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February 3, 2023

Taco Time Northwest
3401 Lind Avenue SW
Renton, Washington 98057

Attn: Robby Tonkin
(206) 499-1360
rtonkin@tacotimenw.com

Updated Soils Report
Proposed Restaurant
1115 & 1129 East Main
Puyallup, Washington
PN: 7845100032 & 0420271171
Doc ID: TacoTimeNorthwest.EMainSt.SRu

INTRODUCTION

This ***Updated*** *Soils Report* summarizes our site observations and geotechnical data review, and addresses the feasibility of stormwater infiltration for the proposed restaurant to be constructed at 1115 and 1129 East Main in Puyallup, Washington. The approximate site location is shown on Figure 1.

Our understanding of the project is based on our correspondence with you and Azure Green Consultants, our review of the provided site plan, **our review of the City of Puyallup comments,** our October 14, 2021 subsurface explorations, our July 6, 2022 infiltration tests, our review of the *Preliminary Storm, SS, & Water Plan* prepared by Azure Green Consultants dated June 21, 2022, our understanding of the City of Puyallup's development codes, and our experience in the site area. We understand that you propose to construct a new restaurant on the undeveloped portion of the site. Development will also include expanding parking and converting the existing restaurant into a separate retail space. We anticipate that the new structure will be a one- to two-story, wood-framed structure supported by conventional shallow foundations.

SCOPE

The purpose of our services was to evaluate the surface and subsurface conditions across the site as a basis for providing geotechnical recommendations and design criteria for the proposed restaurant. Specifically, the scope of services for this project included the following:

1. Reviewing the available geologic, hydrogeologic, and geotechnical data for the site area;
2. Exploring surface and subsurface conditions by reconnoitering the site and monitoring the excavation of a series of three test pits at select locations across the site and installed shallow (less than 10 feet) groundwater monitoring stand pipes in each of the test pits;
3. Return to the site and performing two small scale pilot infiltration tests (PITs) in accordance with the **2019** SWMMWW;

4. Describing surface and subsurface conditions, including soil type, depth to groundwater, if encountered, and an estimate of seasonal high groundwater levels;
5. Monitoring groundwater levels bi-weekly throughout the wet season;
6. Perform 2 small-scale Pilot Infiltration Tests (PITs) at select locations at the site;
7. Providing our opinion about the feasibility of onsite infiltration in accordance with the **2019** SWMMWW, including a preliminary design infiltration rate based on grain size analysis, as applicable; and,
8. Preparing this *Soils Report* that satisfies the **2019** SWMMWW requirements and summarizes our site observations and conclusions, and our geotechnical recommendations, along with the supporting data.

SITE CONDITIONS

Surface Conditions

As mentioned above, the site is located at 1115 and 1129 East Main in Puyallup, Washington, within an area of existing commercial development. The site consists of two tax parcels, that when combined is generally trapezoidal in shape, measures approximately 480 to 570 feet long (north to south) by approximately 275 feet wide (east to west), and encompasses approximately 3.3 acres. The site is bounded by the Puyallup River to the north, E Main St to the south, an RV park to the west, and commercial and non-developed parcels to the east. The southern portion of the site is currently developed with an existing Taco Time building in the southwestern portion of the site. The remaining area of the southern portion of the site is developed with automobile parking. The northern portion of the site is undeveloped.

Based on topographic information obtained from Pierce County Public GIS and our site observations, the ground surface of the site generally slopes down to the north. In the southern portion of the site, in the area of the existing commercial development, the ground surface is relatively level. In the central portion of the site, the ground surface slopes down to the north at approximately 4 to 8 percent. These slopes continue at similar inclinations throughout the northern portion of the site. The total topographic relief of the site is on the order of approximately 15 feet. The existing site configuration and topography are shown on the Site & Exploration Map, Figure 2 and Site Vicinity Map, Figure 3.

Vegetation in the southern portion of the site generally consists of commercial landscaping in the parking lot area with some scattered coniferous and deciduous trees with areas of maintained grass. In the central and northern portion of the site, vegetation generally consists of a moderate stand of coniferous and deciduous trees with a moderately dense understory of native and invasive plants and shrubs. No seeps, springs, or standing water was observed at the time of our site reconnaissance. No areas of surficial erosion or slope movement were observed at the time of our site visit.

Site Soils

The Natural Resource Conservation Service (NRCS) Web Soil Survey maps the site as being underlain by Pilchuck fine sandy loam (29A) and Puyallup sandy loam (31A). Detailed descriptions of the above listed soil types are included below. A copy of the NRCS soils map is included as Figure 4.

Pilchuck fine sandy loam (29A): The Pilchuck soils are mapped across the northern portion of the site. These soils are derived from mixed alluvium under hardwoods and conifers, form on slopes of less than 3 percent, have a "none" erosion hazard when exposed, and are included in hydrologic soils group C.

Puyallup sandy loam (31A): The Puyallup fine sandy loam soils are mapped across the southern portion of the site. These soils are derived from alluvium, form on slopes of 0 to 3 percent, have a "slight" erosion hazard when exposed, and are included in hydrologic soils group A.

Site Geology

According to the *draft Geologic map of the Puyallup 7.5-minute Quadrangle, Washington* by Troost, (in review) the site is mapped as being underlain by Quaternary Alluvium (Qal). A detailed description of the geologic unit is included below. An excerpt from the geologic map is included as Figure 5.

Quarternary Alluvium (Qal): Alluvial soils generally consist of normally consolidated, stratified deposits of sand, silt, clay, and occasional peat that were deposited along the Puyallup River channel. The existing topography, as well as the surficial and shallow soils in the area, are the result of fluvial action, including down-cutting by the river, channel meandering and migration, and flood deposits.

Subsurface Explorations

On October 14, 2021, a field representative from GeoResources visited the site and monitored the excavation of three test pits to depths of about 9½ to 10½ feet below the existing ground surface, logged the subsurface conditions encountered in each test pit, and obtained representative soil samples. The test pits were excavated by a small track-mounted excavator operated by a licensed operated working under subcontract to GeoResources. The soil densities presented on the logs were based on the difficulty of excavation and our experience. The number and location of the test pits were selected in the field based on project information provided by Azure Green Consultants, consideration for underground utilities, existing site conditions, and current site usage. An open standpipe piezometer (OSP) was installed in each test pit and backfilled with the excavated soils and bucket tamped, but not otherwise compacted.

On July 6, 2022, we returned to the site to perform two pilot infiltration tests (PITs) at depths of approximately 4 feet below existing ground surface. As part of the test, we logged subsurface conditions encountered in each exploration, and obtained representative soil samples. The PITs were excavated by a small track-mounted excavator operated by a licensed earthwork contractor working for you and GeoResources. The soil densities presented on the logs were based on the difficulty of excavation and our experience. Each PIT was then backfilled with the excavated soils and bucket tamped, but not otherwise compacted.

The subsurface explorations excavated as part of this evaluation indicate the subsurface conditions at specific locations only, as actual subsurface conditions can vary across the site. Furthermore, the nature and extent of such variation would not become evident until additional explorations are performed or until construction activities have begun. Based on our experience in the area and extent of prior explorations in the area, it is our opinion that the soils encountered in the explorations are generally representative of the soils at the site.

The soils encountered were visually classified in accordance with the Unified Soil Classification System (USCS) and ASTM D: 2488. The approximate locations of our test pits are

indicated on the attached Site & Exploration Map, Figure 2. The USCS is included in Appendix A as Figure A-1, while the descriptive logs of our test pits and PITs are included as Figures A-2 through A-4.

Subsurface Conditions

At the locations of our test pits we encountered uniform subsurface conditions that in our opinion generally confirmed the mapped stratigraphy at the site. Our test pits generally encountered approximately ¾ to 1 foot of topsoil. Underlying the topsoil in test pit TP-1 we encountered approximately 4½ feet of brown silty sand with significant amounts of concrete, some metal, and trace organics. We interpret these soils to be undocumented fill. Underlying the topsoil in test pit TP-2 we encountered brown poorly graded sand with some silt and gravel in a loose to medium dense, moist condition. We interpret these soils be weathered alluvium. Underlying the topsoil in test pit TP-3 and the weathered alluvium in test pit TP-2, we encountered brown-grey to grey fine silty sand in a medium dense, moist condition. We interpret these soils to be alluvium and were encountered to the full depth explored in test pit TP-2. Underlying the undocumented fill in test pit TP-1 and the alluvium in test pit TP-3, we encountered brown grey sandy silt in a stiff, moist condition. We interpret these soils to be consistent with alluvium deposits. These soils were encountered to the full depth explored.

At the locations of our Pilot Infiltration Tests (PITs) we encountered relatively uniform subsurface conditions that, in our opinion, generally confirmed the mapped stratigraphy and the encountered stratigraphy in our previously excavated test pits. Our PITs encountered approximately ¾ feet of topsoil mantling approximately 1 to 1 ¼ feet of brown poorly graded sand with some silt and gravel to dark brown silty sand in a loose to medium dense, moist condition. We interpret these soils to be weathered alluvium. Underlying the weathered alluvium in PIT-1 we encountered approximately 3¾ feet of brown-grey sandy silt in a medium stiff, moist condition. We interpret these soils to be alluvium. Underlying the weathered alluvium in PIT-2 and the sandy silt alluvium in PIT-1, we encountered brown-grey silty sand in a medium dense, moist condition. We interpret these soils to be alluvium and these soils were encountered to the full depth explored.

We interpret all encountered soils to be alluvium deposited from the Puyallup River. Based on our knowledge of the site area as well as the loose to medium dense nature of the encountered soils, the alluvium was deposited after the latest glaciation and therefore is unconsolidated.

Laboratory Testing

Geotechnical laboratory tests were performed on two samples retrieved from the test pits to estimate index engineering properties of the soils encountered. Laboratory testing included visual soil classification per ASTM D: 2487 and ASTM D: 2488, moisture content determinations per ASTM D: 2216, and grain size analyses per ASTM D: 6913 standard procedures. The results of the laboratory tests are included in Appendix B.

Groundwater Conditions

At the locations and time of our test pit explorations we did not encounter groundwater seepage within the depths explored. We anticipate fluctuations in the local groundwater levels will occur in response to precipitation patterns, off-site construction activities, and site utilization. We performed wet season monitoring of the groundwater elevation on a bi-weekly basis throughout the

2021/2022 wet season. Table 1, below, summarizes the depth and elevation of groundwater encountered during our wet season monitoring.

TABLE 1:
APPROXIMATE DEPTH AND ELEVATION OF ENCOUNTERED GROUNDWATER

Date	OSP-1 (47.92')		OSP-2 (49.91')		OSP-3 (54.06')	
	Measured Depth to Water (feet)	Water Elevation (feet)	Measured Depth to Water (feet)	Water Elevation (feet)	Measured Depth to Water (feet)	Water Elevation (feet)
12/28/2021	6.9	42.1	6.6	43.9	9.7	46.8
1/14/2022	6.1	42.9	5.7	44.8	8.8	47.7
1/28/2022	7.1	41.9	6.8	43.7	9.7	46.8
2/11/2022	7.8	41.3	7.5	43.0	10.0	46.5
2/23/2022	8.3	40.9	7.9	42.6	10.0	46.5
3/1/2022	5.3	43.7	5.5	45.0	9.3	47.2
3/9/2022	6.4	42.6	6.5	44.0	9.5	47.0
3/21/2022	7.0	42.0	6.7	43.8	9.7	46.8
Notes: 1= Elevations of OSP's provided by Azure Green Consultants						

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our data review, site reconnaissance, and subsurface explorations, it is our opinion that the infiltration of stormwater runoff generated onsite by the new impervious surfaces may be feasible for this project.

Infiltration Recommendations

Based on our site observations and subsurface explorations, it is our opinion that stormwater infiltration via a trench or basin type system may be feasible at the site. Per the **2019** SWMMWW, downspout infiltration is considered feasible on lots or sites if 3 feet or more of permeable soil from the proposed final grade to the seasonal high ground water table exists and at least 1 foot of clearance from the expected bottom elevation of the infiltration facility to the seasonal high ground water table can be met. For the purposes of this infiltration feasibility evaluation, we have assumed that, at a minimum, the standard infiltration trench section (6 inches of topsoil over a 2-foot-deep trench) and the standard permeable pavement section (6 inches of pavement over 6 inches of storage course) would be used for a total depth of 3.5 feet. Deeper trenches and thicker storage courses may be designed by a civil engineer where the vertical separation requirements can be met. Test pit TP-1 encountered approximately 4½ feet of undocumented fill, therefore infiltration is not feasible near this location. ***We monitored groundwater elevations throughout the 2021/2022 wet season and observed groundwater in OSP-3, nearest to the proposed trench location, to be about 8.8 feet below the ground surface.***

The City of Puyallup uses the 2019 *Stormwater Management Manual for Western Washington* (SWMMWW). Volume III, Section 3.1.1 Downspout Full Infiltration Systems of the 2019 SWMMWW lists the minimum vertical separation requirements for infiltration facilities. A 1-foot or 3-foot minimum vertical separation from the bottom of bioretention is required

depending upon the drainage area. For the purposes of this evaluation, a standard permeable pavement section (6 inches of pavement over 6 inches of storage course) would be used. Based on the above, shallow infiltration facilities such as rain gardens, bioretention, and permeable pavement appear to be feasible. Deeper trenches and thicker storage courses may be designed by a civil engineer where the vertical separation requirements can be met.

In Situ Infiltration Testing

We performed two small scale Pilot Infiltration Tests (PITs) in the area of the parking lot infiltration gallery (PIT-1) and the proposed roof Infiltration area (PIT-2) in accordance with the 2019 SWMMWW. The approximate location of each Small-Scale PIT is labeled on the attached Site & Exploration Plan, Figure 2.

The design infiltration rate was determined based on the procedure provided in Volume V Chapter 5, of the 2019 SWMMWW. Three correction factors, described below, were applied to measured rates. These include correction factors for testing ($F_{testing}$), geometry ($F_{geometry}$) and plugging ($F_{plugging}$). The design infiltration rates were determined as follows:

Where: $ksat_{design} = ksat_{initial} \times CF_V \times CF_T \times CF_M$

$ksat_{design}$ = **Infiltration rate to be used for design of infiltration facility**

$ksat_{intial}$ = **Infiltration rate measured in the field**

CF_T = **A correction factor of 0.5 was used since we used the small-scale Pilot infiltration test (PIT) in the field.**

CF_V = **A correction factor of 0.5 was used for site variability**

CF_M = **A correction factor of 0.9 was used for degree of influent control to prevent siltation and bio-buildup**

TABLE 1:
INFILTRATION RATES for INFILTRATION FACILITIES

Small-Scale Pilot Infiltration Test Number	Soil Type at Approximate Bottom of Infiltration Test	Measured Infiltration Rate (in/hr)	Design Infiltration Rate (in/hr)
PIT-1	**Sandy silt (ML)**	**1.5**	**0.3**
PIT-2	**Brown gravelly silty Sand (SM)**	**5.0**	**1.1**

All minimum vertical separations, horizontal setback requirements, and infeasibility criteria per 2019 SWMMWW should be considered prior to the selection, design and location of any stormwater facility for the proposed development. We have reviewed the *Preliminary Storm, SS, & Water Plan* prepared by Azure Green dated February 2, 2023. We understand that the proposed infiltration trench for the parking area will be approximately 70 feet from a 6-foot tall retaining wall to the north. The bottom of the infiltration trench is proposed to be approximately 2.3 feet higher than the bottom of the retaining wall. The proposed wall will be a "fill" wall, and the toe of the wall will be located near the existing ground surface. Based on

our understanding of the soil types, depth to seasonal high groundwater, and the provided site plan, we do not anticipate that stormwater from the proposed infiltration trench will short circuit into the drainage course behind the retaining wall. No additional horizontal setback requirements from the proposed retaining wall should be required for the infiltration facility as designed.

Construction Considerations

Appropriate design, construction and maintenance measures will be required to ensure the infiltration rate can be effectively maintained over time. Stormwater Best Management Practices (BMPs) in accordance with the **2019** SWMMWW should be included in the project plans and specifications to minimize the potential for fines contamination of Low Impact Development BMPs utilized at the site.

Suspended solids could clog the underlying soil and reduce the infiltration rate. To reduce potential clogging of the infiltration systems, the infiltration system should not be connected to the stormwater runoff system until after construction is complete and the site area is landscaped, paved or otherwise protected. Additional measures may also be taken during construction to minimize the potential of fines contamination of the proposed infiltration system, such as utilizing an alternative storm water management location during construction or leaving the bottom of the permanent systems 1 to 2 feet high, and subsequently excavating to the finished grade once the site soils have been stabilized. All contractors working on the site (builders and subcontractors) should divert sediment laden stormwater away from proposed infiltration facilities during construction and landscaping activities. No concrete trucks should be washed or cleaned, and washout areas should not be within the vicinity of the proposed infiltration facilities. After construction activities have been completed, periodic sweeping of the paved areas will help extend the life of the infiltration system.

LIMITATIONS

We have prepared this report for use by Taco Time NW and other members of the design team, for use in the permitting and design of a portion of this project. The data used in preparing this report and this report should be provided to prospective contractors for their bidding or estimating purposes only. Our report, conclusions and interpretations are based on subsurface explorations and data from others and limited site reconnaissance, and should not be construed as a warranty of the subsurface conditions.

Variations in subsurface conditions are possible between the explorations and may also occur with time. A contingency for unanticipated conditions should be included in the budget and schedule. Sufficient monitoring, testing and consultation should be provided by our firm during construction to confirm that the conditions encountered are consistent with those indicated by the explorations, to provide recommendations for design changes should the conditions revealed during the work differ from those anticipated, and to evaluate whether earthwork and foundation installation activities comply with contract plans and specifications.

The scope of our services does not include services related to environmental remediation and construction safety precautions. Our recommendations are not intended to direct the contractor's methods, techniques, sequences or procedures, except as specifically described in our report for consideration in design.

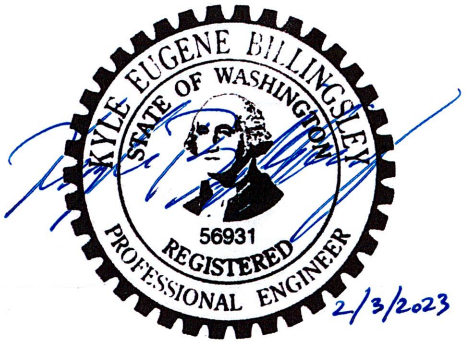
If there are any changes in the loads, grades, locations, configurations or type of facilities to be constructed, the conclusions and recommendations presented in this report may not be fully applicable. If such changes are made, we should be given the opportunity to review our recommendations and provide written modifications or verifications, as appropriate.

◆ ◆ ◆

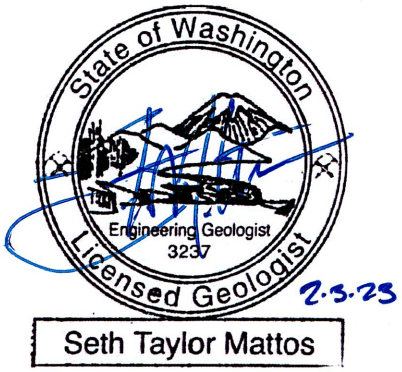
We have appreciated the opportunity to be of service to you on this project. If you have any questions or comments, please do not hesitate to call at your earliest convenience.

Respectfully submitted,
GeoResources, LLC

Davis Carlsen, GIT
Staff Geologist



Kyle E. Billingsley, PE
Senior Engineer



Seth T. Mattos, LEG
Associate

DC:KEB:EWH/dc
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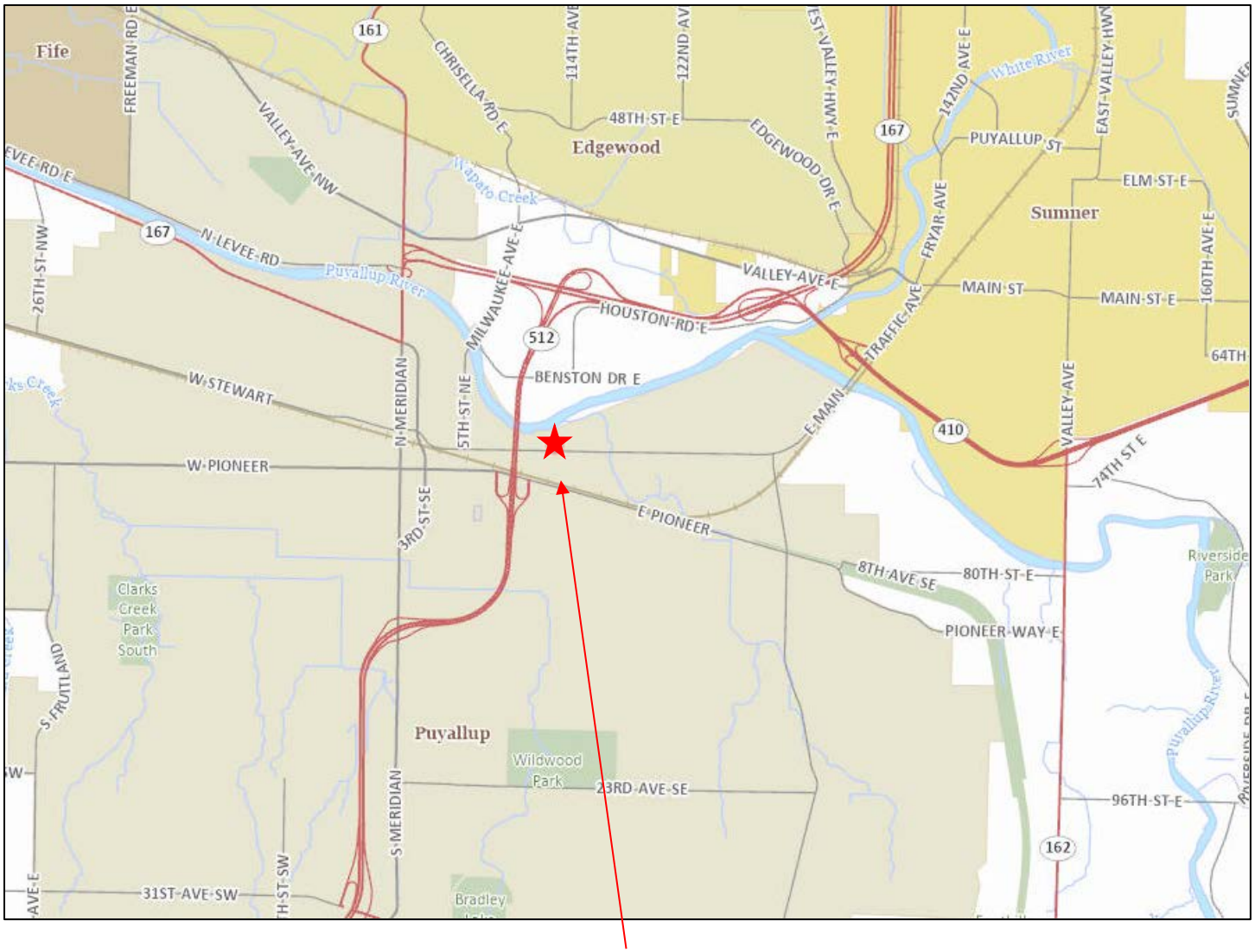
Attachments:
Figure 1: Site Vicinity Map
Figure 2: Site & Exploration Plan
Figure 3. Site Vicinity Map
Figure 4: NRCS Soils Map
Figure 5: Geologic Map
Appendix A – Subsurface Explorations
Appendix B – Laboratory Test Results



Approximate Site Location

Map created from Peirce County Public GIS (https://matterhornwab.co.pierce.wa.us/publicgis/)

N W E S

Not to Scale

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Site Location Map

Proposed Taco Time
1115 & 1129 East Main
Puyallup, Washington
PN: 7845100032 & 0420271171

DocID: TacoTimeNorthwest.EMainSt.F.docx	February 2023	Figure 1

TP/OSP - # Test Pit/ Open Standpipe Piezometer number and approximate location

PIT - # Pilot Infiltration Test number and approximate location

Notes:
Site plan prepared by Azure Green Consultants dated February 2, 2023.

Scale:1" = 40'

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Site & Exploration Plan
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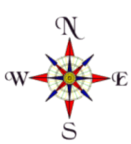
PN: 7845100032 & 0420271171

TacoTimeNorthwest.EMaint.F2	February 2023	Figure 2

Approximate Site Location

Map created from Peirce County Public GIS (https://matterhornwab.co.pierce.wa.us/publicgis/)



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Site Vicinity Map
Proposed Taco Time
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DocID: TacoTimeNorthwest.EMainSt.F	February 2023	Figure 3

Approximate Site Location

Map created from Web Soil Survey (http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx)

Soil Type	Soil Name	Parent Material	Slopes	Erosion Hazard	Hydrologic Soils Group
W	Water	-	-	-	-
29A	Pilchuck fine sandy loam	Mixed alluvium under hardwoods and conifers	<3	None	C
31A	Puyallup fine sandy loam	Alluvium	0 to 3	Slight	A

Not to Scale

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NRCS Soils Map

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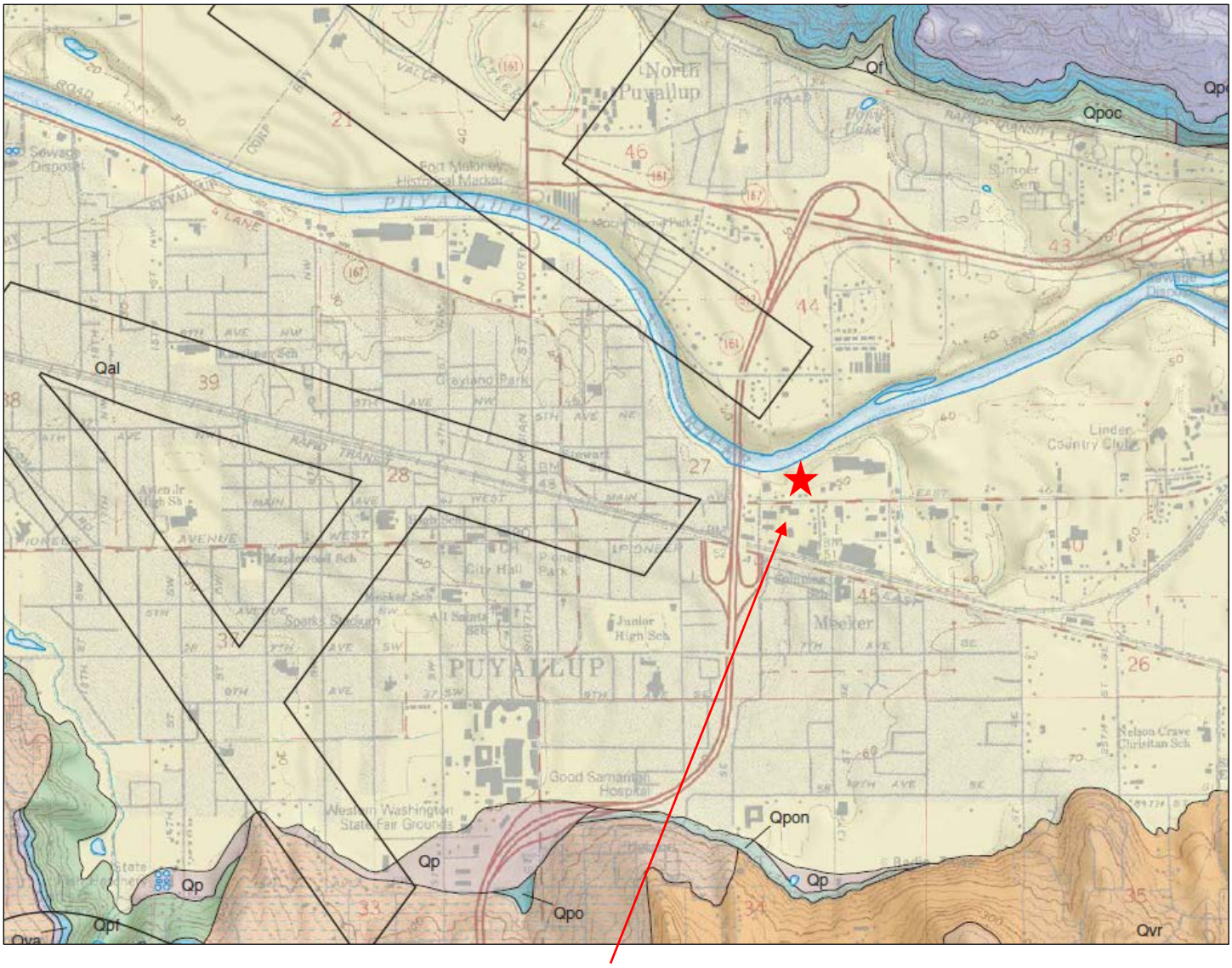

Approximate Site Location

Excerpt from the draft *Geologic Map of the Puyallup 7.5-Minute Quadrangle, Washington*
By Troost, K.G. (in review)

Qal	Alluvium

N W E S

Not to Scale

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Geologic Map

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DocID: TacoTimeNorthwest.EMainSt.F	February 2023	Figure 5

Appendix A

Subsurface Explorations

SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOL	GROUP NAME
COARSE GRAINED SOILS More than 50% Retained on No. 200 Sieve	GRAVEL More than 50% Of Coarse Fraction Retained on No. 4 Sieve	CLEAN GRAVEL	GW	WELL-GRADED GRAVEL, FINE TO COARSE GRAVEL
			GP	POORLY-GRADED GRAVEL
		GRAVEL WITH FINES	GM	SILTY GRAVEL
			GC	CLAYEY GRAVEL
	SAND More than 50% Of Coarse Fraction Passes No. 4 Sieve	CLEAN SAND	SW	WELL-GRADED SAND, FINE TO COARSE SAND
			SP	POORLY-GRADED SAND
		SAND WITH FINES	SM	SILTY SAND
			SC	CLAYEY SAND
FINE GRAINED SOILS More than 50% Passes No. 200 Sieve	SILT AND CLAY Liquid Limit Less than 50	INORGANIC	ML	SILT
			CL	CLAY
		ORGANIC	OL	ORGANIC SILT, ORGANIC CLAY
	SILT AND CLAY Liquid Limit 50 or more	INORGANIC	MH	SILT OF HIGH PLASTICITY, ELASTIC SILT
			CH	CLAY OF HIGH PLASTICITY, FAT CLAY
		ORGANIC	OH	ORGANIC CLAY, ORGANIC SILT
HIGHLY ORGANIC SOILS			PT	PEAT

NOTES:

1. Field classification is based on visual examination of soil in general accordance with ASTM D2488-90.
2. Soil classification using laboratory tests is based on ASTM D2487-90.
3. Description of soil density or consistency are based on interpretation of blow count data, visual appearance of soils, and or test data.

SOIL MOISTURE MODIFIERS:

Dry- Absence of moisture, dry to the touch

Moist- Damp, but no visible water

Wet- Visible free water or saturated, usually soil is obtained from below water table

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Unified Soils Classification System

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Puyallup, Washington
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Test Pit/ Open Standpipe Piezometer TP/OSP-1

Location: North of existing structure
Approximate Elevation: 47'

Depth (ft)			Soil Type	Soil Description
0	-	¾	-	Topsoil/rootzone
¾	-	5¼	SM	Brown silty SAND with significant amounts of cement fragments, some metal, and trace organics (Undocumented fill) (medium dense, moist)
5¼	-	10½	ML	Brown-grey sandy SILT (alluvium deposits) (stiff, moist)

Terminated at 10½ feet below ground surface.
Mottling observed at approximately 5¼ feet below existing ground surface
No significant caving observed at the time of excavation.
No seepage observed at the time of excavation.

Test Pit/ Open Standpipe Piezometer TP/OSP-2

Location: East-central portion of site
Approximate Elevation: 49

Depth (ft)			Soil Type	Soil Description
0	-	¾	-	Topsoil/rootzone
¾	-	1¾	SP-SM	Brown poorly graded SAND with some silt and gravel (Weathered Alluvium) (loose to medium dense, moist)
1¾	-	10	SM	Grey silty fine SAND (Alluvium) (medium dense, moist)

Terminated at 10 feet below ground surface.
Mottling observed at approximately 5 feet below existing ground surface
No significant caving observed at the time of excavation.
No seepage observed at the time of excavation.

Logged by: DC **Excavated on: October 14, 2021**

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Test Pit Logs
Proposed Taco Time
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Test Pit/Open Standpipe Piezometer TP/OSP-3

Location: Southeast portion of site
Approximate Elevation: 54'

Depth (ft)			Soil Type	Soil Description
0	-	1	-	Topsoil/rootzone
1	-	7	ML	Brown-grey sandy SILT (medium dense, moist) (alluvium)
7	-	9½	ML	Brown-grey sandy SILT (Stiff, moist) (alluvium deposits)

Terminated at 9½ feet below ground surface.
Mottling observed at approximately 4 feet below existing ground surface
No significant caving observed at the time of excavation.
No seepage observed at the time of excavation.

Logged by: DC

Excavated on: October 14, 2021

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Puyallup, Washington
PN: 7845100032 & 0420271171

Pilot Infiltration Test PIT-1

Location: Parking Lot Infiltration Gallery
Approximate Elevation: 49'

Depth (ft)			Soil Type	Soil Description
0	-	¾	-	Topsoil/rootzone
¾	-	1¾	SM	Dark Brown silty SAND (loose to medium dense, moist) (weathered alluvium)
1¾	-	5½	ML	Brown-grey sandy SILT (alluvium deposits) (medium stiff, moist)
5½	-	7½	SM	Brown-grey silty SAND (alluvium deposits) (medium dense, moist)

Terminated at 7½ feet below ground surface (BGS)
Mottling observed at approximately 2 feet below existing ground surface
No significant caving observed at the time of excavation.
No seepage observed at the time of excavation.

Pilot Infiltration Test PIT-2

Location: Roof Infiltration Trench
Approximate Elevation: 53

Depth (ft)			Soil Type	Soil Description
0	-	¾	-	Topsoil/rootzone
¾	-	2	SP-SM	Brown poorly graded SAND with some silt and gravel (Weathered Alluvium) (loose to medium dense, moist)
2	-	7¾	SM	Brown-grey silty SAND (alluvium deposits) (medium dense, moist)

Terminated at 7¾ feet below ground surface (BGS)
Mottling observed at approximately7 feet below existing ground surface
No significant caving observed at the time of excavation.
No seepage observed at the time of excavation.

Logged by: DC **Excavated on: July 6, 2022**

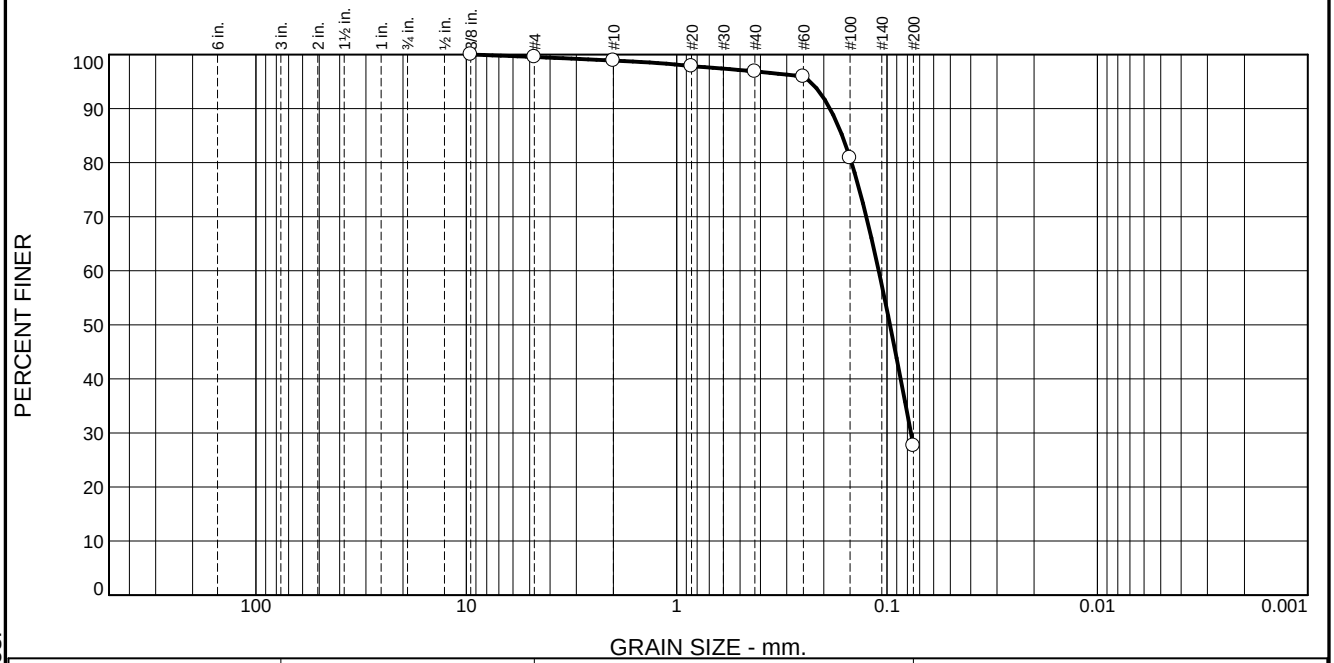
GEORESOURCES
earth science & geotechnical engineering
4809 Pacific Hwy. E. | Fife, WA 98424 | 253.896.1011 | www. georesources.rocks

Test Pit Logs
Proposed Taco Time
1115 & 1129 East Main
Puyallup, Washington
PN: 7845100032 & 0420271171

Appendix B

Laboratory results

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.5	0.6	2.0	69.2	27.7	

Test Results (ASTM D 6913 & ASTM D 1140)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
0.375	100.0		
#4	99.5		
#10	98.9		
#20	97.8		
#40	96.9		
#60	95.9		
#100	80.9		
#200	27.7		

* (no specification provided)

Material Description

Silty SAND (SM)

Atterberg Limits (ASTM D 4318)

PL= NP **LL=** NV **PI=** NP

Classification

USCS (D 2487)= SM **AASHTO (M 145)=** A-2-4(0)

Coefficients

D_{90}= 0.1868 D_{85}= 0.1634 D_{60}= 0.1095
D_{50}= 0.0969 D_{30}= 0.0770 D_{15}=
D_{10}= C_u= C_c=

Remarks

Natural Moisture: 5.7%

Date Received: 10/19/21 **Date Tested:** 10/19/21

Tested By: MAW

Checked By: KEB

Title: PM

Location: TP-2, S-1 **Date Sampled:** 10/19/21
Sample Number: 102580 **Depth:** 4'

GeoResources, LLC

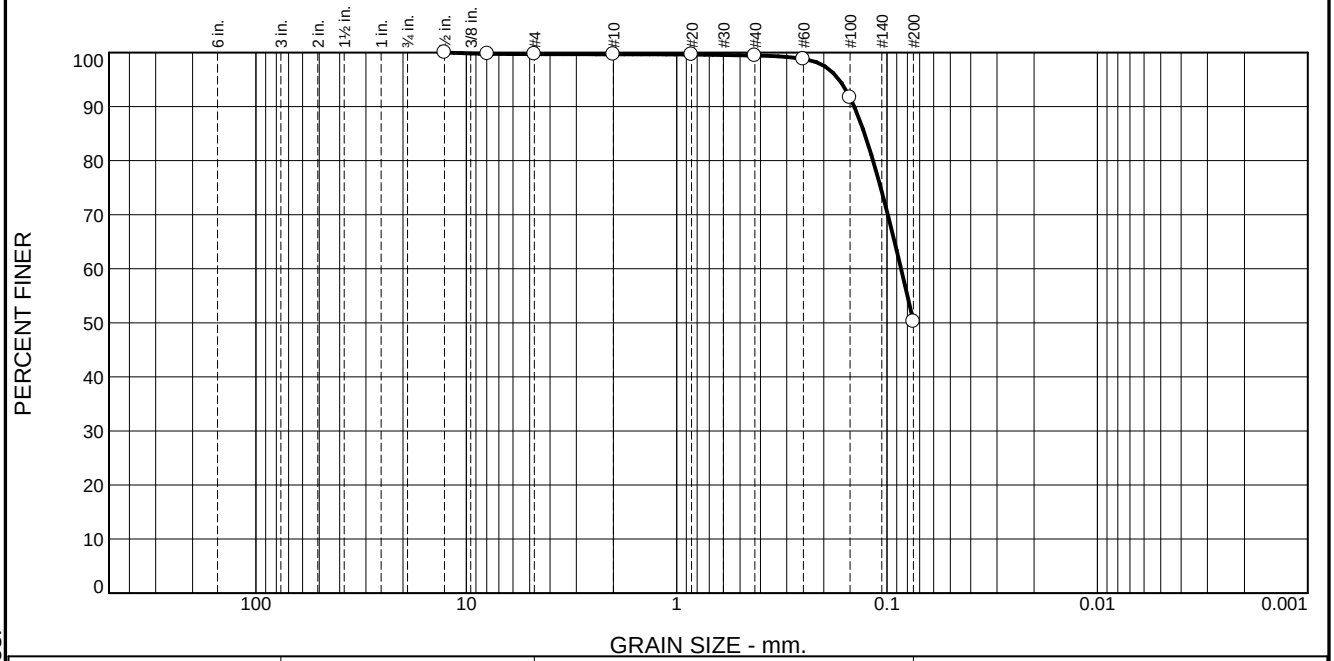
Fife, WA

Client: Taco Time Northwest
Project: Proposed Taco Time

Project No: TacoTimeNorthwest.EMainSt **Figure** B-1

Tested By: _____ **Checked By:** _____

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.3	0.0	0.3	49.1	50.3	

Test Results (ASTM D 6913 & ASTM D 1140)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
.5	100.0		
.3125	99.8		
#4	99.7		
#10	99.7		
#20	99.6		
#40	99.4		
#60	98.8		
#100	91.7		
#200	50.3		

* (no specification provided)

Material Description

Sandy SILT (ML)

Atterberg Limits (ASTM D 4318)

PL= NP **LL=** NV **PI=** NP

Classification

USCS (D 2487)= ML **AASHTO (M 145)=** A-4(0)

Coefficients

D_{90}= 0.1432 D_{85}= 0.1279 D_{60}= 0.0858
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Natural Moisture: 15.3%

Date Received: 10/19/21 **Date Tested:** 10/19/21

Tested By: MAW

Checked By: KEB

Title: PM

Location: TP-3 S-1
Sample Number: 102581 **Depth:** 3'

Date Sampled: 10/19/21

GeoResources, LLC

Fife, WA

Client: Taco Time Northwest
Project: Proposed Taco Time

Project No: TacoTimeNorthwest.EMainSt **Figure** B-2

Tested By: _____ **Checked By:** _____