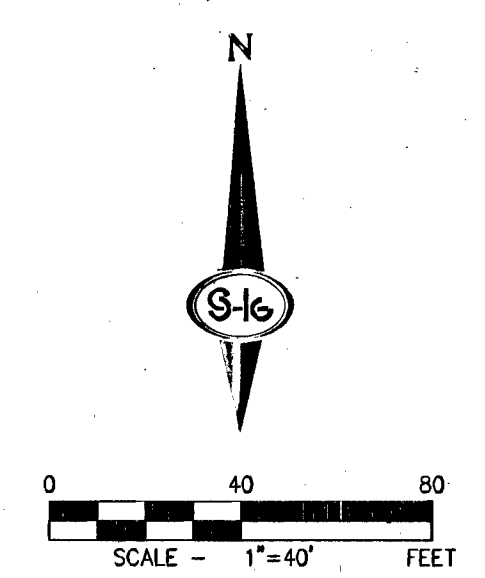
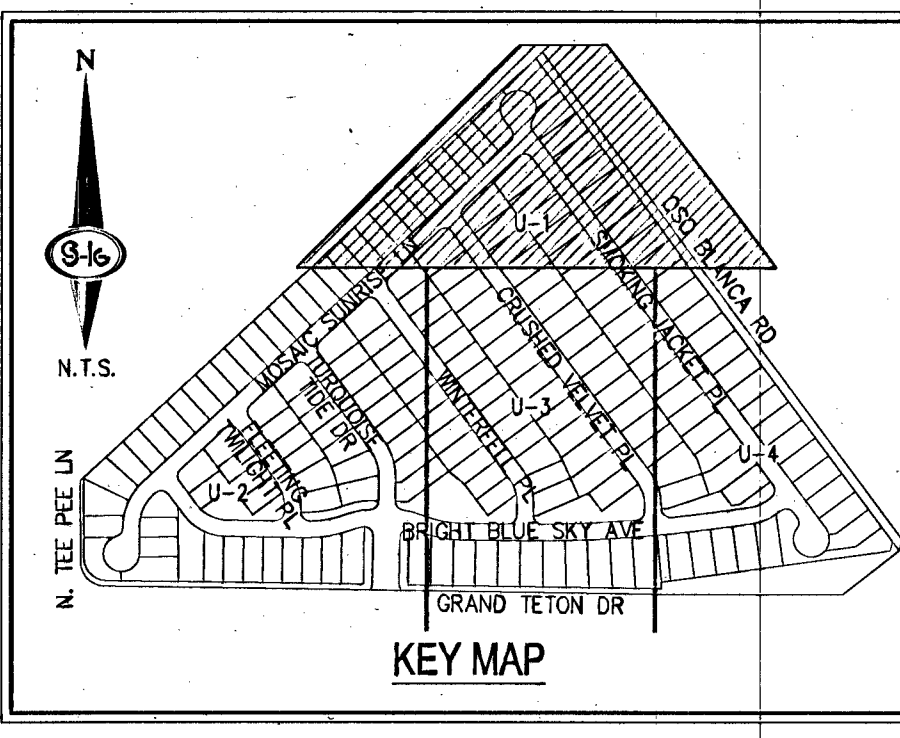


MH #	STREET NAME	STREET STA	RIM ELEV	INV. IN	INV. OUT	INV. THRU
1	MOSCA SUNRISE LN	2715.60	2715.60	2707.92		
2	MOSCA SUNRISE LN	10+96.53	2715.68	2706.23		
3	MOSCA SUNRISE LN	11+29.48	2715.00	2705.57		
4	MOSCA SUNRISE LN	12+09.68	2711.23	2703.24	2703.44	2703.24
5	BRIGHT BLUE SKY AVE	11+12.09	2707.58	2700.21		
6	BRIGHT BLUE SKY AVE	11+82.74	2705.18	2696.85		
7	BRIGHT BLUE SKY AVE	13+59.28	2701.09	2693.40		2693.60
8	FLEETING THOUGHT PL	12+12.30	2703.33	2694.37		
9	MOSCA SUNRISE LN	14+21.88	2705.80	2697.72	2697.52	2697.72
10	MOSCA SUNRISE LN	9+94.44	2698.58	2691.03	2691.23	2691.03
11	TURQUOISE TIDE DR	13+09.72	2697.59	2689.13		
12	BRIGHT BLUE SKY AVE	14+37.92	2697.18	2688.34	2688.14	2688.14
13	BRIGHT BLUE SKY AVE	17+25.64	2692.11	2683.67	2683.47	
14	BRIGHT BLUE SKY AVE	16+65.68	2685.85	2677.19	2676.99	2677.19
15	WINTERPELLA	15+71.99	2688.54	2679.50		
16	WINTERPELLA	13+16.40	2689.70		2681.93	
17	MOSCA SUNRISE LN	18+48.20	2692.06	2684.54		
18	MOSCA SUNRISE LN	9+94.78	2685.27	2677.68	2677.48	
19	CRUSHED VELVET PL	10+23.10	2684.85	2677.32	2677.03	
20	CRUSHED VELVET PL	14+03.10	2681.37	2673.72	2673.72	
21	CRUSHED VELVET PL	17+68.49	2677.89	2670.55	2670.35	
22	BRIGHT BLUE SKY AVE	15+51.28	2671.51	2669.37		2669.57
23	MOSCA SUNRISE LN	20+37.54	2684.61	2677.68		
24	MOSCA SUNRISE LN	22+77.54	2681.50	2674.39	2674.19	
25	SMOKING JACKET FL	10+53.22	2681.49	2673.71		
26	MOSCA SUNRISE LN	10+71.14	2681.28	2673.68	2673.48	2673.48
27	SMOKING JACKET FL	13+91.14	2677.02	2669.38	2669.38	
28	SMOKING JACKET FL	17+35.97	2672.60	2664.70	2664.70	
29	BRIGHT BLUE SKY AVE	24+81.04	2669.00	2656.90		
30	BRIGHT BLUE SKY AVE	24+19.91	2669.00	2659.80		
31	BRIGHT BLUE SKY AVE	22+15.72	2674.03	2665.42		
32	SMOKING JACKET FL	21+54.12	2667.90	2655.81		
33	CE W	24+00.00	2667.28	2655.42	2655.22	
34	CE W	24+89.51	2663.94	2654.68	2654.48	
35	OSO BLANCA	16+10.10	2662.24	2646.32		
36	OSO BLANCA	23+94.29	2660.16	2651.96		
37	CAUSHED VELVET PL	20+75.73	2659.57	2647.31	2647.11	
38	CAUSHED VELVET PL	19+97.62	2659.82	2647.82		
39	GRAND TETON DR	23+55.00	2667.31	2667.99	2667.79	

**NOTICE:**  
NO WORK WITHIN NOT RIGHT-OF-WAY UNTIL AN ENCROACHMENT PERMIT HAS BEEN ISSUED.



INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS PLATE NO. 15

- GENERAL NOTES**
- REPLACE ALL TRAFFIC CONTROL DEVICES (SIGNS AND/OR PAVEMENT MARKINGS) UNDER CLARK COUNTY'S JURISDICTION THAT ARE DISTURBED, DESTROYED, MOVED OR DAMAGED BY TRENCHING ACTIVITIES TO CLARK COUNTY'S SATISFACTION. ALL MATERIAL USED SHALL MEET CLARK COUNTY'S SPECIFICATIONS OR WILL BE AN APPROVED EQUIVALENT.
  - IN THE EVENT THAT THE TRAFFIC SIGNAL CONDUITS, LOOP DETECTORS OR ASSOCIATED EQUIPMENT ARE DAMAGED BY CONTRACTOR, THE CONTRACTOR WILL HIRE AN MSA LEVEL II ELECTRICAL CONTRACTOR TO MAKE REPAIRS PER UNIFORM SPECIFICATION NO. 623.01.02.
  - ALL SEWER / STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.2.2 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.
  - THE CONTRACTOR IS TO VERIFY THE ACTUAL FIELD CONDITIONS OF ALL LOTS AND INSTALL SEWER CHECK VALVES WHERE REQUIRED PER THE LATEST EDITION OF THE UNIFORM PLUMBING CODE.
  - FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALK.

- WATER NOTES**
- 8" PVC WATER PIPE (2860 MP2)
  - 8" PVC WATER PIPE (2860 MP2)
  - 8" DIP WATER PIPE (CLASS 53)
  - 8" X 8" TEE PER UDACS PLATE NO. 31
  - 8" X 8" TEE PER UDACS PLATE NO. 31
  - 10" X 8" TAPPING SLEEVE WITH 8" TAPPING VALVE PER UDACS PLATE NO. 34, 39, & UDACS SECTION 2.24.01A
  - 12" X 8" TAPPING SLEEVE WITH 8" TAPPING VALVE PER UDACS PLATE NO. 34, 39, & UDACS SECTION 2.24.01B
  - 1 DEGREE MAXIMUM JOINT DEFLECTION PER UDACS SECTION 2.07.01
  - 5 DEGREE BEND WITH RESTRAINED JOINTS
  - 11.25 DEGREE BEND PER UDACS PLATE NO. 31
  - 22.5 DEGREE BEND PER UDACS PLATE NO. 31
  - 8" X 8" REDUCER PER UDACS PLATE NO. 30
  - 8" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 31
  - CAP AND 2" BLOW-OFF VALVE PER UDACS PLATE NO. 36
  - FIRE HYDRANT ASSEMBLY W/ 8" GATE VALVE PER UDACS PLATE NO. 36
  - INSTALL BLUE REFLECTIVE RAISED PAVEMENT MARKERS
  - 1" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 2
  - 1" COPPER SERVICE W/ 1" IRRIGATION METER AND 1" RPPA PER UDACS PLATE NO. 4 & 8 (BRASS BETWEEN METER AND RPPA)
  - POINT OF CURVATURE OF WATER MAIN USING 1" JOINT DEFLECTIONS PER UDACS SECTION 2.07.01
  - 45 DEGREE BEND PER UDACS PLATE NO. 31
  - 45 DEGREE VERT. BEND. SEE SHEET U-1 FOR PROFILE AND WATER QUANTITIES

Call before you Dig  
Call  
811  
1-800-227-2600  
CLARK COUNTY TRAFFIC ENGINEERING SERVICES  
1-702-455-6000

Call before you do Underground  
1-702-455-6000  
CLARK COUNTY TRAFFIC ENGINEERING SERVICES  
1-702-432-5300  
FREEMAN AND REGIONAL SYSTEMS OF TRANSPORTATION

- SEWER NOTES**
- 8" PVC SANITARY SEWER PIPE
  - INSTALL MANHOLE CONCRETE COLLAR PER DCSWMS SD-4
  - 8" DIAMETER SANITARY SEWER MANHOLE WITH PRECAST BASE PER DCSWMS SD-1A INSTALLED WITH WATER TIGHT JOINTS USING LVWD APPROVED INTERNAL FLASHING AND SEALANT IN COMPLIANCE WITH ASTM C920.
  - ADJUST PROPOSED MANHOLE TO EXISTING GRADE
  - 4" DIAMETER SANITARY SEWER MANHOLE WITH PRECAST BASE PER DCSWMS SD-1A INSTALLED WITH WATER TIGHT JOINTS USING LVWD APPROVED INTERNAL FLASHING AND SEALANT IN COMPLIANCE WITH ASTM C920.

**NOTE**  
PER 19.08 & 19.12 ALL ABOVE-GROUND UTILITY BOXES SHALL BE FULLY SCREENED FROM ALL RIGHTS OF WAY.

- FIRE FLOW CALCULATIONS**
- FIRE FLOW REQUIREMENT IS 1750 GALLONS PER MINUTE AT 20 P.S.I. RESIDUAL PRESSURE.
- |                                   |               |
|-----------------------------------|---------------|
| USE/OCCUPANCY                     | SINGLE FAMILY |
| TYPE OF CONSTRUCTION (IBC)        | TYPE I-B      |
| AUTOMATIC FIRE SPRINKLERS         | NO            |
| SQUARE FOOTAGE                    | 1,160         |
| LARGEST AREA BETWEEN 4 HOUR WALLS | N/A           |
| BUILDING HEIGHT                   | < 35          |
| NO OF STORES INCLUDING BASEMENT   | 2             |
| HIGH PILED COMBUSTIBLE STORAGE    | NO            |
| NO OF HYDRANTS INSTALLED          | 12            |

**BENCHMARK**  
RIVET & PLATE ON NORTHEAST CORNER OF HEADWALL ON THE WEST SIDE OSO BLANCA RD. 200' SSE OF FORT APACHE & RAHEL, 790898W  
NAVD8 88 ELEV=814.651 METERS=2672.73 FEET

**BASIS OF BEARING**  
NORTH 00°48'23" WEST, BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW/4) OF THE SOUTHWEST QUARTER (SW/4) OF SECTION 7, TOWNSHIP 19 SOUTH, RANGE 60 EAST, W.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREIN IN BOOK 122, PAGE 37 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

**APPROVED FOR CONSTRUCTION**  
Darrin Paetz  
LAS VEGAS, VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER  
DATE 07/11/13 PROJECT NO. 121258  
LVWD APPROVED FIRE FLOW 1750 GPM AT 20 PSI RESIDUAL

**APPROVAL**  
Scott Farmer  
LAS VEGAS FIRE AND RESCUE  
DATE 7/16/13

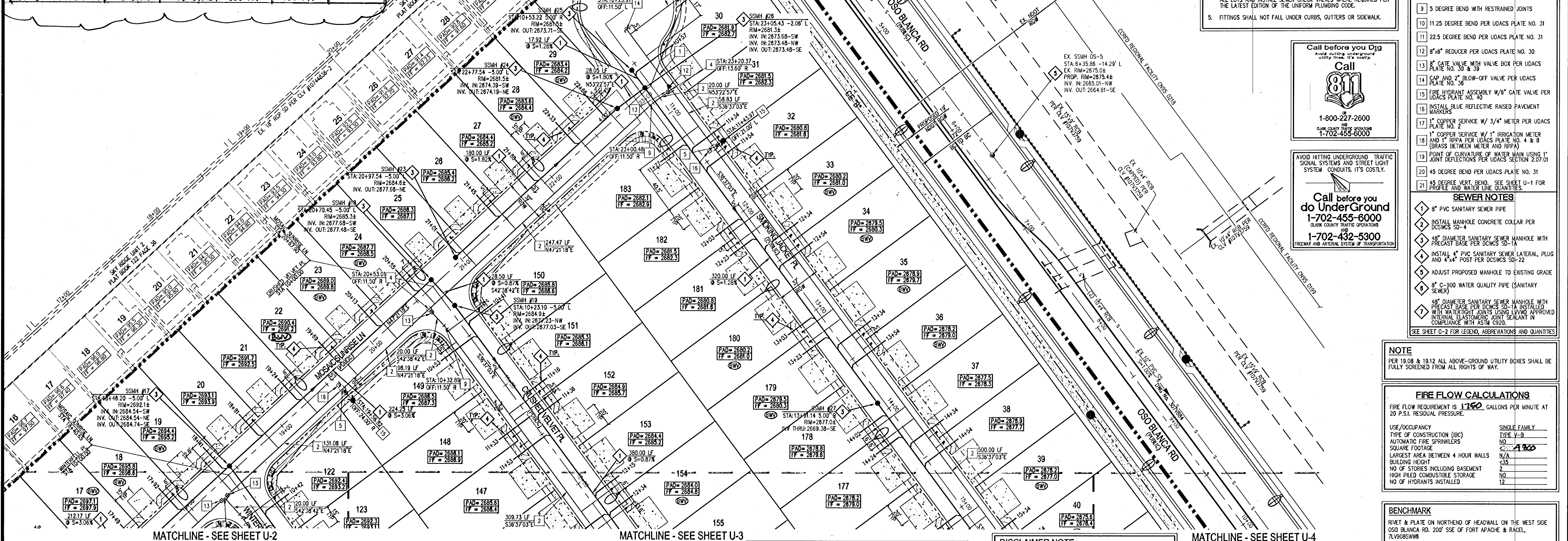
**ESTIMATED AVERAGE DAILY SEWER CONTRIBUTIONS**  
183 UNITS X 250 GPD/UNIT = 45,750 GPD  
TOTAL AVERAGE CONTRIBUTION = 45,750 GPD = 0.04575 MGD  
TOTAL PEAK FLOW = 0.04575 MGD X 3.5 (PEAK FACTOR) = 0.16013 MGD

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

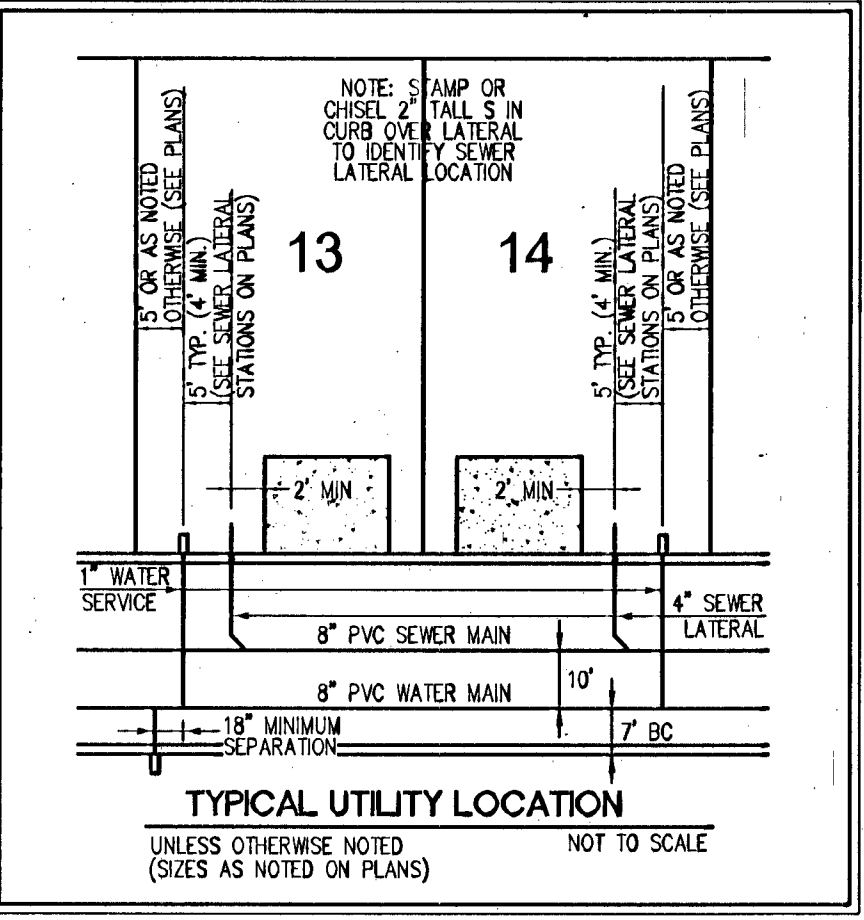
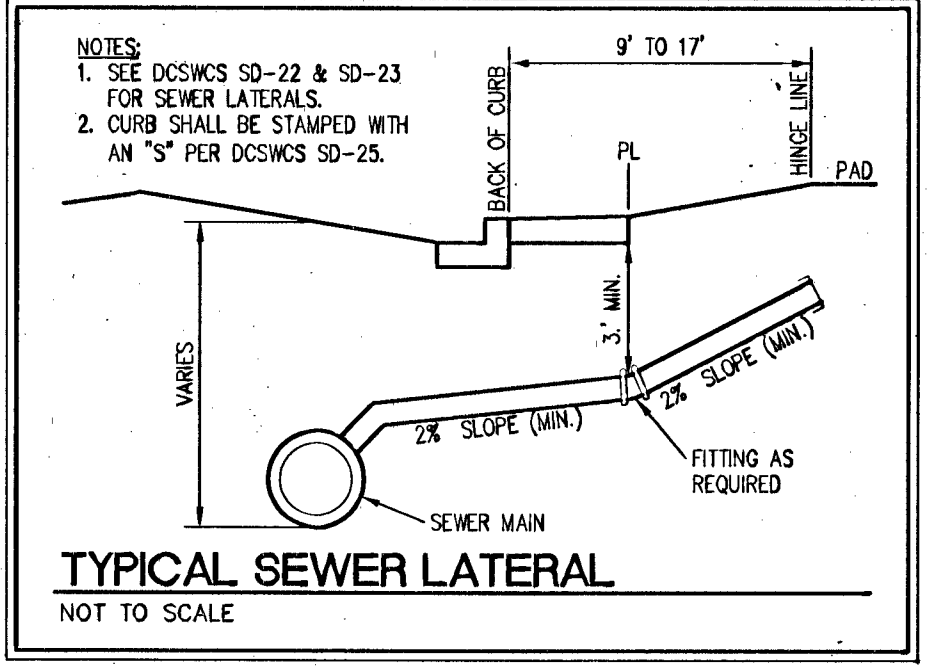
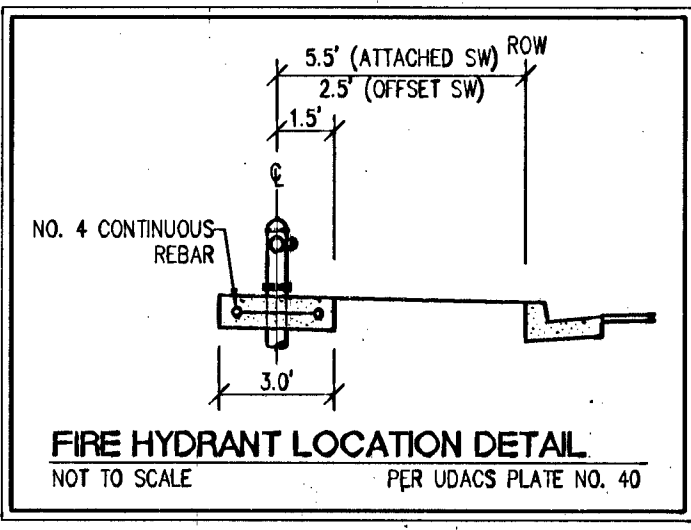
**WATER MAIN JOINT DEFLECTION (DIP. 4" - 24")**  
PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.  
FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE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

**WATER MAIN JOINT DEFLECTION (DIP. 4" - 12")**  
DIP PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE (2.5) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 415' (18" SEC)/460' (20" SEC), PER UDACS 2.07.03.  
FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

**REDUCED PRESSURE PRINCIPLE ASSEMBLY**  
APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWD. ANY BACK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.



**LOTS 41-56 & 166-172**  
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 80 PSI. PRIVATE ARE THE DEVELOPER'S RESPONSIBILITY, AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVWD FACILITIES.



**NOTE:** STAMP OR CHISEL 2" TALL S IN CURB OVER LATERAL TO IDENTIFY SEWER LATERAL LOCATION

**SLATER HANIFAN GROUP**  
CONSULTING ENGINEERS & PLANNERS  
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118  
PHONE (702) 284-5300 FAX (702) 284-5389

**DR. HORTON**  
GRAND TETON AND TEE PEE  
UTILITY PLAN I

CITY OF LAS VEGAS, NV

NO.	DESCRIPTION	DATE	BY	APP.
1	UPDATE SHEET MANIPULATE TABLE	10/15/13	WDB	

DATE: 04/09/13  
DRAFTER: DSP  
DESIGNER: DSP  
CHECKED: DJP  
PROJECT NO. DRH1213-000

**PROFESSIONAL ENGINEER - STATE OF NEVADA**  
DARRIN PAETZ  
NO. 15874  
7/16/13

**PROFESSIONAL ENGINEER - STATE OF NEVADA**  
TODD L. STEADHAM  
NO. 61579  
7/16/13

U-1  
SHEET 39 OF 47  
1074986