LAS VEGAS FIRE DEPARTMENT

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

Based on:

Square footage 1086 – 2491

Largest area between area seperation walls N/A

Height 21 FEET

Type of Construction FRAME/STUCCO

Exposures 15 FEET

Sprinkler System NONE

Occupancy RESIDENTIAL

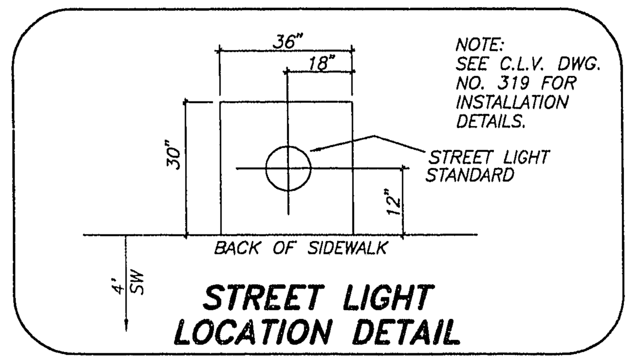
Roof Construction TILE

Review By: [signature]

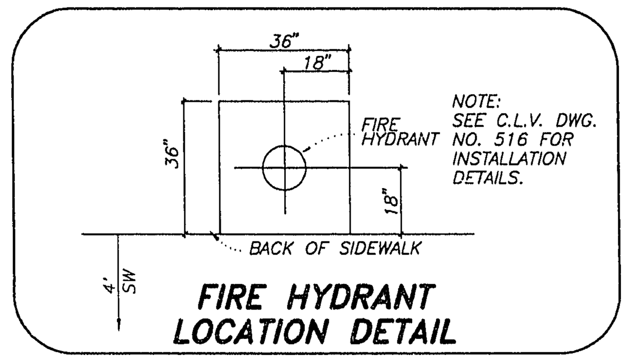
Date: 11-17-95

LEGEND

(symbol)	CONCRETE DRIVEWAY
(symbol)	250W HPS LUMINAIRE W/11 GA. POLE
(symbol)	100W HPS LUMINAIRE W/11 GA. POLE
P.B.	NO. 3 1/2 CONCRETE PULL BOX W/METAL COVER
(symbol)	STOP SIGN
(symbol)	STREET SIGN
(symbol)	S.P.O.C. (SERVICE POINT OF CONNECTION)
(symbol)	IRRIGATION ELECTRICAL METER
(symbol)	RIGHT OF WAY LINE
(symbol)	EASEMENT LINE
EX.8"W	EXIST. WATER LINE
S	EXIST. SEWER LINE
(symbol)	FIRE HYDRANT W/LEAD AND G.V.
W	WATER LINE
MH #3	SEWER LINE WITH MANHOLE
(symbol)	SEWER LATERAL
(symbol)	GATE VALVE
(symbol)	1 1/4" PVC CONDUIT (STREET LIGHTS)



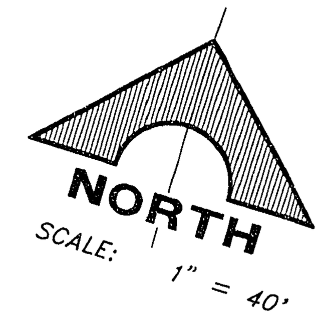
STREET LIGHT LOCATION DETAIL



FIRE HYDRANT LOCATION DETAIL

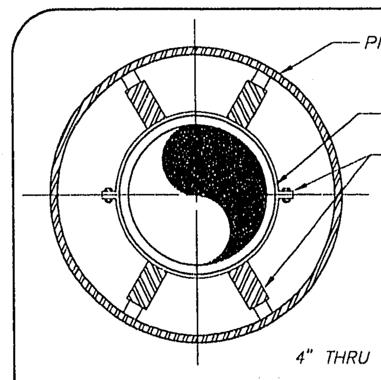
EASEMENTS AREAS

ALL PUBLIC EASEMENT SURFACE AREAS ARE TO BE PRIVATLY MAINTAINED BY HOME OWNERS ASSOCIATIONS.



FIRE DEPARTMENT NOTES

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CITY OF LAS VEGAS FIRE DEPARTMENT "HYDRANT SPECIFICATIONS", "HYDRANT INSTALLATION SPECIFICATIONS" AND ORDINANCE #3677.
2. AUTHORIZED HYDRANTS FOR THIS PROJECT ARE:
   A – KENNEDY GUARDIAN
   B – MUELLAR A-423 CENTURIAN
   C – CLOW MODEL 2546 MEDALLION
3. 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.
4. CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT CENTER-LINE OF STREET ADJACENT TO FIRE HYDRANT AS REQUIRED IN ORDINANCE #3677 TO IDENTIFY FIRE HYDRANT LOCATIONS.
5. CALL THE LAS VEGAS BUILDING DEPARTMENT AT 229-2071 FOR UNDER-GROUND INSPECTION, PRESSURE AND FLUSH VERIFICATION OF ALL FIRE HYDRANTS AND FIRE LINES BEFORE COVERING.
6. PAINTING OF THE CURBS AND HYDRANT AND ANY WORK NECESSARY FOR PROTECTION OF HYDRANTS FROM PHYSICAL DAMAGE PER ORDINANCE #3677 SHALL BE COMPLETED BEFORE APPROVAL BY THE CITY OF LAS VEGAS FIRE DEPARTMENT.
7. A PERMIT IS REQUIRED FROM THE FIRE DEPARTMENT FOR ON-SITE WATER LINE AND FIRE HYDRANT. THE PERMIT AND CONTRACTORS MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER PRIOR TO ANY WORK BEGINNING.
8. A FLOW TEST MUST BE WITNESSED BY THE FIRE DEPARTMENT PRIOR TO OCCUPANCY FOR VERIFICATION OF REQUIRED ON-SITE WATER SUPPLY.
9. ALL ON-SITE FIRE MAIN MATERIALS MUST BE U.L. LISTED AND A.W.W.A. APPROVED.
10. FIRE HYDRANT SPACING:
    RESIDENTIAL – 500 FEET UNSPRINKLED, 600 FEET SPRINKLED
    COMMERCIAL, INCLUDING MULTI-FAMILY – 300 FEET UNSPRINKLED, 400 FEET SPRINKLED.
11. NO FIRE HYDRANTS 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.
12. NO FIRE HYDRANT SHALL BE LOCATED WITHIN 6 FEET OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREET LIGHT OR ANY OTHER OBSTRUCTION.
13. NOT MORE THAN 2 HYDRANTS CAN BE OUT OF SERVICE DUE TO A SINGLE MAIN BREAK.
14. THE TURNING RAIDIUS 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.
15. 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 91, SECTION 10.203).
16. ALL DEAD END FIRE APPARATUS ACCESS ROADS AND/OR FIRE LANES PUBLIC OR PRIVATE IN EXCESS OF 150 FEET IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURNAROUND AREA. SEE ORDINANCE #3677
17. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF LAS VEGAS GUIDELINES FOR AUTOMATIC EMERGENCY VEHICLE ACCESS GATES.



TYPICAL CASING SECTION

NOTE:

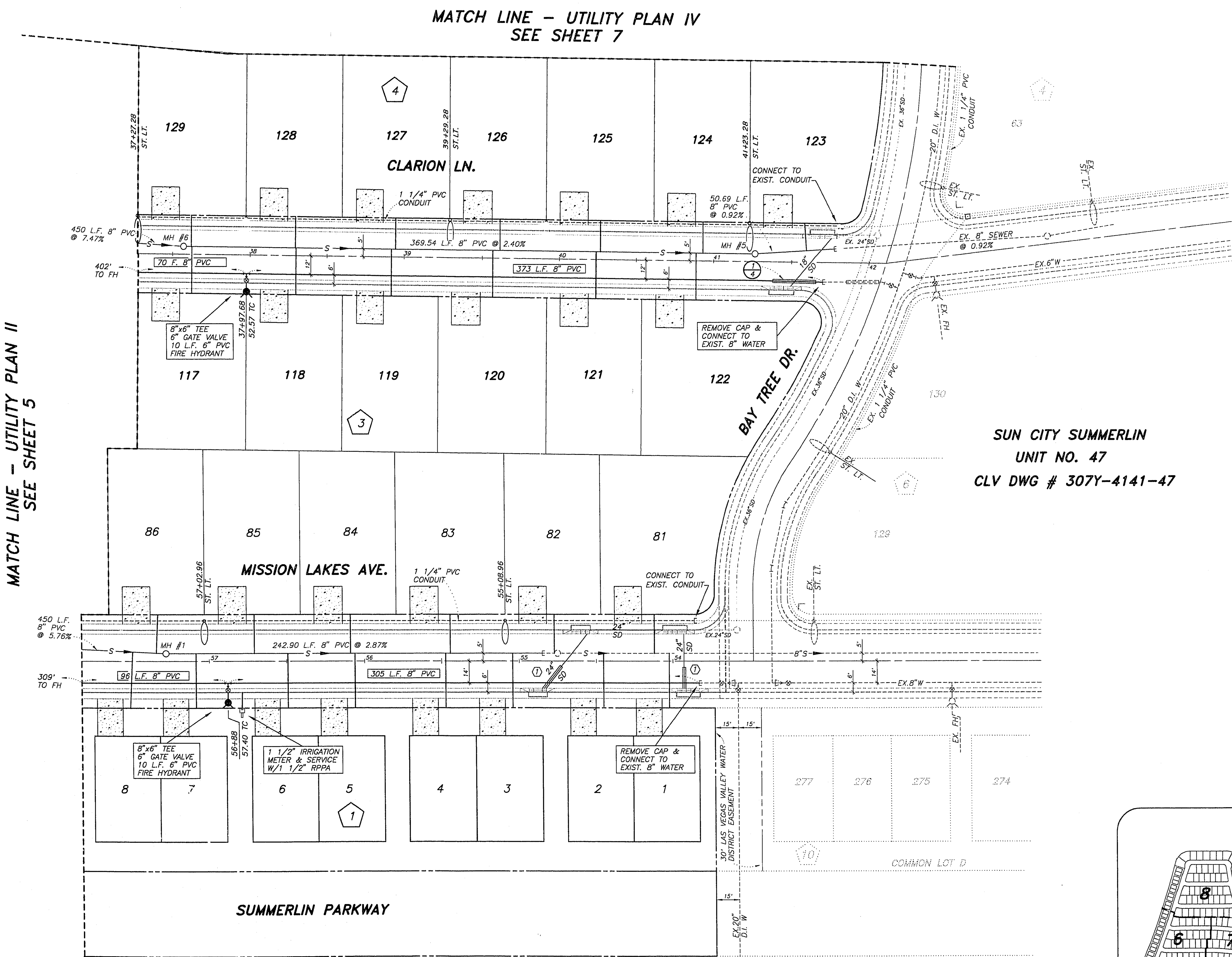
1. STEEL PIPE CASING SHALL BE FABRICATED FROM A MIN. OF 1/4" THICK STEEL PLATES, CONFORMING TO THE REQUIREMENTS OF ASTM A283, GRADE B,C, OR D. ALL JOINTS SHALL BE WELDED. INTERIOR JOINTS SHALL BE GROUNDED TO A SMOOTH FINISH. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWWA C201, "AWWA STANDARD FOR FABRICATED ELECTRICALLY WELDED STEEL WATER PIPE." COATINGS FOR STEEL CASING ARE NOT REQUIRED.
2. PIPE CASING SHALL BE LAID TRUE TO LINE AND GRADE WITH NO BENDS OR CHANGES IN GRADE FOR THE FULL LENGTH OF THE CASING.
3. THE PIPE SHALL BE SUPPORTED AT EACH END OF EACH JOINT WITH SPACERS. AFTER INSTALLATION OF THE WATER PIPE, THE CASING PIPE SHALL BE SEALED AT BOTH ENDS WITH CASCADE MODEL CCES END SEALS.

1/4 CASING DETAIL

NOT TO SCALE

PROPERTY IN 3320 ZONE

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. PRV'S ARE THE DEVELOPER'S RESPONSIBILTY AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVVWD FACILITIES.



LAS VEGAS VALLEY WATER DISTRICT STANDARD NOTES

1. NO WORK SHALL BEGIN ON THE WATER PLANS UNTIL THEY HAVE BEEN RELEASED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING APPROVAL OF THE PLANS, NOTICE MUST BE GIVEN TO THE LVVWD COMMUNICATION SUPPORT CENTER (258-7171) PRIOR TO THE START OF CONSTRUCTION. NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO A LVVWD INSPECTION.
2. ALL WORK SHALL CONFORM TO LVVWD STANDARD PLATES, DRAWINGS AND SPECIFICATIONS AND THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS (UDACS), LATEST EDITION.
3. ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2, SHALL BE DONE IN ACCORDANCE WITH THE MOST CURRENT DRAFT OR ADDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENTS, CLARK COUNTY AREA.
4. A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVWD.
5. ALL SERVICE LATERALS TWO (2") INCHES IN DIAMETER AND SMALLER SHALL BE COPPER TUBING WITH LVVWD APPROVED SERVICE SADDLES.
6. ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
7. ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY AND CURB GUTTERS.
8. THE FOLLOWING REQUIREMENTS MUST BE MET IN THE EVENT A WATER LINE AND SANITARY OR STORM SEWER LINE CROSS:

   A MINUMUM 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 OR THE WATER LINE MUST BE PLACED UNDER THE SANITARY OR STORM SEWER LINE, THE SANITARY OR STORM SEWER LINE MUST BE CONSTRUCTED WITH ONE OF THE FOLLOWING OR, AS SHOWN ON THESE PLANS:

   A. POTABLE WATER SUPPLY QUALITY MATERIAL.
   B. ENCASEMENT, 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.
9. 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.
10. ALL WATER FACILITIES SHALL BE FILLED, DISINFECTED, PRESSURE TESTED, FLUSHED, FILLED AND AN ACCEPTABLE WATER SAMPLE OBTAINED, PRIOR TO CONNECTION TO THE LVVWD'S DISTRIBUTION SYSTEM.
11. THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 FORTY-EIGHT HOURS PRIOR TO PICKUP.
12. CONSTRUCTION MAY INTERRUPT SERVICE, WITH LVVWD APPROVAL AND PROPER NOTIFICATION, BETWEEN THE HOURS OF 10 P.M. AND 6 AM, SUNDAY THROUGH THURSDAY. CIRCUMSTANCES MAY REQUIRE TEMPORARY SERVICE FEEDS BE INSTALLED, WITHOUT LVVWD REIMBURSEMENT. ANY TEMPORARY SERVICE FEED MUST HAVE PRIOR LVVWD APPROVAL.
13. ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVVWD'S PRE-APPROVED MATERIALS AND MANUFACTURERS LISTING FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS.

REVISED: APRIL 25, 1995

ESTIMATE OF QUANTITIES

STD. FIRE HYDRANT	22	EA.
1 1/2" SERVICE W/METER BOX (IRRIGATION)	4	EA.
1 1/2" METER BY L.V.V.W.D. (IRRIGATION)	4	EA.
1" SERVICE W/3/4" METER BOX	279	EA.
3/4" METER BY L.V.V.W.D.	225	EA.
5/8" METER BY L.V.V.W.D. (FOR DUPLEX UNITS ONLY)	54	EA.
BLOW OFF ASSEMBLY	13	EA.
20" DUCTILE IRON	700	L.F.
10" PVC	1,609	L.F.
8" PVC	6,025	L.F.
6" PVC	3,272	L.F.
20" GATE VALVE W/ 6" BY PASS	2	EA.
10" GATE VALVE	4	EA.
8" GATE VALVE	8	EA.
6" GATE VALVE	21	EA.
20"x 20" CROSS	2	EA.
20"x 20" TEE	1	EA.
10"x8" TEE	5	EA.
10"x6" TEE	3	EA.
8"x 8" TEE	5	EA.
8"x 6" TEE	19	EA.
20"x10" REDUCER	1	EA.
20"x8" REDUCER	4	EA.
10"x 8" REDUCER	1	EA.
10"x 6" REDUCER	1	EA.
8"x 6" REDUCER	18	EA.
6" 90° BEND	1	EA.
10" 45° BEND	1	EA.
8" 45° BEND	2	EA.
20" 22 1/2° BEND	1	EA.
10" 22 1/2° BEND	1	EA.
8" 22 1/2° BEND	9	EA.
20" CAP	2	EA.
8" CAP	1	EA.
16" CASING PIPE	28	L.F.

TRAFFIC SIGN QUANTITIES

6" D-3 STREET NAME SIGN	21	EA.

CONDITIONAL APPROVAL OF VALVED OUTLET (6" AND LARGER)

THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS. INSTALLATION OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS ACTUALLY DEVELOPED, THE DEVELOPER SHALL ANANDON THE OUTLETS AT THE CONNECTION TO ACTIVE MAIN IN ACCORDANCE WITH THE DISTRICT'S STANDARDS AND AT THE DEVELOPER'S EXPENSE.

(1) 4" CONCRETE ENCASEMENT TO 10' EACH SIDE OF WATER LINE

NOTE: ALL SEWERS SHOWN ON THIS SHEET ARE PUBLIC SEWERS.

STREET LIGHTING 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. SEE UNIFORM STANDARD DRAWING NO. 319.

SEWAGE CONTRIBUTION

279 RESIDENTIAL UNITS x 250 G.P.D. = 69,750 G.P.D.
PEAKING FACTOR = 3.5 (FROM TABLE C, PG. T-3)
PEAK FLOW: 69,750 x 3.5 = 244,125 G.P.D.

REDUCED PRESSURE PRINCIPLE ASSEMBLY – 4 LOCATIONS

APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE DISTRICT'S STANDARD PLATE NO. 11A. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVVWD.

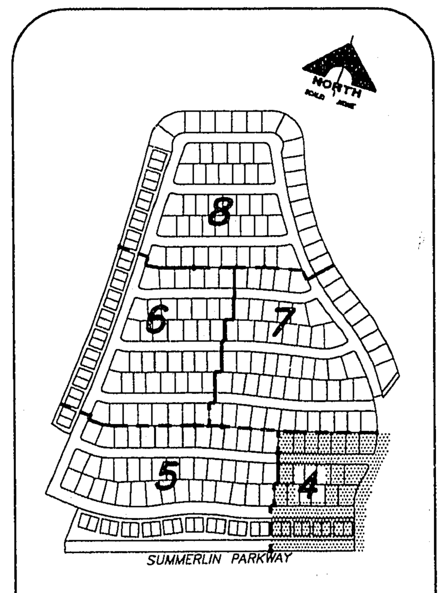
ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S), SO AS TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY.

BENCHMARKS

C.L.V. BM. STA. OLVOO–18SEE6
RIVET & PLATE IN TOP OF CURB, N.E. RETURN OF DEL WEBB BLVD. & LAKE MEAD BLVD.
ELEVATION: 2618.318' NGVD29
ELEVATION: 798.8092m NAVD88

PROJECT BENCHMARK: BRASS CAP IN IRON PIPE, 102' NORTH AND 64' WEST OF THE INTERSECTION OF SUN CITY BLVD. AND THOMAS W. RYAN BLVD..
N 532,694.700, E 577,451.546
ELEVATION: 2851.66

Avoid cutting underground utility lines. It's costly.
Call before you Dig.
1-800-227-2600
UNDERGROUND SERVICE (USA)



KEY MAP

APPROVED FOR CONSTRUCTION

[signature] 12/01/95
LAS VEGAS VALLEY WATER DISTRICT DATE

REV	DATE	DESCRIPTION	C.L.V.	DATE

RECOMMENDED SONNY W. NEIGHBORS P.E. NO. 10118 DATE 11/16/95

PROFESSIONAL ENGINEER – STATE OF NEVADA – SONNY W. NEIGHBORS No. 10118

G.C. WALLACE, INC.
Engineering/Architecture
1555 SOUTH RAINBOW BLVD./LAS VEGAS, NEVADA 89102

DEL WEBB COMMUNITIES, INC.
SUN CITY SUMMERLIN – UNIT NO. 49
UTILITY PLAN I

SHEET 4 OF 32 SHEETS

JOB NO. 701.244 PLOTTED: 11/09/95 2:29 pm DRAWING: C:\49\UTILITY\D49-4 BY: cep

12-12-93 307Y-4141-49