SCANNELL PROPERTIES

MUSTANG INDUSTRIAL CENTER SPECIAL USE PERMIT FOR

Application to Washoe County

FOR

Scannell Properties

800 East 96th Street, Suite 175
Indianapolis, IN 46240

Prepared by:

TECTONICS DESIGN GROUP

730 Sandhill Road, Suite 250
Reno, Nevada 89521

August 15th, 2019

Job Number: 181122

August 15th, 2019

Washoe County
Building & Safety
1001 E 9th St
Reno, NV 89512

Re: Mustang Industrial Center Special Use Permit

To Whom It May Concern,

I am pleased to submit this application on behalf of Scannell Properties for consideration of a Special Use Permit for the Mustang Industrial Center. The Mustang Industrial Center is comprised of two parcels (APN 084-370-06 and 084-370-07) for a total of 117.65 Acres. APN 084-370-06 has a 343,024 SF warehouse building that is currently occupied by FedEx. APN 084-370-07 has just completed construction of a 560,820 SF warehouse that is currently unoccupied pending tenant improvements.

The Mustang Industrial Center was constructed under an existing SUP SB15-001that allowed for the cut and fill required for construction of the center. The need for this SUP arose from bedrock encountered during grading along the northern slope of APN 084-370-07. These slopes and walls were required for the development to maintain safe clearance from existing high-pressure gas main on the north of the parcel. The bedrock presents different design requirements than the previously approved slope and tiered retaining walls. The Geotechnical investigation and design have been performed in order to determine the most appropriate and feasible slope and stabilization for the encountered bedrock.

Thank you for taking time to review this Mustang Industrial Center Special Use Permit. I, on behalf of Tectonics Design Group and Scannell Properties, appreciate your time and consideration. Should you have any questions or wish to request additional material, please feel free to contact me at your earliest convenience at (775) 624-7134, or via email at jon@tdg-inc.com.

Sincerely,

Jonathan Browning, P.E.

Washoe County Development Application

Your entire application is a public record. If you have a concern about releasing personal information, please contact Planning and Building staff at 775.328.6100.

Project Information	**Staff Assigned Case No.:**

Project Name: **Mustang Industrial Development**

Project Description: This a completed 560,820 SF Industrial Warehouse Building. The cut and fill required was completed under SUP Case Number SB15-001. The proposed walls on SB15-001 could not be constructed due to bedrock encountered. Cut slopes designed by a geotechnical engineer are required to complete the project.

Project Address: 12475 Mustang Road, Washoe County, NV 89434

Project Area (acres or square feet): 45.75 Acres

Project Location (with point of reference to major cross streets **AND** area locator):

East on Mustang Road from I-80 near the intersection of Mustang Road and Peri Ranch Road. Bound by the Union Pacific Railroad to the north/west and the Truckee River to the south/east.

Assessor's Parcel No.(s):	Parcel Acreage:	Assessor's Parcel No.(s):	Parcel Acreage:
084-370-07	45.75		

Indicate any previous Washoe County approvals associated with this application:
Case No.(s). SB15-001

Applicant Information (attach additional sheets if necessary)

Property Owner:		**Professional Consultant:**	
Name: Scannell Properties #257, LLC		Name: Tectonics Design Group	
Address: 8801 River Crossing Blvd, Suite 300		Address: 730 Sandhill Road, Suite 250	
Indianapolis, IN	Zip: 46240	Reno, NV	Zip: 89521
Phone: (763) 331-8854	Fax:	Phone: 775-824-9988 x11	Fax: 824-9986
Email: msimmons@scannellproperties.com		Email: matt@tdg-inc.com	
Cell: (763) 331-8854	Other:	Cell:	Other:
Contact Person: Mike Simmons		Contact Person: Matthew Rasmussen	
Applicant/Developer:		**Other Persons to be Contacted:**	
Name: Scannell Properties		Name:	
Address: 800 East 96th Street, Suite 175		Address:	
Indianapolis, IN	Zip: 46240		Zip:
Phone: (763) 331-8854	Fax:	Phone:	Fax:
Email: msimmons@scannellproperties.com		Email:	
Cell: (763) 331-8854	Other:	Cell:	Other:
Contact Person: Mike Simmons		Contact Person:	

For Office Use Only

Date Received:	Initial:	Planning Area:
County Commission District:		Master Plan Designation(s):
CAB(s):		Regulatory Zoning(s):

Property Owner Affidavit

Applicant Name: Scannell Properties #257, LLC

The receipt of this application at the time of submittal does not guarantee the application complies with all requirements of the Washoe County Development Code, the Washoe County Master Plan or the applicable area plan, the applicable regulatory zoning, or that the application is deemed complete and will be processed.

STATE OF ~~NEVADA~~ INDIANA)
COUNTY OF ~~WASHOE~~ MARION)

I, Marc D. Pfleging,
(please print name)

being duly sworn, depose and say that I am the owner* of the property or properties involved in this application as listed below and that the foregoing statements and answers herein contained and the information herewith submitted are in all respects complete, true and correct to the best of my knowledge and belief. I understand that no assurance or guarantee can be given by members of Planning and Development.

(A separate Affidavit must be provided by each property owner named in the title report.)

Assessor Parcel Number(s): 084-370-07

Printed Name Marc D. Pfleging

Signed [signature]

Address 8801 River Crossing Blvd, Suite 300

Indianapolis, IN 46240

Subscribed and sworn to before me this 16th day of August, 2019.

[signature]
Notary Public in and for said county and state

(Notary Stamp)

NOTARY PUBLIC SEAL STATE OF INDIANA
DEBORAH H. CRABTREE
Hendricks County
My Commission Expires
July 29, 2023

My commission expires: 7/29/23

*Owner refers to the following: (Please mark appropriate box.)

- ☐ Owner
- ■ Corporate Officer/Partner (Provide copy of recorded document indicating authority to sign.)
- ☐ Power of Attorney (Provide copy of Power of Attorney.)
- ☐ Owner Agent (Provide notarized letter from property owner giving legal authority to agent.)
- ☐ Property Agent (Provide copy of record document indicating authority to sign.)
- ☐ Letter from Government Agency with Stewardship

CONSENT OF THE SOLE MEMBER
OF
SCANNELL PROPERTIES #257, LLC
TO ACTION WITHOUT A MEETING

The undersigned, constituting the Sole Member of SCANNELL PROPERTIES #257, LLC, an Indiana limited liability company (the "Company"), hereby consent to the following actions to be taken without a meeting.

WHEREAS, pursuant to that certain Operating Agreement of Scannell Properties #257, LLC dated May 23, 2016 (the "Operating Agreement"), the initial managers of the Company are Robert J. Scannell, Douglas L. Snyder and James C. Carlino; and

WHEREAS, the Members may designate or elect unanimously additional Managers of the Company pursuant to Section 2.3 of the Operating Agreement; and

WHEREAS, the Members deem it proper and advisable and in the best interests of the Company to appoint the following individuals as additional Managers for purposes of administering the management of the Company's business affairs:

Ralph I. Shiley
Marc D. Pfleging

NOW, THEREFORE, IT IS:

RESOLVED, that each of the following individuals, be and they hereby are, appointed as additional Managers of the Company, to hold their offices until their successors are chosen and qualified:

Ralph I. Shiley
Marc D. Pfleging

FURTHER RESOLVED, after giving effect to such appointment, the current Managers of the Company are:

Robert J. Scannell
Douglas L. Snyder
James C. Carlino
Ralph I. Shiley
Marc D. Pfleging

FURTHER RESOLVED, that this Consent be filed with the records of the Company.

DATED as of this 31st day of July, 2018.

SOLE MEMBER:

SCANNELL PROPERTIES #249, LLC, an Indiana limited liability company

By: _____
James C. Carlino, Manager

Special Use Permit Application
for Grading
Supplemental Information

(All required information may be separately attached)

1. What is the purpose of the grading?

The site was graded in order to prepare for development of two light industrial buildings, associated parking and access roads. Work was completed under SUP SB15-001. Construction encountered bedrock that prohibited building the retaining walls that were proposed. The current slopes have been stabilized per Geotechnical Recommendation and must remain to support the development.

2. How many cubic yards of material are you proposing to excavate on site?

No additional work is proposed.

3. How many square feet of surface of the property are you disturbing?

No additional work is proposed.

4. How many cubic yards of material are you exporting or importing? If none, how are you managing to balance the work on-site?

No additional work is proposed.

5. Is it possible to develop your property without surpassing the grading thresholds requiring a Special Use Permit? (Explain fully your answer.)

It is not possible to build the walls that were proposed in SB15-001 due to the bedrock encountered. There is also a high pressure gas main that prevents cutting the slopes back further. Geotechnical investigation and design allowed for proper stabilization of the slopes. The current slopes have been determined to be the only feasible solution for the site.

6. Has any portion of the grading shown on the plan been done previously? (If yes, explain the circumstances, the year the work was done, and who completed the work.)

All of the grading on the plan has been completed. It was done in two phases. The first phase was completed by Arco Construction in 2016-2017 under SB15-001. The second phase performed by United Construction completed the building and associated parking lot and drainage facilities also under SB15-001.

7. Have you shown all areas on your site plan that are proposed to be disturbed by grading? (If no, explain your answer.)

All of the grading is complete and only areas and amounts of cut and fill approved under SB15-001 have been completed.

8. Can the disturbed area be seen from off-site? If yes, from which directions and which properties or roadways?

Yes. The cut slope can been seen from the from across the Truckee River in Storey County. The slope is not visible without entering the Mustang Industrial Center from the Washoe side of the Truckee river.

9. Could neighboring properties also be served by the proposed access/grading requested (i.e. if you are creating a driveway, would it be used for access to additional neighboring properties)?

The slope supports an access route that also provides emergency access to the adjacent parcel that currently is occupied by FedEx.

10. What is the slope (horizontal/vertical) of the cut and fill areas proposed to be? What methods will be used to prevent erosion until the revegetation is established?

The two slopes are approximately 1.5:1 and have been stabilized per the geotechnical recommendations. The slope along the access road is comprised of bedrock and is stable in its current state. The slope behind the propane tank has been treated with riprap.

11. Are you planning any berms?

Yes	No X	If yes, how tall is the berm at its highest?

12. If your property slopes and you are leveling a pad for a building, are retaining walls going to be required? If so, how high will the walls be and what is their construction (i.e. rockery, concrete, timber, manufactured block)?

No retaining walls are proposed for the slopes as they are not feasible.

13. What are you proposing for visual mitigation of the work?

Both slopes blend with the surrounding area as currently constructed.

14. Will the grading proposed require removal of any trees? If so, what species, how many and of what size?

No additional grading is proposed.

15. What type of revegetation seed mix are you planning to use and how many pounds per acre do you intend to broadcast? Will you use mulch and, if so, what type?

The slopes are comprised of bedrock and riprap and will not require revegetation

16. How are you providing temporary irrigation to the disturbed area?

No temporary irrigation is required.

17. Have you reviewed the revegetation plan with the Washoe Storey Conservation District? If yes, have you incorporated their suggestions?

No revegetation is required. However, WSCD was consulted on the landscaping for the rest of the facility.

18. Are there any restrictive covenants, recorded conditions, or deed restrictions (CC&Rs) that may prohibit the requested grading?

Yes	No	If yes, please attach a copy.

Second Amended

First American Title Insurance Company
National Commercial Services
30 North LaSalle Street, Suite 2700
Chicago, IL 60602

November 07, 2018

Debbie Crabtree
Scannell Properties, LLC
8801 River Crossing Blvd, Suite 300
Indianapolis , IN 46240-3868
Phone: (317)218-1661

Fax:

Title Officer:	Patricia Rogers
Phone:	(312)553-0471
Email:	progers@firstam.com

Order Number: NCS-913217-CHI2

Property: 12475 Mustang Road, Sparks, NV

First American Title Insurance Company

Dennis J. Gilmore
President

Jeffrey S. Robinson
Secretary

Countersigned by:

_____

Authorized Signatory

Attached please find the following item(s):

Commitment

Thank you for your confidence and support. We at First American Title Insurance Company maintain the fundamental principle:

Customer First!

First American Title Insurance Company

INFORMATION

The Title Insurance Commitment is a legal contract between you and the company. It is issued to show the basis on which we will issue a Title Insurance Policy to you. The Policy will insure you against certain risks to the land title, subject to the limitations shown in the policy.

The Company will give you a sample of the Policy form, if you ask.

The Commitment is based on the land title as of the Commitment Date. Any changes in the land title or the transaction may affect the Commitment and the Policy.

The Commitment is subject to its Requirements, Exceptions and Conditions.

This information is not part of the title insurance commitment.

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YOU SHOULD READ THE COMMITMENT VERY CAREFULLY.
If you have any questions about the Commitment,
please contact the issuing office.

COMMITMENT FOR TITLE INSURANCE

Issued by

First American Title Insurance Company

Agreement to Issue Policy

We agree to issue a policy to you according to the terms of this Commitment.

When we show the policy amount and your name as the proposed insured in Schedule A, this Commitment becomes effective as of the Commitment Date shown in Schedule A.

If the Requirements shown in this Commitment have not been met within six months after the Commitment Date, our obligation under this Commitment will end. Also, our obligation under this Commitment will end when the Policy is issued and then our obligation to you will be under the Policy.

Our obligation under this Commitment is limited by the following:

The Provisions in Schedule A.

The Requirements in Schedule B-1.

The Exceptions in Schedule B-2.

The Conditions.

This Commitment is not valid without Schedule A and Sections 1 and 2 of Schedule B.

SCHEDULE A

1. Commitment Date: October 31, 2018 at 7:30 A.M.

2. Policy or Policies to be issued: Amount

   (A) ALTA Owner's Policy $TBD

   Proposed Insured:

   Scannell #257, LLC, an Indiana limited liability company

   b. Loan Policy

   Proposed Insured:

   Delaware Life Insurance Company, its successors and/or assigns $TBD

3. (A) The estate or interest in the land described in this Commitment is:

   Fee as to Parcel 1 and Right of Way as to Parcel 2 and Easement as to Parcel 3

   (B) Title to said estate or interest at the date hereof is vested in:

   Scannell Properties #257, LLC, an Indiana limited liability company

4. The land referred to in this Commitment is situated in the City of Sparks, County of Washoe, State of Nevada, and is described as follows:

   PARCEL 1:

   REAL PROPERTY LOCATED IN THE WEST HALF OF SECTION 15, TOWNSHIP 19 NORTH, RANGE 21 EAST, M.D.M., WASHOE COUNTY, NEVADA AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

   PARCEL 2 OF LAND MAP 246 RECORDED FEBRUARY 3, 2017 IN INSTRUMENT NO. 4677122 OF OFFICIAL RECORDS OF WASHOE COUNTY, NEVADA.

   PARCEL 2:

   RIGHTS UNDER A RIGHT OF WAY GRANT BY THE UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT, UNDER SERIAL NO. NVN 096615) AS EVIDENCED BY THE NOTICE OF BLM RIGHT-OF-WAY GRANT (SERIAL NO. NVN096615) RECORDED AUGUST 10, 2018 AS INSTRUMENT NO. 4840712 OF OFFICIAL RECORDS OF WASHOE COUNTY, NEVADA.

   PARCEL 3:

   TOGETHER WITH EASEMENTS FOR WATER, FIRE PROTECTION AND STORM WATER MANAGEMENT FOR THE BENEFIT OF PARCEL 1 AS CREATED, LIMITED AND DEFINED IN DECLARATION OF COMMON MAINTENANCE AND CROSS-EASEMENTS AGREEMENT RECORDED SEPTEMBER 18, 2017 AS DOCUMENT NO. 4745261 OF THE OFFICIAL RECORDS OF WASHOE COUNTY, NEVADA.

SCHEDULE B

SECTION ONE

REQUIREMENTS

The following requirements must be met:

(A) Pay the agreed amounts for the interest in the land and/or the mortgage to be insured.

(B) Pay us the premiums, fees and charges for the policy.

(C) Documents satisfactory to us creating the interest in the land and/or the mortgage to be insured must be signed, delivered and recorded.

(D) You must tell us in writing the name of anyone not referred to in this Commitment who will get an interest in the land or who will make a loan on the land. We may then make additional requirements or exceptions.

(E) Releases(s) or Reconveyance(s) of Item(s): None

(F) Other: None

(G) You must give us the following information:
1. Any off record leases, surveys, etc.
2. Statement(s) of Identity, all parties.
3. Other: None

The following additional requirements, as indicated by "X", must be met:

[X] (H) Provide information regarding any off-record matters, which may include, but are not limited to: leases, recent works of improvement, or commitment statements in effect under the Environmental Responsibility Acceptance Act, Civil Code Section 850, et seq.

The Company's Owner's Affidavit form(as provided by company) must be completed and submitted prior to close in order to satisfy this requirement. This Commitment will then be subject to such further exceptions and/or requirements as may be deemed necessary.

[X] (I) An ALTA/NSPS survey of recent date, which complies with the current minimum standard detail requirements for ALTA/NSPS land title surveys, must be submitted to the Company for review. This Commitment will then be subject to such further exceptions and/or requirements as may be deemed necessary.

[X] (J) The following LLC documentation is required:
(i) a copy of the Articles of Organization
(ii) a copy of the Operating Agreement, if applicable
(iii) a Certificate of Good Standing and/or other evidence of current Authority to Conduct Business within the State
(iv) express Company Consent to the current transaction

[] (K) The following partnership documentation is required **:**
(i) a copy of the partnership agreement, including all applicable amendments thereto
(ii) a Certificate of Good Standing and/or other evidence of current Authority to Conduct Business within the State
(iii) express Partnership Consent to the current transaction

[] (L) The following corporation documentation is required:
(i) a copy of the Articles of Incorporation
(ii) a copy of the Bylaws, including all applicable Amendments thereto
(iii) a Certificate of Good Standing and/or other evidence of current Authority to Conduct Business within the State
(iv) express Corporate Resolution consenting to the current transaction

[] (M) Based upon the Company's review of that certain partnership/operating agreement dated **Not disclosed** for the proposed insured herein, the following requirements must be met:

Any further amendments to said agreement must be submitted to the Company, together with an affidavit from one of the general partners or members stating that it is a true copy, that said partnership or limited liability company is in full force and effect, and that there have been no further amendments to the agreement. This Commitment will then be subject to such further requirements as may be deemed necessary.

[] (N) A copy of the complete lease, as referenced in Schedule A, #3 herein, together with any amendments and/or assignments thereto, must be submitted to the Company for review, along with an affidavit executed by the present lessee stating that it is a true copy, that the lease is in full force and effect, and that there have been no further amendments to the lease. This Commitment will then be subject to such further requirements as may be deemed necessary.

[X] (O) Approval from the Company's Underwriting Department must be obtained for issuance of the policy contemplated herein and any endorsements requested thereunder. This Commitment will then be subject to such further requirements as may be required to obtain such approval.

[X] (P) Potential additional requirements, if ALTA Extended coverage is contemplated hereunder, and work on the land has commenced prior to close, some or all of the following requirements, and any other requirements which may be deemed necessary, may need to be met:

[] (Q) The Company's "Indemnity Agreement I" must be executed by the appropriate parties.

[] (R) Financial statements from the appropriate parties must be submitted to the Company for review.

[] (S) A copy of the construction contract must be submitted to the Company for review.

[] (T) An inspection of the land must be performed by the Company for verification of the phase of construction.

[] (U) The Company's "Mechanic's Lien Risk Addendum" form must be completed by a Company employee, based upon information furnished by the appropriate parties involved.

SCHEDULE B

SECTION TWO

EXCEPTIONS

Any policy we issue will have the following exceptions unless they are taken care of to our satisfaction. The printed exceptions and exclusions from the coverage of the policy or policies are set forth in Exhibit A attached. Copies of the policy forms should be read. They are available from the office which issued this Commitment.

1. Water rights, claims or title to water, whether or not shown by the public records.

2. Any taxes that may be due, but not assessed, for new construction which can be assessed on the unsecured property rolls, in the Office of the County Assessor, per Nevada Revised Statute 361.260.

3. Any taxes that may be due as provided under NRS 361.4725.

4. Any unpaid charges due the Washoe County Sewer & Water District. Specific amounts may be obtained by calling the Washoe County Water Resources, Utility Services Division at P.O. Box 11130, Reno, NV 89520, (775) 954-4601.

5. Any adverse claim based upon the assertion that:

   (A) Any portion of the land lies below the last natural high water mark of the Truckee River.

   (B) Some portion of the land has been created by artificial means or has accreted to such portion so created.

   (C) Some portion of the land has been brough within the boundaries thereof by an avulsive movement of the Truckee River or has been formed by accretion of any such portion.

   (D) Any rights of access to the Truckee River for recreational purposes which may exist over the land.

6. Reservations and provisions as contained in Patent from the United States of America, recorded February 09, 1889, in Book A, Page 391 of Patents, as Instrument No. N/A.

7. Reservations and provisions as contained in Patent from the United States of America, recorded September 19, 1902, in Book A, Page 746 of Patents, as Instrument No. N/A.

8. An easement for public utilities and incidental purposes in the document recorded January 29, 1942 in Book No. 146, Page 21 as Instrument No. 100923 of Official Records.

   - A document entitled "Quitclaim Deed of Grant of Easement" recorded March 2, 2016 as Instrument No. 4565661 of Official Records.

9. An easement for public utilities and incidental purposes in the document recorded January 11, 1949 in Book No. 228, Page 585 as Instrument No. 170211 of Official Records.

- A document entitled "Quitclaim Deed of Grant of Easement" recorded March 2, 2016 as Instrument No. 4565661 of Official Records.

- A document entitled "Partial Relinquishment of Easement Rights" recorded September 07, 2016 as Instrument No. 4629744 of Official Records.

10. An easement for pipelines, valves, necessary appurtenances and incidental purposes in the document recorded June 20, 1956 in Book No. 416, Page 61 as Instrument No. 261281 of Deed Records.

11. An easement for public utilities and incidental purposes in the document recorded November 17, 1964 in Book No. 38, Page 260 as Instrument No. 12830 of Official Records.

- A document entitled "Quitclaim Deed of Grant of Easement" recorded March 2, 2016 as Instrument No. 4565661 of Official Records.

- A document entitled "Partial Relinquishment of Easement Rights" recorded September 07, 2016 as Instrument No. 4629745 of Official Records.

12. An easement for public utilities and incidental purposes in the document recorded March 24, 1965 in Book No. 69, Page 485 as Instrument No. 23503 of Official Records.

- A document entitled "Quitclaim Deed of Grant of Easement" recorded March 2, 2016 as Instrument No. 4565661 of Official Records.

- A document entitled "Partial Relinquishment of Easement Rights" recorded September 07, 2016 as Instrument No. 4629746 of Official Records.

13. Fifty foot (50') wide flood control, access and greenbelt easement along the north bank of the Truckee River as provided for or delineated on Subdivision Tract Map #1878 , as amended by document entitled "Resolution and Order of Abandonment" recorded January 17, 1989, in Book 2854, Page 851 as Instrument No. 1299517 of Official Records and further amended by Reversion Tract Map #2561.

14. Easements, dedications, reservations, provisions, relinquishments, recitals, certificates, and any other matters as provided for or delineated on Survey Map No. 5012. Reference is hereby made to said plat for particulars.

NOTE: Said Map depicts a 30' wide access easement purportedly granted per BLM-Nevada Serial No. 77824.

15. The terms and provisions contained in the document entitled "Retail Water Service Area Annexation Agreement" recorded May 19, 2016 as Instrument No. 4590526 of Official Records.

16. A document entitled "Notice of BLM Right-of-Way Grant (Serial No. NVN 096615)" recorded August 10, 2018 as Instrument No. 4840712 of Official Records.

17. The terms and provisions contained in the document entitled "Amended and Restated Indenture" recorded May 23, 2016 as Instrument No. 4591762 of Official Records.

(Affects Parcel 2)

18. The terms and provisions contained in the document entitled "Novation Agreement" recorded May 23, 2016 as Instrument No. 4591763 of Official Records.

19. An easement for access and water facilities and incidental purposes in the document recorded July 20, 2016 as Instrument No. 4611761 of Official Records.

20. An easement for public utilities and incidental purposes in the document recorded August 30, 2016 as Instrument No. 4626980 of Official Records.

21. An easement for public utilities and incidental purposes in the document recorded August 30, 2016 as Instrument No. 4626984 of Official Records.

22. Easements, dedications, reservations, provisions, relinquishments, recitals, certificates, and any other matters as provided for or delineated on Land Map No. 246 referenced in the legal description contained herein. Reference is hereby made to said plat for particulars.

23. Covenants, conditions, easements and restrictions in a Declaration of Common Maintenance and Cross-Easements Agreement recorded September 18, 2017 as Instrument No. 4745261 of Official Records.

24. Easements, dedications, reservations, provisions, relinquishments, recitals, certificates, and any other matters as provided for or delineated on Survey Map No. 5948. Reference is hereby made to said plat for particulars.

25. The existence of any reversionary interest, possibility of reverter, power of termination, right of first refusal, or similar interest, of the United States of America, or any other person or entity in that portion of the land lying within the right of way granted to the Southern Pacific Railroad by the United States Government.

26. Any facts, rights, interests or claims which would be disclosed by a correct ALTA/NSPS survey.

27. Rights of parties in possession.

28. Those taxes for the fiscal year July 1, 2018 through June 30, 2019, including any secured personal property taxes collected by the County Treasurer.
APN 084-370-07

1st installment	$ **8,430.53**	**PAID**
2nd installment	**$ 8,253.98**	**PAID**
3rd installment	**$ 8,253.98**	
4th installment	**$ 8,253.98**	
Total	$ **33,192.47**	

NOTE:
Said taxes become a lien on July 1, 2018 , each installment will become due and payable on the following dates:
1st installment is due on the 3rd Monday of August, 2018.
2nd installment is due on the 1st Monday of October, 2018.
3rd installment is due on the 1st Monday of January, 2019.
4th installment is due on the 1st Monday of March, 2019.

Each installment will become delinquent ten (10) days after due.

INFORMATIONAL NOTES

NOTE to proposed insured lender only: No Private transfer fee covenant, as defined in Federal Housing Finance Agency Final Rule 12 CFR Part 1228, that was created and first appears in the Public Records on or after February 8, 2011, encumbers the Title except as follows: None

NOTE: We find no open deeds of trust. Escrow please confirm before closing.

The map attached, if any, may or may not be a survey of the land depicted hereon. First American Title Insurance Company expressly disclaims any liability for loss or damage which may result from reliance on this map except to the extent coverage for such loss or damage is expressly provided by the terms and provisions of the title insurance policy, if any, to which this map is attached.

CONDITIONS

1. **DEFINITIONS**
(a)"Mortgage" means mortgage, deed of trust or other security instrument.
(b)"Public Records" means title records that give constructive notice of matters affecting the title according to the state law where the land is located.

2. **LATER DEFECTS**
The Exceptions in Schedule B - Section Two may be amended to show any defects, liens or encumbrances that appear for the first time in the public records or are created or attached between the Commitment Date and the date on which all of the Requirements (a) and (c) of Schedule B - Section One are met. We shall have no liability to you because of this amendment.

3. **EXISTING DEFECTS**
If any defects, liens or encumbrances existing at Commitment Date are not shown in Schedule B, we may amend Schedule B to show them. If we do amend Schedule B to show these defects, liens or encumbrances, we shall be liable to you according to Paragraph 4 below unless you knew of this information and did not tell us about it in writing.

4. **LIMITATION OF OUR LIABILITY**
Our only obligation is to issue to you the Policy referred to in this Commitment, when you have met its Requirements. If we have any liability to you for any loss you incur because of an error in this Commitment, our liability will be limited to your actual loss caused by your relying on this Commitment when you acted in good faith to:

comply with the Requirements shown in Schedule B - Section One
or
eliminate with our written consent any Exceptions shown in Schedule B - Section Two.

We shall not be liable for more than the Policy Amount shown in Schedule A of this Commitment and our liability is subject to the terms of the Policy form to be issued to you.

5. **CLAIMS MUST BE BASED ON THIS COMMITMENT**
Any claim, whether or not based on negligence, which you may have against us concerning the title to the land must be based on this commitment and is subject to its terms.

First American Title

Privacy Information

We Are Committed to Safeguarding Customer Information

In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information - particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, together with our subsidiaries we have adopted this Privacy Policy to govern the use and handling of your personal information.

Applicability

This Privacy Policy governs our use of the information that you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from a public record or from another person or entity. First American has also adopted broader guidelines that govern our use of personal information regardless of its source. First American calls these guidelines its Fair Information Values.

Types of Information

Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

Use of Information

We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial service providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies and escrow companies. Furthermore, we may also provide all the information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

Former Customers

Even if you are no longer our customer, our Privacy Policy will continue to apply to you.

Confidentiality and Security

We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products or services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy and First American's Fair Information Values. We currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

Information Obtained Through Our Web Site

First American Financial Corporation is sensitive to privacy issues on the Internet. We believe it is important you know how we treat the information about you we receive on the Internet.
In general, you can visit First American or its affiliates' Web sites on the World Wide Web without telling us who you are or revealing any information about yourself. Our Web servers collect the domain names, not the e-mail addresses, of visitors. This information is aggregated to measure the number of visits, average time spent on the site, pages viewed and similar information. First American uses this information to measure the use of our site and to develop ideas to improve the content of our site.
There are times, however, when we may need information from you, such as your name and email address. When information is needed, we will use our best efforts to let you know at the time of collection how we will use the personal information. Usually, the personal information we collect is used only by us to respond to your inquiry, process an order or allow you to access specific account/profile information. If you choose to share any personal information with us, we will only use it in accordance with the policies outlined above.

Business Relationships

First American Financial Corporation's site and its affiliates' sites may contain links to other Web sites. While we try to link only to sites that share our high standards and respect for privacy, we are not responsible for the content or the privacy practices employed by other sites.

Cookies

Some of First American's Web sites may make use of "cookie" technology to measure site activity and to customize information to your personal tastes. A cookie is an element of data that a Web site can send to your browser, which may then store the cookie on your hard drive.
FirstAm.com uses stored cookies. The goal of this technology is to better serve you when visiting our site, save you time when you are here and to provide you with a more meaningful and productive Web site experience.

Fair Information Values

Fairness We consider consumer expectations about their privacy in all our businesses. We only offer products and services that assure a favorable balance between consumer benefits and consumer privacy.
Public Record We believe that an open public record creates significant value for society, enhances consumer choice and creates consumer opportunity. We actively support an open public record and emphasize its importance and contribution to our economy.
Use We believe we should behave responsibly when we use information about a consumer in our business. We will obey the laws governing the collection, use and dissemination of data.
Accuracy We will take reasonable steps to help assure the accuracy of the data we collect, use and disseminate. Where possible, we will take reasonable steps to correct inaccurate information. When, as with the public record, we cannot correct inaccurate information, we will take all reasonable steps to assist consumers in identifying the source of the erroneous data so that the consumer can secure the required corrections.
Education We endeavor to educate the users of our products and services, our employees and others in our industry about the importance of consumer privacy. We will instruct our employees on our fair information values and on the responsible collection and use of data. We will encourage others in our industry to collect and use information in a responsible manner.
Security We will maintain appropriate facilities and systems to protect against unauthorized access to and corruption of the data we maintain.

EXHIBIT A
LIST OF PRINTED EXCEPTIONS AND EXCLUSIONS (BY POLICY TYPE)

1. CALIFORNIA LAND TITLE ASSOCIATION STANDARD COVERAGE POLICY - 1990
SCHEDULE B

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records. Proceedings by a public agency which may result in taxes or assessments, or notice of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of the land or which may be asserted by persons in possession thereof.
3. Easements, liens or encumbrances, or claims thereof, which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the public records.

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:
   (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
   (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
   (c) resulting in no loss or damage to the insured claimant;
   (d) attaching or created subsequent to Date of Policy; or
   (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage or for the estate or interest insured by this policy.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with applicable "doing business" laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any claim, which arises out of the transaction vesting in the insured the estate or interest insured by their policy or the transaction creating the interest of the insured lender, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws.

2. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY FORM B - 1970
SCHEDULE OF EXCLUSIONS FROM COVERAGE

1. Any law, ordinance or governmental regulation (including but not limited to building and zoning ordinances) restricting or regulating or prohibiting the occupancy, use or enjoyment of the land, or regulating the character, dimensions or location of any improvement now or hereafter erected on the land, or prohibiting a separation in ownership or a reduction in the dimensions of area of the land, or the effect of any violation of any such law, ordinance or governmental regulation.
2. Rights of eminent domain or governmental rights of police power unless notice of the exercise of such rights appears in the public records at Date of Policy.
3. Defects, liens, encumbrances, adverse claims, or other matters (a) created, suffered, assumed or agreed to by the insured claimant; (b) not known to the Company and not shown by the public records but known to the insured claimant either at Date of Policy or at the date such claimant acquired an estate or interest insured by this policy and not disclosed in writing by the insured claimant to the Company prior to the date such insured claimant became an insured hereunder; (c) resulting in no loss or damage to the insured claimant; (d) attaching or created subsequent to Date of Policy; or (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the estate or interest insured by this policy.

3. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY FORM B - 1970
WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 2 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage by reason of the matters shown in parts one and two following:
Part One

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the public records.

4. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1970
WITH A.L.T.A. ENDORSEMENT FORM 1 COVERAGE
SCHEDULE OF EXCLUSIONS FROM COVERAGE

1. Any law, ordinance or governmental regulation (including but not limited to building and zoning ordinances) restricting or regulating or prohibiting the occupancy, use or enjoyment of the land, or regulating the character, dimensions or location of any improvement now or hereafter erected on the land, or prohibiting a separation in ownership or a reduction in the dimensions or area of the land, or the effect of any violation of any such law ordinance or governmental regulation.
2. Rights of eminent domain or governmental rights of police power unless notice of the exercise of such rights appears in the public records at Date of Policy.
3. Defects, liens, encumbrances, adverse claims, or other matters (a) created, suffered, assumed or agreed to by the insured claimant, (b) not known to the Company and not shown by the public records but known to the insured claimant either at Date of Policy or at the date such claimant acquired an estate or interest insured by this policy or acquired the insured mortgage and not disclosed in writing by the insured claimant to the Company prior to the date such insured claimant became an insured hereunder, (c) resulting in no loss or damage to the insured claimant; (d) attaching or created subsequent to Date of Policy (except to the extent insurance is afforded herein as to any statutory lien for labor or material or to the extent insurance is afforded herein as to assessments for street improvements under construction or completed at Date of Policy).
4. Unenforceability of the lien of the insured mortgage because of failure of the insured at Date of Policy or of any subsequent owner of the indebtedness to comply with applicable "doing business" laws of the state in which the land is situated.

5. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1970
WITH REGIONAL EXCEPTIONS

When the American Land Title Association Lenders Policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy, the exclusions set forth in paragraph 4 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage by reason of the matters shown in parts one and two following:
Part One

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

6. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1992
WITH A.L.T.A. ENDORSEMENT FORM 1 COVERAGE
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy;
   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims, or other matters:
   (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
   (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
   (c) resulting in no loss or damage to the insured claimant;
   (d) attaching or created subsequent to Date of Policy (except to the extent that this policy insures the priority of the lien of the insured mortgage over any statutory lien for services, labor or material or the extent insurance is afforded herein as to assessments for street improvements under construction or completed at date of policy); or
   (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage.

4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with the applicable "doing business" laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any statutory lien for services, labor or materials (or the claim of priority of any statutory lien for services, labor or materials over the lien of the insured mortgage) arising from an improvement or work related to the land which is contracted for and commenced subsequent to Date of Policy and is not financed in whole or in part by proceeds of the indebtedness secured by the insured mortgage which at Date of Policy the insured has advanced or is obligated to advance.
7. Any claim, which arises out of the transaction creating the interest of the mortgagee insured by this policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on:
(i) the transaction creating the interest of the insured mortgagee being deemed a fraudulent conveyance or fraudulent transfer; or
(ii) the subordination of the interest of the insured mortgagee as a result of the application of the doctrine of equitable subordination; or
(iii) the transaction creating the interest of the insured mortgagee being deemed a preferential transfer except where the preferential transfer results from the failure:
(a) to timely record the instrument of transfer; or
(b) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.

7. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1992
WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 6 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:
1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

8. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 1992
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:
1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
(b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims, or other matters:
(a) created, suffered, assumed or agreed to by the insured claimant;
(b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
(c) resulting in no loss or damage to the insured claimant;
(d) attaching or created subsequent to Date of Policy; or
(e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the estate or interest insured by this policy.
4. Any claim, which arises out of the transaction vesting in the insured the estate or interest insured by this policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on:
(i) the transaction creating the estate or interest insured by this policy being deemed a fraudulent conveyance or fraudulent transfer; or
(ii) the transaction creating the estate or interest insured by this policy being deemed a preferential transfer except where the preferential transfer results from the failure:
(a) to timely record the instrument of transfer; or
(b) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.

9. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 1992
WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 8 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:
Part One:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

ALTA RESIDENTIAL TITLE INSURANCE POLICY (6-1-87)
EXCLUSIONS

In addition to the Exceptions in Schedule B, you are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of any law or government regulation. This includes building and zoning ordinances and also laws and regulations concerning:
   (a) and use
   (b) improvements on the land
   (c) and division
   (d) environmental protection
   This exclusion does not apply to violations or the enforcement of these matters which appear in the public records at Policy Date.
   This exclusion does not limit the zoning coverage described in Items 12 and 13 of Covered Title Risks.
2. The right to take the land by condemning it, unless:
   (a) a notice of exercising the right appears in the public records on the Policy Date
   (b) the taking happened prior to the Policy Date and is binding on you if you bought the land without knowing of the taking
3. Title Risks:
   (a) that are created, allowed, or agreed to by you
   (b) that are known to you, but not to us, on the Policy Date -- unless they appeared in the public records
   (c) that result in no loss to you
   (d) that first affect your title after the Policy Date -- this does not limit the labor and material lien coverage in Item 8 of Covered Title Risks
4. Failure to pay value for your title.
5. Lack of a right:
   (a) to any land outside the area specifically described and referred to in Item 3 of Schedule A OR
   (b) in streets, alleys, or waterways that touch your land
   This exclusion does not limit the access coverage in Item 5 of Covered Title Risks.

11. EAGLE PROTECTION OWNER'S POLICY

CLTA HOMEOWNER'S POLICY OF TITLE INSURANCE - 1998
ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE - 1998

Covered Risks 14 (Subdivision Law Violation). 15 (Building Permit). 16 (Zoning) and 18 (Encroachment of boundary walls or fences) are subject to Deductible Amounts and Maximum Dollar Limits of Liability

EXCLUSIONS

In addition to the Exceptions in Schedule B, you are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of any law or government regulation. This includes ordinances, laws and regulations concerning:
   a. building b. zoning
   c. land use d. improvements on the land
   e. land division f. environmental protection
   This exclusion does not apply to violations or the enforcement of these matters if notice of the violation or enforcement appears in the Public Records at the Policy Date.
   This exclusion does not limit the coverage described in Covered Risk 14, 15, 16, 17 or 24.
2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not apply to violations of building codes if notice of the violation appears in the Public Records at the Policy Date.
3. The right to take the Land by condemning it, unless:
   a. a notice of exercising the right appears in the Public Records at the Policy Date; or
   b. the taking happened before the Policy Date and is binding on You if You bought the Land without Knowing of the taking.
4. Risks:
   a. that are created, allowed, or agreed to by You, whether or not they appear in the Public Records;
   b. that are Known to You at the Policy Date, but not to Us, unless they appear in the Public Records at the Policy Date;
   c. that result in no loss to You; or
   d. that first occur after the Policy Date - this does not limit the coverage described in Covered Risk 7, 8.d, 22, 23, 24 or 25.

5. Failure to pay value for Your Title.
6. Lack of a right:
   a. to any Land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
   b. in streets, alleys, or waterways that touch the Land.
   This exclusion does not limit the coverage described in Covered Risk 11 or 18.

12. THIRD GENERATION EAGLE LOAN POLICY AMERICAN LAND TITLE ASSOCIATION EXPANDED COVERAGE RESIDENTIAL LOAN POLICY (1/01/08)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to (i) the occupancy, use, or enjoyment of the Land; (ii) the character, dimensions, or location of any improvement erected on the Land; (iii) the subdivision of land; or(iv) environmental protection; or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
   (b)Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27 or 28); or
   (e) resulting in loss or damage which would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury, or any consumer credit protection or truth-in-lending law. This Exclusion does not modify or limit the coverage provided in Covered Risk 26.
6. Any claim of invalidity, unenforceability or lack of priority of the lien of the Insured Mortgage as to Advances or modifications made after the Insured has Knowledge that the vestee shown in Schedule A is no longer the owner of the estate or interest covered by this policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching subsequent to Date of Policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11(b) or 25.
8. The failure of the residential structure, or any portion of it, to have been constructed before, on or after Date of Policy in accordance with applicable building codes. This Exclusion does not modify or limit the coverage provided in Covered Risk 5 or 6.

13. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 2006
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions, or location of any improvement erected on the Land;
   (iii) the subdivision of land; or
   (iv) environmental protection;
   or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
   (a) a fraudulent conveyance or fraudulent transfer, or

(b) a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.

7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

14. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 2006 WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 13 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.

15. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 2006 EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions, or location of any improvement erected on the Land;
   (iii) the subdivision of land; or
   (iv) environmental protection;or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risks 9 and 10); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors rights laws, that the transaction vesting the Title as shown in Schedule A, is
   (a) a fraudulent conveyance or fraudulent transfer; or
   (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

16. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 2006 WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 15 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.

2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.

Washoe County Treasurer
P.O. Box 30039, Reno, NV 89520-3039
ph: (775) 328-2510 fax: (775) 328-2500
Email: tax@washoecounty.us

Washoe County Treasurer
Tammi Davis

Bill Detail

Back to Account Detail | Change of Address | Print this Page

Washoe County Parcel Information

Parcel ID	Status	Last Update
08437007	Active	8/16/2019 2:07:46 AM

Current Owner:
SCANNELL PROPERTIES #257 LLC
8801 RIVER CROSSING BLVD STE 300
INDIANAPOLIS, IN 46240

SITUS:
12475 MUSTANG RD
WASHOE COUNTY NV

Taxing District
4000

Geo CD:

Legal Description

SubdivisionName _GOVERNMENT HOMESITES Section 15 Lot 2 Block Range 21 Township 19

Installments

Period	Due Date	Tax Year	Tax	Penalty/Fee	Interest	Total Due
INST 1	8/19/2019	2019	$0.00	$0.00	$0.00	$0.00
INST 2	10/7/2019	2019	$25,774.34	$0.00	$0.00	$25,774.34
INST 3	1/6/2020	2019	$25,774.34	$0.00	$0.00	$25,774.34
INST 4	3/2/2020	2019	$25,774.34	$0.00	$0.00	$25,774.34
		Total Due:	**$77,323.02**	**$0.00**	**$0.00**	**$77,323.02**

Tax Detail

	Gross Tax	Credit	Net Tax
State of Nevada	$5,834.33	($429.85)	$5,404.48
Truckee Meadows Fire Dist	$18,532.58	($1,365.42)	$17,167.16
Washoe County	$47,762.58	($3,518.99)	$44,243.59
Washoe County Sc	$39,072.88	($2,878.75)	$36,194.13
Water District	$170.28	$0.00	$170.28
TRACY SEGMENT WATER BASIN	$6.48	$0.00	$6.48
RECLAMATION DAM SAFETY	$88.00	$0.00	$88.00
Total Tax	**$111,467.13**	**($8,193.01)**	**$103,274.12**

Payment History

Tax Year	Bill Number	Receipt Number	Amount Paid	Last Paid
2019	2019182676	B19.29051	$25,951.10	8/6/2019

Pay By Check

Please make checks payable to:
WASHOE COUNTY TREASURER

Mailing Address:
P.O. Box 30039
Reno, NV 89520-3039

Overnight Address:
1001 E. Ninth St., Ste D140
Reno, NV 89512-2845

Change of Address

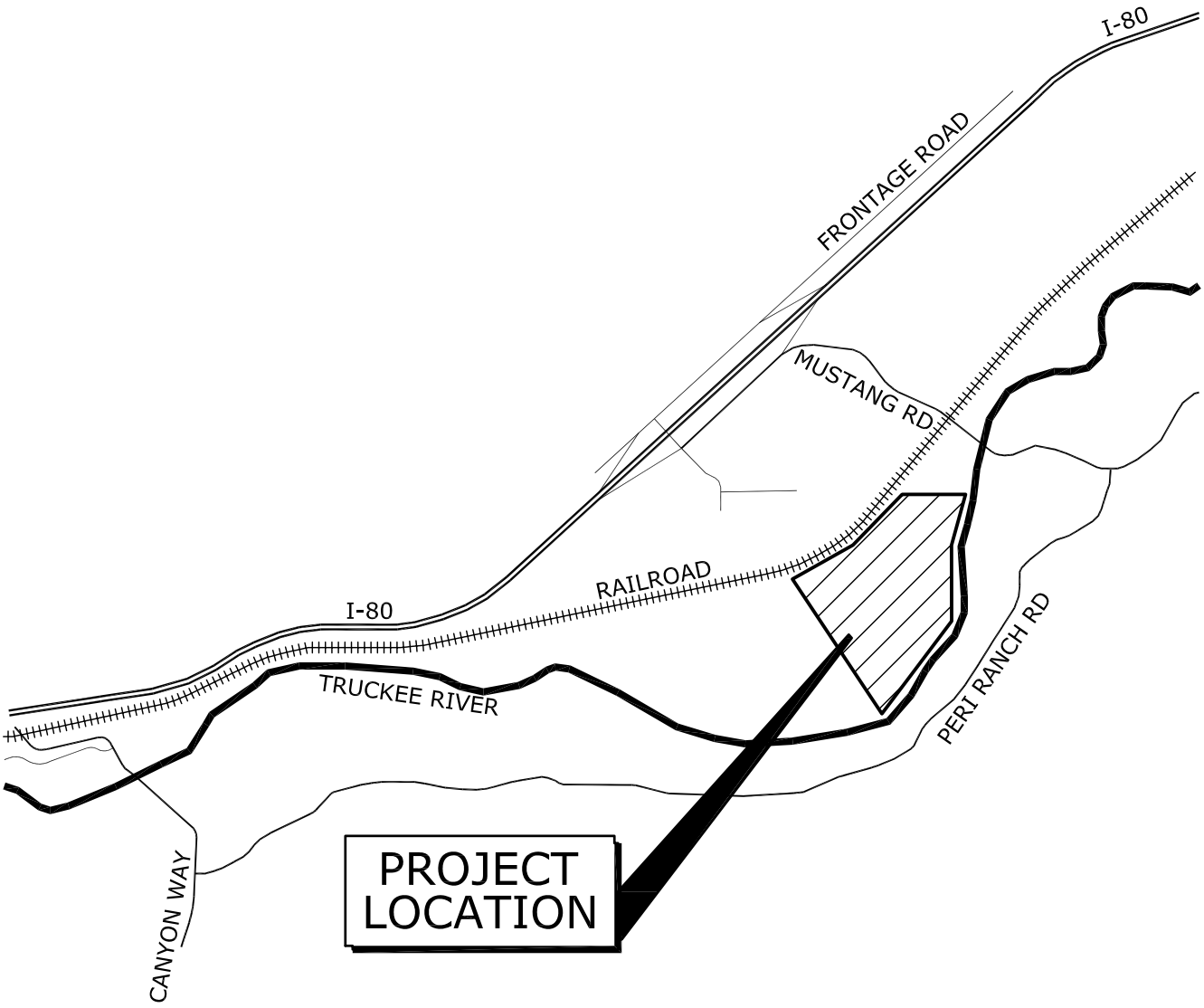
All requests for a mailing address change must be submitted in writing, including a signature (unless using the online form).

To submit your address change online click here

Address change requests may also be faxed to:
(775) 328-3642

Address change requests may also be mailed to:
Washoe County Assessor
1001 E 9th Street
Reno, NV 89512-2845

DRAWN:	J.P.B.		DATE:	08/01/18
DESCRIPTION:	VICINITY MAP	APN:084-370-07	SUBMITTAL:	EX-1



VICINITY MAP

SCALE: N.T.S.

PROJECT/CLIENT:

JOB #: 18091

MUSTANG INDUSTRIAL DEVELOPMENT
McCarran, NV

SCANNELL PROPERTIES
821 Meander Court, Suite 200, Medina, Minnesota 55340

TECTONICS DESIGN GROUP
10451 Double R Boulevard, Reno, NV 89521
www.tectonicsdesigngroup.com
tel 775-824-9988
fax 775-824-9986

Photo Locations

SCALE: NTS

N W E S

DRAWN: J.P.B. / W.T.G.
DESIGNED: J.P.B.
CHECKED/STAMPED:

STAMP:

DESIGNER:

TECTONICS DESIGN GROUP
730 Sandhill Rd., #250, Reno, Nevada 89521
www.tectonicsdesigngroup.com
tel 775-824-9988
fax 775-824-9986

PROJECT/CLIENT:

18091
MUSTANG INDUSTRIAL DEVELOPMENT
12475 MUSTANG ROAD Washoe County, NV
Scannell Properties
821 Meander Court, Suite 200, Medina, Minnesota 55340

SUBMITTAL RECORD:

DATE:		SUBMITTAL
06/14/16	A	SITE IMPROVEMENT PERMIT #16-1945
09/26/18		CLIENT UPDATES BUILDING SHIFT
09/28/18	B	RFI 11
01/02/18	C	SEWER IE UPDATES UPDATES PER
01/16/19	D	TMFPD COMMENTS UPDATES PER ARCH.
05/30/19	E	SD CHANGES UPDATED GRADING
08/14/19	F	DETAIL ASBUILT DRAWINGS

SHEET TITLE:

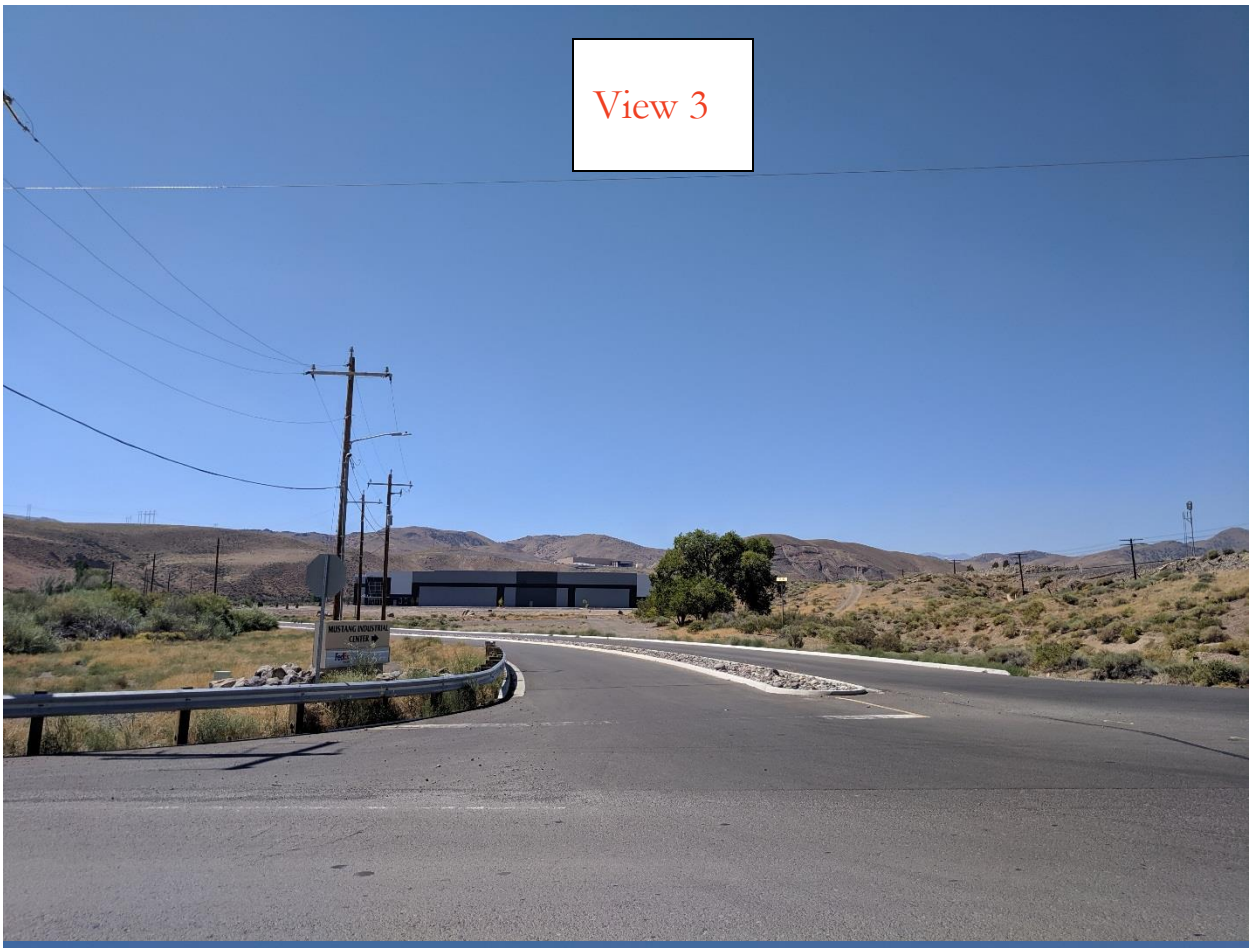
SHEET:

EX

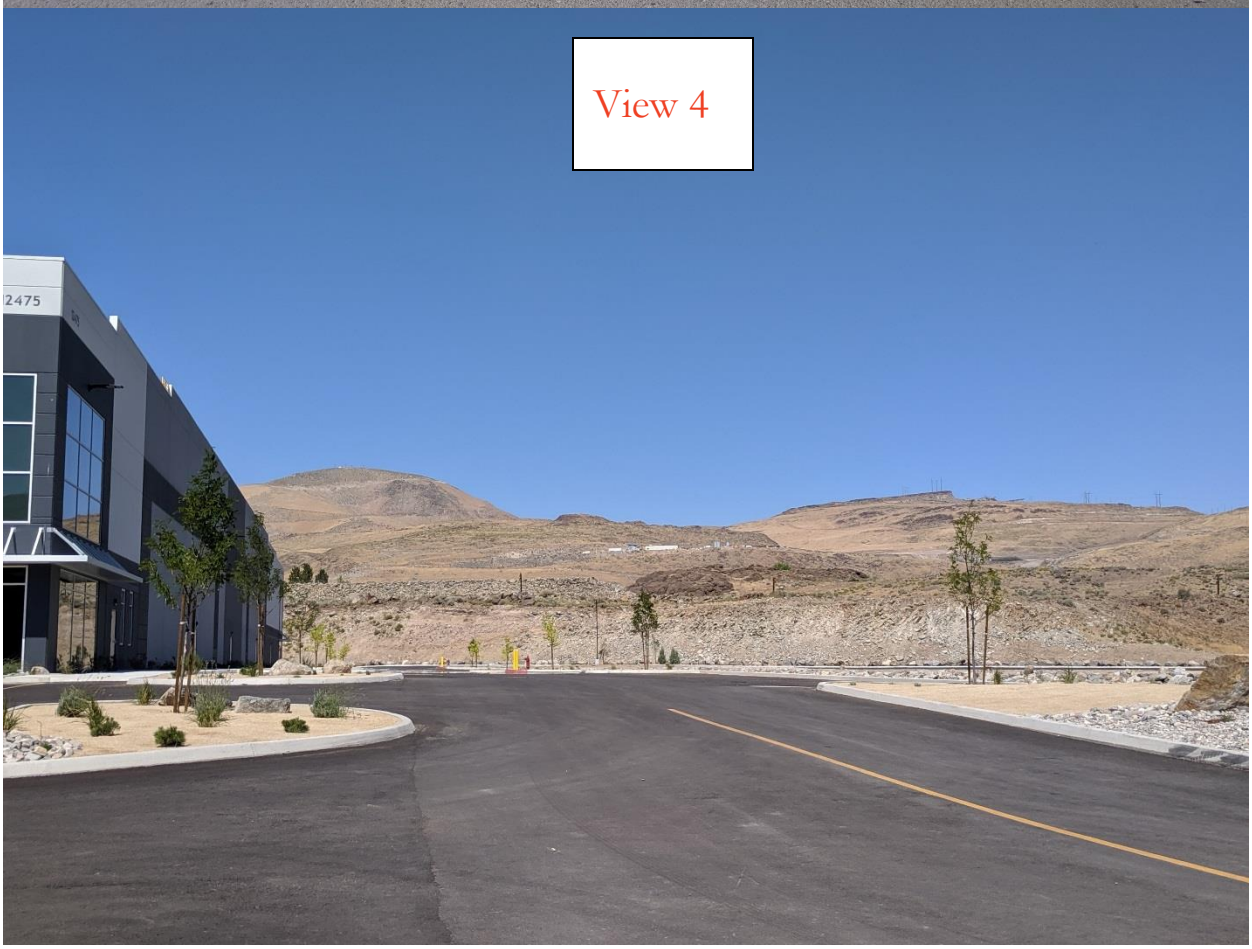
View 1

View 2

View 3

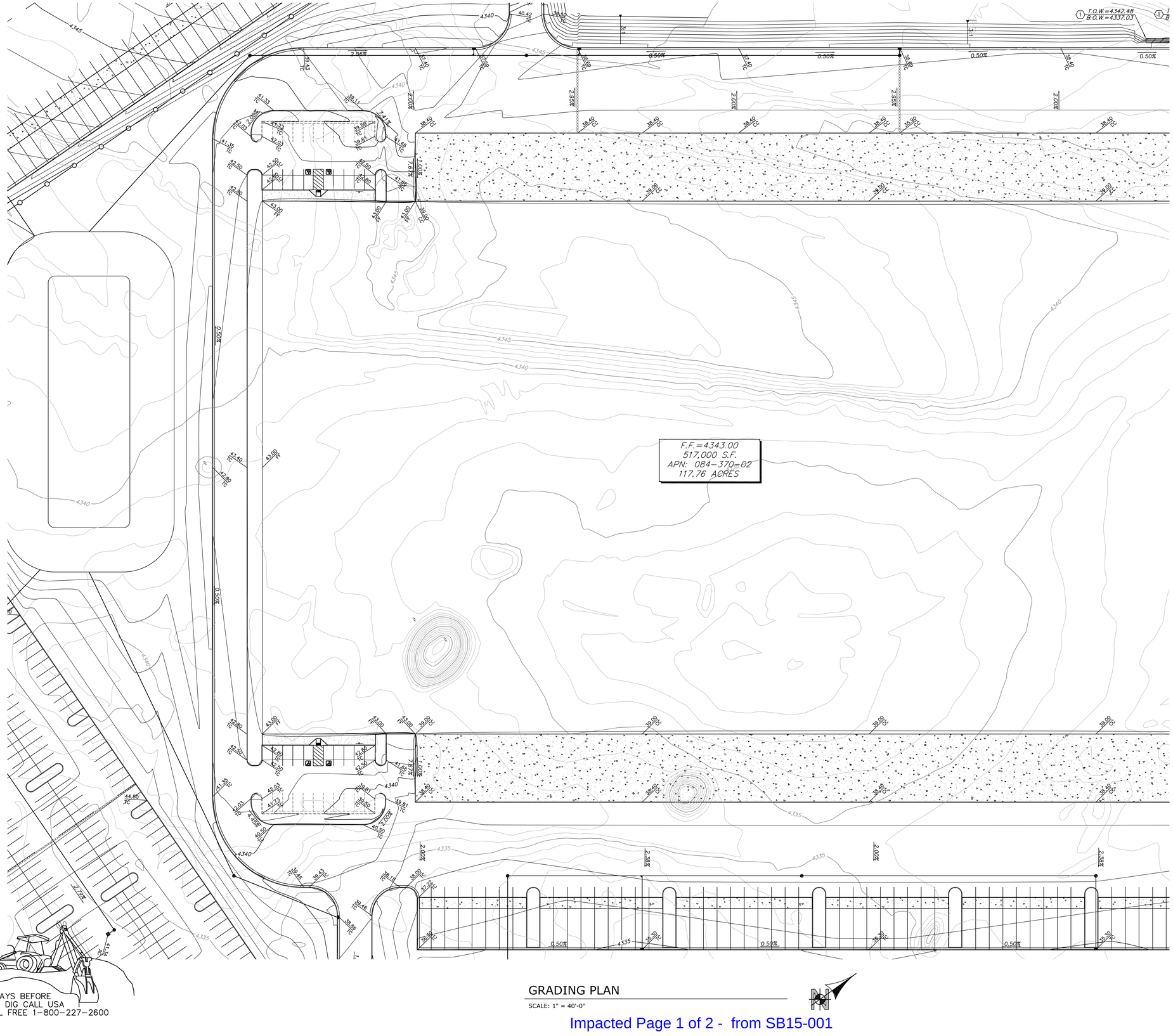


View 4



View 5

View 6



GRADING PLAN

SCALE: 1" = 40'-0"

1"=40'-0" FED EX FACILITY 14217 C3S

PRELIMINARY ESTIMATED EARTHWORK QUANTITIES (TO SUB-GRADE):

CUT: 332,960 CY CUT
FILL: 328,085 CY FILL
TOTAL: 4,875 CY EXPORT
NOTE: THESE ARE ESTIMATED QUANTITIES ONLY. CONTRACTOR IS RESPONSIBLE TO CONSTRUCT PROJECT TO LINES AND GRADES AS SHOWN ON THE PLANS.

NOTES:

1. *REFERENCE "GENERAL NOTES" ON SHEET C6.1*
2. *REFERENCE "ABBREVIATIONS" ON SHEET C6.1*
3. *REFERENCE "LEGEND" ON SHEET C6.1*
4. *ADD 4300 TO ALL FINISHED GRADE OR INVERT ELEVATIONS*
5. *PERMANENT STRIPING, BIKE LANES, AND MARKINGS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES"*
6. *DISTURBED AREAS TO BE RE-VEGITATED WITH IRRIGATION*

CONSTRUCTION NOTES:

1. *CONSTRUCT ROCK RETAINING WALL, DESIGN BY OTHERS.*

STAMP:

DRAWN: S.W.T.
DESIGNED: S.W.T.
CHECKED/STAMPED: MATT K. RASMUSSEN, P.E.

DESIGNER:

TECTONICS DESIGN GROUP
10451 Double R Boulevard
Reno, NV 89521
www.tdg-inc.com
tel 775-824-9988
fax 775-824-9986

PROJECT/CLIENT:

Mustang Industrial Development
McCarren, NV
Scannell Properties
821 Meander Court, Suite 200, Medina, Minnesota 55340
#: 14217

SUBMITTAL RECORD:

DATE: SUBMITTAL
03/10/15 SUP SUBMITTAL

SHEET TITLE:

GRADING PLAN

SHEET:

C3.5

F.F.=4343.00
517,000 S.F.
APN: 084-370-02
117.76 ACRES

2 DAYS BEFORE
YOU DIG CALL USA
TOLL FREE 1-800-227-2600

1"=40'-0" FED EX FACILITY 14217 C36

GRADING PLAN

SCALE: 1" = 40'-0"

PRELIMINARY ESTIMATED EARTHWORK QUANTITIES (TO SUB-GRADE):

CUT: 332,960 CY CUT
FILL: 328,085 CY FILL
TOTAL: 4,875 CY EXPORT
NOTE: THESE ARE ESTIMATED QUANTITIES ONLY. CONTRACTOR IS RESPONSIBLE TO CONSTRUCT PROJECT TO LINES AND GRADES AS SHOWN ON THE PLANS.

NOTES:

1. REFERENCE "GENERAL NOTES" ON SHEET C6.1
2. REFERENCE "ABBREVIATIONS" ON SHEET C6.1
3. REFERENCE "LEGEND" ON SHEET C6.1
4. ADD 4300 TO ALL FINISHED GRADE OR INVERT ELEVATIONS
5. PERMANENT STRIPING, BIKE LANES, AND MARKINGS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES"
6. DISTURBED AREAS TO BE RE-VEGITATED WITH IRRIGATION

CONSTRUCTION NOTES:

1. CONSTRUCT ROCK RETAINING WALL, DESIGN BY OTHERS.

STAMP:

DRAWN: S.W.T.
DESIGNED: S.W.T.
CHECKED/STAMPED: MATT K. RASMUSSEN, P.E.

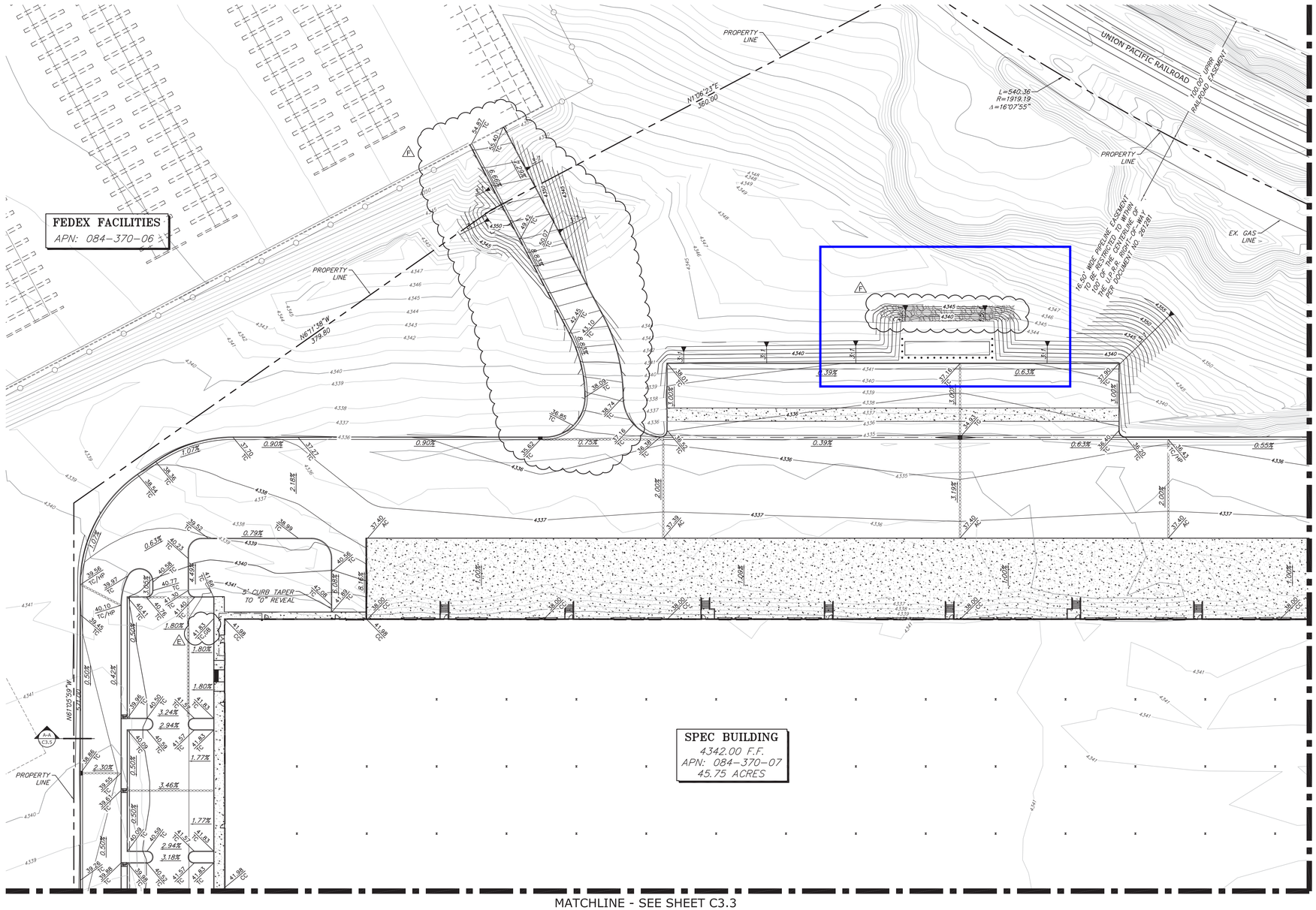
DESIGNER: TECTONICS DESIGN GROUP
10451 Double R Boulevard Reno, NV 89521
tel 775-824-9988 fax 775-824-9986 www.tdg-inc.com

PROJECT/CLIENT:
#: 14217
Mustang Industrial Development
McCarren, NV
Scannell Properties
821 Meander Court, Suite 200, Medina, Minnesota 55340

SUBMITTAL RECORD:
DATE: SUBMITTAL
03/10/15 SUP SUBMITTAL

SHEET TITLE: GRADING PLAN

SHEET: C3.6



WEST - GRADING PLAN

SCALE: 1" = 40'-0"

NOTE:

SHOULD ANY PREHISTORIC OR HISTORIC REMAINS/ARTIFACTS BE DISCOVERED DURING SITE DEVELOPMENT, WORK SHALL TEMPORARILY BE HALTED AT THE SPECIFIC SITE AND THE STATE HISTORIC PRESERVATION OFFICE OF THE DEPARTMENT OF MUSEUMS, LIBRARY AND ARTS SHALL BE NOTIFIED TO RECORD AND PHOTOGRAPH THE SITE. THE PERIOD OF TEMPORARY DELAY SHALL BE LIMITED TO A MAXIMUM OF TWO (2) WORKING DAYS FROM THE DATE OF NOTIFICATION.

CONSTRUCTION NOTES:

1. *CONSTRUCT INFILTRATION BASIN AS PER DETAIL 1, SHEET C6.4 TO ENSURE THAT TOTAL DISSOLVED SOLIDS, NITROGEN, PHOSPHOROUS AND AMBIENT TEMPERATURE MEET WATER QUALITY REQUIREMENTS ESTABLISHED BY THE NDEP*
2. *CONSTRUCT RIPRAP CHANNEL AS PER DETAIL 6, SHEET C6.4*

NOTES:

1. *REFERENCE "GENERAL NOTES" ON SHEET C6.1*
2. *REFERENCE "ABBREVIATIONS" ON SHEET C6.1*
3. *REFERENCE "LEGEND" ON SHEET C6.1*
4. *ADD 4300 TO ALL FINISHED GRADE OR INVERT ELEVATIONS*
5. *DISTURBED AREAS TO BE RE-VEGETATED*
6. *SEE GEOTECHNICAL REPORT FOR OVER EXCAVATION REQUIREMENTS*
7. *ALL CREATED SLOPES GREATER THAN 3:1 SHALL BE TREATED WITH 0.5' DEEP 6"-8" ROCK RIPRAP*
8. *TEMPORARY CONSTRUCTION FENCING SHALL BE INSTALLED AT THE LIMITS OF GRADING*
9. *ALL MATERIALS (SUCH AS GRAVEL, CONCRETE, SOIL AND OTHER DUMPED ITEMS) NOT SUITABLE FOR USE AS CUT-AND-FILL MATERIAL, SHALL BE REMOVED FROM THE PROJECT SITE TO A LOCATION APPROVED BY WASHOE COUNTY.*
10. *BOULDERS UNEARTHED DURING GRADING SHALL BE PLACED ON ALL CUT AND FILL SLOPES TO HELP STABILIZE THE SLOPES AND TO HELP CREATE A MORE NATURAL APPEARANCE*
11. *EVERY ATTEMPT HAS BEEN MADE TO GRADE THIS DEVELOPMENT AS A BALANCED SITE WITH MINIMAL IMPORT OR EXPORT OF FILL REQUIRED.*

STAMP:

DRAWN: J.P.B. / W.T.G.
DESIGNED: J.P.B.
CHECKED/STAMPED:

DESIGNER:

TECTONICS DESIGN GROUP
730 Sandhill Rd., #250, Reno, Nevada 89521
tel 775-824-9988
fax 775-824-9986
www.tectonicsdesigngroup.com

PROJECT/CLIENT:

18091
MUSTANG INDUSTRIAL DEVELOPMENT
12475 MUSTANG ROAD Washoe County, NV
Scannell Properties
821 Meander Court, Suite 200, Medina, Minnesota 55340

SUBMITTAL RECORD:

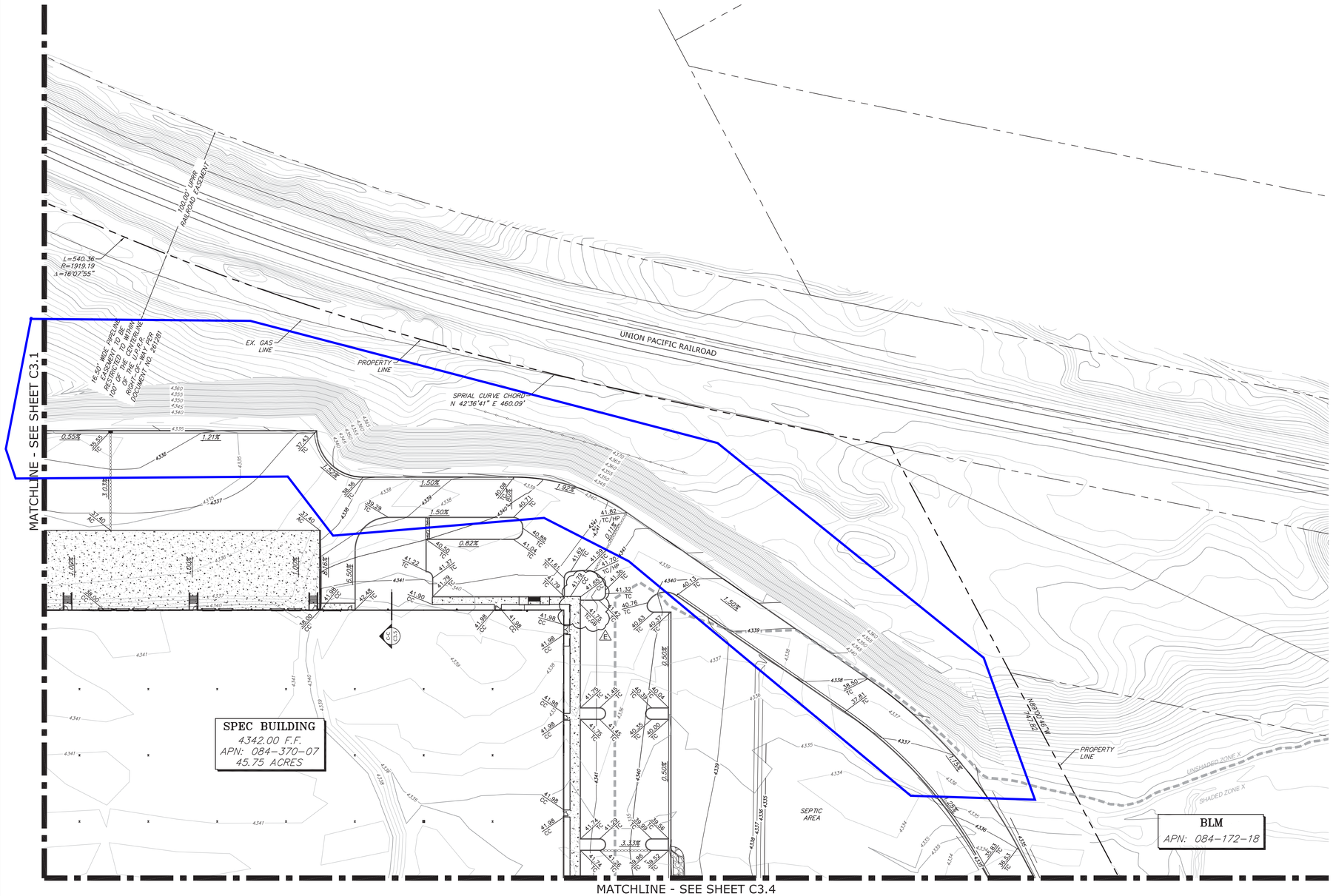
DATE:		SUBMITTAL
06/14/16	A	SITE IMPROVEMENT PERMIT #16-1945
09/26/18		CLIENT UPDATES BUILDING SHIFT
09/28/18	B	RFI 11
01/02/18	C	SEWER IE UPDATES UPDATES PER TMFPD COMMENTS
01/16/19	D	UPDATES PER ARCH. SD CHANGES
05/30/19	E	UPDATED GRADING DETAIL
08/14/19	F	ASBUILT DRAWINGS

SHEET TITLE: WEST - GRADING PLAN

SHEET: C3.1

1"=40'-0" MUSTANG INDUSTRIAL PARK 18122_C31

Asbuilt Page 1 of 2 - Showing Slope Behind Propane Tank



NORTH - GRADING PLAN

SCALE: 1" = 40'-0"

2 DAYS BEFORE
YOU DIG CALL USA
TOLL FREE 1-800-227-2600

Asbuilt Page 2 of 2 - Showing Bedrock Slope Along Drive

NOTE:

SHOULD ANY PREHISTORIC OR HISTORIC REMAINS/ARTIFACTS BE DISCOVERED DURING SITE DEVELOPMENT, WORK SHALL TEMPORARILY BE HALTED AT THE SPECIFIC SITE AND THE STATE HISTORIC PRESERVATION OFFICE OF THE DEPARTMENT OF MUSEUMS, LIBRARY AND ARTS SHALL BE NOTIFIED TO RECORD AND PHOTOGRAPH THE SITE. THE PERIOD OF TEMPORARY DELAY SHALL BE LIMITED TO A MAXIMUM OF TWO (2) WORKING DAYS FROM THE DATE OF NOTIFICATION.

CONSTRUCTION NOTES:

1. *CONSTRUCT INFILTRATION BASIN AS PER DETAIL 1, SHEET C6.4 TO ENSURE THAT TOTAL DISSOLVED SOLIDS, NITROGEN, PHOSPHOROUS AND AMBIENT TEMPERATURE MEET WATER QUALITY REQUIREMENTS ESTABLISHED BY THE NDEP*
2. *CONSTRUCT RIPRAP CHANNEL AS PER DETAIL 6, SHEET C6.4*

NOTES:

1. *REFERENCE "GENERAL NOTES" ON SHEET C6.1*
2. *REFERENCE "ABBREVIATIONS" ON SHEET C6.1*
3. *REFERENCE "LEGEND" ON SHEET C6.1*
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9. *ALL MATERIALS (SUCH AS GRAVEL, CONCRETE, SOIL AND OTHER DUMPED ITEMS) NOT SUITABLE FOR USE AS CUT-AND-FILL MATERIAL, SHALL BE REMOVED FROM THE PROJECT SITE TO A LOCATION APPROVED BY WASHOE COUNTY.*
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11. *EVERY ATTEMPT HAS BEEN MADE TO GRADE THIS DEVELOPMENT AS A BALANCED SITE WITH MINIMAL IMPORT OR EXPORT OF FILL REQUIRED.*

DRAWN: J.P.B. / W.T.G.
DESIGNED: J.P.B.
CHECKED/STAMPED:

STAMP:

DESIGNER:

TECTONICS DESIGN GROUP
730 Sandhill Rd., #250, Reno, Nevada 89521
tel 775-824-9988
fax 775-824-9986
www.tectonicsdesigngroup.com

PROJECT/CLIENT:

MUSTANG INDUSTRIAL DEVELOPMENT
12475 MUSTANG ROAD Washoe County, NV

Scannell Properties
821 Meander Court, Suite 200, Medina, Minnesota 55340

#: 18091

SUBMITTAL RECORD:

DATE:		SUBMITTAL
06/14/16	A	SITE IMPROVEMENT PERMIT #16-1945
09/26/18		CLIENT UPDATES
		BUILDING SHIFT
		RFI 11
09/28/18	B	SEWER IE UPDATES
01/02/18	C	UPDATES PER TMFPD COMMENTS
01/16/19	D	UPDATES PER ARCH. SD CHANGES
05/30/19	E	UPDATED GRADING DETAIL
08/14/19	F	ASBUILT DRAWINGS

SHEET TITLE: NORTH - GRADING PLAN

SHEET: C3.2

1"=40'-0" MUSTANG INDUSTRIAL PARK 18122_C32

Mr. Mike Simmons
Scannell Properties
8801 River Crossing Boulevard Suite 300
Indianapolis, IN 46240

Project No.: 1827-04-1
August 16, 2019

RE: Geotechnical Investigation Addendum – Bedrock Cut Slopes
Mustang Industrial Development Spec Building
Washoe County, Nevada

Dear Mr. Simmons:

Black Eagle Consulting, Inc. (BEC) completed a geotechnical investigation for the above-referenced project titled *Geotechnical Investigation Update, Mustang Industrial Development Spec Building, Washoe County, Nevada*, dated March 25, 2016. Black Eagle Consulting, Inc. provided inspection and testing services during the original mass grading for the overall project which included both the FedEx building and the Spec building as well as the construction of these buildings. This addendum provides a summary of the geotechnical conditions and BEC's evaluation associated with the bedrock cut slope that was constructed as part of the project.

The March 2016 geotechnical investigation report provides the recommendation that the bedrock cuts northwest of the Spec building can be sloped at a 1.5H:1V (horizontal to vertical) ratio. During grading, competent bedrock was encountered in this area and was consequently evaluated by BEC; we provided the recommendation that the bedrock cuts can be sloped at a 1H:1V ratio via a geotechnical memorandum dated August 12, 2016. The August 2016 memorandum also discussed the originally planned tiered rockery walls in this area which can be eliminated with the competent bedrock encountered and the possible steep cut slope in bedrock. Based on BEC's evaluation during grading as well as our recent evaluation (3 years after construction of the bedrock cut slope), the subject bedrock cut slope is globally stable and should provide sufficient long-term performance.

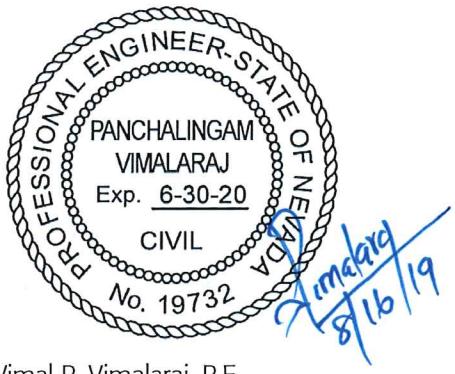
In addition, BEC also evaluated the cut slope associated with the propane tank pad northwest of the Spec building and provided geotechnical recommendations on its stability and for long-term performance. The evaluation by BEC as well as the recommendations were provided via a geotechnical memorandum dated April 23, 2019.

The geotechnical report for the project and geotechnical memorandums discussed within this letter are attached.

We appreciate being of service to you on this project. If you have any questions or require any additional information, please do not hesitate to contact us.

Sincerely,

Black Eagle Consulting, Inc.



Vimal P. Vimalaraj, P.E.
Engineering Division Manager

PV:cjr

Copies to: Addressee (PDF via email)
Mr. Jon Browning, PE, Tectonics Design Group (7 copies and PDF via email)

Black Eagle Consulting, Inc.

Geotechnical Investigation
Update

Mustang Industrial Development Spec Building

Washoe County, Nevada

March 25, 2016

Prepared for
Scannell Properties

Black Eagle Consulting, Inc.
Geotechnical & Construction Services

Mr. Dan Salzer
Scannell Properties
821 Meander Court, Suite 200
Medina, MN 55340

Project No.: 1827-01-2
March 25, 2016

RE: Geotechnical Investigation Update
Mustang Industrial Development Spec Building
Washoe County, Nevada

Dear Mr. Salzer:

Black Eagle Consulting, Inc. (BEC) is pleased to present this update to our geotechnical investigation for the subject project titled *Geotechnical Investigation, H.P. Ranch Parcel Distribution Facility, Washoe County, Nevada,* dated April 13, 2015 (BEC, 2015). At the time the previous report was published, the project scope included 1 industrial building (Distribution Facility); the scope has since expanded to include an additional 564,000-square-foot (sf) warehouse building (Spec Building) within the eastern portion of the project site. Our scope of work for the subject project included research, exploration, laboratory testing and engineering analysis to provide updated or revised geotechnical recommendations, as necessary, for design and construction of the proposed Spec Building. Where not specifically addressed in this geotechnical update report, the geotechnical information and recommendations contained in the 2015 geotechnical report remain valid for the proposed Spec Building. The 2015 geotechnical report is included as Appendix A (Geotechnical Report for Distribution Facility).

Project Description

The overall Mustang Industrial Development project site consists of an irregular-shaped parcel of approximately 114 acres located in Washoe County, Nevada. The project includes the design and construction of a 343,000-sf Distribution Facility, the subject 564,000-sf Spec Building, and associated improvements including automobile and truck parking lots, driveways, and a main access road to the site from Mustang Road. The subject building will be oriented southwest-northeasterly within the eastern half of the parcel.

The proposed Spec Building will be a Portland cement concrete (PCC) tilt-up panel structure founded on shallow spread footings and will have a PCC slab-on-grade floor. Loading docks with associated truck ramps will be located on both the northwestern (longer) and southeastern sides of the Spec Building.

A final grading plan for the project was not available at the time of this report. Based on the preliminary grading concepts developed by Tectonics Design Group, the finished floor elevation of the Spec Building will be approximately 4,343 feet above mean sea level (msl). Mass grading will require maximum cut and fill depths of approximately 4 and 7 feet, respectively, within the proposed building footprint. Cuts will occur within the northwestern third of the building footprint, and the remaining southeastern portion of the building footprint will receive fills. The loading docks will require an additional 4 feet of cut on the north side and shallower fills on the south side of the building.

The parking lots and a secondary access roadway off of the primary access roadway north and northwest of the northern corner of the Spec Building will require additional relatively deep cuts into the existing steeper slope down from the Union Pacific Railroad (UPRR) tracks. Based on the preliminary grading plans, cuts up to 25 feet in depth will be supported by 1 to 3 tiers of retaining walls each up to 10 feet tall. Rockery retaining walls are currently proposed in this area. It is our understanding some changes to the grading concepts may still occur.

Site Conditions

The overall site conditions of the parcel, including the area to host the Spec Building, are described in detail in the 2015 geotechnical report that is included in Appendix A. No additional description is included in this update report.

Additional Exploration within the Spec Building Footprint

The site to host the proposed Spec Building at the Mustang Industrial Development was explored on February 25 and 26, 2016, by drilling 13 test borings (Boring BH-01 through BH-13). The locations of the borings were delineated by the project's general contractor. All borings were located within the footprint of the Spec Building. The small, deep cut area associated with the proposed parking lots north and west of the northern corner of the building is presently a steep slope (nearly at a 3H:1V [horizontal to vertical] ratio) that exhibits volcanic bedrock on the slope face; as such, exploration of the subject area via borings was not possible due to access constraints. In addition, advancing borings from the top of the subject steep slope may require a UPRR encroachment permit because the access needs to be obtained via a UPRR right of way. The borings were drilled using 8-inch-outside-diameter (O.D.), 4-¼-inch-inside-diameter (I.D.), hollow-stem augers and a truck-mounted CME 75 soils sampling drill rig. The maximum depth of exploration was 15 feet below the existing ground surface. The locations of the test borings are shown on Plate 1 (Plot Plan).

The native soils were sampled in-place every 2.5 to 5 feet by use of a standard, 2-inch O.D., split-spoon sampler driven by a 140-pound automatic drive hammer with a 30-inch stroke. The number of blows to drive the sampler the final 12 inches of an 18-inch penetration (Standard Penetration Test [SPT] - American Society for Testing and Materials [ASTM] D 1586) into undisturbed soil is an indication of the density and consistency of the material. Pocket penetrometer testing was performed on various samples of fine-grained soils in order to evaluate unconfined compressive strength.

A 3-½-inch O.D., split-spoon sampler (ASTM D 3550) was also used to sample soils containing gravel or where approximate in-place densities of subsurface materials were required. Sampling methods used were similar to the SPT but also included the use of 2-½-inch diameter, 6-inch-long, brass sampling tubes placed inside the split-spoon sampler. Because of the larger diameter of the sampler, blowcounts are typically higher than those obtained with the SPT and should not be directly equated to SPT blowcounts. The logs indicate the type of sampler used for each sample.

Due to the relatively small diameter of the samplers, the maximum particle size that could be obtained was approximately 1.25 inches. The final logs may not, therefore, adequately represent the actual quantity or presence of cobbles or boulders. Exploration drilling encountered many cobbles and boulders, resulting in multiple attempts to achieve the desired boring depth and/or shallow drilling refusal.

A geologist examined and identified all soils in the field in accordance with ASTM D 2488. During drilling, representative bulk samples were placed in sealed plastic bags and returned to our Reno, Nevada laboratory for testing. Additional soil classification was subsequently performed in accordance with ASTM 2487 (Unified Soil Classification System [USCS]) upon completion of laboratory testing. Logs of the test borings are presented as Plate 2 (Boring Logs), and a USCS chart has been included as Plate 3 (Graphic Soils Classification Chart).

Laboratory Testing

All soils testing performed in the BEC soils laboratory is conducted in accordance with the standards and methodologies described in Volume 4.08 of the ASTM Standards. Representative samples from the exploration were analyzed to determine their in-situ moisture content (ASTM D 2216), grain size distribution (ASTM D 422), and plasticity index (ASTM D 4318); the results of these tests are shown on Plate 4 (Index Tests Results). Results of these tests were used to classify the soils according to ASTM D 2487, to verify the field classification, and to generate any updated geotechnical recommendations for the Spec Building.

Chemical testing was performed on a representative sample of site foundation soils to evaluate the material's potential to corrode buried steel and concrete in contact with the ground. The samples were tested for pH, resistivity, redox potential, soluble sulfates and sulfides. The results of the chemical tests are shown on Appendix B (Chemical Test Results). Chemical testing was performed by Sierra Environmental Monitoring Laboratory of Reno, Nevada.

Geologic and Soil Conditions

The overall Mustang Industrial Development lies adjacent to the Truckee River east of Reno, Nevada. The site geology is extremely complex and consists of glacial outwash sand and gravel soils with abundant cobbles and boulders interbedded with lakebed deposits of fine sand and silt. Wind-deposited fine sands exist at the original ground surface. An older diatomaceous siltstone is present in isolated areas beneath the outwash and lakebed deposits. A more detailed description of the site geology is presented within our 2015 geotechnical report (BEC, 2015) that is enclosed in Appendix A.

Within the vicinity of the proposed Spec Building, the original ground surface has been mined throughout the majority of the southern and eastern portions of the site, removing the surficial wind-transported sands and some gravel soils throughout much of the site. There are stockpiles of fill material within the northeast corner of the site. Within the building footprint is a stockpile 4 to 6 feet thick of asphalt grindings. The majority of native site soils generally consist of sand and gravel deposits with abundant cobbles and occasional boulders. Within the southern corner of the building footprint, near boring BH-03, a siltstone sedimentary rock unit was

encountered through the maximum exploration depth of about 16.5 feet below existing ground surface. Lakebed silts are present on the exposed slope near test hole TH-01 (BEC, 2015), above outwash sands and gravels in boring BH-04, and below the outwash sands and gravels within boring BH-12.

The outwash sand and gravel soils generally consist of poorly graded sand to clayey sand to clayey gravel. During drilling, drill rig response indicated abundant cobbles and boulders. Cobbles and boulders resulted in drilling refusal in 3 borings; multiple attempts were made for drilling the subject borings in the general vicinity and were unsuccessful, resulting in refusal at similar depth. The outwash deposits are described as brown to gray to reddish brown, slightly moist to moist, medium dense to very dense, and as containing 5 to 32 percent non-plastic to medium plasticity fines and up to 60 percent subrounded to rounded gravel. Previous test pit exploration within this area estimated up to 35 percent of the total soil mass consists of cobbles and boulders up to 2 feet in diameter (BEC, 2015).

The lakebed silts and sands are located within the existing cut slope along the northern portion of the site near test hole TH-01 (BEC, 2015), at the ground surface along the southeast portion of the site near boring BH-04, and at depth in the northern corner of the site near boring BH-12. The lakebed deposits exposed at the existing ground surface are approximately 4 feet thick. These soils are described as olive to light brown with occasional orange staining, dry to very moist, medium dense (firm to hard) silt with sand to silty sand, and as containing 40 to 76 percent non-plastic to low plasticity fines and fine to medium sand.

The siltstone unit is present in the elevated bench at the southern corner of the building pad near boring BH-03. During previous test pit exploration, test pit TP-06 (BEC, 2015), and in SPT sampling of previous borings, this material mechanically broke down to elastic silt materials.

Volcanic bedrock units are exposed on the existing slope down from the UPRR tracks and are similar to the rock units encountered within the northwestern portion of the overall site in boring B-11 and test pit TP-07 (BEC, 2015). These rock units mechanically broke down into clayey gravel with sand and cobbles.

Groundwater was encountered in boring BH-06 at a depth of 15.5 feet beneath the existing ground surface, at an approximate elevation of 4,317.5 feet above msl. Additional discussion with respect to the groundwater level within the overall parcel is contained in the 2015 geotechnical report included as Appendix A. Based on the topographic elevation increases away from the Truckee River and the expected cut depths, groundwater is not anticipated to affect the design or construction of the Spec Building and associated improvements.

Geologic Hazards

A discussion of the site's seismicity, known faults, liquefaction potential, ground motion, and other geologic hazards is provided within the 2015 geotechnical investigation report included as Appendix A.

No other geologic hazards beyond those already discussed were encountered during our exploration of the proposed Spec Building.

Updates to Geotechnical Design and Construction Recommendations

The subsurface soils encountered within the building footprint are complex in nature, exhibiting various geological units because of the unique geological setting of the overall Mustang Industrial Development parcel. The majority of the subsurface within the proposed Spec Building contains outwash sand gravel soils with cobbles and boulders; however, sedimentary and lakebed units consisting of fine-grained and clay soils exist within local areas. The northern, steep slope down from the UPRR tracks that is expected to be cut through as deep as 25 feet exhibits volcanic bedrock units. No exploration was performed within the subject steep sloping area because of access constraints, and because the requested additional exploration only included advancement of borings.

The geotechnical recommendations contained in the 2015 geotechnical report for the distribution facility, which is attached as Appendix A, remain applicable for the design and construction of the Spec Building unless otherwise updated/revised in this update report.

1. Various stockpiles exist across the limits of the proposed Spec Building development. These materials shall be completely removed from structural areas to expose native materials. The stockpiled materials are primarily, but are not limited to, granular soils with cobbles and boulders, such that they will typically meet the requirements for use as structural fill (rock fill).

2. The lakebed sediments and sedimentary rock units exhibiting clay and fine-grained soils exist as lenses and isolated zones within various portions of the proposed building footprint. The clay and fine-grained soils are not suitable to directly host the proposed building footings, slabs, and asphalt pavement and will require structural fill separation following the recommendations contained in the **Site Preparation** section of the geotechnical report (Appendix A).

3. Excavation into the northern, steep slope down from the UPRR tracks exhibiting volcanic bedrock units is expected to generate materials that are suitable to use as structural fill within the southern fill areas. Based on the conditions of similar geologic units encountered within the northwestern limits of the overall parcel, these materials are expected to be excavatable with large construction equipment (dozers with rippers and large excavators). However, there is always a potential to encounter hard "core stones" within volcanic units that could demand aggressive excavation techniques. Once the grading plans are finalized, we recommend BEC be provided the opportunity to advance 1 or 2 exploratory test pits into the existing steep slope using a large excavator to characterize the volcanic units in this area.

4. Based on the provided preliminary grading plans, up to 3-tier retaining walls each measuring up to 10 feet in exposed height are proposed to support the cuts into the northern steep slope described above in Item 3. The retaining wall design parameters provided in the project geotechnical report can be used in the design of these walls, including rockery walls. However, based on the anticipated volcanic bedrock in this area, the subject retaining wall design parameters may be conservative. Once the grading plans are finalized, BEC can reevaluate the retaining wall design parameters with the advancement of additional test pits discussed in item 3. If requested, BEC can also provide final design for rockery or other segmental

block retaining walls (with non-uniform geogrid tiebacks) in this area as an additional scope of work. The final design of retaining walls in this area must include a global stability evaluation of the tiered walls supporting a steep slope. Further, the upper wall must be setback from the lower wall at a horizontal distance equal to the exposed height of the lower wall.

Closing

The information presented in this updated report provides any updated/revised geotechnical design and construction recommendations for the Spec Building and associated improvements. All other recommendations contained in the 2015 geotechnical report that is attached as Appendix A remain applicable.

The recommendations presented in this report are based on the assumption that sufficient field testing and construction review will be provided during all phases of construction. We should review the final plans and specifications for conformance with the intent of our recommendations. Prior to construction, a pre-job conference should be scheduled to include, but not be limited to, the owner, civil design engineer, general contractor, building official, and geotechnical engineer. The conference will allow parties to review the project plans, specifications, and recommendations presented in this report and discuss applicable material quality and mix design requirements. All quality control reports should be submitted to and reviewed by the geotechnical engineer.

During construction, we should have the opportunity to provide sufficient on-site observation of preparation and grading, over-excavation, fill placement, and foundation installation. These observations would allow us to verify that the geotechnical conditions are as anticipated and that the contractor's work is in conformance with the approved plans and specifications.

This report has been prepared in accordance with generally accepted geotechnical practices. The analyses and recommendations submitted are based upon field exploration performed at the locations described above and in the 2015 geotechnical report (Appendix A). This report does not reflect soils or groundwater variations that may become evident during the construction period, at which time re-evaluation of the recommendations may be necessary.

The owner shall be responsible for distribution of this geotechnical investigation to all designers and contractors whose work is related to geotechnical factors. In the event of changes in the design, location, or ownership of the project from the time of this report, recommendations should be reviewed and possibly modified by the geotechnical engineer. If the geotechnical engineer is not accorded the privilege of making this recommended review, he can assume no responsibility for misinterpretation or misapplication of his recommendations or their validity in the event changes have been made in the original design concept without his prior review. The geotechnical engineer makes no other warranties, either expressed or implied, as to the professional advice provided under the terms of this agreement and included in this report.

We appreciate being of service to you on this project. If you have any questions, or require any additional information, please do not hesitate to contact us.

Sincerely,

Black Eagle Consulting, Inc.

Vimal P. Vimalaraj, P.E.
Engineering Division Manager

JW:PV:LJJ:cr

Enclosures: Plate 1 - Plot Plan
Plate 2 - Boring Logs
Plate 3 - Graphic Soils Classification Chart
Plate 4 - Index Tests Results
Appendix A - Geotechnical Report for Distribution Facility
Appendix B - Chemical Test Results

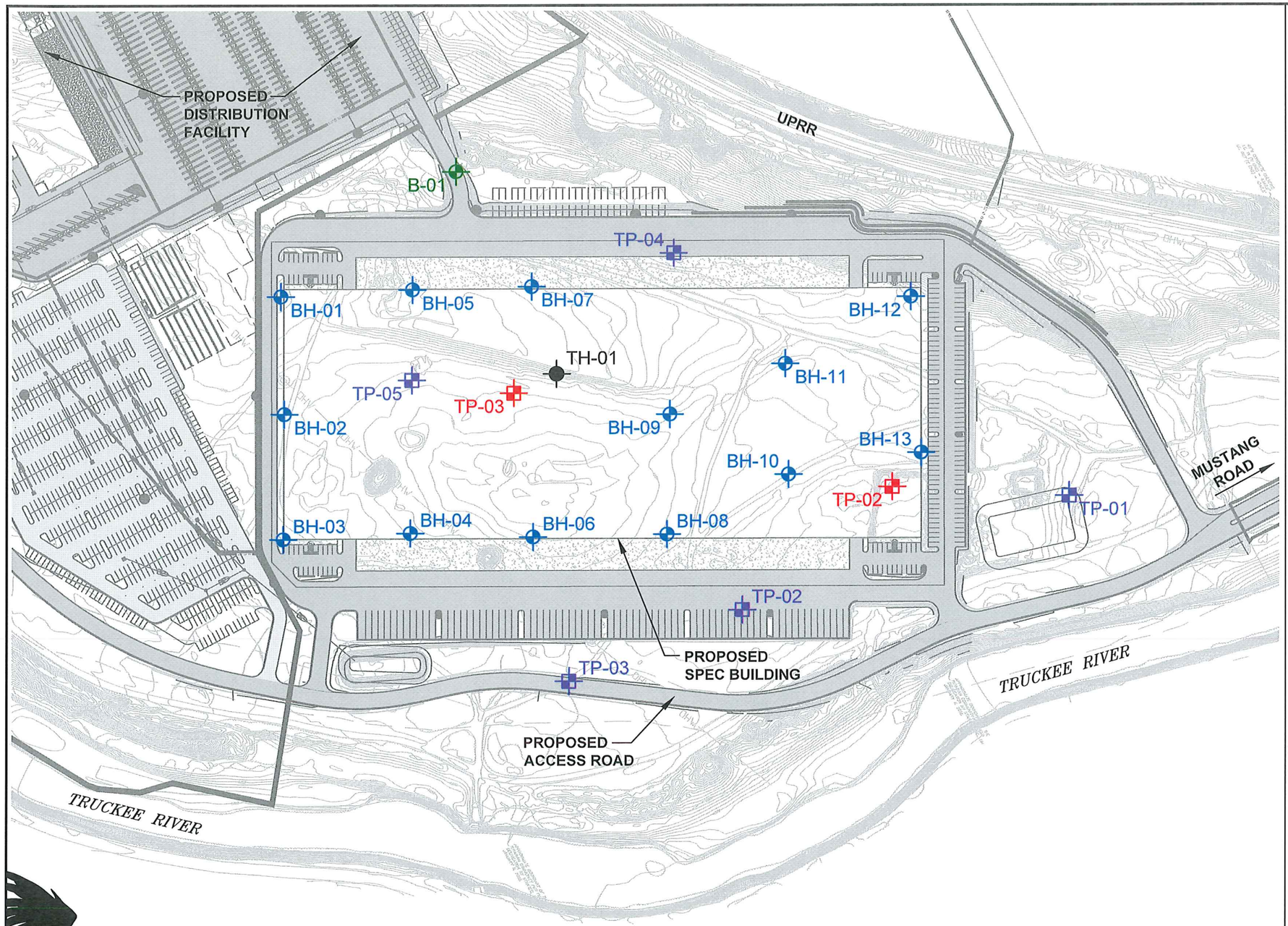
Copies to: Addressee (4 copies, PDF)

References:

American Society for Testing and Materials (ASTM), 2015, *Soil and Rock;* Volume 4.08.

Black Eagle Consulting, Inc. (BEC), 2015, *Geotechnical Investigation, H.P. Ranch Parcel Distribution Facility, Washoe County, Nevada*, private consultants report, dated March 6, 2015 and revised April 13, 2015.

PLATES



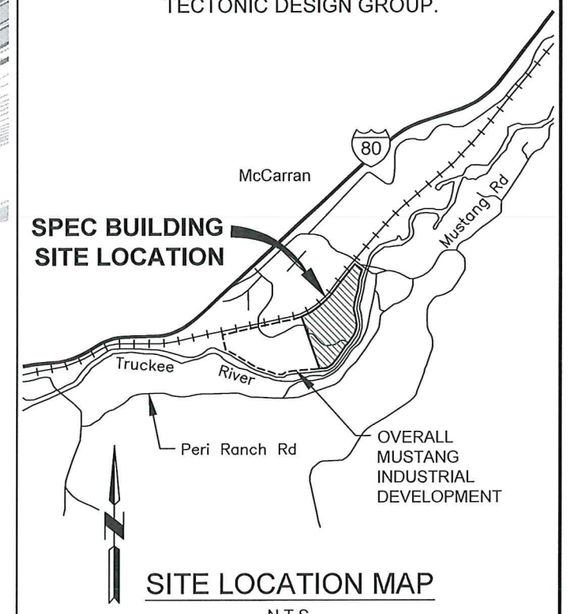
SCALE: 1"=200'
1' CONTOUR INTERVAL

LEGEND

- BH-01 — APPROXIMATE BORING LOCATION
- B-01 — APPROXIMATE 2015 BORING LOCATION
- TP-01 — APPROXIMATE 2015 TEST PIT LOCATION
- TH-01 — APPROXIMATE 2015 TEST HOLE LOCATION
- TP-01 — APPROXIMATE 2007 TEST PIT LOCATION

NOTES

1. BASE MAP PROVIDED BY TECTONIC DESIGN GROUP.



SITE LOCATION MAP
N.T.S.

Black Eagle Consulting, Inc.
Geotechnical & Construction Services
1345 Capital Boulevard, Suite A
Reno, Nevada 89502-7140
Telephone: 775/359-6600
Facsimile: 775/359-7766

SCANNELL PROPERTIES

PLOT PLAN

MUSTANG INDUSTRIAL DEVELOPMENT SPEC BUILDING
WASHOE COUNTY, NEVADA

Project No.
1827-01-2

Plate 1

BORING LOG

BORING NO.: BH-01 | DATE: 2/25/2016

TYPE OF RIG: CME 75 | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): 4339 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					0	SM		**Silty Sand** Brown, moist, loose to medium dense, with an estimated 20% low plasticity fines, 70% fine to coarse sand, and 10% subrounded gravel up to 2 inches in diameter.
					2			Cobbles starting at 1.5 feet below the ground surface (bgs) indicated by drilling response.
A	SPT	28				SC		**Clayey Sand** Light brown, moist, medium dense, with an estimated 25% low to medium plasticity fines, 65% fine to coarse sand, and 10% subrounded to rounded gravel up to 1-1/4 inches in diameter.
					4			Cobbles throughout soil layer indicated by drilling response.
B	SPT	30				SC		**Clayey Sand with Gravel** Brown, medium dense, with an estimated 35% medium plasticity fines, 45% fine to coarse sand, and 20% subrounded to rounded gravel up to 1-1/4 inches in diameter. Strongly cemented soil matrix.
					6			Cobbles throughout soil layer indicated by drilling response.
C	SPT	56			8			**Poorly Graded Gravel with Silt and Sand** Brown to gray, slightly moist, very dense, with an estimated 10% non-plastic fines, 35% fine to coarse sand, and 55% subrounded to rounded gravel up to 1-1/4 inches in diameter.
D	SPT	85/11.5"			10	GP-GM		Cobbles throughout soil layer indicated by drilling response.
					12			
					14			
E	SPT	85/11.5"			16			

N 4377061 E 274420 UTM NAD83

Black Eagle Consulting, Inc.
1345 Capital Blvd., Suite A
Reno, Nevada 89502-7140
(775) 359-6600

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BORING_LOG 1827012.GPJ BLKEAGLE.GDT 3/25/2016

BORING LOG

BORING NO.: BH-02 | DATE: 2/25/2016

TYPE OF RIG: CME 75 | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): 4339 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	SPT	90/11"			2	GP		**Poorly Graded Gravel with Sand** Brown, slightly moist to moist, very dense, with an estimated 5% non-plastic fines, 35% fine to coarse sand, and 60% subrounded to rounded gravel up to 1-1/4 inches in diameter. Cobbles and boulders throughout soil layer indicated by drilling respone. Drilling refusal at 1.5 feet, 5 feet and 5.5 feet bgs on boulders.
B	SPT	50/5.5"			4			
					6			Drilling refusal at 5.5 feet bgs on boulder.
					8			
					10			
					12			
					14			
					16			

Attempted 3 locations within the exploration area, refusal at 5.5 feet bgs.
N 4377026 E 274481 UTM NAD83

Black Eagle Consulting, Inc.
1345 Capital Blvd., Suite A
Reno, Nevada 89502-7140
(775) 359-6600

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BORING_LOG 1827012.GPJ BLKEAGLE.GDT 3/25/2016

BORING LOG

BORING NO.: BH-03 | DATE: 2/25/2016

TYPE OF RIG: CME 75 | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): 4340 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2			**Siltstone** Soft rock. Friable in SPT samples. Bedrock material breaks down under mechanical processing and was sampled as Elastic Silt, olive, moist, very stiff to hard, with 96% medium to high plasticity fines and 4% fine sand.
A	SPT	26	47.0	25	4			Sample A: Pocket penetrometer (PP) > 4.5 tons per square foot (tsf).
B	SPT	21			6			Sample B: PP > 4.5 tsf.
C	MC	33			8	MH		Sample C: PP > 4.5 tsf.
D	SPT	16			10			Moisture increases to very moist and consistency decreases to stiff to very stiff.
E	SPT	12			12 14 16			

N 4377000 E 274534 UTM NAD83

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1345 Capital Blvd., Suite A
Reno, Nevada 89502-7140
(775) 359-6600

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BORING_LOG 1827012.GPJ BLKEAGLE.GDT 3/25/2016

BORING LOG

BORING NO.: BH-04 | DATE: 2/25/2016

TYPE OF RIG: CME 75 | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): 4336 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					0	ML		**Sandy Silt** Olive with slight orange mottling, moist, very stiff, with an estimated 55% low plasticity fines and 45% fine to coarse sand.
A	SPT	21			2			
					4	SM		**Silty Sand with Gravel** Brown, moist, very dense, with an estimated 20% low plasticity fines, 45% fine to coarse sand, and 35% subrounded to rounded gravel up to 1-1/4 inches in diameter. Cobbles and boulders indicated by drilling response.
B	MC	50/4"			6			
					8	GC		Drilling refusal at 7.0 feet bgs due to boulder, hole offset. **Clayey Gravel with Sand** Gray to olive to dark brown, moist, very dense, with an estimated 20% medium plasticity fines, 25% fine to coarse sand, and 55% subangular to subrounded gravel up to 1-1/4 inches in diameter. Sample composed of rotten, fractured volcanic rock fragments. Cobbles and boulders indicated by drilling response.
C	SPT	50/5.5"			10			
D	SPT	50/1"			12			Sample D: Very low recovery.
					14			
E	SPT	50/2"			16			Sample E: No recovery.

Hole offset due to refusal at 7.0 feet bgs.
N 4377055 E 274571 UTM NAD83

Black Eagle Consulting, Inc.
1345 Capital Blvd., Suite A
Reno, Nevada 89502-7140
(775) 359-6600

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BORING_LOG 1827012.GPJ BLKEAGLE.GDT 3/25/2016

BORING LOG

BORING NO.: BH-05 | DATE: 2/26/2016

TYPE OF RIG: CME 75 | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): 4345 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	SPT	54			2	GP		**Poorly Graded Gravel with Sand** Reddish brown to brown to gray, slightly moist to moist, very dense, with an estimated 5% non-plastic to low plasticity fines, 35% fine to coarse sand, and 60% subrounded to rounded gravel up to 1-1/4 inches in diameter. Cobbles and boulders throughout soil layer indicated by drilling response.
B	SPT	63			6			
C	SPT	34	8.2	18	8	SC		**Clayey Sand with Gravel** Brown, slightly moist, dense, with 25% medium plasticity fines, 43% fine to coarse sand, and 33% subrounded to rounded gravel up to 1 inch in diameter.
D	SPT	42			10	SM		**Silty Sand with Gravel** Brown, slightly moist, dense, with an estimated 20% low plasticity fines, 60% fine to coarse sand, and 20% subrounded to rounded gravel up to 1-1/4 inches in diameter.
					12	GP		**Poorly Graded Gravel with Sand** Brown to gray, slightly moist, very dense, with an estimated 5% non-plastic fines, 45% fine to coarse sand, and 50% subrounded to rounded gravel up to 1-1/4 inches in diameter. Gravel and cobbles throughout soil layer indicated by drilling response.
E	SPT	56			16			

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PLATE: 2

SHEET 1 OF 1

BORING_LOG 1827012.GPJ BLKEAGLE.GDT 3/25/2016

BORING LOG

BORING NO.: BH-06 | DATE: 2/25/2016

TYPE OF RIG: CME 75 | DEPTH TO GROUND WATER (ft): 15.5

LOGGED BY: JP | GROUND ELEVATION (ft): 4333 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	SP-SM		**Poorly Graded Sand with Silt and Gravel** Brown to olive, slightly moist to moist, dense, with an estimated 10% low plasticity fines, 45% fine to coarse sand, and 45% subrounded to rounded gravel up to 1-1/4 inches in diameter. Cobbles throughout soil layer indicated by drilling response.
A	SPT	37			4			
B	SPT	43			6			
C	SPT	86			8	SM		**Silty Sand with Gravel** Brown to olive, moist, very dense, with an estimated 15% low plasticity fines, 50% fine to coarse sand, and 35% subrounded to rounded gravel up to 1.5 inches in diameter. Cobbles and boulders indicated by drilling response.
D	SPT	49			10	GP		**Poorly Graded Gravel with Sand** Brown to olive, moist, dense, with an estimated 5% low plasticity fines, 35% fine to coarse sand, and 60% subrounded to rounded gravel up to 1-1/4 inches in diameter. Cobbles throughout soil layer indicated by drilling response.
					12			
					14	SP-SM		**Poorly Graded Sand with Silt and Gravel** Brown to gray, moist to wet, dense, with an estimated 10% non-plastic fines, 55% fine to coarse sand, and 35% subrounded to rounded gravel up to 1-1/4 inches in diameter. Gravels throughout soil layer indicated by drilling response.
E	SPT	36			16			

N 4377120 E 274613 UTM NAD83

Black Eagle Consulting, Inc.
1345 Capital Blvd., Suite A
Reno, Nevada 89502-7140
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PLATE: 2

BORING LOG

BORING NO.: BH-07 | DATE: 2/26/2016

TYPE OF RIG: CME 75 | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): 4345 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					0			**Clayey Sand with Gravel** Reddish brown to brown, moist, dense, with an estimated 15% low to medium plasticity fines, 60% fine to coarse sand, and 25% subrounded to rounded gravel up to 1-1/4 inches in diameter.
					2	SC		Cobbles and boulders throughout soil layer indicated by drilling response.
A	SPT	31			4			
					6			**Poorly Graded Gravel with Sand** Gray to brown, slightly moist, very dense, with an estimated 5% non-plastic fines, 45% fine to coarse sand, and 50% subrounded to rounded gravel up to 1-1/4 inches in diameter.
B	SPT	82				GP		Cobbles and boulders throughout soil layer indicated by drilling response.
					8			**Silty Sand** Brown, slightly moist, medium dense, with an estimated 35% non-plastic fines, 65% fine to medium sand, and trace amounts of gravel up to 1/2 inch in diameter. Weakly cemented soil matrix.
C	SPT	25				SM		
					10			**Silty Sand** Brown, moist, dense, with an estimated 20% non-plastic fines and 80% fine to medium sand.
D	SPT	31				SM		
					12			**Poorly Graded Gravel with Sand** Gray, slightly moist, very dense, with an estimated 5% non-plastic fines, 35% fine to coarse sand, and 60% subrounded to rounded gravel up to 1-1/4 inches in diameter.
					14	GP		Gravel and cobbles throughout soil layer indicated by drilling response.
E	SPT	98/11"			16			

N 4377188 E 274495 UTM NAD83

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Mustang Industrial Development Spec Building

Washoe County, NV

PROJECT NO.: 1827-01-2

PLATE: 2

SHEET 1 OF 1

BORING_LOG 1827012.GPJ BLKEAGLE.GDT 3/25/2016

BORING LOG

BORING NO.: BH-08 | DATE: 2/26/2016

TYPE OF RIG: CME 75 | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): 4336 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	SPT	50/5.5"			2	GP		**Poorly Graded Gravel with Sand** Brown to gray, slightly moist, very dense, with an estimated 5% non-plastic fines, 40% fine to coarse sand, and 55% subrounded to rounded gravel up to 1-1/4 inches in diameter. Abundant cobbles and boulders throughout soil layer indicated by drilling response. Sample A: Very low recovery.
B	SPT	50/5.5"			4			Sample B: No recovery.
C	SPT	86			6			
D	SPT	30/0"			8			Sample D: No recovery.
					10			Drilling refusal at 10.5 feet bgs on boulder.
					12			
					14			
					16			

N 4377186 E 274650 UTM NAD83

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PROJECT NO.: 1827-01-2

PLATE: 2

SHEET 1 OF 1

BORING_LOG 1827012.GPJ BLKEAGLE.GDT 3/25/2016

BORING LOG

BORING NO.: BH-09 | DATE: 2/26/2016

TYPE OF RIG: CME 75 | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): 4336 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					0	SM		**Silty Sand with Gravel** Reddish brown to brown, moist, dense, with an estimated 15% low plasticity fines, 50% fine to coarse sand, and 35% subrounded to rounded gravel up to 3 inches in diameter (from cuttings).
					2			Cobbles and boulders throughout soil layer indicated by drilling response.
A	SPT	28						**Poorly Graded Gravel with Sand** Brown to gray, slightly moist, medium dense to dense, with an estimated 5% non-plastic fines, 40% fine to coarse sand, and 55% subrounded to rounded gravel up to 1-1/4 inches in diameter.
					4			
B	SPT	30						Abundant cobbles and boulders throughout soil layer indicated by drilling response.
					6	GP		
								Sample A: No recovery.
					8			Hard cobbles or boulders at 7.5 and 10 feet bgs, no SPT sampling.
					10			Drilling refusal at 10 feet bgs on boulder.
					12			
					14			
					16			

Attempted 3 locations within the exploration area, refusal at 10.0 feet bgs.
N 4377207 E 274595 UTM NAD83

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Washoe County, NV

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PLATE: 2

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BORING LOG

BORING NO.: BH-10 | DATE: 2/26/2016

TYPE OF RIG: CME 75 | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): 4337 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					0	SM		**Silty Sand** Brown, moist, medium dense to dense, with an estimated 25% low plasticity fines and 75% fine to coarse sand.
A	SPT	56			2	SM		**Silty Sand** Brown, slightly moist to moist, very dense, with an estimated 20% non-plastic fines, 70% fine to coarse sand, and 10% subrounded to rounded gravel up to 1-1/4 inches in diameter.
B	SPT	74/11.5"			4			
C	SPT	72			6	GP		**Poorly Graded Gravel with Sand** Brown to gray, slightly moist, very dense, with an estimated 5% non-plastic fines, 35% fine to coarse sand, and 60% subrounded to rounded gravel up to 1-1/4 inches in diameter. Cobble or boulder at 5 feet bgs indicated by drilling response. Cobbles through remainder of soil profile indicated by drilling responce.
D	SPT	30/0"			8			
E	SPT	50/5.5"			10			
					12			
					14			
					16			

N 4377256 E 274672 UTM NAD83

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Washoe County, NV

PROJECT NO.: 1827-01-2

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BORING_LOG 1827012.GPJ BLKEAGLE.GDT 3/25/2016

BORING LOG

BORING NO.: BH-11 | DATE: 2/26/2016

TYPE OF RIG: CME 75 | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): 4338 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	SM		**Silty Sand** Brown, moist, medium dense to dense, with 29% non-plastic fines, 69% fine to coarse sand, and 2% fine gravel. Occasional weak cement.
A	SPT	31	7.6	NP	4			
B	SPT	20			6			
C	SPT	16			8	ML		**Sandy Silt** Brown, slighlty moist to moist, very stiff, with an estimated 55% low plasticity fines and 45% fine sand. Weakly cemented soil matrix.
D	SPT	13			10	SM		**Silty Sand** Brown, slightly moist to moist, medium dense, with an estimated 40% non-plastic fines and 60% fine to medium sand.
					12			
					14			
E	SPT	41			16	GP-GM		**Poorly Graded Gravel with Silt and Sand** Brown to gray, slighlty moist, dense, with an estimated 10% non-plastic fines 40% fine to coarse sand, and 50% subrounded to rounded gravel up to 1-1/4 inches in diameter. Contains friable volcanic gravel.

N 4377290 E 274616 UTM NAD83

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PROJECT NO.: 1827-01-2

PLATE: 2

SHEET 1 OF 1

BORING_LOG 1827012.GPJ BLKEAGLE.GDT 3/25/2016

BORING LOG

BORING NO.: BH-12 | DATE: 2/26/2016

TYPE OF RIG: CME 75 | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): 4339 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	GC		**Clayey Gravel with Sand** Reddish brown to brown, moist to very moist, dense, with 32% medium plasticity fines, 30% fine to coarse sand, and 38% subrounded to rounded gravel up to 1-1/4 inches in diameter. Cobbles and boulders throughout soil layer indicated by drilling response.
A	SPT	30	17.1	22	4			
B	SPT	84/10"			6	SC		**Clayey Sand with Gravel** Reddish brown to brown, moist, very dense, with an estimated 20% medium plasticity fines, 55% fine to coarse sand, and 35% subrounded to rounded gravel up to 1-1/4 inches in diameter.
C	SPT	20			8	CL		**Sandy Lean Clay** Brown, moist, very stiff, with an estimated 60% low to medium plasticity fines and 40% fine sand. Weakly cemented soil matrix.
D	SPT	50/3"			10	SM		**Silty Sand** Brown, slightly moist, very dense, with an estimated 40% low plasticity fines and 60% fine to medium sand. Moderately cemented soil matrix. Tight, slow drilling.
					12			
					14	ML		**Silt with Sand** Olive with orange mottling, slightly moist, very stiff, with an estimated 85% non-plastic to low plasticity fines and 15% fine sand. Easy drilling.
E	SPT	13			16			

N 4377376 E 274622 UTM NAD83

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Washoe County, NV

PROJECT NO.: 1827-01-2

PLATE: 2

SHEET 1 OF 1

BORING_LOG 1827012.GPJ BLKEAGLE.GDT 3/25/2016

BORING LOG

BORING NO.: BH-13 | DATE: 2/26/2016

TYPE OF RIG: CME 75 | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): 4337 (Topo)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	SM		**Silty Sand** Brown, moist, medium dense, with an estimated 25% non-plastic to low plasticity fines, 75% fine to medium sand, and trace amounts of gravel up to 3/4 inch in diameter.
A	SPT	22			4			
B	SPT	30			6			**Poorly Graded Gravel with Sand** Brown to gray, slighlty moist, very dense, with an estimated 5% non-plastic fines, 35% fine to coarse sand, and 60% subrounded to rounded gravel up to 1-1/4 inches in diameter.
C	SPT	77			8			Cobbles and boulders throughout soil layer indicated by drilling response.
D	SPT	63			10	GP		
					12			
					14			
E	SPT	63			16			

N 4377344 E 274691 UTM NAD83

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Mustang Industrial Development Spec Building
Washoe County, NV

PROJECT NO.: 1827-01-2

PLATE: 2

SHEET 1 OF 1

BORING_LOG 1827012.GPJ BLKEAGLE.GDT 3/25/2016

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS (MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE)	GRAVEL AND GRAVELLY SOILS (MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE)	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS (MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE)	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS (MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE)	SILTS AND CLAYS (LIQUID LIMIT LESS THAN 50)			ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS (LIQUID LIMIT GREATER THAN 50)			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS
FILL MATERIAL				--	FILL MATERIAL, NON-NATIVE

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS.

EXPLORATION SAMPLE TERMINOLOGY

Sample Type	Sample Symbol	Sample Code
Auger Cuttings		Auger
Bulk (Grab) Sample		Grab
Modified California Sampler		MC
Shelby Tube		SH or ST
Standard Penetration Test		SPT
Split Spoon		SS
No Sample		

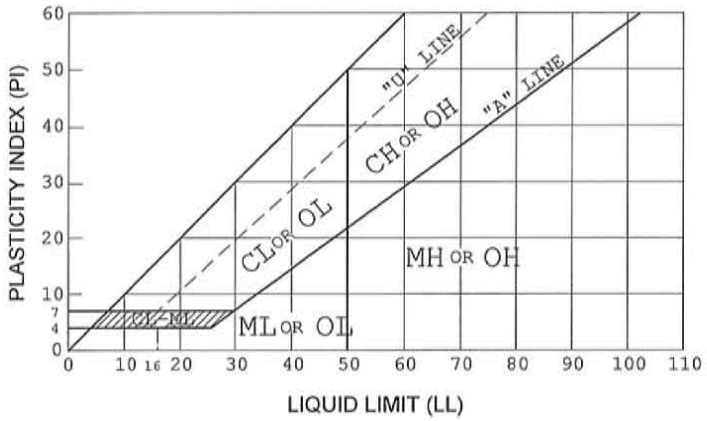
GRAIN SIZE TERMINOLOGY

Component of Sample	Size Range
Boulders	Over 12 in. (300mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 4.75mm)
Sand	# 4 to #200 sieve (4.75mm to 0.074mm)
Silt or Clay	Passing #200 sieve (0.074mm)

RELATIVE DENSITY OF GRANULAR SOILS

N - Blows/ft	Relative Density
0 - 4	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
greater than 50	Very Dense

PLASTICITY CHART



FOR CLASSIFICATION OF FINE-GRAINED SOILS AND FINE-GRAINED FRACTION OF COARSE-GRAINED SOILS

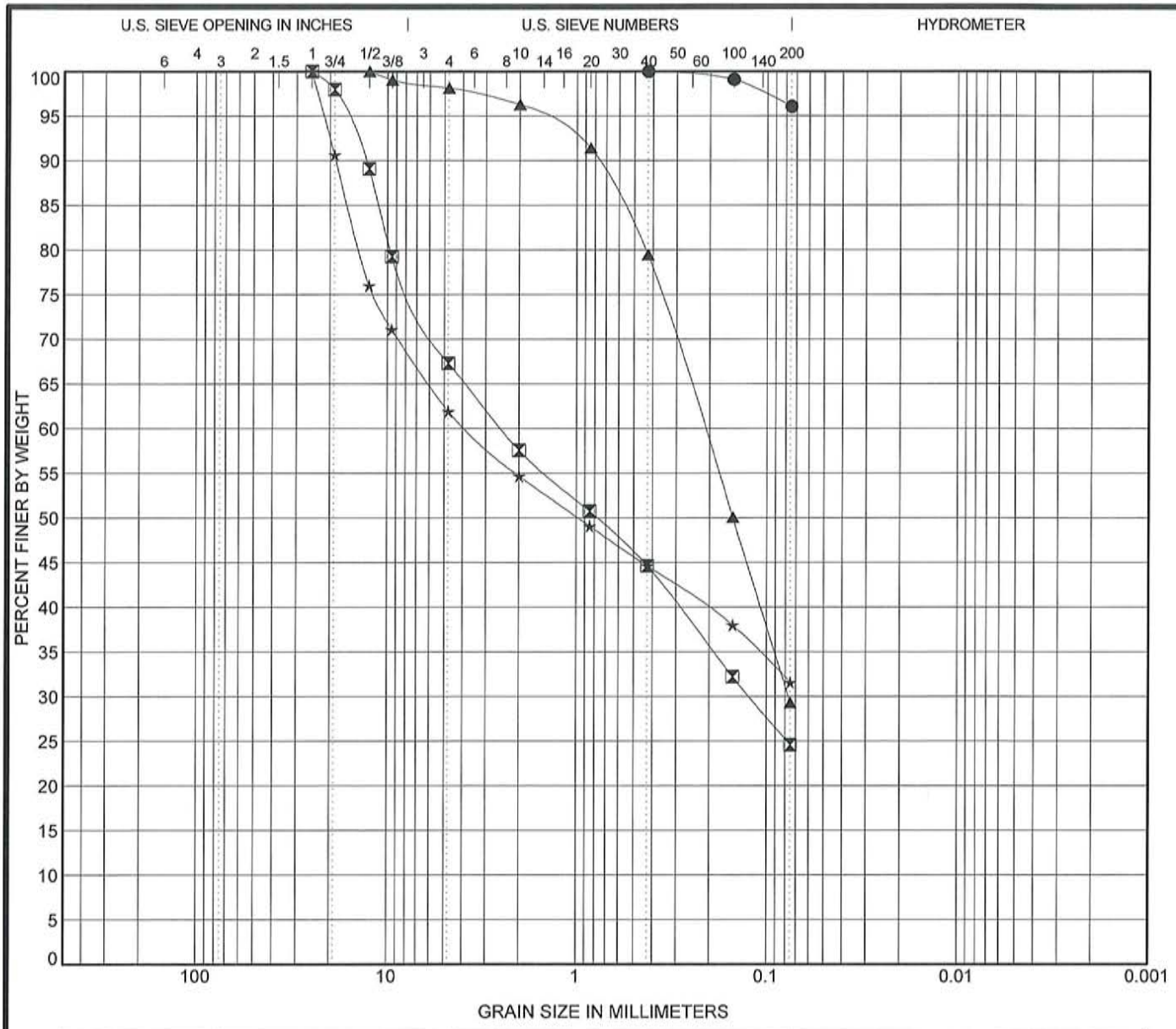
CONSISTENCY OF COHESIVE SOILS

Unconfined Compressive Strength, psf	N - Blows/ft	Consistency
less than 500	0 - 1	Very Soft
500 - 1,000	2 - 4	Soft
1,000 - 2,000	5 - 8	Firm
2,000 - 4,000	9 - 15	Stiff
4,000 - 8,000	16 - 30	Very Stiff
8,000 - 16,000	31 - 60	Hard
greater than 16,000	greater than 60	Very Hard

Black Eagle Consulting, Inc.
1345 Capital Blvd., Suite A
Reno, Nevada 89502-7140
Telephone: (775) 359-6600
Fax: (775) 359-7766

USCS Soil Classification Chart

Project: Mustang Industrial Development Spec Building
Location: Washoe County, NV
Project Number: 1827-01-2 Plate: 3



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification			USCS Classification	LL	PL	PI	Cc	Cu
●	BH-03	2.5'	ELASTIC SILT (MH)	68	43	25		
⊠	BH-05	7.5'	CLAYEY SAND with GRAVEL (SC)	37	19	18		
▲	BH-11	2.5'	SILTY SAND (SM)	NP	NP	NP		
★	BH-12	2.5'	CLAYEY GRAVEL with SAND (GC)	44	22	22		

Specimen Identification			D100	D60	D30	D10	MC %	%Gravel	%Sand	%Silt	%Clay
●	BH-03	2.5'	0.425				47.0	0.0	3.9	96.1	
⊠	BH-05	7.5'	25	2.483	0.123		8.2	32.7	42.7	24.6	
▲	BH-11	2.5'	12.5	0.213	0.077		7.6	1.9	68.8	29.3	
★	BH-12	2.5'	25	3.779			17.1	38.1	30.3	31.6	

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1345 Capital Blvd., Suite A
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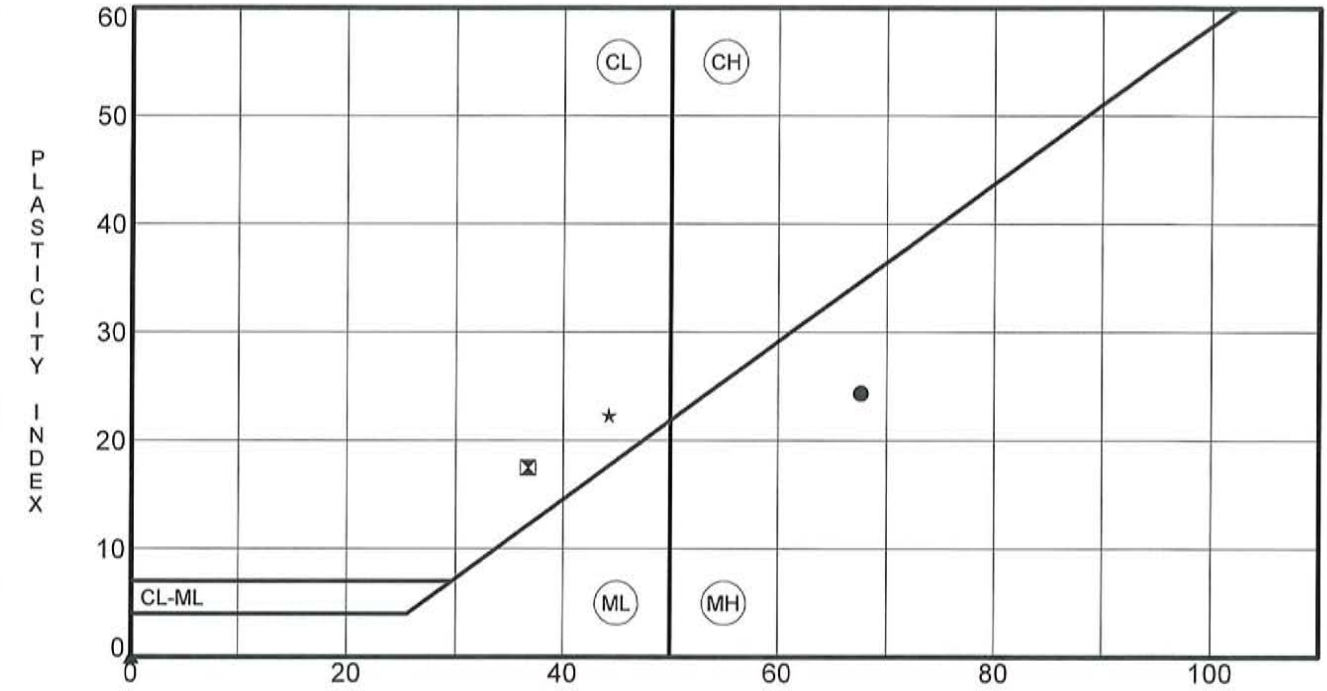
GRAIN SIZE DISTRIBUTION

Project: Mustang Industrial Development Spec Building
Location: Washoe County, NV
Project Number: 1827-01-2 Plate: 4a



Specimen Depth in Feet.

	Specimen Identification			LL	PL	PI	Fines	USCS Classification
●	BH-03	A	2.5'	68	43	25	96	ELASTIC SILT (MH)
⊠	BH-05	C	7.5'	37	19	18	25	CLAYEY SAND with GRAVEL (SC)
▲	BH-11	A	2.5'	NP	NP	NP	29	SILTY SAND (SM)
★	BH-12	A	2.5'	44	22	22	32	CLAYEY GRAVEL with SAND (GC)

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1345 Capital Blvd., Suite A
Reno, Nevada 89502-7140
Telephone: (775) 359-6600
Fax: (775) 359-7766

ATTERBERG LIMITS RESULTS

Project: Mustang Industrial Development Spec Building

Location: Washoe County, NV

Project Number: 1827-01-2 Plate: 4b

APPENDICES

APPENDIX A

GEOTECHNICAL REPORT FOR DISTRIBUTION FACILITY

Mr. Dan Salzer
Scannell Properties
821 Meander Court, Suite 200
Medina, MN 55340

March 6, 2015
Revised April 13, 2015
Project No.: 1827-01-1

L

RE: Geotechnical Investigation
H.P. Ranch Parcel Distribution Facility APN 084-370-02
Washoe County, Nevada

Dear Mr. Salzer:

Black Eagle Consulting, Inc. (BEC) is pleased to present the results of our geotechnical investigation for the above-referenced project. Our investigation consisted of research, field exploration, laboratory testing, and engineering analysis to allow formulation of geotechnical conclusions and recommendations for design and construction of the subject distribution facility.

The proposed project will involve the design and construction of a distribution facility within the H.P. Ranch Parcel located north of the Truckee River, which previously hosted a sand and gravel quarry. The facility will include a tilt-up panel building of 343,000 square feet within the western portion of the parcel. An access way off of Mustang Road, driveways, truck, and automobile parking lots will also be constructed.

The predominant sand and gravel Tahoe Outwash soils that underlie the parcel will provide adequate support in cuts and will perform well as fill. Volcanic bedrock that is present within the western and northern limits of the parcel will generally be excavatable and will produce good quality fill. Lakebed sediments and sedimentary bedrock, clay, and fine-grained soils exist as local zones within the northern limits of the site and will require separation from structural improvements.

We appreciate having the opportunity to work with you on this project. If you have any questions regarding the content of the attached report, please do not hesitate to contact me.

Sincerely,

Black Eagle Consulting, Inc.

Jeffery Wilbrecht, P.E.
Project Engineer

Copies to: Addressee (3 copies and PDF via email)

JP:PV:LJJ:kad

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Introduction

Presented herein are the results of Black Eagle Consulting, Inc.'s (BEC's) geotechnical investigation, laboratory testing, and associated geotechnical design recommendations for the proposed distribution facility to be located within the H.P. Ranch Parcel, Assessor's Parcel Number (APN) 084-370-02, southwest of Mustang Road between the Truckee River and the Union Pacific Railroad (UPRR) in Washoe County, Nevada. These recommendations are based on surface and subsurface conditions encountered in our explorations, and on details of the proposed project as described in this report. The objectives of this study were to:

1. Determine general soil, bedrock, and ground water conditions pertaining to design and construction of the proposed distribution center.

2. Provide recommendations for design and construction of the project, as related to these geotechnical conditions.

The area covered by this report is shown on Plate 1 (Plot Plan). Our investigation included field exploration, laboratory testing, and engineering analysis to determine the physical and mechanical properties of the various on-site materials. Results of our field exploration and testing programs are included in this report and form the basis for all conclusions and recommendations.

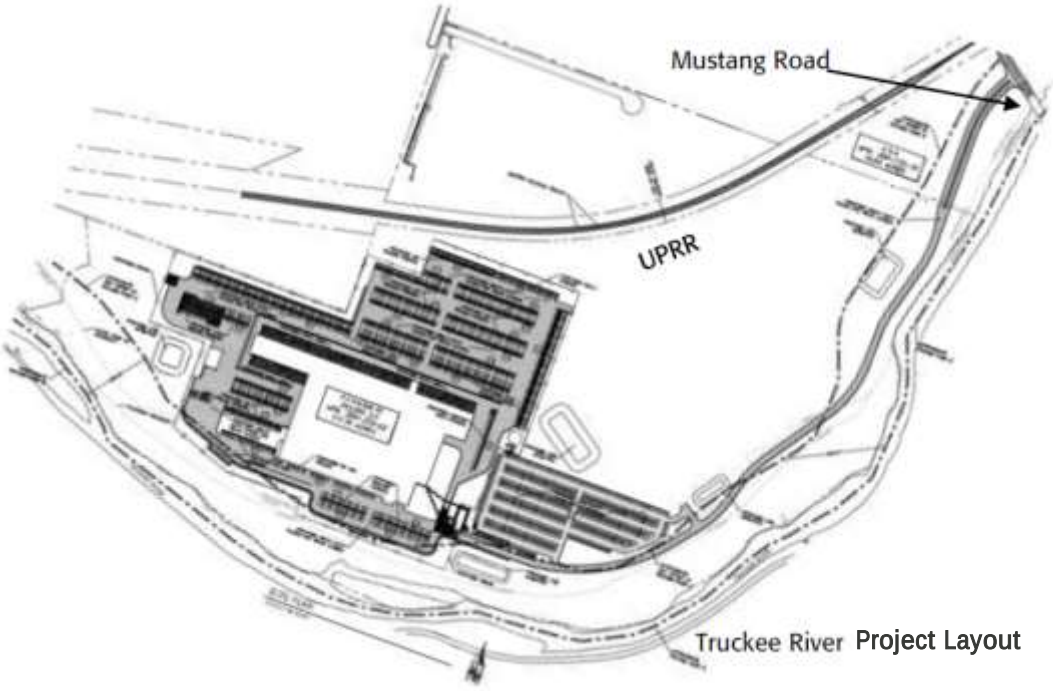
Black Eagle Consulting, Inc.'s exploration and testing program was planned and executed based on the original development plan provided by Scannell Properties that included a building on the west portion of the panel, nearby parking areas, and access roadway off of Mustang Road. As currently proposed, the site is planned to be mass graded; as such, the geotechnical recommendations contained in this report for the eastern half of the site shall be considered preliminary and shall be updated as necessary, when design details become available.

The services described above were conducted in accordance with the BEC Professional Geotechnical Agreement dated December 11, 2014 and revised December 17, 2014, which was signed by Mr. Daniel Salzer of Scannell Properties.

Black Eagle Consulting, Inc. performed a feasibility-level geotechnical investigation of the site to develop preliminary recommendations and design for the planning of a commercial development titled, *Feasibility-Level Geotechnical Investigation, Mustang Parcel, APN 084-370-02, Washoe County, Nevada*, dated August 13, 2007 (BEC, 2007).

Project Description

The H.P. Ranch parcel to host the proposed distribution facility consists of an irregular-shaped parcel of approximately 114 acres located in Washoe County, Nevada. The site is located in Sections 15 and 16, Township 19 North, Range 21 East, Mount Diablo Meridian. The parcel is bordered to the north by the Union Pacific Railroad. The Truckee River flows around the western, southern, and eastern perimeter of the parcel. Mustang Road borders the extreme northeastern property line. The parcel was previously operated as a sand and gravel pit, and is presently undeveloped land. Access to the site is obtained by an unimproved road from Mustang Road.



Project Layout

Structure/Development Information

The project will involve the design and construction of a distribution building and associated improvements that will include automobile and truck parking lots, driveways, and an access road off of Mustang Road. The building will measure approximately 343,000 square feet (sf) and will be oriented east-westerly. The building will be a Portland cement concrete (PCC) tilt-up panel structure supported by shallow spread footings and will have a PCC slab-on-grade floor. Loading docks with associated truck ramps will be located on the northern side of the building.

An asphalt concrete access roadway from Mustang Road will be constructed to follow the Truckee River within the southern limits of the parcel. Two major parking areas north and east of the building will be constructed and will have truck and automobile parking spaces, respectively. Parking lots will also be incorporated in other areas of the project. Portland cement concrete curbs and gutters will be constructed along the parking lots and access roadways. Paved edges will also incorporate PCC walkways where necessary to accommodate pedestrian traffic. Five storm water detention basins of various sizes and depths will be constructed within various areas of the project. The detention basin located between the proposed parking areas will be the largest of all and will be as deep as 10 feet. Utilities will be extended to service the facility from the existing stubs in the area. We understand there are no nearby sewer stubs, therefore, the facility will likely require an on-site sewage disposal system. The location of the on-site sewage system (septic tank and leach field) is not known. An on-site sewage system will require design and percolation testing within the areas to host the primary and secondary leach fields. Black Eagle Consulting, Inc. can provide these services, as a separate scope of work once the on-site sewage disposal system location is finalized.

Structural loads were unknown at the time of this report. In general, roof loads from similar structures are transferred to steel or PCC interior and exterior columns located at variable spacing/spans. Columns will be supported on PCC isolated spread footings that are sized to resist structural loading based on the geotechnical design parameters for the foundation soils provided in this report. The structural loading will vary depending on the selected span lengths between columns. Based on our experience with similar structures, we anticipate the widths of the isolated footings could be on the order of 4 to 8 feet. Wall loads will be supported by PCC continuous spread footings, typically with variable widths.

Grading Concepts

A grading plan has been developed by Tectonics Design Group for the project. The site will be graded cut to fill. Cuts will occur within the northern limits of the project site and the generated materials will be placed as compacted fill within the southern limits. The finished floor elevation for the building will be set at 4,348.75 feet above mean sea level (msl).

The building will generally require cuts within the northwestern quadrant and western edge, and the remainder of the building footprint will receive fill. Cuts will be up to 14 feet within the building footprint, except for the northern loading docks, where about 18 feet of cut will occur to establish their depressed grade. A maximum fill up to 13 feet will be placed in the southeastern corner of the small building pad.

The northern large truck parking area will primarily lie in cuts up to 17 feet. The southeastern corner of this northern parking lot will receive up to 5 feet of fill. The small parking area and driveway northwest of the building will lie on cuts up to 22 feet where they occur immediately north of the building. The automobile parking lot east of the building and the smaller truck parking and driveway south of the building will all lie on fills up to 10 feet. The main access roadway within the southern limits primarily follows the existing topography (within plus or minus 2 feet) with the exception of some local segments, where the existing ground will require up to 6 feet of fill. An emergency

access roadway that will head northwest off of the main access road starting east of the large detention basin will be placed on fill up to 10 feet until it reaches the steep slope south of the railway track, where significant grading will occur. Cuts up to 20 feet will be necessary in this steep sloping topography to establish the emergency access roadway grade. The extension of this access roadway northeast of the building will also require cuts in the range of 10 to 18 feet. All cut and fill slopes are currently proposed to be at a 3H:1V (horizontal to vertical) ratio. The existing slope north of the building is slightly flatter than 3H:1V; as such, the proposed cut slope (at a 3H:1V ratio) into this existing slope will extend up to 45 feet in vertical height from toe to crest. This will primarily involve steepening of the existing slope by removing 0 to 18 feet of material.

The grading plan calls for a retaining wall that will generally follow the northern property line and will be up to 8 feet in exposed height above the proposed cut slope northwest of the building. In this area, the vertical height of the proposed 3H:1V cut slope below the retaining wall will be about 10 to 12 feet in vertical height.

Site Conditions

Existing Structures

The site was formerly operated as a sand and gravel quarry. As a result, the natural topography has been modified extensively by these operations. The quarry operations lowered the ground elevation of the eastern and western portions of the site by approximately 4 to 15 feet based on the surrounding topography. A deeper pit is located at the southwest corner of the proposed building footprint, approximately 15 to 17 feet deep, and is roughly 400 feet long by 200 feet wide. A soil berm up to 12 feet in height follows the southern and eastern boundary along the Truckee River.

Site Conditions

Stockpiles of discarded sand, gravel, and boulders are abundant and scattered throughout the site. The boulders range in size throughout the site, however, the largest observed boulder is up to 25 feet in diameter. The stockpiles are most prevalent within the northern portion of the proposed building footprint. Additional stockpiles are also located immediately southwest of the building footprint. More obvious stockpiled soil and construction debris are located in the eastern portion of the site. Only a small wooden well house is left from the quarry operations and possibly has an existing well inside. No areas of deep fill are documented and only minor fill or disturbed surface areas are noted.

Several overhead power and communications lines and easements are present within the parcel. One east-westerly and then northeasterly trending line crosses through the center of the site for its entire length. Three shorter segments extend southward to the Truckee River. Overhead power lines and buried fiber optic cable and gas lines are located along the northern property line within and/or adjacent to the UPRR right of way.

Topography

As stated above, the original topography of the site has been extensively modified by the sand and gravel quarry operations. The depth of the remaining sand and gravel appears to vary across the site. Pillars of original ground occupied by overhead utility poles indicate that approximately 4 to 8 feet of soil had been mined from the area west of the predominant pit, which itself is about 17 feet in depth. Approximately 10 to 15 feet of soil had been excavated in the area east of the pit. The areas east and west of the pit are relatively level, or benched, sloping to the south.

Overall, the site slopes down southeasterly at less than 5 percent. The highest elevations lie along the northern edges of the proposed improvements and are in the range of 4,365 feet above msl. The southern lower limits of the parcel, above the slope down to the Truckee River, are at an elevation of about 4,335 feet above msl. In between these elevations, the existing topographic elevations within the site are irregular due to sand and gravel quarry activity and locally exhibit steeper side walls. However, in no case does the bottom of the quarried areas extend deeper than the southern ground elevations.

Vegetation

Moderately dense sagebrush, rabbit brush, and greasewood up to 4 feet in height have regrown throughout the quarry area. Intervening areas and localized areas exhibit only sparse vegetation.

Exploration

As described earlier, the site was previously explored in 2007 as part of a feasibility-level investigation to develop recommendations for preliminary planning and design of a commercial development. The 2007 geotechnical investigation included advancement of 16 test pits. Approximate locations of the 2007 test pits are shown on Plate 1. Logs of the test pits and laboratory testing on representative samples associated with the 2007 investigation are included as Appendix A (2007 Geotechnical Data).

The recent exploration activities within the parcel included advancement of 11 test borings to a maximum depth of 26.5 feet below the existing ground surface and excavation of 11 test pits, as detailed below.

Drilling

The H.P. Ranch parcel to host the proposed distribution facility was explored in late December 2014 by drilling 11 test borings. The borings were drilled using 8-inch-outside-diameter (O.D.), 4-¼-inch-inside-diameter (I.D.), hollow-stem augers, and a truck-mounted BK 81 soils sampling drill rig. The maximum depth of exploration was 26.5 feet below the existing ground surface. The locations of the test borings are shown on Plate 1. As requested, borings were generally located within the footprint of the originally planned building location in the western portion of the site.

Boring Exploration

The native soils were sampled in-place every 2 to 5 feet by use of a standard 2-inch O.D., split-spoon sampler driven by a 140-pound automatic drive hammer with a 30-inch stroke. The number of blows to drive the sampler the final 12 inches of an 18-inch penetration (Standard Penetration Test [SPT]; American Society for Testing and Materials [ASTM] D 1586) into undisturbed soil is an indication of the density and consistency of the material.

Due to the relatively small diameter of the samplers, the maximum particle size that could be obtained was approximately 1-¼ inches. The final boring logs may not, therefore, adequately represent the actual quantity or presence of cobbles or boulders.

Ground water levels were recorded when encountered.

Test Pits

The H.P. Ranch parcel to host the proposed distribution facility was also explored December 31, 2014 by excavating 11 test pits using a CAT® 330 L track-mounted excavator. Locations of the test pits are shown on Plate 1. The maximum depth of exploration was 21 feet below the existing ground surface. Bulk samples for index testing were collected from the trench wall sides at specific depths in each soil horizon. The test pits were backfilled immediately after exploration. Backfill was loosely placed and the area re-graded to the extent possible with equipment on hand.

Test Pit Exploration

Material Classification

A geologist examined and identified all soils in the field in accordance with ASTM D 2488. During drilling and test pitting, representative bulk samples were placed in sealed plastic bags and returned to our Reno, Nevada laboratory for testing. Additional soil classification was subsequently performed in accordance with ASTM 2487 (Unified Soil Classification System [USCS]) upon completion of laboratory testing as described in the **Laboratory Testing** section. Logs of the borings and test pits are presented as Plate 2 (Boring and Test Pit Logs), and a USCS chart has been included as Plate 3 (Graphic Soils Classification Chart).

Laboratory Testing

All soils testing performed in the BEC soils laboratory is conducted in general accordance with the standards and methodologies described in Volume 4.08 of the ASTM Standards.

Grain Size Analysis

Index Tests

Samples of each significant soil type were analyzed to determine their in-situ moisture content (ASTM D 2216), grain size distribution (ASTM D 422), and plasticity index (ASTM D 4318). The results of these tests are shown on Plate 4 (Index Test Results). Test results were used to classify the soils according to ASTM D 2487 and to verify field logs, which were then updated as appropriate. Classification in this manner provides an indication of the soil's mechanical properties and can be correlated with standard penetration testing and published charts (Bowles, 1996; Naval Facilities Engineering Command [NAVFAC], 1986a and b) to evaluate bearing capacity, lateral earth pressures, and settlement potential.

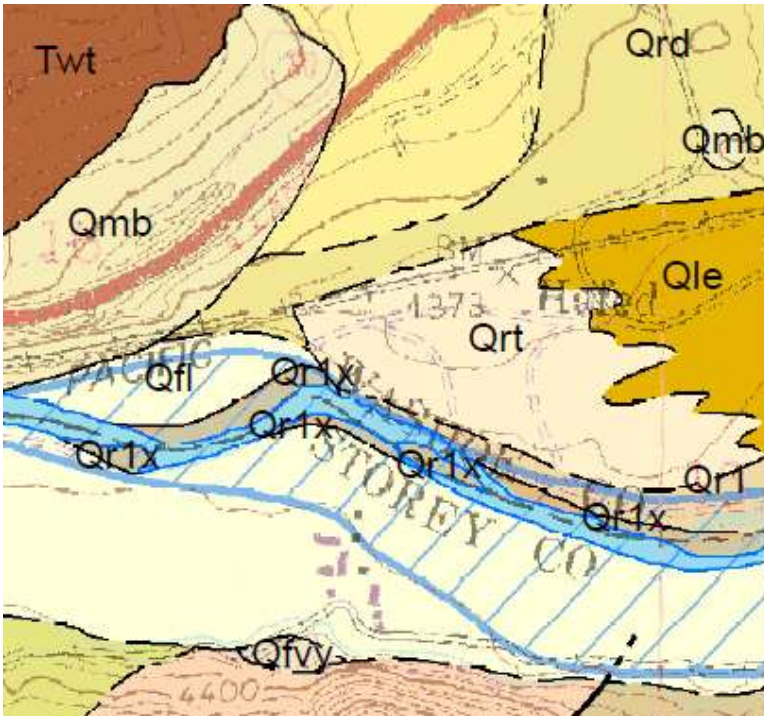
Chemical Tests

Chemical testing was performed on representative samples of site foundation soils to evaluate the site materials' potential to corrode steel and PCC in contact with the ground. The samples were tested for pH, resistivity, redox potential, soluble sulfates, and sulfides. The results of the chemical tests are shown on Appendix B (Chemical Test Results). Chemical testing was performed by Sierra Environmental Monitoring of Reno, Nevada.

Geologic and General Soil Conditions

Site Geology

The site is located east of Reno, Nevada within the inside portion of an ancient meander terrace of the Truckee River. The site has been mapped by the Nevada Bureau of Mines and Geology (NBMG) as lying between Quaternary Age Tahoe Outwash (Qrt) and Quaternary Age Eetza Formation (Qle) (Ramelli et. al, 2011). The extreme southern limit of the parcel immediately along the Truckee River is mapped as Holocene to Modern Truckee River deposits (Qr1).



Geologic Map

The materials encountered during our field exploration and the surficial geological units observed within the parcel generally correspond with NBMG mapping; however, some native geologic units (particularly outwash soils) have been removed by quarry operations exposing deeper geologic units.

The Tahoe Outwash deposits are a result of glacial floods and consist of coarse-grained sand and gravel deposits with cobbles and boulders, some of which are massive. Lake Lahontan occupied a vast area of western Nevada including the Carson Sink to the east and Black Rock Desert to the north during the same geologic time (Pleistocene Age) as when repeated glacial floods resulted in Tahoe Outwash deposits along the path of the Truckee River. The Eetza Formation soils are shore and deltaic deposits associated with Pleistocene Lake Lahontan and consist of fine sand, silts and clays. Outwash soils and lake bed sediments are complexly interbedded within the site because of the parcel's unique geologic setting. Glacial flooding eroded lake sediments and deposited outwash soils; the proceeding lake shore resulted in lake bed sediments above outwash soils.

Basalt rock exists as isolated remnants within fluvial and lacustrine deposits and as deeper units beneath outwash soils within the northwestern corner and western edges of the parcel. These basalt bedrock units are either

members of the McCellan Peak Basalt or basalt lava and intrusion of Tertiary Age Loosetown Formation (Ramelli et. al, 2011). Tertiary age basalt and andesite bedrock is also exposed in the slopes below the UPRR tracks along the eastern half of the northern edge of the parcel.

A sedimentary rock unit overlying volcanic rocks at the surface or beneath outwash soils (where they are not mined) was also encountered in the exploration. The older sedimentary rocks that were exposed on the cuts/slopes are not correlative to any lithologies mapped by the NBMG in this area (Ramelli et. al, 2011; Bell and Bonham, 1987; Bonham and Papke, 1969)

Site Materials

Areas of stockpiled sand, gravel, and construction debris; quarry waste rock; and disturbed ground are present in isolated areas within the parcel. Boulders of various sizes up to 25 feet in diameter, remnants of sand and gravel mining activities, exist within and near the pits. No areas of deep fills are documented or were identified during the exploration. Approximate areas exhibiting quarry waste, stockpiles, disturbed ground, or widespread large boulders are shown on Plate 1.

The northern undisturbed portion of the parcel is surfaced with a thin layer of eolian sand that is about 2 to 4 feet in thickness. This surficial sand soil layer includes poorly graded sand and silty sand soils with 5 to 30 percent non-plastic fines and 70 to 95 percent fine to medium sand.

The remainder of the soil units within the site primarily consist of outwash soils and some interbedded layers of lake sediments. Outwash soils vary from silty/clayey sand with gravel to poorly graded sand/gravel with silt and silty/clayey gravel with sand. These deposits of the Truckee River generally consist of approximately 5 to 20 percent non-plastic to low plasticity fines, 30 to 80 percent fine to coarse sand, and 10 to 65 percent fine to coarse subrounded to rounded gravel. In general, the outwash soils profile also includes cobbles and boulders accounting for up to about 30 percent of the total excavated soil mass. Cobbles are common in the Tahoe Outwash in this area; however, boulders up to 4 feet in diameter were also encountered. Outwash soils also include a few thin layers of clean sand soils at depth. Occasionally, clayey sand soils near the surface consist of slightly elevated medium plasticity fines up to about 30 percent.

As described earlier, lakebed sediments are present as interbeds within outwash soils or at the surface in the higher areas of the site away from the Truckee River. In particular, these sediments were encountered as 2- to 5-foot-thick layers at the surface or at various depths (as deep as 20 feet below existing ground surface) within the northern edge of the proposed building, the northern truck parking lots, and western quadrant of the parcel. The lakebed sediments do not exhibit clearly defined horizontal beds throughout these areas at any depth; the thickness and depth of sediments vary between 2 adjacent exploration locations. Lake bed sediments vary from silty/clay sand to sandy lean clay to silt with sand and generally contain approximately 40 to 77 percent low to high plasticity fines and 23 to 60 percent fine to medium sand.

Basalt bedrock was encountered within the northwestern portion of the parcel in test pit TP-07 and boring B-11. The upper weathered bedrock material is easily excavated with the medium truck-mounted excavator used in the exploration to about 6 feet below the existing ground surface. Basalt is less weathered below 6 feet deep and excavation of test pit TP-07 reached refusal at about 7 feet below the existing ground surface. However, nearby boring B-11 was drilled to about 16.5 feet deep with the hollow stem auger technique. Basalt bedrock in test pit TP-07 was excavated as poorly graded gravel consisting of approximately 5 percent low plasticity fines, 20 percent fine to coarse sand and 75 percent subangular to angular fine to coarse gravel. Excavated material also includes small cobbles up to 4 inches in diameter. In boring B-11, basalt bedrock was sampled as dense to very dense clayey gravel consisting of about 15 percent low to medium plasticity fines, 40 percent fine to coarse sand and 45 percent gravel. Cobbles were indicated by the drilling response in boring B-11.

A sedimentary rock unit consisting of diatomaceous siltstone was encountered in test pits TP-06 and TP-11 and in boring B-06. Test pit TP-11 was excavated as a short trench to examine the contact of the sedimentary unit with the overlying outwash deposits. The contact between the outwash deposits and the underlying siltstone is irregular and has been altered by the Truckee River cutting into this soft sedimentary bedrock material. During the Tahoe glacial period, the Truckee River was extremely active and migrated laterally throughout the Truckee River canyon. Glacial flooding events would have cut/scoured into underlying soft sedimentary rocks and filled multiple channels throughout the site generating an irregular erosional surface. Siltstone extends 16.5 feet or more below the existing grade within the bottom of the western quarry pit. In the higher ground (test pit TP-06 and boring B-06) above the western quarry, siltstone is present beneath 4 to 10 feet of outwash soils and/or lakebed sediments. The siltstone breaks down to a blocky gravel-sized material during excavation. Subsequent transportation and compaction will further breakdown the soft rock to silty sand or sandy silt with variable amounts of gravel and cobble-sized blocks. Mechanical processing of siltstone in the laboratory yielded silty sandy soils with about 28 to 43 percent low to high plasticity fines.

Ground Water

During exploration, ground water was encountered at the approximate depths of 21 and 16 feet below existing ground surface in borings B-05 and B-02, respectively. Ground water was not encountered in all of the remaining borings that were advanced about 15 to 26.5 feet below existing ground surface. The depth to ground water in boring B-05 and B-02 corresponds with ground water elevations of approximately 4,326 feet and 4,324 feet above msl, respectively. The shallower ground water elevation measured in boring B-05 that was advanced relatively closer to Truckee River is nearly equal or slightly lower than the Truckee River water elevation. The depth to ground water appears to increase away from the Truckee River. At the encountered depths, ground water is not expected to affect the design or construction of the project. Deeper cuts will occur within the higher elevations where depth to ground water is expected to be adequately below the bottom of the cuts. Based on the increase of depth to ground water away from the river, it appears the Truckee River is tributary to the ground water within the parcel. Changes in ground water within the parcel should be anticipated with the changes in the river level.

Geologic Hazards

Seismicity

Much of the Western United States is a region of moderate to intense seismicity related to movement of crustal masses (plate tectonics). By far, the most active regions, outside of Alaska, are in the vicinity of the San Andreas Fault system of western California. Other seismically active areas include the Wasatch Front in Salt Lake City, Utah, which forms the eastern boundary of the Basin and Range physiographic province, and the eastern front of the Sierra Nevada Mountains, which is the western margin of the province. The Mustang area lies along the eastern base of the Sierra Nevadas, within the western extreme of the Basin and Range.

The Mustang area lies within an area with a potential for strong earthquake shaking. Seismicity within the Reno-Sparks area is considered about average for the western Basin and Range Province (Ryall and Douglas, 1976). It is generally accepted that a maximum credible earthquake in this area would be in the range of magnitude 7 along the Olinghouse fault approximately 7 miles northeast of the site. The Olinghouse fault has been suggested to be the source of a magnitude 6.7 earthquake that occurred in 1869. Another active fault system in the geologic vicinity of the site is in the Reno area located at the base of the mountains near Thomas Creek, Whites Creek, and Mt. Rose Highway, some 18 miles southwest of the project.

Faults

An earthquake hazards map is not available for the project area. The Quaternary Fault Map of Nevada (Bell, 1984) shows no faults with movement in the Pleistocene Age or younger within 3 miles of the site. The geologic map shows a Tertiary age bedrock fault south of the Truckee River, adjacent to the project site (Ramelli et. al, 2011; Bell and Bonham, 1987). This fault progresses in a northwesterly trend, and it is not mapped as passing through the project site. A concealed extension of this fault had been shown within the site in an older geologic map at a scale of 1:250, 000 for the region (Bonham and Papke, 1969); however, the subject concealed extension within the site is not shown in recent more detailed geologic maps that are at a scale of 1:24,000 (Bell and Bonham, 1987; Ramelli et. al, 2011). As per the Quaternary Fault Map of Nevada, the nearest Pleistocene Age faults are north to northeast-trending fault splays associated with the Spanish Springs Peak Fault Zone mapped about 3.5 miles north of the project site. The Holocene Age Olinghouse fault is mapped about 7 miles to the northeast.

The Nevada Earthquake Safety Council (NESC, 1998) has developed and adopted the criteria for evaluation of Quaternary age earthquake faults. *Holocene Active Faults* are defined as those with evidence of movement within the past 10,000 years (Holocene time). Those faults with evidence of displacement during the last 130,000 years are termed *Late Quaternary Active Faults*. A *Quaternary Active Fault* is one that has moved within the last 1.6 million years. An *Inactive Fault* is a fault *without recognized activity within Quaternary time* (last 1.6 million years). The bedrock fault mapped south of the Truckee River is considered to be an *Inactive Fault* without any recent movement.

Since no faults of Pleistocene Age or younger (*Quaternary Active Fault*) are mapped or were identified in the field investigation as passing through or in the vicinity of the project site, no further fault investigation or mitigation is necessary.

Ground Motion and Liquefaction

Mapping by the United States Geological Survey (USGS, 2015) indicates that there is a 2 percent probability that a *bedrock* ground acceleration of 0.59 g will be exceeded in any 50-year interval.

Because the site area is underlain by old and dense granular soils and bedrock at shallow depth, liquefaction potential is minimal due to the type, age, and density of materials present.

Flood Plains

The Federal Emergency Management Agency (FEMA) has identified majority of the site as lying in unshaded Zone X or outside the limits of a 500-year floodplain (FEMA, 2009). The southern strip of the parcel located along the Truckee River that extends a maximum of 300 feet within the parcel is mapped as lying in shaded Zone AE with 100-year base flood elevations of 4,340 feet above msl in the western, upstream end, to 4,328 feet above msl in the northeastern, downstream end (FEMA, 2009).

Other Geologic Hazards

A moderate to high potential for dust generation is present if grading is performed in dry weather. No other geologic hazards were identified.

Discussion and Recommendations

General Information

The site is geotechnically well-suited to host the proposed improvements. Site subsurface materials mostly consist of sand and gravel outwash soils and volcanic bedrock that will provide, when properly prepared, excellent support for the proposed distribution facility building and associated improvements. Excavation of these materials will also generate excellent quality fill material. Lakebed sediments and sedimentary rocks that are also present within localized zones are not suitable to directly support structural improvements and will not be suitable to use as structural fill directly beneath improvements, as described in the **Site Preparation** and **Mass Grading** sections. These clay and fine-grained soils will require separation from structural improvements.

The volcanic bedrock present within the western and northwestern limits of the parcel and northern exposed slopes will generally be excavatable, as described in the **Trenching and Excavation** section. Difficulty in excavation and trenching should be anticipated in bedrock as well as outwash soils due to the presence of cobbles and boulders. Outwash soils excavated and compacted as structural fill are expected to experience significant quantity shrinkage, as much as 25 percent, due to the removal of oversized particles (refer to the **Subsidence and Shrinkage** section).

The recommendations provided herein, and particularly under **Site Preparation, Mass Grading, Foundations,** and **Quality Control**, are intended to minimize risks of structural distress related to consolidation or expansion of native soils and/or structural fills. These recommendations, along with proper design and construction of the structure and associated improvements, work together as a system to improve overall performance. If any aspect of this system is ignored or is poorly implemented, the performance of the project will suffer. Sufficient quality control should be performed to verify that the recommendations presented in this report are followed.

Structural areas referred to in this report include all areas of buildings, concrete slabs, asphalt pavements, as well as pads for any minor structures. The term engineer, as presented below, pertains to the civil or geological engineer that has prepared the geotechnical engineering report for the project or who serves as a qualified geotechnical professional on behalf of the owner.

All compaction requirements presented in this report are relative to ASTM D 1557. For the purposes of this project:

- Fine-grained soils are defined as those with more than 40 percent by weight passing the number 200 sieve, and a plastic index lower than 15.
- Clay soils are defined as those with more than 30 percent passing the number 200 sieve, and a plastic index greater than 15.
- Granular soils are those not defined by the above criteria.

Any evaluation of the site for the presence of surface or subsurface hazardous substances is beyond the scope of this investigation. When suspected hazardous substances are encountered during routine geotechnical investigations, they are noted in the exploration logs and immediately reported to the client. No such substances were revealed during our exploration.

Site Preparation

The parcel previously hosted a sand and gravel quarry many years ago. As a result, a majority of the site has been disturbed during excavating and processing of the fine to coarse aggregates. Several sand/gravel stockpiles exist throughout the parcel. Stockpiles of debris also exist, primarily within the eastern limits of the parcel. These materials will require removal from all structural areas. As necessary, the materials can be selectively used in various aspects of the project.

Various sizes of boulders are present at the surface throughout and near the areas of quarry operations. All boulders shall be removed from structural areas; smaller boulders could be placed at the toe of the slope in areas of deep fill or can be partially buried on fill slopes. Massive boulders will require splitting or blasting into manageable sizes for their use on the project.

Existing power and communication lines shall be rerouted, as necessary.

The well house shall be demolished and removed. Any existing well inside the well house will require proper abandoning following the guidelines of the State of Nevada Water Resources Division.

All vegetation shall be stripped and grubbed from structural areas and removed from the site. A stripping depth of 0.2 to 0.3 feet is anticipated. Resulting excavations shall be backfilled with structural fill compacted to 90 percent relative compaction.

No areas of existing deep fill were documented or identified in the exploration activities. However, disturbed ground exhibiting loose near surface soil layers is present in various localized areas throughout the parcel. Disturbed areas to receive structural fill or structural loading shall be scarified through 12 inches depth, moisture conditioned, and re-compacted to a minimum 90 percent relative compaction.

The test pits were excavated by backhoe at the approximate locations shown on Plate 1. Locations were determined in the field by approximate means. All test pits were backfilled upon completion of the field portion of our study. The backfill was compacted to the extent possible with equipment on hand. However, the backfill was not compacted to the requirements presented herein under **Mass Grading**. If structures, concrete flatwork, pavement, utilities, or other improvements are to be located in the vicinity of any of the test pits, the backfill should be removed and re-compacted in accordance with the requirements contained in the soils report. Failure to properly compact backfill could result in excessive settlement of improvements located over test pits.

Lakebed sediments that are present within the north-central portions (northern higher areas) of the site at various horizons consists of fine-grained and clay soils. Sedimentary rocks that are present from the surface or below native soils near and within northwestern portions of the western quarry and some sidewall segments of the eastern quarry will also result in clay and fine-grained soils when mechanically processed (excavation, handling, and compaction by construction equipment). Clay and fine-grained soils are continuous between nearby exploration locations in some areas, but are mostly present as discontinuous/isolated pockets. Fine-grained and clay soils within this site will exhibit considerable shrink-swell with changes in moisture content or could lose significant strength with moisture increases. Such soils are common, but sporadically distributed and must be identified during grading. Failure to recognize and properly mitigate these soils will result in damage to improvements. Fine-grained and clay soils shall be separated from improvements by structural fill in order to decrease potential shrink-swell movements and/or to provide subgrade soils that will not undergo strength loss with moisture increases. The minimum separation is presented in Table 1 (Required Thickness of Structural Fill between Clay Soils and Improvements).

TABLE 1 - REQUIRED THICKNESS OF STRUCTURAL FILL BETWEEN CLAY SOILS AND IMPROVEMENTS

Improvement	Minimum Separation
Footings	2.5 feet
Interior Floor Slabs*	2.5 feet
Concrete Loading Dock Flatwork*	2.5 feet
Exterior Concrete Flatwork, including Curbs, Gutters, Sidewalk*	2.0 feet
Asphalt Pavements*	2.0 feet

* Includes aggregate base section.

The required separation may be achieved by any combination of site filling or over-excavation and replacement. Based on the current grading concept, over-excavation is expected in localized areas within the northern limits of the project. In particular, areas in and around the northwestern corner of the building. Since clay and fine-grained soils exist as isolated pockets and zones because of the unique geologic setting of the parcel, potholing and evaluation by an experienced geotechnical technician is mandatory during mass grading to identify these areas and to provide the required separation. Special attention should be given to cut to fill transition areas. Any over-excavation shall be backfilled with structural fill to footing grade, or subgrade for pavements and slabs. The width of over-excavation shall extend laterally from the edges of footings, concrete slabs, or asphalt pavements at least 12 inches on all sides.

Clays to be left in place and covered with fill shall be moisture-conditioned to 2 to 4 percent over optimum for a minimum depth of 12 inches. This moisture level will significantly decrease the magnitude of shrink-swell movements in the upper foot of clay. The high moisture content must be maintained by periodic surface wetting, or other methods, until the surface is covered by at least one lift of fill. If allowed to dry out, subsequent expansion of clay soils beneath foundations and floor slabs could significantly exceed the design criteria set forth previously.

All areas to receive structural fill or structural loading shall be densified to, at least, 90 percent relative compaction. Where less than 70 percent passes the ¾-inch sieve, soils are too coarse for standard density testing techniques. In this case, as will commonly occur in outwash soils, a proof rolling of a minimum five single passes with a minimum 10-ton roller in mass grading, or five complete passes with hand compactors in footing trenches is recommended. This alternate has proved to provide adequate project performance, as long as all other geotechnical recommendations are closely followed. In all cases, the final surface shall be smooth, firm, and exhibit no signs of deflection.

If wet weather construction is anticipated, surface clay and fine-grained soils may become well above optimum moisture and impossible to compact. In some situations, moisture conditioning may be possible by scarifying the top 12 inches of subgrade and allowing it to air dry to near-optimum moisture prior to compaction. Where this procedure is ineffective or where construction schedules preclude delays, mechanical stabilization will be necessary. Mechanical stabilization may be achieved by over-excavation and/or placement of an initial 12- to 18-inch-thick lift of 12-inch-minus, 3-inch-plus, well graded, angular rock fill. The more angular and well graded the rock is, the more effective it will be. This fill shall be densified with large equipment, such as a self-propelled sheeps-foot or a large loader, until no further deflection is noted. Additional lifts of rock may be necessary to achieve adequate stability. The use of a separator geotextile will prevent mud from pumping up between the rocks, thereby increasing rock-to-rock contact and decreasing the required thickness of stabilizing fill. The separator geotextile shall meet or exceed the following minimum properties presented in Table 2 (Minimum Required Properties for Separator Geotextile).

TABLE 2 - MINIMUM REQUIRED PROPERTIES FOR SEPARATOR GEOTEXTILE	
Trapezoid Strength (ASTM D 4533)	80 x 80 lbs.
Puncture Strength (ASTM D 4833)	500 lbs.
Grab Tensile Strength/Elongation (ASTM D 4632)	200 x 200 @ 50 %

As an alternate to rock fill, a geotextile/gravel system may be used for stabilization. Aggregate base (*Standard Specifications for Public Works Construction* [*SSPWC*], 2012), Class C or D drain rock (*SSPWC*, 2012), or pit run gravels shall be placed above the geotextile. Regardless of which alternate is selected, a test section is recommended to determine the required thickness of stabilization.

Trenching and Excavation

The degree of weathering and frequency of fractures/joints in volcanic bedrock are expected to vary, resulting in variable excavatability. We expect that most of the site bedrock can be graded mostly or entirely using heavy grading equipment (dozers with rippers). However, localized zones of "core stones" requiring hoe ram, blasting, and other aggressive excavation techniques may be present. We expect similar excavation characteristics in the volcanic slope

exposed below the UPPR tracks northwest westof the building. As much as 17 feet of cut and steepening of the existing slope is necessary for this project. Sedimentary bedrock within the site will be more easily excavated.

Trenching for utilities and footings in bedrock will also be difficult. Use of a rock saw and other aggressive trenching techniques should be anticipated locally.

Trenching and excavation in outwash soils will also pose difficulty due to the presence of small to large boulders. Neat line trenching will not be possible in outwash soils. Where outwash soils exhibit minimal non-plastic fines, caving and sloughing of sidewalls will occur particularly when they are allowed to dry out.

Temporary trenches with near-vertical sidewalls in soils should be stable to a depth of approximately 4 feet. Temporary trenches are defined as those that will be open for less than 24 hours. Excavations to greater depths will require shoring or laying back of sidewalls to maintain adequate stability. Regulations contained in Part 1926, Subpart P, of Title 29 of the Code of Federal Regulations (CFR, 2010) require that temporary sidewall slopes be no greater than those presented in Table 3 (Maximum Allowable Temporary Slopes).

TABLE 3 - MAXIMUM ALLOWABLE TEMPORARY SLOPES

Soil or Rock Type	Maximum Allowable Slopes[1] for Deep Excavations less than 20 Feet Deep[2]
Stable Rock	Vertical (90 degrees)
Type A[3]	3H:4V (53 degrees)
Type B	1H:1V (45 degrees)
Type C	3H:2V (34 degrees)

Notes:

[1] Numbers shown in parentheses next to maximum allowable slopes are angles expressed in degrees from the horizontal. Angles have been rounded off.

[2] Sloping or benching for excavations greater than 20 feet deep shall be designed by a registered professional engineer.

[3] A short-term (open 24 hours or less) maximum allowable slope of 1H:2V (63 degrees) is allowed in excavation in Type A soils that are 12 feet or less in depth. Short-term maximum allowable slopes for excavations greater than 12 feet in depth shall be 3H:4V (53 degrees).

The State of Nevada, Department of Industrial Relations, Division of Occupational Safety and Health Administration (OSHA), has adopted and strictly enforces these regulations, including the classification system and the maximum slopes. In general, Type A soils are cohesive, non-fissured soils, with an unconfined compressive strength of 1.5 tons per square foot (tsf) or greater. Type B are cohesive soils with an unconfined compressive strength between 0.5 and 1.5 tsf. Type C soils have an unconfined compressive strength below 0.5 tsf. Numerous additional factors and exclusions are included in the formal definitions. The client, owner, design engineer, and contractor shall refer to Appendix A and B of Subpart P of the previously referenced Federal Register for complete definitions and

requirements on sloping and benching of trench sidewalls. Appendices C through F of Subpart P apply to requirements and methodologies for shoring.

On the basis of our exploration, the majority of site soils are Type C. Lakebed sediments can be considered Type B. Both volcanic and sedimentary bedrock units within the site shall be considered Type A unless evaluated to be stable rock by the engineer during construction. Any area in question shall be considered Type C, unless specifically examined by the engineer during construction. All trenching shall be performed and stabilized in accordance with local, state, and OSHA standards.

If loose, soft, wet, or disturbed soils are encountered at the foundation subgrade, these soils should be removed to expose undisturbed soils/bedrock, and the resulting over-excavation backfilled with compacted structural fill. The base of all excavations should be dry and free of loose soils at the time of concrete placement.

Mass Grading

Mass grading of the site will involve as much as 20 feet of cuts within the northern limits and fills up to 13 feet within southern limits. The exposed volcanic bedrock slope north and northeast of the proposed building footprint will require a combination of excavation (up to 18-foot-cuts) and slope steepening resulting in a cut slope that is up to 45 feet in vertical height from toe to crest. An emergency access roadway along the UPRR tracks will also require up to 20 feet of cuts.

Site subsurface soils generally include outwash granular soils with minor interbeds of lakebed, fine-grained, and clay soils. Volcanic bedrock is present within the northwestern limits of the parcel beneath near surface deposits and sediments and on the northern exposed slopes. Sedimentary rocks also present overlying basalt bedrock in localized areas.

Native clay and fine-grained soils shall be placed as fill only in nonstructural areas, particularly near the toe of the fill slopes, or at the bottom of deep structural fill within paved areas below required structural fill separation. In general, excavation of lakebed sediments and sedimentary rock units will result in clay and fine-grained soils. Native granular soils and excavated volcanic bedrock will be suitable for structural fill provided particles larger than 6 inches are removed, although rock up to 12 inches can be incorporated in rock fill as detailed later in this section. Oversized rock can be stockpiled for later use as erosion protection or placed in the bottom of deep nonstructural fill, particularly beneath the slopes. In deep fills, oversized rocks must be scattered in such a manner as to preclude development of voids between the particles (nesting). If imported structural fill is required on this project, we recommend it satisfy the specifications presented in Table 4 (Guideline Specification for Imported Structural Fill).

TABLE 4 - GUIDELINE SPECIFICATION FOR IMPORTED STRUCTURAL FILL		
Sieve Size	Percent by Weight Passing	
4 Inch	100	
3/4 Inch	70 – 100	
No. 40	15 – 70	
No. 200	5 – 30	
Percent Passing No. 200 Sieve	Maximum Liquid Limit	Maximum Plastic Index
5 – 10	50	20
11 – 20	40	15
21 – 30	35	10

These recommendations are intended as guidelines to specify a readily available, prequalified material. Adjustments to the recommended limits can be provided to allow the use of other granular, non-expansive material. Any such adjustments must be made and approved by the engineer, in writing, prior to importing fill to the site.

All fill placed on hillsides steeper than 5H:1V shall be keyed into existing materials in equipment wide benches. The maximum vertical separation between benches shall be 6 feet.

Whenever possible, structure foundations shall not be placed partially on bedrock and partially on structural fill. Where structure foundations will be placed partially on bedrock and partially on structural fill due to cut and fill operations, differential settlement of the structural fill may be on the order of 1 percent of the maximum fill height, which would result in differential settlement of structure foundations. Such differential settlement should be minimized. Measures to minimize such differential settlement may include providing a gradual transition from the bedrock to structural fill and/or over-excavating a portion of the bedrock and backfilling with structural fill.

Any structural fill within the building area shall be placed in maximum 12-inch-thick (loose) lifts, each densified to, at least, 95 percent relative compaction. All other structural fill shall be densified to a minimum 90 percent relative compaction. Nonstructural fill shall be densified to, at least, 85 percent relative compaction to minimize consolidation and erosion.

Commonly, outwash soils and excavated bedrock materials will have greater than 30 percent retained on the ¾-inch sieve; as such standard density testing is not valid. These materials will be treated as rock fills with a maximum lift thickness and maximum particle size of 12 inches. A proof rolling program of at least 5 single passes of a minimum CAT® 815 roller in mass grading or at least 5 complete passes with hand compactors in footing trenches is

recommended. If a CAT® 825 or larger compactor is used, it could be possible to increase both lift thickness and particle size to a maximum of 18 inches. However, this will require a test section to verify the contractor's competency in properly compacting such thick lifts.

Properly constructed rock fills have a long history of excellent performance in northern Nevada. Within 4 feet of finished subgrade elevation, the maximum particle size and maximum lift thickness contained in rock fill placed during mass grading should be 18 inches. Additionally, the rock fill should exhibit maximum particle size and maximum lift thickness of 12 inches. As an alternate, the owner may wish to restrict the maximum particles size to 6 inches in the upper 2 feet to facilitate fine grading, trenching, and footing excavation. Acceptance of this rock fill is based upon observation of particle size, lift thickness, moisture content, and applied compactive effort. Compaction must continue to the satisfaction of the engineer. In all cases, the finished surface shall be firm and show no signs of deflection.

Grading shall not be performed with or on frozen soils.

Utility Trench Backfill

The maximum particle size in trench backfill shall be 4 inches. Bedding and initial backfill 12 inches over the pipe will require import and shall conform to the requirements of the utility having jurisdiction. Bedding and initial backfill shall be densified to at least 90 percent relative compaction. Native granular soils and excavated bedrock materials will provide adequate final backfill as long as oversized particles are excluded, and shall be placed in maximum 8-inch-thick loose lifts that are compacted to a minimum of 90 percent relative compaction in all structural areas.

Seismic Design Parameters

The 2012 *International Building Code* (*IBC*) (International Code Council [ICC], 2012) adopted by Washoe County requires a detailed soils evaluation to a depth of 100 feet to develop appropriate soils criteria. However, the code states that a Site Class D may be used as a default value when the soil properties are not known in sufficient detail to determine the soil profile type. The Site Class D soil profile is for stiff soils with a shear velocity between 600 and 1,200 feet per second, or with an N (SPT) value between 15 and 50 or an undrained shear strength between 1,000 and 2,000 pounds per square foot (psf). Based on our experience and the geology at the H.P. Ranch Parcel, it is our opinion that the default Site Class D is appropriate. With that assumption, the recommended seismic design criteria are presented in Table 5 (Seismic Design Criteria Using 2012 *International Building Code*).

TABLE 5 - SEISMIC DESIGN CRITERIA USING 2012 *INTERNATIONAL BUILDING CODE* (USGS, 2015)	
Approximate Latitude	39.513
Approximate Longitude	-119.627
Spectral Response at Short Periods, S_s, percent of gravity	148.0
Spectral Response at 1-Second Period, S_1, percent of gravity	49.3
Site Class	D
Occupancy Category	II
Site Coefficient F_a, decimal	1.00
Site Coefficient F_v, decimal	1.50
Site Adjusted Spectral Response at Short Periods, S_{MS}, percent of gravity	148.0
Site Adjusted Spectral Response at Long Periods, S_{M1}, percent of gravity	74.3
Design Spectral Response at Short Periods, S_{DS}, percent of gravity	98.7
Design Spectral Response at Long Periods, S_{D1}, percent of gravity	49.5
Seismic Design Category	D

Foundations

Clay and fine-grain soils exist as isolated pockets and as lenses of geologic units (lakebed sediments and sedimentary bedrock) within the northern half of the parcel. Clay and fine-grained soils are considered poor foundation materials because of their expansive nature or potential to lose strength with moisture increases and therefore, are not suitable to directly support footings. The most economical method of foundation support lies in spread footings bearing on native granular soils, volcanic bedrock or a minimum 2.5 feet of structural fill.

Individual column footings and continuous wall footings underlain by properly prepared native granular soils or bedrock or a minimum 2.5 feet of compacted structural fill can be designed for a net maximum allowable bearing pressure of 3,000 psf, and should have minimum footing widths of 24 and 12 inches, respectively. The net allowable bearing pressure is the pressure at the base of the footing in excess of the adjacent overburden pressure. This allowable bearing value should be used for dead plus ordinary live loads. Ordinary live loads are the portion of the design live load that will be present during the majority of the life of the structure. Design live loads are loads which are produced by the use and occupancy of the building, such as by moveable objects, including people or equipment, as well as snow loads. This bearing value may be increased by one-third for total loads. Total loads are defined as the maximum load imposed by the required combinations of dead load, design live loads, snow loads, and wind or seismic loads.

With this allowable bearing pressure, total foundation movements of approximately ¾ inch should be anticipated. Differential movement between footings with similar loads, dimensions, and base elevations should not exceed ½ inch. The majority of the anticipated movement will occur during the construction period as loads are applied.

Lateral loads, such as wind or seismic, may be resisted by passive soil pressure and friction on the bottom of the footings. The recommended coefficient of base friction is 0.45 and has been reduced by a factor of 1.5 on the ultimate soil strength. Design values for active and passive equivalent fluid pressures of footings lying within either native granular soils or structural fill are 32 and 400 pounds per square foot per foot of depth, respectively. These design values are based on spread footings bearing on native granular soils, volcanic bedrock, or structural fill, and backfilled with structural fill. All exterior footings should be placed a minimum 2 feet below adjacent finish grade for frost protection.

Retaining Walls

Retaining walls up to 8 feet in maximum exposed height are anticipated to support cuts north and northwest of the building. The grading plan shows the proposed retaining wall is to align above a 3H:1V slope of up to 12 feet in vertical height. Segmental block retaining walls may be appropriate. It will be preferable to build the retaining wall at the edge of the parking lots and to have a cut slope above the wall for global stability and to minimize necessary backfilling activities beyond the property line. If the wall is to be located above the slope, the wall embedment depth should be increased significantly and/or a horizontal bench of a minimum 4 feet should be included near the front face of the wall for global stability. Geotechnical recommendations for the design and construction of retaining walls are provided in this section. If necessary, BEC can provide design of the segmental retaining wall as a separate scope of work. Short, terraced rockery walls can also be considered, but on-site rocks are not generally suitable for rockery walls.

Dock walls up to about 4 feet in exposed height will be necessary along the side of the building where loading docks are to be constructed.

Retaining Wall Design Parameters

Table 6 (Lateral Earth Pressure Values [Equivalent Fluid Density]) provides design parameters for fully drained retaining walls with vertical back faces, horizontal backfill, and no surcharge loads next to the top of the wall. Recommendations for retaining wall drainage are provided in the **Retaining Wall/Foundation Drainage Design** section. Dock walls will not require drainage. Surcharge loads, including construction and traffic loads, should be added to the following values. While the recommendations here may be suitable for other conditions, the engineer should be consulted for retaining walls with unusual conditions such as sloping backfill, sloping retaining walls, or the presence of hydrostatic pressure. The engineer should also be consulted where retaining walls exceed 10 feet in height.

TABLE 6 - LATERAL EARTH PRESSURE VALUES (EQUIVALENT FLUID DENSITY), pcf				
Retained Slope	Static		Dynamic	
	Active[1]	Passive[2]	Active[1]	Passive[2]
Level	32	140	47	210
3H:1V	39	140[3]	74	210[3]

[1]For walls that are free to yield at least 0.2 percent of the wall height.
[2]The values presented have been reduced from the ultimate passive resistance values by 67 and 50 percent to limit deflection under static and dynamic conditions, respectively.
[3]No sloping ground on the passive side. Provide a minimum 4 feet horizontal bench where sloping ground exist.

Restrained walls should be designed to resist an at-rest equivalent fluid density of 55 pounds per cubic foot (pcf).

Lateral loads will be resisted by friction along the base of retaining wall footings and by passive resistance against buried foundation walls. Foundation wall footings cast directly on properly prepared native granular soils, volcanic bedrock, or on properly compacted structural fill, may be designed using a coefficient of base friction of 0.45. This factor has been reduced by a factor of 1.5 on the ultimate soil strength.

Retaining Wall/Foundation Drainage Design

Subsurface foundation drainage must be installed along the retaining wall foundations. Dock walls will not require drainage. This may be accomplished by placing a non-woven geotextile/gravel system with a network of perforated drain pipes below and along the outside base of the exterior footings. The geotextile shall meet or exceed the minimum properties presented in Table 7 (Minimum Required Properties for Drainage Geotextile).

TABLE 7 - MINIMUM REQUIRED PROPERTIES FOR DRAINAGE GEOTEXTILE	
Grab Tensile (ASTM D 4632)	90 lbs.
Puncture Strength (ASTM D 4833)	50 lbs.
Burst Strength (ASTM D 3786)	150 psi.
or if native soils have sharp, angular rocks:	
Grab Tensile (ASTM D 4632)	130 lbs.
Puncture Strength (ASTM D 4833)	75 lbs.
Burst Strength (ASTM D 3786)	250 psi.

A trench shall be excavated to a depth of at least 6 inches below the base and directly adjacent to the outside of the footings. A perforated 4-inch-diameter drain pipe shall be placed in the bottom of the trench, and graded to drain downslope of the wall. Class C drain rock (*SSPWC*, 2012) shall be placed a minimum of 12 inches above the drain pipe and around the footing, and covered by the geotextile.

Retaining wall drainage can be accomplished by installing granular backfill (and a weep hole drain system at the bottom of the wall) that is hydraulically connected to the foundation drain system. The drain rock section shall be a minimum of 18 inches wide and extend to within 12 inches of finished grade. A drainage geotextile (Table 7) shall be placed between the drain rock backfill and the native soils to prevent migrations of fines into the drain rock.

A shallow swale with adequate grade shall be incorporated at the backfill surface to direct runoff away from the wall.

Retaining Wall Backfill

Outwash granular soils and excavated volcanic bedrock materials will be suitable for retaining wall backfill provided particles larger than 6 inches are excluded. Native clay and fine-grained soils shall not be used as retaining wall backfill within a horizontal distance equal to the height of the wall from the wall back face. Backfill behind retaining walls shall be compacted to 90 percent of the material's maximum dry density in accordance with ASTM D 1557, but shall not be densified to more than about 92 percent relative density to minimize pressure against the wall. Care must be exercised when compacting backfill against retaining walls and foundations. To reduce temporary construction loads on the walls, heavy equipment shall not be used for placing and compacting fill within a region as determined by a 0.5H:1V line drawn upward from the bottom of the wall, or within 3 feet of the wall, whichever is greater. We recommend that hand-operated compaction equipment be used to compact soils adjacent to walls.

Portland Cement Concrete Flatwork

The design of the facility floor slab shall be performed by the structural engineer. A vertical subgrade modulus (K-value) of 250 pounds per cubic inch (30-inch-diameter plate) can be used for design of the main floor slab for the facility building.

Any other miscellaneous interior concrete slab-on-grade floors (i.e. office floor slabs, etc.) shall be a minimum of 4 inches thick. Floor slab reinforcement for these miscellaneous floors, as a minimum, shall consist of No. 3 reinforcing steel placed on 24-inch-centers in each direction, or flat sheets of 6x6, W4.0xW4.0 welded wire mesh (WWM), or as dictated by the structural engineer. Rolls of WWM are not recommended for use since vertically centered placement of rolled WWM within a floor slab is difficult to achieve. All reinforcing steel and WWM shall be centered in the floor slab through the use of concrete dobies or approved equivalent.

The thickness of base material beneath PCC flatwork shall be a minimum of 4 inches for curbs, gutters, sidewalks, floor slabs, and private flatwork. The strength of the base material is particularly critical for impact loads (fork lifts) and point loads, as occurs with storage racks. Aggregate base courses shall be densified to at least 95 percent relative compaction.

The structural section for exterior truck ramps, aprons, and dolly pads shall be a minimum of 6 inches of 4,000 pounds per square inch (psi) concrete overlying 6 inches of Type 2, Class B, aggregate base (*SSPWC*, 2012). Valley gutters shall include at least 7 inches of fibermesh concrete (4,000 psi). These exterior rigid pavements have been

designed using the American Association of State Highway and Transportation Officials (AASHTO, 1993) method for concrete with a 28-day flexural strength of 570 psi (approximately 4,000 psi compressive strength).

The northern Nevada area is a region with exceptionally low relative humidity. As a consequence, concrete flatwork is prone to excessive shrinking and curling. Concrete mix proportions and construction techniques, including the addition of water and improper curing, can adversely affect the finished quality of concrete and result in cracking, curling, and spalling of slabs. We recommend that all placement and curing be performed in accordance with procedures outlined by the American Concrete Institute (ACI, 2008) and this report. Special considerations shall be given to concrete placed and cured during hot or cold weather temperatures, low humidity conditions, and windy conditions such as are common in the Truckee Meadows area.

Proper control joints and reinforcement shall be provided to minimize any damage resulting from shrinkage. In particular, crack-control joints should be installed on maximum 10-foot-centers and shall be installed to a minimum depth of 25 percent of the slab thickness. Final layout of the crack control joints for the main floor slab shall be determined by the structural engineer. Saw-cuts, zip strips, and/or trowel joints are acceptable; however, saw-cut joints must be installed as soon as initial set allows and prior to the development of internal stresses that will result in a random crack pattern. If trowel joints are used in the office areas, they will need to be grouted over prior to installation of floor coverings.

Concrete shall not be placed on frozen in-place soils.

Any interior concrete slab-on-grade floors with moisture sensitive flooring will require a moisture barrier system. Installation shall conform to the specifications provided for a Class B vapor restraint (ASTM E 1745-97). The vapor barrier shall consist of placing a 10-mil-thick StegoRap® vapor barrier or approved equal directly on a properly prepared subgrade surface. A 4-inch-thick layer of aggregate base shall be placed over the vapor barrier and compacted with a vibratory plate. The base layer that overlies the moisture barrier membrane shall remain compacted and a uniform thickness maintained during the concrete pour, as its intended purpose is to facilitate even curing of the concrete and minimize curling of the slab. Extra attention shall be given during construction to ensure that rebar reinforcement and equipment do not damage the integrity of the vapor barrier. Care must be taken so that concrete discharge does not scour the base material from the vapor barrier. This can be accomplished by maintaining the discharge hose in the concrete and allowing the concrete to flow out over the base layer.

Asphalt Concrete

Paved areas subject to truck traffic shall consist of 4 inches of asphalt concrete underlain by 6 inches of Type 2, Class B, aggregate base (*SSPWC*, 2012). Paved areas restricted to automobile parking can consist of 3 inches of asphalt concrete underlain by 6 inches of aggregate base. All aggregate base beneath asphalt pavements shall be densified to, at least, 95 percent relative compaction.

Asphalt concrete pavements have been designed for a standard 20-year life expectancy. Due to the local climate and available construction aggregates, an entire 20 years of performance life is only achieved with diligent maintenance. Between 15 and 20 years after initial construction (average 17 years), major rehabilitation (structural overlay or reconstruction) is often required. To achieve maximum performance life, periodic maintenance is required, including regular crack sealing, seal coats, and patching as necessary. Failure to provide the required maintenance will significantly reduce pavement design life and performance.

Subsidence and Shrinkage

Subsidence of about 0.1 feet should be anticipated from construction traffic in soils. Subsidence of bedrock exposed in cut should be negligible. Granular outwash soils excavated and re-compacted as structural fill/rock fill will experience quantity shrinkage in the range of 20 to 25 percent including the removal of oversized particles larger than 12 inches. Granular outwash soils excavated and re-compacted as final utility backfill will experience quantity shrinkage in the range of 30 to 35 percent including the removal of particles larger than 4 inches in size.

Bedrock will have varying degrees of volume change, ranging from shrinkage to swell, when excavated and placed as fill. Deeply weathered bedrock will exhibit a quantity shrinkage similar to granular soil without cobbles and boulders (approximately 10 to 15 percent). Firm bedrock may exhibit no quantity shrinkage. Where hard bedrock excavates into gravel and larger sized particles, a quantity swell of up to 30 percent could be experienced. This volume increase will be partially to completely offset by removal of oversized particles, which will vary with geology and excavation methods. Therefore, an overall earthwork quantity balance at this site becomes difficult to predict and manage.

Site Drainage

Adequate surface drainage shall be provided so moisture is directed away from the structure. A system of roof drains is recommended to collect roof precipitation and direct it away from the building foundations unless pavement extends to the walls. Foundation backfill shall be thoroughly compacted to decrease permeability and reduce the potential for irrigation and storm water to migrate below the building floor slab. The ponding of water on finish grade or at the edge of pavements shall be prevented by proper grading.

On-site Sewage Disposal System Considerations

The project will likely require an on-site sewage disposal system. The planning and permitting of such a sewage system will require coordination with the Nevada Division of Environmental Protection, particularly because of the parcel's proximity to host the Truckee River. Design of the on-site sewage disposal system will require percolation testing within the site area host the primary and secondary leach fields. The bottom of the leach fields must be adequately above the highest seasonal ground water table. Geological units within the parcel are expected to exhibit significantly varying percolation rates. Outwash sand and gravel soils will likely have a significantly low percolation rate (highly permeable). Bedrock will have a high percolation rate depending on the fracture. If outwash soils exhibit a

percolation rate faster than 5 minutes per inch, a sand filter bed leach field may be necessary when the on-site sewage system is located in these soils.

Slope Stability and Erosion Control

Stability of cut and filled surfaces involve 2 separate aspects. The first concerns true slope stability related to mass wasting, landslides or the en masse downward movement of soil or rock. Stability of cut and fill slopes is dependent upon shear strength, unit weight, moisture content, and slope angle. The 2012 *IBC* (ICC, 2012) adopted by the City of Reno allows cut and fill slopes up to 2H:1V in the type of soils present at this site. The exploration and testing program conducted during this investigation confirms 2H:1V slopes will be stable in the soils. Bedrock cuts northwest of the large building can be sloped at a 1.5H:1V ratio, if necessary.

The second aspect of stability involves erosion potential and is dependent on numerous factors involving grain size distribution, cohesion, moisture content, slope angle, and the velocity of the water or wind on the ground surface. Slopes between 3H:1V and 5H:1V can be stabilized by hydroseeding. Slopes steeper than 3H:1V require mechanical stabilization. Protection could be provided by a variety of methods such as rip-rap or "geo-cell" systems; however, the abundance of rock excavated from the site will make rip-rap the most cost-effective alternative. The type and sizing of rip-rap on the fill slopes that extend within the 100-year floodplain shall be determined based on the floodwater velocity of the Truckee River. It may be necessary to provide rip-rap protection for flatter than 3H:1V slopes along Truckee River based on floodwater velocity of the Truckee River.

Dust potential at this site will be moderate during dry periods. Temporary (during construction) and permanent (after construction) erosion control will be required for all disturbed areas. The contractor shall prevent dust from being generated during construction in compliance with all applicable city, county, state, and federal regulations. The contractor shall submit an acceptable dust control plan to the Washoe County District Health Department prior to starting site preparation or earthwork. Project specifications should include an indemnification by the contractor of the owner and engineer for any dust generation during the construction period. The owner will be responsible for mitigation of dust after accepting the project.

In order to minimize erosion and downstream impacts to sedimentation from this site, best management practices with respect to storm water discharge shall be implemented at this site.

Corrosion Potential

Metal Pipe Design Parameters

Laboratory testing was performed to evaluate the corrosion potential of the soils with respect to metal pipe in contact with the ground. The results of the laboratory testing indicate that the site soils are not corrosive to buried steel (American Water Works Association [AWWA], 1999). As a result, metal pipe in contact with the ground will not require corrosion protection.

Portland Cement Concrete Mix Design Parameters

Soluble sulfate content has been determined for representative samples of the site foundation soils. The sulfate was extracted from the soil at a 10:1 water to soil ratio in order to assure that all soluble sodium sulfate was dissolved. The results are reported in milligrams of sulfate per kilogram of soil and can be directly converted to percent by dividing by 10,000. The percent sulfate in the soil is used to determine the sulfate exposure Class (S) from the information presented in Table 8 (Sulfate Exposure Class).

TABLE 8 - SULFATE EXPOSURE CLASS*

			Water-Soluble Sulfate (SO_4) in Soil, Percent by Weight	Dissolved Sulfate (SO_4) in Water, ppm
S Sulfate	Not Applicable	S0	$SO_4 < 0.10$	$SO_4 < 150$
	Moderate	S1	$0.10 \leq SO_4 < 0.20$	$150 \leq SO_4 < 1,500$ Seawater
	Severe	S2	$0.20 \leq SO_4 \leq 2.00$	$1,500 \leq SO_4 \leq 10,000$
	Very Severe	S3	$SO_4 > 2.00$	$SO_4 > 10,000$

*From Table 4.2.1 Exposure Categories and Classes. ACI 318, *Buildings Code and Comments.*

The results of the testing (Appendix B) indicate that concrete in contact with the site foundation soils should be designed for Class S0 Sulfate exposure. Therefore, Type II cement can be used for all concrete work.

Anticipated Construction Problems

Some difficulty will be encountered in trenching due to the presence of small to large boulders in areas of granular outwash soils. Difficulty in excavation and trenching will also be encountered in bedrock. Outwash soils may cave and slough from sidewalls, especially when allowed to dry out. Fine-grained and clay soils are presented in isolated locations at various depths within the northern half of the parcel and will require diligent and continuous monitoring and inspection in order to properly identify these soils during mass grading in order to provide the required separation from structural improvements.

Quality Control

All plans and specifications should be reviewed for conformance with this geotechnical report and approved by the engineer prior to submitting them to the building department for review.

The recommendations presented in this report are based on the assumption that sufficient field testing and construction review will be provided during all phases of construction. We should review the final plans and specifications to check for conformance with the intent of our recommendations. Prior to construction, a pre-job conference should be scheduled to include, but not be limited to, the owner, architect, civil engineer, the general contractor, earthwork and materials subcontractors, building official, and engineer. The conference will allow parties to review the project plans, specifications, and recommendations presented in this report and discuss applicable material quality and mix design requirements. All quality control reports should be submitted to and reviewed by the engineer.

The parcel exhibits various geological units with significantly varying physical and engineering properties; as such, the project will need sufficient quality control during construction. We should have the opportunity to provide sufficient on-site observation of preparation and grading, over-excavation, fill placement, foundation installation, and paving during construction. These observations would allow us to verify that the geotechnical conditions are as anticipated and that the contractor's work is in conformance with the approved plans and specifications.

Standard Limitations Clause

This report has been prepared in accordance with generally accepted geotechnical practices. The analyses and recommendations submitted are based on field exploration performed at the locations shown on Plate 1 of this report. This report does not reflect soils variations that may become evident during the construction period, at which time re-evaluation of the recommendations may be necessary. We recommend our firm be retained to perform construction observation in all phases of the project related to geotechnical factors to ensure compliance with our recommendations. The owner shall be responsible for distributing this geotechnical investigation to all designers and contractors whose work is related to geotechnical factors.

Equilibrium water level readings were made on the date shown on Plate 2 of this report. Fluctuations in the water table may occur due to rainfall, temperature, seasonal runoff or adjacent irrigation practices. Construction planning should be based on assumptions of possible variations in the water table.

It is anticipated that the site will be graded cut to fill. As such, minor deviations from the recommendations and assessments presented in this report are anticipated. Fills are to be generated on site using cut-to-fill methods and will not be purchased from a commercial borrow source. Therefore, the potential exists for soils within the building pads to fall outside the material limits recommended in this report. Unless these deviations can be proven to be fundamental to any observed distress or performance issue, such deviations should not be considered a failure to adhere to the recommendations presented in this report or a design flaw, but should be considered an acceptable variation in mass grading when on-site materials are used as the fill source. Acceptable performance of such materials is formulated around the provisions and requirements of the *IBC*.

This report has been produced to provide information allowing the architect or engineer to design the project. The owner is responsible for distributing this report to all designers and contractors whose work is affected by geotechnical aspects. In the event there are changes in the design, location, or ownership of the project from the time this report is issued, recommendations should be reviewed and possibly modified by the engineer. If the engineer is not granted the opportunity to make this recommended review, he or she can assume no responsibility for misinterpretation or misapplication of his or her recommendations or their validity in the event changes have been made in the original design concept without his or her prior review. The engineer makes no other warranties, either expressed or implied, as to the professional advice provided under the terms of this agreement and included in this report.

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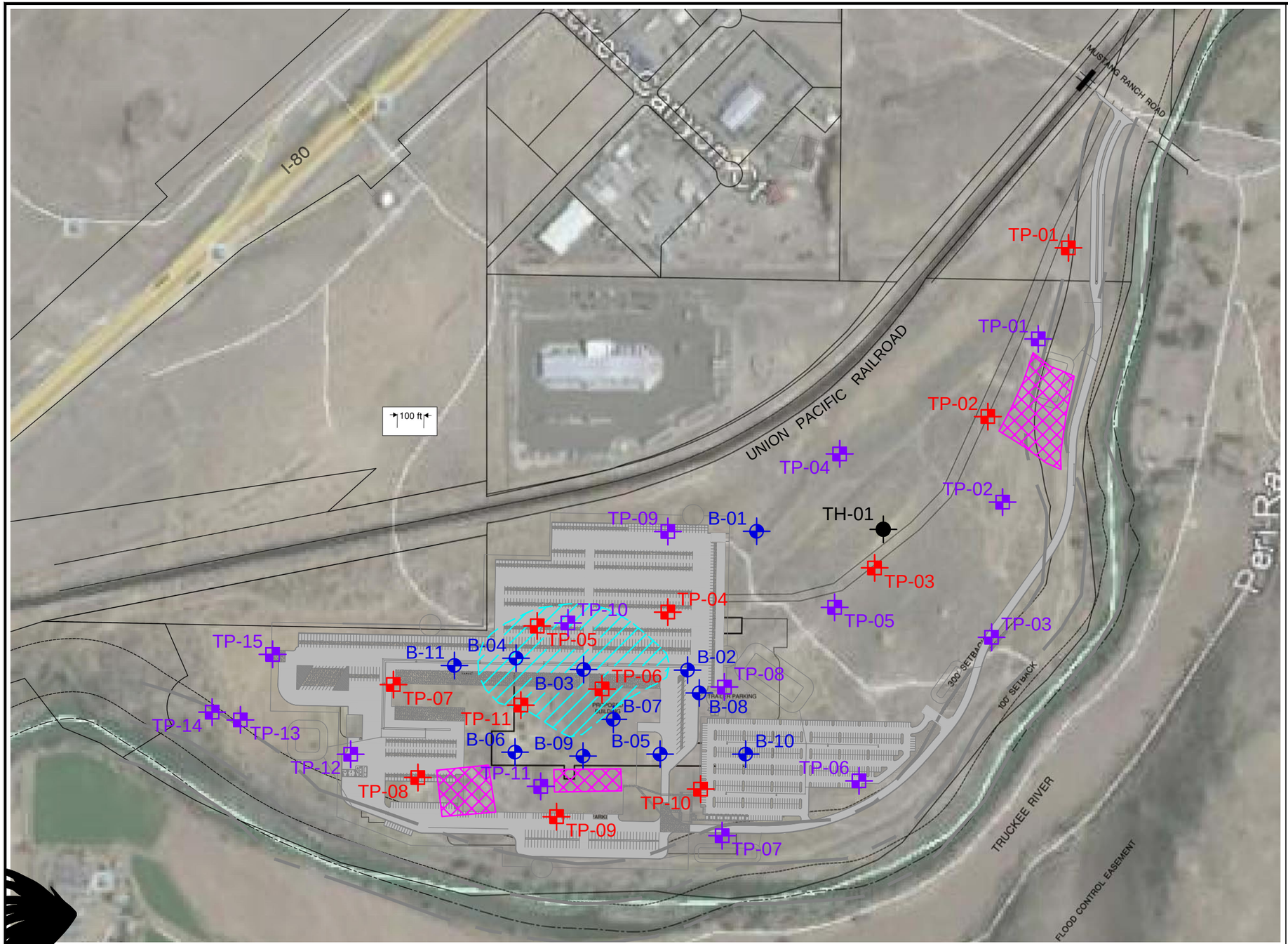
PLATES



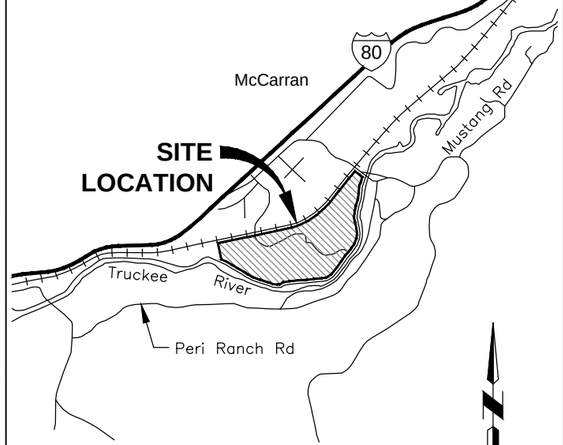
SCALE: 1"=400'
(APPROXIMATE)

LEGEND

- B-01 — APPROXIMATE BORING LOCATION
- TP-01 — APPROXIMATE TEST PIT LOCATION
- TH-01 — APPROXIMATE TEST HOLE LOCATION
- TP-01 — APPROXIMATE 2007 TEST PIT LOCATION
- APPROXIMATE AREA OF WIDESPREAD LARGE BOULDERS
- APPROXIMATE AREA OF QUARRY WASTE, STOCKPILES, OR DISTURBED GROUND

NOTES

1. BASE MAP PROVIDED BY SCANNELL PROPERTIES.



SITE LOCATION MAP

N.T.S.

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Geotechnical & Construction Services
1345 Capital Boulevard, Suite A
Reno, Nevada 89502–7140
Telephone: 775/359–6600
Facsimile: 775/359–7766

SCANNELL PROPERTIES

PLOT PLAN

H. P. RANCH PARCEL DISTRIBUTION FACILITY
WASHOE COUNTY, NEVADA

Project No.
1827-01-1

Plate 1

BORING LOG

BORING NO.: B-01 | DATE: 12/22/2014

TYPE OF RIG: BK 81 | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): ±4,350 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	SPT	50/4"			2–4	SM		**Silty Sand with Gravel** Brown to tan, slightly moist to moist, medium dense to very dense, with an estimated 15% non-plastic fines, 60% fine to coarse sand, and 25% subangular gravel up to 1-1/4 inches in diameter. Cobbles indicated by drilling response, SPT Sample A driven through cobble. Boulders up to 4 feet in diameter present on exploration surface.
B	SPT	18			6			
C	SPT	30/1" Bouncing			8	SM		**Silty Sand** Brown to tan, slightly moist to moist, very dense, with an estimated 20% non-plastic fines, 80% fine to coarse sand, and trace amounts of subangular gravel up to 1/4 inch in diameter. SPT refusal on hard cobble or boulder.
D	SPT	88			10–18	SM		**Silty Sand with Gravel** Brown to tan, slightly moist to moist, very dense, with an estimated 15% non-plastic fines, 45% fine to coarse sand, and 40% subrounded to subangular gravel up to 1-1/4 inches in diameter. Cobbles indicated by drilling response.
E	SPT	50/2.5"			16			
F	SPT	37			20–22	SM		**Silty Sand with Gravel** Light brown to tan, moist, dense, with an estimated 15% low plasticity fines, 65% fine to coarse sand, and 20% subrounded to subangular gravel up to 1 inch in diameter. Weakly cemented soil matrix.
G	SPT	29			24–26	SP		**Poorly Graded Sand** Gray to brown, moist, medium dense, with an estimated 5% non-plastic fines and 95% fine to coarse sand.

N 4377220 E 274389 UTM NAD83

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Scannell Properties

H.P. Ranch Parcel Distribution Facility

Washoe County, Nevada

PROJECT NO.: 1827-01-1

PLATE: 2a

SHEET 1 OF 1

BORING_LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015

BORING LOG

BORING NO.: B-02 | DATE: 12/22/2014

TYPE OF RIG: BK 81 | DEPTH TO GROUND WATER (ft): 21.0

LOGGED BY: JP | GROUND ELEVATION (ft): ±4,345 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	SC		**Clayey Sand** Brown, slightly moist, dense, with 34% medium plasticity fines, 62% fine to coarse sand, and 4% rounded gravel up to 1/2 inch in diameter. Moderately cemented soil matrix. Surfical boulders up to 8 feet in diameter present near exploration area.
A	SPT	35	6.1	13	4			
B	SPT	61			6	SM		**Silty Sand with Gravel** Brown to tan, slightly moist, very dense, with an estimated 20% non-plastic to low plasticity fines, 70% fine to coarse sand, and 15% rounded to subrounded gravel up to 1-1/4 inches in diameter.
C	SPT	50/6"			8			**Poorly Graded Sand with Silt and Gravel** Brown to tan, slightly moist, very dense, with an estimated 10% non-plastic fines, 70% fine to coarse sand, and 20% rounded to subrounded gravel up to 1-1/4 inches in diameter. Cobbles at 8 feet bgs indicated by drilling response.
D	SPT	50/1"			10	SP-SM		Sample D: No recovery. Boulder at 10 to 12 feet bgs indicated by drilling response.
					12			
					14			**Clayey Sand with Gravel** Brown to gray, slightly moist to wet, dense to very dense, with an estimated 20% low to medium plasticity fines, 55% fine to coarse sand, and 25% rounded to subrounded gravel up to 1-1/4 inches in diameter.
E	SPT	65			16			
					18	SC		
F	SPT	44			20 ▼			
					22			
					24			**Poorly Graded Gravel with Clay and Sand** Brown to gray, wet, dense, with an estimated 10% low to medium plasticity fines, 45% fine to coarse sand, and 45% rounded to subrounded gravel up to 1-1/4 inches in diameter. Moderately cemented soil matrix.
G	SPT	41			26	GP-GC		

N 4377046 E 274300 UTM NAD83

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Washoe County, Nevada

PROJECT NO.: 1827-01-1

PLATE: 2b

SHEET 1 OF 1

BORING_LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015

BORING LOG

BORING NO.: B-03 | DATE: 12/22/2014

TYPE OF RIG: BK 81 | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): ±4,359 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	SM		**Silty Sand** Brown to tan, slightly moist, medium dense, with 20% non-plastic fines, 79% fine to coarse sand, and 1% rounded to subrounded gravel up to 1/2 inch in diameter. Cobbles indicated by drilling response. Surficial boulders up to 8 feet in diameter present near exploration area.
A	SPT	17	4.3	NP	4			
B	SPT	50/4" Bouncing			6	CL		**Sandy Lean Clay** Brown to tan, slightly moist, very hard, with an estimated 50% low plasticity fines and 50% fine to medium sand. Boulder from 5 to 6 feet bgs indicated by drilling response. SPT Sample B low recovery.
C	SPT	89/11.5"			8	GC		**Clayey Gravel with Sand** Gray, slightly moist, very dense, with an estimated 15% low to medium plasticity fines, 25% fine to coarse sand, and 60% subrounded to angular gravel up to 1-1/4 inches in diameter. Probable weathered boulder.
D	SPT	50/6"			10	SM		**Silty Sand with Gravel** Brown, very dense, with an estimated 15% non-plastic fines, 60% fine to coarse sand, and 25% rounded to subrounded gravel up to 2 inches in diameter. Cobbles and boulders indicated by drilling response. SPT Sample D: Very low recovery.
E	AUGER				12			
					14			
					16			Drilling refusal at 15 feet bgs on boulder.
					18			
					20			

N 4377040 E 274173 UTM NAD83

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Washoe County, Nevada

PROJECT NO.: 1827-01-1

PLATE: 2c

SHEET 1 OF 1

BORING_LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015

BORING LOG

BORING NO.: B-04 | DATE: 12/22/2014

TYPE OF RIG: BK 81 | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): ±4,363 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	SM		**Silty Sand with Gravel** Brown to tan, slightly moist, very dense, with 37% low plasticity fines, 47% fine to medium sand, and 16% rounded gravel up to 1/2 inch in diameter.
A	SPT	67	6.3	5	4			Surficial boulders up to 6 feet in diameter present near exploration area.
B	SPT	41			6	SM		**Silty Sand with Gravel** Brown to gray, slightly moist to moist, dense to very dense, with an estimated 20% non-plastic to low plasticity fines, 55% fine to coarse sand, and 25% rounded to subrounded gravel up to 1-1/4 inches in diameter. Gravel and cobbles indicated by drilling response.
C	SPT	59			8			
D	SPT	50/4" Bouncing			10			Cobbles or boulder at 10 to 11 feet bgs indicated by drilling response.
					12	SM		**Silty Sand with Gravel** Brown to tan, slightly moist, very dense, with an estimated 20% low plasticity fines, 65% fine to coarse sand, and 15% subrounded to subangular gravel up to 1/2 inch in diameter.
E	SPT	30/1" Bouncing			14			
					16			SPT Sample E low recovery.
					18			
F	SPT	50/3" Bouncinng			20			SPT Sample F no recovery.
					22			Boulder at 20 feet bgs indicated by drilling response. Lithologic contact indicated by drilling response.
G	SPT	32			24	SC		**Clayey Sand** Olive to light brown with orange mottling, moist, dense, with an estimated 30% medium plasticity fines and 70% fine to coarse sand. Moderately to strongly cemented soil matrix.
					26			

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Washoe County, Nevada

PROJECT NO.: 1827-01-1

PLATE: 2d

SHEET 1 OF 1

BORING_LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015

BORING LOG

BORING NO.: B-05 | DATE: 12/23/2014

TYPE OF RIG: BK 81 | DEPTH TO GROUND WATER (ft): 16.25

LOGGED BY: JP | GROUND ELEVATION (ft): ±4,342 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	SM		**Silty Sand** Brown to tan, moist, medium dense, with an estimated 20% non-plastic to low plasticity fines, 80% fine to medium sand, and trace amounts of rounded to subrounded gravel up to 1/2 inch in diameter. Weakly cemented soil matrix.
A	SPT	16			4			
						SM		**Silty Sand** Brown to tan, moist, medium dense, with an estimated 25% non-plastic to low plasticity fines, 75% fine to medium sand, and trace amounts of rounded to subrounded gravel up to 1/2 inch in diameter.
B	SPT	23			6			
						SM		**Silty Sand with Gravel** Gray, slightly moist, very dense, with an estimated 15% non-plastic fines, 60% fine to coarse sand, and 25% rounded to subrounded gravel up to 1-1/4 inches in diameter. Gravel and cobbles at 8 feet bgs indicated by drilling response. SPT Sample C: low recovery.
C	SPT	30/0.5" Bouncing			8			
					10	SC		**Clayey Sand** Brown, slightly moist, dense, with an estimated 30% medium plasticity fines, 60% fine to coarse sand, and 10% subangular gravel up to 1-1/4 inches in diameter.
D	SPT	38			12			Cobbles or boulders at 12 to 14 feet bgs indicated by drilling response.
					14	GM		**Silty Gravel with Sand** Gray to brown, very moist to wet, dense, with an estimated 15% non-plastic to low plasticity fines, 40% fine to coarse sand, and 45% rounded to subrounded gravel up to 1 inch in diameter.
E	SPT	41			16▼			
					18			
					20			

N 4376936 E 274276 UTM NAD83

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PROJECT NO.: 1827-01-1

PLATE: 2e

SHEET 1 OF 1

BORING LOG

BORING NO.: B-06 | DATE: 12/22/2014

TYPE OF RIG: BK 81 | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): ±4,345 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
	AC		17.4	10	2	SM		**Siltstone** Mechanically breaks down to Silty Sand with Gravel. Light tan to light olive, moist, very dense, with 28% low plasticity fines, 55% fine to coarse sand, and 17% subrounded to subangular gravel up to 3/4 inch in diameter.
A	SPT	50/2.5"			4			Boring located in old pit. Massive boulders (>10 feet in diameter) present in pit.
B	SPT	76			6			SPT Sample A very low recovery. Auger cuttings sampled.
C	SPT	62			8	SM		**Siltstone** Mechanically breaks down to Silty Sand. Olive mottled tan, very dense, with an estimated 35% low plasticity fines, 60% fine to coarse sand, and 5% subrounded to subangular gravel up to 1/4 inch in diameter.
D	SPT	50/4"			10	SM		**Siltstone** Mechanically breaks down to Silty Sand with Gravel. Olive to gray, moist, very dense, with an estimated 20% low to medium plasticity fines, 50% fine to coarse sand, and 30% subangular gravel up to 1 inch in diameter. SPT Sample D: very low recovery.
E	SPT	25			12			
					14	ML		**Siltstone** Mechanically breaks down to Sandy Silt. Light tan to light olive, moist, very stiff, with an estimated 50% low to medium plasticity fines, 50% fine to medium sand, and trace amounts of fine gravel.
					16			
					18			
					20			

N 4376949 E 274125 UTM NAD83

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Reno, Nevada 89502-7140
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PROJECT NO.: 1827-01-1

PLATE: 2f

SHEET 1 OF 1

BORING_LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015

BORING LOG

BORING NO.: B-07 DATE: 12/23/2014

TYPE OF RIG: BK 81 DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP GROUND ELEVATION (ft): ±4,358 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
						SC		**Clayey Sand** Brown to reddish brown, moist, dense, with an estimated 40% low to medium plasticity fines, 55% fine to coarse sand, and 5% subrounded to subangular gravel up to 1 inch in diameter.
					2			Boring located near bottom of previous cut area.
A	SPT	48			4			**Clayey Gravel with Sand** Brown, moist, dense to very dense, with an estimated 15% low plasticity fines, 40% fine to coarse sand, and 45% subrounded to angular gravel up to 1-1/4 inches in diameter. Gravels are fractured during SPT sampling. Gravel and cobbles indicated by drilling response.
B	SPT	49			6	GC		
C	SPT	50/6"			8			SPT Sample C: Very low recovery.
D	SPT	44			10			**Silty Sand with Gravel** Brown, slightly moist, dense, with an estimated 15% non-plastic to low plasticity fines, 55% fine to coarse sand, and 30% rounded to subrounded gravel up to 2 inches in diameter in drill cuttings. SPT Sample D: low recovery.
					12	SM		Cobbles at 8 feet bgs indicated by drilling response.
					14			**Clayey Sand** Olive brown, moist, very dense, with an estimated 35% low to medium plasticity fines and 65% fine to coarse sand. Thinnly bedded.
E	SPT	30/2" Bouncing			16	SC		SPT Sample E: very low recovery.
					18			
F	SPT	23			20	SM		**Silty Sand with Gravel** Gray, moist, medium dense, with an estimated 15% non-plastic to low plasticity fines, 50% fine to coarse sand, and 35% subrounded to subangular gravel up to 3/4 inch in diameter. Granitic composition, possible decomposed boulder.

N 4377006 E 274243 UTM NAD83

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Washoe County, Nevada

PROJECT NO.: 1827-01-1

PLATE: 2g

SHEET 1 OF 1

BORING_LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015

BORING LOG

BORING NO.: B-08 | DATE: 12/22/2014

TYPE OF RIG: BK 81 | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): ±4,339 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	SC		**Clayey Sand with Gravel** Brown to gray, slightly moist, medium dense, with an estimated 25% low to medium plasticity fines, 50% fine to coarse sand, and 25% rounded to subrounded gravel up to 1-1/4 inches in diameter. Cobbles indicated by drilling response. Weakly to moderately cemented soil matrix.
A	SPT	25			4			Surficial cobbles up to 12 inches in diameter present near exploration area.
B	SPT	27			6			
C	SPT	60			8	SP-SM		**Poorly Graded Sand with Silt and Gravel** Brown to gray, slightly moist, very dense, with an estimated 10% non-plastic fines, 55% fine to coarse sand, and 35% rounded to subrounded gravel up to 1-1/4 inches in diameter.
D	SPT	19			10	SM		**Silty Sand** Brown, slightly moist, medium dense, with an estimated 20% non-plastic fines, 75% fine to coarse sand, and 5% rounded to subrounded gravel up to 1-1/4 inches in diameter.
					12			Cobbles from 10 to 13 feet bgs indicated by drilling response.
E	SPT	61			14	GP-GM		**Poorly Graded Gravel with Silt and Sand** Brown to gray, slightly moist, very dense, with an estimated 10% non-plastic fines, 40% fine to coarse sand, and 50% rounded to subrounded gravel up to 1-1/4 inches in diameter. Cobbles indicated by drilling response.
					16			
					18			
					20			

N 4377017 E 274330 UTM NAD83

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H.P. Ranch Parcel Distribution Facility

Washoe County, Nevada

PROJECT NO.: 1827-01-1

PLATE: 2h

SHEET 1 OF 1

BORING LOG

BORING NO.: B-09 | DATE: 12/22/2014

TYPE OF RIG: BK 81 | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): ±4,344 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	SP-SM		**Poorly Graded Sand with Silt and Gravel** Brown to tan, slightly moist, medium dense, with an estimated 10% non-plastic fines, 70% fine to coarse sand, and 20% rounded to subrounded gravel. Gravel up to 2 inches in diameter in drill cuttings. Gravel and cobbles indicated by drilling response.
A	SPT	20			4			
B	SPT	21			6			
C	SPT	19			8	SP-SM		**Poorly Graded Sand with Silt** Gray, slightly moist, medium dense to very dense, with an estimated 10% non-plastic fines, 80% fine to coarse sand, and 10% rounded to subrounded gravel up to 1/2 inch in diameter. Cobbles or boulders at 8 to 10 feet bgs indicated by drill response. SPT Sample D: Very low recovery.
D	SPT	50/4" Bouncing			10			
					12			
					14	SM		**Silty Sand with Gravel** Brown, slightly moist, very dense, with an estimated 15% non-plastic to low plasticity fines, 50% fine to coarse sand, and 35% rounded to subrounded gravel up to 3/4 inch in diameter. Very low SPT sample recovery. Boulder at about 12 to 14 feet bgs indicated by drill response.
E	SPT	30/2" Bouncing			16			
					18			
					20			

N 4376942 E 274212 UTM NAD83

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H.P. Ranch Parcel Distribution Facility

Washoe County, Nevada

PROJECT NO.: 1827-01-1

PLATE: 2i

SHEET 1 OF 1

BORING_LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015

BORING LOG

BORING NO.: B-10 | DATE: 12/22/2014

TYPE OF RIG: BK 81 | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): ±4,338 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	SC		**Clayey Sand with Gravel** Brown, moist, medium dense, with an estimated 25% medium plasticity fines, 60% fine to coarse sand, and 15% subrounded to subangular gravel up to 2 inches in diameter in drill cuttings. Cobbles indicated by drilling response.
A	SPT	15			4			No SPT sample recovery. Auger cuttings field classified. Surficial boulders up to 3 feet in diameter present in exploration area.
B	SPT	24	7.3	16	6	SC		**Clayey Sand** Brown to tan, moist, medium dense, with 34% medium plasticity fines, 53% fine to coarse sand, and 13% subrounded to subangular gravel up to 1-1/4 inches in diameter. Moderately cemented soil matrix.
C	SPT	23			8	SM		**Silty Sand with Gravel** Brown, slighlty moist to moist, medium dense, with an estimated 20% non-plastic to low plasticity fines, 65% fine to coarse sand, and 15% rounded to subangular gravel up to 1-1/4 inches in diameter.
D	SPT	26			10	SM		**Silty Sand** Brown, slighlty moist to moist, medium dense, with an estimated 15% non-plastic fines, 75% fine to coarse sand, and 10% rounded to subangular gravel up to 1-1/4 inches in diameter.
E	SPT	47			12	SP		**Poorly Graded Sand with Silt and Gravel** Brown, slightly moist, dense, with an estimated 10% non-plastic fines, 60% fine to coarse sand, and 30% rounded to subrounded gravel up to 1-1/4 inches in diameter.
					14			
					16			
					18			
					20			

N 4376943 E 274365 UTM NAD83

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Scannell Properties

H.P. Ranch Parcel Distribution Facility

Washoe County, Nevada

PROJECT NO.: 1827-01-1

PLATE: 2j

SHEET 1 OF 1

BORING_LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015

BORING LOG

BORING NO.: B-11 | DATE: 12/23/2014

TYPE OF RIG: BK 81 | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): ±4,365 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					0	SC		**Clayey Sand** Light tan to yellow, moist, very dense, with an estimated 45% medium plasticity fines and 55% fine to coarse sand.
					2			Surficial boulders up to 6 feet in diameter present near exploration area. Cobbles indicated by drilling response throughout the boring.
A	SPT	85			4	GC		**Basalt** Mechanically breaks down to Clayey Gravel with Sand. Light tan to yellow with black clasts, moist, very dense, with an estimated 15% low plasticity fines, 40% fine to coarse sand, and 45% subangular gravel up to 1-1/4 inches in diameter. Fine sediments with fractured volcanic cobbles.
B	SPT	62			6			
					8			**Basalt** Mechanically breaks down to Clayey Gravel with Sand. Light tan to yellow with black clasts, moist, dense to very dense, with an estimated 20% low to medium plasticity fines, 40% fine to coarse sand, and 45% subangular gravel up to 1-1/4 inches in diameter. Fine sediments with fractured volcanic cobbles.
C	SPT	50/2"			10			SPT Sample C: No recovery.
D	SPT	42			12	GC		
					14			SPT Sample E: Very low recovery.
E	SPT	50/3.5"			16			
					18			
					20			

N 4377051 E 274028 UTM NAD83

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Scannell Properties

H.P. Ranch Parcel Distribution Facility

Washoe County, Nevada

PROJECT NO.: 1827-01-1

PLATE: 2k

SHEET 1 OF 1

BORING_LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015

TEST HOLE LOG

BORING NO.: TH-01 | DATE: 12/31/2014

TYPE OF RIG: Existing quarry cut slope | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): ±4,340 (TOPO)

SAMPLE NO.	SAMPLE TYPE	BLOWS/12 inches	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB		9.1	5	2	ML		**Silt with Sand** Light gray with orange mottling, dry to slightly moist, firm to stiff, with 76% low plasticity fines and 24% fine to medium sand. Laminar bedding. Weakly cemented.
					4	SM		**Silty Sand** Brown with orange mottling, slightly moist, loose to medium dense, with an estimated 20% non-plastic to low plasticity fines and 80% fine to medium sand. Fine bedding.
					6			
					8			
					10			

N 4377184 E 274545 UTM NAD83

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H.P. Ranch Parcel Distribution Facility

Washoe County, Nevada

PROJECT NO.: 1827-01-1

PLATE: 2I

TEST PIT LOG

TEST PIT NO.: TP-01 DATE: 12/31/2014

TYPE OF HOE: Cat 330L Trackhoe DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP GROUND ELEVATION (ft): ±4,335 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				0	SM		**Silty Sand** Brown, slightly moist, medium dense, with an estimated 15% non-plastic fines, 75% fine to coarse sand, and 10% subrounded gravel up to 2 inches in diameter. Weakly cemented soil matrix.
B	GRAB				2	GM		**Silty Gravel with Sand** Brown to gray, slightly moist, dense, with an estimated 15% non-plastic fines, 40% fine to coarse sand, and 45% rounded to subrounded gravel up to 3 inches in diameter. Weakly cemented soil matrix.
					4	SM		**Silty Sand** Light gray with orange mottling, slightly moist, medium dense to dense, with an estimated 35% non-plastic to low plasticity fines and 65% fine to medium sand. Weakly cemented soil matrix. Finely bedded.
C	GRAB				6	SM		**Silty Sand with Gravel** Brown, slightly moist, dense, with an estimated 20% non-plastic fines, 45% fine to coarse sand, and 35% rounded to subrounded gravel up to 3 inches in diameter.
					8			
					10			

N 4377533 E 274790 UTM NAD83

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PROJECT NO.: 1827-01-1

PLATE: 2m

SHEET 1 OF 1

BORING_LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015

TEST PIT LOG

TEST PIT NO.: TP-02 | DATE: 12/31/2014

TYPE OF HOE: Cat 330L Trackhoe | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): ±4,334 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				2	SM		**Silty Sand** Brown to tan, slightly moist, loose to medium dense, with an estimated 25% non-plastic to low plasticity fines, 70% fine to medium sand, and 5% subrounded gravel up to 1 inch in diameter. Weakly to moderately cemented soil matrix. Fine roots to a depth of 4 inches.
					4			
B	GRAB				6	SM		**Silty Sand with Gravel** Brown, slightly moist to moist, medium dense to dense, with an estimated 20% non-plastic to low plasticity fines, 65% fine to medium sand, and 15% rounded to subrounded gravel up to 1-1/2 inches in diameter. Moderatly cemented soil matrix to 7 feet below the ground surface (bgs) and weakly cemented below.
					8			
					10			

N 4377316 E 274659 UTM NAD83

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PROJECT NO.: 1827-01-1

PLATE: 2n

SHEET 1 OF 1

BORING_LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015

TEST PIT LOG

TEST PIT NO.: TP-03

DATE: 12/31/2014

TYPE OF HOE: Cat 330L Trackhoe

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP

GROUND ELEVATION (ft): ±4,346 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				2 4 6 8 10	GP		**Poorly Graded Gravel with Sand** Brown to gray, slightly moist to moist, medium dense, with an estimated 5% low plasticity fines, 30% fine to coarse sand, and 65% rounded to subgangular fine to coarse gravel. Cobbles up to 6 inches in diameter make up about 30% of the total soil mass (tsm). Cobbles and boulders up to 2 feet in diameter make up an additional 5% of the tsm.

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PROJECT NO.: 1827-01-1

PLATE: 2o

SHEET 1 OF 1

BORING_LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015

TEST PIT LOG

TEST PIT NO.: TP-04 | DATE: 12/31/2014

TYPE OF HOE: Cat 330L Trackhoe | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): ±4,353 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				2	SP		**Poorly Graded Sand** Gray with orange mottling, dry to slightly moist, loose, with an estimated 5% non-plastic fines and 85% fine to coarse sand.
B	GRAB		6.7	3	4	SM		**Silty Sand with Gravel** Light gray with orange mottling, dry to slightly moist, medium dense, with 46% low plasticity fines, 35% fine to coarse sand, and 19% subangular gravel up to 1/2 inch in diameter. Finely bedded. Weakly cemented soil matrix.
C	GRAB		7.2	11	6	GW-GC		**Well-Graded Gravel with Clay and Sand** Brown to gray with orange mottling, slightly moist to moist, medium dense, with 8% medium plasticity fines, 32% fine to coarse sand, and 60% rounded to subrounded fine to coarse gravel. Cobbles up to 6 inches in diameter make up about 10% of the tsm. Cobbles up to 12 inches in diameter make up an addition 5% of the tsm.
D	GRAB				12	GW-GC		**Well-Graded Gravel with Clay and Sand** Brown to gray with orange mottling, slightly moist to moist, dense to very dense, with an estimated 10% low plasticity fines, 40% fine to coarse sand, and 50% rounded to subrounded fine to coarse gravel. Cobbles up to 6 inches in diameter make up about 15% of the tsm. Cobbles and boulders up to 4 feet in diameter make up an addition 15% of the tsm. Excavation depth limited due to multiple boulders greater than 3 feet in diameter at 13 to 15 feet bgs.
					14			
					16			
					18			
					20			

N 4377116 E 274263 UTM NAD83

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Washoe County, Nevada

PROJECT NO.: 1827-01-1

PLATE: 2p

SHEET 1 OF 1

BORING_LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015

TEST PIT LOG

TEST PIT NO.: TP-05 | DATE: 12/31/2014

TYPE OF HOE: Cat 330L Trackhoe | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): ±4,361 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					0	SP		**Poorly Graded Sand** Gray with orange mottling, dry to slightly moist, loose, with an estimated 5% non-plastic fines, 90% fine to coarse sand, and 5% rounded to subrounded gravel up to 1 inch in diameter. Fine roots to a depth of 4 inches bgs.
A	GRAB				2	SM		Surficial boulders up to 6 feet in diameter near exploration area. Boulders are of volcanic orgin.
					4	SM		**Silty Sand** Brown, moist, medium dense, with an estimated 20% non-plastic to low plasticity fines, 70% fine to coarse sand, and 10% subrounded gravel up to 1 inch in diameter. Moderately cemented soil matrix.
					6	SP		Multiple boulders 3 to 6 feet in diameter encountered from 2 to 10 feet bgs. Boulders make up about 25% of the tsm from 2 to 10 feet bgs. Boulders are of volcanic composition, some were broken down to less than 2 feet in diameter during excavation.
B	GRAB				8			**Silty Sand** Light gray, moist, stiff to very stiff, with an estimated 45% low plasticity fines and 55% fine to coarse sand.
					10			**Poorly Graded Sand with Silt and Gravel** Brown, slightly moist to moist, medium dense to dense, with an estimated 10% non-plastic to low plasticity fines, 50% fine to coarse sand, and 40% subrounded fine to coarse gravel. Cobbles up to 12 inches in diameter make up about 5% of the tsm (in addition to 25% boulders).
C	BULK				12			
					14	GP		**Poorly Graded Gravel with Sand** Brown to gray, slightly moist to moist, medium dense to dense, with an estimated 5% non-plastic fines, 40% fine to coarse sand, and 55% rounded to subrounded fine to coarse gravel. Cobbles up to 12 inches in diameter make up about 10% of the tsm. Occasional boulders up to 3 feet in diameter are also present.
					16			
					18			
					20			

N 4377087 E 274144 UTM NAD83

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Washoe County, Nevada

PROJECT NO.: 1827-01-1

PLATE: 2q

SHEET 1 OF 1

BORING_LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015

TEST PIT LOG

TEST PIT NO.: TP-06 DATE: 12/31/2014

TYPE OF HOE: Cat 330L Trackhoe DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP GROUND ELEVATION (ft): ±4,359 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					0	SP		**Poorly Graded Sand** Gray with orange mottling, dry to slightly moist, loose, with an estimated 5% non-plastic fines, 90% fine to coarse sand, and 5% rounded to subrounded gravel up to 1 inch in diameter. Fine roots to a depth of 4 inches bgs.
					2	ML		Surficial boulders up to 6 feet in diameter near exploration area. Boulders are of volcanic orgin.
					4			**Sandy Silt** Light gray, moist, stiff to very stiff, with an estimated 60% low plasticity fines and 40% fine to coarse sand.
A	GRAB		59.5	29	6			**Siltstone** Light olive to light tan, moderately weathered, friable. Mechanically breaks down to Silty Sand. Moist to very moist, dense to very dense, with 43% high plasticity fines, 56% fine to medium sand, and 1% subangular to angular gravel up to 3/8 inch in diameter. This rock material is easily excavated and breaks down to angular gravel and cobble size material.
					8			
					10			
					12	SM		
B	GRAB				14			
					16			
					18			
					20			

N 4377049 E 274207 UTM NAD83

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PROJECT NO.: 1827-01-1

PLATE: 2r

SHEET 1 OF 1

BORING_LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015

TEST PIT LOG

TEST PIT NO.: TP-07 | DATE: 12/31/2014

TYPE OF HOE: Cat 330L Trackhoe | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): ±4,358 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	BULK				2	GP		**Weathered Basalt** Dark brown to black with yellowish brown fines, moderately to highly weathered, weak to friable. Mechanically breaks down to Poorly Graded Gravel with Sand. Moist, medium dense to very dense, with an estimated 5% low plasticity fines, 20% fine to coarse sand, and 75% subangular to angular gravel and cobbles up to 4 inches in diameter. Material excavates to hard gravel and cobbles with sand and fines. Becomes very dense at 6 feet bgs, excavation slowed significantly.
					4			
					6			
					8			
					10			

N 4377032 E 273951 UTM NAD83

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Washoe County, Nevada

PROJECT NO.: 1827-01-1

PLATE: 2s

SHEET 1 OF 1

BORING_LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015

TEST PIT LOG

TEST PIT NO.: TP-08 | DATE: 12/31/2014

TYPE OF HOE: Cat 330L Trackhoe | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP | GROUND ELEVATION (ft): ±4,350 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				2	SM		**Silty Sand** Light gray with orange mottling, silghtly moist, loose to medium dense, with an estimated 45% low plasticity fines and 55% fine to medium sand. Rock tailings on the surface near exploration area.
B	GRAB				4 6 8	SM		**Silty Sand with Gravel** Brown to gray with heavy orange staining, moist, medium dense to dense, with an estimated 20% low plasticity fines, 65% fine to coarse sand, and 15% rounded to subangular fine to coarse gravel. Cobbles up to 8 inches make up about 10% of the tsm. Moderately cemented soil matrix.
					10			

N 4376929 E 274004 UTM NAD83

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Washoe County, Nevada

PROJECT NO.: 1827-01-1

PLATE: 2t

SHEET 1 OF 1

BORING_LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015

TEST PIT LOG

TEST PIT NO.: TP-09 DATE: 12/31/2014

TYPE OF HOE: Cat 330L Trackhoe DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP GROUND ELEVATION (ft): ±4,343 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				0	SM		**Silty Sand** Brown, moist, loose to medium dense, with an estimated 25% low plasticity fines, 70% fine to coarse sand, and 5% subrounded gravel up to 3/4 inch in diameter. Weakly cemented soil matrix.
B	GRAB				2	SM		**Silty Sand** Brown, slightly moist, medium dense, with an estimated 20% non-plastic fines and 80% fine to medium sand. Weakly cemented soil matrix.
					4	SP		**Poorly Graded Sand with Gravel** Gray, slightly moist, loose to medium dense, with an estimated 5% non-plastic fines, 80% fine to coarse sand, and 15% rounded to subrounded gravel up to 3 inches in diameter. This soil layer sloughs easily.
					6			Excavation depth limited due to severe sloughing below 4 feet bgs.
					8			
					10			

N 4376859 E 274226 UTM NAD83

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H.P. Ranch Parcel Distribution Facility

Washoe County, Nevada

PROJECT NO.: 1827-01-1

PLATE: 2u

SHEET 1 OF 1

BORING_LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015

TEST PIT LOG

TEST PIT NO.: TP-10 DATE: 12/31/2014

TYPE OF HOE: Cat 330L Trackhoe DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP GROUND ELEVATION (ft): ±4,335 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB		17.2	20		GM		**Silty Gravel with Sand** Brown with orange mottling, slightly moist to moist, medium dense, with 18% medium plasticity fines, 27% fine to coarse sand, and 45% subangular fine to coarse gravel. Cobbles up to 12 inches in diameter make up about 10% of the tsm. Fine roots to a depth of 4 inches bgs.
					2			**Silty Sand with Gravel** Brown with orange mottling, slightly moist to moist, medium dense to dense, with an estimated 20% low to medium plasticity fines, 60% fine to coarse sand, and 20% subrounded to subangular fine to coarse gravel. Cobbles and boulders up to 2 feet in diameter up about 15% of the tsm.
					4			Multiple 3 to 6-foot-diameter boulders encountered below 4 feet bgs make up an additional 10% of the tsm.
B	GRAB				6	SM		
					8			
					10			

N 4376877 E 274421 UTM NAD83

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Washoe County, Nevada

PROJECT NO.: 1827-01-1

PLATE: 2v

SHEET 1 OF 1

BORING_LOG 1827011.GPJ BLKEAGLE.GDT 2/25/2015

TEST PIT LOG

TEST PIT NO.: TP-11

DATE: 12/31/2014

TYPE OF HOE: Cat 330L Trackhoe

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: JP

GROUND ELEVATION (ft): ±4,359 (TOPO)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					0–10	SM		**Silty Sand with Gravel** Brown to tan with orange mottling, slightly moist to moist, medium dense to very dense, with an estimated 20% non-plastic to low plasticity fines, 55% fine to coarse sand, and 25% subrounded gravel. Cobbles and boulders up to 4 feet in diameter make up about 20% of the tsm. Boulders of volcanic and metasedimentary composition.
					10–15	ML		**Siltstone** Light olive to light tan, moderately weathered, friable. Mechanically breaks down to Silty Sand. Slightly moist to moist, dense, with an estimated 45% low to high plasticity fines and 55% fine to medium sand. This rock material is easily excavated and breaks down to angular gravel and cobble size material.
					15			Test pit excavated as a shallow trench in the deep pit sidewall slope. The contact between siltstone and overlying soils is irregular.

N 4377015 E 274115 UTM NAD83

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Scannell Properties

H.P. Ranch Parcel Distribution Facility

Washoe County, Nevada

PROJECT NO.: 1827-01-1

PLATE: 2w

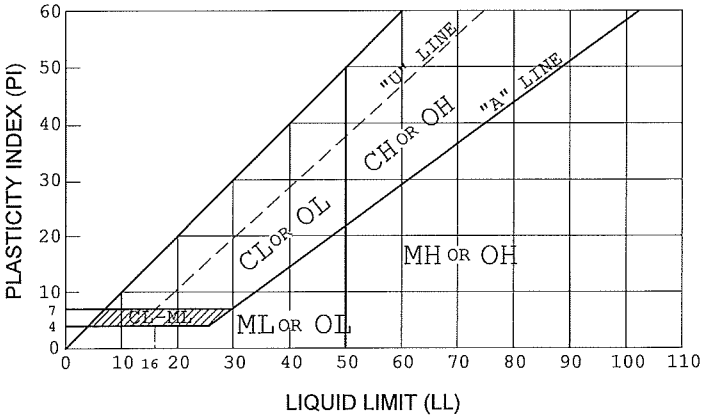
SHEET 1 OF 1

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE			GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS
FILL MATERIAL				--	FILL MATERIAL, NON-NATIVE

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS.

PLASTICITY CHART



FOR CLASSIFICATION OF FINE-GRAINED SOILS AND FINE-GRAINED FRACTION OF COARSE-GRAINED SOILS

EXPLORATION SAMPLE TERMINOLOGY

Sample Type	Sample Symbol	Sample Code
Auger Cuttings		Auger
Bulk (Grab) Sample		Grab
Modified California Sampler		MC
Shelby Tube		SH or ST
Standard Penetration Test		SPT
Split Spoon		SS
No Sample		

GRAIN SIZE TERMINOLOGY

Component of Sample	Size Range
Boulders	Over 12 in. (300mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 2mm)
Sand	# 4 to #200 sieve (2mm to 0.074mm)
Silt or Clay	Passing #200 sieve (0.074mm)

RELATIVE DENSITY OF GRANULAR SOILS

N - Blows/ft	Relative Density
0 - 4	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
greater than 50	Very Dense

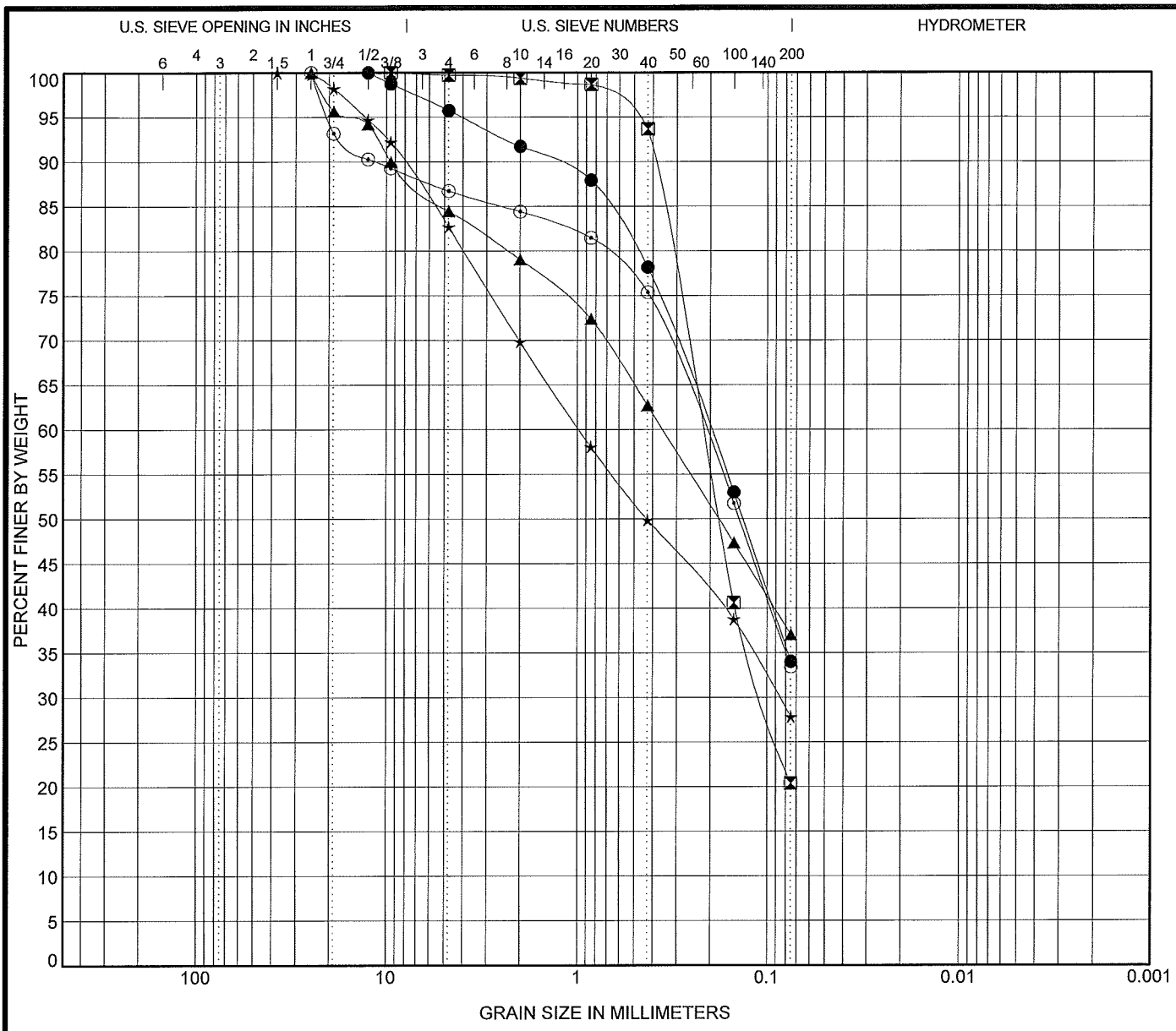
CONSISTENCY OF COHESIVE SOILS

Unconfined Compressive Strength, psf	N - Blows/ft	Consistency
less than 500	0 - 1	Very Soft
500 - 1,000	2 - 4	Soft
1,000 - 2,000	5 - 8	Firm
2,000 - 4,000	9 - 15	Stiff
4,000 - 8,000	16 - 30	Very Stiff
8,000 - 16,000	31 - 60	Hard
greater than 16,000	greater than 60	Very Hard

Black Eagle Consulting, Inc.
1345 Capital Blvd., Suite A
Reno, Nevada 89502-7140
Telephone: (775) 359-6600
Fax: (775) 359-7766

USCS Soil Classification Chart

Project: H.P. Ranch Parcel Distribution Facility
Location: Washoe County, Nevada
Project Number: 1827-01-1 Plate: 3



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification			USCS Classification	LL	PL	PI	Cc	Cu
●	B-02	2.5'	CLAYEY SAND (SC)	29	16	13		
⊠	B-03	2.5'	SILTY SAND (SM)	NP	NP	NP		
▲	B-04	2.5'	SILTY SAND with GRAVEL (SM)	27	22	5		
★	B-06	0.0'	SILTY SAND with GRAVEL (SM)	39	29	10		
⊙	B-10	5.0'	CLAYEY SAND (SC)	31	15	16		

Specimen Identification			D100	D60	D30	D10	MC %	%Gravel	%Sand	%Silt	%Clay
●	B-02	2.5'	12.5	0.2			6.1	4.2	61.7	34.0	
⊠	B-03	2.5'	9.5	0.219	0.104		4.3	0.3	79.3	20.4	
▲	B-04	2.5'	25	0.354			6.3	15.5	47.4	37.0	
★	B-06	0.0'	37.5	0.977	0.086		17.4	17.3	54.9	27.8	
⊙	B-10	5.0'	25	0.216			7.3	13.3	53.3	33.5	

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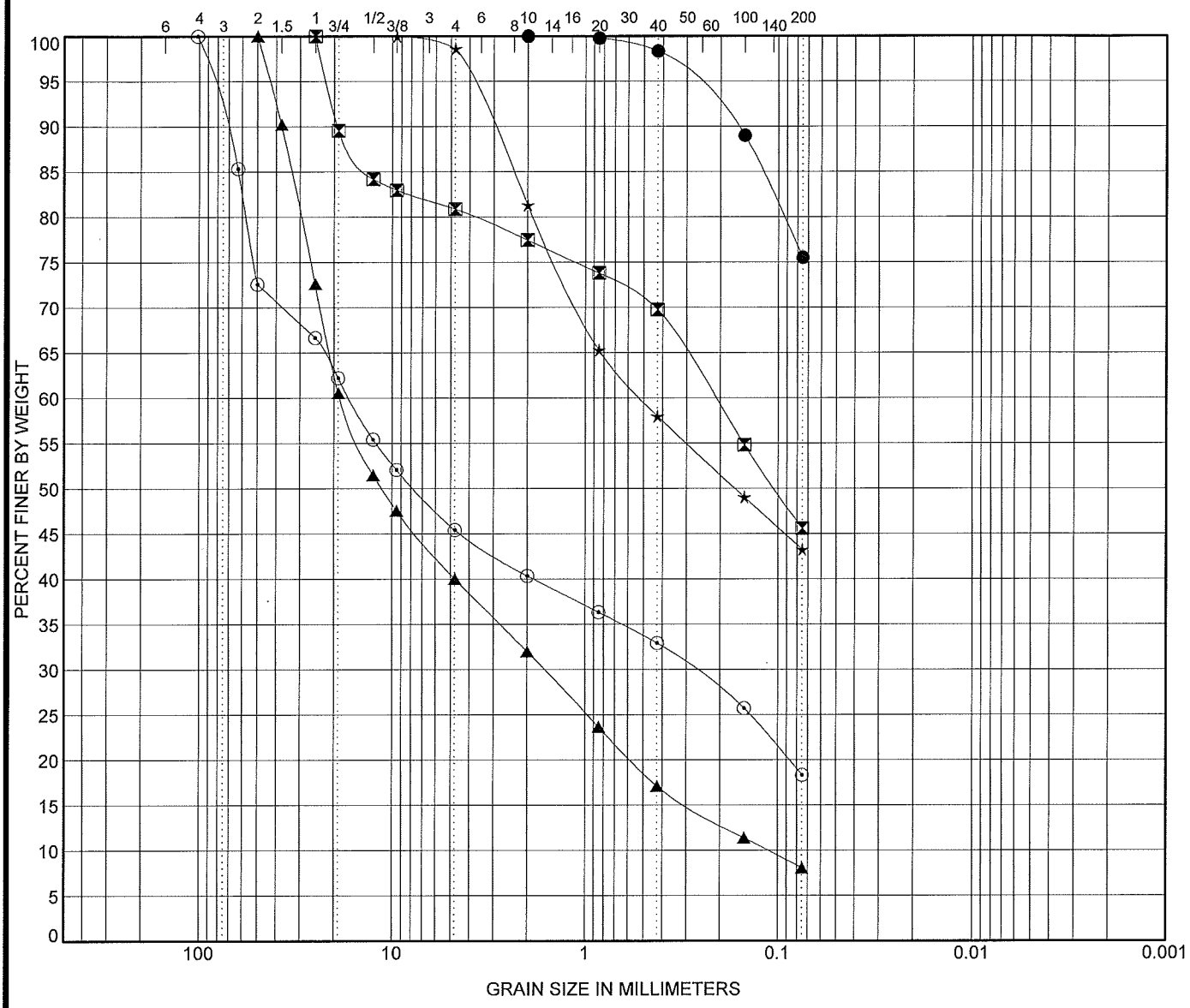
1345 Capital Blvd., Suite A
Reno, Nevada 89502-7140
Telephone: (775) 359-6600
Fax: (775) 359-7766

GRAIN SIZE DISTRIBUTION

Project: H.P. Ranch Parcel Distribution Facility
Location: Washoe County, Nevada
Project Number: 1827-01-1 Plate: 4a

US GRAIN SIZE2 1827011.GPJ US LAB.GDT 2/25/2015



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		USCS Classification	LL	PL	PI	Cc	Cu
●	TH-01	0.0'	SILT with SAND (ML)	29	24	5		
⊠	TP-04	4.0'	SILTY SAND with GRAVEL (SM)	25	22	3		
▲	TP-04	5.0'	WELL-GRADED GRAVEL with CLAY and SAND (GW-GC)	33	22	11	1.28	164.76
★	TP-06	6.0'	SILTY SAND (SM)	93	64	29		
⊙	TP-10	0.0'	SILTY GRAVEL with SAND (GM)	48	28	20		

	Specimen Identification		D100	D60	D30	D10	MC %	%Gravel	%Sand	%Silt	%Clay
●	TH-01	0.0'	2				9.1	0.0	24.5	75.5	
⊠	TP-04	4.0'	25	0.215			6.7	19.1	35.3	45.6	
▲	TP-04	5.0'	50	18.517	1.63	0.112	7.2	60.0	32.0	8.1	
★	TP-06	6.0'	9.5	0.514			59.5	1.4	55.4	43.3	
⊙	TP-10	0.0'	102	16.571	0.278		17.2	45.2	27.1	18.3	

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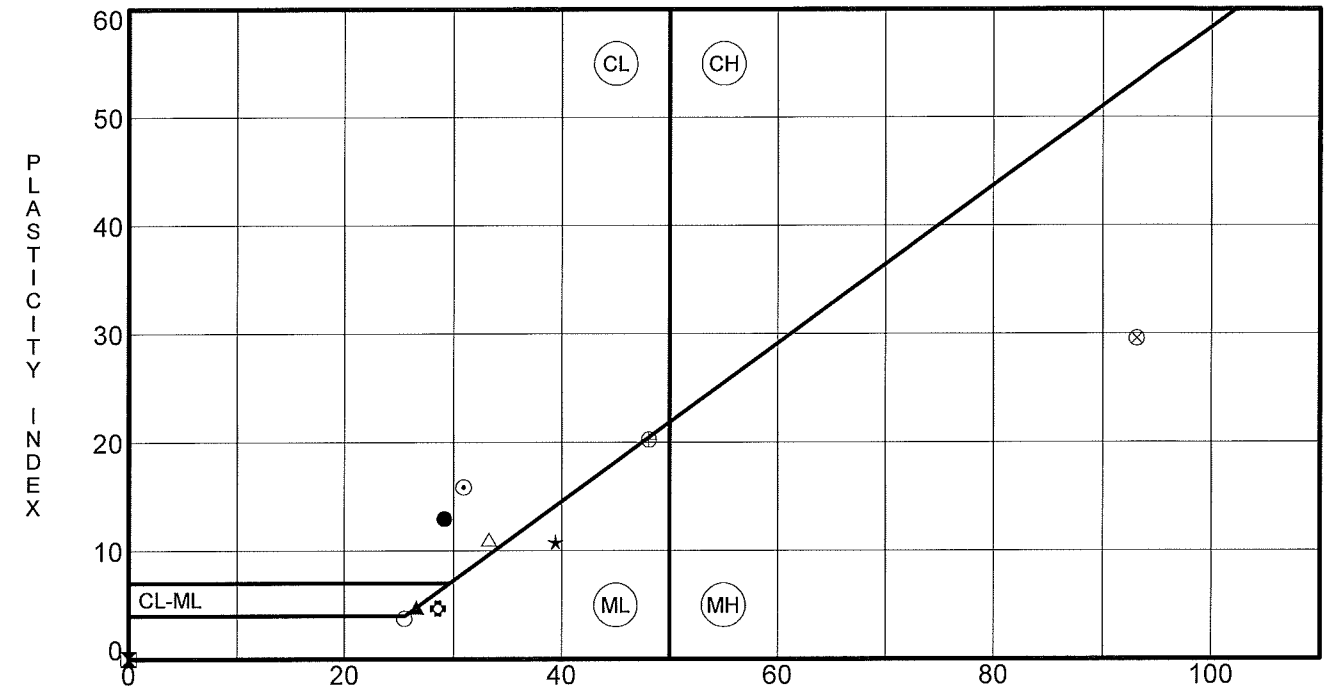
Fax: (775) 359-7766

GRAIN SIZE DISTRIBUTION

Project: H.P. Ranch Parcel Distribution Facility
Location: Washoe County, Nevada
Project Number: 1827-01-1 Plate: 4b



Specimen Depth in Feet.

	Specimen Identification			LL	PL	PI	Fines	USCS Classification
●	B-02	A	2.5'	29	16	13	34	CLAYEY SAND (SC)
⊠	B-03	A	2.5'	NP	NP	NP	20	SILTY SAND (SM)
▲	B-04	A	2.5'	27	22	5	37	SILTY SAND with GRAVEL (SM)
★	B-06		0.0'	39	29	10	28	SILTY SAND with GRAVEL (SM)
⊙	B-10	B	5.0'	31	15	16	33	CLAYEY SAND (SC)
✿	TH-01	A	0.0'	29	24	5	76	SILT with SAND (ML)
○	TP-04	B	4.0'	25	22	3	46	SILTY SAND with GRAVEL (SM)
△	TP-04	C	5.0'	33	22	11	8	WELL-GRADED GRAVEL with CLAY and SAND (GW-GC)
⊗	TP-06	A	6.0'	93	64	29	43	SILTY SAND (SM)
⊕	TP-10	A	0.0'	48	28	20	18	SILTY GRAVEL with SAND (GM)

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Telephone: (775) 359-6600
Fax: (775) 359-7766

ATTERBERG LIMITS RESULTS

Project: H.P. Ranch Parcel Distribution Facility
Location: Washoe County, Nevada
Project Number: 1827-01-1 Plate: 4c

APPENDICES

APPENDIX A

2007 GEOTECHNICAL DATA

TEST PIT LOG

TEST PIT NO.: TP-01 | DATE: 6/13/2007

TYPE OF HOE: Hitachi EX330LC | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: BE | GROUND ELEVATION (ft): 4333 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB					SM		0.0' - 2.0': **SILTY SAND** Light brown, gray, orange specs, slightly moist, medium dense, with estimated 15% non-plastic fines and 85% fine to medium sand, locally weakly cemented, roots common.
					2			
B	GRAB		12.5	17		GC		2.0' - 4.0': **CLAYEY GRAVEL WITH SAND AND COBBLES** Brown, slightly moist, medium dense, total soil mass contains estimated 20% angular to subrounded cobbles to 12-inches in diameter in a matrix of 26% medium plasticity fines, 37% fine to coarse sand, and 37% fine to coarse gravel, one 9 foot-diameter boulder was observed, roots present.
					4			
C	GRAB					SP		4.0' - 5.0': **POORLY GRADED SAND** Orange brown to grayish brown, slightly moist, dense, with estimated 5% non-plastic fines and 95% fine sand, weakly cemented, minor cross-bedding.
D	GRAB				6	SC		5.0' - 8.0': **CLAYEY SAND** Dark brown, slightly moist, dense, with estimated 30% medium plasticity fines and 70% very fine to medium sand, moderately to strongly cemented, roots common to 8 feet.
					8			
E	GRAB				10	SP-SM		8.0' - 12.0': **POORLY GRADED SAND WITH SILT** Brown to tan, slightly moist, very dense, with estimated 10-15% non-plastic fines and 85 to 90% very fine to medium sand, moderately to strongly cemented.
					12			
					14			

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Washoe County, Nevada

PROJECT NO.: 0465-17-1

PLATE:

TEST PIT LOG

TEST PIT NO.: TP-01 DATE: 6/13/2007

TYPE OF HOE: Hitachi EX330LC DEPTH TO GROUND WATER (ft): NE

LOGGED BY: BE GROUND ELEVATION (ft): 4333 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB					SM		0.0' - 2.0': **SILTY SAND** Light brown, gray, orange specs, slightly moist, medium dense, with estimated 15% non-plastic fines and 85% fine to medium sand, locally weakly cemented, roots common.
B	GRAB		12.5	17	2	GC		2.0' - 4.0': **CLAYEY GRAVEL WITH SAND AND COBBLES** Brown, slightly moist, medium dense, total soil mass contains estimated 20% angular to subrounded cobbles to 12-inches in diameter in a matrix of 26% medium plasticity fines, 37% fine to coarse sand, and 37% fine to coarse gravel, one 9 foot-diameter boulder was observed, roots present.
C	GRAB				4	SP		4.0' - 5.0': **POORLY GRADED SAND** Orange brown to grayish brown, slightly moist, dense, with estimated 5% non-plastic fines and 95% fine sand, weakly cemented, minor cross-bedding.
D	GRAB				6	SC		5.0' - 8.0': **CLAYEY SAND** Dark brown, slightly moist, dense, with estimated 30% medium plasticity fines and 70% very fine to medium sand, moderately to strongly cemented, roots common to 8 feet.
E	GRAB				8	SP-SM		8.0' - 12.0': **POORLY GRADED SAND WITH SILT** Brown to tan, slightly moist, very dense, with estimated 10-15% non-plastic fines and 85 to 90% very fine to medium sand, moderately to strongly cemented.
					10			
					12			
					14			

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Washoe County, Nevada

PROJECT NO.: 0465-17-1

PLATE:

SHEET 1 OF 1

BORING_LOG 0465171.GPJ BLKEAGLE.GDT 2/25/2015

TEST PIT LOG

TEST PIT NO.: TP-02

DATE: 6/13/2007

TYPE OF HOE: Hitachi EX330LC

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: BE

GROUND ELEVATION (ft): 4338 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A, B	GRAB				2	SP-SM		0.0' - 4.5': **POORLY GRADED SAND WITH SILT** Orange brown, gray, slightly moist, medium dense to dense, interbedded Poorly Graded Sand (80%, 4 to 8 inch beds) and Silty Sand (20%, 1 to 4 inch beds), overall contains estimated 10-15% non-plastic fines and 85-90% fine to medium sand, locally cross-bedded and moderately cemented, roots common to 4.5 feet.
					4			
C	GRAB				6	GP		4.5' - 13.0': **POORLY GRADED GRAVEL WITH SAND AND COBBLES** Light brown to grayish brown, slightly moist, very dense, total soil mass contains estimated 40% angular to subrounded cobbles and 5% boulders to 18 inches in diameter in a matrix of estimated 0-5% non-plastic fines, 25-30% fine to coarse sand and 70% fine to coarse gravel.
					8			
					10			
					12			
					14			

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PLATE:

SHEET 1 OF 1

BORING_LOG 0465171.GPJ BLKEAGLE.GDT 2/25/2015

TEST PIT LOG

TEST PIT NO.: TP-03 DATE: 6/13/2007

TYPE OF HOE: Hitachi EX330LC DEPTH TO GROUND WATER (ft): NE

LOGGED BY: BE GROUND ELEVATION (ft): 4332 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				2	GP-GC		0.0' - 4.0': **POORLY GRADED GRAVEL WITH CLAY, SAND, COBBLES AND BOULDERS** Orange brown to reddish brown, gray, slightly moist, dense to very dense, total soil mass contains estimated 40% angular to subrounded cobbles and 15% boulders to 6 feet in diameter in a matrix of estimated 10% medium plasticity fines, 15% fine to coarse sand and 75% fine to coarse gravel, roots common.
					4			
B	GRAB				6	GP-GM		4.0' - 9.5': **POORLY GRADED GRAVEL WITH CLAY, SILT, SAND, COBBLES AND BOULDERS** Brown to dark grayish brown, slightly moist, very dense, total soil mass contains estimated 30% angular to subrounded cobbles and 5% subrounded boulders to 16 inches in diameter in a matrix of estimated 5-10% low to medium plasticity fines, 10-15% fine to coarse sand and 80% fine to coarse gravel.
					8			
C	GRAB				10	GP-GM		9.5' - 13.0': **POORLY GRADED GRAVEL WITH CLAY, SILT, SAND AND COBBLES** Brown, moist, dense, total soil mass contains estimated 20% subrounded cobbles to 12 inches in diameter in a matrix of estimated 5-10% low to medium plasticity fines, 40-45% fine to coarse sand and 50% fine to coarse subangular to rounded gravel.
					12			
					14			

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TEST PIT LOG

TEST PIT NO.: TP-04 DATE: 6/13/2007

TYPE OF HOE: Hitachi EX330LC DEPTH TO GROUND WATER (ft): NE

LOGGED BY: BE GROUND ELEVATION (ft): 4343 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				2	GP-GM		0.0' - 3.0': **POORLY GRADED GRAVEL WITH SILT, SAND AND COBBLES** Brown to grayish brown, slightly moist, dense, total soil mass contains estimated 30-40% angular to subrounded cobbles and 5% subangular boulders to 16 inches in diameter in a matrix of estimated 10% non-plastic fines, 25% fine to coarse sand and 65% fine to coarse gravel, roots common.
B	GRAB				4 6 8	GP-GC		3.0' - 9.5': **POORLY GRADED GRAVEL WITH CLAY, COBBLES AND BOULDERS** Light brown to grayish brown, slightly moist, dense to very dense, total soil mass contains estimated 40% angular to subrounded cobbles and 15% angular to subangular boulders to 9 feet in diameter in a matrix of estimated 10% medium plasticity fines, 40% fine to coarse sand and 50% fine to coarse gravel.
C	GRAB				10 12	SM		9.5' - 13.0': **SILTY SAND** Brown to dark brown, moist, very dense, with estimated 30% low plasticity fines, 70% very fine to medium sand, and trace fine to coarse subrounded gravel to ¾-inch diameter, moderately cemented.
					14			

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PLATE:

TEST PIT LOG

TEST PIT NO.: TP-05 DATE: 6/13/2007

TYPE OF HOE: Hitachi EX330LC DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL GROUND ELEVATION (ft): 4338 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					0	GP-GM		0.0' - 1.0': **POORLY GRADED GRAVEL WITH SILT, SAND AND COBBLES** Brown to orange brown, orange, dry to slightly moist, very dense, with total soil mass contains estimated 5-10% subrounded to rounded volcanic cobbles to 8 inches in diameter in a matrix of estimated 10% low plasticity fines, 30% fine to coarse sand and 60% fine to coarse gravel, roots common.
					2	GP		1.0' - 6.0': **POORLY GRADED GRAVEL WITH SAND, COBBLES, AND BOULDERS** Brown , dry to slightly moist, very dense, total soil mass contains estimated 25-30% subrounded to rounded cobbles and 5% boulders to 20 inches in diameter in a matrix of estimated 5% non-plastic fines, 35% medium to coarse sand and 60% fine to coarse gravel.
					4			
					6	GP		6.0' - 12.0': **POORLY GRADED GRAVEL WITH SAND, COBBLES, AND BOULDERS** Brown , dry to slightly moist, very dense, total soil mass contains estimated 30-35% subrounded to rounded granite, basalt and metasediment cobbles and 15-20% boulders to 33 inches in diameter in a matrix of estimated 5% non-plastic fines, 30% medium to coarse sand and 65% fine to coarse gravel.
					8			
					10			
					12			
					14			

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PLATE:

SHEET 1 OF 1

TEST PIT LOG

TEST PIT NO.: TP-06 DATE: 6/13/2007

TYPE OF HOE: Hitachi EX330LC DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL GROUND ELEVATION (ft): 4336 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				0 - 5	SC-SM		0.0' - 5.0': **CLAYEY, SILTY SAND WITH GRAVEL** Brown, dry to slightly moist, medium dense to dense, with estimated 20% non-plastic to medium plasticity fines, 65% fine to coarse sand, and 15% subrounded to rounded, fine to coarse gravel to ½-inch diameter, weakly cemented, local cobble- and gravel-rich zones with clasts to 8 inches in diameter, locally 25-30% low to medium plasticity fines.
					5 - 10	GP		5.0' - 10.0': **POORLY GRADED GRAVEL WITH SAND, COBBLES, AND BOULDERS** Brown to light brown, also orange brown and orange in upper 1.5 feet of interval, dry to slightly moist, very dense, total soil mass contains estimated 25-30% subangular to rounded volcanic, granitic, and metasediment cobbles and 10-15% boulders to 44 inches in diameter in a matrix of estimated 5% non-plastic to low plasticity fines, 40% medium to coarse sand and 55% fine to coarse gravel, strongly cemented with calcium carbonate and some iron oxide in upper 1 to 2 feet of interval, moderately cemented below.

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PLATE:

TEST PIT LOG

TEST PIT NO.: TP-07 DATE: 6/13/2007

TYPE OF HOE: Hitachi EX330LC DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL GROUND ELEVATION (ft): 4332 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				2	SC-SM		0.0' - 4.0': **CLAYEY, SILTY SAND WITH GRAVEL AND COBBLES** Brown to light brown, dry to slightly moist, dense, total soil mass contains estimated 5-10% rounded cobbles to 5 inches in diameter in a matrix of estimated 20% non-plastic to medium plasticity fines, 45% fine to coarse sand, and 35% fine to coarse gravel, weakly cemented.
					4			
B	GRAB				6	GP-GM		4.0' - 7.0': **POORLY GRADED GRAVEL WITH SILT, SAND AND COBBLES** Brown, slightly moist, very dense, total soil mass contains estimated 15-20% rounded cobbles to 8 inches in diameter in a matrix of estimated 10% non-plastic to low plasticity fines, 40% medium to coarse sand and 50% fine to coarse gravel, unconsolidated.
C	GRAB				8	SP		7.0' - 10.0': **POORLY GRADED SAND WITH GRAVEL AND COBBLES** Brown to dark brown, moist, dense, total soil mass contains estimated 5-10% rounded cobbles to 8 inches in diameter in a matrix of estimated 5% non-plastic fines, 50% medium to coarse sand, and 45% fine to coarse gravel.
					10			
					12			
					14			

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Washoe County, Nevada

PROJECT NO.: 0465-17-1

PLATE:

SHEET 1 OF 1

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TEST PIT LOG

TEST PIT NO.: TP-08 DATE: 6/13/2007

TYPE OF HOE: Hitachi EX330LC DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL GROUND ELEVATION (ft): 4340 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				2 4 6	GP-GM		0.0' - 6.0': **POORLY GRADED GRAVEL WITH SILT, SAND, COBBLES, AND BOULDERS** Brown, dry to slightly moist, dense to very dense, total soil mass contains estimated 25-30% subround to rounded cobbles and 15-20% boulders to 6 feet in diameter in a matrix of estimated 10% non-plastic to low plasticity fines, 35% medium to coarse sand and 55% fine to coarse gravel, locally weakly cemented.
B	GRAB				8 10 12 14	SM		6.0' - 11.0': **SILTY SAND WITH GRAVEL AND COBBLES** Brown, slightly moist, medium dense to dense, total soil mass contains estimated 5% subrounded to rounded cobbles to 6 inches in diameter in a matrix of estimated 15-20% non-plastic fines, 60% medium to coarse sand, and 15-20% fine to coarse gravel, weakly cemented.

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Mustang Parcel, APN 084-370-02

Washoe County, Nevada

PROJECT NO.: 0465-17-1

PLATE:

SHEET 1 OF 1

TEST PIT LOG

TEST PIT NO.: TP-09 | DATE: 6/13/2007

TYPE OF HOE: Hitachi EX330LC | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL | GROUND ELEVATION (ft): 4350 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB					SP		0.0' - 1.5': **POORLY GRADED SAND WITH BOULDERS** Brown to dark brown, slightly moist, loose to medium dense, total soil mass contains estimated 0-30% angular to subangular boulders to 7 feet in diameter in a matrix of estimated 5% non-plastic fines and 95% fine to medium sand, local coarse sand and trace fine gravel, large boulders scattered on surface partially buried by dune sand.
B	GRAB	>4.5	13.4	8	2 4	ML		1.5' - 6.0': **SILT WITH SAND** Light brown to brown, gray, orange brown to orange, slightly moist, hard, with 77% low to medium plasticity fines, 23% fine to medium sand and trace gravel, local interbeds with non-plastic fines, weakly cemented, common orange mottling.
					6 8	GP		6.0' - 10.0': **POORLY GRADED GRAVEL WITH SAND AND COBBLES** Brown, orange to orange brown, slightly moist, dense to very dense, total soil mass contains estimated 10-15% subangular to rounded cobbles to 12 inches in diameter in a matrix of estimated 5% non-plastic fines, 45% medium to coarse sand, and 50% fine to coarse gravel, weak to moderate cement in upper 3 feet of interval with common orange oxidation.
					10 12 14			

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PROJECT NO.: 0465-17-1

PLATE:

TEST PIT LOG

TEST PIT NO.: TP-10 | DATE: 6/14/2007

TYPE OF HOE: Hitachi EX330LC | DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL | GROUND ELEVATION (ft): 4359 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
						SP		0.0' - 1.0': **POORLY GRADED SAND WITH BOULDERS** Brown to dark brown, slightly moist, loose to medium dense, total soil mass contains estimated 0-30% angular to subangular boulders to 7 feet in diameter in a matrix of estimated 5% non-plastic fines and 95% fine to medium sand, local coarse sand and trace fine gravel, large boulders scattered on surface partially buried by dune sand.
A	GRAB	>4.5				SC-CL		
					2			1.0' - 2.0': **CLAYEY SAND, SANDY LEAN CLAY** Dark brown to brown, moist, medium dense or hard, with estimated 50% medium to high plasticity fines and 50% fine to coarse sand.
B	GRAB					SP		
					4			2.0' - 3.5': **POORLY GRADED SAND WITH GRAVEL** Brown to orange brown, slightly moist, medium dense to dense, with estimated 5% non-plastic fines, 75% medium to coarse sand, and 20% rounded fine gravel to ½-inch diameter, weak orange oxidation and weakly cemented.
C	GRAB	>4.5			6	ML		3.5' - 8.0': **SANDY SILT** Light brown to brown, orange brown to orange, slightly moist, hard, with estimated 60% non-plastic to low plasticity fines and 40% fine sand, local 6- to 12-inch Sandy Lean Clay interbeds, common orange mottling.
					8	SP		8.0' - 10.0': **POORLY GRADED SAND WITH GRAVEL** Brown to orange brown, orange, moist, medium dense to dense, with estimated 5% non-plastic fines, 80% medium to coarse sand, and 15% subrounded to rounded fine to coarse gravel to 2 inches in diameter, abundant orange mottling.
					10	GP		10.0' - 11.0': **POORLY GRADED GRAVEL WITH SAND, COBBLES AND BOULDERS** Brown to light brown, slightly moist, very dense, total soil mass contains estimated 20-25% rounded cobbles and 10-15% boulders to 6 feet in diameter in a matrix of estimated 5% non-plastic fines, 45% medium to coarse sand, and 50% fine to coarse gravel.
					12			
					14			

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PROJECT NO.: 0465-17-1

PLATE:

TEST PIT LOG

TEST PIT NO.: TP-11 DATE: 6/14/2007

TYPE OF HOE: Hitachi EX330LC DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL GROUND ELEVATION (ft): 4342 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A	GRAB				0	SC		0.0' - 1.0': **CLAYEY SAND WITH GRAVEL** Brown to dark brown, slightly moist, medium dense to dense, with estimated 30% medium plasticity fines, 40% fine to coarse sand, and 30% rounded fine to coarse gravel to 3 inches in diameter.
B	GRAB				2	GP		1.0' - 8.0': **POORLY GRADED GRAVEL WITH SAND** Brown, white and dark gray, slightly moist, dense to very dense, with estimated 5% non-plastic fines, 45% medium to coarse sand, and 50% rounded fine to coarse gravel to 3 inches in diameter, unconsolidated, crossbedded river gravels, common discontinuous buried soil horizons up to 1 foot thick with root mats.
C	GRAB				8	SP		8.0' - 10.5': **POORLY GRADED SAND** Brown, orange to orange brown, gray, slightly moist to moist, medium dense, with estimated 0-5% non-plastic fines, 90% medium to coarse sand and 5% rounded fine gravel to ¼-inch diameter.
					10.5	ML		10.5' - 11.0': **SANDY SILT** Light brown to brown, orange brown to orange, slightly moist, hard, with estimated 60% non-plastic to low plasticity fines and 40% fine sand, common orange mottling.

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(775) 359-6600

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TEST PIT LOG

TEST PIT NO.: TP-12 DATE: 6/14/2007

TYPE OF HOE: Hitachi EX330LC DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL GROUND ELEVATION (ft): 4350 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	GP		0.0' - 3.0': **POORLY GRADED GRAVEL WITH SAND AND COBBLES** Orange to orange brown, brown, slightly moist, dense to very dense, total soil mass contains estimated 5% rounded cobbles to 6 inches in diameter in a matrix of estimated 5% non-plastic fines, 35% medium to coarse sand, and 60% fine to coarse gravel, local boulders to 18 inches in diameter, abundant orange oxidation, unconsolidated to weakly cemented with iron oxide.
					4			3.0' - 9.5': **BASALT** Red, orange, brown to light brown, white, gray, and black, slightly moist, dense, weakly to moderately weathered vesicular basalt bedrock excavates easily to a **Poorly Graded Gravel with Silt, Sand and Cobbles**, in which total soil mass contains estimated 20-25% angular cobbles in a matrix of estimated 5-10% non-plastic fines, 40% fine to coarse sand, and 55% fine to coarse gravel, moderately to strongly oxidized, common clay alteration along fractures locally consists of estimated 5-10% medium (and possibly high) plasticity fines.
					6	BASALT (GP-GM)		
					8			
					10			
					12			
					14			

Black Eagle Consulting, Inc.
1345 Capital Blvd., Suite A
Reno, Nevada 89502-7140
(775) 359-6600

Mustang Parcel, APN 084-370-02

Washoe County, Nevada

PROJECT NO.: 0465-17-1

PLATE:

TEST PIT LOG

TEST PIT NO.: TP-13 DATE: 6/14/2007

TYPE OF HOE: Hitachi EX330LC DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL GROUND ELEVATION (ft): 4354 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					0	GC-GM		0.0' - 1.0': **CLAYEY, SILTY GRAVEL WITH COBBLES** Brown to dark brown, slightly moist, medium dense to very dense, total soil mass contains estimated 20-25% angular to subrounded volcanic cobbles to 10 inches in diameter in a matrix of estimated 15% low to medium plasticity fines, 40% fine to coarse sand, and 45% fine to coarse gravel, roots common, surface clay development of underlying alluvium.
					2			1.0' - 12.0': **POORLY GRADED GRAVEL WITH SILT, SAND, COBBLES AND BOULDERS** Light brown to brown, gray to dark gray, slightly moist, very dense, total soil mass contains estimated 30-35% angular to subrounded basaltic cobbles and 5-10% angular to subrounded boulders to 24 inches in diameter in a matrix of estimated 10% non-plastic to low plasticity fines, 40% fine to coarse sand, and 50% fine to coarse gravel, metavolcanic and metasediment clasts, unconsolidated alluvial/colluvial material.
					4			
					6	GP-GM		
					8			
					10			
					12			
					14			

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1345 Capital Blvd., Suite A
Reno, Nevada 89502-7140
(775) 359-6600

Mustang Parcel, APN 084-370-02

Washoe County, Nevada

PROJECT NO.: 0465-17-1

PLATE:

SHEET 1 OF 1

TEST PIT LOG

TEST PIT NO.: TP-14

DATE: 6/14/2007

TYPE OF HOE: Hitachi EX330LC

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL

GROUND ELEVATION (ft): 4355 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					0	BASALT (GP-GM)		0.0' - 2.0': **BASALT** Red, orange, brown to light brown, white, gray, and black, slightly moist, dense, weakly to moderately weathered vesicular basalt bedrock excavates easily to a **Poorly Graded Gravel with Silt, Sand and Cobbles**, in which total soil mass contains estimated 20-25% angular cobbles in a matrix of estimated 5-10% non-plastic fines, 40% fine to coarse sand, and 55% fine to coarse gravel, moderately to strongly oxidized, common clay alteration along fractures locally consists of estimated 5-10% medium (and possibly high) plasticity fines.
					2			
					4			
					6			
					8			
					10			
					12			
					14			

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1345 Capital Blvd., Suite A
Reno, Nevada 89502-7140
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Mustang Parcel, APN 084-370-02

Washoe County, Nevada

PROJECT NO.: 0465-17-1

PLATE:

SHEET 1 OF 1

BORING_LOG 0465171.GPJ BLKEAGLE.GDT 2/25/2015

TEST PIT LOG

TEST PIT NO.: TP-15

DATE: 6/14/2007

TYPE OF HOE: Hitachi EX330LC

DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL

GROUND ELEVATION (ft): 4358 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					0	BASALT (GP-GM)		0.0' - 2.0': **BASALT** Red, orange, brown to light brown, white, gray, and black, slightly moist, dense, weakly weathered vesicular basalt bedrock excavates with slight difficulty to a **Poorly Graded Gravel with Silt, Sand and Cobbles**, in which total soil mass contains estimated 20-25% angular cobbles in a matrix of estimated 5-10% non-plastic fines, 40% fine to coarse sand, and 55% fine to coarse gravel, moderately to strongly oxidized, common clay alteration along fractures locally consists of estimated 5-10% medium (and possibly high) plasticity fines.
					2			
					4			
					6			
					8			
					10			
					12			
					14			

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1345 Capital Blvd., Suite A
Reno, Nevada 89502-7140
(775) 359-6600

Mustang Parcel, APN 084-370-02

Washoe County, Nevada

PROJECT NO.: 0465-17-1

PLATE:

TEST PIT LOG

TEST PIT NO.: TP-16 DATE: 6/14/2007

TYPE OF HOE: Hitachi EX330LC DEPTH TO GROUND WATER (ft): NE

LOGGED BY: MSL GROUND ELEVATION (ft): 4346 (topo)

SAMPLE NO.	SAMPLE TYPE	PENETROMETER (tsf)	MOISTURE (%)	PLASTICITY INDEX	DEPTH (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
					2	GP		0.0' - 3.0': **POORLY GRADED GRAVEL WITH SAND AND COBBLES** Orange to orange brown, brown, slightly moist, dense to very dense, total soil mass contains estimated 20-25% rounded cobbles and 5-10% boulders to 3 feet in diameter in a matrix of estimated 5% non-plastic fines, 35% medium to coarse sand, and 60% fine to coarse gravel, abundant orange oxidation, unconsolidated to weakly cemented with iron oxide.
					4	BASALT (GP-GM)		3.0' - 4.0': **BASALT** Red, orange, brown to light brown, white, gray, and black, slightly moist, dense, weakly to moderately weathered vesicular basalt bedrock excavates easily to a **Poorly Graded Gravel with Silt, Sand and Cobbles**, in which total soil mass contains estimated 20-25% angular cobbles in a matrix of estimated 5-10% non-plastic fines, 40% fine to coarse sand, and 55% fine to coarse gravel, moderately to strongly oxidized, common clay alteration along fractures locally consists of estimated 5-10% medium (and possibly high) plasticity fines.
					6			
					8			
					10			
					12			
					14			

Black Eagle Consulting, Inc.
1345 Capital Blvd., Suite A
Reno, Nevada 89502-7140
(775) 359-6600

Mustang Parcel, APN 084-370-02

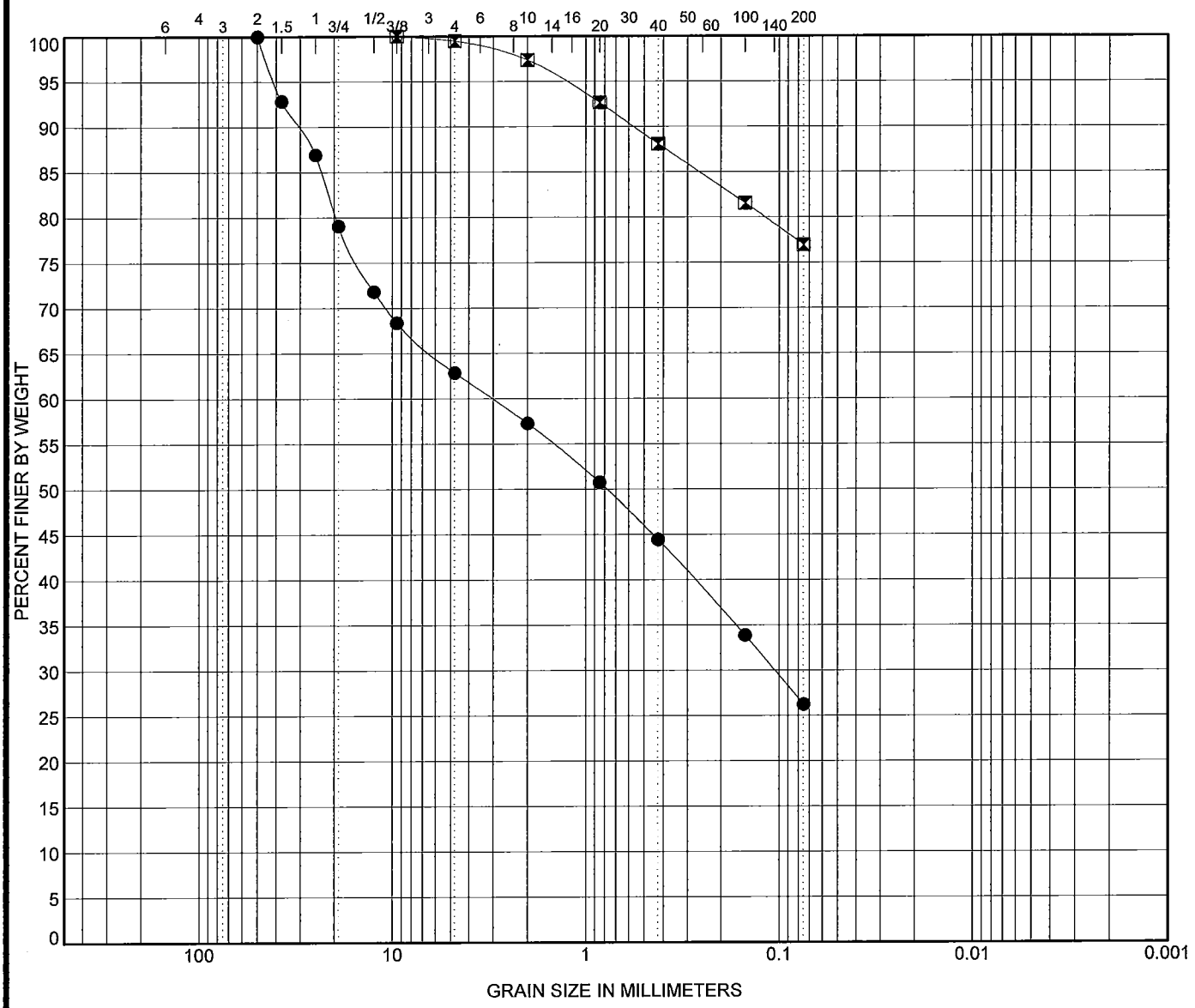
Washoe County, Nevada

PROJECT NO.: 0465-17-1

PLATE:

SHEET 1 OF 1

BORING_LOG 0465171.GPJ BLKEAGLE.GDT 2/25/2015



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

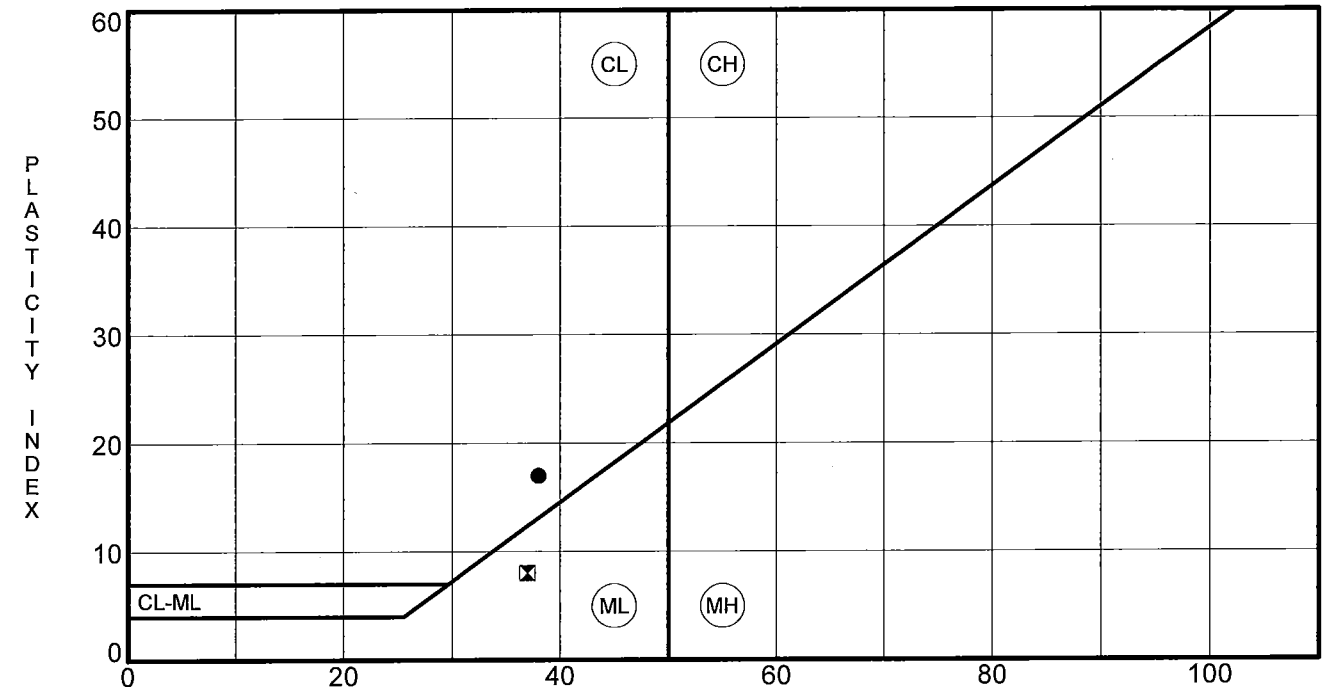
	Specimen Identification		USCS Classification	LL	PL	PI	Cc	Cu
●	TP-01	2.0'	CLAYEY GRAVEL with SAND (GC)	38	21	17		
⊠	TP-09	1.5'	SILT with SAND (ML)	37	29	8		

	Specimen Identification		D100	D60	D30	D10	MC %	%Gravel	%Sand	%Silt	%Clay
●	TP-01	2.0'	50	3.046	0.105		12.5	37.1	36.6	26.3	
⊠	TP-09	1.5'	9.5				13.4	0.5	22.5	77.0	

Black Eagle Consulting, Inc.
1345 Capital Blvd., Suite A
Reno, Nevada 89502-7140
Telephone: (775) 359-6600
Fax: (775) 359-7766

GRAIN SIZE DISTRIBUTION

Project: Mustang Parcel, APN 084-370-02
Location: Washoe County, Nevada
Project Number: 0465-17-1 Plate: a



Specimen Depth in Feet.

	Specimen Identification			LL	PL	PI	Fines	USCS Classification
●	TP-01	B	2.0'	38	21	17	26	CLAYEY GRAVEL with SAND (GC)
⊠	TP-09	B	1.5'	37	29	8	77	SILT with SAND (ML)

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1345 Capital Blvd., Suite A
Reno, Nevada 89502-7140
Telephone: (775) 359-6600
Fax: (775) 359-7766

ATTERBERG LIMITS RESULTS

Project: Mustang Parcel, APN 084-370-02
Location: Washoe County, Nevada
Project Number: 0465-17-1 Plate: a

APPENDIX B

CHEMICAL TEST RESULTS

Laboratory Report
Report ID: 139247

Sierra Environmental Monitoring, Inc.

Black Eagle Consulting, Inc.
Attn: Jeff Wilbrecht
1345 Capital Blvd., Suite A
Reno, NV 89502-7140

Date: 1/15/2015
Client: BEC-100
Taken by: J. Payne
PO #:

Analysis Report

Laboratory Accreditation Number: NV-0015

Laboratory Sample ID	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S201501-0072	1827-01-1 B-04A	12/22/2014	5:30 PM	1/6/2015

Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
pH - Saturated Paste	SW-846 9045A	9.10	pH Units		Malkiewich	1/9/2015	
pH - Temperature	SW-846 9045A	21.2	°C		Malkiewich	1/9/2015	
Redox Potential	SM 2580 B	314	MV		Faulstich	1/14/2015	
Resistivity	EPA 120.1	4500	ohm cm		Malkiewich	1/9/2015	
Sulfate - Ion Chromatography	EPA 300.0	27	mg/Kg	2	Faulstich	1/8/2015	
Sulfide	EPA 376.1	NEGATIVE	Pos/Neg	1	Faulstich	1/14/2015	

Laboratory Accreditation Number: NV-0015

Laboratory Sample ID	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S201501-0073	1827-01-1 TP-04B	12/31/2014	10:00 AM	1/6/2015

Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
pH - Saturated Paste	SW-846 9045A	9.45	pH Units		Malkiewich	1/9/2015	
pH - Temperature	SW-846 9045A	21.4	°C		Malkiewich	1/9/2015	
Redox Potential	SM 2580 B	329	MV		Faulstich	1/14/2015	
Resistivity	EPA 120.1	3200	ohm cm		Malkiewich	1/9/2015	
Sulfate - Ion Chromatography	EPA 300.0	14	mg/Kg	2	Faulstich	1/8/2015	
Sulfide	EPA 376.1	NEGATIVE	Pos/Neg	1	Faulstich	1/14/2015	

Data Flag Legend:

John Kobza, Ph.D
Laboratory Director

1135 Financial Blvd.
Reno, Nv 89502-2348
Phone (775) 857-2400 Fax
(888) 398-7002
jnava@sem-analytical.com

John Faulstich
Quality Assurance Manager

APPENDIX B

CHEMICAL TEST RESULTS

Laboratory Report
Report ID: 146823

Sierra Environmental Monitoring

Black Eagle Consulting, Inc.
Attn: Jeff Wilbrecht
1345 Capital Blvd., Suite A
Reno, NV 89502-7140

Date: 3/10/2016
Client: BEC-100
Taken by: J. Payne
PO #: 1827-01-2

Analysis Report

Laboratory Accreditation Number: NV-00015

Laboratory Sample ID	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S201603-0004	1827-01-2 B-03 A/B	2/25/2016	9:30 AM	3/1/2016

Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
pH - Saturated Paste	SW-846 9045A	7.87	pH Units		Lax	3/4/2016	
pH - Temperature	SW-846 9045A	20.9	°C		Lax	3/4/2016	
Redox Potential	SM 2580 B	362	MV		Faulstich	3/9/2016	
Resistivity	EPA 120.1	2100	ohm cm		Lax	3/7/2016	
Sulfate - Ion Chromatography	EPA 300.0	110	mg/Kg	2	Faulstich	3/9/2016	
Sulfide	EPA 376.1	NEGATIVE	Pos/Neg	1	Faulstich	3/10/2016	

Data Flag Legend:

John Faulstich
Laboratory Director

1135 Financial Blvd.
Reno, Nv 89502-2348
Phone (775) 857-2400 Fax
(888) 398-7002
jnava@sem-analytical.com

Carly Wood
Quality Assurance Manager

Geotechnical Memorandum

Black Eagle Consulting, Inc
1345 Capital Boulevard, Suite A
Reno, Nevada
Phone: 775 359-6600
Fax: 775 359-7766
Email: mail@blackeagleconsulting.com

PROFESSIONAL ENGINEER-STATE OF NEVADA
PANCHALINGAM VIMALARAJ
Exp. 6-30-18
CIVIL
No. 19732
8/12/16

Project No.:	1827-02-1	Project Name:	Mustang Spec Building
To:	Mr. Michael Simmons, Scannell Mr. Dan Salzer, Scannell Mr. George Green, ARCO Mr. Matt Rasmussen, Tectonics	From:	Vimal P. Vimalaraj, P.E. Jeff Wilbrecht, P.E
Date:	August 9, 2016 Revised August 12, 2016	Location:	Washoe County, Nevada

RE: Geotechnical Recommendations Update for Bedrock Cut Slope and Rockery Walls North and Northwest of Spec Building

This geotechnical memorandum provides Black Eagle Consulting, Inc.'s (BEC's) updated geotechnical recommendations related to the bedrock exposure within the existing cut slopes north and northwest of the proposed Spec Building. Black Eagle Consulting, Inc. completed a geotechnical investigation for the subject project entitled *Geotechnical Investigation Update, Mustang Industrial Development Spec Building, Washoe County, Nevada,* dated March 25, 2016 (BEC, 2016). The geotechnical investigation report documented the presence of volcanic bedrock in the slopes below the Union Pacific Railroad (UPRR) tracks along the eastern half of the northern edge of the overall project site. We anticipated that most of the material could be excavated with large equipment, but localized areas could require aggressive techniques such as blasting. Explorations were not possible on or above the sloping area because of access constraints associated with the UPRR right-of-way above the slope and steepness of the slope. The geotechnical investigation report (BEC, 2016) recommended additional test pit exploration to quantify the excavated materials in this area.

A BEC geologist and engineer evaluated the bedrock that is exposed on the surface of the current cut face after ripping and excavation activities by the mass grading contractor. The current cut face exhibits volcanic bedrock of variable competency. Hard, competent, sound "core stones" exist within the bedrock matrix. The fracture spacing varies between 6 and 36 inches in the exposed competent bedrock. The abundance of core stones has inhibited the contractor's ability to excavate the hillside with traditional earthwork equipment such as dozers with ripper shanks. As such, blasting will most likely be completed in the area to facilitate removal of the bedrock material. Potentially rippable areas exist, but they are limited in extent and are present between hard core stones; as such, ripping operations may not be effective or efficient.

As per the mass grading plan prepared by Tectonics Design Group, the cuts into the existing slope were planned to be supported by a tiered rockery wall system with up to 3 tiers of rockery walls with maximum exposed heights of 10 feet. In addition, the original design cut above the uppermost wall sloped at 3H:1V (horizontal to vertical). Based on our evaluation, the volcanic bedrock material in the site area north and northwest of the

proposed Spec Building will be stable at a 1H:1V ratio. A drawing showing the area that was evaluated as part of this memorandum and where exposed bedrock could be sloped at a 1H:1V ratio is attached to this memorandum. At a bedrock cut slope of 1H:1V, dislodging of surficial rock particles with freeze-thaw cycles and erosion of any non-competent bedrock zones could be significant. Therefore, it is important to implement the additional geotechnical recommendations discussed below. Depending on the competency and hardness of the exposed bedrock surface after blasting operations, steel netting that is anchored above the crest of the slope should be installed on areas where the exposed bedrock surface exhibits a potential for dislodging of rock particles. In addition to netting, application of gunite should be anticipated in some areas where exposed bedrock may exhibit soil-like characteristics with increased potential for erosion. Black Eagle Consulting, Inc. should be provided the opportunity to evaluate the exposed bedrock surface after blasting and make a determination on the needed slope treatment. A shallow brow ditch of adequate width and depth should be incorporated near the crest of the cut slope to divert surface runoff away from the bedrock cut slope. In addition, a maintenance equipment-wide (minimum 8-feet-wide) ditch/catchment area also should be provided between the toe of the cut slope and back of the curb for the proposed paved surfaces to collect any falling rocks and eroding materials. The ditch can be cleaned as part of maintenance activities. A minimum 5-foot-tall chain-link fence should be added behind the pavement to minimize hazards from any large rocks that could dislodge from the cut slope with freeze-thaw cycles. Scaling of the permanent bedrock cut slope should also be performed to remove any large, exposed particles with a potential to ravel.

The blasting operation will be performed in relatively close proximity to the UPRR right-of-way and tracks. We also understand a major underground gas line exists within the UPRR right-of-way. Therefore, the blasting operation will require coordination with these entities and meeting their requirements. An experienced blasting contractor shall be retained to perform the blasting operations in a controlled manner. It may be necessary to measure and monitor vibrations associated with the blasting.

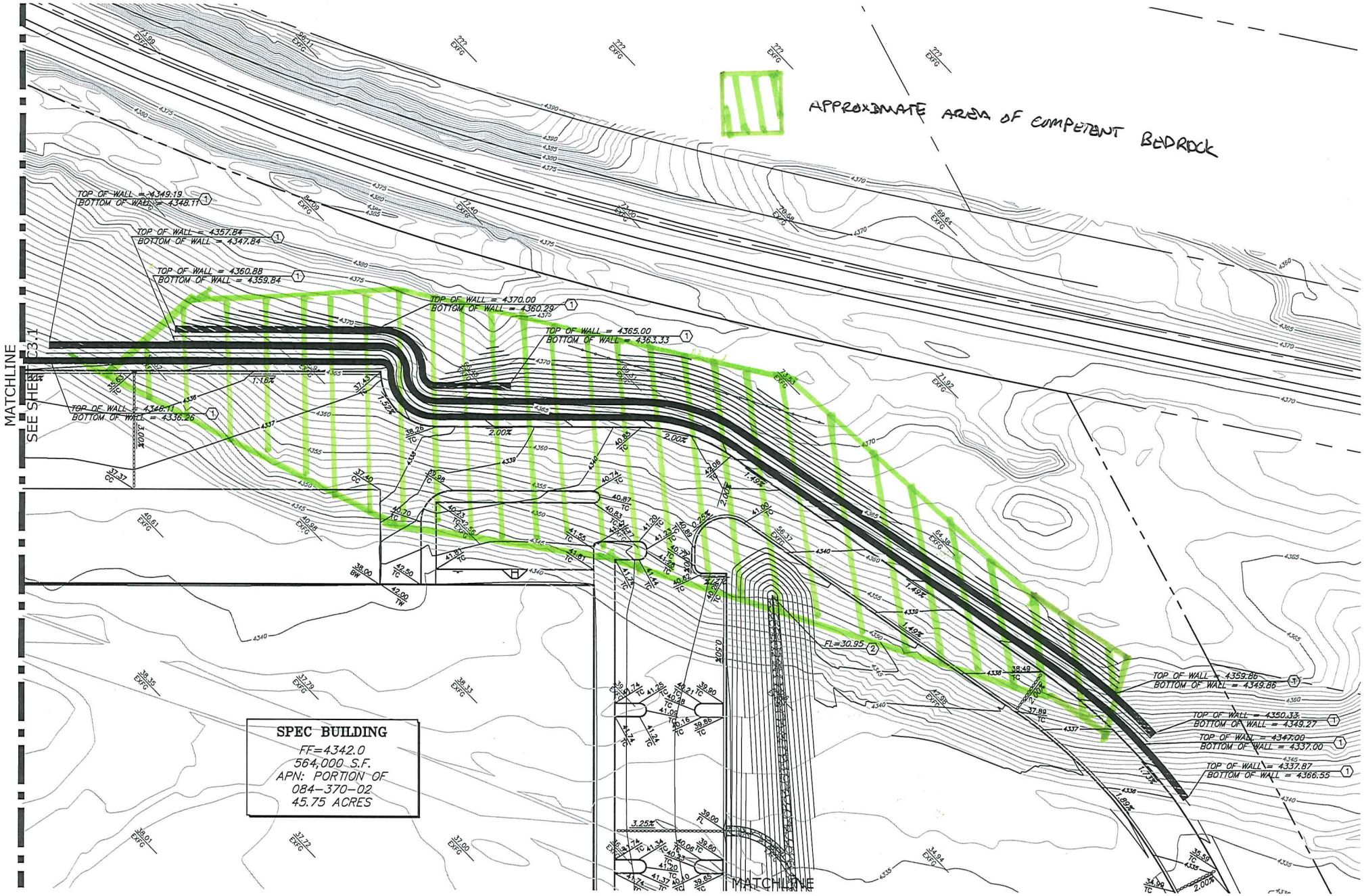
The blasting operations will likely produce oversized particles that will require additional processing before they can be used as fill or rock fill on the project. Depending on the competency of the blasted materials, they can also be used as rip-rap elsewhere on the project.

With the recommended 1H:1V permanent bedrock cut slopes, the heights and/or courses of the rockery walls shown in the original design will be reduced, and several segments of rockery walls may be completely eliminated. However, rockery walls will still be needed in some segments to retain cuts. Once a new grading plan is developed for this northern portion of the project, BEC will evaluate the rockery wall design that was provided for the original grading concepts in a report titled *Rockery Wall Design, Mustang Spec Building Site, Washoe County, Nevada,* and dated July 7, 2016.

Attachment: Approximate Areas of Competent Bedrock

References:

Black Eagle Consulting, Inc. (BEC), 2016, *Geotechnical Investigation Update, Mustang Industrial Development Spec Building, Washoe County, Nevada,* Private Consultant Report dated March 25, 2016.


APPROXIMATE AREA OF COMPETENT BEDROCK
MATCHLINE SEE SHEET C3.1
TOP OF WALL = 4349.19
BOTTOM OF WALL = 4348.11
TOP OF WALL = 4357.84
BOTTOM OF WALL = 4347.84
TOP OF WALL = 4360.88
BOTTOM OF WALL = 4359.84
TOP OF WALL = 4370.00
BOTTOM OF WALL = 4360.29
TOP OF WALL = 4365.00
BOTTOM OF WALL = 4363.33
TOP OF WALL = 4346.11
BOTTOM OF WALL = 4336.26
TOP OF WALL = 4359.86
BOTTOM OF WALL = 4349.86
TOP OF WALL = 4350.33
BOTTOM OF WALL = 4349.27
TOP OF WALL = 4347.00
BOTTOM OF WALL = 4337.00
TOP OF WALL = 4337.87
BOTTOM OF WALL = 4366.55
FL=30.95
SPEC BUILDING
FF=4342.0
564,000 S.F.
APN: PORTION OF
084-370-02
45.75 ACRES
MATCHLINE

Mr. Mike Simmons
Scannell Properties
8801 River Crossing Boulevard, Suite 300
Indianapolis, IN 46240

Project No.: 1827-01-4
April 23, 2019

RE: Evaluation of Cut Slope Associated with Propane Tank Pad
Mustang Industrial Development Spec Building
Washoe County, Nevada

Dear Mr. Simmons:

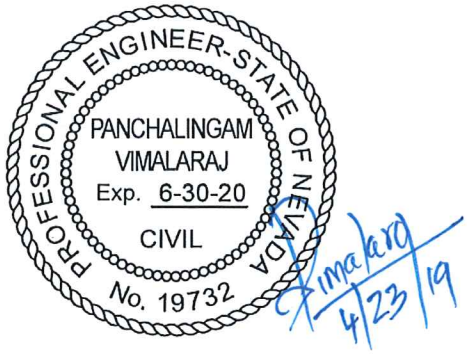
As requested by United Construction Company, Black Eagle Consulting, Inc. performed an evaluation of the cut slope associated with the propane tank pad northwest of the Spec Building. This letter summarizes our findings and recommendations for this cut slope. It is our understanding the cut slope to grade the pad for the propane tank is shown in the plans to be at a 3H:1V (horizontal to vertical) ratio. However, due to the topography and the existing large boulders in the area, cut slopes at a 3H:1V ratio would require significant grading work and possibly removal and replacement of boulders which exist in the uphill areas.

Based on our approximate measurements, the cut slope associated with the pad is at about a 1:5H:1V to 2H:1V ratio. A nearly horizontal bench of variable depths exists at the crest of the cut slope before the topography rises and includes large boulders. This flat area is associated with the bench for the excavator that was utilized to grade the slope. The materials exposed in the cut slope consist of native sand and gravel soils with cobbles and several large, embedded boulders. These materials generally exhibit a dense to very dense consistency. Based on the type and consistency of the slope materials and slope geometry, the cut slopes will be globally stable at the current 1.5H:1V ratio or flatter. However, for long-term performance against surface erosion, the slopes should be protected via rip-rap. For the subject 1.5H:1V slope, rip-rap shall include larger rocks (Class 300 or larger) and may grade to smaller rocks (Class 150) within the upper portion. The bottom rocks may need to be partially embedded for adequate stability of rip-rap on the relatively steep slope.

We appreciate being of service to you on this project. If you have any questions or require any additional information, please do not hesitate to contact us.

Sincerely,

Black Eagle Consulting, Inc.



Vimal P. Vimalaraj, P.E.
Engineering Division Manager

PV:cjr

Copies to: Addressee (2 copies and PDF via email)
Mr. Chuck Brown, United Construction Company (PDF)
Mr. Kevin Julian, United Construction Company (PDF)

Black Eagle Consulting, Inc.
Geotechnical & Construction Services
1345 Capital Boulevard, Suite A
Reno, Nevada 89502-7140
Tel: 775/359-6600 Fax: 775/359-7766
Email: mail@blackeagleconsulting.com