

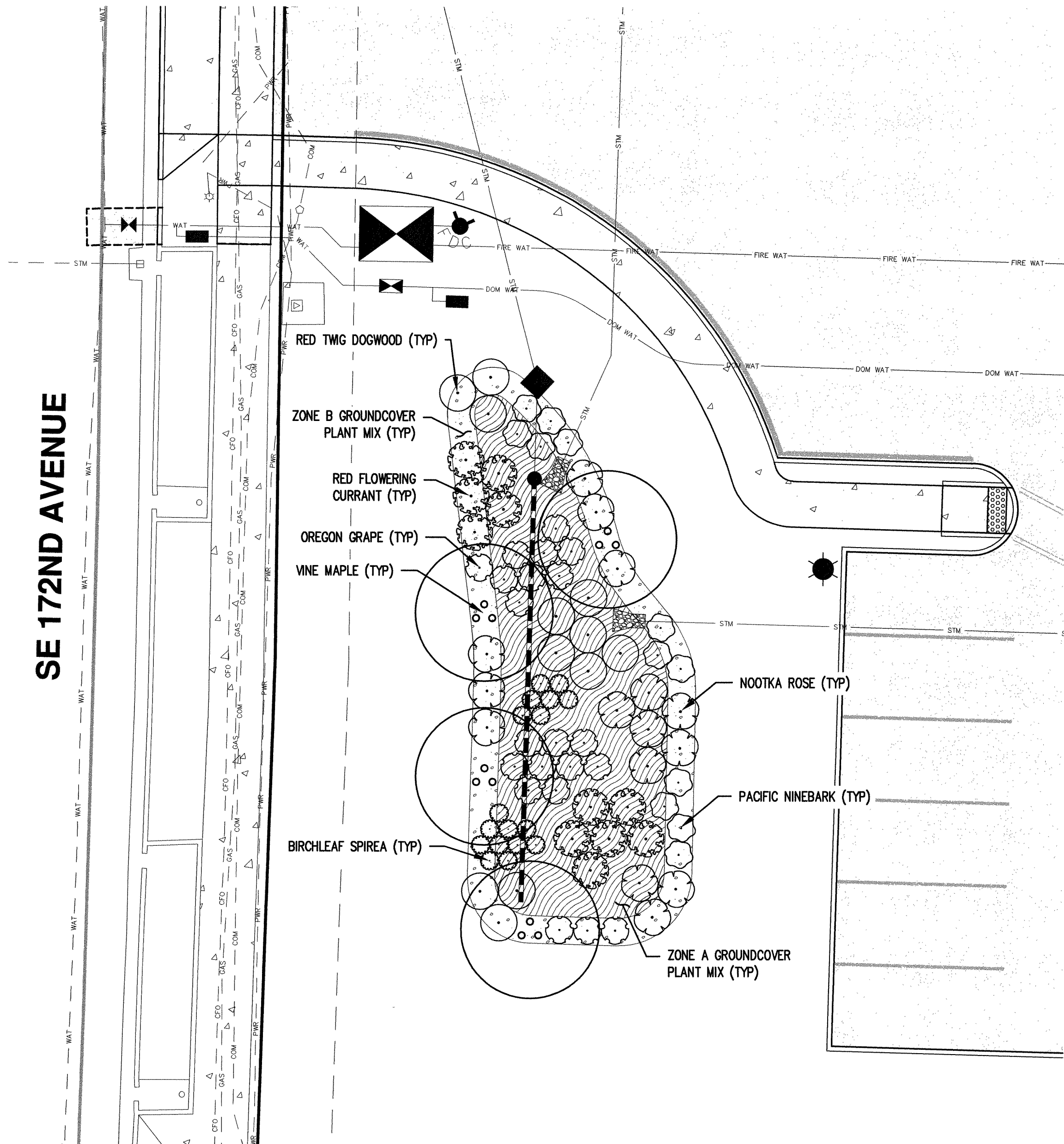
PLANT SCHEDULE

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
	4	ACER CIRCINATUM	VINE MAPLE	1.5" MIN CAL. B&B/MULTI-TRUNK	AS SHOWN
	3	CALOCEDRUS DECURRENS	INCENSE CEDAR	5' MIN. HT. B&B	AS SHOWN
	2	EXISTING STREET TREE			
	4	OSTRYA VIRGINIANA	AMERICAN HOPHORNBEAM	1.75" MIN. CAL. B&B	AS SHOWN
	5	ZELKOVA SERRATA 'VILLAGE GREEN'	VILLAGE GREEN JAPANESE ZELKOVA	1.5" MIN. CAL. B&B	AS SHOWN
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
	10	ESCALLONIA X LANGLEYENSIS 'APPLE BLOSSOM'	APPLE BLOSSOM ESCALLONIA	2 GAL. CONT.	48" o.c.
	58	LIGUSTRUM X VICARYI	VICARY PRIVET	2 GAL. CONT.	48" o.c.
	24	MAHONIA AQUIFOLIUM 'COMPACTA'	COMPACT OREGON GRAPE	2 GAL. CONT.	36" o.c.
	3	RIBES SANGUINEUM	RED FLOWERING CURRANT	3 GAL. CONT.	60" o.c.
GROUND COVERS	QTY	DESCRIPTION			
	287	ARCTOSTAPHYLOS UVA-URSI	KINNIKINNICK	1 GAL. CONT.	30" o.c.
	± 562 SF	EXISTING LANDSCAPE TO REMAIN			
	± 3,197 SF	LAWN: NORTHWEST SUPREME LAWN SEED MIX - SUNMARK SEEDS (OR APPROVED EQUAL) DASHER 3 PERENNIAL RYEGRASS (LOLIUM PERENNE VAR. DASHER 3) 35%; CUTTIE II PERENNIAL RYEGRASS (LOLIUM PERENNE VAR. CUTTIE II) 35%; GARNET CREEPING RED FESCUE (FESTUCA RUBRA VAR. GARNET) 15%; WINDWARD CHEWINGS FESCUE (FESTUCA RUBRA SPP FALLAX VAR. WINDWARD) 15% APPLY AT A RATE OF 8 LBS. PER 1,000 SF OR AS RECOMMENDED BY SUPPLIER			
	± 3,227 SF	EROSION CONTROL SEED MIX: PT 400 NATIVE UPLAND MIX FROM PRO TIME LAWN SEED, OR APPROVED EQUAL: BLUE WILDRIE/ELYMUS GLAUCUS (34%); MEADOW BARLEY/HORDEUM BRACHYANTHERUM (33%); CALIFORNIA BROME/BROMUS CARINATUS (33%). APPLY 1 LB PER 1,000 SQ FT			
	± 585 SF	RIVER COBBLE: ROUNDED, WASHED RIVER GRAVEL, VARIED DIMENSIONS RANGING FROM 3" DIAMETER TO 6" DIAMETER, MINIMUM 6" DEEP OVER FREE-DRAINING WEED BARRIER FABRIC. LOCAL SOURCES PREFERRED, MIX OF NATURAL GRAY AND TAN COLORS.			

LANDSCAPE CONSTRUCTION NOTES

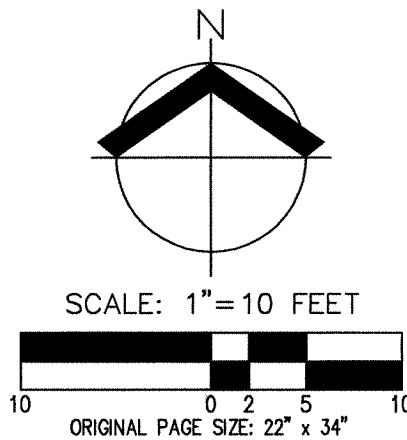
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING PLANT AND MATERIAL QUANTITIES PRIOR TO BIDDING AND CONSTRUCTION. SCHEDULES, QUANTITIES, ETC. AS SHOWN ON THE PLANS ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE AND DO NOT RELEASE THE CONTRACTOR FROM VERIFYING THE PLANS WITH ACTUAL FIELD CONDITIONS. ANY DISCREPANCIES BETWEEN THE PANS AND FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER/LANDSCAPE ARCHITECT AND THE OWNER FOR RESOLUTION; DESIGN INTENT PREVAILS OVER QUANTITIES LISTED.
- LANDSCAPING PLAN IS INTENDED TO SHOW DESIGN INTENT. SUBSTITUTIONS AND PLAN REVISIONS, INCLUDING CHANGES TO PLANT SPECIES, SIZES, SPACING, QUANTITIES, ETC. MAY BE APPROVED BASED ON UNFORESEEN SITE FIELD CONDITIONS, NURSERY STOCK AVAILABILITY, WEATHER CONDITIONS, ETC. REVISIONS AND SUBSTITUTIONS MUST COMPLY WITH GOOD PRACTICE INDUSTRY STANDARDS AND APPLICABLE JURISDICTIONAL STANDARDS.
- CONTRACTOR SHALL MAKE MINOR FIELD ADJUSTMENTS TO PLANTINGS ON SITE AS NECESSARY TO AVOID CONFLICTS WITH FINAL UTILITIES, METERS, LIGHTS, DRIVEWAY LOCATIONS, ETC.
- LANDSCAPING SHALL CONFORM TO APPLICABLE CITY OF HAPPY VALLEY DESIGN STANDARDS. PLANT MATERIAL SHALL COMPLY IN SIZE, QUALITY GRADE, FORM, ETC. TO THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1), CURRENT EDITION. INSTALLATION SHALL COMPLY WITH RECOGNIZED GOOD PRACTICE INDUSTRY STANDARDS, SUCH AS THOSE ADOPTED BY THE OREGON LANDSCAPE CONTRACTORS BOARD (OLCB).
- SOIL PREPARATION: TOPSOIL DEPTH IN ALL PLANTING AREAS SHALL BE OF SUFFICIENT QUANTITY AND QUALITY TO MAINTAIN HEALTHY PLANT ESTABLISHMENT AND GROWTH IN ACCORDANCE WITH CITY OF HAPPY VALLEY STANDARDS. TOPSOIL MAY BE NON-COMPACTED, NATIVE EXISTING TOPSOIL, FROM CLEAN SOURCES STOCKPILED ON SITE, OR FROM IMPORTED SOURCES IF REQUIRED. TOPSOIL SHALL BE FREE OF ROOTS, WEEDS/WEED SEEDS, CLAY LUMPS, DEBRIS, ROCKS OVER 3/4" DIAMETER, LARGE WOODY MATERIAL, AND OTHER EXTRANEIOUS, NON-ORGANIC MATERIAL HARMFUL TO PLANT GROWTH. SOIL PLACEMENT SHALL NOT OCCUR IN CONDITIONS THAT COULD RESULT IN OVER-COMPACTATION OR EROSION AND MUST BE IN FRIABLE (WORKABLE) CONDITION WHEN PLACED. BACKFILL SOIL MIX IN PLANTING HOLES SHALL BE AMENDED SOIL CONTAINING 2/3 NATIVE TOPSOIL AND 1/3 ORGANIC COMPOST. FINISH GRADE OF NEW PLANTING AREAS SHALL SEAMLESSLY MEET GRADE OF SURROUNDING AREAS AND GRADES SHOWN ON GRADING PLANS AND CREATE POSITIVE DRAINAGE. TOPSOIL REMOVED DURING CONSTRUCTION SHALL BE REPLACED WITH TOPSOIL. EROSION CONTROL SHALL BE IN COMPLIANCE WITH THE FINAL EROSION CONTROL PLANS.
- BARK MULCH: APPLY 3" DEEP WELL-AGED MEDIUM GRIND OR SHREDDED DARK HEMLOCK OR FIR BARK MULCH UNDER AND AROUND ALL NEW PLANTINGS. CARE SHALL BE TAKEN TO AVOID COVERING LEAVES OR ROOT CROWNS. TREES AND SHRUBS SHALL BE SET ABOVE SOIL LEVEL SO THAT CROWN OF ROOT BALL IS FLUSH WITH FINISH GRADE AFTER MULCH APPLICATION.
- IRRIGATION: AN IRRIGATION SYSTEM OR OTHER MEANS OF WATERING SHALL BE INSTALLED TO MAINTAIN ALL PLANT MATERIAL IN ACCORDANCE WITH THE CITY OF HAPPY VALLEY STANDARDS. THE SYSTEM, IF USED, SHALL BE 'DESIGN-BUILD' BY THE LANDSCAPE CONTRACTOR AND BE APPROVED BY THE CITY OF HAPPY VALLEY AND THE PROJECT LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. IRRIGATION SHALL BE PROVIDED TO ENSURE PLANT SURVIVAL DURING PLANT ESTABLISHMENT (A MINIMUM OF TWO-YEARS UNLESS OTHERWISE DESCRIBED).
- REFER ALSO TO STORMWATER FACILITY NOTES ON SHEET L101.





STORMWATER DATA:  
ZONE A = 815 SF (EXCLUDES RIPRAP AREAS)  
ZONE B = 436 SF

TRACT A STORMWATER FACILITY PLANTING CALCULATIONS:					
ZONE	AREA	MIN. HERBACEOUS	MIN. TREES	MIN. LARGE SHRUB/SMALL TREE	MIN. SMALL SHRUBS
A	815 SF / 100 SF = 8.15	NONE REQUIRED IN ZONE	NONE REQUIRED IN ZONE	8.15 X 3 = 25	8.15 X 4 = 33
B	436 SF / 100 SF = 4.36	NONE REQUIRED IN ZONE	4.36 X 1 = 4	4.36 X 3 = 13	4.36 X 4 = 17
TOTAL PLANTS REQUIRED:		N/A	4	38	50
TOTAL PLANTS PROPOSED:		N/A	4	38	50

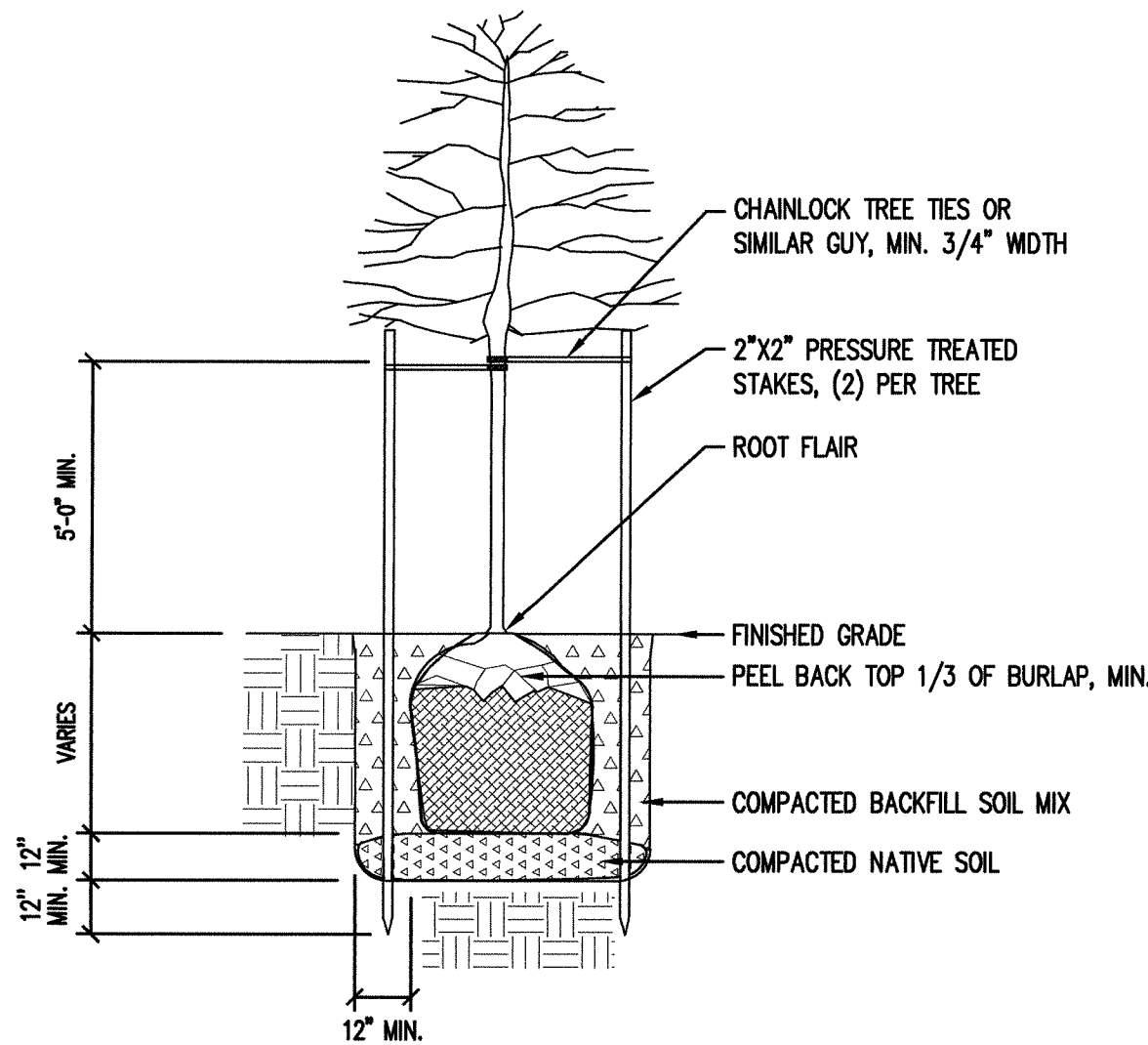


STORMWATER FACILITY NOTES

- CONTRACTOR IS RESPONSIBLE FOR VERIFYING PLANT AND MATERIAL QUANTITIES. IF DISCREPANCIES OCCUR, DESIGN INTENT PREVAILS OVER QUANTITIES LISTED. ALL PLANTS AND PLANTINGS SHALL CONFORM TO WES STANDARDS.
- A 'DESIGN BUILD' TEMPORARY IRRIGATION SYSTEM DESIGNED PER WES/CCSD#1 STANDARDS, SHALL BE INSTALLED TO IRRIGATE THE PLANTINGS IN THE STORMWATER FACILITY. CONTRACTOR SHALL PROVIDE IRRIGATION PLANS, INCLUDE HEAD AND PIPE LAYOUT, ZONING, ETC. TO WES/CCSD#1 FOR APPROVAL PRIOR TO BEGINNING INSTALLATION. WATERING SHALL OCCUR DURING THE WARRANTY/MONITORING PERIOD TO MAINTAIN ALL PLANTINGS IN A HEALTHY THRIVING CONDITION, A MINIMUM OF 1" PER WEEK FROM JUNE 15TH THROUGH OCTOBER 15 AND AS REQUIRED FOR ESTABLISHMENT.
- MULCH: STORMWATER FACILITY PLANTINGS SHALL BE MULCHED PER WES/CCSD#1 STANDARDS. REFER TO CCSD#1 APPENDIX A.3.5. MULCH SHALL NOT BE USED IN FREQUENTLY INUNDATED AREAS TO AVOID WATER QUALITY IMPACTS.
- SOIL PREPARATION: GROWING MEDIUM IN STORMWATER FACILITY SHALL MEET WES/CCSD#1 DESIGN STANDARDS. THE MEDIUM SHALL BE A BLEND OF LOAMY SOIL, SAND, AND COMPOST THAT IS 30%-40% COMPOST BY VOLUME. TOPSOIL MAY BE IMPORTED AND/OR SURFACE SOIL STOCKPILED ON SITE MAY BE USED IF IT MEETS WES STANDARDS. COMPOST SHALL BE ENTIRELY DERIVED FROM NON-WOODY PLANT MATERIAL. PARTICLE GRADATION OF THE BLENDED MATERIAL SHALL BE IN CONFORMANCE WITH ASTM C1 17/C136 (AASHTO T11/127) AND HAVE A PH OF 6 TO 8. MATERIAL SHALL BE LOOSE AND FRIABLE AND WELL-MIXED WITH SUFFICIENT STRUCTURE TO GIVE GOOD TILTH AND AERATION; SHALL BE FREE OF ROOTS, PLANTS, SOD, STONES, CLAY LUMPS, DEBRIS, ALKALI SALTS, ALL WEEDS AND INVASIVE PLANT SEED, PESTS, AND OTHER UNDESIRABLE ORGANISMS AND DISEASE CAUSING PLANT PATHOGENS; AND SHOULD HAVE NO VISIBLE FREE WATER. THE GROWING MEDIUM SHALL BE PROTECTED FROM ALL SOURCES OF CONTAMINATION, INCLUDING WEEDS SEEDS, WHILE AT THE SUPPLIER, IN CONVEYANCE, AND AT THE PROJECT SITE. PLACE GROWING MEDIUM IN LOOSE LIFTS, NOT TO EXCEED 8" EACH, AND EACH LIFT SHALL BE COMPACTED WITH A WATER-FILLED LANDSCAPE ROLLER. THE MATERIAL SHALL NOT OTHERWISE BE MECHANICALLY COMPACTED. REFER TO CCSD#1 APPENDIX A.3. REFER TO ENGINEERING PLANS FOR SOIL PLACEMENT, DEPTH, AND EROSION CONTROL MATTING.
- HATCHED AREAS ARE MEANT TO CONVEY GENERAL PLANT LOCATION. PLANT COVERAGE, SPACING, AND LAYOUT SHALL BE CONSISTENT WITH THE SPACING LISTED IN THE PLANT LEGEND FOR FULL AND EVEN COVERAGE. ADJUST AS NECESSARY TO AVOID CONFLICTS WITH UTILITIES, SATURATED SOILS, RIP-RAP, ETC.
- A 2-YEAR MONITORING PERIOD SHALL BE REQUIRED PER WES/CCSD#1 STANDARDS, APPENDIX A. PLANTS SHALL BE TAGGED FOR DORMANT SEASON IDENTIFICATION. MAINTENANCE AND MONITORING SHALL OCCUR A MINIMUM OF THREE TIMES PER GROWING SEASON (APRIL, JUNE, SEPTEMBER) AND ONCE PRIOR TO THE ONSET OF THE GROWING SEASON (FEBRUARY-MARCH) DURING THE 2-YEAR MONITORING PERIOD. ON-GOING MAINTENANCE, PER WES/CCSD#1 STANDARDS, SHALL BE DETERMINED BY THE MONITORING PARTY AND INCLUDE BUT NOT BE LIMITED TO: PRUNING, PLANT REPLACEMENT, INVASIVE SPECIES CONTROL AND REMOVAL, IRRIGATION SYSTEM OPERATION, REPAIR, AND WINTERIZING, ETC.
- PLANT REPLACEMENT AND PRESERVATION: AT THE END OF THE MAINTENANCE PERIOD, ALL PLANTS NOT IN A HEALTHY GROWING CONDITION WILL BE NOTED AND AS SOON AS SEASONAL CONDITIONS PERMIT, WILL BE REMOVED FROM THE SITE AND REPLACED WITH PLANTS OF THE SAME SPECIES AND SIZE AS ORIGINALLY SPECIFIED. PRIOR TO REPLACEMENT, THE CAUSE OF LOSS (WILDLIFE DAMAGE, POOR PLANT STOCK, INADEQUATE IRRIGATION, ETC.) SHALL BE DOCUMENTED WITH A DESCRIPTION OF THE CORRECTIVE ACTIONS TAKEN.
- PLANT MATERIAL SHALL BE FIELD ADJUSTED TO PROVIDE EVEN COVERAGE. ADJUST AS NECESSARY TO AVOID CONFLICTS WITH UTILITIES, TREES, RIP-RAP, ETC.
- PLANT TAGGING FOR DORMANT SEASON IDENTIFICATION SHALL BE USED. FLAGS OR MARKERS SHALL BE COLOR COORDINATED BY PLANT SPECIES FOR EASE OF IDENTIFICATION. SUBMIT TAG INFORMATION AS AS-BUILTS TO OWNER AFTER COMPLETION.
- REFER TO RAIN GARDEN DETAIL ON SHEET L102.

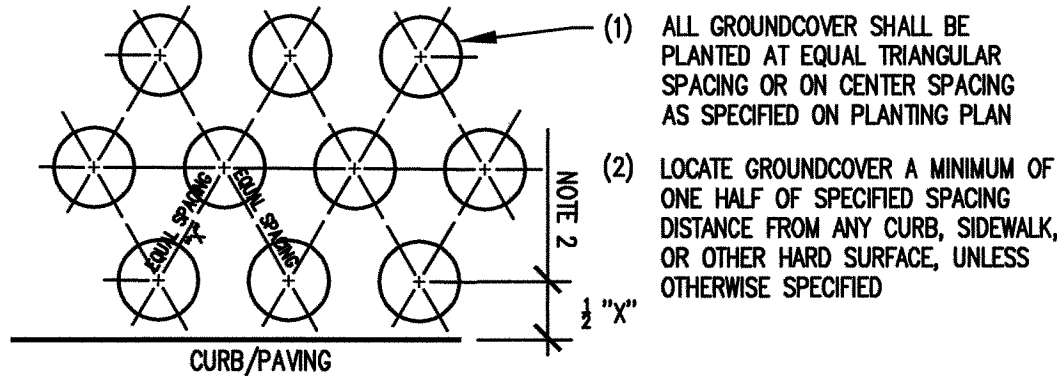
STORMWATER FACILITY PLANT SCHEDULE

STORMWATER TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
	4	ACER CIRCINATUM	VINE MAPLE	1" CAL B&B	AS SHOWN
LARGE SHRUBS/SMALL TREES					
	12	CORNUS SERICEA	RED TWIG DOGWOOD	30" HT. CONT.	48" o.c.
	11	RIBES SANGUINEUM	RED FLOWERING CURRANT	30" HT. CONT.	48" o.c.
	15	ROSA NUTKANA	NOOTKA ROSE	30" HT. CONT.	48" o.c.
TOTAL LARGE SHRUBS/SMALL TREES: 38					
SMALL SHRUBS / GROUNDCOVER	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
	21	MAHONIA AQUIFOLIUM	OREGON GRAPE	1 GAL. CONT.	36" o.c.
	12	PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	1 GAL. CONT.	36" o.c.
	21	SPIRAEA BETULIFOLIA	BIRCHLEAF SPIREA	1 GAL. CONT.	24" o.c.
TOTAL SMALL SHRUBS: 50					
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
	±815 SF	ZONE A GROUNDCOVER PLANT MIX: SP#4 CONTAINERS, 12" O.C. AT A RATE OF 115 PLANTS PER 100 SF AS REQUIRED BY WES. CONTRACTOR SHALL FIELD ADJUST SPACING AND LOCATION AS NECESSARY TO FIT AROUND SHRUBS LISTED IN PLANT SCHEDULE ABOVE AND TO MAINTAIN CLEAR MAINTENANCE ACTIVITY ACCESS AND GATE CLEARANCE.  PLANT SUBSTITUTIONS MAY BE ALLOWED BASED ON AVAILABILITY AT TIME OF INSTALLATION. ANY SUBSTITUTIONS MUST CHOSEN FROM WES APPROVED PLANT LIST AND BE APPROVED BY CITY OF HAPPY VALLEY. GROUNDCOVER PLANTS SHALL BE AS FOLLOWS, OR APPROVED EQUAL:  CALIFORNIA BROME (BROMUS CARINATUS) (134), ALASKA BROME (BROMUS SITCHENSIS) (134), TUFTED HAIRGRASS (DESCHAMPSIA CAESPITOSA) (134), BLUE WILDRYE (ELYMUS GLAUCUS) (134), WESTERN FESCUE (FESTUCA OCCIDENTALIS) (134), DOUGLAS ASTER (ASTER SUBSPICATUS) (134), AND CREEPING MAHONIA (MAHONIA REPENS) (126).  TOTAL ZONE A GROUNDCOVER REQUIRED: 937 PLANTS			
	±436 SF	ZONE B GROUNDCOVER PLANT MIX: SP#4 CONTAINERS, 12" O.C. AT A RATE OF 115 PLANTS PER 100 SF AS REQUIRED BY WES. CONTRACTOR SHALL FIELD ADJUST SPACING AND LOCATION AS NECESSARY TO FIT AROUND SHRUBS LISTED IN PLANT SCHEDULE ABOVE AND TO MAINTAIN CLEAR MAINTENANCE ACTIVITY ACCESS AND GATE CLEARANCE.  PLANT SUBSTITUTIONS MAY BE ALLOWED BASED ON AVAILABILITY AT TIME OF INSTALLATION. ANY SUBSTITUTIONS MUST CHOSEN FROM WES APPROVED PLANT LIST AND BE APPROVED BY CITY OF HAPPY VALLEY. GROUNDCOVER PLANTS SHALL BE AS FOLLOWS, OR APPROVED EQUAL:  BLUE WILDRYE (ELYMUS GLAUCUS) (56), CALIFORNIA FESCUE (FESTUCA CALIFORNICA) (56), DOUGLAS ASTER (ASTER SUBSPICATUS) (56), LADY FERN (ATHYRIUM FEXUX-FEMINA) (56), SMALL-FLOWERED LUPINE (LUPINUS MICRANTHUS) (56), KINKINICK (ARTOSTAPHYLOS UVA-URS) (56), COASTAL STRAWBERRY (FRAGARIA CHILOENSIS) (55), CREEPING MAHONIA (MAHONIA REPENS) (55), AND DEER FERN (BLECHNUM SPICANT) (55).  TOTAL ZONE B GROUNDCOVER REQUIRED: 501 PLANTS  TOTAL GROUNDCOVER PLANTS (ZONES A & B): 1,438			



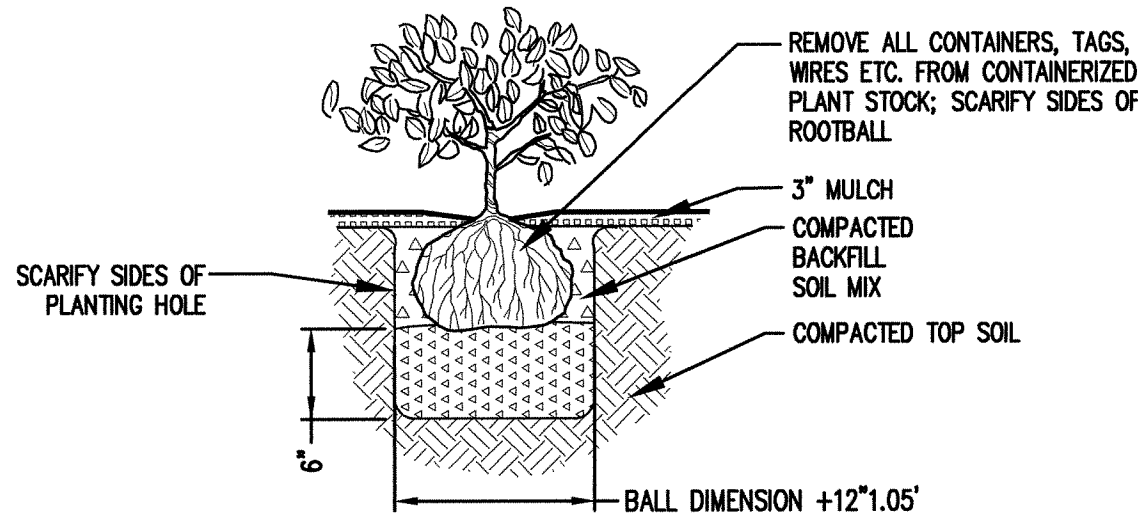
1 TYPICAL TREE PLANTING DETAIL

- NTS  
NOTES:
1. DRIVE STAKES OUTSIDE OF ROOTBALL. SINGLE STAKE TREES LESS THAN 6' TALL.
  2. SET TREE 2" ABOVE FINISH GRADE TO ALLOW FOR SETTLING OF SOIL.
  3. BACKFILL SOIL MIX FOR TREE PLANTING TO BE 1/3 ORGANIC MATERIALS, 1/3 TOPSOIL, AND 1/3 SANDY LOAM OR 1/3 ORGANIC MATERIALS MIXED WITH NATIVE SOIL.
  4. REMOVE ALL WIRES, METAL BASKETS, TWINE, AND OTHER NON-COMPOSTABLE MATERIALS FROM TREE ROOTBALL PRIOR TO PLANTING.
  6. CONTRACTOR SHALL WATER-SETTLE PLANTING HOLES TO REMOVE AIR POCKETS.



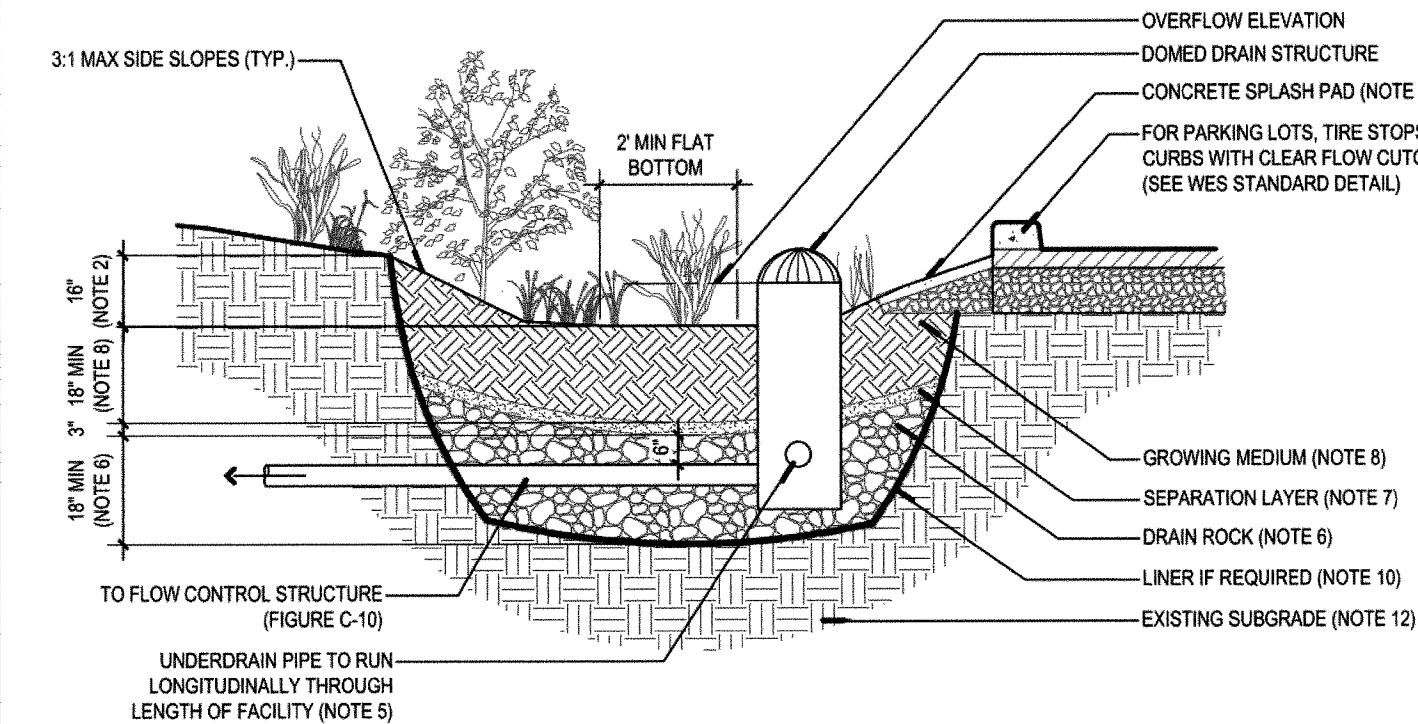
2 TYPICAL GROUNDCOVER PLANTING DETAIL

- NTS  
NOTES:
1. BACKFILL SOIL MIX IN PLANTING HOLES MAY BE RE-USED NATIVE TOPSOIL OR, IF SOIL CONDITIONS ARE POOR, A SOIL BLEND OF 1/3 ORGANIC MATERIALS, 1/3 TOPSOIL, AND 1/3 SANDY LOAM.
  2. REMOVE ALL CONTAINERS, METAL, TWINE, TAGS, AND OTHER NON-BIODEGRADABLE MATERIALS PRIOR TO PLANTING.
  3. ALL CONTAINERIZED PLANT STOCK SHALL BE VIGOROUS, FREE OF DISEASE AND PESTS, EVENLY FORMED, AND BE FULLY ROOTED IN THE CONTAINER IN WHICH THEY ARE DELIVERED. ALL PLANTS SHALL FOLLOW ANSI Z60.1 STANDARDS FOR NURSERY STOCK INCLUDING MINIMUM REQUIREMENTS FOR CONTAINER SIZE, HEIGHT, ETC.
  4. CONTRACTOR SHALL WATER-SETTLE PLANTING HOLES TO REMOVE AIR POCKETS.



3 TYPICAL SHRUB PLANTING DETAIL

- NTS  
NOTES:
1. BACKFILL SOIL MIX IN PLANTING HOLES MAY BE RE-USED NATIVE TOPSOIL OR, IF SOIL CONDITIONS ARE POOR, A SOIL BLEND OF 1/3 ORGANIC MATERIALS, 1/3 TOPSOIL, AND 1/3 SANDY LOAM.
  2. REMOVE ALL CONTAINERS, METAL, TWINE, TAGS, AND OTHER NON-BIODEGRADABLE MATERIALS PRIOR TO PLANTING.
  3. ALL CONTAINERIZED PLANT STOCK SHALL BE VIGOROUS, FREE OF DISEASE AND PESTS, EVENLY FORMED, AND BE FULLY ROOTED IN THE CONTAINER IN WHICH THEY ARE DELIVERED. ALL PLANTS SHALL FOLLOW ANSI Z60.1 STANDARDS FOR NURSERY STOCK INCLUDING MINIMUM REQUIREMENTS FOR CONTAINER SIZE, HEIGHT, ETC.
  4. CONTRACTOR SHALL WATER-SETTLE PLANTING HOLES TO REMOVE AIR POCKETS.



- GENERAL NOTES:
1. PROVIDE PROTECTION FROM ALL VEHICLE TRAFFIC, EQUIPMENT STAGING, AND FOOT TRAFFIC IN PROPOSED INFILTRATION AREAS PRIOR TO, DURING AND AFTER CONSTRUCTION. UNLESS REQUIRED BY SITE CONDITIONS, UNLINED RAIN GARDENS ARE PREFERRED TO MAXIMIZE ONSITE INFILTRATION.
  2. DIMENSIONS:
    - DEPTH OF BASIN (FROM TOP OF GROWING MEDIUM TO OVERFLOW ELEVATION): 12"
    - FLAT BOTTOM WIDTH: 2' MINIMUM
    - SIDE SLOPES OF BASIN: 3:1 MAXIMUM
    - SLOPE OF RAIN GARDEN: 0.5% OR LESS
  3. SETBACKS:
    - FILTRATION RAIN GARDEN MUST BE 10' FROM FOUNDATIONS AND 5' FROM PROPERTY LINES UNLESS APPROVED BY BUILDING OFFICIAL.
  4. OVERFLOW:
    - OVERFLOW REQUIRED. INLET ELEVATION MUST ALLOW FOR 4" OF FREEBOARD, MINIMUM.
    - PROTECT FROM DEBRIS AND SEDIMENT WITH STRAINER OR GRATE.
  5. PIPING:
    - PERFORATED UNDERDRAIN PIPING: SHALL BE ABS SCH. 40, DUCTILE IRON, OR PVC SCH. 40, MINIMUM DIAMETER IS 6". PIPING MUST HAVE 1% GRADE AND FOLLOW THE UNIFORM PLUMBING CODE. PVC NOT ALLOWED ABOVE GROUND.
    - OVERFLOW PIPING: SHALL BE ABS SCH. 40, DUCTILE IRON, OR PVC SCH. 40 AND SHALL NOT BE PERFORATED. MINIMUM DIAMETER IS 6". PIPING MUST HAVE 1% GRADE AND FOLLOW THE UNIFORM PLUMBING CODE. PVC NOT ALLOWED ABOVE GROUND.
  6. DRAIN ROCK:
    - SIZE: 1 1/2" to 3/4"-0 WASHED
    - DEPTH: 18" MINIMUM
  7. SEPARATION BETWEEN DRAIN ROCK AND GROWING MEDIUM: SHALL BE A 3" LAYER OF 3/4" - 1/4" OPEN GRADED AGGREGATE.
  8. GROWING MEDIUM:
    - DEPTH: 18" MINIMUM
    - FACILITY SURFACE AREA MAY BE REDUCED BY 20% WHEN GROWING MEDIA DEPTH IS INCREASED TO 30" OR MORE.
  9. VEGETATION: FOLLOW LANDSCAPE PLANS OR REFER TO PLANTING REQUIREMENTS IN APPENDIX A.
  10. WATERPROOF LINER (IF REQUIRED): SHALL BE 30 MIL PVC OR EQUIVALENT.
  11. SPLASH PAD TO TRANSITION FROM INLETS TO GROWING MEDIUM.
  12. SEASONAL HIGH GROUNDWATER SEPARATION:
    - SEPARATION DISTANCE AS REQUIRED BY WES.
  13. SEE WES STANDARD DRAWINGS FOR LOCATING PLANTERS IN THE PUBLIC RIGHT-OF-WAY.

Rain Garden - Filtration  
Figure D3



CLACKAMAS  
WATER  
ENVIRONMENT  
SERVICES

WES  
STORMWATER AND  
GRADING  
DESIGN STANDARDS

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AKS ENGINEERING & FORESTRY, LLC  
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14790 SE 172ND AVENUE  
(DR-28-20/ERP-04-20)

OREGON  
HAPPY VALLEY  
CLACKAMAS COUNTY TAX MAP 2 3 E 07A  
TAX LOT 500

LANDSCAPE DETAILS

DESIGNED BY: NKP  
DRAWN BY: NKP  
MANAGED BY: JMM  
CHECKED BY: TEB

DATE: 5/17/2021

REGISTERED  
1025  
ZIMOTHY E. BAUER  
OREGON  
11/01/19  
LANDSCAPE ARCHITECT

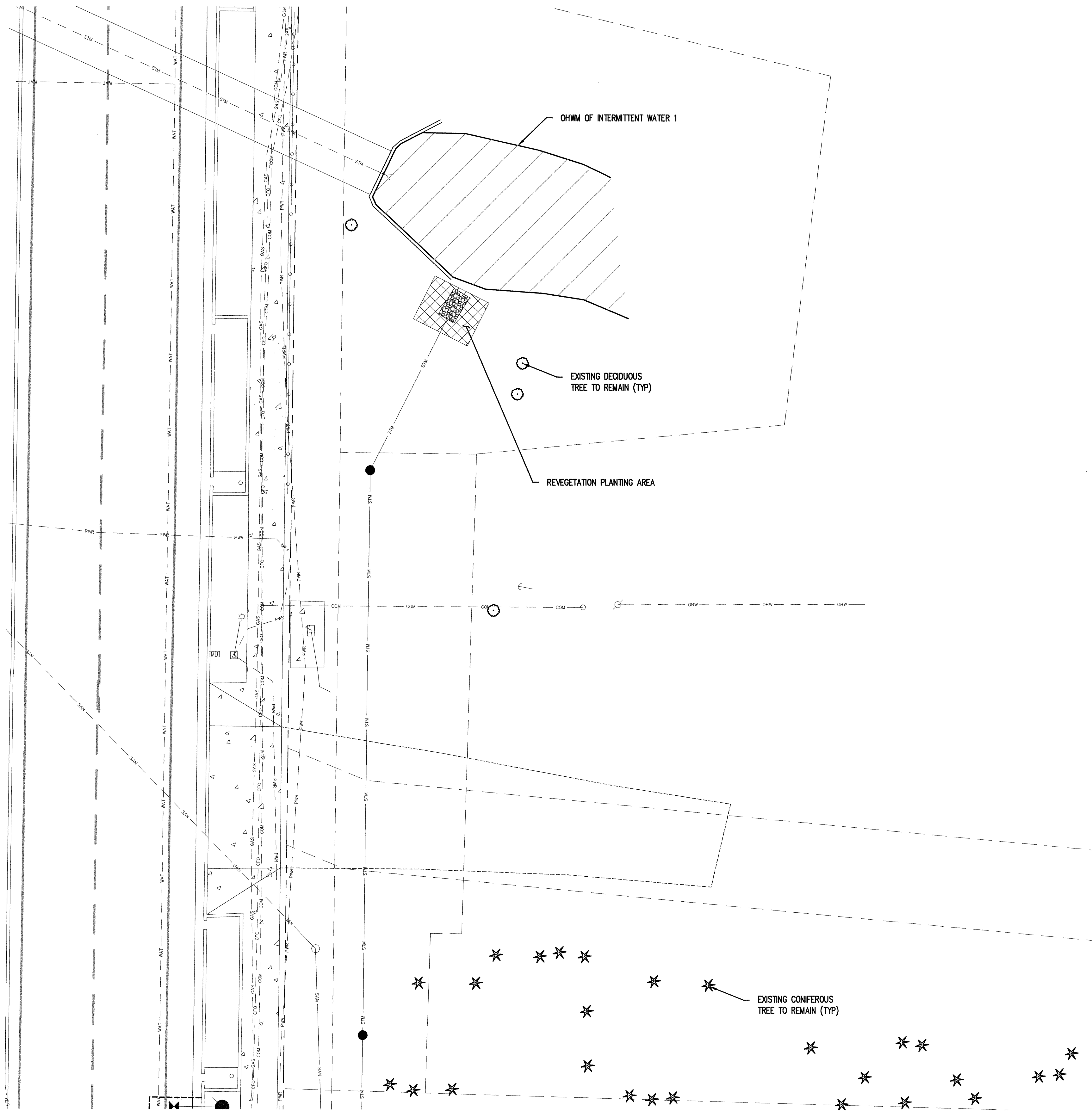
REVISIONS

JOB NUMBER  
7984

SHEET

L102





SE 172ND AVENUE VEGETATED CORRIDOR / HCA REVEGETATION PLANTING SPECIFICATIONS

PLANTING SPECIFICATIONS FOR THE ENHANCEMENT OF ±291 SQUARE FEET OF TEMPORARY VEGETATED CORRIDOR AND HCA ENCROACHMENTS:

SCIENTIFIC NAME	COMMON NAME	SIZE*	SPACING/SEEDING RATE	QUANTITY
<b>TREES (TOTAL 3)</b>				
ACER CIRCINATUM	VINE MAPLE	1/2" CAL. > 1 GALLON, 6" TALL	8-12 FEET ON CENTER	3
<b>SHRUBS (TOTAL 15)</b>				
LONICERA INVOLUCRATA	BLACK TWIMBERRY	1 GALLON	4-5 FEET ON CENTER	8
RUBUS SPECTABILIS	SALMONBERRY	1 GALLON	4-5 FEET ON CENTER	7

\*BALL AND BURLAP MAY BE SUBSTITUTED FOR CONTAINER PLANTS, IN EQUIVALENT SIZES, BASED ON AVAILABILITY.

PLANTING NOTES [PER HAPPY VALLEY MUNICIPAL CODE SECTION 16.34.070(D) & (C)(4)]

- AREA TO BE REPLANTED IMMEDIATELY AFTER BACKFILLING. BARE ROOT PLANTS ARE RECOMMENDED TO BE PLANTED BETWEEN DECEMBER 1 AND FEBRUARY 28, WHILE CONTAINER PLANTS ARE RECOMMENDED TO BE PLANTED BETWEEN OCTOBER 15 AND APRIL 30.
- INVASIVE, NON-NATIVE, AND NOXIOUS VEGETATION MUST BE REMOVED FROM WITHIN THE MITIGATION AREA PRIOR TO PLANTING.
- TREES, SHRUBS, AND GROUNDCOVERS PLANTED SHALL BE MULCHED AT A MINIMUM OF THREE INCHES IN DEPTH AND 18 INCHES IN DIAMETER TO RETAIN MOISTURE AND DISCOURAGE WEED GROWTH AROUND NEWLY INSTALLED PLANT MATERIAL. APPROPRIATE MULCHES ARE MADE FROM COMPOSTED BARK OR LEAVES THAT HAVE NOT BEEN CHEMICALLY TREATED.
- PLANT SLEEVES OR FENCING RECOMMENDED TO PROTECT TREES AND SHRUBS FROM WILDLIFE BROWSING.

FIVE-YEAR MAINTENANCE PLAN

- THE CITY OF HAPPY VALLEY REQUIRES A MINIMUM OF 80% TREE AND SHRUB SURVIVAL ON THE FIFTH ANNIVERSARY OF THE PLANTING DATE.
- IRRIGATION/WATERING REQUIRED. WATER NEW PLANTINGS ONE INCH PER WEEK BETWEEN JUNE 15 AND OCTOBER 15, FOR THE THREE YEARS FOLLOWING PLANTING.
- NON-NATIVE, INVASIVE VEGETATION CONTROL IS TO BE CONDUCTED AS NEEDED BASED ON THE SITE INSPECTIONS THROUGHOUT MAINTENANCE PERIOD.
- MONITORING OF THE PLANTINGS IS THE ONGOING RESPONSIBILITY OF THE PROPERTY OWNER. PLANTS THAT DIE MUST BE REPLACED IN KIND OR WITH SIMILAR NATIVE PLANTS PER THE HAPPY VALLEY PLANT LIST.

