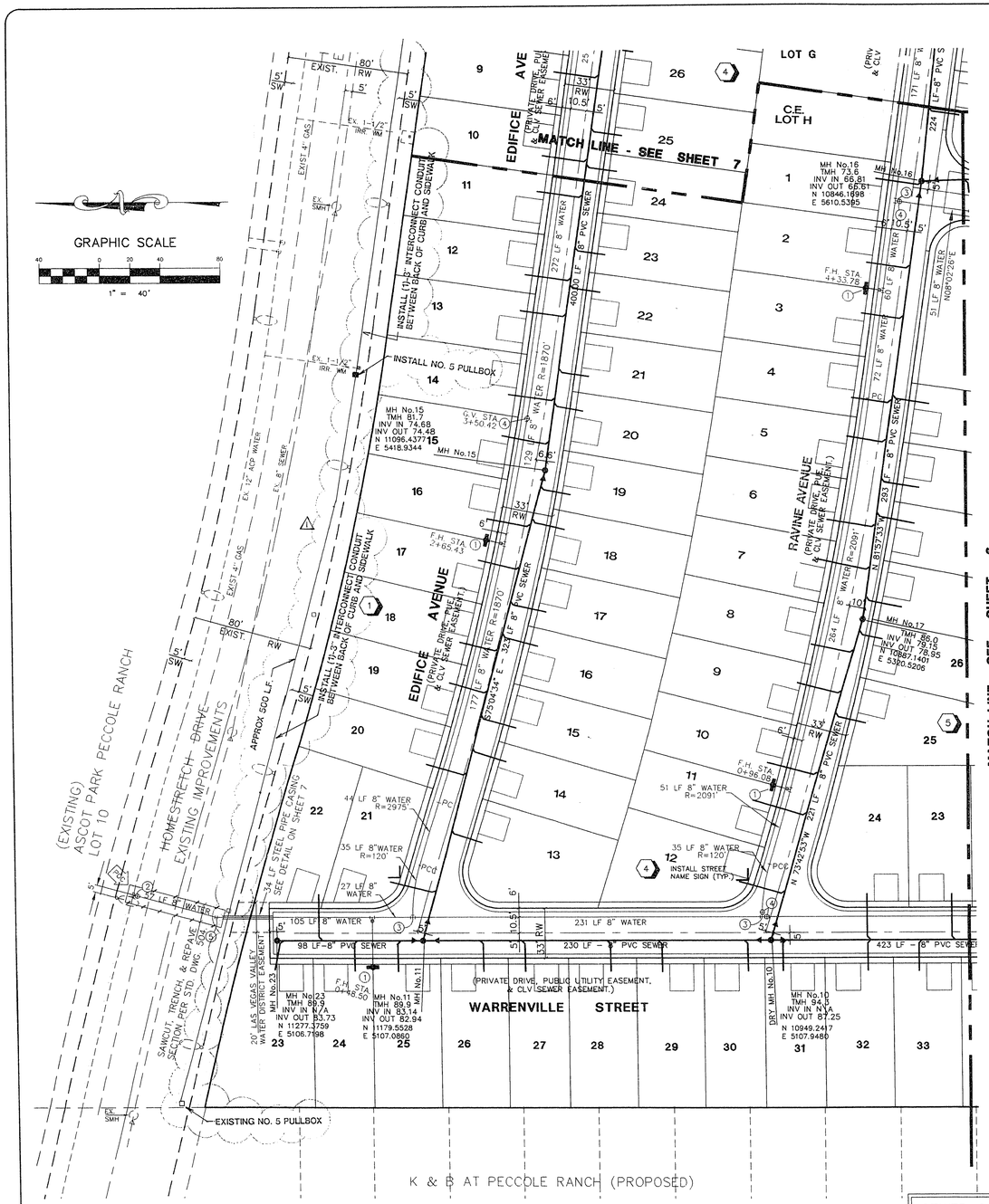


UTILITY IMPROVEMENTS QUANTITY ESTIMATE AND LEGEND

WATER

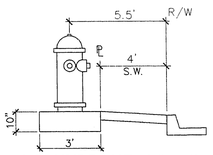
1	FIRE HYDRANT ASSEMBLY	12 EA.
2	12"X8" WET TAPPING VALVE & ASS'Y.	2 EA.
3	8"x 8" TEE	9 EA.
4	8" GATE VALVE	9 EA.
5	8" BEND	5 EA.
6	8"X6" REDUCER	3 EA.
7	10"X8" REDUCER	1 EA.
8	2" BLOW-OFF	2 EA.
9	10"X10" CUT-IN TEE ASS'Y	1 EA.
10	6" BEND	1 EA.
11	10" VALVE	1 EA.
12	BACKFLOW PREVENTION DEVICE (3/4")	2 EA.
*	1" COPPER SERVICE W/ 5/8" METER	180 EA.
	10" WATER MAIN	180 LF.
	8" WATER MAIN	5200 LF.
	6" WATER MAIN	287 LF.
*	INSTALL PER UPDS STD # 1-13	
*	1" COPPER SERVICE WITH 3/4" METER	1 EA.

SEWER

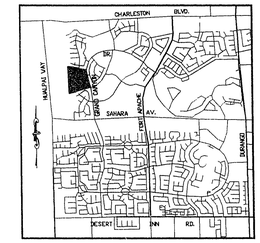
	STANDARD MANHOLE	24 EA.
	8" SEWER MAIN (PUBLIC)	5550 LF.
	4" SEWER LATERALS (PUBLIC)	4960 LF.
	4" SEWER WYES (PUBLIC)	180 EA.

STREET LIGHTS

100 WATT LUMINAIRE	0 EA.
1 1/4" PVC CONDUIT	0 LF.
# 3 1/2 PULL BOX	1 EA.
RELOCATE EXIST. ST. LIGHT	1 EA.
STOP SIGN	2 EA.
STREET NAME SIGN	12 EA.
DRIVEWAY LOCATION SCHEMATIC ONLY)	
POINT OF CONNECTION (UTILITIES)	



FIRE HYDRANT DETAIL



LOCATION MAP

REDUCED PRESSURE PRINCIPLE ASSEMBLY

Approved Reduced Pressure Principle Assembly(s) shall be installed per the UDACS 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) to allow the District direct access from the adjacent right-of-way.

STREET LIGHT NOTE

ALL STREET LIGHTING INSTALLATION EXCEPT AS NOTED ON THE STREET LIGHTING PLANS SHALL CONFORM TO THE IMPROVEMENT STANDARDS, DEPARTMENT OF PUBLIC WORKS, CITY OF LAS VEGAS, NEVADA, AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA.

ALL POLES TO BE GALVANIZED.

LAS VEGAS VALLEY WATER DISTRICT STANDARD NOTES

1. 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 CUSTOMER SERVICE DEPARTMENT (870-4194) PRIOR TO THE START OF CONSTRUCTION. NOTICE MUST BE GIVEN BY 2:00 P.M. OF THE BUSINESS DAY PRIOR TO A LVVWD INSPECTION.
2. ALL WORK SHALL CONFORM TO THE 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 EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENT, 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, AND VALLEY GUTTERS.
8. THE FOLLOWING REQUIREMENTS MUST BE MET IN THE EVENT A WATER LINE AND A SANITARY OR SEWER LINE CROSS.
   A MINIMUM OF EIGHTEEN (18) INCH VERTICAL SEPARATION (OUTSIDE TO OUTSIDE) MUSR BE MAINTAINED WHEN THE WATER LINE IS INSTALLED OVER THE SANITARY OR 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 WATER PIPE.
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. TELEPJONE 258-3152 FORTY-EIGHT (48) HOURS PRIOR TO PICKUP.
12. CONSTRUCTION MAY INTERRUPT SERVICE, WITH LVVWD APPROVAL AND PROPER NOTIFICATION, BETWEEN THE HOURS OF 10PM AND 6AM, SUNDAY THROUGH THURSDAY. CIRCUMSTANCES MAY REQUIRE TEMPORARY SERVICE FEEDS BE INSTALLED, WITHOUT LVVWD REIMBURSEMENT. ANY TEMPORARY SRVICE FEED MUST HAVE PRIOR LVVWD APPROVAL.
13. ALL WATER FACITIY 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.

CITY OF LAS VEGAS SEWER NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN AND 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, THESE STANDARDS SHALL SUPERSEDE THE UNIFORM STANDARD SPECIFICATIONS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATION BOOKS.
2. 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.
3. CHISEL "S" OR "G" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
4. POLYVINYL (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE II GRAVEL.
5. ALL MANHOLES IN PAVED STREETS 80' R/W AND LARGER, SHALL HAVE CONCRETE COLLARS.
6. TEE SADDLES 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.
7. 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 FEET (10') TO EACH SIDE OF THE CENTERLINE OF THE WATER MAIN.
8. ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CONTROLLING AGENCY MUST BE CLASS "A" CONTRACTORS.
9. THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAINS WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN ONE TENTH (0.1) OF A FOOT FROM THE APPROVED CONSTRUCTION PLANS. SEWER MAINS FOUND TO EXCEED THIS TOLERANCE WILL HAVE TO BE REPAIRED OR REMOVED AND REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY.

WATER CROSSING NOTE

THE FOLLOWING ARE THE REQUIREMENTS THAT MUST BE MET WHEN THERE IS A WATER-SEWER CROSSING:

WHEN PROTECTION OF THE WATERLINE IS CONSIDERED, THE MINIMUM VERTICAL DISTANCE OF 18 INCHES MUST BE MAINTAINED WHEN THE WATER LINE IS INSTALLED OVER THE SEWER/STORM LINE. IF THIS 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. ENCASEMENT WITH 4 INCHES MINIMUM OF CONCRETE OR SLEEVING 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.

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 #3944.
2. AUTHORIZED HYDRANTS FOR THIS PROJECT ARE:
   A. KENNEDY GUARDIAN
   B. MUELLER 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 CENTERLINE OF STREET ADJACENT TO FIRE HYDRANT AS REQUIRED IN ORDINANCE #3944 TO IDENTIFY THE FIRE HYDRANT LOCATIONS.
5. 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.
6. PAINTING OF THE CURBS AND HYDRANTS 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.
7. 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 PRIOR TO ANY WORK BEGINNING.
8. PRIVATE FIRE HYDRANTS SHALL BE PAINTED RED.
9. A FLOW TEST MUST BE WITNESSED BY THE FIRE DEPARTMENT PRIOR TO OCCUPANCY FOR VERIFICATION OF REQUIRED ON-SITE WATER SUPPLY.
10. ALL ON-SITE FIRE MAIN MATERIALS MUST BE U.L. LISTED AND A.W.W.A. APPROVED.
11. FIRE HYDRANT SPACING:
    RESIDENTIAL - 500 FEET UNSPRINKLERED, 1,000 FEET SPRINKLERED
    COMMERCIAL, INCLUDING MULTI-FAMILY - 300 FEET UNSPRINKLERED, 600 FEET SPRINKLERED.
12. 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.
13. 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.
14. NO FIRE HYDRANT SHALL BE LOCATED WITHIN 6 FEET OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREET LIGHT OR ANY OTHER OBSTRUCTION.
15. TWO SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE ARE 4 OR MORE HYDRANTS INSTALLED ON A SINGLE SYSTEM.
16. NOT MORE THAN 2 HYDRANTS CAN BE OUT OF SERVICE DUE TO A SINGLE MAIN BREAK.
17. FIRE APARATUS ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 20 FEET PROVIDED NO PARKING IS ALLOWED, NOT LESS THAN 28 FEET IF PARRALLEL PARKING IS ALLOWED ON ONE SIDE, AND NOT LESS THAN 36 FEET IF PARRALLEL PARKING IS ALLOWED ON BOTH SIDES. VERTICAL CLEARANCE SHALL BE NOT LESS THAN 13 FEET 6 INCHES.
18. 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.
19. 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).
20. 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 TURN AROUND AREA. SEE ORDINANCE #3944.
21. 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 NEEDE 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 CEMENT IF CURB IS NOT PRESENT, SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS.
22. 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 1500 GALLONS PER MINUTE AT 20 psi RESIDUAL PRESSURE.

BASED ON:

SQUARE FOOTAGE: 1999 (MAXIMUM BUILDING) SQ. FT.

LARGEST AREA BETWEEN 4-HOUR AREA SEPARATION WALLS: N/A SQ. FT.

BUILDING HEIGHT: 25'-2" (MAX. BUILDING) FEET

NUMBER OF STORIES: 2 FLOOR

TYPE OF CONSTRUCTION: VN

OCCUPANCY: R-3

FULL AUTOMATIC FIRE SPRINKLER SYSTEM: NONE

REVIEWED BY: _____

DATE: _____

APPROVAL:
1ST APPROVAL 5/21/96

LAS VEGAS VALLEY WATER DISTRICT — DATE 8/2/96

CITY OF LAS VEGAS FIRE MARSHALL — DATE 7-29-96

NEVADA POWER COMPANY — DATE 7-25-96

NEVADA POWER COMPANY APPROVAL IS ONLY FOR THE PLACEMENT AND CLEARANCE OF STREET LIGHT AND SIGNAL LIGHT INSTALLATION.

Avoid cutting underground utility lines. It's costly.

Call before you **Dig**

1-800-227-2600

PLAN INFORMATION:

SEE SHEET 5 FOR GENERAL NOTES, QUANTITIES, SIGNATURE BLOCKS, ETC.

SEE SHEET 7 FOR PIPE CASING DETAILS.

BENCHMARK

CLV BENCHMARK No. 31, STATION 1LV106C4

RIVET & PLATE IN TOP OF CURB, NE RETURN OF GRAND CANYON DRIVE & POLO GREEN DRIVE.

ELEVATION = 873.1747 METERS
= 2864.741 FEET (NAVD88).

PRESSURE REDUCING VALVES

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 RESPONSIBILITY AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVVWD FACILITIES.

SEWER CONTRIBUTION

AVERAGE DAILY FLOW = 0.0483 MGD
PEAK FLOW = 0.1448 MGD

IMPLEMENTING FACILITIES

CONSTRUCTION OF THESE WATER FACILITIES CANNOT BEGIN AND CONSTRUCTION WATER WILL NOT BE AVAILABLE UNTIL THE 3090 ZONE RESERVOIR AND THE WATER MAINS IN HUALPAI WAY AND HOMESTRETCH DR. ARE OPERATIONAL.

REV	DATE	BY	REVISION
1	10/9/96	WEA	REVISE (4) 5/8" METER, ADD (1) 3/4" METER, ADD 3/4"
2	10/14/96	KWF	INSTALL INTERCONNECT CONDUIT
3			
4			

DEVELOPER
TRIPLE FIVE DEV. GROUP CENTRAL, LTD.
P.O. BOX 3 NEVADA 89137
LAS VEGAS, NEVADA
(702) 277-6654

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

TITLE: MASTER UTILITY PLAN
PROJECT: LOT 11 AT PECCOLE RANCH

SEAL: REGISTERED PROFESSIONAL ENGINEER — STATE OF NEVADA — No. 6012

WO NO. 4986
BY JPS
DATE APR. 1996
SCALE HORIZ. 1"=40' VERT.
SHEET 5 OF 19 SHEETS

H:\CAD\LANDEV\4986\4986LAND.DWG (U1)

307Y-4070-11

H:\CAD\LANDEV\4986\4986LAND wed Jul 24 16:15:42 1996 Plotted by: JPS