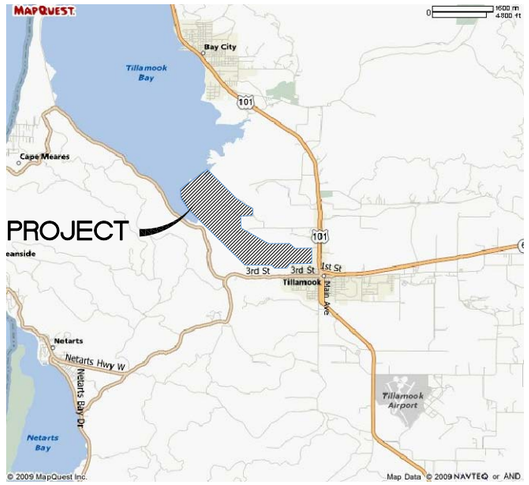
SOUTHERN FLOW CORRIDOR BID PLANS

FEBRUARY 5, 2016

PORT OF TILLAMOOK BAY



VICINITY MAP

APPLICANT/LANDOWNER:

TILLAMOOK COUNTY
201 LAUREL AVENUE
TILLAMOOK, OR 97141
PH: (503) 842-1809
CONTACT: PAUL LEVESQUE

ON BEHALF OF:

PORT OF TILLAMOOK BAY
PH: (503) 842-2413
CONTACT: AARON PALTER

CIVIL ENGINEER:

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PROJECT MANAGER: ANDREY CHERNISHOV, PE, CWRE

PROJECT DESIGN:

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SEATTLE, WA 98188
PH: (206) 241-6000
EMAIL: VCOLLINS@NHCWEB.COM
CONTACT: VAUGHN COLLINS, P.E., CFM

SURVEYING:

TILLAMOOK COUNTY SURVEYOR
1510 3RD ST., SUITE C
TILLAMOOK, OR 97141
CONTACT: MIKE RICE, PLS
PH: (503) 842-3430

VERTICAL DATUM:

THE ELEVATIONS SHOWN HEREON ARE BASED UPON NAVD 88 DATUM.

SHEET INDEX

TAX LOT INFORMATION

THIS PROJECT IS LOCATED IN A PORTION OF SECTION 22 AND 23 OF TOWNSHIP 1 SOUTH, RANGE 10 WEST OF THE WILLAMETTE MERIDIAN. COUNTY OF TILLAMOOK, STATE OF OREGON.

LOCATE

(48 HOUR NOTICE PRIOR TO EXCAVATION)

OREGON LAW REQUIRES YOU TO FOLLOW THE RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH 952-001-0090 & ORS 757.542 THROUGH 757.562 & ORS 757.993. YOU MAY OBTAIN COPIES OF THE RULES FROM THE CENTER BY CALLING (503) 246-1987.
ONE CALL SYSTEM NUMBER 1-800-332-2344.

ABBREVIATIONS

@	AT	N	NORTH
AC	ASPHALT	NE	NORTH EAST
CB	CATCH BASIN	NTS	NOT TO SCALE
C/L	CENTERLINE	NW	NORTH WEST
CMP	CORRUGATED METAL PIPE	OHP	OVER HEAD POWER
CO	CLEAN OUT	P/L	PROPERTY LINE
COTG	CLEAN OUT TO GRADE	PVC	POLYVINYL CHLORIDE
CY	CUBIC YARDS	ROW	RIGHT OF WAY
DR	DRIVE	RT	RIGHT
DIP	DUCTILE IRON PIPE	S	SOUTH
E	EAST	SE	SOUTH EAST
ELEV	ELEVATION	SW	SOUTH WEST
EP	EDGE OF PAVEMENT	STM	STORM DRAIN
EX	EXISTING	SF	SQUARE FEET
FCS	FLOOD CONTROL STRUCTURE	SAN	SANITARY SEWER
GUT	GUTTER	ST	STREET
HDPE	HIGH DENSITY POLYETHYLENE	STA	STATION
HOR	HORIZONTAL	S=	SLOPE EQUALS
HOT	HIGHEST OBSERVED TIDE	S/W	SIDEWALK
HP	HIGH POINT	TB	THRUST BLOCK
IE	INVERT ELEVATION	TYP	TYPICAL
LF	LINEAR FEET	VER	VERTICAL
LN	LINE	W	WEST
LP	LOW POINT	W/	WITH
LT	LEFT	WTR	WATER
MH	MANHOLE		

LEGEND

- FILL REMOVAL LIMITS
- TREE PROTECTION AREA
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING GROUND SURFACE (PROFILES AND CROSS SECTIONS)
- PROPOSED GROUND SURFACE (PROFILES AND CROSS SECTIONS)
- FLOATING SILT CURTAIN
- WOOD CHIP FILTER BERM
- LARGE WOODY DEBRIS STRUCTURE
- DITCH PLUG

MONITORING POINTS TO BE PROTECTED

- ACCRETION PLOT
- CHANNEL MORPHOLOGY MONUMENT
- LOCAL BENCHMARK
- GROUNDWATER LEVEL STATION
- WATER LEVEL LOGGER

REGISTERED PROFESSIONAL ENGINEER 76347PE OREGON March 09, 2010 ANDREY R. CHERNISHOV
EXPIRES 12/31/2017

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REV.	DATE	DESCRIPTION	BY

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IF THIS LINE IS NOT 0,5 INCH SCALE IS NOT AS SHOWN

OREGON SOLUTIONS
506 SW MILL STREET; PORTLAND, OREGON 97201

SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON
COVER SHEET

Date: 02-05-16 | Sheet No.: 1 | 1 of 37

2009-003-03

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE STRICTER REQUIREMENTS, AS INTERPRETED BY THE OWNER, BETWEEN THE 2015 ODOT/APWA OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION AND THE PROJECT SPECIFICATIONS FOUND IN THE CONTRACT DOCUMENTS.

2. ALL MATERIALS AND WORKMANSHIP FOR FACILITIES SHALL CONFORM TO THE APPLICABLE REGULATIONS, SPECIFICATIONS, CODES AND REQUIREMENTS OF ALL STATE, FEDERAL, AND LOCAL AGENCIES. THE CONTRACTOR SHALL REVIEW REGULATORY PERMIT REQUIREMENTS TO ENSURE CONFORMANCE TO THE RULES OF EACH AGENCY.

3. CONTRACTOR TO NOTIFY TILLAMOOK COUNTY PUBLIC WORKS DEPARTMENT AT (503) 842-3419 A MINIMUM OF 48 HOURS (2 BUSINESS DAYS) PRIOR TO START OF CONSTRUCTION AND BY CALLING "OREGON UTILITY NOTIFICATION CENTER" AT 1-800-332-2344. CONTRACTOR SHALL NOTIFY ALL OTHER APPLICABLE AGENCIES, AS NECESSARY.

4. CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN AND SECURE APPROVAL OF THE PLAN AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING WORK.

5. CONTRACTOR SHALL ERECT AND MAINTAIN BARRICADES, WARNING SIGNS, TRAFFIC CONES (AND ALL OTHER TRAFFIC CONTROL DEVICES REQUIRED) PER THE APPROVED PLAN IN ACCORDANCE WITH THE MUTCD (MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES) INCLUDING OREGON AMENDMENTS. ACCESS TO DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES.

6. THE CONTRACTOR SHALL NOT PERFORM WORK WITHOUT AGENCY INSPECTORS WHERE INSPECTORS ARE REQUIRED.

7. ANY INSPECTION BY TILLAMOOK COUNTY, HBH, NHC, PORT OF TILLAMOOK BAY, OREGON SOLUTIONS OR OTHER AGENCIES SHALL NOT, IN ANY WAY, RELIEVE THE CONTRACTOR FROM ANY OBLIGATION TO PERFORM THE WORK IN STRICT COMPLIANCE WITH THE APPLICABLE CODES AND AGENCY REQUIREMENTS.

8. HBH MUST APPROVE, PRIOR TO CONSTRUCTION, ANY ALTERATION OR VARIANCE FROM THESE PLANS. ANY VARIATIONS FROM THESE PLANS SHALL BE PROPOSED ON CONSTRUCTION FIELD PRINTS AND TRANSMITTED TO THE ENGINEER AND THE COUNTY FOR APPROVAL.

9. WHEN PERFORMING EXCAVATIONS, THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF ORS 757.541 TO 757.571, WHICH INCLUDE REQUIREMENTS THAT THE CONTRACTOR HAND-EXPOSE (POTHOLE) UNDERGROUND FACILITIES AND USE REASONABLE CARE TO AVOID DAMAGING THEM.

10. CONTRACTOR SHALL CONFORM TO ALL PERMITS OBTAINED FOR THIS WORK.

11. CONTRACTOR SHALL PROVIDE ALL BONDS AND INSURANCE REQUIRED BY PUBLIC AND/OR PRIVATE AGENCIES HAVING JURISDICTION.

12. THE CONTRACTOR SHALL PERFORM ALL WORK NECESSARY TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DRAWINGS, INCLUDING SUCH INCIDENTALS AS MAY BE NECESSARY TO MEET APPLICABLE AGENCY REQUIREMENTS AND PROVIDE A COMPLETE AND FUNCTIONING PROJECT.

13. RECORD DRAWINGS: THE CONTRACTOR SHALL MAINTAIN ONE COMPLETE SET OF APPROVED DRAWINGS ON THE CONSTRUCTION SITE AT ALL TIMES WHEREON HE WILL RECORD ANY APPROVED DEVIATIONS IN CONSTRUCTION FROM THE APPROVED DRAWINGS, AS WELL AS THE STATION LOCATIONS AND DEPTHS OF ALL EXISTING UTILITIES ENCOUNTERED. THESE FIELD RECORD DRAWINGS SHALL BE KEPT UP TO DATE AT ALL TIMES AND SHALL BE AVAILABLE FOR INSPECTION BY TILLAMOOK COUNTY UPON REQUEST.

14. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL SUBMIT A CLEAN SET OF FIELD RECORD DRAWINGS CONTAINING ALL AS-BUILT INFORMATION TO TILLAMOOK COUNTY.

15. THE CONTRACTOR SHALL SUBMIT A SUITABLE MAINTENANCE BOND PRIOR TO FINAL PAYMENT WHERE REQUIRED BY PUBLIC AND/OR PRIVATE AGENCIES HAVING JURISDICTION.

EXISTING UTILITIES AND FACILITIES

16. THE EXISTENCE AND APPROXIMATE LOCATION OF KNOWN UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE DRAWINGS WERE DETERMINED BY A SEARCH OF AVAILABLE PUBLIC RECORDS AND/OR FIELD SURVEYS. THE LOCATIONS AND DEPTHS OF THESE UTILITIES ARE FROM THESE RECORDS AND ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR. NO RESPONSIBILITY IS ASSUMED BY EITHER THE OWNER, THE ENGINEER, NOR THE UTILITY COMPANIES FOR ACCURACY OF COMPLETENESS OF SUCH RECORDS.

17. ATTENTION: 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 THE RULES BY CALLING THE CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS (800) 332-2344).

18. THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING UTILITIES ON THIS SITE. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN OR NOT ON THESE DRAWINGS, SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. EXISTING SURFACE FEATURES AND FENCING SHALL BE REPLACED IN KIND.

19. THE CONTRACTOR SHALL HAVE ALL EXISTING UTILITIES LOCATED PRIOR TO STARTING ANY WORK.

20. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS AND ELEVATIONS TO HIS OR HER SATISFACTION.

21. ALL EXISTING FACILITIES SHALL BE MAINTAINED IN-PLACE BY THE CONTRACTOR UNLESS OTHERWISE SHOWN OR DIRECTED. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO SUPPORT, MAINTAIN, OR OTHERWISE PROTECT EXISTING UTILITIES AND OTHER FACILITIES AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR TO LEAVE EXISTING FACILITIES IN AN EQUAL OR BETTER-THAN-ORIGINAL CONDITION AND TO THE SATISFACTION OF THE LANDOWNER TILLAMOOK COUNTY.

22. THE CONTRACTOR SHALL LOCATE AND MARK ALL EXISTING PROPERTY AND STREET MONUMENTS PRIOR TO CONSTRUCTION. ANY MONUMENTS DISTURBED DURING CONSTRUCTION OF THE PROJECT SHALL BE REPLACED BY A REGISTERED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE. THE MONUMENTS SHALL BE REPLACED WITHIN A MAXIMUM OF 90 DAYS, AND THE COUNTY SURVEYOR SHALL BE NOTIFIED IN WRITING AS REQUIRED BY ORS 209.150.

23. UTILITIES, OR INTERFERING PORTIONS OF UTILITIES, THAT ARE ABANDONED IN PLACE SHALL BE REMOVED BY THE CONTRACTOR TO THE EXTENT NECESSARY TO ACCOMPLISH THE WORK. THE CONTRACTOR SHALL PLUG THE REMAINING EXPOSED ENDS OF ABANDONED UTILITIES.

24. CONTRACTOR SHALL REMOVE ALL EXISTING SIGNS, MAILBOXES, FENCES, LANDSCAPING, ETC., AS REQUIRED TO AVOID DAMAGE DURING CONSTRUCTION AND REPLACE THEM TO EXISTING OR BETTER CONDITION.

25. ANY SEPTIC TANKS ENCOUNTERED DURING CONSTRUCTION SHALL BE PUMPED OUT. SEPTIC TANK REMOVAL TO BE IN ACCORDANCE WITH COUNTY SANITARIAN REQUIREMENTS.

26. ANY WELLS ENCOUNTERED SHALL BE ABANDONED PER STATE OF OREGON WATER RESOURCES DEPARTMENT REQUIREMENTS.

27. ANY FUEL TANKS ENCOUNTERED SHALL BE REMOVED AND DISPOSED OF PER STATE OF OREGON DEQ REQUIREMENTS. BACKFILL WITH COMPACTED GRANULAR MATERIAL.

GRADING NOTES

28. CONTRACTOR TO REVIEW GEOTECHNICAL REPORTS PREPARED BY SHANNON & WILSON DATED OCTOBER 20, 2015 AND FEBRUARY 3, 2016, AND CONFORM TO ALL RECOMMENDATIONS LISTED IN REPORT.

29. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MANAGING CONSTRUCTION ACTIVITIES TO INSURE THAT PUBLIC ROADS AND RIGHT-OF-WAYS ARE KEPT CLEAN OF MUD, DUST OR DEBRIS. DUST ABATEMENT SHALL BE MAINTAINED BY ADEQUATE WATERING OF THE SITE BY THE CONTRACTOR.

30. CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR ALL ROADS DAMAGED BY CONSTRUCTION OPERATIONS IN A TIMELY MANNER TO AVOID INCONVENIENCES OR HAZARDS TO THE PUBLIC.

31. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, STRAIGHT GRADES SHALL BE RUN BETWEEN ALL FINISH GRADE ELEVATIONS AND/OR FINISH CONTOUR LINES SHOWN.

32. ALL PROPOSED ELEVATIONS SHOWN SHALL BE CONSIDERED TO BE FINISH SURFACE ELEVATIONS, INCLUDING TOPSOIL STRIPPINGS, UNLESS OTHERWISE NOTED.

33. GRADING SHOWN ON THE DRAWINGS IS CRITICAL TO FLOOD ABATEMENT AND SHALL BE STRICTLY FOLLOWED.

34. UNLESS OTHERWISE NOTED, ALL GRADING, ROCKING, AND PAVING TO CONFORM TO OSSC (ODOT/APWA) SPECIFICATIONS, 2015 EDITION.

35. CLEAR AND GRUB WITHIN WORK LIMITS ALL SURFACE VEGETATION, TREES, STUMPS, BRUSH, ROOTS, ETC. DO NOT DAMAGE OR REMOVE TREES EXCEPT AS APPROVED BY THE ENGINEER OR AS SHOWN ON THE DRAWINGS. PROTECT ALL ROOTS TWO INCHES IN DIAMETER OR LARGER.

36. STRIP WORK LIMITS, REMOVING ALL ORGANIC MATTER WHICH CANNOT BE COMPACTED INTO A STABLE MASS. ALL TREES, BRUSH AND DEBRIS ASSOCIATED WITH CLEARING, STRIPPING, OR GRADING SHALL REMAIN ON SITE.

37. IMMEDIATELY FOLLOWING THE FINE GRADING OPERATIONS, COMPACT SUBGRADE TO 95% OF THE MAXIMUM DRY DENSITY PER ASTM D 689 TEST METHOD (STANDARD PROCTOR). SUBGRADE MUST BE INSPECTED AND SURVEYED BY CONTRACTOR, AND APPROVED BY THE RESPONSIBLE INSPECTOR PRIOR TO PLACING EMBANKMENTS OR BASE ROCK.

38. ENGINEERED FILLS SHALL BE CONSTRUCTED OR COMPACTED IN 8 INCH LIFTS OVER APPROVED SUBGRADE. ALL FILLS WITHIN LEVEES SHALL BE ENGINEERED, WITH EACH LIFT COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY PER ASTM D 689 TEST METHOD (STANDARD PROCTOR).

39. ALL FILLS OUTSIDE OF LEVEES WHICH ARE OVER 12-INCHES IN DEPTH SHALL BE ENGINEERED, WITH EACH LIFT COMPACTED TO 90% OF THE MAXIMUM DRY DENSITY PER ASTM D 689 TEST METHOD (STANDARD PROCTOR).

40. CRUSHED ROCK SHALL CONFORM TO THE REQUIREMENTS OF OSSC (ODOT/APWA) 02630.10 (DENSE GRADED BASE AGGREGATE), WITH NO MORE THAN 10% PASSING THE #40 SIEVE AND NO MORE THAN 5% PASSING THE #200 SIEVE. COMPACT TO 95% OF THE MAXIMUM DRY DENSITY PER AASHTO T-180 TEST METHOD (MODIFIED PROCTOR). WRITTEN COMPACTION TEST RESULTS FOR BASEROCK AND BACKFILL MUST BE PROVIDED AND A PROOF-ROLL (WITNESSED BY THE RESPONSIBLE INSPECTOR) MUST BE PERFORMED.

41. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, NO CUT OR FILL SLOPES SHALL BE CONSTRUCTED STEEPER THAN 3H:1V

UTILITY

42. UNLESS OTHERWISE NOTED, MATERIALS AND WORKMANSHIP FOR STORM SEWER SHALL CONFORM TO OSSC (ODOT/APWA) SPECIFICATIONS, 2015 EDITION.

43. BEDDING AND BACKFILL: ALL PIPES SHALL BE BEDDED WITH MINIMUM 6-INCHES OF 3/4" MINUS CRUSHED ROCK IN THE PIPE ZONE (CRUSHED ROCK SHALL EXTEND A MINIMUM OF 12-INCHES OVER THE TOP OF THE PIPE IN ALL CASES). CRUSHED ROCK TRENCH BACKFILL SHALL BE USED UNDER ALL IMPROVED AREAS, INCLUDING SIDEWALKS. GRANULAR TRENCH BACKFILL SHALL BE COMPACTED TO 92% OF THE MAXIMUM DRY DENSITY PER AASHTO T-180 TEST METHOD (MODIFIED PROCTOR).

44. THE CONTRACTOR SHALL HAVE APPROPRIATE EQUIPMENT ON SITE TO PRODUCE A FIRM, SMOOTH, UNDISTURBED SUBGRADE AT THE TRENCH BOTTOM, TRUE TO GRADE. THE BOTTOM OF THE TRENCH EXCAVATION SHALL BE SMOOTH, FREE OF LOOSE MATERIALS OR TOOTH GROOVES FOR THE ENTIRE WIDTH OF THE TRENCH PRIOR TO PLACING THE GRANULAR BEDDING MATERIAL.

CONSTRUCTION NOTES

45. A PORTION OF THIS WORK IS TIDAL RELATED. THE CONTRACTOR SHALL COORDINATE THEIR ACTIVITIES WITH THE INSPECTOR AND LOCAL AGENCIES WHEN WORKING IN THIS ZONE. WORK HOURS MAY NEED TO BE ADJUSTED ACCORDINGLY.

46. CONTRACTOR SHALL PROPOSE A PLAN FOR CONSTRUCTION SCHEDULE AND SEQUENCING AT PROJECT BEGINNING. THIS PLAN SHALL BE DETAILED INTO MONTHLY ACTIVITIES AND REVIEWED BIWEEKLY. THE PLAN SHALL BE FORWARDED TO PERMITTING AGENCIES FOR COMMENT. PLAN SHALL ADDRESS RISK OF SIGNIFICANT FLOODING OR TIDAL INFLUENCES DURING FALL 2016 CONSTRUCTION, INCLUDING METHODS TO ENSURE EROSION AND SEDIMENT CONTROL ARE MET. SCHEDULE MUST INCLUDE PLAN TO STABILIZE SITE FOR THE WINTER AND DEMOBILIZE AT SHORT NOTICE IF SIGNIFICANT FLOODING OR TIDAL INFLUENCE IS LIKELY, AND RESUME CONSTRUCTION IN SUMMER 2017 AS NECESSARY. ENGINEER WILL DIRECT CONTRACTOR AS TO WHICH PROJECT ELEMENTS MAY BE CONSTRUCTED WITH LESS LIKELY RISK OF DAMAGE DUE TO SIGNIFICANT FLOODING OR TIDAL INFLUENCES. PROGRESS OF WORK AND RISK SHALL BE DISCUSSED DAILY WITH ENGINEER BASED ON WEATHER FORECASTS AND SITE CONDITIONS.

47. THE CONTRACTOR SHALL PROVIDE A PLAN FOR WORK IN WATERWAYS THAT ARE ACCESSIBLE BY FISH. THE CONSTRUCTION ACTIVITY SHALL BE LIMITED TO IN-WATER WORK PERIODS. THIS WORK MAY INCLUDE COFFERDAMS, REMOVAL OF FISH AND RELATED WORK. THE PLAN SHALL BE REVIEWED BY THE AFFECTED AGENCIES.

48. ALL CONCRETE POURS SHALL NOT BE IN CONTACT WITH WATER. PUMPING WILL BE REQUIRED. A PUMPING PLAN SHALL BE SUBMITTED AND APPROVED PRIOR TO STARTING THIS PORTION OF WORK.

REGISTERED PROFESSIONAL ENGINEER 75547PE OREGON MARCH 09, 2010 ANDREY R. CHERNISHOV
EXPIRES 12/31/2017

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OREGON SOLUTIONS
506 SW MILL STREET; PORTLAND, OREGON 97201

SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

CONSTRUCTION NOTES

Sheet No. 2 of 37
Date 02-05-16
2009-003-03

EROSION AND SEDIMENT CONTROL NOTES

49. CONTRACTOR SHALL PROCURE AND CONFORM TO DEQ STORMWATER PERMIT NO. 1200-C PRIOR TO CONSTRUCTION ACTIVITIES.

50. THE CONTRACTOR SHALL DESIGNATE AN EROSION CONTROL INSPECTOR FOR THE SITE. A PRE-CONSTRUCTION MEETING SHALL BE HELD, WHICH SHALL INCLUDE THE CONTRACTOR'S DESIGNATED EROSION CONTROL INSPECTOR TO DISCUSS EROSION AND SEDIMENT CONTROL PROTECTION (ESCP) MEASURES AND CONSTRUCTION LIMITS.

51. THE ESCP MUST BE KEPT ONSITE AND ALL EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLAN MUST BE INSTALLED IN SUCH A MANNER TO ENSURE THAT SEDIMENT OR SEDIMENT LADEN WATER THAT ENTERS OR IS LIKELY TO ENTER SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATER, ROADWAY, OR OTHER PROPERTIES DOES NOT OCCUR.

52. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES, IN ACCORDANCE WITH LOCAL, STATE, OR FEDERAL REGULATIONS.

53. THE IMPLEMENTATION OF THE ESCP AND CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THE EROSION AND SEDIMENT CONTROL MEASURES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED BY THE CONTRACTING AGENCY AND VEGETATION/LANDSCAPING IS ESTABLISHED. THE PERMIT REGISTRANT SHALL BE RESPONSIBLE FOR MAINTENANCE UNTIL THE 1200-C PERMIT IS TERMINATED.

54. EROSION AND SEDIMENT CONTROL MEASURES INCLUDING PERIMETER SEDIMENT CONTROL MUST BE IN PLACE BEFORE VEGETATION IS DISTURBED AND MUST REMAIN IN PLACE AND BE MAINTAINED, REPAIRED, AND PROMPTLY IMPLEMENTED FOLLOWING PROCEDURES ESTABLISHED FOR THE DURATION OF CONSTRUCTION, INCLUDING PROTECTION FOR ACTIVE STORM DRAIN INLETS AND CATCH BASINS AND APPROPRIATE NON-STORMWATER POLLUTION CONTROLS.

55. BEGIN LAND CLEARING, EXCAVATION, TRENCHING, CUTTING OR GRADING AND EARTHWORK-SURFACE ROUGHING AFTER INSTALLING APPLICABLE SEDIMENT, EROSION PREVENTION AND RUNOFF CONTROL MEASURES NOT IN THE DIRECT PATH OF WORK.

56. APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES AND FOR ALL ROADWAYS INCLUDING GRAVEL ROADWAYS.

57. STORMWATER SEDIMENT CONTROL: STORMWATER SEDIMENT CONTROL DURING CONSTRUCTION OF THE SOUTHERN FLOW CORRIDOR SHALL GENERALLY FOLLOW STANDARD BEST MANAGEMENT PRACTICES AS RECOMMENDED BY THE OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY. SEQUENCING OF CONSTRUCTION IS OF CRITICAL IMPORTANCE IN SEDIMENT CONTROL, ESPECIALLY WITH THE ADDED COMPLEXITY OF TIDAL INFLUENCE AT THE SITE AND EXTENSIVE WORK ON THE RIVER BANKS. THERE WILL BE SOME UNAVOIDABLE SEDIMENT PRODUCING ACTIVITIES AT THE END OF CONSTRUCTION THAT CAN BE MINIMIZED BUT NOT PREVENTED.

58. CONSTRUCTION ENTRANCE: THERE WILL BE AROUND 5 CONSTRUCTION ENTRANCES TO THE PROJECT SITE; 2 ON THE NORTH SIDE AND 3 ON THE SOUTH. EACH SHALL HAVE A STANDARD ROCK CONSTRUCTION ENTRANCE INSTALLED TO MINIMIZE TRANSPORT OF SOIL ONTO PUBLIC STREETS.

59. HAUL ROADS: EXISTING SITE ROADS THAT WILL BE USED FOR HAUL ARE GENERALLY CRUSHED ROCK/GRAVEL SURFACED, WITH CONDITIONS RANGING FROM VERY POOR TO GOOD. THESE ROADS SHALL BE REPAIRED WITH ADDITIONAL CRUSHED ROCK PRIOR TO HAUL. NOTE THAT ALL EXISTING GRAVEL ROADS SHALL BE REMOVED AND THE ROAD BEDS DECOMMISSIONED AT THE END OF CONSTRUCTION.

60. PROTECT EXISTING VEGETATION: CLEARING LIMITS SHALL BE CLEARLY MARKED. VEHICLE TRAFFIC SHALL BE LIMITED TO HAUL ROADS AND EXISTING DISTURBED AREAS TO THE MAXIMUM EXTENT POSSIBLE. IN PARTICULAR, THE LARGE PASTURE AREA ALONG THE TRASK RIVER SHALL BE PROTECTED SO AS TO ALLOW ITS USE AS A VEGETATED FILTER STRIP.

61. COMPOST/BRUSH BERMS: COMPOST AND/OR BRUSH BERMS SHALL BE USED IN MOST LOCATIONS WHERE THERE MAY BE SOIL EROSION INTO A NEARBY WATERWAY. THEY SHALL BE INSTALLED AT THE LIMITS OF CLEARING, AND LEFT IN PLACE OR SPREAD OUT IN-SITU AT THE END OF CONSTRUCTION.

62. WORK AREA ISOLATION DAMS: IN LOCATIONS WHERE LANDSIDE DITCHES THAT WILL REQUIRE IN-WATER WORK, OR WHERE SOIL REMOVAL IS OCCURRING AT THE TOP OF BANK, WORK AREA ISOLATION DAMS SHALL BE INSTALLED TO BLOCK THE DITCH FROM CONNECTION TO THE MAIN DRAINAGE NETWORK AND ULTIMATELY THE RIVER. THE DITCH SEGMENT WILL THEN SERVE AS A SEDIMENT POND DURING CONSTRUCTION. THIS BMP SHALL NOT BE USED WHERE THERE MAY BE FISH PRESENT.

63. SOIL COVERING: THERE SHALL BE TEMPORARY STORAGE OF SOILS ON SITE FOR STAGING, MOISTURE CONTROL, AND PRELOADING THE NEW LEVEES. APPROPRIATE SEASONAL REQUIREMENTS ON COVERING EXPOSED STOCKPILES WITH PLASTIC SHEETING SHALL BE REQUIRED TO CONTROL EROSION.

64. FLOATING SILT CURTAINS: THE UTILITY OF FLOATING SILT CURTAINS SHALL BE LIMITED IN THE THIS PROJECT, BUT THEY CAN BE USED IN LIEU OF WORK AREA ISOLATION DAMS, AND ON THE RIVERWARD SIDE WHERE THE HIGH TIDE DEPTH IS UNDER SIX FEET AND VELOCITIES ARE LOW.

65. EROSION CONTROL BLANKETS: THE NEW LEVEES SHALL BE COVERED WITH EROSION CONTROL BLANKETS ONCE CONSTRUCTED. THE NEW LEVEES SHALL BE OVERBUILT AND ALLOWED TO SETTLE FOR A YEAR, THEN RE-GRADED TO FINAL DESIGN ELEVATION. AS A RESULT, THE FIRST YEAR EROSION PROTECTION SHALL BE PRIMARILY PROVIDED BY THE BLANKETS, RATHER THAN GRASS COVER.

66. HYDROSEEDING: HYDROSEEDING SHALL BE USED FOR TEMPORARY AND PERMANENT SEEDING OF NEW LEVEES, AND OTHER DISTURBED AREAS.

67. MULCHING : LARGE QUANTITIES OF BRUSH AND SMALL TREES SHALL BE REMOVED FROM CONSTRUCTIONS AREAS ON SITE. THESE SHALL BE CHIPPED AND USED FOR BRUSH DAMS AT CLEARING LIMITS, AND AS MULCH OVER DISTURBED AREAS WHERE LOW WATER VELOCITIES AREA EXPECTED.

68. SEQUENCING: SEQUENCING IS AN IMPORTANT COMPONENT OF SEDIMENT CONTROL FOR LEVEE REMOVAL AND CONSTRUCTION IN TIDAL ZONES.

69. FILL REMOVAL: THE PERIMETER LEVEES AND DREDGE SPOILS SHALL BE REMOVED IN PHASES. AT ALL TIMES THE EXPOSED TOP SURFACE WILL BE GRADED TOWARDS THE INTERIOR TO PREVENT DIRECT RUNOFF INTO THE RIVER. CLEARING AND STRIPPING ON THE RIVERWARD SIDE SHALL PROCEED WITH LEVEE REMOVAL AND NOT OCCUR AS A SEPARATE, EARLIER ACTIVITY. COMPLETE LEVEE REMOVAL SHALL PROCEED TO AN ELEVATION JUST ABOVE SUMMER HIGH TIDE LEVELS. AT THIS POINT A SMALL BERM SHALL BE LEFT ON THE RIVER SIDE, AND REMOVAL OF THE REMAINDER OF THE LEVEE COMPLETED ON THE LANDWARD SIDE. THE BERM SHALL BE LEFT IN PLACE UNTIL ALL OTHER INTERIOR RESTORATION ELEMENTS AND THE NEW LEVEES ARE CONSTRUCTED. ONCE BREACHING OF THE PERIMETER LEVEES AT HISTORIC CHANNEL CONNECTION LOCATIONS BEGINS, THE INTERIOR WILL BEGIN TO FLOOD WITH EVERY TIDE. THE DESIGN LEVEE REMOVAL ELEVATION IS AROUND MHHW, SO THE BERM WILL BE ACCESSIBLE FOR REMOVAL EXCEPT DURING HIGH TIDES, AND THERE WILL BE ONE TO TWO WEEK PERIODS WHEN THE HIGH TIDES WILL NOT REACH THE DESIGN LEVEL. THESE WINDOWS SHALL BE TARGETED FOR MAXIMUM BERM REMOVAL AS THEY PROVIDE BOTH MAXIMUM SEDIMENT CONTROL AND CONSTRUCTION EFFICIENCY. BREACHING REQUIRES EXCAVATION TO MUCH LOWER ELEVATIONS. IN GENERAL THIS ACTIVITY SHALL OCCUR ABOVE TIDE LEVEL AS MUCH AS POSSIBLE. THE LOWEST PORTIONS OF EACH BREACH WILL REQUIRE IN-WATER EXCAVATION.

70. PRIMARY SEDIMENT PRODUCING ACTIVITIES: THERE ARE TWO ACTIVITIES THAT ARE ANTICIPATED TO PRODUCE THE GREATEST AMOUNT OF SEDIMENT THAT WILL ENTER THE RIVERS AROUND THE PROJECT SITE. AS DISCUSSED ABOVE, BREACHING REQUIRES EXCAVATION TO LOW ELEVATIONS. THESE BREACHES WILL IMMEDIATELY BEGIN TO CONVEY WATER IN AND OUT OF THE SITE, SO WORK AREA ISOLATION IS NOT AN OPTION. THE PRIMARY METHOD OF MINIMIZING SEDIMENT FOR THIS ACTIVITY IS TO MINIMIZE THE TIME SPENT IN EXCAVATION. RAPID EXCAVATION MINIMIZES IN-WATER DISTURBANCE TIME. INITIAL BREACHES WILL BE UNDERSIZED AND GENERATE HIGHER THAN NATURAL VELOCITIES ON EBB AND FLOOD TIDES. THE QUICKER ALL THE BREACHES CAN BE EXCAVATED THE LESS TIME HIGH VELOCITIES AND CONSEQUENTIAL EROSION RISK WILL OCCUR AT EACH BREACH. RIPRAP REMOVAL SHALL OCCUR AROUND EACH BREACH OPENING, BUT ALSO MAY OCCUR ALONG LENGTHS OF LEVEE AWAY FROM THE BREACHES IN ORDER TO ALLOW MORE NATURAL CHANNEL FORMING PROCESSES TO OCCUR. RIPRAP REMOVAL UNDERWATER WILL GENERATE SIGNIFICANT TURBIDITY. WHERE POSSIBLE, FLOATING SILT CURTAINS SHALL BE USED TO ISOLATE WORK AREAS, BUT THERE WILL BE AREAS WHERE DEPTHS AND WATER VELOCITIES MAY MAKE THEM INEFFECTIVE OR PREVENT THEIR USE. AS WITH BREACHING, WORKING RAPIDLY TO MINIMIZE IN-WATER CONTACT TIME SHALL BE USED AS A KEY SEDIMENT CONTROL METHOD.

71. DUST CONTROL: DUST SHALL BE CONTROLLED DURING CONSTRUCTION PRIMARILY BY WATERING DRY EXPOSED SOILS. AS DISCUSSED ABOVE, HAUL ROADS SHALL BE EITHER CRUSHED ROCK OR HOG FUEL, WHICH WILL MINIMIZE DUST GENERATION. NEW LEVEE CONSTRUCTION REQUIRES PRECISE MOISTURE CONTROL ON THE FILL MATERIAL, WHICH WILL RESULT IN MATERIALS DAMP ENOUGH TO NOT GENERATE DUST IN SIGNIFICANT QUANTITIES. AREAS OF HIGHER ELEVATION FILL REMOVAL (EXISTING LEVEES AND DREDGE SPOIL PILES), WILL BE THE PRIMARY SOURCES OF DUST. THESE SOILS WILL BE DRY IN THE SUMMER TIME, AND THE SURFACE WILL BE USED FOR HAULING. WATERING OF EXPOSED SOILS AS CONSTRUCTION PROCEEDS SHALL BE REQUIRED IN ORDER TO MINIMIZE DUST GENERATION.

72. WET WEATHER BMPS: CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND CREATION OF BARE GROUND ON SLOPES GREATER THAN FIVE (5) PERCENT FROM OCTOBER 1 THROUGH MAY 31 EACH YEAR.

73. WET WEATHER BMPS: TEMPORARY STABILIZATION OF THE SITE MUST BE INSTALLED AT THE END OF THE SHIFT BEFORE A HOLIDAY OR WEEKEND OR AT THE END OF EACH WORKDAY IF RAINFALL IS FORECAST IN THE NEXT 24 HOURS AND EACH WEEKEND AND HOLIDAY.

74. IDENTIFY, MARK, AND PROTECT (BY FENCING OFF OR OTHER MEANS) CRITICAL RIPARIAN AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES AND VEGETATION AREAS TO BE PRESERVED. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (E.G., WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN PERIMETER AREAS. PRESERVE EXISTING VEGETATION AND RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION.

75. PROVIDE PERMANENT EROSION PREVENTION MEASURES ON ALL EXPOSED AREAS TO PREVENT FROM BECOMING A SOURCE OF EROSION AND REMOVE ALL TEMPORARY CONTROL MEASURES, UNLESS LOCAL ORDINANCES REQUIRE OTHERWISE, AS AREAS ARE STABILIZED.

76. ALL TEMPORARY SEDIMENT CONTROLS MUST REMAIN IN PLACE UNTIL PERMANENT VEGETATION OR OTHER PERMANENT COVERING OF EXPOSED SOIL IS ESTABLISHED. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED.

77. SEDIMENT CONTROLS MUST BE INSTALLED AND MAINTAINED ALONG THE SITE PERIMETER ON ALL DOWN GRADIENT SIDES OF THE CONSTRUCTION SITE AND AT ALL ACTIVE AND OPERATIONAL INTERNAL STORM DRAIN INLETS AT ALL TIMES DURING CONSTRUCTION.

78. TEMPORARY STABILIZATION OR COVERING OF SOIL STOCKPILES AND PROTECTION OF STOCKPILE LOCATED AWAY FROM CONSTRUCTION ACTIVITY MUST OCCUR AT THE END OF EACH WORKDAY OR OTHER BMPS, SUCH AS DIVERSION OF UNCONTAMINATED FLOWS AND INSTALLATION OF SEDIMENT FENCES AROUND STOCKPILES, MUST BE IMPLEMENTED TO PREVENT TURBID DISCHARGES TO SURFACE WATERS.

79. BMPS THAT WILL BE USED TO PREVENT OR MINIMIZE STORMWATER FROM BEING EXPOSED TO POLLUTANTS FROM SPILLS INCLUDE THE FOLLOWING: NO DISCHARGE OF CONCRETE TRUCK WASH WATER, VEHICLE AND EQUIPMENT CLEANING, VEHICLE AND EQUIPMENT FUELING, MAINTENANCE, AND STORAGE, OTHER CLEANING AND MAINTENANCE ACTIVITIES, AND WASTE HANDLING ACTIVITIES. THESE POLLUTANTS INCLUDE FUEL, HYDRAULIC FLUID, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS DEBRIS, LEFTOVER PAINTS, SOLVENTS, AND GLUES FROM CONSTRUCTION OPERATIONS.

80. ANY USE OF TOXIC OR OTHER HAZARDOUS MATERIALS MUST INCLUDE PROPER STORAGE, APPLICATION, AND DISPOSAL.

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SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

CONSTRUCTION NOTES

Sheet No. 3 of 37
Date 02-05-16
2009-003-03

EROSION AND SEDIMENT CONTROL NOTES (CONT.)

81. SOLID WASTE AND HAZARDOUS MATERIALS MANAGEMENT. FOLLOW PROJECT WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES; REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY; AND MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, MATERIAL USE, COVERED STORAGE AREAS FOR WASTE AND SUPPLIES.

82. THE CONTRACTOR MUST PROPERLY MANAGE HAZARDOUS WASTES, USED OILS, CONTAMINATED SOILS, CONCRETE WASTE, SANITARY WASTE, LIQUID WASTE, OR OTHER TOXIC SUBSTANCES DISCOVERED OR GENERATED DURING CONSTRUCTION AND MEET ALL STATE AND FEDERAL REGULATIONS AND APPROVALS.

83. THE ESCP MEASURES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE MEASURES MUST BE UPGRADED AS NEEDED TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL EROSION AND SEDIMENT CONTROL REGULATIONS. CHANGES TO THE ESCP MUST ALSO BE SUBMITTED IN THE FORM OF AN ACTION PLAN TO DEQ OR ITS AGENT FOR APPROVAL.

84. IF PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT AND ACCESSIBLE DISCHARGE POINT OR DOWNSTREAM LOCATION DURING PERIODS WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER.

85. ANY SIGNIFICANT AMOUNTS OF SEDIMENT WHICH LEAVES THE SITE MUST BE CLEANED UP WITHIN 24 HOURS AND PLACED BACK ON THE SITE AND STABILIZED OR PROPERLY DISPOSED OF. THE CAUSE OF THE SEDIMENT RELEASE MUST BE IDENTIFIED AND PREVENTED FROM CAUSING A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE OREGON DEPARTMENT OF STATE LANDS REQUIRED TIME FRAME.

86. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. TIME-RELEASE FERTILIZERS SHOULD BE USED WITH CARE WITHIN ANY WATERWAY RIPARIAN ZONE.

87. SEDIMENT MUST BE REMOVED FROM BEHIND A SEDIMENT FENCE WHEN IT HAS REACHED A HEIGHT OF 1/3 THE HEIGHT OF THE FENCE ABOVE GROUND AND BEFORE FENCE REMOVAL.

88. SEDIMENT MUST BE REMOVED FROM BEHIND BIO BAGS AND OTHER BARRIERS IF/WHEN IT HAS REACHED A HEIGHT OF TWO (2) INCHES AND BEFORE BMP REMOVAL.

89. REMOVAL OF TRAPPED SEDIMENT IN A SEDIMENT BASIN OR SEDIMENT TRAP OR CATCH BASINS MUST OCCUR WHEN THE SEDIMENT RETENTION CAPACITY HAS BEEN REDUCED BY FIFTY (50)% AND AT COMPLETION OF PROJECT.

90. DEQ MUST APPROVE OF ANY TREATMENT SYSTEM AND OPERATIONAL PLAN THAT MAY BE NECESSARY TO TREAT CONTAMINATED CONSTRUCTION DEWATERING OR SEDIMENT AND TURBIDITY IN STORMWATER RUNOFF.

91. SHOULD ALL CONSTRUCTION ACTIVITIES CEASE FOR THIRTY (30) DAYS OR MORE, THE ENTIRE SITE MUST BE TEMPORARILY STABILIZED USING VEGETATION, HEAVY MULCH LAYER, TEMPORARY SEEDING, OR OTHER METHOD.

92. SHOULD CONSTRUCTION ACTIVITIES CEASE FOR FIFTEEN (15) DAYS OR MORE ON ANY SIGNIFICANT PORTION OF A CONSTRUCTION SITE, TEMPORARY STABILIZATION IS REQUIRED FOR THAT PORTION OF THE SITE WITH STRAW, COMPOST, OR OTHER TACKIFIED COVERING THAT PREVENT SOIL OR WIND EROSION UNTIL WORK RESUMES ON THAT PORTION OF THE SITE.

93. WHEN RAINFALL AND RUNOFF OCCURS, DAILY INSPECTIONS OF THE BMPS AND DISCHARGE OUTFALLS MUST BE CONDUCTED BY THE PROJECT ESCP INSPECTOR. THESE INSPECTIONS AND OBSERVATIONS MUST BE RECORDED IN A LOG THAT IS AVAILABLE ON SITE.

94. BMPS MUST BE INSPECTED BEFORE, DURING, AND AFTER SIGNIFICANT STORM EVENTS.

95. ALL ESCP CONTROLS AND PRACTICES MUST BE INSPECTED VISUALLY ONCE TO ENSURE THAT BMPS ARE IN WORKING ORDER PRIOR TO THE SITE BECOMING INACTIVE OR IN ANTICIPATION OF SITE INACCESSIBILITY AND MUST BE INSPECTED VISUALLY ONCE EVERY TWO (2) WEEKS DURING INACTIVE PERIODS GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS.

TILLAMOOK COUNTY ROADS NOTES

96. ALL ROADS WITHIN COUNTY RIGHT-OF-WAY TO BE REPAIRED TO COUNTY STANDARDS AFTER COMPLETION OF HAULING ACTIVITIES.

97. TILLAMOOK COUNTY PUBLIC WORKS RECOGNIZES THE RELATIVELY POOR CONDITION OF THE ROADWAYS. THE CONTRACTOR SHALL PARTICIPATE IN A MANDATORY WALK-THROUGH REVIEW WITH TILLAMOOK COUNTY CHIEF OF STAFF TO DISCUSS AND DOCUMENT THE EXISTING CONDITION OF PAVEMENT, CULVERTS AND GENERAL ROADWAY STATUS PRIOR TO MOBILIZATION.

98. THE CONTRACTOR SHALL BE REQUIRED TO ESTABLISH AND MAINTAIN APPROPRIATE STORM WATER BMP'S ALONG COUNTY ROADWAYS AND ENSURE THAT RUNOFF DURING THE CONSTRUCTION PERIOD DOES NOT TRANSPORT SEDIMENT TO ANY OPEN WATERWAY.

99. PRIOR TO COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR SHALL BE REQUIRED TO PLACE APPROPRIATE DUST CONTROL OVER THE ENTIRE ROCKED PORTIONS OF BOTH COUNTY ROADWAYS SUFFICIENT TO ENSURE THAT ADJACENT HOMES OR PROJECT LAND WILL NOT RECEIVE ANY OF THE ROAD DUST GENERATED BY HEAVY HAULING OR RELATED CONSTRUCTION ACTIVITIES. STABILIZATION AGENT SHALL BE EARTHBIND™, OR APPROVED EQUAL. PLACEMENT AND MAINTENANCE OF DUST CONTROL SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY.

100. SHOULD THE CONTRACTOR DESIRE TO CONSTRUCT PULL OUTS ALONG ANY OF THE PUBLIC ROADS INCLUDED IN THE PROJECT, IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO CONSTRUCT AND MAINTAIN SUCH PULL OUTS AS MAY BE REQUIRED TO SUPPORT HEAVY HAULING AND RESIDENTIAL ACCESS ALONG THE COUNTY ROADWAY ALIGNMENTS. TILLAMOOK COUNTY PUBLIC WORKS WILL REQUIRE THAT WRITTEN APPROVAL OF LOCATION AND CONSTRUCTED ROAD SECTION BE PROVIDED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OF ANY ROADWAY PULL OUTS.SHOULD ANY PULL OUT BE CONSTRUCTED OUTSIDE THE DEDICATED PUBLIC RIGHT-OF-WAY IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH AND MAINTAIN RIGHT OF ENTRY UPON THE SPECIFIC PRIVATE LANDS.

101. UPON COMPLETION OF CONTRACT WORK ALL ROADSIDE STORMWATER BMP'S SHALL BE FRESHENED AND LEFT IN PLACE.

102. THROUGHOUT THE CONSTRUCTION PROCESS THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE FOLLOWING:

a. ROAD SURFACE CONDITION SUITABLE FOR LAND OWNER, RECREATIONAL AND EMERGENCY USE
b. CONTROL OF DUST GENERATED BY HEAVY HAULING ALONG COUNTY ROADWAYS.
c. MAINTENANCE OF ROADSIDE STORM WATER DRAINAGE BMP'S ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
d. NOISE CONTROL AND HEAVY EQUIPMENT OPERATING HOURS CONSISTENT WITH ADJACENT LAND OWNER REQUIREMENTS

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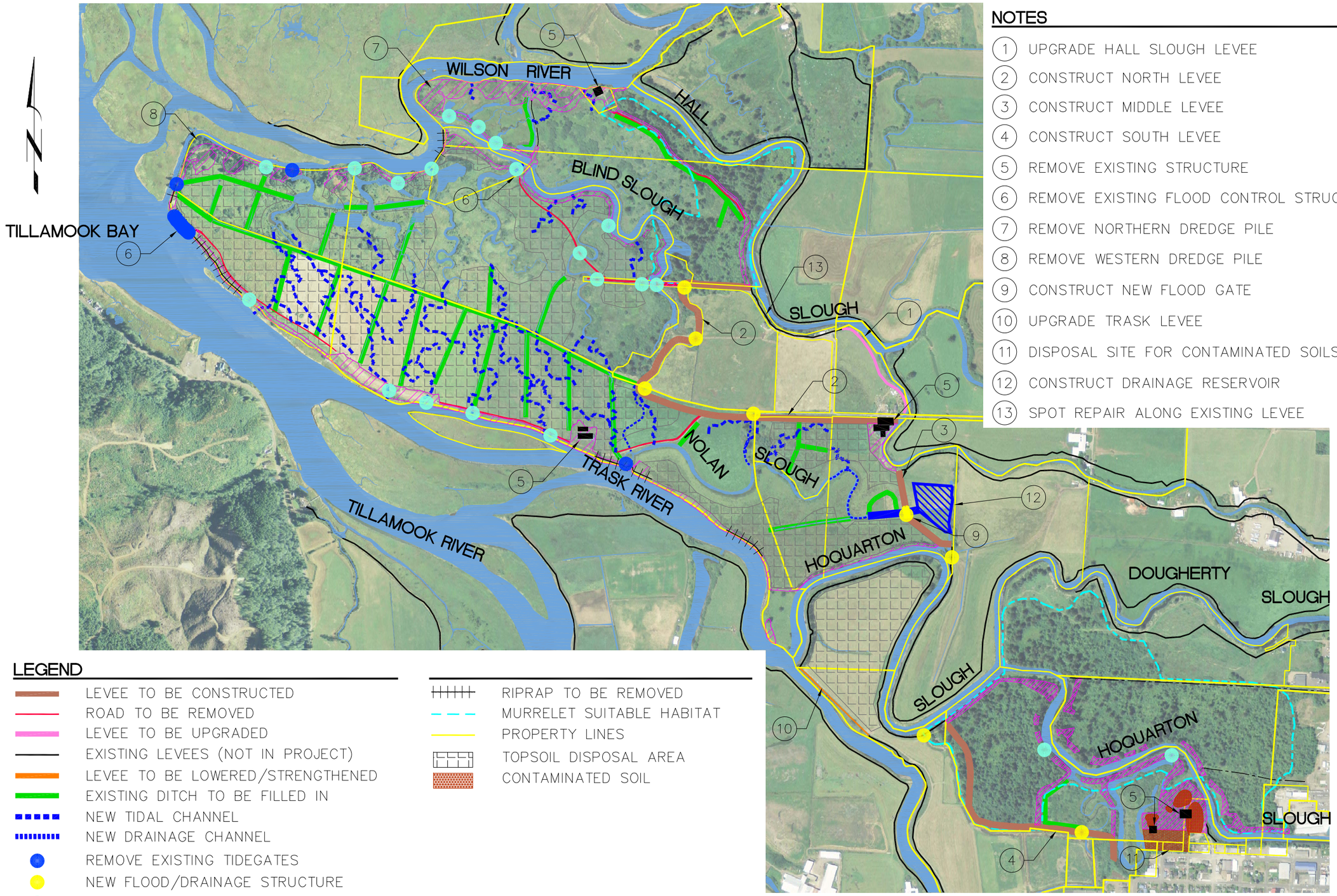
506 SW MILL STREET; PORTLAND, OREGON 97201

SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

CONSTRUCTION NOTES

Date: 02-05-16
Sheet No.: 4 of 37

2009-003-03



NOTES

1. UPGRADE HALL SLOUGH LEVEE
2. CONSTRUCT NORTH LEVEE
3. CONSTRUCT MIDDLE LEVEE
4. CONSTRUCT SOUTH LEVEE
5. REMOVE EXISTING STRUCTURE
6. REMOVE EXISTING FLOOD CONTROL STRUCTURE
7. REMOVE NORTHERN DREDGE PILE
8. REMOVE WESTERN DREDGE PILE
9. CONSTRUCT NEW FLOOD GATE
10. UPGRADE TRASK LEVEE
11. DISPOSAL SITE FOR CONTAMINATED SOILS
12. CONSTRUCT DRAINAGE RESERVOIR
13. SPOT REPAIR ALONG EXISTING LEVEE

LEGEND

- LEVEE TO BE CONSTRUCTED
- ROAD TO BE REMOVED
- LEVEE TO BE UPGRADED
- EXISTING LEVEES (NOT IN PROJECT)
- LEVEE TO BE LOWERED/STRENGTHENED
- EXISTING DITCH TO BE FILLED IN
- NEW TIDAL CHANNEL
- NEW DRAINAGE CHANNEL
- REMOVE EXISTING TIDEGATES
- NEW FLOOD/DRAINAGE STRUCTURE
- RECONNECT CHANNEL
- REMOVE FILL (LEVEES AND DREDGE SPOILS)
- WATER
- REMOVE EXISTING STRUCTURE
- RIPRAP TO BE REMOVED
- MURRELET SUITABLE HABITAT
- PROPERTY LINES
- TOPSOIL DISPOSAL AREA
- CONTAMINATED SOIL

PROJECT OVERVIEW

SCALE: 1" = 1000'

GRAPHIC SCALE

500 0 250 500 1000 2000

(IN FEET)
1 inch = 1000 ft.

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PROJECT OVERVIEW

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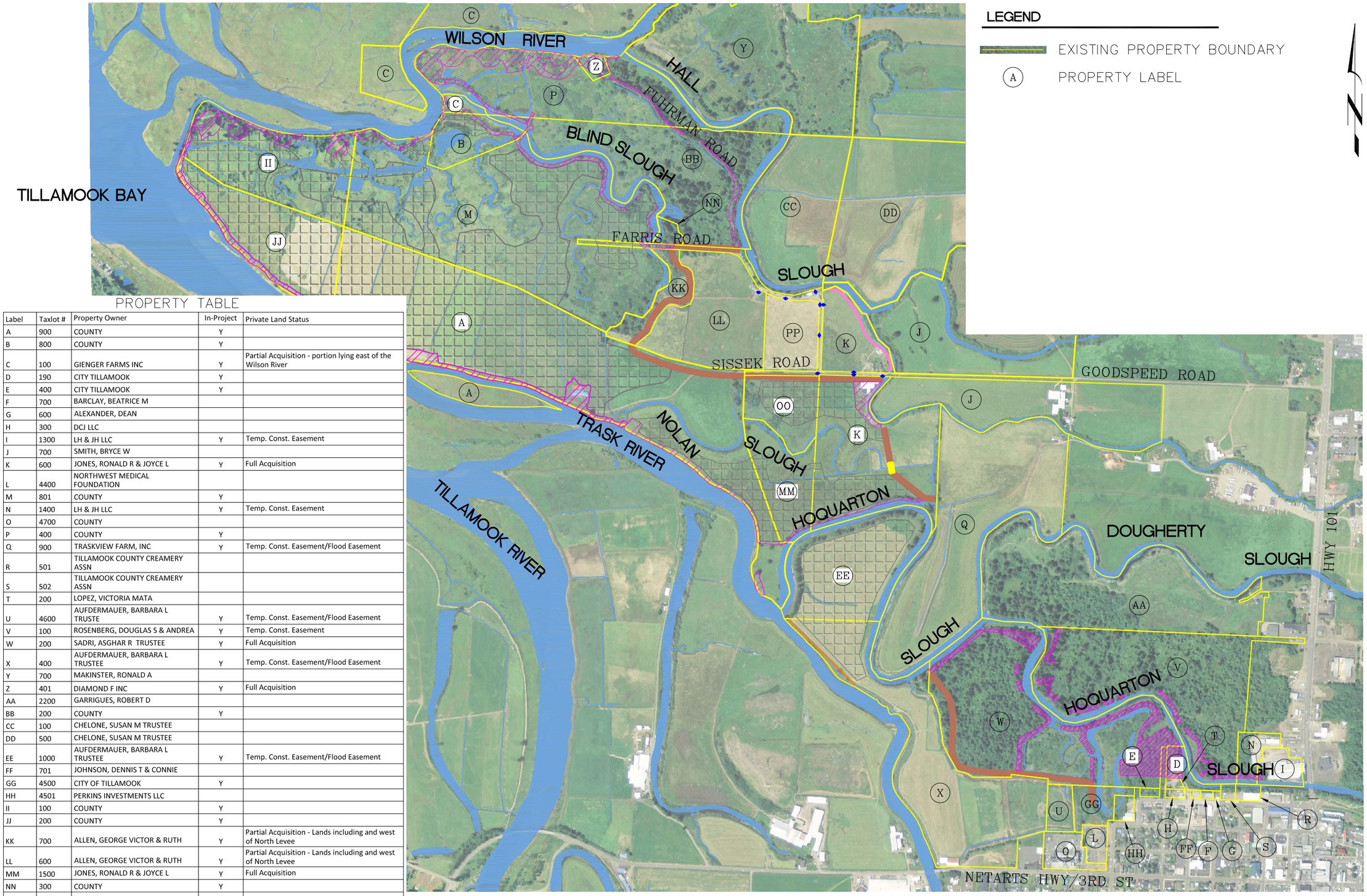

LEGEND

EXISTING PROPERTY BOUNDARY

(A) PROPERTY LABEL

PROPERTY TABLE

Label	Taxlot #	Property Owner	In-Project	Private Land Status
A	900	COUNTY	Y	
B	800	COUNTY	Y	
C	100	GIENGER FARMS INC	Y	Partial Acquisition - portion lying east of the Wilson River
D	190	CITY TILLAMOOK	Y	
E	400	CITY TILLAMOOK	Y	
F	700	BARCLAY, BEATRICE M		
G	600	ALEXANDER, DEAN		
H	300	DCJ LLC		
I	1300	LH & JH LLC	Y	Temp. Const. Easement
J	700	SMITH, BRYCE W		
K	600	JONES, RONALD R & JOYCE L	Y	Full Acquisition
L	4400	NORTHWEST MEDICAL FOUNDATION		
M	801	COUNTY	Y	
N	1400	LH & JH LLC	Y	Temp. Const. Easement
O	4700	COUNTY		
P	400	COUNTY	Y	
Q	900	TRASKVIEW FARM, INC	Y	Temp. Const. Easement/Flood Easement
R	501	TILLAMOOK COUNTY CREAMERY ASSN		
S	502	TILLAMOOK COUNTY CREAMERY ASSN		
T	200	LOPEZ, VICTORIA MATA		
U	4600	AUFDERMAUER, BARBARA L TRUSTE	Y	Temp. Const. Easement/Flood Easement
V	100	ROSENBERG, DOUGLAS S & ANDREA	Y	Temp. Const. Easement
W	200	SADRI, ASGHAR R TRUSTEE	Y	Full Acquisition
X	400	AUFDERMAUER, BARBARA L TRUSTEE	Y	Temp. Const. Easement/Flood Easement
Y	700	MAKINSTER, RONALD A		
Z	401	DIAMOND F INC	Y	Full Acquisition
AA	2200	GARRIGUES, ROBERT D		
BB	200	COUNTY	Y	
CC	100	CHELONE, SUSAN M TRUSTEE		
DD	500	CHELONE, SUSAN M TRUSTEE		
EE	1000	AUFDERMAUER, BARBARA L TRUSTEE	Y	Temp. Const. Easement/Flood Easement
FF	701	JOHNSON, DENNIS T & CONNIE		
GG	4500	CITY OF TILLAMOOK	Y	
HH	4501	PERKINS INVESTMENTS LLC		
II	100	COUNTY	Y	
JJ	200	COUNTY	Y	
KK	700	ALLEN, GEORGE VICTOR & RUTH	Y	Partial Acquisition - Lands including and west of North Levee
LL	600	ALLEN, GEORGE VICTOR & RUTH	Y	Partial Acquisition - Lands including and west of North Levee
MM	1500	JONES, RONALD R & JOYCE L	Y	Full Acquisition
NN	300	COUNTY	Y	
OO	1400	COUNTY	Y	
PP	500	JONES, RONALD R & JOYCE L	Y	Full Acquisition
Right-of-Way		COUNTY	Y	Portions of Goodspeed, Sissek & Farris Rd.
Right-of-Way		CITY	Y	Douglas Ave Extension

PROPERTY BOUNDARIES AND MONUMENTS

SCALE: 1" = 1000'

GRAPHIC SCALE

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PROPERTY BOUNDARIES

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NOTE: SEE SPECIFICATIONS FOR GOODSPEED ROAD DUST CONTROL REQUIREMENTS

PAVE 430± FT OF GOODSPEED ROAD TO COUNTY SPECIFICATIONS (MIN. 2"–THICK LEVEL 2, ½" DENSE HMAC WEARING SURFACE) INCLUDING HWY 101 INTERSECTION

REGRADE AND CROWN GOODSPEED AND SISSEK ROAD WITHIN COUNTY ROW W/ ¾"–0" ANGULAR CRUSHED AGGREGATE (OPTIONAL: MIXED W/ ASPHALT GRINDINGS TO RESULT IN A NOMINAL 50% MIX)

TILLAMOOK BAY
WILSON RIVER
NEW WOOD SLASH ACCESS ROAD
HALL
FUHRMAN ROAD
BLIND SLOUGH
GRAVEL CONSTRUCTION ENTRANCE (TYP)
MAINTAIN EX. GRAVEL TURNAROUND
FARRIS ROAD
SLOUGH
SISSEK ROAD
GOODSPEED ROAD
NEW PERMANENT GRAVEL ROAD
STOCK PILE
STAGING AREA
MATERIAL DRYING AREA
TRASK RIVER
NOLAN
SLOUGH
MAINTAIN CULVERT BENEATH GOODSPEED ROAD OR REPLACE, AS DIRECTED BY COUNTY
TILLAMOOK RIVER
OPTIONAL TEMPORARY BRIDGE
HOQUARTON
OPTIONAL TEMPORARY HAUL ROAD – CONSTRUCT ONLY IF TEMPORARY BRIDGE IS USED
DOUGHERTY
SLOUGH
HWY 101
SLOUGH
NEW PERMANENT GRAVEL ROAD
HOQUARTON
NEW WOOD SLASH ACCESS ROAD
SLOUGH
FRONT ST
NETARTS HWY/3RD ST
NO USE OF FRONT STREET TO/FROM HIGHWAY 101 DURING CITY ROAD INSTRUCTION

LEGEND

- EXISTING GRAVEL ROAD
- EXISTING PAVED ROAD
- NEW PERMANENT GRAVEL HAUL ROAD
- NEW WOOD SLASH ACCESS ROAD
- GRAVEL CONSTRUCTION ENTRANCE
- FILL REMOVAL AREA
- TOPSOIL DISPOSAL AREA

GRAPHIC SCALE
500 0 250 500 1000 2000
(IN FEET)
1 inch = 1000 ft.

ACCESS PLAN AND HAUL ROADS

SCALE: 1" = 1000'

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TILLAMOOK, OREGON

ACCESS PLAN AND HAUL ROADS

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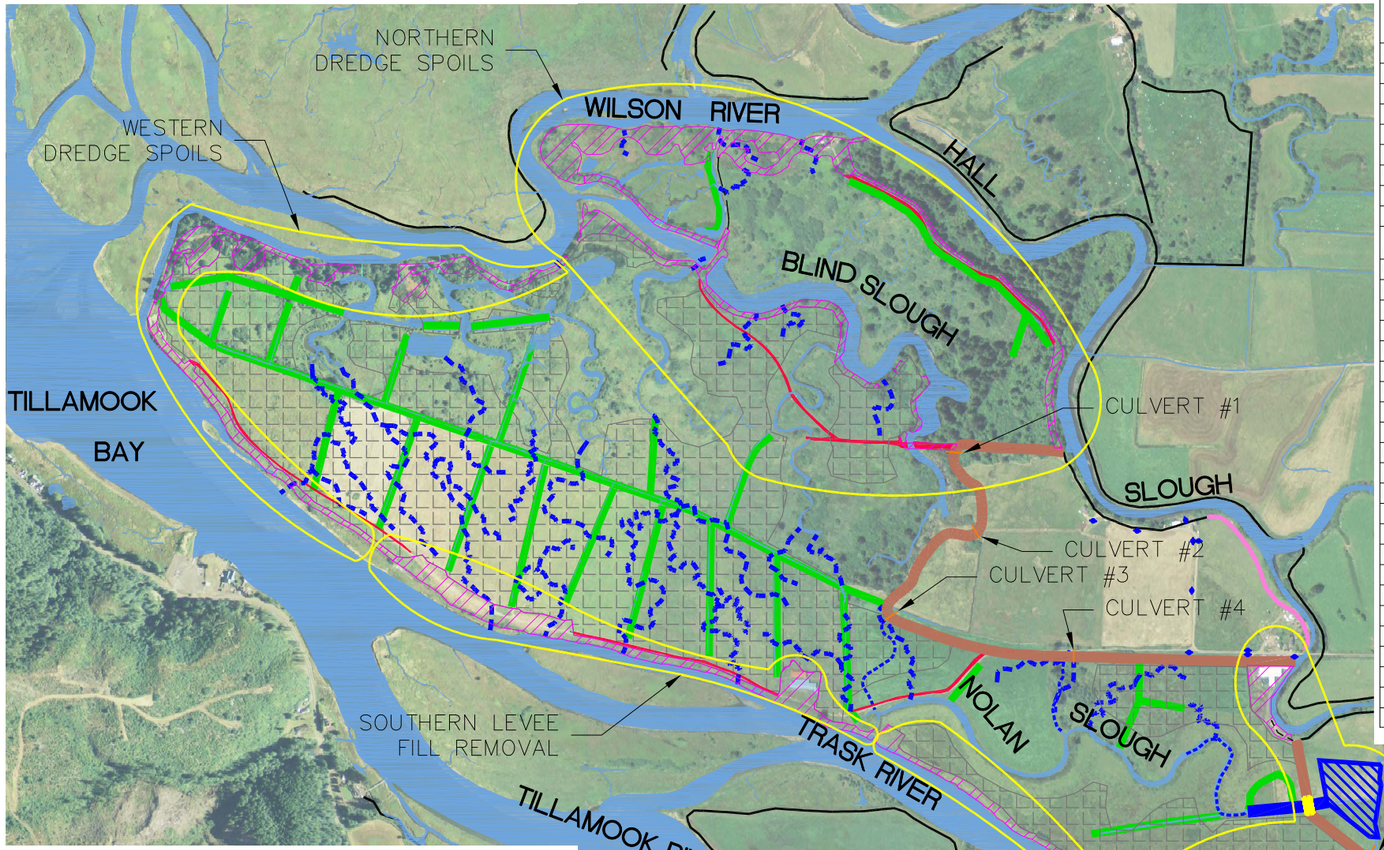
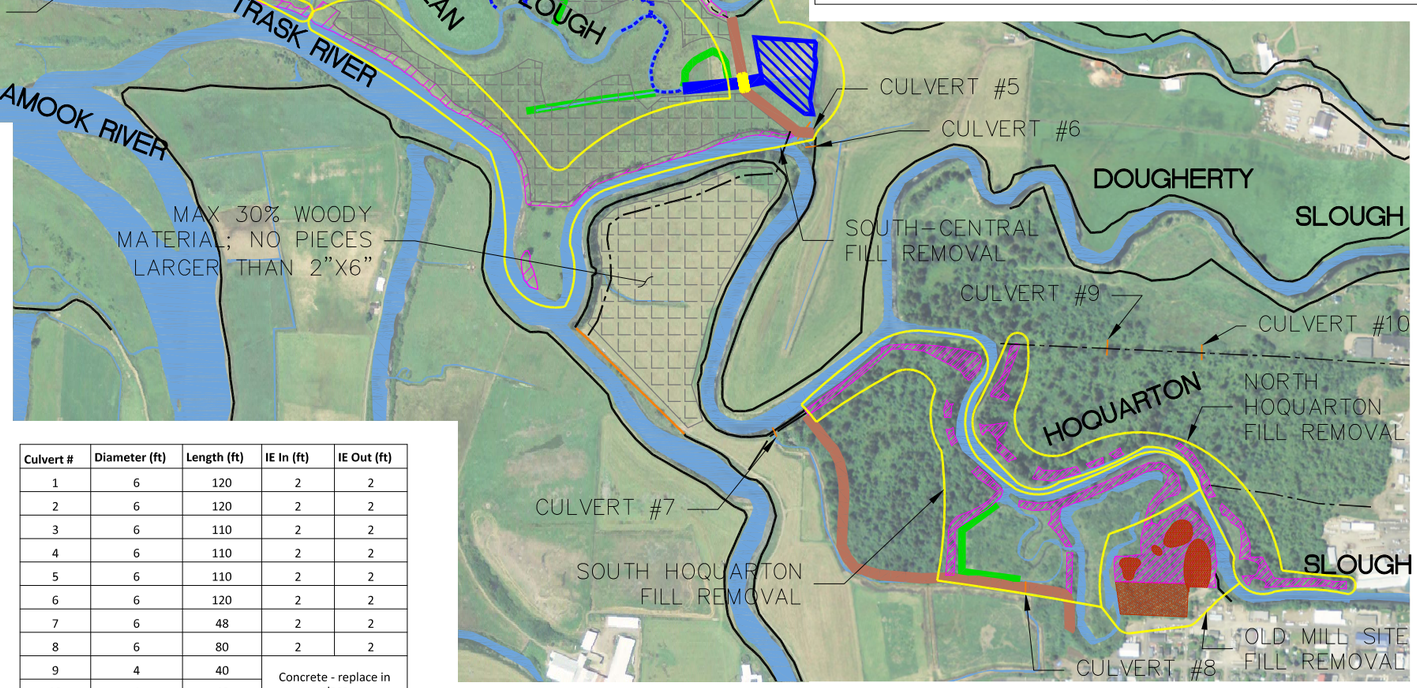
Sheet No.: 7 of 37

2009-003-03





Project Element	Total Volume (cy)*	Total Area (ac)	Total Length (ft)	Levee Road Aggregate (cy)	Stripping/Topsoil Volume (cy)**	Contaminated Volume (cy)	3' Summer Levee Volume (cy)	Clean Fill Volume (cy)
CUT								
North Levee	13,300	-	-	-	13,300	-	-	-
Middle Levee	2,200	-	-	-	2,200	-	-	-
South Levee	4,200	-	-	-	4,200	-	-	-
Trask Levee	700	-	-	-	700	-	-	-
Hall Slough Levee	1,200	-	-	-	1,200	-	-	-
Northern Dredge Piles	36,000	14.9	-	-	24,000	-	2,400	9,600
Western Dredge Piles	26,000	8.3	-	-	13,000	-	2,400	10,600
Southern Levee Fill Removal	22,000	7.4	-	-	12,000	-	2,700	7,300
South-Central Levee Fill Removal	14,500	5.6	-	-	9,000	-	800	4,700
Hoquarton South Fill Removal	23,000	5.4	-	-	9,000	-	1,700	12,300
Hoquarton North Fill Removal	21,000	3.3	-	-	5,000	-	1,700	14,300
Old Mill Site Fill Removal	43,000	7.8	-	-	13,000	21,000	300	8,700
Tidal Channels	15,000	2.3	29,200	-	4,000	-	-	11,000
Drainage Channels	11,000	5.6	3,500	-	4,000	-	-	7,000
Drainage Basin	20,000	3.1	-	-	5,000	-	-	15,000
Rip-Rap	3,000	1.0	2,800	-	-	-	-	-
TOTAL	**256,100**	**65**	**-**	**-**	**119,600**	**21,000**	**12,000**	**100,500**
FILL								
North Levee	79,000	8.3	4,991	2,800	3,900	-	-	72,300
Middle Levee	10,000	1.4	1,044	600	500	-	-	8,900
South Levee	19,000	2.6	2,764	1,500	600	-	-	16,900
Trask Levee	2,000	0.4	1,001	600	0	-	-	1,400
Hall Slough Levee	2,000	0.8	1,179	700	300	-	-	1,000
Old Mill Site Contaminated Soil	21,900	0.6	-	-	900	21,000	-	0
Ditch Fill	27,000	6.8	25,000	-	27,000	-	-	0
Topsoil Disposal Area	98,400	192.0	-	-	86,400	-	12,000	0
Rip Rap	3,000	-	1,044	-	-	-	-	-
TOTAL	**262,300**	**213**	**-**	**6,200**	**119,600**	**21,000**	**12,000**	**100,500**
Wood Slash Access Roads	3,000	0.9		-	-	-	-	-

Volumes are based on Lidar surface data, which may be off as much as +-20%.

***Assuming 12" stripping (cut) depth and 6" topsoil (fill) depth*

LEGEND

- LEVEE TO BE CONSTRUCTED
- ROAD TO BE REMOVED
- LEVEE TO BE UPGRADED
- EXISTING LEVEES (NOT IN PROJECT)
- LEVEE TO BE LOWERED/STRENGTHENED
- EXISTING DITCH TO BE FILLED IN
- NEW TIDAL CHANNEL
- NEW DRAINAGE CHANNEL
- WATER
- TOPSOIL DISPOSAL AREA
- CONTAMINATED SOIL
- FILL REMOVAL AREA

NOTES

1. ALL FILL REMOVAL AND DISPOSAL AREAS TO BE HYDROSEEDED.
2. ALL LEVEES CONSTRUCTED OR DISTURBED SHALL BE MATTED AND SEEDED.

Culvert #	Diameter (ft)	Length (ft)	IE In (ft)	IE Out (ft)
1	6	120	2	2
2	6	120	2	2
3	6	110	2	2
4	6	110	2	2
5	6	110	2	2
6	6	120	2	2
7	6	48	2	2
8	6	80	2	2
9	4	40	Concrete - replace in place	
10	4	40		

GRADING OVERVIEW

SCALE: 1" = 1000'

GRAPHIC SCALE

500 0 250 500 1000 2000

(IN FEET)
1 inch = 1000 ft.

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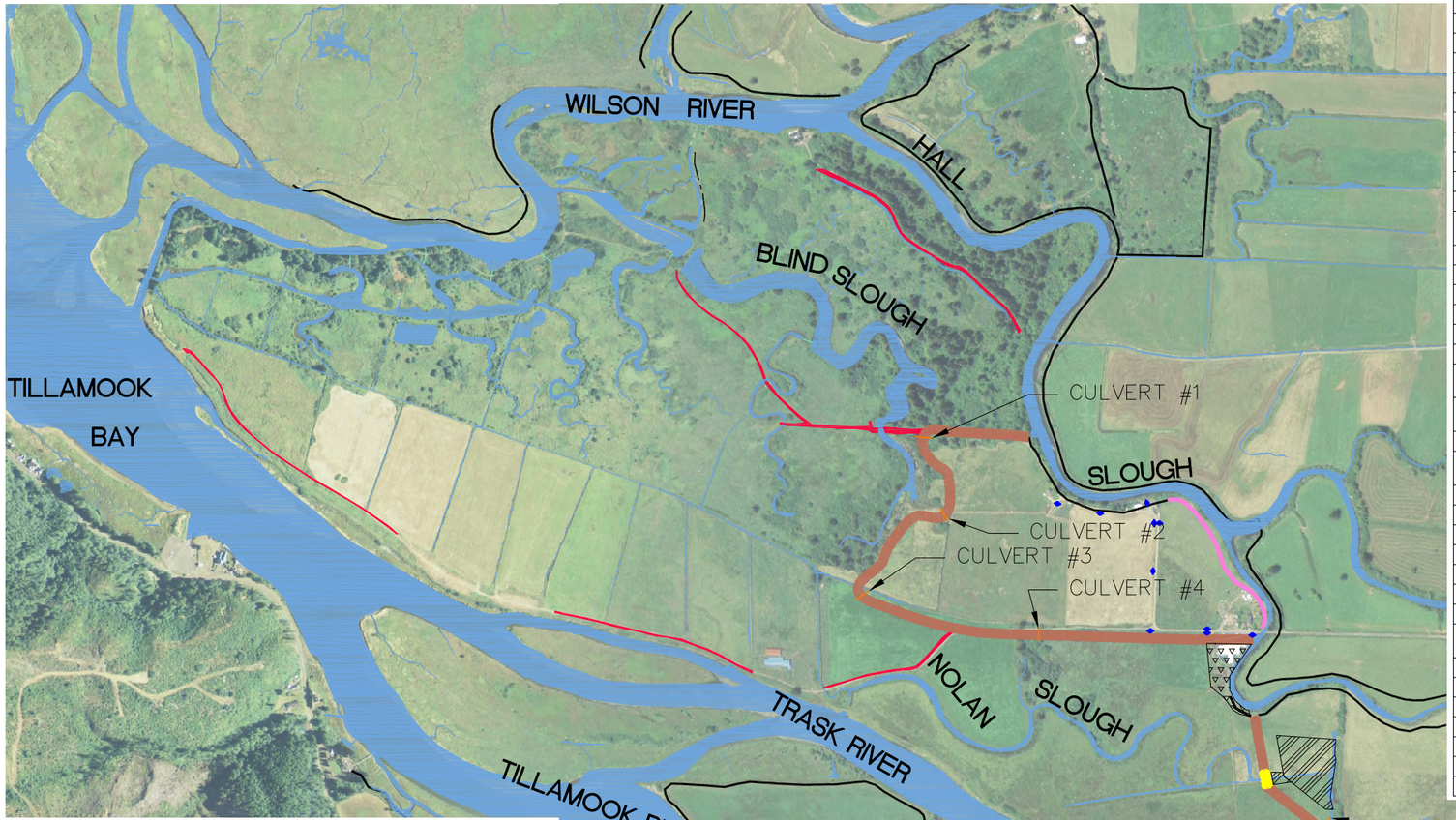
506 SW MILL STREET; PORTLAND, OREGON 97201

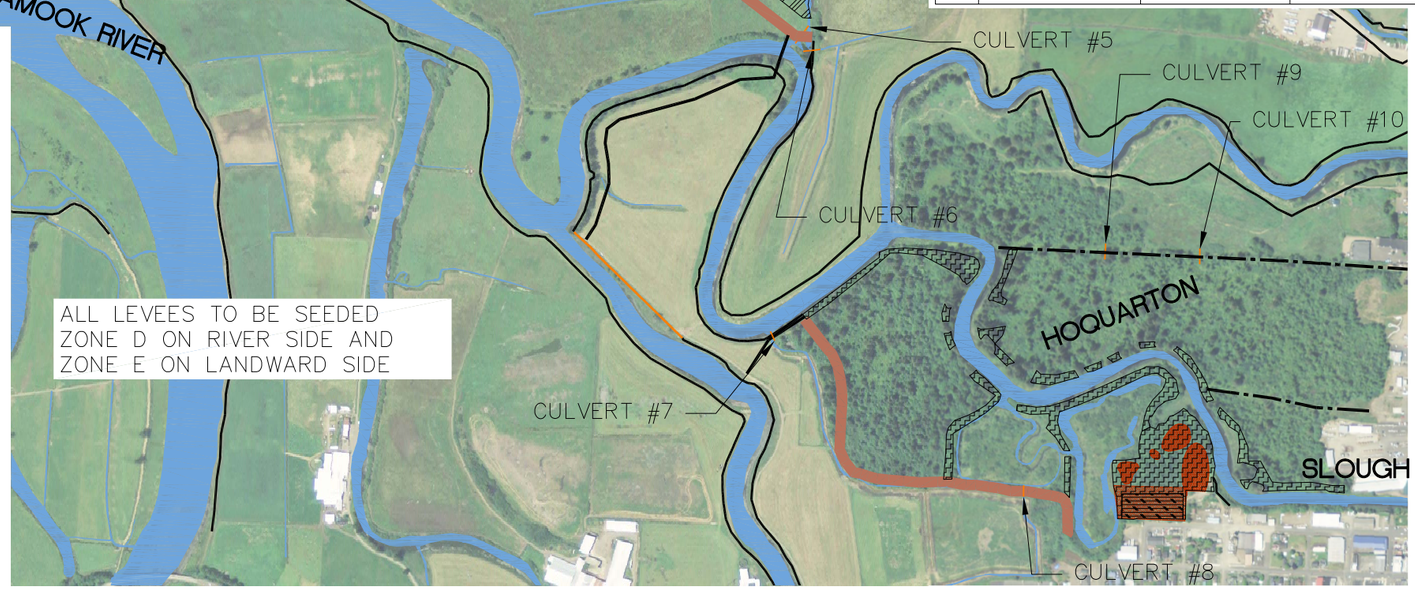
SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

GRADING OVERVIEW AND CULVERT DETAILS

Date: 02-05-16 | Sheet No.: 8 | 8 of 37

2009-003-03





		Construction Year 1 Grass/Sedge/Forb Seeding	
Zone	Zone Type	Candidate Species (*=non-native)	
B	Freshwater Diked Wetland	Carex stipata	Sawbreak Sedge
		Carex obnupta	Slough Sledge
		Eleocharis palustris	Creeping Spikerush
		Juncus tenuis	Slender Rush
		Juncus ensifolius	Dagger-leaf Rush
		Scirpus microcarpus	Small-fruited bulrush
		Glyceria occidentallis	Western Mannagrass
		Grindelia integrifolia	Entire-Leaved Gumweed
		Alopecurus geniculatus	Water Foxtail
D	Tidal Freshwater Swamp	Hordeum brachyantherum	Meadow Barley
		Bromus carinatus	California Brome
		Festuca rubra rubra	Native Red Fescue
		Glyceria occidentallis	Northwestern Mannagrass
		Deschampsia cespitosa	Tufted Hairgrass
		Agrostis exarata	Spike Bentgrass
		Carex obnupta	Slough Sedge
		Scirpus microcarpus	Small-fruited bulrush
E	Levee/Containment Cell	Lolium multiflorium*	Annual Ryegrass
		Lolium perenne*	Perennial Ryegrass
		Hordeum brachyantherum	Meadow Barley
		Bromus carinatus	California Brome
		Festuca rubra rubra	Native Red Fescue
		Glyceria occidentallis	Northwestern Mannagrass
		Deschampsia cespitosa	Tufted Hairgrass
		Agrostis exarata	Spike Bentgrass
		Carex lyngbyei	Lyngbye's sedge
		Juncus balticus	Baltic rush
F	Riparian	Hordeum brachyantherum	Meadow Barley
		Bromus carinatus	California Brome
		Festuca rubra rubra	Native Red Fescue
		Glyceria occidentallis	Northwestern Mannagrass
		Deschampsia cespitosa	Tufted Hairgrass
		Agrostis exarata	Spike Bentgrass

LEGEND

- LEVEE TO BE CONSTRUCTED
- ROAD TO BE REMOVED
- LEVEE TO BE UPGRADED
- EXISTING LEVEES (NOT IN PROJECT)
- LEVEE TO BE LOWERED/STRENGTHENED
- WATER

ALL LEVEES TO BE SEEDED
ZONE D ON RIVER SIDE AND
ZONE E ON LANDWARD SIDE

SEED MIX ZONES

- ZONE B (3.4 ACRES)
- ZONE D (7.1 ACRES)
- ZONE E (1.5 ACRES)
- ZONE F (1.7 ACRES)

REVEGETATION OVERVIEW

SCALE: 1" = 1000'

GRAPHIC SCALE

500 0 250 500 1000 2000

(IN FEET)
1 inch = 1000 ft.

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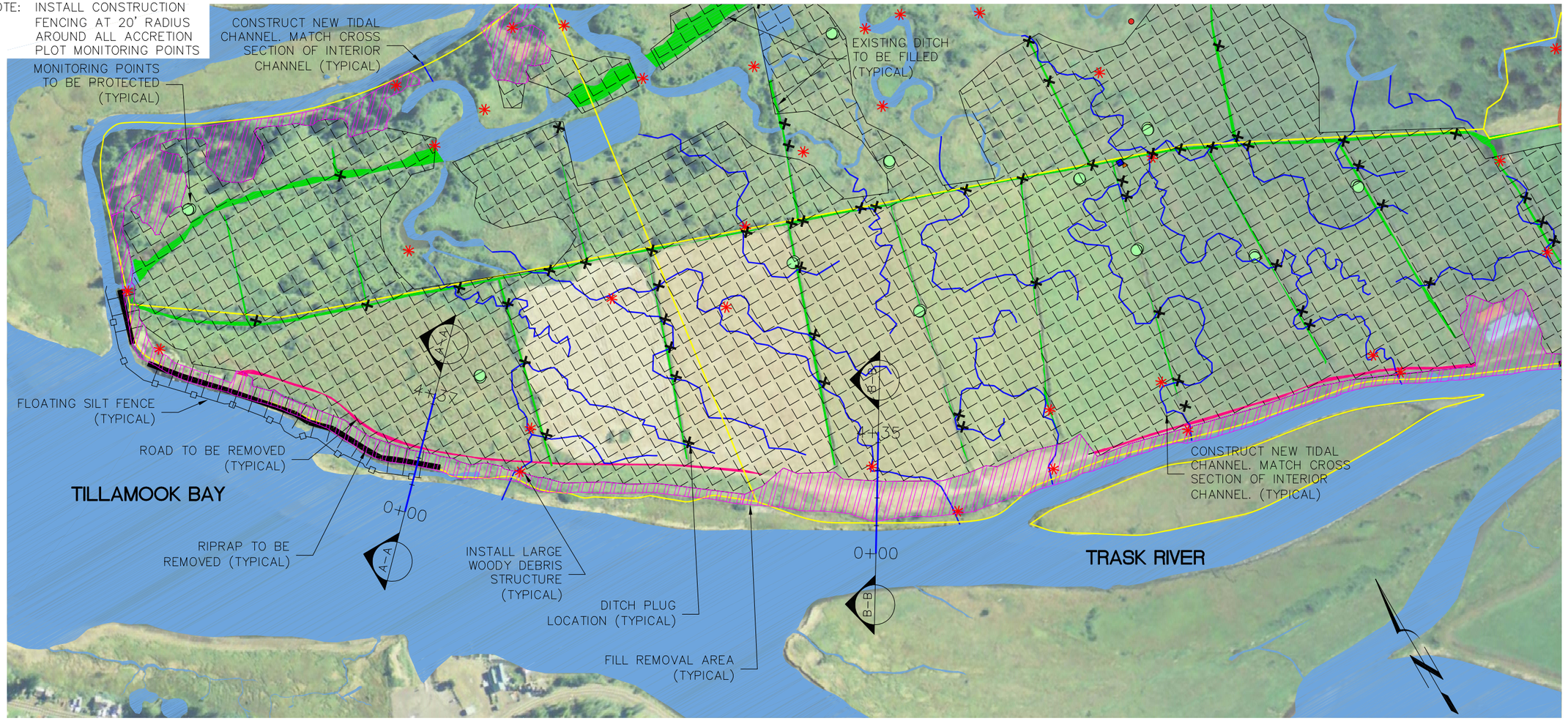
SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

REVEGETATION OVERVIEW

Sheet No. 9 of 37
Date 02-05-16
2009-003-03

NOTE: INSTALL CONSTRUCTION FENCING AT 20' RADIUS AROUND ALL ACCRETION PLOT MONITORING POINTS



SECTIONS A-A AND B-B

SCALE: 1" = 400'

GRAPHIC SCALE

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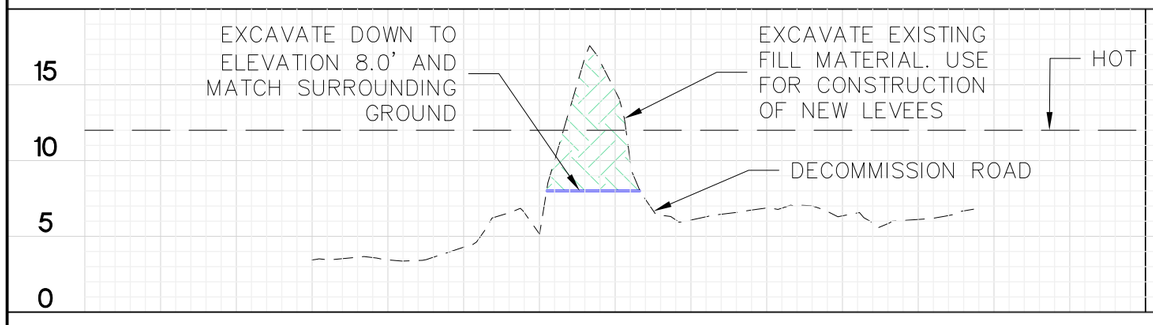
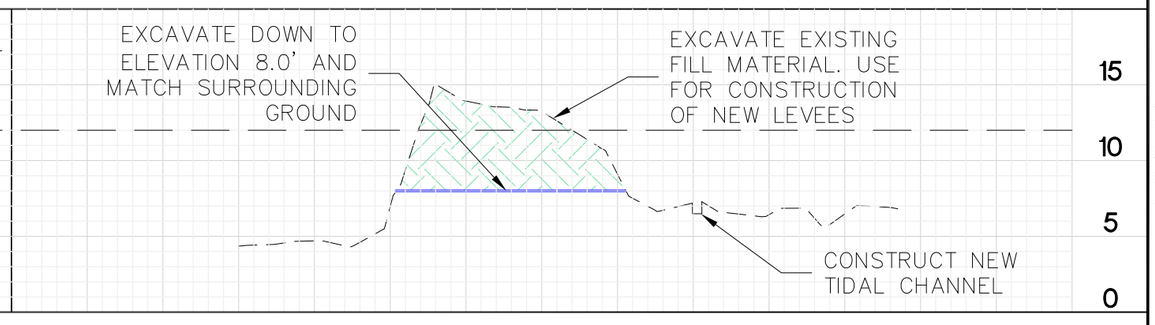
(IN FEET)
1 inch = 400 ft.



SECTION A-A PROFILE

SCALE: HOR: 1" = 100'
VER: 1" = 10'



SECTION B-B PROFILE

SCALE: HOR: 1" = 100'
VER: 1" = 10'

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SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

GRADING/ESC PLAN
SECTIONS A-A AND B-B

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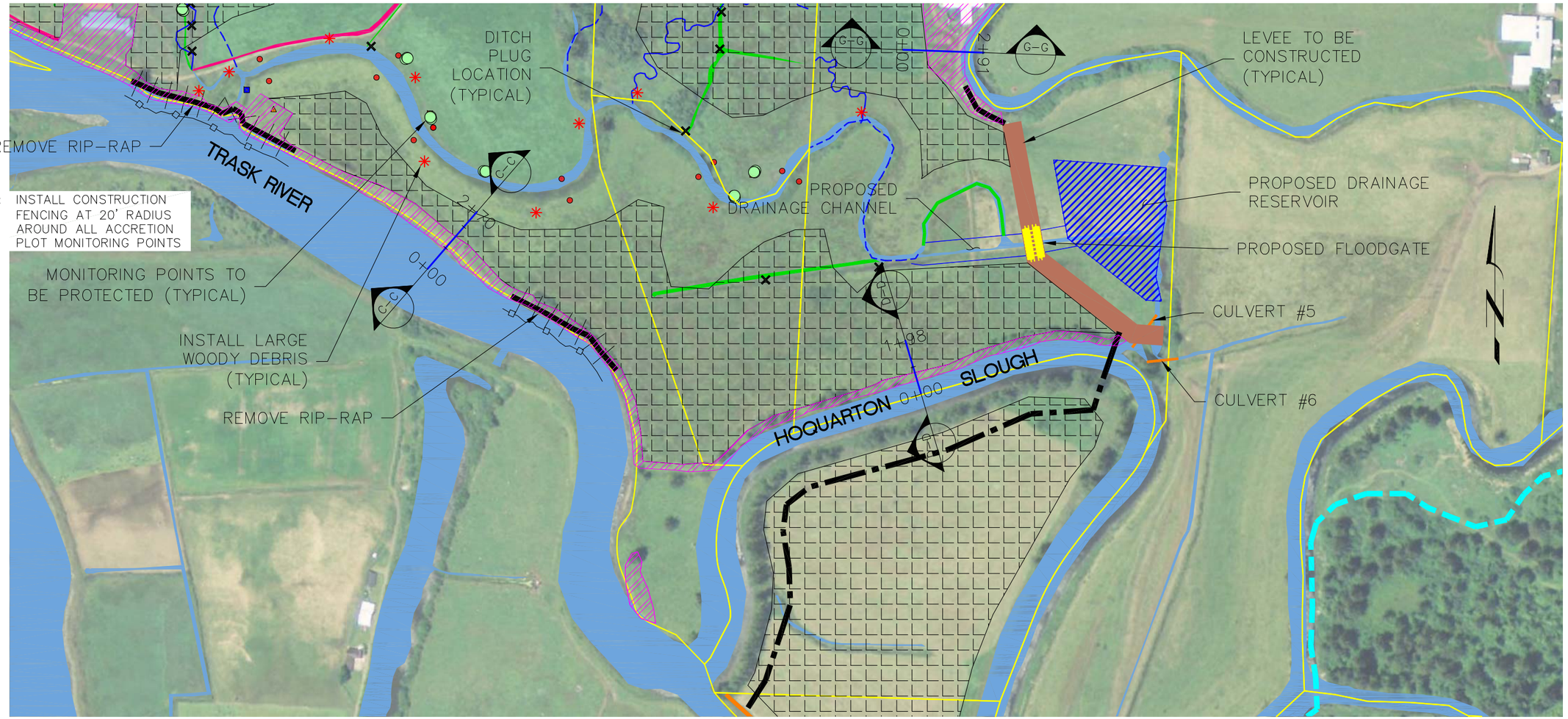
Date 02-05-16
2009-003-03



SECTIONS C-C, D-D, AND G-G

SCALE: 1" = 400'

GRAPHIC SCALE

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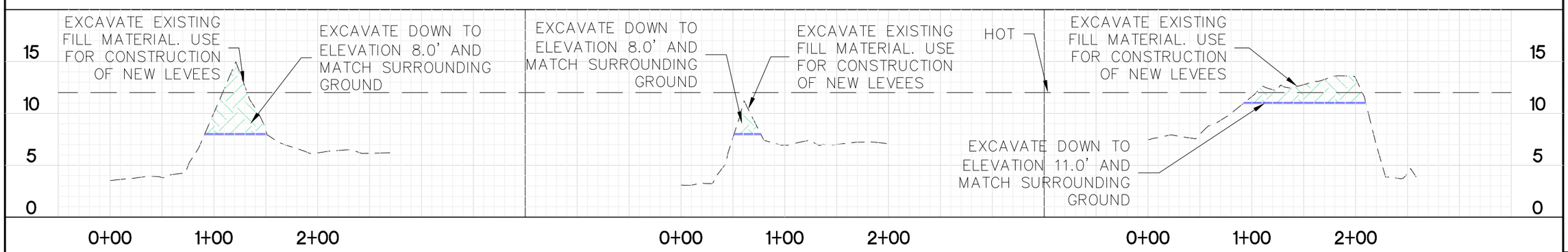
(IN FEET)
1 inch = 400 ft.



SECTION C-C PROFILE

SCALE: HOR: 1" = 100'
VER: 1" = 10'

SECTION D-D PROFILE

SCALE: HOR: 1" = 100'
VER: 1" = 10'

SECTION G-G PROFILE

SCALE: HOR: 1" = 100'
VER: 1" = 10'

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SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

GRADING/ESC PLAN
SECTIONS C-C, D-D AND G-G

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Date 02-05-16
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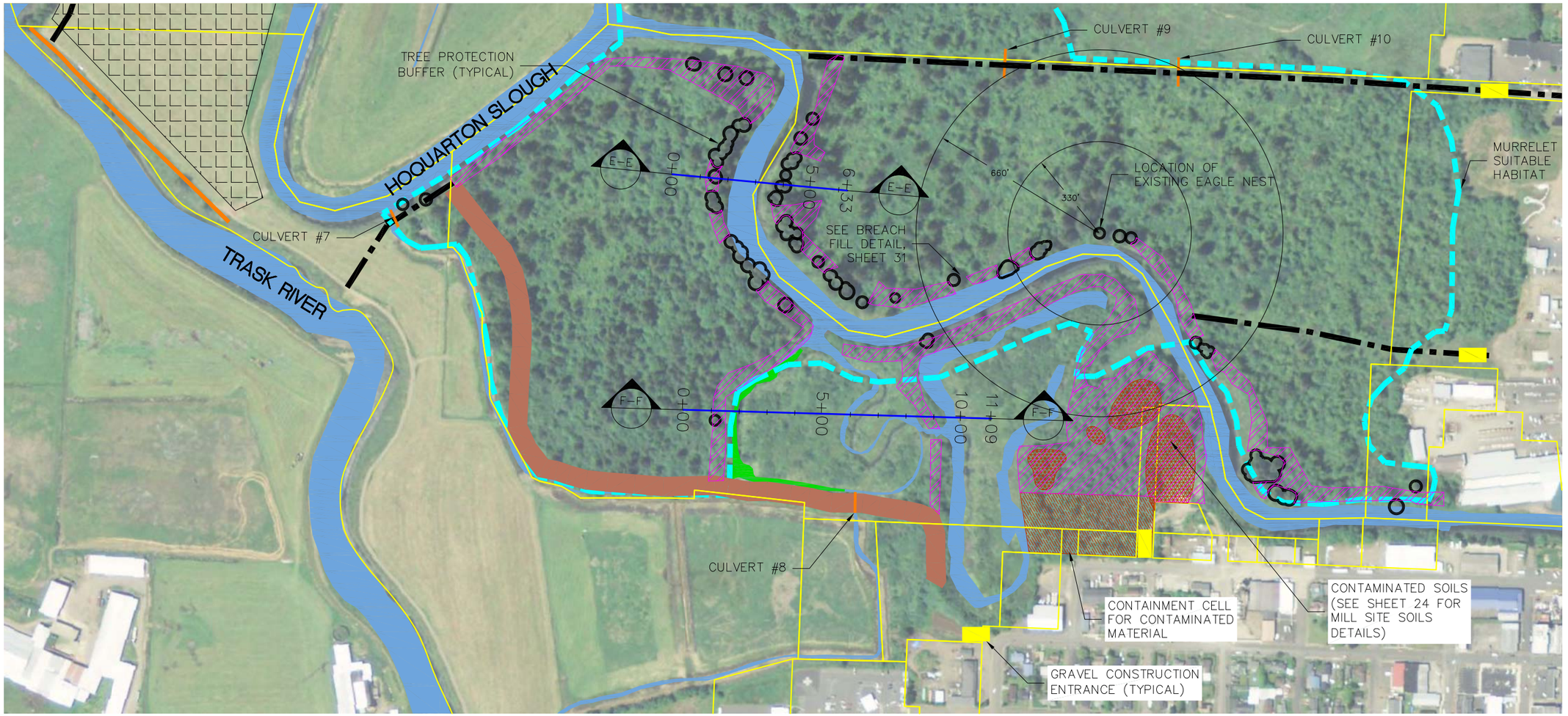

SECTIONS E-E AND F-F

SCALE: 1" = 400'

GRAPHIC SCALE

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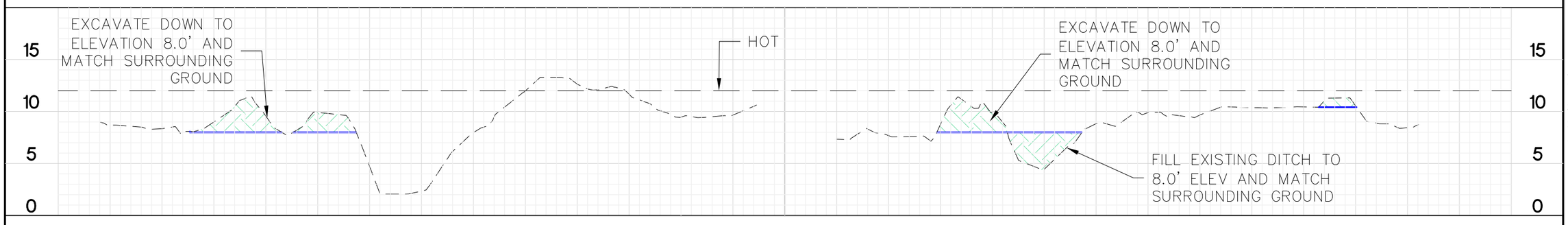
(IN FEET)
1 inch = 400 ft.



SECTION E-E PROFILE

SCALE: HOR: 1" = 100'
VER: 1" = 10'

SECTION F-F PROFILE

SCALE: HOR: 1" = 200'
VER: 1" = 10'

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GRADING/ESC PLAN
SECTIONS E-E AND F-F

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Date 02-05-16
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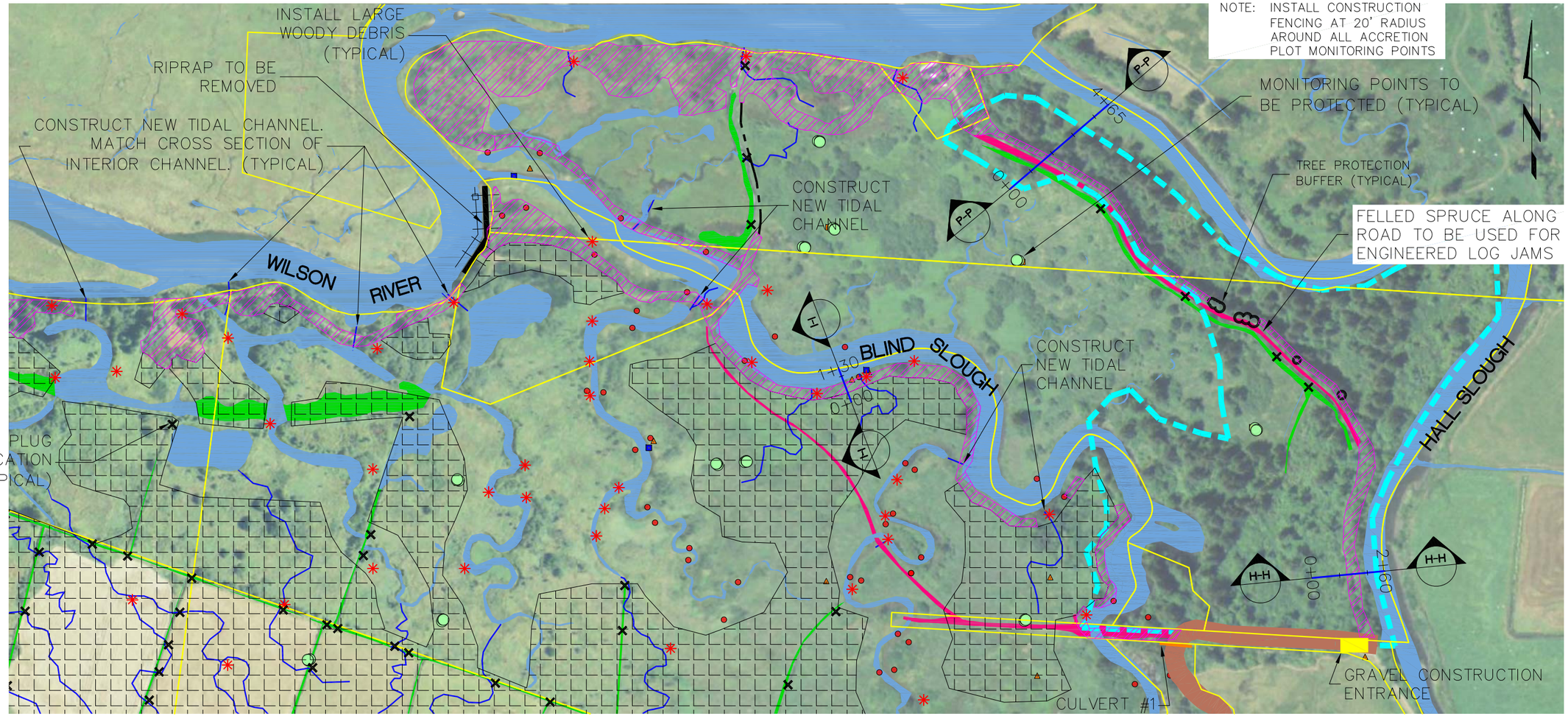

SECTIONS H-H, I-I AND P-P

SCALE: 1" = 400'

GRAPHIC SCALE

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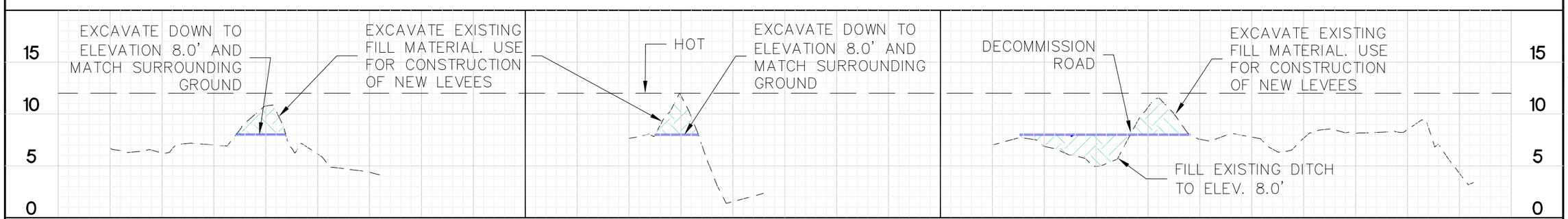
(IN FEET)
1 inch = 400 ft.



SECTION H-H PROFILE

SCALE: HOR: 1" = 100'
VER: 1" = 10'

SECTION I-I PROFILE

SCALE: HOR: 1" = 100'
VER: 1" = 10'

SECTION P-P PROFILE

SCALE: HOR: 1" = 100'
VER: 1" = 10'

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SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

GRADING/ESC PLAN
SECTIONS H-H, I-I AND P-P

Sheet No. 13 of 37
Date 02-05-16
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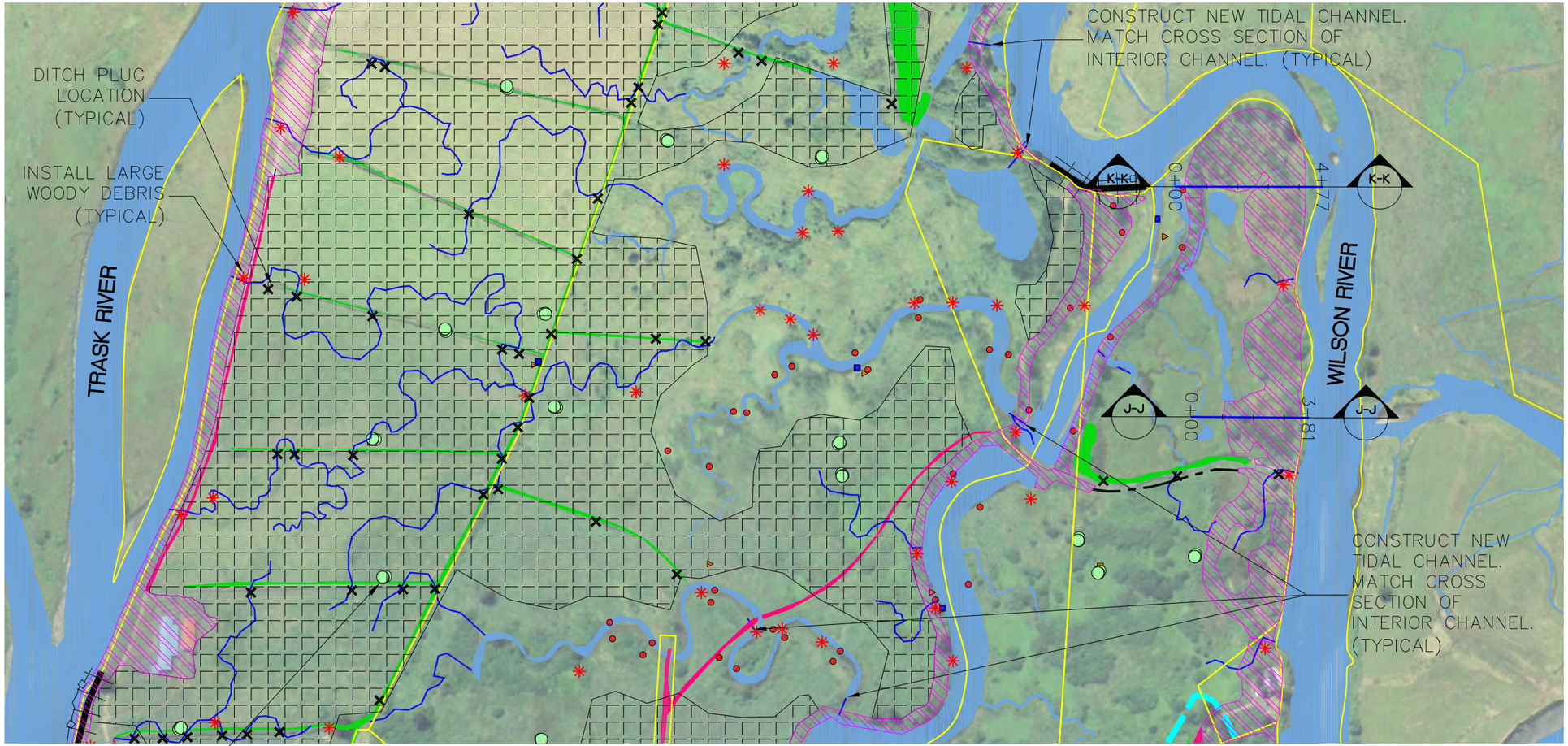

MONITORING POINTS TO BE PROTECTED (TYPICAL)

NOTE: INSTALL CONSTRUCTION FENCING AT 20' RADIUS AROUND ALL ACCRETION PLOT MONITORING POINTS

SECTIONS J-J AND K-K

SCALE: 1" = 400'

GRAPHIC SCALE

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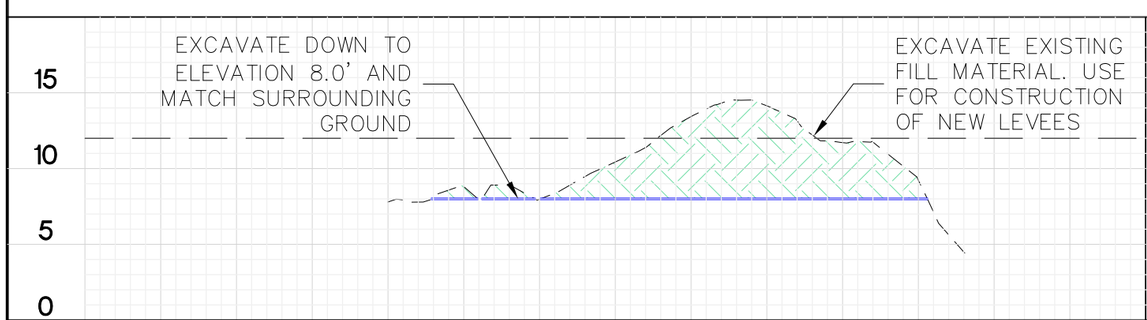
(IN FEET)
1 inch = 400 ft.



SECTION J-J PROFILE

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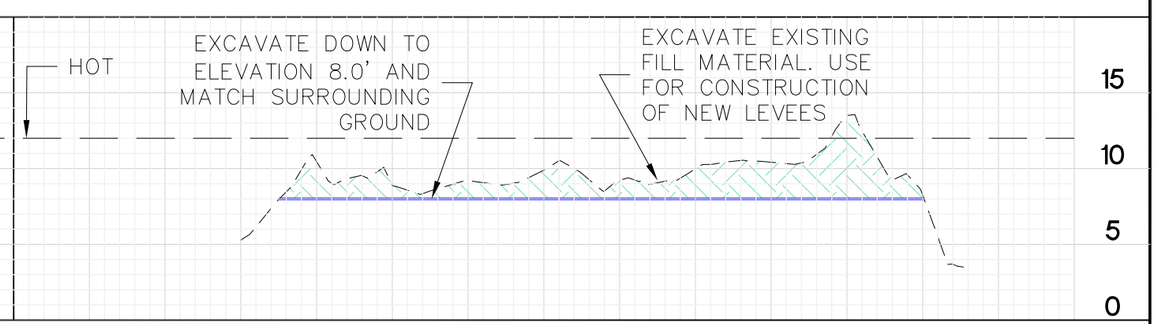
VER: 1" = 10'



SECTION K-K PROFILE

SCALE: HOR: 1" = 100'
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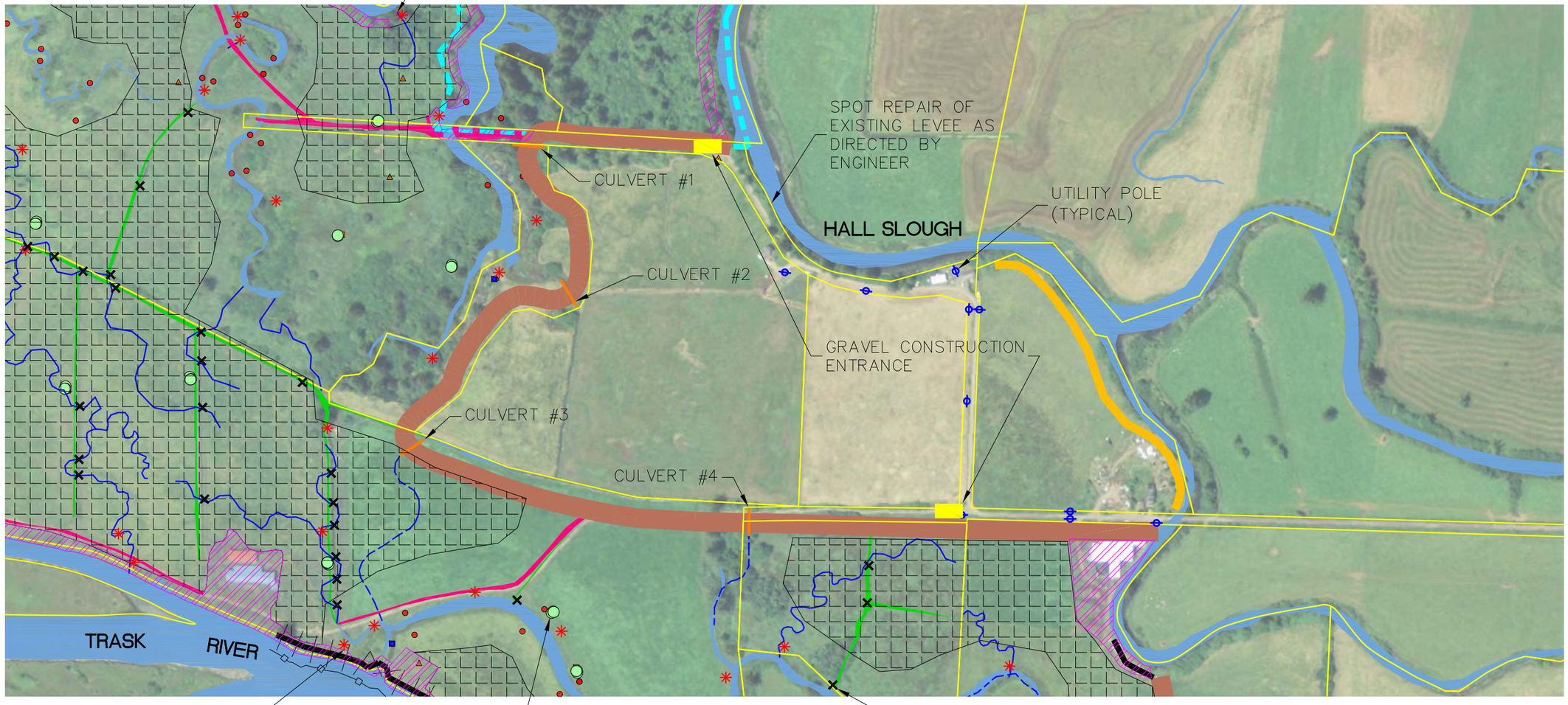
SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

GRADING/ESC PLAN
SECTIONS J-J AND K-K

Sheet No. 14 of 37
Date 02-05-16
2009-003-03



NOTE: INSTALL CONSTRUCTION FENCING AT 20' RADIUS AROUND ALL ACCRETION PLOT MONITORING POINTS

NORTH LEVEE AREA

SCALE: 1" = 400'

GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)
1 inch = 400 ft.

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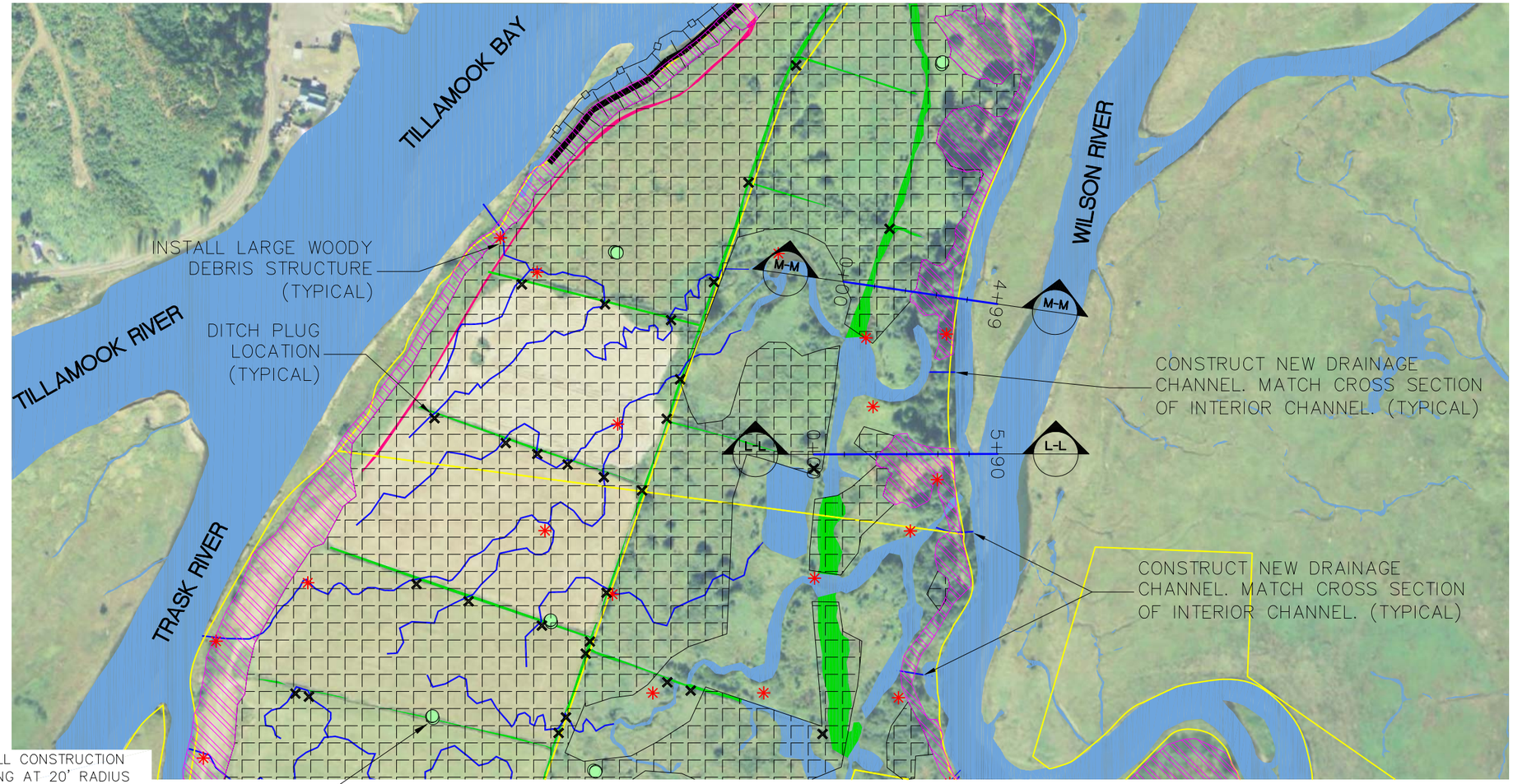
OREGON SOLUTIONS
506 SW MILL STREET, PORTLAND, OREGON 97201

SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

GRADING/ESC PLAN
NORTH LEVEE AREA

Date: 02-05-16
Sheet No.: 15 of 37

2009-003-03



NOTE: INSTALL CONSTRUCTION FENCING AT 20' RADIUS AROUND ALL ACCRETION PLOT MONITORING POINTS

SECTIONS L-L AND M-M

SCALE: 1" = 400'

GRAPHIC SCALE

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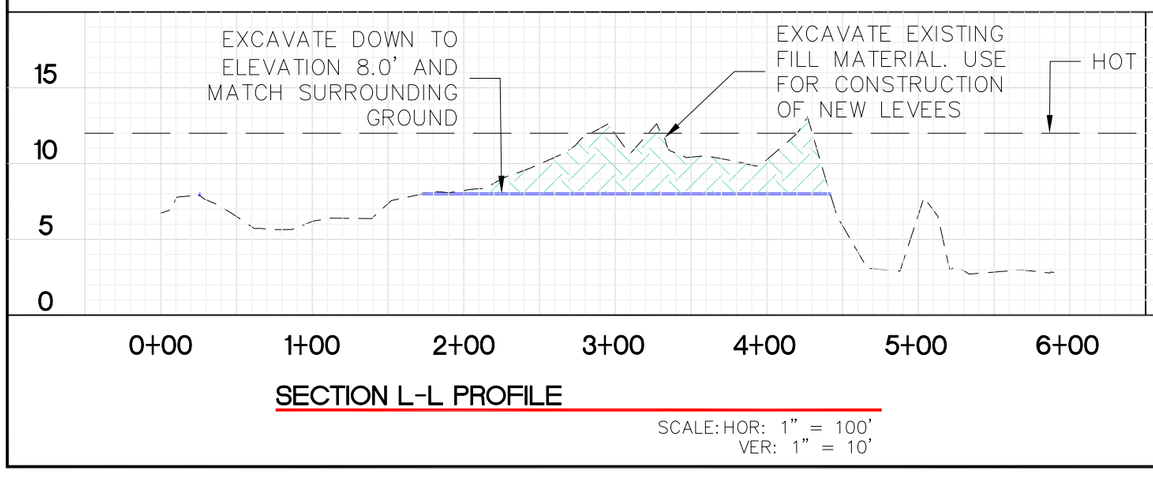
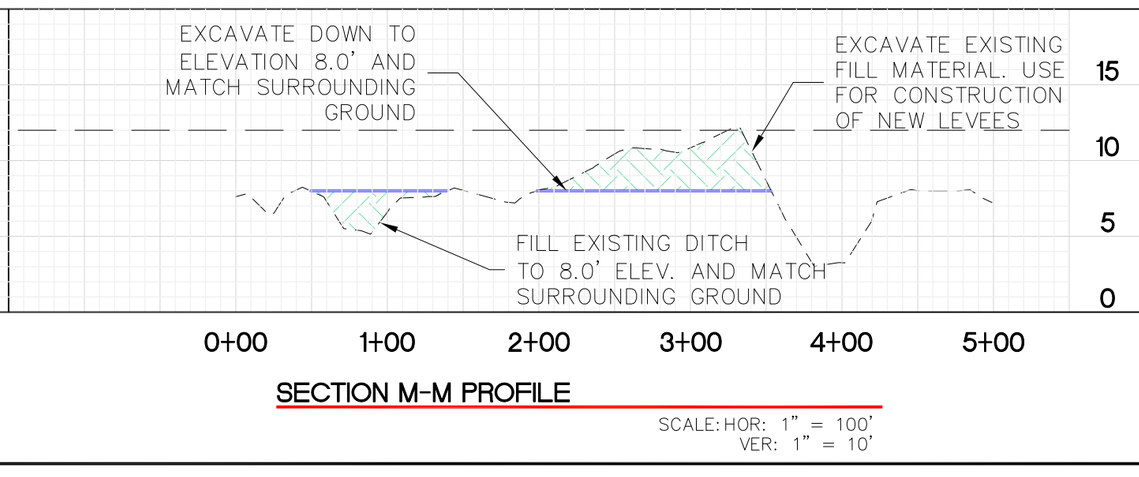
(IN FEET)
1 inch = 400 ft.



SECTION L-L PROFILE

SCALE: HOR: 1" = 100'
VER: 1" = 10'



SECTION M-M PROFILE

SCALE: HOR: 1" = 100'
VER: 1" = 10'

REGISTERED PROFESSIONAL ENGINEER
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MARCH 09, 2010
ANDREY R. CHERNISHOV
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File: L:\2009-003-03\dwg\Permit Set\SECTIONS | Layout: L-L & M-M

REV.	DATE	DESCRIPTION	BY

0" 0.5"
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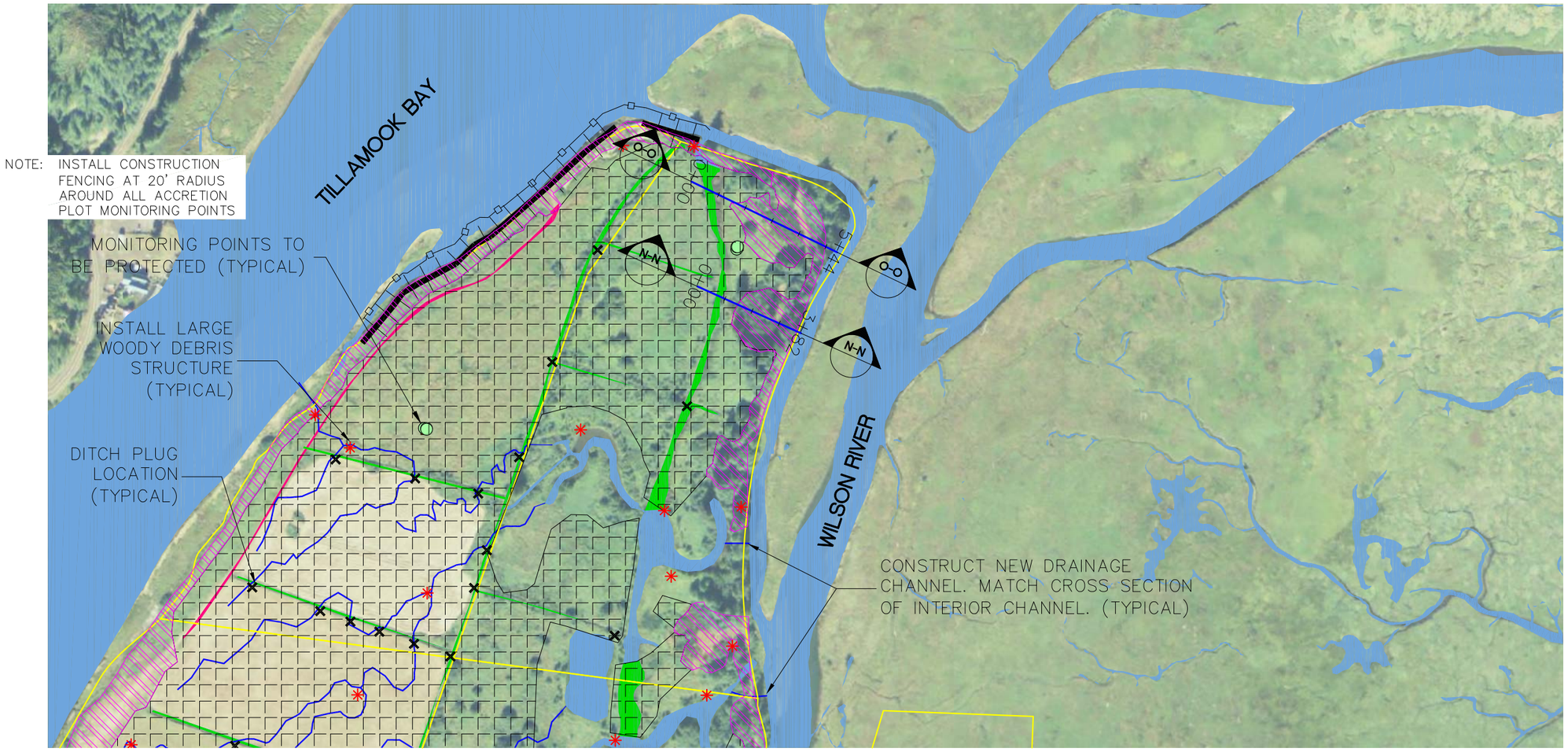
OREGON SOLUTIONS
506 SW MILL STREET; PORTLAND, OREGON 97201

SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

GRADING/ESC PLAN
SECTIONS L-L AND M-M

Sheet No. 16 of 37
Date 02-05-16
2009-003-03



SECTIONS N-N AND O-O

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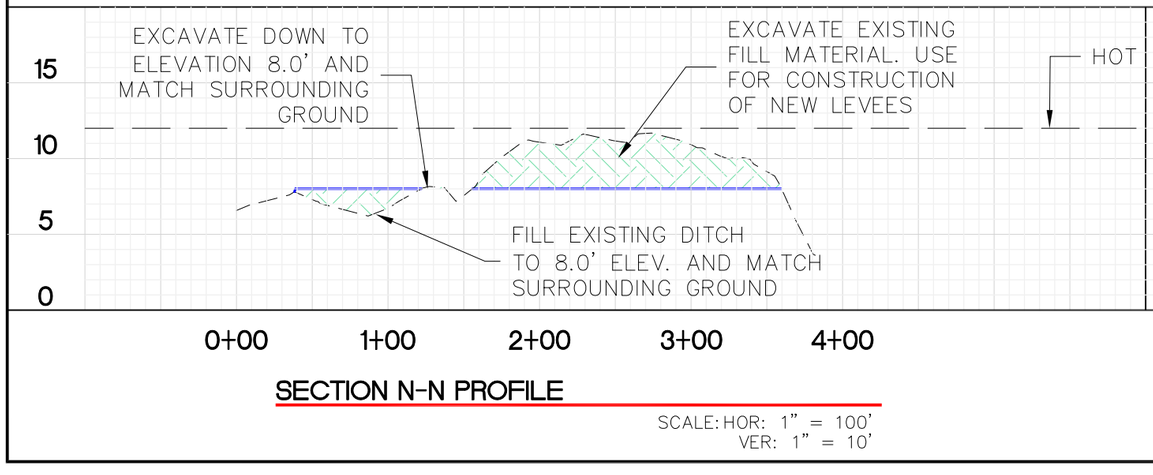
(IN FEET)
1 inch = 400 ft.



SECTION N-N PROFILE

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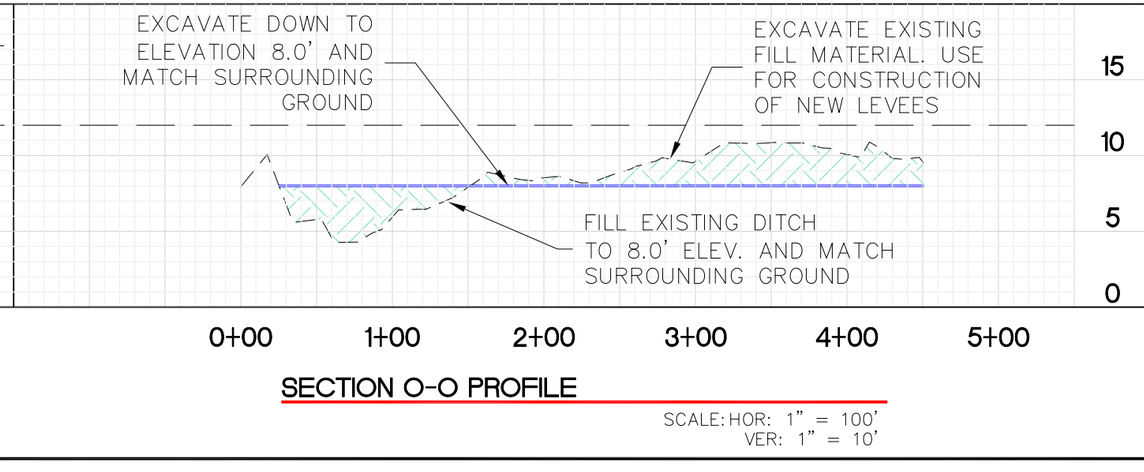
VER: 1" = 10'



SECTION O-O PROFILE

SCALE: HOR: 1" = 100'
VER: 1" = 10'

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OREGON SOLUTIONS
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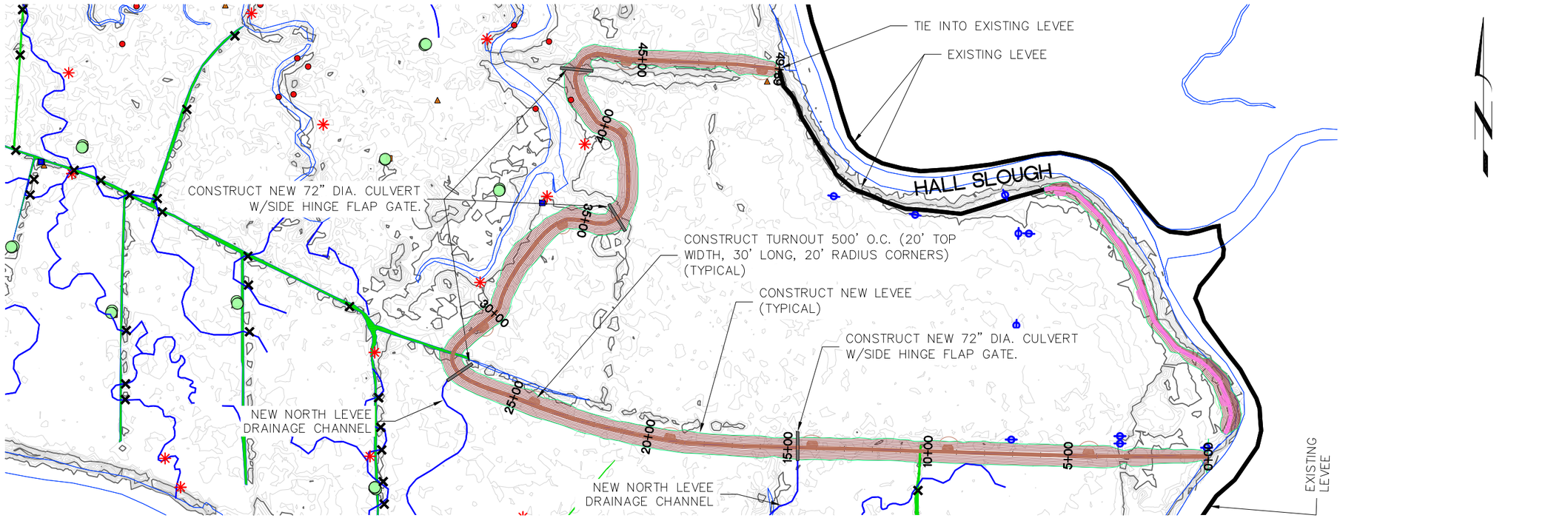
SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

FILL REMOVAL SECTIONS N-N AND O-O

Sheet No. 17 of 37
Date 02-05-16
2009-003-03



NORTH LEVEE PLAN

SCALE: 1" = 400'

GRAPHIC SCALE

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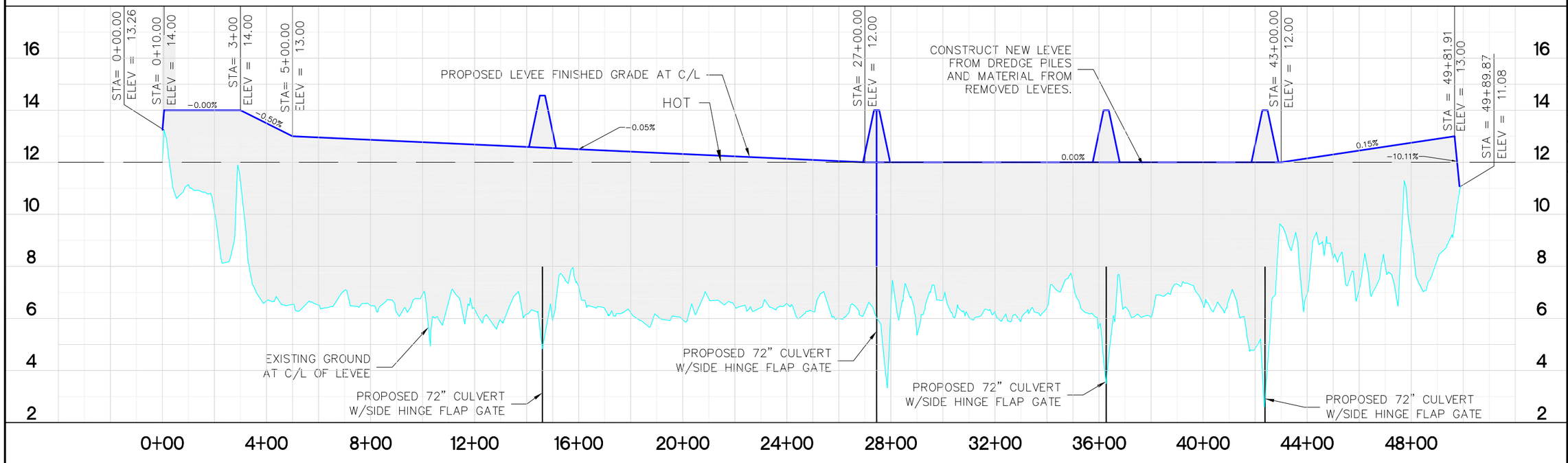
(IN FEET)
1 inch = 400 ft.



NORTH LEVEE PROFILE

SCALE: HOR: 1" = 400'
VER: 1" = 4'

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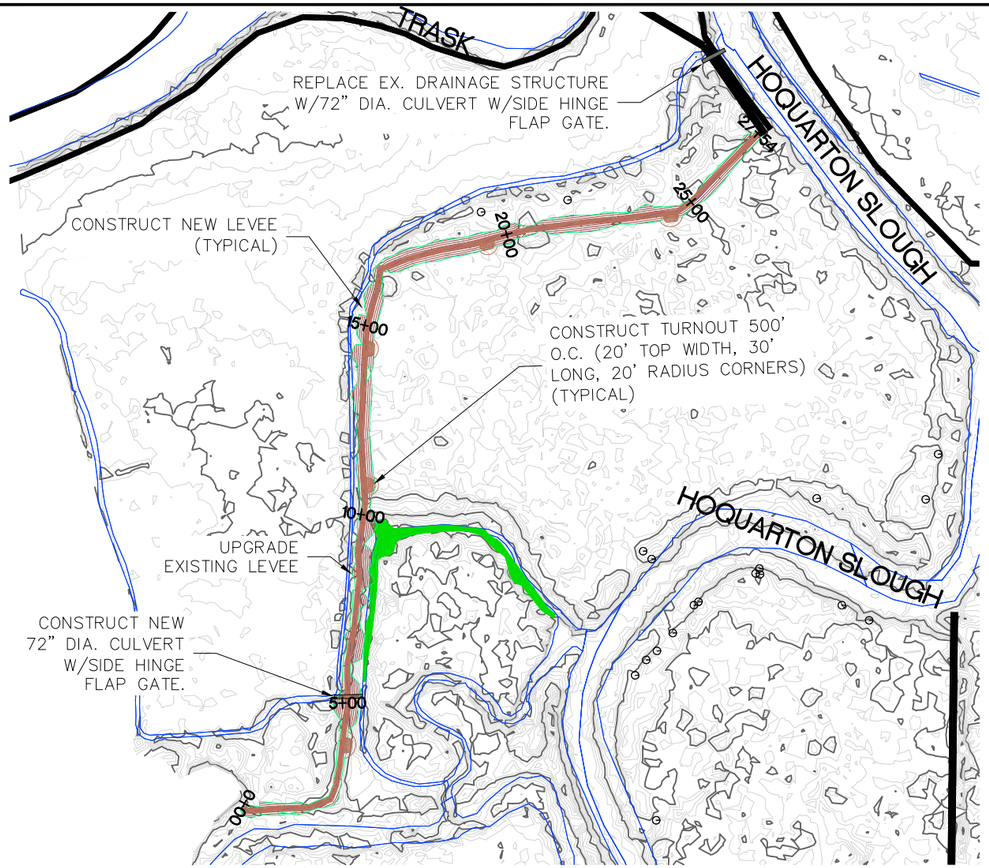
SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

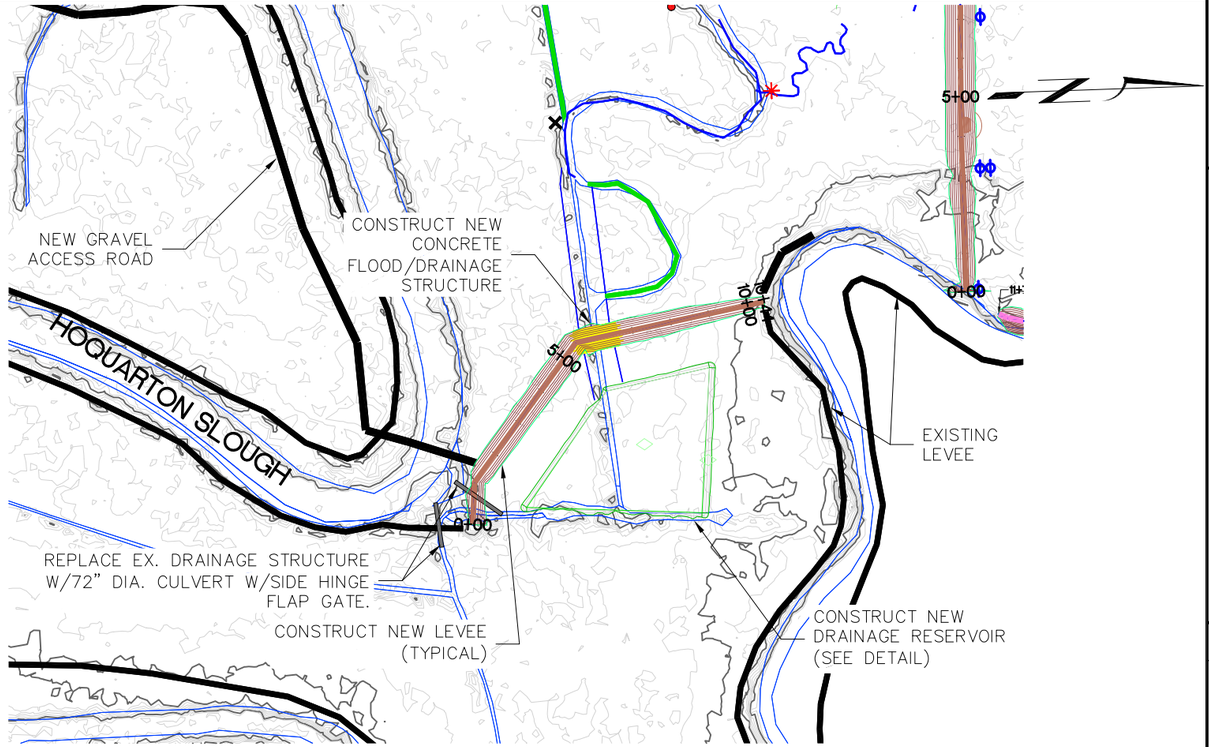
NORTH LEVEE PLAN + PROFILE

Sheet No. 18 of 37
Date 02-05-16
2009-003-03



SOUTH LEVEE PLAN

SCALE: 1" = 400'



MIDDLE LEVEE PLAN

SCALE: 1" = 400'

GRAPHIC SCALE

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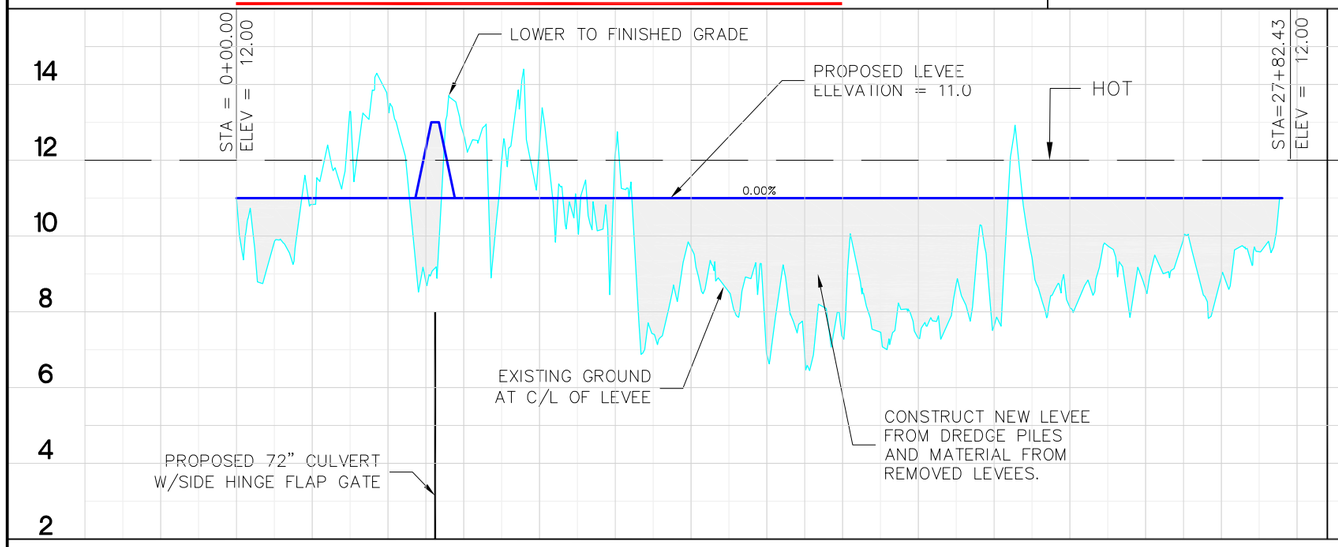
(IN FEET)
1 inch = 400 ft.



SOUTH LEVEE PROFILE

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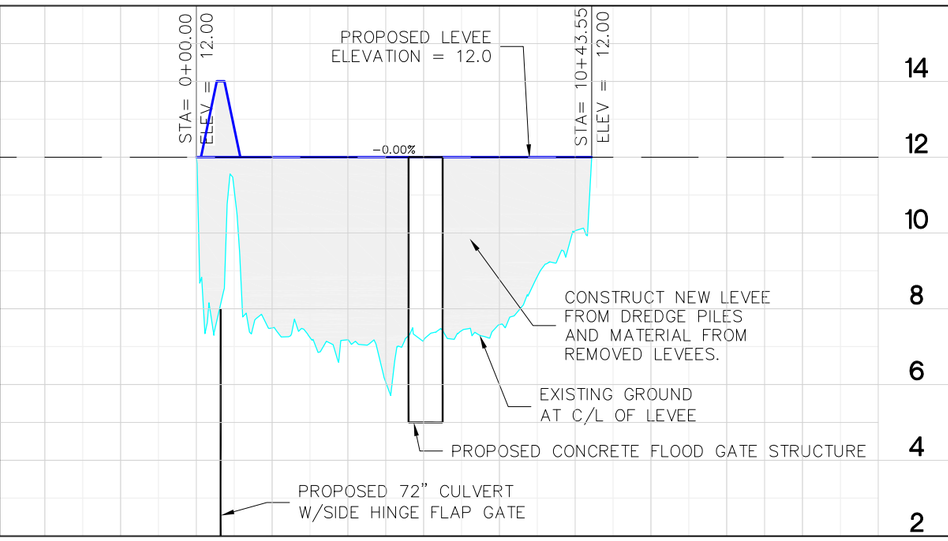

MIDDLE LEVEE PROFILE

SCALE: HOR: 1" = 400'
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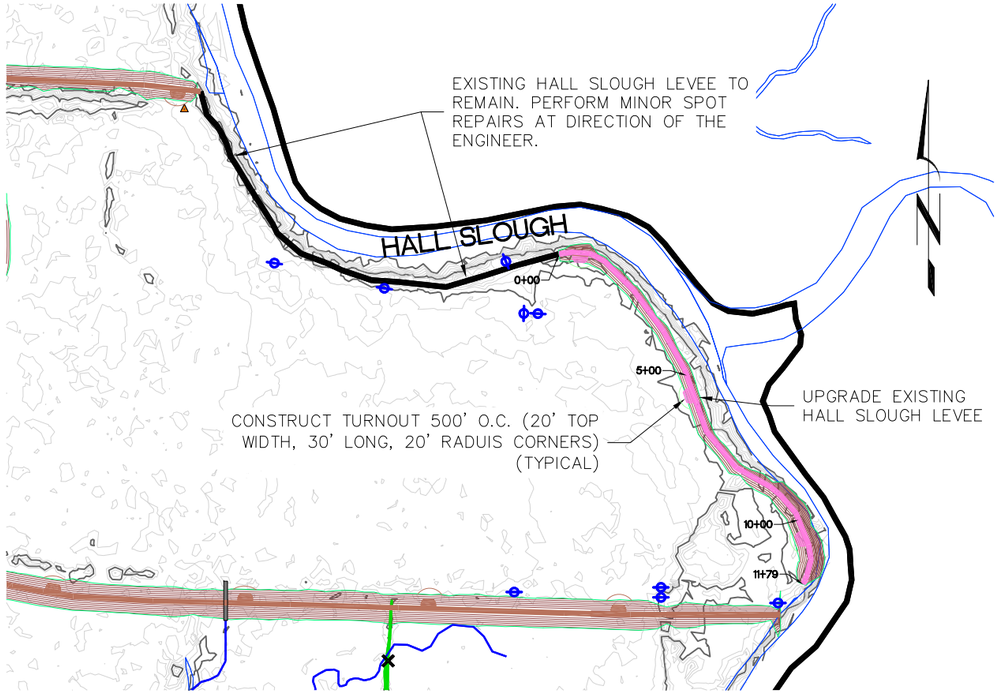
SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

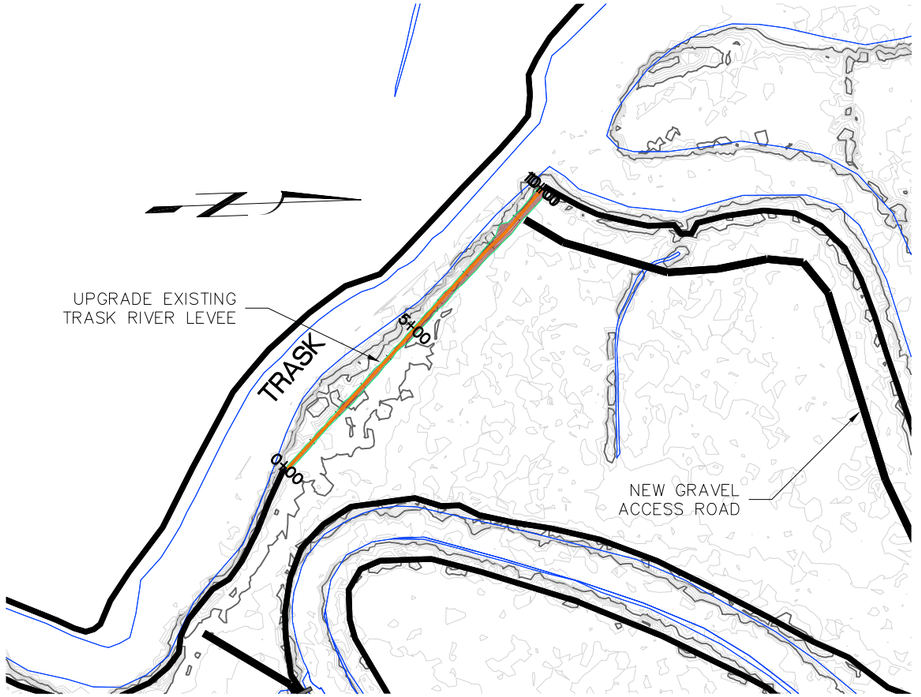
MIDDLE AND SOUTH LEVEE PLAN + PROFILE

Sheet No. 19 of 37
Date 02-05-16
2009-003-03



HALL SLOUGH LEVEE UPGRADE PLAN

SCALE: 1" = 400'



TRASK RIVER LEVEE UPGRADE PLAN

SCALE: 1" = 400'

GRAPHIC SCALE

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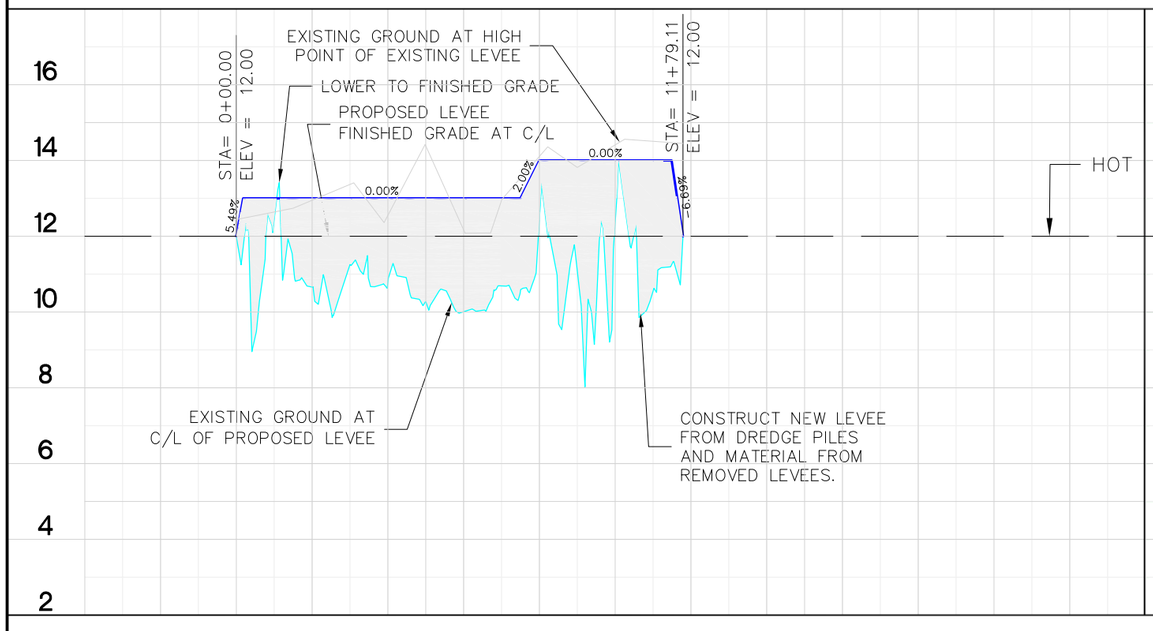
(IN FEET)
1 inch = 400 ft.



HALL SLOUGH LEVEE UPGRADE PROFILE

SCALE: HOR: 1" = 400'
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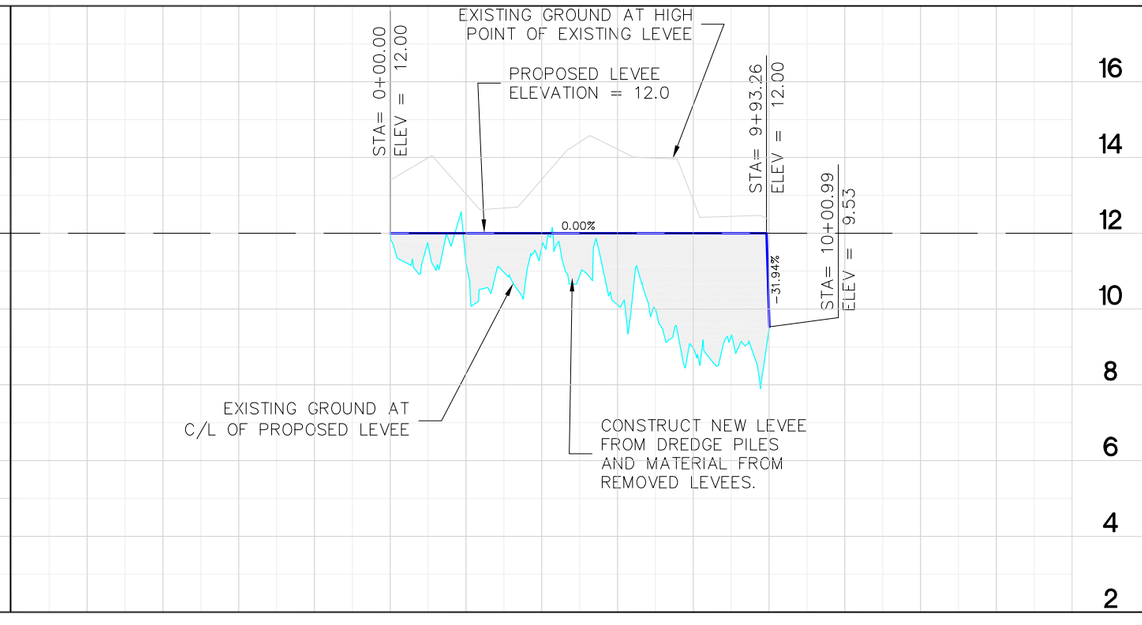

TRASK RIVER LEVEE UPGRADE PROFILE

SCALE: HOR: 1" = 400'
VER: 1" = 4'

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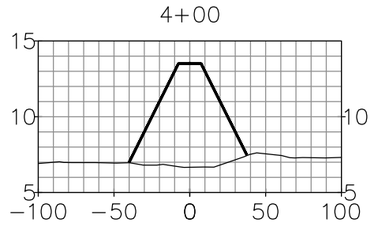
SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

HALL + TRASK LEVEE PLAN + PROFILE

Sheet No. 20
Date 02-05-16
20 of 37

2009-003-03



NORTH LEVEE SECTION

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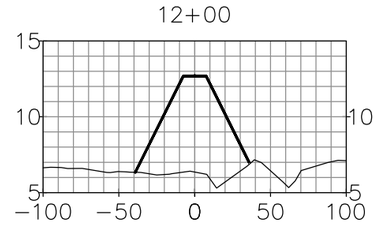

NORTH LEVEE SECTION

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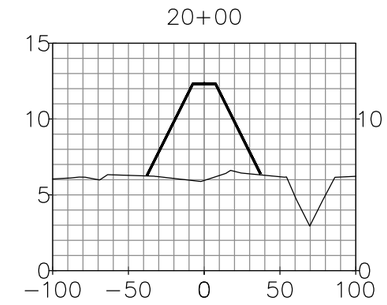

NORTH LEVEE SECTION

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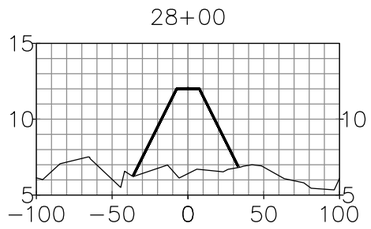

NORTH LEVEE SECTION

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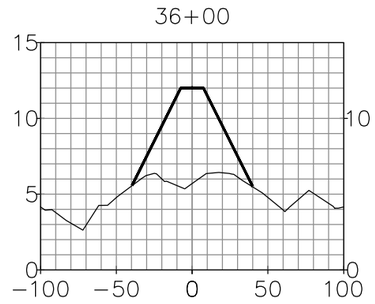

NORTH LEVEE SECTION

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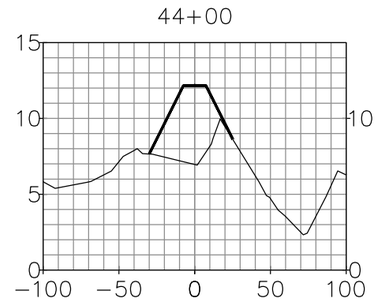

NORTH LEVEE SECTION

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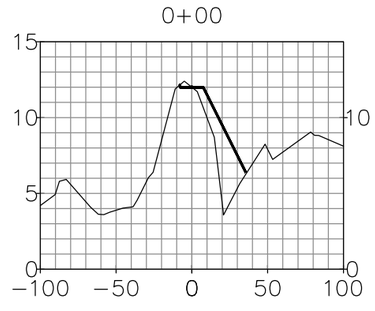

MIDDLE LEVEE SECTION

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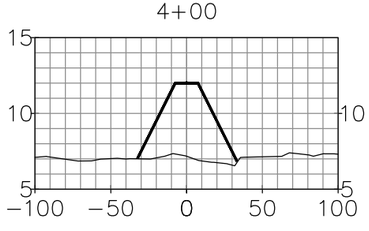

MIDDLE LEVEE SECTION

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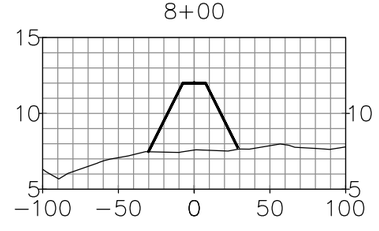

MIDDLE LEVEE SECTION

SCALE: HOR: 1" = 100'
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OREGON SOLUTIONS
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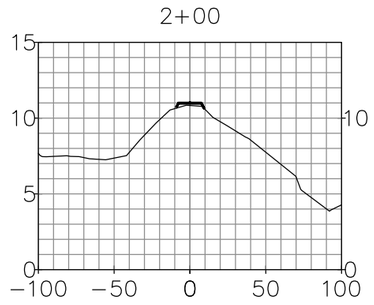
SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

NORTH + MIDDLE LEVEE TYPICAL SECTIONS

Date: 02-05-16
Sheet No.: 21 of 37

2009-003-03



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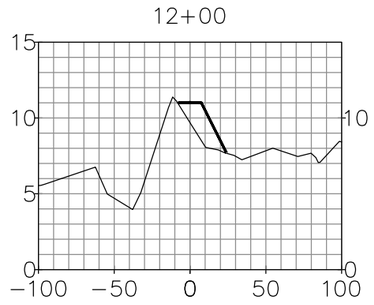

SOUTH LEVEE SECTION

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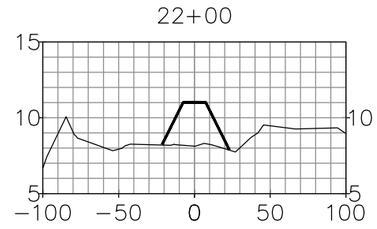

SOUTH LEVEE SECTION

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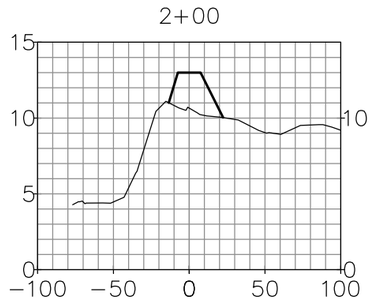

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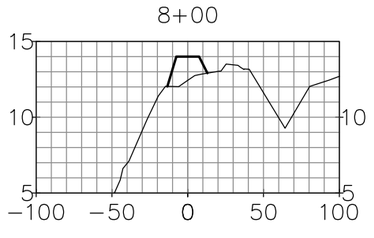

HALL SLOUGH LEVEE SECTION

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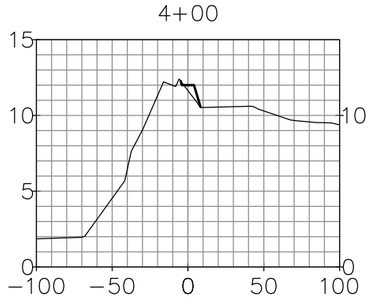

TRASK LEVEE SECTION

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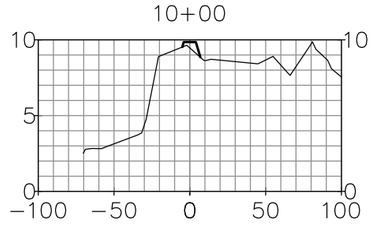

TRASK LEVEE SECTION

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SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

SOUTH, HALL, + TRASK LEVEE TYPICAL SECTIONS

Sheet No. 22
Date 02-05-16
22 OF 37

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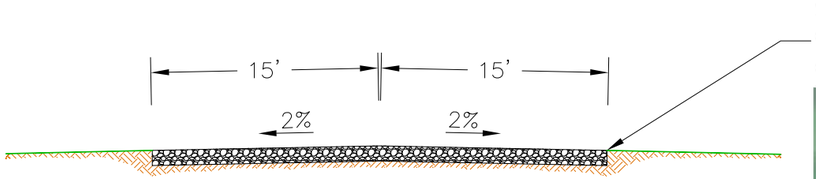

STRIP ALL ORGANICS AND INSTALL ODOT TYPE 2 GEOTEXTILE UNDER 12" OF $\frac{3}{4}$"–0" CRUSHED AGGREGATE

DOUGLAS AVE GRAVEL ROAD SECTION

NTS

CONCRETE FOUNDATIONS TO BE REMOVED

CONSTRUCT TREE PLANTING BERMS (TYP)

PROPOSED FILL REMOVAL BOUNDARY

CONSTRUCT CONTAMINATED FILL CONTAINMENT CELL (21,000 CY) 567,000 CU FT/67,800 SF = 8.0' HIGH (SEE DETAIL)

APPROXIMATE BOUNDARY OF CONTAMINATED SOIL (TYP.)

FOUNDRY PARK

HOQUARTON SLOUGH

WASTE CONCRETE TO BE REMOVED AND DISPOSED OF OFF SITE

TAX LOT 200
MAP 1S 10W 25

GRAVEL PARKING LOT (12" COMPACTED DEPTH OF $\frac{3}{4}$"–0" GRAVEL)

62'

30'

54'

TAX LOT 200

TAX LOT 190

IRONWORKS PARK

TAX LOT 400

TAX LOT 300

TAX LOT 701

20'

TAX LOT 4500

FRONT ST.

DOUGLAS AVENUE GRAVEL ROAD IMPROVEMENTS (12" COMPACTED DEPTH OF $\frac{3}{4}$"–0" GRAVEL)

LOT 4501

CEDAR AVE

DOUGLAS AVE

SITE PLAN

SCALE: 1" = 100'

NOTE:
PAYMENT FOR GRAVEL PARKING LOT AND DOUGLAS AVE ROAD IMPROVEMENTS ARE INCIDENTAL TO PLACEMENT OF CONTAMINATED FILL

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File: L:\2009-003-03\dwg\Permit Set\PARKS SITE PLAN

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OREGON SOLUTIONS
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SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

OLD MILL SITE PLAN

Sheet No. 23 of 37
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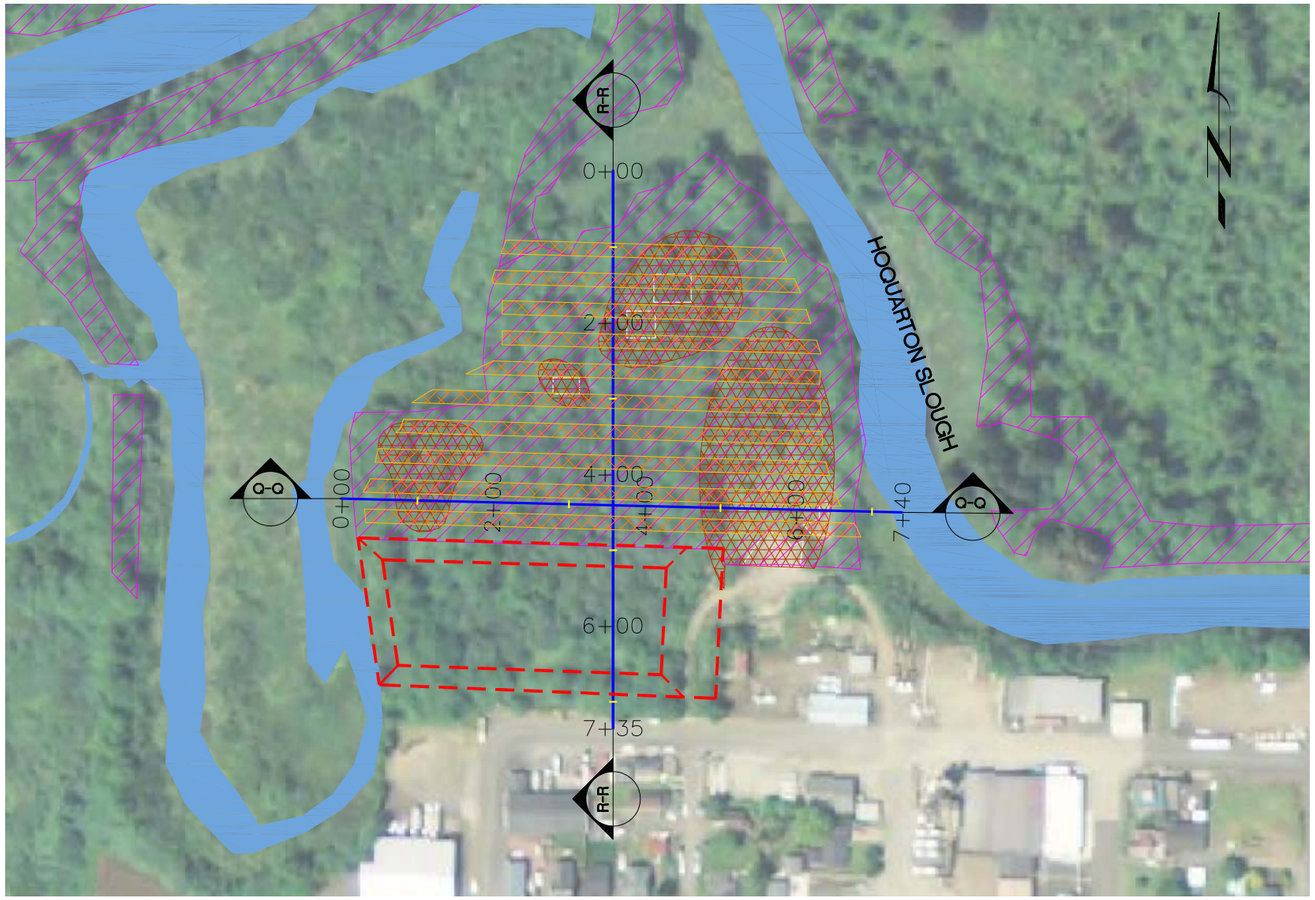
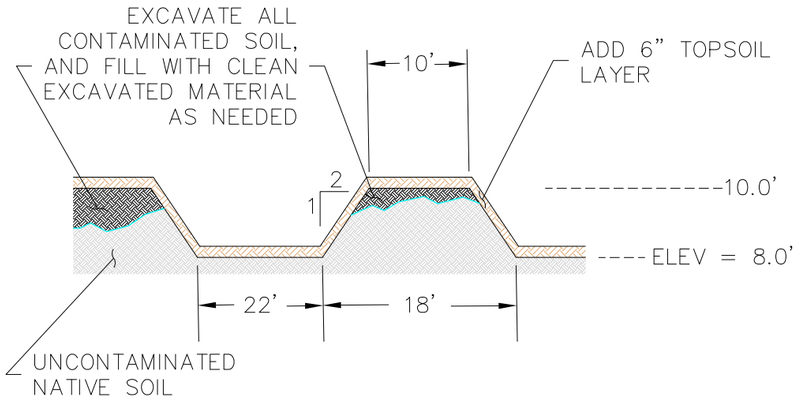
2009-003-03



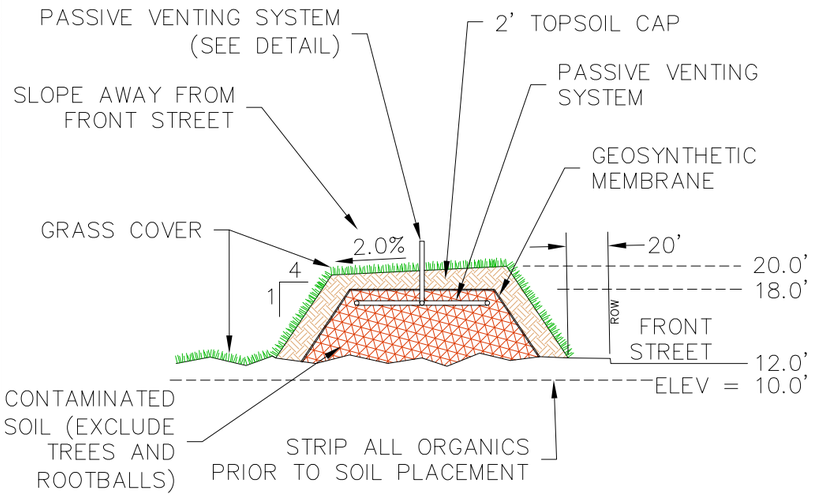
OLD MILL SITE PLAN VIEW

SCALE: 1" = 100'



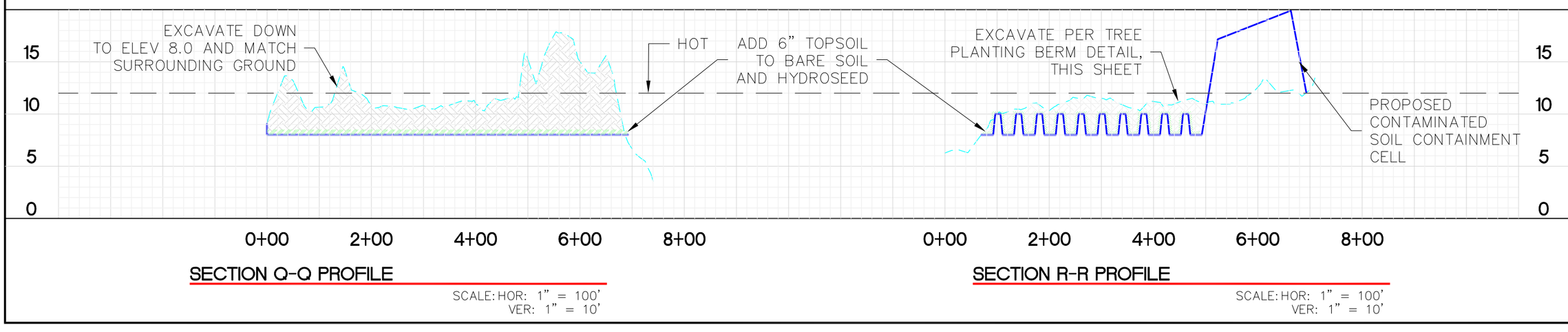
TREE PLANTING BERM DETAIL

N.T.S.



CONTAINMENT CELL DETAIL

N.T.S.



SECTION Q-Q PROFILE

SCALE: HOR: 1" = 100'
VER: 1" = 10'

SECTION R-R PROFILE

SCALE: HOR: 1" = 100'
VER: 1" = 10'

REGISTERED PROFESSIONAL ENGINEER 76347PE OREGON MARCH 09, 2010 ANDREY R. CHERNISHOV
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mail@hbhconsulting.com

Designed By: ARC | Drawn By: ARC | Checked By: MDH | Submittal No: BID SET
File: L:\2009-003-03\dwg\Permit Set\PARKS SITE PLAN | Layout: SITE SECTIONS

BY	DESCRIPTION	DATE	REV.

0" 0.5" IF THIS LINE IS NOT 0.5 INCH SCALE IS NOT AS SHOWN

OREGON SOLUTIONS
506 SW MILL STREET; PORTLAND, OREGON 97201

SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

OLD MILL SITE PLAN
SECTIONS Q-Q + R-R

Date: 02-05-16
Sheet No.: 24 of 37

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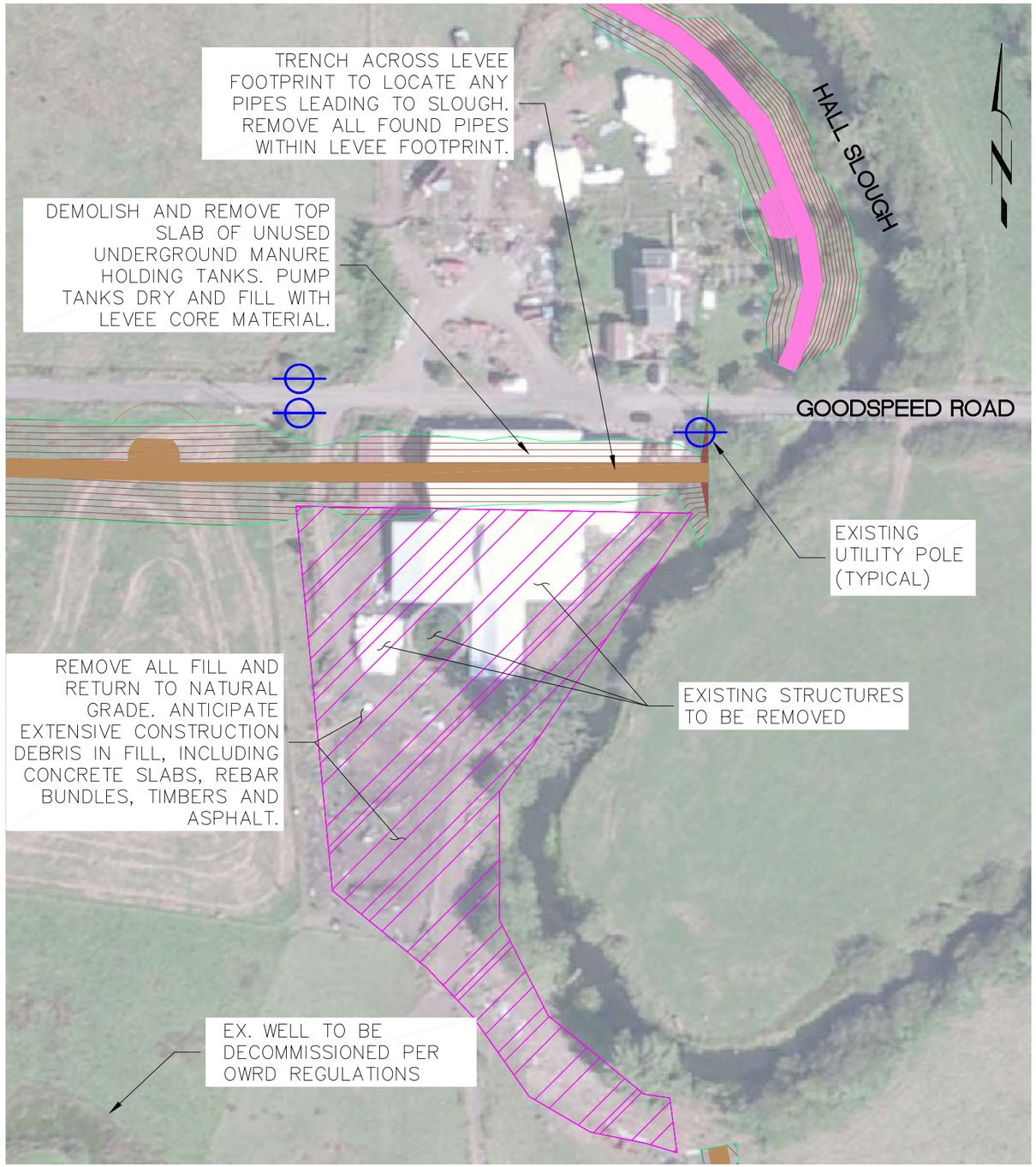
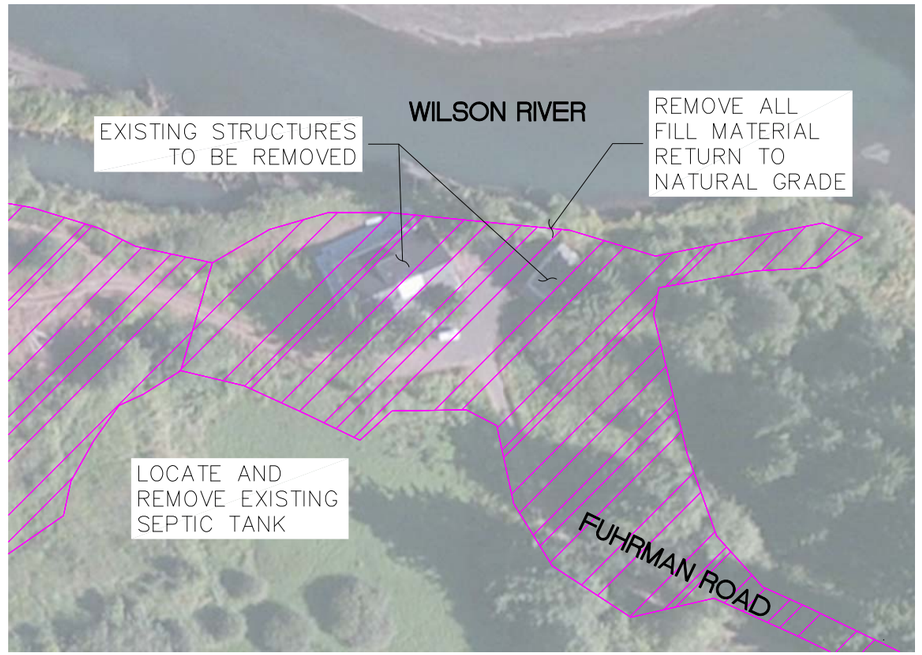


JONES STRUCTURE REMOVAL

SCALE: 1" = 100'



FUHRMAN STRUCTURE REMOVAL

SCALE: 1" = 100'

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 100 ft.

BARN REMOVAL

SCALE: 1" = 100'

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File: L:\2009-003-03\dwg\Permit Set\STRUCTURES | Layout: LAYOUT1

REV.	DATE	DESCRIPTION	BY

0" 0.5"
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OREGON SOLUTIONS
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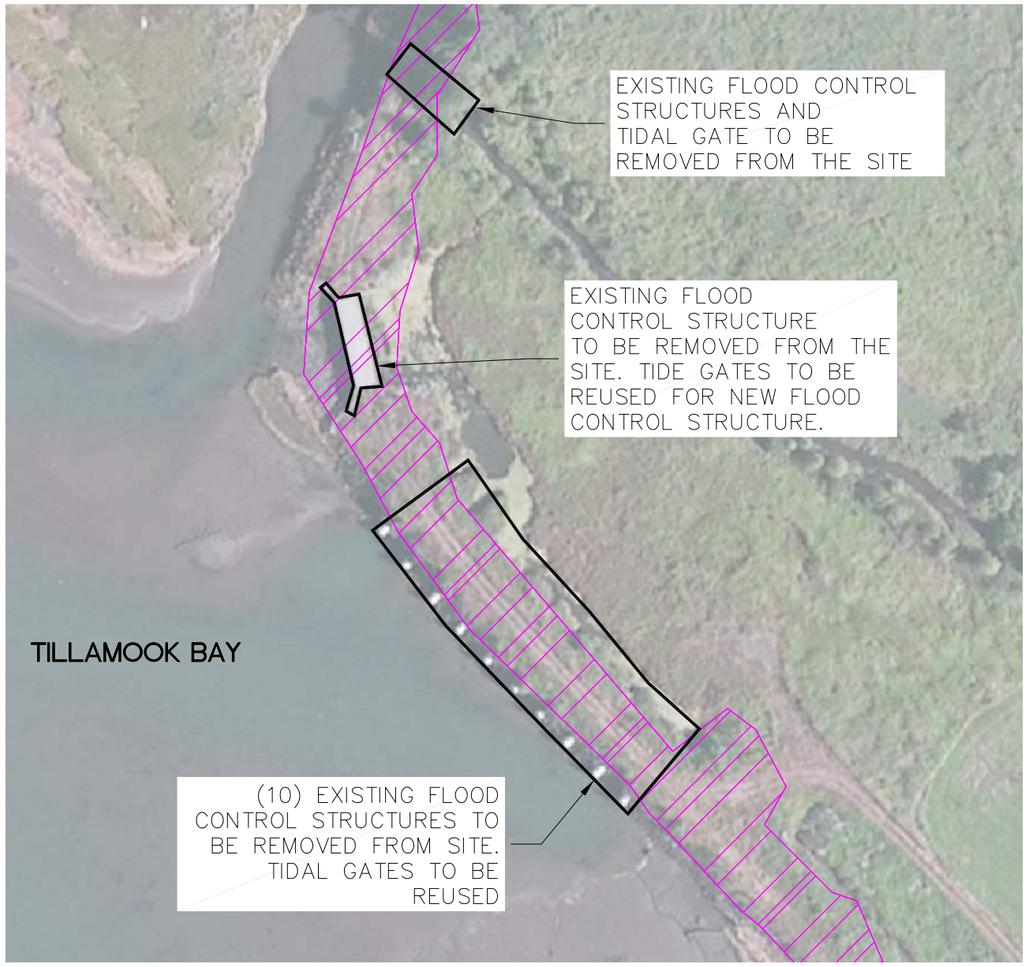
SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

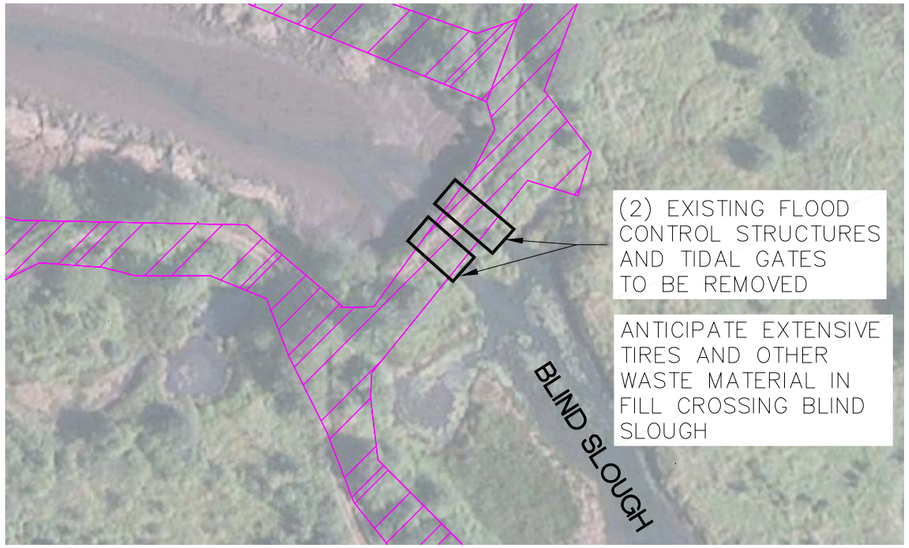
EXISTING STRUCTURES AND FILL REMOVAL

Sheet No. 25 of 37
Date 02-05-16
2009-003-03



TILLAMOOK BAY TIDAL GATES

SCALE: 1" = 100'



BLIND SLOUGH TIDAL GATES

SCALE: 1" = 100'

GRAPHIC SCALE

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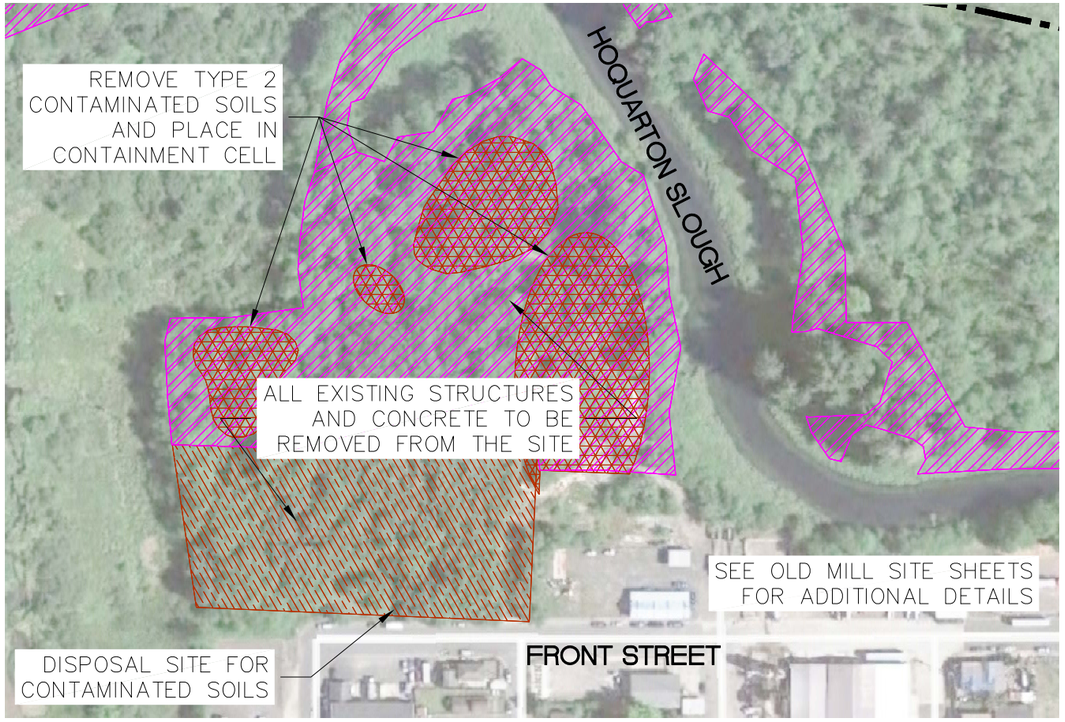
(IN FEET)
1 inch = 100 ft.



OLD MILL SITE

SCALE: 1" = 100'

REGISTERED PROFESSIONAL ENGINEER
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OREGON
MARCH 09, 2010
ANDREY R. CHERNISHOV
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File: L:\2009-003-03\dwg\Permit Set\STRUCTURES

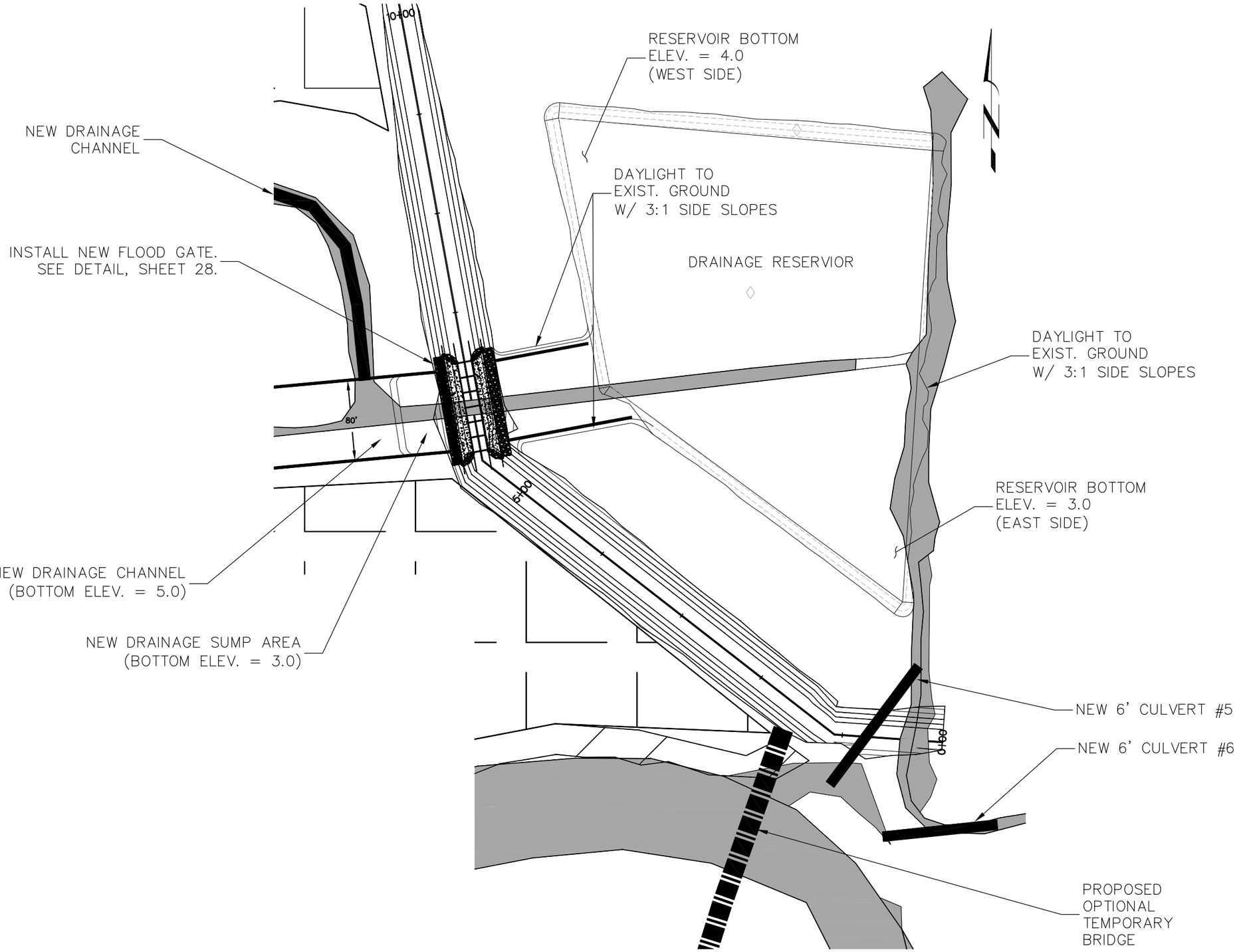
REV.	DATE	DESCRIPTION	BY

0" 0.5"
IF THIS LINE IS NOT 0.5 INCH SCALE IS NOT AS SHOWN

SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

EXISTING STRUCTURES AND FILL REMOVAL

Sheet No. 26 of 37
Date 02-05-16
2009-003-03



PROPOSED DRAINAGE RESERVOIR AND FLOOD GATE LOCATION

SCALE: 1" = 50'

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76347PE
OREGON
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File: L:\2009-003-03\dwg\Permit Set\DETAILS | Layout: RESERVOIR

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0" 0.5"
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OREGON SOLUTIONS
506 SW MILL STREET; PORTLAND, OREGON 97201

SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

DRAINAGE RESERVOIR

Date: 02-05-16
Sheet No.: 27 of 37

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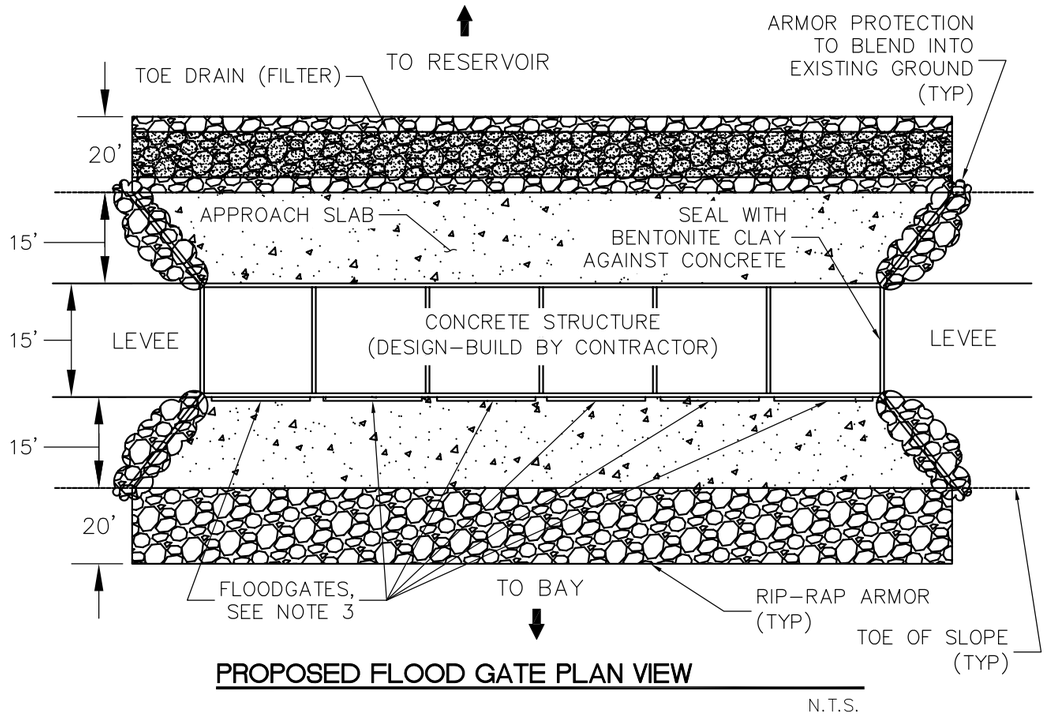
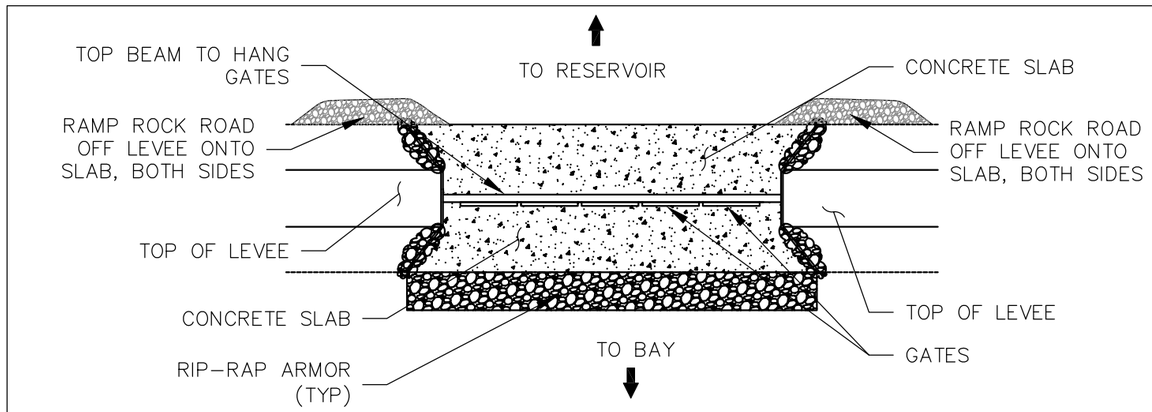


PROPOSED FLOOD GATE PLAN VIEW

N.T.S.

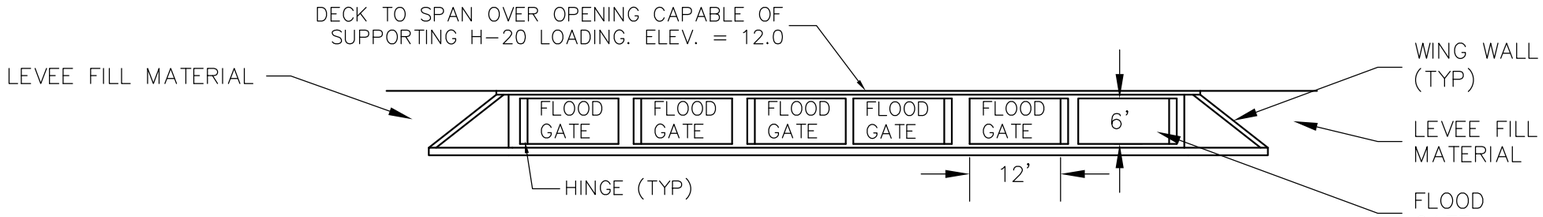
NOTES

1. CONTRACTOR TO DESIGN AND CONSTRUCT FLOOD GATE STRUCTURE WITHIN GIVEN DESIGN PARAMETERS. FLOOD GATE STRUCTURE PLANS MUST BE STAMPED BY AN OREGON REGISTERED PROFESSIONAL ENGINEER AND SUBMITTED TO HBH FOR REVIEW.
2. CONTRACTOR TO REVIEW GEOTECHNICAL ENGINEERING REPORT PREPARED BY SHANNON & WILSON, DATED NOVEMBER 24, 2014, AND CONFORM TO ALL RECOMMENDATIONS LISTED IN THE REPORT.
3. RETROFIT, REFURBISH, AND INSTALL 4 FLOODGATES FROM PROJECT SITE. PURCHASE AND INSTALL TWO NEW FLOODGATES TO MATCH EX. FLOODGATES



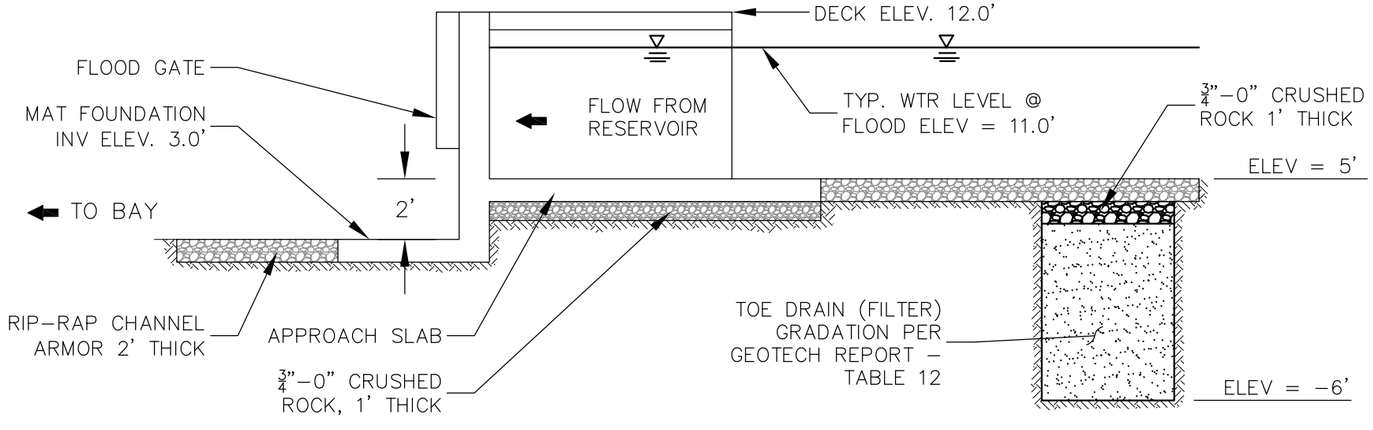
FLOOD GATE ALTERNATE PLAN VIEW

N.T.S.



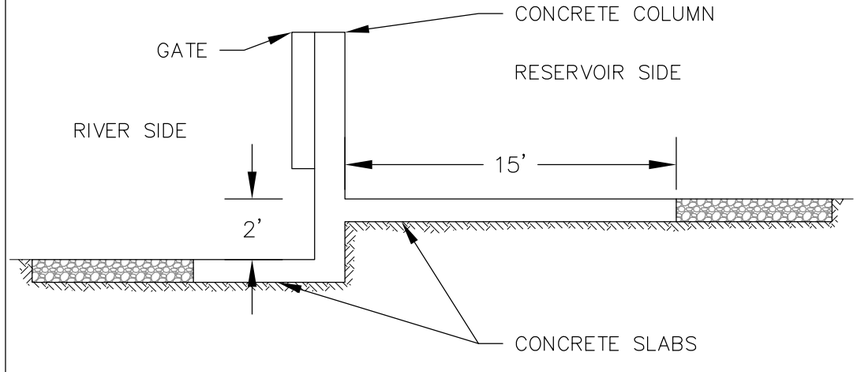
PROPOSED FLOOD GATE ELEVATION VIEW

N.T.S.



PROPOSED FLOOD GATE SECTION VIEW

N.T.S.



FLOOD GATE ALTERNATE SECTION VIEW

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REGISTERED PROFESSIONAL ENGINEER 76347PE OREGON MARCH 09, 2015 ANDREI R. CHERNISHOV EXPIRES 12/31/2017

Designed By:	Drawn By:	Checked By:	Submittal No:	BID SET
File: L:\2009-003-03\dwg\Permit Set\DETAILS	ARC	ARC	MDH	Layout: FLOOD GATE

REV.	DATE	DESCRIPTION	BY

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SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

FLOOD GATE DETAILS

Sheet No. 28
Date 02-05-16
28 OF 37

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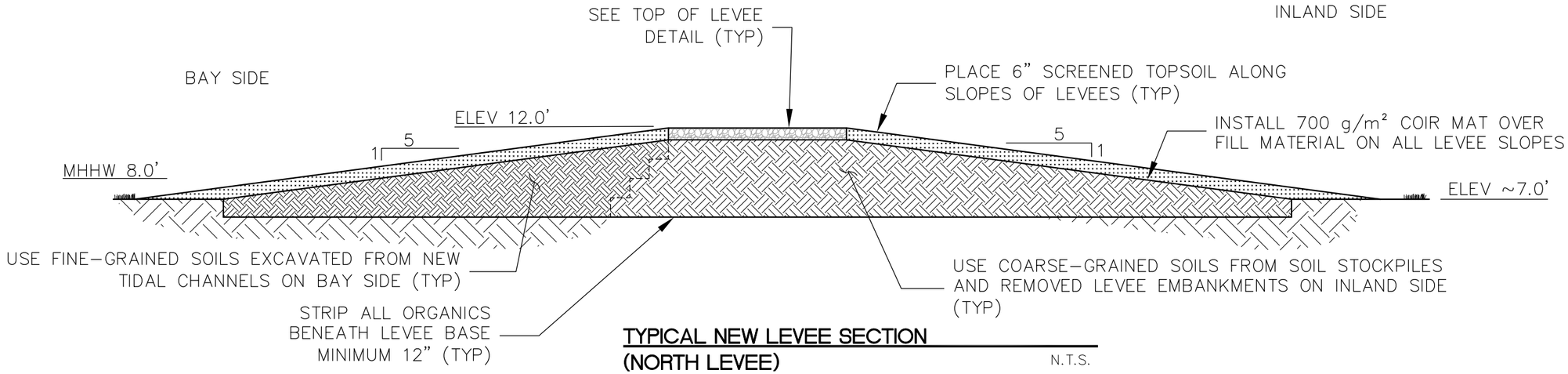
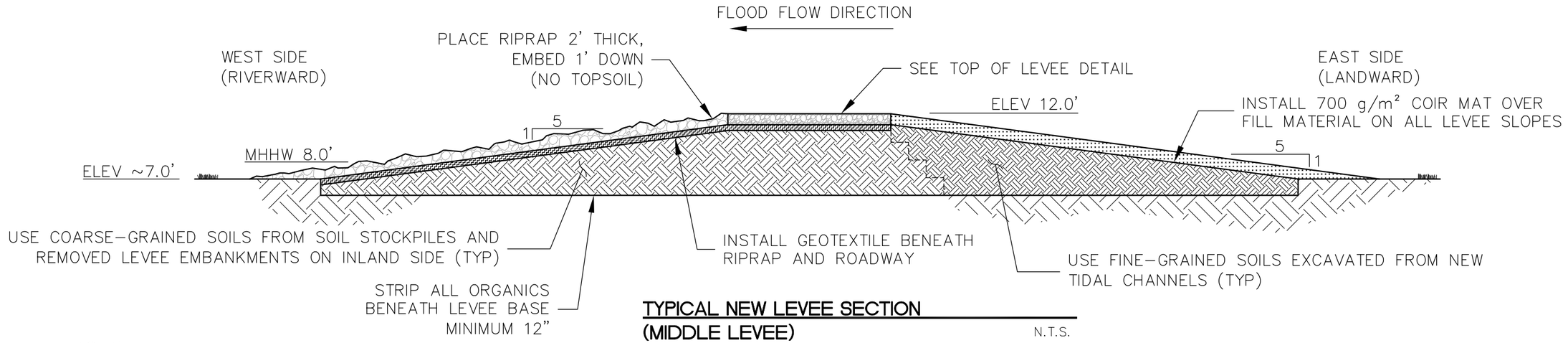


TYPICAL NEW LEVEE SECTION (NORTH LEVEE)

N.T.S.



TYPICAL NEW LEVEE SECTION (MIDDLE LEVEE)

N.T.S.

LEVEE NOTES

1. CONTRACTOR TO REVIEW GEOTECHNICAL ENGINEERING REPORT PREPARED BY SHANNON & WILSON, DATED OCTOBER 24, 2015 AND FEBRUARY 3, 2016, AND CONFORM TO ALL RECOMMENDATIONS LISTED IN THE REPORT.
2. ALL AREAS THAT WILL RECEIVE LEVEE EMBANKMENTS AND STRUCTURES SHOULD BE STRIPPED TO A DEPTH THAT IS SUFFICIENT TO REMOVE EXISTING SURFACE VEGETATION AND ORGANIC SOIL. THE STRIPPING DEPTH IS ANTICIPATED TO BE AT LEAST 12 INCHES.
3. ALL FILL MATERIAL PLACED IN THE BOTTOM TWO FEET OF THE LEVEE SHOULD BE PLACED IN LOOSE LIFTS NOT EXCEEDING 12 INCHES IN THICKNESS AND COMPACTED TO AT LEAST 90% OF THE DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST, ASTM D 689. ALL SUBSEQUENT LIFTS SHOULD BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8 INCHES IN THICKNESS AND COMPACTED TO AT LEAST 95% OF THE DRY DENSITY.
4. AN IN-PLACE DENSITY TEST SHALL BE PERFORMED FOR EVERY 2,000 SF OF FILL PLACED IN THE LEVEE PRISM AND EVERY 5,000 SF OF FILL PLACED ELSEWHERE. FOR BACKFILL OF UTILITY TRENCHES OR AROUND STRUCTURES, AND IN-PLACE DENSITY TEST SHALL BE PERFORMED FOR EVERY LIFT EVERY 100 FEET. AT LEAST ONE DENSITY TEST SHALL BE COMPLETED PER LIFT, REGARDLESS OF THE SIZE OR LOCATION OF THE FILL AREA.
5. THE CONTRACTOR SHALL PLACE A LAYER OF BENTONITE CLAY BETWEEN THE CONCRETE FLOOD CONTROL STRUCTURE AND THE LEVEE CORE MATERIAL TO SEAL THE SEAM.
6. TURNOUT LEVEE EXTENSIONS WILL BE CONSTRUCTED AT 500' O.C. EXTENDING TOWARD THE STORAGE SIDE. THEY SHALL BE 20' IN TOP WIDTH FOR A LENGTH OF 30 FEET WITH 20' RADIUS CORNERS.
7. COIR MAT SHALL BE PLACED ON THE SIDE SLOPES BETWEEN THE TOP OF FILL AND THE EXISTING GROUND ELEVATION FOR BOTH SIDES OF THE LEVEE.
8. FINE-GRAINED SOILS SHALL BE MINIMUM 30% PASSING A #200 SIEVE, AND WILL GENERALLY BE SOURCED FROM TIDAL CHANNEL EXCAVATION. THE PROPORTION OF LEVEE USING FINE-GRAINED SOILS IS NOT SPECIFIED, HOWEVER, MINIMUM THICKNESS OF FINE-GRAINED SOILS WHERE SHOWN ON ALL LEVEES IS 3 FEET.
9. TOPSOIL GENERATED ON SITE SHALL BE SCREENED, WITH NO PIECES LARGER THAN 2".

REGISTERED PROFESSIONAL ENGINEER 76347PE OREGON MARCH 09, 2016 ANDREI R. CHERNISHOV
EXPIRES 12/31/2017

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Designed By: ARC | Drawn By: ARC | Checked By: MDH | Submittal No: BID SET | Layout: NEW LEVEE
File: L:\2009-003-03\dwg\Permit Set\LEVEE DETAILS

REV.	DATE	DESCRIPTION	BY
1			

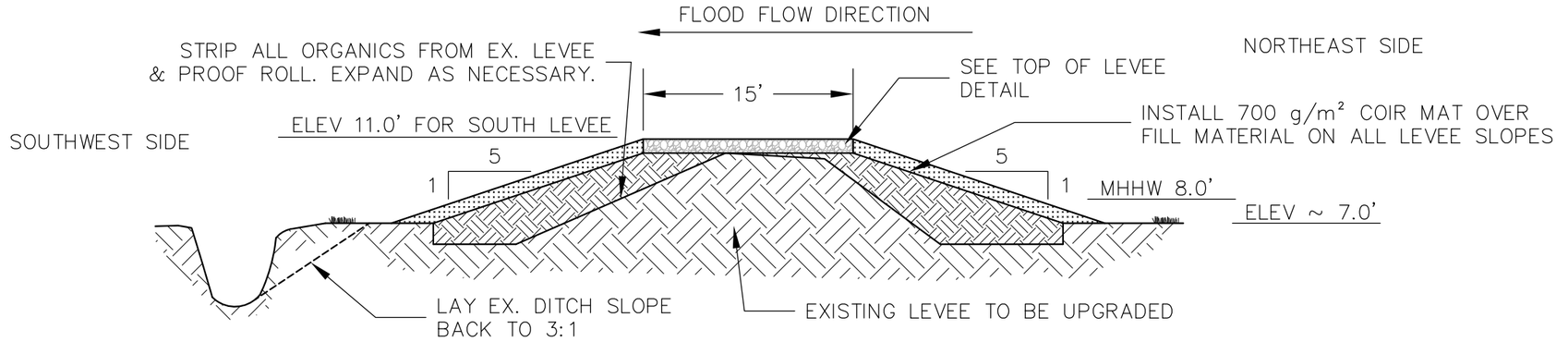
0" 0.5"
IF THIS LINE IS NOT 0.5 INCH SCALE IS NOT AS SHOWN

OREGON SOLUTIONS
506 SW MILL STREET; PORTLAND, OREGON 97201

SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

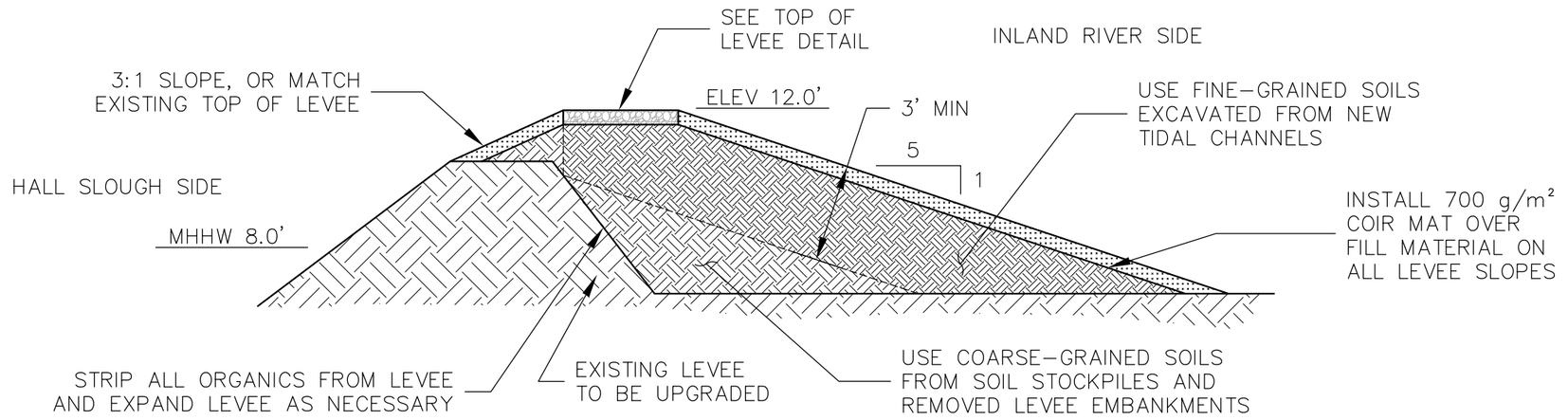
NEW LEVEE SECTIONS

Sheet No. 29 of 37
Date 02-05-16
2009-003-03



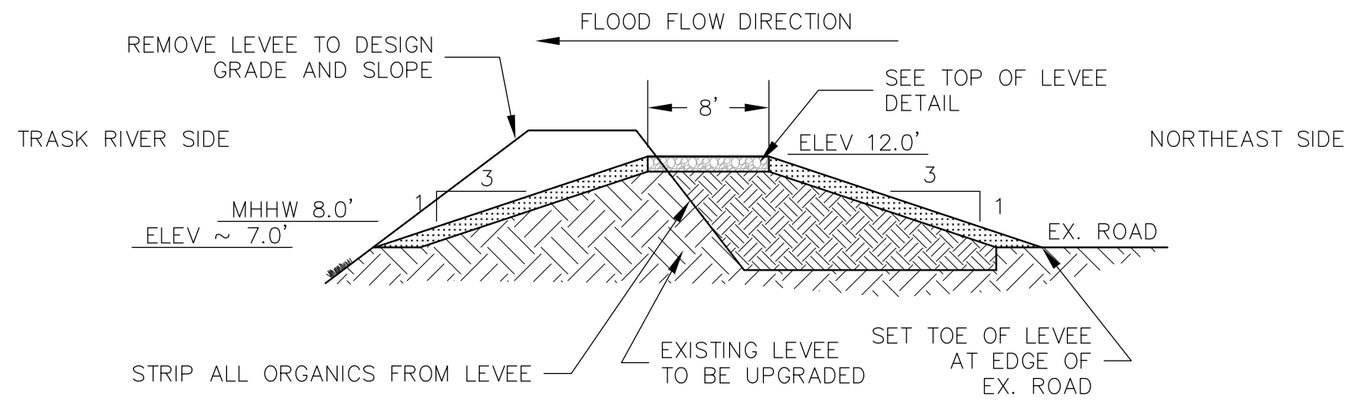
TYPICAL UPGRADED LEVEE SECTION (SOUTH LEVEE)

N.T.S.



TYPICAL RAISE LEVEE SECTION (HALL SLOUGH)

N.T.S.



TYPICAL LOWER LEVEE SECTION (TRASK LEVEE)

N.T.S.

REGISTERED PROFESSIONAL ENGINEER
76347PE
OREGON
MARCH 09, 2016
ANDREY R. CHERNISHOV
EXPIRES 12/31/2017

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File: L:\2009-003-03\dwg\Permit Set\LEVEE DETAILS

REV.	DATE	DESCRIPTION	BY
1			

0" 0.5"
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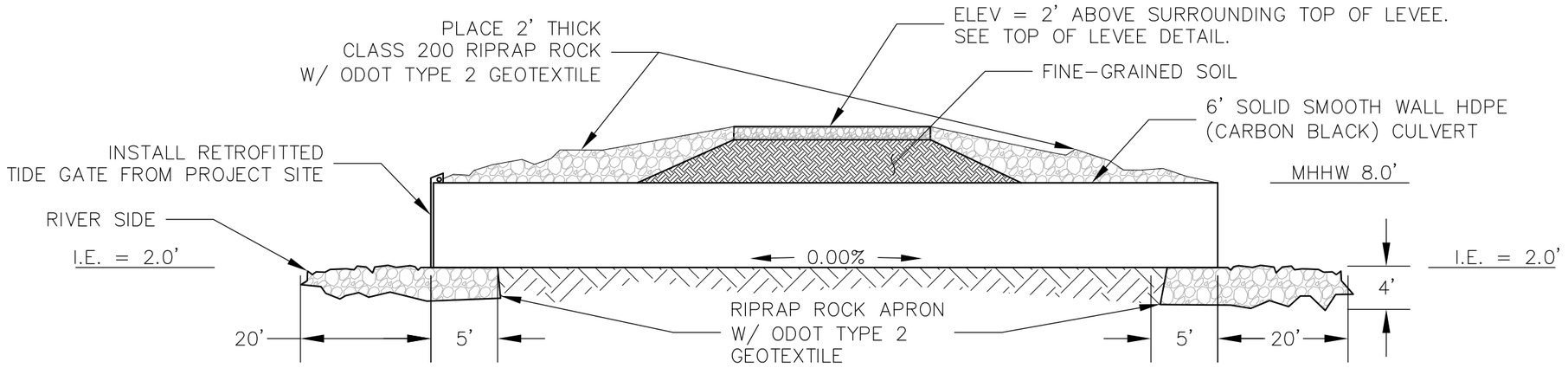
SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

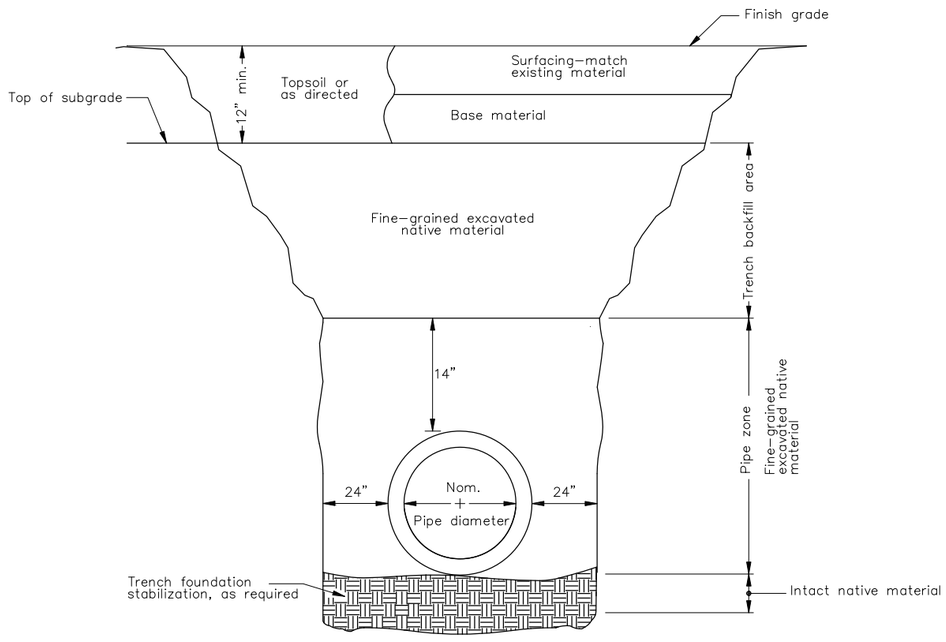
LEVEE UPGRADE SECTIONS

Sheet No. 30 of 37
Date 02-05-16
2009-003-03



TYPICAL NEW FLOOD/DRAINAGE CULVERT SECTION

N.T.S.

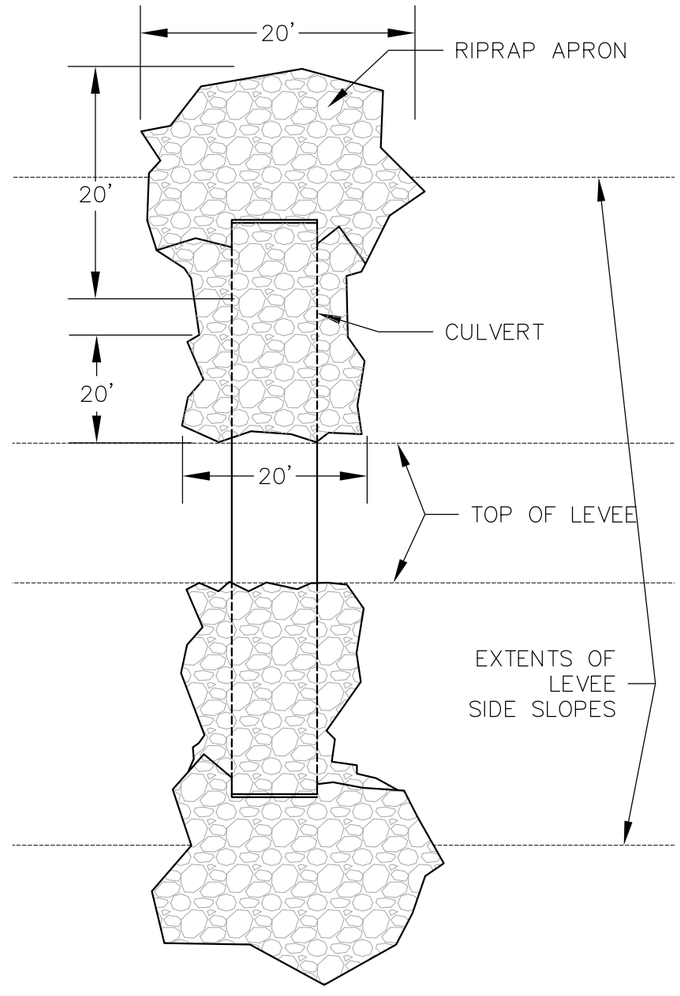


TYPICAL CULVERT TRENCH BACKFILL DETAIL

N.T.S.

NOTES:

1. SEE GEOTECHNICAL REPORT FOR PRELOAD REQUIREMENTS AT CULVERTS.
2. RIPRAP TO BE FROM ONSITE RIPRAP REMOVALS. ADDITIONAL RIPRAP, IF NEEDED, TO BE ODOT CLASS 200.
3. SEE CULVERT TABLE ON GRADING SHEET FOR CULVERT DIMENSIONS AND LOCATIONS.



TYPICAL NEW FLOOD/DRAINAGE CULVERT PLAN VIEW

N.T.S.

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76347PE
OREGON
MARCH 09, 2010
ANDREA R. CHERNISHOV
EXPIRES 12/31/2017

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Designed By: ARC | Drawn By: ARC | Checked By: MDH | Submittal No: PRELIMINARY | Layout: CULVERT
File: L:\2009-003-03\dwg\Permit Set\DETAILS

BY	DESCRIPTION	DATE	REV.

0" 0.5"
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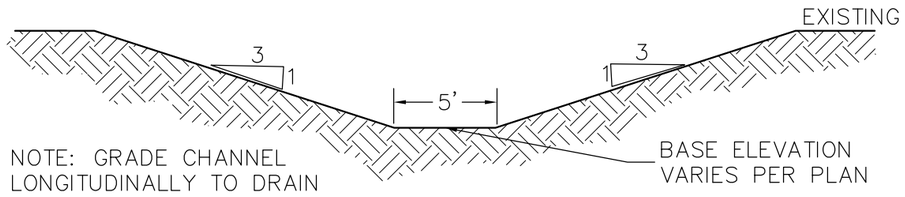
SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

TYPICAL CULVERT DEATILS

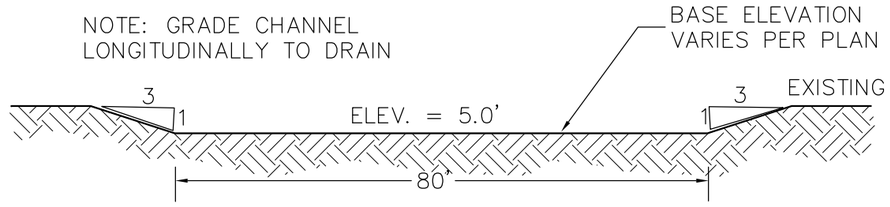
Date: 02-05-16
Sheet No.: 31 of 37

2009-003-03



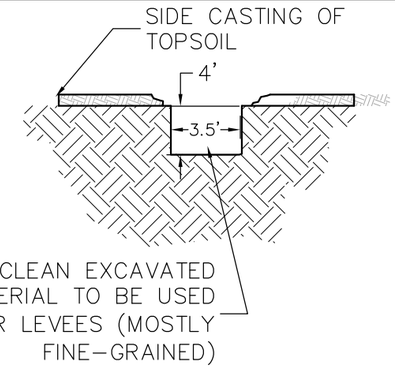
NORTH LEVEE DRAINAGE CHANNEL

N.T.S.



MIDDLE LEVEE DRAINAGE CHANNEL

N.T.S.



TIDAL CHANNEL

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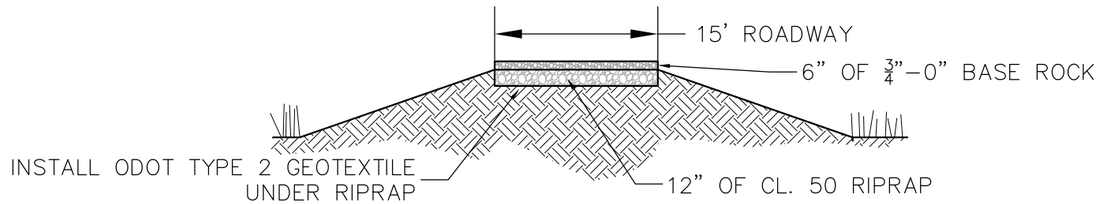
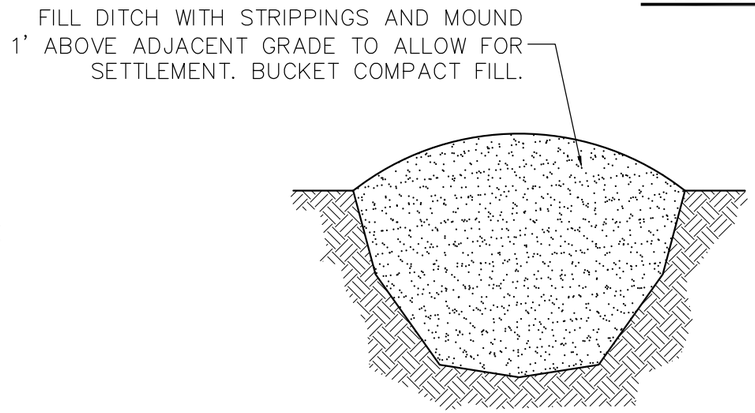


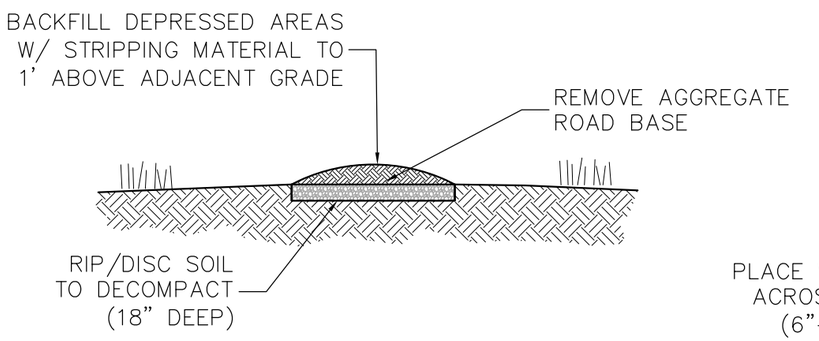
TYPICAL ROAD SECTION TOP OF LEVEE AND NEW GRAVEL ROAD

N.T.S.



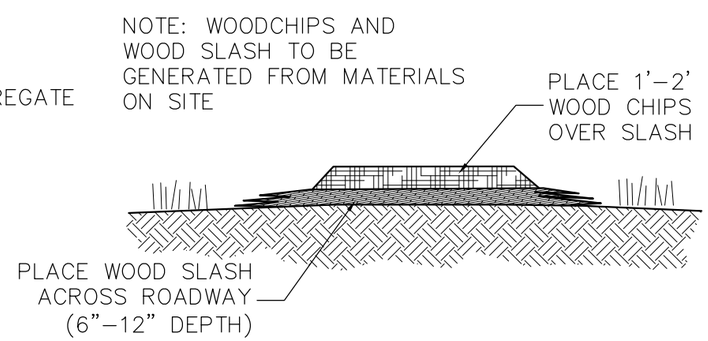
DRAINAGE DITCH FILL DETAIL

N.T.S.



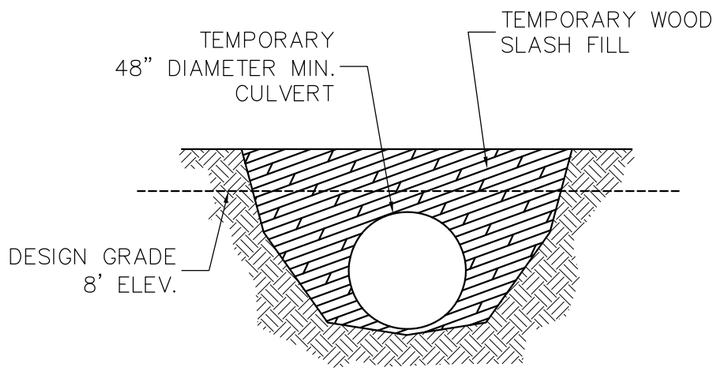
ROAD DE-COMMISSIONING DETAIL

N.T.S.



WOOD SLASH ACCESS ROAD DETAIL

N.T.S.



TYPICAL TEMP. LEVEE BREACH CROSSING DETAIL

N.T.S.

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Designed By: ARC | Drawn By: ARC | Checked By: MDH | Submittal No: BID SET | Layout: ROADS DRAINAGE | File: L:\2009-003-03\dwg\Permit Set\DETAILS

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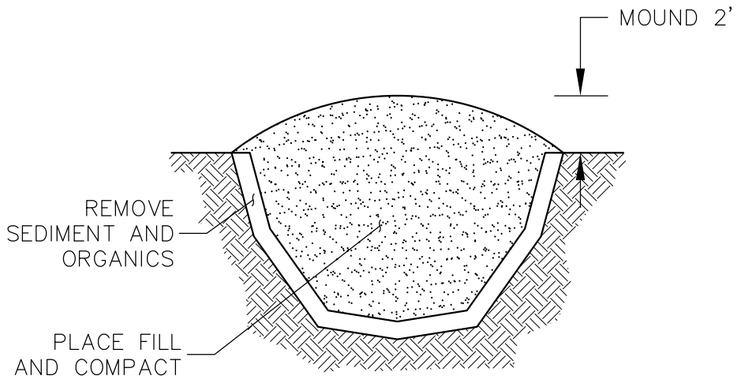
SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

ROAD/DRAINAGE DETAILS

Sheet No. 32 of 37
Date 02-05-16
2009-003-03

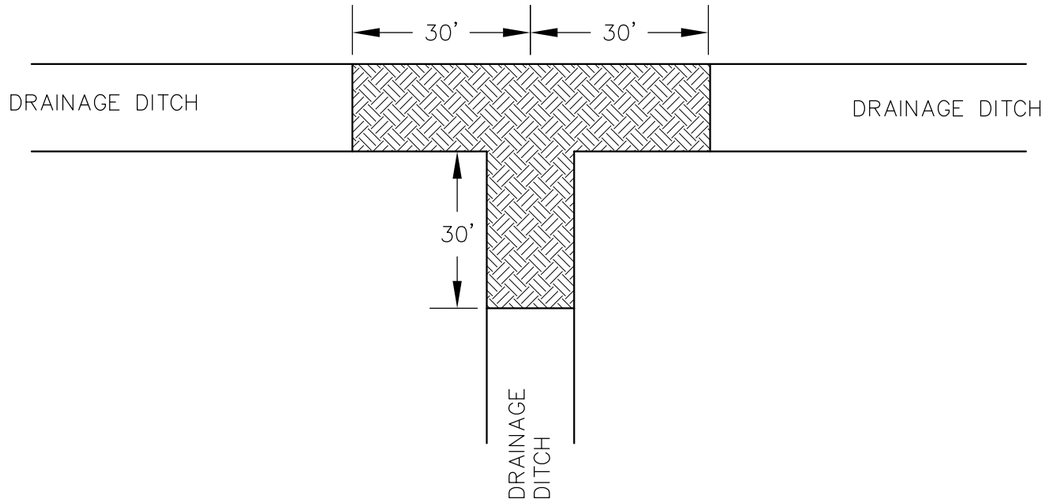
DITCH FILL PROCEDURE:

1. DEWATER DITCH PLUG AREA USING TEMPORARY COFFERDAMS AND PUMPS, OR OTHER MEANS.
2. REMOVE ALL VEGETATION, ORGANIC SOIL AND SOFT SEDIMENT
3. BACKFILL WITH LEVEE CORE MATERIAL IN 18" LIFTS AND BUCKET COMPACT



DRAINAGE DITCH PLUG DETAIL

N.T.S.



DITCH/DITCH JUNCTION

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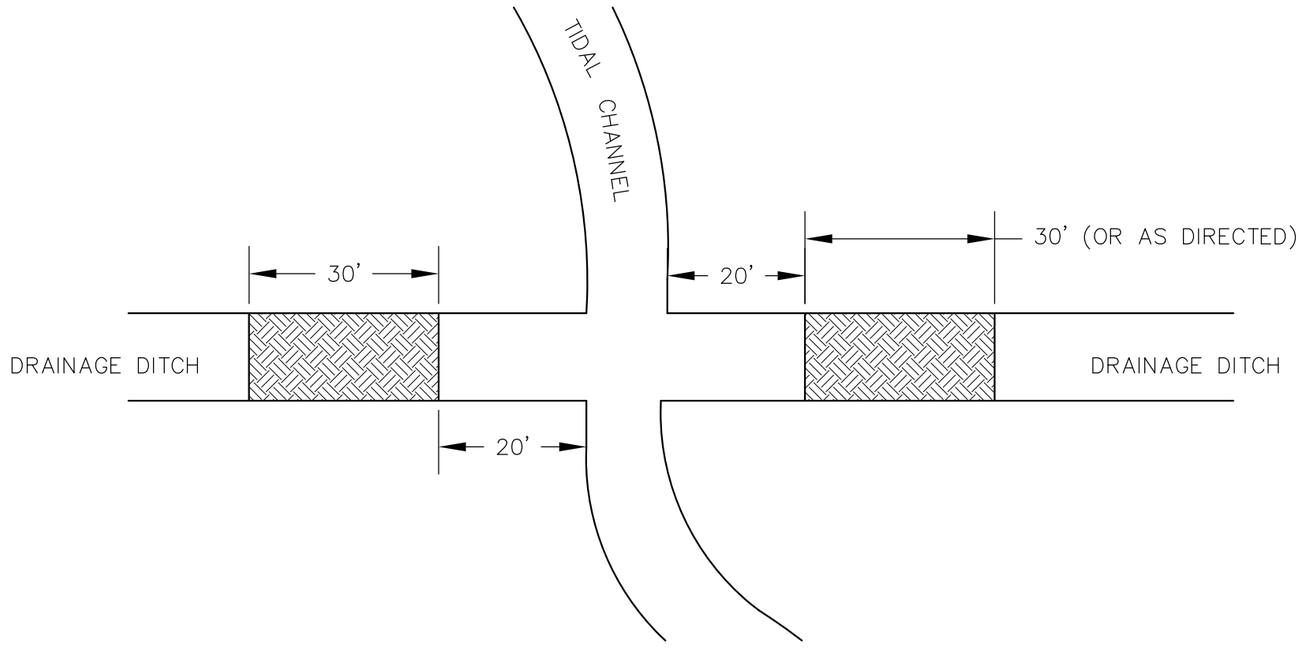

TIDAL CHANNEL/DITCH JUNCTION

N.T.S.

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File: L:\2009-003-03\dwg\Permit Set\DETAILS

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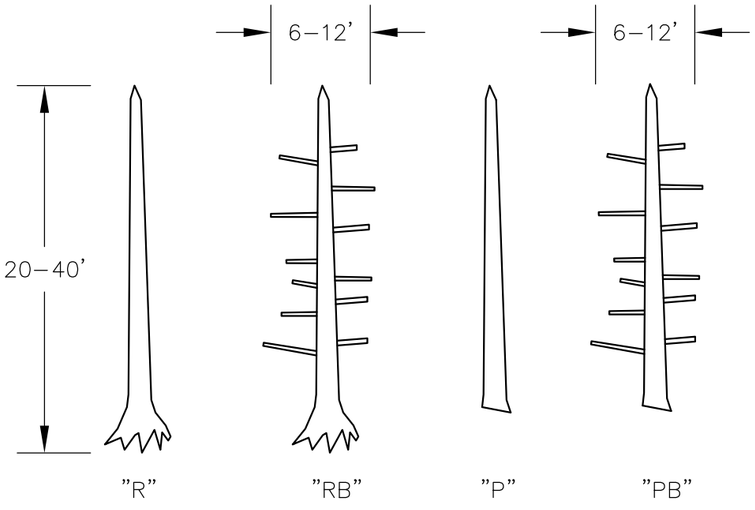
SOUTHERN FLOW CORRIDOR
TILLAMOOK, OREGON

TYPICAL DETAILS

Date: 02-05-16 | Sheet No. 33 | 33 or 37

2009-003-03

"R" – ROOTWAD, LIMBED
"RB" – ROOTWAD W/ BRANCHES
"P" – POST, LIMBED
"PB" – POST W/ BRANCHES



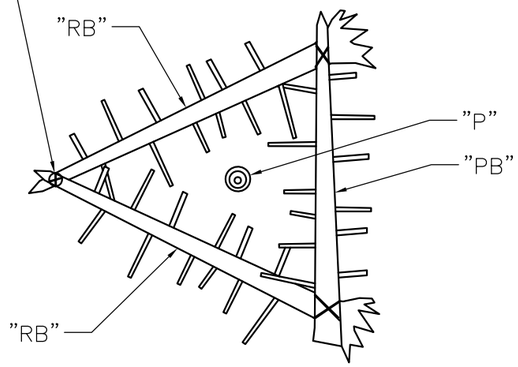
TYPICAL LOG TYPES

N.T.S.

LARGE WOODY DEBRIS STRUCTURES

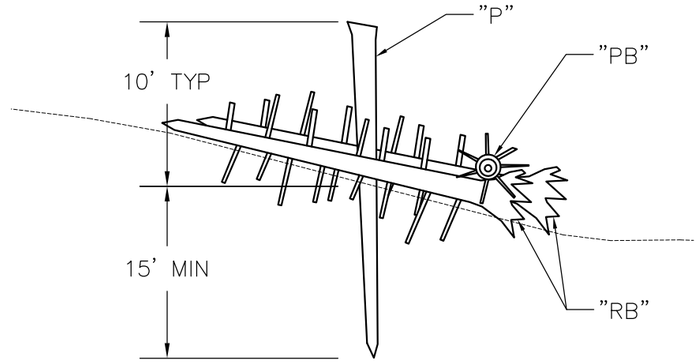
TYPE 1

NOTCH LOGS WITH CHAINSAW AND LASH TOGETHER W/ ¾" MAINLA HEMP ROPE; MINIMUM THREE WRAPS AROUND EACH LOG IN A FIGURE–8 PATTERN. TIE OFF ROPE AND SECURE IN NOTCH W/ STAPLES (TYP)



PLAN VIEW

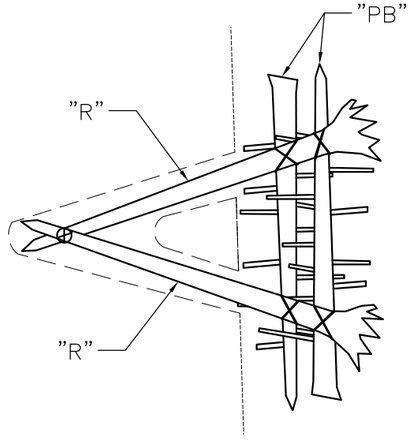
N.T.S.



SECTION VIEW

N.T.S.

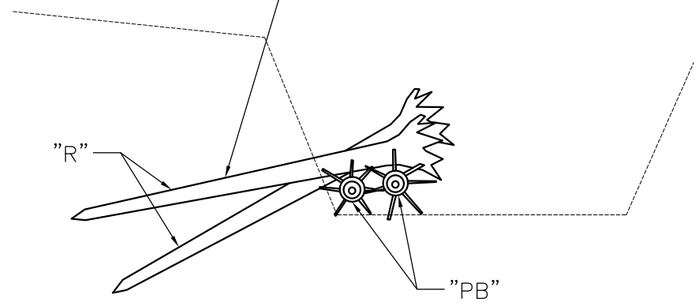
TYPE 2



PLAN VIEW

N.T.S.

LAY LOGS IN TRENCH AND BACKFILL, OR SHARPEN END AND PUSH INTO TIDAL CHANNEL BANK. MINIMUM EMBEDMENT 2/3 OF LOG LENGTH, MIN. COVER 4 FEET.



SECTION VIEW

N.T.S.

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WOODY DEBRIS PLACEMENT DETAILS

Sheet No. 34 of 37
Date 02-05-16
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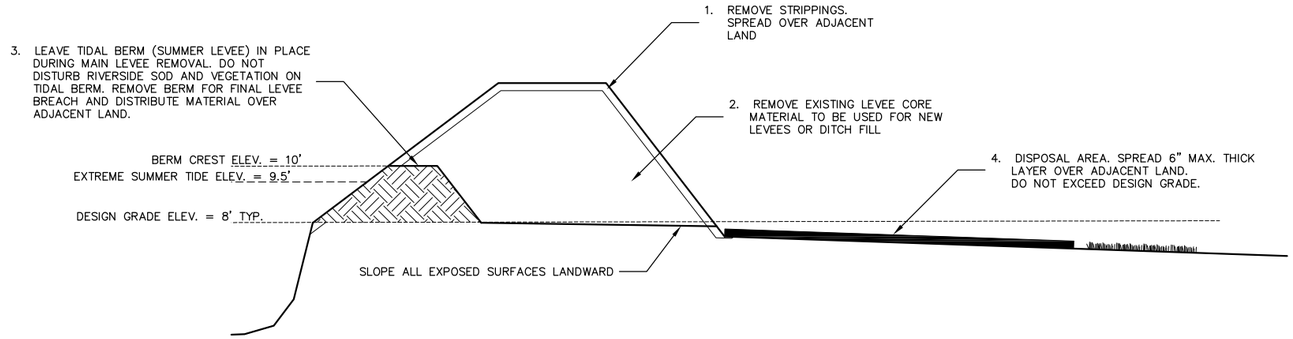
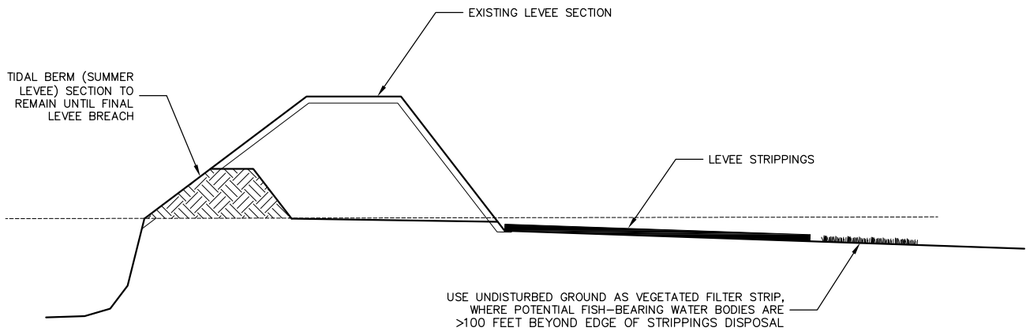


EXISTING LEVEE REMOVAL EXCAVATION SEQUENCING DETAIL

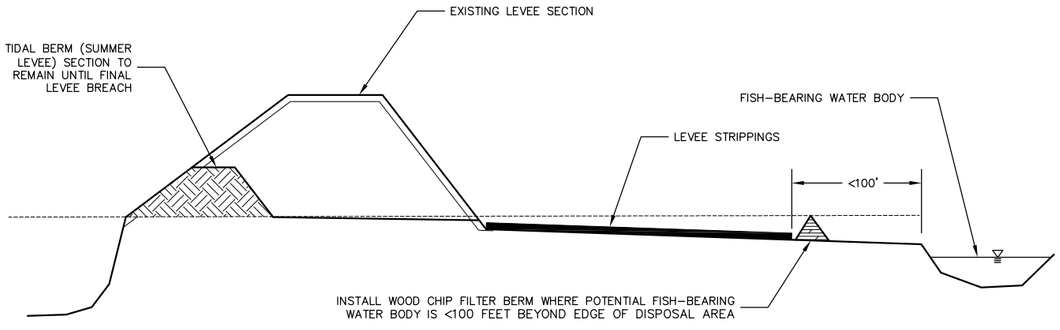
N.T.S.

EXISTING LEVEE REMOVAL LANDWARD EROSION CONTROL DETAILS



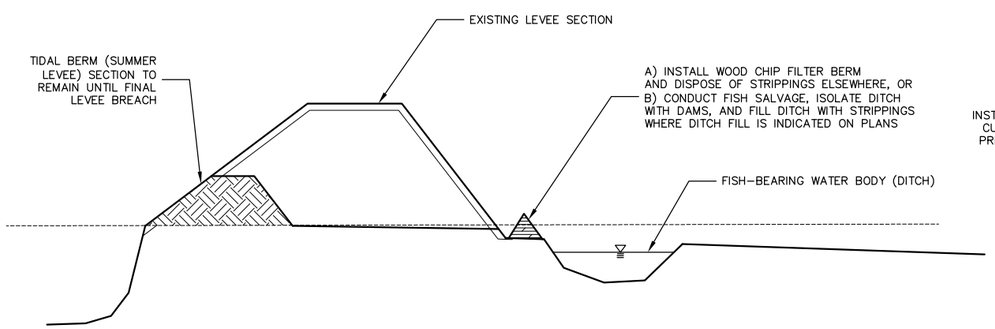
VEGETATED FILTER STRIP SECTION

N.T.S.



WOOD CHIP FILTER BERM SECTION

N.T.S.



WOOD CHIP FILTER BERM/DITCH FILL SECTION

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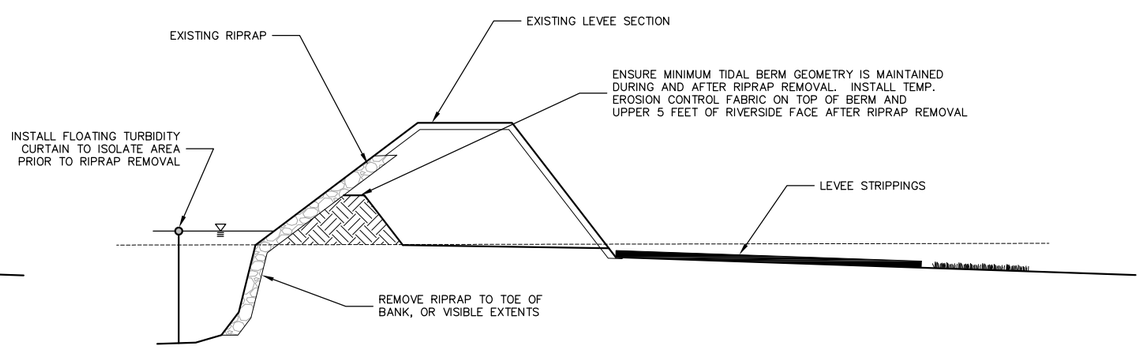

RIPRAP REMOVAL SECTION

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TILLAMOOK, OREGON

EROSION CONTROL DETAILS

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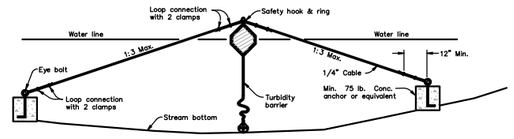
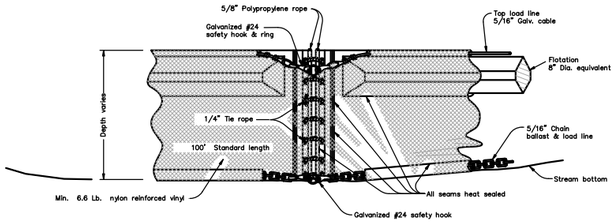
SEDIMENT BARRIER FLOATING



SIDE VIEW



ANCHOR ASSEMBLY

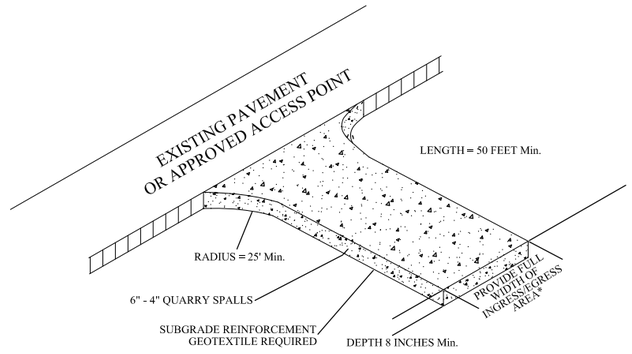
NOTE:

Components of this barrier may be similar or identical to proprietary designs. Any infringement on the proprietary rights of the designer shall be the sole responsibility of the contractor. Substitutions shall be as approved by the engineer.

TURBIDITY BARRIER

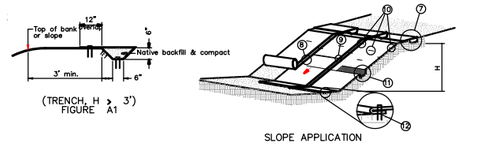
ODOT DETAIL 6006 - TURBIDITY BARRIER

N.T.S.



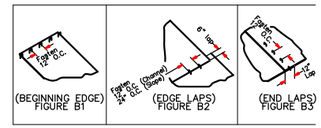
GRAVEL CONSTRUCTION ENTRANCE

N.T.S.



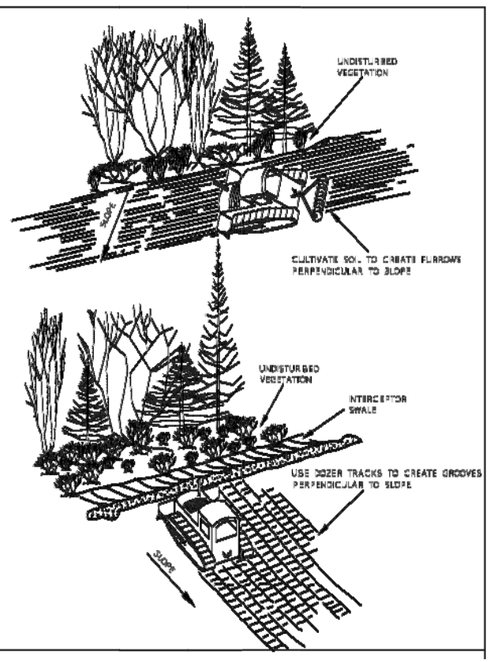
Slope application:

7. Anchor matting at top of slope (Fig. A1 & A2) Fasten in trench and at overlap 12" O.C. (Fig. B1)
8. Overlap mat edges 6" and fasten (Fig. B2). Install matting so edge overlaps are shingled away from prevailing winds. Fasten edges 24" O.C.
9. Overlap mat ends 12", upper mat over lower mat, and fasten (Fig. B3).
10. Stagger alternate rows of fasteners placed at 24" O.C.
11. Construct check slot when specified or as recommended by the manufacturer (Fig A3). Fasten mat in bottom of check slot (Fig. A3 & B1)
12. Extend mat 24" beyond toe of slope; fold mat back under 4" and fasten (Fig. B1)



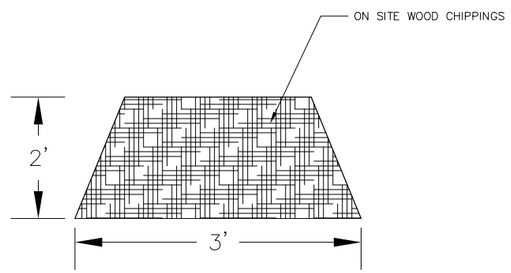
ODOT DETAIL 1055 - MATTING

N.T.S.



SURFACE ROUGHENING DETAIL

N.T.S.



WOOD CHIP BERM DETAIL

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EROSION CONTROL DETAILS

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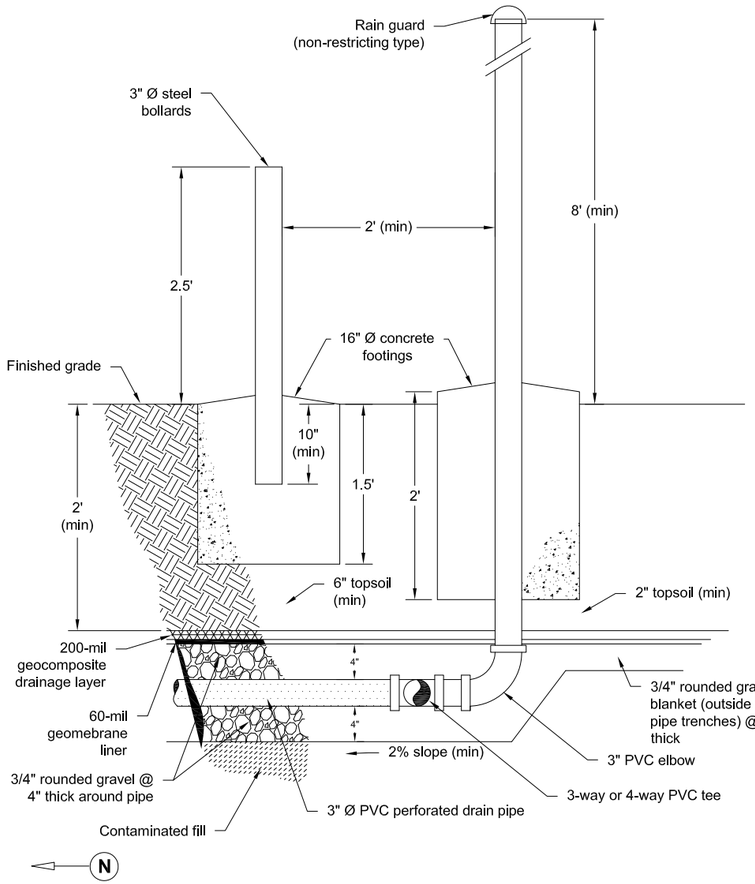

NOTES

1. This drawing shows a typical section of the contaminated containment cell passive venting system at one of the vent risers (looking east).
2. Drawing is not to scale.

Old Mill Site Design Work
Tillamook, Oregon

PASSIVE VENTING SYSTEM TYPICAL SECTION

October 2015 24-1-03957-001

SHANNON & WILSON, INC. Geotechnical and Environmental Consultants | **FIG. 3**

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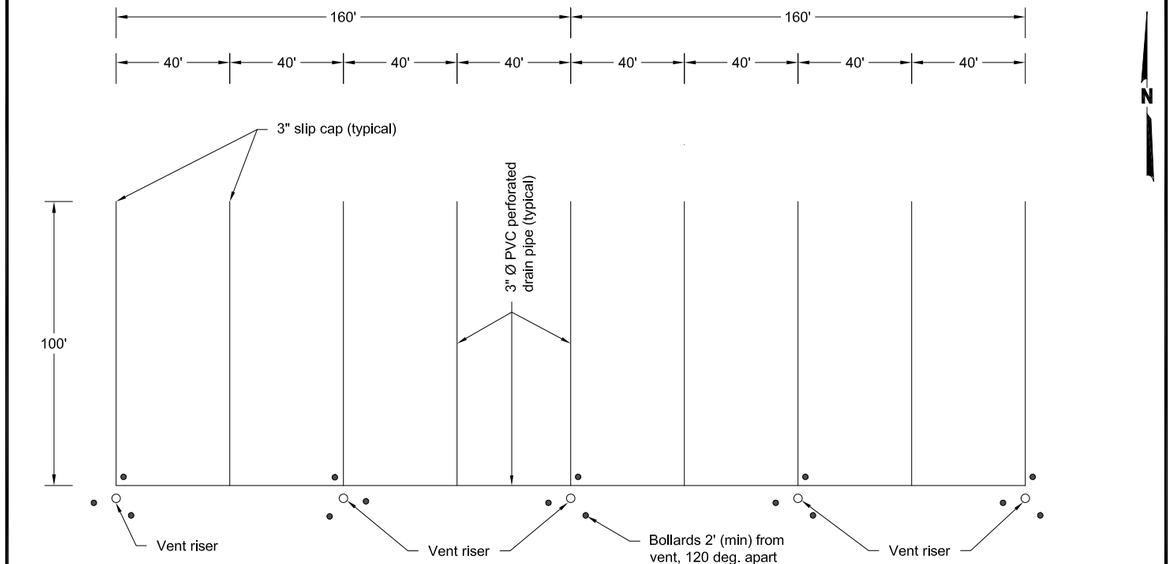

NOTES

1. Passive venting system to be installed under final cap cover and centered on top of contaminated cell prism.
2. Three vent risers in center get 4-way tees, all others get 3-way tees.
3. Drawing is not to scale.

FIG. 4

Old Mill Site Design Work
Tillamook, Oregon

PASSIVE VENTING SYSTEM PLAN VIEW

October 2015 24-1-03957-001

SHANNON & WILSON, INC. Geotechnical and Environmental Consultants | **FIG. 4**

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File: L:\2009-003-03\dwg\Permit Set\DETAILS | Layout: VENT SYSTEM

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TILLAMOOK, OREGON

VENTING SYSTEM DETAILS

Date 02-05-16 | Sheet No. 37 | 37 of 37

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