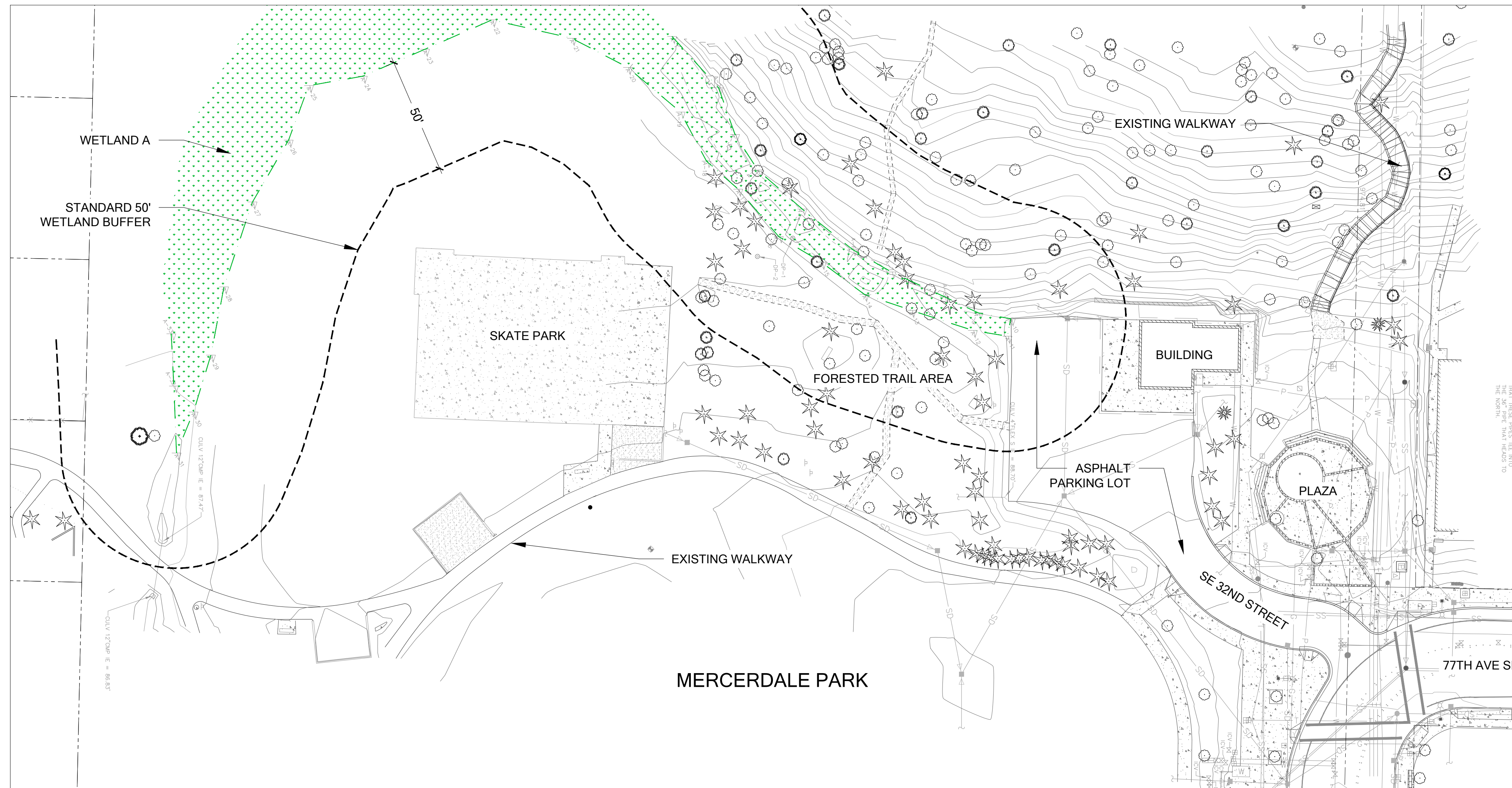


SEPA Environmental Checklist
Mercer Island Center for the Arts

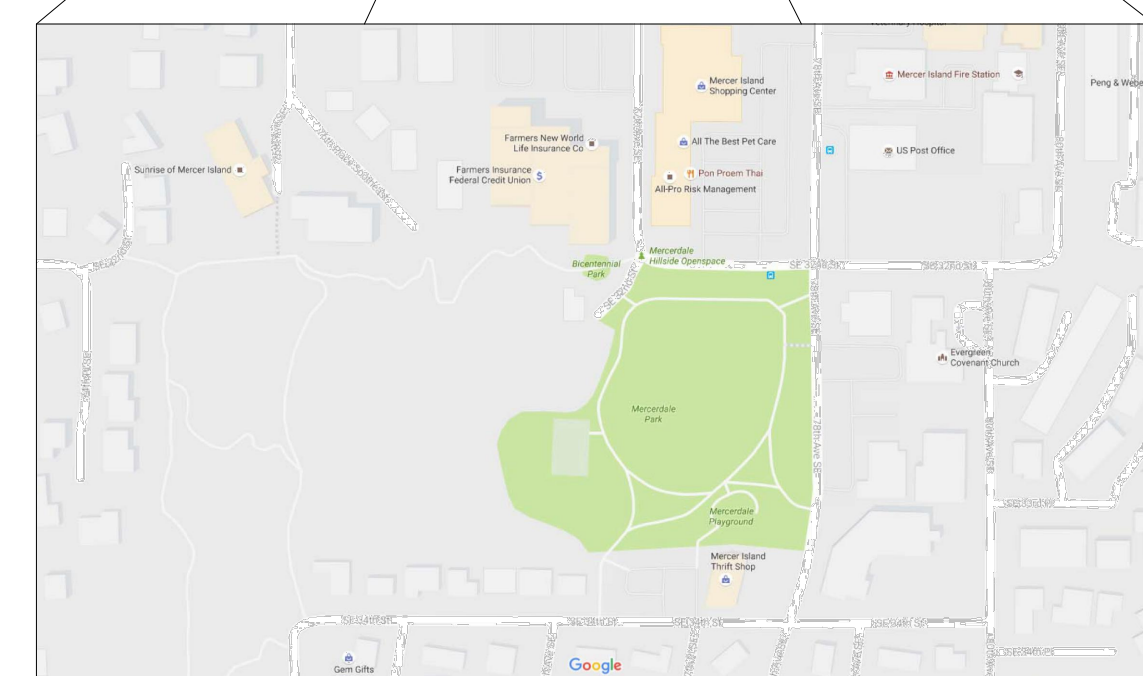
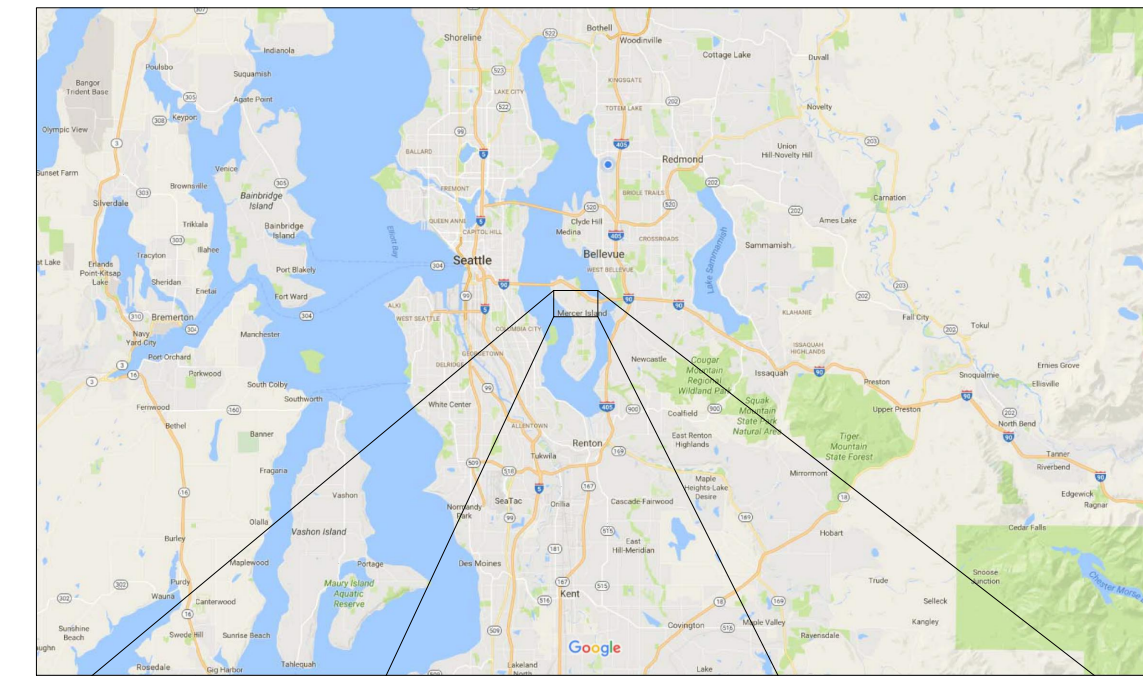
Attachment K
Wetland Mitigation Plan

January 2017

MERCER ISLAND CENTER FOR THE ARTS



- LEGEND**
- DELINEATED WETLAND
 - WETLAND BUFFER
 - EXISTING SURVEYED TREE
 - PARCEL BOUNDARIES



VICINITY MAPS

SHEET INDEX

- W1 EXISTING SITE CONDITIONS
- W2 IMPACTS ASSESSMENT AND MITIGATION PLAN
- W3 TREE DEMO AND PROTECTION PLAN
- W4 SITE PREPARATION PLAN
- W5 PLANTING PLAN
- W6 PLANT INSTALLATION SPECIFICATIONS AND MITIGATION DETAILS
- W7 MITIGATION PLAN DETAILS AND NOTES

NOTES

1. THIS PLAN IS TO BE REVIEWED BY MERCER ISLAND PARKS AND RECREATION PRIOR TO BUILDING PERMIT APPROVAL.
2. CRITICAL AREAS DELINEATED BY THE WATERSHED COMPANY APRIL 2ND, 2015
3. SURVEY RECEIVED FROM MAGNUSSON KLEMENCIC ASSOCIATES ON OCTOBER 14TH, 2016.

EXISTING SITE CONDITIONS



MERCER ISLAND CENTER FOR THE ARTS

MITIGATION PLAN

PREPARED FOR BRUCE LORIG
MERCERDALE PARK
77TH AVE SE & SE 32ND STREET (PARCEL # 1224049068)
MERCER ISLAND, WA 98040

SUBMITTALS & REVISIONS

NO.	DATE	DESCRIPTION	BY
1	08-21-15	REVIEW SET	MSF
1	10-20-2016	CONCEPT PLANS	KMB
3	11-16-2016	SEPA	KMB

SHEET SIZE:
ORIGINAL PLAN IS 22" x 34".
SCALE ACCORDINGLY.

PROJECT MANAGER: HM
DESIGNED: KMB
DRAFTED: KMB
CHECKED: KC/KB

JOB NUMBER:
150320

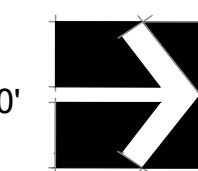
SHEET NUMBER:
W1 OF 7



- LEGEND**
- DELINEATED WETLAND
 - STANDARD WETLAND BUFFER
 - PROPOSED REDUCED BUFFER
 - PROPOSED BUFFER REDUCTION AREA (5,768 SQUARE FEET)
 - PROPOSED BUFFER RESTORATION PLANTING AREA (2,908 SQUARE FEET) - PLANTING OF NATIVE TREES, SHRUBS, AND GROUNDCOVER
 - PROPOSED BUFFER ENHANCEMENT PLANTING AREA (8,454 SQUARE FEET) - INFILL PLANTING OF NATIVE CONIFERS, SHRUBS, AND GROUNDCOVER
 - PROPOSED LARGE WOODY DEBRIS STRUCTURES (57)
(LARGE WOODY DEBRIS IS TO BE SOURCED FROM TREES TO BE REMOVED ON SITE. SEE SHEET W3)

1
W6

IMPACTS ASSESSMENT AND MITIGATION PLAN



MERCER ISLAND CENTER FOR THE ARTS

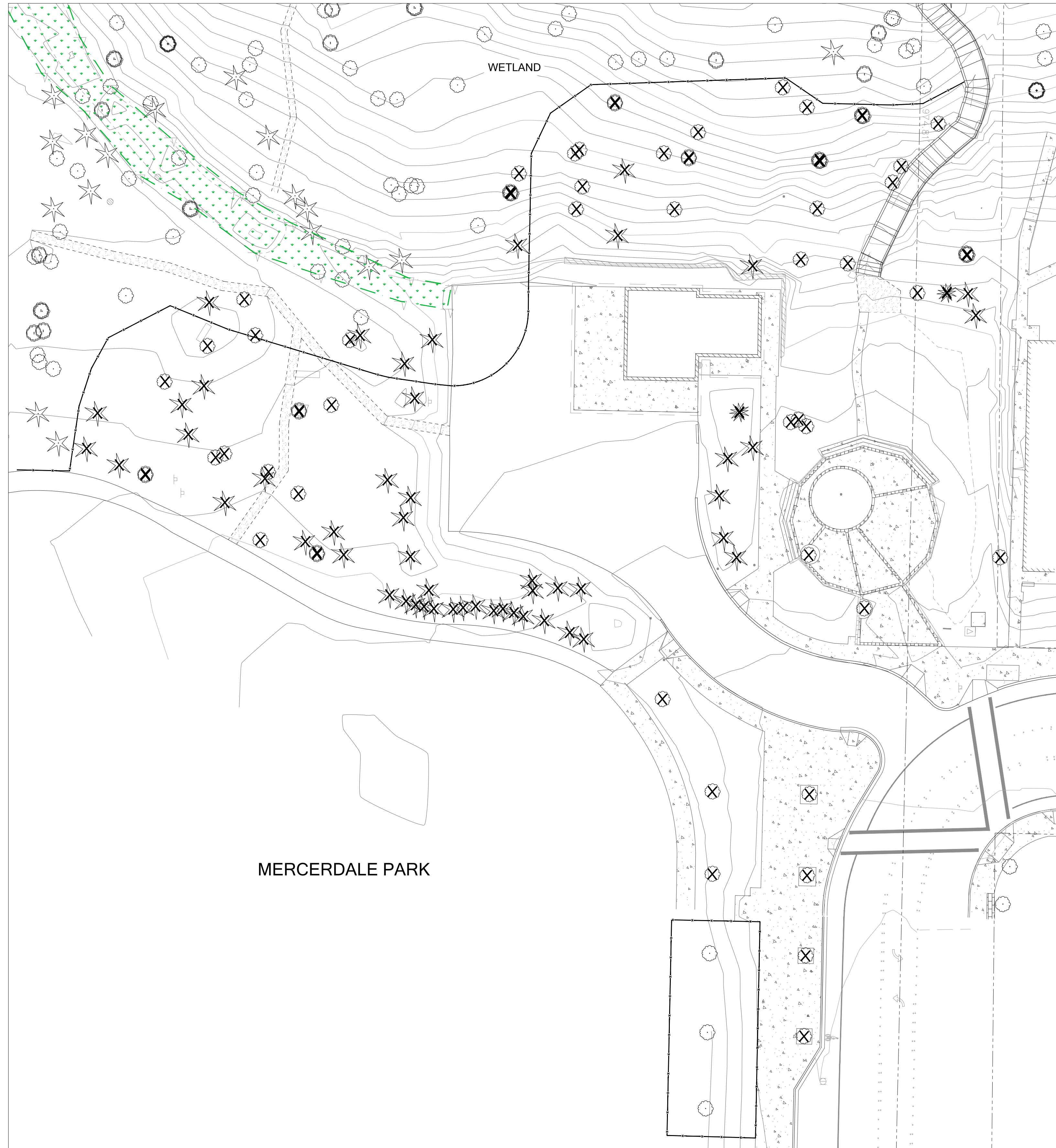
MITIGATION PLAN
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SUBMITTALS & REVISIONS

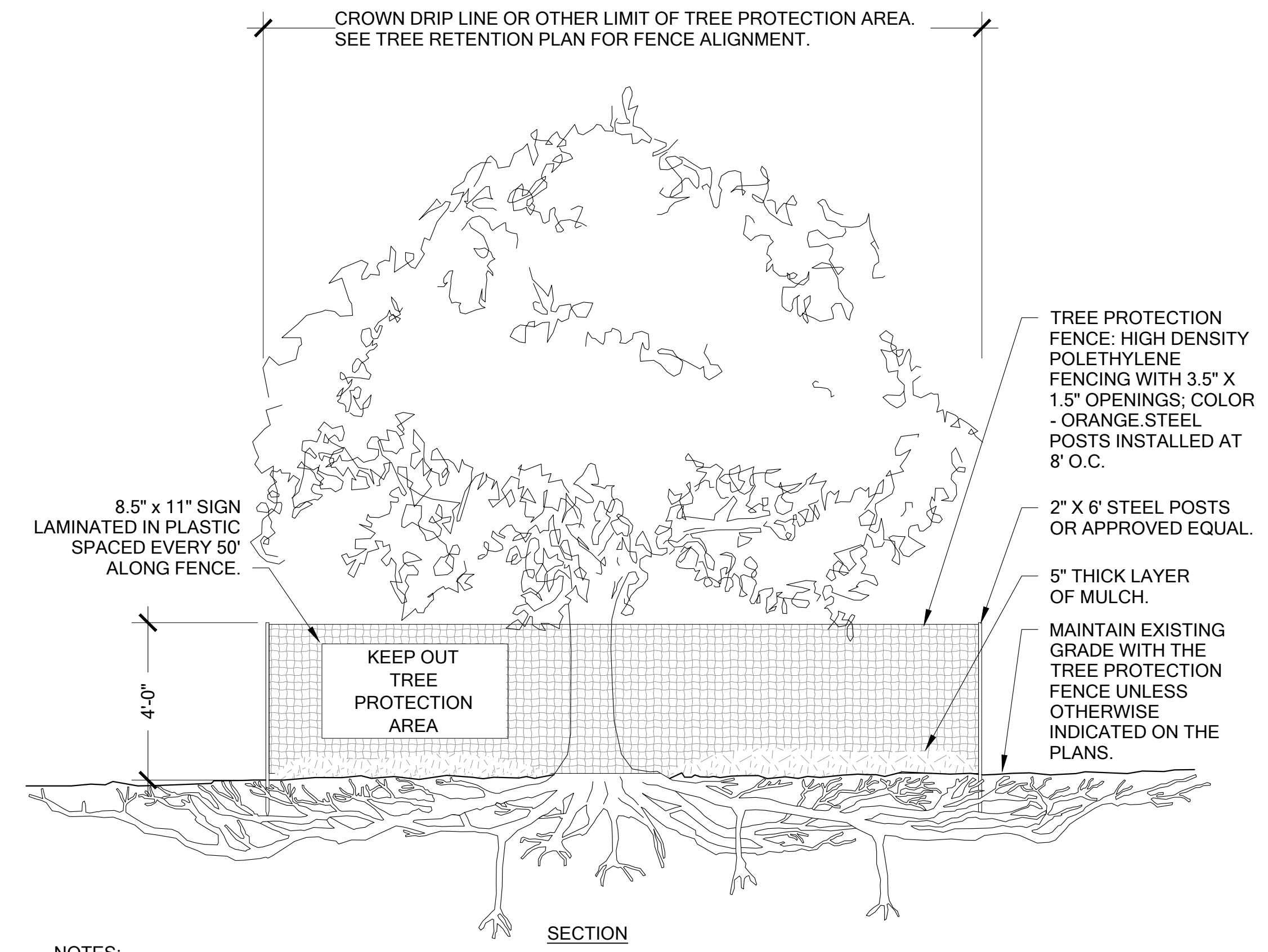
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DRAFTED: KMB
CHECKED: KC/KB
JOB NUMBER: 150320
SHEET NUMBER: W2 OF 7



TREE DEMO AND PROTECTION PLAN



- NOTES:**
1. NO PRUNING SHALL BE PERFORMED UNLESS UNDER THE DIRECTION OF AN ARBORIST.
 2. NO EQUIPMENT SHALL BE STORED OR OPERATED INSIDE THE PROTECTIVE FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL.
 3. NO STORAGE OF MATERIALS SHALL OCCUR INSIDE THE PROTECTIVE FENCING.
 4. UNAUTHORIZED ACTIVITIES IN TREE PROTECTION AREA MAY REQUIRE EVALUATION BY A CERTIFIED ARBORIST TO IDENTIFY IMPACTS AND MITIGATION REQUIRED.
 5. EXPOSED ROOTS: FOR ROOTS GREATER THAN 1" DAMAGED DURING CONSTRUCTION, MAKE A CLEAN, STRAIGHT CUT TO REMOVE DAMAGED PORTION AND INFORM PROJECT ARBORIST.

1 TREE PROTECTION FENCING

Scale: NTS

- NOTES**
1. TREE PROTECTION FENCING SHALL NOT BE MOVED WITHOUT PRIOR APPROVAL FROM PROJECT ARBORIST.
 2. TREE PROTECTION FENCING SHALL BE PLACED BEFORE THE START OF ANY CONSTRUCTION AND SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT.
 3. OF THE 112 TREES TO BE REMOVED THE LARGEST CONIFER TREES IN THE BEST OVERALL HEALTH SHALL BE USED FOR LARGE WOODY DEBRIS STRUCTURES AS SHOWN ON THE MITIGATION PLAN.
 4. TREES TO BE REMOVED INSIDE OF PROTECTION AREA OR LOCATED WITHIN THE PROPOSED MITIGATION AREA SHALL BE FALLEN IN PLACE AND LEFT AS IS.

LEGEND

- DELINEATED WETLAND
- TREE PROTECTION FENCING
- TREES TO BE REMOVED (54 CONIFERS, 58 DECIDUOUS)
- TREES TO REMAIN

MERCER ISLAND CENTER FOR THE ARTS

MITIGATION PLAN
PREPARED FOR BRUCE LORIG
MERCERDALE PARK
77TH AVE SE & SE 32ND STREET (PARCEL # 122409068)
MERCER ISLAND, WA 98040

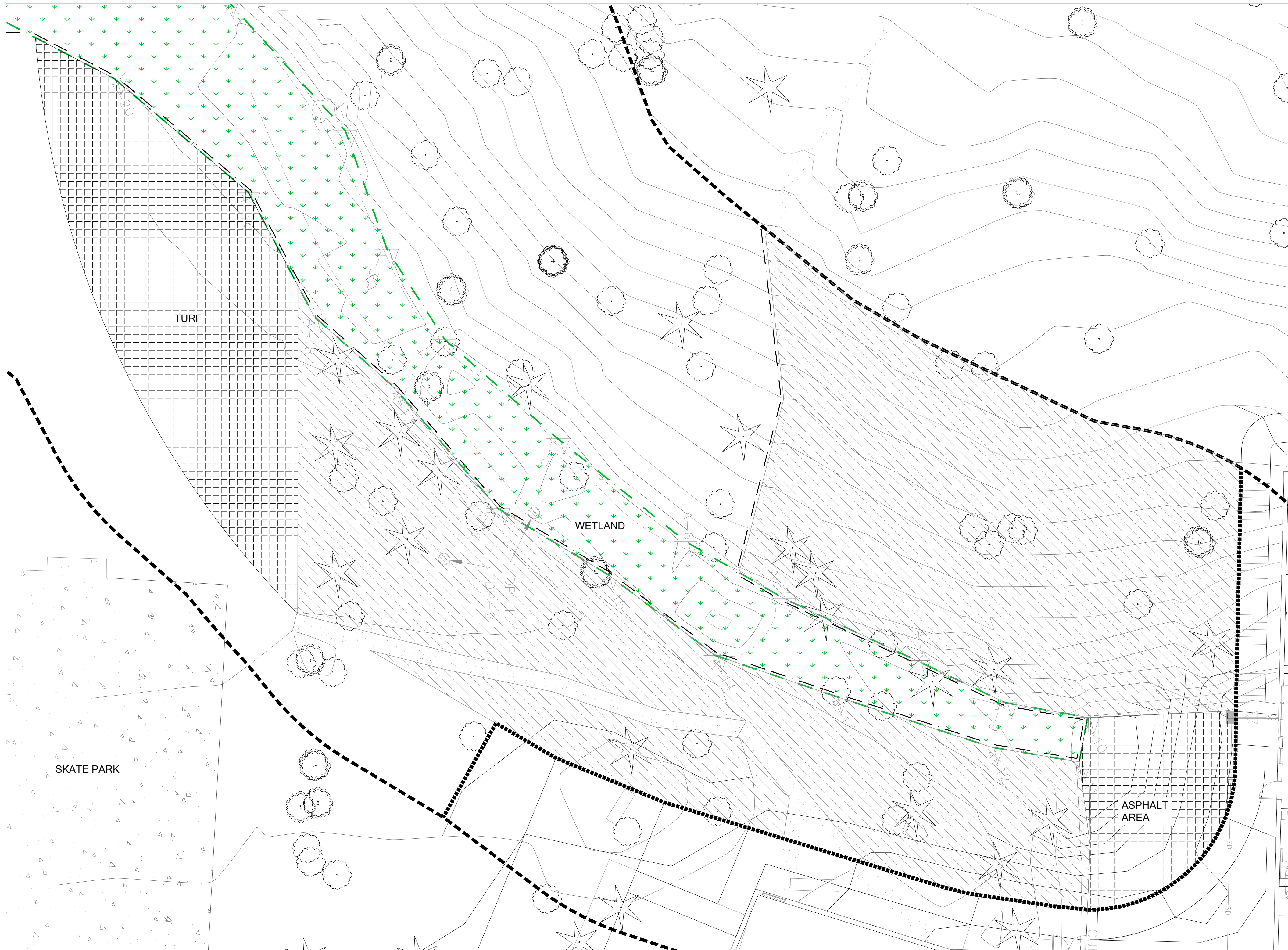
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1	1	MSF	08-21-15	REVIEW SET
3	1	KMB	10-20-2016	CONCEPT PLANS
	3	KMB	11-16-2016	SEPA

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SHEET NUMBER:
W3 OF 7

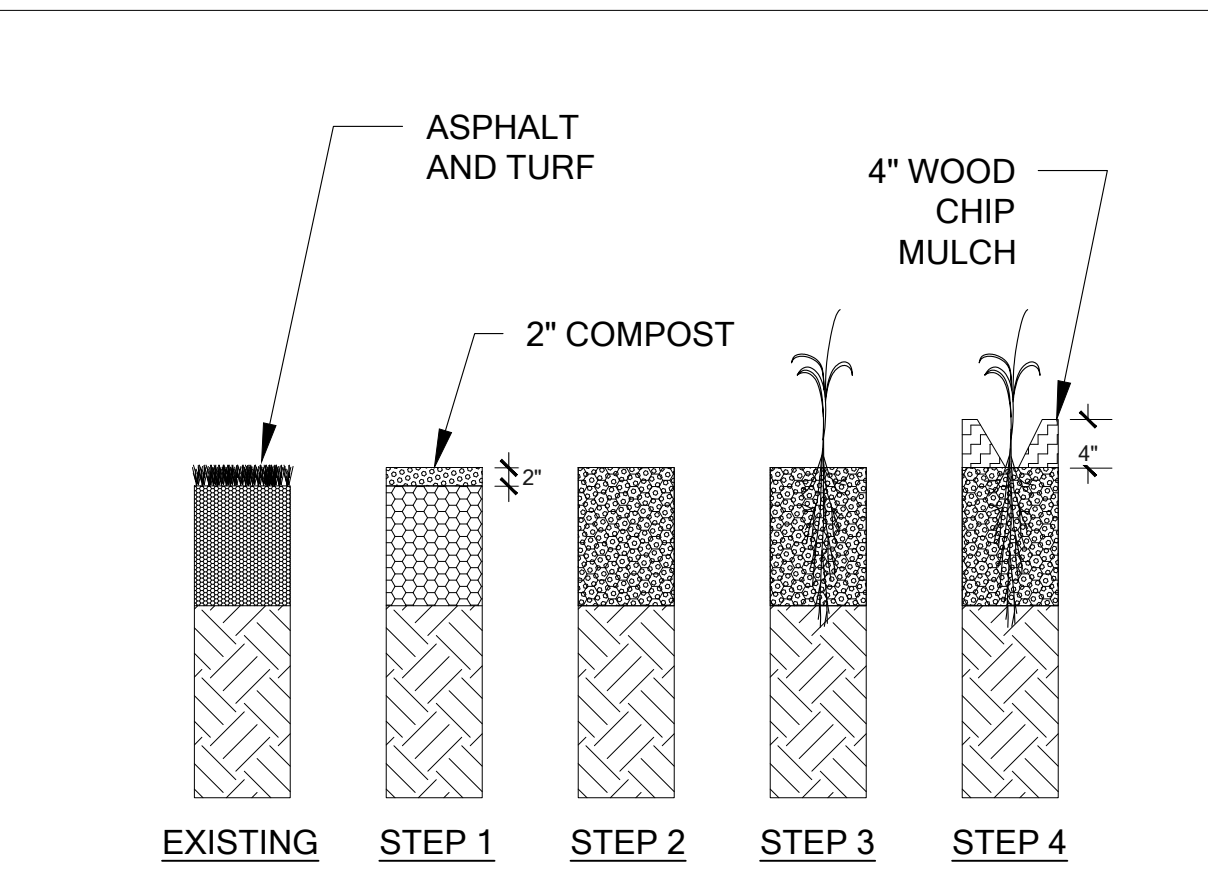
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- LEGEND**
- DELINEATED WETLAND
 - STANDARD WETLAND BUFFER
 - REDUCED BUFFER
 - SILT FENCE $\frac{2}{WE}$

- NOTES**
1. ASPHALT AREA IS TO BE USED FOR CONSTRUCTION STAGING. RESTORATION TO COMMENCE UPON SUBSTANTIAL DEMOBILIZATION FROM THE SITE.



PLANTING AREA PREPARATION

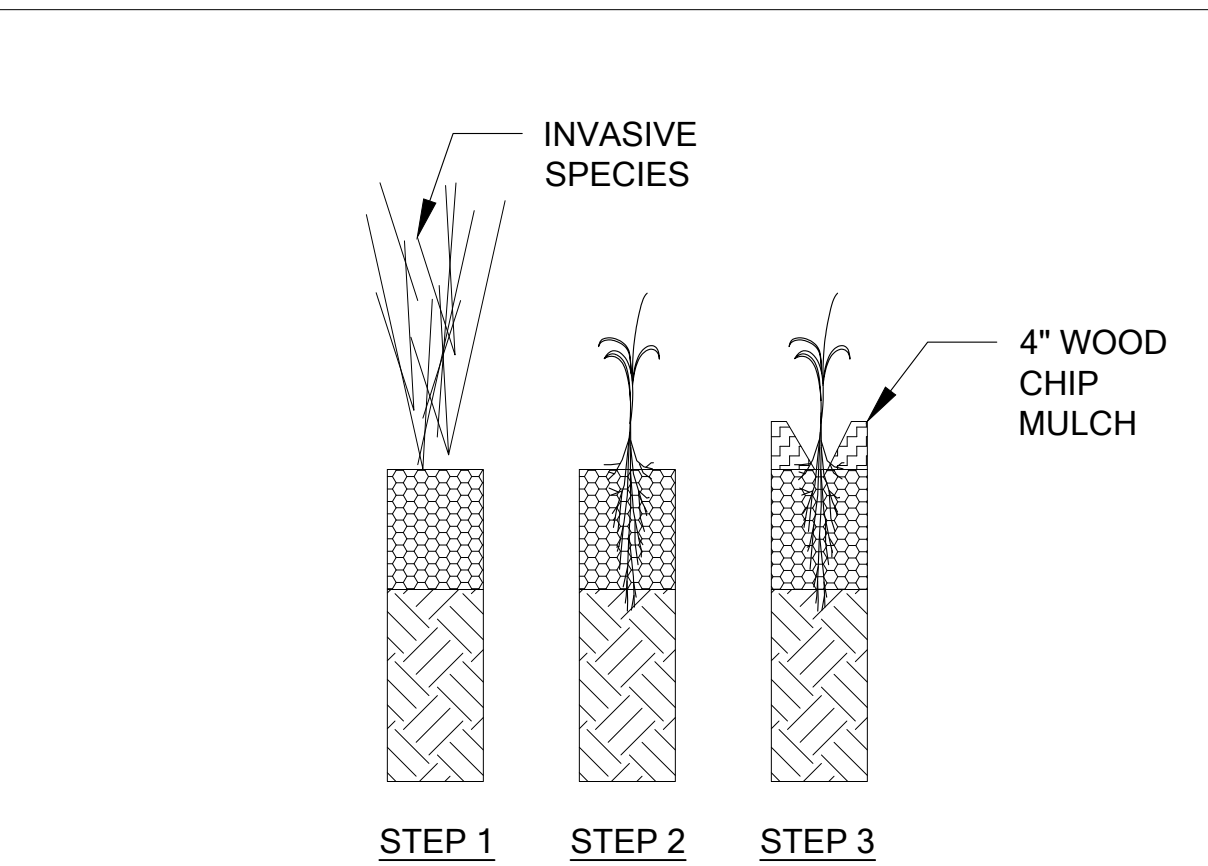
STEP 1
REMOVE ASPHALT, GRAVEL SUB-BASE AND TURF. ADDRESS COMPACTION TO A MINIMUM SIX (6) INCH DEPTH. DRAINAGE RATE SHALL BE BETWEEN 1 - 5 INCHES PER HOUR OR AS OTHERWISE APPROVED BY THE RESTORATION SPECIALIST. WORK WITHIN ROOT ZONES OF ANY TREES OR NATIVE PLANTS SHALL BE DONE BY HAND. THEN PLACE (2) INCHES OF COMPOST.

STEP 2
AMEND EXISTING SOIL AND COMPOST.

STEP 3
INSTALL PLANTS. (SEE CONTAINER PLANTING DETAIL)

STEP 4
PLACE 4" OF WOODCHIP MULCH. PULL MULCH BACK FROM STEMS AND TRUNK OF PLANTS AND TREES.

SOIL PREPARATION AREA 1
SEQUENCE OF WORK - NOT TO SCALE



PLANTING AREA PREPARATION

STEP 1
REMOVE INVASIVE SPECIES AND TURF. HAND GRUB IN AND AROUND EXISTING NATIVE VEGETATION.

STEP 2
PLANT INFILL PLANTINGS IN AND AROUND EXISTING NATIVE VEGETATION. (SEE CONTAINER PLANTING DETAIL.)

STEP 3
PLACE WOOD CHIP MULCH 4" DEEP. PULL BACK MULCH FROM STEMS OF PLANTS.

SOIL PREPARATION AREA 2
SEQUENCE OF WORK - NOT TO SCALE

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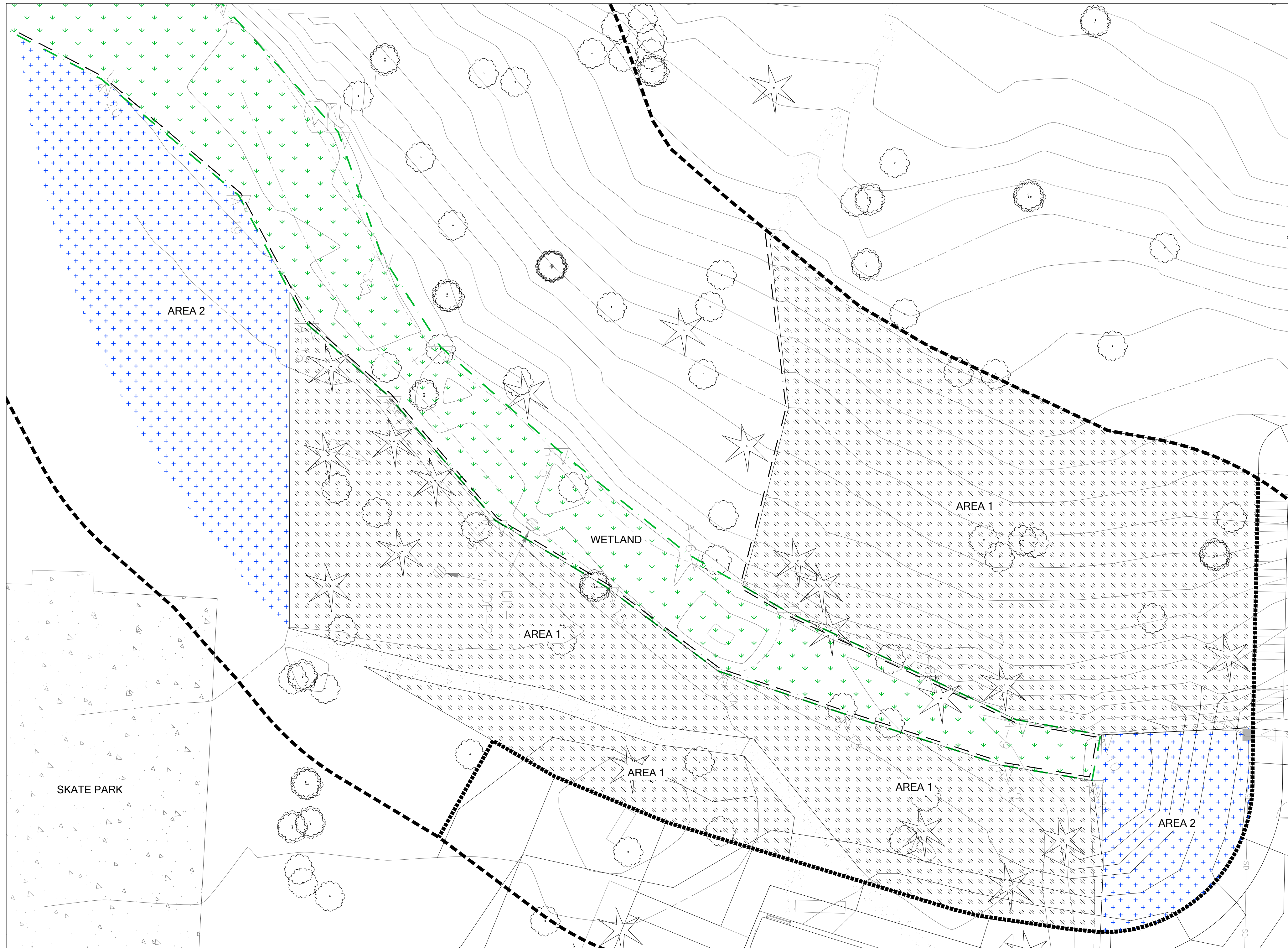
JOB NUMBER: 150320
SHEET NUMBER: W4 OF 7

SITE PREPARATION PLAN

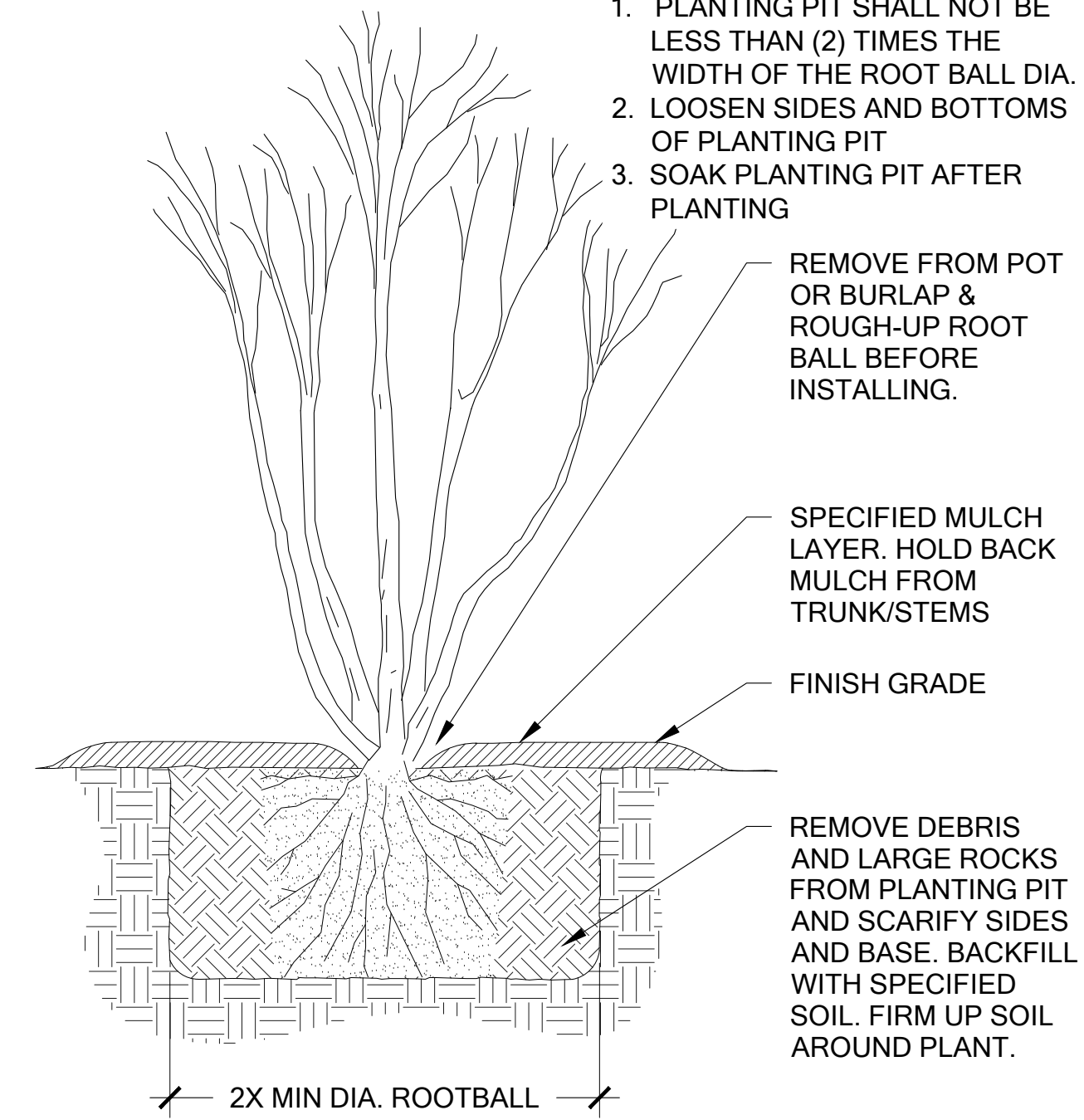


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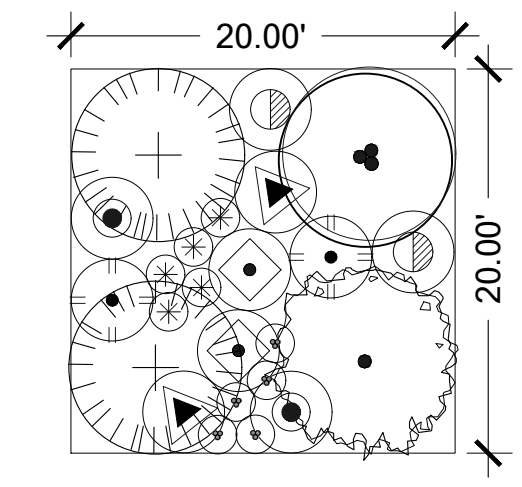


- NOTES:**
1. PLANTING PIT SHALL NOT BE LESS THAN (2) TIMES THE WIDTH OF THE ROOT BALL DIA.
 2. LOOSEN SIDES AND BOTTOMS OF PLANTING PIT
 3. SOAK PLANTING PIT AFTER PLANTING



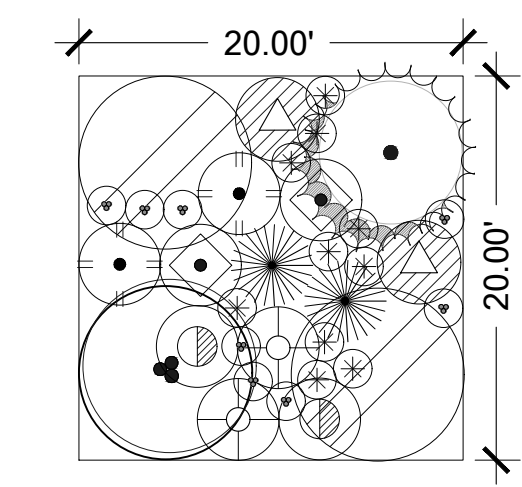
1 CONTAINER PLANTING

Scale: 1:1



- NOTES:**
1. PLANT IN AND AROUND EXISTING NATIVE TREES AND SHRUBS.
 2. SEE PLANTING DETAIL FOR CONTAINER PLANTING.
 3. REFER TO SHEET W3 FOR SOIL PREPARATION.
 4. OMIT TREE PLANTING WITHIN 25' OF PROPOSED BUILDINGS.

PLANTING AREA 1 (INFILL PLANTING)
8,454 SQUARE FEET

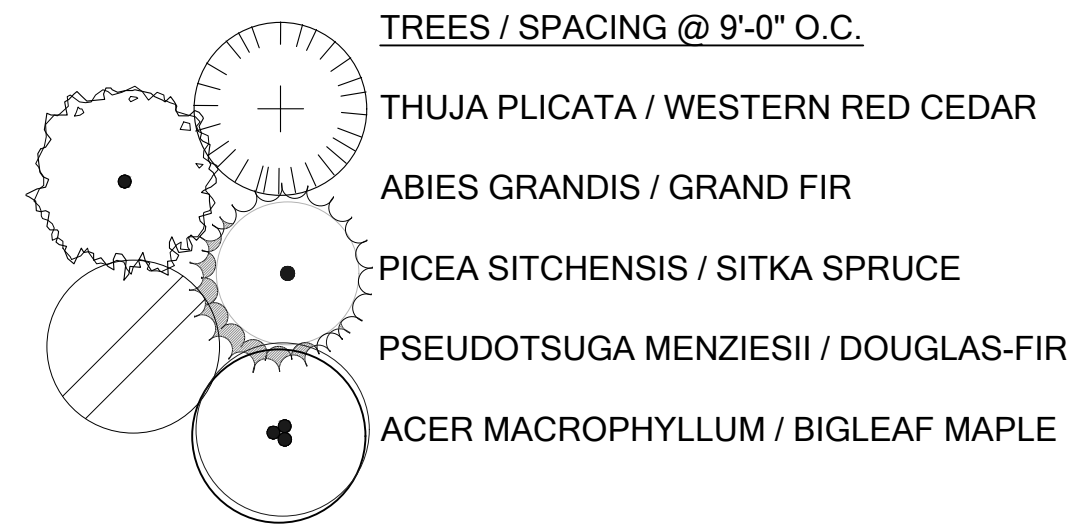


- NOTES:**
1. SEE PLANTING DETAIL FOR CONTAINER PLANTING. REFER TO SHEET W3 FOR SOIL PREPARATION.
 2. OMIT TREE PLANTING WITHIN 25' OF PROPOSED BUILDINGS.

PLANTING AREA 2 (BUFFER RESTORATION)
2,908 SQUARE FEET

- LEGEND**
- DELINEATED WETLAND
 - STANDARD WETLAND BUFFER
 - REDUCED BUFFER
 - SILT FENCE (2 W/6)

PLANTING SCHEDULE



TREES / SPACING @ 9'-0" O.C.			SHRUBS / SPACING @ 42" O.C.			SHRUBS / SPACING @ 42" O.C.			GROUNDCOVERS / SPACING @ 24" O.C.		
AREA 1 QTY	AREA 2 QTY	SIZE	AREA 1 QTY	AREA 2 QTY	SIZE	AREA 1 QTY	AREA 2 QTY	SIZE	AREA 1 QTY	AREA 2 QTY	SIZE
42	0	2 GAL.	42	0	1 GAL.	0	16	1 GAL.	110	80	4" POT
22	8	2 GAL.	42	16	1 GAL.	0	16	1 GAL.	110	80	4" POT
0	8	2 GAL.	42	16	1 GAL.	0	16	1 GAL.			
0	8	2 GAL.	42	16	1 GAL.						
22	8	2 GAL.	42	0	1 GAL.						

PLANTING PLAN



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150320
SHEET NUMBER:
W5 OF 7

PLANT INSTALLATION SPECIFICATIONS

GENERAL NOTES

QUALITY ASSURANCE

- PLANTS SHALL MEET OR EXCEED THE SPECIFICATIONS OF FEDERAL, STATE, AND LOCAL LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL.
- PLANTS SHALL BE HEALTHY, VIGOROUS, AND WELL-FORMED, WITH WELL DEVELOPED, FIBROUS ROOT SYSTEMS, FREE FROM DEAD BRANCHES OR ROOTS. PLANTS SHALL BE FREE FROM DAMAGE CAUSED BY TEMPERATURE EXTREMES, LACK OR EXCESS OF MOISTURE, INSECTS, DISEASE, AND MECHANICAL INJURY. PLANTS IN LEAF SHALL BE WELL FOLIATED AND OF GOOD COLOR. PLANTS SHALL BE HABITUATED TO THE OUTDOOR ENVIRONMENTAL CONDITIONS INTO WHICH THEY WILL BE PLANTED (HARDENED-OFF).
- TREES WITH DAMAGED, CROOKED, MULTIPLE OR BROKEN LEADERS WILL BE REJECTED. WOODY PLANTS WITH ABRASIONS OF THE BARK OR SUN SCALD WILL BE REJECTED.
- NOMENCLATURE: PLANT NAMES SHALL CONFORM TO FLORA OF THE PACIFIC NORTHWEST BY HITCHCOCK AND CRONQUIST, UNIVERSITY OF WASHINGTON PRESS, 1973 AND/OR TO A FIELD GUIDE TO THE COMMON WETLAND PLANTS OF WESTERN WASHINGTON & NORTHWESTERN OREGON, ED. SARAH SPEAR COOKE, SEATTLE AUDUBON SOCIETY, 1997.

DEFINITIONS

- PLANTS/PLANT MATERIALS. PLANTS AND PLANT MATERIALS SHALL INCLUDE ANY LIVE PLANT MATERIAL USED ON THE PROJECT. THIS INCLUDES BUT IS NOT LIMITED TO CONTAINER GROWN, B&B OR BAREROOT PLANTS; LIVE STAKES AND FASCINES (WATTLES); TUBERS, CORMS, BULBS, ETC.; SPRIGS, PLUGS, AND LINERS.
- CONTAINER GROWN. CONTAINER GROWN PLANTS ARE THOSE WHOSE ROOTBALLS ARE ENCLOSED IN A POT OR BAG IN WHICH THAT PLANT GREW.

SUBSTITUTIONS

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN SPECIFIED MATERIALS IN ADVANCE IF SPECIAL GROWING, MARKETING OR OTHER ARRANGEMENTS MUST BE MADE IN ORDER TO SUPPLY SPECIFIED MATERIALS.
- SUBSTITUTION OF PLANT MATERIALS NOT ON THE PROJECT LIST WILL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE RESTORATION CONSULTANT.
- IF PROOF IS SUBMITTED THAT ANY PLANT MATERIAL SPECIFIED IS NOT OBTAINABLE, A PROPOSAL WILL BE CONSIDERED FOR USE OF THE NEAREST EQUIVALENT SIZE OR ALTERNATIVE SPECIES, WITH CORRESPONDING ADJUSTMENT OF CONTRACT PRICE.
- SUCH PROOF WILL BE SUBSTANTIATED AND SUBMITTED IN WRITING TO THE CONSULTANT AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION.

INSPECTION

- PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE RESTORATION CONSULTANT FOR CONFORMANCE TO SPECIFICATIONS, EITHER AT TIME OF DELIVERY ON-SITE OR AT THE GROWER'S NURSERY. APPROVAL OF PLANT MATERIALS AT ANY TIME SHALL NOT IMPAIR THE SUBSEQUENT RIGHT OF INSPECTION AND REJECTION DURING PROGRESS OF THE WORK.
- PLANTS INSPECTED ON SITE AND REJECTED FOR NOT MEETING SPECIFICATIONS MUST BE REMOVED IMMEDIATELY FROM SITE OR RED-TAGGED AND REMOVED AS SOON AS POSSIBLE.
- THE RESTORATION CONSULTANT MAY ELECT TO INSPECT PLANT MATERIALS AT THE PLACE OF GROWTH. AFTER INSPECTION AND ACCEPTANCE, THE RESTORATION CONSULTANT MAY REQUIRE THE INSPECTED PLANTS BE LABELED AND RESERVED FOR PROJECT. SUBSTITUTION OF THESE PLANTS WITH OTHER INDIVIDUALS, EVEN OF THE SAME SPECIES AND SIZE, IS UNACCEPTABLE.

MEASUREMENT OF PLANTS

- PLANTS SHALL CONFORM TO SIZES SPECIFIED UNLESS SUBSTITUTIONS ARE MADE AS OUTLINED IN THIS CONTRACT.
- HEIGHT AND SPREAD DIMENSIONS SPECIFIED REFER TO MAIN BODY OF PLANT AND NOT BRANCH OR ROOT TIP TO TIP. PLANT DIMENSIONS SHALL BE MEASURED WHEN THEIR BRANCHES OR ROOTS ARE IN THEIR NORMAL POSITION.
- WHERE A RANGE OF SIZE IS GIVEN, NO PLANT SHALL BE LESS THAN THE MINIMUM SIZE AND AT LEAST 50% OF THE PLANTS SHALL BE AS LARGE AS THE MEDIAN OF THE SIZE RANGE. (EXAMPLE: IF THE SIZE RANGE IS 12" TO 18", AT LEAST 50% OF PLANTS MUST BE 15" TALL.)

SUBMITTALS

PROPOSED PLANT SOURCES

- WITHIN 45 DAYS AFTER AWARD OF THE CONTRACT, SUBMIT A COMPLETE LIST OF PLANT MATERIALS PROPOSED TO BE PROVIDED DEMONSTRATING CONFORMANCE WITH THE REQUIREMENTS SPECIFIED. INCLUDE THE NAMES AND ADDRESSES OF ALL GROWERS AND NURSERIES.

PRODUCT CERTIFICATES

- PLANT MATERIALS LIST - SUBMIT DOCUMENTATION TO CONSULTANT AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION THAT PLANT MATERIALS HAVE BEEN ORDERED. ARRANGE PROCEDURE FOR INSPECTION OF PLANT MATERIAL WITH CONSULTANT AT TIME OF SUBMISSION.
- HAVE COPIES OF VENDOR'S OR GROWERS' INVOICES OR PACKING SLIPS FOR ALL PLANTS ON SITE DURING INSTALLATION. INVOICE OR PACKING SLIP SHOULD LIST SPECIES BY SCIENTIFIC NAME, QUANTITY, AND DATE DELIVERED (AND GENETIC ORIGIN IF THAT INFORMATION WAS PREVIOUSLY REQUESTED).

DELIVERY, HANDLING, & STORAGE

NOTIFICATION

CONTRACTOR MUST NOTIFY CONSULTANT 48 HOURS OR MORE IN ADVANCE OF DELIVERIES SO THAT CONSULTANT MAY ARRANGE FOR INSPECTION.

PLANT MATERIALS

- TRANSPORTATION - DURING SHIPPING, PLANTS SHALL BE PACKED TO PROVIDE PROTECTION AGAINST CLIMATE EXTREMES, BREAKAGE AND DRYING. PROPER VENTILATION AND PREVENTION OF DAMAGE TO BARK, BRANCHES, AND ROOT SYSTEMS MUST BE ENSURED.
- SCHEDULING AND STORAGE - PLANTS SHALL BE DELIVERED AS CLOSE TO PLANTING AS POSSIBLE. PLANTS IN STORAGE MUST BE PROTECTED AGAINST ANY CONDITION THAT IS DETRIMENTAL TO THEIR CONTINUED HEALTH AND VIGOR.
- HANDLING - PLANT MATERIALS SHALL NOT BE HANDLED BY THE TRUNK, LIMBS, OR FOLIAGE BUT ONLY BY THE CONTAINER, BALL, BOX, OR OTHER PROTECTIVE STRUCTURE, EXCEPT BAREROOT PLANTS SHALL BE KEPT IN BUNDLES UNTIL PLANTING AND THEN HANDLED CAREFULLY BY THE TRUNK OR STEM.
- LABELS - PLANTS SHALL HAVE DURABLE, LEGIBLE LABELS STATING CORRECT SCIENTIFIC NAME AND SIZE. TEN PERCENT OF CONTAINER GROWN PLANTS IN INDIVIDUAL POTS SHALL BE LABELED. PLANTS SUPPLIED IN FLATS, RACKS, BOXES, BAGS, OR BUNDLES SHALL HAVE ONE LABEL PER GROUP.

WARRANTY

PLANT WARRANTY

PLANTS MUST BE GUARANTEED TO BE TRUE TO SCIENTIFIC NAME AND SPECIFIED SIZE, AND TO BE HEALTHY AND CAPABLE OF VIGOROUS GROWTH.

REPLACEMENT

- PLANTS NOT FOUND MEETING ALL OF THE REQUIRED CONDITIONS AT THE CONSULTANT'S DISCRETION MUST BE REMOVED FROM SITE AND REPLACED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- PLANTS NOT SURVIVING AFTER ONE YEAR TO BE REPLACED AT THE CONTRACTOR'S EXPENSE.

PLANT MATERIAL

GENERAL

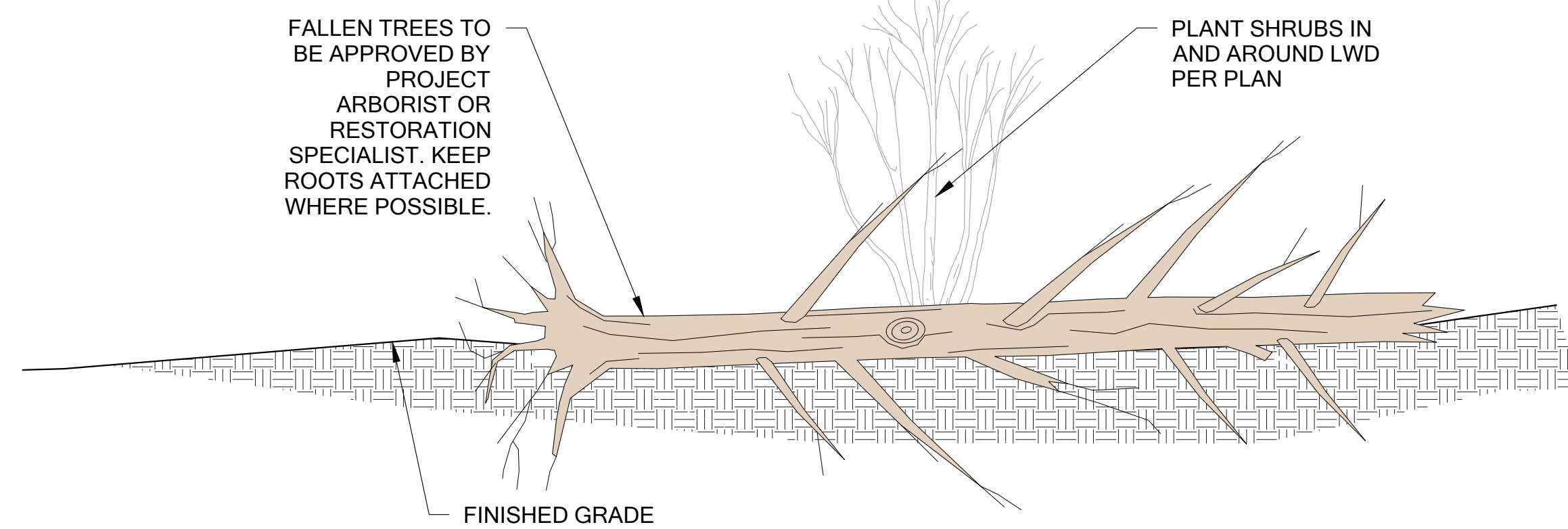
- PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES UNDER CLIMATIC CONDITIONS SIMILAR TO OR MORE SEVERE THAN THOSE OF THE PROJECT SITE.
- PLANTS SHALL BE TRUE TO SPECIES AND VARIETY OR SUBSPECIES. NO CULTIVARS OR NAMED VARIETIES SHALL BE USED UNLESS SPECIFIED AS SUCH.

QUANTITIES

SEE PLANT LIST ON ACCOMPANYING PLANS AND PLANT SCHEDULES.

ROOT TREATMENT

- CONTAINER GROWN PLANTS (INCLUDES PLUGS): PLANT ROOT BALLS MUST HOLD TOGETHER WHEN THE PLANT IS REMOVED FROM THE POT, EXCEPT THAT A SMALL AMOUNT OF LOOSE SOIL MAY BE ON THE TOP OF THE ROOTBALL.
- PLANTS MUST NOT BE ROOT-BOUND; THERE MUST BE NO CIRCLING ROOTS PRESENT IN ANY PLANT INSPECTED.
- ROOTBALLS THAT HAVE CRACKED OR BROKEN WHEN REMOVED FROM THE CONTAINER SHALL BE REJECTED.

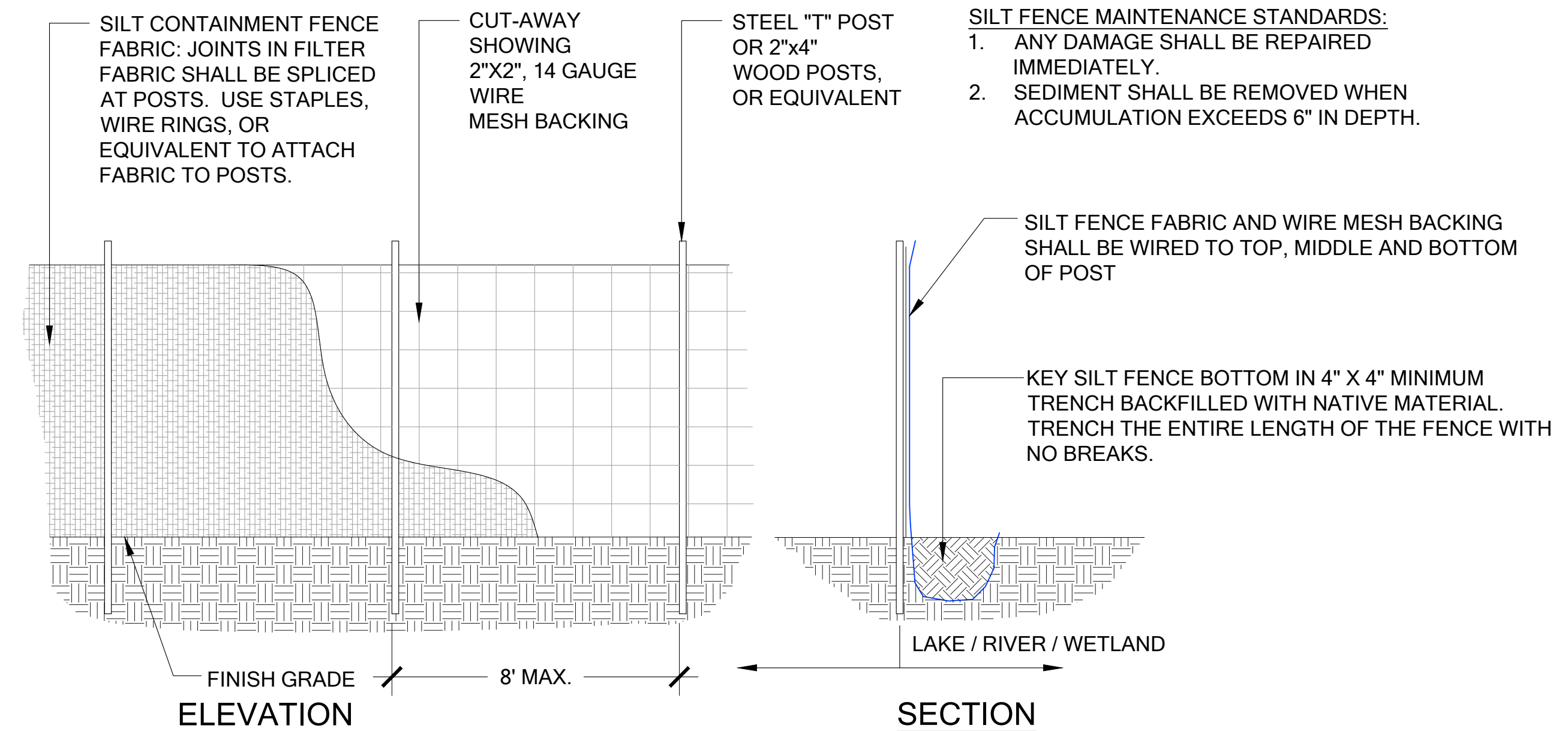


NOTES:

- LAYOUT OF DETAIL IS CONCEPTUAL. SEE PLAN FOR LOCATION. LAYOUT IN FIELD WITH ASSISTANCE FROM THE PROJECT ARBORIST OR RESTORATION SPECIALIST.
- ENSURE SOIL CONTACT OVER MINIMUM TWO THIRDS LOG LENGTH.
- DO NOT DISTURB EXISTING NATIVE VEGETATION.
- TREES TO BE REMOVED WITHIN MITIGATION AREA ARE TO BE FALLEN IN PLACE AND LEFT AS IS.

1 LARGE WOODY DEBRIS STRUCTURE

Scale: NTS



2 SILT FENCE

Scale: NTS

PLANT INSTALLATION SPECIFICATIONS AND MITIGATION DETAILS

MERCER ISLAND CENTER FOR THE ARTS

MITIGATION PLAN
PREPARED FOR BRUCE LORIG
MERCERDALE PARK
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W6 OF 7

MITIGATION PLAN NOTES

OVERVIEW

A COMPREHENSIVE FIVE-YEAR MAINTENANCE AND MONITORING PLAN IS INCLUDED AS PART OF THE BUFFER MITIGATION. THE PLAN SPECIFIES APPROPRIATE SPECIES FOR PLANTING AND PLANTING TECHNIQUES, DESCRIBES PROPER MAINTENANCE ACTIVITIES, AND SETS FORTH PERFORMANCE STANDARDS TO BE MET YEARLY DURING MONITORING. THIS WILL ENSURE THAT MITIGATION PLANTINGS WILL BE MAINTAINED, MONITORED, AND SUCCESSFULLY ESTABLISHED WITHIN THE FIRST FIVE YEARS FOLLOWING IMPLEMENTATION.

PROPOSED RESTORATION BEGINS WITH REMOVAL OF INVASIVE WEEDS SUCH AS HIMALAYAN BLACKBERRY, ENGLISH IVY, AND ENGLISH LAUREL AND PLACEMENT OF WOODY DEBRIS IN THE BUFFER. SOIL AMENDMENTS, INCLUDING REMOVAL OF ASPHALT PAVING IN THE PARKING AREA AND INCORPORATION OF COMPOST IN ALL PLANTING AREAS, WOULD FOLLOW WEED REMOVAL. WOODY DEBRIS GENERATED FROM REMOVAL OF STANDING DEAD TREES ON THE SITE WOULD BE PLACED THROUGHOUT THE BUFFER. FINALLY, INSTALLATION OF NATIVE TREE, SHRUB, AND GROUND COVER SPECIES SUITABLE TO THE SITE (APPENDIX A) WOULD BE INITIATED. THE SITE WOULD THEN BE STABILIZED WITH A THICK APPLICATION OF WOODCHIP MULCH. FOUR NATIVE TREE SPECIES, EIGHT NATIVE SHRUB SPECIES, AND TWO NATIVE GROUND COVER SPECIES ARE PROPOSED IN THE MITIGATION AREA. THE PLAN CALLS FOR NEW PLANTINGS WITHIN THE REDUCED WETLAND BUFFER. NATIVE PLANTINGS AND WOODY MATERIAL ARE INTENDED TO INCREASE NATIVE PLANT COVER, IMPROVE NATIVE SPECIES DIVERSITY, INCREASE VEGETATIVE STRUCTURE, AND PROVIDE FOOD AND OTHER HABITAT RESOURCES FOR WILDLIFE.

GOALS

1. ENHANCE THE WETLAND BUFFER.

- REMOVE AND CONTROL ALL INVASIVE WOODY SPECIES IN THE MITIGATION AREA INCLUDING BUT NOT LIMITED TO HIMALAYAN BLACKBERRY, ENGLISH IVY, AND ENGLISH LAUREL.
- ESTABLISH DENSE AND DIVERSE NATIVE TREE, SHRUB AND GROUND COVER VEGETATION THROUGHOUT THE MITIGATION AREA.

PERFORMANCE STANDARDS

INFILL PLANTING AREAS

1. SURVIVAL:

- 100% SURVIVAL OF ALL TREES AND SHRUBS AT THE END OF YEAR ONE. THIS STANDARD MAY BE MET THROUGH ESTABLISHMENT OF INSTALLED PLANTS OR BY REPLANTING AS NECESSARY TO ACHIEVE THE REQUIRED NUMBERS.
- 80% SURVIVAL OF ALL TREES AND SHRUBS AT THE END OF YEAR TWO. THIS STANDARD MAY BE MET THROUGH ESTABLISHMENT OF INSTALLED PLANTS OR BY REPLANTING AS NECESSARY TO ACHIEVE THE REQUIRED NUMBERS.
- SURVIVAL BEYOND YEAR TWO IS DIFFICULT TO TRACK. THEREFORE, A DIVERSITY STANDARD IS PROPOSED IN PLACE OF SURVIVAL (SEE #3, BELOW).

2. NATIVE VEGETATION COVER IN PLANTED AREAS:

- ACHIEVE AT LEAST 30% COVER OF NATIVE PLANTS BY THE END OF YEAR 3, EXCLUDING THE EXISTING CANOPY. VOLUNTEER SPECIES MAY COUNT TOWARDS THIS STANDARD.
- ACHIEVE AT LEAST 80% COVER OF NATIVE PLANTS BY THE END OF YEAR 5, EXCLUDING THE EXISTING CANOPY. VOLUNTEER SPECIES MAY COUNT TOWARDS THIS STANDARD.

3. SPECIES DIVERSITY IN PLANTED AREAS:

- ESTABLISH AT LEAST TWO NATIVE TREE SPECIES, FOUR NATIVE SHRUB SPECIES AND ONE NATIVE GROUND COVER SPECIES THROUGHOUT THE BUFFER AREA BY YEAR 5. VOLUNTEER SPECIES MAY COUNT TOWARDS THIS STANDARD.

4. INVASIVE SPECIES STANDARD: NO MORE THAN 10% COVER OF INVASIVE SPECIES IN THE PLANTING AREA, IN ANY MONITORING YEAR. INVASIVE SPECIES ARE DEFINED AS ANY CLASS A, B, OR C NOXIOUS WEEDS AS LISTED BY THE KING COUNTY NOXIOUS WEED CONTROL BOARD.

BUFFER RESTORATION AREA

1. SURVIVAL:

- 100% SURVIVAL OF ALL TREES AND SHRUBS AT THE END OF YEAR ONE. THIS STANDARD MAY BE MET THROUGH ESTABLISHMENT OF INSTALLED PLANTS OR BY REPLANTING AS NECESSARY TO ACHIEVE THE REQUIRED NUMBERS.
- 80% SURVIVAL OF ALL TREES AND SHRUBS AT THE END OF YEAR TWO. THIS STANDARD MAY BE MET THROUGH ESTABLISHMENT OF INSTALLED PLANTS OR BY REPLANTING AS NECESSARY TO ACHIEVE THE REQUIRED NUMBERS.
- SURVIVAL BEYOND YEAR TWO IS DIFFICULT TO TRACK. THEREFORE, A DIVERSITY STANDARD IS PROPOSED IN PLACE OF SURVIVAL (SEE #3, BELOW).

2. NATIVE VEGETATION COVER IN PLANTED AREAS:

- ACHIEVE AT LEAST 50% COVER OF NATIVE PLANTS BY THE END OF YEAR 3. VOLUNTEER SPECIES MAY COUNT TOWARDS THIS STANDARD.
- ACHIEVE AT LEAST 80% COVER OF NATIVE PLANTS BY THE END OF YEAR 5. VOLUNTEER SPECIES MAY COUNT TOWARDS THIS STANDARD.

3. SPECIES DIVERSITY IN PLANTED AREAS:

- ESTABLISH AT LEAST TWO NATIVE TREE SPECIES, FOUR NATIVE SHRUB SPECIES AND ONE NATIVE GROUND COVER SPECIES THROUGHOUT THE BUFFER AREA BY YEAR 5. VOLUNTEER SPECIES MAY COUNT TOWARDS THIS STANDARD.

4. INVASIVE SPECIES STANDARD: NO MORE THAN 10% COVER OF INVASIVE SPECIES IN THE PLANTING AREA, IN ANY MONITORING YEAR. INVASIVE SPECIES ARE DEFINED AS ANY CLASS A, B, OR C NOXIOUS WEEDS AS LISTED BY THE KING COUNTY NOXIOUS WEED CONTROL BOARD.

MONITORING METHODS

THIS MONITORING PROGRAM IS DESIGNED TO TRACK THE SUCCESS OF THE MITIGATION SITE OVER TIME BY MEASURING THE DEGREE TO WHICH THE PERFORMANCE STANDARDS LISTED ABOVE ARE BEING MET. AN AS-BUILT PLAN WILL BE PREPARED WITHIN 30 DAYS OF SUBSTANTIALLY COMPLETE CONSTRUCTION OF THE MITIGATION AREA. THE AS-BUILT PLAN WILL DOCUMENT CONFORMANCE WITH THESE PLANS AND WILL

DISCLOSE ANY SUBSTITUTIONS OR OTHER NON-CRITICAL DEPARTURES. THE AS-BUILT PLAN WILL ESTABLISH BASELINE PLANT INSTALLATION QUANTITIES, PHOTOPOINTS, AND MONITORING TRANSECTS THAT WILL BE USED THROUGHOUT THE MONITORING PERIOD TO MEASURE THE PERFORMANCE STANDARDS.

MONITORING WILL OCCUR TWICE ANNUALLY FOR FIVE YEARS. THE FIRST MONITORING VISIT WILL TAKE PLACE IN THE SPRING. THIS VISIT WILL RECORD NECESSARY WEEDING, INVASIVE CONTROL, AND OTHER MAINTENANCE NEEDS. THE RESTORATION SPECIALIST WILL THEN NOTIFY THE OWNER AND/OR MAINTENANCE CREWS OF NECESSARY EARLY SEASON MAINTENANCE. THE LATE-SEASON VISIT WILL OCCUR IN LATE SUMMER OR FALL AND WILL RECORD THE FOLLOWING AND BE SUBMITTED IN AN ANNUAL REPORT TO THE CITY:

- GENERAL SUMMARY OF THE SPRING VISIT.
- FIRST- AND SECOND-YEAR COUNTS OF SURVIVING AND DEAD/DYING PLANTS BY SPECIES IN THE PLANTING AREAS.
- ESTIMATES OF NATIVE SPECIES COVER USING THE LINE-INTERCEPT METHOD ALONG THE MONITORING TRANSECTS.
- ESTIMATES OF INVASIVE SPECIES COVER USING THE LINE-INTERCEPT METHOD ALONG THE MONITORING TRANSECTS.
- COUNTS OF ESTABLISHED NATIVE SPECIES TO DETERMINE SPECIES RICHNESS.
- PHOTOGRAPHIC DOCUMENTATION AT PERMANENT PHOTOPOINTS.
- INTRUSIONS INTO THE PLANTING AREAS, EROSION, VANDALISM, TRASH, AND OTHER ACTIONS DETRIMENTAL TO THE OVERALL HEALTH OF THE MITIGATION AREAS.
- RECOMMENDATIONS FOR MAINTENANCE IN THE MITIGATION AREAS.
- RECOMMENDATIONS FOR REPLACEMENT OF ALL DEAD OR DYING PLANT MATERIAL WITH SAME OR LIKE SPECIES AND NUMBER AS ON THE APPROVED PLAN.

CONSTRUCTION NOTES AND SPECIFICATIONS

SPECIFICATIONS FOR ITEMS IN BOLD CAN BE FOUND UNDER "MATERIAL SPECIFICATIONS AND DEFINITIONS."

GENERAL NOTES

THE RESTORATION SPECIALIST WILL OVERSEE THE FOLLOWING:

- CLEARING, SOIL PREPARATION (INCLUDING ASPHALT REMOVAL), AND PLACEMENT OF WOODY DEBRIS;
- INVASIVE WEED CLEARING; AND
- PLANT MATERIAL INSPECTION.
 - PLANT DELIVERY INSPECTION.
 - 50% PLANT INSTALLATION/LAYOUT INSPECTION.
 - 100% PLANT INSTALLATION INSPECTION.

THE PROJECT ARBORIST WILL OVERSEE THE FOLLOWING:

- PLACEMENT OF TREE PROTECTION FENCING
- ANY PRUNING OR CUTTING OF TREES WITHIN THE PROJECT AREA.

WORK SEQUENCE

- ENSURE TREE PROTECTION FENCING AND SILT FENCE ARE IN PLACE BEFORE THE START OF ANY WORK ACTIVITIES.
- CLEAR THE PLANTING AREA OF ALL INVASIVE WOODY VEGETATION INCLUDING BUT NOT LIMITED TO HIMALAYAN BLACKBERRY, ENGLISH IVY, AND ENGLISH LAUREL.
- MANUALLY OR MECHANICALLY REMOVE ALL INVASIVE WOODY VEGETATION ROOTS. CUT IVY GROWING ON TREES AT APPROXIMATELY EYE-LEVEL AND REMOVE ROOTS FROM THE SOIL. RAKE OUT REMAINING ROOTS TO THE MAXIMUM EXTENT PRACTICAL.
- REMOVE ALL ASPHALT AND AREAS OF LAWN FROM THE PLANTING AREAS AND LOOSEN ALL COMPACTED SOILS IN PREPARATION FOR PLANTING. ROTOTILL TWO INCHES OF COMPOST INTO THE UPPER SIX INCHES OF THE SOIL WHERE DECOMPACTION IS NECESSARY IN SOIL PREPARATION AREA 1.
- PLACE WOODY DEBRIS RETAINED FROM TREE REMOVAL IN THE BUFFER AS SHOWN IN PLANS. UNLESS TOO DENSE, TREES MAY BE LEFT WHERE THEY FALL RATHER THAN AS EXACTLY SHOWN ON THE PLAN.
- ALL PLANT INSTALLATION WILL TAKE PLACE DURING THE DORMANT SEASON (OCTOBER 15 TO MARCH 1).
- LAYOUT VEGETATION TO BE INSTALLED PER THE PLANTING PLAN AND PLANT SCHEDULE.
- PREPARE A PLANTING PIT FOR EACH PLANT AND INSTALL PER THE CONTAINER PLANTING DETAIL.
- MULCH ENTIRE MITIGATION AREA WITH WOOD CHIP MULCH, 4 INCHES THICK PULLED AWAY FROM TRUCK AND STEMS OF INSTALLED CONTAINER TREES, SHRUBS OR GROUND COVER.
- INSTALL A TEMPORARY OR PERMANENT IRRIGATION SYSTEM AS NEEDED TO ENSURE THAT ALL PLANTS RECEIVE AT LEAST ONE INCH OF WATER PER WEEK FROM JUNE 1ST - SEPTEMBER 30TH. MAINTAIN IRRIGATION SYSTEM IN WORKING CONDITION FOR AT LEAST TWO SUMMERS AFTER INITIAL PLANT INSTALLATION.

MAINTENANCE

THIS SITE WILL BE MAINTAINED FOR FIVE YEARS FOLLOWING COMPLETION OF THE PLANT INSTALLATION. SPECIFICATIONS IN BOLD CAN BE FOUND UNDER "MATERIAL SPECIFICATIONS AND DEFINITIONS."

- REPLACE EACH PLANT FOUND DEAD IN THE SUMMER MONITORING VISIT DURING THE UPCOMING FALL DORMANT SEASON (OCTOBER 15 TO MARCH 1).
- FOLLOW THE RECOMMENDATIONS NOTED IN THE SPRING MONITORING SITE VISIT.
- INVASIVE SPECIES MAINTENANCE PLAN:
 - HIMALAYAN BLACKBERRY, ENGLISH IVY, ENGLISH LAUREL, AND OTHER INVASIVE WOODY VEGETATION WILL BE GRUBBED OUT BY HAND ON AN ONGOING BASIS, WITH CARE TAKEN TO GRUB OUT ROOTS EXCEPT WHERE SUCH WORK WILL JEOPARDIZE THE ROOTS OF INSTALLED OR VOLUNTEER NATIVE PLANTS.

b) IF IT IS LIKELY THAT HAND REMOVAL WILL NOT BE COMPLETELY EFFECTIVE OR WILL DAMAGE DESIRABLE SPECIES, THEN APPLICATION OF AN HERBICIDE APPROVED FOR USE IN AQUATIC AREAS MAY BE USED. HERBICIDE APPLICATIONS MUST BE CONDUCTED ONLY BY A STATE-LICENSED APPLICATOR. APPLICATIONS SHOULD BE DONE BETWEEN MID-SPRING AND MID-SUMMER TO MAXIMIZE UPTAKE BY PLANTS. APPLICATION SHOULD BE A TARGETED METHOD SUCH AS SPOT SPRAY (PREFERRED FOR HIMALAYAN BLACKBERRY), OR WICK.

- AT LEAST TWICE YEARLY, REMOVE BY HAND ALL COMPETING WEEDS AND WEED ROOTS FROM BENEATH EACH INSTALLED PLANT AND ANY DESIRABLE VOLUNTEER VEGETATION TO A DISTANCE OF 18 INCHES FROM THE MAIN PLANT STEM. WEEDING SHOULD OCCUR AS NEEDED DURING THE SPRING AND SUMMER. FREQUENT WEEDING WILL RESULT IN LOWER MORTALITY AND LOWER PLANT REPLACEMENT COSTS.
- DO NOT WEED THE AREA NEAR THE PLANT BASES WITH STRING TRIMMER (WEED WHACKER). NATIVE PLANTS ARE EASILY DAMAGED OR KILLED, AND WEEDS EASILY RECOVER AFTER TRIMMING.
- APPLY SLOW RELEASE GRANULAR FERTILIZER TO EACH INSTALLED PLANT ANNUALLY IN THE SPRING (BY JUNE 1) OF YEARS 2 THROUGH 5.
- MULCH THE WEEDED AREAS BENEATH EACH PLANT WITH WOOD CHIP MULCH AS NECESSARY TO MAINTAIN A MINIMUM 4-INCH-THICK, 18-INCH-DIAMETER MULCH RING.
- THE TEMPORARY IRRIGATION SYSTEM WILL BE OPERATED TO ENSURE THAT PLANTS RECEIVE A MINIMUM OF ONE INCH OF WATER PER WEEK FROM JUNE 1 THROUGH SEPTEMBER 30 FOR THE FIRST TWO YEARS FOLLOWING INSTALLATION. IRRIGATION BEYOND THE SECOND YEAR MAY BE NEEDED BASED ON SITE PERFORMANCE OR SIGNIFICANT REPLANTING.

MATERIAL SPECIFICATIONS AND DEFINITIONS

- COMPOST: CEDAR GROVE COMPOST OR EQUIVALENT PRODUCT. 100% VEGETABLE COMPOST WITH NO APPRECIABLE QUANTITIES OF SAND, GRAVEL, SAWDUST, OR OTHER NON-ORGANIC MATERIALS.
- FERTILIZER: SLOW RELEASE, GRANULAR PHOSPHOROUS-FREE FERTILIZER. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR APPLICATION. KEEP FERTILIZER IN A WEATHER-TIGHT CONTAINER WHILE ON SITE. NOTE THAT FERTILIZER IS TO BE APPLIED ONLY IN YEARS 2 THROUGH 5 AND NOT IN THE FIRST YEAR.
- RESTORATION SPECIALIST: THE WATERSHED COMPANY [(425) 822-5242] PERSONNEL OR OTHER PERSON QUALIFIED TO EVALUATE ENVIRONMENTAL RESTORATION PROJECTS.
- PROJECT ARBORIST: THE WATERSHED COMPANY [(425) 822-5242] PERSONNEL OR OTHER PERSON CERTIFIED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE.
- WOOD CHIP MULCH: CHIPPED WOODY MATERIAL APPROXIMATELY 1 INCH MINIMUM TO 3 INCHES IN MAXIMUM DIMENSION (NOT SAWDUST OR COARSE HOG FUEL). MULCH SHALL NOT CONTAIN APPRECIABLE QUANTITIES OF GARBAGE, PLASTIC, METAL, SOIL, AND DIMENSIONAL LUMBER OR CONSTRUCTION/ DEMOLITION DEBRIS. PACIFIC TOPSOIL SELLS SUITABLE WOODCHIP MULCH CALLED "WOOD CHIP MULCH" AT MANY OF THEIR LOCATIONS. PACIFIC TOPSOIL: (800) 884-7645. NOTE: ARBORIST WOODCHIPS GENERALLY CONTAIN WEED SEEDS AND ARE NOT A RELIABLE ALTERNATIVE.
- WOODY DEBRIS: LARGE PIECES OF DOWNED WOOD SUCH AS LOGS, ROOTWADS, AND LIMBS WHICH ARE PLACED ON THE GROUND. THESE PIECES OF DOWNED WOOD SHOULD HAVE A DIAMETER OF AT LEAST 12 INCHES AND A MINIMUM LENGTH OF 10 FEET BUT WILL VARY SINCE THEY ARE SOURCED FROM EXISTING STANDING DEAD TREES ALREADY ON THE SITE. DEBRIS TO BE PLACED TO MAXIMIZE GROUND CONTACT.



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Science & Design

MERCER ISLAND CENTER FOR THE ARTS

MITIGATION PLAN
PREPARED FOR BRUCE LORIG
MERCERDALE PARK
77TH AVE SE & SE 32ND STREET (PARCEL # 1224049068)
MERCER ISLAND, WA 98040

SUBMITTALS & REVISIONS

NO	DATE	DESCRIPTION	BY
1	08-21-15	REVIEW SET	MSF
1	10-20-2016	CONCEPT PLANS	KMB
3	11-16-2016	SEPA	KMB

SHEET SIZE:
ORIGINAL PLAN IS 22" x 34".
SCALE ACCORDINGLY.

PROJECT MANAGER: **HM**
DESIGNED: **KMB**
DRAFTED: **KMB**
CHECKED: **KC/KB**

JOB NUMBER:
150320

SHEET NUMBER:
W7 OF 7

DATE: 11/16/2016
PRINTED BY: KYLE BROWN
FILENAME: 150320_MICA_MITIGATION.DWG

MITIGATION PLAN DETAILS AND NOTES