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May 1, 2017

Oregon State University
Construction Contract Administration
Seed Lab Parking Lot #3333 Reconstruction
Solicitation # 187888

ADDENDUM NO. 1

THIS ADDENDUM IS BEING ISSUED for clarification and/or revisions of the Request for Qualifications as noted. This document is hereby made a part of the Contract Documents to the extent as though it was originally included herein.

QUESTIONS/CLARIFICATIONS:

Item 1 **Q:** Please provide a copy of the Geotechnical Report for project.
A: Attached as REFERENCE ONLY in Exhibit 1.

END OF ADDENDUM NO. 1

Foundation Engineering, Inc.
Professional Geotechnical Services

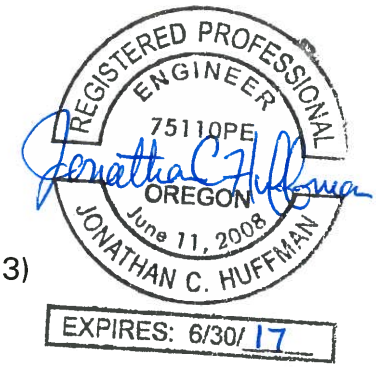
Date: April 5, 2016

To: Nathan Patterson, EIT
Infrastructure Construction Manager
OSU Capital Planning & Development

From: Jon Huffman, P.E., G.E.

Subject: National Forage Seed Research Center Lot (#3333)
Pavement Evaluation

Project: OSU Parking Lot Renewal and Reconstruction
Project 2161005



We have completed the requested geotechnical investigation for the above-referenced project in Corvallis, Oregon. This memorandum includes a description of our work, a discussion of the site conditions and a summary of our engineering analyses. General recommendations are included for pavement design and construction.

BACKGROUND

Oregon State University (OSU) Parking Services is planning improvements to five parking lots located across the campus. They include the National Forage Seed Research Center Lot (#3333), Orchard Avenue South Lot (#3316), Kerr Administration South Lot (#3262), Weniger East Lot (#3222), and the Jefferson & 14th Street Lot (#3210). The parking lot locations are shown on Figure 1A (Appendix A).

The improvements will consist of either pavement renewal or reconstruction. OSU indicated the pavement renewal would likely include some combination of seal coating, point repair, and possible removal/replacement. Parking lots designated for reconstruction will likely include full-depth reconstruction, but may salvage existing pavement materials, where practical. The finished parking lot grades are expected to closely match the existing pavement surface elevations to accommodate the grades for existing curbs, driveways, and drainage.

A separate pavement evaluation memorandum has been prepared for each parking lot. This memorandum addresses the National Forage Seed Research Center Lot (#3333). The lot is currently gravel-surfaced, but OSU plans to pave it as part of the parking lot improvements. The lot may also be expanded to the southeast. An aerial photo showing the layout of the lot is provided in Figure 2A (Appendix A).

OSU retained Foundation Engineering, Inc. as the geotechnical consultant to evaluate the existing pavement sections and subgrade conditions, and provide geotechnical recommendations associated with the planned improvements. Our scope of work was summarized in a proposal dated December 7, 2015, and authorized by Supplement No. OSU-254-P-15-98 dated December 29, 2015.

FIELD EXPLORATION

We completed twenty-one explorations (identified as C-1 through C-21) in the five lots between February 22 and February 23, 2016. C-9 through C-13 were completed within the National Forage Seed Research Center Lot, and C-14 was completed in the adjacent undeveloped area where expansion may occur. The approximate locations of C-9 through C-14 are shown in Figure 2A. The number and location of the explorations were selected in consultation with OSU Capital Planning personnel.

The explorations were completed using a trailer-mounted drill rig equipped with a solid-stem auger. Drilling extended to a maximum depth of ±5 feet in each exploration. The explorations were logged to delineate the thickness of the existing granular fill (in the existing parking area) and to identify the subgrade conditions. Dynamic Cone Penetrometer (DCP) testing was performed on the subgrade in each exploration. Upon completion, the explorations were backfilled with the excavated materials, placed and compacted in ±1 to 2-inch lifts, and capped with granular fill.

The existing granular fill thickness and subgrade conditions are summarized on the exploration logs (Appendix B). The logs were prepared based on a review of the field logs and an examination of the soil samples in our office. Table 1 provides a summary of the granular fill (i.e., Base Rock) thickness encountered in each exploration. A column for asphaltic concrete (AC) thickness is included in Table 1, consistent with the summary tables shown in the memorandums prepared for the other parking lots included with this project. However, there is no AC surface at the existing lot. The exploration at C-14 was drilled through a grass area where no AC or base rock is present.

Table 1. Summary of Pavement Thicknesses

[1]Exploration	Asphaltic Concrete Thickness (in.)	[2]Base Rock Thickness (in.)	Total Pavement Thickness (in.)
C-9	-	8	8
C-10	-	12	12
C-11		9	9
C-12	-	12	12
C-13	-	10	10
C-14	-	-	-

Notes: 1. See Figure 2A for exploration locations.

2. See logs (Appendix B) and discussion below for description of base materials in the individual explorations.

DCP TESTING

In-situ DCP testing was completed in conjunction with the field exploration. The test consists of driving the cone of the DCP apparatus into the soil and recording the penetration versus blow count (mm/blow) as the DCP value. The Oregon Department of Transportation (ODOT) Pavement Design Guide (2011) provides a correlation for estimating the in-situ subgrade modulus (M_R) from the DCP value.

The DCP test was completed in C-9 through C-13 at the top of the subgrade (i.e., beneath the existing base material). In C-14, the test was completed after drilling through the upper ±13 inches of topsoil. The DCP test results and the correlated in-situ subgrade M_R values are summarized in Table 2.

Table 2. Summary of DCP Test Results

Core Hole	Initial Test Depth (inches)	Soil Description	[1]Average DCP (mm/blow)	[2]Average M_R (psi)	[3]Corrected M_R (psi)
C-9	9	Medium stiff SILT, some clay (ML)	42.8	11,329	3,965
C-10	12	Medium stiff SILT, some clay (ML)	44.3	11,179	3,913
C-11	10	Medium stiff SILT, some clay (ML)	29.3	13,139	4,599
C-12	13	Stiff SILT, some clay (ML)	31.1	12,837	4,493
C-13	11	Stiff SILT, some clay (ML)	31.8	12,721	4,452
C-14	13	Soft to medium stiff SILT, some clay (ML)	92.8	9,378	2,932

Notes: 1. DCP (mm/blow) based on the average of several readings from the initial test depth.
2. M_R value based on average DCP value at the test depth and the ODOT (2011) recommended correlation: $M_R = 49023(DCP)^{-0.39}$. Values may vary slightly due to rounding.
3. Corrected M_R values are based on the ODOT recommended correction factors of 0.35 for subgrade.

DISCUSSION OF SURFACE AND SUBSURFACE CONDITIONS

Surface Conditions

The existing parking lot consists of crush gravel and rock fill. However, the gravel surface is silty in some areas and short weeds and sod are growing at the edges of the parking stalls. Small ruts have developed in isolated areas and we anticipate the ruts are periodically in-filled using granular fill stockpiled near the southeast corner of the site. The parking lot expansion area (southeast of the existing lot) is presently undeveloped and grass-covered.

Subsurface Conditions

The explorations within the lot (C-9 through C-13) encountered a base rock section that consists of dense, ±1-inch minus crushed gravel or rock with varying amounts of silt and sand. As noted above, we anticipate the surface of the granular fill has become silty from on-going traffic use. The deeper portion of the base material is also silty, likely from subgrade intrusion. The thickness of the existing fill ranges from ±8 to 12 inches.

The subgrade underlying the base material in C-9 through C-13 consists of medium stiff to stiff, brown to dark brown, low to medium plasticity silt with some clay (topsoil/alluvium). Similar soil was encountered in C-14, completed southeast of the lot. The topsoil/alluvium layer was encountered to a depth of ±1.5 to 3 feet in the explorations, and followed by medium stiff to stiff, light brown, medium plasticity silty clay to silt with some clay (Willamette Silt), which extended to the bottom of the explorations (±5 feet).

PAVEMENT ANALYSIS AND DESIGN RECOMMENDATIONS

The National Forage Seed Research Center Lot is a reconstruction lot and will be paved as part of the improvements. The design and construction recommendations are based on the Oregon Department of Transportation (ODOT) Pavement Design Guide (2011) and the Asphalt Paving Association of Oregon (APAO) Asphalt Paving Design Guide (2003).

Traffic Data

The existing lot accommodates vehicular traffic and occasional RV parking during sporting events. However, OSU indicated the new lot would no longer accommodate RV parking.

The parking stalls and east-west (E-W) drive aisles of the new lot will only accommodate cars and light pick-up trucks. However, the north-south (N-S) drive aisles will service delivery and garbage trucks for the adjacent buildings. In addition, the western N-S drive isle provides a connection between Campus Way and Jefferson Way. Therefore, significantly higher traffic volume (and loading) is expected for the N-S drive aisles.

Based on the traffic information provided and the lot size, we believe the traffic level for the E-W aisles and parking stalls corresponds with a Level I traffic classification, as defined in the APAO Design Guide (2003). This corresponds to an equivalent single axel load (ESAL) of up to 10,000 for a 20-year design life, and an average daily truck traffic (ADTT) of one. The traffic level within the N-S aisles will experience heavier traffic, possibly as high as Level III. Level III corresponds a range of 50,000 to 100,000 ESALs for a 20-year design life, and an ADTT of 7 to 14.

Discussion of Existing Materials and Re-Use

OSU indicated they would like to re-use the existing granular fill in the parking lot, if practical, to limit excavation depths and the need for importing new fill. However, the existing fill has significantly higher fines content relative to typical pavement base rock, which lowers the resilient modulus and impedes drainage.

A new pavement section constructed over fine-grained subgrade typically consists of imported Base Rock comprised of clean (i.e., less than 5% fines), crushed gravel or rock underlain by a Separation Geotextile. However, to reduce cost by reducing imported Base Rock quantities, we recommend excavating or scraping off a minimum 3 inches of the existing fill to remove vegetation and silty material, or to the depth required to provide a minimum 6-inch thick layer of new Base Rock. The actual excavation depths and the required quantity of imported fill will depend on the finish grades and meeting the minimum Base Rock section thickness. A Separation Geotextile is not required between the existing fill and new Base Rock.

The thickness of the existing fill varies. We measured thicknesses is the range of ±8 to 12 inches in the explorations, with an average thickness slightly greater than 10 inches. Therefore, we recommend assuming an average thickness of 10 inches to represent the existing fill thickness. Following the removal of the upper 3 inches, there will be an average remaining thickness of 7 inches.

The granular fill removed from the existing parking lot surface may be considered for reuse as subbase in the lot expansion area to the southeast, provided the fill is free of vegetation, construction debris, high plasticity clay, or other deleterious material. Subbase will be required if the subgrade preparation occurs when the subgrade is too wet for aeration and compaction. The required overexcavation and replacement depth is expected to be ±6 to 12 inches, but the actual depth will require confirmation during construction. The subbase material is not considered part of the recommended minimum pavement sections.

Minimum Pavement Sections

For fair subgrade conditions, APAO (2003) recommends a minimum pavement section of 3 inches AC over 12 inches Base Rock for pavements with servicing Level I traffic, and a minimum pavement section of 4 inches AC over 12 inches Base Rock for pavements servicing Level III traffic. We believe these sections will be suitable for the parking lot provided construction occurs during relatively dry weather when subgrade compaction is practical.

GENERAL CONSTRUCTION RECOMMENDATIONS

Based on ODOT (2011) guidelines, the pavement mix design for new AC should consist of Level 2, ½-inch Dense-Graded HMAC Wearing Course with PG 64-22 binder. Lift thicknesses of between 2 and 3 inches should be planned. Section 10.4 (Table 5) of the ODOT (2011) guidelines indicates the project location does not mandate the use of anti-stripping additives in the HMAC.

Imported Base Rock should conform to the material requirements of Section 02630 and grading requirements of Table 02630-1 for ¾ or 1-inch minus aggregate, as set forth in the ODOT Standard Specifications for Construction (2015).

In new pavement areas where excavation extends to fine-grained subgrade (i.e., silt and clay), a Subgrade Geotextile for Separation meeting the requirements in ODOT (2015) Section 02320.20 is required between the subgrade and Base Rock.

Moisture-condition and compact in accordance with ODOT (2015) Section 00330.43 for subgrade preparation during dry weather. The finished subgrade should be proof-rolled with a loaded dump truck or other approved heavy construction vehicle prior to placing the Subgrade Separation Geotextile and Base Rock to identify any soft areas. Any soft or pumping subgrade should be reworked or overexcavated and replaced with additional Base Rock.

Subgrade compaction will not be feasible if construction occurs during wet weather, or during late spring or early summer when the subgrade soils have not had time to sufficiently dry. For these conditions, care is required to avoid subgrade disturbance. This includes completing the excavation work from outside the excavation using an excavator equipped with a smooth-edged bucket. In addition, the placement of the subbase material or Base Rock from a thickened access ramp extending into the excavation is required.

A representative of Foundation Engineering should be present to confirm the subgrade conditions and make recommendations, as required, for overexcavation and replacement of soft or disturbed subgrade prior to backfilling with subbase or Base Rock.

LIMITATIONS

The conclusions and recommendations contained herein are based on the assumption that the subsurface profiles encountered in the core holes are representative of the overall site conditions within the National Forage Seed Research Center Lot (#3333). The above recommendations assume we will have the opportunity to review final drawings and be present during construction. No changes in the enclosed recommendations should be made without our approval. We will assume no responsibility or liability for any engineering judgment, inspection or testing performed by others.

This memorandum was prepared for the exclusive use of OSU Capital Planning & Development and their design consultants for the OSU Parking Lot Renewal and Reconstruction project in Corvallis, Oregon. Information contained herein should not be used for other sites or for unanticipated construction without our written consent. This report is intended for planning and design purposes. Contractors using this information to estimate construction quantities or costs do so at their own risk.

Our services do not include any survey or assessment of potential surface contamination, or contamination of the soil or ground water by hazardous or toxic materials. We assume those services, if needed, have been completed by others.

We trust this information meets your present needs. Please do not hesitate to call if you have questions or need further assistance.

JCH/wg
Attachments

REFERENCES

American Association of State Highway and Transportation Officials (1993); *AASHTO Guide for Design of Pavement Structures*.

Hicks, R.G., Curren, P., Lundy, J.R., Huddleston, J. (2003); *Asphalt Paving Design Guide*, Asphalt Pavement Association of Oregon (APAO).

Oregon Department of Transportation, Highway Division (2015); *Oregon Standard Specifications for Construction.*

Oregon Department of Transportation, Pavement Services Unit (August 2011); *ODOT Pavement Design Guide.*

Appendix A

Figures

Professional
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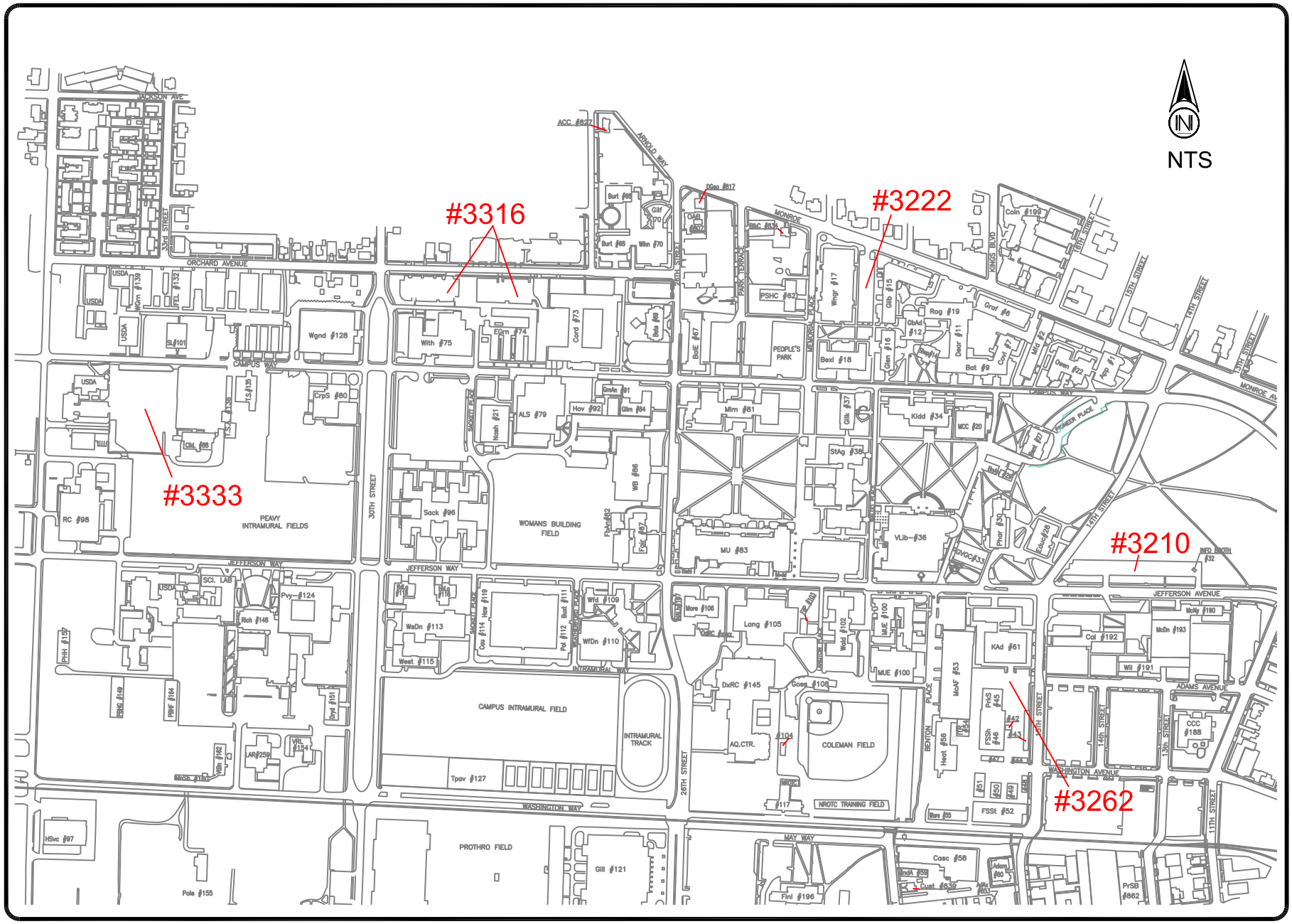
Services

Foundation Engineering, Inc.



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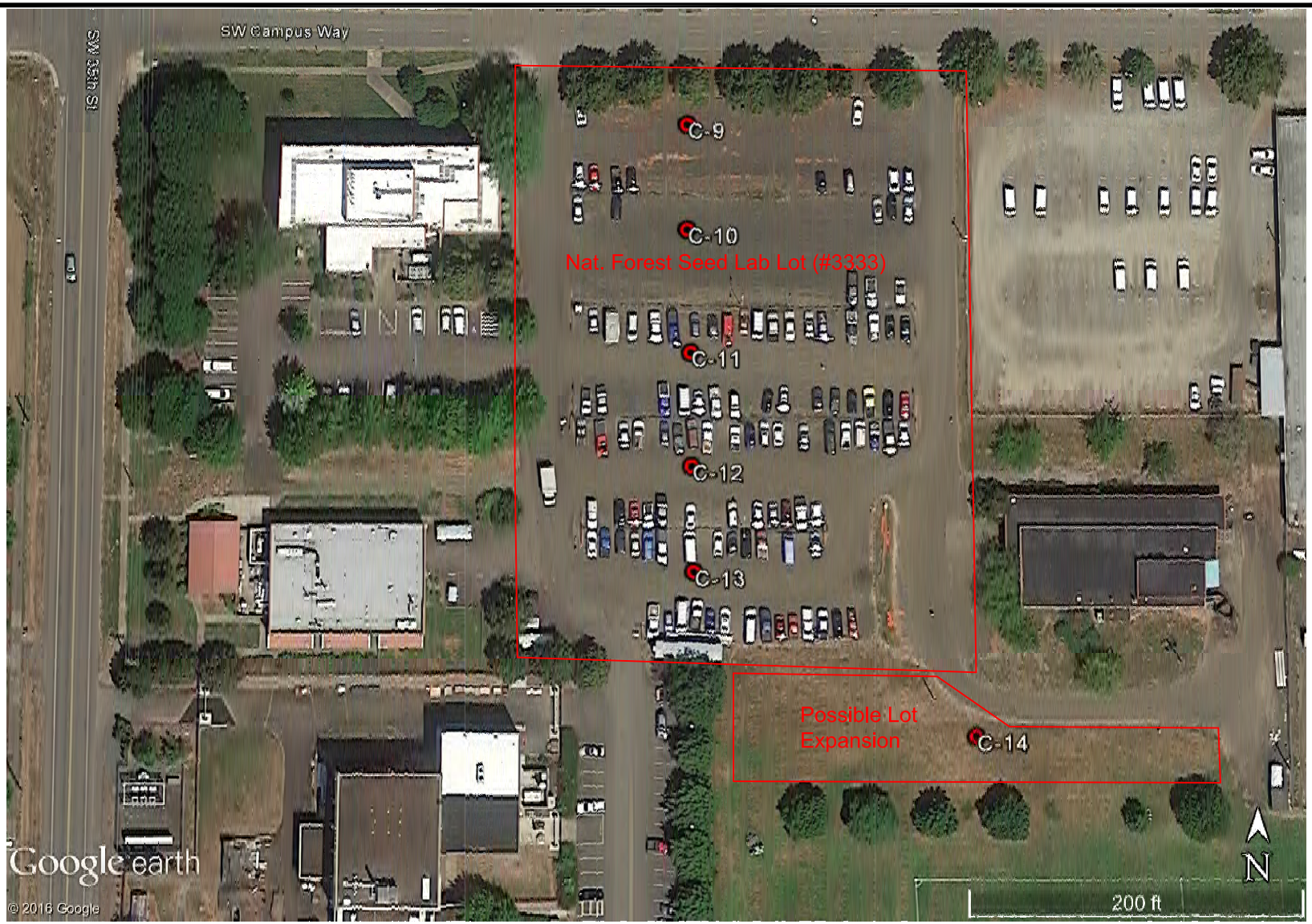
DATE Mar. 2016
DWN. JCH
APPR.
REVIS.
PROJECT NO.
2161005

VICINITY MAP

OSU Parking Lot Renewal and Reconstruction
Corvallis, Oregon

FIGURE NO.
1A

FILE NAME:



NOTES:
1. BORING LOCATIONS ARE APPROXIMATE ONLY.
2. SEE REPORT FOR A DISCUSSION OF SUBSURFACE CONDITIONS.
3. AERIAL PHOTO WAS OBTAINED FROM GOOGLE EARTH PRO.

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DATE Mar. 2016
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SITE LAYOUT AND BORING LOCATIONS
NATIONAL FORAGE SEED RESEARCH CENTER LOT (#3333)
OSU Parking Lot Renewal and Reconstruction
Corvallis, Oregon

FIGURE NO.
2A

FILE NAME:

Appendix B

Exploration Logs

Professional
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DISTINCTION BETWEEN FIELD LOGS AND FINAL LOGS

A field log is prepared for each boring or test pit by our field representative. The log contains information concerning sampling depths and the presence of various materials such as gravel, cobbles, and fill, and observations of ground water. It also contains our interpretation of the soil conditions between samples. The final logs presented in this report represent our interpretation of the contents of the field logs and the results of the sample examinations and laboratory test results. Our recommendations are based on the contents of the final logs and the information contained therein and not on the field logs.

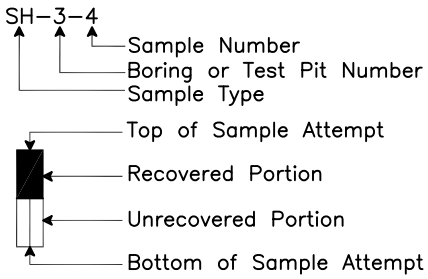
VARIATION IN SOILS BETWEEN TEST PITS AND BORINGS

The final log and related information depict subsurface conditions only at the specific location and on the date indicated. Those using the information contained herein should be aware that soil conditions at other locations or on other dates may differ. Actual foundation or subgrade conditions should be confirmed by us during construction.

TRANSITION BETWEEN SOIL OR ROCK TYPES

The lines designating the interface between soil, fill or rock on the final logs and on subsurface profiles presented in the report are determined by interpolation and are therefore approximate. The transition between the materials may be abrupt or gradual. Only at boring or test pit locations should profiles be considered as reasonably accurate and then only to the degree implied by the notes thereon.

SAMPLE OR TEST SYMBOLS



S – Grab Sample
SS – Standard Penetration Test Sample (split–spoon)
SH – Thin–walled Shelby Tube Sample
C – Pavement Core Sample
CS – Rock Core Sample

▲ Standard Penetration Test Resistance equals the number of blows a 140 lb. weight falling 30 in. is required to drive a standard split–spoon sampler 1 ft. Practical refusal is equal to 50 or more blows per 6 in. of sampler penetration.

● Water Content (%).

UNIFIED SOIL CLASSIFICATION SYMBOLS

G – Gravel	W – Well Graded
S – Sand	P – Poorly Graded
M – Silt	L – Low Plasticity
C – Clay	H – High Plasticity
Pt – Peat	O – Organic

FIELD SHEAR STRENGTH TEST

Shear strength measurements on test pit side walls, blocks of soil or Shelby tube samples are typically made with Torvane or Field Vane shear devices.

TYPICAL SOIL/ROCK SYMBOLS

Concrete, Sand, Basalt
Organics, Gravel, Sandstone
Clay, Silt, Siltstone

WATER TABLE

Water Table Location

(1/31/16) Date of Measurement

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SYMBOL KEY

BORING AND TEST PIT LOGS

Explanation of Common Terms Used in Soil Descriptions

Field Identification	Cohesive Soils			Granular Soils	
	SPT*	S_u** (tsf)	Term	SPT*	Term
Easily penetrated several inches by fist.	0 – 2	< 0.125	Very Soft	0 – 4	Very Loose
Easily penetrated several inches by thumb.	2 – 4	0.125–0.25	Soft	4 – 10	Loose
Can be penetrated several inches by thumb with moderate effort.	4 – 8	0.25 – 0.50	Medium Stiff	10 – 30	Medium Dense
Readily indented by thumb but penetrated only with great effort.	8 – 15	0.50 – 1.0	Stiff	30 – 50	Dense
Readily indented by thumbnail.	15 – 30	1.0 – 2.0	Very Stiff	> 50	Very Dense
Indented with difficulty by thumbnail.	>30	> 2.0	Hard		

* SPT N–value in blows per foot (bpf)
** Undrained shear strength

Term	Soil Moisture Field Description
Dry	Absence of moisture. Dusty. Dry to the touch.
Damp	Soil has moisture. Cohesive soils are below plastic limit and usually moldable.
Moist	Grains appear darkened, but no visible water. Silt/clay will clump. Sand will bulk. Soils are often at or near plastic limit.
Wet	Visible water on larger grain surfaces. Sand and cohesionless silt exhibit dilatancy. Cohesive soil can be readily remolded. Soil leaves wetness on the hand when squeezed. Soil is wetter than the optimum moisture content and above the plastic limit.

Term	PI	Plasticity Field Test
Non–plastic	0 – 3	Cannot be rolled into a thread at any moisture.
Low Plasticity	3 – 15	Can be rolled into a thread with some difficulty.
Medium Plasticity	15 – 30	Easily rolled into thread.
High Plasticity	> 30	Easily rolled and re–rolled into thread.

Term	Soil Structure Criteria
Stratified	Alternating layers at least ¼ inch thick.
Laminated	Alternating layers less than ¼ inch thick.
Fissured	Contains shears and partings along planes of weakness.
Slickensided	Partings appear glossy or striated.
Blocky	Breaks into small lumps that resist further breakdown.
Lensed	Contains pockets of different soils.

Term	Soil Cementation Criteria
Weak	Breaks under light finger pressure.
Moderate	Breaks under hard finger pressure.
Strong	Will not break with finger pressure.

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COMMON TERMS

SOIL DESCRIPTIONS

Comments	Depth, Feet	Sample #	Location	Class Symbol	Water Table	C, TSF	Symbol	Soil and Rock Description
		C-9-1						Dense CRUSHED GRAVEL, some sand and silt (GP-GM) (±8 inches); grey to brown, damp, low plasticity silt, fine to coarse sand, ±1-inch minus, subangular gravel, (base rock).
	1	C-9-2						Medium stiff SILT, some clay (ML); dark brown, moist, low to medium plasticity, (topsoil/alluvium).
	2							
	3							Medium stiff to stiff silty CLAY (CL); light brown, moist, medium plasticity, (Willamette Silt).
		C-9-3						
No seepage or groundwater encountered to the limit of excavation.	4							
	5							BOTTOM OF EXPLORATION

Project No.: 2161005

Surface Elevation: N.A. (Approx.)

Date of Test Pit: February 22, 2016

Test Pit Log: C-9
National Forage Seed Research Center Lot (#3333)
OSU Parking Lot Renewal and Reconstruction
Corvallis, Oregon

Comments	Depth, Feet	Sample #	Location	Class Symbol	Water Table	C, TSF	Symbol	Soil and Rock Description
		C-10-1						Dense CRUSHED GRAVEL, trace to some silt (GW to GW-GM) (±12 inches); grey, damp, low plasticity silt, ±1-inch minus, subangular gravel, (base rock).
	1							Medium stiff SILT, some clay (ML); dark brown, moist, low to medium plasticity, (topsoil/alluvium).
		C-10-2						
	2							
	3	C-10-3						Medium stiff silty CLAY (CL); light brown, moist, medium plasticity, (Willamette Silt).
No seepage or groundwater encountered to the limit of excavation.	4							
	5							BOTTOM OF EXPLORATION

Project No.: 2161005

Surface Elevation: N.A. (Approx.)

Date of Test Pit: February 22, 2016

Test Pit Log: C-10
National Forage Seed Research Center Lot (#3333)
OSU Parking Lot Renewal and Reconstruction
Corvallis, Oregon

Comments	Depth, Feet	Sample #	Location	Class Symbol	Water Table	C, TSF	Symbol	Soil and Rock Description
		C-11-1						Dense CRUSHED GRAVEL, some silt (GW-GM) (±9 inches); grey to brown, damp, low plasticity silt, ±1-inch minus, subangular gravel, (base rock).
	1	C-11-2						Medium stiff SILT, some clay (ML); brown to dark brown, damp to moist, low to medium plasticity, (topsoil/alluvium).
	2							Medium stiff silty CLAY to SILT, some clay (CL to ML); light brown, moist, medium plasticity, (Willamette Silt).
	3	C-11-3						
No seepage or groundwater encountered to the limit of excavation.	4							
	5							BOTTOM OF EXPLORATION

Project No.: 2161005

Surface Elevation: N.A. (Approx.)

Date of Test Pit: February 22, 2016

Test Pit Log: C-11

National Forage Seed Research Center Lot (#3333)

OSU Parking Lot Renewal and Reconstruction

Corvallis, Oregon

Comments	Depth, Feet	Sample #	Location	Class Symbol	Water Table	C, TSF	Symbol	Soil and Rock Description
		C-12-1						Dense CRUSHED GRAVEL, some silt and sand (GW-GM) (±12 inches); grey to brown, damp, low plasticity silt, ±1-inch minus, subangular gravel, (base rock).
	1	C-12-2						Stiff SILT, some clay (ML); brown to dark brown, damp to moist, low plasticity, (topsoil/alluvium).
	2							Medium stiff silty CLAY to SILT, some clay (CL to ML); light brown, moist, medium plasticity, (Willamette Silt).
	3	C-12-3						
No seepage or groundwater encountered to the limit of excavation.	4							
	5							BOTTOM OF EXPLORATION

Project No.: 2161005

Surface Elevation: N.A. (Approx.)

Date of Test Pit: February 22, 2016

Test Pit Log: C-12

National Forage Seed Research Center Lot (#3333)

OSU Parking Lot Renewal and Reconstruction

Corvallis, Oregon

Comments	Depth, Feet	Sample #	Location	Class Symbol	Water Table	C, TSF	Symbol	Soil and Rock Description
		C-13-1						Dense CRUSHED ROCK, some silt and sand (GW-GM) (±10 inches); grey to brown, damp, low plasticity silt, fine to coarse sand, ±1-inch minus, angular to subangular rock fragments, (base rock).
	1							Stiff SILT, some clay (ML); dark brown, damp to moist, low plasticity, (topsoil/alluvium).
	2	C-13-2						Medium stiff to stiff silty CLAY to SILT, some clay (CL to ML); light brown, moist, medium plasticity, (Willamette Silt).
	3							
No seepage or groundwater encountered to the limit of excavation.	4							
	5							BOTTOM OF EXPLORATION

Project No.: 2161005

Surface Elevation: N.A. (Approx.)

Date of Test Pit: February 22, 2016

Test Pit Log: C-13

National Forage Seed Research Center Lot (#3333)

OSU Parking Lot Renewal and Reconstruction

Corvallis, Oregon

Comments	Depth, Feet	Sample #	Location	Class Symbol	Water Table	C, TSF	Symbol	Soil and Rock Description
Surface: grass								Soft to medium stiff SILT, some clay (ML); dark brown, moist to wet, low plasticity, (topsoil).
	1	C-14-1						
	2							
	3							Medium stiff to stiff silty CLAY to SILT, some clay (CL to ML); light brown, moist, medium plasticity, (Willamette Silt).
		C-14-2						
No seepage or groundwater encountered to the limit of excavation.	4							
	5							BOTTOM OF EXPLORATION

Project No.: 2161005

Surface Elevation: N.A. (Approx.)

Date of Test Pit: February 22, 2016

Test Pit Log: C-14

National Forage Seed Research Center Lot (#3333)

OSU Parking Lot Renewal and Reconstruction

Corvallis, Oregon