

OWNER: MOSSAC LAND 1, LLC  
APN: 125-10-001-003

OWNER: RICHMOND AMERICAN HOMES NEVADA  
APN: 125-10-002-009

**NOTE TO ENGINEER/LVWD INSPECTOR**  
A MAXIMUM OF 30 WATER SERVICES CAN BE FED OFF OF A SINGLE FEED WITH MAXIMUM OF THREE FIRE HYDRANTS.

**SEWER CONNECTION NOTE:**  
ONE OR MORE SEGMENTS OF THE DOWNSTREAM SEWER SYSTEM THAT WILL SERVE THIS PROJECT HAS NOT BEEN COMPLETED AND/OR ACCEPTED FOR MAINTENANCE BY THE CITY OF LAS VEGAS. ANY WORK DONE ON THIS PROJECT PRIOR TO THE COMPLETION AND/OR ACCEPTANCE OF THE DOWNSTREAM SEWER SYSTEM(S) SHALL BE DONE AT THE DEVELOPER'S OWN RISK. THE CITY OF LAS VEGAS RESERVES THE RIGHT TO PREVENT THE PHYSICAL CONNECTION OF THIS PROJECT INTO THE DOWNSTREAM SEWER SYSTEM UNTIL ALL SEGMENTS HAVE BEEN COMPLETED AND ACCEPTED FOR MAINTENANCE, OR UNTIL SUCH TIME AS THEY ARE DEEMED AVAILABLE FOR SERVICE.

**TRAFFIC DELINEATION**  
① INSTALL BLUE RAISED REFLECTIVE PAVEMENT MARKERS PER NOTE SHEET TR1

- WATER**
- ① FIRE HYDRANT ASSEMBLY INCLUDES 8" x 6" TEE
  - ② 8" GATE VALVE PER UDACS PLTS. 30 & 39
  - ③ 8" CAP W/ 2" B.O PER UDACS PLT. 36
  - ④ 4" 45° BEND PER UDACS PLT. 31
  - ⑤ 8" x 8" TEE PER UDACS PLT. 31
  - ⑥ 8" CROSS PER UDACS PLT. 31
  - ⑦ 8" x 6" REDUCER PER UDACS PLT. 30
  - ⑧ 8" CAP W/ 2" B.O PER UDACS PLT. 35
  - ⑨ 10" x 8" TAPPING SLEEVE W/ 8" TAPPING VALVE PER UDACS PLT. 34 & UDACS SEC 2.24.01.A
  - ⑩ 3/4" RESIDENTIAL METER PER UDACS PLT. 2
- SEWER**
- STANDARD MANHOLE PER SD-1A & SD-1B
  - 4" SEWER LATERALS PER SD-22
  - 4" 6900 SEWER LATERALS PER SD-22
  - 8" SEWER MAIN PER SD-16
  - BACKWATER VALVES PER SD-29
- SEWER CONNECTION NOTE:**  
PRESSURE REDUCING VALVE (PRIVATE)  
DRIVEWAY LOCATION (SCHEMATIC ONLY)

**SEWER MANHOLE TABLE**

STRUCTURE NAME:	DETAILS	INV IN	INV OUT	INV THRU	NORTHING	EASTING
EX. SSMH #1	48" RIM = 2779.5	2772.30 (S)			668928.1786	226538.7915
EX. SSMH #2	48" RIM = 2780.2	2770.66 (N)	2770.48 (S)		668763.9538	226537.7489
EX. SSMH #3	48" RIM = 2768.8	2758.13 (S) 2758.13 (N)	2757.93 (E)		668313.9629	226534.8921
SSMH #4	48" RIM = 2768.4	2761.30 (SW)	2761.10 (N)		668017.4150	226533.0094
SSMH #5	48" RIM = 2767.4		2761.69 (NE)		667989.9842	226505.2281
SSMH #6	48" RIM = 2756.3		2753.63 (N)		667929.8227	228748.9577
EX. SSMH #7	48" RIM = 2762.9	2749.82 (S) 2749.82 (W)	2749.62 (N)		668310.9181	228749.3771
EX. SSMH #8	72" RIM = 2770.3			2747.65	668639.4099	228751.4625
EX. SSMH #9	72" RIM = 2772.3	2745.67 (S)	2745.47 (E)		668969.4390	228753.5577

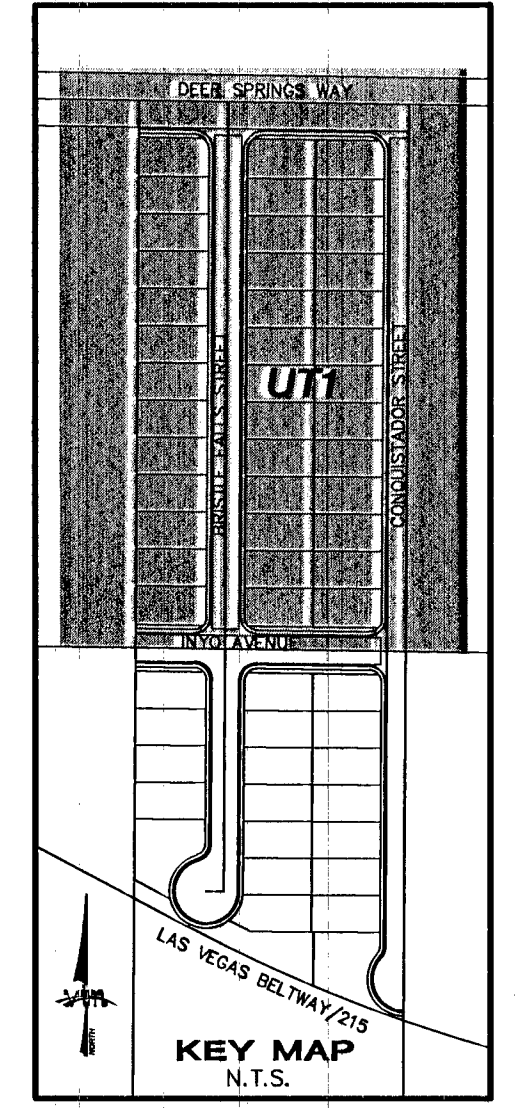
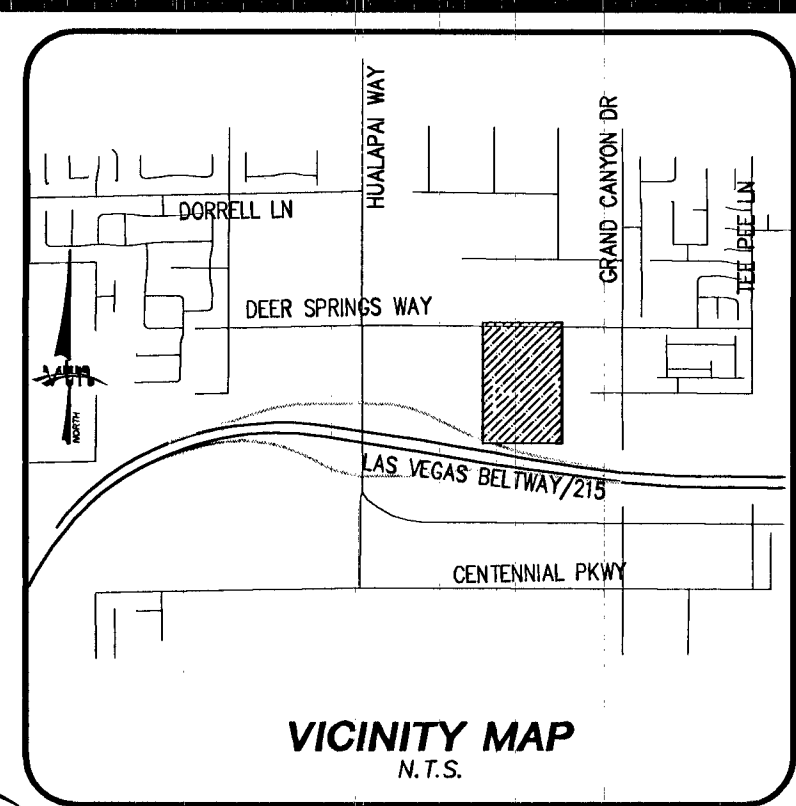
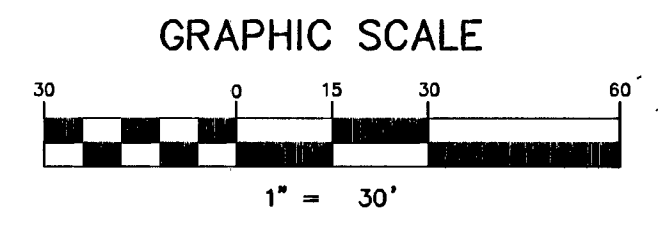
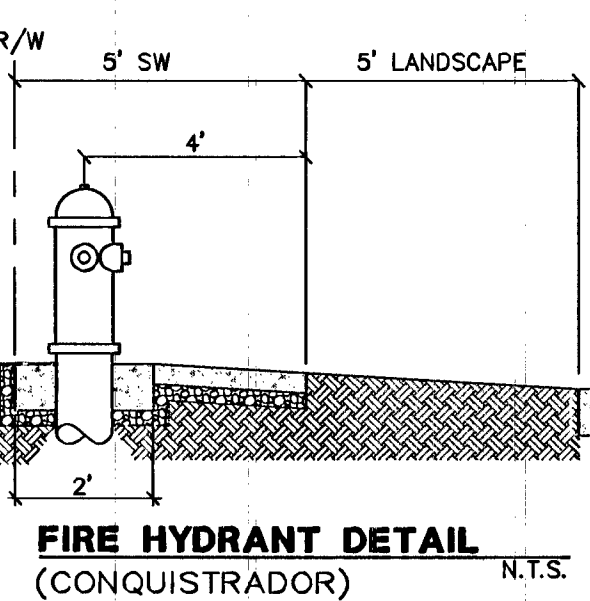
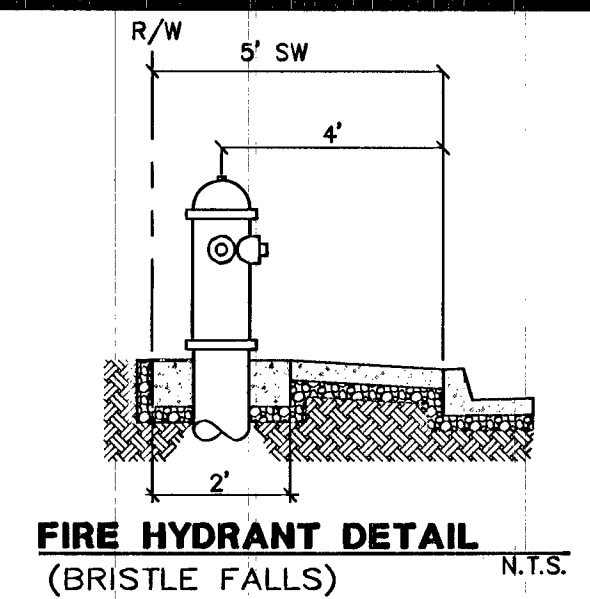
**FIRE FLOW CALCULATIONS**

FIRE FLOW REQUIREMENT IS 1,500 GALLONS PER MINUTE AT 20 PSI RESIDUAL PRESSURE.

BASED ON:

SQUARE FOOTAGE:	<3600	SQ. FT.
LARGEST AREA BETWEEN 4-HOUR AREA SEPARATION WALLS:	N/A	SQ. FT.
BUILDING HEIGHT:	27'	
NUMBER OF STORIES:	2	
TYPE OF CONSTRUCTION:	V	
OCCUPANCY:	SFR	
FULL AUTOMATIC FIRE SPRINKLER SYSTEM:	NO	

REVIEWED BY: *[Signature]*  
DATE: 9/15/14



**NOTE:**  
LOTS 10-30 & 40-60 THIS PROPERTY MAY HAVE STATIC WATER PRESSURE IN EXCESS OF 80 PSI. THE UNIFORM PLUMBING CODE REQUIRES THAT INDIVIDUAL ON-SITE (PRIVATE), PRESSURE REDUCING VALVES BE INSTALLED WHENEVER THE PRESSURE EXCEEDS 80PSI. PRV'S ARE THE DEVELOPER'S RESPONSIBILITY AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVWD FACILITIES.

**ALL NEW WATER MAIN TO HAVE MINIMUM 42" DEPTH OF COVER PER UDACS SECTION 2.08**

**NOTE:**  
VERIFY AND LOCATE ALL EXISTING UTILITIES WITHIN THE PROJECT WORK AREA.

**UTILITY CROSSING NOTE:**  
ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

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**EXISTING SERVICES**  
IF ANY OF THE EXISTING SERVICES ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON, THE DEVELOPER SHALL ABANDON THE LATERALS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH THE UDACS STANDARDS, AND AT THE DEVELOPER'S EXPENSE.

**Call before you Dig**  
Underground  
1-702-455-7511  
CLARK COUNTY TRAFFIC OPERATIONS  
1-702-432-5300  
LAS VEGAS AREA COMPUTER TRAFFIC SYSTEM

**Call before you Dig**  
Avoid overhead power the contact, it's costly.  
811  
CLARK COUNTY TRAFFIC OPERATIONS  
1-800-227-2929

**ENGINEER DISCLAIMER NOTE:**  
UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

**WATER MAIN JOINT DEFLECTION (PVC, 4" x 24")**  
PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.  
FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

**BLM GRANT NOTE**  
THIS PROJECT INCLUDES WATER FACILITIES TO BE INSTALLED ON BLM PROPERTY UNDER BLM GRANT N-61410.  
DEVELOPER AND CONTRACTOR MUST MEET WITH LVWD RIGHT-OF-WAY AND ENVIRONMENTAL RESOURCES REPRESENTATIVES PRIOR TO START OF CONSTRUCTION TO REVIEW REQUIREMENTS FOR COMPLIANCE WITH BLM GRANT STIPULATIONS.  
CALL MELROY YURASEK AT (702) 862-3447 TO SCHEDULE THE REQUIRED FIELD MEETING.

**NOTE**  
INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER UDACS PLATE No. 15

**NOTE**  
CONSTRUCTION CONTINGENT ON THE FOLLOWING:  
LVWD PROJECT #121812 (GRAND CANYON/DEER SPRINGS)  
FIRE DEPARTMENT APPROVAL APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM THE LVWD.

**NOTE**  
A MIN. 3' OF HORIZONTAL CLEARANCE IS REQUIRED BETWEEN WATER MAINS AND DRY UTILITIES PER UDACS 2.04.02

**NOTE**  
A MIN. OF 12" OF VERTICAL CLEARANCE BETWEEN WATER MAINS AND DRY UTILITIES, AND 6" OF VERTICAL CLEARANCE REQUIRED BETWEEN WATER LATERALS AND DRY UTILITIES PER UDACS SECTION 2.04.06

**PROJECT BENCHMARK**  
PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)  
CITY OF LAS VEGAS BENCHMARK: 5LV9019W4 2008 ADJUSTMENT (UPDATED 5/24/10) NAVD88 ELEVATION: 857.697 METERS (2813.96 FEET)  
RIVET AND PLATE CONCRETE PAD (LVWD) 100'SE HUALAPAI WAY AND DEER SPRINGS.

**BASIS OF BEARINGS**  
GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.  
LINEAR UNIT: US SURVEY FOOT (FTUS)  
DATUM (REFERENCE FRAME): NAD 1983 (CORS 2011) EPOCH 2010  
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)  
ZONE: LAS VEGAS  
PROJECTION: TRANSVERSE MERCATOR  
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N  
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W  
NORTHING AT GRID ORIGIN: 200,000,000 M (656,166.6667 FTUS)  
EASTING AT CENTRAL MERIDIAN: 100,000,000 M (328,083.3333 FTUS)  
SCALE FACTOR ON CENTRAL MERIDIAN: 1.0001 (EXACT)

**APPROVALS:**  
APPROVED FOR CONSTRUCTION  
*[Signature]*  
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER  
DATE: 9/18/14 PROJECT: 122759  
LVWD APPROVED FIRE FLOW 1500 GPM AT 20 PSI RESIDUAL  
HTE 14-17769  
H#53328

7	6	5	4	3	2	1
REV	DATE	BY	DATE	BY	DATE	BY

**CITY OF LAS VEGAS**  
2727 SOUTH RAINBOW BOULEVARD  
LAS VEGAS, NEVADA 89146-5148  
PH. (702) 875-7550 FAX (702) 362-2587 WEB WWW.LVNV.COM  
CONSULTING ENGINEERS • PLANNERS • LAND SURVEYORS

**RYLAND HOMES**  
8925 W. RUSSELL ROAD, SUITE 200  
LAS VEGAS, NV 89148  
(702) 360-7500

**UTILITY PLAN 1**

**BRISTLE FALLS UNIT 2**

DRAWN BY: LHM  
DESIGNED BY: DO  
CHECKED BY: AT  
PROJECT NO.: 7519  
SCALE: 1" = 30' HORZ.  
VERT.

EXPIRES 06-30-16

**PROFESSIONAL ENGINEER SEAL**  
AARON M. YAMACHKA  
CIVIL ENGINEER  
LICENSE NO. 15079

SHEET  
UT1  
8 OF 19 SHEETS  
DRAWING NO.  
1074994-2