# **City of St. Helens** Planning Commission September 12, 2017 Agenda

## 1. **7:00 p.m.** Call to Order and Flag Salute

## 2. Consent Agenda

- a. Planning Commission Minutes dated August 8, 2017
- 3. **Topics from the Floor:** Limited to 5 minutes per topic (Not on Public Hearing Agenda)

#### 4. Soda Tax Presentation & Discussion - Finance Director, Matt Brown

- 5. **Public Hearing Agenda:** (times are earliest start time)
  - a. 7:30 p.m. Site Design Review & Sensitive Lands Permit at 354 N. 15<sup>th</sup> Street & 474 N. 16<sup>th</sup> Street St. Helens School District

## 6. Term Expiration Discussion

- 7. **Planning Director Decisions:** (previously e-mailed to the Commission)
  - a. Home Occupation (Type I) at 35100 Burt Rd. Pet sitting/walking/transport home office
  - b. Sign Permits (x6) at 2275 Columbia Blvd. Dutch Bros Drive-Thru
  - c. Sign Permit (Banner) at 2100 Block of Columbia Blvd. Amani Center Luau
  - d. Home Occupation (Type I) at 275 S. 12<sup>th</sup> Street Home office for construction business
  - e. Temporary Use Permit at 385 N. 3<sup>rd</sup> Street St. Helens High School Construction Class conex box (1 year)
  - f. Sign Permit (x2) at 585 S. Columbia River Highway Best Western Hotel
  - g. Site Design Review (Minor) at 900 Port Ave. Portland General Electric Company

## 8. Planning Department Activity Reports

a. August 29, 2017

# 9. For Your Information Items

# 10. Next Regular Meeting: October 10, 2017

## Adjournment

The St. Helens City Council Chambers are handicapped accessible. If you wish to participate or attend the meeting and need special accommodation, please contact City Hall at 503-397-6272 in advance of the meeting.

# City of 多t. 狗elens Planning Commission Meeting August 8, 2017 Minutes

<u>Members Present</u> :	Al Petersen, Chair Dan Cary, Vice Chair Greg Cohen, Commissioner Sheila Semling, Commissioner Audrey Webster, Commissioner Kathryn Lawrence, Commissioner Russell Hubbard, Commissioner
Members Absent:	None
Staff Present:	Jacob Graichen, City Planner Jennifer Dimsho, Associate Planner
Councilors Present:	Ginny Carlson, City Council Liaison
Others Present:	Lesley Everett Peter & Elaine Frank

The Planning Commission meeting was called to order by Chair Al Petersen at 7:00 p.m. Chair Petersen led the flag salute.

# **Consent Agenda**

#### **Approval of Minutes**

Commissioner Semling moved to approve the minutes of the July 11, 2017 Planning Commission meeting. Commissioner Webster seconded the motion. Motion carried with all in favor. Chair Petersen did not vote as per operating rules.

# **Topics From The Floor**

There were no topics from the floor.

#### **<u>Public Hearing</u>** Lesley Everett Comprehensive & Zone Map Amendments/ CPZA.1.17 1160 & 1170 Deer Island Road

It is now 7:01 p.m. and Chair Petersen opened the public hearing. There were no ex-parte contacts, conflicts of interest or bias in this matter.

City Planner Jacob Graichen entered the following items into the record:

• Staff report packet dated July 27, 2017 with attachments

Graichen introduced the Commission to the proposal, as presented in the staff report. He said the Commission is making a recommendation to Council tonight. A small portion of the property being considered for a zone change is owned by the City. Graichen said the proposal is to change the zone of the property from Light Industrial to Apartment Residential and amend the Comprehensive Plan zoning to General Residential from Light Industrial. He said there are two non-conforming residential buildings (one duplex and one detached single-family dwelling) on the property.

Vice Chair Cary asked if any commercial uses are allowed in Apartment Residential. Graichen said neighborhood stores are allowed in Apartment Residential (via Conditional Use Permit). Graichen said, overall, Light Industrial is not very favorable to commercial uses.

Commissioner Cohen asked how many dwelling units would be allowed on the property with Apartment Residential zoning. Graichen said about 15 units if it was developed with multi-family dwellings.

Commissioner Webster asked about the City's portion of the property. Graichen said the City's portion is not being used how it used to be. It used to be an important access to the City's Public Works Shops, but now the shops are accessed via Oregon Street. Graichen said one of the benefits of including the City's portion in this proposal is that it removes a Light Industrial island, allowing for a more consistent Apartment Residential-zoned area.

Commissioner Semling asked how the zone change will affect the City's use of their property. Graichen said the City's property has only been used as an access point. Since it is not a key access point to the Public Works Shop any longer, the zone change will not affect operations. Commissioner Hubbard asked if it would be buildable. Graichen said yes, it could potentially be purchased and/or combined with adjoining properties. Vice Chair Cary clarified that the zone change would not inhibit the City using it as an access. Graichen said that is correct.

#### **IN FAVOR**

**Frank, Elaine. Property Owner.** Frank said when they inherited the property, it had a non-conforming duplex and single-family dwelling unit. In September 2016, the small single-family dwelling caught fire and caused a lot of water and smoke damage inside. Frank said the insurance company would pay for damages, but the estimates to bring the unit up to code were higher than it would be to just tear it down and rebuild. That is when they said they approached Graichen about rebuilding a new home. Frank said the previous tenant was very hostile and it took a long time to clean out all of the junk he had left. Frank said they considered the industrial options for redevelopment, but they thought St. Helens did not need more storage units. Frank said they had many people ask them if they could rent the dwelling unit when it was repaired. Frank said they are considering options for how to rebuild the site. They are considering a single-family

dwelling or, if they can afford it, a duplex to match the existing one. They like working with NOAH and would like to keep working with them. Frank said they would still need to divide the lot in order to develop it.

**Franklin, Patty. 60745 Robinette Road.** Franklin has been a realtor for 27 years. She has lived in this area for 10 years. Franklin's business is primarily in the Portland-Metro area. She said development surrounding transit centers in other locations is usually multi-family. She thinks it does not make sense for that area to be zoned industrial. Franklin asked if the City considers the access point abandoned. Graichen said he would not consider it abandoned, but it does not have the use it once did. Franklin said it has been this way for over 10 years.

#### IN OPPOSITION

No one spoke in opposition.

#### END OF ORAL TESTIMONY

There were no requests to continue the hearing or leave the record open.

#### **CLOSE PUBLIC HEARING & RECORD**

The applicant waived the opportunity to submit final written argument after the close of the record

#### DELIBERATIONS

Vice Chair Cary said multi-family development makes sense adjacent to the transit center. Chair Petersen agreed that it makes more sense as Apartment Residential than Light Industrial.

#### MOTION

Commissioner Cohen moved to recommend approval of the Zoning Map and Comprehensive Plan Amendment. Commissioner Semling seconded. All in favor; none opposed; motion carries.

# Draft Branding & Wayfinding Master Plan

Associate Planner Dimsho discussed the Branding & Wayfinding Master Plan project with the Commission. She said that she is not asking for a formal recommendation, but just feedback. The final Master Plan will go before City Council in September for adoption by resolution. The Travel Oregon grant reporting deadline is the end of the September, which is why the Commission is reviewing an incomplete version of the Master Plan. This draft does not contain the Design Intent package, the Sign Location Plan, and the Demolition and Relocation Plan for Highway 30 because they are forthcoming from the consultant. She asked if anyone was interested in these additional documents via email. The Commission said yes.

Commissioner Cohen said he would like the Welcome to St. Helens sign with the Community Achievement Award on Highway 30 to be relocated somewhere where it can still be seen by the public, like in a park. Chair Petersen noted that all signage on the highway will have to comply with ODOT and ODOT Rail, depending on their location in the right-of-ways. Vice Chair Cary asked if the sign blades will be three dimensional, depending on where the destination is located. Dimsho said yes. Vice Chair Cary asked if signage will be installed on trails and in parks. Dimsho said yes, but not with this Master Plan effort. This Master Plan includes the design package for park and trail signs, but only recommends locations along priority routes.

She said as part of the completion of the project, temporary corrugated plastic signage for about four locations will be installed in October. One of them includes a kiosk. The life-size temporary signage will be showcased at the upcoming Citizens Day in the Park from 12 p.m. to 3 p.m. at McCormick Park on August 12. Staff will be there to answer questions and discuss the project with the general public. Dimsho said the temporary wayfinding signage will be installed through the month of October for all of the incoming Spirit of Halloweentown tourists. Permanent wayfinding signage will be installed as grants and funding are available.

# Acceptance Agenda: Planning Administrator Site Design Review

a. Site Design Review at 2105 Columbia Blvd. - El Tapatio Mexican Restaurant re-model

Commissioner Webster moved to accept the acceptance agenda. Commissioner Semling seconded. All in favor; none opposed; motion carries.

# **Planning Director Decisions**

a. Accessory Structure at 197 N. 3<sup>rd</sup> Street - New garage

There were no comments.

# Planning Department Activity Reports

There were no comments.

# For Your Information Items

Graichen said the St. Helens Middle School public hearing will be at the next meeting.

There being no further business before the Planning Commission, the meeting was adjourned at 7:50 p.m.

Respectfully submitted,

Jennifer Dimsho Associate Planner

APPROVED XX/XX/17

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Date	Petersen	Hubbard	Lawrence	Cohen	Cary	Semling	Webster
01/10/17	Р	Р	A	Р	Р	P.	Р
02/14/17	Р	Р	Р	Р	А	Р	Р
03/14/17	Р	Р	A	Р	Р	Р	Р
04/11/17	Р	Р	Р	Р	Р	Р	Р
05/09/17	Р	Р	Р	А	Р	Р	Р
06/13/17	Р	Р	Р	Р	Р	Р	Р
07/11/17	A	Р	Р	Р	Р	Р	Р
08/08/17	Р	Р	Р	Р	Р	Р	Р
09/12/17							
10/10/17							
11/14/17							
12/12/17							

#### 2017 Planning Commission Attendance Record P=Present A=Absent Can=Cancelled

## CITY OF ST. HELENS PLANNING DEPARTMENT STAFF REPORT Site Design Review SDR.6.17 Sensitive Lands Permit SL.3.17

DATE:	September 5, 2017	
To:	Planning Commission	
FROM:	Jacob A. Graichen, AICP, City Planner	
APPLICANT: Owner:	St. Helens School District same as applicant	
ZONING: LOCATION:	Public Lands, PL 354 N. 15 <sup>th</sup> Street and 474 N. 16 <sup>th</sup> Street; Tax Assessor Map No. 4N1W-4BA-100 & 4N1W-4AB-3400	
<b>PROPOSAL:</b>	Replace existing St. Helens Middle School (SHMS) and Columbia County Educational Campus (CCEC)	

#### The 120-day rule (ORS 227.178) for final action for this land use decision is Dec. 6, 2017.

#### SITE INFORMATION / BACKGROUND

The site is zoned Public Lands, PL where public schools are a permitted use. Thus, the normal land use process would include a Site Design Review, which is normally administrative and doesn't automatically require a public hearing. At their May 9, 2017 monthly meeting the Planning Commission thought it was more appropriate to have a public hearing on this matter given the type and magnitude of the proposal. Pursuant to SHMC 17.24.090(2), the director may refer any application for review to the Planning Commission; this is the case here.

The Middle School building and athletic facility, along the south and east portions of the subject property predate the City's land use records. Early aerial photography at City Hall (c. 1983) shows it. So we know it's been around for *at least* approximately four decades.

In 1984 a Conditional Use Permit was applied for "to allow an administration office complex for a government body." The School District wanted to move their administrative office out of the old John Gumm School (251 St. Helens Street) basement because of lack of space and security there. This is when the northwest corner of the subject property started to be developed with buildings and parking area.

In 1999 the School District applied for a Site Design Review (SDR.5.99) to site eight additional modular buildings just to the east of the original Middle School building. Over time, some of those have been removed; a few still remain.

This proposal includes a complete replacement of the original Middle School building, its associated modular buildings, athletic facility, internal access and off-street parking. However, the N. 16<sup>th</sup> Street access is not proposed to change.

In the NW corner of the subject property, the District's administrative office will remain, its adjacent off-street parking area is proposed to be partially modified, and a group of modular buildings that make up the Columbia County Education Campus (CCEC alternative school) will be largely replaced by a new building. The existing N. 16<sup>th</sup> Street access is not proposed to change.

Note: the applicant also applied for sign permits, which will be handled administratively and separate from this.

#### **PUBLIC HEARING & NOTICE**

Hearing dates are as follows: September 12, 2017 before the Planning Commission.

Notice of this proposal was sent to surrounding property owners within 100 feet of the subject property(ies) on August 23, 2017 via first class mail. Notice was sent to agencies by mail or e-mail on the same date. Notice was published in the <u>The Chronicle</u> on August 30, 2017.

Given the immediate proximity to known wetlands, staff also sent a Wetland Land Use Notification to the Oregon Department of State Lands on August 24, 2017. *No response as of the date of this decision*. However, as of August 24, 2017 DSL has concurred with the wetland delineation prepared in advance of this project (DSL File WD #2017-0305).

#### AGENCY REFERRALS & COMMENTS

As of the date of this staff report, the following agency referrals/comments have been received that are pertinent to the analysis of this proposal:

**City Engineering**: I don't have many comments regarding this proposal that have not already been addressed and/or discussed. All new and/or existing public utilities, including public walkways, located on the property shall be contained within a public utility or access easement. If no easement exists, new easements meeting the City's requirements shall be provided by the owner. A stormwater plan shall be submitted that addresses any increase in runoff from the site and how the potential impacts will be mitigated. Frontage improvements shall be constructed to meet City standards.

**Police Chief:** *Staff inquired with the Chief about this matter. In regards to the existing path that is proposed to be an official public way in lieu of sidewalks for a portion of the site:* Kids use it every day and so does the occasional bad guy. Its well-travelled and semi-lit from the parking lot. So long as this pathway is well lit and remains free from heavy shrubbery and foliage, it's going to be okay.

*The Chief also discussed one of the trails that accesses the site from the southeast (and is proposed to be abandoned):* The other trail that is behind the the school that goes down into Jack Ass Canyon is much more of a concern. We've had numerous, countless encounters with bad guys, and gals, along that trail. That trail is dark, secluded and generally a place to avoid after

dark. It was a main, but unofficial thoroughfare for school kids for a long time. But I think that the school took steps to block it off a few years ago.

*The Chief expressed the following comments about lighting:* You need to know that anyone standing just beyond the beams of headlights remains invisible in the current football field. I'd like it if the new fields had some kind of lighting that would give off just enough light to create shadows so that people are visible after dark.

#### **APPLICABLE CRITERIA, ANALYSIS & FINDINGS**

#### Site Design Review—SDR.6.17 and SL.3.17

*Note:* the applicant prepared a very thorough application. Thus, this report is intended to supplement that, make corrections where necessary, and provide necessary commentary.

<u>SHMC Chapter 17.32 – Zones and Uses:</u> The standards of the PL zone are less prescribed than other zoning districts. The applicant appears to have a design that will continue to coexist with the surrounding land uses, which are residential in use and zone. Surrounding zoning districts are Apartment Residential, AR and General Residential, R5.

<u>SHMC Chapter 17.40—Wetlands and Riparian Areas:</u> There are two significant wetlands on the subject property per the City's Local Wetlands Inventory. Wetland D-6 is along the western side of and entirely located within the subject property. A portion of Wetland J-3 runs along the southeast corner of the subject property.

Both wetlands D-6 and J-3 are considered Type 1 per this chapter and include a 75' wide upland protection zone, whose impact is also regulated.

Wetland J-3 is outside any area of impact.

There are some impacts proposed for Wetland D-6. However, note that this chapter became effective on December 1, 2003, after some protection zone impacts to Wetland D-6 already occurred. One of these areas is the access drive along the south side of the wetland. The applicant proposes to move that drive southward to give some protection zone back to Wetland D-6.

The other impact is to install underground storm drainage infrastructure.

**Some impacts were not proposed but have already occurred.** Trees that are inventoried on the plans submitted that are at least within wetland J-3's upland protection zone have been cut. Observing the cuts in the field shows no signs of internal rot. Removal of these trees technically required a permit.



Multiple large diameter trees recently cut on the east side of wetland J-3, within the wetland's statutory upland protection zone.

Plans submitted for this proposal seem to demonstrate their preservation.

Log cuts show no sign of rot. No permit was obtained for removal, despite requirements for such.

At least one large diameter tree was recently cut on the west side of wetland D-6, within the wetlands statutory upland protection zone.

Log cuts show no sign of rot. No permit was obtained for removal, despite requirements for such.

Moreover, this tree may be in the public rightof-way and subject to protection as a public tree per SHMC 8.12.090. The City has no record of approval by the City Forester for its removal.

The removal of these trees without a permit is contrary to SHMC 17.40.040(6)(g) and 17.132.030. On page 15 of the application narrative it states that "The District understands it is the responsibility of the District to obtain all necessary permits and approvals" for wetland and protection zone impacts. Per SHMC 17.12.030 a violation of this code carries a maximum fine of \$1,250. A fine should be imposed and loss of these trees incorporated into the restoration plan.

In additional to vegetative restoration, this tree removal emphasizes the importance of a management plan for wetland D-6 and its protection zone, which shall include signage in sufficient locations to alert students, staff, the public and contractors of the sensitive lands beyond and limits of allowed impact.

Note that there is a smaller wetland, not subject to the provisions of this chapter (i.e., not "significant" to the City) just east of wetland D-6. A bridge is proposed over that wetland to preserve it.

**<u>SHMC Chapter 17.44</u>**—<u>Sensitive Lands:</u> The applicable sensitive land per this Chapter are slopes at or exceeding 25%. The applicant addressed the approval criteria for this on page 27 of the application narrative, which mentions specific geotechnical recommendations.

Site specific Geotech Reports shall be required for each and every location slopes at or exceeding 25% are involved before the applicable building/development permit issuance. Method of slope stability based on the site specific Geotech Reports shall be certified by a qualified professional engineer. Recommendation of said site specific Geotech reports shall be followed.

**<u>SHMC Chapter 17.72</u>**<u>Landscaping and Screening:</u> The applicant notes that "methods to protect existing plant materials will be provided as part of the building permit application."

The applicant notes street trees planted along the right-of-way where N. 15<sup>th</sup> Street transitions to N. 16<sup>th</sup> Street. Note that Sheet H as described in the narrative (pg. 37) does not show proper property geometry at this location (right-of-way curvature is not shown).

The desired street tree is a Skyline Honeylocust, which is considered "large" per this chapter. There is overhead power along N. 15<sup>th</sup>, N. 6<sup>th</sup>, and West Streets but it is on the opposite side of the street, thus, no need to restrict to "small" trees.

Applicant notes that further detail (specific tree location and conformance with location requirements of this Chapter) will occur with construction documents.

The applicant notes that no existing trees will be used as street trees. Actually, trees associated with wetland D-6's protection zone will be street trees by default at that stretch of N. 16<sup>th</sup> Street. The City is allowing an exemption from the normal street frontage requirements to avoid impact to this natural area. Thus, existing trees remain and will be along the street.

Note that additional trees are proposed along the north side of the site as described on page 41 of the application narrative.

Some retaining walls will be as high as 10<sup>°</sup>. This is acceptable from a wall height regulation standpoint to accommodate reconstruction and improvement of the site, subject to proof of integrity by a qualified engineer. The City's Building Official will likely need to review some of these as well under the prevue of the Building Code.

As described on page 31 and 43 of the application narrative, service facilities (e.g., HVAC, emergency generator) will be in an enclosure for the middle school building. Some rooftop equipment is said to be screened as well. For CCEC, service facilities are internal. Rooftop equipment is said to be placed so as not to be visible. Both uses include a trash enclosure.

Conditions to ensure the end result meets the purpose of the code is important for this matter given multiple variables and points of view for these items required to be screened.

As described on page 45 of the application narrative, the applicant proposes to meet the requirement for large parking areas to have treed landscape islands to break up parking into rows not exceeding 7 spaces. Two exceptions are proposed: 1) for the existing CCEC parking lot (staff's take is it may remain as an existing condition) and 2) disabled person parking row of the new Middle School parking area closest to the school. Given the need to meet ADA requirements, this is acceptable to staff.

More detailed plans will be required prior to development permit issuance.

<u>SHMC Chapter 17.80—Off-Street Parking and Loading Requirements</u>: The applicant notes that the parking spaces meet the dimensional requirements of the code. But at a scale of 1":100' precise measurement is difficult. Final plans submitted for development permits will need to be at a larger scale.

As described on pages 49-50 of the application narrative, some exception to the distance of offstreet parking spaces to land use served is requested. The proposal seems reasonable, especially considering that the uses served are not just the CCEC and middle school building, but also surrounding grounds (e.g., athletic facilities).

Note that no compact parking spaces are proposed.

Note that the applicant proposes some variation to bicycle parking requirements (page 51 of the application narrative). One is the within 50' distance from primary entrances requirement for the Middle School. Staff feels this is acceptable given the large number of these spaces required and multiple other ingress/egress points to/from the building.

The other is the mix of bicycle and skateboard/scooter racks, despite the code's focus on bicycles. Obviously, the principle user of the facility is youth. And some youth like bicycles, but also other forms of non-motorized transportation. The intent of this law is to accommodate nonmotorized modes of travel. Because the proposal is a school for children/teenagers, staff feels this is acceptable.

Parking requirement calculations are predominately addressed on pages 53-54 of the application narrative. Building plans will need to be consistent with the description (e.g., number of classrooms).

Note that a temporary parking area is proposed off of West Street north of the CCEC building to accommodate construction. This doesn't need to be paved being temporary, but will need to be removed with the site restored before project completion.

<u>SHMC Chapter 17.84—Access, Egress, and Circulation:</u> The existing street access points are not proposed to change. They are currently acceptable.

Note a temporary access is proposed from West Street. This will need to be removed (via street frontage improvements) before project completion.

Internal walkway are shown with interconnectedness throughout. Final plans required at a larger scale to evaluate details.

<u>SHMC Chapter 17.92—Mixed Solid Waste and Recyclables Storage:</u> Larger scale final plans will be required to ensure dimensional requirements as stated in the application narrative or per the code are met.

SHMC Chapter 17.96—Site Development Review: One important aspect this chapter addresses is crime prevention. On page 89 of the application narrative it mentions overlapping illumination patters on sheet B1, but it doesn't show it very well, leaving much to one's imagination. Staff observed many breaches in the surrounding fence on the east side where people crawl under to reach the current athletic fields. As described in the Police Chief's comments above, more illumination of the new athletic fields is desired. The Commission needs to take this into consideration.



This picture is of the pedestrian/bike access point from the SE side of the site. In the application, it notes that this trail will be abandoned.

As seen here, it is officially closed, but the breech in the fence show unofficial entry likely still occurs. Staff observed other such issues along the fence on the east side, even where there was no gate.

This and given comments from the Police Chief, illumination of the new athletic fields should be considered to aid in crime prevention.

**SHMC Chapter 17.132—Tree Removal:** Note that though this chapter focuses on trees over 12" dbh, the applicant includes trees over 6" dbh. The Site Design Review chapter addresses trees of this size, though not identically to the provisions of this Chapter. In any case, tree replacement scheme appears acceptable.

The applicant notes that trees to remain will be protected with temporary fencing placed at the dripline of individual trees or grouping of trees. This needs to be included in final development plans to help ensure it is done.

SHMC Chapter 17.152—Street and Utility Improvement Standards: In regards to streets, both 15<sup>th</sup>/16<sup>th</sup> Street and West Street that abut the site and provide access are classified as collector streets per the City's Transportation Systems Plan.

Street segments abutting the subject property are treated differently as follow:

- S. 12<sup>th</sup> Street: Abuts the subject property on its SE side. It is improved and includes curb-tight sidewalks on the same side as the subject property. This is a collector classified street. Given topography, which physically disconnects the property from the street and the existing sidewalk, no requirements here are warranted.
- Willamette Street (Columbia Boulevard): This undeveloped right-of-way abuts the south side of the subject property. Much is within a ravine and include wetlands protected by City code. Any improvement here is not warranted.
- N. 15<sup>th</sup>/16<sup>th</sup> Street south of the southerly (middle school) driveway: Due to rock outcrops this area is challenging without substantial rock removal. Instead of a tradition sidewalk, the City is willing to incorporate a long time existing asphalt path as part of the public walkway system. Being outside of a public right-of-way, rights of public access needs to be established via easement or right-of-way dedication.

Since this is not a typical right-of-way sidewalk, we need to look at the City's Parks and Trails Master Plan for standards. This passageway will function as a regional trail, which requires a minimum 8' wide paved swath and a 2' clear shoulder on each side. The path is at least 8' wide and paved for its entire length. A minimum 12' wide easement/right-of-way will be required.



Along N. 15<sup>th</sup> Street facing south (away from the subject property) near the SW corner of the subject property. This multi-use path, in this case within the public right-of-way, has been in place for years. The path veers off the right-of-way and into the subject property continuing northward.



Same location as the previous photo but facing north. Note the slope along the side of the street. This is a rock outcrop that would need to be excavated to install sidewalks.

So the alternative considered here is keeping the long-time used path, but dedicating it as public access, in lieu of typical sidewalk construction for a portion of the subject property's street frontage.

Same path as the previous two photos. This is well within the subject property facing north.

Much of the path is bordered by a chain link fence along the east side.

• N. 16<sup>th</sup> Street between the southerly (Middle School) driveway and the northerly (SHSD Admin/CCEC) driveway: Due to the significant wetland that abuts this segment, the City is willing to accept a curb-tight sidewalk to avoid or minimize wetland impacts here.



At the Middle School driveway/N. 16<sup>th</sup> Street intersection facing north.

Wetland D-6 lies between this and the more northerly CCEC driveway. As such, a curbtight sidewalk is proposed despite the normal Collector Street classification standard.

SDR.6.17 & SL.3.17

• N. 16<sup>th</sup> Street north of the northerly (SHSD Admin/CCEC) driveway and the portion of West Street abutting the subject property: This segment to be built to the City's collector standards with curb, street treed landscape strip, and sidewalk.



and N. 16<sup>th</sup> Street, facing north. **Above right:** The "intersection" (curve) of N. 16<sup>th</sup> Street and West Street, facing east viewing West Street.

With ample physical room, normal Collector Street frontage standards are proposed along this segment of the subject property's street frontage.

**Water.** The site is served by water currently. In fact, City water mains are already within the subject property. This is public infrastructure that requires an easement. There is no easement currently. Some existing water main infrastructure is proposed to be removed in the SE quadrant of the site (this portion is not shown on plans provided—sheet B2). In any case, new easements will be required in addition to City Engineering review.

**Sanitary Sewer.** The site is served by sanitary sewer currently, which is located within adjacent public rights-of-way. At this point, it's assumed that all sanitary sewer infrastructure within the subject property will be private. If public infrastructure is warranted within the property, easements will be required in addition to City Engineering review.

**Storm Sewer.** Proposed infrastructure is private. If public infrastructure is warranted within the property, easements will be required in addition to City Engineering review. A drainage/storm water management plan will be required.

<u>SHMC Chapter 17.156 – Traffic Impact Analysis:</u> A traffic impact analysis is not required because the student body is not anticipated to significantly change. Nonetheless, the applicant had professional traffic analysis done to evaluate the two street access points and those where found to operate adequately for this proposal.

<u>Other issues:</u> The subject property consists of an assemblage of multiple lots as shown by the title report submitted with the application. Since this is being approved as a single unit and to avoid complex easements amongst the multitude of lots and parcels that make up the property, it shall be consolidated as one for development purposes with a land use restriction recorded on the deed of the property. Or, the applicant could replat the property.

The applicant is aware of this as evidenced by the submitted General Land Use Application form that notes "parcels to be consolidated, see Title Report."

\* \* \* \* \*

#### CONCLUSION & RECOMMENDATION

# Based upon the facts and findings herein, staff recommends approval of this Site Design Review (SDR.6.17) and Sensitive Lands Permit (SL.3.17) with the following conditions:

- 1. This approval is valid for a limited time (to establish the use) pursuant to SHMC 17.96.040.
- 2. The following shall be required **prior to development/building permit issuance for the CCEC**:
  - a. Materials including but not necessarily limited to a site plan shall be submitted to the City for review and approval demonstrating compliance with all applicable provisions of the Development Code (SHMC Title 17) and in accordance with the conditions herein. This/these material(s) shall specifically address and be subject to the following:
    - i. All improvements specific to CCEC. Temporary access and parking area to be included.
    - ii. As per originally submitted plans but with construction level detail (e.g., larger scale than 1":100').
  - iii. Methods to protect existing plant materials. This includes but is not limited to temporary fencing placed at the dripline of individual trees or grouping of trees.
  - iv. Detailed landscape plans.
  - b. Engineering/construction plans shall be submitted for review and approval. This shall include all public infrastructure proposed or required for CCEC. This includes but is not limited to the proposed water main extension.
  - c. The applicant shall provide legal descriptions per City specifications for all existing and proposed public infrastructure within the subject property related to CCEC. This includes but is not limited to the proposed water main extension.

- d. A drainage and stormwater plan shall be submitted that addresses any increase in runoff from the site and how the potential impacts will be mitigated.
- e. As per condition 6 as applicable for the CCEC portion of development.
- f. The applicant shall pay \$1,250 for illegal sensitive lands tree removal.

# 3. The following shall be required **prior to development/building permit issuance for the Middle School**:

- a. Materials including but not necessarily limited to a site plan shall be submitted to the City for review and approval demonstrating compliance with all applicable provisions of the Development Code (SHMC Title 17) and in accordance with the conditions herein. This/these material(s) shall specifically address and be subject to the following:
  - i. All improvements including restoration of the temporary access and parking area.
  - ii. As per originally submitted plans but with construction level detail (e.g., larger scale than 1":100').
- iii. Methods to protect existing plant materials. This includes but is not limited to temporary fencing placed at the dripline of individual trees or grouping of trees.
- iv. Detailed landscape plans.
- b. Engineering/construction plans shall be submitted for review and approval. This shall include all public right-of-way frontage improvements as described in this report, and all other public infrastructure proposed or required.
- c. The applicant shall provide legal descriptions per City specifications for all existing and proposed public infrastructure within the subject property not already addressed by the CCEC portion of the proposal.
- d. The applicant shall provide legal description(s) for the existing walkway between the subject property's southerly (Middle School) driveway and south property line. Easement or right-of-way dedication shall be at least 12 feet in width.
- e. A drainage and stormwater plan shall be submitted that addresses any increase in runoff from the site and how the potential impacts will be mitigated.
- f. As per condition 6.
- g. Wetland/protection zone restoration plans for wetland D-6 by a qualified environmental professional. Trees removed not reflected on the originally submitted tree plan (sheet H) shall be included with their absence mitigated as required per the Development Code.

- h. Wetland/protection zone management plan by a qualified environmental professional, which shall include signage in sufficient locations to alert students, staff, the public and contractors of the sensitive lands beyond and limits of allowed impact.
- 4. The following shall be required **prior to Certificate of Occupancy/final inspection of the CCEC** by the City Building Official:
  - a. All improvements specific to CCEC necessary to address the requirements herein, and in accordance with approved plans, shall be in place. Street frontage improvements needn't be completed at this time.
  - b. Easements for all existing and proposed public infrastructure within the subject property related to CCEC shall be recorded as approved by the City. This includes but is not limited to the existing and proposed water main.
  - c. The multitude of lots and parcels that make up the property shall be consolidated as one for development purposes with a land use restriction recorded on the deed of the property as approved by the City. As an alternative, the applicant could replat the property into a single parcel.
- 5. The following shall be required **prior to Certificate of Occupancy/final inspection of the Middle School** by the City Building Official:
  - a. All improvements not already complete for CCEC necessary to address the requirements herein, and in accordance with approved plans, shall be in place. This includes all street frontage improvements.
  - b. Easements for all existing and proposed public infrastructure within the subject property not already addressed by the CCEC portion of the proposal shall be recorded as approved by the City.
  - c. Public access easement or right-of-way dedication for the existing walkway between the subject property's southerly (Middle School) driveway and south property line shall recorded as approved by the City.
- 6. Before the applicable building/development permit issuance, site specific Geotech Reports shall be required for each and every location slopes at or exceeding 25% will be impacted or created. Method of slope stability based on the site specific Geotech Reports shall be certified by a qualified professional engineer. Recommendation of said site specific Geotech reports shall be followed.
- 7. Mitigation planting for the riparian corridor/protection zone shall be maintained for a minimum of two years. Within that time, invasive species shall be controlled (i.e., removed as needed), and mitigation plants that perish shall be replaced.

The applicant shall provide monitoring and maintenance reports performed by a qualified environmental professional upon request by the City to demonstrate compliance with this condition.

- 8. Areas where natural vegetation has been removed, and that are not covered by approved landscaping, shall be replanted pursuant to SHMC 17.72.120.
- 9. All required walkways and areas used for the parking or storage or maneuvering of any vehicle, boat, or trailer shall be improved with asphalt or concrete surfaces or other similar type materials approved by the city.
- 10. Any artificial lighting of off-street parking facilities shall be designed such that there will be no glare into nearby public rights-of-way or residences.
- 11. Service facilities such as gas meters and air conditioners which would otherwise be visible from a public street, customer or resident parking area, any public facility or any residential area shall be screened, regardless if such screening is absent on any plan reviewed by the City. This includes but is not limited to ground mounted, roof mounted or building mounted units. See SHMC 17.72.110(2).
- 12. Any requirement of the Fire Marshall as it applies to this proposal shall be met.
- 13. Owner/Developer shall be solely responsible for obtaining all approvals, permits, licenses, and authorizations from the responsible Federal, State and local authorities, or other entities, necessary to perform land clearing, construction and improvement of the subject property in the location and manner contemplated by Owner/Developer. City has no duty, responsibility or liability for requesting, obtaining, ensuring, or verifying Owner/Developer compliance with the applicable State and Federal agency permit or other approval requirements. This land use approval shall not be interpreted as a waiver, modification, or grant of any State or Federal agency or other permits or authorizations.
- 14. All or a portion of this property has been identified as wetland on the Statewide (or Local) Wetlands Inventory. If the site is a jurisdictional wetland, this proposal may require a permit from the Department of State Lands and/or the Army Corps of Engineers. You must obtain any necessary state or federal permit before beginning your project. The City of St. Helens is not liable for any delays in the processing of a state or federal permit.
- 15. No plan submitted to the City for approval shall contradict another. For example, engineering/construction plans shall not contradict the approved site plan. Otherwise revisions and permit modifications as applicable shall be necessary.
- 16. These conditions assume that the CCEC portion of the project will occur in advance of the Middle School. Changes to this timing may require a minor modification of the Site Design Review per the City's discretion.

17. Owner/applicant is still responsible to comply with the City Development Code (SHMC Title 17).

??? Does the Commission want a better illustration of how the site, including public passage ways, will be illuminated for crime prevention???

???Does the Commission want to require a condition that the athletic fields be illuminated for crime prevention???

\* \* \* \* \*

Attachment(s): Application narrative (spiral bound book). Note that skateboard rack and bicycle rack exhibits where added to exhibit 5 after they were received; thus, not spiral bound.

Plan set.



St. Helens School District

# St. Helens Middle School and Columbia County Educational Campus

Site Development Review Sensitive Lands Permit Sign Permits

> Prepared by Angelo Planning Group Submitted to City of St. Helens Planning Department July 2017

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# List of Exhibits

#### Exhibit 1: Plan Set (provided under separate cover)

- Sheet A Existing Site Conditions Analysis
- Sheet B1 Site Development Plan
- Sheet B2 Utility Plan
- Sheet C Grading Plan
- Sheet D Landscape Plan
- Sheet E1 CCEC Exterior Elevations
- Sheet E2 CCEC Exterior Elevations
- Sheet E3 Middle School Exterior Elevations
- Sheet E4 Middle School Exterior Elevations
- Sheet F Sign Plan
- Sheet H Tree Plan
- Exhibit 2: Title Report
- Exhibit 3: Traffic Memo
- Exhibit 4: Wetland Delineation Report
- Exhibit 5: Lighting and Equipment Cut Sheets
- Exhibit 6: Street Cross-Sections

# 1. Proposal Summary Information

File No:	200.001
App <b>licant</b> :	St. Helens School District Jessica Pickett, Business Manager 474 N 16th St. St Helens, OR 97051 503.366.7225 jessicapi@sthelens.k12.or.us
App <b>licants Re</b> p <b>resentative</b> :	Frank Angelo Angelo Planning Group 921 SW Washington Street, Suite 468 Portland, Oregon 97205 503-227-3664 fangelo@angeloplanning.com
Request:	Site Development Review Sensitive Lands Permit Sign Permits (3)
Location:	St. Helens Middle School 354 N 15th St. St Helens, OR 97051 Columbia County Education Campus 474 N 16th St. St Helens, OR 97051
Legal Description:	See Title Report (Exhibit 2)
Zoning Designation:	Public Lands (PL)

# 2. Project Team

#### Owner Representative

St. Helens School District Jessica Pickett, Business Manager 474 N 16th St. St Helens, OR 97051 (503) 366-7225 jessicapi@sthelens.k12.or.us

#### Architects

Soderstrom Architects Marlene Gillis, Project Manager 1200 NW Naito Parkway, Suite 410 Portland, OR 97209 (503) 595-2511 marleneg@sdra.com

#### Land Use Planners

Angelo Planning Group Frank Angelo, Principal 921 SW Washington Street, Suite 468 Portland, Oregon 97205 (502) 227-3664 fangelo@angeloplanning.com

#### **Construction Management**

Heery International David Etchart, Bond Program Manager 2 Centerpointe Drive, Suite 250 Lake Oswego, Oregon 97035 (503) 431-6188 detchart@heery.com

#### Civil Engineers

Locke Engineers Charles Fisher, Design Engineer 9755 SW Barnes Rd, Ste 300 Portland, Oregon 97225 (503) 364-8207 Charles@LockeEngineers.com

#### Landscape Architects

simp.L Landscape Architects Jeff Simpson, Principal 8455 SW Beaverton Hillsdale Hwy. Portland, OR 97225 (503) 841-6315 jeff.simpson@gosimpl.com

# 3. Project Introduction

# Project Description

The St. Helens School District is seeking approval from the City of St. Helens to construct new buildings and site improvements to replace the current facilities of St. Helens Middle School, located at 354 N. 15th Street, and the Columbia County Educational Campus (CCEC), located at 474 N. 16th Street. CCEC is an alternative education high school located on the same site as St. Helens Middle School. The existing facilities for both schools will be replaced with new buildings, outdoor education areas, play areas, and athletic facilities. The funding for both projects originates from a bond measure passed by district voters in the fall of 2016.

## Existing Site Conditions

The site is located in a residential neighborhood and has frontage on two streets: W. 15<sup>th</sup>/16<sup>th</sup> Street and West Street. The topography of the site rises from the streets on the west and north boundaries, with steeper slopes around the perimeter of the south, east and northeast property lines. The grade change and mature wooded areas around the perimeter of the site provide buffering and screening from the residential neighborhood. The site also includes wetlands areas; two of the three wetlands are classified as significant wetlands by the City of St. Helens.

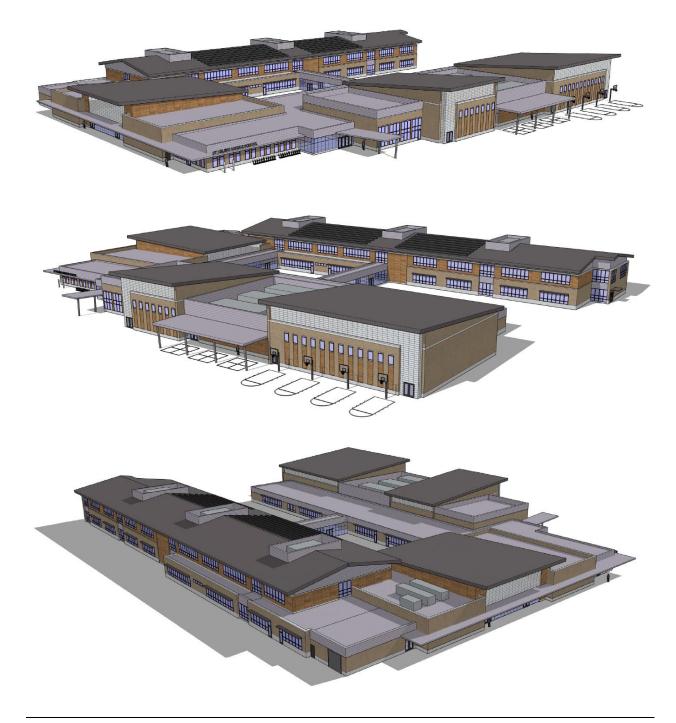
The existing Middle School building does not meet district standards. The building has many fire and building code issues, including potential presence of asbestos, and is not seismically sound. The sixth-grade program is currently remotely located in portable structures, as the building was originally designed as a junior high and is not designed to effectively accommodate all three grade levels. Additionally, the school's play areas, and athletic facilities do not meet district standards. The existing CCEC program is currently housed in temporary portable structures that do not provide sufficient space and facilities for the needs of the program.

## Design Approach

The new St. Helens Middle School and CCEC facilities will deliver vastly improved education resources to the children within the District, along with benefits for the greater community. These facilities will feature state-of-the-art core learning spaces and support for added cultural/arts programs. The Middle School will allow the previously remotely located sixth grade program to join seventh and eighth grade under one roof. Both schools will create safer environments for students and staff, with an emphasis on celebrating community and social connectedness.

The Middle School is designed around a central courtyard, which will serve as both outdoor classroom and social gathering space (Figure 1). Circulation around this courtyard connect out

towards two wings, one being the two-story academic 'house', and the other hosting athletics and artistic studies. The overall form in plan is a horseshoe shape, which offers benefits of compactness on site while capturing a maximum amount of daylight. The larger gathering commons and gym spaces are highlighted as taller volumes with single slope roofs that float above translucent panels. The new Middle School building will be approximately 104,000 square feet in gross floor area. The existing Middle School has capacity for approximately 750 students and the new school will retain that same capacity.





The CCEC options high school will combine what is currently housed in multiple modular buildings into one new school building. Interior spaces are organized along a tall circulation spine offering daylighting to the entire length of the building (Figure 2). Common spaces such as the multi-purpose room, media room, and main office are located to the west and grouped around the main entry. The east end of the building houses six flexible teaching spaces that cater a variety of learning styles and emerging technologies. The new CCEC building will be approximately 11,400 square feet. The existing portables have capacity for approximately 70 students and the new building will have capacity for approximately 90 students.



Figure 2. Renderings of CCEC Building



The palette for both schools puts a Northwest modern twist on the traditional schoolhouse aesthetic of brick and sloped roofs. Large windows help to lighten the expanses of brick, while phenolic wood-look panels provide a warm highlight. The overall design intent for both buildings is to create an approachable, semi-modern building that fits with the Northwest aesthetic.

## Requested Approvals

In order to receive the necessary land use permits to construct the new buildings and site improvements, the District is requesting the following approvals:

- **Site Development Review.** As a new development, the project is being reviewed under the Site Development Review process and approval standards.
- **Sensitive Lands** Permit. This approval is required for landform alterations and surface paving of areas of greater than 25% slope.
- **Sign** Permit (3). Two wall signs and one monument sign are proposed as part of the development and the approval of the sign permits is requested as part of this application.

The above applications are being submitted with this package and the District understands that they will be reviewed concurrently by the Planning Director with a hearing and review by the Planning Commission. This narrative contains written responses to all applicable standards, requirements, and approval criteria for each application. Applicable provisions were identified during the pre-application conference with City staff on February 17, 2017.

# 4. Conformance with St. Helens Municipal Code

This section of the narrative demonstrates the project's conformance with all applicable provisions of the St. Helens Municipal Code (SHMC). It is organized by SHMC chapter. All text in *italics* are direct quotes from the code, which are followed by applicant responses.

# Chapter 17.32 Zones and Uses

#### 17.32.150 Public lands - PL.

(1) Purpose. The purpose of the public lands zone is to delineate lands that are owned by public or semipublic entities and that are used, or have the potential to be used, for public or semipublic purposes such as schools, parks, and playgrounds.

**Res**ponse: As public schools, the Middle School and CCEC are consistent with the purpose of the PL zone.

(2) Uses Permitted Outright. In the PL zone the following uses are allowed outright after compliance with the site development review chapter (Chapter <u>17.96</u> SHMC) and other relevant sections of this code:

[…]

(f) Public or private school and/or college.

**Res**ponse: The Middle School and CCEC are public schools; therefore, they are permitted uses. All play areas, athletic facilities, and site improvements are considered permitted accessory uses.

The CCEC site will also include a continuation and consolidation of the school's community donation program. Two of the existing portable structures north of the main building will be retained to accommodate this use. The program is currently operating at the school as an accessory use. The portables will allow the District to consolidate storage and distribution from the donation programs of other schools. As addressed in the Traffic Memo (Exhibit 3), the traffic effects of this use will be limited.

(3) Conditional Uses. In the PL zone the following uses are permitted if approved under the conditional use chapter (Chapter <u>17.100</u> SHMC) and other applicable provisions of this code:

(a) Public facilities, major.

(b) Public support and safety facilities.

(c) Travel trailer park in public parks of over four acres in size to include a buffer of 20 feet where abutting a residential zone.

(d) Hospitals.

**Res**ponse: The proposed uses do not include those listed above; therefore, a conditional use permit is not required.

#### (4) Standards.

(a) The standards for the PL zone shall be determined by proximity to residential zones and the anticipated off-site impacts.

(b) The maximum building height shall be determined on a case-by-case basis (see SHMC <u>17.68.040</u>).

(c) See subsection (5) of this section, Additional Requirements.

**Response**: The site design has taken into consideration the residential context of the site to minimize impacts on residential properties. As shown on the Site Development Plan (Sheet B1, Exhibit 1), no structures are placed less than 10 feet from the side or rear property lines, and the main Middle School and CCEC buildings are at least 45 feet from any property line abutting residential properties. The maximum height of any building on the site will be 38 feet. Adjacent residential properties are also buffered from the impacts of the development by topography—the site is on a plateau—and mature trees that line the perimeter of most of the site.

The height and setbacks for the buildings are compatible with adjacent residential zones due to the significant distance between the primary structures and adjacent residential properties and the buffering and screening created by existing site features and planned landscape installations. Buffering and screening is described in more detail in responses to Chapter 17.72.

(5) All chapters of the Development Code apply.

**Res**ponse: This narrative addresses the project's conformance with all chapters of the Development Code.

# Chapter 17.36 Historic Sites and Overlay District

**Res**ponse: The project is not located on a historic site or within an historic overlay district; therefore, this chapter is not applicable.

# **Chapter 17.40 Protective Measures for Significant Wetlands, Riparian Corridors and Protection Zones**

# 17.40.005 Purpose.

The purpose of this chapter is to implement Statewide Planning Goal No. 5 and Oregon Administrative Rules requiring the establishment of regulatory protective measures for significant wetland areas and significant riparian corridors. This chapter establishes prohibitions and permit requirements for the significant wetlands and riparian corridors and their associated protection zones.

The standards and requirements of this chapter shall apply in addition to other regulations of the Development Code applicable to the underlying zoning classification of lands within significant wetlands,

riparian corridors, and protection zones. In case of any conflict between these regulations and any other regulation(s) of the city, the regulation(s) which provide more protection shall apply.

[…]

**Res**ponse: The District recognizes the purpose of this chapter and will demonstrate conformance with its provisions below.

# 17.40.015 Establishment of significant wetlands, riparian corridors and protection zones.

(1) Wetlands. Ordinance 2807 adopted in November 1999 established and listed significant wetland areas within the city of St. Helens. Such areas were added to the comprehensive plan.

D-6	J-3	MC-1
D-10	M-7	MC-9
D-11	M-8	MC-25
D-16	M-10	UA-2
D-17	M-11	UB-5A
D-18	M-12	UB-5B

(a) The following significant wetlands are hereby established as Type I:

**Response**: Two significant wetlands are located on the site and are established as Type 1 wetlands in the City's inventory. As shown on Figure 3A of the Wetland Delineation Report (Exhibit 4), wetland D-6 is located on along the west property line. Wetland J-3, as shown on Figure 3B, is located on the southwest corner of the site. Therefore, the provisions of this chapter related to protection of significant wetlands are applicable to this project.

(2) Riparian Corridors. Ordinance 2824 adopted in August 2000 established significant riparian corridors within the city of St. Helens. Such areas were added to the comprehensive plan.

**Res**ponse: No riparian corridors are located on the site; therefore, the provisions of this chapter related to riparian corridors are not applicable.

(3) Protection Zone. There is hereby established a wetland/riparian protection zone (hereinafter "protection zone" or "PZ") adjacent to all significant wetlands and all significant riparian corridors to protect their integrity, function and value. The protection zone shall be measured from the wetland edge, the riparian corridor edge, or the top of the bank of the waterway when no riparian area is included in the corridor. The width of the protection zone shall vary according to the type of wetland/riparian corridor as listed below:

(a) The required protection zone for Type I wetland shall extend 75 feet upland from the delineated wetland edge.

**Response**: The significant wetlands on the site are classified as Type 1; therefore, a 75-foot protection zone was delineated on the site development plan based on the boundary of the two significant wetlands as determined by the Wetland Delineation Report (Exhibit 4). The 75-foot boundary is shown on the Site Development Plan (Sheet B1, Exhibit 1).

# 17.40.020 Applicability of chapter – Site-specific determination of significant wetland, significant riparian corridor and protection zone boundaries.

(1) All those contemplating land purchase for development are urged to obtain environmental professional field delineations of wetlands and riparian corridors prior to decisions on land use and project design. The burden is on the property owner to demonstrate that the requirements of this chapter are met or are not applicable to development activity or other proposed use or alteration on the owner's land. Accordingly, as part of any application involving land clearing, alteration or use on a site within 200 feet of a resource, an environmental assessment, prepared and certified by a qualified environmental professional showing the boundaries of the significant wetland, significant riparian corridor and protection zones on the property, is required. The EA shall be prepared at the applicant's sole expense. Assistance from state and federal agencies is encouraged. Alternatively, the property owner may submit a sworn statement from a qualified environmental professional that no significant wetlands, significant riparian corridors or protection zones exist on the site. Environmental assessments must comply with minimum requirements in SHMC <u>17.40.065</u>.

**Res**ponse: Pacific Habitat Services has prepared and certified the Wetland Delineation Report (Exhibit 4) in accordance with this provision and SHMC 17.40.065.

(2) Notwithstanding subsection (1) of this section, when the request is for verification of an exemption or for single-family lot of record development, the director may waive the requirement for a professionally prepared environmental assessment or statement, provided the director finds that the St. Helens zone map, resource map, combined with scaled maps provided by the applicant, or any other materials supplied by the applicant and used by the director, and a field check by the director, is sufficient to determine the location of the resource and protection zone boundaries or lack thereof on a particular site or portion thereof.

**Res**ponse: This subsection applies to single-family development; therefore, it is not applicable to this project.

(3) The director shall incorporate findings of compliance or noncompliance with this chapter into decisions concerning development applications. Unless otherwise specified in this chapter, a decision concerning compliance with this chapter shall be made a part of the requested development application, and not a separate land use decision. If no development application is submitted, then a decision on an exception shall be a director's decision and not a separate land use decision. A decision under this chapter which would not otherwise be a land use decision shall be made a director's decision in accordance with the procedures in SHMC <u>17.24.090</u>.

**Res**ponse: The District understands that demonstration of compliance with this chapter is incorporated with the land use decision and is therefore providing responses to the provisions of the chapter.

(4) Precise wetland and riparian corridor boundaries may vary from those shown in the comprehensive plan exhibit if an EA is performed and accepted by the city, applicable state agencies and verified with onsite inspection. The more precise boundaries can be mapped, staked, and used for review and development without a change in the comprehensive plan wetlands map exhibit. (Ord. 2890 Att. A, 2003; Ord. 2875 § 1.091.020, 2003)

**Res**ponse: The District understands that the specific boundaries of any wetland on the site may be modified if the city accepts the EA provided with this land use application. Therefore, the site design was

developed based on the specific delineation of wetland boundaries provided in the Wetland Delineation Report.

# 17.40.025 Prohibitions within significant wetlands, significant riparian corridors and protection zones.

(1) All significant wetlands, significant riparian corridors and protection zones shall be protected from alteration or development activities, except as specifically provided herein.

(2) Except as set forth in the exemption, exception, or other approval authorized in this chapter, no person or entity shall alter or allow, or permit or cause to be altered, any real property designated as a significant wetland, significant riparian corridor, or a wetland/riparian protection zone.

(3) Except as set forth in the exemption, exception, or other approval authorized in this chapter, no person or entity shall use or allow, or permit or cause to be used, property designated as a significant wetland, significant riparian corridor, or wetland/riparian protection zone. (Ord. 2890 Att. A, 2003; Ord. 2875 § 1.091.025, 2003)

**Response**: The District understands that no alterations or development activities are permitted within significant wetlands and protection zones except as set forth by this chapter. The District proposes to construct temporary alterations to areas within the wetland protection zone to relocate the Middle School access drive and repair the native landscaping in the area, and to install underground storm drainage facilities within the protection zone.

# 17.40.030 Sworn statement, verification of federal, state and local permit compliance.

Prior to any land clearing, alteration, or physical construction (other than survey work or environmental testing) on a site, the property owner and developer, if any, shall execute a sworn statement, under penalty of perjury and false swearing, that owner/developer has obtained all required federal, state, and local authorizations, permits and approvals for the proposed development, including any proposed use, or alteration of the site, including also any off-site improvements. Owner/developer shall be solely responsible for obtaining all approvals, permits, licenses, insurance, and authorizations from the responsible federal, state and local authorities, or other entities, necessary to use the property in the manner contemplated, including all authorizations necessary to perform land clearing, construction and improvement of property in the location and manner contemplated. This provision includes, specifically, a permit or statement from the National Marine Fisheries Service and/or Fish and Wildlife Service that owner's proposed use and/or development will not take or harm any endangered or threatened species as that term is defined in applicable federal statutes and administrative rules. The city of St. Helens has no duty, responsibility or liability for requesting, obtaining, ensuring, or verifying owner/developer's compliance with the applicable state and federal agency permit or approval requirements. Any permit or authorization granted by the city, including any exemption, exception, permit, approval or variance pursuant to the Community Development Code shall not in any way be interpreted as a waiver. modification, or grant of any state or federal agency permits or authorizations or permission to violate any state or federal law or regulation. Owner/developer shall be held strictly liable, and shall hold the city of St. Helens harmless for administrative, civil and criminal penalties for any violation of federal and state statutes, including but not limited to the Clean Water Act, Endangered Species Act and regulations implementing such laws. Nothing herein shall be interpreted as restricting or limiting the city from bringing an enforcement action under Chapter 17.12 SHMC. (Ord. 2890 Att. A, 2003; Ord. 2875 § 1.091.030, 2003)

**Response**: The District understands it is the responsibility of the District to obtain all necessary permits and approvals from federal, state or other local authorities for the all construction activities and uses that may impact wetlands or protection zones on the site. As noted above, no structures or site improvements are planned within the locally significant wetlands on site. A third, smaller wetland exists on the site (Wetland B in the delineation report) and is located just east of Wetland C. A shown on the Site Development Plan, a short bridge will be constructed over this wetland for the bus loop access road. All support structures for the bridge will be placed outside the wetland boundary.

As the site design avoids any impacts to the wetland areas, no state or federal permits are required. If conditions change and state or federal permits are required, the District will execute the sworn statement that these permits will be obtained prior to any construction activity, in accordance with this provision.

# 17.40.035 Exempt activities and uses within a significant wetland, riparian corridor and protection zone.

(1) The following activities do not require a permit or authorization from the city to be conducted or to continue in a significant wetland, riparian corridor or protection zone:

# [...]

**Res**ponse: The District is not proposing any of the identified activities or uses within a significant wetland or protection zone; therefore, this section is not applicable.

# 17.40.040 Protection zone exceptions – Limited activities and uses within the protection zone.

Unless otherwise specified, findings by the approval authority concerning whether a proposed use or activity meets the exception criteria shall be incorporated into the underlying decision on the application. If the application concerns only an exception or is part of a building permit process, it shall be made as a director's decision in accordance with the procedures in SHMC <u>17.24.090</u>, unless otherwise specified.

# […]

(6) Other Authorized Activities in the Protection Zone. The following uses, alteration and development activity shall be permitted in a protection zone provided the approval authority finds that proposed development uses or alterations are designed and constructed in a manner to minimize intrusion into the protection zone, and the applicant demonstrates compliance with specific requirements listed, and all applicable general criteria in SHMC <u>17.40.055</u>, including minimum restoration and enhancement requirements, are met.

[...]

(b) Construction of new drainage facilities, utilities and irrigation pumps in public rights-of-way or easements, existing or herein accepted by the city thereafter.

# [...]

(d) Alteration or removal of noxious, invasive and/or nonnative vegetation with power-assisted equipment or machinery, or chemical control, provided any chemicals used are authorized and approved for such use by the Oregon Department of Agriculture or DEQ, upon a finding that the plant infestation is extensive.

#### (e) Planting of native vegetation when planted with power-assisted equipment or machinery.

**Response**: The three uses and activities identified above are proposed within the protection zone of Wetland C in the Wetland Delineation Report (Exhibit 4). As shown on the Utility Plan (Sheet B1, Exhibit 1), new storm drainage facilities are proposed within the protection zone as part of the overall stormwater management plan for the site. An existing water main also runs through the protection zone of Wetland C.

As shown on the Landscape Plan (Sheet D, Exhibit 1), restorative landscaping is proposed just inside the south and southeastern boundaries of the protection zone. The landscaping proposed for these areas is to repair and replace areas along the current alignment of the main access road to the school. The access road will be removed and reconstructed outside of the protection zone.

The District understands these uses and activities are subject to the criteria identified in SHMC 17.40.055 and has provided a response to that section below.

# 17.40.045 Resource exceptions – Limited activities and uses within significant wetlands, significant riparian corridors (resource areas).

**Res**ponse: No activities or uses are proposed within significant wetlands on the site; therefore, this section is not applicable.

# 17.40.050 Additional requirements for land divisions and new development.

**Res**ponse: The provisions of this section are intended to regulate residential development; therefore, it is not applicable to this proposal.

# 17.40.055 General criteria for exceptions and other approvals.

The appropriate approval authority shall approve or approve with conditions an application request within a significant wetland, significant riparian corridor or protection zone based upon findings that all of the following criteria have been satisfied and the conditions herein are imposed:

(1) The extent and nature of the proposed alteration or development will not create site disturbances to an extent greater than the minimum required for the use;

**Response**: The drainage facilities and landscaping alterations proposed within the protection zone are limited to minimize disturbances to the site. The drainage facilities are sized and located to serve the site most efficiently and minimize impacts to the protection zone. The landscaping alterations are limited to restoration and repair activities necessary as a result of reconstructing main access in a new location outside the protection zone.

#### (2) No loss of wetland/riparian area and function:

(a) Any wetland or riparian area alteration permitted through an exception or other approval shall be mitigated to ensure that there is no net loss of functions or the spatial extent of wetlands or riparian area within the city of St. Helens;

**Res**ponse: The proposed uses and activities will not impact the wetland areas of any significant wetlands.

(b) Any encroachment or change in on-site or off-site drainage which would adversely impact wetland or riparian characteristics have been mitigated;

**Response**: On-site drainage will be managed to minimize impacts on the wetlands and be in accordance with the City of St Helens Engineering Standards Manual. The storm water management approach will include both quantity detention and quality pretreatment. More information about how storm water will be managed is provided in the response to Section 17.152.100 Storm Drainage.

(3) Where natural vegetation has been removed due to alteration or development, erosion control provisions of the Community Development Code and "Engineering Department Public Facility Construction Standards Manual" shall be met;

**Response**: The District understands that erosion control provisions of the Community Development Code and Engineering Manual shall be met wherever natural vegetation is removed. Construction documents submitted with the building permit application will demonstrate compliance with these provisions.

(4) All applicable sensitive lands requirements of Chapter <u>17.44</u> SHMC have been met;

**Res**ponse: All applicable sensitive lands requirements of Chapter 17.44 are addressed in the subsequent section of this narrative.

(5) Copies of all state and federal permit applications shall be submitted with development applications requiring compliance with this chapter. All required state and federal permits shall be obtained and copies provided to the city of St. Helens prior to alteration of the site;

**Response**: As noted above, no state or federal permits are required. If conditions change and permits are required, the District will provide copies of all state and federal permits related to wetland impacts prior to any alteration of the site, in accordance with this requirement.

(6) The protection of the significant riparian corridor or significant wetland can be assured through restoration, enhancement, and other similar measures in the protection zone and the resource area. The following minimum restoration and enhancement shall be required as a condition of approval:

(a) The applicant shall enter into a two-year contract for installation and maintenance of plant materials with the city. Financial security in an amount not less than 110 percent of the cost estimate for installation shall be provided. Within the time specified in the contract, the applicant shall remove noxious vegetation and restore or enhance with native plant materials and other approved resource enhancements all required portions of the protection or resource zone on the site, as well as restoration and enhancement in any associated contiguous resource area under the applicant's ownership or control;

**Response**: The District understands that a contract for the installation and maintenance of plant materials shall be required as a condition of approval for the development, including financial security in the amount of not less than 110 percent of the cost of the installation.

(b) Restoration and enhancement shall be on a 1:1 area basis or such greater ratios as specified in this chapter for the requested activity. Thus, at a minimum, for every 100 square feet of protection zone or resource area that is altered or used for development purposes, at least 100 square feet of the available remaining resource area and/or protection zone shall be enhanced or restored. Priority shall be given to removal of noxious vegetation and planting of native plant materials, including ground cover, under-story and canopy, in nonvegetated areas or areas where noxious plant species

are removed. The number and type of plant materials shall be specified in the contract but shall at a minimum comply with the following requirements:

(i) Only plant materials approved by the director shall be installed in the protection zone or the resource areas. Plant materials shall be of high quality;

(ii) No noxious plants shall be installed and existing noxious materials shall be removed;

(iii) Plant materials shall consist of ground cover, under-story and canopy materials and shall be located in such a manner to maximize enhancement and restoration of the resource area and the protection zone, with particular emphasis on temperature reduction of watercourses, erosion control, and wildlife habitat enhancement;

(iv) Installation standards within the required enhancement area be as follows:

(A) Ground cover shall be hydro-seeded or planted at two-foot intervals or such other interval established by the approval authority as sufficient to attain coverage of the required area within the two-year contract period;

(B) Under-story shall be minimum one-gallon materials planted at six-foot intervals or such other interval approved by the approval authority as sufficient to attain adequate coverage within the two-year contract period;

(C) Canopy trees shall be planted at 20-foot intervals or such other interval as required to install all materials required for tree mitigation pursuant to the tree mitigation requirements of the Community Development Code;

(D) Additional materials or other habitat enhancements are encouraged;

**Res**ponse: The District understands that the number, type, and location of plant materials and the methods of installation shall be specified in the restoration and enhancement contract.

(v) As a condition of approval the applicant shall implement a management plan for the entire protection zone and resource areas under the applicant's ownership or control, including the areas restored and enhanced. The management plan must be approved by the city and shall be attached to the approval document. The management plan shall contain the following requirements and statements:

(A) Identification of resource and protection zone management practices to be conducted and proposed intervals;

(B) Provisions for the perpetual maintenance of protection zone and resource areas by a responsible party;

(C) Provisions for the initial removal and ongoing management of exotic invasive vegetation and debris;

(D) Plans for the restoration and enhancement of any resource or protection areas with appropriate native plant material;

(E) Provisions for the protection of protected plant and animal species in accordance with recommendations from applicable state and federal agencies;

(F) Provision for protective barriers around all trees and vegetation to be saved in accordance with minimum city standards, and prohibiting all activity within these areas during construction;

(G) Specific provisions for city enforcement of the management plan as contained in the city-approved sample management plan;

(H) Any additional measures deemed necessary to protect and maintain the functions and values of the wetlands, riparian corridors and protection zones (e.g., signage delineating preserve boundaries);

(I) The following statements:

1. "There shall be no alteration of significant wetlands, riparian corridors or protection zones as delineated and shown on the attached plan" [attach reduced plan];

2. "There shall be no alteration of the size, shape or design of an approved protection area or resource area without the approval by the City of St. Helens" (modification to original permit);

3. "There shall be no amendment or change to this Management Plan without the approval of the City of St. Helens" (modification to original permit);

**Response**: The District understands that the development and implementation of a management plan for the wetlands and protection zone, meeting the standards and requirements of this subsection, shall be required as a condition of approval of this application.

(c) The exception or other approval document shall be recorded in the public records to give notice of the protection zone and resource area restrictions and maintenance obligations and to ensure no further encroachment into the protection zone and resource area occurs;

**Res**ponse: The District understands and will agree to any documents associated with the approval of this application being recorded in public records.

(d) The applicant may dedicate a conservation easement or equivalent protection instrument to the city, homeowners association or a conservation organization, provided the form of the instrument is approved by the city attorney and accepted by the council, if offered. Applicants should consult with their legal counsel or tax professionals about the tax advantages of conservation easements;

Response: The District is not proposing to dedicate a conservation easement.

(e) The director or approval authority may impose such additional reasonable conditions to mitigate other identified impacts resulting from development on the site. (Ord. 2890 Att. A, 2003; Ord. 2875 § 1.091.055, 2003)

**Response**: The District understands that the Director may impose additional conditions on this application to mitigate other impacts to the wetlands or protection zone.

# 17.40.060 Administration and approval processes.

Administration and approval processes shall be as set forth in Chapter <u>17.44</u> SHMC for other sensitive lands. (Ord. 2890 Att. A, 2003; Ord. 2875 § 1.091.060, 2003)

**Res**ponse: All applicable sensitive lands requirements of Chapter 17.44 are addressed in subsequent section of this narrative.

#### 17.40.065 Application requirements.

Application requirements shall be as set forth in Chapter <u>17.44</u> SHMC for other sensitive lands, except that an environmental assessment (EA), as defined below, shall be required in addition to other application requirements.

(1) Minimum Requirement for Environmental Assessment. The EA shall include the following information:

(a) Vicinity map;

(b) Site designated on St. Helens local wetland inventory (LWI) map and/or riparian corridor map;

(c) The wetland/riparian corridor boundary must be accurately drawn at an appropriate engineering scale of one inch equals 400 feet or larger. Existing features must be distinguished from proposed features. The map must show:

(i) Site boundary property lines and roads;

(ii) Property lines, rights-of-way, easements, etc.;

(iii) Existing physical features of the site including buildings, fences, and other structures, roads, parking lots, utilities, water bodies, etc.;

(iv) Contours at the smallest readily available intervals, preferably at two-foot intervals;

(v) Delineated boundaries of wetlands, tops-of-bank, steep slopes, and protection zone;

(vi) Hydrologic mapping showing patterns of surface water movement into, through, and out of the site area; and

(vii) Location of all test holes and vegetation sample sites, numbers to correspond with flagging in the field and field data sheets.

**Res**ponse: The Wetland Delineation Report (Exhibit 4) includes all of information required by subsection (1) above.

(2) Where environmental impacts may be significant, an aerial photo with overlays displaying the site boundaries and wetland and protection zone/delineation may be required. Generally, an orthophotograph at a scale of one inch equals 400 feet or greater should be used. If an orthophotograph is not available a smaller scale aerial photograph enlarged to one inch equals 400 feet may be used.

The EA narrative shall describe the following:

(a) Location information including legal description and address;

(b) Methodology used for delineation of wetlands, tops-of-bank, steep slopes, and protection zone;

(c) General site conditions, including topography, acreage, and surface areas of wetlands and water bodies;

(d) Specific descriptions of plant communities, soils, and hydrology; and

(e) Wetland field data sheets, numbered to correspond with sample site locations as staked and flagged in the field.

**Res**ponse: The Wetland Delineation Report (Exhibit 4) includes all of information required by subsection (2) above.

(3) Supplemental EA requirements for all new land division and vacant land development applications (excluding lot of record exceptions) and such other applications when such additional information is required by the director pursuant to SHMC <u>17.40.070</u>.

The EA report shall include an analysis of significant adverse impacts to the wetland and riparian corridor functions and values. The impact analysis is based on the resource functions and values identified in the local wetland inventory and riparian inventory reports. Potential impacts may include (but are not limited to) loss of flood storage potential, loss of wildlife habitat, loss of species diversity or quantity, changes in water quality, any increase in human intrusion, and impacts on associated wetland or water resources. To the extent that the wetlands and/or riparian corridors are part of a larger natural system such as a watershed, the evaluation must also consider the cumulative impacts on that system. An impact analysis shall include: identification, by characteristics and quantity, of the resources and the resource functions and values found on the site.

(4) Evaluation of alternative locations, design modifications, or alternative methods of development that avoid significant adverse impacts to identified resource functions and values. Such measures to avoid or reduce impacts may include:

(a) Limiting the degree or magnitude of the proposed activity;

(b) Limiting the implementation of the proposed activity;

(c) Using appropriate and best available technology;

(d) Taking affirmative steps to avoid or minimize impacts; and

(e) Design, siting, or construction of proposed activities so as to avoid potential impacts to wetlands, riparian corridors, and steep slopes.

(5) Determination of the alternative that best meets the applicable approval criteria and determination of unavoidable impacts.

(6) The report shall contain an analysis of recommended measures to avoid significant adverse impacts to wetlands/riparian corridors and their associated protection zones and an identification of impacts that cannot be avoided or reduced.

The report shall contain:

(a) Recommended measures to mitigate unavoidable adverse impacts to wetlands/riparian corridors and their associated protection zones;

(b) A mitigation plan shall include, at a minimum:

(*i*) A description of the resources and the resource functions and values to be restored, created, or enhanced on the mitigation site;

(ii) A plan showing proposed disturbance limits; location, species, and size of proposed plantings; location, size, and details of other proposed mitigation measures; storm water management and erosion control features; and construction management measures;

(c) Documentation of coordination with appropriate local, regional, special district, state, and federal regulatory agencies;

(d) Construction timetables;

(e) Operations and maintenance practices;

(f) Monitoring and evaluation procedures; and

(g) Remedial actions for unsuccessful mitigation. (Ord. 2890 Att. A, 2003; Ord. 2875 § 1.091.065, 2003)

**Response**: No significant adverse impacts to the wetland are anticipated because the disturbances to the protection zone are limited to the temporary impacts of construction activities associated with removal of the access road and installation of underground storm drainage facilities. The long-term resource functions and values of the wetland and protection zone will be preserved through implementation of the restoration and enhancement contract and management plan, as required by SHMC 17.40.055(6) and described above.

# 17.40.070 Additional information required and waiver of requirements.

(1) The director may require information in addition to that required by this chapter in accordance with SHMC <u>17.24.080</u>.

(2) The director may waive a specific requirement for information in accordance with SHMC <u>17.24.080(2)</u> and (3). (Ord. 2890 Att. A, 2003; Ord. 2875 § 1.091.070, 2003)

**Res**ponse: The District understands that the director may waive or request additional information related to the provisions of this chapter.

# Chapter 17.44 Sensitive Lands

# 17.44.010 Purpose.

(1) Sensitive lands are lands potentially unsuitable for development because of their location within:

- (a) The 100-year floodplain per the Federal Emergency Management Agency (FEMA) map;
- (b) Natural drainageways;

(c) Wetland areas which are regulated by the other agencies including the U.S. Army Corps of Engineers and the Division of State Lands, and/or are designated as significant wetland on the St. Helens comprehensive plan floodplain and local wetlands inventory maps;

(d) Steep slopes of 25 percent or greater and unstable ground;

(e) Fish and wildlife habitats as listed in acknowledged comprehensive plan;

(f) Archaeologically designated sites or culturally designated sites as listed in acknowledged comprehensive plan;

(g) State and federal threatened/endangered species habitats as listed by the applicable authority; and

(h) Open space/open space design review areas shown on the comprehensive plan map.

**Res**ponse: Sensitive lands on the site are limited to (c) wetland areas and (d) steep slopes. No other sensitive lands as defined by this chapter are present on the site.

(2) Sensitive land areas are designated as such to protect the public health, safety, and welfare of the community through the regulation of these sensitive land areas.

(3) Sensitive land regulations contained in this chapter are intended to maintain the integrity of the rivers, streams, and creeks in St. Helens by minimizing erosion, promoting bank stability, maintaining and enhancing water quality and fish and wildlife habitats, and preserving scenic quality and recreation potential.

(4) The regulations of this chapter are intended to implement the comprehensive plan and the city's floodplain management program as required by the National Flood Insurance Program, and help to preserve natural sensitive land areas from encroaching use.

All development within a floodplain or floodway or that may directly impact a floodplain or floodway shall follow the rules as stated in Chapter <u>17.46</u> SHMC. (Ord. 3031 Att. A, 2007; Ord. 2875 § 1.092.010, 2003)

**Res**ponse: The District understands the purposes of the sensitive lands regulations and demonstrates conformance with the regulations below.

#### 17.44.015 Permitted and conditional use - Permit requirements.

(1) All uses are conditioned on obtaining a permit except:

The following listed uses are outright permitted uses within slopes that are 25 percent or greater, and unstable ground when the use does not involve paving. No permit is required for permitted use. For the purposes of this chapter, the word "structure" shall exclude: children's play equipment, picnic tables, sand boxes, grills, basketball hoops and similar recreational equipment.

(a) Public and private conservation areas for water, soil, open space, forest, and wildlife resources; and

(b) Removal of invasive/exotic/nonnative vegetation (e.g., poison oak, tansy ragwort, blackberry) as determined by the director.

**Res**ponse: Proposed uses on the site that will affect sensitive lands areas are an access drive, running track, and a service road/fire lane; therefore, they are not exempted from a sensitive lands permit.

(2) Administrative Sensitive Lands Permit.

(a) Administrative sensitive lands permits in drainageways, slopes that are 25 percent or greater, and unstable ground shall be obtained from the appropriate authority for the following:

(i) The city engineer shall review the installation of public support facilities such as underground utilities and construction of roadway improvements including sidewalks, curbs, streetlights, and driveway aprons;

(ii) The city engineer shall review minimal ground disturbance(s) or landform alterations involving zero to 50 cubic yards of material for land that is within public easements and rights-of-way;

(iii) The director shall review minimal ground disturbance(s) or landform alterations involving zero to 50 cubic yards of material;

(iv) The director shall review the repair, reconstruction, or improvement of an existing structure or utility in sensitive lands, the cost of which is less than 50 percent of the market value of the structure prior to the improvement or the damage requiring reconstruction;

(v) The director shall review all building permits for any construction in sensitive lands; see Chapter <u>17.116</u> SHMC, Temporary Uses; and

(vi) The director shall review applications for paving on private property in sensitive lands.

(b) The responsible authority shall approve, approve with conditions, or deny an application for a development permit, as described in subsection (2)(a) of this section, based on the standards set forth in SHMC <u>17.44.040</u>.

**Response**: The running track and fire lane/access road will affect areas of steep slope on the site (25% or greater); therefore, in accordance with the criteria above, an administrative sensitive lands permit is required.

#### (3) Jurisdictional Wetlands. See Chapter <u>17.40</u> SHMC.

**Res**ponse: The requirements associated with wetlands on the site are addressed in the responses to Chapter 17.40.

- (4) Sensitive Lands Permits Issued by the Director.
  - (a) The director shall have the authority to issue a sensitive lands permit in the following areas:
    - (i) Drainageways;
    - (ii) Slopes that are 25 percent or greater or unstable ground; and
    - (iii) Wetland areas.

(b) Sensitive lands permits shall be required for the areas in subsection (4)(a) of this section when any of the following circumstances apply:

(i) Ground disturbance(s) or landform alterations;

(ii) Repair, reconstruction, or improvement of an existing structure or utility, the cost of which equals or exceeds 50 percent of the market value of the structure prior to the improvement or the damage requiring reconstruction;

(iii) Residential and nonresidential structures intended for human habitation; and

(iv) Accessory structures.

#### (c) Cultural sites.

**Response**: As noted above, the running track and fire lane/access road will affect areas of steep slope on the site (25% or greater); therefore, in accordance with the criteria above, an administrative sensitive lands permit is required.

(5) Sensitive Lands Permits Issued by the Planning Commission.

- (a) Fish and wildlife habitats as listed.
- (b) State and federal threatened/endangered species habitats as listed.
- (c) Open space design review.

**Res**ponse: The sensitive lands areas identified in this subsection are not present on the site; therefore, a sensitive lands permit issued by the Planning Commission is not required.

# 17.44.020 Administration and approval process.

(1) The applicant for a sensitive lands permit shall be the recorded owner of the property or an agent authorized in writing by the owner.

**Res**ponse: The applicant is St. Helen's School District; as demonstrated by the Title Report (Exhibit 2), is the recorded owner of the property.

(2) A preapplication conference with city staff is required. (See SHMC <u>17.24.040</u>.) If uncertainty exists in regards to the location or configuration of wetland areas, staff shall make an on-site inspection prior to an application being initiated to review the nature and extent of the resource. If necessary, assistance from state and federal agencies shall be sought to provide the applicant additional information.

(3) Due to possible changes in state statutes, or regional or local policy, information given by staff to the applicant during the preapplication conference is valid for not more than six months:

- (a) Another preapplication conference is required if any variance application is submitted more than six months after the preapplication conference; and
- (b) Failure of the director to provide any of the information required by this chapter shall not constitute a waiver of the standards, criteria or requirements of the application.

**Res**ponse: A preapplication conference with city staff occurred on February 17, 2017. Six months after the preapplication conference would be August 17, 2017. This application will be submitted in July 2017.

(4) The appropriate authority shall approve, approve with conditions, or deny an application for an administrative sensitive lands permit within drainageways, slopes that are 25 percent or greater, and unstable ground as set forth in SHMC <u>17.44.015(2)</u>.

(5) The director shall approve, approve with conditions, or deny an application for a sensitive lands permit as set forth in SHMC <u>17.44.015(4)</u>. The decision made by the director may be appealed to the planning commission as provided by SHMC <u>17.24.310</u>.

(6) The appropriate approval authority shall review all sensitive lands permit applications to determine that all necessary permits shall be obtained from those federal, state, or local governmental agencies from which prior approval is also required.

(7) The appropriate approval authority shall apply the standards set forth in SHMC <u>17.44.040</u> and Chapter <u>17.46</u> SHMC when reviewing an application for a sensitive lands permit.

(8) The director shall give notice of applications to be heard by the planning commission as provided by SHMC <u>17.24.130</u>.

(9) The director shall mail notice of sensitive lands application decisions in SHMC <u>17.44.015(4)</u> and (5) to the persons entitled to notice under SHMC <u>17.24.120</u>. (Ord. 3031 Att. A, 2007; Ord. 2875 § 1.092.020, 2003)

**Res**ponse: The District understands the approval and notice procedures identified above and will coordinate with the city to ensure compliance.

# 17.44.026 General provisions for floodplain areas.

Repealed by Ord. 3031. (Ord. 2875 § 1.092.026, 2003)

Response: No floodplain areas are located on the site; therefore, this section is not applicable.

#### 17.44.028 General provisions for wetlands.

See Chapter 17.40 SHMC. (Ord. 3031 Att. A, 2007; Ord. 2890 Att. A, 2003; Ord. 2875 § 1.092.028, 2003)

**Res**ponse: The requirements associated with wetlands are addressed in the responses to Chapter 17.40.

# 17.44.030 Expiration of approval – Standards for extension of time.

(1) Approval of a sensitive lands permit shall be void if:

(a) Substantial construction of the approved plan has not begun within a one-and-one-half-year period; or

(b) Construction on the site is a departure from the approved plan.

(2) The director shall, upon written request by the applicant and payment of the required fee, grant an extension of the approval period not to exceed one year; provided, that:

(a) No changes are made on the original plan as approved by the approval authority;

(b) The applicant can show intent of initiating construction of the site within the one-year extension period; and

(c) There have been no changes to the applicable comprehensive plan policies and ordinance provisions on which the approval was based.

(3) Notice of the decision shall be provided to the applicant. The director's decision may be appealed by the applicant as provided by SHMC <u>17.24.310</u>. (Ord. 3031 Att. A, 2007; Ord. 2875 § 1.092.030, 2003)

**Res**ponse: The District understands the approval period of the sensitive lands permit and will begin construction prior to expiration of the approval.

# 17.44.040 Approval standards.

(1) The appropriate approval authority shall approve or approve with conditions an application request for a sensitive lands permit on slopes of 25 percent or greater or unstable ground in SHMC <u>17.44.015(2)</u> and (4) based upon findings that all of the following criteria have been satisfied:

(a) The extent and nature of the proposed landform alteration or development will not create site disturbances to an extent greater than that required for the use;

(b) The proposed landform alteration or development will not result in erosion, stream sedimentation, ground instability, or other adverse on-site and off-site effects or hazards to life or property;

(c) The structures are appropriately sited and designed to ensure structural stability and proper drainage of foundation and crawl space areas for development with any of the following soil conditions: wet/high-water table; high shrink-swell capability; compressible/organic; and shallow depth-to-bedrock; and

(d) Where natural vegetation has been removed due to landform alteration or development, the areas not covered by structures or impervious surfaces will be replanted to prevent erosion in accordance with Chapter <u>17.72</u> SHMC.

**Res**ponse: The project civil engineer (Locke Engineers) has prepared the following statement to address these approval standards:

Impacts to existing areas with slopes of 25 percent or greater will be minimized. Transitions from proposed improvements to existing grade impacting existing areas with slopes of 25 percent or greater will be accomplished with 4-unit horizontal to 1-unit vertical slopes constructed in accordance with the site specific geotechnical recommendations. Where a fill slope is not practical a site-specific retaining wall design will be prepared and approved also in accordance with geotechnical recommendations. The nature of the development greatly reduces the area and thus runoff to and through the sensitive areas. The potential for erosion will be reduced as a result. The primary design goal of the transitions to existing grade either by fill slope or retaining wall will be to address and provide stability. Appropriate ground cover will be employed to provide surface stability, ease of maintenance, and erosion prevention. Proposed structures are sited to not impact existing areas with slopes of 25 percent or greater. These structures will be constructed with proper foundation and surface drainage.

(2) The appropriate approval authority shall approve or approve with conditions an application request for a sensitive lands permit within drainageways in SHMC <u>17.44.015(</u>2) and (4) based upon findings that all of the following criteria have been satisfied:

**Res**ponse: Drainageways are not impacted by this proposal; therefore, these standards are not applicable.

(3) See Chapter <u>17.40</u> SHMC.

Response: Responses to Chapter 17.40 can be found in that section of this narrative.

(4) The director shall approve or approve with conditions an application request for a sensitive lands permit within fish and wildlife habitats in SHMC <u>17.44.015(5)</u> based upon findings that all of the following criteria have been satisfied:

(5) The director shall approve or approve with conditions an application request for a sensitive lands permit within cultural areas and sites in SHMC <u>17.36.015(1)</u> based upon findings that all of the following criteria have been satisfied:

(6) The director shall, within state and federal ESA habitats, require the applicant to obtain permission of state and federal authorities to grant permission to disturb this area.

(7) The director shall require a site development review for any alterations or development requests on lands designated as OS/SR or UOS. (Ord. 3031 Att. A, 2007; Ord. 2890 Att. A, 2003; Ord. 2875 § 1.092.040, 2003)

**Res**ponse: Fish and wildlife habitats, cultural sites, and lands designated OS/SR or UOS are not impacted by this proposal; therefore, these standards are not applicable.

# 17.44.050 Application submission requirements.

(1) All applications for uses and activities identified in SHMC <u>17.44.015(2)</u> through (5) shall be made on forms provided by the director and shall be accompanied by:

(a) Copies of the sensitive lands permit proposal and necessary data or narrative which explains how the proposal conforms to the standards (number to be determined at the preapplication conference) and:

(i) The scale for the site plan(s) shall be a standard engineering scale; and

(ii) All drawings or structure elevations or floor plans shall be a standard architectural scale, being one-fourth-inch or one-eighth-inch to the foot.

- (b) The required fee.
- (2) The required information may be combined on one map.
- (3) The site plan(s), data and narrative shall include the following:
  - (a) An existing site conditions analysis, SHMC 17.44.070;
  - (b) A site plan, SHMC <u>17.44.080;</u>
  - (c) A grading plan, SHMC <u>17.44.090;</u> and
  - (d) A landscaping plan, SHMC <u>17.44.100</u>. (Ord. 3031 Att. A, 2007; Ord. 2875 § 1.092.050, 2003)

**Res**ponse: This narrative and the plans included in Exhibit 1 satisfy these application submittal requirements.

# 17.44.060 Additional information required and waiver of requirements.

(1) The director may require information in addition to that required by this chapter in accordance with SHMC <u>17.24.080</u>.

(2) The director may waive a specific requirement for information in accordance with SHMC <u>17.24.080(2)</u> and (3). (Ord. 3031 Att. A, 2007; Ord. 2875 § 1.092.060, 2003)

**Res**ponse: The District understands that additional information may be required and will comply with any requests for additional information.

17.44.070 Site conditions.

17.44.080 **The site** p**lan**.

17.44.090 G**radin**g p**lan**.

# 17.44.100 Landscape plan.

**Res**ponse: The information required by each of these sections can be found on the plans included in Exhibit 1.

# Chapter 17.46 Floodplains and Floodways

[...]

17.46.030 General provisions.

(1) Lands to Which This Chapter Applies. This chapter shall apply to all areas of special flood hazard within the jurisdiction of the city of St. Helens.

**Res**ponse: The site is not within an area of special flood hazard; therefore, the provisions of this chapter are not applicable.

# Chapter 17.48 Solar Access Requirements

[...]

# 17.48.020 Applicability of provisions.

The provisions of this chapter shall apply to the creation of lots which are intended for single detached dwelling unit or duplex residences and the construction of single detached dwelling unit or duplex residences. (Ord. 2875 § 1.096.020, 2003)

**Res**ponse: The proposed development does not include single-family dwellings or duplexes; therefore, the provisions of this chapter are not applicable.

# Chapter 17.52 Environmental Performance Standards

# 17.52.010 Purpose.

The purpose of this chapter is to apply certain federal and state environmental laws, rules, and regulations to development within the city of St. Helens. (Ord. 2875 § 1.098.010, 2003)

**Response**: The District understands the purpose of this chapter and addresses its provisions below.

#### 17.52.020 General provisions.

(1) In addition to the regulations adopted in this chapter, each use, activity, or operation within the city of St. Helens shall comply with the applicable state and federal standards pertaining to noise, odor, and discharge of matter into the atmosphere, ground, sewer system, or stream.

(a) Regulations adopted by the State Environmental Quality Commission pertaining to nonpoint source pollution control and contained in the Oregon Administrative Rules shall by this reference be made a part of this chapter.

(2) Prior to issuance of a building permit, the director may require submission of evidence demonstrating compliance with state, federal, and local environmental regulations and receipt of necessary permits, e.g., air contaminant discharge permits (ACDP) or indirect source construction permits (ISCP).

(3) Compliance with state, federal, and local environmental regulations is the continuing obligation of the property owner and operator. (Ord. 2875 § 1.098.020, 2003)

**Response**: The District understands that compliance with state and federal requirements pertaining to environmental performance is required and will submit any documentation of compliance requested by the director.

#### 17.52.030 Noise.

For the purposes of noise regulation, the provisions of St. Helens Ordinance 2405 (Chapter <u>8.16</u> SHMC), or successive ordinances governing noise, shall apply as the standard. (Ord. 2875 § 1.098.030, 2003)

Response: Chapter 8.16 SHMC establishes the following noise prohibitions.

(1) When measured at or within the boundary of the property on which a noise sensitive unit which is not the source of the sound is located, or within a noise sensitive unit which is not the source of the sound, exceeds:

(a) Fifty dBA at any time between 10:00 p.m. and 7:00 a.m. of the following day;

(b) Sixty dBA at any time between 7:00 a.m. and 10:00 p.m. the same day;

(c) Fifty dBA at any time between 8:00 p.m. Saturday and 7:00 a.m. Monday; or

(2) Is plainly audible at any time between 10:00 p.m. and 7:00 a.m. the following day or at any time between 8:00 p.m. Saturday and 7:00 a.m. Monday:

(a) Within a noise sensitive unit which is not the source of the sound; or

# (b) On a public right-of-way at a distance of 50 feet or more from the source of the sound.

The only potential sources of ongoing noise on the site are the emergency generator and packaged chiller unit, located north of the main Middle School building. The emergency generator would be used only occasionally and on a temporary basis where necessary as a result of a power outage. The emergency generator will include a sound-attenuated enclosure. The technical specifications of the generator are provided in the Lighting and Equipment Cut Sheets (Exhibit 5)

Measured at the source of the noise, both units produce noise levels of approximately 60 to 75 dBA. Both units will be enclosed by a 6-foot masonry wall that will significantly reduce noise levels outside the enclosure. Both units are located between 30 to 40 feet from the adjacent property line. Given the buffering effect of the enclosure and the distance between the units and the property line, noise levels at the property line will be below the maximum levels required by subsection (1) above.

The residential dwellings (noise-sensitive units) on the adjacent properties are located at least 70 feet from the property line; therefore, given this distance and the buffer provided by the enclosure of the dwelling, it is not anticipated that the noise will be plainly audible within the dwellings.

# 17.52.040 Visible emissions.

Within the commercial and industrial park zoning districts, there shall be no use, operation, or activity which results in a stack or other point source emission, other than an emission from space heating, or the emission of pure uncombined water (steam) which is visible from a property line except where permits have been obtained from the Department of Environmental Quality. (Ord. 2875 § 1.098.040, 2003)

**Res**ponse: The site is not located in a commercial or industrial park and will not produce visible emissions; therefore, this section is not applicable.

# 17.52.050 Vibration.

No vibration longer than 30 continuous seconds or a frequency of greater than once per hour other than that caused by highway vehicles, trains, and aircraft is permitted in any given zoning district which is discernible without instruments at the property line of the use concerned. (Ord. 2875 § 1.098.050, 2003)

**Res**ponse: No equipment or activities on the site will produce vibration that is discernable at the property line.

# 17.52.060 Odors.

The emission of odorous gases or other matter in such quantities as to be readily detectable at any point beyond the property line of the use creating the odors is prohibited. DEQ rules for odors (OAR 340-028-090) apply. (Ord. 2875 § 1.098.060, 2003)

**Res**ponse: No equipment or activities on the site will emit odors that are discernable beyond the property line.

# 17.52.070 Glare and heat.

No direct or sky-reflected glare, whether from floodlights or from high temperature processes such as combustion or welding or otherwise, which is visible at the lot line shall be permitted, and:

(1) There shall be no emission or transmission of heat or heated air which is discernible at the lot line of the source; and

(2) These regulations shall not apply to signs or floodlights in parking areas or construction equipment at the time of construction or excavation work otherwise permitted by this code. (Ord. 2875 § 1.098.070, 2003)

**Response**: Light sources on the site will be limited to those necessary to illuminate parking and pedestrian circulation areas. These luminaires will be directed toward and produce little to no glare (see Lighting Cut and Equipment Cut Sheets, Exhibit 5). No glare will be visible from the property line. No equipment or activities on the site will produce emissions of heat that would be discernible at the property line.

#### 17.52.080 Insects and rodents.

All materials including wastes shall be stored and all grounds shall be maintained in a manner which will not attract or aid the propagation of insects or rodents or create a health hazard. (Ord. 2875 § 1.098.080, 2003)

**Res**ponse: All waste storage on the site will be properly enclosed and maintained in order to avoid the attraction of insects or rodents.

# Chapter 17.56 Density Computations

# Chapter 17.60 Manufactured/Mobile Home Regulations

**Res**ponse: Chapters 17.56 and 17.60 of the SHMC are only applicable to residential development; therefore, they do not apply to this application.

# Chapter 17.64 Additional Yard Setback Requirements and Exceptions

# 17.64.010 Purpose.

The purpose of this chapter is to permit or afford better light, air and vision clearance on more heavily traveled streets and on streets of substandard width, to make the location of structures compatible with the need for the eventual widening of streets by providing for additional yard setback distances, to ensure there is adequate distance between buildings on the site and to provide standards for projections into yard areas. (Ord. 2875 § 1.104.010, 2003)

Response: The District understands the purpose of this chapter and addresses its provisions below.

# 17.64.020 Additional setback from centerline required.

(1) To ensure improved light, air, and sight distance and to protect the public health, safety, and welfare, structures in any zoning district which abut certain arterial and collector streets shall be set back a minimum distance from the centerline of the street.

(2) Where the street is not partially or fully improved, the measurement shall be made at right angles from the centerline or general extension of the street right-of-way:

[...]

(b) Collector Streets. The required setback distance for buildings on collector streets as classified by the transportation system plan is the setback distance required by the zoning district plus 25 feet measured from the centerline of the street.

**Res**ponse: The school site is fronted by two collector streets: 15<sup>th</sup>/16<sup>th</sup> Street to the west and West Street to the north. All structures are located greater than 25 feet from the centerline of the street, as follows:

- 15<sup>th</sup>/16<sup>th</sup> Street: The closest structures are the baseball backstop (approximately 225 feet from centerline) and the CCEC building (approximately 300 feet from centerline).
- West Street: The closest structure is the existing portable building, approximately 140 feet from centerline.

(3) The minimum yard requirement shall be increased in the event a yard abuts a street having a right-ofway width less than required by its functional classification on the city's transportation plan map and, in such case, the setback shall be not less than the setback required by the zone plus one-half of the projected road width as shown on the transportation map.

(4) The minimum distance from the wall of any building (except fences or other structures allowed in this code) to the centerline of an abutting street, however, shall not be less than 25 feet plus the yard required by the zone. This provision shall not apply to rights-of-way of 60 feet or greater in width. (Ord. 3164 § 3 (Att. B), 2012; Ord. 2875 § 1.104.020, 2003)

**Res**ponse: Given the significant distances between the structures and centerline of adjacent streets identified above, these two standards are met.

# 17.64.030 No yard required – Structure not on property line.

In zoning districts where a side yard or a rear yard setback is not required, a structure which is not to be built on the property line shall be set back from the property line by a distance in accordance with the applicable building code (as administered by the building official) requirements. (Ord. 3164 § 3 (Att. B), 2012; Ord. 2875 § 1.104.030, 2003)

**Response**: Setbacks in the PL zone are not specified but may be required based on context. Given the significant distances between the structures and centerline of adjacent streets identified above, this standard will be met.

# 17.64.040 Exceptions to yard requirements.

(1) If there are dwellings on both abutting lots with front yard depths less than the required depth for the zone, the depth of the front yard for the intervening lot need not exceed the average depth of the front yards of the abutting lots.

(2) If there is a dwelling on one abutting lot with a front yard of less depth than the required depth for the zone, the front yard for the lot need not exceed a depth half-way between the depth of the abutting lot and the required front yard depth. (Ord. 2875 § 1.104.040, 2003)

**Response**: An exception to the yard requirements is not required; therefore, this section is not applicable.

# 17.64.050 Projections into required yards.

(1) Cornices, eaves, belt courses, sills, canopies, or similar architectural features may extend or project into a required yard not more than 36 inches provided the width of such yard is not reduced to less than three feet.

(2) Fireplace chimneys may project into a required front, side, or rear yard not more than three feet provided the width of such yard is not reduced to less than three feet.

(3) Open porches, decks, or balconies not more than 36 inches in height and not covered by a roof or canopy may extend or project into a required rear or side yard provided such natural yard area is not reduced to less than three feet and the deck is screened from abutting properties. Porches may extend into a required front yard not more than 36 inches.

(4) Unroofed landings and stairs may project into required front or rear yards only.

(5) No building or portion thereof, regardless of size, shall be placed closer than three feet to a property line. (Ord. 2875 § 1.104.050, 2003)

**Res**ponse: No projections will extend into a required yard and no buildings or structures will be placed closer than three feet to a property line; therefore, these standards are met.

# Chapter 17.68 Building Height Limitations – Exceptions

[...]

# 17.68.020 Building height exceptions.

Any building located in an industrial zone may be built to a maximum height of 75 feet, provided:

**Res**ponse: The proposed buildings are not located in an industrial zone; therefore, this section is not applicable.

# 17.68.040 Building height criteria for scenic resources.

(1) No new development over one story, or 15 feet in height, shall significantly obstruct views of the Columbia River on lots fronting on Strand Street, South Second Street, North and South First Street, River Street, and Riverside Drive.

**Res**ponse: The proposed buildings are not located so as to obstruct views from the identified streets; therefore, this section is not applicable.

# Chapter 17.72 Landscaping and Screening

#### 17.72.010 Purpose.

The purpose of this chapter is to establish standards for landscaping, buffering, and screening of land use within St. Helens in order to enhance the aesthetic environmental quality of the city:

(1) By protecting existing street trees and requiring the planting of street trees in new developments;

- (2) Through the use of plant materials as a unifying element;
- (3) By using planting materials to define spaces and articulate the uses of specific areas; and

(4) By using trees and other landscaping materials to mitigate the effects of the sun, wind, noise, and lack of privacy by the provision of buffering and screening. (Ord. 2875 § 1.108.010, 2003)

**Res**ponse: The District understands the purpose of this chapter and demonstrates conformance with its provisions below.

#### 17.72.015 Applicability – Approval process.

(1) The provisions of this chapter shall apply to all development where landscaping is required by this code including the construction of new structures (see SHMC <u>17.96.020</u>, Applicability of provisions), and to a change of use which increases the on-site parking or loading requirements or which changes the access requirements, except as follows:

- (a) Single-dwelling units and duplexes.
- (b) Any use not requiring site design review or conditional use permits.

(2) Where the provisions of Chapter <u>17.96</u> SHMC, Site Development Review, do not apply, the director shall approve, approve with conditions, or deny a plan submitted under the provisions of this chapter. The decision may be appealed as provided by SHMC <u>17.24.310</u>(1).

**Res**ponse: This application is subject to Site Development Review and is therefore subject to the standards of this chapter.

- (3) The applicant shall submit a site plan which includes:
  - (a) Location of underground irrigation system sprinkler heads where applicable;
  - (b) Location and height of fences, buffers, and screenings;

(c) Location of terraces, decks, shelters, play areas, and common open spaces;

- (d) Location, type, size, and species of existing and proposed plant materials; and
- (e) A narrative which addresses:
  - (i) Soil conditions; and
  - (ii) Erosion control measures that will be used.

**Res**ponse: The Site Development Plan and Landscape Plan (Sheets B1 and D, Exhibit 1) and this narrative include the information required above.

(4) The approval standards are the applicable standards contained in this chapter. (Ord. 2875 § 1.108.015, 2003)

Response: The standards of this chapter are addressed below.

#### 17.72.020 General provisions.

(1) Unless otherwise provided by the lease agreement, the owner, tenant, and their agent, if any, shall be jointly and severally responsible for the maintenance of all landscaping which shall be maintained in good condition so as to present a healthy, neat and orderly appearance and shall be kept free from refuse and debris.

(2) All plant growth in landscaped areas of developments shall be controlled by pruning, trimming or otherwise so that:

(a) It will not interfere with the maintenance or repair of any public utility;

- (b) It will not restrict pedestrian or vehicular access; and
- (c) It will not constitute a traffic hazard because of reduced visibility.

**Res**ponse: The District understands the responsibility for maintenance of on-site landscaping and has staff to perform this maintenance on all district properties in accordance with these requirements.

(3) The installation of all landscaping shall be as follows:

- (a) All landscaping shall be installed according to accepted planting procedures;
- (b) The plant materials shall be of high grade; and
- (c) Landscaping shall be installed in accordance with the provisions of this code.

**Response**: The installation of landscaping will be in accordance with accepted procedures, use highgrade materials, and be in accordance with other provisions of this code. Plant material palettes for both projects will be developed to meet SHMC requirements and provide low maintenance, drought tolerant characteristics. All landscape improvement areas will be irrigated with an automatic irrigation system capable of efficient water management and conservation

(4) Certificates of occupancy shall not be issued unless the landscaping requirements have been met or other arrangements have been made and approved by the director such as the posting of a bond.

**Res**ponse: The District understands that certificates of occupancy will not be issued unless landscape requirements have been met.

(5) Existing plant materials on a site shall be protected as much as possible:

(a) The developer shall provide methods for the protection of existing plant material to remain during the construction process; and

(b) The plants to be saved shall be noted on the landscape plans (e.g., areas not to be disturbed can be fenced, as in snow fencing which can be placed around individual trees).

**Response**: The Landscape Plan (Sheet D1, Exhibit 1) identifies areas where existing plant materials will be retained. Methods to protect existing plant materials will be provided as part of the building permit application.

(6) Appropriate methods for the care and maintenance of street trees and landscaping materials shall be provided by the owner of the property abutting the rights-of-way unless otherwise required for emergency conditions and the safety of the general public.

**Res**ponse: The District understands the responsibility for maintenance of landscaping adjacent to the right-of-way and has staff to perform this maintenance on all district properties.

(7) The review procedures and standards for required landscaping and screening shall be specified in the conditions of approval during development review and in no instance shall be less than that required for conventional development.

**Res**ponse: The District understands the landscape and screening standards shall be specified in conditions of approval and will conform with these requirements.

(8) No trees, shrubs, or plantings more than 18 inches in height shall be planted in the public right-of-way abutting roadways having no established curb and gutter. (Ord. 2875 § 1.108.020, 2003)

**Response**: As shown on the Tree Plan (Sheet H, Exhibit 1), five street trees are planned for short segment of N. 15<sup>th</sup> Street south of the main access road, although no curb and gutter are proposed for this segment. No curb and gutter are proposed because rock outcroppings and a steep slope just south of this segment prevent sidewalks or a curb and gutter from being installed, so any sidewalk in this area would be short and discontinuous. The street trees planted in this area found to be in accordance with the intent of this Chapter and were approved by the City Engineer and Planning Director

# 17.72.030 Street trees.

(1) All development projects fronting on a public or private street, or a private driveway more than 100 feet in length approved after the adoption of the ordinance codified in this code shall be required to plant street trees in accordance with the standards in SHMC <u>17.72.035</u>.

**Res**ponse: The District understands that street trees are required as part of the frontage improvements included with this project.

(2) Certain trees can severely damage utilities, streets, and sidewalks or can cause personal injury. Approval of any planting list shall be subject to review by the director. A list of suggested appropriate tree species is located at the end of this chapter. Additional or alternative tree species also may be recommended by the applicant or determined by the director based on information provided in adopted city plans, policies, ordinances, studies or resolutions. Proposals by the applicant shall require approval by the director. (Ord. 3181 § 4 (Att. C), 2015; Ord. 2875 § 1.108.030, 2003)

**Res**ponse: Street trees proposed for this development are Skyline Honeylocust, in conformance with the suggested appropriate street trees identified in this chapter.

# 17.72.035 Location of street trees.

(1) Landscaping in the front and exterior side yards shall include trees with a minimum caliper of two inches at four feet in height as specified in the requirements stated in subsection (2) of this section.

Response: The street trees proposed for this development are at least 2 inches in caliper.

(2) The specific spacing of street trees by size of tree shall be as follows:

(a) Small or narrow stature trees (under 25 feet tall and less than 16 feet wide branching) shall be spaced no greater than 20 feet apart;

(b) Medium sized trees (25 to 40 feet tall, 16 to 35 feet wide branching) shall be spaced no greater than 30 feet apart;

(c) Large trees (over 40 feet tall and more than 35 feet wide branching) shall be spaced no greater than 40 feet apart;

**Res**ponse: As shown on the Tree Plan (Sheet H, Exhibit 1), large street trees are proposed and are spaced approximately 40 feet apart.

(d) Except for signalized intersections as provided in SHMC <u>17.72.060(3)</u>, trees shall not be planted closer than 20 feet from a street intersection, nor closer than two feet from private driveways (measured at the back edge of the sidewalk), fire hydrants, or utility poles in order to maintain visual clearance;

**Res**ponse: As shown on the Tree Plan (Sheet H, Exhibit 1), no street trees are placed within two feet from the site driveways.

(e) No new utility pole location shall be established closer than five feet to any existing street tree;

(f) Tree pits shall be located so as not to include services (water and gas meters, etc.) in the tree well;

(g) On-premises services (water and gas meters, etc.) shall not be installed within existing tree well areas;

(h) Street trees shall not be planted closer than 20 feet to light standards;

(i) New light standards shall not be positioned closer than 20 feet to existing street trees except when public safety dictates, then they may be positioned no closer than 10 feet;

(j) Trees shall be planted at least two feet from the face of the curb;

(k) Where there are overhead power lines, the street tree species selected shall be of a type which, at full maturity, will not interfere with the lines; and

(I) Trees shall not be planted within two feet of any permanent hard surface paving or walkway:

(i) Space between the tree and the hard surface may be covered by a nonpermanent hard surface such as grates, bricks on sand, paver blocks, and cobblestones; and

(ii) Sidewalk cuts in concrete for tree planting shall be at least four feet by four feet to allow for air and water into the root area.

**Response**: The street tree plantings will conform to the requirements of (e) through (I) above. Review of these standards will occur with review of the construction documents, when more detailed drawings are available.

(3) Trees, as they grow, shall be pruned to provide at least eight feet of clearance above sidewalks and 13 feet above local street, 15 feet above collector street, and 18 feet above arterial street roadway surfaces. (Ord. 2875 § 1.108.035, 2003)

**Response**: The District understands the responsibility for maintenance of street trees to provide sufficient clearance of 15 feet above the collector streets that front this development, and has staff to perform this maintenance.

# 17.72.040 Cut and fill around existing trees.

(1) Existing trees may be used as street trees if no cutting or filling takes place within the dripline of the tree unless an exception is approved by the director.

(2) An exception will be approved if:

(a) The ground within the dripline is altered merely for drainage purposes; and

(b) It can be shown that the cut or fill will not damage the roots and will not cause the tree to die. (Ord. 2875 § 1.108.040, 2003)

**Res**ponse: No existing trees are proposed to be used as street trees; therefore, this section is not applicable.

#### 17.72.050 Replacement of street trees.

(1) Existing street trees removed by development projects or other construction shall be replaced by the developer with those types of trees approved by the director.

(2) The replacement trees shall be of a size and species similar to the trees that are being removed unless lesser sized alternatives are approved by the director. (Ord. 2875 § 1.108.050, 2003)

Response: No street trees exist on the site currently; therefore, this section is not applicable.

#### 17.72.060 Exemptions.

(1) Modifications to the street tree requirements or exemptions to the requirements may be granted by the director on a case-by-case basis.

(2) Exemptions shall be granted if it can be documented that one or more of the following applies to the site:

(a) The location of a proposed tree would cause potential problems with existing utility lines;

- (b) The tree would cause visual clearance problems;
- (c) There is not adequate space in which to plant street trees within the public right-of-way; or
- (d) The ground conditions within the public right-of-way are unable to support street trees.

(3) The director may allow trees closer to specified intersections which are signalized, provided the provisions of Chapter <u>17.76</u> SHMC, Visual Clearance Areas, are satisfied.

(4) If one or more conditions described in subsection (2) of this section are shown to exist on the site, the director may require the following to fulfill the street tree requirements of this chapter:

(a) A landscaping easement outside the public right-of-way for the purposes of accommodating street trees. The location of the landscaping easement shall be located on site. A public utility easement may be used for this purpose.

(b) An applicant may, with the consent of the director, elect to compensate the city for costs commensurate with the number of street trees that would have otherwise been required for the site. The fee, established by resolution of the city council, will be generally based on the city's street tree list in this chapter and market value of the tree(s). (Ord. 3181 § 4 (Att. C), 2015; Ord. 3150 § 3 (Att. B), 2011; Ord. 2875 § 1.108.060, 2003)

**Response**: In accordance with this section, street trees are not proposed along the site frontage adjacent to the significant wetland on the west side of the site. Per direction from the City Engineer and Planning Director, including street trees would have more impact on the wetland as the planter strip would require the sidewalk to be closer to the wetland. Therefore, no planter strip or street trees are proposed along this segment of the frontage.

#### 17.72.070 Buffering and screening - General provisions.

(1) It is the intent that these requirements shall provide for privacy and protection and reduce or eliminate the adverse impacts of visual or noise pollution at a development site, without unduly interfering with the view from neighboring properties or jeopardizing the safety of pedestrians and vehicles.

(2) Buffering and screening are required to reduce the impacts on adjacent uses which are of a different type in accordance with the matrix in this chapter. The owner of each proposed development is responsible for the installation and effective maintenance of buffering and screening.

(3) In lieu of these standards, a detailed buffer area landscaping and screening plan may be submitted for the director's approval as an alternative to the buffer area landscaping and screening standards, provided it affords the same degree of buffering and screening as required by this code. (Ord. 2875 § 1.108.070, 2003)

**Response**: The District understand the purposes and intent of the buffering and screening requirements. Due to the unique topography and existing landscape along the perimeter of the site and the lack of standards specific to a public or institutional use such as a school, the District proposes to submit a buffering and screening plan in lieu of responding to the specific standards.

The Landscape Plan and Tree Plan (Sheets D and H, Exhibit 1) and this narrative will serve as the required buffering and screening plan. For a proposed non-residential use, buffering and screening is

required along interior property lines that abut residential uses. Buffering and screening applies to the site as follows:

- The property lines along 15<sup>th</sup>/16<sup>th</sup> Street and West Street are exterior property lines and therefore buffering and screening is not applicable. Street trees planted with frontage improvements along these streets will provide some buffering and screening. Specific elements required to be screened from view from the public right-of-way, as required by 17.72.110, are addressed below.
- The southeasterly property line abuts the public right-of-ways of Willamette Street and 12<sup>th</sup> Street. The majority of this property line abuts the Willamette Street right-of-way that is unimproved and contains a densely vegetated gorge area and wetland. Buffering and screening is not applicable to this property line.
- Portions of the of the north, northeasterly, and eastern property line directly abuts residential properties. Buffering and screening is applicable along these property lines.

The following natural and built features of the site will provide sufficient buffering and screening from the adjacent properties along the north, northeasterly, and eastern property lines:

- There is a significant elevation difference of between 20 and 30 feet between the abutting residential properties and the school site along all of these property lines. This steep grade change serves to significantly obstruct views into the school site from the residential properties.
- The Middle School is placed between 90 and 140 feet from the property line of all adjacent residential properties. A partially vacated right-of-way along the alignment of 12th Street provides an additional buffer between the easterly property line and the adjacent residential properties.
- Mature trees and dense vegetation—on the school property, the 12<sup>th</sup> Street right-of-way, and the adjacent residential properties—provide a level of buffering and screening that is consistent with the purposes of this chapter. There are two areas where the existing vegetation may not provide sufficient buffering and screening: the far northeastern corner of the property and the area directly north of the planned location of loading and service areas. Additional trees will be planted along these property lines in areas additional screening may be desirable, as shown on the Tree Plan. The loading and service areas will be screened from view as required by 17.72.110 and as shown on the Landscape Plan.

This combination of existing site features and planned landscape installations will provide buffering and screening that achieves the purposes of this chapter.

# 17.72.080 Buffering and screening requirements.

**Res**ponse: In accordance with 17.72.070(3), the District is submitting a buffering and screening plan in lieu of responding to the standards of 17.72.080.

# 17.72.090 Setbacks for fences or walls.

(1) No fence or wall shall be constructed which exceeds the standards in subsection (2) of this section except when the approval authority, as a condition of approval, allows that a fence or wall be constructed to a height greater than otherwise permitted in order to mitigate against potential adverse effects. For residential uses, a fence may only exceed the height standards if approved by a variance.

(2) Fences or walls:

(a) May not exceed four feet in height in a required front yard along local or collector streets or six feet in all other yards and, in all other cases, shall meet vision clearance area requirements (Chapter <u>17.76</u> SHMC);

(b) Are permitted up to six feet in height in front yards adjacent to any designated arterial or street. For any fence over three feet in height in the required front yard area, permission shall be subject to review of the location of the fence or wall;

(c) All fences or walls shall meet vision clearance area requirements (Chapter 17.76 SHMC);

(d) All fences or walls greater than six feet in height shall be subject to building official approval. (Ord. 3144 § 2 (Att. A), 2011; Ord. 2875 § 1.108.090, 2003)

**Res**ponse: The following fences and walls are planned for the site. The District understands that all fences or walls greater than six feet in height are subject to building official approval.

- The existing fence around the perimeter of the site is 6 feet in height and is not proposed to be modified. See the Site Development Plan for the location of the fence (Sheet B1, Exhibit 1).
   Where adjacent to the collector streets that front the street, the fence exceeds the height prescribed by subsection (2)(a). The District proposes to retain the fence at its current height to provide sufficient security for the school site.
- The loading and service areas will be enclosed with a 6-foot masonry wall in accordance with 17.72.110 and 17.92.060(3).
- Retaining walls are used in specific locations throughout the site and vary in height from 3 feet to 10 feet. The walls are necessary to accommodate improvements on sloped areas of the site. See the Grading Plan (Sheet C, Exhibit 1) for the location of the retaining walls.

# 17.72.100 Height restrictions.

(1) The prescribed heights of required fences, walls, or landscaping shall be measured from the actual adjoining level of finished grade, except that where parking, loading, storage, or similar areas are located above finished grade, the height of fences, walls, or landscaping required to screen such areas or space shall be measured from the level of such improvements.

**Res**ponse: The height measurements presented in this narrative are consistent with the method prescribed by this provision.

(2) An earthen berm and fence or wall combination shall not exceed the six-foot height limitation for screening. (Ord. 2875 § 1.108.100, 2003)

Response: No earthen berms are proposed for the site; therefore, this provision is not applicable.

# 17.72.110 Screening - Special provisions.

- (1) Screening of Parking and Loading Areas.
  - (a) Screening of parking for single and duplex attached and detached dwellings is not required.
  - (b) Screening of parking (larger than three spaces) and loading areas (larger than 400 square feet) is required. The specifications for this screening are as follows:

(i) Landscaped parking areas shall include special design features which effectively screen the parking lot areas from view. These design features may include the use of landscaped berms, decorative walls, and raised planters. Berms, planters, and other forms of vegetative landscaping are permitted for screening that fronts US 30. Walls are prohibited for screening that fronts US 30;

(ii) Landscape planters may be used to define or screen the appearance of off-street parking areas from the public right-of-way; and

(iii) Materials to be installed should achieve a balance between low-lying and vertical shrubbery and trees.

**Response**: All parking and loading areas visible from public right-of-way will be screened from view using a combination of trees, shrubbery, and decorative walls. These areas are identified as the "required landscape" areas on the Landscape Plan (Sheet D, Exhibit 1). They include the entire perimeter of the CCEC parking area and the southwestern edge of the overflow parking area for the Middle School, which is closer to 16<sup>th</sup> Street than the main parking area. Due to the topography of the site and existing vegetation, the main parking area of the Middle School will not be visible from a public right-of-way.

(2) Screening of Service Facilities. Except for single-dwelling units and duplexes, service facilities such as gas meters and air conditioners which would otherwise be visible from a public street, customer or resident parking area, any public facility or any residential area shall be screened from view by placement of a solid wood fence or masonry wall between five and eight feet in height or evergreens already to correct height minimums. All refuse materials shall be contained within the screened area. Rooftop service facilities and equipment shall be screened from view from adjacent streets and adjacent properties in one of the following ways:

(a) A parapet wall of adequate height;

(b) A screen around the equipment that is made of a primary exterior finish material used on other portions of the building; or

(c) Set back such that it is not visible from the public street(s) and adjacent properties.

Response: All service facilities will be screened as follows:

- All service facilities associated with the Middle School are located to the north of the Middle School building, as shown on the Site Development Plan (Sheet B1, Exhibit 1). They will be enclosed by a masonry wall approximately 6 feet in height that is made of a similar style of masonry used on the main Middle School building. The enclosure will also include a metal deck canopy with a vertical clearance of approximately 10 feet.
- Service facilities associated with the CCEC building will be internal to the building or shared with the Middle School building, except for solid waste containers, which are located at the north end of the parking lot. The containers will be enclosed with a 6-foot masonry wall.

All rooftop facilities will be screened as follows:

- Rooftop equipment on the Middle School building will be screened using metal panel screens. The metal panels are also used on other areas of the building façade.
- Rooftop equipment on the CCEC building is placed inside a mechanical well and set back from the building edge so as not to be visible from the street or adjacent properties. The equipment will also be screened by the covered play structure directly to the north of the main building.

(3) Screening of Swimming Pools. All swimming pools shall be enclosed as required by the applicable building code as administered by the building official.

**Response**: No swimming pools are proposed on the site; therefore, this standard is not applicable.

(4) Screening of Refuse Containers Required. Except for one- and two-unit dwellings, any refuse container or refuse collection area which would be visible from a public street, parking lot, residential or commercial area, or any public facility such as a school or park shall be screened or enclosed from view by placement of a solid wood fence, masonry wall or evergreen hedge.

**Response**: The refuse containers associated with the Middle School are located within the same enclosure as the service facilities described above, and will therefore be screened from view. The refuse containers associated with the CCEC building are located on the north end of the existing parking area, as shown on the Site Development Plan (Sheet B1, Exhibit 1). These containers will be enclosed with a masonry wall approximately 6 feet in height.

(5) Outdoor storage areas shall be landscaped and screened in accordance with SHMC <u>17.72.080(5)(a)</u> through (c).

Response: No outdoor storage areas are proposed on the site.

# 17.72.120 Revegetation.

(1) Where natural vegetation has been removed through grading in areas not affected by the landscaping requirements and that are not to be occupied by structures, such areas are to be replanted as set forth in this section to prevent erosion after construction activities are completed.

(2) Methods of Revegetation. Acceptable methods of revegetation include hydromulching or the planting of rye grass, barley, or other seed with equivalent germination rates, and:

(a) Where lawn or turf grass is to be established, lawn grass seed or other appropriate landscape cover is to be sown at not less than four pounds to each 1,000 square feet of land area;

(b) Other revegetation methods offering equivalent protection may be approved by the approval authority;

(c) Plant materials are to be watered at intervals sufficient to ensure survival and growth; and

(d) The use of native plant materials is encouraged to reduce irrigation and maintenance demands. (Ord. 2875 § 1.108.120, 2003)

**Response**: All areas where natural vegetation has been removed will be repaired and replaced with vegetation in accordance with the provisions of this section. These areas and the proposed plant species to be used are shown on the Landscape Plan (Sheet D, Exhibit 1) as "repair and replace landscape". All landscape improvement areas will be irrigated with an automatic irrigation system capable of efficient water management and conservation. Plant material palettes for both projects will provide low maintenance, drought tolerant characteristics.

# 17.72.130 Buffer matrix.

(1) The buffer matrix (Figure 13) shall be used in calculating widths of buffering and screening to be installed between proposed uses and abutting zoning districts or specified types of streets.

**Res**ponse: In accordance with 17.72.070(3), the District is submitting a buffering and screening plan in lieu of responding to the standards set forth by the buffer matrix.

# 17.72.140 Interior parking lot landscaping.

(1) All parking areas with more than 20 spaces shall provide landscape islands with trees that provide a canopy effect and break up the parking area into rows of not more than seven contiguous parking spaces.

**Response**: As shown on the Landscape Plan, all new parking areas include landscape islands that break up the parking areas into rows of no more than seven spaces. All landscape islands will include trees. One row greater than seven spaces is planned in order to provide a sufficient number of spaces for disabled persons within a close distance of the main entrance, as required by ADA regulations. Per direction from City staff, the existing parking area for the CCEC building will not be required to come into conformity with this standard.

(2) Landscape islands and planters shall have dimensions of not less than 48 square feet of area and no dimension of less than six feet, to ensure adequate soil, water, and space for healthy plant growth.

**Res**ponse: The minimum dimension of any landscape island is 6 feet and the minimum area is approximately 78 square feet.

(3) All required parking lot landscape areas not otherwise planted with trees must contain a combination of shrubs and groundcover plants so that, within two years of planting, not less than 50 percent of that area is covered with living plants.

**Response**: All landscape islands will be planted with shrubs and groundcover plant species as identified on the Landscape Plan (Sheet D, Exhibit 1). The groundcover and shrubs will be planted at an intensity to meet the groundcover standard of this provision.

(4) The landscaping shall be protected from vehicular damage by some form of wheel guard or curb permanently fixed to the ground. (Ord. 3181 § 4 (Att. C), 2015)

Response: As shown on the Landscape Plan (Sheet D, Exhibit 1), all parking stalls include wheel stops.

# Chapter 17.76 Visual Clearance Areas

# 17.76.010 Purpose.

The purpose of this chapter is to establish standards which will assure proper sight distances at intersections in order to reduce the hazard from vehicular turning movements. (Ord. 2875 § 1.110.010, 2003)

**Res**ponse: The District understands the purpose of vision clearance areas and has designed the vehicle access road in accordance with this chapter.

# 17.76.015 Applicability of provisions.

(1) The provisions of this chapter shall apply to all development including the construction of new structures, the remodeling of existing structures (see SHMC <u>17.96.020</u>), and to a change of use which increases the on-site parking or loading requirements or which changes the access requirements.

(2) Where the provisions of Chapter <u>17.96</u> SHMC, Site Development Review, do not apply, the director shall approve, approve with conditions, or deny a plan submitted under the provisions of this chapter. No notice is required. The decision may be appealed as provided by SHMC <u>17.24.310(1)</u>.

Response: As a construction of a new structure, the provisions of this chapter apply to the project.

(3) The applicant shall submit a site plan which includes:

(a) The location and height of all hedges, trees, plantings, fences or wall structures within the vision clearance area as computed in SHMC <u>17.76.030</u>, <u>17.76.040</u>, and <u>17.76.050</u>; and

(b) The location of all access points, parking and circulation areas, loading areas and pedestrian walkways within the vision clearance area as computed in SHMC <u>17.76.030</u>, <u>17.76.040</u>, and <u>17.76.050</u>. (Ord. 2875 § 1.110.015, 2003)

**Res**ponse: The Site Development Plan (Sheet B1, Exhibit 1), in conjunction with this narrative, includes this information.

#### 17.76.020 Visual clearance - Required.

(1) A visual clearance area shall be maintained on the corners of all property adjacent to the intersection of two streets, a street and a railroad, or a driveway providing access to a public or private street.

**Res**ponse: The only applicable intersections on the site are the two driveways providing access to the Middle School and CCEC site.

(2) A clear vision area shall contain no vehicle, hedge, planting, fence, wall structure, or temporary or permanent obstruction (except for an occasional utility pole or tree), exceeding three feet in height, measured from the top of the curb, or where no curb exists, from the street centerline grade, except that trees exceeding this height may be located in this area, provided all branches below eight feet are removed.

**Response**: As shown on the Site Development Plan (Sheet B1, Exhibit 1), no obstructions are placed in the clear vision areas of either driveway. The clear vision areas are measured from the actual edge of the street rather than the property line or right-of-way line as the right-of-way is significantly wider than the street, in accordance with the measurement exception in SHMC 17.76.040. The monument sign planned near the main entrance of the Middle School is intentionally placed outside the clear vision area.

(3) Where the crest of a hill or vertical curve conditions contribute to the obstruction of clear vision areas at a street or driveway intersection, hedges, plantings, fences, walls, wall structures and temporary or permanent obstructions shall be further reduced in height or eliminated to comply with the intent of the required clear vision area.

Response: No obstructions are placed in the clear vision area; therefore, this provision does not apply.

#### 17.76.030 Computation – Nonarterial street and all accessways.

A visual clearance area for all street intersections, street and accessway intersections, and street or accessway and railroad track intersections shall be that triangular area formed by the right-of-way or property lines along such lots and a straight line joining the right-of-way or property line at points which are 30 feet distance from the intersection of the right-of-way line and measured along such lines (see figure above). (Ord. 2875 § 1.110.030, 2003)

**Res**ponse: The clear vision areas for the driveways were measured from the actual street edge, in accordance with SHMC 17.76.040.

## 17.76.040 Exceptions.

Where a right-of-way is greater than what is required, the actual street, railroad, or driveway intersections may be used in lieu of the property lines for computing the visual clearance area. (Ord. 2875 § 1.110.040, 2003)

**Res**ponse: The clear vision areas for the driveways were measured from the actual street edge, in accordance with this provision.

#### 17.76.050 Computation - Arterial.

On all designated aterial streets the visual clearance area shall not be less than 35 feet on each side of the intersection. (Ord. 2875 § 1.110.050, 2003)

Response: The site does not front any arterial streets; therefore, this standard is not applicable.

# Chapter 17.80 Off-Street Parking and Loading Requirements

#### 17.80.010 Purpose.

(1) The purpose of these regulations is to establish parking areas having adequate capacity and which are appropriately located and designed to minimize any hazardous conditions on site and at access points.

(2) The parking requirements are intended to provide sufficient parking in close proximity to the various uses for residents, customers, and employees, and to establish standards which will maintain the traffic-carrying capacity of nearby streets. (Ord. 2875 § 1.114.010, 2003)

**Res**ponse: The District understands the purpose of the off-street parking and loading requirements and demonstrates conformance with the provisions of this chapter below.

## 17.80.015 Applicability of provisions.

(1) The provisions of this chapter shall apply to all development including the construction of new structures, the remodeling of existing structures (see SHMC <u>17.96.020</u>) and to a change of use which increases the on-site parking or loading requirements or which changes the access requirements.

(2) Where the provisions of Chapter <u>17.96</u> SHMC, Site Development Review, do not apply, the director shall approve, approve with conditions, or deny a plan submitted under the provisions of this chapter. No notice is required. The decision may be appealed as provided by SHMC <u>17.24.310(1)</u>.

Response: As a construction of a new structure, the provisions of this chapter apply to the project.

(3) The applicant shall submit a site plan which includes:

- (a) The location of the structures on the property and on the adjoining property;
- (b) The delineation of individual parking and loading spaces and their dimensions;
- (c) The location of the circulation area necessary to serve the spaces;
- (d) The location of the access point(s) to streets, to accessways and to properties to be served;
- (e) The location of curb cuts;

(f) The location and dimensions of all landscaping, including the type and size of plant material to be used, as well as any other landscape material incorporated into the overall plan;

- (g) The proposed grading and drainage plans; and
- (h) Specifications as to signs and bumper guards. (Ord. 2875 § 1.114.015, 2003)

**Res**ponse: The Site Development Plan and Grading Plan (Sheets B1 and C, Exhibit 1), in conjunction with this narrative, include this information.

#### 17.80.020 General provisions.

(1) Parking Dimensions. The minimum dimensions for parking spaces are:

- (a) Eight feet, eight inches wide and 18 feet long for a standard space;
- (b) Eight feet wide and 15 feet long for a compact space; and

(c) As required by applicable state of Oregon and federal standards for designated disabled person parking spaces.

**Res**ponse: As shown on the Site Development Plan (Sheet B1, Exhibit 1), the dimensions of all parking stalls meet the dimensional requirements of this subsection.

(2) Building Permit Conditions. The provision and maintenance of off-street parking and loading spaces are the continuing obligations of the property owner:

(a) No building or other permit shall be issued until plans are presented to the director to show that property is and will remain available for exclusive use as off-street parking and loading space; and

(b) The subsequent use of property for which the building permit is issued shall be conditional upon the unqualified continuance and availability of the amount of parking and loading space required by this code.

**Response**: The District understands that the provision and maintenance of off-street parking and loading spaces are the obligation of the property owner and intend to continue to use the parking lot for the use proposed in this application.

(3) Parking Requirements for Unlisted Uses.

[...]

**Res**ponse: Both the CCEC and Middle School are a listed use in this chapter, therefore; this provision is not applicable.

(4) Existing and New Uses. At the time of erection of a new structure or at the time of enlargement or change in use of an existing structure within any district, off-street parking spaces shall be as provided in accordance with SHMC <u>17.80.030</u>, and:

(a) In case of enlargement of a building or use of land existing on the date of adoption of the ordinance codified in this code, the number of additional parking and loading spaces required shall be based only on floor area or capacity of such enlargement; and

(b) If parking space has been provided in connection with an existing use or is added to an existing use, the parking space shall not be eliminated if the elimination would result in less space than is specified in the standards of this section when applied to the entire use.

**Response**: The parking area for the CCEC building will remain and continue to be used for the existing school district building and the redeveloped CCEC building. The parking requirements of both uses were calculated and combined in determining the minimum parking requirements for this part of the site, as demonstrated below.

(5) Change in Use.

[...]

(6) Shared Parking in Commercial Districts.

[...]

(7) Visitor Parking in Multiple-Dwelling Unit Residential Districts.

[...]

**Res**ponse: The proposed uses do not constitute a change in use and are not located in a commercial or multi-dwelling unit residential district, therefore; these provisions are not applicable.

(8) Location of Required Parking.

(a) Off-street parking spaces for single-dwelling unit – detached, duplex dwellings and singledwelling – attached dwellings shall be located on the same lot with the dwelling; and

(b) Off-street parking lots for uses not listed above shall be located not further than 200 feet from the building or use they are required to serve, measured in a straight line from the building with the following exceptions:

(i) Shared parking areas, as provided by subsection (6) of this section, for commercial uses which require more than 40 parking spaces may provide for the spaces in excess of the required 40 spaces up to a distance of 300 feet from the commercial building or use; and

(ii) Industrial and manufacturing uses which require in excess of 40 spaces may locate the required spaces in excess of the 40 spaces up to a distance of 300 feet from the building.

**Response**: Due to the topography of the site and size of the parking area to be accommodated, the District is requesting to be granted the exceptions to this standard that are applicable to industrial or commercial uses, as provided above. The parking areas meet this standard as follows:

- All of the 17 required parking spaces for the district administration building are located within 200 feet of the building.
- 29 of the required 33 parking spaces for the CCEC building are located within 200 feet of the building. The commercial/industrial standard allows that required spaces in excess of 40 spaces may be located within 300 feet of the building; thus all 33 spaces must be located within 300 feet. All of the required spaces are located within 300 feet of the building.
- The Middle School requires 103 parking spaces. The commercial/industrial standard allows that required spaces in excess of 40 spaces may be located within 300 feet of the building; thus 63 spaces must be located within 300 feet. The site design provides for 83 of the required 103 parking spaces are within 300 feet of the building.

(9) Mixed Uses. Where several uses occupy a single structure or parcel of land or a combination of uses are included in one business, the total off-street parking spaces and loading area is the sum of the requirements of the several uses, computed separately unless the peak hours of use do not overlap.

**Res**ponse: The total off-street parking requirements for the three uses on the site—district administration building, CCEC, and Middle School, were computed separately.

(10) Choice of Parking Requirements. When a building or use is planned or constructed in such a manner that a choice of parking requirements could be made, the use which requires the greater number of parking spaces shall govern.

**Res**ponse: The uses do not allow for a choice of parking requirements; therefore, this provision is not applicable.

(11) Availability of Parking Spaces. Required parking spaces shall:

(a) Be available for the parking of operable passenger automobiles of residents, customers, patrons, and employees only;

(b) Not be used for storage of vehicles or materials or for the parking of trucks used in conducting the business or use; and

(c) Not be rented, leased, or assigned to any other person or organization.

**Res**ponse: The District understands that parking spaces must be available to users of the building and will not be used for storage or leased to other persons or organizations.

(12) Parking Lot Landscaping. Parking lots shall be landscaped in accordance with the requirements in Chapter <u>17.72</u> SHMC.

**Res**ponse: Parking lot landscaping is addressed in the section responding to Chapter 17.72 of this narrative.

(13) Designated Parking for the Handicapped. All parking areas shall be provided with the required numbers and sizes of disabled person parking spaces as specified by applicable state of Oregon and

federal standards. All disabled person parking spaces shall be signed and marked on the pavement as required by these standards.

**Response**: As shown on the Site Development Plan (Sheet B1, Exhibit 1), the CCEC site has designated 2 spaces for disabled persons and the Middle School has designated 5 spaces for disabled persons. The parking spaces are sized and located to be in conformance with all applicable state and federal regulations.

(14) Designated Parking for Compact Vehicles. All parking spaces designated for compact vehicles shall be signed or labeled by painting on the parking space.

Response: No compact spaces are proposed; therefore, this provision is not applicable.

(15) Bicycle Parking.

(a) One lockable bicycle parking space shall be provided within a rack for the following:

[...]

(iii) Civic uses: 20 percent of vehicular parking spaces; and

[...]

**Response**: Minimum bike parking space requirements are prescribed for school uses in the 17.80.030(2)(j). The District assumes that these standards apply and not the general civic use standard listed in this provision.

(b) Bicycle parking areas shall be provided at locations within 50 feet of primary entrances to structures. Where possible, bicycle parking facilities shall be placed under cover. Bicycle parking areas shall not be located within parking aisles, landscape areas, or pedestrian ways; and

**Response**: Due to the high number of parking spaces to be provided in order to serve the school and meet the bicycle parking requirements, the District is requesting an exception to the requirement that all bicycle parking areas be located less than 50 feet from the primary entrance for the Middle School site. As many of the bicycle parking stalls are placed within 50 feet of the main entrance of the Middle School as possible while maintaining safe and convenient access for all users. As shown on the Site Development Plan (Sheet B1, Exhibit 1), approximately half of the required bicycle parking stalls are located within 50 feet of the main entrance. The remaining spaces are located between 50 and 90 feet of the entrance. All spaces will be covered underneath a canopy.

All of the bike parking spaces for the CCEC building are within 50 feet of the main entrance.

(16) Lighting. Any lights provided to illuminate any public or private parking area or vehicle sales area shall be so arranged as to direct the light away from any adjacent residential district, and shall not create a hazard for drivers in public streets.

**Response**: Light sources on the site will be limited to those necessary to illuminate parking and pedestrian circulation areas. These luminaires will be directed downward and produce little to no glare and will not be visible from any adjacent residential properties. More information on the light fixtures can be found on the Lighting and Equipment Cut Sheets (Exhibit 5).

(17) Final Building Inspection. Required parking spaces shall be completely improved to city standards and available for use at the time of the final building inspection.

**Res**ponse: The District understands that required parking spaces must be available for use at the time of final building inspection.

(18) Plan, Building Permit Prerequisite. A plan drawn to scale, indicating how the off-street parking and loading requirement is to be fulfilled, shall accompany the request for a building permit or site development review permit in accordance with SHMC <u>17.96.180</u>(11).

**Res**ponse: The Site Development Plan (Sheet B1, Exhibit 1) is submitted with this application for site development review.

(19) Measurement for Required Parking. Unless otherwise specified, where square feet are specified, the area measured shall be gross floor area under the roof measured from the faces of the structure, excluding only space devoted to covered off-street parking or loading.

Response: Square feet measurements were conducted in accordance with this provision.

(20) Employees. Where employees are specified, the employees counted are the persons who work on the premises including proprietors, executives, professional people, production, sales, and distribution employees during the largest shift at peak season.

Response: Employee calculations were conducted in accordance with this provision.

(21) Fractions. Fractional space requirements shall be counted as a whole space.

Response: Fractional spaces were counted as whole spaces in accordance with this provision.

(22) On-Street Parking. Parking spaces in a public street or alley shall not be eligible as fulfilling any part of the parking requirement except as otherwise provided in this code.

Response: On-street parking spaces were not counted toward fulfilling the parking requirements.

(23) Preferential Long-Term Carpool/Vanpool Parking. Parking lots providing in excess of 20 long-term parking spaces shall provide preferential long-term carpool and vanpool parking for employees, students, or other regular visitors to the site. At least five percent of total long-term parking spaces shall be reserved for carpool/vanpool use. Preferential parking for carpools/vanpools shall be closer to the main entrances of the building than any other employee or student parking, other than disabled person parking spaces. Preferential carpool/vanpool parking spaces shall be full size parking spaces. Preferential carpool/vanpool parking spaces shall be full size parking spaces. Preferential carpool/vanpool parking spaces shall be full size parking spaces. Preferential carpool/vanpool parking spaces shall be full size parking spaces. Preferential carpool/vanpool parking spaces shall be full size parking spaces. Preferential carpool/vanpool parking spaces shall be full size parking spaces. Preferential carpool/vanpool parking spaces shall be full size parking spaces. Preferential carpool/vanpool parking spaces shall be full size parking spaces. Preferential carpool/vanpool spaces shall be clearly designated for use only by carpools or vanpools between 7:00 a.m. and 5:30 p.m. (Ord. 3181 § 4 (Att. C), 2015; Ord. 2875 § 1.114.020, 2003)

**Res**ponse: Preferential carpool/vanpool parking spaces will be provided as follows, as shown on the Site Development Plan (Sheet B1, Exhibit 1).

- CCEC/district administration building: 4 of the 66 parking spaces (5 percent) will be designated for carpool/vanpool users.
- Middle School building: 8 of the 154 parking spaces (5 percent) will be designated for carpool/vanpool users.

## 17.80.030 Minimum off-street parking requirements.

## [...]

(2) Civic.

[...]

(g) Public agency administrative service – one space for every 350 square feet of service gross floor area.

[...]

(j) Schools:

[...]

(ii) Elementary, junior high school or equivalent private or parochial school – one and one-half spaces for every employee, plus one space for 100 square feet of floor area in the auditorium or other assembly or one space for each eight seats, whichever is greater; six bicycle spaces per classroom.

(iii) Senior high and equivalent private or parochial school – one and one-half spaces for each employee, plus one space for each six classroom seats, and one space for each 100 square feet of floor area or one space for each eight seats in the auditorium or other assembly room, whichever is greater; two bicycle spaces per classroom.

**Response**: The minimum parking requirements for CCEC and the Middle School are calculated below in Table 1 and Table 2. The number of spaces planned to be provided for each use are presented below each table.

Standard	Ratio	Calculation
Number of employees	1.5 spaces per employee	31 employees x 1.5 = 46.5 ~ 47 spaces
Assembly room	Greater of: 1 space per 100 sq. ft. or 1 space per 8 seats	5,686 sq. ft. of commons space (cafeteria and auditorium) / 100 = 56.86 ~ 57 spaces 450 seats in auditorium / 8 = 56.25 ~ 57 spaces
TOTAL		104 spaces

Table 1. Minimum Vehicle Parking Requirements for Middle School

As shown on the Site Development Plan, 157 parking spaces are provided for the Middle School, exceeding the minimum requirement of 104 spaces.

Table 2. Minimum Vehicle Parking Requirements Sha	ared CCEC/District Administration Parking Area
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Standard	Ratio	Calculation
Public agency administrative service	1 space per 350 sq. ft. of gross floor area	5,750 sq. ft. / 350 = 16.42 ~ 17 spaces

High school: Number of employees	1.5 spaces per employee	6 employees *1.5 = 9 spaces
High school: Number of classroom seats	1 space per 6 classroom seats	120 classroom seats / 6 = 20 spaces
High school: Assembly rooms	Greater of: 1 space per 100 sq. ft. or 1 space per 8 seats	Not applicable: no assembly rooms in the CCEC building
	TOTAL	46 spaces

As shown on the Site Development Plan, 66 parking spaces are provided for the shared parking area between the CCEC building and the District administration building, exceeding the minimum requirement of 46 spaces.

The bicycle parking requirements are addressed as follows:

- Middle School: Six bike parking spaces are required per classroom. There are 14 general
  purpose classrooms, equating to a requirement for 84 bike parking spaces. The District proposes
  to meet the requirement with a combination of bike parking spaces and spaces for scooters and
  skateboards. The District has found that many students use scooters and skateboards to travel to
  school, but do not always have a secure place to store them. The school will provide 34 bike
  spaces and 60 spaces for skateboards or scooters, a total of 94 spaces. The skateboard and
  scooter places will be provided in a lockable rack system. The specifications of the system are
  available in the Lighting and Equipment Cut Sheets (Exhibit 5).
- CCEC: Two bicycle parking spaces are required per classroom. There are 6 classrooms, equating to 12 total spaces. The school will provide 17 bike parking spaces. In addition, the site will include 20 scooter and skateboard spaces provided in the same locking rack systems proposed for the Middle School.

#### 17.80.040 Modification to parking requirements.

**Response**: No modifications to parking requirements are proposed per the provisions of this section.

#### 17.80.050 Parking dimension standards.

(1) Accessibility. Each parking space shall be accessible from a street or right-of-way, and the access shall be of a width and location as described by SHMC <u>17.84.070</u> and <u>17.84.080</u>.

**Res**ponse: All parking space are accessible from the street and the width of the access ways meets the standards of 17.84.070 and 17.84.080, as addressed in response to Chapter 17.84.

(2) Table of Standards.

(a) Minimum standards for a standard parking stall's length and width, aisle width, and maneuvering space shall be determined from the Table of Standards for Parking Spaces, Figure 14, below;

(b) The width of each parking space does not include a stripe which separates each space.

**Res**ponse: As shown on the Site Development Plan, the parking areas were designed in accordance with the minimum standards presented in the Table of Standards for Parking Spaces and Figure 14.

(3) Aisle Width. Aisles accommodating two-direction traffic, or allowing access from both ends shall be a minimum of 24 feet in width.

**Res**ponse: As shown on the Site Development Plan, all two-way access aisles are a minimum of 24 feet in width.

(4) Angle Parking. Angle parking is permitted in accordance with Figure 14.

Response: No angle parking is proposed for the site; therefore, this standard does not apply.

#### (5) Structured Parking.

Response: No structured parking is proposed for the site; therefore, this standard does not apply.

#### (6) Service Drive.

(a) Excluding single-dwelling units and duplex residences, except as provided by Chapter <u>17.84</u> SHMC and SHMC <u>17.152.030(16)</u>, groups of more than two parking spaces shall be served by a service drive so that no backing movements or other maneuvering within a street or other public right-of-way would be required; and

(b) Service drives shall be designed and constructed to facilitate the flow of traffic, provide maximum safety of traffic access and egress, and maximum safety of pedestrians and vehicular traffic on the site.

**Response**: All parking areas on the site are accessed via a service drive. The service drives are designed to facilitate safe and efficient traffic flow by separating the school bus and parent drop-off areas and separating the drop-off areas from parking areas. Pedestrian walkways and crossings are provided on the site in accordance with the standards of Chapter 17.84. More information on the internal circulation plans for the site is provided in the Traffic Memo (Exhibit 3)

(7) Street Access. Each parking or loading space shall be accessible from a street and the access shall be of a width and location as described in this code.

**Response**: All parking spaces are accessible from the street and the width of the access ways meets the standards of 17.84.070 and 17.84.080, as addressed in response to Chapter 17.84.

(8) Parking Space Configuration. Parking space configuration, stall, and access aisle size shall be in accordance with the minimum standard.

**Res**ponse: As shown on the Site Development Plan, the parking areas were designed in accordance with the minimum standards presented in the Table of Standards for Parking Spaces and Figure 14.

#### (9) Parking Space Markings.

(a) Except for single-dwelling units and duplexes, any area intended to be used to meet the offstreet parking requirements as contained in this chapter shall have all parking spaces clearly marked; and (b) All interior drives and access aisles shall be clearly marked and signed to show direction of flow and maintain vehicular and pedestrian safety.

**Response**: As shown on the Site Development Plan, all parking spaces, service drives, and access aisles will be clearly marked to show the boundaries or the space, the direction of traffic flow, and location of pedestrian crossings.

(10) Parking and Load Area Surface Requirements.

(a) Except for uses as authorized in subsections (10)(b) and (c) of this section, all areas used for the parking or storage or maneuvering of any vehicle, boat, or trailer shall be improved with asphalt or concrete surfaces or other similar type materials approved by the city.

(b) Nonresidential parking areas to be used primarily for nonpublic uses such as employee parking, business vehicles, and construction equipment may be gravel-surfaced when authorized by the approval authority at the time the site development approval is given. The director may require that the property owner enter into an agreement to pave the parking area: (1) within a specified period of time after establishment of the parking area; or (2) if there is a change in the types or weights of vehicles utilizing the parking area; or (3) if there is evidence of adverse effects upon adjacent roadways, watercourses, or properties. Such an agreement shall be executed as a condition of approval of the plan to establish the gravel parking area. Gravel-surfaced parking areas may only be permitted consistent with the following:

(i) Gravel parking areas shall not be permitted within 20 feet of any residentially zoned area;

(ii) Gravel parking areas shall not be allowed within 25 feet of any improved public right-ofway;

(iii) A paved driveway of at least 25 feet in length shall connect a gravel parking area with any public street providing access to the gravel area; and

(iv) Gravel parking areas shall not be allowed within 50 feet of any significant wetland or riparian corridor.

(c) Parking areas to be used in conjunction with a temporary use may be gravel when authorized by the approval authority at the time the permit is approved. The approval authority shall consider the following in determining whether or not the gravel parking is warranted:

(i) The request for consideration to allow a parking area in conjunction with the temporary use shall be made in writing concurrently with the temporary use application;

(ii) The applicant shall provide documentation that the type of temporary use requested will not be financially viable if the parking space surface area requirement is imposed; and

(iii) Approval of the gravel parking area will not create adverse conditions affecting safe ingress and egress when combined with other uses of the property.

(d) Any area where harmful soil contamination could reasonably be expected shall be protected with appropriate surface cover and collection devices.

**Response**: All parking areas will be surfaced with asphalt in accordance with subsection (a). No gravel parking or loading areas are proposed. All parking areas will include stormwater collection devices in accordance with subsection (d) and as shown on the Utility Plan (Sheet B2, Exhibit 1).

(11) Access Drives.

(a) Access drives from the street to off-street parking or loading areas shall be designed and constructed to facilitate the flow of traffic and provide maximum safety for pedestrian and vehicular traffic on the site;

**Response**: The access drives are designed to facilitate safe and efficient traffic flow by separating the school bus and parent drop-off areas and separating the drop-off areas from parking areas. Pedestrian walkways and crossings are provided on the site in accordance with the standards of Chapter 17.84. More information on the internal circulation plans for the site is provided in the Traffic Memo (Exhibit 3)

(b) The number and size of access drives shall be in accordance with the requirements of Chapter <u>17.84</u> SHMC, Access, Egress, and Circulation;

**Res**ponse: The number and size of access drives are in accordance with Chapter 17.84, as described in responses to that chapter.

(c) Access drives shall be clearly and permanently marked and defined through use of rails, fences, walls, or other barriers or markers on frontage not occupied by service drives;

Response: All access drives are defined through the use of curbed landscape medians and islands.

(d) Access drives shall have a minimum vision clearance as provided in Chapter <u>17.76</u> SHMC, Visual Clearance Areas;

**Res**ponse: The vision clearance areas for access drives are in accordance with Chapter 17.76, as described in responses to that chapter.

(e) Access drives shall normally be improved with an asphalt or concrete surface or other similar type material approved by the city; and

(f) Where more public harm would occur than good, the director can waive some hard surface requirements on access drives.

Response: All access drives will be surfaced with asphalt.

(12) Wheel Stops. Parking spaces along the boundaries of a parking lot or adjacent to interior landscaped areas or sidewalks shall be provided with a wheel stop at least four inches high located three feet back from the front of the parking stall. The front three feet of the parking stall may be concrete, asphalt or low-lying landscape material that does not exceed the height of the wheel stop. This area cannot be calculated to meet landscaping or sidewalk requirements.

**Res**ponse: As shown on the Site Development Plan, wheel stops are provided on all parking spaces in accordance with this requirement.

(13) Drainage. Hard surface off-street parking and loading areas shall be drained in accordance with specifications approved by the city engineer to ensure that ponding does not occur:

(a) Except for single-dwelling units and duplexes, off-street parking and loading facilities shall be designed to avoid flow of water across public sidewalks.

(b) In most cases oil/water separators will be required as part of a parking lot drainage system.

**Response**: As shown on the Utility Plan (Sheet B2, Exhibit 1) and described in responses to Chapter 17.52, the parking areas are integrated into the overall stormwater management system and appropriate filtration systems will be provided.

(14) Lighting. Artificial lighting on all off-street parking facilities shall be designed to direct all light away from surrounding residences and so as not to create a hazard to the public use of any road or street.

**Response**: The location of all light posts is shown on the Site Development Plan. The luminaires are designed to minimize glare or off-site impacts through appropriate shielding and design of the luminaire. The technical specifications of the lighting are available on the Lighting an Equipment Cut Sheets (Exhibit 5).

(15) Signs. Signs which are placed on parking lots shall be as prescribed in Chapter <u>17.88</u> SHMC, Signs.

**Res**ponse: All signs in the parking lots shall be in accordance with Chapter 17.88, as described in response to that chapter.

(16) Maintenance of Parking Areas. All parking lots shall be kept clean and in good repair at all times. Breaks in paved surfaces shall be repaired promptly and broken or splintered wheel stops shall be replaced so that their function will not be impaired.

**Res**ponse: The District understands the maintenance responsibilities for parking areas and has staff available to perform this maintenance on an ongoing basis.

(17) Grade Separation Protection. Where a parking area or other vehicle area has a drop-off grade separation, the property owner shall install a wall, railing, or other barrier which will prevent a slow-moving vehicle or driverless vehicle from escaping such area and which will prevent pedestrians from walking over drop-off edges. (Ord. 2875 § 1.114.050, 2003)

**Res**ponse: No significant drop-off grade separations exist between parking areas and adjacent areas on the site.

17.80.060 On-site vehicle stacking areas required for drive-in use.

17.80.065 Storage related to residential uses and use of recreational vehicles related to residential uses.

17.80.066 Use of recreational vehicles related to nonresidential uses.

**Res**ponse: These sections are specific to drive-in uses, residential uses, or use of recreational vehicles. None of these uses are proposed for the site; therefore, these sections are not applicable.

## 17.80.070 Loading/unloading driveways required on site.

A driveway designed for continuous forward flow of passenger vehicles for the purpose of loading and unloading passengers shall be located on the site of any school or other meeting place which is designed to accommodate more than 25 people at one time. (Ord. 2875 § 1.114.070, 2003)

**Response**: Both the Middle School and CCEC building include loading and unloading areas. The loading areas are separated from the bus drop-off loop and parking areas to ensure safe and efficient traffic flow. As shown on the Site Development Plan, the Middle School loading aisle can serve up to 24 vehicles at a time. More information on the internal circulation plans for the site is provided in the Traffic Memo (Exhibit 3).

#### 17.80.080 Off-street loading spaces.

Buildings or structures to be built or altered which receive and distribute material or merchandise by truck shall provide and maintain off-street loading and maneuvering space as follows:

**Res**ponse: No uses that receive or distribute merchandise by truck are proposed; therefore, this section is not applicable.

#### 17.80.090 Off-street loading dimensions.

(1) Each loading berth shall be approved by the city engineer as to design and location.

(2) Each loading space shall have sufficient area for turning and maneuvering of vehicles on the site, and:

(a) At a minimum, the maneuvering length shall not be less than twice the overall length of the longest vehicle using the facility site.

(3) Entrances and exits for the loading areas shall be provided at locations approved by the city engineer in accordance with Chapter <u>17.84</u> SHMC.

(4) Screening for off-street loading facilities is required and shall be the same as screening for parking lots in accordance with Chapter <u>17.72</u> SHMC. (Ord. 2875 § 1.114.090, 2003)

**Response**: All loading spaces in the parent and bus drop-off areas are of a sufficient size to accommodate the anticipated vehicles, located in accordance with Chapter 17.84, and will be screened from view from public streets, as shown on the Landscape Plan (Sheet D1, Exhibit 1).

# Chapter 17.84 Access, Egress, and Circulation

#### 7.84.010 Purpose.

The purpose of this chapter is to establish standards and regulations for safe and efficient vehicle access and egress on a site and for general circulation within the site. (Ord. 2875 § 1.116.010, 2003)

**Res**ponse: The District understands the purpose of this chapter and demonstrates conformance with its requirements below.

#### 17.84.020 Applicability and general provisions.

(1) The requirements and standards of this chapter shall not apply where they conflict with the subdivision rules and standards of this code.

(2) The provisions and maintenance of access and egress stipulated in this code are continuing requirements for the use of any structure or parcel of real property in the city.

(3) No building or other permit shall be issued until scaled plans are presented and approved as provided by this chapter that show how access, egress, and circulation requirements are to be fulfilled.

(4) Should the owner or occupant of a lot or building change or enlarge the use to which the lot or building is put, thereby increasing access and egress requirements, it is unlawful and is a violation of this code to begin or maintain such altered use until the provisions of this chapter have been met if required or until the appropriate approval authority has approved the change. (Ord. 2875 § 1.116.020, 2003)

**Res**ponse: The District understands that no building permit or construction shall take place on the site without fulfilling the requirements of this chapter.

## 17.84.025 Applicability of provisions.

(1) The provisions of this chapter shall apply to all development including the construction of new structures, the remodeling of existing structures (see SHMC <u>17.96.020</u>), and to a change of use which increases the on-site parking or loading requirements or which changes the access requirements.

(2) Where the provisions of Chapter <u>17.96</u> SHMC, Site Development Review, do not apply, the director shall approve, approve with conditions, or deny a plan submitted under the provisions of this chapter. No notice is required. The decision may be appealed as provided by Chapter <u>17.24</u> SHMC.

Response: As a Site Development Review application, the requirements of this chapter apply.

(3) The applicant shall submit a site plan which includes:

(a) The location of the structures on the property and on the adjoining property;

- (b) The location of parking and loading areas and their dimensions;
- (c) The location of the circulation area necessary to serve the spaces;

(d) The location of the access point(s) on the site and on the adjoining properties and on both sides of abutting streets within 200 feet of the subject site;

(e) The location of curb cuts on adjoining properties and on the subject site;

(f) The location and dimensions of all landscaping, including the type and size of plant material to be used, as well as any other landscape material incorporated into the overall plan;

- (g) The proposed grading and drainage plans; and
- (h) Specifications as to signs. (Ord. 2875 § 1.116.025, 2003)

**Res**ponse: The Plan Set (Exhibit 1) includes all the above information; it can be found on the Site Development Plan (Sheet B1), Grading Plan (Sheet C) and Landscape Plan (Sheet D).

## 17.84.030 Joint access and reciprocal access easements.

Response: No joint access agreements are proposed; therefore, this section is not applicable.

#### 17.84.040 Public street access.

(1) All vehicular access and egress as required in SHMC <u>17.84.070</u> and <u>17.84.080</u> shall connect directly with a public or private street approved by the city for public use and shall be maintained at the required standards on a continuous basis.

**Res**ponse: Both access drives for the CCEC building and Middle School connect to N. 15<sup>th</sup>/16<sup>th</sup> Street, a public street, and will be maintained continually by District staff.

(2) Vehicular access to structures shall be provided to residential uses and shall be brought to within 50 feet of the ground floor entrance or the ground floor landing of a stairway, ramp, or elevator leading to the dwelling units.

(3) Vehicular access shall be provided to commercial or industrial uses, and shall be located to within 50 feet of the primary ground floor entrances.

**Response**: The standards of subsection (2) and (3) above do not apply to schools, which have unique access and circulation requirements in order to safely and efficiently manage traffic peaks that occur during drop-off and pick-up times, and to accommodate school bus drop-off areas.

(4) Access to State Streets, Highways, and Interchanges. Access to a transportation facility under the jurisdiction of the Oregon Department of Transportation (ODOT) shall be subject to the requirements of OAR <u>181.555</u> and OAR <u>734-051</u>. ODOT's current access spacing requirements for Highway 30 reflect the functional classification of Highway 30 as both a statewide highway and freight route. Table 17.84.040-1 illustrates the access spacing standards for public and private approaches along Highway 30 within St. Helens.

**Res**ponse: No access is proposed to a state transportation facility; therefore, this standard is not applicable.

(5) Spacing Standards for Access to City Streets. The following are the minimum spacing requirements for access points and intersections for streets under the jurisdiction of the city of St. Helens.

Functional Classification	Public Street (street-to- street) (feet)	Private Access Drive (street-to-drive or drive-to drive) (feet)
Local Street	150	50 <sup>1</sup>
Collector	300	100
Minor Arterial	350 or block length	200 or mid- block
Major Arterial <sup>2</sup>	350 or block length	350 or block length
<sup>1</sup> This applies to street-to-drive spacing only. There is no minimum spacing standard for access points		

#### Table 17.84.040-2: Access Spacing Standards on City Streets

no minimum spacing standard for access points (drive-to-drive) on local streets.

#### Table 17.84.040-2: Access Spacing Standards on City Streets

Functional Classification	Public Street (street-to- street) (feet)	Private Access Drive (street-to-drive or drive-to drive) (feet)
<sup>2</sup> Access standards identified in the Oregon Highway Plan supersede this table on all state highways.		

**Response**: Both access drives connect to N. 16<sup>th</sup> Street, a Collector. Therefore, the access drives must be spaced at least 100 feet from another public street or access drive. The Middle School access drive is approximately 220 feet from the closest street intersection (Wyeth Street). The CCEC access drive is approximately 360 feet from the closest street intersection (Wyeth Street). The two access drives are located approximately 580 feet from each other.

Several existing residential access drives are located on the other side of N. 16<sup>th</sup> Street (west side) from the site. These existing access drives are permitted in accordance with subsection (8) below and are not included in this distance calculation.

(6) Measuring Distance between Access Points. The distance between access points shall be measured from the centerline of the proposed driveway or roadway to the centerline of the nearest adjacent roadway or driveway.

**Res**ponse: The distances noted above were measured by this method.

(7) Development Fronting onto an Arterial Street.

Response: The site does not front an Arterial Street; therefore, this standard is not applicable.

(8) Number of Access Points. For single-family (detached and attached) and duplex housing types, one street access point is permitted per lot, except that two access points may be permitted for duplexes on corner lots (i.e., no more than one access per street), subject to the access spacing standards in subsection (5) of this section. The number of street access points for multiple dwelling unit residential, commercial, industrial, and public/institutional developments shall be minimized to protect the function, safety and operation of the street(s) and sidewalk(s) for all users. Shared access may be required, in conformance with subsection (9) of this section, in order to maintain the required access spacing, and minimize the number of access points.

**Response**: The site maintains the same number of access points (2) as exist today. No new access connections are proposed in order to protect the function and safety of N. 16<sup>th</sup> Street. Consolidating the access drives of the two uses is not feasible given the topography of the site, on-site wetlands, and the need for internal circulation to accommodate both parent and bus-drop off-areas for the site.

(9) Shared Driveways. The number of driveway and private street intersections with public streets shall be minimized by the use of shared driveways with adjoining lots where feasible. The city shall require shared driveways as a condition of land division or site development review, as applicable, for traffic safety and access management purposes in accordance with the following standards:

**Response**: Consolidating the access drives of the two uses is not feasible given the topography of the site, on-site wetlands, and the need for internal circulation to accommodate both parent and bus-drop offareas for the site. Additionally, the existing access drives meet the City's spacing requirements for Collector streets.

## 17.84.050 Required walkway location.

(1) Walkways shall extend from the ground floor entrances or from the ground floor landing of stairs, ramps, or elevators of all commercial, institutional, and industrial uses, to the streets which provide the required access and egress. Walkways shall provide convenient connections between buildings in multibuilding commercial, institutional, and industrial complexes. Walkways also shall provide access to existing and planned transit stops adjacent to the development site. Unless impractical, walkways should be constructed between a new development and neighboring developments.

**Response**: As shown on the Site Development Plan (Sheet B1, Exhibit 1), pedestrian circulation and internal walkways were integrated into the site plan. The entrance to the Middle School is connected to N. 16<sup>th</sup> Street via a hardscape plaza, two crosswalks, and a continuous concrete walkway. The walkway also connects to an existing off-street multi-use path that runs southbound to connect to an off-street path that runs along N. 15<sup>th</sup> Street. Additionally, the main entrance of the Middle School is connected to the track, soccer field, and baseball field by a walkway that runs along the perimeter of the parking lots.

The main entrance to the CCEC building is connected to N. 16<sup>th</sup> Street via a hardscape plaza, a new crosswalk and refuge island, the existing walkway along the parking lot, and a new walkway connecting the parking lot to the street.

The closest transit stop to the site is the CC Rider Transit Station on Deer Island Road, approximately 1,300 feet to the north. Pedestrians can access the site from the transit stop along public streets (11<sup>th</sup> Street, West Street) which connect to 16<sup>th</sup> Street.

A walkway beginning from the hardscape plaza near the northeast corner of the Middle School connects the school to the CCEC building. This walkway will also serve CCEC students that arrive via the school bus drop-off area. The CCEC building is connected to the District administrative offices via the new crosswalk and existing walkway in front of the District office building.

(2) Within all attached housing and multifamily developments, each residential dwelling shall be connected by walkway to the vehicular parking area, and common open space and recreation facilities.

Response: The site does not include a residential use; therefore, this standard is not applicable.

(3) Where a site for proposed commercial, institutional, or multifamily development is located within at least one-quarter mile of an existing or planned transit stop, the proposed pedestrian circulation system must include a safe and direct pedestrian walkway from building entrances to the transit stop or to a public right-of-way that provides access to the transit stop.

**Response**: As noted above, the closest transit stop to the site is the CC Rider Transit Station on Deer Island Road, approximately 1,300 feet to the north. Pedestrians can access the site from the transit stop along public streets (11<sup>th</sup> Street, West Street) which connect to 16<sup>th</sup> Street.

(4) In parking lots one acre or larger, pedestrian walkways shall connect from buildings to sidewalks in the adjacent rights-of-way, and shall be provided at least every 150 feet between rows of parking.

**Res**ponse: The main Middle School parking lot is over one acre in size. The CCEC/administrative office parking lot is less than one acre.

On the main Middle School parking lot, the distance between the walkway that runs between the westernmost row of parking and the walkway adjacent to the track/soccer field is approximately 160 feet. Therefore, an additional walkway was included between the easternmost row of parking and the parent drop-off loading aisle. The distance between these two walkways is approximately 125 feet, in conformance with this standard.

(5) Wherever required walkways cross vehicle access driveways or parking lots, such crossings shall be designed and located for pedestrian safety. Required walkways shall be physically separated from motor vehicle traffic and parking by either a minimum six-inch vertical separation (curbed) or a minimum three-foot horizontal separation, except that pedestrian crossings of traffic aisles are permitted for distances no greater than 36 feet if appropriate landscaping, pavement markings, or contrasting pavement materials are used. Walkways shall be a minimum of four feet in width, exclusive of vehicle overhangs and obstructions such as mailboxes, benches, bicycle racks, and sign posts, and shall be in compliance with ADA standards.

**Response**: All walkways were designed to ensure pedestrian safety. All walkways will be curbed and are at least 6 feet wide. The distance of all crossings of traffic aisles were minimized via the use of landscape islands and is no greater than approximately 30 feet. All crossings will be marked with standard, high-visibility crosswalk ladder striping.

(6) Required walkways shall be paved with hard-surfaced materials such as concrete, asphalt, stone, brick, etc. Walkways shall be required to be lighted and/or signed as needed for safety purposes. Soft-surfaced public use pathways may be provided only if such pathways are provided in addition to required pathways. (Ord. 3181 § 4 (Att. C), 2015; Ord. 3150 § 3 (Att. B), 2011; Ord. 3144 § 2 (Att. A), 2011; Ord. 2875 § 1.116.050, 2003)

**Response**: All walkways are constructed of concrete. The hardscape plazas will be constructed of brick or stone pavers. Lighting will be provided via light posts and wall-mounted lighting throughout the site. The technical specifications of the lighting are available in the Lighting and Equipment Cut Sheets (Exhibit 5).

## 17.84.060 Inadequate or hazardous access.

(1) Applications for building permits shall be referred to the commission for review when, in the opinion of the director, the access proposed:

- (a) Would cause or increase existing hazardous traffic conditions; or
- (b) Would provide inadequate access for emergency vehicles; or

(c) Would in any other way cause hazardous conditions to exist which would constitute a clear and present danger to the public health, safety, and general welfare.

(2) Direct individual access to minor arterial streets from single detached or attached dwelling units and duplexes shall be discouraged. Direct access to major arterial streets shall be considered only if there is no practical alternative way to access the site.

(3) In no case shall the design of the service drive or drives require or facilitate the backward movement or other maneuvering of a vehicle within a street, other than an alley or local street. (Ord. 2875 § 1.116.060, 2003)

**Response**: As demonstrated by the responses to this chapter and the findings of the Traffic Memo (Exhibit 3), the site design provides for safe and efficient access and circulation on the site and does not meet any thresholds above that would cause inadequate or hazardous access.

## 7.84.090 Width and location of curb cuts.

Curb cuts shall be in accordance with SHMC 17.152.030(14). (Ord. 2875 § 1.116.090, 2003)

**Res**ponse: The width and location of curb cuts is in conformance with Chapter 17.152, as demonstrated by the responses to that chapter.

## 17.84.100 One-way vehicular access points.

Where a proposed parking facility indicates only one-way traffic flow on the site, it shall be accommodated by a specific driveway serving the facility; the entrance drive shall be situated closest to oncoming traffic and the exit drive shall be situated farthest from oncoming traffic. (Ord. 2875 § 1.116.100, 2003)

**Res**ponse: No one-way vehicular access points are proposed; therefore, this standard is not applicable.

## 17.84.110 Director's authority to restrict access.

(1) In order to provide for increased traffic movement on congested streets and to eliminate turning movement problems, the director may restrict the location of driveways on streets and require the location of driveways be placed on adjacent streets, upon the finding that the proposed access would:

(a) Cause or increase existing hazardous traffic conditions; or

(b) Provide inadequate access for emergency vehicles; or

(c) Cause hazardous conditions to exist which would constitute a clear and present danger to the public health, safety, and general welfare.

(2) In order to eliminate the need to use public streets for movements between commercial or industrial properties, parking areas shall be designed to connect with parking areas on adjacent properties unless not feasible. The director shall require access easements between properties where necessary to provide for parking area connections.

(3) In order to facilitate pedestrian and bicycle traffic, access and parking area plans shall provide efficient sidewalk and/or pathway connections, as feasible, between neighboring developments or land uses.

(4) A decision by the director may be appealed to the commission as provided by SHMC <u>17.24.310(1)</u>, Determination of appropriate reviewing body. (Ord. 2875 § 1.116.110, 2003)

**Response**: As demonstrated by the responses to this chapter and the findings of the Traffic Memo (Exhibit 3), the site design provides for safe and efficient access and circulation on the site and does not meet any thresholds above that would cause inadequate or hazardous access.

## 17.84.120 Variances to access standards.

## 17.84.130 Administration and approval process.

## 17.84.140 Expiration of approval – Standards for extension of time.

## 17.84.150 Approval standards.

## 17.84.160 Application submission requirements.

**Res**ponse: The sections above address requirements associated with an access variance request. No access variance is proposed for this site; therefore, these sections are not applicable.

# Chapter 17.88 Signs

#### 17.88.010 Purpose.

The purposes of this chapter are to protect the health, safety, property and welfare of the public, to provide a neat, clean, orderly and attractive appearance of the community, to improve the effectiveness of signs, to provide for safe construction, location, erection and maintenance of signs, to prevent proliferation of signs and sign clutter, to minimize adverse visual safety factors to travelers on public highways and streets and on private areas open to public travel, and to achieve this purpose consistent with state and federal constitutional limits on the regulation of speech. To achieve these purposes it is necessary to regulate the design, quality of materials, construction, location, electrification, illumination, and maintenance of signs that are visible from public property, public rights-of-way and private areas open to public travel. (Ord. 3091 § 2, 2008)

**Res**ponse: The District understands the purpose of this chapter, and demonstrates conformance with its requirements below.

#### 17.88.020 General requirements.

(1) Except as provided in SHMC <u>17.88.025</u>, no person shall erect, construct, enlarge, alter, repair, move, improve, remove, convert, demolish, equip, use or maintain any sign, or cause or permit the same to be done, contrary to or in violation of any of the provisions of this code.

(2) Except as provided in SHMC <u>17.88.025</u>, no person shall erect, construct or alter a sign, or permit the same to be done, unless a sign permit has been issued by the city. A sign permit for the construction and continued use of a sign is subject to the terms and conditions stated in the permit and this code.

(3) An application for sign permit approval is also subject to the procedures set forth in SHMC 17.88.130.

(4) No owner shall erect or construct a sign on a site that contains unlawful signs.

(5) This chapter shall not be construed to permit the erection or maintenance of any sign at any place or in any manner unlawful under any other city code provision or other applicable law. In any case where a part of this chapter conflicts with a provision of any zoning, building, fire, safety or health ordinance or

code, the provision which establishes a stricter standard for the protection of the public health and safety shall prevail.

(6) This chapter is not intended to and does not restrict speech on the basis of its content, viewpoint or message. Any classification of signs in this chapter that permits speech by reason of the type of sign, identity of the sign user or otherwise shall permit any type of speech on the sign. No part of this chapter shall be construed to favor commercial speech over noncommercial speech. To the extent any provision of this chapter is ambiguous, the term shall be interpreted to not regulate on the basis of speech content, and the interpretation resulting in the least restriction on the content of the sign message shall prevail.

(7) If any section, subsection, paragraph, sentence, clause or phrase of this chapter is declared invalid for any reason by a court having jurisdiction under state or federal law, the remaining portions of this chapter shall remain in full force and effect. (Ord. 3091 § 2, 2008)

**Res**ponse: The District understands that a sign permit shall be required and that the intent of this chapter is not to regulate the content of the sign.

## 17.88.025 Exempt signs.

Except for signs prohibited by this chapter, the following signs are exempt from the provisions of this chapter:

(1) All signs which are placed inside a structure or building, and which are either not visible through windows or building openings, or are not intended to be visible from outside of the structure or building.

(2) Signs required by law, administrative order or judicial order and erected by public employees performing official duties. (Ord. 3091 § 2, 2008)

**Res**ponse: The District understands that signs placed inside of buildings or required by law are exempt from the requirements of this chapter.

## 17.88.030 Prohibited signs.

Except for nonconforming signs, the following signs are unlawful and are nuisances:

(1) Abandoned signs.

(2) Any sign constructed, maintained or altered in a manner not in compliance with this chapter.

(3) Any nonpublic sign constructed or maintained which, by reason of its size, location, movement, coloring or manner of illumination, may be confused with or construed as a traffic control device or which hides from view any traffic control device that impedes the intended purpose of the device.

(4) Any sign constructed in such a manner or at such a location that it will obstruct access to any fire escape or other means of ingress or egress from a building or an exit corridor, exit hallway or exit doorway. No sign or supporting structure shall cover, wholly or partially, any window or doorway in any manner that it will substantially limit access to the building in case of fire.

(5) Any sign located in a manner which could impede traffic on any street, alley, sidewalk, bikeway or other pedestrian or vehicular travel way.

(6) Any sign equipped with moving, rotating or otherwise animated parts, except for athletic scoreboards.

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(7) Any sign that is wholly or partially illuminated by a flashing or intermittent light, lights, lamps, bulbs, or tubes. Rotary beacon lights, zip lights, strobe lights, or similar devices shall not be erected or maintained, or attached to or incorporated in any sign.

(8) Any sign attached to a tree or a plant, a fence or a utility pole, except as otherwise allowed by this chapter.

(9) Any sign within or over any public right-of-way, or located on private property less than two feet from any area subject to vehicular travel, except for:

- (a) Public signs.
- (b) Temporary signs specifically allowed within the public right-of-way under SHMC 17.88.045.

(10) Temporary signs, including banners, pennants, wind signs, and flags, except as otherwise authorized by SHMC <u>17.88.040</u> or <u>17.88.045</u>. (Ord. 3091 § 2, 2008)

**Res**ponse: The District recognizes that these types of signs are prohibited and does not propose any of these types of signs on the site.

## 17.88.035 Nonconforming signs.

(1) Nonconforming signs may continue to exist, subject to the following provisions:

(a) No additions or enlargements may be made to a nonconforming sign except those additions or enlargements that are required by law.

**Response**: The existing monument sign, which reads "St. Helens School District", at the entry to the District administrative building, will remain and not be altered by this project. The conformity of this sign with this Chapter is unknown; however, if it is non-conforming, it may continue to exist on the site because the sign is not being altered or enlarged.

## 17.88.040 Exemptions from requirement for permit.

## 17.88.045 Temporary signs.

**Res**ponse: The District is not proposing any signs that are exempt from a permit or temporary signs as a part of this development application; therefore, these sections are not applicable.

## 17.88.050 Sign districts - General.

(1) The following sign districts are created and applied to designated land. No permit shall be issued for any sign unless specifically allowed as an allowed sign under the terms of the applicable sign district or otherwise allowed as a nonconforming sign under this chapter or exempted under this chapter. Any particular limitation in a sign district regulation shall not be construed to exclude the applicability of other restrictions imposed under this chapter.

(2) The sign districts shall be as follows:

(a) The residential sign district includes all land within the R-10, R-7, R-5, AR, and MHR zoning districts, and pursuant to subsections (2)(c) and (d) of this section.

## [...]

(d) Signs in other zones not otherwise mentioned in subsection (2)(a), (b), or (c) of this section shall be treated under the same rules as the abutting sign district closest to the sign.

**Res**ponse: The site abuts the AR and R-5 zones; therefore, it is subject to standards of the residential sign district.

## 17.88.055 Residential sign district.

In addition to the temporary and permanent signage allowed without permits, the following signage is allowed subject to the requirements of this chapter:

(1) Permitted Sign Types, Number and Area. Signs within the residential sign district are limited as follows and require issuance of permits under SHMC <u>17.88.130</u>:

(a) Monument and Ground-Mounted Signs.

## [...]

(iii) For churches, schools, public/semi-public facilities, and privately owned community centers, one single- or double-faced monument sign shall be permitted for each such facility. Where such a facility has multiple street frontages, this signage may be permitted on each frontage. Sign area shall not exceed 16 square feet for each sign face.

(b) Bulletin Boards.

(i) For schools, churches, public and semi-public facilities, and privately owned community centers, one single- or double-faced bulletin board may be incorporated into an approved monument sign. If a monument sign will incorporate a bulletin board, sign area may be up to a maximum of 24 square feet for each sign face and the bulletin board portion of the sign may make up a maximum of two-thirds of the total sign face.

[...]

**Response**: As shown on the Sign Plan (Sheet F, Exhibit 1), one double-faced monument sign with a double-faced digital reader bulletin board is proposed near the main access drive to the Middle School. The total area of the sign face (excluding the concrete base) is approximately 21 square feet. The cabinet of the digital reader display is approximately 10 square feet, making up about 48% of the total area of the sign face, in conformance with this standard.

(c) Wall Signs.

[...]

(ii) For churches, schools, and public/semi-public facilities, one wall sign for each building frontage shall be permitted. Sign area for all wall signs shall not exceed eight percent of the building elevation area with a maximum individual sign face area of 50 square feet on primary frontages, and six percent of the building elevation area on secondary frontages, with a maximum sign face area of 25 square feet.

[...]

**Response**: As shown on the Sign Plan (Sheet F, Exhibit 1), the CCEC building will include one wall sign on the primary frontage of the building. The sign is 22.5 square feet in area in accordance with this standard. The area of the primary elevation is approximately 1,500 square feet; therefore, the sign makes up approximately 1.5% of the area of the elevation.

(d) Awning Signs.

(ii) For churches, schools, and public/semi-public facilities, one awning sign for each building frontage shall be permitted. Total sign area including wall signs shall not exceed 12 percent of the building elevation area, with a maximum sign face area of 50 square feet on primary frontages, and eight percent of the building elevation area on secondary frontages, with a maximum sign face area of 25 square feet.

**Response**: As shown on the Sign Plan (Sheet F, Exhibit 1), the Middle School will include one awning sign on the primary elevation. The sign will be 50 square feet. The area of the primary elevation is approximately 15,000 square feet; therefore, the sign makes up approximately 0.33% of the area of the elevation.

(e) Suspended Signs.

(f) Banner Signs.

**Res**ponse: No suspended signs or banner signs are proposed; therefore, these provisions are not applicable.

(2) Maximum Sign Height. Monument signs shall be no more than six feet in height. Ground-mounted signs shall be no more than 12 feet in height.

Response: The monument sign for the Middle School is 5 feet in height.

(3) Illumination.

(a) For athletic scoreboards, bulletin boards, and wall signs permitted in the residential zoning districts, any illumination of signs shall be indirect.

(b) The illumination of signs within the residential sign district shall comply with the standards contained in this chapter. (Ord. 3164 § 3 (Att. B), 2012; Ord. 3144 § 2 (Att. A), 2011; Ord. 3091 § 2, 2008)

**Res**ponse: All signs will be illuminated indirectly. The general standards pertaining to electronic message signs and illumination are addressed below.

#### 17.88.060 Commercial/industrial sign district.

Response: The site is within a residential sign district; therefore, this section does not apply.

#### 17.88.070 Architectural design review.

Signs within portions of the RD zoning district are subject to SHMC 17.32.172(7) and 17.32.173(5)(b).

**Response**: The site is not within the RD zoning district; therefore, this section does not apply.

#### 17.88.080 Measurements.

Response: Sign measurements were completed in accordance with the standards of this section.

#### 17.88.085 Projecting signs.

**Res**ponse: No signs are proposed to project over a public right-of-way; therefore, this section does not apply.

#### 17.88.090 Wall signs.

(1) A wall sign shall not project more than 12 inches from the wall to which it is attached. A wall sign located on an alley frontage shall not project more than 12 inches from the wall to which it is attached and shall have 15 feet of clearance.

(2) A wall sign shall not project above the roof line, or top of the parapet wall, whichever is higher.

(3) No external braces, guy wires, "A" frames, or similar bracing systems shall be used in constructing a wall sign.

**Res**ponse: The CCEC wall sign will be directly attached to the façade and not use any external bracing systems. The sign will project less than 12 inches.

(4) The height of a wall sign attached to the end or face of a marquee shall not exceed 30 inches. The lower edge of this sign shall not extend below the marquee.

(5) Wall signs on mansard roofs of 30 degrees or less may be installed vertically if solid background is used.

**Res**ponse: The wall sign is not attached to a marquee or mansard roof, therefore, subsections (4) and (5) do not apply.

#### 17.88.095 Freestanding signs.

(1) No part of a freestanding sign shall be erected or maintained within three feet of a street front property line, or within five feet of a side lot line, unless the application for the permit has been reviewed by the fire marshal and the fire marshal has determined that the location of the sign does not interfere with adequate fire access to any property.

(2) No part of a freestanding sign shall project or extend into any public right-of-way.

**Res**ponse: The Middle School monument sign is located 10 feet from the street property line and public right-of-way along N. 16<sup>th</sup> Street.

(3) Except as provided in this section, no freestanding sign shall project or extend into any vision clearance area. One or two sign poles supporting a freestanding sign may be located within the vision clearance area if they are necessary for the support of the sign, and if no other portion of the sign is located within the vision clearance area between two feet and 10 feet overgrade.

**Response**: The Middle School monument sign has been placed outside of the clear vision area triangle formed by the access drive intersection.

(4) A freestanding sign shall be directly supported by poles or foundation supports in or upon the ground. No external cross braces, guy wires, "T" frames, "A" frames, trusses, or similar bracing systems shall be used to buttress, balance, or support a freestanding sign.

**Res**ponse: As shown on the Sign Plan (Sheet F, Exhibit 1), the monument sign is supported by a concrete base foundation with no external bracing system.

(5) Only one freestanding sign is allowed for each street frontage, unless multiple signs are approved through a comprehensive sign plan.

**Res**ponse: Only one freestanding sign is proposed under this application.

(6) A minimum of 14 feet of clearance is required in areas accessible to vehicles. The lowest point of these signs may be less than 14 feet above grade in areas not accessible to vehicles when the signs are protected from physical damage by the installation of bumper poles or other ground protections.

Response: No signs are proposed in areas accessible to vehicles.

(7) Freestanding signs permitted in a commercial/industrial sign district shall not be located closer than 50 linear feet from the property line of any residential zoned property as measured along the street frontage. (Ord. 3091 § 2, 2008)

Response: The site is within a residential sign district; therefore, this standard does not apply.

## 17.88.100 Awning signs.

(1) Awning signs are permitted only as an integral part of the awning to which they are attached or applied.

**Res**ponse: As shown on the building elevations (Sheet E4, Exhibit 1) the Middle School awning sign is integrated into the canopy structure and composed of similar materials as the canopy.

(2) The awning supporting structure shall maintain a clearance of eight feet.

**Response**: The vertical clearance of the awning is 10 feet.

(3) An awning shall not extend to within two feet from the curb. An awning shall not project above the roofline.

**Res**ponse: The awning is located within the interior of the site at a significant distance from any street curb and does not project above any rooflines.

(4) The awning sign shall extend no more than eight feet from the building face. (Ord. 3091 § 2, 2008)

**Res**ponse: The awning sign is placed at the end of the awning, which extends 6 feet from the building face.

## 17.88.105 Electronic message signs.

Electronic message signs permitted under this chapter shall comply with the following standards:

(1) The rate of change for sign copy from one message to another message shall be no more frequent than every eight seconds and the actual copy change shall be accomplished in four seconds or less. Once changed, the copy shall remain static until the next change.

(2) Displays may travel horizontally or scroll vertically onto electronic message signs, but must hold in a static position after completing the travel or scroll.

(3) Electronic message signs requiring more than four seconds to change from one copy to another shall be turned off during the change interval.

(4) Sign copy shall not appear to flash, undulate, or pulse, or portray explosions, fireworks, flashes of lights, or blinking or chasing lights. Copy shall not appear to move toward or away from the viewer, expand or contract, bounce, rotate, spin, twist, or otherwise portray graphics or animation as it moves onto, is displayed on, or leaves the sign face.

(5) No electronic message sign lamp may be illuminated to a degree of brightness that is greater than necessary for adequate visibility. In no case may the brightness exceed 8,000 nits or equivalent candelas during daylight hours, or 1,000 nits or equivalent candelas between dusk and dawn. Signs found to be too bright shall be adjusted or removed as directed by the planning director. (Ord. 3091 § 2, 2008)

**Response**: As shown on the Lighting and Equipment Cut Sheets (Exhibit 4), the District proposes to use a Galaxy GS6 19.8 mm digital reader sign. The sign can be programmed to display text or graphics to the specific requirements of the user. The District will ensure that the text display is programmed in accordance with subsections (1) through (3) and that any graphic displays do not use animation features described in subsection (4). The brightness of the sign can be programmed on a schedule and set at 64 brightness levels; the brightness levels will be programmed in accordance with the maximum levels specified in subsection (5).

## 17.88.110 Comprehensive sign plan.

**Res**ponse: This section applies to multi-tenant commercial developments; therefore, it is not applicable to this project.

## 17.88.120 Construction and maintenance standards.

(1) All permanent signs shall be constructed and erected in accordance with the requirements of the applicable building code as administered by the building official.

(2) All illuminated signs must be installed by a state-licensed sign contractor, subject to the requirements of the State Electrical Code. All electrically illuminated signs shall be listed, labeled, and tested by a testing agency recognized by the state of Oregon.

(3) Building and electrical permits shall be the responsibility of the applicant. Prior to obtaining building and electrical permits, the applicant shall obtain a sign permit or demonstrate an exception from the permit requirements of this chapter.

(4) All signs, together with all of their supports, braces, guys, and anchors, shall be kept in good repair and be maintained in a safe condition. All signs and the site upon which they are located shall be maintained in a neat, clean, and attractive condition. Signs shall be kept free from excessive rust, corrosion, peeling paint or other surface deterioration. The display surfaces of all signs shall be kept neatly painted or posted. (5) No person required to obtain a sign permit under this chapter shall scatter, daub, or leave any paint, paste, glue, or other substances used for painting or affixing advertising matter or scatter or throw or permit to be scattered or thrown any bills, waste matter, paper, cloth, or materials of whatsoever kind removed from signs on any public street, sidewalk, or private property.

(6) No sign shall be erected or maintained in such a manner that any portion of its surface or supports will interfere in any way with the free use of any fire escape, exit, or standpipe. No signs shall be erected or maintained so as to obstruct any building opening to such an extent that light or ventilation is reduced below minimums required by any applicable law or provisions of this code. (Ord. 3164 § 3 (Att. B), 2012; Ord. 3091 § 2, 2008)

**Res**ponse: The District understands the construction and maintenance standards associated with the proposed signs and will conform to these requirements.

## 17.88.125 Illumination – General restrictions.

(1) No sign, light, lamp, bulb, tube, or device shall be used or displayed in violation of this section.

(2) Regardless of the maximum wattages or milliamphere rating capacities allowable under this chapter, no light source shall create an unduly distracting or hazardous condition to a motorist, pedestrian or the general public. Lighted signs shall be placed, shielded or deflected so as not to shine into residential dwelling units or structures, or impair the road vision of the driver of any vehicle.

(3) External light sources for a sign shall be directed and shielded to limit direct illumination of any object other than the sign.

**Res**ponse: The monument sign and wall signs will be lit with external light sources that are directed at the sign and shielded to prevent unnecessary illumination of any other areas.

(4) Except as may be approved under a comprehensive sign plan, temporary signs shall not be illuminated.

Response: No temporary signs are proposed; therefore, this standard is not applicable.

(5) The illumination of signs shall comply with the following standards:

(a) No exposed reflective type bulb, PAR spot or incandescent lamp, which incandescent lamp exceeds 25 watts, shall be exposed to direct view from a public street or highway, but may be used for indirect light illumination of the display surface of a sign.

(b) When neon tubing is employed on the exterior or interior of a sign, the capacity of such tubing shall not exceed 300 milliamperes rating for white tubing or 100 milliamperes rating for any colored tubing.

(c) When fluorescent tubes are used for interior illumination of a sign such illumination shall not exceed:

(i) Within residential sign districts, illumination equivalent to 425 milliampere rating tubing behind a sign face with tubes spaced at least seven inches, center to center.

(ii) Within commercial or industrial sign districts, illumination equivalent to 800 milliampere rating tubing behind a sign face spaced at least nine inches, center to center. (Ord. 3091 § 2, 2008)

**Res**ponse: No exposed reflective type bulb, PAR spot or incandescent lamp, neon tubing, or fluorescent tubes are proposed; therefore, these standards are not applicable.

## 17.88.130 Sign permit application.

(1) Except as provided in this chapter, a permit is required to erect, construct, repair or alter a sign. If a sign is for a new development that requires development review under the St. Helens Community Development Code, then the sign shall be reviewed as part of the development review process prior to approval of a sign permit.

(2) An application for a sign permit shall be made on a form prescribed by the planning director and shall be filed with the city. The application shall be filed by the owner of the sign or a representative of the sign's owner. A separate sign permit application is required for each sign, unless a combined application for all signs in a proposed development is proposed. The application shall include information required by the planning director and the following:

(a) A sketch of the site, drawn to scale, showing the approximate location of existing structures, existing signs, and the proposed sign.

(b) Building frontage elevations drawn to scale, showing the sign's relative location and placement.

(c) An illustration of the proposed sign, drawn to scale, showing the design, elevations, sign face dimensions and area, materials and engineering data which demonstrates its structural stability. The illustration of the proposed sign need not show the sign message, but shall show the size, style, and design of the lettering, numbers, and graphics conveying any message. The content of any message shall not be considered in the evaluation of a sign permit application.

(d) The names and addresses of the applicant, the owner of the property on which the sign is to be located, the manufacturer of the sign and the person installing the sign, and the construction contractor's board number of the installer. The owner of the property on which the sign is to be located shall sign the sign permit application.

(e) A fee in the amount set by council resolution. When a person begins construction of a sign requiring a sign permit before the permit is approved, the permit fee shall be doubled.

(3) When deemed necessary by the building official, building or electrical permits shall be obtained as a part of the sign permit process. When required by St. Helens Community Development Code or building code, the approval of the fire marshal shall be obtained.

(4) The planning director shall grant or deny the sign permit application based upon the information submitted with the application and other information obtained by the city.

(5) A sign permit application shall be approved if:

(a) The application complies with all of the applicable provisions of this chapter, and any other objective requirement imposed by law. No standard shall be applied to deny a permit if the operation of that standard violates a constitutional right of the applicant. If, as part of the application, an applicant identifies a particular standard alleged to have unconstitutional effect, and provides reasons for that contention, the planning director shall seek the opinion of the city attorney on the contention. If the city attorney concludes that the operation of the standard violates a constitutional right of the applicant, the planning director shall not apply the standard in reviewing the application.

(b) The applicable permit fee has been paid.

(6) An approved sign shall be constructed and installed within six months of the final approval of the permit, including resolution of any appeal. The sign permit shall be void if installation is not completed within this period or if the sign does not conform to the approved permit. Sign permits mistakenly issued in violation of this chapter or other provisions of this code are void. The planning director may grant a reasonable extension of time for the installation deadline upon a showing of reasonable grounds for delay.

(7) If sign does not conform to the building code after inspection, the sign will be subject to removal per this chapter.

(8) The planning director may revoke a sign permit if the director finds that there was a material and misleading false statement of fact in the permit application. (Ord. 3091 § 2, 2008)

**Response**: The District is proposing for the sign permits to be reviewed as a part of this development application. As such, the required application materials and fees are included with this application. The required information can be found on the Sign Plan (Sheet F, Exhibit 1) and in the responses within this narrative. The District understands that administrative requirements stated in this section and will ensure the final approval and construction of the sign is in conformance with these requirements.

17.88.135 Adjustments.

17.88.140 Appeal of decision on sign permit or sign removal.

17.88.145 Inspections.

17.88.155 Removal of signs – General.

17.88.160 Removal of unsafe signs.

17.88.165 Removal of abandoned signs.

## 17.88.170 Removal of signs erected without a permit.

**Response**: The sections above address requirements associated with adjustments, appeals, and removal of signs, which are not proposed under this application. The District understands that an inspection of the signs may be required as part of the building permit approval.

# **Chapter** 17.92 **Mixed Solid** Waste and Recyclables Storage in New Multi-Unit Residential and Nonresidential Buildings

## 17.92.010 Purpose.

The purpose of this chapter is to ensure that certain new construction incorporates functional and adequate space for on-site storage and efficient collection of mixed solid waste and source-separated recyclables prior to pick-up and removal by haulers. (Ord. 2875 § 1.124.010, 2003)

**Res**ponse: The District understands the purpose of this chapter, and demonstrates conformance with its requirements below.

#### 17.92.020 Applicability.

The mixed solid waste and source-separated recyclables storage standards shall apply to new multi-unit residential buildings containing five or more units and nonresidential construction that are subject to full site plan or design review, and are located within urban zones that allow, outright or by condition, for such uses. (Ord. 2875 § 1.124.020, 2003)

**Res**ponse: The project is nonresidential construction subject to site plan review; therefore, this chapter is applicable.

#### 17.92.040 Materials accepted.

The storage area must be able to accept at least all "principle recyclable materials" designated by the Oregon Environmental Quality Commission and other source-separated recyclables the local government identifies by regulation. (Ord. 2875 § 1.124.040, 2003)

**Res**ponse: The storage areas of both the Middle School and CCEC site will continue to accept all "principal recyclable materials" and other recyclables as required by the City.

#### 17.92.050 Methods of demonstrating compliance.

(1) An applicant shall choose one of the following four methods to demonstrate compliance:

- (a) Minimum standards;
- (b) Waste assessment;
- (c) Comprehensive recycling plan; or
- (d) Franchised hauler review and sign-off.

Response: The District will demonstrate compliance under the Minimum Standards method.

(2) The following provisions apply to all four methods of demonstrating compliance:

(a) SHMC <u>17.92.060</u> (location, design and access standards), except as provided in subsection (7) of this section;

(b) The floor area of an interior or exterior storage area required by this code shall be excluded from the calculation of lot coverage and from the calculation of building floor area for purposes of determining minimum storage requirements.

**Response**: Conformance with the general location, design, and access standards is addressed below. Calculations of building floor area for the determination of storage requirements does not include the storage area.

(3) Minimum Standards Method.

(a) Description of Method. This method specifies a minimum storage area requirement based on the size and general use category of the new construction.

(b) Typical Application of Method. This method is most appropriate when the specific use of a new building is not known. It provides specific dimensions for the minimum size of storage areas by general use category.

(c) Application Requirements and Review Procedure. The size and location of the storage area(s) shall be indicated on the site plan of any construction subject to this code. Through the site plan review process, compliance with the general and specific requirements set forth below is verified.

(4) General Requirements.

(a) The storage area requirement is based on the predominant use(s) of the building (e.g., residential, office, retail, wholesale/warehouse/manufacturing, educational/institutional, or other). If a building has more than one of the uses listed herein and that use occupies 20 percent or less of the floor area of the building, the floor area occupied by that use shall be counted toward the floor area of the predominant use(s). If a building has more than one of the uses listed herein and that use occupies more than 20 percent of the floor area of the building, then the storage area requirement for the whole building shall be the sum of the requirement for the area of each use;

(b) Storage areas for multiple uses on a single site may be combined and shared; and

(c) The specific requirements are based on an assumed storage height of four feet for solid waste/recyclables. Vertical storage higher than four feet but no higher than seven feet may be used to accommodate the same volume of storage in a reduced floor space (potential reduction of 43 percent of specific requirements). Where vertical or stacked storage is proposed, the site plan shall include drawings to illustrate the layout of the storage area and dimensions of containers.

(5) Specific Requirements.

[...]

(b) Nonresidential buildings shall provide a minimum storage area of 10 square feet, plus:

[...]

(iv) Educational and institutional: four square feet/1,000 square feet GFA.

**Response**: There are two storage areas on the site, one for the Middle School and one for the CCEC building. The size of the Middle School is 104,000 square feet GFA, equating to a storage area of at least 426 square feet. The storage area will be 432 square feet. The size of the CCEC building is 11,400 square feet GFA, equating to a minimum storage area of 56 square feet. The CCEC storage will be 306 square feet.

## 17.92.060 Location, design and access standards for storage areas.

(1) The following location, design and access standards for storage areas are applicable to all four methods of compliance:

- (a) Minimum standards;
- (b) Waste assessment;

(c) Comprehensive recycling plan; and

(d) Franchised hauler review.

(2) Location Standards.

(a) To encourage its use, the storage area for source-separated recyclables shall be collocated with the storage area for residual mixed solid waste;

Response: The storage areas for both buildings will include both recyclables and mixed solid waste.

(b) Indoor and outdoor storage areas shall comply with Uniform Building and Fire Code requirements;

Response: The storage areas are designed to be compliant with building and fire code.

(c) Storage area space requirements can be satisfied with a single location or multiple locations, and can combine both interior and exterior locations;

(d) Exterior storage areas can be located within interior side yard or rear yard areas. Exterior storage areas shall not be located within a required front yard setback or in a yard adjacent to a public or private street;

(e) Exterior storage areas shall be located in central and visible locations on a site to enhance security for users;

**Response**: The storage areas for each building are in a single location, not within a required front yard setback, and in relatively visible locations. The CCEC storage area is in the parking area, where traffic and visibility can be expected. The Middle School storage area is located adjacent to the bus loop and will be visible from windows along the north elevation.

(f) Exterior storage areas can be located in a parking area, if the proposed use provides at least the minimum number of parking spaces required for the use after deducting the area used for storage. Storage areas shall be appropriately screened according to the provisions in subsection (3) of this section, Design Standards; and

**Response**: The CCEC storage area is located in the parking area, but does not consume area that would otherwise be used for parking spaces. As described below in response to subsection (3), the storage area will be screened from view by a masonry wall and surrounding landscaping.

(g) The storage area shall be accessible for collection vehicles and located so that the storage area will not obstruct pedestrian or vehicle traffic movement on the site or on public streets adjacent to the site.

**Response**: The storage areas have been located to be accessible for collection vehicles. The Middle School storage area is separated from the internal vehicle circulation and accessed via a service drive. The CCEC storage area is within the parking lot, but is located at the far north end of the parking area in order to reduce potential obstruction of vehicle traffic in and around the parent drop-off area.

(3) Design Standards.

(a) The dimensions of the storage area shall accommodate containers consistent with current methods of local collection;

(b) Storage containers shall meet Uniform Fire Code standards and be made and covered with waterproof materials or situated in a covered area;

**Response**: The dimensions of the storage area were designed to accommodate current local standard containers. The containers meet fire code standards and are lidded with waterproof materials. The middle School storage area, which will handle all food waste for both buildings, will also be covered with a metal canopy.

(c) Exterior storage areas shall be enclosed by a sight-obscuring fence, wall, or hedge at least six feet in height. Gate openings which allow access to users and haulers shall be provided. Gate openings for haulers shall be a minimum of 10 feet wide and shall be capable of being secured in a closed and open position; and

**Response**: Both storage areas will be enclosed by a 6-foot masonry wall. The gate openings for the Middle School storage area is 15 feet wide and the CCEC storage area is 22 feet wide. The gates will be equipped with a drop rod bolt and ground openings in order to be secured in both a closed and open position.

(d) Storage area(s) and containers shall be clearly labeled to indicate the type of materials accepted.

Response: All storage areas and containers will be labeled to indicate the type of materials accepted.

(4) Access Standards.

(a) Access to storage areas can be limited for security reasons. However, the storage area shall be accessible to users at convenient times of the day, and to collection service personnel on the day and approximate time they are scheduled to provide collection service;

**Res**ponse: Storage areas will be secured, but users will be provided keys to access the container and the containers will be unlocked during scheduled collection times.

(b) Storage areas shall be designed to be easily accessible to collection trucks and equipment, considering paving, grade and vehicle access. A minimum of 10 feet horizontal clearance and eight feet of vertical clearance is required if the storage area is covered; and

**Response**: Both storage areas are accessed on asphalt access drives. A short segment of the access to the Middle School storage area is via a concrete driveway and service pad. All access drives are at least 10 feet wide. The metal canopy covering the Middle School storage area is 10 feet high.

(c) Storage areas shall be accessible to collection vehicles without requiring backing out of a driveway onto a public street. If only a single access point is available to the storage area, adequate turning radius shall be provided to allow collection vehicles to safely exit the site in a forward motion. (Ord. 2875 § 1.124.060, 2003)

**Response**: At the CCEC building, collection vehicles can turn around using the parent drop-off loop. The vehicle would back up from the storage area and back into the drop-off loop area. At the Middle School building, collection vehicles can turn around using the bus loop.

# Chapter 17.96 Site Development Review

#### 17.96.010 Purpose.

(1) The purpose and intent of site development review is to promote the general welfare by directing attention to site planning, and giving regard to the natural environment and the elements of creative design to assist in conserving and enhancing the appearance of the city.

(2) It is in the public interest and necessary for the promotion of the health, safety and welfare, convenience, comfort and prosperity of the citizens of the city of St. Helens:

(a) To implement the city of St. Helens comprehensive plan and other approval standards in this code;

(b) To preserve and enhance the natural beauties of the land and of the manmade environment, and enjoyment thereof;

(c) To maintain and improve the qualities of and relationships between individual buildings, structures and the physical developments which best contribute to the amenities and attractiveness of an area or neighborhood;

(d) To protect and ensure the adequacy and usefulness of public and private developments as they relate to each other and to the neighborhood or area; and

(e) To ensure that each individual development provides for a quality environment for the citizens utilizing that development as well as the community as a whole.

(3) In order to prevent the erosion of natural beauty, the lessening of environmental amenities, the dissipation of both usefulness and function, and to encourage additional landscaping, it is necessary:

(a) To stimulate harmonious design for individual buildings, groups of buildings and structures, and other physical developments;

(b) To encourage the innovative use of materials, methods, and techniques and flexibility in building placement; and

(c) To integrate the functions, appearances and locations of buildings and improvements so as to best achieve a balance between private interests and preferences, and the public interest and welfare. (Ord. 2875 § 1.128.010, 2003)

**Res**ponse: The District and the design team understand the purposes of Site Development Review and have designed the site layout, buildings, and landscaping to contribute toward these purposes and goals.

#### 17.96.020 Applicability of provisions.

Site development review shall be applicable to all new developments and major modification of existing developments, as provided in SHMC <u>17.96.070</u>, except it shall not apply to:

**Res**ponse: The project is a complete redevelopment of the existing school buildings; therefore, site development review is required.

#### 17.96.030 Administration and approval process.

(1) The applicant for a site development review proposal shall be the recorded owner of the property or an agent authorized in writing by the owner.

**Res**ponse: As demonstrated by the Title Report (Exhibit 2), the applicant, St. Helens School District is the recorded owner of the property.

(2) A preapplication conference with city staff is required. (See SHMC <u>17.24.040</u>.)

Response: A preapplication conference with city staff occurred on February 17, 2017.

(3) Due to possible changes in state statutes, or regional or local policy, information given by staff to the applicant during the preapplication conference is valid for no more than six months:

(a) Another preapplication conference is required if any site development application is submitted six months after the preapplication conference; and

(b) Failure of the director to provide any of the information required by this section shall not constitute a waiver of the standards, criteria or requirements applicable to the applications.

**Res**ponse: Six months after the preapplication conference would be August 17, 2017. This application will be submitted in July 2017.

(4) The director shall approve, approve with conditions or deny any application for site development review as provided by SHMC <u>17.24.090</u>. The director shall apply the standards set forth in SHMC <u>17.96.180</u> when reviewing an application for site development review. The planning commission will review the director's tentative decision before it becomes final.

(5) The decision of the director may be appealed in accordance with SHMC <u>17.24.310(1)</u>.

(6) The director shall mail notice of any site development review proposal decision to the persons who may have the right to request a hearing before the commission in accordance with SHMC <u>17.24.120</u>. (Ord. 2875 § 1.128.030, 2003)

**Res**ponse: The District understands that the application will be reviewed by the Planning Director and Planning Commission and a public hearing may be included in the review process.

## 17.96.040 Expiration of approval – Standards for extension of time.

#### 17.96.050 Phased development.

**Response**: The District understands that approval of the application is effective for one year and a phased development schedule is not proposed. Construction of the CCEC building will begin in the fall of 2017 and construction of the Middle School will begin in the winter or spring of 2018.

#### 17.96.060 Bonding and assurances.

(1) On all projects where public improvements are required the director shall:

(a) Require a bond in an amount not greater than 110 percent of engineer estimates for public improvements or other adequate assurances as a condition of approval of the site development plan in order to ensure the completed project is in conformance with the approved plan; and

(b) Approve and release such bonds.

(2) The bond shall be released when the director finds the completed project conforms to the approved site development plan and all conditions of approval are satisfied.

(3) Landscaping shall be installed prior to issuance of occupancy permits, unless security equal to the cost of the landscaping as determined by the director is filed with the city recorder assuring such installation within six months after occupancy:

(a) Security may consist of a faithful performance bond payable to the city, cash, certified check or such other assurance of completion approved by the city attorney; and

(b) If the installation of the landscaping is not completed within the six-month period, the security may be used by the city to complete the installation.

(4) The applicant shall ensure that all occupants of the completed project, whether permanent or temporary, shall apply for and receive a city of St. Helens business license prior to initiating business. (Ord. 2875 § 1.128.060, 2003)

**Res**ponse: The District understands that bonding and assurances shall be required for the site and will conform to these requirements.

17.96.070 Major modification to approved plans or existing development.

#### 17.96.080 Minor modification to approved plans or existing development.

**Res**ponse: This application is being submitted as new development. Although the site has existing buildings, most of the site will be completely redeveloped; therefore, these sections do not apply.

#### 17.96.090 Application submission requirements.

(1) All applications shall be made on forms provided by the director and shall be accompanied by:

(a) Copies of the site development plan(s) (number to be determined at the preapplication conference) and necessary data or narrative which explains how the development conforms to the standards, and:

(i) The site development plan(s) and required drawings shall be drawn on sheets preferably not exceeding 18 inches by 24 inches;

(ii) The scale for a site development plan shall be an engineering scale; and

(iii) All drawings of structure elevations shall be a standard architectural scale, being one-fourth-inch or one-eighth-inch; and

(b) The required fee.

**Res**ponse: Per staff direction, (2) copies of the site development plan set and (1) copy of this narrative were submitted, in addition to the required application form and fees.

- (2) The required information may be combined on one map.
- (3) The site development plan, data, and narrative shall include the following:
  - (a) An existing site conditions analysis, SHMC 17.96.110;
  - (b) A site plan, SHMC <u>17.96.120;</u>
  - (c) A grading plan, SHMC <u>17.96.130;</u>
  - (d) A landscape plan, SHMC <u>17.96.150;</u>
  - (e) Architectural elevations of all structures, SHMC 17.96.140;
  - (f) A sign plan, SHMC <u>17.96.160;</u> and
  - (g) A copy of all existing and proposed restrictions or covenants. (Ord. 2875 § 1.128.090, 2003)

**Res**ponse: Items (a) through (f) are included in the Plan Set (Exhibit 1). Item (g) is included in the Title Report (Exhibit 2).

#### 17.96.100 Additional information required and waiver of requirements.

(1) The director may require information in addition to that required by this chapter in accordance with SHMC <u>17.24.080(1)</u>.

(2) The director may waive a specific requirement for information in accordance with SHMC <u>17.24.080(2)</u> and (3). (Ord. 2875 § 1.128.100, 2003)

Response: The District understands the additional information may be required or waived by the director.

#### 17.96.110 Site conditions.

**Res**ponse: The information required by this section is presented on Sheet A (Exhibit 1).

#### 17.96.120 The site development plan.

Response: The information required by this section is presented on Sheet B1 (Exhibit 1).

#### 17.96.130 G**radin**g p**lan**.

**Res**ponse: The information required by this section is presented on Sheet C (Exhibit 1).

#### 17.96.140 Architectural drawings.

Response: The information required by this section is presented on Sheets E1-E4 (Exhibit 1).

#### 17.96.150 **Landsca**p**e** p**lan**.

**Res**ponse: The information required by this section is presented on Sheet D (Exhibit 1).

#### 17.96.160 Sign drawings.

Response: The information required by this section is presented on Sheet F (Exhibit 1).

#### 17.96.180 Approval standards.

The director shall make a finding with respect to each of the following criteria when approving, approving with conditions, or denying an application:

(1) Provisions of the following chapters:

- (a) Chapter <u>17.44</u> SHMC, Sensitive Lands;
- (b) Chapter 17.60 SHMC, Manufactured/Mobile Home Regulations;
- (c) Chapter 17.56 SHMC, Density Computations;
- (d) Chapter <u>17.124</u> SHMC, Accessory Structures;
- (e) Chapter <u>17.64</u> SHMC, Additional Yard Setback Requirements and Exceptions;
- (f) Chapter <u>17.68</u> SHMC, Building Height Limitations Exceptions;
- (g) Chapter 17.72 SHMC, Landscaping and Screening;
- (h) Chapter 17.76 SHMC, Visual Clearance Areas;
- (i) Chapter <u>17.80</u> SHMC, Off-Street Parking and Loading Requirements;
- (j) Chapter 17.84 SHMC, Access, Egress, and Circulation;
- (k) Chapter 17.88 SHMC, Signs;
- (I) Chapter 17.132 SHMC, Tree Removal;
- (m) Chapter 17.152 SHMC, Street and Utility Improvement Standards; and
- (n) Chapter 17.156 SHMC, Transportation Impact Analysis;

Response: The requirements of each of these chapters is addressed in this narrative.

(2) Relationship to the Natural and Physical Environment.

(a) Buildings shall be:

(i) Located to preserve existing trees, topography, and natural drainage in accordance with other sections of this code;

**Response**: Both the Middle School and CCEC building are located on relatively flat portions of the site that have few trees. Buildings and access roads were located to minimize impact on the existing wetlands

and wooded areas on the site. The buildings are located on the higher elevation areas of the site to take advantage of natural drainage patterns.

#### (ii) Located in areas not subject to ground slumping or sliding;

**Response**: All buildings are located on relatively flat areas not subject to slumping or sliding. Any modifications to areas of 25 percent or higher slope are limited to site improvements such as access roads and athletic fields. Stabilization proposals are addressed in the responses to Chapter 17.44 Sensitive Lands.

## (iii) Located to provide adequate distance between adjoining buildings for adequate light, air circulation, and fire fighting; and

**Response**: All buildings are located at a significant distance from each other building on the site. Fire lane access is provided around the perimeter of the Middle School and the south end of the CCEC building. Fire apparatus access to the north of the CCEC and the modular buildings is also available through the parking lot of the CCEC building.

#### (iv) Oriented with consideration for sun and wind; and

**Response**: Both buildings employ an east-west orientation and the Middle School uses multiple wings to increase access to sunlight during more hours of the day. Most outdoor play areas are situated south of the buildings to avoid building shadows. The outdoor classroom and rain garden within the Middle School are oriented to the east to capture sun light during morning and early afternoon hours, when school is in session.

### (b) Trees having a six-inch DBH (as defined by Chapter <u>17.132</u> SHMC) or greater shall be preserved or replaced by new plantings of equal character;

**Response**: All trees over six-inch DBH are identified on the Tree Plan (Sheet H, Exhibit 1). All trees will be replaced at a 1:1 ratio with trees of a similar species or a more appropriate species if the tree is considered noxious or invasive. The location of replacement trees is also identified on the Tree Plan.

(3) Exterior Elevations. Along the vertical face of single-dwelling units – attached and multiple-dwelling unit structures, offsets shall occur at a minimum of every 30 feet by providing any two of the following:

(a) Recesses (decks, patios, entrances, floor area, etc.) of a minimum depth of eight feet;

(b) Extensions (decks, patios, entrances, floor area, etc.) of a minimum depth of eight feet, and maximum length of an overhang shall be 25 feet; and

(c) Offsets or breaks in roof elevations of three or more feet in height;

**Response**: This standard applies to residential development; therefore, it does not apply. However, the elevation of both the CCEC and Middle School buildings are articulated through the use of offsetting walls, canopies, and variations in glazing patterns, roof forms, and materials.

(4) Buffering, Screening, and Compatibility between Adjoining Uses (See Figure 13, Chapter <u>17.72</u> SHMC).

(a) Buffering shall be provided between different types of land uses (for example, between singledwelling units and multiple-dwelling units residential, and residential and commercial), and the following factors shall be considered in determining the adequacy of the type and extent of the buffer:

(i) The purpose of the buffer, for example to decrease noise levels, absorb air pollution, filter dust, or to provide a visual barrier;

- (ii) The size of the buffer required to achieve the purpose in terms of width and height;
- (iii) The direction(s) from which buffering is needed;
- (iv) The required density of the buffering; and
- (v) Whether the viewer is stationary or mobile;

**Response**: Buffering and screening between the site, as a public facility use, and the adjacent residential properties, is addressed in detail in responses to Section 17.72.070. The site layout and planned landscape installations—in combination with existing site features such as the topography, existing vegetation, and the size of the site—will provide sufficient buffering and screening so as to minimize the visual impact of the buildings on the adjacent properties.

(b) On-site screening from view from adjoining properties of such things as service areas, storage areas, parking lots, and mechanical devices on rooftops (e.g., air cooling and heating systems) shall be provided and the following factors will be considered in determining the adequacy of the type and extent of the screening:

- (i) What needs to be screened;
- (ii) The direction from which it is needed;
- (iii) How dense the screen needs to be;
- (iv) Whether the viewer is stationary or mobile; and
- (v) Whether the screening needs to be year-round;

**Response**: All service facilities, solid waste storage, rooftop equipment, and parking areas will be screened from view from public streets or adjacent properties. The specific form of the screening associated with each of these elements is addressed in response to Section 17.72.110.

(5) Privacy and Noise.

(a) Structures which include residential dwelling units shall provide private outdoor areas for each ground floor unit which is screened from view by adjoining units as provided in subsection (6)(a) of this section;

**Response**: This standard is specific to residential uses; therefore, it does not apply.

(b) The buildings shall be oriented in a manner which protects private spaces on adjoining properties from view and noise;

**Response**: As noted in response to the Section 17.72.070, the site layout and planned landscape installations—in combination with existing site features such as the topography, existing vegetation, and the size of the site—will protect private spaces on adjoining properties from view and noise.

(c) Residential buildings should be located on the portion of the site having the lowest noise levels; and

**Response**: This standard is specific to residential uses; therefore, it does not apply.

(d) On-site uses which create noise, lights, or glare shall be buffered from adjoining residential uses (see subsection (4) of this section);

**Res**ponse: This standard is addressed as follows:

- The only potential sources of ongoing noise on the site are the emergency generator and packaged chiller unit, located north of the main Middle School building. Any potential noise impacts will be mitigated through enclosures and distance from the property line, as described in response to Section 17.52.030.
- Light sources on the site will be limited to those necessary to illuminate parking and pedestrian circulation areas. These luminaires will be directed downward and produce little to no glare. No glare will be visible from the property line.
- (6) Private Outdoor Area Residential Use.
- (7) Shared Outdoor Recreation Areas Residential Use.
- (8) Demarcation of Public, Semipublic, and Private Spaces Crime Prevention.

(a) The structures and site improvements shall be designed so that public areas such as streets or public gathering places, semipublic areas and private outdoor areas are clearly defined in order to establish persons having a right to be in the space, in order to provide for crime prevention and to establish maintenance responsibility; and

- (b) These areas may be defined by:
  - (i) A deck, patio, low wall, hedge, or draping vine;
  - (ii) A trellis or arbor;
  - (iii) A change in level;
  - (iv) A change in the texture of the path material;
  - (v) Sign; or
  - (vi) Landscaping;

**Res**ponse: Public, semipublic, and private spaces are demarcated throughout the site in several ways:

- Monument signs at the entries to the site demarcate the transition from the public space of the street and sidewalk to the school property.
- Generous hardscape plaza areas surround each school that demarcate a transition from the semi-public space of the parking lots, walkways, and athletic facilities to the more private space intended for gatherings of students and staff, and for student play areas. The plazas will be constructed of a combination of premium scored concrete and potentially a limited amount of brick or stone pavers. The Middle School play area will also be fenced to further demarcate this space as private space.

- Canopies over many of the play areas further demarcate the semi-public from the private space by designating the spaces as intended for use by students.
- The outdoor classroom at the Middle School is demarcated as a private space by being enclosed on all four sides. The corridor that encloses the east side of the space is transparent to allow light passage, but can be secured from entry from the rear of the school.
- The fire lane that runs the perimeter of the Middle School and the south side of the CCEC building will be constructed of grass pavers, differentiating this space from the concrete walkways, asphalt access drives, or hardscape plaza. The grass pavers demarcate this space as a semi-natural area, not intended for gathering or movement of pedestrians or vehicles.

#### (9) Crime Prevention and Safety.

#### (a) Windows shall be located so that areas vulnerable to crime can be surveyed by the occupants;

**Response**: As shown on the Elevations (Sheets E1-E4), both buildings include generous glazing on all sides of the building. The interior courtyard of the Middle School is surrounded by windows on all sides. The only elevation without windows is the south wing of the east elevation of the Middle School; however, the north wing extends slightly further east than this elevation, allowing for views from the east end of the north wing to the rear of the south wing.

- (b) Interior laundry and service areas shall be located in a way that they can be observed by others;
- (c) Mail boxes shall be located in lighted areas having vehicular or pedestrian traffic;

**Res**ponse: These two standards seem to apply to residential uses; however, all service areas and mail boxes will be located on the interior of the school. All interior spaces will be appropriately secured.

(d) The exterior lighting levels shall be selected and the angles shall be oriented towards areas vulnerable to crime; and

(e) Light fixtures shall be provided in areas having heavy pedestrian or vehicular traffic and in potentially dangerous areas such as parking lots, stairs, ramps, and abrupt grade changes:

(i) Fixtures shall be placed at a height so that light patterns overlap at a height of seven feet, which is sufficient to illuminate a person;

**Response**: As shown on the Site Development Plan (Sheet B1), all parking areas will be illuminated with overlapping pattern. The main walkway in the parking area to the hardscape plaza will be lit by the parking lamps. The walking path on the east side of the parking lot adjacent to the field will not have any direct lighting, only residual lighting from the parking area. The plaza will have some illumination coming from the building security lights (wall sconces) which will be around the perimeter of the building but will not have an overlap pattern.

(10) Access and Circulation.

(a) The number of allowed access points for a development shall be as provided in SHMC <u>17.84.070;</u>

**Res**ponse: The site will continue to have two access points, in conformance with Chapter 17.84, as described in responses to that chapter.

(b) All circulation patterns within a development shall be designed to accommodate emergency vehicles; and

**Res**ponse: The access drives, loading areas, and fire lanes are of a sufficient width and designed with sufficient turning radius for all emergency vehicles.

(c) Provisions shall be made for pedestrianways and bicycleways if such facilities are shown on an adopted plan;

**Response**: Sidewalks will be constructed or reconstructed along all site frontages. The existing off-street path that runs on to the site from N. 15<sup>th</sup> Street will be preserved and connected with the on-site walkways.

Two existing, informal pedestrian/bike paths connect to the school, one at the northeast corner of the site and another through the gorge area on the southeast corner of the site. The path at the northeast corner will be retained as it can provide convenient access to the rear of the Middle School. The path in the southeast corner will be removed as that area will be regraded and replaced with the track.

One off-street trail was identified in the St. Helens Parks and Trails Master Plan near the site. The trail is planned to run through the gorge area south of the site, along the right-of-way of Willamette Street. Per staff direction, this trail is outside of the property boundaries and would not improve access to the school; therefore, the facility is not proposed to be constructed as part of this project.

(11) Distance between Multiple-Family Residential Structure and Other.

Response: This standard is specific to residential uses; therefore, it does not apply.

(12) Parking. All parking and loading areas shall be designed in accordance with the requirements set forth in SHMC <u>17.80.050</u> and <u>17.80.090</u>; Chapter <u>17.76</u> SHMC, Visual Clearance Areas; and Chapter <u>17.84</u> SHMC, Access, Egress, and Circulation;

**Response**: All parking and loading areas have been designed in accordance with Chapter 17.80 Off-Street Parking and Loading, Chapter 17.76 Visual Clearance Areas, and Chapter 17.84 Access, Egress, and Circulation, as demonstrated in the responses to those chapters.

(13) Landscaping.

(a) All landscaping shall be designed in accordance with the requirements set forth in Chapter <u>17.72</u> SHMC; and

**Res**ponse: All landscaping has been designed in accordance with Chapter 17.72 Landscaping and Screening, as demonstrated in the responses to that chapter.

(14) Drainage. All drainage plans shall be designed in accordance with the criteria in the most current adopted St. Helens master drainage plan;

**Res**ponse: Drainage and storm water management plans have been designed in accordance with all local, state, and federal regulations, as described in responses to Section 17.152.100.

(15) Provision for the Handicapped. All facilities for the handicapped shall be designed in accordance with the requirements pursuant to applicable federal, state and local law;

**Res**ponse: All site improvements and buildings were designed in accordance with applicable state and federal requirements associated with the Americans with Disabilities Act (ADA).

(16) Signs. All sign placement and construction shall be designed in accordance with requirements set forth in Chapter <u>17.88</u> SHMC;

**Res**ponse: All signs have been designed in accordance with Chapter 17.88 Signs, as demonstrated in the responses to that chapter.

(17) All of the provisions and regulations of the underlying zone shall apply unless modified by other sections of this code (e.g., the planned development, Chapter <u>17.148</u> SHMC; or a variance granted under Chapter <u>17.108</u> SHMC; etc.).

**Res**ponse: All provisions of the base zone (PL) have been addressed, as demonstrated in the responses to Chapter 17.32.150 Public Lands.

#### Chapter 17.132 Tree Removal

#### 17.132.010 Purpose.

(1) After years of both natural growth and planting by residents, the city now benefits from a large number of trees. These trees of varied types add to the aesthetic beauty of the community, help clean the air, help control erosion, maintain water quality and provide noise barriers.

(2) The purposes of this chapter are to:

(a) Encourage the preservation, planting and replacement of trees in the city;

(b) Regulate the removal of trees on sensitive lands in the city to eliminate unnecessary removal of trees;

- (c) Provide for a tree plan for developing properties;
- (d) Protect sensitive lands from erosion;
- (e) Protect water quality;
- (f) Provide incentives for tree retention and protection; and
- (g) Regulate commercial forestry to control the removal of trees in an urban environment.

(3) The city recognizes that, notwithstanding these purposes, at the time of development it may be necessary to remove certain trees for public safety and in order to accommodate structures, streets, utilities, and other needed or required improvements within the development. (Ord. 2875 § 1.160.010, 2003)

**Res**ponse: The District understands the purposes of this chapter and demonstrates conformance with its requirements below.

#### 17.132.025 Tree plan requirement.

(1) A tree plan for the planting, removal, and protection of trees prepared by a certified arborist or other capable professional as allowed by the director (for property or site with more than 10 trees or any tree over two feet DBH) shall be provided for any lot, parcel or combination of lots or parcels for which a development application for a land division, site development review, planned development or conditional use is filed. Protection is preferred over removal where possible.

**Res**ponse: As a site development review application, a tree plan is required for this application and has been prepared by a certified Landscape Architect (simp.L).

(2) The tree plan shall include the following

(a) Identification of the location, size, DBH and species of all existing trees including trees designated as significant by the city;

(b) Identification of a program to save existing trees or mitigate tree removal over 12 inches DBH. Mitigation must follow the replacement guidelines of SHMC <u>17.132.070(4)</u> according to the following standards:

(*i*) Retainage of less than 50 percent of existing trees over 12 inches DBH requires a mitigation program according to SHMC <u>17.132.070(4)</u> with a ratio of two minimum two-inch DBH trees for each 12-inch or greater DBH tree to be removed.

(ii) Retainage of over 50 percent of existing trees over 12 inches DBH requires the trees to be mitigated according to SHMC <u>17.132.070(4)</u> with a ratio of one minimum two-inch DBH tree for each 12-inch or greater DBH tree to be removed.

(c) Identification of all trees which are proposed to be removed; and

**Response**: The Tree Plan (Sheet H) identifies the location, size, DBH, and species of all existing trees, identifies trees to be removed and the location of replacement trees. The tree inventory and mitigation requirements were calculated separately for the CCEC and Middle School building (combining the calculations does not change the mitigation standard). As shown on the plan, all trees over 6" DBH will be replaced at a 1:1 ratio, in accordance with Site Development Review requirements, which supersede these standards. All trees will be replaced with trees of at least 2" DBH. Tree replacement is proposed as follows:

Site	Existing trees over 6" DBH	Trees over 6" DBH to be remo∨ed	Replacement rate	Number of replacement trees
CCEC	18	7 (38%)	1:1	7
Middle School	63	18 (29%)	1:1	18

(d) A protection program defining standards and methods that will be used by the applicant to protect trees during and after construction.

**Response**: Existing trees to remain will be identified in the field, prior to construction activities. Trees to remain will be protected with temporary fencing placed at the dripline of each tree. Trees that are in clustered groups will be fenced with temporary fencing at the dripline of the group.

(3) Trees removed within the period of one year prior to a development application listed above will be inventoried as part of the tree plan above and will be replaced according to SHMC <u>17.132.070(4)</u>. (Ord. 3144 § 2 (Att. A), 2011; Ord. 2875 § 1.160.025, 2003)

**Res**ponse: No trees have been removed on the site within a period of one year prior to this development application.

#### 17.132.030 Permit requirement.

(1) Tree removal permits shall be required only for the removal of any tree which is located on or in a sensitive land area as defined by Chapter <u>17.44</u> SHMC.

(2) A tree removal permit shall not be required for the removal of a tree which:

- (a) Obstructs visual clearance as defined in Chapter 17.76 SHMC;
- (b) Is a hazardous tree;
- (c) Is a nuisance affecting public safety as defined in the St. Helens Municipal Code; or

(d) Is used for Christmas tree production, or land registered with the Columbia County assessor's office as property tax deferred tree farm or small woodlands, but does not stand on sensitive lands.

(3) Commercial forestry as defined by SHMC <u>17.132.020(1)(b)</u> and excluding subsection (2)(d) of this section is permitted after a plan per SHMC <u>17.132.025</u> is reviewed and approved and only in accordance with the approved plan. (Ord. 2875 § 1.160.030, 2003)

**Response**: As shown on the Tree Plan (Sheet H) and the Grading Plan (Sheet C), no trees are being removed on sensitive lands, which include areas of over 25% slope and wetlands (shown on the Grading Plan). Two trees are being removed that are the vicinity of Wetland B (see Exhibit 4 for location of Wetland B), but are not located within the delineated wetland boundary. Therefore, as no trees are being removed that are located on sensitive lands, no tree removal permit is required.

#### 17.132.040 Permit criteria.

Response: No tree removal permit is required; therefore, this section is not applicable.

#### 17.132.045 Incentives for tree retention.

(1) In order to assist in the preservation and retention of existing trees, the director may apply one or more of the following incentives as part of development review approval and the provisions of a tree plan according to SHMC <u>17.132.025</u>:

**Res**ponse: No tree retention incentives are proposed as part of this application; therefore, this section is not applicable.

#### 17.132.050 Expiration of approval – Extension of time.

#### 17.132.060 Application submission requirements.

Response: No tree removal permit is required; therefore, these sections are not applicable.

#### 17.132.070 Illegal tree removal - Violation - Replacement of trees.

- (1) The following constitute a violation of this chapter:
  - (a) Removal of a tree:
    - (i) Without a valid tree removal permit; or
    - (ii) In noncompliance with any condition of approval of a tree removal permit;
    - (iii) In noncompliance with any condition of any city permit or development approval; or
    - (iv) In noncompliance with any other section of this code.
  - (b) Breach of a condition of any city permit or development approval which results in damage to a tree or its root system.

(2) If the director has reason to believe that a violation of this chapter has occurred, then he or she may do any or all of the following:

(a) Require the owner of the land on which the tree was located to submit sufficient documentation, which may include a written statement from a qualified arborist or forester, showing that removal of the tree was permitted by this chapter;

(b) Pursuant to SHMC <u>17.24.390</u>, initiate a hearing on revocation of the tree removal permit and/or any other permit or approval for which this chapter was an approval standard;

- (c) Seek a stop order;
- (d) Seek a citation; or
- (e) Take any other action allowed by law.

(3) Notwithstanding any other provision of this code, any party found to be in violation of this chapter pursuant to Chapter <u>17.12</u> SHMC shall be subject to a civil penalty of up to \$500.00 and shall be required to remedy any damage caused by the violation. Such remediation shall include, but not be limited to, the following:

(a) Replacement of unlawfully removed or damaged trees in accordance with subsection (4) of this section; and

(b) Payment of an additional civil penalty representing the estimated value of any unlawfully removed or damaged tree, as determined using the most current International Society of Arboriculture's Guide for Plant Appraisal.

**Res**ponse: The District understands the requirements related to tree removal and will perform all tree removals in conformance with this section and all other City regulations.

(4) Replacement of a tree shall take place according to the following guidelines:

(a) A replacement tree shall be a substantially similar species considering site characteristics;

(b) If a replacement tree of the species of the tree removed or damaged is not reasonably available, the director may allow replacement with a different species of equivalent natural resource value;

(c) The director may permit one or more replacement trees to be planted on other property within the city, either public property or, with the consent of the owner, private property whenever it is not viable to place the trees on the site;

(d) The planting of a replacement tree shall take place in a manner reasonably calculated to allow growth to maturity.

**Response**: As shown on the Tree Plan (Sheet H, Exhibit 1), all trees will be replaced with a similar species, will be located on site, and placed in a manner that will allow for the tree to grow to maturity. However, several cottonwood trees, which are commonly considered a noxious and invasive species, will be replaced with oak trees.

(5) In lieu of tree replacement under subsection (4) of this section, a party may, with the consent of the director, elect to compensate the city for its costs in performing such tree replacement.

(6) The remedies set out in this section shall not be exclusive. (Ord. 2875 § 1.160.070, 2003)

Response: No compensation in-lieu of tree replacement is proposed as part of this application.

#### Chapter 17.152 Street and Utility Improvement Standards

#### 17.152.010 Purpose.

The purpose of this chapter is to provide construction standards for the implementation of public and private facilities and utilities such as streets, sewers, and drainage and to indicate when and where they are required. (Ord. 2875 § 1.184.010, 2003)

**Res**ponse: The District understands the purposes of this chapter and demonstrates conformance with its requirements below.

#### 17.152.020 General provisions.

(1) Unless otherwise provided, the standard specifications for construction, reconstruction or repair of streets, sidewalks, curbs and other public improvements within the city shall occur in accordance with the standards of this code.

(2) The city engineer may recommend changes or supplements to the standard specifications consistent with the application of engineering principles.

(3) The appropriate provision of the St. Helens Municipal Code shall apply to this chapter.

(4) The city has adopted "City of St. Helens Engineering Department Public Facilities Construction Standards Manual." (Ord. 2875 § 1.184.020, 2003)

**Response**: The District understands that all public improvements shall be designed and constructed in accordance with this chapter, any other relevant provisions of the St. Helens Municipal Code, the St. Helens Engineering Standards Manual, and any modifications recommended by the city engineer. The project team and city engineer have coordinated to ensure designs are consistent with city standards.

#### 17.152.030 Streets.

(1) Improvements. No development shall occur unless the development has frontage or approved access to a public street:

(a) Streets within a development and streets adjacent shall be improved in accordance with this code;

(b) Development on site adjacent to nonstandard street shall require improvement of street to applicable city standards;

(c) Any new street or additional street width planned as a portion of an existing dedicated/public street shall be dedicated and improved in accordance with this code; and

(d) The director may accept a future improvement guarantee in lieu of street improvements if one or more of the following conditions exist:

[...]

**Res**ponse: The site fronts two existing City streets, N. 15<sup>th</sup>/16<sup>th</sup> Street and West Street. Both streets are nonstandard and will be improved to City standards. The improvements will be constructed concurrent with the development of the site; no future improvement guarantee is proposed.

(2) Creation of Rights-of-Way for Streets and Related Purposes. Rights-of-way shall be created through the approval of a final land division plat; however, the council may approve the creation of a street by acceptance of a deed; provided, that such street is deemed essential by the council for the purpose of general traffic circulation:

**Res**ponse: Public rights-of-way exist for the streets fronting the site and will not be affected by this application.

(3) Creation of Access Easements. The approval authority may approve an access easement established by deed without full compliance with this code provided such an easement is the only reasonable method by which a lot, large enough to develop, can be created:

Response: No access easements are proposed as part of this application.

(4) Street Location, Width and Grade. The location, width and grade of all streets shall conform to an approved street plan and shall be considered in their relation to existing and planned streets, to topographic conditions, to public convenience and safety, and in their appropriate relation to the proposed use of the land to be served by such streets:

**Response**: The location and grade of existing streets are not proposed to be modified as part of this project. The width of existing streets to be improved is addressed in subsection (5) below. No new streets are proposed.

(5) Minimum Rights-of-Way and Street Widths. Unless otherwise indicated on an approved street plan, or as needed to continue an existing improved street, street right-of-way and roadway widths shall not be less than the minimum width described in Figure 19. Where a range is indicated, the width shall be determined by the decision-making authority based upon anticipated average daily traffic (ADT) on the new street segment. (The city council may adopt, by resolution, design standards for street construction and other public improvements. The design standards will provide guidance for determining improvement requirements within the specified ranges.) (See "City of St. Helens Engineering Department Public Facilities Construction Standards Manual.")

(a) The planning director shall recommend, to the decision-making body, desired right-of-way width and pavement width of the various street types within the subdivision or development after consideration of the following:

(i) The type of road as set forth in Figure 19, Road Standards;

#### ROAD STANDARDS

### MINIMUM RIGHTS-OF-WAY AND STREET WIDTHS (see Transportation Systems Plan [TSP] Figures 7-2 and 7-3) Figure 19

Type of Street	Right-of-Way Width	Roadway Width	Moving Lanes	Bicycle Lanes*
Major Arterial	101' minimum	74'	4	2@6'
Minor Arterial (Typical)	60'	36'	2	2@6'
Minor Arterial (One-Way, Uptown)	80'	46'	2	1 @ 6'
Minor Arterial (Two-Way, Downtown)	80'	52'	2	2@6'
Collector	60'	36'	2	2@6'
Local	50'	34'	1 – 2	None
Local "Skinny" Street	40'	20' or 26'	1 – 2	None

\*Applies to bicycle lanes required in Transportation Systems Plan (TSP) or Public Facilities Plan (PFP)

- (ii) Anticipated traffic generation;
- (iii) On-street parking needs;
- (iv) Sidewalk and bikeway requirements;
- (v) Requirements for placement of utilities;
- (vi) Street lighting;
- (vii) Drainage and slope impacts;
- (viii) Street tree location;
- (ix) Planting and landscape areas;
- (x) Safety for motorists, bicyclists, and pedestrians; and
- (xi) Access needs for emergency vehicles;

(b) Improvements to streets shall be made according to adopted city standards, unless the approval authority determines that the standards will result in an unacceptable adverse impact on existing development or on the proposed development or on natural features such as wetlands, steep slopes or existing mature trees. In approving an exception to the standards, the approval authority shall determine that the potential adverse impacts exceed the public benefits of the standards. In evaluating the public benefits, the approval authority shall consider the criteria listed in subsection (5)(a) of this section.

**Response**: All streets that front the site are classified as Collector Streets. The City Engineer, Planning Director, and Project Civil Engineer (Locke) have coordinated to determine the most appropriate design for the streets in consideration of City standards and the consideration of the various factors above. The proposed cross-sections for three street segments are illustrated in Exhibit 6 and described below.

- Right-of-Way Width: All street segments have right-of-way widths of approximately 80 feet, above the City standard of 60 feet.
- Roadway Width: This project will construct street improvements along all frontages. The improvements are designed to a City-standard 36-foot roadway width. A 3-foot offset to the ROW centerline is proposed for 16<sup>th</sup> Street and 9.5-foot offset is proposed for West Street in order to ensure alignment with existing travel lanes.
- Travel Lanes and Bike Lanes: All travel lanes will be 12 feet wide and all street segments will include a 6-foot bike lane.
- Sidewalks and Planter Strip: A 6-foot sidewalk will be provided on all street segments. A 5-foot planter strip will be provided along all street segments except for the segment of 16<sup>th</sup> Street adjacent to the wetlands. City staff determined that including the planter strip would have a greater impact on the wetland area by moving the sidewalk further into the wetland area; therefore, no planter strip is proposed (curb-tight sidewalk).

The short segment of 15<sup>th</sup> Street south of the Middle School access road will not be improved with curb and gutters, but will be planted with street trees. No curb and gutter are proposed for this segment because rock outcroppings and a steep slope just south of this segment prevent sidewalks or a curb and gutter from being installed, so any sidewalk in this area would be short and discontinuous.

#### (6) Future Street Plan and Extension of Streets.

**Res**ponse: No land division is proposed as part of this application, and no potential future street extensions run through the site; therefore, these standards are not applicable.

#### (7) Street Alignment and Connections.

(8) Intersection Angles. Streets shall be laid out so as to intersect at an angle as near to a right angle as practicable, except where topography requires a lesser angle, but in no case shall the angle be less than 60 unless there is special intersection design, and:

**Res**ponse: No street alignments or intersections are proposed to be modified. Both access drives will continue to be aligned at an approximate 90-degree angle to 16<sup>th</sup> Street.

(9) Existing Rights-of-Way. Whenever existing rights-of-way adjacent to or within a tract are of less than standard width, additional rights-of-way shall be provided at the time of land division or development.

**Res**ponse: As noted above, right-of-way widths are sufficient to accommodate standard street dimensions.

(10) Partial Street Improvements. Partial street improvements resulting in a pavement width of less than 20 feet, while generally not acceptable, may be approved where essential to reasonable development when in conformity with the other requirements of these regulations, and when it will be practical to require the improvement of the other half when the adjoining property is developed.

**Res**ponse: Roadway widths will continue to be in excess of 20 feet and will be no less than 32 feet along any street segment.

(11) Cul-de-Sacs. A cul-de-sac street shall only be used when environmental or topographical constraints, existing development patterns, or compliance with other standards in this code preclude street extension and through circulation. When cul-de-sacs are provided, all of the following shall be met:

**Res**ponse: No cul-de-sacs are proposed as part of this application; therefore, this standard is not applicable.

(12) Street Names. No street name shall be used which will duplicate or be confused with the names of existing streets in Columbia County emergency communications district, except for extensions of existing streets. Street names and numbers shall conform to the established pattern in the surrounding area or as agreed with Columbia County.

**Res**ponse: No street name changes are proposed as part of this application; therefore, this standard is not applicable.

(13) Grades and Curves. Grades shall not exceed 10 percent on arterials, 12 percent on collector streets, or 12 percent on any other street (except that local or residential access streets may have segments with grades up to 15 percent for distances of no greater than 250 feet), and:

Response: The grades of existing streets will not be modified as part of this project.

(14) Curbs, Curb Cuts, Ramps, and Driveway Approaches. Concrete curbs, curb cuts, wheelchair/bicycle ramps and driveway approaches shall be constructed in accordance with standards specified in the "City of St. Helens Engineering Department Public Facilities Construction Standards Manual," and:

(a) Concrete curbs and driveway approaches are required; except where no sidewalk is planned, an asphalt approach may be constructed with city engineer approval;

(b) Asphalt and concrete driveway approaches to the property line shall be built to city configuration standards; and

(c) All driveways shall be at right angle to public or private street for at least 20 feet.

**Response**: The access point to the Middle School leads to an access drive; therefore, it will be constructed of asphalt. The existing asphalt driveway to the CCEC building will be replaced with a concrete driveway and integrated sidewalk. Both access points will be built to city standards and be at a right angle to N. 16<sup>th</sup> Street for at least 20 feet.

(15) Streets Adjacent to Railroad Right-of-Way. Wherever the proposed development contains or is adjacent to a railroad right-of-way, provision shall be made for a street approximately parallel to and on each side of such right-of-way at a distance suitable for the appropriate use of the land, and:

Response: No streets are adjacent to a railroad right-of-way; therefore, this standard is not applicable.

(16) Access to Arterials and Collectors.

(a) Where a development abuts or is traversed by an existing or proposed arterial or collector street, the development design shall provide adequate protection for residential properties and shall separate residential access and through traffic, or if separation is not feasible, the design shall minimize the traffic conflicts. The design shall include any of the following:

(i) A parallel access street along the arterial or collector;

(ii) Lots of suitable depth abutting the arterial or collector to provide adequate buffering with frontage along another street;

(iii) Screen planting at the rear or side property line to be contained in a nonaccess reservation along the arterial or collector; or

(iv) Other treatment suitable to meet the objectives of this subsection;

(b) See "City of St. Helens Engineering Department Public Facilities Construction Standards Manual."

Response: This standard is intended for residential developments; therefore, it is not applicable.

(17) Alleys, Public or Private. Alleys, 20 feet in width, shall be provided in commercial and industrial districts, unless other permanent provisions for access to off-street parking and loading facilities are made, and:

**Res**ponse: The school is not in a commercial or industrial district and alleys would not be appropriate for a large, campus site with internal circulation routes.

(18) Survey Monuments. Upon completion of a street improvement and prior to acceptance by the city, it shall be the responsibility of the developer's registered professional land surveyor to provide certification to the city that all boundary and interior monuments shall be reestablished and protected.

**Res**ponse: The District understands will ensure that all survey monuments are reestablished and protected following construction of the improvements.

(19) Private Streets.

**Res**ponse: No private streets are proposed as part of this project; therefore, this standard is not applicable.

(20) Railroad Crossings. Where an adjacent development results in a need to install or improve a railroad crossing, the cost for such improvements may be a condition of development approval, or another equitable means of cost distribution shall be determined by the public works director and approved by the commission.

**Res**ponse: No railroad crossings proposed as part of this project; therefore, this standard is not applicable.

(21) Street Signs. The city shall install all street signs, relative to traffic control and street names, as specified by the city engineer for any development. The cost of signs shall be the responsibility of the developer.

**Res**ponse: The District understands that street signs may need to be re-installed following construction of the improvements and will fund the cost of the replacement street signs.

(22) Mailboxes. Joint mailbox facilities shall be provided in all residential developments, with each joint mailbox serving at least two dwelling units or as required by the Postmaster.

Response: This standard is intended for residential developments; therefore, it is not applicable.

(23) Traffic Signals. The location of traffic signals shall be noted on approved street plans, and:

**Res**ponse: No traffic signals will be affected or needed as part of this project; therefore, this standard is not applicable.

(24) Street Light Standards. Street lights shall be installed in accordance with regulations adopted by the city's direction. At the very least, there shall be a street light at each street intersection. In addition, lighting within the Columbia Boulevard/St. Helens Street corridor master plan area shall be installed in accordance with the US 30 and Columbia Boulevard/St. Helens Street corridor master plan (Ordinance No. 3181, Attachment A) and shall be:

**Res**ponse: Existing street lights provide sufficient illumination of the street and no new street lights are proposed.

(25) Street Name Signs. Street name signs shall be installed at all street intersections. Stop signs and other signs may be required.

**Res**ponse: The District understands that street signs may need to be re-installed following construction of the improvements and will fund the cost of the replacement street signs.

(26) Street Cross-Sections. The cross-section of streets in inches shall not be less than the minimum shown in the "City of St. Helens Engineering Department Public Facilities Construction Standards Manual":

Typ <b>e o</b> f Street	Subbase	Leveling Course	Surface
Minor Arterial	12"	4"	4"
Commercial and Collectors	12"	3"	4"
Local	8"	2"	3"
Residential Access	8"	2"	3"

#### CROSS-SECTION OF STREETS IN INCHES Figure 20

**Response**: The improved streets will be designed to meet the minimum requirements for the size of subbase, leveling course, and surface material identified in Figure 20. The Distirct will demonstrate conformance with these standards through review of engineering documents.

(27) Local "Skinny" Streets. Such streets, as set forth in Figure 19, Road Standards, of this chapter, may be allowed, provided:

**Res**ponse: No skinny streets are proposed as part of this project; therefore, this standard is not applicable.

#### 17.152.040 Blocks.

**Res**ponse: No new blocks or changes to block patterns are proposed as part of this project; therefore, this standard is not applicable.

#### 17.152.050 Easements.

(1) Easements. Easements for sewers, drainage, water mains, electric lines or other public utilities shall be either dedicated or provided for in the deed restrictions, and:

(a) Where a development is traversed by a watercourse, or drainageway, there shall be provided a storm water easement or drainage right-of-way conforming substantially with the lines of the watercourse.

(2) Utility Easements. A property owner proposing a development shall make arrangements with the city, the applicable district and each utility franchise for the provision and dedication of utility easements necessary to provide full services to the development. (Ord. 2875 § 1.184.050, 2003)

**Response**: As shown on the Utility Plan (Sheet B2, Exhibit 1) and Title Report (Exhibit 2), a utility easement exists for underground telephone and power lines that enter from West Street to the north of the site. All new public water mains proposed on the site will be placed in a public easement, as shown on the Utility Plan. The precise alignment of all other utilities on the site is not known at this time; however, easements will be dedicated to all relevant utility franchises once the final alignments are determined.

#### 17.152.060 Sidewalks.

(1) Sidewalks shall be constructed, replaced or repaired to city design standards as set forth in the standard specifications manual and located as follows:

(a) On both sides of arterial and collector streets to be built at the time of street construction;

(b) On both sides of all other streets and in pedestrian easements and rights-of-way, except as provided further in this section or per SHMC <u>17.152.030(1)(d)</u>, to be constructed along all portions of the property designated for pedestrian ways in conjunction with development of the property.

**Response**: In accordance with paragraph (b) above, sidewalks will be constructed along all property frontages of N. 15<sup>th</sup>/16<sup>th</sup> Streets and West Street, except for the segment of N. 15<sup>th</sup> Street south of the Middle School access road. This segment of the street is constrained by a steep grade change and rock outcroppings along the site frontage. Per direction from the City Engineer and the Planning Director, the off-street trail that runs along N. 15<sup>th</sup> Street will provide sufficient pedestrian and bicycle access to the school site, and installation of sidewalks is not feasible or desirable in this location.

(2) A planter strip separation of at least five feet between the curb and the sidewalk shall be required in the design of any arterial or collector street, except where the following conditions exist: there is inadequate right-of-way; the curbside sidewalks already exist on predominant portions of the street; it would conflict with the utilities; or as indicated otherwise by the transportation systems plan (TSP) (see TSP Figures 7-2 and 7-3) or an adopted street plan.

**Res**ponse: Planter strips are included in the frontage improvements along West Street and most of N. 16<sup>th</sup> Street. The segment of N. 16<sup>th</sup> Street that is directly adjacent to the wetlands will not include a planter

strip. Per direction from the City Engineer and Planning Director, including a planter strip would have more impact on the wetland as the planter strip would require the sidewalk to be closer to the wetland. Therefore, no planter strip or street trees are proposed along this segment of the frontage.

(3) Maintenance. Maintenance of sidewalks, curbs, and planter strips is the continuing obligation of the adjacent property owner.

**Res**ponse: The District recognizes their responsibility for sidewalk maintenance and has staff available to perform the maintenance on an ongoing basis.

(4) Application for Permit and Inspection. If the construction of a sidewalk is not included in a performance bond of an approved subdivision or the performance bond has lapsed, then every person, firm or corporation desiring to construct sidewalks as provided by this chapter shall, before entering upon the work or improvement, apply for a street opening permit to the engineering department to so build or construct:

(a) An occupancy permit shall not be issued for a development until the provisions of this section are satisfied or a fee in lieu has been paid to the city pursuant to subsection (6) of this section;

(b) The city engineer may issue a permit and certificate allowing temporary noncompliance with the provisions of this section to the owner, builder or contractor when, in his opinion, the construction of the sidewalk is impractical for one or more of the following reasons:

(i) Sidewalk grades have not and cannot be established for the property in question within a reasonable length of time;

(ii) Forthcoming installation of public utilities or street paving would be likely to cause severe damage to the new sidewalk;

(iii) Street right-of-way is insufficient to accommodate a sidewalk on one or both sides of the street; or

(iv) Topography or elevation of the sidewalk base area makes construction of a sidewalk impractical or economically infeasible;

(c) The city engineer shall inspect the construction of sidewalks for compliance with the provision set forth in the standard specifications manual.

**Res**ponse: The District understands that a street opening permit will be necessary prior to construction of the sidewalks.

(5) Council Initiation of Construction. In the event one or more of the following situations are found by the council to exist, the council may adopt a resolution to initiate construction of a sidewalk in accordance with city ordinances:

(a) A safety hazard exists for children walking to or from school and sidewalks are necessary to eliminate the hazard;

(b) A safety hazard exists for pedestrians walking to or from a public building, commercial area, place of assembly or other general pedestrian traffic, and sidewalks are necessary to eliminate the hazard;

(c) Fifty percent or more of the area in a given block has been improved by the construction of dwellings, multiple dwellings, commercial buildings or public buildings and/or parks; and

(d) A criterion which allowed noncompliance under subsection (4)(b) of this section no longer exists and a sidewalk could be constructed in conformance with city standards.

**Res**ponse: The District understands that the Council may initiate construction of sidewalks in accordance with this section.

(6) Fee in Lieu Option. An applicant may request or the city may require the applicant to pay a fee in lieu of constructing sidewalks to be approved by the city engineer.

**Res**ponse: The District is not proposing to pay a fee-in-lieu of sidewalk construction and the City has accepted the proposal to directly construct the sidewalks; therefore, this provision is not applicable.

#### 17.152.070 Public use areas.

(1) Indicated in Development Plan – Dedication Requirements. Where a proposed park, playground, transit stop or other public use shown in a development plan adopted by the city is located in whole or in part in a subdivision, the commission may require the dedication or reservation of such area within the subdivision.

(2) Not Indicated in Development Plan – Dedication Requirements. Where considered desirable by the commission in accordance with adopted comprehensive plan policies, and where a development plan of the city does not indicate proposed public use areas, the commission may require the offer of a dedication or reservation of areas within the subdivision or sites of a character, extent and location suitable for the development of parks and other public use.

(3) Acquisition by Public Agency. If the subdivider is required to reserve land area for a park, playground, or other public use, such land shall be acquired by the appropriate public agency within 18 months following plat approval, at a price agreed upon prior to approval of the plat, or such reservation shall be released to the subdivider.

(4) Transit Improvements. Development proposals for sites that include existing or planned transit facilities, as shown in the adopted St. Helens transportation systems plan or adopted county transit plan, shall be required to provide any of the following, as applicable, if the approval authority determines such is necessary for public health, safety, and welfare:

(a) A reasonably direct pedestrian connection between the transit facility and building entrances of the site. For the purpose of this section "reasonably direct" means a route that does not deviate unnecessarily from a straight line or a route that does not involve a significant amount of out-of-direction travel for likely users.

(b) A transit passenger landing pad accessible to disabled persons.

(c) An easement or dedication for a passenger shelter or bench if such facility is identified in the St. Helens transportation systems plan or adopted county transit plan.

(d) Lighting at the transit facility. (Ord. 3144 § 2 (Att. A), 2011; Ord. 2875 § 1.184.070, 2003)

**Res**ponse: No public use areas or transit facilities are proposed in an adopted plan or have been requested by city staff or commission in relation to this project; therefore, this section is not applicable.

#### 17.152.080 Water services.

(1) Water Supply (Required). Municipal water system shall be installed to serve each new development and to connect development to existing mains in accordance with the provisions set forth in the standard specification manual and the adopted policies of the St. Helens comprehensive plan.

(2) Water Supply Plan Approval. The city engineer shall approve all water supply plans and proposed systems prior to issuance of development permits involving water service. Such plans and systems shall be designed by a registered professional engineer.

(3) Oversizing. Proposed water systems shall include consideration of additional development within the area as projected by the St. Helens comprehensive plan.

(4) Permits Denied. Development permits may be restricted by the commission or council (i.e., the applicable approval authority) where a deficiency exists in the existing water system or portion thereof which cannot be rectified within the development and which if not rectified will result in a threat to public health or safety, surcharging of existing mains, or violations of state or federal standards pertaining to operation of the water system.

(5) In some cases, a municipal water system may not be required, such as for nonconsumption purposes like landscape irrigation or industrial processing. The city engineer and building official shall decide when this exception is to be allowed.

(6) Extension of water mains shall be public (i.e., under control of a public authority) except where a variance is approved per Chapter <u>17.108</u> SHMC. (Ord. 3150 § 3 (Att. B), 2011; Ord. 2875 § 1.184.080, 2003)

**Response**: The site will continue to be served by public water supply. Three existing water mains serve the site. As shown on the Utility Plan (Sheet B2), the water main that enters the site from the southeast will be decommissioned and the water service will be consolidated into two water mains. All water systems will be designed by a professional engineer (Locke Engineers) and the sizing and design of the system will be completed in coordination with the city engineer.

#### 17.152.090 Sanitary sewers.

(1) Sewers (Required).

(a) Public sanitary sewers shall be installed to serve all properties being developed and having to comply with plumbing codes adopted by the city of St. Helens except where a variance is approved per Chapter <u>17.108</u> SHMC.

(b) Any proposed installation of sanitary sewers shall comply with this section.

(2) Sewer Plan Approval. The city engineer shall approve all sanitary sewer plans and proposed systems prior to issuance of development permits involving sewer service. Such plans and systems shall be designed by a registered professional engineer.

(3) Oversizing. Proposed sewer systems shall include consideration of additional development within the area as projected by the St. Helens comprehensive plan.

(4) Permits Denied. Development permits may be restricted by the commission or council (i.e., the applicable approval authority) where a deficiency exists in the existing sewer system or portion thereof

which cannot be rectified within the development and which if not rectified will result in a threat to public health or safety, surcharging of existing mains, or violations of state or federal standards pertaining to operation of the sewage treatment system.

(5) For the purpose of this section "public sanitary sewer" means a sewer in which all owners of abutting properties have equal rights, and is controlled by the city. (Ord. 3150 § 3 (Att. B), 2011; Ord. 2875 § 1.184.090, 2003)

**Response**: The site will continue to be served by public sanitary sewer system. As shown on the Utility Plan (Sheet B2), the sanitary sewer systems of both the Middle School and CCEC buildings will connect to the sewer main located along the alignment of West Street. All sewer systems will be designed by a professional engineer (Locke Engineers) and the sizing and design of the system will be completed in coordination with the city engineer.

#### 17.152.100 Storm drainage.

(1) Storm Drainage – General Provisions. The director and city engineer shall issue a development permit only where adequate provisions for storm water and floodwater runoff have been made, which may require storm water facilities, and:

(a) The storm water drainage system or storm water facilities shall be separate and independent of any sanitary sewerage system;

(b) Where possible, inlets shall be provided so surface water is not carried across any intersection or allowed to flood any street; and

(c) Surface water drainage patterns shall be shown on every development proposal plan.

(2) Easements. Where a subdivision is traversed by a watercourse, drainageway, channel or stream, there shall be provided a storm water easement or drainage right-of-way conforming substantially with the lines of such watercourse and such further width as will be adequate for conveyance and maintenance.

(3) Accommodation of Upstream Drainage (Must Comply with State and Federal Requirements). A culvert or other drainage or storm water facility shall be large enough to accommodate potential runoff from its entire upstream drainage area, whether inside or outside the development, and:

(a) The city engineer shall approve the necessary size of the storm water facility, based on the provisions of the city's adopted master drainage plan.

(4) Effect on Downstream Drainage. Where it is anticipated by the city engineer that the additional runoff resulting from the development will overload an existing drainage or storm water facility, the director and engineer shall withhold approval of the development until provisions have been made for improvement of the potential condition or until provisions have been made for storage of additional runoff caused by the development in accordance with the city's current master drainage plan.

(5) Any storm water facility shall be designed by a registered professional engineer.

(6) Any storm water facility shall be public (i.e., under control of a public authority) and located on city owned property, city right-of-way or city easement except where a variance is approved per Chapter <u>17.108</u> SHMC or where such facility is determined to be private by the city engineer (e.g., private detention ponds for commercial or industrial development).

(7) For the purpose of this section, "storm water facility" means any structure(s) or configuration of the ground that is used or by its location becomes a place where storm water flows or is accumulated including, but not limited to, pipes, sewers, street gutters, manholes, catch basins, ponds, open drainageways and their appurtenances. Milton Creek, McNulty Creek, and the Columbia River are not storm drain facilities. (Ord. 3150 § 3 (Att. B), 2011; Ord. 2875 § 1.184.100, 2003)

**Response**: The storm water management system for the site will be designed in conformance with all City of St. Helens Standards. The project civil engineer (Locke Engineers) has prepared the following statement to describe the overall approach to stormwater management on the site:

The storm water management approach will include both quantity detention and quality pretreatment.

The proposed storm water detention system utilizes the existing wetland area. Due to the site configuration, the detention system design will consider all tributary areas from the Middle School project, the CCEC project, existing impervious areas to remain, as well as existing and proposed offsite impervious. Currently the proposed onsite improvements generate 1.39 acres of net new impervious surface. A new control structure will be constructed over the existing, uncontrolled, wetland area outlet pipe. This control will be sized to limit the rate of post-developed outflow resulting from the 25yr storm event to the pre-developed (today's condition) peak rate resulting from the 10yr storm event in accordance with St. Helens Municipal Code. The outflow rate will be further controlled as needed to account for a small impervious surface not tributary to the wetland and/or to address downstream capacity issues.

All proposed storm water surface inlets will be of the pretreatment type to include a minimum 6" trap and 24" sump. Runoff will be directed to outlets generally east and upland of the wetland area. An appropriately sized energy dissipation device or installation will be constructed at or beneath each outlet to prevent erosion.

#### 17.152.110 Bikeways and off-street trails.

(1) Developments adjoining or containing proposed bikeways and off-street trails identified within adopted city plans, including but not limited to the Transportation Systems Plan (2011) and the Parks and Trails Master Plan (2015), shall include provisions for the future extension of such bikeways and off-street trails through the dedication of easements or rights-of-way (subject to constitutional limitations).

(2) Development permits issued for planned unit developments, conditional use permits, subdivisions, and other developments which will principally benefit from such bikeways and/or off-street trails shall be conditioned to include the cost of construction of bikeway and/or off-street trail improvements (subject to constitutional limitations).

(3) Minimum width for bikeways within the roadway is six feet per bicycle travel lane. Minimum width for two-way bikeways separated from the road is eight feet.

(4) Minimum off-street trail width is determined by the trail function and classification from Chapter 6 of the Parks and Trails Master Plan attached to Ordinance No. 3191 as Attachment A. (Ord. 3203 § 2 (Att. A), 2016; Ord. 3150 § 3 (Att. B), 2011; Ord. 2875 § 1.184.110, 2003)

**Res**ponse: No bikeway improvements are identified in the direct vicinity of the site in the St. Helens Transportation System Plan (Figure 7-6).

- Two existing, informal pedestrian/bike paths connect to the school, one at the northeast corner of the site and another through the gorge area on the southeast corner of the site. The path at the northeast corner will be retained as it can provide convenient access to the rear of the Middle School. The path in the southeast corner will be removed as that area will be regraded and replaced with the track.
- One off-street trail was identified in the St. Helens Parks and Trails Master Plan near the site (project number 18 on proposed trails map, p. 110). The trail is planned to run through the gorge area south of the site, along the right-of-way of Willamette Street. Per staff direction, this trail is outside of the property boundaries and would not improve access to the school; therefore, the facility is not proposed to be constructed as part of this project.

#### 17.152.120 Utilities

(1) Underground Utilities. All utility lines including, but not limited to, those required for electric, communication, lighting and cable television services and related facilities shall be placed underground, except for surface-mounted transformers, surface-mounted connection boxes and meter cabinets which may be placed above ground, temporary utility service facilities during construction, high capacity electric lines operating at 50,000 volts or above, and:

(a) The subdivider shall make all necessary arrangements with the serving utility to provide the underground services;

(b) The city reserves the right to approve location of all surface-mounted facilities;

(c) All underground utilities, including sanitary sewers and storm drains installed in streets by the subdivider, shall be constructed prior to the surfacing of the streets; and

(d) Stubs for service connections shall be long enough to avoid disturbing the street improvements when service connections are made.

(2) Information on Development Plans. The applicant for a subdivision shall show on the development plan, or in the explanatory information, easements for all underground utility facilities, and:

(a) Plans showing the location of all underground facilities as described herein shall be submitted to the city engineer for review and approval; and

(b) Care shall be taken in all cases to ensure that above ground equipment does not obstruct vision clearance areas for vehicular traffic.

(3) Exception to Undergrounding Requirement.

(4) Fee in Lieu of Undergrounding.

**Response**: As shown on the Utility Plan (Sheet B2, Exhibit 1) and the Title Report (Exhibit 2), all existing utilities are placed underground and all new utilities will be undergrounded. No exceptions or fee-in-lieu of undergrounding is proposed.

#### 17.152.130 Cash or bond required.

(1) All public improvements installed by the land divider shall be guaranteed as to workmanship and material for a period of one year following acceptance by the city council.

(2) Such guarantee shall be secured by cash deposit or bond in the amount of the value of the improvements as set by the city engineer.

(3) The cash or bond shall comply with the terms and conditions of SHMC  $\underline{17.136.180}$ . (Ord. 2875 § 1.184.130, 2003)

**Res**ponse: The District understands that a cash deposit or bond will be required to guarantee the public improvements and will convey the bond when requested.

#### 17.152.140 Monuments.

Any monuments that are disturbed before all improvements are completed by the land divider shall be replaced prior to final acceptance of the improvements. (Ord. 2875 § 1.184.140, 2003)

**Res**ponse: The District will ensure that all survey monuments are reestablished and protected following construction of the improvements.

#### 17.152.150 Installation – Prerequisite/permit fee.

(1) No land division public facility improvements, including sanitary sewers, storm sewers, streets, sidewalks, curbs, lighting or other requirements, shall be undertaken except after the plans have been approved by the city, permit fee paid (if any), and permit issued (if required).

(2) A permit fee may be required to defray the costs and expenses incurred by the city for construction and other services in connection with the public facility improvement. The permit fee shall be determined by the city engineer based upon estimates. (Ord. 2875 § 1.184.150, 2003)

Response: The District understands that a permit fee will be required and will convey the fee.

#### 17.152.160 Installation – Conformation required.

(1) In addition to other requirements, public facility improvements installed by the land divider, either as a requirement of these regulations or at his own option, shall conform to the requirements of this chapter and to improvement standards and specifications followed by the city.

(2) The Standard Specifications for Public Works Construction, Oregon Chapter APWA, shall be a part of the city's adopted installation standard(s); other standards may also be required upon recommendation of the city engineer. (Ord. 2875 § 1.184.160, 2003)

**Res**ponse: The District understands that conformance with all city specifications and Standard Specifications for Public Works Construction (Oregon Chapter APWA) is required for all public improvements.

#### 17.152.170 Plan checking required.

(1) Work shall not begin until four (for city engineer, applicant, public works, and file) sets of construction and construction estimate plans have been submitted and checked for adequacy and approved by the city in writing.

(2) All such plans shall be prepared in accordance with requirements of the city. (Ord. 2875 § 1.184.170, 2003)

**Res**ponse: The District understands that plan-checking by the city shall be required prior to construction of the improvements.

#### 17.152.180 Notice to city required.

(1) Work shall not begin until the city has been notified in advance.

(2) If work is discontinued for any reason, it shall not be resumed until the city is notified. (Ord. 2875 § 1.184.180, 2003)

**Res**ponse: The District understands that notice to the city shall be required prior to construction of the improvements.

#### 17.152.190 City inspection required

Public facility improvements shall be constructed to the satisfaction of the city. The city may require changes in typical sections and details if unusual conditions arising during construction warrant such changes in the public interest. (Ord. 2875 § 1.184.190, 2003)

**Res**ponse: The District understands that the city shall inspect the improvements and may require modifications to the construction.

#### 17.152.200 Engineer's certification required.

The land divider's engineer shall provide written certification on a form provided by the city that all public facility improvements, workmanship and materials are in accord with current and standard engineering and construction practices, and are of high grade, prior to city acceptance of the subdivision's public improvements or any portion thereof for operation and maintenance. In most cases, "as-built" drawings are required prior to acceptance by the city of any public facilities. (Ord. 2875 § 1.184.200, 2003)

**Res**ponse: The District understands that an engineer is required to certify all plans for public improvements prior to approval.

#### 17.152.210 Temporary parklets.

Temporary parklets may be permitted in the right-of-way in on-street parking spaces pursuant to procedures in SHMC <u>18.12.190</u> and <u>8.12.080</u>. (Ord. 3181 § 4 (Att. C), 2015)

**Response**: No temporary parklets are proposed as part of this application; therefore, this section is not applicable.

#### Chapter 17.156 Traffic Impact Analysis (TIA)

#### 17.156.010 Purpose.

The purpose of this chapter is to implement OAR 660-012-0045(2)(e) of the State Transportation Planning Rule that requires the city to adopt a process to apply conditions to development proposals in

order to protect and minimize adverse impacts to transportation facilities. This chapter establishes the standards for when a proposal must be reviewed for potential traffic impacts; when a traffic impact analysis must be submitted with a development application in order to determine whether conditions are needed to minimize impacts to and protect transportation facilities; what must be in a traffic impact analysis; and who is qualified to prepare the analysis. (Ord. 3150 § 3 (Att. B), 2011)

**Res**ponse: The District understands the purpose of this chapter and demonstrates conformance with its requirements below.

#### 17.156.020 Typical average daily trips and level-of-service standards.

(1) The latest edition of the trip generation manual published by the Institute of Transportation Engineers (ITE) shall be used as standards by which to gauge average daily vehicle trips.

(2) Pursuant to the transportation systems plan (TSP) (see TSP Section 4), the following minimum operating standards apply to city-maintained intersections. As measured using the Highway Capacity Manual, latest edition, Level of Service "D" is considered acceptable at signalized and all-way stop controlled intersections if the intersection volume-to-capacity ratio is not higher than 1.0 for the sum of critical movements. Level of Service "E" is considered acceptable for the poorest operating approach at two-way stop intersections. Level of Service "F" is allowed in situations where a traffic signal is not warranted. (Ord. 3150 § 3 (Att. B), 2011)

**Res**ponse: As noted in the Traffic Memo (Exhibit 3), the project traffic engineer used the latest edition of the ITE manual and the city's stated LOS standards to assess the traffic impacts of the project.

#### 17.156.030 Applicability.

A traffic impact analysis shall be required to be submitted to the city with a land use application when the application involves one or more of the following actions:

**Res**ponse: As demonstrated by the Traffic Memo (Exhibit 3), the project does not meet any of the thresholds for requirement of a Traffic Impact Analysis.

#### 17.156.040 Traffic impact analysis requirements.

#### 17.156.050 Study area.

17.156.060 Analysis periods.

17.156.070 Peak hour analysis.

#### 17.156.080 Approval criteria.

**Res**ponse: The sections above pertain to developments which require a TIA. A TIA is not required for this application; therefore, the sections are not applicable.

#### 17.156.090 Conditions of approval.

The city may deny, approve, or approve a development proposal with appropriate conditions needed to meet operations and safety standards and provide the necessary right-of-way and improvements to develop the future planned transportation system. Conditions of approval that should be evaluated as part of land divisions, conditional use permits, and site development reviews include:

(1) Crossover or reciprocal easement agreements for all adjoining parcels to facilitate future access between parcels.

(2) Access for new developments that have proposed access points that do not meet the designated access spacing policy and/or have the ability to align with opposing access driveways.

(3) Right-of-way dedications for future planned roadway improvements.

(4) Half-street improvements along site frontages that do not have full-buildout improvements in place at the time of development. (Ord. 3150 § 3 (Att. B), 2011)

**Response**: The District understands that the city may apply conditions of approval to the application to ensure traffic operations, safety, and implementation of the planned transportation system. The District will comply with any conditions of approval that are required of the project.

## Exhibit 1

## Plan Set (under separate cover)

# Exhibit 2

**Title Report** 



#### 2534 Sykes Road, Ste C (503)397-3537 FAX (503)397-4851

#### OWNERSHIP AND ENCUMBRANCES REPORT WITH GENERAL INDEX LIENS

Informational Report of Ownership and Monetary and Non-Monetary Encumbrances

To ("Customer"): KLS Surveying 1224 Alder Street Vernonia, OR 97064

Customer Ref.:	SH SCHOOL DISTRICT
Order No.:	473817000508
Effective Date:	April 7, 2017 at 08:00 AM
Charge:	\$500.00

The information contained in this report is furnished by Ticor Title Company of Oregon (the "Company") as a real property information service based on the records and indices maintained by the Company for the county identified below. THIS IS NOT TITLE INSURANCE OR A PRELIMINARY TITLE REPORT FOR, OR COMMITMENT FOR, TITLE INSURANCE. No examination has been made of the title to the herein described property, other than as specifically set forth herein. Liability for any loss arising from errors and/or omissions is limited to the lesser of the charge or the actual loss, and the Company will have no greater liability by reason of this report. THIS REPORT IS SUBJECT TO THE LIMITATIONS OF LIABILITY STATED BELOW, WHICH LIMITATIONS OF LIABILITY ARE A PART OF THIS REPORT.

#### THIS REPORT INCLUDES MONETARY AND NON-MONETARY ENCUMBRANCES.

#### Part One - Ownership and Property Description

**Owner.** The apparent vested owner of property ("the Property") as of the Effective Date is:

Columbia County Administrative School District No. 502 St. Helens, also known as Columbia County Administrative School District 502, Columbia County, Oregon, also known as School District 502, Columbia County, Oregon

#### Premises. The Property is:

#### (a) Street Address:

354 N 15th and 474 N. 16th St., Saint Helens, OR 97051

#### (b) Legal Description:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

#### Part Two - Encumbrances

**Encumbrances**. As of the Effective Date, the Property appears subject to the following monetary and non-monetary encumbrances of record, not necessarily listed in order of priority, including liens specific to the subject property and general index liens (liens that are not property specific but affect any real property of the named person in the same county):

#### EXCEPTIONS

1. Reservation, exception or other severance of minerals, together with the implied or express appurtenant rights to use the surface of the land for the development or extraction of such minerals, contained in or disclosed by instrument,

In favor of:Columbia County, OregonReservation of:minerals etc.Recording Date:March 30, 1938Recording No.:Book 62, Page 276Affects:Lot 6, Block 111

The Company makes no representation as to the present ownership of this interest or its encumbrances.

2. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	City of St. Helens
Purpose:	sewer and drain pipe
Recording Date:	December 27, 1961
Recording No:	Book 147, Page 754
Affects:	Lot 21, Block 108

3. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	Portland General Electric Company
Purpose:	underground distribution line
Recording Date:	January 7, 1987
Recording No:	Book 267, Page 471
Affects:	Parcel 2

4. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	City of St. Helens, a municipal corporation
Purpose:	sanitary sewer
Recording Date:	February 22, 1991
Recording No:	91-0986
Affects:	See document

#### **End of Reported Information**

There will be additional charges for additional information or copies. For questions or additional requests, contact:

Lori Johnston 503-397-3537 FAX 503-397-0104 Lori.Johnston@ticortitle.com

Ticor Title Company of Oregon 2534 Sykes Road, Ste C St Helens, OR 97051

Informational Report of Ownership and Monetary and Non-Monetary Encumbrances (Ver. 20161024)

## EXHIBIT "A"

## Legal Description

Parcel 1: Lots 3 through 11, inclusive, and Lots 20, 21 and 22, Block 108; Lots 1 through 8, inclusive, and Lots 15 through 22, inclusive, Block 109, all in the City of St. Helens, Columbia County, Oregon.

Parcel 2: All of Blocks 125 and 126, in the City of St. Helens, Columbia County, Oregon. EXCEPTING THEREFROM tract conveyed to City of St. Helens, Oregon, a municipal corporation by deed recorded December 30, 1963 in Book 153, Page 985, Deed Records of Columbia County, Oregon.

Parcel 3: Lots 1, 2 and 12 through 19, inclusive, Block 108; Lots 9 and 14, Block 109; Lots 1 through 7 and Lots 16 through 22, inclusive, Block 110; all of Block 111 and all of Block 124, all in the City of St. Helens, Columbia County, Oregon.

Parcel 4: All that portion of Lots 8, 14 and 15, Block 110, City of St. Helens, Columbia County, Oregon, lying Southeasterly of the following described line:

Beginning at a point on the South line of Lot 8, Block 110, City of St. Helens, Oregon that is South 73°02 1/2' West 28.0 feet from the Southeast corner of said Lot 8; thence North 27°52 1/2 East a distance of 63.3 feet; thence North 56°13 1/2 East, a distance of 45.31 feet; thence North 38°02 1/2' East a distance of 48.83 feet to a point in the East line of Lot 14, Block 110 that is North 16°57 1/2' West 28.0 feet from the Southeast corner of said Lot 14.

Parcel 5: All that portion of Lot 10, Block 109, City of St. Helens, Columbia County, Oregon, lying Southerly of the following described line:

Beginning at a point on the West line of Lot 10, Block 109 that is North 16°57 1/2' West 14.20 feet from the Southwest corner of said Lot 10; thence North 35°01 1/2' East a distance of 32.18 feet; thence North 63°50 1/2' East a distance of 75.72 feet to a point in the East line of said Lot 10 that is North 16°57 1/2' West 46.13 feet from the Southeast corner of said Lot 10, Block 109, City of St. Helens, Oregon.

Parcel 6: All of California Square, City of St. Helens, together with the portion of vacated 15th and Wyeth Streets adjoining. EXCEPT that portion of California Square described as follows:

Beginning at the Southwest corner of California Square, City of St. Helens as per plat is on file and of record in the office of the Clerk of Columbia County, Oregon; thence along the South line North 73°02 1/2' East a distance of 169.54 feet; thence North 69°27 1/2' West a distance of 92.15 feet; thence along the arc of a 246.48 foot radius to the right (the long chord of which curve bears North 43°12 1/2' West 218.03 feet) a distance of 225.85 feet to the West line of said California Square; thence South 16°57 1/2' East a distance of 250.62 feet to the point of beginning.

TOGETHER WITH that portion of vacated streets which inures to said property by Ordinance No. 1656, by instrument recorded September 23, 1963 in Book 153, Page 166, Deed Records of Columbia County, Oregon.

ALSO TOGETHER WITH that portion of vacated North 12th Street and Wyeth Street which inures to said property by Ordinance No. 2657, by instrument recorded June 7, 1993 in Fee Number 93-4590, Records of Columbia County, Oregon.

## LIMITATIONS OF LIABILITY

"CUSTOMER" REFERS TO THE RECIPIENT OF THIS REPORT.

CUSTOMER EXPRESSLY AGREES AND ACKNOWLEDGES THAT IT IS EXTREMELY DIFFICULT, IF NOT IMPOSSIBLE, TO DETERMINE THE EXTENT OF LOSS WHICH COULD ARISE FROM ERRORS OR OMISSIONS IN, OR THE COMPANY'S NEGLIGENCE IN PRODUCING, THE REQUESTED REPORT, HEREIN "THE REPORT." CUSTOMER RECOGNIZES THAT THE FEE CHARGED IS NOMINAL IN RELATION TO THE POTENTIAL LIABILITY WHICH COULD ARISE FROM SUCH ERRORS OR OMISSIONS OR NEGLIGENCE. THEREFORE, CUSTOMER UNDERSTANDS THAT THE COMPANY IS NOT WILLING TO PROCEED IN THE PREPARATION AND ISSUANCE OF THE REPORT UNLESS THE COMPANY'S LIABILITY IS STRICTLY LIMITED. CUSTOMER AGREES WITH THE PROPRIETY OF SUCH LIMITATION AND AGREES TO BE BOUND BY ITS TERMS

THE LIMITATIONS ARE AS FOLLOWS AND THE LIMITATIONS WILL SURVIVE THE CONTRACT:

ONLY MATTERS IDENTIFIED IN THIS REPORT AS THE SUBJECT OF THE REPORT ARE WITHIN ITS SCOPE. ALL OTHER MATTERS ARE OUTSIDE THE SCOPE OF THE REPORT.

CUSTOMER AGREES, AS PART OF THE CONSIDERATION FOR THE ISSUANCE OF THE REPORT AND TO THE FULLEST EXTENT PERMITTED BY LAW, TO LIMIT THE LIABILITY OF THE COMPANY, ITS LICENSORS, AGENTS, SUPPLIERS, RESELLERS, SERVICE PROVIDERS, CONTENT PROVIDERS AND ALL OTHER SUBSCRIBERS OR SUPPLIERS, SUBSIDIARIES, AFFILIATES, EMPLOYEES. SUBCONTRACTORS FOR ANY AND ALL CLAIMS, LIABILITIES, CAUSES OF ACTION, LOSSES, COSTS, DAMAGES AND EXPENSES OF ANY NATURE WHATSOEVER, INCLUDING ATTORNEY'S FEES, HOWEVER ALLEGED OR ARISING, INCLUDING BUT NOT LIMITED TO THOSE ARISING FROM BREACH OF CONTRACT, NEGLIGENCE, THE COMPANY'S OWN FAULT AND/OR NEGLIGENCE, ERRORS, OMISSIONS, STRICT LIABILITY, BREACH OF WARRANTY, EQUITY, THE COMMON LAW, STATUTE OR ANY OTHER THEORY OF RECOVERY, OR FROM ANY PERSON'S USE, MISUSE, OR INABILITY TO USE THE REPORT OR ANY OF THE MATERIALS CONTAINED THEREIN OR PRODUCED, SO THAT THE TOTAL AGGREGATE LIABILITY OF THE COMPANY AND ITS AGENTS, SUBSIDIARIES, AFFILIATES, EMPLOYEES, AND SUBCONTRACTORS SHALL NOT IN ANY EVENT EXCEED THE COMPANY'S TOTAL FEE FOR THE REPORT.

CUSTOMER AGREES THAT THE FOREGOING LIMITATION ON LIABILITY IS A TERM MATERIAL TO THE PRICE THE CUSTOMER IS PAYING, WHICH PRICE IS LOWER THAN WOULD OTHERWISE BE OFFERED TO THE CUSTOMER WITHOUT SAID TERM. CUSTOMER RECOGNIZES THAT THE COMPANY WOULD NOT ISSUE THE REPORT BUT FOR THIS CUSTOMER AGREEMENT, AS PART OF THE CONSIDERATION GIVEN FOR THE REPORT, TO THE FOREGOING LIMITATION OF LIABILITY AND THAT ANY SUCH LIABILITY IS CONDITIONED AND PREDICATED UPON THE FULL AND TIMELY PAYMENT OF THE COMPANY'S INVOICE FOR THE REPORT.

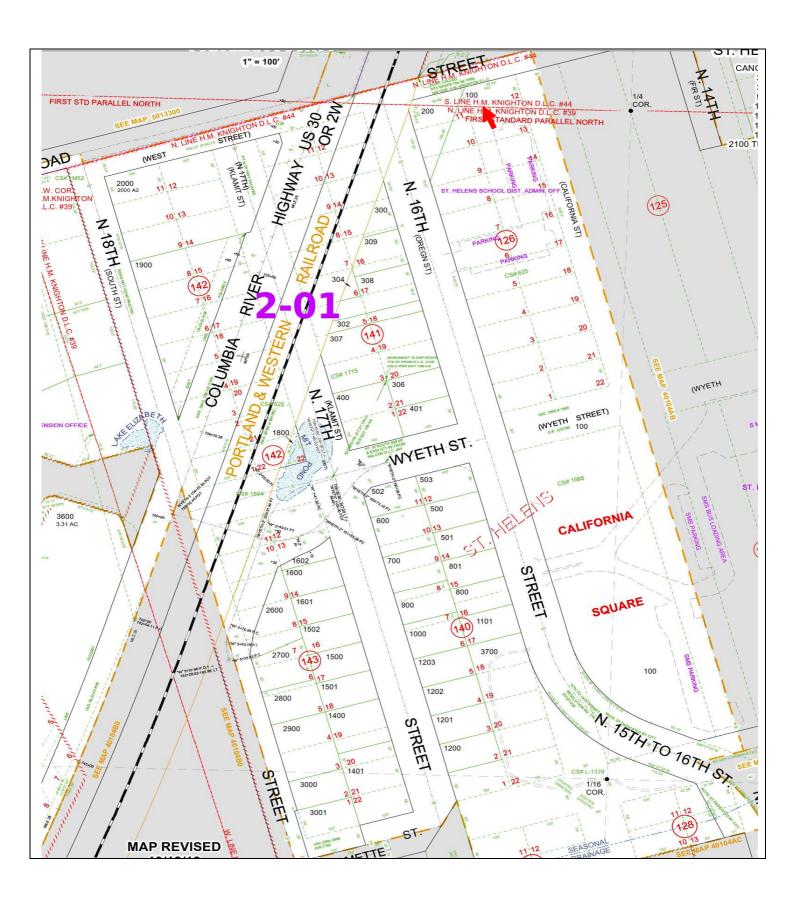
THE REPORT IS LIMITED IN SCOPE AND IS NOT AN ABSTRACT OF TITLE, TITLE OPINION, PRELIMINARY TITLE REPORT, TITLE REPORT, COMMITMENT TO ISSUE TITLE INSURANCE, OR A TITLE POLICY, AND SHOULD NOT BE RELIED UPON AS SUCH. THE REPORT DOES NOT PROVIDE OR OFFER ANY TITLE INSURANCE, LIABILITY COVERAGE OR ERRORS AND OMISSIONS COVERAGE. THE REPORT IS NOT TO BE RELIED UPON AS A REPRESENTATION OF THE STATUS OF TITLE TO THE PROPERTY. THE COMPANY MAKES NO REPRESENTATIONS AS TO THE REPORT'S ACCURACY, DISCLAIMS ANY WARRANTY AS TO THE REPORT, ASSUMES NO DUTIES TO CUSTOMER, DOES NOT INTEND FOR CUSTOMER TO RELY ON THE REPORT, AND ASSUMES NO LIABILITY FOR ANY LOSS OCCURRING BY REASON OF RELIANCE ON THE REPORT OR OTHERWISE.

IF CUSTOMER (A) HAS OR WILL HAVE AN INSURABLE INTEREST IN THE SUBJECT REAL PROPERTY, (B) DOES NOT WISH TO LIMIT LIABILITY AS STATED HEREIN AND (C) DESIRES THAT ADDITIONAL LIABILITY BE ASSUMED BY THE COMPANY, THEN CUSTOMER MAY REQUEST AND PURCHASE A POLICY OF TITLE INSURANCE, A BINDER, OR A COMMITMENT TO ISSUE A POLICY OF TITLE INSURANCE. NO ASSURANCE IS GIVEN AS TO THE INSURABILITY OF THE TITLE OR STATUS OF TITLE. CUSTOMER EXPRESSLY AGREES AND ACKNOWLEDGES IT HAS AN INDEPENDENT DUTY TO ENSURE AND/OR RESEARCH THE ACCURACY OF ANY INFORMATION OBTAINED FROM THE COMPANY OR ANY PRODUCT OR SERVICE PURCHASED.

NO THIRD PARTY IS PERMITTED TO USE OR RELY UPON THE INFORMATION SET FORTH IN THE REPORT, AND NO LIABILITY TO ANY THIRD PARTY IS UNDERTAKEN BY THE COMPANY.

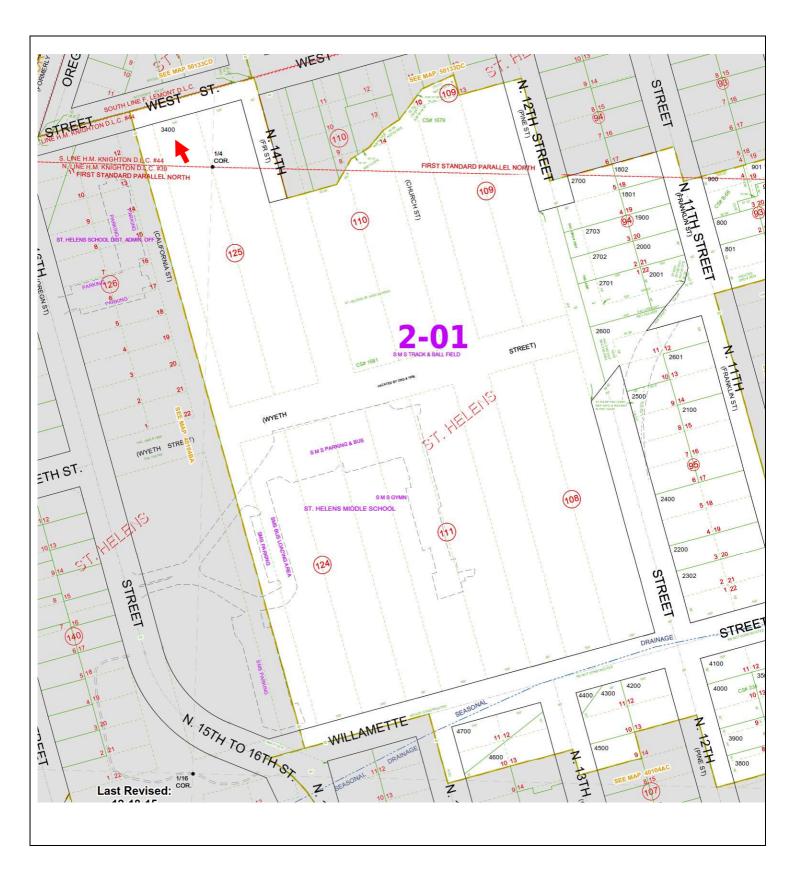
CUSTOMER AGREES THAT, TO THE FULLEST EXTENT PERMITTED BY LAW, IN NO EVENT WILL THE COMPANY, ITS LICENSORS, AGENTS, SUPPLIERS, RESELLERS, SERVICE PROVIDERS, CONTENT PROVIDERS, AND ALL OTHER SUBSCRIBERS OR SUPPLIERS, SUBSIDIARIES, AFFILIATES, EMPLOYEES AND SUBCONTRACTORS BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, INDIRECT, PUNITIVE, EXEMPLARY, OR SPECIAL DAMAGES, OR LOSS OF PROFITS, REVENUE, INCOME, SAVINGS, DATA, BUSINESS, OPPORTUNITY, OR GOODWILL, PAIN AND SUFFERING, EMOTIONAL DISTRESS, NON-OPERATION OR INCREASED EXPENSE OF OPERATION, BUSINESS INTERRUPTION OR DELAY, COST OF CAPITAL, OR COST OF REPLACEMENT PRODUCTS OR SERVICES, REGARDLESS OF WHETHER SUCH LIABILITY IS BASED ON BREACH OF CONTRACT, TORT, NEGLIGENCE, THE COMPANY'S OWN FAULT AND/OR NEGLIGENCE, STRICT LIABILITY, BREACH OF WARRANTIES, FAILURE OF ESSENTIAL PURPOSE, OR OTHERWISE AND WHETHER CAUSED BY NEGLIGENCE, ERRORS, OMISSIONS, STRICT LIABILITY, BREACH OF CONTRACT, BREACH OF WARRANTY, THE COMPANY'S OWN FAULT AND/OR NEGLIGENCE OR ANY OTHER CAUSE WHATSOEVER, AND EVEN IF THE COMPANY HAS BEEN ADVISED OF THE LIKELIHOOD OF SUCH DAMAGES OR KNEW OR SHOULD HAVE KNOWN OF THE POSSIBILITY FOR SUCH DAMAGES.

END OF THE LIMITATIONS OF LIABILITY



THIS MAP IS MADE SOLELY FOR THE PURPOSE OF ASSISTING IN LOCATING SAID PREMISES, AND THE COMPANY ASSUMES NO LIABILITY FOR VARIATIONS. IF ANY, IN DIMENSIONS, AREAS, AND LOCATIONS AS CERTAINED BY ACTUAL SURVEY.





THIS MAP IS MADE SOLELY FOR THE PURPOSE OF ASSISTING IN LOCATING SAID PREMISES, AND THE COMPANY ASSUMES NO LIABILITY FOR VARIATIONS. IF ANY, IN DIMENSIONS, AREAS, AND LOCATIONS AS CERTAINED BY ACTUAL SURVEY.



# Exhibit 3

# **Traffic Memo**

## **Technical Memorandum**

To:	David Etchart, Heery International	MAM R. FARL
From:	Todd E. Mobley, PE William R. Farley, PE	RENEWS: 12/31/2017
Date:	July 19, 2017	
Subject:	St. Helens Middle School & Columbia C Transportation Assessment	County Education Campus



RED PROA

321 SW 4th Ave., Suite 400 Portland, OR 97204 phone: 503.248.0313 fax: 503.248,9251 lancasterengineering.com

## Introduction

This memorandum is written to address the potential transportation-related impacts associated with the planned replacement of the St. Helens Middle School (SHMS) and the Columbia County Education Campus (CCEC).

The project includes complete replacement of the existing SHMS building, parking lots, and athletic fields. It also includes a new building to house the CCEC facility, which currently occupies modular buildings near the St. Helens School District administration building. Each school will retain their current separate accesses to N 16th Street, but a new on-site bus loop will serve both schools.

Two of the existing modular buildings currently used by CCEC will be retained and used to consolidate the St. Helens School District's community donation program, where parents and students can donate items that can be used by other families in the district that are in need.

## City of St. Helens Municipal Code

Chapter 17.156 of the City of St. Helens Municipal Code addresses the requirements for a Traffic Impact Analysis (TIA). Specifically, section 17.156.030 contains requirements for when a TIA shall be provided. That code section is quoted below in *italics*, with a response immediately following.

## 17.156.030 Applicability.

A traffic impact analysis shall be required to be submitted to the city with a land use application when the application involves one or more of the following actions:

- (1) A change in zoning or a comprehensive plan amendment designation, except when the change will result in a zone or plan designation that will result in less vehicle trips based on permitted uses (e.g., from a high density residential district to a lower density residential district or from a commercial district to a residential district);
- (2) The site proposes to take access on Highway 30 or on an approach to Highway 30; or



- (3) The development shall cause one or more of the following effects, which can be determined by field counts, site observation, traffic impact analysis or study, field measurements, crash history, Institute of Transportation Engineers Trip Generation, and information and studies provided by the local reviewing jurisdiction(s) and/or ODOT:
  - (a) The proposed action is estimated to generate 250 average daily trips (ADT) or more or 25 or more weekday a.m. or p.m. peak hour trips (or as required by the city engineer);
  - (b) The proposed action is projected to further degrade mobility at the Deer Island Road/Highway 30, Pittsburg Road/Highway 30, Wyeth Street/Highway 30, Gable Road/Highway 30, or Millard Road/Highway 30 intersections;
  - (c) An increase in use of adjacent streets by vehicles exceeding the 20,000 pound gross vehicle weights by 10 vehicles or more per day;
  - (d) The location of the access driveway does not meet minimum intersection sight distance requirements, or is located where vehicles entering or leaving the property are restricted, or such vehicles queue or hesitate, creating a safety hazard;
  - (e) The location of the access driveway does not meet the access spacing standard of the roadway on which the driveway is located; or
  - (f) A change in internal traffic patterns that may cause safety problems, such as backup onto the highway or traffic crashes in the approach area. (Ord. 3150 3 (Att. B), 2011)

Subsections (1) and (2) are not met, since the project does not include a change in zoning or comprehensive plan designation, nor does the site access Highway 30. The contents of this memo address the subsection (3), and as demonstrated in the sections below, none of the criteria in (a)-(f) are met. As such, a TIA is not required by City code. Still, this memo serves as a Transportation Assessment and addresses the transportation-related issues associated with the project. While not a formal TIA, it still includes some TIA elements, such as traffic counts, intersection analysis, trip generation, etc.

## Trip Generation

While these school replacements are significant projects, they will not increase the overall student population on the site. Rather, the project provides modern school facilities and replaces aging buildings and infrastructure. For example, the current capacity of the SHMS campus is 750 students with 440 students enrolled and the new school is designed to accommodate a student population of up to 750. CCEC currently has an enrollment of 70 students and the new building is intended to accommodate 90 students. As such, the projects will not result in an increase in trip generation.



In addition, the project will not change attendance boundaries or change school assignments to area residents. As such, all existing school traffic within the community and through nearby by off-site intersections will remain unchanged.

The donation program planned for the remaining modular that currently house CCEC will consolidate a District-wide program that currently takes place in individual schools. The program offers a significant community benefit, but is not particularly traffic intensive. District representatives estimate that the modular will be open and in use three days per week with a total of 5-10 visitors per day. Based on this level of activity, it is estimated that no peak hour would likely experience more than five trips from this use. Also, it is likely that families attending SHMS and CCEC will make these trips together with school pick up and drop off that are already occurring.

In summary, Section 17.156.030(3)(a) of the St. Helens Municipal Code, which requires a TIA if a project generates more than 250 weekday or 25 peak-hour trips, is not satisfied.

## Site Access Operation

SHMS currently takes access to N 16<sup>th</sup> Street at a T-shaped intersection controlled by stop signs on all approaches. This access and traffic control configuration will remain in place with the proposed project. The east leg of the intersection is the site driveway, which will be improved as part of the project, with a new sidewalk as well as separate westbound left and right-turn lanes, consistent with the current intersection configuration.

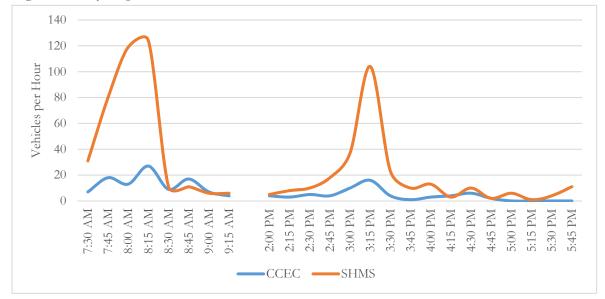
CCEC takes access to N 16<sup>th</sup> Street at a shared driveway that also serves the St. Helens School District administration building. This access will remain in its current configuration and will not be altered by the proposed project.

Traffic counts were conducted at both site access locations in May and June of 2017 while school was in session. The counts were conducted from 7:00 to 9:00 AM and from 2:00 to 6:00 PM. These times were selected to capture the morning school peak hour, the afternoon school release peak hour, and the typical adjacent street commuter peak hour. Figure 1 on the following page shows the traffic volume trends at both schools throughout the day.

As shown in Figure 1, traffic volumes at SHMS are significantly higher than the driveway serving CCEC and the administration building. Still, on-site observations conducted during school peak periods show that delay and congestion was not excessive. To quantify the delay at the SHMS and CCEC accesses and to gauge intersection operation, a level of service analysis was conducted.

Level of service is a performance metric consisting of a letter grade ranging from A to F. The grading is determined based on the average delay per vehicle. St. Helens Municipal Code section 17.156.020(2) states





### Figure 1: Daily Trip Generation Profile

that level of D or better is acceptable for all-way stop controlled intersections. The analysis was conducted according to the unsignalized intersection analysis methodologies given in the *HIGHWAY CAPACITY MANUAL* (HCM), published by the Transportation Research Board.

Both the SHMS and CCEC accesses on N 16<sup>th</sup> Street are currently operating at level of service B or better with less than 12 seconds of delay during both peak periods. Since the project will not significantly increase the trip generation of either the middle school or the adminstration building, intersection operation is projected to continue operating acceptably and well within the City's operational standards.

Additional analysis was conducted to determiune how the access intersections would operate when the school reaches the capacity of 750 students. Currently, the enrollment of 440 students was observed to generate 357 trips during the morning peak from 7:35 AM to 8:35 AM and 182 trips during the afternoon peak from 2:45 PM to 3:45 PM. If these trips are increased proportionately, at capacity the school would generate 609 trips during the morning peak and 310 trips during the afternoon. Similarly, the CCEC will generate 90 trips during the morning peak and 45 trips during the evening peak when it reaches the capacity of 90 students.

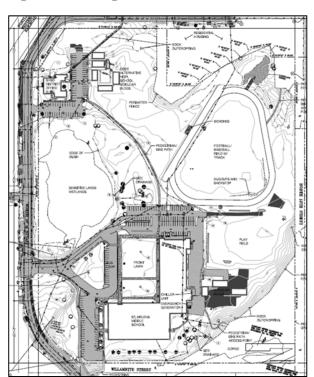
With the increased amount of traffic, the SHMS and CCEC accesses to N 16<sup>th</sup> Street would operate at level of service C or better with less than 16 seconds of average delay. Accordingly, it is anticipated that the intersections will operate within the City's operational standards even with the school campus serving 750 students.



## **On-Site Circulation**

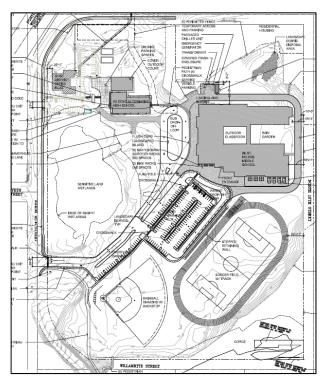
Current on-site circulation at both schools operate in an organized fashion without any significant conflicts or with congestion that backs up onto the adjacent public street system. School bus loading and unloading activities are separated from parent pick-up and drop off. This separation is maintained with the new site layout. Loading activities for both parents and buses occur well within the site with more than adequate queue storage available. A side-by-side comparison of existing conditions and the proposed site plan is shown in Figure 2 and Figure 3 below.

During school peak observations, students were observed walking along N 16<sup>th</sup> Street between CCEC and SHMS, including students being picked up and dropped off via school bus. In the morning, students would walk from the bus loading area at SHMS out to N 16<sup>th</sup> Street, then north toward CCEC. In the afternoon the converse would occur, except that CCEC students would be picked up by the bus.



## **Figure 2: Existing Conditions**

## Figure 3: Proposed Site Plan





## **Operations During Events**

Since the middle school occassionally hosts events that increase the traffic intensity of the site, a field visit was conducted to observe intersection operation and site circulation during an event that has parent attendance. During a 7<sup>th</sup> grade end-of-year assembly that occurred between the hours of 8:40 AM and 9:10 AM (nearly coinciding with the schools peak hour of 7:35 AM to 8:35 AM), the intersection of the SHMS access at N 16<sup>th</sup> Street was observed to operate acceptably without any significant delays or other concerns.

It is possible that other events could generate more trips than what was observed as part of this analysis. For example, holiday musical or theater performances are often well-attended by parents and family, but given the duration of this project, specific observations at events of this nature were not possible. Still, based on the observations made at the school during school peak hours and during the end-of-year assembly, it is clear that there is a significant amount of capacity available both on the school site and at the site access to accommodate larger events.

## Summary & Conclusion

Because the school replacements are not providing an increase in student capacity, the trip generation of the schools is not expected to increase. As such, a full TIA is not required per St. Helens Municipal Code section 17.156.030. Still, this Transportation Assessment offers an examination of transportation-related items related to the proposed school replacements.

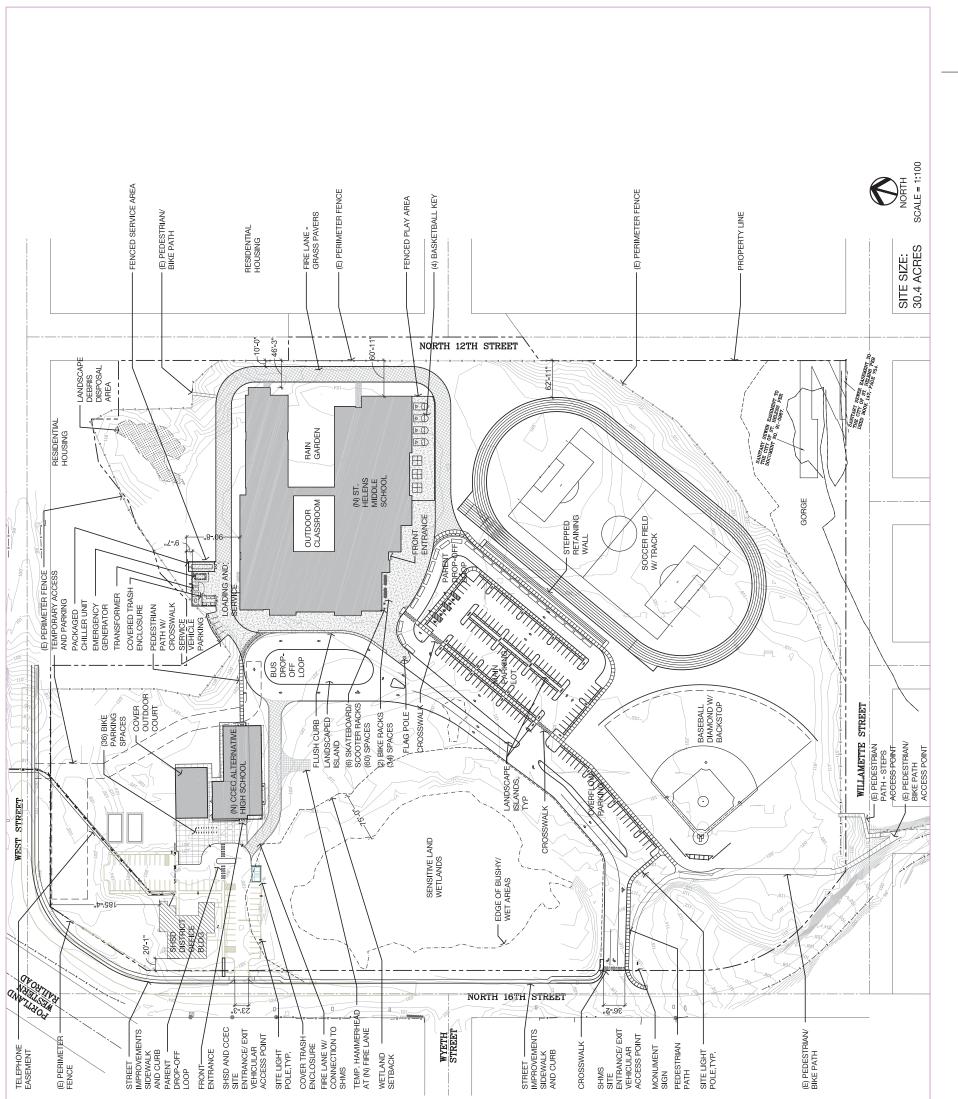
Traffic count data and on-site observations show that the site accesses to N 16<sup>th</sup> Street are operating well within the City's level of service standard and no intersection improvements are recommended.

On-site circulation with the new schools in place will be efficient and will keep all parking and queuing well within the site boundaries, removing the possibility of school congestion backing up into the adjacent public streets. Pedestrian and bicycle infrastructure will be improved as part of the project, providing sidewalks along the site frontages and improving on-site connections between SHMS and CCEC.

Other than the improvements already proposed as part of the project, no mitigation or further improvements are necessary or recommended.



Appendix



TELEPHONE EASEMENT

(E) PERIMET FENCE

WETLAND SETBACK

SODERSTROM ARCHITECTS

# Land Use Submittal St. Helens Middle School and CCEC St. Helens School District SITE DEVELOPMENT PLAN

(E) PEDESTRIAN/ BIKE PATH

© 2017 SODERSTROM ARCHITECTS, LTD.

SITE LIGHT POLE, TYP.

MONUMENT -SIGN PEDESTRIAN PATH

**Total Vehicle Summary** 



## N 15th St & School Access

*Thursday, June 01, 2017 7:30 AM to 9:30 AM* 

#### 5-Minute Interval Summary 7:30 AM to 9:30 AM

Interval Start		bound 5th St			South N 15			Eastbo School A			Westbo School A			Interval		Pedes Cross		
Time	Т	R	Bikes	L	Т	Bikes			Bikes	L		R	Bikes	Total	North	South	East	West
7:30 AM	0	4	0	0	11	0			0	1		1	0	17	0	0	1	0
7:35 AM	3	5	0	4	7	0			0	1		3	0	23	0	0	0	0
7:40 AM	5	5	0	4	8	0			0	2	1	1	0	25	0	0	0	0
7:45 AM	2	5	0	10	9	0			0	8		3	0	37	0	0	1	0
7:50 AM	5	5	0	10	6	0			0	9		4	0	39	1	0	0	0
7:55 AM	0	7	0	9	5	0			0	5		5	0	31	0	0	0	0
8:00 AM	1	3	0	19	5	0			0	9		4	0	41	1	0	1	0
8:05 AM	3	7	0	11	5	0			0	14		8	0	48	2	1	0	0
8:10 AM	2	9	0	13	4	0			0	13		9	0	50	0	2	1	0
8:15 AM	2	9	0	24	6	0	1		0	18		14	0	73	0	1	0	0
8:20 AM	2	3	0	15	10	0			0	13		8	0	51	0	0	0	0
8:25 AM	7	2	0	6	6	0			0	5		7	0	33	0	0	0	0
8:30 AM	2	3	0	3	7	1	l I		0	1	1	2	1	18	0	0	0	0
8:35 AM	1	0	0	0	6	0			0	0		0	1	7	1	0	0	0
8:40 AM	2	1	0	1	4	0			0	0		0	0	8	0	0	0	0
8:45 AM	2	0	0	3	6	0			0	0		2	0	13	0	0	0	0
8:50 AM	2	0	0	1	4	0			0	0		1	0	8	0	0	0	0
8:55 AM	5	1	0	1	3	0			0	0		2	0	12	0	0	2	0
9:00 AM	2	0	0	0	4	0			0	1		0	0	7	0	2	0	0
9:05 AM	0	0	0	2	3	1			0	2		0	0	7	0	1	0	0
9:10 AM	1	0	0	0	1	0			0	1		0	0	3	0	0	0	0
9:15 AM	3	0	0	1	6	0			0	0		1	0	11	1	0	0	0
9:20 AM	2	1	0	2	0	0			0	0		0	0	5	0	0	1	0
9:25 AM	1	0	0	0	1	0			0	1		0	0	3	0	0	0	0
Total Survey	55	70	0	139	127	2			0	104		75	2	570	6	7	7	0

#### 15-Minute Interval Summary

#### 7:30 AM to 9:30 AM

Interval	North	bound			South	bound	East	tbound		Westbound				Pedes	strians	
Start	N 15	th St			N 15	ith St	Schoo	ol Access		School Access	5	Interval		Cros	swalk	
Time	Т	R	Bikes	L	Т	Bikes		Bikes	L	R	Bikes	Total	North	South	East	West
7:30 AM	8	14	0	8	26	0		0	4	5	0	65	0	0	1	0
7:45 AM	7	17	0	29	20	0		0	22	12	0	107	1	0	1	0
8:00 AM	6	19	0	43	14	0		0	36	21	0	139	3	3	2	0
8:15 AM	11	14	0	45	22	0		0	36	29	0	157	0	1	0	0
8:30 AM	5	4	0	4	17	1		0	1	2	2	33	1	0	0	0
8:45 AM	9	1	0	5	13	0		0	0	5	0	33	0	0	2	0
9:00 AM	3	0	0	2	8	1		0	4	0	0	17	0	3	0	0
9:15 AM	6	1	0	3	7	0		0	1	1	0	19	1	0	1	0
Total Survey	55	70	0	139	127	2		0	104	75	2	570	6	7	7	0

## Peak Hour Summary

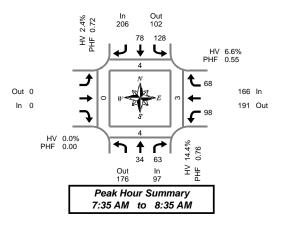
7:35 AM	to	8:35 AM
		Marthha

By			bound				bound				ound				bound					strians
Approach		N 15	oth St			N 15	th St			School	Access			School	Access		Total		Cross	swalk
Appidacii	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East
Volume	97	176	273	0	206	102	308	1	0	0	0	0	166	191	357	1	469	4	4	3
%HV		14	.4%			2.4	4%			0.0	0%			6.	6%		6.4%			
PHF		0.	76			0.	72			0.	00			0.	55		0.67			
B.		North	bound			South	bound			Easth	ound			West	bound					
By Movement		N 15	5th St			N 15	th St			School	Access			School	Access		Total			
wovernent		Т	R	Total	L	Т		Total				Total	L		R	Total				
Volume		34	63	97	128	78		206				0	98		68	166	469			
%HV	NA	5.9%	19.0%	14.4%	0.0%	6.4%	NA	2.4%	NA	NA	NA	0.0%	9.2%	NA	2.9%	6.6%	6.4%			
															0.55	0.55	0.67			

#### Rolling Hour Summary

#### 7:30 AM to 9:30 AM

Interval Start	North N 15	bound th St				bound oth St		Eastb School	ound Access			Westa School			Interval			s <b>trians</b> swalk	
Time	 Т	R	Bikes	L	Т		Bikes			Bikes	L		R	Bikes	Total	North	South	East	West
7:30 AM	32	64	0	125	82		0			0	98		67	0	468	4	4	4	0
7:45 AM	29	54	0	121	73		1			0	95		64	2	436	5	4	3	0
8:00 AM	31	38	0	97	66		1			0	73		57	2	362	4	4	4	0
8:15 AM	28	19	0	56	60	1	2			0	41		36	2	240	1	4	2	0
8:30 AM	23	6	0	14	45		2			0	6		8	2	102	2	3	3	0



West

## Heavy Vehicle Summary



## N 15th St & School Access

*Thursday, June 01, 2017 7:30 AM to 9:30 AM* 

$\begin{array}{c} n & Out \\ 5 & 4 \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ &$
$\begin{array}{c c} & & & \\ \hline & & & \\ 2 & 12 \\ 0 \\ 0 \\ 14 & 14 \end{array}$
Peak Hour Summary 7:35 AM to 8:35 AM

Out 0

ln 0

## Heavy Vehicle 5-Minute Interval Summary 7:30 AM to 9:30 AM

Interval Start		bound 5th St				bound oth St			ound Access				bound Access		Interval
Time	Т	R	Total	L	Т		Total		T	otal	L		R	Total	Total
7:30 AM	0	0	0	0	0		0			0	0		0	0	0
7:35 AM	0	1	1	0	0		0			0	0		0	0	1
7:40 AM	0	0	0	0	0		0			0	0	1	0	0	0
7:45 AM	1	0	1	0	0		0			0	0		1	1	2
7:50 AM	0	1	1	0	1	1	1	 		0	0		0	0	2
7:55 AM	0	3	3	0	0		0			0	0		0	0	3
8:00 AM	0	2	2	0	0		0			0	0		0	0	2
8:05 AM	0	2	2	0	1		1	 		0	6		0	6	9
8:10 AM	0	0	0	0	0		0			0	2		0	2	2
8:15 AM	1	1	2	0	2		2	 		0	0		0	0	4
8:20 AM	0	1	1	0	1		1			0	1		0	1	3
8:25 AM	0	0	0	0	0		0			0	0		1	1	1
8:30 AM	0	1	1	0	0		0	 		0	0		0	0	1
8:35 AM	0	0	0	0	0		0			0	0		0	0	0
8:40 AM	0	0	0	0	0		0	 		0	0		0	0	0
8:45 AM	0	0	0	0	0		0			0	0		0	0	0
8:50 AM	0	0	0	0	0		0			0	0		0	0	0
8:55 AM	0	0	0	0	0		0	 		0	0		0	0	0
9:00 AM	0	0	0	0	0		0			0	0		0	0	0
9:05 AM	0	0	0	0	0		0	 		0	0		0	0	0
9:10 AM	0	0	0	0	0		0			0	0		0	0	0
9:15 AM	0	0	0	0	0		0			0	0		0	0	0
9:20 AM	0	0	0	0	0		0	 		0	0		0	0	0
9:25 AM	0	0	0	0	0		0			0	0		0	0	0
Total Survey	2	12	14	0	5		5			0	9		2	11	30

#### Heavy Vehicle 15-Minute Interval Summary 7:30 AM to 9:30 AM

Interval Start		bound ith St				bound oth St	ound Access		West! School	oound Access		Interval
Time	Т	R	Total	L	Т	Total	Total	L		R	Total	Total
7:30 AM	0	1	1	0	0	0	0	0		0	0	1
7:45 AM	1	4	5	0	1	1	0	0		1	1	7
8:00 AM	0	4	4	0	1	1	0	8		0	8	13
8:15 AM	1	2	3	0	3	3	0	1		1	2	8
8:30 AM	0	1	1	0	0	0	0	0		0	0	1
8:45 AM	0	0	0	0	0	0	0	0		0	0	0
9:00 AM	0	0	0	0	0	0	0	0		0	0	0
9:15 AM	0	0	0	0	0	0	0	0		0	0	0
Total Survey	2	12	14	0	5	5	0	9		2	11	30

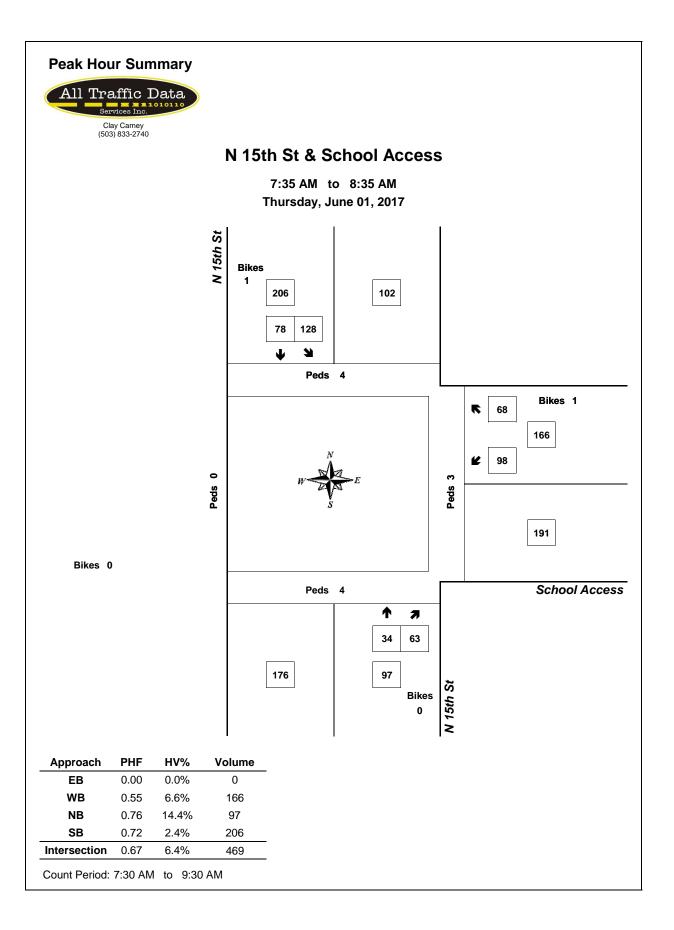
#### Heavy Vehicle Peak Hour Summary 7:35 AM to 8:35 AM

Ву			bound 5th St			bound 5th St			oound Access			bound Access	Total
Approach	In	Out	Total										
Volume	14	14	28	5	4	9	0	0	0	11	12	23	30
PHF	0.50			0.42			0.00			0.34			0.50

By Movement	North N 15					bound oth St			ound Access			Westa School			Total
wovernent	Т	R	Total	L	Т		Total			Total	L		R	Total	
Volume	2	12	14	0	5		5			0	9		2	11	30
PHF	0.50	0.43	0.50	0.00	0.42		0.42			0.00	0.28		0.50	0.34	0.50

#### Heavy Vehicle Rolling Hour Summary 7:30 AM to 9:30 AM

Interval	North	bound				bound		Eastb	ound			West	oound		
Start	N 15	ith St			N 15	ith St		School	Access			School	Access		Interval
Time	Т	R	Total	L	Т	T	Total			Total	L		R	Total	Total
7:30 AM	2	11	13	0	5		5			0	9		2	11	29
7:45 AM	2	11	13	0	5		5			0	9		2	11	29
8:00 AM	1	7	8	0	4		4			0	9		1	10	22
8:15 AM	1	3	4	0	3		3			0	1		1	2	9
8:30 AM	0	1	1	0	0		0			0	0		0	0	1

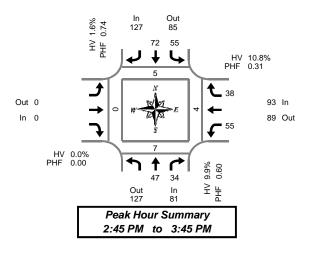


## **Total Vehicle Summary**



## N 15th St & School Access

Wednesday, May 31, 2017 2:00 PM to 6:00 PM



15-Minute Interval Summary 2:00 PM to 6:00 PM

Interval	North	bound			South	bound	Eastb	oound			West	bound				Pedes	trians	
Start	N 15	th St			N 15	th St	School	Access			School	Access		Interval		Cross	swalk	
Time	Т	R	Bikes	L	Т	Bikes			Bikes	L		R	Bikes	Total	North	South	East	West
2:00 PM	10	2	0	2	12	0			0	0		1	0	27	0	0	0	0
2:15 PM	12	0	0	4	15	0			0	3		1	0	35	0	0	0	0
2:30 PM	13	3	0	4	16	0			0	1		2	0	39	0	0	0	0
2:45 PM	13	4	0	12	13	0			0	2		0	0	44	0	0	0	0
3:00 PM	20	14	0	20	23	0			0	2		1	0	80	0	0	0	0
3:15 PM	6	13	0	17	26	0			0	43		31	0	136	3	4	4	0
3:30 PM	8	3	0	6	10	0			0	8		6	0	41	2	3	0	0
3:45 PM	14	1	0	2	13	0			0	4		3	0	37	1	0	0	0
4:00 PM	8	1	0	1	17	0			0	5		6	0	38	0	0	0	0
4:15 PM	8	0	0	0	15	0			0	2		1	0	26	0	1	1	0
4:30 PM	11	0	0	2	15	0			0	5		3	0	36	0	0	0	0
4:45 PM	11	0	0	0	4	0			0	2		0	0	17	0	0	0	0
5:00 PM	9	2	0	2	16	0			0	1		1	0	31	0	0	0	0
5:15 PM	11	0	0	0	23	0			0	0		1	0	35	0	1	0	0
5:30 PM	4	1	0	1	14	0			0	1		1	0	22	1	0	0	0
5:45 PM	9	1	0	1	17	1			0	4		5	0	37	0	0	0	0
Total Survey	167	45	0	74	249	1			0	83		63	0	681	7	9	5	0

#### Peak Hour Summary 2:45 PM to 3:45 PM

By			bound ith St			South N 15	<b>bound</b> th St				ound Access				oound Access		Total		Pedes Cross	s <b>trians</b> swalk	
Approach	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	81	127	208	0	127	85	212	0	0	0	0	0	93	89	182	0	301	5	7	4	0
%HV		9.9	9%			1.6	5%			0.0	0%			10.	8%		6.6%				
PHF		0.	60			0.	74			0.	00			0.	31		0.55				

By Movement			bound th St			South N 15					ound Access				bound Access		Total
wovernerit		Т	R	Total	L	Т		Total				Total	L		R	Total	
Volume		47	34	81	55	72		127				0	55		38	93	301
%HV	NA	0.0%	23.5%	9.9%	1.8%	1.4%	NA	1.6%	NA	NA	NA	0.0%	18.2%	NA	0.0%	10.8%	6.6%
PHF		0.59	0.61	0.60	0.69	0.69		0.74				0.00	0.32		0.31	0.31	0.55

#### **Rolling Hour Summary** 2:00 PM to 6:00 PM

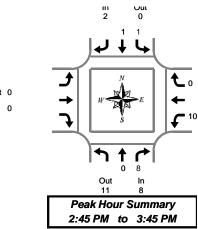
Interval	North	bound			South	bound		Eastb	ound			Westk	ound				Pedes	trians	
Start	N 15	th St			N 15	ith St		School	Access			School	Access		Interval		Cross	swalk	
Time	Т	R	Bikes	L	Т	E	Bikes			Bikes	L		R	Bikes	Total	North	South	East	West
2:00 PM	48	9	0	22	56		0			0	6		4	0	145	0	0	0	0
2:15 PM	58	21	0	40	67		0			0	8		4	0	198	0	0	0	0
2:30 PM	52	34	0	53	78		0			0	48		34	0	299	3	4	4	0
2:45 PM	47	34	0	55	72		0			0	55		38	0	301	5	7	4	0
3:00 PM	48	31	0	45	72		0			0	57		41	0	294	6	7	4	0
3:15 PM	36	18	0	26	66		0			0	60		46	0	252	6	7	4	0
3:30 PM	38	5	0	9	55		0			0	19		16	0	142	3	4	1	0
3:45 PM	41	2	0	5	60		0			0	16		13	0	137	1	1	1	0
4:00 PM	38	1	0	3	51		0			0	14		10	0	117	0	1	1	0
4:15 PM	39	2	0	4	50		0			0	10		5	0	110	0	1	1	0
4:30 PM	42	2	0	4	58		0			0	8		5	0	119	0	1	0	0
4:45 PM	35	3	0	3	57		0			0	4		3	0	105	1	1	0	0
5:00 PM	33	4	0	4	70		1			0	6		8	0	125	1	1	0	0

## **Heavy Vehicle Summary**



## N 15th St & School Access

Wednesday, May 31, 2017 2:00 PM to 6:00 PM



## Heavy Vehicle 15-Minute Interval Summary 2:00 PM to 6:00 PM

Interval	North	bound			South	bound		Eastb	ound		West	bound		
Start	N 15	ith St			N 15	5th St		School	Access		School	Access		Interval
Time	Т	R	Total	L	Т		Total		Tota	L		R	Total	Total
2:00 PM	0	1	1	0	0		0		0	0		0	0	1
2:15 PM	1	0	1	0	0		0		0	1		0	1	2
2:30 PM	1	1	2	0	0		0		0	0		0	0	2
2:45 PM	0	1	1	1	0		1		0	0		0	0	2
3:00 PM	0	1	1	0	1		1		0	0		0	0	2
3:15 PM	0	5	5	0	0		0		0	9		0	9	14
3:30 PM	0	1	1	0	0		0		0	1		0	1	2
3:45 PM	0	0	0	0	0		0		0	0		0	0	0
4:00 PM	2	0	2	0	1		1		0	0		0	0	3
4:15 PM	2	0	2	0	2		2		0	0		0	0	4
4:30 PM	0	0	0	0	1		1		0	0		0	0	1
4:45 PM	0	0	0	0	0		0		0	0		0	0	0
5:00 PM	0	0	0	0	0		0		0	0		0	0	0
5:15 PM	0	0	0	0	0		0		0	0		0	0	0
5:30 PM	0	0	0	0	1		1		0	0		0	0	1
5:45 PM	0	0	0	0	0		0		0	0		0	0	0
Total Survey	6	10	16	1	6		7		0	11		0	11	34

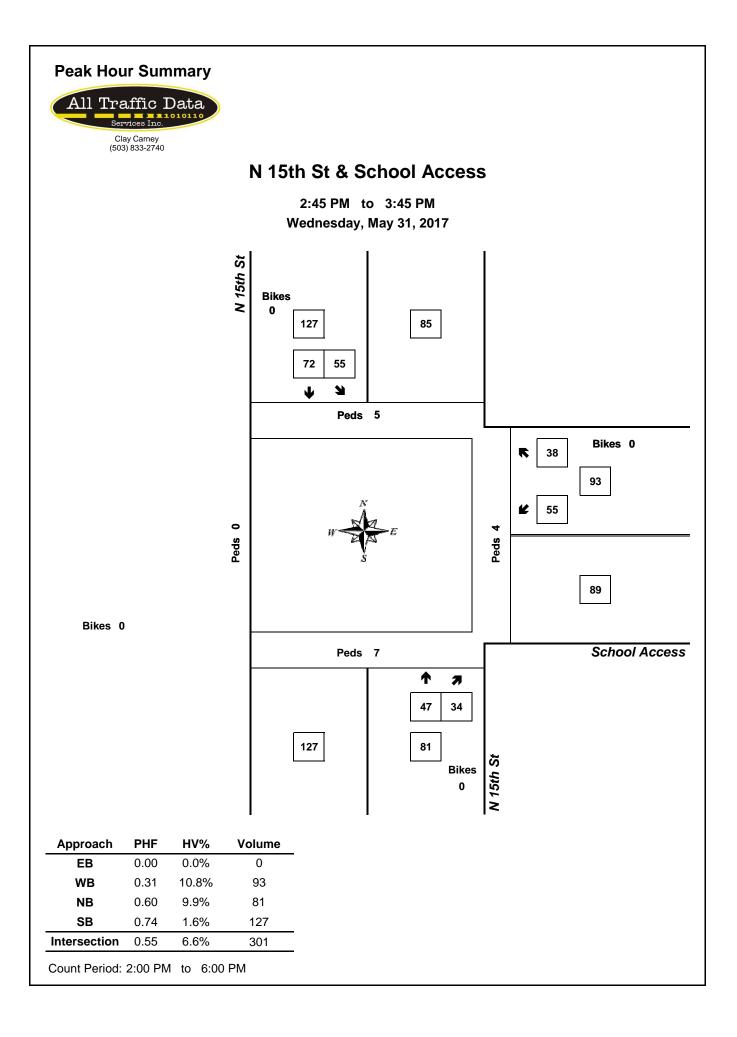
## Heavy Vehicle Peak Hour Summary 2:45 PM to 3:45 PM

Ву			<b>bound</b> 5th St			<b>bound</b> ith St			ound Access			oound Access	Total
Approach	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	Total
Volume	8	11	19	2	0	2	0	0	0	10	9	19	20
PHF	0.29			0.13		•	0.00		•	0.25			0.28

By Movement		bound th St				bound ith St			ound Access			oound Access		Total
wovernerit	Т	R	Total	L	Т		Total			Total	L	R	Total	
Volume	0	8	8	1	1		2			0	10	0	10	20
PHF	0.00	0.29	0.29	0.25	0.06		0.13			0.00	0.25	0.00	0.25	0.28

## Heavy Vehicle Rolling Hour Summary 2:00 PM to 6:00 PM

Interval	Nort	nbound			South	bound		E	Eastb	ound			West	bound		
Start	N 1	5th St			N 15	ith St		Sc	chool	Access			School	Access		Interval
Time	Т	R	Total	L	Т	Т	otal				Total	L		R	Total	Total
2:00 PM	2	3	5	1	0		1				0	1		0	1	7
2:15 PM	2	3	5	1	1		2				0	1		0	1	8
2:30 PM	1	8	9	1	1		2				0	9		0	9	20
2:45 PM	0	8	8	1	1		2				0	10		0	10	20
3:00 PM	0	7	7	0	1		1				0	10		0	10	18
3:15 PM	2	6	8	0	1		1				0	10		0	10	19
3:30 PM	4	1	5	0	3		3				0	1		0	1	9
3:45 PM	4	0	4	0	4		4				0	0		0	0	8
4:00 PM	4	0	4	0	4		4				0	0		0	0	8
4:15 PM	2	0	2	0	3		3				0	0		0	0	5
4:30 PM	0	0	0	0	1		1				0	0		0	0	1
4:45 PM	0	0	0	0	1		1				0	0		0	0	1
5:00 PM	0	0	0	0	1		1				0	0		0	0	1



**Total Vehicle Summary** 



## N 16th St & School Administration

Thursday, June 01, 2017

7:30 AM to 9:30 AM

## 5

															7.5	JAW	10 0.33	AW			
5-Minute	Inte	rval Su	mma	rv															_		
7:30 AM				,																	
	10																				
Interval			bound				bound			Eastb				Westb						strians	
Start		N 16	oth St			N 16	ith St		Sch	nool Adr	ministrati	on	Sch	hool Adr	ninistrat	ion	Interval			swalk	
Time		Т	R	Bikes	L	Т	В	ikes				Bikes	L		R	Bikes	Total	North	South	East	West
7:30 AM		2	1	0	0	5		0				0	0		0	0	8	0	0	0	0
7:35 AM		7	3	0	1	5		0				0	0		0	0	16	0	0	0	0
7:40 AM		5	0	0	1	7		0				0	1		0	0	14	0	0	0	0
7:45 AM		3	4	0	0	3		0				0	1		2	0	13	0	0	1	0
7:50 AM		6	2	0	1	7		0				0	1		1	0	18	0	0	0	0
7:55 AM		1	2	0	1	5		0				0	2		1	0	12	0	0	0	0
8:00 AM		4	5	0	0	6		0				0	2		0	0	17	0	0	0	0
8:05 AM		5	2	0	0	7		0				0	0		0	0	14	0	0	0	0
8:10 AM		8	2	0	1	9		0				0	1		0	0	21	0	0	0	0
8:15 AM		9	5	0	2	9		0				0	0		0	0	25	0	0	0	0
8:20 AM		10	4	0	1	4		0				0	2		0	0	21	0	0	0	0
8:25 AM		5	7	0	1	5		0				0	4		1	0	23	0	0	0	0
8:30 AM		2	2	0	0	4		0				0	4		0	0	12	0	0	0	0
8:35 AM		2	1	0	0	5		0				0	0		0	0	8	0	0	0	0
8:40 AM		5	1	0	0	2		0			1	0	1		0	0	9	0	0	0	0
8:45 AM		2	2	0	2	4		0				0	3		0	0	13	0	0	0	0
8:50 AM		3	3	0	1	7		0				0	0		0	0	14	0	0	2	0
8:55 AM		5	5	0	0	5		0				0	0		1	0	16	0	0	0	0
9:00 AM		1	3	0	1	6		0				0	0		0	0	11	0	0	0	0
9:05 AM		0	0	0	1	6		0				0	1		1	0	9	0	0	0	0
9:10 AM		2	0	0	0	2		0				0	0		0	0	4	0	0	0	0
9:15 AM		2	0	0	0	5		0				0	0		0	0	7	0	0	0	0
9:20 AM		1	2	0	0	1		0				0	0		1	0	5	0	0	0	0
9:25 AM		2	1	0	0	0		0				0	0		0	0	3	0	0	0	0
Total Survey		92	57	0	14	119		0				0	23		8	0	313	0	0	3	0

## 15-Minute Interval Summary 7:30 AM to 9:30 AM

Interval		bound				bound		Eastbo			Westbour						trians	
Start	N 16	th St			N 16	ith St	Scho	ol Admi	nistration	Sc	hool Adminis	stration		Interval		Cross	swalk	
Time	Т	R	Bikes	L	Т	Bikes			Bikes	L	F	R Bik	es	Total	North	South	East	West
7:30 AM	14	4	0	2	17	0			0	1	(	) 0	)	38	0	0	0	0
7:45 AM	10	8	0	2	15	0			0	4	4	0	)	43	0	0	1	0
8:00 AM	17	9	0	1	22	0			0	3	(	0	)	52	0	0	0	0
8:15 AM	24	16	0	4	18	0			0	6	1	0	)	69	0	0	0	0
8:30 AM	9	4	0	0	11	0			0	5	(	0	)	29	0	0	0	0
8:45 AM	10	10	0	3	16	0			0	3	1	0	)	43	0	0	2	0
9:00 AM	3	3	0	2	14	0			0	1	1	0	)	24	0	0	0	0
9:15 AM	5	3	0	0	6	0			0	0	1	0	)	15	0	0	0	0
Total Survey	92	57	0	14	119	0			0	23	8	0	)	313	0	0	3	0

## Peak Hour Summary

7:35 AM to 8:35 AM

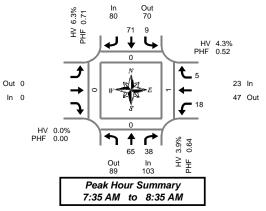
By			bound 6th St				bound ith St		Sc	Eastb hool Ad	oound ministrat	tion	Sc	Westl hool Ad	bound ministra	tion	Total		Pedes Cross	
Approach	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East
Volume	103	89	192	0	80	70	150	0	0	0	0	0	23	47	70	0	206	0	0	1
%HV		3.9	9%			6.3	3%			0.0	0%			4.3	3%		4.9%			
PHF		0.	64			0.	71			0.	00			0.	52		0.75			
_		North	bound			South	bound			Easth	ound			West	bound					

Bv		North	bound			South	bound			Easth	ound			West	ound		
Movement		N 16	th St			N 16	th St		Sc	hool Ad	ministra	tion	Sc	hool Adı	ministra	tion	Total
wovernent		Т	R	Total	L	Т		Total				Total	L		R	Total	
Volume		65	38	103	9	71		80				0	18		5	23	206
%HV	NA	4.6%	2.6%	3.9%	0.0%	7.0%	NA	6.3%	NA	NA	NA	0.0%	5.6%	NA	0.0%	4.3%	4.9%
PHF		0.60	0.59	0.64	0.56	0.71		0.71				0.00	0.45		0.31	0.52	0.75

#### **Rolling Hour Summary**

#### 7:30 AM to 9:30 AM

Interval	North	bound			South	bound		East	oound			Westb	ound				Pedes	trians	
Start	N 16	th St			N 16th St L T Bikes			hool Ad	ministratio	on	Sc	hool Adr	ministra	tion	Interval		Cross	swalk	
Time	Т	R	Bikes	L	Т	Bikes		1		Bikes	L		R	Bikes	Total	North	South	East	West
7:30 AM	65	37	0	9	72	0				0	14		5	0	202	0	0	1	0
7:45 AM	60	37	0	7	66	0				0	18		5	0	193	0	0	1	0
8:00 AM	60	39	0	8	67	0				0	17		2	0	193	0	0	2	0
8:15 AM	46	33	0	9	59	0				0	15		3	0	165	0	0	2	0
8:30 AM	27	20	0	5	47	0				0	9		3	0	111	0	0	2	0



East West Ω

## **Heavy Vehicle Summary**



Out 0 In 0

## N 16th St & School Administration

*Thursday, June 01, 2017 7:30 AM to 9:30 AM* 

7.30 AM 10 3.30 AM

## Heavy Vehicle 5-Minute Interval Summary 7:30 AM to 9:30 AM

Interval Start		bound oth St			Southt N 16t		 tbound dministration		Vestbound ol Administra	ition	Interva
Time	Т	R	Total	L	Т	Total	Total	L	R	Total	Total
7:30 AM	0	0	0	0	0	0	0	0	0	0	0
7:35 AM	0	0	0	0	0	0	0	0	0	0	0
7:40 AM	1	0	1	0	0	0	0	0	0	0	1
7:45 AM	1	0	1	0	1	1	0	0	0	0	2
7:50 AM	0	0	0	0	0	0	0	0	0	0	0
7:55 AM	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0
8:05 AM	0	0	0	0	2	2	0	0	0	0	2
8:10 AM	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	1	0	1	0	2	2	0	0	0	0	3
8:20 AM	0	0	0	0	0	0	0	0	0	0	0
8:25 AM	0	1	1	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	1	0	1	1
8:35 AM	0	0	0	0	0	0	0	0	0	0	0
8:40 AM	1	0	1	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	1	0	1	0	1	0	1	2
8:50 AM	0	0	0	0	0	0	0	0	0	0	0
8:55 AM	1	0	1	0	0	0	0	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	0	0	0	0
9:05 AM	0	0	0	0	0	0	0	0	0	0	0
9:10 AM	1	0	1	0	0	0	0	0	0	0	1
9:15 AM	0	0	0	0	0	0	0	0	0	0	0
9:20 AM	0	0	0	0	0	0	0	0	0	0	0
9:25 AM	0	0	0	0	0	0	0	0	0	0	0
Total Survey	6	1	7	1	5	6	0	2	0	2	15

#### Heavy Vehicle 15-Minute Interval Summary 7:30 AM to 9:30 AM

Interval Start		nbound 6th St				bound Sth St	So		bound ministration	s	West chool Ad	<b>bound</b> ministra	tion	Interval
Time	Т	R	Total	L	Т	Tot	al	1	Tot	al L		R	Total	Total
7:30 AM	1	0	1	0	0	0			0	0		0	0	1
7:45 AM	1	0	1	0	1	1		1	0	0		0	0	2
8:00 AM	0	0	0	0	2	2		1	0	0		0	0	2
8:15 AM	1	1	2	0	2	2		1	0	0		0	0	4
8:30 AM	1	0	1	0	0	0			0	1		0	1	2
8:45 AM	1	0	1	1	0	1			0	1		0	1	3
9:00 AM	1	0	1	0	0	0		1	0	0		0	0	1
9:15 AM	0	0	0	0	0	0		1	0	0		0	0	0
Total Survey	6	1	7	1	5	6			0	2		0	2	15

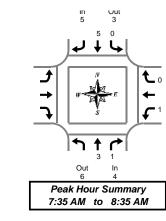
#### Heavy Vehicle Peak Hour Summary 7:35 AM to 8:35 AM

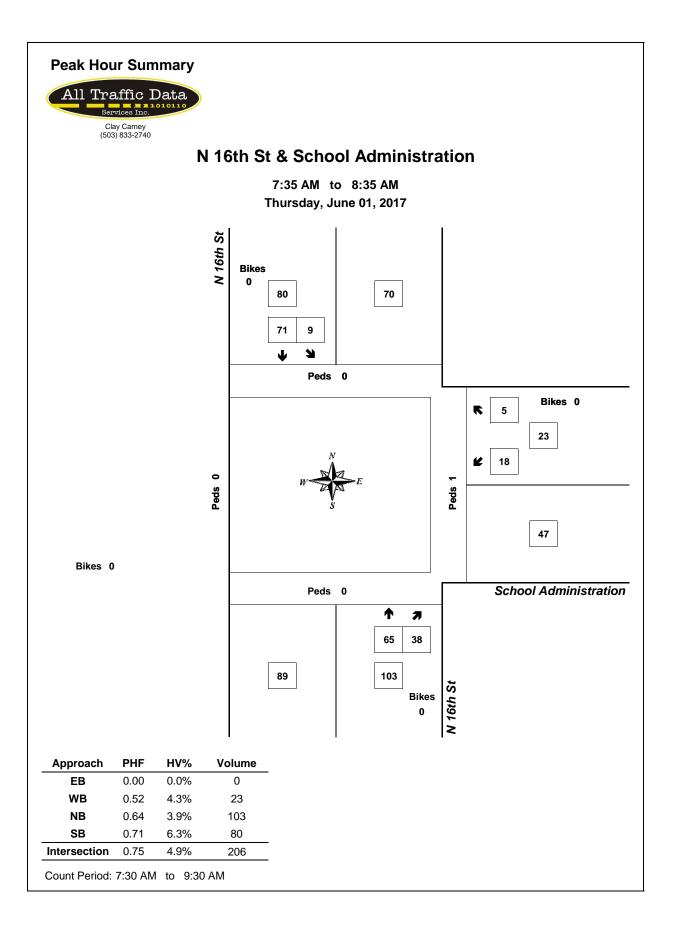
By			bound Sth St			bound 6th St	Sc		oound ministration	Sc		bound ministration	Total
Approach	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	4	6	10	5	3	8	0	0	0	1	1	2	10
PHF	0.50			0.31			0.00			0.25			0.50

By Movement	North N 16					bound Sth St		Scl	 oound ministrat	tion	Sch	Westa nool Adr		ion	Total
wovernern	Т	R	Total	L	Т		Total			Total	L		R	Total	
Volume	3	1	4	0	5		5			0	1		0	1	10
PHF	0.38	0.25	0.50	0.00	0.31		0.31			0.00	0.25		0.00	0.25	0.50

#### Heavy Vehicle Rolling Hour Summary 7:30 AM to 9:30 AM

Interval	North	bound			South	bound			Easth	ound			West	oound		
Start	N 16	th St			N 16	oth St		Sc	nool Ad	ministrati	on	Sc	hool Adı	ministrat	ion	Interval
Time	Т	R	Total	L	Т		Total				Total	L		R	Total	Total
7:30 AM	3	1	4	0	5		5				0	0		0	0	9
7:45 AM	3	1	4	0	5		5				0	1		0	1	10
8:00 AM	3	1	4	1	4		5				0	2		0	2	11
8:15 AM	4	1	5	1	2		3				0	2		0	2	10
8:30 AM	3	0	3	1	0		1				0	2		0	2	6



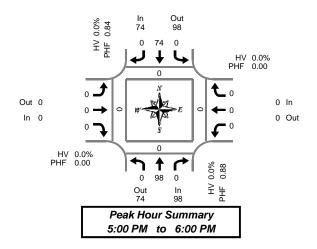


## **Total Vehicle Summary**



## N 16th St & School Administration

Wednesday, May 31, 2017 2:00 PM to 6:00 PM



15-Minute Interval Summary 2:00 PM to 6:00 PM

Interval			bound				bound				ound				oound				Pedes		
Start		N 16	th St			N 16	th St		Sc	hool Ad	ministra	tion	Sc	hool Adı	ministra	tion	Interval		Cross	swalk	
Time	L	Т	R	Bikes	L	Т	R	Bikes	L	Т	R	Bikes	L	Т	R	Bikes	Total	North	South	East	West
2:00 PM	0	19	0	0	1	7	0	0	0	0	0	0	3	0	0	0	30	0	0	1	0
2:15 PM	0	18	2	0	0	15	0	0	0	0	0	0	1	0	0	0	36	0	0	0	0
2:30 PM	0	14	1	1	0	14	0	0	0	0	0	0	3	0	1	0	33	0	0	0	0
2:45 PM	0	13	3	0	0	19	0	0	0	0	0	0	1	0	0	0	36	0	0	0	0
3:00 PM	0	14	8	0	1	23	0	0	0	0	0	0	1	0	0	0	47	0	0	4	0
3:15 PM	0	19	3	0	1	19	0	0	0	0	0	0	10	0	2	0	54	0	0	4	0
3:30 PM	0	15	0	1	0	11	0	0	0	0	0	0	3	0	1	0	30	0	0	0	0
3:45 PM	0	13	0	0	0	13	0	0	0	0	0	0	1	0	0	0	27	0	0	0	0
4:00 PM	0	15	1	0	0	16	0	0	0	0	0	0	1	0	1	0	34	0	0	0	0
4:15 PM	0	16	0	0	0	13	0	0	0	0	0	0	4	0	0	0	33	0	0	2	0
4:30 PM	0	19	0	0	0	13	0	0	0	0	0	0	4	0	2	1	38	0	0	1	0
4:45 PM	0	15	0	0	0	10	0	0	0	0	0	0	2	0	0	0	27	0	0	1	0
5:00 PM	0	22	0	0	0	14	0	0	0	0	0	0	0	0	0	0	36	0	0	0	0
5:15 PM	0	28	0	0	0	22	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0
5:30 PM	0	24	0	0	0	18	0	0	0	0	0	0	0	0	0	0	42	0	0	0	0
5:45 PM	0	24	0	0	0	20	0	1	0	0	0	0	0	0	0	0	44	0	0	0	0
Total Survey	0	288	18	2	3	247	0	1	0	0	0	0	34	0	7	1	597	0	0	13	0

#### Peak Hour Summary 5:00 PM to 6:00 PM

By		North N 16	bound th St				bound th St		Sc	Eastb hool Adr		ion	Sc	Westl hool Adı	<b>cound</b> ministrat	ion	Total		Pedes Cross	<b>trians</b> swalk	
Approach	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	98	74	172	0	74	98	172	1	0	0	0	0	0	0	0	0	172	0	0	0	0
%HV		0.0	)%			0.0	)%			0.0	)%			0.0	0%		0.0%				
PHF		0.8	88			0.	84			0.	00			0.	00		0.86				

By Movement			bound th St				<b>bound</b> th St		Scl	Eastb hool Adr	ound ninistrat	ion	Sc		<b>bound</b> ministrat	tion	Total
wovernern	L	Т	R	Total	Г	Т	R	Total	Г	Т	R	Total	L	Т	R	Total	
Volume	0	98	0	98	0	74	0	74	0	0	0	0	0	0	0	0	172
%HV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PHF	0.00	0.88	0.00	0.88	0.00	0.84	0.00	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86

#### **Rolling Hour Summary** 2:00 PM to 6:00 PM

Interval Northbound

Interval Start			<b>bound</b> ith St			South N 16	<b>bound</b> th St		Sc	Eastb hool Adi	ound ministra	tion	Sc	Westi hool Adı		tion	Interval		Pedes Cross		
Time	L	Т	R	Bikes	L	Т	R	Bikes	L	Т	R	Bikes	L	Т	R	Bikes	Total	North	South	East	West
2:00 PM	0	64	6	1	1	55	0	0	0	0	0	0	8	0	1	0	135	0	0	1	0
2:15 PM	0	59	14	1	1	71	0	0	0	0	0	0	6	0	1	0	152	0	0	4	0
2:30 PM	0	60	15	1	2	75	0	0	0	0	0	0	15	0	3	0	170	0	0	8	0
2:45 PM	0	61	14	1	2	72	0	0	0	0	0	0	15	0	3	0	167	0	0	8	0
3:00 PM	0	61	11	1	2	66	0	0	0	0	0	0	15	0	3	0	158	0	0	8	0
3:15 PM	0	62	4	1	1	59	0	0	0	0	0	0	15	0	4	0	145	0	0	4	0
3:30 PM	0	59	1	1	0	53	0	0	0	0	0	0	9	0	2	0	124	0	0	2	0
3:45 PM	0	63	1	0	0	55	0	0	0	0	0	0	10	0	3	1	132	0	0	3	0
4:00 PM	0	65	1	0	0	52	0	0	0	0	0	0	11	0	3	1	132	0	0	4	0
4:15 PM	0	72	0	0	0	50	0	0	0	0	0	0	10	0	2	1	134	0	0	4	0
4:30 PM	0	84	0	0	0	59	0	0	0	0	0	0	6	0	2	1	151	0	0	2	0
4:45 PM	0	89	0	0	0	64	0	0	0	0	0	0	2	0	0	0	155	0	0	1	0
5:00 PM	0	98	0	0	0	74	0	1	0	0	0	0	0	0	0	0	172	0	0	0	0

## **Heavy Vehicle Summary**



Out 0 In 0

## N 16th St & School Administration

Wednesday, May 31, 2017 2:00 PM to 6:00 PM

Heavy Vehicle 15-Minute Interval Summary 2:00 PM to 6:00 PM

Interval			bound				bound				ound				bound		
Start		N 16	th St			N 16	th St		Sc	nool Adı	ministra	tion	Sc	hool Adı	ministra	tion	Interval
Time	L	Т	R	Total	L	Т	R	Total	L	Т	R	Total	L	Т	R	Total	Total
2:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
2:15 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
2:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
2:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	3	0	3	0	1	0	1	0	0	0	0	0	0	0	0	4
4:15 PM	0	1	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
4:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	8	0	8	0	7	0	7	0	0	0	0	0	0	0	0	15

## Heavy Vehicle Peak Hour Summary 5:00 PM to 6:00 PM

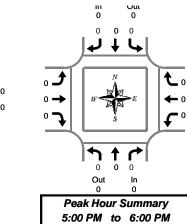
Du		North	bound		South	bound		Eastb	ound		Westl	oound	
By		N 16	6th St		N 16	oth St	Sc	hool Adı	ministration	Sc	hool Adı	ministration	Total
Approach	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.00			0.00			0.00		•	0.00			0.00

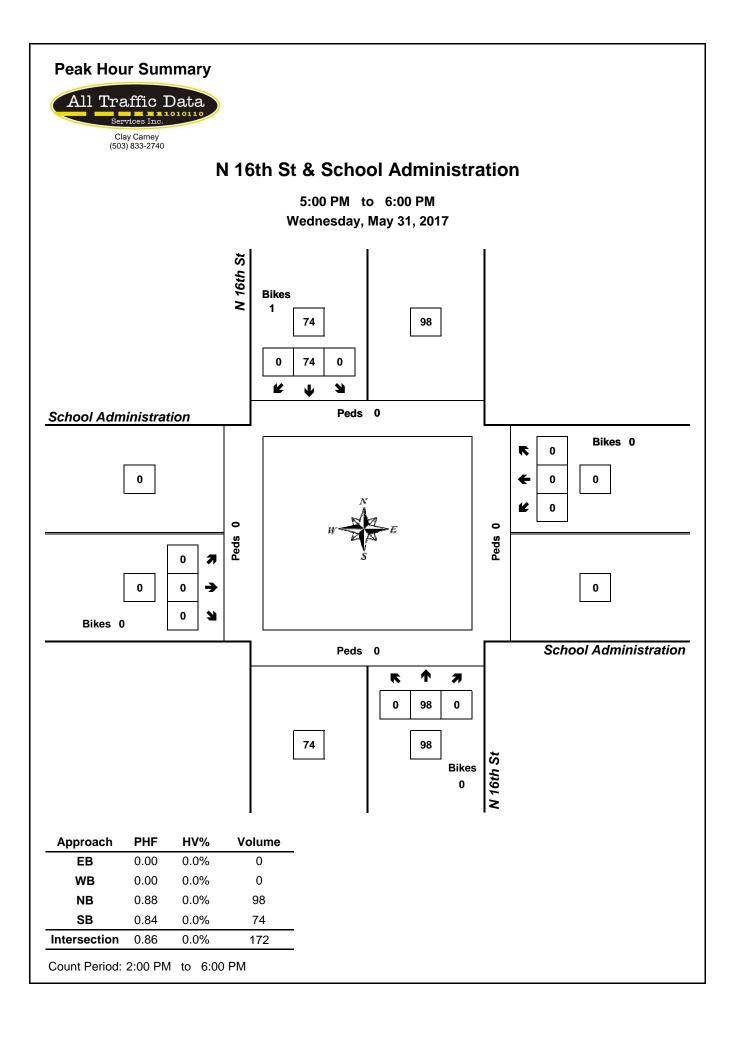
By			<b>bound</b> ith St				<b>bound</b> ith St		Sc	Eastb hool Adr	oound ministrat	ion	Sc	Westl hool Adr		ion	Total
Movement	L	Т	R	Total	L	Т	R	Total	L	Т	R	Total	L	Т	R	Total	
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## Heavy Vehicle Rolling Hour Summary

2:00 PM to 6:00 PM

Interval		North	bound			South	bound			Eastb	ound			West	bound		
Start		N 16	th St			N 16	oth St		Sc	hool Adı	ministrat	tion	Sc	hool Ad	ministra	tion	Interval
Time	L	Т	R	Total	L	Т	R	Total	L	Т	R	Total	L	Т	R	Total	Total
2:00 PM	0	3	0	3	0	2	0	2	0	0	0	0	0	0	0	0	5
2:15 PM	0	3	0	3	0	1	0	1	0	0	0	0	0	0	0	0	4
2:30 PM	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
2:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
3:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3:15 PM	0	4	0	4	0	1	0	1	0	0	0	0	0	0	0	0	5
3:30 PM	0	4	0	4	0	3	0	3	0	0	0	0	0	0	0	0	7
3:45 PM	0	4	0	4	0	4	0	4	0	0	0	0	0	0	0	0	8
4:00 PM	0	4	0	4	0	5	0	5	0	0	0	0	0	0	0	0	9
4:15 PM	0	1	0	1	0	4	0	4	0	0	0	0	0	0	0	0	5
4:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0





Intersection Delay, s/veh Intersection LOS

h 10.5 B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT	
Lane Configurations		٦.	1		fa A				र्स	
Traffic Vol, veh/h	0	98	68	0	34	63	0	128	78	
Future Vol, veh/h	0	98	68	0	34	63	0	128	78	
Peak Hour Factor	0.92	0.67	0.67	0.92	0.67	0.67	0.92	0.67	0.67	
Heavy Vehicles, %	2	7	7	2	14	14	2	2	2	
Mvmt Flow	0	146	101	0	51	94	0	191	116	
Number of Lanes	0	1	1	0	1	0	0	0	1	
Approach		WB			NB			SB		
Opposing Approach					SB			NB		
Opposing Lanes		0			1			1		
Conflicting Approach Left		NB						WB		
Conflicting Lanes Left		1			0			2		
Conflicting Approach Right		SB			WB					
Conflicting Lanes Right		1			2			0		
HCM Control Delay		10.1			9			11.5		
HCM LOS		В			А			В		

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	62%
Vol Thru, %	35%	0%	0%	38%
Vol Right, %	65%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	98	68	206
LT Vol	0	98	0	128
Through Vol	34	0	0	78
RT Vol	63	0	68	0
Lane Flow Rate	145	146	101	307
Geometry Grp	2	7	7	2
Degree of Util (X)	0.193	0.252	0.14	0.418
Departure Headway (Hd)	4.795	6.194	4.983	4.895
Convergence, Y/N	Yes	Yes	Yes	Yes
Сар	743	576	713	732
Service Time	2.857	3.969	2.757	2.946
HCM Lane V/C Ratio	0.195	0.253	0.142	0.419
HCM Control Delay	9	11.1	8.6	11.5
HCM Lane LOS	А	В	А	В
HCM 95th-tile Q	0.7	1	0.5	2.1

Int Delay, s/veh

Int Delay, s/veh	1.4						
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	¥		4î			र्च	
Traffic Vol, veh/h	18	5	65	38	9	71	
Future Vol, veh/h	18	5	65	38	9	71	
Conflicting Peds, #/hr	0	0	0	1	1	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	0	-	-	-	-	-	
Veh in Median Storage, #	ŧ O	-	0	-	-	0	
Grade, %	0	-	0	-	-	0	
Peak Hour Factor	75	75	75	75	75	75	
Heavy Vehicles, %	4	4	4	4	6	6	
Mvmt Flow	24	7	87	51	12	95	

Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	232	113	0	0	138	0	
Stage 1	113	-	-	-	-	-	
Stage 2	119	-	-	-	-	-	
Critical Hdwy	6.44	6.24	-	-	4.16	-	
Critical Hdwy Stg 1	5.44	-	-	-	-	-	
Critical Hdwy Stg 2	5.44	-	-	-	-	-	
Follow-up Hdwy	3.536	3.336	-	-	2.254	-	
Pot Cap-1 Maneuver	752	934	-	-	1421	-	
Stage 1	907	-	-	-	-	-	
Stage 2	901	-	-	-	-	-	
Platoon blocked, %			-	-		-	
Mov Cap-1 Maneuver	745	933	-	-	1421	-	
Mov Cap-2 Maneuver	745	-	-	-	-	-	
Stage 1	906	-	-	-	-	-	
Stage 2	893	-	-	-	-	-	
-							
Approach	W/D		ND		CD		

Approach	WB	NB	SB	
HCM Control Delay, s	9.8	0	0.8	
HCM LOS	А			

Minor Lane/Major Mvmt	NBT	NBRV	VBLn1	SBL	SBT
Capacity (veh/h)	-	-	779	1421	-
HCM Lane V/C Ratio	-	-	0.039	0.008	-
HCM Control Delay (s)	-	-	9.8	7.6	0
HCM Lane LOS	-	-	А	А	А
HCM 95th %tile Q(veh)	-	-	0.1	0	-

# Intersection Intersection Delay, s/veh 9.2 Intersection LOS A

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT	
Lane Configurations		ሻ	1		4î				र्च	
Traffic Vol, veh/h	0	48	34	0	52	34	0	53	78	
Future Vol, veh/h	0	48	34	0	52	34	0	53	78	
Peak Hour Factor	0.92	0.55	0.55	0.92	0.55	0.55	0.92	0.55	0.55	
Heavy Vehicles, %	2	11	11	2	11	11	2	2	2	
Mvmt Flow	0	87	62	0	95	62	0	96	142	
Number of Lanes	0	1	1	0	1	0	0	0	1	
Approach		WB			NB			SB		
Opposing Approach					SB			NB		
Opposing Lanes		0			1			1		
Conflicting Approach Left		NB						WB		
Conflicting Lanes Left		1			0			2		
Conflicting Approach Right		SB			WB					
Conflicting Lanes Right		1			2			0		
HCM Control Delay		9.2			8.7			9.6		
HCM LOS		А			А			А		

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	40%
Vol Thru, %	60%	0%	0%	60%
Vol Right, %	40%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	86	48	34	131
LT Vol	0	48	0	53
Through Vol	52	0	0	78
RT Vol	34	0	34	0
Lane Flow Rate	156	87	62	238
Geometry Grp	2	7	7	2
Degree of Util (X)	0.197	0.148	0.084	0.304
Departure Headway (Hd)	4.529	6.089	4.88	4.598
Convergence, Y/N	Yes	Yes	Yes	Yes
Сар	791	588	732	781
Service Time	2.56	3.835	2.625	2.627
HCM Lane V/C Ratio	0.197	0.148	0.085	0.305
HCM Control Delay	8.7	9.9	8.1	9.6
HCM Lane LOS	A	А	А	А
HCM 95th-tile Q	0.7	0.5	0.3	1.3

Int Delay, s/veh

Int Delay, s/veh	1.1						
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	¥		4î			र्च	
Traffic Vol, veh/h	15	3	60	15	2	75	
Future Vol, veh/h	15	3	60	15	2	75	
Conflicting Peds, #/hr	0	0	0	8	8	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	0	-	-	-	-	-	
Veh in Median Storage, #	÷ 0	-	0	-	-	0	
Grade, %	0	-	0	-	-	0	
Peak Hour Factor	79	79	79	79	79	79	
Heavy Vehicles, %	1	1	3	3	1	1	
Mvmt Flow	19	4	76	19	3	95	

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	193	93	0	0	103	0
Stage 1	93	-	-	-	-	-
Stage 2	100	-	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	798	967	-	-	1495	-
Stage 1	933	-	-	-	-	-
Stage 2	927	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	790	960	-	-	1495	-
Mov Cap-2 Maneuver	790	-	-	-	-	-
Stage 1	926	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	9.6		0		0.2	

HCM LOS

А

Minor Lane/Major Mvmt	NBT	NBRV	VBLn1	SBL	SBT
Capacity (veh/h)	-	-	814	1495	-
HCM Lane V/C Ratio	-	-	0.028	0.002	-
HCM Control Delay (s)	-	-	9.6	7.4	0
HCM Lane LOS	-	-	А	А	Α
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection Delay, s/veh Intersection LOS

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Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT	
Lane Configurations		٦.	1		4î				र्स	
Traffic Vol, veh/h	0	167	116	0	34	107	0	218	78	
Future Vol, veh/h	0	167	116	0	34	107	0	218	78	
Peak Hour Factor	0.92	0.67	0.67	0.92	0.67	0.67	0.92	0.67	0.67	
Heavy Vehicles, %	2	7	7	2	14	14	2	2	2	
Mvmt Flow	0	249	173	0	51	160	0	325	116	
Number of Lanes	0	1	1	0	1	0	0	0	1	
Approach		WB			NB			SB		
Opposing Approach					SB			NB		
Opposing Lanes		0			1			1		
Conflicting Approach Left		NB						WB		
Conflicting Lanes Left		1			0			2		
Conflicting Approach Right		SB			WB					
Conflicting Lanes Right		1			2			0		
HCM Control Delay		13.7			11.4			20.3		
HCM LOS		В			В			С		

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	74%
Vol Thru, %	24%	0%	0%	26%
Vol Right, %	76%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	141	167	116	296
LT Vol	0	167	0	218
Through Vol	34	0	0	78
RT Vol	107	0	116	0
Lane Flow Rate	210	249	173	442
Geometry Grp	2	7	7	2
Degree of Util (X)	0.328	0.48	0.275	0.69
Departure Headway (Hd)	5.612	6.929	5.71	5.622
Convergence, Y/N	Yes	Yes	Yes	Yes
Сар	640	521	628	641
Service Time	3.661	4.672	3.453	3.663
HCM Lane V/C Ratio	0.328	0.478	0.275	0.69
HCM Control Delay	11.4	15.9	10.6	20.3
HCM Lane LOS	В	С	В	С
HCM 95th-tile Q	1.4	2.6	1.1	5.5

Int Delay, s/veh	1.7						
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	¥		4î			र्च	
Traffic Vol, veh/h	23	6	65	49	12	71	
Future Vol, veh/h	23	6	65	49	12	71	
Conflicting Peds, #/hr	0	0	0	1	1	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	0	-	-	-	-	-	
Veh in Median Storage, #	ŧ 0	-	0	-	-	0	
Grade, %	0	-	0	-	-	0	
Peak Hour Factor	75	75	75	75	75	75	
Heavy Vehicles, %	4	4	4	4	6	6	
Mvmt Flow	31	8	87	65	16	95	

Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	247	120	0	0	153	0	
Stage 1	120	-	-	-	-	-	
Stage 2	127	-	-	-	-	-	
Critical Hdwy	7.14	6.24	-	-	4.16	-	
Critical Hdwy Stg 1	6.14	-	-	-	-	-	
Critical Hdwy Stg 2	6.14	-	-	-	-	-	
Follow-up Hdwy	3.536	3.336	-	-	2.254	-	
Pot Cap-1 Maneuver	703	926	-	-	1403	-	
Stage 1	880	-	-	-	-	-	
Stage 2	872	-	-	-	-	-	
Platoon blocked, %			-	-		-	
Mov Cap-1 Maneuver	696	925	-	-	1403	-	
Mov Cap-2 Maneuver	696	-	-	-	-	-	
Stage 1	880	-	-	-	-	-	
Stage 2	862	-	-	-	-	-	
Approach	WB		NB		SB		

Арргоаст	WB	ND	30	
HCM Control Delay, s	10.2	0	1.1	
HCM LOS	В			

Minor Lane/Major Mvmt	NBT	NBRW	/BLn1	SBL	SBT
Capacity (veh/h)	-	-	734	1403	-
HCM Lane V/C Ratio	-	-	0.053	0.011	-
HCM Control Delay (s)	-	-	10.2	7.6	0
HCM Lane LOS	-	-	В	А	А
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection Delay, s/veh Intersection LOS

n 10.7 B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT	
Lane Configurations		۳.	1		4î				र्च	
Traffic Vol, veh/h	0	82	58	0	52	58	0	90	78	
Future Vol, veh/h	0	82	58	0	52	58	0	90	78	
Peak Hour Factor	0.92	0.55	0.55	0.92	0.55	0.55	0.92	0.55	0.55	
Heavy Vehicles, %	2	11	11	2	11	11	2	2	2	
Mvmt Flow	0	149	105	0	95	105	0	164	142	
Number of Lanes	0	1	1	0	1	0	0	0	1	
Approach		WB			NB			SB		
Opposing Approach					SB			NB		
Opposing Lanes		0			1			1		
Conflicting Approach Left		NB						WB		
Conflicting Lanes Left		1			0			2		
Conflicting Approach Right		SB			WB					
Conflicting Lanes Right		1			2			0		
HCM Control Delay		10.4			9.7			11.7		
HCM LOS		В			А			В		

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	54%
Vol Thru, %	47%	0%	0%	46%
Vol Right, %	53%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	82	58	168
LT Vol	0	82	0	90
Through Vol	52	0	0	78
RT Vol	58	0	58	0
Lane Flow Rate	200	149	105	305
Geometry Grp	2	7	7	2
Degree of Util (X)	0.27	0.264	0.151	0.423
Departure Headway (Hd)	4.853	6.382	5.17	4.982
Convergence, Y/N	Yes	Yes	Yes	Yes
Сар	734	558	685	718
Service Time	2.924	4.176	2.963	3.044
HCM Lane V/C Ratio	0.272	0.267	0.153	0.425
HCM Control Delay	9.7	11.5	8.9	11.7
HCM Lane LOS	А	В	А	В
HCM 95th-tile Q	1.1	1.1	0.5	2.1

Int Delay, s/veh

Int Delay, s/veh	1.4						
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	¥		4î			र्च	
Traffic Vol, veh/h	19	4	60	19	3	75	
Future Vol, veh/h	19	4	60	19	3	75	
Conflicting Peds, #/hr	0	0	0	8	8	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	0	-	-	-	-	-	
Veh in Median Storage, #	÷ 0	-	0	-	-	0	
Grade, %	0	-	0	-	-	0	
Peak Hour Factor	79	79	79	79	79	79	
Heavy Vehicles, %	1	1	3	3	1	1	
Mvmt Flow	24	5	76	24	4	95	

Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	199	96	0	0	108	0	
Stage 1	96	-	-	-	-	-	
Stage 2	103	-	-	-	-	-	
Critical Hdwy	6.41	6.21	-	-	4.11	-	
Critical Hdwy Stg 1	5.41	-	-	-	-	-	
Critical Hdwy Stg 2	5.41	-	-	-	-	-	
Follow-up Hdwy	3.509	3.309	-	-	2.209	-	
Pot Cap-1 Maneuver	792	963	-	-	1489	-	
Stage 1	930	-	-	-	-	-	
Stage 2	924	-	-	-	-	-	
Platoon blocked, %			-	-		-	
Mov Cap-1 Maneuver	784	956	-	-	1489	-	
Mov Cap-2 Maneuver	784	-	-	-	-	-	
Stage 1	923	-	-	-	-	-	
Stage 2	921	-	-	-	-	-	
Approach	WB		NB		SB		

Арргоаст	WB	IND	SD	
HCM Control Delay, s	9.6	0	0.3	
HCM LOS	А			

Minor Lane/Major Mvmt	NBT	NBRW	/BLn1	SBL	SBT
Capacity (veh/h)	-	-	809	1489	-
HCM Lane V/C Ratio	-	-	0.036	0.003	-
HCM Control Delay (s)	-	-	9.6	7.4	0
HCM Lane LOS	-	-	А	А	А
HCM 95th %tile Q(veh)	-	-	0.1	0	-

# Exhibit 4

# Wetland Delineation Report

# Wetland Delineation for the St. Helens School District Bond Projects in St. Helens, Oregon

(Township 4 North, Range 1 West, Section 4AB, Tax Lot 3400 and Section 4BA, Tax Lot 100)

#### **Prepared for**

**St Helens School District** 474 North 16<sup>th</sup> Street St Helens, OR 97051

#### Prepared by

Tina Farrelly Caroline Rim **Pacific Habitat Services, Inc.** 9450 SW Commerce Circle, Suite 180 Wilsonville, Oregon 97070 (503) 570-0800 (503) 570-0855 FAX

PHS Project Number: 6150

#### June 14, 2017



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# I. INTRODUCTION

Pacific Habitat Services, Inc. (PHS) conducted a wetland delineation for the St. Helens School District Bond Projects in St. Helens, Oregon (Township 4 North, Range 1 West, Section 4AB, Tax Lot 3400 and Section 4BA, Tax Lot 100). This report presents the results of PHS's wetland delineation within the study area. Figures, including a map depicting the location of wetlands within the study area, are located in Appendix A. Data sheets documenting on-site conditions are provided in Appendix B. Ground-level photographs documenting site conditions are provided in Appendix C. A discussion of the wetland delineation methodology is provided for the client in Appendix D.

# **II. RESULTS AND DISCUSSION**

# A. Landscape Setting and Land Use

The study area is located within the City of St. Helens, east of Highway 30, and west of the Columbia River. The study area includes the St. Helens Middle School campus and Columbia County Education Campus. Most of the site is on a broad terrace of the Columbia River, ranging from 115 to 125 feet elevation. The southeastern portion of the site drops steeply into a low canyon ranging from 65 to 90 feet elevation. The entire study area is mapped with the *rock outcrops – xerumbrepts complex* soil map unit. Soils examined throughout the site are representative of this map unit, with bedrock present within 6 to 24 inches of the surface.

Vegetation in landscaped areas is dominated by turf grasses, with some scattered Douglas-fir (*Pseudotsuga menziesii*, FACU) and oak (*Quercus* species, FACU or UPL) trees and patches of Himalayan blackberry (*Rubus armeniacus*, FAC). Land use surrounding the study area is residential.

The study area has been largely developed with school buildings, athletic fields, landscaped areas, and parking lots; however, there are two undeveloped areas present in the western and southeastern portions of the site. The Local Wetland Inventory (LWI) for St. Helens, show each of these areas containing a Type 1 Significant Wetland (Wetland D-6 and Wetland J3), as established by the St. Helens Municipal Code (Section 17.40.015). Vegetation in these areas is dominated by Douglas-fir, oak, red alder (*Alnus rubra*, FAC), big leaf maple (*Acer macrophyllum*, FACU), Oregon ash (*Fraxinus latifolia*, FACW), black cottonwood (*Populus balsamifera*, FAC), birch (*Betula pendula*, FACU), oso-berry (*Oemleria cerasiformis*, FACU), serviceberry (*Amelanchier alnifolia*, FACU), honeysuckle (*Lonicera involurata*, FAC), English holly (*Ilex aquifolium*, FACU), Douglas hawthorn (*Crataegus douglasii*, FAC), Douglas spirea (*Spiraea douglasii*, FACW), Himalayan blackberry, reed canarygrass (*Phalaris arundinacea*, FACW), English ivy (*Hedera helix*, FACU), tall fescue (*Schedonorus arundinaceus*, FAC), sword fern (*Polystichum munitum*, FACU), orchardgrass (*Dactylus glomerata*, FACU), bentgrass (*Agrostis* species, FAC), and bluegrass (*Poa* species, FAC).

# **B.** Site Alterations

The campus grounds are regularly mowed, landscaped, and irrigated. There is no evidence of recent fill or other site alterations. The wetland areas are generally undisturbed, other than restoration plantings around the Type 1 Significant Wetland in the western portion of the property, and a utility access path in the southeastern portion of the property.

# C. Precipitation Data and Analysis

The wetland delineation was conducted on March 23 and April 13, 2017. During the March field visit, 0.06 inches of rain was recorded and 5.74 inches were recorded during the previous two weeks. For the April field visit 0.33 inches of rain was recorded on the field investigation date and 2.15 inches were recorded during the preceding two weeks. For the entire month of March 2017, the total rainfall was 11.27 inches, which is 190 percent of normal (NRCS, 2017). With the exception of January, precipitation recorded during the months preceding the field investigation was both above average and above the normal range for the period of record. For January, recorded precipitation was below average but within the normal range. The water year through the field investigation dates (October 1, 2016 through March 31, 2017) was also well above average at 138 percent of normal.

Table 1 shows the average monthly precipitation in Clatskanie for the three months prior to the site visits, as well as the upper and lower values considered within normal ranges for the period of record.

Month	A womo go*	30% chan	ce will have	Observed
Ivionun	Average*	Less than	More than	Precipitation**
December 2016	9.12	6.35	10.83	7.91
January 2017	8.28	5.13	10.00	5.27
February 2017	6.74	4.56	8.06	11.23
March 2017	5.94	4.36	6.98	11.27
April 2017	4.08	2.85	4.85	5.38

 Table 1. Average Monthly Precipitation and Observed Precipitation

\*Average Monthly Rainfall [NRCS WETS Table for Clatskanie (City of St Helens WETS Table was missing)] \*\*Observed monthly rainfall (NRCS) for Clatskanie

Given the abnormally wet weather in the days and months preceding the field investigation, free water and saturation were present in many of the upland sample plots. However, this is the result of the unusually high amount of recent rain rather than normal conditions during the growing season. This exceptionally wet weather, however, is not expected to have affected the wetland delineation, as the boundaries were delineated based on the presence of wetland vegetation, low relative geomorphic position, and a hydrogen sulfide odor.

# **D.** Methods

PHS delineated the limits of the wetlands on the site based on the presence of wetland hydrology, hydric soils, and hydrophytic vegetation, in accordance with the Routine On-site Determination, as described in the *Corps of Engineers Wetland Delineation Manual*, *Wetlands Research Program Technical Report Y-87-1* ("The 1987 Manual") and the *Regional Supplement to the Corps of Engineers Wetland Delineation Mountains*, *Valleys, and Coast Region*. The delineation was conducted on March 23 and April 13, 2017.

The entire study area was investigated for the presence of wetlands or other waters. Three wetlands, two of which are considered Type 1 Significant Wetlands by the City of St. Helens, were identified within the study area. In addition, an unnamed tributary of the Columbia River and a backwater channel were identified in the southeastern portion of the study area, within the limits of Wetland A.

Soils in Wetlands B and C generally do not have common redox concentrations; for Wetland B, saturation and shallow ponding were observed on both delineation dates. Given the presence of a restrictive layer and observed saturation and ponding, it was assumed that anaerobic conditions are present for extended periods during the growing season and soils in the wetland meet the hydric soil definition (USDA 2016).

Four pairs of sample points document the boundaries of delineated wetlands. In addition, two sample points were collected within the study area to document conditions in undeveloped and relatively unmanaged areas.

Although saturation and a high (perched) water table were present within many of the upland sample points, upland areas did not have hydric soils, a low geomorphic position, or pass the FAC-neutral test.

### E. Description of all Wetlands and Other Non-Wetland Waters

Within the study areas, PHS identified three wetlands and a tributary of the Columbia River.

#### Wetland A

Wetland A is located at the bottom of a steep canyon, identified in the Local Wetland Inventory (LWI) as Jackass Canyon. Tributary 1 and a backwater channel (described below) are located within the boundaries of Wetland A. The Cowardin class of the wetland is a palustrine, forested/scrub-shrub/emergent, seasonally flooded/saturated (PFO/SS/EME) and the Hydrogeomorphic (HGM) class is Slope. The wetland is 15,419 square feet (0.35 acre) within the study area, and continues southwest outside of the study area boundary.

There are upland hummocks within the delineated boundary of Wetland A, especially near the tributary and backwater channel. The upland area is estimated to comprise approximately 10 percent of the wetland within the study area boundary.

Vegetation in Wetland A (Sample Point 1) is dominated by Oregon ash, black cottonwood, red alder, willow (*Salix* species, generally FAC or wetter), reed canarygrass, and bluegrass. Himalayan blackberry and English ivy are dominant in some locations, most often near the wetland-upland boundary and on upland hummocks within the wetland. Soils in the wetland meet the definition for redox dark surface (F6). Saturation and a high water table were present in the sample area during the field investigation. In addition, the area has a low geomorphic position and vegetation passes the FAC-neutral test.

The upland surrounding Wetland A (Sample Point 2) is dominated by many of the same species with the addition of English holly, hawthorn, oso-berry, and sword fern. The upland lacks hydic soils and indicators of wetland hydrology.

#### <u>Wetland B</u>

Wetland B is a small wetland (1,694 square feet / 0.04 acre) north of a parking lot in the central portion of the study area. The wetland has a Cowardin class of PSS/EME and an HGM class of Slope. There is a culvert on the west side of Wetland B that connects it to Wetland C (described below).

Vegetation within the wetland (Sample Point 5) is dominated by black cottonwood saplings, reed canarygrass, tall fescue, and bentgrass. Although soils within the wetland sample area did not satisfy any of the hydric soil indicators with a chroma of 2 and only 2 percent redox concentrations, the wetland is assumed to have an aquic moisture regime. Saturation and a high (perched) water table were observed on both field investigation dates, indicating that anaerobic conditions are present for extended periods during the growing season and soils in the wetland meet the hydric soil definition (USDA 2016). In addition to saturation and a high (perched) water table, wetland hydrology was indicated by a low geomorphic position, a shallow aquitard, and the FAC-neutral test.

The upland surrounding Wetland B (Sample Point 4) is dominated by oak, orchardgrass, and bluegrass. Soils did not meet the definition of any of the hydric soil indicators. Although saturation and a high (perched) water table were present during the March field investigation, this is assumed to result from recent extreme rain events.

#### Wetland C

Wetland C is located in the western portion of the study area and is 85,140 square feet (1.95 acres) in size. The Cowardin class is a palustrine forested/scrub-shrub, semi-permanently flooded (PFO/SSF) and the HGM class is Depressional.

Vegetation within Wetland C (Sample Points 7 and 9) is dominated by black cottonwood, willow, birch, spirea, rush (*Juncus* species, generally FAC or wetter), velvetgrass (*Holcus lanatus*, FAC), bluegrass, and tall fescue. Because the wetland is semi-permanently flooded, a large portion of the herb stratum is unvegetated. Redox concentrations were absent or less than common in the sampled soils, though a hydrogen sulfide odor indicated that the soil was in an anaerobic state on the field investigation date. The presence of surface water, saturation, a high (perched) water table, a hydrogen sulfide odor, drainage patterns, a low geomorphic position, a shallow aquitard, and/or the FAC-neutral test indicated that wetland hydrology was present.

The upland surrounding Wetland C (Sample Points 6 and 8) is dominated by big-leaf maple, Douglas-fir, oak, birch, oso-berry, serviceberry, Himalayan blackberry, sword fern, English ivy, trailing blackberry (*Rubus ursinus*, FACU), tall fescue, and bluegrass. Though a shallow aquitard was present, soils were not hydric and there were no primary or other secondary indicators of wetland hydrology.

#### Tributary 1 (including a backwater channel)

Tributary 1 flows east/northeast through the southeastern portion of the study area at the base of Jackass Canyon. A small backwater channel is parallel to the tributary on its north side, and connects to Tributary 1 through Wetland A. The combined total of Tributary 1 and its associated backwater channel is 2,172 square feet (0.05 acre) within the study area. The Cowardin class is riverine, intermittent, streambed, semi-permanently flooded (R4SBF) and the HGM class is Riverine.

Riparian vegetation includes Oregon ash, black cottonwood, red alder, willow, Himalayan blackberry, reed canarygrass, English ivy, sword fern, and bluegrass. Tributary 1 flows into a double culvert that passes under North 12<sup>th</sup> Street. According to the LWI, the wetland/stream system identified as J-3 continues northeast where it connects to another wetland/stream system (J-6). Ultimately, water from the tributary drains to the Columbia River three quarters of a mile northeast of the study area.

# F. Deviation from LWI or NWI

The LWI maps Wetland D-6 and J-3, consistent with the wetland boundaries of Wetland C and Wetland A as mapped by PHS. One additional wetland (Wetland B) delineated by PHS does not appear on the LWI. The reason for the discrepancy is likely due to the small size of the wetland and its seasonal hydrology.

# G. Mapping Method

PHS flagged the limits of wetlands and waters with blue tape flagging, and sample points with lime-green flagging. KLS Surveying then surveyed the flags. The accuracy of the survey and sample points is sub-centimeter with the exception of sample point 10, which is +/- three feet.

# H. Additional Information

None.

# I. Results and Conclusions

PHS delineated three wetlands and a tributary and backwater channel within the study area. The total area of wetlands within the study area is 102,253 square feet (2.35 acre) and the total area of waters is 2,172 square feet (0.05 acre), as summarized in the following table.

Feature	Area (square feet / acreage)	Cowardin Class	HGM Class
Wetland A	15,419 / 0.35	PFO/SS/EME	Slope
Wetland B	1,694 / 0.04	PSS/EME	Slope
Wetland C	85,140 / 1.95	PFO/SSF	Depression
Total Wetland	102,253 / 2.35		
Tributary 1	868 / 0.02	R4SBF	Riverine
Backwater channel	1,304 / 0.03	R4SBF	Riverine
Total Other Waters	2,172 / 0.05		

 Table 2.
 Total wetland and other waters within the study area

#### J. Required Disclaimer

This report documents the investigation, best professional judgment and conclusions of the investigators. It is correct and complete to the best of our knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and used at your own risk unless it has been reviewed and approved in writing by the Oregon Department of State Lands in accordance with OAR 141-090-0005 through 141-090-0055.

### **III. REFERENCES**

Adamus, P.R. and D. Field. 2001 Guidebook for Hydrogeomorphic (HGM)-based Assessment of Oregon Wetland and Riparian Sites. Willamette Valley Ecoregion, Riverine Impounding and Slopes/Flats Subclasses. Oregon Division of State Lands, Salem, OR.

GoogleEarth Map, 2017. 2016 aerial photograph.

Lichvar, R.W., M. Butterwick, N.C. Melvin, and W.N. Kirchner. 2016. State of Oregon 2016 Plant List. The National Wetland Plant List: 2016 Update of Wetland Ratings. <u>http://wetland\_plants.usace.army.mil</u>

Munsell Color, 2009. Munsell Soil Color Charts.

- Natural Resources Conservation Service (NRCS), 2017. NRCS Field Office Technical Guide. <u>http://efotg.sc.egov.usda.gov/</u>
- Natural Resources Conservation Service, 2017. NRCS WETS table for Clatskanie <u>http://www.wcc.nrcs.usda.gov/climate/climate-map.html</u>
- Natural Resources Conservation Service (NRCS) Web Soil Survey, 2017. <u>http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.</u>
- Oregon Department of State Lands, 2009. Oregon Revised Statutes (ORS), Chapter 196 Columbia River Gorge; Ocean Resource Planning; Wetlands; Removal and Fill. Section 196.800 Definitions for ORS 196.600 - 196.905.

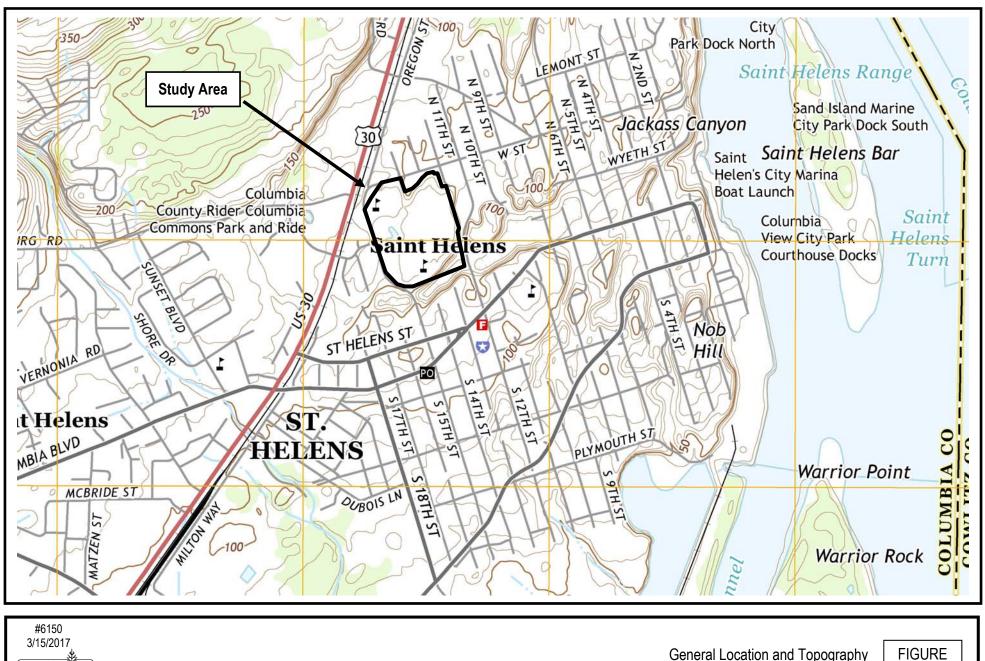
Oregon Maps online. 2017. http://www.ormap.org/

- Otak, Inc. 1999. Local Wetland Inventory for St Helens.
- US Army Corps of Engineers, Environmental Laboratory, 1987. Corps of Engineers Wetland Delineation Manual. Technical Report Y-87-1.
- US Army Corps of Engineers, Environmental Laboratory, 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0).
- US Department of Agriculture, Natural Resources Conservation Service (USDA). 2016. *Field Indicators of Hydric Soils in the United States*, Version 8.0. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCE, in cooperation with the National Technical Committee for Hydric Soils.
- US Geologic Survey, 2014. 7.5-minute topographic map, Saint Helens, Oregon-Washington Quadrangle.

# Appendix A

Figures





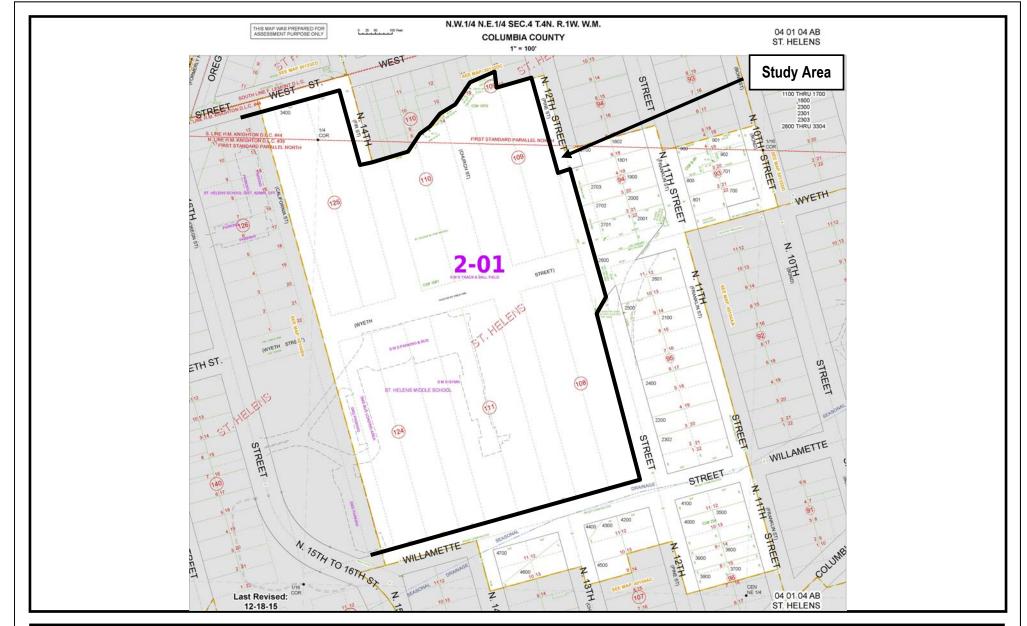
Wilsonville, OR 97070

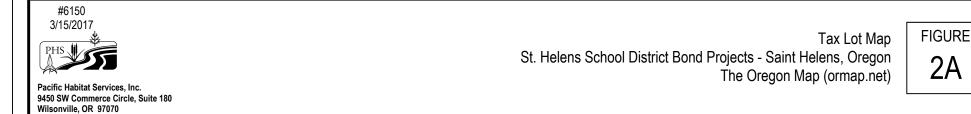
Pacific Habitat Services, Inc.

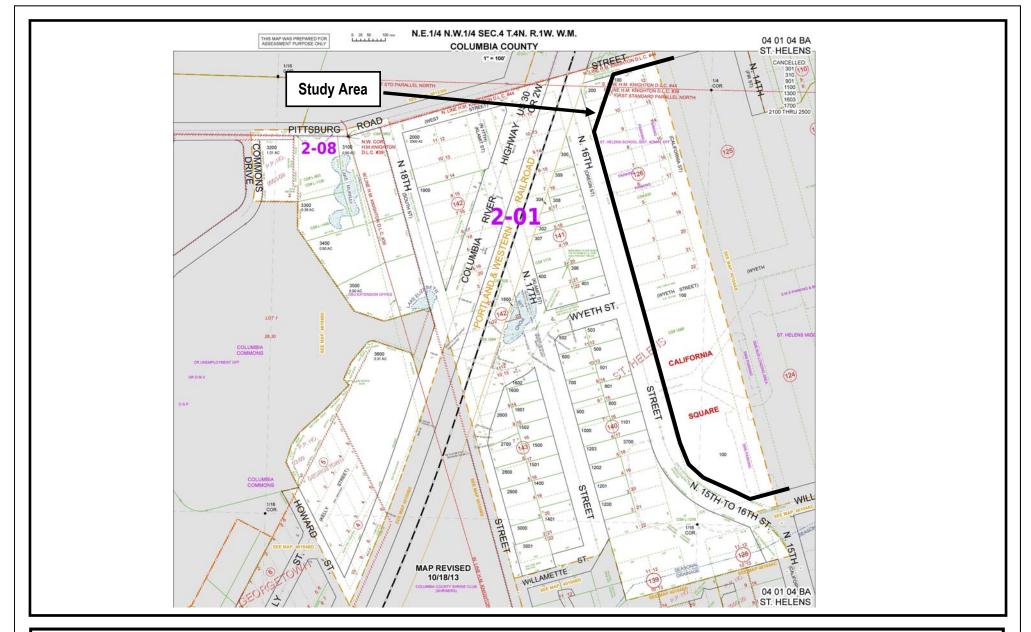
9450 SW Commerce Circle, Suite 180

St. Helens School District Bond Projects - Saint Helens, Oregon United States Geological Survey (USGS), Saint Helens, Oregon-Washington, 7.5 Quadrangle, 2014 (viewer/nationalmap.gov/basic)

FIGURE



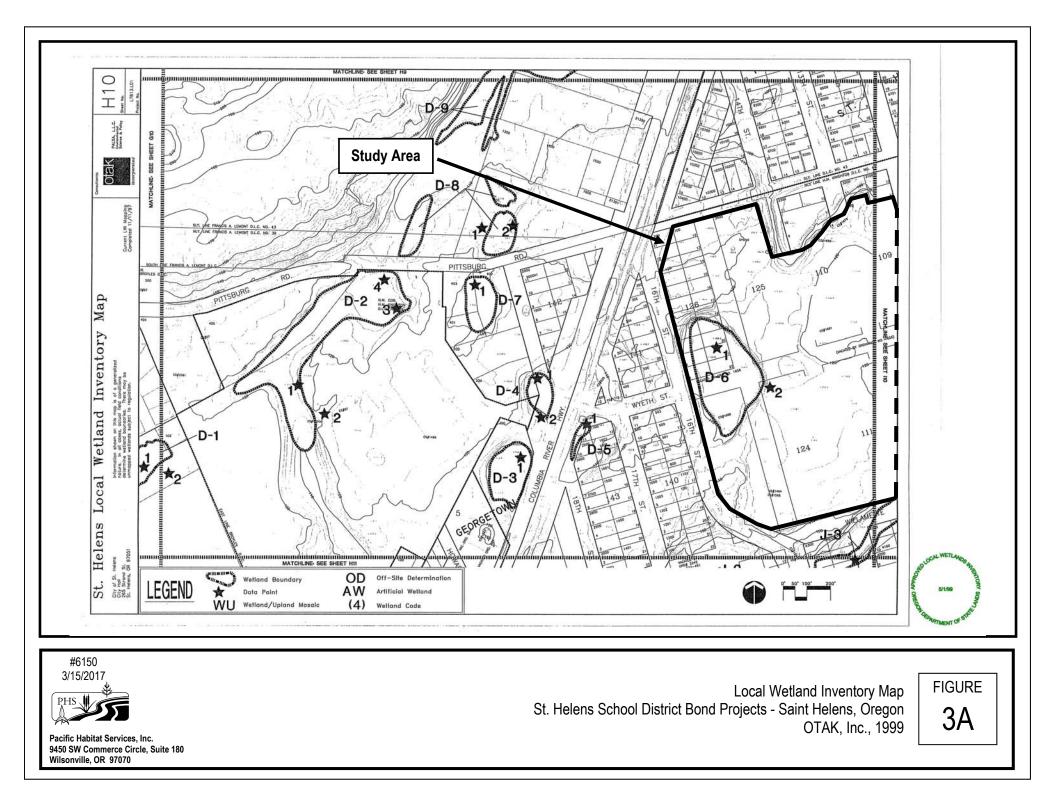


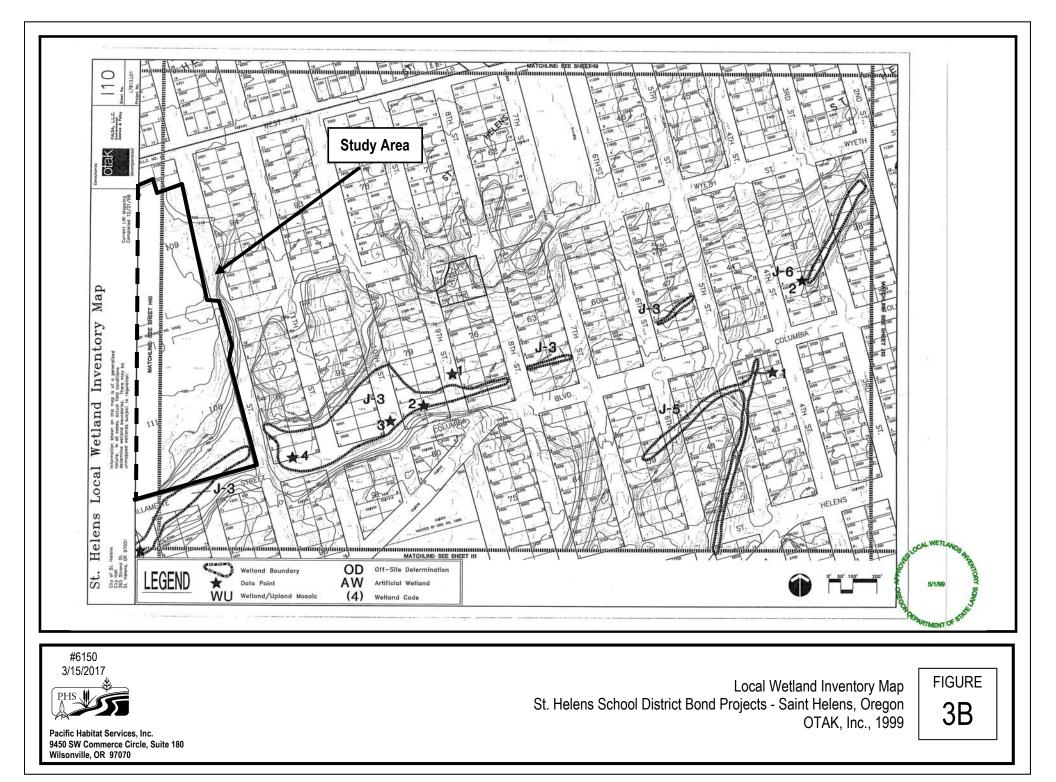






Pacific Habitat Services, Inc. 9450 SW Commerce Circle, Suite 180 Wilsonville, OR 97070







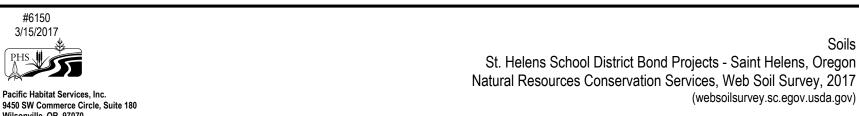


FIGURE Soils

4

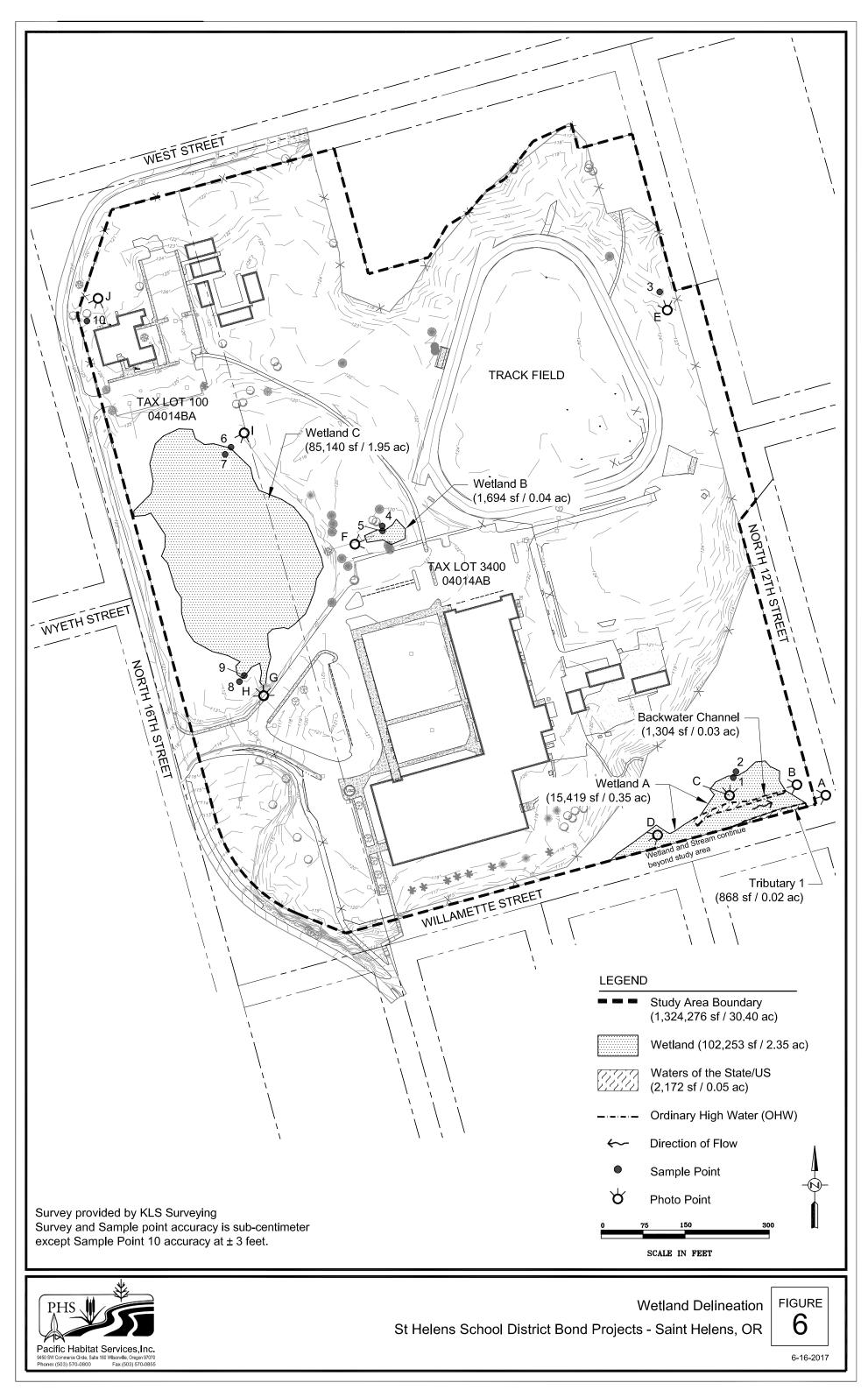
9450 SW Commerce Circle, Suite 180 Wilsonville, OR 97070



#6150 3/15/2017



Pacific Habitat Services, Inc. 9450 SW Commerce Circle, Suite 180 Wilsonville, OR 97070 2016 Aerial Photo St. Helens School District Bond Projects - Saint Helens, Oregon GoogleEarth, 2017 FIGURE



X:\Project Directories\6100\6150 St Helens School District\AutoCAD\Plot Dwgs\Fig6 WetDel.dwg, 6/16/2017 2:23:46 PM, CutePDF Writer

# **Appendix B**

# **Wetland Determination Data Sheets**



WETLAND DETER	RMINATION	N DATA FOI	RM - Weste	ern Mountains, Val	leys, and Coa	PHS # st Region	6150
oject/Site: School District Bond F	Projects	City/County:	St. He	elens/Columbia	Sampling Date	4/13	/2017
pplicant/Owner: St. Helens School	District			State:	OR	Sampling Point:	1
vestigator(s): TF/DS		Section, To	wnship, Range:	Sectio	on 4, Township 4	N, Range 1W	
ndform (hillslope, terrace, etc.:)	Slope		Local relief (co	ncave, convex, none):	none	Slope (%):	0
Ibregion (LRR):	4	Lat:	45.862	097 Long:	-122.807629	Datum:	WGS84
il Map Unit Name: Rock outo	rop - Xerumb	- repts complex	k, undulating	NWI Cla	ssification:	None	
e climatic/hydrologic conditions on the site t	-		-			plain in Remarks)	
e vegetation Soil or Hy		•		Are "Normal Circumstand			
° <u> </u>		-		d, explain any answers in Re	,		
,				.,			
UMMARY OF FINDINGS – Attac	ch site map s	showing sam	pling point	locations, transects	, important fea	tures, etc.	
vdrophytic Vegetation Present? Yes	X No		Is Sampled A	roo within			
ydric Soil Present? Yes	X No		a Wetla		X	No	
etland Hydrology Present? Yes	X No						
emarks:							
EGETATION - Use scientific nar							
	absolute % cover	Dominant Species?	Indicator Status	Dominance Test wor	ksheet:		
ee Stratum (plot size: 30 )		000003:	Jiaius	Number of Dominant Spe	cies		
Fraxinus latifolia	60	х	FACW	That are OBL, FACW, or		4	(A)
Populus balsamifera	30	X	FAC				. ,
Alnus rubra	5		FAC	Total Number of Dominar	t		
				Species Across All Strata	:	4	(B)
	95	= Total Cover					
apling/Shrub Stratum (plot size: 5	)			Percent of Dominant Spe	cies		
Rubus armeniacus		Х	FAC	That are OBL, FACW, or	FAC:	100%	(A/B)
				Prevalence Index Wo	orksheet:		
				Total % Cover of	Multiply I	by:	
				OBL Species	x 1 =	- 0	
	10	= Total Cover		FACW species	x 2 =		
erb Stratum (plot size: <b>5</b> )				FAC Species FACU Species	x 3 =		
erb Stratum (plot size: <u>5</u> ) Poa sp.	70	x	(FAC)	UPL Species	x 4 = x 5 =		
Phalaris arundinacea	10		FACW	Column Totals	<b>0</b> (A)		(B)
Juncus tenuis	10		FAC		(()		(5)
				Prevalence Index =	B/A =	#DIV/0!	
				Hydrophytic Vegetat	ion Indicators:		
					1- Rapid Test for Hy	drophytic Vegetatio	n
				X	2- Dominance Test i	s >50%	
	90	= Total Cover			3-Prevalence Index i		
	<b>`</b>				4-Morphological Ada		
body Vine Stratum (plot size:	_)				data in Remarks or o		)
					5- Wetland Non-Vas Problematic Hydropł		volain)
	0	= Total Cover		<sup>1</sup> Indicators of hydric soil a		·	
				disturbed or problematic.		, maar be present,	
				disturbed of problematic.			
Bare Ground in Herb Stratum	10			Hydrophytic Vegetation	Yes X		

SOIL			PHS #	6'	150	_		Sampling Point: 1
	ption: (Describe to t	he depth	needed to docume			onfirm the abse	nce of indicators.)	
Depth (Inches)	Matrix Color (moist)	%	Color (moist)	Redo %	x Features Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-9	10YR 2/1	85	10YR 5/6	15	<u>с</u>	M	Silt Loam	Medium
9-16	10YR 3/1	95	10YR 3/4	5	C	M	Silt Loam	Medium
					·			
17 0.0								2
	centration, D=Depletion Indicators: (Appli						Indic	<sup>2</sup> Location: PL=Pore Lining, M=Matrix. ators for Problematic Hydric Soils <sup>3</sup> :
-	Histosol (A1)				Sandy Red			2 cm Muck (A10)
	Histic Epipedon (A2)				Stripped M			Red Parent Material (TF2)
	Black Histic (A3)				•	cky Mineral (F1)	except MLRA 1)	Very Shallow Dark Surface (TF12)
	Hydrogen Sulfide (A4	)			•	eved Matrix (F2)		Other (explain in Remarks)
	Depleted Below Dark		Δ11)		Depleted N			
	Thick Dark Surface (A		ATT)	X	•	k Surface (F6)		
					-	Dark Surface (F7)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland
	Sandy Mucky Mineral Sandy Gleyed Matrix				•	pressions (F8)		hydrology must be present, unless disturbed or problematic.
Restrictive	Layer (if present):							
Туре:								
Depth (inches	s):						Hydric Soil Pres	sent? Yes X No
Remarks:					_			
HYDROLO Wetland Hy	GY drology Indicator	s:						
Primary Indi	cators (minimum o	f one rec	uired; check all th	hat apply	)			Secondary Indicators (2 or more required)
	Surface Water (A1) High Water Table (A2	:)			Water stair 1, 2, 4A, a	ned Leaves (B9) <b>(</b> nd 4B)	Except MLRA	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
X	Saturation (A3)				Salt Crust	(B11)		Drainage Patterns (B10)
	Water Marks (B1)				Aquatic Inv	vertebrates (B13)		Dry-Season Water Table (C2)
	Sediment Deposits (E	2)			Hydrogen	Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (CS
	Drift Deposits (B3)				Oxidized R	hizospheres alon	g Living Roots (C3)	X Geomorphic Position (D2)
	Algal Mat or Crust (B4	4)			Presence	of Reduced Iron (	C4)	Shallow Aquitard (D3)
	Iron Deposits (B5)				Recent Iro	n Reduction in Plo	owed Soils (C6)	X Fac-Neutral Test (D5)
	Surface Soil Cracks (	B6)			Stunted or	Stressed Plants (	(D1) <b>(LRR A)</b>	Raised Ant Mounds (D6) (LRR A)
	Inundation Visible on	Aerial Ima	agery (B7)		Other (Exp	lain in Remarks)		Frost-Heave Hummocks (D7)
	Sparsely Vegetated C	Concave S	surface (B8)					
Field Obser	vations:							
Surface Water	Present? Yes		No <u>X</u>	Depth	(inches):			
Water Table P	resent? Yes	X	No	Depth	(inches):	2	Wetland Hyd	rology Present?
Saturation Pre (includes capillar		X	No	Depth	(inches):	Surface		Yes X No
Describe Reco	orded Data (stream ga	iuge, mon	itoring well, aerial pl	hotos, prev	vious inspec	ctions), if available	e:	
Remarks:								

	RMINATION	DATA FO	RM - Weste	rn Mountains, Val	leys, and Coast	PHS #	6150
roject/Site: School District Bond I		City/County:		lens/Columbia	Sampling Date:	-	/2017
pplicant/Owner: St. Helens School	<u> </u>			State:		Sampling Point:	2
vestigator(s): TF/DS		Section. To	wnship, Range:		on 4, Township 4N,		
andform (hillslope, terrace, etc.:)	Slope	0000000, 10		ncave, convex, none):	none	Slope (%):	0
ubregion (LRR):		Lat:	45.8620	-		Datum:	wgs84
bil Map Unit Name: Rock outo							10004
					ssification:		
e climatic/hydrologic conditions on the site						in in Remarks)	
	ydrology			Are "Normal Circumstanc	,	¥	
re vegetation Soil or Hy	ydrology	naturally problei	matic? If needed	, explain any answers in Re	emarks.)		
UMMARY OF FINDINGS – Attac	ch site map s	howing san	pling point	locations, transects	, important featu	res, etc.	
drophytic Vegetation Present? Yes	No	X			· •	•	
dric Soil Present? Yes	No	X	ls Sampled Ar a Wetlar		١	lo X	
etland Hydrology Present? Yes	No		a wettar				
		Λ					
emarks:							
EGETATION - Use scientific nar	mes of plants						
	absolute	Dominant	Indicator	Dominance Test wor	ksheet:		
	% cover	Species?	Status				
ee Stratum (plot size: 30 )	)			Number of Dominant Spe	cies		
Fraxinus latifolia	60	X	FACW	That are OBL, FACW, or	FAC:	3	(A)
Populus balsamifera	20	Х	FAC				
Alnus rubra	10		FAC	Total Number of Dominan	t		
				Species Across All Strata	·	6	(B)
	90	= Total Cover					
pling/Shrub Stratum (plot size: 5	)			Percent of Dominant Spec	cies		
Rubus armeniacus	20	Х	FAC	That are OBL, FACW, or	FAC:	50%	(A/B)
llex aquifolium	20	Х	FACU				
Crataegus douglasii	10		FAC	Prevalence Index Wo	orksheet:		
Oemleria cerasiformis	10		FACU	Total % Cover of	Multiply by:	_	
Rosa nutkana	5		FAC	OBL Species	x 1 =	0	
	65	= Total Cover		FACW species	x 2 =	0	
	N N			FAC Species	x 3 =	0	
erb Stratum (plot size: 5)	60	v	EACU	FACU Species	x 4 =	0	
Hedera helix Polystichum munitum	60	<u> </u>	FACU	UPL Species	x 5 =	0	(P)
Polystichum munitum Unidentified grass	<u> </u>	^	FACU (FAC)	Column Totals	<b>0</b> (A)	0	(B)
Unidentified grass	10			Prevalence Index =	3/Δ <b>= #</b> I	DIV/0!	
				Hydrophytic Vegetat	ion Indicators		
					1- Rapid Test for Hydro	phytic Vegetatio	n
					2- Dominance Test is >		
	90	= Total Cover			3-Prevalence Index is ≤		
					4-Morphological Adapta		upporting
oody Vine Stratum (plot size:	)				data in Remarks or on	a separate sheet	)
					5- Wetland Non-Vascul	ar Plants <sup>1</sup>	
					Problematic Hydrophyti	c Vegetation <sup>1</sup> (E	kplain)
	0	= Total Cover		<sup>1</sup> Indicators of hydric soil a	nd wetland hydrology r	nust be present,	unless
				disturbed or problematic.			
				Hydrophytic			
Bare Ground in Herb Stratum	10			Vegetation	Yes	No	Х

Depth         Matrix         Redux Features           Gentrestic         Color (molit)         %         Type:         Loc <sup>2</sup> Tecture         Remarks           0-12         10YR 2/1         80         Sitt Loam         Sitt Loam         Sitt Loam           12-16         10YR 2/2         20         Sitt Loam         Sitt Loam         Sitt Loam           "Indicators (Applicable to all LRRs, unless otherwise noted.)         Sitt Loam         Concentration, Deceptetion, Methedwood Matrix, CS=Covered or Codeled Sand Graits.         *Location, FL=Pote Linng, Methatrix.           Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.)         Indicators for Problematic Hydric Soils*:           Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.)         Indicators for Problematic Hydric Soils*:           Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.)         Indicators for Problematic Hydric Soils*:           Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.)         Indicators of hydrophyse wgataton and vetland tydricogon suited present; Uress disturbed of tydrophyse wgataton and vetland tydricogon must be present; unless disturbed of tydrophyse wgataton and vetland tydricogon must be present; unless disturbed of tydrophyse wgataton and vetland tydricogon must be present; unless disturbed of tydrophyse wgataton and vetland tydricogon must be present; unless disturbed of tydrophyse wgataton (As)           Stands Water (Ali)         Water stalane	(inches)         Color (most)         %         Type         Loc <sup>2</sup> Torun         Remarks           0-12         10YR 2/1         80         Silt Loam         Silt Loam	SOIL			PHS #	6150			Sampling Point:	2
Color (molit)       K       Color (molit)       K       Type       Lef       Texture       Remarks         0-12       197R 2/1       100       Silt Learn       Silt Learn       Silt Learn       Silt Learn         12-16       197R 2/2       20       Silt Learn       Silt Learn       Silt Learn         12-16       197R 2/2       20       Silt Learn       Silt Learn       Silt Learn         "group ChConcentration. Dringdom. RM-Reference Matrix CS-Coverso or Coulds Surd Grains. Theorem PL=Pone Lining, MeMatrix       Silt Learn       Silt Learn         "group ChConcentration. Dringdom. RM-Reference Matrix CS-Coverso or Coulds Surd Grains. Silt Learn       Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators (Art)       Control (F2)         Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators (Art)       Control (F2)       Control (F2)         Bask Hats (A)       Leary (Matrix (S)       Control (F2)       Control (F2)       Control (F2)         Statutor (F1)       Depited Balow Dark Surface (A1)       Depited Matrix (S)       Sold (F2)       Sold (F2)         Statutor (F2)       Restrictive Layer (If present):       Type:       Control (F2)       Sold (F2)         Statutor (F2)       Hydric Soil Present?       Yee       No       X	Index         Color (mailed)         %         Type         Ind <sup>2</sup> Texture         Remarks           0-12         10YR 2/1         100			the depth	needed to docume		nfirm the abse	nce of indicators.)		
0-12       10YR 2/1       100       Sitt Loam         12:16       10YR 2/1       80       Sitt Loam         12:16       10YR 2/2       20       Sitt Loam         11:16       10YR 2/2       20       Sitt Loam         11:17       Sitt Loam       Sitt Loam       Sitt Loam         11:17       Sitt Loam       Sitt Loam       Sitt Loam         11:16       10YR 2/2       Sitt Loam       Sitt Loam         11:17       Sitt Loam       Sitt Loam       Sitt Loam         11	0-12       19YR 2/1       100       Silt Loam         12.16       19YR 2/2       20       Silt Loam         12.16       19YR 2/2       20       Silt Loam         112.16       19YR 2/2       Silt Loam       Silt Loam         112.17       100       Silt Loam       Silt Loam         112.18       20 m/2       Silt Loam       Silt Loam         112.19					4	2			
12:16       10 YR 2/1       80       Silt Loam         12:16       10 YR 2/2       20       Silt Loam         12:16       10 YR 2/2       20       Silt Loam         Type: C-Consentation, Di-Depticion, RM-Robused Matrix, CSP-Covered or Coated Sand Grains.       *Location; PL-Pore Linng, M-Materix.         Type: C-Consentation, Di-Depticion, RM-Robused Matrix, CSP-Covered or Coated Sand Grains.       *Location; PL-Pore Linng, M-Materix.         Type: C-Consentation, Di-Depticion, RM-Robused Matrix, CSP-Covered or Coated Sand Grains.       *Location; PL-Pore Linng, M-Materix.         Type: C-Consentation, Di-Depticable to all LRRs, unless otherwise noted.)       Indicators: CApplicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soli?         Hetrosci (A1)       Loamy Gayed Matrix (P2)       Core (repain in Remarks)       Deptieted Batrix (P2)       Core (repain in Remarks)         Deptieted Batrix (P3)       Loamy Gayed Matrix (P3)       Protocol Matrix (P3)       *Material Protocol Matrix (P3)       *Material Protocol Matrix (P3)         Restrictive Layer (If present):       Type:	12:16       10 YR 2/1       80       Silt Learn         12:16       10 YR 2/2       20       Silt Learn         12:16       10 YR 2/2       20       Silt Learn         Type: C-Concentration. D-Dealetion, RM-Roduced Matrix, CS=Covered or Coated Sand Grains.       *Location PL-Pero Ling, M-Matrix.         Type: C-Concentration. D-Dealetion, RM-Roduced Matrix, CS=Covered or Coated Sand Grains.       *Location PL-Pero Ling, M-Matrix.         Type: C-Concentration. D-Dealetion, RM-Roduced Matrix, CS=Covered or Coated Sand Grains.       *Location PL-Pero Ling, M-Matrix.         Type: C-Concentration. D-Dealetion, RM-Roduced Matrix, CS3       Can Matrix (R3)       Loarny Gloged Matrix (R2)         Heide Galow. Dark Surface (A11)       Copieted Matrix (R2)       Other (explain in Remarks)         Copieted Bolow. Dark Surface (A12)       Redox Dark Surface (R1)       Very Statow Dark Surface (R12)         Sandy Mudy Mineral (S1)       Depleted Dark Surface (R1)       Totok Surface (R2)       Indicators (R12)         Sandy Mudy Mineral (S1)       Depleted Dark Surface (R1)       Totok Surface (R12)       Indicators (R12)         Sandy Mudy Mineral (S1)       Depleted Dark Surface (R1)       Totok Surface (R12)       Indicators (R12)         Sandy Mudy Mineral (S1)       Depleted Dark Surface (R11)       Paret Matrix (R2)       No _ X         Sandy Mudy Mater (A1)       Very Matrix (A14				Color (moist)	% Туре	LOC		Remark	S
12:16       19YR 2/2       20       Silt Loam         "Type: C=Concentration, D=Depietron, RM=Rotuced Matrix, CS=Covered or Control Sand Grains, Incontrol PL=Pore Lining, M=Matrix, Hydric Solls, Inclustors: (Applicable to all LRs, unless otherwise noted.)       Indicators for Problematic Hydric Solls <sup>1</sup> : 2 on Matrix (Stolls <sup>1</sup> : 1 Stady Reduct(N1)         Held: Expected (A)       Stady Reduct(Stol)       Indicators for Problematic Hydric Solls <sup>1</sup> : 2 on Matrix (Stolls <sup>1</sup> : 1 Stady Reduct(N1)         Bigk Held: (A)       Learny (May Minori (Stol)       Reduct(N2)         Bigk Held: (A)       Learny (May Minori (Stol)       Reduct Matrix (F2)         Depieted Betro Dark Surface (A11)       Depieted Matrix (F2)       Other (explain in Remarks)         Depieted Betro Matrix (Stol)       Reduc Dagressions (F5)       **indicators of hydrophylic vegatilition and welland hydrology matrix (Stol Present? Yes       No       X         Restrictive Lagyer (Inclustors:	12-16       19YR 2/2       20       Silt Loam         "Type: C=Conventuration. D=Deptetion. RM=Reduced Matrix, C8=Converse or Coated Stard Grains.       "Location: PL=Perst Lining, M=Matrix.         Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted)       Indicators for Problematic Hydric Solls":         Histic Expander (A2)       Stardy Redux (S5)       2 or Matrix (MD)         Black Hate (A3)       Coation: PL=Perst Lining, M=Matrix.         Depted Balon CA2)       Stardy Redux (S5)       Red Parent Matrix (T2)         Dispted Matrix (S1)       Dopted Matrix (S2)       Offer (resplan in Remarks)         Base, Hate (A3)       Loamy Greyel Matrix (S1)       Offer (resplan in Remarks)         Basely Redux (LS1)       Dopted Matrix (S1)       Offer (resplan in Remarks)         Restrictive Larger (f Present):       Tribit Data Surface (A11)       Dopted Matrix (S1)         Startictive Larger (f Present):       Trype:       Problematic         Type:       Implementation of one required: check all that apply)       Secondary Indicators (2 or more required S1)         Hydro Cody       Mater statined Larves (18)       Mater statined Larves (18)       Genomatrix (14)         Statuted Variance (A11)       Apatitic Invertational Relation In Problematic Invertigit 1       Secondary Indicators (2 or more required the Matrix (14)         Statuted Variand Matrix (S1)									
Type: C=Concentration, D=Dupletion, RM=Reduced Matrix, CS=Covered or Coalted Sand Grains. <sup>1</sup> Location: PL=Pers Lining, M=Matrix, Methatrix,          Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Solls <sup>1</sup> :          Heitesd (A1)       Sandy Redox (S5)       2 cm Murk (M0)         Black Hate, (A3)       Loamy Mucky Mintra (F1) [except MLRA 1)       Very Shallow Dark Sufface (T12)         Depleted Blow Dark Sufface (A11)       Depleted Matrix (F2)       Other (explain in Remarks)         Depleted Blow Dark Sufface (A12)       Redox Dark Sufface (F6)           Samdy Reyord Matrix (S4)       Depleted Dark Sufface (F7)           Samdy Reyord Matrix (S4)       Redox Dark Sufface (F7)           Speph (notes)::::::::::::::::::::::::::::::::::::	Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       *Location PL=Pore Lining, M=Matrix.         Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils*:         Haltcoll (A1)       Sandy Robox (S5)	-						·		
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Solls <sup>2</sup> :         Hatasol (A1)       Sandy Redox (S5)       2 cm Muck (A10)         Hatasol (A2)       Standy Redox (S5)       Problematic Hydric Solls <sup>2</sup> :         Black Histic (A2)       Leamy Gleged Matrix (S0)       Red Parent Material (TF2)         Depleted Batox Dark Surface (A11)       Depleted Matrix (F2)       Other (explain in Remarks)         Sandy Mucky Mineral (S1)       Depleted Matrix (F2) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Type:       Sandy Mucky Mineral (S1)       Redox Depressions (F8) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present.         Type:       Problematic.       No _ X       X         Metrix Layor (If present):       Yes       No _ X         Type:       Primary Indicators (2 or more required).       Water stained Leaves (B0) (Except MLRA       Water stained Leaves (B0) (MLRA1, 4, 4, and 4B)         Matrix Marka (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)       Saturation (V3)         Saturation (A3)       Saturation Visible on Actial Imagery Dry - Dift Deposits (B3)       Dift of Capetatian Remarks)       Shellow Aquater (D3)         Saturation (A3)       Saturatin Visible on Actial Imagery Vigores Saturation (A4) <t< td=""><td>Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Solls<sup>1</sup>:         Histool (A1)       Sandy Redox (S5)       2 om Muck (A10)         Histool (A2)       Stringeel Matrix (S6)       Red Parent Material (TF2)         Hydrogen Sulfide (A4)       Loamy Glueyed Matrix (F2)       Other (explain in Remarks)         Depieted Below Dark Surface (A12)       Redox Dark Surface (F1)       Other (explain in Remarks)         Sandy Macky Mineral (S1)       Depleted Matrix (F2)       Other (explain in Remarks)         Sandy Macky Mineral (S1)       Depleted Matrix (F2)       Indicators of hydrophytic vegetation and wellan hydrology mate be present, unless disturbed or problematic.         Restrictive Layer (if present):       Type:       Primary Indicators (F1)       Water stained Leaves (F2)         Surface (Vater (A1)       Water stained Leaves (B9) (Except MLRA       Water stained Leaves (B9)       Water stained Leaves (B9)         Surface Water (A1)       Water stained Leaves (B1)       Darage Patients (B1)       Darage Patients (B1)         Surface Nater (A2)       1, 2, 4A, and 4B)       Day-Season Water Table (C2)       Saturation (Nature And AB)         Surface Nater (A1)       Mater stained Leaves (B1)       Darage Patiens (B1)       Darage Patiens (B1)         Surface Nater (A1)       Mater stained Leaves (B1)       Darage Patiens (B1)       Da</td><td>12-16</td><td>10YR 2/2</td><td>20</td><td></td><td></td><td></td><td>Silt Loam</td><td></td><td></td></t<>	Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Solls <sup>1</sup> :         Histool (A1)       Sandy Redox (S5)       2 om Muck (A10)         Histool (A2)       Stringeel Matrix (S6)       Red Parent Material (TF2)         Hydrogen Sulfide (A4)       Loamy Glueyed Matrix (F2)       Other (explain in Remarks)         Depieted Below Dark Surface (A12)       Redox Dark Surface (F1)       Other (explain in Remarks)         Sandy Macky Mineral (S1)       Depleted Matrix (F2)       Other (explain in Remarks)         Sandy Macky Mineral (S1)       Depleted Matrix (F2)       Indicators of hydrophytic vegetation and wellan hydrology mate be present, unless disturbed or problematic.         Restrictive Layer (if present):       Type:       Primary Indicators (F1)       Water stained Leaves (F2)         Surface (Vater (A1)       Water stained Leaves (B9) (Except MLRA       Water stained Leaves (B9)       Water stained Leaves (B9)         Surface Water (A1)       Water stained Leaves (B1)       Darage Patients (B1)       Darage Patients (B1)         Surface Nater (A2)       1, 2, 4A, and 4B)       Day-Season Water Table (C2)       Saturation (Nature And AB)         Surface Nater (A1)       Mater stained Leaves (B1)       Darage Patiens (B1)       Darage Patiens (B1)         Surface Nater (A1)       Mater stained Leaves (B1)       Darage Patiens (B1)       Da	12-16	10YR 2/2	20				Silt Loam		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils <sup>2</sup> :         Histool (A1)       Sandy Redox (S5)       2 cm Mack (A10)         Histool (A2)       Subjeed Matrix (S9)       Red Parent Material (T2)         Depleted Balow Dark Surface (A11)       Depleted Matrix (F2)       Other (explain in Remarks)         Depleted Balow Dark Surface (A12)       Redox Dark Surface (F6)       ************************************	Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils <sup>1</sup> :         Hatsoel (A1)       Sandy Rédox (S6)       2 om Muck (A10)         Hatsoel (A2)       Stroped Matrix (S6)       Red Paert Material (TF2)         Depleted Matrix (S4)       Loamy Gleged Matrix (F2)       Other (explain in Remarks)         Depleted Matrix (F3)       Redox Dark Surface (F1)       Depleted Matrix (F3)         Sandy Mucky Mineral (S1)       Depleted Matrix (F3)       "indicators of hydrophytic vegetation and wellan hydrology must be present, unless disturbed or podematic."         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       "indicators of hydrophytic vegetation and wellan hydrology must be present, unless disturbed or podematic."         Restrictive Layer (If present):       Trype:		·							
tydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)     Indicators for Problematic Hydric Soils <sup>2</sup> :       Hintsol (A1)     Sandy Redox (S5)     2 cm Muck (A10)       Hintsol (A2)     Slapped Marix (S1)     Red Parent Material (T2)       Black Histic (A3)     Loamy Gleyed Marix (F2)     Other (explain in Remarks)       Depleted Below Dark Surface (A11)     Depleted Marix (F2)     Other (explain in Remarks)       Sandy Mucky Mineral (S1)     Depleted Marix (F2)     *indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.       Sandy Gleyed Marix (S4)     Redox Dark Surface (F6)     *indicators of hydrophytic vegetation and wetland hydrology Indicators (F8)       Price:	tydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils <sup>1</sup> :         Histoni (A1)       Sandy Redox (S5)       2 cm Muck (A10)         Histoni (A2)       Black Histo (A3)       Loamy Glaved Matrix (S6)       Red Parent Material (TF2)         Updagen Sufface (A4)       Loamy Glaved Matrix (F3)       Other (explain in Remarks)         Depleted Matrix (F3)       Redox Dark Surface (F6)       *indicators of hydrophylic vegetation and wellan         Sandy Micky Mineral (S1)       Depleted Matrix (F3)       *indicators of hydrophylic vegetation and wellan         Sandy Gleyed Matrix (F4)       Redox Dark Surface (F7)       *indicators of hydrophylic vegetation and wellan         Systematic       Redox Dark Surface (F7)       *indicators of hydrophylic vegetation and wellan         Pripe:       Problematic       Problematic       Yes       No       X         Prop:       Prophylic vegetation and wellan       Material (TF2)       Waterial (TF2)       Waterial (TF2)       No       X         Ype:       Prophylic vegetation and wellan       Redox Depressions (F8)       Prophylic vegetation and wellan       No       X         Ype:       Prophylic vegetation and wellan       Redox Depressions (F8)       Prophylic vegetation and wellan       No       X         Ype:       Prophylic vegetation									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils <sup>2</sup> :         Hatsol (A1)       Sandy Redox (S5)       2 cm Mack (A10)         Hatsol (A2)       Surped Matrix (S8)       Red Parent Material (TF2)         Depleted Batov Dark Surface (A1)       Leamy Gleyed Matrix (F2)       Other (explain in Remarks)         Depleted Batov Dark Surface (A12)       Redox Dark Surface (F6)       ************************************	Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils <sup>1</sup> :         Histosol (A1)       Sandy Redox (S6)       2 om Muck (A10)         Histosol (A2)       Sintypee Marix (S6)       Red Parent Material (TF2)         Hydragen Sulfide (A4)       Loamy Glaved Marix (F2)       Other (explain in Remarks)         Depieted Blow Dark Surface (A11)       Depieted Marix (F3)       Other (explain in Remarks)         Sandy Mucky Mineral (S1)       Depieted Dark Surface (F6) <sup>1</sup> indicators of hydrophytic vegetation and wellan hydrology must be present, unless disturbed or problematic.         Restrictive Layer (If present):       Type:       Primary Indicators:       No _ X         Primary Indicators (R1)       Water stained Laws (B6) (Except MLRA       Water stained Laws (B7)       Water stained Laws (B7)         Surface Water (A1)       Water stained Laws (B6) (Except MLRA       Water stained Laws (B7)       Water stained Laws (B7)         Surface Water (A1)       Yes conception (B1)       Depresent (B1)       Water stained Laws (B7)       Water stained Laws (B7)         Surface Water (A1)       Yes conception (B1)       Darlaws (B1)       Darlaws (B1)       Darlaws (B1)         Sufface Water (A1)       Yes conception (B2)       Secondary Indicators (C2)       Secondary Indicators (C2)       Secondary Indicators (C2)       Secondary Indicators (C2)						- Craine		<sup>2</sup> contine: DI - Dore Lining A	A-Matrix
Histosol (A1)       Sandy Redox (S5)       2 cm Muck (A10)         Histo Eppedion (A2)       Stripped Matrix (S6)       Red Parent Material (TF2)         Black Histo (A3)       Loamy Mucky Mineral (P1) (except MLRA 1)       Very Shaltow Dark Surface (TF12)         Hydrogen Sulfac (A4)       Loamy Gleyd Matrix (F2)       Other (explain in Remarks)         Thick Dark Surface (A11)       Depleted Matrix (F3)       "Indicators of hydrophysic separation and welland hydrology must be present unless disturbed or problematic.         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       "Indicators of hydrophysic separation and welland hydrology must be present.         Pripe:       Depleted Selow Dark Surface (F7)       No _ X         Restrictive Layer (If present):       Problematic.       No _ X         Pype:       Depleted Natrix (F3)       Secondary Indicators (2 or more required).         Surface Water (A1)       Water stained Leaves (B9) (Except MLRA       (MLRA1, 2, 4A, and 4B)         High Water Table (A2)       1, 2, 4A, and 4B)       (MLRA1, 2, 4A, and 4B)         Saturation (A3)       Saturation (A3)       Saturation (A4)       Dry-Season Water Table (C2)         Sediment Deposite (B2)       Divideogen Sufface Doris (B13)       Dry-Season Water Table (C2)       Saturation (A4B)         Sufface Soil Cracks (B6)       Sutration (A5)       Saturation (C1)       Sat	Histosol (A1)       Sandy Redox (S5)      2 cm Muck (A10)         Histosol (A2)       Stripped Matrix (S6)       Red Parent Muterial (TF2)         Black Histor (A2)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Surface (TF12)         Hydrogen Suffice (A4)       Loamy Mucky Mineral (F2)       Other (explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Matrix (F2)       Other (explain in Remarks)         Sandy Mucky Mineral (S1)       Depleted Matrix (F6)       "Indicators of hydrophylic vagetation and vetting hydrology muck by present, unless disturbed or problematic."         Restrictive Layer (If present):       Type:							Indic	-	
Halic Epipedon (A2)       Simpled Matrix (S6)       Red Parent Material (TF2)         Block Histic (A3)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Surface (TF12)         Depleted Below Dark Surface (A11)       Depleted Matrix (F2)       Other (explain in Remarks)         Sandy Mucky Mineral (S1)       Depleted Matrix (F2)       Protein in Remarks)         Sandy Mucky Mineral (S1)       Depleted Matrix (F2)       Protein in Remarks)         Depleted Plantix (S4)       Redox Depressions (F8)       Proteinatic         Restrictive Layer (If present):	Habb Epipedon (A2)       Stripped Matrix (S6)       Red Parent Material (TF2)         Black Histic (A3)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Surface (TF12)         Depleted Below Dark Surface (A11)       Depleted Matrix (TS2)       Other (explain in Remarks)         Trick Dark Surface (A12)       Redox Dark Surface (F6)       "Indicators of hydrophytic vegetation and wetlam hydrology must be present, unless disturbed or sondy Gleyed Matrix (S4)       Redox Dark Surface (F7)       "Indicators of hydrophytic vegetation and wetlam hydrology must be present, unless disturbed or problematic.         Restrictive Layer (If present):       Type:	-							-	
Black Histic (A3)       Loamy Mucky Mineral (F1)(except MLRA 1)       Very Shallow Dark Surface (TF12)         Hydrogen Suffice (A4)       Loamy Gleyed Matrix (F2)       Other (explain in Remarks)         Depleted Below Dark Surface (A12)       Redox Dark Surface (F7)       ************************************	Black Histic (A3)       Loamy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Surface (FF12)         Hydrogen Suffice (A1)       Depleted Below Dark Surface (A12)       Redex Dark Surface (F6)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       Indicators of Hydrophytic vegetation and wetlan hydrology must be present, unless disturbed or problematic.         Restrictive Layer (If present):       Type:		-	1						
Hydrogen Sulfde (A4)       Loamy Gleyed Matrix (F2)       Other (explain in Remarks)         Depleted Baktow Dark Surface (A11)       Depleted Matrix (F3)       "Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problemate.         Standy Oleyed Matrix (S4)       Redox Dark Surface (F6)       "Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problemate.         Restrictive Layer (If present):	Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Other (explain in Remarks)         Depleted Below Dark Surface (A12)       Redox Dark Surface (F7)       *indicators of hydrophytic vegetation and wellan hydrology must be present, unless disturbed or problemate.         Sandy Gleyed Matrix (S4)       Depleted Dark Surface (F7)       *indicators of hydrophytic vegetation and wellan hydrology must be present, unless disturbed or problemate.         Restrictive Layer (if present):							(except MLRA 1)		
Depleted Below Dark Surface (A1)       Depleted Matrix (F3)         Thick Dark Surface (A12)       Redox Dark Surface (F6)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)         Particle Surface (A12)       Redox Depressions (F8)         Restrictive Layer (if present):       rpoblematic.         Type:	Depteted Below Dark Surface (A11)       Depteted Matrix (F3)         Trick Dark Surface (A12)       Redox Dark Surface (F7)         Sandy Mucky Mineral (S1)       Depteted Dark Surface (F7)         Sandy Mucky Mineral (S1)       Depteted Dark Surface (F7)         Problematic       Problematic         Restrictive Layer (if present):		-	4)				, oxoopt <u>-</u> ,		
Thick Dark Surface (A12)       Redox Dark Surface (F6)       "Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       "indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Restrictive Layer (ff present):       //ypc:	Thick Dark Surface (A12)       Redox Dark Surface (F6)       "Indicators of hydrophytic vegetation and wetlan hydrology must be present, unless disturbed or problematic."         Sandy Gleyed Matrix (S4)       Depleted Dark Surface (F7)       "Indicators of hydrophytic vegetation and wetlan hydrology must be present, unless disturbed or problematic."         Restrictive Layer (If present):       //ypc:         Depleted funches):       Hydric Soil Present? Yes       No         YDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (Ininimum of one required: check all that apply)       Secondary Indicators (2 or more required: high Water stained Leaves (B9) (Except MLRA       Water stained Leaves (C1)         Surface Water (A1)       Water stained Leaves (B9) (Except MLRA       Water stained Leaves (C1)       Dariage Patterns (G10)         Statication (A3)       Satt Crust (G1)       Dariage Patterns (G10)       Dariage Patterns (G10)       Dariage Patterns (G10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dray-Season Water Table (C2)       Saturation Nable on Aerial Image         Orifit Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Image         Magi Mator Crust (B4)       Presence of Reduced Ion (C4)       Saturation (C4)       Raised Ant Mounds (D6) (LR A)         Inundation Visible on Aerial Imager (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7) </td <td></td> <td></td> <td></td> <td>A 4 4 \</td> <td></td> <td></td> <td></td> <td></td> <td>I Kemarsj</td>				A 4 4 \					I Kemarsj
Sandy Muchy Mineral (S1)       Depleted Dark Surface (F7) <sup>a</sup> Indicators of hydrophytic vegetation and welland hydrology must be present. unless disturbed or problematic.         Restrictive Layer (if present):	Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       "Indicators of hydrophytic vegetation and wellan hydrology must be present, unless disturbed or problematic."         Restrictive Layer (if present):			-	A11)					
	Sandy Muck (S1)		-				. ,	х	<sup>3</sup> Indicators of hydrophytic veç	jetation and wetland
Restrictive Layer (if present):	Restrictive Layer (if present):		-					1	hydrology must be present,	unless disturbed or
Type::	Type:	Restrictive						T		
Prepth (inches):       Hydric Soil Present? Yes       No       X         temarks:             YDROLOGY             Vetland Hydrology Indicators:           Primary Indicators (minimum of one required; check all that apply) <td>Prepth (inches):       Image: the stained leaves (B2)       No_X         MVDROLOGY       Secondary Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (2 or more required; Surface Water (A1)         Surface Water (A1)       Water stained Leaves (B2) (Except MLRA)       (MLRA1, 2, 4A, and 4B)         Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sufide Odor (C1)       Saturation (D3)         Orift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Genomorphic Position (D2)         Agal Mat or Crust (B4)       Presence of Reduced forn (C4)       Shallow Aquitard (D3)         Inon Deposits (B5)       Recent fron Reduction in Plowed Solis (C6)       Fac-Neutral Test (D5)         Surface Soli Cracks (B6)       Stituted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Isolar Table Present?       Yes       No       X         Video Cracks (B6)       Stituted or Stressed Plants (D1) (LRR A)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Popth (inches):       &gt;16         Video Cracks Curre Surface (B8)       No       X       Depth (inches):       &gt;16<td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td>	Prepth (inches):       Image: the stained leaves (B2)       No_X         MVDROLOGY       Secondary Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (2 or more required; Surface Water (A1)         Surface Water (A1)       Water stained Leaves (B2) (Except MLRA)       (MLRA1, 2, 4A, and 4B)         Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sufide Odor (C1)       Saturation (D3)         Orift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Genomorphic Position (D2)         Agal Mat or Crust (B4)       Presence of Reduced forn (C4)       Shallow Aquitard (D3)         Inon Deposits (B5)       Recent fron Reduction in Plowed Solis (C6)       Fac-Neutral Test (D5)         Surface Soli Cracks (B6)       Stituted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Isolar Table Present?       Yes       No       X         Video Cracks (B6)       Stituted or Stressed Plants (D1) (LRR A)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Popth (inches):       >16         Video Cracks Curre Surface (B8)       No       X       Depth (inches):       >16 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
Improve the second and	termarks:         AYDROLOGY         Vettand Hydrology Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (2 or more required; heaves (B9)         High Water Table (A2)       1, 2, 4A, and 4B)       (MLRA1, 2, 4A, and 4B)         Saturation (A3)       Sait Crust (B1)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Image         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Agal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Solis (C6)       Fac-Neutral Test (D5)         Sundator Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Veter Table Present? Yes       No       X         Vater Table Present?       Yes       No       X       Depth (inches):       >16         Vater Table Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X	•••	es):					Hydric Soil Pres	sent? Yes	No X
HybroLoGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (2 or more required)         Surface Water (A1)       1, 2, 4A, and 4B)       Water stained Leaves (B9)         High Water Table (A2)       1, 2, 4A, and 4B)       (MLRA1, 2, 4A, and 4B)         Saturation (A3)       Salt Crust (B1)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Softment Deposits (B2)       Hydrogen Suffice Odor (C1)       Saturation Visible on Aerial Imagery.         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algai Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Solis (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (87)       Other (Explain in Remarks)       Frost-Heave Hummocks (07)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       >16       Yes	Hybrology       Metand Hydrology Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (2 or more required; (MLRA 1, 2, 4A, and 4B)         Surface Water (A1)       Water stained Leaves (B9) (Except MLRA (MLRA1, 2, 4A, and 4B)       Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)         Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sufface Odr (C1)       Saturation Visible on Aerial Image         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Agal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Solis (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (87)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       >16       Yes							-		
Surface Water (A1)       Water stained Leaves (B9) (Except MLRA       Water stained Leaves (B9)         High Water Table (A2)       1, 2, 4A, and 4B)       (MLRA1, 2, 4A, and 4B)         Saturation (A3)       Sati Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery of the position (D2)         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       >16         Yes       No       X         No       X       Depth (inches):       >16         Yes       No       X       Depth (inches):       >16         Saturation Present?       Yes       No       X         Dept	Surface Water (A1)       Water stained Leaves (B9) (Except MLRA       Water stained Leaves (B9)         High Water Table (A2)       1, 2, 4A, and 4B)       (MLRA1, 2, 4A, and 4B)         Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Image         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       >16         Field Observations:       No       X       Depth (inches):       >16         Saturation Present?       Yes       No       X       Depth (inches):       >16         Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes			rs:						
High Water Table (A2)       1, 2, 4A, and 4B)       (MLRA1, 2, 4A, and 4B)         Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       >16         Water Table Present? Yes       No       X       Depth (inches):       >16         Saturation Present? Yes       No       X       Depth (inches):       >16         Yes       No       X       Depth (inches):       >16       Yes       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Yes <th>High Water Table (A2)       1, 2, 4A, and 4B)       (MLRA1, 2, 4A, and 4B)         Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Image         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       &gt;16       Yes       No       X         Saturation Present?       Yes       No       X       Depth (inches):       &gt;16       Yes       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Yes       No       X</th> <th>Primary Indi</th> <th>icators (minimum c</th> <th>of one req</th> <th>uired; check all th</th> <th></th> <th></th> <th></th> <th>Secondary Indicators (2</th> <th>or more required)</th>	High Water Table (A2)       1, 2, 4A, and 4B)       (MLRA1, 2, 4A, and 4B)         Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Image         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       >16       Yes       No       X         Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Yes       No       X	Primary Indi	icators (minimum c	of one req	uired; check all th				Secondary Indicators (2	or more required)
Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery (D2)         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       >16         Field Observations:       No       X       Depth (inches):       >16         Saturation Present?       Yes       No       X       Depth (inches):       >16         Yes       No       X       Depth (inches):       >16       Yes       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Statiable:       Statiable	Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Image         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       >16         Water Table Present?       Yes       No       X         No       X       Depth (inches):       >16         Yes       No       X       Depth (inches):       16         Zescribe Recorded		-	.2)				(Except MLRA		. ,
Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       No       X       Depth (inches):       >16         Water Table Present?       Yes       No       X       Depth (inches):       >16         Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous in	Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imager         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       >16       Yes         Field Observations:       No       X       Depth (inches):       >16         Saturation Present?       Yes       No       X       Depth (inches):       >16         Saturation Present?       Yes <td< td=""><td></td><td></td><td>_,</td><td></td><td>Salt Crust (E</td><td>311)</td><td></td><td>Drainage Patte</td><td>rns (B10)</td></td<>			_,		Salt Crust (E	311)		Drainage Patte	rns (B10)
Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Imagery         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       >16       Wetland Hydrology Present?         Saturation Present?       Yes       No       X       Depth (inches):       >16         Vater Table Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Depth (inches):       >16       Yes       No       X       Depth (inches):       >16       Yes       No       X         Depth Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Staulable	Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Image         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       >16         Wetland Hydrology Present?       Yes       No       X         No X       Depth (inches):       >16       Yes       No       X         Includes capillary fringe)       Depth (inches):       >16       Yes       No       X         Depth (inches):       >16       Yes       No       X       Depth (inches):       Depth (inches):       Depth (inches):       No       X         Depth (inches):       >16       Yes       No       X       Depth (inches):       Depth (inches):       Depth (inches):       Depth (inches):       Depth (inches):       Stauration Present?       Yes		_ 、 ,					i		
Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):	Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):		-	B2)		·	. ,			
Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       >16         Wetland Hydrology Present?       Yes       No       X         No       X       Depth (inches):       >16         Saturation Present?       Yes       No       X         Includes capillary fringe)       No       X       Depth (inches):         Depth Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Yes       No	Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Pepth (inches):       >16         Wetland Hydrology Present?       Yes       No       X         Saturation Present?       Yes       No       X         No       X       Depth (inches):       >16         Saturation Present?       Yes       No       X         Depth (inches):       >16       Yes       No         Yes       No       X       Depth (inches):       >16         Secorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Peresentions), if available:			,				,		
Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       >16       Wetland Hydrology Present?         Field Observations:       No       X       Depth (inches):       >16       Yes       No       X         Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Previous inspections), if available:       Previous inspections), if available:	Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Tepth (inches):       >16       Wetland Hydrology Present?         Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Staulable:       Staulable:			34)			-			
Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Tepth (inches):       >16         Wetland Hydrology Present?       Yes       No       X         Saturation Present?       Yes       No       X         No       X       Depth (inches):       >16         Yes       No       X       Depth (inches):       >16         Saturation Present?       Yes       No       X         Depth (inches):       >16       Yes       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Field Observations:       Frost-Heave Hummocks (D7)         Surface Water Present? Yes       No       X       Depth (inches):       >16         Water Table Present? Yes       No       X       Depth (inches):       >16         Saturation Present? Yes       No       X       Depth (inches):       >16         Saturation Present? Yes       No       X       Depth (inches):       >16         Sourcide capillary fringe)       Yes       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Staulable:			,			·	. ,		
Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Field Observations:       Field Observations:         Surface Water Present?       Yes       No       X       Depth (inches):       >16         Water Table Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Field Observations:       Surface Water Present? Yes       No       X       Depth (inches):       >16       Wetland Hydrology Present?         Noter Table Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Staulable:       Staulable:       Staulable:		-	(B6)				( )		. ,
Sparsely Vegetated Concave Surface (B8)         Field Observations:         Surface Water Present? Yes       No       X       Depth (inches):       >16         Water Table Present? Yes       No       X       Depth (inches):       >16         Saturation Present? Yes       No       X       Depth (inches):       >16         Secribe capillary fringe)       Ves       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Sparsely Vegetated Concave Surface (B8)         Field Observations:         Surface Water Present? Yes       No       X       Depth (inches):       >16         Water Table Present? Yes       No       X       Depth (inches):       >16       Wetland Hydrology Present?         Saturation Present? Yes       No       X       Depth (inches):       >16       Yes       No       X         Saturation Present? Yes       No       X       Depth (inches):       >16       Yes       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		-		agery (B7)					
Surface Water Present?       Yes       No       X       Depth (inches):       >16       Wetland Hydrology Present?         Water Table Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Saturations, if available:       Yes	Surface Water Present?       Yes       No       X       Depth (inches):       >16       Wetland Hydrology Present?         Water Table Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Saturations, if available:       Saturations, if available:       Saturations, if available:		Sparsely Vegetated	Concave S	urface (B8)					
Nater Table Present?       Yes       No       X       Depth (inches):       >16       Wetland Hydrology Present?         Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         includes capillary fringe)       No       X       Depth (inches):       >16       Yes       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       If available:       If available	Nater Table Present?       Yes       No       X       Depth (inches):       >16       Wetland Hydrology Present?         Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         includes capillary fringe)       No       X       Depth (inches):       >16       Yes       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Statistical photos, previous inspections), if available:       Statistical photos, previous inspections), if available:	Field Obser	rvations:							
Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Second Previous inspections), if available:       Second Previous inspections), if available:	Saturation Present?       Yes       No       X       Depth (inches):       >16       Yes       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Second Present Previous P	Surface Wate	r Present? Yes		No <u>X</u>	Depth (inches):				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Water Table F	Present? Yes		No X	Depth (inches):	>16	Wetland Hyd	rology Present?	
					No <u>X</u>	Depth (inches):	>16		Yes	No <u>X</u>
emarks:	emarks:	Describe Rec	orded Data (stream g	auge, mon	itoring well, aerial ph	notos, previous inspecti	ions), if availabl	e:		
emarks:	emarks:									
		emarks:								
		indiko.								

	WETLAND I	DETERMINATIO	N DATA FOI	RM - Weste	rn Mountains, Val	leys, and C	PHS # oast Region	6150
roject/Site:	School District		City/County:		lens/Columbia	Sampling D	-	23/2017
pplicant/Owner:	St. Helens S	School District			State:	OR	Sampling Poin	t: <b>3</b>
vestigator(s):	C	R/TF	Section, To	wnship, Range:	Sectio	on 4, Townshi	p 4N, Range 1W	
andform (hillslop	e, terrace, etc.:)	Slope	-	Local relief (cor	ncave, convex, none):	none	Slope (%	): 1
ubregion (LRR):		LRR A	Lat:	45.8620	<b>197</b> Long:	-122.8076	29 Datun	n: WGS84
oil Map Unit Nar		ck outcrop - Xerum	- prepts complex	k. undulating		ssification:	None	
		the site typical for this tir	· ·	Yes	X No		, explain in Remarks	)
re vegetation	-		-		Are "Normal Circumstand			, ,
e vegetation					, explain any answers in Re			_
						sindiko.)		
UMMARY C	DF FINDINGS -	• Attach site map	showing sam	pling point	locations, transects	, important f	eatures, etc.	
/drophytic Vege	etation Present?	Yes X No						
ydric Soil Prese	nt?	Yes No	X	ls Sampled Ar a Wetlan			No X	_
etland Hydrolog	gy Present?	Yes X No						
emarks:								
EGETATIO	N - Use scienti	fic names of plant	ts.					
		absolute	Dominant	Indicator	Dominance Test wor	ksheet:		
ee Stratum (	nlot sizo:	% cover	Species?	Status	Number of Dominant Coo	alaa		
	piot size.	)			Number of Dominant Spe That are OBL, FACW, or		2	(A)
							2	_(~)
					Total Number of Dominar	nt		
					Species Across All Strata		2	(B)
		0	= Total Cover			·		_(-)
pling/Shrub Str	ratum (plat size)	<u> </u>			Dereent of Deminent Cro			
	ratum (plot size:	)			Percent of Dominant Spe That are OBL, FACW, or		100%	(A/B)
,						TAC.	100 /8	_(AD)
					Prevalence Index Wo	orksheet <sup>.</sup>		
					Total % Cover of		oly by:	
					OBL Species		(1 = <b>0</b>	
		0	= Total Cover		FACW species	>	(2 = <b>0</b>	
					FAC Species	>	c 3 = <b>0</b>	_
erb Stratum (	plot size: 5	5)			FACU Species	>	(4 = <b>0</b>	
Schedonor	rus arundinaceu	is 30	X	FAC	UPL Species	>	c 5 = <b>0</b>	_
Moss		30	Χ	(FAC)	Column Totals	<b>0</b> (A)	0	(B)
Unidentifie	-	15		(FAC)				
Hypochaer		15		FACU	Prevalence Index =	B/A =	#DIV/0!	_
Plantago n	najor	10		FAC			_	
. <u></u>					Hydrophytic Vegetat			
						2- Dominance Te	Hydrophytic Vegeta	lion
		100	= Total Cover			2-Dominance Te 3-Prevalence Ind		
							Adaptations <sup>1</sup> (provide	e supporting
oody Vine Strat	tum (plot size:	)					or on a separate she	
						5- Wetland Non-	√ascular Plants <sup>1</sup>	
						Problematic Hyd	rophytic Vegetation <sup>1</sup>	(Explain)
		0	= Total Cover		<sup>1</sup> Indicators of hydric soil a	ind wetland hydro	ology must be preser	it, unless
					disturbed or problematic.			
					Ludronhutio			
Bare Ground ir	Herb Stratum				Hydrophytic Vegetation	Yes	X N	D

SOIL			PHS #	6150	-		Samp	ling Point:	3
		-	needed to docume	ent the indicator or co	onfirm the abse	nce of indicators.)			
Depth (Inchoo)	Matrix		O the (moint)	Redox Features	Loc <sup>2</sup>	Tauture		Demorto	
(Inches)	Color (moist)	%	Color (moist)	% Type'	LUC	Texture		Remarks	
0-6	10YR 2/2	100				Silt Loam			
			· . <del></del> .						
<u> </u>									
				Covered or Coated Sa			<sup>2</sup> Location: PL=Po		
Hydric Soil	Indicators: (Appl	licable to	all LRRs, unles	s otherwise noted.	.)	Indica	ators for Proble	ematic Hydric	Soils':
	Histosol (A1)			Sandy Redo	ox (S5)		2 c	cm Muck (A10)	
	Histic Epipedon (A2)	)		Stripped Ma	atrix (S6)		Re	ed Parent Materia	al (TF2)
	Black Histic (A3)			Loamy Muc	cky Mineral (F1)(	except MLRA 1)	Ve	ery Shallow Dark	Surface (TF12)
	Hydrogen Sulfide (A4	.4)		Loamy Gley	yed Matrix (F2)		Oť	ther (explain in Re	emarks)
	Depleted Below Dark	k Surface (	(A11)	Depleted Ma	atrix (F3)				
	Thick Dark Surface (	(A12)		Redox Dark	k Surface (F6)		2		
	Sandy Mucky Minera	al (S1)		Depleted Da	ark Surface (F7)	1		drophytic vegetat t be present, unle	
	Sandy Gleyed Matrix	x (S4)		Redox Depr	ressions (F8)		nyurorogy	problematic.	33 ulota 1000 5.
Restrictive	Layer (if present)	.):							
Туре:		Be	drock						
Depth (inches	3):		6			Hydric Soil Pres	sent? Yes	N	No <u>X</u>
Remarks:									
HYDROLO Wetland Hy	GY drology Indicator	ors:							
Primary Indic	cators (minimum c	of one req	uired; check all th	nat apply)			Secondary In	dicators (2 or r	more required)
	Surface Water (A1)				ed Leaves (B9)	(Except MLRA		ater stained Leav	. ,
	High Water Table (A	.2)		1, 2, 4A, an	.d 4B)		(1)	MLRA1, 2, 4A, an	id 4B)
	Saturation (A3)			Salt Crust (E				ainage Patterns (	
	Water Marks (B1)				ertebrates (B13)			y-Season Water	. ,
	Sediment Deposits (I	(B2)			Sulfide Odor (C1)				on Aerial Imagery (C
	Drift Deposits (B3)					ng Living Roots (C3)		eomorphic Positic	
	Algal Mat or Crust (B	34)			of Reduced Iron (			nallow Aquitard (D	
	Iron Deposits (B5)					lowed Soils (C6)		ac-Neutral Test (D	,
	Surface Soil Cracks	. ,	· · · · · · /D7\		Stressed Plants			aised Ant Mounds	
	Inundation Visible on Sparsely Vegetated				lain in Remarks)			ost-Heave Humm	IOCKS (UT)
Field Obser						<del></del>			
Surface Water			No X	Depth (inches):					
Water Table P		x	No	Depth (inches):	3 to 6	Wetland Hyd	drology Present	t?	
Saturation Pre	sent? Yes	Х	No	Depth (inches):	surface		Yes		lo
(includes capillar	y fringe)								
Describe Reco	rded Data (stream g	jauge, mon	itoring well, aerial pl	hotos, previous inspect	ions), if available	e:			
Remarks: Saturation i	- coociated wit		rein event free	water in the soil pit	• wee flowing	downelone The	high water tak	- and eatura	tion are
	n water perched			Nalei III IIIe Soli pit	, was nowing	downsiope. The	ากลาย เลย	le anu satura	JUII ale
derived fror									

	WETLAND D	ETERMINATION		RM - Weste	rn Mountains, Val	leys, and Co	PHS # ast Region	6150
oject/Site:	School District E	Bond Projects	City/County:	St. He	lens/Columbia	Sampling Dat	te: 3/2:	3/2017
plicant/Owner:	St. Helens So	chool District			State:	OR	Sampling Point:	4
vestigator(s):	CI	R/TF	Section, To	wnship, Range:	Sectio	on 4, Township	4N, Range 1W	
andform (hillslop	e, terrace, etc.:)	Slope		Local relief (cor	ncave, convex, none):	none	Slope (%):	0
ubregion (LRR):		LRR A	Lat:	45.8620	197 Long:	-122.80762	9 Datum:	WGS84
oil Map Unit Nan	me: Roc	k outcrop - Xerumb	- repts complex	k, undulating	NWI Cla	ssification:	None	
e climatic/hydro	logic conditions on th	ne site typical for this tin	ne of year?	Yes	X No	(if no, e	explain in Remarks)	
e vegetation	Soil	or Hydrology	significantly dist	urbed?	Are "Normal Circumstand	ces" present? (Y/N	l) <b>Y</b>	
e vegetation	Soil	or Hydrology	naturally probler	matic? If needed	, explain any answers in Re	emarks.)		
_			-					
UMMARY O			showing sam	pling point	locations, transects	, important fe	atures, etc.	
drophytic Vege	tation Present? Y	íes No	<u> </u>	Is Sampled Ar	ea within			
ydric Soil Preser	nt? Y	Yes No	X	a Wetlan			No X	
etland Hydrolog	y Present? Y	res X No						
emarks:								
		is names of plant						
	- USE SCIENTI	ic names of plant absolute	s. Dominant	Indicator	Dominance Test wor	ksheet:		
		% cover	Species?	Status				
ee Stratum (p	plot size: 30	)			Number of Dominant Spe	cies		
Quercus ga	arryana	40	X	FACU	That are OBL, FACW, or	FAC:	1	(A)
					Total Number of Dominar	it		
					Species Across All Strata	:	3	(B)
		40	= Total Cover					
apling/Shrub Stra	atum (plot size:	<b>5</b> )			Percent of Dominant Spe	cies		
					That are OBL, FACW, or	FAC:	33%	(A/B)
					Prevalence Index Wo			
					Total % Cover of	Multiply	<u> </u>	
		0	- Tetel Course		OBL Species	x 1		
		0	= Total Cover		FACW species FAC Species	x2 x3	$\frac{2}{3} = 0$	
erb Stratum (	plot size:	)			FACU Species	x 4	-	
Poa sp.		80	X	(FAC)	UPL Species	x 5	5 = 0	
Dactylis glo	omerata	20	Х	FACU	Column Totals	<b>0</b> (A)	0	(B)
}								
					Prevalence Index =	B/A =	#DIV/0!	
					Hydrophytic Vegetat	ion Indicators:		
						-	lydrophytic Vegetatio	on
						2- Dominance Tes		
		100	= Total Cover			3-Prevalence Inde: 4-Morphological A	x is ≤ 3.0' daptations <sup>1</sup> (provide :	supporting
oody Vine Stratu	um (plot size:	)					r on a separate shee	
		,				5- Wetland Non-Va	•	-1
							phytic Vegetation <sup>1</sup> (E	xplain)
		0	= Total Cover		<sup>1</sup> Indicators of hydric soil a			
					disturbed or problematic.			
					Hydrophytic			
Bare Ground in	Horb Stratum				Vegetation	Yes	No	Х

SOIL			PHS #	61	50			S	ampling Point:	4
	iption: (Describe to	the depth	needed to docu			nfirm the absen	ce of indicators.)			
Depth (Inches)	Matrix Color (moist)	%	Color (moint)		x Features Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remark	_
(incries) 0-7		100	Color (moist)		Туре		Silt Loam	aravala		5
0-7	10YR 2/2	100				<u> </u>	Silt Loan	graveis	throughout	
						<u> </u>				
						·				
						·				
T			- durand Mathin C					21 +:	N-Dana Lining M	
	centration, D=Deplet Indicators: (App						Indic		PL=Pore Lining, M	
-	Histosol (A1)		···· _····, ····		Sandy Redo				2 cm Muck (A10	
	Histic Epipedon (A2)	1			Stripped Mat				Red Parent Mat	
	Black Histic (A3)					(USC) (y Mineral (F1)	xcept MI RA 1)		_	ark Surface (TF12)
	Hydrogen Sulfide (A	4)			-	ed Matrix (F2)			Other (explain ir	
	Depleted Below Dar		A11)		Depleted Ma					r (enarks)
	Thick Dark Surface (		<b>1</b> 11)			Surface (F6)				
	Sandy Mucky Minera					irk Surface (F7)		<sup>3</sup> Indicators	of hydrophytic veg	etation and wetland
	Sandy Gleyed Matrix	. ,			Redox Depre			hydrology	must be present, u problematio	Inless disturbed or
	Layer (if present								problemate	
	Layer (il present									
Tuno		Bor								
Type: Depth (inches	s):		drock 7		-		Hydric Soil Pres	sent? Yes		No X
Type: Depth (inche: Remarks:	s):		<u>arock</u> 7				Hydric Soil Pres	sent? Yes	i	No <u>X</u>
Depth (inches Remarks:	DGY				- 		Hydric Soil Pres	sent? Yes	i	No <u>X</u>
Depth (inches Remarks: HYDROLO Wetland Hy	·	rs:	7	l that apply)	- 		Hydric Soil Pres			
Depth (inches Remarks: HYDROLO Wetland Hy Primary India	IGY drology Indicato	rs:	7			ed Leaves (B9) <b>(</b>				or more required)
Depth (inches Remarks: HYDROLO Netland Hy Primary India	IGY drology Indicato	<b>rs</b> : of one req	7			ed Leaves (B9) ( <b>E</b>			ry Indicators (2 d	or more required) eaves (B9)
Arrow Contract of the second s	OGY drology Indicato cators (minimum o Surface Water (A1)	<b>rs</b> : of one req	7		Water staine	ed Leaves (B9) (E d 4B)			ry Indicators (2 o Water stained L	or more required) eaves (B9) , <b>and 4B)</b>
Arrimary India	DGY drology Indicato cators (minimum o Surface Water (A1) High Water Table (A	<b>rs</b> : of one req	7		Water staine 1, 2, 4A, and Salt Crust (B	ed Leaves (B9) (E d 4B)			ry Indicators (2 o Water stained L (MLRA1, 2, 4A	or more required) eaves (B9) , <b>and 4B)</b> ns (B10)
HYDROLO Netland Hy Primary Indi X X	DGY drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3)	<b>rs:</b> of one req 2)	7		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve	ed Leaves (B9) <b>(E</b> d <b>4B)</b> 311)			ry Indicators (2 d Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa	or more required) eaves (B9) , <b>and 4B)</b> ns (B10) ter Table (C2)
Arrow Content of the second se	<b>IGY</b> <b>drology Indicato</b> cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1)	<b>rs:</b> of one req 2)	7		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen Su	ed Leaves (B9) <b>(E</b> d <b>4B)</b> 311) ertebrates (B13) ulfide Odor (C1)			ry Indicators (2 d Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa	or more required) eaves (B9) , <b>and 4B)</b> ns (B10) ter Table (C2) le on Aerial Imagery (C
HYDROLO Wetland Hy Primary India	GY drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (	<b>rs:</b> of one req 2) B2)	7		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi	ed Leaves (B9) <b>(E</b> d <b>4B)</b> 311) ertebrates (B13) ulfide Odor (C1)	Except MLRA		ry Indicators (2 o Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib	or more required) eaves (B9) , <b>and 4B)</b> ns (B10) ter Table (C2) le on Aerial Imagery (C sition (D2)
HYDROLO Wetland Hy Primary India X X	DGY drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits ( Drift Deposits (B3)	<b>rs:</b> of one req 2) B2)	7		Water staine <b>1, 2, 4A, and</b> Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi Presence of	ed Leaves (B9) <b>(E</b> d <b>4B)</b> 311) vrtebrates (B13) ulfide Odor (C1) izospheres along	Except MLRA	Seconda	ry Indicators (2 o Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Po	or more required) eaves (B9) , <b>and 4B)</b> ns (B10) ter Table (C2) le on Aerial Imagery (C sition (D2) d (D3)
Arring Strange	IGY drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits ( Drift Deposits (B3) Algal Mat or Crust (E	rs: of one req 2) B2) 34)	7		Water staine <b>1, 2, 4A, and</b> Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron	ed Leaves (B9) ( <b>E</b> d <b>4B)</b> 311) ulfide Odor (C1) izospheres along Reduced Iron (C	Except MLRA g Living Roots (C3) 54) wed Soils (C6)	Seconda	ry Indicators (2 o Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Pos Shallow Aquitar Fac-Neutral Tes	or more required) eaves (B9) , <b>and 4B)</b> ns (B10) ter Table (C2) le on Aerial Imagery (C sition (D2) d (D3)
A primary India	GY drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B Drift Deposits (B3) Algal Mat or Crust (E Iron Deposits (B5)	<b>rs:</b> 2) B2) B2) 34) (B6)	7 uired; check al		Water staine <b>1, 2, 4A, and</b> Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron Stunted or S	ed Leaves (B9) ( <b>E</b> d <b>4B)</b> 311) urtebrates (B13) ulfide Odor (C1) izospheres along Reduced Iron (C Reduction in Plo	Except MLRA g Living Roots (C3) 54) wed Soils (C6)	Seconda	ry Indicators (2 o Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Pos Shallow Aquitar Fac-Neutral Tes	or more required) eaves (B9) , <b>and 4B)</b> ns (B10) ter Table (C2) le on Aerial Imagery (C sition (D2) d (D3) t (D5) nds (D6) <b>(LRR A)</b>
Arring Primary India	GY drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits ( Drift Deposits (B3) Algal Mat or Crust (E Iron Deposits (B5) Surface Soil Cracks	rs: of one req 2) B2) 34) (B6) n Aerial Ima	7 uired; check al		Water staine <b>1, 2, 4A, and</b> Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron Stunted or S	ed Leaves (B9) <b>(E</b> d <b>4B)</b> 311) artebrates (B13) ulfide Odor (C1) izospheres along Reduced Iron (C Reduction in Plo itressed Plants (I	Except MLRA g Living Roots (C3) 54) wed Soils (C6)	Seconda	ry Indicators (2 o Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Pos Shallow Aquitar Fac-Neutral Tes Raised Ant Mou	Dr more required) eaves (B9) , <b>and 4B)</b> ns (B10) ter Table (C2) le on Aerial Imagery (C sition (D2) d (D3) t (D5) nds (D6) <b>(LRR A)</b>
Primary India	GY drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (E Iron Deposits (B3) Surface Soil Cracks Inundation Visible or Sparsely Vegetated vations:	rs: of one req 2) B2) 34) (B6) n Aerial Ima	7 uired; check al agery (B7) urface (B8)		Water staine <b>1, 2, 4A, and</b> Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron Stunted or S Other (Expla	ed Leaves (B9) <b>(E</b> d <b>4B)</b> 311) artebrates (B13) ulfide Odor (C1) izospheres along Reduced Iron (C Reduction in Plo itressed Plants (I	Except MLRA g Living Roots (C3) 54) wed Soils (C6)	Seconda	ry Indicators (2 o Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Pos Shallow Aquitar Fac-Neutral Tes Raised Ant Mou	or more required) eaves (B9) , <b>and 4B)</b> ns (B10) ter Table (C2) le on Aerial Imagery (C sition (D2) d (D3) t (D5) nds (D6) <b>(LRR A)</b>
Primary India X X Field Obser Surface Water	DGY drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (E Iron Deposits (B3) Algal Mat or Crust (E) Surface Soil Cracks Inundation Visible or Sparsely Vegetated vations: Present? Yes	rs: of one req 2) B2) 34) (B6) n Aerial Ima Concave Si	<u>vired; check al</u> agery (B7) urface (B8) No <u>X</u>		Water staine <b>1, 2, 4A, and</b> Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron Stunted or S Other (Explain (inches):	ed Leaves (B9) ( <b>E</b> d <b>4B</b> ) 311) urtebrates (B13) ulfide Odor (C1) izospheres along Reduced Iron (C Reduced Iron (C Reduction in Plo stressed Plants (I ain in Remarks)	Except MLRA g Living Roots (C3) (4) wed Soils (C6) D1) (LRR A)	_Seconda	ry Indicators (2 o Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Pos Shallow Aquitar Fac-Neutral Tes Raised Ant Mou Frost-Heave Hu	or more required) eaves (B9) , <b>and 4B)</b> ns (B10) ter Table (C2) le on Aerial Imagery (C sition (D2) d (D3) t (D5) nds (D6) <b>(LRR A)</b>
Primary India  X  X  Field Obser  Surface Water Water Table P	GY drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated vations: Present? Yes Iresent? Yes	rs: of one req 2) B2) 34) (B6) n Aerial Ima Concave So X	7 uired; check al agery (B7) urface (B8) No X No	Depth	Water staine <b>1, 2, 4A, and</b> Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron Stunted or S Other (Expla (inches): (inches):	ed Leaves (B9) (E d 4B) 311) artebrates (B13) ulfide Odor (C1) izospheres along Reduced Iron (C Reduction in Plov attressed Plants (I ain in Remarks) 3 to 7	Except MLRA g Living Roots (C3) 54) wed Soils (C6)	Seconda	ry Indicators (2 o Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Por Shallow Aquitari Fac-Neutral Tes Raised Ant Mou Frost-Heave Hu	or more required) eaves (B9) , <b>and 4B)</b> ns (B10) ter Table (C2) le on Aerial Imagery (C sition (D2) d (D3) t (D5) nds (D6) <b>(LRR A)</b> mmocks (D7)
Primary India X X Field Obser Surface Water	DGY drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated vations: Present? Yes resent? Yes	rs: of one req 2) B2) 34) (B6) n Aerial Ima Concave Si	<u>vired; check al</u> agery (B7) urface (B8) No <u>X</u>	Depth	Water staine <b>1, 2, 4A, and</b> Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron Stunted or S Other (Explain (inches):	ed Leaves (B9) ( <b>E</b> d <b>4B</b> ) 311) urtebrates (B13) ulfide Odor (C1) izospheres along Reduced Iron (C Reduced Iron (C Reduction in Plo stressed Plants (I ain in Remarks)	Except MLRA g Living Roots (C3) (4) wed Soils (C6) D1) (LRR A)	_Seconda	ry Indicators (2 o Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Por Shallow Aquitari Fac-Neutral Tes Raised Ant Mou Frost-Heave Hu	or more required) eaves (B9) , <b>and 4B)</b> ns (B10) ter Table (C2) le on Aerial Imagery (C sition (D2) d (D3) t (D5) nds (D6) <b>(LRR A)</b>
Primary India	DGY drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated vations: Present? Yes resent? Yes	rs: of one req 2) B2) 34) (B6) n Aerial Ima Concave Si X X	7 uired; check al agery (B7) urface (B8) No X No No No	Depth Depth Depth	Water staine <b>1, 2, 4A, and</b> Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron Stunted or S Other (Explain (inches): (inches):	ed Leaves (B9) (E d 4B) 311) ulfide Odor (C1) izospheres along Reduced Iron (C Reduction in Plo Stressed Plants (I ain in Remarks) 3 to 7 Surface	Except MLRA g Living Roots (C3) (4) wed Soils (C6) D1) (LRR A) Wetland Hyd	Seconda	ry Indicators (2 o Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Por Shallow Aquitari Fac-Neutral Tes Raised Ant Mou Frost-Heave Hu	or more required) eaves (B9) , <b>and 4B)</b> ns (B10) ter Table (C2) le on Aerial Imagery (C sition (D2) d (D3) t (D5) nds (D6) <b>(LRR A)</b> mmocks (D7)
Primary India	IGY drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (E Iron Deposits (B3) Surface Soil Cracks Inundation Visible or Sparsely Vegetated <b>vations:</b> Present? Yes resent? Yes sent? Yes y fringe)	rs: of one req 2) B2) 34) (B6) n Aerial Ima Concave Si X X	7 uired; check al agery (B7) urface (B8) No X No No No	Depth Depth Depth	Water staine <b>1, 2, 4A, and</b> Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron Stunted or S Other (Explain (inches): (inches):	ed Leaves (B9) (E d 4B) 311) ulfide Odor (C1) izospheres along Reduced Iron (C Reduction in Plo Stressed Plants (I ain in Remarks) 3 to 7 Surface	Except MLRA g Living Roots (C3) (4) wed Soils (C6) D1) (LRR A) Wetland Hyd	Seconda	ry Indicators (2 o Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Por Shallow Aquitari Fac-Neutral Tes Raised Ant Mou Frost-Heave Hu	or more required) eaves (B9) , <b>and 4B)</b> ns (B10) ter Table (C2) le on Aerial Imagery (C sition (D2) d (D3) t (D5) nds (D6) <b>(LRR A)</b> mmocks (D7)
Primary India	IGY drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (E Iron Deposits (B3) Surface Soil Cracks Inundation Visible or Sparsely Vegetated <b>vations:</b> Present? Yes resent? Yes sent? Yes y fringe)	rs: of one req 2) B2) 34) (B6) n Aerial Ima Concave Si X X	7 uired; check al agery (B7) urface (B8) No X No No No	Depth Depth Depth	Water staine <b>1, 2, 4A, and</b> Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron Stunted or S Other (Explain (inches): (inches):	ed Leaves (B9) (E d 4B) 311) ulfide Odor (C1) izospheres along Reduced Iron (C Reduction in Plo Stressed Plants (I ain in Remarks) 3 to 7 Surface	Except MLRA g Living Roots (C3) (4) wed Soils (C6) D1) (LRR A) Wetland Hyd	Seconda	ry Indicators (2 o Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Por Shallow Aquitari Fac-Neutral Tes Raised Ant Mou Frost-Heave Hu	or more required) eaves (B9) , <b>and 4B)</b> ns (B10) ter Table (C2) le on Aerial Imagery (0 sition (D2) d (D3) t (D5) nds (D6) <b>(LRR A)</b> mmocks (D7)
Primary India	IGY drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (E Iron Deposits (B3) Surface Soil Cracks Inundation Visible or Sparsely Vegetated <b>vations:</b> Present? Yes resent? Yes sent? Yes y fringe)	rs: of one req 2) B2) 34) (B6) n Aerial Ima Concave Si X X	7 uired; check al agery (B7) urface (B8) No X No No No	Depth Depth Depth	Water staine <b>1, 2, 4A, and</b> Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron Stunted or S Other (Explain (inches): (inches):	ed Leaves (B9) (E d 4B) 311) ulfide Odor (C1) izospheres along Reduced Iron (C Reduction in Plo Stressed Plants (I ain in Remarks) 3 to 7 Surface	Except MLRA g Living Roots (C3) (4) wed Soils (C6) D1) (LRR A) Wetland Hyd	Seconda	ry Indicators (2 o Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Por Shallow Aquitari Fac-Neutral Tes Raised Ant Mou Frost-Heave Hu	Dr more required) eaves (B9) , <b>and 4B)</b> ns (B10) ter Table (C2) le on Aerial Imagery (f sition (D2) d (D3) t (D5) nds (D6) <b>(LRR A)</b> mmocks (D7)
HYDROLO Netland Hy Primary India X X Field Obser Surface Water Nater Table P Saturation Pre includes capillar Describe Reco	IGY drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (E Iron Deposits (B3) Surface Soil Cracks Inundation Visible or Sparsely Vegetated <b>vations:</b> Present? Yes resent? Yes sent? Yes y fringe)	rs: of one req 2) B2) 34) (B6) n Aerial Ima Concave So X x auge, moni	7         uired; check al         agery (B7)         urface (B8)         No         No	Depth Depth Depth Depth Iphotos, previ	Water staine <b>1, 2, 4A, and</b> Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron   Stunted or S Other (Expla (inches): (inches): ious inspection	ed Leaves (B9) (E d 4B) 311) artebrates (B13) ulfide Odor (C1) izospheres along Reduced Iron (C Reduction in Plo thressed Plants (I ain in Remarks) 3 to 7 Surface ons), if available:	Except MLRA g Living Roots (C3) (4) wed Soils (C6) D1) (LRR A) Wetland Hyd	Seconda	ry Indicators (2 o Water stained L (MLRA1, 2, 4A Drainage Patter Dry-Season Wa Saturation Visib Geomorphic Por Shallow Aquitaro Fac-Neutral Tes Raised Ant Mou Frost-Heave Hu	Dr more required) eaves (B9) , <b>and 4B)</b> ns (B10) ter Table (C2) le on Aerial Imagery (0 sition (D2) d (D3) t (D5) nds (D6) <b>(LRR A)</b> mmocks (D7)

	WETLAND	) DETEI	RMINATIO	N DATA FOI	RM - Weste	rn Mountains, Val	leys, and	I Coast Re	PHS # egion	6150
Project/Site:	School Distri			City/County:		elens/Columbia	Samplin		-	/2017
pplicant/Owner:	St. Helens	s School	District			State:	OR	Sam	pling Point:	5
vestigator(s):		CR/TF		Section, To	wnship, Range:	Section	on 4, Town	ship 4N, Rai	nge 1W	
andform (hillslop	e, terrace, etc.:)		Slope	_	Local relief (cor	ncave, convex, none):	cond	ave	Slope (%):	0
ubregion (LRR):		LRR A	4	Lat:	45.8620	D97 Long:	-122.8	07629	Datum:	WGS84
oil Map Unit Nar	me: F	Rock outo	crop - Xerumb	orepts complex	, undulating	NWI Cla	assification:		None	
re climatic/hydro	logic conditions	on the site t	typical for this tin	ne of year?	Yes	X No	(it	f no, explain in	Remarks)	
re vegetation	Soil	or Hy	/drology	significantly dist	urbed?	Are "Normal Circumstan	ces" present?	(Y/N)	Y	
re vegetation	Soil	or Hy	/drology	naturally probler	matic? If needed	I, explain any answers in R	emarks.)			
					ipling point	locations, transects	s, importai	nt reatures	, etc.	
lydrophytic Vege		Yes -	X No		Is Sampled Ar	ea within				
lydric Soil Preser		Yes _	X No		a Wetlar	nd? Yes	X	No		
/etland Hydrolog	y Present?	Yes	X No							
lemarks:										
FGFTATIO	N - Use scier	ntific nar	mes of plant	S						
			absolute	Dominant	Indicator	Dominance Test wor	rksheet:			
			% cover	Species?	Status					
r <u>ee Stratum</u> (j	plot size:	)				Number of Dominant Spe				
						That are OBL, FACW, or	FAC:	4		(A)
<u> </u>										
3						Total Number of Dominar Species Across All Strata		4		(B)
•			0	= Total Cover		Species Across Air Strata				(0)
anling/Chruh Ctr	otum (III)	-								
apling/Shrub Str 1 Populus ba		e: 5	_) 80	x	FAC	Percent of Dominant Spe That are OBL, FACW, or		100%	,	(A/B)
	aisaiiiieia		00		FAC	That are OBL, FACVV, OF	FAC.	1007	0	(A/D)
						Prevalence Index We	orksheet:			
4						Total % Cover of		lultiply by:		
5						OBL Species		x 1 =	0	
			80	= Total Cover		FACW species		x 2 =	0	
						FAC Species		x 3 =	0	
	plot size:	5)				FACU Species		x 4 =	0	
	rus arundinac	eus	40	<u> </u>	FAC	UPL Species		x 5 =	0	
2 <u>Agrostis st</u> 3 Poa sp.	olonifera		<u>20</u> 10	<u> </u>	FAC	Column Totals	<b>0</b> (A	A)	0	(B)
Unidentifie	darass		10		(FAC) (FAC)	Prevalence Index =	B/A =	#DIV/	יח	
Dhalaris ar	-		20	x	FACW					
;						Hydrophytic Vegetat	tion Indicat	ors:		
,							1- Rapid Test	t for Hydrophyt	ic Vegetatio	า
3						X	2- Dominance	e Test is >50%		
			100	= Total Cover				Index is ≤ 3.0	1.	
	(-l-1 -		\ \					cal Adaptation		
oody Vine Strat	um (plot size:		)					rks or on a sep		)
								on-Vascular Pl Hydrophytic Ve		(nlain)
			0	= Total Cover		<sup>1</sup> Indicators of hydric soil a				
						disturbed or problematic.		, arongy must	~~ prosent,	
						Hydrophytic				
Bare Ground in			0			Vegetation	Yes	х	No	

SOIL			PHS #	61	50			Sampling Point: 5
	iption: (Describe to	the depth	needed to docume			onfirm the abse	nce of indicators.)	
Depth	Matrix				x Features	1 2		- ·
(Inches)	Color (moist)	%	Color (moist)	%	Type'	Loc <sup>2</sup>	Texture	Remarks
0-8	10YR 3/2	98	7.5YR 3/3	2	C	M	Silt Loam	Fine
		-						
			·					
<sup>1</sup> Type: C=Con	centration, D=Deplet	ion, RM=R	educed Matrix, CS=	Covered o	r Coated Sa	nd Grains.		<sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (App	licable to	all LRRs, unles	s otherw	ise noted.	)	Indic	ators for Problematic Hydric Soils <sup>3</sup> :
-	Histosol (A1)				Sandy Redo	ox (S5)		2 cm Muck (A10)
	Histic Epipedon (A2)	)			Stripped Ma	trix (S6)		Red Parent Material (TF2)
	Black Histic (A3)					ky Mineral (F1)	except MLRA 1)	Very Shallow Dark Surface (TF12)
	Hydrogen Sulfide (A	4)			-	ed Matrix (F2)	,	X Other (explain in Remarks)
	Depleted Below Darl	,	A11)					
	•		ATT)		Depleted Ma			
	Thick Dark Surface (					Surface (F6)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland
	Sandy Mucky Minera			Depleted Dark Surface (F7)				hydrology must be present, unless disturbed or
	Sandy Gleyed Matrix	k (S4)			Redox Depr	essions (F8)	T	problematic.
Restrictive	Layer (if present	):						
Туре:		Be	drock		_			
Depth (inches	s):		8		_		Hydric Soil Pres	sent? Yes X No
HYDROLO	IGY							
Wetland Hy	drology Indicato	rs:						
Primary Indi	cators (minimum o	of one rec	uired; check all th	nat apply)				Secondary Indicators (2 or more required)
	Surface Water (A1)				Water staine	ed Leaves (B9) (	Except MLRA	Water stained Leaves (B9)
X	High Water Table (A	2)			1, 2, 4A, an	d 4B)		(MLRA1, 2, 4A, and 4B)
X	Saturation (A3)				Salt Crust (E	311)		Drainage Patterns (B10)
	Water Marks (B1)				Aquatic Inve	ertebrates (B13)		Dry-Season Water Table (C2)
	Sediment Deposits (	B2)			Hydrogen S	ulfide Odor (C1)	)	Saturation Visible on Aerial Imagery (C9)
	Drift Deposits (B3)				Oxidized Rh	izospheres alon	g Living Roots (C3)	X Geomorphic Position (D2)
	Algal Mat or Crust (E	34)			Presence of	Reduced Iron (	C4)	X Shallow Aquitard (D3)
	Iron Deposits (B5)				Recent Iron	Reduction in Ple	owed Soils (C6)	X Fac-Neutral Test (D5)
	Surface Soil Cracks	(B6)			Stunted or S	Stressed Plants	(D1) <b>(LRR A)</b>	Raised Ant Mounds (D6) (LRR A)
	Inundation Visible or	n Aerial Ima	agery (B7)		Other (Expla	ain in Remarks)		Frost-Heave Hummocks (D7)
	Sparsely Vegetated	Concave S	Surface (B8)					
Field Obser	vations:							
Surface Water	Present? Yes		No X	Depth	(inches):			
Water Table P	resent? Yes	Х	No	Depth	(inches):	0	Wetland Hyd	Irology Present?
Saturation Pre (includes capillar		X	No	Depth	(inches):	0		Yes X No
Describe Reco	orded Data (stream g	auge, mor	itoring well, aerial pl	notos, prev	ious inspecti	ions), if available	e:	
		-		-	-	·		
Remarks:								

WETLAND DETER			RM - Weste	rn Mountains, V	allevs ar	nd Coast F	PHS # Region	6150
Project/Site: School District Bond P		City/County:		lens/Columbia	•	ling Date:	-	3/2017
Applicant/Owner: St. Helens School I		ong/ ocumy:			e: OR	-	mpling Point:	-
nvestigator(s): CR/TF		Section To	wnship, Range:			nship 4N, R		•
andform (hillslope, terrace, etc.:)	Slope	-		ncave, convex, none):		one	Slope (%):	2
Subregion (LRR):		Lat:	45.8620			807629	Datum:	WGS84
<b>.</b>			x, undulating				None	110304
·			· •		Classification:			
re climatic/hydrologic conditions on the site ty	-	-				(if no, explain		
		significantly dist		Are "Normal Circumsta	•	t? (Y/N)	Y	
re vegetation Soil or Hy	drology	naturally proble	matic? If needed	, explain any answers in	Remarks.)			
SUMMARY OF FINDINGS – Attac	h site map s	showing san	npling point	locations. transec	ts. import	ant feature	s. etc.	
ydrophytic Vegetation Present? Yes	No	X					-,	
lydric Soil Present? Yes	No	X	Is Sampled Ar a Wetlar	ea within	s	No	х	
/etland Hydrology Present? Yes	No	X	a wella					
		X						
Remarks:								
/EGETATION - Use scientific nan	nes of plants	S.						
	absolute	Dominant	Indicator	Dominance Test w	orksheet:			
	% cover	Species?	Status					
ree Stratum (plot size: 30 )				Number of Dominant S	•			<i>(</i> <b>•</b> )
Acer macrophyllum	30	<u> </u>	FACU	That are OBL, FACW,	or FAC:		)	(A)
Pseudotsuga menziesii	30	<u> </u>	FACU					
Quercus garryana	20	<u> </u>	FACU	Total Number of Domin				
Populus balsamifera	<u> </u>	- Total Cover	FAC	Species Across All Stra	ata:		6	(B)
	90	= Total Cover						
apling/Shrub Stratum (plot size: 5	-'			Percent of Dominant S	pecies			
Acer macrophyllum	65	<u> </u>	FACU	That are OBL, FACW,	or FAC:	09	%	(A/B)
Oemleria cerasiformis	20	<u> </u>	FACU					
Corylus cornuta			FACU	Prevalence Index V	Norksheet:			
1 <u>Thuja plicata</u>	5		FAC	Total % Cover of	_	Multiply by:	•	
5	100	= Total Cover		OBL Species FACW species		x 1 =	0	
	100			FAC Species		x 2 = x 3 =	0	
erb Stratum (plot size: 5 )				FACU Species		x 4 =	0	
Polystichum munitum	80	х	FACU	UPL Species		x 5 =	0	
Carex densa	10		OBL	Column Totals	0	(A)	0	(B)
Geranium robertianum	5		FACU					
Tellima grandiflora	5		FACU	Prevalence Index	x =B/A =	#DI	//0!	
5 Adenocaulon bicolor	5		(UPL)	ļ				
3				Hydrophytic Veget	ation Indica	ators:		
					1- Rapid Te	est for Hydroph	ytic Vegetatio	n
3					-	nce Test is >50		
	105	= Total Cover				ce Index is ≤ 3		upportir -
oody Vine Stratum (plot size: 30	)				_	gical Adaptation		
1 <b>Rubus ursinus</b>	_,5	x	FACU			Non-Vascular	•	<i>'</i> )
2 Hedera helix	5	<u> </u>	FACU		_	c Hydrophytic V		xolain)
	10	= Total Cover	1700	<sup>1</sup> Indicators of hydric so	_			
				disturbed or problemati		, s.e.g., mu		
				Hydrophytic				
6 Bare Ground in Herb Stratum				Vegetation	Yes		No	х

SOIL			PHS #		6150			Sampling Point:	6
	ption: (Describe to	•	needed to do			onfirm the abser	nce of indicators.)		
Depth (Inchas)	Matrix		O al an (main		dox Features Type <sup>1</sup>	Loc <sup>2</sup>	Tauture	Demedia	
(Inches)	Color (moist)	<u>%</u>	Color (mois	st) %	Туре	LUC	Texture	Remarks	
0-16	10YR 3/3	100					Silt Loam		
			. <u> </u>			·			
		·				·			
		·				·			
			. <u> </u>			·			
	centration, D=Deple						India	<sup>2</sup> Location: PL=Pore Lining, M=N	
-	Indicators: (App	licable to	all LRRs, u	iless othe			Indic	ators for Problematic Hydric	Solls":
	Histosol (A1)				Sandy Redo			2 cm Muck (A10)	
	Histic Epipedon (A2	)			Stripped Ma			Red Parent Materia	
	Black Histic (A3)				_	ky Mineral (F1) (e	except MLRA 1)	Very Shallow Dark	Surface (TF12)
	Hydrogen Sulfide (A	(4)			Loamy Gley	ed Matrix (F2)		Other (explain in R	emarks)
	Depleted Below Dar	k Surface (A	A11)		Depleted Ma	atrix (F3)			
	Thick Dark Surface	(A12)			Redox Dark	Surface (F6)		<sup>3</sup> Indiantara of hydrophytic yearste	tion and watland
	Sandy Mucky Miner	al (S1)			Depleted Da	ark Surface (F7)		<sup>3</sup> Indicators of hydrophytic vegeta hydrology must be present, unle	
	Sandy Gleyed Matri	x (S4)			Redox Depr	ressions (F8)		problematic.	
Restrictive	Layer (if present	:):							
Туре:									
Type: Depth (inches Remarks:	s): 						Hydric Soil Pres	sent? Yes N	lo <u>X</u>
Depth (inches Remarks: HYDROLO		ITS:					Hydric Soil Pres	sent? Yes N	lo <u>X</u>
Depth (inches Remarks: HYDROLO Wetland Hy	GY		uired; check	all that app			Hydric Soil Pres	sent? Yes N	
Depth (inches Remarks: HYDROLO Wetland Hy Primary Indio	GY drology Indicato	of one req	uired; check	all that app		ed Leaves (B9) (I			more required)
Depth (inches Remarks: HYDROLO Wetland Hy Primary India	GY drology Indicato cators (minimum	of one req	uired; check	all that app				Secondary Indicators (2 or	more required) /es (B9)
Depth (inches Remarks: HYDROLO Wetland Hy Primary India	GY drology Indicato cators (minimum Surface Water (A1)	of one req	uired; check	all that app	Water staine	d 4B)		Secondary Indicators (2 or	more required) /es (B9) 1 <b>d 4B)</b>
Depth (inches Remarks: HYDROLO Wetland Hy Primary India	<b>GY</b> drology Indicato cators (minimum Surface Water (A1) High Water Table (A	of one req	uired; check	all that app	Water staine 1, 2, 4A, and Salt Crust (E	d 4B)		Secondary Indicators (2 or Water stained Leav (MLRA1, 2, 4A, ar	more required) /es (B9) nd <b>4B)</b> (B10)
Depth (inches Remarks: HYDROLO Wetland Hy Primary India	GY drology Indicato cators (minimum Surface Water (A1) High Water Table (A Saturation (A3)	of one req A2)	uired; check	all that app	Water staine <b>1, 2, 4A, and</b> Salt Crust (E Aquatic Inve	<b>d 4B)</b> 311)	Except MLRA	Secondary Indicators (2 or Water stained Leav (MLRA1, 2, 4A, au Drainage Patterns Dry-Season Water	more required) /es (B9) 1 <b>d 4B)</b> (B10) Table (C2)
Depth (inches Remarks: HYDROLO Wetland Hy Primary India	GY drology Indicato cators (minimum Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1)	of one req A2)	uired; check	all that app	Water staine <b>1, 2, 4A, and</b> Salt Crust (E Aquatic Inve Hydrogen Si	d 4B) B11) ertebrates (B13) ulfide Odor (C1)	Except MLRA	Secondary Indicators (2 or Water stained Leav (MLRA1, 2, 4A, au Drainage Patterns Dry-Season Water	more required) res (B9) nd <b>4B)</b> (B10) Table (C2) on Aerial Imagery (C
Depth (inches Remarks: HYDROLO Wetland Hy Primary India	GY drology Indicato cators (minimum Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits	of one req A2) (B2)	uired; check	all that app	Water staine <b>1, 2, 4A, and</b> Salt Crust (E Aquatic Inve Hydrogen So Oxidized Rh	d 4B) B11) ertebrates (B13) ulfide Odor (C1)	Except MLRA	Secondary Indicators (2 or ) Water stained Leav (MLRA1, 2, 4A, au Drainage Patterns Dry-Season Water Saturation Visible of	more required) ves (B9) nd <b>4B)</b> (B10) Table (C2) on Aerial Imagery (C on (D2)
Depth (inches Remarks: HYDROLO Wetland Hy Primary India	GY drology Indicato cators (minimum Surface Water (A1) High Water Table ( <i>I</i> Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3)	of one req A2) (B2)	uired; check	all that app	Water staine <b>1, 2, 4A, and</b> Salt Crust (E Aquatic Inve Hydrogen So Oxidized Rh Presence of	d 4B) 311) ertebrates (B13) ulfide Odor (C1) nizospheres alon	Except MLRA g Living Roots (C3) C4)	Secondary Indicators (2 or Water stained Leav (MLRA1, 2, 4A, ar Drainage Patterns Dry-Season Water Saturation Visible of Geomorphic Positio	more required) ves (B9) nd <b>4B)</b> (B10) Table (C2) on Aerial Imagery (C on (D2) O3)
Depth (inches Remarks: HYDROLO Wetland Hy Primary Indio	GY drology Indicato cators (minimum Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust (	of one req A2) (B2) B4)	uired; check	all that app	Water staine <b>1, 2, 4A, and</b> Salt Crust (E Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S	d 4B) B11) ertebrates (B13) ulfide Odor (C1) hizospheres along Reduced Iron (C Reduction in Plc Stressed Plants (	Except MLRA g Living Roots (C3) C4) swed Soils (C6)	Secondary Indicators (2 or Water stained Leav (MLRA1, 2, 4A, at Drainage Patterns Dry-Season Water Saturation Visible of Geomorphic Positio Shallow Aquitard (I	more required) ves (B9) <b>1d 4B)</b> (B10) Table (C2) on Aerial Imagery (C on (D2) D3)
Depth (inches Remarks: HYDROLO Wetland Hy Primary India	GY drology Indicato cators (minimum Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust ( Iron Deposits (B5)	of one req A2) (B2) B4) : (B6)		all that app	Water staine <b>1, 2, 4A, and</b> Salt Crust (E Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S	d 4B) 311) ertebrates (B13) ulfide Odor (C1) nizospheres alone Reduced Iron (C Reduction in Plo	Except MLRA g Living Roots (C3) C4) swed Soils (C6)	Secondary Indicators (2 or Water stained Leav (MLRA1, 2, 4A, ar Drainage Patterns Dry-Season Water Saturation Visible of Geomorphic Positio Shallow Aquitard (I Fac-Neutral Test (I	more required) res (B9) nd <b>4B)</b> (B10) Table (C2) on Aerial Imagery (C on (D2) O3) O5) s (D6) <b>(LRR A)</b>
Depth (inches Remarks: HYDROLO Wetland Hy Primary India	GY drology Indicato cators (minimum Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust ( Iron Deposits (B5) Surface Soil Cracks	of one req A2) (B2) B4) : (B6) n Aerial Ima	agery (B7)	all that app	Water staine <b>1, 2, 4A, and</b> Salt Crust (E Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S	d 4B) B11) ertebrates (B13) ulfide Odor (C1) hizospheres along Reduced Iron (C Reduction in Plc Stressed Plants (	Except MLRA g Living Roots (C3) C4) swed Soils (C6)	Secondary Indicators (2 or ) Water stained Leav (MLRA1, 2, 4A, ar Drainage Patterns Dry-Season Water Saturation Visible of Geomorphic Positio Shallow Aquitard (I Fac-Neutral Test (I Raised Ant Mound	more required) res (B9) nd <b>4B)</b> (B10) Table (C2) on Aerial Imagery (C on (D2) O3) O5) s (D6) <b>(LRR A)</b>
Depth (inches Remarks: HYDROLO Wetland Hy Primary India	GY drology Indicato cators (minimum Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust ( Iron Deposits (B5) Surface Soil Cracks Inundation Visible o Sparsely Vegetated	of one req A2) (B2) B4) : (B6) n Aerial Ima	agery (B7)	all that app	Water staine <b>1, 2, 4A, and</b> Salt Crust (E Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S	d 4B) B11) ertebrates (B13) ulfide Odor (C1) hizospheres along Reduced Iron (C Reduction in Plc Stressed Plants (	Except MLRA g Living Roots (C3) C4) swed Soils (C6)	Secondary Indicators (2 or ) Water stained Leav (MLRA1, 2, 4A, ar Drainage Patterns Dry-Season Water Saturation Visible of Geomorphic Positio Shallow Aquitard (I Fac-Neutral Test (I Raised Ant Mound	more required) res (B9) nd <b>4B)</b> (B10) Table (C2) on Aerial Imagery (C on (D2) O3) O5) s (D6) <b>(LRR A)</b>
Depth (inches Remarks: HYDROLO Wetland Hy Primary Indio	GY drology Indicato cators (minimum Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust ( Iron Deposits (B5) Surface Soil Cracks Inundation Visible o Sparsely Vegetated vations:	of one req A2) (B2) B4) : (B6) n Aerial Ima	agery (B7)		Water staine <b>1, 2, 4A, and</b> Salt Crust (E Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S	d 4B) B11) ertebrates (B13) ulfide Odor (C1) hizospheres along Reduced Iron (C Reduction in Plc Stressed Plants (	Except MLRA g Living Roots (C3) C4) swed Soils (C6)	Secondary Indicators (2 or ) Water stained Leav (MLRA1, 2, 4A, ar Drainage Patterns Dry-Season Water Saturation Visible of Geomorphic Positio Shallow Aquitard (I Fac-Neutral Test (I Raised Ant Mound	more required) res (B9) nd <b>4B)</b> (B10) Table (C2) on Aerial Imagery (C on (D2) O3) O5) s (D6) <b>(LRR A)</b>
Depth (inches Remarks: HYDROLO Wetland Hy Primary India Field Obser	GY drology Indicato cators (minimum Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust ( Iron Deposits (B5) Surface Soil Cracks Inundation Visible o Sparsely Vegetated vations: Present? Yes	of one req A2) (B2) B4) : (B6) n Aerial Ima	agery (B7) urface (B8)		Water staine <b>1, 2, 4A, and</b> Salt Crust (E Aquatic Inve Hydrogen So Oxidized Rh Presence of Recent Iron Stunted or S Other (Expla	d 4B) B11) ertebrates (B13) ulfide Odor (C1) hizospheres along Reduced Iron (C Reduction in Plc Stressed Plants (	Except MLRA g Living Roots (C3) C4) wwed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or ) Water stained Leav (MLRA1, 2, 4A, ar Drainage Patterns Dry-Season Water Saturation Visible of Geomorphic Positio Shallow Aquitard (I Fac-Neutral Test (I Raised Ant Mound	more required) res (B9) nd <b>4B)</b> (B10) Table (C2) on Aerial Imagery (C on (D2) O3) O5) s (D6) <b>(LRR A)</b>
Depth (inches Remarks: HYDROLO Wetland Hy Primary Indio Primary Indio Field Obser Surface Water Water Table P Saturation Pre	GY drology Indicato cators (minimum Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust (I Iron Deposits (B5) Surface Soil Cracks Inundation Visible o Sparsely Vegetated <b>vations:</b> Present? Yes resent? Yes	of one req A2) (B2) B4) : (B6) n Aerial Ima	agery (B7) Furface (B8)	Dep	Water staine 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain oth (inches):	d 4B) B11) ertebrates (B13) ulfide Odor (C1) hizospheres along Reduced Iron (C Reduction in Plo Stressed Plants ( ain in Remarks)	Except MLRA g Living Roots (C3) C4) wwed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or ) Water stained Leav (MLRA1, 2, 4A, ar Drainage Patterns Dry-Season Water Saturation Visible of Geomorphic Positio Shallow Aquitard (I Fac-Neutral Test (I Raised Ant Mounds Frost-Heave Humn	more required) res (B9) nd <b>4B)</b> (B10) Table (C2) on Aerial Imagery (C on (D2) O3) O5) s (D6) <b>(LRR A)</b>
Depth (inches Remarks: HYDROLO Wetland Hyd Primary India Primary India Field Obser Surface Water Water Table P Saturation Pre Saturation Pre	GY drology Indicato cators (minimum Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust (I Iron Deposits (B5) Surface Soil Cracks Inundation Visible o Sparsely Vegetated <b>vations:</b> Present? Yes resent? Yes	of one req A2) (B2) B4) : (B6) n Aerial Ima Concave S	agery (B7) Jurface (B8) No X No X No X	Dep Dep Dep	Water staine 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen So Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain oth (inches): oth (inches):	d 4B) 311) ertebrates (B13) ulfide Odor (C1) nizospheres alone F Reduced Iron (C Reduction in Plo Stressed Plants ( ain in Remarks) >16 >16 >16	Except MLRA g Living Roots (C3) C4) wed Soils (C6) D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or ) Water stained Leav (MLRA1, 2, 4A, ar Drainage Patterns Dry-Season Water Saturation Visible of Geomorphic Positio Shallow Aquitard (I Fac-Neutral Test (I Raised Ant Mounds Frost-Heave Humm	more required) res (B9) nd <b>4B)</b> (B10) Table (C2) on Aerial Imagery (C on (D2) O3) O5) s (D6) <b>(LRR A)</b> nocks (D7)
Depth (inches Remarks: HYDROLO Wetland Hyd Primary India Primary India Field Obser Surface Water Water Table P Saturation Pre Saturation Pre	GY drology Indicato cators (minimum Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust (I Iron Deposits (B5) Surface Soil Cracks Inundation Visible o Sparsely Vegetated <b>vations:</b> Present? Yes resent? Yes sent? Yes y fringe)	of one req A2) (B2) B4) : (B6) n Aerial Ima Concave S	agery (B7) Jurface (B8) No X No X No X	Dep Dep Dep	Water staine 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen So Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain oth (inches): oth (inches):	d 4B) 311) ertebrates (B13) ulfide Odor (C1) nizospheres alone F Reduced Iron (C Reduction in Plo Stressed Plants ( ain in Remarks) >16 >16 >16	Except MLRA g Living Roots (C3) C4) wed Soils (C6) D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or ) Water stained Leav (MLRA1, 2, 4A, ar Drainage Patterns Dry-Season Water Saturation Visible of Geomorphic Positio Shallow Aquitard (I Fac-Neutral Test (I Raised Ant Mounds Frost-Heave Humm	more required) res (B9) nd <b>4B)</b> (B10) Table (C2) on Aerial Imagery (C on (D2) O3) O5) s (D6) <b>(LRR A)</b> nocks (D7)
Depth (inches Remarks: HYDROLO Wetland Hy Primary India Primary India Field Obser Surface Water Water Table P Saturation Pre Saturation Pre Cincludes capillar Describe Reco	GY drology Indicato cators (minimum Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust (I Iron Deposits (B5) Surface Soil Cracks Inundation Visible o Sparsely Vegetated <b>vations:</b> Present? Yes resent? Yes sent? Yes y fringe)	of one req A2) (B2) B4) : (B6) n Aerial Ima Concave S	agery (B7) Jurface (B8) No X No X No X	Dep Dep Dep	Water staine 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen So Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain oth (inches): oth (inches):	d 4B) 311) ertebrates (B13) ulfide Odor (C1) nizospheres alone F Reduced Iron (C Reduction in Plo Stressed Plants ( ain in Remarks) >16 >16 >16	Except MLRA g Living Roots (C3) C4) wed Soils (C6) D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or ) Water stained Leav (MLRA1, 2, 4A, ar Drainage Patterns Dry-Season Water Saturation Visible of Geomorphic Positio Shallow Aquitard (I Fac-Neutral Test (I Raised Ant Mounds Frost-Heave Humm	more required) res (B9) nd <b>4B)</b> (B10) Table (C2) on Aerial Imagery (C on (D2) O3) O5) s (D6) <b>(LRR A)</b> nocks (D7)
Depth (inches Remarks: HYDROLO Wetland Hyd Primary India Primary India Field Obser Surface Water Water Table P Saturation Pre Saturation Pre	GY drology Indicato cators (minimum Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust (I Iron Deposits (B5) Surface Soil Cracks Inundation Visible o Sparsely Vegetated <b>vations:</b> Present? Yes resent? Yes sent? Yes y fringe)	of one req A2) (B2) B4) : (B6) n Aerial Ima Concave S	agery (B7) Jurface (B8) No X No X No X	Dep Dep Dep	Water staine 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen So Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain oth (inches): oth (inches):	d 4B) 311) ertebrates (B13) ulfide Odor (C1) nizospheres alone F Reduced Iron (C Reduction in Plo Stressed Plants ( ain in Remarks) >16 >16 >16	Except MLRA g Living Roots (C3) C4) wed Soils (C6) D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or ) Water stained Leav (MLRA1, 2, 4A, ar Drainage Patterns Dry-Season Water Saturation Visible of Geomorphic Positio Shallow Aquitard (I Fac-Neutral Test (I Raised Ant Mounds Frost-Heave Humm	more required) res (B9) nd <b>4B)</b> (B10) Table (C2) on Aerial Imagery (C on (D2) O3) O5) s (D6) <b>(LRR A)</b> nocks (D7)

WETLAND DETE			RM - Weste	ern Mountains, Val	leys, and Co	PHS # bast Region	6150
oject/Site: School District Bond		City/County:		elens/Columbia	Sampling Da	-	23/2017
plicant/Owner: St. Helens Schoo	I District			State:	OR	Sampling Point	t: <b>7</b>
estigator(s): CR/TF		Section, To	wnship, Range:	Sectio	on 4, Township	4N, Range 1W	
ndform (hillslope, terrace, etc.:)	Slope		Local relief (co	ncave, convex, none):	concave	Slope (%)	): 1
bregion (LRR):	Α	Lat:	45.862	- 097 Long:	-122.80762	29 Datum	n: WGS84
il Map Unit Name: Rock ou	tcrop - Xerumb	- prepts complex	k, undulating	NWI Cla	ssification:	None	
e climatic/hydrologic conditions on the site	e typical for this tin	ne of year?	Yes			explain in Remarks)	)
	Hydrology	-		Are "Normal Circumstand			
e vegetation Soil or I	· · · ·			l, explain any answers in Re		,	_
	, <u>.</u>	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		,			
UMMARY OF FINDINGS – Atta	ach site map	showing san	pling point	locations, transects	, important fe	eatures, etc.	
drophytic Vegetation Present? Yes	X No		Is Sampled A	roo within			
ydric Soil Present? Yes	X No		a Wetlar		Х	No	_
etland Hydrology Present? Yes	X No						
emarks:							
EGETATION - Use scientific na	ames of plant	s.					
	absolute	Dominant	Indicator	Dominance Test wor	ksheet:		
ee Stratum (plot size: 30	% cover	Species?	Status	Number of Dominant Spe	ries		
Populus balsamifera	_/ 	х	FAC	That are OBL, FACW, or I		6	(A)
Salix sp.	30	<u> </u>	(FAC)		AU.	0	_(//)
			(1710)	Total Number of Dominan	t		
·				Species Across All Strata		6	(B)
	70	= Total Cover					_ ` `
pling/Shrub Stratum (plot size: 5	)			Dereent of Dominant Spor			
Spiraea douglasii	) 30	x	FACW	Percent of Dominant Spec That are OBL, FACW, or		100%	(A/B)
Populus balsamifera	10	<u> </u>	FAC		TAU.	100 /8	_(///D)
				Prevalence Index Wo	orksheet:		
				Total % Cover of	Multip	ly by:	
				OBL Species		1 = <b>0</b>	
	40	= Total Cover		FACW species	x	2 = 0	-
				FAC Species	x	3 = 0	_
erb Stratum (plot size: 5	)			FACU Species	x	4 = 0	_
Juncus sp.	15	<u>X</u>	(FAC)	UPL Species		5 = 0	_
Geum macrophyllum	5	<u> </u>	FAC	Column Totals	<b>0</b> (A)	0	(B)
} 	- <u> </u>						
				Prevalence Index =	B/A =	#DIV/0!	_
	- <u> </u>			Hydrophytic Verstat	ion Indiactors		
				Hydrophytic Vegetat			ion
					2- Dominance Tes	Hydrophytic Vegetat	.011
	20	= Total Cover			3-Prevalence Inde		
						daptations <sup>1</sup> (provide	e supporting
oody Vine Stratum (plot size:	)				data in Remarks c	or on a separate she	et)
					5- Wetland Non-V	ascular Plants <sup>1</sup>	
					Problematic Hydro	ophytic Vegetation <sup>1</sup> (	(Explain)
	0	= Total Cover		<sup>1</sup> Indicators of hydric soil a	nd wetland hydrol	ogy must be presen	t, unless
				disturbed or problematic.			
Bare Ground in Herb Stratum	80			Hydrophytic Vegetation	Yes	X No	D

SOIL			PHS #	6	150	_		Sampling Point: 7
Profile Descr Depth	iption: (Describe to Matrix	the depth	needed to docume		<b>dicator or c</b> ox Features		nce of indicators.)	
(Inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-7	10YR 3/2	99	10YR 3/4	1	c	M	Silt Loam	fine
			·					
			·					
			·					
	centration, D=Deplet							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appl	icable to	o all LRRs, unles	s otherw	vise noted	1.)	Indica	ators for Problematic Hydric Soils <sup>3</sup> :
	Histosol (A1)				Sandy Red	dox (S5)		2 cm Muck (A10)
	Histic Epipedon (A2)				Stripped N	latrix (S6)		Red Parent Material (TF2)
	Black Histic (A3)				Loamy Mu	cky Mineral (F1)	except MLRA 1)	Very Shallow Dark Surface (TF12)
х	Hydrogen Sulfide (A4	4)			Loamy Gle	eyed Matrix (F2)		Other (explain in Remarks)
(i	Depleted Below Dark	(Surface (	(A11)		Depleted M	Matrix (F3)		
	Thick Dark Surface (				-	rk Surface (F6)		
	Sandy Mucky Minera	-			-	Dark Surface (F7)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland
	Sandy Gleyed Matrix				-	pressions (F8)		hydrology must be present, unless disturbed or problematic.
Postrictivo	Layer (if present)							problemate.
	Layer (il present)		drock					
Type:		De			_			
Depth (inche	s)		7		_		Hydric Soil Pres	sent? Yes X No
HYDROLC Wetland Hy	OGY drology Indicator	rs:						
Primary Indi	cators (minimum c	of one rec	nuired <sup>,</sup> check all th	nat apply	)			Secondary Indicators (2 or more required)
<u>- mary mar</u>	Surface Water (A1)			iat appiy		ned Leaves (B9) (	Except MLRA	Water stained Leaves (B9)
X	High Water Table (A	2)			1, 2, 4A, a			(MLRA1, 2, 4A, and 4B)
<u> </u>	Saturation (A3)	_)			Salt Crust	(B11)		Drainage Patterns (B10)
	Water Marks (B1)				-	vertebrates (B13)		Dry-Season Water Table (C2)
	Sediment Deposits (I	B2)		X	-	Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9
	Drift Deposits (B3)	<b>52</b> )				. ,	g Living Roots (C3)	X Geomorphic Position (D2)
	Algal Mat or Crust (B	84)			-	of Reduced Iron (		X Shallow Aquitard (D3)
	Iron Deposits (B5)	,,,			-	n Reduction in Pla	-	Fac-Neutral Test (D5)
	Surface Soil Cracks	(B6)				Stressed Plants (		Raised Ant Mounds (D6) (LRR A)
	Inundation Visible on	. ,	agery (B7)		-	blain in Remarks)	.= ., (,	Frost-Heave Hummocks (D7)
	Sparsely Vegetated				-	, and the terms of term		
Field Obse	vations:							
Surface Wate	r Present? Yes		No X	Depth	(inches):			
Water Table F		Х	No	-	(inches):	2	Wetland Hvd	rology Present?
Saturation Pre		X	No	-	(inches):	Surface		Yes X No
(includes capilla				Dopti	r (monoo).	Gundoo		
Describe Rec	orded Data (stream g	auge, mor	nitoring well, aerial pl	notos, prev	vious inspe	ctions), if available	2:	
Remarks:								

	WETLAND [	DETERMINATIO	N DATA FOI	RM - Weste	rn Mountains, Val	leys, and Coas	PHS #	6150	
Project/Site:	School District		City/County:		lens/Columbia	Sampling Date:	•	3/23/2017	
pplicant/Owner:	St. Helens S	chool District			State:	OR	Sampling Point:	8	
vestigator(s):	С	R/TF	Section, To	wnship, Range:	Sectio	on 4, Township 4N,	Range 1W		
andform (hillslop	e, terrace, etc.:)	Slope		Local relief (cor	ncave, convex, none):	none	Slope (%):	1	
ubregion (LRR):	-	LRR A	Lat:	45.8620	- 197 Long:	-122.807629	Datum:	WGS84	
oil Map Unit Nan	ne: Ro	ck outcrop - Xeruml	- brepts complex	, undulating	NWI Cla	ssification:	None		
		the site typical for this tir		Yes			in in Remarks)		
	Soil		•	urbed?	Are "Normal Circumstand				
e vegetation					l, explain any answers in Re				
						,			
UMMARY O	F FINDINGS –	Attach site map	showing sam	pling point	locations, transects	, important featu	res, etc.		
ydrophytic Vege	tation Present?	Yes X No		Is Sampled Ar					
ydric Soil Preser	nt?	Yes No	Х	a Wetlar		1	lo X		
etland Hydrolog	y Present?	Yes No	Х						
emarks:									
EGETATION	N - Use scienti	fic names of plan							
		absolute % cover	Dominant Species?	Indicator Status	Dominance Test wor	ksheet:			
ee Stratum (r	plot size: 30		opecies :	Jialus	Number of Dominant Spe	cies			
Betula pen			х	FACU	That are OBL, FACW, or		3	(A)	
<i>i</i>					, , ,			( )	
					Total Number of Dominan	t			
+					Species Across All Strata:	:	5	(B)	
		40	= Total Cover						
apling/Shrub Str	atum (plot size:	5)			Percent of Dominant Spec	cies			
Amelanchi	(		х	FACU	That are OBL, FACW, or		60%	(A/B)	
Rubus arm	eniacus	5	X	FAC	, , ,			( )	
3					Prevalence Index Wo	orksheet:			
					Total % Cover of	Multiply by:			
					OBL Species	x 1 =	0		
		25	= Total Cover		FACW species	x 2 =	0		
					FAC Species	x 3 =	0		
	plot size: 5		Y	(540)	FACU Species	x 4 =	0		
Poa sp.	rus arundinaceu	60 s 30	<u> </u>	(FAC) FAC	UPL Species	x 5 =	0		
Hedera hel		<u> </u>		FACU	Column Totals	<b>0</b> (A)		(B)	
Camassia s		5		(FACW)	Prevalence Index =	B/A = <b>#</b>	DIV/0!		
<u>oumusoid</u>	56.			(1701)					
					Hydrophytic Vegetat	ion Indicators:			
						1- Rapid Test for Hydro	phytic Vegetation	n	
						2- Dominance Test is >			
		100	= Total Cover			3-Prevalence Index is ≤	3.0 <sup>1</sup>		
						4-Morphological Adapta			
oody Vine Strate	um (plot size:	)				data in Remarks or on		)	
						5- Wetland Non-Vascu			
						Problematic Hydrophyt			
		0	= Total Cover		<sup>1</sup> Indicators of hydric soil a disturbed or problematic.	nd wetland hydrology r	nust be present,	unless	
					Hydrophytic				
Bare Ground in	Herb Stratum	0			Vegetation	Yes X	No		
	_				Present?		-		

0-5       10YR 3/3       40       Silt Loam       Rod	Remarks cks throughout profile, mixed matrix cks throughout profile, mixed matrix
Color (moist)       %       Color (moist)       %       Type <sup>1</sup> Loc <sup>2</sup> Texture         0-5       10YR 3/2       60       Silt Loam       Rod         0-5       10YR 3/3       40       Silt Loam       Rod	cks throughout profile, mixed matrix
0-5       10YR 3/2       60       Silt Loam       Rod         0-5       10YR 3/3       40       Silt Loam       Rod	cks throughout profile, mixed matrix
0-5       10YR 3/3       40       Silt Loam       Rod	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Loca	
	ation: PL=Pore Lining, M=Matrix.
HVORIC SOIL INDICATORS: (ADDIICADIE TO BIT LEVES, UTIES OTHERWISE HOTEO)	for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1) Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2) Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)	Other (explain in Remarks)
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6)	
<sup>3</sup> Indic	cators of hydrophytic vegetation and wetland
Sandy Mucky Mineral (S1)Depleted Dark Surface (F7) hydr Sandy Gleyed Matrix (S4) Redox Depressions (F8)	ology must be present, unless disturbed or problematic.
Restrictive Layer (if present):	
Type: Bedrock	
Depth (inches): 5 Hydric Soil Present?	Yes No X
Remarks:	
HYDROLOGY Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply) Sec	condary Indicators (2 or more required)
Surface Water (A1)     Water stained Leaves (B9) (Except MLRA       High Water Table (A2)     1, 2, 4A, and 4B)	Water stained Leaves (B9) (MLRA1, 2, 4A, and 4B)
Saturation (A3) Salt Crust (B11)	Drainage Patterns (B10)
	Dry Concern Weter Table (CO)
Water Marks (B1)Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Water Marks (B1)     Aquatic Invertebrates (B13)       Sediment Deposits (B2)     Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C
Sediment Deposits (B2) Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C
Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)	Saturation Visible on Aerial Imagery (C Geomorphic Position (D2)
Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)	Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) X Shallow Aquitard (D3)
Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) X Shallow Aquitard (D3) Fac-Neutral Test (D5)
Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       Stressed Plants (D1)	Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) X Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       Field Observations:	Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) X Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       Field Observations:         Surface Water Present?       No       X	Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) X Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       Teld Observations:         Surface Water Present?       Yes       No         Water Table Present?       Yes       No         X       Depth (inches):       >5         Saturation Present?       Yes       No       X	Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) X Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       Eiteld Observations:         Surface Water Present?       Yes       No       X         Water Table Present?       Yes       No       X       Depth (inches):       >5         Water Table Present?       Yes       No       X       Depth (inches):       >5	Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) X Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) y Present?
Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       Teld Observations:         Surface Water Present?       Yes       No         Water Table Present?       Yes       No         No       X       Depth (inches):         Saturation Present?       Yes       No         No       X       Depth (inches):	Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) X Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) y Present?
Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       Pepth (inches):         Field Observations:       No       X         Surface Water Present?       Yes       No         No       X       Depth (inches):         Saturation Present?       Yes       No         No       X       Depth (inches):         Saturation Present?       Yes       No         No       X       Depth (inches):         Saturation Present?       Yes       No         No       X       Depth (inches):       >5	Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) X Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) y Present?
Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       Pepth (inches):         Field Observations:       No       X         Surface Water Present?       Yes       No         Saturation Present?       Yes       No         No       X       Depth (inches):       >5         Saturation Present?       Yes       No       X         No       X       Depth (inches):       >5	Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) X Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) y Present?
Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       Field Observations:         Surface Water Present?       Yes       No         X       Depth (inches):       >5         Water Table Present?       Yes       No         Kincludes capillary fringe)       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Remarks:	Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) X Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) y Present? Yes NoX
Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Sparsely Vegetated Concave Surface (B8)       Sturface Water Present? Yes         No       X       Depth (inches):         Water Table Present? Yes       No       X         No       X       Depth (inches):         Saturation Present? Yes       No       X         Includes capillary fringe)       No       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Saturation Visible on Aerial Imagery ( Geomorphic Position (D2) X Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) y Present? Yes NoX

	WETLAND D	ETERMINATION	N DATA FO	RM - Weste	rn Mountains, Val	leys, and Co	PHS # ast Region	6150
oject/Site:	School District I	Bond Projects	City/County:	St. He	lens/Columbia	Sampling Date	e: <u>3/23</u>	/2017
oplicant/Owner:	St. Helens S	chool District			State:	OR	Sampling Point:	9
vestigator(s):	C	R/TF	Section, To	wnship, Range:	Sectio	on 4, Township	4N, Range 1W	
ndform (hillslop	e, terrace, etc.:)	Slope		Local relief (cor	ncave, convex, none):	concave	Slope (%):	1
ubregion (LRR):		LRR A	Lat:	45.8620	197 Long:	-122.807629	Datum:	WGS84
oil Map Unit Nan	me: Roc	k outcrop - Xerumb	orepts complex	x, undulating	NWI Cla	ssification:	None	
e climatic/hydro	logic conditions on t	he site typical for this tim	ne of year?	Yes	X No	(if no, e	xplain in Remarks)	
e vegetation	Soil	or Hydrology	significantly dist	urbed?	Are "Normal Circumstanc	es" present? (Y/N	) Y	
e vegetation	Soil	or Hydrology	naturally proble	matic? If needed	, explain any answers in Re	marks.)		
			- 					
UMMARY O			showing san	npling point	locations, transects	, important fea	atures, etc.	
drophytic Vege		res X No		Is Sampled Ar	ea within			
ydric Soil Preser		res X No		a Wetlar		<u>x</u>	No	
etland Hydrolog	y Present? Y	res X No						
emarks:								
		io nomes of slave						
	n - Use scientif	ic names of plant absolute	<b>s.</b> Dominant	Indicator	Dominance Test wor	ksheet:		
		% cover	Species?	Status				
ee Stratum (p	plot size: 30	)			Number of Dominant Spec	cies		
Betula pen	dula	100	X	FACU	That are OBL, FACW, or I	-AC:	4	(A)
					Total Number of Dominan			(5)
					Species Across All Strata:		6	(B)
		100	= Total Cover					
pling/Shrub Str	(1	<b>5</b> )			Percent of Dominant Spec	cies		
Betula pen		80	<u> </u>	FACU	That are OBL, FACW, or	FAC:	67%	(A/B)
Rubus arm	eniacus	20	<u>X</u>	FAC	Duran la ser la deve Ma			
					Prevalence Index Wo		. h	
					Total % Cover of OBL Species	Multiply x 1	<u> </u>	
		100	= Total Cover		FACW species	x 1		
					FAC Species	x 3		
erb Stratum (	plot size: 5	)			FACU Species	x 4	= 0	
Holcus lana	atus	60	X	FAC	UPL Species	x 5	= 0	
Agrostis ca	-	20	X	FAC	Column Totals	<b>0</b> (A)	0	(B)
Unidentifie	d grasses	20	<u>X</u>	(FAC)			// <b></b>	
					Prevalence Index =	B/A =	#DIV/0!	
					Hudrophytic Verster	on Indiantere		
					Hydrophytic Vegetati		udronhytic Vocatotic	n
						2- Dominance Test	ydrophytic Vegetatic is >50%	
		100	= Total Cover			3-Prevalence Index		
							aptations <sup>1</sup> (provide s	supporting
oody Vine Strat	um (plot size:	)				data in Remarks or	on a separate shee	t)
						5- Wetland Non-Va	scular Plants <sup>1</sup>	
							ohytic Vegetation <sup>1</sup> (E	
		0	= Total Cover		<sup>1</sup> Indicators of hydric soil a disturbed or problematic.	nd wetland hydrolo	gy must be present,	unless
					Hydrophytic			
Bare Ground in	Herb Stratum	0			Vegetation	Yes X	No	
					Present?			

SOIL			PHS #	6150	_		Sampling Point:	9
	•	the depth	needed to docume	ent the indicator or o		ence of indicators.)		
Depth	Matrix			Redox Features	Loc <sup>2</sup>	<b>T</b> 1 1		
(Inches)	Color (moist)	%	Color (moist)	% Type'	LOC	Texture	Remarks	
0-4	10YR 3/2	100				Silt Loam	Rocks throughout the pro	ille
						·		
						·		
				·				
				·				
<sup>1</sup> Type: C=Con	centration, D=Deplet	ion, RM=R	educed Matrix, CS=	Covered or Coated S	and Grains.		<sup>2</sup> Location: PL=Pore Lining, M=Ma	ıtrix.
Hydric Soil	Indicators: (App	licable to	all LRRs, unles	s otherwise noted	l.)	Indica	ators for Problematic Hydric	Soils <sup>3</sup> :
	Histosol (A1)			Sandy Re	dox (S5)		2 cm Muck (A10)	
	Histic Epipedon (A2)	1		Stripped N	latrix (S6)		Red Parent Material	(TF2)
	Black Histic (A3)			Loamy Mu	cky Mineral (F1)	(except MLRA 1)	Very Shallow Dark S	Surface (TF12)
X	Hydrogen Sulfide (A	4)		Loamy Gle	eyed Matrix (F2)		Other (explain in Re	marks)
	Depleted Below Darl	k Surface (A	A11)	Depleted I	Matrix (F3)			
	Thick Dark Surface (	A12)		Redox Da	rk Surface (F6)			
	Sandy Mucky Minera	al (S1)		Depleted I	Dark Surface (F7	)	<sup>3</sup> Indicators of hydrophytic vegetati hydrology must be present, unles	
	Sandy Gleyed Matrix	(S4)		Redox De	pressions (F8)		problematic.	s disturbed of
Restrictive	Layer (if present	):						
Туре:		R	ock					
Depth (inches	s):		4			Hydric Soil Pres	sent? Yes X No	c
Remarks:								
HYDROLO Wetland Hy	GY drology Indicato	re ·						
-								
	cators (minimum o	of one req	uired; check all th		(D0)		Secondary Indicators (2 or m	<u> </u>
	Surface Water (A1)	0)		1, 2, 4A, a	ned Leaves (B9) nd 4B)	(Except MLRA	Water stained Leave (MLRA1, 2, 4A, and	. ,
	High Water Table (A	2)						
	Saturation (A3)			Salt Crust			X Drainage Patterns (I	
	Water Marks (B1)	<b>D</b> 2)			vertebrates (B13) Sulfide Odor (C1		Dry-Season Water T	. ,
	Sediment Deposits ( Drift Deposits (B3)	62)				ng Living Roots (C3)	Saturation Visible or X Geomorphic Position	
	Algal Mat or Crust (E	84)			of Reduced Iron		X Shallow Aquitard (D	
	Iron Deposits (B5)	, ,				lowed Soils (C6)	Fac-Neutral Test (D	
	Surface Soil Cracks	(B6)			Stressed Plants	( )	Raised Ant Mounds	,
	Inundation Visible or		gery (B7)		lain in Remarks)		Frost-Heave Humme	
	Sparsely Vegetated		· ·	、	,			
Field Obser	vations:							
Surface Water		х	No	Depth (inches):	0.5			
Water Table P		<u> </u>	No	Depth (inches):	0	Wetland Hvd	rology Present?	
Saturation Pre		X	No	Depth (inches):	0		Yes X No	o
(includes capillar				<b>p</b> (			···· <u>···</u> ···	
Describe Reco	orded Data (stream g	auge, mon	itoring well, aerial pł	notos, previous inspe	ctions), if availab	e:		
Remarks:								

	WETLAND	DETER	MINATION	N DATA FOI	RM - Weste	rn Mountains, Val	leys, and C	PHS oast Regioi	
roject/Site:	School District	Bond Pr	ojects	City/County:	St. He	lens/Columbia	Sampling D	ate:	3/23/2017
pplicant/Owner:	St. Helens St.	School D	istrict		Sta		OR	Sampling P	oint: <b>10</b>
vestigator(s):	C	CR/TF		Section, To	wnship, Range:	Sectio	on 4, Townshi	p 4N, Range 1	N
andform (hillslop	e, terrace, etc.:)		Slope		Local relief (con	ncave, convex, none):	none	Slope	(%): 1
ubregion (LRR):		LRR A		Lat:	45.8620	197 Long:	-122.8076	<b>29</b> Da	tum: WGS84
oil Map Unit Nar	me: Ro	ock outcr	op - Xerumb	repts complex	, undulating	NWI Cla	ssification:	Nor	ne
re climatic/hydro	logic conditions on	the site typ	pical for this tim	ne of year?	Yes	X No	(if no	, explain in Rema	rks)
re vegetation	Soil	or Hyd	rology	significantly dist	urbed?	Are "Normal Circumstanc	es" present? (Y	/N) Y	
e vegetation	Soil	or Hyd	rology	naturally probler	matic? If needed,	, explain any answers in Re	emarks.)		
		-		-					
				showing sam	npling point l	locations, transects	, important f	eatures, etc.	
		Yes	X No		Is Sampled Are	ea within			
ydric Soil Preser		Yes		<u> </u>	a Wetlan			No <b>X</b>	
etland Hydrolog	y Present?	Yes	X No						
emarks:									
uepressiona	al area, small oa	aks grove	•						
FGETATIO	N - Use scient	ific nam	es of plant	s					
			absolute	Dominant	Indicator	Dominance Test wor	ksheet:		
			% cover	Species?	Status				
ree Stratum (		3 <b>0</b> )				Number of Dominant Spec		_	
Quercus ga	arryana	·	100	<u> </u>	FACU	That are OBL, FACW, or I	FAC:	5	(A)
						Total Number of Duni			
						Total Number of Dominan		8	(B)
			100	= Total Cover		Species Across All Strata:	·	0	(D)
aliaa (Ohauh Ota									
apling/Shrub Str Rosa nutka		5	) <b>40</b>	v	FAC	Percent of Dominant Spec		63%	
Quercus ga			30	<u> </u>	FAC	That are OBL, FACW, or	FAC.	03 %	(A/B)
	arpos albus		20	<u> </u>	FACU	Prevalence Index Wo	orksheet:		
Rubus arm	•		10		FAC	Total % Cover of		oly by:	
						OBL Species	<u> </u>	<b>1 = 0</b>	
			100	= Total Cover		FACW species	×	2 = <b>0</b>	
						FAC Species	>	3 = <b>0</b>	
<u> </u>		<b>5</b> )				FACU Species		4 = <b>0</b>	
Holcus lan			23	<u> </u>	FAC (EAC)	UPL Species		:5= <u>0</u>	(D)
Unidentifie Schedonor	a grasses rus arundinaceu	15	22 15	<u> </u>	(FAC) FAC	Column Totals	<b>0</b> (A)	0	(B)
Schedonor Agrostis ca			15	<u> </u>	FAC	Prevalence Index =	3/A =	#DIV/0!	
Agrostis et									
						Hydrophytic Vegetati	ion Indicators	:	
								Hydrophytic Veg	etation
						<b>X</b>	2- Dominance Te	est is >50%	
			75	= Total Cover			3-Prevalence Ind		
	um (plot cinc)		<b>`</b>					Adaptations <sup>1</sup> (prov	
oody Vine Strat	um (plot size:		)				data in Remarks 5- Wetland Non-\	or on a separate	sneet)
								ophytic Vegetatic	n <sup>1</sup> (Explain)
			0	= Total Cover		<sup>1</sup> Indicators of hydric soil a	-		
			<u> </u>			disturbed or problematic.		. 3,	, 2
						Hydrophytic			
Bare Ground in		2	-			Vegetation	Yes	Х	No

Politic Decreption: Description: Descri				PHS #	6150			Sampling Point:	10
Interior         Columnation         %         Type <sup>1</sup> Inte <sup>1</sup> Texture         Remarks           0-6         5YR 32         20         Sill Loam         Mixed matrix, disturbed           6-13         5YR 32         20         Sill Loam         Mixed matrix, disturbed           6-13         5YR 32         20         Sill Loam         Mixed matrix, disturbed           6-13         5YR 32         20         Sill Loam         Mixed matrix, disturbed           6-13         5YR 46         20         Sill Loam         Mixed matrix, disturbed           6-14         5YR 46         20         Sill Loam         Mixed matrix, disturbed           1         5ill Loam         Mixed matrix, disturbed         Sill Loam         Mixed matrix, disturbed           1         5ill Loam         Mixed matrix, disturbed         Sill Loam         Mixed matrix, disturbed           1         5ill Loam         Sill Loam         Mixed matrix, disturbed         Sill Loam           1         5ill Loam         Sill Loam         Mixed matrix, disturbed         Sill Loam           1         5ill Loam         Sill Loam         Sill Loam         Sill Loam           1         5ill Loam         Sill Loam         Sill Loam <td< td=""><td>Profile Descrip</td><td>ption: (Describe to</td><td>the depth</td><td>needed to docum</td><td>ent the indicator or co</td><td>nfirm the abser</td><td>nce of indicators.)</td><td></td><td></td></td<>	Profile Descrip	ption: (Describe to	the depth	needed to docum	ent the indicator or co	nfirm the abser	nce of indicators.)		
0-6       SYR 2.5/1       100       Sit Leam         6-13       SYR 32       20       Sit Leam         6-13       SYR 33       60       Sit Leam         6-13       SYR 34       60       Sit Leam         6-14       SYR 34       60       Sit Leam         Mixed matrix, disturbed       Mixed matrix, disturbed       Mixed matrix, disturbed         6-13       SYR 46       20       Sit Leam         "Type: C=Concentration, D=Dipteton, RM=Reduced Matrix, GS=Coverd or Couted Sand Grains       Indicators in PI=Port Lining, M=Matrix         "Type: C=Concentration, D=Dipteton, RM=Reduced Matrix, GS=Coverd or Couted Sand Grains       Indicators in PI=Port Lining, M=Matrix         "Type: C=Concentration, D=Dipteton, RM=Reduced Matrix, GS=Coverd or Couted Sand Grains       Indicators in PI=Port Lining, M=Matrix         Tech Care Sandy Glage Matrix (21)       Sandy Reduce (55)       2 on Mark (10)         Hear Explored Index (24)       Leamy Mixely Minera (17)       Very Stator (17)         Back Hear (53)       Leam Surface (71)       Depeted Attrix (73)         Restrictive Layer (Present):       Type: Bedrock       Popeted Attrix (73)         Type:       Bedrock       No       X         Sandy Glage Matrix (24)       Reades Depressions (76)       Secondary Indicators (2 or more required Lines antr	-					2			
6-13       SYR 3/2       20       Silt Leam       Mixed matrix, disturbed         6-13       SYR 3/2       60       Silt Leam       Mixed matrix, disturbed         6-13       SYR 4/6       20       Silt Leam       Mixed matrix, disturbed         6-14       Silt Leam       Mixed matrix, disturbed       Mixed matrix, disturbed         6-15       SYR 4/6       20       Silt Leam       Mixed matrix, disturbed         1*/per.C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Ceated Sand Grain.       *Location: PL=Pore Linn, M=Matrix.         1*/pdf: Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils?       Red Parent Midneri (T72)         Heads (A1)       Sandy Redux (S5)       2 cm Mixel (A10)       Red Parent Midneri (T72)       Other (repain in Remarks)         Depleted Below Dark Surface (11)       Depleted Dark Surface (F7)       Indicators of hydrophylic vegotation and vetam hydrology indicators of hydrophylic vegotation and vetam hydrology indicators (11)       Depleted Dark Surface (F7)       Indicators (11)       Depleted Dark Surface (F7)         Sondy Muxy Mineral (S1)       Depleted Dark Surface (F7)       Indicators (11)       Vetar Saintee (12)       Potermatic:         Primary Indicators (Interace (12)       13       Hydric Soil Present? Yes		Color (moist)		Color (moist)	% Type'	Loc		Remarks	
6-13       SYR 3/3       60       Silt Leam       Mixed matrix, disturbed         6-13       SYR 4/6       20       Silt Leam       Mixed matrix, disturbed         1*per: C+Concentration, D+Depletion, RM-Reduced Matrix, CS-Coverso or Coated Sand Grains.       *Location: (PL+Proe Lining, M-Matrix).         Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted).       Indicators for Problematic Hydric Soils':         Heldood (A1)       Sandy Redox (S3)       2 on Mixek (A10)         Heldood (A1)       Clamp Greyel Matrix (F1)       Very Statuto Matting (T2)         Depleted Below Dark Surface (A11)       Depleted Matrix (F2)       Other (explain in Remarks)         Depleted Below Dark Surface (A12)       Redoreck       Pageleted Dark Surface (F7)         Sandy Macky Miners (S1)       Depleted Dark Surface (F7)       No	0-6	5YR 2.5/1	100				Silt Loam		
6-13       SYR 4/6       20       Silt Leam       Mixed matrix, disturbed         "Type: C=Concentration, D=Depleton, RM=Reduced Matrix, CS=Covered of Costed Sand Grain.       *Location: PL=Pore Lining, M=Matrix.         Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Solls <sup>1</sup> :         Histado (A1)       Sandy Redox (S3)       Control (Carlow CH=Pore Lining, M=Matrix.         Hydrog Solfice (A2)       Stripped Matrix (S2)       Red Parent Matrial (TF2)         Hydrogen Solfice (A1)       Depleted Matrix (F2)       Other (caplain in Remarks.)         Depleted Batvo Datk Sufface (A11)       Depleted Matrix (F2)       Other (caplain in Remarks.)         Sandy Gleyed Matrix (S4)       Redox Datk Sufface (F7)       *Indicators of hydrophylic vegetation and vetain hydrology must be prosent. Unloss distributed on Sufface (F7)         Type:       Bedrock       Redox Depressions (F8)       *Indicators (12 or more negured Datk Sufface (F7)         Type:       13       Poptiermain:       *Water stained (A2)       Secondary Indicators (2 or more negured Datk Sufface (A1)         Sufface Water (A1)       Water stained Leaves (89) (Except MLRA       Water stained Leaves (80)       Water stained Leaves (80)         X       Sufface Water (A1)       Water stained Leaves (80) (Except MLRA       Water stained Leaves (80)         X       Sufface (X1) <td< td=""><td>6-13</td><td>5YR 3/2</td><td>20</td><td></td><td></td><td></td><td>Silt Loam</td><td>Mixed matrix, disturbed</td><td></td></td<>	6-13	5YR 3/2	20				Silt Loam	Mixed matrix, disturbed	
Type:	6-13	5YR 3/3	60				Silt Loam	Mixed matrix, disturbed	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils <sup>1</sup> :         Histool (A1)       Sandy Redox (SS)       2 cm Muck (A10)         Histool (A2)       Sitroped Matrix (SS)       Red Parent Matrial (TF2)         Hydrogen Suffice (A4)       Loamy Mucky Mineral (F1) (except MLRA 1)       Vary Shallow Dark Surface (TF12)         Popleted Below Dark Surface (A12)       Redox Dark Surface (F6)       Thick Dark Surface (A12)       Redox Dark Surface (F7)         Sandy Kleyd Mineral (S1)       Depleted Dark Surface (F7)       "Indicators of hydrophytic vegetation and wetlam hydrology must be present. unless disturbed or problematic."         Type:       Bedrock       Redox Dark Surface (F8)       "Indicators (F7)         Type:       Bedrock       Redox Depressions (F8)       Wolfer Statuse (A11)         Vpter:       13       Hydric Soil Present? Yes       No	6-13	5YR 4/6	20				Silt Loam	Mixed matrix, disturbed	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils <sup>1</sup> :         Histoal (A1)       Sardy Redx (SS)       2 cm Muck (A10)         Histoal (A1)       Sardy Redx (SS)       2 cm Muck (A10)         Histoal (A2)       Stripped Matrix (SB)       Red Parent Material (TF2)         Hydrogen Suffice (A2)       Learny Gloyed Matrix (SB)       Red Parent Material (TF2)         Depleted Below Dark Surface (A11)       Depleted Matrix (F2)       Other (oxplain in Remarks)         Sandy Mucky Mineral (S1)       Depleted Matrix (F2)       Other (oxplain in Remarks)         No       Sandy Klezy Mineral (S1)       Depleted Matrix (F2)       No         Sandy Klezy Mineral (S1)       Bebrock       Redox Depressions (F8)       modelmatks.         Type:       Bedrock       Redox Depressions (F8)       Wolfer Statuse (A10)       X         Ype:       Bedrock       No       X         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (C2 or more required)       Water stained Leaves (B9) (Except MLRA       Water stained Leaves (B9)         X       Saturation (A3)       Sat Crust (B1)       Darage Patterns (B10)       Dary-Season Water Table (C2)         X       Saturation (A3)       Sat Crust (A11)       Deny-Season Water Table (C2)       S									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils <sup>1</sup> :         Histoal (A1)       Sardy Redx (SS)       2 cm Muck (A10)         Histoal (A1)       Sardy Redx (SS)       2 cm Muck (A10)         Histoal (A2)       Stripped Matrix (SB)       Red Parent Material (TF2)         Hydrogen Suffice (A2)       Learny Gloyed Matrix (SB)       Red Parent Material (TF2)         Depleted Below Dark Surface (A11)       Depleted Matrix (F2)       Other (oxplain in Remarks)         Sandy Mucky Mineral (S1)       Depleted Matrix (F2)       Other (oxplain in Remarks)         No       Sandy Klezy Mineral (S1)       Depleted Matrix (F2)       No         Sandy Klezy Mineral (S1)       Bebrock       Redox Depressions (F8)       modelmatks.         Type:       Bedrock       Redox Depressions (F8)       Wolfer Statuse (A10)       X         Ype:       Bedrock       No       X         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (C2 or more required)       Water stained Leaves (B9) (Except MLRA       Water stained Leaves (B9)         X       Saturation (A3)       Sat Crust (B1)       Darage Patterns (B10)       Dary-Season Water Table (C2)         X       Saturation (A3)       Sat Crust (A11)       Deny-Season Water Table (C2)       S			ion RM=R	educed Matrix, CS		d Grains		<sup>2</sup> Location: PL=Pore Lining M=Matri	iv.
Histosal (A1)       Sandy Redox (S5)      2 cm Muck (A10)         Histic Explocidor (A2)       Stripped Matrix (S6)       Red Parent Material (TF2)         Hydrogen Sulfide (A4)       Learny Mucky Minrai (F1) (except MLRA 1)       Very Shallow Dark Surface (A11)         Depleted Back Matrix (C3)       Depleted Matrix (T2)       Other (explain in Remarks)         Thick Dark Surface (A11)       Depleted Matrix (T2)       Other (explain in Remarks)         Sandy Kludy Minrai (C1)       Depleted Matrix (S1)       Depleted Matrix (S1)         Sandy Gluyed Matrix (S4)       Redox Dark Surface (F7)       *indicators of hydrophytic vegetation and vetain any ve							Indica	0.	
Histic Epipedon (A2)       Stripped Matrix (S6)       Red Parent Material (TF2)         Black Histic (A3)       Larmy Mucky Mineral (F1) (except MLRA 1)       Very Shallow Dark Surface (TF12)         Depleted Balow Dark Surface (A11)       Depleted Matrix (F2)       Other (explain in Remarks)         Thick Dark Surface (A12)       Redox Dark Surface (F6)       "indicators of hydrophytic vegetation and wetlam hydrology must be present, unless disturbed or yorkology must be present, unless disturbed or problematic.         Restrictive Layer (if present):       Type:       Bedrock       problematic.         Popleted Matrix (S1)       Depleted Dark Surface (F7)       "indicators of hydrophytic vegetation and wetlam hydrology must be present, unless disturbed or problematic.         Restrictive Layer (if present):       Type:       Bedrock       problematic.         Depleted Matrix (S4)       Redox Depressions (F8)       not       X         Wetland Hydrology Indicators:       Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (2 or more required)         X       Surface Water (A1)       Salt Crust (B1)       Dariange Patient (B1)       Dariange Patient (B1)         X       Salt Crust (B1)       Aquatic Inverterates (B1)       Dariange Patient (B1)       Dariange Patient (B1)         X       Salt Crust (B4)       Presence of Reduced Inin (C4)       X       Salt Crust (B1)<	•							-	
Black Histe (A3)       Loamy Mucky Mineral (F1) (weept MLRA 1)       Very Shallow Dark Surface (TF12)         Hydrogen Suffie (A4)       Loamy Gleyed Matrix (F2)       Other (explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       ************************************									(F2)
Hydrogen Sulidice (A4)       Loarny Gleyed Matrix (F2)       Other (explain in Remarks)         Depleted Below Dark Surface (A12)       Redox Dark Surface (F6)       ************************************						. ,	vcont MI BA 1)		<i>.</i>
Depteted Below Dark Surface (A12)       Depteted Matrix (F3)         Sandy Mucky Mineral (S1)       Depteted Matrix (F3)         Sandy Gleyed Matrix (S4)       Redox Depressions (F8)         Propressions (F8)       problematic.         Type:       Bedrock         Depth (inches):       13         HYDROLOGY       No         Wetland Hydrology Indicators:       No         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (2 or more required; Surface Water (A1)         Water stained Leaves (B9)       Water stained Leaves (B9)         X       High Water Table (A2)         Surface Water (A1)       Saturation (B3)         Water stained Leaves (B1)       Drainage Patterns (B10)         Water stained Leaves (B9)       Secondary Indicators (2 or more required; An and 4B)         X       Saturation (A3)       Saturation (B1)         Sediment Deposits (B2)       Hydrogen Sufface Water (A1)       Oraliage Patterns (B10)         Dyn-Season Water Table (A2)       Aquatio Invertebrates (B13)       Dry-Season Water Table (A2)         Sediment Deposits (B3)       Oxidized Phizospheres along Living Roots (C3)       Geomorphic Position (D2)         Aqail Mator Crust (B4)       Presence of Reduced Iron (C4)       X       Shallow Aquataf (D3)         Satu							ACCEPT MLRA 1)		
Thick Dark Surface (A12)       Redox Dark Surface (F6)       **Indicators of hydrophytic vegetation and wetlan hydrology must be present, unless disturbed or problematic.         Restrictive Layer (if present):       Redox Dark Surface (F7)       **Indicators of hydrophytic vegetation and wetlan hydrology must be present, unless disturbed or problematic.         Restrictive Layer (if present):       Bedrock        No X         Depth (inches):       13        No X         Remarks:       Hydric Soil Present? Yes       No X         Wetland Hydrology Indicators:        No X         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (2 or more required; Second AP)         X       High Water Table (A2)       1, 2, 4A, and 4B)       (MLRA1, 2, 4A, and 4B)         X       Surface Water (A1)       Aquatic Invertebrates (B1)       Dariage Patterns (B1)         X       Saturation (A3)       Sati Crust (B1)       Dariage Patterns (B1)       Dariage Patterns (B1)         X       Saturation (A3)       Oxidace Networks (G3)       Oxidace Networks (G3)       Dariage Patterns (B1)         X       Saturation (A3)       Sati Crust (B1)       Dariage Patterns (B1)       Dariage Patterns (B1)         X       Aquatic Invertebrates (B13)       Dy-Season Water Table (C2)       Hydrogen Suifde Odr (C1)       Satu			-					Other (explain in Rema	arks)
Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7) <sup>1n</sup> dicators of hydrophytic vegetation and vetlam hydrology must be present, unless disturbed or problematic.         Restrictive Layer (if present):       Type:       Bedrock       problematic.         Type:       Bedrock       model and the second and the sec		•		A11)					
	1	Thick Dark Surface (	(A12)		Redox Dark	Surface (F6)		<sup>3</sup> Indicators of hydrophytic vocatation	and watland
Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       problematic.         Restrictive Layer (if present):       Type:       Bedrock         Depth (inches):       13       Hydric Soil Present? Yes       No       X         Remarks:       Hydric Soil Present? Yes       No       X         HYDROLOGY       Secondary Indicators (2 or more required: check all that apply)       Secondary Indicators (2 or more required: seves (B9) (Except MLRA       Water stained Lawes (B9)         Surface Water (A1)       Water stained Lawes (B9) (Except MLRA       (MLRA1, 2, 4A, and 4B)       (MLRA1, 2, 4A, and 4B)         X       High Water Table (A2)       1, 2, 4A, and 4B)       Oralized Patterns (B10)       Drainage Patterns (B10)         X       Saturation (A3)       Sati Crust (B11)       Drainage Patterns (B10)       Dry-Season Water Table (C2)         X       Saturation (A3)       Sati Crust (B11)       Drainage Patterns (B10)       Dry-Season Water Table (C2)         X       Saturation (A3)       Saturation Nisble on Aerial Image       Outdized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Agal Mat or Crust (B4)       Presence of Reduced Iron (C4)       X       Shallow Aquitard (D3)       Sturation in Remarks)       Frost-Heave Hummocks (D7)       Sparsely Vegetated Concave Surface (B8)       Frost-Heave Hummocks (D7)       Sparsely Vegetated	5	Sandy Mucky Minera	al (S1)		Depleted Da	rk Surface (F7)			
Type:       Bedrock         Depth (inches):       13         Remarks:         No X         Remarks:         HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one required; check all that apply)         Secondary Indicators (2 or more required; Surface Water (A1)         X       High Water Table (A2)       1, 2, 4A, and 4B)       Water stained Leaves (B9) (Except MLRA       Water stained Leaves (B9)       (MLRA1, 2, 4A, and 4B)       Water stained Leaves (B1)       Drainage Patterns (B10)       Drains (D10)       Saturation Visible on Aerial Imagery (B7)		Sandy Gleyed Matrix	k (S4)		Redox Depre	essions (F8)			
Depth (inches):       13       Hydric Soil Present? Yes       No       X         Remarks:       Remarks:       Remarks:       Remarks:       Remarks:       Remarks:       No       X         HYDROLOGY       Water stained Leaves (B9) (Except MLRA       Secondary Indicators (2 or more required; check all that apply)       Secondary Indicators (2 or more required; fight Water stained Leaves (B9)       Secondary Indicators (2 or more required; fight Water stained Leaves (B9)         X       Fight Water stained Leaves (B9)       Water stained Leaves (B9)       Water stained Leaves (B9)         X       Fight Water stained Leaves (B9)       Mater stained Leaves (B9)       (MLRA1, 2, 4A, and 4B)       Water stained Leaves (B9)         X       Saturation (A3)       Satit Crust (B11)       Drainage Patterns (B10)       Drainage Patterns (B10)       Drainage Patterns (B10)       Saturation Visible on Aerial Image         Drift Deposits (B2)       Hydrogen Sulfde Cdor (C1)       Saturation Visible on Aerial Image       Saturation Visible on Aerial Image       C2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       X       Saturation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Field Observations:       Mo       Depth (inches):       Mo       Mo       Mo       Mo <td< td=""><td>Restrictive L</td><td>_ayer (if present</td><td>):</td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	Restrictive L	_ayer (if present	):						
Remarks:         HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (2 or more required; check all that apply)         Surface Water (A1)       Nature of the required; check all that apply)         Surface Water (A1)       Water stained Leaves (B9) (Except MLRA         X       High Water Table (A2)       1, 2, 4A, and 4B)         X       Saturation (A3)       Saturation (A3)         Water Marks (B1)       Drinage Patterns (B10)         Water Marks (B1)       Driy-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Suffice Odor (C1)         Sutartation (A3)       Oxidized Rhizospheres along Living Roots (C3)         Geomorphic Position (D2)       Aquatic Invertebrates (B13)         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)         Geomorphic Position (D2)       Align Mat or Crust (B4)         Iron Deposits (B5)       Resent for Reduced Iron (C4)       X       Shallow Aquitard (D3)         Surface Soil Cracks (B6)       Other (Explain in Remarks)       Foret-Heave Hummocks (D7)         Sparsely Vegetat	Туре:		Bee	drock					
Remarks:         HYDROLOGY         Wetland Hydrology Indicators:         Surface Water (A1)       Secondary Indicators (2 or more required; Check all that apply)         Secondary Indicators:         X       High Water Table (A2)       1, 2, 4A, and 4B)       Water stained Leaves (B9)       Water stained Leaves (B9)         X       High Water Table (A2)       1, 2, 4A, and 4B)       Water stained Leaves (B9)       Water Stained Leaves (B1)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Drainage Patterns (B10)       Saturation Visible on Aerial Image         Drift Deposits (B2)       Hydrogen Sulfac Odor (C1)       Saturation Visible on Aerial Image       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Mage Mat or Crust (B4)       Presence of Reduced Iron (C4)       X       Shallow Aquidard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Water Present?       Yes       No       Depth (inches):       Wetland Hydrology Present?         Saturation Present?       Yes       X       No       Depth (inches):       Wetland Hydrology Present?         Yes       X       No       Depth (inches):       0       Yes <td>Depth (inches</td> <td>):</td> <td></td> <td>13</td> <td></td> <td></td> <td>Hydric Soil Pres</td> <td>sent? Yes No</td> <td>х</td>	Depth (inches	):		13			Hydric Soil Pres	sent? Yes No	х
Surface Water (A1)       Water stained Leaves (B9) (Except MLRA       Water stained Leaves (B9)         X       High Water Table (A2)       1, 2, 4A, and 4B)       (MLRA1, 2, 4A, and 4B)         X       Saturation (A3)       Saturation (A3)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sufide Odor (C1)       Saturation Visible on Aerial Image         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       X       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       0       Yes       X       No         Saturation Present?       Yes       X       No       Depth (inches):       0       Yes       X       No         Saturation Present?       Yes       X       No       Depth (inches):       0 <td< th=""><th>Remarks:</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></td<>	Remarks:								
X       High Water Table (A2)       1, 2, 4A, and 4B)       (MLRA1, 2, 4A, and 4B)         X       Saturation (A3)       Salt Crust (B11)       Drainage Patterns (B10)         Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Image         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       X       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       4       Wetland Hydrology Present?         Yes       X       No       Depth (inches):       0       Yes       X       No         Saturation Present?       Yes       X       No       Depth (inches):       0       Yes       X       No         Saturation Present?       Yes       X       No       Depth (inches): <td< td=""><td>Remarks:</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	Remarks:								
X       Saturation (A3)	Remarks: HYDROLO Wetland Hyd	drology Indicato	rs:		nat apply)				re required)
Water Marks (B1)       Aquatic Invertebrates (B13)       Dry-Season Water Table (C2)         Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Image         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       X       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       4       Wetland Hydrology Present?         Yes       X       No       Depth (inches):       4       No         Saturation Present?       Yes       X       No       Depth (inches):       4       No         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Describe recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Yes       X       No	Remarks: HYDROLO Wetland Hyo Primary Indic	drology Indicato	rs:			d Leaves (B9) <b>(</b> I		Secondary Indicators (2 or mo	
Sediment Deposits (B2)       Hydrogen Sulfide Odor (C1)       Saturation Visible on Aerial Image         Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       X       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):           Field Observations:       Saturation Present?       Yes       X       No       Depth (inches):          Saturation Present?       Yes       X       No       Depth (inches):       0       Yes       X       No         Depth (inches):       0       Yes       X       No       Depth (inches):       0       Yes       X       No         Saturation Present?       Yes       X       No       Depth (inches):       0       Yes       X       No         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Remarks: HYDROLO Wetland Hyc Primary Indic	drology Indicato cators (minimum o Surface Water (A1)	<b>rs:</b> of one req		Water staine			Secondary Indicators (2 or mo Water stained Leaves	(B9)
Drift Deposits (B3)       Oxidized Rhizospheres along Living Roots (C3)       Geomorphic Position (D2)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       X       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Depth (inches):       Wetland Hydrology Present?         Yes       X       No       Depth (inches):       Wetland Hydrology Present?         Saturation Present?       Yes       X       No       Depth (inches):       Ves         Mater Table Present?       Yes       X       No       Depth (inches):       Ves       X       No         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Yes       X       No	Remarks: HYDROLO Wetland Hyc Primary Indic X H	drology Indicato cators (minimum c Surface Water (A1) High Water Table (A	<b>rs:</b> of one req		Water staine 1, 2, 4A, and	i 4B)		Secondary Indicators (2 or mo Water stained Leaves (MLRA1, 2, 4A, and 4	(B9) <b>4B)</b>
Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       X       Shallow Aquitard (D3)         Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Pepth (inches):       Wetland Hydrology Present?         Sufface Water Present?       Yes       X       No         Saturation Present?       Yes       X       No         Saturation Present?       Yes       X       No         Depth (inches):       0       Yes       X         Mo       Depth (inches):       0       Yes       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Present available:	Remarks: HYDROLO Wetland Hyd Primary Indic X X X X S	drology Indicato cators (minimum o Surface Water (A1) High Water Table (A Saturation (A3)	<b>rs:</b> of one req		Water staine <b>1, 2, 4A, and</b> Salt Crust (B	<b>i 4B)</b> :11)		Secondary Indicators (2 or mo Water stained Leaves (MLRA1, 2, 4A, and 4 Drainage Patterns (B1	(B9) <b>4B)</b> 0)
Iron Deposits (B5)       Recent Iron Reduction in Plowed Soils (C6)       Fac-Neutral Test (D5)         Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Pepth (inches):       4       Wetland Hydrology Present?         Saturation Present?       Yes       X       No       Depth (inches):       4       Wetland Hydrology Present?         Saturation Present?       Yes       X       No       Depth (inches):       0       Yes       X       No         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Previous inspections), if available:       Previous inspections), if available:	Remarks: HYDROLO Wetland Hyd Primary Indic S X X X X X	drology Indicato cators (minimum o Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1)	<b>rs:</b> of one req 2)		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve	<b>1 4B)</b> 111) rtebrates (B13)	Except MLRA	Secondary Indicators (2 or mo Water stained Leaves (MLRA1, 2, 4A, and 4 Drainage Patterns (B1 Dry-Season Water Tal	(B9) 4 <b>B)</b> 0) ble (C2)
Surface Soil Cracks (B6)       Stunted or Stressed Plants (D1) (LRR A)       Raised Ant Mounds (D6) (LRR A)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       The provide the second s	Remarks: HYDROLO Wetland Hyc Primary Indic S X K S S S S S S S S S S S S S	drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (	<b>rs:</b> of one req 2)		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen St	<b>1 4B)</b> 111) rtebrates (B13) ulfide Odor (C1)	Except MLRA	Secondary Indicators (2 or mo Water stained Leaves (MLRA1, 2, 4A, and 4 Drainage Patterns (B1 Dry-Season Water Tat Saturation Visible on A	(B9) 4 <b>B)</b> 0) ble (C2) Aerial Imagery (C
Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7)         Sparsely Vegetated Concave Surface (B8)       Field Observations:	Remarks: HYDROLO Wetland Hyd Primary Indio S X F X S C C	drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits ( Drift Deposits (B3)	<b>rs:</b> of one req 2) B2)		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi	<b>1 4B)</b> 111) rtebrates (B13) Ilfide Odor (C1) izospheres along	Except MLRA	Secondary Indicators (2 or mo Water stained Leaves (MLRA1, 2, 4A, and 4 Drainage Patterns (B1 Dry-Season Water Tal Saturation Visible on A Geomorphic Position (	(B9) 4 <b>B)</b> 0) ble (C2) Aerial Imagery (C D2)
Sparsely Vegetated Concave Surface (B8)         Field Observations:         Surface Water Present?       Yes       No       Depth (inches):       4         Water Table Present?       Yes       X       No       Depth (inches):       4         Saturation Present?       Yes       X       No       Depth (inches):       0       Yes       X       No         Includes capillary fringe)       Ves       X       No       Depth (inches):       0       Yes       X       No         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       If available:       If available:	Remarks: HYDROLO Wetland Hyd Primary Indic X K X K X C X C C C C C C C C C C C C C	drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits ( Drift Deposits (B3) Algal Mat or Crust (E	<b>rs:</b> of one req 2) B2)		Water staine	<b>1 4B)</b> (11) (tebrates (B13) (11) (12) (12) (13) (13) (14) (14) (14) (14) (14) (14) (14) (14	Except MLRA g Living Roots (C3) C4)	Secondary Indicators (2 or mo Water stained Leaves (MLRA1, 2, 4A, and 4 Drainage Patterns (B1 Dry-Season Water Tal Saturation Visible on A Geomorphic Position ( X Shallow Aquitard (D3)	(B9) 4 <b>B)</b> 0) ble (C2) Aerial Imagery (C D2)
Field Observations:         Surface Water Present?       Yes       No       X       Depth (inches):       4       Wetland Hydrology Present?         Water Table Present?       Yes       X       No       Depth (inches):       4       Wetland Hydrology Present?         Saturation Present?       Yes       X       No       Depth (inches):       0       Yes       X       No         Gincludes capillary fringe)       Ves       X       No       Depth (inches): inches):       0       Yes       X       No         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       If available:	Remarks: HYDROLO Wetland Hyd Primary Indic S X F X S C A H A A A A A A A A A A A A A	drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits ( Drift Deposits (B3) Algal Mat or Crust (E ron Deposits (B5)	rs: of one req 2) B2) 34)		Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron	<b>1 4B)</b> (11) (Intebrates (B13)) (Intebrates (B13)) (Intebrates (B13)) (Intebrates (B13)) (Intebrates (B13)) (Interpret (B13)) (Integration (B13))	Except MLRA g Living Roots (C3) C4) wed Soils (C6)	Secondary Indicators (2 or mo Water stained Leaves (MLRA1, 2, 4A, and 4 Drainage Patterns (B1 Dry-Season Water Tal Saturation Visible on A Geomorphic Position ( X Shallow Aquitard (D3) Fac-Neutral Test (D5)	(B9) 4B) 0) ble (C2) Aerial Imagery (C D2)
Surface Water Present?       Yes       No       X       Depth (inches):       4       Wetland Hydrology Present?         Water Table Present?       Yes       X       No       Depth (inches):       4       Wetland Hydrology Present?         Saturation Present?       Yes       X       No       Depth (inches):       0       Yes       X       No         (includes capillary fringe)       Ves       X       No       Depth (inches):       0       Yes       X       No         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       If available:       If available:	Remarks: HYDROLOG Wetland Hyc Primary Indic S X K S C C C C C C C C C C C C C	drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits ( Drift Deposits (B3) Algal Mat or Crust (E ron Deposits (B5) Surface Soil Cracks	<b>rs:</b> 2) B2) B2) (B6)	uired; check all t	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron Stunted or S	<b>I 4B)</b> Intebrates (B13) Iffide Odor (C1) Izospheres along Reduced Iron (C Reduction in Plo tressed Plants (	Except MLRA g Living Roots (C3) C4) wed Soils (C6)	Secondary Indicators (2 or mo Water stained Leaves (MLRA1, 2, 4A, and 4 Drainage Patterns (B1 Dry-Season Water Tal Saturation Visible on A Geomorphic Position ( X Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D	(B9) 4B) 0) ble (C2) Aerial Imagery (C D2) 06) (LRR A)
Water Table Present?       Yes       X       No       Depth (inches):       4       Wetland Hydrology Present?         Saturation Present?       Yes       X       No       Depth (inches):       0       Yes       X       No         (includes capillary fringe)       Yes       X       No       Depth (inches):       0       Yes       X       No         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       If available:       If available:       If available:	Remarks: HYDROLO Wetland Hyd Primary Indic X K X S C C C C C C C C C C C C C	drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits ( Drift Deposits (B3) Algal Mat or Crust (E ron Deposits (B5) Surface Soil Cracks nundation Visible or	rs: of one req 2) B2) 34) (B6) n Aerial Ima	uired; check all t	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron Stunted or S	<b>I 4B)</b> Intebrates (B13) Iffide Odor (C1) Izospheres along Reduced Iron (C Reduction in Plo tressed Plants (	Except MLRA g Living Roots (C3) C4) wed Soils (C6)	Secondary Indicators (2 or mo Water stained Leaves (MLRA1, 2, 4A, and 4 Drainage Patterns (B1 Dry-Season Water Tal Saturation Visible on A Geomorphic Position ( X Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D	(B9) <b>4B)</b> 0) ble (C2) Aerial Imagery (C D2) 06) <b>(LRR A)</b>
Saturation Present?       Yes       X       No       Depth (inches):       0       Yes       X       No         (includes capillary fringe)       Depth (inches):       0       Yes       X       No         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Saturation       Saturation       Saturation	Remarks:  HYDROLO  Wetland Hyd  Primary Indic  X  X  X  C  C  C  C  C  C  C  C  C  C	drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (E ron Deposits (B5) Surface Soil Cracks nundation Visible or Sparsely Vegetated	rs: of one req 2) B2) 34) (B6) n Aerial Ima	uired; check all t	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron Stunted or S	<b>I 4B)</b> Intebrates (B13) Iffide Odor (C1) Izospheres along Reduced Iron (C Reduction in Plo tressed Plants (	Except MLRA g Living Roots (C3) C4) wed Soils (C6)	Secondary Indicators (2 or mo Water stained Leaves (MLRA1, 2, 4A, and 4 Drainage Patterns (B1 Dry-Season Water Tal Saturation Visible on A Geomorphic Position ( X Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D	(B9) 4B) 0) ble (C2) Aerial Imagery (C D2) 06) (LRR A)
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Remarks: HYDROLO Wetland Hyd Primary Indic X X X X X S C C C C C C C C C C C C C	drology Indicato eators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (E ron Deposits (B5) Surface Soil Cracks nundation Visible or Sparsely Vegetated vations:	rs: of one req 2) B2) 34) (B6) n Aerial Ima	uired; check all t igery (B7) urface (B8)	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron Stunted or S Other (Expla	<b>I 4B)</b> Intebrates (B13) Iffide Odor (C1) Izospheres along Reduced Iron (C Reduction in Plo tressed Plants (	Except MLRA g Living Roots (C3) C4) wed Soils (C6)	Secondary Indicators (2 or mo Water stained Leaves (MLRA1, 2, 4A, and 4 Drainage Patterns (B1 Dry-Season Water Tal Saturation Visible on A Geomorphic Position ( X Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D	(B9) 4 <b>B)</b> 0) ble (C2) Aerial Imagery (C D2) 06) (LRR A)
	Remarks: HYDROLO Wetland Hyd Primary Indic S X H X S C C C C C C C C C C C C C	drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (E ron Deposits (B5) Surface Soil Cracks nundation Visible or Sparsely Vegetated vations: Present? Yes	rs: of one req 2) B2) 34) (B6) h Aerial Ima Concave S	uired; check all t igery (B7) urface (B8) No X	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron Stunted or S Other (Explain Depth (inches):	<b>1 4B)</b> it1) rtebrates (B13) ulfide Odor (C1) izospheres along Reduced Iron (C Reduction in Plo tressed Plants ( in in Remarks)	Except MLRA g Living Roots (C3) C4) wed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or mo Water stained Leaves (MLRA1, 2, 4A, and 4 Drainage Patterns (B1 Dry-Season Water Tal Saturation Visible on A Geomorphic Position ( X Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D Frost-Heave Hummoc	(B9) 4B) 0) ble (C2) Aerial Imagery (C D2) 06) (LRR A)
	Remarks: HYDROLOG Wetland Hyd Primary Indic S X H X S S Field Observ Surface Water Water Table Pr Saturation Pres	drology Indicato cators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (E ron Deposits (B5) Surface Soil Cracks nundation Visible or Sparsely Vegetated vations: Present? Yes resent? Yes	rs: of one req 2) B2) 34) (B6) n Aerial Ima Concave S X	uired; check all t Igery (B7) urface (B8) No <u>X</u> No	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rh Presence of Recent Iron Stunted or S Other (Expla Depth (inches): Depth (inches):	4 4B) (11) rtebrates (B13) ulfide Odor (C1) izospheres along Reduced Iron (C Reduction in Plot tressed Plants (i in in Remarks) 4	Except MLRA g Living Roots (C3) C4) wed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or mo Water stained Leaves (MLRA1, 2, 4A, and 4 Drainage Patterns (B1 Dry-Season Water Tal Saturation Visible on A Geomorphic Position ( X Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D Frost-Heave Hummoc	(B9) <b>4B)</b> 0) ble (C2) Aerial Imagery (C D2) 06) <b>(LRR A)</b>
	Remarks: HYDROLOO Wetland Hyd Primary Indic S X H X S V S Field Observ Surface Water Water Table Pr Saturation Press (includes capillary	drology Indicato eators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (E ron Deposits (B5) Surface Soil Cracks nundation Visible or Sparsely Vegetated <b>vations:</b> Present? Yes resent? Yes sent? Yes	rs: of one req 2) B2) 34) (B6) n Aerial Ima Concave S X X	uired; check all t ngery (B7) urface (B8) No <u>X</u> No <u>No</u>	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron Stunted or S Other (Expla Depth (inches): Depth (inches):	4 4B) (11) rtebrates (B13) ulfide Odor (C1) izospheres along Reduced Iron (C Reduction in Plo tressed Plants (i in in Remarks) 4 0	Except MLRA g Living Roots (C3) C4) wed Soils (C6) D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or mo Water stained Leaves (MLRA1, 2, 4A, and 4 Drainage Patterns (B1 Dry-Season Water Tal Saturation Visible on A Geomorphic Position ( X Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D Frost-Heave Hummoc	(B9) <b>4B)</b> 0) ble (C2) Aerial Imagery (C D2) 06) <b>(LRR A)</b>
Remarks:	Remarks: HYDROLOO Wetland Hyd Primary Indic S X H X S V S Field Observ Surface Water Water Table Pr Saturation Press (includes capillary	drology Indicato eators (minimum of Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (E ron Deposits (B5) Surface Soil Cracks nundation Visible or Sparsely Vegetated <b>vations:</b> Present? Yes resent? Yes sent? Yes	rs: of one req 2) B2) 34) (B6) n Aerial Ima Concave S X X	uired; check all t ngery (B7) urface (B8) No <u>X</u> No <u>No</u>	Water staine 1, 2, 4A, and Salt Crust (B Aquatic Inve Hydrogen Su Oxidized Rhi Presence of Recent Iron Stunted or S Other (Expla Depth (inches): Depth (inches):	4 4B) (11) rtebrates (B13) ulfide Odor (C1) izospheres along Reduced Iron (C Reduction in Plo tressed Plants (i in in Remarks) 4 0	Except MLRA g Living Roots (C3) C4) wed Soils (C6) D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or mo Water stained Leaves (MLRA1, 2, 4A, and 4 Drainage Patterns (B1 Dry-Season Water Tal Saturation Visible on A Geomorphic Position ( X Shallow Aquitard (D3) Fac-Neutral Test (D5) Raised Ant Mounds (D Frost-Heave Hummoc	(B9) <b>4B)</b> 0) ble (C2) Aerial Imagery (C D2) 06) <b>(LRR A)</b>

## **Appendix C**

**Site Photos** 





#### Photo A:

Looking west-southwest at Tributary 1 and Wetland A.

#### Photo B:

Looking southwest at the backwater channel associated with Tributary 1 and Wetland A.



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#### Photo C:

Looking north at Sample Points 1 & 2 and the northern boundary of Wetland A.

#### Photo D:

Looking southwest at Wetland A.



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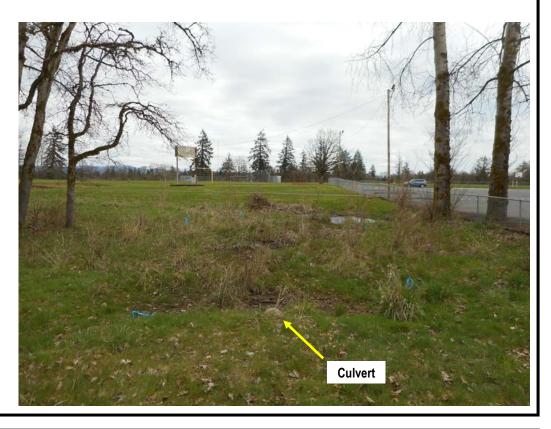


#### Photo E:

Looking north at Sample Point 3.

#### Photo F

Looking east at Wetland B. The culvert that drains to Wetland C is at the west end of Wetland B.



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#### Photo G:

Looking northeast at the southeastern boundary of Wetland C.

#### Photo H:

Looking northwest at Sample Points 8 & 9 and the southwestern boundary of Wetland C.



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#### Photo I:

Looking southwest at Sample Points 6 & 7 and the northeastern boundary of Wetland C.

#### Photo J:

Looking southwest at Sample Point 10.



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## **Appendix D**

### Wetland Definitions and Methodology and References



## WATERS OF THE STATE AND WETLAND DEFINITION AND CRITERIA

#### **Regulatory Jurisdiction**

Wetlands and water resources in Oregon are regulated by the Oregon Department of State Lands (DSL) under the Removal-Fill Law (ORS 196.800-196.990) and by the U.S. Army Corps of Engineers (COE) through Section 404 of the Clean Water Act.

The primary source documents for wetland delineations within Oregon is the *Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (U.S. Army Corps of Engineers, 2010), which are required by both DSL and COE.

#### Waters of This State and Wetland Definition

Waters of This State are defined as "all natural waterways, tidal and non-tidal bays, intermittent streams, constantly flowing streams, lakes, wetlands, that portion of the Pacific Ocean that is in the boundaries of this state, all other navigable and nonnavigable bodies of water in this state and those portions of the ocean shore ..." (DSL, 2009).

Wetlands are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (DSL 2009).

#### Wetland Criteria

Based on the above definition, three major factors characterize a wetland: hydrology, substrate, and biota.

#### Wetland Hydrology

Wetland hydrology is related to duration of saturation, frequency of saturation, and critical depth of saturation. The 1987 manual defines wetland hydrology as inundation or saturation within a major portion of the root zone (usually above 12 inches), typically for at least 12.5% of the growing season. The wetland hydrology criterion can be met, however, if saturation within the major portion of the root zone is present for only 5% of the growing season, depending on other evidence.

The growing season is defined as the portion of the year when soil temperatures at 12.0 inches below the soil surface are higher than biological zero (41 degrees Fahrenheit, 5 degrees Celsius), but also allows approximation from frost free days, based on air temperature. The growing season for any given site or location is determined from US Natural Resources Conservation Service, (formerly Soil Conservation Service) data and information.

Wetland hydrologic indicators include the following: visual observation of inundation or saturation, watermarks, drift lines, sediment deposits, and/or oxidized rhizospheres with living roots. Oxidized rhizospheres are defined as yellowish-red zones around the roots and rhizomes of some plants that grow in frequently saturated soils. Other indicators of hydrology, including algal mats or crust, iron deposits, surface soil cracks, sparsely vegetated concave surface, salt crust, aquatic invertebrates, hydrogen sulfide odor, reduced iron, iron reduction in tilled soils, and stunted or stressed plants can also be used to determine the presence of wetland hydrology.

#### Wetland Substrate (Soils)

Most wetlands are characterized by hydric soils. Hydric soils are those that are ponded, flooded, or saturated for long enough during the growing season to develop anaerobic conditions. Periodic saturation of soils causes alternation of reduced and oxidized conditions, which leads to the formation of redoximorphic features (gleying and mottling). Mineral hydric soils will be either gleyed or will have bright mottles and/or low matrix chroma. The redoximorphic feature known as gley is a result of greatly reduced soil conditions, which result in a characteristic grayish, bluish or greenish soil color. The term mottling is used to describe areas of contrasting color within a soil matrix. The soil matrix is the portion of the soil layer that has the predominant color. Soils that have brightly colored mottles and a low matrix chroma are indicative of a fluctuating water table.

Hydric soil indicators include: organic content of greater than 50% by volume, and/or presence of redoximorphic features and dark soil matrix, as determined by the use of a Munsell Soil Color Chart. This chart establishes the chroma, value and hue of soils based on comparison with color chips. Mineral hydric soil must meet one of the 16 definitions for hydric soil indicators, or be classified as a "problem soil" in the Interim Regional Supplement.

#### Wetland Biota (Vegetation)

т 1• 4

Wetland biota is defined as hydrophytic vegetation. A hydrophyte is a plant species that is capable of growing in substrates that are periodically deficient in oxygen as a result of saturated soil conditions. The U.S. Fish and Wildlife Service, in the *National List of Plant Species that Occur in Wetlands*, has established five basic groups of vegetation based on their frequency of occurrence in wetlands. These categories, referred to as the "wetland indicator status", are as follows: obligate wetland plants (OBL), facultative wetland (FACW), facultative (FAC), facultative upland (FACU), and obligate upland (UPL). Table 1 gives a definition of the plant indicator codes.

Table 1.	<b>Description of Wetland Plant Indicator Status Codes</b>
----------	--

Indicator	
Code	Status
OBL	Obligate wetland. Estimated to occur almost exclusively in wetlands (>99%)
FACW	Facultative wetland. Estimated to occur 67-99% of the time in wetlands.
FAC	Facultative. Occur equally in wetlands and non-wetlands (34-66%).
FACU	Facultative upland. Usually occur in non-wetlands (67-99%).
UPL	Obligate upland. Estimated to occur almost exclusively in non-wetlands (>99%). If a species is not assigned to one of the four groups described above it is assumed to be obligate upland.
NI	Has not yet received a wetland indicator status, but is probably not obligate upland.

Observations of hydrology, soils, and vegetation, were made using the "Routine On-site" delineation method as defined in the 1987 manual and the Interim Regional Supplement for areas that were not currently in agricultural production. One-foot diameter soil pits were excavated to 20 inches and soil profiles were examined for hydric soil and wetland hydrology field indicators. In addition, a visual absolute-cover estimate of the dominant species of the plant community was performed using soil pit locations as a center of reference. Dominant plant species are based on estimates of absolute cover for herbaceous, and shrub species within a 5 foot radius of the sample point, and basal area cover for tree and woody vine species within a 30 foot radius of the sample point. Plant species in each vegetative layer, which are estimated at less than 20% of the total cover, are not considered to be dominant. The wetland indicator status is then used to determine if there is an overall dominance (greater than 50%) of wetland or upland plant species. If less than 50% of the dominant species are hydrophytic, then the prevalence index may be used to determine if the subdominant species are hydrophytic. If the prevalence index is less than or equal to 3, hydrophytic vegetation criterion is met.

During data collection, the soil profiles were examined for hydric soil and wetland hydrology field indicators. Plant species and cover were recorded. Data was recorded on standard data sheets which contain the information specified in the 1987 Corps Manual and the Interim Regional Supplement.

## Exhibit 5

## Lighting and Equipment Cut Sheets

#### DESCRIPTION

The Galleon<sup>™</sup> LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics<sup>™</sup> system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated and UL/cUL Listed for wet locations.

#### **McGraw-Edison**

Catalog #	Туре
Project	
Comments	Date
Prepared by	

#### SPECIFICATION FEATURES

#### Construction

Extruded aluminum driver enclosure thermally isolated from Light Squares for optimal thermal performance. Heavy-wall, diecast aluminum end caps enclose housing and die-cast aluminum heat sinks. A unique, patent pending interlocking housing and heat sink provides scalability with superior structural rigidity. 3G vibration tested and rated. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

#### Optics

Patented, high-efficiency injection-molded AccuLED Optics technology. Optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT 70 CRI. Optional 3000K, 5000K and 6000K CCT.

#### Electrical

LED drivers are mounted to removable tray assembly for ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Standard with 0-10V dimming. Shipped standard with Eaton proprietary circuit module designed to withstand 10kV of transient line surge. The Galleon LED luminaire is suitable for operation in -40°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Light Squares are IP66 rated. Greater than 90% lumen maintenance expected at 60,000 hours. Available in standard 1A drive current and optional 600mA. 800mA and 1200mA drive currents (nominal).

#### Mounting

STANDARD ARM MOUNT: Extruded aluminum arm includes internal bolt guides allowing for easy positioning of fixture during mounting. When mounting two or more luminaires at 90° and 120° apart, the EA extended arm may be required. Refer to the

-21-3/4" [553mm]-

arm mounting requirement table. Round pole adapter included. For wall mounting, specify wall mount bracket option. QUICK MOUNT ARM: Adapter is bolted directly to the pole. Quick mount arm slide into place on the adapter and is secured via two screws, facilitating quick and easy installation. The versatile, patent pending, quick mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8". Removal of the door on the quick mount arm enables wiring of the fixture without having to access the driver compartment. A knock-out enables round pole mounting.

#### Finish

Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Heat sink is powder coated black. Standard housing colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available.

#### Warranty

Five-year warranty.

"B"

2

[51mm]

1-3/4"

[44mm]

DRILLING PATTERN

TYPE "N"



#### **GLEON** GALLEON LED

1-10 Light Squares Solid State LED

**AREA/SITE LUMINAIRE** 



#### CERTIFICATION DATA

UL/cUL Wet Location Listed ISO 9001 LM79 / LM80 Compliant 3G Vibration Rated IP66 Rated DesignLights Consortium<sup>™</sup> Qualified\*

#### ENERGY DATA

Electronic LED Driver >0.9 Power Factor <20% Total Harmonic Distortion 120V-277V 50/60Hz 347V & 480V 60Hz -40°C Min. Temperature 40°C Max. Temperature 50°C Max. Temperature (HA Option)



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## DIMENSIONS

#### DIMENSION DATA

Number of Light Squares	"A" Width	"B″ Standard Arm Length	"B" Optional Arm Length 1	Weight with Arm (Ibs.)	EPA with Arm <sup>2</sup> (Sq. Ft.)			
1-4	15-1/2" (394mm)	7" (178mm)	10" (254mm)	33 (15.0 kgs.)	0.96			
5-6	21-5/8" (549mm)	7" (178mm)	10" (254mm)	44 (20.0 kgs.)	1.00			
7-8	27-5/8" (702mm)	7" (178mm)	13" (330mm)	54 (24.5 kgs.)	1.07			
9-10	33-3/4" (857mm)	7" (178mm)	16" (406mm)	63 (28.6 kgs.)	1.12			

NOTES: 1. Optional arm length to be used when mounting two fixtures at 90° on a single pole. 2. EPA calculated with optional arm length.



(2) 9/16" [14mm]

Diameter Holes

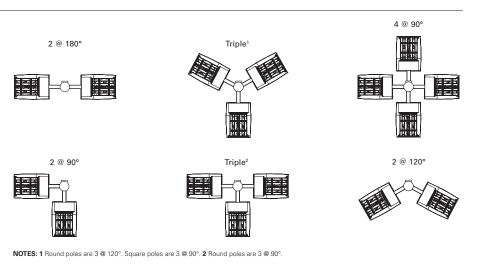
3/4" [19mm]

Diameter Hole

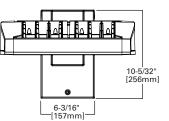
7/8" [22mm]

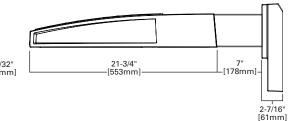
#### ARM MOUNTING REQUIREMENTS

Configuration	90° Apart	120° Apart
GLEON-AF-01	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-02	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-03	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-04	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-05	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-06	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-07	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-08	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-09	16" Extended Arm (Required)	16" Extended Arm (Required)
GLEON-AF-10	16" Extended Arm (Required)	16" Extended Arm (Required)

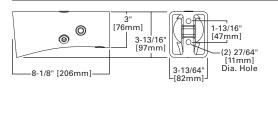


STANDARD WALL MOUNT

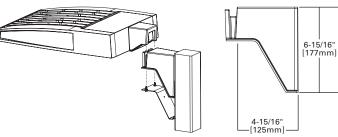


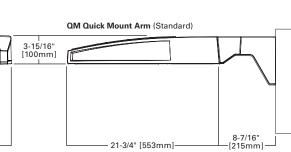


MAST ARM MOUNT



#### QUICK MOUNT ARM (INCLUDES FIXTURE ADAPTER)





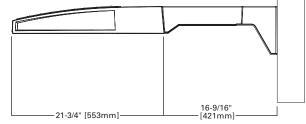
QMEA Quick Mount Arm (Extended)

1-1/4" [32mm]

4-7/8" [124mm]

Œ

3-3/4" -[96mm]-



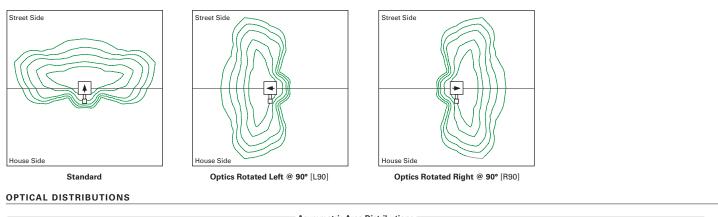
## QUICK MOUNT ARM DATA

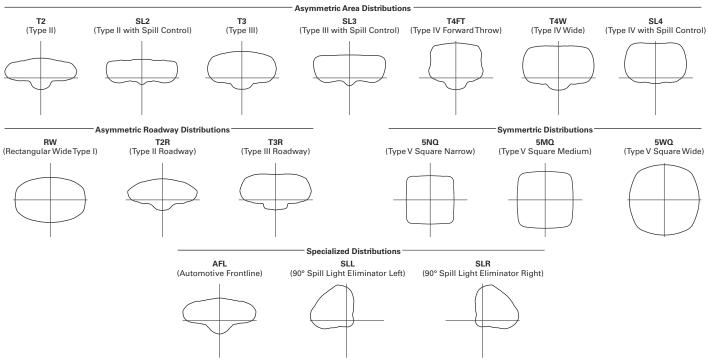
Number of Light Squares <sup>1, 2</sup>	"A" Width	Weight with QM Arm (lbs.)	Weight with QMEA Arm (lbs.)	<b>EPA</b> (Sq. Ft.)				
1-4	15-1/2" (394mm)	35 (15.91 kgs.)	38 (17.27 kgs.)					
5-6 <sup>3</sup>	21-5/8" (549mm)	46 (20.91 kgs.)	49 (22.27 kgs.)	1.11				
7-8	27-5/8" (702mm)	56 (25.45 kgs.)	59 (26.82 kgs.)					

NOTES: 1 QM option available with 1-8 light square configurations. 2 QMEA option available with 1-6 light square configurations. 3 QMEA arm to be used when mounting two fixtures at 90° on a single pole.



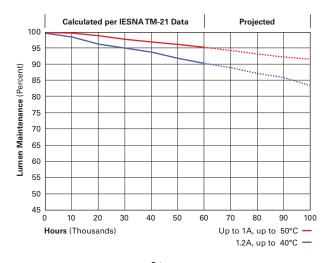
#### OPTIC ORIENTATION





#### LUMEN MAINTENANCE

Drive Current	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Projected L70 (Hours)
Up to 1A	Up to 50°C	> 95%	416,000
1.2A	Up to 40°C	> 90%	205,000



#### LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97



Eaton 1121 Highway 74 South Peachtree City, GA 30269 P: 770-486-4800 www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

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#### NOMINAL POWER LUMENS (1.2A)

Number o	of Light Squares	1	2	3	4	5	6	7	8	9	10
Nominal P	Power (Watts)	67	129	191	258	320	382	448	511	575	640
Input Curr	rent @ 120V (A)	0.58	1.16	1.78	2.31	2.94	3.56	4.09	4.71	5.34	5.87
Input Curr	rent @ 208V (A)	0.33	0.63	0.93	1.27	1.57	1.87	2.22	2.52	2.8	3.14
Input Curr	rent @ 240V (A)	0.29	0.55	0.80	1.10	1.35	1.61	1.93	2.18	2.41	2.71
Input Curr	rent @ 277V (A)	0.25	0.48	0.70	0.96	1.18	1.39	1.69	1.90	2.09	2.36
Input Curr	rent @ 347V (A)	0.20	0.39	0.57	0.78	0.96	1.15	1.36	1.54	1.72	1.92
Input Curr	rent @ 480V (A)	0.15	0.30	0.43	0.60	0.73	0.85	1.03	1.16	1.28	1.45
Optics											
-	4000K/5000K Lumens	6,709	13,111	19,562	25,848	32,026	38,325	45,324	51,355	57,286	63,424
Т2	3000K Lumens	5,939	11,606	17,316	22,881	28,349	33,925	40,121	45,459	50,710	56,143
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G
	4000K/5000K Lumens	7,122	13,919	20,769	27,442	34,000	40,687	48,117	54,519	60,816	67,333
T2R	3000K Lumens	5,939	11,606	17,316	22,881	28,349	33,925	40,121	45,459	50,710	56,143
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G
	4000K/5000K Lumens	6,838	13,363	19,939	26,346	32,642	39,062	46,196	52,343	58,388	64,646
Т3	3000K Lumens	6,053	11,829	17,650	23,321	28,895	39,002	40,190	46,334	51,685	57,225
13	BUG Rating	6,053 B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	34,578 B3-U0-G5	40,893 B4-U0-G5	46,334 B4-U0-G5	B4-U0-G5	57,225 B4-U0-G
	4000K/5000K Lumens	6,990	13,660	20,382	26,931	33,368	39,930	47,223	53,506	59,686	66,081
T3R	3000K Lumens				28,931						
ian	BUG Rating	6,188 B1-U0-G2	12,092 B2-U0-G3	18,042 B2-U0-G3	23,839 B3-U0-G4	29,537 B3-U0-G5	35,346 B3-U0-G5	41,802 B3-U0-G5	47,364 B3-U0-G5	52,834 B4-U0-G5	58,495 B4-U0-G
	-										
	4000K/5000K Lumens	6,878	13,440	20,055	26,499	32,832	39,289	46,464	52,646	58,726	65,020
T4FT	3000K Lumens	6,088	11,897	17,753	23,457	29,063	34,779	41,130	46,602	51,984	57,556
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G
	4000K/5000K Lumens	6,789	13,267	19,795	26,156	32,408	38,781	45,864	51,967	57,968	64,180
T4W	3000K Lumens	6,010	11,744	17,523	23,153	28,688	34,329	40,599	46,001	51,313	56,812
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G
	4000K/5000K Lumens	6,697	13,088	19,529	25,804	31,970	38,259	45,245	51,267	57,186	63,315
SL2	3000K Lumens	5,928	11,585	17,287	22,842	28,300	33,867	40,051	45,382	50,621	56,046
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G
	4000K/5000K Lumens	6,837	13,361	19,936	26,342	32,639	39,057	46,189	52,336	58,380	64,636
SL3	3000K Lumens	6,052	11,827	17,647	23,318	28,892	34,573	40,887	46,328	51,678	57,216
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G
	4000K/5000K Lumens	6,496	12,695	18,943	25,029	31,011	37,110	43,886	49,727	55,470	61,414
SL4	3000K Lumens	5,750	11,238	16,768	22,156	27,451	32,850	38,848	44,018	49,102	54,364
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G
	4000K/5000K Lumens	7,052	13,781	20,564	27,171	33,664	40,285	47,641	53,981	60,215	66,669
5NQ	3000K Lumens	6,242	12,199	18,203	24,052	29,799	35,660	42,172	47,784	53,302	59,015
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G
	4000K/5000K Lumens	7,182	14,034	20,942	27,671	34,284	41,027	48,518	54,975	61,323	67,896
5MQ	3000K Lumens	6,358	12,423	18,538	24,494	30,348	36,317	42,948	48,664	54,283	60,102
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G
	4000K/5000K Lumens	7,201	14,073	20,998	27,744	34,375	41,136	48,648	55,121	61,487	68,077
5WQ	3000K Lumens	6,374	12,457	18,587	24,559	30,429	36,414	43,063	48,793	54,428	60,262
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G
	4000K/5000K Lumens	6,009	11,741	17,519	23,148	28,681	34,321	40,589	45,990	51,301	56,798
SLL/SLR	3000K Lumens	5,319	10,393	15,508	20,491	25,388	30,381	35,929	40,710	45,412	50,278
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G
	4000K/5000K Lumens	6,989	13,657	20,378	26,925	33,360	39,921	47,211	53,494	59,672	66,066
RW	3000K Lumens	6,187	12,089	18,039	23,834	29,530	35,338	41,791	47,353	52,822	58,482
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G
	4000K/5000K Lumens	7,014	13,706	20,452	27,023	33,481	40,066	47,383	53,688	59,888	66,306
AFL	3000K Lumens	6,209	12,133	18,104	23,921	29,637	35,466	41,943	47,525	53,013	58,694
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\* Nominal data for 70 CRI.



#### NOMINAL POWER LUMENS (1A)

Number o	f Light Squares	1	2	3	4	5	6	7	8	9	10
	Power (Watts)	59	113	166	225	279	333	391	445	501	558
	ent @ 120V (A)	0.51	1.02	1.53	2.03	2.55	3.06	3.56	4.08	4.6	5.07
-	rent @ 208V (A)	0.29	0.56	0.82	1.11	1.37	1.64	1.93	2.19	2.46	2.75
	rent @ 240V (A)	0.26	0.48	0.71	0.96	1.19	1.41	1.67	1.89	2.12	2.39
· ·	rent @ 277V (A)	0.23	0.42	0.61	0.83	1.03	1.23	1.45	1.65	1.84	2.09
-	ent @ 277V (A)	0.17	0.32	0.50	0.64	0.82	1.00	1.14	1.32	1.50	1.68
	ent @ 480V (A)	0.17	0.32	0.37	0.48	0.61	0.75	0.91	0.99	1.12	1.08
Optics		0.14	0.24	0.37	0.40	0.01	0.75	0.51	0.00	1.12	1.20
Optics	4000K/5000K Lumens	6,116	11,951	17,833	23,563	29,195	34,937	41,317	46,814	52,221	57,817
T2	3000K Lumens	5,414	10,579	15,786	20,858	25,843	30,926	36,574	41,440	46,226	51,180
12	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	4000K/5000K Lumens	6,493	12,688	18,932	25,015	30,994	37,090	43,863	49,699	55,439	61,380
T2R	3000K Lumens	5,748	11,231	16,759	22,143	27,436	32,832	38,828	43,994	49,075	54,334
120		5,748 B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4		49,075 B4-U0-G5	B4-U0-G5
	BUG Rating								B3-U0-G5		
To	4000K/5000K Lumens	6,234	12,181	18,176	24,017	29,756	35,609	42,111	47,715	53,225	58,930
Т3	3000K Lumens	5,518	10,783	16,089	21,260	26,340	31,521	37,277	42,237	47,115	52,165
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	4000K/5000K Lumens	6,372	12,453	18,580	24,550	30,418	36,400	43,048	48,776	54,409	60,239
T3R	3000K Lumens	5,640	11,023	16,447	21,732	26,926	32,221	38,106	43,177	48,163	53,324
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	4000K/5000K Lumens	6,270	12,252	18,282	24,156	29,929	35,815	42,356	47,992	53,534	59,271
T4FT	3000K Lumens	5,550	10,845	16,183	21,383	26,493	31,703	37,494	42,483	47,388	52,467
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4W	4000K/5000K Lumens	6,189	12,094	18,045	23,844	29,543	35,352	41,809	47,372	52,843	58,506
	3000K Lumens	5,479	10,706	15,973	21,107	26,151	31,294	37,009	41,934	46,777	51,790
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	4000K/5000K Lumens	6,105	11,931	17,803	23,522	29,144	34,877	41,245	46,734	52,130	57,717
SL2	3000K Lumens	5,404	10,561	15,759	20,822	25,798	30,873	36,510	41,369	46,145	51,091
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	4000K/5000K Lumens	6,233	12,180	18,174	24,013	29,753	35,604	42,106	47,708	53,218	58,921
SL3	3000K Lumens	5,517	10,782	16,088	21,256	26,337	31,517	37,272	42,231	47,109	52,157
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	4000K/5000K Lumens	5,922	11,572	17,268	22,816	28,269	33,829	40,006	45,330	50,566	55,984
SL4	3000K Lumens	5,242	10,244	15,286	20,197	25,024	29,945	35,413	40,126	44,761	49,557
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	4000K/5000K Lumens	6,429	12,563	18,746	24,768	30,688	36,723	43,429	49,208	54,891	60,775
5NQ	3000K Lumens	5,691	11,121	16,594	21,925	27,165	32,507	38,443	43,559	48,590	53,798
	BUG Rating	B2-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	4000K/5000K Lumens	6,547	12,794	19,090	25,224	31,253	37,400	44,228	50,114	55,902	61,893
5MQ	3000K Lumens	5,795	11,325	16,898	22,328	27,665	33,106	39,151	44,361	49,484	54,788
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	4000K/5000K Lumens	6,564	12,828	19,141	25,291	31,336	37,499	44,347	50,248	56,051	62,058
5WQ	3000K Lumens	5,810	11,355	16,944	22,388	27,739	33,194	39,256	44,480	49,616	54,934
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	4000K/5000K Lumens	5,478	10,703	15,970	21,102	26,145	31,286	37,001	41,924	46,765	51,777
SLL/SLR	3000K Lumens	4,849	9,474	14,137	18,679	23,144	27,694	32,753	37,111	41,396	45,833
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	4000K/5000K Lumens	6,371	12,449	18,576	24,544	30,411	36,392	43,037	48,764	54,396	60,225
RW	3000K Lumens	5,640	11,020	16,443	21,726	26,920	32,214	38,096	43,166	48,151	53,311
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
	4000K/5000K Lumens	6,394	12,494	18,644	24,634	30,521	36,524	43,194	48,942	54,593	60,444
AFL	3000K Lumens	5,660	11,060	16,504	21,806	27,017	32,331	38,235	43,323	48,326	53,505
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4
L	a for 70 CRI.	-	-	-	-					-	-

\* Nominal data for 70 CRI.



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#### NOMINAL POWER LUMENS (800MA)

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Number o	f Light Squares	1	2	3	4	5	6	7	8	9	10
Nominal P	Power (Watts)	44	85	124	171	210	249	295	334	374	419
Input Curr	rent @ 120V (A)	0.39	0.77	1.13	1.54	1.90	2.26	2.67	3.03	3.39	3.80
Input Curr	rent @ 208V (A)	0.22	0.44	0.62	0.88	1.06	1.24	1.50	1.68	1.87	2.12
Input Curr	rent @ 240V (A)	0.19	0.38	0.54	0.76	0.92	1.08	1.30	1.46	1.62	1.84
Input Curr	rent @ 277V (A)	0.17	0.36	0.47	0.72	0.83	0.95	1.19	1.31	1.42	1.67
Input Curr	rent @ 347V (A)	0.15	0.24	0.38	0.49	0.63	0.77	0.87	1.01	1.15	1.52
Input Curr	ent @ 480V (A)	0.11	0.18	0.29	0.37	0.48	0.59	0.66	0.77	0.88	0.96
Optics											
	4000K/5000K Lumens	4,941	9,656	14,408	19,038	23,588	28,227	33,382	37,823	42,191	46,713
T2	3000K Lumens	4,374	8,547	12,754	16,852	20,880	24,987	29,550	33,481	37,347	41,350
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5
	4000K/5000K Lumens	5,246	10,251	15,296	20,211	25,041	29,966	35,439	40,154	44,791	49,592
T2R	3000K Lumens	4,644	9,074	13,540	17,891	22,166	26,526	31,371	35,544	39,649	43,899
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
	4000K/5000K Lumens	5,037	9,842	14,685	19,404	24,041	28,770	34,024	38,551	43,003	47,612
ТЗ	3000K Lumens	4,459	8,712	12,999	17,176	21,281	25,467	30,118	34,125	38,066	42,146
-	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
	4000K/5000K Lumens	5,148	10,061	15,011	19,835	24,576	29,409	34,780	39,408	43,959	48,669
T3R	3000K Lumens	4,557	8,906	13,288	17,558	24,370	26,033	30,787	34,884	38,913	43,082
ion	BUG Rating	4,557 B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	43,082 B3-U0-G5
	4000K/5000K Lumens										
TAFT		5,066	9,899	14,770	19,516	24,181	28,936	34,221	38,774	43,252	47,888
T4FT	3000K Lumens	4,484	8,763	13,074	17,276	21,405	25,614	30,292	34,323	38,287	42,390
T4)4/	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	4000K/5000K Lumens	5,000	9,771	14,579	19,264	23,869	28,562	33,779	38,274	42,694	47,269
T4W	3000K Lumens	4,426	8,649	12,905	17,052	21,129	25,283	29,901	33,880	37,793	41,843
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	4000K/5000K Lumens	4,933	9,639	14,383	19,005	23,547	28,178	33,324	37,758	42,118	46,632
SL2	3000K Lumens	4,367	8,532	12,732	16,823	20,844	24,943	29,498	33,423	37,283	41,279
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
	4000K/5000K Lumens	5,036	9,841	14,683	19,401	24,039	28,766	34,019	38,546	42,997	47,605
SL3	3000K Lumens	4,458	8,711	12,997	17,174	21,279	25,464	30,114	34,121	38,061	42,140
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	4000K/5000K Lumens	4,784	9,350	13,951	18,434	22,840	27,332	32,323	36,624	40,854	45,232
SL4	3000K Lumens	4,235	8,277	12,349	16,318	20,218	24,194	28,612	32,420	36,164	40,039
	BUG Rating	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	4000K/5000K Lumens	5,194	10,150	15,145	20,011	24,794	29,670	35,088	39,757	44,349	49,102
5NQ	3000K Lumens	4,598	8,985	13,406	17,714	21,948	26,264	31,060	35,193	39,258	43,465
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3
	4000K/5000K Lumens	5,290	10,337	15,424	20,380	25,250	30,217	35,734	40,489	45,165	50,006
5MQ	3000K Lumens	4,683	9,150	13,653	18,040	22,351	26,748	31,632	35,841	39,980	44,265
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	4000K/5000K Lumens	5,304	10,365	15,465	20,434	25,318	30,297	35,830	40,597	45,286	50,139
5WQ	3000K Lumens	4,695	9,175	13,690	18,088	22,411	26,819	31,717	35,936	40,087	44,383
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	4000K/5000K Lumens	4,426	8,648	12,903	17,049	21,124	25,278	29,894	33,872	37,784	41,832
SLL/SLR	3000K Lumens	3,918	7,655	11,422	15,092	18,699	22,376	26,462	29,983	33,446	37,030
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	4000K/5000K Lumens	5,147	10,058	15,009	19,830	24,570	29,402	34,771	39,399	43,949	48,658
RW	3000K Lumens	4,556	8,903	13,286	17,554	21,749	26,027	30,779	34,876	38,904	43,072
	BUG Rating	4,550 B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4
	4000K/5000K Lumens	5,166	10,095	15,063	19,903	24,659	29,509	34,898		44,108	48,835
AEI									39,542		
AFL	3000K Lumens	4,573	8,936	13,334	17,618	21,828	26,121	30,892	35,003	39,044	43,229
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3

\* Nominal data for 70 CRI.



#### NOMINAL POWER LUMENS (600MA)

GLEON	GALLEON	LED
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				1						1	
Number of	f Light Squares	1	2	3	4	5	6	7	8	9	10
Nominal P	Power (Watts)	34	66	96	129	162	193	226	257	290	323
Input Curr	rent @ 120V (A)	0.30	0.58	0.86	1.16	1.44	1.73	2.03	2.33	2.59	2.89
Input Curr	rent @ 208V (A)	0.17	0.34	0.49	0.65	0.84	0.99	1.14	1.30	1.48	1.63
Input Curr	rent @ 240V (A)	0.15	0.30	0.43	0.56	0.74	0.87	1.00	1.13	1.30	1.43
Input Curr	ent @ 277V (A)	0.14	0.28	0.41	0.52	0.69	0.81	0.93	1.04	1.22	1.33
Input Curr	ent @ 347V (A)	0.11	0.19	0.30	0.39	0.49	0.60	0.69	0.77	0.90	0.99
Input Curr	ent @ 480V (A)	0.08	0.15	0.24	0.30	0.38	0.48	0.53	0.59	0.71	0.77
Optics											
	4000K/5000K Lumens	4,029	7,874	11,749	15,525	19,235	23,019	27,222	30,844	34,406	38,093
Т2	3000K Lumens	3,566	6,970	10,400	13,743	17,027	20,376	24,097	27,303	30,456	33,720
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
	4000K/5000K Lumens	4,278	8,360	12,474	16,482	20,421	24,437	28,900	32,745	36,527	40,441
T2R	3000K Lumens	3,787	7,400	11,042	14,590	18,077	21,632	25,582	28,986	32,334	35,798
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
	4000K/5000K Lumens	4,107	8,026	11,976	15,824	19,605	23,461	27,746	31,438	35,068	38,827
тз	3000K Lumens	3,636	7,105	10,601	14,007	17,354	20,768	24,561	27,829	31,042	34,370
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
	4000K/5000K Lumens	4,198	8,205	12,242	16,175	20,041	23,982	28,363	32,137	35,848	39,689
T3R	3000K Lumens	3,716	7,263	10,837	14,318	17,740	21,229	25,107	28,448	31,733	35,133
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
	4000K/5000K Lumens	4,131	8,072	12,045	15,915	19,719	23,597	27,907	31,620	35,272	39,052
T4FT	3000K Lumens	3,657	7,145	10,662	14,088	17,455	20,888	24,703	27,990	31,223	34,569
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4W	4000K/5000K Lumens	4,077	7,968	11,889	15,710	19,465	23,292	27,546	31,212	34,816	38,547
	3000K Lumens	3,609	7,053	10,524	13,906	17,230	20,618	24,384	27,629	30,819	34,122
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
	4000K/5000K Lumens	4,022	7,861	11,729	15,498	19,202	22,979	27,175	30,791	34,347	38,028
SL2	3000K Lumens	3,560	6,959	10,383	13,719	16,998	20,341	24,055	27,256	30,404	33,662
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
	4000K/5000K Lumens	4,106	8,025	11,974	15,821	19,603	23,458	27,742	31,433	35,064	38,821
SL3	3000K Lumens	3,635	7,104	10,599	14,005	17,353	20,765	24,557	27,824	31,039	34,364
0L3	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
	4000K/5000K Lumens	3,902	7,624	11,377	15,033	18,626	22,289	26,359	29,867	33,316	36,886
SL4		3,302	6,749	10,071				23,333	26,438		32,651
314	3000K Lumens				13,307	16,488	19,730			29,491	
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5
-	4000K/5000K Lumens	4,236	8,277	12,351	16,319	20,219	24,196	28,614	32,422	36,166	40,042
5NQ	3000K Lumens	3,750	7,327	10,933	14,446	17,898	21,418	25,329	28,700	32,014	35,445
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3
	4000K/5000K Lumens	4,314	8,429	12,578	16,619	20,591	24,641	29,141	33,019	36,832	40,779
5MQ	3000K Lumens	3,819	7,461	11,134	14,711	18,227	21,812	25,796	29,228	32,604	36,098
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
	4000K/5000K Lumens	4,325	8,452	12,611	16,664	20,646	24,707	29,219	33,106	36,930	40,888
5WQ	3000K Lumens	3,828	7,482	11,163	14,751	18,276	21,871	25,865	29,305	32,690	36,194
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	4000K/5000K Lumens	3,609	7,052	10,522	13,903	17,226	20,613	24,378	27,622	30,812	34,114
SLL/SLR	3000K Lumens	3,195	6,242	9,314	12,307	15,248	18,247	21,579	24,451	27,275	30,198
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
	4000K/5000K Lumens	4,197	8,202	12,239	16,171	20,036	23,977	28,356	32,129	35,839	39,680
RW	3000K Lumens	3,715	7,260	10,834	14,315	17,736	21,224	25,101	28,441	31,725	35,125
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
	4000K/5000K Lumens	4,213	8,232	12,284	16,230	20,109	24,064	28,459	32,246	35,969	39,824
AFL	3000K Lumens	3,729	7,287	10,874	14,367	17,800	21,301	25,192	28,544	31,840	35,252
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3

\* Nominal data for 70 CRI.



#### CONTROL OPTIONS

#### 0-10V (DIM)

This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

#### Photocontrol (P, R and PER7)

Optional button-type photocontrol (P) and photocontrol receptacles (R and PER7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

#### After Hours Dim (AHD)

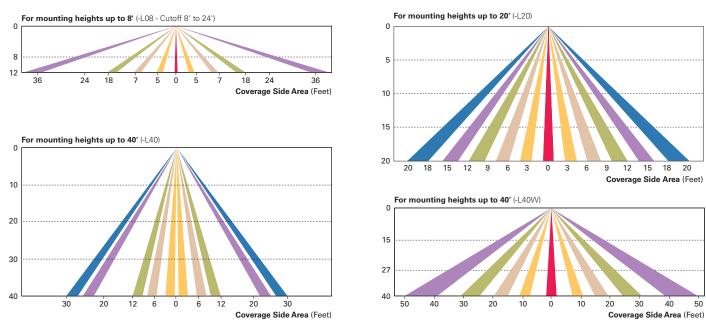
This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

#### Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)

These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for "dusk-to-dawn" control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

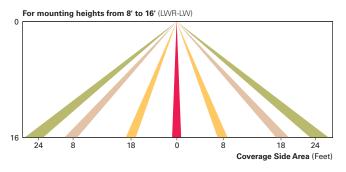
A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-40'.

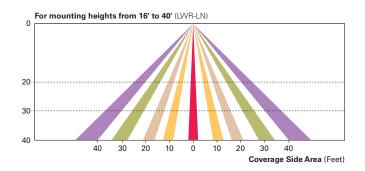


#### LumaWatt Wireless Control and Monitoring System (LWR-LW and LWR-LN)

The LumaWatt system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt product guides.







Eaton 1121 Highway 74 South Peachtree City, GA 30269 P: 770-486-4800 www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

#### ORDERING INFORMATION

Sample Number: GLEON-AF-04-LED-E1-T3-GM-QM

Product Family <sup>1, 2</sup>	Light Engine	Number of Light Squares <sup>3</sup>	Lamp Type	Voltage	Distribution		Color	Mounting
GLEON=Galleon	AF=1A Drive Current	01=1 02=2 03=3 04=4 05=5 06=6 07=7 <sup>4</sup> 08=8 <sup>4</sup> 09=9 <sup>5</sup> 10=10 <sup>5</sup>	LED=Solid State Light Emitting Diodes	E1=120-277V 347=347V <sup>6</sup> 480=480V <sup>6,7</sup>	T4W=Type I 5NQ=Type V 5MQ=Type V 5WQ=Type V SL2=Type II SL4=Type III SL4=Type IV SLL=90° Spi SLR=90° Spi RW=Rectang	r Roadway V Forward Throw V Wide	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White	[Blank]=Arm for Round or Square Pole EA=Extended Arm <sup>8</sup> MA=Mast Arm Adapter <sup>9</sup> WM=Wall Mount QM=Quick Mount Arm (Standard Length) <sup>10</sup> QMEA=Quick Mount Arm (Extended Length) <sup>11</sup>
Options (Add as Su	uffix)	1	I	1	1	Accessories (Order Sepa	rately)	
PER7=NEMÄ 7-PIN R=NEMA Twistlock AHD145=After Hou AHD255=After Hou AHD255=After Hou AHD355=After Hou AHD355=After Hou AHD350°C High Aml MS/DIM-L40=Moti MS/DIM-L40=Moti MS/DIM-L40=Moti MS/X-L40=Bi-Leve MS/X-L40=Bi-Leve MS/X-L40=Bi-Leve MS/X-L40=Bi-Leve MS/X-L40=Bi-Leve MS/X-L40=Bi-Leve MS-L40=Bi-Leve	<sup>13</sup> <sup>12</sup> <sup>12</sup> Factory Set to Ni Factory Set to Ni Factory Set to Ni 7 7 7 7 7 7 7 7 7 7 7 7 7	ominal 800mA <sup>14</sup> Nominal 1200mA <sup>14</sup> Just Specify Voltage Must Specify Voltage to 8, 240 or 277V. M control Receptacle aceptacle <sup>18</sup> <sup>18</sup> <sup>18</sup> <sup>18</sup> <sup>18</sup> <sup>18</sup> <sup>18</sup> <sup>18</sup>	) ge) ust Specify Volatage) Maximum 8' Mounting 9' - 20' Mounting Heigl 21' - 40' Mounting Heigl 21' - 40' Mounting Heigh 1, 21' - 40' Mounting Height 20.22.25 I Height <sup>20.22.25</sup> I Height <sup>20.22.25</sup> ng Height <sup>20.22.25</sup> ng Height (Wide Range Mounting Height <sup>20.22</sup> 40' Mounting Height <sup>20.22</sup> 40' Mounting Height ( <sup>1</sup> ' - 16' Mounting Height	ht <sup>20, 22</sup> Jht <sup>20, 23</sup> eight (Wide Rang ) <sup>20, 24, 25</sup> t <sup>20, 21</sup> Wide Range) <sup>20, 24</sup>	-	OA/RA1027=NEMA Phot OA/RA1201=NEMA Phot OA/RA1201=NEMA Phot OA/RA1013=Photocontro OA/RA1014=120V Photoo MA1036-XX=Single Tem MA1037-XX=2@180° Ten MA1197-XX=3@120° Ten MA1190-XX=3@90° Tend MA1190-XX=3@90° Tend MA1190-XX=2@120° Ten MA1193-XX=2@180° Ten MA1192-XX=3@120° Ten MA1192-XX=3@10° Ten MA1192-XX=3@10° Ten MA1193-XX=2@90° Tend MA1195-XX=3@90° Tend FSIR-100=Wireless Confi GLEON-MT1=Field Instal GLEON-MT3=Field Instal	ocontrol - 347V ol Shorting Cap control dule Replacement on Adapter for 2-3/8" O.D. on Adapter for 3-1/2" O.D. guration Tool for Occupa led Mesh Top for 1-4 Ligt led Mesh Top for 7-8 Ligt	Tenon ). Tenon Tenon Tenon Tenon D. Tenon D. Tenon D. Tenon Tenon Tenon Tenon Tenon to Sensor <sup>20</sup> tt Squares tt Squares

1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.

Customer is responsible for engineering analysis to commin pole and ixture compatibility for all applications, here to our will 2. DesignLights Consortium<sup>14</sup> Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
 Standard 4000K CCT and minimum 70 CRI.
 Not compatible with extended quick mount arm (QMEA).

A concompatible with steadard quick mount aim (QM) or extended quick mount arm (QMEA).
 5. Not compatible with steadard quick mount arm (QM) or extended quick mount arm (QMEA).
 6. Requires the use of an internal step down transformer when combined with sensor options. Not available with sensor at 1200mA. Not available in combination with the HA high ambient and sensor options at 1A.
 7. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).

8. May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table.
9. Factory installed.
10. Maximum 8 light squares.

- 11. Maximum 6 light squares.

- Extended lead times apply. Use dedicated IES files for 3000K, 5000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website.
   Extended lead times apply. Use dedicated IES files for 3000K, 5000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website.
   Amp standard. Use dedicated IES files for 600mA, 800mA and 1200mA when performing layouts. These files are published on the Galleon luminaire product page on the website.
- 15. Not available with HA option.

16. Lic not available with NS, MS/X or MS/DIM at 347V or 480V. 2L in AF-02 through AF-04 requires a larger housing, normally used for AF-05 or AF-06. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table.
 17. Not available with LumaWatt wireless sensors.

18. Requires the use of P photocontrol or the PER7 or R photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information.

Requires the use of P photocontrol or the PER7 or R photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information.
 50°C lumen maintenance data applies to 600mA, 800mA and 1A drive currents.
 The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
 Approximately 22' detection diameter at 8' mounting height.
 Approximately 60' detection diameter at 40' mounting height.
 Approximately 100' detection diameter at 40' mounting height.
 Replace X with number of Light Squares operating in low output mode.
 LumaWatt wireless sensors are factory installed only requiring network components RF-EM-1, RF-GW-1 and RF-ROUT-1 in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
 Not available with house side shield (HSS).
 On the reliable with the LVR, MS, MS/X, MS/ZM, P, R or PER7 options. Available in 120-277V only.
 One required for each Light Square.

30. One required for each Light Square.



Eaton

Specifications and dimensions subject to change without notice.

#### GALAXY® GS6 19.8 MM PRODUCT SPECIFICATIONS

The Galaxy GS6 is the best full-feature, high-quality Galaxy series yet. This product provides users a display that runs outstanding graphics and animations using the best contrast in the industry. The 19.8 mm pixel pitch provides a great-looking image and is a popular request among customers.

#### **19.8 MM TECHNICAL SPECIFICATIONS**

Character Height: 5.5" (7 pixel font) Line Spacing: 19.8 mm (0.78")

**Pixel Configuration:** Monochrome: 1 red or 1 amber RGB:1 red, 1 green, 1 blue

Maximum Brightness: Monochrome red: 4,500 nits Monochrome amber: 6,000 nits RGB: 11,000 nits

Monochrome Color Capability: 4,096 shades of red or amber Full Color Capability: RGB: 281 trillion colors Optimal Viewing Angle: 140 degrees horizontal x 70 degrees vertical Readability Angle: 160 degrees horizontal x 90 degrees vertical Min Viewing Distance: 45'

#### **PRODUCT FEATURES**

- All sealed components
- Quick connects
- Mounting clips
- High-contrast louvers
- Redundant module signal
- Large sections for fast installation
  Front ventilation on displays less t
- Front ventilation on displays less than seven feet tall
- No spreader beam required for displays greater than seven feet tall
- Same module size and cabinet size for all pixel pitches
- Single-step module removal
- Shallow cabinet depth
- Narrow cabinet borders

#### **MODEL NUMBER GUIDE**

Series High Wide pacing or Color	SF
Series Lines High Columns Wide Line Spacing Red, Amber, or RGB	Single Face or Two View 9







#### **GS6 SERIES SPECIFICATIONS**

Estimated LED Lifetime: 100,000+ hours **Contrast Enhancement:** Non-reflective black louvers and module face grooves disperse light **Message Capability:** Text, graphics, logos, basic animation, video clips, multiple font styles, and sizes **Control Software:** Venus<sup>®</sup> Control Suite **Power:** 120, 120/240 VAC Single Phase **Display Dimming:** 64 levels (Automatic, scheduled or manual control) **Communication Options:** Ethernet Fiber Optic, Ethernet Bridge Radio, Remote Cellular, Ethernet CAT5 **Operating Temperature:** 40°F to 120°F with 99% RH non-condensing **Compliance Information:** UL and cUL Listed, UL-Energy Verified,

FCC compliance

Warranty Coverage: 5 years

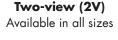
Galaxy Product Support: Parts support for 10 years

#### **DISPLAY CONFIGURATIONS**



Single-face (SF) Available in all sizes







### GALAXY® GS6 19.8 MM PRODUCT SPECIFICATIONS

16x80         Sing/Ft           16x100         Sing/Ft           16x120         Sing/Ft           16x140         Sing/Ft           16x160         Sing/Ft           16x180         Sing/Ft           16x200         Sing/Ft           16x200         Sing/Ft           16x200         Sing/Ft           16x240         Sing/Ft           16x260         Sing/Ft	1'7" x 5'6" x 5" 1'7" x 6'9" x 5" 1'7" x 8'1" x 5" 1'7" x 9'5" x 5" 1'7" x 10'8" x 5" 1'7" x 12'0" x 5" 1'7" x 13'3" x 5" 1'7" x 14'7" x 5" 1'7" x 15'11" x 5" 1'7" x 17'2" x 5"	0.47 × 1.67 × 0.13 0.47 × 2.06 × 0.13 0.47 × 2.46 × 0.13 0.47 × 2.85 × 0.13 0.47 × 3.25 × 0.13 0.47 × 3.65 × 0.13 0.47 × 4.04 × 0.13 0.47 × 4.44 × 0.13 0.47 × 4.84 × 0.13	(Square Meters)           8.4         (0.8)           10.4         (1.0)           12.4         (1.2)           14.4         (1.3)           16.4         (1.5)           18.4         (1.7)           20.4         (1.9)	5.5 (0.6) 6.8 (0.8) 8.2 (1.0) 9.5 (1.1) 10.9 (1.3)	(kilograms) 65 (30) 75 (35) 90 (41)	2/16 2/20	5''–12'' 5''–12''	255	255	340
16x120         Sing/Ft           16x140         Sing/Ft           16x160         Sing/Ft           16x180         Sing/Ft           16x200         Sing/Ft           16x220         Sing/Ft           16x220         Sing/Ft           16x240         Sing/Ft           16x260         Sing/Ft	1'7" x 8'1" x 5" 1'7" x 9'5" x 5" 1'7" x 10'8" x 5" 1'7" x 12'0" x 5" 1'7" x 13'3" x 5" 1'7" x 14'7" x 5" 1'7" x 15'11" x 5" 1'7" x 17'2" x 5"	$\begin{array}{c} 0.47 \times 2.46 \times 0.13 \\ 0.47 \times 2.85 \times 0.13 \\ 0.47 \times 3.25 \times 0.13 \\ 0.47 \times 3.65 \times 0.13 \\ 0.47 \times 4.04 \times 0.13 \\ 0.47 \times 4.44 \times 0.13 \end{array}$	12.4 (1.2) 14.4 (1.3) 16.4 (1.5) 18.4 (1.7)	8.2 (1.0) 9.5 (1.1)	<u>_</u>		5''-12''			0-0
16x140         Sing/Ft           16x160         Sing/Ft           16x180         Sing/Ft           16x200         Sing/Ft           16x220         Sing/Ft           16x240         Sing/Ft           16x260         Sing/Ft	1'7" x 9'5" x 5" 1'7" x 10'8" x 5" 1'7" x 12'0" x 5" 1'7" x 13'3" x 5" 1'7" x 14'7" x 5" 1'7" x 15'11" x 5" 1'7" x 17'2" x 5"	0.47 x 2.85 x 0.13 0.47 x 3.25 x 0.13 0.47 x 3.65 x 0.13 0.47 x 4.04 x 0.13 0.47 x 4.44 x 0.13	14.4 (1.3) 16.4 (1.5) 18.4 (1.7)	9.5 (1.1)	90 (41)	0/04		305	305	415
16x160         Sing/Ft           16x180         Sing/Ft           16x200         Sing/Ft           16x220         Sing/Ft           16x240         Sing/Ft           16x260         Sing/Ft	1'7" x 10'8" x 5" 1'7" x 12'0" x 5" 1'7" x 13'3" x 5" 1'7" x 14'7" x 5" 1'7" x 15'11" x 5" 1'7" x 17'2" x 5"	0.47 x 3.25 x 0.13 0.47 x 3.65 x 0.13 0.47 x 4.04 x 0.13 0.47 x 4.44 x 0.13	16.4 (1.5) 18.4 (1.7)			2/24	5''-12''	360	360	485
16x180         Sing/Ft           16x200         Sing/Ft           16x220         Sing/Ft           16x240         Sing/Ft           16x260         Sing/Ft	1'7" x 12'0" x 5" 1'7" x 13'3" x 5" 1'7" x 14'7" x 5" 1'7" x 14'7" x 5" 1'7" x 15'11" x 5" 1'7" x 17'2" x 5"	0.47 x 3.65 x 0.13 0.47 x 4.04 x 0.13 0.47 x 4.44 x 0.13	18.4 (1.7)	10013	105 (48)	2/28	5"-12"	410	410	560
16x200         Sing/Ft           16x220         Sing/Ft           16x240         Sing/Ft           16x260         Sing/Ft	1'7" x 13'3" x 5" 1'7" x 14'7" x 5" 1'7" x 15'11" x 5" 1'7" x 17'2" x 5"	0.47 x 4.04 x 0.13 0.47 x 4.44 x 0.13			120 (55)	2/32	5"-12"	460	460	635
16x220         Sing/Ft           16x240         Sing/Ft           16x260         Sing/Ft	1'7'' x 14'7'' x 5'' 1'7'' x 15'11'' x 5'' 1'7'' x 17'2'' x 5''	0.47 x 4.44 x 0.13	20.4 [1.7]	12.2 (1.4) 13.6 (1.6)	135 (62) 150 (69)	2/36 2/40	5"–12" 5"–12"	515 565	515 565	
16x240         Sing/Ft           16x260         Sing/Ft	1'7'' x 15'11'' x 5'' 1'7'' x 17'2'' x 5''		22.4 (2.1)	14.9 (1.8)	165 (75)	2/40	5"-12"	615	615	850
		0.4/ X 4.04 X 0.13	24.4 (2.3)	16.3 (1.9)	180 (82)	2/48	5''-12''	665	665	925
1/ 000 0: /-	1170 10170 50	0.47 x 5.23 x 0.13	26.4 (2.5)	17.6 (2.1)	195 (89)	2/52	5''-12''	720	720	995
16x280 Sing/Ft	1'7'' x 18'6'' x 5''	0.47 x 5.63 x 0.13	28.4 (2.6)	19.0 (2.2)	205 (93)	2/56	5''-12''	770	770	1070
16x300 Sing/Ft	1'7'' x 19'9'' x 5''	0.47 x 6.02 x 0.13	30.4 (2.8)	20.3 (2.4)	220 (100)	2/60	5''-12''	820	820	1145
16x320 Sing/Ft	1'7'' x 21'1'' x 5''	0.47 x 6.42 x 0.13	32.4 (3.0)	21.7 (2.6)	235 (107)	2/64	5"-12"	875	875	1215
16x340 Sing/Ft	1'7'' x 22'5'' x 5''	0.47 x 6.82 x 0.13	34.4 (3.2)	23.0 (2.7)	250 (114)	2/68	5"-12"	925	925	1290
16x360 Sing/Ft	1'7'' x 23'8'' x 5''	0.47 x 7.21 x 0.13	36.4 (3.4)	24.4 (2.9)	265 (121)	2/72	5"-12"	975 1025	975 1025	1360
<u>16x380</u> Sing/Ft 16x400 Sing/Ft	1'7'' x 25'0'' x 5'' 1'7'' x 26'3'' x 5''	0.47 x 7.61 x 0.13 0.47 x 8.01 x 0.13	38.4 (3.6) 40.4 (3.8)	25.7 (3.0) 27.1 (3.2)	280 (128) 295 (134)	2/76 2/80	5"–12" 5"–12"	1025	1025	1435 1505
32x60 Sing/Ft	2'7'' x 4'2'' x 5''	0.79 x 1.27 x 0.13	10.7 (1.0)	8.2 (0.8)	80 (37)	<u>4/12</u>	5''-24''	270	270	395
32x80 Sing/Ft	2'7'' x 5'6'' x 5''	0.79 x 1.67 x 0.13	14.1 (1.3)	10.9 (1.1)	105 (48)	4/16	5''-24''	340	340	515
32x100 Sing/Ft	2'7'' x 6'9'' x 5''	0.79 x 2.06 x 0.13	17.4 (1.6)	13.6 (1.4)	130 (59)	4/20	5''-24''	415	415	630
32x120 Sing/Ft	2'7'' x 8'1'' x 5''	0.79 x 2.46 x 0.13	20.8 (1.9)	16.3 (1.7)	150 (69)	4/24	5''-24''	485	485	745
32x140 Sing/Ft	2'7'' x 9'5'' x 5''	0.79 x 2.85 x 0.13	24.1 (2.3)	19.0 (2.0)	175 (80)	4/28	5''–24''	560	560	860
32x160 Sing/Ft	2'7'' x 10'8'' x 5''	0.79 x 3.25 x 0.13	27.5 (2.6)	21.7 (2.2)	200 (91)	4/32	5''–24''	635	635	975
32x180 Sing/Ft	2'7'' x 12'0'' x 5''	0.79 x 3.65 x 0.13	30.8 (2.9)	24.4 (2.5)	225 (103)	4/36	5''-24''	705	705	1090
32x200 Sing/Ft	2'7" x 13'3" x 5"	0.79 x 4.04 x 0.13	34.2 (3.2)	27.1 (2.8)	250 (114)	4/40	5"-24"	780	780	1205
32x220 Sing/Ft	2'7'' x 14'7'' x 5'' 2'7'' x 15'11'' x 5''	0.79 x 4.44 x 0.13	37.5 (3.5)	29.8 (3.1)	275 (125)	4/44	5"-24"	850 925	850 925	1325
32x240 Sing/Ft 32x260 Sing/Ft	2'7" x 13'11" x 5"	0.79 x 4.84 x 0.13 0.79 x 5.23 x 0.13	40.9 (3.8)	32.5 (3.4) 35.2 (3.6)	295 (134) 320 (146)	4/48 4/52	5''–24'' 5''–24''	925	925	1440 1555
32x280 Sing/Ft	2'7'' x 18'6'' x 5''	0.79 x 5.63 x 0.13	47.6 (4.4)	37.9 (3.9)	345 (140)	4/56	5"-24"	1070	1070	1670
32x300 Sing/Ft	2'7'' x 19'9'' x 5''	0.79 x 6.02 x 0.13	51.0 (4.8)	40.6 (4.2)	370 (168)	4/60	5"-24"	1145	1145	1785
32x320 Sing/Ft	2'7'' x 21'1'' x 5''	0.79 x 6.42 x 0.13	54.3 (5.1)	43.3 (4.5)	395 (180)	4/64	5''-24''	1215	1215	1900
32x340 Sing/Ft	2'7'' x 22'5'' x 5''	0.79 x 6.82 x 0.13	57.7 (5.4)	46.0 (4.8)	420 (191)	4/68	5''-24''	1290	1290	2015
32x360 Sing/Ft	2'7'' x 23'8'' x 5''	0.79 x 7.21 x 0.13	61.0 (5.7)	48.7 (5.0)	440 (200)	4/72	5''-24''		1360	2135
32x380 Sing/Ft	2'7'' x 25'0'' x 5''	0.79 x 7.61 x 0.13	64.4 (6.0)	51.4 (5.3)	465 (211)	4/76	5''-24''	1435	1435	2250
32x400 Sing/Ft	2'7'' x 26'3'' x 5''	0.79 x 8.01 x 0.13	67.7 (6.3)	54.1 (5.6)	490 (223)	4/80	5"-24"		1505	2365
48x60 Sing/Ft	3'8" x 4'2" x 5"	1.11 x 1.27 x 0.13	15.0 (1.4)	12.2 (1.2)	110 (50)	6/12	5"-37"	335	335	525
48x80 Sing/Ft 48x100 Sing/Ft	3'8'' x 5'6'' x 5'' 3'8'' x 6'9'' x 5''	1.11 x 1.67 x 0.13 1.11 x 2.06 x 0.13	19.7 (1.9) 24.4 (2.3)	16.3 (1.6) 20.3 (2.0)	145 (66) 180 (82)	6/16 6/20	5''-37'' 5''-37''	425 520	425 520	<u>685</u> 845
48x120 Sing/Ft	3'8'' x 8'1'' x 5''	1.11 x 2.46 x 0.13	29.1 (2.7)	24.4 (2.4)	210 (96)	6/24	5"-37"	615	615	1000
48x140 Sing/Ft	3'8" x 9'5" x 5"	1.11 x 2.85 x 0.13	33.8 (3.2)	28.4 (2.8)	245 (112)	6/28	5''-37''	710	710	1160
48x160 Sing/Ft	3'8'' x 10'8'' x 5''	1.11 x 3.25 x 0.13	38.6 (3.6)	32.5 (3.2)	280 (128)	6/32	5''-37''	805	805	1320
48x180 Sing/Ft	3'8'' x 12'0'' x 5''	1.11 x 3.65 x 0.13	43.3 (4.1)	36.6 (3.6)	315 (143)	6/36	5''-37''	900	900	1475
48x200 Sing/Ft	3'8'' x 13'3'' x 5''	1.11 x 4.04 x 0.13	48.0 (4.5)	40.6 (4.0)	350 (159)	6/40	5''-37''	995	995	1635
48x220 Sing/Ft	3'8'' x 14'7'' x 5''	1.11 x 4.44 x 0.13	52.7 (4.9)	44.7 (4.4)	380 (173)	6/44	5''-37''		1085	1795
48x240 Sing/Ft	3'8" x 15'11" x 5"	1.11 x 4.84 x 0.13	57.4 (5.4)	48.7 (4.8)	415 (189)	6/48	5"-37"			1955
48x260 Sing/Ft	3'8'' x 17'2'' x 5''	1.11 x 5.23 x 0.13	62.1 (5.8)	52.8 (5.2)	450 (205)	6/52	5"-37"	1275	1275	2110
48x280 Sing/Ft 48x300 Sing/Ft	3'8'' x 18'6'' x 5'' 3'8'' x 19'9'' x 5''	1.11 x 5.63 x 0.13 1.11 x 6.02 x 0.13	66.8 (6.2) 71.5 (6.7)	56.8 (5.6) 60.9 (6.0)	485 (220) 515 (234)	6/56 6/60	5''-37'' 5''-37''	1370 1465	1370	2270 2430
48x320 Sing/Ft	3'8'' x 21'1'' x 5''	1.11 x 6.42 x 0.13	76.2 (7.1)	64.9 (6.4)	550 (250)	6/64	5''-37''		1560	2585
48x340 Sing/Ft	3'8'' x 22'5'' x 5''	1.11 x 6.82 x 0.13	80.9 (7.6)	69.0 (6.8)	585 (266)	6/68	5''-37''		1655	2745
48x360 Sing/Ft	3'8'' x 23'8'' x 5''	1.11 x 7.21 x 0.13	85.6 (8.0)	73.1 (7.2)	620 (282)	6/72	5''-37''	1745	1745	2905
48x380 Sing/Ft	3'8'' x 25'0'' x 5''	1.11 x 7.61 x 0.13	90.3 (8.4)	77.1 (7.6)	655 (298)	6/76	5''-37''		1840	3065
48x400 Sing/Ft	3'8'' x 26'3'' x 5''	1.11 x 8.01 x 0.13	95.0 (8.9)	81.2 (8.0)	685 (311)	6/80	5''-37''	1935	1935	3220
64x60 Sing/Ft	4'8'' x 4'2'' x 5''	1.43 x 1.27 x 0.13	19.3 (1.8)	16.3 (1.6)	140 (64)	8/12	5''-49''	485	485	745
64x80 Sing/Ft	4'8'' x 5'6'' x 5''	1.43 x 1.67 x 0.13	25.4 (2.4)	21.7 (2.1)	185 (84)	8/16	5"-49"	635	635	975
64x100 Sing/Ft	4'8'' x 6'9'' x 5''	1.43 x 2.06 x 0.13	31.5 (2.9)	27.1 (2.6)	230 (105)	8/20	5"-49"	780	780	1205
64x120 Sing/Ft	4'8'' x 8'1'' x 5''	1.43 x 2.46 x 0.13	37.5 (3.5)	32.5 (3.1)	275 (125)	8/24	5"-49"	925	925	1440
64x140 Sing/Ft 64x160 Sing/Ft	4'8'' x 9'5'' x 5'' 4'8'' x 10'8'' x 5''	1.43 x 2.85 x 0.13 1.43 x 3.25 x 0.13	43.6 (4.1) 49.6 (4.6)	37.9 (3.6) 43.3 (4.2)	315 (143) 360 (164)	8/28 8/32	5''-49'' 5''-49''	1070 1215	1070 1215	1670 1900
64x180 Sing/Ft	4'8'' x 12'0'' x 5''	1.43 x 3.65 x 0.13	55.7 (5.2)	48.7 (4.7)	405 (184)	8/36	5''-49''		1360	2135
64x200 Sing/Ft	4'8'' x 13'3'' x 5''	1.43 x 4.04 x 0.13	61.7 (5.8)	54.1 (5.2)	445 (202)	8/40	5''-49''	1505		2365
64x220 Sing/Ft	4'8'' x 14'7'' x 5''	1.43 x 4.44 x 0.13	67.8 (6.3)	59.5 (5.7)	490 (223)	8/44	5''-49''	1655		2595
64x240 Sing/Ft	4'8'' x 15'11'' x 5''	1.43 x 4.84 x 0.13	73.9 (6.9)	64.9 (6.2)	535 (243)	8/48	5''-49''		1800	2825
64x260 Sing/Ft	4'8'' x 17'2'' x 5''	1.43 x 5.23 x 0.13	79.9 (7.5)	70.4 (6.8)	580 (264)	8/52	5''-49''	1945	1945	3060
64x280 Sing/Ft	4'8'' x 18'6'' x 5''	1.43 x 5.63 x 0.13	86.0 (8.1)	75.8 (7.3)	620 (282)	8/56	5''-49''			3290
64x300 Sing/Ft	4'8'' x 19'9'' x 5''	1.43 x 6.02 x 0.13	92.0 (8.6)	81.2 (7.8)	665 (302)	8/60	5"-49"			3520
64x320 Sing/Ft	4'8'' x 21'1'' x 5''	1.43 x 6.42 x 0.13	98.1 (9.2)	86.6 (8.3)	710 (323)	8/64	5''-49''	2380	2380	3755

# Sound-attenuated and weather-protective enclosures

> For generator sets from 10 to 1000 kW



#### Power Generation

#### Our energy working for you.™

## Diesel generator set enclosures 10 to 1000 kW Weather-protective

Level I, Level II, Level III

#### Spark-ignited generator set enclosures

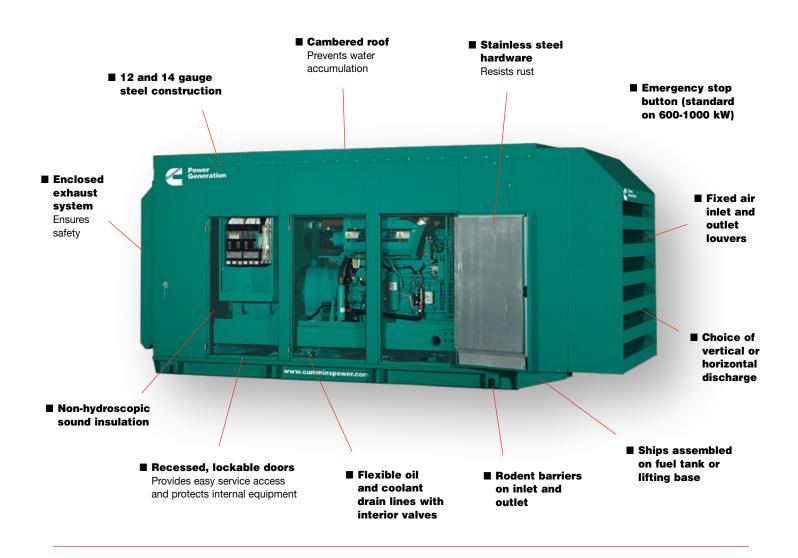
20 to 150 kW Weather-protective Level I, Level II Sound-attenuated and weatherprotective enclosures from Cummins Power Generation Inc. meet even the strictest sound requirements and provide optimum protection from inclement weather.

Cummins Power Generation diesel and spark-ignited generator sets are available with sound-attenuated and weather-protective enclosures. Pre-assembled, pre-integrated and delivered as part of the entire power system, these enclosures are designed to speed installation time and reduce costs.

Choose from three levels of sound-attenuation, depending on model size, to comply with even the strictest noise requirements. Enclosures are constructed of steel or aluminum, which is preferred in coastal regions or other environments where corrosion is a concern.



## Features:



> Three levels of sound attenuation

- Level I: 70 to 89 d(B)A\*
- Level II: 63 to 78 d(B)A\*
- Level III: 68 to 70 d(B)A\*
- > Compact footprint, low profile design
- > Easy access to all major generator and engine control components for servicing
- > Fully-house, enclosed exhaust silencer ensures safety and protects against rust
- > Enclosure, generator set, exhaust system and tank are pre-assembled, pre-integrated and shipped as one package, saving time and labor costs
- All-steel construction with stainless steel hardware offers durability

- > Upgrade kits
- > Enclosures mounted directly to a sub-base fuel tank or lifting base
- > UL2200-listed
- > Customer options available to meet your application needs

#### **Enclosure options**

- > Aluminum enclosure is wind-rated to 150 mph (per ASCE 7-05 exposure D, category 1 importance factor)
- > Kits available to up-fit existing generator sets or to upgrade existing enclosures with additional sound attenuation
- > Exterior oil and coolant drains with interior valves for ease of service
- > Overhead 2-point lifting brackets (some models)

<sup>\*</sup> Full load at 7 meters, steel enclosures

#### Choose from weather protective enclosure or three levels of sound attenuation:

Sound levels (dB(A))*										
kW	Model	Weather- protective	Level I	Level II						
Diesel										
10	DSKAA	78	68	65						
15	DSKAB	81	69	66						
20	DSKBA	80	70	67						
25	DSKFA	82	72	69						
35	DGBB	82	71	63						
35	DGGD	81	72	66						
40	DGBC	82	72	63						
40	DGHD	79	71	64						
50	DGCA	83	72	66						
50	DGHE	79	70	65						
60	DGCB	84	73	67						
60	DSFAD	87	79	71						
80	DGCG	84	76	67						
80	DSFAE	87	82	72						
100	DGDB	86	77	70						
100	DSGAA*	87	-	73						
100	DSHAF	95	88	78						
125	DGDK	86	80	78						
125	DSGAB*	87	-	74						
125	DSHAE			74						
125	DSHAE	95 89	88	78						
			77							
150	DSGAC*	88	-	75						
150	DSHAA	95	88	78						
175	DGFB	90	78	72						
175	DSHAB	95	88	78						
200	DGFC	91	80	74						
200	DSHAC	95	88	78						
230	DGFS	91	81	75						
230	DSHAD	96	89	78						
250	DQDAA	90	86	71						
275	DQDAB	89	86	71						
275	DQHAA	86	85	74						
300	DFCB	86	84	71						
300	DQDAC	89	86	71						
300	DQHAB	89	88	76						
350	DFCC	87	85	72						
350	DFEG	85	83	72						
400	DFCE	89	85	73						
400	DFEG	89	85	73						
450	DFEJ	87	84	73						
500	DFEK	88	85	76						
600	DFGB	85	78	74						
600	DQCA	87	79	74						
750	DFGE	87	80	75						
750	DFHA	91	81	77						
750	DQCB	87	79	74						
750	DQFAA	89	79	75						
800	DFHB	91	81	77						
800	DQCC	87	79	74						
800	DQFAB	89	79	75						
900	DEHC	93	83	73						
900	DQFAC	88	80	76						
1000	DGFAC	90	80	76						
1000	DQFAD	90	80	76						

	Sound levels (dB(A))*										
kW	Model	Weather- protective	Level I	Level II							
Spark-ignited		1									
20	GGMA	77	N/A	66							
25	GGMB	78	N/A	66							
30	GGMC	79	N/A	67							
35	GGFD	80	73	65							
42/47	GGFE	83	73	66							
60	GGHE	86	77	68							
70/75	GGHF	87	77	69							
85	GGHG	85	79	75							
100	GGHH	86	80	76							
125	GGLA	85	79	75							
150	GGLB	85	79	75							

*Also available Level III										
100 kW	DSGAA	68 dB(A)								
125 kW	DSGAB	69 dB(A)								
150 kW	DSGAC	70 dB(A)								
100 KW	DOUAO	70 ab(r)								



Diesel generator sets from 100 to 150 kW (models **DSGAA, DSGAB, DSGAC**) are available in **Level III** sound attenuation.

Shown: 100 kW Tier 3 diesel generator set (model DSGAA).

	Dies	sel p	acka	ge di	men	sions	; (in.)			
Tank capacity		/eathe otecti		1	Level	I	Le	vel II,	=	
(gal.)	Length	Width	Height	Length	Width	Height	Length	Width	Height	
35-80 kW										
70	83	40	63	83	40	81	102	40	81	
140	83	40	71	83	40	89	102	40	89	
100-230 kW	/		1				1			
109	105	40	67	108	40	85	142	40	87	
173	105	40	72	108	40	90	142	40	92	
309	105	44	87	N/A	N/A	N/A	145	43	97	
336	105	40	86	108	40	104	142	40	106	
230-500 kW										
Lifting base	188	82	100	188	82	100	222	82	100	
300	188	82	104	188	82	104	222	82	104	
400	188	82	106	188	82	106	222	82	106	
500	188	82	108	188	82	108	222	82	108	
600	188	82	111	188	82	111	222	82	111	
660	188	82	113	188	82	113	222	82	113	
720	188	82	114	188	82	114	222	82	114	
850	188	82	118	188	82	118	222	82	118	
1470	200	82	128	200	82	128	200	82	128	
1700	234	82	128	234	82	128	234	82	128	
600-1000 k	W									
200	260	98	133	303	98	133	315	98	133	
660	260	98	133	303	98	133	315	98	133	
1000	260	98	137	303	98	137	315	98	137	
1500	260	98	142	303	98	142	315	98	142	
2000	280	98	142	320	98	142	320	98	142	
2400	332	98	142	330	98	142	332	98	142	

Spark-ignited package dimensions (in.)									
Model number	Weather- protective			Level I			Level II		
	Length	Width	Height	Length	Width	Height	Length	Width	Height
20 kW			1						
GGMA	65	30	46	N/A	N/A	N/A	85	30	47
25 kW	1		1						
GGMB	65	30	46	N/A	N/A	N/A	85	30	47
30 kW	1		1						
GGMC	65	30	46	N/A	N/A	N/A	85	30	47
35 kW	1		1						
GGFD	83	40	54	83	40	72	83	40	72
45 kW	1		1						
GGFE	83	40	54	83	40	72	83	40	72
60 kW	1		1						
GGHE	83	40	54	83	40	72	83	40	72
70 kW									
GGHF	83	40	54	83	40	72	83	40	72
85 kW	1		1						
GGHG	105	40	70	105	60	70	142	60	70
100 kW	1		1						
GGHH	105	40	70	105	60	70	142	60	70
125 kW									
GGLA	105	40	70	105	60	70	142	60	70
150 kW	1		I				1		
GGLB	105	40	70	105	60	70	142	60	70

#### **Cummins Power Generation**

1400 73rd Avenue N.E. Minneapolis, MN 55432 Phone: 763 574 5000 Fax: 763 574 5298

#### Latin America

3350 Southwest 148th Ave., Suite 205 Miramar, FL 33027 USA Phone 1 954 431 5511 Fax 1 954 433 5797



Package listed to UL2200

#### Our energy working for you.™

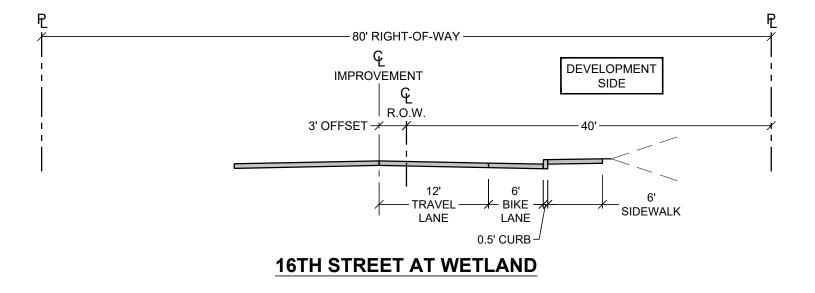
www.cumminspower.com

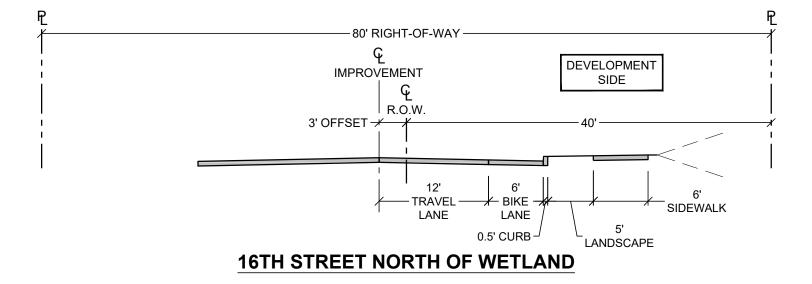
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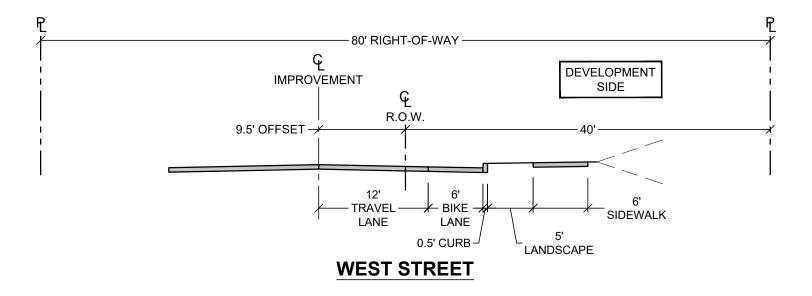


## Exhibit 6

## **Street Cross-Sections**









## **PROJECT TEAM**

#### <u>OWNER</u>

ST. HELENS SCHOOL DISTRICT 474 N 16th St. St. Helens, OR 97051 (503) 397-3085

#### PROJECT MANAGER

HEERY INTERNATIONAL Two Centerpointe Dr., Suite 250 Lake Oswego, OR 97035 (503) 431-6180

David Etchart, Bond Program Manager detchart@heery.com

Diana Kessler, Project Manager dkessler@heery.com

#### **ARCHITECT**

SODERSTROM ARCHITECTS, LTD. 1200 NW Natio Parkway, Suit 410 Portland, Oregon 97209 Tel. (503) 228-5617 Fax. (503) 273-8584

Marlene Gillis, Principal marleneg@sdra.com

Henry Fitzgibbon, Principal in Charge henry@sdra.com

#### CIVIL ENGINEER

LOCKE ENGINEERS 1375 Liberty ST SE Salem OR 97302-4245 (503) 364-8207

Greg Locke, President Greg@LockeEngineers.com

LANDSCAPE ARCHITECTS SIMP.L 8455 SW BEAVERTON-HILLSDALE HWY Portland, OR 97225 (503) 841-6315

Jeff Simpson, President Jeff.Simpson@gosimpl.com

**COVER SHEET** 

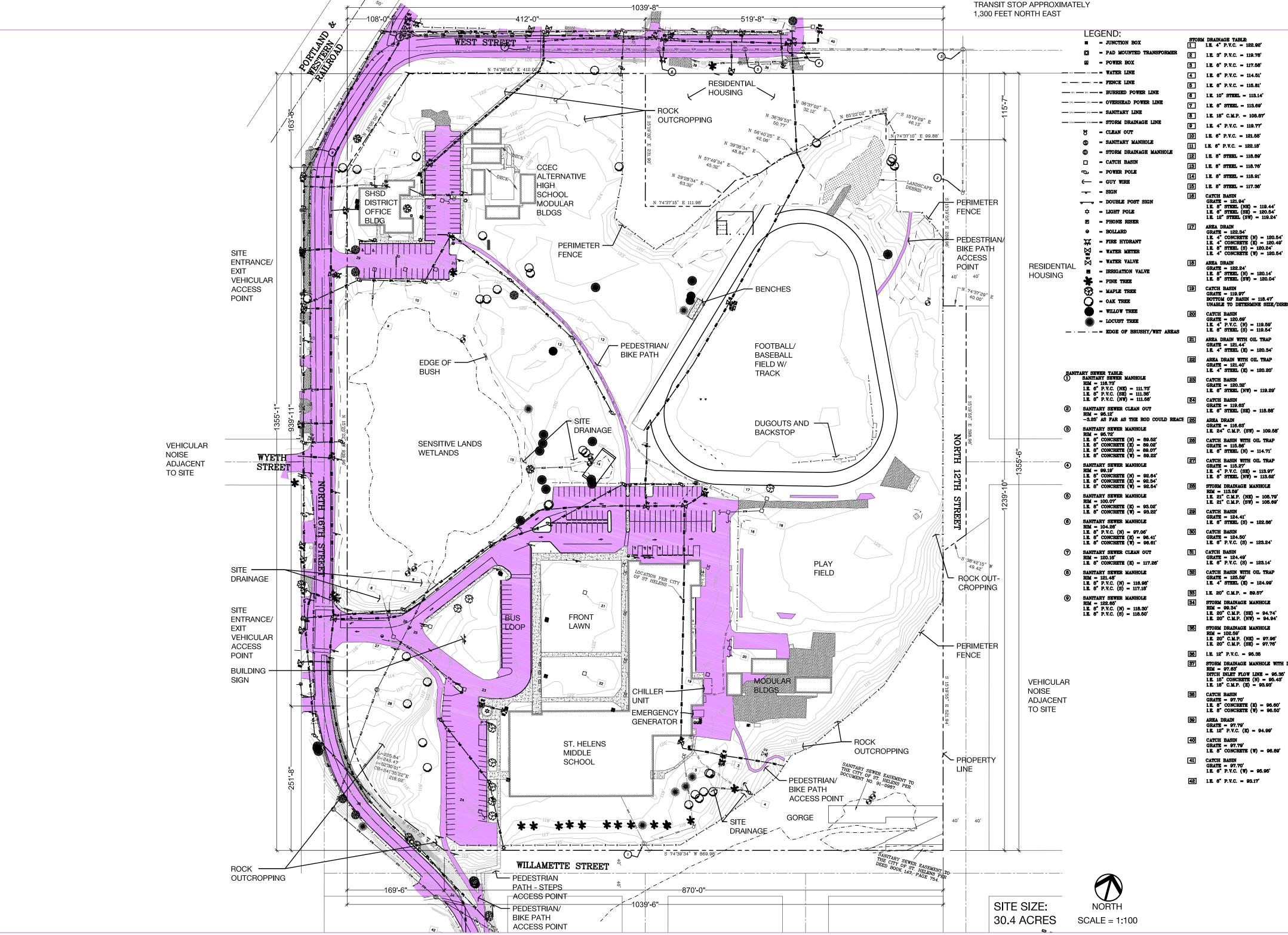
## St. Helens School District

474 N 16th St, St. Helens, OR 97051

SHEET INDEX

## Land Use Submittal - 7/17/17

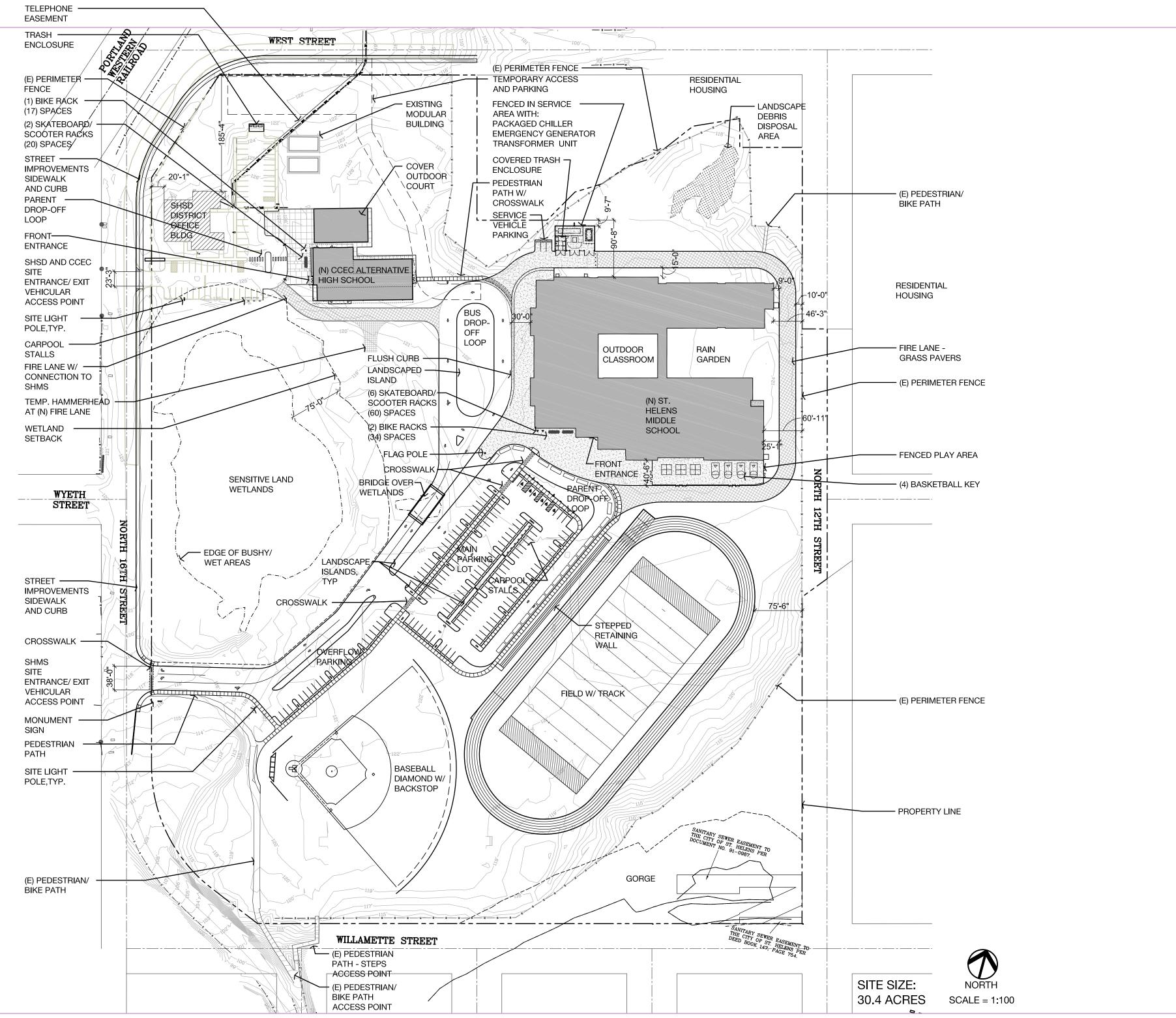
STRUCTURAL ENGINEER CATENA CONSULTING ENGINEERS 1500 NE Irving Street, Suite 412 Portland, or 97232 (503) 467-4980	00 A B1 B2 C	Cover Existing Site Conditions Analysis Site Development Plan Utility Plan Grading Plan
Jason Thompson Jason@catenaengineers.com	D E1 E2 E3	Landscape Plan CCEC Exterior Elevations CCEC Exterior Elevations Middle School Exterior Elevation
MECHANICAL / ELECTRICAL / <u>PLUMBING ENGINEER</u> MKE & ASSOCIATES INC. 6915 SW Macadam Ave., Suite 200 Portland, OR 97219 (503) 892-1188	E4 F H	Middle School Exterior Elevation Sign Plan Tree Plan
Richard Dusa, Principal rickd@mke-inc.com		
Steve Smith, Principal <u>steves@mke.inc.com</u>		
LAND USE PLANNER ANGELO PLANNING GROUP 921 SW Washington St. Suite 468 Portland, OR 97205		
Frank Angelo, Planner fangelo@angeloplanning.com		
<u>WETLANDS CONSULTANT</u> PACIFIC HABITAT SERVICES 9450 SW Commerce Circle, Suite 180 Wilsonville, OR 97070		
John van Staveren, PWS jvs@pacifichabitat.com		



**EXISTING SITE CONDITIONS ANALYSIS** Land Use Submittal **St. Helens Middle School and CCEC** St. Helens School District

## SODERSTROM ARCHITECTS

A



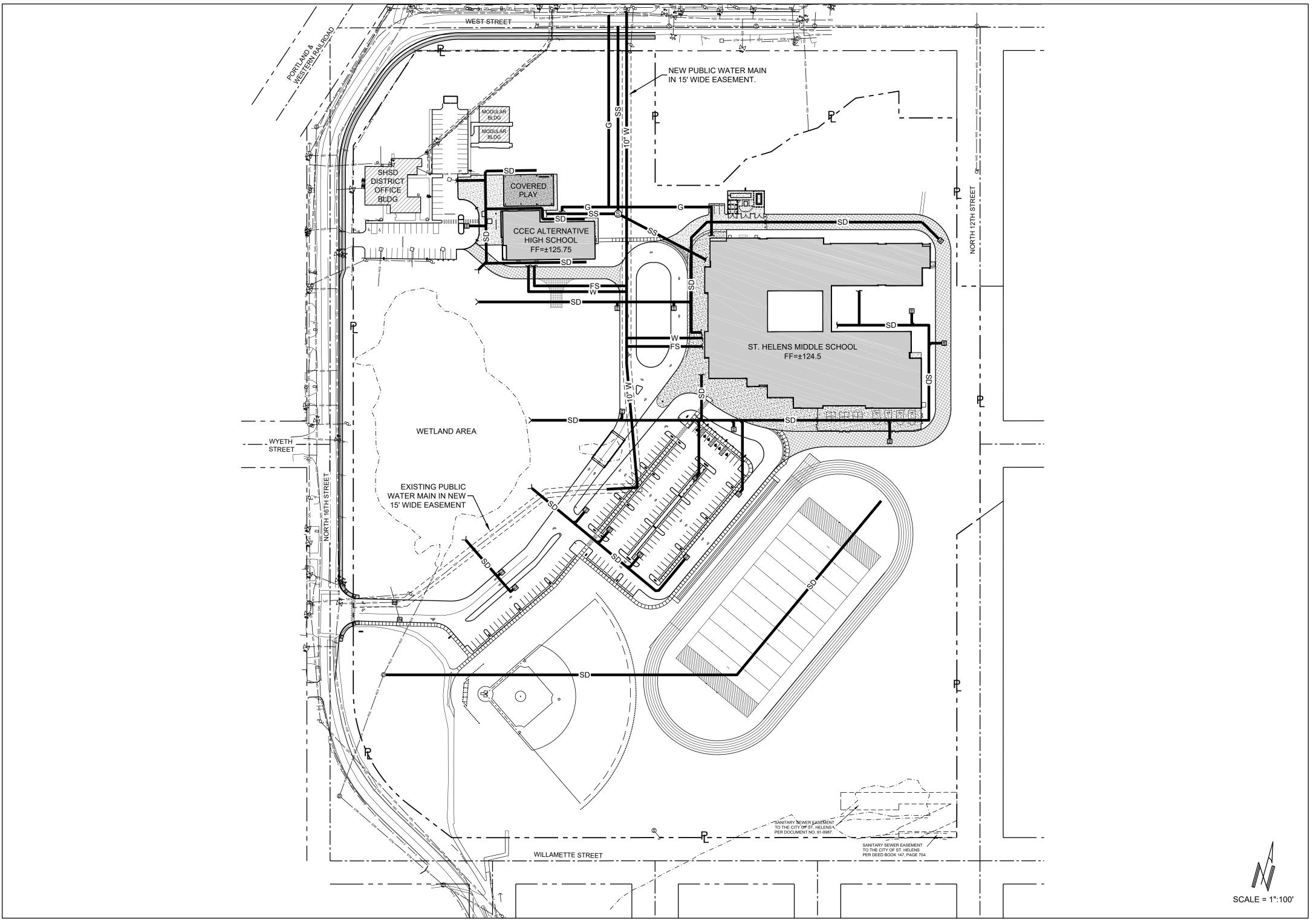
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### SITE DEVELOPMENT PLAN Land Use Submittal **St. Helens Middle School and CCEC**

## SODERSTROM ARCHITECTS

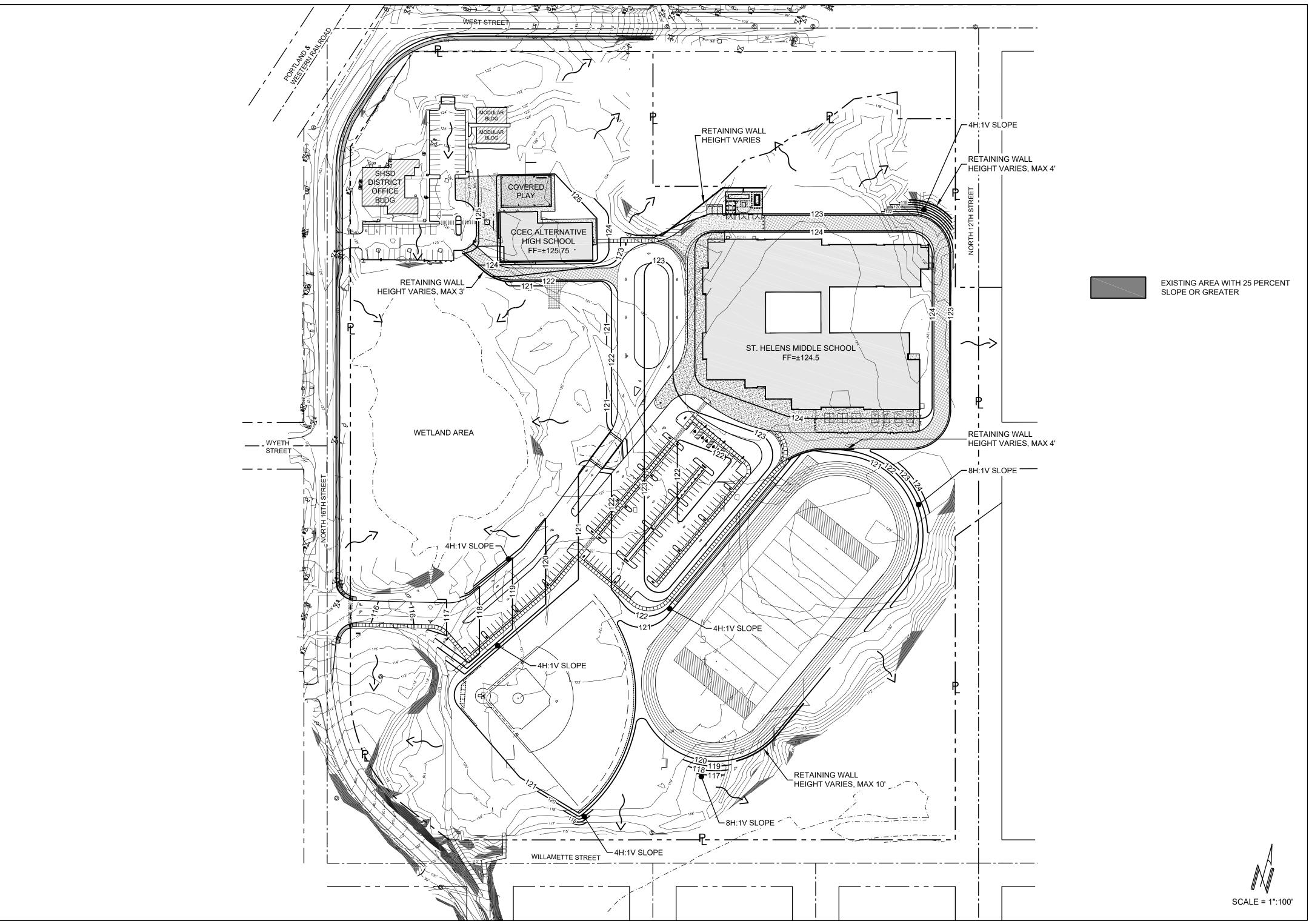
St. Helens School District



LTD.

## SODERSTROM ARCHITECTS

B2



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С

#### landscape menu

required landscape: code required landscape improvements including trees, parking lots, screening & buffering.

**ornamental landscape**: discretionary landscape areas intended to enhance high traffic/visibility areas.

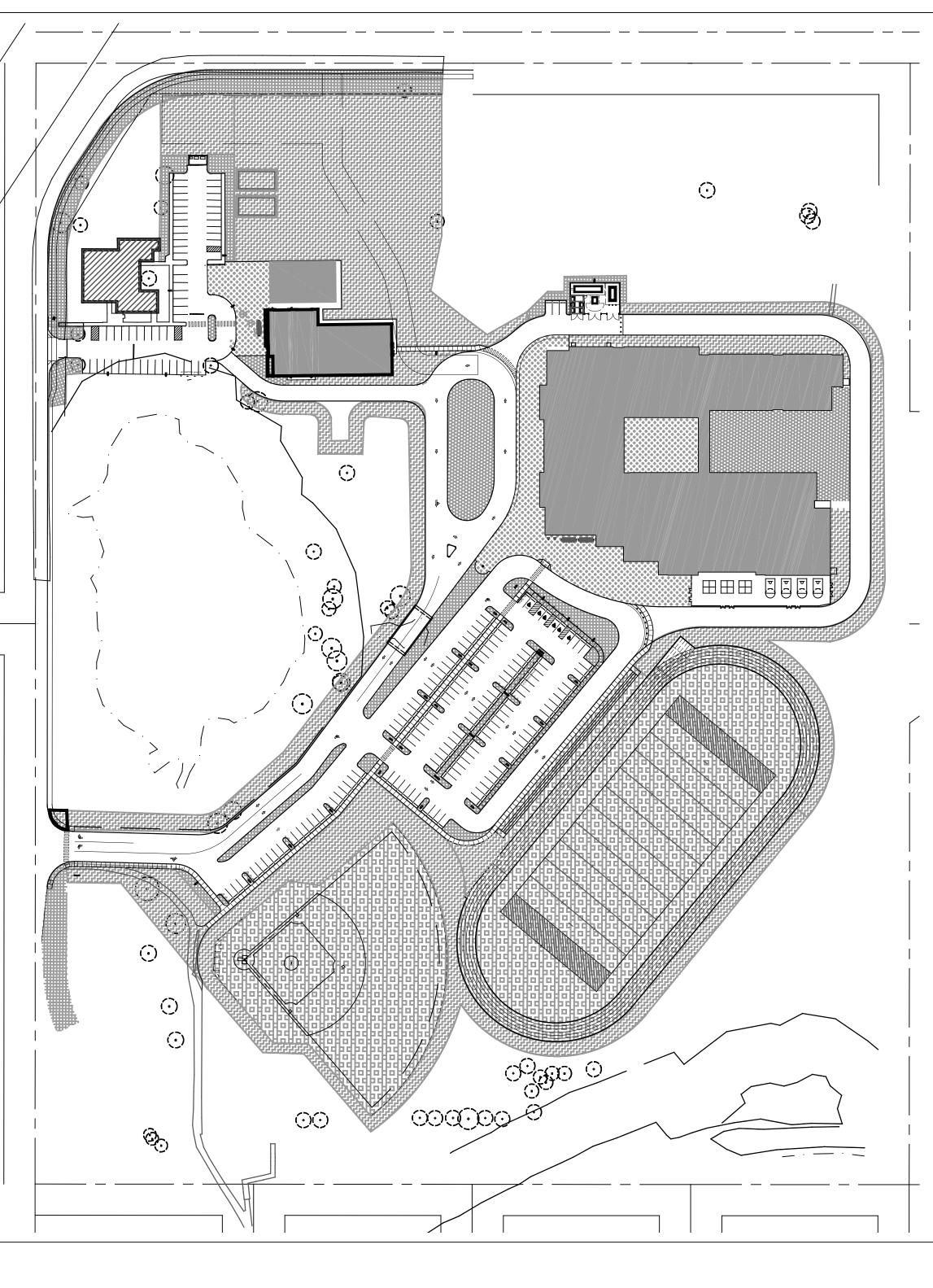


**repair & replace landscape**: landscape improvements required to repair & blend existing landscapes (mostly turf) to areas disturbed by construction, grading & earthwork, and demolition of existing buildings.

**sports facilities landscape**: landscape improvements to include new running track and sports fields, quality, performance and safety expectations of the ammenities determined through guidance and instruction of the school district.

hardscape **landscape**: discretionary landscape improvements intended to enhance high traffic/visibility areas with gathering spaces and vegetated raised planters.





LANDSCAPE PLAN Land Use Submittal **St. Helens Middle School and CCEC** St. Helens School District

SODERSTROM ARCHITECTS

# landscape menu

## trees

common name green vase zelkova little leaf linden incense cedar columnar hornbeam katsura tree princeton century gingko paperbark maple mountain hemlock serbian spruce

# shrubs

common name indian princess hawthorne rhaphiolepis indica evergreen huckleberry vine maple red twig isanti david viburnum red flowering curent

# groundcover/grasses

common name dwarf fountain grass munstead lavender orange new zealand sage carex testacea kinnikinnick sweet flag muhly regal mist

## botanical name

zelkova serrata 'green vase' tilia cordata calocedrus decurrens carpinus betulus 'fastigata' cercidiphyllum japonicum gingko biloba 'princeton century' acer griseum tsuga mertensiana picea omorika

## botanical name

vaccinium ovatum acer circinatum cornus sericea 'isanti' viburnum davidii ribes sanguineum

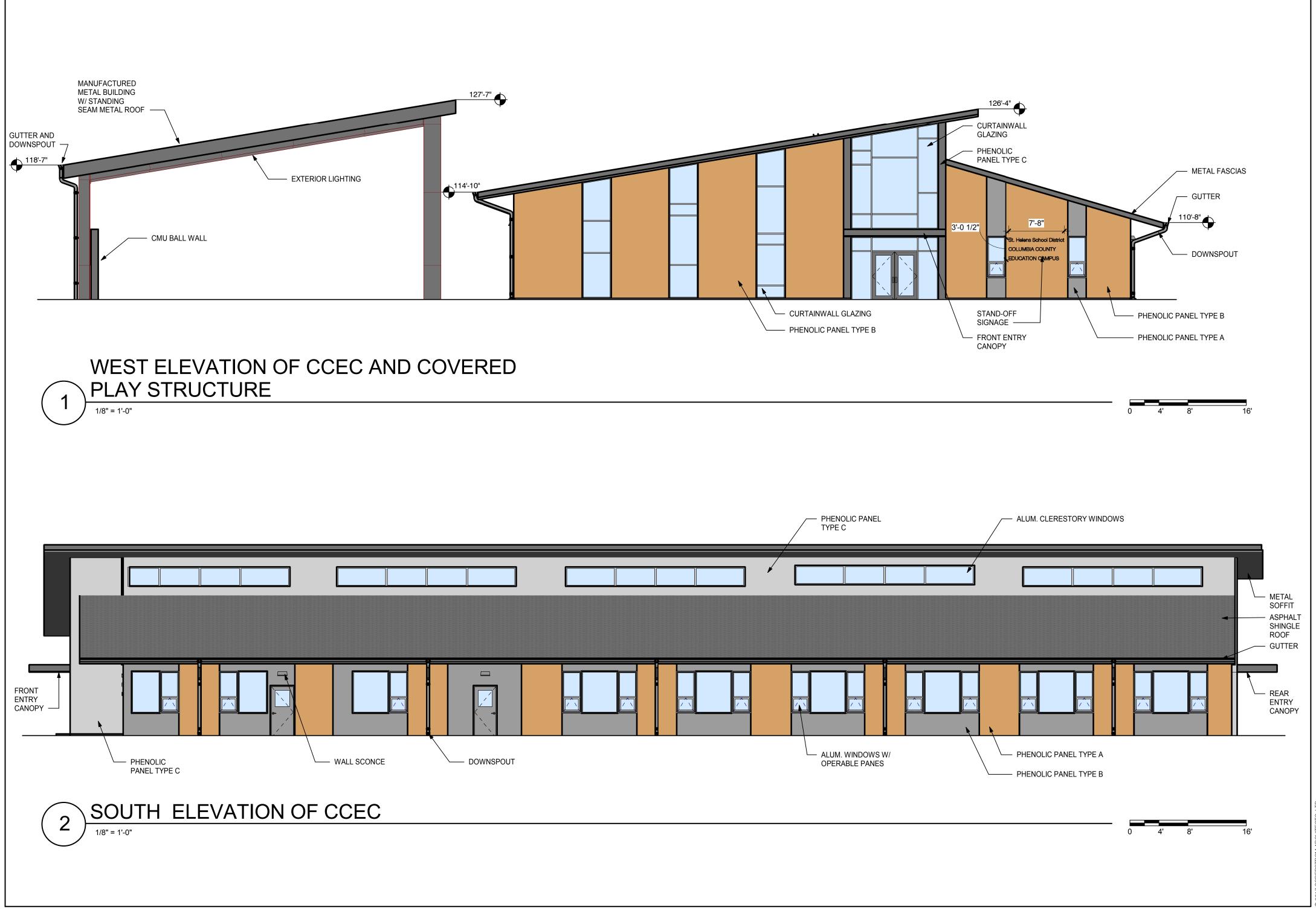
### botanical name

pennisetum alopecuroides 'hameln' lavandula angustifolia 'munstead' arctostaphylos uva-ursi acorus gramineus 'ogon' muhlenbergia capillaris 'lenca"

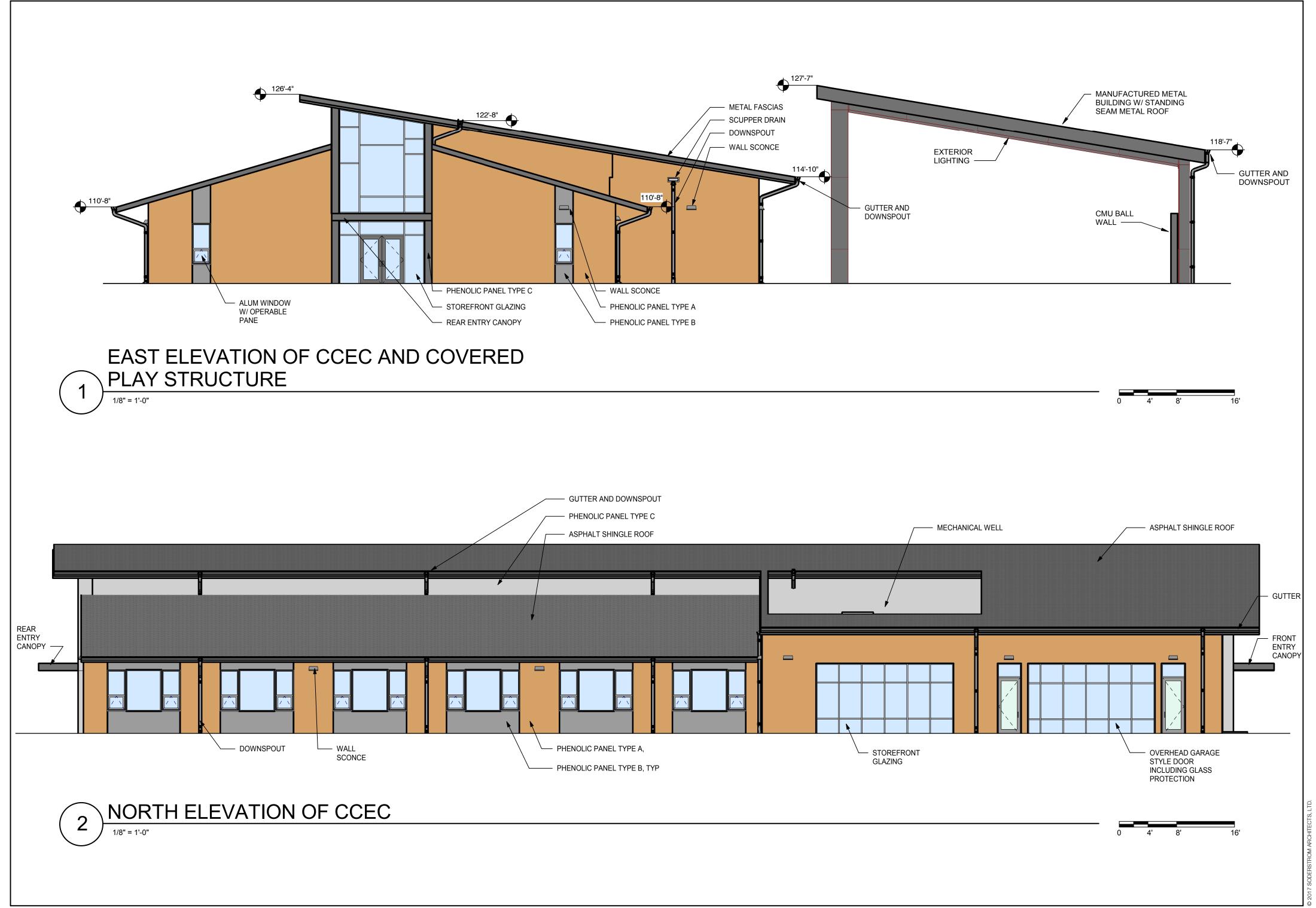
# seeding mix

seeding mfg: hobbs & hopkins ltd. model: companion low maintenance mix



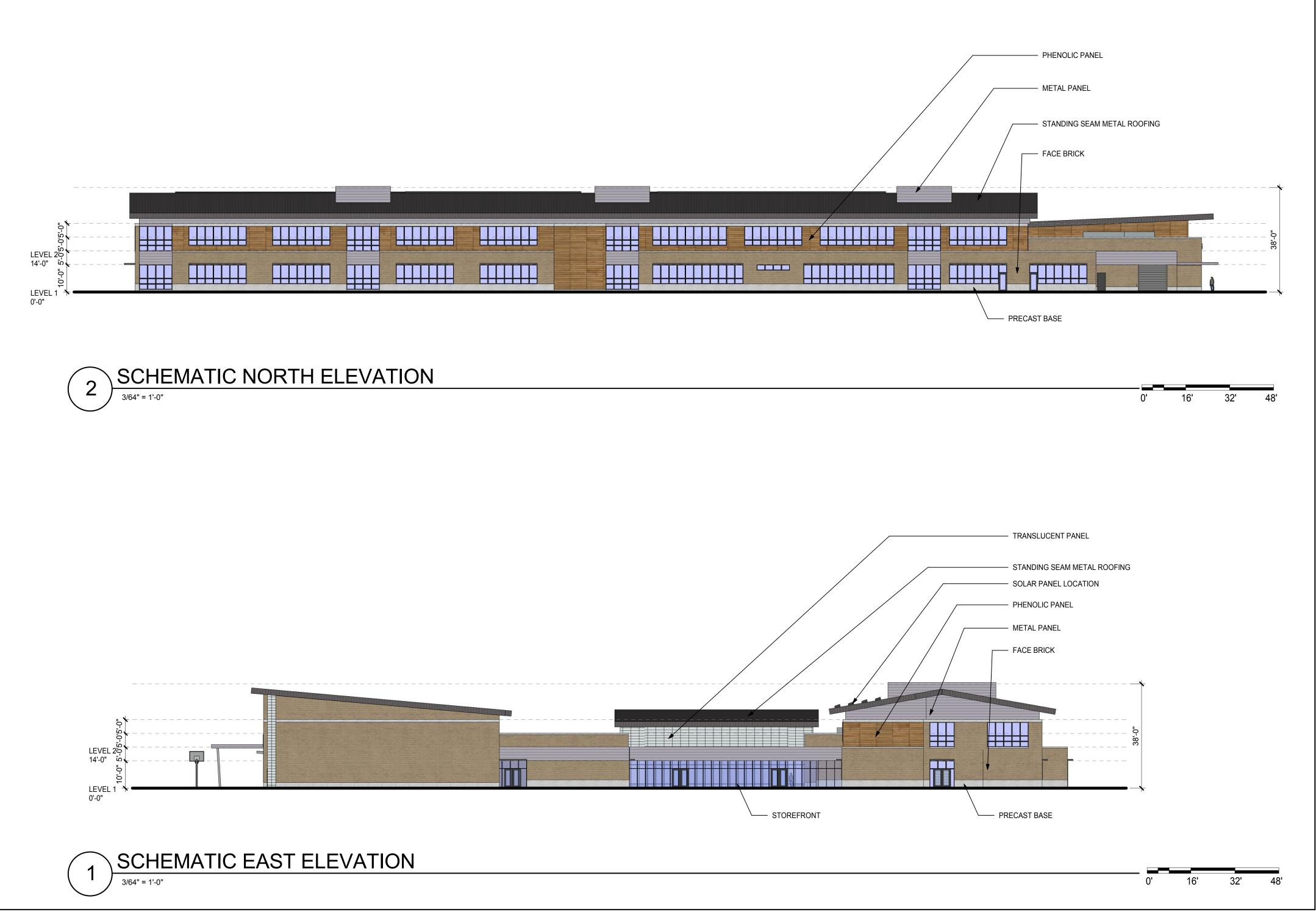


**CCEC Exterior Elevations** 



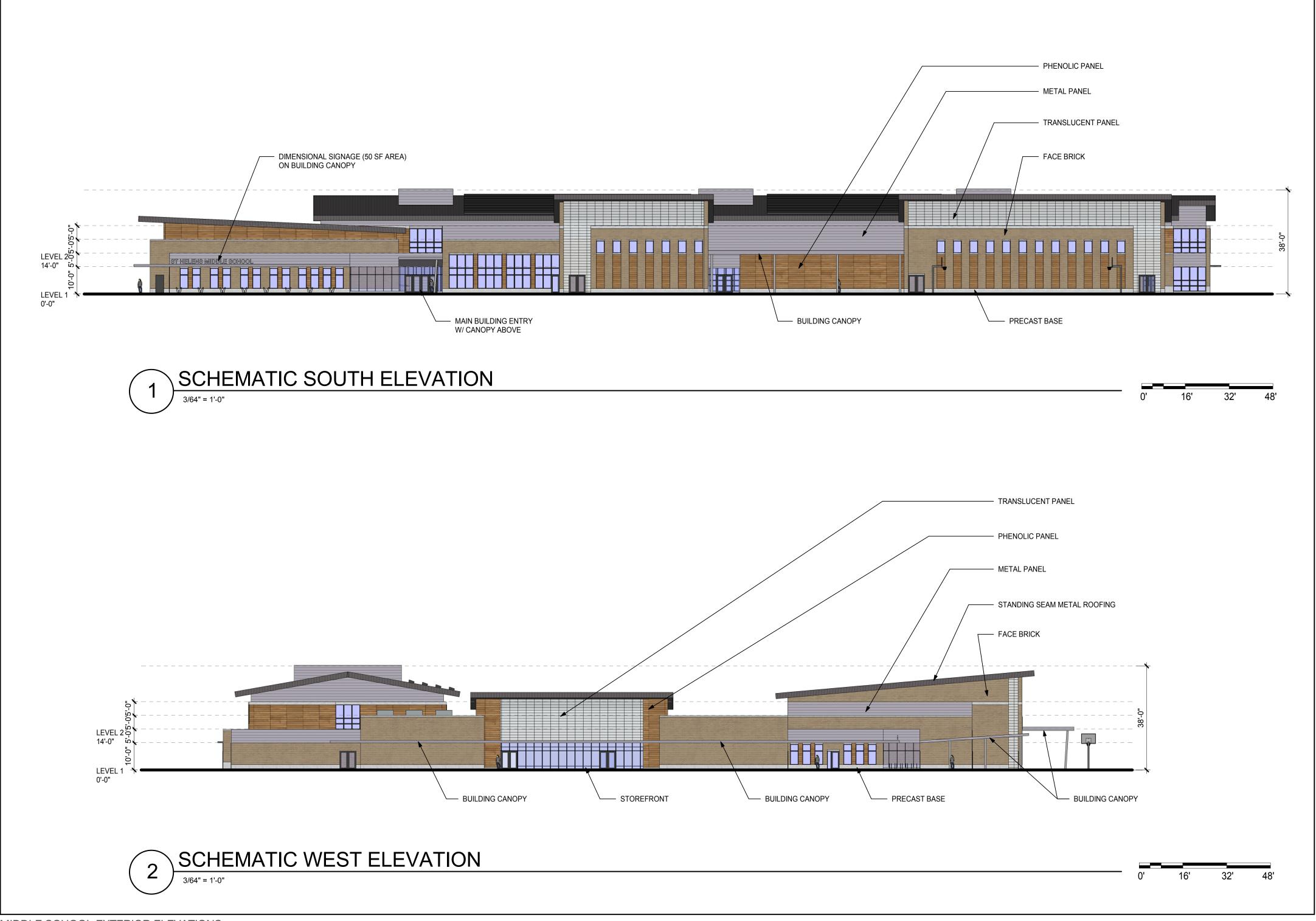
CCEC Exterior Elevations

E2



MIDDLE SCHOOL EXTERIOR ELEVATIONS

Land Use Submittal **St. Helens Middle School and CCEC** St. Helens School District

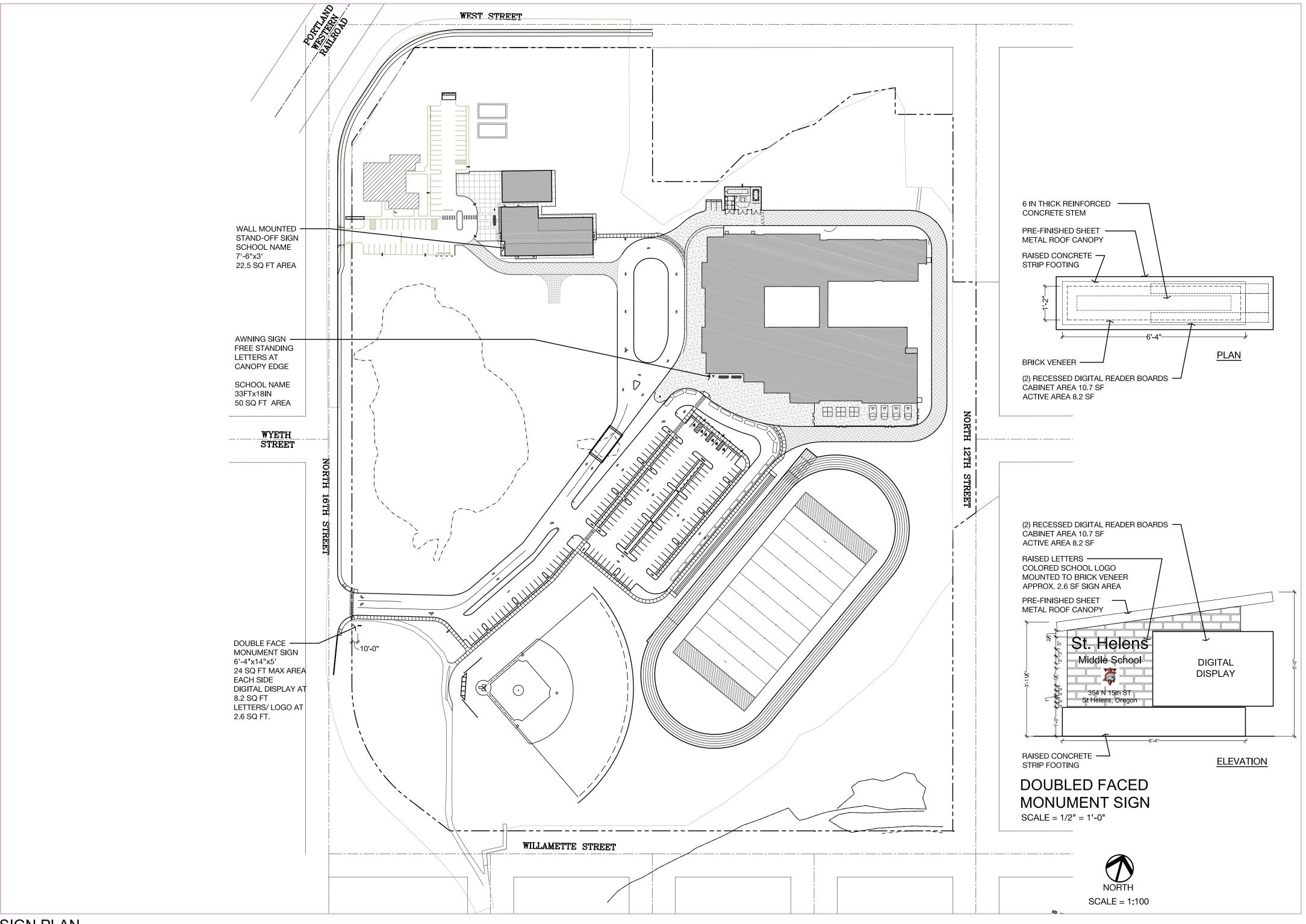


MIDDLE SCHOOL EXTERIOR ELEVATIONS

Land Use Submittal **St. Helens Middle School and CCEC** St. Helens School District

# **SODERSTROM** ARCHITECTS

E4



0 SIGN PLAN Land Use Submittal **St. Helens Middle School and CCEC** St. Helens School District

# **SODERSTROM** ARCHITECTS

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# CCEC-Tree Inventory

		-		
#	TYPE	DBH	REMARKS	REMARKS
1A	CHERRY	14"		
1B	CHERRY	14"		
1C	LAUREL	8"		
1D	OAK	8"		
1E	OAK	14"	MULTISTEM	
1F	OAK	20"		TBR
1G	ASH	12"	MULTISTEM	
1H	OAK	6"	MULTISTEM	
11	OAK	8"		
1J	COTTONWOOD	16"		TBR
1K	CHERRY	8"		TBR
1L	OAK	6"		TBR
1M	OAK	6"		TBR
1N	OAK	8"		TBR
10	OAK	26"		TBR
1P	OAK	20"	MULTISTEM	
1Q	OAK	24"		
1R	PINE	16"		

\* TBR- TO BE REMOVED

### **SUMMARY**

\* 18 TREES IN TOTAL. (ALL GREATER THAN 6" DBH)

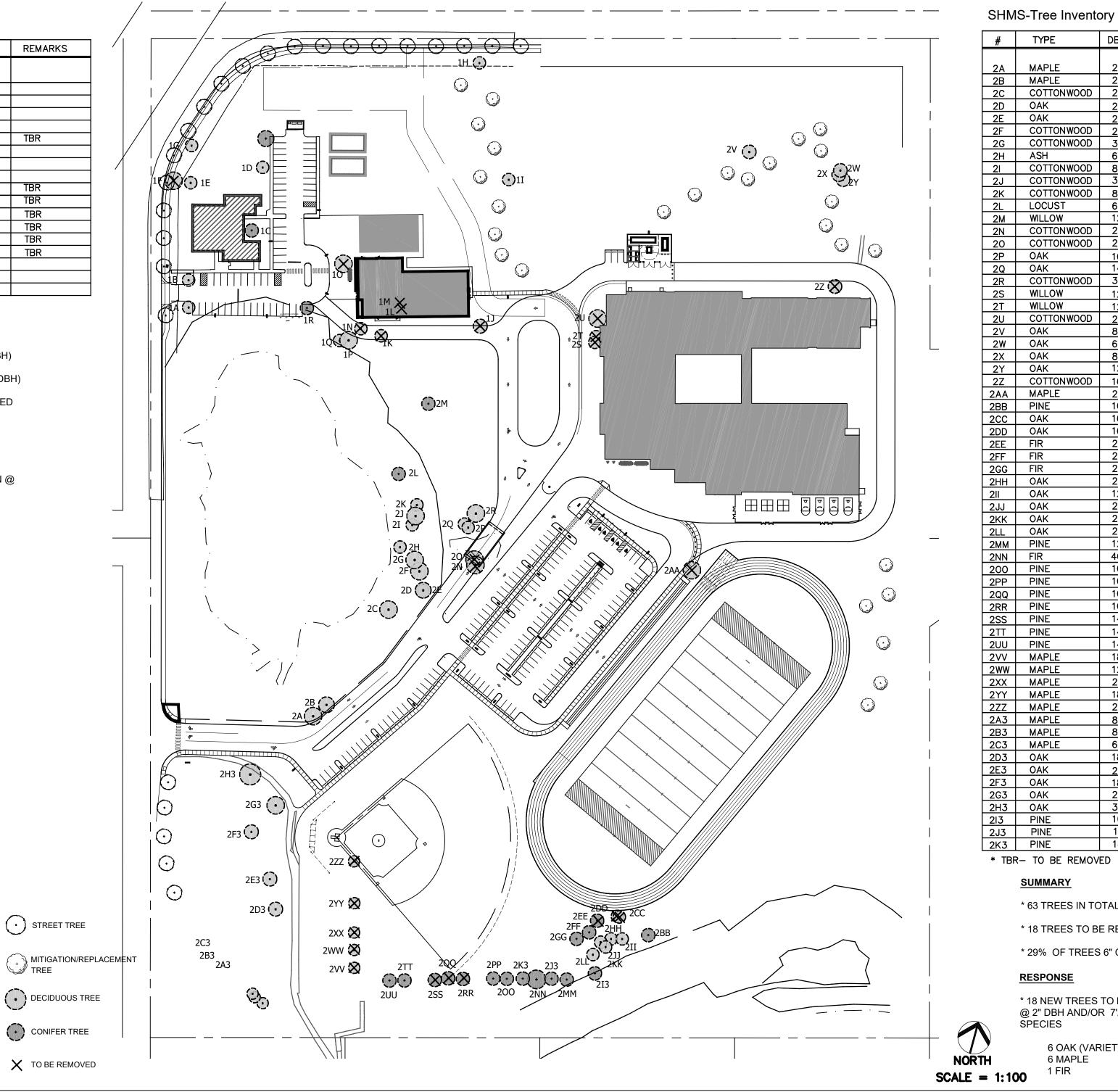
\* 7 TREES TO BE REMOVED (GREATER THAN 6" DBH)

\* 39% OF TREES 6" OR GREATER BEING REMOVED

#### RESPONSE

\* 7 NEW TREES TO BE INSTALLED AS MITGATION @ 2" DBH

> 1 CHERRY 6 OAK (VARIETY)



# NOTES

COTTONWOODS BEING REMOVED ARE REPLACED BY OAK VARIETY

INSTALLATION OF STREET TREES TO BE PERFOREMED IN ACCORDENCE WITH ST. HELENS MUNICIPAL CODE (CHAPTER 17.72.030)

TREE PLAN Land Use Submittal **St. Helens Middle School and CCEC** St. Helens School District

( · ) STREET TREE

CONIFER TREE

X TO BE REMOVED

2F         COTTONWOOD         24"           2G         COTTONWOOD         30"           2H         ASH         6"           2I         COTTONWOOD         30"           2J         COTTONWOOD         8"         MULTISTEM           2L         LOCUST         6"         2000           2M         WILOW         12"         TBR           2O         COTTONWOOD         24"         TBR           2O         COTTONWOOD         24"         TBR           2Q         OAK         10"         20           2Q         OAK         14"         MULTISTEM         TBR           2Q         OAK         12"         MULTISTEM         TBR           2Q         OAK         8"         10"         12"           2Q         OAK         8"         10"         12"           2Q         OAK         8"         12"         TBR           2U         COTTONWOOD         24"         TBR           2Y         OAK         8"         12"         12"           2Z         COTTONWOOD         16"         MULTISTEM         12"           2B         PINE         10"<	#	TYPE	DBH	REMARKS	REMARKS
28         MAPLE         20"           20         COTTONWOOD         24"           20         OAK         20"           21         COTTONWOOD         24"           22         COTTONWOOD         30"           24         ASH         6"           21         COTTONWOOD         8"           22.1         COTTONWOOD         8"           23.2         COTTONWOOD         8"           24.         LOCUST         6"           25.         COTTONWOOD         24"           26.         COTTONWOOD         24"           27.         COTTONWOOD         24"           28.         COTTONWOOD         24"           29.         OAK         10"           20.         COTTONWOOD         24"           21.         COTTONWOOD         24"           22.         COTTONWOOD         24"           21.         WILLOW         12"         TBR           22.         COTTONWOOD         24"         TBR           22.         COTTONWOOD         24"         TBR           22.         COTTONWOOD         16"         MULTISTEM           22. <t< td=""><td>2</td><td></td><td>ວ⊿"</td><td></td><td></td></t<>	2		ວ⊿"		
2C         COTTONWOOD         24"           2D         OAK         20"           2D         OAK         20"           2E         OAK         20"           2F         COTTONWOOD         24"           2G         COTTONWOOD         30"           2H         ASH         6"           2L         COTTONWOOD         8"           2L         COTTONWOOD         8"           2L         COTTONWOOD         24"           2M         WILLOW         12"           2N         COTTONWOOD         24"           2N         COTTONWOOD         24"           2N         COTTONWOOD         24"           2Q         OAK         10"           2Q         OAK         10"           2Q         OAK         10"           2Q         OAK         12"           2Q         OAK         8"           2U         COTTONWOOD         24"           2W         OAK         8"           2W         OAK         8"           2W         OAK         12"           2X         OAK         12"           2X			2 <del>4</del> 20"	+ +	
2D         OAK         20"           2E         OAK         20"           2F         COTTONWOOD         24"           2G         COTTONWOOD         30"           2H         ASH         6"           2I         COTTONWOOD         8"           2J         COTTONWOOD         8"           2L         LOCUST         6"           2M         WILLOW         12"           2N         COTTONWOOD         24"           2N         COTTONWOOD         24"           2Q         OAK         10"           2Q         OAK         14"           2P         OAK         10"           2Q         OAK         14"           2Q         OAK         12"           2Q         OAK         8"           2U         COTTONWOOD         24"           2X         OAK         8"           2U         COTTONWOOD         24"           2X         OAK         8"           2U         OAK         8"           22         OAK         12"           23         COTTONWOOD         16"           24"         <					
2E         OAK         20"         Image: style styl					
2F         COTTONWOOD         24"         Image: style sty	2E				
2G         COTTONWOOD         30"					
2H         ASH         6"					
21         COTTONWOOD         8"	2H				
2.J         COTTONWOOD         30"	21	COTTONWOOD	8"		
2K         COTTONWOOD         8"         MULTISTEM           2L         LOCUST         6"	2J	COTTONWOOD	30"		
2L         LOCUST         6"         Image: style st	2K			MULTISTEM	
ZN         COTTONWOOD         24"         TBR           20         COTTONWOOD         24"         TBR           20         COTTONWOOD         24"         TBR           20         OAK         14"         MULTISTEM         TBR           20         OAK         14"         MULTISTEM         TBR           20         OAK         12"         MULTISTEM         TBR           21         WILLOW         12"         MULTISTEM         TBR           21         COTTONWOOD         24"         TBR         TBR           22W         OAK         8"	2L	LOCUST	6"		
2N         COTTONWOOD         24"         TBR           20         COTTONWOOD         24"         TBR           20         OAK         10"         TBR           20         OAK         10"         TBR           21         OAK         14"         MULTISTEM         TBR           22         OAK         12"         MULTISTEM         TBR           22         OAK         8"         TBR         TBR           21         WILLOW         12"         MULTISTEM         TBR           22V         OAK         8"         TBR         TBR           22V         OAK         8"         TBR         TBR           24W         OAK         8"         TBR         TBR           24W         OAK         8"         TBR         TBR           22Y         OAK         16"         MULTISTEM         TBR           24         OAK         16"         TBR         TBR           25         FIR         20"         TBR         TBR           26         FIR         24"         MULTISTEM         TBR           27         FIR         20"         TBR         TBR	2M	WILLOW	12"		
20         COTTONWOOD         24"         TBR           2P         OAK         10"	2N				TBR
2P         OAK         10"         MULTISTEM           2Q         OAK         14"         MULTISTEM           2R         COTTONWOOD         36"	20		24"		
2Q         OAK         14"         MULTISTEM           2R         COTTONWOOD         36"	2P		<u>1</u> 0"		
2R         COTTONWOOD         36"         MULTISTEM         TBR           2S         WILLOW         12"         MULTISTEM         TBR           2U         COTTONWOOD         24"         TBR           2U         COTTONWOOD         24"         TBR           2W         OAK         8"         Image: Control and	2Q	OAK	14"	MULTISTEM	
2S         WILLOW         12"         MULTISTEM         TBR           2T         WILLOW         12"         TBR           2U         COTTONWOOD         24"         TBR           2W         OAK         8"         TBR           2Y         OAK         12"         MULTISTEM         TBR           2Z         COTTONWOOD         16"         MULTISTEM         TBR           2BB         PINE         10"         TBR         TBR           2BB         PINE         10"         TBR         TBR           2CC         OAK         16"         TBR         TBR           2DD         OAK         12"         MULTISTEM         TBR           2EF         FIR         20"         TBR         TBR           2H         OAK         22"         T         T           2UI         OAK         22"	2R	COTTONWOOD	36"		
2T         WILLOW         12"         TBR           2U         COTTONWOOD         24"         TBR           2W         OAK         8"         Image: constraint of the second s	2S	WILLOW		MULTISTEM	TBR
2V         OAK         8"         MULTISTEM           2W         OAK         6"         MULTISTEM           2Y         OAK         12"         MULTISTEM           2Y         OAK         12"         MULTISTEM           2Y         OAK         12"         MULTISTEM           2Y         OAK         12"         MULTISTEM           2Y         OAK         16"         MULTISTEM           2X         COTTONWOOD         16"         MULTISTEM           2X         COTTONWOOD         16"         TBR           2AA         MAPLE         27"         TBR           2B         PINE         10"         TBR           2D         OAK         16"         TBR           2EE         FIR         28"         TBR           2EF         FIR         20"         MULTISTEM           2H         OAK         22"         TBR           2H         OAK         22"         TD           2L         OAK         22"         TD           2L         OAK         22"         TD           2NN         FIR         10"         TBR           2NM	2T	WILLOW			TBR
2V         OAK         8"         MULTISTEM           2W         OAK         6"         MULTISTEM           2Y         OAK         12"         MULTISTEM           2Y         OAK         12"         MULTISTEM           2Y         OAK         12"         MULTISTEM           2Y         OAK         12"         MULTISTEM           2Y         OAK         16"         MULTISTEM           2X         COTTONWOOD         16"         MULTISTEM           2X         COTTONWOOD         16"         TBR           2AA         MAPLE         27"         TBR           2B         PINE         10"         TBR           2D         OAK         16"         TBR           2EE         FIR         28"         TBR           2EF         FIR         20"         MULTISTEM           2H         OAK         22"         TBR           2H         OAK         22"         TD           2L         OAK         22"         TD           2L         OAK         22"         TD           2NN         FIR         10"         TBR           2NM	2U	COTTONWOOD			TBR
2X         OAK         8"         MULTISTEM           2Y         OAK         12"         MULTISTEM         TBR           2Z         COTTONWOOD         16"         MULTISTEM         TBR           2AA         MAPLE         27"         TBR           2BB         PINE         10"         TBR           2CC         OAK         16"         TBR           2DD         OAK         16"         TBR           2DD         OAK         16"         TBR           2DD         OAK         16"         TBR           2EF         FIR         28"         TBR           2EG         FIR         24"         MULTISTEM           2UI         OAK         22"	2V	OAK	8"		
2Y         OAK         12"         MULTISTEM           2Z         COTTONWOOD         16"         MULTISTEM         TBR           2AA         MAPLE         27"         TBR           2BB         PINE         10"	2W	OAK		MULTISTEM	
2Z         COTTONWOOD         16"         MULTISTEM         TBR           2AA         MAPLE         27"         TBR           2BB         PINE         10"         TBR           2BB         PINE         10"         TBR           2CC         OAK         16"         TBR           2EE         FIR         28"         TBR           2EE         FIR         24"         MULTISTEM           2EG         FIR         24"         MULTISTEM           2HH         OAK         22"            2HH         OAK         22"            2U         OAK         22"            2NN         FIR         40"            200         PINE         10"         TBR           201         PINE         10"         TBR           215         PINE         14"            200         PINE	2X				
ZAA         MAPLE         27"         TBR           28A         MAPLE         27"         TBR           28B         PINE         10"	2Y				
PBB         PINE         10"         TBR           PCC         OAK         16"         TBR           PCE         FIR         28"         TBR           PCF         FIR         24"         MULTISTEM           PCG         OAK         24"         PARA           PCH         OAK         22"         PARA           PCH         OAK         22"         PARA           PCL         OAK         22"         PARA           PCL         OAK         22"         PARA           PCL         OAK         22"         PARA           POAK         22"         PARA         PARA           PINE         10"         PARA         PARA           PINE         10"         TBR         PARA           PINE         10"         TBR         PARA           PINE         14"         PARA         PARA           PINE         14"         <	2Z			MULTISTEM	
Processor         OAK         16"         TBR           P2D         OAK         16"         TBR           P2EE         FIR         28"         TBR           P2FF         FIR         20"         TBR           P2GG         FIR         24"         MULTISTEM           P2HH         OAK         24"         MULTISTEM           P2HH         OAK         22"         P2"           P2H         OAK         22"         P2"           P3MM         P1NE         10"         P2"           P2O         P1NE         10"         P3"           P2Q         P1NE         10"         TBR           P2Q         P1NE         14"         P2"           P2R         P1NE         14"         P2"           P2V         MAPLE	2AA		27"		TBR
DD         OAK         16"         TBR           EE         FIR         28"         TBR           EFF         FIR         20"         Image: Constraint of the state of the st	2BB		10"		
EEE       FIR       28"       TBR         2FF       FIR       20"       Image: Constraint of the state	200				TBR
PEF         FIR         20"         PER           2GG         FIR         24"         MULTISTEM         24"           2HH         OAK         24"         24"         24"           2U         OAK         22"         22"         22"           2J         OAK         22"         22"         22"           2KK         OAK         22"         22"         22"           2MM         PINE         12"         22"         22"           2MM         PINE         12"         22"         22"           2MM         FIR         40"         20"         22"         22"           2NN         FIR         40"         20" <t< td=""><td>2DD</td><td></td><td></td><td></td><td></td></t<>	2DD				
PEGG         FIR         24"         MULTISTEM           PHH         OAK         24"	2EE				TBR
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# SUMMARY

- \* 63 TREES IN TOTAL. (ALL GREATER THAN 6" DBH)
- \* 18 TREES TO BE REMOVED, (GREATER THAN 6" DBH)
- \* 29% OF TREES 6" OR GREATER BEING REMOVED

# RESPONSE

\* 18 NEW TREES TO BE INSTALLED AS MITGATION @ 2" DBH AND/OR 7'/8' IN HEIGHT FOR CONIFER SPECIES

#### 6 OAK (VARIETY) 6 MAPLE 1 FIR

2 WILLOW 3 PINE

# CITY OF ST. HELENS PLANNING DEPARTMENT ACTIVITY REPORT



**To**: City Council **From**: Jacob A. Graichen, AICP, City Planner

**Date**: 08.29.2017

This report does not indicate all *current planning* activities over the past report period. These are tasks, processing and administration of the Development Code which are a weekly if not daily responsibility. The Planning Commission agenda, available on the City's website, is a good indicator of *current planning* activities. The number of building permits issued is another good indicator as many require Development Code review prior to Building Official review.

## PLANNING ADMINISTRATION

Conducted a pre-application meeting for the former Violette's Villa mobile/manufactured home park along US 30 in the middle of town. Potential commercial and residential development of this site that has been vacant for 7+ years.

Wrote a zoning compliance letter for Northfork Apartments at 544 N. 10<sup>th</sup> Street. The information within is due to federal dollars (or something) being used for the purchase. This is a similar letter written in 2015 for three other apartment complexes that where purchased and rehabilitated using federal money. Its noteworthy because it shows investment in St. Helens' existing multifamily stock; important for housing options.

Conducted a pre-application meeting for a property addressed as 2695 Gable Road for a potential multi-family residential development. This is close to the Gable Road/Firlock Park Street intersection.

Responded to a Columbia County referral notice for a project outside City limits but inside the City's UGM for a home occupation at 57703 Old Portland Road (County File: CU 18-02). See attached.

#### **DEVELOPMENT CODE ENFORCEMENT**

A unlawful shed issue has been resolved on the 500 block of N. 14ht Street. There was discussion from a neighboring property owner for years, but once the tenant long-term took ownership of that property, the complaints became firm (around May) and staff responded accordingly.

#### PLANNING COMMISSION (& acting HISTORIC LANDMARKS COMMISSION)

<u>August 8, 2017 meeting (outcome)</u>: The Commission reviewed and recommends approval of a Zone and Comprehensive Map change at 1160 and 1170 Deer Island Road. The Council will see this on September 20<sup>th</sup>. The Commission also had a chance to review the draft Branding and Wayfinding Master Plan.

<u>September 12, 2017 meeting (upcoming)</u>: The Commission will hold a public hearing for the St. Helens Middle School and CCEC replacement project. The City's Finance Director will also present the proposed soda (sugary drink) tax to the Commission for their input/comments. A couple Commissioner's terms expire in December; that will be discussed too.

**ASSOCIATE PLANNER**—In addition to routine tasks, the Associate Planner has been working on: See attached.

COLUMBIA COUNTY LAND DEVELOPMENT SERVICES Planning Division COURTHOUSE ST. HELENS, ORE GON 97051 Phone: (503) 397-1501 Fax: (503) 366-3902

August 22, 2017

### **REFERRAL AND ACKNOWLEDGMENT**

To: City of St Helens

NOTICE IS HEREBY GIVEN that Gretchen Ramos has submitted an application for a Conditional Use Permit Type II Home Occupation for using the home as office and accessory structures for parking trucks and trailers. This is a lawn maintenance business with one employee at the office site and 15 employees in the field. The subject property is located at 57703 Old Portland Rd, and identified by Tax Map No. 4N1W17-B0-04600, 1.15 acres.

THIS APPLICATION IS FOR: () Administrative Review; (X) Planning Commission, Hearing Date: October 2, 2017

#### **PLEASE RETURN BY:** 09/01/17

#### Planner: Deborah Jacob

The enclosed application is being referred to you for your information and comment. Your recommendation and suggestions will be used by the County Planning Department and/or the Columbia County Planning Commission in arriving at a decision. Your prompt reply will help us to process this application and will ensure the inclusion of your recommendations in the staff report. Please comment below.

1. We have reviewed the enclosed application and have no objection to its approval as submitted.

- 2. Please see attached letter or notes below for our comments.
- We are considering the proposal further, and will have comments to you by \_\_\_\_\_\_.
- 4. \_\_\_\_Our board must meet to consider this; we will return their comments to you by \_\_\_\_\_
- 5. Please contact our office so we may discuss this.
- 6. \_\_\_\_\_We recommend denial of the application, for the reasons below:

COMMENTS: SEE	ATTACHED	MEMO	PATED	AVG.	25	2017	1

A	
Signed:	Printed Name: ACCB GRAICHEN
Title: CETY PLANNER	Date: 8-25-2014



TO:Deborah Jacob, Planner, Columbia CountyFROM:Jacob A. Graichen, AICP, City PlannerRE:Columbia County File CU 18-02DATE:August 25, 2017

This property is outside of St. Helens' city limits. The City's Comprehensive Plan map designates the subject property and all properties surrounding it as Rural Suburban Unincorporated Residential, RSUR. If annexed, the surrounding properties and the surrounding properties would be most likely zoned Suburban Residential, R10 or Moderate Residential, R7.

This is a residential area dominated by detached single-family dwellings. It's fair to assume this will continue into the foreseeable future.

There are a couple standards worth noting:

### CCZO 1503.5(E):

"The proposed use will not **alter the character** of the surrounding area in a manner which substantial limits, impairs, or precludes the use of surrounding properties for the primary uses listed in the underlying district."

#### CCZO 1507.3(B):

"A home occupation shall not unreasonably interfere with other uses permitted in the zone in which the property is located."

Traffic should be considered when determining the fate of this application. In my experience, a common concern from neighbors about existing or alleged home occupations is traffic.

A single family home generates about 10 average daily vehicle trips (ITE Trip Generation Handbook).

Having multiple trucks and equipment for up to 15 employees (as noted by the applicant) to use seems like it will generate more traffic than a typical singe family dwelling.

Also, related to traffic, do the employees park their personal vehicles at this location to use the trucks and equipment stored on site? If so, that's more vehicular trips.

# If the County approves this, I recommend some way to ensure its traffic generation is not or will not be out of character with the residential neighborhood.

COD	File No. CU 18-02
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State	Zip Code
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S:\Planning Division\Forms\Application Forms\Conditional Use Permit - Home Occupation Application

Updated 11/18/02

			File No. CU 18-02
WATER SUPPLY:	Private well.	Is the well insta	alled?Yes _X_No
If Septic, doe	s the subject property	Community Sewer. Not applicable. Septic System. already have a system? Septic System?	Name X_YesNo No
EMPLOYEES: For a including yourself an CONTIGUOUS PRO this property:	any business, how mand family members:	any expected full or part-time <u>ONIY</u> 1 employee ve) 15 employee er properties you own which	e employees will you have, L ON Proferty, -S in the field-Licensed those have boundary lines touching Citi
	count No. Acre	es <u>Co-owners (if a</u>	any)
NA			
	cy apparatus access.		Deal Rural Fire Protection District
, <u>,</u>	all of the above state by belief and knowled ] Signatu	ge.	ents submitted, are accurate and
+++++++++++++++++++++++++++++++++++++++	++++++++++++++++++++++++++++++++++++++	++++++++++++++++++++++++++++++++++++++	+++++++++++++++++++++++++++++++++++++++
Date Rec'd. 1-20		Hearing Date:	
Receipt No. 2063		Or: Administrative	
Zoning: R-10		Staff Member: tR	
Previous Land Use	Actions: CU 05-	15	
+++++++++++++++++++++++++++++++++++++++	+++++++++++++++++++++++++++++++++++++++	+++++++++++++++++++++++++++++++++++++++	-++++++++++++++++++++++++++++++++++++++

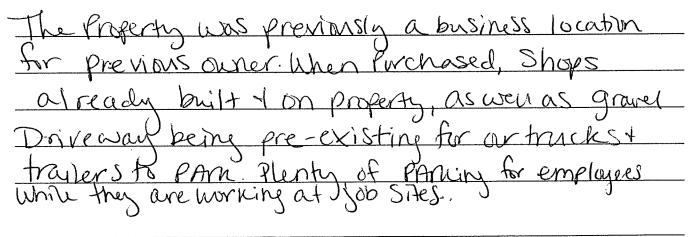
### CONDITIONAL USE PERMIT FACT SHEET

Please attach extra pages if necessary.

1. <u>New Uses:</u> What new uses will occur on the property if this Conditional Use Permit is approved? Describe your project.

We own a Lawn Maintenence business. The office is located on Property where I employee works functione. The earigment is stored on site in a Shop + Trucks with traiters park at Property site in evenings And when not in use. Business licenses are held in Surranding Cities where actual work is performed by other employees.

2. <u>Suitability:</u> Why is the property suitable for this use (considering lot size, shape and location, access and roads, natural features and topography, existing improvements, etc.)?



Compatibility: How will the use be compatible with surrounding uses? 3. tor other business', offices  $b \mathcal{Q}$ ished & Do not Dry ashr are well Physical address tor customers. busine(s' customer traffic

4. <u>Impact:</u> What impact will the proposed use have on existing public facilities, or on your neighbors' use of their land? Why?

impact them or disturb 1CH rently no 4 INA AUN erl-YΥ is twe Ne rmi indi 2V ONP USINOS (athat NOT and fi C ustomer TO Proper minima tom YZ. Hazards: Does the proposed use create any hazardous conditions or use any poisonous 5. materials? Please describe them. 1 believe- each Pelica thick b Vegu Gas iler red (an Q De bri NR MM more limpale nor ron businesses exe earby

#### 

Submission: All of the following must be completed and submitted for a complete application:

- 1. The attached HOME OCCUPATION CONDITIONAL USE PERMIT APPLICATION.
- 2. Answers to the above questions.
- 3. An accurate site plan of your property including property lines and dimensions, all existing and proposed structures, septic tank and drainfield and well locations, prominent natural features (slopes, cliffs & streams, etc.), roads, easements, and forested areas.
- 4. Proof of <u>legal usable access</u> to your property (unless you can show an unobstructed frontage on a public or county road or on a state highway).
- 5. A vicinity map.
- 6. The application fee.
- 7. Please also address the criteria (on a separate sheet of paper) of Section 1503, Conditional Uses, from the Columbia County Zoning Ordinance. (See below.) And Section 1507.

### Section 1503, Conditional Uses:

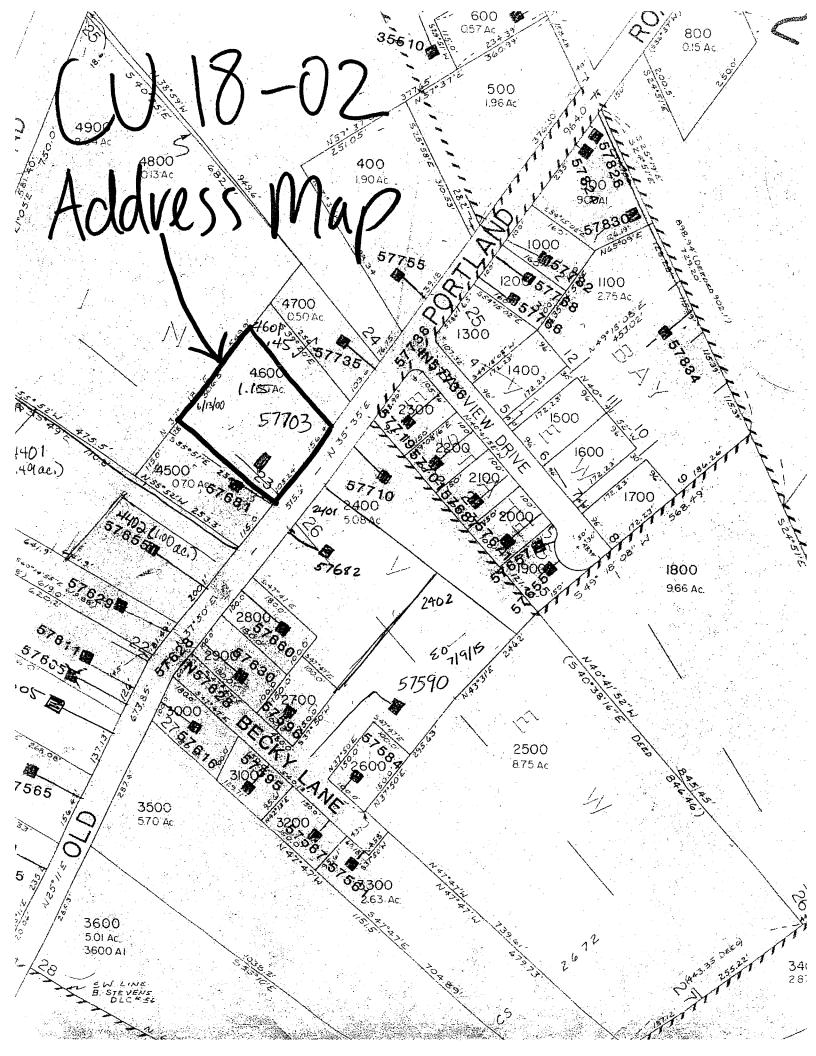
- .5 <u>Granting a Permit</u>: The Commission may grant a Conditional Use Permit after conducting a public hearing, provided the applicant provides evidence substantiating that all the requirements of this ordinance relative to the proposed use are satisfied and demonstrates the proposes use also satisfies the following criteria:
  - A. The use is listed as a Conditional Use in the zone which is currently applied to the site;
  - B. The use meets the specific criteria established in the underlying zone;
  - C. The characteristics of the site are suitable for the proposed use considering size, shape, location, topography, existence of improvements, and natural features;
  - D. The site and proposed development is timely, considering the adequacy of transportation systems, public facilities, and services existing or planned for the area affected by the use;
  - E. The proposed use will not alter the character of the surrounding area in a manner which substantially limits, impairs, or precludes the use of surrounding properties for the primary uses listed in the underlying district;
  - F. The proposal satisfies the goals and policies of the Comprehensive Plan which apply to the proposed use;
  - G. The proposal will not create any hazardous conditions.

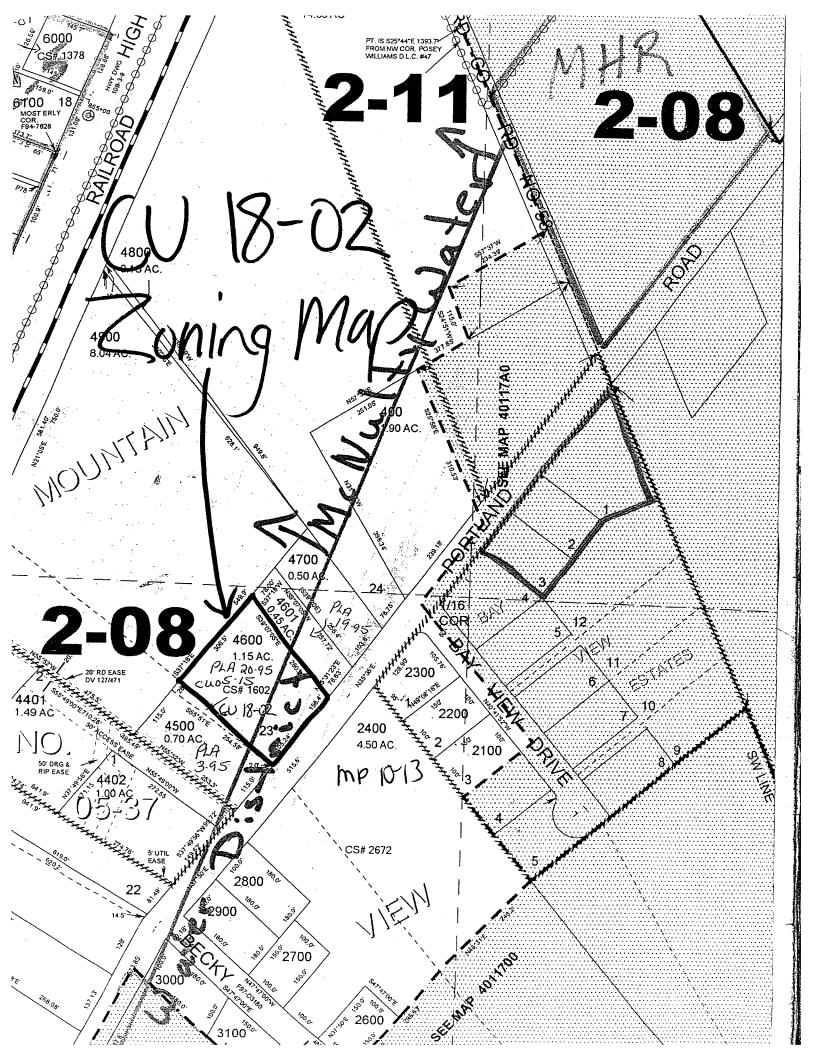
# **1507 HOME OCCUPATIONS** [amended 3-2000]

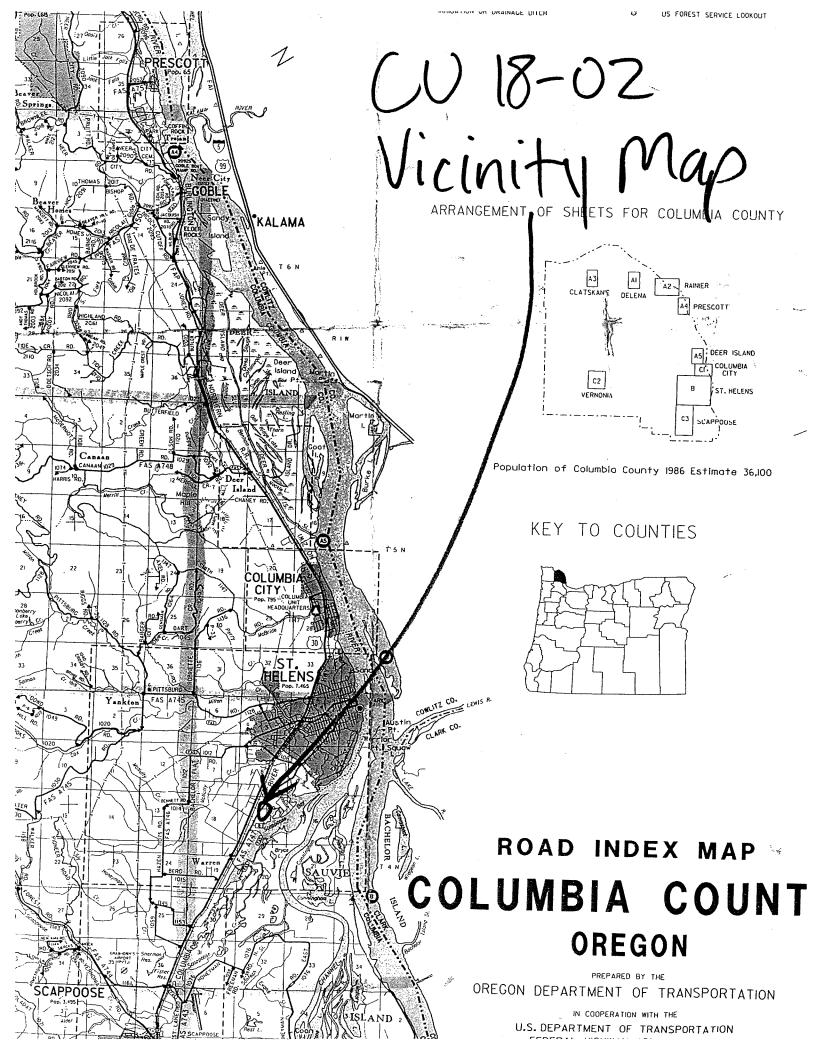
Land Development Services or the County Planning Commission (or the County) may allow the establishment of a Type 1 or Type 2 home occupation in any zone that allows residential uses. The following provisions shall apply:

- .1 <u>Type 1:</u> A Type 1 home occupation is reviewed administratively by Land Development Services and presents no indication of a business to the neighboring property owners. In addition to the general criteria in Subsection 1507.3, the following criteria shall apply to a Type 1 home occupation:
  - A. It shall be operated by a resident of the property on which the business is located.
  - B. No non-residents shall be employed on the property.
  - C. The business generates not more than 20 customer vehicle trips to the property per week.
  - D. Signs are not permitted.
- .2 <u>Type 2:</u> A Type 2 home occupation is reviewed as a Conditional Use by the Planning Commission and may be visible to the neighborhood in which it is located. In addition to the general criteria in Subsection 1507.3, the following criteria shall apply to a Type 2 home occupation:
  - A. It shall be operated by a resident or employee of a resident of the property on which the business is located.
  - B. It shall employ on the site no more than five full-time or part-time persons.
  - C. Signs are permitted as per Section 1300 of the CCZO.
- .3 The following criteria shall apply to all home occupations:
  - A. A home occupation shall be operated substantially in:
    - 1. The dwelling; or
    - 2. Other buildings normally associated with uses permitted in the zone in which the property is located.
  - B. A home occupation shall not unreasonably interfere with other uses permitted in the zone in which the property is located.

	Fans Full Permit Number 500-292- 3td County Coler Bit
SECTION 3:	AS-BUILT PLAN OF THE CONSTRUCTED SYSTEM. Indicate the direction of NORTH and show the locations of all wells within 200 feet of the system. Old Portland Rd 180'
266 John In	42 × 66 Hore Hor
SECTION 4:	CONSTRUCTION WAS PERFORMED BY:







### **Jacob Graichen**

From:	Jennifer Dimsho
Sent:	Thursday, August 24, 2017 11:37 AM
То:	Jacob Graichen
Subject:	August Planning Department Report

Here are my addition to the August Planning Department Report.

#### GRANTS

- 1. EPA Community-Wide Assessment Grant for 300k Discussed scope with MFA and EPA. Discussed potential 30k technical assistance scope from EPA for Lagoon Repurposing Project
- Travel Oregon Grant –Branding & Wayfinding Master Plan: Temporary Signage created and showcased at Citizen's Day in the Park on August 12 from 12 – 3 p.m. Planning Commission review of draft plan on August 8. Reviewed and compiled staff feedback for design intent drawings, sign location plan, and US 30 demolition and relocation plan. Prepared and created adoption resolution for City Council review of final Master Plan in September. Began preparing Travel Oregon final report/budget report due September 29
- 3. Local Government (CLG) Historic Preservation Grant Award \$12,500 to help cover City Hall façade cleaning and repairs. Reimbursement & final report submitted and accepted
- 4. Kickoff meeting for the OPRD Veterans Memorial Grant on July 17. Grant is for \$46,770 Total project is \$68,400. Staked out project area on site with Engineer on August 14.
- 5. HEAL Cities Grant (5k award) Nob Hill Nature Park staircase and kiosk installation. Tracked hours. Final project report is due October 13, 2017
- 6. OPRD Recreational Trails Program Presentation for grants over 50k in Salem on Sept. 20. Began preparation of PowerPoint for the grants Committee.

#### **URBAN RENEWAL**

- 7. Sent notice of final adoption to media for proper newspaper publishing (4 days after final reading). Prepared recording documents for the Columbia County Clerk 30 days after adoption.
- 8. Finished Draft Urban Renewal Agency Minutes for review and approval at the next meeting. Updated Urban Renewal website for adoption materials
- 9. Began compiling charter/bylaw examples for next agency meeting in Oct. or Nov.

#### MISC

- 10. Attended 6 workshop/training sessions for Granicus, the new meeting recording/minutes system
- 11. 2695 Gable Road Apartment Pre-Application/Site Design Review Pre-Application
- 12. Reviewed Draft Waterfront RFP Submission August 11
- 13. ACC Sub-Committee Meeting for Ribbon Cutting Ceremony Meeting August 15 and ACC meeting on August 29. Planned rentals, catering, speaker, location, press, etc.
- 14. Planned for and attended Salmon Tree Cycle sculpture viewing party at Rhiza A+D August 10.
- 15. 2020 Census Bureau paperwork
- 16. Met with public health graduate student to discuss active transportation infrastructure in our community
- 17. Attended Parks Commission August 14 Discussed potential funding source (soda tax) and gave Veterans Memorial expansion project update
- 18. Continued research/preparation for affordable housing text amendments to come

#### Jenny Dimsho

Associate Planner City of St. Helens (503) 366-8207