

**GENERAL UTILITY NOTES**

- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION.
- SOME SECTIONS OF EXISTING SEWER HAVE SHALLOW COVER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO AVOID DAMAGE TO THESE MAINS DURING ALL PHASES OF CONSTRUCTION.
- ALL EXISTING MANHOLES, VALVE BOXES, AND UTILITY RISERS WITHIN THE LIMITS OF CONSTRUCTION SHALL BE ADJUSTED TO GRADE AS NECESSARY.
- REFER TO M.P.E. DRAWINGS FOR THE EXACT LOCATION AND SIZES OF EXISTING SERVICE LATERALS.
- ON-SITE WATER MAINS SHALL BE ACP, PVC OR APPROVED EQUAL, AND SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE UNIFORM PLUMBING CODE.
- THE QUANTITY ESTIMATES SHOWN HEREON ARE APPROXIMATE AND NO ONE IS TO RELY UPON THEM FOR QUANTITIES. EACH AND EVERY CONTRACTOR SHALL HAVE A SET OF APPROVED PLANS AND SPECIFICATIONS ON THE JOB SITE AT ALL TIMES AND SHALL RELY ON THEM TO A HIGHER DEGREE THAN THE CONSTRUCTION STAKES IN PROSECUTING THE WORK.
- PRIVATE AND PUBLIC UTILITIES AS SHOWN ON THE PLANS REFLECT AVAILABLE RECORD DATA AND THEIR SIZE AND LOCATION HAVE NOT BEEN VERIFIED IN THE FORM OF UNDERGROUND BORING EXPLORATION BUT RATHER RESTRICTED TO SURFACE VISIBLE ITEMS.

**CLV 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 #8077.
- AUTHORIZED HYDRANTS FOR THIS PROJECT ARE:  
A - KENNEDY GUARDIAN  
B - WELLS 4-43 COLUMBIAN  
C - CLOW MODEL 2546 MEDALLION
- ON ANY NEW HOME OR BUILDING INSTALLATION ACCESSIBLE FIRE HYDRANTS SHALL BE INSTALLED BEFORE COMPLETION OF CONSTRUCTION. COMMERCIAL AND SHOP FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER WITH AN ACCESSIBLE WATER MAIN.
- CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT CENTER-LINE OF STREET ADJACENT TO FIRE HYDRANT AS REQUIRED IN ORDINANCE #8077 TO IDENTIFY FIRE HYDRANT LOCATIONS.
- CALL THE LAS VEGAS FIRE DEPARTMENT AT 226-3071 FOR UNDERGROUND INSPECTION, PRESSURE AND FLOW VERIFICATION OF ALL FIRE HYDRANTS AND FIRE LINES BEFORE CONSTRUCTION.
- PAINTING OF THE CURBS AND HYDRANT AND ANY WORK NECESSARY FOR PROTECTION OF HYDRANTS FROM PHYSICAL DAMAGE PER ORDINANCE #8077 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 DEPARTMENT OFFICE TO ANY WORK BEING DONE FROM A FIRE DEPARTMENT VEHICLE ACCESS (SEE EXCEPTIONS IN U.P.C. SECTION 10-2-203 AND 10-2-204).
- 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 A N.W.A. APPROVED.
- FIRE HYDRANT SPACING:  
RESIDENTIAL - 500 FEET UNSPRINKLED, 500 FEET SPRINKLED  
COMMERCIAL INCLUDING MULTI-FAMILY - 300 FEET UNSPRINKLED, 400 FEET SPRINKLED
- NO FIRE HYDRANT SHALL BE LOCATED WITHIN THE REQUIRED RADIUS OF A CURB CUT OR WITHIN 20 FEET OF THE PERIMETER OF THE RADIUS OF THE CURB CUT.
- NO FIRE HYDRANT SHALL BE LOCATED WITHIN 6 FEET OF ANY CURB OR STREET LIGHT 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 FOR FIRE LANE, PUBLIC OR PRIVATE SHALL BE NOT LESS THAN 40 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 100 FEET FROM A FIRE DEPARTMENT VEHICLE ACCESS (SEE EXCEPTIONS IN U.P.C. SECTION 10-2-203 AND 10-2-204).
- 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 TURNAROUND AREA. SEE ORDINANCE #8077.
- ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF LAS VEGAS GUIDELINES FOR AUTOMATIC EMERGENCY VEHICLE ACCESS GATES.

**CITY OF LAS VEGAS SEWER NOTES**

- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN & CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS (CLARK COUNTY AREA, NEVADA, AS AMENDED). IN ALL CASES, THE CONTRACTOR SHALL SUBMIT THE UNIFORM STANDARD SPECIFICATIONS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATIONS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN CONSTRUCTION AS PER PLANS. ANY ADDITIONS, DELETIONS OR CHANGES SHALL FIRST MEET WITH THE APPROVAL OF THE CONTROLLING AGENCY.
- CONCRETE "T" OR "C" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
- POLYETHYLENE (PE) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE B GRAVEL.
- ALL MANHOLES IN PAVED STREETS 80 R/W AND LARGER SHALL HAVE CONCRETE COLLARS.
- TEE SADDLES SHALL BE USED TO CONNECT SEWER LATERALS TO EXISTING MAIN LINES UP TO 12" DIA. IN SIZE. CONNECTIONS TO 15" OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES.
- A SEWER MAIN CROSSING OVER A WATER MAIN OR LESS THAN 18" UNDER A WATER MAIN MUST BE REINFORCED CONCRETE ENCASED FOR A DISTANCE NOT LESS THAN TEN (10) TO EACH SIDE OF THE CONTINUING OF THE WATER MAIN.
- ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CONTROLLING AGENCY MUST BE CLASS "A" CONTRACTORS.
- THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAIN WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN ONE (1) INCH PER FOOT FROM THE APPROVED CONSTRUCTION PLANS. SEWER MAINS THAT EXCEED THE FOLLOWING DEFLECTIONS SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY.

**LAS VEGAS VALLEY WATER DISTRICT NOTES**

- NO WORK SHALL BE DONE UNTIL THE WATER PLANS HAVE BEEN RELEASED FOR CONSTRUCTION BY THE LVWD. FOLLOWING WATER PLAN APPROVAL, 48 HOURS NOTICE SHALL BE GIVEN TO THE LVWD CUSTOMER SERVICE DEPARTMENT (226-7171) PRIOR TO THE START OF CONSTRUCTION. NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO A LVWD INSPECTION.
- ALL WORK SHALL CONFORM TO LVWD STANDARD PLANS, DRAWINGS AND SPECIFICATIONS, LATEST EDITION.
- ALL WORK EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2 SHALL BE DONE IN ACCORDANCE WITH THE MOST CURRENT DRAFT OF EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA.
- A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVWD.
- ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE OF COPPER TUBING WITH LVWD APPROVED SERVICE SADDLES.
- ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
- ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY AND CURB OUTLINES.
- THE FOLLOWING REQUIREMENTS MUST BE MET IN THE EVENT A WATER LINE AND SANITARY OR STORM SEWER LINE CROSS:  
A. MINIMUM EIGHTEEN (18) INCH VERTICAL SEPARATION (OUTSIDE TO OUTSIDE) MUST BE MAINTAINED WHEN THE WATER LINE IS INSTALLED OVER THE SANITARY OR STORM SEWER LINE. IF THE VERTICAL SEPARATION CANNOT BE MAINTAINED, THE WATER LINE MUST BE PLACED UNDER THE SANITARY OR STORM SEWER LINE. THE SADDLE OR SERVICE SIZES LINE MUST BE CONSTRUCTED WITH ONE OF THE FOLLOWING: (A) AS SHOWN ON THESE PLANS.  
B. EQUIVALENT WITH FOUR (4) INCH CONCRETE (MINIMUM) C. SLEEVING WITH POTABLE WATER SUPPLY QUALITY PIPE.  
EACH PROVISION MUST EXTEND ALONG THE SANITARY OR STORM SEWER ON EITHER SIDE OF THE MAIN, A MINIMUM 10 FOOT DISTANCE, PERPENDICULAR TO THE WATER MAIN EXTERIOR.
- WARNING TAPE SHALL BE REQUIRED OVER ALL MAINS ALL SIX (6) INCH DIAMETER AND LARGER SERVICE LATERALS AND ANY SERVICE LATERAL NOT INSTALLED PERPENDICULAR TO THE MAIN IN ACCORDANCE WITH STANDARD PLATE NO. 27.
- ALL WATER FACILITIES SHALL BE FILLED, DISINFECTED, PRESSURE TESTED, FLOWED, FILLED AND AN ACCEPTABLE WATER SAMPLE OBTAINED PRIOR TO CONNECTION TO THE LVWD DISTRIBUTION SYSTEM.
- THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVWD CENTRAL STORES. TELEPHONE 226-3152 FORTY-EIGHT (48) HOURS PRIOR TO PICKUP.
- CONSTRUCTION MAY INTERRUPT SERVICE WITH LVWD APPROVAL AND PROPER NOTIFICATION BETWEEN THE HOURS OF 10:00 A.M. AND 5:00 P.M. PROPER NOTIFICATION MUST BE GIVEN. ANY INTERRUPT SERVICE FEES SHALL BE INSTALLED WITHOUT LVWD REIMBURSEMENT. ANY TEMPORARY SERVICE FEES MUST HAVE PRIOR LVWD APPROVAL.
- ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVWD'S APPROVED MATERIALS AND MANUFACTURERS LISTING FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS.

**LEGEND & ESTIMATE OF WATER QUANTITIES**

①	6" X 6" MECHANICAL JOINT	1 EA
②	6" TAPPING VALVE	1 EA
③	FIRE HYDRANT ASSEMBLY	2 EA
④	8" BY 6" REDUCER	2 EA
⑤	6" CAP W/2" BLOW-OFF	1 EA
⑥	1" COPPER SERVICE LATERAL	10 EA
⑦	3/4" METER FROM LVWD	10 EA
⑧	8" PVC	426 LF
⑨	6" PVC	130 LF
⑩	5/8" METER FROM LVWD	1 EA
⑪	3/4" RPPA FROM LVWD	1 EA

**SEWER QUANTITIES ESTIMATE**

MANHOLE	3 EA
8" PVC MAIN	512 LF
4" PVC SERVICE LATERAL	10 EA

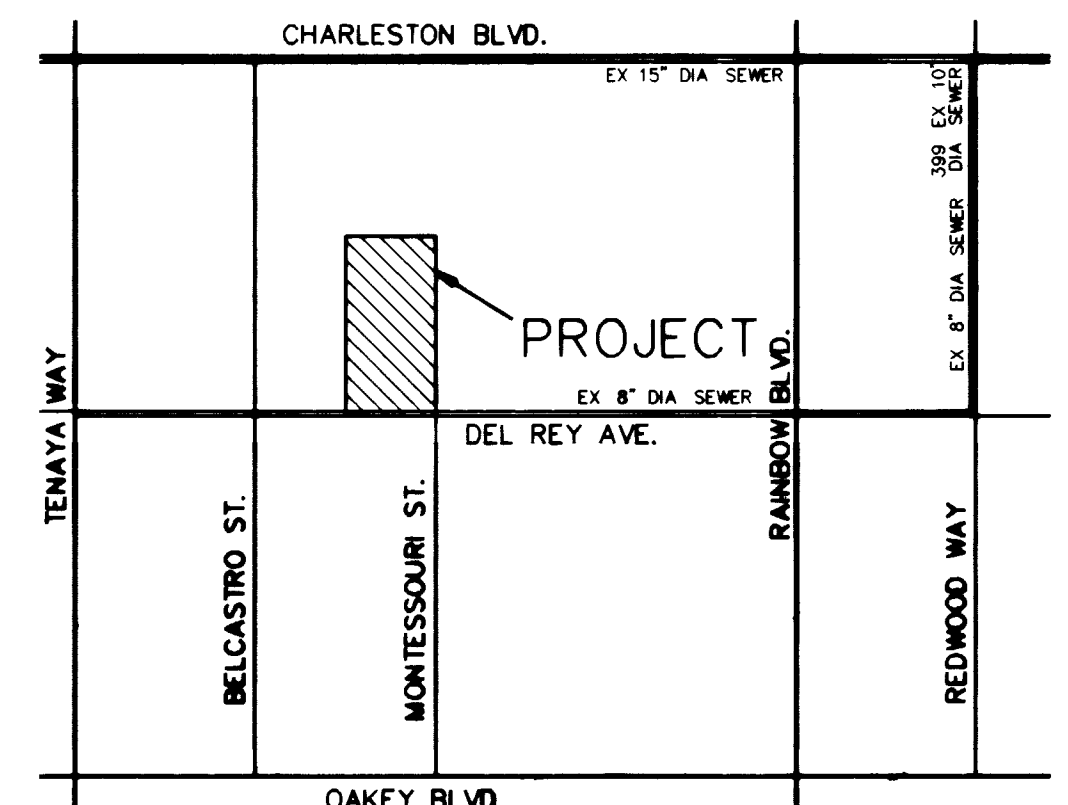
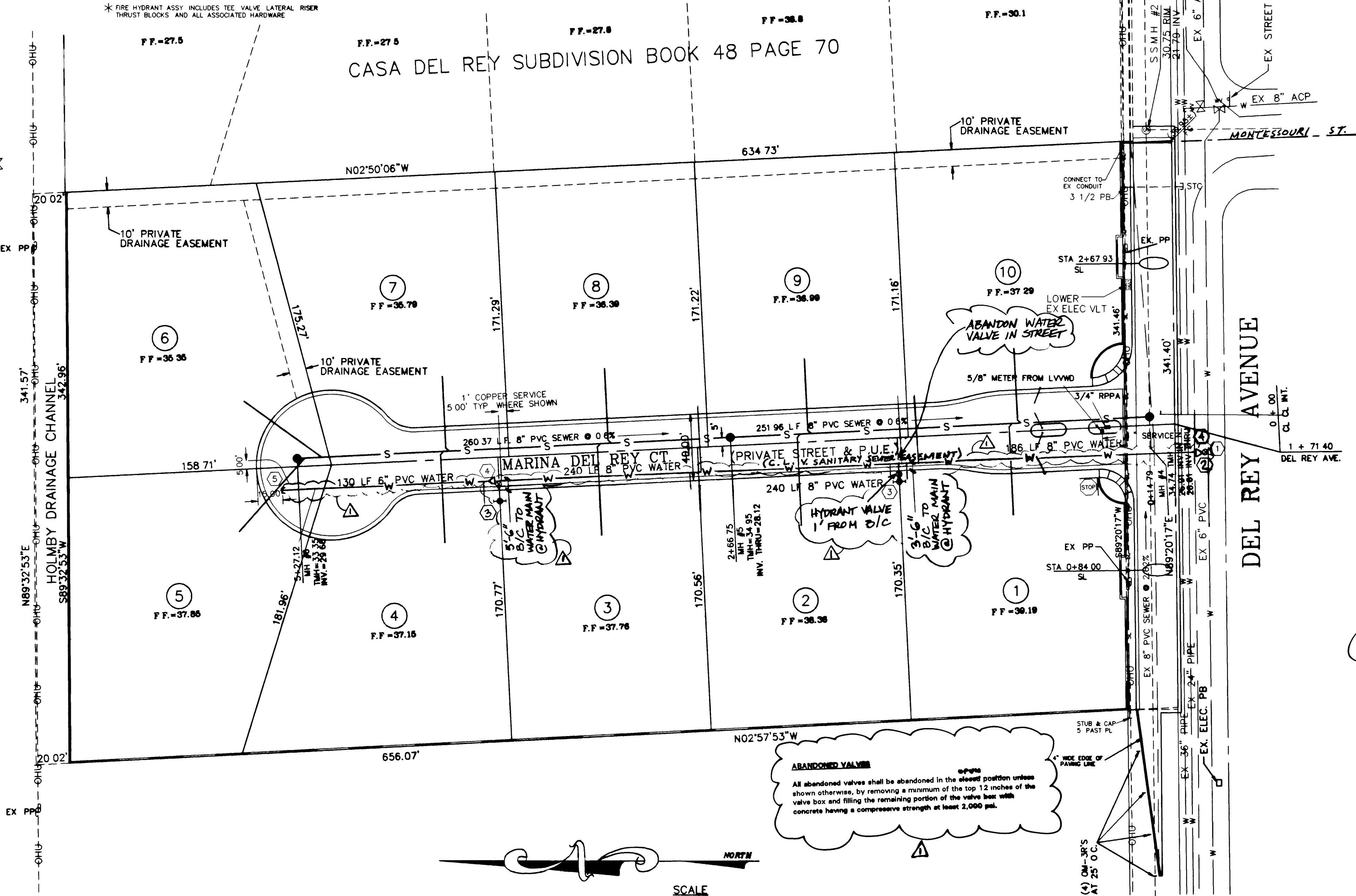
**STREET LIGHT QUANTITIES**

100 WATT HPS LUMINAIRE	2 EA
1 1/4" PVC CONDUIT	345 LF

**SEWER CONTRIBUTION**

10 ERU @ 90,000 GPD/EACH  
APPROXIMATELY 2466 GPD TOTAL  
PEAK FACTOR = 3.3  
APPROXIMATE PEAK FLOW = 8,137 GPD

2 working days  
Call before you Dig  
1-800-227-2600



VICINITY MAP  
N.T.S.

**LAS VEGAS FIRE DEPARTMENT**

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

Based on:  
 Square footage 3600  
 Largest area between area separation walls N/A  
 Height 25'  
 Type of Construction TYPE V - WOOD FRAME  
 Exposures 10'  
 Sprinkler System NO  
 Occupancy R-3  
 Roof Construction TILE  
 Revisions  
 Date

**APPROVALS:**

*[Signature]* 6-20-95  
CLV FIRE MARSHALL DATE

*[Signature]* 8-10-95  
LAS VEGAS VALLEY WATER DISTRICT DATE

*[Signature]* 6-27-95  
NEVADA POWER CO. DATE

THIS APPROVAL IS ONLY FOR THE PLACEMENT AND CLEARANCE OF STREET LIGHT AND SIGNAL LIGHT INSTALLATIONS.

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 ESN 041.

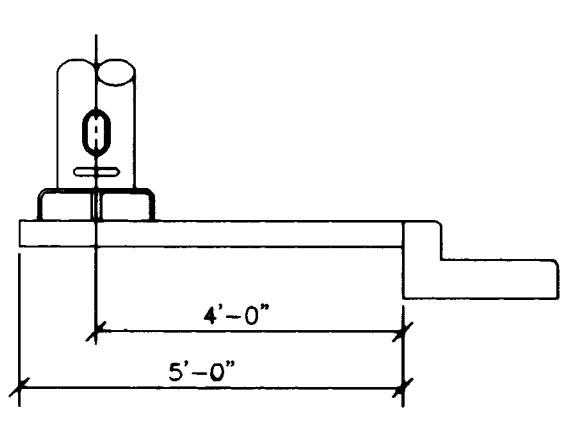
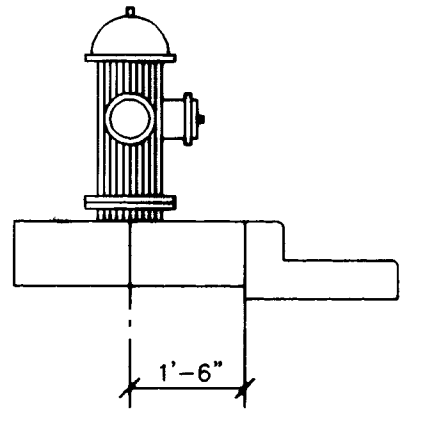
ALL METERS 1" AND SMALLER REQUIRE 1" COPPER SERVICE LATERALS. A 1" X 3/4" ANGLE METER STOP IS REQUIRED WITH 5/8" OR 3/4" METERS. MINIMUM 3/4" METER BOX DETAILS OF THE ABOVE INSTALLATION ARE AVAILABLE FROM THE ENGINEERING SERVICES DIVISION AND FROM DISTRICT INSPECTORS.

PROJECT NAME: DEL REY ESTATE

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 and this signature does not provide or imply a water connection.

**CLV STREET LIGHT NOTES**

- 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 OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, LATEST EDITION UNLESS OTHERWISE NOTED OR SPECIFICALLY APPROVED ON THESE PLANS.



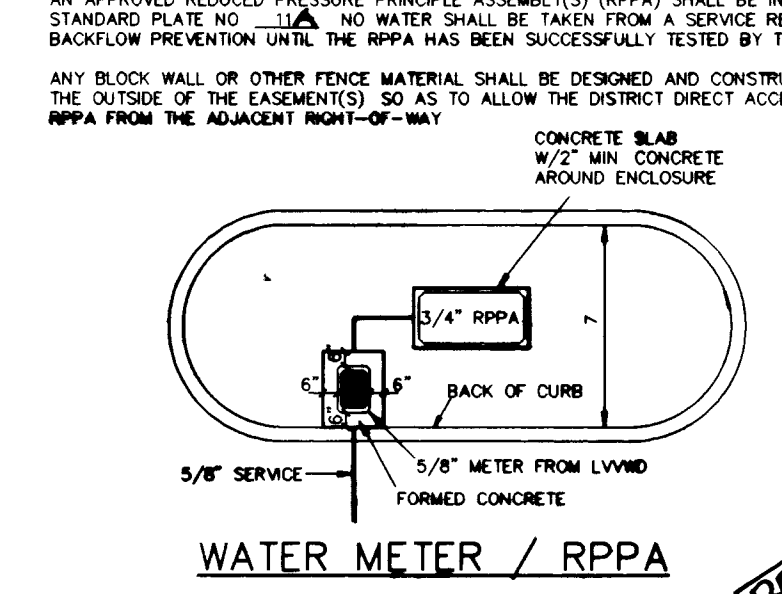
ON-SITE FIRE HYDRANT LOCATION

ST. LIGHT LOCATION

**LEGEND**

- S SEWER MAIN
- W WATER MAIN
- SL STREET LIGHT CONDUIT
- SEWER MANHOLE
- 100 W HPS STREET LIGHT
- 200 W HPS STREET LIGHT
- EXISTING STREET LIGHT
- FIRE HYDRANT
- STREET NAME SIGN
- STOP SIGN

**REDUCED PRESSURE PRINCIPLE ASSEMBLY**



**JOHN R. VEGA CONSULTING ENGINEERS INC.**  
 DEL REY ESTATES UTILITY PLAN  
 SHEET C-2 OF 3  
 DATE 6-20-95  
 DRAWN BY JRV  
 CHECKED BY R.J.L.  
 3001 SPRING MOUNT RD. SUITE #8  
 LAS VEGAS, NV 89102  
 (702) 368-4400

