

LAS VEGAS FIRE DEPARTMENT

Fire Flow Requirement is 1500 gallons per minute at 20 pounds per square inch residual.

Based on:
 Square footage 1913 SF
 Largest area between area separation walls 10'
 Height 2 STORY - 20'
 Type of Construction I
 Exposures NONE
 Sprinkler System NO
 Occupancy SINGLE FAMILY
 Roof Construction CERAMIC TILE

Reviewed By: *Richard G. Brennan*
 Date: 11-21-91

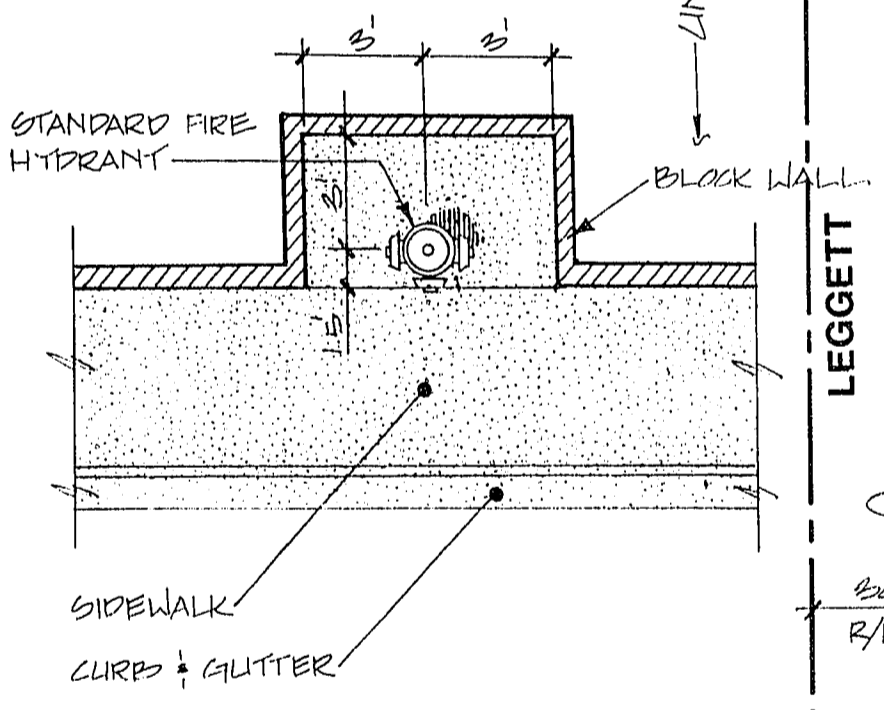
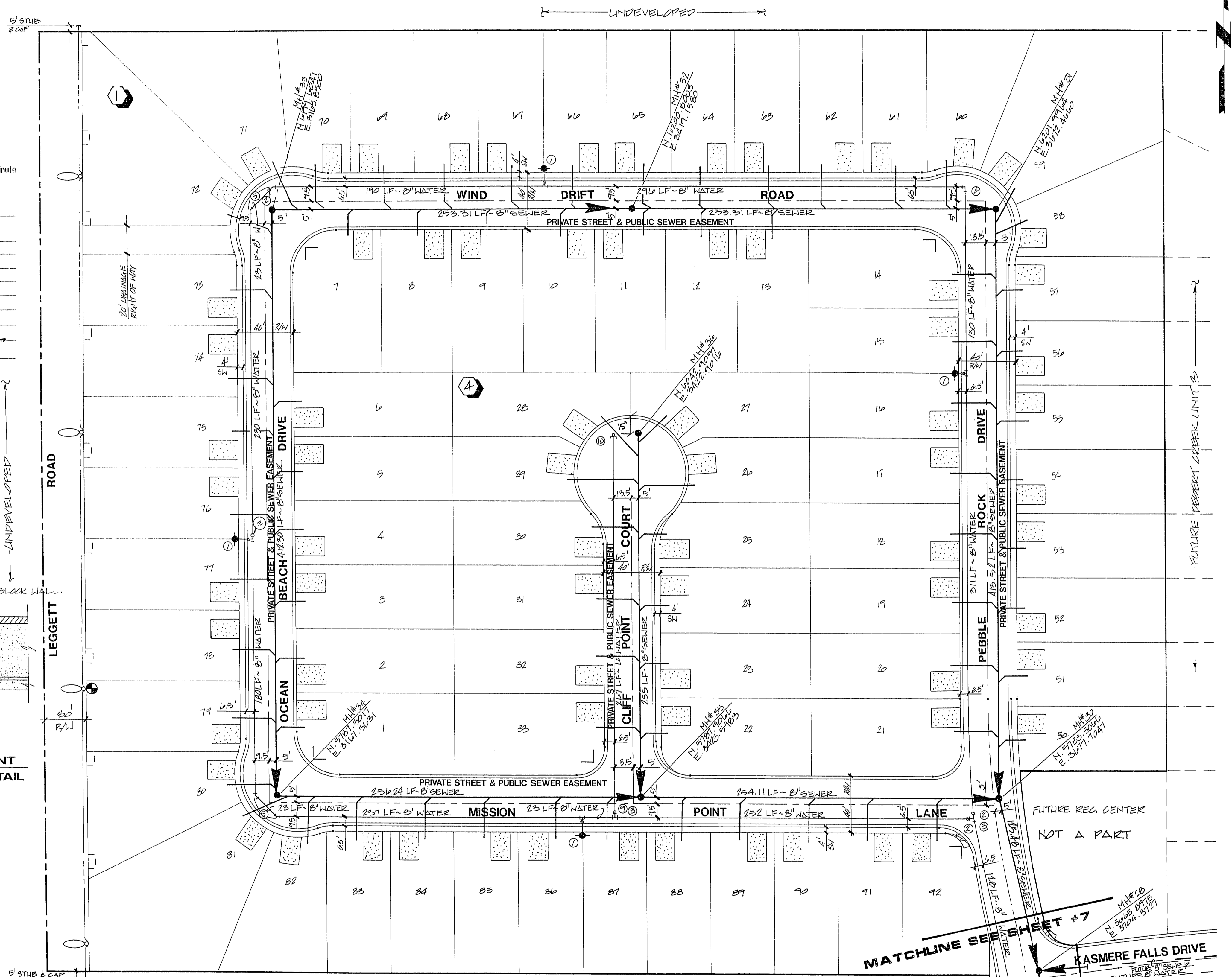
LEGEND & QUANTITY ESTIMATE

WATER	
① FIRE HYDRANT ASS'Y (DO NOT INCLUDE PIPE, TEE, VALVE, RISER)	7 EA.
② 8" GATE VALVE	11 EA.
③ 8" TEE	3 EA.
④ 8" 90° BEND	1 EA.
⑤ 8" 45° BEND	7 EA.
⑥ 8" 22 1/2° BEND	3 EA.
⑦ 8" CROSS	EA.
⑧ 8" X 1/2" TEE	1 EA.
⑨ 1" GATE VALVE	1 EA.
⑩ 2" BELOW OFF ASS'Y	2 EA.
3/4" SERVICE	105 EA.
5/8" METER BY LVVWV	105 EA.
8" WATER MAIN	352 LF.
1 1/2" WATER MAIN	207 LF.
⑪ 8" 8" M.I. TAPPING TEE & VALVE	1 EA.
⑫ 8" 1 1/4" BEND	2 EA.
⑬ 1" IRRIGATION SERVICE	1 EA.

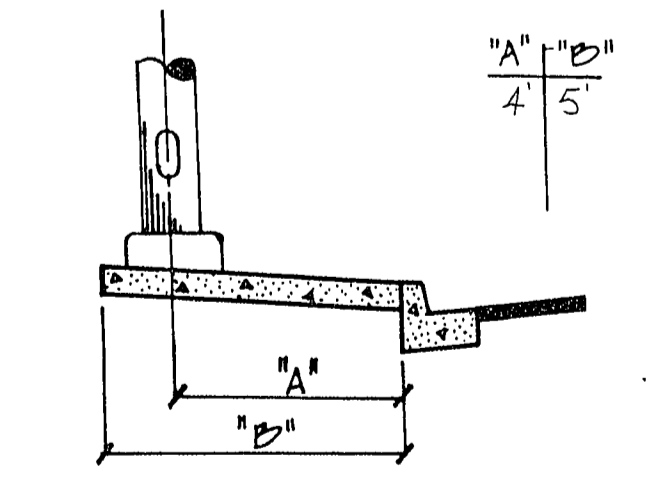
SEWER	
● STANDARD MANHOLE	14 EA.
8" SEWER MAIN	4431 LF.
4" SEWER LATERALS	2926 LF.
NYES	109 EA.
15" SEWER MAIN	110 LF.

OFFSITE STREETLIGHT	
⊙ 250 WATT LUMIN.	4 EA.
⊙ 100 WATT LUMIN.	4 EA.
--- 1/2" CONDUIT	1937 LF.
⊙ SERVICE POINT & R.O.G.	1 EA.
⊙ STREET SIGNS	9 EA.

- CITY OF LAS VEGAS
FIRE DEPARTMENT NOTES
- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CITY OF LAS VEGAS FIRE DEPARTMENT "HYDRANT" SPECIFICATIONS, "HYDRANT INSTALLATION SPECIFICATIONS" AND ORDINANCE #3545.
 - AUTHORIZED HYDRANTS FOR THIS PROJECT ARE:
 A. KENNEDY GUARDIAN
 B. MUELLER A-423 CENTURIAN
 C. GLOW MODEL 2546 REDALLION
 - ON ANY NEW HOME OR BUILDING INSTALLATION, ACCESSIBLE FIRE HYDRANTS SHALL BE INSTALLED BEFORE COMBUSTIBLE CONSTRUCTION COMMENCES AND SAID FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER WITH AN ADEQUATE WATER SUPPLY. CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT CENTERLINE OF STREET ADJACENT TO FIRE HYDRANT AS REQUIRED IN ORDINANCE #3545 TO IDENTIFY FIRE HYDRANT LOCATIONS.
 - CALL THE LAS VEGAS BUILDING DEPARTMENT AT 799-2071 FOR UNDERGROUND INSPECTION, PRESSURE AND FLUSH VERIFICATION OF ALL FIRE HYDRANTS AND FIRE LINES BEFORE COVERING.
 - PAINTING OF THE CURBS AND HYDRANT AND ANY WORK NECESSARY FOR PROTECTION OF HYDRANTS FROM PHYSICAL DAMAGE, PER ORDINANCE #3545, SHALL BE COMPLETED BEFORE APPROVAL BY THE CITY OF LAS VEGAS FIRE DEPARTMENT.
 - A PERMIT IS REQUIRED FROM THE FIRE DEPARTMENT FOR ON-SITE WATER LINE AND FIRE HYDRANT. THE PERMIT AND CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE ANY WORK BEGINNING.
 - A FLOW TEST MUST BE WITNESSED BY THE FIRE DEPARTMENT PRIOR TO OCCUPANCY FOR VERIFICATION OF REQUIRED ON-SITE WATER SUPPLY.
 - ALL ON-SITE FIRE MAIN MATERIALS MUST BE U.L. LISTED AND F.M. APPROVED.
 - FIRE HYDRANT SPACING:
 RESIDENTIAL - 500 FEET UNSPRINKLERED, 600 FEET SPRINKLERED
 COMMERCIAL, INCLUDING MULTI-FAMILY - 300 FEET UNSPRINKLERED, 400 FEET SPRINKLERED
 - NO FIRE HYDRANT SHALL BE LOCATED WITHIN THE REQUIRED RADIUS OF A CUL-DE-SAC OR WITHIN 20 FEET OF THE PERIMETER OF THE RADIUS OF THE CUL-DE-SAC.
 - NO FIRE HYDRANT SHALL BE LOCATED WITHIN 6 FEET OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREET LIGHT OR ANY OTHER OBSTRUCTION.
 - NOT MORE THAN 2 HYDRANTS CAN BE OUT OF SERVICE DUE TO A SINGLE MAIN BREAK.
 - THE TURNING RADIUS FOR ANY FIRE APPARATUS ACCESS ROAD AND/OR FIRE LANE, PUBLIC OR PRIVATE, SHALL BE NOT LESS THAN 45 FEET OUTSIDE RADIUS AND 22 FEET INSIDE RADIUS.
 - A FIRE APPARATUS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN 150 FEET FROM A FIRE DEPARTMENT VEHICLE ACCESS (SEE EXCEPTIONS IN UFC 88, SECTION 10.207).
 - ALL DEAD END FIRE APPARATUS ACCESS ROADS AND/OR FIRE LINES, PUBLIC OR PRIVATE, IN EXCESS OF 150 FEET IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURN AROUND AREA. SEE ORDINANCE #3545.



TYPICAL FIRE HYDRANT WALL CLEARANCE DETAIL



STREETLIGHT DETAIL

- CITY OF LAS VEGAS SEWER NOTES
- All construction and materials shall be in accordance with the latest edition of the City of Las Vegas Valley Water District's technical requirements; however, this water plan is NOT APPROVED FOR CONSTRUCTION at this time.
 - It shall be the contractor's responsibility to perform construction as per plans. Any additions, deletions, or changes shall first meet with the approval of the controlling agency.
 - Close 12" or 16" in curves where sewer or gas laterals pass under the curb.
 - Polystyrene (EPS) sewer pipe shall meet ASTM D-2034 SDR 35 specifications, installed with sand bedding and manholes of Type II grade.
 - All manholes in paved streets 60" R/W and larger, shall have concrete collars.
 - The manhole shall be used to connect sewer laterals to existing main lines up to 12" dia. size. Connections to 15" or larger mains shall require special procedures.
 - A sewer main crosses over a water main or less than 18" under a water main, must be reinforced concrete slusaged for a distance not less than six feet (6') to each side of the centerline of the water main.
 - All contractors installing sewer lines that will be under the jurisdiction of the controlling agency must be Class "A" Contractors.

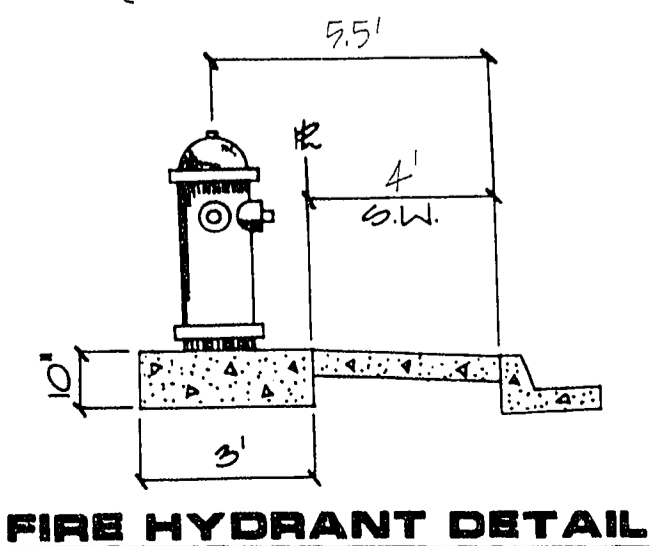
PROJECT NAME: **DESERT CREEK**
 Phase II Unit 1
 This project water plan complies with the Las Vegas Valley Water District's technical requirements; however, this water plan is NOT APPROVED FOR CONSTRUCTION at this time.

12/10/91 11-26-91
 L.V.W.D. sheets 1 of 7

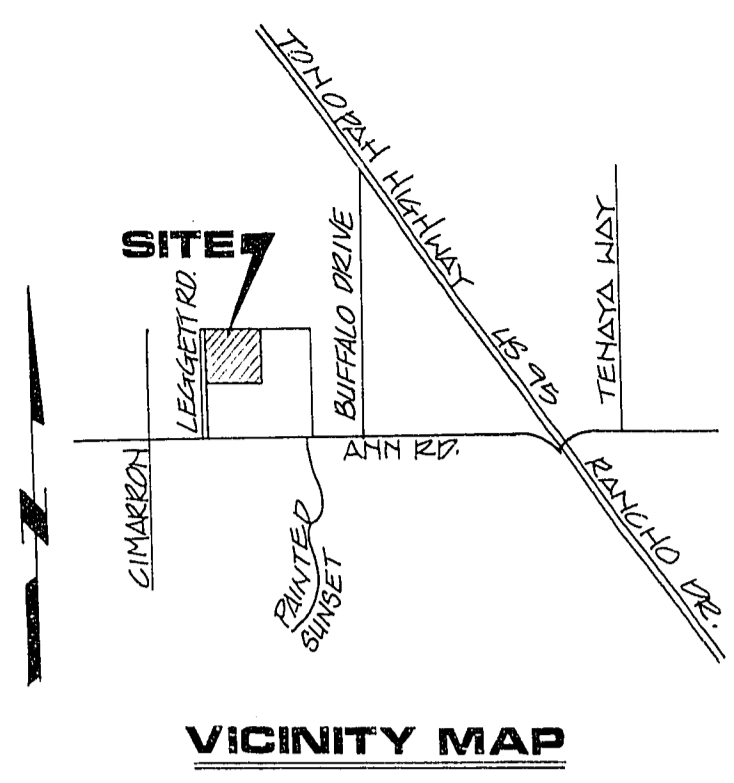
BENCHMARK:
 BM = U.S.G.S. Brass Cap and Conc. stamped S169 Reset 1963
 Elev. = 2357.04
 Approx. 400' No. Ann Road & 4.0' East of the East E.P. NB Lane of Oran Gragoon Expressway

STREET LIGHT NOTE

- All street light installations shall conform to the standard details and specifications of the City of Las Vegas, and shall also conform to the uniform standard specifications for public works construction of off-site improvements, Clark County area, latest edition, unless otherwise noted. ALL HAND PILES MUST BE INSTALLED, PILE CAPS BORED AND PULL BOX LIPS BATTER DOWN PRIOR TO ENERGIZING CIRCUIT. ALL WIRES MUST HAVE THW INSULATION. ALL BALLAST MUST BE MAG. RES.



FIRE HYDRANT DETAIL



DESERT CREEK ASSOCIATES
LAS VEGAS, NEVADA

CONSULTING ENGINEERS • PLANNERS • LAND SURVEYORS
 2727 SOUTH RAINBOW BOULEVARD
 LAS VEGAS, NEVADA 89102-5148 PHONE (702) 873-7550 FAX (702) 362-2597

DATE: 11-21-91
 BY: KPN, WLR
 SHEET: 6 OF 14 SHEETS

MASTER UTILITY PLAN
DESERT CREEK
 PHASE II UNIT 1

APPROVALS:
Richard G. Brennan 11-21-91
 CITY LAS VEGAS FIRE MARSHALL DATE
12/10/91
 LAS VEGAS VALLEY WATER DISTRICT DATE
12/10/91
 NEVADA POWER COMPANY
 NEVADA POWER COMPANY APPROVAL IS ONLY FOR THE PLACEMENT & CLEARANCE OF STREET LIGHT & SIGNAL LIGHT INSTALLATION.

NO. 1008-1
 DATE: ALA, 1991
 SCALE: 1"=40'
 SHEET: 6 OF 14 SHEETS

3074-4074-II-1