CONSTRUCTION KEY NOTES (ALL KEY NOTES NOT NECESSARILY SHOWN ON THIS SHEET)

1. INSTALL FIRE HYDRANT PER U.D.S. PLATE No. 7. PROVIDE A MINIMUM OF 3' CLEARANCE AROUND FIRE HYDRANT.
2. INSTALL 8" DOUBLE CHECK DETECTOR ASSEMBLY ABOVE FG, ON A 4"x63"x151" CONCRETE PAD, PER U.D.S. PLATE No. 20B.
3. INSTALL 2-2" METERS PER PLATE ID (POTABLE METERS).
4. CONSTRUCT STANDARD ECCENTRIC MANHOLE PER SD-1 (UDCS).
5. PROVIDE A MINIMUM OF 18" VERTICAL CLEARANCE BETWEEN SEWER AND WATER LINES.
6. EXISTING MANHOLE TO BE VERTICALLY ADJUSTED TO PROPOSED AC ELEVATION. ADJUSTMENT TO BE PER GOVERNING AGENCY AND APPROVED BY AGENCY INSPECTOR.
7. 8" MECHANICAL JOINT TAPPING SLEEVE AND VALVE PER LVVWD STD. PLATE NO. 22.
8. △2 EXISTING 30" PUBLIC SS TO BE ENCASED IN REINFORCED CONCRETE PER DETAIL K ON SHEET C6.02.
9. INSTALL 2-2" RPPA PER U.D.S. PLATE 11A.
10. INSTALL 2-2" RPPA PER UDS PLATE 11A. (LANDSCAPE ONLY)
11. INSTALL 2-2" METERS PER PLATE 1D. (LANDSCAPE METERS)

FIRE FLOW CALCULATIONS

FIRE FLOW REQUIREMENT IS: 2625 GALLONS PER MINUTE AT 20 PSI RESIDUAL PRESSURE.

BASED ON:

• SQUARE FOOTAGE:	59996 SQUARE FEET
• LARGEST AREA BETWEEN 4-HOUR AREA SEPARATION WALLS :	NA SQUARE FEET
• BUILDING HEIGHT:	26'-10" FEET
• NUMBER OF STORIES:	ONE FLOOR
• TYPE OF CONSTRUCTION:	II N
• OCCUPANCY:	B60
• FULL AUTOMATIC FIRE SPRINKLER SYSTEM:	YES

REVIEWED BY: [signature]

DATE: 5-3-96

CITY OF LAS VEGAS FIRE DEPT. 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 No. 3944.
2. AUTHORIZED HYDRANTS FOR THIS PROJECT ARE
   A – KENNEDY GUARDIAN
   B – MUELLER A-423 CENTURION
   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 No. 3944 TO IDENTIFY FIRE HYDRANT LOCATIONS.
5. CALL THE LAS VEGAS BUILDING 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 HYDRANT AND ANY WORK NECESSARY FOR PROTECTION OF HYDRANTS FROM PHYSICAL DAMAGE PER ORDINANCE No. 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 CONTRACTORS 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, 1000 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 MAX. 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' OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT, OR ANY OTHER OBSTRUCTION.
15. TWO SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE ARE 4 OR MORE FIRE 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 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 NOT BE LESS THAN 13 FEET 6 INCHES.
18. THE TURNING RADIUS OF 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 U.F.C. 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 TURNAROUND AREA. SEE ORDINANCE No. 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 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 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.

REDUCED PRESSURE PRINCIPLE ASSEMBLY 4 - 2"

APPROVED REDUCED PRESSURE 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 TEST BY THE LVWD.

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 DOUBLE CHECK DETECTOR ASSEMBLY 2 - 8"

THE DOUBLE CHECK DETECTOR ASSEMBLIES SHALL BE INSTALLED IN ACCORDANCE WITH THE UDACS PLATE 20B.

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.

[signature] 5/06/96
LAS VEGAS VALLEY WATER DISTRICT DATE

Avoid cutting underground utility lines. It's costly.

Call before you Dig 1-800-227-2600

N

GRAPHIC SCALE

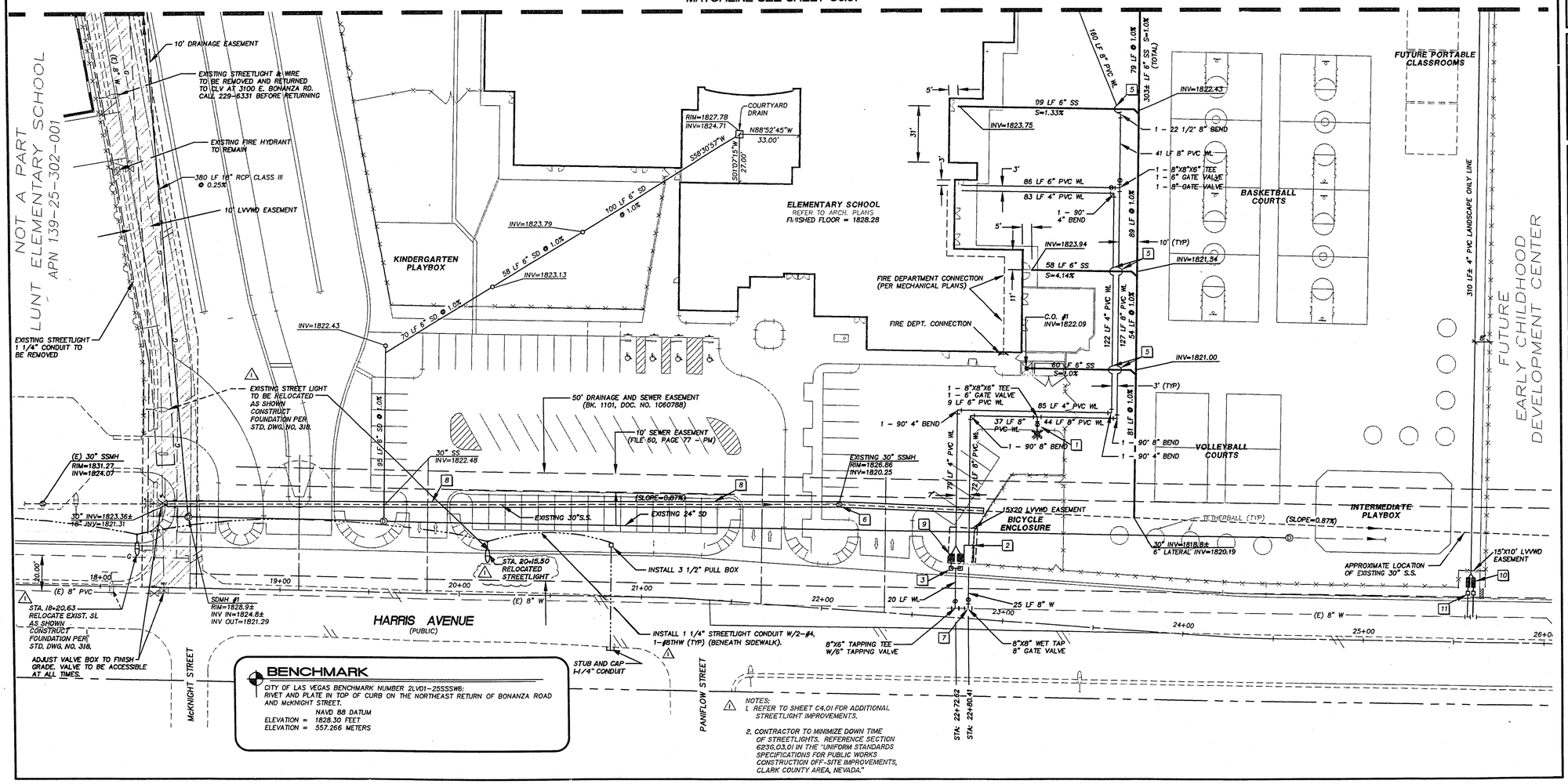
30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

SANITARY SEWER CONTRIBUTION
(ESTIMATE)

AVERAGE DAILY FLOW =	0.0719 CFS
PEAK FLOW =	0.248 CFS

MATCHLINE SEE SHEET C5.01



BENCHMARK

CITY OF LAS VEGAS BENCHMARK NUMBER 2LV01-25SSSW6:
RIVET AND PLATE IN TOP OF CURB ON THE NORTHEAST RETURN OF BONANZA ROAD AND McKNIGHT STREET.
NAVD 88 DATUM
ELEVATION = 1828.30 FEET
ELEVATION = 557.266 METERS

NOTES:
1. REFER TO SHEET C4.01 FOR ADDITIONAL STREETLIGHT IMPROVEMENTS.
2. CONTRACTOR TO MINIMIZE DOWN TIME OF STREETLIGHTS. REFERENCE SECTION 623G.03.01 IN THE "UNIFORM STANDARDS SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA."

C:\DWGS\B43\B43UT Wed May 1 08:42:41 1996 PBSJ

REVISIONS

REV	DESCRIPTION	DATE	BY
1	STREETLIGHT AND SL NOTE REVISIONS PER CLV	5/22/96	VRH
2	REVISED CONST. KEY NOTE #8	6/26/96	VRH

HB 5/30/96
DM 7/1/96

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SEAL: ENGINEER - STATE OF NEVADA - VERNON G. HARRIS - No. 8858 - PROFESSIONAL ENGINEER - CIVIL

CCDS PROJECT NO. 0828
CCDS REVIEW
APPROVED BY
DATE
DATE 5/01/96
DRAWN BY KAW
CHECKED BY VRH
SUBMITTAL 5/01/96
A/E PROJECT NO. 95252

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CLARK COUNTY SCHOOL DISTRICT

CONSTRUCTION MANAGEMENT
4828 PEARL ST. LAS VEGAS, NEVADA 89121

28TH AND HARRIS ELEMENTARY SCHOOL

UTILITY PLAN

SHEET NO.
C5.02
SHEET 15 OF 17

JOB NO. 51843
FILE NO. 843UT.DWG BR-UT2

715-92