

SEWER MANHOLE DATA TABLE

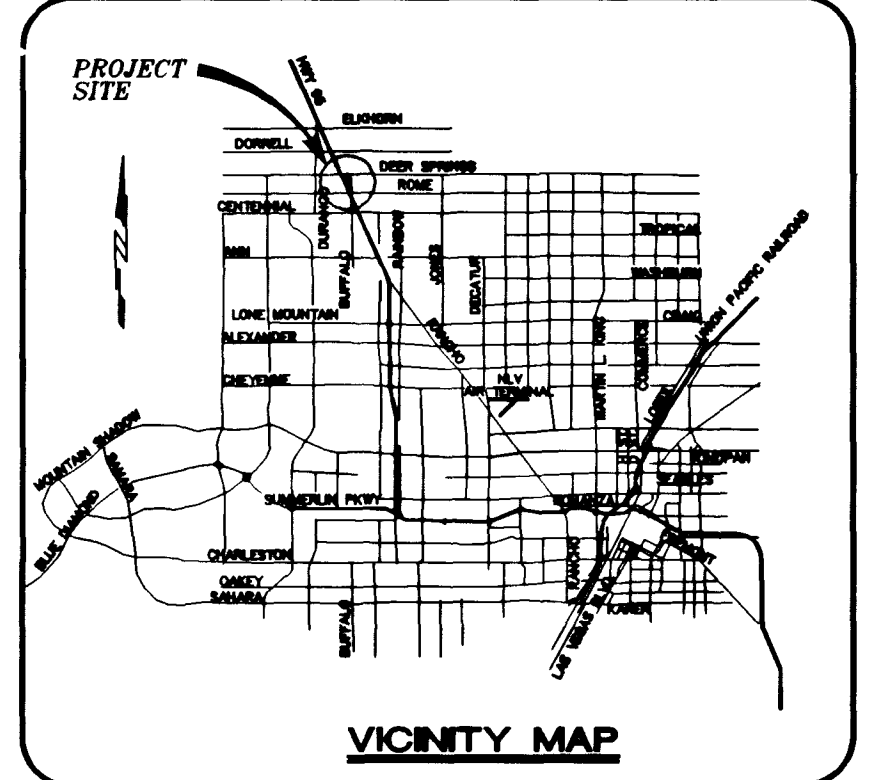
SMH #	TMH	INV. IN	INV. OUT	NORTHING	EASTING
EX	17.7E	09.93	09.73	809555.42	750085.34
1	20.1E	15.01	14.81	809881.55	750092.73
2	21.9E	15.70	15.50	809882.39	749976.21
3	21.9E	16.45	16.25	809993.30	749978.72
4	22.8E	16.80	16.60	810021.82	749971.07
5	23.5E	17.44	17.24	810003.73	749901.53
6	28.3E	22.58	22.38	810005.50	749654.33
7	29.5E	24.40	24.20	810020.82	749492.64
8	30.4E	24.82	24.62	810029.67	749472.03
9	22.2E	17.18	16.98	810050.65	749983.48
10	23.0E	18.16	17.96	810207.79	749954.37
11	24.0E	19.02	18.82	810333.46	749968.25

SEWER CLEANOUT DATA TABLE

CO #	TCO	INV. IN	INV. OUT	NORTHING	EASTING
1	25.2E	17.18	16.98	810350.66	749983.48
2	25.2E	17.96	17.76	810350.66	749983.48
3	25.3E	18.91	18.71	810367.79	749954.37
4	23.3E	18.64	18.44	810276.62	749961.31
5	24.0E	18.07	17.87	810333.46	749968.25
6	24.3E	19.72	19.52	810430.55	749970.45
7	24.5E	20.31	20.11	810506.03	749972.16
8	25.3E	20.86	20.66	810558.85	749973.36
9	25.2E	20.74	20.54	810432.34	749891.57
10	26.3E	21.19	20.99	810439.05	749848.93
11	26.4E	21.43	21.23	810084.49	749753.17
12	27.0E	22.38	22.18	810156.24	749753.69
13	28.5E	23.02	22.82	810181.66	749720.40
14	31.0E	24.26	24.06	810281.63	749722.66
15	32.0E	25.50	25.30	810381.58	749719.57
16	32.5E	26.40	26.20	810449.26	749713.55
17	30.4E	27.44	27.24	810541.24	749752.78
18	22.6E	15.83	15.63	809898.74	750052.99
19	26.1E	17.21	17.01	809927.55	749834.50
20	23.4E	19.31	19.11	810078.98	750057.25
21	23.4E	19.31	19.11	810080.93	750054.27
22	27.0E	20.68	20.48	810240.33	749862.93
23	26.1E	21.25	21.05	810267.83	749865.96
24	27.0E	20.77	20.57	810232.38	749872.52
25	27.1E	20.92	20.72	810223.98	749862.95
26	24.4E	20.29	20.09	810234.21	750030.65

SEWER CLEANOUT DATA TABLE

CO #	TCO	INV. IN	INV. OUT	NORTHING	EASTING
27	24.5E	20.16	19.96	810244.15	750031.75
28	28.8E	21.18	20.98	810440.12	749875.82
29	29.6E	22.14	21.94	810471.10	749834.91
30	29.7E	22.31	22.11	810466.79	749826.65
31	25.2E	20.78	20.58	810444.88	750042.65
32	25.3E	20.88	20.68	810449.38	750042.75
33	25.6E	22.00	21.80	810633.08	750032.18
34	27.0E	22.36	22.16	810668.05	750032.08
35	27.0E	22.36	22.16	810666.36	750029.74
36	24.6E	18.58	18.38	810054.94	749802.85
37	27.9E	22.99	22.79	810051.30	749890.08
38	29.6E	24.78	24.58	809932.88	749625.58
39	30.0E	24.85	24.65	809932.90	749620.62
40	30.9E	24.78	24.58	810061.87	749579.88
41	30.4E	25.60	25.40	810183.43	749673.21
42	31.7E	25.75	25.55	810187.95	749673.00
43	32.8E	26.09	25.89	810409.96	749710.55
44	33.0E	27.26	27.06	810452.94	749642.93
45	33.3E	28.05	27.85	810480.00	749572.07
46	33.0E	28.63	28.43	810499.50	749520.98
47	35.0E	29.91	29.71	810557.09	749516.78
48	33.6E	27.48	27.28	810503.98	749718.82
49	29.6E	28.25	28.05	810603.15	749745.03
50	34.2E	28.88	28.68	810658.11	749737.32
51	34.2E	28.83	28.63	810659.32	749739.31



PROJECT BENCHMARK
 TM 1169 3" BRASS CAP USC & GS 50' EAST OF US 95 & 200' SOUTH OF CENTENNIAL ON 88 DATUM METER 734.5745=2410.02 FEET
 BM # 1LV9028NNE6

BASIS OF BEARINGS
 THE BASIS OF BEARINGS FOR THIS PROJECT IS GRID NORTH, AS DEFINED BY THE NEVADA COORDINATE SYSTEM OF 1983 (NCS83), EAST ZONE, (2701), AS DETERMINED BY NORTH LAS VEGAS HARN CONTROL POINTS 700, 704, 714, AS SHOWN ON A RECORD OF SURVEY ON FILE IN THE CLARK COUNTY, NEVADA, RECORDER'S OFFICE IN FILE 82 OF SURVEYS, AT PAGE 52.

Call before you Dig
 1-800-227-2600

Call before you OVERHEAD
 1-702-593-6111

ESTIMATE OF QUANTITIES/LEGEND

	PRIVATE	PUBLIC
1 FIRE HYDRANT ASSEMBLY per (udacs plate 7) (INCLUDES 8"x6" TEE & 6" GV)	15 EA.	
10"x8" REDUCER	2 EA.	
8" GATE VALVE	1 EA.	
8"x8" REDUCER	2 EA.	
10" GATE VALVE	9 EA.	
6" GATE VALVE		2 EA.
10"x10"x10" TEE	2 EA.	
10"x10" TEE		2 EA.
10"x6" WET TAP		7 EA.
90° BEND		5 EA.
45° BEND		3 EA.
22.5° BEND		3 EA.
11.25° BEND		3 EA.
6"x3" FMCT WITH 8" RPPA PER PLATE 11B		2 EA.
10" WATER LINE	2614 LF.	
8" WATER LINE	307 LF.	
6" WATER LINE	432 LF.	176 LF.
2" WATER LINE	1121 LF.	

SEWER

STANDARD MANHOLE	11 EA.
CLEANOUT	47 EA.
6" SEWER MAIN	104 LF.
8" SEWER MAIN	821 LF.
4" SEWER LATERALS	1352 LF.

SEWER CONTRIBUTION

AVERAGE FLOW =	0.0510 MGD.
PEAK FLOW =	0.1785 MGD.

STREET LIGHTS & SIGNAGE

200W HPS LUMINAIRE	4 EA.
STOP SIGN	2 EA.
SERVICE POINT & RCOO	1 EA.

SEWER CONNECTION NOTE
 A SEGMENT 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 ACCEPTED FOR MAINTENANCE, OR UNTIL SUCH TIME AS THEY HAVE BEEN DEEMED AVAILABLE FOR SERVICE.

FIRE FLOW DATA

THE FIRE FLOW REQUIREMENTS IS 2500 GPM AT 20 PSI RESIDUAL PRESSURE.

BASED ON: PERLMAN ARCHITECTS BUILDING PLANS

SQUARE FOOTAGE: 18876 SF

LARGEST AREA BETWEEN 4-HOUR AREA SEPARATION WALLS: N/A

BUILDING HEIGHT: 34'-5 1/2" FEET

NUMBER OF STORIES: 2 FLOORS

TYPE OF CONSTRUCTION: II-1 HOUR

OCCUPANCY: R1

FULL AUTOMATIC FIRE SPRINKLER SYSTEM: N/A

REVIEWED BY: *[Signature]*

DATE: 6/30/99

APPROVALS:
[Signature] 6/30/99
 CITY OF LAS VEGAS FIRE MARSHAL DATE



NOTE: CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

NOTE: 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: ALL CLEANOUTS LOCATED IN PAVED AREAS WILL BE PROVIDED WITH VALVE BOXES, TRAFFIC BEARING LIDS AND CONCRETE COLLARS.

INSTALLATION OF METER AND VAULT
 (2) 6"x3" FMCT HERSHEY'S MFM 11-NCT 11 OR APPROVED EQUALS AND VAULTS WITH NON-TRAFFIC BEARING COVER(S) SHALL BE INSTALLED IN ACCORDANCE WITH THE UDACS PLATE NO. 21D AND WITH STANDARD VAULT DRAWING C-475, LATEST REVISION.

REDUCED PRESSURE PRINCIPLE ASSEMBLY
 (2) 8" RPPA WATTS # 90411 OR APPROVED EQUALS SHALL BE INSTALLED PER THE UDACS PLATE NO. 11B. 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 BLOCK 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.

BIG SKY DEVELOPMENT

MASTER UTILITY PLAN

DEER SPRINGS APARTMENTS

2727 SOUTH RAINBOW BOULEVARD LAS VEGAS, NEVADA 89102-5148
 3320 N. BUFFALO DRIVE SUITE 800A, 89129
 PH. (702) 873-7550 FAX (702) 362-2597
 (702) 395-2050

VTM nevada CONSULTING ENGINEERS • PLANNERS • LAND SURVEYORS

SEAL
 THOMAS E. HAYES
 CIVIL ENGINEER STATE OF NEVADA
 LICENSE NO. 9426

SCALE: 1"=20' HORIZ. N/A VERT.

DRAWN BY: MARCH 1999
DESIGNED BY: MARCH 1999
CHECKED BY: MARCH 1999
PROJECT NO.: 5522

SHEET 5 OF 17 SHEETS
DRAWING NO. 107-V310B

