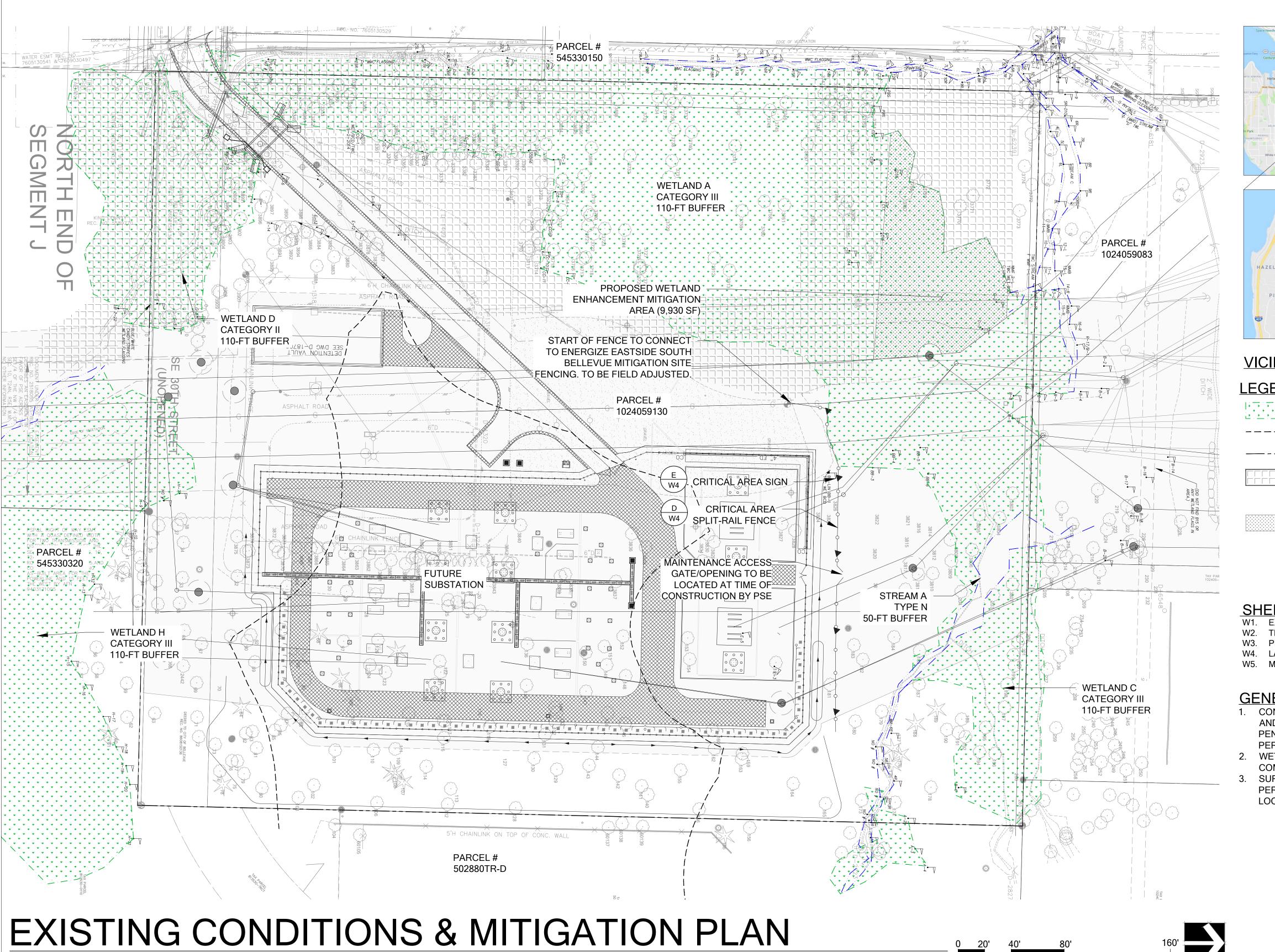
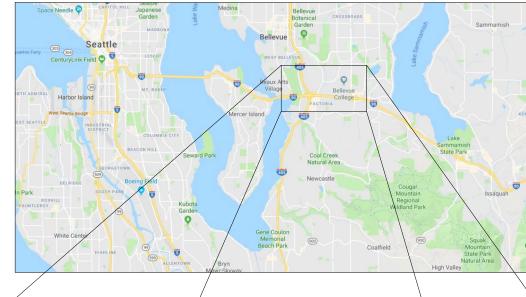
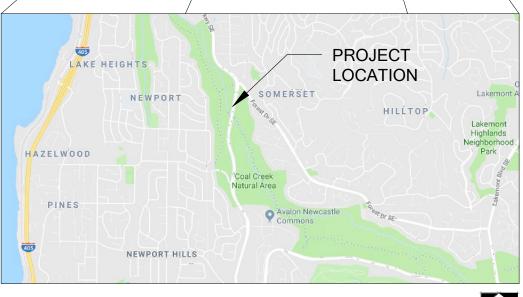
ENERGIZE EASTSIDE RICHARDS CREEK SUBSTATION









VICINITY MAPS

LEGEND

WETLAND BOUNDARY

WETLAND ENHANCEMENT (9,930 SF)

SHEET INDEX

EXISTING CONDITIONS & MITIGATION PLAN

PLANTING PLAN

LANDSCAPE CONSTRUCTION NOTES & DETAILS

MITIGATION NOTES

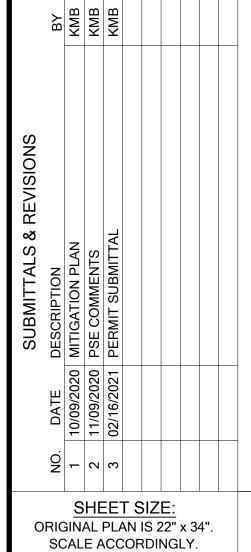
GENERAL NOTES

- CONSTRUCTION ACCESS, POLE TYPES, POLE HEIGHTS, AND POLE LOCATIONS ARE SUBJECT TO CHANGE PENDING FURTHER DESIGN, ENVIRONMENTAL REVIEW, PERMITTING AND IN-FIELD CONSTRUCTION NEEDS
- WETLANDS WERE DELINEATED BY THE WATERSHED COMPANY ON JANUARY 31, 2017 AND FEBRUARY 7, 2017
- SURVEY RECEIVED FROM APS SURVEY AND MAPPING, PERFORMED ON JANUARY 19, 2017 AND WETLAND LOCATES PERFORMED ON FEBRUARY 16, 2017.



Kirkland WA 98033

Science & Design

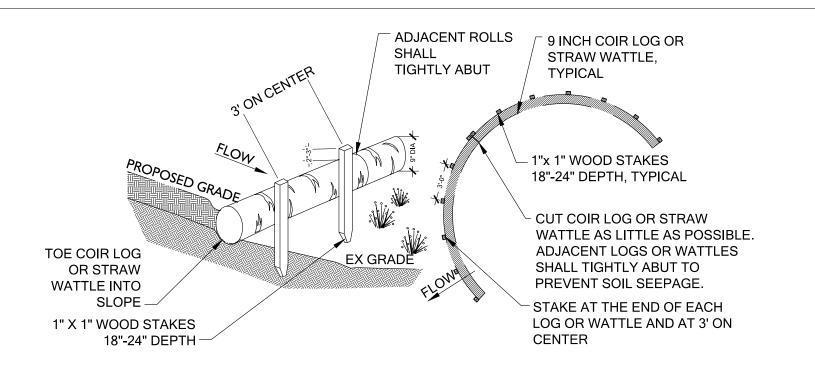


DRAFTED: CHECKED: CM/KC

JOB NUMBER: 111103.11 SHEET NUMBER:

© Copyright- The Watershed Compan

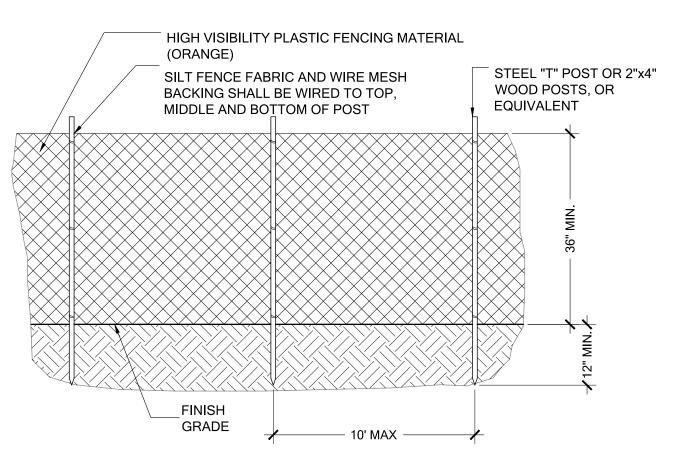
SCALE: 1" = 40'



- COIR LOG OR STRAW WATTLE SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION RELATED ACTIVITIES.
- COIR LOG OR STRAW WATTLE SHALL BE 9 INCH IN DIAMETER.
- STAKING: WOODEN STAKES ARE RECOMMENDED TO SECURE THE COIR LOG OR STRAW WATTLE. BE SURE TO USE A STAKE THAT IS LONG ENOUGH TO PROTRUDE SEVERAL INCHES ABOVE THE COIR LOG OR STRAW WATTLE: 18" IS A GOOD LENGTH FOR HARD, ROCKY SOIL; FOR SOFT LOAMY SOIL
- 4. WHEN INSTALLING RUNNING LENGTHS OF COIR LOG OR STRAW WATTLE, BUTT THE SECOND LOG TIGHTLY AGAINST THE FIRST; DO NOT OVERLAP THE
- WATTLE, BUT CLOSE ENOUGH TO HOLD IT IN PLACE. LEAVE 2 3 INCHES OF THE STAKE PROTRUDING ABOVE THE COIR LOG OR STRAW WATTLE. A HEAVY SEDIMENT LOAD WILL TEND TO PICK UP THE COIR LOG OR STRAW WATTLE AND COULD PULL IT OFF THE STAKES IF THEY ARE DRIVEN DOWN
- OR STRAW WATTLE ON SLOPES, DRIVE THE STAKES PERPENDICULAR TO THE SLOPE. DRIVE THE FIRST END STAKE OF THE SECOND COIR LOG OR



SCALE: NTS

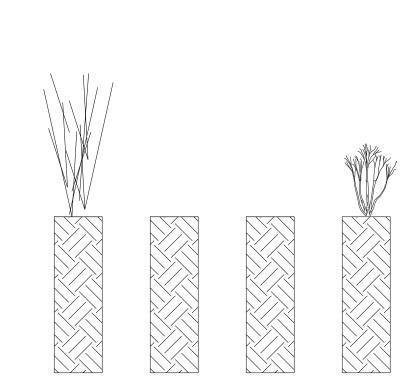


- 1. DO NOT NAIL OR STAPLE FENCE TO EXISTING TREES OR UTILITY POLES.
- 2. ANY DAMAGE TO THE FENCE SHALL BE REPAIRED IMMEDIATELY.



HIGH VISIBILITY FENCE

SCALE: NTS



PLANTING AREA PREPARATION

REMOVE INVASIVE SPECIES. WORK WITHIN ROOT ZONES OF EXISTING TREES AND SHRUBS SHALL BE DONE BY HAND. ALL OTHER WORK SHALL BE DONE BY MACHINERY WITH NON-COMPACTING TIRES/TREAD, OR BY HAND. SOIL SHALL NOT BE LEFT BARE FOR MORE THAN 7 DAYS.

REMOVED INVASIVE SPECIES AGAIN WITHIN ONE WEEK OF PLANTING

INSTALL PLANTS. (SEE PLANTING DETAIL ON SHEET W4.)

STEP 1 STEP 2

SOIL PREPARATION AREA 1 SEQUENCE OF WORK - NOT TO SCALE

SILT FÉNCE INSTALLED AS PART OF RICHARDS CREEK SUBSTATION MITIGATION PLAN. SHOULD REMAIN IN PLACE FOR-DURATION OF ALL RESTORATION WORK TO TAKE PLACE AS PART OF THE ENERGIZE EASTSIDE PROJECT. **LEGEND** → → → | WETLAND BOUNDARY ---- WETLAND BUFFER — - - — PROPERTY BOUNDARY SOIL PREP 1 (9,930 SF) ○ COIR WATTLE (200 LF) — HIGH VISIBILITY FENCE (70 LF) (LIMITS OF WORK) — SILT FENCE, SEE ENERGIZE EASTSIDE SOUTH BELLEVUE MITIGATION AND RESTORATION AREA DRAWINGS. (17-120557-LO)

750 Sixth Street South

Kirkland WA 98033

p 425.822.5242

www.watershedco.com

Science & Design

KMB KMB KMB KMB

SHEET SIZE:

ORIGINAL PLAN IS 22" x 34". SCALE ACCORDINGLY.

KMB

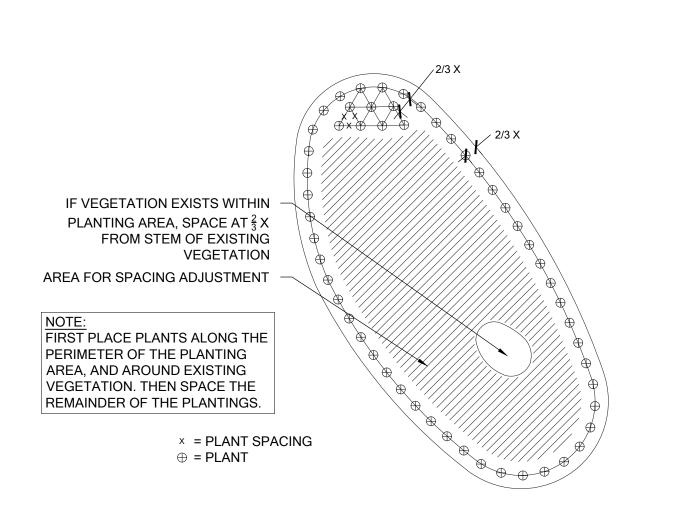
PROJECT MANAGER: NL **DESIGNED:** DRAFTED: CHECKED: CM/KC JOB NUMBER:

111103.11 SHEET NUMBER:

TESC PLAN

SCALE: 1" = 20'

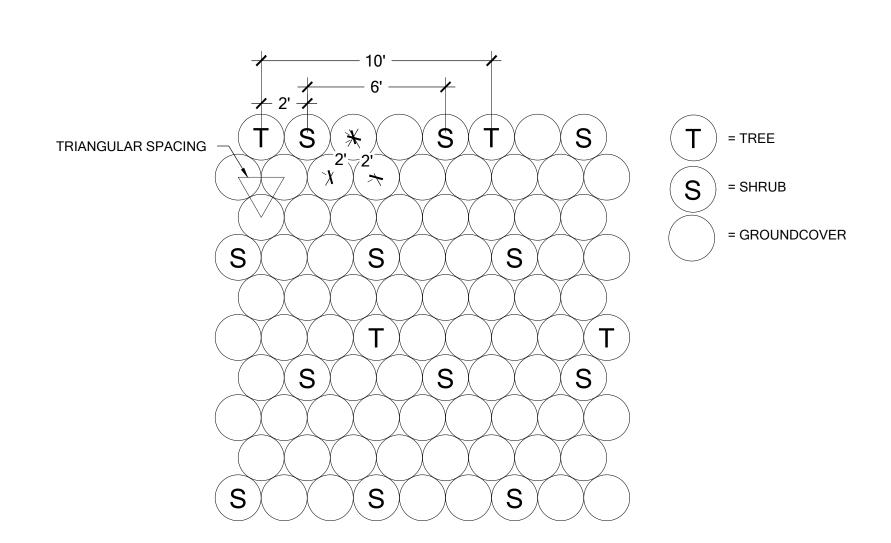
© Copyright- The Watershed Company

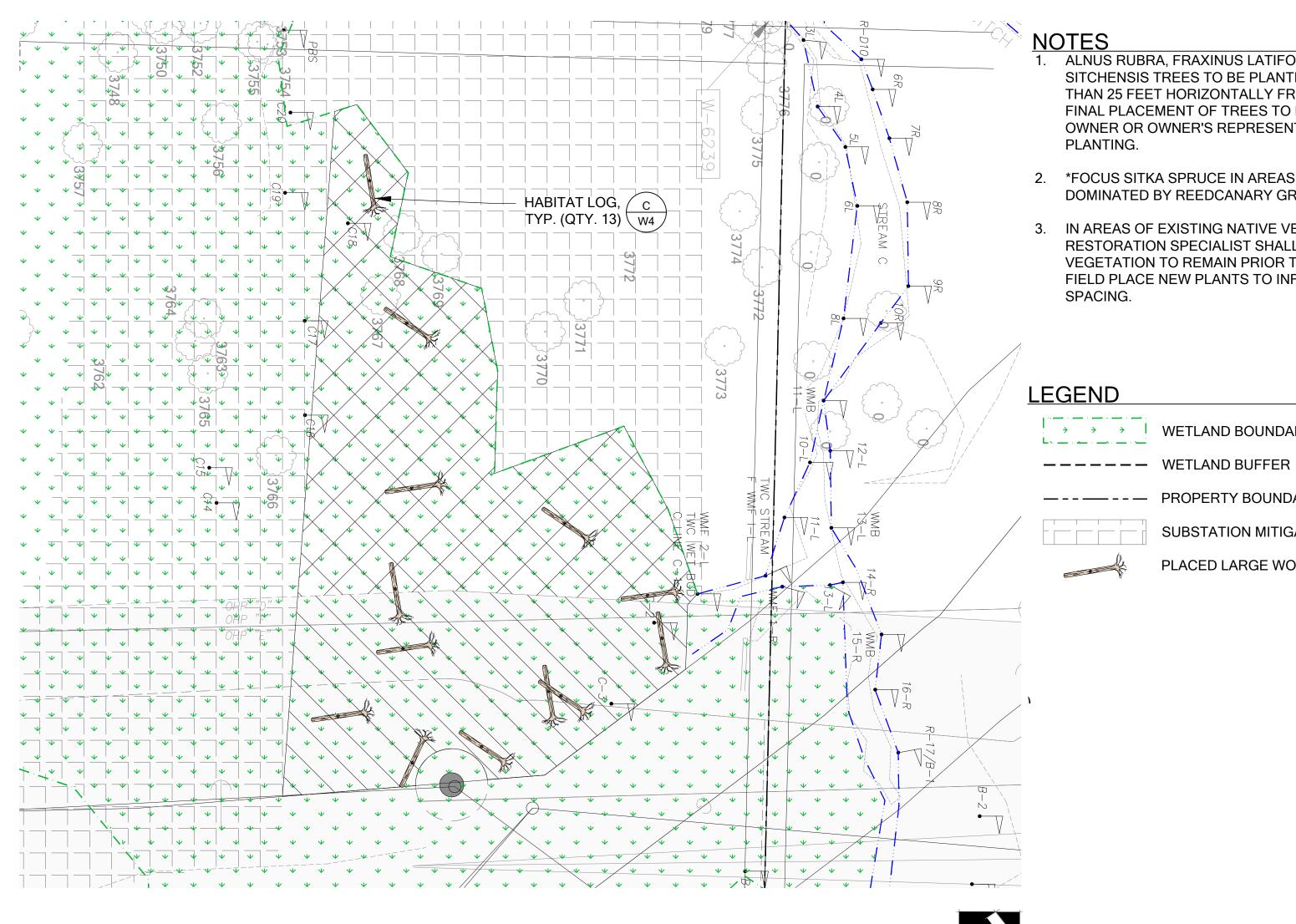


PLANT SCHEDULE					
PLANT SPECIES / SPACING	PLANTING AREA QUANTITY				
	WETLAND ENHANCEMENT	WETLAND ENHANCEMENT (R.O.W)	TOTAL QTY	SIZE	REMARKS
SQUARE FEET	5,940 SF	3,990 SF	9,930 SF		
TREES / @10 FT O.C.					
ALNUS RUBRA	22		22	2 GAL.	
FRAXINUS LATIFOLIA	22		22	2 GAL.	
PICEA SITCHENSIS*	22		22	2 GAL.	SEE NOTE 2
SALIX SITCHENSIS	22		22	2 GAL.	
SHRUBS / @6 FT O.C.					
CORNUS SERICEA	48	32	80	1 GAL.	
PHYSOCARPUS CAPITATUS	48	32	80	1 GAL.	
ROSA NUTKANA	48	32	80	1 GAL.	
RUBUS SPECTABILIS	48	32	80	1 GAL.	
GROUNDCOVERS / @24-I	NCH O.C.				ALL SPECIES TO BE SPACED TRIANGULARLY
ATHYRIUM FILIX-FEMINA	360	270	630	1 GAL.	PLANT BY SPECIES IN ODD NUMBER GROUPS OF 9-15
CAREX OBNUPTA	360	270	630	1 GAL.	PLANT BY SPECIES IN ODD NUMBER GROUPS OF 9-15
SCIRPUS MICROCARPUS	360	270	630	1 GAL.	PLANT BY SPECIES IN ODD NUMBER GROUPS OF 9-15
TOLMIEA MENZIESII	360	270	630	1 GAL.	PLANT BY SPECIES IN ODD NUMBER GROUPS OF 9-15
TOTAL	1,720	1,208	2,928		

PLANT SPACING DETAIL

Scale: NTS





- ALNUS RUBRA, FRAXINUS LATIFOLIA, AND PICEA SITCHENSIS TREES TO BE PLANTED NO CLOSER THAN 25 FEET HORIZONTALLY FROM CONDUCTOR. FINAL PLACEMENT OF TREES TO BE APPROVED BY OWNER OR OWNER'S REPRESENTATIVE PRIOR TO
- 2. *FOCUS SITKA SPRUCE IN AREAS HEAVILY DOMINATED BY REEDCANARY GRASS.
- 3. IN AREAS OF EXISTING NATIVE VEGETATION, A RESTORATION SPECIALIST SHALL IDENTIFY VEGETATION TO REMAIN PRIOR TO PLANTING. FIELD PLACE NEW PLANTS TO INFILL PER TYPICAL

→ → → WETLAND BOUNDARY

— - - — PROPERTY BOUNDARY

SUBSTATION MITIGATION

PLACED LARGE WOODY DEBRIS (13)

SHEET SIZE:

RICHARDS C EE NORTH BELL PREPARED FOR:

KMB KMB KMB KMB

750 Sixth Street South Kirkland WA 98033

p 425.822.5242 www.watershedco.com

Science & Design

ORIGINAL PLAN IS 22" x 34". SCALE ACCORDINGLY.

PROJECT MANAGER: NL DESIGNED: DRAFTED: CHECKED: CM/KC JOB NUMBER:

111103.11

SHEET NUMBER:

PLANT LAYOUT DETAIL Scale: NTS

PLANTING PLAN

SCALE: 1" = 20'

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
- 2. 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.
- 4. 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.

- 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

- 1. 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 PSE OR 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 PSE OR THE RESTORATION CONSULTANT AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION.

INSPECTION

- PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY PSE OR 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.
- PSE OR RESTORATION CONSULTANT MAY ELECT TO INSPECT PLANT MATERIALS AT THE PLACE OF GROWTH. AFTER INSPECTION AND ACCEPTANCE, PSE OR 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

- 1. PLANTS SHALL CONFORM TO SIZES SPECIFIED UNLESS SUBSTITUTIONS ARE MADE AT THE APPROVAL OF PSE OR RESTORATION CONSULTANT
- 2. 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

1. 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

- 1. PLANT MATERIALS LIST SUBMIT DOCUMENTATION TO PSE OR RESTORATION SPECIALIST 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 PSE OR RESTORATION SPECIALIST AT TIME OF **SUBMISSION**
- 2. 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 PSE OR RESTORATION SPECIALIST 48 HOURS OR MORE IN ADVANCE OF DELIVERIES SO THAT PSE OR RESTORATION SPECIALIST MAY ARRANGE FOR INSPECTION

PLANT MATERIALS

- 1. 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.
- 2. 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
- 3. 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

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

PLANT MATERIAL

GENERAL

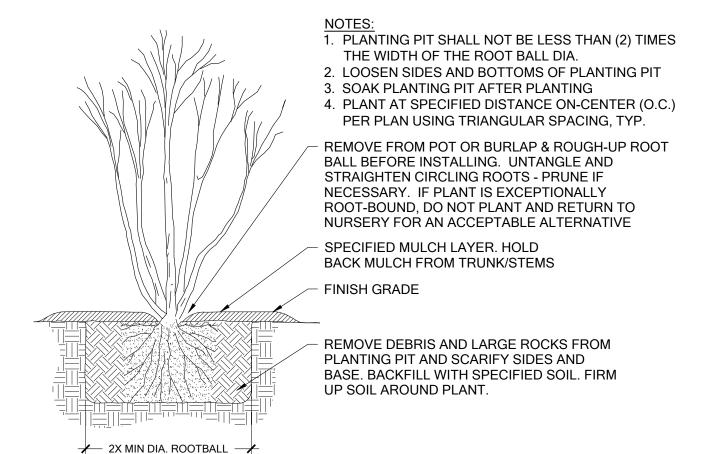
- PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES UNDER CLIMATIC CONDITIONS SIMILAR TO OR MORE SEVERE THAN THOSE OF THE PROJECT SITE.
- 2. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY OR SUBSPECIES. NO CULTIVARS OR NAMED VARIETIES SHALL BE USED UNLESS SPECIFIED AS SUCH.

QUANTITIES

SEE PLANT LIST ON ACCOMPANYING PLANS AND PLANT SCHEDULES.

ROOT TREATMENT

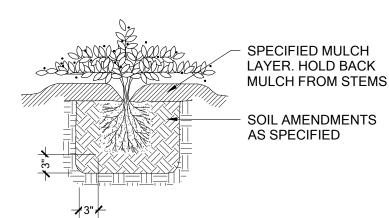
- CONTAINER GROWN PLANTS (INCLUDES PLUGS): PLANT ROOT BALLS MUST HOLD TOGETHER WHEN THE PLANT IS REMOVED FROM THE POT, EXCEPT THAT A SMALL AMOUNT OF LOOSE SOIL MAY BE ON THE TOP OF THE ROOTBALL
- 2. PLANTS MUST NOT BE ROOT-BOUND; THERE MUST BE NO CIRCLING ROOTS PRESENT IN ANY PLANT INSPECTED.
- 3. ROOTBALLS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



TREE AND SHRUB PLANTING

Scale: NTS

- PLANT GROUNDCOVER AT SPECIFIED DISTANCE ON-CENTER (O.C.) USING TRIANGULAR SPACING, TYP.
- 2. LOOSEN SIDES AND BOTTOM OF PLANTING PIT AND REMOVE DEBRIS
- LOOSEN ROOTBOUND PLANTS BEFORE
- **INSTALLING** 4. SOAK PIT BEFORE AND AFTER INSTALLING



GROUNDCOVER PLANTING

Scale: NTS

SIGNAGE TO APPEAR

SIZES NOTED ON THE

LEFT WITH A GREEN

ALUMINUM. BY A CITY

APPROVED VENDOR,

SUCH AS REDMOND

SIGNS, (425) 883-9944

PLACED ON FENCING

THE PLANS AND PER

WHERE NOTED ON

SPECIFICATIONS.

LIKE IMAGE AND

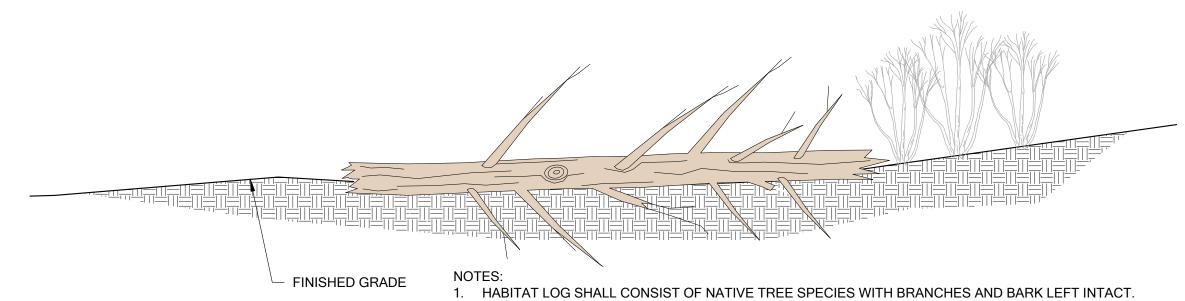
BACKGROUND. SIGN TO BE

FABRICATED IN

OR EQUIVALENT

MANUFACTURER.

SIGNAGE TO BE

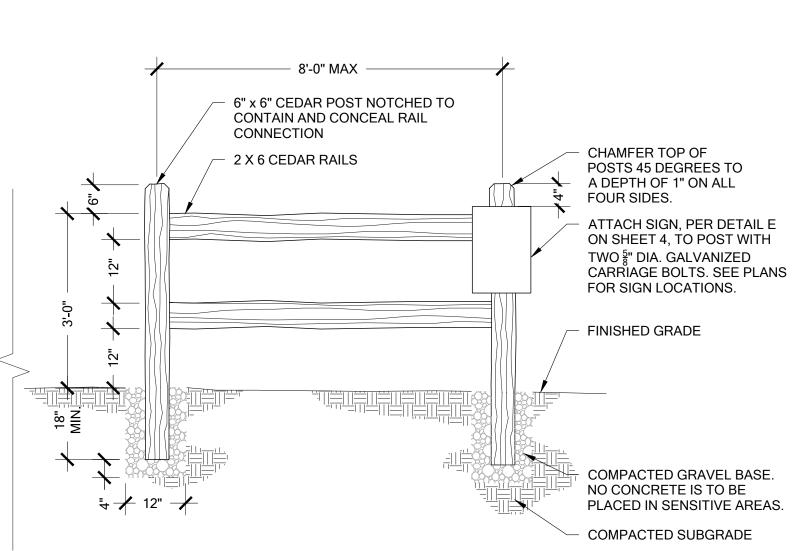


3. LAYOUT OF DETAIL IS CONCEPTUAL. SEE PLAN FOR LOCATION. LAYOUT IN FIELD WITH ASSISTANCE FROM THE CONTRACTING AGENCY

REUSE OF FELLED TREES FROM ELSEWHERE ON THE CORRIDOR IS ACCEPTABLE.

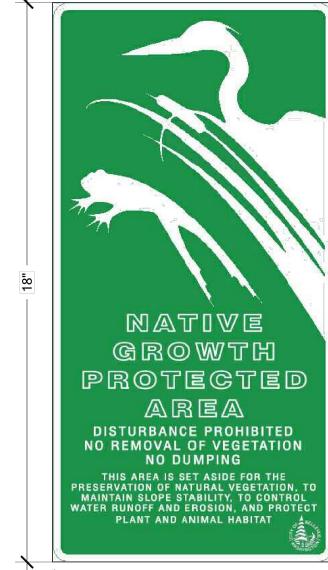
HABITAT LOG

Scale: NTS



SPLIT RAIL FENCING AND NGPA SIGN

Scale: NTS



NGPA SIGN

Scale: NTS

LANDSCAPE CONSTRUCTION NOTES & DETAILS

Kirkland WA 98033 p 425.822.5242 Science & Design

www.watershedco.com

750 Sixth Street South

 \mathcal{L} N N

OR AR RICH Ž D

CREEK

KMB KMB KMB 3 2 - 2 SHEET SIZE: ORIGINAL PLAN IS 22" x 34". SCALE ACCORDINGLY. PROJECT MANAGER: NL **DESIGNED** KMB DRAFTED: **KMB** CHECKED: CM/KC

© Copyright- The Watershed Compan

SHEET NUMBER:

111103.11

JOB NUMBER:

MITIGATION NOTES

EXECUTIVE SUMMARY

Kelsey

Wetland

Creek

PSE'S ENERGIZE EASTSIDE PROJECT (THE PROJECT) PROPOSES TO UPGRADE EXISTING TRANSMISSION LINES IN NORTH 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 NORTH BELLEVUE CRITICAL AREAS REPORT (CAR) FOR THE PROJECT (THE WATERSHED COMPANY2021)

THIS MITIGATION PLAN HAS BEEN DESIGNED TO APPROPRIATELY MITIGATE FOR PROJECT IMPACTS OCCURRING IN WETLAND AND STREAM BUFFERS IN THE RICHARDS CREEK SUBBASIN, AND A PORTION OF THE WETLAND AND STREAM BUFFER IMPACTS OCCURING IN THE KELSEY CREEK SUBBASIN, AS DESCRIBED IN THE NORTH BELLEVUE CAR AND REQUIRED BY THE BELLEVUE MUNICIPAL CODE (BMC). THE REMAINDER OF PROJECT IMPACTS NOT COVERED BY THIS PLAN WILL BE MITIGATED THROUGH USE OF A MITIGATION BANK.

PROPOSED PROJECT ACTIVITIES HAVE THE POTENTIAL TO IMPACT WETLANDS AND WETLAND/STREAM BUFFERS IN ONE OF THREE WAYS: PERMANENT FILL RESULTING FROM TRANSMISSION POLE INSTALLATION/REPLACEMENT (PERMANENT), PERMANENT VEGETATION CONVERSION FROM A FORESTED VEGETATION TYPE DUE TO VEGETATION MANAGEMENT REQUIREMENTS (CONVERSION), AND TEMPORARY IMPACTS ASSOCIATED WITH CONSTRUCTION ACTIVITIES (TEMPORARY). NO PERMANENT IMPACTS ARE PROPOSED IN WETLANDS OR STREAMS. PERMANENT IMPACT IN WETLAND AND STREAM BUFFERS IS OFFSET BY REMOVAL OF EXISTING POLES RESULTING IN A NET GAIN OF VEGETATED BUFFER AREA. CONVERSION BUFFER IMPACTS REQUIRE MITIGATION AS SUMMARIZED IN THE TABLE BELOW. TEMPORARY IMPACTS WILL BE RESTORED IN PLACE IN ACCORDANCE WITH THE PSE ENERGIZE EASTSIDE NORTH BELLEVUE TEMPORARY IMPACTS RESTORATION PLAN (THE WATERSHED COMPANY 2021) AND ARE NOT INCLUDED IN THIS TABLE.

Basin	Critical Area Name	Category	Type of Activity	Quantii (SF)	Adjusto ty Quanti (SF) ¹	ty N	Mitigation Ratio ²	Mitigatio Required (SF)
	Wetland EB20	III	Pole Removal	-30	-		-	0
	Wetland EE	IV	Conversion	840	810		3:1	2,430
Richards Creek	Combined Buffers Combined Buffers	na	Pole removal/ Installation	-280 6,820	- 6,540	<u> </u>	- 0.5:1	0 3,270
	Wetland EB02	III	Pole removal	-120	- 0,540		-	-
	Wetland EB11	II.	Conversion	2,900			6:1	17,400
	Wetland EB12	lii	Conversion	1,940			4:1	7,280
	Wetland EB13	III	Conversion	1,940	<u> </u>	-	4:1	5,840
	Wetland EB13		Conversion	800	800	'	4:1	3,200
Kelsey	Wetland EB14	III	Conversion	500	500		4:1	2,000
Creek	Wetland EB17	III	Conversion	560	560		4:1	2,240
	Combined buffers Combined buffers	na na	Pole removal/ Installation Conversion	-650 30,110	29,46	0	0.5:1	0 14,730
N . II	Wetland A (Overlake Farms)	IV	Conversion	240	240 240		3:1	720
Valley Creek	Wetland CB01	III	Conversion	600	600		4:1	2,400
CIEEK	Combined buffers	na	Conversion	2,130	2,130		0.5:1	1,065
MITIGAT	TION							
Critical Ar	ea Name		Category		Type of Act	ivity	Quantit	ty (SF)
Richards C	reek Substation We	tland A			Enhanceme	nhancement 9,930		
Keller Farr	m Mitigation Bank		See Bank Use P	lan				
IMPACT	& MITIGATION S	UMMARY						
Basin	Critical Area Type	Type of Activity	Total Quantity (SF)		Total itigation uired (SF) ³	ı	Mitigation P	Proposed
Richards	Wetland	Conversion	810			2,940 SF enhancement of Richards Wetland A		
Creek	Buffer	Conversion	6,540	3,270		3,300 SF enhancement of Richards Wetland A		
						3,690	O SF enhanc	ement of

. THE ADJUSTED QUANTITY INCORPORATES SQUARE FOOTAGE OF POLE REMOVAL (IF ANY) AS THE REMOVAL SELF-MITIGATES FOR SOME OF THE POLE INSTALLATION

37.960

8,040

Richards Wetland A +

Mitigation Bank (see Bank

- 2. IN ACCORDANCE WITH AGENCY GUIDANCE FOR CONVERSION IMPACTS, MITIGATION RATIO PRESENTED IS ONE HALF THE STANDARD ENHANCEMENT RATIO, BASED ON WETLAND CATEGORY
- 3. THE REQUIRED MITIGATION AREA SHOWN IS BASED ON ONSITE ENHANCEMENT RATIOS. FOR DISCUSSION OF MITIGATION BANKING RATIOS AND CREDITS REQUIRED FOR BANK USE, SEE THE PROJECT'S MITIGATION BANK USE PLAN (THE WATERSHED COMPANY,

MITIGATION FOR SOME IMPACTS, PRESENTED IN THE TABLE ABOVE, IS PLANNED ON THE RICHARDS CREEK SUBSTATION SITE. AS DISCUSSED IN THE NORTH 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, INCLUDING THE SOUTH BELLEVUE RICHARDS CREEK SUBBASIN MITIGATION AREA.

THIS MITIGATION PLAN PROPOSES TO COMPENSATE FOR PROJECT IMPACTS THROUGH WETLAND ENHANCEMENT WHICH WILL EXPAND AND COMPLEMENT THE ADJACENT MITIGATION AREA APPROVED FOR THE SOUTH BELLEVUE SEGMENT OF THE ENERGIZE EASTISDE PROJECT (17-120557-LO). 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.

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.

PROJECT GOALS

1. ENHANCE APPROXIMATELY 9.930 SF OF WETLAND AREA IN WETLAND A TO COMPENSATE FOR PROJECT IMPACTS.

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.

- 1. SURVIVAL STANDARDS:
- 1.1. 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.
- 1.2. 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.
- 1.3. ESTABLISHMENT OF AT LEAST TWO NATIVE TREE SPECIES, FOUR NATIVE SHRUB SPECIES AND TWO NATIVE EMERGENT SPECIES IN PLANTING AREAS.
- 2. NATIVE VEGETATION COVER STANDARDS:
- 2.1. ACHIEVE 60% COVER OF ALL INSTALLED VEGETATION BY THE END OF YEAR 3. NATIVE VOLUNTEERS MAY COUNT TOWARDS THIS STANDARD.
- 2.2. ACHIEVE 80% COVER OF ALL INSTALLED VEGETATION BY THE END OF YEAR 5. NATIVE VOLUNTEERS MAY COUNT TOWARDS THIS STANDARD.
- 3. INVASIVE SPECIES COVER STANDARD:
- 3.1. NO MORE THAN 10% COVER OF NON-NATIVE. INVASIVE SPECIES IN ANY PLANTING AREA IN ANY MONITORING YEAR.

MAINTENANCE

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

- 1. REPLACE EACH PLANT FOUND DEAD IN YEAR ONE.
- 2. FOLLOW THE RECOMMENDATIONS NOTED IN THE PREVIOUS MONITORING SITE VISIT'S REPORT
- 3. GENERAL WEEDING FOR ALL PLANTED AREAS:
- 3.1. 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
- 3.2. MORE FREQUENT WEEDING MAY BE NECESSARY DEPENDING ON WEED CONDITIONS THAT DEVELOP AFTER PLANT INSTALLATION.
- 3.3. NOXIOUS WEEDS MUST BE REMOVED FROM THE ENTIRE MITIGATION AREA, AT LEAST TWICE
- 3.4. DO NOT USE STRING TRIMMERS IN THE VICINITY OF INSTALLED PLANTS, AS THEY MAY DAMAGE OR KILL THE PLANTS.
- 4. MAINTAIN A FOUR-INCH-THICK LAYER OF WOOD CHIP MULCH ACROSS ALL PLANTING AREAS. MULCH SHOULD BE PULLED BACK TWO INCHES FROM THE PLANT STEMS.
- 5. 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.
- 6. 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 50 TO 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

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.

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 ANNUALLY TO THE CITY, AND WILL CONTAIN THE FOLLOWING:

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

REPORT SUBMISSION: REPORTS SHALL BE SUBMITTED TO HEIDI BEDWELL, OR THE CITY OF BELLEVUE'S SUCCESSOR ENVIRONMENTAL PLANNING MANAGER, NO LATER THAT THE END OF EACH GROWING SEASON OR BY DECEMBER 31ST AND CAN BE EMAILED TO HBEDWELL@BELLEVUEWA.GOV OR MAILED DIRECTLY TO:

ENVIRONMENTAL PLANNING MANAGER

DEVELOPMENT SERVICES DEPARTMENT

CITY OF BELLEVUE

PO BOX 90012 **BELLEVUE, WA 98009-9012**

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.

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

- 1. WOOD CHIP 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. MULCH SHALL NOT CONTAIN APPRECIABLE QUANTITIES OF GARBAGE, PLASTIC, METAL, SOIL, AND DIMENSIONAL LUMBER OR CONSTRUCTION/DEMOLITION DEBRIS. APPROX. QUANTITY REQUIRED: 75 CUBIC YARDS.
- 2. COMPOST: COMPOST SHALL MEET WSDOT STANDARDS SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, 9-14.4(8) FOR FINE COMPOST: 25 CUBIC YARDS
- 3. 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.
- 4. RESTORATION SPECIALIST: QUALIFIED PROFESSIONAL ABLE TO EVALUATE AND MONITOR THE CONSTRUCTION OF ENVIRONMENTAL RESTORATION PROJECTS.

750 Sixth Street South Kirkland WA 98033

p 425.822.5242 www.watershedco.com

Science & Design

Ш CREEK ∞ \square \bigcirc エロ Od

RI

KMB KMB KMB SHEET SIZE: ORIGINAL PLAN IS 22" x 34".

SCALE ACCORDINGLY.

PROJECT MANAGER: NL **DESIGNED:** KMB DRAFTED: KMB CHECKED: CM/KC JOB NUMBER:

111103.11

SHEET NUMBER:

MITIGATION NOTES

Conversion

PSE Energize Eastside Project Documentation

MITIGATION BANK USE PLAN NORTH BELLEVUE SEGMENT

February 16, 2021

Prepared on behalf of (applicant):



Ryan Wieder PSE Energize Eastside PO Box 97034, EST 3W Bellevue, WA 98009



The information contained in this report is based on the application of technical guidelines currently accepted as the best available science and in conjunction with the manuals and criteria outlined in the document. All discussions, conclusions and recommendations reflect the best professional judgment of the author(s) and are based upon information available at the time the study was conducted. All work was completed within the constraints of budget, scope, and timing. The findings of this report are subject to verification and agreement by the appropriate local, state and federal regulatory authorities. No other warranty, expressed or implied, is made.



750 Sixth Street South Kirkland, WA 98033

p 425.822.5242
f 425.827.8136

watershedco.com

Reference Number: 111103.12

Contact: Katy Crandall, PWS

Ecologist and Arborist

Clover McIngalls, PWS Environmental Planner

Nell Lund, PWS Senior Ecologist

Table of Contents

1	Intro	oduction	1
	1.1	Background	1
	1.2	Consultant Qualifications	3
2	Proj	ect Description	5
3	Exist	ting Conditions	6
	3.1	Site Location	6
	3.2	Site Description	6
4	Avo	idance and Minimization of Impacts	8
5	Una	voidable Wetland and Buffer Impacts	9
6	Imp	acted Wetland and Buffer Functions	11
	6.1	Tree Removal Impact Characterized	11
	6.2	Functional Impact	11
7	Miti	gation Site Selection Rationale	12
	7.1	Confirmation of Mitigation Credit Availability	17
8	Wet	land/Stream Functions Provided at KFMB	18
	8.1	Water Quality Functions	20
	8.2	Hydrologic Functions	20
	8.3	Habitat Functions	21
	8.4	Summary of Functional Improvements	21
9	Wet	land/Stream/Buffer Functions Not Mitigated at Mitigation Bank	22
10	Prop	oosed Mitigation Credits	24
11	Cred	lit Purchase or Transfer Timing	25

List of Figures

List of Tables

Table 1.	Approximate area (in square feet, SF) of unavoidable wetland and buffer impact	10
Table 2.	Creditable restoration actions at KFMB.	16
Table 3.	Standard KFMB credit to impact ratios	17
Table 4.	Richards Creek Substation impact and mitigation summary	23
Table 5.	Summary of proposed KFMB credit to impact ratios with the applied vegetation conversion factor and total credit amount and cost	24

1 Introduction

1.1 Background

The North Bellevue Segment of Puget Sound Energy's (PSE) Energize Eastside Project (Project) is located within the Lake Washington Service Area of the Keller Farm Mitigation Bank (KFMB or the Bank). PSE is requesting that mitigation credits from KFMB be used to compensate for impacts to wetland and wetland and stream buffer areas associated with the North Bellevue Segment of the Project. The North Bellevue Segment includes the 5.2 mile rebuild of two existing 115 kV transmission lines within a 100-foot-wide corridor by replacing poles and conductor to operate up to 230 kV (herein referred to as 230 kV lines). The mitigation for impacts to wetlands and buffers within the North Bellevue Segment will be partially mitigated onsite on the Richards Creek Substation parcel. Remaining impacts are proposed to be mitigated for through purchasing credits at the KFMB.

This Bank Use Plan describes the rationale for purchasing credits at the KFMB to compensate for impacts and was prepared following agency guidance on preparing mitigation plans and the use of mitigation banks including: the Interagency Review Team for Washington State Guidance Paper on *Using Credits from Mitigation Banks: Guidance to Applicants on Submittal Contents for Bank Use Plans* (2009); Washington State's Mitigation Banking Statutes (Revised Code of Washington (RCW) 90.84 and Washington Administrative Code (WAC) 173-700); the interagency mitigation guidance document, *Wetland Mitigation in Washington State* (Parts 1 and 2; Ecology et al. 2006) and the updated draft version of Part 1 of that document (Ecology et al. 2020); and the U.S. Army Corps of Engineers (Corps) *Compensatory Mitigation for Losses of Aquatic Resources* (33 Code of Federal Regulations (CFR) § 332)(2008).

The KFMB is a 75-acre certified mitigation bank located in the City of Redmond, Washington. The Bank location, Lake Washington Service Area, and North Bellevue Segment of the Project corridor are shown in Figure 1. KFMB is an "urban" bank that provides mitigation opportunities for urbanizing areas in east King County and south Snohomish County. KFMB was certified by federal, state, and local regulatory agencies in December 2019 and has mitigation credits available to compensate for approved impacts to wetlands, streams and buffers.

The purpose of the Bank is to generate mitigation credits for projects that will potentially have an adverse impact on the aquatic environment and that need to compensate for those impacts as a condition of their permits or other regulatory requirements resulting from project impacts. The Bank site, known locally as "the Keller Farm", has been identified as a high priority restoration site since the 1990s. It was specifically identified as a potential mitigation bank site and "Near Term Action" important to regional salmonid habitat restoration efforts in the *Final*

Lake Washington/Cedar/Sammamish Watershed (WRIA 8) Chinook Salmon Conservation Plan (2005). That plan was adopted by the National Oceanic and Atmospheric Administration (NOAA) and implemented by local stakeholders to achieve Chinook salmon recovery consistent with the Endangered Species Act (ESA) (ESA 16 U.S.C. S 1531).

Restoration goals at KFMB address the limiting factors in the watershed related to loss of wetland habitat, riparian vegetation communities, and alterations to floodplain and stream habitat.

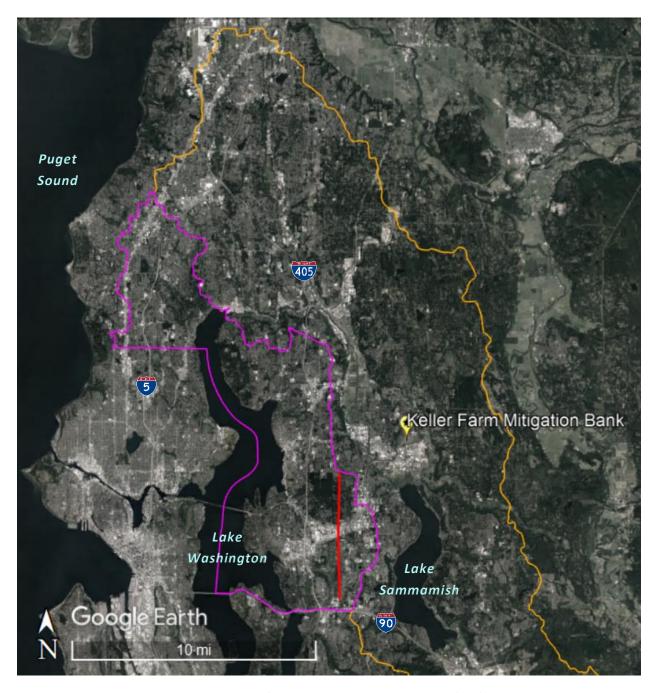


Figure 1. The North Bellevue Segment of the Energize Eastside corridor (red) is shown within the Lake Washington Service Area (purple) of the Keller Farm Mitigation Bank (yellow pin). Lake Sammamish Service Area is also mapped (orange) and extends to the south.

1.2 Consultant Qualifications

The Watershed Company (Watershed) has been the primary environmental consultant addressing wetland and stream critical areas potentially affected by the Project. Established 37 years ago, Watershed has built a reputation on using sound scientific methods to find

responsible and sustainable solutions for environmental impacts. The credentials of the primary Watershed staff members working on the Project, and authors of this report, are provided below.

Katy Crandall, PWS

Wetland Biologist | ISA Certified Arborist®

Katy is a Professional Wetland Scientist (PWS) and arborist specializing in assessing infrastructure impacts on critical areas. She has experience with restoration, mitigation, and wildlife research. Prior to joining Watershed in 2013, Katy spent a year implementing wetland, stream, and buffer restoration projects throughout unincorporated King County with the Washington Conservation Corps.

Clover McIngalls, PWS

Environmental Planner

Clover is an environmental planner with over twelve years of experience helping private project proponents, public agencies and jurisdictions meet Washington's environmental regulatory requirements and mitigate for project impacts. She utilizes her background in wetland science to efficiently navigate local, state and federal permitting needs from agencies such as the Washington Department of Fish and Wildlife (WDFW), Department of Ecology (Ecology), and the Corps. Clover also has experience developing Critical Area Ordinance and Shoreline Master Program updates for local jurisdictions in Washington.

Nell Lund, PWS

Senior Ecologist

Nell is a project manager, field biologist and wetland scientist with over a decade of experience in critical areas assessment. She frequently works with Watershed's planning department in support of policy planning efforts, providing field assessment and documentation to verify report findings and demonstrate environmental consequences of proposed changes. Nell leads Watershed's environmental services as an on-call consultant for cities and schools in the Puget Sound region.

Greg Johnston, CFP

Senior Fisheries Biologist

Greg is a Certified Fisheries Professional (CFP) with more than 30 years of experience as a senior fisheries biologist and habitat project manager. He routinely applies his expertise in fisheries biology and civil engineering towards minimizing impacts and evaluating and developing improvements for salmonid fish habitat and passage, along with related flooding, sedimentation, erosion, and drainage issues. He has extensive experience helping design and gain approval for combined fish habitat and infrastructure projects for utilities and local municipalities. He is an expert on related local, state, and federal

permitting regulations, particularly as they relate to mitigating impacts and gaining Hydraulic Project Approval from WDFW and ESA evaluations associated with the Corps.

2 Project Description

The Energize Eastside Project includes the construction of a new 230 kV to 115 kV substation (Richards Creek Substation) and to upgrade approximately 16 miles of existing 115 kV transmission lines located within an existing 100-foot wide regional utility corridor to be operated up to 230 kV power. Combined with aggressive conservation, the Project will improve reliability for Eastside communities, including the City of Bellevue (City), and supply the needed electrical capacity for anticipated growth and development on the Eastside.

The North Bellevue Segment of the Project, which is the focus of this report, begins at the City of Bellevue's northern city limits near the Bridle Crest Trail at NE 60th Street and extends south to the existing Lakeside Substation for a corridor length of approximately 5.2 miles (Figure 1). As shown in Figure 1, the North Bellevue Project area is located entirely within the Lake Washington Service Area of KFMB. See *Appendix A – Critical Area Impact Assessment Maps* of the *North Bellevue Critical Areas Report* (The Watershed Company 2021a) for more detailed maps of the North Bellevue Segment area.

Project activities in the North Bellevue Segment are limited to the replacement of existing poles and transmission lines to be operated up to 230 kV power. Federal vegetation management standards for transmission lines operated above 200kV power impose height restrictions on vegetation beneath the lines for safety. As a result, large shrubs and trees growing in the Project corridor that are incompatible with the federal vegetation management standards for 230 kV transmission lines must be removed for safe operation of the utility. Currently, the corridor is managed to PSE's 115 kV standards.

Impacts from pole replacement and vegetation management occur within wetland areas and wetland/stream buffers in the North Bellevue Segment. Impacts occur in disturbed and degraded areas within the existing transmission line corridor. The *North Bellevue Critical Areas Report* provides a more complete Project description including construction methods and equipment and discusses Project temporary and permanent impacts to wetland and buffer areas (The Watershed Company 2021a).

3 Existing Conditions

The following section describes general site conditions for the North Bellevue Segment corridor. More detailed information on specific wetland and stream conditions can be found in the *North Bellevue Critical Areas Report* (The Watershed Company 2021a), *Appendix C – Wetland and Stream Delineation Report Update for North Bellevue*.

3.1 Site Location

The North Bellevue study area is located in an urban landscape setting. The majority of the corridor is zoned single-family residential at various densities; with the exception of the Bel-Red area, generally zoned commercial and office. In the North Bellevue Segment, the Project corridor passes through or adjacent to (from north to south) the Bridle Trails, Bel-Red, Wilburton, Crossroads, Woodridge, Lake Hills, and Eastgate neighborhoods. The corridor is located in the following public land survey sections: Sections 15, 22, 27, and 34 of Township 25N, Range 05E; and Sections 3 and 10 of Township 24N, Range 05E. See Figure 1.

The North Bellevue Segment study area is located in the Cedar-Sammamish Watershed (WRIA 8), and spans three Bellevue-defined drainage basins, which include (from north to south) the Valley Creek, Kelsey Creek, and Richards Creek drainage basins.

3.2 Site Description

When the corridor was constructed in the late 1920s and early 1930s, the entire corridor was cleared. Construction activities resulted in a compacted subsurface in those areas where poles were installed. Since that time, the corridor has been continually maintained by PSE through easement rights. Poles have been replaced and vegetation has been managed requiring vehicles and equipment to use existing access routes. Over time, development has occurred adjacent to and within the corridor, including residential development, roads, parking lots, commercial development, and the establishment of trails (using overgrown access routes).

Olympic Pipeline Company also utilizes the North Bellevue Segment corridor for operation and maintenance of petroleum pipelines. In general, vegetation management requirements of pipelines are more restrictive than vegetation management requirements for the transmission line described herein. For example, trees and shrubs are expected to be mowed or removed on a more frequent basis than for the transmission lines to prevent damage to the pipeline by large roots. In addition, the corridor of herbaceous vegetation is maintained both to keep the area free of large tree and shrub roots and to be able to easily, visually inspect the pipeline corridor from the ground and/or air. The pipeline easement spans the length is varying locations of the North Bellevue Segment transmission line easement and acts as a regular, contributing source of ongoing disturbance within the shared utility corridor.

Valley Creek Drainage Basin

The Bridle Trails neighborhood, at the north end of the North Bellevue Segment consists of developed single-family residential parcels and Viewpoint Park located on the north side of State Route 520. Residential parcels in this area were developed as early as the 1960s and, in many cases, contain a mix of managed low-growing vegetation in the Project area and large established trees located at the perimeter or outside of the corridor. The Project area through Viewpoint Park appears to experience routine maintenance and is dominated by invasive Himalayan blackberry, tree saplings and small shrubs, and herbaceous vegetation. Outside of the Project area, Viewpoint Park is forested.

Soils consist of gravelly sandy loams and topography is generally dominated by a west-facing slope. Water in this portion of the Project corridor flows east toward Valley Creek.

Kelsey Creek Drainage Basin

The Bel-Red neighborhood is south of State Route 520 and contains commercial properties and businesses. The Project area through the Bel-Red neighborhood includes comparatively more impervious surface area (mainly parking lots) than other parts of the North Bellevue Segment corridor. At this location, existing vegetation is often limited to invasive species and non-native, ornamental trees.

Between Bel-Red Road and the Lake Hills Connector, the Project area borders the Wilburton neighborhood to the west and Crossroads and Lake Hills neighborhoods to the east. Parcels in the vicinity include single- and multi-family properties. Glendale Country Club and Kelsey Creek Park are also defining landscape features in this area. Again, the corridor mainly consists of low, maintained landscapes or areas overgrown by invasive, weedy vegetation; established, native vegetation is located nearby. Beginning on the Glendale County Club property, a compact gravel trail is present in the Project area. This trail connects to the City's managed trails associated with Kelsey Creek Park, south of the Glendale Country Club and generally west of the Project area.

Soils consist of gravelly sandy loams and topography is generally dominated by an east-facing slope. Water in this portion of the Project corridor flows west toward Kelsey Creek.

Richards Creek Drainage Basin

South of the Lake Hills Connector, the North Bellevue Segment corridor continues along the edge of the Lake Hills neighborhood and also borders the Woodridge neighborhood to the west. The compact gravel trail present to the north, continues south through a large undeveloped privately-owned parcel before it terminates in a Lake Hills neighborhood residential development. Unmaintained vegetation (particularly near the gravel trail) in the corridor through this area continues to be dominated by invasive Himalayan blackberry and

young, weedy trees, while native forests are present in the immediate vicinity. The North Bellevue Segment terminates in the Eastgate neighborhood, at PSE's Lakeside Substation property, where surrounding properties are zoned light industrial.

Soils consist of gravelly sandy loam in addition to mapped Ragnar-Indianola association, moderately steep and urban land. Topography is generally dominated by an east-facing slope. Water in this portion of the Project corridor flows west toward Richards Creek.

4 Avoidance and Minimization of Impacts

PSE seeks to avoid and minimize impacts to the critical areas and associated buffers located in the Project corridor to the greatest extent feasible, as demonstrated below and in the *North Bellevue Critical Areas Report* (The Watershed Company 2021a).

Avoidance

Proposed poles replacing existing poles to be removed have been sited to avoid direct impacts (fill) to wetlands (although some vegetation removal will occur); no direct impacts are proposed to streams. Completely avoiding pole impacts to wetland/stream buffers is not feasible due to the prevalence of those features in the Project area. Furthermore, pole replacement activities associated with the transmission line upgrade must occur in specific locations for proper functioning of the electrical system due to complex engineering considerations making pole placement in some buffers unavoidable. Where avoidance was not possible, PSE worked with engineers to minimize impacts through design revisions; such changes reduced pole footprints and increased line heights to avoid critical area impacts to the extent feasible.

Temporary impact areas associated with construction access, pole construction work areas, and stringing sites also avoid critical areas to the extent feasible. For example, specific pole construction work areas have been adjusted to exclude critical areas on a pole-by-pole basis.

Every effort has been made to relocate poles out of critical areas and buffers where possible, resulting in a decrease in pole-associated impacts to wetlands and buffer areas in the North Bellevue Segment from existing conditions. However, completely avoiding impacts to all buffers as part of the North Bellevue Segment is not achievable. Where avoidance is not possible, PSE worked with engineers to locate poles to minimize impacts.

Minimization

Minimization techniques were utilized during the design process in order to limit impacts to critical areas and their associated buffers. Minimization measures included the following:

1. Utilizing the existing transmission line corridor, which has experienced significant disturbance as a result of adjacent development and ongoing corridor maintenance.

- Alterntaive routes and options were evaluated in the Phase 2 Draft Environmental Impact Statement for the Project (ESA 2017).
- 2. When working within a critical area, limiting the construction disturbance to the minimum feasible size around each pole and access point.
- 3. Installing 230 kV transmission lines between poles with minimal site disturbance. Where feasible given maximum distance allowed between poles, the poles will be located outside of critical areas. Transmission lines will span aerially above critical areas, minimizing ground disturbance, vegetation removal, and loss of critical area function.
- 4. Where vegetation removal is required in critical areas, trees will be accessed by foot, stumps will be left in the ground, and debris will be chipped or dispersed as appropriate, preventing critical area disturbance by large heavy equipment.

5 Unavoidable Wetland and Buffer Impacts

Impact types resulting from the Project have been quantified based upon the long-term condition of the proposed work areas and existing land cover types in the corridor. Total vegetated wetland and wetland/stream buffer area would be increased by removing existing poles from wetlands and wetland/stream buffers and replacing them with new poles outside of critical areas where possible. Temporary impacts will result from pole installation and removal activities, but permanent impacts from pole installation (in buffer areas only) are offset by pole removals. Permanent vegetation conversion impacts are generated from implementation of federal vegetation management requirements for 230 kV transmission lines. Impact quantities have been rounded up to the nearest 10 square feet (SF) to account for the coarseness of the GIS-based impact analysis in the table below. For more information on unavoidable wetland and buffer impacts, see the *North Bellevue Critical Areas Report* (The Watershed Company 2021a).

Table 1. Approximate area (in square feet, SF) of unavoidable wetland and buffer impact.

Drainage Basin ¹	Critical Area Name	Category	Type of Activity	Quantity (SF)	Adjusted Quantity (SF) ²
Richards Creek	Wetland EB20	III	Pole Removal	-30	-
(Wetland Total:	Wetland EE	IV	Conversion	840	810
2,430 SF Buffer Total:	Combined Buffers	na	Pole removal/ Installation	-280	-
3,300 SF)	Combined Buffers	na	Conversion	6,820	6,540
	Wetland EB02	III	Pole removal	-120	-
	Wetland EB11	II	Conversion	2,900	2,900
	Wetland EB12	III	Conversion	1,940	1,820
Kelsey Creek	Wetland EB13 III Conversion		1,460	1,460	
(Wetland Total: 37,960 SF	Wetland EB14	III	Conversion	800	800
Buffer Total:	Wetland EB16	III	Conversion	500	500
14,730 SF)	Wetland EB17	Ш	Conversion	560	560
	Combined buffers	na	Pole removal/ Installation	-650	-
	Combined buffers	na	Conversion	30,110	29,460
Valley Creek (Wetland Total:	Wetland A (Overlake Farms)	IV	Conversion	240	240
3,120 SF	Wetland CB01	III	Conversion	600	600
Buffers Total: 1,065 SF)	Combined buffers	na	Conversion	2,130	2,130

^{1.} Bellevue-defined drainage basins.

^{2.} The adjusted quantity incorporates square footage of pole removal (if any) as the removal self-mitigates for some of the pole installation.

6 Impacted Wetland and Buffer Functions

6.1 Tree Removal Impact Characterized

The wetland and buffer functions impacted by the Project are associated with vegetation conversion (*i.e.*, tree removal; no fill). They are limited to removal of trees growing within and immediately adjacent to the existing managed utility corridor. The approximate impacted area, quantified based on area of canopy removal (identified as vegetation conversion), has been provided previously in Table 1. Details that characterize the trees to be removed are summarized below and in the *North Bellevue Critical Areas Report* (specifically, in Tables 14 and 15 of that report) (The Watershed Company 2021a).

Approximately 30 trees will be removed from wetlands in the Richards and Kelsey Creek drainage basins. One-third of the trees to be removed from these wetlands are non-native, ornamental species (e.g., *Salix matsudana* 'Tortuosa' [corkscrew willow] and *Prunus domestica* [European plum]). The average stem diameter of trees to be removed from wetlands is 8.9 inches and includes some as small as 3-inches diameter at breast height (DBH) and others as large as 26-inches DBH. In most instances, the largest trees have experienced severe pruning or topping as part of existing vegetation management activities, often negatively affecting the tree's condition, particularly for conifers.

Approximately 172 trees will be removed from wetland/stream buffers based in the North Bellevue Segment Project corridor. Similar to tree removal from wetland areas, approximately one-third of the trees being removed from buffers are non-native species. The size of trees to be removed from buffer areas ranges from 3- to 26-inches DBH; the average diameter is 8.5 inches. The larger trees to be removed have commonly been pruned or topped as part of existing vegetation maintenance activities along the corridor. Most of the trees to be removed from buffer areas are deciduous tree species.

6.2 Functional Impact

Trees perform water quality and hydrologic functions through interception of rainfall and uptake of groundwater and nutrients. Trees also provide important breeding and foraging habitat functions to local wildlife, particularly native tree species. In general, tree removal without mitigation would diminish habitat, hydrologic, and water quality functions.

The habitat functions of trees to be removed are limited by several factors, including species composition (*i.e.*, approximately one-third are non-native or invasive); location within an existing, disturbed utility easement; and ongoing vegetation management activities.

As described in The *Targeted Critical Areas Geologic Hazard Evaluation* (GeoEngineers 2020), tree removal can affect hydrologic functions through reductions in canopy interception and

evapotranspiration. Temporary impacts to evapotranspiration are expected to be limited (to much less than 50 percent from existing conditions) because tree removal will be selective and impacts to understory vegetation will be avoided to the extent feasible (GeoEngineers 2020). The greatest impact to evapotranspiration is expected to occur immediately after tree removal.

Few impacts to water quality are anticipated with application of the recommended Temporary Erosion and Sediment Control measures and Best Management Practices proposed by GeoEngineers (2020) during construction and because tree removal is selective, and removed trees are growing in an existing utility corridor which is subject to ongoing vegetation management activities. Organic matter from trees and tree debris will not be placed in water bodies preventing depleting oxygen levels. Furthermore, trees growing within the buffer of Kelsey Creek are to be retained and managed as necessary which will avoid water quality impacts to the stream (*e.g.*, from reduction in shade).

7 Mitigation Site Selection Rationale

The North Bellevue Segment of the Energize Eastside Project is located within the Lake Washington Service Area of the KFMB, a 75-acre state and federally certified mitigation bank project in WRIA 8. The KFMB is located at the confluence of two regionally significant salmon bearing streams (Bear and Evans Creeks) in the City of Redmond.

The KFMB has undergone an extensive permitting and review process which involved input and direction from multiple agencies and reviewing groups. Based on work accomplished, credits have been approved and released for sale by the Interagency Review Team (IRT) cochaired by the Corps and Ecology. The KFMB restoration design, performance standards and monitoring plan are detailed in the Bank's Mitigation Banking Instrument (MBI). This plan was prepared in consultation with the IRT and follows specific requirements of Chapter 173-700 WAC for Wetland Mitigation Banks. The following agencies and stakeholders participated in the development of the banking instrument:

- U.S. Army Corps of Engineers, Seattle District
- U.S. Environmental Protection Agency
- Washington State Department of Ecology
- National Marine Fisheries Service
- Washington Department of Fish and Wildlife
- Muckleshoot Indian Tribe Fisheries Division
- King County-WRIA 8 Technical Committee
- City of Redmond

The availability of mitigation credits from a large-scale mitigation bank project in WRIA 8 provides many benefits above and beyond traditional permittee-responsible mitigation. First

the bank project was reviewed extensively by multiple agencies to ensure appropriate siting within the watershed, appropriate design and restoration approach as well as appropriate metrics for evaluating success. In the Lake Washington-Sammamish Watershed, there are relatively little restoration or mitigation opportunities available that provide meaningful functional lift of existing aquatic resources. There are limited mitigation opportunities when looking "on-site" (*i.e.*, a managed transmission line corridor) versus locating mitigation in a more sustainable and effective location in the watershed.

Mitigation bank projects are highly regulated with multiple agencies overseeing their development and monitoring. Banks are situated in the landscape using criteria found in the joint guidance from the Corps and Ecology, *Selecting Mitigation Sites Using a Watershed Approach* (Hruby, Harper and Stanley 2009), to targeting restoration actions in a WRIA or watershed. Banks are often very large, highly functioning restoration projects that restore a variety of wetland, riparian and associated upland habitat types, creating more complete and interconnected systems connected to habitat corridors rather than habitat patches separated and fragmented by development. Banks are fully protected by a conservation easement which is funded in perpetuity through the establishment of an endowment fund and credits are only released when the bank has shown that it is meeting stated performance standards.

The Corps 2008 Final Rule *Compensatory Mitigation for Losses of Aquatic Resources* establishes a preference for the use of certified mitigation banks to compensate for permitted impacts to aquatic resources:

Since a mitigation bank must have an approved mitigation plan and other assurances in place before any of its credits can be used to offset permitted impacts, this rule establishes a preference for the use of mitigation bank credits, which reduces some of the risks and uncertainties associated with compensatory mitigation.

The Corps rule goes on to read:

when the permitted impacts are located within the service area of an approved mitigation bank, and the bank has the appropriate number and resource type of credits available, the permittee's compensatory mitigation requirements may be met by securing those credits from the sponsor (33 CFR part 332.3b[2]).

Washington State's Mitigation Banking Rule provides the following support for the use and establishment of Mitigation Banks in Washington State:

WAC 173-700-100 Background and purpose.

(1) The Wetlands Mitigation Banking Act, chapter 90.84 RCW, identifies wetland mitigation banking (banks) as an important regulatory tool for providing compensatory mitigation for unavoidable impacts to wetlands and declares it the policy of the state to support banking. The

act directs the department of ecology (department) to adopt rules establishing a statewide process for certifying banks.

- (2) The department anticipates that banks will provide compensatory mitigation in advance of unavoidable impacts to wetlands and will consolidate compensatory mitigation into larger contiguous areas for regionally significant ecological benefits.
- (3) Banks prioritize restoration of wetland functions and as such should be complementary to the restoration of ecosystems and ecosystem processes as identified in state or locally adopted science-based watershed management plans.
- (4) The purpose of this chapter is to encourage banking by providing an efficient, predictable statewide framework for the certification and operation of environmentally sound banks.

Local governments also implement land use regulations, which control the type and intensity of development within a given jurisdiction. Through guidance from Ecology, many local governments have adopted critical area regulations supporting the use of mitigation banks specifically, recognizing their unique ability to address watershed scale restoration objectives and limiting factors for aquatic and critical areas. This is especially the case in more urban watersheds where very little meaningful mitigation actions may exist on-site or in the immediate sub-basin of a development project. The City of Bellevue may "encourage, facilitate, and approve innovative mitigation projects that are based on the best available science" (City of Bellevue Land Use Code 20.25H.225).

The KFMB site has been identified as a high priority stream and wetland restoration project in WRIA 8 for the last thirty years, beginning with the Bear Creek Basin Plan in the 1980s. The Bank site is identified as a 'Near Term Action' important to regional salmonid habitat restoration efforts as part of the Lake Washington/Cedar/Sammamish Salmon Conservation Plan for WRIA 8 adopted by NOAA Fisheries and implemented by local stakeholders to achieve Chinook salmon recovery consistent with the ESA (Chinook Salmon Conservation Plan (CSCP), 2005; ESA 16 U.S.C. S 1531).

The KFMB is located at the confluence of two regionally significant, salmon-bearing streams, Bear Creek and Evans Creek. Another smaller stream, Perrigo Creek, flows adjacent to a portion of the western Bank boundary and will be rerouted and daylighted onto the Bank site. The Bank design goals were developed as part of the *Project Prospectus* (Habitat Bank 2015) and *Basis of Design Report* (Shannon and Wilson. Inc. 2018). The design goals are consistent with Ecology, Corps, and U.S. Environmental Protection Agency guidelines for establishing mitigation bank goals and criteria, as well as with Bear Creek Basin restoration planning efforts and WRIA 8 restoration goals as established by the WRIA 8 Salmon Recovery Council. Wetland and habitat restoration goals on the Bank site were developed to address the limiting factors in the watershed related to the loss of wetland hydrology, the loss of wetland habitat and vegetation communities, and the alteration of topography affecting wetlands, floodplain, and stream

habitat conditions. Implementation of the KFMB will result in substantial gains in aquatic ecosystem functions as compared to baseline conditions present on the bank site.

The site-specific goals and objectives for the KFMB include:

- Permanently protect ecosystem functions at the Bank by implementing the Bank Instrument and executing a conservation easement with permanent funding for site stewardship.
- Re-establish wetland hydrology and varying wetland hydroperiods across the site by disabling farm ditches, reconnecting Bear creek with its floodplain, and performing grading actions to re-establish wetland hydrology and riparian habitat across the Bank site.
- Create additional wetland habitat areas that support wetland-dependent organisms and anadromous fish species. Increase habitat structure and diversity on the Bank site over existing degraded conditions.
- Re-establish wetland vegetation and native plant communities across the site. Remove
 and control noxious and invasive plant species and reintroduce native vegetation to
 increase habitat complexity in the floodplain wetlands and adjacent upland areas. Plant
 native trees, shrubs, and herbaceous species to re-establish a mosaic of habitat
 communities within the Bank property.
- Improve access for aquatic organisms to floodplain wetland and aquatic areas. Enhance and create off-channel rearing and refuge habitat for salmonids within the floodplain streams and deeper backwater areas connected to Bear Creek.
- Reconnect Bear Creek to the floodplain and improve floodplain functions on the Bank site including attenuation of flood flows, reductions in peak flood flows, food web and organic material support and transport, and refuge habitat for fish and wildlife during flood events.
- Establish a connection point for the future relocation of Perrigo Creek through the adjacent parcel north of the Bank.
- Reestablish and rehabilitate stream channel habitat in the floodplain through grading and addition of large woody debris. Create pool habitat and increase channel habitat complexity.
- Increase shading and cover of streams through planting on the Bank site over existing conditions.

Specific creditable restoration actions at KFMB are shown below in Table 2.

Table 2. Creditable restoration actions at KFMB.

HABITAT TYPE (Action)	CREDITABLE ACRES	NON- CREDITABLE BUFFERS	NON- CREDITABLE EASEMENTS	TOTALS	
Riparian Upland Forest (Enhancement)	6.7	5.1	0.1	11.9	
Riparian Forest Wetland (Re-establishment)	17.5	1.5	0.1	19.1	
Shrub-Scrub/Emergent Wetland Mix (Re- establishment)	28.7	2.8	0.5	32.0	
Riparian Wetland Stream Complex (Rehabilitation)	3.9	0.3	0.1	4.3	
Existing Wetland PFO/PSS Mix (Rehabilitation)	7.7	0.1	0.1	7.9	
Subtotal	64.5	9.8	0.9		
Total	75.2				

In order to mitigate for some of the proposed Project impacts to wetland and buffer areas from vegetation removal activities, PSE is proposing off-site mitigation using the KFMB. The KFMB has met all required performance standards applicable to the release of available credits under the terms of the MBI. Given the size, scope and diversity of this bank located in an urban setting and its unique ability to restore both wetland area and functions as well as critical habitat for salmonids, the KFMB is the most suitable location for the Project's compensatory mitigation requirements that cannot be mitigated on-site at the Richards Creek Substation mitigation site.

For more information about the bank contact:

Habitat Bank LLC. Zach Woodward Project Manager P.O. Box 354

Kirkland, WA 98033 Phone: (425) 205-0279

Email: Zachary.woodward@habitatbank.com

See also: www.habitatbank.com

7.1 Confirmation of Mitigation Credit Availability

As of October 30, 2020, the KFMB has 5.3 mitigation credits available for immediate use with an additional 7.5 credits anticipated to be available soon. Mitigation credits are provided from the bank to an applicant's project using the suggested ratios in the Table 3 below, as approved by the Corps and Ecology. For vegetation conversion impacts, a discount factor has been applied to previous projects with similar impacts, generally ranging from 25 to 33 percent of the standard ratio (Z. Woodward, personal communication, June 19, 2020).

Table 3. Standard KFMB credit to impact ratios.

Permanent Resource Impact	Credit to Impact Ratio
Wetland, Category I	Case by case
Wetland, Category II	1.2 to 1
Wetland, Category III	1.0 to 1
Wetland, Category IV	0.85 to 1
Critical Area Buffer	0.3 to 1
Stream	Case by case

Proof of the current number of available mitigation credits at the KFMB site can be confirmed by the approving agency(s) through IRT.

Contact:

Kate Thompson
Shorelands and Environmental Assistance Program
P.O. Box 47600
Olympia, WA 98504
(360) 407-6749
kate.thompson@ecy.wa.gov

Suzanne L. Anderson, PhD, PWS
Project Manager/Banking Lead
Seattle District U.S. Army Corps of Engineers
Regulatory Branch, CENWS-OD-RG
Mail Address: P.O. Box 3755
Seattle, WA 98124-3755

Building Location: 4735 East Marginal Way South

Seattle, WA 98134

Email: Suzanne.l.Anderson@usace.army.mil

8 Wetland/Stream Functions Provided at KFMB

The following is excerpted or paraphrased from the MBI:

The Keller Farm Mitigation Bank is located at the floodplain confluence of two regionally significant salmon bearing streams, Bear and Evans Creeks. The Bear Creek watershed is designated as a "Highest Restoration Watershed" by the City of Redmond. KFMB is a high priority wetland and stream restoration site important to regional salmonid habitat restoration efforts.

Historically, the Bank site was a wetland and upland "mosaic" complex with forested, shrub, and herbaceous wetlands, beaver ponds, and tributary streams that flowed into Bear Creek. Two federally threatened salmonid species, Puget Sound Chinook and Steelhead, utilize Bear and Evans Creeks and their larger tributaries, as well as coho, sockeye, and coastal cutthroat, and numerous other non-salmonid fish species. The Bank site is known to have been historically used by Native Americans for fishing, camping and trading. The site was homesteaded in the 1880s and converted to agricultural use. It was extensively ditched, drained, grazed, tilled, and managed as a dairy farm through the 1980s. Very little remnant wetland area remained compared to historic conditions, and a network of linear ditches replaced the natural floodplain tributary streams to convey water off the site.

The KFMB includes wetland habitat areas that are classified as "depressional and riverine" under the hydrogeomorphic (HGM) classification system and "palustrine and riverine" wetlands under the Cowardin classification system (Cowardin et al. 1979). Improvements to water quality, water quantity, and habitat functions within the re-established and rehabilitated wetland areas on the KFMB site will be documented and evaluated through the Bank's performance standards and monitoring reports, which allow credits to be generated and released for use by applicants. The improvement of existing and historic wetlands on the Bank site can be placed into two categories of restoration actions, per the joint agency guidance on compensatory mitigation found in Wetland Mitigation in Washington State Part 1 (Washington Department of Ecology, et al. 2006):

Wetland Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural or historic functions to a former wetland. Re-establishment results in rebuilding a former wetland and results in a gain in wetland acres and functions. Activities could include removing fill, plugging ditches, or breaking drain tiles.

Wetland re-establishment actions at the KFMB include restoring wetland hydrology to historical wetland areas within the Bear Creek floodplain that have been drained over the last 100 years by farm ditches.

Re-establishment activities for wetland hydrology include reconnecting historical wetlands and existing wetlands to floodplain streams by 1) disabling a series of deep drainage ditches and drainage tiles, 2) creating additional connection points between the floodplain wetlands and Bear Creek to increase the normal frequency of overbank flows, 3) reconnecting and daylighting Perrigo Creek into the Bank Site to increase hydrologic inputs to the site, and 4) providing habitat and space to account for beavers utilizing their historical habitat areas and creating additional floodplain inundation and saturation of soils.

These actions will reconnect wetland areas to their historical sources of hydrology and create highly functional wetland and riparian habitat types for juvenile salmonids, amphibians and other aquatic dependent organisms. Disabling ditches and reconnecting the high groundwater table to wetland areas on the Bank site will re-saturate and inundate historical wetland areas and provide additional flood storage and attenuation of baseflows in Bear Creek. Shading these areas by creating shrub and forested wetland habitat communities will also reduce peak temperatures in aquatic areas and work to maintain the cool water input to Bear Creek from the Bank site which is essential during the summer for Bear Creek and the Sammamish Basin for migrating anadromous fish.

Wetland Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural or historic functions [and processes] of a degraded wetland. Rehabilitation results in a gain in wetland function but does not result in a gain in wetland acres. Activities could involve breaching a dike to reconnect wetlands to a floodplain or returning tidal influence to a wetland.

Wetland rehabilitation actions include restoring the natural wetland hydroperiod of existing wetlands through floodplain reconnection with Bear Creek and disabling of existing ditches, grading to create connectivity between existing wetlands and reestablished wetlands, and reestablishing native vegetation communities within the existing wetland areas.

Additionally, riparian uplands surrounding the re-established and rehabilitated wetland areas and streams will be enhanced through the planting of native trees and shrubs which will create interspersed terrestrial habitat, important for aquatic dependent wildlife as well as providing other improvements such as shading aquatic areas on the site and providing a source of organic material and large wood.

Restoration across the Bank site will rehabilitate 7.9 acres of existing wetland habitat while re-establishing approximately 51.1 acres of forested, shrub and emergent wetlands. The existing 7,114 linear feet (1.7 acres) of ditched tributary streams will be rehabilitated and approximately 5,162 linear feet (2.6 acres) of stream channel will be added across the Bank site.

8.1 Water Quality Functions

All pre-existing wetlands at the Bank provided a medium level of water quality functions (total water quality score of 6-7 points) and a low or medium site potential function for water quality improvement using the Washington State Wetland Rating System for Western Washington (Rating System; Hruby 2014). All wetlands are located within the floodplain of Bear Creek and are inundated during overbank flood events. However, lack of surface channel connections with Bear Creek or existing onsite ditches and limited extent of seasonal ponding during nonflood events restrict the site potential of existing wetlands to provide water quality functions. In addition, because the site was in agricultural use, pollutant filtering capability of vegetation in site wetlands was limited. All existing wetlands rate high for providing water quality improvement that is valuable to society because both Bear Creek adjacent to the Bank and the tributary Perrigo Creek that flows through the Bank site are listed on the State of Washington 303d list as impaired for water quality parameters. Perrigo Creek is impaired for temperature and a Total Maximum Daily Load (TMDL) has been established. Bear Creek is listed for bioassessment, dissolved oxygen, temperature, and bacteria and TMDLs have been established for the latter three parameters. Existing wetlands on the Bank site will gain significant functional lift in water quality from rehabilitation and enhancement actions associated with implementation of the Bank. In addition, a net increase of 51.1 acres of wetland and 2.6 acres of stream channel/wetland complex will result. Post-construction wetland and floodplain functions related to water quality, such as removing sediments, nutrients, metals, and toxic organics will significantly increase as native vegetation establishes.

The Bank's riparian restoration and stream plantings are an integral part of a regional effort to restore riparian conditions and functions and reduce temperatures in Bear Creek and the Sammamish River. Vegetating the banks of Bear Creek and the tributary floodplain streams within the Bank site with trees and shrubs will provide additional shading during the critical months in the summer and fall when adult salmon are migrating and spawning in the Bear Creek and Sammamish River systems. The Bank was designed so that during the summer and fall periods when water levels across the Bank site will be at their lowest levels, water will be confined to the riparian stream channel areas, rather than spreading out or ponding across the site which could warm surface waters. Riparian wetlands are not expected to have extended periods of standing water June through October. Additionally, floodplain streams will maintain their groundwater connection, providing a cold-water source in the streams and to Bear Creek.

8.2 Hydrologic Functions

All pre-existing wetlands on the Bank site provided a medium level of hydrologic functions (total hydrologic score of 7 points) using the Rating System.

Restoration actions at KFMB will result in improvement to site-specific wetland and floodplain hydrologic functions and watershed-scale hydrologic processes, including increased available flood storage volume, attenuation of flood flows, reductions in peak flood flows, and groundwater recharge.

8.3 Habitat Functions

All pre-existing wetlands on the Bank site provided a medium level of habitat functions (total habitat score of 6 points) using the Rating System. Plant communities were entirely emergent and dominated by non-native and invasive species, farmed, and lacked habitat complexity.

Overall habitat suitability for wetland-associated birds, mammals, amphibians, fish and invertebrates will improve over existing conditions because of: the net increase in acreage of wetland and aquatic area, improved access for aquatic organisms to floodplain wetland and aquatic areas, the increased variety of hydroperiods, the increase in vegetation species richness and habitat interspersion, the addition of habitat enhancement features such as large woody debris, and accessibility to contiguous habitat areas such as the adjacent WSDOT mitigation site and NGPA areas along Bear Creek.

The restoration of 7,114 linear feet of ditched tributary streams and addition of 5,162 linear feet of stream channel will increase available suitable habitat for salmonids and other fish species, including ESA-listed species. This restoration will include additional off-channel rearing and refuge habitat within the floodplain streams and deeper backwater areas connected to Bear Creek.

8.4 Summary of Functional Improvements

Existing wetlands on the Bank site gain significant functional lift in water quality and habitat functions from rehabilitation and enhancement actions associated with implementation of the Bank. Hydrologic functions in existing wetlands would remain similar to pre-project conditions. Existing wetlands (7.9 acres) and re-established wetlands (63.3 acres) are anticipated to rate as Category II wetlands at maturity. For existing wetlands onsite, the Credit-Debit Method (*Calculating Credits and Debits for Compensatory Mitigation in Western Washington*, Hruby 2012) estimated that 14.2 acre-points would be generated for water quality functions and 7.9 acre-points would be generated for habitat functions with Bank implementation. Additionally, 500 water quality acre-points, 438 hydrology acre-points, and 438 habitat acre-points would be generated by re-establishing and rehabilitating approximately 63.3 acres of former wetlands on the site.

Post construction, the Bank site will consist of a mosaic of forested upland, forested, scrub/shrub, and emergent wetland, and stream channel habitat. The Bank will create new aquatic habitat for resident and anadromous fish species and improve existing habitat for the

regionally important salmonid populations that are present on the Bank site. A net increase of 51.1 acres of wetland and 2.6 acres of stream channel/wetland will result from Bank implementation.

Post-project conditions will provide numerous functional benefits over existing conditions including: allowing Bear Creek flows to infiltrate in wetland areas during a wider range of flow conditions; recharging the local groundwater aquifer; increasing floodplain wetland groundwater storage; providing cooling of groundwater through soil heat adsorption of surface waters; and delaying release of cooler groundwater to the floodplain streams later in the spring and summer when stream temperatures are highest. Plantings adjacent to Bear Creek and floodplain streams will also help moderate summer water temperatures, and re-established vegetation communities within the wetlands and riparian upland areas will increase habitat diversity and accessibility for aquatic dependent plants and animals. Enhanced floodplain connections with Bear Creek will be established that will increase the range of flow conditions where Bear Creek flows will contribute to hydrologic support of floodplain wetlands and streams. These connections will also allow fish access to the re-established wetlands and stream channels in the floodplain.

The benefits and functional improvements provided by the Bank exceed those anticipated under a traditional permittee-responsible mitigation approach, as described in Section 7. "Onsite" mitigation opportunities for the Project have been considered and are limited as described in the *North Bellevue Critical Area Report*. As described in Section 9 below, a portion of the wetland and buffer impacts for the North Bellevue Segment will be mitigated through restoration planting at the Richards Creek Substation in conjunction with an existing mitigation site for the South Bellevue Segment impacts. Due to limited space availability at the Richards Creek Substation site, the remainder of the impacts for the North Bellevue Segment are proposed to be mitigated through purchase of credits at the KFMB.

9 Wetland/Stream/Buffer Functions Not Mitigated at Mitigation Bank

A portion of the North Bellevue Project impacts will be mitigated on-site at the Richards Creek Substation site, rather than through the Bank, as described in the *North Bellevue Critical Areas Report* (The Watershed Company 2021a).

The Richards Creek Substation mitigation area consists of a Category III wetland (Wetland A) dominated by reed canarygrass and Himalayan blackberry. Wetland enhancement is proposed that would expand and complement the adjacent mitigation area approved for the South Bellevue Segment of the Project. The wetland enhancement 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. The plan includes a comprehensive five-year maintenance and monitoring plan including specifications and standards that will ensure the enhancement plantings will be maintained, monitored, and successfully established within the first five years following implementation.

Project impacts and the associated, proposed permittee-responsible on-site mitigation is summarized in Table 4, below. For more information, see the *North Bellevue Critical Areas Report* (The Watershed Company 2021a; and associated Appendix G of that report).

Drainage Basin ¹	Critical Area Name	Wetland Category	Type of Impact	Adjusted Impact Quantity (SF) ²	Proposed Mitigation Activity	Proposed Mitigation Area (SF)
Richards Creek	Wetland EE	IV	Conversion	810	Enhancement of Wetland A (Category III) at Richards Creek Substation in the	2,940
	Combined Buffers	buffer	Conversion	6,540		3,300
Kelsey Creek	Wetland EB14	III	Conversion	800	Richards Creek drainage basin	3,690
					Total	9,930

Table 4. Richards Creek Substation impact and mitigation summary.

- 1. Bellevue-defined drainage basins.
- 2. The adjusted quantity incorporates square footage of pole removal (if any) as the removal self-mitigates for some of the pole installation.

In addition to compensation of ecological functions through critical area mitigation requirements, PSE has committed to replacement of removed trees based on size per the Project's *Vegetation Inventory & Management Plan Report for North Bellevue* (The Watershed Company 2021b), which describes PSE's propose tree replacement approach. According to that document, PSE would prioritize replacement of impacted vegetation with transmission line compatible species within or near the Project corridor as negotiated with private property owners.

Temporary impacts from the Project are proposed to be restored on site in accordance with the *Temporary Impacts Restoration Plan* (Appendix E of the *North Bellevue Critical Areas Report*; The Watershed Company 2021a).

10 Proposed Mitigation Credits

The ratios in Table 5 are proposed to mitigate for the indirect impact of vegetation conversion (tree removal) in wetlands and critical area buffers. Ratios are based upon the number of bank credits typically required by the IRT agencies to compensate for each unit of permanent loss of aquatic resource type and functional level. A "vegetation conversion discount factor" is applied because the vegetation conversion impact does not result in fill or total loss of the affected aquatic resource.

Vegetation conversion discount factors have been applied for projects with similar impacts, generally ranging from 25 to 33 percent of the standard permanent impact ratio (Z. Woodward, personal communication, June 19, 2020). The 25 percent vegetation conversion discount factor is proposed based on the existing degraded condition of the transmission line corridor, impacted tree species composition, and condition of impacted trees (*i.e.*, many have been previously pruned or topped as part of ongoing vegetation management activities).

Table 5. Summary of proposed KFMB credit to impact ratios with the applied vegetation conversion factor and total credit amount and cost.

Permanent Resource Impact	Vegetation Conversion Impact (SF)	Permanent Impact Ratio	Vegetation Conversion Discount Factor (no fill) ¹	KFMB Credits
Wetland, Category II	2,900	1.2 to 1	25%	870
Wetland, Category III	4,940	1 to 1	25%	1,235
Wetland, Category IV	240	0.85 to 1	25%	51
Critical Area Buffer	31,590	0.3 to 1	25%	2,370
	Total Credit (SF) =	4,526 SF		
	0.103885			
	\$103,885			

^{1.} The discount factor is the percentage of the standard ratio that applies.

11 Credit Purchase or Transfer Timing

PSE will enter into a Purchase Agreement with KFMB (Habitat Bank, LLC) to purchase 4,526 square feet of credits that would appropriately mitigate for the proposed project impacts. The anticipated timing of credit purchase and transfer is mid- to late-2021, following permit issuance by the agencies with jurisdiction. Purchase of credits will be completed prior to the onset of any activities affecting impacted resources. Nothing in the Purchase Agreement shall be interpreted as permitting or construed to permit any activity that otherwise requires a federal, state and/or local permit. Proof of the credit purchase and transfer will be provided in the form a notification letter to the approving agencies and to the IRT co-chairs by the Bank Sponsor. Upon service of this notification, the mitigation requirement to purchase 4,526 square feet of mitigation credits will be fully satisfied.

References

- Compensatory Mitigation for Losses of Aquatic Resources. 2008. 33 C.F.R. §332.
- Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U. S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Jamestown, ND: Northern Prairie Wildlife Research Center Home Page. http://www.npwrc.usgs.gov/resource/1998/classwet/classwet.htm (Version 04DEC98).
- Environmental Science Associates (ESA). May 2017. Energize Eastside Project: Phase 2 Draft Environmental Impact Statement. Prepared for the Cities of Bellevue, Newcastle, Redmond, and Renton. Available online:

 http://www.energizeeastsideeis.org/library.html#phase2deis
- GeoEngineers. 2020. Targeted Critical Areas Geologic Hazards Evaluation: Energize Eastside Project, North Bellevue, WA. Prepared for PSE.
- Habitat Bank, LLC. May 2015. Keller Farm Mitigation Bank Project Prospectus. Available at: https://www.nws.usace.army.mil/Portals/27/docs/regulatory/publicnotices/2015%20PNs /Keller%20Prospectus%20May%2021%202015.pdf
- Habitat Bank, LLC. 2019. Keller Farm Mitigation Bank Mitigation Banking Instrument.

 Available at: https://ecology.wa.gov/Water-Shorelines/Wetlands/Mitigation/Wetland-mitigation-banking/Mitigation-bank-projects/Keller-Farm
- Hruby, T. 2012. Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington, Final Report, March 2012. Washington State Department of Ecology publication #10-06-11. Available at: https://ecology.wa.gov/Water-Shorelines/Wetlands/Tools-resources/Credit-debit-methoda
- Hruby, T. 2014. Washington State Wetland Rating System for Western Washington: 2014
 Update Effective January 2015. Publication No. 14-06-029. Available at:
 https://ecology.wa.gov/Water-Shorelines/Wetlands/Tools-resources/Rating-systems
- Hruby, T., K. Harper, and S. Stanley. 2009. Selecting Wetland Mitigation Sites Using a Watershed Approach. Washington State Department of Ecology Publication #09-06-032.
- Interagency Review Team for Washington State. 2009. Using Credits from Wetland Mitigation Banks: Guidance to Applicants on the Submittal Contents for Bank Use Plans. Revised

February 19. Available at: https://fortress.wa.gov/ecy/ezshare/sea/MitigationBanking/Templates/BankUsePlan.pdf

<u>Lake Washington/Cedar/Sammamish Watershed. 2005.</u> Final Lake Washington/Cedar/Sammamish Watershed (WRIA 8) Chinook Salmon Conservation Plan. Available at: https://govlink.org/watersheds/8/planning/chinook-conservation-plan.aspx

- Shannon & Wilson, Inc. March 2018. Keller Farm Mitigation Bank Basis of Design Report. Shannon & Wilson No: 21-1-12566-241. Available at:

 https://www.redmond.gov/DocumentCenter/View/5074/Keller-Farm-Wetland-Mitigation-Bank-Basis-of-Design-Report--PDF
- Washington State Department of Ecology, U.S. Army Corps of Engineers Seattle District, and U.S. Environmental Protection Agency Region 10. March 2006. Wetland Mitigation in Washington State Part 1: Agency Policies and Guidance (Version 1). Washington State Department of Ecology Publication #06-06-011a. Olympia, WA. Available at: https://ecology.wa.gov/Water-Shorelines/Wetlands/Mitigation/Interagency-guidance
- Washington State Department of Ecology, U.S. Army Corps of Engineers Seattle District, and U.S. Environmental Protection Agency Region 10. March 2006. Wetland Mitigation in Washington State Part 2: Developing Mitigation Plans (Version 1). Washington State Department of Ecology Publication #06-06-011b. Olympia, WA. Available at: https://ecology.wa.gov/Water-Shorelines/Wetlands/Mitigation/Interagency-guidance
- Washington State Department of Ecology, U.S. Army Corps of Engineers Seattle District, and U.S. Environmental Protection Agency Region 10. October 2020. Draft Wetland Mitigation in Washington State Part 1: Agency Policies and Guidance (Version 2). Washington State Department of Ecology Publication #20-06-010. Olympia, WA. Available at: https://fortress.wa.gov/ecy/publications/documents/2006010.pdf
- The Watershed Company 2021a. North Bellevue Critical Areas Report: Puget Sound Energy Energize Eastside Project. Prepared for City of Bellevue.
- The Watershed Company. 2021b. Vegetation Inventory & Management Plan Report for North Bellevue: Puget Sound Energy – Energize Eastside Project. Prepared for City of Bellevue.

TEMPORARY IMPACTS RESTORATION PLAN

PLAN SET INTENT

THIS PLAN IS LIMITED TO RESTORATION OF TEMPORARILY IMPACTED, VEGETATED AREAS TO PRE-CONSTRUCTION CONDITIONS OR BETTER

SHEET INDEX W1.0 GENERAL NOTES & PLANT INSTALLATION SPECIFICATIONS W2.0 KEY PLAN MAPS (1 OF 16) W2.1 KEY PLAN MAPS (2 OF 16) W2.2 KEY PLAN MAPS (3 OF 16) W2.3 KEY PLAN MAPS (4 OF 16) W2.4 KEY PLAN MAPS (5 OF 16) W2.5 KEY PLAN MAPS (6 OF 16) W2.6 KEY PLAN MAPS (7 OF 16) W2.7 KEY PLAN MAPS (8 OF 16) W2.8 KEY PLAN MAPS (9 OF 16) W2.9 KEY PLAN MAPS (10 OF 16) W2.10 KEY PLAN MAPS (11 OF 16) W2.11 KEY PLAN MAPS (12 OF 16) W2.12 KEY PLAN MAPS (13 OF 16) W2.13 KEY PLAN MAPS (14 OF 16) W2.14 KEY PLAN MAPS (15 OF 16) W2.15 KEY PLAN MAPS (16 OF 16)

	W2.1	KEY PLAN MAPS (2 OF 16)		
	W2.2	KEY PLAN MAPS (3 OF 16)		N P
	W2.3	KEY PLAN MAPS (4 OF 16)		
	W2.4	KEY PLAN MAPS (5 OF 16)		
	W2.5	KEY PLAN MAPS (6 OF 16)		
	W2.6	KEY PLAN MAPS (7 OF 16)		
	W2.7	KEY PLAN MAPS (8 OF 16)		
	W2.8	KEY PLAN MAPS (9 OF 16)		
	W2.9	KEY PLAN MAPS (10 OF 16)		下
	W2.10	KEY PLAN MAPS (11 OF 16)		
	W2.11	KEY PLAN MAPS (12 OF 16)		
	W2.12	KEY PLAN MAPS (13 OF 16)	,	ΑF
	W2.13	KEY PLAN MAPS (14 OF 16)		
	W2.14	KEY PLAN MAPS (15 OF 16)		
	W2.15	KEY PLAN MAPS (16 OF 16)		
	W3.0 F	RESTORATION PLAN TYP. 1: STANDARD		
	W3.1	RESTORATION PLAN TYP. 2: WETLAND		
	W3.2	RESTORATION PLAN TYP. 3: STREAM AND WETLAND BUFFER		
1				

APPROX. SUM OF AREA (SF)
25,000
605
FFER 27,000
141,000
193,605

W3.3 RESTORATION PLAN TYP. 4: OTHER

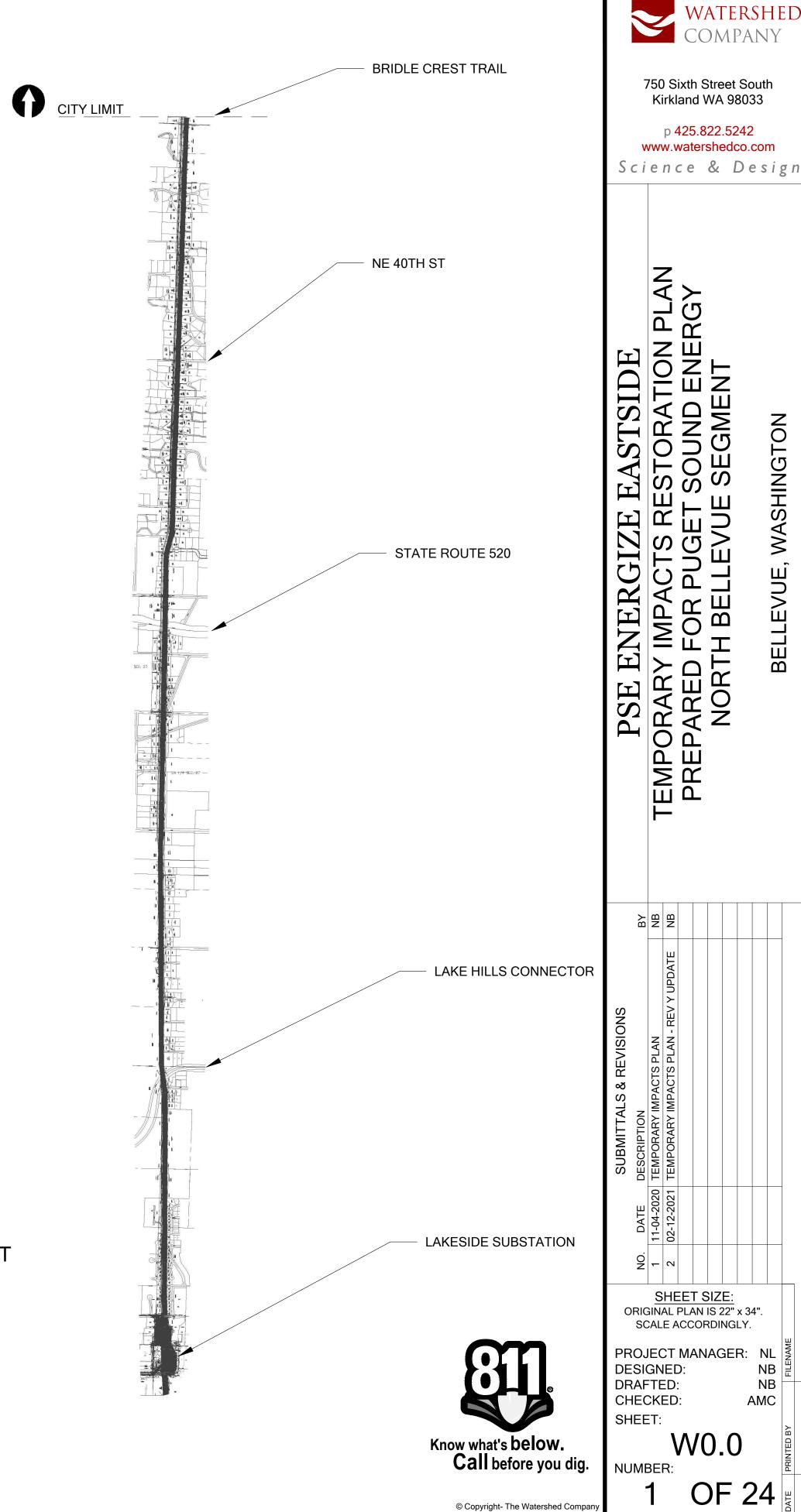
W5.0 MITIGATION NOTES

W4.0 PLANTING & SOIL PREPARATION DETAILS



PUGET SOUND ENERGY RIGHT OF WAY MAINTENANCE PATH THROUGH LOW GROWING SHRUBS AND TREES.

BELLEVUE, WASHINGTON **ENERGIZE EASTSIDE** 230 CORRIDOR NORTH BELLEVUE SEGMENT



GENERAL NOTES

TYPICAL APPROACH TO IMPLEMENTATION

- LOCATE KEY MAP THE WORK AREA RESIDES IN (SHEETS W2.0-2.15).
 IDENTIFY TYPE(S) OF EXISTING LAND-CLASS COVER WITHIN WORK
- I IMITS
- 3. CHOOSE CORRECT RESTORATION TYP. BASED ON EXISTING LAND-CLASS COVER AND POST-CONSTRUCTION CONDITIONS. NOTE: THIS MAY NOT APPLY TO SOME TEMPORARY IMPACTS AREAS THAT WILL NOT HAVE VEGETATION REMOVED, SUCH AS, WHERE MATS ARE PLACED OVER EXISTING VEGETATION DURING CONSTRUCTION AND THE VEGETATION IS EXPECTED TO RECOVER.
- 4. HOLD A PRE-CONSTRUCTION MEETING WITH A PSE REPRESENTATIVE TO ESTABLISH CONSTRUCTION WORK LIMITS AND VERIFY THE RESTORATION APPROACH CHOSEN IS CORRECT BASED ON EXISTING SITE CONDITIONS.
- 5. IF OPL OCCURS WITHIN WORK AREA, CONTRACTOR SHALL LOCATE AND MARK CENTERLINE (CL) OF OPL, THEN FLAG/STAKE 10FT OFFSETS TO EACH SIDE OF OPL CL.
- 6. FLAG/STAKE ANY CRITICAL AREAS AND ASSOCIATED BUFFERS PRIOR TO CONSTRUCTION ACTIVITIES.
- 7. DOCUMENT THE EXISTING CONDITIONS OF THE SITE TO BE IMPACTED BY TAKING A MINIMUM OF 3 PHOTOS CLEARLY DISPLAYING THE ENTIRE SITE. THESE SHALL BE TAKEN PRIOR TO ANY DISTURBANCE OR REMOVAL OF VEGETATION.
- 8. PERFORM CONSTRUCTION ACTIVITIES (SEE CIVIL OR OTHER PLAN SET).
- 9. POST-CONSTRUCTION, HAVE A PSE REPRESENTATIVE INSPECT SITE AND SOILS WITHIN AREAS OF TEMPORARY IMPACTS. SELECT SOIL PREP PROCEDURE BASED ON CONDITIONS (SHEET W4.0) AND VERIFY WITH A PSE REPRESENTATIVE.
- 10. PREP SOILS, INSTALL PLANTS, AND PLACE MULCH (SHEET W4.0).
- 11. REMOVE ALL MACHINERY, PLASTIC, METAL, REFUSE, DEBRIS, GARBAGE, FUELS, AND NON-NATIVE MATERIALS FROM THE CONSTRUCTION SITE.

COMPANION PLAN SETS

 SEE THE PARCEL-SPECIFIC LANDSCAPE PLANS WHERE AVAILABLE. THESE ARE NOTED AS TYPE 5 RESTORATIONS ON THE FOLLOWING SHEETS.

ASSUMPTIONS

- 1. TESC PLANS AND DETAILS WILL BE PROVIDED IN THE CIVIL PLAN SET
- 2. ALL CRITICAL AREAS AND BUFFERS WILL BE STAKED/FLAGGED PRIOR TO STARTING CONSTRUCTION ACTIVITIES
- 3. A PRE-CONSTRUCTION MEETING WITH A PSE REPRESENTATIVE WILL TAKE PLACE FOR EACH WORK AREA TO CONFIRM CONTRACTOR APPROACH TO RESTORING TEMPORARY IMPACTS.

DIVERSITY STANDARDS

FOR EACH IMPACT AREA TO BE REPLANTED, INSTALL ONE OF EACH TREE, SHRUB, AND GROUNDCOVER SPECIES FROM THE LIST PROVIDED FOR EACH TYPICAL AT THE SPECIFIED SPACING UNTIL THE AREA HAS BEEN 100% PLANTED. FOR AREAS LARGE ENOUGH FOR ALL THE SPECIES PROVIDED, ONCE ALL SPECIES HAVE BEEN INSTALLED START OVER AGAIN AT THE BEGINNING OF THE LIST AND REPEAT.

PLANT INSTALLATION SPECIFICATIONS

QUALITY ASSURANCE

- PLANTS SHALL MEET OR EXCEED THE SPECIFICATIONS OF FEDERAL STATE, AND LOCAL LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL.
- 2. 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).
- 3. TREES WITH DAMAGED, CROOKED, MULTIPLE OR BROKEN LEADERS WILL BE REJECTED. WOODY PLANTS WITH ABRASIONS OF THE BARK OR SUN SCALD WILL BE REJECTED.
- 4. 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.

SUBSTITUTIONS

- 1. 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.
- 2. SUBSTITUTION OF PLANT MATERIALS NOT ON THE PROJECT LIST WILL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE PSE REPRESENTATIVE.
- 3. 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.
- 4. SUCH PROOF WILL BE SUBSTANTIATED AND SUBMITTED IN WRITING TO THE CONSULTANT OR PSE AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION.

INSPECTION

- 1. PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE RESTORATION CONSULTANT OR PSE 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.
- 2. 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.
- 3. THE RESTORATION CONSULTANT OR PSE MAY ELECT TO INSPECT PLANT MATERIALS AT THE PLACE OF GROWTH. AFTER INSPECTION AND ACCEPTANCE, THE RESTORATION CONSULTANT OR PSE 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.
- 2. 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.
- 3. 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

- 1. PLANT MATERIALS LIST SUBMIT DOCUMENTATION TO RESTORATION CONSULTANT OR PSE 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 RESTORATION CONSULTANT OR PSE 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 RESTORATION CONSULTANT OR PSE 48 HOURS OR MORE IN ADVANCE OF DELIVERIES SO THAT CONSULTANT OR PSE MAY ARRANGE FOR INSPECTION.

PLANT MATERIALS

- 1. 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.
- 2. 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.
- 3. 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.
- 4. 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

- 1. PLANTS NOT FOUND MEETING ALL OF THE REQUIRED CONDITIONS AT THE RESTORATION CONSULTANT OR PSE'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.
- 2. 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.
- 2. PLANTS MUST NOT BE ROOT-BOUND; THERE MUST BE NO CIRCLING ROOTS PRESENT IN ANY PLANT INSPECTED.
- 3. ROOTBALLS THAT HAVE CRACKED OR BROKEN WHEN REMOVED FROM THE CONTAINER SHALL BE REJECTED.

DEFINITIONS

- 1. PSE REPRESENTATIVE: POINT OF CONTACT PROVIDED BY PSE FOR THIS PLAN SET
- 2. <u>RESTORATION CONSULTANT</u>: WATERSHED COMPANY [(425) 822-5242] PERSONNEL, OR OTHER PERSONS QUALIFIED TO EVALUATE ENVIRONMENTAL RESTORATION PROJECTS.
- 3. <u>COMPOST</u>: COMPOST SHALL MEET WSDOT STANDARDS SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, 9-14.4(8).
- I. WOOD CHIP 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.
 MULCH SHALL NOT CONTAIN APPRECIABLE QUANTITIES OF
 GARBAGE, PLASTIC, METAL, SOIL, AND DIMENSIONAL LUMBER OR
 CONSTRUCTION/DEMOLITION DEBRIS.
- 5. THREE-WAY TOPSOIL: TOPSOIL SHALL BE A THREE-WAY MIXTURE OF APPROXIMATELY 33-50% COMPOST AND 50-65% SAND OR SANDY LOAM. ALL COMPONENTS SHALL BE FREE OF PHYTO-TOXIC MATERIALS AND VIABLE SEEDS, RHIZOMES, OR ROOTS OF STATE-LISTED NOXIOUS WEEDS.
- 6. 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.
- 7. <u>CONTAINER GROWN</u>: CONTAINER GROWN PLANTS ARE THOSE WHOSE ROOTBALLS ARE ENCLOSED IN A POT OR BAG IN WHICH THAT PLANT GREW.



750 Sixth Street South Kirkland WA 98033

p 425.822.5242 www.watershedco.com

Science & Design

ORATION PLAN UND ENERGY GMENT

EMPORARY IMPACTS RESTORAT
PREPARED FOR PUGET SOUND I

SUBMITTALS & REVISIONS

NO. DATE DESCRIPTION

1 11-04-2020 TEMPORARY IMPACTS PLAN

2 02-12-2021 TEMPORARY IMPACTS PLAN - REV Y UPDATE NB

SINCE

INC. DATE DESCRIPTION

BY

NB

CONTRIBUTION

INC. DATE DESCRIPTION

BY

CONTRIBUTION

BY

CONTRIBUTION

CONTR

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

PROJECT MANAGER: NL
DESIGNED: NE
DRAFTED: NE
CHECKED: AMC

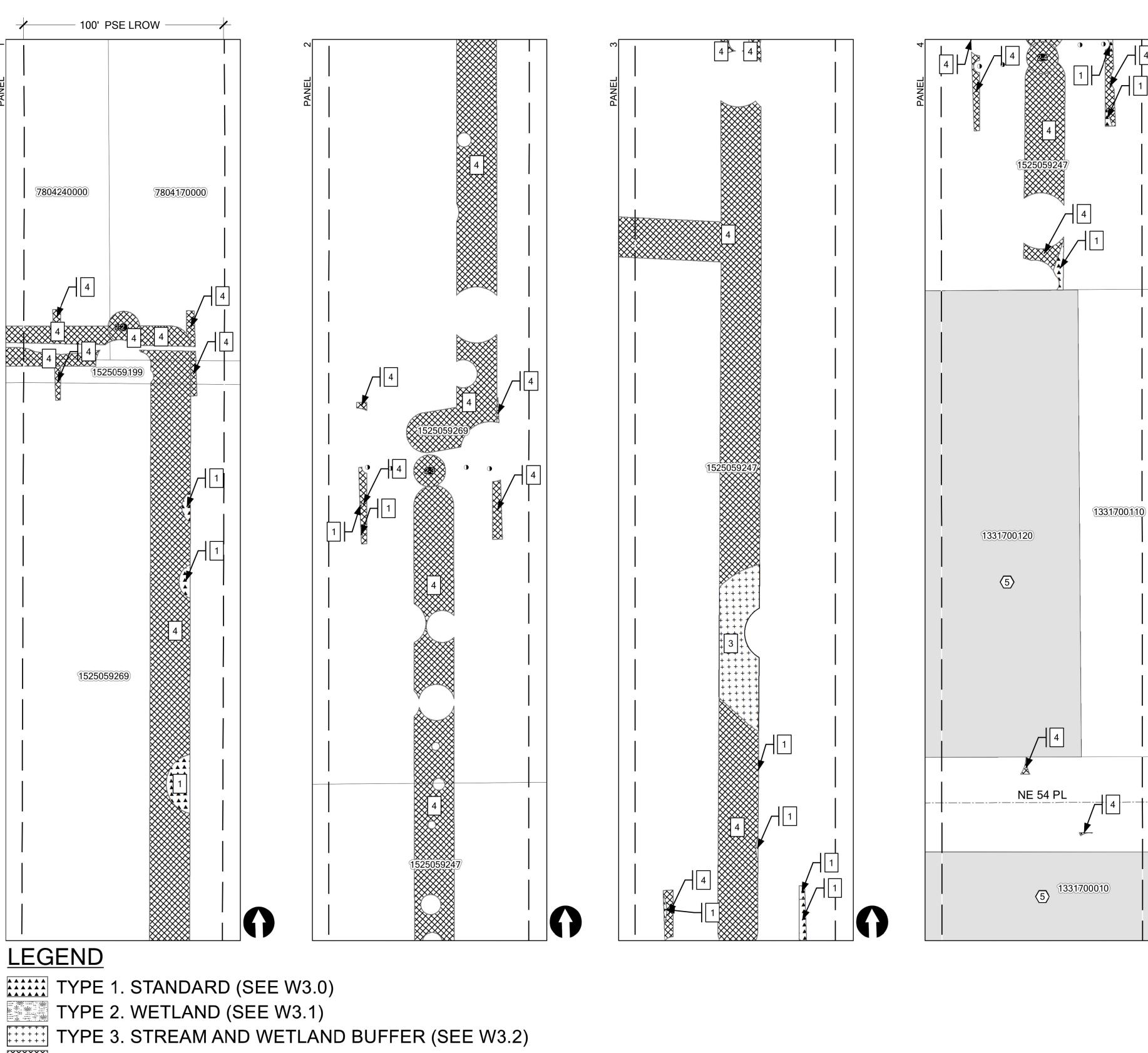
SHEET: W

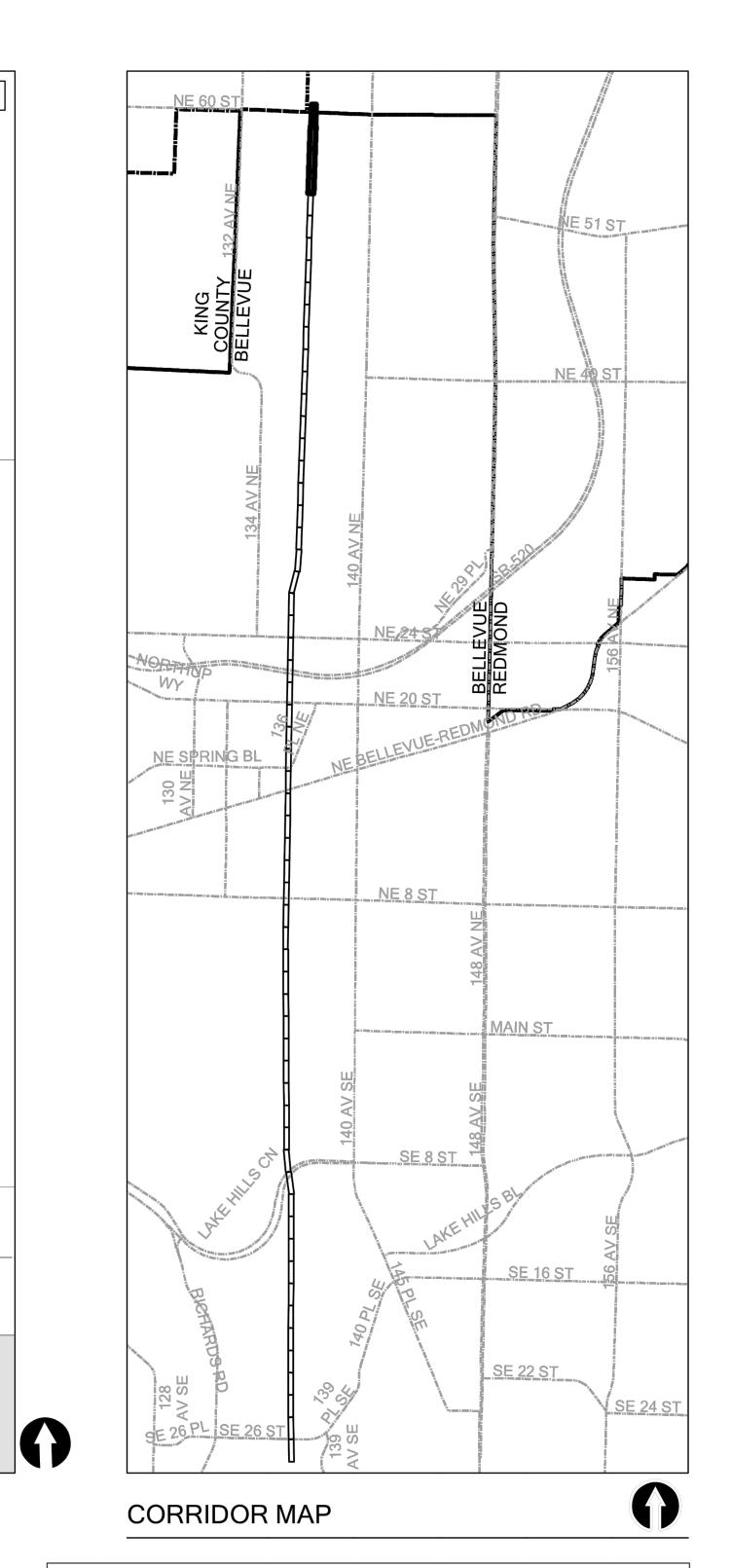
VV 1.0

NUMBER:

2 OF 24

Know what's below.
Call before you dig.





TYPE 4. OTHER (SEE W3.3)

TYPE 5. PARCEL-SPECIFIC LANDSCAPE PLAN - SEE COMPANION PLAN SET

• EXISTING POLES TO BE REMOVED

PROPOSED POLES - Received January 2021

NOTES

- 1. THESE PANELS SHOW THE 100-FT PSE MAINTENANCE EASEMENT FROM NORTH TO SOUTH FOR THE ENERGIZE EASTSIDE 230 CORRIDOR SEGMENT THROUGH NORTH BELLEVUE.
- 2. GEOLOGIC HAZARD AREAS (INCLUDING STEEP SLOPES, STEEP SLOPE BUFFERS, STEEP SLOPE SETBACKS, LANDSLIDE HAZARDS, AND LANDSLIDE HAZARD BUFFERS) OCCUR THROUGHOUT THE NORTH BELLEVUE SEGMENT CORRIDOR AND ARE INCLUDED IN THIS PLAN. PLEASE REFER TO GEOENGINEERS' NORTH BELLEVUE TARGETED CRITICAL AREAS GEOLOGIC HAZARDS EVALUATION, NOVEMBER 2020, REPORT FOR INFORMATION RELATED TO GEOLOGIC HAZARD AREAS.



Know what's below.
Call before you dig.

ght- The Watershed Company

ORIGINAL PLAN IS 22" x 34" SCALE ACCORDINGLY.

W2.0

OF 24

PROJECT MANAGER:

DESIGNED: DRAFTED:

CHECKED:

SHEET:

THE WATERSHED COMPANY

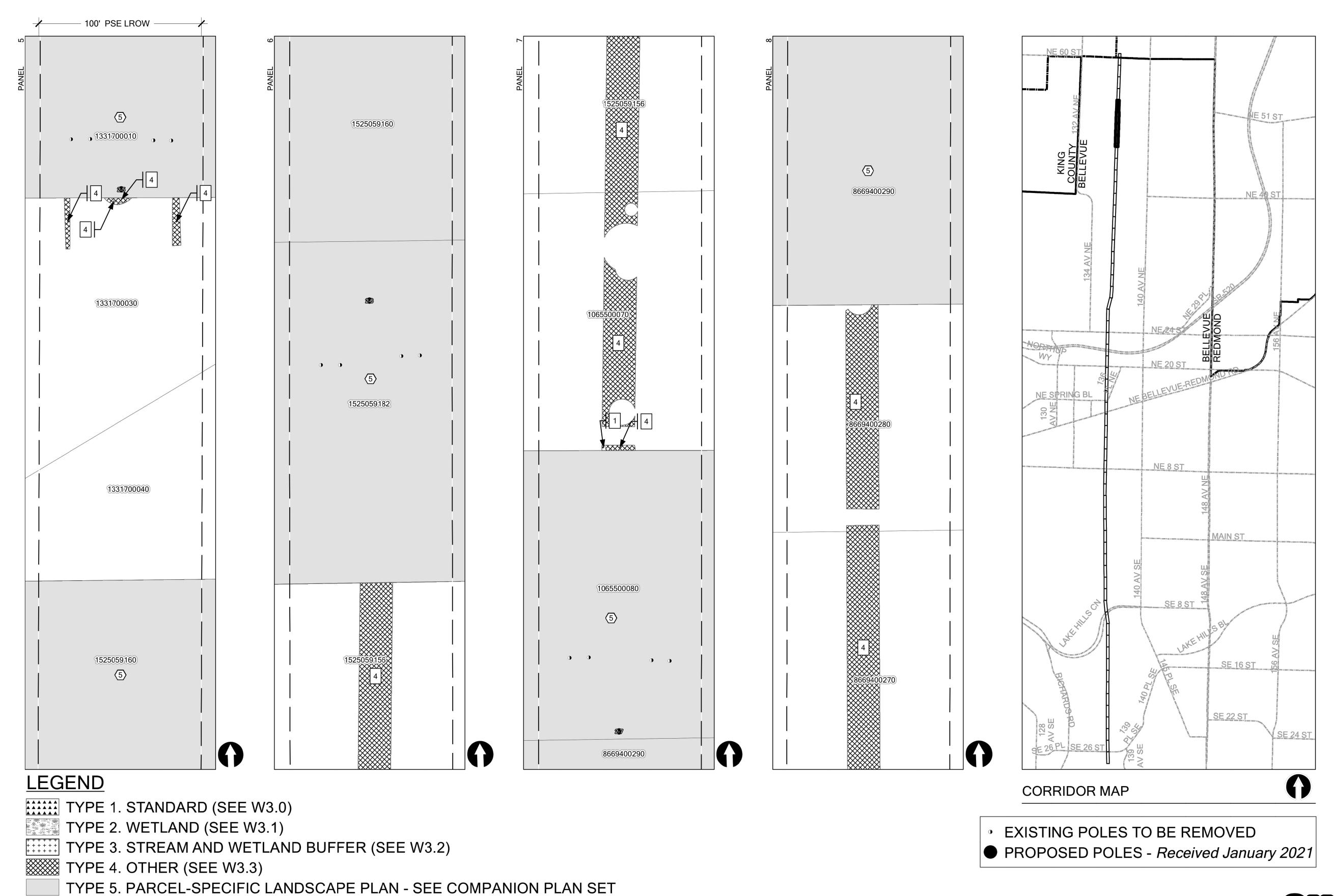
750 Sixth Street South Kirkland WA 98033

p 425.822.5242

Science & Design

KEY PLAN MAP (1 OF 16)

© Copyright The V



SHEET SIZE: ORIGINAL PLAN IS 22" x 34". SCALE ACCORDINGLY. DESIGNED: DRAFTED: CHECKED: SHEET: W2.1 OF 24

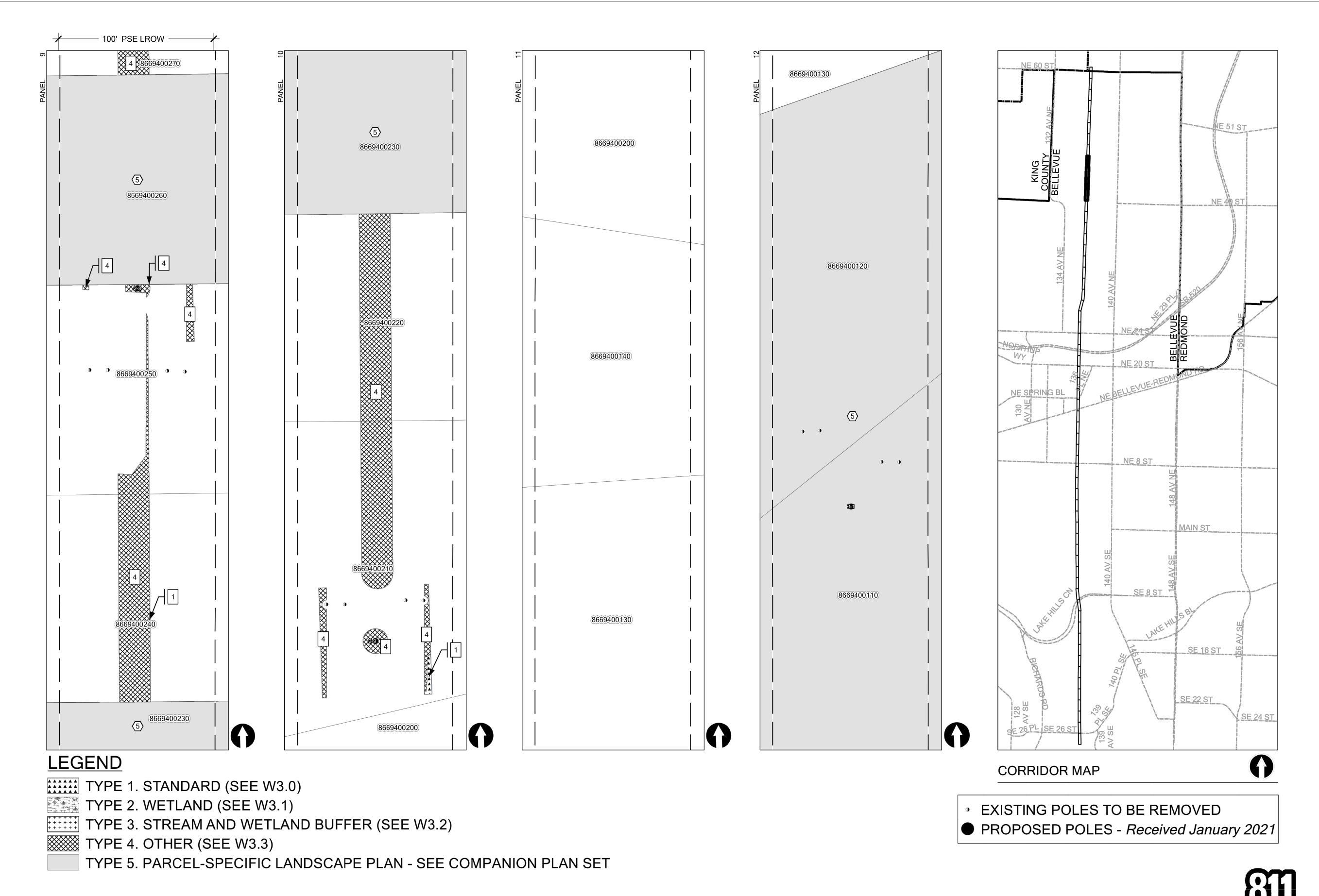
750 Sixth Street South Kirkland WA 98033

p 425.822.5242 www.watershedco.com Science & Design

Know what's below.

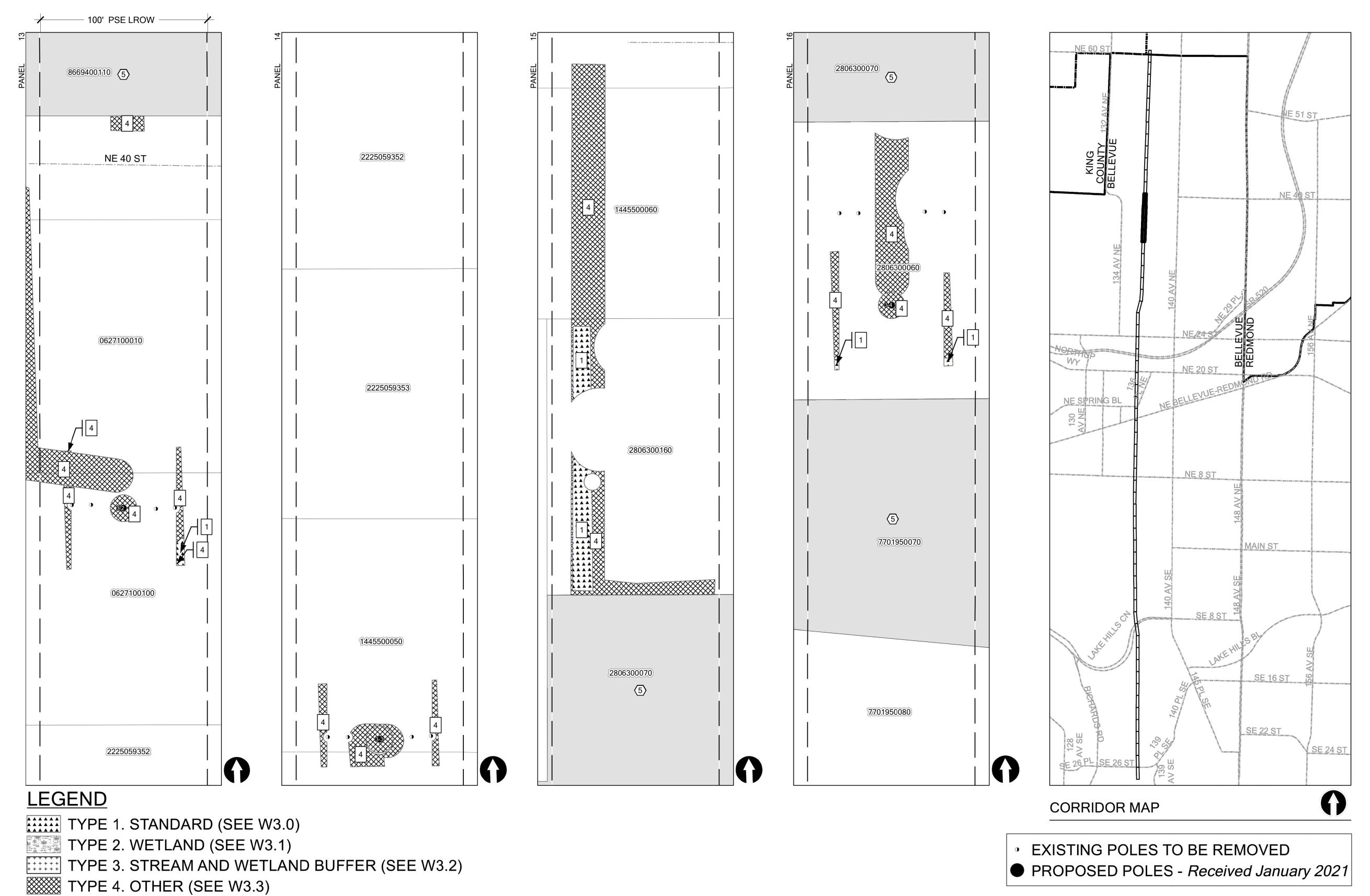
Call before you dig.

KEY PLAN MAP (2 OF 16)



750 Sixth Street South Kirkland WA 98033 p 425.822.5242 www.watershedco.com Science & Design PSE ENERGIZE EASTSIDE
TEMPORARY IMPACTS RESTORATION PLAN
PREPARED FOR PUGET SOUND ENERGY
NORTH BELLEVUE SEGMENT BELLEVUE, WASHINGTON SHEET SIZE: ORIGINAL PLAN IS 22" x 34". SCALE ACCORDINGLY. PROJECT MANAGER:
DESIGNED:
DRAFTED:
CHECKED: SHEET: Know what's below.

Call before you dig. W2.2 OF 24



PSE ENERGIZE EASTSIDE
TEMPORARY IMPACTS RESTORATION PLAN
PREPARED FOR PUGET SOUND ENERGY
NORTH BELLEVUE SEGMENT SHEET SIZE: ORIGINAL PLAN IS 22" x 34". SCALE ACCORDINGLY. DESIGNED: DRAFTED: CHECKED: SHEET: W2.3 OF 24 6

WATERSHED COMPANY

750 Sixth Street South

Kirkland WA 98033

p 425.822.5242 www.watershedco.com

Science & Design

KEY PLAN MAP (4 OF 16)

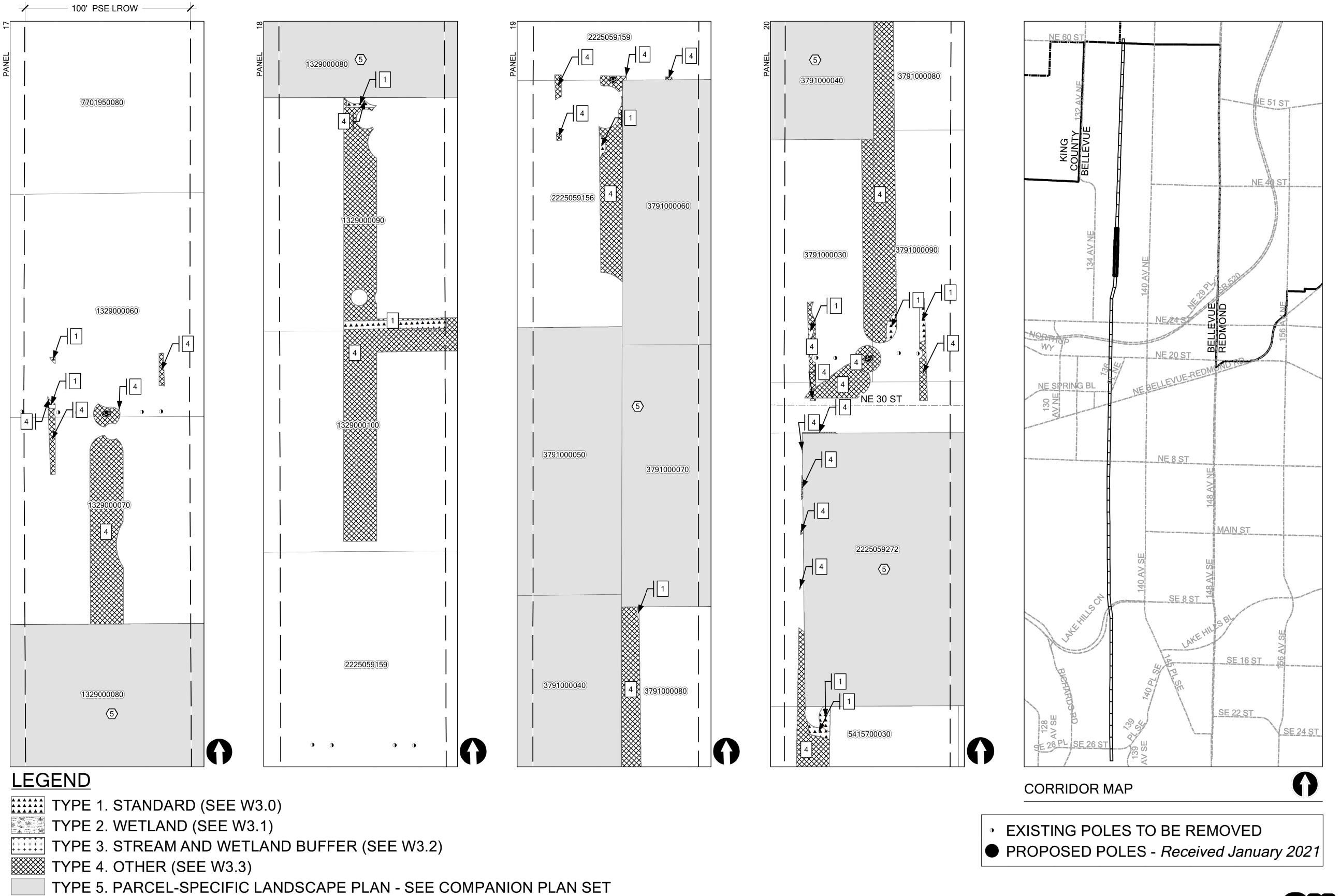
TYPE 5. PARCEL-SPECIFIC LANDSCAPE PLAN - SEE COMPANION PLAN SET

0 15' 30' 60' 120'

M



etore you dig. NUMBE



PROJECT M
DESIGNED:
DRAFTED:
CHECKED:
SHEET:

Know what's below.
Call before you dig.

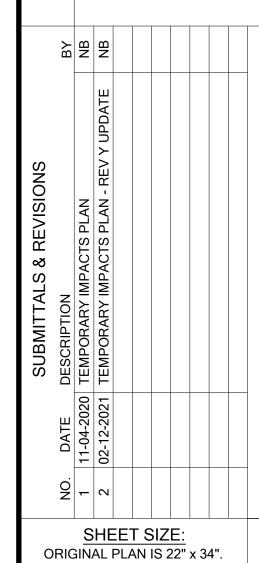
NUMBER:

THE WATERSHED COMPANY

750 Sixth Street South Kirkland WA 98033

p 425.822.5242
www.watershedco.com
Science & Design

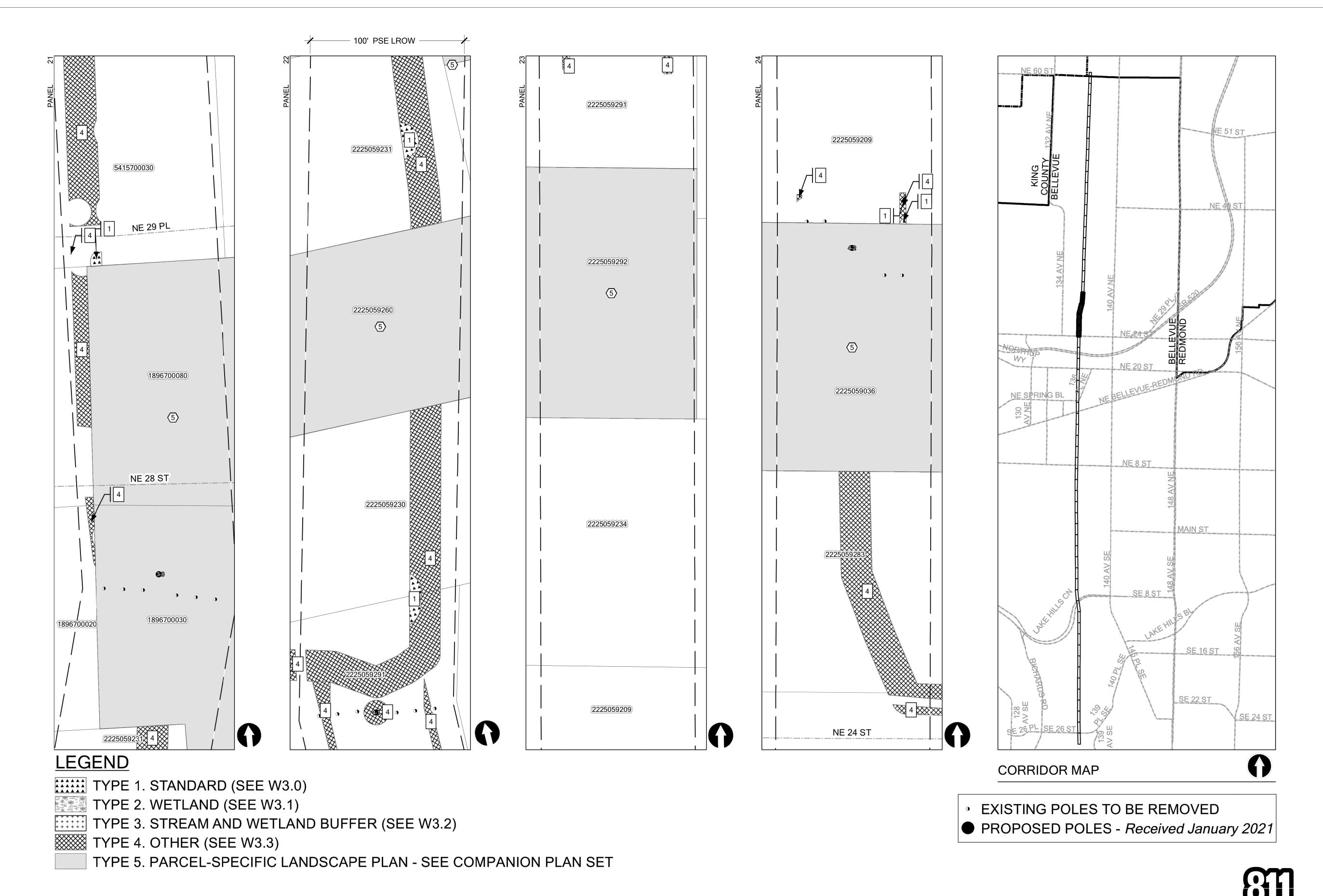
PSE ENERGIZE EASTSIDE
FEMPORARY IMPACTS RESTORATION
PREPARED FOR PUGET SOUND ENER
NORTH BELLEVUE SEGMENT



SCALE ACCORDINGLY.

W2.4

OF 24



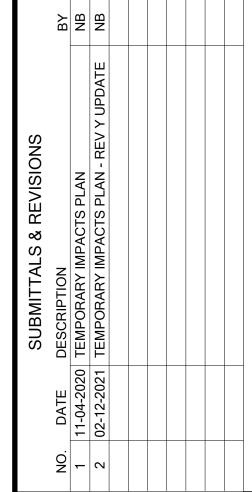
THE WATERSHED COMPANY

750 Sixth Street South Kirkland WA 98033

p 425.822.5242 www.watershedco.com

Science & Design

TSE ENERGIZE EASTSIDE
TEMPORARY IMPACTS RESTORATION
PREPARED FOR PUGET SOUND ENE
NORTH BELLEVUE SEGMENT



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

PROJECT MANAGE DESIGNED: DRAFTED: CHECKED:

8

SHEET: W2.5

OF 24

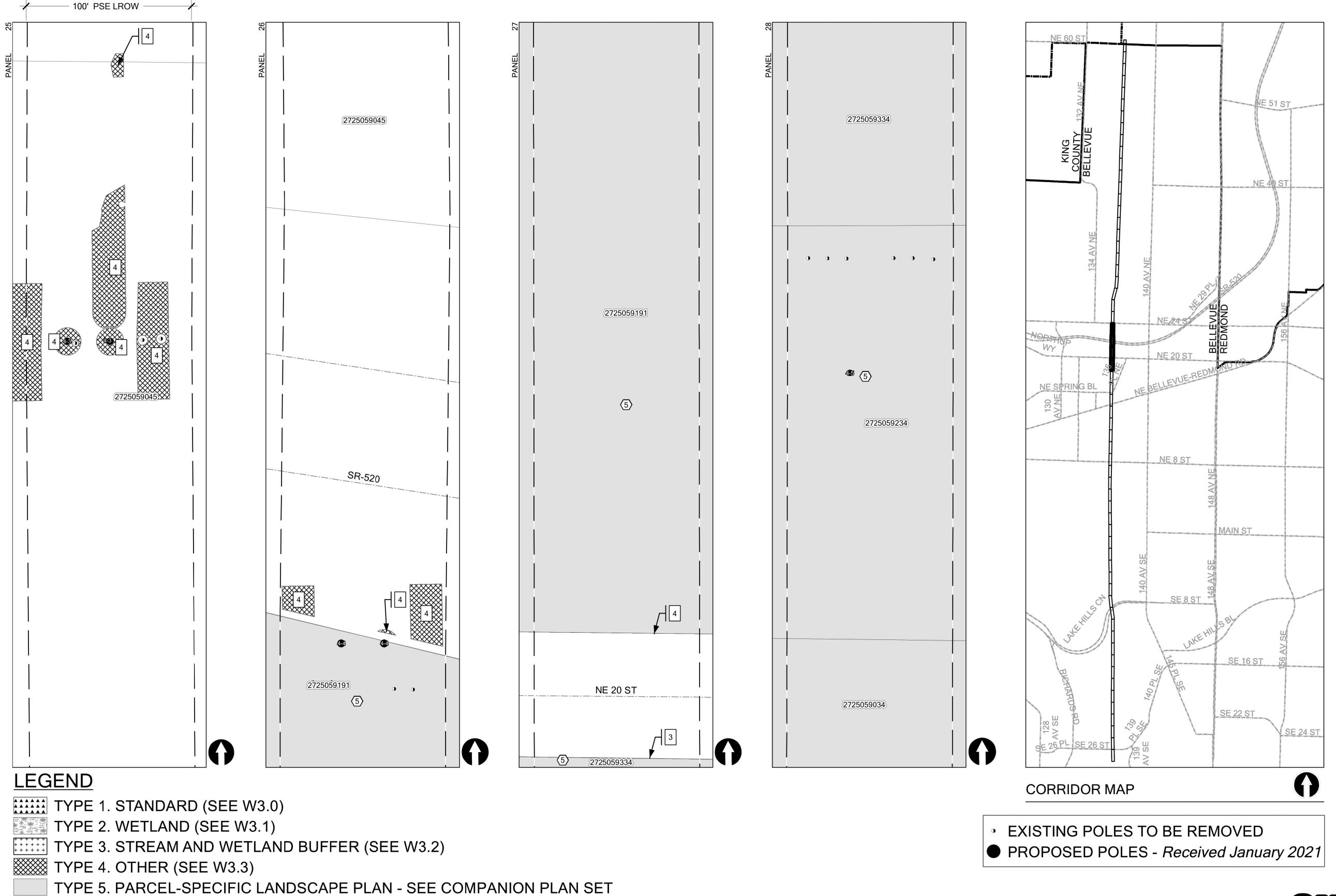
© Copyright- The Watershed Compan

Know what's below.

Call before you dig.

KEY PLAN MAP (6 OF 16)

0 15' 30' 60' 120'



THE WATERSHED COMPANY

750 Sixth Street South Kirkland WA 98033

p 425.822.5242
www.watershedco.com
Science & Design

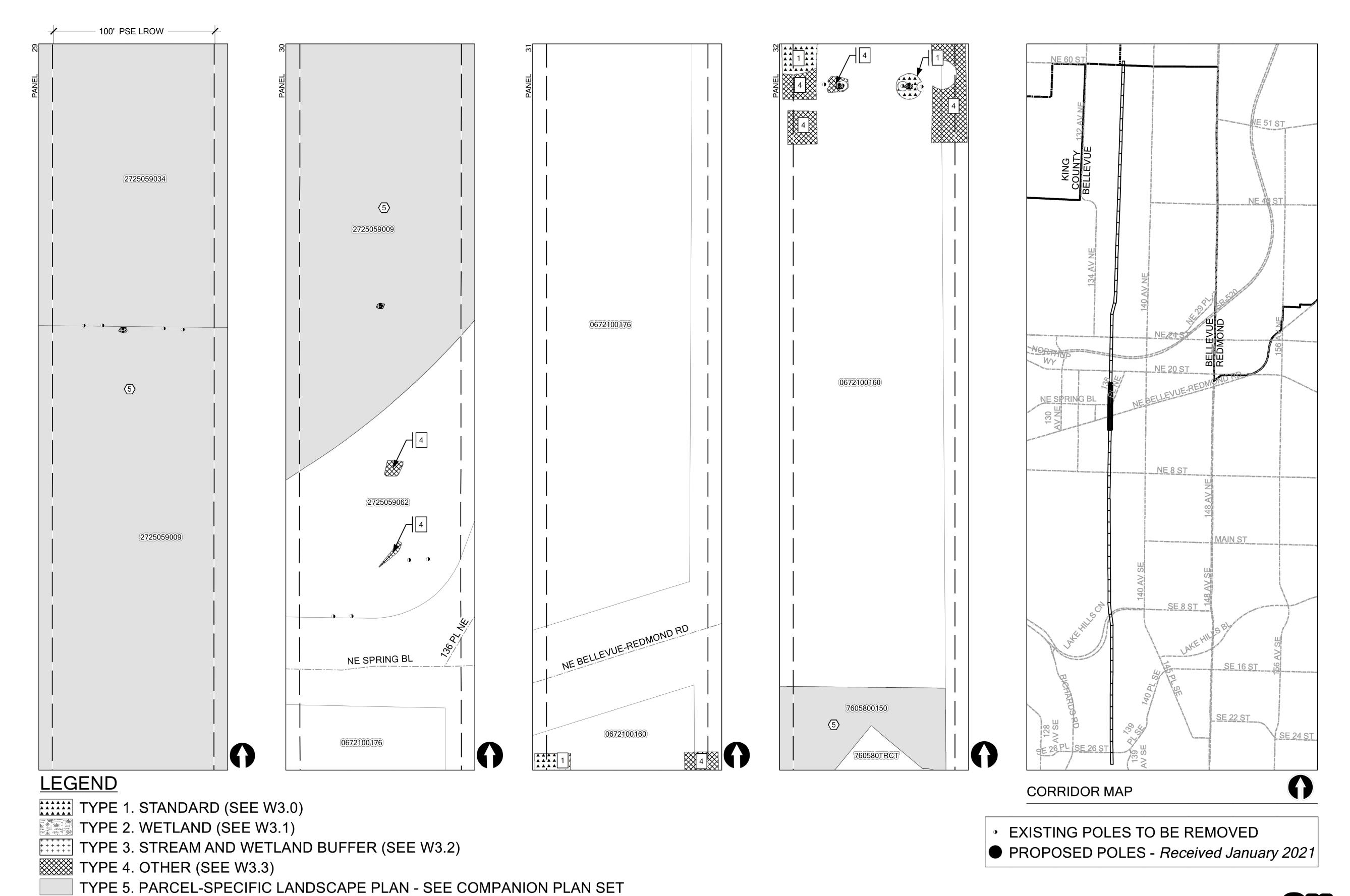
TEMPORARY IMPACTS RESTORATION PLANT PREPARED FOR PUGET SOUND ENERGY NORTH BELLEVUE SEGMENT

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

PROJECT MAN DESIGNED: DRAFTED: CHECKED:

CHECKED: A SHEET: W2.6

9 OF 24



DESIGNED: DRAFTED: CHECKED: SHEET: 10 OF 24 g

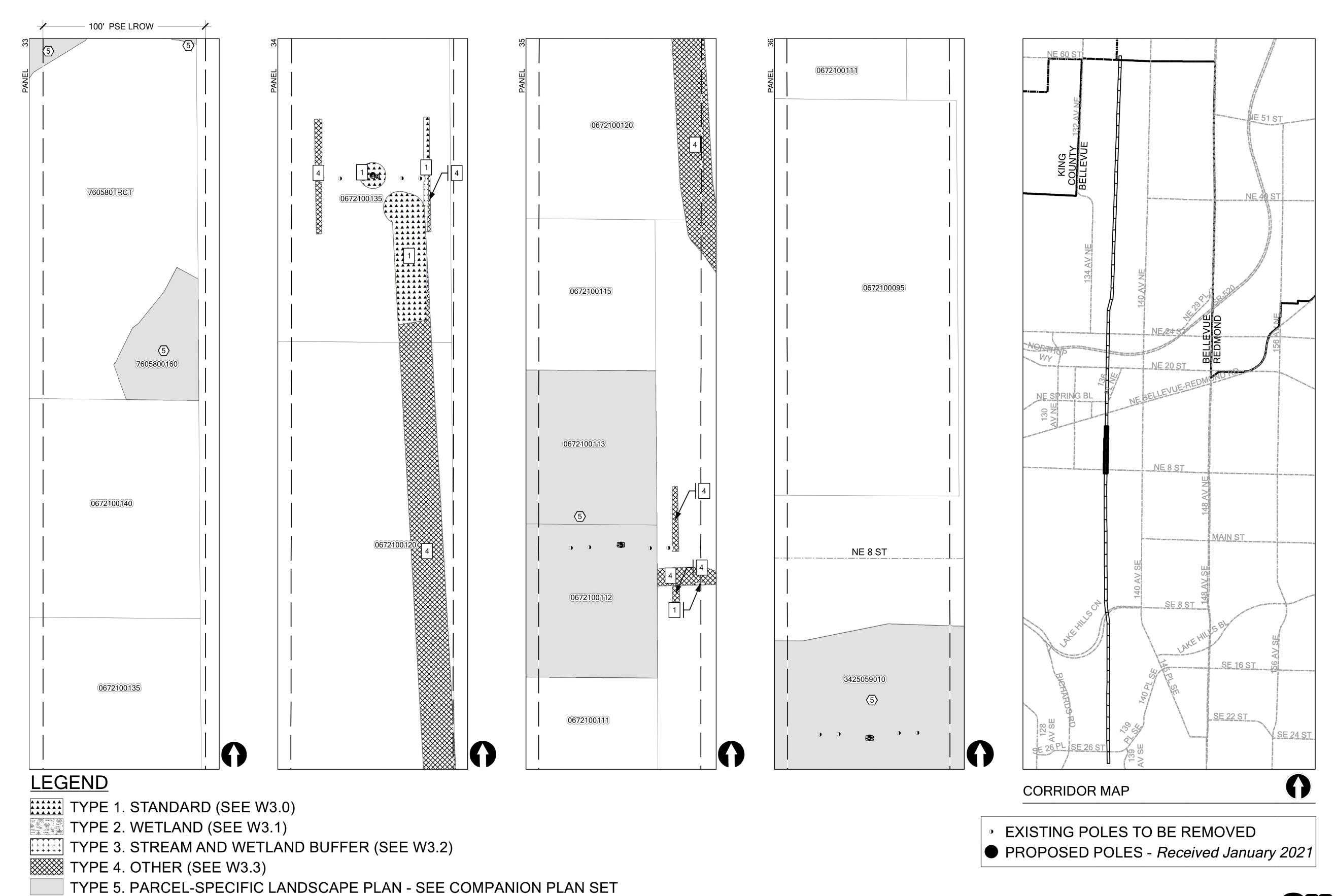
KEY PLAN MAP (8 OF 16)

750 Sixth Street South Kirkland WA 98033

p 425.822.5242 www.watershedco.com Science & Design

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

W2.7



750 Sixth Street South Kirkland WA 98033 p 425.822.5242 www.watershedco.com Science & Design PSE ENERGIZE EASTSIDE
TEMPORARY IMPACTS RESTORATION PLAN
PREPARED FOR PUGET SOUND ENERGY
NORTH BELLEVUE SEGMENT

SUBMITTALS & REVISIONS

DATE DESCRIPTION

1-04-2020 TEMPORARY IMPACTS PLAN

2-12-2021 TEMPORARY IMPACTS PLAN - REV Y UPDATE

NB

1-12-2021 TEMPORARY IMPACTS PLAN - REV Y UPDATE

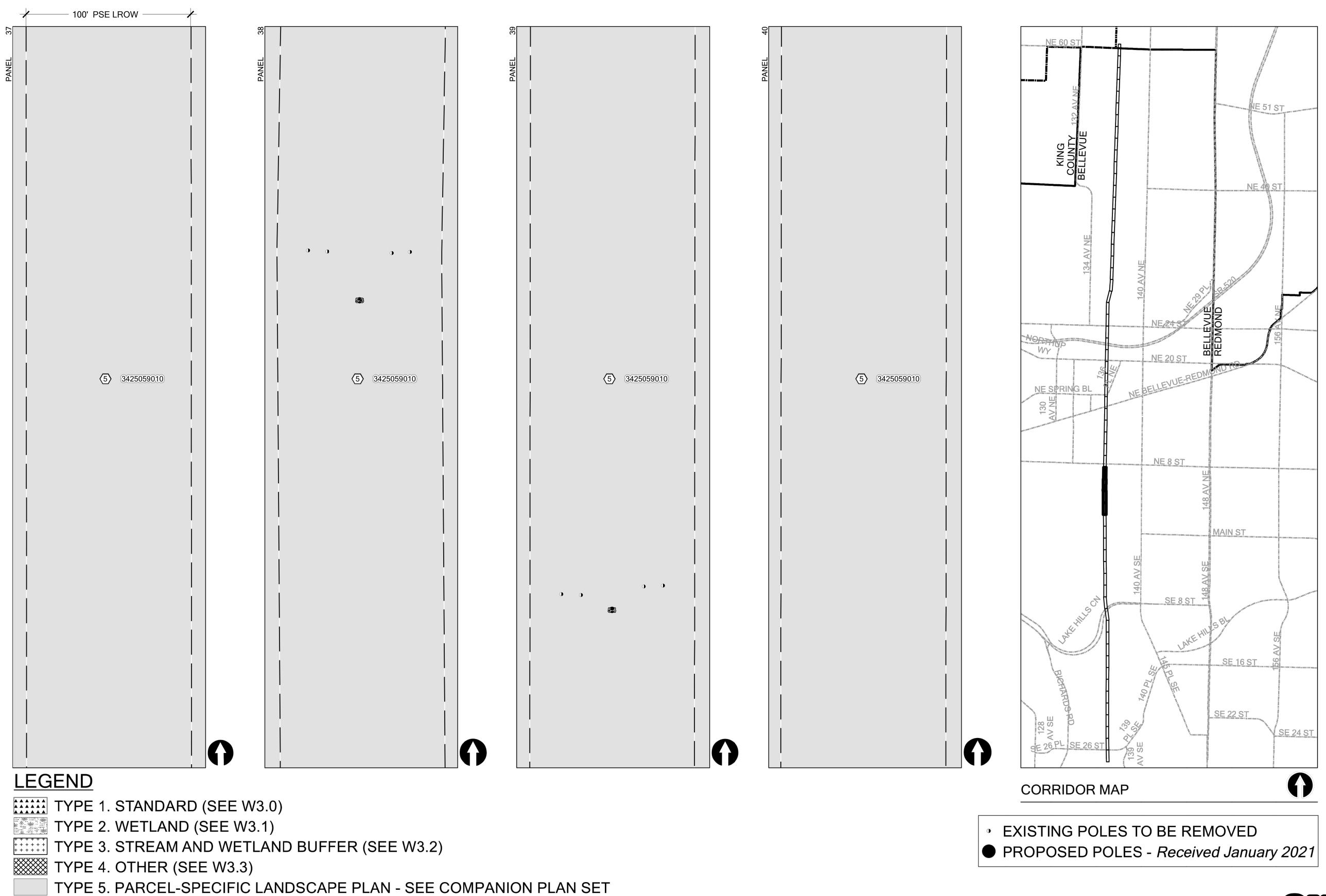
NB

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

PROJECT MANAG DESIGNED: DRAFTED: CHECKED:

SHEET: W2.8

11 OF 24



SHEET:

W2.9

12 OF 24 g

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

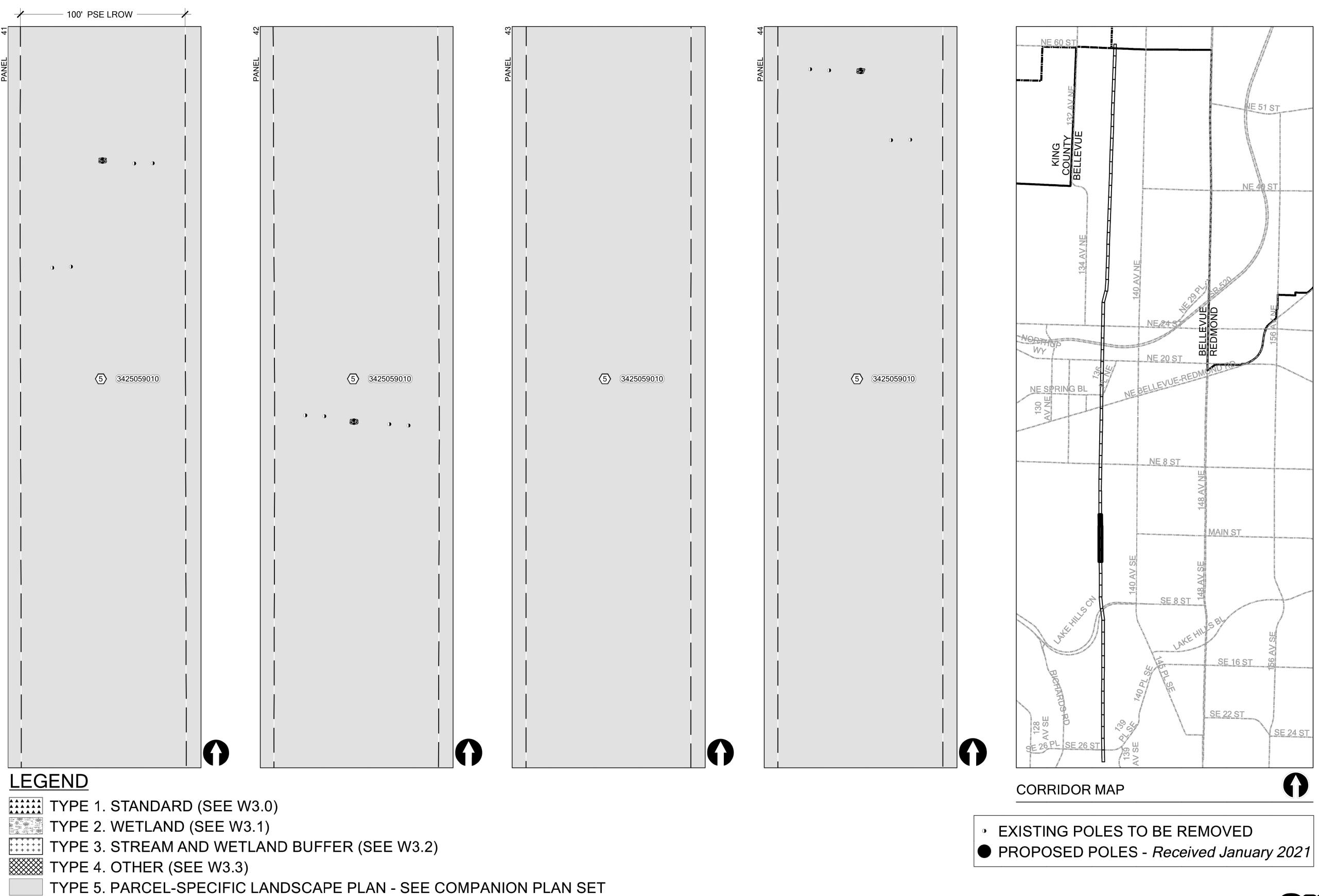
WATERSHED COMPANY

750 Sixth Street South Kirkland WA 98033

p 425.822.5242 www.watershedco.com Science & Design

KEY PLAN MAP (10 OF 16)

0 15' 30' 60' 120'



SUBMITTALS & REVISIONS

SUBMITTALS & REVISIONS

SUBMITTALS & REVISIONS

NO. DATE DESCRIPTION

ORIGINAL PLAN IN 11-04-2020 TEMPORARY IMPACTS PLAN

SCALE ACCORDINGLY.

PROJECT MANAGER: NB
DRAFTED: AMC
SHEET:

W2.10

SHEET:

W2.10

NUMBER:

TABLE DESCRIPTION

BY

ORIGINAL PLAN - REV. Y UPDATE

NB
CHECKED: AMC
SHEET:

W2.10

NUMBER:

TABLE DESCRIPTION

BY

ORIGINAL PLAN - REV. Y UPDATE

NB
CHECKED: AMC
SHEET:

W2.10

NUMBER:

TABLE DESCRIPTION

BY

ORIGINAL PLAN - REV. Y UPDATE

NB
CHECKED: AMC
SHEET:

W2.10

NUMBER:

TABLE DESCRIPTION

NB
AND
THE DESCRIPTION

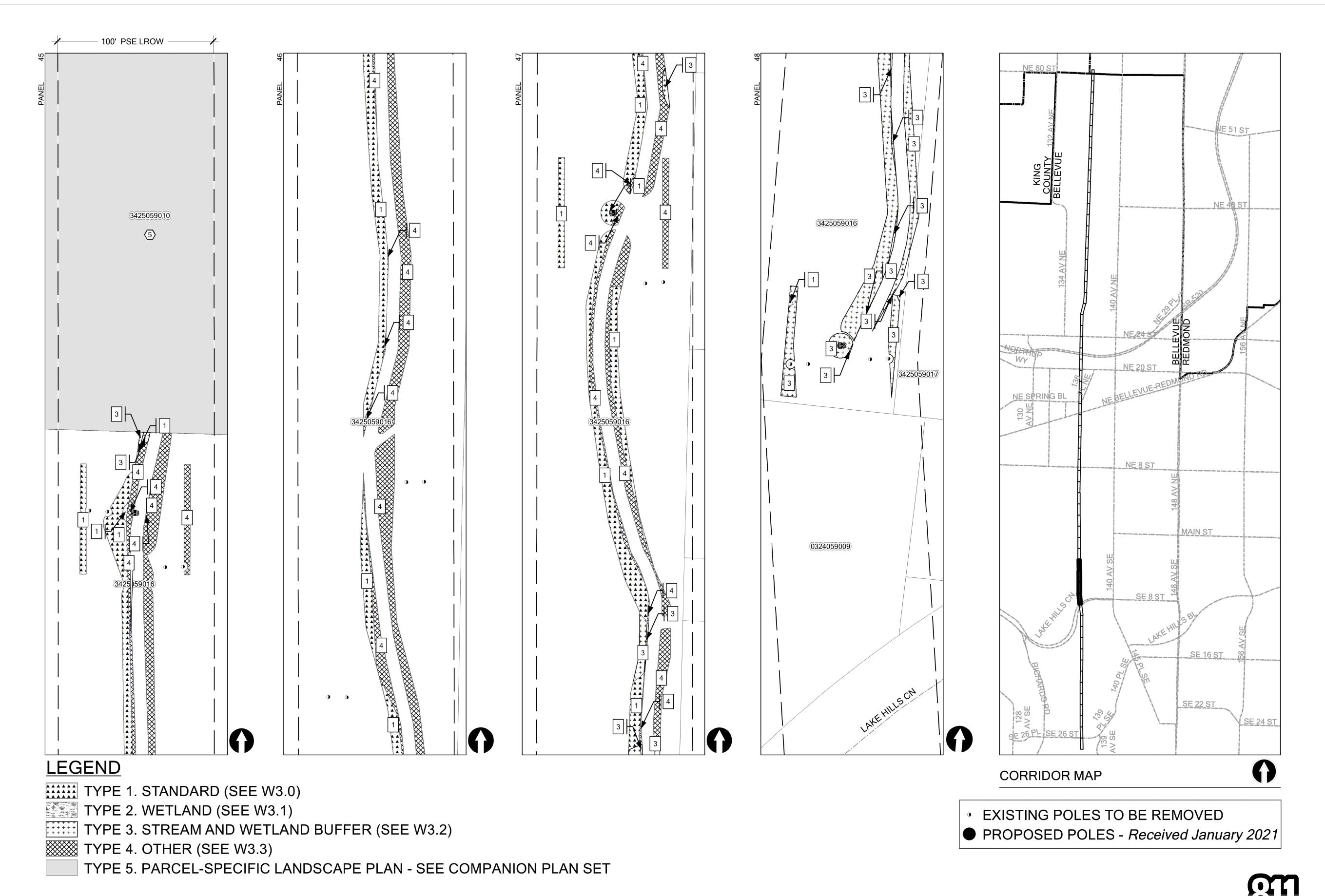
THE

WATERSHED COMPANY

750 Sixth Street South Kirkland WA 98033

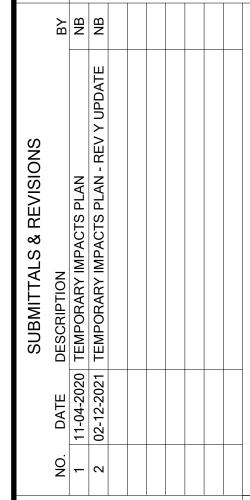
p 425.822.5242 www.watershedco.com

Science & Design



750 Sixth Street South Kirkland WA 98033 p 425.822.5242 www.watershedco.com Science & Design

PSE ENERGIZE EASTSIDE
TEMPORARY IMPACTS RESTORATION PLAN
PREPARED FOR PUGET SOUND ENERGY
NORTH BELLEVUE SEGMENT



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

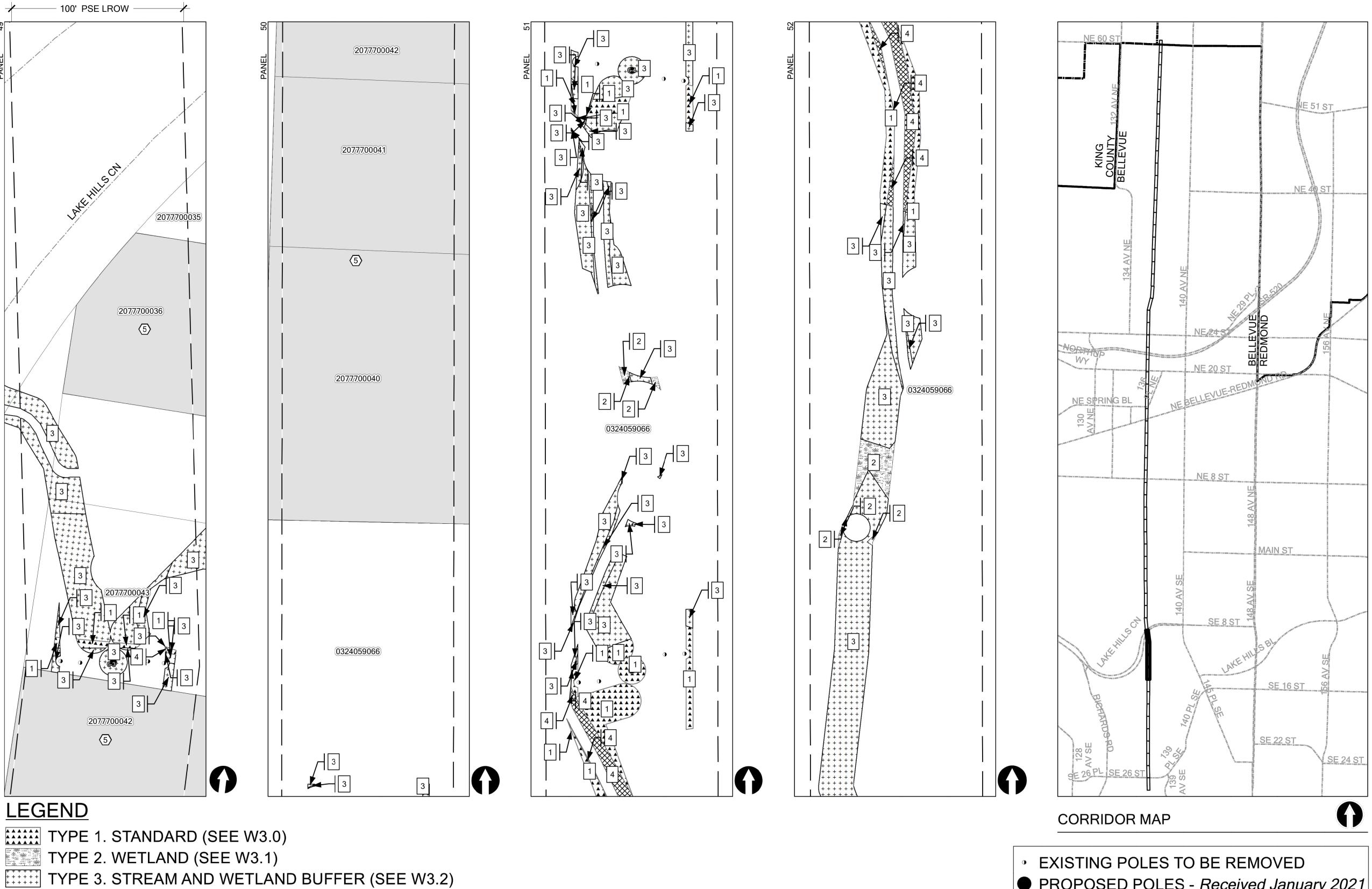
DESIGNED: DRAFTED: CHECKED:

SHEET: W2.11

Know what's below.

Call before you dig. 14 OF 24 g

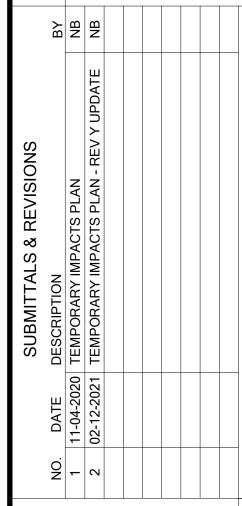
KEY PLAN MAP (12 OF 16)



PROPOSED POLES - Received January 2021



750 Sixth Street South Kirkland WA 98033 p 425.822.5242 www.watershedco.com Science & Design



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

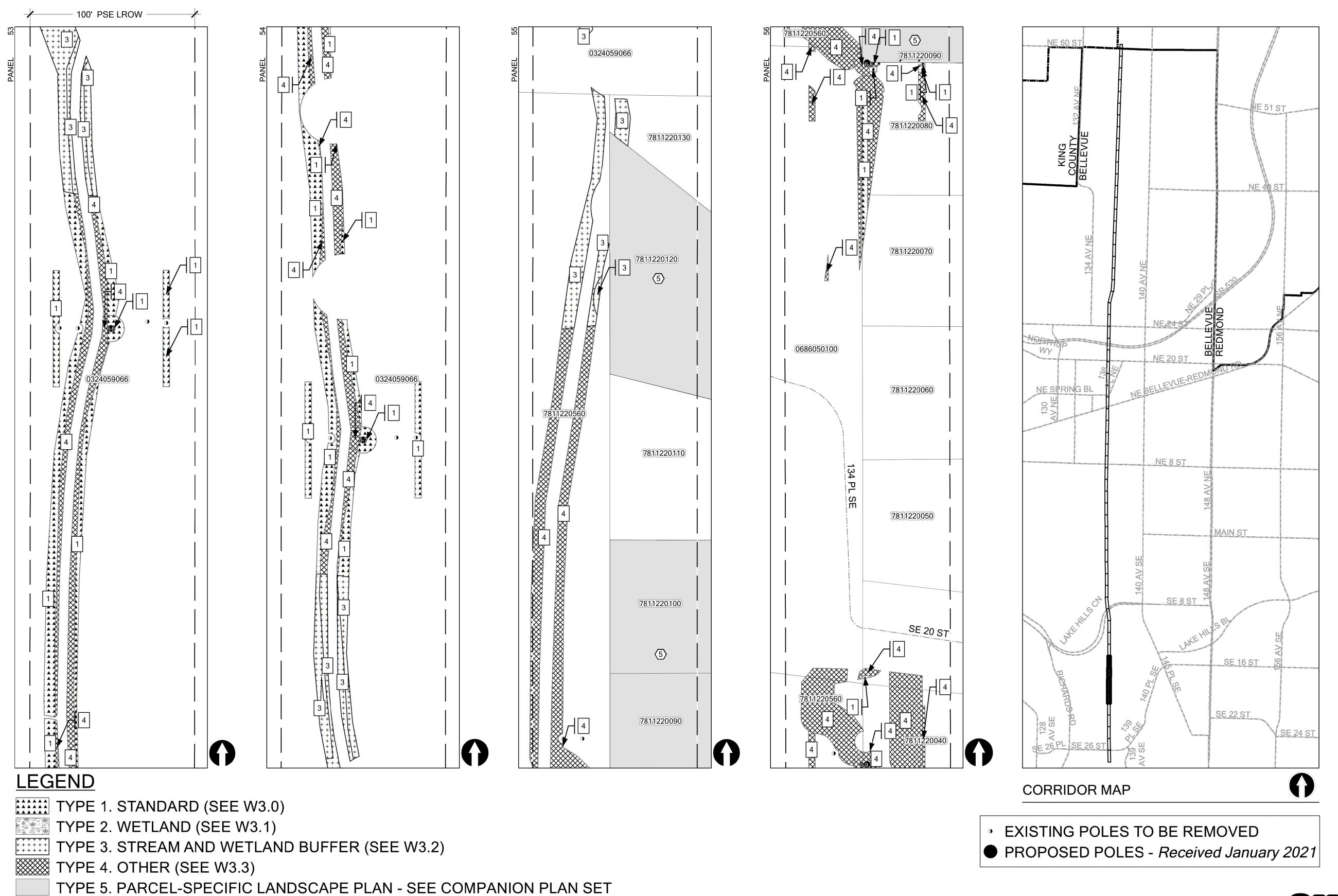
DESIGNED: DRAFTED: CHECKED:

SHEET: W2.12

15 OF 24 g

TYPE 4. OTHER (SEE W3.3)

TYPE 5. PARCEL-SPECIFIC LANDSCAPE PLAN - SEE COMPANION PLAN SET



THE WATERSHED COMPANY

750 Sixth Street South Kirkland WA 98033

p 425.822.5242
www.watershedco.com

Science & Design

PSE ENERGIZE EASTSIDE
TEMPORARY IMPACTS RESTORATION PLAN
PREPARED FOR PUGET SOUND ENERGY
NORTH BELLEVUE SEGMENT

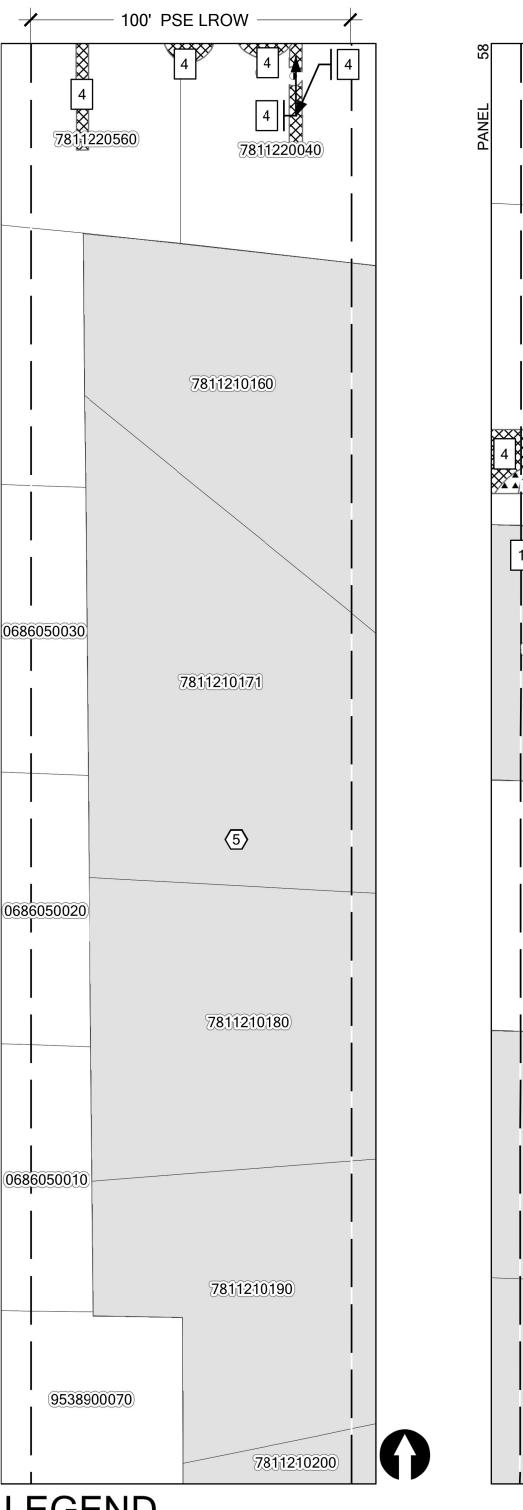
BELLEVUE, WASHINGTON

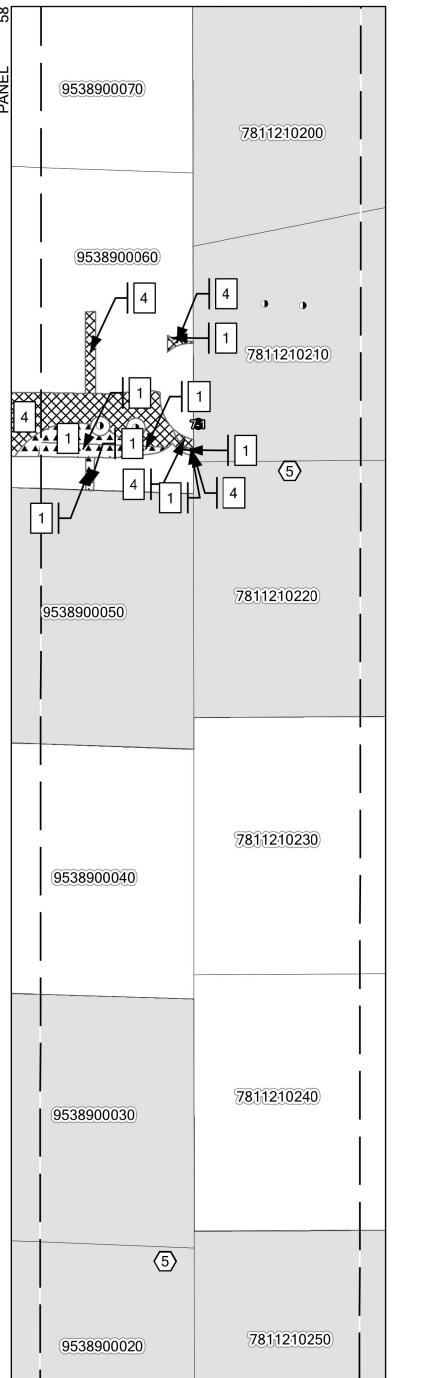
SHEET SIZE:
ORIGINAL PLAN IS 22" x 34".
SCALE ACCORDINGLY.

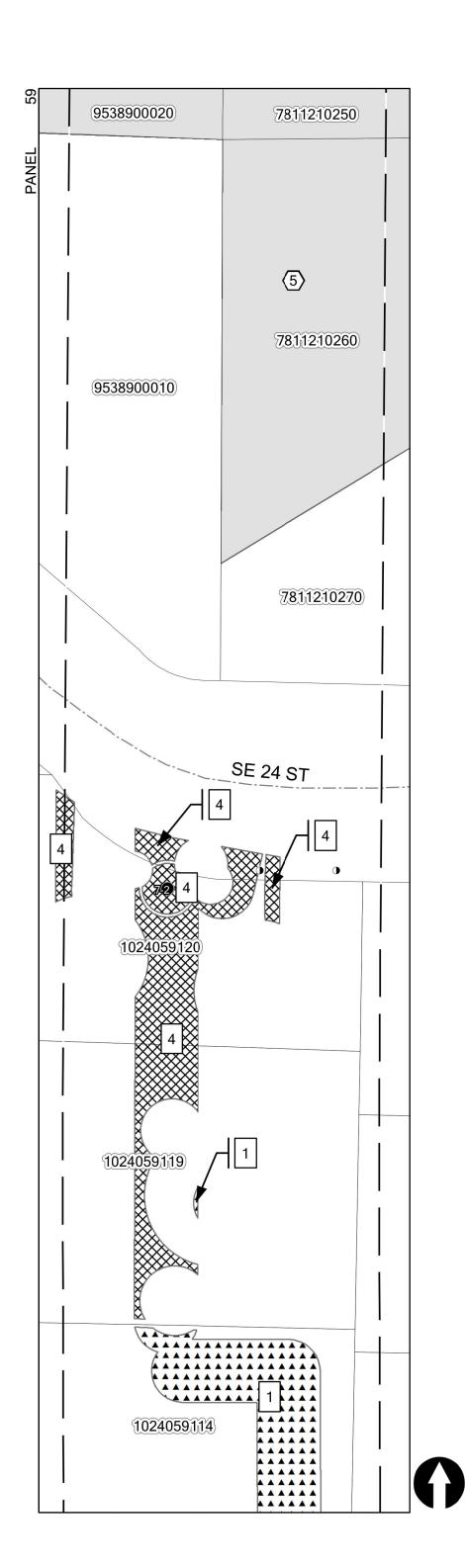
PROJECT MANA DESIGNED: DRAFTED: CHECKED:

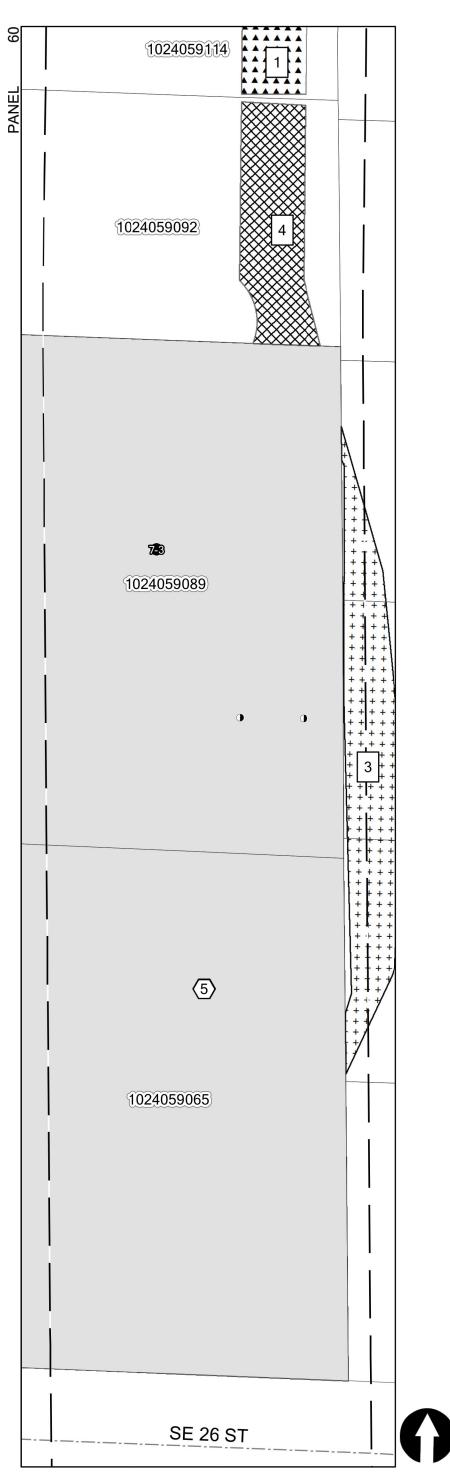
SHEET: W2.13

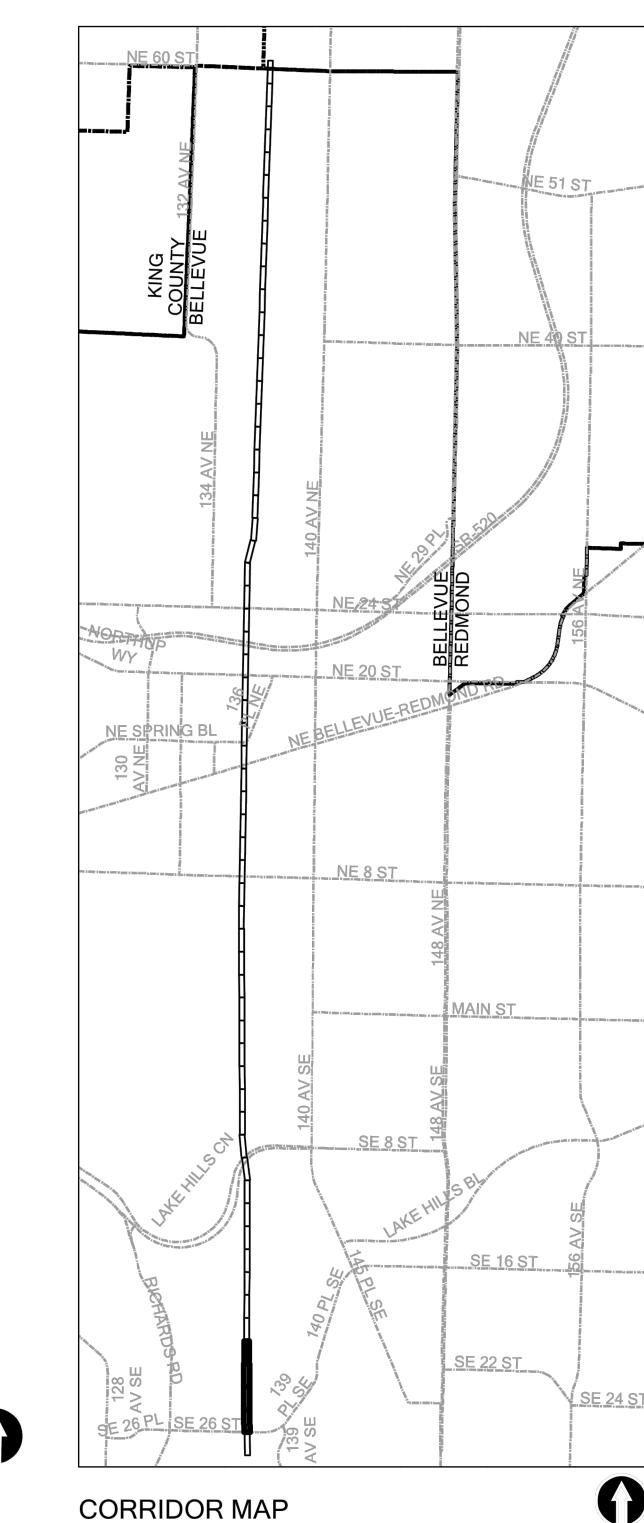
MBER: 16 OF 24











LEGEND

- TYPE 1. STANDARD (SEE W3.0)
- TYPE 2. WETLAND (SEE W3.1)
- TYPE 3. STREAM AND WETLAND BUFFER (SEE W3.2)
- - TYPE 5. PARCEL-SPECIFIC LANDSCAPE PLAN SEE COMPANION PLAN SET

EXISTING POLES TO BE REMOVED

PROPOSED POLES - Received January 2021



750 Sixth Street South Kirkland WA 98033 p 425.822.5242 www.watershedco.com Science & Design

	ВУ	NB	NB						
SUBMITTALS & REVISIONS	DESCRIPTION	11-04-2020 TEMPORARY IMPACTS PLAN	02-12-2021 TEMPORARY IMPACTS PLAN - REV Y UPDATE						
	DATE	11-04-2020	02-12-2021						
	ON	-	2						
		S	HF	F-	Т.9	17	F٠		•

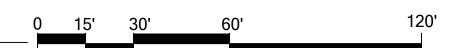
SHEET SIZE: ORIGINAL PLAN IS 22" x 34" SCALE ACCORDINGLY.

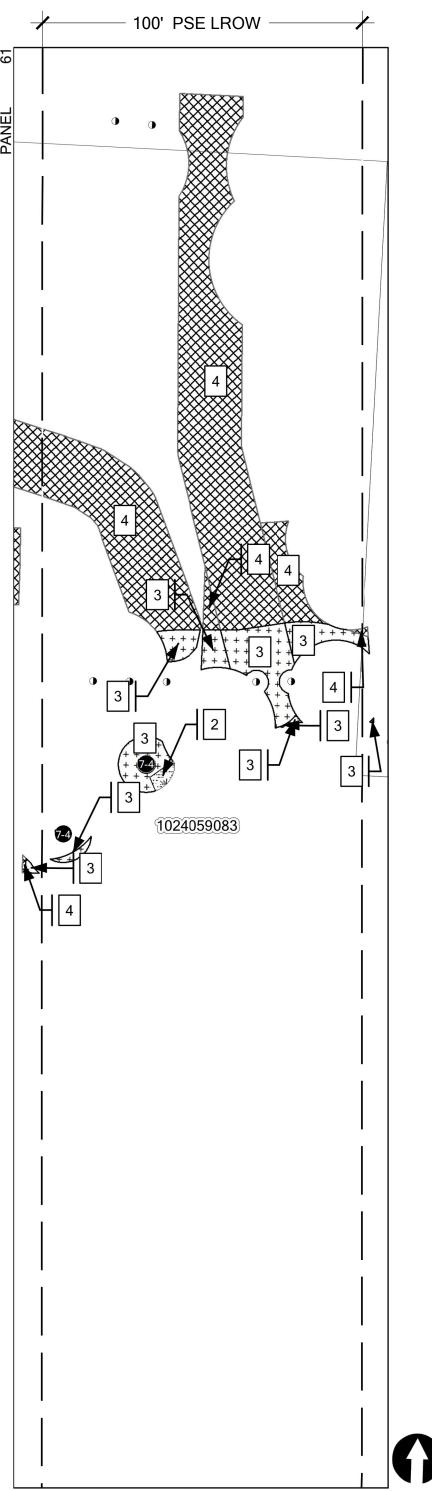
PROJECT MANAGER: NI DESIGNED: DRAFTED: CHECKED:

SHEET: W2.14

17 OF 24

KEY PLAN MAP (15 OF 16)





LEGEND

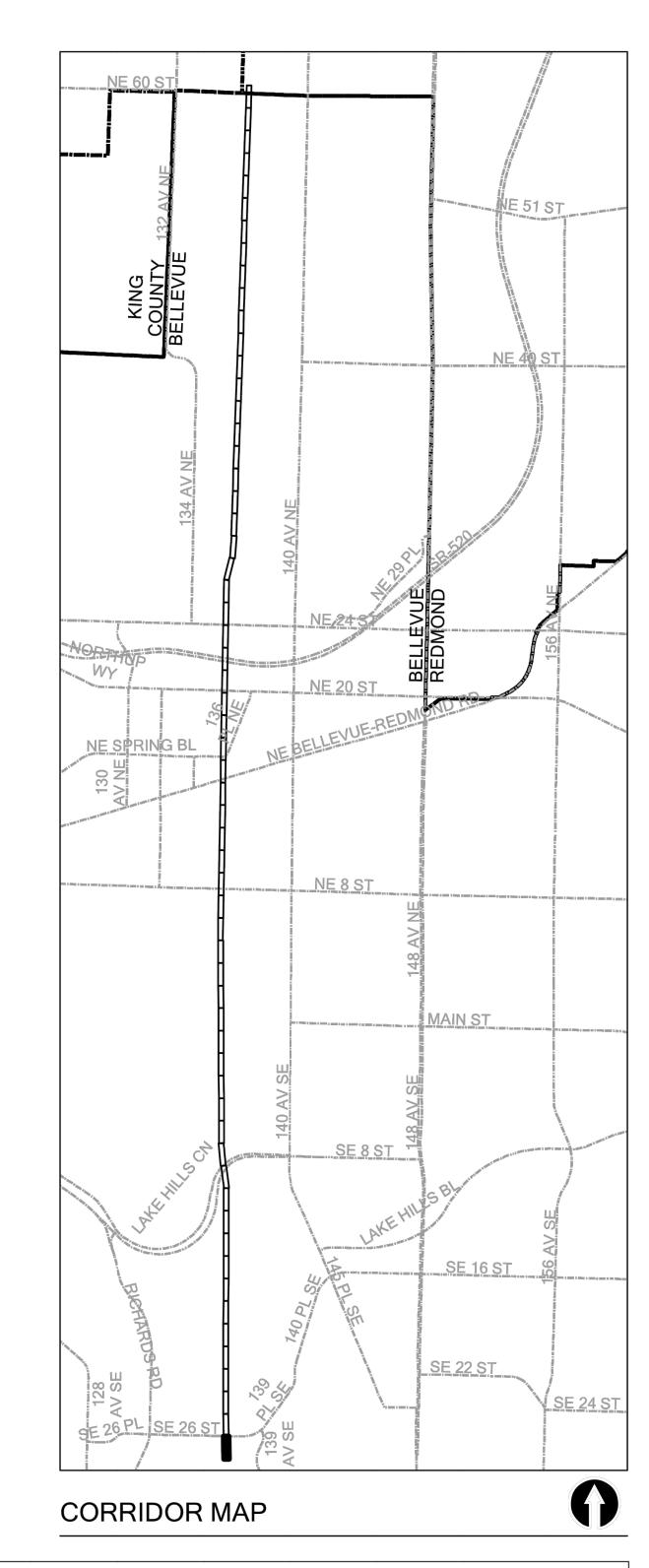
TYPE 1. STANDARD (SEE W3.0)

TYPE 2. WETLAND (SEE W3.1)

TYPE 3. STREAM AND WETLAND BUFFER (SEE W3.2)

TYPE 4. OTHER (SEE W3.3)

TYPE 5. PARCEL-SPECIFIC LANDSCAPE PLAN - SEE COMPANION PLAN SET



EXISTING POLES TO BE REMOVED
 PROPOSED POLES - Received January 2021



THE WATERSHED COMPANY

750 Sixth Street South Kirkland WA 98033

p 425.822.5242
www.watershedco.com
Science & Design

PSE ENERGIZE EASTSIDE
TEMPORARY IMPACTS RESTORATION PLAN
PREPARED FOR PUGET SOUND ENERGY
NORTH BELLEVUE SEGMENT

	ВУ	NB	NB						
SUBMITTALS & REVISIONS	DESCRIPTION	11-04-2020 TEMPORARY IMPACTS PLAN	02-12-2021 TEMPORARY IMPACTS PLAN - REV Y UPDATE						
	DATE	11-04-2020	02-12-2021						
	NO.	_	2						
		S	HF	E.	T .S	317	F٠		Γ

ORIGINAL PLAN IS 22" x 34". SCALE ACCORDINGLY.

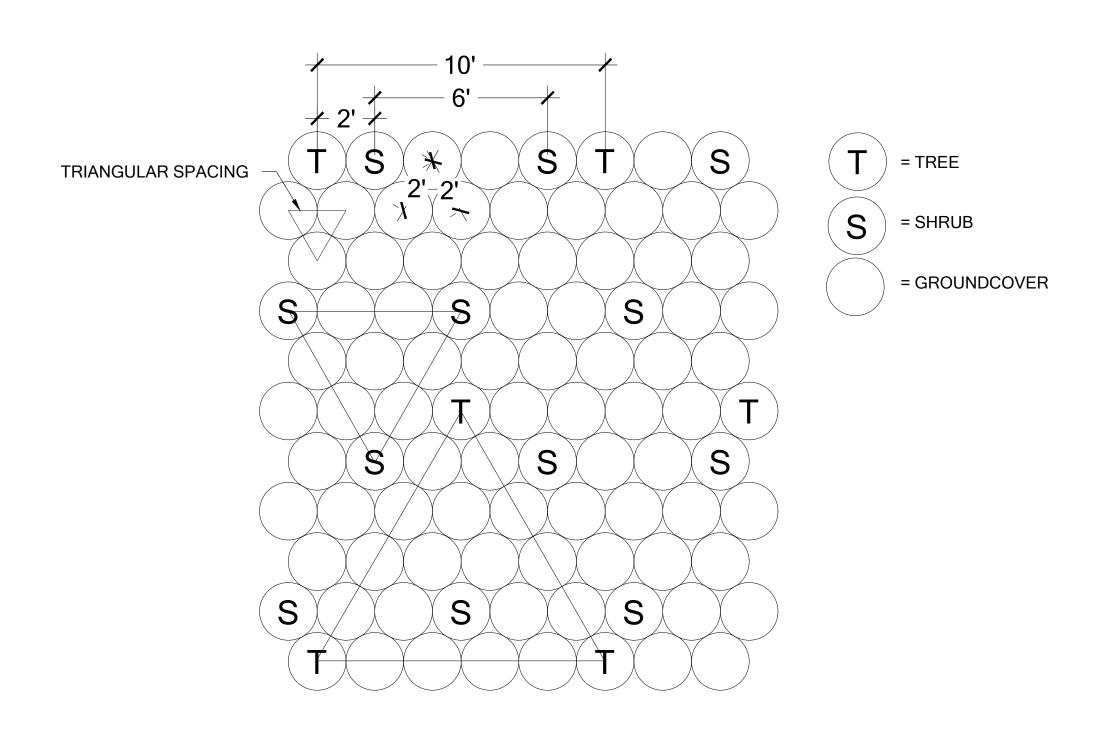
W2.15

18 OF 24

DESIGNED: DRAFTED:

CHECKED:

SHEET:



RESTORATION TYPE 1: STANDARD (APPROX 25,000 SF TOTAL)

Scale: 1:30

PLANT LIST

TREES (2-GAL) *AMELANCHIER ALNIFOLIA / PACIFIC SERVICEBERRY *TSUGA MERTENSIANA / DWARF MOUNTAIN HEMLOCK ARBUTUS 'UNEDO' COMPACTA / DWARF STRAWBERRY TREE CRATAEGUS X MORDENENSIS 'TOBA / TOBA HAWTHORN AMELANCHIER X GRANDIFOLIA 'AUTUMN BRILLIANCE' / AUTUMN BRILLIANCE SERVICEBERRY ACER PLATANOIDES 'GLOBOSUM' / GLOBE NORWAY MAPLE MALUS 'SCHMIDTCUTLEAF' / GOLDEN RAINDROPS CRABAPPLE

*NATIVE TREE SPECIES. WHERE NATIVE SPECIES ARE REMOVED, ONLY NATIVE SPECIES ARE TO BE INSTALLED FOR RESTORATION.

SHRUBS (1-GAL) CORYLUS CORNUTA / BEAKED HAZELNUT HOLODISCUS DISCOLOR / OCEANSPRAY MAHONIA AQUIFOLIUM / TALL OREGON GRAPE PHILADELPHUS LEWISII / MOCK ORANGE OEMLERIA CERASIFORMIS / OSOBERRY SYMPHORICARPUS ALBUS / SNOWBERRY VIBURNUM EDULE / HIGHBUSH CRANBERRY RIBES SANGUINEUM / RED-FLOWERING CURRANT

GROUNDCOVERS (1-QT) MAHONIA NERVOSA / LOW OREGON GRAPE GAULTHERIA SHALLON / SALAL POLYSTICHUM MUNITUM / SWORD FERN ARCTOSTAPHYLUS UVA-URSI / KINNIKINNICK FRAGARIA CHILOENSIS / BEACH STRAWBERRY

TYPE 1 NOTES

PLANT GROUPING/SPACING SPACE 10-FT O.C.

SHRUBS SPACE 6-FT O.C. PLACE IN GROUPS OF 3 - 7

GROUNDCOVER SPACE 2-FT O.C. PLACE IN GROUPS OF 3-13

SOIL PREP USE SOIL PREP DETAILS 1, 2, AND 3 **DEPENDING ON EXISTING CONDITIONS** (SEE SHEET W4.0)

PLANT LAYOUT NOTES

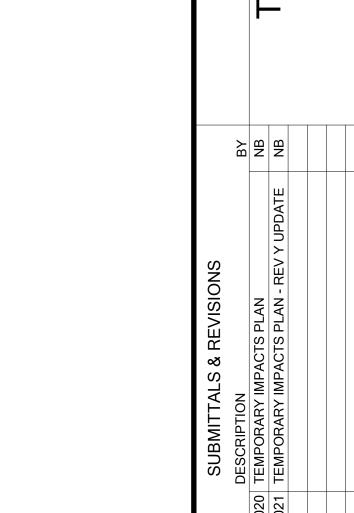
- 1. ALL WOODY PLANTS SHALL BE HELD BACK 10-FT FROM OPL CL. ONLY HERBACEOUS PLANTS SHALL BE PLANTED OVER OPL. 2. WHERE OPL OCCURS WITHIN WORK AREA,
- CONTRACTOR SHALL LAY OUT PLANTS WITHIN 10-FT OF OPL CL FOR APPROVAL BY PSE REPRESENTATIVE PRIOR TO INSTALL

ESTIMATED TOTAL QUANTITY

290 TREES

800 SHRUBS

7,200 GROUNDCOVER



Know what's below.

Call before you dig.

© Copyright- The Watershed Compa

NUMBER:

PSE ENERGIZE EASTSIDE
TEMPORARY IMPACTS RESTORATION PLAN
PREPARED FOR PUGET SOUND ENERGY
NORTH BELLEVUE SEGMENT

750 Sixth Street South Kirkland WA 98033

p 425.822.5242 www.watershedco.com

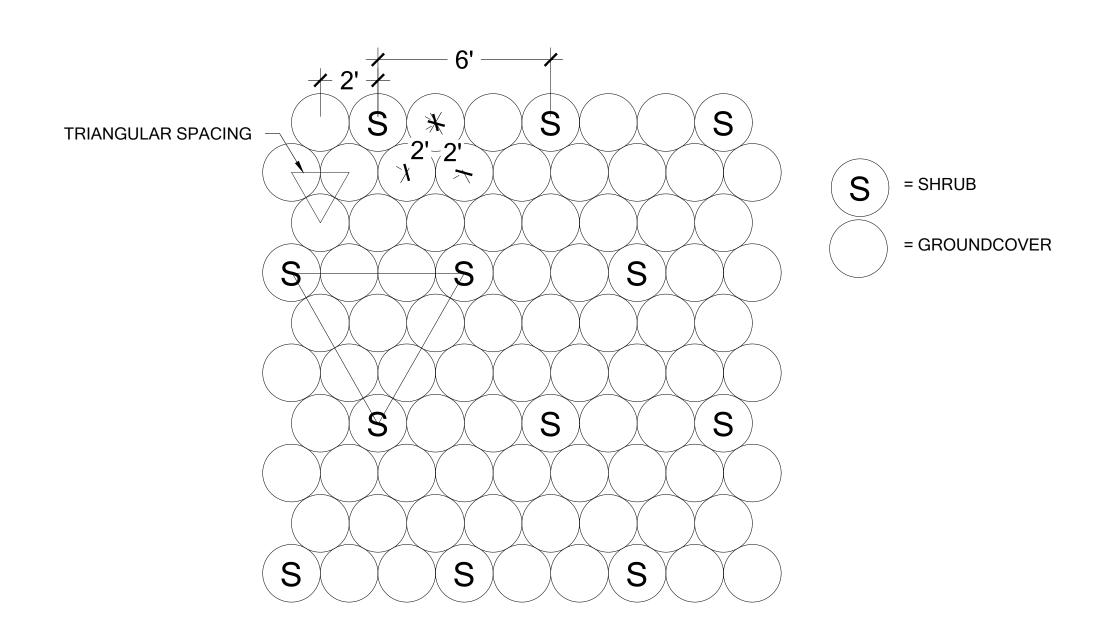
Science & Design

PROJECT MANAGER: NL DESIGNED: NB DRAFTED: CHECKED: SHEET: W3.0

SHEET SIZE:

ORIGINAL PLAN IS 22" x 34". SCALE ACCORDINGLY.

19 OF 24



RESTORATION TYPE 2: WETLAND (APPROX 605 SF TOTAL)

Scale: 1:30

PLANT LIST

SHRUBS (1-GAL) LONICERA INVOLUCRATA / TWINBERRY CORNUS SERICEA / RED OSIER DOGWOOD ROSA PISOCARPA / SWAMP ROSE PHYSOCARPUS CAPITATUS / PACIFIC NINEBARK RUBUS SPECTABLIS / SALMONBERRY

GROUNDCOVERS (1-GAL) ATHYRIUM FELIX-FEMINA / LADY FERN SCIRPUS MICROCARPUS / SMALL-FRUITED BULRUSH JUNCUS EFFUSUS / SOFT RUSH

TYPE 2 NOTES

PLANT GROUPING/SPACING SPACE 6-FT O.C. PLACE IN GROUPS OF 3 - 7

GROUNDCOVER SPACE 2-FT O.C. PLACE IN GROUPS OF 3-13

USE SOIL PREP DETAILS 3 AND 4 DEPENDING ON EXISTING CONDITIONS (SEE SHEET W4.0)

PLANT LAYOUT NOTES

- 1. ALL WOODY PLANTS SHALL BE HELD BACK 10-FT FROM OPL CL. ONLY HERBACEOUS PLANTS SHALL BE PLANTED OVER OPL.
- 2. WHERE OPL OCCURS WITHIN WORK AREA, CONTRACTOR SHALL LAY OUT PLANTS WITHIN 10-FT OF OPL CL FOR APPROVAL BY PSE REPRESENTATIVE PRIOR TO INSTALL

ESTIMATED TOTAL QUANTITY

20 SHRUBS

175 GROUNDCOVER



750 Sixth Street South Kirkland WA 98033

p 425.822.5242 www.watershedco.com

Science & Design

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

© Copyright- The Watershed Compar

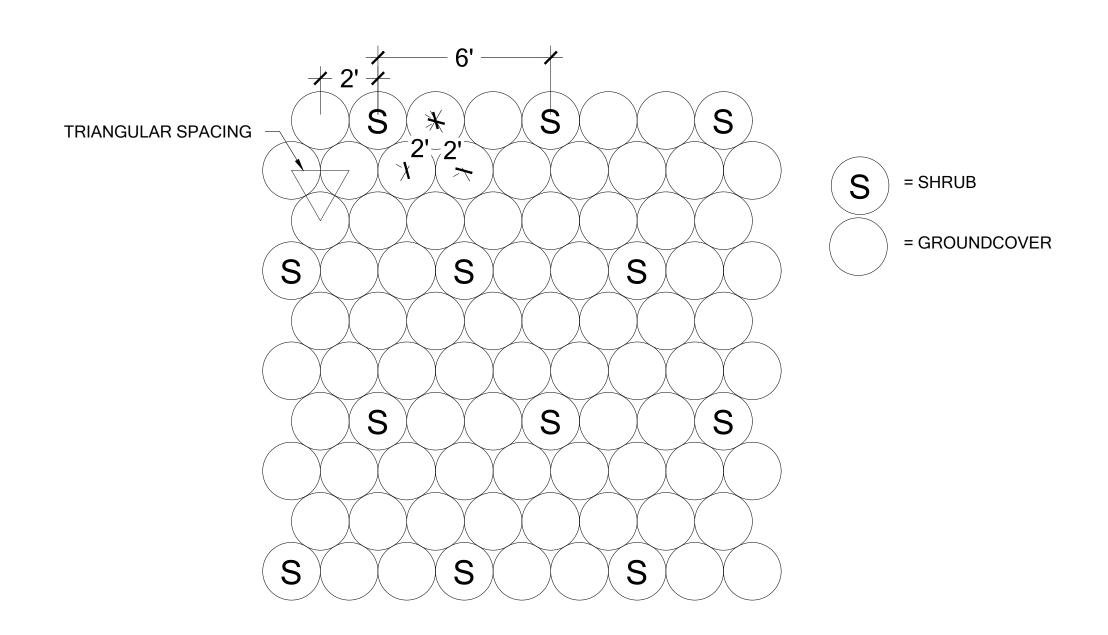
20 OF 24 g

RESTORATION TYPE 2: WETLAND

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

PROJECT MANAGER: NL DESIGNED: DRAFTED: CHECKED: SHEET:

W3.1 NUMBER:





RESTORATION TYPE 3: STREAM AND WETLAND BUFFER (APPROX 27,000 SF TOTAL)

Scale: 1:30

PLANT LIST

SHRUBS (1-GAL) CORYLUS CORNUTA / BEAKED HAZELNUT HOLODISCUS DISCOLOR / OCEANSPRAY MAHONIA AQUIFOLIUM / TALL OREGON GRAPE PHILADELPHUS LEWISII / MOCK ORANGE OEMLERIA CERASIFORMIS / OSOBERRY SYMPHORICARPUS ALBUS / SNOWBERRY VIBURNUM EDULE / HIGHBUSH CRANBERRY RIBES SANGUINEUM / RED-FLOWERING CURRANT

GROUNDCOVERS (1-GAL) MAHONIA NERVOSA / LOW OREGON GRAPE GAULTHERIA SHALLON / SALAL POLYSTICHUM MUNITUM / SWORD FERN ARCTOSTAPHYLUS UVA-URSI / KINNIKINNICK FRAGARIA CHILOENSIS / BEACH STRAWBERRY

TYPE 3 NOTES

PLANT GROUPING/SPACING SPACE 6-FT O.C. PLACE IN GROUPS OF 3 - 7

GROUNDCOVER SPACE 2-FT O.C. PLACE IN GROUPS OF 3-13

SOIL PREP

USE SOIL PREP DETAILS 3 AND 4 DEPENDING ON EXISTING CONDITIONS (SEE SHEET W4.0)

PLANT LAYOUT NOTES

- 1. ALL WOODY PLANTS SHALL BE HELD BACK 10-FT FROM OPL CL. ONLY HERBACEOUS PLANTS SHALL BE PLANTED OVER OPL.
- 2. WHERE OPL OCCURS WITHIN WORK AREA, CONTRACTOR SHALL LAY OUT PLANTS WITHIN 10-FT OF OPL CL FOR APPROVAL BY PSE REPRESENTATIVE PRIOR TO INSTALL

ESTIMATED TOTAL QUANTITY

860 SHRUBS

7,780 GROUNDCOVER





Call before you dig.

© Copyright- The Watershed Compa

RESTORATION TYPE 3: STREAM AND WETLAND BUFFER

750 Sixth Street South Kirkland WA 98033 p 425.822.5242 www.watershedco.com Science & Design

PSE ENERGIZE EASTSIDE
TEMPORARY IMPACTS RESTORATION PLAN
PREPARED FOR PUGET SOUND ENERGY
NORTH BELLEVUE SEGMENT

B N B N B

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

PROJECT MANAGER: NL

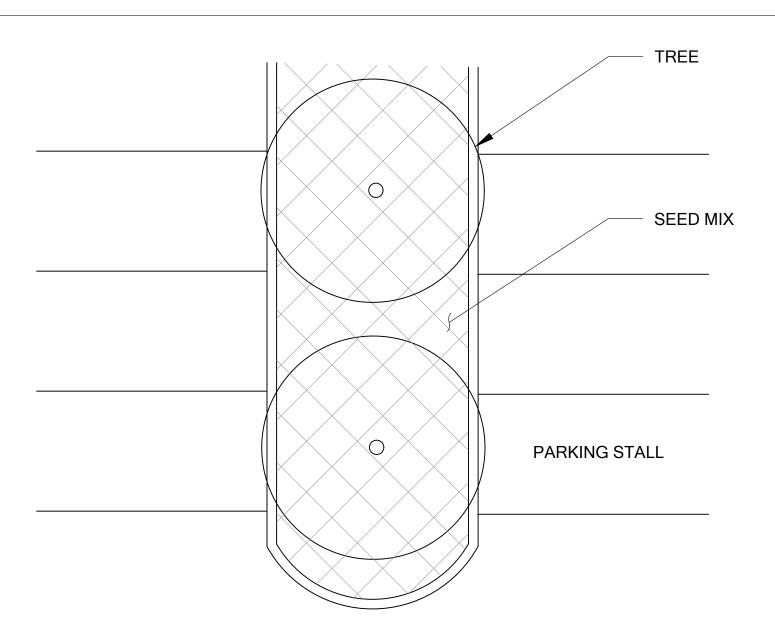
21 OF 24 g

NB

DESIGNED:

DRAFTED: CHECKED: SHEET:

NUMBER:



PLANT LIST

TREE (5 GAL)* ACER GLABRUM / DOUGLAS MAPLE

SHRUB (2 GAL)* ROSA NUTKANA / NOOTKA ROSE

SEED MIX **ECO-TURF MIX** PROTIME LAWN SEED - PT 769 OR EQUIVALENT

FESTUCA OVINA / QUATRO TETRAPLOID SHEEP FESCUE

LOLIUM PERENNE 'BANFIELD' / BANFIELD PERENNIAL RYEGRASS FESTUCA TRACHYPHYLLA 'EUREKA II' / EUREKA II HARD FESCUE TRIFOLIUM REPENS VAR PIPOLINA / MICROCLOVER

* ONLY INSTALL TREES OR SHRUBS WHERE EXISTING TREES OR SHRUBS WERE REMOVED DUE TO CONSTRUCTION ACTIVITIES

TYPE 4A NOTES

PLANT GROUPING/SPACING

SPACE 10-FT O.C.

SHRUBS

SPACE 6-FT O.C. PLACE IN GROUPS OF 3 - 7

APPLY AT 5-7 LBS / 1,000 SF

SOIL PREP

USE SOIL PREP DETAILS 1 AND 2 DEPENDING ON **EXISTING CONDITIONS (SEE SHEET W4.0)**

PLANT LAYOUT NOTES

1. ALL WOODY PLANTS SHALL BE HELD BACK 10-FT FROM OPL CL. ONLY HERBACEOUS PLANTS SHALL BE PLANTED OVER OPL

2. WHERE OPL OCCURS WITHIN WORK AREA CONTRACTOR SHALL LAY OUT PLANTS WITHIN 10-FT OF OPL CL FOR APPROVAL BY PSE REPRESENTATIVE PRIOR TO **INSTALL**

RESTORATION TYPE 4A: OTHER - PARKING PLANTER STRIP & LAWN (APPROX 141,000 SF TOTAL, 4A & 4B)

Scale: NTS

MOWED ROW **ACCESS PATH** MOWED ROW

PLANT LIST

SEED MIX WSDOT EROSION CONTROL MIX 40% PERENNIAL RYEGRASS 40% CREEPING RED FESCUE 10% COLONIAL BENTGRASS

10% WHITE CLOVER

TYPE 4B NOTES

PLANT GROUPING/SPACING SEEDMIX APPLY AT 2-3 LBS / 1,000 SF

USE SOIL PREP DETAILS 1 OR 3 DEPENDING ON EXISTING CONDITIONS (SEE SHEET W4.0)

PLANT LAYOUT NOTES

- 1. ALL WOODY PLANTS SHALL BE HELD BACK 10-FT FROM OPL CL. ONLY HERBACEOUS
- PLANTS SHALL BE PLANTED OVER OPL 2. WHERE OPL OCCURS WITHIN WORK AREA, CONTRACTOR SHALL LAY OUT PLANTS WITHIN 10-FT OF OPL CL FOR APPROVAL BY PSE REPRESENTATIVE PRIOR TO INSTALL

RESTORATION TYPE 4B: OTHER - MOWED ROW & MAINTAINED ACCESS PATH RESTORATION (APPROX 141,000 SF TOTAL, 4A & 4B)



Know what's below.
Call before you dig.

CHECKED: SHEET: 22 OF 24

DESIGNED: DRAFTED:

ORIGINAL PLAN IS 22" x 34". SCALE ACCORDINGLY.

RESTORATION TYPE 4: OTHER

© Copyright- The Watershed Compa

750 Sixth Street South Kirkland WA 98033

p 425.822.5242

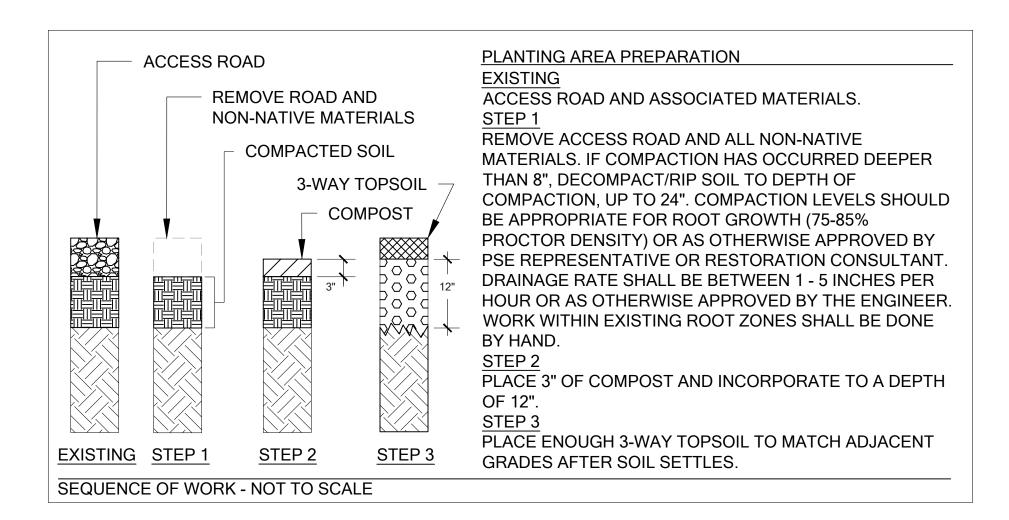
www.watershedco.com

Science & Design

ESTORATION PLAN

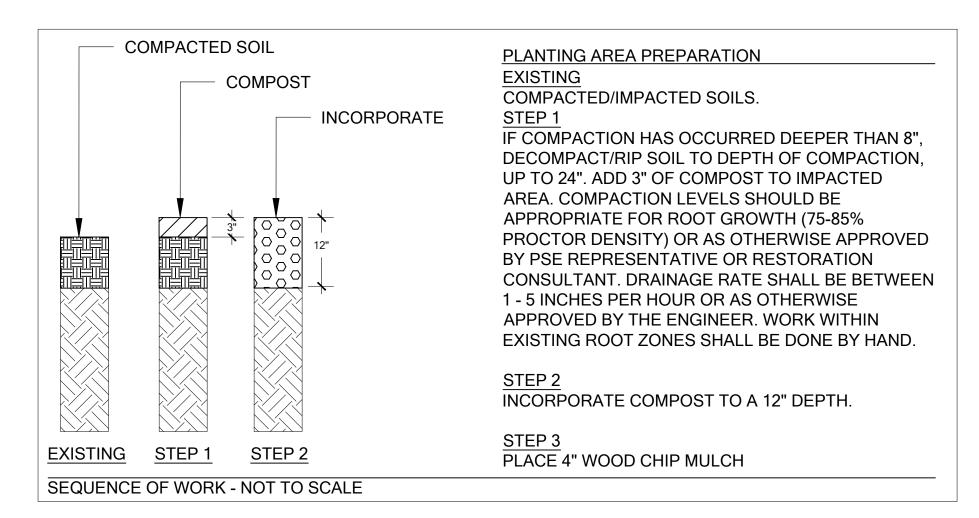
SOUND ENERGY

E SEGMENT PSE ENERGIZE EASTSIDE DRARY IMPACTS RESTORATION IMPACTS REST S
FOR PUGET S



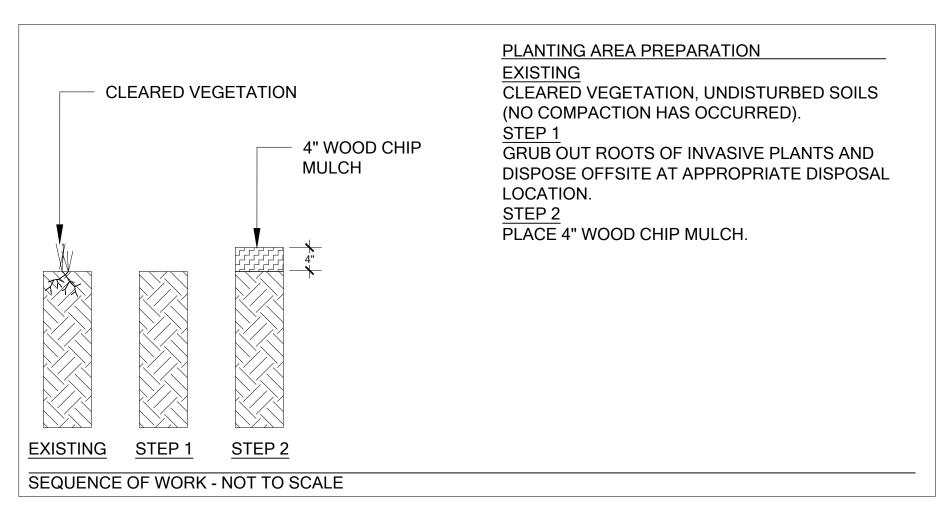
ACCESS ROAD SOIL PREP

Scale: NTS



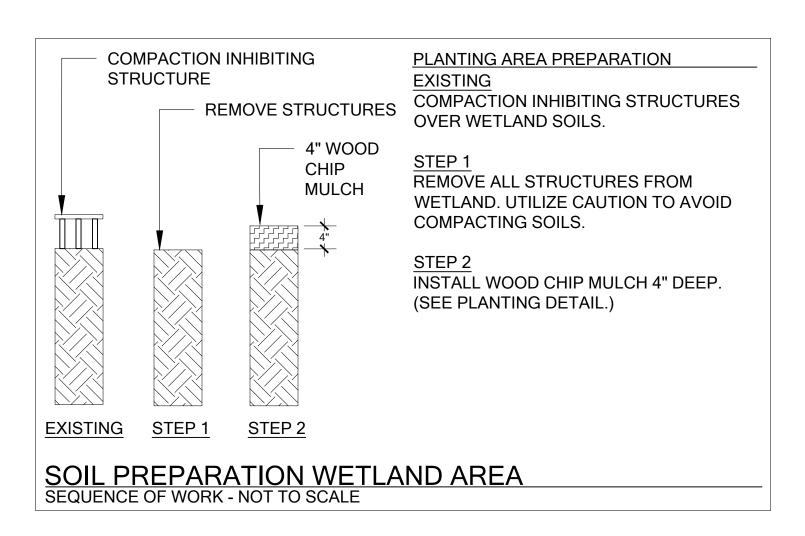
POLE BUFFER AND WORK AREA SOIL PREP

Scale: NTS



CLEARED AREAS (NO COMPACTION) SOIL PREP

Scale: NTS



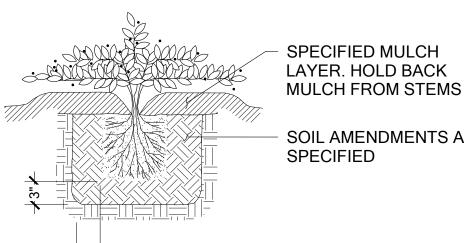
WETLAND POLE BUFFER AND WORK AREA SOIL PREP

Scale: NTS

1. PLANT GROUNDCOVER AT SPECIFIED DISTANCE ON-CENTER (O.C.) USING TRIANGULAR SPACING, TYP.

- 2. LOOSEN SIDES AND BOTTOM OF PLANTING PIT AND REMOVE DEBRIS
- LOOSEN ROOTBOUND PLANTS BEFORE **INSTALLING**
- 4. SOAK PIT BEFORE AND AFTER INSTALLING **PLANT**

GROUNDCOVER PLANTING



SOIL AMENDMENTS AS

Scale: NTS

TRIANGULAR SPACING

IF VEGETATION EXISTS WITHIN

PLANTING AREA, SPACE AT 3 X

AREA FOR SPACING ADJUSTMENT

FIRST PLACE PLANTS ALONG THE

PERIMETER OF THE PLANTING

AREA, AND AROUND EXISTING

VEGETATION. THEN SPACE THE

REMAINDER OF THE PLANTINGS.

FROM STEM OF EXISTING

VEGETATION

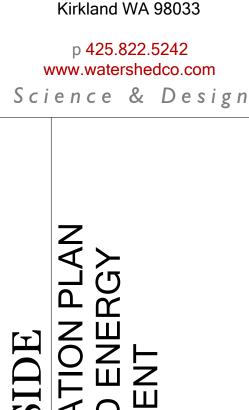
× = PLANT SPACING

 \oplus = PLANT

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 4. PLANT AT SPECIFIED DISTANCE ON-CENTER (O.C.) PER PLAN USING TRIANGULAR SPACING, TYP. REMOVE FROM POT OR BURLAP & ROUGH-UP ROOT BALL BEFORE INSTALLING. UNTANGLE AND STRAIGHTEN CIRCLING ROOTS - PRUNE IF NECESSARY. IF PLANT IS EXCEPTIONALLY ROOT-BOUND, DO NOT PLANT AND RETURN TO NURSERY FOR AN ACCEPTABLE ALTERNATIVE SPECIFIED MULCH LAYER. HOLD BACK MULCH FROM TRUNK/STEMS FINISH GRADE REMOVE DEBRIS AND LARGE ROCKS FROM PLANTING PIT AND SCARIFY SIDES AND BASE. BACKFILL WITH SPECIFIED SOIL. FIRM UP SOIL AROUND PLANT. rootball 🥕

GROUNDCOVER PLANTING

Scale: NTS



750 Sixth Street South

MP

SHEET SIZE:

ORIGINAL PLAN IS 22" x 34". SCALE ACCORDINGLY.

PROJECT MANAGER: NL DESIGNED: DRAFTED: CHECKED:

SHEET:

23 OF 24

PLANTING & SOIL PREPARATION DETAILS

© Copyright- The Watershed Compa

Know what's below. Call before you dig.

MONITORING NOTES

IN COMPLIANCE WITH BELLEVUE LUC 20.25H.220, RESTORATION FOR TEMPORARY AREAS OF DISTURBANCE TO CRITICAL AREAS SHALL BE MONITORED TO ENSURE SUCCESSFUL ESTABLISHMENT. THE FOLLOWING NOTES APPLY TO AREAS OF TEMPORARY DISTURBANCE TO CRITICAL AREAS WHERE PLANTS ARE REMOVED AND RESTORATION TYPES 2 OR 3 ARE APPLIED TO RESTORE THE AREA TO PREDISTURBANCE CONDITIONS.

A FIVE YEAR MONITORING PROGRAM IS PROPOSED BELOW, HOWEVER, PER 20.25H.220.H.4, THE DIRECTOR MAY REDUCE THE MONITORING PERIOD TO NOT LESS THAN ONE YEAR FROM COMPLETION OF THE ORIGINAL RESTORATION.

RESTORE ALL AREAS OF TEMPORARY DISTURBANCE TO WETLANDS AND WETLAND AND STREAM BUFFERS.

PERFORMANCE STANDARDS

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

1) SURVIVAL STANDARDS:

- a) 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.
- b) 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.
- c) SURVIVAL BEYOND YEAR 2 IS DIFFICULT TO TRACK. THEREFORE, A DIVERSITY STANDARD SHALL BE IMPLEMENTED.
- i) ESTABLISHMENT OF AT LEAST TWO NATIVE TREE SPECIES, FOUR NATIVE SHRUB SPECIES AND TWO NATIVE EMERGENT SPECIES IN PLANTING AREAS.

2) NATIVE VEGETATION COVER STANDARDS:

- a) ACHIEVE 60% AERIAL COVER OF NATIVE WOODY VEGETATION BY THE END OF YEAR 3. NATIVE VOLUNTEERS MAY COUNT TOWARDS THIS STANDARD.
- b) ACHIEVE 80% AERIAL COVER OF NATIVE WOODY VEGETATION BY THE END OF YEAR 5. NATIVE VOLUNTEERS MAY COUNT TOWARDS THIS STANDARD.

3) INVASIVE SPECIES COVER STANDARD:

a) NO MORE THAN 10% AERIAL COVER OF NON-NATIVE, INVASIVE SPECIES IN ANY PLANTING AREA IN ANY MONITORING YEAR.

MAINTENANCE

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

- 1. REPLACE EACH PLANT FOUND DEAD IN YEAR ONE.
- 2. FOLLOW THE RECOMMENDATIONS NOTED IN THE PREVIOUS MONITORING SITE VISIT'S REPORT.
- 3. GENERAL WEEDING FOR ALL PLANTED AREAS:
- A. 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.
- B. MORE FREQUENT WEEDING MAY BE NECESSARY DEPENDING ON WEED CONDITIONS THAT DEVELOP AFTER PLANT INSTALLATION.
- C. NOXIOUS WEEDS MUST BE REMOVED FROM THE ENTIRE RESTORATION AREA, AT LEAST TWICE ANNUALLY.
- D. DO NOT USE STRING TRIMMERS IN THE VICINITY OF INSTALLED PLANTS, AS THEY MAY DAMAGE OR KILL THE PLANTS.
- 4. MAINTAIN A FOUR-INCH-THICK LAYER OF WOODCHIP MULCH ACROSS ALL PLANTING AREAS. MULCH SHOULD BE PULLED BACK TWO INCHES FROM THE PLANT STEMS.
- 5. 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.

MITIGATION NOTES

MONITORING METHODS

THE MONITORING PROGRAM IS DESIGNED TO TRACK THE SUCCESS OF THE RESTORATION 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. 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. WHERE RESTORATION AREAS ARE NOT OF SUFFICIENT SIZE TO ESTABLISH TRANSECTS, THE TOTAL RESTORATION AREA MAY BE EVALUATED INSTEAD.

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.

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 ANNUALLY TO THE CITY, 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, IF APPLICABLE.
- 4. PERCENT COVER OF INVASIVE SPECIES USING THE LINE INTERCEPT
- METHOD ALONG ESTABLISHED TRANSECTS, IF APPLICABLE.
- 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 RESTORATION AREA.
- REPORT ON CONDITION OF PLACED LARGE WOODY DEBRIS.
- 10. INTRUSIONS INTO THE PLANTING AREAS. VANDALISM OR OTHER ACTIONS THAT IMPAIR THE INTENDED FUNCTIONS OF THE RESTORATION AREAS.
- 11. RECOMMENDATIONS FOR MAINTENANCE OR REPAIRS.

CONTINGENCIES

UNFORSEEN 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.

MATERIALS

- 1. 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.
- 2. COMPOST: CEDAR GROVE COMPOST OR EQUIVALENT "COMPOSTED MATERIAL" PER WASHINGTON ADMIN. CODE 173-350-220. APPROXIMATE QUANTITY REQUIRED: 35 CUBIC YARDS
- 5. RESTORATION SPECIALIST: QUALIFIED PROFESSIONAL ABLE TO EVALUATE AND MONITOR THE CONSTRUCTION OF ENVIRONMENTAL RESTORATION PROJECTS.



750 Sixth Street South Kirkland WA 98033

p 425.822.5242 www.watershedco.com

Science & Design

RATION IND ENEF OUN SEG MP

B B

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

PROJECT MANAGER: NL

W5.0

24 OF 24

NB

DESIGNED:

DRAFTED: CHECKED:

SHEET:

NUMBER:



