



Department of Administrative Services

Purchasing and Contracts

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Sabra Smith Newby, Chief Administrative Officer
Adleen B. Stidhum, Purchasing Administrator



CLARK COUNTY, NEVADA

BID NO. 603204-13

RON LEWIS PARK: RESTROOM, CONCESSION & STORAGE BUILDING

January 15, 2014

ADDENDUM NO. 1

INVITATION TO BID

1. The Bid Opening date of January 24, 2014 at 2:15:00 p.m. has been **changed to January 31, 2014 at 2:15:00 p.m.**

INSTRUCTION TO BIDDERS

2. **Replace** Instruction to Bidder's page 1-1 with the attached revised Instruction to Bidder's Page 1.1.

BID FORM

3. **Discard** the original Bid Form, pages 4-1 through 4-5 and **replace** with the attached Revised Bid Form pages 4-1 through 4-5.

SPECIFICATIONS

4. **Replace** the original Division 1 Table of Contents with the attached revised Division 1 Table of Contents.
5. **Insert** to Division I, Section 01 23 00 (ADDITIVE ALTERNATE), attached to this Addendum No. 1.
6. **Insert** the attached SOIL REPORT to the project manual.

CONTRACT DRAWINGS A-1

7. Sheet A-1 (Schedule)
Base bid to **EXCLUDE** the following Kitchen Equipment (schedule on A-1):
 - a. B108 (2-Door Reach-In Refrigerator)
 - b. B109 (22" Ice Dispenser)
 - c. B110 (20 LB Bagger)
8. **Delete** the original Civil Sheets # C1, C2, C3 & C4 and **Replace** with the attached revised Civil Sheets #C1, C2, C3 & C4.
 - d. Please notice the smaller size of the septic tank and the smaller size of the leach field as reflected in the attached revised Civil Sheets #C1, C2, C3 & C4.
 - e. **Do not** provide price for the Alternate location of the leach field. It is only required for NDEP plan review.

CLARIFICATIONS

9. The deadline for questions shall be **January 24, 2014 @ 5:00 p.m.**
10. Conduits for Tel/Communication to be direct bury; min 24" - must meet minimum NEC Cover Requirements and conduit/cables must be rated for direct bury.
11. Conduits for Secondary power (from MSA to Building) to be direct bury; min. 24" - must meet minimum NEC Cover Requirements and conduit/cables must be rated for direct bury.
12. Concrete slab sealer to be a **minimum of three (3) coats** of Semco XCRETE 500 or equal. (updated note/spec on sheet A-5, Section 3 Concrete subsection 3.3)
13. Water Meter fees will be paid by Clark County

Except as modified herein all other bid specifications, terms and conditions and special conditions shall remain the same.

ISSUED BY:

SANDY MOODY-UPTON
Purchasing Analyst II

Attachments: Revised Instruction to Bidders Page 1-1
Revised Bid Form, pages 4-1 through 4-5
Division 1 Table of Contents – General Requirements
Soil Report
Section 01 23 00 Additive Alternate
Revised Civil Sheets # C1, C2, C3, & C4

Cc: Jerry Stueve, Real Property Management
Chuck James, Real Property Management
Sam Botros, Real Property Management
Ken Ballard, Suzana Rutar Architect, Ltd

INSTRUCTIONS TO BIDDERS

BID NO. 603204-13

**RON LEWIS PARK: RESTROOM, CONCESSION & STORAGE BUILDING
REVISED PER ADDENDUM NO. 1**

1. PROJECT SCOPE OF WORK

The work includes the construction of a CMU restroom/concession stand building with its own septic tank & leach field and accessible sidewalk access from the existing concrete near the ball field.

The restroom is a 40'x40' CMU structure with a metal panel roofing with areas for storage, restrooms and a concessions stand as indicated in Clark County Standard Plan #43-1645.

The electrical service will be from the existing main switch rear at the existing community center with the new panel located in the restroom/concession stand building.

The water service will be from the existing 14" water main with 1" service to the new restroom/concession building.

2. PRE-BID AND BID OPENING DATES

Pre-Bid Meeting – January 3, 2014; 11:00 a.m., Gold Conference Room

Bid Opening – **January 31**, 2014; 2:15:00 p.m., Gold Conference Room

3. DESIGNATED CONTACTS

DESIGNATED CONTACTS FOR QUESTIONS	ENTITY/COMPANY	CONTACT NAME	WORK REFERENCE #	TELEPHONE NUMBER	FAX NUMBER
Special provisions, technical specifications, or drawings	Clark County Real Property Management	Sam Botros botross@clarkcountynv.gov	603204-13	(702) 455-4924	(702) 455-5817
Invitation to Bid, Bonds, insurance requirements (Purchasing Analyst)	Clark County Purchasing and Contracts Division	Sandy Moody-Upton scm@clarkcountynv.gov	603204-13	(702) 455-4424	(702) 386-4914
Special provisions, technical specifications or drawings (Consulting Architect)	Suzana Rutar Architect, Ltd	Ken Ballard ken@srutar.com		(702) 263-6176	(702) 361-2582
Building Permits and Fees Clark County	Clark County Department of Development Services		43-1645 13-45890	(702) 455-3020	(702) 455-5685
Building Permits and Fees City of Las Vegas	City of Las Vegas Building Department			(702) 229-6251	(702) 229-6202
Water connection fees	Moapa Valley Water District	Brian C. Mortensen		(702) 397-6893	
Nevada Department of Environmental Protection		Peter Lassaline plassaline@ndep.nv.gov	GNeVOSD509L0216	(775) 687-4684	
Dust control permit	Clark County Department of Air Quality and Environmental Management	Customer Service		(702) 455-5942	(702) 383-9994
Management of construction project after award (Construction Manager)	Clark County Real Property Management	John Rodriquez jro@clarkcountynv.gov	603204-13	(702) 455-4924	(702) 455-5817

CLARK COUNTY, NEVADA

BID FORM

BID NO. 603204-13
RON LEWIS PARK: RESTROOM, CONCESSION & STORAGE BUILDING
PWP NUMBER: CL-2014-126
REVISED PER ADDENDUM NO. 1

(NAME)

(ADDRESS)

I, THE UNDERSIGNED BIDDER:

1. Agree, if awarded this Contract, I will complete all work for which a Contract may be awarded and to furnish any and all labor, equipment, materials, transportation, and other facilities required for the services as set forth in the Bidding and Contract Documents.
2. Have examined the Contract Documents and the site(s) for the proposed work and satisfied themselves as to the character, quality of work to be performed, materials to be furnished and as to the requirements of the specifications.
3. Have completed all information in the blanks provided and have submitted the following within this Bid:
 - a) Have listed the name of each Subcontractor which will be paid an amount exceeding five percent (5%) of the Total Base Bid amount.
 - b) Attached a bid security (in the form of, at my option, a Cashiers Check, Certified Check, Money Order, or Bid Bond in favor of the Owner in the amount of five percent (5%) of the Total Base Bid amount.
 - c) If claiming the preference eligibility, I have submitted a valid Certificate of Eligibility with this Bid.
4. I acknowledge that if I am one of the three apparent low bidders at the bid opening, and if I have listed Subcontractor(s) pursuant to NRS 338.141, I must submit Bid Attachment 2 within two-hours after completion of the bid opening pursuant to the Instructions to Bidders, forms must be submitted via hand delivery or email to COUNTPURCHASING@CLARKCOUNTYNV.GOV and I understand that hand delivery is recommended, and Owner shall not be responsible for lists received after the two-hour time limit, regardless of the reason. I understand that submission after the two-hour time limit is not allowed and will be returned to me and the bid will be deemed non-responsive. I acknowledge that for:
 - a) Projects UNDER \$5,000,000
I need to list **only those Subcontractors** that will provide labor/improvements exceeding \$50,000.00.
5. I acknowledge that if notified that I am the low bidder, I must submit the Disclosure of Ownership/Principals form within 24-hours of request.
6. I acknowledge that if I am one of the three apparent low bidder(s) for the base bid at the bid opening, I must submit the Bid Attachment 4, Schedule of Values, by 12:00 Noon of the next business day.
7. I acknowledge that my bid is based on the current State of Nevada prevailing wages.
8. I acknowledge that I have not breached a public work contract for which the cost exceeds \$25,000,000, within the preceding year, for failing to comply with NRS 338.147 and the requirements of a contract in which I have submitted within 2 hours of the bid opening an Affidavit pertaining to preference eligibility.
9. Upon faxed or mailed receipt of a Notice of Intent to Award the Contract, I will provide the following submittals within seven business days from receipt of the Notice:
 - a) Performance Bond, Labor and Material Payment Bond and a Guaranty Bond, for 100% of the Contract amount as required.
 - b) Certificates of insurance for Commercial General Liability in the amount of \$1,000,000, Automobile Liability in the amount of \$1,000,000, and Workers' Compensation insurance issued by an insurer qualified to underwrite Workers' Compensation insurance in the State of Nevada, as required by law.

10. I acknowledge that if I do not provide the above submittals on or before the seventh business day after receipt of the Notice of Intent to Award; or do not keep the bonds or insurance policies in effect, or allow them to lapse during the performance of the Contract; I will pay over to the Owner the amount of **\$500** per day as liquidated damages.
11. I confirm this bid is genuine and is not a sham or collusive, or made in the interest of, or on behalf of any person not herein named, nor that the Bidder in any manner sought to secure for themselves an advantage over any bidders.
12. I further propose and agree that if my bid is accepted, I will commence to perform the work called for by the contract documents on the date specified in the Notice to Proceed and I will complete all work within the calendar days **specified in the General Conditions.**
13. I further propose and agree that I will accept as full compensation for the work to be performed the price written in the Bid Schedule below.
14. I have carefully checked the figures below and the Owner will not be responsible for any error or omissions in the preparation or submission of this Bid.
15. I agree no verbal agreement or conversation with an officer, agent or employee of the owner, either before or after the execution of the contract, shall affect or modify any of the terms or obligations of this Bid.
16. I am responsible to ascertain the number of addenda issued, and I hereby acknowledge receipt of the following addenda:

Addendum No. _____ dated, _____	Addendum No. _____ dated, _____
Addendum No. _____ dated, _____	Addendum No. _____ dated, _____
Addendum No. _____ dated, _____	Addendum No. _____ dated, _____
Addendum No. _____ dated, _____	Addendum No. _____ dated, _____
Addendum No. _____ dated, _____	Addendum No. _____ dated, _____

17. I agree to perform all work described in the drawings, specifications, and other documents for the amounts quoted below:

ITEM NUMBER	ITEM DESCRIPTION	LUMP SUM
1.	RON LEWIS PARK: RESTROOM, CONCESSION & STORAGE BUILDING, AS SPECIFIED	\$
2.	PERMITS AND FEES BID ALLOWANCE	\$ 10,000
3.	CONSTRUCTION CONFLICTS AND ADDITIONAL WORK ALLOWANCE	\$ 50,000
4.	DUST CONTROL, AS SPECIFIED	\$
5.	STORMWATER POLLUTION, AS SPECIFIED	\$
6.	ALLOWANCE FOR ONSITE MATERIAL TESTING FOR QUALITY CONTROL	\$
TOTAL BID AMOUNT		\$

ADDITIVE ALTERNATES

THE OWNER MAY EXERCISE THE FOLLOWING ITEMS IN SEQUENTIAL ORDER ONLY SUBJECT TO THE AVAILABILITY OF FUNDS. THE ADDITIVE ALTERNATE PRICES QUOTED SHALL REMAIN FIRM FOR THE PERIOD OF 90 CALENDAR DAYS, AS DETAILED IN THE INSTRUCTIONS TO BIDDERS.

WHERE AN ADDITIVE ALTERNATE REQUIRES DELETING ALL OR A PORTION OF THE SPECIFIED ITEM AND ADDING OR SUBSTITUTING AN OPTIONAL ITEM, THE BID AMOUNT SUBMITTED FOR THE ADDITIVE ALTERNATE SHALL BE THE NET COST DIFFERENCE BETWEEN WHAT IS ADDED AND WHAT IS DELETED.

ALTERNATE	ITEM DESCRIPTION	TOTAL
1.	PROVIDE AND INSTALL ALTERNATE LIGHTING PACKAGE AS INDICATED IN SECTION 01 23 00	\$

18. BUSINESS ENTERPRISE INFORMATION:

The Prime Contractor submitting this Bid is a MBE WBE PBE SBE NBE LBE as defined in the Instructions to Bidders.

19. BUSINESS ETHNICITY INFORMATION:

The Prime Contractor submitting the Bid Ethnicity is Caucasian (CX) African American (AA) Hispanic American (HA) Asian Pacific American (AX) Native American (NA) Other as defined in the Instructions to Bidders.

20. _____
LEGAL NAME OF FIRM AS IT WOULD APPEAR IN CONTRACT

ADDRESS OF FIRM

CITY, STATE, ZIP CODE

TELEPHONE NUMBER

FAX NUMBER

NEVADA STATE CONTRACTORS' BOARD LICENSE INFORMATION:

I certify that the license(s) listed below will be the license(s) used to perform the majority of the work on this project.

LICENSE NUMBER: _____

LICENSE CLASS: _____

LICENSE LIMIT: _____

ONE TIME LICENSE LIMIT INCREASE \$ _____ IF YES, DATE REQUESTED _____

CLARK COUNTY BUSINESS LICENSE NO. _____

STATE OF NEVADA BUSINESS LICENSE NO. _____

AUTHORIZED REPRESENTATIVE
(PRINT OR TYPE)

E-MAIL ADDRESS

SIGNATURE OF AUTHORIZED REPRESENTATIVE

TODAY'S DATE

TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

01 11 00	Summary of Work
01 23 00	Additive Alternatives
01 25 00	Substitution Procedures
01 26 00	Contract Modification Procedures
01 26 13	Requests for Interpretation (RFI)
01 29 76	Application for Payment
01 31 13	Project Coordination
01 31 19	Project Meetings
01 32 16	Construction Progress Schedule
01 32 33	Photographic Documentation
01 33 00	Submittal Procedures
01 35 16	Alteration Project Procedures
01 35 33	Environmental Procedures
01 35 53	Security Procedures
01 42 13	Abbreviations and Acronyms
01 42 16	Definitions
01 42 19	Reference Standards
01 45 00	Quality Control
01 45 29	Testing Laboratory Services
01 51 00	Temporary Utilities
01 52 13	Field Offices and Sheds
01 55 00	Vehicular Access and Parking
01 57 00	Temporary Controls
01 57 55	Storm Water Pollution Prevention
01 58 13	Temporary Project Signage
01 60 00	Product Requirements
01 71 23	Field Engineering
01 71 33	Protection of Adjacent Construction
01 73 29	Cutting and Patching
01 74 00	Cleaning and Waste Management
01 75 00	Starting and Adjusting
01 76 00	Protecting Installed Construction
01 77 00	Closeout Procedures
01 78 23	Operation and Maintenance Data
01 78 36	Product Warranties and Bonds
01 78 39	Project Record Documents

TABLE OF CONTENTS

DIVISION 02 – EXISTING CONDITIONS

See Notes on Civil & Architectural Sheets

DIVISION 03 – CONCRETE

See Notes on Civil, Architectural & Structural Sheets

DIVISION 04 – MASONRY

See notes on Architectural & Structural Sheets

04 22 00 Concrete Unit Masonry

DIVISION 5 – METALS

See Notes on Structural Sheets

05 12 00 Structural Steel

05 55 00 Metal Fabrications

DIVISION 06 – WOOD, PLASTICS, AND COMPOSITES

06 10 00 Rough Carpentry

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

07 60 00 Sheet Metal Flashing and Trim

07 61 00 Standing Seam Metal Panel Roof

07 92 00 Joint Sealants

DIVISION 09 – FINISHES

See Notes on Architectural Sheets

DIVISION 10 – SPECIALTIES

See Notes on Architectural Sheets

DIVISION 11 – EQUIPMENT

See Notes on Architectural Sheets

DIVISION 22 – PLUMBING

See notes on Mechanical/Plumbing Sheets

DIVISION 23 – HEATING VENTILATING AND AIR-CONDITIONING

See notes on Mechanical/Plumbing Sheets

TABLE OF CONTENTS

DIVISION 26 – ELECTRICAL

See Notes on Electrical Sheets

DIVISION 31 – EARTHWORK

See Notes on Civil Sheets & Appendix B

DIVISION 33 – UTILITIES

See Notes on Civil Sheets

APPENDIX A

Structural Calculations

APPENDIX B

Soils Report

GEOTECHNICAL EVALUATION
MOAPA CONCESSION AND RESTROOM
LEWIS PARK
MOAPA, NEVADA
WT JOB NO. 4123JD048



**Western
Technologies
Inc.**

The Quality People
Since 1955

LAS VEGAS – NEVADA
6633 West Post Road
Las Vegas, Nevada 89118
(702) 798-8050 • fax 798-7664

Prepared for:

Suzana Rutar Architect, LTD

September 9, 2013



Cindy Dewitt for

Donald J. Spadola, P.E.
Director of Geotechnical Services

Reviewed by: Craig P. Wiedeman, P.E.
Senior Geotechnical Engineer

ARIZONA

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FLAGSTAFF
FORT MOHAVE
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Las Vegas, Nevada 89118
(702) 798-8050 • fax 798-7664

September 9, 2013

Suzana Rutar Architect, LTD
1950 East Warm Springs Road
Las Vegas, Nevada 89119

Attn: Mr. Ken Ballard

Re: Geotechnical Evaluation
Moapa Concession and Restroom
Lewis Park
Moapa, Nevada

WT Job No. 4123JD048

Western Technologies Inc. (WT) has completed the geotechnical evaluation for the proposed Moapa Concession and Restroom at Lewis Park in Moapa, Nevada. The results of our evaluation, including the boring location diagram, boring logs, laboratory test results, and geotechnical recommendations are attached.

Please contact us if design conditions change, or if you have any questions concerning this report or any of our materials testing, special inspection, or consulting services. We look forward to working with you on future projects.

Sincerely,
WESTERN TECHNOLOGIES INC.
Geotechnical Engineering Services

Donald J. Spadola, P.E.
Director of Geotechnical Services

Copies to: Addressee (3)

TABLE OF CONTENTS

1.0 PURPOSE	1
2.0 PROJECT DESCRIPTION	15
3.0 SCOPE OF SERVICES	2
3.1 Field Exploration	2
3.2 Laboratory Analyses	2
3.3 Analyses and Report	2
4.0 SITE CONDITIONS	3
4.1 Surface	3
4.2 Subsurface	3
4.3 Geology	3
4.3.1 Seismicity	3
4.3.2 Geologic Constraints	4
5.0 GEOTECHNICAL PROPERTIES & ANALYSIS	4
5.1 Laboratory Tests	4
5.2 Field Tests	5
6.0 RECOMMENDATIONS	5
6.1 General	5
6.2 Foundations	5
6.3 Lateral Design Criteria	6
6.3.1 Retaining Walls	6
6.4 Seismic Considerations	7
6.5 Drainage	7
6.6 Conventional Slab-on-Grade Support	7
6.7 Corrosively	8
7.0 EARTHWORK	8
7.1 General	8
7.2 Site Clearing	8
7.3 Excavation	8
7.4 Building Pad Preparation	9
7.5 Materials	9
7.6 Placement and Compaction	11
7.7 Compliance	11
8.0 LIMITATIONS	12
9.0 CLOSURE	12

PLATE NO.

VICINITY MAP.....1
BORING LOCATION DIAGRAM.....2

APPENDIX A

Definition of Terminology.....A-1
Method of Soil Classification.....A-2
Boring Log Notes.....A-3
Boring LogsA-4 to A-6
Percolation Test ResultsA-7 and A-8

APPENDIX B

Laboratory Test Results.....B-1 to B-4

**GEOTECHNICAL EVALUATION
MOAPA CONCESSION AND RESTROOM
LEWIS PARK
MOAPA, NEVADA
WT JOB NO. 4123JD048**

1.0 PURPOSE

This report contains the results of a geotechnical evaluation performed at the site of a proposed concession stand and restroom to be constructed at Lewis Park in Moapa, Nevada. The general location of the site is shown on Figure 1, titled Site Vicinity Map. The purpose of these services is to provide information and recommendations regarding the following:

- Subsurface conditions
- Geologic hazards
- Foundation design parameters
- Lateral earth pressures
- Seismic considerations
- Corrosivity
- Excavation conditions
- Earthwork, including site preparation, fill placement, and suitability of existing soils for fill materials, and compaction

Results of the field exploration, field and laboratory tests are presented in the Appendices.

2.0 PROJECT DESCRIPTION

A new concession and restroom building will be constructed at Lewis Park in Moapa, Nevada. The building will total approximately 1,600 square feet and will be located in the vicinity of the left field area of the existing baseball park. A shallow leach field for the restroom will be located near the building but outside of the baseball playing field along the left field foul line. The building will be a single-story structure of wood frame and/or masonry construction with a concrete slab-on-grade floor (no basement). Based on past experience with similar construction, we have assumed maximum wall loads on the order of 3 to 5 kips per linear foot with maximum column loads (if any) on the order of 30 to 50 kips. We have also assumed that the floor elevation will be within approximately 3 feet of the existing site grade. Ancillary construction is expected to include underground utilities and exterior concrete flatwork.

3.0 SCOPE OF SERVICES

3.1 Field Exploration

Three (3) borings were drilled to depths ranging from 10 to 16 feet below the existing ground surface (bgs). One (1) boring was drilled in the building area to a depth of 16 feet bgs and 2 borings were drilled within the leach field area to a depth of 10 feet bgs. In addition, an approximate 12 inch diameter test hole was drilled to a depth of approximately 3 feet bgs adjacent to the 2 borings drilled in the leach field area in order to conduct shallow percolation testing. The locations of the borings are shown on Figure 2, titled Boring Location Diagram. A field log was prepared for each boring. These logs contain visual classifications of the materials encountered during drilling as well as interpolation of the subsurface conditions between samples. Final logs, included in Appendix A, represent our interpretation of the field logs and may include modifications based on laboratory observations and tests of the field samples. The final logs describe the materials encountered, their thicknesses, and the locations where samples were obtained.

The Unified Soil Classification System was used to classify soils. The soil classification symbols appear on the boring logs and are briefly described in Appendix A. Local and regional geologic characteristics were used to estimate the seismic design criteria.

3.2 Laboratory Analyses

Laboratory analyses were performed on representative soil samples to aid in material classification and to estimate pertinent engineering properties of the on-site soils for preparation of this report. The following tests were performed in general accordance with applicable procedures, and the results are presented in Appendix B.

- Sieve analysis
- Liquid limit and plasticity index
- Compression
- Expansion
- pH and resistivity
- Water soluble salts, chloride and sulfate content

3.3 Analyses and Report

This geotechnical engineering report includes a description of the project, a discussion of the field and laboratory testing programs, a discussion of the subsurface conditions, and design recommendations as appropriate to its purpose. The scope of services does not include any

environmental assessment of the site, discovery of UST's or other underground structures, or identification of contaminated or hazardous materials or conditions. If the Client is concerned about the possibility of such contamination, we are available to discuss the scope of such other and further studies with you.

Using the exploration and test data, we have performed engineering analyses appropriate to the purpose of our services, as defined in Section 1.0. Our report includes a site vicinity map, a boring location diagram, boring logs, tests results, conclusions and recommendations.

4.0 SITE CONDITIONS

4.1 Surface

At the time of our exploration, the site was the left field area of an existing baseball field. The ground surface was relatively flat and covered with grass. Site drainage was as sheet surface flow although the direction of the drainage was not visually apparent.

4.2 Subsurface

As presented on the boring logs, the near surface soil to a depth of approximately 1 foot was a sandy clay fill material. This fill material was likely imported in order to provide suitable conditions for growing grass on the baseball field. Below a depth of 1 foot and extending throughout the remaining depth of the exploration was a deposit of native silty sand. This deposit consisted of a non-plastic, fine to coarse sand with gravel. The native silty sand was generally moist and medium dense in the upper 9 to 10 feet and then became damp and dense below this level. Groundwater was not encountered in any of the borings at the time of the exploration. A detailed description of the soils encountered will be found on the boring logs in Appendix A.

4.3 Geology

4.3.1 Seismicity

Numerous seismic events, most of which are a probable result of underground blasting at the Nevada Test Site (about 90 miles north of Las Vegas), have been felt in and around the Las Vegas area. There is a noticeable lack of earthquakes that have epicenters in the Southern Nevada area and are directly attributable to deep-seated tectonic movement. A few events recorded in the Henderson area and in Lincoln County registered between 5.0 and 6.0 Richter magnitude. Most of the recorded events in the area range between 4.0 and

4.9. Based on the 2009 International Building Code (IBC), we recommend the site be assigned Site Class D (default classification).

4.3.2 Geologic Constraints

No known or mapped earth subsidence fissures, due to regional groundwater withdrawal exist in the site vicinity. No evidence has been noted of distress arising from areal subsidence due to regional groundwater withdrawal.

Observation of the ground surface indicated no readily discernible evidence of recent compaction faulting or fissuring. Compaction faults are generally accepted as features resulting from deep-seated differential consolidation of alluvial materials with dissimilar grain-size and compressibility characteristics. Fissures are understood to be the results of a subsurface erosion process occurring in tension fractures at or near the surface of uncemented, relatively fine-grained soils.

5.0 GEOTECHNICAL PROPERTIES & ANALYSIS

5.1 Laboratory Tests

The laboratory test results indicate that native on-site subsoil below sandy clay fill materials are silty sand with gravel. Compression testing conducted on a representative sample of the near surface soils indicated they are moderately compressible at the existing moisture content. An increase in the moisture content will result in moderate additional compression.

Expansion testing conducted on these native silty sand soils indicate they have a low expansion potential when recompacted, confined by loads approximating floor loads and saturated. Slabs-on-grade supported on recompacted silty sand soils have a low potential for heaving if the water content of the soil increases. Slabs-on-grade may be supported on properly prepared silty sand soils. We point out that the sandy clay fill materials encountered in the top 12 inches of the test borings are likely expansive and should not be used as building pad fill on the site.

Chemical tests were performed on a sample of the surficial soils at the site to determine the amount of water-soluble salts, chloride, and sulfates. The test results indicate that the on-site soils would be classified as having a low corrosive potential to concrete according to Table 4.3.1 of the American Concrete Institute (ACI) 318 Building Code and Commentary. The tests were performed by Silverstate Analytical and the test results are presented in Appendix B.

5.2 Field Tests

On-site soils near shallow foundation level exhibited moderate resistance to penetration using the standard ring sample penetration test method (ASTM D3550, "Standard Practice for Thick Wall, Ring Lined, Split Barrel, Drive Sampling of Soils"). These soils correlate to having a moderate allowable bearing capacity in their present condition.

Percolation tests were conducted in the planned leach field area for the concession and restroom building. The tests were performed in approximate 12 inch diameter test holes drilled to a depth of approximately 3 feet below the existing ground surface. The percolation test holes were drilled within a few feet of borings B-2 and B-3 as shown on Figure 2, Boring Location Diagram.

After drilling the percolation test holes, they were filled with water and allowed to pre-soak for approximately one hour. After pre-soaking percolation test hole B-3 was empty and percolation test hole B-2 contained 9 inches of water. The percolation tests were performed using a constant head of 12 inches of water. Testing was performed until at least three successive readings were within approximately 5 percent of each other. A stabilized percolation rate of 10 minutes per inch was measured in B-2 while a stabilized percolation rate of 2 minutes per inch was measured in B-3. The results of the testing are presented in Appendix A.

6.0 RECOMMENDATIONS

6.1 General

Recommendations contained in this report are based on our understanding of the project criteria described in Section 2.0, and the assumption that the soil and subsurface conditions are those disclosed by the borings. Others may change the plans, final elevations, number and type of structures, foundation loads, and floor levels during design or construction. Substantially different subsurface conditions from those described herein may be encountered or become known. Any changes in the project criteria or subsurface conditions shall be brought to our attention in writing. This report does not encompass the effects, if any, of underlying geologic hazards or regional groundwater withdrawal and expresses no opinion regarding their effects on surface movements at the project site.

6.2 Foundations

Foundations for the proposed new concession and restroom building are anticipated to be on the order of 3 to 5 kips per linear foot for walls and 30 to 50 kips for any columns. Based on the granular soil condition present at the site, it is our opinion that the proposed concession and

restroom building can be supported by a shallow spread foundation system bearing on the native site soils or properly compacted fill materials. The foundations should be a minimum of 16 inches in width and bear at a depth of at least 18 inches below the finished grade. Finished grade is defined as floor level for interior footings and the lowest adjacent grade within 5 feet of the building for perimeter footings. An allowable bearing pressure of 3,000 pounds per square foot (psf) can be used in designing the foundations.

We anticipate that total settlement of the building foundations should be less than 1 inch and differential settlement should be less than 1/2 inch. Additional foundation movements could occur if water from any source infiltrates the foundation soils. Therefore, proper drainage should be provided in the final design and during construction.

We recommend that the geotechnical engineer or his representative observe the footing excavations before reinforcing steel and concrete are placed. This observation is to assess whether the soils exposed are similar to those anticipated for support of the footings. Any soft, loose or unacceptable soils should be undercut to suitable materials and backfilled with approved fill materials or lean concrete. Soil backfill should be properly compacted.

6.3 Lateral Design Criteria

Lateral loads may be resisted by concrete interface friction and by passive resistance. For shallow foundations bearing on properly compacted fill at this site, we recommend the following lateral resistance criteria:

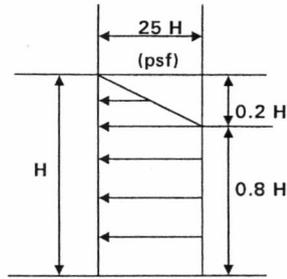
- Coefficient of Friction0.35
- Passive Pressure 300 psf/ft

The frictional resistance and the passive pressure may be combined without reduction in determining the total lateral resistance.

6.3.1 Retaining Walls

Cantilevered retaining walls, with free-draining level backfills and without surcharge, may be designed assuming that the soils will impose a pressure equal to that developed by a fluid with a density of 35 pounds per cubic foot.

Braced retaining walls, with free draining level backfills and without surcharge, may be designed assuming that the soils will impose a pressure with the following distribution:



Any uniform surcharge loading should be added to the above pressures using a factor of 0.30. The stated pressures assume that hydrostatic pressure will not develop. Therefore, we recommend that a wall drainage system be provided and that the structural fill placed behind retaining walls be granular and free draining (less than 5% fines).

Additional lateral loads on cantilevered and braced walls due to a seismic event should be added to the static pressures. Based on recommendations presented in 2000 NEHRP, the seismic component may be calculated by the following equations:

$$\begin{aligned} \text{Unrestrained Elements: } P_{AE} &= \frac{3}{8} K_h H^2 \gamma && (\text{psf/linear foot of wall}) \\ \text{Restrained Elements: } P_{AE} &= K_h H^2 \gamma && (\text{psf/linear foot of wall}) \end{aligned}$$

Where $K_h = S_{DS}/2.5$, H is the height of the wall in feet, and γ is the unit weight of the backfill material in pounds per cubic foot (pcf). The resultant seismic earth pressure P_{AE} , acts at a distance of $0.6H$ above the base of the wall.

For this site, $P_{AE} = 10H^2$ and $27H^2$ for unrestrained elements and restrained elements, respectively.

Based on information obtained from Google Maps, the Latitude and Longitude for the site are determined to be 36.6719°N and 114.5908°W , respectively.

6.4 Seismic Considerations

For structural designs based upon the 2009 International Building Code, the following criteria will apply. The soil site class is D. S_s , the spectral acceleration for short periods, is 0.56. S_1 , the spectral acceleration for a 1-second period, is 0.18. F_a and F_v , in accordance with Table 1613.5.3(1) and 1613.5.3(2) are 1.34 and 2.08, respectively.

6.5 Drainage

The major cause of soil problems in this vicinity is moisture increase in soils below structures. Therefore, it is extremely important that positive drainage be provided during construction and

maintained throughout the life of the proposed structure. Infiltration of water into utility or foundation excavations must be prevented during construction.

6.6 Slab-on-Grade Support

Floor slabs can be supported on properly placed and compacted fill or approved native soil. The slab subgrade should be prepared by the procedures outlined in this report. A minimum 4-inch layer of Type II base course over a minimum 10 mil thick layer of visqueen should be provided beneath all slabs to help prevent capillary rise and a damp slab.

6.7 Corrosivity

Based on the test results, the on-site soils possess low concentrations of sulfates. However, in keeping with local practice, we recommend Type V or equivalent sulfate resistant cement be utilized in all concrete in contact with on-site soils.

7.0 EARTHWORK

7.1 General

The validity of the conclusions contained in this report are based on compliance with the recommendations presented in this section. Any excavating, trenching, or disturbance that occurs after completion of the earthwork must be backfilled, compacted and tested in accordance with the recommendations contained herein. If any unobserved and untested earthwork, trenching, or backfilling occurs, then the conclusions and recommendations in this report may not be relied on. We recommend that Western Technologies, Inc. be retained to provide services during these phases of the project. Observation and testing of all foundation excavations should be performed prior to placement of reinforcing steel and concrete to confirm that foundations are constructed on satisfactory bearing materials.

7.2 Site Clearing

Strip and remove the existing vegetation, organic topsoils, debris, fill materials and any other deleterious materials from the building area. The building area is defined as that area within the building footprint plus 5 feet beyond the perimeter of the footprint. All exposed surfaces should be free of mounds and depressions that could prevent uniform compaction.

7.3 Excavation

We anticipate that excavations for shallow foundations and utility trenches for the proposed construction can be accomplished with conventional equipment. Excavations into the non-plastic silty sand may cave and slough during excavation and these soils may need to be flattened or shored to facilitate removal. The speed and ease of excavation are dependent on the nature of the deposit, the type of equipment used, and the skill and experience of the equipment operator.

The soils to be penetrated by the proposed excavations may vary significantly across the site. Our soil classifications are based solely on the materials encountered in widely spaced exploratory test borings. The contractor should verify that similar conditions exist throughout the proposed area of excavation. If different subsurface conditions are found at the time of construction, we should be contacted immediately to evaluate the conditions encountered.

7.4 Building Pad Preparation

After the site clearing operations are completed, remove the sandy clay fill materials down to the native silty sand soils. After removal scarify, moisture condition, and compact the exposed ground surface to a minimum depth of 8 inches prior to placing any additional fill materials necessary to achieve the finished subgrade level. The removed sandy clay soils should not be used for construction of the building pad. A minimum 4-inch layer of Type II base course over a minimum 10 mil thick layer of visqueen should be provided over the prepared subgrade and beneath all slabs to help prevent capillary rise and a damp slab.

7.5 Materials

Clean on-site low expansive potential silty sand soils or imported materials may be used as fill material for the following:

- Foundation areas
- Interior and exterior slab areas
- Backfill

The on-site sandy clay soils removed from the building area should not be reused as fill material. On-site silty sand soils, minus any debris or organic matter may be used in required fills. Materials used in the upper 3 to 5 feet of the building pad should be reasonably free of rock and lumps having a particle diameter greater than 6 inches. Acceptance of the quantity of oversized materials shall be at the discretion of the geotechnical engineer. Any required import material

should consist of relatively non-expansive and preferably granular material. All imported material should be approved prior to importing.

Imported soils should conform to the following:

- Gradation (ASTM C136):

	percent finer by weight
6"	100
4"	85-100
3/4"	70-100
No. 4 Sieve.....	50-100
No. 200 Sieve.....	50 (max)
- Maximum expansive potential (%)*4.0
- Maximum soluble sulfates (%)0.10

* Measured on a sample compacted to approximately 95 percent of the D1557 maximum dry density at about 3 percent below optimum water content. The sample is confined under a 60 psf surcharge and submerged.

Base course should conform to the Clark County Uniform Specifications for Type II Aggregate Base Section 704.03.04.

7.6 Placement and Compaction

- a. Place and compact fill in horizontal lifts, using equipment and procedures that will produce recommended water contents and densities throughout the lift.
- b. Uncompacted fill lifts should not exceed 8 inches.
- c. Materials should be compacted to the following:

**Minimum Percent
Material Compaction (ASTM D1557)**

- On-site soil, reworked and fill:

Below footings	90
Below slabs-on-grade.....	85
- Imported soil:

Below footings	90
----------------------	----

Below slabs-on-grade.....	85
• Aggregate base.....	90
• Nonstructural backfill.....	85

Imported and on-site granular soils should be compacted within a water content range of three percent below to three percent above optimum.

Based on the site soil conditions and Table 1704.7 of the Southern Nevada Amendments to the 2009 IBC, we recommend a Level A inspection for the project.

7.7 Compliance

Recommendations for slabs-on-grade and foundations supported on compacted fills or prepared subgrade depend upon compliance with **EARTHWORK** recommendations. To assess compliance, observation and testing should be performed under the direction of a geotechnical engineer.

8.0 LIMITATIONS

This report has been prepared assuming the project criteria described in Section 2.0. If changes in the project criteria occur, or if different subsurface conditions are encountered or become known, the conclusions and recommendations presented herein shall become invalid. In any such event, WT should be contacted in order to assess the effect that such variations may have on our conclusions and recommendations.

The recommendations presented are based entirely upon data derived from a limited number of samples obtained from widely spaced borings. The attached logs are indicators of subsurface conditions only at the specific locations and times noted.

This report assumes the uniformity of the geology and soil structure between borings, however variations can and often do exist. Whenever any deviation, difference or change is encountered or becomes known, WT should be contacted.

This report is valid for the earlier of one year from the date of issuance, a change in circumstances, or discovered variations. After expiration, no person or entity shall rely on this report without the express written authorization of WT.

9.0 CLOSURE

We prepared this report as an aid to the designers of the proposed project. The comments, statements, recommendations and conclusions set forth in this report reflect the opinions of the authors. These opinions are based upon data obtained at the location of the borings, and from laboratory tests. Work on your project was performed in accordance with generally accepted standards and practices utilized by professionals providing similar services in this locality. No other warranty, express or implied, is made.



NOT TO SCALE



PROPERTY

Google earth

Geotechnical
Environmental
Inspections
Materials



**Western
Technologies Inc.**
The Quality People
Since 1955

FIGURE 1. SITE VICINITY MAP
Moapa Concession and Restroom
Ron Lewis Town Park
Moapa, Nevada

WT Job No. 4123JD048



FIGURE 2. BORING LOCATION DIAGRAM
 Moapa Concession and Restroom
 Ron Lewis Town Park
 Moapa, Nevada

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 Environmental
 Inspections
 Materials*

LEGEND

 Approximate Boring Location

Allowable Soil Bearing Capacity	The recommended maximum contact stress developed at the interface of the foundation element and the supporting material.
Backfill	A specified material placed and compacted in a confined area.
Base Course	A layer of specified material placed on a subgrade or subbase.
Base Course Grade	Top of base course.
Bench	A horizontal surface in a sloped deposit.
Caisson	A concrete foundation element cast in a circular excavation which may have an enlarged base. Sometimes referred to as a cast-in-place pier.
Concrete Slabs-On-Grade	A concrete surface layer cast directly upon a base, subbase or subgrade.
Crushed Rock Base Course	A base course composed of crushed rock of a specified gradation.
Differential Settlement	Unequal settlement between or within foundation elements of a structure.
Engineered Fill	Specified material placed and compacted to specified density and/or moisture conditions under observations of a representative of a soil engineer.
Existing Fill	Materials deposited through the action of man prior to exploration of the site.
Existing Grade	The ground surface at the time of field exploration.
Expansive Potential	The potential of a soil to expand (increase in volume) due to absorption of moisture.
Fill	Materials deposited by the actions of man.
Finished Grade	The final grade created as a part of the project.
Gravel Base Course	A base course composed of naturally occurring gravel with a specified gradation.
Heave	Upward movement
Native Grade	The naturally occurring ground surface.
Native Soil	Naturally occurring on-site soil.
Rock	A natural aggregate of mineral grains connected by strong and permanent cohesive forces. Usually requires drilling, wedging, blasting or other methods of extraordinary force for excavation.
Sand and Gravel Base	A base course of sand and gravel of a specified gradation.
Sand Base Course	A base course composed primarily of sand of a specified gradation.
Scarify	To mechanically loosen soil or break down existing soil structure.
Settlement	Downward movement.
Soil	Any unconsolidated material composed of discrete solid particles, derived from the physical and/or chemical disintegration of vegetable or mineral matter, which can be separated by gentle mechanical means such as agitation in water.
Strip	To remove from present location.
Subbase	A layer of specified material placed to form a layer between the subgrade and base course.
Subbase Grade	Top of subbase.
Subgrade	Prepared native soil surface.

Moapa Concession and Restroom

Definition of Terminology

Western Technologies Inc.

Job No. 4123JD048

Plate A-1

METHOD OF SOIL CLASSIFICATION

COARSE-GRAINED SOILS (LESS THAN 50% FINES)

Group Symbols	Description	Major Divisions
GW	Well-graded gravels or gravel-sand mixtures, less than 5% fines	GRAVELS More than half of coarse fraction is larger than No. 4 sieve size
GP	Poorly-graded gravels or gravel-sand mixtures less than 5% fines	
GM	Silty gravels, gravel-sand-silt mixtures, more than 12% fines	
GC	Clayey gravels, gravel-sand-clay mixtures, more than 12% fines	
SW	Well-graded sands or gravelly sands, less than 5% fines	SANDS More than half of coarse fraction is smaller than No. 4 sieve size
SP	Poorly-graded sands or gravelly sands, less than 5% fines	
SM	Silty sands, sand-silt mixtures, more than 12% fines	
SC	Clayey sands, sand-clay mixtures, more than 12% fines	

NOTE: Coarse-grained soils receive dual symbols if they contain 5 to 12% fines (e.g. SW-SM, GP-GC, etc.)

FINE-GRAINED SOILS (MORE THAN 50% FINES)

ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands	SILTS AND CLAYS Liquid limits less than 50
CL	Inorganic clays or low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	
OL	Organic silts or organic silt-clays of low plasticity	
MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts	SILTS AND CLAYS Liquid limit more than 50
CH	Inorganic clays of high plasticity, fat clays	
OH	Organic clays of medium to high plasticity	
PT	Peat, muck, and other highly organic soils	HIGHLY ORGANIC SOILS

NOTE: Fine-grained soils may receive dual classification based upon plasticity characteristics

SOIL SIZES

Component	Size Range
Boulders	Above 12 in.
Cobbles	3 in to 12 in
Gravel	No. 4 to 3 in.
Coarse	¾ in. to 3 in.
Fine	No. 4 to ¾ in.
Sand	No. 200 to No. 4
Coarse	No. 10 to No. 4
Medium	No. 40 to No. 10
Fine	No. 200 to No. 40
Fines (Silt or Clay)	Below No. 200

NOTE: Only size smaller than 3 inches are used to classify soils

CONSISTENCY

Clays & Silts	Blows/Foot*
Very Soft	0 - 2
Soft	2 - 4
Firm	4 - 8
Stiff	8 - 16
Very Stiff	16 - 32
Hard	Over 32

* Number of blows of 140-pound hammer falling 30 inches to drive a 2-inch O.D. (1-3/8" I.D.) split-spoon (ASTM D1686).

RELATIVE DENSITY

Sands & Gravels	Blows/Foot*
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Over 50

PLASTICITY OF FINE-GRAINED SOILS

Plasticity Index	Dry
0	Non-Plastic
1 - 7	Low
8 - 25	Medium
Over 25	High

DEFINITION OF WATER CONTENT

Dry
Slightly Damp
Damp
Moist
Wet
Saturated

Moapa Concession and Restroom

Western Technologies Inc.

Project No. 4123JD048

Plate: A-2

The number shown in "**BORING NO.**" refers to the approximate location of the same number indicated on the "Boring Location Diagram" as positioned in the field by pacing or measurement from property lines and/or existing features, or through the use of Global Positioning System (GPS) devices.

"**DRILLING TYPE**" refers to the exploratory equipment used in the boring wherein **HSA** = **hollow stem auger**, and the dimension presented is the outside diameter of the HSA used.

"**N**" in "**BLOWS/FT.**" refers to a 2-in. outside diameter split-barrel sampler driven into the ground with a 140 lb. drop-hammer dropped 30 in. repeatedly until a penetration of 18 in. is achieved or until refusal. The number of blows, or "blow count", of the hammer is recorded for each of three 6-in. increments totaling 18 in. The number of blows required for advancing the sampler for the last 12 in. (2nd and 3rd increments) is defined as the Standard Penetration Test (SPT) "N"-Value. Refusal to penetration is considered more than 50 blows per foot. (Ref. ASTM D 1586).

"**R**" in "**BLOWS/FT.**" refers to a 3-in. outside diameter ring-lined split spoon sampler driven into the ground with a 140 lb. drop-hammer dropped 30 in. repeatedly until a penetration of 12 in. is achieved or until refusal. The number of blows required to advance the sampler 12 in. is defined as the "R" blow count. The "R" blow count requires an engineered conversion to an equivalent SPT N-Value. Refusal to penetration is considered more than 50 blows per foot. (Ref. ASTM D 3550).

"**SAMPLE TYPE**" refers to the form of sample recovery, in which **N** = **Split-barrel sample**, **R** = **Ring-lined sample**, **G** = **Grab sample**, **B** = **Bucket sample**, **C** = **Core sample** (ex. diamond bit rock coring).

"**DRY DENSITY (LBS/CU FT)**" refers to the laboratory-determined dry density in pounds per cubic foot. The symbol "**NR**" indicates that no sample was recovered. The symbol "**DU**" indicates that determination of dry density was not possible.

"**MOISTURE CONTENT (% OF DRY WT.)**" refers to the laboratory-determined water content in percent (Ref. ASTM D2216).

"**USCS**" refers to the "Unified Soil Classification System" Group Symbol for the soil type as defined by ASTM D 2487 and D 2488. The soils were classified visually in the field, and where appropriate, classifications were modified by visual examination of samples in the laboratory and/or by appropriate tests.

These notes and boring logs are intended for use in conjunction with the purposes of our services defined in the text. Boring log data should not be construed as part of the construction plans nor as defining construction conditions.

Boring logs depict our interpretations of subsurface conditions at the locations and on the date(s) noted. Variations in subsurface conditions and characteristics may occur between borings. Groundwater levels may fluctuate due to seasonal variations and other factors.

The stratification lines shown on the boring logs represent our interpretation of the approximate boundary between soil or rock types based upon visual field classification at the boring location. The transition between materials is approximate and may be more or less gradual than indicated.

Moapa Concession and Restroom	
Boring Log Notes	
Western Technologies Inc.	
Job No.: 4123JD048	Plate: A-3

DATE DRILLED: 8-14-13
 LOCATION: See Figure 2
 ELEVATION: Not measured

BORING NO. 1

EQUIPMENT TYPE: Air Rotary
 EXCAVATION TYPE: 5.5' Rotary
 FIELD ENGINEER: D.Spadola

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

MOISTURE CONTENT (% OF DRY WT)	DRY DENSITY (LBS/CU FT)	SAMPLE TYPE	SAMPLE BLOWS/FT.	DEPTH (FEET)	USCS	GRAPHIC	SOIL DESCRIPTION	MOISTURE	CONSISTENCY
				1			Fill: Grass over Sandy Clay	moist	med. dense
				2	SM		Native: Silty Sand; fine coarse sand and gravel, non-plastic, brown		
13.9	89	R	21	3				damp	
				4					
25.7	87	R	12	6					
				7					
8.6	110	R	25	9				dense	
				10					
				11					
				12					
				13					
				14					
7.3	108	R	44	15				Stopped at 16 feet	
				16					
				17					
				18					
				19					

- N- STANDARD PENETRATION TEST
- R- RING SAMPLE
- C- CORE: %RECOVERY/%RQD
- B- BAG
- BN- BULL NOSE

NOTES: **Water not encountered.**

DRIVING WEIGHT (LBS)



WESTERN TECHNOLOGIES INC.

PROJECT NO. 4123JD048

PROJECT: Susan Rutar Architect
BORING LOG

PLATE
A-4

DATE DRILLED: 8-14-13
 LOCATION: See Figure 2
 ELEVATION: Not measured

BORING NO. 2

EQUIPMENT TYPE: Air Rotary
 EXCAVATION TYPE: 5.5' Rotary
 FIELD ENGINEER: D.Spadola

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

MOISTURE CONTENT (% OF DRY WT)	DRY DENSITY (LBS/CU FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT.	DEPTH (FEET)	USCS	GRAPHIC	SOIL DESCRIPTION	MOISTURE	CONSISTENCY
					1	SM		Fill: Grass over Sandy Clay	moist	med. dense
					2			Native: Silty Sand; fine to coarse sand and gravel, non-plastic, brown		
					3					
					4					
					5					
					6					
					7					
					8					
					9					
					10					
					11			Stopped at 10 feet		
					12					
					13					
					14					
					15					
					16					
					17					
					18					
					19					

- N- STANDARD PENETRATION TEST
- R- RING SAMPLE
- C- CORE: %RECOVERY/%RQD
- B- BAG
- BN- BULL NOSE

NOTES: Water not encountered.

DRIVING WEIGHT (LBS)



WESTERN TECHNOLOGIES INC.

PROJECT NO. 4123JD048

PROJECT:

Susan Rutar Architect

BORING LOG

PLATE

A-5

DATE DRILLED: 8-14-13
 LOCATION: See Figure 2
 ELEVATION: Not measured

BORING NO. 3

EQUIPMENT TYPE: Air Rotary
 EXCAVATION TYPE: 5.5' Rotary
 FIELD ENGINEER: D.Spadola

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

MOISTURE CONTENT (% OF DRY WT)	DRY DENSITY (LBS/CU FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT.	DEPTH (FEET)	USCS	GRAPHIC	SOIL DESCRIPTION	MOISTURE	CONSISTENCY
					1			Fill: Grass over Sandy Clay	moist	med. dense
					1	SM		Native: Silty Sand; fine to coarse sand and gravel, non-plastic, brown		
					2					
					3					
					4					
					5					
					6					
					7					
					8					
					9					
					10			Stopped at 10 feet		
					11					
					12					
					13					
					14					
					15					
					16					
					17					
					18					
					19					

- N- STANDARD PENETRATION TEST
- R- RING SAMPLE
- C- CORE: %RECOVERY/%RQD
- B- BAG
- BN- BULL NOSE

NOTES: Water not encountered.

DRIVING WEIGHT (LBS)



WESTERN TECHNOLOGIES INC.

PROJECT NO. 4123JD048

PROJECT:

Susan Rutar Architect

BORING LOG

PLATE

A-6

PERCOLATION TEST RESULTS

TEST NO. B-2

Project Name: Moapa Rest Room and Concession

Date of Test: August 14, 2012

Project Location: Lewis Park Moapa, Nevada

Test Location: B-2

TEST DATA

Hole Diameter: 12 inches

Depth of Hole: 36 inches

Depth of water: 12 inches (water added to maintain 12 level after each reading)

Presoak Time: 60 Minutes

Time of Reading	Time Difference (minutes)	Depth of Water (inches)	Depth Difference (inches)	Percolation Rate (minutes/inch)
9:33	0	12	0	Start Test
9:43	10	12	1	10.0
9:53	10	12	1	10.0
10:03	10	12	1	10.0
10:13	10	12	1	10.0

PERCOLATION TEST RESULTS

TEST NO. B-3

Project Name: Moapa Rest Room and Concession

Date of Test: August 14, 2012

Project Location: Lewis Park Moapa, Nevada

Test Location: B-3

TEST DATA

Hole Diameter: 12 inches

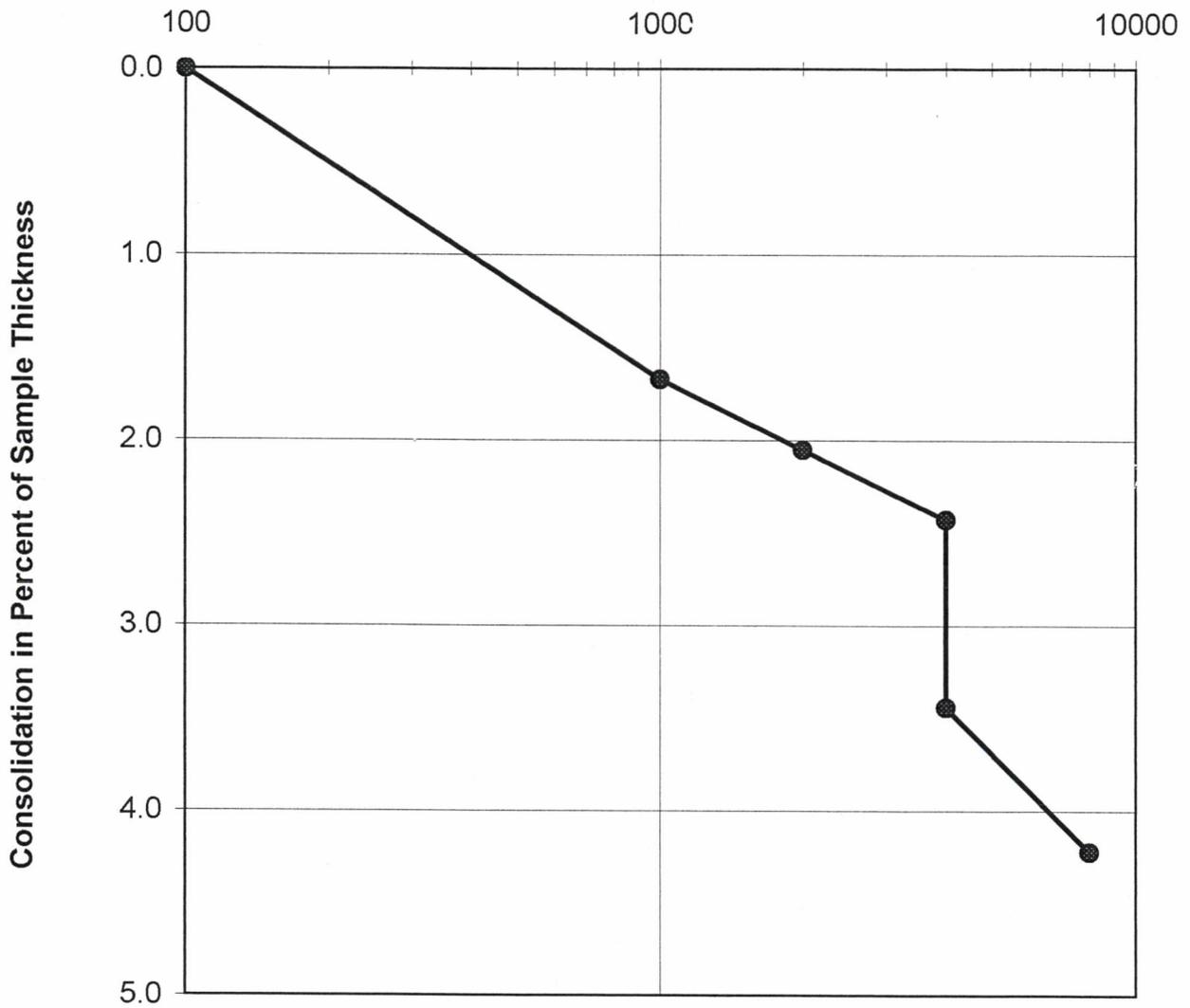
Depth of Hole: 36 inches

Depth of water: 12 inches (water added to maintain 12 level after each reading)

Presoak Time: 60 Minutes

Time of Reading	Time Difference (minutes)	Depth of Water (inches)	Depth Difference (inches)	Percolation Rate (minutes/inch)
9:31	0	12	0	Start Test
9:41	10	12	4	2.5
9:51	10	12	5	2.0
10:01	10	12	5	2.0
10:11	10	12	5	2.0

Load in Pounds Per Square Foot



MOAPA CONCESSION AND RESTROOM

Consolidation Test Results B1 @ 5'

Western Technologies Inc.

Project No. 4123JD048

Plate: B1

SOIL PROPERTIES

Boring No.	Depth (ft.)	Soil Class	Initial Dry Density (pcf)	Initial Water Content (%)	Compression Properties			Expansion Properties		Plasticity		Percent Passing #200	Soluble		Remarks
					SurchARGE (ksf)	Total Compression (%) In-Situ	After Saturation	SurchARGE (ksf)	Expansion (%)	LL	PI		Sulfate ppm	Chloride ppm	
B2&3	0-10	SM	110	4.9				0.06	1.2	NP	NP	17			2

Note: Initial Dry Density and Initial Water Content are in-situ values unless otherwise noted. NP = Non-Plastic

Remarks

1. Compacted density (approx. 95% of ASTM D698 max. density at moisture content slightly below optimum.)
2. Submerged to approximate saturation.
3. Slight rebound after saturation.
4. Sample disturbance observed.


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PROJECT: Moapa Concession and Restroom
 JOB NO.: 4123JD048

SOIL PROPERTIES

PLATE

B-3

LABORATORY REPORT

DATE: August 22, 2013 **REPORT NUMBER:** 13-3604
CLIENT: Western Technologies, Inc. **PAGE:** 1 of 1
 6633 West Post Road
 Las Vegas, NV 89118

CLIENT PROJECT: 4123JD048 **CLIENT PO #:** 4143P234

ANALYST: SW

Sampled By: Client **Date Received:** 08/16/13
Date Sampled: 08/16/13 **Time Received:** 1413
Time Sampled: --

Sample ID: 4123JD048, B2±3 @ 0-10'

Analysis	Result	Unit	Method
Sodium	0.09	%	ASTM D2791
Water Soluble Sulfate (SO ₄)	0.09	%	SM 4500 E
Total Available Water Soluble Sodium Sulfate (Na ₂ SO ₄)	0.14	%	Calculation
Total Salts (Solubility)	0.18	%	SM2540B
pH	8.10	S.U.	SM9045C
Resistivity	265	Ω-cm	ASTM G57
Soluble Soil Chlorides	110	mg/kg	SM4500Cl

NOTES: The results for each constituent denote the percentage (%) for that particular element which is soluble in a 1:5 (soil to water) extraction ratio and corrected for dilution.

REVIEWED BY:



 John Sloan
 Laboratory Director

SECTION 01 23 00

ADDITIVE ALTERNATE

PART 1 GENERAL

1.01 SUMMARY

- A. Additive Alternates (noted as Bid Options on the Addendum#1) specified herein, but shall not be included in the Base Bid.
- B. Lump sum bid for each Additive Alternate shall include labor, materials, equipment, and services required to complete the Work as shown on Drawings, as specified, and as described below.

1.02 SUBMISSION REQUIREMENTS

- A. Submit bids for Additive Alternates, as summarized in the Schedule of Additive Alternates below, by filling appropriate blank spaces provided in the Bid Form.

1.03 SELECTION AND AWARD OF ADDITIVE ALTERNATES

- A. Additive Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option.
- B. Additive Alternates can only be accepted in numerical order, i.e., 2 cannot be taken unless 1 is accepted. Three cannot be taken unless 1 and 2 are accepted. Thus, the Base Bid in combination with any one or more Additive Alternates may determine low Bid.
- C. Accepted Additive Alternates will be identified in the Contract for Construction.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 SCHEDULE OF ADDITIVE ALTERNATES

- A. ADDITIVE ALTERNATE No. 1:

1) PROVIDE AND INSTALL LIGHTING ALTERNATE: (quantities are the same, unless noted otherwise)

- a) Recessed can lights at soffit – Kirlin Lighting LRV-07130 LED 20W 41K recessed mounted, non-dimming application with vandal protection.
- b) Lights in storage areas – Columbia CS-42-48-E-U-CSWG4 120v (2) F40/WW/SS 3500K temp lamps.
- c) Lights in Kitchen & Restroom – Luminaire Lighting VPF-42 LED CP-WHT-PC-WET 120V OR Lithonia #VDC240-120ES 120V (2) F40/WWSS OR Cooper #ICP 226 120V (2) 26W.
- d) Emergency Fixture - Lithonia Titan ELT 50 120V Furnish lamps with unit (bug eyes) – Three (3) locations.
- e) Exit Light – Isolite PHL-1-G-BB wall mounted.

END OF SECTION

CLARK COUNTY TRAFFIC NOTES

- ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND IN FINAL POSITION BEFORE TO ALLOWING ANY PUBLIC TRAFFIC ONTO THE PORTIONS OF THE ROAD(S) BEING IMPROVED HEREUNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.
- BEFORE ANY WORK IS STARTED IN THE RIGHT-OF-WAY, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS FOR THE CONSTRUCTION ZONE. THE CONTRACTOR SHALL INSTALL TEMPORARY GROUND MOUNTED STOP SIGNS AT ALL NEW STREET ENCROACHMENTS INTO EXISTING COUNTY STREETS IMMEDIATELY AFTER FIRST GRADING WORK IS ACCOMPLISHED, AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.
- ALL CONSTRUCTION SIGNING, BARRICADING, AND PAVEMENT MARKINGS SHALL CONFORM TO THE "NEVADA WORK ZONE TRAFFIC CONTROL HANDBOOK - 1986" AND TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", CURRENT EDITION.
- IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY OBSTRUCTION, TEMPORARY REMOVAL, OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKING, SUCH PAVEMENT MARKING SHALL BE RESTORED OR REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE COUNTY TRAFFIC MANAGER.
- THE DEVELOPER SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL ALL PERMANENT SIGNS SHOWN ON THE PLANS. STREET NAME SIGNS SHALL CONFORM IN THEIR ENTIRETY TO CLARK COUNTY AREA STANDARDS. ALL OTHER SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL SIGN POSTS SHALL BE INSTALLED IN ACCORDANCE WITH CLARK COUNTY AREA STANDARDS. ALL SIGNS SHALL USE CLASS VI SHEETING.
- IF A PROPOSED STREET LIGHT STANDARD IS FIELD LOCATED TO WITHIN FIVE (5) FEET OF ANY SIGN SHOWN HEREON TO BE MOUNTED ON A SIGN POST, THEN CHANGE SIGN MOUNTING TO ONE ON THE STREETLIGHT STANDARD.
- PRIOR TO CONSTRUCTION, THE STREET SIGN CONTRACTOR SHALL OBTAIN STREET NAMES AND BLOCK NUMBERING FROM THE CURRENT PLANNING DIVISION OF THE DEPARTMENT OF COMPREHENSIVE PLANNING.
- ALL TRAFFIC SIGNAL POLE ASSEMBLIES, STEEL PEDESTALS FOR CABINETS, AND STREET LIGHT POLES SHALL BE GALVANIZED PER ASTM A123.
- ALL STREET LIGHTING INSTALLATIONS EXCEPT AS NOTED ON THE STREET LIGHTING PLANS SHALL CONFORM TO THE UNIFORM STANDARD DRAWINGS AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS CLARK COUNTY AREA, NEVADA, LATEST EDITION OF EACH.
- THE FOLLOWING CLARK COUNTY UNDERGROUND FACILITIES MAY BE LOCATED IN YOUR PROJECT AREA: STREET LIGHTING, TRAFFIC SIGNALS, FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION (F.A.S.T.) INTERCONNECT CABLE. YOU MUST CONTACT CLARK COUNTY TRAFFIC MANAGEMENT DIVISION, OPERATIONS UNIT AT 455-6600 FOR LOCATIONS AT LEAST 48 HOURS PRIOR TO WORKING IN THE AREA. CLARK COUNTY IS NOT A MEMBER OF CALL BEFORE YOU DIG (UNDERGROUND SERVICE ALERT), AND A CALL TO THE ORGANIZATION DOES NOT RELIEVE YOU OF LIABILITY FOR CLARK COUNTY FACILITIES.
- F.A.S.T. INTERCONNECT CABLE POLICY IS IN EFFECT. INTERCONNECT CABLE MUST BE MAINTAINED AT ALL TIMES. DEVELOPER/CONTRACTOR SHALL PROVIDE TEMPORARY OVERHEAD INTERCONNECT CABLE, WHILE PERMANENT CABLE IS BEING RELOCATED. TEMPORARY AERIAL INSTALLATION MUST BE ACCEPTABLE TO THE COUNTY TRAFFIC MANAGER AND TO F.A.S.T. ANY DAMAGE TO THIS CABLE IS DEEMED AN EMERGENCY BY F.A.S.T., CITY OF LAS VEGAS, CLARK COUNTY AND NDOT AND MUST BE REPAIRED IMMEDIATELY TO F.A.S.T. ACCEPTANCE. \$2,500 PER DAY DAMAGES MAY BE ASSESSED AFTER 24 HOURS HAS ELAPSED FROM TIME OF BREAK OR DAMAGE.
- ALL NEW OR REPLACEMENT TRAFFIC SIGNAL LOOPS SHALL BE INSTALLED USING CABLE-IN-DUCT WIRING, SHALL HAVE INDEPENDENT LEAD-IN WIRES FOR EACH LOOP FROM THE CONTROLLER TO THE PULL-BOX, AND EACH LEAD-IN SHALL BE INDIVIDUALLY TAGGED.
- TRAFFIC SIGNAL PEDESTRIAN HEADS SHALL BE THE LED TYPE.
- ELECTRICAL POWER SERVICE POINT LOCATION(S) FOR STREET LIGHTING AND TRAFFIC SIGNALS MUST BE INDICATED ON THE PLANS. IF CONNECTING TO AN EXISTING CIRCUIT, INDICATE LOCATION OF EXISTING SERVICE POINT FOR EACH CIRCUIT.
- WHEN STREETLIGHTS ARE TO BE CONNECTED TO AN EXISTING CIRCUIT, AN ELECTRICAL ENGINEER OR A CLARK COUNTY APPROVED LICENSED ELECTRICIAN MUST CERTIFY THAT THE EXISTING CIRCUIT IS CAPABLE OF HANDLING THE ADDITIONAL CIRCUIT LOAD.
- CLARK COUNTY RESERVES THE RIGHT TO REJECT STREET LIGHT AND TRAFFIC SIGNAL POLES AND ASSEMBLIES WHICH HAVE A "STRIPED" APPEARANCE.
- TWO WEEKS PRIOR TO BEGINNING OF CONSTRUCTION, MODIFICATION, OR RELOCATION OF ANY TRAFFIC SIGNAL SYSTEM, WRITTEN NOTICE SHALL BE SUBMITTED TO THE CLARK COUNTY TRAFFIC MANAGEMENT DIVISION OF THE DATE THAT WORK WILL BEGIN.
- THREE (3) NORMAL WORKING DAYS PRIOR TO TURN-ON OR COMPLETION OF MODIFICATION(S) TO A TRAFFIC SIGNAL SYSTEM, WRITTEN NOTICE SHALL BE SUBMITTED TO THE CLARK COUNTY TRAFFIC MANAGEMENT DIVISION THAT WORK IS BEING COMPLETED AND THE PROPOSED DATE OF COMPLETION.

REVISED 01/07

STORMWATER MANAGEMENT NOTES:

- STANDARD NOTE NO. 1: THE OWNER, SITE DEVELOPER, CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAY OF THE CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
- ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORSEEN PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN THE [CC BLDG. ADMINISTRATIVE CODE 24.40] AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
- TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREA AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.5.
- AT A MINIMUM, THE CONTRACTOR OF HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMPs WEEKLY, AND WITHIN 24 HOURS AFTER ANY RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORM WATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO THE NEVADA STORMWATER GENERAL PERMIT OF CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.
- ACCUMULATED SEDIMENT IN BMPs SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.



NOTICE

THE FOLLOWING CLARK COUNTY FACILITIES MAY BE LOCATED IN YOUR PROJECT AREA, STREET LIGHTING, TRAFFIC SIGNALS, INTERCONNECT CABLE. YOU MUST CONTACT CLARK COUNTY TRAFFIC AT 455-7511 FOR LOCATIONS AT LEAST 48 HOURS PRIOR TO WORKING IN THE AREA. CLARK COUNTY IS NOT A MEMBER OF CALL BEFORE YOU DIG (UNDERGROUND SERVICE ALERT) AND A CALL TO THAT ORGANIZATION DOES NOT RELIEVE YOU OF LIABILITY FOR CLARK COUNTY FACILITIES.

ALL STREET LIGHTING INSTALLATIONS EXCEPT AS NOTED ON THE STREET LIGHTING PLANS SHALL CONFORM TO THE IMPROVEMENT STANDARDS, DEPARTMENT OF PUBLIC WORKS, CLARK COUNTY, NEVADA, AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, OFF SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA.

MOAPA VALLEY WATER DISTRICT (MVWD) GENERAL NOTES

- ALL WORK SHALL CONFORM TO MVWD STANDARDS (CONSTRUCTION STANDARD PLATES UPON REQUEST).
- ALL WORK EXCEPT AS MODIFIED HEREON OR BY NOTE 1, SHALL CONFORM TO THE UNIFORM STANDARDS SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA.
- WRITTEN NOTICE IS TO BE GIVEN TO THE MOAPA VALLEY WATER DISTRICT AT LEAST 48 HOURS PRIOR TO ACTUAL CONSTRUCTION.
- ALL LINES TO BE INSTALLED, PRESSURE AND LEAKAGE TESTED AS PER AWWA STANDARDS. (PVC-0605, A-C PIPE-0603, DUCTILE IRON PIPE -0600 USING 200 PSI AS THE MINIMUM TEST PRESSURE).
- ALL MAIN LINES SHALL BE DISINFECTED AS OUTLINES IN AWWA-C-651 (AS LATEST REVISED), "AWWA STANDARD FOR DISINFECTING WATER MAINS".
- DEFLECTION ANGLES SHALL NOT EXCEED THE MANUFACTURERS SPECIFICATIONS.
- ALL METERS SHALL BE LOCATED OUTSIDE OF DRIVEWAYS.
- ALL VALVE BOXES TO BE PLACED OUTSIDE VALLEY GUTTERS AND 1/4" ABOVE FINISHED GRADE.
- TRACE WIRE REQUIRED TO BE INSTALLED ON ALL NEW LINES.
- ALL NEW FIRE HYDRANTS TO BE EITHER "KENNEDY" K-81D, "MUELLER", "WATEROUS" OR APPROVED EQUAL, MECHANICAL JOINT SHOE AND TO BE INSTALLED/INSPECTED AS PER CLARK COUNTY FIRE DEPARTMENT SPECIFICATIONS.
- ONLY MVWD STAFF IS AUTHORIZED TO OPERATE EXISTING VALVES HYDRANTS, ETC.
- MVWD IS LOCATED AT 601 N. MOAPA VALLEY BLVD, OVERTON, NV 89040 (702)397-6893. HOURS: 8 A.M. TO 4:30 P.M.
- 1-800-227-2600 USA NORTH CALL BEFORE YOU DIG (811) MUST BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ACTUAL CONSTRUCTION START TIME.
- VALVES SHALL BE MANUFACTURED BY KENNEDY, MUELLER, WATERODISTRICT APPROVED EQUAL.

CLARK COUNTY WATER RECLAMATION DISTRICT GENERAL SEWER NOTES

- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST EDITION; UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS, LATEST EDITION; THE UNIFORM STANDARDS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY, NEVADA, AS AMENDED; AND THE UNIFORM PLUMBING CODE. CONTRACTOR SHALL ADVISE THE CONTROLLING AGENCY OF ANY CONFLICTS DISCOVERED BETWEEN THESE SPECIFICATIONS PRIOR TO PROCEEDING WITH THE WORK GOVERNED BY THE CONFLICTING REQUIREMENTS. THE ENGINEER AND/OR CONTRACTOR SHALL PROPOSE A RESOLUTION TO THE CONFLICT FOR REVIEW BY THE AGENCY PRIOR TO PERFORMING THE WORK AFFECTED BY THE CONFLICT. THE RESOLUTION SHALL GENERALLY BE IN THE MANNER THAT YIELDS THE HIGHER QUALITY AND/OR PERFORMANCE OF THE WORK. THE CONTROLLING AGENCY SHALL ISSUE WRITTEN APPROVAL FOR THE RESOLUTION OF THE CONFLICT WHICH SHALL BECOME A PART OF THE CONSTRUCTION DOCUMENTS FOR THE WORK.
- THESE STANDARDS APPLY TO ALL CONSTRUCTION.
- SEWER MAINS SHALL BE LAID INDIVIDUALLY IN TRENCHES THAT ARE INDEPENDENT FROM THE TRENCHES FOR OTHER UTILITIES.
- ALL LATERALS SHALL BE LAID AT SLOPES NOT LESS THAN THE MINIMUM SLOPES SHOWN IN THESE SPECIFICATIONS.
- IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PERFORM CONSTRUCTION IN FULL CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. SHOULD THE DEVELOPER, ENGINEER OR CONTRACTOR WISH TO MAKE CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS, SUCH CHANGES SHALL BE APPROVED BY THE AGENCY PRIOR TO CONSTRUCTION OF THE AFFECTED IMPROVEMENTS. CHANGES CONSTRUCTED WITHOUT AGENCY APPROVAL SHALL BE REMOVED BY THE CONTRACTOR AT ITS OWN EXPENSE AND THE WORK CONSTRUCTED AS DEPICTED IN THE APPROVED CONSTRUCTION DOCUMENTS.
- SOIL TESTING SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 3.15 OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS, LATEST EDITION.
- ALL AIR TESTING, VISUAL INSPECTIONS, SYSTEM CLEANING, DEFLECTION TESTING, TELEVISION, PRESSURE TESTING AND LEAKAGE TESTING SHALL BE IN ACCORDANCE WITH SECTION 3.19 OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS, LATEST EDITION.
- CUT SHEETS CONFORMING TO SECTION 3.6 OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS, LATEST EDITION SHALL BE SUBMITTED BY THE CONTRACTOR TO THE CONTROLLING AGENCY FOR REVIEW BEFORE BEGINNING CONSTRUCTION. CONTRACTOR SHALL NOT BEGIN CONSTRUCTION UNTIL AUTHORIZED BY THE AGENCY.
- CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE AGENCY SHALL POSSESS A CLASS "A" LICENSE PER THE NEVADA STATE CONTRACTOR'S BOARD.
- WHEN CONNECTING TO AN EXISTING STUB, CONTRACTOR SHALL CLEAN AND TEST BOTH THE NEW AND EXISTING PORTIONS OF THE LINE TO THE NEXT MANHOLE UPSTREAM/DOWNSTREAM.
- ALL SANITARY SEWER MANHOLES SHALL BE LOCATED AND CONSTRUCTED SUCH THAT THEY ARE ACCESSIBLE TO CONVENTIONAL SEWER MAINTENANCE VEHICLES AT ALL TIMES AND UNDER ALL WEATHER CONDITIONS. THOSE MANHOLES INSTALLED ALONG ACCESS ROADS HAVING SINGLE POINTS OF ENTRY AND EGRESS (I.E. "DEAD-END ROADS") SHALL HAVE AT LEAST ONE LOCATION ALONG THE ACCESS ROAD HAVING SUFFICIENT WIDTH TO ALLOW TURN-AROUNDS OF VEHICLES HAVING INSIDE TURNING RADII OF 50-FEET.
- ALL SEWER MAINS UNDER CONSTRUCTION SHALL HAVE A DEBRIS TRAP PER STANDARD DRAWING SD-30 AT THE POINT OF CONNECTION TO THE EXISTING SEWER SYSTEM UNTIL ALL CONSTRUCTION ACTIVITIES, INCLUDING FINAL TESTING, ARE COMPLETED AND THE SEWER IS READY FOR FINAL ACCEPTANCE BY THE AGENCY.
- ALL MANHOLES UNDER CONSTRUCTION SHALL HAVE PLUGS PLACED IN THEIR OUTLET PIPES DURING ALL CONSTRUCTION ACTIVITIES TO PREVENT THE MIGRATION OF SEWER CONSTRUCTION DEBRIS DOWNSTREAM. THESE PLUGS MAY BE REMOVED FOR SHORT PERIODS AS NECESSARY TO ACCOMPLISH FINAL SEWER CLEANING AND TESTING TASKS PRIOR TO FINAL ACCEPTANCE OF THE IMPROVEMENTS.
- PRIOR TO ANY SEWER MAIN BEING PLACED IN SERVICE AND AS A CONDITION OF FINAL ACCEPTANCE, ALL NEW SEWER MAINS SHALL BE TELEVIEWED IN ACCORDANCE WITH SECTION 3.19.1.E OF THE DESIGN STANDARDS.
- IF ANY EXISTING MANHOLE HAVING A LINING SYSTEM IS BEING MODIFIED AS PART OF THE CONSTRUCTION OF THE NEW SANITARY SEWER, THAT LINING SYSTEM SHALL BE RESTORED TO ITS ORIGINAL CONDITION PRIOR TO THE MODIFICATIONS USING LINING MATERIALS AND SYSTEMS THAT ARE FULLY COMPATIBLE WITH THE ORIGINAL LINING.
- FIELD-INSTALLED SEWER LINING SYSTEMS MAY NOT BE INSTALLED UNTIL AFTER ALL MANHOLE CONSTRUCTION TASKS ARE COMPLETED, INCLUDING BACKFILLING AND INITIAL GRADE ADJUSTMENTS, BUT PRIOR TO FINAL GRADE ADJUSTMENT.
- NEW SEWERS HAVING GRADES OF 0.5 PERCENT OR LESS SHALL BE STAKED FOR CONSTRUCTION AT A MAXIMUM OF 25-FEET ON CENTER.
- SEWER LATERALS SHALL BE CONNECTED TO SEWER MAINS ONLY. LATERALS MAY NOT BE CONNECTED TO SANITARY SEWER MANHOLES UNLESS APPROVED BY THE AGENCY.
- SEWER PIPE MATERIAL, PIPE SPECIFICATION, WALL THICKNESS, INTERNAL DIAMETER AND PIPE SLOPE SHALL BE UNIFORM BETWEEN MANHOLES. CHANGES IN PIPE MATERIALS, SPECIFICATIONS, WALL THICKNESSES, INTERNAL DIAMETERS AND/OR PIPE SLOPES SHALL BE MADE AT MANHOLES ONLY.
- LOCATOR RIBBON AND MARKER BALLS SHALL BE PLACED ABOVE ALL NEW SANITARY SEWERS, LATERALS AND FORCE MAINS IN ACCORDANCE WITH SECTION 3.14 OF THE DESIGN STANDARDS.

CLARK COUNTY FIRE DEPARTMENT GENERAL NOTES

- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE 2005 CLARK COUNTY FIRE CODE, AND THE 2002 EDITION OF NATIONAL FIRE PROTECTION ASSOCIATION PAMPHLET #24.
- FIRE HYDRANTS AND WATER SUPPLIES FOR FIRE PROTECTION SHALL BE AND MADE SERVICEABLE PRIOR TO AND DURING THE TIME OF CONSTRUCTION IN ACCORDANCE WITH SECTION 901.3 OF THE 2005 CLARK COUNTY FIRE CODE.
- IF DURING CONSTRUCTION IT BECOMES NECESSARY TO CLOSE ANY CONTROL VALVE OR PLACE A HYDRANT OUT OF SERVICE, THE CLARK COUNTY FIRE DEPARTMENT MUST BE CONTACTED.
- PAINTING OF CURBS AND/OR STRIPING OF ASPHALT AREAS AND PROTECTION OF HYDRANTS FROM PHYSICAL INJURY SHALL BE PER THE FIRE HYDRANT INSTALLATION SPECIFICATIONS OF THE FIRE PREVENTION BUREAU.
- NO FIRE HYDRANT SHALL BE LOCATED WITHIN 25 FEET OF ANY STRUCTURE, OR 5 FEET OF A DRIVEWAY, POWER POLE, LIGHT STANDARD, OR ANY OTHER OBSTRUCTION. FOR WALL, FENCE AND PLANTER LOCATIONS, A PERIMETER AROUND THE HYDRANT MEASURING A MINIMUM OF 3 FEET FROM ITS EXTERIOR SHALL BE MAINTAINED CLEAR OF ALL OBSTRUCTION AT ALL TIMES.
- AT ALL TIMES DURING CONSTRUCTION SUITABLE EMERGENCY VEHICLE ACCESS ROAD(S) MUST BE MAINTAINED. ROADWAYS MUST BE SMOOTH, COMPACTED AND CAPABLE OF SUPPORTING THE IMPOSED LOADS OF ALL EMERGENCY VEHICLES.
- PRIOR TO ACCEPTANCE OF ANY FIRE SERVICE MAIN, A SATISFACTORY HYDROSTATIC TEST WITH PIPING JOINTS UNCOVERED MUST BE CONDUCTED. APPROVED PLANS, AN INSTALLATION PERMIT AND A CONTRACTOR'S MATERIALS AND TEST CERTIFICATE MUST BE PROVIDED AT TIME OF INSPECTION. CALL CQD INSPECTION HOTLINE AT 226-8991 TO SCHEDULE INSPECTIONS.
- FIRE HYDRANTS SHALL BE LOCATED 4' TO 7' FROM BACK OF CURB.
- BLUE REFLECTIVE MARKERS MUST BE INSTALLED BEFORE FINAL HYDRANT ACCEPTANCE CAN BE ATTAINED [2005 CLARK COUNTY FIRE CODE, SEC. 901.4.3].
- APPROVED (PUBLIC) FIRE HYDRANTS FOR THIS PROJECT ARE:
 - KENNEDY - GUARDIAN MODELS K81A AND K81D
 - MUELLER - SUPER CENTURION 250 MODEL A-423
 - CLOW - MEDALLION MODEL F-2546LVD
 - TROY VALVE - PATRIOT MODEL PT8100N NEVADA HYDRANT

REVISED 09/2007

DEPARTMENT OF PUBLIC WORKS

- INSPECTIONS ARE REQUIRED. CALL 24 HOURS IN ADVANCE, 455-4610 YOUR PERMIT, APPROVED PLANS, AND BARRICADE PLANS FOR THIS WORK MUST BE ON THE JOB SITE AT ALL TIMES.
- EXACT LOCATION OF ALL SAW-CUT LINES SHALL BE DETERMINED IN THE FIELD BY A CLARK COUNTY INSPECTOR.
- CURB AND GUTTER WITH A GRADE OF LESS THAN 4/10 OF ONE PERCENT SHALL BE CONSTRUCTED BY FORMING. EACH JOINT SHALL BE CHECKED FOR GRADE PRIOR TO CONSTRUCTION AND WATER TESTED AS SOON AS POSSIBLE AFTER CONSTRUCTION.
- FINAL ASPHALTIC CONCRETE (AC) PAVEMENT SURFACES SHALL BE ONE-HALF (1/2") INCH ABOVE THE LIP OF THE GUTTER (INCLUDING OPEN GRADE).
- ALL OFF-SITE IMPROVEMENT CONSTRUCTION SHALL CONFORM TO THE "UNIFORM STANDARD SPECIFICATIONS AND STANDARD DRAWINGS, CLARK COUNTY AREA, NEVADA" AND "CLARK COUNTY SUPPLEMENT TO UNIFORM STANDARD DRAWINGS AND SPECIFICATIONS", LATEST REVISION.
- PRIVATE STREETS, CURB & GUTTER AND VALLEY GUTTERS REFLECTED ON THESE PLANS ARE TO BE INSPECTED BY A CLARK COUNTY INSPECTOR.
- WHEEL CHAIR RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS SHALL BE DETERMINED IN THE FIELD BY CLARK COUNTY PUBLIC WORKS INSPECTOR.
- PROPER SIGNS, BARRIERS, BARRICADES, AND LIGHTS SHALL BE PLACED AND MAINTAINED IN ACCORDANCE WITH THE LATEST "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS". TRAFFIC, SCHOOL, OR STREET SIGNS OF ANY KIND ARE NOT TO BE MOVED FOR ANY REASON WITH OUT FIRST COORDINATING WITH THE DEPARTMENT OF PUBLIC WORKS INSPECTOR @ 455-4610.
- THIS PLAN DOES NOT AUTHORIZE CLOSURE OF ANY ROAD OR STREET.
- NO OPEN TRENCH SHALL BE ALLOWED ACROSS ANY STREET OR WITHIN TEN FEET (10') OF ANY TRAVEL-WAY, EXCEPT WHEN WORK IS IN ACTUAL PROGRESS. AREAS COVERED BY ACCEPTABLE STEEL PLATES ARE NOT TO BE CONSTRUED AS A TRENCH. NO OPEN TRENCH PERMITTED IN EXCESS OF 500 FEET OR LENGTH NECESSARY TO ACCOMMODATE PIPE INSTALLATION IN A SINGLE DAY, WHICHEVER IS GREATER. ALL TRENCH CROSSINGS AND BACK FILL SHALL MEET STANDARD SPECIFICATION UNLESS OTHERWISE STATED.
- A TEMPORARY PATCH IS TO BE IN PLACE AT THE END OF EACH WORK DAY WHERE THE BACKFILL IN THE TRENCH HAS BEEN COMPLETED AND PRIOR TO OPENING THE WORK AREA BACK TO TRAFFIC AND IS TO BE MAINTAINED BY THE PERMITTEE. A PERMANENT PATCH IS TO BE IN PLACE WITHIN THIRTY (30) DAYS AFTER THE INSTALLATION OF THE TEMPORARY PATCH.
- COMPACTION TESTS ARE REQUIRED.

PUBLIC QUANTITIES

GENERAL

EXCAVATION	65 CY
4-INCH THICK CONCRETE SIDEWALK	1600 SF
TYPE II BASE	90 CY

WATER QUANTITIES

14" x 1" SERVICE SADDLE CONNECTION WITH CORPORATION STOP	1 EA
PER UDACS STD PLE 4	
1" TYPE "K" COPPER WATER LINE	20.5 LF
1" METER PER UDACS STD PLT 4	1 EA
1" BRASS PIPE BETWEEN METER AND RPPA	3 LF
1" RPPA PER UDACS STD PLT 8	1 EA
1" PE WATERLINE	40 LF

SEWER QUANTITIES

4000 GALLON SEPTIC TANK	1 EA
6" PVC SEWER @ 4% MIN.	34 LF
6" SEWER CLEANOUT	4 EA
4" PVC NON-PERFORATED PIPE	72 LF
4" PVC PERFORATED PIPE	594 LF
4" SEWER CLEANOUT	1 EA
4" SEWER CLEANOUT	1 EA
4" PVC ENDCAPS	6 EA
WASHED GRAVEL	420 CY
DOSING TANK	1 EA
DISTRIBUTION BOX	1 EA

ABBREVIATIONS

AC	ASPHALTIC CONCRETE	GB	GRADE BREAK
BW	BLOCK WALL	HP	HIGH POINT
CG	CURB & GUTTER	MH	MANHOLE
CL	CENTERLINE	PL	PROPERTY LINE
DW	DRIVEWAY	POC	POINT OF CONNECTION
EOP	EDGE OF PAVEMENT	SL	STREET LIGHT
EX	EXISTING	STA	STATION
FAST	THE FREEWAY AND ARTERIAL	SW	SIDEWALK
FD	FINISH GRADE	TC	TOP OF CURB
FH	FIRE HYDRANT	VG	VALLEY GUTTER
FL	FLOWLINE		

LEGEND

	CENTERLINE OF RIGHT OF WAY
	RIGHT OF WAY
	PROPERTY LINE
	EXISTING CURB & GUTTER
	PROPOSED CURB & GUTTER
	EXISTING SEWER
	PROPOSED SEWER
	EXISTING WATER
	PROPOSED WATER
	EXISTING GAS
	EXISTING BLOCK WALL
	PROPOSED BLOCK WALL

DATE	
BY	
REVS	

SUZANA RUTAR, Architect Ltd.
Architectural Design & Planning
1950 E. Warm Springs Road
Las Vegas, Nevada 89119
Telephone (702) 263-6176
Fax (702) 361-2582
A Professional Corporation



CLARK COUNTY
DEPARTMENT OF
REAL PROPERTY MANAGEMENT
Design and Construction Division
500 South Grand Central Parkway
Las Vegas, Nevada 89155-1733
Vegas (702) 452-4616
Fax (702) 455-9817



RESTROOM & CONCESSION STAND BUILDING FOR RON LEWIS PARK
USING STANDARD PLAN #43-1645
NOTE SHEET

DRAWN/CHECKED BY: **JA/RPJ**
DATE: **OCTOBER 5, 2013**
PROJECT NUMBER: **243-13-036**
SHEET NUMBER: **G2**
SHEET **2** OF **4** SHEETS

LEGAL DESCRIPTION

THAT PORTION OF THE NORTHWEST QUARTER (NW 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 34, TOWNSHIP 14 SOUTH, RANGE 66 EAST, M.D.B.&M.

BENCHMARK

NATIONAL GEODETIC SURVEY POINT L406

LOCATED ON THE NORTHBOUND OFF RAMP OF INTERSTATE 15 EXIT 90, APPROXIMATELY ONE QUARTER (1/4) OF THE WAY AROUND THE OFF RAMP.

ELEVATION 1537.85 FEET (NAVD88)

APPROVED FOR CONSTRUCTION

MOAPA VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
PROJECT NO. **XXXXXX** DATE:

JAR Associates Ltd.

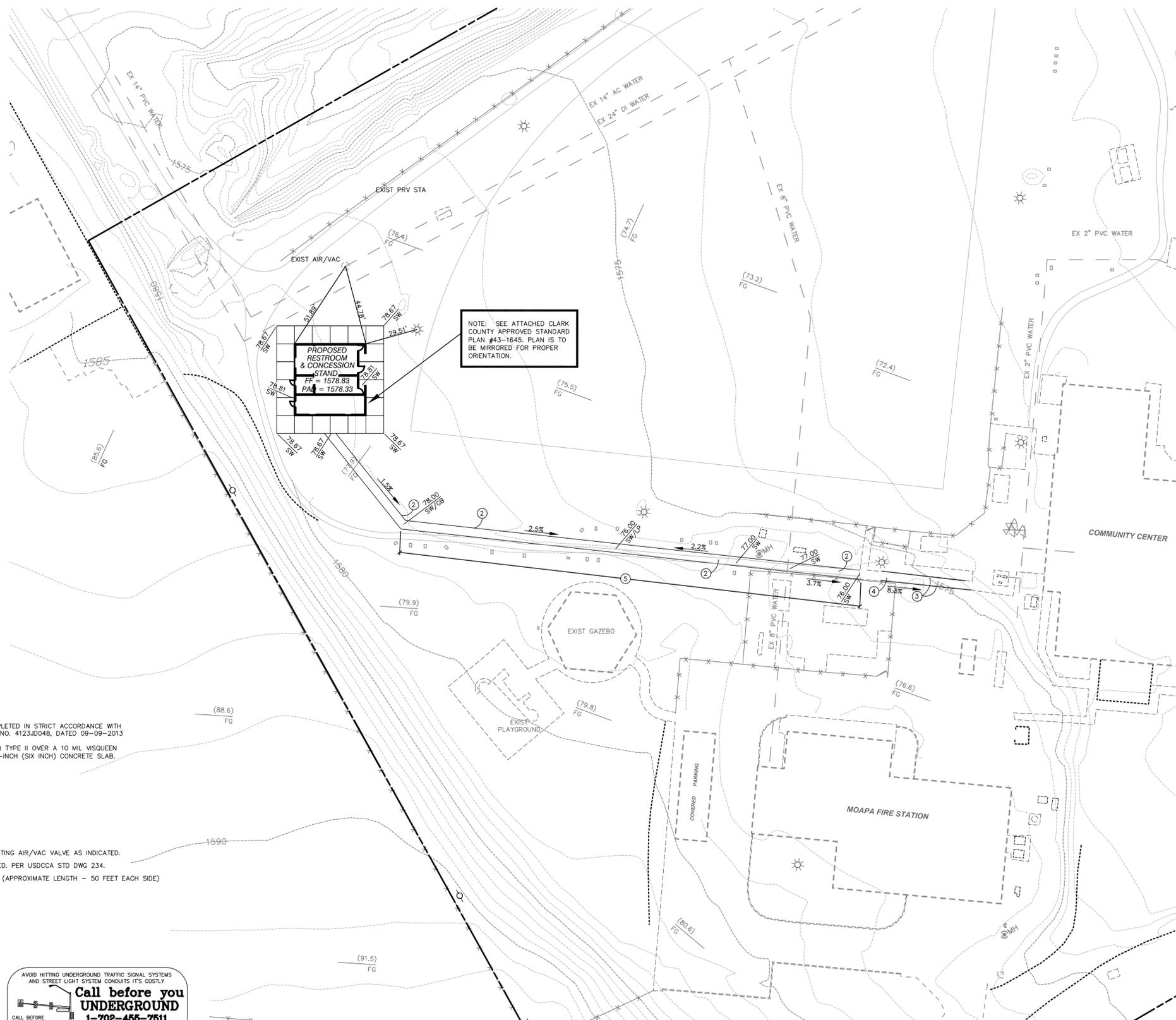
4880 W. UNIVERSITY AVE. SUITE B-2
LAS VEGAS, NV 89103
TEL: (702) 876-2341
FAX: (702) 876-8395

LEGAL DESCRIPTION

A PORTION OF THE SOUTHEAST QUARTER (SE 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 34, TOWNSHIP 14 SOUTH, RANGE 66 EAST, M.D.B.&M.

BENCHMARK

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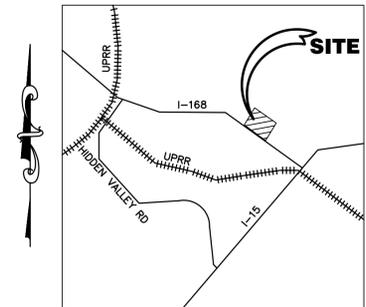


GRADING NOTES

- ALL GRADING AND CONCRETE WORK TO BE COMPLETED IN STRICT ACCORDANCE WITH WESTERN TECHNOLOGIES' GEOTECHNICAL REPORT NO. 4123.0046, DATED 09-09-2013
- PAD GRADE BASED ON 4-INCHES (FOUR INCHES) TYPE II OVER A 10 MIL VISQUEEN OVER COMPACTED NATIVE SOIL, ALL UNDER A 6-INCH (SIX INCH) CONCRETE SLAB.

CONSTRUCTION NOTES

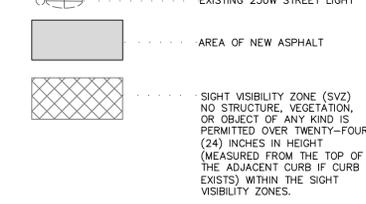
- BUILDING TO BE LOCATED FROM CENTER OF EXISTING AIR/VAC VALVE AS INDICATED.
- CONSTRUCT 5-FOOT WIDE SIDEWALK AS INDICATED. PER USDCCA STD DWG 234.
- INSTALL ADA COMPLIANT HANDRAILS THIS AREA. (APPROXIMATE LENGTH - 50 FEET EACH SIDE)
- EXISTING 5-FOOT CONCRETE SIDEWALK.
- ABANDON EXISTING PATH THIS AREA.



LEGEND

---	PROPERTY LINE
---	RIGHT OF WAY
---	CENTERLINE
---	AC CUTLINE
---	EXISTING CURB
---	PROPOSED CURB
---	EXISTING EDGE OF PAVEMENT
---	PROPOSED EDGE OF PAVEMENT
---	EXISTING BLOCK WALL
---	PROPOSED BLOCK WALL
---	CONTOUR LINE
---	2051

AC	ASPHALTIC CONCRETE
BC	BACK OF CURB
BCR	BEGIN CURB RETURN
SW	BACK OF WALK
CC	CURB & GUTTER
CL	CENTERLINE
CONC	CONCRETE
ECR	END OF CURB RETURN
EP	EDGE OF PAVEMENT
EX	EXISTING
FG	FINISH GRADE
FL	FLOW LINE
GB	GRADE BREAK
HP	HIGH POINT
LP	LOW POINT
NG	NATURAL GROUND
PL	PROPERTY LINE
STA	CENTERLINE STATIONING
SW	SIDEWALK
TC	TOP OF CURB
TF	TOP OF FOOTING
TFW	TOP OF FLOOD WALL
TRW	TOP OF RETAINING WALL
TW	TOP OF WALL
(88.88)	EXISTING GRADE/SLOPE
[88.88]	FUTURE GRADE/SLOPE
88.88	PROPOSED GRADE/SLOPE
---	EXISTING 250W STREET LIGHT

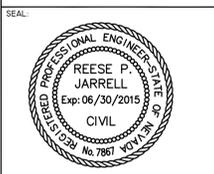


CLARK COUNTY
 DEPARTMENT OF PUBLIC WORKS
 ACCEPTANCE OF PLANS FOR FILING:

BY: _____
 ACCEPTANCE OF THESE PLANS FOR FILING SHALL NOT BE CONSTRUED TO BE A PERMIT FOR OR AN APPROVAL OF ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS AND/OR SPECIFICATIONS. CLARK COUNTY SHALL BE HELD FREE FROM DAMAGES WHICH MAY RESULT FROM THE CONSTRUCTION OF THE IMPROVEMENTS FROM THE ENGINEERING DESIGN DEPICTED HEREIN.
 NOTE: POWER POLES AND/OR OTHER EXISTING FACILITIES NOT IN PROPER LOCATION BASED ON PROPOSED IMPROVEMENTS SHOWN HEREON WILL BE RELOCATED AT NO EXPENSE TO CLARK COUNTY.

REV'S	DATE

SUZANA RUTAR, Architect Ltd.
 Architectural Design & Planning
 1950 E. Warm Springs Road
 Las Vegas, Nevada 89119
 Telephone (702) 263-6176
 Fax (702) 361-2562
A Professional Corporation



CLARK COUNTY
 DEPARTMENT OF REAL PROPERTY MANAGEMENT
 Design and Construction Division
 500 South Grand Central Parkway
 Las Vegas, Nevada 89102
 Phone: (702) 455-5817
 Fax: (702) 455-5817



RESTROOM & CONCESSION STAND BUILDING FOR RON LEWIS PARK
 using STANDARD PLAN: #43-1645
GRADING PLAN

Drawn/Checked BY: **JA/RPJ**
 DATE: **OCTOBER 5, 2013**
 PROJECT NUMBER: **243-13-036**

JAR Associates Ltd.
 4880 W. UNIVERSITY AVE. SUITE B-2
 LAS VEGAS, NV 89103
 TEL: (702) 876-2341
 FAX: (702) 876-8395

C3
 SHEET 3 of 4 SHEETS

LEGAL DESCRIPTION

A PORTION OF THE SOUTHEAST QUARTER (SE 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 34, TOWNSHIP 14 SOUTH, RANGE 66 EAST, M.D.B.&M.

BENCHMARK

NATIONAL GEODETIC SURVEY POINT L406
LOCATED ON THE NORTHBOUND OFF RAMP OF INTERSTATE 15 EXIT 90, APPROXIMATELY ONE QUARTER (1/4) OF THE WAY AROUND THE OFF RAMP.

ELEVATION 1537.85 FEET (NAV88)

WATER NOTES/QUANTITIES

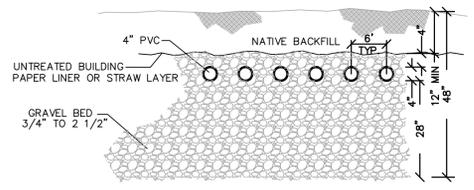
- 1 INSTALL 14" X 1" SERVICE SADDLE CONNECTION WITH CORPORATION STOP PER UDACS STD PLE 4 1 EA
- 2 INSTALL 1" TYPE "K" COPPER WATER LINE 20.5 LF
- 3 INSTALL 1" METER PER UDACS STD PLT 4 1 EA
- 4 INSTALL 1" BRASS PIPE BETWEEN METER AND RPPA
- 5 INSTALL 1" RPPA PER UDACS STD PLT 8 1 EA
- 6 INSTALL 1" PE WATERLINE 40 LF

OSDS CONSTRUCTION NOTES

1. ANY IMPERMEABLE LAYER ENCOUNTERED WITHIN 5 FEET OF THE BOTTOM OF THE DISPOSAL FIELD SHALL BE BROKEN UP.
2. DISTRIBUTION BOXES ARE TO BE SET LEVEL WITH BACKFILL AROUND BOX HAND COMPACTED. NO HEAVY EQUIPMENT SHALL BE USED IN THE VICINITY OF THE DISTRIBUTION BOXES.
3. NO PAVEMENT OR EVAPORATION INHIBITING MATERIAL SHALL BE PLACED ON TOP OF THE DISPOSAL FIELD.
4. THE BOTTOM OF THE DISPOSAL FIELD SHALL BE GRADED LEVEL PRIOR TO THE PLACEMENT OF GRAVEL. INDIVIDUAL 4-INCH LATERALS IN THE ABSORPTION FIELD SHALL SLOPE AT 2-INCHES TO 4-INCHES PER 100 FEET.
5. CONTRACTOR SHALL INSTALL A SIPHON DOSING TANK WITH A MINIMUM CAPACITY OF 250 GALLONS PER DISCHARGE AND A MAXIMUM CAPACITY OF 300 GALLONS PER DISCHARGE. JENSEN PRECAST MODEL DS1200-412 OR EQUAL.
6. CONTRACTOR SHALL INSTALL AN INSPECTION RISER AT THE MIDPOINT OF EACH ABSORPTION BED LATERAL.
7. CONTRACTOR SHALL INSTALL JENSEN PRECAST D-30 DISTRIBUTION BOX OR APPROVED EQUAL.
8. ANY IRRIGATION PIPING AND APPURTANCES ENCOUNTERED DURING EXCAVATION OF THE DRAIN FIELD SHALL BE REMOVED AND REINSTALLED AT THE DIRECTION OF THE OWNER.

SEWER NOTES/QUANTITIES

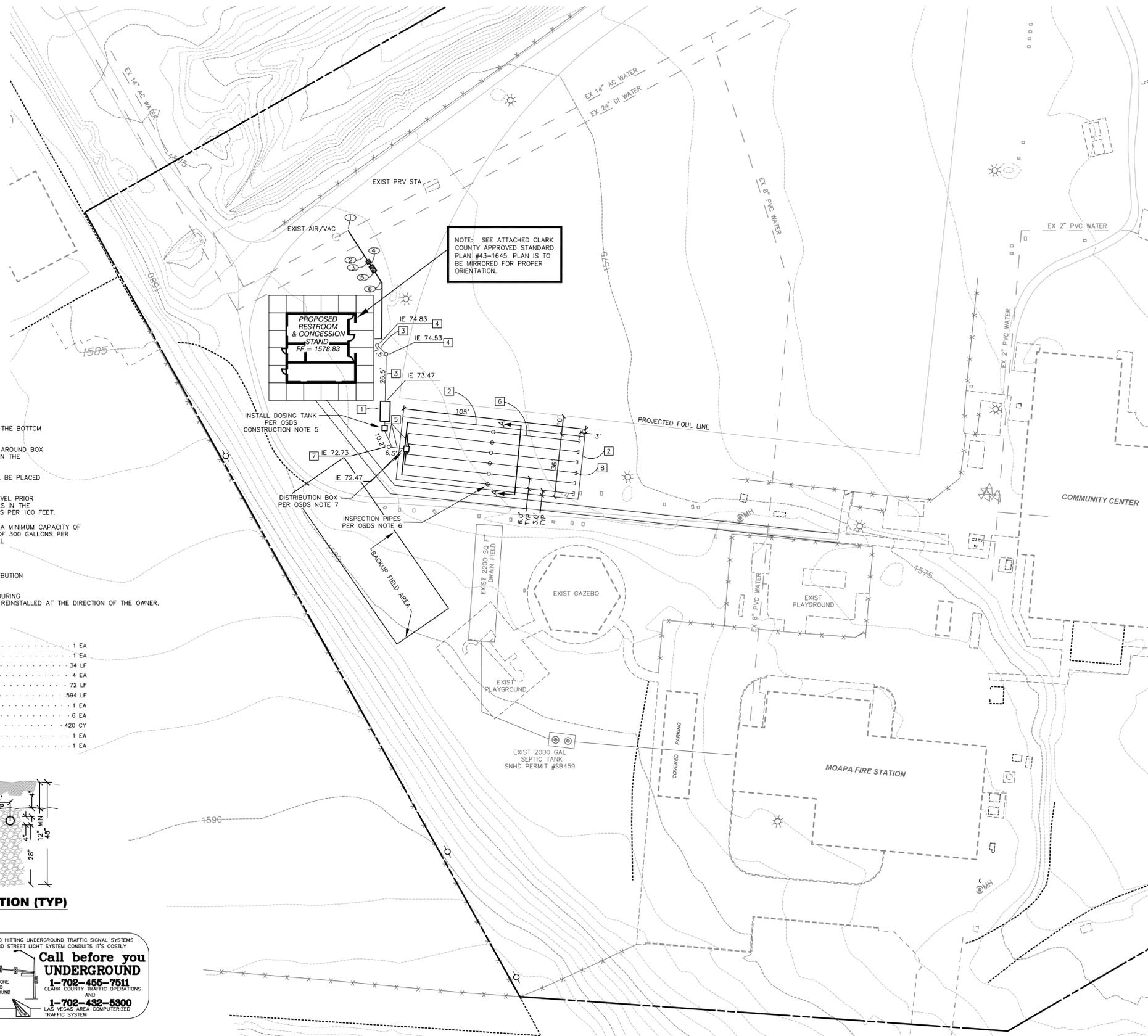
- 1 INSTALL 4000 GALLON SEPTIC TANK 1 EA
- 2 INSTALL 3780 S.F. LEACH FIELD (105'X36') 1 EA
- 3 INSTALL 6" PVC SEWER @ 4% MIN. 34 LF
- 4 INSTALL 6" SEWER CLEANOUT 4 EA
- 5 INSTALL 4" PVC NON-PERFORATED PIPE 72 LF
- 6 INSTALL 4" PVC PERFORATED PIPE 594 LF
- 7 4" SEWER CLEANOUT 1 EA
- 8 INSTALL 4" PVC ENDCAPS 6 EA
- WASHED GRAVEL 420 CY
- DOSING TANK 1 EA
- DISTRIBUTION BOX 1 EA



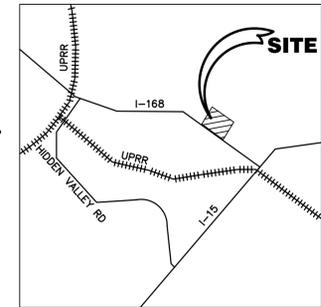
A DRAINFIELD CROSS SECTION (TYP)
NOT TO SCALE

811
48 HRS ADVANCE
Call before you DIG.
1-800-227-2600
NEVADA POWER ENVIRONMENT AND SAFETY SERVICES DEPARTMENT
Call before you OVERHEAD
1-702-227-2929

Avoid hitting underground utility lines. It's costly.
Call before you UNDERGROUND
1-702-455-7511
CLARK COUNTY TRAFFIC OPERATIONS AND
1-702-432-5300
LAS VEGAS AREA COMPUTERIZED TRAFFIC SYSTEM



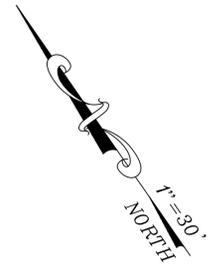
NOTE: SEE ATTACHED CLARK COUNTY APPROVED STANDARD PLAN #43-1645. PLAN IS TO BE MIRRORED FOR PROPER ORIENTATION.



AREA MAP
N.T.S.

LEGEND

- PROPERTY LINE
- RIGHT OF WAY
- CENTERLINE
- AC OUTLINE
- EXISTING CURB
- PROPOSED CURB
- EXISTING EDGE OF PAVEMENT
- PROPOSED EDGE OF PAVEMENT
- EXISTING BLOCK WALL
- PROPOSED BLOCK WALL
- CONTOUR LINE
- ASPHALTIC CONCRETE
- BACK OF CURB
- BEGIN CURB RETURN
- BACK OF WALK
- CURB & GUTTER
- CONCRETE
- CENTERLINE
- CONC
- CONC
- END OF CURB RETURN
- EDGE OF PAVEMENT
- EXISTING
- FINISH GRADE
- FLOW LINE
- GRADE BREAK
- HIGH POINT
- LOW POINT
- NATURAL GROUND
- ON SITE DISPOSAL SYSTEM
- SOUTHERN NEVADA HEALTH DISTRICT
- SIDEWALK
- TOP OF CURB
- TOP OF FOOTING
- TOP OF FLOOD WALL
- TOP OF RETAINING WALL
- TOP OF WALL
- EXISTING GRADE/SLOPE
- FUTURE GRADE/SLOPE
- PROPOSED GRADE/SLOPE



REV'S	BY	DATE

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SEAL
REGISTERED PROFESSIONAL ENGINEER-STATE OF NEVADA
REESE P. JARRELL
Exp: 06/30/2015
CIVIL
No. 7987

CLARK COUNTY
DEPARTMENT OF
REAL PROPERTY MANAGEMENT
Design and Construction Division
3000 Las Vegas Blvd. S., Suite 151
Las Vegas, Nevada 89151
Voice: (702) 455-4616
Fax: (702) 455-5817



RESTROOM & CONCESSION STAND
BUILDING for RON LEWIS PARK
using STANDARD PLAN: #43-1645
UTILITY PLAN

DRAWN/CHECKED BY: JA/RPJ
DATE: OCTOBER 5, 2013
PROJECT NUMBER: 243-13-036
SHEET NUMBER: 4

C4
SHEET 4 of 4 SHEETS

APPROVED FOR CONSTRUCTION
MOAPA VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
PROJECT NO. XXXXXX DATE: