Drainage Report

Farm 12 – Parking Lot Revision

3303 8th Ave SE B Puyallup, WA 98372

Prepared for Farm 12 3303 8th Ave SE B Puyallup, WA 98372 Krista Linden kristalinden@stepbystepfamily.org

Prepared by

JMJ Team 905 Main Street, Suite 200 Sumner, WA 98390 206.596.2020 Justin Jones, PE

PROJECT ENGINEER'S CERTIFICATION

"I hereby state that this Drainage Report for the Farm 12 Parking Lot Revision has been prepared by me or under my supervision and meets the minimum standard of care and expertise which is usual and customary in this community for professional engineers. I understand that the City of Puyallup does not and will not assume liability for the sufficiency, suitability, or performance of drainage facilities prepared by me."

Justin Jones, PE





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Appendix A: Site Development Drawings

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PROJECT OVERVIEW AND VICINITY MAP

The Farm 12 Parking Lot Revision project is located at the intersection of 33rd St SE and E Pioneer in the City of Puyallup. The project site includes parcel 0420264069 and has a total lot size of 5.94 acres. The site is currently developed as a CMX – Shaw Pioneer Community Mixed Use and within Agriculture Overlay Zone. New development on-site includes the improvement of the existing gravel parking lot. The stormwater approach is to disperse runoff to an existing ditch that is part of the City's Southeast Puyallup Basin MS4 system that direct discharges to the Puyallup River.



Vicinity Map



Proposed Site Map

EXISTING CONDITIONS SUMMARY

The Farm 12 Parking Lot Revision project site area is 254,473 SF (5.94 acres). The existing site consists of grass vegetation and an existing gravel parking lot abutting 33rd Street SE. The site is fairly flat and has a slight slope towards the east side of the property.

The existing storm system consists of a ditch along the eastern property line that is part of the City's MS4 system. This ditch is part of the Southeast Puyallup Basin, that direct discharges to the Puyallup River. Runoff from 33rd Street SE sheet flows to the ditch and is eventually conveyed towards the Puyallup River located north of site. Runoff from existing gravel parking pad sheet flows towards the grass vegetation and existing ditch.

USDA Soil Survey Map was utilized to analyze existing soils on-site, see Appendix B for maps. On-site soils are predominantly Briscot loam (Group C soils).

The site is located within Lahar Hazard area.

There are no critical areas within site.

PROPOSED CONDITIONS SUMMARY

Adjust quantities for the additional 24'x114' gravelled area (See Page 8 comment). [Storm Report; Page 9 of 32]

The proposed development is to improve the existing gravel parking lot so that it meets the City of Puyallup Design and stormwater management standards. Improvements include the re-grade of existing gravel parking lot and implementation of stormwater management practices.

The proposed development will result in 19,940 SF of replaced impervious surfaces within the project site area. Total land disturbing activity to be approximately 45,960 SF. Minimum requirements 1-9 will apply to this project. Lot Coverage Table has been provided in the report following.

The stormwater approach for this project is to sheet flow runoff from the replaced gravel lot to disperse and receive treatment through amended soil. Runoff will then follow a natural drainage pattern and be conveyed towards an existing ditch east of site where it will eventually discharge into the Puyallup River.

LOT COVERAGE

The following tables show the existing and proposed lot coverage for the Farm 12 Parking Lot Revision project site.

Existing Lot Coverage (258,473 SF Site Area)				
Coverage Area (SF) Area (Acres) % C				
Impervious				
Existing Gravel Parking	19,940	0.46		
Total Site Impervious	19,940	0.46	7.7%	
Pervious				
Grass Vegetation	238,533	5.47		
Total Site Pervious	238,533	5.47	92.3%	

Proposed Lot Coverage (258,473 SF Site Area)					
Coverage Area (SF) Area (Acres) % of Site					
Impervious					
Replaced Gravel Parking	19,940	0.46			
Total Replaced Impervious 19,940 0.46					
Total Site Impervious	19,940	0.46	7.7%		
Pervious					
Grass Vegetation 238,533 5.47					
Total Site Pervious 238,533 5.47 92.3%					

SUMMARY OF MINIMUM REQUIREMENTS

The City of Puyallup adopts the 2019 Stormwater Management Manual for Western Washington (DOE Manual). Volume 1 of the DOE Manual describes the minimum requirements for a development project. Using the flowchart below, Minimum Requirements #1-9 applies to the project site.





MINIMUM REQUIREMENT 1: PREPARATION OF STORMWATER SITE PLANS

Stormwater Site Plan drawings have been prepared per the City of Puyallup development codes and the 2019 Stormwater Management Manual for Western Washington (DOE Manual), see Appendix A.

MINIMUM REQUIREMENT 2: CONSTRUCTION STORMWATER POLLUTION PREVENTION

A Temporary Erosion and Sediment Control Plan has been prepared per the City of Puyallup development codes and the 2019 DOE Manual and is included in this report, see Appendix A. Construction Stormwater Pollution Prevention measures may include storm drain inlet protection; construction entrance; silt fence and a sediment trap.

MINIMUM REQUIREMENT 3: SOURCE CONTROL OF POLLUTION

Source control BMPs will be implemented to minimize stormwater contamination and help comply with the DOE Manual. BMP's for the project may include:

- Inspect and clean treatment BMPs, conveyance systems, and catch basins as needed, and determine necessary O & M Improvements.
- Clean catch basins when the depth of deposits reaches 60-percent of the sump depth as measured from the bottom of basin to the invert of the lowest pipe into or out of the basin.
- Clean woody debris in a catch basin as frequently as needed to ensure proper operation of the catch basin.

MINIMUM REQUIREMENT 4: PRESERVATION OF NATURAL DRAINAGE SYSTEMS AND OUTFALLS

This site is fairly flat and has a natural drainage pattern towards an MS4 ditch along the east side of the site. The project proposes to maintain drainage pattern so that overall site continues to drain east of site.

It does not appear that there are any catch basins associated with this project. Perhaps language such as: -"Maintain, swales, ditches and culverts at an appropriate frequency to ensure that plugging,erosion, and flooding does not occur." -"Provide maintenance and cleaning of debris, sediments, and other pollutants from the stormwater collection, conveyance, and treatment systems to maintain proper operation." -"Reseed bare turf areas until the vegetation fully covers the grond surface." [Storm Report; Page 12 of 32]

MINIMUM REQUIREMENT 5: ONSITE STORMWATER MANAGEMENT

Per Figure I-3.3 of the 2019 DOE Manual, the Farm 12 Parking Lot Revision project is required to either use any Flow Control BMP to meet LID Performance Standards or use List #3 to determine appropriate stormwater management BMPs for various surfaces. This project proposes to use List #3 to determine appropriate stormwater management BMP.



Figure I-3.3: Flow Chart for Determining MR #5 Requirements

The following BMPs from List #3 was considered to manage runoff from various surfaces:

Hard Surfaces:

BMP T5.12 Sheet Flow Dispersion:

This project chooses to implement BMP T5.12 Sheet Flow Dispersion to manage stormwater runoff from replaced gravel parking lot. The flow path has been sized utilizing the design guidelines set forth by the DOE Manual. The design criteria are as follows:

- Used on flat or moderately sloping (< 15% slope) surfaces.
- Provide a 2-foot-side-transition zone to discourage channeling between the edge of impervious surface and downslope vegetation.
- Provide a 10-foot-wide vegetated buffer for up to 20 feet of width of impervious surface.

The gravel parking lot is approximately 66-feet wide. Using the design criteria above, a minimum of 40-foot-wide vegetated buffer is required to fully manage runoff from replaced gravel parking lot.

No other BMPs were analyzed as this BMP was determined to be feasible for this site.

Lawn and Landscaped Areas:

BMP T5.13 Post Construction Soil Quality and Depth:

The Farm 12 project proposes retain and protect undisturbed soil in areas not being developed and, prior to completion of the project, amend all new, replaced, and disturbed topsoil (including construction lay-down areas) with organic matter in accordance with BMP T5.13 of the 2019 DOE Manual.

MINIMUM REQUIREMENT 6: RUNOFF TREATMENT

Per the 2019 DOE Manual, Runoff Treatment is required if the site Threshold Discharge Area (TDA) has a total of 5,000 SF of pollution generating back surfaces (PGHS) or 3/4 acres of pollution generating pervious surfaces (PGPS). The Farm 12 project proposes 19,940 SF of PGHS. Using Figure III-1.1 of the 2019 DOE Manual, this project is required to implement Enhanced Treatment BMP for the replaced gravel parking lot.



Figure III-1.1: Runoff Treatment BMP Selection Flow Chart

Treatment Selection was determined as follow:

Oil Control:

Oil control is required for areas that have high concentrations of oil due to high traffic turnover or frequent transfer of oil. This project will not have high traffic turnover, store petroleum, or store vehicles that are over 10 tons gross weight; therefore, this treatment level does not apply.

Treatment via Infiltration:

Treatment via infiltration was deemed impracticable as the site consists of large, vegetated areas that can be used to implement low impact BMPs such as dispersion.

Phosphorus Treatment:

Phosphorus Treatment is required for projects within phosphorus sensitive watersheds. This project does not propose discharging runoff to a water body that is sensitive to phosphorus; therefore, this treatment level does not apply.

Enhanced Treatment:

Enhanced Treatment is required for projects that direct discharge to freshwater body designated for aquatic life or infiltrate within ¼ mile of freshwater body. This project proposes to direct discharge to a water body or a conveyance system tributary to a freshwater body; therefore, this treatment level is required for this project.

Basic Treatment:

Since Enhanced Treatment will be provided, Basic Treatment is not required for the gravel parking lot prior to discharging through infiltration or surface flow.

The Farm 12 project proposes to implement BMP T7.40 Compost-Amended Vegetated Filter Strip (CAVFS) to meet Enhanced Treatment prior to discharging to the City's conveyance system. To fully meet Runoff Treatment requirements, 91% of the influent runoff file must pass through the soil profile of the CAVFS. Using WWHM Modeling, it was determined that the CAVFS will need to be designed as follow to meet 91% influent runoff file:

- Minimum length of 286-feet
- Minimum width of 5-feet
- Minimum amended soil depth of 4-inches
- Minimum gravel transition width of 2-feet
- Minimum slope of 2%

See Appendix C for WWHM Modeling.

MINIMUM REQUIREMENT 7: FLOW CONTROL

Per 2019 DOE Manual, Flow Control is not required for TDAs that discharge directly to, or indirectly through an MS4 to a Flow Control Exempt Receiving Waters.

The Farm 12 project proposes to discharge runoff indirectly through the City's MS4 ditch that is part of the Southeast Puyallup Basin. The Southeast Puyallup Basin contains ditches and streams which drain predominately rural areas to the Puyallup River. The Puyallup River is part of the Flow Control Exempt Receiving Waters.

Since the project is proposing to indirectly discharge runoff to a flow control exempt receiving waters, Flow Control BMPs are not required for this project.

MINIMUM REQUIREMENT 8: WETLAND PROTECTION

This minimum requirement applies only to TDAs whose stormwater discharges to wetlands. This project does not propose to discharge stormwater to wetlands; therefore, this minimum requirement does not apply to the project.

MINIMUM REQUIREMENT 9: OPERATION AND MAINTENANCE

An operation and maintenance manual shall be provided for Stormwater Management BMPs in accordance with the 2019 DOE Manual. This manual will be developed prior to the end of construction.

APPENDIX A

FARM 12 - PARKING LOT REVISION **CIVIL SITE PERMIT**

APPLICANT

FARM 12 3303 8TH AVE SE A PUYALLUP, WA 98372 kristalinden@stepbystepfamily.org CONTACT: KRISTÁ LINDEN

CIVIL ENGINEER

JMJ TEAM 905 MAIN STREET SUITE 200 SUMNER, WA 98390 (206) 596-2020 CONTACT: JUSTIN JONES, PE

SITE INFORMATION:

SITE ADDRESS TAX PARCEL NUMBER(S): ZONING: SITE AREA:

506 33RD ST SE PUYALLUP, WA 98372 0420264069 CMX- SHAW PIONEER COMMUNITY MIXED USE 5.94 ACRES

VERTICAL DATUM:

NVAD 88

HORIZONTAL DATUM:

NAD 83

LEGAL DESCRIPTION:

SECTION 26 TOWNSHIP 20 RANGE 04 QUARTER 44 LOT 2 OF BLA 2023-03-15-5002 COM AT INTER OF S LI OF RS MOORE DLC & E LI OF SE OF SEC TH S 00 DEG 44 MIN 18 SEC W 250.47 FT TH N 89 DEG 02 MIN 21 SEC W 20 FT TO POB TH N 89 DEG 02 MIN 21 SEC W 280.18 FT TH S 00 DEG 44 MIN 18 SEC W 887.38 FT TH S 74 DEG 08 MIN E 290.24 FT TH N 00 DEG 44 MIN 18 SEC E 962.04 FT TO POB EASE OF REC CURRENT USE RCW 84.34 AFN 2414198 AGRI 1971 AS AMEND 1973 AFN 2546752 OUT OF 04-20-26-4-007 & 4-019 SEG 2023-0331 03/24/23 JP/DH

SERVICE PROVIDERS:

WATER:	CITY OF PUYALLUP
SEWER:	CITY OF PUYALLUP
POWER:	PUGET SOUND ENERGY
GAS:	PUGET SOUND ENERGY
FIRE PROTECTION:	PIERCE COUNTY FIRE DEPARTMENT



VICINITY MAP

SECTION 26, TOWNSHIP 20 NORTH, RANGE 4 EAST, W.M.

506 33rd St SE Puyallup, WA 98372

SHEET INDEX

Page #	Sheet #	Sheet Name
1	C-01	Cover Sheet
2	C-02	Existing Site Plan
3	C-03	TESC Plan
4	C-04	TESC Details
5	C-05	Site Plan
6	C-06	Storm & Grading Plan
7	C-07	Details

GENERAL NOTES

- 1. All work in City right-of-way requires a permit from the City of Puyallup. Prior to any work commencing, the general contractor shall arrange for a preconstruction will perform work shown on the approved engineering plans, representatives from all applicable utility companies, the project owner and appropriate city staff. Contact Engineering Services at (253-841-5568) to schedule the meeting. The contractor is responsible to have their own set of approved plans at the meeting.
- 2. After completion of all items shown on these plans and before acceptance of the project the contractor shall obtain a "punch list" prepared by the City's inspector detailing remaining items of work to be completed. All items of work shown on these plans shall be completed to the satisfaction of the City prior to acceptance of the water system and provision of sanitary sewer service.
- 3. All materials and workmanship shall conform to the Standard Specifications for Road, Bridge, and Municipal Construction (hereinafter referred to as the "Standard Works Association, Washington State Chapter, latest edition, unless superseded or amended by the City of Puyallup City Standards for Public Works Engineering and Construction (hereinafter referred to as the "City Standards").
- 4. A copy of these approved plans and applicable city developer specifications and details shall be on site during construction.
- 5. Any revisions made to these plans must be reviewed and approved by the developer's engineer and the City prior to any implementation in the field. The City shall not be responsible for any errors and/or omissions on these plans.
- 6. The contractor shall have all utilities verified on the ground prior to any construction. Call (811) at least two working days in advance. The owner and his/her engineer shall be contacted immediately if a conflict exists.
- 7. Any structure and/or obstruction that requires removal or relocation relating to this project shall be done so at the developer's expense.
- 8. Locations of existing utilities are approximate. It shall be the contractor's responsibility to determine the true elevations and locations of hidden utilities. All visible items shall be the engineer's responsibility.
- 9. The contractor shall install, replace, or relocate all signs, as shown on the plans or as affected by construction, per City Standards.
- 10. Power, street light, cable, and telephone lines shall be in a trench located within a 10-foot utility easement adjacent to public right-of-way. Right-of-way crossings shall have a minimum horizontal separation from other utilities (sewer, water, and storm) of 5 feet.
- 11. All construction surveying for extensions of public facilities shall be done under the direction of a Washington State licensed land surveyor or a Washington State licensed professional civil engineer.
- 12. During construction, all public streets adjacent to this project shall be kept clean of all material deposits resulting from on-site construction, and existing structures shall be protected as directed by the City.
- 13. Certified record drawings are required prior to project acceptance.
- 14. A NPDES Stormwater General Permit may be required by the Department of Ecology for this project. For information contact the Department of Ecology, Southwest Region Office at (360)407-6300.
- 15. Any disturbance or damage to Critical Areas and associated buffers, or significant trees designated for preservation and protection shall be mitigated in accordance with a Mitigation Plan reviewed and approved by the City's Planning Division. Preparation and implementation of the Mitigation Plan shall be at the developer's expense.

meeting at the Development Services Center to be attended by all contractors that

Specifications"), Washington State Department of Transportation and American Public

Owner/Developer

Krista Linden Farm 12 3303 8th Ave SE A Puyallup, WA 98372 kristalinden@stepbystepfamily.org



Justin Jones JMJ Team 905 Main Street, Suite #200 Sumner, WA 98390 (206) 596-2020

Project:

Farm 12 Parking Lot Revision

506 33rd St SE Puyallup, WA 98372

> ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

Civil Site Permit



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Cover Sheet

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NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL

FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS

THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE

DETERMINED BY THE DEVELOPMENT ENGINEERING

DATE

DATE.

PLANS.

MANAGER.



LEGEND

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Existing Gravel

Existing Edge of Asphalt

Existing Ditch Line

Property Line

Fire Hydrant

VERTICAL DATUM NAVD 88

HORIZONTAL DATUM

NAD 83

EXISTING LOT COVERAGE

•	Project Site Area:	258,473 SF (5.94 AC)
•	Total Impervious:	19,940 SF (7.7%)
••	Existing Gravel Parking:	19,940 SF
•	Total Pervious:	238,533 SF (92.3%)
••	Grass Vegetation:	238,533 SF

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Existing Site Plan

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Existing Gravel

Landscape to be Cleared & Grubbed

Silt Fence

Existing Ditch Line

Property Line

Clearing Limit

(#) TESC NOTES

- Contractor to install TESC measures as necessary to ensure stormwater leaving the site is free of settleable solids.
- Existing gravel driveway to be used as construction entrance. Maintain construction entrance per City of Puyallup Standard Detail 05.01.01 and install wheel wash as needed per Washington DOE BMP C106.
- Install silt fence per City of Puyallup Standard Detail 02.03.02
 Silt Fence to mark clearing limits in the field.
- Roads shall be cleared thoroughly as needed to protect stormwater infrastructure and downstream water resources. Sediment shall be removed from roads by shoveling or pickup sweeping and transported to a controlled sediment disposal area.
- 5. Exposed soils shall be watered as necessary to prevent dust from leaving the site.
- 6. Disturbed soils to be amended per DOE BMP T5.13
- If necessary, alternative sediment control methods shall be submitted by the contractor for review and approval prior to construction.
- 8. A CESCL shall be present on-site or on-call for the duration of construction operations.

DEMOLITION NOTES

- Landscaping to be Cleared & Grubbed: 25,280 SF
- Disturbed Area: 45,960 SF

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Owner/Developer:

Krista Linden Farm 12 3303 8th Ave SE A

1. ALL LIMITS OF CLEARING AND AREAS OF VEGETATION PRESERVATION AS PRESCRIBED ON THE PLANS SHALL BE CLEARLY FLAGGED

2. ALL REQUIRED SEDIMENTATION AND EROSION CONTROL FACILITIES MUST BE CONSTRUCTED AND IN OPERATION PRIOR TO ANY LAND CLEARING AND/OR OTHER CONSTRUCTION TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE NATURAL DRAINAGE SYSTEM. THE CONTRACTOR SHALL SCHEDULE AN INSPECTION OF THE EROSION CONTROL FACILITIES PRIOR TO ANY LAND CLEARING AND/OR CONSTRUCTION. ALL EROSION AND SEDIMENT FACILITIES SHALL BE MAINTAINED IN A SATISFACTORY CONDITION AS DETERMINED BY THE CITY, UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED. THE IMPLEMENTATION, MAINTENANCE, REPLACEMENT, AND ADDITIONS TO THE EROSION AND SEDIMENTATION CONTROL

3. THE EROSION AND SEDIMENTATION CONTROL SYSTEM FACILITIES DEPICTED ON THESE PLANS ARE INTENDED TO BE MINIMUM REQUIREMENTS TO MEET ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES AND UNEXPECTED OR SEASONAL CONDITIONS DICTATE, FACILITIES WILL BE NECESSARY TO ENSURE COMPLETE SILTATION CONTROL ON THE SITE. DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE PERMITEE TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES, OVER AND ABOVE THE MINIMUM REQUIREMENTS, AS MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES, SENSITIVE AREAS, NATURAL WATER COURSES, AND/OR STORM DRAINAGE SYSTEMS.

4. APPROVAL OF THESE PLANS IS FOR GRADING, TEMPORARY DRAINAGE, EROSION AND SEDIMENTATION CONTROL ONLY. IT DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT STORM DRAINAGE DESIGN, SIZE OR LOCATION OF PIPES, RESTRICTORS, CHANNELS, OR

5. ANY DISTURBED AREA WHICH HAS BEEN STRIPPED OF VEGETATION AND WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF 30 DAYS OR MORE, MUST BE IMMEDIATELY STABILIZED WITH MULCHING, GRASS PLANTING, OR OTHER APPROVED EROSION CONTROL TREATMENT APPLICABLE TO THE TIME OF YEAR IN QUESTION. GRASS SEEDING ALONE WILL BE ACCEPTABLE ONLY DURING THE MONTHS OF APRIL THROUGH SEPTEMBER INCLUSVE. SEEDING MAY PROCEED OUTSIDE THE SPECIFIED TIME PERIOD WHENEVER IT IS IN THE INTEREST OF THE PERMITEE BUT MUST BE AUGMENTED WITH MULCHING, NETTING, OR OTHER TREATMENT APPROVED BY THE

6. IN CASE EROSION OR SEDIMENTATION OCCURS TO ADJACENT PROPERTIES, ALL CONSTRUCTION WORK WITHIN THE DEVELOPMENT THAT WILL FURTHER AGGRAVATE THE SITUATION MUST CEASE, AND THE OWNER/CONTRACTOR WILL IMMEDIATELY COMMENCE RESTORATION METHODS. RESTORATION ACTIVITY WILL CONTINUE UNTIL SUCH TIME AS THE AFFECTED PROPERTY OWNER IS SATISFIED.

7. NO TEMPORARY OR PERMANENT STOCKPILING OF MATERIALS OR EQUIPMENT SHALL OCCUR WITHIN CRITICAL AREAS OR ASSOCIATED

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Proposed Gravel Transition Zone

Proposed Gravel Parking Lot

Property Line

Existing Edge of Asphalt Existing Ditch Line

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SITE DATA

- Project Site Area: 258,473 SF (5.94 AC)
- Tax Parcel Number: 0420264069
- Zoning: CMX Shaw-Pioneer Community Mixed Use

PROPOSED LOT COVERAGE

Project Site Area:

• Total Impervious:

• Total Pervious:

- 258,473 SF (5.94 AC) 19,940 SF (7.7%)
- 9,940 SF (7.7%)
- •• Replaced Gravel Parking: 19,940 SF
 - 238,533 (92.3%)
- •• Grass Vegetation:
- 238,533 (92.3%) 238,533 SF

Owner/Developer:

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Proposed Gravel Transition

Proposed CAVFS

Existing Edge of Asphalt

Existing Ditch Line

Property Line

Grade Break Line

Existing Fire Hydrant

CONSTRUCTION NOTES

- 1. Vegetated Flow Path to be a minimum of 40 LF in length at 1.0% minimum slope.
- Composed-Amended Filter Strip to be a minimum of 5 LF in length at 2.0% minimum slope. See CAVFS Detail, Sheet C-07.
- 3. All disturbed lawn and landscaped area to be amended per BMP T5.13 Post-Construction Soil Quality and Depth.

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Project:

Farm 12 Parking Lot Revision

506 33rd St SE Puyallup, WA 98372

> ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

Civil Site Permit



_	

APPROVED

SHEET TITLE.

BY ______ CITY OF PUYALLUP DEVELOPMENT ENGINEERING

DATE

0

NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL DATE. THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS

AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

CALL TWO BUSINESS DAYS BEFORE YOU DIG 1-800-424-5555 UTILITIES UNDERGROUND LOCATION CENTER

Storm &
Grading Plan
-

PROJ. NO:	1616-001		
DATE:	Deo	December 12, 2023	
DRAWN BY:	МО	DESIGN BY:]]
SHEET NUMBER. C-06			
DWG.	6 0F	7	



	Owner/Developer:
	Krista Linden
	Farm 12 3303 8th Ave SE A
	Puyallup, WA 98372 kristalinden@stepbystepfamily.org
	Engineer:
	Justin Jones JMJ Team
	905 Main Street, Suite #200 Sumner, WA 98390
	(206) 596-2020
5.0% Max to Existing	
	Project:
	Farm 12
BMP T5.13,	Parking Lot Revision
OIL/COMPOST MIX NOTE:	
Place and rototill 1.75 inches of composted material into 6.25 inches of soil (a total amended depth of about 9.5 inches), for a settled depth of 8 inches.	
Water or roll to compact soil to 85% maximum.	506 33rd St SE
Plant Grass.	Puyallup, WA 98372
Recommend mixing 60% to 65% loamy cand mixed with 25% to 20%	
compost or 30% sandy loam, 30% course sand, and 30% compost in order to achieve organic content of 5% by dry weight.	ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
. Final soil mixture to be tested prior to installation for fertility, micronutrient analysis, and organic material content.	Civil Site Dermit
	41829 41829 PECISTERED NOLENCINIT 12/12/2023
	KEV DATE DESCRIPTION
	SHEET TITLE.
APPROVED	Details
BY	
CITY OF PUYALLUP DEVELOPMENT ENGINEERING	
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DEVELOPMENT ENGINEERING MANAGER.	
REFORE YOU DIG	
	DWG
1-800-424-5555	
GHEMES UNDERGROUND LOCATION CENTE	

APPENDIX B

nhc Final Report, Rev. 1 May 2022 Legend 167 Stream . . Puyallup UGA 161 City Limits Major Drainage Basin 167 Clarks Creek Deer Creek North Puyallup Potholes SE Puyallup South Puyallup State Highway Wapato Creek 410 162 **Project Site** -512-Puyallup River 161 0.5 N 0 1 2 Miles Figure 2.3 City of Puyallup Major Drainage Basins City of Puyallup Stormwater Management Action Plan 5 **Receiving Waters Assessment**

PUYALLUP DRAINAGE BASIN MAP Figure #1 12-12-23





APPENDIX C

WWHM MODELING



🕏 Gravel Parking Mitigated				23
Element Name	Gravel Parking		Designate as Bypass for F	
Runoff Type	Surface	Interflow	Ground	water
Downstream Connection	CAVFS 1 Surface 1	0	0	
Element Type	Lateral Impervious F	low Basin		
Impervious (IMPLND) Type	PARKING/FLAT			change
Lateral Area (ac)	0.46			

🛱 CAVFS 1 Mitigated			Σ
Facility Name	CAVFS 1		
	Outlet 1	Outlet 2	Outlet 3
Downstream Connection	0	0	0
Facility Type	CAVFS]
Use Simple Swale		Default CAVFS	
CAVFS Bottom Elevation (ft)	0		
CAVFS Dimensions		Flow Through CAVFS (ac-ft)	95.749
CAVFS width (ft) 5.000		Total Outflow (ac-ft)	174.114
CAVFS Length (ft) 286.000		Percent Through CAVFS	54.99
Surface Ponding (ft) 0.050		Total Volume Filtered	95.749
		Facility Dimension	Diagram
Material Layer for CAVFS			
Gravel CAVFS			
Depth (ft) 2.000 0.333			
GRAVEL	-		
CAVFS SMMWW 12 in/hr	-		
Edit Soil Types		-KSat Safety Factor-	
			G 4
Embankment Height (ft) 0.100	1	UNONE UZ	9 4
	_		
			On and Table
		CAVES Volume at overflow (Upen Table
Native Infiltration NO 🕂		CAVES VOIUME at OVERIOW (8	uchtj .000