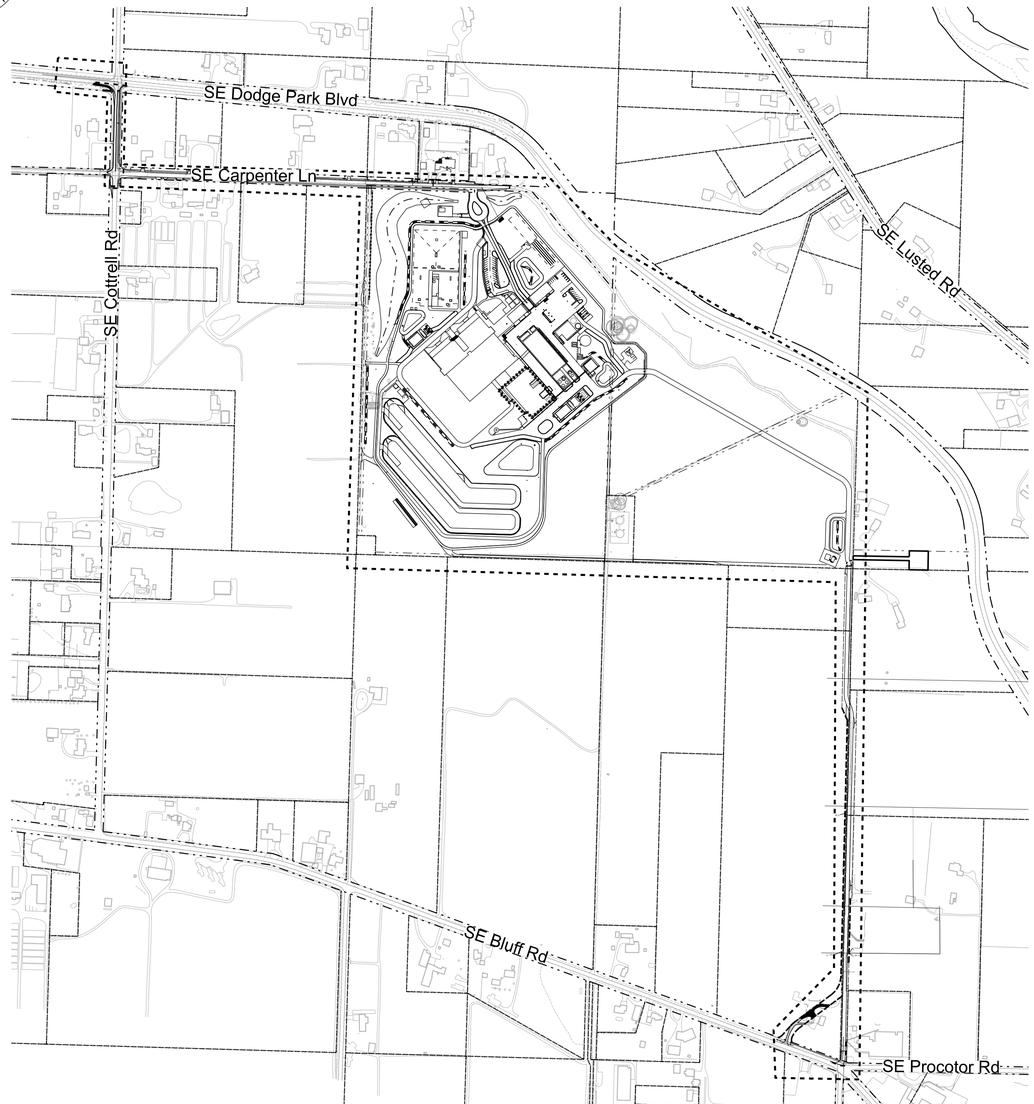
1200-CA Erosion and Sediment Control Plan
Bull Run Filtration Facility

Site North



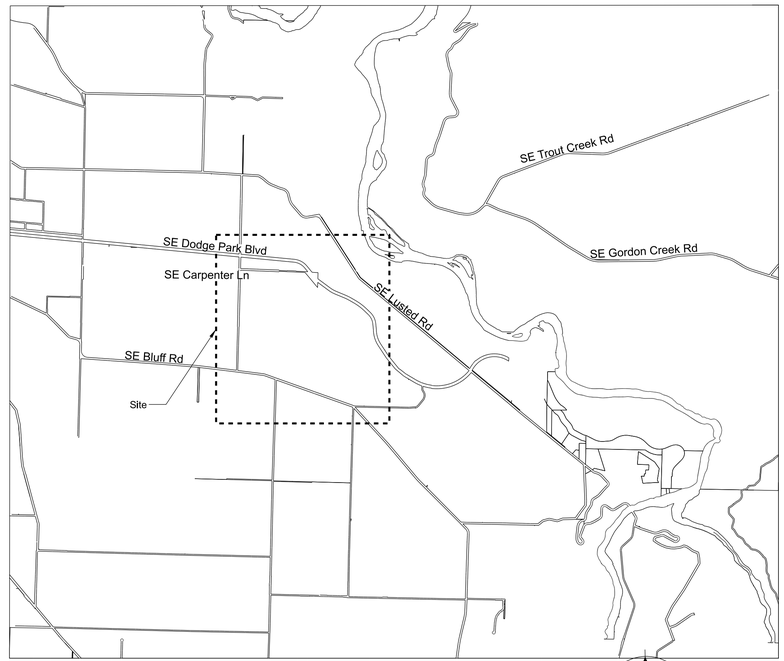
Site Map
1"=400'

CIVIL LEGEND

- Major Contour
- SEC Zone
- Geohazard
- Deciduous Tree
- Evergreen Tree
- Existing Water Line
- Existing Fence
- Existing chain-link Fence
- Existing Gas Line
- Existing Overhead line
- Existing Communications line
- Existing power
- Property Line
- Right-of-Way
- Existing utility easement
- Existing public easement
- Existing Ditch
- Centerline
- Exisiting gravel road
- Existing edge of pavement
- Existing structure
- Catch basin or Inlet
- Existing Utility pole
- Existing guy wire
- Existing water valve
- Existing water meter
- Existing hydrant
- Exisiting gas valve
- Existing Communications structure
- Existing mailbox
- Existing sign
- Existing light post
- Existing culvert
- Existing Sewer maintenance hole
- Existing gas structure
- Existing monitor well

Tentative Business Days/Hours

Monday	7:00am-6:00pm
Tuesday	7:00am-6:00pm
Wednesday	7:00am-6:00pm
Thursday	7:00am-6:00pm
Friday	7:00am-6:00pm
Saturday	7:00am-6:00pm
Sunday	-No Work-



Vicinity Map
NTS

Site North

Sheet Index

00-C-300	Erosion and Sediment Control Cover Sheet
00-C-301	Erosion and Sediment Control Notes
00-C-302	Existing Conditions Carpenter Lane
00-C-303	Paving Plan and Utility Work Carpenter Lane
00-C-304	Final Stabilization and Landscape Carpenter Lane
00-C-305	Existing Conditions Filtratrion Facility
00-C-306	Clearing and Construction Filtration Facility
00-C-307	Mass Excavation Filtration Facility
00-C-308	Utility Work Filtration Facility
00-C-309	Vertical Construction Filtration Facility
00-C-310	Final Stabilization and Landscape Filtration Facility
00-C-311	Existing Conditions Emergency Access
00-C-312	Utility Work Emergency Access
00-C-313	Final Stabilization and Landscape Emergency Access
00-C-801	Permanent Seed Mixes - 1
00-C-802	Permanent Seed Mixes - 2
00-C-901	Details - 1
00-C-902	Details - 2

REGISTERED PROFESSIONAL ENGINEER
84283
OREGON
JULY 13, 2010
ROY W. HAWKINS
EXPIRES 6-30-25

User: stanpw11ics03$ 00-C-300.dgn

10/26/2023

No	Date	Description	Appd
		Revision	
Survey			

Stantec
EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	JSL	Design Mgr	LSH
Drawn By	VAK	Const Mgr	TG
Checked By	RG	Const Supvr	RM
Project Mgr	MRG	Date	

Warning
0 ½ 1
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

David W. Peters, Engineering Manager, PE No 16683

Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Facility

Erosion and Sediment Control

Cover Sheet

Across from 35319 SE Carpenter Lane

SAP Project No
W02229
1/4 Section
3765 / 3766
Sheet No
00-C-300
1 of 16

STANDARD EROSION AND SEDIMENT CONTROL NOTES

1. INCLUDE A LIST OF ALL PERSONNEL (BY NAME AND POSITION) THAT ARE RESPONSIBLE FOR THE DESIGN, INSTALLATION AND MAINTENANCE OF STORMWATER CONTROL MEASURES (E.G. ESCP DEVELOPER, BMP INSTALLER (SEE SECTION 4.10), AS WELL AS THEIR INDIVIDUAL RESPONSIBILITIES. (SECTION 4.4.C.II)
2. VISUAL MONITORING INSPECTION REPORTS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-C PERMIT REQUIREMENTS. (SECTION 6.5)
3. INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200-C PERMIT REQUIREMENTS. (SECTION 6.5Q)
4. RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. (SECTION 4.7)
5. THE PERMIT REGISTRANT MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT (SECTIONS 4 AND 4.11)
6. THE ESCP MUST BE ACCURATE AND REFLECT SITE CONDITIONS. (SECTION 4.8)
7. SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITTAL OF THE ESCP REVISIONS IS ONLY UNDER SPECIFIC CONDITIONS. SUBMIT ALL NECESSARY REVISION TO DEQ OR AGENT WITHIN 10 DAYS. (SECTION 4.9)
8. SEQUENCE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. (SECTION 2.2.2)
9. CREATE SMOOTH SURFACES BETWEEN SOIL SURFACE AND EROSION AND SEDIMENT CONTROLS TO PREVENT STORMWATER FROM BYPASSING CONTROLS AND PONDING. (SECTION 2.2.3)
10. IDENTIFY, MARK, AND PROTECT (BY CONSTRUCTION FENCING 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. (SECTION 2.2.1)
11. PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED. (SECTION 2.2.5)
12. MAINTAIN AND DELINEATE ANY EXISTING NATURAL BUFFER WITHIN THE 50-FEET OF WATERS OF THE STATE. (SECTION 2.2.4)
13. INSTALL PERIMETER SEDIMENT CONTROL, INCLUDING STORM DRAIN INLET PROTECTION AS WELL AS ALL SEDIMENT BASINS, TRAPS, AND BARRIERS PRIOR TO LAND DISTURBANCE. (SECTIONS 2.1.3)
14. CONTROL BOTH PEAK FLOW RATES AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS AND DOWNSTREAM CHANNELS AND STREAMBANKS. (SECTION 2.1.1 AND 2.2.16)
15. CONTROL SEDIMENT AS NEEDED ALONG THE SITE PERIMETER AND AT ALL OPERATIONAL INTERNAL STORM DRAIN INLETS AT ALL TIMES DURING CONSTRUCTION, BOTH INTERNALLY AND AT THE SITE BOUNDARY. (SECTIONS 2.2.6 AND 2.2.13)
16. ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. (SECTION 2.2.14)
17. APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES. TEMPORARY OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES. TEMPORARY OR PERMANENT STABILIZATION MEASURES ARE NOT REQUIRED FOR AREAS THAT ARE INTENDED TO BE LEFT UNVEGETATED, SUCH AS DIRT ACCESS ROADS OR UTILITY POLE PADS. (SECTIONS 2.2.20 AND 2.2.21)
18. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS. (SECTION 2.3.7)
19. KEEP WASTE CONTAINER LIDS CLOSED WHEN NOT IN USE AND CLOSE LIDS AT THE END OF THE BUSINESS DAY FOR THOSE CONTAINERS THAT ARE ACTIVELY USED THROUGHOUT THE DAY. FOR WASTE CONTAINERS THAT DO NOT HAVE LIDS, PROVIDE EITHER (1) COVER (E.G., A TARP, PLASTIC SHEETING, TEMPORARY ROOF) TO PREVENT EXPOSURE OF WASTES TO PRECIPITATION, OR (2) A SIMILARLY EFFECTIVE MEANS DESIGNED TO PREVENT THE DISCHARGE OF POLLUTANTS (E.G., SECONDARY CONTAINMENT). (SECTION 2.3.7)
20. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMPS SUCH AS: CONSTRUCTION ENTRANCE, GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPS MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES. (SECTION 2.2.7)
21. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE. (SECTION 2.2.7.F)
22. CONTROL PROHIBITED DISCHARGES FROM LEAVING THE CONSTRUCTION SITE, I.E., CONCRETE WASH-OUT, WASTEWATER FROM CLEANOUT OF STUCCO, PAINT AND CURING COMPOUNDS. (SECTIONS 1.5 AND 2.3.9)
23. ENSURE THAT STEEP SLOPE AREAS WHERE CONSTRUCTION ACTIVITIES ARE NOT OCCURRING ARE NOT DISTURBED. (SECTION 2.2.10)
24. PREVENT SOIL COMPACTION IN AREAS WHERE POST-CONSTRUCTION INFILTRATION FACILITIES ARE TO BE INSTALLED AND IN AREAS OF REPLANTING. (SECTION 2.2.12)
25. USE BMPS TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; 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, FERTILIZER, PESTICIDES AND HERBICIDES, PAINTS, SOLVENTS, CURING COMPOUNDS AND ADHESIVES FROM CONSTRUCTION OPERATIONS. (SECTIONS 2.2.15 AND 2.3)
26. PROVIDE PLANS FOR SEDIMENTATION BASINS THAT HAVE BEEN DESIGNED PER SECTION 2.2.17 AND STAMPED BY OREGON PROFESSIONAL ENGINEER. (SECTION 2.2.17.A)
27. IF ENGINEERED SOILS ARE USED ON SITE, A SEDIMENTATION BASIN/IMPOUNDMENT MUST BE INSTALLED. (SEE SECTIONS 2.2.17 AND 2.2.18)
28. PROVIDE A DEWATERING PLAN FOR ACCUMULATED WATER FROM PRECIPITATION AND UNCONTAMINATED GROUNDWATER SEEPAGE DUE TO SHALLOW EXCAVATION ACTIVITIES. (SEE SECTION 2.4)
29. IMPLEMENT THE FOLLOWING BMPS WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES. (SECTION 2.3)
30. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL. (SECTION 2.2.9)
31. THE APPLICATION RATE OF ORGANIC FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. ABIDE BY ANY SETBACKS ON PRODUCT LABELS AND USE IN SUCH A WAY THAT THE PRODUCT DOES NOT CAUSE OR CONTRIBUTE TO AN EXCEEDANCE OF APPLICABLE WATER QUALITY STANDARDS. (SECTION 2.3.5)
32. IF AN ACTIVE TREATMENT SYSTEM (FOR EXAMPLE, ELECTRO-COAGULATION, FLOCCULATION, FILTRATION, ETC.) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION OF INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVICE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATING THE TREATMENT SYSTEM. OBTAIN ENVIRONMENTAL MANAGEMENT PLAN APPROVAL FROM DEQ BEFORE OPERATING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS. (SECTION 1.2.9)
33. TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE REGISTRANT IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR. (SECTION 2.2)
34. AS NEEDED BASED ON WEATHER CONDITIONS, AT THE THE END OF EACH WORKDAY SOIL STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER BMPS MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS. (SECTION 2.2.8)
35. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL. (SECTION 2.1.5.B)
36. OTHER SEDIMENT BARRIERS (SUCH AS BIOBAGS): REMOVE SEDIEMNT BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT AND BEFORE BMP REMOVAL. (SECTION 2.1.5.C)
37. CATCH BASINS: CLEAN BEFORE RETENTION CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT. SEDIMENT BASINS AND SEDIMENT TRAPS: REMOVE TRAPPED SEDIMENTS BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT. (SECTION 2.1.5.D)
38. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT 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 TIMEFRAME. (SECTION 2.2.19.A)
39. THE INTENTIONAL WASHING OF SEDIMENT INTO STORM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS. (SECTION 2.2.19)
40. DOCUMENT ANY PORTION(S) OF THE SITE WHERE LAND DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED OR WILL BE TEMPORARILY INACTIVE FOR 14 OR MORE CALENDAR DAYS. (SECTION 6.5.F)
41. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS WITH A COVERING OF BLOWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE. (SECTION 2.2.2)
42. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR MORE THAN 14 DAYS WITH A COVERING OF TEMPORARY SEED UNTIL WORK RESUMES ON THAT PORTION OF THE SITE. (SECTION 2.2.2)
43. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED, ALL TEMPORARY EROSION CONTROLS AND RETAINED SOILS MUST BE REMOVED AND DISPOSED OF PROPERLY, UNLESS NEEDED FOR LONG TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE. (SECTION 2.2.21)

SITE CONDITION	MINIMUM INSPECTION FREQUENCY
1. ACTIVE PERIOD	ON INITIAL DATE THAT LAND DISTURBANCE ACTIVITIES COMMENCE. WITHIN 24 HOURS OF ANY STORM EVENT, INCLUDING RUNOFF FROM SNOW MELT, THAT RESULTS IN DISCHARGE FROM THE SITE. AT LEAST ONCE EVERY 14 DAYS, REGARDLESS OF WHETHER STORMWATER RUNOFF IS OCCURRING.
2. INACTIVE PERIODS GREATER THAN 14 CONSECUTIVE CALENDAR DAYS	THE INSPECTOR MAY REDUCE THE FREQUENCY OF INSPECTIONS IN ANY AREA OF THE SITE WHERE THE STABILIZATION STEPS IN SECTION 2.2.20 HAVE BEEN COMPLETED TO TWICE PER MONTH FOR THE FIRST MONTH, NO LESS THAN 14 CALENDAR DAYS APART, THEN ONCE PER MONTH.
3. PERIODS DURING WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER	IF SAFE, ACCESSIBLE AND PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT DISCHARGE POINT, OR DOWNSTREAM LOCATION OF THE RECEIVING WATERBODY.
4. PERIODS DURING WHICH CONSTRUCTION ACTIVITIES ARE SUSPENDED AND RUNOFF IS UNLIKELY DUE TO FROZEN CONDITIONS.	VISUAL MONITORING INSPECTIONS MAY BE TEMPORARILY SUSPENDED. IMMEDIATELY RESUME MONITORING UPON THAWING, OR WHEN WEATHER CONDITIONS MAKE DISCHARGES LIKELY.
5. PERIODS DURING WHICH CONSTRUCTION ACTIVITIES ARE CONDUCTED AND RUNOFF IS UNLIKELY DURING FROZEN CONDITIONS.	VISUAL MONITORING INSPECTIONS MAY BE REDUCED TO ONCE A MONTH. IMMEDIATELY RESUME MOITORING UPON THAWING, OR WHEN WEATHER CONDITIONS MAKE DISCHARGES LIKELY.

SITE INFORMATION

1. **TYPE OF DEVELOPMENT:**
   CAPITAL IMPROVEMENT
2. **CONSTRUCTION ACTIVITY WILL CONSIST OF:**
   - **A) CLEARING** **Sept 2023**
   - **B) MASS GRADING** **April 2024**
   - **C) UTILITY CONSTRUCTION** **June 2024**
   - **D) VERTICAL CONSTRUCTION** **June 2025**
   - **E) OFFSITE PUBLIC ROADWAY IMPROVEMENTS** **June 2026**
   - **F) FINAL STABLIZATION** **June 2027**
3. **PROJECT TIMELINE:**
   - **BEGINNING DATE:** **June 2023**
   - **COMPLETION DATE:** **Sept 2027**
4. **PROJECT SITE AREAS:**
   - **- TOTAL AREA:** **95 AC**
   - **-DISTURBED AREA:** **83 AC**
   - **-PERCENT OF SITE DISTURBED:** **87%**
5. **OFFSITE PUBLIC IMPROVEMENT AREA:**
   - **-IMPROVEMENT LENGTH:** **4897 FT**
6. **ONSITE SOIL TYPES:**
   - **A) BORGES SILTY CLAY LOAM, 0-8% SLOPES**
   - **B) CAZADERO SILTY CLAY LOAM, 0-7% SLOPES**
   - **C) CAZADERO SILTY CLAY LOAM, 0-8% SLOPES**
   - **D) CAZADERO SILTY CLAY LOAM, 8-15% SLOPES**
   - **E) HAPLUMBREPTS, VERY STEEP**
   - **F) WOLLENT SILT LOAM**
7. **CUT AND FILL DATA:**
   - **-CUT:** **760,000 CY**
   - **-FILL:** **101,000 CY**
   - **-NET ADJUSTED:** **-659,000 CY**

This is primarily a cut project , any fill material will be generated from native soils.

POLLUTANT GENERATING MATERIALS

Sediment, Concrete, Paint, Fuels, Oils, Plastics, Construction Materials.

WATER BODIES WITHIN 1-MILE RADIUS

Johnson Creek (Not 303D listed at discharge location), Beaver Creek, Sandy River

AUTHORIZED NON-STORMWATER DISCHARGES

Fire hydrant flushing, Irrigation, Potable Waterline Flushing, Pavement Wash Water (Excluding spill & leaks), Uncontaminated Clear Groundwater, Construction De-watering

BMP MATRIX FOR CONSTRUCTION PHASE

1200-C PHASES	PHASE 1		PHASE 2	PHASE 3	PHASE 4
PHASE/BMP	CLEARING	MASS GRADING	UTILITY CONSTRUCTION	VERTICAL CONSTRUCTION	FINAL STABILIZATION
EROSION PREVENTION					
GROUND COVER	X	X	X	X	X
PLASTIC SHEETING	X	X	X	X	
DUST CONTROL	X	X	X	X	
TEMPORARY STABILIZATION (STRAW MULCH/HYDROSEED)		X	X	X	
PERMANENT STABILIZATION				X	X
BUFFER ZONE (FROM RAVINE)	X	X	X	X	X
SEDIMENT CONTROL					
SEDIMENT FENCE (PERIMETER)	X	X	X	X	X
SEDIMENT FENCE (INTERIOR)	X	X	X	X	
STRAW WATTLES	X	X	X	X	X
INLET PROTECTION	X	X	X	X	X
DEWATERING		X	X	X	
RUN OFF CONTROL					
CONSTRUCTION ENTRANCE	X	X	X	X	
EXISTING OUTLET PROTECTION					
NEW OUTLET PROTECTION		X	X	X	X
EXISTING CURB INLET CHECK DAMS				X	X
POLLUTION PREVENTION					
HAZARD WASTE MANAGEMENT					
SPILL KIT ONSITE	X	X	X	X	X
CONCRETE WASHOUT AREA			X	X	

OWNER/DEVELOPER

Portland Water Bureau
David Peters
503-823-2003
1120 SW 5th Ave Rm 405
Portland, Oregon 97204

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Portland, OR 97201

RAIN GAUGE:

https:// www.wunderground.com
/dashboard/pws/ KORBORIN2

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541-207-8441

ESCP PREPARER:

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CESCL:

Michael Zenthoefer
Point Environmental LLC
mikez@pointenv.com
541-207-8441

Description of Training:
-Certified Professional in Erosion and Sediment Control (Cert# 7386, Exp. 4/16/25)
-ODOT Certified Environmental Construction Inspector (Cert# 44011)

Description of Experience:
Fifteen years of experience. B.S. Environmental Science, Environmental Law and Policy, OSU. Environmental manager, contractor, and inspector, with extensive experience designing, installing, maintaining, and inspecting erosion, sediment, and pollution control features on a wide variety of civil infrastructure projects.

REGISTERED PROFESSIONAL ENGINEER 84283
OREGON JULY 13, 2010 ROY W. HANKINS
EXPIRES 6-30-25

00-C-301.dgn
User: stanpw11lcs03$
10/26/2023

No	Date	Description	Appd
		Revision	
Survey			

Stantec
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Designed By	JSL	Design Mgr	LSH
Drawn By	VAK	Const Mgr	TG
Checked By	LCS	Const Supvr	RM
Project Mgr	MRG	Date	

Warning
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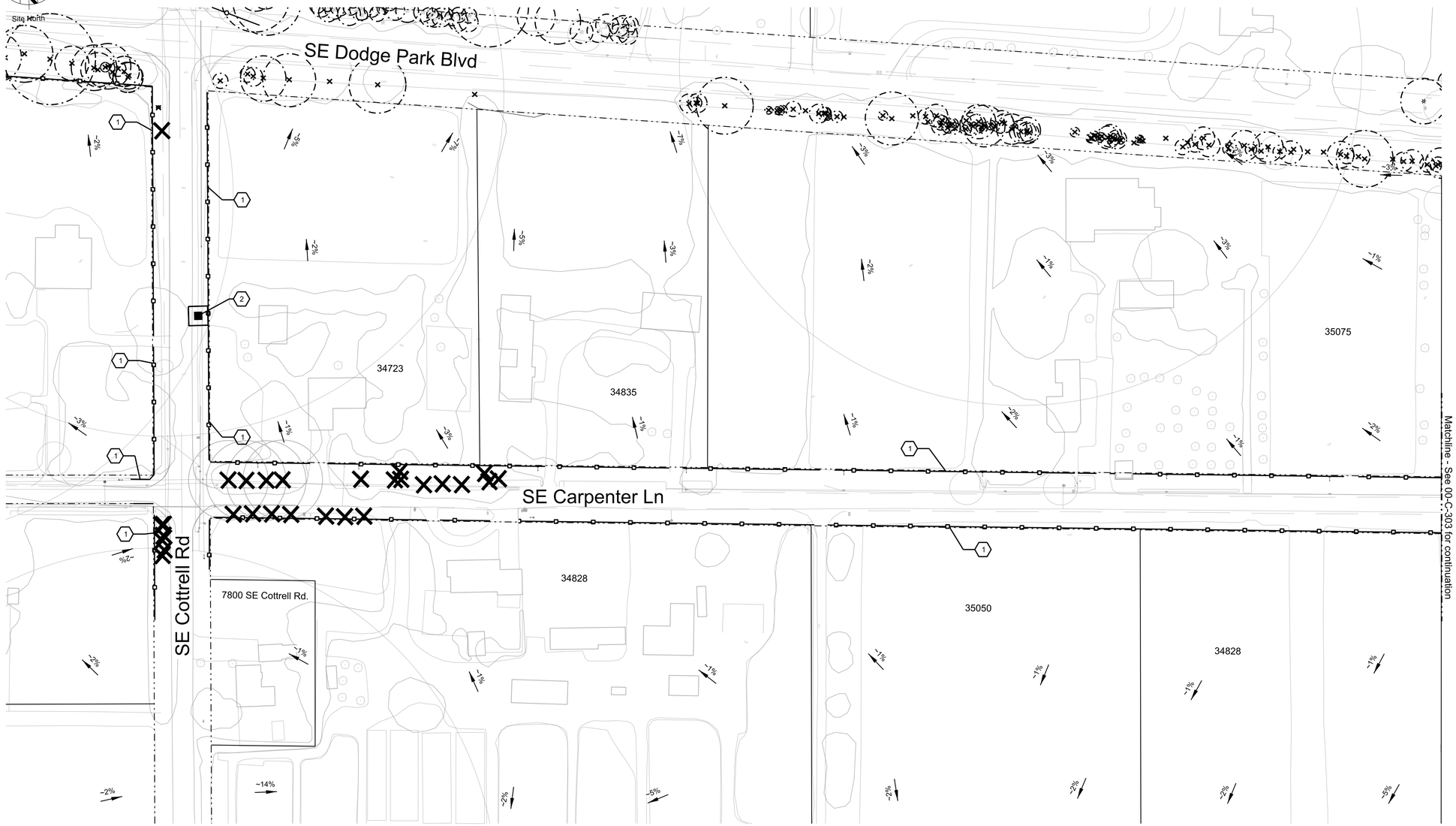
PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

David W. Peters, Engineering Manager, PE No 16683 — Date

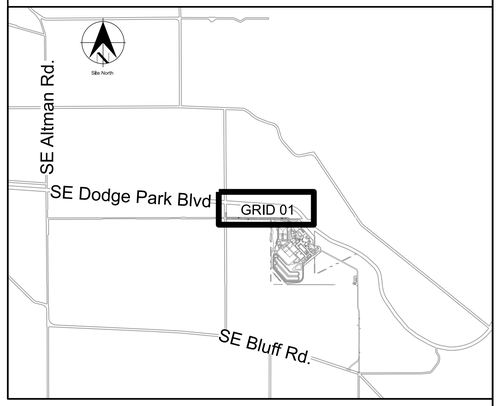
CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Facility
Erosion and Sediment Control
General Notes
Across from 35319 SE Carpenter Lane

SAP Project No W02229
1/4 Section 3765 / 3766
Sheet No 00-C-301
2 of 16



KEY PLAN



Sheet Keynotes

1. Install Temporary Silt Fence, See Detail 2 on Sheet 00-C-901.
2. Install Inlet Protection, See Detail 2 on Sheet 00-C-902.

Legend

- Silt Fence
- Limits of Grading
- Tree Removal
- Flow Arrow
- Inlet Protection

0 60 120
SCALE IN FEET

REGISTERED PROFESSIONAL ENGINEER
84283
OREGON
JULY 13, 2010
ROY W. HAWKINS
EXPIRES 6-30-25

User: stanpw11cs03$ 00-C-302.dgn

10/26/2023

No	Date	Description	Appd
		Revision	
Survey			

Stantec
EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	JSL	Design Mgr	LSH
Drawn By	VAK	Const Mgr	TG
Checked By	LCS	Const Supvr	RM
Project Mgr	MRG	Date	

Warning
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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

David W. Peters, Engineering Manager, PE No 16683 — Date

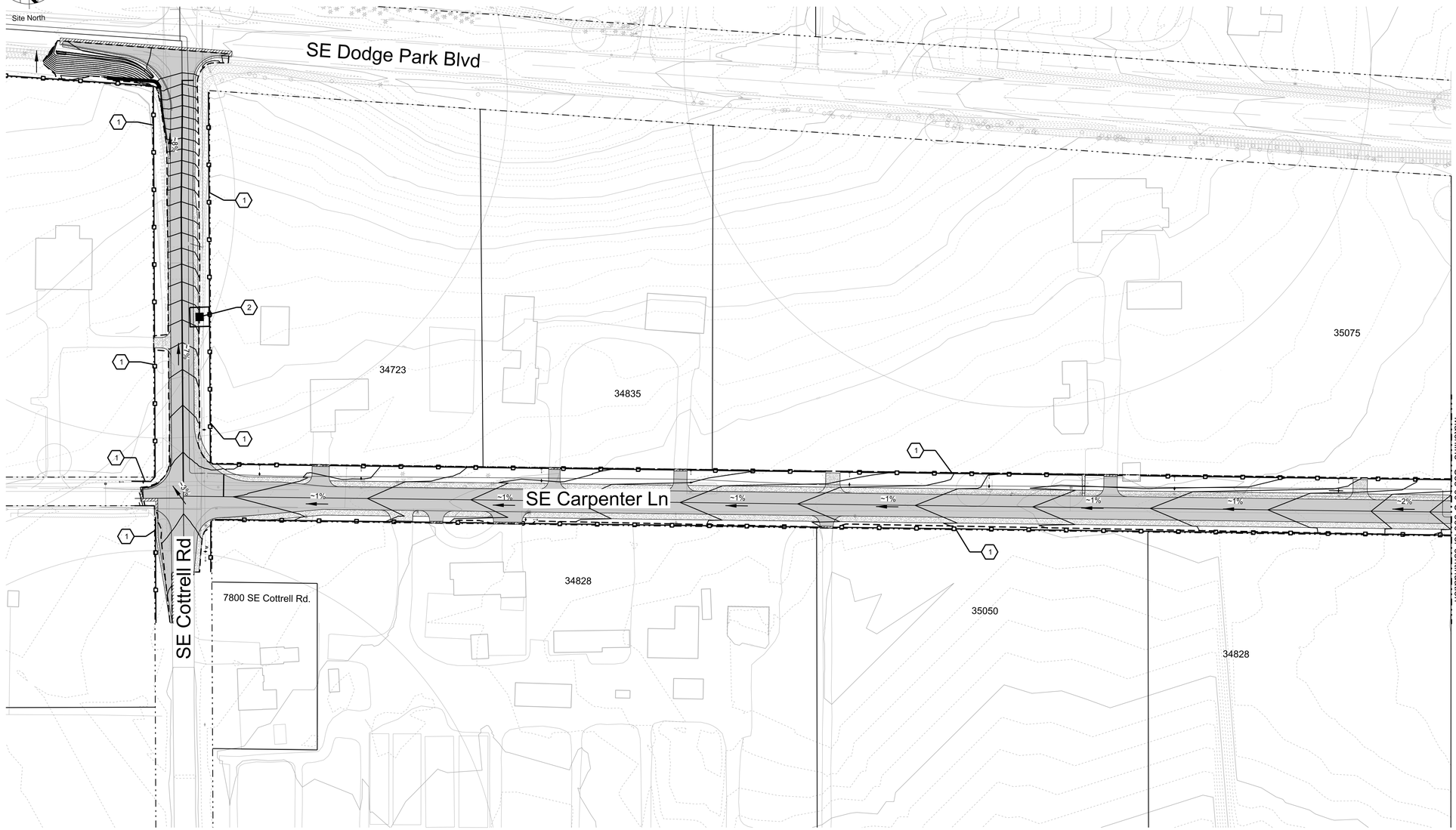
CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Facility

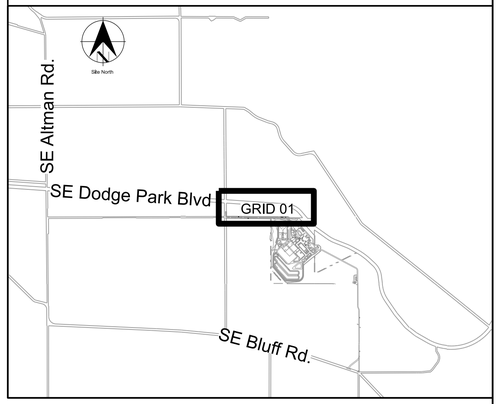
Erosion and Sediment Control

Existing Conditions
SE Carpenter Lane
Across from 35319 SE Carpenter Lane

SAP Project No
W02229
1/4 Section
3765 / 3766
Sheet No
00-C-302
3 of 16



KEY PLAN



Sheet Keynotes

1. Install Temporary Silt Fence, See Detail 2 on Sheet 00-C-901.
2. Install Inlet Protection, See Detail 2 on Sheet 00-C-902.

Legend

- Silt Fence
- Limits of Grading
- Flow Arrow
- Utility Pole
- Fiber Optic Line
- Inlet Protection

0 60 120
SCALE IN FEET

REGISTERED PROFESSIONAL ENGINEER
84283
OREGON
JULY 13, 2010
ROY W. HAWKINS
EXPIRES 6-30-25

User: stanpw11lcs03$ 00-C-303.dgn

10/26/2023

No	Date	Description	Appd
		Revision	
Survey			

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Designed By	JSL	Design Mgr	LSH
Drawn By	VAK	Const Mgr	TG
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Project Mgr	MRG	Date	

Warning
0 ½ 1
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

David W. Peters, Engineering Manager, PE No 16683 — Date

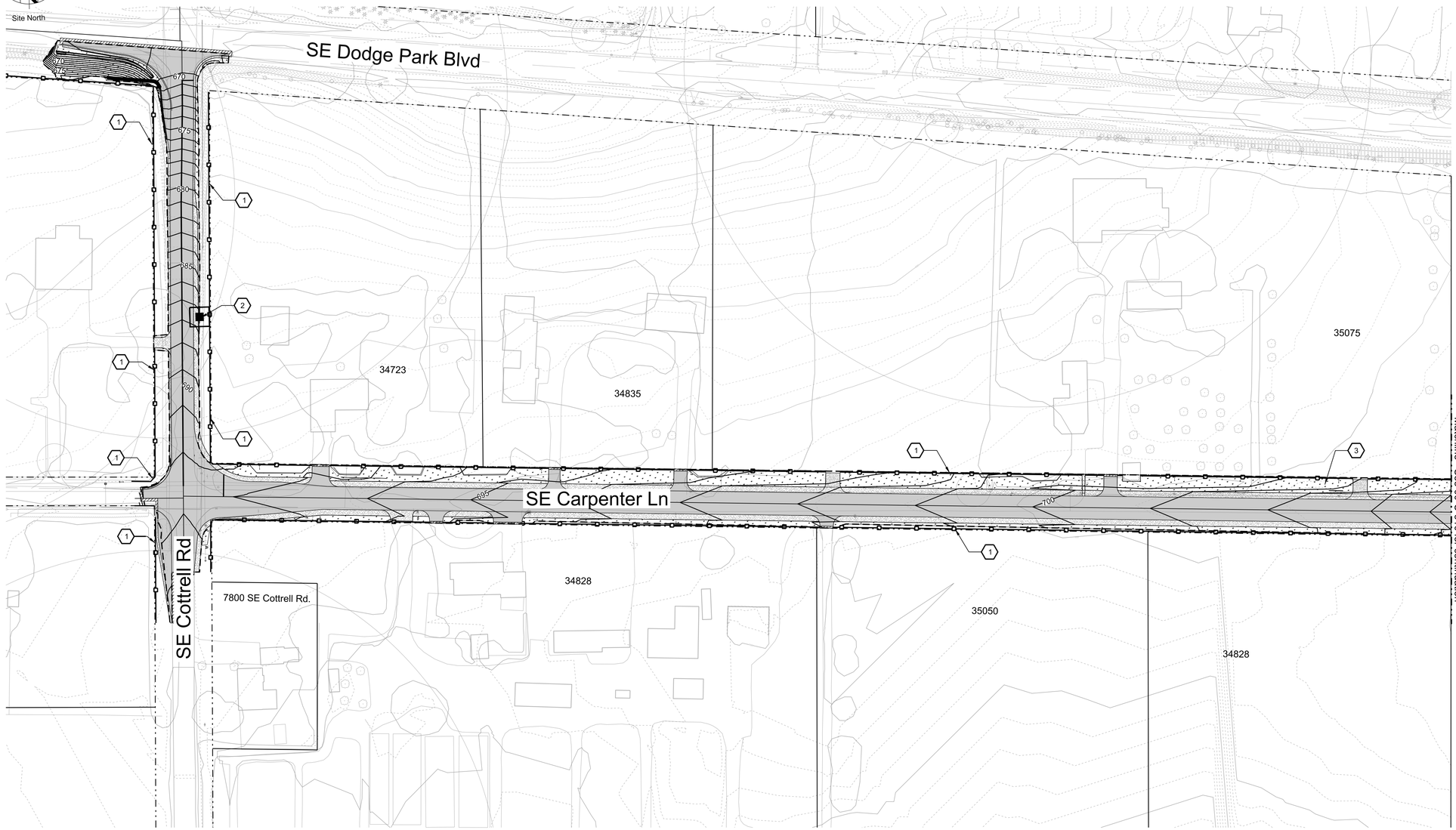
CITY OF PORTLAND OREGON 1851

Bull Run Filtration Facility

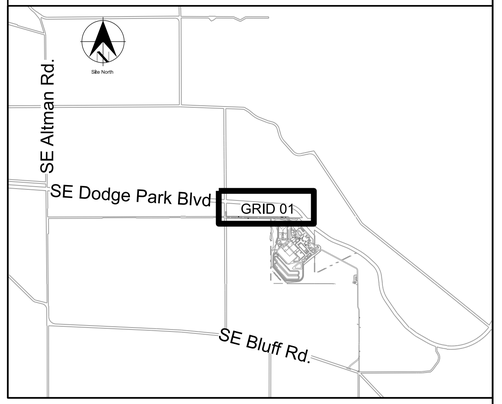
Erosion and Sediment Control

Paving Plan and Utility Work
SE Carpenter Lane
Across from 35319 SE Carpenter Lane

SAP Project No
W02229
1/4 Section
3765 / 3766
Sheet No
00-C-303
4 of 16



KEY PLAN



General Sheet Notes

1. Refer to Erosion and Sediment Control notes, Sheet 00-C-301.
2. Protect all existing structures and trees not shown for demolition.
3. Upon project completion remove gravel surfacing from all staging areas and restore topsoil and seed.
4. Remove sediment fence and tree protection fence upon final site stabilization.
5. Limit of Disturbance is 1ft from Right-of-way lines. Temporary Sediment Fence is placed at Limit of Disturbance.
6. All seeding should be accompanied by mulching either hydro, rolled matting, or temporary straw/compost, etc. All mulching should conform to COP specs.

Sheet Keynotes

1. Install Temporary Silt Fence, See Detail 2 on Sheet 00-C-901.
2. Install Inlet Protection, See Detail 2 on Sheet 00-C-902.
3. Apply Hydroseed per 1030.48. See 00-C-801 and 00-C-802 for seed mixes.

Legend

- Silt Fence
- Asphalt
- Gravel
- Native Grass / Forb Mix
- Inlet Protection

0 60 120
SCALE IN FEET

REGISTERED PROFESSIONAL ENGINEER 84283
OREGON JULY 13, 2010 ROY W. HAWKINS
EXPIRES 6-30-25

No	Date	Description	Appd
		Revision	
Survey			

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Project Mgr	MRG	Date	

Warning
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PORTLAND WATER BUREAU
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CITY OF PORTLAND OREGON 1851

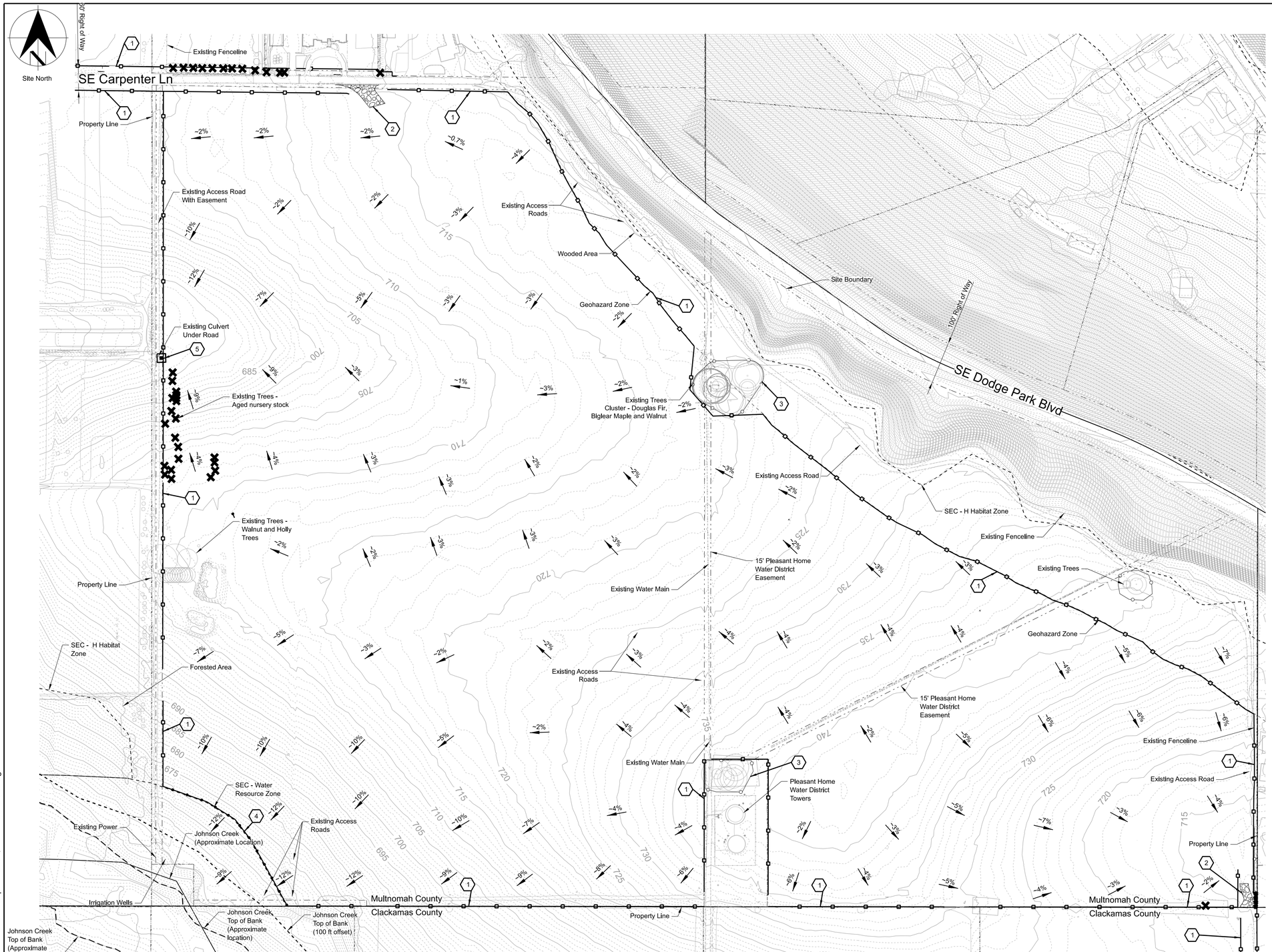
Bull Run Filtration Facility

Erosion and Sediment Control

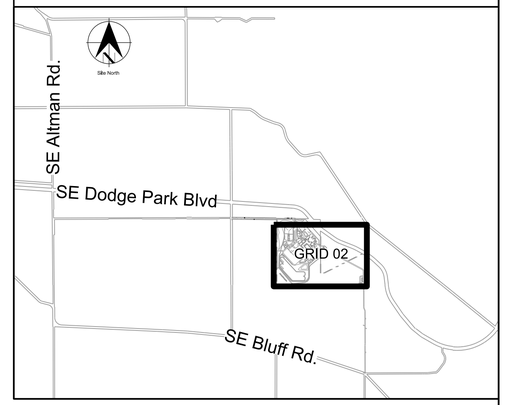
Final Stabilization and Landscape
SE Carpenter Lane
Across from 35319 SE Carpenter Lane

SAP Project No W02229
1/4 Section 3765 / 3766
Sheet No 00-C-304
5 of 16

10/26/2023
User: stanpw11lcs04$
00-C-304.dgn



KEY PLAN



General Sheet Notes

1. Refer to Erosion and Sediment Control notes, Sheet 00-C-301.
2. Protect all existing structures and trees not shown for demolition.
3. Upon project completetion remove gravel surfacing from all staging areas and restore topsoil and seed.
4. Remove Silt Fence and tree protection fence upon final site stabilization.

Sheet Keynotes

1. Install Temporary Silt Fence, See Detail 2 on Sheet 00-C-901.
2. Install Stabilized Construction Entrance, See Detail 1 on Sheet 00-C-901.
3. Install Tree Protection Fence, See Detail 1 on Sheet 00-C-902.
4. Install Compost Filter Sock, See Detail 2 on Sheet 00-C-903.
5. Install Inlet Protection, See Detail 2 on Sheet 00-C-902.

Legend

- Tree and Vegetation Removal
- Flow Arrow
- Silt Fence
- Tree Protection Fence
- Stabilized Construction Entrance
- Compost Filter Sock
- Inlet Protection

0 120 240
SCALE IN FEET

REGISTERED PROFESSIONAL ENGINEER 84283 OREGON JULY 13, 2010 ROY W. HAWKINS
EXPIRES 6-30-25

00-C-305.dgn
User: stanpw11lcs04$
10/26/2023

No	Date	Description	Appd
		Revision	
Survey			

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Checked By	LCS	Const Supvr	RM
Project Mgr	MRG	Date	

Warning
0 ½ 1
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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

David W. Peters, Engineering Manager, PE No 16683 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Facility

Erosion and Sediment Control

Existing Conditions
Filtration Facility
Across from 35319 SE Carpenter Lane

SAP Project No
W02229
1/4 Section
3765 / 3766
Sheet No
00-C-305
6 of 16

Site North

Matchline - See 00-L-501 for continuation

SE Carpenter Ln

Right of Way

Temporary Drainage Ditch

Drainfield

Septic Tank

SE Dodge Park Blvd

Area to remain undisturbed by construction activites until drainfield construction

Property Line

Right of Way

Temporary Drainage Ditch

Cut Face of Excavation

Limit of Disturbance at edge of easement

Existing Water Discharge Location

Geohazard

SEC-H Wildlife Habitat

Limit of Disturbance

Wooden Area

Storage for non-erosion pollution

Concrete Washouts and Cleanup

Temporary Drainage Ditch

Warehouse, Maintenance Shop, and Fuel Farm

See Sheet Note 2

Mass Ex Spring/Summer 2024

Clearing and Grading Fall 2023

Limit of Grading

3 00-C-902 Flow Spreader

Water Discharge

SEC-WR

100 ft Buffer Offset

Johnson Creek (Approximate location)

Stormwater Treatment

Property Line

Mitigation Planting Area

Wooden Area

See Sheet Note 2

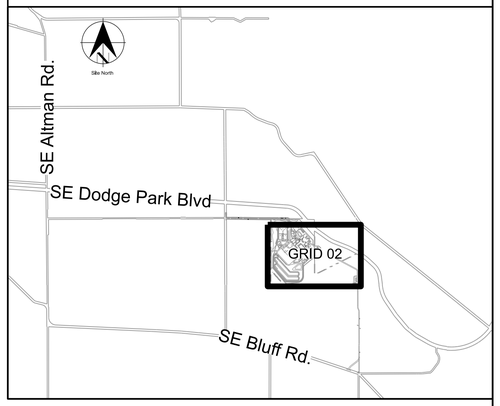
Property Line

Temporary Drainage Ditch

Silt Fence

Emergency Access to Bluff Rd (Clackamas County)

KEY PLAN



General Sheet Notes

1. No unsupported finish slopes on site.
2. Limit of Disturbance is 1ft from Geohazard line, property line, or SEC-WR line. Temporary Silt Fence is placed at Limit of Disturbance.

Sheet Keynotes

1. Install Temporary Silt Fence, See Detail 2 on Sheet 00-C-901.
2. Install Tree Protection Fence, See Detail 1 on Sheet 00-C-902.
3. Install Stabilized Construction Entrance, See Detail 1 on Sheet 00-C-901.
4. Install Wheel Wash, See Detail 3 on Sheet 00-C-901.
5. Protect Existing Fence. Place Temporary Silt Fence minimum 1ft from existing fence.
6. Install Compost Filter Sock, See Detail 2 on Sheet 00-C-903.
7. Install Straw Wattle, See Detail 2 on Sheet 00-C-903.
8. Install Inlet Protection, See Detail 2 on Sheet 00-C-902.

Legend

- Install Silt Fence
- Install Tree Protection Fence
- Limit of Disturbance
- Geohazard
- SEC Zone
- Erosion Control Matting
- Work Area
- Stockpile Area
- Pipelines Project Construction zone
- Laydown
- Drain Field
- 67% Excavation Cut Slope
- Temporary Storm Pond
- Warehouse, Maintenance Shop, Fuel Farm
- Flow Direction
- Pipe Flow Direction
- Temporary Drainage Ditch
- Stabilized Construction Entrance
- Wheel Wash
- Compost Filter Sock
- Straw Wattle
- Inlet Protection
- Vegetated Buffer

0 120 240
SCALE IN FEET

REGISTERED PROFESSIONAL ENGINEER 84283 OREGON JULY 13, 2010 ROY W. HAWKINS EXPIRES 6-30-25

User: stanpw11ics03$

00-C-306.dgn

10/26/2023

No	Date	Description	Appd
		Revision	
Survey			

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Checked By	RG	Const Supvr	RM
Project Mgr	MRG	Date	

Warning

0 ½ 1

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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

David W. Peters, Engineering Manager, PE No 16683

Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Facility

Erosion and Sediment Control

Clearing and Construction
Filtration Facility
Across from 35319 SE Carpenter Lane

SAP Project No
W02229
1/4 Section
3765 / 3766
Sheet No
00-C-306
7 of 16

DRAWING 00-C-307

CONTRACT

ADJACENT 35319 SE CARPENTER LN GRESHAM, OR 97080
BULL RUN FILTRATION FACILITY
DESCRIPTION

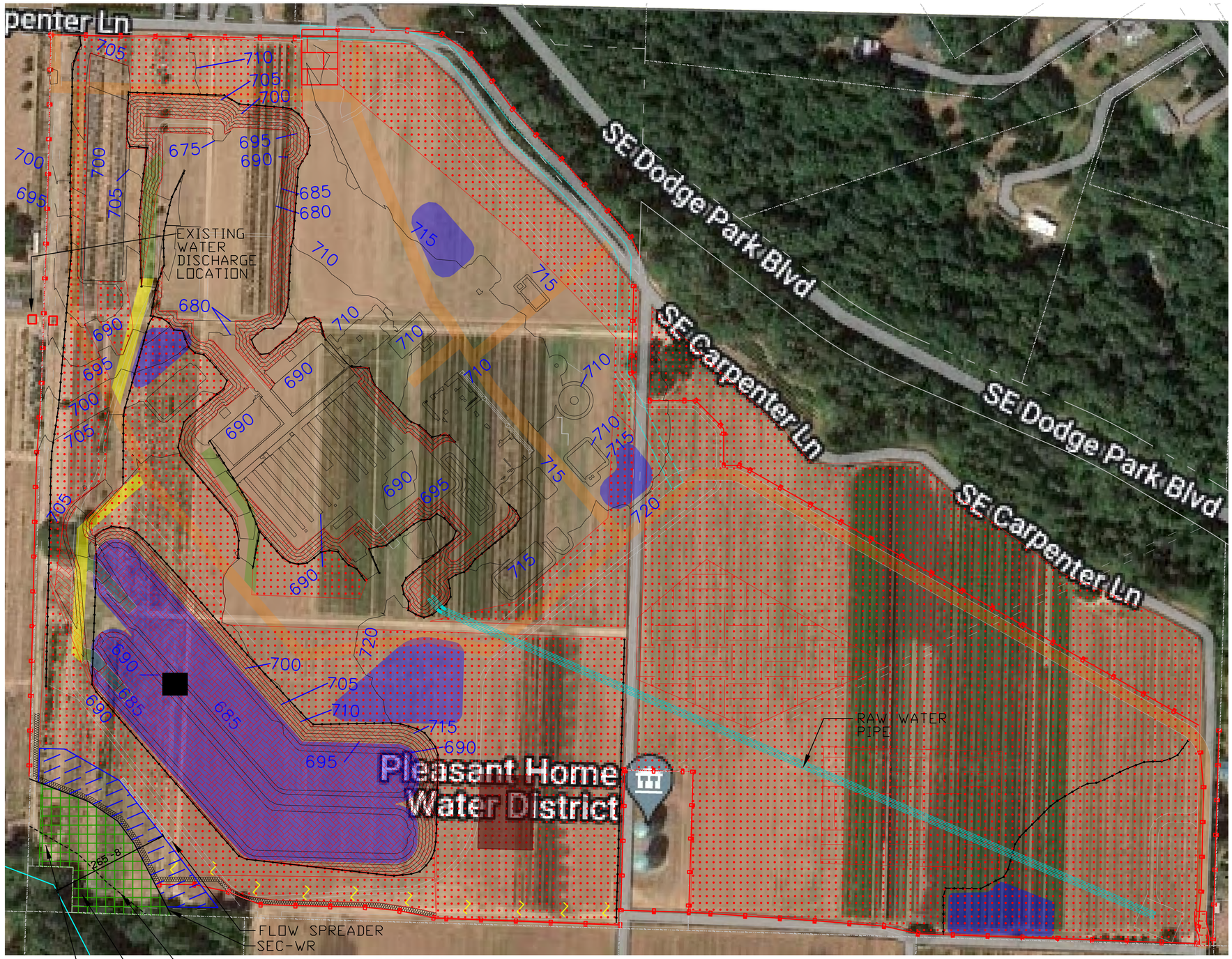
PHOTO

DATE

BY

SURVEYED

DEPARTMENT BAR CODE



Legend

- Sediment Fence Unsupported (RD1040)
- Straw Wattle/Fiber Roll (RD1030)
- Compost Sock (RD1032)
- Stabilized Construction Entrance (RD1000)
- Inlet Protection (RD1010, RD1015)
- Scour Protection (RD1050)
- Slope Matting Hydraulic or Rolled RD1055)
- Temp Straw/Wood Mulch (Inactive Soils) per 1030.48(b)(2)a.
- Check Dam per RD1005 & RD1006
- Property Boundary/Limit of Disturbance
- Stockpile Area (Covered)
- Access Road
- Temp. Haul Road
- Ramps
- Water Treatment System
- Erosion Control Matting
- Vegetated Buffer

NOTES:

- DRAWING SHOWING MASS EXCAVATION CONTOUR LINES, SPACED AT 5 FT INTERVAL
- DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED

JOB No.

REV	DATE	REVISION	BY
5			
4			
3			
2			
1			

DATE 2023-10-10

LOCATION

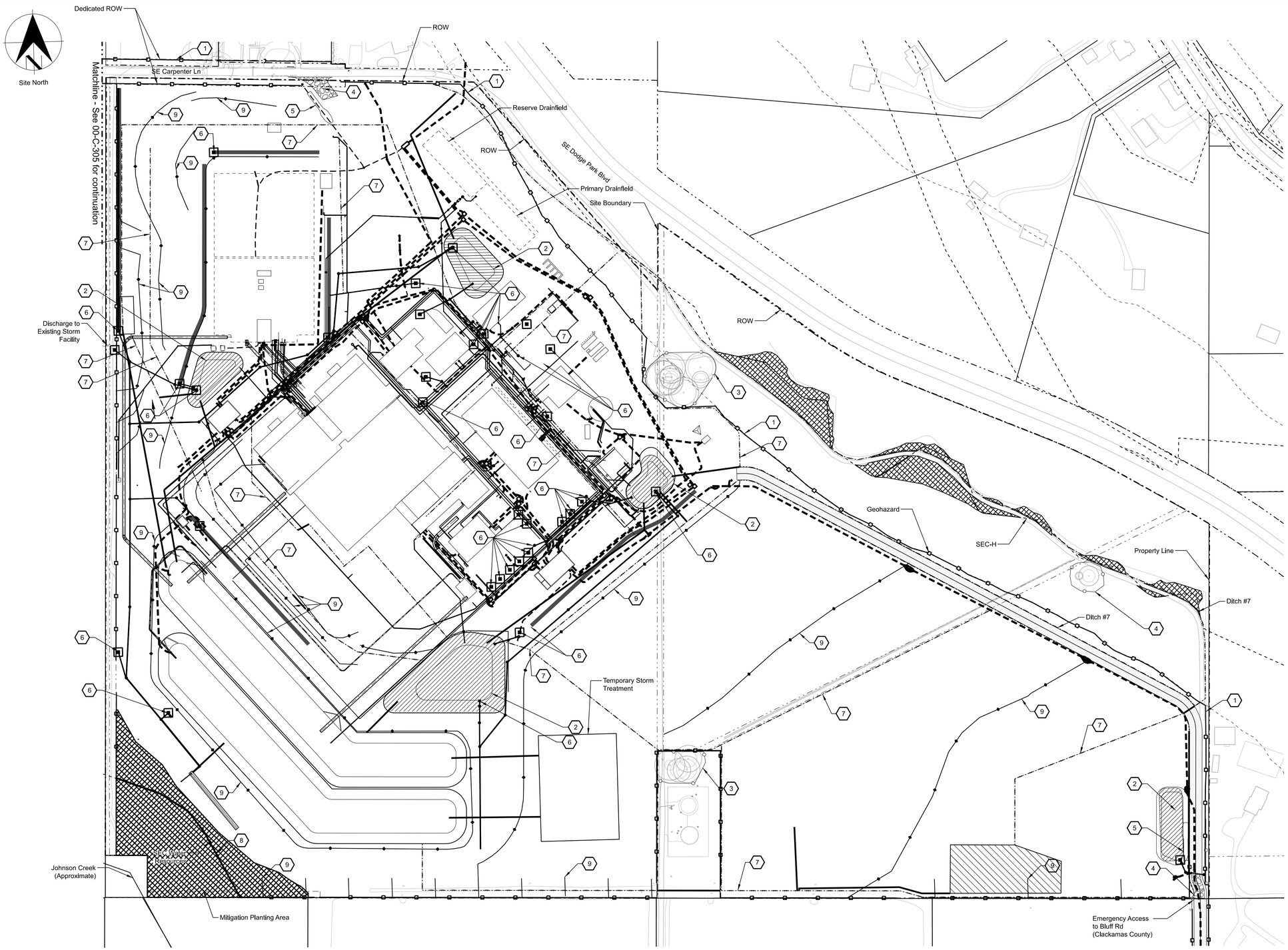
ADJACENT 35319 SE CARPENTER LN
GRESHAM, OR 97080
BULL RUN FILTRATION FACILITY
MASS EXCAVATION

SHEET 1 OF 1

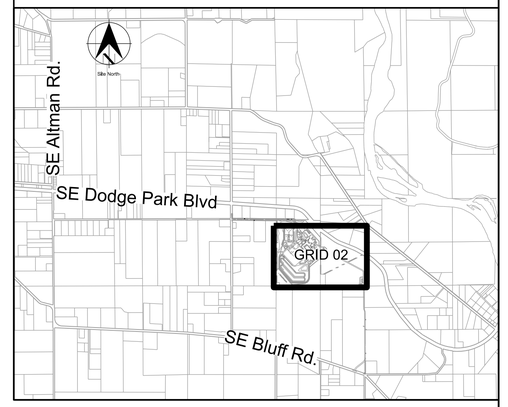
DRAWING 00-C-307

$DATE$

$FILE$



KEY PLAN



General Sheet Notes

1. Refer to Filtration Facility Stormwater Report attached to EMP for stormwater calculations and sizing.
2. See 00-LU-506 (Grading Plan) for ground disturbance limits.
3. See 00-LU-508 (Landscape Plan) for proposed vegetation.
4. All storm pipe outfalls will include scour protection. See Detail 3 on Sheet 00-C-903.

Sheet Keynotes

1. Install Silt Fence, See Detail 2 on Sheet 00-C-901.
2. Construct Detention Pond.
3. Install Tree Protection Fence, See Detail 1 on Sheet 00-C-902.
4. Install Stabilized Construction Entrance, See Detail 1 on Sheet 00-C-901.
5. Install Wheel wash, See Detail 3 on sheet 00-C-901.
6. Install Inlet Protection. See Detail 2 on Sheet 00-C-902.
7. Install Temp storm ditches with check dams, See Detail 6 on sheet 00-C-901.
8. Install Compost Filter Sock, See Detail 2 on Sheet 00-C-903.
9. Install Straw Wattle, See Detail 2 on Sheet 00-C-903.

Legend

- Detention Pond
- Site Boundary
- Tree Removal
- Silt Fence
- Tree Protection Fence
- Electrical Duct Bank
- Piping
- Temporary Storm Ditches with check dams
- Vegetated Buffer
- Stabilized Construction Entrance
- Wheel Wash
- Straw Wattle
- Compost Filter Sock
- Inlet Protection

0 120 240
SCALE IN FEET

REGISTERED PROFESSIONAL ENGINEER 84283 OREGON JULY 13, 2010 ROY W. HAWKINS EXPIRES 6-30-25

No	Date	Description	Appd
		Revision	
Survey			

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Drawn By	BYS	Const Mgr	TG
Checked By	RG	Const Supvr	RM
Project Mgr	MRG	Date	

Warning
0 ½ 1
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

David W. Peters, Engineering Manager, PE No 16683 — Date

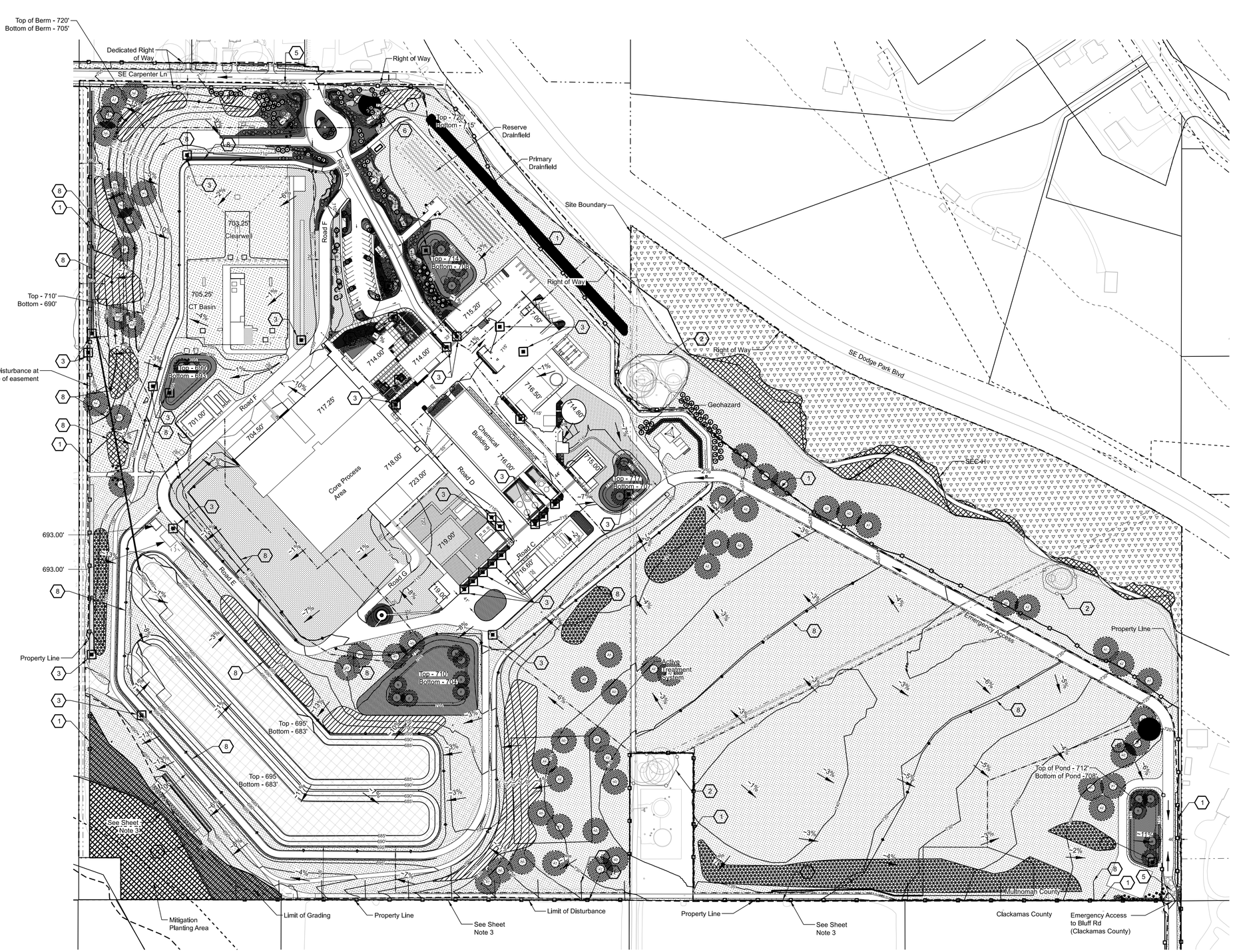
CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Facility

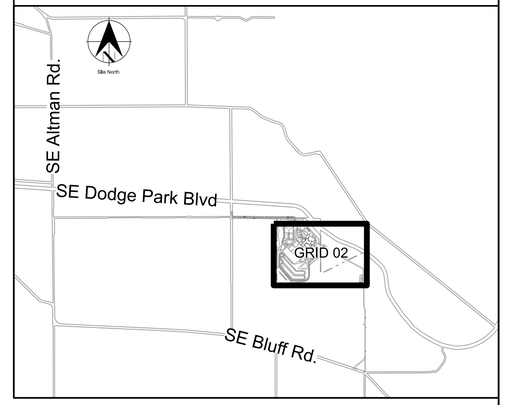
Erosion and Sediment Control

Utility Permanent Storm & Temp. Storm Management
Filtration Facility
Across from 35319 SE Carpenter Lane

SAP Project No W02229
1/4 Section 3765 / 3766
Sheet No 00-C-308
9 of 16



KEY PLAN



General Sheet Notes

1. Refer to Erosion and Sediment Control notes, Sheet 00-C-301.
2. Protect all existing strucutres and trees not shown for demolition.
3. Upon project completion remove gravel surfacing from all staging areas and restore topsoil and seed.
4. Contours displayed every foot. Only major contours at every 5ft are labeled.
5. Remove sediment fence and tree protection fence upon final site stabilization.
6. No unsupported finish slopes on site.
7. Limit of Disturbance is 1ft from Geohazard line, property line, or SEC-WR line. Temporary Sediment Fence is placed at Limit of Disturbance.
8. Cover all other inactive exposed soil with temporary mulching weed free of straw or wood material.

Sheet Keynotes

1. Install Temporary Silt Fence, See Detail 2 on sheet 00-C-901.
2. Install Tree Protection Fence, See detail 1 on Sheet 00-C-902.
3. Install Inlet Protection, See detail 2 on Sheet 00-C-902.
4. Install Compost Filter Sock, See Detail 2 on Sheet 00-C-903.
5. Install Stabilized Construction Entrance, See Detail 1 on Sheet 00-C-901.
6. Install Concrete Washout, See Detail 3 on Sheet 00-C-902.
7. Install Slope Matting, See Detail 4 on Sheet 00-C-901.
8. Install Straw Wattle, See Detail 2 on Sheet 00-C-903.

Legend

- Silt Fence
- Tree Protection Fence
- Flow Arrow
- Compost Filter Sock
- Straw Wattle
- Concrete Washout
- Slope Matting (Hydraulic or Rolled RD1055)
- Stabilized Construction Entrance
- Inlet Protection

0 120 240
SCALE IN FEET

REGISTERED PROFESSIONAL ENGINEER
84283
OREGON
JULY 13, 2010
ROY W. HAWKINS
EXPIRES 6-30-25

User: stanpw11ics03$ 00-C-309.dgn

10/26/2023

No	Date	Description	Appd
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Drawn By		Const Mgr	TG
Checked By		Const Supvr	RM
Project Mgr	MRG	Date	

Warning
0 ½ 1
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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

David W. Peters, Engineering Manager, PE No 16683 — Date

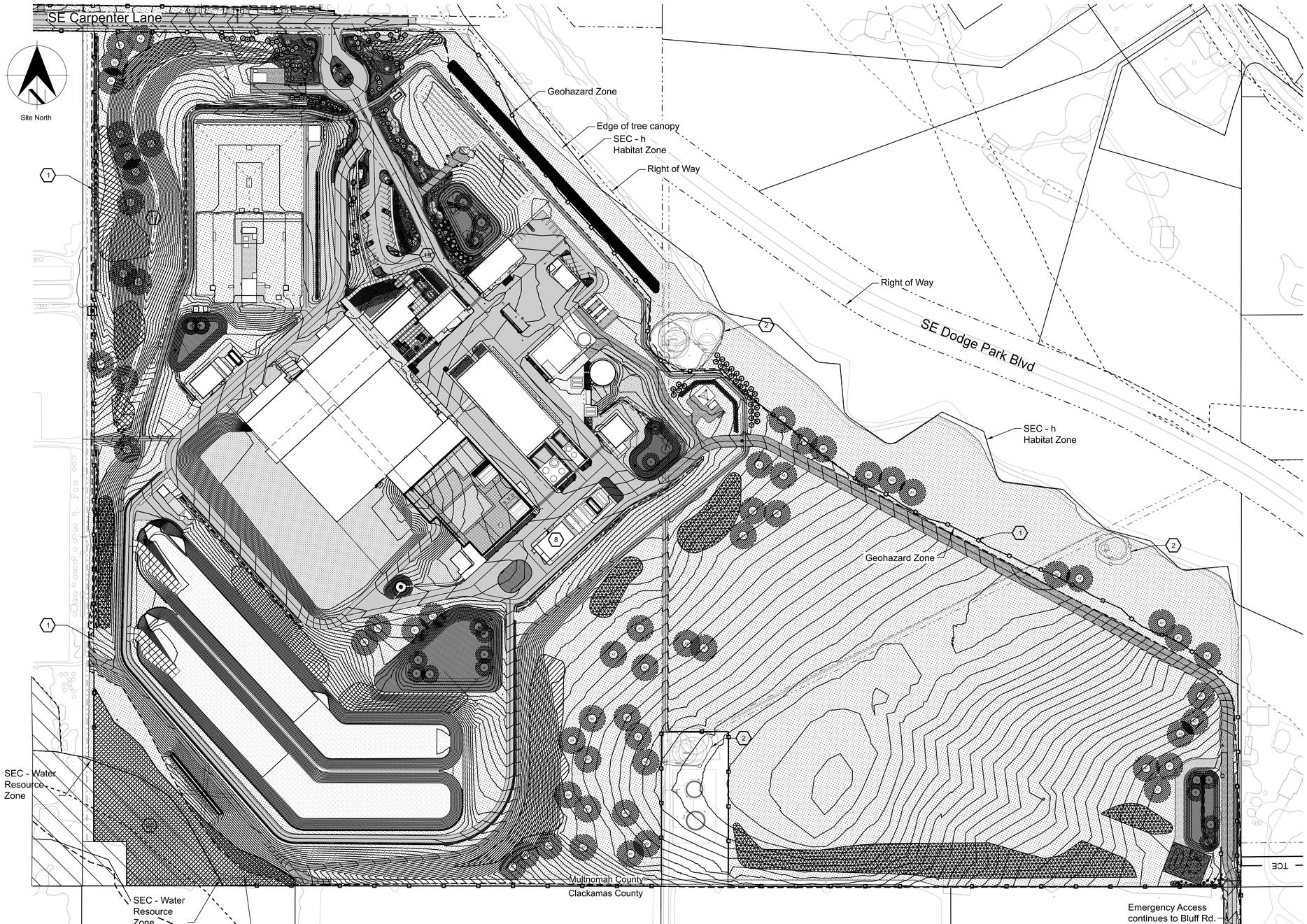
CITY OF PORTLAND OREGON 1851

Bull Run Filtration Facility

Erosion and Sediment Control

Vertical Construction
Filtration Facility
Across from 35319 SE Carpenter Lane

SAP Project No
W02229
1/4 Section
3765 / 3766
Sheet No
00-C-309
10 of 16



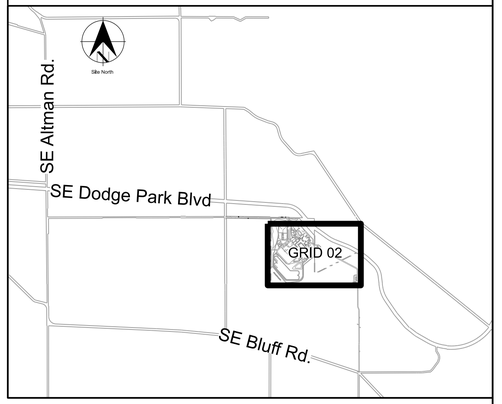
PLAN

SCALE: 1" = 120'-0"

0 120 240

SCALE IN FEET

KEY PLAN



General Sheet Notes

1. Refer to Erosion and Sediment Control notes, Sheet 00-C-301.
2. Protect all existing strucutres and trees not shown for demolition.
3. Upon project completion remove gravel surfacing from all staging areas and restore topsoil and seed.
4. Remove sediment fence and tree protection fence upon final site stabilization.
5. Limit of Disturbance is 1ft from Geohazard line, property line, or SEC-WR line. Temporary Sediment Fence is placed at Limit of Disturbance.
6. See Seed mixes on Sheet 00-C-801 and 00-C-802.
7. All seeding should be accompanied by mulching either hydro, rolled matting, or temporary straw/compost, etc. All mulching should conform to COP specs.

Sheet Keynotes

1. Install Temporary Silt Fence, See Detail 2 on Sheet 00-C-901.
2. Install Chain Link Fence, See Detail 1 on Sheet 00-C-902.

Legend

- Asphalt Paving
- Concrete Paving
- Gravel Paving
- Native Grass / Forb Mixes
- Silt Fence
- Tree Protection Fence
- Property Line
- Right-of-Way
- Swale Planting
- Stormwater Planting
- Screen Mix: Forested Planting
- Screen Mix: Shrubby Planting
- Tree / Shrub Planting Clusters
- Proposed Trees - Deciduous and Evergreen
- Landscape Bed - Shrubs, Groundcover, Mulch
- Mitigation Planting Area

REGISTERED PROFESSIONAL ENGINEER 84283
OREGON JULY 13, 2010 ROY W. HAWKINS
EXPIRES 6-30-25

User: stanpw111cs03$ 00-C-310.dgn

10/26/2023

No	Date	Description	Appd
		Revision	
Survey			

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Designed By	JSL	Design Mgr	LSH
Drawn By	VAK	Const Mgr	TG
Checked By	LCS	Const Supvr	RM
Project Mgr	MRG	Date	

Warning
0 ½ 1
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

David W. Peters, Engineering Manager, PE No 16683 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Facility

Erosion and Sediment Control

Final Stabilization and Landscape
Filtration Facility
Across from 35319 SE Carpenter Lane

SAP Project No W02229
1/4 Section 3765 / 3766
Sheet No 00-C-310
11 of 16

SEE SPECIFICATION 32 91 13 SOIL PREPARATION FOR PREPARATION AND DEPTH AS DESCRIBED BY PLANTING AREA

Type 1 Seeding - Provide topsoil for Type C seeded areas

	Seeded Mowing Area		
Legend	**Botanical Name**	**Common Name**	**Percentage/PLS**
	Fleur de Lawn Blanche		PLS
	Lolium perenne	Perennial Ryegrass	40%
	Festuca trachyphylla	Hard Fescue	22%
	Festuca 'Quatro'	Quatro Tetraploid Sheep Fescue	20%
	Trifolium repens	White Clover	5%
	Achillea millefolium	White Yarrow	5%
	Lobularia maritima	Sweet Alyssum	5%
	Bellis perennis	Single White English Daisy	3%

Type 2 Seeding - Provide topsoil for Type C seeded areas

Grassland Seeding - Bunchgrass Focused			
Legend	**Botanical Name**	**Common Name**	**Lbs/Acre**
	Grasses		
	Danthonia californica	California Oatgrass	6
	Deschampsia elongata	Slender Hairgrass	5
	Festuca occidentalis	Western Fescue	1
	Festuca roemeri	Roemer's Fescue	2
	Hordeum brachyantherum	Meadow Barley	1
	Koeleria macrantha	Prairie Junegrass	1
	Poa scabrella	Pine Junegrass	1
	Forbs		
	Achillea millefolium	Yarrow	0.5
	Anaphalis marginatacea	Pearly Everlasting	0.5
	Epilobium angustifolium	Fireweed	0.5
	Eriophyllum lanatum	Oregon Sunshine	1
	Geranium oreganum	Western Geranium	1
	Lupinus polyphyllus	Bigleaf Lupine	0.1
	Prunella vulgaris ssp lanceolata	Common Selfheal	1
	Sidalcea campestris	Meadow checkermallow	1
	Lomatium utriculatum	Common biscuitroot	1
	Lomatium macrocarpum	Bigseed Biscuitroot	1
	Solidago canadensis	Canada Goldenrod	0.25

Type 3 Seeding - Provide topsoil for Type C seeded areas

Grassland Seeding - Color and Fire Resistance Focused			
Legend	**Botanical Name**	**Common Name**	**lbs/Acre**
	Danthonia californica	California Oatgrass	6
	Deschampsia elongata	Slender Hairgrass	5
	Festuca occidentalis	Western Fescue	1
	Festuca roemeri	Roemer's Fescue	2
	Hordeum brachyantherum	Meadow Barley	2
	Koeleria macrantha	Prairie Junegrass	1
	Poa scabrella	Pine Junegrass	2
	Forbs		
	Achillea millefolium	Yarrow	0.5
	Asclepias speciosa	Milkweed	0.5
	Anaphalis marginatacea	Pearly Everlasting	0.5
	Brodiaea coronaria	Brodiaea	0.5
	Epilobium angustifolium	Fireweed	0.25
	Eriophyllum lanatum	Oregon Sunshine	0.5
	Gaillardia aristata	blanket flower	0.5
	Geranium oreganum	Western Geranium	0.5
	Lomatium macrocarpum	*Bigseed Biscuitroot*	1
	Lupinus polyphyllus	*Bigleaf Lupine*	0.1
	Penstemon cardwellii	Cardwell's penstemon	0.25
	Prunella vulgaris ssp lanceolata	Common Selfheal	0.5
	Sidalcea campestris	Meadow checkermallow	0.5
	Solidago canadensis	Canada Goldenrod	0.5

Stormwater Seed Mixes - Provide topsoil for Type B stormwater facilities

See Details 311 and 312 on Sheet 06-L-931 for placement of seed mixes in stormwater areas. These seed mixes are only to be applied to stormwater areas that are depicted with the hatch patterns shown in the sheet legends.

Stormwater - Seed Mix			
Legend	**Botanical Name**	**Common Name**	**Lbs/Acre**
	Grasses		
	Danthonia californica	California Oatgrass	5
	Deschampsia cespitosa	Tufted Hairgrass	3
	Deschampsia elongata	Slender Hairgrass	3
	Hordeum brachyantherum	Meadow Barley	1
	Flowering Plants		
	Achillea millefolium	Yarrow	0.5
	Aesclepias speciosa	Milkweed	0.5
	Carex densa	Dense Sedge	1
	Carex unilateralis	Lateral Sedge	1
	Juncus patens	Slender Rush	1
	Juncus tenuis	Spreading Rush	1
	Lupinus latifolius	Broadleaf Lupine	0.1
	Potentilla gracilis	Graceful Cinqufoil	0.5

Stormwater Pond Bottom - Seed Mix			
Legend	**Botanical Name**	**Common Name**	**Lbs/Acre**
	Carex densa	Dense Sedge	0.25
	Carex pachystachya	Chamisso Sedge	0.5
	Carex scoparia	Broom Sedge	0.5
	Carex unilateralis	Bone-Sided Sedge	0.5
	Agrostis exerata	Spike bentgrass	1
	Danthonia californica	California Oatgrass	2
	Deschampsia cespitosa	Tufted Hairgrass	1
	Juncus tenuis	Slender Rush	0.1
	Achillea millefolium	Western Yarrow	0.25
	Epilobium densiflorum	Spike Primrose	0.1
	Grindelia integrifolia	Willamette Gumweed	0.1
	Lupinus rivularis	Riverbank Lupine	0.1
	Madia elegans	Common Madia	0.3
	Mimulus guttatus	Yellow Monkeyflower	0.1
	Plagiobothrys figuratus	Fragrant Popcorn Flower	0.1
	Sidalcea campestris	Checkermallow	0.5

REGISTERED PROFESSIONAL ENGINEER 84283 OREGON JULY 13, 2010 ROY W. HAWKINS EXPIRES 6-30-25

User: stanpw11lcs03$ 00-C-801.dgn

10/26/2023

No	Date	Description	Appd

Revision

Survey

Stantec

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	JSL	Design Mgr	LSH
Drawn By	VAK	Const Mgr	TG
Checked By	LCS	Const Supvr	RM
Project Mgr	MRG	Date	

Warning

0 ½ 1

If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU

FROM FOREST TO FAUCET

David W. Peters, Engineering Manager, PE No 16683

Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Facility

Erosion and Sediment Control

Permanent Seed Mixes - 1

Across from 35319 SE Carpenter Lane

SAP Project No W02229

1/4 Section -

Sheet No 00-C-801

12 of 16

SEE SPECIFICATION 32 91 13 SOIL PREPARATION FOR PREPARATION AND DEPTH AS DESCRIBED BY PLANTING AREA

Called out on sheets as individual plants

Containerized Plantings - Provide topsoil for Type A Ornamental plants

Tree Plantings - Provide topsoil for Type F Large tree planting pits

Managed Landscape Areas

Legend	Botanical Name	Common Name	Plant Size
	Trees		
ALN RHO	*Alnus rhombifolia*	White Alder	1.5" Cal.
CAL DEC	*Calocedrus decurrens*	Incense-Cedar	5' Height
COR VEN	*Cornus 'Kn30 8'*	Venus Dogwood	2" Cal.
NYS SYL	*Nyssa sylvatica*	Tupelo	1.5" Cal.
PIN CON	*Pinus contorta var. contorta*	Shore Pine	5' Height
PIN PON	*Pinus ponderosa var. benthamiana*	Pacific Ponderosa	5' Height
PSE MEN	*Pseudotsuga menziesii*	Douglas-fir	1.5" Cal.
QUE GAR	*Quercus garryana*	Oregon White Oak	2" Cal.
RHA PUR	*Rhamnus purshinana*	Cascara	1.5" Cal.
THU HOG	*Thuja* 'Hogan'	Hogan Western Red Cedar	8' Height
	Sub-Trees (10-15')		
AME ALN	*Amelanchier alnifolia*	Wester Service Berry	15 Gal.
	Large Shrubs (5-10')		
GAR ELL	Garrya elliptica	Silk Tassle Tree	5 Gal.
MYI CAL	*Myrica californica*	Pacific Wax Myrtle	5 Gal.
RUB PAR	*Rubus parviflora*	Thimbleberry	1 Gal.
VIB TRI	*Viburnum trilobum*	American Cranberry	1 Gal.
	Small Shrubs (2' - 5')		
COR KEL	*Cornus* 'Kelseyi'	Kelsey's Dogwood	1 Gal.
MAH COM	*Mahonia aquifolium 'Compacta'*	Compact Oregon Grape	1 Gal.
MAH NER	Mahonia nervosa	Cascade Oregon Grape	1 Gal.
MAH SOF	*Mahonia 'Soft Caress'*	Soft Caress Mahonia	5 Gal.
PHI LEW	*Philadelphus lewisii 'Snow Dwarf'*	Dwarf Mockorange	1 Gal.
POL MUN	*Polysticum munitum*	Western Sword Fern	5 Gal.
RIB SAN	*Ribes sanguineum*	Flowering Red Currant	1 Gal.
SPI BET	*Spiraea betulifolia var. 'Tor'*	Birchleaf Spirea	1 Gal.
VAC OVA	*Vaccinium ovatum*	Evergreen Huckleberry	5 Gal.
	Herbaceous (perennials, ferns, grasses)		
ACH MOO	*Achillea 'Moonshine'*	Moonshine Yarrow	1 Gal.
AES SPE	Aesclepias speciosus	Milkweed	1 Gal.
AQU COL	*Aquilegia columbiana*	Columbine	1 Gal.
CAL NUT	*Calamgrostis nutkatensis*	Pacific Reedgrass	1 Gal.
DES GOL	*Deschampsia 'Goldtau'*	Gold Dew Tufted Hairgrass	1 Gal.
HEL ARG	*Helleborus argutifolia*	Corsican Hellebore	1 Gal.
IRI DOU	*Iris douglasii*	Douglas Iris	1 Gal.
SID CAM	Sidalcea campestris	Checker Mallow	1 Gal.
TEL GRA	*Tellima grandiflora*	Fringecup	1 Gal.
	Groundcover (12" or less)		
ARC VAN	*Arctostaphylos* 'Vancouver Jade'	Vancouver Jade Bearberry	1 Gal.
CAR FLA	*Carex flacca*	Grey Sedge	1 Gal.
FRA CHI	*Fragaria chiloensis*	Beach Strawberry	1 Gal.
MAH REP	*Mahonia repens*	Cascade Oregon Grape	1 Gal.

Stormwater Plants

Legend	Botanical Name	Common Name	Plant Size
AST SUB	*Aster subspicatus*	Douglas Aster	1 Gal.
CAM LEI	*Camassi leichtlinii*	Great Camas	1 Gal.
CAR OBN	*Carex obnupta*	Slough Sedge	1 Gal.
COR MID	*Cornus 'Midwinter Fire'*	Midwinter Fire Osier	1 Gal.
IRS DOU	*Iris douglasii*	Douglas Iris	1 Gal.
IRS TEN	*Iris tenax*	Pacific Coast Iris	1 Gal.
JUN TEN	*Juncus tenuis*	Spreading Rush	1 Gal
MAH COM	*Mahonia 'Compacta'*	Compact Oregon Grape	1 Gal.
MAH SOF	*Mahonia 'Soft Caress'*	Soft Caress Mahonia	1 Gal.
MYR CAL	*Myrica californica*	Pacific Wax Myrtle	5 Gal.
PHY CAP	*Physocarpus capitatus*	Ninebark	1 Gal.
POL MUN	*Polysticum munitum*	Western Sword Fern	1 Gal.
SPI TOR	*Spirea 'Tor'*	Birchleaf Spirea	1 Gal

Groundcover Mix

Provide topsoil for Type A Ornamental plants

Extended Area Groundcover

Legend	Botanical Name	Common Name	Plant Size	% Composition
	Arctostaphylos 'Vancouver Jade'	Vancouver Jade Bearberry	1 Gal.	33%
	Calamagrostis nutcatensis	Pacific Reedgrass	1 Gal.	33%
	Fragaria chiloensis	Beach Strawberry	1 Gal.	34%

Screening Planting Mixes

Provide topsoil for Type E Bare root planting

Screening Mix - Forested

Legend	Botanical Name	Common Name	Plant Size	% Composition
	Trees			
	Abies grandis	Grand Fir	2' Ht. Max Bareroot	15%
	Acer macrophyllum	Bigleaf Maple	2' Ht. Max Bareroot	5%
	Calocedrus decurrens	Incense Cedar	2' Ht. Max Bareroot	15%
	Larix occidentalis	Western Larch	2' Ht. Max Bareroot	5%
	Pinus ponderosa	Ponderosa Pine	2' Ht. Max Bareroot	10%
	Pseudotsuga menziesii	Douglas Fir	2' Ht. Max Bareroot	5%
	Rhamnus purshiana	Cascara	2' Ht. Max Bareroot	5%
	Salix scouleriana	Scouler's Willow	2' Ht. Max Bareroot	5%
	Shrubs			
	Mahonia aquifolium	Tall Oregon Grape	Bareroot	15%
	Oemleria ceraciformis	Osoberry	Bareroot	5%
	Polystichum munitum	Swordfern	Bareroot	5%
	Rubus parviflorus	Thimbleberry	Bareroot	5%
	Symphoricarpos albus	Snowberry	Bareroot	5%

Screening Mix - Shrubby Unirrigated

Legend	Botanical Name	Common Name	Plant Size	% Composition
	Trees			
	Cornus nuttallii	Pacific Dogwood	1/2" Bareroot	5%
	Pinus contorta var. contorta	Shore Pine	1/2" Bareroot	10%
	Shrubs			
	Amelanchier alnifolia	Serviceberry	Bareroot	5%
	Corylus cornuta var californica	Western Hazelnut	Bareroot	5%
	Holodiscus discolor	Oceanspray	Bareroot	5%
	Garrya elliptica	Silk Tassel	Bareroot	10%
	Mahonia aquifolium	Tall Oregon Grape	Bareroot	5%
	Myrica californica	Pacific Wax Myrtle	Bareroot	10%
	Philadelphus lewisii	Mockorange	Bareroot	5%
	Physocarpus capitatus	Pacific Ninebark	Bareroot	5%
	Ribes malvaceum	Chapparal Currant	Bareroot	5%
	Rosa gymnocarpa	Baldhip Rose	Bareroot	5%
	Sambucus racemosa	Red Elderberry	Bareroot	5%
	Spiraea douglasii	Douglas Spiraea	Bareroot	5%
	Symphoricarpos albus	Snowberry	Bareroot	5%
	Vaccinium ovatum	Evergreen Huckleberry	Bareroot	5%
	Viburnum edule	Highbush cranberry	Bareroot	5%

Screening Planting Mixes

Provide topsoil for Type D Container planting at seeded areas

Screening Mix - Shrubby Irrigated

Legend	Botanical Name	Common Name	Plant Size	% Composition
	Trees			
	Cornus nuttallii	Pacific Dogwood	1 Gal.	5%
	Pinus contorta var. contorta	Shore Pine	8' Height	10%
	Shrubs			
	Amelanchier alnifolia	Serviceberry	5 Gal.	5%
	Corylus cornuta var californica	Western Hazelnut	5 Gal.	5%
	Holodiscus discolor	Oceanspray	5 Gal.	5%
	Garrya elliptica	Silk Tassel	5 Gal.	10%
	Mahonia aquifolium	Tall Oregon Grape	1Gal.	5%
	Myrica californica	Pacific Wax Myrtle	5 Gal.	10%
	Philadelphus lewisii	Mockorange	2 Gal.	5%
	Physocarpus capitatus	Pacific ninebark	2 Gal.	5%
	Ribes malvaceum	Chapparal Currant	1 Gal.	5%
	Rosa gymnocarpa	Baldhip Rose	1 Gal.	5%
	Sambucus racemosa	Red Elderberry	5 Gal.	5%
	Spiraea douglasii	Douglas spiraea	1 Gal.	5%
	Symphoricarpos albus	Snowberry	1 Gal.	5%
	Vaccinium ovatum	Evergreen Huckleberry	5 Gal.	5%
	Viburnum edule	Highbush cranberry	5 Gal.	5%

Provide topsoil for Type E Bare root planting

Planting Clusters

Legend	Botanical Name	Common Name	Plant Size	% Composition
A1	*Quercus garryana*	Oregon White Oak	1/2" Bareroot	100%
A2	*Pinus ponderosa var. benthamiana*	Pacific Ponderosa Pine	1/2" Bareroot	20%
	Quercus garryana	Oregon White Oak	1/2" Bareroot	80%
A3	*Amelanchier alnifolia*	Western Service Berry	1 Gal. Bareroot	5%
	Holodiscus discolor	Oceanspray	1 Gal. Bareroot	5%
	Mahonia aquifolium	Oregon Grape	1 Gal. Bareroot	10%
	Philadelphus lewisii	Mockorange	1 Gal. Bareroot	5%
	Physocarpus capitatus	Ninebark	1 Gal. Bareroot	5%
	Quercus garryana	Oregon Oak	1/2" Bareroot	30%
	Rosa gymnocarpa	Baldhip Rose	1 Gal. Bareroot	15%
	Symphoricarpos albus	Snowberry	1 Gal. Bareroot	15%
B1	*Mahonia aquifolium*	Oregon Grape	1 Gal. Bareroot	20%
	Rhamnus purshiana	Cascara	1/2" Bareroot	10%
	Salix scouleriana	Scouler's Willow	1/2" Bareroot	5%
	Sambucus cerulea	Blue elderberry	1 Gal. Bareroot	10%
	Symphoricarpos albus	Snowberry	1 Gal. Bareroot	50%
	Symphoricarpos mollis	Creeping Snowberry	1 Gal. Bareroot	5%
	Topsoil placement for Type B clusters not necessary for areas that have prior stormwater area soil prep.			
C1	*Mahonia aquifolium*	Tall Oregon Grape	1 Gal. Bareroot	20%
	Rosa gymnocarpa	Baldhip Rose	1 Gal. Bareroot	20%
	Rubus parviflorus	Thimbleberry	1 Gal. Bareroot	50%
	Symphoricarpos albus	Snowberry	1 Gal. Bareroot	10%

Stormwater Planting Mixes

Provide topsoil for Type B Stormwater Facilities

Conveyance Pond Planting Irrigated

Legend	Botanical Name	Common Name	Plant Size	% Composition
	Trees			
	Alnus rhombifolia	White Alder	1.5" Cal.	3%
	Rhamnus purshiana	Cascara	1.5" Cal.	7%
	Thuja plicata	Wester Red Cedar	5' Height	5%
	Stormwater Pond Side - Shrubs			
	Lonicera involucrata	Twinberry	1 Gal.	5%
	Mahonia aquifolium	Oregon Grape	1 Gal.	5%
	Physocarpus capitatus	Ninebark	1 Gal.	10%
	Rosa pisocarpa	Swamp Rose	1 Gal.	10%
	Ribes sanguineum	Red Flowering Currant	1 Gal.	10%
	Sambucus racemosa	Red Elderberry	1 Gal.	5%
	Symphoricarpus albus	Snowberry	1 Gal.	10%
	Stormwater Pond Bottom - Shrubs			
	Cornus sericea	Redtwig Dogwood	1 Gal.	10%
	Salix sitchensis	Sitka Willow	1 Gal.	10%
	Salix hookeriana	Hooker's Willow	1 Gal.	5%
	Spirea douglasii	Douglas Spirea	1 Gal.	5%

Conveyance Pond Planting Unirrigated

Legend	Botanical Name	Common Name	Plant Size	% Composition
	Trees			
	Alnus rhombifolia	White Alder	1.5" Cal. Bareroo	3%
	Rhamnus purshiana	Cascara	1.5" Cal. Bareroo	7%
	Stormwater Pond Side - Shrubs			
	Lonicera involucrata	Twinberry	Bareroot	5%
	Mahonia aquifolium	Oregon Grape	Bareroot	5%
	Physocarpus capitatus	Ninebark	Bareroot	10%
	Rosa pisocarpa	Swamp Rose	Bareroot	10%
	Ribes sanguineum	Red Flowering Currant	Bareroot	10%
	Sambucus racemosa	Red Elderberry	Bareroot	5%
	Symphoricarpus albus	Snowberry	Bareroot	10%
	Stormwater Pond Bottom - Shrubs			
	Cornus sericea	Redtwig Dogwood	Bareroot	10%
	Salix sitchensis	Sitka Willow	Bareroot	10%
	Salix hookeriana	Hooker's Willow	Bareroot	10%
	Spirea douglasii	Douglas Spirea	Bareroot	5%

Conveyance Swale Planting

Legend	Botanical Name	Common Name	Plant Size	% Composition
	Shrubs			
	Mahonia repens	Low Oregon Grape	Bareroot	30%
	Rosa pisocarpa	Swamp Rose	Bareroot	20%
	Spirea betulifolia	Birchleaf Spirea	Bareroot	25%
	Spirea douglasii	Douglas Spirea	Bareroot	25%

REGISTERED PROFESSIONAL ENGINEER 84283 OREGON JULY 13, 2010 ROY W. HAWKINS EXPIRES 6-30-25

PLANTING SCHEDULE 2

-

User: stanpw11lcs03$ 00-C-802.dgn

10/26/2023

No	Date	Description	Appd
		Revision	
Survey			

Stantec

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Designed By	JSL	Design Mgr	LSH
Drawn By	VAK	Const Mgr	TG
Checked By	LCS	Const Supvr	RM
Project Mgr	MRG	Date	

Warning

0 ½ 1

If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU

FROM FOREST TO FAUCET

David W. Peters, Engineering Manager, PE No 16683 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Facility

Erosion and Sediment Control

Permanent Seed Mixes - 2

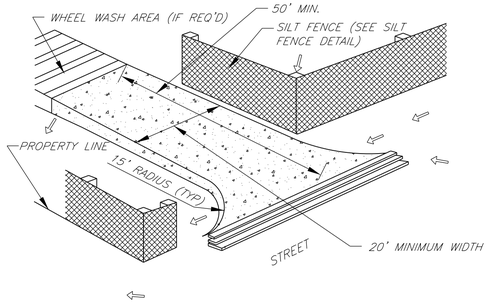
Across from 35319 SE Carpenter Lane

SAP Project No W02229

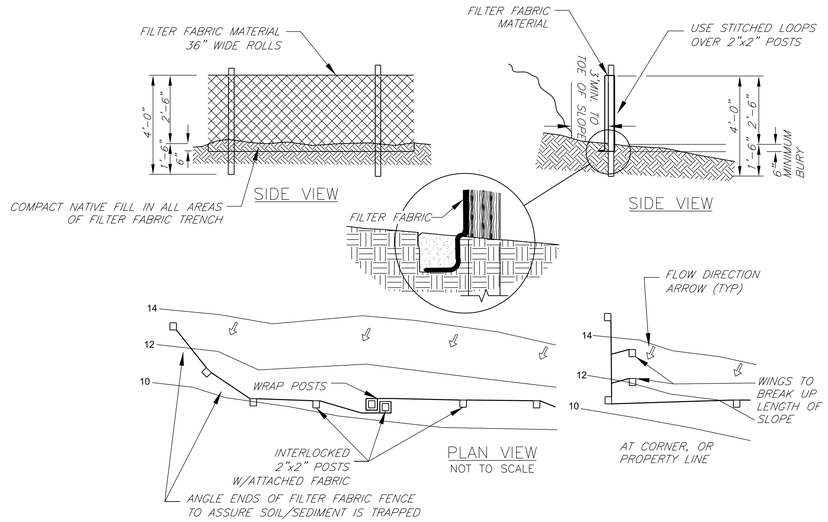
1/4 Section 3765 / 3766

Sheet No 00-C-802

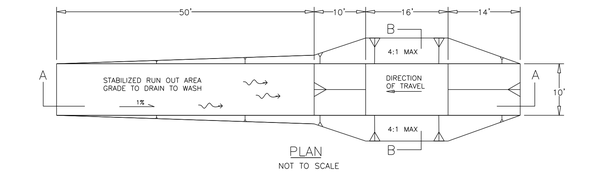
13 of 16



1 GRAVEL CONSTRUCTION ENTRANCE
00-C-901 NOT TO SCALE

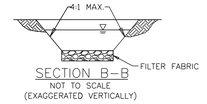


2 TEMPORARY SILT FENCE
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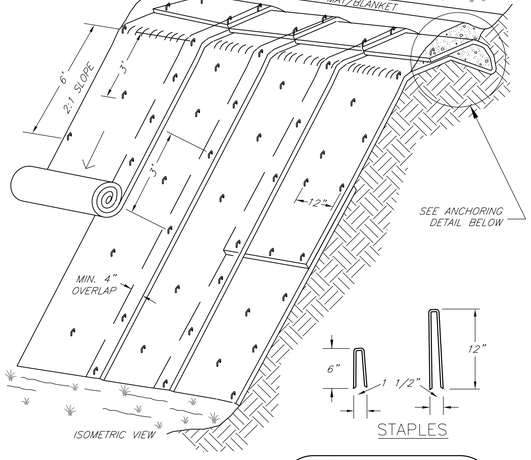


NOTE:
1. CONTRACTOR TO REMOVE ACCUMULATED SEDIMENT FROM WHEEL WASH; MAY BE PIPE TO AN APPROVED SEDIMENT TRAP.

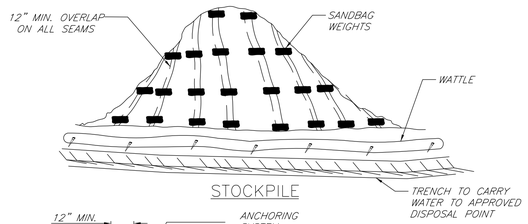
REFERENCE:
USE GEOTEXTILE FABRIC WITH AGGREGATE FOR A TEMPORARY TIRE WASH.

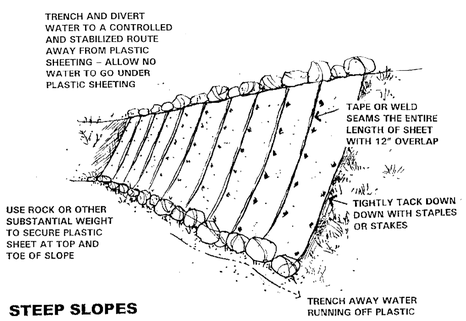


3 WHEEL WASH
00-C-901 NOT TO SCALE

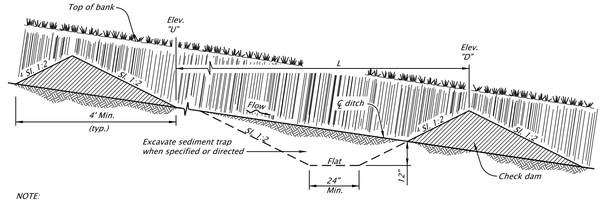


4 SLOPE MATTING
00-C-901 NOT TO SCALE



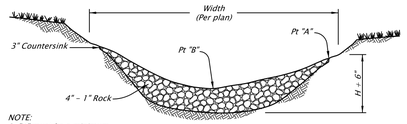


5 TEMPORARY SLOPE PROTECTION
00-C-901 NOT TO SCALE



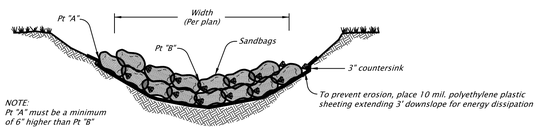
NOTE:
L = Spacing along swale or ditch so that Elevation "U" equals Elevation "D".

TYPICAL PROFILE SECTION CHECK DAMS (SHOWN WITH AGGREGATE)
NOT TO SCALE



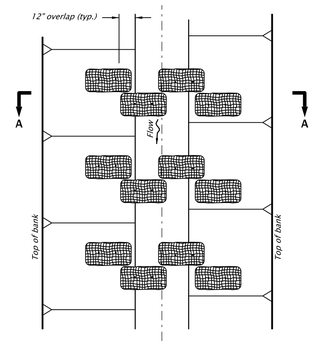
NOTE:
Pt "A" must be a minimum of 6" higher than Pt "B"

AGGREGATE CHECK DAM - TYPE 1
NOT TO SCALE



NOTE:
Pt "A" must be a minimum of 6" higher than Pt "B"

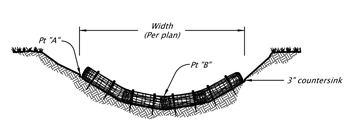
SANDBAG CHECK DAM - TYPE 4
NOT TO SCALE



MAXIMUM CHECK DAM SPACING "L"				
Ditch Grade	H=8"	H=12"	H=18"	H=24"
10%	* *	* *	15'	20'
9%	* *	* *	16'	22'
8%	* *	* *	18'	25'
7%	* *	* *	21'	28'
6%	* *	16'	25'	33'
5%	* *	20'	30'	40'
4%	16'	25'	37'	50'
3%	22'	33'	50'	66'
2%	33'	50'	75'	100'

* * Not allowed H = Min. dam height

NOTES:
1. Type 3 – stake biofilter bags with two 2"x2"x18" (minimum) wood stakes per bag. Drive stakes a minimum of 6" into the ground and flush with the top of the bags. Omit stakes if placed over paved surfaces. Overlap bags 12" minimum at each joint.
2. Type 4 – Tightly abut or overlap ends of sandbags at each joint.
3. Spacing between check dams for all check dam types shall comply with the typical profile section shown above.



SECTION A-A

BIOFILTER BAG CHECK DAM - TYPE 3
NOT TO SCALE

6 CHECK DAM
00-C-901 NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER
84283
OREGON
JULY 13, 2010
ROY W. HAWKINS
EXPIRES 6-30-25

No	Date	Description	Appd
		Revision	
Survey			

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Designed By	JSL	Design Mgr	LSH
Drawn By	VAK	Const Mgr	TG
Checked By	RG	Const Supvr	RM
Project Mgr	MRG	Date	

Warning
0 ½ 1
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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

David W. Peters, Engineering Manager, PE No 16683 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Facility

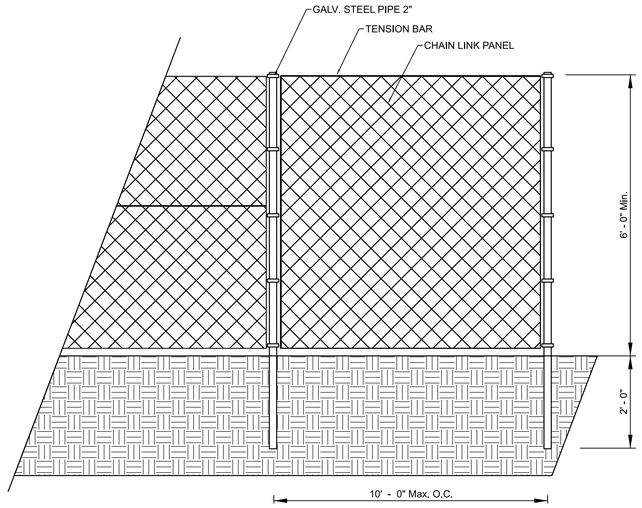
Erosion and Sediment Control

Details - 1

Across from 35319 SE Carpenter Lane

SAP Project No W02229
1/4 Section 3765 / 3766
Sheet No 00-C-901
14 of 16

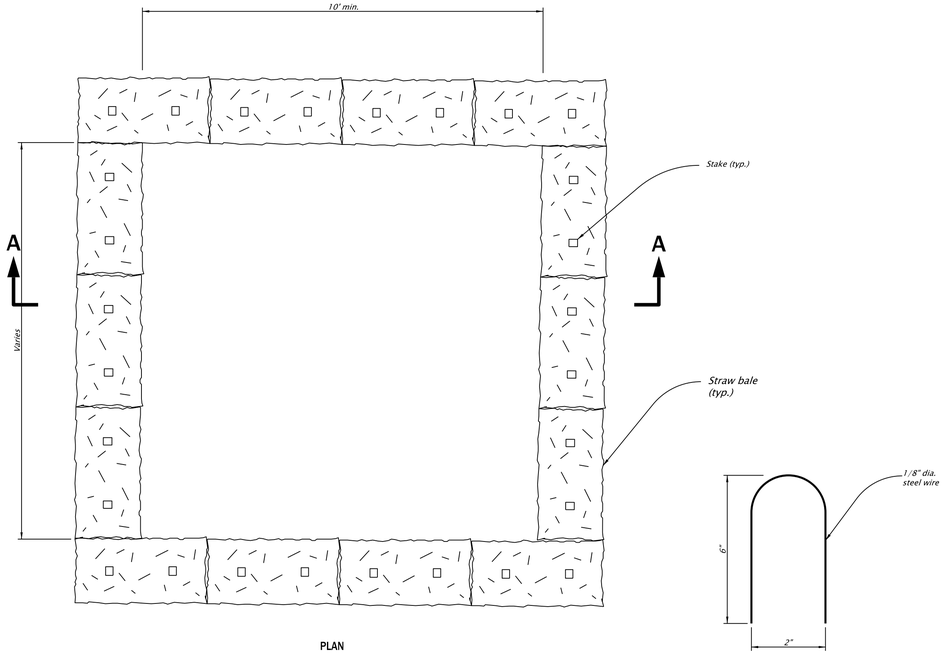
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10/26/2023



NOTES

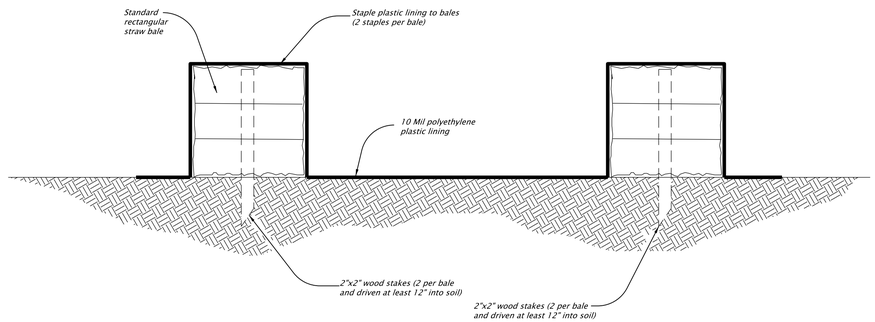
1. Install tree protection fence before any ground disturbing activities including storage of equipment or materials, clearing and grubbing, grading, or construction starts. Fencing shall remain in place until final inspection.
2. The following is prohibited within the tree protection fence: ground disturbance or construction activity including vehicle or equipment access; storage of equipment or materials including soil, temporary or permanent stockpiling, trenching or other work activities.
3. Place any required erosion control devices at the tree protection fence if the base of the tree is at, or below, the new grade elevation. Any erosion control device installed at the fence must not be trenched into the ground but must be designed to prevent the ingress of any materials or fluids beyond the fence line.

1 / 00-C-902 — **TREE PROTECTION FENCING**
N.T.S.

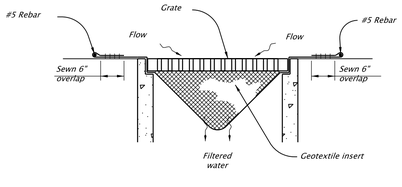


PLAN

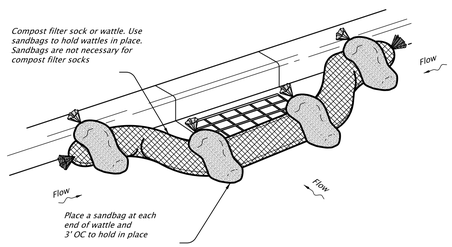
STAPLE DETAIL
NOT TO SCALE



SECTION A-A



PREFABRICATED FILTER INSERT - TYPE 3
NOT TO SCALE

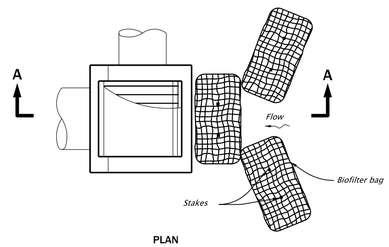


CURB INLET PERSPECTIVE VIEW

COMPOST FILTER SOCK OR WATTLE - TYPE 7
NOT TO SCALE

NOTES:
Type 3 – Prefabricated filter inserts
Install prefabricated filter inserts according to the plans, special provisions, and manufacturer recommendations.
Prefabricated inserts with provisions for overflow are allowed only when accompanied by additional BMP's to prevent the potential of sediments entering project storm systems.
Field fabricated inserts are not allowed.

Type 7 – Compost filter sock
Drive 2"x2" wood stakes a minimum of 6" into ground and flush with the top of the sock.
Overlap ends of sock per manufacturers recommendations (12"min., 36" max.).
Use 8" to 12" dia sock on curbside in traffic areas.
Use 12" to 18" dia sock in non-traffic areas or areas where the larger socks can be used safely.
use synthetic mesh socks for temporary installations.



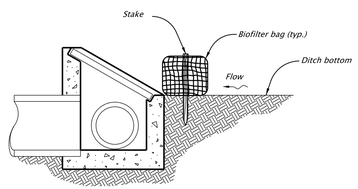
PLAN
DITCH INLET

NOTES, Type 4:
1. Stake biofilter bags with 2"x2"x36" wood stakes, and use a minimum 2 stakes per bag. Drive stakes a minimum of 6" into the ground and flush with the top of the bags.

2. Omit stakes when bags are placed on pavement surface.

3. Overlap all bag joints 6".

4. Biofilter bags used on active roadways are easily displaced and made ineffective if struck by vehicles. If struck by a cyclist, falls with injury could result. On active roadways alternative inlet protection should be considered.



SECTION A-A
DITCH INLET

BIOFILTER BAGS - TYPE 4
NOT TO SCALE

2 / 00-C-902 — **INLET PROTECTION**
N.T.S.

3 / 00-C-902 — **CONCRETE WASHOUT FACILITY**
N.T.S.

REGISTERED PROFESSIONAL ENGINEER
84283
OREGON
JULY 13, 2010
ROY W. HAWKINS
EXPIRES 6-30-25

User: stanpwr11ics04$
00-C-902.dgn
10/26/2023

No	Date	Description	Appd
		Revision	
Survey			

Stantec
EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Design Mgr	LSH
Drawn By	DJD	Const Mgr	TG
Checked By	LCS	Const Supvr	RM
Project Mgr	MRG	Date	

Warning
0 ½ 1
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

David W. Peters, Engineering Manager, PE No 16683 — Date

CITY OF PORTLAND, OREGON 1851

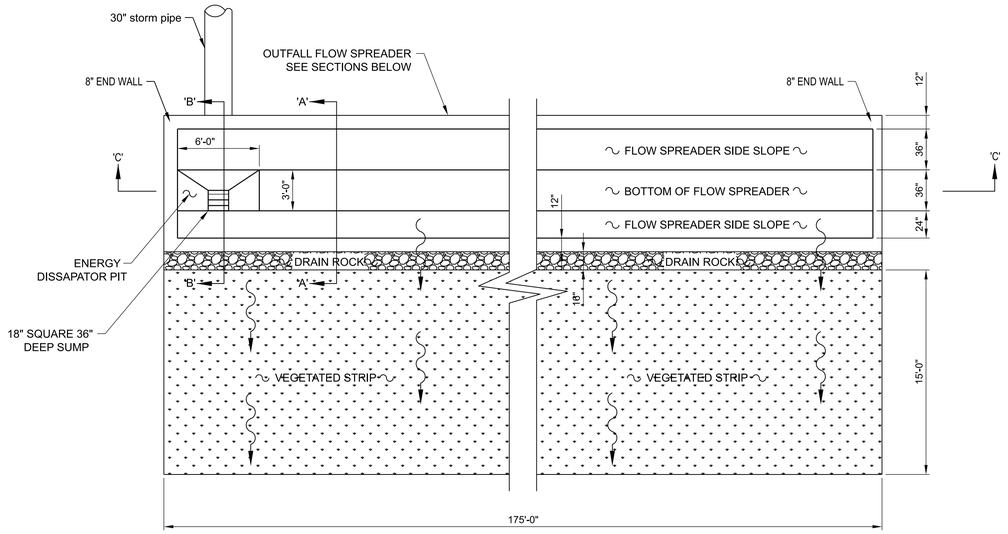
Bull Run Filtration Facility

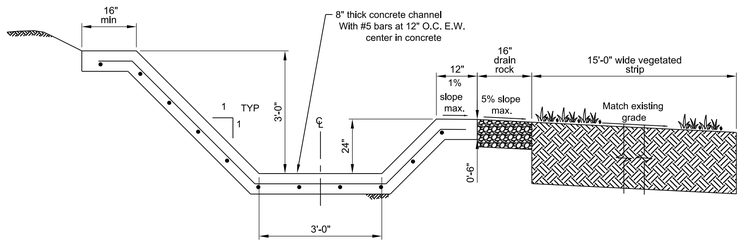
Erosion and Sediment Control

Detail - 2

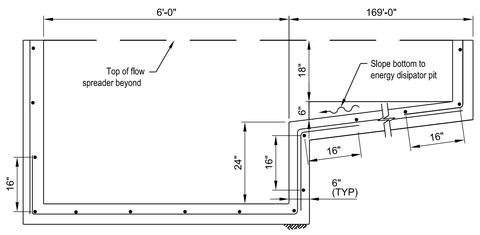
Across from 35319 SE Carpenter Lane

SAP Project No W02229
1/4 Section 3765 / 3766
Sheet No 00-C-902
15 of 16

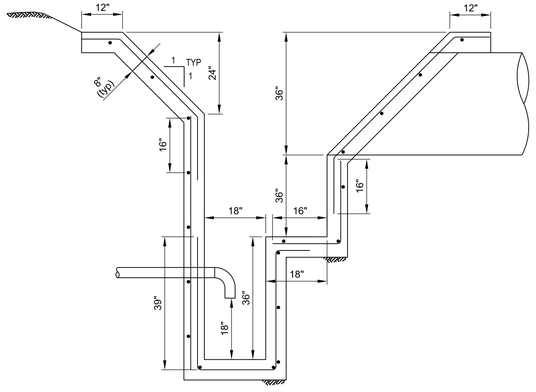




A SECTION
NTS

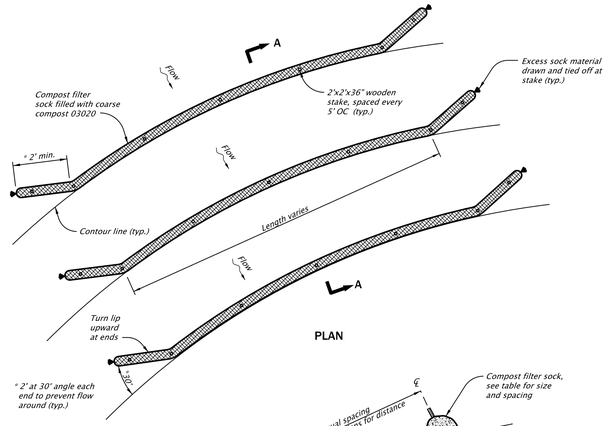


C SECTION
NTS

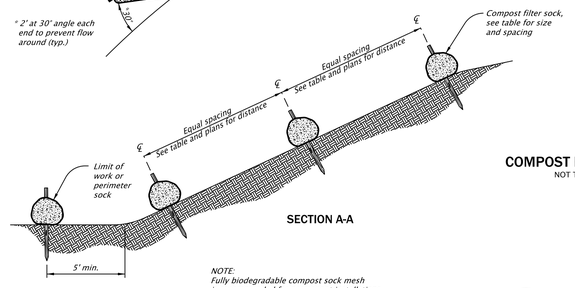


B SECTION
NTS

1 OUTFALL FLOW SPREADER
00-C-903 N.T.S.

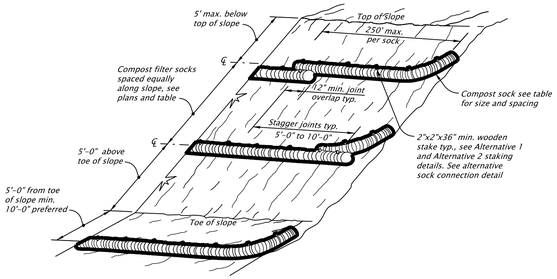


PLAN

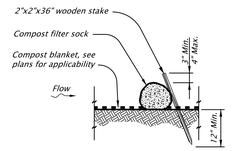


SECTION A-A

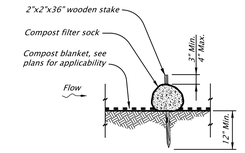
NOTE:
Fully biodegradable compost sock mesh is recommended for permanent installations. Where compost socks must be moved or removed, synthetic sock mesh should be used.



SLOPE APPLICATION - PERSPECTIVE VIEW



ALTERNATIVE 1 (Staking)

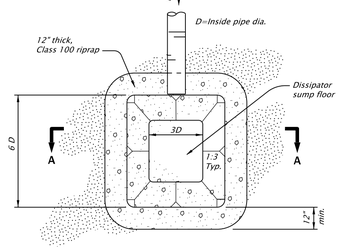


ALTERNATIVE 2 (Staking)

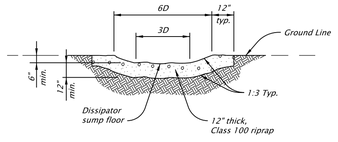
COMPOST FILTER SOCK
NOT TO SCALE

COMPOST FILTER SOCK DIAMETER AND SPACING BASED ON SLOPE		
SLOPE	*SPACING (ft)*	*DIAMETER (in)*
<1:50	250	8
1:50 – 1:10	125	12
1:10 – 1:5	100	12
1:5 – 1:2	50	18
>1:2	25	18

2 00-C-903 COMPOST FILTER SOCK
N.T.S.



PLAN



SECTION A-A

NOTES:
1. *All dimensions not indicated will be as directed.*
2. *Install level spreader, sediment barrier(s), check dam(s) or other appropriate BMP(s) to address volume, velocity and turbidity of discharge water.*

TEMPORARY SCOUR BASIN / ENERGY DISSIPATOR
NOT TO SCALE

3 00-C-903 SCOUR BASIN
N.T.S.

REGISTERED PROFESSIONAL ENGINEER
84285
OREGON
JULY 13, 2010
ROY W. HANKINS
EXPIRES 6-30-25

No	Date	Description	Appd
		Revision	
Survey			

Stantec
EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Design Mgr	LSH
Drawn By	DJD	Const Mgr	TG
Checked By	LCS	Const Supvr	RM
Project Mgr	MRG	Date	

Warning
0 ½ 1
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

David W. Peters, Engineering Manager, PE No 16683 — Date

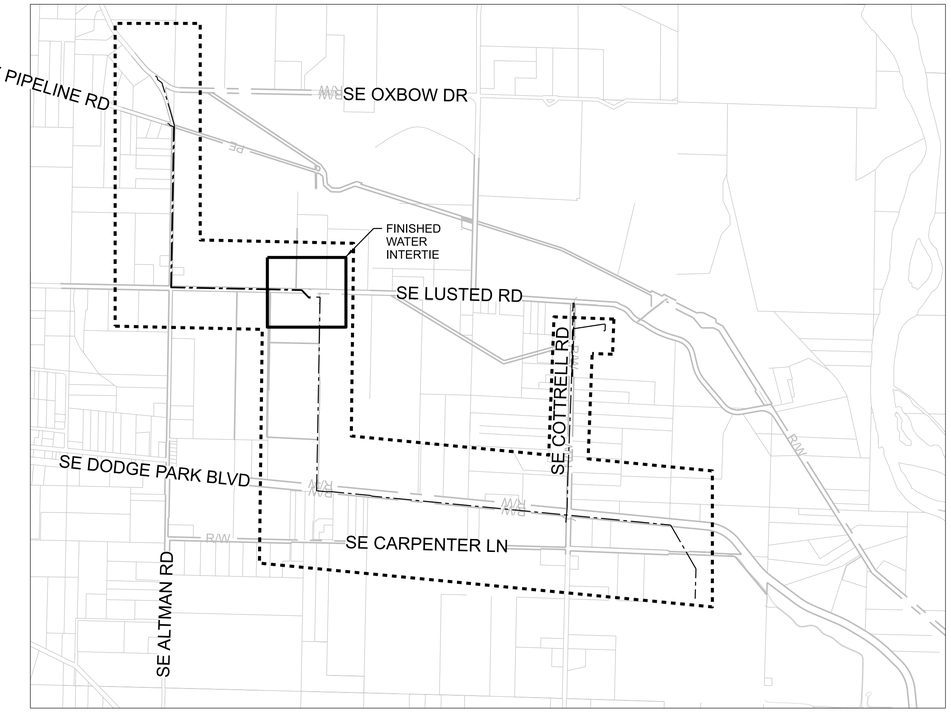
CITY OF PORTLAND, OREGON 1851

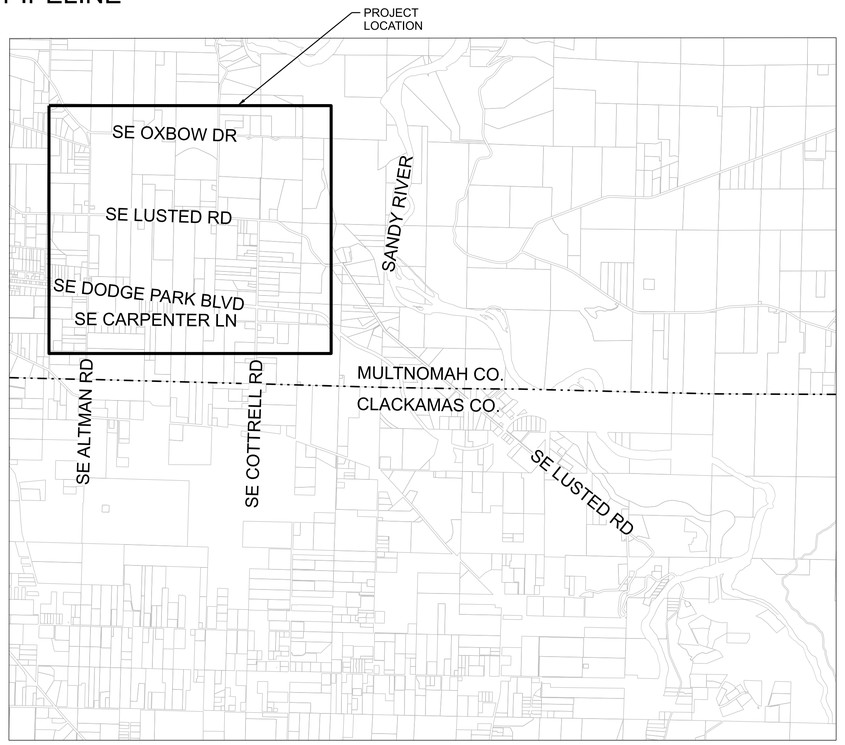
Bull Run Filtration Facility
Erosion and Sediment Control
Detail - 3
Across from 35319 SE Carpenter Lane

SAP Project No W02229
1/4 Section 3765 / 3766
Sheet No 00-C-903
16 of 16

10/26/2023
User: stanpw11\cs04$
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EROSION AND SEDIMENT CONTROL PLAN - 1200-C
BULL RUN FILTRATION PIPELINES
FINISHED WATER PIPELINE





LEGEND

- EXISTING CONCRETE
- EXISTING ASPHALT
- SIGNIFICANT ENVIRONMENTAL CONCERN (SEC)
- COUNTY LINE
- P/L — EXISTING PROPERTY LINE
- R/W — EXISTING RIGHT OF WAY
- STREAM
- 100 FT STREAM/WETLAND BUFFER
- WETLAND BOUNDARY
- W — EXISTING WATER LINE
- G — EXISTING GAS LINE
- TEL — EXISTING TELEPHONE LINE
- IRR — EXISTING IRRIGATION
- EXISTING UTILITY POLE
- EXISTING CULVERT
- X — X — EXISTING STRUCTURE FENCE
- EXISTING DITCH
- EXISTING SIGN
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- EXISTING MAILBOX
- EXISTING TREES
- 500' — EXISTING CONTOUR
- EXISTING OHW AND/OR WETLANDS

SHEET INDEX

FWP-CE-1000	COVER SHEET
FWP-CE-1000A	GENERAL NOTES
FWP-CE-1001	EXISTING CONDITIONS AND DEMOLITION-DODGE PARK BLVD
FWP-CE-1002	EXISTING CONDITIONS AND DEMOLITION-DODGE PARK BLVD
FWP-CE-1003	EXISTING CONDITIONS AND DEMOLITION-DODGE PARK BLVD
FWP-CE-1004	EXISTING CONDITIONS AND DEMOLITION-DODGE PARK BLVD
FWP-CE-1005	EXISTING CONDITIONS AND DEMOLITION-ROAD 1
FWP-CE-1006	EXISTING CONDITIONS AND DEMOLITION-ROAD 1
FWP-CE-1007	EXISTING CONDITIONS AND DEMOLITION-LUSTED RD
FWP-CE-1008	EXISTING CONDITIONS AND DEMOLITION-LUSTED RD
FWP-CE-1009	EXISTING CONDITIONS AND DEMOLITION-ALTMAN RD
FWP-CE-1010	EXISTING CONDITIONS AND DEMOLITION-ALTMAN RD
FWP-CE-1011	EXISTING CONDITIONS AND DEMOLITION-COTTRELL RD
FWP-CE-1012	EXISTING CONDITIONS AND DEMOLITION-COTTRELL RD
FWP-CE-1013	UTILITY WORK-DODGE PARK BLVD
FWP-CE-1014	UTILITY WORK-DODGE PARK BLVD
FWP-CE-1015	UTILITY WORK-DODGE PARK BLVD
FWP-CE-1016	UTILITY WORK-DODGE PARK BLVD
FWP-CE-1017	UTILITY WORK-ROAD 1
FWP-CE-1018	UTILITY WORK-ROAD 1
FWP-CE-1019	UTILITY WORK-LUSTED RD SOUTH WIDENING
FWP-CE-1020	UTILITY WORK-LUSTED RD SOUTH WIDENING
FWP-CE-1021	UTILITY WORK-LUSTED RD NORTH WIDENING
FWP-CE-1022	UTILITY WORK-LUSTED RD NORTH WIDENING
FWP-CE-1023	UTILITY WORK-ALTMAN RD
FWP-CE-1024	UTILITY WORK-ALTMAN RD
FWP-CE-1025	UTILITY WORK-COTTRELL RD
FWP-CE-1026	UTILITY WORK-COTTRELL RD
FWP-CE-1027	FINAL STABILIZATION AND LANDSCAPE-DODGE PARK BLVD
FWP-CE-1028	FINAL STABILIZATION AND LANDSCAPE-DODGE PARK BLVD
FWP-CE-1029	FINAL STABILIZATION AND LANDSCAPE-DODGE PARK BLVD
FWP-CE-1030	FINAL STABILIZATION AND LANDSCAPE-DODGE PARK BLVD
FWP-CE-1031	FINAL STABILIZATION AND LANDSCAPE-ROAD 1
FWP-CE-1032	FINAL STABILIZATION AND LANDSCAPE-ROAD 1
FWP-CE-1033	FINAL STABILIZATION AND LANDSCAPE-LUSTED RD
FWP-CE-1034	FINAL STABILIZATION AND LANDSCAPE-LUSTED RD
FWP-CE-1035	FINAL STABILIZATION AND LANDSCAPE-ALTMAN RD
FWP-CE-1036	FINAL STABILIZATION AND LANDSCAPE-ALTMAN RD
FWP-CE-1037	FINAL STABILIZATION AND LANDSCAPE-COTTRELL RD
FWP-CE-1038	FINAL STABILIZATION AND LANDSCAPE-COTTRELL RD
STD-CE-0001	STANDARD DETAILS
STD-CE-0002	STANDARD DETAILS
STD-CE-0003	STANDARD DETAILS

SITE MAP
1"=1000"

VICINITY MAP
N.T.S.

SITE INFORMATION

1. TYPE OF DEVELOPMENT: CAPITAL IMPROVEMENTS
2. CONSTRUCTION ACTIVITY WILL CONSIST OF:
   - A) PHASE 1: CLEARING AND GRUBBING 2024
   - B) PHASE 1: MASS GRADING AND EXCAVATION 2024-2027
   - C) PHASE 2: UTILITY CONSTRUCTION 2024-2028
   - D) PHASE 3: VERTICAL CONSTRUCTION 2024-2025 -FWI SITE ONLY
   - E) PHASE 4: FINAL STABILIZATION 2025-2028
3. PROJECT TIMELINE:
   - BEGINNING DATE: MARCH 2024
   - COMPLETION DATE: MARCH 2028
4. PROJECT SITE AREAS:
   - -TOTAL AREA: 29.09 AC
   - -DISTURBED AREA: 23.85 AC
   - -PERCENT OF SITE DISTURBED: 82 %
5. OFFSITE PUBLIC IMPROVEMENT AREA:
   - -IMPROVEMENT LENGTH: 10,040'
6. ONSITE SOIL TYPES:
   - A) CORNELIUS SILT LOAM, 8-15% SLOPES
   - B) POWELL SILT LOAM, 0-3% SLOPES, 3-8% SLOPES, 15-30% SLOPES
   - C) WOLLENT SILT LOAM, 0-8% SLOPES
   - D) MERSHON SILT LOAM, 0-8% SLOPES, 8-15% SLOPES, 15-30% SLOPES
   - E) CAZADERO SILTY CLAY LOAM, 0-8% SLOPES, 8-15% SLOPES
7. CUT AND FILL DATA:
   - -CUT: 3,929.35 CY
   - -FILL: 4,487.57 CY
   - -NET ADJUSTED: 558.22 CY FILL
8. NEAREST WATER BODY: SANDY RIVER
9. PROJECT LOCATION: FILTRATION FACILITY (R342619) NORTHWEST TO 35227 SE CARPENTER LANE (R342606), WEST ON SE DODGE PARK BOULEVARD, NORTH ALONG ROAD 1/33304 SE LUSTED ROAD (R342513), WEST ALONG SE LUSTED ROAD TO SE ALTMAN ROAD, NORTH ALONG ALTMAN ROAD TO SE OXBOW DRIVE. SE COTTRELL ROAD: SE DODGE PARK BOULEVARD NORTH TO 6704 SE COTTRELL RD (R342553)
10. PROPERTY DESCRIPTION: VARIES
11. VERTICAL ELEVATION: VARIES

PROPOSED CATIONIC CHEMICALS TO BE USED:

TIDAL CLEAR 1% - CHITOSAN (cas 9012-76-4), ORGANIC ACID (CAS 64-19-7, 77-92-9, 79-33-4, AND/OR 6915-15-7), WATER (CAS 7732-18-5)

POLLUTANTS GENERATING MATERIALS:

SEDIMENT, CONCRETE, PAINT, FUELS, OILS, PLASTICS, CONSTRUCTION MATERIALS

AUTHORIZED NON-STORMWATER DISCHARGES:

FIRE HYDRANT FLUSHING, IRRIGATION, POTABLE WATERLINE FLUSHING, PAVEMENT WASH WATER (EXCLUDING SPILLS AND LEAKS), UNCONTAMINATED CLEAR GROUNDWATER, CONSTRUCTION DE-WATERING

OWNER/DEVELOPER

PORTLAND WATER BUREAU
DAVID W. PETERS
1120 S.W. 5TH AVENUE, SUITE 600
PORTLAND, OR 97204
503-823-2003
DAVID.PETERS@PORTLANDOREGON.GOV

DESIGN ENGINEER

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RAFAEL GAETA
6445 SW FALLBROOK PL, SUITE 100
BEAVERTON, OR 97008
503-746-8812
RAFAEL@EMERIODESIGN.COM

GEOTECHNICAL ENGINEER

JACOBS
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2020 SW FOURTH AVENUE, 3RD FLOOR
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503-235-5000
TODD COTTEN@JACOBS.COM

SURVEYOR

BULL RUN CONVEYANCE PARTNERS
DAMIAN SKERBECK
DAMIANS@JWFOWLER.COM
503-623-5373

BMP INSTALLER/MAINTAINER:

BULL RUN CONVEYANCE PARTNERS
DAMIAN SKERBECK
DAMIANS@JWFOWLER.COM
503-623-5373

ESCP PREPARER:

EMERIO DESIGN
ROY HANKINS
1500 VALLEY RIVER DRIVE, SUITE 100
EUGENE, OR 97401
503-746-8812
ROY@EMERIODESIGN.COM

SITE CONTRACTOR

BULL RUN CONVEYANCE PARTNERS
TODD LARSON
TODD.LARSON@MWHCONSTRUCTORS.COM

CESCL:

BULL RUN CONVEYANCE PARTNERS
RYAN ELLIOTT
RYANE@JWFOWLER.COM
503-623-5373
CESCL ID # 80006

RAIN GAGE:

GRESHAM FIRE DEPT. RAIN GAGE
1333 NW EASTMAN PKWY
Hyperlink:
https://or.water.usgs.gov/non-usgs/bes/gresham.html

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No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 Date

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL
COVER SHEET

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1000

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EROSION AND SEDIMENT CONTROL NOTES (ALL SECTIONS REFERENCING DEQ 1200-C PERMIT)

1. ONCE KNOWN, INCLUDE A LIST OF ALL CONTRACTORS THAT WILL ENGAGE IN CONSTRUCTION ACTIVITIES ON SITE, AND THE AREAS OF THE SITE WHERE THE CONTRACTOR(S) WILL ENGAGE IN CONSTRUCTION ACTIVITIES. REVISE THE LIST AS APPROPRIATE UNTIL PERMIT COVERAGE IS TERMINATED (SECTION 4.4.c.i). IN ADDITION, INCLUDE A LIST OF PERSONNEL (BY NAME AND POSITION) THAT ARE RESPONSIBLE FOR THE DESIGN, INSTALLATION AND MAINTENANCE OF STORMWATER CONTROL MEASURES (E.G. ESCP DEVELOPER, BMP INSTALLER (SEE SECTION 4.10), AS WELL AS THEIR INDIVIDUAL RESPONSIBILITIES. (SECTION 4.4C.ii).
2. VISUAL MONITORING INSPECTION REPORTS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-C PERMIT REQUIREMENTS. (SECTION 6.5)
3. INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200-C PERMIT REQUIREMENTS. (SECTION 6.5q)
4. RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. (SECTION 4.7)
5. THE PERMIT REGISTRANT MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT. (SECTIONS 4 AND 4.11)
6. THE ESCP MUST BE ACCURATE AND REFLECT SITE CONDITIONS. (SECTION 4.8)
7. SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITTAL OF THE ESCP REVISIONS IS ONLY UNDER SPECIFIC CONDITIONS. SUBMIT ALL NECESSARY REVISIONS TO DEQ OR AGENT WITHIN 10 DAYS. (SECTION 4.9)
8. SEQUENCE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. (SECTION 2.2.2)
9. CREATE SMOOTH SURFACES BETWEEN SOIL SURFACE AND EROSION AND SEDIMENT CONTROLS TO PREVENT STORMWATER FROM BYPASSING CONTROLS AND PONDING. (SECTION 2.2.3)
10. IDENTIFY, MARK, AND PROTECT (BY CONSTRUCTION FENCING 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. (SECTION 2.2.1)
11. PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED. (SECTION 2.2.5)
12. MAINTAIN AND DELINEATE ANY EXISTING NATURAL BUFFER WITHIN THE 50-FEET OF WATERS OF THE STATE. (SECTION 2.2.4)
13. INSTALL PERIMETER SEDIMENT CONTROL, INCLUDING STORM DRAIN INLET PROTECTION AS WELL AS ALL SEDIMENT BASINS, TRAPS, AND BARRIERS PRIOR TO LAND DISTURBANCE, (SECTIONS 2.1.3)
14. CONTROL BOTH PEAK FLOW RATES AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS AND DOWNSTREAM CHANNELS AND STREAM BANKS. (SECTIONS 2.1.1 AND 2.2.16)
15. CONTROL SEDIMENT AS NEEDED ALONG THE SITE PERIMETER AND AT ALL OPERATIONAL INTERNAL STORM DRAIN INLETS AT ALL TIMES DURING CONSTRUCTION, BOTH INTERNALLY AND AT THE SITE BOUNDARY. (SECTIONS 2.2.6 AND 2.2.13)
16. ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. (SECTION 2.2.14)
17. APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES. TEMPORARY OR PERMANENT STABILIZATIONS MEASURES ARE NOT REQUIRED FOR AREAS THAT ARE INTENDED TO BE LEFT VEGETATED, SUCH AS DIRT ACCESS ROADS OR UTILITY POLE PADS. (SECTIONS 2.2.20 AND 2.2.21)
18. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS. (SECTION 2.3.7)
19. KEEP WASTE CONTAINER LIDS CLOSED WHEN NOT IN USE AND CLOSE LIDS AT THE END OF THE BUSINESS DAY FOR THOSE CONTAINERS THAT ARE ACTIVELY USED THROUGHOUT THE DAY. FOR WASTE CONTAINERS THAT DO NOT HAVE LIDS, PROVIDE EITHER (1) COVER (E.G., A TARP, PLASTIC SHEETING, TEMPORARY ROOF) TO PREVENT EXPOSURE OF WASTES TO PRECIPITATION, OR (2) A SIMILARLY EFFECTIVE MEANS DESIGNED TO PREVENT THE DISCHARGE OF POLLUTANTS (E.G., SECONDARY CONTAINMENT). (SECTION 2.3.7)
20. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMP'S SUCH AS: CONSTRUCTION ENTRANCE, GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPS MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES. (SECTION 2.2.7)
21. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE. (SECTION 2.2.7.f)
22. CONTROL PROHIBITED DISCHARGED FROM LEAVING THE CONSTRUCTION SITE, I.E., CONCRETE WASH-OUT, WASTEWATER FROM CLEANOUT OF STUCCO, PAINT AND CURING COMPOUNDS. (SECTIONS 1.5 AND 2.3.9)
23. ENSURE THAT STEEP SLOPE AREAS WHERE CONSTRUCTION ACTIVITIES ARE NOT OCCURRING ARE NOT DISTURBED. (SECTION 2.2.10)
24. PREVENT SOIL COMPACTION IN AREAS WHERE POST-CONSTRUCTION INFILTRATION FACILITIES ARE TO BE INSTALLED. (SECTION 2.2.12)
25. USE BMPS TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; 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, FERTILIZER, PESTICIDES AND HERBICIDES, PAINTS, SOLVENTS, CURING COMPOUNDS AND ADHESIVES FROM CONSTRUCTION OPERATIONS. (SECTIONS 2.2.15 AND 2.3)
26. PROVIDE PLANS FOR SEDIMENTATION BASINS THAT HAVE BEEN DESIGNED PER SECTION 2.2.17 AND STAMPED BY AN OREGON PROFESSIONAL ENGINEER. (SEE SECTION 2.2.17a)
27. IF ENGINEERED SOILS ARE USED ON SITE, A SEDIMENTATION BASIN/IMPOUNDMENT MUST BE INSTALLED. (SEE SECTIONS 2.2.17 AND 2.2.18)
28. PROVIDE A DEWATERING PLAN FOR ACCUMULATED WATER FROM PRECIPITATION AND UNCONTAMINATED GROUNDWATER SEEPAGE DUE TO SHALLOW EXCAVATION ACTIVITIES. (SEE SECTION 2.4)
29. IMPLEMENT THE FOLLOWING BMPS WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES. (SECTION 2.3)
30. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL. (SECTION 2.2.9)
31. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPARIAN ZONE. (SECTION 2.3.5)
32. IF AN ACTIVE TREATMENT SYSTEM (FOR EXAMPLE, ELECTRO-COAGUALATION, FLOCCULATION, FILTRATION, ETC) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVIDCE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATION THE TREATMENT SYSTEM. OBTAIN ENVIRONMENTAL MANAGEMENT PLAN APPROVAL FROM DEQ BEFORE OPERATIING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS. (SECTION 1.2.9)
33. TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE REGISTRANT IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR. (SECTION 2.2)
34. AS NEEDED BASED ON WEATHER CONDITIONS, AT THE END OF EACH WORKDAY SOLID STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER MBPS MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS. (SECTION 2.2.8)
35. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL. (SECTION 2.1.5b)
36. OTHER SEDIMENT BARRIERS (SUCH AS BIOBAGS): REMOVE SEDIMENT BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT AND BEFORE BMP REMOVAL. (SECTION 2.1.5c)
37. CATCH BASINS: CLEAN BEFORE RETENTION CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT. SEDIMENT BASINS AND SEDIMENT TRAPS: REMOVE TRAPPED SEDIMENTS BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT. (SECTION 2.1.5a)
38. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT 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 TIMEFRAME. (SECTION 2.2.19)
39. THE INTENTIONAL WASHING OF SEDIMENT INTO STROM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS. (SECTION 2.2.19)
40. DOCUMENT AN PORTION(S) OF THE SITE WHERE LAND DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED OR WILL BE TEMPORARILY INACTIVE FOR 14 OR MORE CALENDAR DAYS. (SECTION 6.5.f)
41. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE WITH A COVERING OF BLOWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE. (SECTION 2.2.20)
42. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED, ALL TEMPORARY EROSION CONTROLS AND RETAINED MOVED AND DISPOSED OF PROPERLY, UNLESS NEEDED FOR LONG TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE. (SECTION 2.2.21)

INSPECTION FREQUENCY

	SITE CONDITION	MINIMUM FREQUENCY
1.	ACTIVE PERIOD	ON INITIAL DATE THAT LAND DISTURBANCE ACTIVITIES COMMENCE. WITHIN 24 HOURS OF ANY STORM EVENT, INCLUDING RUNOFF FROM SNOW MELT, THAT RESULTS IN DISCHARGE FROM THE SITE. AT LEAST ONCE EVERY 14 DAYS, REGARDLESS OF WHETHER STORMWATER RUNOFF IS OCCURRING.
2.	INACTIVE PERIODS GREATER THAN 14 CONSECUTIVE CALENDAR DAYS	THE INSPECTOR MAY REDUCE THE FREQUENCY OF INSPECTIONS IN ANY AREA OF THE SITE WHERE THE STABILIZATION STEPS IN SECTION 2.2.20 HAVE BEEN COMPLETED TO TWICE PER MONTH FOR THE FIRST MONTH, NO LESS THAN 14 CALENDAR DAYS APART, THAN ONCE PER MONTH.
3.	PERIODS DURING WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER	IF SAFE, ACCESSIBLE AND PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT DISCHARGE POINT, OR DOWNSTREAM LOCATION OF THE RECEIVING WATERBODY.
4.	PERIODS DURING WHICH CONSTRUCTION ACTIVITIES ARE SUSPENDED AND RUNOFF IS UNLIKELY DUE TO FROZEN CONDITIONS.	VISUAL MONITORING INSPECTIONS MAY BE TEMPORARILY SUSPENDED. IMMEDIATELY RESUME MONITORING UPON THAWING, OR WHEN WEATHER CONDITIONS MAKE DISCHARGES LIKELY.
5.	PERIODS DURING WHICH CONSTRUCTION ACTIVITIES ARE CONDUCTED AND RUNOFF IS UNLIKELY DURING FROZEN CONDITIONS.	VISUAL MONITORING INSPECTIONS MAY BE REDUCED TO ONCE A MONTH. IMMEDIATELY RESUME MOITORING UPON THAWING, OR WHEN WEATHER CONDITIONS MAKE DISCHARGES LIKELY.

SEC SEEDING

BOTANICAL NAME	COMMON NAME
BROMUS CARINATUS	CALIFORNIA BROME
CAREX DEWEYANA	DEWEY'S SEDGE
DESCHAMPSIA ELONGATA	SLENDER HAIRGRASS
ELYMUS GLAUCUS	BLUE WLLDRYE
GEUM MACROPHYLLUM	LARGE-LEAVED AVENS
GLYCERIA ELATA	TALL MANNAGRASS
LUPINUS LATIFOLIUM	LARGELEAF LUPINE
PRUNELLA LANCEOLATA	SELFHEAL
TELLIMA GRANDIFLORA	FRINGE CUPS

ROADSIDE SEEDING

BOTANICAL NAME	COMMON NAME
FESTUCA RUBRA VAR. SEALINK	SEALINK CREEPING RED FESCUE
FESTUCA OVINA VAR. AZAY BLUE	AZAY BLUE SHEEP FESCUE
TRIFOLIUM FRAGIFERUM	STRAWBERRY CLOVER
NEMOPHILA MENZIESII	BABY BLUE EYES
LIMNANTHES DOUGLASII	DOUGLAS MEADOWFOAM
ARMERIA MARITIMA	THRIFT SEAPINK
TRIFOLIUM REPENS VAR MICROCLOVER	MICROCLOVER
LOBULARIA MARITIMA	SWEET ALYSSUM CARPET OF SNOW
ACHILLEA MILLEFOLIUM	COMMON YARROW
BELLIS PERENNIS	LAWNDAISY

FILTER STRIP SEEDING

BOTANICAL NAME	COMMON NAME
HORDEUM VULGARE VAR POCO	POCO BARLEY
HARDEUM BRACHYANTHERUM	MEADOW BARLEY
BROMUS CARINATUS	CALIFORNIA BROME
FESTUCA IDAHOENSIS ROMERIID	ROEMER'S FESCUE
TRIFOLIUM FRAGIFERUM	STRAWBERRY CLOVER
CLARKIA AMONEA	FAREWELL TO SPRING
OENOTHERA ELATA HOOKERI	HOOKER'S EVENING PRIMROSE
DESHAMPSIA CESPITOSA	TUFTED HAIRGRASS
AGROSTIS EXERATA	SPIKE BENTGRASS

BMP MATRIX FOR CONSTRUCTION PHASE

YEAR	2024-2027				
PHASE/BMP	CLEARING	MASS GRADING	UTILITY CONSTRUCTION	VERTICAL CONSTRUCTION	FINAL STABILIZATION
EROSION PREVENTION					
GROUND COVER	X	X	X		X
PLASTIC SHEETING	X	X	X		
DUST CONTROL	X	X	X		
TEMPORARY STABILIZATION (STRAW MULCH/HYDROSEED)		X	X	X	
PERMANENT STABILIZATION					X
BUFFER ZONE (FROM RAVINE)	X	X	X	X	
SEDIMENT CONTROL					
SEDIMENT FENCE (PERIMETER)	X				X
SEDIMENT FENCE (INTERIOR)	X				
STRAW WATTLES	X	X	X	X	X
INLET PROTECTION	X	X	X	X	X
DEWATERING		X	X		
RUN OFF CONTROL					
CONSTRUCTION ENTRANCE	X	X	X		
EXISTING OUTLET PROTECTION	X	X	X	X	
NEW OUTLET PROTECTION		X	X	X	X
EXISTING CURB INLET CHECK DAMS	X	X	X	X	X
POLLUTION PREVENTION					
HAZARD WASTE MANAGEMENT				X	
SPILL KIT ONSITE				X	X
CONCRETE WASHOUT AREA	X	X	X	X	

LAWN SEEDING

BOTANICAL NAME	COMMON NAME
FESTUCA ARUNDINACEA	'TURFWAY' - TURFWAY TALL FESCUE
FESTUCA ARUNDINACEA	'HOUNDOG 8' - HOUNDOG 8 TALL FESCUE
FESTUCA ARUNDINACEA	FOXHOUND TALL FESCUE

PASTURE SEEDING

BOTANICAL NAME	COMMON NAME
FESTUCA ARUNDINCIA VAR ATLAS	ATLAS FORAGE TALL FESCUE
FESTULOIUM SPP	SWEET TART FESTULOIUM
LOLIUM PERENNE VAR AMAZON	TETRAPLOID AMAZON TETRAPLOID PERENNIAL RYE
LOLIUM MULTIFLORIUM VAR BIG SHOT TETRAPLOID	BIG SHOT TETRAPLOID ANNUAL RYE
DACTYALIS GLOMERITA	POTOMAC ORCHARDGRASS
TRIFOLIUM REPENS VAR JUMBO LADINO	JUMBO LADINO WHITE

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Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING

0 1"

If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M, ACKERMAN, PRINCIPAL ENGINEER, PE #19424

Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

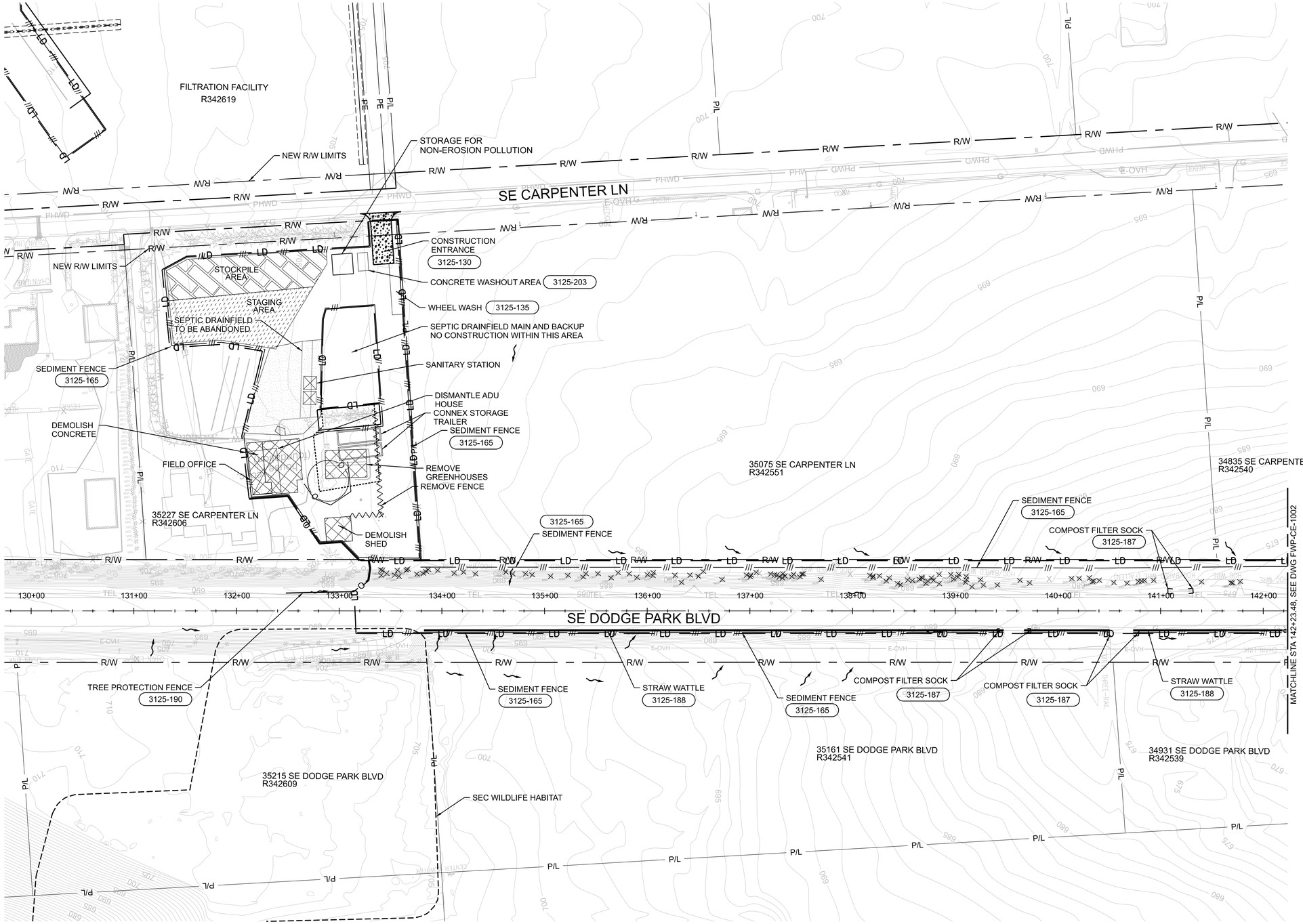
FINISHED WATER PIPELINE
EROSION AND SED. CONTROL
GENERAL NOTES

SAP Project No
W02563
1/4 Section

Sheet No
FWP-CE-1000A

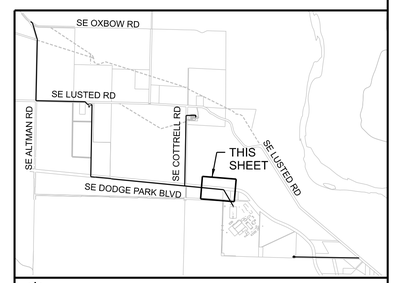
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LEGEND

- CONSTRUCTION ENTRANCE
- TREE REMOVAL
- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- STRAW WATTLE
- COMPOST FILTER SOCK
- XXXX-XXX — STANDARD DETAIL CALLOUT
- DEMOLITION AREA
- ABANDON
- DEMOLITION
- STOCKPILE AREA
- STAGING AREA
- SANITARY STATION
- FIELD OFFICE
- CONNEX STORAGE TRAILER



KEYPLAN

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Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

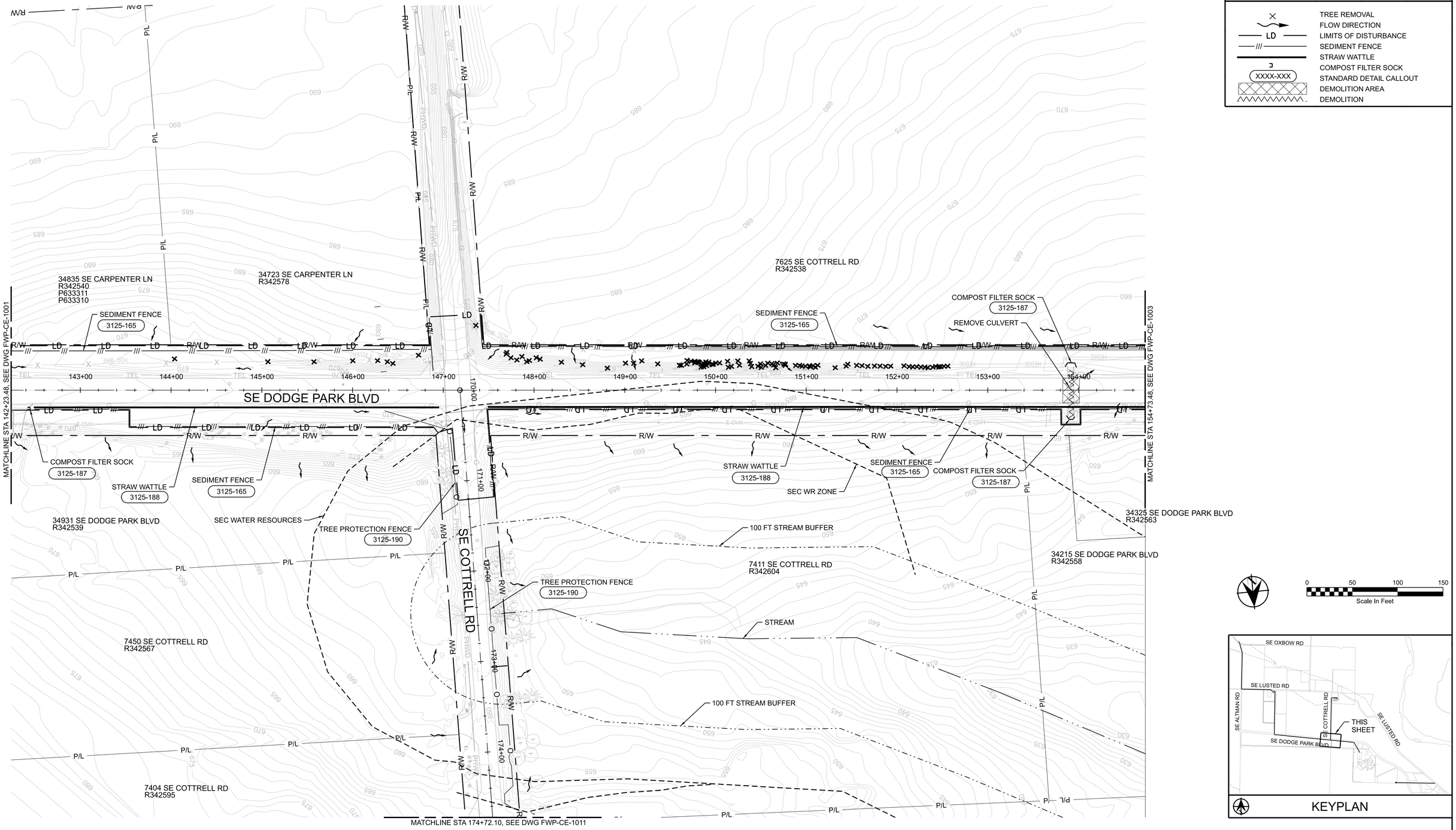
FINISHED WATER PIPELINE EROSION AND SED. CONTROL

EXISTING CONDITIONS AND DEMOLITION
DODGE PARK BLVD

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1001

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Project Mgr	BJP	Date	6/7/23

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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M, ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

EXISTING CONDITIONS AND DEMOLITION
DODGE PARK BLVD

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LEGEND

- TREE REMOVAL
- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- STRAW WATTLE
- COMPOST FILTER SOCK
- XXXX-XXX — STANDARD DETAIL CALLOUT

MATCHLINE STA 154+73.48, SEE DWG FWP-CE-1002

MATCHLINE STA 167+23.48, SEE DWG FWP-CE-1004

7625 SE COTTRELL RD
R342538

34201 SE CARPENTER LN
R342537

33907 SE CARPENTER LN
R342470

SEDIMENT FENCE
3125-165

SE DODGE PARK BLVD

155+00 156+00 157+00 158+00 159+00 160+00 161+00 162+00 163+00 164+00 165+00 166+00 167+00

R/W

COMPOST FILTER SOCK
3125-187

STRAW WATTLE
3125-188

34225 SE DODGE PARK BLVD
R342563

34215 SE DODGE PARK BLVD
R342558

34163 SE DODGE PARK BLVD
R342461

NO ADDRESS FOUND
R342527

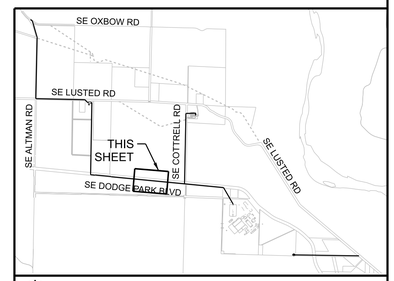
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100 FT STREAM BUFFER

SEC WATER RESOURCES

STREAM

0 50 100 150
Scale In Feet



KEYPLAN

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Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424

Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

EXISTING CONDITIONS AND DEMOLITION
DODGE PARK BLVD

SAP Project No	W02563
1/4 Section	3664 / 3764
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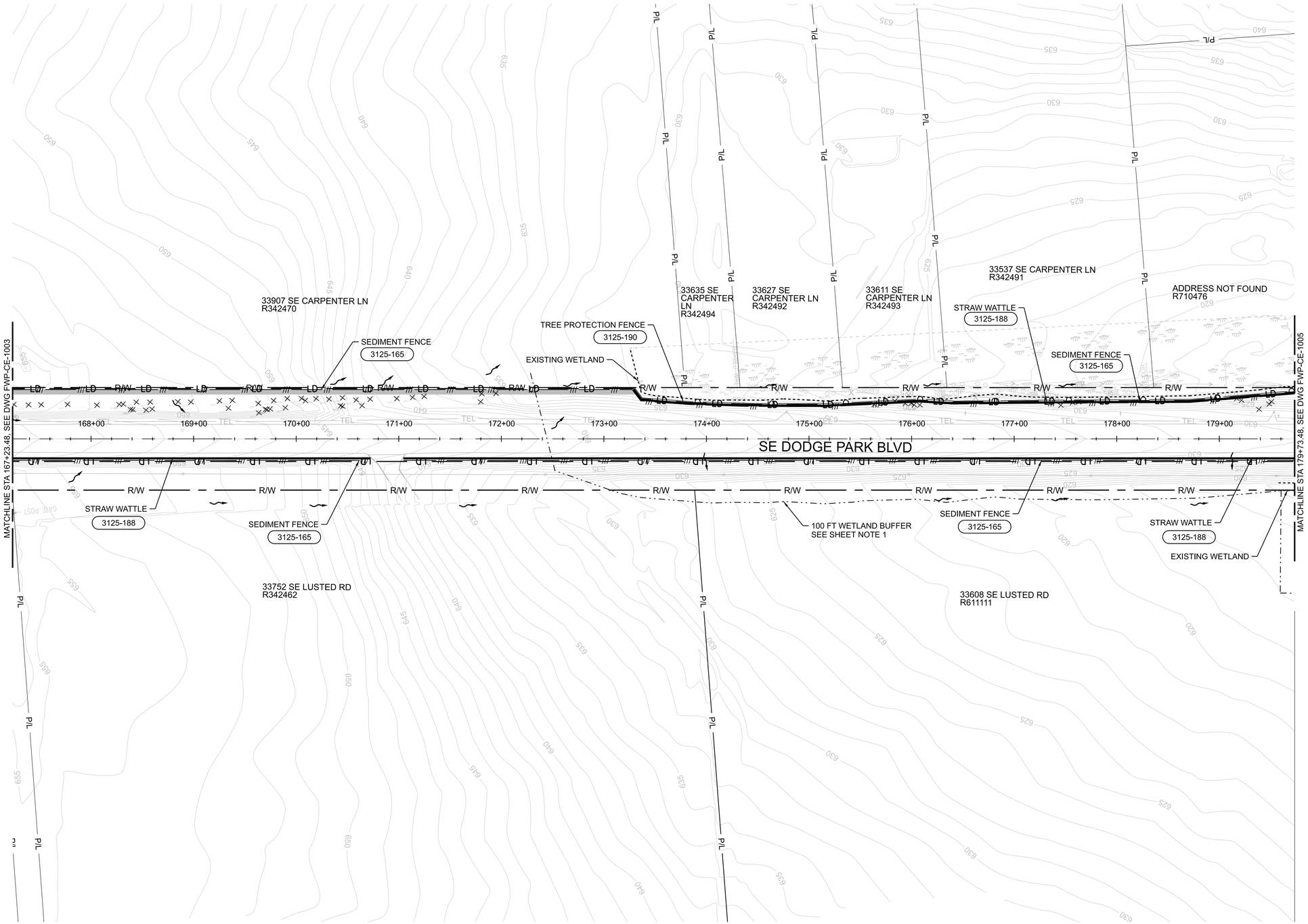
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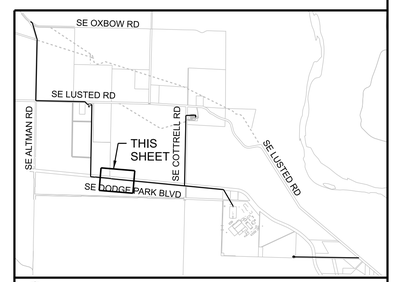
GENERAL SHEET NOTES

1. FOR CONSTRUCTION WITHIN 100 FOOT BUFFER OF WET AREA, PROVIDE COMPOST FILTER SOCK 1 FOOT DOWNSLOPE OF PROPOSED SEDIMENT FENCE.
2. SEE RUSLE2 CALCULATIONS FOR PROPOSED BMP PERFORMANCE TO REDUCE SEDIMENT TO LESS THAN 1 TON/ACRE/YEAR.

LEGEND

- TREE REMOVAL
- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- STRAW WATTLE
- XXXX-XXX — STANDARD DETAIL CALLOUT





KEYPLAN

0 50 100 150
Scale In Feet

CONFIDENTIAL

W02563_FWP-CE-1004.dgn
21-JUL-2023 14:51

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

EXISTING CONDITIONS AND DEMOLITION
DODGE PARK BLVD

SAP Project No: W02563
1/4 Section: 3664 / 3764
Sheet No: FWP-CE-1004

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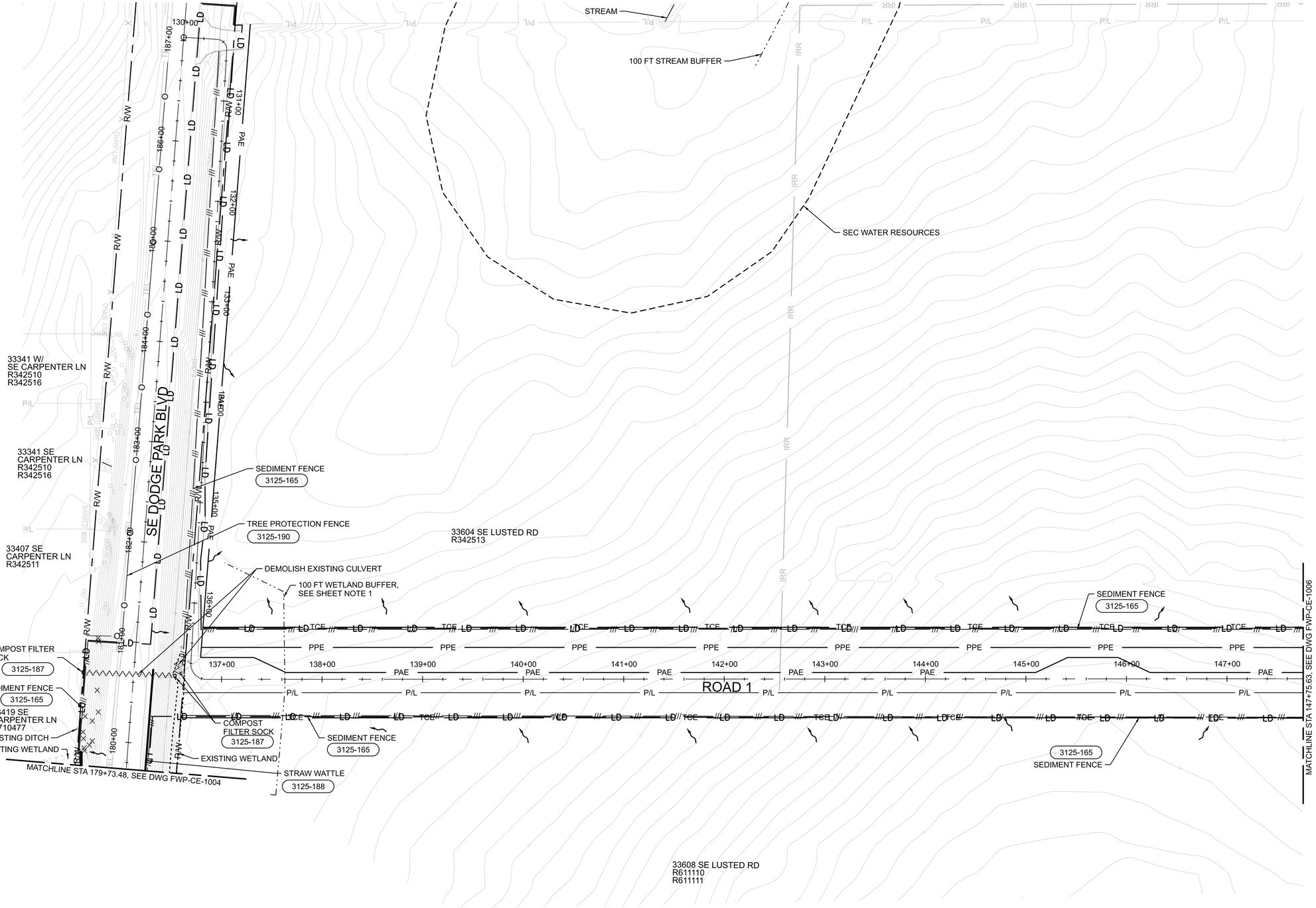
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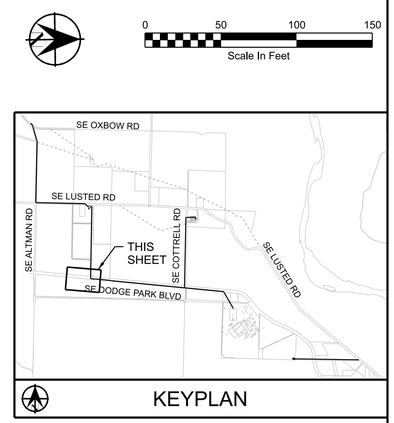
GENERAL SHEET NOTES

1. FOR CONSTRUCTION WITHIN 100 FOOT BUFFER OF WET AREA, PROVIDE COMPOST FILTER SOCK 1 FOOT DOWNSLOPE OF PROPOSED SEDIMENT FENCE.
2. SEE RUSLE2 CALCULATIONS FOR PROPOSED BMP PERFORMANCE TO REDUCE SEDIMENT TO LESS THAN 1 TON/ACRE/YEAR.

LEGEND

- TREE REMOVAL
- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- STRAW WATTLE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- COMPOST FILTER SOCK
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- PPE — PERMANENT PROPERTY EASEMENT
- PAE — PUBLIC ACCESS EASEMENT
- TO BE DEMOLISHED





KEYPLAN

0 50 100 150
Scale In Feet

W02563_FWP-CE-1005.dgn

21-JUL-2023 14:45

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

Bull Run Filtration Pipelines

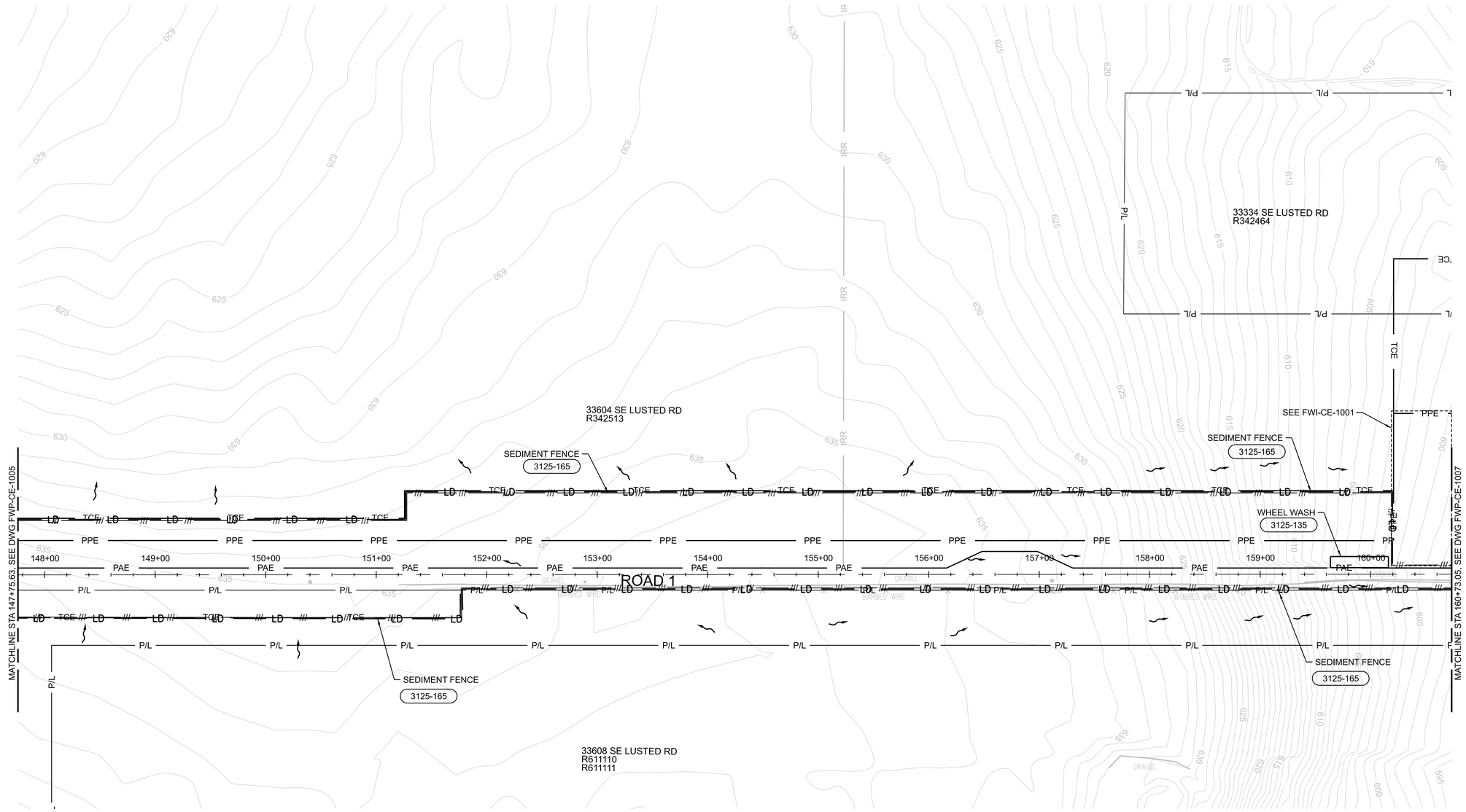
FINISHED WATER PIPELINE EROSION AND SED. CONTROL

EXISTING CONDITIONS AND DEMOLITION
ROAD 1

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1005

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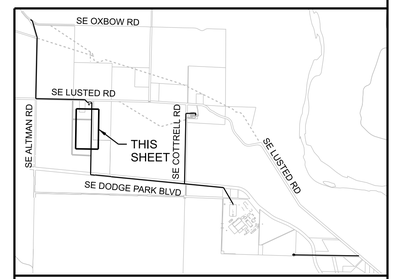
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LEGEND

- FLOW DIRECTION
- P/L — EXISTING PROPERTY LINE
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- PPE — PERMANENT PROPERTY EASEMENT
- PAE — PUBLIC ACCESS EASEMENT

0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1006.dgn
21-JUL-2023 14:46

No	Date	Description	Appd
		Revision	
Survey			

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Designed By	RG	Program Mgr	DH
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Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M, ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

EXISTING CONDITIONS AND DEMOLITION
ROAD 1

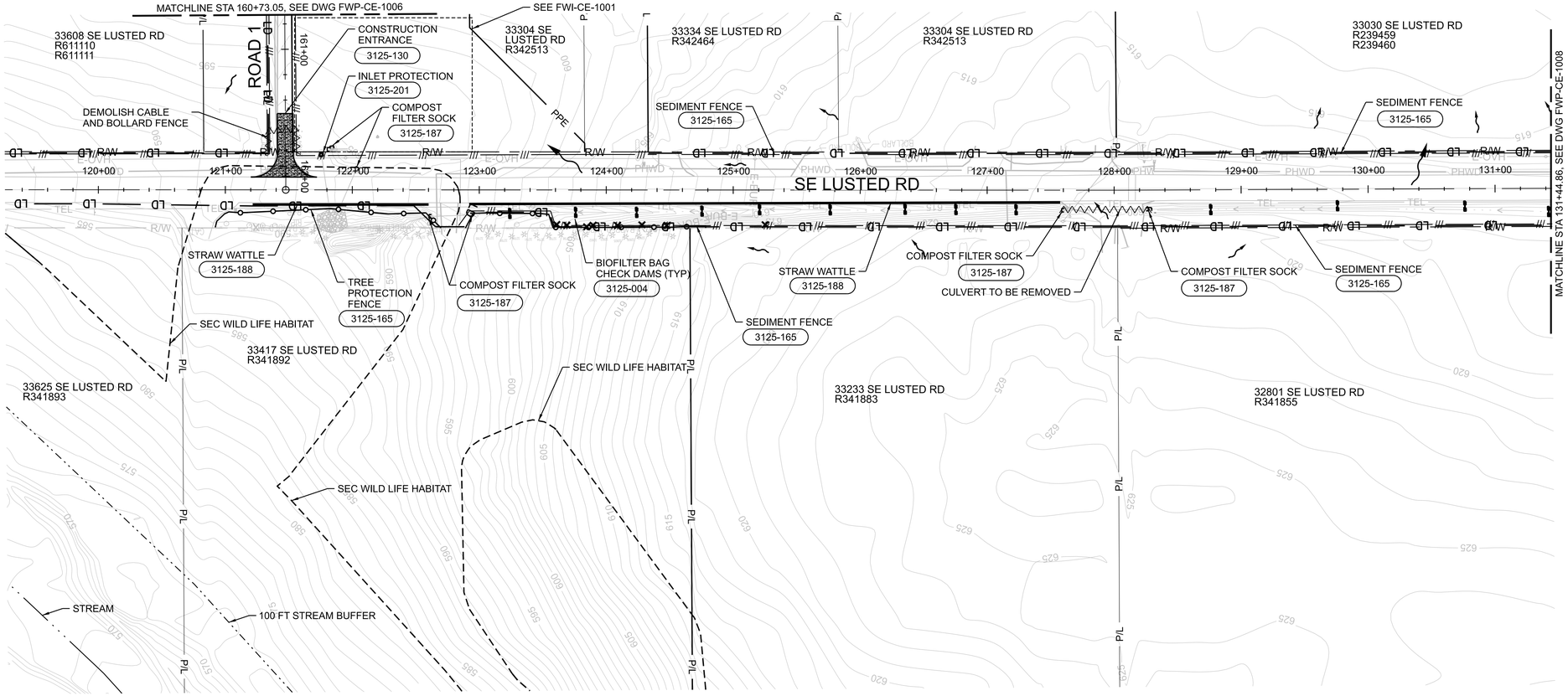
SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1006

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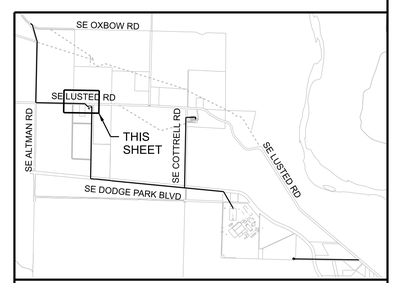
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LEGEND

- TREE REMOVAL
- FLOW DIRECTION
- CONSTRUCTION ENTRANCE
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- STRAW WATTLE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- BIOFILTER BAG CHECK DAM
- COMPOST FILTER SOCK
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- PPE — PERMANENT PROPERTY EASEMENT
- TO BE DEMOLISHED



0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1007.dgn
21-JUL-2023 14:50

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

EXISTING CONDITIONS AND DEMOLITION
LUSTED ROAD

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1007

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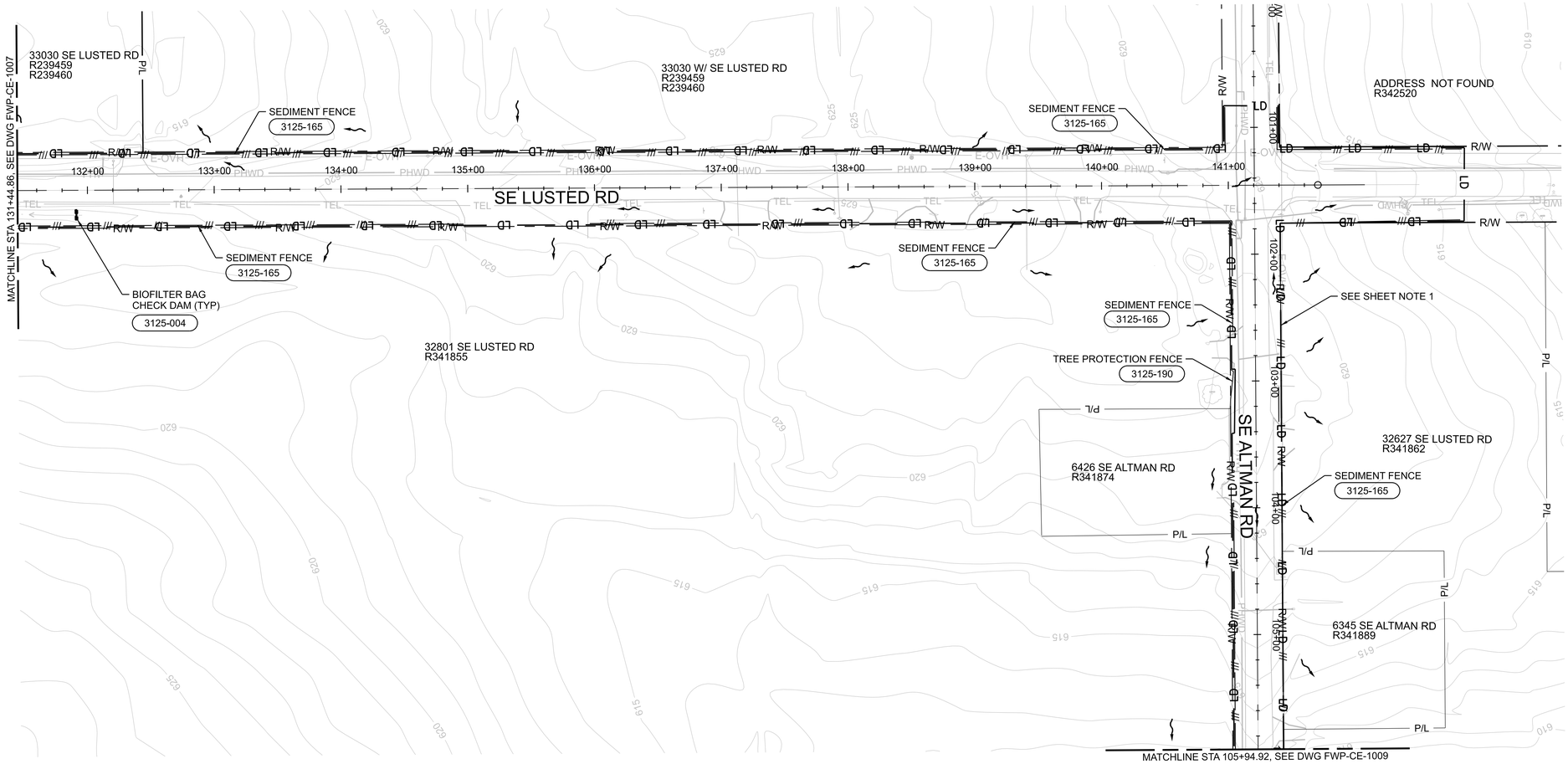
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GENERAL SHEET NOTES

1. SEDIMENT FENCE AND LIMIT OF DISTURBANCE LINE ON R/W LINE.

LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- BIOFILTER BAG CHECK DAM



W02563_FWP-CE-1008.dgn

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No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

PRELIMINARY NOT FOR CONSTRUCTION

Designed By	RG	Program Mgr	DH	XXX
Drawn By	JL	Const Mgr	BN	XXX
Checked By	RG	Const Supvgr	JB	XXX
Project Mgr	XXX	Date	6/7/23	

WARNING

0 1"

If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

XXX XXX

XXX XXX M, ACKERMAN, PRINCIPAL ENGINEER, PE #19424

Date

Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

EXISTING CONDITIONS AND DEMOLITION

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1008

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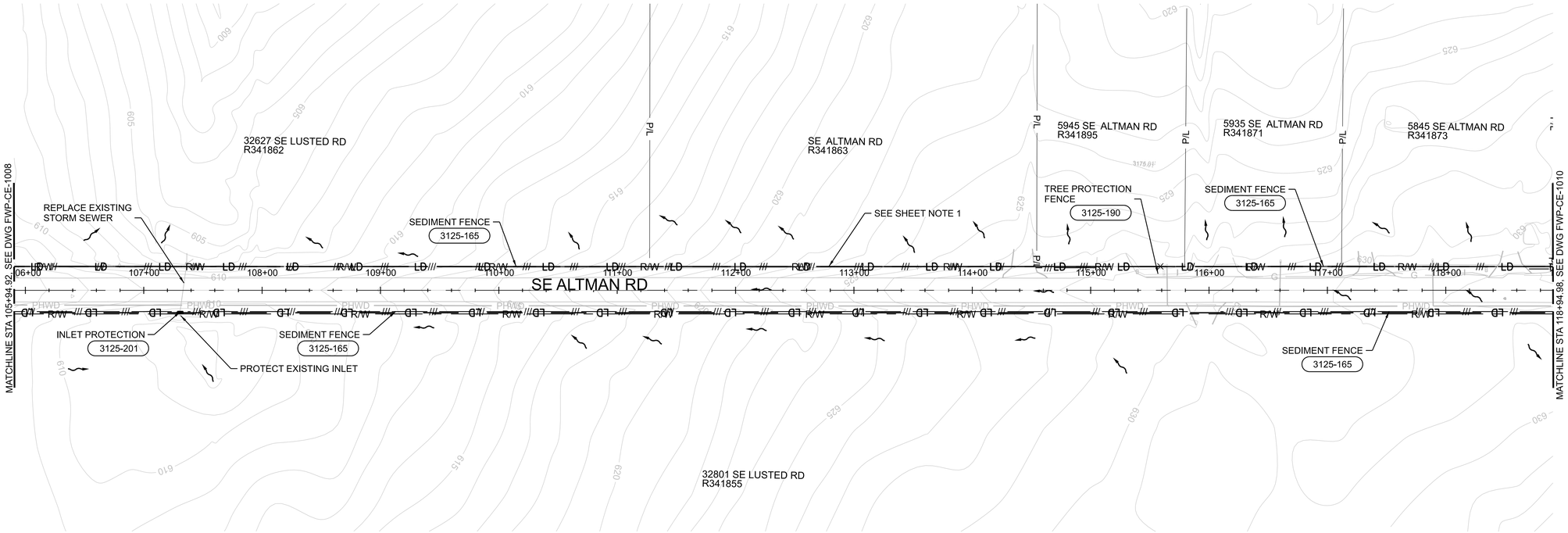
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GENERAL SHEET NOTES

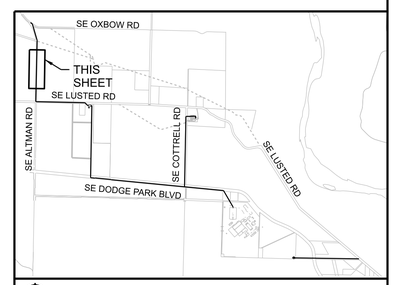
1. SEDIMENT FENCE AND LIMIT OF DISTURBANCE LINE ON R/W LINE.

LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- XXXX-XXX — STANDARD DETAIL CALLOUT



0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1009.dgn
21-JUL-2023 14:48

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

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Drawn By	DD	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

EXISTING CONDITIONS AND DEMOLITION
ALTMAN ROAD

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1009

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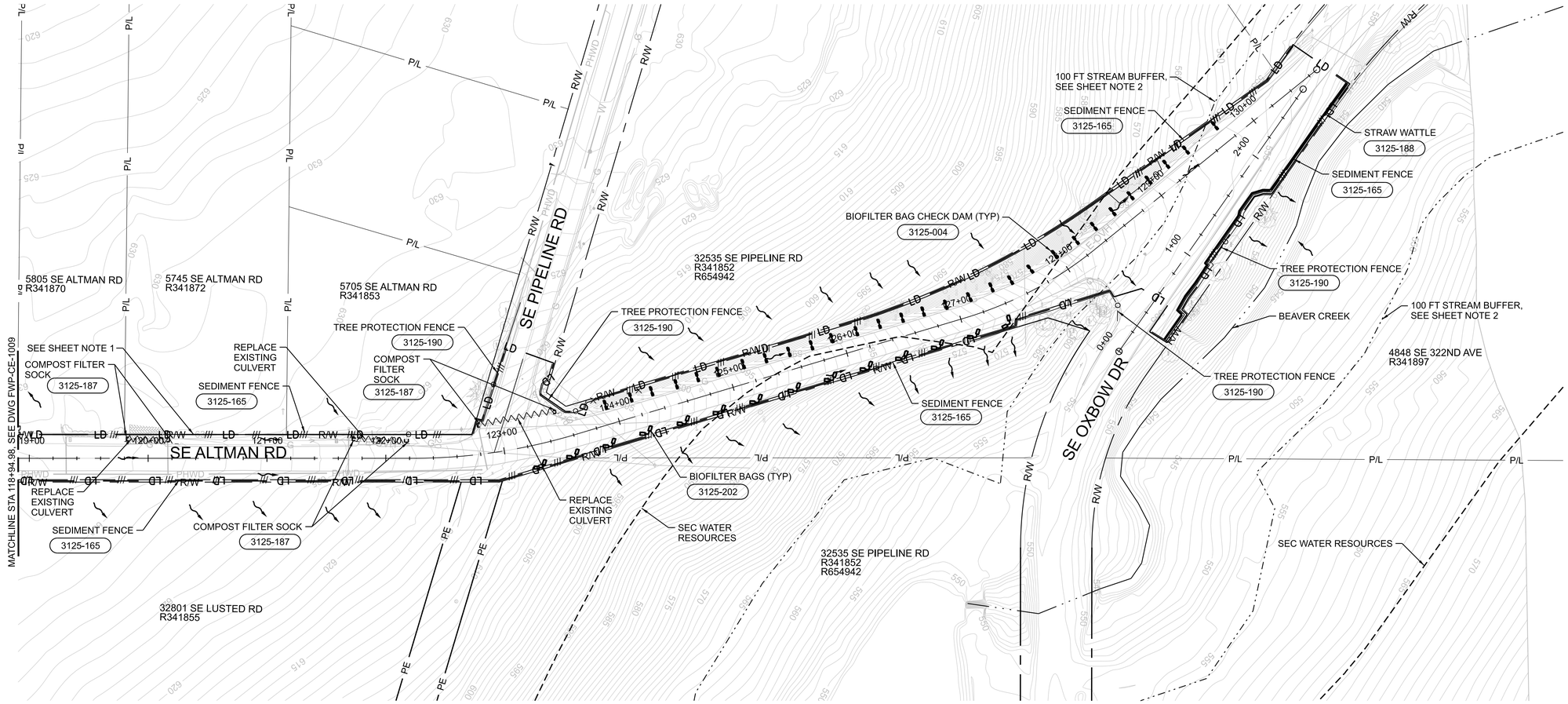
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GENERAL SHEET NOTES

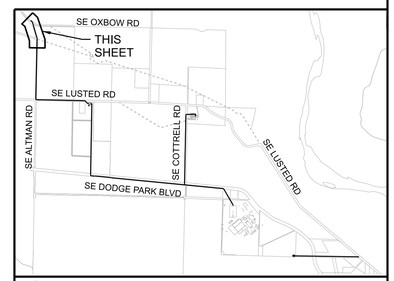
1. SEDIMENT FENCE AND LIMIT OF DISTURBANCE LINE ON R/W LINE.
2. FOR CONSTRUCTION WITHIN 100 FOOT BUFFER OF WET AREA, PROVIDE COMPOST FILTER SOCK 1 FOOT DOWNSLOPE OF PROPOSED SEDIMENT FENCE.
3. SEE RUSLE2 CALCULATIONS FOR PROPOSED BMP PERFORMANCE TO REDUCE SEDIMENT TO LESS THAN 1 TON/ACRE/YEAR.

LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- STRAW WATTLE
- COMPOST FILTER SOCK
- BIOFILTER BAG CHECK DAM
- DEMOLITION



0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1010.dgn
21-JUL-2023 14:51

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	DD	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

EXISTING CONDITIONS AND DEMOLITION
ALTMAN ROAD

SAP Project No W02563
1/4 Section 3664 / 3764
Sheet No FWP-CE-1010

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LEGEND

- TREE REMOVAL
- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- XXXX-XXX — STANDARD DETAIL CALLOUT

SEC WATER RESOURCES

7387 SE COTTRELL RD R342610

7345 SE COTTRELL RD R342605

7239 SE COTTRELL RD R342624

7235 SE COTTRELL RD R342625

7205 SE COTTRELL RD R342608 R342602

7205 WI/ SE COTTRELL RD

7125 SE COTTRELL RD R342569

7035 SI/ SE COTTRELL RD R342628

7035 SE COTTRELL RD R632311

6845 SE COTTRELL RD R342571

6915 SE COTTRELL RD R342591

6849 SE COTTRELL RD R342590

TREE PROTECTION FENCE 3125-190

SEDIMENT FENCE 3125-165

SEDIMENT FENCE 3125-165

MATCHLINE STA 174+72.10, SEE DWG FWP-CE-1002

MATCHLINE STA 187+72.10, SEE DWG FWP-CE-1012

SE COTTRELL RD

175+00 176+00 177+00 178+00 179+00 180+00 181+00 182+00 183+00 184+00 185+00 186+00 187+00

7326 SE COTTRELL RD R342599

7238 SE COTTRELL RD R342594

7130 SE COTTRELL RD R342536

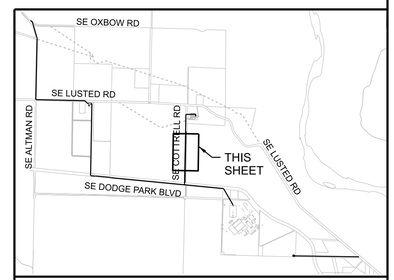
7044 SE COTTRELL RD R342562

7010 SE COTTRELL RD R342560

6930 SE COTTRELL RD R342582

6920 SE COTTRELL RD R342559

0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1011.dgn

21-JUL-2023 14:48

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

EXISTING CONDITIONS AND DEMOLITION COTTRELL ROAD

SAP Project No W02563
1/4 Section 3664 / 3764
Sheet No FWP-CE-1011

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LEGEND

- TREE REMOVAL
- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- XXXX-XXX — STANDARD DETAIL CALLOUT

6801 SE COTTRELL RD
R342621

6825 SE COTTRELL RD
R342621

6837 SE COTTRELL RD
R342572

6715 SE COTTRELL RD
R342533

34630 SE LUSTED RD

TREE PROTECTION FENCE
3125-190

SEDIMENT FENCE
3125-165

SE COTTRELL RD

SEC WILDLIFE HABITAT

6840 SE COTTRELL RD
R342577

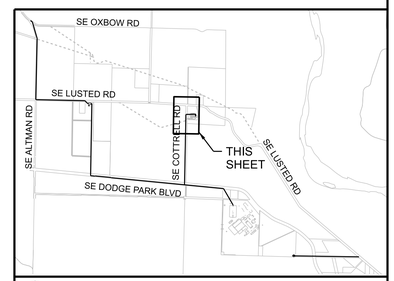
6704 SE COTTRELL RD

SE LUSTED RD

E-BUR

MATCHLINE STA 187+72.10, SEE DWG FWP-CE-1011

0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1012.dgn
21-JUL-2023 14:43

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

EXISTING CONDITIONS AND DEMOLITION
COTTRELL ROAD

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1012

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LEGEND

- CONSTRUCTION ENTRANCE
- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- STRAW WATTLE
- COMPOST FILTER SOCK
- XXXX-XXX — STANDARD DETAIL CALLOUT
- STOCKPILE AREA
- STAGING AREA
- SANITARY STATION
- FIELD OFFICE
- CONNEX STORAGE TRAILER
- PROPOSED PIPELINE
- 500' — PROPOSED CONTOUR

RECEIVING SHAFT

FILTRATION FACILITY
R342619

STORAGE FOR
NON-EROSION POLLUTION

SE CARPENTER LN

CONSTRUCTION ENTRANCE
3125-130

CONCRETE WASHOUT AREA 3125-203

WHEEL WASH 3125-135

SEPTIC DRAINFIELD MAIN AND BACKUP
NO CONSTRUCTION IN THIS AREA

SANITARY STATION

SEDIMENT FENCE
3125-165

CONNEX STORAGE
TRAILER

GRAVEL CONSTRUCTION ACCESS

RECEIVING SHAFT

STOCKPILE
AREA

STAGING
AREA

SEDIMENT
FENCE
3125-165

PROPOSED
PIPELINE

FIELD OFFICE

SEDIMENT
FENCE
3125-165

35227 SE CARPENTER LN
R342606

35075 SE CARPENTER LN
R342551

34835 SE CARPENTER LN
R342540

SEDIMENT FENCE
3125-165

PROPOSED PIPELINE

SEDIMENT FENCE
3125-165

COMPOST FILTER SOCK
3125-187

SE DODGE PARK BLVD

TREE PROTECTION
FENCE
3125-190

SEC WILDLIFE HABITAT

SEC WILDLIFE
HABITAT

STRAW WATTLE
3125-188

SEDIMENT FENCE
3125-165

COMPOST FILTER SOCK
3125-187

COMPOST FILTER SOCK
3125-187

STRAW WATTLE
3125-188

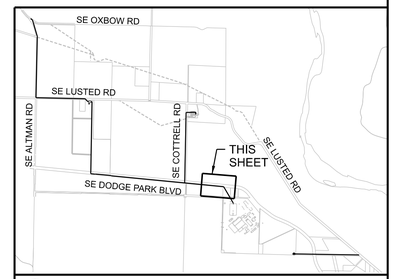
35215 SE DODGE PARK BLVD
R342609

35161 SE DODGE PARK BLVD
R342541

34931 SE DODGE PARK BLVD
R342539

MATCHLINE STA 142+23.48, SEE DWG FWP-CE-1014

0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1013.dgn
07/26/2023 2:27:56 PM

No	Date	Description	Appd
Revision			
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

UTILITY WORK
DODGE PARK BLVD

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1013

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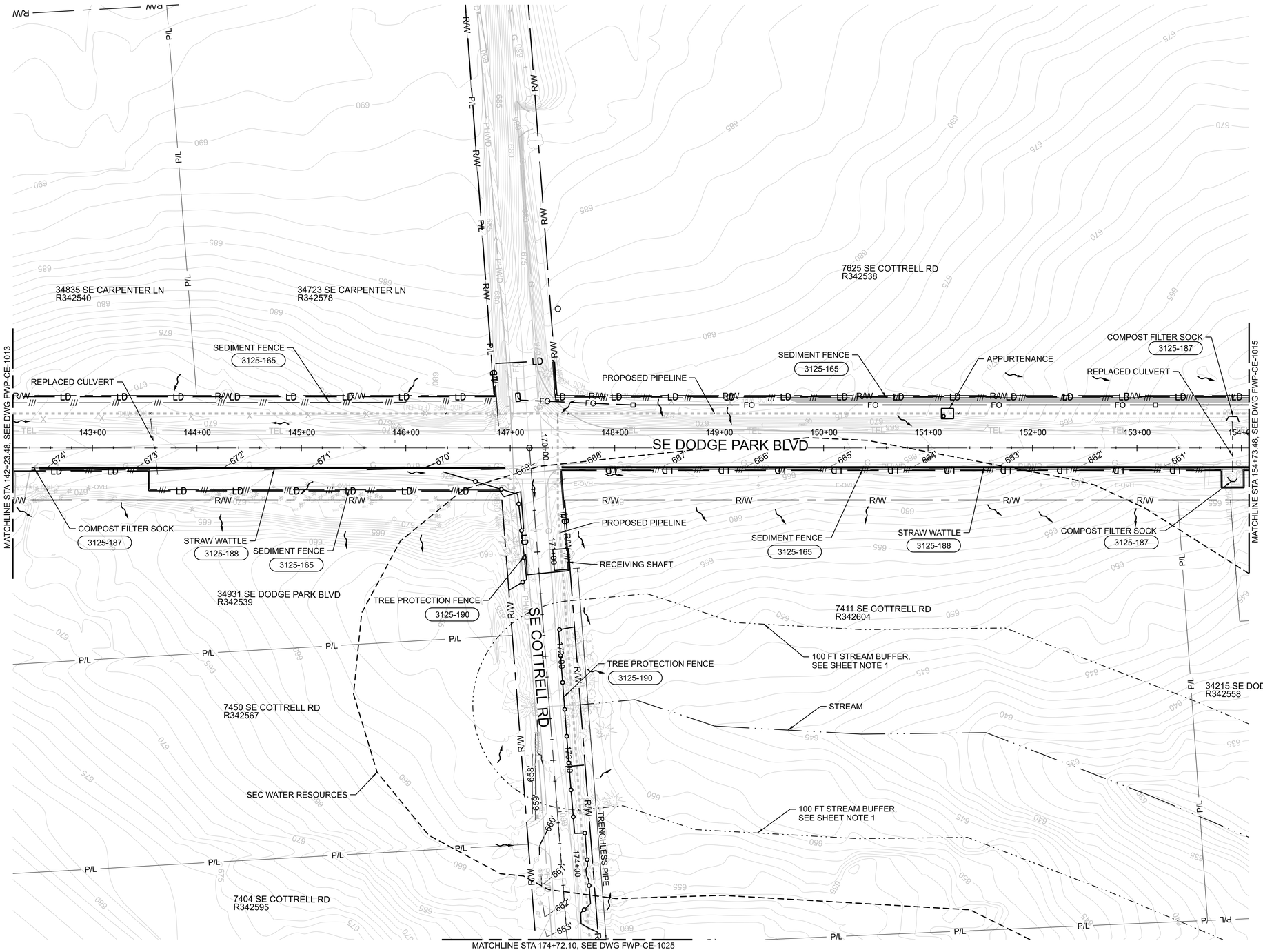
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GENERAL SHEET NOTES

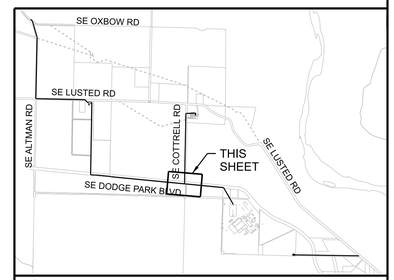
1. FOR CONSTRUCTION WITHIN 100 FOOT BUFFER OF WET AREA, PROVIDE COMPOST FILTER SOCK 1 FOOT DOWNSLOPE OF PROPOSED SEDIMENT FENCE.
2. SEE RUSLE2 CALCULATIONS FOR PROPOSED BMP PERFORMANCE TO REDUCE SEDIMENT TO LESS THAN 1 TON/ACRE/YEAR.

LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- O — TREE PROTECTION FENCE
- /// — SEDIMENT FENCE
- STRAW WATTLE
- COMPOST FILTER SOCK
- XXXX-XXX — STANDARD DETAIL CALLOUT
- PROPOSED PIPELINE
- FO — PROPOSED FIBER OPTIC
- PROPOSED FIBER OPTIC HANDHOLE
- 500' — PROPOSED CONTOUR
- PROPOSED STORM CULVERT



0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1014.dgn
21-JUL-2023 14:43

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

UTILITY WORK
DODGE PARK BLVD

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1014

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LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- STRAW WATTLE
- COMPOST FILTER SOCK
- XXXX-XXX — STANDARD DETAIL CALLOUT
- FO — PROPOSED FIBER OPTIC
- PROPOSED FIBER OPTIC HANDHOLE
- PROPOSED PIPELINE
- 500' — PROPOSED CONTOUR

MATCHLINE STA 154+73.48, SEE DWG FWP-CE-1014

MATCHLINE STA 167+23.48, SEE DWG FWP-CE-1016

7625 SE COTTRELL RD
R342538

34201 SE CARPENTER LN
R342537

33907 SE CARPENTER LN
R342470

SEDIMENT FENCE 3125-165

PROPOSED PIPELINE

SEDIMENT FENCE 3125-165

155+00 156+00 157+00 158+00 159+00 160+00 161+00 162+00 163+00 164+00 165+00 166+00 167+00

SE DODGE PARK BLVD

R/W

SEDIMENT FENCE 3125-165

COMPOST FILTER SOCK 3125-187

STRAW WATTLE 3125-188

STRAW WATTLE 3125-188

SEDIMENT FENCE 3125-165

34225 SE DODGE PARK BLVD
R342563

34215 SE DODGE PARK BLVD
R342558

34163 SE DODGE PARK BLVD
R342461

NO ADDRESS FOUND
R342527

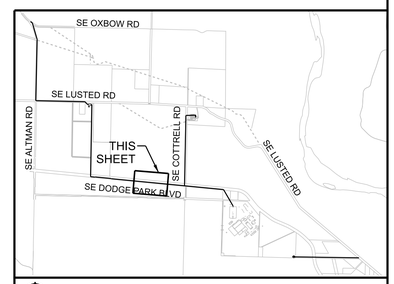
P/L

SEC WATER RESOURCES

100 FT STREAM BUFFER

STREAM

0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1015.dgn

21-JUL-2023 14:43

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING

0 1"

If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

UTILITY WORK
DODGE PARK BLVD

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1015

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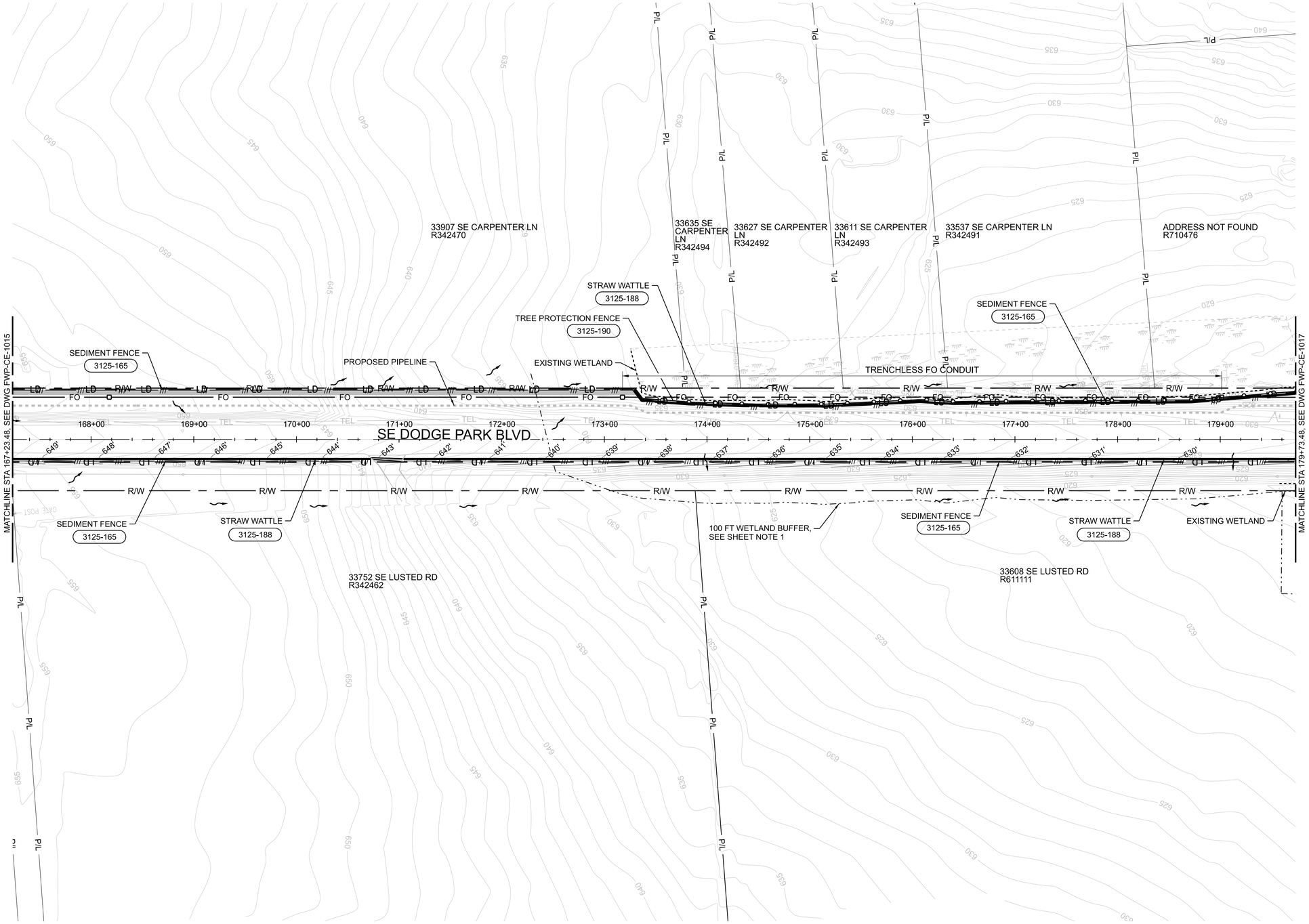
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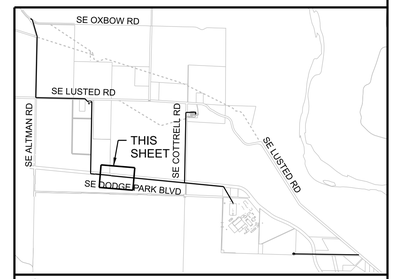
GENERAL SHEET NOTES

1. FOR CONSTRUCTION WITHIN 100 FOOT BUFFER OF WET AREA, PROVIDE COMPOST FILTER SOCK 1 FOOT DOWNSLOPE OF PROPOSED SEDIMENT FENCE.
2. SEE RUSLE2 CALCULATIONS FOR PROPOSED BMP PERFORMANCE TO REDUCE SEDIMENT TO LESS THAN 1 TON/ACRE/YEAR.

LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- STRAW WATTLE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- PROPOSED PIPELINE
- FO — PROPOSED FIBER OPTIC
- PROPOSED FIBER OPTIC HANDHOLE
- 500' — PROPOSED CONTOUR





KEYPLAN

0 50 100 150
Scale In Feet

W02563_FWP-CE-1016.dgn
21-JUL-2023 14:47

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

UTILITY WORK
DODGE PARK BLVD

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1016

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GENERAL SHEET NOTES

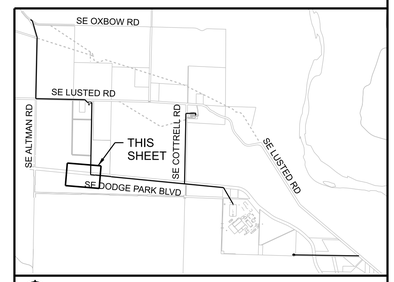
1. FOR CONSTRUCTION WITHIN 100 FOOT BUFFER OF WET AREA, PROVIDE COMPOST FILTER SOCK 1 FOOT DOWNSLOPE OF PROPOSED SEDIMENT FENCE.
2. SEE RUSLE2 CALCULATIONS FOR PROPOSED BMP PERFORMANCE TO REDUCE SEDIMENT TO LESS THAN 1 TON/ACRE/YEAR.

LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- STRAW WATTLE
- COMPOST FILTER SOCK
- XXXX-XXX — STANDARD DETAIL CALLOUT
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- PPE — PERMANENT PROPERTY EASEMENT
- PAE — PUBLIC ACCESS EASEMENT
- PIPE EXCAVATION MATERIAL PROTECTION
- PROPOSED GRAVEL
- PROPOSED PIPELINE
- FO — PROPOSED FIBER OPTIC
- PROPOSED FIBER OPTIC HANDHOLE
- 500' — PROPOSED CONTOUR
- PROPOSED STORM CULVERT
- PROPOSED STORM MANHOLE

STREAM
100 FT STREAM BUFFER
SEC WATER RESOURCES
SEDIMENT FENCE 3125-165
33341 W/ SE CARPENTER LN R342510 R342516
33341 SE CARPENTER LN R342510 R342516
SE DODGE PARK BLVD
3125-190 TREE PROTECTION FENCE
33407 SE CARPENTER LN R342511
PROPOSED CULVERT SEDIMENT FENCE 3125-165
PROPOSED PIPELINE
COMPOST FILTER SOCK 3125-187
33429 SE CARPENTER LN R710478
3125-188 STRAW WATTLE
EXISTING WETLAND
MATCHLINE STA 179+73.48, SEE DWG FWP-CE-1016
100 FT WETLAND BUFFER, SEE SHEET NOTE 1
PIPE EXCAVATION MATERIAL PROTECTION 3125-301
33304 SE LUSTED RD R342513
ROAD 1
33608 SE LUSTED RD R611110 R611111
PROPOSED PIPELINE
SEDIMENT FENCE 3125-165
MATCHLINE STA 147+75.63, SEE DWG FWP-CE-1018

0 50 100 150
Scale In Feet



KEYPLAN

CONFIDENTIAL

W02563_FWP-CE-1017.dgn
21-JUL-2023 14:44

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

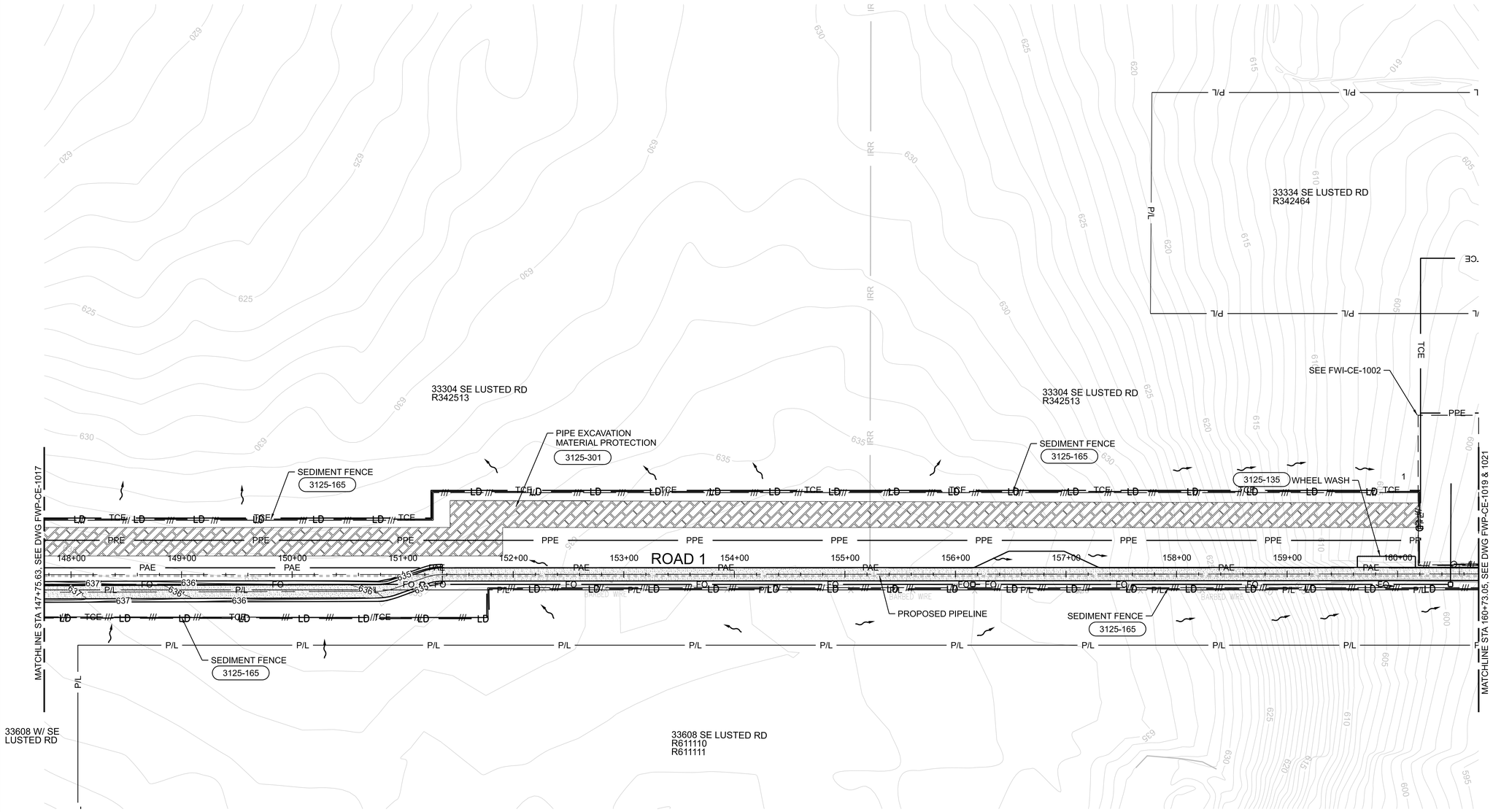
FINISHED WATER PIPELINE EROSION AND SED. CONTROL

UTILITY WORK
ROAD 1

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1017

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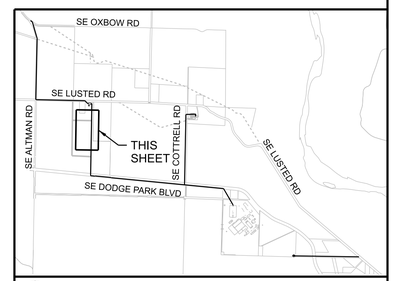
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LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- PPE — PERMANENT PROPERTY EASEMENT
- PAE — PUBLIC ACCESS EASEMENT
- PIPE EXCAVATION MATERIAL PROTECTION
- PROPOSED GRAVEL
- PROPOSED PIPELINE
- FO — PROPOSED FIBER OPTIC
- PROPOSED FIBER OPTIC HANDHOLE
- 500' — PROPOSED CONTOUR

0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1018.dgn
21-JUL-2023 14:49

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

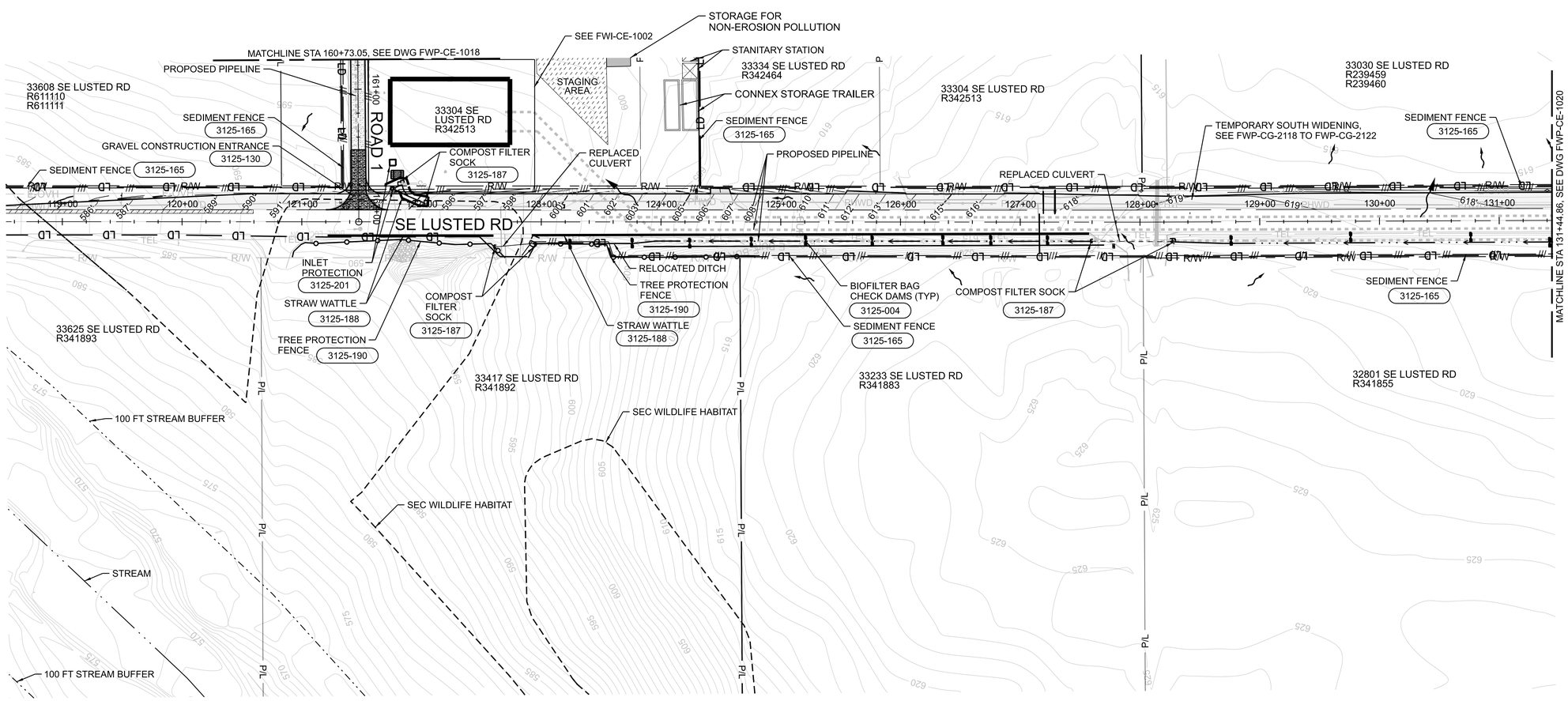
FINISHED WATER PIPELINE EROSION AND SED. CONTROL

UTILITY WORK
ROAD 1

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1018

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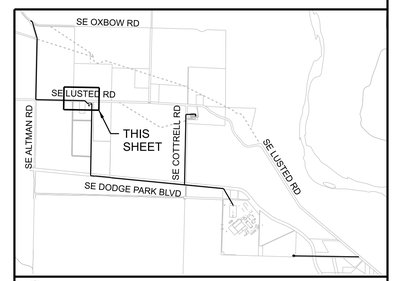
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LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- STRAW WATTLE
- BIOFILTER BAG CHECK DAM
- COMPOST FILTER SOCK
- PROPOSED MAILBOX
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- PPE — PERMANENT PROPERTY EASEMENT
- PROPOSED PIPELINE
- PROPOSED DRAINAGE DITCH
- PROPOSED STORM CULVERT
- CONSTRUCTION ENTRANCE
- PROPOSED ASPHALT
- PROPOSED GRAVEL
- GRIND & INLAY
- STAGING AREA
- SANITARY STATION
- CONNEX STORAGE TRAILERS

0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1019.dgn
21-JUL-2023 14:48

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

UTILITY WORK PHASE 1
LUSTED RD SOUTH WIDENING

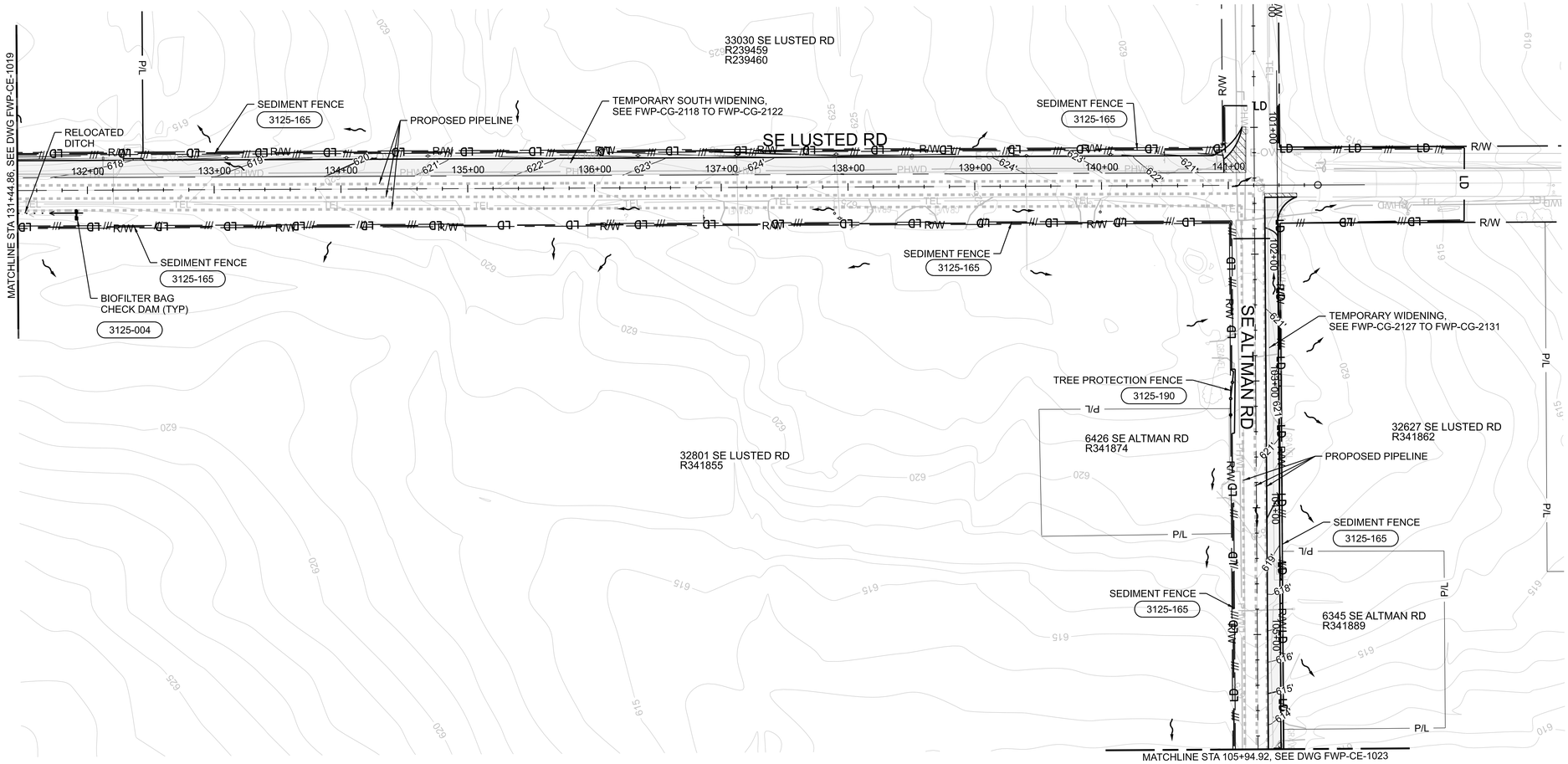
SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1019

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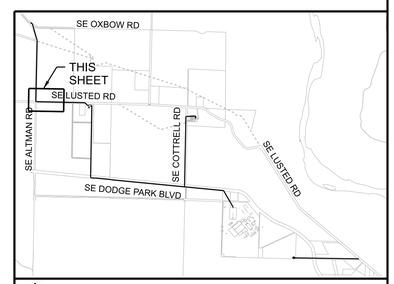
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LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- BIOFILTER BAG CHECK DAM
- PROPOSED PIPELINE
- 500' — PROPOSED CONTOUR
- PROPOSED DRAINAGE DITCH
- PROPOSED ASPHALT
- GRIND & INLAY



0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1020.dgn
21-JUL-2023 14:48

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

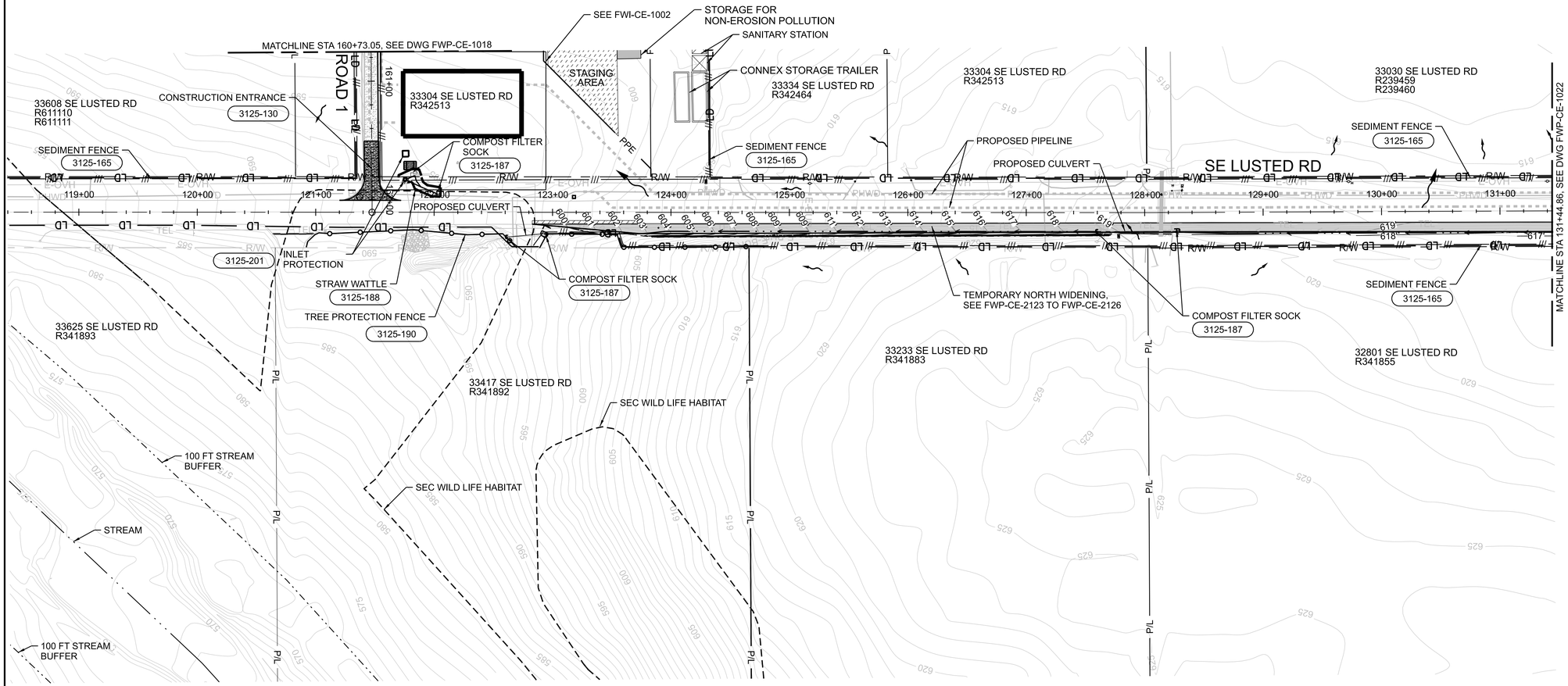
FINISHED WATER PIPELINE EROSION AND SED. CONTROL

UTILITY WORK PHASE 1
LUSTED RD SOUTH WIDENING

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1020

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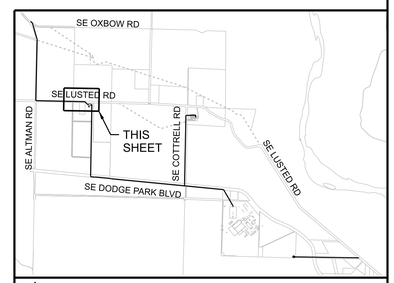
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LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- STRAW WATTLE
- COMPOST FILTER SOCK
- PROPOSED MAILBOX
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- PPE — PERMANENT PROPERTY EASEMENT
- DEMOLITION
- PROPOSED PIPELINE
- 500' — PROPOSED CONTOUR
- PROPOSED DRAINAGE DITCH
- PROPOSED STORM CULVERT
- CONSTRUCTION ENTRANCE
- PROPOSED ASPHALT
- PROPOSED GRAVEL
- GRIND & INLAY
- STAGING AREA
- SANITARY STATION
- CONNEX STORAGE TRAILERS

0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1021.dgn
14:43
21-JUL-2023

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M, ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

UTILITY WORK PHASE 2
LUSTED ROAD NORTH WIDENING

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1021

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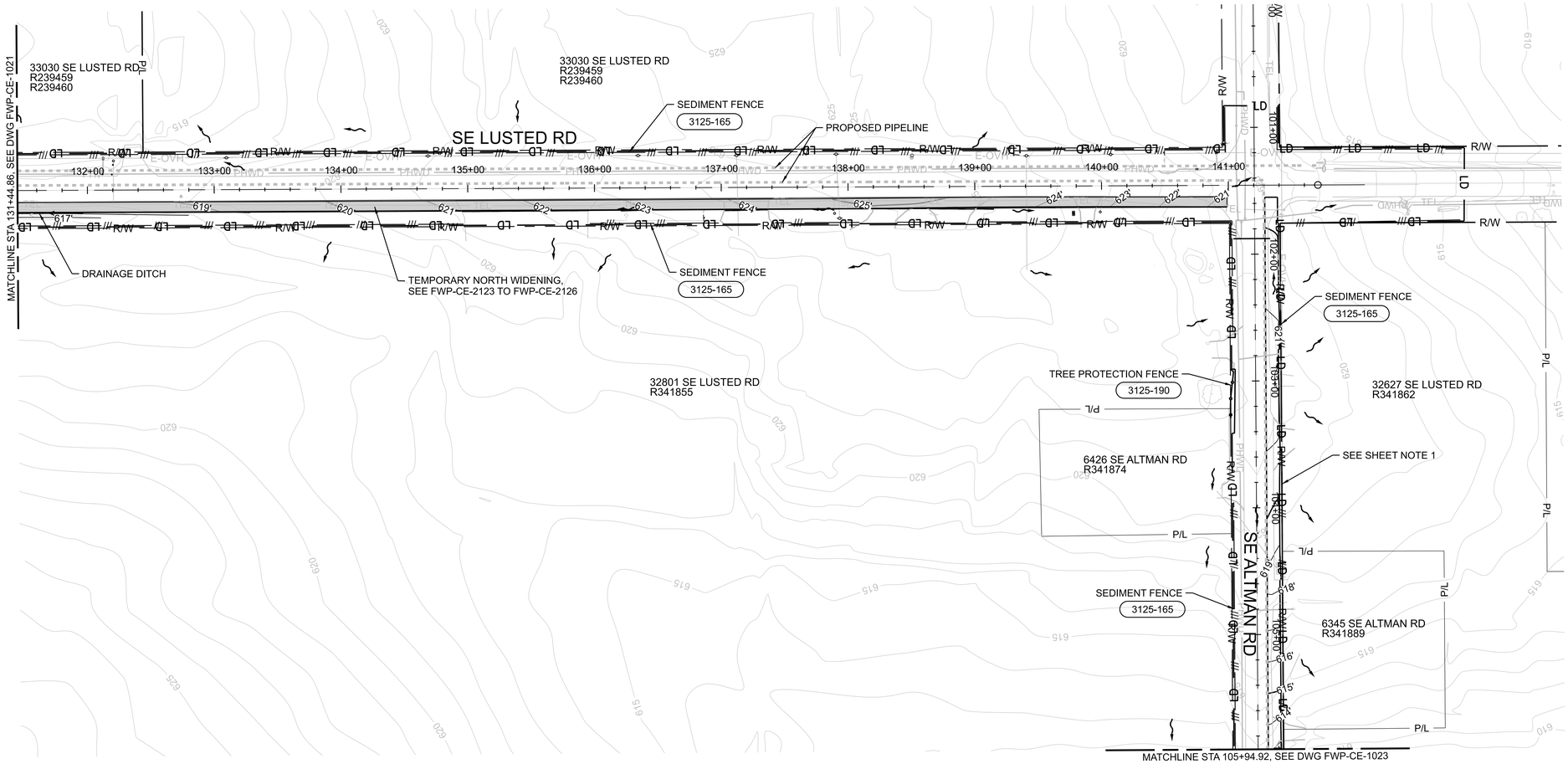
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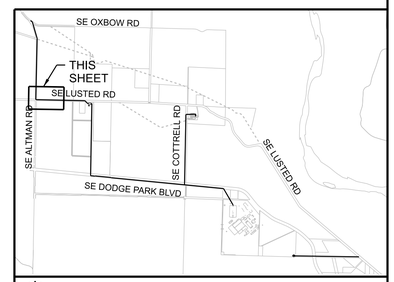
GENERAL SHEET NOTES

1. SEDIMENT FENCE AND LIMIT OF DISTURBANCE LINE ON R/W LINE.

LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- PROPOSED PIPELINE
- PROPOSED DRAINAGE DITCH
- 500' — PROPOSED CONTOUR
- PROPOSED ASPHALT
- PROPOSED MAILBOX





KEYPLAN

W02563_FWP-CE-1022.dgn

21-JUL-2023 14:49

No	Date	Description	Appd

Revision

Survey

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING

0 1"

If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 Date

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

UTILITY WORK PHASE 2
LUSTED RD NORTH WIDENING

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1022

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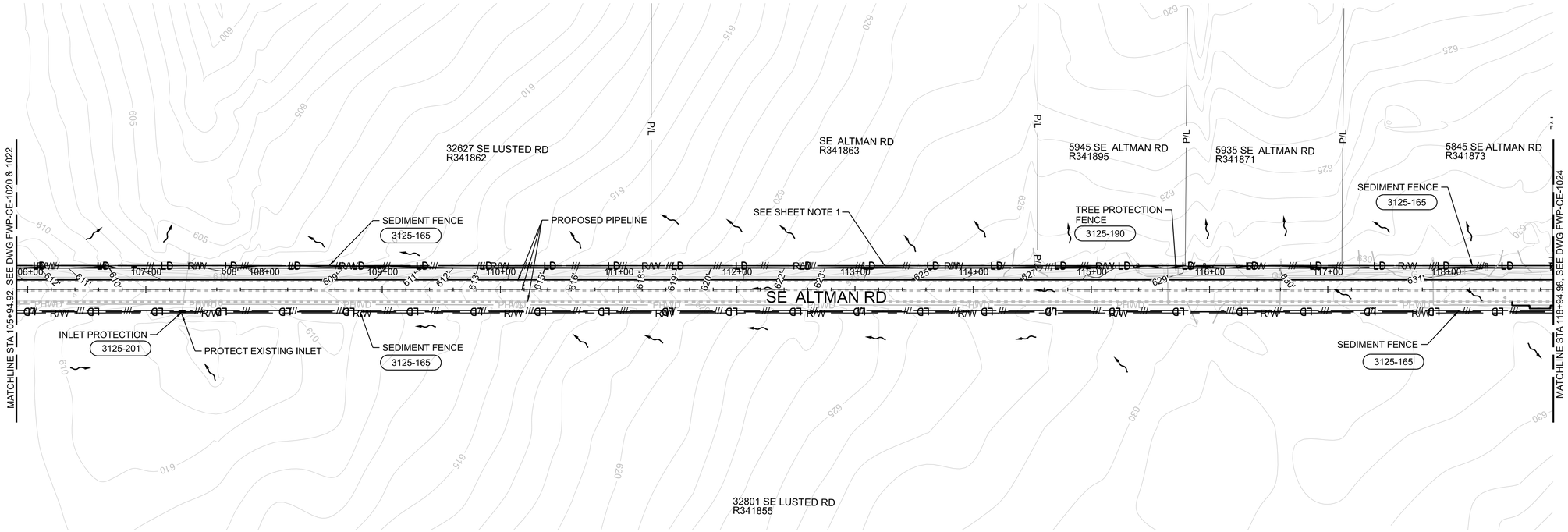
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GENERAL SHEET NOTES

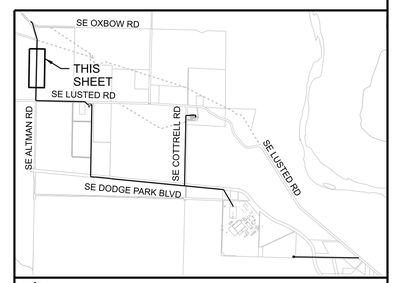
1. SEDIMENT FENCE AND LIMIT OF DISTURBANCE LINE ON R/W LINE.

LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- PROPOSED PIPELINE
- 500' — PROPOSED CONTOUR
- PROPOSED ASPHALT
- PROPOSED MAILBOX



0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1023.dgn
21-JUL-2023 14:49

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	DD	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

UTILITY WORK
ALTMAN ROAD

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1023

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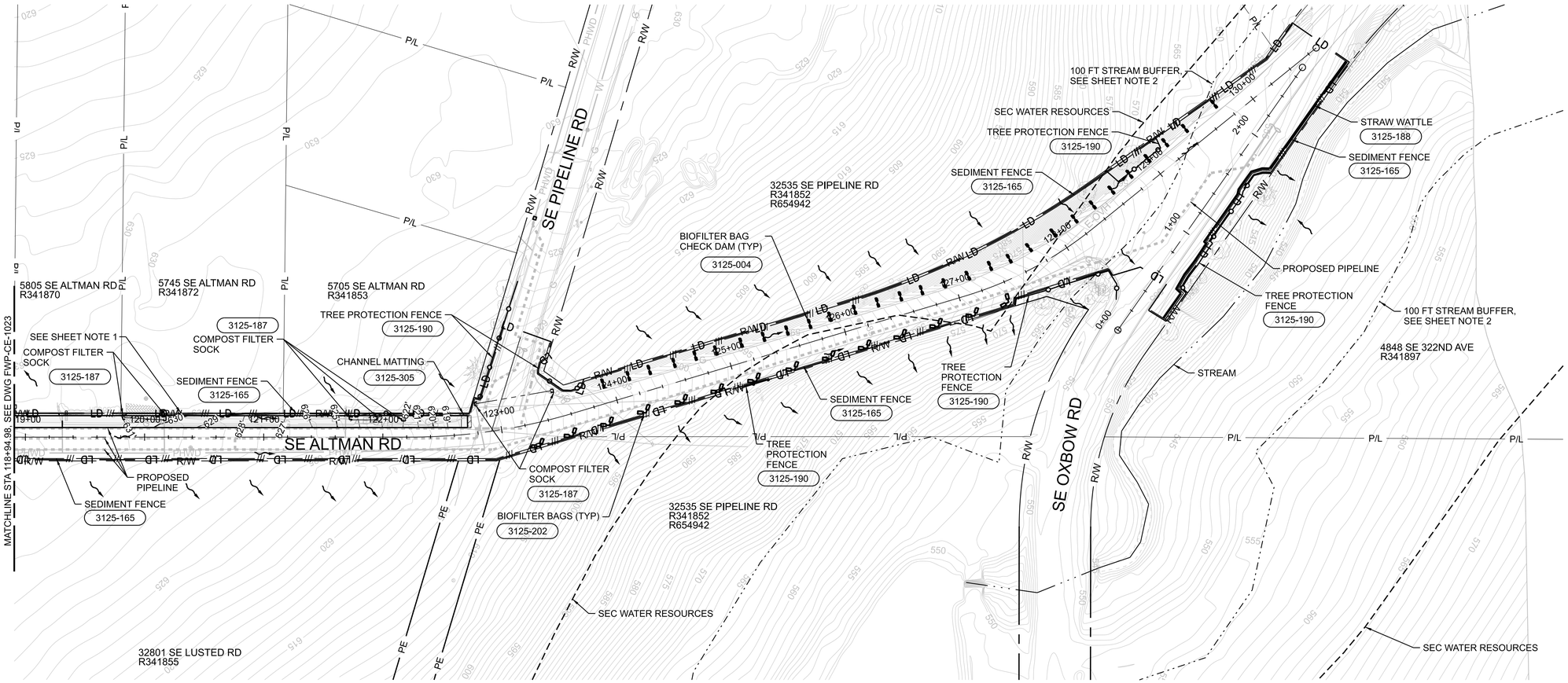
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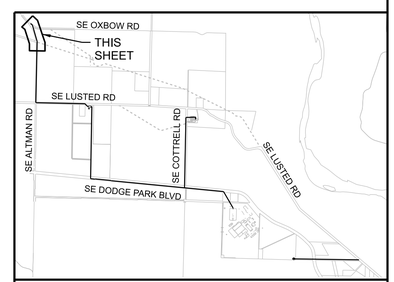
GENERAL SHEET NOTES

1. SEDIMENT FENCE AND LIMIT OF DISTURBANCE LINE ON R/W LINE.
2. FOR CONSTRUCTION WITHIN 100 FOOT BUFFER OF WET AREA, PROVIDE COMPOST FILTER SOCK 1 FOOT DOWNSLOPE OF PROPOSED SEDIMENT FENCE.
3. SEE RUSLE2 CALCULATIONS FOR PROPOSED BMP PERFORMANCE TO REDUCE SEDIMENT TO LESS THAN 1 TON/ACRE/YEAR.

LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- STRAW WATTLE
- COMPOST FILTER SOCK
- BIOFILTER BAG CHECK DAM
- PROPOSED ASPHALT
- PROPOSED PIPELINE
- PROPOSED STORM CULVERT
- 500' — PROPOSED CONTOUR
- PROPOSED MAILBOX
- BMP BIOFILTER BAG





KEYPLAN

0 50 100 150
Scale In Feet

W02563_FWP-CE-1024.dgn
21-JUL-2023 14:46

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	DD	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

UTILITY WORK
ALTMAN ROAD

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1024

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LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- PROPOSED PIPELINE

SEC WATER RESOURCES

7387 SE COTTRELL RD R342610

7345 SE COTTRELL RD R342605

7239 SE COTTRELL RD R342624

7235 SE COTTRELL RD R342625

7205 SE COTTRELL RD R342608 R342602

7205 WI/ SE COTTRELL RD

7035 S/ SE COTTRELL RD R342628

7125 SE COTTRELL RD R342569

7035 SE COTTRELL RD R632311

6945 SE COTTRELL RD R342571

6915 SE COTTRELL RD R342591

6849 SE COTTRELL RD R342590

TRENCHLESS PIPE

3125-190 TREE PROTECTION FENCE

TRENCHLESS PIPE

SEDIMENT FENCE 3125-165

PROPOSED PIPELINE

MATCHLINE STA 174+72.10, SEE DWG FWP-CE-1014

MATCHLINE STA 187+72.10, SEE DWG FWP-CE-1026

SE COTTRELL RD

LAUNCH PIT

SEDIMENT FENCE 3125-165

7404 SE COTTRELL RD R342595

7326 SE COTTRELL RD R342599

7238 SE COTTRELL RD R342594

7130 SE COTTRELL RD R342536

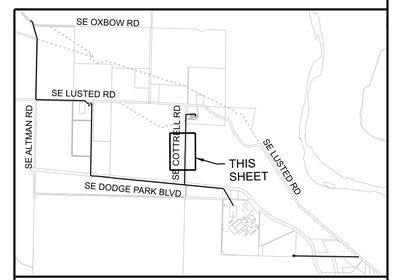
7044 SE COTTRELL RD R342562

7010 SE COTTRELL RD R342560

6930 SE COTTRELL RD R342582

6920 SE COTTRELL RD R342559

0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1025.dgn

21-JUL-2023 14:45

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

UTILITY WORK
COTTRELL ROAD

SAP Project No W02563
1/4 Section 3664 / 3764
Sheet No FWP-CE-1025

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LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- PROPOSED PIPELINE

6801 SE COTTRELL RD
R342621

6837 SE COTTRELL RD
R342572

6825 SE COTTRELL RD
R342621

6715 SE COTTRELL RD
R342533

34630 SE LUSTED RD

6840 SE COTTRELL RD
R342577

6704 SE COTTRELL RD

SE COTTRELL RD

SE LUSTED RD

MATCHLINE STA 187+72.10, SEE DWG FWP-CE-1025

TRENCHLESS PIPE

TREE PROTECTION FENCE 3125-190

HDD EXIT

SEDIMENT FENCE 3125-165

PROTECT CULVERT IN PLACE

SEC WILDLIFE HABITAT

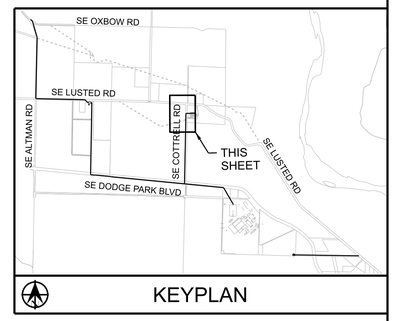
PROPOSED PIPELINE

RECEIVING SHAFT

LAUNCH PIT

188+00 189+00 190+00 191+00 192+00 193+00 194+00 195+00 196+00 197+00

0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1026.dgn
21-JUL-2023 14:48

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
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Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 Date

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

UTILITY WORK
COTTRELL ROAD

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1026

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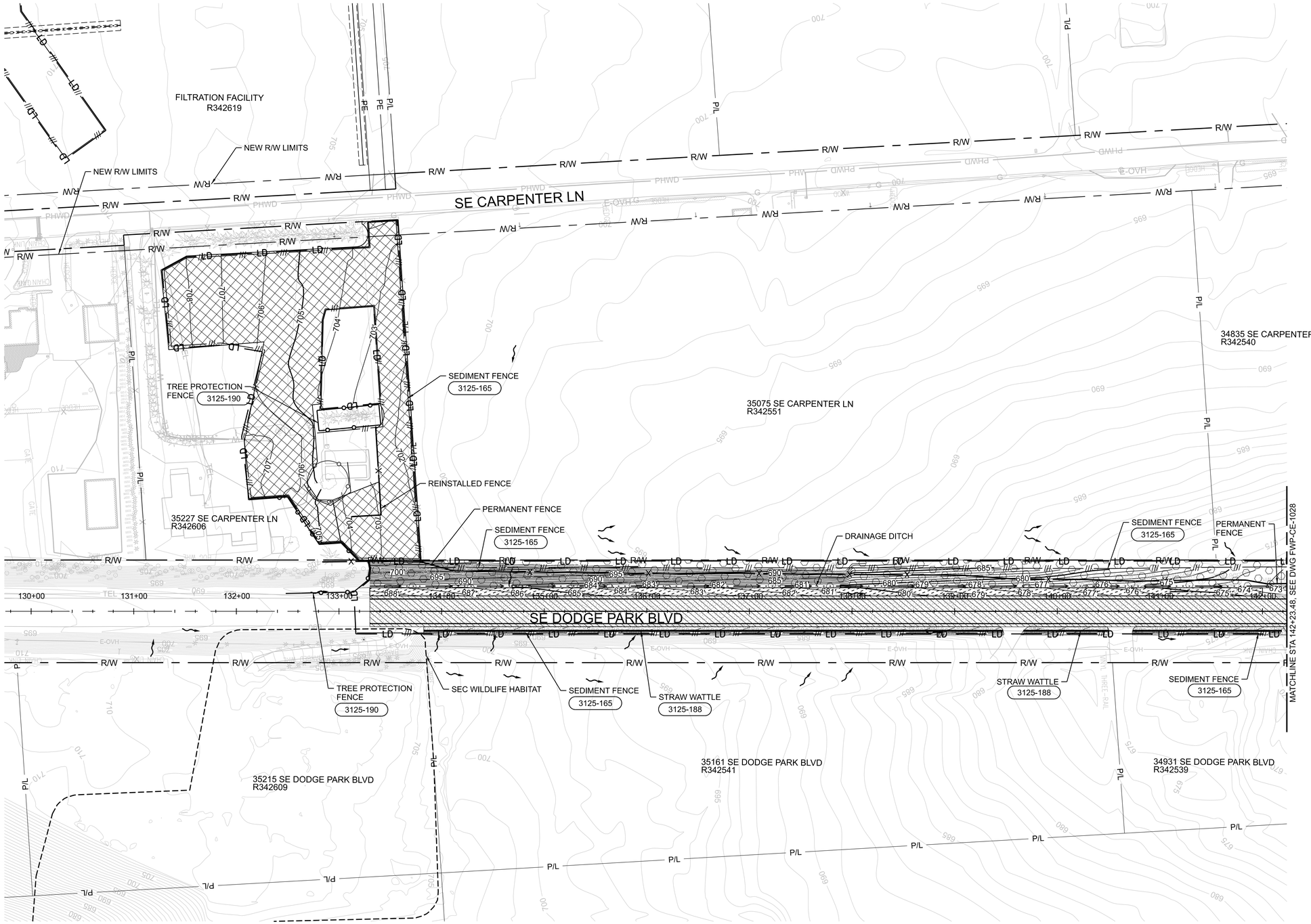
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FINAL STABILIZATION PHASE NOTES

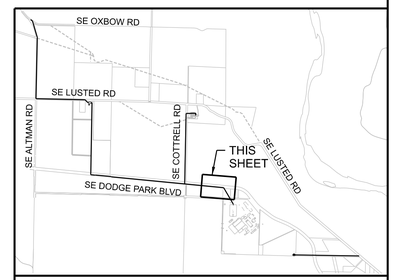
1. ALL PERIMETER SEDIMENT FENCING TO BE REMOVED UPON COMPLETION OF THIS PHASE.
2. SEE SEEDING MIX TABLES, SHEET FWP-CE-1000A.

LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- STRAW WATTLE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- PROPOSED DRAINAGE DITCH
- 500' — PROPOSED CONTOUR
- X — PROPOSED FENCE
- GRIND & INLAY
- STORM FILTER STRIP
- PROTECTED VEGETATED SHOULDER
- ROADSIDE SEEDING
- LAWN SEEDING



0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1027.dgn
5:45:53 PM
07/26/2023

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

FINAL STABILIZATION AND LANDSCAPE
DODGE PARK BLVD

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1027

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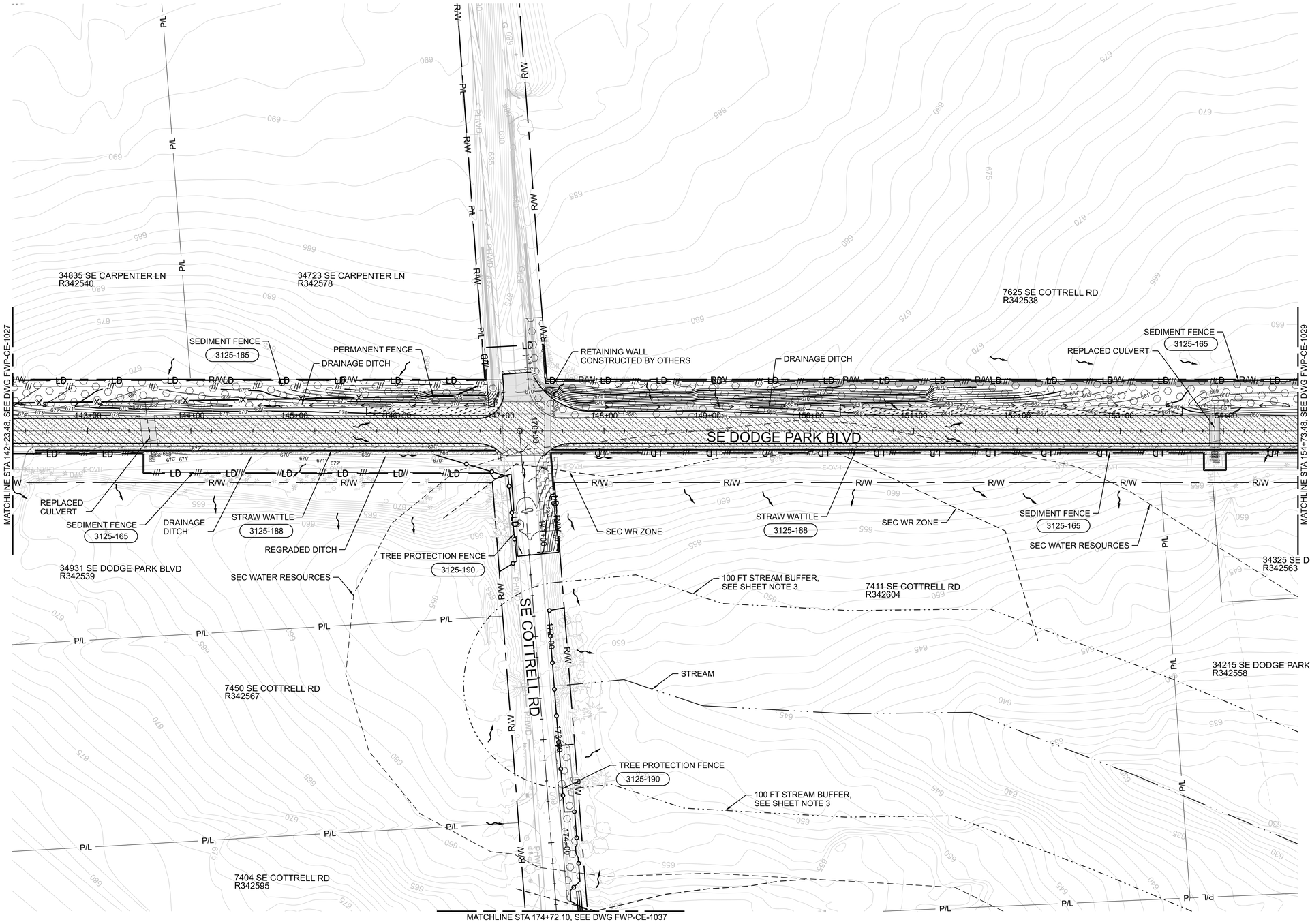
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FINAL STABILIZATION PHASE NOTES

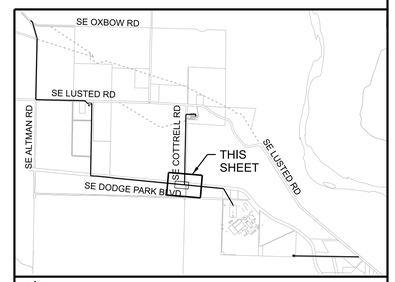
1. ALL PERIMETER SEDIMENT FENCING TO BE REMOVED UPON COMPLETION OF THIS PHASE.
2. SEE SEEDING MIX TABLES, SHEET FWP-CE-1000A.
3. FOR CONSTRUCTION WITHIN 100 FOOT BUFFER OF WET AREA, PROVIDE COMPOST FILTER SOCK 1 FOOT DOWNSLOPE OF PROPOSED SEDIMENT FENCE.
4. SEE RUSLE2 CALCULATIONS FOR PROPOSED BMP PERFORMANCE TO REDUCE SEDIMENT TO LESS THAN 1 TON/ACRE/YEAR.

LEGEND

- FLOW DIRECTION
- PROPOSED ASPHALT
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- STRAW WATTLE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- PROPOSED DRAINAGE DITCH
- PROPOSED STORM CULVERT
- 500' — PROPOSED CONTOUR
- X — PROPOSED FENCE
- PROPOSED RIPRAP
- GRIND & INLAY
- STORM FILTER STRIP
- PROTECTED VEGETATED SHOULDER
- ROADSIDE SEEDING
- SEC SEEDING



0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1028.dgn
21-JUL-2023 14:44

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

FINAL STABILIZATION AND LANDSCAPE
DODGE PARK BLVD

SAP Project No W02563
1/4 Section 3664 / 3764
Sheet No FWP-CE-1028

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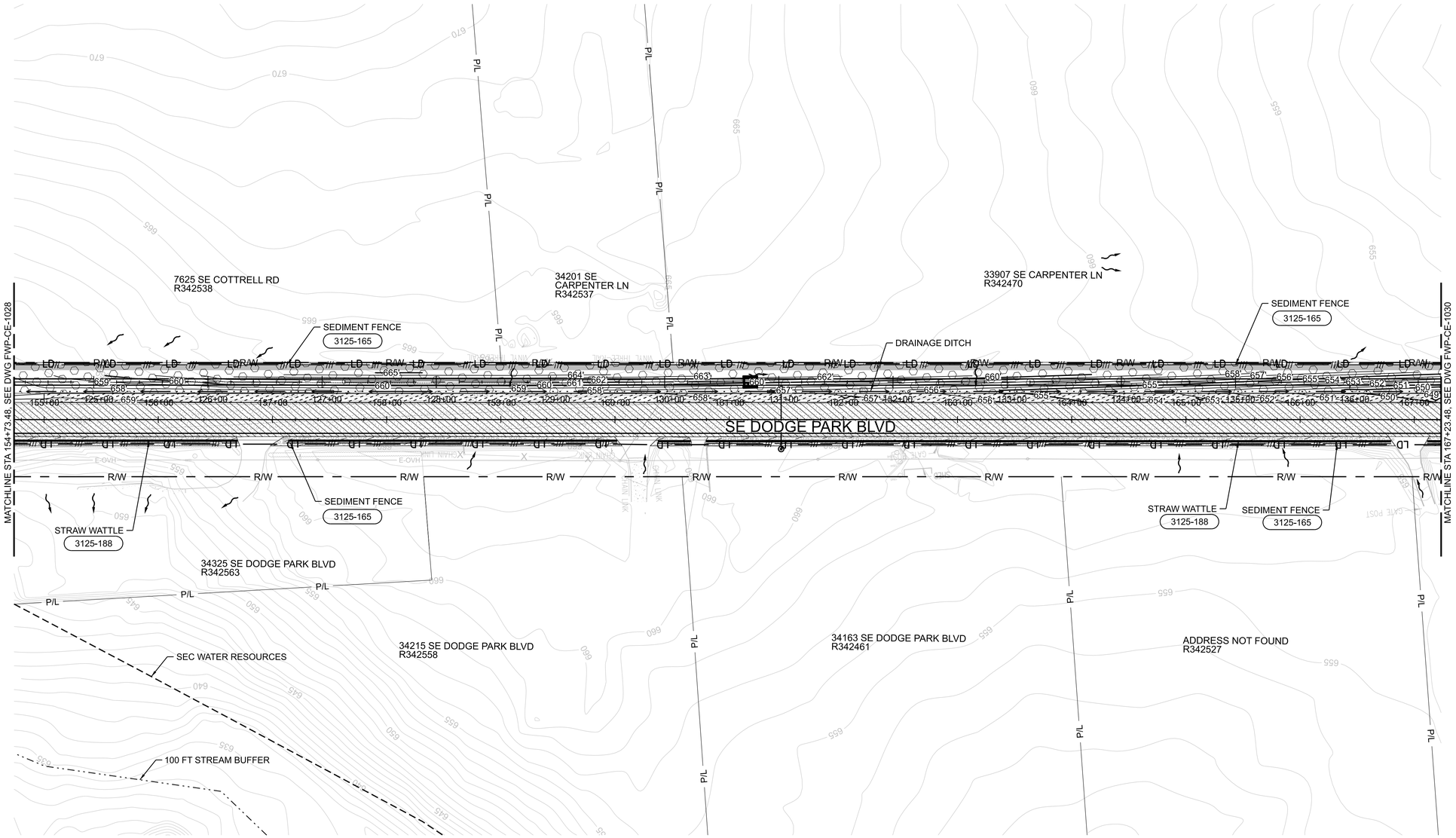
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FINAL STABILIZATION PHASE NOTES

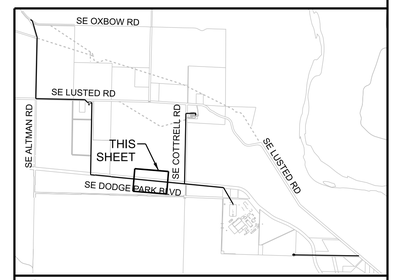
1. ALL PERIMETER SEDIMENT FENCING TO BE REMOVED UPON COMPLETION OF THIS PHASE.
2. SEE SEEDING MIX TABLES, SHEET FWP-CE-1000A.

LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- STRAW WATTLE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- PROPOSED DRAINAGE DITCH
- 500' — PROPOSED CONTOUR
- GRIND & INLAY
- STORM FILTER STRIP
- PROTECTED VEGETATED SHOULDER
- ROADSIDE SEEDING



0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1029.dgn
21-JUL-2023 14:51

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

FINAL STABILIZATION AND LANDSCAPE
DODGE PARK BLVD

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1029

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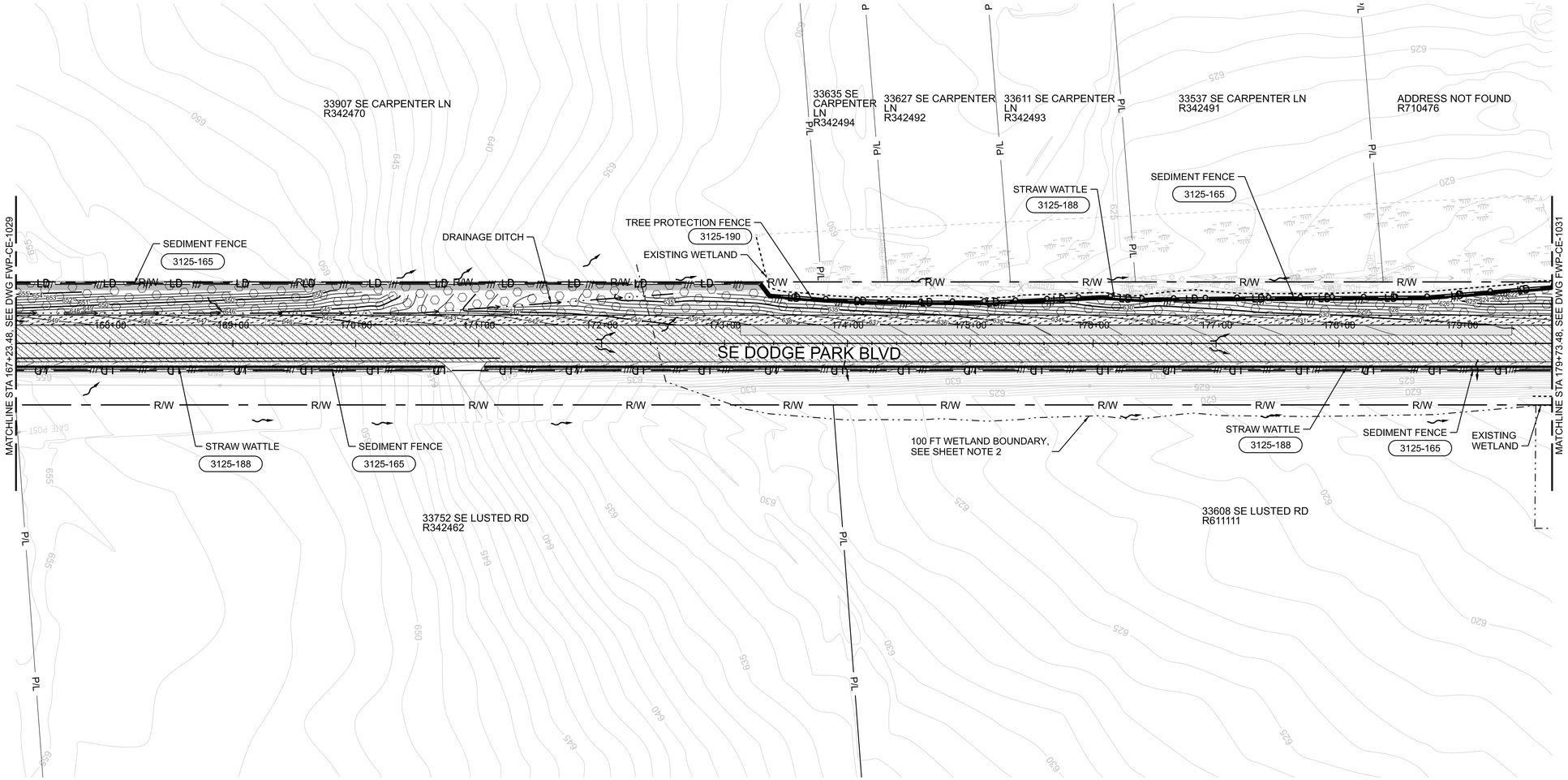
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FINAL STABILIZATION PHASE NOTES

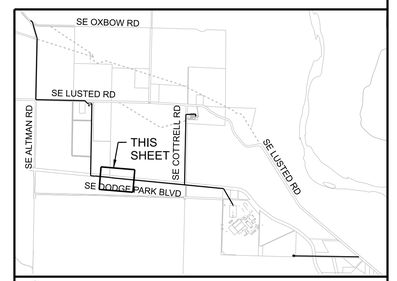
1. ALL PERIMETER SEDIMENT FENCING TO BE REMOVED UPON COMPLETION OF THIS PHASE.
2. FOR CONSTRUCTION WITHIN 100 FOOT BUFFER OF WET AREA, PROVIDE COMPOST FILTER SOCK 1 FOOT DOWNSLOPE OF PROPOSED SEDIMENT FENCE.
3. SEE SEEDING MIX TABLES, SHEET FWP-CE-1000A.

LEGEND

- FLOW DIRECTION
- PROPOSED ASPHALT
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- STRAW WATTLE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- PROPOSED DRAINAGE DITCH
- 500' — PROPOSED CONTOUR
- GRIND & INLAY
- STORM FILTER STRIP
- PROTECTED VEGETATED SHOULDER
- ROADSIDE SEEDING



0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1030.dgn
14:50
21-JUL-2023

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

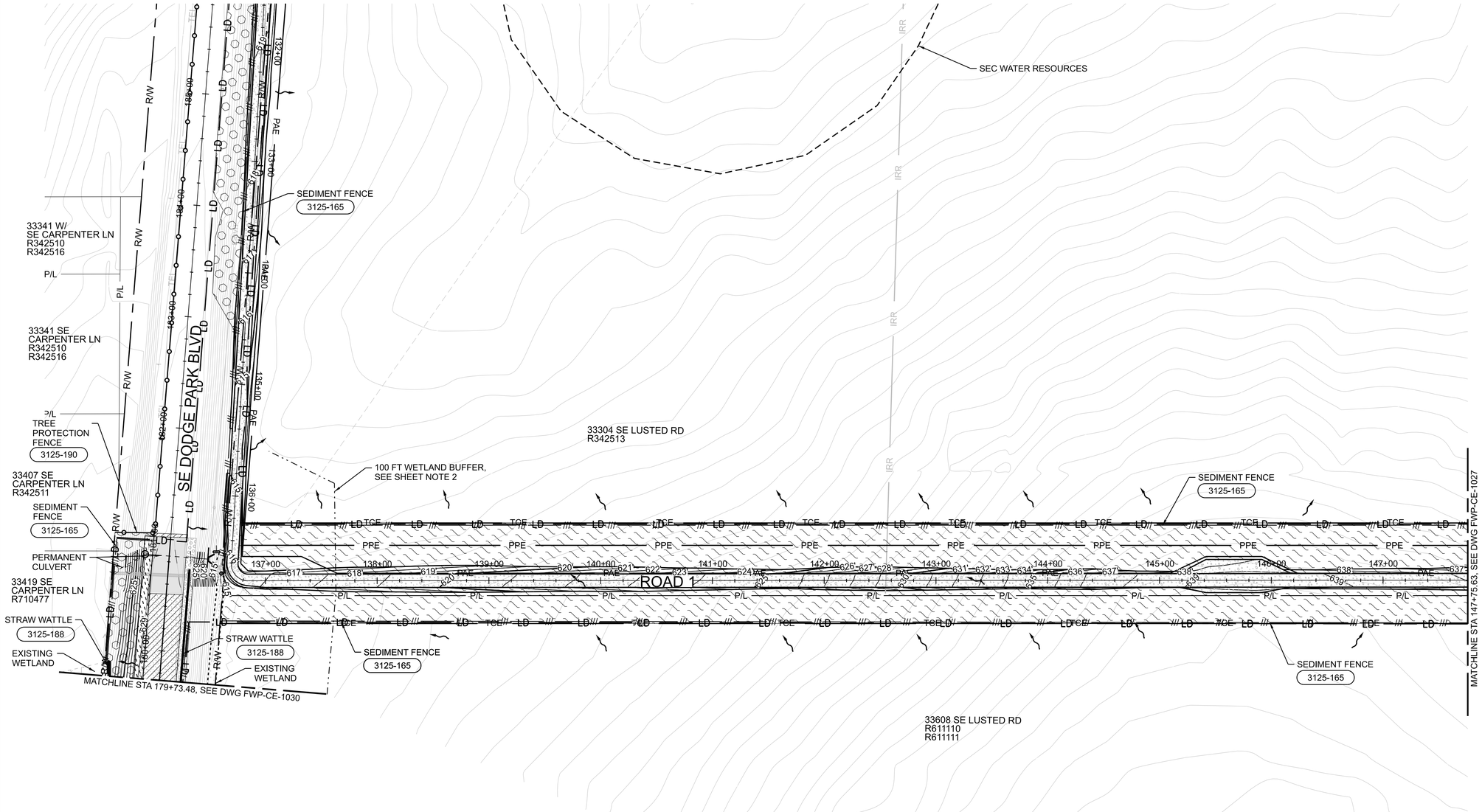
FINISHED WATER PIPELINE EROSION AND SED. CONTROL

FINAL STABILIZATION AND LANDSCAPE
DODGE PARK BLVD

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1030

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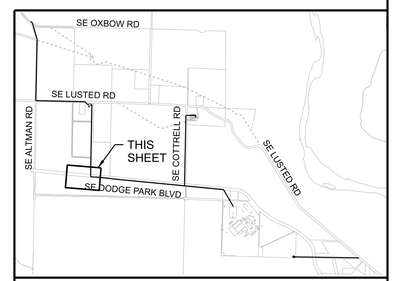
FINAL STABILIZATION PHASE NOTES

1. ALL PERIMETER SEDIMENT FENCING TO BE REMOVED UPON COMPLETION OF THIS PHASE.
2. FOR CONSTRUCTION WITHIN 100 FOOT BUFFER OF WET AREA, PROVIDE COMPOST FILTER SOCK 1 FOOT DOWNSLOPE OF PROPOSED SEDIMENT FENCE.
3. SEE SEEDING MIX TABLES, SHEET FWP-CE-1000A.
4. AGRICULTURAL SOIL TREATMENT AREA TOPSOIL TO BE RETURNED TO ORIGINAL PARCEL AND TO ORIGINAL GRADE. AMEND AS NECESSARY TO RESTORE PRE-CONSTRUCTION NUTRIENT LEVELS AND COMPACTION LEVELS AS DIRECTED BY THE AGRICULTURAL SPECIALIST.

LEGEND

- FLOW DIRECTION
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- PPE — PERMANENT PROPERTY EASEMENT
- PAE — PUBLIC ACCESS EASEMENT
- PROPOSED ASPHALT
- PROPOSED GRAVEL
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- STRAW WATTLE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- PROPOSED DRAINAGE DITCH
- PROPOSED STORM CULVERT
- 500' — PROPOSED CONTOUR
- GRIND & INLAY
- PROPOSED RIPRAP
- STORM FILTER STRIP
- PROTECTED VEGETATED SHOULDER
- ROADSIDE SEEDING
- AGRICULTURAL SOIL TREATMENT

0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1031.dgn
21-JUL-2023 14:43

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

FINAL STABILIZATION AND LANDSCAPE
ROAD 1

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1031

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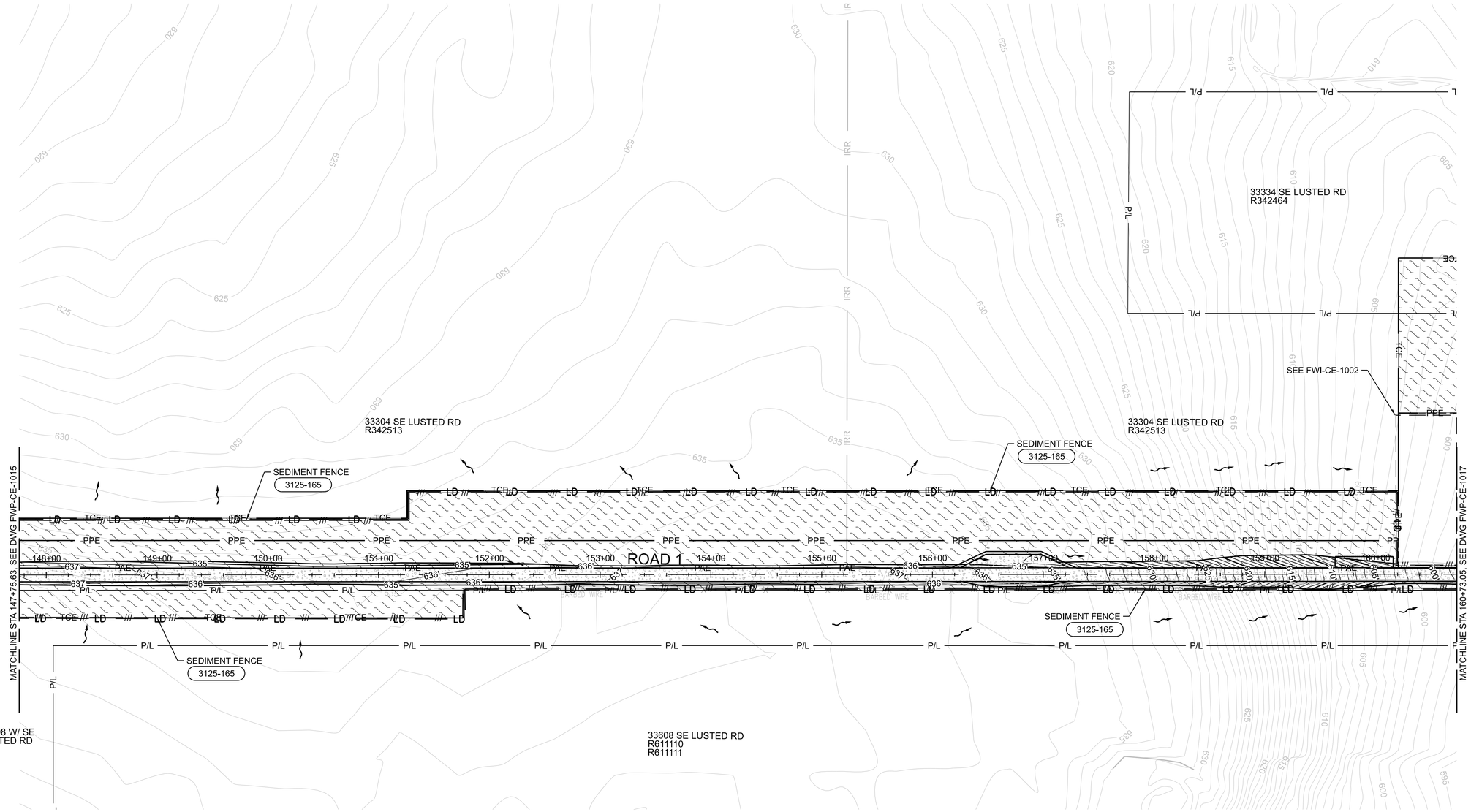
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FINAL STABILIZATION PHASE NOTES

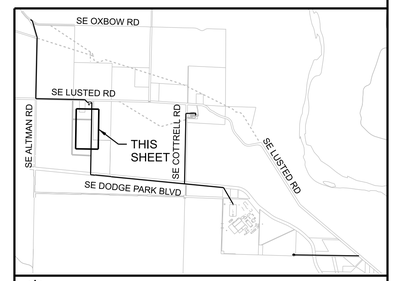
1. ALL PERIMETER SEDIMENT FENCING TO BE REMOVED UPON COMPLETION OF THIS PHASE.
2. SEE SEEDING MIX TABLES, SHEET FWP-CE-1000A.
3. AGRICULTURAL SOIL TREATMENT AREA TOPSOIL TO BE RETURNED TO ORIGINAL PARCEL AND TO ORIGINAL GRADE. AMEND AS NECESSARY TO RESTORE PRE-CONSTRUCTION NUTRIENT LEVELS AND COMPACTION LEVELS AS DIRECTED BY THE AGRICULTURAL SPECIALIST.

LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- PPE — PERMANENT PROPERTY EASEMENT
- PAE — PUBLIC ACCESS EASEMENT
- PROPOSED GRAVEL
- 500' — PROPOSED CONTOUR
- AGRICULTURAL SOIL TREATMENT



0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1032.dgn
21-JUL-2023 14:48

No	Date	Description	Appd
Revision			
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

FINAL STABILIZATION AND LANDSCAPE
ROAD 1

SAP Project No: W02563
1/4 Section: 3664 / 3764
Sheet No: FWP-CE-1032

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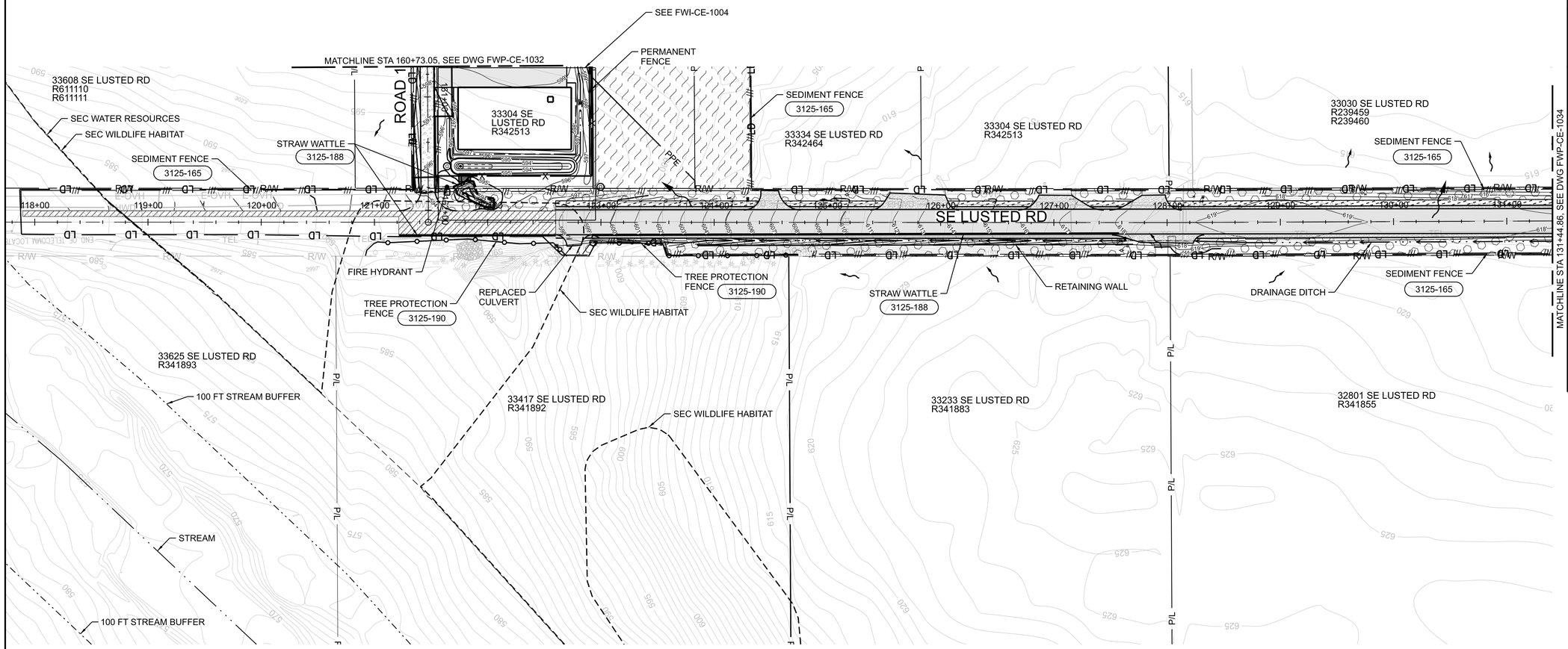
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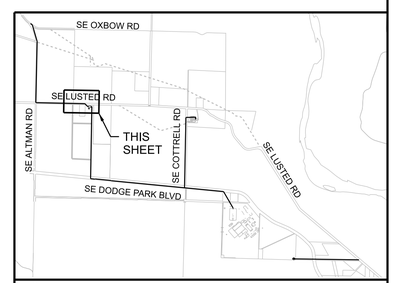
FINAL STABILIZATION PHASE NOTES

1. ALL PERIMETER SEDIMENT FENCING TO BE REMOVED UPON COMPLETION OF THIS PHASE.
2. SEE SEEDING MIX TABLES, SHEET FWP-CE-1000A.
3. AGRICULTURAL SOIL TREATMENT AREA TOPSOIL TO BE RETURNED TO ORIGINAL PARCEL AND TO ORIGINAL GRADE. AMEND AS NECESSARY TO RESTORE PRE-CONSTRUCTION NUTRIENT LEVELS AND COMPACTION LEVELS AS DIRECTED BY THE AGRICULTURAL SPECIALIST.

LEGEND

- FLOW DIRECTION
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- PPE — PERMANENT PROPERTY EASEMENT
- PE — PERMANENT EASEMENT
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- STRAW WATTLE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- 500' — PROPOSED CONTOUR
- PROPOSED DRAINAGE DITCH
- PROPOSED CONVEYANCE SWALE
- PROPOSED STORM CULVERT
- X — PROPOSED FENCE
- PROPOSED MAILBOX
- PROPOSED ASPHALT
- PROPOSED GRAVEL
- PROPOSED RIPRAP
- GRIND & INLAY
- STORM FILTER STRIP
- ROADSIDE SEEDING
- AGRICULTURAL SOIL TREATMENT
- PROPOSED WATER METER
- PROPOSED WATER VALVE
- PROPOSED STORM MANHOLE
- PROPOSED DRAINAGE STRUCTURE
- PROPOSED FIRE HYDRANT





KEYPLAN

W02563_FWP-CE-1033.dgn
21-JUL-2023 14:45

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

FINAL STABILIZATION AND LANDSCAPE
LUSTED ROAD

SAP Project No W02563
1/4 Section 3664 / 3764
Sheet No FWP-CE-1033

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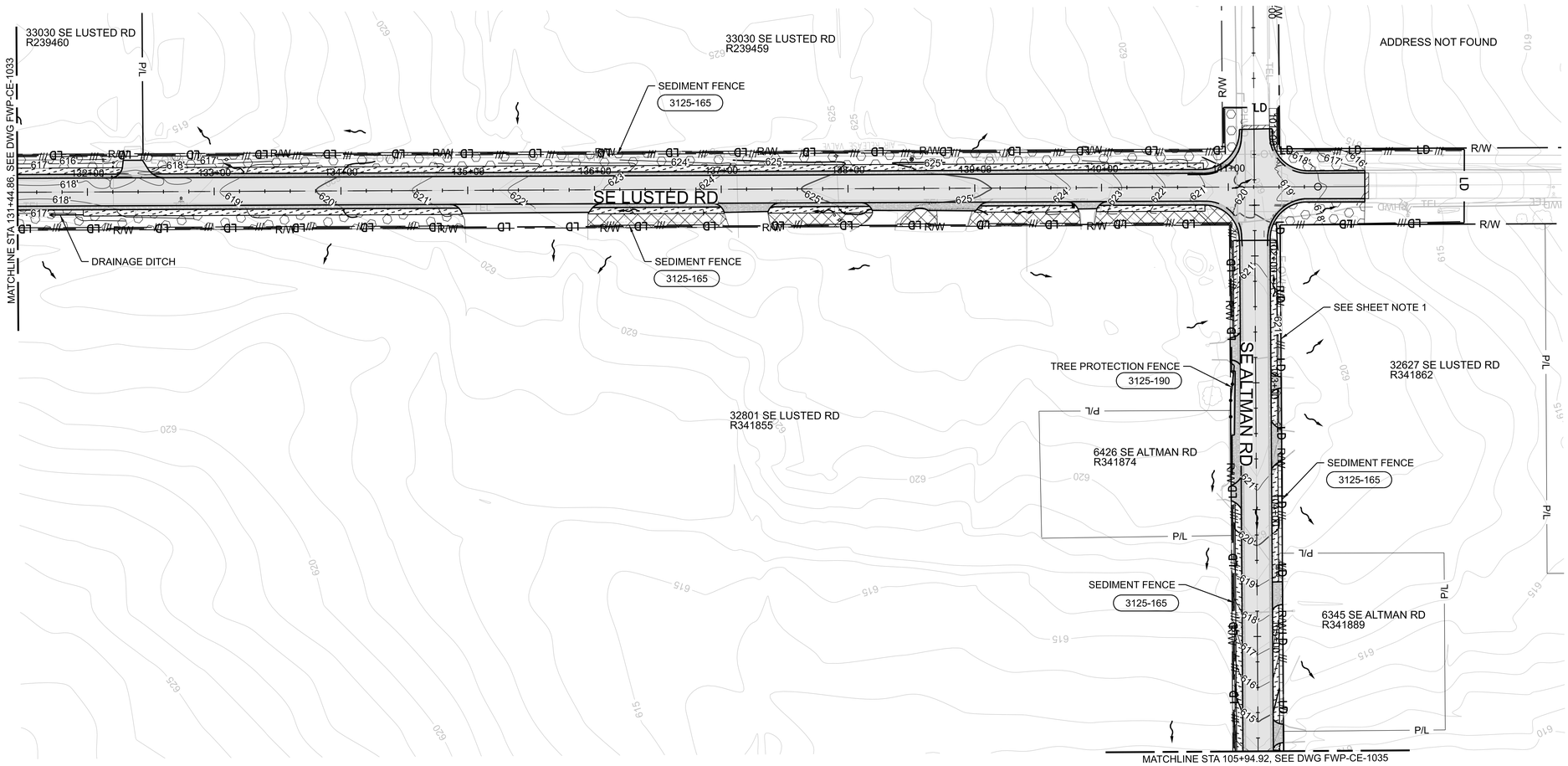
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FINAL STABILIZATION PHASE NOTES

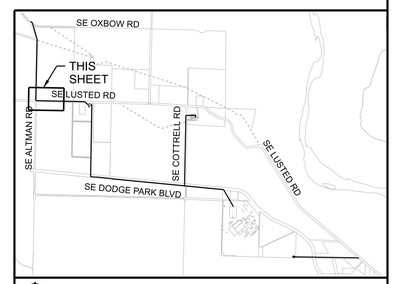
1. SEDIMENT FENCE AND LIMIT OF DISTURBANCE LINE ON R/W LINE.
2. ALL PERIMETER SEDIMENT FENCING TO BE REMOVED UPON COMPLETION OF THIS PHASE.
3. SEE SEEDING MIX TABLES, SHEET FWP-CE-1000A.

LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- 500' — PROPOSED CONTOUR
- PROPOSED DRAINAGE DITCH
- PROPOSED ASPHALT
- PROPOSED GRAVEL
- STORM FILTER STRIP
- ROADSIDE SEEDING
- LAWN SEEDING



0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1034.dgn
21-JUL-2023 14:46

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

FINAL STABILIZATION AND LANDSCAPE
LUSTED ROAD

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1034

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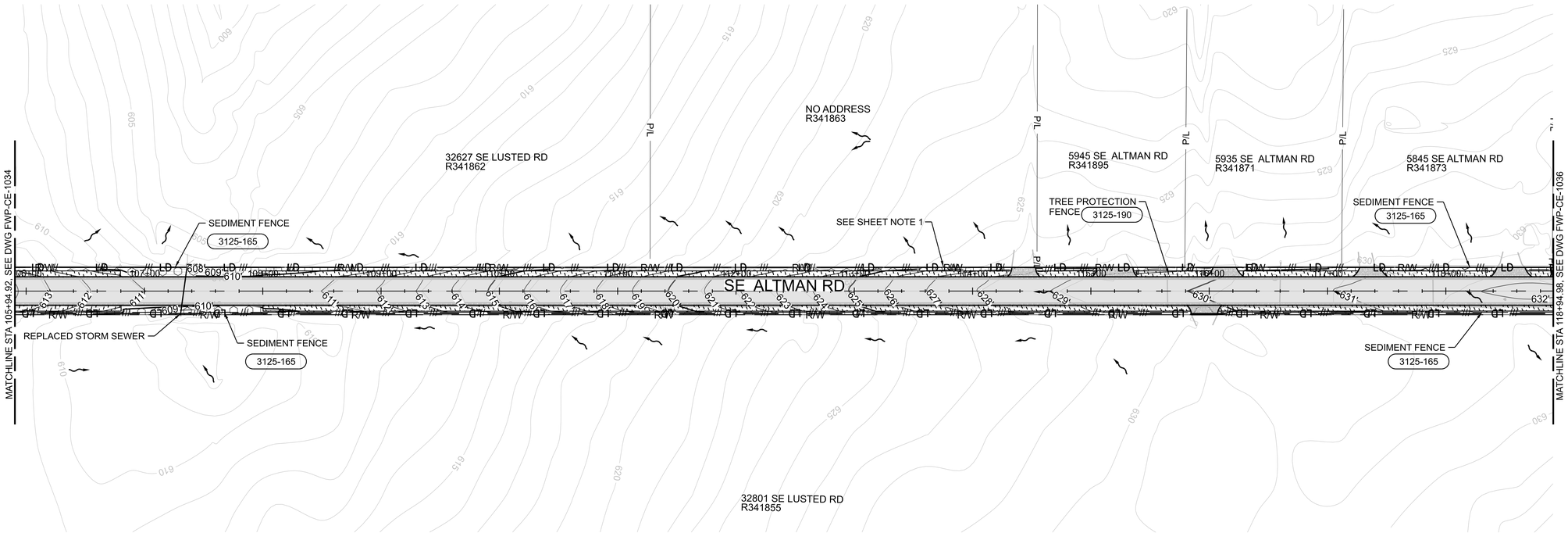
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FINAL STABILIZATION PHASE NOTES

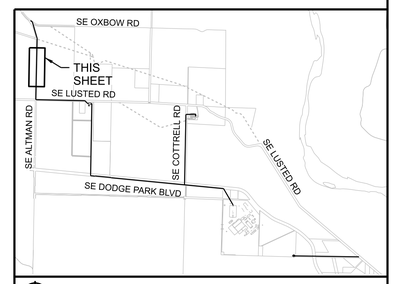
1. SEDIMENT FENCE AND LIMIT OF DISTURBANCE LINE ON R/W LINE.
2. ALL PERIMETER SEDIMENT FENCING TO BE REMOVED UPON COMPLETION OF THIS PHASE.
3. SEE SEEDING MIX TABLES, SHEET FWP-CE-1000A.

LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- PROPOSED MAILBOX
- 500' — PROPOSED CONTOUR
- PROPOSED ASPHALT
- PROPOSED GRAVEL
- STORM FILTER STRIP
- ROADSIDE SEEDING



0 50 100 150
Scale In Feet



KEYPLAN

CONFIDENTIAL

W02563_FWP-CE-1035.dgn
21-JUL-2023 14:44

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	DD	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M, ACKERMAN, PRINCIPAL ENGINEER, PE #19424 Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

FINAL STABILIZATION AND LANDSCAPE
ALTMAN ROAD

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1035

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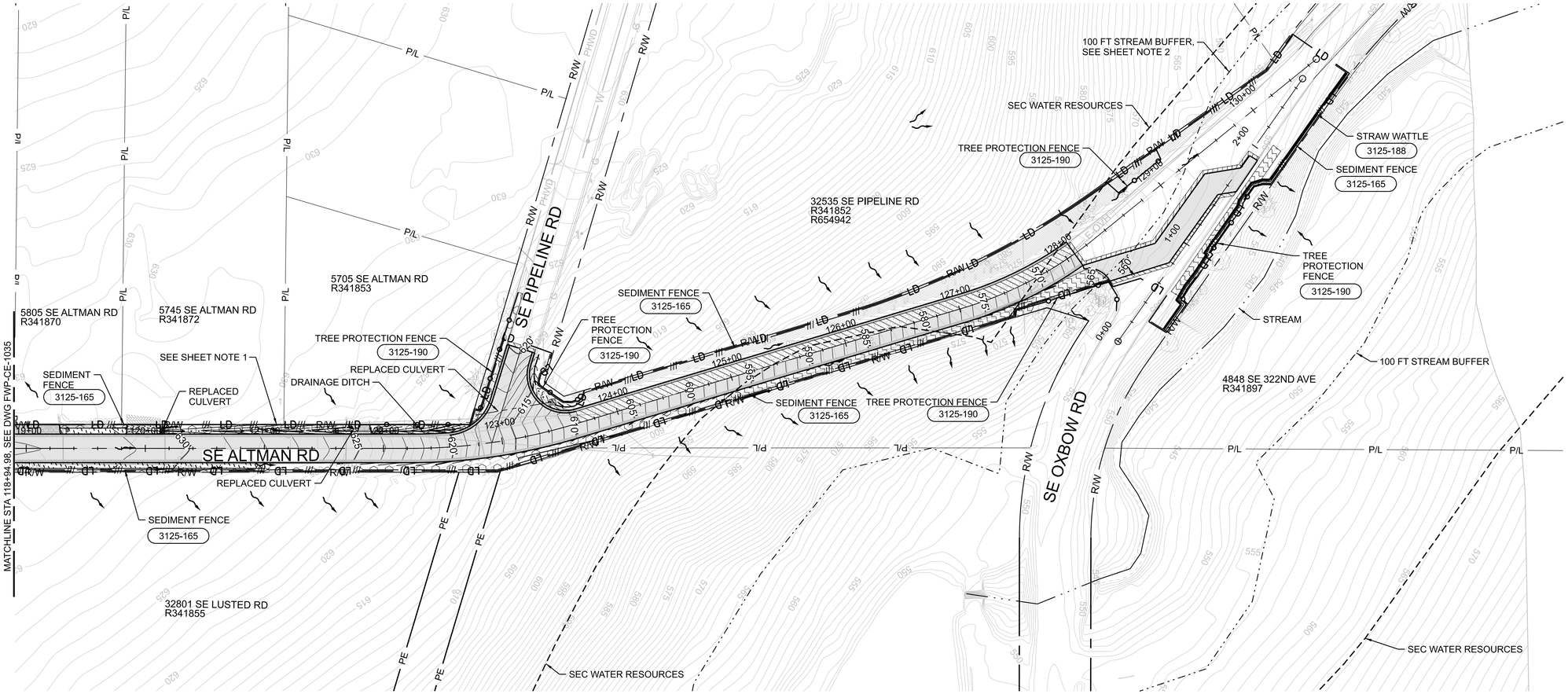
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FINAL STABILIZATION PHASE NOTES

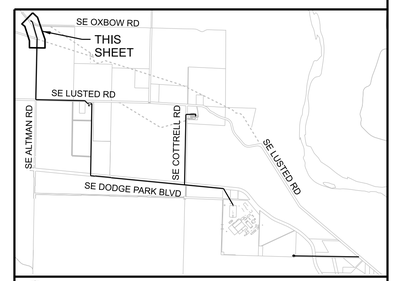
1. SEDIMENT FENCE AND LIMIT OF DISTURBANCE LINE ON R/W LINE.
2. FOR CONSTRUCTION WITHIN 100 FOOT BUFFER OF WET AREA, PROVIDE COMPOST FILTER SOCK 1 FOOT DOWNSLOPE OF PROPOSED SEDIMENT FENCE.
3. ALL PERIMETER SEDIMENT FENCING TO BE REMOVED UPON COMPLETION OF THIS PHASE.
4. SEE SEEDING MIX TABLES, SHEET FWP-CE-1000A.

LEGEND

- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- PROPOSED MAILBOX
- 500' — PROPOSED CONTOUR
- PROPOSED DRAINAGE DITCH
- PROPOSED STORM CULVERT
- PROPOSED ASPHALT
- PROPOSED GRAVEL
- PROPOSED RIPRAP
- GRIND & INLAY
- STORM FILTER STRIP
- ROADSIDE SEEDING
- SEC SEEDING



0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1036.dgn
21-JUL-2023 14:49

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	DD	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

FINAL STABILIZATION AND LANDSCAPE
ALTMAN ROAD

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1036

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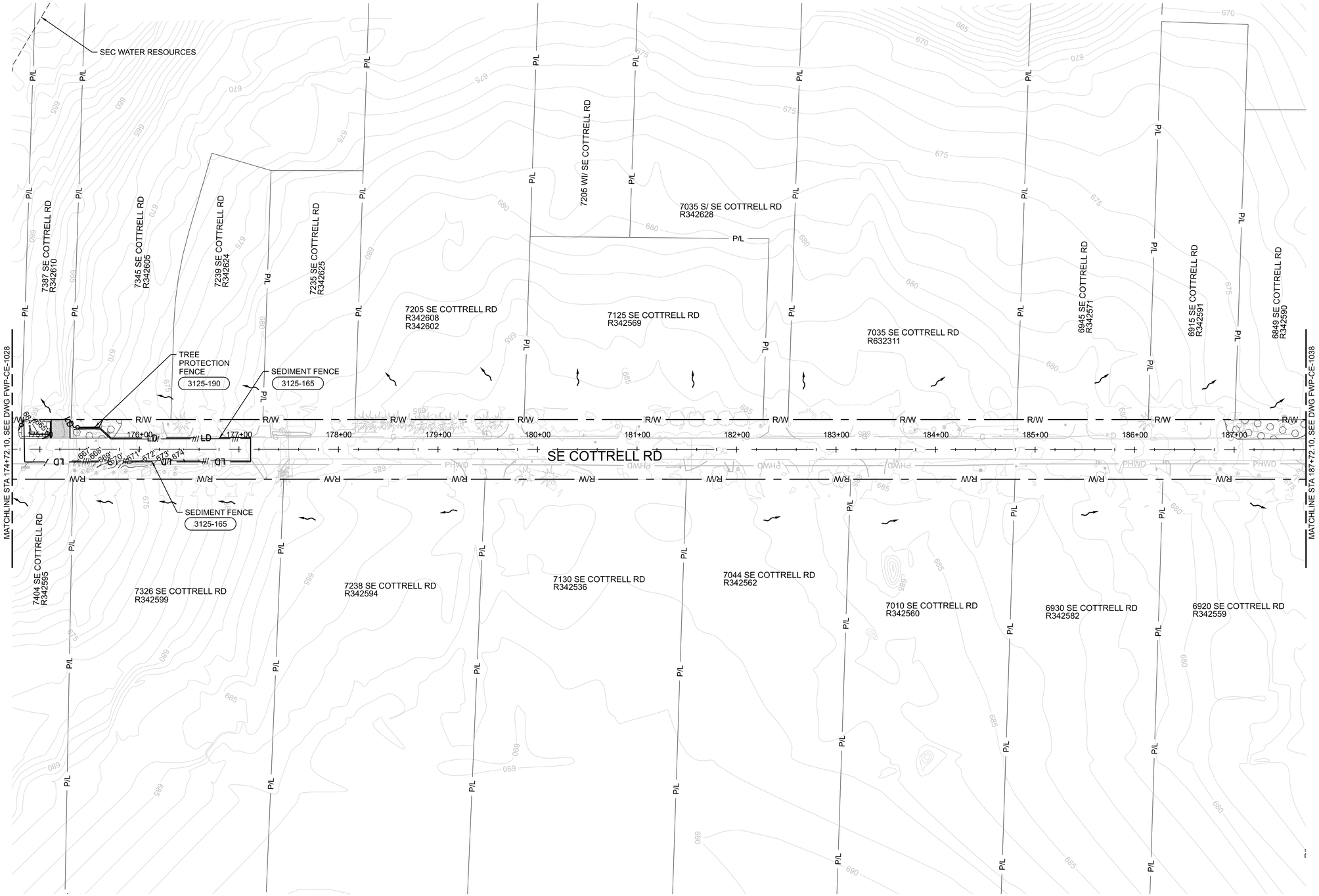
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FINAL STABILIZATION PHASE NOTES

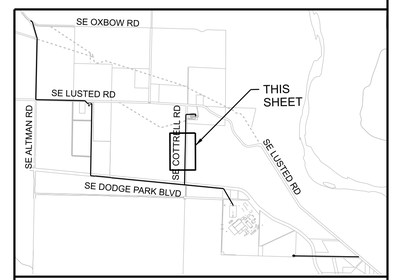
1. ALL PERIMETER SEDIMENT FENCING TO BE REMOVED UPON COMPLETION OF THIS PHASE.
2. SEE SEEDING MIX TABLES, SHEET FWP-CE-1000A.

LEGEND

- FLOW DIRECTION
- LD — LIMIT OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- PROPOSED GRAVEL
- ROADSIDE SEEDING



0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1037.dgn
21-JUL-2023 14:47

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER PIPELINE EROSION AND SED. CONTROL

FINAL STABILIZATION AND LANDSCAPE
COTTRELL ROAD

SAP Project No W02563
1/4 Section 3664 / 3764
Sheet No FWP-CE-1037

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FINAL STABILIZATION PHASE NOTES

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2. SEE SEEDING MIX TABLES, SHEET FWP-CE-1000A.

LEGEND

- FLOW DIRECTION
- LD — LIMIT OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- PROPOSED STORM CULVERT
- 500' — PROPOSED CONTOUR
- XXXX-XXX — STANDARD DETAIL CALLOUT
- PROPOSED ASPHALT
- PROPOSED RIPRAP
- GRIND & INLAY
- STORM FILTER STRIP
- ROADSIDE SEEDING
- SEC SEEDING

6801 SE COTTRELL RD
R342621

6825 SE COTTRELL RD
R342621

6849 SE COTTRELL RD
R342590

6837 SE COTTRELL RD
R342572

6715 SE COTTRELL RD
R342533

34630 SE LUSTED RD
R342534

6840 SE COTTRELL RD
R342577

6704 SE COTTRELL RD
R342553

MATCHLINE STA 187+72.10, SEE DWG FWP-CE-1037

TREE PROTECTION FENCE 3125-190

SEDIMENT FENCE 3125-165

SE COTTRELL RD

SE LUSTED RD

REPLACED CULVERT

SEC WILDLIFE HABITAT

TREE PROTECTION FENCE 3125-190

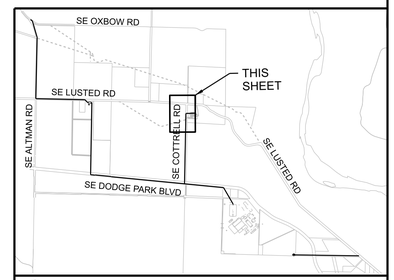
SEDIMENT FENCE 3125-165

SEC WILDLIFE HABITAT

TREE PROTECTION FENCE 3125-190

SEDIMENT FENCE 3125-165

0 50 100 150
Scale In Feet



KEYPLAN

W02563_FWP-CE-1038.dgn
21-JUL-2023 14:44

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

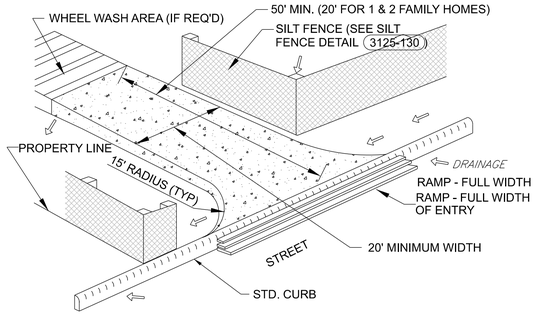
FINISHED WATER PIPELINE EROSION AND SED. CONTROL

FINAL STABILIZATION AND LANDSCAPE
COTTRELL ROAD

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	FWP-CE-1038

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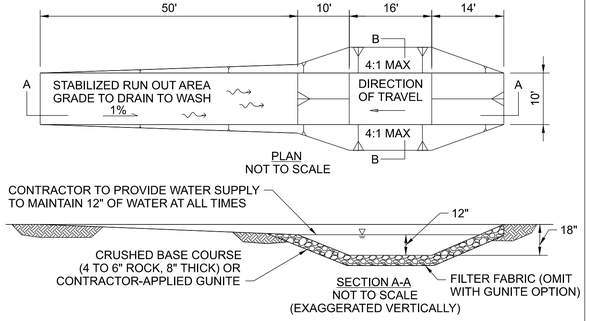
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GRAVEL CONSTRUCTION ENTRANCE

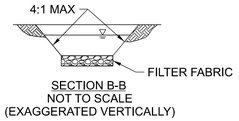
NTS

3125-130



NOTE:
1. CONTRACTOR TO REMOVE ACCUMULATED SEDIMENT FROM WHEEL WASH; MAY BE PIPED TO AN APPROVED SEDIMENT TRAP.

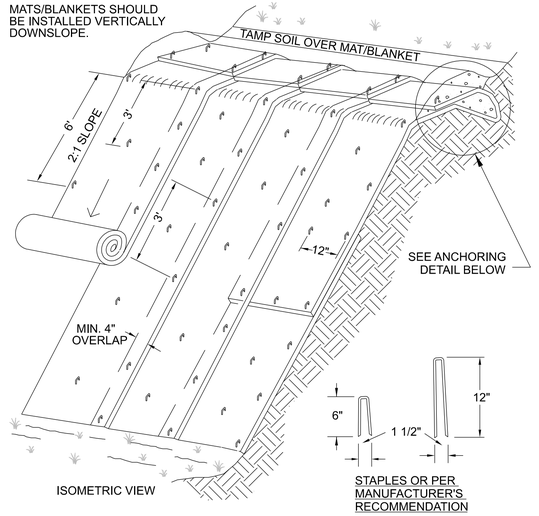
REFERENCE:
USE GEOTEXTILE FABRIC WITH AGGREGATE FOR A TEMPORARY TIRE WASH



WHEEL WASH

NTS

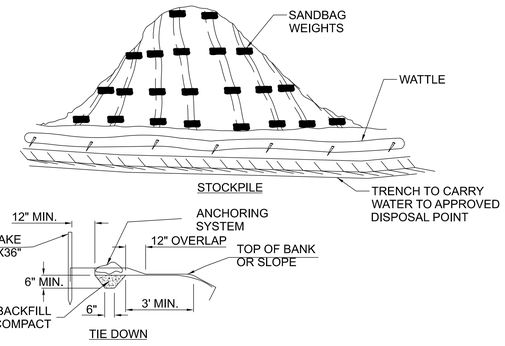
3125-135



SLOPE STABILIZATION

NTS

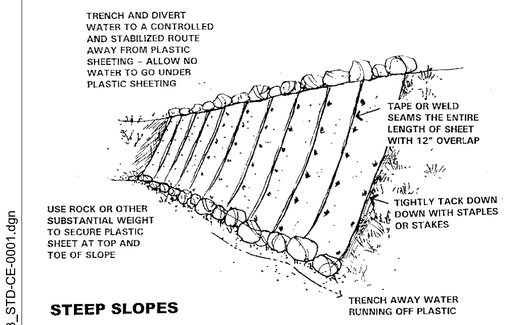
3125-152



STOCKPILE

NTS

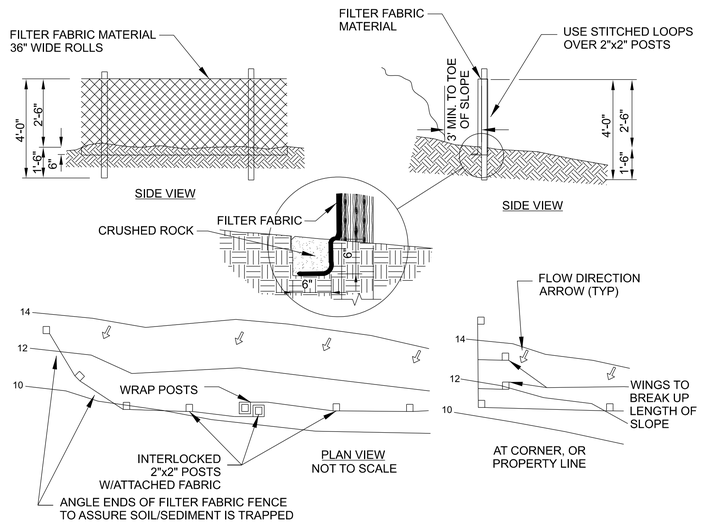
3125-161



TEMPORARY SLOPE PROTECTION

NTS

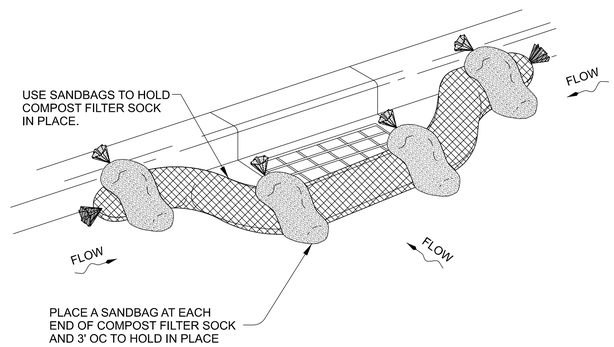
3125-153



TEMPORARY SEDIMENT FENCE

NTS

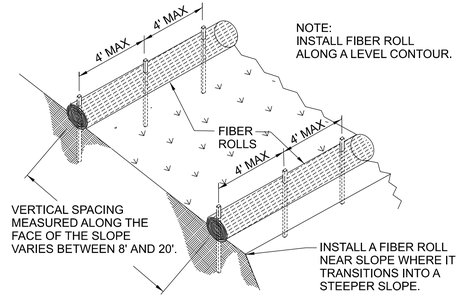
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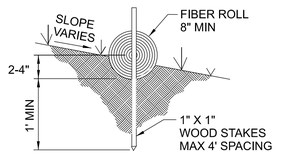
COMPOST FILTER SOCK - TYPE 7

NTS

3125-187



TYPICAL FIBER ROLL INSTALLATION
NOT TO SCALE



ENTRENCHMENT DETAIL
NOT TO SCALE

STRAW WATTLE

NTS

3125-188

CONFIDENTIAL

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No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	RM
Checked By	RG	Const Supvr	JB
Project Mgr	BJP	Date	6/7/23

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0 1"
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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

STANDARD DETAILS EROSION CONTROL
DETAILS 1

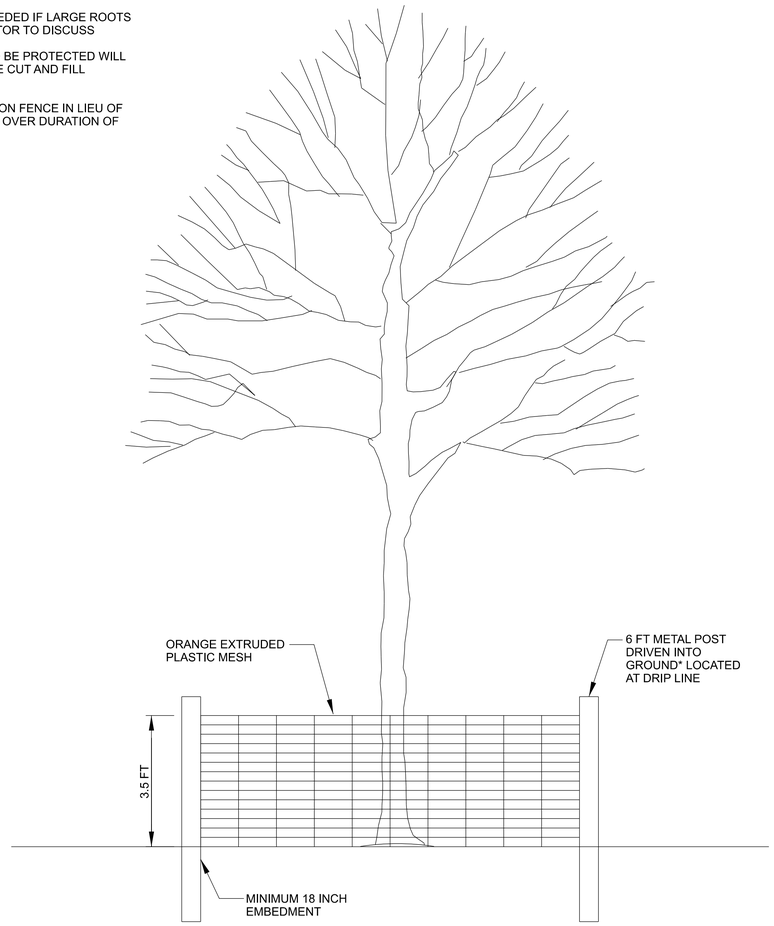
SAP Project No: W02563
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TREE PROTECTION NOTES

1. INSTALL TREE PROTECTION FENCING (TPF) PRIOR TO ANY GROUND DISTURBING ACTIVITY. INSPECTION AND APPROVAL OF FENCING BY THE URBAN FORESTRY TREE INSPECTOR IS REQUIRED PRIOR TO COMMENCEMENT OF WORK, INCLUDING EQUIPMENT AND MATERIALS STAGING AND MOBILIZATION
2. CALL 823-TREE (8733) TO SCHEDULE THE TREE PROTECTION INSPECTION ONCE TPF IS INSTALLED
3. NO ENTRY IS ALLOWED INTO TREE PROTECTION AREAS FOR THE DURATION OF THE PROJECT UNLESS PERMITTED BY THE URBAN FORESTRY TREE INSPECTOR
4. TREE PROTECTION FENCING SHALL NOT BE MOVED, ALTERED OR REMOVED THROUGHOUT THE DURATION OF THE PROJECT DAMAGED TREE PROTECTION FENCE MUST BE REPAIRED IMMEDIATELY.
5. WHERE TREE ROOTS ARE ENCOUNTERED OR ANTICIPATED, EXCAVATION SHALL BE COMPLETED WITH HAND TOOLS CAREFULLY WITHOUT DAMAGE (I.E. VAC TRUCK, AIR SPADE, ETC)
6. TREE ROOTS OVER 2-INCH DIAMETER MAY NOT BE CUT OR DAMAGED WITHOUT A ROOT PRUNING INSPECTION.
7. FIELD ADJUSTMENTS OR ALTERNATIVE METHODS MAY BE NEEDED IF LARGE ROOTS ARE ENCOUNTERED. CONTACT THE ASSIGNED TREE INSPECTOR TO DISCUSS
8. TREES WITHIN THE LIMITS OF DISTURBANCE DESIGNATED TO BE PROTECTED WILL NOT BE REMOVED. CONTRACTOR IS DIRECTED TO COMPLETE CUT AND FILL OPERATIONS WITH CARE NEXT TO THESE TREES
9. THE ORANGE PLASTIC FENCE CAN BE USED AS CONSTRUCTION FENCE IN LIEU OF SILT FENCE IF GRADE IS MODERATE. INSPECT AND MAINTAIN OVER DURATION OF PROJECT

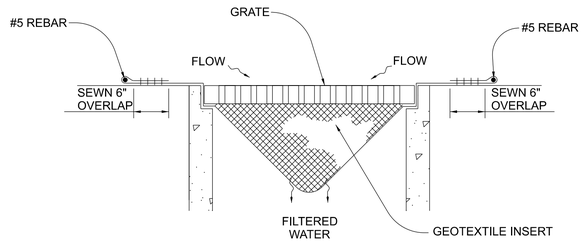


*MAXIMUM 10 FEET SEPARATION BETWEEN METAL POSTS

TREE PROTECTION FENCE

NTS

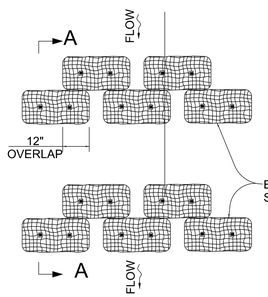
3125-190



INLET PROTECTION - TYPE 3

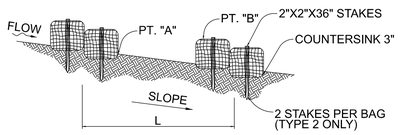
NTS

3125-201



PLAN

BARRIER SPACING		
INSTALL PARALLEL ALONG CONTOURS AS FOLLOWS		
% SLOPE	% SLOPE	MAXIMUM SPACING ON SLOPE
10% FLATTER	1:10 or FLATTER	300'
10 > % ≥ 15	10 > X ≥ 7.5	150'
15 > % ≥ 20	7.5 > X ≥ 5	100'
20 > % ≥ 30	5 > X ≥ 3	50'
STEEPER THAN 30%	STEEPER THAN 1:3	25'



SECTION A-A

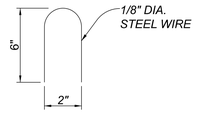
NOTES:
1. FOR TYPE 2 BARRIER, DRIVE STAKES FLUSH WITH TOP OF BAG AND INTO UNDISTURBED GROUND A MIN. OF 12". OMIT STAKES IF BAGS ARE PLACED ON PAVED SURFACE.
2. FOR TYPE 2 AND TYPE 4 BARRIERS, SPACE BAGS (L) SO THAT THE ELEVATION OF POINT "A" IS LESS THAN OR EQUAL TO THE ELEVATION OF POINT "B".

TYPE 2 - BIOFILTER BAGS
TYPE 3 - WATTLES
TYPE 4 - SAND BAGS

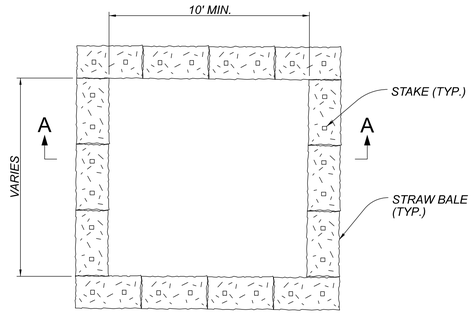
BIOFILTER BAG / SAND BAG BARRIER - TYPE 2 AND 4

NTS

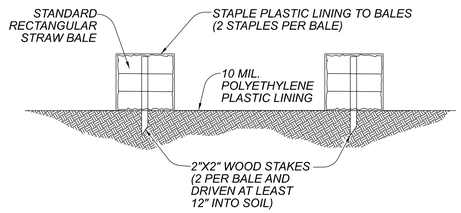
3125-202



STAPLE DETAIL



PLAN



SECTION A-A

CONCRETE TRUCK WASH OUT FACILITY

NTS

3125-203

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No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	RM
Checked By	RG	Const Supvr	JB
Project Mgr	BJP	Date	6/7/23

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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

STANDARD DETAILS EROSION CONTROL

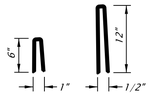
DETAILS 2

SAP Project No: W02563
1/4 Section:
Sheet No: STD-CE-0002

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NOTES:
1. INSTALL MATTING ON SMOOTH SOIL SURFACE AFTER SEEDING IS APPLIED (WHERE APPLICABLE).
2. INSTALL CHANNEL LINER MATTING, IN THE DIRECTION OF WATER FLOW. ANCHOR UPSTREAM END OF MAT WITH CHECK SLOT FOR CULVERT OUTFALLS. PLACE MAT UNDER PIPE 12" MINIMUM UPSTREAM FROM PIPE OUTLET.
3. CONSTRUCT CHECK SLOTS ACROSS CHANNEL BOTTOM AT 25' SPACING AND AT THE END OF EACH MAT (FIG. A3 OR A4).
4. OVERLAP SIDE CHANNEL LINER MATTING EDGES 6" OVER THE CENTER CHANNEL LINER MATTING AND FASTEN EDGES 12" OC CONTINUE OVERLAP AND STAPLING PATTERN FOR EACH ADDITIONAL SIDE CHANNEL LINER MAT.
5. LAP UPSTREAM MATTING END 12" OVER BEGINNING EDGE OF DOWNSTREAM MATTING. FASTEN 12" OC
6. ANCHOR TOP EDGE OF SIDE CHANNEL MATTING IN TRENCH AND FASTEN 12" OC (FIG. A2).
7. FASTEN MATTING INTERIOR AT 24" OC WITH STAGGERED SPACING.
8. CONSTRUCT INITIAL ANCHOR TRENCH AT DOWNSTREAM END OF MATTING AND TERMINAL SLOPE ANCHOR AT UPSTREAM END.
9. MATTING TYPES A THROUGH E: FURNISH FULLY BIODEGRADABLE PRODUCT. MATTING WITH PLASTIC OR PHOTODEGRADABLE COMPONENTS WILL NOT BE ACCEPTED.



STAPLES OR PER MANUFACTURER'S RECOMMENDATION
NOT TO SCALE

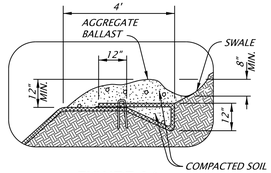
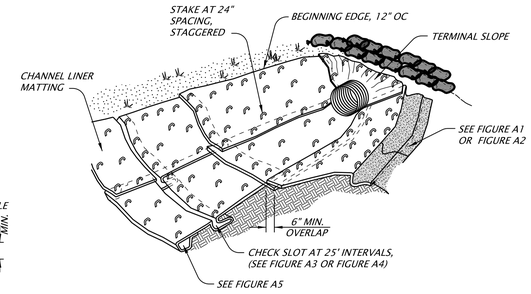


FIGURE A1: TOP OF BANK ANCHOR TRENCH, H>3' AND TERMINAL SLOPE
NOT TO SCALE



CHANNEL MATTING ISOMETRIC VIEW
NOT TO SCALE

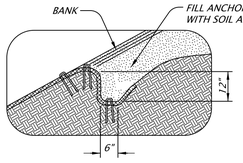


FIGURE A2: TOP OF BANK ANCHOR TRENCH, H<3'
NOT TO SCALE

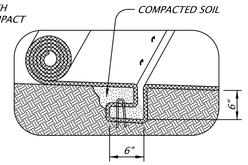


FIGURE A3: CHANNEL CHECK SLOT
NOT TO SCALE

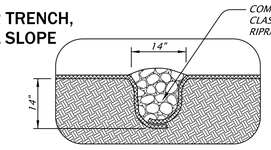


FIGURE A4: CHANNEL CHECK SLOT WITH ROCK BACKFILL
NOT TO SCALE

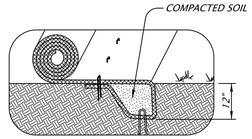
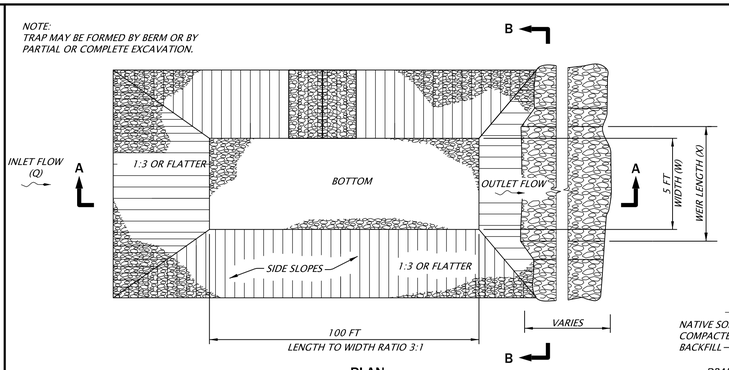


FIGURE A5: INITIAL CHANNEL ANCHOR TRENCH
NOT TO SCALE

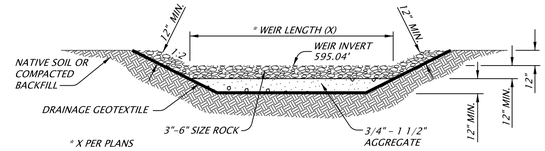
CHANNEL MATTING
NTS

3125-305

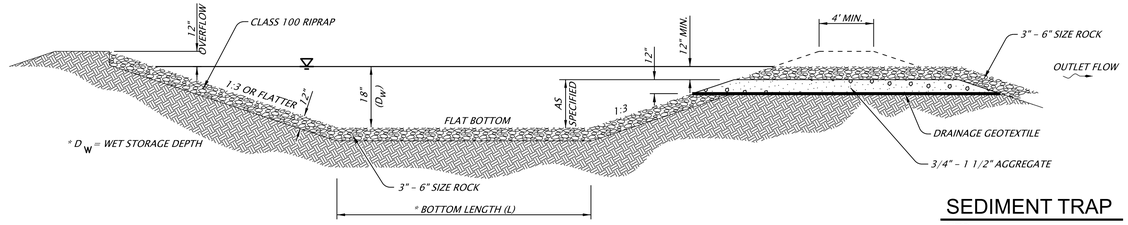
NOTE:
TRAP MAY BE FORMED BY BERM OR BY PARTIAL OR COMPLETE EXCAVATION.



PLAN



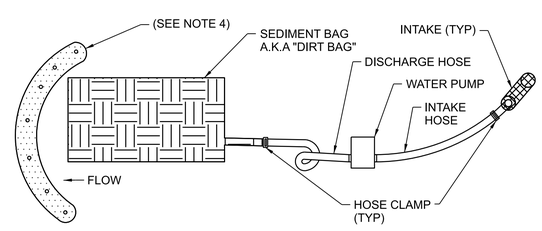
SECTION B-B



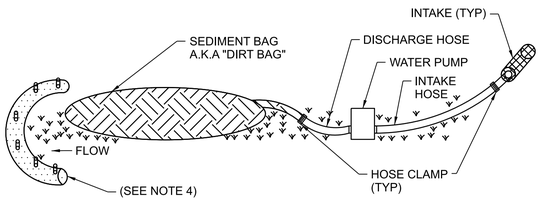
SECTION A-A

SEDIMENT TRAP
NTS

3125-302



PLAN VIEW



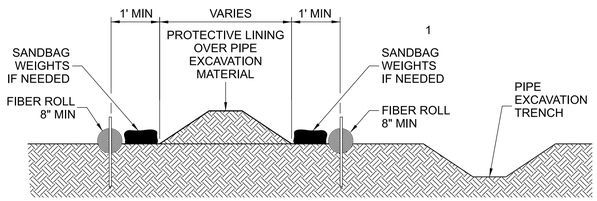
ELEVATION VIEW

NOTES:

1. PROVIDE SEDIMENT BAG MANUFACTURERED USING POLYPROPYLENE 8 OZ. NON-WOVEN GEOTEXTILE SEWN INTO A BAG WITH DOUBLE-NEEDLE USING HIGH STRENGTH THREAD, MIRAFI 180N DEWATERING BAG OR EQUAL.
2. PROVIDE FILLING CONNECTION INTO SEDIMENT BAG FOR 4 INCH OR LARGER DISCHARGE HOSE WITH STRAPS TO SECURE HOSE TO BAG.
3. SECURE SEDIMENT BAG TO GROUND WITH STRAPS AND STAKES SUCH THAT BAG IS IMMOVABLE WHEN FILLED.
4. PROVIDE TWO ROWS OF STRAW WADDLE DOWNSTREAM OF SEDIMENT BAG WITH ENDS OF WADDLE WRAPPED UPHILL AROUND SEDIMENT BAG TO CAPTURE DISCHARGE FROM BAG. 3125-188
5. SEDIMENT BAG IS FULL WHEN IT NO LONGER CAN EFFICIENTLY FILTER SEDIMENT OR ALLOW WATER TO PASS AT A RATE LESS THAN 50% OF THE MANUFACTURER'S DESIGNED FLOW RATE. WHEN FULL, DISPOSE OF SEDIMENT BAG IN ACCORDANCE WITH APPROVED SOLID WASTE DISPOSAL PLANS AS APPROVED BY OWNER'S REPRESENTATIVE.
6. DURING ACTIVE DEWATERING AND PUMPING INTO SEDIMENT BAG, MONITOR DEWATERING BAG AND DISCONTINUE USE IF BAG IS DAMAGED OR FULL.

SEDIMENT BAG
NTS

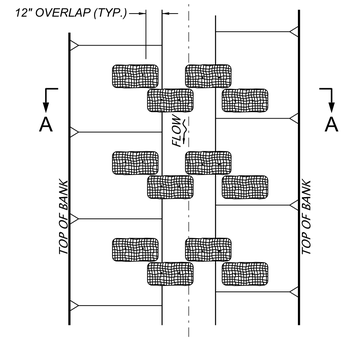
3125-310



APPLY DETAIL FOR ENTIRE LENGTH OF EXCAVATION BETWEEN DODGE PARK BLVD AND LUSTED ROAD. INSTALL FIBER ROLL ACCORDING TO 3125-188 AND ANCHOR PROTECTIVE LINING ACCORDING TO 3125-153. KEEP EXCAVATION MATERIAL WITHIN SILT FENCE BOUNDARY.

PIPE EXCAVATION MATERIAL PROTECTION
NTS

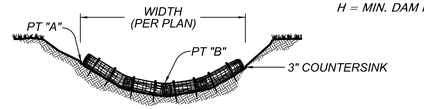
3125-301



PLAN

MAXIMUM CHECK DAM SPACING "L"				
Ditch Grade	H=8"	H=12"	H=18"	H=24"
10%	* *	* *	15'	20'
9%	* *	* *	16'	22'
8%	* *	* *	18'	25'
7%	* *	* *	21'	28'
6%	* *	16'	25'	33'
5%	* *	20'	30'	40'
4%	16'	25'	37'	50'
3%	22'	33'	50'	66'
2%	33'	50'	75'	100'

* * NOT ALLOWED
H = MIN. DAM HEIGHT



SECTION A-A

STAKE BIOFILTER BAGS WITH TWO 2"X2"X18" (MINIMUM) WOOD STAKES PER BAG. DRIVE STAKES A MINIMUM OF 6" INTO THE GROUND AND FLUSH WITH THE TOP OF THE BAGS. OMIT STAKES IF PLACED OVER PAVED SURFACES. OVERLAP BAGS 12" MINIMUM AT EACH JOINT.

BIOFILTER BAG CHECK DAM - TYPE 3
NTS

3125-004

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Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M, ACKERMAN, PRINCIPAL ENGINEER, PE #19424 Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

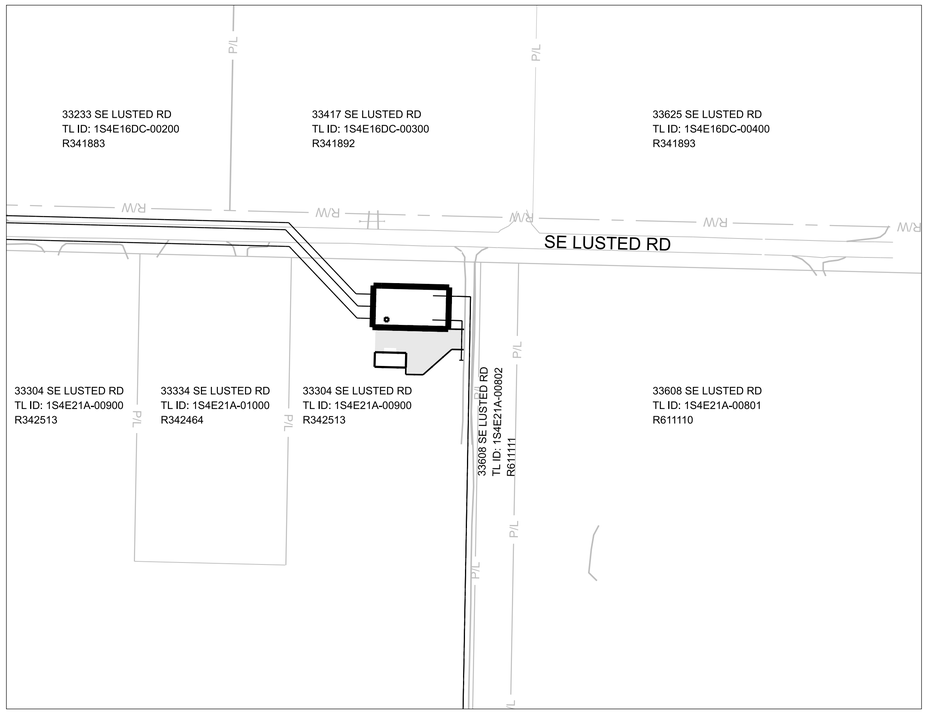
STANDARD DETAILS EROSION CONTROL
DETAILS 3

SAP Project No W02563
1/4 Section
Sheet No STD-CE-0003

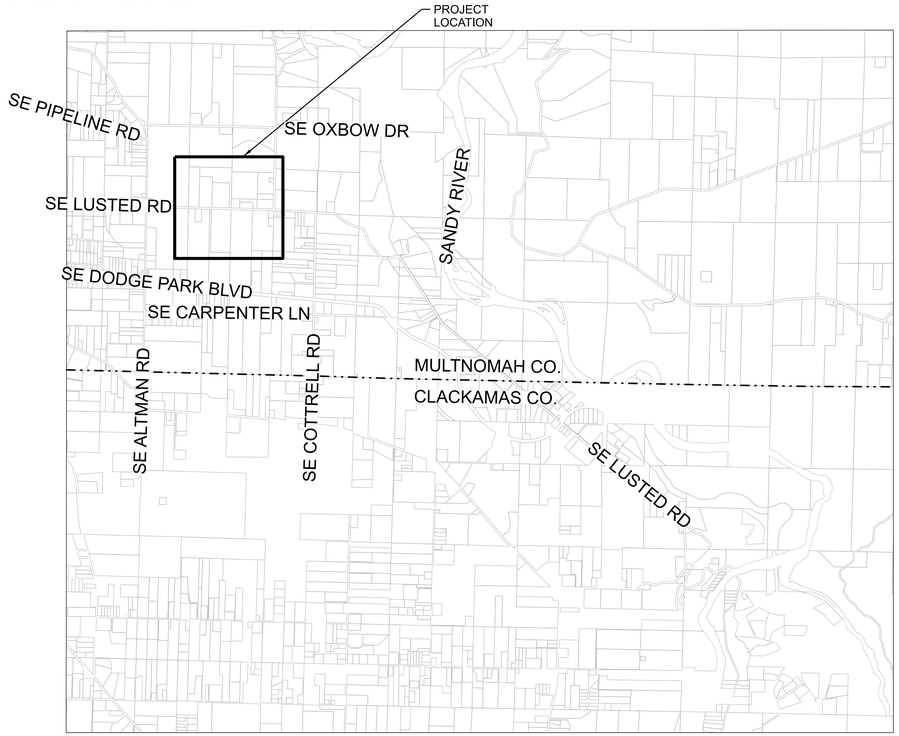
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EROSION AND SEDIMENT CONTROL PLAN - 1200-CA
BULL RUN FILTRATION PIPELINES
FINISHED WATER INTERTIE



SITE MAP
1"=100"



VICINITY MAP
N.T.S.

LEGEND

- EXISTING CONCRETE
- EXISTING ASPHALT
- SIGNIFICANT ENVIRONMENTAL CONCERN (SEC)
- COUNTY LINE
- P/L — EXISTING PROPERTY LINE
- R/W — EXISTING RIGHT OF WAY
- W — EXISTING WATER LINE
- G — EXISTING GAS LINE
- TEL — EXISTING TELEPHONE LINE
- EXISTING UTILITY POLE
- EXISTING INLET
- EXISTING CULVERT
- X — X — EXISTING STRUCTURE FENCE
- EXISTING DITCH
- EXISTING SIGN
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- EXISTING MAILBOX
- EXISTING TREES
- 500' — EXISTING CONTOUR
- EXISTING OHW AND/OR WETLANDS

SHEET INDEX

FWI-CE-1000	COVER SHEET
FWI-CE-1000A	GENERAL NOTES
FWI-CE-1001	EXISTING CONDITIONS AND DEMOLITION
FWI-CE-1002	UTILITY WORK
FWI-CE-1003	VERTICAL CONSTRUCTION
FWI-CE-1004	FINAL STABILIZATION AND LANDSCAPE
STD-CE-0001	STANDARD DETAILS
STD-CE-0002	STANDARD DETAILS
STD-CE-0003	STANDARD DETAILS

PROPOSED CATIONIC CHEMICALS TO BE USED:

TIDAL CLEAR 1% - CHITOSAN (cas 9012-76-4), ORGANIC ACID (CAS 64-19-7, 77-92-9, 79-33-4, AND/OR 6915-15-7), WATER (CAS 7732-18-5)

POLLUTANTS GENERATING MATERIALS:

SEDIMENT, CONCRETE, PAINT, FUELS, OILS, PLASTICS, CONSTRUCTION MATERIALS

AUTHORIZED NON-STORMWATER DISCHARGES:

FIRE HYDRANT FLUSHING, IRRIGATION, POTABLE WATERLINE FLUSHING, PAVEMENT WASH WATER (EXCLUDING SPILLS AND LEAKS), UNCONTAMINATED CLEAR GROUNDWATER, CONSTRUCTION DE-WATERING

SITE INFORMATION

1. TYPE OF DEVELOPMENT: CAPITAL IMPROVEMENTS
2. CONSTRUCTION ACTIVITY WILL CONSIST OF:
   - A) PHASE 1: CLEARING AND GRUBBING 2024
   - B) PHASE 1: MASS GRADING AND EXCAVATION 2024-2027
   - C) PHASE 2: UTILITY CONSTRUCTION 2024-2028
   - D) PHASE 3: VERTICAL CONSTRUCTION 2024-2025 -FWI SITE ONLY
   - E) PHASE 4: FINAL STABILIZATION 2025-2028
3. PROJECT TIMELINE:
   - BEGINNING DATE: MARCH 2024
   - COMPLETION DATE: MARCH 2028
4. PROJECT SITE AREAS:
   - - TOTAL AREA: 1.04 AC
   - -DISTURBED AREA: 1.04 AC
   - -PERCENT OF SITE DISTURBED: 100 %
5. ONSITE SOIL TYPES:
   - A) CORNELIUS SILT LOAM, 8-15% SLOPES
   - B) MERSHON SLIT LOAM, 8-15% SLOPES
6. CUT AND FILL DATA:
   - -CUT: 178.88 CY
   - -FILL: 1,017.63 CY
   - -NET ADJUSTED: 838.75 CY FILL
7. NEAREST WATER BODY: BEAVER CREEK
8. PROJECT LOCATION: 33304 SE LUSTED ROAD, TLID:1S4E21A-00900, R342513; 33334 SE LUSTED ROAD, TLID:1S4E21A-01000, R342464
9. PROPERTY DESCRIPTION: VARIES
10. VERTICAL ELEVATION INFORMATION: 596'- 626'

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RAIN GAGE:
GRESHAM FIRE DEPT. RAIN GAGE
1333 NW EASTMAN PKWY
Hyperlink:
https://or.water.usgs.gov/non-usgs/bes/gresham.html

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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines
FINISHED WATER INTERTIE EROSION AND SED CONTROL
COVER SHEET

SAP Project No W02563
1/4 Section
Sheet No FWI-CE-1000

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EROSION AND SEDIMENT CONTROL GENERAL NOTES (ALL SECTIONS REFERENCING DEQ 1200-C PERMIT)

1. ONCE KNOWN, INCLUDE A LIST OF ALL CONTRACTORS THAT WILL ENGAGE IN CONSTRUCTION ACTIVITIES ON SITE, AND THE AREAS OF THE SITE WHERE THE CONTRACTOR(S) WILL ENGAGE IN CONSTRUCTION ACTIVITIES. REVISE THE LIST AS APPROPRIATE UNTIL PERMIT COVERAGE IS TERMINATED (SECTION 4.4.c.i). IN ADDITION, INCLUDE A LIST OF PERSONNEL (BY NAME AND POSITION) THAT ARE RESPONSIBLE FOR THE DESIGN, INSTALLATION AND MAINTENANCE OF STORMWATER CONTROL MEASURES (E.G. ESCP DEVELOPER, BMP INSTALLER (SEE SECTION 4.10), AS WELL AS THEIR INDIVIDUAL RESPONSIBILITIES. (SECTION 4.4C.ii).
2. VISUAL MONITORING INSPECTION REPORTS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-C PERMIT REQUIREMENTS. (SECTION 6.5)
3. INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200-C PERMIT REQUIREMENTS. (SECTION 6.5q)
4. RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. (SECTION 4.7)
5. THE PERMIT REGISTRANT MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT. (SECTIONS 4 AND 4.11)
6. THE ESCP MUST BE ACCURATE AND REFLECT SITE CONDITIONS. (SECTION 4.8)
7. SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITTAL OF THE ESCP REVISIONS IS ONLY UNDER SPECIFIC CONDITIONS. SUBMIT ALL NECESSARY REVISIONS TO DEQ OR AGENT WITHIN 10 DAYS. (SECTION 4.9)
8. SEQUENCE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. (SECTION 2.2.2)
9. CREATE SMOOTH SURFACES BETWEEN SOIL SURFACE AND EROSION AND SEDIMENT CONTROLS TO PREVENT STORMWATER FROM BYPASSING CONTROLS AND PONDING. (SECTION 2.2.3)
10. IDENTIFY, MARK, AND PROTECT (BY CONSTRUCTION FENCING 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. (SECTION 2.2.1)
11. PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED. (SECTION 2.2.5)
12. MAINTAIN AND DELINEATE ANY EXISTING NATURAL BUFFER WITHIN THE 50-FEET OF WATERS OF THE STATE. (SECTION 2.2.4)
13. INSTALL PERIMETER SEDIMENT CONTROL, INCLUDING STORM DRAIN INLET PROTECTION AS WELL AS ALL SEDIMENT BASINS, TRAPS, AND BARRIERS PRIOR TO LAND DISTURBANCE, (SECTIONS 2.1.3)
14. CONTROL BOTH PEAK FLOW RATES AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS AND DOWNSTREAM CHANNELS AND STREAM BANKS. (SECTIONS 2.1.1 AND 2.2.16)
15. CONTROL SEDIMENT AS NEEDED ALONG THE SITE PERIMETER AND AT ALL OPERATIONAL INTERNAL STORM DRAIN INLETS AT ALL TIMES DURING CONSTRUCTION, BOTH INTERNALLY AND AT THE SITE BOUNDARY. (SECTIONS 2.2.6 AND 2.2.13)
16. ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. (SECTION 2.2.14)
17. APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES. TEMPORARY OR PERMANENT STABILIZATIONS MEASURES ARE NOT REQUIRED FOR AREAS THAT ARE INTENDED TO BE LEFT UNVEGETATED, SUCH AS DIRT ACCESS ROADS OR UTILITY POLE PADS. (SECTIONS 2.2.20 AND 2.2.21)
18. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS. (SECTION 2.3.7)
19. KEEP WASTE CONTAINER LIDS CLOSED WHEN NOT IN USE AND CLOSE LIDS AT THE END OF THE BUSINESS DAY FOR THOSE CONTAINERS THAT ARE ACTIVELY USED THROUGHOUT THE DAY. FOR WASTE CONTAINERS THAT DO NOT HAVE LIDS, PROVIDE EITHER (1) COVER (E.G., A TARP, PLASTIC SHEETING, TEMPORARY ROOF) TO PREVENT EXPOSURE OF WASTES TO PRECIPITATION, OR (2) A SIMILARLY EFFECTIVE MEANS DESIGNED TO PREVENT THE DISCHARGE OF POLLUTANTS (E.G., SECONDARY CONTAINMENT). (SECTION 2.3.7)
20. PREVENT TRACKING OF SEDIMENT ONTO PULIC OR PRIVATE ROADS USING BMP'S SUCH AS: CONSTRUCTION ENTRANCE, GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ON SITE, OR USE AN EXIT TIRE WASH. THESE BMPS MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES. (SECTION 2.2.7)
21. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE. (SECTION 2.2.7.f)
22. CONTROL PROHIBITED DISCHARGE FROM LEAVING THE CONSTRUCTION SITE, I.E., CONCRETE WASH-OUT, WASTEWATER FROM CLEANOUT OF STUCCO, PAINT AND CURING COMPOUNDS. (SECTIONS 1.5 AND 2.3.9)
23. ENSURE THAT STEEP SLOPE AREAS WHERE CONSTRUCTION ACTIVITIES ARE NOT OCCURRING ARE NOT DISTURBED. (SECTION 2.2.10)
24. PREVENT SOIL COMPACTION IN AREAS WHERE POST-CONSTRUCTION INFILTRATION FACILITIES ARE TO BE INSTALLED. (SECTION 2.2.12)
25. USE BMPS TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; VEHICLE AND EQUIMPMENT 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, FERTILIZER, PESTICIDES AND HERBICIDES, PAINTS, SOLVENTS, CURING COMPOUNDS AND ADHESIVES FROM CONSTRUCTION OPERATIONS. (SECTIONS 2.2.15 AND 2.3)
26. PROVIDE PLANS FOR SEDIMENTATION BASINS THAT HAVE BEEN DESIGNED PER SECTION 2.2.17 AND STAMPED BY AN OREGON PROFESSIONAL ENGINEER. (SEE SECTION 2.2.17a)
27. IF ENGINEERED SOILS ARE USED ON SITE, A SEDIMENTATION BASIN/IMPOUNDMENT MUST BE INSTALLED. (SEE SECTIONS 2.2.17 AND 2.2.18)
28. PROVIDE A DEWATERING PLAN FOR ACCUMULATED WATER FROM PRECIPITATION AND UNCONTAMINATED GROUNDWATER SEEPAGE DUE TO SHALOW EXCAVATION ACTIVITIES. (SEE SECTION 2.4)
29. IMPLEMENT THE FOLLOWING BMPS WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES. (SECTION 2.3)
30. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL. (SECTION 2.2.9)
31. THE APPLICATION RATE OF FERTIZIERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPATIAN ZONE. (SECTION 2.3.5)
32. IF AN ACTIVE TREATMENT SYSTEM (FOR EXAMPLE, ELECTRO-COAGUALATION, FLOCCULATION, FILTRATION, ETC) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVIDCE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATION THE TREATMENT SYSTEM. OBTAIN ENVIRONMENTAL MANAGEMENT PLAN APPROVAL FROM DEQ BEFORE OPERATIING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS. (SECTION 1.2.9)
33. TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE REGISTRANT IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR. (SECTION 2.2)
34. AS NEEDED BASED ON WEATHER CONDITIONS, AT THE END OF EACH WORKDAY SOILD STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER MBPS MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS. (SECTION 2.2.8)
35. SEDIMENT FENCE: REMIOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL. (SECTION 2.1.5b)
36. OTHER SEDIMENT BARRIERS (SUCH AS BIOBAGS): REMOVE SEDIMENT BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT AND BEFORE BMP REMOVAL. (SECTION 2.1.5c)
37. CATCH BASINS: CLEAN BEFORE RETENTION CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT. SEDIMENT BASINS AND SEDIMENT TRAPS: REMOVE TRAPPED SEDIMENTS BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT. (SECTION 2.1.5a)
38. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT 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 TIMEFRAME. (SECTION 2.2.19)
39. THE INTENTIONAL WASHING OF SEDIMENT INTO STROM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS. (SECTION 2.2.19)
40. DOCUMENT AN PORTION(S) OF THE SITE WHERE LAND DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED OR WILL BE TEMPORARILY INACTIVE FOR 14 OR MORE CALENDAR DAYS. (SECTION 6.5.f)
41. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE WITH A COVERING OF BLOWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE. (SECTION 2.2.20)
42. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED, ALL TEMPORARY EROSION CONTROLS AND RETAINED MOVED AND DISPOSED OF PROPERLY, UNLESS NEEDED FOR LONG TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE. (SECTION 2.2.21)

INSPECTION FREQUENCY

SITE CONDITION	MINIMUM FREQUENCY
1. ACTIVE PERIOD	ON INITIAL DATE THAT LAND DISTURBANCE ACTIVITIES COMMENCE. WITHIN 24 HOURS OF ANY STORM EVENT, INCLUDING RUNOFF FROM SNOW MELT, THAT RESULTS IN DISCHARGE FROM THE SITE. AT LEAST ONCE EVERY 14 DAYS, REGARDLESS OF WHETHER STORMWATER RUNOFF IS OCCURRING.
2. INACTIVE PERIODS GREATER THAN 14 CONSECUTIVE CALENDAR DAYS	THE INSPECTOR MAY REDUCE THE FREQUENCY OF INSPECTIONS IN ANY AREA OF THE SITE WHERE THE STABILIZATION STEPS IN SECTION 2.2.20 HAVE BEEN COMPLETED TO TWICE PER MONTH FOR THE FIRST MONTH, NO LESS THAN 14 CALENDAR DAYS APART, THAN ONCE PER MONTH.
3. PERIODS DURING WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER	IF SAFE, ACCESSIBLE AND PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT DISCHARGE POINT, OR DOWNSTREAM LOCATION OF THE RECEIVING WATERBODY.
4. PERIODS DURING WHICH CONSTRUCTION ACTIVITIES ARE SUSPENDED AND RUNOFF IS UNLIKELY DUE TO FROZEN CONDITIONS.	VISUAL MONITORING INSPECTIONS MAY BE TEMPORARILY SUSPENDED. IMMEDIATELY RESUME MONITORING UPON THAWING, OR WHEN WEATHER CONDITIONS MAKE DISCHARGES LIKELY.
5. PERIODS DURING WHICH CONSTRUCTION ACTIVITIES ARE CONDUCTED AND RUNOFF IS UNLIKELY DURING FROZEN CONDITIONS.	VISUAL MONITORING INSPECTIONS MAY BE REDUCED TO ONCE A MONTH. IMMEDIATELY RESUME MOITORING UPON THAWING, OR WHEN WEATHER CONDITIONS MAKE DISCHARGES LIKELY.

BMP MATRIX FOR CONSTRUCTION PHASE

YEAR	2024-2027				
PHASE/BMP	CLEARING	MASS GRADING	UTILITY CONSTRUCTION	VERTICAL CONSTRUCTION	FINAL STABILIZATION
EROSION PREVENTION					
GROUND COVER	X	X	X		X
PLASTIC SHEETING	X	X	X		
DUST CONTROL	X	X	X		
TEMPORARY STABILIZATION (STRAW MULCH/HYDROSEED)		X	X	X	
PERMANENT STABILIZATION					X
BUFFER ZONE (RAVINE)	X	X	X	X	
SEDIMENT CONTROL					
SEDIMENT FENCE (PERIMETER)	X				X
SEDIMENT FENCE (INTERIOR)	X				
STRAW WATTLES	X	X	X	X	X
INLET PROTECTION	X	X	X	X	X
DEWATERING		X	X		
RUN OFF CONTROL					
CONSTRUCTION ENTRANCE	X	X	X		
EXISTING OUTLET PROTECTION	X	X	X	X	
NEW OUTLET PROTECTION		X	X	X	X
EXISTING CURB INLET CHECK DAMS	X	X	X	X	X
POLLUTION PREVENTION					
HAZARD WASTE MANAGEMENT				X	
SPILL KIT ONSITE				X	X
CONCRETE WASHOUT AREA	X	X	X	X	

FILTER STRIP SEEDING

BOTANICAL NAME	COMMON NAME
HORDEUM VULGARE VAR POCO	POCO BARLEY
HARDEUM BRACHYANTHERUM	MEADOW BARLEY
BROMUS CARINATUS	CALIFORNIA BROME
FESTUCA IDAHOENSIS ROMERIID	ROEMER'S FESCUE
TRIFOLIUM FRAGIFERUM	STRAWBERRY CLOVER
CLARKIA AMONEA	FAREWELL TO SPRING
OENOTHERA ELATA HOOKERI	HOOKER'S EVENING PRIMROSE
DESHAMPSIA CESPITOSA	TUFTED HAIRGRASS
AGROSTIS EXERATA	SPIKE BENTGRASS

ROADSIDE SEEDING

BOTANICAL NAME	COMMON NAME
FESTUCA RUBRA VAR. SEALINK	SEALINK CREEPING RED FESCUE
FESTUCA OVINA VAR. AZAY BLUE	AZAY BLUE SHEEP FESCUE
TRIFOLIUM FRAGIFERUM	STRAWBERRY CLOVER
NEMOPHILA MENZIESII	BABY BLUE EYES
LIMNANTHES DOUGLASII	DOUGLAS MEADOWFOAM
ARMERIA MARITIMA	THRIFT SEAPINK
TRIFOLIUM REPENS VAR MICROCLOVER	MICROCLOVER
LOBULARIA MARITIMA	SWEET ALYSSUM CARPET OF SNOW
ACHILLEA MILLEFOLIUM	COMMON YARROW
BELLIS PERENNIS	LAWNDAISY

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No	Date	Description	Appd
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FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER INTERTIE
EROSION AND SED CONTROL
GENERAL NOTES

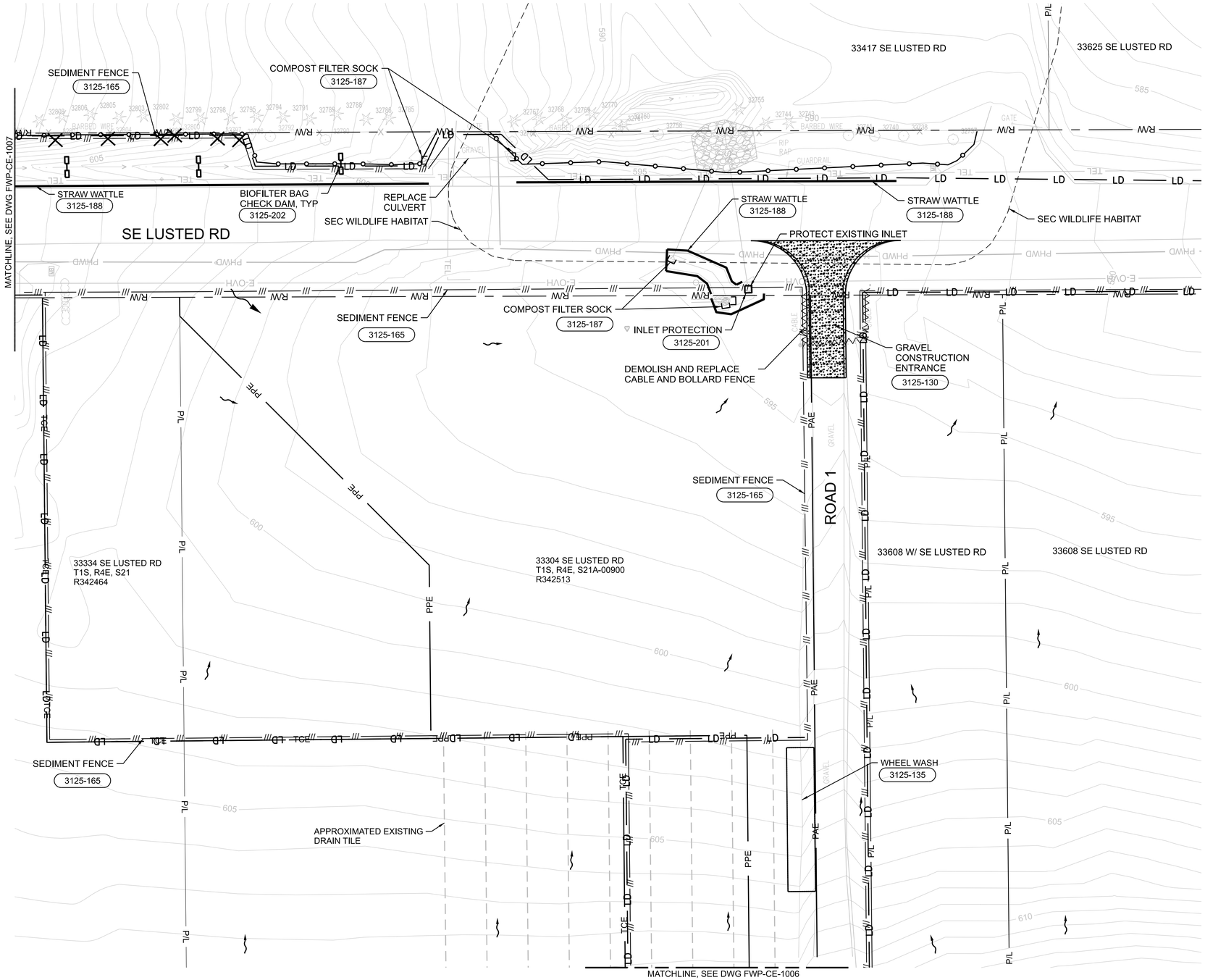
SAP Project No W02563
1/4 Section
Sheet No FWI-CE-1000A

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PRE-CONSTRUCTION, CLEARING, AND DEMOLITION NOTES:

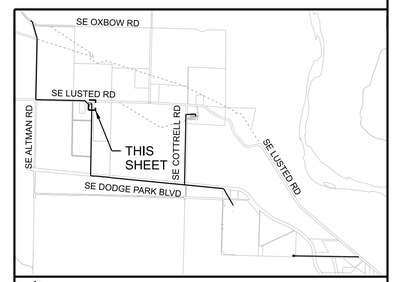
1. **ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSRTUCTION ACTIVITIES.**
2. **SEDIMENT BARRIERS APPROVED FOR USE INCLUDE SEDIMENT FENCE, BERMS CONSTRUCTED OUT OF MULCH, CHIPPINGS, OR OTHER SUITABLE MATERIALS, STRAW WATTLES, OR OTHER APPROVED MATRIALS.**
3. **SENSITIVE RESOURCES INCLUDING, BUT NOT LIMITED TO, TREES, WETLANDS, AND RIPARIAN PROTECTION AREAS SHALL BE CLEARLY DELINEATED WITH ORANGE CONSTRUCTION FENCING OR CHAIN LINK FENCING IN A MANNER THAT IS CLEARLY VISIBLE TO ANYONE IN THE AREA. NO ACTIVITIES ARE PERMITTED TO OCCUR BEYOND THE CONSTRUCTION BARRIER.**
4. **CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, STREET SWEEPING, AND VACUUMING, MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.**
5. **RUN-ON AND RUN-OFF CONTROLS SHALL BE IN PLACE AND FUNCTIONAL PRIOR TO BEGINNING SUBSTANTIAL CONSTRUCTION ACTIVITIES. RUN-ON AND RUN-OFF CONTROL MEASURES INCLUDE: SLOPE DRAINS (WITH OUTLET PROTECTION), CHECK DAMS, SURFACE ROUGHENING, AND BANK STABILIZATION.**



LEGEND

- CONSTRUCTION ENTRANCE
- FLOW DIRECTION
- TREE PROTECTION FENCE
- TREE REMOVAL
- PE — PERMANENT EASEMENT
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- PPE — PERMANENT PROPERTY EASEMENT
- PAE — PUBLIC ACCESS EASEMENT
- SEDIMENT FENCE
- LD — LIMITS OF DISTURBANCE
- STRAW WATTLE
- COMPOST FILTER SOCK
- XXXX-XXX — STANDARD DETAIL CALLOUT
- DEMOLITION
- BIOFILTER BAG CHECK DAM
- INLET PROTECTION

0 20 40 60
Scale In Feet



KEYPLAN

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21-JUL-2023

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M, ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

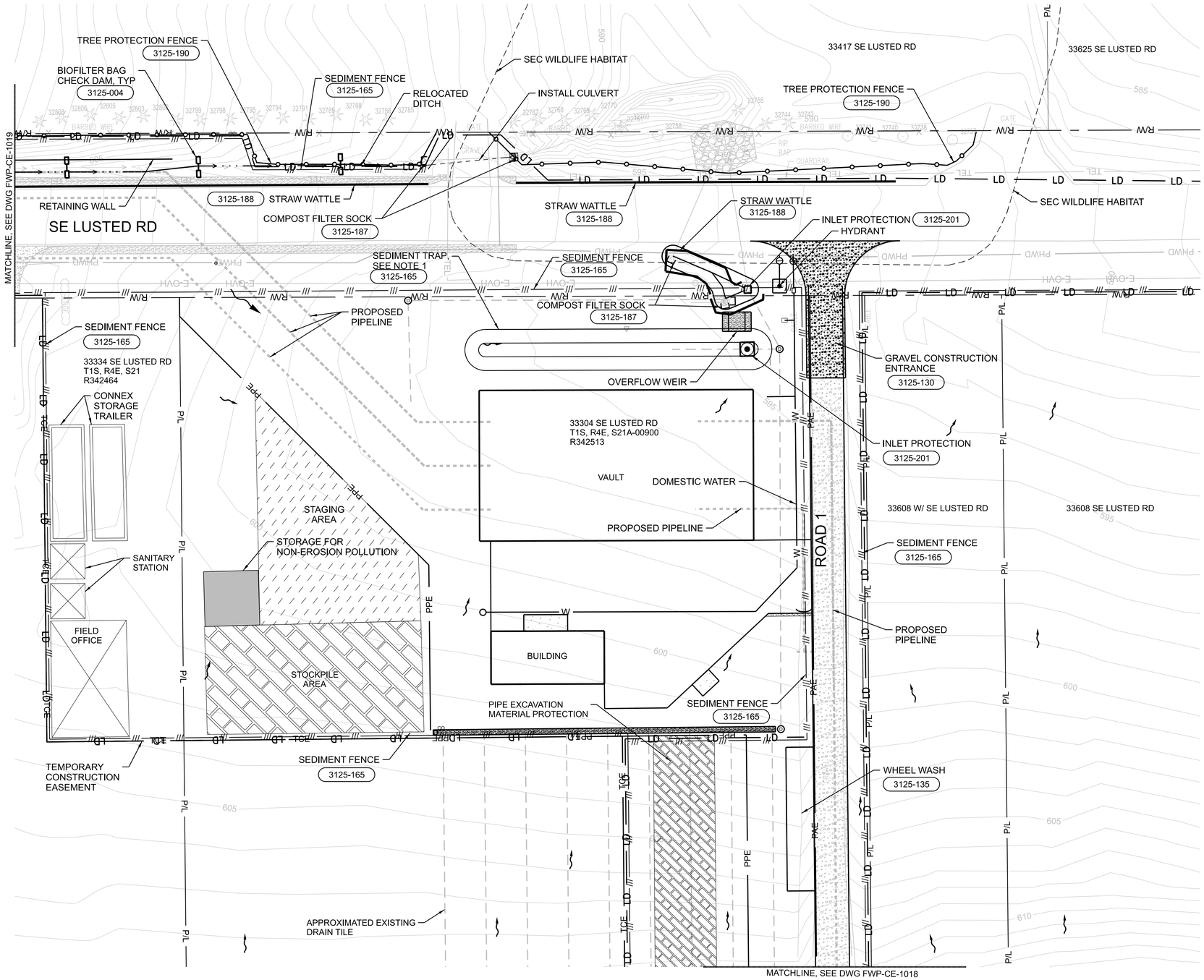
FINISHED WATER INTERTIE EROSION AND SED CONTROL

EXISTING CONDITIONS AND DEMOLITION

SAP Project No W02563
1/4 Section
Sheet No FWI-CE-1001

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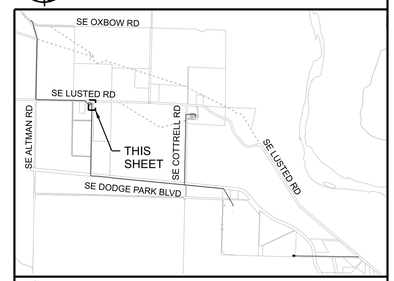
GENERAL SHEET NOTES

1. SEDIMENT TRAP TO BE CLEANED OF SEDIMENT AFTER SITE GRADING IS COMPLETE.
2. STOCKPILE TO BE COVERED WITH PLASTIC HELD DOWN BY SANDBAGS WHEN NOT IN USE.
3. STRAW MULCH AND/OR HYDROSEED SHALL BE USED FOR TEMPORARY STABILIZATION OF ANY EXPOSED TRENCH SPOILS (INCLUDING STOCKPILE IF PLASTIC SHEETING DOESNT WORK).

LEGEND

- CONSTRUCTION ENTRANCE
- PROPOSED CONCRETE
- PROPOSED GRAVEL
- PROPOSED RIPRAP
- FLOW DIRECTION
- PE — PERMANENT EASEMENT
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- PPE — PERMANENT PROPERTY EASEMENT
- PAE — PUBLIC ACCESS EASEMENT
- LD — LIMITS OF DISTURBANCE
- SEDIMENT FENCE
- TREE PROTECTION FENCE
- STRAW WATTLE
- COMPOST FILTER SOCK
- PROPOSED DRAINAGE DITCH
- PROPOSED STORM CULVERT
- PROPOSED PIPELINE
- W — PROPOSED WATER SERVICE
- PROPOSED WATER METER
- PROPOSED WATER VALVE
- PROPOSED STORM MANHOLE
- PROPSOED DRAINAGE STRUCTURE
- PROPOSED FIRE HYDRANT
- XXXX-XXX — STANDARD DETAIL CALLOUT
- BIOFILTER BAG CHECK DAM
- INLET PROTECTION
- STOCKPILE AREA
- STAGING AREA
- PIPE EXCAVATION MATERIAL PROTECTION
- SANITARY STATION
- FIELD OFFICE
- CONNEX STORAGE TRAILERS

0 20 40 60
Scale In Feet



KEYPLAN

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21-JUL-2023 14:40

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Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER INTERTIE EROSION AND SED CONTROL

UTILITY WORK

SAP Project No W02563
1/4 Section
Sheet No FWI-CE-1002

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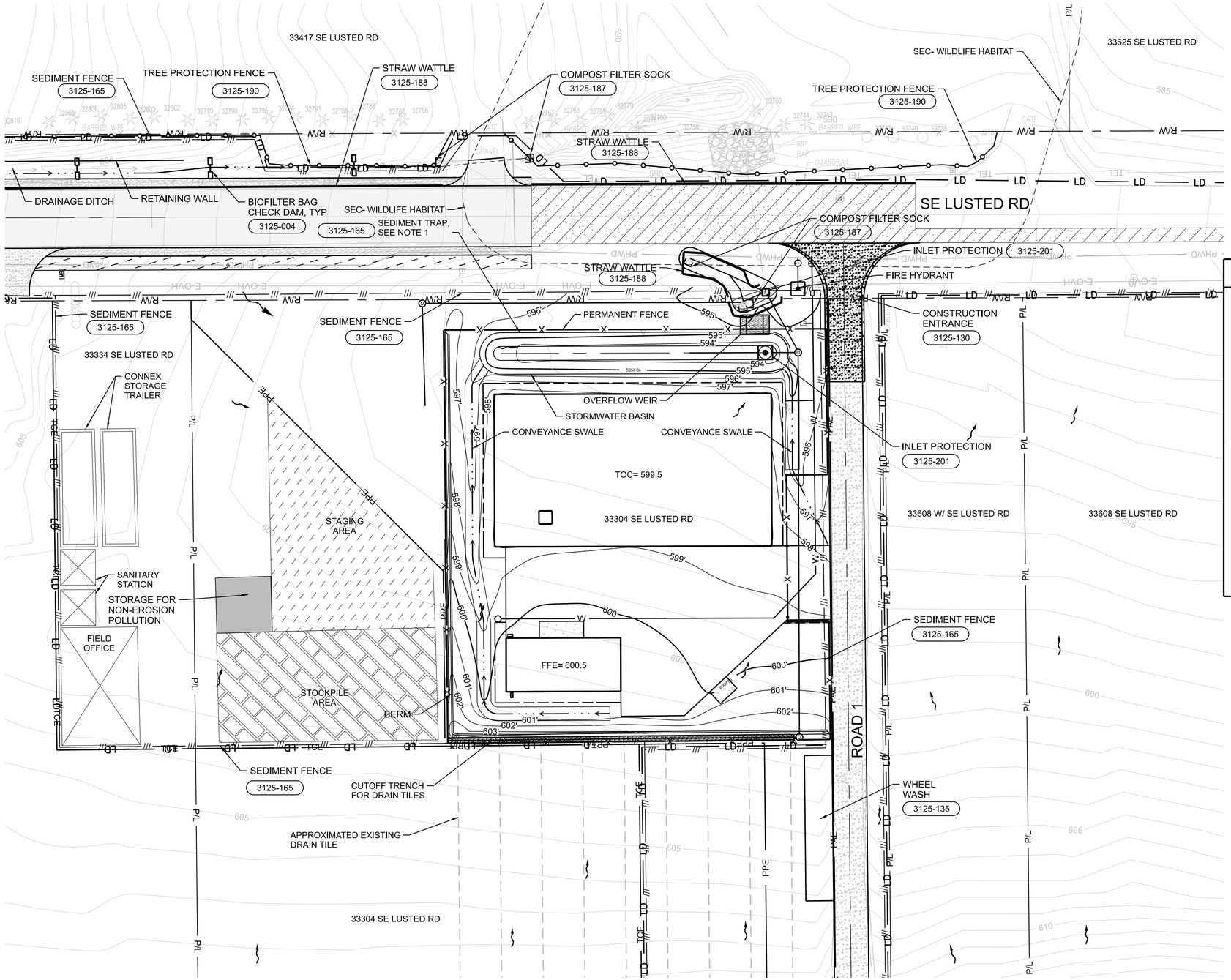
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GENERAL SHEET NOTES

1. SEE ARCHITECTURAL SHEETS FOR INTERTIE VAULT DETAILS.

VERTICAL CONSTRUCTION PHASE NOTES

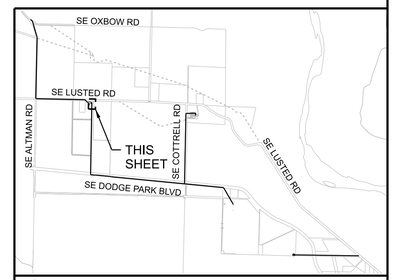
1. ALL CONSTRUCTION MATERIALS THAT COULD LEAD TO POLLUTION IF SPILLED NOT IN IMMEDIATE USE SHALL BE STORED IN A STORAGE BOX AT THE NORTH WEST OF THE SITE (AS SHOWN) TO PREVENT SPILLS AND EXPOSURE TO WET WEATHER.
2. FOR SPILL PREVENTION SPILL KITS AND OTHER SPILL CONTAINMENT DEVICES (I.E. WATTLES, ABSORBENT SOCKS/BOOMS, ORGANIC OIL ABSORBENT AGENT, ETC) SHALL BE KEPT ONSITE WITHIN THE STORAGE CONTAINER MENTIONED ABOVE THROUGH THE COMPLETION OF THE PROJECT.



LEGEND

- CONSTRUCTION ENTRANCE
- PROPOSED ASPHALT
- PROPOSED CONCRETE
- PROPOSED GRAVEL
- PROPOSED RIPRAP
- FLOW DIRECTION
- PE — PERMANENT EASEMENT
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- PPE — PERMANENT PROPERTY EASEMENT
- PAE — PUBLIC ACCESS EASEMENT
- LD — LIMITS OF DISTURBANCE
- SEDIMENT FENCE
- TREE PROTECTION FENCE
- STRAW WATTLE
- W — PROPOSED WATER SERVICE
- PROPOSED WATER METER
- PROPOSED WATER VALVE
- PROPOSED STORM MANHOLE
- PROPOSED DRAINAGE STRUCTURE
- PROPOSED FIRE HYDRANT
- XXXX-XXX — STANDARD DETAIL CALLOUT
- COMPOST FILTER SOCK
- BIOFILTER BAG CHECK DAM
- INLET PROTECTION
- DRAINAGE DITCH
- CONVEYANCE SWALE
- X — PROPOSED FENCE
- 500' — PROPOSED CONTOUR
- PROPOSED STORM CULVERT
- STOCKPILE AREA
- STAGING AREA
- SANITARY STATION
- FIELD OFFICE
- CONNEX/STORAGE TRAILERS
- POLLUTANT STORAGE CONTAINER
- GRIND & INLAY
- STORM FILTER STRIP
- PROTECTED VEGETATED SHOULDER

0 20 40 60
Scale In Feet



KEYPLAN

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		Revision	
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Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER INTERTIE EROSION AND SED CONTROL

VERTICAL CONSTRUCTION

SAP Project No	Sheet No
W02563	FWI-CE-1003
1/4 Section	

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FINAL STABILIZATION PHASE NOTES

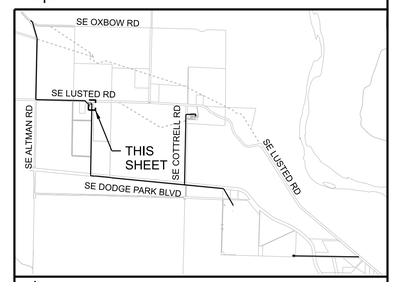
1. ALL PERIMETER SEDIMENT FENCING TO BE REMOVED UPON COMPLETION OF THIS PHASE.
2. SEE SEEDING MIX TABLES, SHEET FWI-CE-1000A.
3. AGRICULTURAL SOIL TREATMENT AREA TOPSOIL TO BE RETURNED TO ORIGINAL PARCEL AND TO ORIGINAL GRADE. AMEND AS NECESSARY TO RESTORE PRE-CONSTRUCTION NUTRIENT LEVELS AND COMPACTION LEVELS AS DIRECTED BY THE AGRICULTURAL SPECIALIST.

LEGEND

- PROPOSED ASPHALT
- PROPOSED CONCRETE
- PROPOSED GRAVEL
- PE — PERMANENT EASEMENT
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- PPE — PERMANENT PROPERTY EASEMENT
- PAE — PUBLIC ACCESS EASEMENT
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- STRAW WATTLE
- W — PROPOSED WATER SERVICE
- GRIND & INLAY
- STORM FILTER STRIP
- PROPOSED RIPRAP
- PROPOSED WATER METER
- PROPOSED WATER VALVE
- PROPOSED STORM MANHOLE
- PROPOSED DRAINAGE STRUCTURE
- PROPOSED FIRE HYDRANT
- XXXX-XXX — STANDARD DETAIL CALLOUT
- PROPOSED DRAINAGE DITCH
- PROPOSED CONVEYANCE SWALE
- X — PROPOSED FENCE
- PROPOSED CABLE AND BOLLARD FENCE
- 500' — PROPOSED CONTOUR
- PROPOSED STORM CULVERT
- PROPOSED MAILBOX
- ROADSIDE SEEDING
- AGRICULTURAL SOIL TREATMENT

33417 SE LUSTED RD
33625 SE LUSTED RD
33608 W/ SE LUSTED RD
33608 SE LUSTED RD
SE LUSTED RD
ROAD 1
SEC- WILDLIFE HABITAT
PERMANENT CULVERT
SEDIMENT FENCE 3125-165
TREE PROTECTION FENCE 3125-190
RETAINING WALL
STRAW WATTLE 3125-188
DRAINAGE DITCH
PERMANENT FENCE
FIRE HYDRANT
CABLE AND BOLLARD FENCE
STORMWATER BASIN
CONVEYANCE SWALE
BERM
MATCHLINE, SEE DWG FWP-CE-1033
MATCHLINE, SEE DWG FWP-CE-1032

0 20 40 60
Scale In Feet



KEYPLAN

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		Revision	
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Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M, ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

FINISHED WATER INTERTIE EROSION AND SED CONTROL

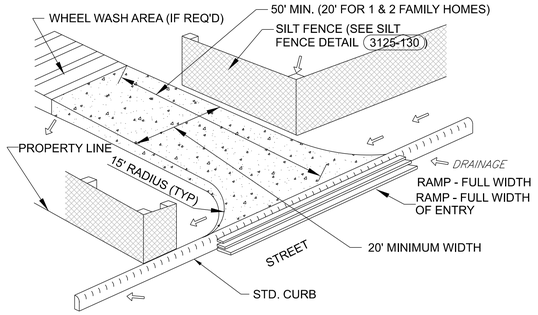
FINAL STABILIZATION AND LANDSCAPE

SAP Project No W02563
1/4 Section
Sheet No FWI-CE-1004

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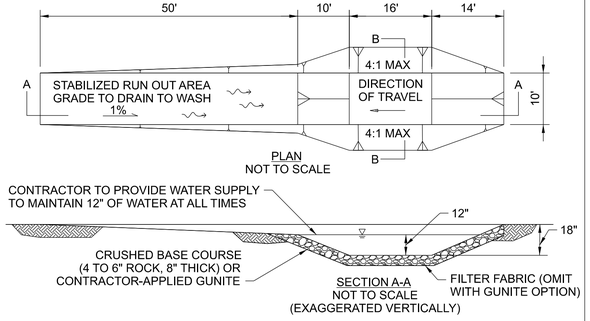
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GRAVEL CONSTRUCTION ENTRANCE

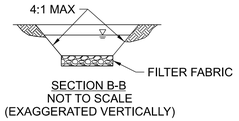
NTS

3125-130



NOTE:
1. CONTRACTOR TO REMOVE ACCUMULATED SEDIMENT FROM WHEEL WASH; MAY BE PIPED TO AN APPROVED SEDIMENT TRAP.

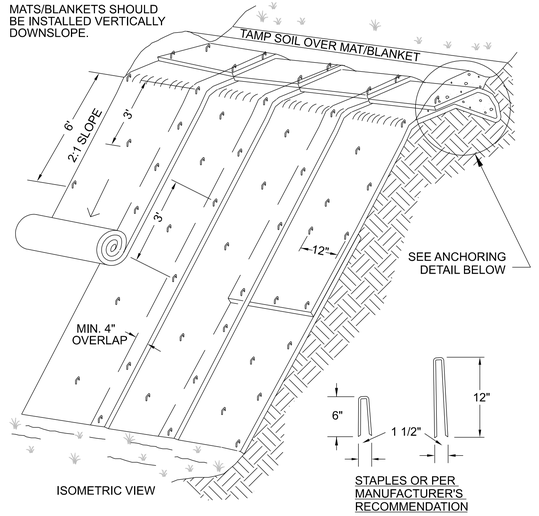
REFERENCE:
USE GEOTEXTILE FABRIC WITH AGGREGATE FOR A TEMPORARY TIRE WASH



WHEEL WASH

NTS

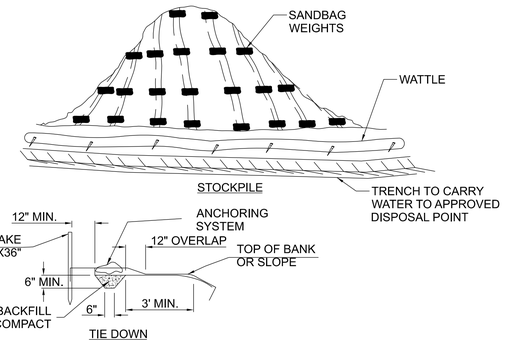
3125-135



SLOPE STABILIZATION

NTS

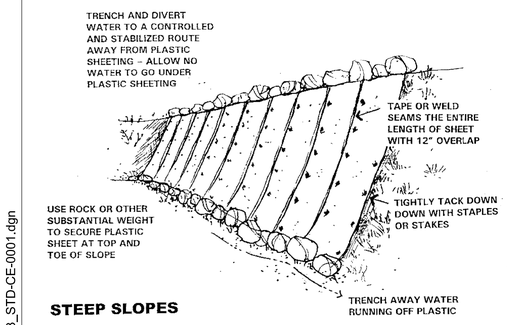
3125-152



STOCKPILE

NTS

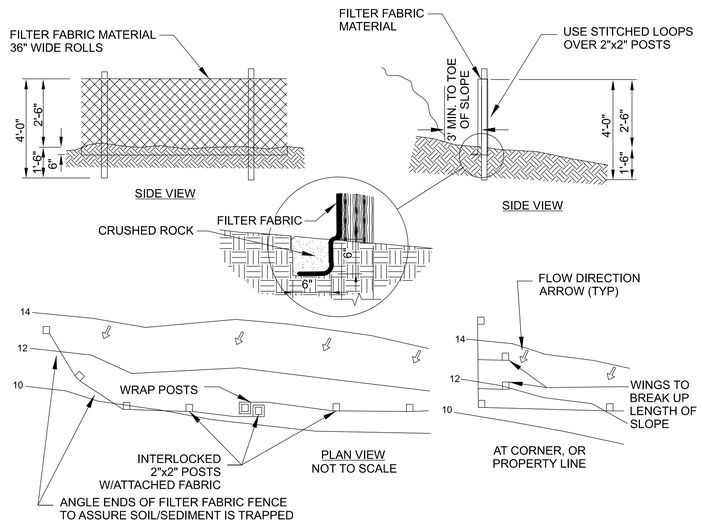
3125-161



TEMPORARY SLOPE PROTECTION

NTS

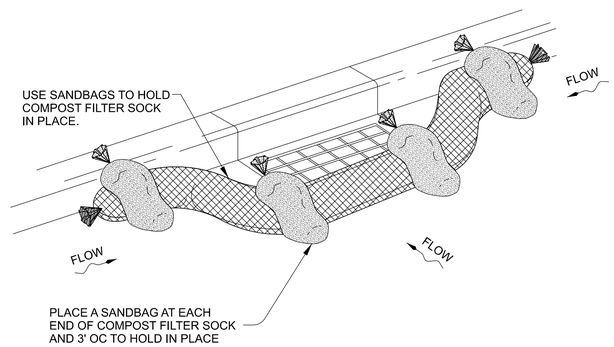
3125-153



TEMPORARY SEDIMENT FENCE

NTS

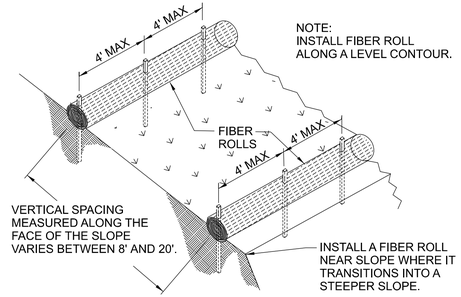
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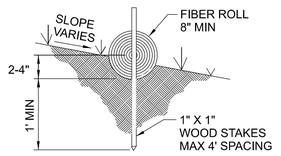
COMPOST FILTER SOCK - TYPE 7

NTS

3125-187



TYPICAL FIBER ROLL INSTALLATION
NOT TO SCALE



ENTRENCHMENT DETAIL
NOT TO SCALE

STRAW WATTLE

NTS

3125-188

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No	Date	Description	Appd
		Revision	
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EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	RM
Checked By	RG	Const Supvr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

STANDARD DETAILS EROSION CONTROL
DETAILS 1

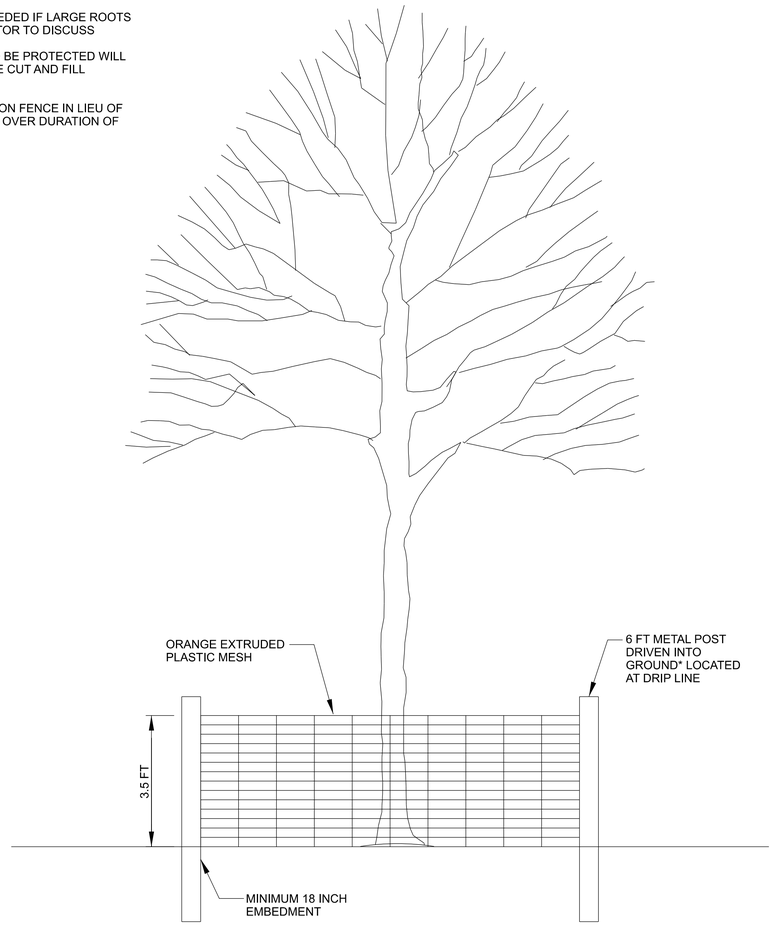
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1/4 Section:
Sheet No: STD-CE-0001

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TREE PROTECTION NOTES

1. INSTALL TREE PROTECTION FENCING (TPF) PRIOR TO ANY GROUND DISTURBING ACTIVITY. INSPECTION AND APPROVAL OF FENCING BY THE URBAN FORESTRY TREE INSPECTOR IS REQUIRED PRIOR TO COMMENCEMENT OF WORK, INCLUDING EQUIPMENT AND MATERIALS STAGING AND MOBILIZATION
2. CALL 823-TREE (8733) TO SCHEDULE THE TREE PROTECTION INSPECTION ONCE TPF IS INSTALLED
3. NO ENTRY IS ALLOWED INTO TREE PROTECTION AREAS FOR THE DURATION OF THE PROJECT UNLESS PERMITTED BY THE URBAN FORESTRY TREE INSPECTOR
4. TREE PROTECTION FENCING SHALL NOT BE MOVED, ALTERED OR REMOVED THROUGHOUT THE DURATION OF THE PROJECT DAMAGED TREE PROTECTION FENCE MUST BE REPAIRED IMMEDIATELY.
5. WHERE TREE ROOTS ARE ENCOUNTERED OR ANTICIPATED, EXCAVATION SHALL BE COMPLETED WITH HAND TOOLS CAREFULLY WITHOUT DAMAGE (I.E. VAC TRUCK, AIR SPADE, ETC)
6. TREE ROOTS OVER 2-INCH DIAMETER MAY NOT BE CUT OR DAMAGED WITHOUT A ROOT PRUNING INSPECTION.
7. FIELD ADJUSTMENTS OR ALTERNATIVE METHODS MAY BE NEEDED IF LARGE ROOTS ARE ENCOUNTERED. CONTACT THE ASSIGNED TREE INSPECTOR TO DISCUSS
8. TREES WITHIN THE LIMITS OF DISTURBANCE DESIGNATED TO BE PROTECTED WILL NOT BE REMOVED. CONTRACTOR IS DIRECTED TO COMPLETE CUT AND FILL OPERATIONS WITH CARE NEXT TO THESE TREES
9. THE ORANGE PLASTIC FENCE CAN BE USED AS CONSTRUCTION FENCE IN LIEU OF SILT FENCE IF GRADE IS MODERATE. INSPECT AND MAINTAIN OVER DURATION OF PROJECT

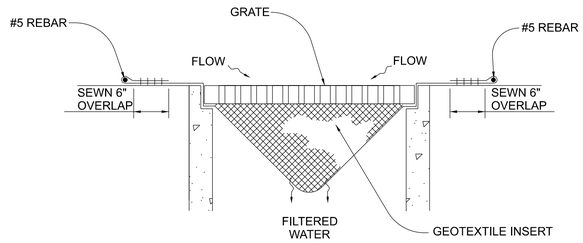


*MAXIMUM 10 FEET SEPARATION BETWEEN METAL POSTS

TREE PROTECTION FENCE

NTS

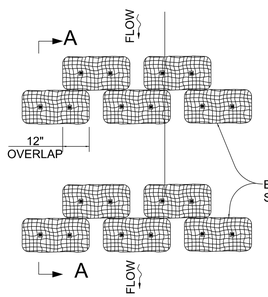
3125-190



INLET PROTECTION - TYPE 3

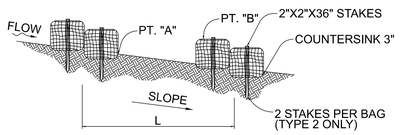
NTS

3125-201



PLAN

BARRIER SPACING		
INSTALL PARALLEL ALONG CONTOURS AS FOLLOWS		
% SLOPE	% SLOPE	MAXIMUM SPACING ON SLOPE
10% FLATTER	1:10 or FLATTER	300'
10 > % ≥ 15	10 > X ≥ 7.5	150'
15 > % ≥ 20	7.5 > X ≥ 5	100'
20 > % ≥ 30	5 > X ≥ 3	50'
STEEPER THAN 30%	STEEPER THAN 1:3	25'



SECTION A-A

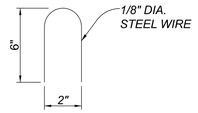
NOTES:
1. FOR TYPE 2 BARRIER, DRIVE STAKES FLUSH WITH TOP OF BAG AND INTO UNDISTURBED GROUND A MIN. OF 12". OMIT STAKES IF BAGS ARE PLACED ON PAVED SURFACE.
2. FOR TYPE 2 AND TYPE 4 BARRIERS, SPACE BAGS (L) SO THAT THE ELEVATION OF POINT "A" IS LESS THAN OR EQUAL TO THE ELEVATION OF POINT "B".

TYPE 2 - BIOFILTER BAGS
TYPE 3 - WATTLES
TYPE 4 - SAND BAGS

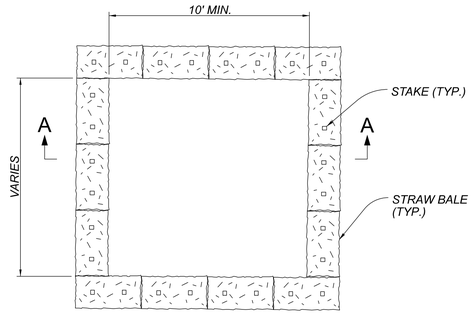
BIOFILTER BAG / SAND BAG BARRIER - TYPE 2 AND 4

NTS

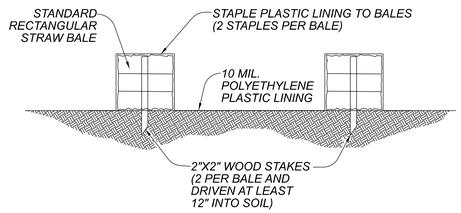
3125-202



STAPLE DETAIL



PLAN



SECTION A-A

CONCRETE TRUCK WASH OUT FACILITY

NTS

3125-203

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05\16\2023

No	Date	Description	Appd
		Revision	
Survey			

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Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	RM
Checked By	RG	Const Supvr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

STANDARD DETAILS EROSION CONTROL

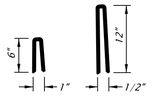
DETAILS 2

SAP Project No: W02563
1/4 Section:
Sheet No: STD-CE-0002

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NOTES:
1. INSTALL MATTING ON SMOOTH SOIL SURFACE AFTER SEEDING IS APPLIED (WHERE APPLICABLE).
2. INSTALL CHANNEL LINER MATTING, IN THE DIRECTION OF WATER FLOW. ANCHOR UPSTREAM END OF MAT WITH CHECK SLOT FOR CULVERT OUTFALLS. PLACE MAT UNDER PIPE 12" MINIMUM UPSTREAM FROM PIPE OUTLET.
3. CONSTRUCT CHECK SLOTS ACROSS CHANNEL BOTTOM AT 25' SPACING AND AT THE END OF EACH MAT (FIG. A3 OR A4).
4. OVERLAP SIDE CHANNEL LINER MATTING EDGES 6" OVER THE CENTER CHANNEL LINER MATTING AND FASTEN EDGES 12" OC CONTINUE OVERLAP AND STAPLING PATTERN FOR EACH ADDITIONAL SIDE CHANNEL LINER MAT.
5. LAP UPSTREAM MATTING END 12" OVER BEGINNING EDGE OF DOWNSTREAM MATTING. FASTEN 12" OC
6. ANCHOR TOP EDGE OF SIDE CHANNEL MATTING IN TRENCH AND FASTEN 12" OC (FIG. A2).
7. FASTEN MATTING INTERIOR AT 24" OC WITH STAGGERED SPACING.
8. CONSTRUCT INITIAL ANCHOR TRENCH AT DOWNSTREAM END OF MATTING AND TERMINAL SLOPE ANCHOR AT UPSTREAM END.
9. MATTING TYPES A THROUGH E: FURNISH FULLY BIODEGRADABLE PRODUCT. MATTING WITH PLASTIC OR PHOTODEGRADABLE COMPONENTS WILL NOT BE ACCEPTED.



STAPLES OR PER MANUFACTURER'S RECOMMENDATION
NOT TO SCALE

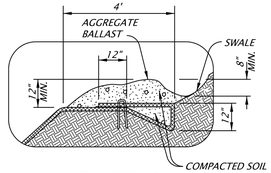
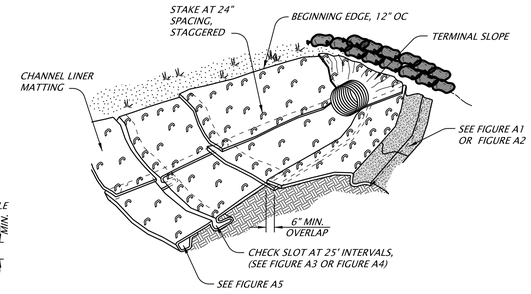


FIGURE A1: TOP OF BANK ANCHOR TRENCH, H>3' AND TERMINAL SLOPE
NOT TO SCALE



CHANNEL MATTING ISOMETRIC VIEW
NOT TO SCALE

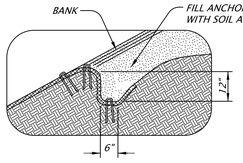


FIGURE A2: TOP OF BANK ANCHOR TRENCH, H<3'
NOT TO SCALE

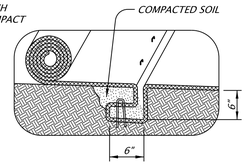


FIGURE A3: CHANNEL CHECK SLOT
NOT TO SCALE

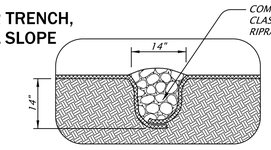


FIGURE A4: CHANNEL CHECK SLOT WITH ROCK BACKFILL
NOT TO SCALE

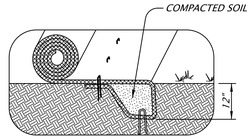
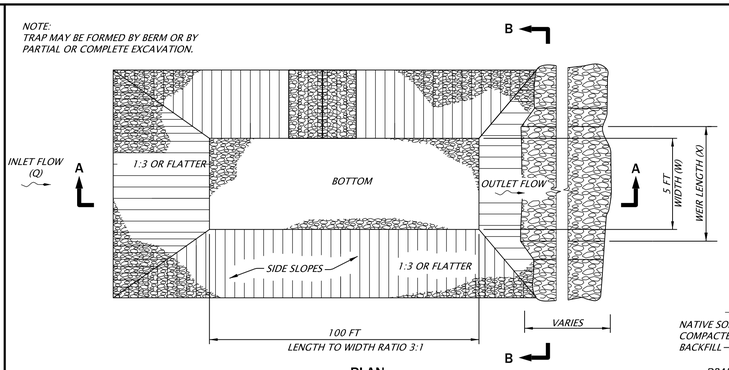


FIGURE A5: INITIAL CHANNEL ANCHOR TRENCH
NOT TO SCALE

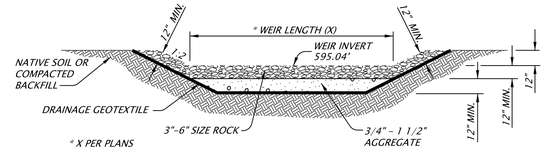
CHANNEL MATTING
NTS

3125-305

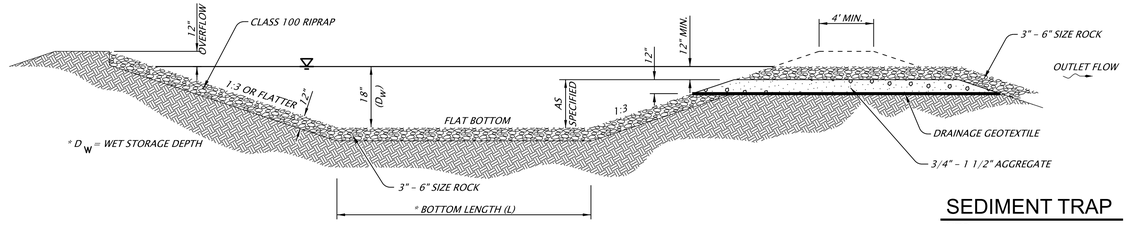
NOTE:
TRAP MAY BE FORMED BY BERM OR BY PARTIAL OR COMPLETE EXCAVATION.



PLAN



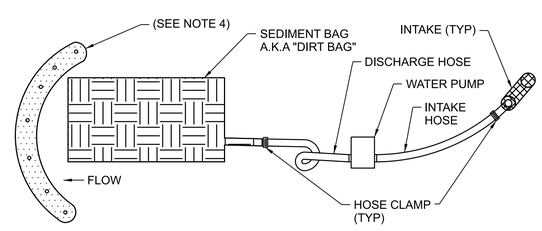
SECTION B-B



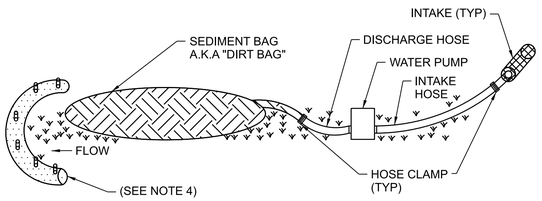
SECTION A-A

SEDIMENT TRAP
NTS

3125-302



PLAN VIEW



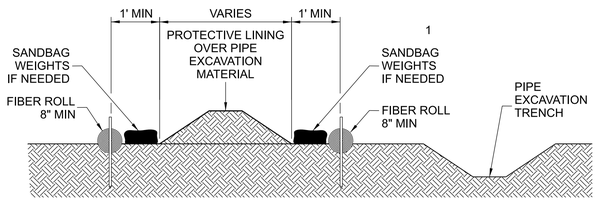
ELEVATION VIEW

NOTES:

1. PROVIDE SEDIMENT BAG MANUFACTURERED USING POLYPROPYLENE 8 OZ. NON-WOVEN GEOTEXTILE SEWN INTO A BAG WITH DOUBLE-NEEDLE USING HIGH STRENGTH THREAD, MIRAFI 180N DEWATERING BAG OR EQUAL.
2. PROVIDE FILLING CONNECTION INTO SEDIMENT BAG FOR 4 INCH OR LARGER DISCHARGE HOSE WITH STRAPS TO SECURE HOSE TO BAG.
3. SECURE SEDIMENT BAG TO GROUND WITH STRAPS AND STAKES SUCH THAT BAG IS IMMOVABLE WHEN FILLED.
4. PROVIDE TWO ROWS OF STRAW WADDLE DOWNSTREAM OF SEDIMENT BAG WITH ENDS OF WADDLE WRAPPED UPHILL AROUND SEDIMENT BAG TO CAPTURE DISCHARGE FROM BAG. 3125-188
5. SEDIMENT BAG IS FULL WHEN IT NO LONGER CAN EFFICIENTLY FILTER SEDIMENT OR ALLOW WATER TO PASS AT A RATE LESS THAN 50% OF THE MANUFACTURER'S DESIGNED FLOW RATE. WHEN FULL, DISPOSE OF SEDIMENT BAG IN ACCORDANCE WITH APPROVED SOLID WASTE DISPOSAL PLANS AS APPROVED BY OWNER'S REPRESENTATIVE.
6. DURING ACTIVE DEWATERING AND PUMPING INTO SEDIMENT BAG, MONITOR DEWATERING BAG AND DISCONTINUE USE IF BAG IS DAMAGED OR FULL.

SEDIMENT BAG
NTS

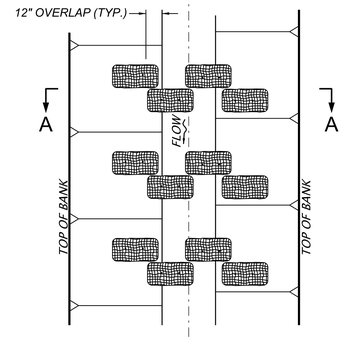
3125-310



APPLY DETAIL FOR ENTIRE LENGTH OF EXCAVATION BETWEEN DODGE PARK BLVD AND LUSTED ROAD. INSTALL FIBER ROLL ACCORDING TO 3125-188 AND ANCHOR PROTECTIVE LINING ACCORDING TO 3125-153. KEEP EXCAVATION MATERIAL WITHIN SILT FENCE BOUNDARY.

PIPE EXCAVATION MATERIAL PROTECTION
NTS

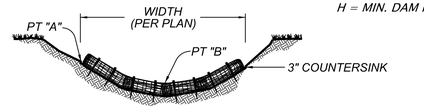
3125-301



PLAN

MAXIMUM CHECK DAM SPACING "L"				
Ditch Grade	H=8"	H=12"	H=18"	H=24"
10%	* *	* *	15'	20'
9%	* *	* *	16'	22'
8%	* *	* *	18'	25'
7%	* *	* *	21'	28'
6%	* *	16'	25'	33'
5%	* *	20'	30'	40'
4%	16'	25'	37'	50'
3%	22'	33'	50'	66'
2%	33'	50'	75'	100'

* * NOT ALLOWED
H = MIN. DAM HEIGHT



SECTION A-A

STAKE BIOFILTER BAGS WITH TWO 2"X2"X18" (MINIMUM) WOOD STAKES PER BAG. DRIVE STAKES A MINIMUM OF 6" INTO THE GROUND AND FLUSH WITH THE TOP OF THE BAGS. OMIT STAKES IF PLACED OVER PAVED SURFACES. OVERLAP BAGS 12" MINIMUM AT EACH JOINT.

BIOFILTER BAG CHECK DAM - TYPE 3
NTS

3125-004

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No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M, ACKERMAN, PRINCIPAL ENGINEER, PE #19424 Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

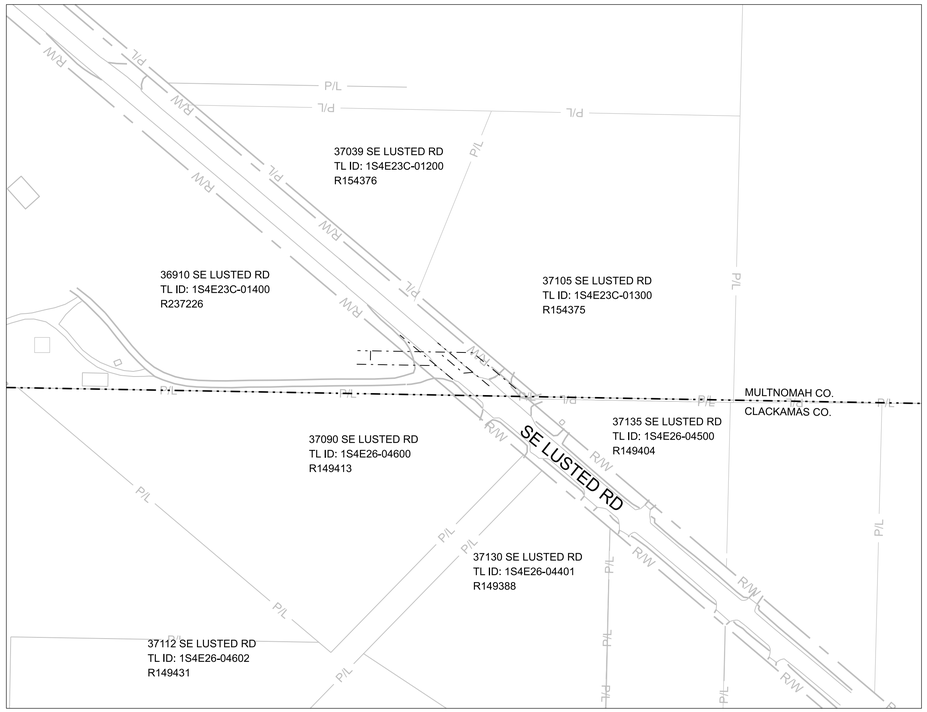
STANDARD DETAILS EROSION CONTROL
DETAILS 3

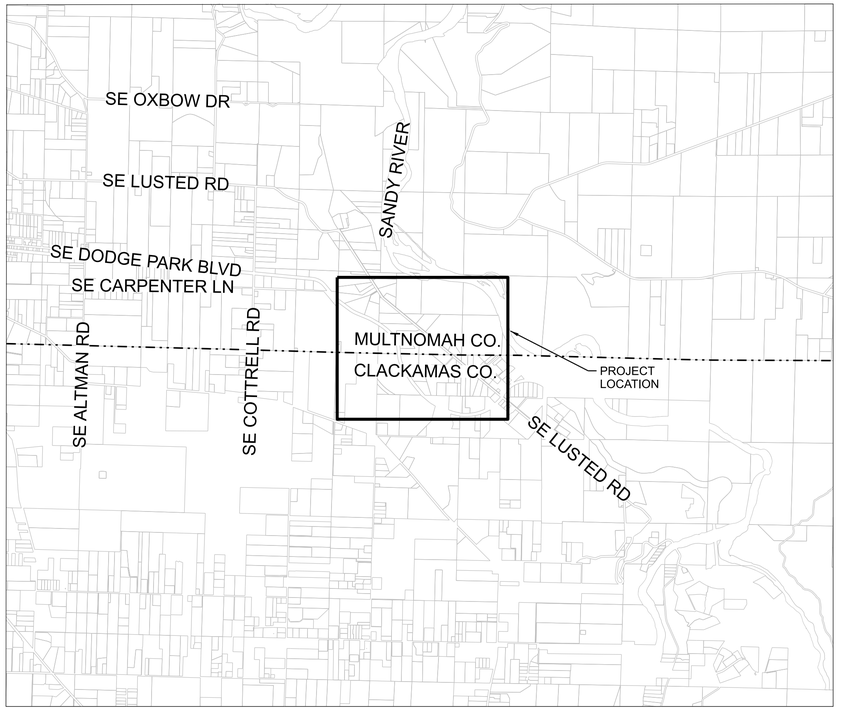
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EROSION AND SEDIMENT CONTROL PLAN - 1200-CA
BULL RUN FILTRATION PIPELINES
MULTNOMAH CONNECTION





LEGEND

- EXISTING CONCRETE
- EXISTING ASPHALT
- SIGNIFICANT ENVIRONMENTAL CONCERN (SEC)
- COUNTY LINE
- P/L — EXISTING PROPERTY LINE
- R/W — EXISTING RIGHT OF WAY
- W — EXISTING WATER LINE
- G — EXISTING GAS LINE
- TEL — EXISTING TELEPHONE LINE
- EXISTING UTILITY POLE
- EXISTING CULVERT
- X — X — EXISTING STRUCTURE FENCE
- EXISTING DITCH
- EXISTING SIGN
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- EXISTING MAILBOX
- EXISTING TREES
- 500' — EXISTING CONTOUR
- EXISTING OHW AND/OR WETLANDS

SITE MAP
1"=100"

SITE INFORMATION

1. TYPE OF DEVELOPMENT: CAPITAL IMPROVEMENT
2. CONSTRUCTION ACTIVITY WILL CONSIST OF:
   - A) PHASE 1: CLEARING AND GRUBBING 2024
   - B) PHASE 1: MASS GRADING AND EXCAVATION 2024-2027
   - C) PHASE 2: UTILITY CONSTRUCTION' 2024-2028
   - D) PHASE 3: VERTICAL CONSTRUCTION 2024-2025
     - -FWI SITE ONLY
   - E) PHASE 4: FINAL STABILIZATION 2025-2028
3. PROJECT TIMELINE:
   - BEGINNING DATE: MARCH 2024
   - COMPLETION DATE: MARCH 2028
4. PROJECT SITE AREAS:
   - TOTAL AREA: 1.30 AC
   - -DISTURBED AREA: 1.30 AC
   - -PERCENT OF SITE DISTURBED: 100 %
5. OFFSITE PUBLIC IMPROVEMENT AREA:
   - -IMPROVEMENT LENGTH: 317'
6. ONSITE SOIL TYPES:
   - A) BULL RUN SILT LOAD, 3-8% SLOPES
   - B) CAZADERO SILTY CLAY LOAM, 8-15% SLOPES
   - C) CAZADERO SILTY CLAY LOAM, 0-7% SLOPES
7. CUT AND FILL DATA:
   - -CUT: 22.37 CY
   - -FILL: 113.99 CY
   - -NET ADJUSTED: 91.62 CY FILL
8. NEAREST WATER BODY: LOWER SANDY RIVER WATERSHED
9. PROJECT LOCATION: 36910 SE LUSTED ROAD, TLID: 1S4E23C-01400, R237226
10. PROPERTY DESCRIPTION: VARIES
11. VERTICAL ELEVATION: 500'-506'

VICINITY MAP
N.T.S.

SHEET INDEX

MUL-CE-1000	COVER SHEET
MUL-CE-1000A	GENERAL NOTES
MUL-CE-1001	EXISTING CONDITIONS AND DEMOLITION
MUL-CE-1002	UTILITY WORK PHASE 1
MUL-CE-1003	UTILITY WORK PHASE 2
MUL-CE-1004	FINAL STABILIZATION AND LANDSCAPE
STD-CE-0001	STANDARD DETAILS
STD-CE-0002	STANDARD DETAILS
STD-CE-0003	STANDARD DETAILS

PROPOSED CATIONIC CHEMICALS TO BE USED:

TIDAL CLEAR 1% - CHITOSAN (cas 9012-76-4), ORGANIC ACID (CAS 64-19-7, 77-92-9, 79-33-4, AND/OR 6915-15-7), WATER (CAS 7732-18-5)

POLLUTANTS GENERATING MATERIALS:

SEDIMENT, CONCRETE, PAINT, FUELS, OILS, PLASTICS, CONSTRUCTION MATERIALS.

AUTHORIZED NON-STORMWATER DISCHARGES:

FIRE HYDRANT FLUSHING, IRRIGATION, POTABLE WATERLINE FLUSHING, PAVEMENT WASH WATER (EXCLUDING SPILL AND LEAKS), UNCONTAMINATED CLEAR GROUNDWATER, CONSTRUCTION DE-WATERING

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EUGENE, OR 97401
503-746-8812
ROY@EMERIODESIGN.COM

RAIN GAGE:
GRESHAM FIRE DEPT, RAIN GAGE
1333 NW EASTMAN PKWY
Hyperlink:
https://or.water.usgs.gov/non-usgs/bes/gresham.html

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No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

MULTNOMAH CONNECTION EROSION AND SED CONTROL
COVER SHEET

SAP Project No: W02563
1/4 Section: 3664 / 3764
Sheet No: MUL-CE-1000

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EROSION AND SEDIMENT CONTROL GENERAL NOTES (ALL SECTIONS REFERENCING DEQ 1200-C PERMIT)

1. ONCE KNOWN, INCLUDE A LIST OF ALL CONTRACTORS THAT WILL ENGAGE IN CONSTRUCTION ACTIVITIES ON SITE, AND THE AREAS OF THE SITE WHERE THE CONTRACTOR(S) WILL ENGAGE IN CONSTRUCTION ACTIVITIES. REVISE THE LIST AS APPROPRIATE UNTIL PERMIT COVERAGE IS TERMINATED (SECTION 4.4.c.i). IN ADDITION, INCLUDE A LIST OF PERSONNEL (BY NAME AND POSITION) THAT ARE RESPONSIBLE FOR THE DESIGN, INSTALLATION AND MAINTENANCE OF STORMWATER CONTROL MEASURES (E.G. ESCP DEVELOPER, BMP INSTALLER (SEE SECTION 4.10), AS WELL AS THEIR INDIVIDUAL RESPONSIBILITIES. (SECTION 4.4C.ii).
2. VISUAL MONITORING INSPECTION REPORTS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-C PERMIT REQUIREMENTS. (SECTION 6.5)
3. INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200-C PERMIT REQUIREMENTS. (SECTION 6.5q)
4. RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. (SECTION 4.7)
5. THE PERMIT REGISTRANT MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT. (SECTIONS 4 AND 4.11)
6. THE ESCP MUST BE ACCURATE AND REFLECT SITE CONDITIONS. (SECTION 4.8)
7. SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITTAL OF THE ESCP REVISIONS IS ONLY UNDER SPECIFIC CONDITIONS. SUBMIT ALL NECESSARY REVISIONS TO DEQ OR AGENT WITHIN 10 DAYS. (SECTION 4.9)
8. SEQUENCE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. (SECTION 2.2.2)
9. CREATE SMOOTH SURFACES BETWEEN SOIL SURFACE AND EROSION AND SEDIMENT CONTROLS TO PREVENT STORMWATER FROM BYPASSING CONTROLS AND PONDING. (SECTION 2.2.3)
10. IDENTIFY, MARK, AND PROTECT (BY CONSTRUCTION FENCING 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. (SECTION 2.2.1)
11. PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED. (SECTION 2.2.5)
12. MAINTAIN AND DELINEATE ANY EXISTING NATURAL BUFFER WITHIN THE 50-FEET OF WATERS OF THE STATE. (SECTION 2.2.4)
13. INSTALL PERIMETER SEDIMENT CONTROL, INCLUDING STORM DRAIN INLET PROTECTION AS WELL AS ALL SEDIMENT BASINS, TRAPS, AND BARRIERS PRIOR TO LAND DISTURBANCE, (SECTIONS 2.1.3)
14. CONTROL BOTH PEAK FLOW RATES AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS AND DOWNSTREAM CHANNELS AND STREAM BANKS. (SECTIONS 2.1.1 AND 2.2.16)
15. CONTROL SEDIMENT AS NEEDED ALONG THE SITE PERIMETER AND AT ALL OPERATIONAL INTERNAL STORM DRAIN INLETS AT ALL TIMES DURING CONSTRUCTION, BOTH INTERNALLY AND AT THE SITE BOUNDARY. (SECTIONS 2.2.6 AND 2.2.13)
16. ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. (SECTION 2.2.14)
17. APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES. TEMPORARY OR PERMANENT STABILIZATIONS MEASURES ARE NOT REQUIRED FOR AREAS THAT ARE INTENDED TO BE LEFT UNVEGETATED, SUCH AS DIRT ACCESS ROADS OR UTILITY POLE PADS. (SECTIONS 2.2.20 AND 2.2.21)
18. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS. (SECTION 2.3.7)
19. KEEP WASTE CONTAINER LIDS CLOSED WHEN NOT IN USE AND CLOSE LIDS AT THE END OF THE BUSINESS DAY FOR THOSE CONTAINERS THAT ARE ACTIVELY USED THROUGHOUT THE DAY. FOR WASTE CONTAINERS THAT DO NOT HAVE LIDS, PROVIDE EITHER (1) COVER (E.G., A TARP, PLASTIC SHEETING, TEMPORARY ROOF) TO PREVENT EXPOSURE OF WASTES TO PRECIPITATION, OR (2) A SIMILARLY EFFECTIVE MEANS DESIGNED TO PREVENT THE DISCHARGE OF POLLUTANTS (E.G., SECONDARY CONTAINMENT). (SECTION 2.3.7)
20. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMP'S SUCH AS: CONSTRUCTION ENTRANCE, GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPS MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES. (SECTION 2.2.7)
21. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE. (SECTION 2.2.7.f)
22. CONTROL PROHIBITED DISCHARGED FROM LEAVING THE CONSTRUCTION SITE, I.E., CONCRETE WASH-OUT, WASTEWATER FROM CLEANOUT OF STUCCO, PAINT AND CURING COMPOUNDS. (SECTIONS 1.5 AND 2.3.9)
23. ENSURE THAT STEEP SLOPE AREAS WHERE CONSTRUCTION ACTIVITIES ARE NOT OCCURRING ARE NOT DISTURBED. (SECTION 2.2.10)
24. PREVENT SOIL COMPACTION IN AREAS WHERE POST-CONSTRUCTION INFILTRATION FACILITIES ARE TO BE INSTALLED. (SECTION 2.2.12)
25. USE BMPS TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; 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, FERTILIZER, PESTICIDES AND HERBICIDES, PAINTS, SOLVENTS, CURING COMPOUNDS AND ADHESIVES FROM CONSTRUCTION OPERATIONS. (SECTIONS 2.2.15 AND 2.3)
26. PROVIDE PLANS FOR SEDIMENTATION BASINS THAT HAVE BEEN DESIGNED PER SECTION 2.2.17 AND STAMPED BY AN OREGON PROFESSIONAL ENGINEER. (SEE SECTION 2.2.17a)
27. IF ENGINEERED SOILS ARE USED ON SITE, A SEDIMENTATION BASIN/IMPOUNDMENT MUST BE INSTALLED. (SEE SECTIONS 2.2.17 AND 2.2.18)
28. PROVIDE A DEWATERING PLAN FOR ACCUMULATED WATER FROM PRECIPITATION AND UNCONTAMINATED GROUNDWATER SEEPAGE DUE TO SHALLOW EXCAVATION ACTIVITIES. (SEE SECTION 2.4)
29. IMPLEMENT THE FOLLOWING BMPS WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES. (SECTION 2.3)
30. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL. (SECTION 2.2.9)
31. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPARIAN ZONE. (SECTION 2.3.5)
32. IF AN ACTIVE TREATMENT SYSTEM (FOR EXAMPLE, ELECTRO-COAGUALATION, FLOCCULATION, FILTRATION, ETC) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVIDCE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATION THE TREATMENT SYSTEM. OBTAIN ENVIRONMENTAL MANAGEMENT PLAN APPROVAL FROM DEQ BEFORE OPERATIING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS. (SECTION 1.2.9)
33. TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE REGISTRANT IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR. (SECTION 2.2)
34. AS NEEDED BASED ON WEATHER CONDITIONS, AT THE END OF EACH WORKDAY SOILD STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER MBPS MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS. (SECTION 2.2.8)
35. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL. (SECTION 2.1.5b)
36. OTHER SEDIMENT BARRIERS (SUCH AS BIOBAGS): REMOVE SEDIMENT BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT AND BEFORE BMP REMOVAL. (SECTION 2.1.5c)
37. CATCH BASINS: CLEAN BEFORE RETENTION CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT. SEDIMENT BASINS AND SEDIMENT TRAPS: REMOVE TRAPPED SEDIMENTS BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT. (SECTION 2.1.5a)
38. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT 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 TIMEFRAME. (SECTION 2.2.19)
39. THE INTENTIONAL WASHING OF SEDIMENT INTO STROM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS. (SECTION 2.2.19)
40. DOCUMENT AN PORTION(S) OF THE SITE WHERE LAND DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED OR WILL BE TEMPORARILY INACTIVE FOR 14 OR MORE CALENDAR DAYS. (SECTION 6.5.f)
41. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE WITH A COVERING OF BLOWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE. (SECTION 2.2.20)
42. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED, ALL TEMPORARY EROSION CONTROLS AND RETAINED MOVED AND DISPOSED OF PROPERLY, UNLESS NEEDED FOR LONG TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE. (SECTION 2.2.21)

INSPECTION FREQUENCY

	SITE CONDITION	MINIMUM FREQUENCY
1.	ACTIVE PERIOD	ON INITIAL DATE THAT LAND DISTURBANCE ACTIVITIES COMMENCE. WITHIN 24 HOURS OF ANY STORM EVENT, INCLUDING RUNOFF FROM SNOW MELT, THAT RESULTS IN DISCHARGE FROM THE SITE. AT LEAST ONCE EVERY 14 DAYS, REGARDLESS OF WHETHER STORMWATER RUNOFF IS OCCURRING.
2.	INACTIVE PERIODS GREATER THAN 14 CONSECUTIVE CALENDAR DAYS	THE INSPECTOR MAY REDUCE THE FREQUENCY OF INSPECTIONS IN ANY AREA OF THE SITE WHERE THE STABILIZATION STEPS IN SECTION 2.2.20 HAVE BEEN COMPLETED TO TWICE PER MONTH FOR THE FIRST MONTH, NO LESS THAN 14 CALENDAR DAYS APART, THAN ONCE PER MONTH.
3.	PERIODS DURING WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER	IF SAFE, ACCESSIBLE AND PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT DISCHARGE POINT, OR DOWNSTREAM LOCATION OF THE RECEIVING WATERBODY.
4.	PERIODS DURING WHICH CONSTRUCTION ACTIVITIES ARE SUSPENDED AND RUNOFF IS UNLIKELY DUE TO FROZEN CONDITIONS.	VISUAL MONITORING INSPECTIONS MAY BE TEMPORARILY SUSPENDED. IMMEDIATELY RESUME MONITORING UPON THAWING, OR WHEN WEATHER CONDITIONS MAKE DISCHARGES LIKELY.
5.	PERIODS DURING WHICH CONSTRUCTION ACTIVITIES ARE CONDUCTED AND RUNOFF IS UNLIKELY DURING FROZEN CONDITIONS.	VISUAL MONITORING INSPECTIONS MAY BE REDUCED TO ONCE A MONTH. IMMEDIATELY RESUME MOITORING UPON THAWING, OR WHEN WEATHER CONDITIONS MAKE DISCHARGES LIKELY.

FILTER STRIP SEEDING

BOTANICAL NAME	COMMON NAME
HORDEUM VULGARE VAR POCO	POCO BARLEY
HARDEUM BRACHYANTHERUM	MEADOW BARLEY
BROMUS CARINATUS	CALIFORNIA BROME
FESTUCA IDAHOENSIS ROMERIID	ROEMER'S FESCUE
TRIFOLIUM FRAGIFERUM	STRAWBERRY CLOVER
CLARKIA AMONEA	FAREWELL TO SPRING
OENOTHERA ELATA HOOKERI	HOOKER'S EVENING PRIMROSE
DESHAMPSIA CESPITOSA	TUFTED HAIRGRASS
AGROSTIS EXERATA	SPIKE BENTGRASS

SITE INFORMATION

YEAR	2024-2027				
PHASE/BMP	CLEARING	MASS GRADING	UTILITY CONSTRUCTION	VERTICAL CONSTRUCTION	FINAL STABILIZATION
EROSION PREVENTION					
GROUND COVER	X	X	X		X
PLASTIC SHEETING	X	X	X		
DUST CONTROL	X	X	X		
TEMPORARY STABILIZATION (STRAW MULCH/HYDROSEED)		X	X	X	
PERMANENT STABILIZATION					X
BUFFER ZONE (RAVINE)	X	X	X	X	
SEDIMENT CONTROL					
SEDIMENT FENCE (PERIMETER)	X				X
SEDIMENT FENCE (INTERIOR)	X				
STRAW WATTLES	X	X	X	X	X
INLET PROTECTION	X	X	X	X	X
DEWATERING		X	X		
RUN OFF CONTROL					
CONSTRUCTION ENTRANCE	X	X	X		
EXISTING OUTLET PROTECTION	X	X	X	X	
NEW OUTLET PROTECTION		X	X	X	X
EXISTING CURB INLET CHECK DAMS	X	X	X	X	X
POLLUTION PREVENTION					
HAZARD WASTE MANAGEMENT				X	
SPILL KIT ONSITE				X	X
CONCRETE WASHOUT AREA	X	X	X	X	

ROADSIDE SEEDING

BOTANICAL NAME	COMMON NAME
FESTUCA RUBRA VAR. SEALINK	SEALINK CREEPING RED FESCUE
FESTUCA OVINA VAR. AZAY BLUE	AZAY BLUE SHEEP FESCUE
TRIFOLIUM FRAGIFERUM	STRAWBERRY CLOVER
NEMOPHILA MENZIESII	BABY BLUE EYES
LIMNANTHES DOUGLASII	DOUGLAS MEADOWFOAM
ARMERIA MARITIMA	THRIFT SEAPINK
TRIFOLIUM REPENS VAR MICROCLOVER	MICROCLOVER
LOBULARIA MARITIMA	SWEET ALYSSUM CARPET OF SNOW
ACHILLEA MILLEFOLIUM	COMMON YARROW
BELLIS PERENNIS	LAWNDAISY

PASTURE SEEDING

BOTANICAL NAME	COMMON NAME
FESTUCA ARUNDINCIA VAR ATLAS	ATLAS FORAGE TALL FESCUE
FESTULOIUM SPP	SWEET TART FESTULOIUM
LOLIUM PERENNE VAR AMAZON	TETRAPLOID AMAZON TETRAPLOID PERENNIAL RYE
LOLIUM MULTIFLORIUM VAR BIG SHOT TETRAPLOID	BIG SHOT TETRAPLOID ANNUAL RYE
DACTYALIS GLOMERITA	POTOMAC ORCHARDGRASS
TRIFOLIUM REPENS VAR JUMBO LADINO	JUMBO LADINO WHITE

SEC SEEDING

BOTANICAL NAME	COMMON NAME
BROMUS CARINATUS	CALIFORNIA BROME
CAREX DEWEYANA	DEWEY'S SEDGE
DESCHAMPSIA ELONGATA	SLENDER HAIRGRASS
ELYMUS GLAUCUS	BLUE WLLDRYE
GEUM MACROPHYLLUM	LARGE-LEAVED AVENS
GLYCERIA ELATA	TALL MANNAGRASS
LUPINUS LATIFOLIUM	LARGELEAF LUPINE
PRUNELLA LANCEOLATA	SELFHEAL
TELLIMA GRANDIFLORA	FRINGE CUPS

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Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

MULTNOMAH CONNECTION
EROSION AND SED CONTROL
GENERAL NOTES

SAP Project No W02563
1/4 Section
Sheet No MUL-CE-1000A

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PRE-CONSTRUCTION, CLEARING, AND DEMOLITION NOTES:

1. **ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRTUCTION ACTIVITIES.**

2. **SEDIMENT BARRIERS APPROVED FOR USE INCLUDE SEDIMENT FENCE, BERMS CONSTRUCTED OUT OF MULCH, CHIPPINGS, OR OTHER SUITABLE MATERIALS, STRAW WATTLES, OR OTHER APPROVED MATRIALS.**

3. **SENSITIVE RESOURCES INCLUDING, BUT NOT LIMITED TO, TREES, WETLANDS, AND RIPARIAN PROTECTION AREAS SHALL BE CLEARLY DELINEATED WITH ORANGE CONSTRUCTION FENCING OR CHAIN LINK FENCING IN A MANNER THAT IS CLEARLY VISIBLE TO ANYONE IN THE AREA. NO ACTIVITIES ARE PERMITTED TO OCCUR BEYOND THE CONSTRUCTION BARRIER.**

4. **CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, STREET SWEEPING, AND VACUUMING, MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.**

5. **RUN-ON AND RUN-OFF CONTROLS SHALL BE IN PLACE AND FUNCTIONAL PRIOR TO BEGINNING SUBSTANTIAL CONSTRUCTION ACTIVITIES. RUN-ON AND RUN-OFF CONTROL MEASURES INCLUDE: SLOPE DRAINS (WITH OUTLET PROTECTION), CHECK DAMS, SURFACE ROUGHENING, AND BANK STABILIZATION.**

LEGEND

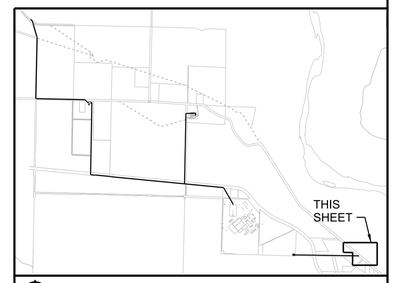
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- TREE REMOVAL
- FLOW DIRECTION
- SANITARY STATION
- CONSTRUCTION ENTRANCE
- REMOVE FENCE

37130 SE LUSTED RD
R149413

37135 SE LUSTED RD
R149404

SEDIMENT FENCE 3125-165
TREE PROTECTION FENCE 3125-190
TREE PROTECTION FENCE 3125-190
CLACKAMAS COUNTY
MULTNOMAH COUNTY
SEC-WILDLIFE HABITAT
SEDIMENT FENCE 3125-165
GRAVEL CONSTRUCTION ENTRANCE 3125-130
MATCHLINE, RWP-CE-1001
WHEEL WASH 3125-135
SANITARY STATION
SE LUSTED RD
37103 SE LUSTED RD
R154375
REMOVE FENCE
37090 SE LUSTED RD
R237226
TREE PROTECTION FENCE 3125-190
SEDIMENT FENCE 3125-165
TREE PROTECTION FENCE 3125-190
SEDIMENT FENCE 3125-165
SEC-GENERAL
37039 SE LUSTED RD
R154376
SEC-SCENIC WATERWAY
SEC-SCENIC WATERWAY
SEC-WILDLIFE HABITAT

0 40 80 120
Scale In Feet



KEYPLAN

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Project Mgr	BJP	Date	6/7/23

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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M, ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

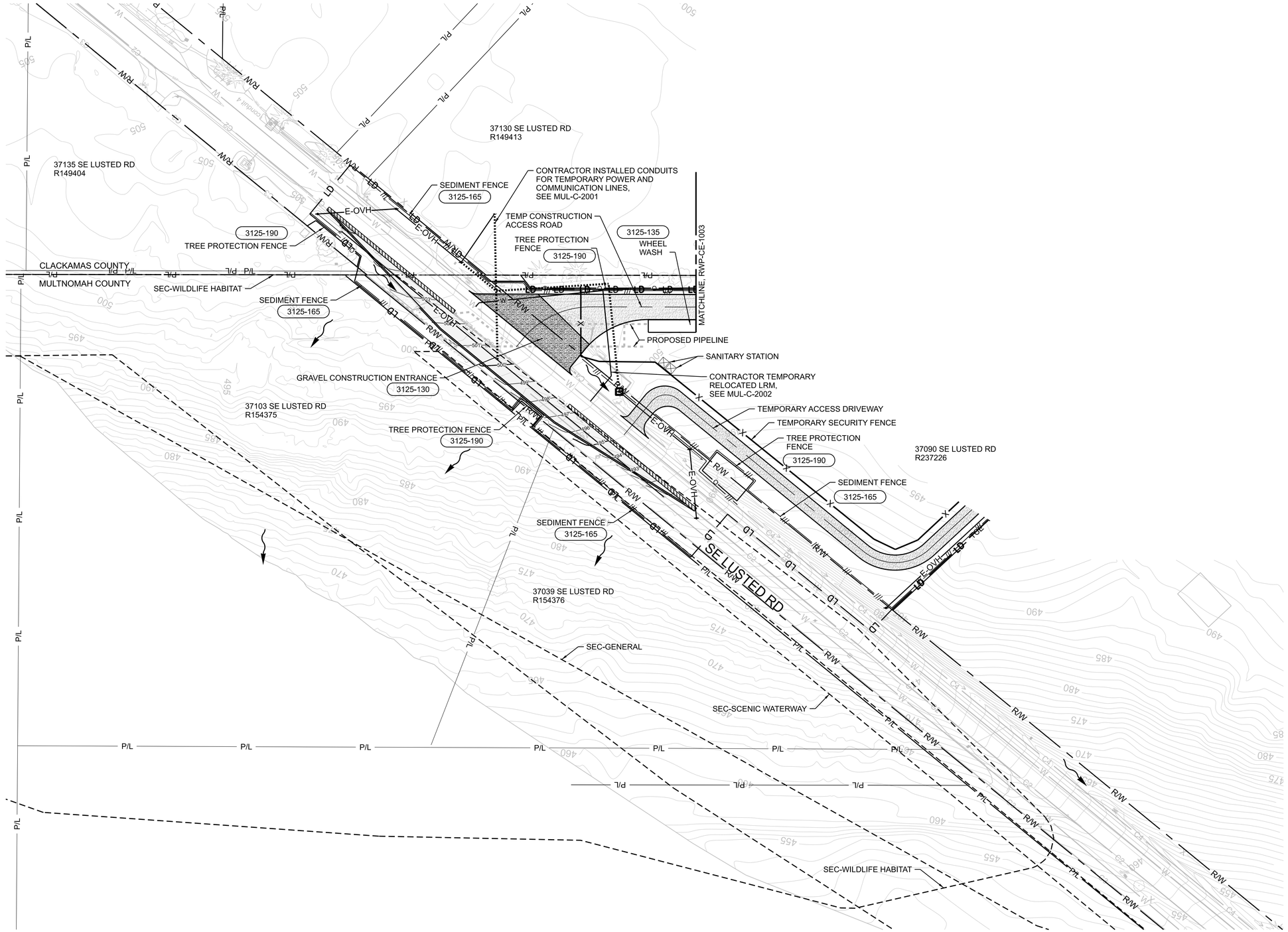
MULTNOMAH CONNECTION EROSION AND SED CONTROL

EXISTING CONDITIONS AND DEMOLITION

SAP Project No	1/4 Section	Sheet No
W02563	3664 / 3764	MUL-CE-1001

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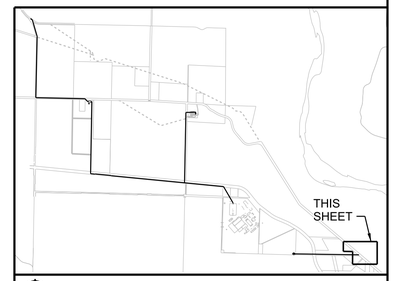
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LEGEND

- CONSTRUCTION ENTRANCE
- PROPOSED ASPHALT
- PROPOSED GRAVEL
- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- GRIND & INLAY
- XXXX-XXX — STANDARD DETAIL CALLOUT
- 500' — PROPOSED CONTOUR
- PROPOSED PIPELINE
- PROPOSED BURIED ELECTRIC
- X — TEMPORARY FENCE
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- E-OVH — TEMPORARY OVERHEAD POWER
- W — TEMPORARY WATER RELOCATE
- TEMPORARY UTILITY POLE
- SANITARY STATION

0 40 80 120
Scale In Feet



KEYPLAN

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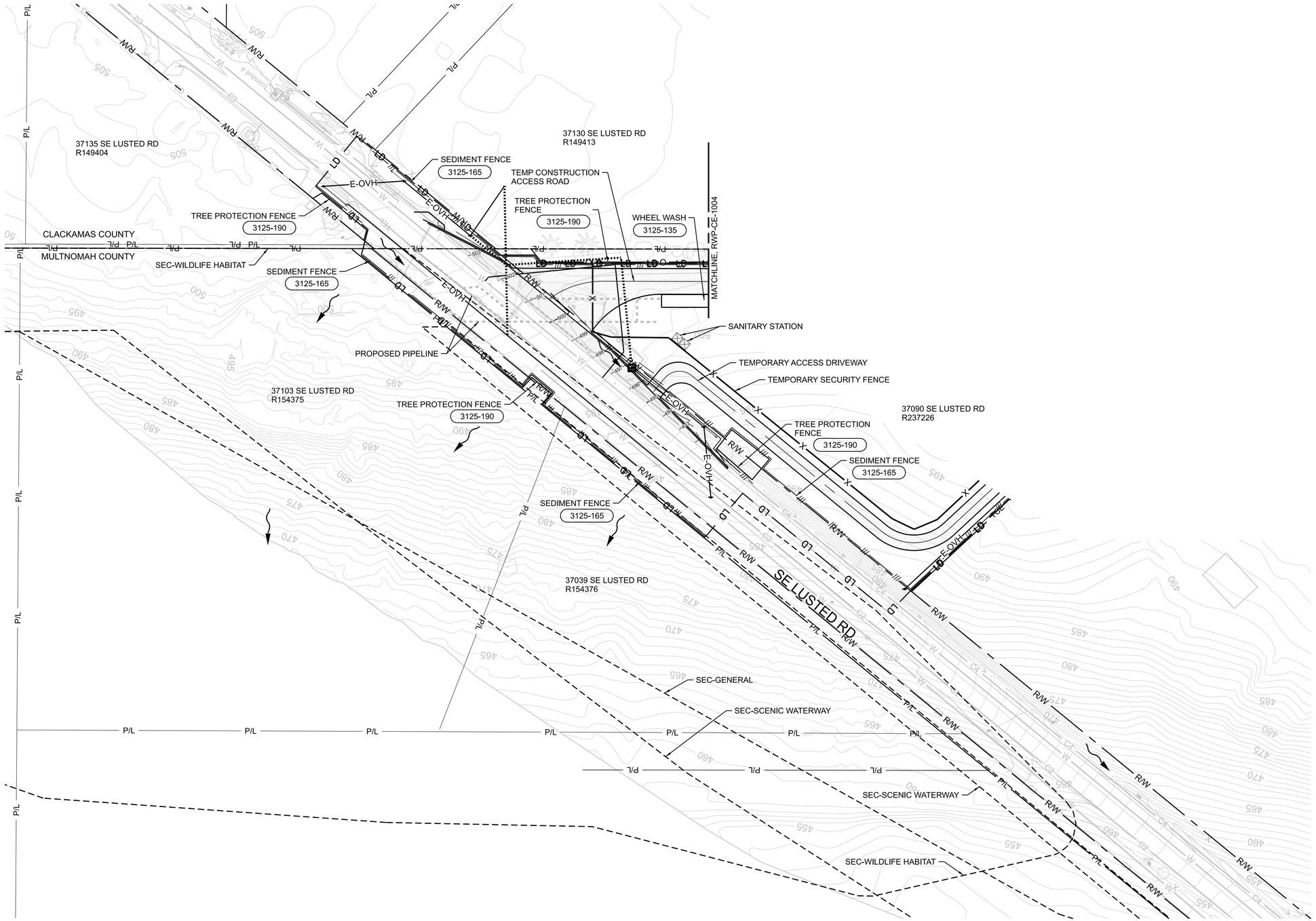
MULTNOMAH CONNECTION EROSION AND SED CONTROL

UTILITY WORK PHASE 1
NORTH WIDENING

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- O — TREE PROTECTION FENCE
- GRIND & INLAY
- XXXX-XXX — STANDARD DETAIL CALLOUT
- 500' — PROPOSED CONTOUR
- PROPOSED PIPELINE
- PROPOSED BURIED ELECTRIC
- X — TEMPORARY FENCE
- TEMPORARY UTILITY POLE
- E-OVH — TEMPORARY OVERHEAD POWER
- TCE — TEMPORARY CONSTRUCTION EASEMENT

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21-JUL-2023

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M, ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

MULTNOMAH CONNECTION EROSION AND SED CONTROL

UTILITY WORK PHASE 2
SOUTH WIDENING

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	MUL-CE-1003

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FINAL STABILIZATION PHASE NOTES

1. ALL PERIMETER SEDIMENT FENCING TO BE REMOVED UPON COMPLETION OF THIS PHASE.
2. SEE SEEDING MIX TABLES, SHEET MUL-CE-1000A.

LEGEND

- PROPOSED ASPHALT
- PROPOSED GRAVEL
- FLOW DIRECTION
- LD — LIMITS OF DISTURBANCE
- /// — SEDIMENT FENCE
- O — TREE PROTECTION FENCE
- GRIND & INLAY
- STORM FILTER STRIP
- XXXX-XXX — STANDARD DETAIL CALLOUT
- 500' — PROPOSED CONTOUR
- X — PROPOSED FENCE
- PE — PERMANENT EASEMENT
- E-OVH — PROPOSED UTILITY WIRE OVERHEAD
- ROADSIDE SEEDING
- PASTURE SEEDING
- SEC SEEDING

37130 SE LUSTED RD
R149413

37135 SE LUSTED RD
R149404

37103 SE LUSTED RD
R154375

37090 SE LUSTED RD
R237226

37039 SE LUSTED RD
R154376

SE LUSTED RD

SEDIMENT FENCE 3125-165

TREE PROTECTION FENCE 3125-190

PERMANENT FENCE

PROPOSED UTILITY WIRE

SEC-WILDLIFE HABITAT

SEC-GENERAL

SEC-SCENIC WATERWAY

CLACKAMAS COUNTY

MULTNOMAH COUNTY

MATCHLINE, RWP-CE-1004

0 40 80 120
Scale In Feet

THIS SHEET

KEYPLAN

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Project Mgr	BJP	Date	6/7/23

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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

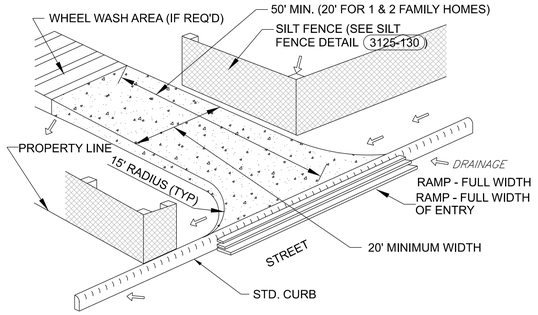
MULTNOMAH CONNECTION EROSION AND SED CONTROL

FINAL STABILIZATION AND LANDSCAPE

SAP Project No	W02563
1/4 Section	3664 / 3764
Sheet No	MUL-CE-1004

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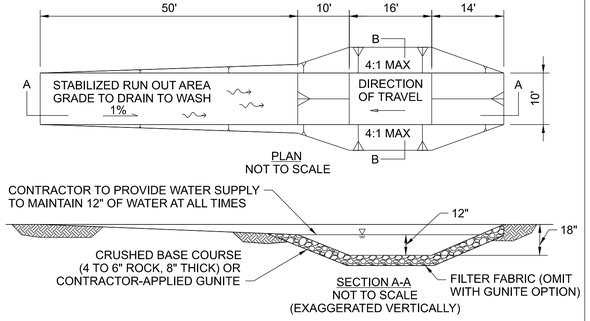
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GRAVEL CONSTRUCTION ENTRANCE

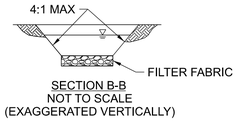
NTS

3125-130



NOTE:
1. CONTRACTOR TO REMOVE ACCUMULATED SEDIMENT FROM WHEEL WASH; MAY BE PIPED TO AN APPROVED SEDIMENT TRAP.

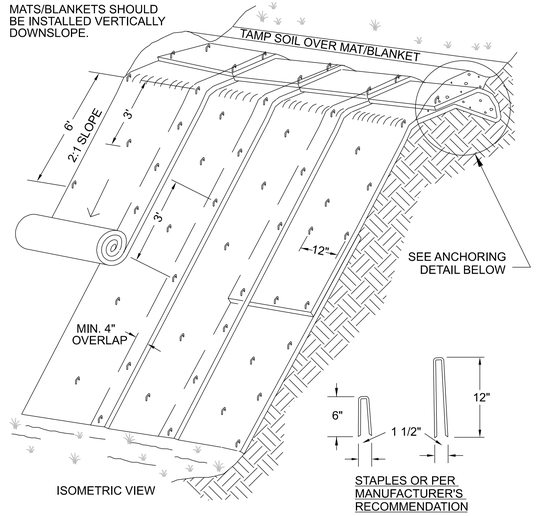
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USE GEOTEXTILE FABRIC WITH AGGREGATE FOR A TEMPORARY TIRE WASH



WHEEL WASH

NTS

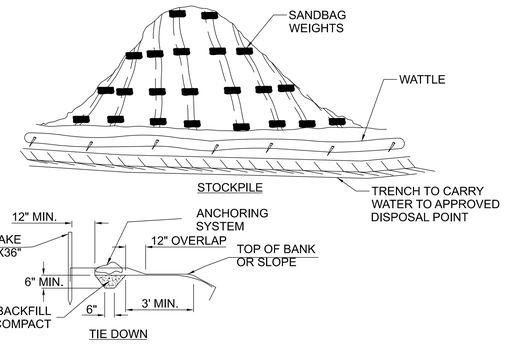
3125-135



SLOPE STABILIZATION

NTS

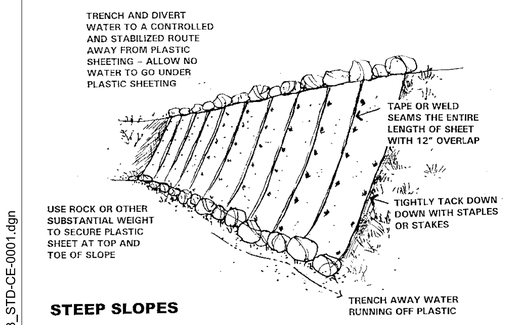
3125-152



STOCKPILE

NTS

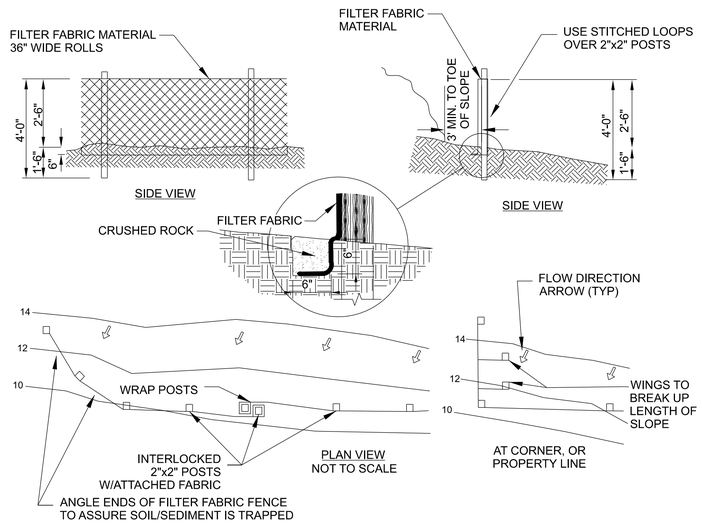
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TEMPORARY SLOPE PROTECTION

NTS

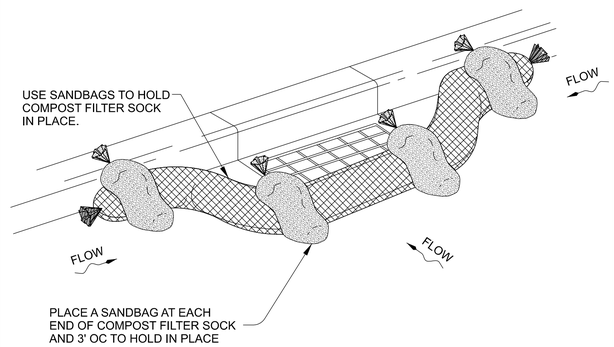
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TEMPORARY SEDIMENT FENCE

NTS

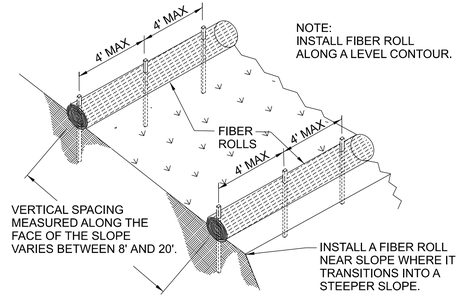
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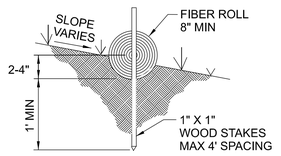
COMPOST FILTER SOCK - TYPE 7

NTS

3125-187



TYPICAL FIBER ROLL INSTALLATION
NOT TO SCALE



ENTRENCHMENT DETAIL
NOT TO SCALE

STRAW WATTLE

NTS

3125-188

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Checked By	RG	Const Supvr	JB
Project Mgr	BJP	Date	6/7/23

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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

STANDARD DETAILS EROSION CONTROL
DETAILS 1

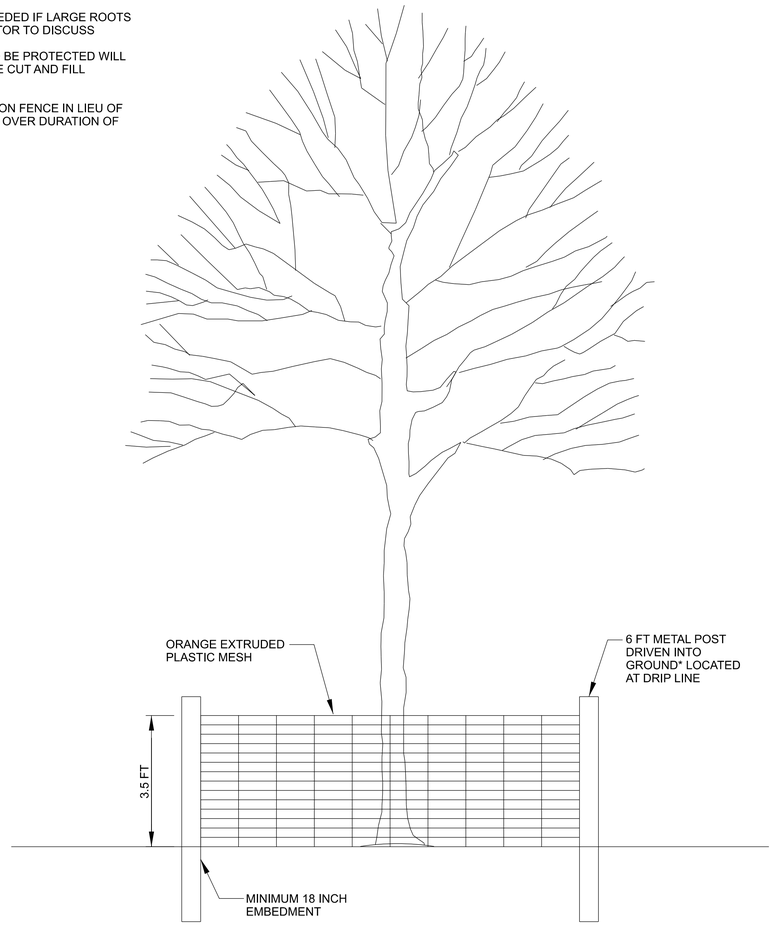
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TREE PROTECTION NOTES

1. INSTALL TREE PROTECTION FENCING (TPF) PRIOR TO ANY GROUND DISTURBING ACTIVITY. INSPECTION AND APPROVAL OF FENCING BY THE URBAN FORESTRY TREE INSPECTOR IS REQUIRED PRIOR TO COMMENCEMENT OF WORK, INCLUDING EQUIPMENT AND MATERIALS STAGING AND MOBILIZATION
2. CALL 823-TREE (8733) TO SCHEDULE THE TREE PROTECTION INSPECTION ONCE TPF IS INSTALLED
3. NO ENTRY IS ALLOWED INTO TREE PROTECTION AREAS FOR THE DURATION OF THE PROJECT UNLESS PERMITTED BY THE URBAN FORESTRY TREE INSPECTOR
4. TREE PROTECTION FENCING SHALL NOT BE MOVED, ALTERED OR REMOVED THROUGHOUT THE DURATION OF THE PROJECT DAMAGED TREE PROTECTION FENCE MUST BE REPAIRED IMMEDIATELY.
5. WHERE TREE ROOTS ARE ENCOUNTERED OR ANTICIPATED, EXCAVATION SHALL BE COMPLETED WITH HAND TOOLS CAREFULLY WITHOUT DAMAGE (I.E. VAC TRUCK, AIR SPADE, ETC)
6. TREE ROOTS OVER 2-INCH DIAMETER MAY NOT BE CUT OR DAMAGED WITHOUT A ROOT PRUNING INSPECTION.
7. FIELD ADJUSTMENTS OR ALTERNATIVE METHODS MAY BE NEEDED IF LARGE ROOTS ARE ENCOUNTERED. CONTACT THE ASSIGNED TREE INSPECTOR TO DISCUSS
8. TREES WITHIN THE LIMITS OF DISTURBANCE DESIGNATED TO BE PROTECTED WILL NOT BE REMOVED. CONTRACTOR IS DIRECTED TO COMPLETE CUT AND FILL OPERATIONS WITH CARE NEXT TO THESE TREES
9. THE ORANGE PLASTIC FENCE CAN BE USED AS CONSTRUCTION FENCE IN LIEU OF SILT FENCE IF GRADE IS MODERATE. INSPECT AND MAINTAIN OVER DURATION OF PROJECT

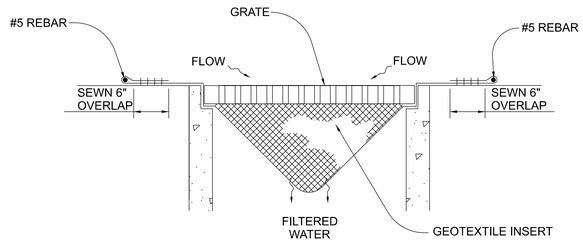


*MAXIMUM 10 FEET SEPARATION BETWEEN METAL POSTS

TREE PROTECTION FENCE

NTS

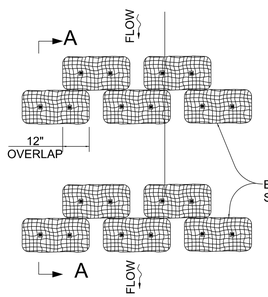
3125-190



INLET PROTECTION - TYPE 3

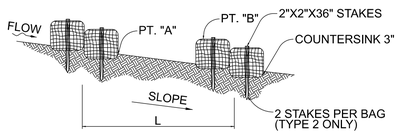
NTS

3125-201



PLAN

BARRIER SPACING		
INSTALL PARALLEL ALONG CONTOURS AS FOLLOWS		
% SLOPE	% SLOPE	MAXIMUM SPACING ON SLOPE
10% FLATTER	1:10 or FLATTER	300'
10 > % ≥ 15	10 > X ≥ 7.5	150'
15 > % ≥ 20	7.5 > X ≥ 5	100'
20 > % ≥ 30	5 > X ≥ 3	50'
STEEPER THAN 30%	STEEPER THAN 1:3	25'



SECTION A-A

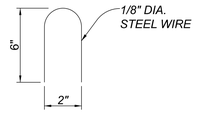
NOTES:
1. FOR TYPE 2 BARRIER, DRIVE STAKES FLUSH WITH TOP OF BAG AND INTO UNDISTURBED GROUND A MIN. OF 12". OMIT STAKES IF BAGS ARE PLACED ON PAVED SURFACE.
2. FOR TYPE 2 AND TYPE 4 BARRIERS, SPACE BAGS (L) SO THAT THE ELEVATION OF POINT "A" IS LESS THAN OR EQUAL TO THE ELEVATION OF POINT "B".

TYPE 2 - BIOFILTER BAGS
TYPE 3 - WATTLES
TYPE 4 - SAND BAGS

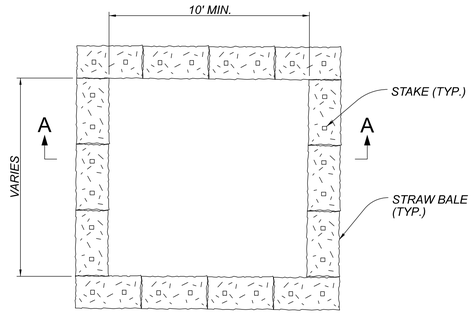
BIOFILTER BAG / SAND BAG BARRIER - TYPE 2 AND 4

NTS

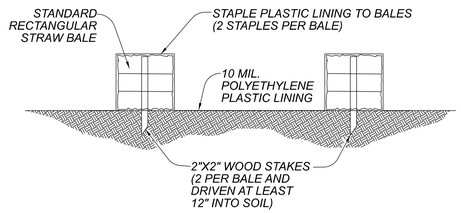
3125-202



STAPLE DETAIL



PLAN



SECTION A-A

CONCRETE TRUCK WASH OUT FACILITY

NTS

3125-203

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Checked By	RG	Const Supvr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

STANDARD DETAILS EROSION CONTROL

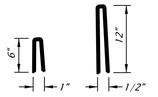
DETAILS 2

SAP Project No: W02563
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NOTES:
1. INSTALL MATTING ON SMOOTH SOIL SURFACE AFTER SEEDING IS APPLIED (WHERE APPLICABLE).
2. INSTALL CHANNEL LINER MATTING, IN THE DIRECTION OF WATER FLOW. ANCHOR UPSTREAM END OF MAT WITH CHECK SLOT FOR CULVERT OUTFALLS. PLACE MAT UNDER PIPE 12" MINIMUM UPSTREAM FROM PIPE OUTLET.
3. CONSTRUCT CHECK SLOTS ACROSS CHANNEL BOTTOM AT 25' SPACING AND AT THE END OF EACH MAT (FIG. A3 OR A4).
4. OVERLAP SIDE CHANNEL LINER MATTING EDGES 6" OVER THE CENTER CHANNEL LINER MATTING AND FASTEN EDGES 12" OC CONTINUE OVERLAP AND STAPLING PATTERN FOR EACH ADDITIONAL SIDE CHANNEL LINER MAT.
5. LAP UPSTREAM MATTING END 12" OVER BEGINNING EDGE OF DOWNSTREAM MATTING. FASTEN 12" OC
6. ANCHOR TOP EDGE OF SIDE CHANNEL MATTING IN TRENCH AND FASTEN 12" OC (FIG. A2).
7. FASTEN MATTING INTERIOR AT 24" OC WITH STAGGERED SPACING.
8. CONSTRUCT INITIAL ANCHOR TRENCH AT DOWNSTREAM END OF MATTING AND TERMINAL SLOPE ANCHOR AT UPSTREAM END.
9. MATTING TYPES A THROUGH E: FURNISH FULLY BIODEGRADABLE PRODUCT. MATTING WITH PLASTIC OR PHOTODEGRADABLE COMPONENTS WILL NOT BE ACCEPTED.



STAPLES OR PER MANUFACTURER'S RECOMMENDATION
NOT TO SCALE

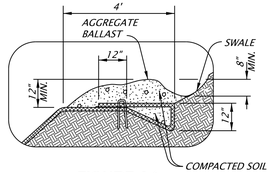
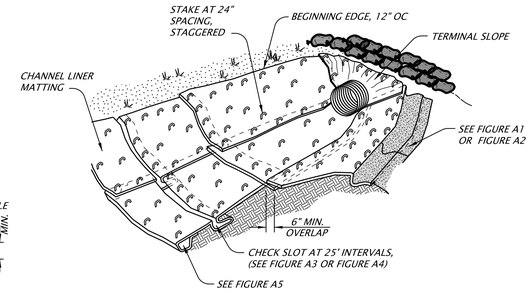


FIGURE A1: TOP OF BANK ANCHOR TRENCH, H>3' AND TERMINAL SLOPE
NOT TO SCALE



CHANNEL MATTING ISOMETRIC VIEW
NOT TO SCALE

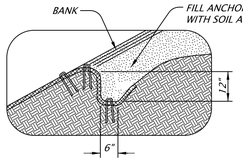


FIGURE A2: TOP OF BANK ANCHOR TRENCH, H<3'
NOT TO SCALE

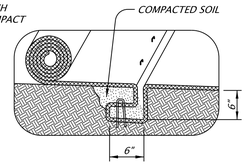


FIGURE A3: CHANNEL CHECK SLOT
NOT TO SCALE

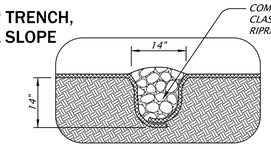


FIGURE A4: CHANNEL CHECK SLOT WITH ROCK BACKFILL
NOT TO SCALE

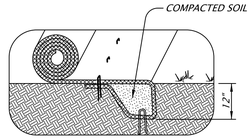
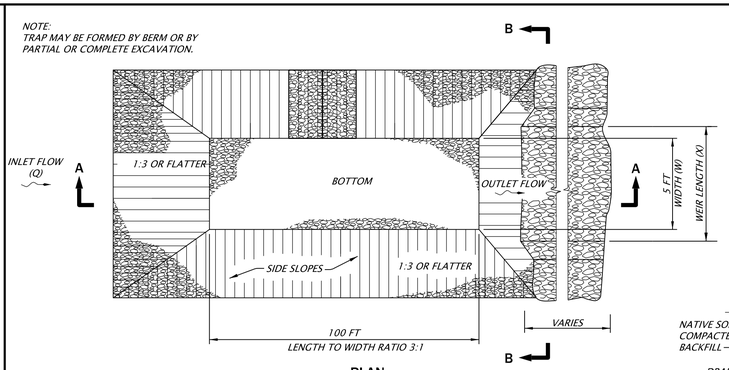


FIGURE A5: INITIAL CHANNEL ANCHOR TRENCH
NOT TO SCALE

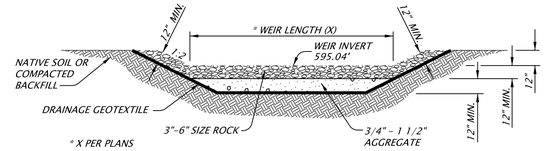
CHANNEL MATTING
NTS

3125-305

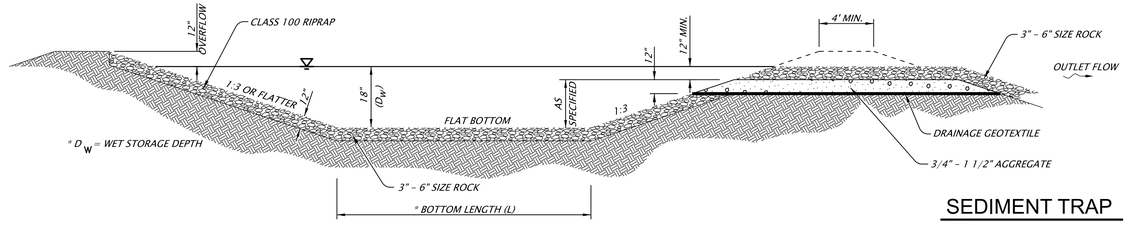
NOTE:
TRAP MAY BE FORMED BY BERM OR BY PARTIAL OR COMPLETE EXCAVATION.



PLAN



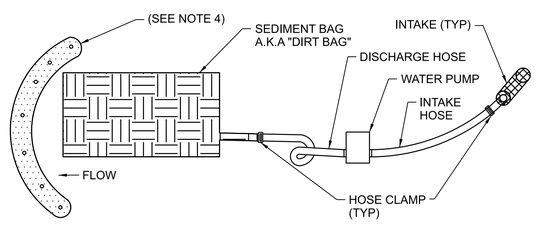
SECTION B-B



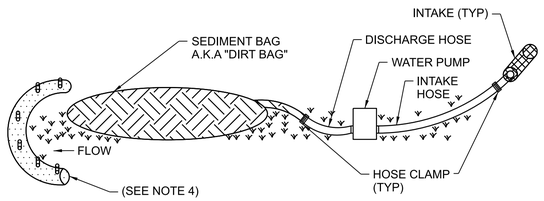
SECTION A-A

SEDIMENT TRAP
NTS

3125-302



PLAN VIEW



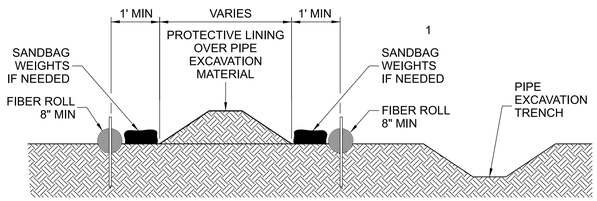
ELEVATION VIEW

NOTES:

1. PROVIDE SEDIMENT BAG MANUFACTURERED USING POLYPROPYLENE 8 OZ. NON-WOVEN GEOTEXTILE SEWN INTO A BAG WITH DOUBLE-NEEDLE USING HIGH STRENGTH THREAD, MIRAFI 180N DEWATERING BAG OR EQUAL.
2. PROVIDE FILLING CONNECTION INTO SEDIMENT BAG FOR 4 INCH OR LARGER DISCHARGE HOSE WITH STRAPS TO SECURE HOSE TO BAG.
3. SECURE SEDIMENT BAG TO GROUND WITH STRAPS AND STAKES SUCH THAT BAG IS IMMOVABLE WHEN FILLED.
4. PROVIDE TWO ROWS OF STRAW WADDLE DOWNSTREAM OF SEDIMENT BAG WITH ENDS OF WADDLE WRAPPED UPHILL AROUND SEDIMENT BAG TO CAPTURE DISCHARGE FROM BAG. 3125-188
5. SEDIMENT BAG IS FULL WHEN IT NO LONGER CAN EFFICIENTLY FILTER SEDIMENT OR ALLOW WATER TO PASS AT A RATE LESS THAN 50% OF THE MANUFACTURER'S DESIGNED FLOW RATE. WHEN FULL, DISPOSE OF SEDIMENT BAG IN ACCORDANCE WITH APPROVED SOLID WASTE DISPOSAL PLANS AS APPROVED BY OWNER'S REPRESENTATIVE.
6. DURING ACTIVE DEWATERING AND PUMPING INTO SEDIMENT BAG, MONITOR DEWATERING BAG AND DISCONTINUE USE IF BAG IS DAMAGED OR FULL.

SEDIMENT BAG
NTS

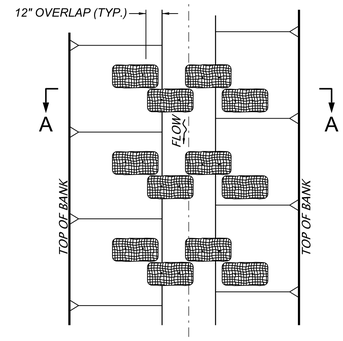
3125-310



APPLY DETAIL FOR ENTIRE LENGTH OF EXCAVATION BETWEEN DODGE PARK BLVD AND LUSTED ROAD. INSTALL FIBER ROLL ACCORDING TO 3125-188 AND ANCHOR PROTECTIVE LINING ACCORDING TO 3125-153. KEEP EXCAVATION MATERIAL WITHIN SILT FENCE BOUNDARY.

PIPE EXCAVATION MATERIAL PROTECTION
NTS

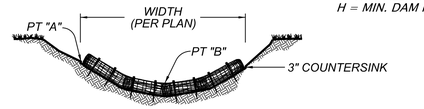
3125-301



PLAN

MAXIMUM CHECK DAM SPACING "L"				
Ditch Grade	H=8"	H=12"	H=18"	H=24"
10%	* *	* *	15'	20'
9%	* *	* *	16'	22'
8%	* *	* *	18'	25'
7%	* *	* *	21'	28'
6%	* *	16'	25'	33'
5%	* *	20'	30'	40'
4%	16'	25'	37'	50'
3%	22'	33'	50'	66'
2%	33'	50'	75'	100'

* * NOT ALLOWED
H = MIN. DAM HEIGHT



SECTION A-A

STAKE BIOFILTER BAGS WITH TWO 2"X2"X18" (MINIMUM) WOOD STAKES PER BAG. DRIVE STAKES A MINIMUM OF 6" INTO THE GROUND AND FLUSH WITH THE TOP OF THE BAGS. OMIT STAKES IF PLACED OVER PAVED SURFACES. OVERLAP BAGS 12" MINIMUM AT EACH JOINT.

BIOFILTER BAG CHECK DAM - TYPE 3
NTS

3125-004

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No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M, ACKERMAN, PRINCIPAL ENGINEER, PE #19424 Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

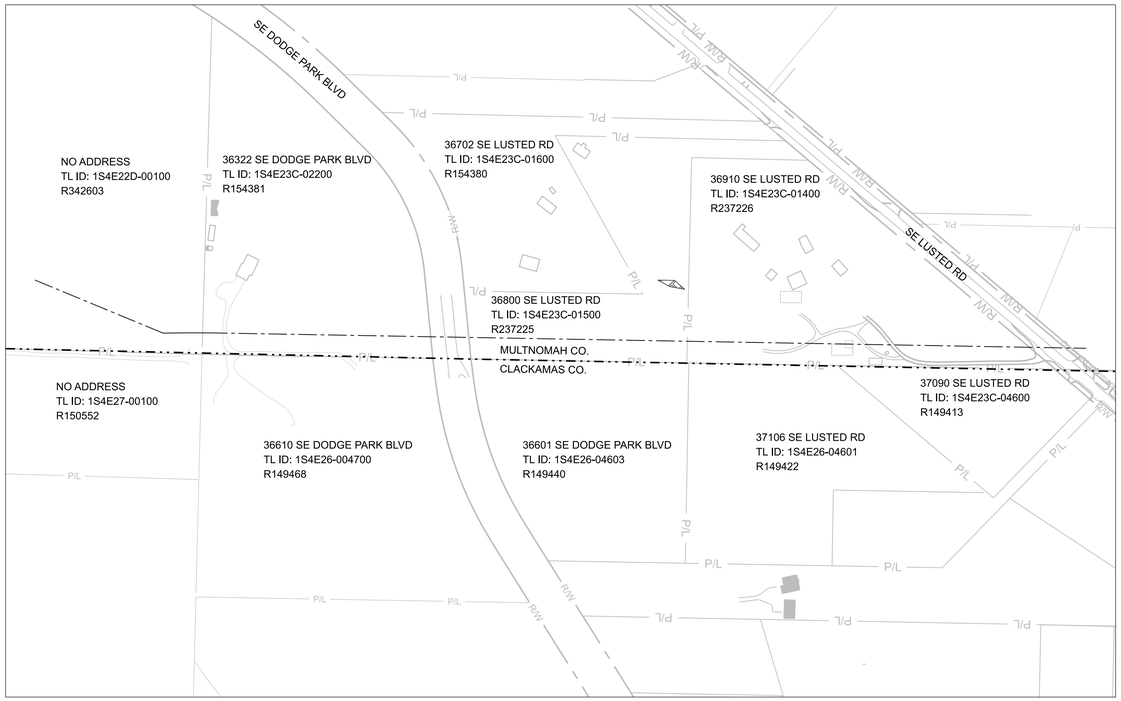
STANDARD DETAILS EROSION CONTROL
DETAILS 3

SAP Project No W02563
1/4 Section
Sheet No STD-CE-0003

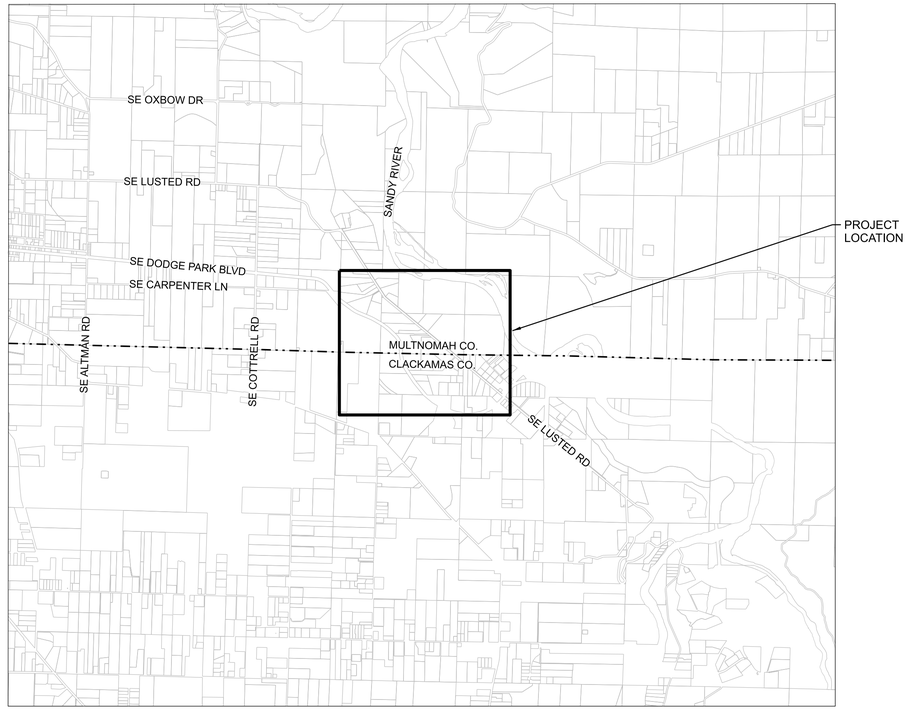
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EROSION AND SEDIMENT CONTROL PLAN - 1200-CA
BULL RUN FILTRATION PIPELINES
RAW WATER PIPELINE



SITE MAP
1"=200"



VICINITY MAP
N.T.S.

LEGEND

- EXISTING CONCRETE
- EXISTING ASPHALT
- SIGNIFICANT ENVIRONMENTAL CONCERN (SEC)
- COUNTY LINE
- P/L — EXISTING PROPERTY LINE
- R/W — EXISTING RIGHT OF WAY
- EL — EXISTING EASEMENT
- W — EXISTING WATER LINE
- G — EXISTING GAS LINE
- TEL — EXISTING TELEPHONE LINE
- STREAM
- 100 FT STREAM/WETLAND BUFFER
- WETLAND BOUNDARY
- EXISTING UTILITY POLE
- EXISTING CULVERT
- X — X — EXISTING STRUCTURE FENCE
- EXISTING DITCH
- EXISTING SIGN
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- EXISTING MAILBOX
- EXISTING TREES
- 500' — EXISTING CONTOUR
- EXISTING OHW AND/OR WETLANDS

SHEET INDEX

RWP-CE-1000	COVER SHEET
RWP-CE-1000A	GENERAL NOTES
RWP-CE-1001	EXISTING CONDITIONS AND DEMOLITION 1
RWP-CE-1002	EXISTING CONDITIONS AND DEMOLITION 2
RWP-CE-1003	UTILITY WORK PHASE 1
RWP-CE-1004	UTILITY WORK PHASE 2
RWP-CE-1005	FINAL STABILIZATION AND LANDSCAPE 1
RWP-CE-1006	FINAL STABILIZATION AND LANDSCAPE 2
STD-CE-0001	STANDARD DETAILS
STD-CE-0002	STANDARD DETAILS
STD-CE-0003	STANDARD DETAILS

SITE INFORMATION

1. TYPE OF DEVELOPMENT: CAPITAL IMPROVEMENT
2. CONSTRUCTION ACTIVITY WILL CONSIST OF:
   - A) PHASE 1: CLEARING AND GRUBBING 2024
   - B) PHASE 1: MASS GRADING AND EXCAVATION 2024-2027
   - C) PHASE 2: UTILITY CONSTRUCTION 2024-2028
   - D) PHASE 3: VERTICAL CONSTRUCTION 2024-2025 -FWI SITE ONLY
   - E) PHASE 4: FINAL STABILIZATION 2025-2028
3. PROJECT TIMELINE:
   - BEGINNING DATE: MARCH 2024
   - COMPLETION DATE: MARCH 2028
4. PROJECT SITE AREAS:
   - TOTAL AREA: 8.85 AC
   - DISTURBED AREA: 6.81 AC
   - PERCENT OF SITE DISTURBED: 77 %
5. OFFSITE PUBLIC IMPROVEMENT AREA:
   - IMPROVEMENT LENGTH: 0 FT
6. ONSITE SOIL TYPES:
   - A) CAZADERO SILTY CLAY LOAM, 0-8% SLOPES
   - B) HAPLUMBREPTS , VERY STEEP
7. CUT AND FILL DATA:
   - CUT: 2,813.88 CY
   - FILL: 1,228.73 CY
   - NET ADJUSTED: 1,585.15 CY CUT
8. NEAREST WATER BODY: SANDY RIVER
9. PROJECT LOCATION: 36910 SE LUSTED ROAD, TLID 1S4E23C-01400, R237226; 36800 SE LUSTED ROAD, TLID 1S4E23C-01500, R237225; 36322 SE DODGE PARK BOULEVARD, TLID 1S4E23C-02200, R154381 AND TLID 1S4E22D-00100, R342603
10. PROPERTY DESCRIPTION: VARIES
11. VERTICAL ELEVATION: 496'-704'

PROPOSED CATIONIC CHEMICALS TO BE USED:

TIDAL CLEAR 1% - CHITOSAN (cas 9012-76-4), ORGANIC ACID (CAS 64-19-7, 77-92-9, 79-33-4, AND/OR 6915-15-7), WATER (CAS 7732-18-5)

POLLUTANTS GENERATING MATERIALS:

SEDIMENT, CONCRETE, PAINT, FUELS, OILS, PLASTICS, CONSTRUCTION MATERIALS

AUTHORIZED NON-STORMWATER DISCHARGES:

FIRE HYDRANT FLUSHING, IRRIGATION, POTABLE WATERLINE FLUSHING, PAVEMENT WASH WATER (EXCLUDING SPILL AND LEAKS), UNCONTAMINATED CLEAR GROUNDWATER, CONSTRUCTION DE-WATERING

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ROY@EMERIODESIGN.COM

RAIN GAGE:
GRESHAM FIRE DEPT. RAIN GAGE
1333 NW EASTMAN PKWY
Hyperlink:
https://or.water.usgs.gov/non-usgs/bes/gresham.html

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No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

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0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines
RAW WATER PIPELINE EROSION AND SED CONTROL
COVER SHEET

SAP Project No: W02563
1/4 Section: 3664 / 3764
Sheet No: RWP-CE-1000

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EROSION AND SEDIMENT CONTROL GENERAL NOTES (ALL SECTIONS REFERENCING DEQ 1200-C PERMIT)

1. ONCE KNOWN, INCLUDE A LIST OF ALL CONTRACTORS THAT WILL ENGAGE IN CONSTRUCTION ACTIVITIES ON SITE, AND THE AREAS OF THE SITE WHERE THE CONTRACTOR(S) WILL ENGAGE IN CONSTRUCTION ACTIVITIES. REVISE THE LIST AS APPROPRIATE UNTIL PERMIT COVERAGE IS TERMINATED (SECTION 4.4.c.i). IN ADDITION, INCLUDE A LIST OF PERSONNEL (BY NAME AND POSITION) THAT ARE RESPONSIBLE FOR THE DESIGN, INSTALLATION AND MAINTENANCE OF STORMWATER CONTROL MEASURES (E.G. ESCP DEVELOPER, BMP INSTALLER (SEE SECTION 4.10), AS WELL AS THEIR INDIVIDUAL RESPONSIBILITIES. (SECTION 4.4C.ii).
2. VISUAL MONITORING INSPECTION REPORTS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-C PERMIT REQUIREMENTS. (SECTION 6.5)
3. INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200-C PERMIT REQUIREMENTS. (SECTION 6.5q)
4. RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. (SECTION 4.7)
5. THE PERMIT REGISTRANT MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT. (SECTIONS 4 AND 4.11)
6. THE ESCP MUST BE ACCURATE AND REFLECT SITE CONDITIONS. (SECTION 4.8)
7. SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITTAL OF THE ESCP REVISIONS IS ONLY UNDER SPECIFIC CONDITIONS. SUBMIT ALL NECESSARY REVISIONS TO DEQ OR AGENT WITHIN 10 DAYS. (SECTION 4.9)
8. SEQUENCE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. (SECTION 2.2.2)
9. CREATE SMOOTH SURFACES BETWEEN SOIL SURFACE AND EROSION AND SEDIMENT CONTROLS TO PREVENT STORMWATER FROM BYPASSING CONTROLS AND PONDING. (SECTION 2.2.3)
10. IDENTIFY, MARK, AND PROTECT (BY CONSTRUCTION FENCING 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. (SECTION 2.2.1)
11. PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED. (SECTION 2.2.5)
12. MAINTAIN AND DELINEATE ANY EXISTING NATURAL BUFFER WITHIN THE 50-FEET OF WATERS OF THE STATE. (SECTION 2.2.4)
13. INSTALL PERIMETER SEDIMENT CONTROL, INCLUDING STORM DRAIN INLET PROTECTION AS WELL AS ALL SEDIMENT BASINS, TRAPS, AND BARRIERS PRIOR TO LAND DISTURBANCE, (SECTIONS 2.1.3)
14. CONTROL BOTH PEAK FLOW RATES AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS AND DOWNSTREAM CHANNELS AND STREAM BANKS. (SECTIONS 2.1.1 AND 2.2.16)
15. CONTROL SEDIMENT AS NEEDED ALONG THE SITE PERIMETER AND AT ALL OPERATIONAL INTERNAL STORM DRAIN INLETS AT ALL TIMES DURING CONSTRUCTION, BOTH INTERNALLY AND AT THE SITE BOUNDARY. (SECTIONS 2.2.6 AND 2.2.13)
16. ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. (SECTION 2.2.14)
17. APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES. TEMPORARY OR PERMANENT STABILIZATIONS MEASURES ARE NOT REQUIRED FOR AREAS THAT ARE INTENDED TO BE LEFT UNVEGETATED, SUCH AS DIRT ACCESS ROADS OR UTILITY POLE PADS. (SECTIONS 2.2.20 AND 2.2.21)
18. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS. (SECTION 2.3.7)
19. KEEP WASTE CONTAINER LIDS CLOSED WHEN NOT IN USE AND CLOSE LIDS AT THE END OF THE BUSINESS DAY FOR THOSE CONTAINERS THAT ARE ACTIVELY USED THROUGHOUT THE DAY. FOR WASTE CONTAINERS THAT DO NOT HAVE LIDS, PROVIDE EITHER (1) COVER (E.G., A TARP, PLASTIC SHEETING, TEMPORARY ROOF) TO PREVENT EXPOSURE OF WASTES TO PRECIPITATION, OR (2) A SIMILARLY EFFECTIVE MEANS DESIGNED TO PREVENT THE DISCHARGE OF POLLUTANTS (E.G., SECONDARY CONTAINMENT). (SECTION 2.3.7)
20. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMP'S SUCH AS: CONSTRUCTION ENTRANCE, GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPS MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES. (SECTION 2.2.7)
21. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE. (SECTION 2.2.7.f)
22. CONTROL PROHIBITED DISCHARGED FROM LEAVING THE CONSTRUCTION SITE, I.E., CONCRETE WASH-OUT, WASTEWATER FROM CLEANOUT OF STUCCO, PAINT AND CURING COMPOUNDS. (SECTIONS 1.5 AND 2.3.9)
23. ENSURE THAT STEEP SLOPE AREAS WHERE CONSTRUCTION ACTIVITIES ARE NOT OCCURRING ARE NOT DISTURBED. (SECTION 2.2.10)
24. PREVENT SOIL COMPACTION IN AREAS WHERE POST-CONSTRUCTION INFILTRATION FACILITIES ARE TO BE INSTALLED. (SECTION 2.2.12)
25. USE BMPS TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; 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, FERTILIZER, PESTICIDES AND HERBICIDES, PAINTS, SOLVENTS, CURING COMPOUNDS AND ADHESIVES FROM CONSTRUCTION OPERATIONS. (SECTIONS 2.2.15 AND 2.3)
26. PROVIDE PLANS FOR SEDIMENTATION BASINS THAT HAVE BEEN DESIGNED PER SECTION 2.2.17 AND STAMPED BY AN OREGON PROFESSIONAL ENGINEER. (SEE SECTION 2.2.17a)
27. IF ENGINEERED SOILS ARE USED ON SITE, A SEDIMENTATION BASIN/IMPOUNDMENT MUST BE INSTALLED. (SEE SECTIONS 2.2.17 AND 2.2.18)
28. PROVIDE A DEWATERING PLAN FOR ACCUMULATED WATER FROM PRECIPITATION AND UNCONTAMINATED GROUNDWATER SEEPAGE DUE TO SHALLOW EXCAVATION ACTIVITIES. (SEE SECTION 2.4)
29. IMPLEMENT THE FOLLOWING BMPS WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES. (SECTION 2.3)
30. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL. (SECTION 2.2.9)
31. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPARIAN ZONE. (SECTION 2.3.5)
32. IF AN ACTIVE TREATMENT SYSTEM (FOR EXAMPLE, ELECTRO-COAGUALATION, FLOCCULATION, FILTRATION, ETC) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVIDCE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATION THE TREATMENT SYSTEM. OBTAIN ENVIRONMENTAL MANAGEMENT PLAN APPROVAL FROM DEQ BEFORE OPERATIING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS. (SECTION 1.2.9)
33. TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE REGISTRANT IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR. (SECTION 2.2)
34. AS NEEDED BASED ON WEATHER CONDITIONS, AT THE END OF EACH WORKDAY SOIL STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER MBPS MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS. (SECTION 2.2.8)
35. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL. (SECTION 2.1.5b)
36. OTHER SEDIMENT BARRIERS (SUCH AS BIOBAGS): REMOVE SEDIMENT BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT AND BEFORE BMP REMOVAL. (SECTION 2.1.5c)
37. CATCH BASINS: CLEAN BEFORE RETENTION CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT. SEDIMENT BASINS AND SEDIMENT TRAPS: REMOVE TRAPPED SEDIMENTS BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT. (SECTION 2.1.5a)
38. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT 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 TIMEFRAME. (SECTION 2.2.19)
39. THE INTENTIONAL WASHING OF SEDIMENT INTO STROM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS. (SECTION 2.2.19)
40. DOCUMENT AN PORTION(S) OF THE SITE WHERE LAND DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED OR WILL BE TEMPORARILY INACTIVE FOR 14 OR MORE CALENDAR DAYS. (SECTION 6.5.f)
41. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE WITH A COVERING OF BLOWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE. (SECTION 2.2.20)
42. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED, ALL TEMPORARY EROSION CONTROLS AND RETAINED MOVED AND DISPOSED OF PROPERLY, UNLESS NEEDED FOR LONG TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE. (SECTION 2.2.21)

INSPECTION FREQUENCY

	SITE CONDITION	MINIMUM FREQUENCY
1.	ACTIVE PERIOD	ON INITIAL DATE THAT LAND DISTURBANCE ACTIVITIES COMMENCE. WITHIN 24 HOURS OF ANY STORM EVENT, INCLUDING RUNOFF FROM SNOW MELT, THAT RESULTS IN DISCHARGE FROM THE SITE. AT LEAST ONCE EVERY 14 DAYS, REGARDLESS OF WHETHER STORMWATER RUNOFF IS OCCURRING.
2.	INACTIVE PERIODS GREATER THAN 14 CONSECUTIVE CALENDAR DAYS	THE INSPECTOR MAY REDUCE THE FREQUENCY OF INSPECTIONS IN ANY AREA OF THE SITE WHERE THE STABILIZATION STEPS IN SECTION 2.2.20 HAVE BEEN COMPLETED TO TWICE PER MONTH FOR THE FIRST MONTH, NO LESS THAN 14 CALENDAR DAYS APART, THAN ONCE PER MONTH.
3.	PERIODS DURING WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER	IF SAFE, ACCESSIBLE AND PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT DISCHARGE POINT, OR DOWNSTREAM LOCATION OF THE RECEIVING WATERBODY.
4.	PERIODS DURING WHICH CONSTRUCTION ACTIVITIES ARE SUSPENDED AND RUNOFF IS UNLIKELY DUE TO FROZEN CONDITIONS.	VISUAL MONITORING INSPECTIONS MAY BE TEMPORARILY SUSPENDED. IMMEDIATELY RESUME MONITORING UPON THAWING, OR WHEN WEATHER CONDITIONS MAKE DISCHARGES LIKELY.
5.	PERIODS DURING WHICH CONSTRUCTION ACTIVITIES ARE CONDUCTED AND RUNOFF IS UNLIKELY DUE TO FROZEN CONDITIONS.	VISUAL MONITORING INSPECTIONS MAY BE REDUCED TO ONCE A MONTH. IMMEDIATELY RESUME MONITORING UPON THAWING, OR WHEN WEATHER CONDITIONS MAKE DISCHARGES LIKELY.

TEMPORARY SEEDING

BOTANICAL NAME	COMMON NAME
STERILE WHEAT GRASS	REGREEN, QUICKGUARD, OR APPROVED
HORDEUM VULGARE VAR POCO	POCO BARLEY

NATIVE UNDERSTORY SEEDING

BOTANICAL NAME	COMMON NAME
ELYMUS GLAUCUS	BLUE WILDRYE
BROMUS CARINATUS	CALIFORNIA BROME
DESHAMPSIA ELONGATE	SLENDER HAIRGRASS
FESTUCA ROEMERI	ROEMER'S FESCUE
ACHILLEA MILLEFOLIUM	YARROW
CLARKIA AMONEA	FAREWELL TO SPRING
GILIA CAPITATA	GLOBE GILIA
LUPINUS POLYPHYLLUS	BIG LEAFED LUPINE
PRUNELLA VULGARIS	HEAL ALL
ERIOPHYLLUM LANATUM	OREGON SUNSHINE
ARTEMISIA DOUGLASIANA	DOUGLAS' SAGEWORT
MADIA GRACILIS	COMMON TARWEED
SIDALCEA CAMPESTRIS	MEADOW CHECKERBLOOM
COLLOMIA GRANDIFLORA	LARGE FLOWERED COLLOMIA

FILTER STRIP SEEDING

BOTANICAL NAME	COMMON NAME
HORDEUM VULGARE VAR POCO	POCO BARLEY
HARDEUM BRACHYANTHERUM	MEADOW BARLEY
BROMUS CARINATUS	CALIFORNIA BROME
FESTUCA IDAHOENSIS ROMERIID	ROEMER'S FESCUE
TRIFOLIUM FRAGIFERUM	STRAWBERRY CLOVER
CLARKIA AMONEA	FAREWELL TO SPRING
OENOTHERA ELATA HOOKERI	HOOKER'S EVENING PRIMROSE
DESHAMPSIA CESPITOSA	TUFTED HAIRGRASS
AGROSTIS EXERATA	SPIKE BENTGRASS

ROADSIDE SEEDING

BOTANICAL NAME	COMMON NAME
FESTUCA RUBRA VAR. SEALINK	SEALINK CREEPING RED FESCUE
FESTUCA OVINA VAR. AZAY BLUE	AZAY BLUE SHEEP FESCUE
TRIFOLIUM FRAGIFERUM	STRAWBERRY CLOVER
NEMOPHILA MENZIESII	BABY BLUE EYES
LIMNANTHES DOUGLASII	DOUGLAS MEADOWFOAM
ARMERIA MARITIMA	THRIFT SEAPINK
TRIFOLIUM REPENS VAR MICROCLOVER	MICROCLOVER
LOBULARIA MARITIMA	SWEET ALYSSUM CARPET OF SNOW
ACHILLEA MILLEFOLIUM	COMMON YARROW
BELLIS PERENNIS	LAWNDAISY

SEC SEEDING

BOTANICAL NAME	COMMON NAME
BROMUS CARINATUS	CALIFORNIA BROME
CAREX DEWEYANA	DEWEY'S SEDGE
DESCHAMPSIA ELONGATA	SLENDER HAIRGRASS
ELYMUS GLAUCUS	BLUE WLLDRYE
GEUM MACROPHYLLUM	LARGE-LEAVED AVENS
GLYCERIA ELATA	TALL MANNAGRASS
LUPINUS LATIFOLIUM	LARGELEAF LUPINE
PRUNELLA LANCEOLATA	SELFHEAL
TELLIMA GRANDIFLORA	FRINGE CUPS

PASTURE SEEDING

BOTANICAL NAME	COMMON NAME
FESTUCA ARUNDINCIA VAR ATLAS	ATLAS FORAGE TALL FESCUE
FESTULOIUM SPP	SWEET TART FESTULOIUM
LOLIUM PERENNE VAR AMAZON	TETRAPLOID AMAZON TETRAPLOID PERENNIAL RYE
LOLIUM MULTIFLORIUM VAR BIG SHOT TETRAPLOID	BIG SHOT TETRAPLOID ANNUAL RYE
DACTYALIS GLOMERITA	POTOMAC ORCHARDGRASS
TRIFOLIUM REPENS VAR JUMBO LADINO	JUMBO LADINO WHITE

SHEET INDEX

YEAR	2024-2027				
PHASE/BMP	CLEARING	MASS GRADING	UTILITY CONSTRUCTION	VERTICAL CONSTRUCTION	FINAL STABILIZATION
EROSION PREVENTION					
GROUND COVER	X	X	X		X
PLASTIC SHEETING	X	X	X		
DUST CONTROL	X	X	X		
TEMPORARY STABILIZATION (STRAW MULCH/HYDROSEED)		X	X	X	
PERMANENT STABILIZATION					X
BUFFER ZONE (RAVINE)	X	X	X	X	
SEDIMENT CONTROL					
SEDIMENT FENCE (PERIMETER)	X				X
SEDIMENT FENCE (INTERIOR)	X				
STRAW WATTLES	X	X	X	X	X
INLET PROTECTION	X	X	X	X	X
DEWATERING		X	X		
RUN OFF CONTROL					
CONSTRUCTION ENTRANCE	X	X	X		
EXISTING OUTLET PROTECTION	X	X	X	X	
NEW OUTLET PROTECTION		X	X	X	X
EXISTING CURB INLET CHECK DAMS	X	X	X	X	X
POLLUTION PREVENTION					
HAZARD WASTE MANAGEMENT				X	
SPILL KIT ONSITE				X	X
CONCRETE WASHOUT AREA	X	X	X	X	

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Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

RAW WATER PIPELINE EROSION AND SED CONTROL
GENERAL NOTES

SAP Project No W02563
1/4 Section
Sheet No RWP-CE-1000A

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PRE-CONSTRUCTION, CLEARING, AND DEMOLITION NOTES:

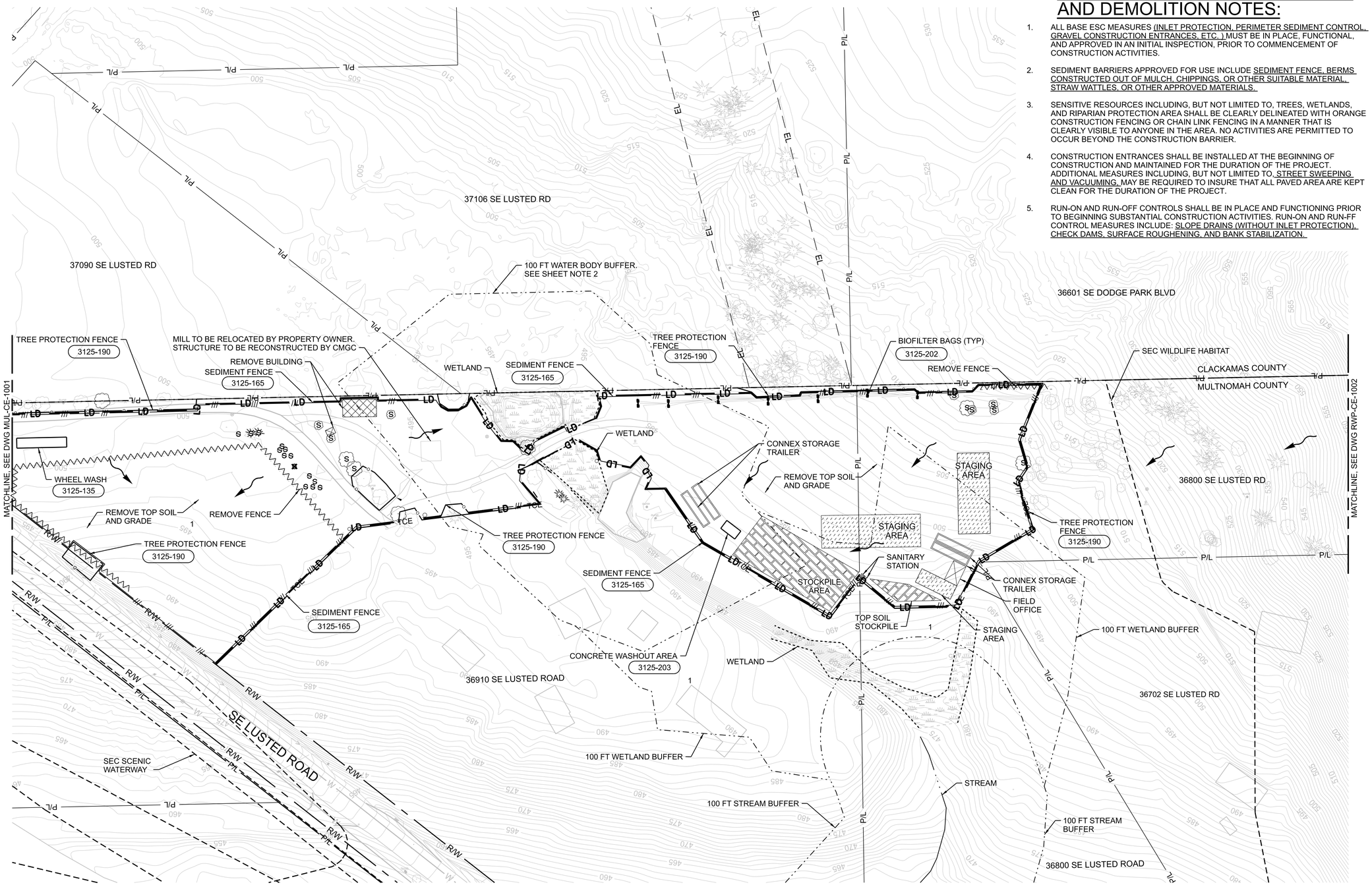
1. ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
2. SEDIMENT BARRIERS APPROVED FOR USE INCLUDE SEDIMENT FENCE, BERMS CONSTRUCTED OUT OF MULCH, CHIPPINGS, OR OTHER SUITABLE MATERIAL, STRAW WATTLES, OR OTHER APPROVED MATERIALS.
3. SENSITIVE RESOURCES INCLUDING, BUT NOT LIMITED TO, TREES, WETLANDS, AND RIPARIAN PROTECTION AREA SHALL BE CLEARLY DELINEATED WITH ORANGE CONSTRUCTION FENCING OR CHAIN LINK FENCING IN A MANNER THAT IS CLEARLY VISIBLE TO ANYONE IN THE AREA. NO ACTIVITIES ARE PERMITTED TO OCCUR BEYOND THE CONSTRUCTION BARRIER.
4. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, STREET SWEEPING AND VACUUMING, MAY BE REQUIRED TO INSURE THAT ALL PAVED AREA ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
5. RUN-ON AND RUN-OFF CONTROLS SHALL BE IN PLACE AND FUNCTIONING PRIOR TO BEGINNING SUBSTANTIAL CONSTRUCTION ACTIVITIES. RUN-ON AND RUN-FF CONTROL MEASURES INCLUDE: SLOPE DRAINS (WITHOUT INLET PROTECTION), CHECK DAMS, SURFACE ROUGHENING, AND BANK STABILIZATION.

GENERAL SHEET NOTES

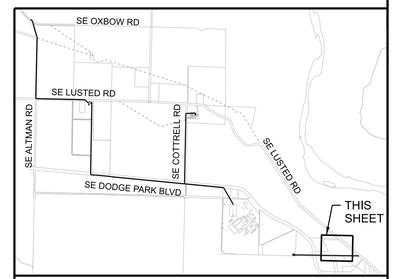
1. SEE RWP-TP-2213, 2216 AND 2217 FOR TREE REMOVAL AND TREE PROTECTION.
2. SEE RUSLE2 CALCULATIONS FOR BMPS TO REDUCE RUNOFF TO LESS THAN 1 TON/ACRE/YEAR OF SEDIMENT LOAD TO WATERBODY.

LEGEND

- SEDIMENT FENCE
- TREE PROTECTION FENCE
- LD — LIMIT OF DISTURBANCE
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- XXXX-XXX — STANDARD DETAIL CALLOUT
- FLOW DIRECTION
- TREE REMOVAL (SEE LANDSCAPE)
- BMP BIOFILTER BAG
- DEMOLISH BUILDING
- REMOVE FENCE
- STOCKPILE AREA
- STAGING AREA
- SANITARY STATION
- FIELD OFFICE
- CONNEX STORAGE TRAILER



0 50 100 150
Scale In Feet



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Survey		Revision	

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Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

RAW WATER PIPELINE EROSION AND SED CONTROL

EXISTING CONDITIONS AND DEMOLITION 1

SAP Project No	W02563
1/4 Section	3668
Sheet No	RWP-CE-1001

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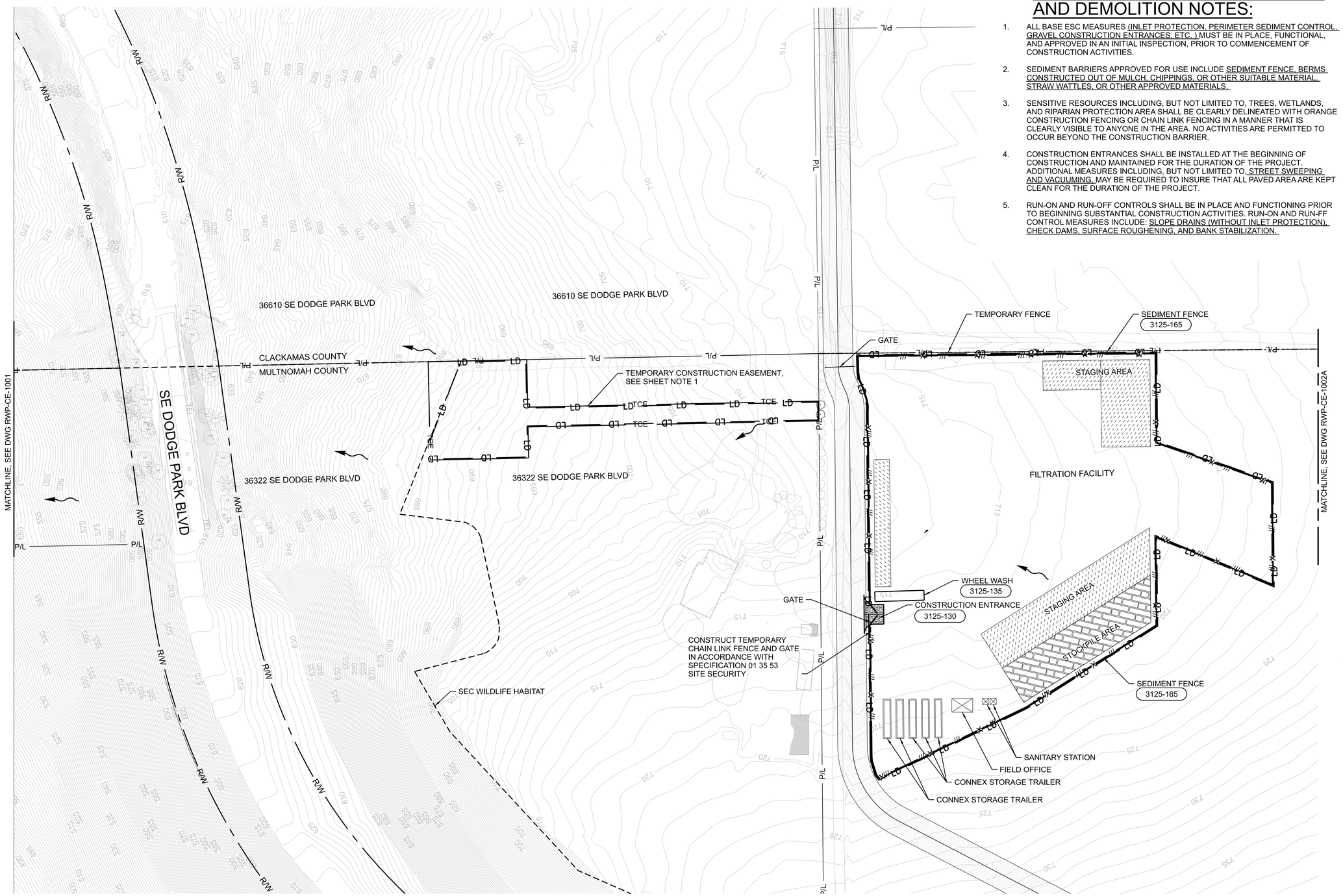
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GENERAL SHEET NOTES

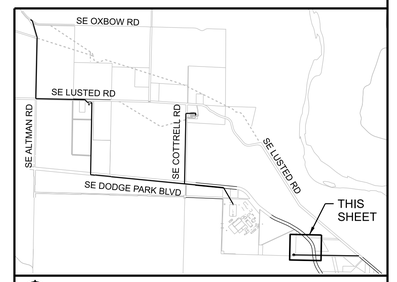
1. TCE AT THIS LOCATION FOR INSTALLING INSTRUMENTATION AND MONITORING. NO EQUIPMENT STORAGE, MATERIAL STORAGE OR PARKING IS PERMITTED WITHIN THE TCE LIMITS.

LEGEND

- LD — LIMIT OF DISTURBANCE
- /// — SEDIMENT FENCE
- CONSTRUCTION ENTRANCE
- FLOW DIRECTION
- x — TEMPORARY FENCE
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- XXXX-XXX — STANDARD DETAIL CALLOUT
- STOCKPILE AREA
- STAGING AREA
- SANITARY STATION
- FIELD OFFICE
- CONNEX STORAGE TRAILER



0 50 100 150
Scale In Feet



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Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M, ACKERMAN, PRINCIPAL ENGINEER, PE #19424 Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

RAW WATER PIPELINE EROSION AND SED CONTROL

EXISTING CONDITIONS AND DEMOLITION 2

SAP Project No	W02563
1/4 Section	3968
Sheet No	RWP-CE-1002

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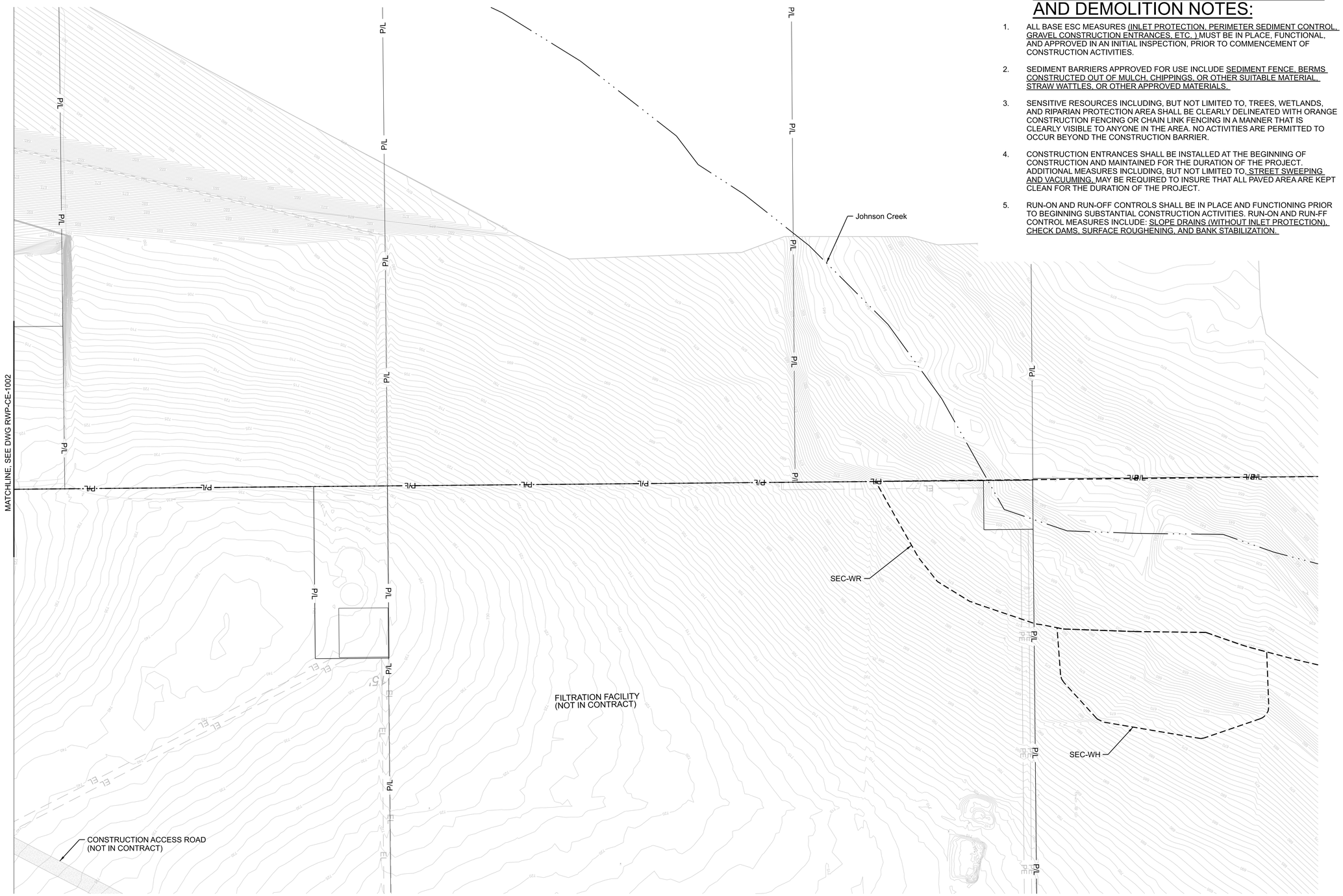
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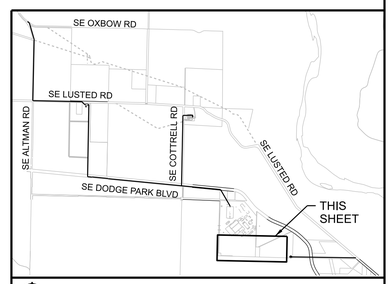
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LEGEND

GRAVEL



0 50 100 150
Scale In Feet



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Project Mgr	BJP	Date	6/7/23

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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M, ACKERMAN, PRINCIPAL ENGINEER, PE #19424 Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

RAW WATER PIPELINE EROSION AND SED CONTROL

EXISTING CONDITIONS AND DEMOLITION 3

SAP Project No	W02563
1/4 Section	3968
Sheet No	RWP-CE-1002A

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GENERAL NOTES

1. TEMPORARY PERIMETER NOISE BARRIERS SHALL BE ENGINEERED AND CONSTRUCTED IN FULL ACCORDANCE WITH SITE SPECIFICE ENGINEERING REQUIRMENTS (E.G. WIND LOADING, SEISMIC, FLAME/FIRE, ETC.) NOISE BARRIERS SHALL CONSIST OF A NOISE CURTAIN MATERIAL, SUCH AS SOUND SEAL MODE BBC-13-2, OR EQUIVALENTLY RATED MATERIAL (A SOUND TRANSMISSION CLASS (STC) RATING OF STC 30 OR GREATER, BASE ON SOUND TRANSMISSION LOSS DATA TAKEN ACCORDING ASTM TEST METHOD F90 ABD E413 AND NOISE REDUCTION COEFFICIENT OF 0.7 OR GREATER BASED ON ASTM C423). GAPS BETWEEN ADJACENT PANELS MUST BE FILLED-IN TO AVOID HAVING NOISE LEAK THROUGH HOLES IN THE BARRIER. A PRELIMINARY ALIGNMENT FOR AN 18 FT TALL BARRIER IS SHOWN ON THE DRAWING ALTERNATIVE ALIGNMENTS, HEIGHTS AND PRODUCTS ARE SUBJECT TO OWNER'S APPROVAL.

2. SEE RUSLE2 CALCULATIONS FOR BMPS TO REDUCE RUNOFF TO LESS THAN 1 TON/ACRE/YEAR OF SEDIMENT LOAD TO WATERBODY.

LEGEND

- SEDIMENT FENCE
- TREE PROTECTION FENCE
- LIMIT OF DISTURBANCE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- FLOW DIRECTION
- BMP BIOFILTER BAG
- TEMP SECURITY FENCE
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED GRAVEL
- TEMP HARDENED STRUCTURE
- 500' — PROPOSED CONTOUR
- PROPOSED PIPELINE
- TRENCH DRAIN
- TEMPORARY UTILITY POLE
- E-OVH — TEMPORARY OVERHEAD POWER
- UE — TEMPORARY UNDERGROUND POWER
- PE — PERMANENT EASEMENT
- NOISE BARRIER
- STOCKPILE AREA
- STAGING AREA
- SANITARY STATION
- FIELD OFFICE
- CONNEX STORAGE TRAILERS

0 50 100 150
Scale In Feet

KEYPLAN

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Project Mgr	BJP	Date	6/7/23

WARNING
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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

RAW WATER PIPELINE EROSION AND SED CONTROL

UTILITY WORK 1

SAP Project No	W02563
1/4 Section	3968
Sheet No	RWP-CE-1003

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GENERAL SHEET NOTES

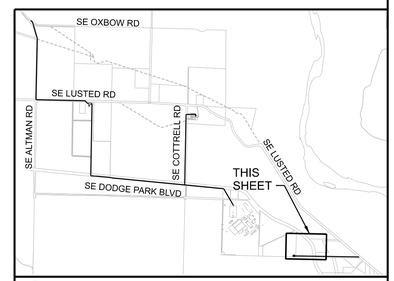
1. TCE AT THIS LOCATION FOR INSTALLING INSTRUMENTATION AND MONITORING. NO EQUIPMENT STORAGE, MATERIAL STORAGE OR PARKING IS PERMITTED WITHIN THE TCE LIMITS.
2. PIPELINE CONTRACTOR WILL SEND CLEAN WATER TO FACILITY. CONTRACTOR TO BE TREATED AND DISCHARGED IN ACCORDANCE WITH DEQ 1200-CA REQUIREMENTS. SEE FILTRATION FACILITY ESCP AND EMP.

LEGEND

- CONSTRUCTION ENTRANCE
- PROPOSED GRAVEL
- XXXX-XXX — STANDARD DETAIL CALLOUT
- FLOW DIRECTION
- LD — LIMIT OF DISTURBANCE
- /// — SEDIMENT FENCE
- X — TEMP SECURITY FENCE
- TEMP NOISE BARRIER/SOUND WALL
- PROPOSED PIPELINE
- PE — PERMANENT EASEMENT
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- 500' — PROPOSED CONTOUR
- STOCKPILE AREA
- STAGING AREA
- SANITARY STATION
- FIELD OFFICE
- CONNEX STORAGE TRAILER
- CONST. CONVEYANCE DITCH
- CONSTRUCTION STORM PIPE
- CONST. PUMPED STORM PIPE

36610 SE DODGE PARK BLVD
36322 SE DODGE PARK BLVD
SE DODGE PARK BLVD
CLACKAMAS COUNTY
MULTNOMAH COUNTY
MATCHLINE, SEE DWG RWP-CE-1003
MATCHLINE, SEE DWG RWP-CE-1004A
TRENCHLESS PIPE CONSTRUCTION
TEMPORARY CONSTRUCTION EASEMENT, SEE SHEET NOTE 1
CONST, STORMWATER POND (DISCHARGE POINT) SEE SHEET NOTE 2
CONSTRUCTION ELECTRIC VAULTS
TEMPORARY PROCESS WATER TREATMENT
GATE
STAGING AREA
CRANE
PROPOSED PIPELINE
SEDIMENT FENCE 3125-165
TEMPORARY SECURITY FENCE
WHEEL WASH 3125-135
CONSTRUCTION ENTRANCE 3125-130
SEC WILDLIFE HABITAT
FILTRATION FACILITY (NOT IN CONTRACT)
SANITARY STATION
FIELD OFFICE
CONNEX STORAGE TRAILER
CONSTRUCTION ACCESS ROAD (NOT IN CONTRACT)

0 50 100 150
Scale In Feet



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CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

RAW WATER PIPELINE EROSION AND SED CONTROL

UTILITY WORK 2

SAP Project No	W02563
1/4 Section	3968
Sheet No	RWP-CE-1004

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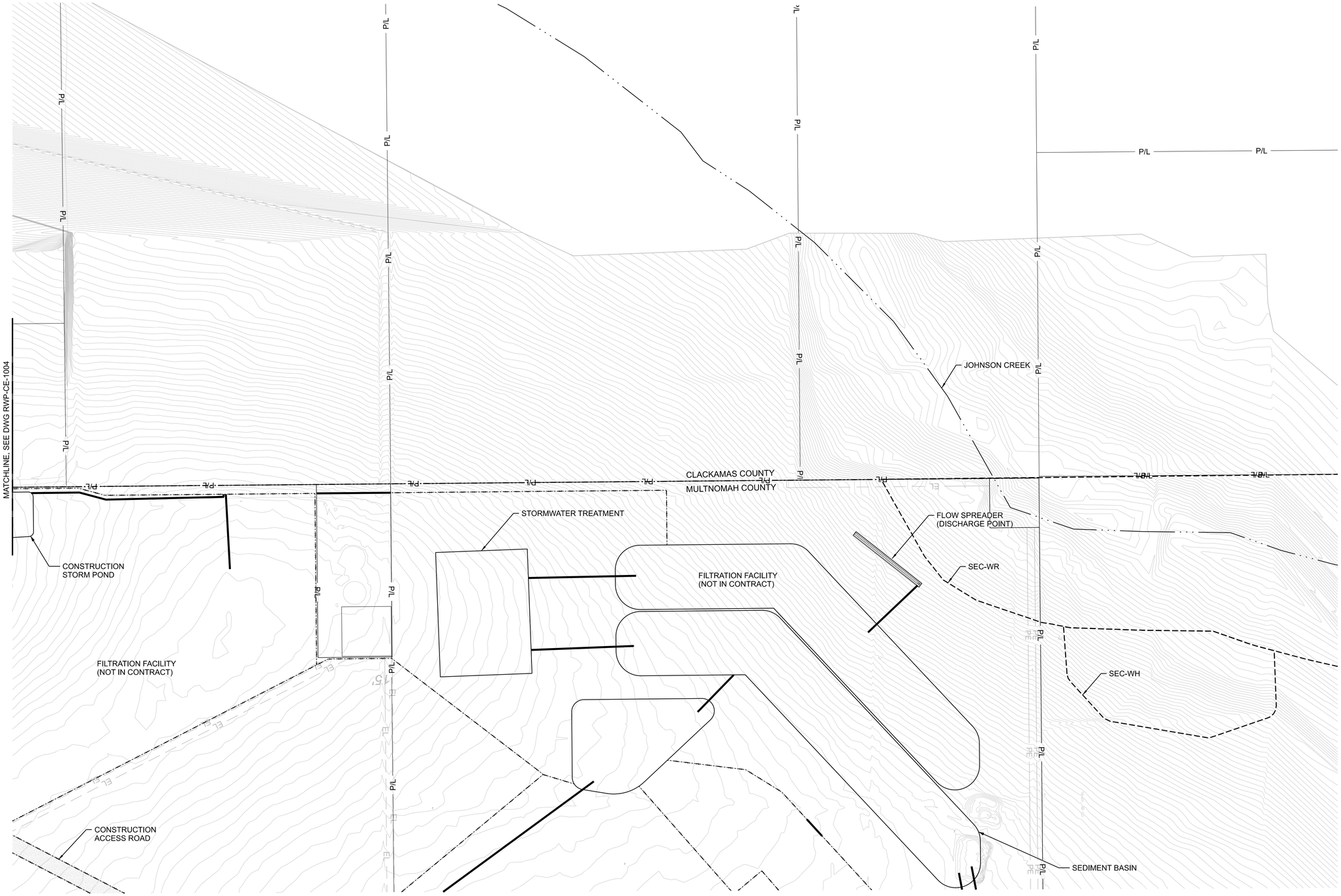
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GENERAL SHEET NOTES

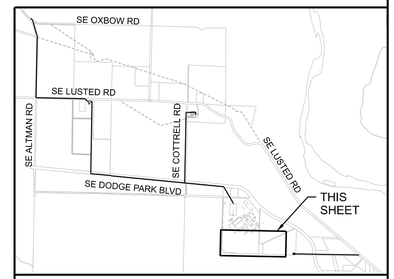
1. TCE AT THIS LOCATION FOR INSTALLING INSTRUMENTATION AND MONITORING. NO EQUIPMENT STORAGE, MATERIAL STORAGE OR PARKING IS PERMITTED WITHIN THE TCE LIMITS.

LEGEND

- GRAVEL
- CONST. CONVEYANCE DITCH
- CONSTRUCTION STORM PIPE
- CONST. PUMPED STORM PIPE



0 50 100 150
Scale In Feet



KEYPLAN

CONFIDENTIAL

No	Date	Description	Appd
1	6/7/23	ADDENDA NO. 1 - 100% REVIEW COMMENT UPDATE	BJP
Revision			
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

RAW WATER PIPELINE EROSION AND SED CONTROL

UTILITY WORK 3

SAP Project No	W02563
1/4 Section	3968
Sheet No	RWP-CE-1004A

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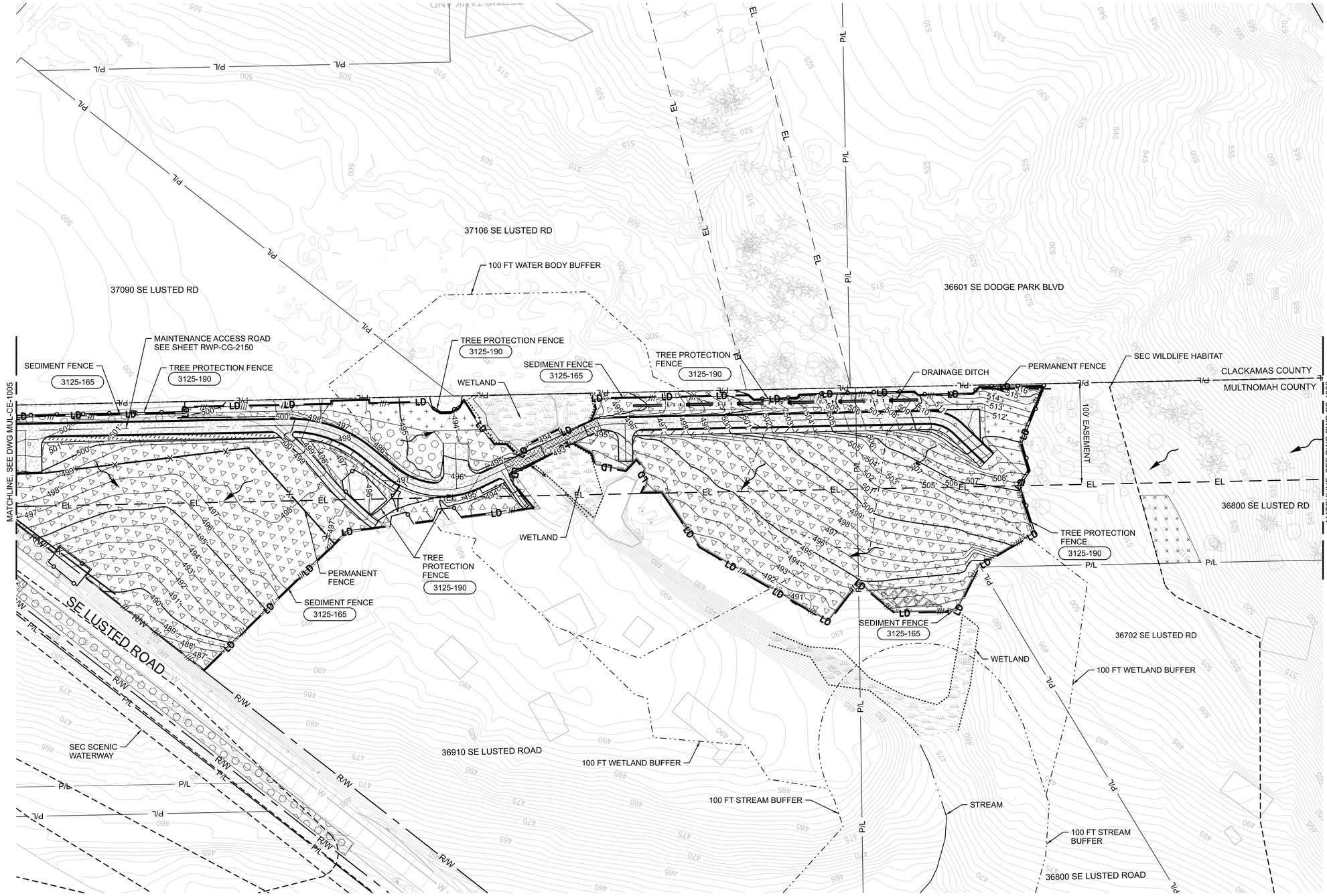
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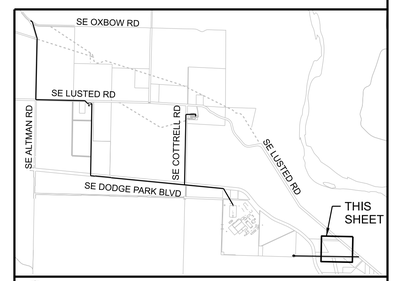
1. ALL PERIMETER SEDIMENT FENCING AND CATCH BASIN FILTER INSERTS TO BE REMOVED UPON COMPLETION OF THIS PHASE.
2. SEE RWP-L-2202 AND RWP-L-2203 FOR SEEDING AND LANDSCAPE PLANS.
3. SEE SEEDING MIX TABLES, SHEET RWP-CE-1000A.

LEGEND

- PROPOSED UTILITY EASEMENT
- SEDIMENT FENCE
- TREE PROTECTION FENCE
- LIMIT OF DISTURBANCE
- XXXX-XXX — STANDARD DETAIL CALLOUT
- FLOW DIRECTION
- PROPOSED GRAVEL
- PERMANENT FENCE
- PROPOSED CONTOUR
- PROPOSED DRAINAGE DITCH
- ROADSIDE SEEDING
- PASTURE SEEDING
- FOREST SHRUB MIX WITH NATIVE UNDERSTORY SEEDING
- SEC SEEDING
- FILTER STRIP SEEDING



0 50 100 150
Scale In Feet



KEYPLAN

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No	Date	Description	Appd
		Revision	
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Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

RAW WATER PIPELINE EROSION AND SED CONTROL

FINAL STABILIZATION AND LANDSCAPE 1

SAP Project No	W02563
1/4 Section	3668
Sheet No	RWP-CE-1005

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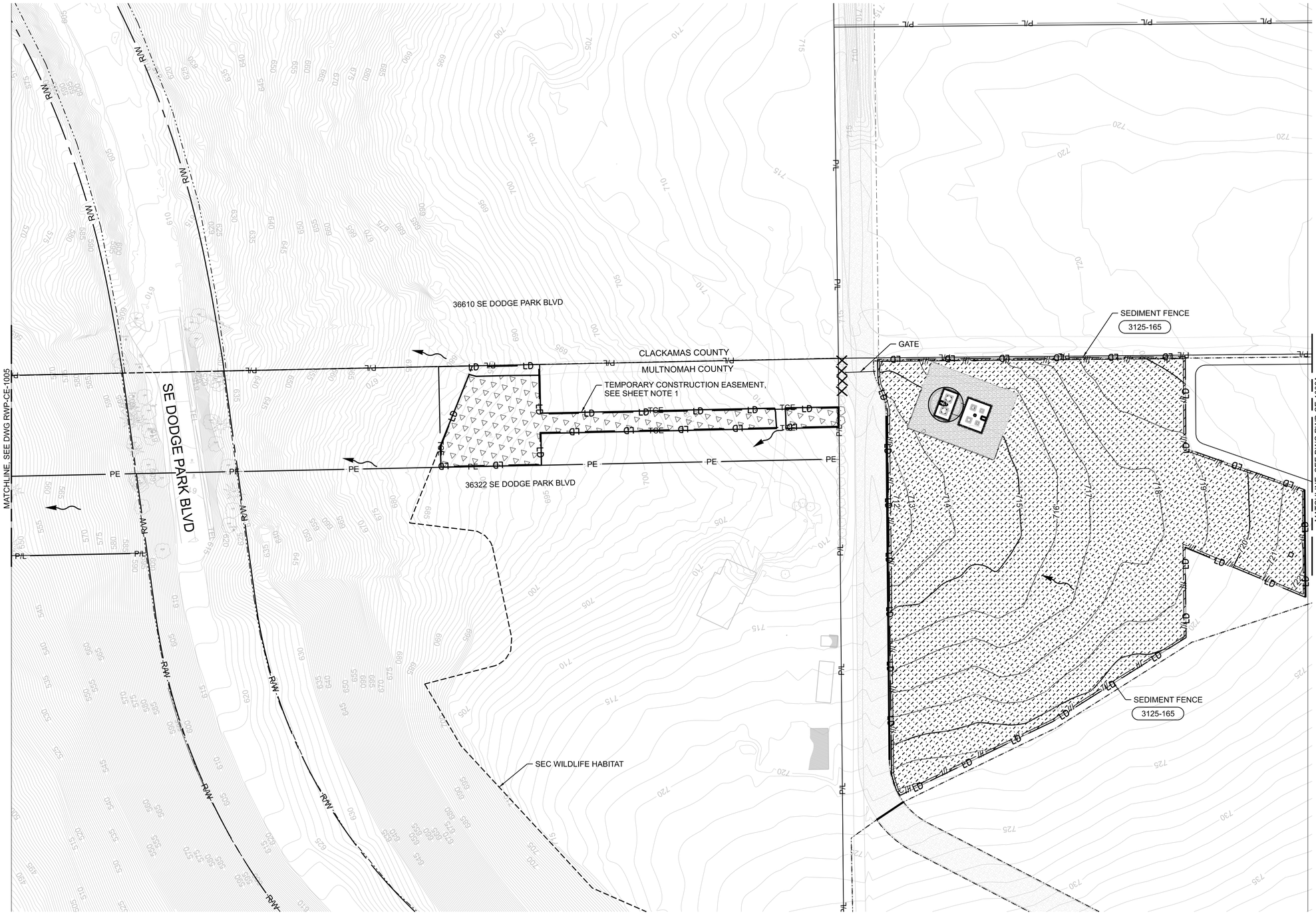
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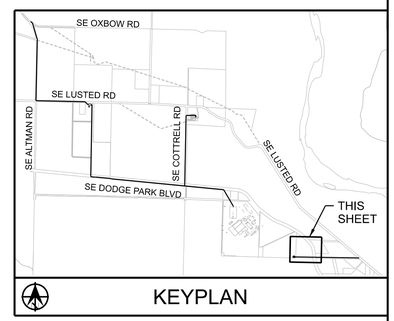
1. ALL PERIMETER SEDIMENT FENCING AND CATCH BASIN FILTER INSERTS TO BE REMOVED UPON COMPLETION OF THIS PHASE.
2. SEE SEEDING MIX TABLES, SHEET RWP-CE-1000A.
3. TCE AT THIS LOCATION FOR INSTALLING INSTRUMENTATION AND MONITORING. NO EQUIPMENT STORAGE, MATERIAL STORAGE OR PARKING IS PERMITTED WITHIN THE TCE LIMITS.
4. FINAL SEEDING AND GRADING IN SE CORNER OF SITE TO BE COMPLETED BY FACILITY CONTRACTOR AFTER PIPELINES CONTRACTOR HAS COMPLETED THEIR WORK.

LEGEND

- TEMPORARY SEEDING
- LD — LIMIT OF DISTURBANCE
- /// — SEDIMENT FENCE
- FLOW DIRECTION
- PE — PERMANENT EASEMENT
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- 500' — PROPOSED CONTOUR
- XXXX-XXX — STANDARD DETAIL CALLOUT
- PROPOSED GRAVEL
- CONST. CONVEYANCE DITCH
- CONSTRUCTION STORM PIPE



0 50 100 150
Scale In Feet



KEYPLAN

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No	Date	Description	Appd
		Revision	
Survey			

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Designed By	RG	Program Mgr	DH
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Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

RAW WATER PIPELINE EROSION AND SED CONTROL

FINAL STABILIZATION AND LANDSCAPE 2

SAP Project No	W02563
1/4 Section	3968
Sheet No	RWP-CE-1006

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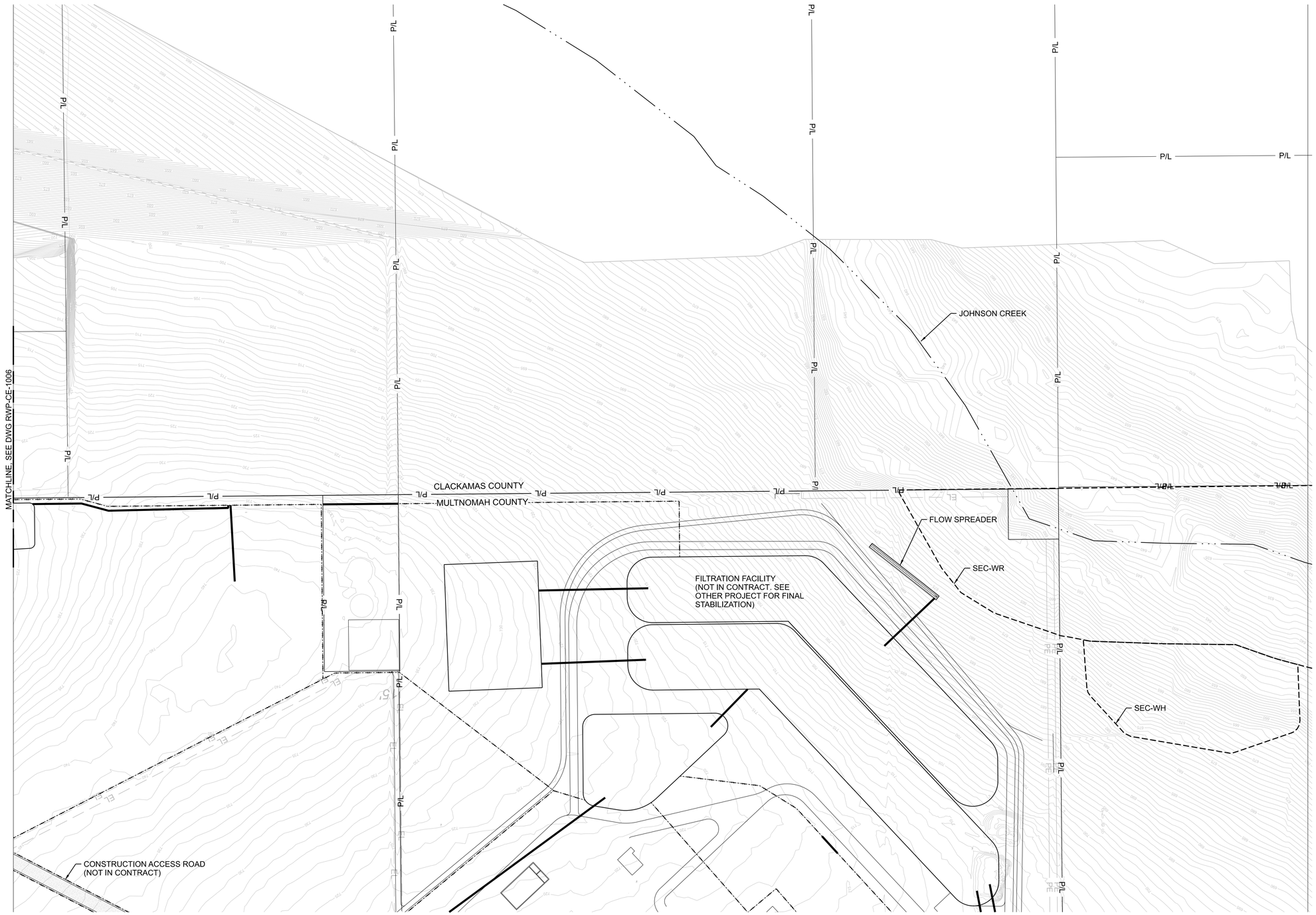
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GENERAL SHEET NOTES

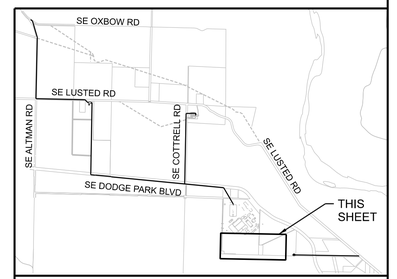
1. ALL PERIMETER SEDIMENT FENCING AND CATCH BASIN FILTER INSERTS TO BE REMOVED UPON COMPLETION OF THIS PHASE.
2. SEE SEEDING MIX TABLES, SHEET RWP-CE-1000A.
3. TCE AT THIS LOCATION FOR INSTALLING INSTRUMENTATION AND MONITORING. NO EQUIPMENT STORAGE, MATERIAL STORAGE OR PARKING IS PERMITTED WITHIN THE TCE LIMITS.

LEGEND

- TEMPORARY SEEDING
- LD — LIMIT OF DISTURBANCE
- /// — SEDIMENT FENCE
- FLOW DIRECTION
- PE — PERMANENT EASEMENT
- TCE — TEMPORARY CONSTRUCTION EASEMENT
- 500' — PROPOSED CONTOUR
- XXXX-XXX — STANDARD DETAIL CALLOUT
- PROPOSED GRAVEL



0 50 100 150
Scale In Feet



KEYPLAN

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		Revision	
Survey			

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Designed By	RG	Program Mgr	DH
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Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

RAW WATER PIPELINE EROSION AND SED CONTROL

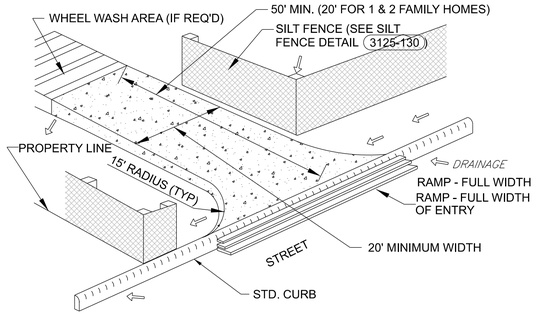
FINAL STABILIZATION AND LANDSCAPE 3

SAP Project No	W02563
1/4 Section	3968
Sheet No	RWP-CE-1006A

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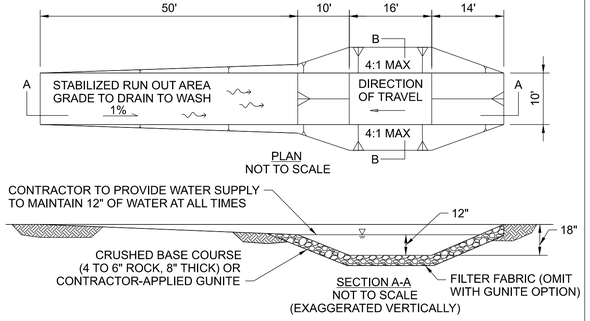
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GRAVEL CONSTRUCTION ENTRANCE

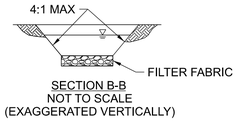
NTS

3125-130



NOTE:
1. CONTRACTOR TO REMOVE ACCUMULATED SEDIMENT FROM WHEEL WASH; MAY BE PIPED TO AN APPROVED SEDIMENT TRAP.

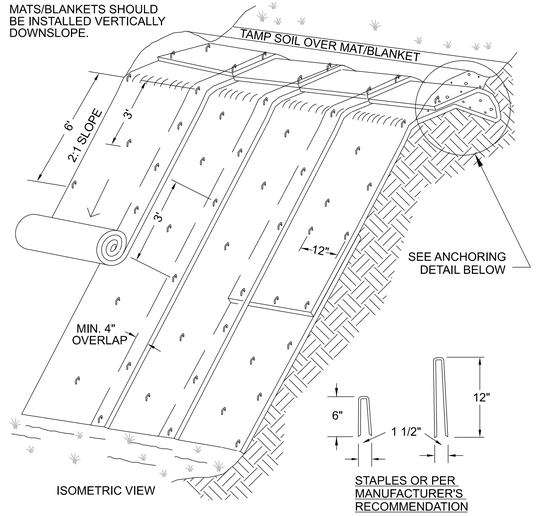
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USE GEOTEXTILE FABRIC WITH AGGREGATE FOR A TEMPORARY TIRE WASH



WHEEL WASH

NTS

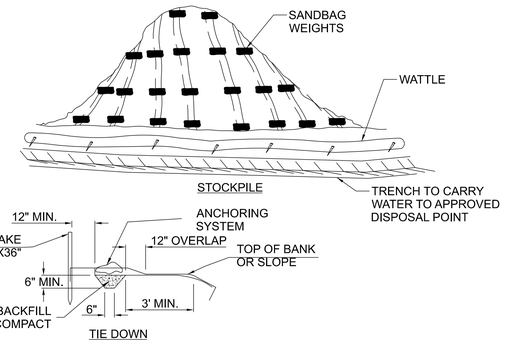
3125-135



SLOPE STABILIZATION

NTS

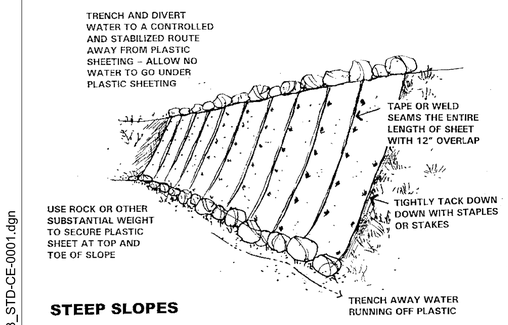
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STOCKPILE

NTS

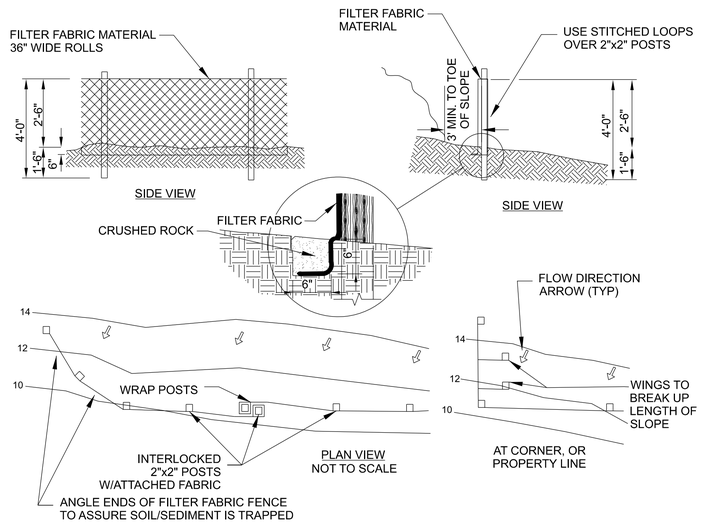
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TEMPORARY SLOPE PROTECTION

NTS

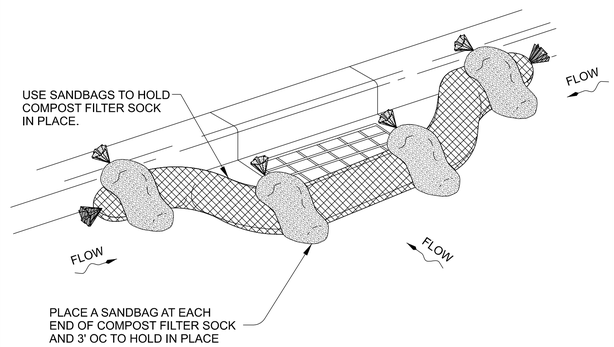
3125-153



TEMPORARY SEDIMENT FENCE

NTS

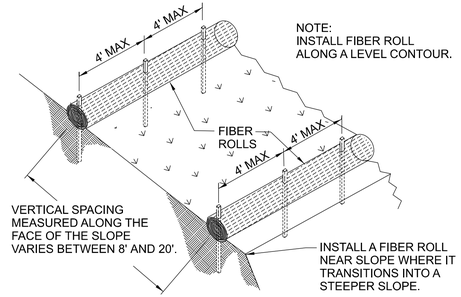
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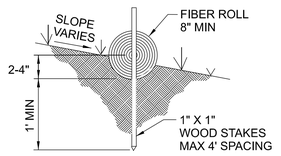
COMPOST FILTER SOCK - TYPE 7

NTS

3125-187



TYPICAL FIBER ROLL INSTALLATION
NOT TO SCALE



ENTRENCHMENT DETAIL
NOT TO SCALE

STRAW WATTLE

NTS

3125-188

CONFIDENTIAL

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No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	RM
Checked By	RG	Const Supvr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

STANDARD DETAILS EROSION CONTROL
DETAILS 1

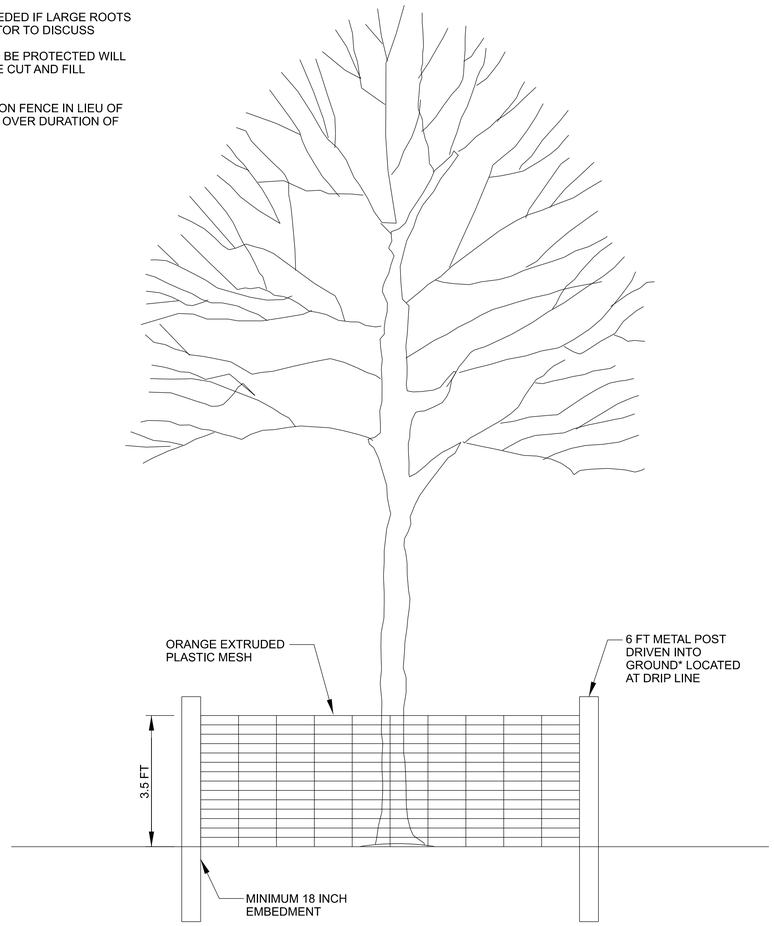
SAP Project No: W02563
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TREE PROTECTION NOTES

1. INSTALL TREE PROTECTION FENCING (TPF) PRIOR TO ANY GROUND DISTURBING ACTIVITY. INSPECTION AND APPROVAL OF FENCING BY THE URBAN FORESTRY TREE INSPECTOR IS REQUIRED PRIOR TO COMMENCEMENT OF WORK, INCLUDING EQUIPMENT AND MATERIALS STAGING AND MOBILIZATION
2. CALL 823-TREE (8733) TO SCHEDULE THE TREE PROTECTION INSPECTION ONCE TPF IS INSTALLED
3. NO ENTRY IS ALLOWED INTO TREE PROTECTION AREAS FOR THE DURATION OF THE PROJECT UNLESS PERMITTED BY THE URBAN FORESTRY TREE INSPECTOR
4. TREE PROTECTION FENCING SHALL NOT BE MOVED, ALTERED OR REMOVED THROUGHOUT THE DURATION OF THE PROJECT DAMAGED TREE PROTECTION FENCE MUST BE REPAIRED IMMEDIATELY.
5. WHERE TREE ROOTS ARE ENCOUNTERED OR ANTICIPATED, EXCAVATION SHALL BE COMPLETED WITH HAND TOOLS CAREFULLY WITHOUT DAMAGE (I.E. VAC TRUCK, AIR SPADE, ETC)
6. TREE ROOTS OVER 2-INCH DIAMETER MAY NOT BE CUT OR DAMAGED WITHOUT A ROOT PRUNING INSPECTION.
7. FIELD ADJUSTMENTS OR ALTERNATIVE METHODS MAY BE NEEDED IF LARGE ROOTS ARE ENCOUNTERED. CONTACT THE ASSIGNED TREE INSPECTOR TO DISCUSS
8. TREES WITHIN THE LIMITS OF DISTURBANCE DESIGNATED TO BE PROTECTED WILL NOT BE REMOVED. CONTRACTOR IS DIRECTED TO COMPLETE CUT AND FILL OPERATIONS WITH CARE NEXT TO THESE TREES
9. THE ORANGE PLASTIC FENCE CAN BE USED AS CONSTRUCTION FENCE IN LIEU OF SILT FENCE IF GRADE IS MODERATE. INSPECT AND MAINTAIN OVER DURATION OF PROJECT

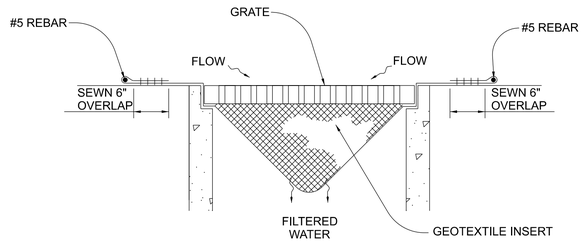


*MAXIMUM 10 FEET SEPARATION BETWEEN METAL POSTS

TREE PROTECTION FENCE

NTS

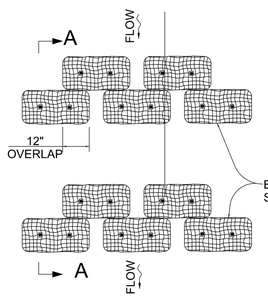
3125-190



INLET PROTECTION - TYPE 3

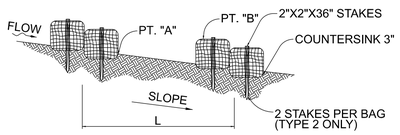
NTS

3125-201



PLAN

BARRIER SPACING		
INSTALL PARALLEL ALONG CONTOURS AS FOLLOWS		
% SLOPE	% SLOPE	MAXIMUM SPACING ON SLOPE
10% FLATTER	1:10 or FLATTER	300'
10 > % ≥ 15	10 > X ≥ 7.5	150'
15 > % ≥ 20	7.5 > X ≥ 5	100'
20 > % ≥ 30	5 > X ≥ 3	50'
STEEPER THAN 30%	STEEPER THAN 1:3	25'



SECTION A-A

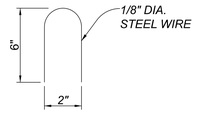
NOTES:
1. FOR TYPE 2 BARRIER, DRIVE STAKES FLUSH WITH TOP OF BAG AND INTO UNDISTURBED GROUND A MIN. OF 12". OMIT STAKES IF BAGS ARE PLACED ON PAVED SURFACE.
2. FOR TYPE 2 AND TYPE 4 BARRIERS, SPACE BAGS (L) SO THAT THE ELEVATION OF POINT "A" IS LESS THAN OR EQUAL TO THE ELEVATION OF POINT "B".

TYPE 2 - BIOFILTER BAGS
TYPE 3 - WATTLES
TYPE 4 - SAND BAGS

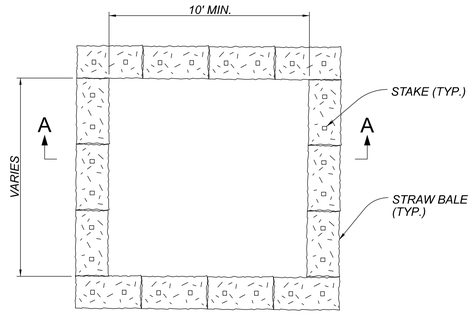
BIOFILTER BAG / SAND BAG BARRIER - TYPE 2 AND 4

NTS

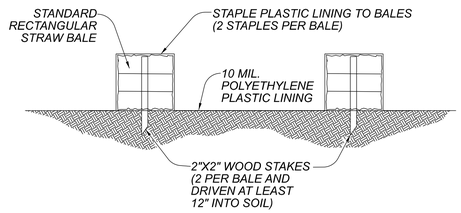
3125-202



STAPLE DETAIL



PLAN



SECTION A-A

CONCRETE TRUCK WASH OUT FACILITY

NTS

3125-203

CONFIDENTIAL

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6:18:58 PM
05\16\2023

No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	RM
Checked By	RG	Const Supvr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
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PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424 — Date

CITY OF PORTLAND OREGON 1851

Bull Run Filtration Pipelines

STANDARD DETAILS EROSION CONTROL

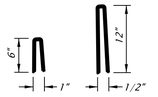
DETAILS 2

SAP Project No: W02563
1/4 Section:
Sheet No: STD-CE-0002

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NOTES:
1. INSTALL MATTING ON SMOOTH SOIL SURFACE AFTER SEEDING IS APPLIED (WHERE APPLICABLE).
2. INSTALL CHANNEL LINER MATTING, IN THE DIRECTION OF WATER FLOW. ANCHOR UPSTREAM END OF MAT WITH CHECK SLOT FOR CULVERT OUTFALLS. PLACE MAT UNDER PIPE 12" MINIMUM UPSTREAM FROM PIPE OUTLET.
3. CONSTRUCT CHECK SLOTS ACROSS CHANNEL BOTTOM AT 25' SPACING AND AT THE END OF EACH MAT (FIG. A3 OR A4).
4. OVERLAP SIDE CHANNEL LINER MATTING EDGES 6" OVER THE CENTER CHANNEL LINER MATTING AND FASTEN EDGES 12" OC CONTINUE OVERLAP AND STAPLING PATTERN FOR EACH ADDITIONAL SIDE CHANNEL LINER MAT.
5. LAP UPSTREAM MATTING END 12" OVER BEGINNING EDGE OF DOWNSTREAM MATTING. FASTEN 12" OC
6. ANCHOR TOP EDGE OF SIDE CHANNEL MATTING IN TRENCH AND FASTEN 12" OC (FIG. A2).
7. FASTEN MATTING INTERIOR AT 24" OC WITH STAGGERED SPACING.
8. CONSTRUCT INITIAL ANCHOR TRENCH AT DOWNSTREAM END OF MATTING AND TERMINAL SLOPE ANCHOR AT UPSTREAM END.
9. MATTING TYPES A THROUGH E: FURNISH FULLY BIODEGRADABLE PRODUCT. MATTING WITH PLASTIC OR PHOTODEGRADABLE COMPONENTS WILL NOT BE ACCEPTED.



STAPLES OR PER MANUFACTURER'S RECOMMENDATION
NOT TO SCALE

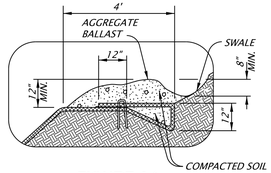
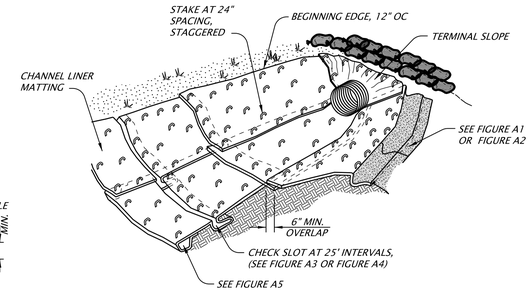


FIGURE A1: TOP OF BANK ANCHOR TRENCH, H>3' AND TERMINAL SLOPE
NOT TO SCALE



CHANNEL MATTING ISOMETRIC VIEW
NOT TO SCALE

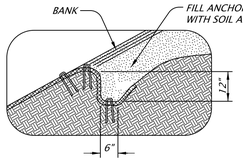


FIGURE A2: TOP OF BANK ANCHOR TRENCH, H<3'
NOT TO SCALE

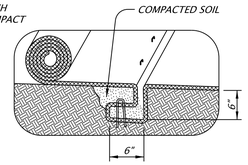


FIGURE A3: CHANNEL CHECK SLOT
NOT TO SCALE

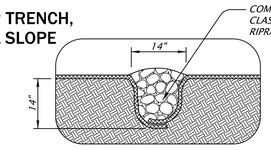


FIGURE A4: CHANNEL CHECK SLOT WITH ROCK BACKFILL
NOT TO SCALE

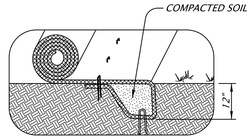
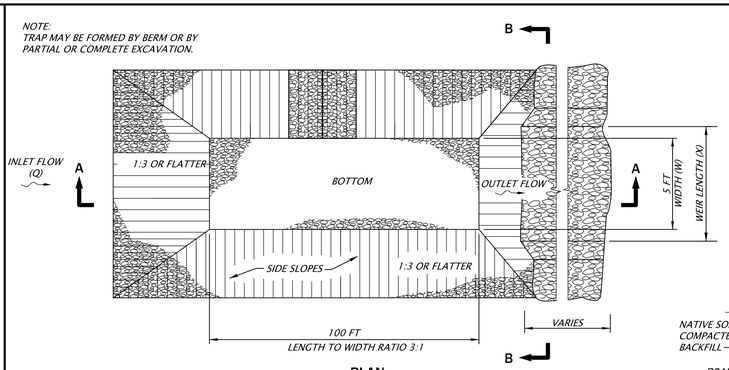


FIGURE A5: INITIAL CHANNEL ANCHOR TRENCH
NOT TO SCALE

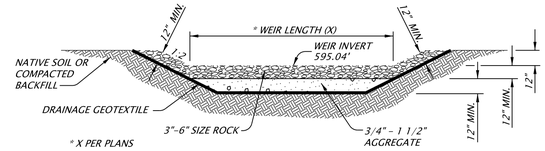
CHANNEL MATTING
NTS

3125-305

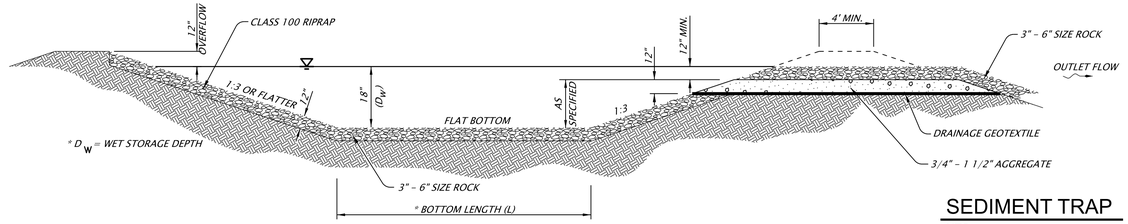
NOTE:
TRAP MAY BE FORMED BY BERM OR BY PARTIAL OR COMPLETE EXCAVATION.



PLAN



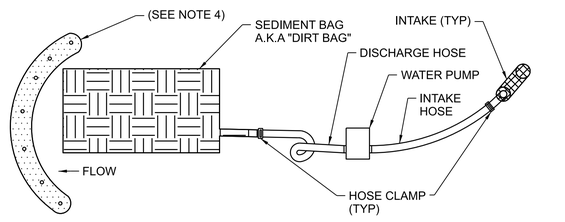
SECTION B-B



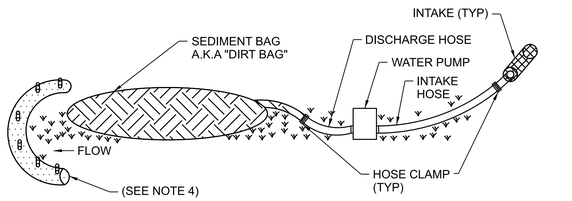
SECTION A-A

SEDIMENT TRAP
NTS

3125-302



PLAN VIEW



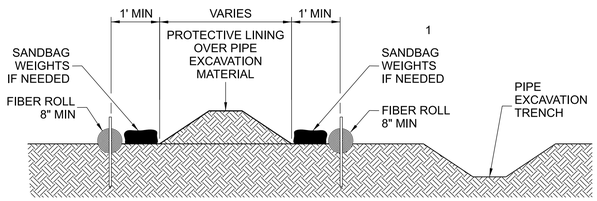
ELEVATION VIEW

NOTES:

1. PROVIDE SEDIMENT BAG MANUFACTURERED USING POLYPROPYLENE 8 OZ. NON-WOVEN GEOTEXTILE SEWN INTO A BAG WITH DOUBLE-NEEDLE USING HIGH STRENGTH THREAD, MIRAFI 180N DEWATERING BAG OR EQUAL.
2. PROVIDE FILLING CONNECTION INTO SEDIMENT BAG FOR 4 INCH OR LARGER DISCHARGE HOSE WITH STRAPS TO SECURE HOSE TO BAG.
3. SECURE SEDIMENT BAG TO GROUND WITH STRAPS AND STAKES SUCH THAT BAG IS IMMOVABLE WHEN FILLED.
4. PROVIDE TWO ROWS OF STRAW WADDLE DOWNSTREAM OF SEDIMENT BAG WITH ENDS OF WADDLE WRAPPED UPHILL AROUND SEDIMENT BAG TO CAPTURE DISCHARGE FROM BAG. 3125-188
5. SEDIMENT BAG IS FULL WHEN IT NO LONGER CAN EFFICIENTLY FILTER SEDIMENT OR ALLOW WATER TO PASS AT A RATE LESS THAN 50% OF THE MANUFACTURER'S DESIGNED FLOW RATE. WHEN FULL, DISPOSE OF SEDIMENT BAG IN ACCORDANCE WITH APPROVED SOLID WASTE DISPOSAL PLANS AS APPROVED BY OWNER'S REPRESENTATIVE.
6. DURING ACTIVE DEWATERING AND PUMPING INTO SEDIMENT BAG, MONITOR DEWATERING BAG AND DISCONTINUE USE IF BAG IS DAMAGED OR FULL.

SEDIMENT BAG
NTS

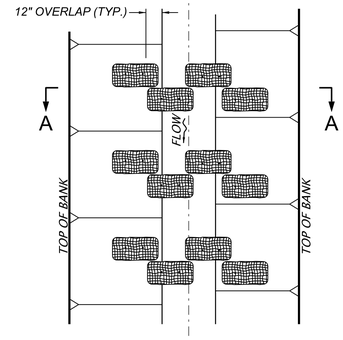
3125-310



APPLY DETAIL FOR ENTIRE LENGTH OF EXCAVATION BETWEEN DODGE PARK BLVD AND LUSTED ROAD. INSTALL FIBER ROLL ACCORDING TO 3125-188 AND ANCHOR PROTECTIVE LINING ACCORDING TO 3125-153. KEEP EXCAVATION MATERIAL WITHIN SILT FENCE BOUNDARY.

PIPE EXCAVATION MATERIAL PROTECTION
NTS

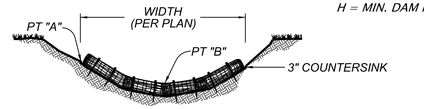
3125-301



PLAN

MAXIMUM CHECK DAM SPACING "L"				
Ditch Grade	H=8"	H=12"	H=18"	H=24"
10%	* *	* *	15'	20'
9%	* *	* *	16'	22'
8%	* *	* *	18'	25'
7%	* *	* *	21'	28'
6%	* *	16'	25'	33'
5%	* *	20'	30'	40'
4%	16'	25'	37'	50'
3%	22'	33'	50'	66'
2%	33'	50'	75'	100'

* * NOT ALLOWED
H = MIN. DAM HEIGHT



SECTION A-A

STAKE BIOFILTER BAGS WITH TWO 2"X2"X18" (MINIMUM) WOOD STAKES PER BAG. DRIVE STAKES A MINIMUM OF 6" INTO THE GROUND AND FLUSH WITH THE TOP OF THE BAGS. OMIT STAKES IF PLACED OVER PAVED SURFACES. OVERLAP BAGS 12" MINIMUM AT EACH JOINT.

BIOFILTER BAG CHECK DAM - TYPE 3
NTS

3125-004

CONFIDENTIAL

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No	Date	Description	Appd
		Revision	
Survey			

EMERIO ENGINEERING • SURVEYING • DESIGN

Designed By	RG	Program Mgr	DH
Drawn By	JL	Const Mgr	BN
Checked By	RG	CM/I Eng Mgr	JB
Project Mgr	BJP	Date	6/7/23

WARNING
0 1"
If this bar does not measure 1" then the drawing is not to scale

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

KENNETH M, ACKERMAN, PRINCIPAL ENGINEER, PE #19424 Date

CITY OF PORTLAND, OREGON 1851

Bull Run Filtration Pipelines

STANDARD DETAILS EROSION CONTROL
DETAILS 3

SAP Project No W02563
1/4 Section
Sheet No STD-CE-0003

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