

1. ACCORDING TO WASHINGTON STATE DNR REGULATIONS AND KING COUNTY CODE 21A.22.060.B, ACTIVE CONSTRUCTION ON A SITE OF 20 ACRES OR MORE SHALL HAVE A SEGMENTAL RECLAMATION PHASING PLAN TO MINIMIZE ENVIRONMENTAL IMPACTS. EACH PHASE SHALL BE FILLED IN ITS ENTIRETY PRIOR TO INITIATING FILL IN THE NEXT PHASE UNLESS IT IS FULLY HYDROSEDED AND STABILIZED.
2. OWNER TO ESTABLISH A MONITORING PLAN THAT ENSURES THAT ALL FILL WILL BE "CLEAN FILL" AS DEFINED BY KING COUNTY CODE 16.82.110.C AND ACCORDING TO THE FINAL SEPA DECISION.

1. REFER TO CONCEPTUAL CONSTRUCTION AND EROSION CONTROL PLAN ON SHEET 4 FOR DIRECTION AND DETAILS ON PROPOSED FILLING PROCESS.
2. SLOPES AND GRADE CONTOURS SHOWN ARE CONCEPTUAL IN NATURE AND ACTUAL REFINED CONSTRUCTION MAY DIFFER BASED ON COUNTRY AND GEOTECHNICAL ENGINEER REVIEW OF SITE CONDITIONS AND FILL MATERIALS.
3. PROFILES A-A', B-B', AND C-C' ARE SHOWN ON SHEET 6.

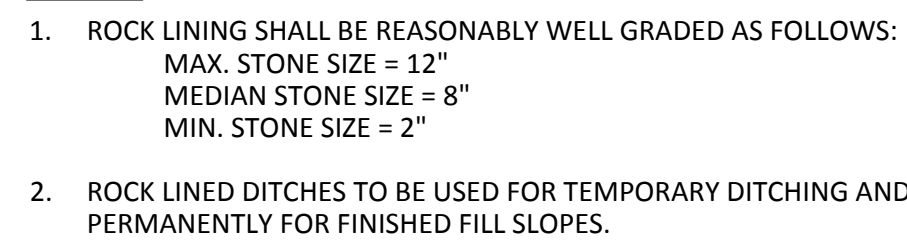
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STATUS:	ISSUED FOR PERMIT REVIEW	

**QUEEN CITY FARMS
PHASE III REFILL
MAPLE VALLEY, WASHINGTON**

REFILL AND ENVIRONMENTAL RESTORATION PLAN

[illegible]

1. A TEMPORARY SEDIMENT POND SHALL BE PROVIDED TO ACCOMMODATE UP TO AN APPROXIMATELY 8-ACRE PORTION OF THE PHASE AS SHOWN ON THE TYPICAL CONCEPTUAL STRATEGY DETAIL BELOW.
2. EACH 8-ACRE PORTION OF FILL SHALL BE CONSTRUCTED TO DIRECT RUNOFF TO PERIMETER DITCHES THAT, IN TURN, RUNOFF TO THE SEDIMENT POND FACILITIES.
3. EROSION RILLS MAY FORM NATURALLY IN EACH 8-ACRE SUBBASIN. IF EROSION SOILS DELIVERED TO THE SEDIMENT POND EXCEED THE POND'S CAPACITY, THEN THE POND SHALL BE CLEANED OUT OR REPLACED AND THE EROSION RILLS STABILIZED BY ADDING GRAVEL WITHIN THE RILLS.
4. AS FILL PROCEEDS TO HIGHER FILL LAYERS, THE SEDIMENT PONDS MAY NEED TO BE FILLED OVER AND RELOCATED TO ACCOMMODATE THE CHANGING GRADES.
5. WHERE TEMPORARY SEDIMENT POND DISCHARGE DITCHES HAVE PROFILES EXCEEDING 10%, THE DITCHES SHALL BE ROCK-LINED PER THE "ROCK LINED DITCH" DETAIL ON THIS SHEET. ALL POND DISCHARGE DITCHES IN EACH PHASE SHALL DISCHARGE INTO A PERIMETER COLLECTION DITCH WITH ROCK CHECK DAMS THAT, IN TURN, SHALL DISCHARGE INTO THE STORMWATER DETENTION AND WATER QUALITY POND FACILITIES. AS THE SEDIMENT PONDS ARE RELOCATED, THE SEDIMENT POND DISCHARGE DITCHES WILL ALSO NEED TO BE EXTENDED, WHERE NECESSARY, TO ACCOMMODATE THE SLOPES.

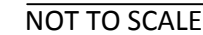


1. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.
2. IF CONCENTRATED FLOWS ARE EVIDENT UPHILL OF THE SILT FENCE, THEY MUST BE INTERCEPTED AND CONVEYED TO A SEDIMENT TRAP OR POND.
3. IT IS IMPORTANT TO CHECK THE UPHILL SIDE OF THE SILT FENCE FOR SIGNS OF THE SILT FENCE CLOGGING AND ACTING AS A BARRIER TO FLOW AND THEN CAUSING CHANNELIZATION OF FLOWS PARALLEL TO THE SILT FENCE. IF THIS OCCURS, REPLACE THE SILT FENCE OR REMOVE THE TRAPPED SEDIMENT.
4. SEDIMENT MUST BE REMOVED WHEN THE SEDIMENT IS 6 INCHES HIGH.
5. IF THE FILTER FABRIC (GEOTEXTILE) HAS DETERIORATED DUE TO ULTRAVIOLET BREAKDOWN, IT SHALL BE REPLACED.
6. HIGH-VISIBILITY FENCE SHALL BE INSTALLED ALONG THE OUTER EDGE OF ALL ON-SITE AQUATIC AREA, WETLAND AND RIPARIAN BUFFERS.



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

1. SEDIMENT SHALL BE REMOVED FROM THE POND WHEN IT REACHES 2 FEET IN DEPTH.
2. ANY DAMAGE TO THE POND EMBANKMENTS OR SLOPES SHALL BE REPAIRED.



NOT TO SCALE



NOT TO SCALE



NOTE: ROCK SHALL BE 4" MINUS QUARRY ROCK

NOT TO SCALE

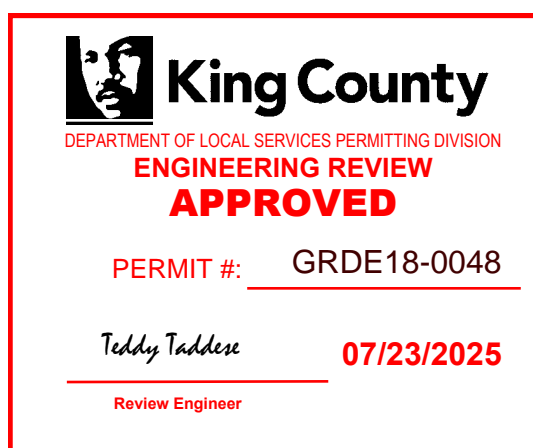
PERFORM ALL CULTURAL OPERATIONS ACROSS OR AT RIGHT ANGLES TO THE SLOPES (CONTOURED). THE SEEDBED SHOULD BE FIRM WITH A FAIRLY FINE SURFACE AFTER ROUGHENING.

FERTILIZATION - AS PER SUPPLIER'S RECOMMENDATIONS. DEVELOPMENTS ADJACENT TO WATER BODIES MUST USE NON-PHOSPHOROUS FERTILIZER.

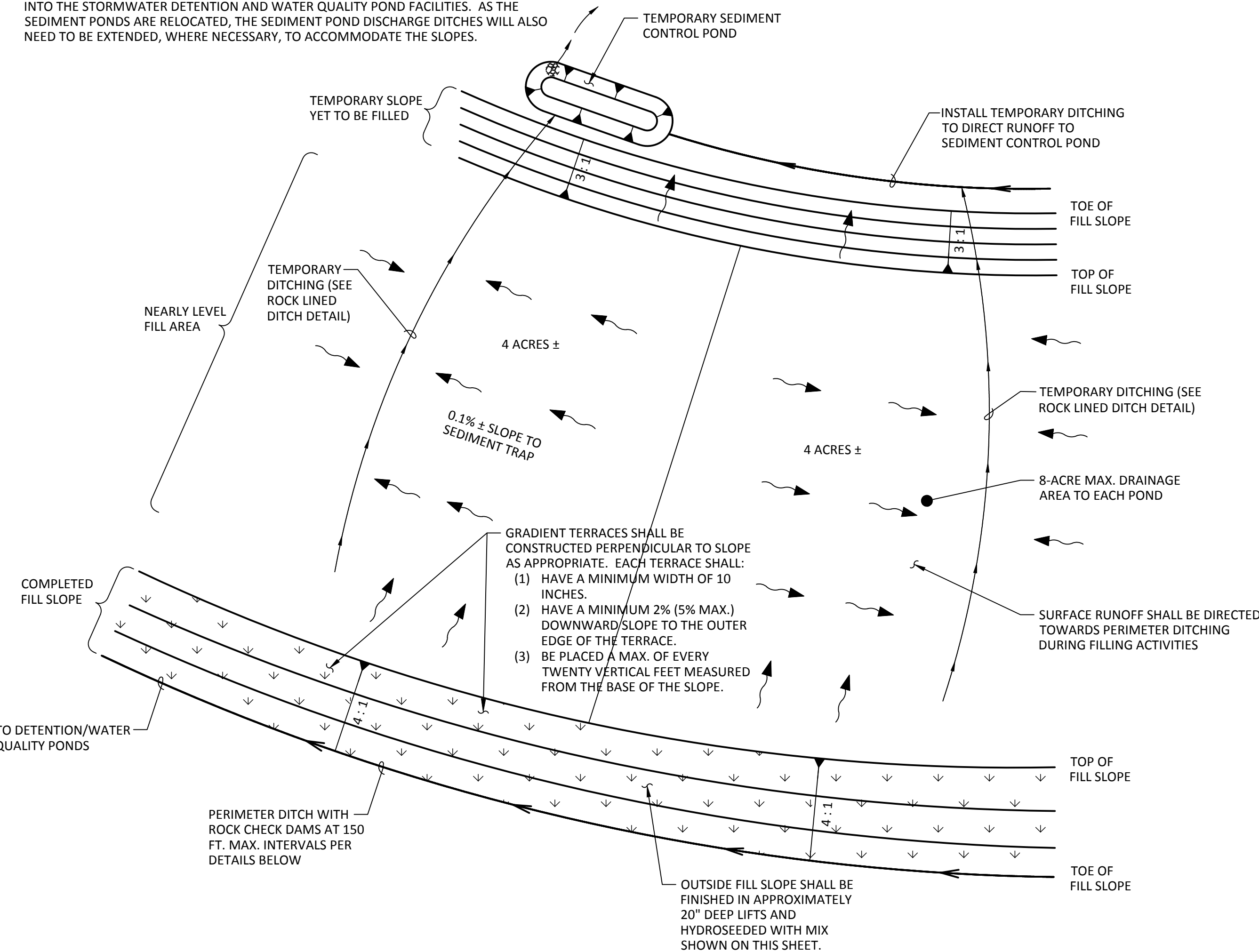
SEEDING - APPLY MIXTURE TO THE GROUND SURFACE AT A RATE OF 45 LBS/ACRE, WITH MULCH ADDED

HYDROSEED APPLICATION MIX: PROPORTIONS BY WEIGHT

RED ALDER	25%
RED FESCUE	40%
COLONIAL BENTGRASS	15%
WHITE CLOVER	20%



MULCH MATERIAL	QUALITY STANDARDS	APPLICATION RATES
STRAW	AIR-DRIED; FREE FROM UNDESIRABLE SEED AND COARSE MATERIAL	2"-3" THICK; 2-3 BALES PER 1000 SF OR 2-3 TONS PER ACRE
WOOD FIBER CELLULOSE	NO GROWTH INHIBITING FACTORS	APPROX. 25-30 LBS PER 1000 SF OR 1000-1500 LBS PER ACRE
COMPOST	NO VISIBLE WATER OR DUST DURING HANDLING. MUST BE PURCHASED FROM SUPPLIER WITH SOLID WASTE HANDLING PERMIT.	2" THICK MIN.; APPROX. 100 TONS PER ACRE (APPROX. 800 LBS PER YARD)
CHIPPED SITE VEGETATION	AVERAGE SIZE SHALL BE SEVERAL INCHES	2" MINIMUM THICKNESS



QUEEN CITY FARMS
PHASE III REFILL
MAPLE VALLEY, WASHINGTON

CONCEPTUAL FILL CONSTRUCTION &
EROSION CONTROL DETAILS

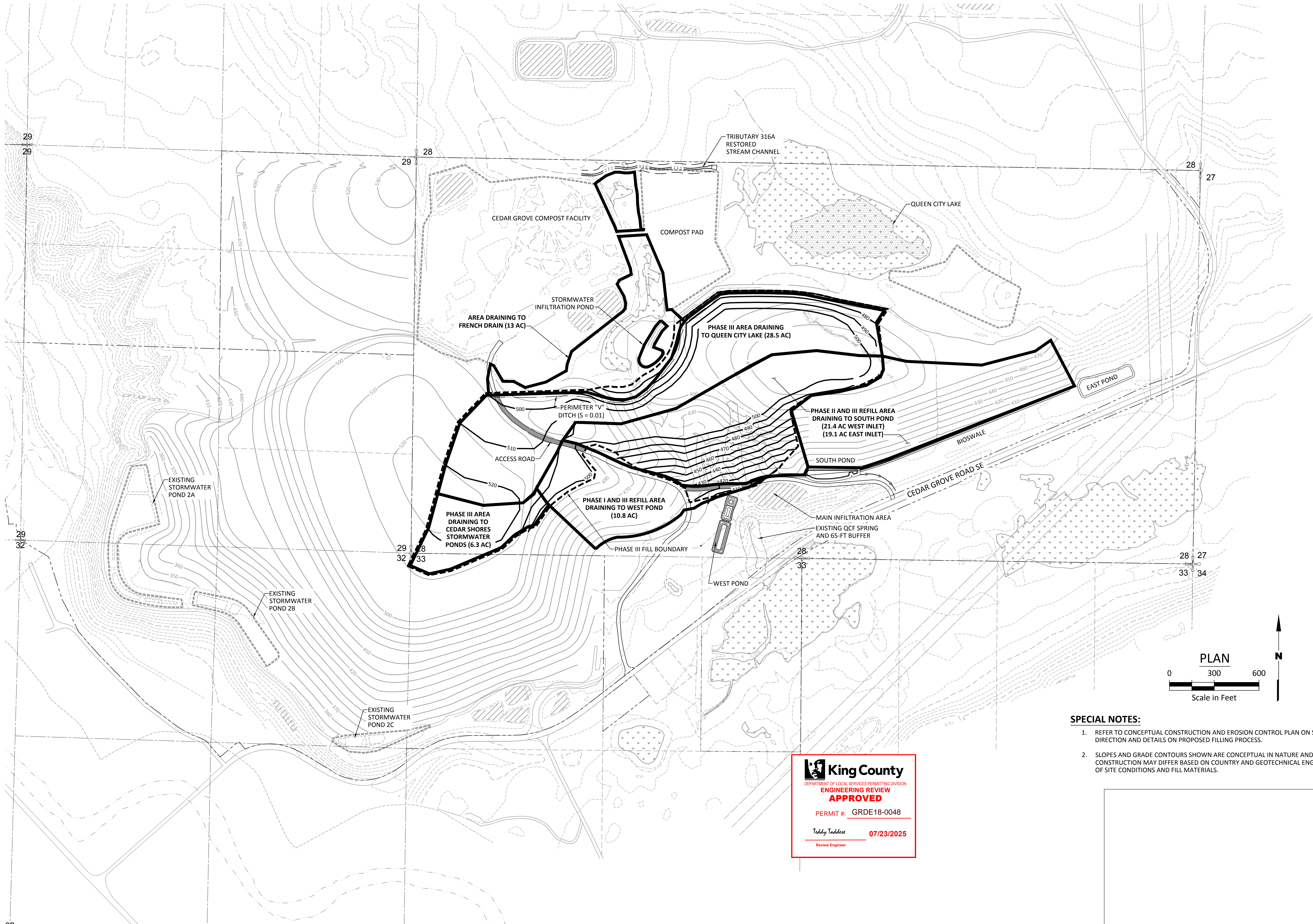
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PROJECT NO.
992002.050


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LANDAU ASSOCIATES INC. | G:\PROJECTS\992002\050\051\PHIII REFILL PLAN SET\P. DRAINAGE BASIN AREAS PLAN.DWG



SPECIAL NOTES:

1. REFER TO CONCEPTUAL CONSTRUCTION AND EROSION CONTROL PLAN ON SHEET 4 FOR DIRECTION AND DETAILS ON PROPOSED FILLING PROCESS.
2. SLOPES AND GRADE CONTOURS SHOWN ARE CONCEPTUAL IN NATURE AND ACTUAL REFILL CONSTRUCTION MAY DIFFER BASED ON COUNTRY AND GEOTECHNICAL ENGINEER REVIEW OF SITE CONDITIONS AND FILL MATERIALS.

**King County**

DEPARTMENT OF LOCAL SERVICES PERMITTING DIVISION

ENGINEERING REVIEW

APPROVED

PERMIT #: GRDE18-0048

Teddy Taddeci

Review Engineer

07/23/2025



PROJECT NO.
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QUEEN CITY FARMS
PHASE III REFILL
MAPLE VALLEY, WASHINGTON

DRAINAGE BASIN AREAS PLAN

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LANDAU
ASSOCIATES

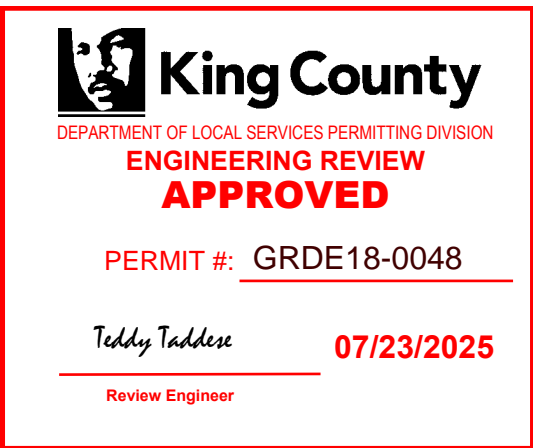
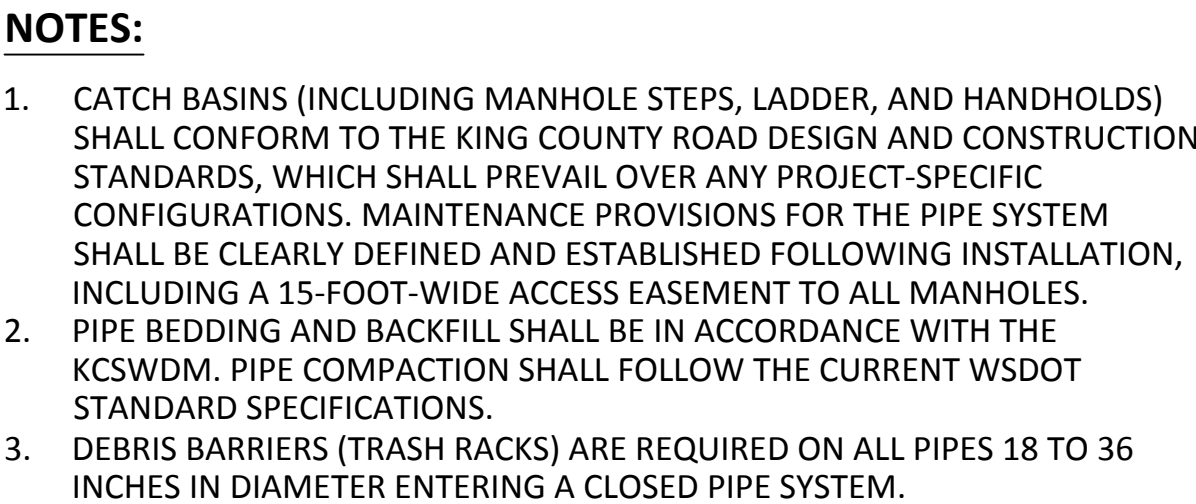
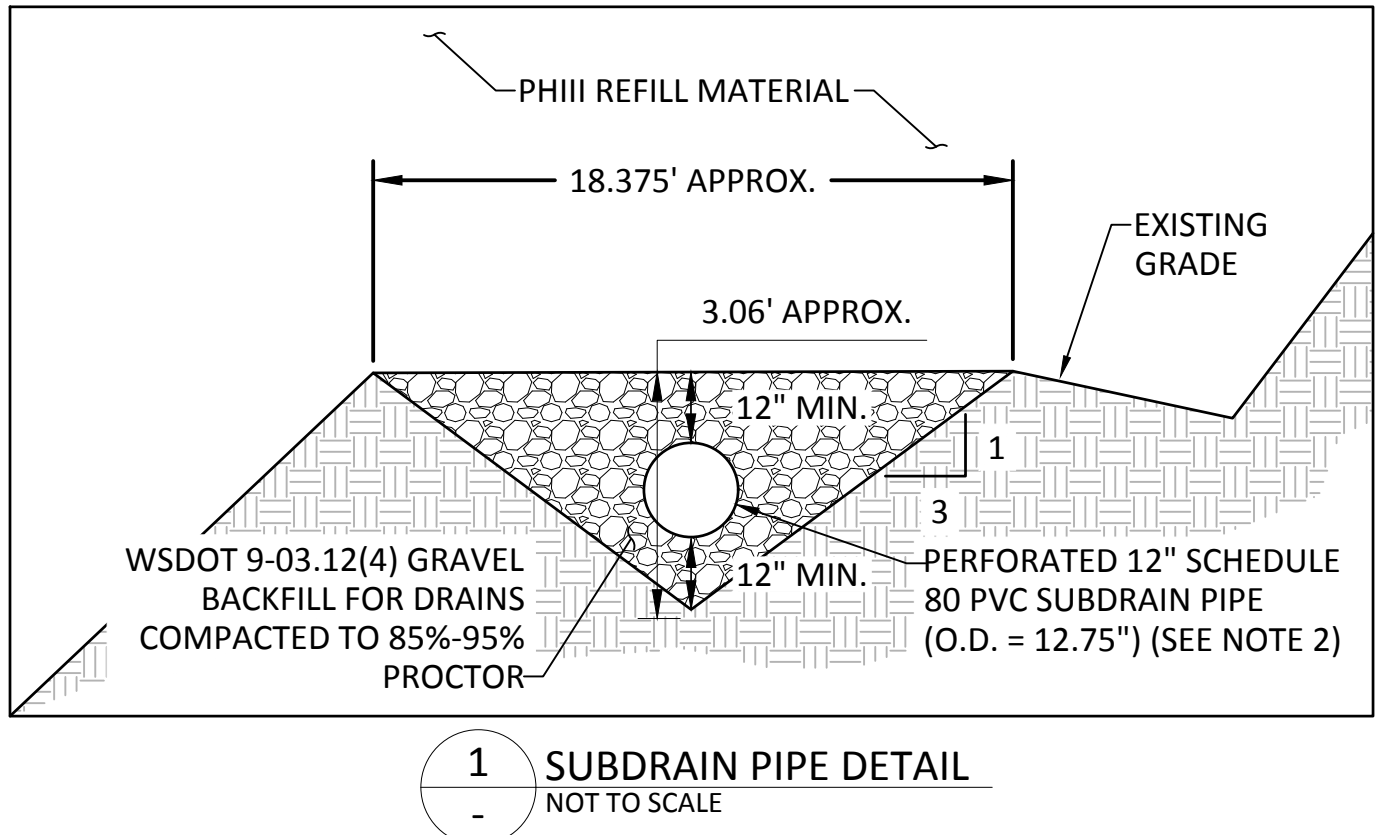
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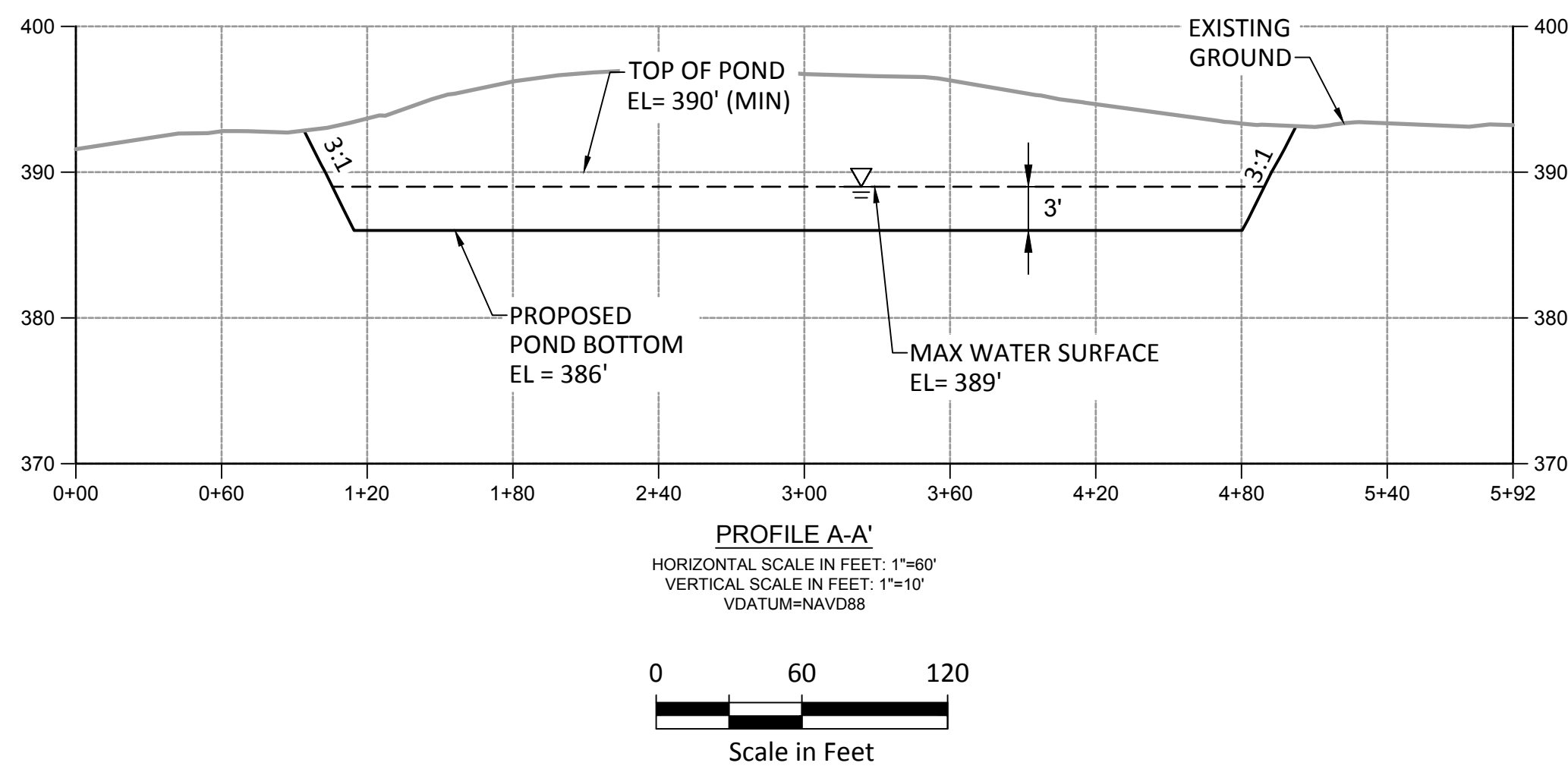
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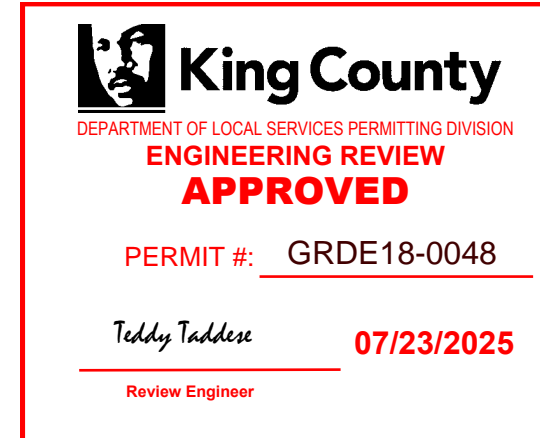
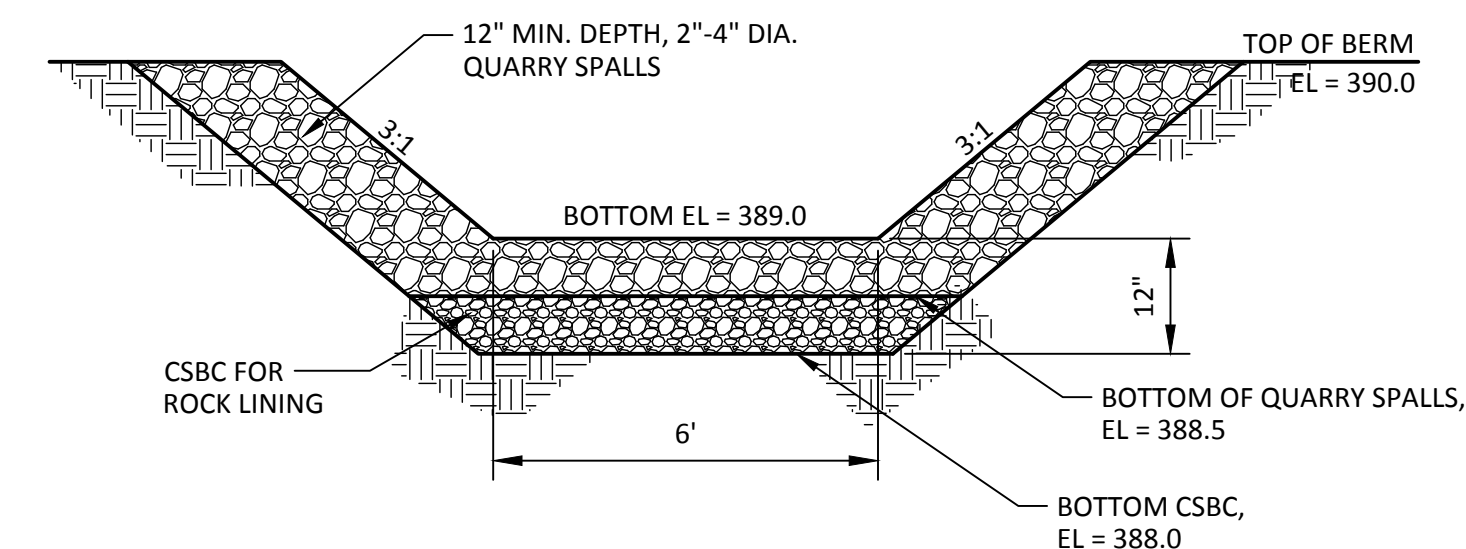
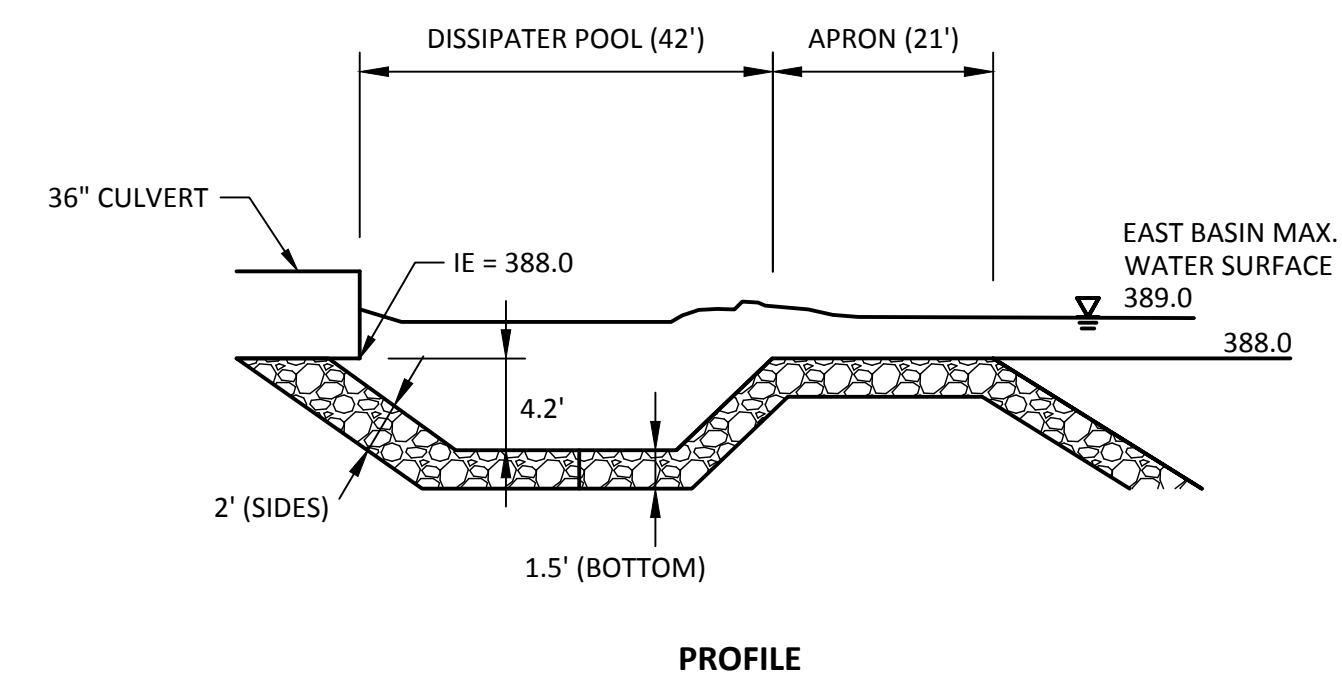


1. THE BASE OF THE RECLAMATION FILL SHOULD BE FOUND ON UNDISTURBED OR PROPERLY PREPARED NATIVE SOIL.
2. ANY SOFT, DISTURBED, AND/OR ORGANIC-RICH SOIL LOCATED WITHIN THE FOOTPRINT OF THE PLANNED FILL SHOULD BE OVEREXCAVATED TO EXPOSE UNDISTURBED NATIVE SOIL.
3. FILL MATERIALS SHOULD BE GRADED AND PLACED IN LOOSE LIFTS NOT TO EXCEED 2 FT THICK PRIOR TO COMPACTION.
4. FILLS PLACED OVER EXISTING SLOPES STEEPER THAN 5H:1V SHOULD BE KEYED INTO THE EXISTING SLOPES BY BENCHING.
5. IN ORDER TO ACHIEVE ADEQUATE COMPACTION NEAR THE FACE OF THE PLANNED FILL SLOPE, THE FILL SLOPE SHOULD BE OVER-BUILT AND THEN TRIMMED TO THE LINES AND GRADES SHOWN ON THE PROJECT DRAWINGS.
6. FILL SHOULD NOT BE PLACED UNDER WATER OR IN AREAS WITH STANDING WATER. IN AREAS WHERE STANDING WATER OCCURS SEASONALLY, IT MAY BE APPROPRIATE TO PLACE FILL IN THE SUMMERY (DRY) SEASON.
7. EACH INDIVIDUAL LIFT SHOULD BE COMPACTED BY ROUTING HAUL TRAFFIC OVER THE LIFT OR BY USE OF MECHANIZED COMPACTION EQUIPMENT. PRIOR TO PLACEMENT OF A SUBSEQUENT OVERLYING LIFT, THE FILL SHOULD BE PROOF ROLLED WITH A FULLY-LOADED DUMP TRUCK. THE PROOF ROLL SHOULD RESULT IN LESS THAN ABOUT 2 INCHES OF PERMANENT RUTTING.
8. WET SOIL AND FILL WITH FREE LIQUIDS SHOULD BE SPREAD OUT IN THIN LIFTS AND ALLOWED TO DRY PRIOR TO FINAL PLACEMENT AND COMPACTION.
9. WET SURFICIAL SOIL SHOULD BE REWORKED AND ALLOWED TO DRY PRIOR TO COMMENCING OVERLYING FILL PLACEMENT ACTIVITIES.
10. THE SURFACE OF THE FILL SHOULD BE SLOPED AND COMPACTED TO PREVENT PONDING OR EXCESSIVE INFILTRATION OF SURFACE WATER AND CREATION OF SATURATED CONDITIONS WITHIN THE FILL MATERIALS.
11. PERMANENT FILL SLOPES SHOULD BE VEGETATED OR OTHERWISE PROTECTED AS SOON AS PRACTICAL, AND BE BENCHED, AS NEEDED, TO CONTROL STORMWATER RUNOFF AND LIMIT THE POTENTIAL FOR EROSION.



INFILTRATION POND
INFILTRATION RATE: 20 IN/HR
TOP OF POND = 390.00
MAX WATER SURFACE = 389.00
BOTTOM OF POND = 386.00
POND BOTTOM AREA REQUIRED = 30,000 SF
POND BOTTOM AREA PROVIDED = 30,670 SF
VOLUME REQUIRED = 100,280 CF
VOLUME PROVIDED = 103,800 CF

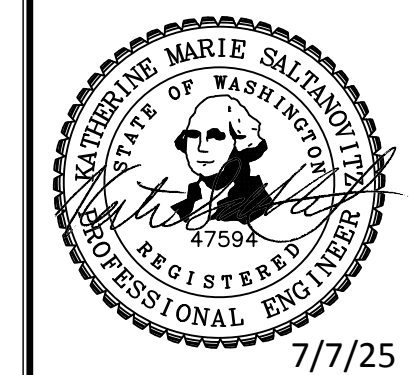
THE REQUIREMENTS FOR DRAINAGE FACILITY CONSTRUCTION AND OPERATION ARE SPECIFIED BY KING COUNTY CODE 9.04.09C AND THE PUBLIC RULE FOR RETENTION/DETENTION FACILITIES. IN OPERATION REQUIREMENTS. INFILTRATION FACILITIES MUST BE FIELD TESTED TO VERIFY THE DESIGN RATE OF SOIL INFILTRATIONS. THIS TESTING MUST BE COMPLETE AND APPROVED BY KING COUNTY PRIOR TO THE CONSTRUCTION OF ANY IMPROVEMENTS AND/OR BUILDING ON THE SITE. CONTACT THE LAND USE SITE DEVELOPMENT SERVICES SECTION TO DETERMINE THE APPROPRIATE TEST METHOD FOR THE DRAINAGE FACILITY.



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**QUEEN CITY FARMS
PHASE III REFILL
MAPLE VALLEY, WASHINGTON**

EAST RETENTION POND MODIFICATIONS

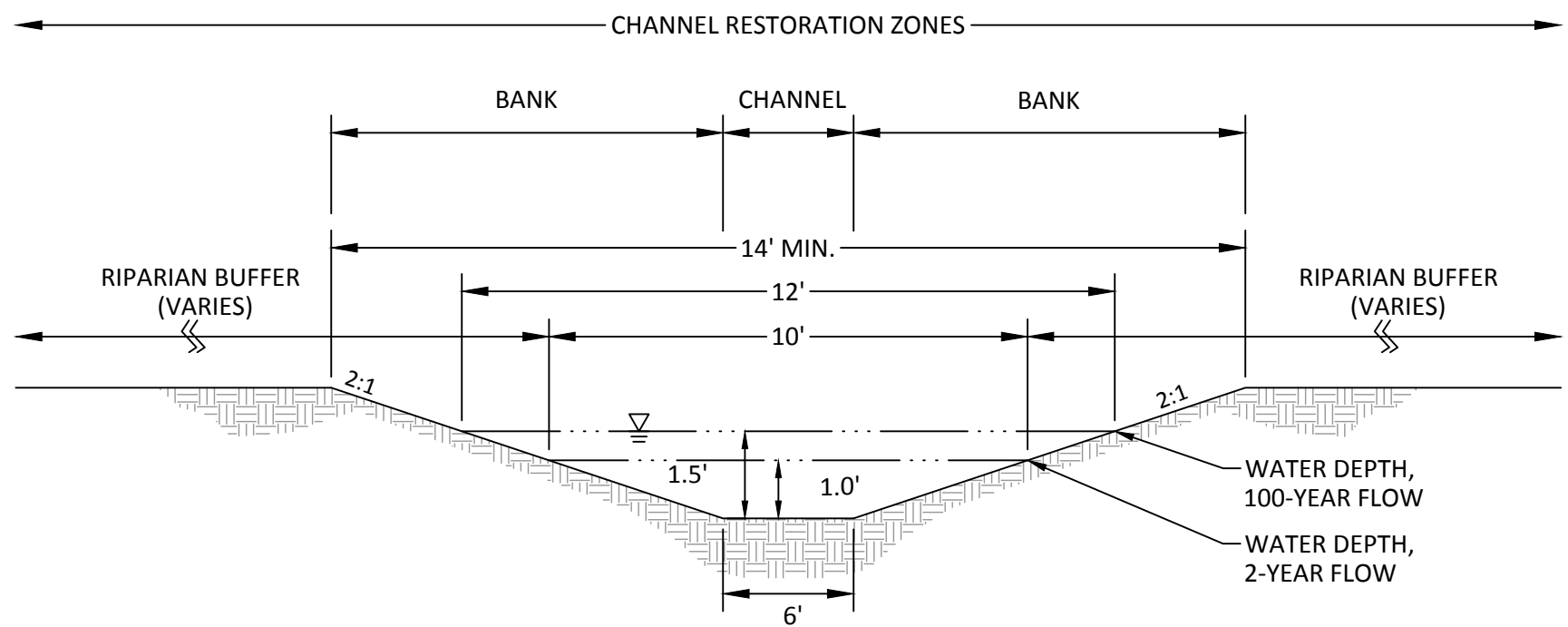
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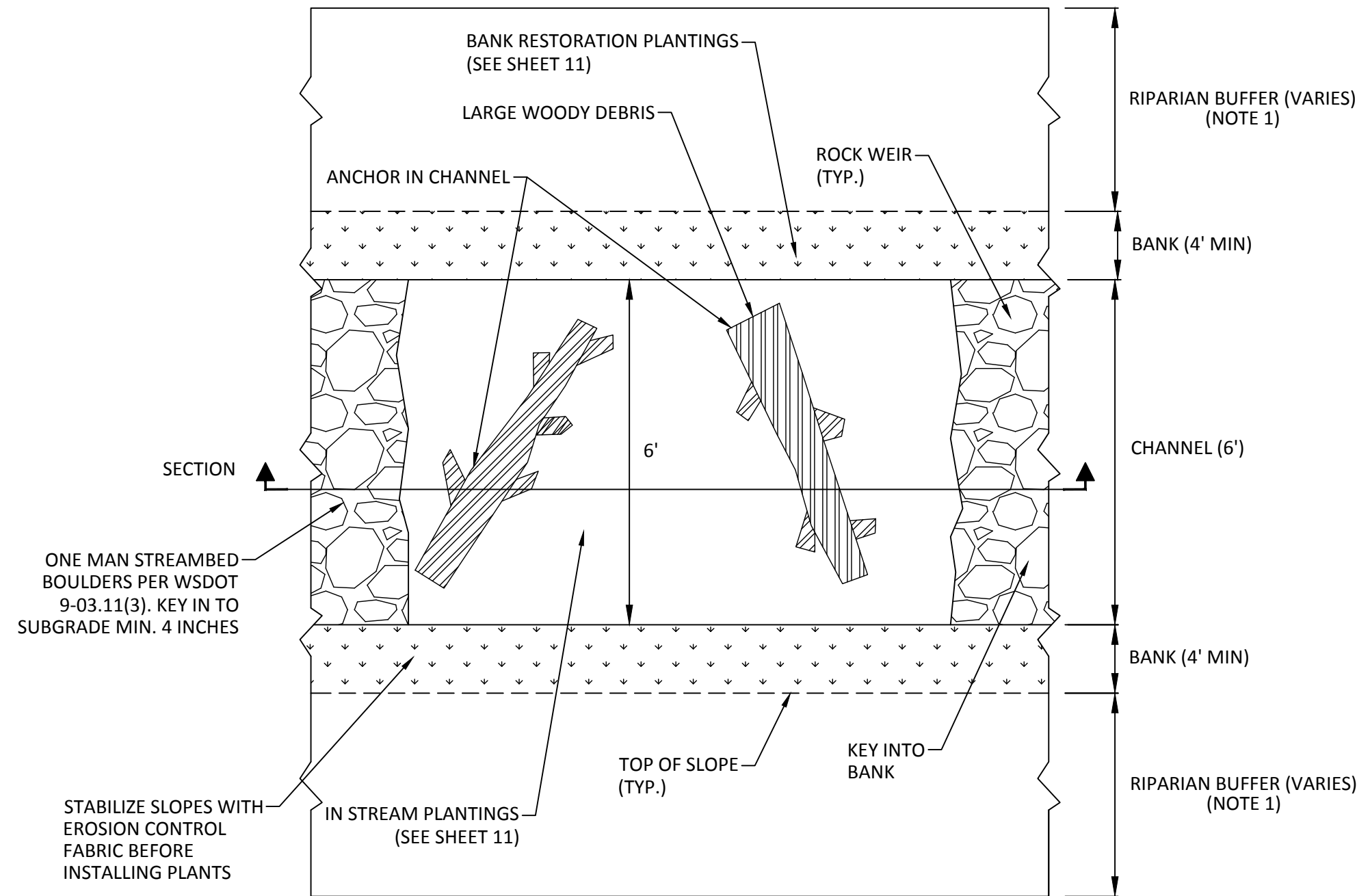
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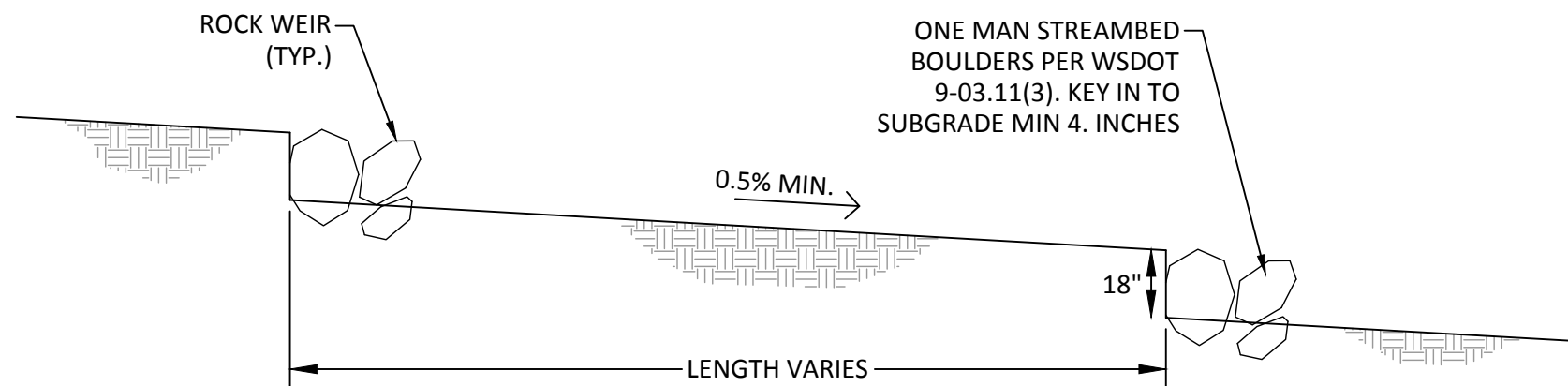


- NOTES:
1. RESTORATION ZONE PLANT RECOMMENDATIONS SHOWN ON SHEET 11.

TYPICAL RESTORED STREAM CHANNEL SECTION
NOT TO SCALE




PLAN



SECTION

- NOTES:
1. INSTALL HIGH VISIBILITY FENCE AND SIGNAGE ALONG OUTER EDGE OF BUFFER TO PROTECT NEWLY PLANTED AREA.

DETAIL - ROCK WEIRS
NOT TO SCALE

**King County**

DEPARTMENT OF LOCAL SERVICES PERMITTING DIVISION

ENGINEERING REVIEW

APPROVED

PERMIT #: GRDE18-0048

Toddy Taddeus

07/23/2025

Review Engineer

KING COUNTY DEPARTMENT OF LOCAL SERVICES PERMITTING DIVISION

CRITICAL AREAS REVIEW

APPROVED

By: *Joseph R. Parsley* Date: **07/11/2025**

Joseph R. Parsley, Environmental Scientist III



PROJECT NO.
992002.050

QUEEN CITY FARMS
PHASE III REFILL
MAPLE VALLEY, WASHINGTON

PROPOSED STREAM CHANNEL
RESTORATION - SECTIONS

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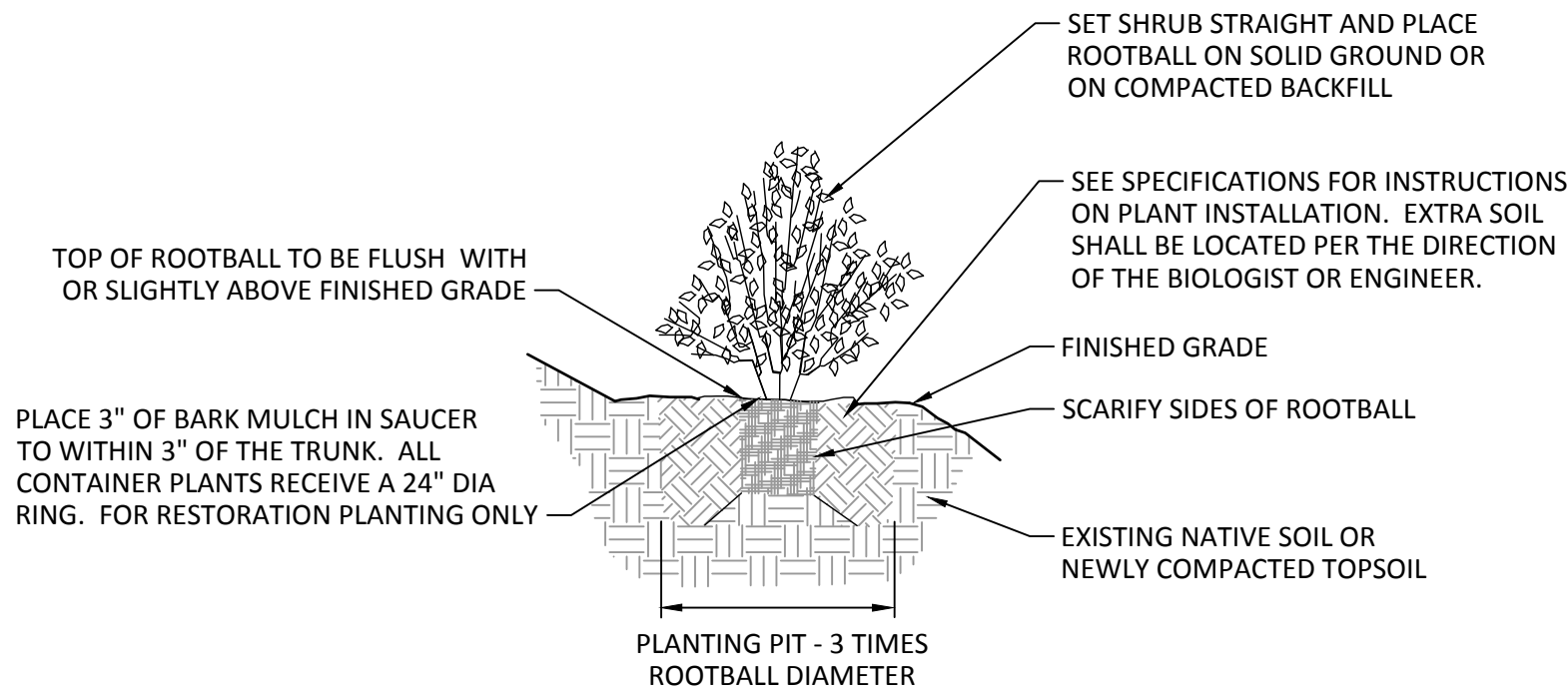
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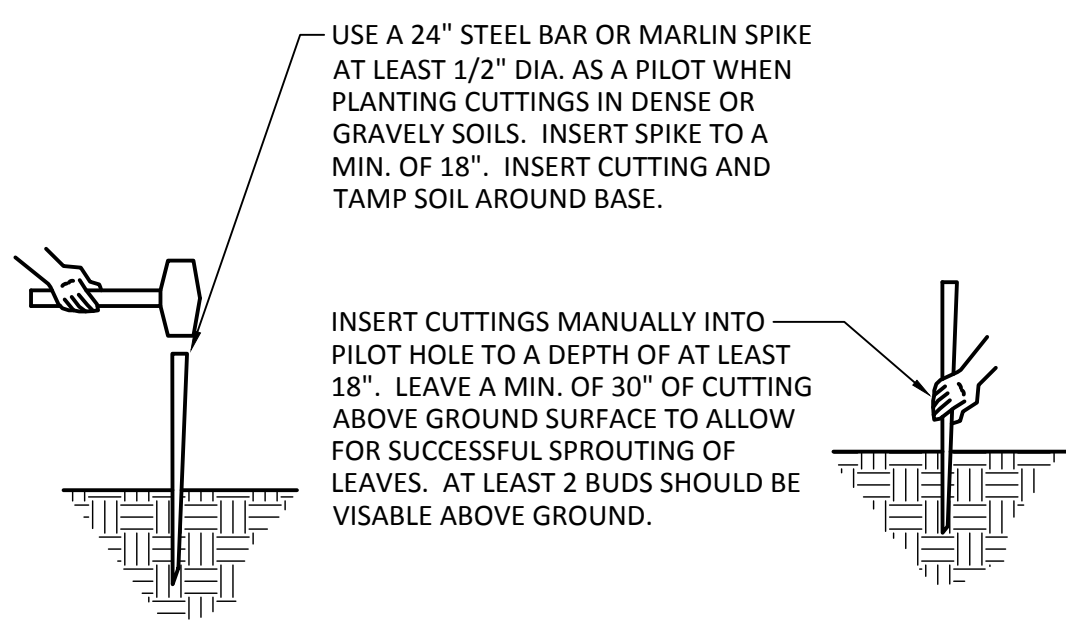
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1 CONTAINER PLANTING DETAIL
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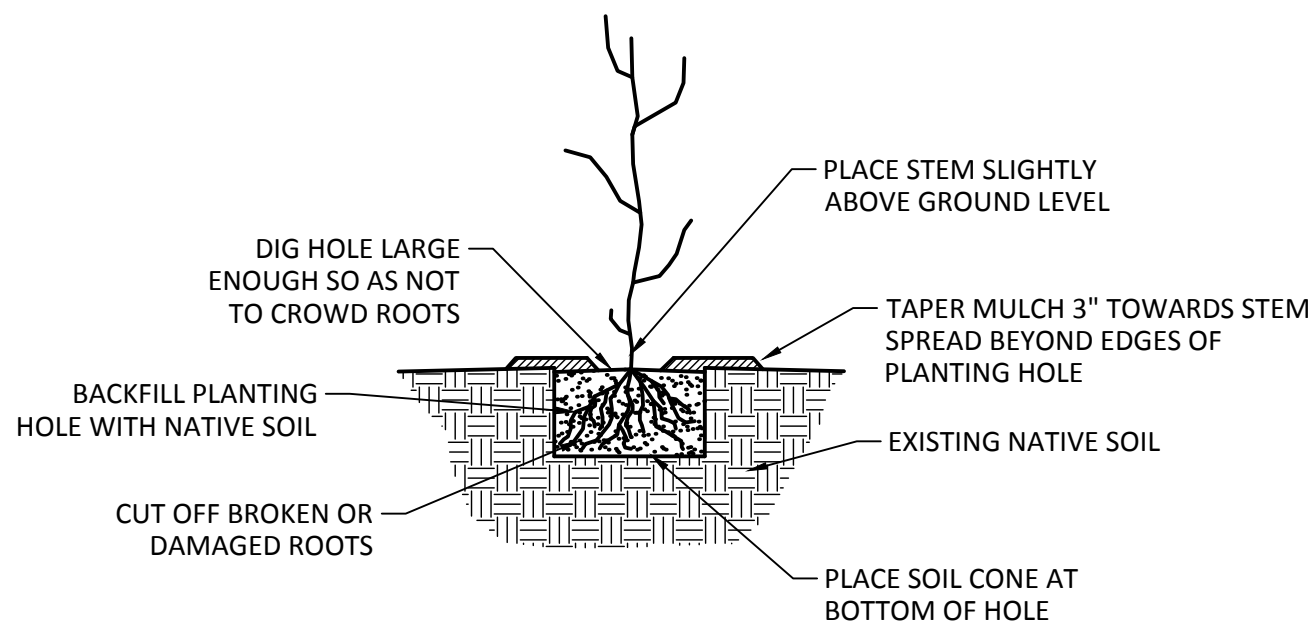


2 PLUG PLANTING DETAIL
NOT TO SCALE

NOTES:

- CUTTINGS SHALL BE SPECIES AS NOTED IN THE PLANT SCHEDULE.
- CUTTINGS SHALL BE AT LEAST 1/2" DIA. AND 5' (MIN.) IN LENGTH.
- CUTTINGS MUST BE ALIVE WITH SIDE BRANCHES CLEARLY REMOVED AND BARK INTACT. CUTTINGS SHALL BE PLANTED WITHIN 24 HOURS OF CUTTING.
- THE BUTT ENDS SHOULD BE CLEANLY CUT AT AN ANGLE FOR EASY INSERTION INTO THE SOIL. THE TOP SHOULD BE CUT SQUARE OR BLUNT.
- CUTTINGS MUST BE FRESH AND KEPT MOIST AFTER CUTTING. THEY SHOULD BE PRUNED AND INSTALLED THE SAME DAY.
- DIP BOTTOM OF CUTTING IN A PLANT ROOTING HORMONE PRIOR TO INSERTION INTO THE SOIL.

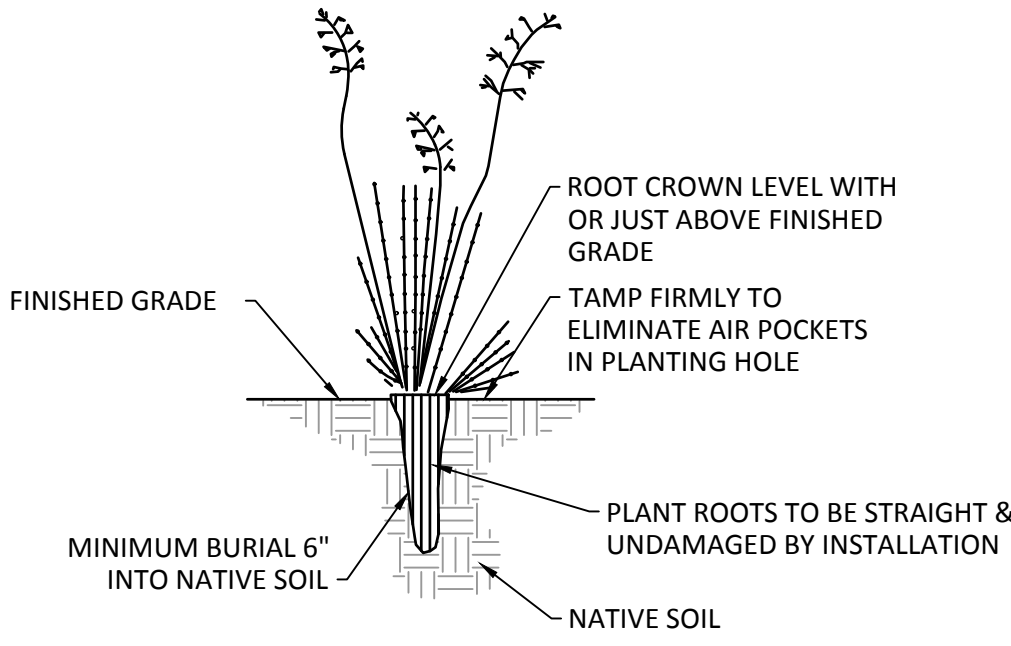
4 LIVE STAKES
NOT TO SCALE



NOTES:

- KEEP ROOTS MOIST AT ALL TIMES BEFORE AND DURING PLANTING.
- INSTALL PLANTS WITHIN 2-DAYS OF RECEIPT OF BARE ROOT STOCK.
- SOAK ROOTS IN TEPID WATER FOR 30-60 MINUTES PRIOR TO INTALLATION.
- DIG HOLE TWICE THE DIAMETER OF THE ROOT SPREAD.
- LEAVE CONE OF UNDISTURBED NATIVE SOIL IN CENTER OF HOLE, SPREADING ROOTS OVER CONE.
- INSTALL CROWN SLIGHTLY HIGHER THAN FINISHED GRADE TO ALLOW FOR POTENTIAL SETTLEMENT WITH ROOTS SPREADING DOWNWARD OVER SOIL CONE.
- TAPER MULCH (2-3") TOWARDS BUT NOT TOUCHING CROWN.

5 BARE ROOT
NOT TO SCALE



NOTES:

- ON-CENTER (O.C.) PLANT SPACING IS AN AVERAGE. PLANTS SHOULD BE SPACED IN A NATURAL PATTERN, WHICH SOMETIMES INCLUDES CLUSTERING SPECIES BASED ON TOPOGRAPHY AND ADJACENT LANDSCAPE. FINAL LOCATIONS SHALL BE APPROVED BY A BIOLOGIST.
- ALL SPECIFICATIONS FOR PLANT MATERIALS SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK, LATEST EDITION.
- THE BIOLOGIST SHALL INSPECT AND APPROVE THE PLANT MATERIAL AT THE JOB SITE FOR PLANT HEALTH, SIZE, AND SPECIES PRIOR TO PLANTING.

3 RANDOM PLANTING DETAIL
NOT TO SCALE

RESTORATION PLANT RECOMMENDATIONS

RESTORATION ZONES	COMMON NAME	SCIENTIFIC NAME	MINIMUM SPACING (O.C. FT)	FORM	MAX HEIGHT (FT)	LIGHT NEEDS ¹	SITE PLACEMENT ²	COMMENTS
CHANNEL								
	PACIFIC WILLOW ³	<i>Salix lucida</i>	1	5' STAKES	36	HA	SS	INSTALL WILLOWS AT EDGE OF STREAMBANK BUT OUTSIDE OF GRADED CHANNEL. INSTALL SLOUGH SEDGE IN CLUMPS OF 4 PLANTS WITH 1-FT ON-CENTER SPACING WITHIN GRADED CHANNEL. DO NOT PLANT WILLOWS WITHIN THALWEG.
	SITKA WILLOW ³	<i>Salix sitchensis</i>	1	5' STAKES	25	HA	WE,SS,WB	
	SLOUGH SEDGE ⁴	<i>Carex obnupta</i>	1	PLUGS	4.5	ST	SS	
BANK								
	BLACK COTTONWOOD	<i>Populus trichocarpa</i>	10	1-GAL	200	HA	WE,WB,SS	INSTALL THESE RECOMMENDED PLANTS ACCORDING TO THEIR SITE PLACEMENT NEEDS.
	CASCARA	<i>Rhamus purshiana</i>	10	1-GAL	25	HA	WE,WB	WETTER EDGE INDICATES
	BLACK TWINBERRY	<i>Lonicera involucrata</i>	4	1-GAL	10	SI-ST	WE,WB	INSTALLING PLANT CLOSER TO
	SALMONBERRY	<i>Rubus spectabilis</i>	4	BARE ROOT	15	HA	WE,WB	THE EDGE OF STREAM CHANNEL
	RED-OSIER DOGWOOD ⁵	<i>Cornus sericea</i>	4	BARE ROOT	20	SI-ST	WE,WB	BELOW THE OHWM. DRIER
	NOOTKA ROSE	<i>Rosa nutkana</i>	4	BARE ROOT	10	SI-ST	WE,WB	BUFFER INDICATES INSTALLING
	RED ALDER	<i>Alnus rubra</i>	4	BARE ROOT	80	SI-ST	WE,WB,SS	PLANT HIGHER ON
	PACIFIC NINEBARK	<i>Physocarpus capitatus</i>	4	1-GAL	13	ST	DB	STREAMBANK ABOVE THE OHWM.
RIPARIAN BUFFER								
	BIGLEAF MAPLE	<i>Acer macrophyllum</i>	10	1-GAL	100	ST	DB	INSTALL THESE RECOMMENDED
	PAPER BIRCH	<i>betula papyrifera</i>	10	1-GAL	230	ST	WE,WB	PLANTS ACCORDING TO THEIR
	OCEAN SPRAY	<i>Holodiscus discolor</i>	4	1-GAL	10	SI-ST	DB	SITE PLACEMENT NEEDS. ALL
	SERVICEBERRY	<i>Amelanchier ainifolia</i>	4	1-GAL	35	SI-ST	WE,WB	PLANTS SHOULD BE ADAPTABLE
	COMMON SNOWBERRY	<i>Symphoricarpos albus</i>	4	1-GAL	6	SI-ST	DB	TO DRIER BUFFER CONDITIONS.
	RED-FLOWERING CURRENT	<i>Rives sanguineum</i>	4	1-GAL	13	SI-ST	DB	PLANTS MAY NEED
	WOOD ROSE	<i>Rosa gymnocarpa</i>	4	1-GAL	7	ST	DB	SUPPLEMENTAL WATERING
	RED ELDERBERRY	<i>Sambucus racemosa</i>	4	1-GAL	20	HA	WB,DB	DURING FIRST YEAR
	INDIAN PLUM	<i>Oemlaria cerasiformis</i>	4	BARE ROOT	15	HA	WE,WB,DB	FOLLOWING INSTALLATION.

NATIVE HYDROSEED MIX:

SCIENTIFIC NAME	COMMON NAME	PROPORTIONS BY WEIGHT
<i>Alopecurus geniculatus</i>	WATER FOXTAIL	15%
<i>Agrostis stolonifera</i>	SPREADING BENTGRASS	15%
<i>Glyceria grandis</i>	REED MANAGRASS	15%
<i>Deschampsia cespitosa</i>	TUFTED HAIRGRASS	15%
<i>Eleocharis palustris</i>	CREEPING SPIKE RUSH	10%
<i>Juncus tenuis</i>	SLENDER RUSH	10%
<i>Scirpus microcarpus</i>	SMALL-FRUITED BULL RUSH	10%
<i>Carex obnupta</i>	SLOUGH SEDGE	10%

NOTES:

- PLANT FORMS ARE APPROXIMATE AND WILL BE BASED ON AVAILABILITY FROM SUPPLIER AT TIME OF INSTALLATION.
- PLANT SPECIES SUBSTITUTIONS FROM RESTORATION ZONES WILL BE APPROVED BY WETLAND BIOLOGIST PRIOR TO ORDERING PLANT STOCK.
- PLANT WILLOWS AT EDGE OF STREAMBANK OUTSIDE OF GRADED CHANNEL.
- PLANT SLOUGH SEDGE THROUGHOUT GRADED CHANNEL AT 1-FT O.C.
- DOGWOOD PLANTS WILL NEED TO BE PROTECTED FROM BROWSING BY WILDLIFE.

¹LIGHT NEEDS:

SI = SHADE INTOLERANT
ST = SHADE TOLERANT
SD = SHADE DEPENDENT
HA = HIGHLY ADAPTABLE

²SITE PLACEMENT:

DB = DRIER BUFFER
WB = WETTER BUFFER
WE = WETTER EDGE
SS = SATURATED SOILS



PROJECT NO. 992002.050
Sheet 11 of 16

QUEEN CITY FARMS
PHASE III REFILL
MAPLE VALLEY, WASHINGTON

WETLAND PLANTING PLAN

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Contact

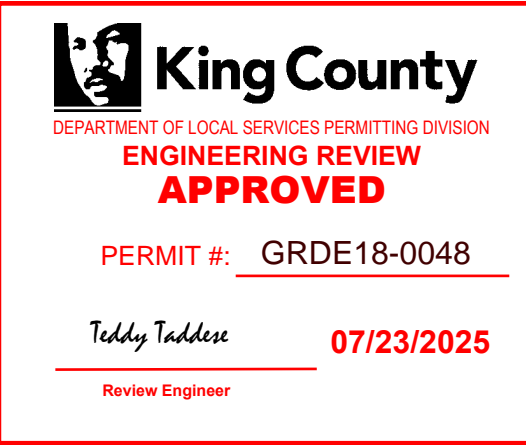
1. ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH PERMIT CONDITIONS, THE KING COUNTY CODE (KCC), THE KING COUNTY ROAD DESIGN AND CONSTRUCTION STANDARDS (KCRDCS), WASHINGTON STATE DOT (WSDOT) STANDARD SPECIFICATIONS AND THE CONDITIONS OF PRELIMINARY APPROVAL. IT SHALL BE THE SOLE RESPONSIBILITY OF THE APPLICANT AND THE PROFESSIONAL CIVIL ENGINEER TO CORRECT ANY ERROR, OMISSION, OR VARIATION FROM THE ABOVE REQUIREMENTS FOUND IN THESE PLANS. ALL CORRECTIONS SHALL BE AT NO ADDITIONAL COST OR LIABILITY TO KING COUNTY.
2. THE DESIGN ELEMENTS WITHIN THESE PLANS HAVE BEEN REVIEWED ACCORDING TO THE KING COUNTY DEPARTMENT OF LOCAL SERVICES (KC DLS) ENGINEERING REVIEW CHECKLIST. SOME ELEMENTS MAY HAVE BEEN OVERLOOKED OR MISSED BY THE KC DLS PLAN REVIEWER. ANY VARIANCE FROM ADOPTED STANDARDS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY KING COUNTY PRIOR TO CONSTRUCTION.
3. APPROVAL OF THIS ROAD, GRADING, PARKING AND DRAINAGE PLAN DOES NOT CONSTITUTE AN APPROVAL OF ANY OTHER CONSTRUCTION (E.G. DOMESTIC WATER CONVEYANCE, SEWER CONVEYANCE, GAS, ELECTRICAL, ETC.)
4. BEFORE ANY CONSTRUCTION OR DEVELOPMENT ACTIVITY, A PRECONSTRUCTION MEETING MUST BE HELD BETWEEN THE KC DLS'S DEVELOPMENT INSPECTOR, THE APPLICANT, AND THE APPLICANT'S CONSTRUCTION REPRESENTATIVE.
5. A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
6. GRADING ACTIVITIES (SITE ALTERATION) ARE LIMITED TO THE HOURS OF 7 A.M. TO 7 P.M. MONDAY THROUGH SATURDAY AND 10 A.M. TO 5 P.M. ON SUNDAY, UNLESS OTHERWISE APPROVED WITH A WRITTEN DECISION BY THE REVIEWING AGENCY.
7. IT SHALL BE THE APPLICANT'S/CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL CONSTRUCTION EASEMENTS NECESSARY BEFORE INITIATING OFF-SITE WORK. EASEMENTS REQUIRE REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
8. FRANCHISED UTILITIES OR OTHER INSTALLATIONS THAT ARE NOT SHOWN ON THESE APPROVED PLANS SHALL NOT BE CONSTRUCTED UNLESS AN APPROVED SET OF PLANS THAT MEET ALL REQUIREMENTS OF KCRDCS CHAPTER 8 ARE SUBMITTED TO THE KC DLS DEVELOPMENT INSPECTOR THREE DAYS PRIOR TO CONSTRUCTION.
9. DATUM SHALL BE NAVD88 UNLESS OTHERWISE APPROVED BY KC DLS.
10. Dewatering system (underdrain) construction shall be within a right-of-way or appropriate drainage easement, but not underneath the roadway section. All underdrain systems must be constructed in accordance with WSDOT standard specifications.
11. All utility trenches and roadway subgrade shall be backfilled and compacted to 95 percent maximum density per WSDOT standard specifications 2-03.3(14D), method C.
12. Open cutting of existing roadways for non-franchised utility or storm work is not allowed unless specifically approved by KC DLS and noted on these approved plans. Any open cut shall be restored in accordance with KCRDCS.
13. The contractor shall be responsible for providing adequate safeguards, safety devices, protective equipment, flaggers, and any other needed actions to protect the life, health, and safety of the public, and to protect property in connection with the performance of work covered by the contractor. Any work within the traveled right-of-way that may interrupt normal traffic flow shall require at least one flagger for each lane of traffic affected. Manual or uniform traffic control devices (MUTCD) shall apply. Work in right-of-way is not authorized until a traffic control plan is approved by King County.

1. PROOF OF LIABILITY INSURANCE SHALL BE SUBMITTED TO KC DLS PRIOR TO THE CONSTRUCTION OF THE DRAINAGE FACILITIES, PREFERABLY AT THE PRECONSTRUCTION MEETING.
2. ALL PIPE AND APPURTENANCES SHALL BE LAID ON A PROPERLY PREPARED FOUNDATION IN ACCORDANCE WITH WSDOT SPECIFICATIONS. THIS SHALL INCLUDE LEVELING AND COMPACTING THE TRENCH BOTTOM, THE TOP OF THE FOUNDATION MATERIAL, AND ANY REQUIRED PIPE BEDDING, TO A UNIFORM GRADE SO THAT THE ENTIRE PIPE IS SUPPORTED BY A UNIFORMLY DENSE UNYIELDING BASE.
3. STEEL PIPE SHALL BE ALUMINIZED, OR GALVANIZED WITH ASPHALT TREATMENT #1 OR BETTER INSIDE AND OUTSIDE.
4. ALL DRAINAGE STRUCTURES, SUCH AS CATCH BASINS AND MANHOLES, NOT LOCATED WITHIN A TRAVELED ROADWAY OR SIDEWALK, SHALL HAVE SOLID LOCKING LIDS. ALL DRAINAGE STRUCTURES ASSOCIATED WITH A PERMANENT RETENTION/DETENTION FACILITY SHALL HAVE SOLID LOCKING LIDS.
5. ALL CATCH BASIN GRATES SHALL CONFORM TO KCRDCS, WHICH INCLUDES THE STAMPING "OUTFALL TO STREAM, DUMP NO POLLUTANTS" AND "PROPERTY OF KING COUNTY", EXCEPT THAT PRIVATE DRAINAGE SYSTEMS SHALL NOT HAVE THE WORDS "PROPERTY OF KING COUNTY".
6. ALL DRIVEWAY CULVERTS LOCATED WITHIN KING COUNTY RIGHT-OF-WAY SHALL BE OF SUFFICIENT LENGTH TO PROVIDE A MINIMUM 3:1 SLOPE FROM THE EDGE OF THE DRIVEWAY TO THE BOTTOM OF THE DITCH. CULVERTS SHALL HAVE BEVELED END SECTIONS TO MATCH THE SIDE SLOPE PER KCRDCS.
7. ROCK FOR EROSION PROTECTION OF ROADWAY DITCHES, WHERE REQUIRED, MUST BE OF SOUND QUARRY ROCK, PLACED TO A DEPTH OF 1 FOOT, AND MUST MEET THE FOLLOWING SPECIFICATIONS: 4"-8"/40%-70% PASSING; 2"-4" ROCK/30%-40% PASSING; AND -2" ROCK/10%-20% PASSING. INSTALLATION SHALL BE IN ACCORDANCE WITH KCRDCS.
8. DRAINAGE OUTLETS (STUB-OUTS) SHALL BE PROVIDED FOR EACH INDIVIDUAL LOT, EXCEPT FOR THOSE LOTS APPROVED FOR INFILTRATION BY KING COUNTY. STUB-OUTS SHALL CONFORM TO THE FOLLOWING:
 - A) EACH OUTLET SHALL BE SUITABLY LOCATED AT THE LOWEST ELEVATION ON THE LOT, SO AS TO SERVICE ALL FUTURE ROOF DOWNSPOUTS AND FOOTING DRAINS, DRIVEWAYS, YARD DRAINS, AND ANY OTHER SURFACE OR SUBSURFACE DRAINS NECESSARY TO RENDER THE LOTS SUITABLE FOR THEIR INTENDED USE. EACH OUTLET SHALL HAVE FREE-FLOWING, POSITIVE DRAINAGE TO AN APPROVED STORMWATER CONVEYANCE SYSTEM OR TO AN APPROVED OUTFALL LOCATION.
 - B) OUTLETS ON EACH LOT SHALL BE LOCATED WITH A FIVE-FOOT-HIGH, 2" X 4" STAKE MARKED "STORM" OR "DRAIN". THE STUB-OUT SHALL EXTEND ABOVE SURFACE LEVEL, BE VISIBLE, AND BE SECURED TO THE STAKE.
 - C) PIPE MATERIAL SHALL CONFORM TO UNDERDRAIN SPECIFICATIONS DESCRIBED IN KCRDCS AND, IF NON-METALLIC, THE PIPE SHALL CONTAIN WIRE OR OTHER ACCEPTABLE DETECTION.
 - D) DRAINAGE EASEMENTS ARE REQUIRED FOR DRAINAGE SYSTEMS DESIGNED TO CONVEY FLOWS THROUGH INDIVIDUAL LOTS.
 - E) THE APPLICANT/CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATIONS OF ALL STUB-OUT CONVEYANCE LINES WITH RESPECT TO THE UTILITIES (E.G. POWER, GAS, TELEPHONE, TELEVISION).
 - F) ALL INDIVIDUAL STUB-OUTS SHALL BE PRIVATELY OWNED AND MAINTAINED BY THE LOT HOME OWNER.
9. ALL DISTURBED PREVIOUS AREAS (COMPACTED, GRADED, LANDSCAPED, ETC.) OF THE DEVELOPMENT SITE MUST DEMONSTRATE ONE OF THE FOLLOWING, IN ACCORDANCE WITH KCC AND THE LOW IMPACT DEVELOPMENT (LID) COMPONENTS OF THE APPROVED SITE PLAN: THE EXISTING DUFF LAYER SHALL BE STAGED AND REDISTRIBUTED TO MAINTAIN THE MOISTURE CAPACITY OF THE SOIL, OR; AMENDED SOIL SHALL BE ADDED TO MAINTAIN THE MOISTURE CAPACITY.
10. SEASONAL CLEARING IS LIMITED BETWEEN OCTOBER 1 AND APRIL 30 INCLUSIVE, UNLESS OTHERWISE APPROVED WITH A WRITTEN DECISION BY THE REVIEWING AGENCY.
11. IMPROVEMENTS AND/OR BUILDINGS SHALL NOT BE INSTALLED UNTIL DRAINAGE FACILITIES ARE "IN OPERATION", (KCC 9.04).

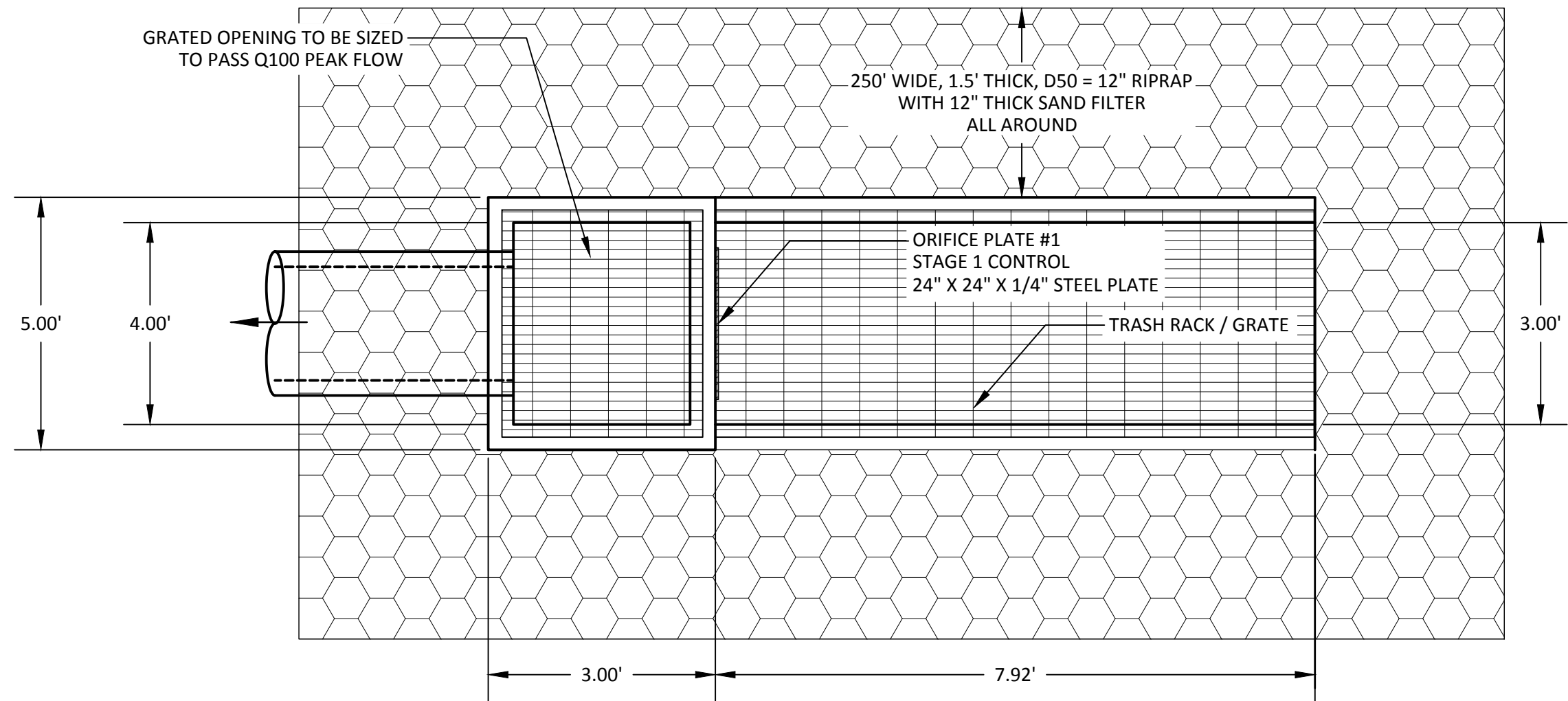
1. THE APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.)
2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED BY SURVEY TAPE OR FENCING, IF REQUIRED, PRIOR TO CONSTRUCTION (KING COUNTY SWDM APPENDIX D). DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT/ESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.
4. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS CONSTRUCTED WHEEL WASH SYSTEMS OR WASH PADS, MAY BE REQUIRED TO ENSURE THAT THE PAVED AREAS ARE KEPT CLEAN AND TRACK OUT TO ROAD RIGHT OF WAY DOES NOT OCCUR FOR THE DURATION OF THE PROJECT.
5. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO AS TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, FLOW CONTROL BMP LOCATIONS (EXISTING AND PROPOSED), AND ADJACENT PROPERTIES IS MINIMIZED.
6. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G. ADDITIONAL COVER MEASURES, ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, PERIMETER PROTECTION ETC.).
7. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE ESC FACILITIES.
8. ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC COVER METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).
9. ANY AREA NEEDING ESC MEASURES, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.
10. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH (MORE FREQUENTLY AS REQUIRED BY THE KC DLS SITE INSPECTOR) OR WITHIN 24 HOURS FOLLOWING A STORM EVENT.
11. AT NO TIME SHALL MORE THAN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
12. ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE PERMANENT FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION SYSTEM, THE TEMPORARY FACILITY MUST BE ROUGH GRADED SO THAT THE BOTTOM AND SIDES ARE AT LEAST THREE FEET ABOVE THE FINAL GRADE OF THE PERMANENT FACILITY. FLOW CONTROL BMP FACILITY AREAS (EXISTING OR PROPOSED) SHALL NOT BE USED AS TEMPORARY FACILITIES AND SHALL BE PROTECTED FROM SEDIMENTATION AND INTRUSION.
13. COVER MEASURES WILL BE APPLIED IN CONFORMANCE WITH APPENDIX D OF THE KING COUNTY SURFACE WATER DESIGN MANUAL.
14. PRIOR TO THE BEGINNING OF THE WET SEASON (OCT. 1), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON. A SKETCH MAP OF THOSE AREAS TO BE SEEDED AND THOSE AREAS TO REMAIN UNCOVERED SHALL BE SUBMITTED TO THE KC DLS INSPECTOR FOR REVIEW.

1. THESE PLANS ARE APPROVED FOR STANDARD ROAD AND DRAINAGE IMPROVEMENTS ONLY. PLANS FOR STRUCTURES SUCH AS BRIDGES, VAULTS, AND RETAINING WALLS REQUIRE A SEPARATE REVIEW AND APPROVAL BY KC DLS PRIOR TO CONSTRUCTION (KCC 16.04, 16.70, 14.20).
2. ROCKERIES ARE CONSIDERED TO BE A METHOD OF BANK STABILIZATION AND EROSION CONTROL. ROCKERIES SHALL NOT BE CONSTRUCTED TO SERVE AS RETAINING WALLS. ALL ROCKERIES IN COUNTRY ROAD RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH KCC 16.04. ROCKERIES OUTSIDE OF ROAD RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE.

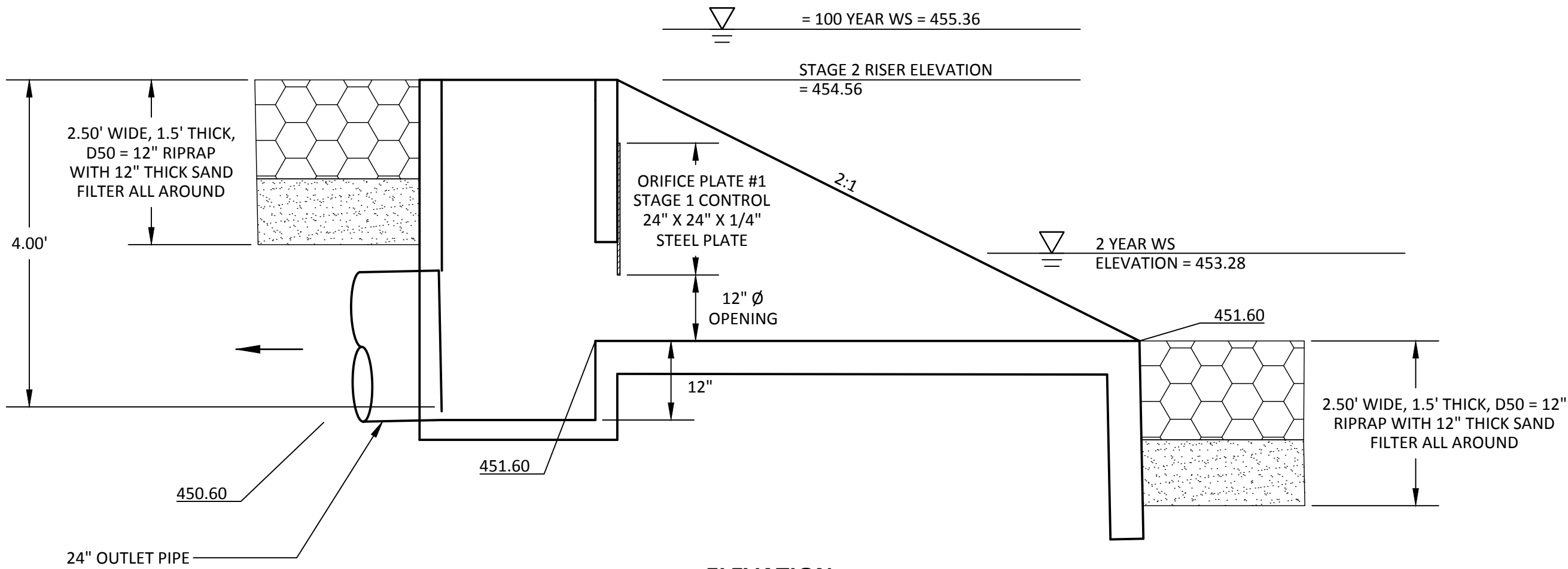
1. ENSURE THAT A PRECONSTRUCTION MEETING HAS BEEN HELD PRIOR TO FILLING.
2. INSTALL THE TEMPORARY SEDIMENT CONTROL PONDS AS NEEDED PER RECOMMENDATIONS ON SHEET 4.
3. CONSTRUCT TO ACCOMMODATE FUTURE DRAINAGE FROM NEW 24-INCH CONVEYANCE PIPE.
4. CONSTRUCT QUEEN CITY LAKE OUTLET AND BYPASS PIPING AS SEEN ON SHEET 13.
5. REMOVE EXISTING QUEEN CITY LAKE OUTLET ONLY AFTER NEW 24-INCH CONVEYANCE PIPE HAS RECEIVED FINAL APPROVAL FROM THE KING COUNTY INSPECTOR.
6. PROCEED WITH FILLING IN LIFTS NO MORE THAN 20 FEET IN DEPTH AND NO MORE THAN 8 ACRES IN AREA. ANY LIFT THAT COMPLETES THE PROPOSED GRADES, AS SHOWN ON THE DESIGN PLANS, SHALL BE HYDROSEEDED UPON COMPLETION. UTILIZE THE HYDROSEED MIX AS OUTLINED ON SHEET 4. EACH 20-FOOT LIFT SHALL BE COMPACTED WITH THE ON-SITE EQUIPMENT UTILIZED FOR FILLING ACTIVITIES.
7. CLEAN AND MAINTAIN THE PERIMETER COLLECTION DITCHES ON A REGULAR BASIS, AND WHEN SEDIMENT BUILDUP EXCEEDS 1 FOOT IN DEPTH.
8. CONTINUE TO MAINTAIN AND CLEAN THE POND FACILITIES ON A SEMI-ANNUAL BASIS TO ENSURE SEDIMENT BUILDUP DOES NOT ENTER INTO NATURAL INFILTRATION AREA.
9. ANY AREAS THAT REMAIN TO BE FILLED BUT LEFT UNTOUCHED FOR MORE THAN 1 YEAR SHALL BE HYDROSEEDED UNTIL FURTHER FILLING ACTIVITIES OCCUR.

[illegible]

LANDAU ASSOCIATES INC. | G:\PROJECTS\992002\050\051\PHIII REFILL PLAN SET\P. OUTLET STRUCTURE.DWG



PLAN VIEW

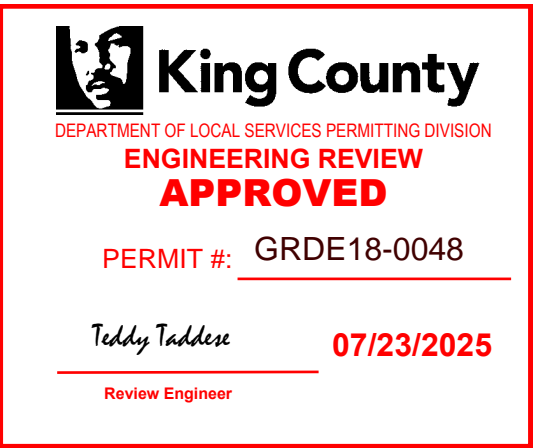


ELEVATION

1 QUEEN CITY LAKE OUTLET STRUCTURE
3 NOT TO SCALE

NOTES:

1. THE OUTLET STRUCTURE SHOWN WAS DESIGNED USING ANTICIPATED UPSTREAM CONDITIONS TO ESTIMATE FUTURE HYDROLOGIC RUNOFF VOLUMES AND PEAK FLOWS. A GROUND INFILTRATION RATE WAS ALSO USED IN THIS OUTLET STRUCTURE STAGE, STORAGE, DISCHARGE, AND INFILTRATION CALCULATIONS. LANDAU ASSOCIATES MAKES NO GUARANTEE IN THE ESTIMATED RAINFALL INTENSITIES AND RESULTING PERFORMANCE OF THIS STRUCTURE. MODIFICATION OF THE ORIFICE PLATE IS RECOMMENDED SHOULD CONDITIONS WARRANT.
2. THE ORIFICE PLATE IS TO BE ATTACHED IN SUCH A MANNER THAT RE-SIZING AND RE-ATTACHMENT OF A MODIFIED PLATE IS POSSIBLE.
3. STRUCTURAL DESIGN FOR ALL WALLS, BY OTHERS (GRDE15-0214).
4. CONTRACTOR SHALL FOLLOW RECOMMENDATIONS AND SPECIFICATIONS OF THE SOILS ENGINEER.
5. GRATE OPENINGS FOR THE TOP OF THE STRUCTURE AND THE OUTLET PIPE ARE TO BE SIZED TO PASS 1.2 TIMES THE 100 YEAR PEAK OUTLET FLOW.
6. A 60-INCH DIAMETER TYPE 2 MANHOLE WITH BEEHIVE GRATE MAY BE USED IN PLACE OF THE OUTLET STRUCTURE SHOWN (PENDING KC DLS APPROVAL).



As outlined in the Phase II permit conditions (L04CG384) dated November 23, 2009, prior to construction, the lake outlet structure shown here shall receive authorization from the Building Official.



PROJECT NO.
992002.050

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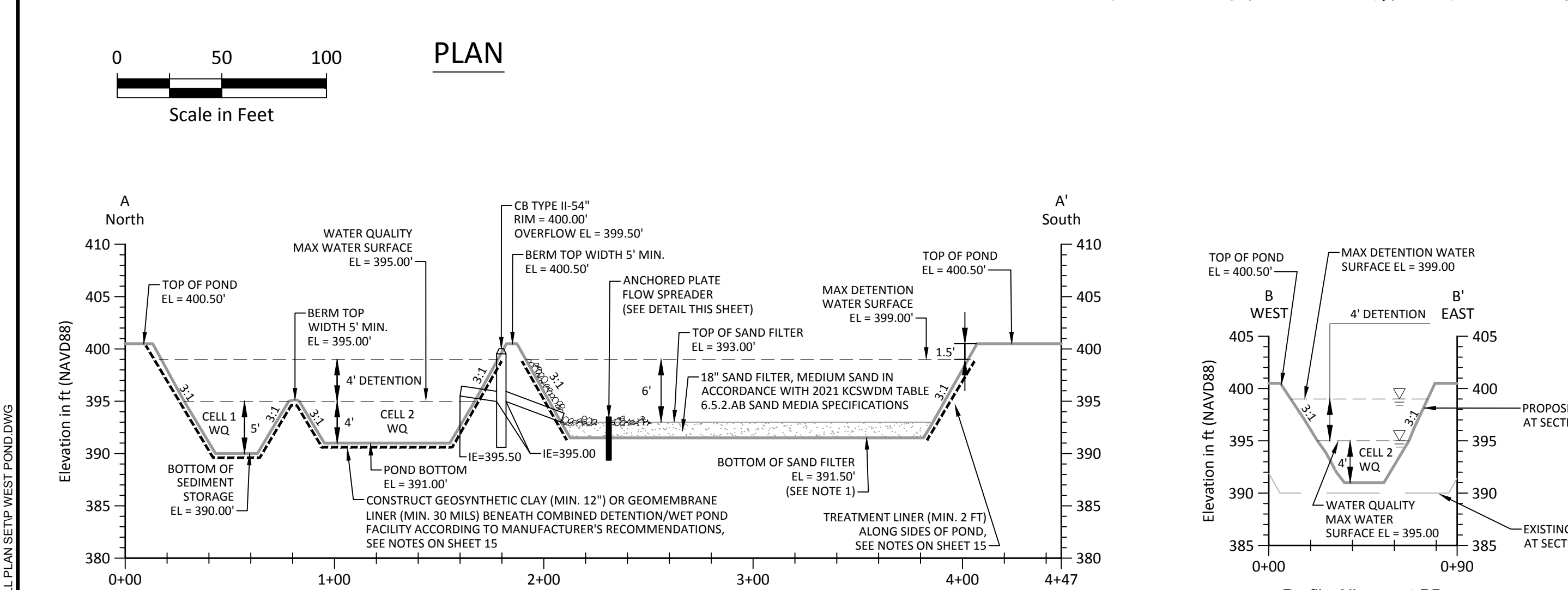
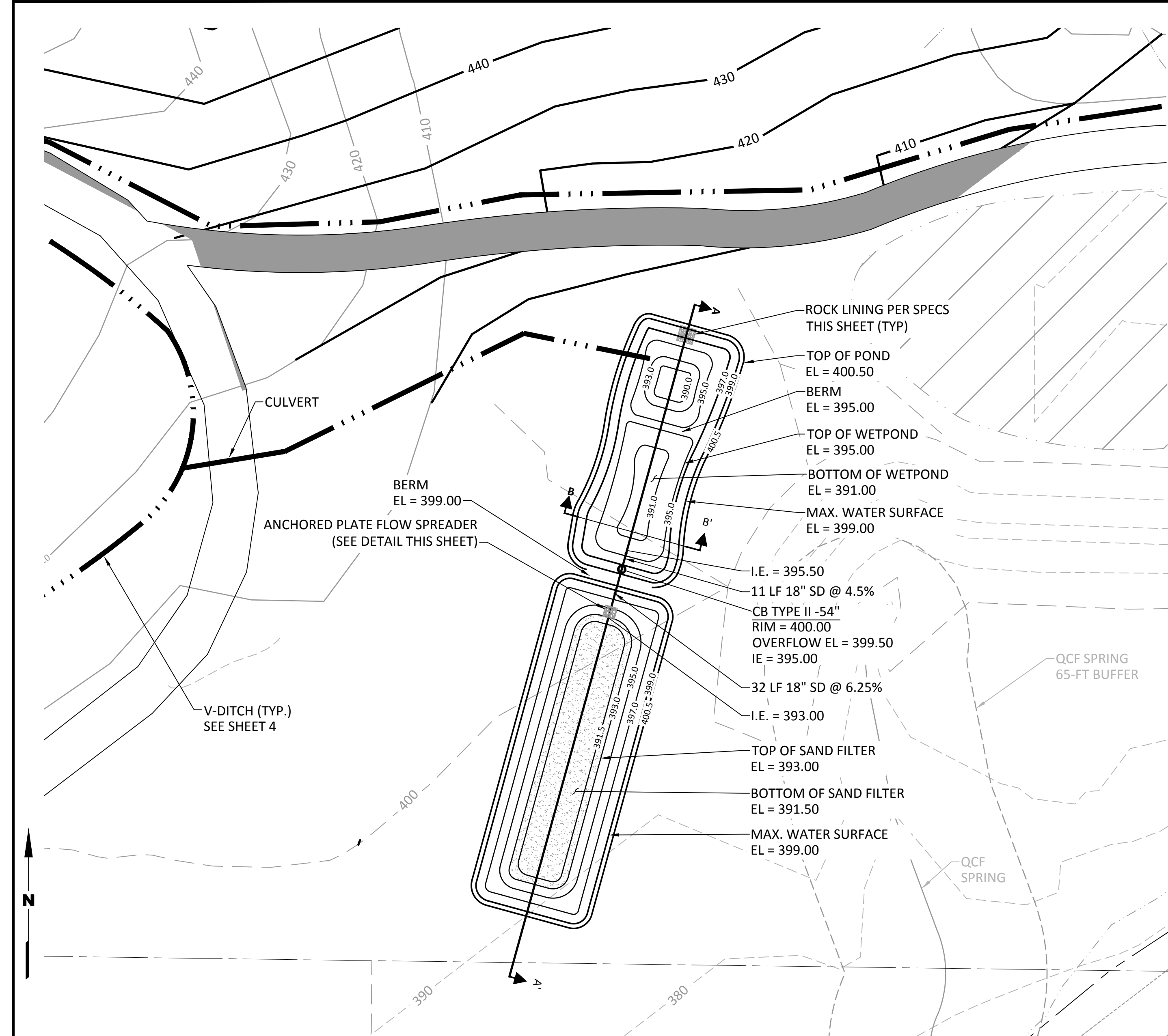
QUEEN CITY FARMS
PHASE III REFILL
MAPLE VALLEY, WASHINGTON

QUEEN CITY LAKE OUTLET STRUCTURE

DRAWN BY: J. VALLUZZI	JIV
DESIGNED BY: M. VEILLEUX	MDV
REVIEWED BY: K. SALTANOVITZ	KMS
APPROVED BY: K. SALTANOVITZ	KMS
DATE SURVEYED:	
SURVEYED BY:	
STATUS:	ISSUED FOR PERMIT REVIEW

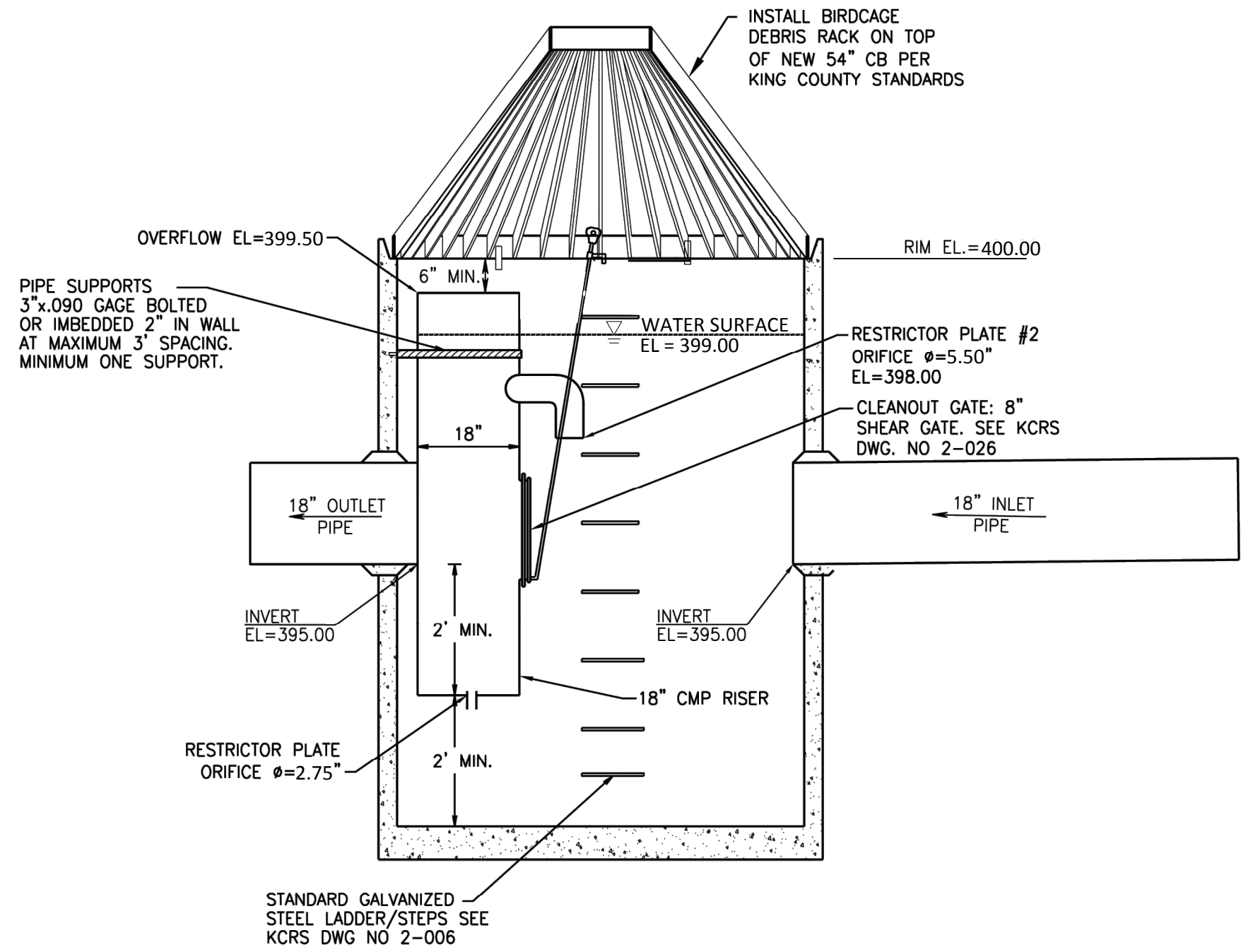
NO.	DATE	REVISIONS
0.	07/07/25	ISSUED FOR PERMIT APPROVAL

LANDAU
A S S O C I A T E S
155 NE 100TH ST, STE 302
SEATTLE, WASHINGTON 98125
KATIE SALTANOVITZ, P.E.
425-329-0268
Contact Phone

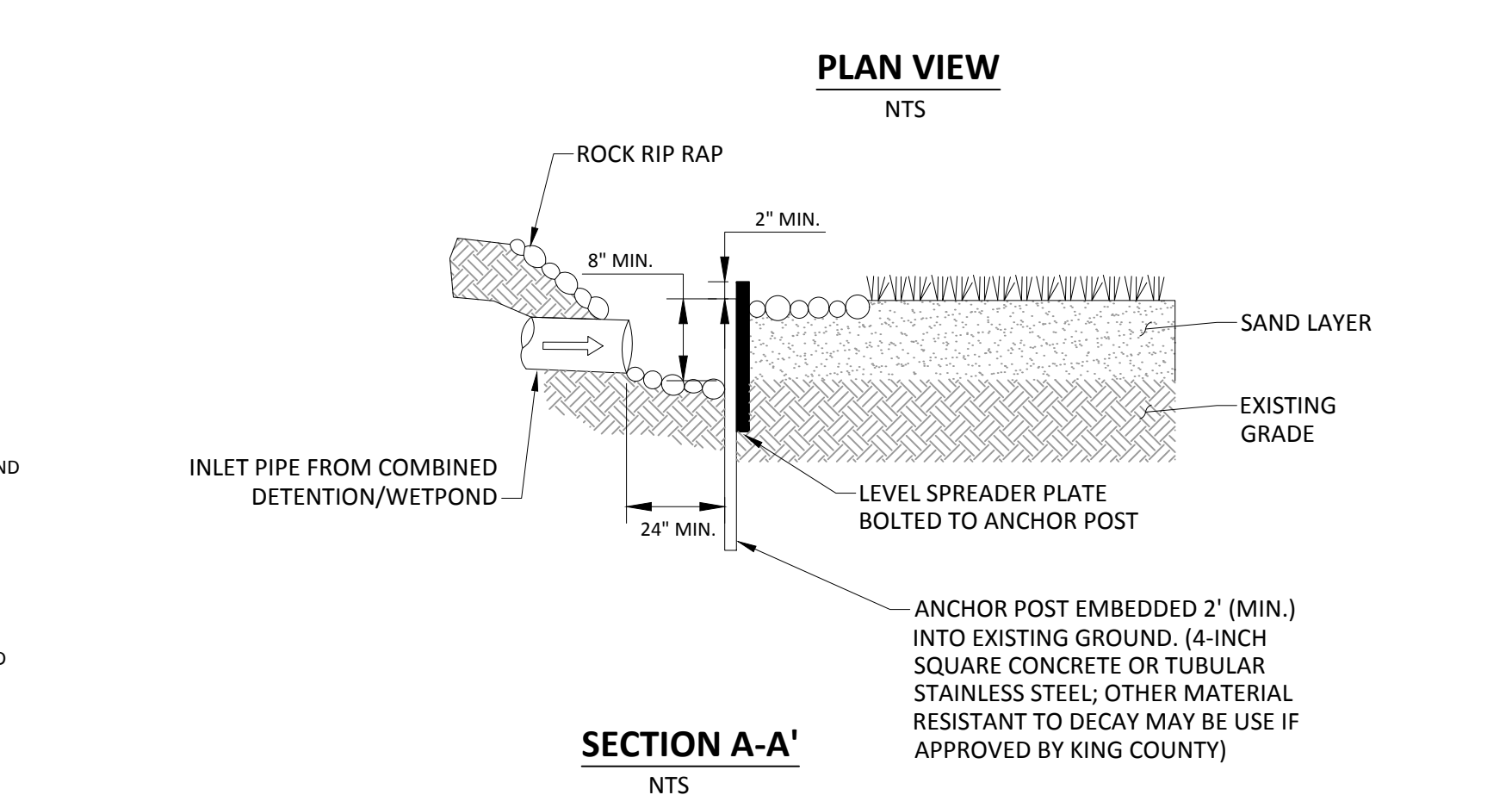
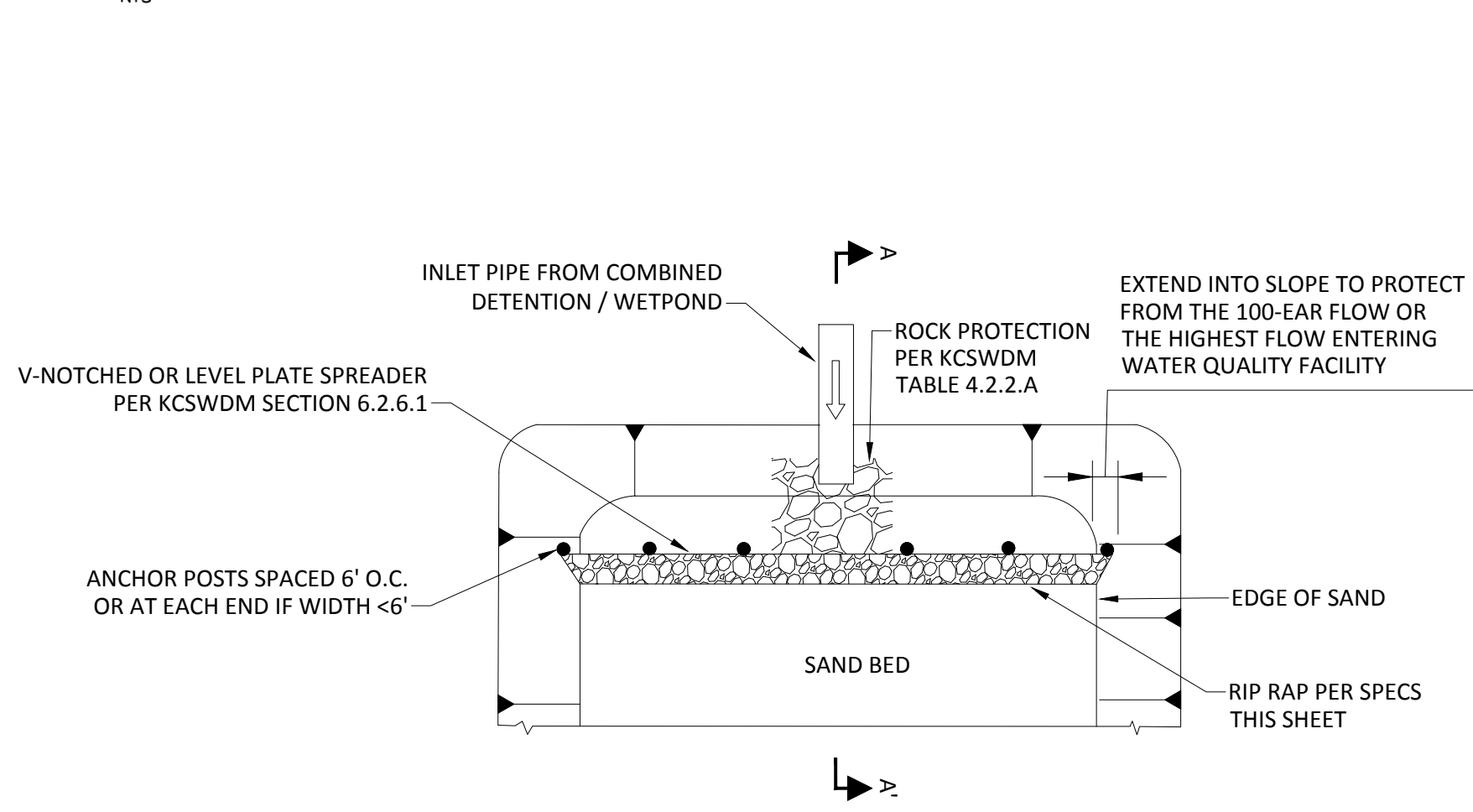


NOTE:

- IF IMPERMEABLE SOIL IS ENCOUNTERED DURING EXCAVATION, CONTRACTOR TO EXCAVATE DOWN TO THE INFILTRATIVE SURFACE/NATIVE SOIL (AT LEAST ONE FOOT IN DEPTH, PER KCSWDM SECTION 5.2.2.1).



KING COUNTY STANDARD TYPE 2 - 54' FLOW CONTROL STRUCTURE W/BIRDCAGE ELEVATION VIEW



ANCHORED PLATE FLOW SPREADER DETAIL

- NOTES:**
- PIPE SIZE & SLOPES: SEE PLANS.
 - OUTLET CAPACITY: NOT LESS THAN COMBINED INLETS.
 - EXCEPT AS SHOWN OR NOTED, UNITS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS FOR CATCH BASIN TYPE 2-54" MIN. DIAMETER.
 - PIPE SUPPORTS AND RESTRICTOR/SEPARATOR SHALL BE OF SAME MATERIAL, AND BE ANCHORED AT 3' MAX. SPACING BY 5/8" DIAMETER STAINLESS STEEL EXPANSION BOLTS OR EMBEDDED 2" IN WALL.
 - THE RESTRICTOR/SEPARATOR SHALL BE FABRICATED FROM 0.060" ALUMINUM, OR 0.064" ALUMINIZED STEEL, OR 0.064" GALVANIZED STEEL PIPE; IN ACCORDANCE WITH AASHTO M 36, M 196, M 197 AND M 274. GALVANIZED STEEL SHALL HAVE TREATMENT 1.
 - OUTLET SHALL BE CONNECTED TO CULVERT OR SEWER PIPE WITH A STANDARD COUPLING BAND FOR CORRUGATED METAL PIPE, OR GROUTED INTO THE BELL OF CONCRETE PIPE.
 - THE VERTICAL RISER STEM OF THE RESTRICTOR/SEPARATOR SHALL BE THE SAME DIAMETER AS THE HORIZONTAL OUTLET PIPE, WITH AN 8" MIN. DIAMETER.
 - FRAME & LADDER OR STEPS OFFSET SO:
 - CLEANOUT GATE IS VISIBLE FROM TOP
 - CLIMBDOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE
 - FRAME IS CLEAR OF CURB
 - IF METAL OUTLET PIPE CONNECTS TO CEMENT CONCRETE PIPE: OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4" /
 - MULTI-ORIFICE ELBOWS MAY BE LOCATED AS SHOWN OR ALL ON ONE SIDE OF RISER TO ASSURE LADDER CLEARANCE.

- ROCK LINING DETAILS:**
- ALL ROCK LINING (QUARRY SPALLS) SHALL BE 7" WIDE X 8" LONG X 1" THICK, USING THE GRADATION SPECIFIED BELOW IN ACCORDANCE WITH THE 2021 KCSWDM (TABLE 4.2.2.A):
 - PASSING 8-INCH SQUARE SIEVE: 100%
 - PASSING 3-INCH SQUARE SIEVE: 40-60% MAXIMUM
 - PASSING 3/4-INCH SQUARE SIEVE: 0-10% MAXIMUM

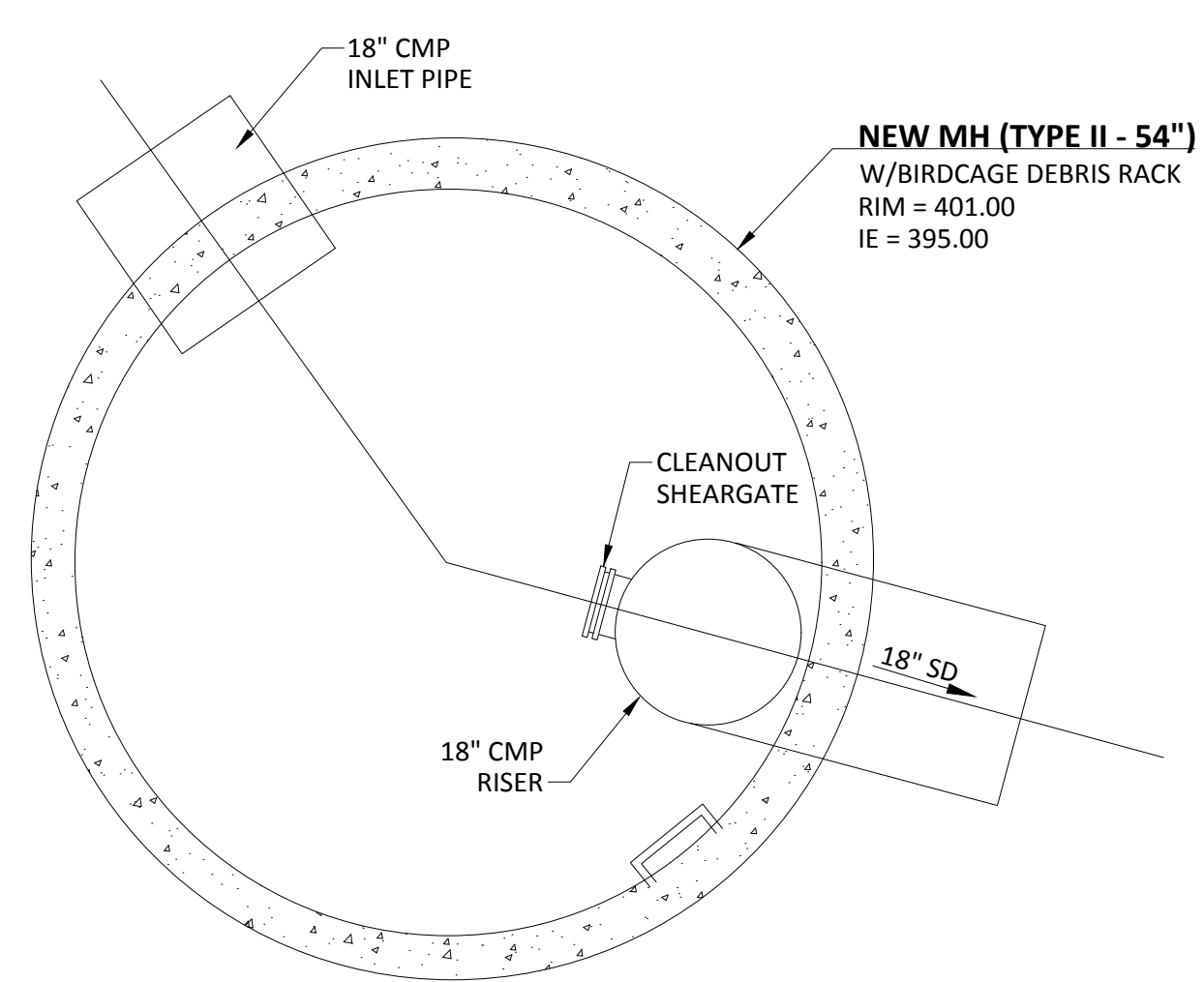
STORMWATER STANDARDS

DETENTION
COMBINED DETENTION/WET POND (LINED)
TOP OF DETENTION LIVE STORAGE = 399.00
BOTTOM OF LIVE STORAGE = 395.00
STORAGE VOLUME REQUIRED = 32,012 CF
STORAGE VOLUME PROVIDED = 43,829 CF
LEVEL 2 FLOW CONTROL

WATER QUALITY
ENHANCED BASIC WATER QUALITY (OPTION 3)
TWO-FACILITY TREATMENT TRAIN (BASIC COMBINED DETENTION/WETPOND AND BASIC SAND FILTER)

VOLUME REQUIRED (WETPOND) = 13,201 CF
VOLUME PROVIDED (WETPOND) = 15,881 CF
TOP OF WETPOND = 395.00

SAND FILTER HYDRAULIC CONDUCTIVITY = 1 IN/HR
SAND FILTER DEPTH = 1.5 FT
SAND FILTER EFFECTIVE DEPTH = 6 FT
PERCENT FILTERED REQUIRED = 91% (BASIC SAND FILTER)
PERCENT FILTERED PROVIDED = 100%
VOLUME REQUIRED = 53,292 CF
VOLUME PROVIDED = 81,656 CF
BOTTOM AREA REQUIRED = 4,508 SF
BOTTOM AREA PROVIDED = 4,831 SF



KING COUNTY STANDARD (TYPE II - 54'') FLOW CONTROL STRUCTURE PLAN VIEW

King County
DEPARTMENT OF LOCAL SERVICES PERMITTING DIVISION
ENGINEERING REVIEW
APPROVED
PERMIT #: GRDE18-0048
Teddy Tadde
Review Engineer
07/23/2025

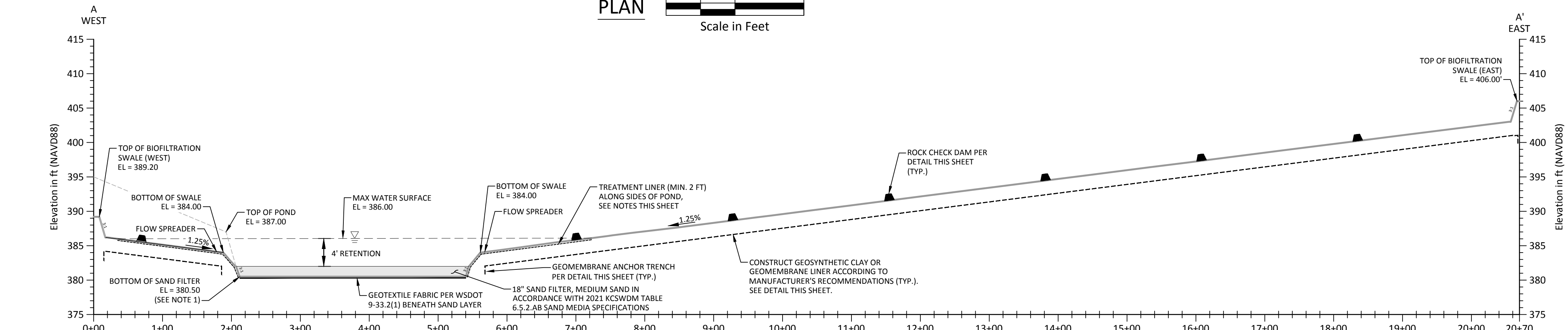
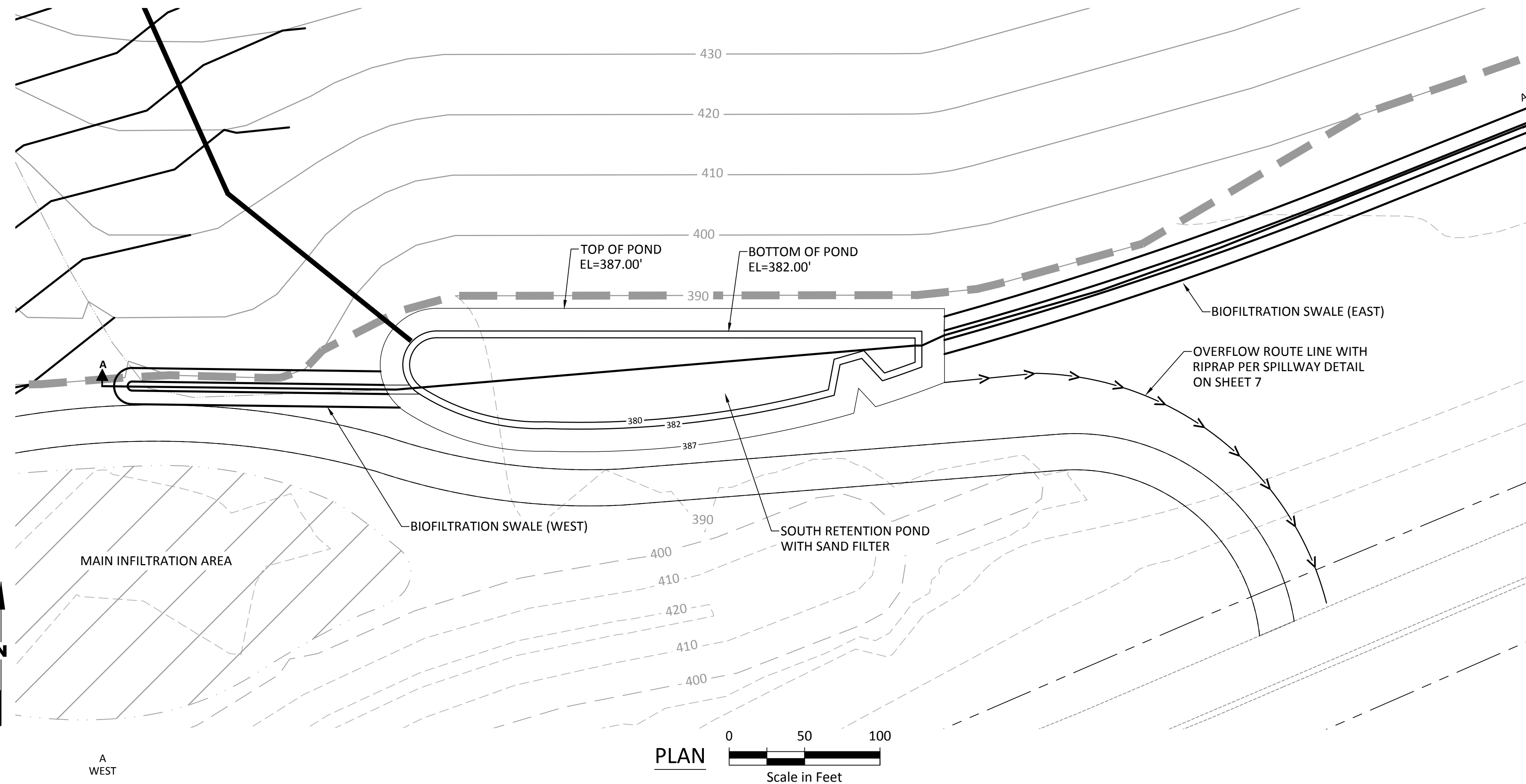
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425-329-0268
KATIE SALTANOVITZ, P.E.
Contact

**QUEEN CITY FARMS
PHASE III REFILL
MAPLE VALLEY, WASHINGTON**

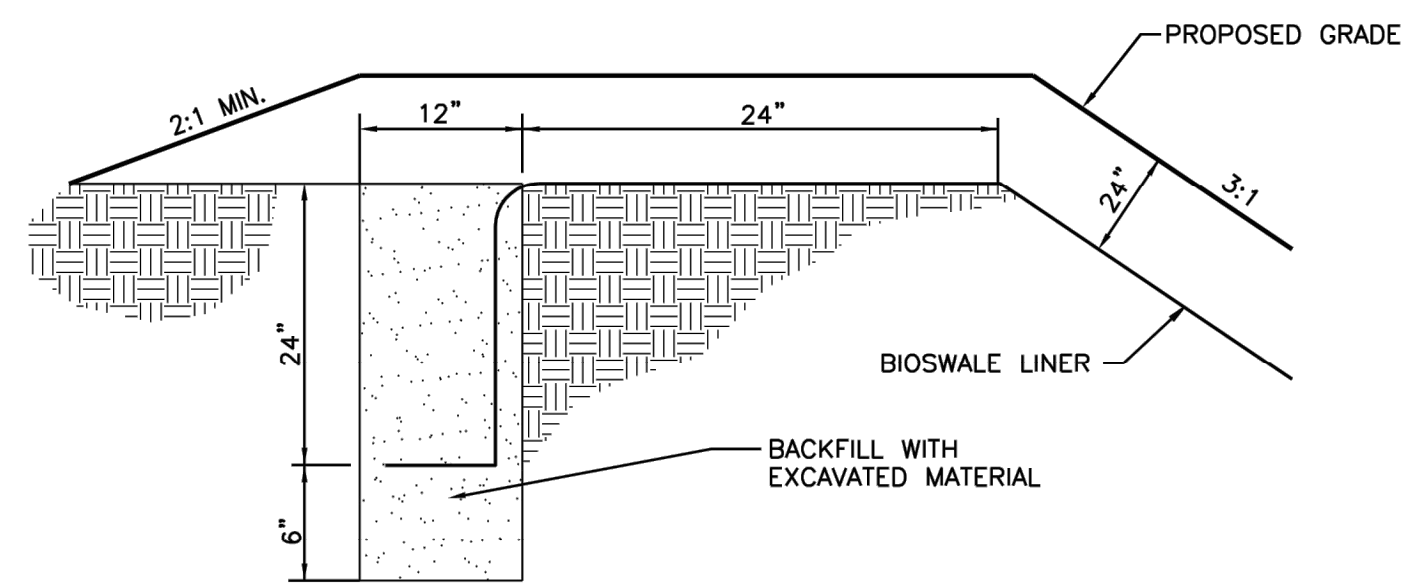
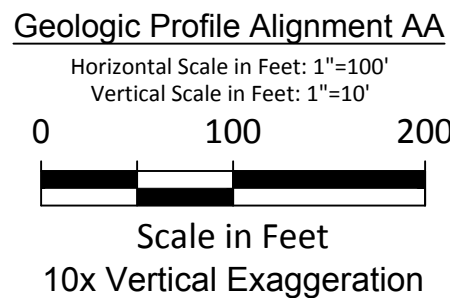
WEST POND

NO.	DATE	REVISIONS
0.	07/07/25	ISSUED FOR PERMIT APPROVAL

PROJECT NO. 992002.050
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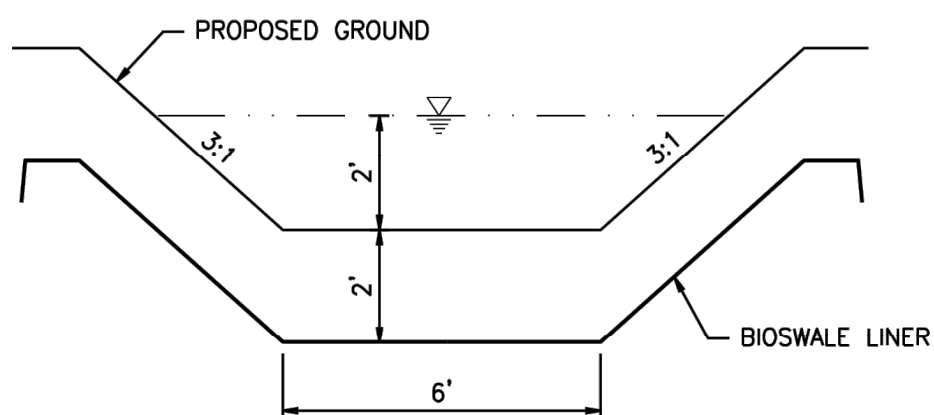


NOTE:
1. IF IMPERMEABLE SOIL IS ENCOUNTERED DURING EXCAVATION, CONTRACTOR TO EXCAVATE DOWN TO THE INFILTRATIVE SURFACE/NATIVE SOIL (AT LEAST ONE FOOT IN DEPTH, PER KCSWDM SECTION 5.2.2.1).



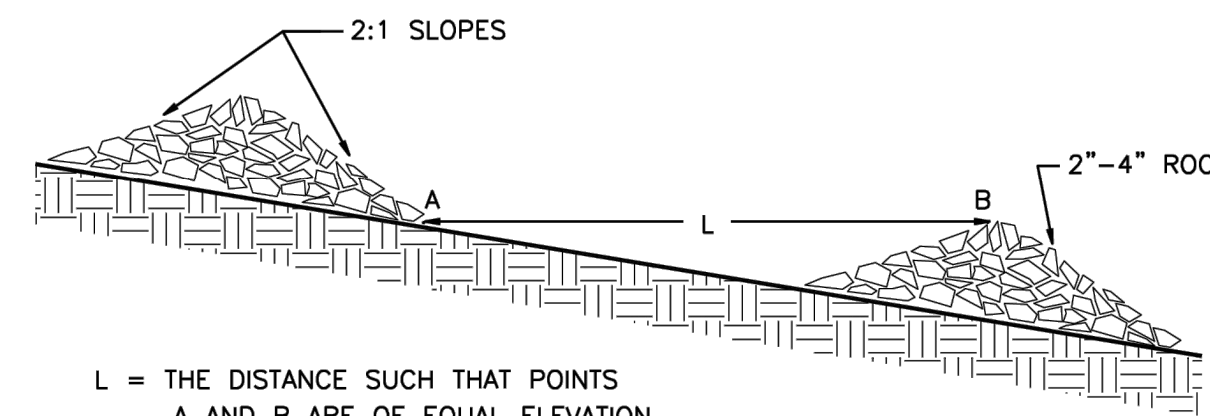
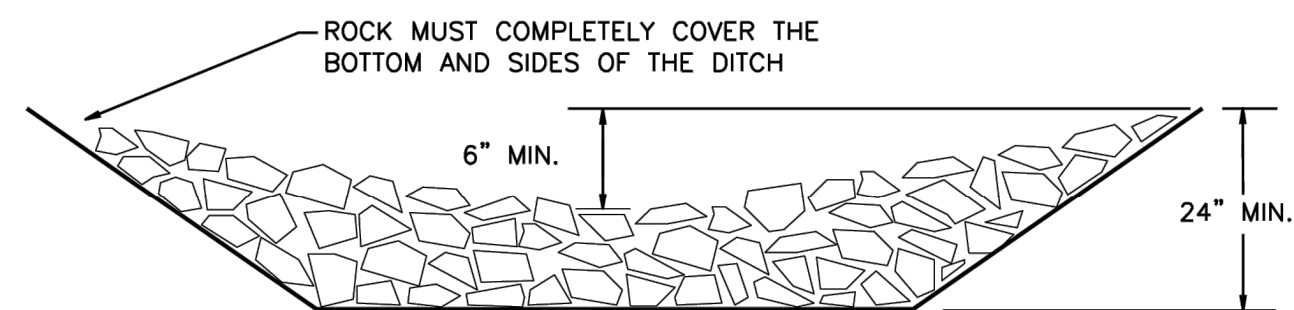
GEOMEMBRANE ANCHOR TRENCH

NOT TO SCALE



BIOSWALE DETAIL

NOT TO SCALE



L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION

ROCK CHECK DAM DETAIL

NOT TO SCALE

GEOSYNTHETIC CLAY LINER REQUIREMENTS

1. LINER THICKNESS SHALL BE 12 INCHES.
2. CLAY SHALL BE COMPACTED TO 95% MINIMUM DRY DENSITY, MODIFIED PROCTOR METHOD (ASTM D-1557).
3. A DIFFERENT DEPTH AND DENSITY SUFFICIENT TO RETARD THE INFILTRATION RATE TO 2.4E-5 INCHES PER MINUTE MAY ALSO BE USED IN LIEU OF CRITERIA 1 AND 2.

ALTERNATIVE GEOMEMBRANE LINER REQUIREMENTS

1. GEOMEMBRANE LINERS SHALL BE UV RESISTANT AND HAVE A MINIMUM THICKNESS OF 30 MIL. A THICKNESS OF 40 MIL SHALL BE USED IN AREAS OF MAINTENANCE ACCESS OR WHERE HEAVY MACHINERY MUST BE OPERATED OVER THE MEMBRANE.
2. GEOMEMBRANES SHALL BE BEDDED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
3. LINERS SHALL BE INSTALLED SO THAT THEY CAN BE COVERED WITH 12 INCHES OF TOP DRESSING FORMING THE BOTTOM AND SIDES OF THE BIOSWALE. TOP DRESSING SHALL CONSIST OF 6-INCHES OF CRUSHED ROCK COVERED WITH 6 INCHES OF NATIVE SOIL. THE ROCK LAYER IS TO MARK THE LOCATION OF THE LINER FOR FUTURE MAINTENANCE OPERATIONS. AS AN ALTERNATIVE TO CRUSHED ROC, 12-INCHES OF NATIVE SOIL MAY BE USED IF ORANGE PLASTIC "SAFETY FENCING" OR ANOTHER HIGH-VISIBLE, CONTINUOUS MARKER IS EMBEDDED 6 INCHES ABOVE THE MEMBRANE.
4. IF POSSIBLE, LINERS SHOULD BE OF A CONTRASTING COLOR SO THAT MAINTENANCE WORKERS ARE AWARE OF ANY AREAS WHERE A LINER MAY HAVE BECOME EXPOSED WHEN MAINTAINING THE FACILITY.
5. GEOMEMBRANE LINERS SHALL NOT BE USED ON SLOPES STEEPER THAN 5H:1V TO PREVENT THE TOP DRESSING MATERIAL FROM SLIPPING. TEXTURED LINERS MAY BE USED ON SLOPES UP TO 3H:1V UPON RECOMMENDATION BY A GEOTECHNICAL ENGINEER THAT THE TOP DRESSING WILL BE STABLE FOR ALL SITE CONDITIONS, INCLUDING MAINTENANCE.

TREATMENT LINER REQUIREMENTS

1. LINER THICKNESS SHALL BE 2 FEET SOIL LAYER WITH A MINIMUM ORGANIC MATTER (OM) CONTENT OF 1.0% AND A MINIMUM CATION EXCHANGE CAPACITY (CEC) OF 8 MILLIEQUIVALENTS PER 100 GRAMS (MEQ/100G). SOIL MAY BE AMENDED OR IMPORTED IF THE TOP 8 INCHES HAS A MINIMUM CEC OF 10 MEQ/100G AND REMAINDER OF THE DEPTH IS NO LESS THAN 8 MEQ/100G.
2. ORGANIC CONTENT SHALL BE MEASURED ON A DRY WEIGHT BASIS USING ASTM D2974.
3. CEC SHALL BE TESTED ACCORDING TO THE 2021 KCSWDM REFERENCE 12-1 (MEASURING CATION EXCHANGE CAPACITY).
4. CERTIFICATION BY A SOILS TESTING LABORATORY THAT IMPORTED SOILS MEET THE ORGANIC CONTENT AND CEC CRITERIA ABOVE SHALL BE PROVIDED TO THE LOCAL APPROVAL AUTHORITY.
5. SOIL AMENDMENT MAY ONLY BE COMPOST MEETING THE REQUIREMENTS OF 2021 KCSWDM REFERENCE 11-C.

NOTES:

1. PIPE SIZE & SLOPES: SEE PLANS.
2. OUTLET CAPACITY: NOT LESS THAN COMBINED INLETS.
3. EXCEPT AS SHOWN OR NOTED, UNITS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS FOR CATCH BASIN TYPE 2-54" MIN. DIAMETER.
4. PIPE SUPPORTS AND RESTRICTOR/SEPARATOR SHALL BE OF SAME MATERIAL, AND BE ANCHORED AT 3' MAX. SPACING BY 5/8" DIAMETER STAINLESS STEEL EXPANSION BOLTS OR EMBEDDED 2" IN WALL. THE RESTRICTOR/SEPARATOR SHALL BE FABRICATED FROM 0.060" ALUMINUM, OR 0.064" ALUMINIZED STEEL, OR 0.064" GALVANIZED STEEL PIPE; IN ACCORDANCE WITH AASHTO M 36, M 196, M 197 AND M 274. GALVANIZED STEEL SHALL HAVE TREATMENT 1.
5. OUTLET SHALL BE CONNECTED TO CULVERT OR SEWER PIPE WITH A STANDARD COUPLING BAND FOR CORRUGATED METAL PIPE, OR GROUTED INTO THE BELL OF CONCRETE PIPE.
6. THE VERTICAL RISER STEM OF THE RESTRICTOR/SEPARATOR SHALL BE THE SAME DIAMETER AS THE HORIZONTAL OUTLET PIPE, WITH AN 8" MIN. DIAMETER.
7. FRAME & LADDER OR STEPS OFFSET SO:
A. CLEANOUT GATE IS VISIBLE FROM TOP
B. CLIMBDOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE
C. FRAME IS CLEAR OF CURB
8. IF METAL OUTLET PIPE CONNECTS TO CEMENT CONCRETE PIPE, OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4".
9. MULTI-ORIFICE ELBOWS MAY BE LOCATED AS SHOWN OR ALL ON ONE SIDE OF RISER TO ASSURE LADDER CLEARANCE.

STORMWATER STANDARDS

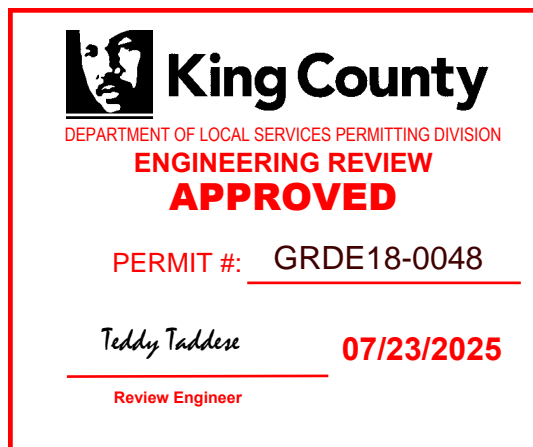
DETENTION
TOP OF RETENTION LIVE STORAGE = 386.00
BOTTOM OF LIVE STORAGE = 382.00
STORAGE VOLUME REQUIRED = 75,576 CF
STORAGE VOLUME PROVIDED = 101,117 CF
LEVEL 2 FLOW CONTROL

WATER QUALITY

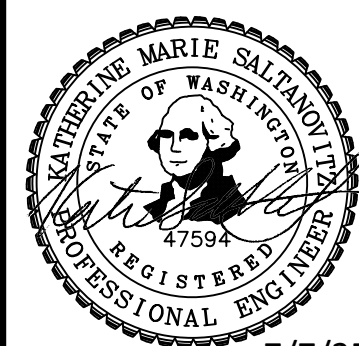
BIOFILTRATION SWALE (EAST)
BOTTOM WIDTH = 6 FT
DEPTH REQUIRED (100-YEAR STORM) = 0.70 FT
DEPTH PROVIDED = 2 FT (W/OUT FREEBOARD)
LENGTH REQUIRED = 174.7 FT
LENGTH PROVIDED = 1516 FT
LONGITUDINAL SLOPE = 1.25%

BIOFILTRATION SWALE (WEST)
BOTTOM WIDTH = 6 FT
DEPTH REQUIRED (100-YEAR STORM) = 0.69 FT
DEPTH PROVIDED = 2 FT (W/OUT FREEBOARD)
LENGTH REQUIRED = 172.0 FT
LENGTH PROVIDED = 175 FT
LONGITUDINAL SLOPE = 1.25%

SAND FILTER/INFILTRATION POND
SAND FILTER HYDRAULIC CONDUCTIVITY = 1 IN/HR
SAND FILTER DEPTH = 1.5 FT
SAND FILTER EFFECTIVE DEPTH = 6 FT
PERCENT FILTERED REQUIRED = 91% (BASIC)
PERCENT FILTER PROVIDED = 97.6%
BOTTOM AREA REQUIRED = 14,154 SF
BOTTOM AREA PROVIDED = 14,411 SF



SWALE SLOPE	CHECK DAM SPACING
0% - 5%	150'
5% - 10%	100'
> 10%	50'



PROJECT NO.
992002.050

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QUEEN CITY FARMS
PHASE III REFILL
MAPLE VALLEY, WASHINGTON

SOUTH RETENTION POND
AND BIOSWALE MODIFICATIONS

DRAWN BY: J. VALLUZZI	MDV	KMS	DATE SURVEYED: 07/23/2025	STATUS: ISSUED FOR PERMIT REVIEW
DESIGNED BY: M. VEILLEUX	MDV	KMS	DATE SURVEYED: 07/23/2025	STATUS: ISSUED FOR PERMIT REVIEW
REVIEWED BY: K. SALTANOVITZ	MDV	KMS	DATE SURVEYED: 07/23/2025	STATUS: ISSUED FOR PERMIT REVIEW
APPROVED BY: K. SALTANOVITZ	MDV	KMS	DATE SURVEYED: 07/23/2025	STATUS: ISSUED FOR PERMIT REVIEW
DATE SURVEYED: 07/23/2025	MDV	KMS	DATE SURVEYED: 07/23/2025	STATUS: ISSUED FOR PERMIT REVIEW
SURVEYED BY: K. SALTANOVITZ	MDV	KMS	DATE SURVEYED: 07/23/2025	STATUS: ISSUED FOR PERMIT REVIEW

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LANDAU ASSOCIATES INC. | G:\PROJECTS\992002\0501PHIII REFILL PLAN SET\P. RECLAMATION PLAN.DWG

PLANTING SPECIFICATIONS FOR RECLAMATION

FLAT HYDROSEED MIX SHALL BE:

COMMON NAME	BOTANICAL NAME	% BY WEIGHT	LB / ACRE
PERENNIAL RYEGRASS	LOLIUM RUBRA	39	15.6
RED FESCUE	FESTUCA RUBRA	25	10
CHEWING FESCUE	RESUCA RUBRA SPP. FALIAX	22	8.8
HIGHLAND COLONIAL BENTGRASS	AGROSTIS CAPILLARIS VAR HIGHLAND	7	2.8
RED CLOVER	TRIFOLIUM REPENS	4	1.6
COMMON YARROW	ACHILLEA MILLIFOLIUM	1	0.5
BROADLEAF LUPINE	LUPINUS LATIFOLIUS	1	0.5
CALIFORNIA POPPY	ESCHSCHOLZIA CALIFORNICA	1	0.5

STEEP SLOPE PLANTINGS SHALL BE:

COMMON NAME	BOTANICAL NAME	PLANT FORM	MIN. SIZE	SPACING	UNITS / ACRE
DOUGLAS-FIR	PSEUDOTSUGA MENZESII	PLUG	6"	15' O.C.	120
RED ALDER	ALNUS RUBRA	PLUG	6"	15' O.C.	60

HYDROSEED APPLICATION RATE = 40 LBS/ACRE

- 2,000 LBS/ACRE WITH CELLULOSE FIBER MULCH.
- TACKIFIER:
 - FOR DRY-SEASON APPLICATION - WATER BY TRUCK
 - 20 LBS/ACRE TACKIFIER
 - 60 LBS/ACRE ORGANIC SUPER ABSORBENT(IRRIGATE AS NECESSARY TO MAINTAIN SOIL MOISTURE FOR A MINIMUM THREE-WEEK PERIOD.)
- TACKIFIER NOT RECOMMENDED ON SLOPES UNDER 3 TO 1.
- FERTILIZER SPECIFIED BELOW TO BE "TILLED-IN" INTO THE HYDROSEED SLURRY.

ALL AREA WHICH ARE SEEDED SHALL RECEIVE FERTILIZER OF THE FOLLOWING PROPORTIONS AND FORMULATIONS:		
TOTAL AVAILABLE NITROGEN	10%	(OF WHICH 50% IS DERIVED FROM 38% SULFUR-COATED UREA)
AVAILABLE PHOSPHORUS	20%	
AVAILABLE POTASSIUM	20%	
APPLICATION RATE	90 LBS/PER ACRE	

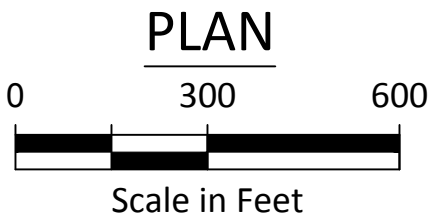
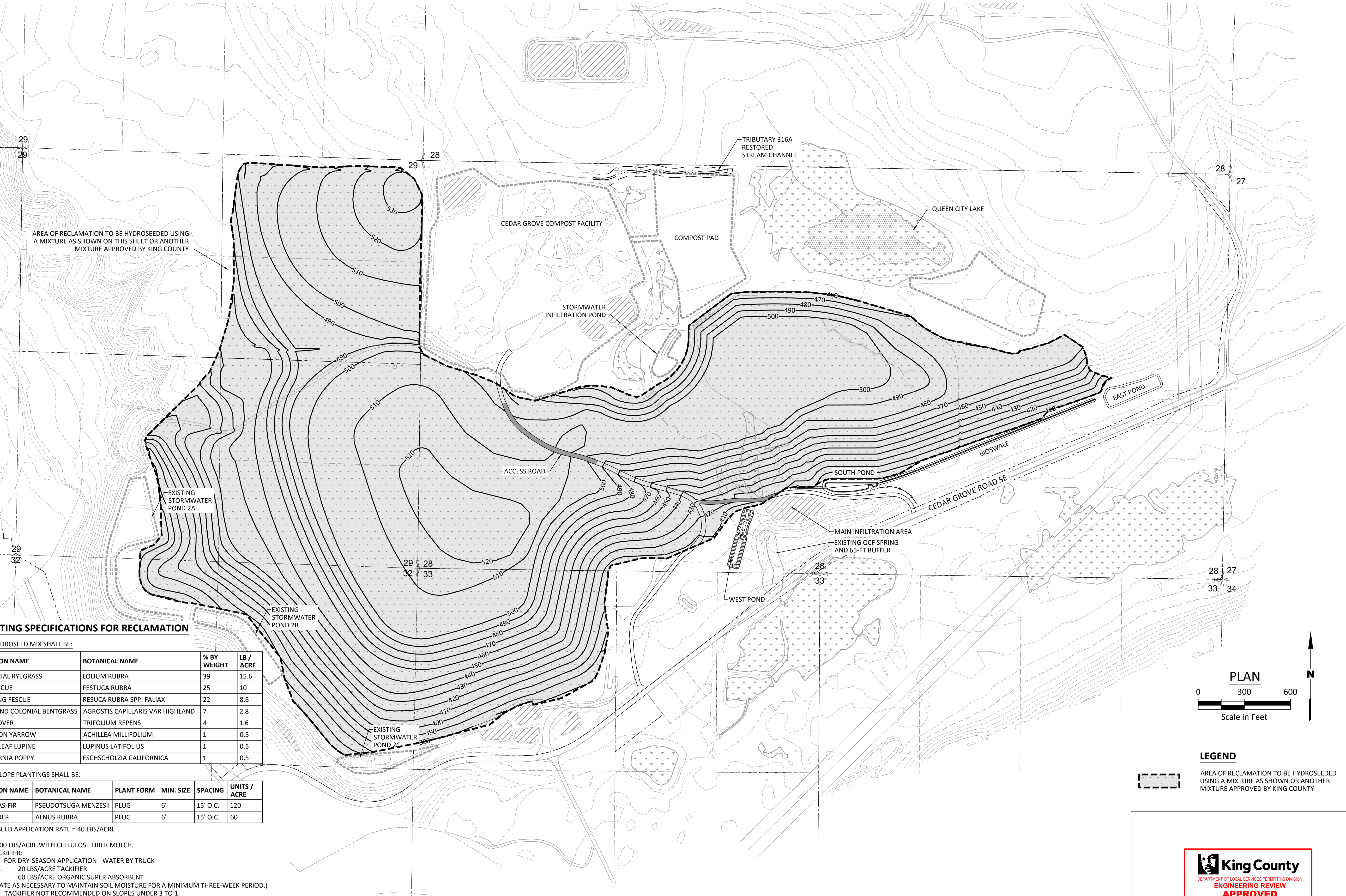
ABOVE PERCENTAGES ARE PROPORTIONED BY WEIGHT.
VERIFY FERTILIZER FORMULATIONS AND PROPORTIONS VIA SOIL SAMPLE PRIOR TO APPLICATION.

- SCARIFY SOIL BEFORE APPLICATION OF HYDROSEED.
- HYDROSEED IN EARLY SPRING.
- ALL GRADED OR BACKFILLED AREAS SHALL BE TOPSOILED WITH A SOIL OF AT LEAST EQUAL TO THE TOPSOIL OF THE LAND AREAS IMMEDIATELY SURROUNDING THE GRADED AREAS.
- NON-INDIGENOUS SPECIES SUCH AS BLACKBERRY AND SCOTCH BROOM WILL NOT BE PERMITTED AS DOMINANT SPECIES IN RECLAIMED AREAS.

NOTES:

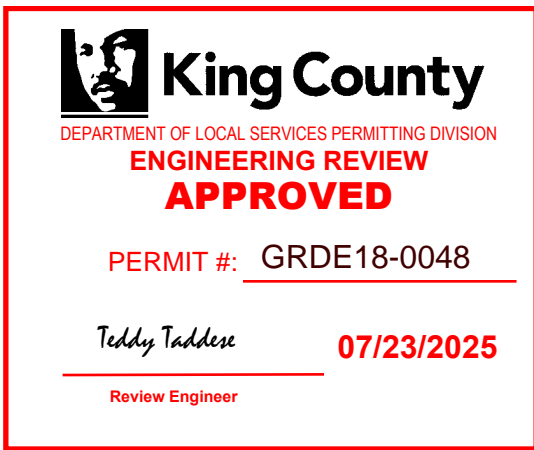
- THE ELEVATIONS DEPICTED ON THIS SHEET ARE THE MAXIMUM EXPECTED RECLAMATION ELEVATIONS. ACTUAL FINAL RECLAIMED SURFACE ELEVATIONS MAY BE LOWER IN PORTIONS OF THE SITE, DEPENDING ON AVAILABILITY OF SUITABLE FILL MATERIAL DURING THE RECLAMATION PERIOD.
- FINAL RECLAIMED SLOPES MAY BE LESS STEEP THAN SHOWN BUT WILL NOT BE STEEPER.
- ANY DECREASE IN FINAL ELEVATIONS OR SLOPES WILL BE IMPLEMENTED SUCH THAT THE GENERAL SITE CONTOURS AS DEPICTED ON THIS PLAN ARE MAINTAINED.
- ALL CONDITIONS AND SPECIFICATIONS ON THIS SHEET ARE SPECIFIC TO PHASE III ONLY.

if there is any variance, the WA Dept. of Natural Resources (WADNR)-approved planting specifications control



LEGEND

AREA OF RECLAMATION TO BE HYDROSEEDED USING A MIXTURE AS SHOWN OR ANOTHER MIXTURE APPROVED BY KING COUNTY



QUEEN CITY FARMS
PHASE III REFILL
MAPLE VALLEY, WASHINGTON

FINAL RECLAMATION PLAN

NO.	DATE	REVISIONS
0.	07/07/25	ISSUED FOR PERMIT APPROVAL



PROJECT NO.
992002.050

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APPROVED BY:	K. SALTANOVITZ	KMS
DATE SURVEYED:		
SURVEYED BY:		
STATUS:	ISSUED FOR PERMIT REVIEW	