

C.L.V. FIRE NOTES

- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CITY OF LAS VEGAS FIRE DEPARTMENT HYDRANT SPECIFICATIONS, AND ORDINANCE #3944.
- AUTHORIZED HYDRANTS FOR THIS PROJECT ARE:
 - KENNEDY GUARDIAN
 - MUELLER A-423 CENTURIAN
 - CLOW MODEL 2546 MEDALLION
- 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 #3944 TO IDENTIFY FIRE HYDRANT LOCATIONS.
- CALL THE LAS VEGAS FIRE DEPARTMENT AT 229-2071 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 #3944 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 CONTRACTORS MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER PRIOR TO ANY WORK BEGINNING.
- PRIVATE FIRE HYDRANTS SHALL BE PAINTED RED.
- 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.W.A. APPROVED.
- FIRE HYDRANT SPACING:
 - RESIDENTIAL - 500 FEET UNSPRINKLERED, 1000 FEET SPRINKLERED.
 - COMMERCIAL, INCLUDING MULTIFAMILY - 300 FEET UNSPRINKLERED, 600 FEET SPRINKLERED.
- WHERE NEW WATER MAINS ARE EXTENDED ALONG STREETS, WHERE HYDRANTS ARE NOT NEEDED FOR PROTECTION OF STRUCTURES, FIRE HYDRANTS SHALL BE SPACED AT MAXIMUM 1,000 FOOT SPACING TO PROVIDE FOR TRANSPORTATION HAZARDS.
- NO FIRE HYDRANT SHALL BE LOCATED WITHIN THE REQUIRED RADIUS OF 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.
- TWO SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE ARE 4 OR MORE FIRE HYDRANTS INSTALLED ON A SINGLE SYSTEM.
- NOT MORE THAN 2 HYDRANTS CAN BE OUT OF SERVICE DUE TO A SINGLE MAIN BREAK.
- FIRE APPARATUS ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 20 FEET PROVIDED NO PARKING IS ALLOWED, NOT LESS THAN 28 FEET IF PARALLEL PARKING IS ALLOWED ON ONE SIDE, AND NOT LESS THAN 36 FEET IF PARALLEL PARKING IS ALLOWED ON BOTH SIDES. VERTICAL CLEARANCE SHALL BE NOT LESS THAN 13 FEET 6 INCHES.
- THE TURNING RADIUS FOR ANY FIRE APPARATUS ACCESS ROAD AND/OR FIRE LANE, PUBLIC OR PRIVATE SHALL NOT BE LESS 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 94, SECTION 902.2).
- 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 #3944.
- ACCESS ROADS SHALL BE MARKED BY PLACING APPROVED SIGNS AT THE START OF THE DESIGNATED FIRE LANE. ONE SIGN AT THE END OF THE FIRE LANE AND WITH SIGNS AT INTERVALS OF 100 FEET ALONG ALL DESIGNATED FIRE LANES. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE. SIGNS TO BE INSTALLED NO HIGHER THAN 10 FEET OR LESS THAN 6 FEET FROM ROADWAY LEVEL. THE CURBS ALONG OR ON THE PAVEMENT OR CONCRETE IF CURB IS NOT PRESENT, SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS.
- 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.

FIRE FLOW CALCULATIONS

FIRE FLOW REQUIREMENT IS: 2,250 gallons per minute at 150 psi residual pressure.

Based on:

- SQUARE FOOTAGE: 96,000 square feet
- LARGEST AREA BETWEEN 4-HOUR AREA SEPARATION WALLS: 47,034 square feet
- BUILDING HEIGHT: 25 feet
- NUMBER OF STORIES: 2 floor
- TYPE OF CONSTRUCTION: II-N
- OCCUPANCY: SCHOOL/CHURCH
- FULL AUTOMATIC FIRE SPRINKLER SYSTEM: YES

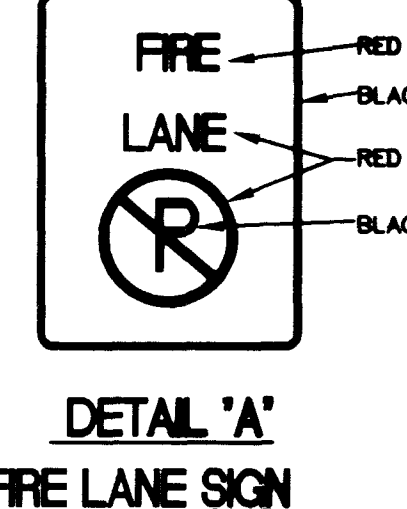
Reviewed By: *[Signature]*
Date: 7-9-98

NOTICE!

CONTRACTOR UTILITIES ARE SHOWN ON PLANS FOR THE CONSTRUCTION OF THIS PROJECT. ONLY THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION OF ALL UTILITIES. THE ENGINEER BEARS NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR SHOWN INCORRECTLY.

Call DPs BEFORE YOU DIG

1-800-227-2800 (LOCAL AREA SERVICE ONLY)



MINIMUM SPECIFICATIONS OF "NO PARKING FIRE LANE SIGNS"

SIZE: 1' WIDE X 1 1/2' LONG OR 2' WIDE X 2 1/2' LONG AS REQUIRED

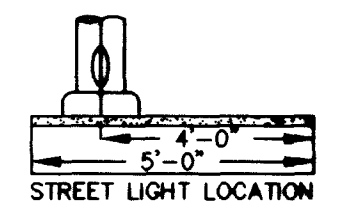
COLOR: RED AND BLACK ON WHITE LUMINOUS BACKGROUND (SEE EXAMPLE ● LEFT)

SYMBOL: INTERNATIONAL NO PARKING SYMBOL

HEIGHT: TO BE INSTALLED NOT LESS THAN SEVEN (7) FEET NOR MORE THAN TEN (10) FEET FROM GROUND LEVEL.

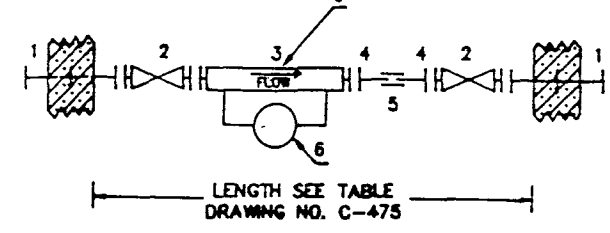
STREETLIGHT NOTE:

ALL HAND HOLE COVERS MUST BE INSTALLED, POLE CAPS POURED, AND PULL BOX LIDS BOILED DOWN PRIOR TO ENERGIZING CIRCUIT. ALL WIRE MUST HAVE THIN INSULATION.



STREETLIGHT NOTES

- ALL STREET LIGHTING INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE STREET LIGHTING PLANS, THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST REVISION, AND THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST REVISION.
- NO DEVIATION OF STREET LIGHT, PULL BOX, CONDUITS (ETC.) LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE TRAFFIC/ELECTRICAL FIELD OPERATIONS DIVISION AND THE CITY ENGINEER. ANY DEVIATION FROM THE PLAN LOCATION WILL REQUIRE COMPLIANCE WITH SECTION 623.L0.03 (E) OF THE SPECIFICATIONS.
- ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.
- ALL EMPTY CONDUIT SHALL HAVE PULL STRINGS INSTALLED PRIOR TO FINAL INSPECTION.
- ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC., SHALL LEAVE A MINIMUM CLEARANCE OF EIGHTEEN INCHES (18") TO THE FACE OF STREET LIGHTING POLE ON ALL SIDES WHEN STREETLIGHT IS INSTALLED BEHIND SIDEWALK, AND SHALL AT NO TIME COMPLETELY ENCLOSE THE STREET LIGHTING POLE.
- AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE ELECTRICAL SERVICES SECTION PRIOR TO ANY PER FINAL INSPECTION. THE AS-BUILT DRAWING NEEDS TO BE STAMPED AS-BUILT AND SIGNED BY THE PREPARER.
- SERVICE POINT SHALL BE COORDINATED WITH NEVADA POWER COMPANY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE CENTER OF THE CIRCUIT. THIS SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- IT SHALL BE ASSUMED THAT IN THE ABSENCE OF AN EXISTING WORKABLE CIRCUIT TO ATTACH TO, ALL INSTALLATIONS SHALL REQUIRE A NEW SERVICE FOR OPERATION OF THE CIRCUIT.
- WHEREVER THERE IS AN OVERHEAD UTILITY THAT MAY CONFLICT WITH THE INSTALLATION OF STREET LIGHTING CIRCUITS AND/OR POLES, THESE CONFLICTS MUST BE RESOLVED BETWEEN THE DEVELOPER AND THE UTILITIES INVOLVED BEFORE STREETLIGHT BASES ARE INSTALLED AT NO EXPENSE TO THE CITY OF LAS VEGAS.
- THE CONTRACTOR SHALL FURNISH COMPLETE SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON PLANS.



ITEM NO.	DESCRIPTION	QTY.
1	FLANGED SCHED 40 FABRICATED STEEL, EPOXY COATED AND LINED WALL SPOOL WITH THRUST RING	2
2	FLANGED GATE VALVE	2
3	SEWER 1/2" X 2" OR APPROVED EQUAL	2
4	FLANGED X PLAN END SCHED 40 FABRICATED STEEL EPOXY COATED AND LINED SPOOL	2
5	SLEEVE TYPE COUPLING	1
6	INSTALL ADJUSTABLE PIPE SUPPORTS, GRONDEL NO. 264 OR APPROVED EQUAL	2

NOTE: ALL FITTINGS, FITTINGS, AND APPURTENANCES SHALL CONFORM TO APPLICABLE DISTRICT SPECIFICATIONS

THIS INSTALLATION IS FOR USE ONLY IN SYSTEMS HAVING ANOTHER SOURCE OF SUPPLY.

L.V.V.W.D. NOTES

- NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN RELEASED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING WATER PLAN APPROVAL, 48 HOUR NOTICE SHALL BE GIVEN TO THE LVVWD COMMUNICATING SUPPORT (201-7171) PRIOR TO THE START OF CONSTRUCTION. NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO A LVVWD INSPECTION.
- ALL WORK SHALL CONFORM TO THE LVVWD'S STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS AND THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS (UDACS), LATEST EDITION.
- ALL WORK, EXCEPT AS MODIFIED 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 IMPROVEMENT, CLARK COUNTY AREA.
- A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVWD.
- ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE COPPER TUBING WITH LVVWD 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 CUTTERS.
- 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 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:
 - POTABLE WATER SUPPLY QUALITY MATERIAL.
 - 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.
- 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 WATER MAIN IN ACCORDANCE WITH STANDARD PLATE NO. 27
- 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.
- THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 FORTY-EIGHT (48) HOURS PRIOR TO PICKUP.
- CONSTRUCTION MAY INTERRUPT SERVICE, WITH LVVWD APPROVAL AND PROPER NOTIFICATION, BETWEEN THE HOURS OF 10 P.M. AND 6 A.M., SUNDAY THROUGH THURSDAY. CIRCUMSTANCES MAY REQUIRE TEMPORARY SERVICE FEEDS BE INSTALLED, WITHOUT LVVWD REIMBURSEMENT. ANY TEMPORARY SERVICE FEED MUST HAVE PRIOR LVVWD APPROVAL.
- 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.

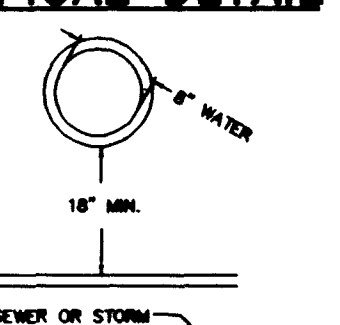
APPROVALS

City of Las Vegas Fire Marshall: *[Signature]* 7-9-98 DATE

Las Vegas Valley Water District: *[Signature]* 10-9-98 DATE

Nevada Power Company: *[Signature]* 7-9-98 DATE

UTILITY CROSSING TYPICAL DETAIL



Approved Reduced Principle Assembly(s) 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 LVVWD.

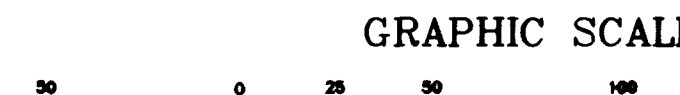
Any block wall or other fence material shall be designed and constructed around the outside of the easement(s) to allow the District direct access from the adjacent right-of-way.

INSTALLATION OF METER AND VAULT (2) 6"X2" FMS

THE METER(S) AND VAULT(S) WITH NON-TRAFFIC BEARING COVER(S) SHALL BE INSTALLED IN ACCORDANCE WITH THE ATTACHED DETAIL AND WITH STANDARD VAULT DRAWING C-475, LATEST REVISION

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 TO THE VAULT(S) FROM THE ADJACENT RIGHT-OF-WAY.

METERS MUST BE SET IN A HORIZONTAL POSITION. AT LEAST EIGHT (8) DIAMETERS OF STRAIGHT PIPE ARE REQUIRED AT THE INLET END.



GRAPHIC SCALE

(IN FEET)

1 inch = 50 ft.

West Charleston Baptist Church
6701 WEST CHARLESTON BOULEVARD
LAS VEGAS, NEVADA 89102
(702) 299-4439

SHILOH CHRISTIAN SCHOOL

ALPHA & MASTER UTILITY SHEET SOUTH

ENGINEERING COMPANY
50 So. Jones #202, Las Vegas, NV, 89107
Telephone: (702) 877-1300

PROJECT NO: 716101
SCALE: 1"=50'
SHEET 5 OF 16 SHEETS
DRAWING NO. 715-102

DATE: 7-9-98

REVISION: 1/98

