FINAL WETLAND MITIGATION PLAN - UPDATED

La Center Middle School
USACE Reference # - NWS-2018-696
City of La Center Reference # 2019-028-PAC

Prepared for:
La Center School District
P.O. Box 1840
La Center, WA 98629

Prepared by:
Olson Environmental, LLC
222 E. Evergreen Blvd.
Vancouver, WA 98660
(360) 693-4555

November 15, 2019

OLSON ENVIRONMENTAL LLC
ENVIRONMENTAL SERVICES • GIS • HABITAT RESTORATION

TABLE OF CONTENTS

FIGURES

FINAL WETLAND MITIGATION PLAN

Applicant:	**La Center School District**
Location:	**2001 N.E. Lockwood Creek Road, La Center, Washington (Sheet 1)**
Legal Description:	**NE ¼ & SE ¼ S-02, T04N, R01E, W. M.; Clark County**
Tax ID Number(s):	**209118-000 & 209120-000**
Acreage:	**17.32 acres**
Jurisdiction:	**City of La Center**
Watershed:	**East Fork of the Lewis River**
WRIA:	**Lewis (27)**
Zoning:	**R1-75/LDR-7.5)**
ComPlan:	**UL**
Project Type:	**Middle School**
Preliminary Mitigation Plan Date:	**January 24, 2019**
Final Mitigation Plan Date:	**September 26, 2019**

1.0 INTRODUCTION

This report details the final wetland mitigation plan prepared for the La Center Middle School by Olson Environmental, LLC (OE). The La Center School District is proposing to construct a middle school and associated infrastructure at 2001 N.E. Lockwood Creek Road, La Center, Washington (Sheet 1). This report has been prepared to address wetland and/or buffer impacts regulated by the La Center Municipal Code (LCMC) 18.300.090(6) - Critical Areas Protection and the U.S. Army Corps of Engineers (USACE) and Washington State Department of Ecology (Ecology) under Sections 404 and 401 of the Clean Water Act, respectively. The legal description of the project area is the NE ¼ and SE ¼ of Section 02, Township 04 North, Range 01 East, W. M.; Clark County. Tax lots identified in the development include 209118-000 and 209120-000. Eight wetlands were identified on the property by OE in December 2018. The wetland boundaries were verified by USACE in January 2019. Wetland impacts will be compensated by purchasing credits from the East Fork Lewis Mitigation Bank (EFLMB). This updated plan includes comments received from the City through the Pre-Application Conference process.

2.0 PROPOSED DEVELOPMENT PROJECT (Sheet 2)

The approximately 17.3-acre site will be developed into a middle school facility to accommodate approximately 550 students in grades 6 through 8 as well as 41 employees. The site will contain a new school building of approximately 77,275 square feet in area with visitor, staff, and bus parking areas, as well as bus loading and unloading areas for the students. There will be two

approaches to the site from NE Lockwood Creek Road – one in the northwest corner and the other in the northeast corner of the site. A physical-education field will be placed to the south of the building, along with an outdoor playfield and a 100-meter dash strip on the north side of the field. Raised garden planters will be provided in addition to the exterior buffering landscaping, interior parking area landscaping, and street tree plantings. A storm facility will be installed in the southeast corner of the site. Additionally, bio-retention areas will be constructed in various locations throughout the site.

3.0 HISTORIC AND EXISTING CONDITIONS

The property is vacant land that historically has been used for agricultural purposes, primarily for growing hay. The site is relatively flat, sloping slightly from north to south (Sheet 3). Surrounding land uses consist of large lot single family residences and agricultural fields. Eight wetlands were identified on the site as shown in Sheet 4. The wetlands were rated according to Ecology's rating system for wetlands in western Washington. Six of the wetlands rated as Category IV and two as Category III according to this rating system. Wetland buffers are based on land use intensity and habitat function score as outlined in LCMC Table18.300.090(6)(h)(i)(1). A description of the wetland and upland areas of the property are as follows:

3.1 Wetlands (Sheets 2 & 4)

Wetland A-S (27,200 sq. ft.)
Wetland A-S exists in the southwestern portion of the study area (Sheet 4). The wetland is an open grassland plant community that was more than likely seeded with a pasture/hay mixture. The wetland plant community is predominantly colonial bent grass (*Agrostis capillaris* - FAC), spreading bent grass (*A. stolonifera* – FAC), velvet grass (*Holcus lanatus* – FAC), reed canary grass (*Phalaris arundinacea* – FACW), tall false rye grass (*Schedonorus arundinaceus* - FAC), and sweet vernal grass (*Anthoxanthum odoratum* – FACU). Soils from 0 to 5 inches area a very dark grayish brown (10YR 3/2) silt loam. Below this to a depth of >16 inches the soil is a very dark gray (10YR 3/1) silty clay loam with dark reddish brown (5YR 3/3) concentrations. Wetland hydrology was indicated by the presence of surface water (1" depth) and soil saturation to the surface. The wetland is a depressional HGM class wetland that rates as a Category IV wetland (Table 1) with a 50-foot buffer.

Wetland B-S (3,770 sq. ft.)
Wetland B-S is located in the northern portion of the property. Vegetation in this area consists of reed canary grass, spreading bent grass, colonial bent grass, velvet grass, and soft rush (*Juncus effusus* – FACW). Soils are a dark gray (10YR 4/1) silt loam with dark reddish brown (10YR 3/3) concentrations to a depth of >16 inches. Wetland hydrology was indicated by water and soil saturation at the surface. It appears that portions of this part of the study area may contain drain tile that are artificially draining the area. A ditch located at the western edge of the wetlands extends to the west property line. This is a slope HGM class wetland that rates as a Category III wetland (Table 1) with an 80-foot buffer.

Wetland C-S (3,315 sq. ft.)
Wetland C-S is located in the south of Wetland B-S (Fig 5). Vegetation in this area consists of spreading bent grass, colonial bent grass, tall false rye grass, cat's ear (*Hypochaeris radicata* – FACU), and creeping buttercup (*Ranunculus repens* – FAC). Soils are a dark grayish brown (10YR 4/2) silt loam/clayey silt loam in the upper 10 inches with dark brown (7.5YR 3/3) concentrations in the bottom half of this layer. From 10 to 16 inches below the surface the soil is a dark gray (7.5YR 4/1) clay loam with dark yellowish brown (10YR 4/6) concentrations Wetland hydrology was indicated by water and soil saturation at the surface and the presence of oxidized rhizospheres, saturation visible on aerial imagery and geomorphic position. This is a depressional HGM class wetland that rates as a Category IV wetland (Table 1) with a 50-foot buffer.

Wetland D-S (74,740 sq. ft.)
Wetland D-S is located near the center of the site (Fig 5). Vegetation in this area is predominantly spreading bent grass, velvet grass, tall false rye grass, cat's ear, and creeping buttercup. Soils to a depth of nine inches are a brown (7.5YR 4/2) silt loam with dark brown (7.5YR 3/2) concentrations in the bottom half of this layer. Below nine inches the soil is a brown (7.5YR 4/2) clayey silt loam with dark brown (7.5YR 3/3) concentrations. Wetland hydrology was indicated by inundation (1-2") and/or soil saturation at the surface and the presence of oxidized rhizospheres, saturation visible on aerial imagery and geomorphic position. This is a slope HGM class wetland that rates as a Category IV wetland (Table 1) with a 50-foot buffer

Wetland E-S (19,960 sq. ft.)
Wetland E-S is located in the southeast corner of the site (Fig 5). Vegetation in this area consists of spreading bent grass, velvet grass, tall false rye grass, cat's ear, soft rush, and perennial rye grass (*Lolium perenne* – FAC). The top four inches of the soil is a dark grayish brown (10YR 4/2) silt loam. From 4-12 inches the soil is a dark gray (10YR 4/1) clayey silt loam with dark brown (7.5YR 3/3) concentrations. Below this to a depth of 16 inches the soil is a gray (10YR 5/1) clayey silt loam with brown (7.5YR 4/4) concentrations. Wetland hydrology was indicated by water and soil saturation at the surface and the presence of oxidized rhizospheres, saturation visible on aerial imagery and geomorphic position. This is a depressional HGM class wetland that rates as a Category IV wetland (Table 1) with a 50-foot buffer.

Wetland D-N (290 sq. ft.)
Wetland D-N is characterized as a palustrine, emergent wetland and is located in the northwestern portion of the study area along the western property boundary (Fig. 5). It appears this wetland is predominately sustained by runoff from a ditch along the western property boundary. The vegetation is predominantly colonial bent grass, reed canary grass and Himalayan blackberry (*Rubus armeniacus* – FAC). Hydric soil indicators included a reduced matrix. Soils from 0 to 12 inches are a very dark grayish brown (10YR 3/2) silt loam with brown (7.5YR 4/4) redox concentrations and turn very dark gray (10YR 3/1) from 12 to 16 inches with similar redox concentrations. Wetland hydrology at the time of initial assessment was indicated by drainage patterns and geomorphic position. This is a slope HGM class wetland that rates as a Category IV wetland (Table 1) with a 50-foot buffer.

Wetland E-N (1,050 sq. ft.)
Wetland E-N is characterized as a palustrine, scrub-shrub wetland and is located in the northern portion of the property adjacent to NE Lockwood Creek Road (Fig 5). It appears that this wetland is predominately sustained by a culvert from the road that drains into the scrub/shrub portion of the study area along the roadside. Vegetation in Wetland E-N consists of snowberry (*Symphoricarpos albus* – FACU), Scouler's willow (*Salix scouleriana* – FAC), and meadowsweet (*Spiraea douglasii* – FACW) in the shrub layer. Reed canary grass dominates the herbaceous layer, with Himalayan blackberry interspersed. Hydric Soil indicators included a reduced matrix with. Soils from 0 to 5 inches are a very dark grayish brown (10YR 3/2) silt loam and turn very dark gray (10YR 3/1) from 5 to 16 inches with dark brown (7.5YR 3/4) redox concentrations. Wetland hydrology was indicated by oxidized rhizospheres along living roots, drainage patterns and geomorphic position. This is a slope HGM class wetland that rates as a Category IV wetland (Table 1) with a 50-foot buffer.

Wetland F-N (2,650 sq. ft.)
Wetland F-N is characterized as a palustrine, forested/scrub-shrub wetland and is located in the northeastern portion of the property adjacent to NE Lockwood Creek Road (Fig 5). This wetland appears to be predominately sustained by a road culvert that drains into this of the study area and may contain drain tile that is artificially draining this portion of the study area. Vegetation in Wetland F-N is dominated by black cottonwood (*Populus balsamifera* – FAC) and Nootka rose (*Rosa nutkana* – FAC) in the tree and shrub canopies, with soft rush and colonial bent grass in the herbaceous layer. Hydric soil indicators included a reduced matrix. Soils from 0 to 16 inches are a very dark grayish brown (10YR 3/2) clayey silt loam with brown (7.5YR 4/4) redox concentrations. Wetland hydrology was indicated by oxidized rhizospheres along living roots, drainage patterns and geomorphic position. This is a slope HGM class wetland that rates as a Category III wetland (Table 1) with an 80-foot buffer.

Table 1. Summary of Wetland Ratings/ Buffer Width & Classification (Figs. 2 & 4)

Wetland	Water Quality Score	Hydrologic Score	Habitat Score	Total Score	Ecology Wetland Classification	Buffer Width (feet)	Cowardin Classification	HGM Classification
A-S	5	4	5	14	IV	50	PEMA	Depressional
B-S	6	5	5	16	III	80	PEMA	Slope
C-S	5	4	5	14	IV	50	PEMA	Depressional
D-S	5	4	5	14	IV	50	PEMC	Slope
E-S	5	4	5	14	IV	50	PEMC	Depressional
D-N	5	4	5	14	IV	50	PEMA	Slope
E-N	6	4	5	15	IV	50	PEMA	Slope
F-N	6	5	5	16	III	80	PEMA	Slope

3.3 Non-wetlands
The non-wetland portions of the property are primarily open grassland that appears to be used primarily as hay land. Vegetation in the upland areas is similar to the wetland vegetation and is more than likely a pasture seed mixture that has been sown for the pasture/hay uses. Vegetation in the grassland area is more than likely a pasture seed mixture that has been sown for the

pasture/hay uses. This area consists tall sweet vernal grass, false rye grass, colonial bent grass, and spreading bent grass, velvet grass. In addition, there are two areas with mixed shrub and tree cover. Vegetation in the upland areas to the north along the roadside consists of black cottonwood, cascara (*Frangula pershiana* – FAC), Nootka rose, Himalayan blackberry, trailing blackberry (*R. ursinus* – FACU) and reed canary grass. A shrub row along the western property line is primarily Himalayan blackberry, with small patches of Oregon ash, bitter cherry (*Prunus emarginata*) and Nootka rose. No wetland hydrology or soil indicators were observed in these areas of the study site.

Photographs of the study area and wetlands are provided in Photo-Sheet 1.

4.0 AVOIDANCE AND MINIMIZATION

Mitigation sequencing is typically avoidance, minimization and compensation for unavoidable wetland impacts. The Applicant is proposing to permanently impact five of the eight wetlands within the study area to provide for the school and required supporting amenities and infrastructure. Due to the need for the school and the lack of suitable available sites for development of a school site, as outlined in the alternatives analysis, avoidance of all of the wetlands within the study area is not practicable for this project. The site has been designed to minimize wetland impacts by avoiding three wetlands and their associated buffers. Compensation will be accomplished through the purchase of wetland bank credits from the EFLMB. As outlined in Section 6 below, EFLMB will adequately mitigate for the loss of wetland functions from this project in the East Fork Lewis River Watershed.

The following additional measures will be taken to avoid/minimize additional impacts to wetland and buffer areas:

1. All wetland, wetland buffer, and riparian buffer boundaries will be temporarily flagged in the field prior to construction.
2. Erosion control measures (e.g. straw bale sediment barriers or sediment fence) will be installed to prevent siltation from occurring in the critical areas during construction.
3. The erosion control measures will be removed once construction is completed and vegetation has become established.

5.0 WETLAND IMPACTS

The Applicant is proposing to directly impact Wetlands C-S, D-S, E-S, E-N, and F-N for a total of 2.34 acres of permanent impact as per Table 2 and shown in Sheets 5, 6, 7, 8, 9, 10, and 11. The impacts will occur for the construction the new school building (approx. 77,275 ft^2), visitor, staff and bus parking areas, bus loading and unloading areas, physical education field, outdoor playfield, and stormwater facilities. All of the wetlands are located within the hayfield and provide low to moderate functions for water quality, hydrology and habitat (Table 1).

Table 2. Proposed Direct Wetland Impacts (Sheets 5 through 11).

Identifier	Ecology Rating	Area (acres)	Fill/Excavate (acres)		
			Direct	Indirect	Total Impacts
Wetland C-S	IV	0.08	0.08		0.08
Wetland D-S	IV	1.72	1.72		1.72
Wetland E-S	IV	0.46	0.46		0.46
Wetland E-N	IV	0.02	0.02		0.02
Wetland F-N	III	0.06	0.06		0.06
Total Impacts			**2.34**	**0.00**	**2.34**

6.0 WETLAND COMPENSATION

The Applicant is proposing to permanently impact five (5) of the eight (8) wetlands within the project area. Four of these wetlands are Category IV wetlands and one is a Category III wetland as rated by Ecology's rating system for western Washington. These unavoidable, permanent wetland impacts will be compensated through the purchase of bank credits from the EFLMB. LCMS 10.300.120(c)(i-ii) states*: wherever possible, replacement or enhancement shall occur on site and (ii) – however, where the applicant can demonstrate that an off-site location is in the same drainage basin, and that greater biological and hydrological values will be achieved, the city may approve such off-site mitigation*. The wetland impacts for this project require an Individual Permit (IP) from the USACE under Section 404 of the Clean Water Act (CWA) and a Section 401 Water Quality Certificate from Ecology. The mitigation requirements for the CWA permits are outlined in the Compensatory Mitigation for Losses of Aquatic Resources Final Rule (33 CFR Part 332 – Mitigation Rule). The preferred mitigation sequence under the mitigation rule is – 1) mitigation bank; 2) in-lieu fee program; and 3) permittee-responsible mitigation. Mitigation banks and in-lieu fee are preferred because they are based on a watershed approach, have a higher ecological success, consolidate resources, and provide consistency and predictability for success. There is an opportunity to enhance 0.72 acres of the non-impacted wetlands onsite. However, these wetlands will be surrounded by development for the school and future development of the project area. Typically, enhanced wetlands surrounded by development do not provide high functions and values and functions may diminish over time as more development occurs. From a watershed approach the mitigation bank option provides higher quality wetland functions and values as outlined below. In addition, the school district is considering using the remaining onsite wetlands for studies by the students.

The impacts to the wetlands listed in Tables 2 and 4 (Sheets 5-11) will be compensated through the purchase of bank credits for the EFLMB. This plan has been prepared to meet the mitigation requirements of LCMC 18.300.090 (6) and Sections 401 and 404 of the Clean Water Act. EFLMB is located in north Clark County and is part of the Fargher Lake system. EFLMB is a 113-acre site located within the East Fork Lewis River Watershed as is the project area (Sheet 12). The bank sponsor conducted a functional assessment of the bank site using the Washington State Method for Assessing Wetland Functions (WAFAM): Volumes I and II (Hruby et al,

1999). Based on this assessment, the bank sponsor concluded that wetland functions could be significantly increased through manipulation of the site. As stated in the EFLMB the ecological goals of the bank areas follows:
1. Restore wetland hydrology by disabling the extensive ditch and drain tile system that was in place when the bank was established;
2. Establish a variety of native wetland habitat types comparable to pre-agricultural conditions and in accordance with targeted hydrologic regimes and elevations across the site;
3. Control invasive species, including but not limited to, reed canarygrass and Himalayan blackberry;
4. Create and enhance wildlife habitat, structure and function of the site.
As per the EFLMB instrument, the bank is projected to re-establish 108.2 acres of wetland, enhance 0.29 acres of wetland and preserve 4.77 acres of wetland and upland forest. The anticipated functional lift for water quality, hydrology and habitat as presented in the EFLMB Instrument are as follows:

6.1 Hydrology

Prior to Bank construction, groundwater, runoff, and flood water from the tributary to Rock Creek entering the Bank site was quickly and effectively conveyed downstream through the extensive drain tile and ditch system. Disabling drain tiles and plugging ditches will allow the site to saturate, creating new wetland area (108+ acres), which will significantly increase flood water storage within the watershed. This reduces peak flows downstream of the Bank, decreases downstream erosion, and provides groundwater recharge that helps to alleviate low flows downstream of the Bank site during the dry season.

6.2 Water Quality

The Bank's contributing basin includes rural residences and paved roads that contribute untreated stormwater runoff to the Bank site. Because the contributing basin is largely undeveloped, it is expected that future land use in the surrounding area will only increase the level of sediments, nutrients, and toxics that could potentially enter the site. Post-construction wetland functions related to water quality, such as removing sediments, nutrients, metals, and toxic organic substances will significantly increase as vegetation establishes. Specifically, the wetland will store water seasonally and during flood events, slowing and reducing sediment transport, and multiple vegetative classes will filter metals and toxic organic substances and remove nutrients in the increased aerobic conditions. Furthermore, trees and shrubs planted along the tributary to Rock Creek will help keep the stream temperature cooler during the hot summer months.

6.3 Wildlife Habitat

Overall habitat suitability for invertebrates, amphibians, wetland-associated birds, and wetland-associated mammals will improve tremendously over existing conditions of the Bank site, specifically because of the increase in wetland area containing a variety of hydroperiods (permanent, seasonal, and occasional inundation and/or saturation), vegetative species richness, habitat interspersion, the habitat features (large woody debris and bird nesting boxes), eventual canopy closure of forested wetland areas, and corridors to adjacent upland areas. Although the site has been designed to exclude resident and anadromous fish to prevent stranding, fish habitat

in the onsite ditches and downstream is enhanced because plantings along the tributary to Rock Creek will provide temperature regulation and leaf litter. The wetlands will also increase groundwater recharge that will supplement low flows during the dry season, and the wetland vegetation will improve water quality entering the stream.

The service area for EFLMB is shown in Sheet 12. Both the bank and project area are located within the East Fork Lewis River Watershed. The credit-debit ratio for the bank is outlined in Table 3 (Bank Instrument – Appendix E, Table E-1). All of the proposed wetlands to be impacted are Category IV wetlands (Table 1) as rated by Ecology's updated rating system for western Washington. As per the approved EFLMB bank instrument, Category IV wetlands are compensated at a 0.85:1 ratio and Category III wetlands are compensated at a 1:1 ratio (Table 3). The Applicant is proposing to purchase 2.0 bank credits (Table 4) to compensate for 1.94 acres of wetland permanent impact to four Category IV and 0.06 acres of Category III wetlands within the project area. As described above the EFLMB will provide significant ecological lift for wetland functions in the East Fork Lewis River Watershed and adequately compensate for the loss of these functions on the proposed development site.

Table 3. Credits Recommended for Wetland Impacts for EFLMB.

Category of Impacted Wetland	Credit Recommended per Impact Acre
I	Case-by-Case
II	1.2:1
III	1:1
IV	0.85:1
Critical Area Buffer	Case-by-Case

Table 4. Mitigation Bank Credits Proposed for Direct Wetland Impacts.

Wetland	Total Wetland Area (on-site) (ac)	Permanently Filled Wetland Area (ac)	Indirect Wetland Impact Area (sq.ft./ac)	Ecology Rating	Credit Ratio Needed per Impact Direct/Indirect	Credit Proposed for Use
C-S	0.08	0.08		IV	0.85:1	0.07
D-S	1.72	1.72		IV	0.85:1	1.46
E-S	0.46	0.46		IV	0.85:1	0.39
E-N	0.02	0.02		IV	0.85:1	0.02
F-N	0.06	0.06		III	1:1	0.06
00	**2.34**	**2.34**				**2.0**

7.0 TEMPORARY BUFFER IMPACT/RESTORATION

To allow for construction of the development site, the outer edge of the buffer for Wetlands D-N and C-S will be graded as shown in Sheets 6 and 7. Currently, the graded areas are in open grassland areas and no woody vegetation is proposed to be removed for this activity. This area will be graded at a slope of 3:1 or less. At final grading the area will consist of permeable soils

that will be seeded with a native grass mixture (or similar) as per Table 5. There will be no loss of buffer function once this area has been restored. Silt fence will be placed on the outer perimeter of the graded area to ensure that wetland functions are not impacted during this activity.

Table 5. Buffer Restoration Herbaceous Mixture.

Native Red Fescue	*Festuca rubra rubra*	85%
California Brome	*Bromus carnatius*	6%
Blue Wildrye	*Elymus glaucus*	7%
Lupine	*Lupinus rivularis*	2%

Seeding Rate:
1.5 pounds/1000 ft²
65.36 pounds/Acre

8.0 DEMARCATION

As per LCMC18.300.090(6)(f)(v & vi) the outer perimeter of the wetland buffers shall be demarcated as follows:

> (v) Marking Buffer during Construction. The location of the outer extent of the wetland buffer shall be marked in the field and such markings shall be maintained throughout the duration of the permit.
>
> (vi) Permanent Marking of Buffer Area. A permanent physical demarcation along the upland boundary of the wetland buffer area shall be installed and thereafter maintained. Such demarcation may consist of logs, a tree or hedgerow, fencing, or other prominent physical marking approved by the hearings examiner. In addition, small signs shall be posted at an interval of one per lot or every 100 feet, whichever is less, and perpetually maintained at locations along the outer perimeter of the wetland buffer worded substantially as follows: "Wetland and Buffer – Please Retain in a Natural State."

The school district has chosen a 3-rail wood fence with chain link fabric to demarcate the buffer perimeter. The fence will have a gate installed to allow for access for maintenance and future wetland studies for school students. Signs will be placed every 50 feet as per the comments received by Ecology. Details of the fence are provided in Appendix A.

9.0 ADDITIONAL CONDITIONS

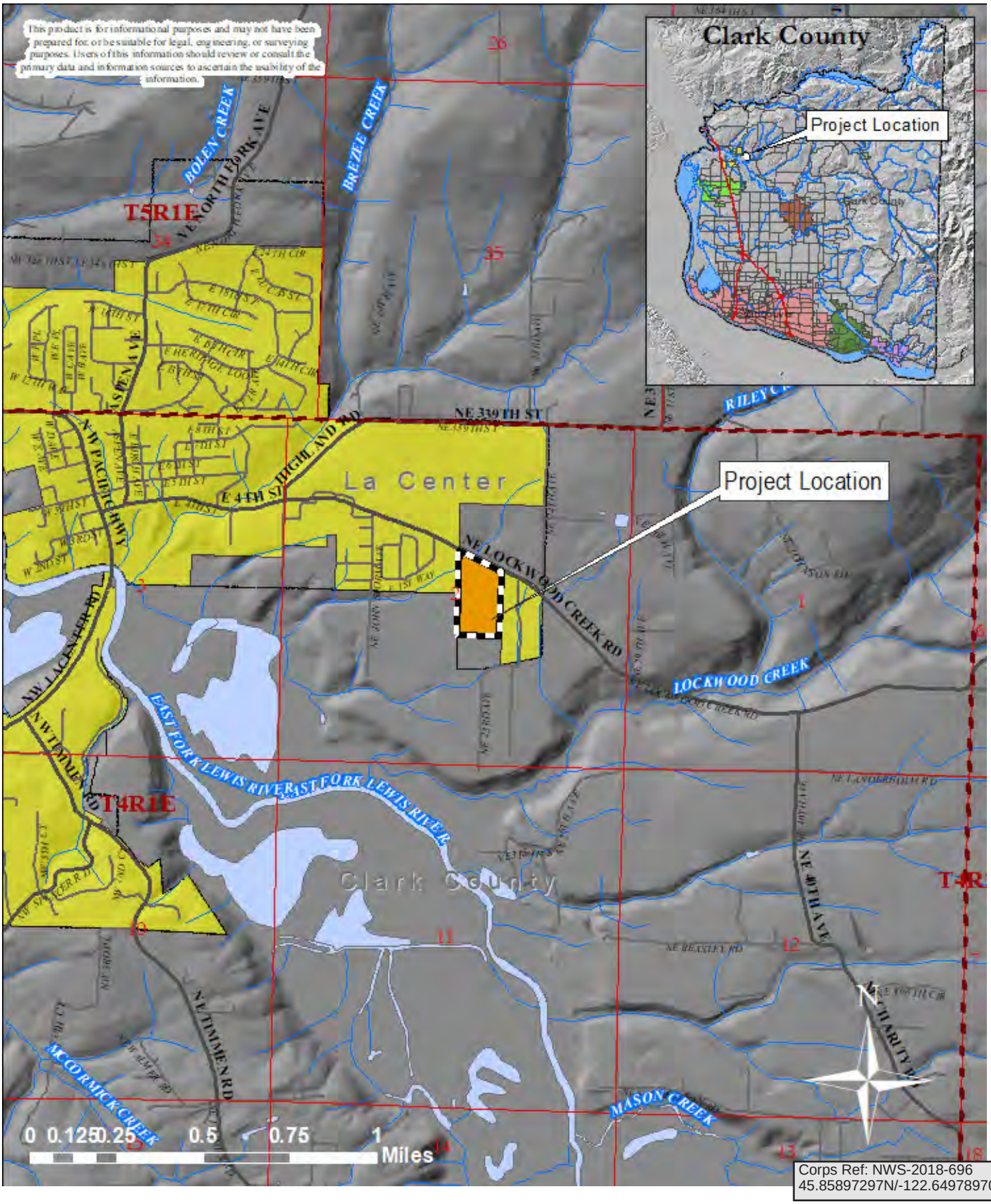
Erosion control silt fencing is required around the outer edge of the retained wetland buffers prior to construction of the site. A wetland biologist shall be onsite during the installation of the silt fence to ensure that it is placed in the correct locations and properly installed. The silt fence shall be maintained throughout the construction period. Once construction has been completed the fence shall be removed.

The retained wetland and buffers will be placed in a conservation covenant to protect these critical areas as per LCMC18.300.090(6)(f)(vii).

10.0 LITERATURE CITED

Hruby, T. 2014. Washington State wetland rating system for Western Washington – Revised. Washington State Department of Ecology Publication # 04-06-15. http://www.ecy.wa.gov/pubs/0406025.pdf.

Hruby, T, K. Harper, and S. Stanley. 2009. Selecting Wetland Mitigation Sites Using a Watershed Approach. Washington State Department of Ecology Publication #09-06-032.



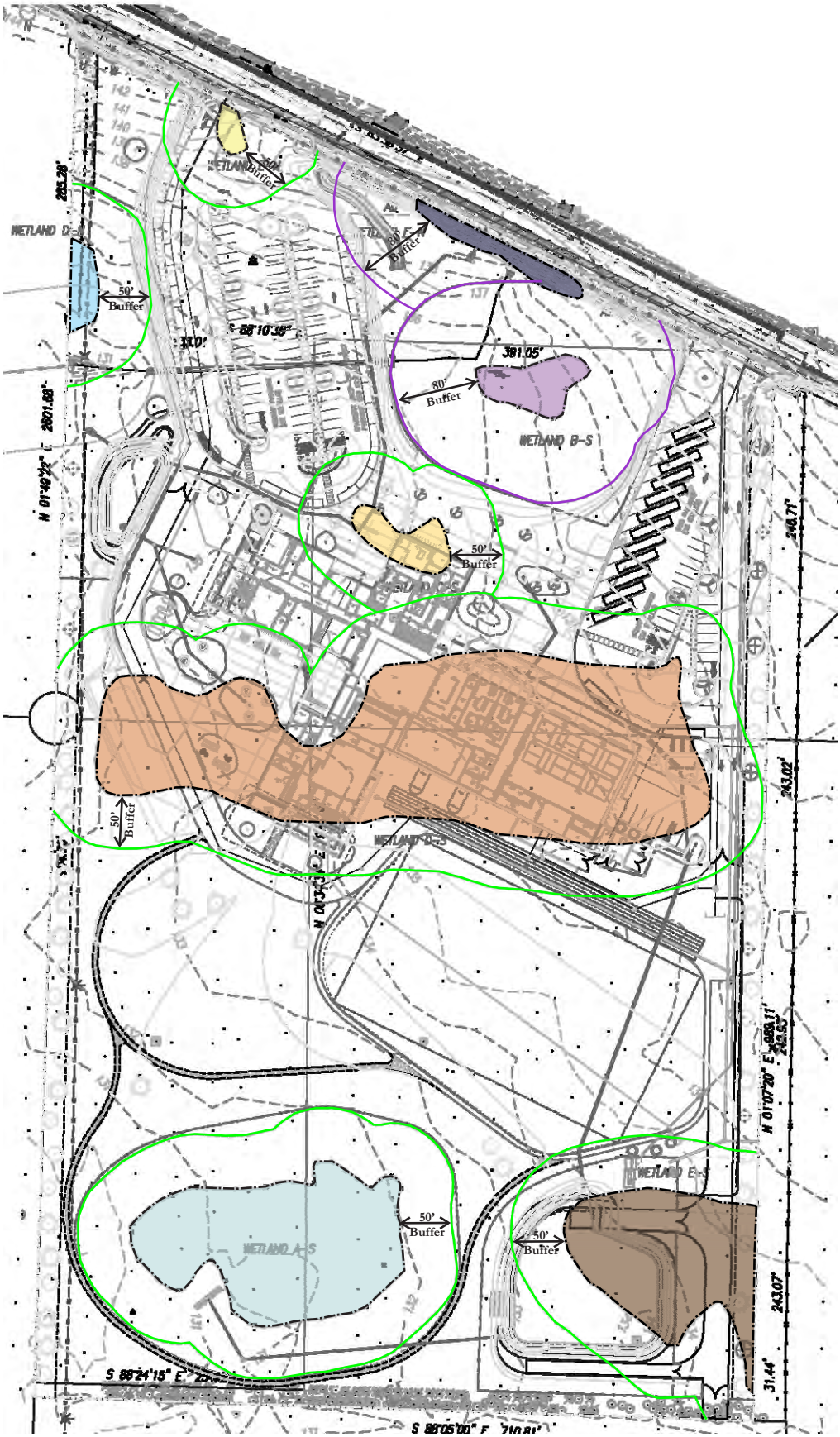
APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

PURPOSE: Final Wetland Mitigation Plan - Updated

Project Location Map
La Center Middle School
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: November 15, 2019



- Wetland A-S - 27,200 sq.ft. (0.62 ac.) Category IV - 50' Buffer
- Wetland B-S - 3,770 sq.ft. (0.09 ac.) Category III - 80' Buffer
- Wetland C-S - 3,315 sq.ft. (0.08 ac.) Category IV - 50' Buffer
- Wetland D-S - 74,740 sq.ft. (1.72 ac.) Category IV - 50' Buffer
- Wetland E-S - 19,960 sq.ft. (0.46 ac.) Category IV - 50' Buffer
- Wetland D-N - 290 sq.ft. (0.006 ac.) Category IV - 50' Buffer
- Wetland E-N - 1,050 sq.ft. (0.02 ac.) Category IV - 50' Buffer
- Wetland F-N - 2,650 sq.ft. (0.06 ac.) Category III - 80' Buffer

Study Area Wetlands
Category III Wetlands
= 6,420 sq.ft. (0.15 ac.)
Category IV Wetlands
= 126,555 sq.ft. (2.91 ac.)

N

Approximate Scale
1" = 160'

Corps Ref: NWS-2018-696
45.85897297N/-122.64978970W

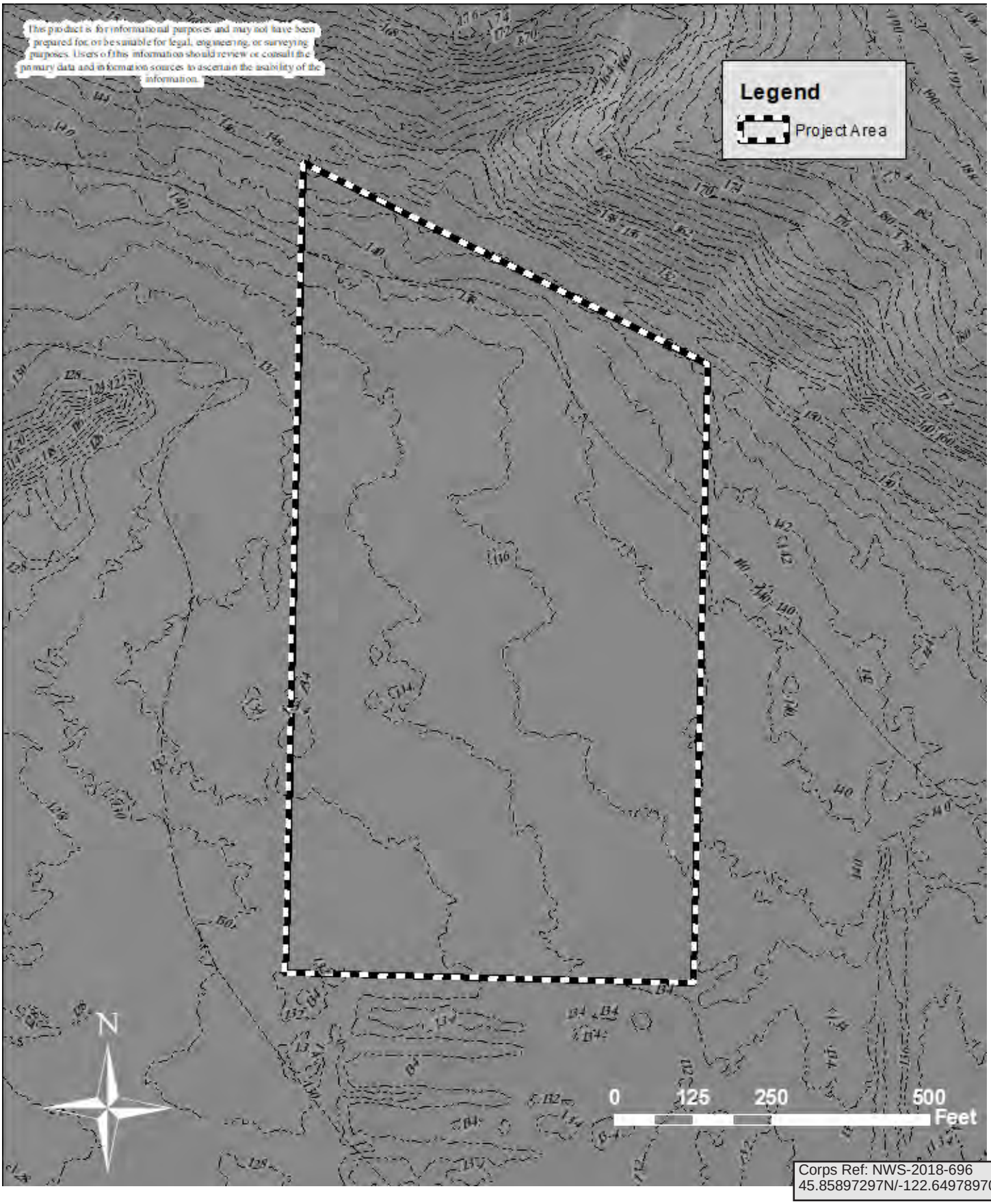
APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

PURPOSE: Final Wetland Mitigation Plan - Updated

Site Plan/Wetlands
La Center Middle School
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: November 15, 2019



APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

PURPOSE: Final Wetland Mitigation Plan - Updated

Topography Map
La Center Middle School
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: November 15, 2019

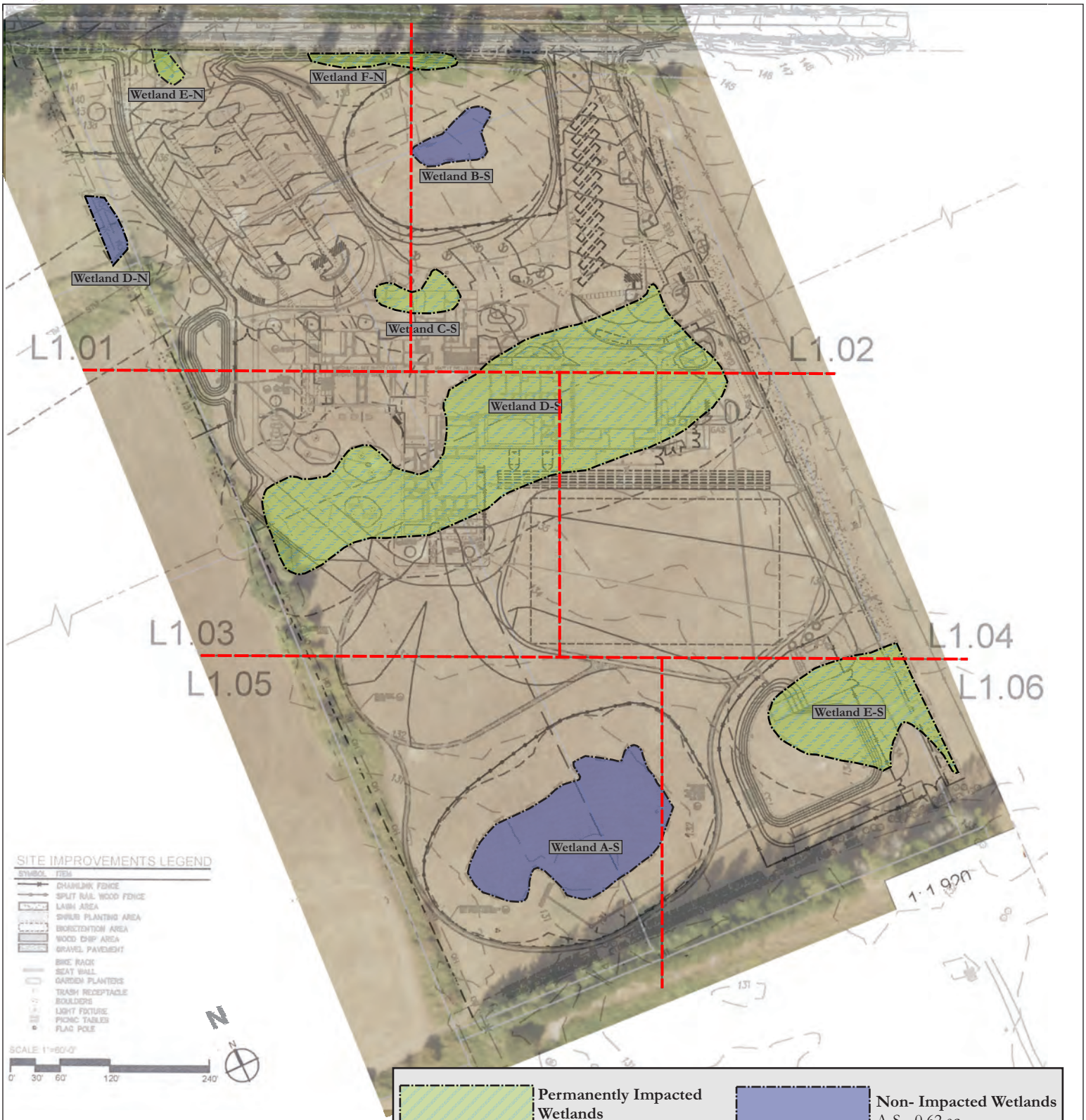
APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

PURPOSE: Final Wetland Mitigation Plan - Updated

Delineated Wetlands and Buffers
La Center Middle School
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: November 15, 2019



Permanently Impacted Wetlands

Wetland C-S - Impact Area = 0.08 ac.
Wetland D-S - Impact Area = 1.72 ac.
Wetland E-S - Impact Area = 0.46 ac.
Wetland E-N - Impact Area = 0.02 ac.
Wetland F-N - Impact Area = 0.06 ac.
Total Wetland Impact Area = 2.34 ac.

Non- Impacted Wetlands

A-S - 0.62 ac.
B-S - 0.09 ac.
D-N - 0.006 ac.

Corps Ref: NWS-2018-696
45.85897297N/-122.64978970W

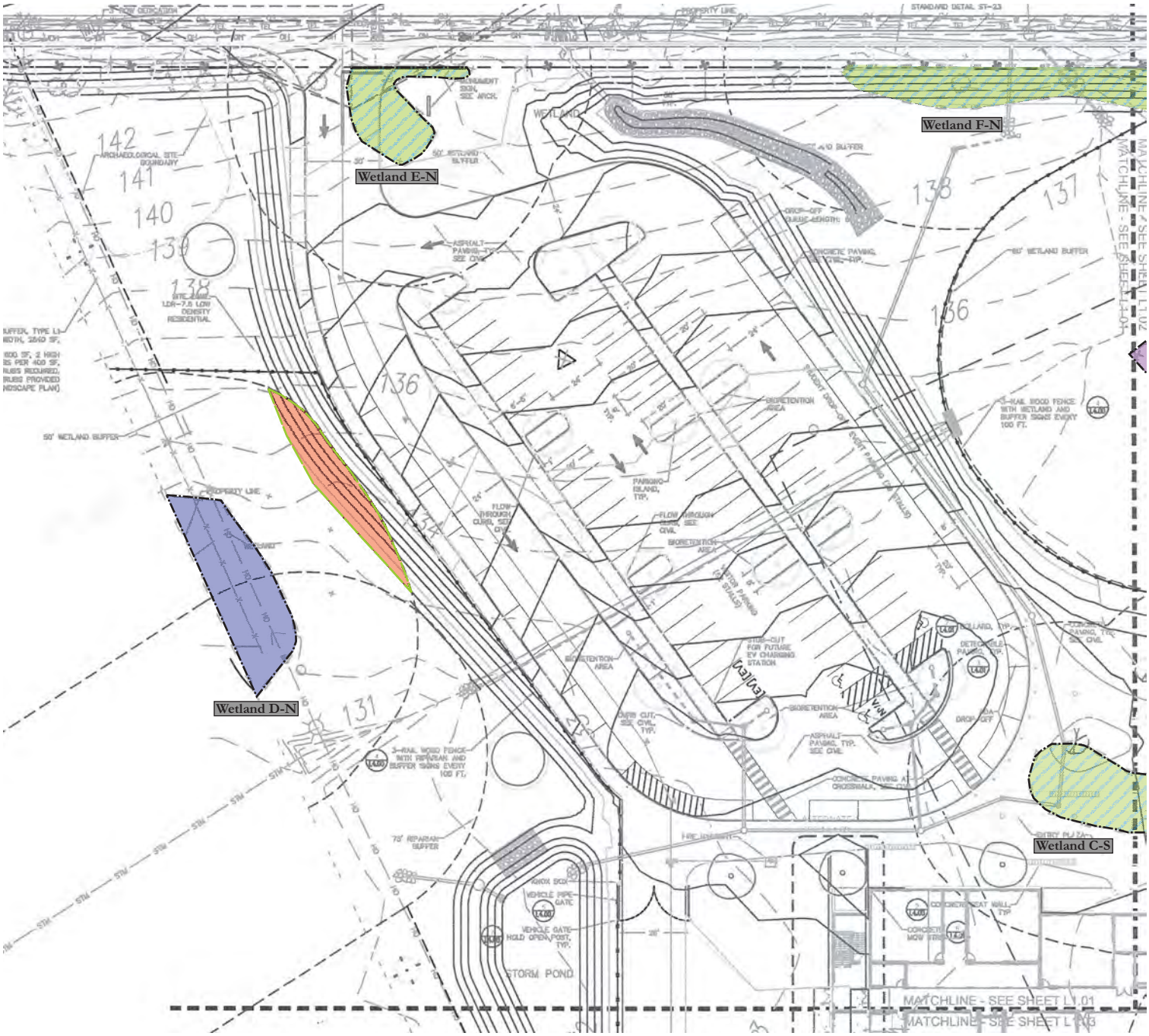
APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

PURPOSE: Final Wetland Mitigation Plan - Updated

Site Plan/Wetland Impact Key
La Center Middle School
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: November 15, 2019



N

Approximate Scale
1" = 60'

Corps Ref: NWS-2018-696
45.85897297N/-122.64978970W

Permanently Impacted Wetlands

Wetland C-S - Impact Area = 0.08 ac.
Wetland D-S - Impact Area = 1.72 ac.
Wetland E-S - Impact Area = 0.46 ac.
Wetland E-N - Impact Area = 0.02 ac.
Wetland F-N - Impact Area = 0.06 ac.
Total Wetland Impact Area = 2.34 ac.

Non- Impacted Wetlands
A-S - 0.62 ac.
B-S - 0.09 ac.
D-N - 0.006 ac.

Temporary Buffer Impact Area

APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

PURPOSE: Final Wetland Mitigation Plan - Updated

L1.01
La Center Middle School
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: November 15, 2019

N

Approximate Scale
1" = 60'

Corps Ref: NWS-2018-696
45.85897297N/-122.64978970W

Permanently Impacted Wetlands

Wetland C-S - Impact Area = 0.08 ac.
Wetland D-S - Impact Area = 1.72 ac.
Wetland E-S - Impact Area = 0.46 ac.
Wetland E-N - Impact Area = 0.02 ac.
Wetland F-N - Impact Area = 0.06 ac.
Total Wetland Impact Area = 2.34 ac.

Non- Impacted Wetlands
A-S - 0.62 ac.
B-S - 0.09 ac.
D-N - 0.006 ac.

Temporary Buffer Impact Area

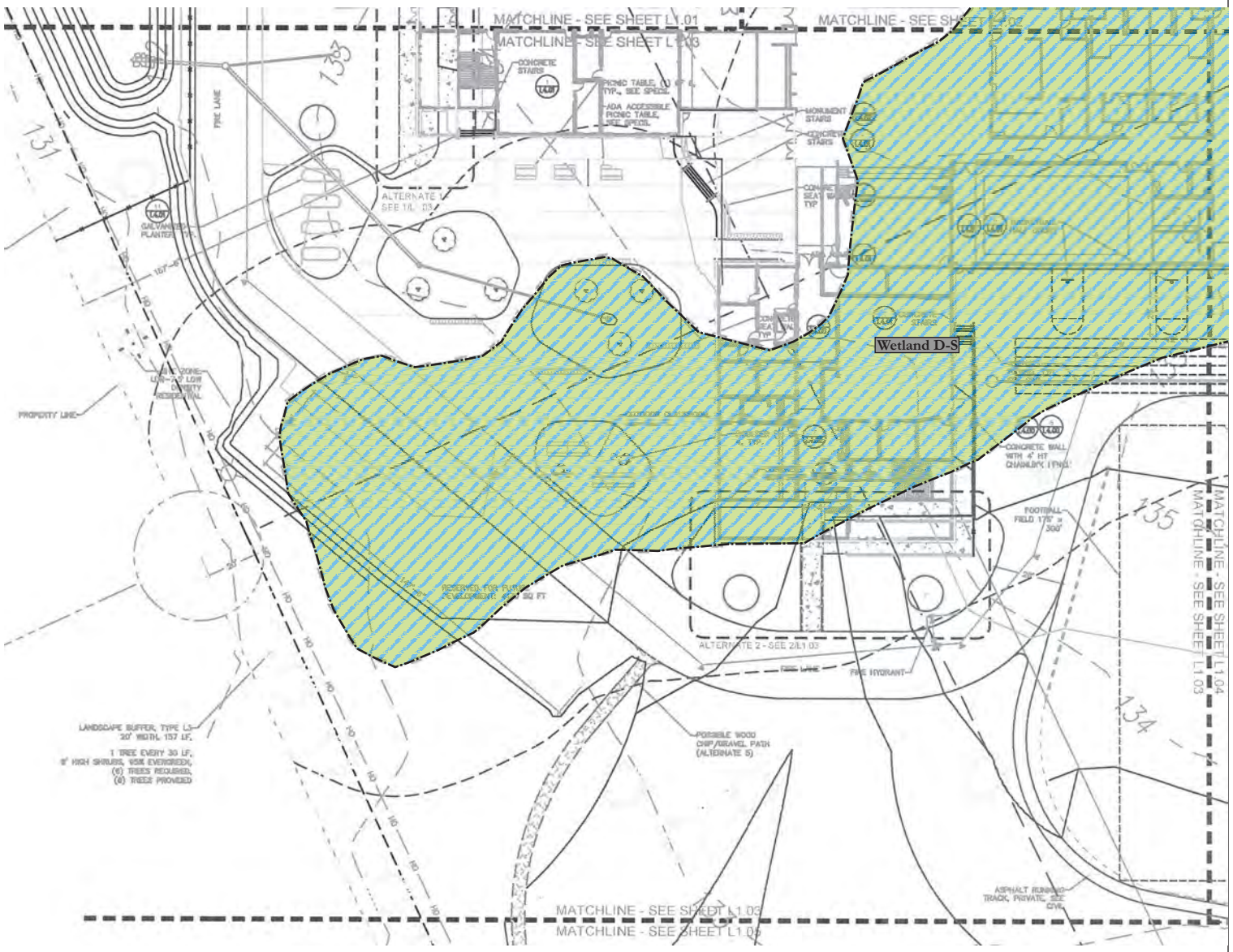
APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

PURPOSE: Final Wetland Mitigation Plan - Updated

L1.02
La Center Middle School
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: November 15, 2019



N

Approximate Scale
1" = 60'

Corps Ref: NWS-2018-696
45.85897297N/-122.64978970W

Permanently Impacted Wetlands

Wetland C-S - Impact Area = 0.08 ac.
Wetland D-S - Impact Area = 1.72 ac.
Wetland E-S - Impact Area = 0.46 ac.
Wetland E-N - Impact Area = 0.02 ac.
Wetland F-N - Impact Area = 0.06 ac.
Total Wetland Impact Area = 2.34 ac.

Non- Impacted Wetlands

A-S - 0.62 ac.
B-S - 0.09 ac.
D-N - 0.006 ac.

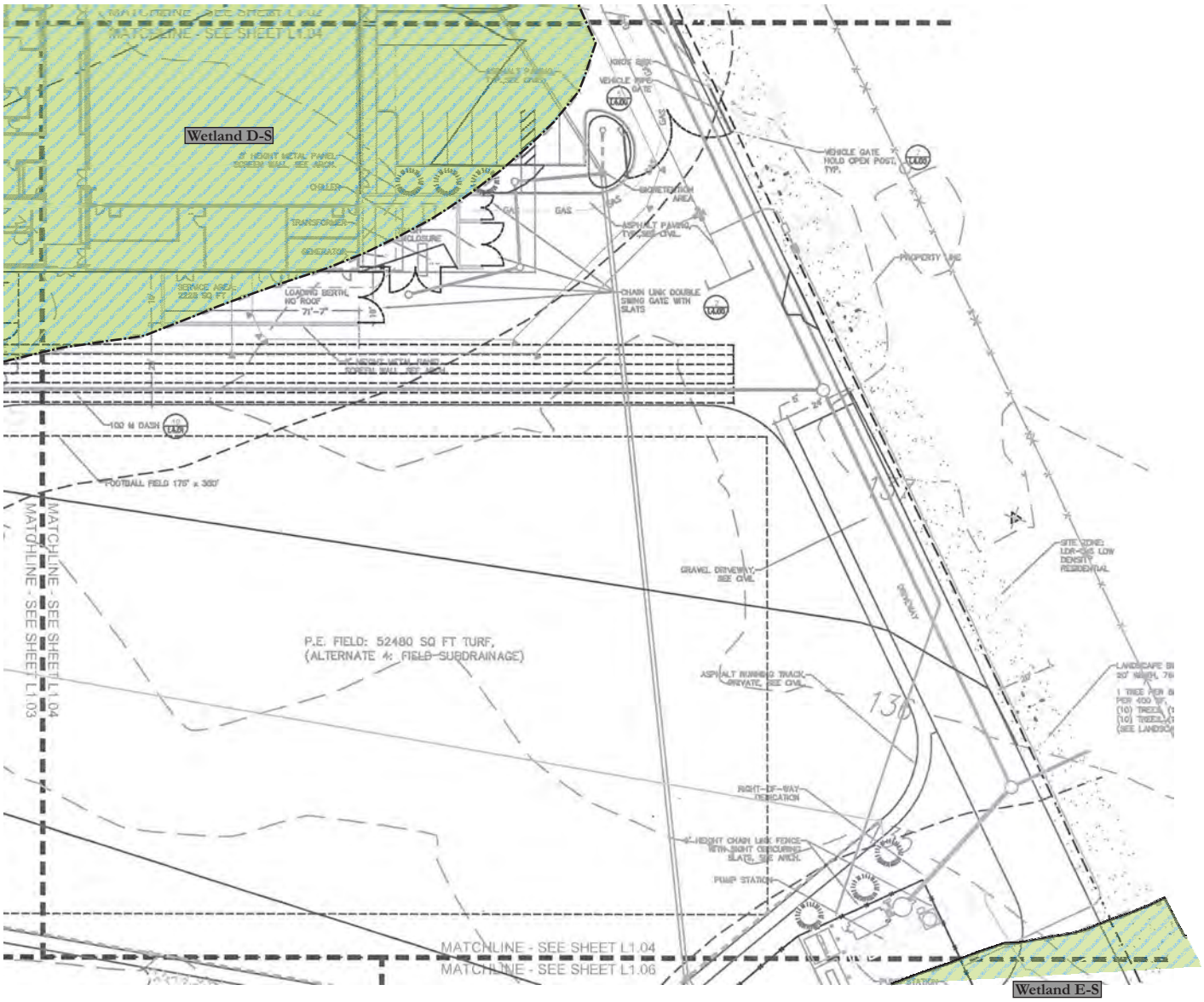
APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

PURPOSE: Final Wetland Mitigation Plan - Updated

L1.03
La Center Middle School
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: November 15, 2019



Approximate Scale
1" = 60'

Corps Ref: NWS-2018-696
45.85897297N/-122.64978970W

Permanently Impacted Wetlands

Wetland C-S - Impact Area = 0.08 ac.
Wetland D-S - Impact Area = 1.72 ac.
Wetland E-S - Impact Area = 0.46 ac.
Wetland E-N - Impact Area = 0.02 ac.
Wetland F-N - Impact Area = 0.06 ac.
Total Wetland Impact Area = 2.34 ac.

Non- Impacted Wetlands
A-S - 0.62 ac.
B-S - 0.09 ac.
D-N - 0.006 ac.

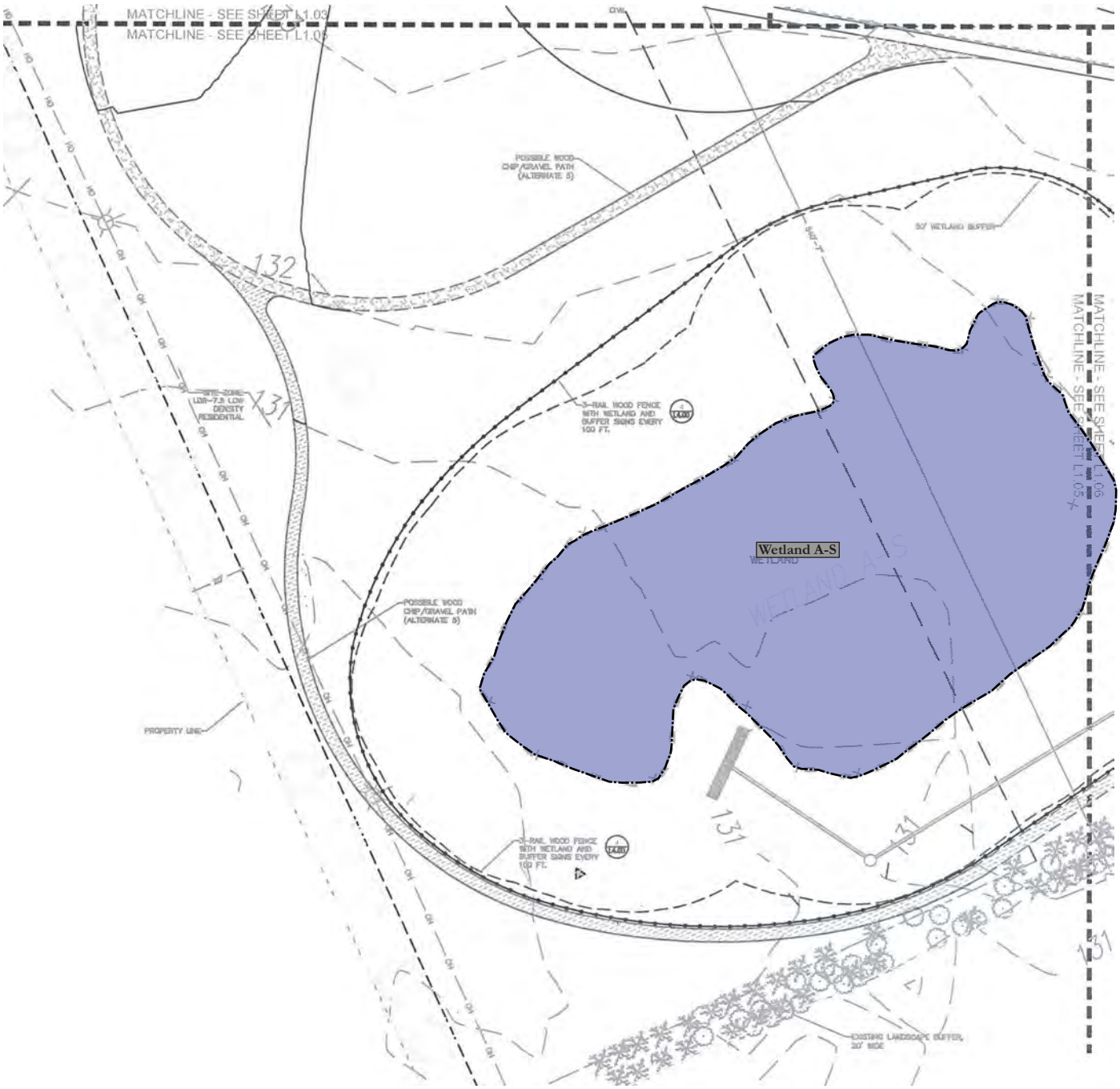
APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

PURPOSE: Final Wetland Mitigation Plan - Updated

L1.04
La Center Middle School
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: November 15, 2019



N

Approximate Scale
1" = 60'

Corps Ref: NWS-2018-696
45.85897297N/-122.64978970W

Permanently Impacted Wetlands

Wetland C-S - Impact Area = 0.08 ac.
Wetland D-S - Impact Area = 1.72 ac.
Wetland E-S - Impact Area = 0.46 ac.
Wetland E-N - Impact Area = 0.02 ac.
Wetland F-N - Impact Area = 0.06 ac.
Total Wetland Impact Area = 2.34 ac.

Non- Impacted Wetlands
A-S - 0.62 ac.
B-S - 0.09 ac.
D-N - 0.006 ac.

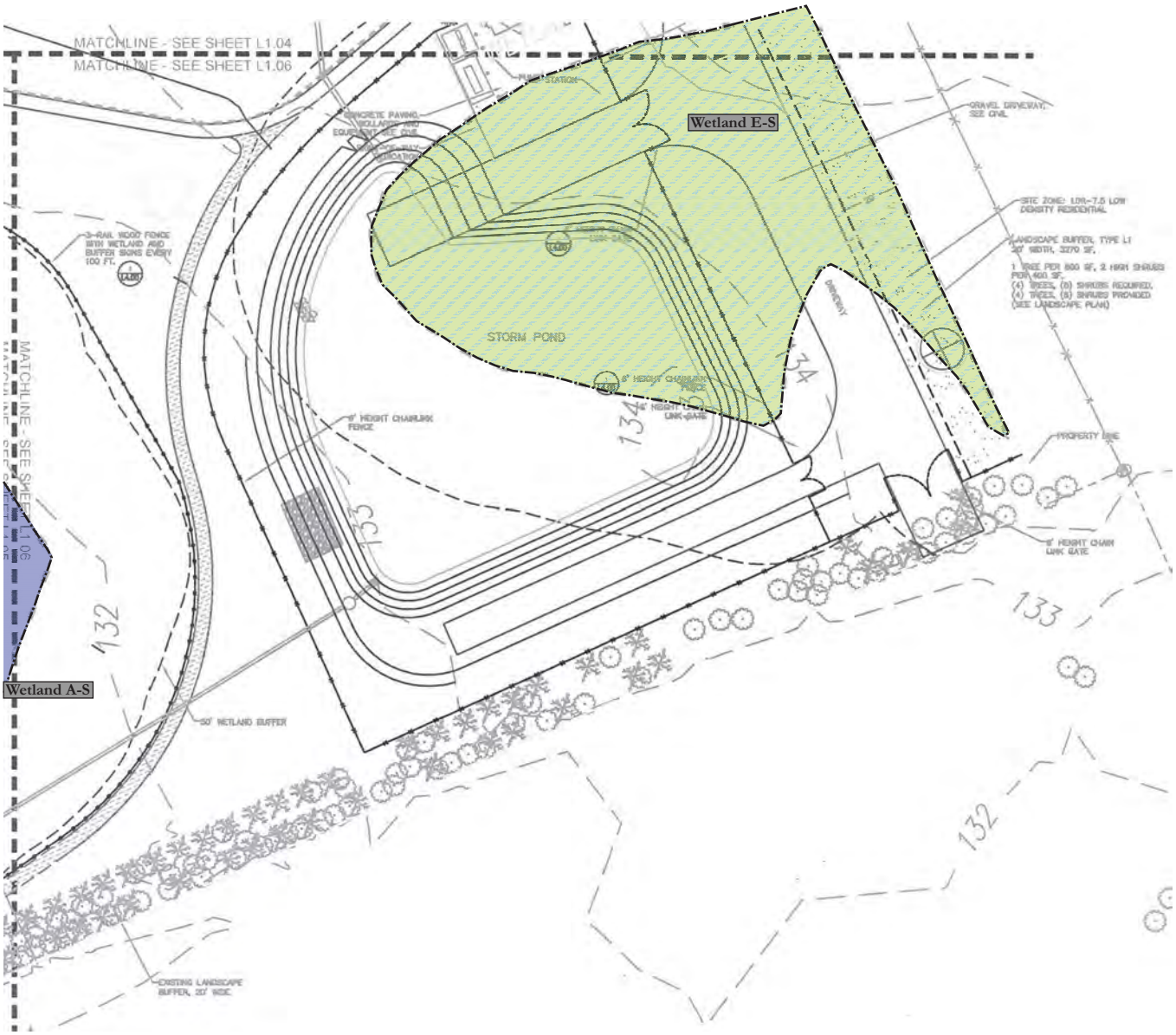
APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

PURPOSE: Final Wetland Mitigation Plan - Updated

L1.05
La Center Middle School
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: November 15, 2019



N

Approximate Scale
1" = 60'

Corps Ref: NWS-2018-696
45.85897297N/-122.64978970W

Permanently Impacted Wetlands

Wetland C-S - Impact Area = 0.08 ac.
Wetland D-S - Impact Area = 1.72 ac.
Wetland E-S - Impact Area = 0.46 ac.
Wetland E-N - Impact Area = 0.02 ac.
Wetland F-N - Impact Area = 0.06 ac.
Total Wetland Impact Area = 2.34 ac.

Non- Impacted Wetlands
A-S - 0.62 ac.
B-S - 0.09 ac.
D-N - 0.006 ac.

Temporary Buffer Impact Area

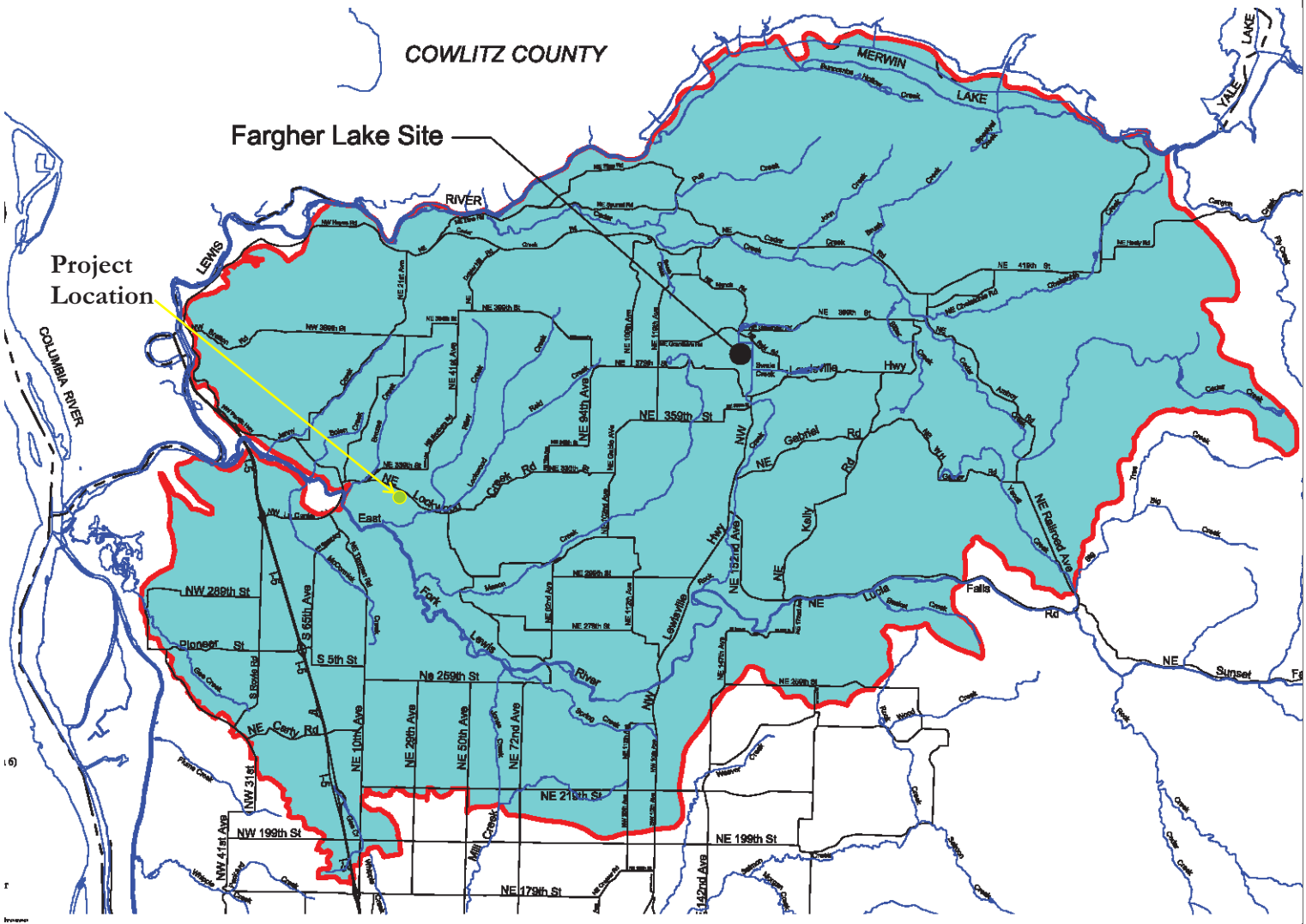
APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

PURPOSE: Final Wetland Mitigation Plan - Updated

L1.06
La Center Middle School
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: November 15, 2019



N

Corps Ref: NWS-2018-696
45.85897297N/-122.64978970W

APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

PURPOSE: Final Wetland Mitigation Plan - Updated

EFLMB Service Area/Project Location
La Center Middle School
La Center, Washington

OLSON ENVIRONMENTAL, LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: November 15, 2019

Corps Ref: NWS-2018-696
45.85897297N/-122.64978970W

APPLICANT:
La Center School District
725 NE Highland Ave
La Center, WA 98629

PURPOSE: Final Wetland Mitigation Plan - Updated

Study Area Photographs
La Center Middle School
La Center, Washington

OLSON ENVIRONMENTAL LLC
222 E. Evergreen Blvd., Vancouver, WA 98660 ph: 360-693-4555 fax: 360-699-6242

PROPOSED ACTIVITIES IN:
Lockwood Creek Watershed
LEGAL: NE ¼ of S2, T4N, R1E, W. M.
NEAR: La Center, Washington
COUNTY: Clark County
DATE: November 15, 2019

Photo-Sheet 1