

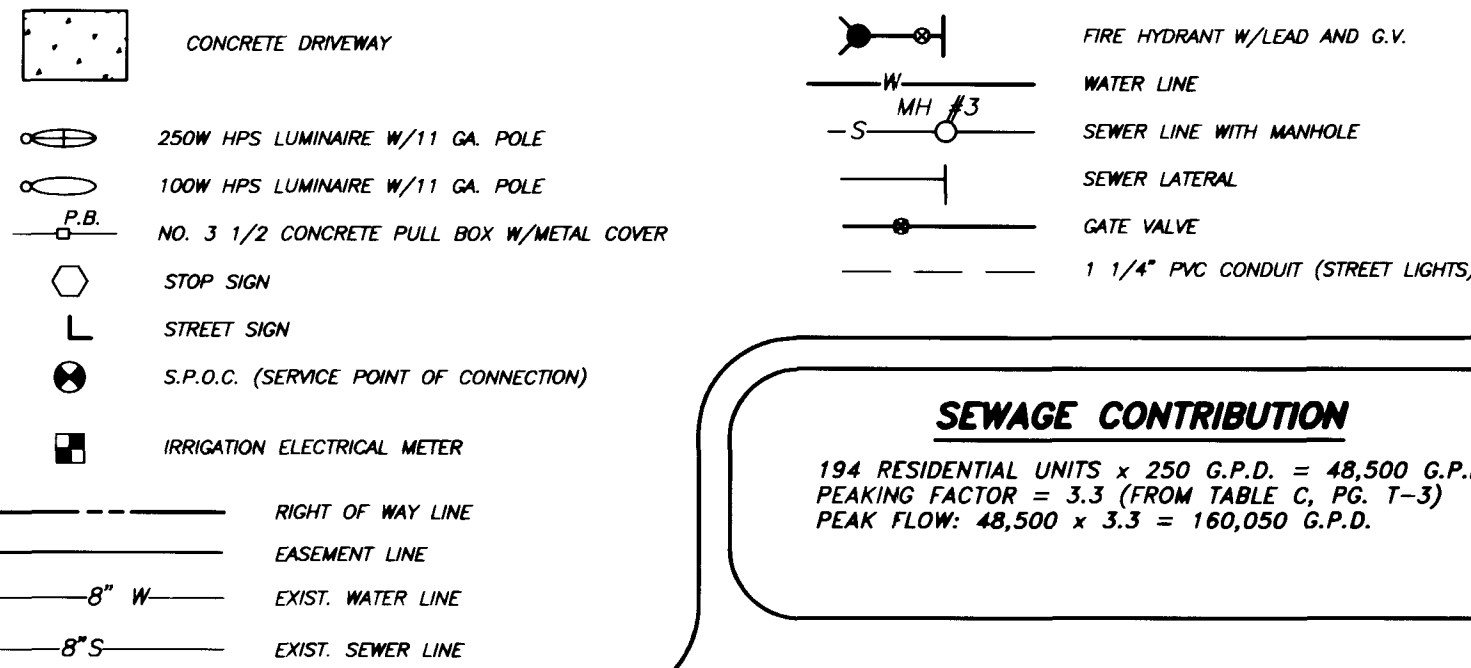
ESTIMATE OF QUANTITIES

1. STD. F.W. W/4" G.V. # 6" A.C.P. LATERAL	15	EA.
2. SERVICE 3/4" W/METER BOX	184	EA.
3. 1" METER BY L.V.W.D.	194	EA.
4. BLOW OFF VALVE	2	EA.
5. 6" PVC	102	L.F.
6. 6" PVC	82.88	L.F.
7. 6" GATE VALVE	1	EA.
8. 6" x 6" TEE	7	EA.
9. 6" x 6" CROSS	2	EA.
10. 6" x 6" REDUCER	3	EA.
11. 6" x 2.5" BEND	7	EA.
12. 6" x 45° BEND	1	EA.
13. 1 1/2" RPPA	4	EA.
14. 1 1/2" IRRIGATION METER & SERVICE	4	EA.
15. CONN. TO EXIST. WATER LINE	3	EA.

TRAFFIC SIGN QUANTITIES

1. 6" O-3 STREET NAME SIGN	13	EA.
2. 30" R1-1 STOP SIGN	3	EA.

LEGEND



WATER-SEWER/STORM DRAIN CROSSING

THE FOLLOWING REQUIREMENTS MUST BE MET IN THE EVENT OF A WATER-SEWER/STORM CROSSING:
 WHEN PROTECTION OF THE WATER LINE IS CONSIDERED, THE MINIMUM VERTICAL DISTANCE OF 18 INCHES MUST BE MAINTAINED WHEN THE WATERLINE IS INSTALLED OVER THE SEWER/STORM LINE. IF THE DISTANCE CANNOT BE MAINTAINED BECAUSE OF PHYSICAL OBSTRUCTIONS OR THE WATERLINE MUST BE PLACED UNDER THE SEWER/STORM LINE, THE SEWER/STORM LINE MUST BE CONSTRUCTED WITH ANY ONE OF THE FOLLOWING:
 A. EXTRA HEAVY CAST IRON OR DUCTILE IRON PIPE,
 B. WATER SUPPLY QUALITY MATERIAL,
 C. ENCASING WITH 4 INCHES MINIMUM CONCRETE SLEEVING OR WITH WATER QUALITY PIPE.
 EACH OF THESE PROVISIONS MUST BE EXTENDED FOR 10 FEET ON EITHER SIDE OF THE WATERLINE AT 90 DEGREES TO THE CROSSING.

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. 318.

BENCHMARKS

C.L.V. BM 37A 04.00-18558
 W/ET & PLATE IN TOP OF CURB, N.E. RETURN OF DEL WEBB BLVD. & LAKE MEAD BLVD.
 ELEVATION: 2618.318' NAVD89
 ELEVATION: 798.905W NAVD89

REDUCED PRESSURE PRINCIPLE ASSEMBLY 4-1 1/2"

APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE DISTRICT'S STANDARD PLATE NO. 117. 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) SO AS TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY.

LAS VEGAS FIRE DEPARTMENT

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

Board on:	1086 - 2491
Square Footage:	N/A
Largest area between area separation walls:	N/A
Height:	21 FEET
Type of Construction:	FRAME/STUCCO
Exposure:	15 FEET
Spinning System:	NONE
Occupancy:	RESIDENTIAL
Roof Construction:	TILE

STREET LIGHT NOTE

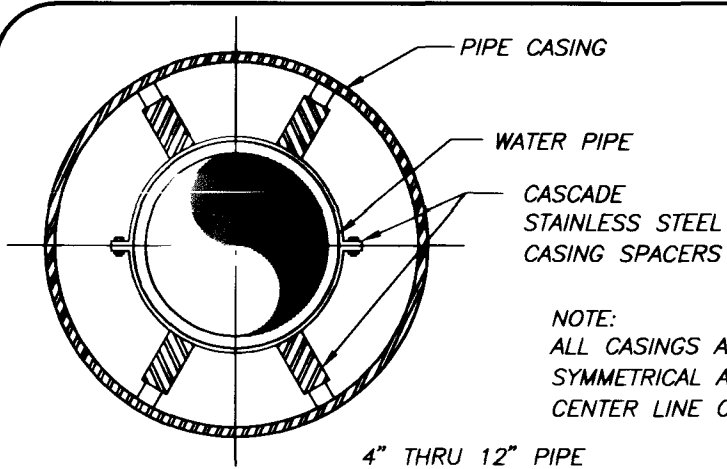
ALL HAND HOLE COVERS MUST BE INSTALLED, POLE CAPS POURED, AND PULL BOX LIDS BOLTED DOWN PRIOR TO ENERGIZING CIRCUIT. ALL WIRE MUST HAVE THW INSULATION.
 A 1" x 3/4" ANGLE METER STOP AND 3/4" METER BOX WILL BE REQUIRED WITH THE 1" SERVICE LATERALS FOR ALL SERVICES WITH 5/8" OR 3/4" SERVICES. DETAILS OF THE ABOVE INSTALLATION ARE AVAILABLE FROM THE ENGINEERING SERVICES DIVISION AND FROM THE DISTRICT'S INSPECTORS.

LAS VEGAS VALLEY WATER DISTRICT STANDARD NOTES

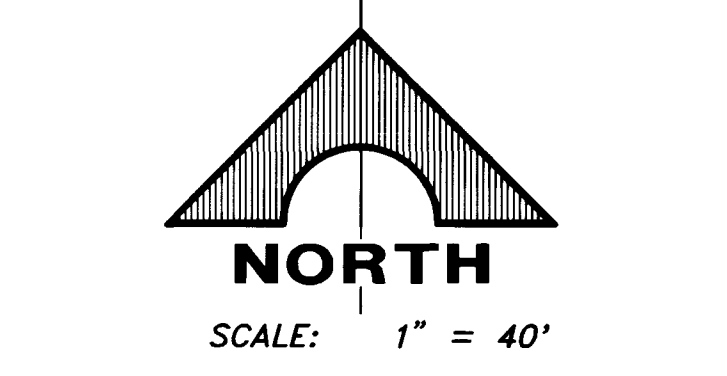
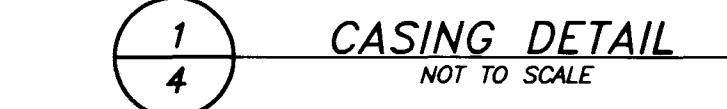
- NO WORK SHALL BE UNLESS THE WATER PLANS HAVE BEEN RELEASED FOR CONSTRUCTION BY THE LVWD. FOLLOWING WATER PLAN APPROVAL, 48 HOUR NOTICE SHALL BE GIVEN TO THE LVWD COMMUNICATIONS SUPPORT CENTER (258-7171) PRIOR TO THE START OF CONSTRUCTION. NOTICE MUST BE GIVEN BY 5:00 P.M. BUSINESS DAY PRIOR TO A LVWD INSPECTION.
- ALL WORK SHALL CONFORM TO LVWD STANDARD PLANS, DRAWINGS AND SPECIFICATIONS, LATEST EDITION.
- ALL WORK EXCEPT AS NOTED BY THESE PLANS OR BY NOTE 2, SHALL BE DONE IN ACCORDANCE WITH THE MOST CURRENT DRAFT OR EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE 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 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 OUTLETS.
- THE FOLLOWING REQUIREMENTS MUST BE MET IN THE EVENT A WATER LINE AND SANITARY OR STORM SEWER LINE CROSS:
 A. MINIMUM VERTICAL (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. ENCASING WITH FOUR (4) INCH CONCRETE (MINIMUM) SLEEVING WITH POTABLE WATER SUPPLY QUALITY PIPE.
 EACH PROVISION MUST EXTEND ALONG THE SANITARY OR STORM SEWER OR LARGER SERVICE LATERALS AND ANY SERVICE LATERAL NOT INSTALLED PERPENDICULAR TO THE MAIN IN ACCORDANCE WITH STANDARD PLATE NO. 27.
 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, FLOODED, FILLED AND AN ACCEPTABLE WATER SAMPLE OBTAINED PRIOR TO CONNECTION TO THE LVWD'S DISTRIBUTION SYSTEM.
 THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVWD CENTRAL STORES. TELEPHONE 258-3152 FORTY-EIGHT (48) HOURS PRIOR TO INSTALLATION.
- CONSTRUCTION MAY INTERRUPT SERVICE WITH LVWD APPROVAL AND PROPER NOTIFICATION BETWEEN THE HOURS OF 8 P.M. AND 6 A.M. SUNDAY THROUGH THURSDAY. CIRCUMSTANCES MAY REQUIRE TEMPORARY SERVICE FEES BE INSTALLED WITHOUT LVWD APPROVAL. ANY TEMPORARY SERVICE FEE 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.
 REVISION: MAY 31, 1995

FIRE DEPARTMENT NOTES

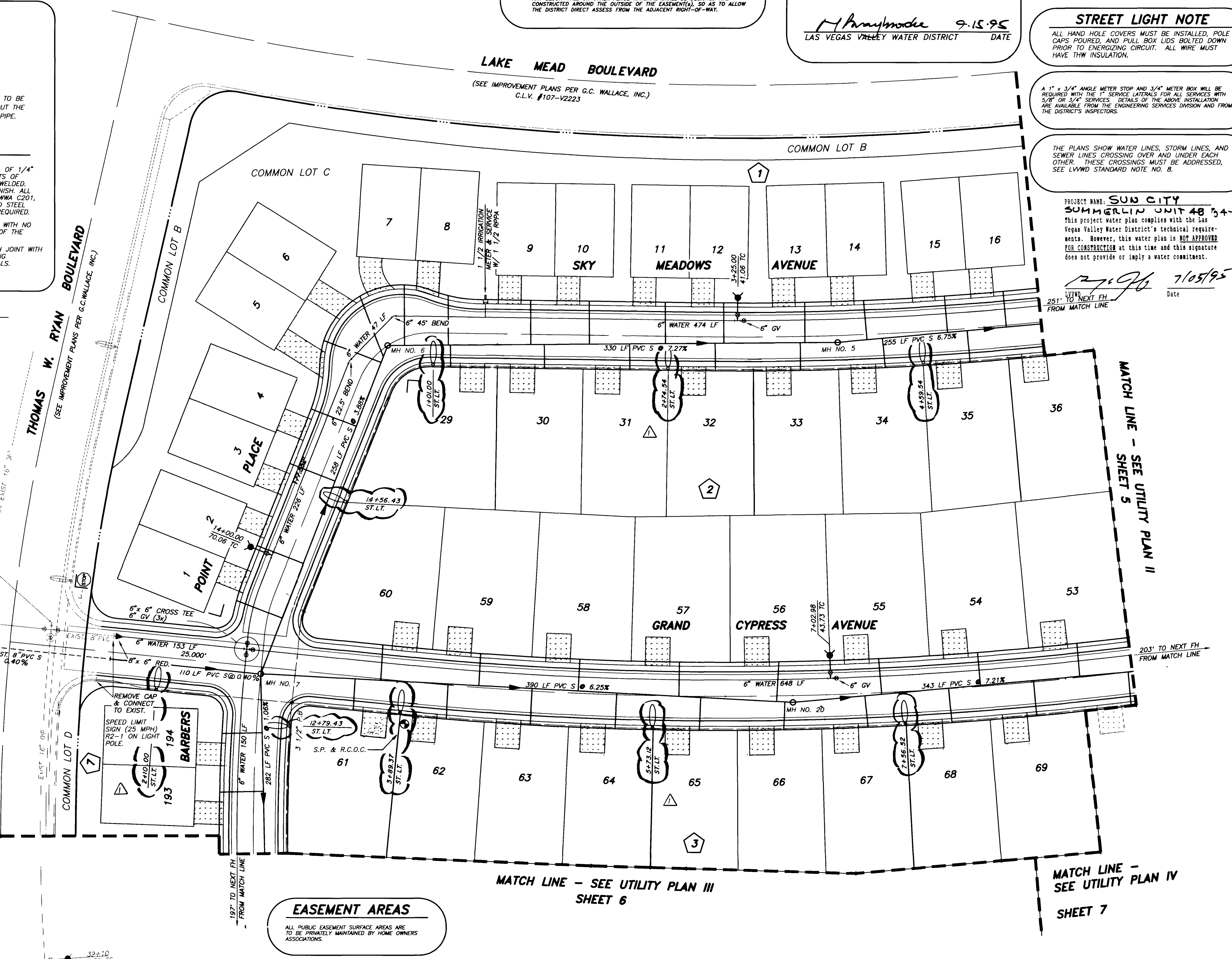
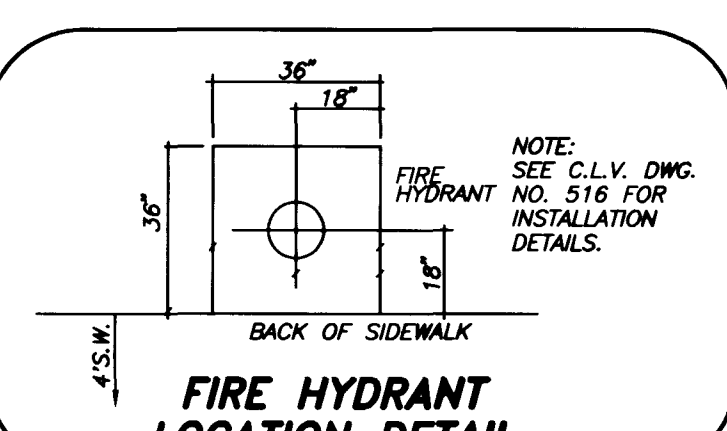
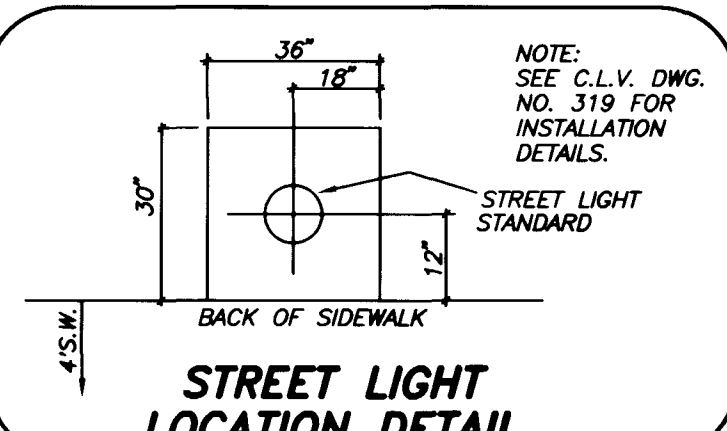
- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CITY OF LAS VEGAS FIRE DEPARTMENT "HYDRANT SPECIFICATIONS", "HYDRANT INSTALLATION SPECIFICATIONS" AND ORDINANCE #5877.
- AUTHORIZED HYDRANTS FOR THIS PROJECT ARE:
 A - KENNEDY GUARDIAN
 B - MUELLER A-423 CENTURION
 C - CLOW MODEL 2546 METALWOLF
- ON ANY NEW HOME OR BUILDING INSTALLATION, ACCESSIBLE FIRE HYDRANTS SHALL BE INSTALLED BEFORE COMPLETION OF 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 CENTER-LINE OF STREET ADJACENT TO FIRE HYDRANT AS REQUIRED BY ORDINANCE #5877 TO IDENTIFY FIRE HYDRANT LOCATIONS.
- CALL THE LAS VEGAS BUILDING DEPARTMENT AT 229-2071 FOR UNDERGROUND INSPECTION, PRESSURE AND FLOOD 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 #5877 SHALL BE COMPLETED AND APPROVED BY THE CITY OF LAS VEGAS FIRE DEPARTMENT.
- A PERMIT IS REQUIRED FROM THE FIRE DEPARTMENT FOR ON-SITE WATER LINE AND FIRE HYDRANT TRENCHING AND CONTRACTOR MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER PRIOR TO 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 A W.P.A. APPROVED.
- FIRE HYDRANT SPACING:
 RESIDENTIAL - 500 FEET UNSPRINKLERED, 800 FEET SPRINKLERED
 COMMERCIAL, INCLUDING MULTI-FAMILY - 300 FEET UNSPRINKLERED, 400 FEET SPRINKLERED
- NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE REQUIRED RADIUS OF A CURB-OR-SAC OR WITHIN 20 FEET OF THE PERIMETER OF THE RADIUS OF THE CURB-OR-SAC.
- NO FIRE HYDRANT SHALL BE LOCATED WITHIN 6 FEET OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREET LIGHT OR ANY OTHER OBSTRUCTION.
- NO 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 25 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 UPC 91, SECTION 10.203).
- 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 #5877)
- 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**
- STEEL PIPE CASING SHALL BE FABRICATED FROM A MIN. OF 1/4" THICK STEEL PLATES, CONFORMING TO THE REQUIREMENTS OF ASTM A252, 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 AWS A2.01, "AWMA STANDARD FOR FABRICATED ELECTRICALLY WELDED STEEL WATER PIPE." COATINGS FOR STEEL CASING ARE NOT REQUIRED.
 - PIPE CASING SHALL BE LAID TRUE TO LINE AND GRADE WITH NO BENDS OR CHANGES IN GRADE FOR THE FULL LENGTH OF THE CASING.
 - THE PIPE SHALL BE SUPPORTED AT EACH END OF EACH JOINT WITH SPACERS. AFTER INSTALLATION OF THE PIPE, THE CASING SHALL BE SEALED AT BOTH ENDS WITH CASING END SEALS.
- SEE SHEET FIVE FOR ADDITIONAL SEWER AND STORM DRAIN CROSSINGS



Call before you Dig.
 1-800-227-2600
 UNDERGROUND SERVICE (USA)



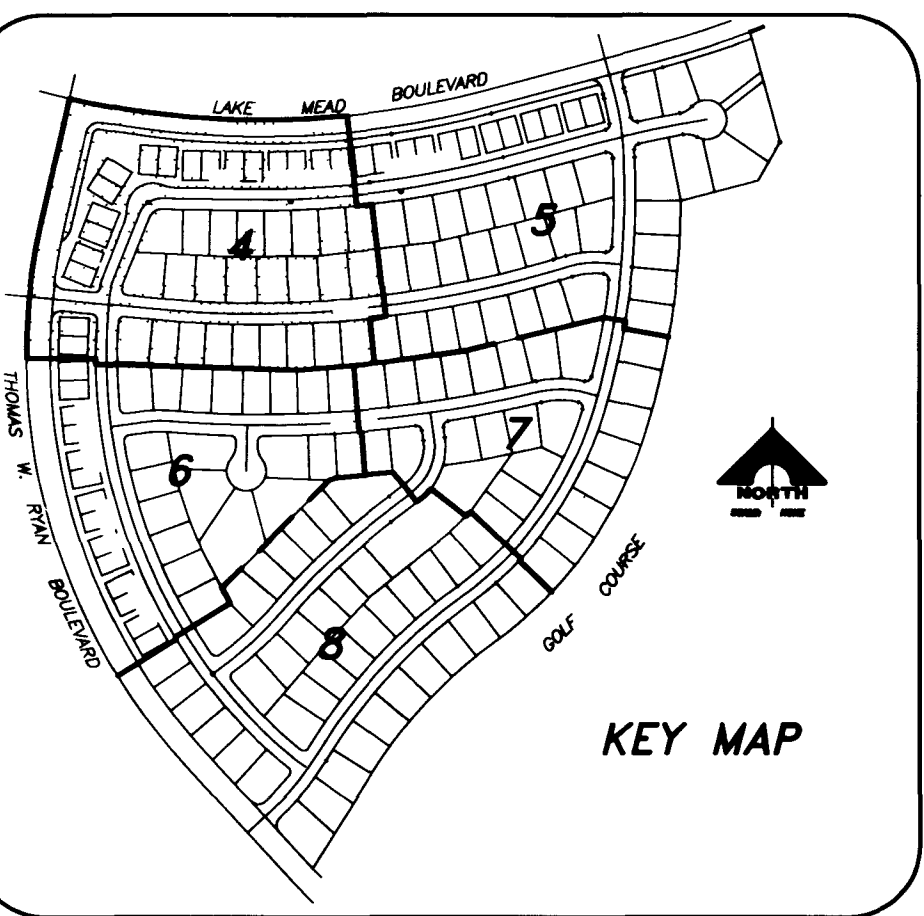
PROJECT NAME: SUN CITY SUMMERLIN UNIT 48 34-8
 This project water plan complies with the Las Vegas Valley Water District's technical requirements. However, this water plan is NOT APPROVED FOR CONSTRUCTION at this time and this signature does not provide or imply a water commitment.
 Date: 7/05/95

MATCH LINE - SEE UTILITY PLAN II SHEET 5

MATCH LINE - SEE UTILITY PLAN III SHEET 6

MATCH LINE - SEE UTILITY PLAN IV SHEET 7

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



DEL WEBB COMMUNITIES, INC.
 SUN CITY SUMMERLIN UNIT 48
 UTILITY PLAN I
 SHEET 4
 OF 29 SHEETS

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

DATE: 7/15/95
 P.L. NO. 10118
 U. 26451

JOB NO. 701-242

307Y-4141-48

