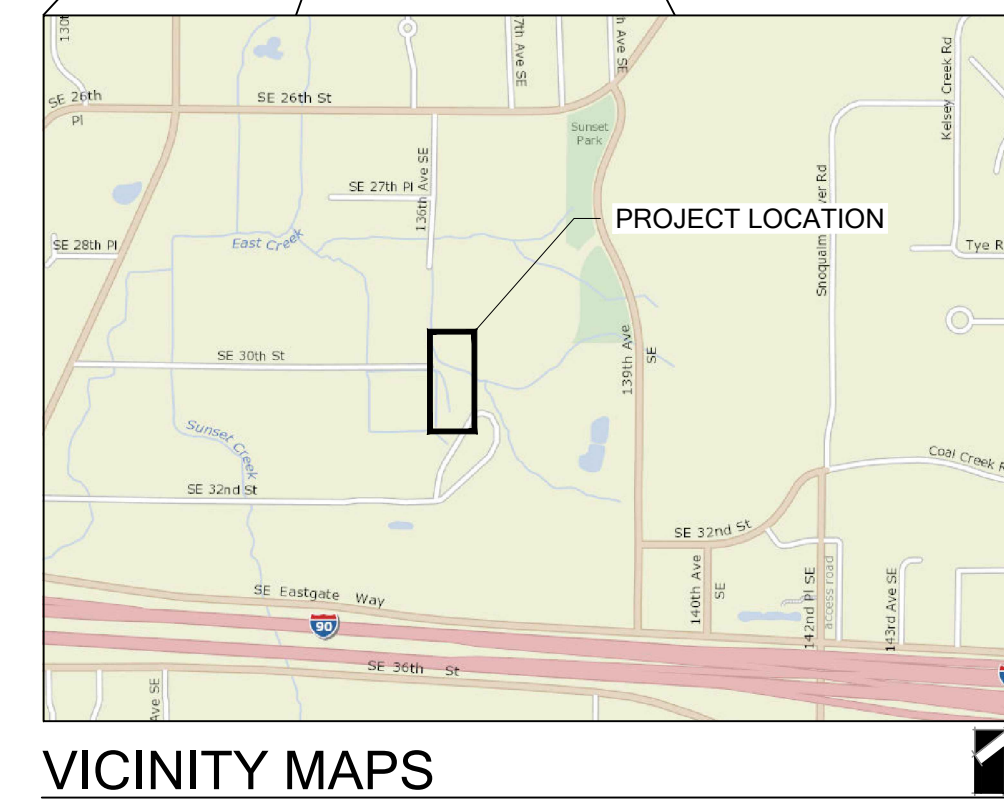
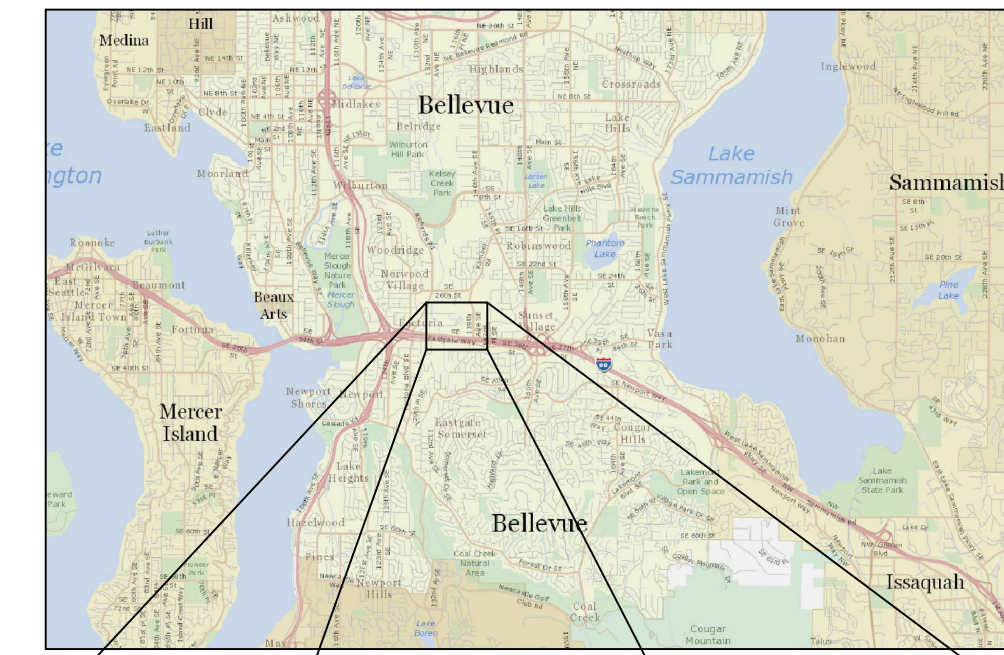
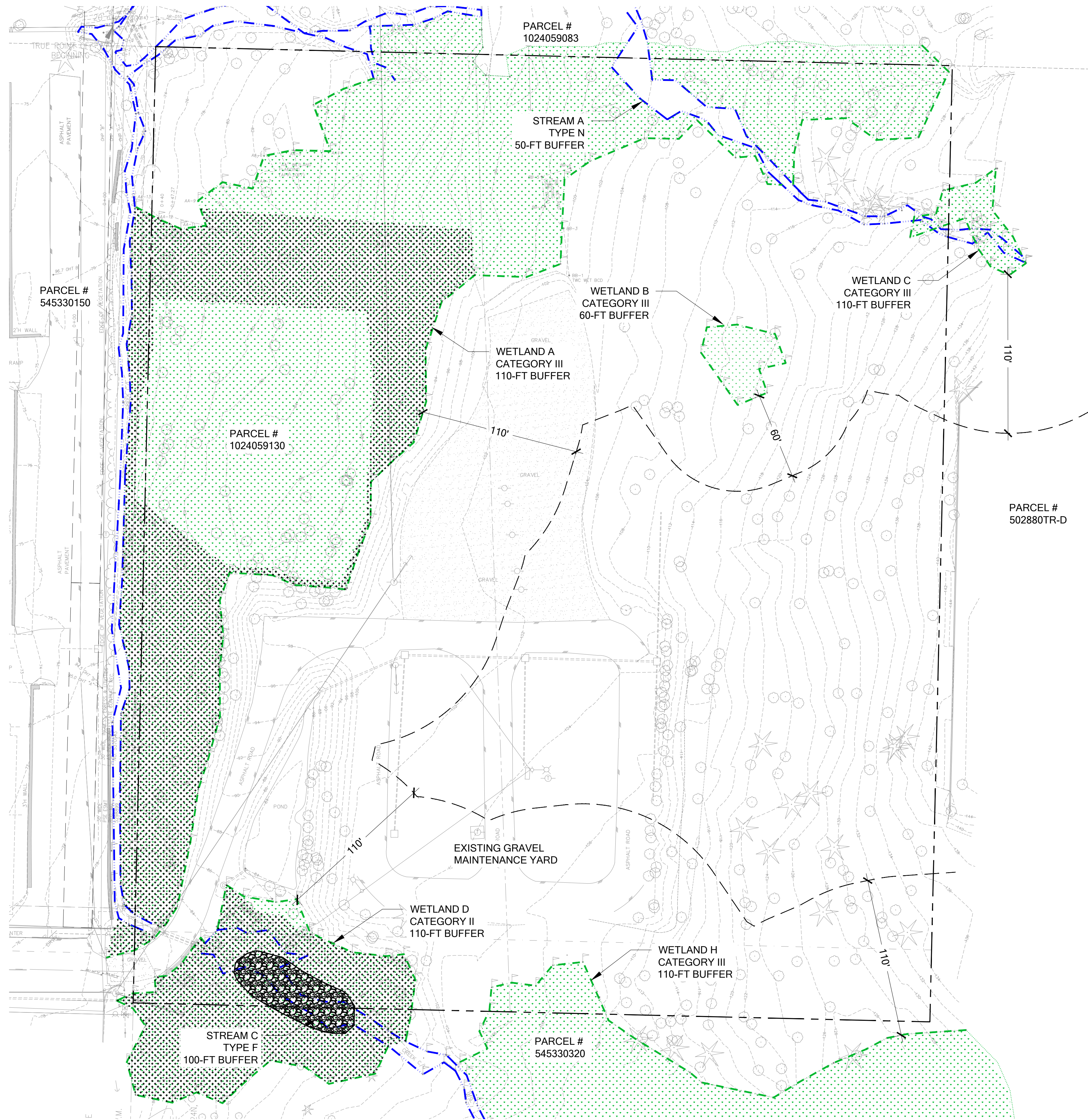


**PSE RICHARDS CREEK SUBSTATION
RICHARDS CREEK SUB-BASIN MITIGATION PLAN
PREPARED FOR: PUGET SOUND ENERGY
ENERGIZE EASTSIDE, SOUTH BELLEVUE SEGMENT
PARCELS #: 1024059130, 1024059083, 5453300150
BELLEVUE, WA**



VICINITY MAPS

LEGEND

- WETLAND BOUNDARY
- WETLAND BOUNDARY (APPROXIMATE)
- STREAM BOUNDARY (OHWM)
- CRITICAL AREA BUFFER
- PROPERTY BOUNDARY
- DEGRADED WETLAND WITHIN PROJECT AREA
- COARSE DEPOSITION

NOTES

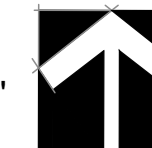
1. CRITICAL AREAS DELINEATED BY THE WATERSHED COMPANY IN OCTOBER 2016, FEBRUARY 2017 AND APRIL 2017.
2. SURVEY RECEIVED FROM APS SURVEY & MAPPING, 13221 S.E. 26TH STREET, SUITE A, BELLEVUE, WA 98005. PHONE: (425) 746-3200.

SHEET INDEX

- W1 EXISTING CONDITIONS
- W2 SITE PREPARATION & TESC PLAN
- W3 GRADING & LARGE WOODY DEBRIS PLAN
- W4 ENHANCEMENT PLAN
- W5 PLANTING PLAN & SCHEDULE
- W6 PLANTING NOTES & DETAILS
- W7 MITIGATION NOTES

EXISTING CONDITIONS

SCALE: 1" = 40'



SUBMITTALS & REVISIONS		BY
NO.	DATE	DESCRIPTION
1	04-18-2018	MITIGATION PLAN
2	12-03-2018	RESPONSE TO CITY COMMENTS

GENERAL NOTES:

SHEET SIZE:
ORIGINAL PLAN IS 24" X 36".
SCALE ACCORDINGLY.

PROJECT MANAGER: JC
DESIGNED: LM
DRAFTED: LM
CHECKED: JC / AM
JOB NUMBER:

111103.11
SHEET NUMBER:
W1 OF 7



Know what's below.
Call before you dig.

**PSE RICHARDS CREEK SUBSTATION
RICHARDS CREEK SUB-BASIN MITIGATION PLAN
PREPARED FOR: PUGET SOUND ENERGY
ENERGIZE EASTSIDE, SOUTH BELLEVUE SEGMENT
PARCELS #: 1024059130, 1024059083, 5453300150
BELLEVUE, WA**

NO.	DATE	DESCRIPTION	BY	LM
1	04-18-2018	MITIGATION PLAN	LM	LM
2	12-03-2018	RESPONSE TO CITY COMMENTS		

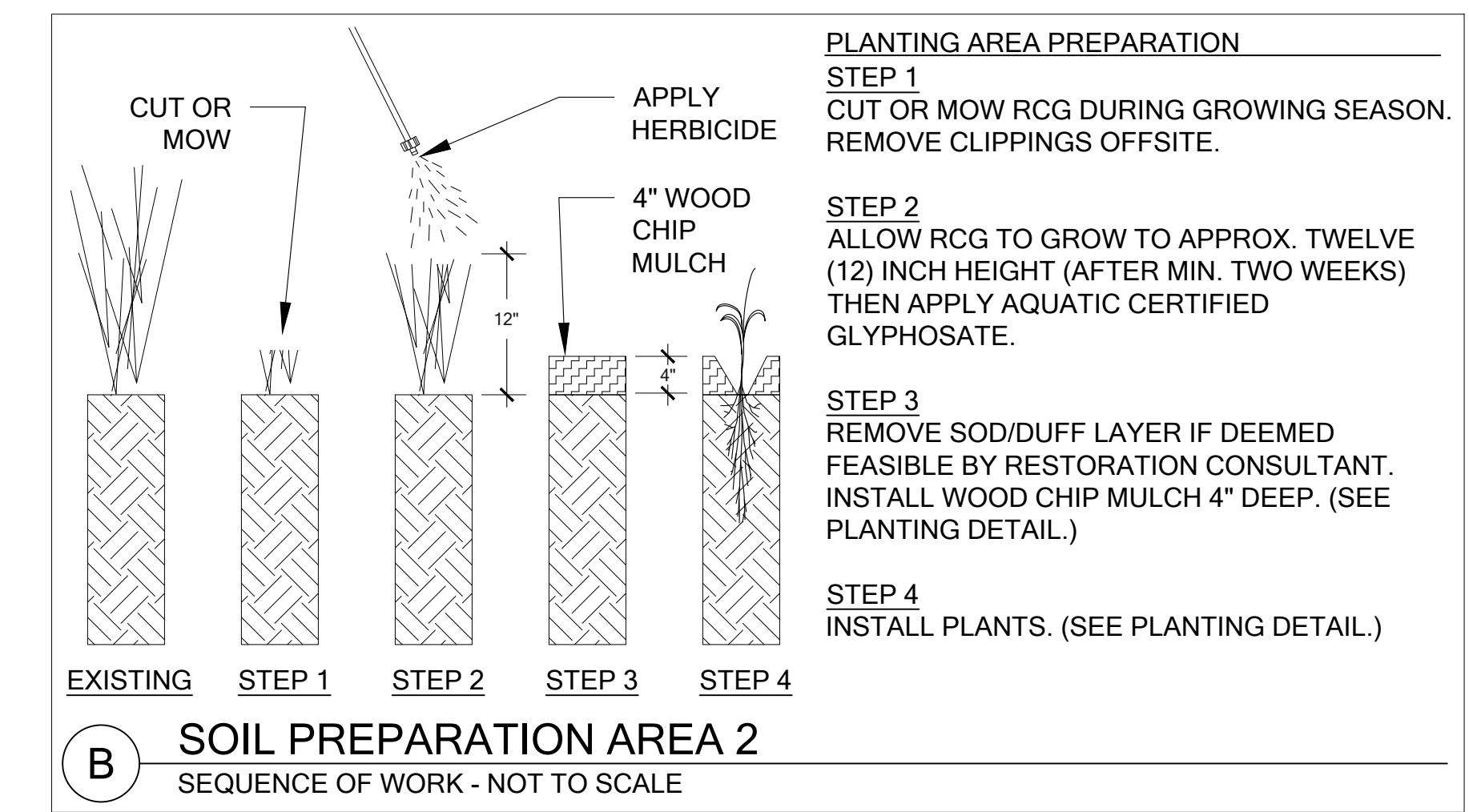
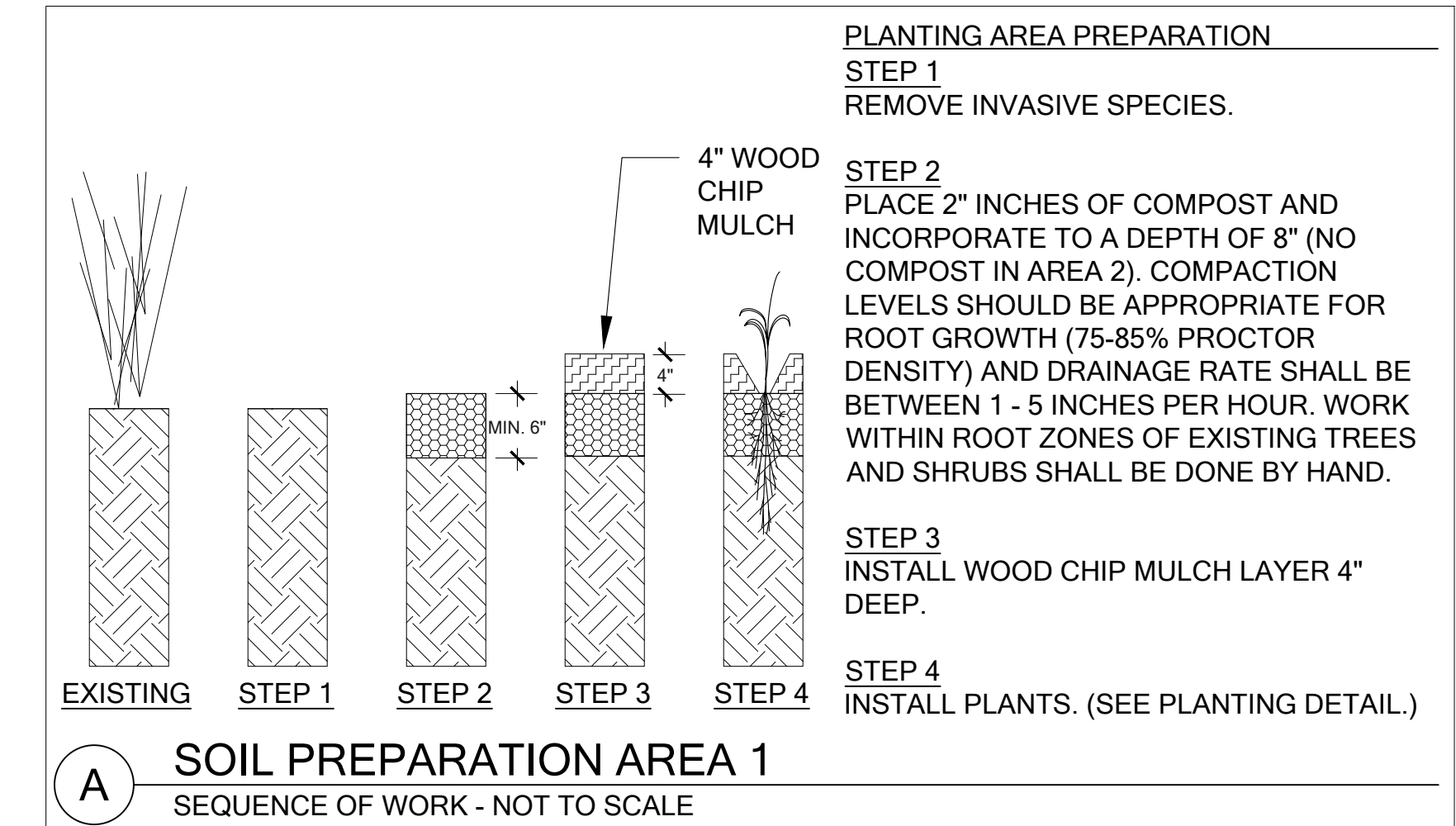
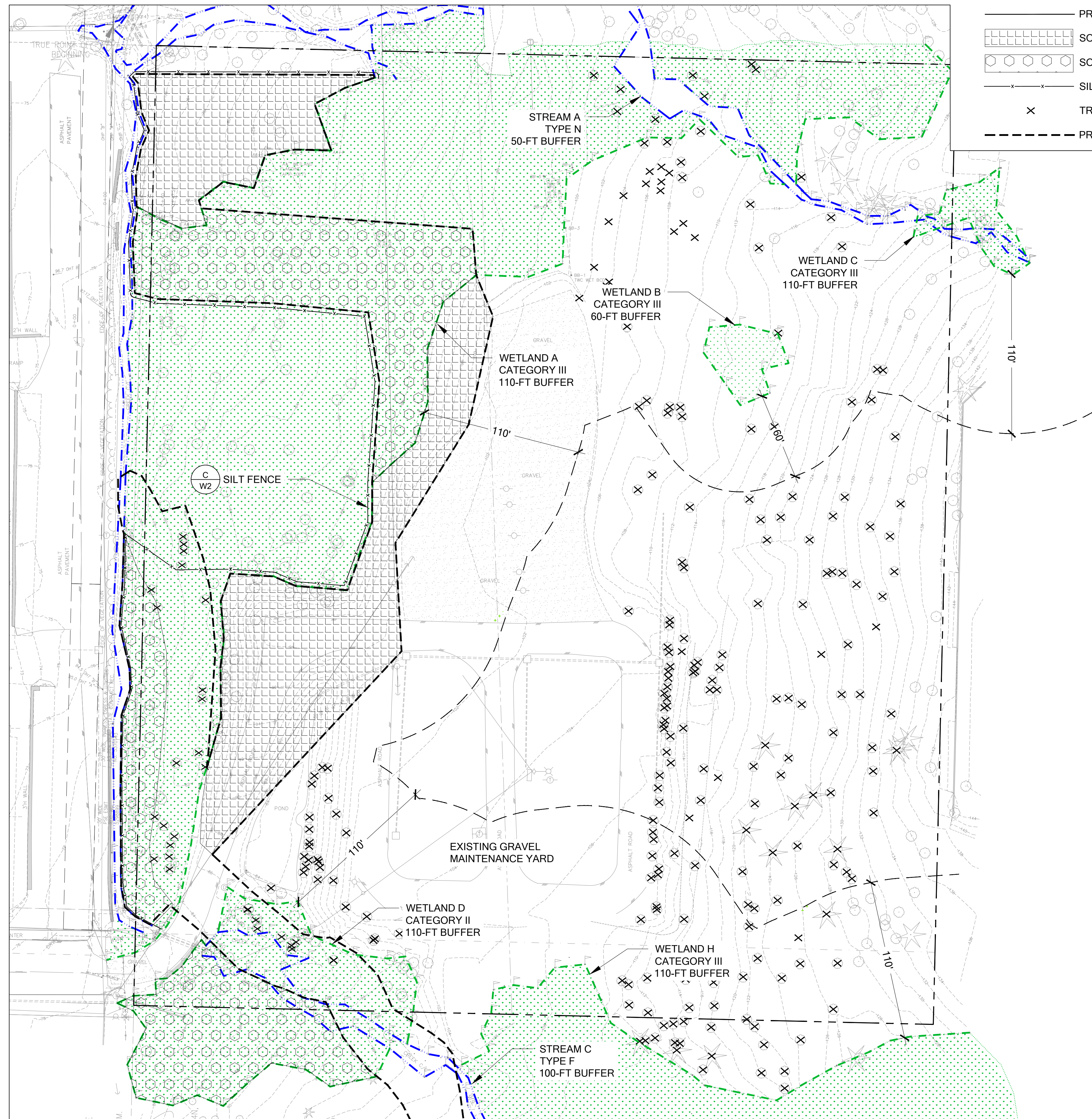
GENERAL NOTES:

SHEET SIZE:
ORIGINAL PLAN IS 24" X 36".
SCALE ACCORDINGLY.

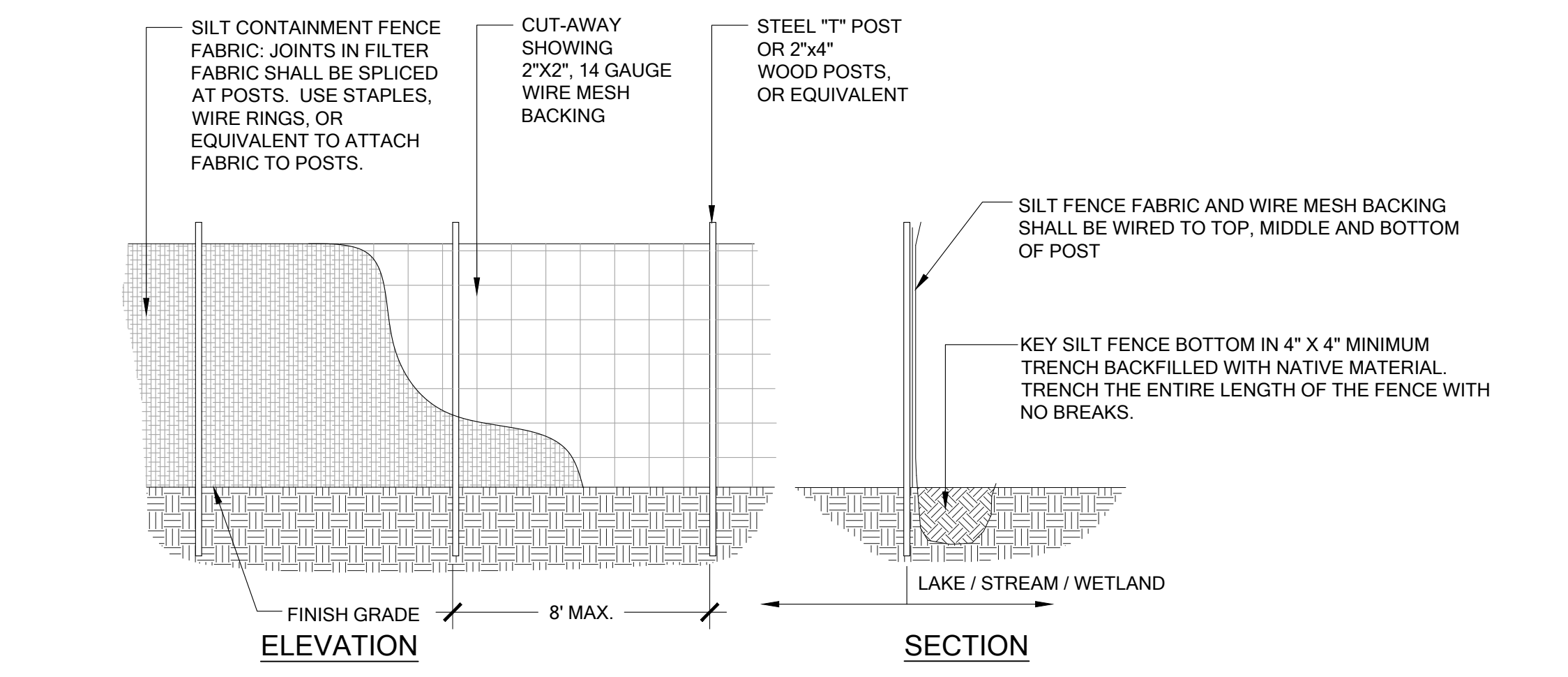
PROJECT MANAGER: JC
DESIGNED: LM
DRAFTED: LM
CHECKED: JC / AM
JOB NUMBER:
111103.11
SHEET NUMBER:
W2 OF 7

LEGEND

- WETLAND BOUNDARY
- WETLAND BOUNDARY (APPROXIMATE)
- STREAM BOUNDARY (OHWM)
- CRITICAL AREA BUFFER
- PROPERTY BOUNDARY
- SOIL PREP AREA 1 (A/W2)
- SOIL PREP AREA 2 (B/W2)
- SILT FENCE (C/W2)
- TREE TO BE REMOVED
- PROJECT BOUNDARY



SILT FENCE MAINTENANCE STANDARDS:
1. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.
2. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION EXCEEDS 6" IN DEPTH.



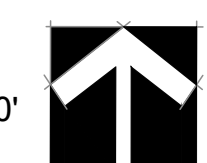
C SILT FENCE

Scale: NTS

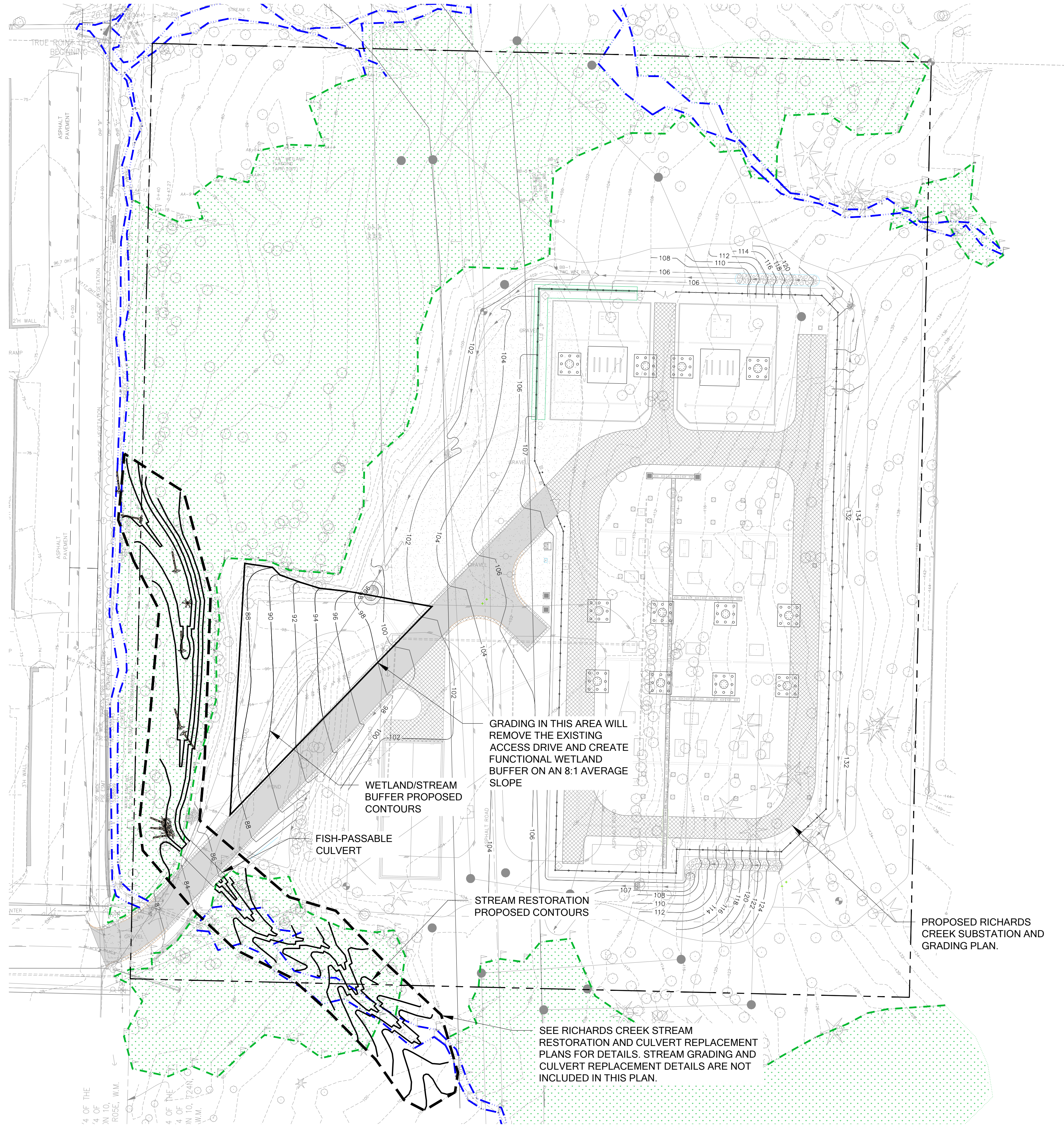
NOTE
1. SEE STREAM RESTORATION AND CULVERT REPLACEMENT PLAN FOR STREAM WORK TESC.

SITE PREPARATION & TESC PLAN

SCALE: 1" = 40'



**PSE RICHARDS CREEK SUBSTATION
RICHARDS CREEK SUB-BASIN MITIGATION PLAN
PREPARED FOR: PUGET SOUND ENERGY
ENERGIZE EASTSIDE, SOUTH BELLEVUE SEGMENT
PARCELS #: 1024059130, 1024059083, 5453300150
BELLEVUE, WA**



NOTES

1. REMOVAL OF THE EXISTING ACCESS DRIVE AND REGRADING WILL CHANGE THE EXISTING 3:1 SLOPE TO AN AVERAGE 8:1 SLOPE.

LEGEND

- WETLAND BOUNDARY
- WETLAND BOUNDARY (APPROXIMATE)
- STREAM BOUNDARY (OHWM)
- CRITICAL AREA BUFFER
- PROPERTY BOUNDARY
- PROPOSED STREAM/BUFFER CONTOURS
- PROPOSED SUBSTATION CONTOURS
- STREAM PROJECT AREA
- LARGE WOODY DEBRIS

SUBMITTALS & REVISIONS		BY
NO.	DATE	DESCRIPTION
1	04-18-2018	MITIGATION PLAN
2	12-03-2018	RESPONSE TO CITY COMMENTS

GENERAL NOTES:

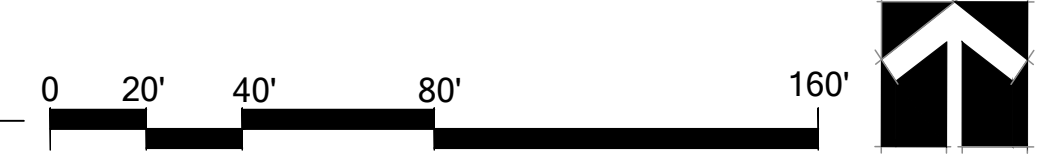
SHEET SIZE: ORIGINAL PLAN IS 24" X 36". SCALE ACCORDINGLY.	
PROJECT MANAGER:	JC
DESIGNED:	LM
DRAFTED:	LM
CHECKED:	JC / AM
JOB NUMBER:	111103.11
SHEET NUMBER:	W3 OF 7



Know what's below.
Call before you dig.

GRADING AND LARGE WOODY DEBRIS PLAN

SCALE: 1" = 40'



**PSE RICHARDS CREEK SUBSTATION
RICHARDS CREEK SUB-BASIN MITIGATION PLAN
PREPARED FOR: PUGET SOUND ENERGY
ENERGIZE EASTSIDE, SOUTH BELLEVUE SEGMENT
PARCELS #: 1024059130, 1024059083, 5453300150
BELLEVUE, WA**

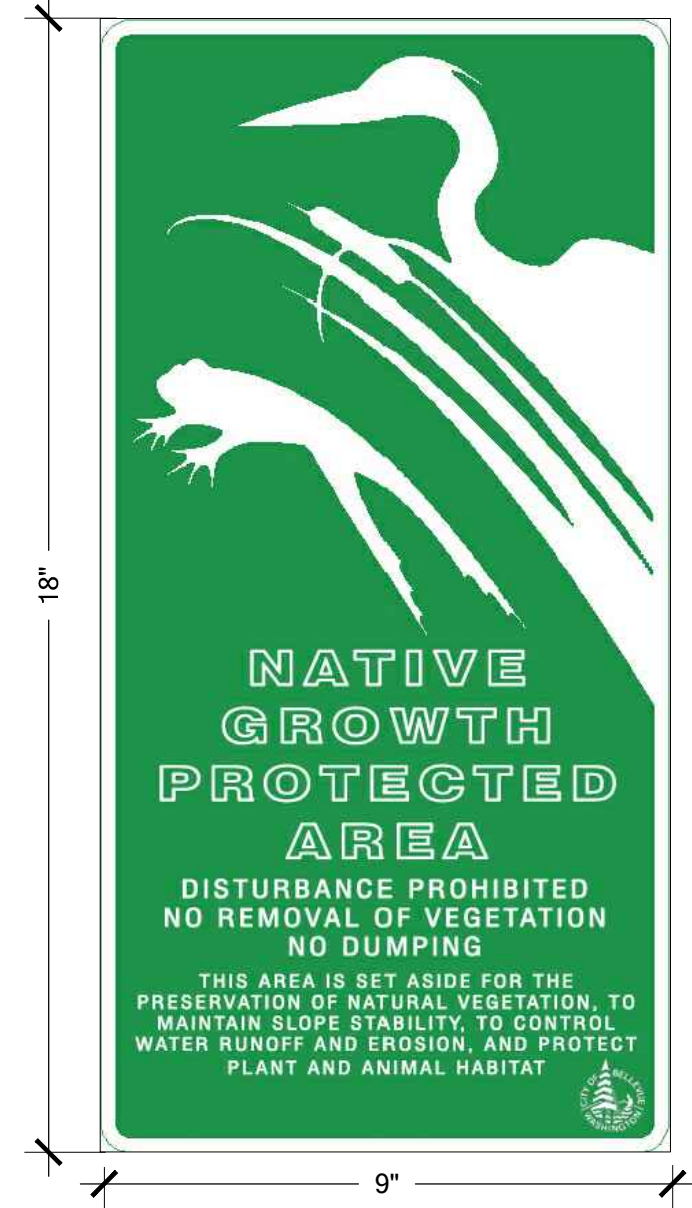
SUBMITTALS & REVISIONS		
NO.	DATE	DESCRIPTION
1	04-18-2018	MITIGATION PLAN
2	12-06-2018	RESPONSE TO CITY COMMENTS

GENERAL NOTES:

811
Know what's below.
Call before you dig.

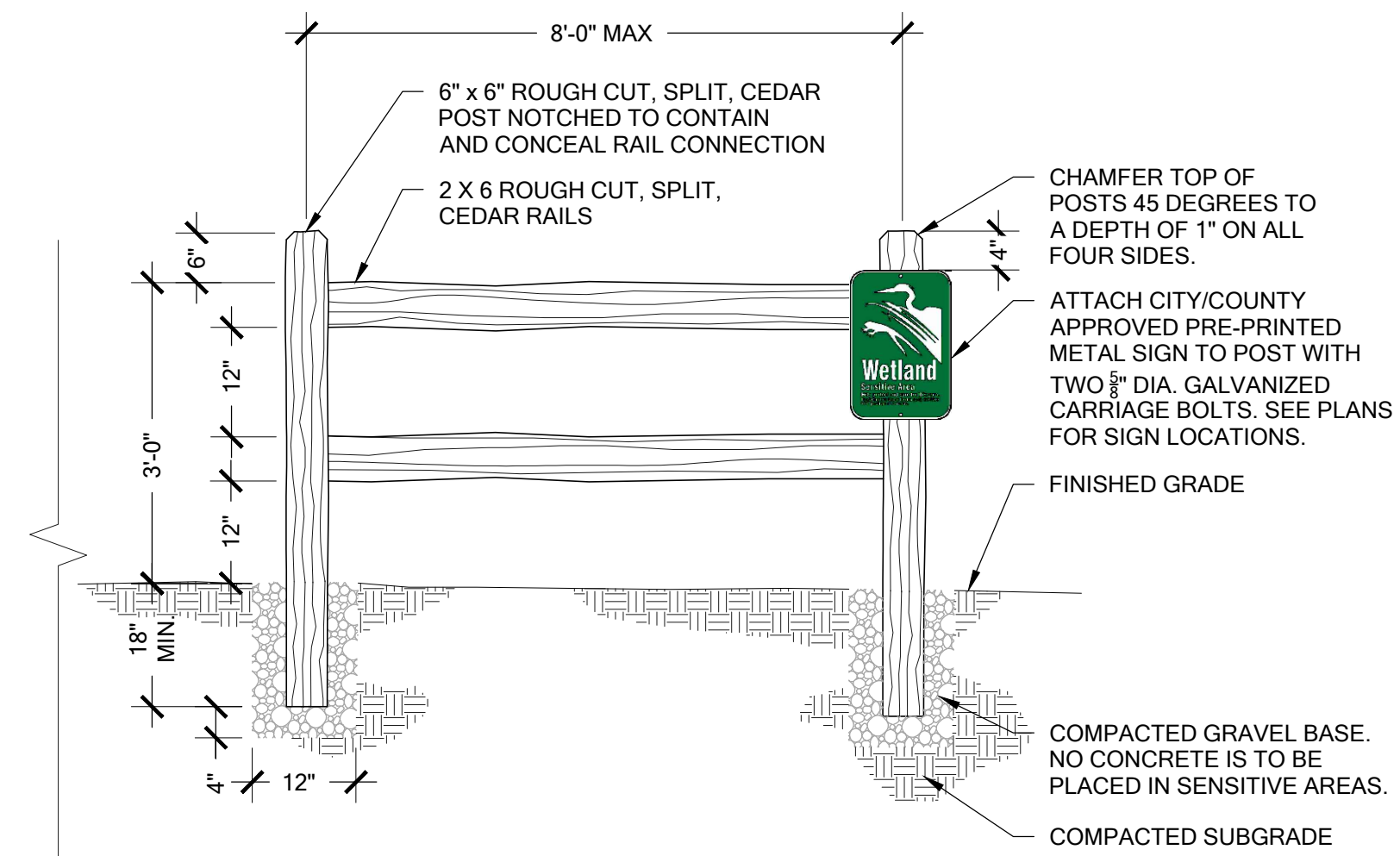
SHEET SIZE:
ORIGINAL PLAN IS 24" X 36".
SCALE ACCORDINGLY.

PROJECT MANAGER: JC
DESIGNED: LM
DRAFTED: LM
CHECKED: JC / AM
JOB NUMBER:
111103.11
SHEET NUMBER:
W4 OF 7



NOTES:
1. SIGNAGE TO APPEAR LIKE IMAGE WITH A GREEN BACKGROUND AND SIZED AS NOTED.
2. SIGN TO BE FABRICATED IN ALUMINUM, BY A CITY APPROVED VENDOR, OR EQUIVALENT MANUFACTURER.
3. SIGNAGE TO BE PLACED ON CHAIN LINK FENCE OR POST EVERY 50-FT.

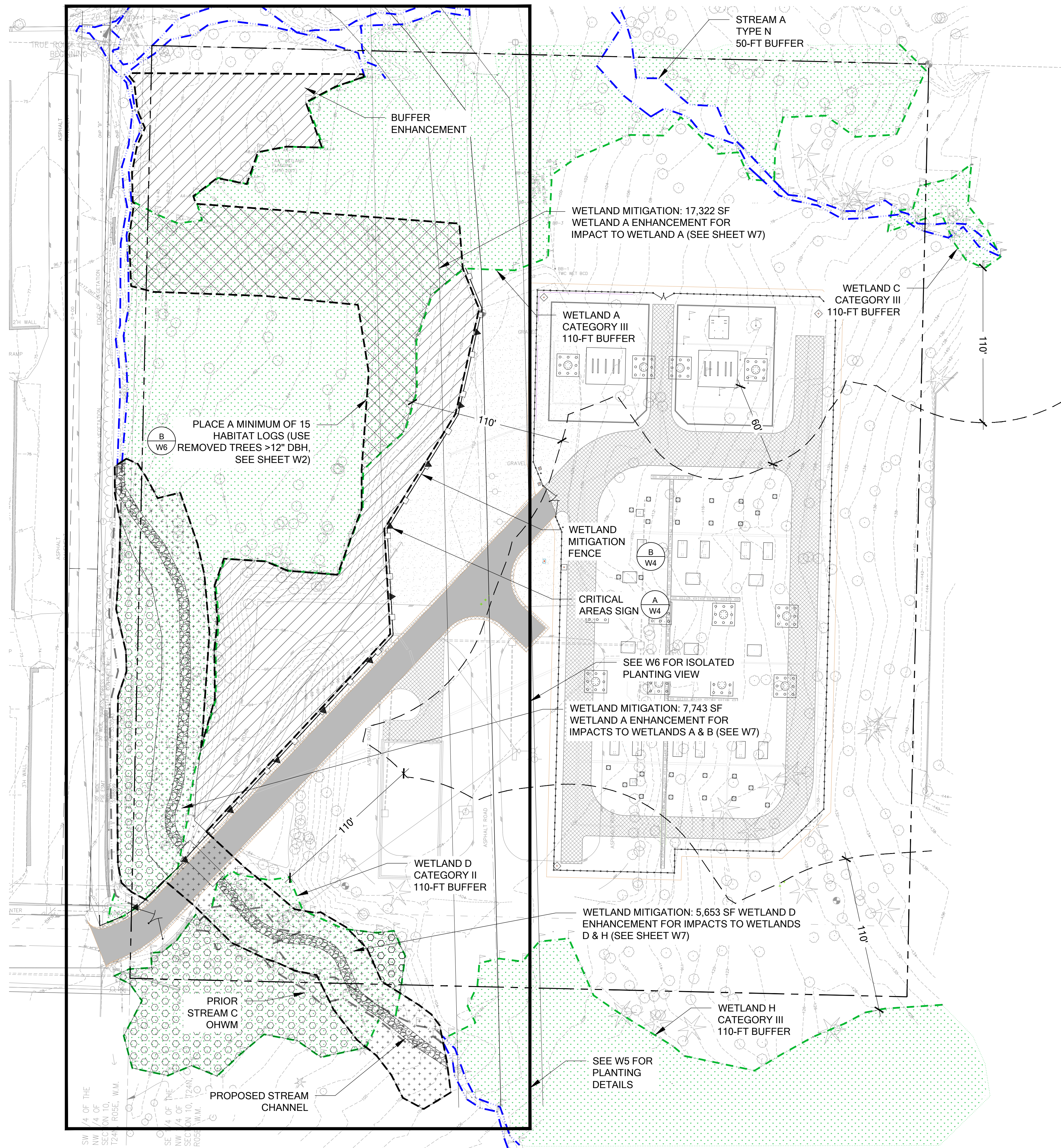
A NGPA SIGN
Scale: NTS



B SPLIT RAIL FENCE WITH CRITICAL AREA SIGN (SEE W3)
Scale: NTS

NOTES
1. THE EXISTING CHANNEL WILL NOT BE FILLED IN AFTER STREAM FLOW IS DIVERTED INTO THE NEW CHANNEL. THE REMNANT CHANNEL IS ANTICIPATED TO CONTINUE TO CAPTURE SEEPAGE AND SHALLOW GROUNDWATER AND WILL CONTINUE TO PROVIDE ECOLOGICAL DIVERSITY AND IS EXPECTED TO FUNCTION AS WETLAND.

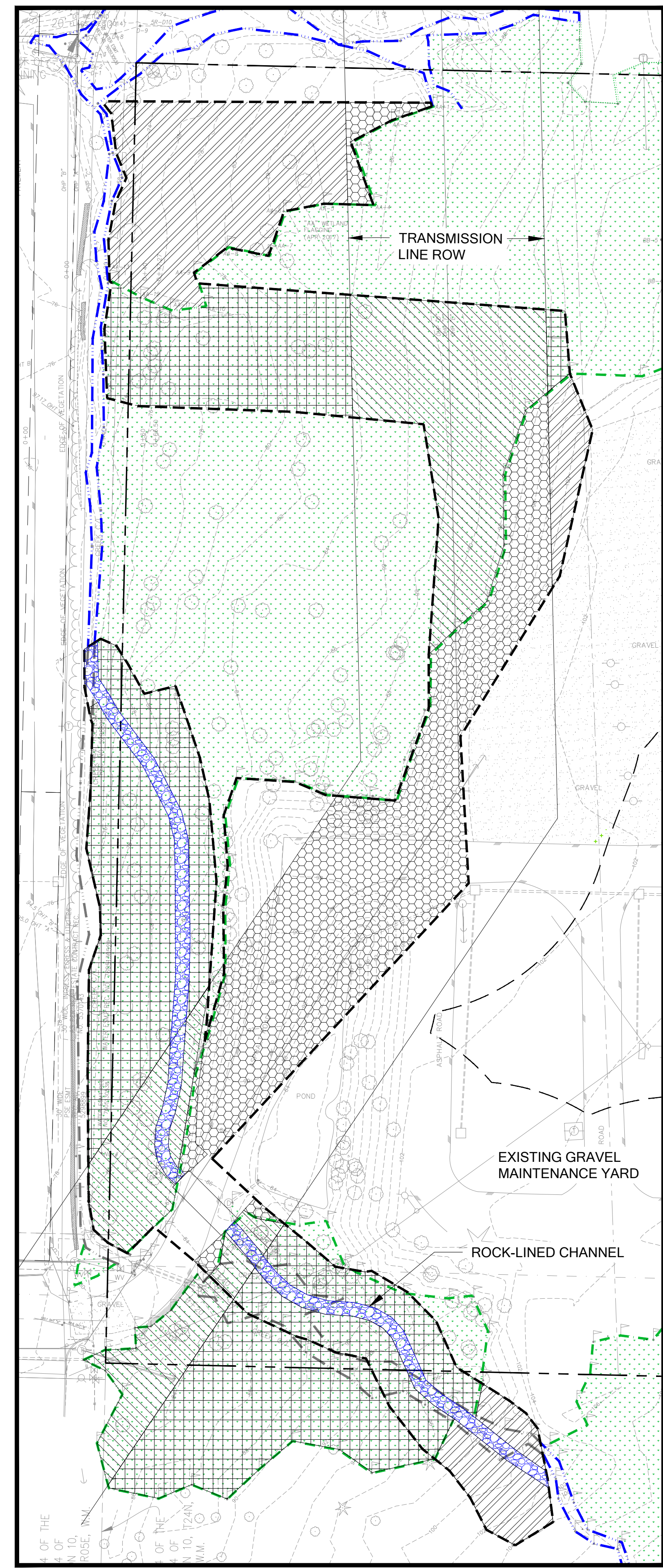
- LEGEND**
- WETLAND BOUNDARY
 - WETLAND BOUNDARY (APPROXIMATE)
 - STREAM BOUNDARY (OHWM)
 - CRITICAL AREA BUFFER
 - PROPERTY BOUNDARY
 - WETLAND A MITIGATION ENHANCEMENT (17,322 SF)
 - WETLAND / STREAM BUFFER MITIGATION ENHANCEMENT (32,013 SF)
 - PROJECT BOUNDARY
 - CRITICAL AREAS FENCE AND SIGNS
 - STREAM RESTORATION PROJECT: INCLUDES 13,396 SF WETLAND MITIGATION ENHANCEMENT (7,743 SF IN WETLAND A AND 5,653 SF IN WETLAND D) AND 3,323 SF WETLAND/STREAM BUFFER MITIGATION ENHANCEMENT
 - ADDITIONAL, NON-COMPENSATORY ENHANCEMENT (6,215 SF IN WETLAND A AND 12,050 SF IN WETLAND D)



ENHANCEMENT PLAN
SCALE: 1" = 40'



PSE RICHARDS CREEK SUBSTATION
RICHARDS CREEK SUB-BASIN MITIGATION PLAN
 PREPARED FOR: PUGET SOUND ENERGY
 ENERGIZE EASTSIDE, SOUTH BELLEVUE SEGMENT
 PARCELS #: 1024059130, 1024059083, 5453300150
 BELLEVUE, WA



SEE W3 FOR ISOLATED VIEW LOCATION

- LEGEND**
- WETLAND BOUNDARY
 - WETLAND BOUNDARY (APPROXIMATE)
 - STREAM BOUNDARY (OHWM)
 - CRITICAL AREA BUFFER
 - PROPERTY BOUNDARY
 - PROJECT BOUNDARY

- NOTES**
1. * FOCUS SITKA SPRUCE IN AREAS HEAVILY DOMINATED BY REEDCANARY GRASS
 2. PIT PLANTING ONLY IN AREAS OF EXISTING NATIVE VEGETATION. NATIVE VEGETATION MUST BE FLAGGED BY A RESTORATION SPECIALIST PRIOR TO PLANT INSTALLATION.

WETLAND ENHANCEMENT PLANTING TYPICAL (ROW)

TOTAL AREA = 16,175

TREES	SIZE	SPACING	SIZE
SALIX LUCIDA / PACIFIC WILLOW	80	9' O.C.	2 GAL.
SALIX SITCHENSIS / SITKA WILLOW	80		2 GAL.
SHRUBS			
CORNUS SERICEA / RED-OSIER DOGWOOD	116	6' O.C.	1 GAL.
ROSA NUTKANA / NOOTKA ROSE	116		1 GAL.
RUBUS SPECTABILIS / SALMONBERRY	116		1 GAL.
PHYSOCARPUS CAPITATUS/ PACIFIC NINEBARK	116		1 GAL.
GROUNDCOVER			
*ALL SPECIES TO BE SPACED TRIANGULARLY			
ATHYRIUM FILIX-FEMINA/ LADY FERN (NO INUNDATION)	1280	24" O.C.	1 GAL.
TOLMIEA MENZIESII / PIGGYBACK PLANT (NO INUNDATION)	1280		1 GAL.
SCIRPUS MICROCARPUS / SMALL FRUITED BULRUSH	1280		1 GAL.

(PLANT BY SPECIES IN ODD GROUPS OF 9-15)

BUFFER ENHANCEMENT PLANTING TYPICAL (ROW)

TOTAL AREA = 19,010

TREES	QTY	SPACING	SIZE
SALIX SCOULERIANA / SCOULER'S WILLOW	114	9' O.C.	2 GAL.
AMELANCHIER ALNIFOLIA / PACIFIC SERVICEBERRY	114		2 GAL.
SHRUBS			
RUBUS SPECTABILIS / SALMONBERRY	120	6' O.C.	1 GAL.
SYMPHORICARPUS ALBUS / SNOWBERRY	120		1 GAL.
OEMLERIA CERASIFORMIS / OSOBERRY	120		1 GAL.
MAHONIA AQUIFOLIUM / TALL OREGON GRAPE	120		1 GAL.
ACER CIRCINATUM / VINE MAPLE	120		1 GAL.
GROUNDCOVER			
*ALL SPECIES TO BE SPACED TRIANGULARLY			
POLYSTICHUM MUNITUM / SWORD FERN	2320	24" O.C.	1 GAL.
BLECHNUM SPICANT / DEER FERN	2320		1 GAL.

(PLANT BY SPECIES IN ODD GROUPS OF 9-15)

WETLAND ENHANCEMENT PLANTING TYPICAL

TOTAL AREA = 31,650

TREES (66)	QTY	SPACING	SIZE
ALNUS RUBRA / RED ALDER	38	9' O.C.	2 GAL.
FRAXINUS LATIFOLIA / OREGON ASH	38		2 GAL.
SALIX LUCIDA / PACIFIC WILLOW	38		2 GAL.
PICEA SITCHENSIS / SITKA SPRUCE*	76		2 GAL.
SALIX SITCHENSIS / SITKA WILLOW	38		2 GAL.
SHRUBS (600)			
CORNUS SERICEA / RED-OSIER DOGWOOD	150	6' O.C.	1 GAL.
ROSA NUTKANA / NOOTKA ROSE	150		1 GAL.
RUBUS SPECTABILIS / SALMONBERRY	150		1 GAL.
PHYSOCARPUS CAPITATUS/ PACIFIC NINEBARK	150		1 GAL.
GROUNDCOVER (3600)			
*ALL SPECIES TO BE SPACED TRIANGULARLY			
ATHYRIUM FILIX-FEMINA/ LADY FERN (NO INUNDATION)	1160	24" O.C.	1 GAL.
TOLMIEA MENZIESII / PIGGYBACK PLANT (NO INUNDATION)	1160		1 GAL.
SCIRPUS MICROCARPUS / SMALL FRUITED BULRUSH	1160		1 GAL.
CAREX OBNUPTA/ SLOUGH SEDGE (BACKWATER AREAS)	1160		1 GAL.

(PLANT BY SPECIES IN ODD GROUPS OF 9-15)

BUFFER ENHANCEMENT PLANTING TYPICAL

TOTAL AREA = 13,435

TREES (48)	QTY	SPACING	SIZE
PSEUDOTSUGA MENZIESII / DOUGLAS-FIR	26	9' O.C.	2 GAL.
THUJA PLUCATA / WESTERN RED CEDAR	26		2 GAL.
ARBUTUS MENZIESII / PACIFIC MADRONE (PLANT NEXT TO DOUGLAS-FIR)	26		2 GAL.
PRUNUS EMARGINATA / BITTER CHEERY	26		2 GAL.
SALIX SCOULERIANA / SCOULER'S WILLOW	26		2 GAL.
ACER MACROPHYLLUM / BIG LEAF MAPLE (AWAY FROM ACCESS DRIVE)	26		2 GAL.
SHRUBS (240)			
RUBUS SPECTABILIS / SALMONBERRY	70	6' O.C.	1 GAL.
SYMPHORICARPUS ALBUS / SNOWBERRY	70		1 GAL.
OEMLERIA CERASIFORMIS / OSOBERRY	70		1 GAL.
MAHONIA NERVOSA / LOW OREGON GRAPE	70		1 GAL.
MAHONIA AQUIFOLIUM / TALL OREGON GRAPE	70		1 GAL.
ACER CIRCINATUM / VINE MAPLE	70		1 GAL.
GROUNDCOVER (3290)			
*ALL SPECIES TO BE SPACED TRIANGULARLY			
POLYSTICHUM MUNITUM / SWORD FERN	1640	24" O.C.	1 GAL.
BLECHNUM SPICANT / DEER FERN	1640		1 GAL.

(PLANT BY SPECIES IN ODD GROUPS OF 9-15)

PLANTING PLAN & SCHEDULE
 SCALE: 1" = 40'



SUBMITTALS & REVISIONS

NO.	DATE	DESCRIPTION	BY
1	04-18-2018	MITIGATION PLAN	LM
2	12-03-2018	RESPONSE TO CITY COMMENTS	LM

GENERAL NOTES:

SHEET SIZE:
 ORIGINAL PLAN IS 24" X 36".
 SCALE ACCORDINGLY.

PROJECT MANAGER: JC
 DESIGNED: LM
 DRAFTED: LM
 CHECKED: JC / AM
 JOB NUMBER:
 111103.11
 SHEET NUMBER:
W5 OF 7

MITIGATION PLAN NOTES

MITIGATION AND MONITORING NOTES

EXECUTIVE SUMMARY

PSE'S ENERGIZE EASTSIDE PROJECT (THE PROJECT) PROPOSES TO UPGRADE EXISTING TRANSMISSION LINES IN SOUTH BELLEVUE IN ORDER TO INCREASE TRANSMISSION SYSTEM CAPACITY TO 230KV POWER. PROJECT ELEMENTS, EXISTING CONDITIONS, MITIGATION SEQUENCING, AND PROJECT IMPACTS TO CRITICAL AREAS ARE DISCUSSED IN THE REVISED CITY OF BELLEVUE CRITICAL AREAS REPORT: PUGET SOUND ENERGY-ENERGIZE EASTSIDE PROJECT SOUTH BELLEVUE SEGMENT (SOUTH BELLEVUE CAR) PREPARED BY THE WATERSHED COMPANY, DECEMBER 2018. THIS MITIGATION PLAN IS INTENDED TO REPRESENT THE FINAL RICHARDS CREEK SUBBASIN MITIGATION PLAN REFERENCED IN THE SOUTH BELLEVUE CAR. IT HAS BEEN DESIGNED TO APPROPRIATELY MITIGATE FOR PROJECT IMPACTS OCCURRING IN WETLANDS AND WETLAND AND STREAM BUFFERS IN THE RICHARDS CREEK SUBBASIN, AS DESCRIBED IN THE SOUTH BELLEVUE CAR AND REQUIRED BY THE BELLEVUE MUNICIPAL CODE (BMC). A SEPARATE MITIGATION PLAN IS PROPOSED FOR PROJECT IMPACTS OCCURRING IN THE COAL CREEK BASIN.

PROPOSED PROJECT ACTIVITIES IMPACT WETLANDS AND BUFFERS IN ONE OF FOUR WAYS: PERMANENT FILL RESULTING FROM DEVELOPMENT OF THE RICHARDS CREEK SUBSTATION AND TRANSMISSION POLE INSTALLATION/REPLACEMENT (PERMANENT), PERMANENT VEGETATION CONVERSION FROM A FORESTED VEGETATION TYPE DUE TO VEGETATION MANAGEMENT REQUIREMENTS (CONVERSION), DEVELOPMENT OF AN ALREADY IMPACTED, NON-FUNCTIONAL BUFFER AREA (REDEVELOPMENT), AND TEMPORARY IMPACTS ASSOCIATED WITH CONSTRUCTION ACTIVITIES (TEMPORARY). PERMANENT AND CONVERSION BUFFER IMPACTS REQUIRE MITIGATION AS SUMMARIZED IN THE TABLE BELOW.

IMPACTS and COMPENSATORY MITIGATION						
Critical Area Name	Category	Type of Impact	Quantity (SF)	Mitigation Ratio	Mitigation Required (SF)	Amount (SF) and Location of Mitigation Proposed ²
Wetlands						
Wetland A	III	Conversion	9,945	2:1	19,890	19,890 Wetland A
Wetland A	III	Permanent	397	4:1	1,588	1,588 Wetland A
Wetland B	III	Permanent	2,060	4:1	8,240	3,587 Wetland A 4,653 Wetland D
Wetland D	II	Conversion	100	3:1	300	300 Wetland D
Wetland D	II	Permanent	41	6:1	246	246 Wetland D
Wetland H	III	Conversion	73	2:1	146	146 Wetland D
Wetland H	III	Permanent	77	4:1	308	308 Wetland D
					TOTAL	30,718
Buffers						
Combined Buffers	N/A	Permanent	23,893	1:1	23,893	23,893 Combined Wetland A/Wetland D/Stream C buffer
Combined Buffers	N/A	Conversion	22,886	0.5:1	11,443	11,443 Combined Wetland A/Wetland D/Stream C buffer
Combined Buffers	N/A	Redevelopment ³	47,512 ³	N/A ³	0 ³	NA
					TOTAL	35,336
ADDITIONAL RESTORATION (not required to mitigate impacts)						
Critical Area Name	Category	Type of Activity	Quantity (SF)	Description		
Stream C	N/A	Restoration (Realignment) ⁴	3,557	New stream channel		
Wetland A	III	Enhancement	6,215	Area between new and old stream channel, outside of grading boundaries		
Wetland D	II	Enhancement	11,160	Area of Wetland D outside of stream project grading boundaries		

- Only activities resulting in a long-term change are included. Temporary impacts will be restored in place and are not shown in this table.
- All wetland mitigation proposed is wetland enhancement.
- This buffer area is already developed and is considered non-functioning; therefore, no mitigation is required.
- Existing stream channel will be abandoned (not filled) with stream restoration/realignment activities.

MITIGATION FOR IMPACTS, PRESENTED IN THE TABLE ABOVE, IS PLANNED ON THE RICHARDS CREEK SUBSTATION SITE. AS DISCUSSED IN THE SOUTH BELLEVUE CAR, THIS LOCATION WAS SELECTED FOR MITIGATION ACTIVITIES BASED UPON THE LOCATION OF PROJECT IMPACTS, OPPORTUNITY PRESENT, PROPERTY OWNERSHIP, AND PROXIMITY TO OTHER REGULATED CRITICAL AREAS.

THIS FINAL MITIGATION PLAN PROPOSES TO COMPENSATE FOR PROJECT IMPACTS THROUGH WETLAND AND WETLAND BUFFER ENHANCEMENT IN AND ADJACENT TO WETLANDS A AND D AND A PROPOSED REALIGNED TRIBUTARY TO RICHARDS CREEK. THESE MITIGATION ACTIVITIES ARE INTENDED TO INCREASE NATIVE PLANT COVER, DECREASE INVASIVE SPECIES PREVALENCE, IMPROVE NATIVE SPECIES DIVERSITY, AND PROVIDE FOOD AND OTHER HABITAT RESOURCES FOR WILDLIFE. ADDITIONAL, NON-COMPENSATORY ENHANCEMENT IS ALSO PROPOSED IN WETLANDS A AND D, ABOVE WHAT IS REQUIRED TO MITIGATE PROJECT IMPACTS.

THE PLAN INCLUDES A COMPREHENSIVE FIVE-YEAR MAINTENANCE AND MONITORING PLAN, DETAILED BELOW. THESE SPECIFICATIONS AND STANDARDS WILL ENSURE THAT ENHANCEMENT PLANTINGS WILL BE MAINTAINED, MONITORED, AND SUCCESSFULLY ESTABLISHED WITHIN THE FIRST FIVE YEARS FOLLOWING IMPLEMENTATION.

GOALS

- ENHANCE THE UNNAMED TRIBUTARY OF RICHARDS CREEK (STREAM C) BY ESTABLISHING A NEW CHANNEL WITH IMPROVED HABITAT FEATURES AND FUNCTIONAL RIPARIAN BUFFER.
- ENHANCE APPROXIMATELY 30,718 SF OF WETLAND AREA ALONG THE NEW STREAM CHANNEL AND ELSEWHERE IN WETLANDS A AND D TO MITIGATE FOR PROJECT IMPACTS.
- ENHANCE APPROXIMATELY 35,336 SF OF COMBINED WETLAND/STREAM BUFFER AREA TO MITIGATE FOR PROJECT IMPACTS.

- ENHANCE AN ADDITIONAL 6,215 SQUARE FEET OF WETLAND A, OUTSIDE OF THE STREAM PROJECT AREA AND MAINTAIN WETLAND HYDROLOGIC FUNCTION IN THIS AREA.
- ENHANCE AN ADDITIONAL 11,160 SQUARE FEET OF WETLAND D, OUTSIDE OF THE STREAM PROJECT AREA.
- CREATE A DENSE, NATIVE, TREE AND SHRUB COMMUNITY THROUGHOUT RESTORED AREAS OF THE SITE WHICH ARE COMPATIBLE WITH THE POWERLINE INFRASTRUCTURE WHERE APPROPRIATE.

PERFORMANCE STANDARDS

THE FOLLOWING PERFORMANCE STANDARDS WILL BE USED TO GAUGE THE SUCCESS OF THE PROJECT OVER TIME. IF ALL PERFORMANCE STANDARDS HAVE BEEN SATISFIED BY THE END OF YEAR FIVE, THE PROJECT SHALL BE CONSIDERED COMPLETE.

- SURVIVAL STANDARDS:
 - 100% SURVIVAL OF INSTALLED PLANTINGS IN ALL AREAS AT THE END OF YEAR 1. THIS STANDARD MAY BE MET THROUGH ESTABLISHMENT OF INSTALLED PLANTS OR BY REPLANTING AS NECESSARY TO ACHIEVE THE REQUIRED NUMBERS.
 - 80% SURVIVAL OF INSTALLED PLANTINGS IN ALL AREAS AT THE END OF YEAR 2. THIS STANDARD MAY BE MET THROUGH ESTABLISHMENT OF INSTALLED PLANTS OR BY REPLANTING AS NECESSARY TO ACHIEVE THE REQUIRED NUMBERS.
 - SURVIVAL BEYOND YEAR 2 IS DIFFICULT TO TRACK. THEREFORE, A DIVERSITY STANDARD SHALL BE IMPLEMENTED.
 - ESTABLISHMENT OF AT LEAST TWO NATIVE TREE SPECIES, FOUR NATIVE SHRUB SPECIES AND TWO NATIVE EMERGENT SPECIES IN PLANTING AREAS.
 - ESTABLISHMENT OF A HYDRIC PLANT COMMUNITY IN ALL PLANTED WETLAND AREAS. THE COMBINATION OF INSTALLED AND VOLUNTEER PLANTS SHALL HAVE A WETLAND INDICATOR STATUS OF FAC OR WETTER.
- NATIVE VEGETATION COVER STANDARDS:
 - ACHIEVE 60% AERIAL COVER OF NATIVE WOODY VEGETATION BY THE END OF YEAR 3. NATIVE VOLUNTEERS MAY COUNT TOWARDS THIS STANDARD.
 - ACHIEVE 80% AERIAL COVER OF NATIVE WOODY VEGETATION BY THE END OF YEAR 5. NATIVE VOLUNTEERS MAY COUNT TOWARDS THIS STANDARD.
- INVASIVE SPECIES COVER STANDARD:
 - NO MORE THAN 10% AERIAL COVER OF NON-NATIVE, INVASIVE SPECIES IN ANY PLANTING AREA IN ANY MONITORING YEAR.
- WETLAND HYDROLOGY STANDARD (NON COMPENSATORY WETLAND A ENHANCEMENT AREA ONLY):
 - EVIDENCE OF WETLAND HYDROLOGY IN WETLAND AREAS DURING THE GROWING SEASON OF EACH MONITORING YEAR. HYDROLOGY TO BE MEASURED BY SHALLOW GROUNDWATER WELLS AS DESCRIBED IN THE MONITORING METHODS SECTION OF THIS PLAN SET.
- STREAM CHANNEL STANDARDS:
 - STREAM BANK STABILITY: ANY BANK EROSION OR INSTABILITY FROM THE PREVIOUS WET SEASON IS TO BE SHALLOW AND LIMITED TO LESS THAN 5% OF RESTORED STREAM BANK LENGTH PER REACH AS DETERMINED BY FISHERIES BIOLOGIST VISUAL INSPECTION. THIS STANDARD MAY INCLUDE AN ADDITIONAL 5% IN STAGES OF RECOVERY AND PARTIALLY REVEGETATED FROM PREVIOUS YEARS.
 - IN-STREAM LOG STRUCTURE STABILITY AND FUNCTION: IN-STREAM WOODY DEBRIS TO REMAIN ANCHORED DURING THE MONITORING PERIOD. AT LEAST ½ OF LOG STRUCTURES TO SHOW POSITIVE HYDRAULIC FUNCTION (MAINTENANCE OF POOLS, BANK TOE PROTECTION AND HABITAT COVER, TAIL OUT GRAVEL, ETC.) AS DETERMINED BY FISHERIES BIOLOGIST VISUAL INSPECTION.
 - STREAM CHANNEL CAPACITY: CHANNEL CROSS SECTIONS TO REMAIN FREE OF SIGNIFICANT FLOOD OBSTRUCTIONS AS SCREENED BY FISHERIES BIOLOGIST VISUAL INSPECTION. QUESTIONABLE OBSTRUCTIONS MAY NEED ADDITIONAL CONSULTATION WITH A PROFESSIONAL ENGINEER AS NEEDED FOR ASSESSMENT.

MAINTENANCE

THE SITE SHALL BE MAINTAINED IN ACCORDANCE WITH THE FOLLOWING INSTRUCTIONS FOR FIVE YEARS FOLLOWING SUCCESSFUL COMPLETION OF THE CONSTRUCTION.

- REPLACE EACH PLANT FOUND DEAD IN YEAR ONE.
- FOLLOW THE RECOMMENDATIONS NOTED IN THE PREVIOUS MONITORING SITE VISIT'S REPORT.
- GENERAL WEEDING FOR ALL PLANTED AREAS:
 - AT LEAST TWICE ANNUALLY, REMOVE COMPETING GRASSES AND WEEDS FROM AROUND THE BASE OF EACH INSTALLED PLANT TO A RADIUS OF 12 INCHES. WEEDING SHOULD OCCUR AT LEAST ONCE IN THE SPRING AND ONCE IN THE SUMMER. THOROUGH WEEDING WILL RESULT IN LOWER PLANT MORTALITY AND ASSOCIATED PLANT REPLACEMENT COSTS.
 - MORE FREQUENT WEEDING MAY BE NECESSARY DEPENDING ON WEED CONDITIONS THAT DEVELOP AFTER PLANT INSTALLATION.
 - NOXIOUS WEEDS MUST BE REMOVED FROM THE ENTIRE MITIGATION AREA, AT LEAST TWICE ANNUALLY.
 - DO NOT USE STRING TRIMMERS IN THE VICINITY OF INSTALLED PLANTS, AS THEY MAY DAMAGE OR KILL THE PLANTS.
- MAINTAIN A FOUR-INCH-THICK LAYER OF WOODCHIP MULCH ACROSS THE ENTIRE PLANTING AREA OUTSIDE THE OHWM. MULCH SHOULD BE PULLED BACK TWO INCHES FROM THE PLANT STEMS.
- INSPECT AND REPAIR THE IRRIGATION SYSTEM AS NECESSARY EACH SPRING. DURING AT LEAST THE FIRST TWO GROWING SEASONS, MAKE SURE THAT THE ENTIRE PLANTING AREA RECEIVES A MINIMUM OF ONE INCH OF WATER PER WEEK FROM JUNE 1ST THROUGH SEPTEMBER 30TH.
- REMOVE TRASH AND DEBRIS FROM THE PLANTING AREAS.

MONITORING METHODS

THE MONITORING PROGRAM IS DESIGNED TO TRACK THE SUCCESS OF THE MITIGATION PLAN OVER TIME BY MEASURING THE DEGREE TO WHICH THE PLAN IS MEETING THE PERFORMANCE STANDARDS LISTED ABOVE. PRIOR TO THE COMMENCEMENT OF THE MONITORING PHASE, AN AS-BUILT PLAN DOCUMENTING THE SUCCESSFUL INSTALLATION OF THE PROJECT WILL BE SUBMITTED TO THE CITY OF BELLEVUE AND OTHER PERMITTING AGENCIES AS REQUESTED. IF NECESSARY, THE AS-BUILT REPORT MAY INCLUDE A MARK-UP OF THE ORIGINAL PLAN THAT NOTES ANY SIGNIFICANT CHANGES OR SUBSTITUTIONS THAT OCCURRED. DURING THE AS-BUILT INSPECTION, THE **RESTORATION SPECIALIST** WILL ESTABLISH AT LEAST FOUR PERMANENT PHOTO-POINTS, BASELINE PLANT INSTALLATION QUANTITIES, AND TRANSECTS AS DETAILED BELOW.

TRANSECTS:

DURING THE AS-BUILT INSPECTION, THE **RESTORATION SPECIALIST** SHALL INSTALL A SUFFICIENT NUMBER OF REPRESENTATIVELY LOCATED 100-FOOT TRANSECTS IN THE RESTORATION PLANTING AREAS TO ADEQUATELY MEASURE THE VEGETATION PERFORMANCE STANDARDS BELOW. PERCENT COVER DATA SHALL BE RECORDED ALONG ESTABLISHED TRANSECTS USING THE LINE INTERCEPT METHOD.

HYDROLOGY:

HYDROLOGY MONITORING WILL OCCUR IN THE SPRING OF EACH YEAR. HYDROLOGY SHALL BE MONITORED USING AT LEAST THREE SHALLOW GROUNDWATER WELLS IN THE NON COMPENSATORY WETLAND A ENHANCEMENT AREA. WELLS SHALL BE CONSTRUCTED OF 24-INCH LENGTHS OF 2-INCH DIAMETER PVC PIPE. THE LOWER 18 INCHES SHALL BE PERFORATED WITH A SERIES OF 1/4-INCH HOLES. WELLS WILL BE INSTALLED TO A DEPTH OF 18 INCHES. EACH WELL SHALL BE FITTED WITH A PIPE END FITTING CAP. HYDROLOGY WELLS SHALL BE MONITORED WEEKLY IN MARCH FOR THE FIRST TWO YEAR FOLLOWING AS-BUILT ACCEPTANCE.

YEARLY MONITORING:

THE SITE WILL BE MONITORED TWICE ANNUALLY FOR FIVE YEARS BEGINNING WITH APPROVAL OF THE AS-BUILT REPORT. DURING EACH YEAR THERE SHALL BE A SPRING VISIT AND A SUMMER OR EARLY FALL VISIT. THE SPRING MONITORING VISIT WILL ADDRESS MAINTENANCE NEEDS SUCH AS PLANT REPLACEMENT AND WEEDING. THE RESTORED STREAM CHANNEL AND IN-STREAM HABITAT FEATURES INCLUDING LOG STRUCTURES WILL ALSO BE INSPECTED IN THE SPRING VISIT TO IDENTIFY ANY MAINTENANCE OR REPAIRS THAT WOULD NEED TO BE DONE DURING THE UPCOMING LOW-FLOW SEASON, WHEN ANY NEEDED IN-STREAM WORK COULD BE AUTHORIZED. STREAM CHANNEL, STREAM BANK, AND LOG STRUCTURE FUNCTIONING WOULD BE ASSESSED. EXAMPLES OF NEEDED STREAM CHANNEL MAINTENANCE OR REPAIR MIGHT INCLUDING STABILIZING ANY ERODING STREAM BANKS OR SECURING ANY LOGS WHOSE ANCHORING MAY HAVE BECOME COMPROMISED.

FOLLOWING THE SPRING VISIT, THE **RESTORATION SPECIALIST** WILL NOTIFY THE RESPONSIBLE PARTY AND/OR MAINTENANCE CREWS OF NECESSARY MAINTENANCE. THE SECOND ANNUAL VISIT WILL OCCUR JULY 1ST TO SEPTEMBER 15TH AND WILL RECORD QUANTITATIVE ASSESSMENT OF THE SITE'S PROGRESS. A REPORT DETAILING THE FINDINGS OF SUMMER MONITORING WILL BE SUBMITTED ANNUAL TO THE CITY, US ARMY CORPS (NWS.COMPLIANCE@USACE.ARMY.MIL), AND WASHINGTON DEPARTMENT OF ECOLOGY AND WILL CONTAIN THE FOLLOWING:

- GENERAL SUMMARY OF SITE CONDITIONS.
- COUNTS OF LIVE PLANTINGS BY SPECIES (YEARS ONE AND TWO ONLY)
- PERCENT COVER OF NATIVE WOODY SPECIES, DETERMINED USING THE LINE INTERCEPT METHOD ALONG ESTABLISHED TRANSECTS.
- PERCENT COVER OF INVASIVE SPECIES USING THE LINE INTERCEPT METHOD ALONG ESTABLISHED TRANSECTS.
- NOTES ON INVASIVE WEEDS OUTSIDE OF ESTABLISHED TRANSECTS.
- PHOTOGRAPHS FROM FIXED PHOTO-POINTS ESTABLISHED DURING THE AS-BUILT INSPECTION.
- ANY EVIDENCE OF WILDLIFE USAGE IN THE MITIGATION AREA.
- REPORT ON CONDITION OF PLACED LARGE WOODY DEBRIS.
- INTRUSIONS INTO THE PLANTING AREAS, VANDALISM OR OTHER ACTIONS THAT IMPAIR THE INTENDED FUNCTIONS OF THE MITIGATION AREAS.
- RECOMMENDATIONS FOR MAINTENANCE OR REPAIRS.

CONTINGENCIES

UNFORESEEN PROJECT CONDITIONS MAY REQUIRE CHANGES IN VEGETATION LAYOUT, DENSITY/SPACING, AND SPECIES SUBSTITUTIONS. WEED CONDITIONS MAY REQUIRE ALTERATION OF INSTALLED VEGETATION TYPES, MULCH PLACEMENT, WEED REMOVAL AND USE OF HERBICIDES. MINOR HAND WORK TO IMPROVE OR RETARD DRAINAGE MAY BE NEEDED TO SUPPORT WETLAND HYDROLOGY. SUCH WORK WILL BE COORDINATED DIRECTLY WITH THE CITY OF BELLEVUE.

UNPREDICTABLE EVENTS SUCH AS OBSTRUCTIONS OR HIGH-FLOWS FROM LARGE STORMS MAY NECESSITATE EROSION AND HABITAT FEATURE REPAIRS. SMALL REPAIRS BY HAND WILL BE COORDINATED WITH THE CITY OF BELLEVUE. LARGER REPAIRS THAT REQUIRE EXTENSIVE MANIPULATION OR THE USE OF HEAVY MACHINERY WILL BE COORDINATED IN CONSULTATION WITH JURISDICTIONAL AGENCIES.

SHOULD THE ADDITIONAL, NON-COMPENSATORY ENHANCEMENT AREA IN WETLAND A NOT MEET WETLAND HYDROLOGY CRITERIA DURING THE FIRST TWO YEARS OF MONITORING, A PLAN TO CREATE ADDITIONAL WETLAND ONSITE WILL BE DEVELOPED TO OFFSET THE LOSS OF WETLAND FUNCTION.

SITE PROTECTION

THE MITIGATION AREA WILL BE PROTECTED BY RECORDING A NOTICE ON TITLE WITH KING COUNTY. FENCING AND SIGNS WILL BE INSTALLED ALONG THE EDGE OF THE MITIGATION AREA.

MATERIALS

- WOODCHIP MULCH:** "ARBORIST CHIPS" (CHIPPED WOODY MATERIAL) APPROXIMATELY ONE TO THREE INCHES IN MAXIMUM DIMENSION (NOT SAWDUST). THIS MATERIAL IS COMMONLY AVAILABLE IN LARGE QUANTITIES FROM ARBORISTS OR TREE-PRUNING COMPANIES. THIS MATERIAL IS SOLD AS "ANIMAL- FRIENDLY HOG FUEL" AT PACIFIC TOPSOILS [(800) 884-7645]. MULCH SHALL NOT CONTAIN APPRECIABLE QUANTITIES OF GARBAGE, PLASTIC, METAL, SOIL, AND DIMENSIONAL LUMBER OR CONSTRUCTION/DEMOLITION DEBRIS. APPROX. QUANTITY REQUIRED: 60 CUBIC YARDS.
- COMPOST:** CEDAR GROVE COMPOST OR EQUIVALENT "COMPOSTED MATERIAL" PER WASHINGTON ADMIN. CODE 173-350-220. QUANTITY REQUIRED: 35 CUBIC YARDS
- FERTILIZER:** SLOW-RELEASE, PHOSPHOROUS-FREE GRANULAR FERTILIZER. MOST COMMERCIAL NURSERIES CARRY THIS PRODUCT. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR USE. KEEP FERTILIZER IN WEATHER-TIGHT CONTAINER WHILE ON-SITE. FERTILIZER IS ONLY TO BE APPLIED IN YEARS TWO AND THREE, NOT IN YEAR ONE.
- RESTORATION SPECIALIST:** QUALIFIED PROFESSIONAL ABLE TO EVALUATE AND MONITOR THE CONSTRUCTION OF ENVIRONMENTAL RESTORATION PROJECTS.
- FERTILIZER (FOR NEAR AQUATIC ENVIRONMENTS):** SLOW-RELEASE, PHOSPHOROUS-FREE GRANULAR FERTILIZER. LABEL MUST INDICATE THAT PRODUCT IS SAFE FOR AQUATIC ENVIRONMENTS. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR USE. KEEP FERTILIZER IN WEATHER-TIGHT CONTAINER WHILE ON-SITE. FERTILIZER IS ONLY TO BE APPLIED IN YEARS TWO AND THREE, NOT IN YEAR ONE.



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BELLEVUE, WA

SUBMITTALS & REVISIONS		BY	LM
NO.	DATE	DESCRIPTION	LM
1	04-18-2018	MITIGATION PLAN	LM
2	12-03-2018	RESPONSE TO CITY COMMENTS	

GENERAL NOTES:



Know what's below.
Call before you dig.

SHEET SIZE:
ORIGINAL PLAN IS 24" X 36".
SCALE ACCORDINGLY.

PROJECT MANAGER: JC
DESIGNED: LM
DRAFTED: LM
CHECKED: JC / AM

JOB NUMBER:

111103.11

SHEET NUMBER:

W7 OF 7

MITIGATION NOTES