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# **Exhibit A: Land Use Application Form**

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Community Development Department | Planning  
 616 NE Fourth Avenue | Camas, WA 98607  
 (360) 817-1568 | [www.cityofcamas.us](http://www.cityofcamas.us)

General Application Form

Case Number:

**Applicant Information**

Applicant/Contact: NW Natural (Halli Chesser) Phone: ( 503 ) 226-4221 x 4394  
 Address: 200 NW Second Avenue halli.chesser@nwnatural.com  
Street Address E-mail Address  
Portland OR 97209  
City State ZIP Code

**Property Information**

Property Address: N/A (NE Everett, across from 3016 NE Everett St.) 91025-001  
Street Address County Assessor # / Parcel #  
Camas WA 98607  
City State ZIP Code  
 Zoning District MF-10 Site Size +/- 0.14 AC

**Description of Project**

Brief description: Site plan to perform site maintenance (replace existing structure in place, re-locate/replace antennae, replace fence, re-grade driveway to facilitate better access). Requires Critical Areas Review consolidated with Shoreline Substantial Development Permit (SDP).

Are you requesting a consolidated review per CMC 18.55.020(B)? YES  NO   
 Permits Requested:  Type I  Type II  Type III  Type IV, BOA, Other

**Property Owner or Contract Purchaser**

Owner's Name: NW Natural (Halli Chesser) Phone: ( 503 ) 226-4221 x 4394  
Last First  
 Address: 200 NW Second Avenue  
Street Address Apartment/Unit #  
 E mail Address: Portland OR 97209  
City State Zip

**Signature**

I authorize the applicant to make this application. Further, I grant permission for city staff to conduct site inspections of the property.

Signature: Halli Chesser Date: 8/3/17

Note: If multiple property owners are party to the application, an additional application form must be signed by each owner. If it is impractical to obtain a property owner signature, then a letter of authorization from the owner is required.

Date Submitted:	Pre-Application Date: 6/29/17	Validation of Fees
Staff:	Related Cases # PA 17-18 and PA16-33	

**Application Checklist and Fees (January 1, 2017)**

◊ Annexation	\$264 - 10% petition; \$1,320 - 60% petition	001-00-345-890-00	\$
◊ Appeal Fee		001-00-345-810-00	\$355.00 \$
◊ Archaeological Review		001-00-345-810-00	\$122.00 \$
◊ Binding Site Plan	\$1,675 + \$21 per unit	001-00-345-810-00	\$
◊ Boundary Line Adjustment		001-00-345-810-00	\$91.00 \$
◊ Comprehensive Plan Amendment		001-00-345-810-00	\$1,756.00 \$
◊ <u>Conditional Use Permit</u>			
Residential	\$3,045 + \$96 per unit	001-00-345-810-00	\$
Non-Residential		001-00-345-810-00	\$3,857.00 \$
◊ Continuance of Public Hearing		001-00-345-810-00	\$305.00 \$
◊ Critical or Sensitive Areas (fee per type)		001-00-345-810-00	\$690.00 \$
	(wetlands, steep slopes or potentially unstable soils, streams and watercourses, vegetation removal, wildlife habitat)		
◊ <u>Design Review</u>			
Minor		001-00-345-810-00	\$386.00 \$
Committee		001-00-345-810-00	\$1,776.00 \$
◊ Development Agreement	\$782 first hearing; \$305 ea. add'l hearing	001-00-345-810-00	\$
◊ <u>Engineering Department Review</u>			
Review Fee	3% of estimated construction costs	001.00.345.830.20	\$
Modification to Approved Construction Plans		001.00.345.810.00	\$370.00 \$
◊ <u>Fire Department Review</u>			
Short Plat or other Development Review		115-00-345-830-10	\$127.00 \$
Short Plat or other Development Inspection		115-00-322-110-00	\$127.00 \$
Subdivision or PRD Review		115-00-345-830-10	\$157.00 \$
Subdivision or PRD Inspection		115-00-322-110-00	\$157.00 \$
Site Plan Review		115-00-345-830-10	\$188.00 \$
Site Plan Inspection		115-00-322-110-00	\$188.00 \$
◊ <u>Home Occupation</u>			
Minor - Notification (No fee)			\$0.00
Major		001-00-321-900-00	\$61.00 \$
◊ LI/BP Development	\$3857 + \$36.50 per 1000 sf of GFA	001-00-345-810-00	\$
◊ Minor Modifications to approved development		001-00-345-810-00	\$178.00 \$
◊ Planned Residential Development	\$30 per unit + subdivision fees	001-00-345-810-00	\$
◊ <u>Plat, Preliminary</u>			
Short Plat	4 lots or less: \$1725.00 per lot	001-00-345-810-00	\$
Short Plat	5 lots or more: \$6,400 + \$225 per lot	001-00-345-810-00	\$
Subdivision	\$6,400 + \$225 per lot	001-00-345-810-00	\$
◊ <u>Plat, Final</u>			
Short Plat		001-00-345-810-00	\$178.00 \$
Subdivision		001-00-345-810-00	\$1,066.00 \$
◊ Plat Modification/Alteration		001-00-345-810-00	\$548.00 \$
◊ <u>Pre-Application (Type II or IV Permits)</u>			
No fee for Type I or II			
General		001-00-345-810-00	\$315.00 \$
Subdivision		001-00-345-810-00	\$812.00 \$
◊ SEPA		001-00-345-890-00	\$721.00 \$
◊ Shoreline Permit		001-00-345-890-00	\$782.00 \$
◊ <u>Sign Permit</u>			
General Sign Permit	(Exempt if building permit is required)	001.00.322.400.00	\$36.00 \$
Master Sign Permit		001.00.322.400.00	\$112.00 \$
◊ <u>Site Plan Review</u>			
Residential	\$1,025 + \$30 per unit	001-00-345-830-10	\$
Non-Residential	\$2,562 + \$61 per 1000 sf of GFA	001-00-345-830-10	\$
Mixed Residential/Non Residential		001-00-345-830-10	\$
	\$3,613 + \$30 per res unit + \$61 per 1000 sf of GFA		
◊ Temporary Use Permit		001-00-321-990-00	\$71.00 \$
◊ Variance (Minor or Major)		001-00-345-810-00	\$620.00 \$
◊ Zone Change (single tract)		001-00-345-810-00	\$1,746.00 \$

Adapted by RES 1023 Aug 2005; Revised by RES 1113 Sept 2007; Revised by RES 1163 Oct 2009; Revised by RES 1204 Nov 2010

Revised by RES 15-001 Jan 2015; Revised by RES 15-007 May 2015; Revised by RES 15-018 Dec 2015; Revised by RES 16-019 Nov 2016

For office use only

**Total Fees Due: \$**



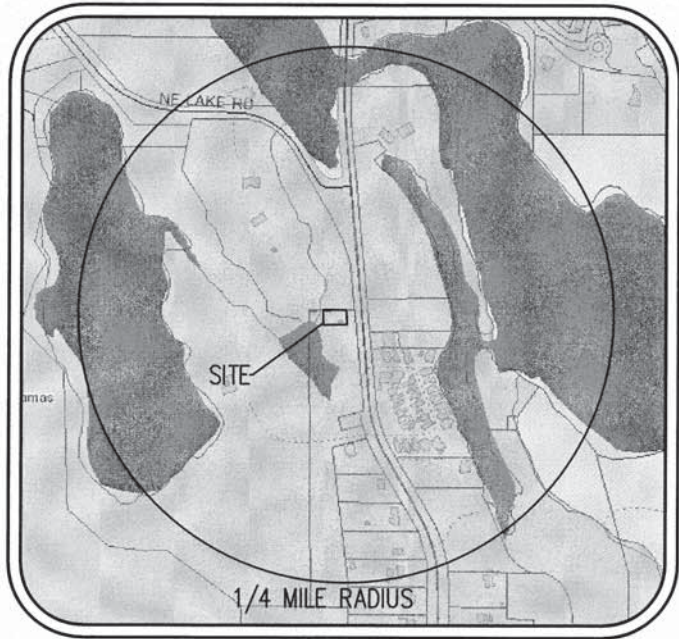
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## **Exhibit B: Development Plans (11 x 17)**

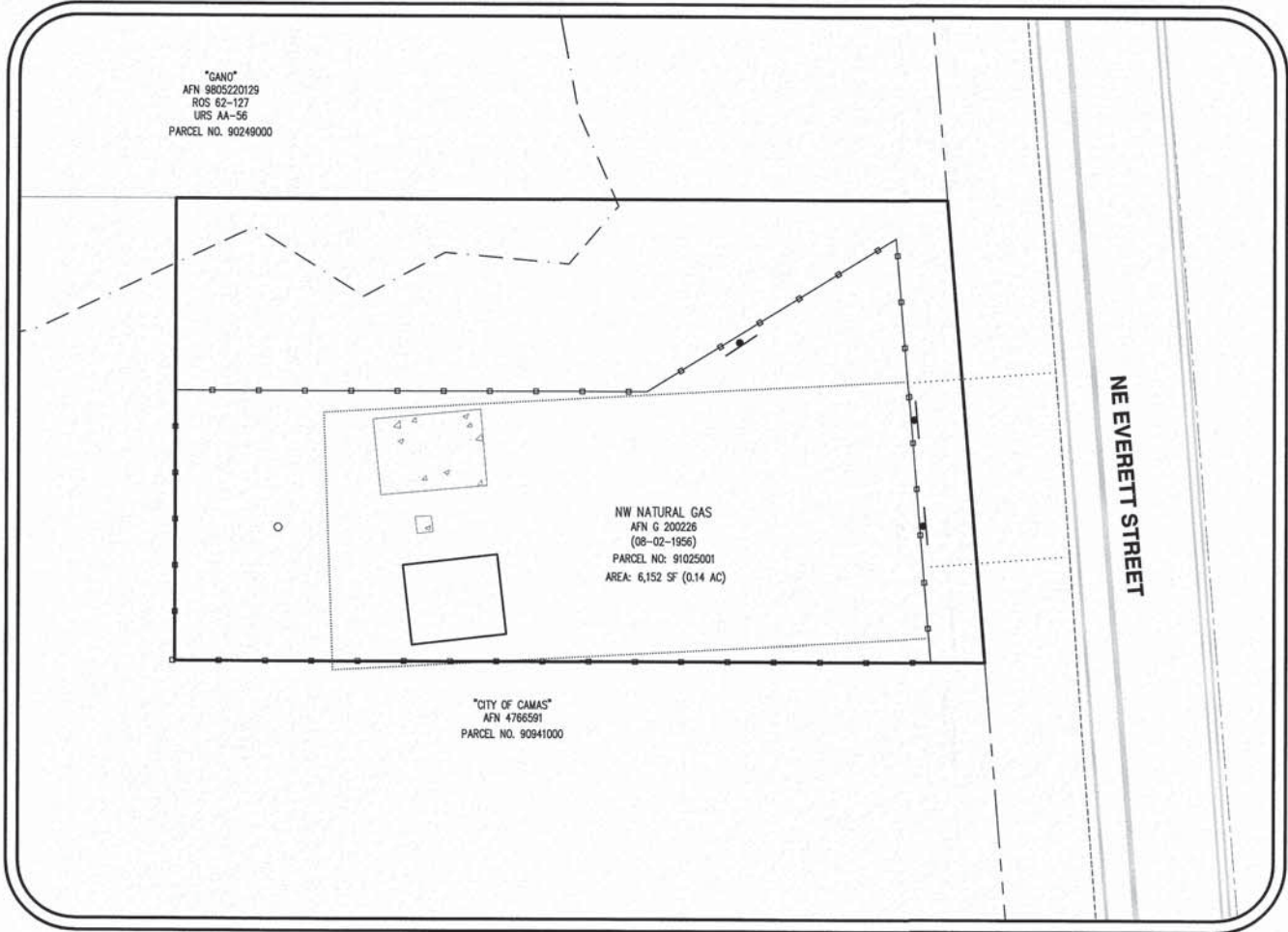
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# NW NATURAL LACAMAS REGIONAL STATION

## PRELIMINARY SITE PLAN



**VICINITY MAP**  
N.T.S.



**SITE MAP**  
N.T.S.



**OWNER/APPLICANT**

NW NATURAL  
CONTACT: HALLI CHESSER  
200 NW SECOND AVENUE  
PORTLAND, OR 97209  
PH: 503-226-4221 X 4394  
E-MAIL: HALLI.CHESSER@NWNATURAL.COM

**PLANNING/ENGINEERING/  
SURVEYING FIRM**

AKS ENGINEERING & FORESTRY, LLC.  
CONTACT: BLAIR CARLSON, P.E.  
9600 NE 126TH AVENUE, SUITE 2520  
VANCOUVER, WA 98682  
PH: 360-882-0419  
FAX: 360-882-0426  
E-MAIL: CARLSONB@AKS-ENG.COM

**PROPERTY DESCRIPTION**

LOCATED IN THE NORTHWEST QUARTER OF SECTION 02, TOWNSHIP 1 NORTH, RANGE 3 EAST, WILLAMETTE MERIDIAN, CITY OF CAMAS, CLARK COUNTY, WASHINGTON.  
PROPERTY SERIAL # 91025-001

**EXISTING LAND USE**

REGIONAL STATION (MF-10)

**PROJECT PURPOSE**

SITE PLAN TO PERFORM SITE MAINTENANCE

**SITE AREA**

±0.14 ACRES (6,152 SF)

**AKS**  
AKS ENGINEERING & FORESTRY, LLC  
9600 NE 126TH AVE, STE. 2520  
VANCOUVER, WA 98682  
P: 360.882.0419  
F: 360.882.0426  
aks-eng.com

**NW NATURAL**  
**LACAMAS REGIONAL STATION**  
**CITY OF CAMAS WASHINGTON**  
NW 1/4 SECTION 2 T1N R3E  
PARCEL NO. 91025-001

**COVER SHEET**

DESIGNED BY: TJW  
DRAWN BY: REW  
CHECKED BY: BGC  
SCALE: AS NOTED  
DATE: 2/17/17



REVISIONS:

JOB NUMBER  
**5489**

SHEET  
**P1.0**

**LEGEND**

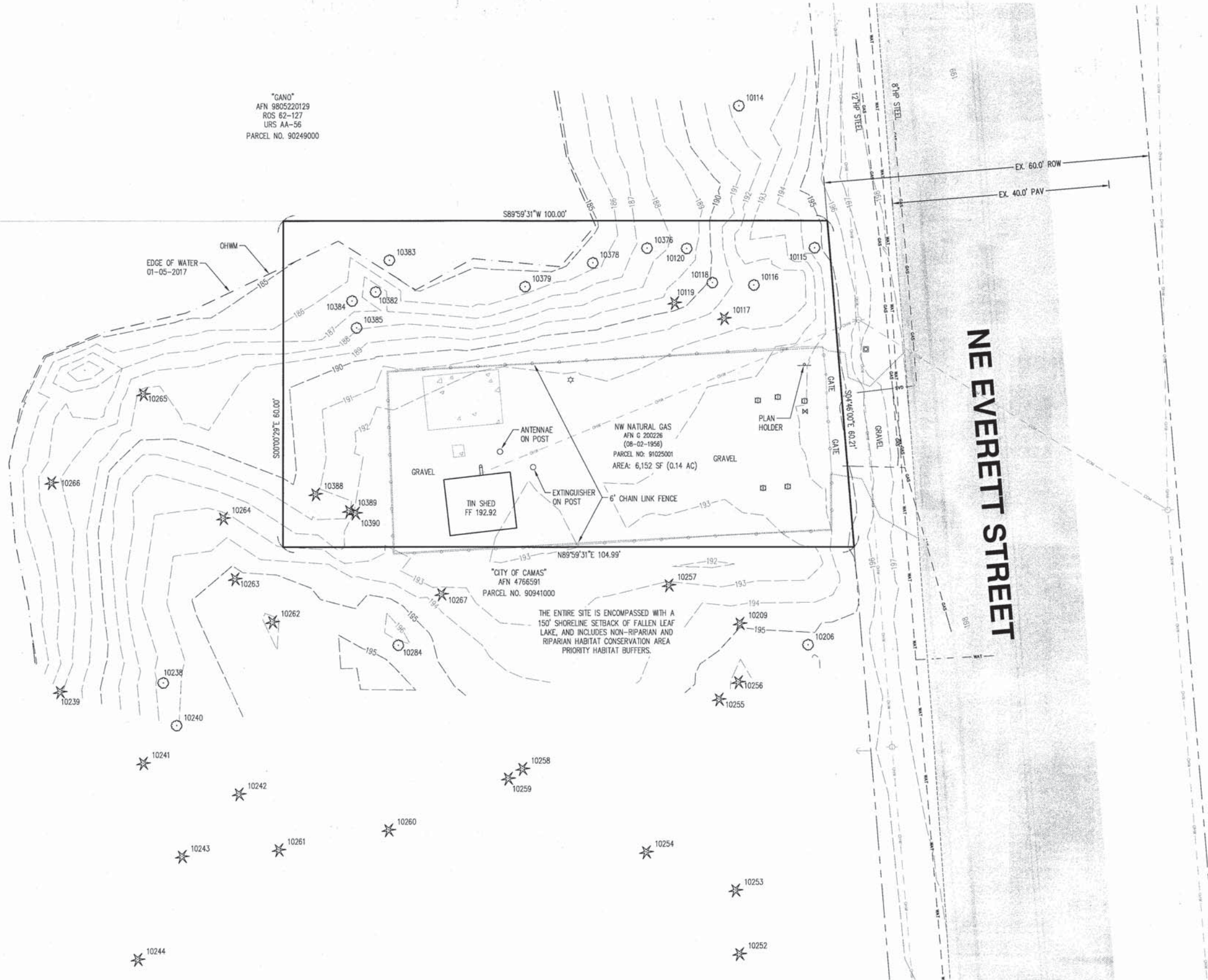
	EXISTING	PROPOSED		EXISTING	PROPOSED
DECIDUOUS TREE			STORM SEWER CLEAN OUT		
CONIFEROUS TREE			STORM SEWER CATCH BASIN		
FIRE HYDRANT			STORM SEWER AREA DRAIN		
WATER BLOWOFF			STORM SEWER MANHOLE		
WATER METER			GAS METER		
WATER VALVE			GAS VALVE		
DOUBLE CHECK VALVE			GUY WIRE ANCHOR		
AIR RELEASE VALVE			POWER POLE		
SANITARY SEWER CLEAN OUT			POWER VAULT		
SANITARY SEWER MANHOLE			POWER JUNCTION BOX		
SIGN			POWER PEDESTAL		
STREET LIGHT			COMMUNICATIONS VAULT		
MAILBOX			COMMUNICATIONS JUNCTION BOX		
			COMMUNICATIONS RISER		

	EXISTING	PROPOSED
RIGHT-OF-WAY LINE		
BOUNDARY LINE		
PROPERTY LINE		
CENTERLINE		
DITCH		
CURB		
EDGE OF PAVEMENT		
EASEMENT		
FENCE LINE		
GRAVEL EDGE		
POWER LINE		
OVERHEAD WIRE		
COMMUNICATIONS LINE		
FIBER OPTIC LINE		
GAS LINE		
STORM SEWER LINE		
SANITARY SEWER LINE		
WATER LINE		

**SHEET INDEX**

- P1.0 COVER SHEET
- P2.0 EXISTING CONDITIONS PLAN
- P3.0 SITE PLAN
- P4.0 DEMOLITION, GRADING, & EROSION CONTROL PLAN
- P5.0 LANDSCAPE PLAN

"GANO"  
 AFN 9805220129  
 RGS 62-127  
 URS AA-56  
 PARCEL NO. 90249000

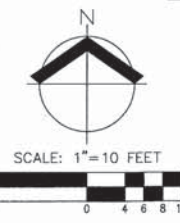


**NOTES:**

1. NO UTILITY LOCATE WERE REQUIRED FOR THIS SITE.
2. FIELD WORK WAS CONDUCTED BETWEEN DECEMBER 20, 2016 AND JANUARY 5, 2017.
3. VERTICAL DATUM: ELEVATIONS ARE BASED ON WSDOT BENCH MARK LACAMAS-15, A 3" BRASS DISK LOCATED AT THE ENTRANCE TO LACAMAS PARK. ELEVATION = 188.13 FEET (NAVD88)
4. THIS MAP DOES NOT CONSTITUTE A PROPERTY BOUNDARY SURVEY.
5. SURVEY IS ONLY VALID WITH SURVEYOR'S STAMP AND SIGNATURE.
6. BUILDING FOOTPRINTS ARE MEASURED TO SIDING UNLESS NOTED OTHERWISE. CONTACT SURVEYOR WITH QUESTIONS REGARDING BUILDING TIES.
7. CONTOUR INTERVAL IS 1 FOOT.
8. TREES WITH DIAMETER OF 6" AND GREATER ARE SHOWN. TREE DIAMETERS WERE DETERMINED BY VISUAL INSPECTION. TREE INFORMATION IS SUBJECT TO CHANGE UPON ARBORIST INSPECTION.
9. EXISTING SURFACE MATERIAL OF NE EVERETT STREET IS ASPHALT.
10. THE EXISTING BUILDING IS CURRENTLY SERVED BY CITY OF CAMAS PUBLIC WATER. SOME PRIVATE, UNDERGROUND UTILITIES WERE NOT MARKED AT THE TIME OF THE SURVEY. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL ON-SITE UTILITIES PRIOR TO WORK COMMENCEMENT.

**TREE TABLE**

POINT	SPECIES	DBH (IN.)
10114	DECIDUOUS	13.32
10115	DECIDUOUS	6
10116	DECIDUOUS	7.14
10117	EVERGREEN	8
10118	DECIDUOUS	21
10119	EVERGREEN	23
10120	DECIDUOUS	11
10206	DECIDUOUS	7
10209	EVERGREEN	20
10238	DECIDUOUS	14
10239	EVERGREEN	29
10240	DECIDUOUS	13
10241	EVERGREEN	23
10242	EVERGREEN	27
10243	EVERGREEN	34
10244	EVERGREEN	21
10245	EVERGREEN	47
10246	EVERGREEN	42
10247	EVERGREEN	39
10248	EVERGREEN	23
10249	EVERGREEN	35
10250	EVERGREEN	22
10251	EVERGREEN	20
10252	EVERGREEN	30
10253	EVERGREEN	12
10254	EVERGREEN	46
10255	EVERGREEN	21
10256	EVERGREEN	38
10257	EVERGREEN	8
10258	EVERGREEN	36
10259	EVERGREEN	46
10260	EVERGREEN	32
10261	EVERGREEN	39
10262	EVERGREEN	25
10263	EVERGREEN	28
10264	EVERGREEN	10
10265	EVERGREEN	41
10266	EVERGREEN	27
10267	EVERGREEN	14
10284	DECIDUOUS	7
10376	DECIDUOUS	23
10378	DECIDUOUS	19
10379	DECIDUOUS	10
10382	DECIDUOUS	15
10383	DECIDUOUS	20
10384	DECIDUOUS	11
10385	DECIDUOUS	13
10388	FIR	9
10389	FIR	7
10390	FIR	6



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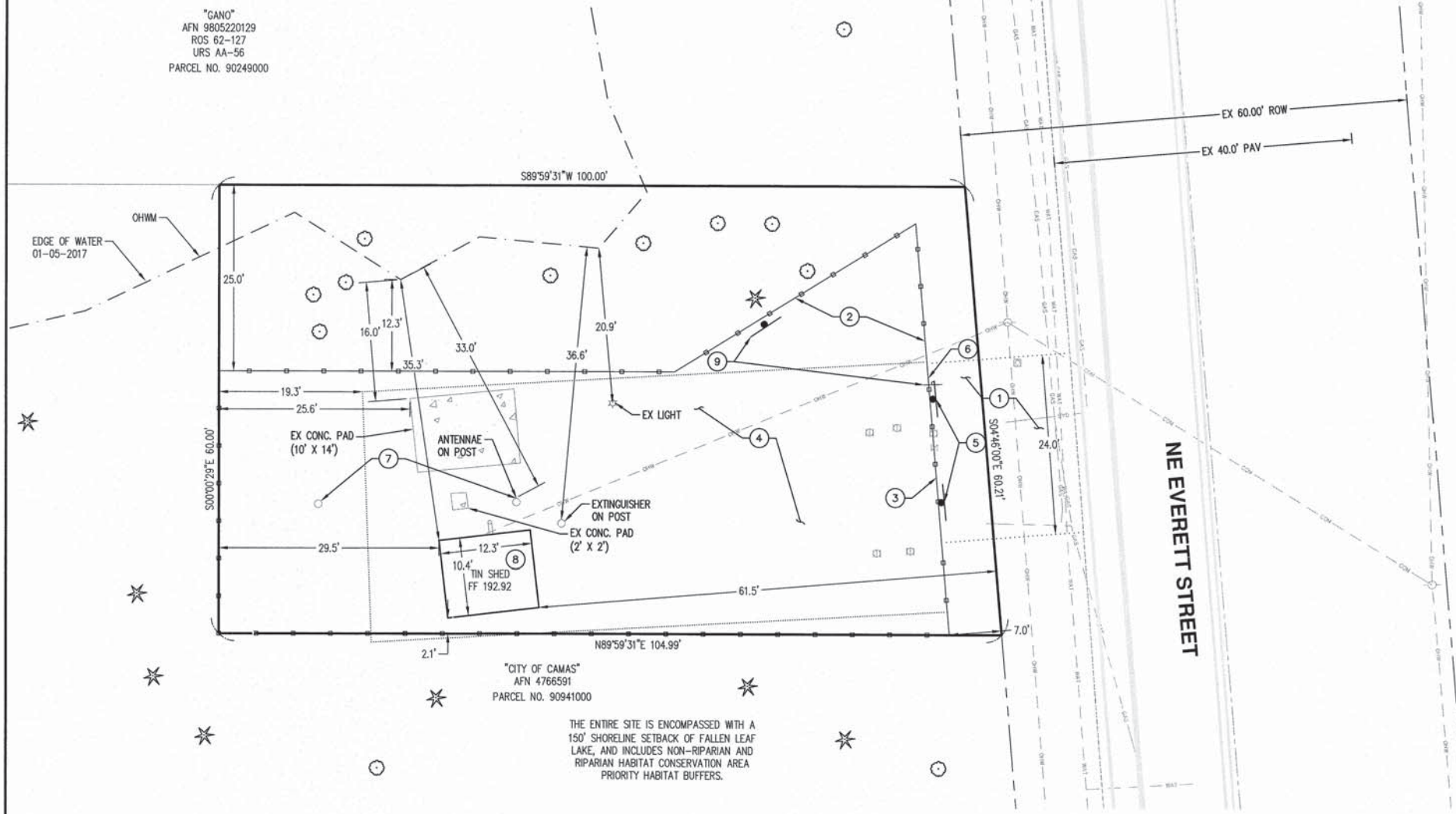
**NW NATURAL  
 LACAMAS REGIONAL STATION  
 CITY OF CAMAS WASHINGTON**  
 FORESTRY · SURVEYING · NATURAL RESOURCES  
 ENGINEERING · PLANNING · LANDSCAPE ARCHITECTURE  
 PARCEL ID NO. 91025-001  
 NW SECTION 2 T1N R3E

**EXISTING CONDITIONS  
 PLAN**

DESIGNED BY: REW  
 DRAWN BY: BJA  
 CHECKED BY: CAB  
 SCALE: AS NOTED  
 DATE: 01/17/2017

REVISIONS  
 JOB NUMBER  
**5489**  
 SHEET  
**P2.0**

"GANO"  
AFN 9805220129  
ROS 62-127  
URS AA-56  
PARCEL NO. 90249000



"CITY OF CAMAS"  
AFN 4766591  
PARCEL NO. 90941000

THE ENTIRE SITE IS ENCOMPASSED WITH A 150' SHORELINE SETBACK OF FALLEN LEAF LAKE, AND INCLUDES NON-RIPARIAN AND RIPARIAN HABITAT CONSERVATION AREA PRIORITY HABITAT BUFFERS.

**GENERAL NOTES:**

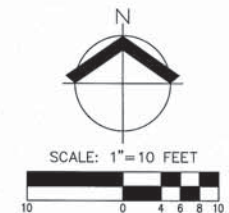
1. THE PROPOSED PROJECT INCLUDES REPLACING AN EXISTING SHED STRUCTURE, RE-LOCATING AN ANTENNAE, INSTALLING SCREENING, REPLACING AN EXISTING FENCE, AND MINOR RE-GRADING OF THE ACCESS DRIVEWAY.
2. SITE ACCESS SHALL BE FROM NE EVERETT STREET.
3. NE EVERETT STREET IS PAVED WITH ASPHALT.
4. THERE ARE NO FLOOD PLAINS, ROCK OUTCROPPINGS, UNSTABLE SLOPES, LANDSLIDE HAZARD AREAS, OR SIGNIFICANT HISTORIC SITES ON THE SITE ACCORDING TO CLARK COUNTY GIS AND REQUIRED SITE INVESTIGATIONS.
5. SHORELINE AREAS, WETLANDS, AND SIGNIFICANT HABITAT ELEMENTS EXIST ON/OR DIRECTLY ADJACENT TO THE SITE.
6. THE EXISTING AND PROPOSED SURFACE MATERIAL OF THE SITE AND ENTRY IS GRAVEL.
7. THERE ARE NO WELLS, SEPTIC TANKS, DRAIN FIELDS, OR STORAGE TANKS KNOWN TO EXIST ON SITE.
8. THERE ARE NO ROADS WITHIN 500' PROVIDING ACCESS TO THE SITE THAT ARE IN EXCESS OF 15%.
9. PARCEL NO. 91025001 IS ZONED MF-10. PARCEL NO. 90941000 WHICH ABUTS THE SITE TO THE WEST AND SOUTH IS ZONED SU. PARCEL NO. 90249000 WHICH ABUTS THE SITE TO THE NORTH IS ZONED MF-10. NE EVERETT STREET ABUTS THE SITE TO THE EAST.
10. ASIDE FROM RE-GRADING THE ENTRANCE, NO ROAD IMPROVEMENTS ARE PROPOSED.
11. NO BICYCLE IMPROVEMENTS EXIST NOR ARE PROPOSED ON SITE.
12. A METAL SHED EXISTS ON SITE AND WILL BE REPLACED.
13. STORMWATER WILL CONTINUE TO BE DISPERSED THROUGH VEGETATION TO THE NORTHWEST.
14. THE EXISTING BUILDING IS CURRENTLY SERVED BY CITY OF CAMAS PUBLIC WATER. SOME PRIVATE, UNDERGROUND UTILITIES WERE NOT MARKED AT THE TIME OF THE SURVEY. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL ON-SITE UTILITIES PRIOR TO WORK COMMENCEMENT.
15. NO RIGHT-OF-WAY DEDICATION IS PROPOSED.
16. THE NEAREST C-TRAN ROUTE IS OVER ONE MILE FROM THE SITE.
17. NO SIDEWALKS EXIST NOR ARE PROPOSED ADJACENT TO OR WITHIN THE SITE.
18. DUE TO THE NATURE AND USE OF THE SITE, NO PARKING IS PROPOSED.

**KEYED NOTES:**

1. RE-GRADE EXISTING 24' GRAVEL DRIVEWAY ENTRANCE. SEE GRADING PLANS.
2. 6' HIGH CHAINLINK FENCE WITH SLATS ON PROPERTY LINE AND ACROSS PROPERTY AS SHOWN (TYP). SEE LANDSCAPE PLANS.
3. 24' VEHICLE GATE. SEE LANDSCAPE PLANS.
4. EXISTING GRAVEL OUTDOOR STORAGE AREA.
5. NO PARKING - FIRE LANE SIGN; MOUNT TO GATE.
6. A KNOX BOX SHALL BE MOUNTED TO THE GATE AND WILL BE ADEQUATELY SIZED FOR THE REQUIRED CONTENT (E.G., KEYS TO SHED AND GATE).
7. REPLACE/RELOCATED ANTENNAE.
8. REPLACE EXISTING OUTBUILDING WITH SAME SIZE BUILDING IN SAME FOOTPRINT. APPROXIMATE BUILDING AREA = 128 SF.
9. RELOCATED PLAN HOLDER SIGN POST.

**SITE STATISTICS**

GROSS SITE AREA:	0.14 AC
BUILDING FOOTPRINT:	128 SF
PROPOSED LANDSCAPE AREA:	0.08 AC (57.1%)
TOTAL BUILDING COVERAGE:	0.003 AC (2.1%)

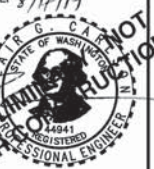


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**LACAMAS REGIONAL STATION**  
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NW 1/4 SECTION 2 T1N R2E  
PARCEL NO: 91025-001

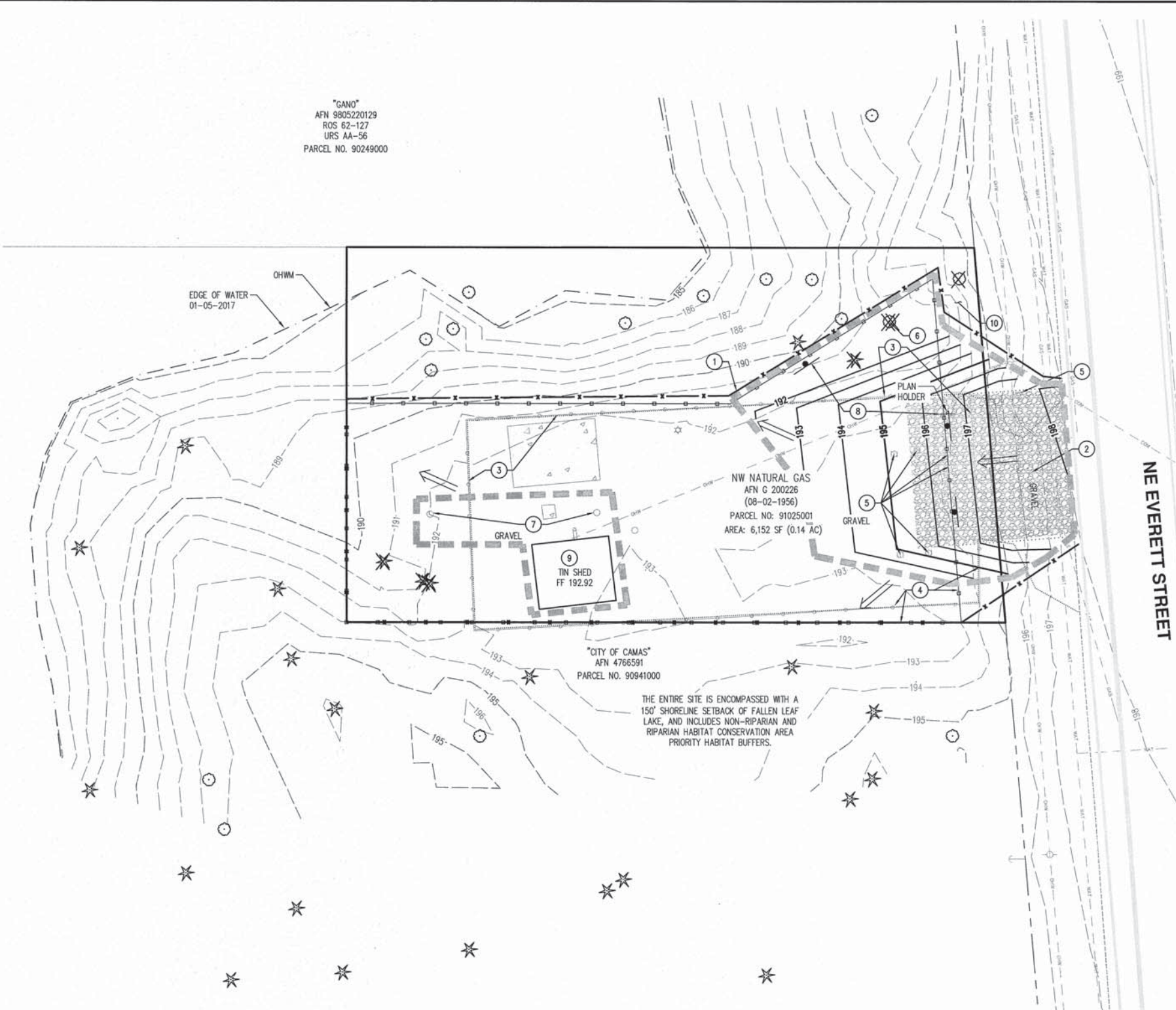
**SITE PLAN**

DESIGNED BY: TJW  
DRAWN BY: REW  
CHECKED BY: BGC  
SCALE: AS NOTED  
DATE: 8/17/17



REVISIONS:  
  
JOB NUMBER  
**5489**  
SHEET  
**P3.0**

"CANO"  
 AFN 9805220129  
 ROS 62-127  
 URS AA-56  
 PARCEL NO. 90249000



"CITY OF CAMAS"  
 AFN 4766591  
 PARCEL NO. 90941000

THE ENTIRE SITE IS ENCOMPASSED WITH A 150' SHORELINE SETBACK OF FALLEN LEAF LAKE, AND INCLUDES NON-RIPARIAN AND RIPARIAN HABITAT CONSERVATION AREA PRIORITY HABITAT BUFFERS.

**GRADING NOTES:**

1. SHOULD ANY ITEM OF ARCHAEOLOGICAL INTEREST BE FOUND DURING DEVELOPMENT, YOU ARE REQUIRED TO STOP WORK AND NOTIFY THE CITY OF CAMAS, CLARK COUNTY, AND THE WASHINGTON STATE OFFICE OF ARCHAEOLOGY AND HISTORIC PRESERVATION AT (360) 753-4011 IMMEDIATELY. FAILURE TO DO SO COULD RESULT IN A FELONY CONVICTION.
2. ANY PUBLIC OR PRIVATE CURB, GUTTER, SIDEWALK, OR ASPHALT DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO CITY OF CAMAS STANDARDS.
3. IF ANY FILL IS PROPOSED WITHIN CURRENT OR FUTURE RIGHT-OF-WAY, THE CONTRACTOR SHALL PLACE SUCH FILL IN ACCORDANCE WITH 2008 WSDOT STANDARD SPECIFICATIONS SECTION 2-03.3(14)C METHOD B.
4. IF ANY SEDIMENT IS TRACKED INTO THE PUBLIC RIGHT-OF-WAY, A WHEEL WASH OR ADDITIONAL MEASURES MAY BE REQUIRED AT THE INSPECTOR'S DISCRETION.
5. SIGNIFICANT VARIATION AND DEGREE OF EROSION CONTROL EFFORT WILL BE DICTATED BY WEATHER CONDITIONS. THE DEVELOPER AND CONTRACTOR SHOULD BE PREPARED TO PROVIDE EXTRA EROSION CONTROL PROVISIONS AND EFFORT DURING WINTER AND WET WEATHER CONDITIONS BEYOND THAT NORMALLY REQUIRED DURING SUMMER AND DRY WEATHER CONDITIONS. FINE GRAINED AND UNCONSOLIDATED SOILS ON SLOPING SITES MAY BECOME UNSTABLE WHEN SUBJECT TO EXCESSIVE MOISTURE.
6. DEMOLITION AND REMOVAL OF ALL STRUCTURES TOGETHER WITH DECOMMISSIONING OF ALL WELLS, SEPTIC TANKS, AND UNDERGROUND STORAGE TANKS (IF ANY EXIST) SHALL BE COMPLETED PRIOR TO SITE GRADING.
7. CUT AND FILL QUANTITIES SHOWN ARE BASED OFF OF RE-GRADING THE SITE'S EXISTING GRAVE ENTRANCE. THESE VOLUMES DO NOT TAKE INTO ACCOUNT ANY UNKNOWN UNSUITABLE SOIL DEPOSITS OR OVER EXCAVATION OF NON-ORGANIC MATERIALS FOUND ON SITE, NOR WET WEATHER CONDITIONS AND MEASURES SHOULD THIS APPLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PRODUCE THEIR OWN INDEPENDENT GRADING VOLUMES AS WELL AS ACCOUNT FOR ANY OBSERVATIONS OR MEASURES DIRECTED WITHIN THE GEOTECHNICAL REPORT OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER ON SITE THROUGHOUT CONSTRUCTION.
8. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY GRADING.
9. SUITABILITY OF IMPORT FILL SHALL BE DETERMINED BY PROJECT GEOTECHNICAL ENGINEER PRIOR TO BRING IN SOILS ON SITE.
10. DEMOLITION DEBRIS SHALL BE REMOVED FOR THE SITE.
11. DISTURBED LIMITS ARE SHOWN OUTSIDE GRADING LIMITS FOR CLARITY.

**KEYED NOTES:**

1. EROSION CONTROL SEDIMENT FENCE (TYP).
2. 50' CONSTRUCTION ENTRANCE.
3. REMOVE EXISTING FENCE.
4. REPLACE/RELOCATE FENCE.
5. UTILITY STRUCTURE TO BE RAISED TO FUTURE GRADE OR REPLACED WITH NEW VAULTS PER EACH RESPECTIVE UTILITIES' REQUIREMENTS. CONTRACTOR TO COORDINATE WITH APPROPRIATE UTILITY.
6. TREE TO BE REMOVED (TYP). SEE MITIGATION PLAN FOR MITIGATION MEASURES.
7. REPLACE/RELOCATE ANTENNAE.
8. RELOCATE PLAN HOLDER SIGN POST.
9. DEMOLISH EXISTING OUTBUILDING. REPLACE WITH NEW OUTBUILDING OF THE SAME SIZE IN SAME LOCATION. APPROXIMATE BUILDING AREA = 128 SF.
10. CLEAR VEGETATION TO PROVIDE ENHANCED SIGHT DISTANCE TO NE EVERETT STREET.

**GRADING QUANTITIES:**

CUT: 0 CY  
 FILL: 75 CY

**LEGEND**

EXISTING GROUND CONTOUR (1 FT)	--- 101 ---
EXISTING GROUND CONTOUR (5 FT)	--- 105 ---
FINISHED GRADE CONTOUR (1 FT)	--- 101 ---
FINISHED GRADE CONTOUR (5 FT)	--- 105 ---
SEDIMENT FENCE (TO BE INSTALLED PRIOR TO GRADING)	--- X ---
GRAVEL CONSTRUCTION ENTRANCE	
DISTURBED LIMITS (MINOR DISTANCE ASSOCIATED WITH FENCE INSTALLATION EXCLUDED)	--- X ---
DRAINAGE FLOW DIRECTION	←
	DECIDUOUS / CONIFEROUS
EXISTING TREE TO REMAIN	⊙ * / ⊙ *
EXISTING TREE TO BE REMOVED	⊗ * / ⊗ *

**ATTENTION EXCAVATORS**

CALL 48 HOURS BEFORE YOU DIG

811

"It's the Law"

NORTHWEST UTILITIES NOTIFICATION CENTER

N

SCALE: 1"=10 FEET

**AKS**

AKS ENGINEERING & FORESTRY, LLC  
 9600 NE 126TH AVE. STE 2520  
 VANCOUVER, WA 98682  
 P: 360.882.0419  
 F: 360.882.0426  
 aks-eng.com

ENGINEERING · SURVEYING · NATURAL RESOURCES  
 FORESTRY · PLANNING · LANDSCAPE ARCHITECTURE

**NW NATURAL  
 LACAMAS REGIONAL STATION  
 CITY OF CAMAS WASHINGTON**

NW 1/4 SECTION 2, T1N, R1E  
 PARCEL NO. 91025-001

**DEMOLITION, GRADING, &  
 EROSION CONTROL PLAN**

DESIGNED BY: TJW  
 DRAWN BY: REW  
 CHECKED BY: BGC  
 SCALE: AS NOTED  
 DATE: 5/17/17

PRELIMINARY NOT FOR CONSTRUCTION

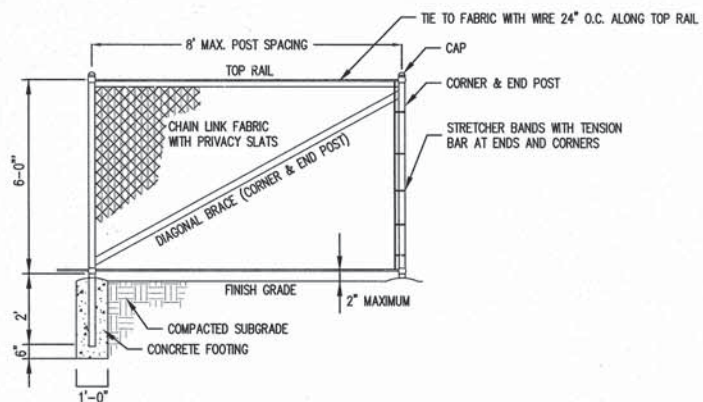
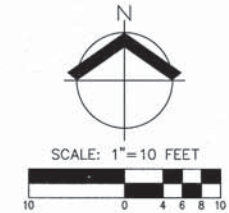
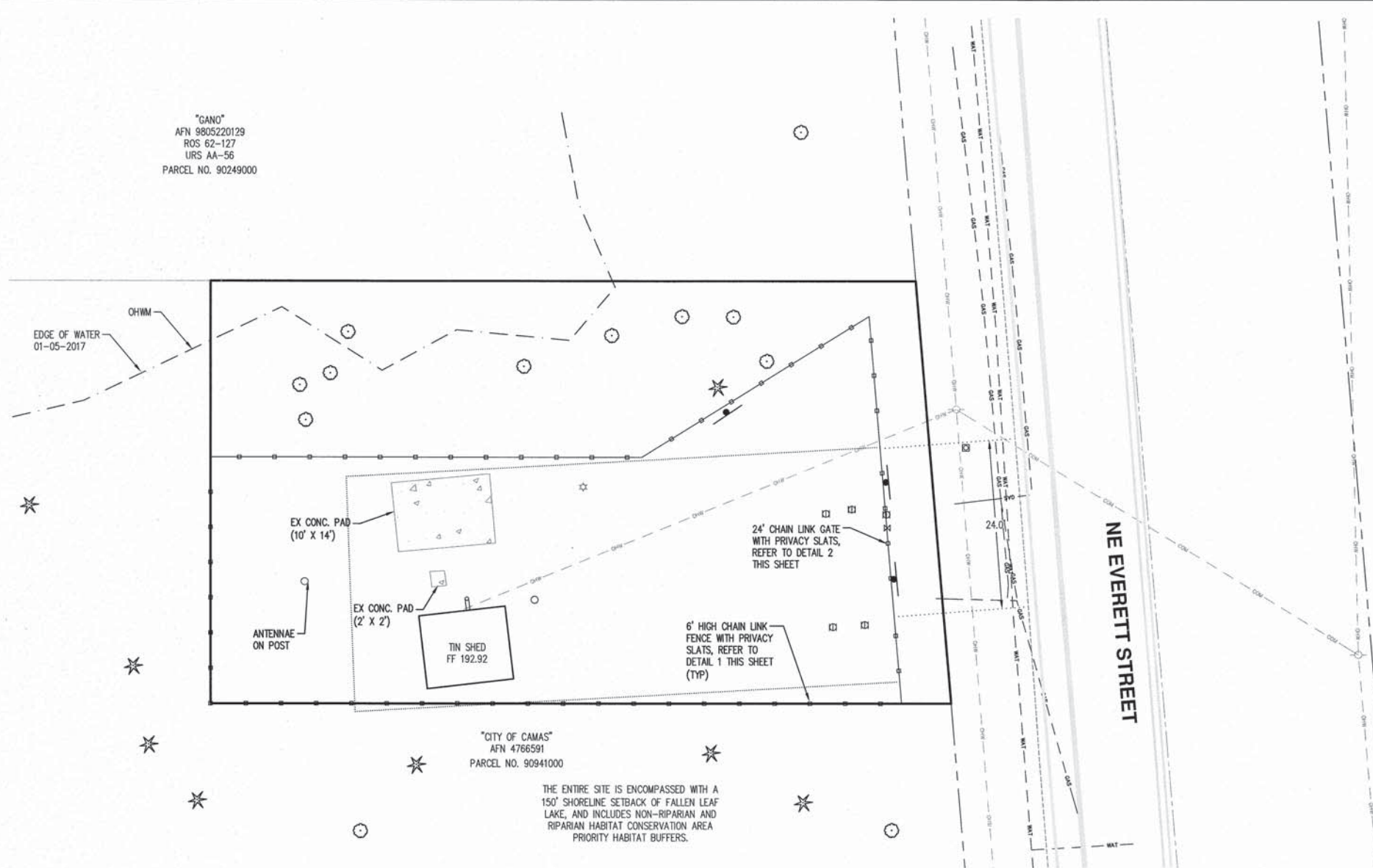
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

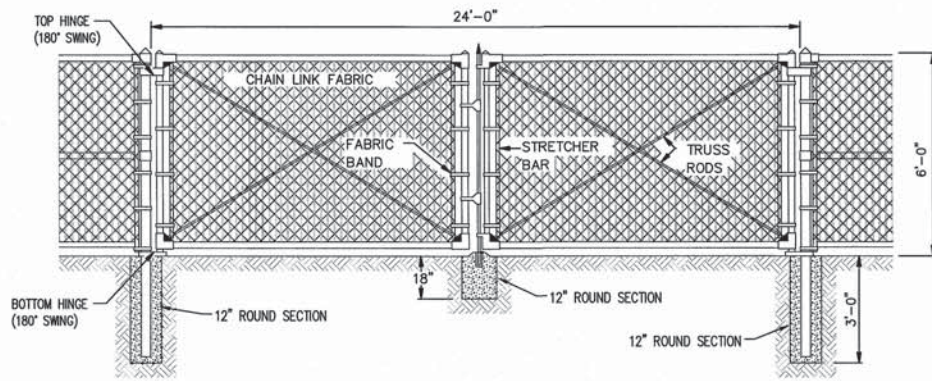
JOB NUMBER	5489
SHEET	P4.0



"GANO"  
 AFN 9805220129  
 ROS 62-127  
 URS AA-56  
 PARCEL NO. 90249000



**1 CHAIN LINK FENCE WITH PRIVACY SLATS**  
**P5.0**  
 NTS  
 NOTE:  
 1. FENCE MATERIAL SHALL BE NO. 11 GAUGE GALVANIZED STEEL FABRIC WITH BONDED VINYL COATING (BLACK) WITH BLACK PRIVACY SLATS.  
 2. FENCE POSTS SHALL BE GALVANIZED STEEL, WITH TOP CAPS, WITH BONDED VINYL COATING (BLACK) AND SET 2 FEET DEEP IN CONCRETE.  
 3. CROSS BARS SHALL CONNECT ADJACENT FENCE POSTS WITH DIAGONAL BRACES AT CORNERS AND ENDS.  
 4. SEE PLAN FOR LOCATION OF FENCE.  
 5. ALL FENCING MATERIALS (INCLUDING CHAIN LINK FABRIC, POSTS, RAILS, ETC.) SHALL BE COVERED WITH BLACK-COLORED VINYL COATING. THE COLOR SHOULD BE THE SAME FOR ALL FENCING MATERIALS.  
 6. CONCRETE POST BASE SHALL BE 12" MINIMUM DIAMETER X 30" DEEP, 3,000 PSI CONCRETE.  
 7. DETAIL IS PROVIDED FOR REFERENCE ONLY. INSTALL PER MANUFACTURERS RECOMMENDATIONS.



**2 CHAIN LINK GATE WITH PRIVACY SLATS**  
**P5.0**  
 NTS  
 NOTE:  
 1. FENCE MATERIAL SHALL BE NO. 11 GAUGE GALVANIZED STEEL FABRIC WITH BONDED VINYL COATING (BLACK) WITH BLACK PRIVACY SLATS.  
 2. ALL FITTINGS, FASTENERS, AND FABRIC TIES SHALL BE HOT DIP GALVANIZED.  
 3. CONCRETE SHALL BE MINIMUM 3,000 PSI AT 28 DAYS.  
 4. SEE PLAN FOR LOCATION OF GATE.  
 5. PROVIDE GATE STOPS AND DROP RECEIVERS SET IN CONCRETE, EACH GATE.  
 6. PROVIDE EXTENSION ARMS ON LINE, END AND CORNER POSTS AND GATE POSTS AS REQUIRED.  
 7. DETAIL IS PROVIDED FOR REFERENCE ONLY. INSTALL PER MANUFACTURERS RECOMMENDATIONS.

**AKS**  
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 FORESTRY · PLANNING · LANDSCAPE ARCHITECTURE

**NW NATURAL**  
**LACAMAS REGIONAL STATION**  
**CITY OF CAMAS WASHINGTON**  
 NW 1/4 SECTION 2, T1N R3E  
 PARCEL NO. 91025-001

**LANDSCAPE PLAN**

DESIGNED BY: TEB  
 DRAWN BY: TEB  
 CHECKED BY: BGC  
 SCALE: AS NOTED  
 DATE: 8/17/17



REVISIONS

JOB NUMBER  
**5489**

SHEET  
**P5.0**

AKS DRAWING FILE: 5489 P5.0 LANDSCAPE.DWG | LAYOUT: P5.0



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## **Exhibit C: Shoreline Critical Areas Report**

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# NW Natural Lacamas Regional Station Shoreline Critical Areas Assessment and Preliminary Buffer Enhancement Plan

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**Date:** August 14, 2017

**Prepared For:** NW Natural  
220 NW 2<sup>nd</sup> Avenue  
Portland, Oregon 97209

**Prepared By:** AKS Engineering & Forestry, LLC  
Taya K. MacLean, MS, PWS, Senior Biologist

**Site Information:** NE Everett Street (no site address; across from  
3016 NE Everett)  
Camas, Clark County, Washington  
Parcel ID: 91025-001



9600 NE 126th Avenue, Suite 2520  
Vancouver, WA 98682  
(360) 882-0419

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## Introduction

AKS Engineering & Forestry, LLC (AKS) was contracted by NW Natural (applicant) to conduct a critical areas assessment of Parcel 91025-001 (Section 02, Township 1N, Range 3E; 0.14 acres). The site is located on the west side of NE Everett Street directly across the street to the west from Camas Produce (3016 NE Everett Street) and south of NW Lake Road in the City of Camas (City), Clark County, Washington (Figure 1 through 6 of Appendix A).

AKS Senior Biologist, Taya K. MacLean conducted a site visit on April 26, 2017 to identify critical areas and to delineate wetlands and the ordinary high water mark (OHWM) of waters in the project area. The OHWM of a ponded area of Fallen Leaf Lake, a shoreline of the state, was delineated in the project area and has a 200-foot shoreline area setback. The parcel is within the shoreline management area designated as 'Urban Conservancy'. In addition to the designated shoreline, the project site is also located in priority habitat, including a mapped non-riparian habitat conservation area and riparian habitat conservation area, which have a 150-foot habitat buffer. No wetlands were identified on-site above the OHWM of the pond.

This report has been prepared to meet the City's Shoreline Master Program (SMP) and Appendix C of the SMP (City of Camas Code (CCC) Chapters 16.53 Wetlands and 16.61 Fish and Wildlife Habitat Conservation Areas) for a shoreline conditional use permit.

## Project Description

The site currently has one existing outbuilding and radio tower located on the property. The project includes site improvements to the Lacamas Regional Station, including re-grading the gravel driveway to reduce the approach grade from NE Everett Street, removing and replacing the existing building within a similar footprint, upgrading the existing radio tower to a modern Rohn communications tower of similar height, removal of seven trees, replacing fencing in its existing location, and expanding fencing along the western boundary and in the northeast corner of the property. Existing conditions are depicted on Figure 4 and a site plan is included as Figure 5 of Appendix A. Representative Site photographs are provided in Appendix B.

The review of critical areas will be consolidated with the Shoreline Permit Review for the project (City Pre-Application File PA17-18).

## Methodology

### Sources of Existing Information

A review of existing literature, maps, and other materials to identify wetlands, priority habitats, or site characteristics indicative of protected natural resources on the study area and lands within 300-feet was conducted. These sources can only indicate the likelihood of the presence of sensitive natural resources; actual wetland and critical area determinations must be based upon data obtained from field investigations. The following is a list of background information sources reviewed:

- U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI; USFWS, 2017)
- Clark County Maps Online (Clark County 2017)
- Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) Data (WDFW 2017)
- Washington National Heritage Program (WNHP) Rare Plants and High-Quality Wetlands Database (WNHP 2017)

- 
- Washington Department of Natural Resources (DNR) Forest Practices Application Mapping Tool for Stream Typing (DNR 2017)
  - Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2017)
  - National Wetland Plant List (2016)
  - WDFW Washington State Fish Passage Database (2017)
  - StreamNet Mapper (2017)
  - Previous site documentation and analysis
  - Camas Shoreline Master Program (SMP 2017)

### **Wetland and Waters Delineation**

The methodology used to determine the lack of presence of wetlands followed the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Version 2.0) (Wakeley et al., 2010). *The National Wetland Plant List 2016* (Lichvar et al., 2014) was used to assign wetland indicator status for the appropriate region. Soils, vegetation, and indicators of hydrology were recorded on standardized data forms (Appendix C).

The OHWM of waters is defined in the Washington State Shorelines Management Act of 1971 as follows:

*"Ordinary high water line" or "OHWL" means the mark on the shores of all waters that will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual and so long continued in ordinary years, as to mark upon the soil or vegetation a character distinct from that of the abutting upland, provided that in any area where the ordinary high water line cannot be found, the ordinary high water line adjoining saltwater shall be the line of mean higher high water, and the ordinary high water line adjoining freshwater shall be the elevation of the mean annual flood. " ... (RCW 90.58.030(2)(b) and WAC 73-22-030(6); WDOE 1994).*

General indicators used for determining the OHWM in the field included: (1) a clear vegetation mark; (2) open waters/upland edge; (3) elevation; (4) soil surface changes from algae or sediment deposition to areas where soils show no sign of depositional.

Sample plot locations and the OHWM were flagged in the field and their locations were professionally land surveyed by AKS (Figure 4 of Appendix A).

Wetlands and waters occurring within 300-feet of the site were assessed using available background mapping, a review of aerial imagery, and visual observations made from surrounding accessible lands by AKS during the site visit.

### **Fish and Wildlife Habitat Conservation Areas Assessment**

AKS reviewed the abovementioned background mapping resources to identify potential for occurrence of fish and wildlife habitat conservation areas. AKS also reviewed the Camas Shoreline Master Program for shoreline designations mapping of the site. During the site visit on April 26, 2017, AKS documented habitat features and the potential for fish and wildlife habitat conservation areas occurrences within the study area, including wildlife presence, sign, and habitat, while inventorying and describing habitat quality and plant communities within the parcel and surrounding lands up to 300-feet. Information regarding reproduction, habitat use, activities of all observed wildlife species, and special habitat features such as large and/or hollow trees, snags, and large downed logs was recorded in field notes.

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The boundaries of forested habitats and other unique habitat features were recorded in field notes and professionally surveyed. Additionally, trees having a diameter at breast height (DBH) greater than six inches were identified by an AKS arborist and professionally surveyed by AKS.

## Results

### Existing Conditions

The terrain of the site is generally flat with a gentle slope to the northwest towards the pond. Elevations range from 185 to 194 feet across the entire site.

Soils within the study area are mapped as Vader silt loam, 3% to 8% slopes (Unit VaB; non-hydric) per the Natural Resources Conservation Service (NRCS) Clark County Area Soil Survey Map. NRCS mapped soils generally matched those observed in the field.

The site currently consists of a graveled entrance and fenced area that includes a shed, an antenna, and chain link fencing.

The undeveloped area beyond the fencing consists of native vegetation and a portion of the pond located within the northwesternmost area of the parcel. The site is bordered to the west by NE Everett Street, a forested parcel to the south and west that is owned by the City (Parcel 90941-000), and an undeveloped private parcel to the north (Parcel 90249-000). The pond is located to the north and west of the parcel. The Fallen Leaf Lake Park and Natural Area is to the west of the parcel.

### Vegetation, Habitat, and Species

The undeveloped area and adjacent undeveloped land within 300 feet is dominated by a Douglas fir (*Pseudotsuga menziesii*; FACU) and bigleaf maple (*Acer macrophyllum*; FACU) forest with a diverse native shrub and herb understory, including red alder (*Alnus rubra*; FAC) along the shoreline, redosier dogwood (*Cornus alba*; FACW), thimbleberry (*Rubus parviflorus*, FACU), salmonberry (*Rubus spectabilis*, FAC), and salal (*Gaultheria shallon*; FACU) as documented at Plot 1. Invasive plants identified within the parcel include a predominance of English ivy (*Helix hederata*; FACU) and scattered Himalayan blackberry (*Rubus armeniacus*; FAC) in the understory across the site and the adjacent City-owned parcel. Snags of red alder and bigleaf maple approximately 10 to 12 inches are present on the site and within 300 feet. No Oregon white oak trees or rare plant communities were identified within the project site or within 300 feet. Dominant vegetation of upland habitat was documented on the attached data sheet (Appendix B).

Below the OHWM, the pond connected to Fallen Leaf Lake is permanently flooded with seasonally fluctuating water levels and contains scattered yellow pond lily (*Nuphar lutea ssp. polysepala*; OBL) in the water and slough sedge (*Carex obnupta*; OBL) along the shoreline. Fallen Leaf Lake is connected to Lacamas Lake via an intermittent channel across Lake Road.

A variety of birds and wildlife utilize aquatic and terrestrial habitat on the site and surrounding lands. During the site visit, AKS observed Northern flicker (*Colaptes auratus*), American coot (*Fulica americana*), American robin (*Turdus migratorius*), varied thrush (*Ixoreus naevius*), bewick's wren (*Thryomanes bewickii*), mallard (*Anas platyrhynchos*), great blue heron (*Ardea Herodias*), and Columbian black-tailed deer (*Odocoileus hemionus columbianus*) within or immediately adjacent to the study area. The on-site habitat is directly connected to surrounding waters and forested habitat, connecting fish and wildlife habitat conservation areas, priority habitats, areas identified as biologically diverse, and other valuable habitats within the City.



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No wetlands above the OHWM of the pond, wetlands of high conservation value, or rare plant populations were identified within the parcel or within 300 feet.

### **Fish and Wildlife Habitat Conservation Areas**

#### **Federal or State Listed Threatened, Endangered, and Sensitive Species**

The Upper Dam of Lacamas Creek is a concrete dam which forms a barrier to native migratory fish passage (WDFW 2017). Additionally, resident coastal cutthroat trout are present in Lacamas Lake, but not in Fallen Leaf Lake (SalmonScape 2017).

The ring-necked snake (*Diadophis punctatus*) is mapped in the area and is currently being monitored by WDFW across its range. 'State Monitor' species are not considered Species of Concern or priority species, but are monitored for status and distribution. Because little is known about the ring-necked snake, WDFW continues to monitor this population to determine whether it warrants further protections. There is suitable habitat for this species within the study area, but given the proximity to NE Everett Street, the on-site habitat may be too fragmented to support a population of ring-necked snake.

No other ESA-listed species are expected to use habitat on site based on WDFW PHS, Clark County mapping, and observations made by AKS.

#### **Priority Species and Habitats**

According to County mapping and WDFW PHS mapping, there is a mapped riparian habitat conservation area surrounding the OHWM of the pond, which have a 150-foot buffer mapped from the OHWM across the entire parcel.

A mapped non-riparian habitat conservation area (biodiversity areas and corridors and caves) is mapped on site. No caves were identified within the study area. Biodiversity areas and corridors area of habitat that are relatively important to various species of native fish and wildlife. Biodiversity areas are biologically diverse and/or are in a city or an urban growth area (UGA) and contains habitat that is valuable to fish or wildlife and is mostly comprised of native vegetation. Relative to other vegetated areas in the same city or UGA, the mapped area on-site is directly connected to undeveloped lands surrounding Fallen Leaf and Lacamas Lakes. The project area does support a diversity of wildlife that move freely along the shoreline of Fallen Leaf Lake, but because of its location along NE Everett Street, movement through the site is restricted along the roadway (a barrier to wildlife movement).

Caves were not identified within the study area or on lands within 300 feet.

#### **Habitats of Local Importance**

No oak trees or camas (*Camassia quamash*; FACW) concentrations were identified within the study area or adjacent lands within 300 feet.

#### **Ponds and Waters of the State**

The OHWM of a ponded area connected to Fallen Leaf Lake was mapped in the northwest section of the study area and this feature is therefore regulated as a fish and wildlife habitat conservation area (CCC 16.61). According to the City's SMP, this waterbody is mapped within the Urban Conservancy Shoreline Designation and has a 200-foot shoreline setback. The pond has water in it year-round, but is expected that water levels fluctuate throughout the year and may support wetland vegetation during periods of low water. The pond encompasses 435 square feet within the parcel and extends offsite to the north and west. The OHWM was determined based on a clear break in topography and a transition from a

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narrow band of slough sedge along the OHWM to upland conditions dominated by English ivy, red alder, and Douglas fir.

No other waters were identified within the study area or immediately adjacent to the site.

### **Other Fish and Wildlife Habitat Conservation Areas**

Fallen Leaf lake is not known to be planted with game fish, though Lacamas Lake is stocked occasionally. State Natural Area Preserves and Natural Resource Conservation Areas are not mapped as occurring within or adjacent to the site. No other fish and wildlife habitat conservation areas were identified within the parcel or adjacent lands within 300 feet.

### **Wetlands**

The pond is mapped by the City as a wetland. According to the NWI, the waterbody is mapped as a palustrine, aquatic bed, permanently flooded feature. Because it retains ponded water throughout the year, AKS has classified this feature as a pond. Wetland conditions that likely occur below the OHWM during periods of low water were not mapped separately as wetlands. No wetlands were delineated above the OHWM within the study area nor on lands within 300 feet of the parcel by AKS.

### **Impacts**

The utility provides a public benefit for residents, which is a primary consideration for shoreline management. Existing development encompasses 2,715 square feet. Site improvements will result in 1,170 square feet of new permanent impacts within shoreline critical area, including removal of seven trees with DBH greater than 6 inches and ranging in size from 6 to 14 inches DBH. There is no practical alternative to the proposed project with less impact on the habitat and buffer area.

Trees to be removed include three deciduous trees (bigleaf maple and red alder) and four Douglas fir trees, encompassing a total of approximately 1,605 square feet of canopy area (based on a 1-foot radius of canopy area per inch of DBH). Grading for the gravel entrance driveway will result in approximately 74 square feet of temporary impacts. Approximately 1,721 square feet of remaining riparian habitat will remain.

Future site use will have limited disturbance to the critical area as the site will only be visited periodically by NW Natural staff for maintenance. No maintenance activities beyond the proposed fence line will be required.

No impacts will occur below or immediately adjacent to the OHWM from construction of the project.

### **Mitigation Plan**

The applicant has designed the project to minimize impacts that degrade the functions and values of the shoreline critical areas to the greatest extent practicable. Mitigation proposed is in-kind and is located on-site and on the parcel immediately adjacent to the site, thereby substantially maintaining the level of habitat functions and values as characterized and documented using best available science. Impacts to critical areas resulting from the project will be mitigated in accordance with the following mitigation plan.

### **Mitigation Sequencing**

Mitigation sequencing includes the following steps:

- Avoiding the impact altogether by not taking a certain action or parts of an action (usually by either finding another site or changing the location on the site);

- 
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps, such as project design, developable area configuration, relocation, or timing, to avoid or reduce impacts;
  - Rectifying the impact to critical areas by repairing, rehabilitating, or restoring the affected environment;
  - Reducing or eliminating the impact or hazard over time by preservation and maintenance operations during the life of the action;
  - Compensating for the impact to critical areas by replacing, enhancing, or providing substitute resources or environments; and
  - Monitoring the impact or other required mitigation and taking remedial action when necessary.

Avoiding the impact altogether is not feasible because the entire parcel is mapped as shoreline critical habitat and as a fish and wildlife habitat conservation area. To avoid direct impacts to the Fallen Leaf Lake pond below the OHWM and on the bank immediately adjacent to the pond from site improvements, expansion of the facility is planned in the upland area west of the existing fence line and just northwest of the entrance gate to provide safe access and enhanced site distance to NE Everett Street. This site layout includes a fencing alignment which preserves habitat connectivity between adjacent uplands and the shoreline by not severing the shoreline habitat above the OHWM. Grading has also been minimized to the greatest extent practicable, only requiring 75 cubic yards of fill material. Impacts to the shoreline critical areas will be mitigated via implementation of best management practices (BMPs) and mitigation measures described below. Mitigation will be conducted in-kind (on-site and on the adjacent parcel) and contiguous to wildlife habitat corridors. Additionally, annual monitoring will ensure successful implementation of mitigation measures and that no net loss of functions and values occurs from the project.

### **Functions and Values**

Terrestrial wildlife habitat functions of the upland enhancement area were assessed using the Clark County Habitat Conservation Ordinance Riparian Habitat Field Rating Form (for terrestrial wildlife habitat functions only; Appendix D). Currently, the site has a diversity of native woody plant species, multiple canopy layers (herb, shrub, and tree), snags, and downed logs. However, the invasive species, English ivy, represents much of cover in the understory vegetation.

To ensure that proposed mitigation will result in a net benefit to ecological functions of the site after construction, habitat functions of the upland enhancement area following enhancement activities were also assessed using the Clark County Habitat Conservation Ordinance Riparian Habitat Field Rating Form (for terrestrial wildlife habitat functions only; Appendix D). An overall increase of native plant health, plant cover, and overall plant community health is expected. Control of English ivy and other noxious weeds or invasive plant species acknowledged by the City will result in greater habitat functions within the remaining on-site enhanced area and enhanced area to the west. Additionally, connectivity of habitats will not be disrupted and no impacts will occur below the OHWM.

The values of this site to society were evaluated qualitatively. Fallen Leaf Lake Park and surrounding natural areas are of high value to residents who utilize trails in the natural area for recreation and wildlife viewing. The on-site habitat is beneficial for a variety of species and the open space to which it is connected to provides an important link to nature and to the quality of life in the community. By enhancing the on-site habitat, it is expected that the habitat value will increase in sync with the habitat functions.

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## Environmental Goals and Objectives

The overall goal of project is to improve and expand the existing NW Natural facility while protecting shoreline and habitat functions. Site development will result in unavoidable encroachment into designated shoreline critical areas. The following mitigation goals and objectives have been established to ensure no net loss of buffer functions and of habitat value results from the project.

**Mitigation Plan Goal 1:** Enhance functions of on-site remaining habitat.

**Objective 1a.** Install and maintain (for a period of five years) a diverse mix of native shrubs and herbaceous plants in the understory of remaining on-site habitat.

**Objective 1b:** Control invasive plants, including English ivy and Himalayan blackberry, throughout remaining on-site habitat.

**Objective 1c.** Retain and enhance habitat structure features within the remaining on-site habitat, including placing portions of felled trees in the habitat area and the retention of existing snags and native understory vegetation where feasible.

**Mitigation Plan Goal 2:** Replace habitat functions of seven trees to be removed during site development through innovative mitigation (CCC Chapter 16.51.180).

**Objective 2a.** Enhance an area equal to a ratio of two times the canopy area for each tree felled in-kind (i.e., immediately adjacent to, but off site from the remaining habitat) by implementing invasive plant control measures.

## Buffer Reduction and Averaging Plan

The entire parcel is located within the shoreline setback and the mapped fish and wildlife habitat conservation areas. Therefore, buffer reductions or averaging are not practicable and are not proposed.

## Mitigation and Enhancement Measures

Impacts to the critical area will include the development of 1,170 square feet of native vegetation for site improvements. Enhancement measures proposed by the applicant to mitigate for project impacts includes:

- Enhancement of the remaining 1,790 square feet of habitat will occur at a slightly lower ratio than 1.5:1 by installing additional native understory plants;
- Enhancement of the remaining 1,790 square feet of habitat on-site will occur via removing/controlling invasive plants (English ivy, Himalayan blackberry, and any other noxious weed or invasive plant species acknowledged by the City);
- 31 square feet of currently graveled area will be planted with native grass seed and returned to native habitat;
- 12 square feet of currently graveled area that extends slightly on to the adjacent City-owned parcel will be planted with native grass seed and returned to native habitat;
- English ivy and other invasive plants will be controlled on 3,209 square feet of area the adjacent City-owned parcel;
- Snags and downed logs will be retained on site; and
- Erosion control BMPs will be adhered to.

Specific mitigation measures are described below and enhancement areas are depicted on the enhancement plan provided in Figure 6 of Appendix A.

**On-Site Enhancement – Native Vegetation Planting**

Installation of additional native plants within the remaining on-site habitat will provide enhanced habitat structure and diversity. Native vegetation selected for the enhancement activities is appropriate for the site because it includes native species that were identified on the site by AKS. Also, once invasive plants are removed, the installed plants will contribute to the habitat structure and native plant cover in the understory. The shrub and herb species should be installed in a natural pattern across the on-site enhancement area in the quantities and spacing layout described in Table 1 below. Additionally, all areas disturbed from grading should be reseeded using an appropriate native seed mix as specified in Table 1.

**Table 1. On-Site Enhancement Area Planting Plan.**

Common Name	Scientific Name	Quantity	Spacing	Size
<b>Shrubs</b>				
vine maple	<i>Acer circinatum</i>	5	10' on center	Bareroot or 1-gallon
redosier dogwood	<i>Cornus alba</i>	5	10' on center	Bareroot or 1-gallon
common snowberry	<i>Symphoricarpos albus</i>	5	10' on center	Bareroot or 1-gallon
Pacific ninebark	<i>Physocarpus capitatus</i>	5	10' on center	Bareroot or 1-gallon
<b>Herbs</b>				
Sword Fern	<i>Polystichum munitum</i>	20	5' on center	1-gallon
Bleeding heart	<i>Dicentra formosa</i>	20	2' on center	1-gallon
<b>Seed Mix (Enhancement areas where soil will be disturbed)</b>				
Native Upland Mix for Shade (Mix No. 460; <a href="http://www.protimelawnseed.com">www.protimelawnseed.com</a> )	Blue wildrye ( <i>Elymus glaucus</i> ), California brome ( <i>Bromus carinatus</i> ), California oatgrass ( <i>Danthonia californica</i> ), Roemer's fescue ( <i>Festuca roemerii</i> ), Prairie Junegrass ( <i>Koeleria macrantha</i> )			Application Rate: 1 pound per 1,000 square feet

Ideally, containerized stock should be installed from February 1 through May 1 and October 1 through November 15. Bare root stock should be installed only from December 15 through April 15. Planted shrubs and herbaceous plants should be mulched a minimum of three inches in depth and 18 inches in diameter to retain moisture and discourage weed growth around newly installed plant material.

All shrub and herbaceous plantings will be irrigated by hand, as necessary, throughout the growing season for the first two seasons following planting or until vegetation is fully established. Watering typically should be applied once every two to three weeks during extended dry periods. To avoid impacts to remaining habitat from installation of an irrigation system, it is recommended that irrigation be completed using a watering truck and hoses. Deep, infrequent watering during this period will encourage root growth and plant survival during the critical establishment period. Installation of

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additional plants may be required during the monitoring period or other measures may be required to meet performance standards.

Additionally, 31 square feet of currently graveled area will be planted with native grass seed and returned to native habitat;

#### **On-Site Enhancement – Invasive Plant Control**

English ivy and Himalayan blackberry spread aggressively and are present on-site throughout the tree, shrub, and canopy layers of the forest. Specifically, the predominance of English ivy is directly impacting the habitat functions and values of the fish and wildlife habitat conservation area by:

- Limiting understory regeneration by blocking sunlight and shading out native plants.
- Competing with native plants for water and nutrients.
- Suppressing host-trees by shading out foliage.
- Adding substantial weight to trees, making them top-heavy and more likely to blow down.

The removal of invasive plant species, including English Ivy as well as any other noxious weed or invasive plant species acknowledged by the City, will be conducted in Year 1 and annually thereafter as needed throughout the 5-year monitoring and maintenance period. Removal of English ivy and other weeds will be conducted with herbicide applications, hand labor, or with light power equipment. Specific instructions for the removal of English ivy and Himalayan blackberry includes:

- Hand pull or dig out accessible plants.
- For English ivy vines growing up trees, cut or pry vines from tree trunks to kill the upper vines AND remove the lower, rooted portion of the plant.
- Wrap pulled English ivy vines into medium sized bundles and leave them on site to dry or remove from the site. Cut Himalayan blackberry can also be removed from the site or piled and left on-site to die and decompose.
- Herbicides shall only be applied by a qualified professional in accordance with state and federal laws, paying special attention to use restrictions within proximity to waterbodies.

#### **On-Site Enhancement – Habitat Structure**

Large snags or dead trees are valuable wildlife habitat as they allow perching sites, nesting sites, shelter, and even food sources from insects that occupy rotting wood for many species. Portions of felled trees will be left on-site as snags or as downed logs to provide additional habitat structure. In addition, native vegetation, snags, and large woody debris beyond the limits of the new fenceline will be preserved.

#### **Off-Site Enhancement – Invasive Plant Control**

On-site tree replacement for the removal of seven trees at a ratio of 2:1 (CCC 16.51.120.C.5.b. iii) is not feasible because of the hazard additional trees might pose to the station facility. AKS coordinated with Sarah Fox, Senior Planner at the City, during the pre-application process to identify appropriate off-site mitigation for the loss of these trees. AKS explored multiple mitigation strategies, including payment into a mitigation fund and replacing trees on-site and off-site on the City-owned parcel at a 2:1 ratio. However, the City does not have a mitigation fund for tree replacement set up currently and indicated that installation of plants that would require maintenance on their property would not be practicable.

The City has indicated that they may allow the applicant to mitigate for the loss of functions from on-site tree removal using innovative mitigation techniques (CCC Chapter 16.51.180). To replace habitat functions lost from the removal of seven trees within the project area, the applicant will provide off-site enhancement of approximately 3, 209 square feet of habitat at a 2:1 enhancement ratio per canopy area on the adjacent City-owned parcel. To calculate canopy area, canopy area for each tree removed

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was calculated as 1-foot radius per 1-inch DBH. Enhancement will consist of removal of invasive plants, including English ivy, Himalayan blackberry, and other invasive or noxious plants recognized by the City using methods described above.

Because English ivy is dominant across the enhancement area and has a direct negative impact on habitat functions and values, removal and control of this species will result in a net benefit the habitat. Also, encroachment of invasive plants within the on-site enhancement area will be minimized by controlling invasive plants adjacent to the site.

Additionally, 12 square feet of currently graveled area that extends slightly on to the adjacent City-owned parcel will be planted with native grass seed and returned to native habitat.

### **Additional Mitigation Measures and Best Management Practices**

Approximately 43 square feet of area that currently has a graveled surface and is located within the existing fenceline will be returned to native habitat and will be re-seeded with native grass seed.

Erosion control BMP measures will further ensure that functions or values of Fallen Leaf Lake and remaining critical area habitat by preventing contamination and degradation of the in-water habitat. Erosion control measures include the placement of silt fencing around the outer limits of construction and a gravel construction entrance to limit the amount of mud and debris transported onto or out of the project area (Figure 5 of Appendix A).

Permanent fencing will be erected around the entire site. Fencing will prevent wildlife and people from accessing the site.

### **Likelihood of Success**

Controlling invasive plant populations directly benefits the viability, health, and resilience of native plants, habitats, and ecosystem processes. Though the loss of mature trees will occur, removal of English ivy and other invasive plants will allow for remaining trees, shrubs, herbs, and plants installed in to the enhancement area to thrive. Control of English ivy as a habitat enhancement measure has been successful at locations throughout southwest Washington and northwest Oregon. For example, the City of Portland has been eradicating English ivy throughout Forest Park for over 20 years and since that time, revegetation occurs naturally after English ivy is removed and that habitat functions return as this occurs. The City of Camas also conducts English ivy control in the vicinity of Fallen Leaf Lake Park to protect habitat functions and values. Control of invasive plants across the on- and off-site enhancement areas is a key factor for replacing the habitat functions lost from the project. Additionally, maintenance and monitoring of the site will ensure that invasive plants are controlled and that existing and planted native shrubs and herbaceous plants thrive. Therefore, the mitigation project is expected to have a very high likelihood of success.

### **Performance Standards**

Performance standards will include:

- Establish vegetation plots and photo stations across enhancement area to document changes over time.
- Within buffer enhancement areas, shrub and herbaceous plantings shall maintain an 80% survival in years one through five.

- 
- English ivy and other noxious weed or invasive plant species acknowledged by the City will not exceed 15% aerial cover in enhancement areas during all monitoring years across the on-site and off-site enhancement areas.
  - Enhancement areas will provide diverse habitat structure supporting a diversity of wildlife.

### **Monitoring Program**

The purpose of monitoring this project is to evaluate the success of the enhancement plantings and invasive plant control. Upon completion of installation of plantings and habitat enhancement measures, an inspection by a qualified wetland biologist will be made to determine plan compliance. Monitoring of the plantings will be done by a qualified wetland biologist annually during the growing season for the five-year monitoring period. Annual monitoring will be conducted on an alternating schedule in Years 1, 3, and 5 across the five-year monitoring span. Monitoring will not be required for Year 2 and 4. However, annual site visits to inspect the site for maintenance needs and vegetation success may be conducted.

Monitoring will consist of establishing an appropriate number of monitoring plot locations across the enhancement area which will be assessed each monitoring year for the duration of the monitoring period. At each plot, performance standards will be addressed by assessing the survivorship of planted shrubs and herbaceous plants, cover of invasive and nonnative species, and additional general site observations. Management recommendations will also be noted. Representative site photos will be taken annually from established photo points across the enhancement area. Vegetation monitoring plot and photo point locations will be determined during Year 1 monitoring efforts. Wildlife observations will be made during each monitoring visit, including species diversity and use of habitats.

The annual monitoring report will summarize overall success towards meeting performance standards and will include current site photos documenting overall enhancement area conditions. The annual monitoring report will also include milestones, successes, and recommendations for corrective measures, contingencies, and maintenance actions conducted and recommendations for the next year to ensure that the project meets recommended performance standards. Success will be achieved when monitoring results indicate that performance standards are being met at the end of five years. The monitoring reports will be submitted to the City by December 31<sup>st</sup> of each monitoring year.

### **Management Recommendations**

Site management will be guided by scientific results of annual monitoring, corrective measures, and adaptive management recommendations. Maintenance and management of the site may include installation of replacement of mitigation plantings or seeding, invasive plant management, irrigation, signage upkeep, and garbage removal as necessary and as recommended in annual monitoring reports. Irrigation may be necessary for the first two to three years. Invasive plants will be removed annually over the 5-year monitoring period. Site management activities and maintenance recommendations will be documented in annual monitoring reports. Should the results of monitoring indicate that the site is not trending towards meeting one or more performance standards, the applicant will confer with the City to identify an alternative management strategy to ensure success of the enhancement project.

### **Critical Area Markers, Signs, and Fencing**

Prior to commencement of construction activities, the outer perimeter of the construction area will be marked in the field in such a way as to ensure that no unauthorized intrusion will occur, most likely with high-visibility flagging in addition to silt fencing installed for erosion control. This temporary marking will be maintained throughout construction and will not be removed until permanent signs are in place.



The entire project site will be permanently fenced, including along the boundary of the site at the edge of the habitat conservation area. A permanent sign will be installed on the permanent fencing at fence corners along NE Everett Street to mark the boundary of the critical area.

### Contingency Plan

NW Natural will be the responsible party for the implementation of management activities during the mitigation monitoring period, including any corrective measures taken when monitoring or evaluation indicates project performance standards or specific goals and objectives are not being met. If deficiencies towards meeting performance standards are identified, adaptive management actions or contingency planning will be recommended as necessary to ensure success of the mitigation project. This contingency plan includes only site management actions within control of NW Natural and does not include remedial actions associated with negative effects to the mitigation site resulting from events such as fire, flood, or other natural disasters.

### Financial Guarantees

To ensure that the mitigation plan is fully implemented, financial guarantees ensuring fulfillment of the mitigation project will be required. The applicant will provide financial guarantee in the form of a mitigation bond or other security in a form and amount deemed acceptable by the City to ensure mitigation is fully functional. The bond will be in the amount of one hundred twenty-five percent of the estimated cost of the uncompleted actions, or the estimated cost of restoring the functions and values of the critical area that are at risk, whichever is greater. The bond may be in the form of a surety bond, performance bond, assignment of savings account, or an irrevocable letter of credit guaranteed by an acceptable financial institution with terms and conditions acceptable to the City Attorney. This guarantee will remain in effect until the City determines, in writing, that the standards bonded for have been met. Release of bond money will be determined by the City and based on satisfaction of the project performance measures.

### Critical Area Protective Mechanism

Identified critical areas and their associated buffer or management zones within the subject parcel will be protected and preserved through a permanent protective mechanism acceptable to the City. This may include placing the critical area and its associated buffer or management zone in a separate tract or executing a protective easement or covenant. The mechanism will provide for maintenance of the critical area and its associated buffer or management zone.

### Project and Mitigation Timeline

The following project schedule outlines the proposed timeline for project development and implementation of mitigation measures. Construction of the project is projected to begin in spring of 2018 and the mitigation site will be planted and seeded in the fall of 2017, serving as Year 0.

**Table 2.** Mitigation and Monitoring Schedule.

Activity	Date
<b>Year 0 (2017)</b>	
Site grading and construction	Summer Year 0
Enhancement seeding, planting, and invasive species control	Fall Year 0
Recorded protection instrument and financial assurance	90 days following completion of enhancement plantings; Summer of Year 0
<b>Year 1 (2018)</b>	
Year 1 monitoring site visit	Spring/Summer Year 1
Invasive species control	Spring/Summer/Fall Year 1
Supplemental seeding, planting (if needed)	Fall Year 1

Supplemental irrigation (if needed)	Summer Year 1
Year 1 monitoring report, including: <ul style="list-style-type: none"> <li>• Establishment of permanent monitoring and photo point locations</li> <li>• Verification of performance standards</li> <li>• Proof of Conservation Easement and financial security</li> </ul>	12/31 of Year 1
<b>Year 2 (2019)</b>	
Invasive species control	Spring/Summer/Fall Year 2
Supplemental seeding, planting (if needed)	Fall Year 2
Supplemental irrigation (if needed)	Summer Year 2
<b>Year 3 (2020)</b>	
Year 3 monitoring site visit	Spring/Summer Year 3
Invasive species control	Spring/Summer/Fall Year 3
Supplemental seeding, planting (if needed)	Fall Year 3
Year 3 monitoring report including evaluation of performance standards and recommendations	12/31 of Year 3
<b>Year 4 (2021)</b>	
Invasive species control	Spring/Summer/Fall Year 4
<b>Year 5 (2022)</b>	
Final Year 5 monitoring site visit	Spring/Summer Year 5
Invasive species control	Spring/Summer Year 5
Final Year 5 monitoring report including evaluation of performance standards and recommendations	12/31 of Year 5

### Qualifications of Preparers

This critical areas report was prepared in accordance with CCC Chapter 16.61.020. Natural resource fieldwork and reporting were conducted by professionals qualified to conduct natural resource projects in Camas, Washington. Information contained in this document should be considered preliminary and used at your own risk until it has been reviewed and approved in writing by the City of Camas.

Taya K. MacLean, MS, PWS, regularly conducts wetlands and fish and wildlife habitat areas critical area assessments. She has been performing site evaluations, analyzing critical area functions and values, analyzing critical area impacts, and recommending critical area mitigation and restoration in Washington for ten years and has worked in natural resource management for over 17 years. She specializes in wetlands, waters, wildlife, and habitat projects. Ms. MacLean has a master of science degree in biology, an undergraduate degree in forestry and natural resources management, and is a certified professional wetland scientist (Certification #2702).



Taya K. MacLean, MS, PWS  
Senior Biologist  
Fieldwork and Report Preparation

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## Literature Cited and Referenced

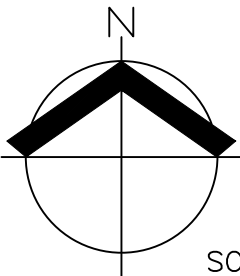
- Clark County Code. 2016. *Chapter 40.450 Wetland Protection*. Seattle (WA): Code Publishing Company. Available at:  
<http://www.codepublishing.com/WA/ClarkCounty/cgi/NewSmartComplie.pl?path=html/ClarkCounty40450/ClarkCounty40450.html>.
- Environmental Laboratory. 1987. Technical Report Y-87-1. In: *Corps of Engineers Wetlands Delineation Manual*. Vicksburg (MS): U.S. Army Engineer Waterways Experiment Station. Available at: <http://el.erdc.usace.army.mil/wetlands/pdfs/wlman87.pdf>.
- Hitchcock, C.L., and A. Cronquist. 1973. *Flora of the Pacific Northwest*. Seattle (WA): University of Washington Press.
- Hruby, T. 2014. *Washington State Wetland Rating System for Western Washington: 2014 Update*. (Publication #14-06-029). Olympia, WA: Washington Department of Ecology.
- Lichvar, R.W. 2013. *The National Wetland Plant List: 2016 wetland ratings*. *Phytoneuron* 2013-49: 1-241. Hanover (NH): U.S. Army Engineer Research and Development Center. Available at: <http://rsgisias.crrel.usace.army.mil/NWPL/>.
- National Weather Service (NWS). 2017. *Vancouver, WA*. Available at:  
<http://www.weather.gov/climate/index.php?wfo=pqr>.
- Natural Resources Conservation Service (NRCS). 2014b. *Web soil survey*. Washington (DC): U.S. Department of Agriculture. Available at: <http://websoilsurvey.nrcs.usda.gov/app/>.
- Schoeneberger, P.J., D.A. Wysocki, E.C. Benham, and W.D. Broderson, eds. 2002. *Field Book for Describing and Sampling Soils, Version 2.0*. Lincoln (NE): U.S. Department of Agriculture Natural Resources Conservation Service, National Soil Survey Center.
- Vasilas, L.M., G.W. Hurt, and C.V. Noble, eds. 2010. *Field Indicators of Hydric Soils in the United States. A Guide for Identifying and Delineating Hydric Soils, Version 7.0, 2010*. Washington (DC): U.S. Department of Agriculture Natural Resources Conservation Service. Available at: [http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb1046970.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1046970.pdf).
- Wakeley, J.S., R.W. Lichvar, and C.V. Noble, eds. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*. ERDC/EL TR-10-3. Vicksburg (MS): U.S. Army Engineer Research and Development Center, U.S. Army Corps of Engineers.
- Washington Department of Fish and Wildlife. 2008 (updated 2016). *Priority Habitat and Species List*. Olympia, Washington. 177 pp.
- Washington Department of Fish and Wildlife. 2009. *Landscape Planning for Washington's Wildlife: Managing for Biodiversity in Developing Areas*. Olympia, WA. 88 pp.
- Washington Department of Fish and Wildlife. 2017. *Washington State Fish Passage Planning and Coordinating Effective Barrier Removal Database*. Olympia, WA. Available at:  
<http://apps.wdfw.wa.gov/fishpassage/>

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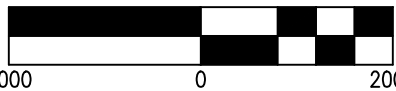
X-Rite. 2000. *Year 2000 revised washable edition, Munsell soil color charts*. Grand Rapids (MI): X-Rite.

## Appendix A: Figures

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SCALE: 1" = 2000 FEET



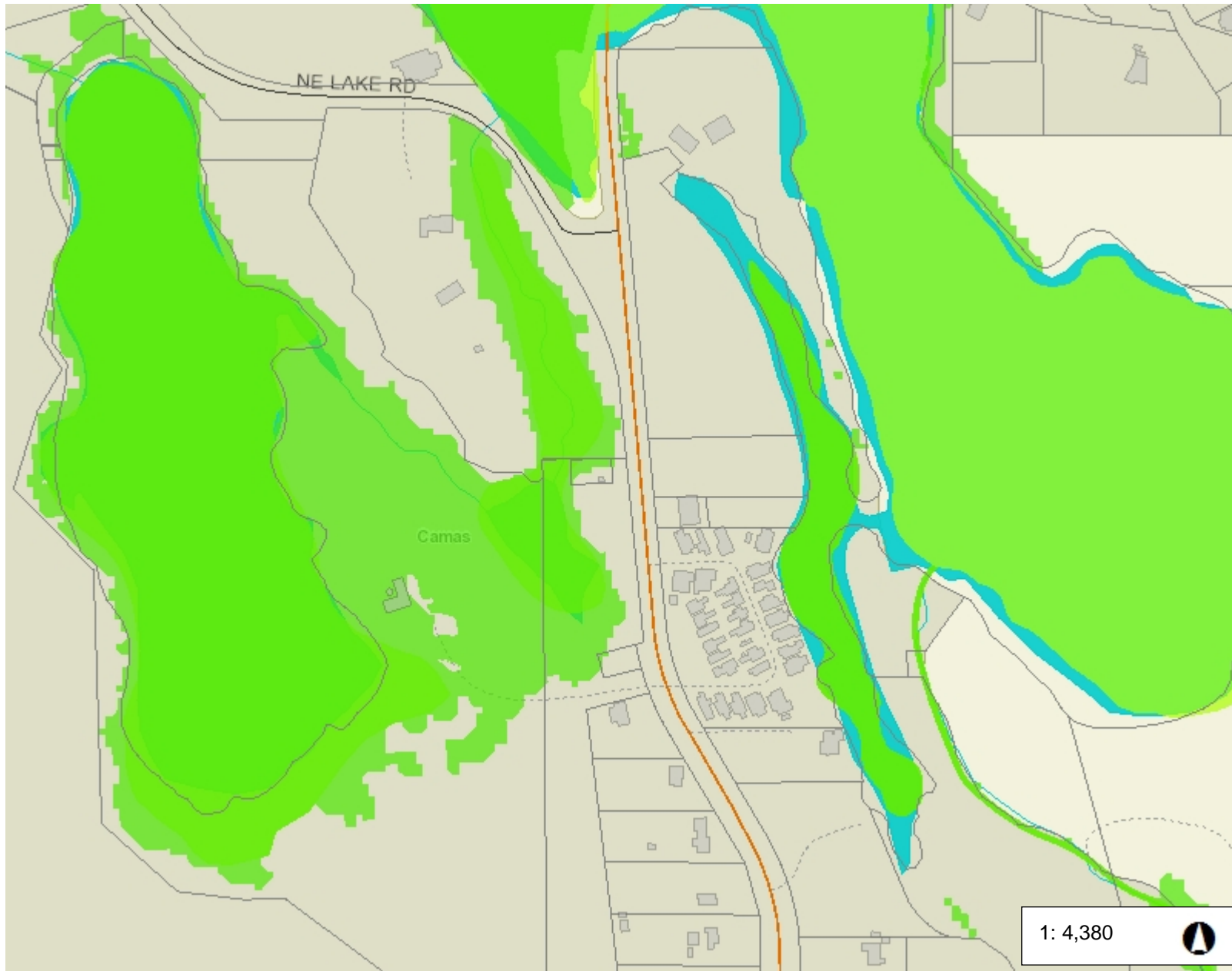
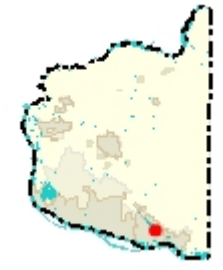
USGS 7.5' TOPOGRAPHIC SERIES  
QUADRANGLE: CAMAS, WA (2017)

DATE: 07/21/2017

<b>USGS VICINITY MAP</b>		<b>AKS</b>
<b>NW NATURAL LACAMAS REGIONAL STATION UPGRADES</b>		
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 P: 503.563.6151 F: 503.563.6152 aks-eng.com		
FIGURE <b>1</b>	DRWN: JRI CHKD: TKM AKS JOB: 5489	



# Figure 2. County and NWI Mapped Wetlands



### Legend

- Building Footprints
- Taxlots
- Wetlands Presence
- Permitted Wetland
- High Quality Wetland
- NWI Wetland
- Cities Boundaries
- Urban Growth Boundaries

### Notes:

NW Natural Lacamas Station  
 AKS Job # 5489  
 August 7, 2017

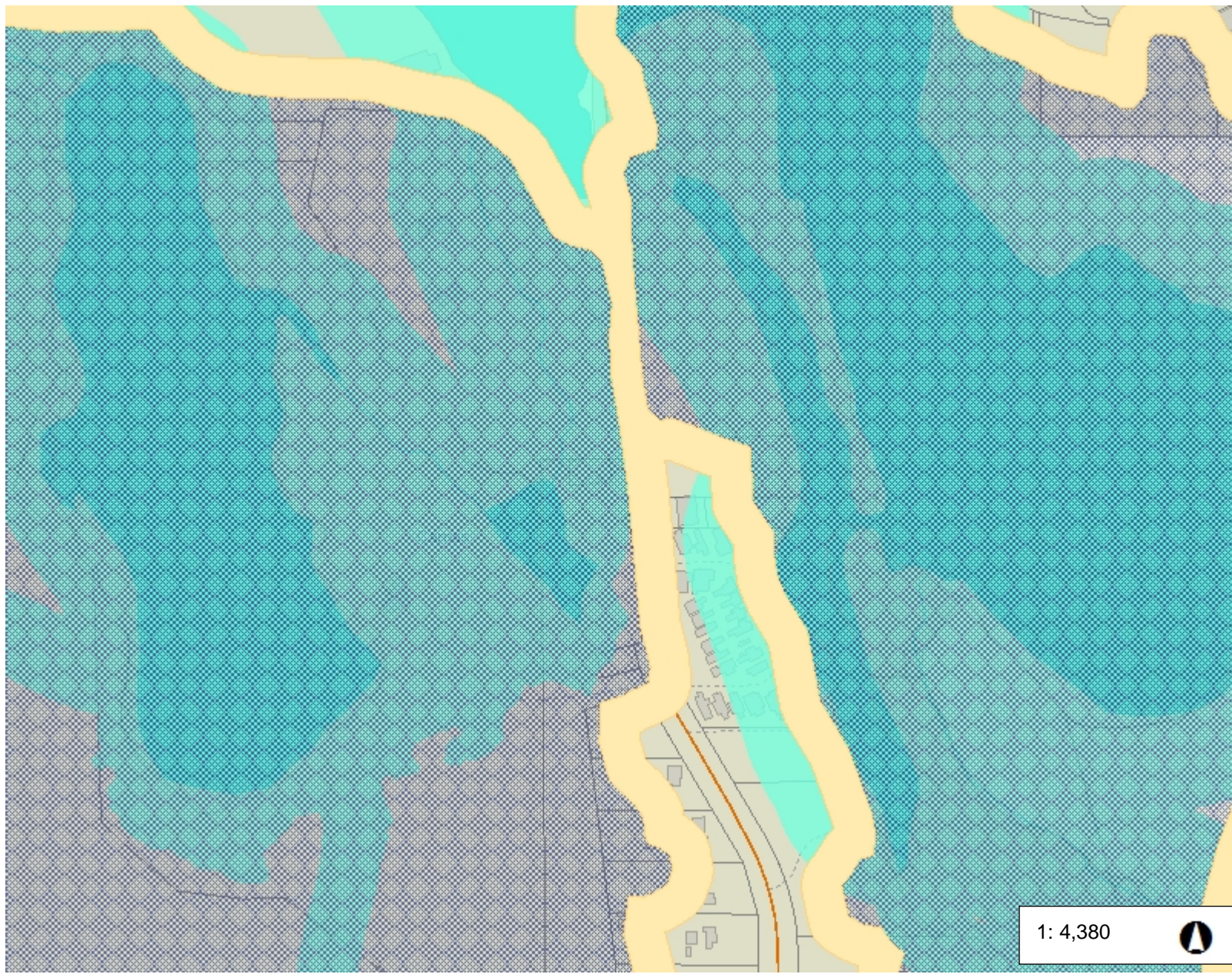
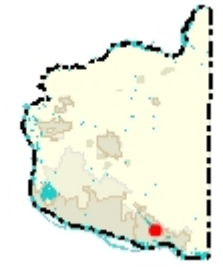
730.0                      0                      364.99                      730.0 Feet

WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere  
 Clark County, WA. GIS - <http://gis.clark.wa.gov>

This map was generated by Clark County's "MapsOnline" website. Clark County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.



# Figure 3. Priority Habitats and Species



### Legend

- Priority Habitat Buffer
- Priority Species Buffer
- Priority Habitat and Species Ar**
- Non-riparian Habitat Conservation /
- Species Areas
- Riparian Habitat Conservation Area
- Building Footprints
- Taxlots
- Cities Boundaries
- Urban Growth Boundaries

1: 4,380

730.0 0 364.99 730.0 Feet

WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere  
Clark County, WA. GIS - <http://gis.clark.wa.gov>

This map was generated by Clark County's "MapsOnline" website. Clark County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

### Notes:

NW Natural Lacamas Station  
AKS Job # 5489  
August 7, 2017

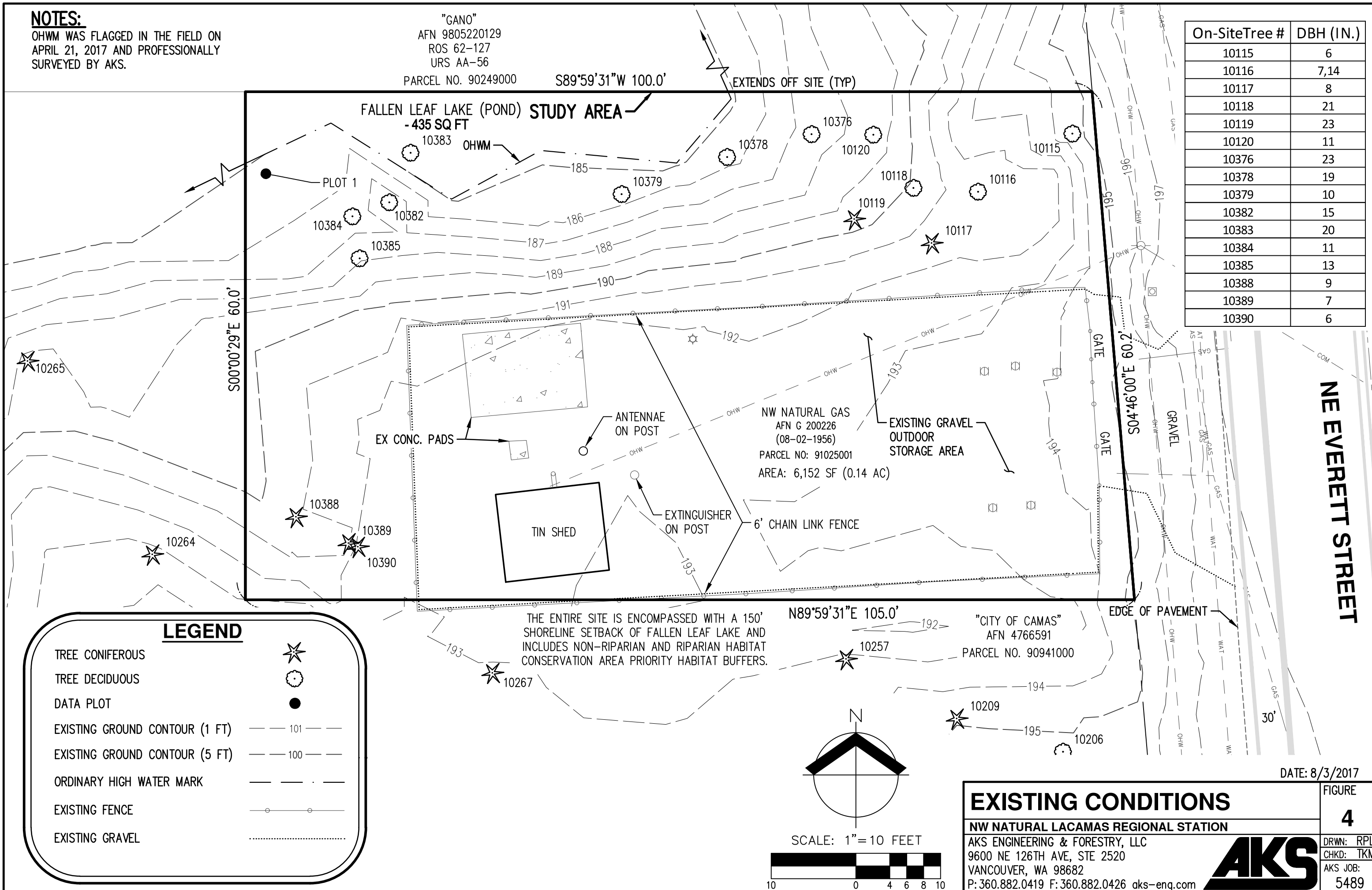


**NOTES:**

OHWM WAS FLAGGED IN THE FIELD ON APRIL 21, 2017 AND PROFESSIONALLY SURVEYED BY AKS.

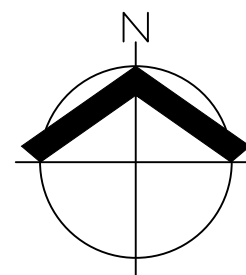
"GANO"  
AFN 9805220129  
ROS 62-127  
URS AA-56  
PARCEL NO. 90249000 S89°59'31"W 100.0'

On-Site Tree #	DBH (IN.)
10115	6
10116	7,14
10117	8
10118	21
10119	23
10120	11
10376	23
10378	19
10379	10
10382	15
10383	20
10384	11
10385	13
10388	9
10389	7
10390	6

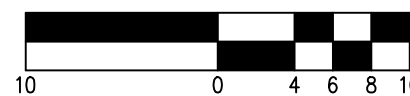


**LEGEND**

- TREE CONIFEROUS
- TREE DECIDUOUS
- DATA PLOT
- EXISTING GROUND CONTOUR (1 FT) 101
- EXISTING GROUND CONTOUR (5 FT) 100
- ORDINARY HIGH WATER MARK
- EXISTING FENCE
- EXISTING GRAVEL



SCALE: 1" = 10 FEET



DATE: 8/3/2017

**EXISTING CONDITIONS**

NW NATURAL LACAMAS REGIONAL STATION

AKS ENGINEERING & FORESTRY, LLC  
9600 NE 126TH AVE, STE 2520  
VANCOUVER, WA 98682  
P: 360.882.0419 F: 360.882.0426 aks-eng.com



FIGURE  
**4**  
DRWN: RPL  
CHKD: TKM  
AKS JOB:  
5489

"GANO", AFN 9805220129,  
 ROS 62-127, URS AA-56  
 PARCEL NO. 90249000

S89°59'31"W 100.0'

EXTENDS OFF SITE (TYP)

FALLEN LEAF LAKE (POND) STUDY AREA  
 - 435 SQ FT

S00°00'29"E 60.0'

S04°46'00"E 60.2'

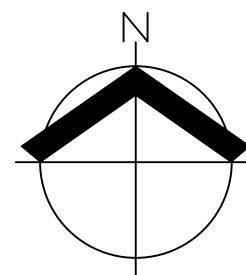
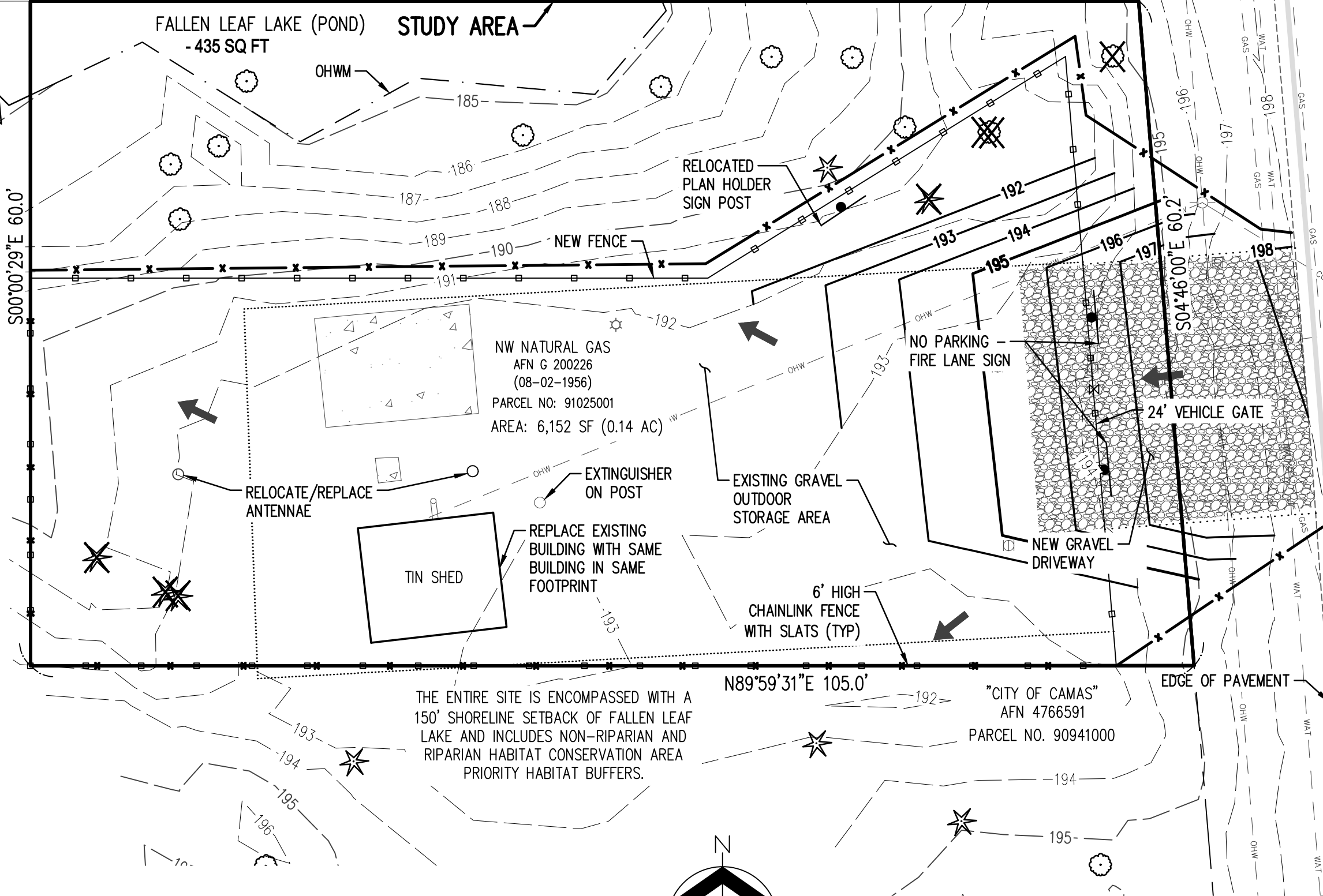
N89°59'31"E 105.0'

NE EVERETT STREET

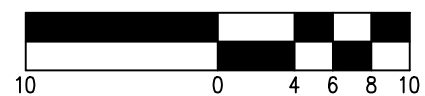
**LEGEND**

DECIDUOUS / CONIFEROUS

- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- DRAINAGE FLOW DIRECTION
- EXISTING GROUND CONTOUR (1 FT)  101
- EXISTING GROUND CONTOUR (5 FT)  100
- FINISHED GRADE CONTOUR (1 FT)  101
- FINISHED GRADE CONTOUR (5 FT)  100
- ORDINARY HIGH WATER MARK
- SILT FENCE  x
- EXISTING GRAVEL
- NEW GRAVEL
- EXISTING FENCE  o
- NEW FENCE  □
- GRAVEL CONSTRUCTION ENTRANCE



SCALE: 1" = 10 FEET

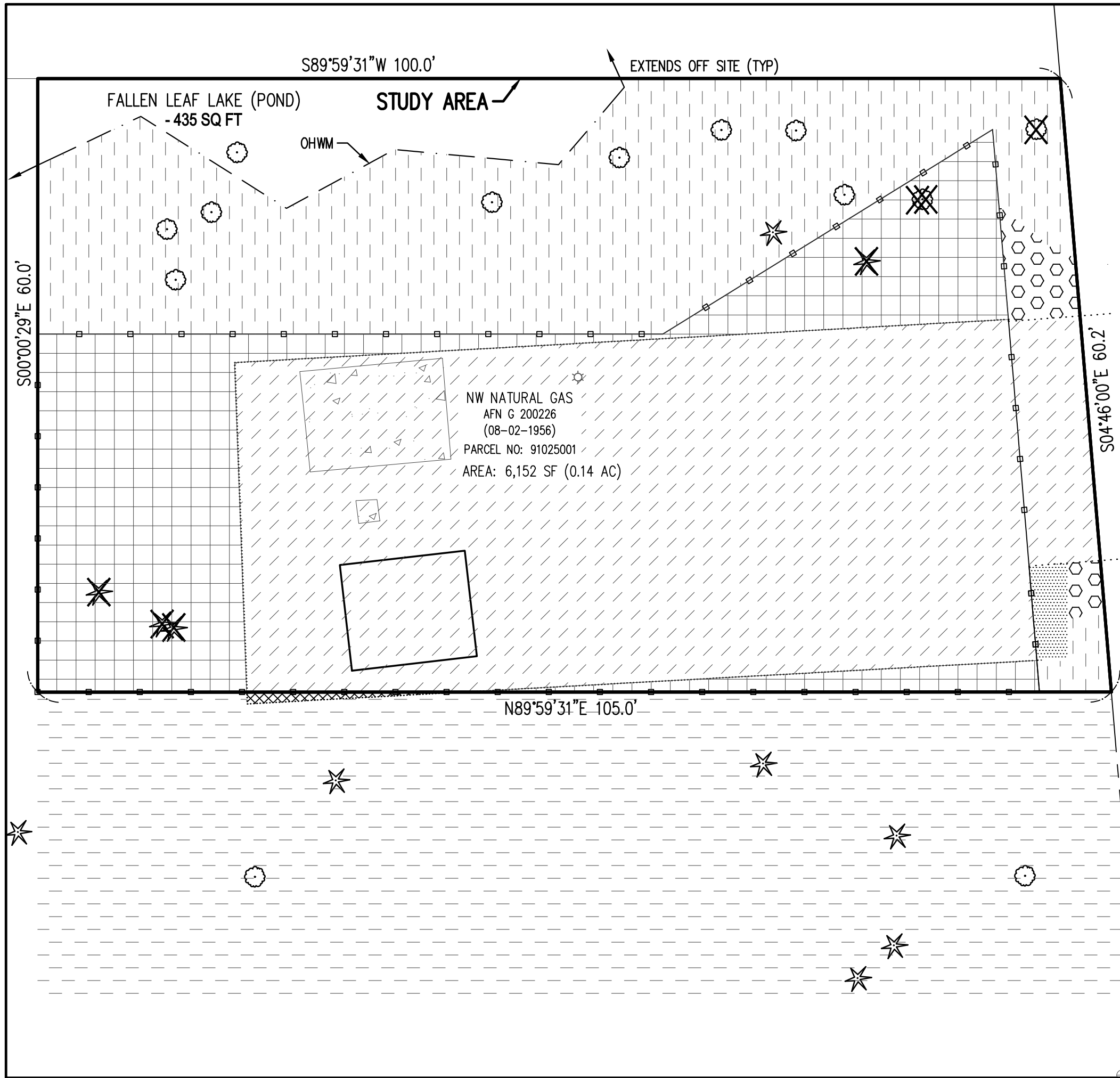


DATE: 8/3/2017

**SITE PLAN + EROSION CONTROL & DRAINAGE PLAN**  
**NW NATURAL LACAMAS REGIONAL STATION**  
 AKS ENGINEERING & FORESTRY, LLC  
 9600 NE 126TH AVE, STE 2520  
 VANCOUVER, WA 98682  
 P: 360.882.0419 F: 360.882.0426 aks-eng.com



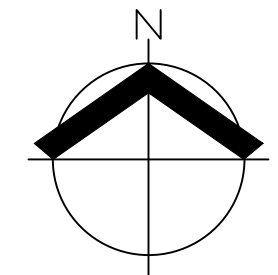
FIGURE  
**5**  
 DRWN: RPL  
 CHKD: TKM  
 AKS JOB:  
 5489



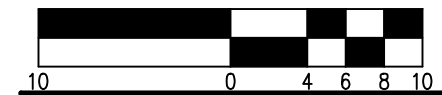
Common Name	Scientific Name	Quantity	Spacing	Size
<b>Shrubs</b>				
vine maple	<i>Acer circinatum</i>	5	10' on center	Bareroot or 1-gallon
redosier dogwood	<i>Cornus alba</i>	5	10' on center	Bareroot or 1-gallon
common snowberry	<i>Symphoricarpos albus</i>	5	10' on center	Bareroot or 1-gallon
Pacific ninebark	<i>Physocarpus capitatus</i>	5	10' on center	Bareroot or 1-gallon
<b>Herbs</b>				
Sword Fern	<i>Polystichum munitum</i>	20	5' on center	1-gallon
Bleeding heart	<i>Dicentra formosa</i>	20	2' on center	1-gallon
<b>Seed Mix (Enhancement areas where soil will be disturbed)</b>				
Native Upland Mix for Shade		Application Rate: 1 lb per 1000 square feet		

**LEGEND**

- ENHANCEMENT AREA (INVASIVE PLANT CONTROL AND UNDERSTORY PLANTING) (1,721 SF)
- ENHANCEMENT AREA (INVASIVE PLANT CONTROL) (3,209 SF)
- ENHANCEMENT AREA; RE-SEEDED (TEMPORARY IMPACTS) (74 SF)
- ENHANCEMENT AREA; RE-SEEDED (PREVIOUS ON-SITE DEVELOPMENT) (31 SF)
- ENHANCEMENT AREA; RE-SEEDED (PREVIOUS OFF-SITE DEVELOPMENT) (12 SF)
- EXISTING DEVELOPMENT (2,715 SF)
- NEW DEVELOPMENT (1,170 SF)



SCALE: 1" = 10 FEET



DATE: 8/3/2017

<b>ENHANCEMENT PLAN</b>	<b>FIGURE 6</b>
<b>NW NATURAL LACAMAS REGIONAL STATION</b>	
AKS ENGINEERING & FORESTRY, LLC 9600 NE 126TH AVE, STE 2520 VANCOUVER, WA 98682 P: 360.882.0419 F: 360.882.0426 aks-eng.com	
DRWN: RPL CHKD: TKM AKS JOB: 5489	

## **Appendix B: Wetland Determination Data Sheet**

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**WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region**

Project/Site: NW Natural Lacamas Regional Station City/County: Camas/Clark Sampling Date: 4/26/2017  
 Applicant/Owner: NW Natural State: WA Sampling Point: 1  
 Investigator(s): Taya K. MacLean, MS, PWS Section, Township, Range: 02, 1N, 3E  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): <3%  
 Subregion (LRR): A, Northwest Forests and Coast Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: (Unit VaB) Vader Silt Loam NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b>	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Precipitation: According to the NWS Vancouver station, 0.00 inches of rainfall was received on the day of the site visit and 2.66 inches within the two weeks prior.

Remarks: Plot located in lowest spot on-site, approximately 1-foot higher in elevation above the ordinary high water mark (OHWM) of the pond. There are no wetlands located above OHWM in the study area. No data was collected below the OHWM.

**VEGETATION**

Tree Stratum (Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40%</u> (A/B)
1. <u>Alnus rubra</u>	<u>25%</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>25%</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>15</u> x 2 = <u>30</u> FAC species <u>32</u> x 3 = <u>96</u> FACU species <u>133</u> x 4 = <u>532</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>180</u> (A) <u>658</u> (B) Prevalence Index = B/A = <u>3.66</u>
1. <u>Cornus alba</u>	<u>15%</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Rubus parviflorus</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
3. <u>Rubus spectabilis</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Symphoricarpos albus</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
<u>27%</u> = Total Cover				
Herb Stratum (Plot size: <u>5' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
1. <u>Hedera helix</u>	<u>50%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Gaultheria shallon</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Polystichum munitum</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Maianthemum racemosum</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Trillium ovatum</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>78%</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>10' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Hedera helix</u>	<u>50%</u>	<u>Yes</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
<u>50%</u> = Total Cover				
% Bare Ground in Herb Stratum <u>22%</u>				

Remarks: Distinct topographic break between OHWM/Pond and upland, with few slough sedge plants at the OHWM and few scattered pond lily plants in-water.

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-12+	10YR 3/6	100					SIL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- |  |  |   |
|--|--|---|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Redox (S5)                                | <b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Stripped Matrix (S6)                            |   |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b> |   |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                        |   |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3)                            |   |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Redox Dark Surface (F6)                         |   |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Depleted Dark Surface (F7)                      |   |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)          | <input type="checkbox"/> Redox Depressions (F8)                          |   |
| <input type="checkbox"/>                                   | <input type="checkbox"/>   |   |
| <input type="checkbox"/>                                   | <input type="checkbox"/>   |   |

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

**Hydric Soil Present? Yes \_\_\_\_\_ No X**

Remarks: Small gravels, cobbles, and dense thick roots throughout profile.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

- |   |  |   |
|---|--|---|
| <b>Primary Indicators (minimum of one required; check all that apply)</b> |  | <b>Secondary Indicators (2 or more required)</b>                                  |
| <input type="checkbox"/> Surface Water (A1)                               | <input type="checkbox"/> Water-Stained Leaves (B9) <b>(except MLRA 1, 2, 4A, and 4B)</b> | <input type="checkbox"/> Water-Stained Leaves (B9) <b>(MLRA 1, 2, 4A, and 4B)</b> |
| <input type="checkbox"/> High Water Table (A2)                            | <input type="checkbox"/> Salt Crust (B11)  | <input type="checkbox"/> Drainage Patterns (B10)                                  |
| <input type="checkbox"/> Saturation (A3)                                  | <input type="checkbox"/> Aquatic Invertebrates (B13)                                     | <input type="checkbox"/> Dry-Season Water Table (C2)                              |
| <input type="checkbox"/> Water Marks (B1)                                 | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                                      | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)                |
| <input type="checkbox"/> Sediment Deposits (B2)                           | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)                   | <input type="checkbox"/> Geomorphic Position (D2)                                 |
| <input type="checkbox"/> Drift Deposits (B3)                              | <input type="checkbox"/> Presence of Reduced Iron (C4)                                   | <input type="checkbox"/> Shallow Aquitard (D3)                                    |
| <input type="checkbox"/> Algal Mat or Crust (B4)                          | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)                      | <input type="checkbox"/> FAC-Neutral Test (D5)                                    |
| <input type="checkbox"/> Iron Deposits (B5)                               | <input type="checkbox"/> Stunted or Stressed Plants (D1) <b>(LRR A)</b>                  | <input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>                    |
| <input type="checkbox"/> Surface Soil Cracks (B6)                         | <input type="checkbox"/> Other (Explain in Remarks)                                      | <input type="checkbox"/> Frost-Heave Hummocks (D7)                                |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)        |  |   |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)          |  |   |

**Field Observations:**

Surface Water Present?	Yes _____ No <u>X</u>	Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
Water Table Present?	Yes _____ No <u>X</u>	Depth (inches): <u>&gt;12"</u>	
Saturation Present?	Yes _____ No <u>X</u>	Depth (inches): <u>&gt;12"</u>	
(includes capillary fringe)			

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

## **Appendix C: Representative Site Photographs**

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**Photo A.** Existing NW Natural facility.



**Photo B.** Plot 1 at OHWM.



**Photo B.** View of upland habitat dominated by English ivy and Himalayan blackberry with large woody debris and Lacamas Station fenceline in background.



**Photo D.** Snag (covered in English ivy) to remain in on-site enhancement area.



# **Appendix D: Clark County Habitat Conservation Ordinance Riparian Habitat Field Rating Forms**

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**CLARK COUNTY HABITAT CONSERVATION ORDINANCE**  
**RIPARIAN HABITAT FIELD RATING FORM**

Date: April 26, 2017

Land Use Designations

Investigator(s): Taya K. MacLean

Zoning: MF-10

Stream: N/A

Shorelines: Fallen Leaf Lake

Legal: Sec 02, TIN, R3E

Other: \_\_\_\_\_

Parcel #: ~~Stream~~ 91025-001

Type: Perennial lake

Base Riparian Zone Width: 150' (Type S)

Reach #: N/A

(Note: Complete 1 field rating form for each reach)

**FISH HABITAT FUNCTIONS**

*Streamflow Influence*

<u>1 – Vegetative Cover (%)</u>	
0-33%	1
34-66%	2
67-100%	3

<u>2 – Associated Wetlands</u>	
Present	+2
Absent	+0

<u>3 – Springs or Seeps</u>	
Absent	0
Intermittent	1
Semi-Permanent	2
Permanent	3

<u>4 – Hydrology (excess flows, erosion, scour, etc.)</u>	
Present	-2
Absent	+0

*Influence on water Temperature & Dissolved Oxygen*

<u>5 – Canopy Cover (%)</u>	
0-33%	1
34-66%	2
67-100%	3

<u>6 – Riffles (%)</u>	
0%	0
1-16%	1
17-33%	2
34-50+%	3

*Control of Sedimentation*

7	10-33% Cover	34-66% Cover	67-100% Cover
0-33% Slope	1	2	3
33-66% Slope	0	1	2
67-100% Slope	0	1	2

<u>8 – Vegetated Banks</u>	
0-33%	-2
34-66%	1
67-100%	3

*Dissolved Oxygen Measurements* (optional): \_\_\_\_\_

*Control of Stream Pollution*

<u>9 – Vegetative Cover (%)</u>	
0-33%	1
34-66%	2
67-100%	3

<u>10 – Associated Wetlands</u>	
Present	+2
Absent	+0

*Contribution to Food Web*

<u>11 – Canopy Cover (%)</u>	
0-33%	1
34-66%	2
67-100%	3

<u>12 – Dominant Tree Species</u>	
67-100%	dec. 1
67-100%	con. 1
33-66% mixed	3

<u>13 – LWD (Pieces per BFW)</u>	
0	0
1	1
2	2
3	3

**\*NOTE: Assessment criteria and scoring were based on conditions likely to be encountered. Users of this methodology may be required to exercise their best professional judgment as a result of unique site conditions.**

Stream Structural Diversity

Streams <10m (33ft) wide

14 - LWD (Key Pieces per BFW)	
0.0	0
0.1	1
0.2	2
>0.3	3

N/A  
No Stream

Streams 10-20+m(33ft) wide

14 - LWD (Key Pieces per BFW)	
0.0	0
0.1-0.2	1
0.3-0.4	2
>0.4	3

15 - Pools (%)	Gradient (%)		
	<2%	2-5%	>5%
>55%	3	3	3
41-54%	2	3	3
31-40%	1	2	3
10-30%	0	1	2
<10%	0	0	1

16 - Riffles (%)	Gradient (%)		
	<2%	2-5%	>5%
1-16%	1	1	0
17-33%	2	2	1
34-50%	2	3	2

17 - Off Channel Habitat
Present 3
Absent 0

18 - Fines (%)	Gradient (%)		
	<2%	2-5%	>5%
0-10%	2	2	2
11-44%	1	-3	-4
45-100%	0	-4	-5

**TERRESTRIAL WILDLIFE HABITAT FUNCTIONS**

Structural/Biological Complexity

Plant Species Diversity

19 - Native Woody Plant Species (#)	
0	0
1-3	1
4-6	2
7+	3

Vertical Diversity

20 - Multiple Canopy Layers	
1	1
2	2
3+	3

Snags

21 - Snags/Acre (20"+dbh, 6' high)	
0	0
1	1
2-3	2
4+	3

Downed Material

22 - Downed Logs/Acre (12"+ diam, 20'+ long)	
1	1
2-3	2
4+	3

Non-Native Plants

23 - Non-native Plant Species	
<10%	1
10-33%	-1
34-66%	-2
67-100%	-4

Connectivity with Other Ecosystems

24 - Riparian Corridor Connected to Other PHS Polygons or Points?	
No	+0
Yes	+2

Abundant Food Sources

25 - Native Woody Plant Species (#)	
1-3	1
4-6	2
7+	3
Specify: cor Ser, RubPar, AlnRub, SimA1b, Phycap, QanSha, Psc Men, AcaMAC, QemCer...	

Available Water

26 - Hydrological Characteristics	
Intermittent	1
Semi-permanent	2
Permanent	3
↳ Pond/Lake	

Moist and Moderate Microclimate

27 - Temperature Microclimate Difference?	
Yes	+2
No	+0
Method: Field observations	

General Observations and Wildlife Occurrences

Multiple snags around Lake observed. Diverse understory, but significant invasive cover (Engl. Ivy @ 50% cover). Large mature fir trees. Birds = CA Goose, Ducks, Robin, N Flicker, Varied thrush, Sparrow, Great blue heron. Lake + upland habitat support diversity of wildlife.

EVALUATION SUMMARY

FISH HABITAT FUNCTIONS

<u>FUNCTION</u>	<u>POSSIBLE POINTS</u>	<u>SCORE</u>
<b>Stream Flow Influence</b>		
1 – Vegetative Cover	3	_____
2 – Associated Wetlands	2	_____
3 – Springs or Seeps	3	_____
4 – Altered Hydrology	0	_____
<b>Influence on Water Temperature &amp; D.O.</b>		
5 – Canopy Cover	3	_____
6 – Riffles	3	_____
<b>Control of Sedimentation</b>		
7 – Slope/Vegetative Cover	3	_____
8 – Vegetated Banks	3	_____
<b>Control of Stream Pollution</b>		
9 – Vegetative Cover	3	_____
10 – Associated Wetlands	2	_____
<b>Contribution to Food Web</b>		
11 – Canopy Cover	3	_____
12 – Dominant Tree Species	3	_____
13 – Large Woody Debris	3	_____
<b>Structural Stream Diversity</b>		
14 – Large Wood Debris	3	_____
15 – Pools	3	_____
16 – Riffles	3	_____
17 – Off-channel Habitat	3	_____
18 – Fines	2	_____
<b>HABITAT SUBTOTAL (HS):</b>	<b>48</b>	<u>N/A</u>

TERRESTRIAL WILDLIFE HABITAT FUNCTIONS

<u>FUNCTION</u>	<u>POSSIBLE POINTS</u>	<u>SCORE</u>
<b>Structural Complexity</b>		
19 – Native Woody Plant Species	3	<u>3</u>
20 – Multiple Canopy Layers	3	<u>3</u>
21 – Snags	3	<u>1</u>
22 – Downed Logs	3	<u>2</u>
<b>Connectivity</b>		
23 – Non-native Plant Species	1	<u>-2</u>
24 – Connection to Other PHS	2	<u>2</u>
<b>Abundant Food Sources</b>		
25 – Native Woody Plant Species	3	<u>3</u>
<b>Available Water</b>		
26 – Hydrological Characteristics	3	<u>3</u>
<b>Moist &amp; Mild Microclimate</b>		
27 – Temperature/Micro. Difference	2	<u>2</u>
<b>WILDLIFE SUBTOTAL (WS)</b>	<b>23</b>	<u>17</u>
Total: WS X% of Riparian Area that is Vegetated	23	<u>14.45</u>
$= 17 \times .85 = 14.45$		
<b>TOTAL SCORE +1 for Type 1 waters (FISH+WILDLIFE FUNCTIONS):</b>	<b>72</b>	<u>N/A</u>

**CLARK COUNTY HABITAT CONSERVATION ORDINANCE**  
**RIPARIAN HABITAT FIELD RATING FORM**

Date: April 26, 2017

Land Use Designations

Investigator(s): Taya K. MacLean

Zoning: MF-10

Stream: N/A

Shorelines: Fallen Leaf Lake

Legal: Sec 02, T1N, R3E

Other: \_\_\_\_\_

Parcel #: Stream 9102S-001

Type: Perennial Lake

Base Riparian Zone Width: 150' (Type S)

Reach #: N/A

(Note: Complete 1 field rating form for each reach)

**FISH HABITAT FUNCTIONS**

*Streamflow Influence*

1 – Vegetative Cover (%)	
0-33%	1
34-66%	2
67-100%	3

2 – Associated Wetlands	
Present	+2
Absent	+0

3 – Springs or Seeps	
Absent	0
Intermittent	1
Semi-Permanent	2
Permanent	3

4 – Hydrology (excess flows, erosion, scour, etc.)	
Present	-2
Absent	+0

*Influence on water Temperature & Dissolved Oxygen*

5 – Canopy Cover (%)	
0-33%	1
34-66%	2
67-100%	3

6 – Riffles (%)	
0%	0
1-16%	1
17-33%	2
34-50+%	3

*Control of Sedimentation*

7	10-33% Cover	34-66% Cover	67-100% Cover
0-33% Slope	1	2	3
33-66% Slope	0	1	2
67-100% Slope	0	1	2

8 – Vegetated Banks	
0-33%	-2
34-66%	1
67-100%	3

*Dissolved Oxygen Measurements* (optional): \_\_\_\_\_

*Control of Stream Pollution*

9 – Vegetative Cover (%)	
0-33%	1
34-66%	2
67-100%	3

10 – Associated Wetlands	
Present	+2
Absent	+0

11 – Canopy Cover (%)	
0-33%	1
34-66%	2
67-100%	3

12 – Dominant Tree Species	
67-100%	dec. 1
67-100%	con. 1
33-66% mixed	3

*Contribution to Food Web*

13 – LWD (Pieces per BFW)	
0	0
1	1
2	2
3	3

**\*NOTE: Assessment criteria and scoring were based on conditions likely to be encountered. Users of this methodology may be required to exercise their best professional judgment as a result of unique site conditions.**

Stream Structural Diversity

Streams <10m (33ft) wide

14 – LWD (Key Pieces per BFW)	
0.0	0
0.1	1
0.2	2
>+0.3	3

Streams 10-20+m(33ft) wide

14 – LWD (Key Pieces per BFW)	
0.0	0
0.1-0.2	1
0.3-0.4	2
>+0.4	3

15 – Pools (%)	Gradient (%)		
	<2%	2-5%	>5%
>55%	3	3	3
41-54%	2	3	3
31-40%	1	2	3
10-30%	0	1	2
<10%	0	0	1

16 – Riffles (%)	Gradient (%)		
	<2%	2-5%	>5%
1-16%	1	1	0
17-33%	2	2	1
34-50%	2	3	2

17 – Off Channel Habitat
Present 3
Absent 0

18 – Fines (%)	Gradient (%)		
	<2%	2-5%	>5%
0-10%	2	2	2
11-44%	1	-3	-4
45-100%	0	-4	-5

**TERRESTRIAL WILDLIFE HABITAT FUNCTIONS**

Structural/Biological Complexity

Plant Species Diversity

19 – Native Woody Plant Species (#)	
0	0
1-3	1
4-6	2
7+	3

Vertical Diversity

20 – Multiple Canopy Layers	
1	1
2	2
3+	3
Retaining on-site trees and on adjacent parcel.	

Snags

21 – Snags/Acre (20"+dbh, 6' high)	
0	0
1	1
2-3	2
4+	3

Downed Material

22 – Downed Logs/Acre (12"+ diam, 20'+ long)	
1	1
2-3	2
4+	3

Non-Native Plants

23 – Non-native Plant Species	
<10%	1
10-33%	-1
34-66%	-2
67-100%	-4

Connectivity with Other Ecosystems

24 – Riparian Corridor Connected to Other PHS Polygons or Points?	
No	+0
Yes	2

Abundant Food Sources

25 – Native Woody Plant Species (#)	
1-3	1
4-6	2
7+	3
Specify:	

Available Water

26 – Hydrological Characteristics	
Intermittent	1
Semi-permanent	2
Permanent	3

Moist and Moderate Microclimate

27 – Temperature Microclimate Difference?	
Yes	2
No	+0
Method:	

General Observations and Wildlife Occurrences

With enhancement, English Ivy cover will decrease from 50% (per plot) to <10% cover.

EVALUATION SUMMARY

FISH HABITAT FUNCTIONS

<u>FUNCTION</u>	<u>POSSIBLE POINTS</u>	<u>SCORE</u>
<b><i>Stream Flow Influence</i></b>		
1 – Vegetative Cover	3	_____
2 – Associated Wetlands	2	_____
3 – Springs or Seeps	3	_____
4 – Altered Hydrology	0	_____
<b><i>Influence on Water Temperature &amp; D.O.</i></b>		
5 – Canopy Cover	3	_____
6 – Riffles	3	_____
<b><i>Control of Sedimentation</i></b>		
7 – Slope/Vegetative Cover	3	_____
8 – Vegetated Banks	3	_____
<b><i>Control of Stream Pollution</i></b>		
9 – Vegetative Cover	3	_____
10 – Associated Wetlands	2	_____
<b><i>Contribution to Food Web</i></b>		
11 – Canopy Cover	3	_____
12 – Dominant Tree Species	3	_____
13 – Large Woody Debris	3	_____
<b><i>Structural Stream Diversity</i></b>		
14 – Large Wood Debris	3	_____
15 – Pools	3	_____
16 – Riffles	3	_____
17 – Off-channel Habitat	3	_____
18 – Fines	2	_____
<b>HABITAT SUBTOTAL (HS):</b>	<b>48</b>	_____

TERRESTRIAL WILDLIFE HABITAT FUNCTIONS

<u>FUNCTION</u>	<u>POSSIBLE POINTS</u>	<u>SCORE</u>
<b><i>Structural Complexity</i></b>		
19 – Native Woody Plant Species	3	<u>3</u>
20 – Multiple Canopy Layers	3	<u>3</u>
21 – Snags	3	<u>1</u>
22 – Downed Logs	3	<u>2</u>
<b><i>Connectivity</i></b>		
23 – Non-native Plant Species	1	<u>1</u>
24 – Connection to Other PHS	2	<u>2</u>
<b><i>Abundant Food Sources</i></b>		
25 – Native Woody Plant Species	3	<u>3</u>
<b><i>Available Water</i></b>		
26 – Hydrological Characteristics	3	<u>3</u>
<b><i>Moist &amp; Mild Microclimate</i></b>		
27 – Temperature/Micro. Difference	2	<u>2</u>
<b>WILDLIFE SUBTOTAL (WS)</b>	<b>23</b>	<u>20</u>
Total: WS X% of Riparian Area that is Vegetated	23	<u>17</u>
20 x 0.85		
<b>TOTAL SCORE +1 for Type 1 waters (FISH+WILDLIFE FUNCTIONS):</b>	<b>72</b>	_____

Loss of riparian vegetation

## **Exhibit D: SEPA Environmental Checklist**

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## **SEPA ENVIRONMENTAL CHECKLIST**

**UPDATED 2016**

### ***Purpose of checklist:***

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

### ***Instructions for applicants:***

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

### ***Instructions for Lead Agencies:***

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

### ***Use of checklist for nonproject proposals:*** [\[help\]](#)

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the [SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS \(part D\)](#). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

## **A. Background** [\[help\]](#)

1. Name of proposed project, if applicable: NW Natural Lacamas Region Station
2. Name of applicant: NW Natural Gas Company

3. Address and phone number of applicant and contact person:

Applicant/Contact:

220 NW 2nd Ave

Portland, OR 97209

503-226-4211

Contact: Corey Raspone (Environmental Specialist II, ext 4312)

4. Date checklist prepared: August 14, 2017

5. Agency requesting checklist: City of Camas

6. Proposed timing or schedule (including phasing, if applicable):

The applicant intends to begin construction as soon as gaining land use, engineering and building permit approvals. Construction likely to begin in late 2017.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No. It should be noted that WSDOT intends to widen Everett Street in the future. This should not affect the subject site.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

A Shoreline Critical Areas Assessment and Preliminary Buffer Enhancement Plan was prepared by AKS Engineering & Forestry and submitted with the land use application package.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No applications pending.

10. List any government approvals or permits that will be needed for your proposal, if known.

Shoreline and Critical Areas Permitting through the City of Camas. Building Permit for proposed upgrades to existing building.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)



Upgrade site, including replacement of existing building with new building of same size in the same location; replacement and moving an antenna; modify site entrance for more gradual grade transition from Everett Street; replace chainlink fence and relocate gate and fence to accommodate future widening of Everett Street.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

2913 NE Everett Street, Camas, WA  
Parcel Number 91025-001  
Approximately 2,000 feet north of the intersection of NE Everett Street and NE 23<sup>rd</sup> Avenue  
T1N R3E Section 2

### A. ENVIRONMENTAL ELEMENTS

#### 1. Earth

a. General description of the site:

(circle one): Flat, rolling, hilly, steep slopes, mountainous, other \_\_\_\_\_

The site is generally flat, with a gentle slope to the northwest along the bank of the pond. Elevations range from 185 to 194-feet across the entire site.

b. What is the steepest slope on the site (approximate percent slope)?

Less than 1% slope.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

The predominant soil types within this are silt loams. USDA NRCS soil maps indicate the presence of Vadar silt loams (VaB and VaC).

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No

- e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

The maximum footprint of this project is 0.14-acre, equivalent to the entirety of the site. It is not expected that the entire site will be disturbed, with a net effective disturbance area of approximately 0.1-acre.

There will be no net removal of soil from this area. Approximately 75 cubic yards of fill is proposed to be imported along the eastern third of the site. This import is needed to ease the slope and transition into the site from NE Everett Street.

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

The potential for erosion for the duration of the project should be minimal. The area of disturbance for any proposed structures and re-grading is small and can be controlled using standard BMPs (silt fencing, wattles, covered stockpiles, etc.).

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

There will be no net increase in impervious surfacing. The existing impervious surfacing is approximately 2%.

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

A Demolition, Grading & Erosion Control Plan is included with the plans submitted with this SEPA Checklist. The plan outlines any BMPs which should be deployed prior to construction and maintained during construction. Given the site conditions and the limited nature and size of any earthworks involved, it is expected that standard BMPs will be sufficient in controlling erosion and sediment migration.

## 2. Air

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Construction: Temporary emissions during construction will include construction dust and pollutants found in combustion engine exhaust from construction equipment. These types of emissions are limited in nature and should not create unacceptable nuisances.

Operation/Maintenance: Emissions during the operational phase would be considered minimal, with regular ongoing emissions not anticipated. There is a pressure relief stack on site, which has the potential to off-gas natural gas during emergency situations, but these relief stacks are not an ongoing source of emission and are designed only to operate during emergency type situations.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

There are no known sources of off-site emissions or odor that will affect this project.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

None proposed at this time. Applicant will comply with applicable code and best management practices.

### 3. Water

a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

The project site is adjacent to a year round pond, which is connected to Fallen Leaf Lake and designated as an "Urban Conservancy" area by the Camas SMP.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes, but only adjacent to and above the OHWM for this area. There will be no work over or in the described waters.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Yes. Per Clark County GIS, the northern portion of the site is estimated to be within the FEMA 100-year floodplain. The FEMA FIRM Panel ID is 53011CO531D.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

b. Ground Water:

- 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No.

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

None.

c. Water runoff (including stormwater):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

The site is almost 100% permeable and covered with well drained gravels. It is possible that some stormwater runoff may occur during periods of high rains, and NW Natural will be preparing a site specific Erosion and Sediment Control Plan (ESCP) or Construction Stormwater Pollution Prevention Plan (CSWPPP) to address this potential. This plan will be implemented prior to the beginning of construction.

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

No.

- 3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

NW Natural will implement all necessary BMPs as identified in the ESCP and monitor the effectiveness of those BMPs as the project progresses.

#### 4. Plants

a. Check the types of vegetation found on the site:

- deciduous tree: alder, maple, aspen, other
- evergreen tree: fir, cedar, pine, other
- shrubs
- grass
- pasture
- crop or grain
- Orchards, vineyards or other permanent crops.
- wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other, slough sledge
- water plants: water lily, eelgrass, milfoil, other
- other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

NW Natural will be removing seven trees and any invasive/non-native vegetation within the site boundary.

c. List threatened and endangered species known to be on or near the site.

None known.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Native vegetation (20 shrubs and 40 herbaceous plants) will be installed and invasive plants will be removed in remaining habitat within the parcel to account for habitat impacts from new development. The invasive removal on the adjacent parcel is proposed as a part of the mitigation plan for the removal of (7) trees on-site.

e. List all noxious weeds and invasive species known to be on or near the site.

We are not aware of any noxious weeds within this area. However, the invasive plants English ivy and Himalayan blackberry were identified on-site.

5. **Animals**

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Examples include:

birds: hawk, heron, eagle, songbirds, other:  
 mammals: deer, bear, elk, beaver, other: coyote, rabbit  
 fish: bass, salmon, trout, herring, shellfish, other \_\_\_\_\_

b. List any threatened and endangered species known to be on or near the site.

The ring-necked snake (*Diadophis punctatus*) is mapped in the area and is currently being monitored by WDFW across its range. 'State Monitor' species are not considered Species of Concern or priority species, but are monitored for status and distribution. Because little is known about the ring-necked snake, WDFW continues to monitor this population to determine whether it warrants further protections. There is suitable habitat for this species within the study area, but given the proximity to NE Everett Street, the on-site habitat may be too fragmented to support a population of ring-necked snake.

No other ESA-listed species are expected to use habitat on site based on WDFW PHS, Clark County mapping, and observations made by AKS.

c. Is the site part of a migration route? If so, explain.

The site is within the broad front Pacific Flyway for bird migration, but no specific migration route overlaps the area.

d. Proposed measures to preserve or enhance wildlife, if any:

A mitigation plan outlined in the Critical Areas Report will enhance habitat value by installing native vegetation and removing invasive species within and around the site. An overall increase of native plant health, plant cover, and overall plant community health is expected. Control of English ivy and other noxious weed or invasive plant species acknowledged by the City will result in greater habitat functions within the on-site enhanced area and enhanced area to the west of the site.

e. List any invasive animal species known to be on or near the site.

None known.

## 6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Energy will be required for the construction phase of the project, diesel and gasoline will be used by construction equipment and vehicles. Following the completion of construction only a small amount of energy will be needed to power the on-site equipment (typical electrical service connections which already exist).

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.



- c. What kinds of energy conservation features are included in the plans of this proposal?  
List other proposed measures to reduce or control energy impacts, if any:

None are proposed at this time.

## 7. Environmental Health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal?  
If so, describe.

- 1) Describe any known or possible contamination at the site from present or past uses.

There is no known contamination on the site from present or past uses.

- 2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

There are existing natural gas pipelines within the project limits. They will be located using the one call utility locate system and NW Natural's utility locators.

- 3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

We anticipate that only limited quantities of gasoline and diesel will be stored on site during construction. No hazardous chemicals will be required for the operation of the facility.

- 4) Describe special emergency services that might be required.

There are no special emergency services that should be required. NW Natural would agree to post informational signage at the site entrance for any first responders. Emergency situations involving any NW Natural gas pipelines would be responded to by NW Natural employees in coordination with local officials.

- 5) Proposed measures to reduce or control environmental health hazards, if any:

Spill kits will be retained on site to contain any spills that may occur.

- b. Noise

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

There are no noises in the area that will affect the project.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Short-term noise will be generated during construction by heavy equipment. The project may involve the excavation for small foundations to support the construction of a small shed and the construction of a telecommunications pole. Additionally, there may be importing of aggregate to raise and grade the site's existing entrance for improved access. We do not anticipate noise to be created on a long-term basis.

3) Proposed measures to reduce or control noise impacts, if any:

Require all construction equipment to have muffled exhaust. Restrict construction to hours allowed by City of Camas (7am – 10pm).

## 8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The property is currently used as a location for a natural gas pressure regulator station and a telecommunications pole. The proposed final usage will be the same.

The proposed will not affect current land uses on nearby or adjacent properties.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

No.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversized equipment access, the application of pesticides, tilling, and harvesting? If so, how:

No.

c. Describe any structures on the site.

There is a small shed on site to cover the existing pressure regulator, which is approximately 120 square feet (10 x 12-foot footprint).

d. Will any structures be demolished? If so, what?

Yes, the existing shed will be demolished and re-built in place.

e. What is the current zoning classification of the site?

Multifamily-10 (MF-10)

f. What is the current comprehensive plan designation of the site?

According to the Camas 2035 Comprehensive Plan the site appears to be designated as a "Multi-Family\_Low" area which is immediately surrounded by areas designated as "park".

g. If applicable, what is the current shoreline master program designation of the site?

Urban Conservancy

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

Yes. The site is within the 200-foot shoreline setback of Fallen Leaf Lake.

i. Approximately how many people would reside or work in the completed project?

None.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:

None.

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Proposed measures include approval through the City of Camas Shoreline Permit Review process. Also, a pre-application conference was already held to discuss this project and outline the approval process. These measures ensure the proposal is compatible with existing and projected land uses and plans.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

There will be no impacts to agricultural and forest lands

## 9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

- c. Proposed measures to reduce or control housing impacts, if any:

None.

## 10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The approximate height of the proposed shed would be 10 feet tall. The telecommunications pole is proposed to be approximately 40-feet in height.

- b. What views in the immediate vicinity would be altered or obstructed?

None.

- c. Proposed measures to reduce or control aesthetic impacts, if any:

None.

## 11. Light and Glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None. Construction would generally occur between the hours of 8a.m. to 5p.m. and generally would not require special lighting that would produce glare.

- b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

c. What existing off-site sources of light or glare may affect your proposal?

None.

d. Proposed measures to reduce or control light and glare impacts, if any:

None proposed.

## 12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

The site itself is not a designated recreational area, but there is a City of Camas park (Fallen Leaf Park) located immediately to the south of the site.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Since there are no anticipated impacts to recreation there are no mitigation measures proposed.

## 13. Historic and cultural preservation

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.

There are no known listed buildings or sites at this time and no buildings over 45 years old on the site.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

No, there are no landmarks/features/evidence of Cultural Resources present at the site. The proposed project would be occurring within a large portion of the existing footprint of the site, most of which was previously disturbed.

- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

NW Natural reviewed Clark County's Archaeological Predictive Model maps and is aware of the moderate to high probability of Cultural Resources in this general area. As such, an inadvertent discover plan will be implemented prior to construction and delivered to the construction crews at that time.

- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

Due to the previously disturbed conditions there are no anticipated impacts to archeological resources for this project, and as such avoidance/minimization/compensation measures are not proposed at this time.

#### 14. Transportation

- a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

Access to the site is only available via NE Everett Street.

- b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

The City of Camas is serviced by C-Tran bus line #92. The route followed by Line #92 does not include the area in the vicinity of the proposed project. The closest bus stop is approximately 5,000 feet to the south.

- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

None.

- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

No.

- e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

No additional vehicle trips per day would be generated.

- g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No.

- h. Proposed measures to reduce or control transportation impacts, if any:

No proposed measures as there should be no impacts to transportation.

#### 15. Public Services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

No.

- b. Proposed measures to reduce or control direct impacts on public services, if any.

No proposed measures beyond temporary traffic control while construction is being completed.

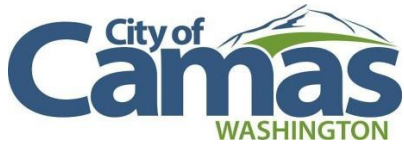
#### 16. Utilities

- a. Circle utilities currently available at the site:

Electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system,  
other \_\_\_\_\_

- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

There are no additional supporting utilities required to complete this project.



**C. Signature**

Under the penalty of perjury, the above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: \_\_\_\_\_  
Name of signee Corey Raspone  
Position and Agency/Organization NW Natural Consultant  
Date Submitted: \_\_\_\_\_



## **Exhibit E: Stormwater Memo**

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## Stormwater Design Memorandum

**Date:** August 17, 2017

**To:** City of Camas  
616 NE Fourth Avenue  
Camas, WA 98607

**From:** Blair Carlson, PE

**Project:** NW Natural – Lacomas Regional Station Site Plan

**RE:** NW Natural – Lacomas Regional Station Site Plan Stormwater Design



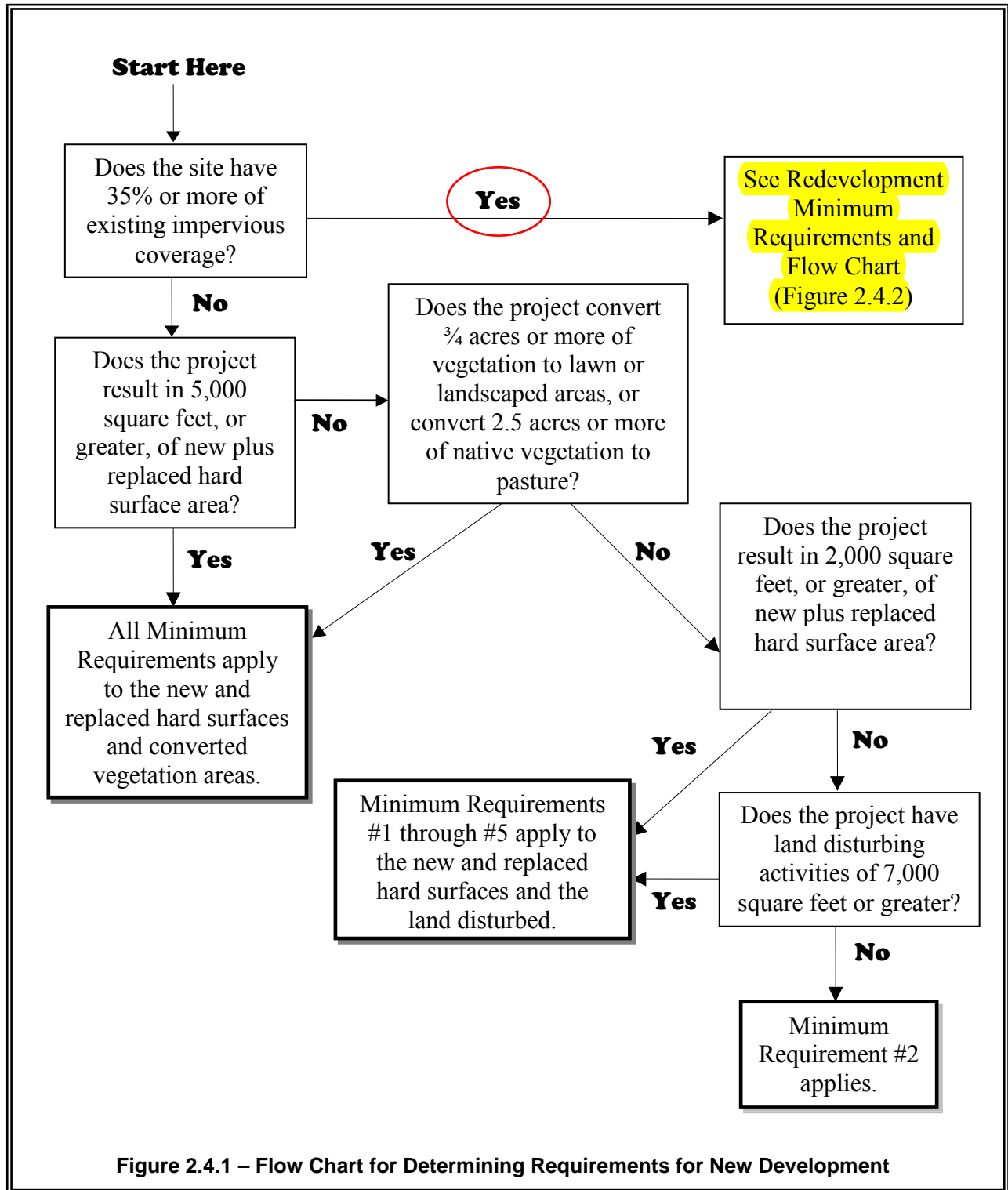
This memorandum serves to address stormwater requirements for the proposed site development project. Per City of Camas code section 14.02, the latest edition of the Department of Ecology's (ECY) Stormwater Management Manual for Western Washington (SMMWW) shall be followed. As discussed in the 2012 SMMWW, Volume I, Section 2.2, this project is exempt from the Minimum Requirements:

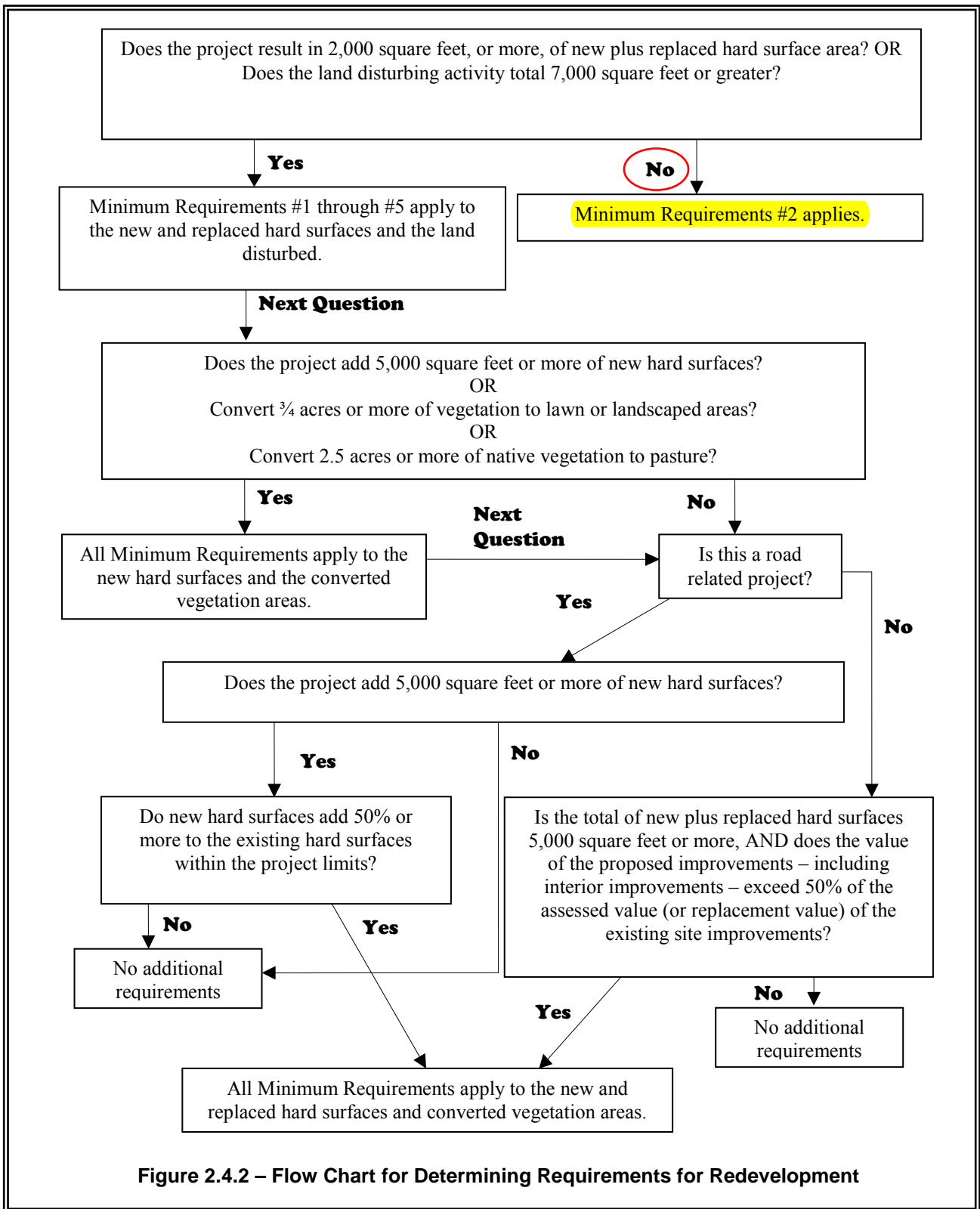
*The following pavement maintenance practices are exempt: ... resurfacing with in-kind material without expanding the road prism...*

Following the ECY Figures 2.4.1 and 2.4.2 (Appendix A), dictates that Minimum Requirement #2 applies to the project because the site currently has over 35% existing impervious coverage, the project results in less than 2,000 square feet of new plus replaced hard surface area, and land disturbing activity is less than 7,000 square feet. While a Stormwater Pollution Prevention Plan is not required for this project, the BMPs shown in Appendix B are included to address the 13 elements of construction pollution prevention.

A construction stormwater general permit is not required for this project because the disturbed area is considerably less than 1 acre and the project is not part of a larger common plan of development.

The project will not cause any change to the existing impervious surfaces or the existing stormwater drainage patterns. As shown on the project plans, the re-developed flow paths of the site's stormwater will continue to sheet flow across the gravel storage yard, through natural vegetation, and eventually to the adjacent wetland areas.





## **Exhibit F: Pre-Application Notes**

# Pre-Application Meeting Notes

NW Natural – Lacamas Regional Station

File PA17-18

**Meeting Date:**

June 29, 2017

Public Works Meeting Room

616 NE Fourth Avenue, Camas, WA 98607

**Applicant/ Contact:**

Devin Jackson, AKS Engineering  
JacksonD@aks-eng.com

Halli Chesser, NW Natural Gas  
Halli.chesser@nwnatural.com

**Project Description:**

Applicant proposes to upgrade site equipment, which includes replacing the existing structure with a new structure of similar size and construction. The applicant also proposes to modify the grade of the entrance for safer site access from Everett Street.

**Representing City of Camas:**

Sarah Fox, Sr. Planner  
Bob Cunningham, Building Official  
Norm Wurzer, Engineer  
Randy Miller, Fire Marshal

**Location:**

No site address. Located on NE Everett Street and directly across the street to the west from Camas Produce (3016 NE EVERETT ST.)

**Tax**

91025-001

**Account:**

**Zoning:**

MF-10

**NOTICE:** Notwithstanding any representation by City staff at a pre-application conference, staff is not authorized to waive any requirement of the City Code. Any omission or failure by staff to recite to an applicant all relevant applicable code requirements shall not constitute a waiver by the City of any standard or requirement. [CMC 18.55.060 (C)] This pre-application conference shall be valid for a period of 180 days from the date it is held. If no application is filed within 180 days of the conference or meeting, the applicant must schedule and attend another conference before the City will accept a permit application. [CMC 18.55.060 (D)] Any changes to the code or other applicable laws, which take effect between the pre-application conference and submittal of an application, shall be applicable. [CMC 18.55.060 (D)]. A link to the Camas Municipal Code (CMC) can be found on the City of Camas website, <http://www.cityofcamas.us/> on the main page under "Business and Development".

**Development fees will be based on the adopted fees at the time of application submittal. The applicable fees include:**

Site Plan Review	\$3,560 + \$60 per 1,000 of GFA
Design Review (minor)	\$380
SEPA	\$710
Critical Areas	\$680.00
Shoreline Permits	\$770.00
Engineering Review	3% of estimated construction costs
Building Permit and Plan Review	based on the valuation of the project

The following pre-application notes are based on the application materials and site plan submitted to the City. Given that the development is not a new use on the site or an expansion of the use, a conditional use permit will not be required (Table 2 of CMC18.07.040).

The site is within a shoreline management area and there are critical areas in the vicinity. The site does not conform to current site development standards as it lacks landscape screening around parking area and along the frontage of NE Everett, an arterial road. The structures also do not appear to conform to shoreline setbacks of 200-feet from the ordinary high water mark of Fallen Leaf Lake.

**A. Site Plan Review (Type II Permit) is not required** if the new impervious surfaces are less than 1,000 square feet. If new impervious surfaces are 1,000 square feet or greater, than an application for Site Plan Review must address the information outlined in CMC 18.18.040 (A-J). [Link to code: [https://www.municode.com/library/wa/camas/codes/code\\_of\\_ordinances?nodeId=TIT18ZO\\_CH18.18SIPLRE\\_18.18.040SUCOCOAP](https://www.municode.com/library/wa/camas/codes/code_of_ordinances?nodeId=TIT18ZO_CH18.18SIPLRE_18.18.040SUCOCOAP)] The application must include a written response to the **criteria for approval** in CMC 18.18.060 (A-F).

**B. Shoreline Substantial Development Permit, Shoreline Variance and Shoreline Conditional Use.** Critical Area Review will be consolidated with Shoreline Permit Review. This land use is subject to a shoreline setback of 200-feet from the ordinary high water mark (OHWM) and a critical area buffer from the wetland.

Shoreline Substantial Development Permit (**SDP**). The following items per Appendix B of the Camas Shoreline Master Program (SMP) must be submitted for a complete shoreline application:

1. Narrative. A complete and detailed narrative that describes the proposed development, existing site conditions and natural features. The narrative should address the following sections of the SMP:

- General goals at Section 3.1
- Transportation, Utilities, and Essential Public Facilities at Section 3.11
- General Shoreline Use and Development Regulations at Section 5.1
- Site Planning at Section 5.7
- Utilities Uses at Section 6.3.15
- Conditional Uses at Appendix B, X (A)
- Shoreline Variance at Appendix B, IX (A)

2. Site plans which provide the following information (strike-outs indicate non-applicable items):

- a. The location of the ordinary high water mark (OHWM);
- b. The names of owners of adjacent land and the names of any adjacent subdivisions;
- c. Names, locations, widths and dimensions of existing and proposed public street rights-of-way, public and private access easements, parks and other open spaces, reservations, and utilities;
- d. Location, footprint and setbacks of all existing structures on the site with a lineal distance from OHWM;
- e. Location of sidewalks, street lighting, and street trees;
- f. Location of proposed building envelopes and accessory structures and the lineal distance from OHWM;
- ~~g. Location, dimensions and purpose of existing and proposed easements. Provide recorded documents that identify the nature and extent of existing easements;~~
- ~~h. Location of any proposed dedications;~~
- i. Existing and proposed topography at two-foot contour intervals, extending to five feet beyond the project boundaries;

- j. Location of any critical areas and critical area buffers, to indicate compliance with all applicable provisions of the critical areas legislation, as required under CMC Title 16;
- k. Preliminary stormwater plan and report;
- l. Description, location and size of existing and proposed utilities, storm drainage facilities, and roads; and
- m. A survey of existing significant trees.

3. Public notice sign must be 4'x8' and installed within view of the public right-of-way.

- **State Environmental Policy Act (SEPA).** A SEPA checklist must be submitted with a shoreline permit application.

- **Critical Area Review (SMP Section 5.3 and Appendix C)**

The property is located adjacent to Fallen Leaf Lake, which has a 150-foot habitat buffer. The SMP at Appendix C (page C-70) provides the requirements for allowing buffer reductions if necessary. There are provisions for non-conforming developments at SMP Section 2.5.2, which allows the structure to be rebuilt in the same location. A critical area report, prepared by a qualified biologist, must be submitted to delineate the wetland area and habitat areas. The preliminary report requirements may be found at SMP, Appendix C, Chapters 16.51 General Provisions of Critical Areas, 16.53 Wetlands, and 16.61 Fish and Wildlife Habitat Conservation Areas.

A preliminary mitigation report must also be submitted. The city is interested in discussing options for alternative mitigation occurring adjacent to the property (on city property).

### **C. Minor Design Review.**

As presented at the pre-application meeting, this project appears to be at a scale that could be reviewed administratively as a Minor Design Review Permit. There are several design standards applicable to this development and may be found in the **Design Review Manual at Standard Principles** (page 4). Landscaping should also conform to the requirements of the engineering **Design Standards Manual** along with CMC 18.13.050 and 060 as noted below. A submittal for design review should include a site plan drawing, landscape plan, building materials and colors, and fencing design specs.

**Landscaping Design:** Landscaping standards apply to conditional uses (utilities in multi-family zones) and redevelopment. The property as a whole would not need to be brought to full conformance, however that portion that is redeveloped (e.g. new pavement area, fencing, and new structures) would be within the scope of review. The new landscaping must “screen and separate uses of different character”, and staff noted that it should be focused on the areas visible from the public right of way.

- Parking areas must be landscaped in compliance with CMC 18.13.060, which means that the perimeter must be landscaped/screened with a five foot wide planter area. The planter area should have one tree per three spaces or every 20-feet.

**Fencing Design:** Fencing along an arterial must be black or green vinyl coated fencing or cedar fencing as shown in the engineering Design Standards Manual at detail **STS 4**.

**Structures:** The property contains forested areas and abuts the city’s open space. Along with the structure complying with Building Department requirements, the color of the structure must blend with the natural surroundings.



## ENGINEERING DIVISION

Norm Wurzer (360) 817-7235

1. Construction plans shall be prepared by a licensed Washington State engineer in accordance with City of Camas standards.
2. Alterations, retaining walls and other site improvements shall not be constructed within 37' from the Centerline of NE Everett adjacent to the existing parcel.
3. Improvements within the right-of-way must conform to the engineering Design Standards, to include street trees along the 60-feet of frontage.
4. Representatives of Northwest Natural Gas (NWNNG) were provided utility prints showing (2) water mainlines and (1) sanitary sewer mainline to the east of the parcel. The representatives were cautioned to not excavate in the vicinity of these mainlines without prior approval from the City of Camas.
5. NWNNG to call in for locates.
6. Contractor to notify Tobin Reed or Sam Adams prior to the start of edge of road work (360) 817-1563.

## BUILDING DIVISION

BOB CUNNINGHAM (360) 817-1568

1. The existing **Non-Conforming** structure shall be replaced with a non-combustible structure of the same size in the same location.
2. The structure shall be designed to the City of Camas design criteria and submittal documents shall be stamped by a licensed professional.
  - 135 mph wind 3 second gust
  - Seismic Zone D
  - 25lbs snow load

## FIRE DEPARTMENT

RANDY MILLER (360) 834-6191

- 1) The applicant must post an address sign for site.
- 2) NFPA signage must be posted for appropriate hazard.
- 3) Contact number must be provided at site.
- 4) Call for Final Inspection. 360-834-6191, [fmo@cityofcamas.us](mailto:fmo@cityofcamas.us), "Camas Connect" available for smart phones, tablets or computer.

## **Exhibit G: Fee Estimate**

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**#5489 - NW Natural Lacamas**

**PA 17-18**

<b>PRELIMINARY PLAN REVIEW FEES:</b>	
Design Review (minor)	\$380.00
SEPA Project Review	\$710.00
Critical Areas	\$680.00
Shoreline Permits	\$770.00
Engineering Review-- 3% of estimated construction costs	\$3,648.00
Site mobilization	\$5,000.00
Gravel Fill and Grading	\$3,900.00
Erosion Control	\$2,000.00
Tree Removal and Fence Demo	\$2,500.00
New Fence	\$2,700.00
New Gate	\$1,000.00
Utility Riser Adjust	\$4,500.00
New Building	\$75,000.00
New Tower	\$20,000.00
Demo Old Tower and Building	\$5,000.00
<b>Total</b>	<b>\$6,188.00</b>