GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA NEVADA", LATEST ISSUE; THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA NEVADA", LATEST ISSUE; AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY; THE UNIFORM BUILDING CODE; AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS".
2. THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCES WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD OR UNDERGROUND POWER, GAS AND/OR OTHER UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COSTS AND LIABILITY IN CONNECTION THEREWITH.
3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES, AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED SATISFACTORY TO THE CITY ENGINEER OR OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.
4. ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
5. TYPE V CEMENT SHALL BE USED IN ALL OFF-SITE CONCRETE WORK. CONCRETE TO BE 3000 P.S.I. MINIMUM @ 28 DAYS. MIX DESIGN TO BE APPROVED BY THE QUALITY CONTROL DIVISION PRIOR TO USE ON THE PROJECT.
6. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT OF WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
7. EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTRUDED TYPE CURB.
8. AC PAVEMENT TO BE 1/2" ABOVE LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS.
9. APPLY FOG SEAL ONLY AFTER ALL CORRECTIONS AND ADJUSTMENTS HAVE BEEN MADE.
10. CURB & GUTTER WITH A GRADE OF LESS THAN FOUR TENTHS OF ONE PERCENT SHALL BE WATER TESTED AS SOON AS POSSIBLE AFTER CONSTRUCTION. ANY CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY SHALL BE REMOVED AND REPLACED.
11. SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.
12. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF TRANSITIONS TO BE AS SHOWN ON PLANS, OR AS DESIGNATED IN THE FIELD BY A CITY INSPECTOR.
13. ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY THE SOILS ENGINEER AND APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.
14. EXACT LOCATION OF ALL SAWCUT LINES MAY BE DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS INSPECTOR IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATION.
15. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH N.R.S. STATUTE NO. 625.550.
16. UTILITY COMPANY METER BOXES, MANHOLE LIDS, VALVE COVERS, ETC. SHALL BE LOCATED OUT OF DRIVEWAYS, DRIVEWAY APRONS, FLOWLINES, AND CROSS GUTTERS UNLESS WRITTEN APPROVAL IS GRANTED BY THE UTILITY COMPANY AND THE CITY ENGINEER.
17. WALL NOTES:
    A. ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN FOR THE PURPOSES OF GRADING RELATIONS.
    B. THE STRUCTURAL AND ARCHITECTURAL DESIGN OF ALL WALLS (RETAINING OR NON-RETAINING) MUST BE APPROVED BY THE CLV BUILDING DEPARTMENT.
18. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT ON CITY STREETS.

GENERAL UTILITY NOTES

1. THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON HAS BEEN DETERMINED FROM SURFACE EVIDENCE OF THEIR EXISTENCE OR FROM THE UTILITY COMPANIES. THE ENGINEER ACCEPTS NO LIABILITY FOR THE EXISTENCE OR NON-EXISTENCE OF UTILITY LINES. CONTRACTORS AND OTHERS USING THIS MAP MUST CONFIRM THE LOCATION OF UNDERGROUND LINES OR STRUCTURES WITH THE UTILITY COMPANIES PRIOR TO COMMENCING ANY EXCAVATION OR ORDERING OF MATERIALS.
2. ANY CONFLICT WITH EXISTING UTILITIES SHALL BE IMMEDIATELY CALLED TO THE ATTENTION OF THE ENGINEER.
3. THE CONTRACTOR SHALL VERIFY IN FIELD, ALL EXISTING ELEVATIONS, DIMENSIONS, FLOW LINES, EXISTING CONDITIONS, AND POINTS OF CONNECTIONS WITH ADJOINING PROPERTY (PUBLIC OR PRIVATE). ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
4. CALL 1-800-227-2600 BEFORE ANY EXCAVATION TAKES PLACE.

CITY OF LAS VEGAS SEWER NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN & 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 SPECIFICATIONS 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.

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 CUSTOMER SERVICE DEPARTMENT (870-4194), 48 HOURS PRIOR TO ACTUAL CONSTRUCTION AND 24 HOURS PRIOR TO AN INSPECTION.
2. CALL BEFORE YOU DIG 1-800-227-2600.
3. ALL WORK SHALL CONFORM TO LVVWD LATEST STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS.
4. ALL WORK, EXCEPT AS MODIFIED HEREON OR BY NOTE 3, SHALL BE DONE IN ACCORDANCE WITH THE MOST CURRENT DRAFT OR ADDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA.
5. DISTRICT APPROVED SERVICE SADDLES OR TAPPED COLLARS WILL BE REQUIRED ON ALL 3/4" AND 1" SERVICE LATERALS. SERVICE SADDLES ONLY WILL BE PERMITTED ON 1-1/2" AND 2" SERVICE LATERALS. DOUBLE TAPPED COLLARS ARE NOT PERMITTED.
6. COPPER SERVICE LATERALS: ALL 3/4" TO 2" SERVICE LATERALS WILL BE OF COPPER TUBING IN ACCORDANCE WITH THE DISTRICT SPECIFICATIONS TITLED "3503-COPPER WATER TUBING" AND STANDARD PLATES.
7. THE MAXIMUM ALLOWABLE JOINT DEFLECTION FOR ACP AND DUCTILE IRON PIPE SHALL BE AS FOLLOWS:

PIPE SIZES	ACP	DUCTILE IRON SLIP JOINT	DUCTILE IRON MECHANICAL JOINT
6 INCH	2.5 DEGREES	2.5 DEGREES	3.5 DEGREES
8-12 INCH	2.5 DEGREES	2.5 DEGREES	2.5 DEGREES
14-16 INCH	2 DEGREES	1.5 DEGREES	1.5 DEGREES
18-24 INCH	N/A	1.5 DEGREES	1.5 DEGREES

ON PVC PIPE, THE MAXIMUM OFFSET FOR A 20' LENGTH OF FACTORY BELLED PIPE SHALL BE 16 INCHES FOR 6" PIPE, 12 INCHES FOR 8" PIPE, AND 9 INCHES FOR 10 AND 12" PIPE.

IF THESE OFFSETS CONFLICT WITH THE PIPE MANUFACTURERS RECOMMENDATION, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

8. ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
9. ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS AND VALLEY GUTTERS.
10. DETECTOR TAPE SHALL BR REQUIRED IN ACCORDANCE WITH STANDARD PLATE NO. 27 WHERE INDICATED, AND AS FOLLOWS:
    A) OVER ALL MAINS NOT INSTALLED 6 FEET FROM BACK OF CURB.
    B) OVER ALL SERVICE LATERALS NOT INSTALLED AT RIGHT ANGLES TO MAIN.
11. ALL WATER MAINS ARE TO BE PRESSURE TESTED AT 200 PSI FOR A CONTINUOUS TWO HOUR PERIOD, IN ACCORDANCE WITH DISTRICT STANDARDS.
12. ALL WATER MAINS AND LATERALS SHALL BE DISINFECTED, FLUSHED, AND AN ACCEPTABLE HEALTH SAMPLE OBTAINED, PRIOR TO THE CONNECTION OF THE WATER MAIN(S) AND/OR LATERAL(S) TO THE DISTRICTS' SYSTEM.
13. CONTRACTOR TO OBTAIN ALL METERS 2" AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 FORTY-EIGHT (48) HOURS PRIOR TO PICKUP.

CITY OF LAS VEGAS 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: 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 #3677 TO IDENTIFY FIRE HYDRANT LOCATIONS.
5. CALL THE LAS VEGAS BUILDING DEPARTMENT AT 299-2071 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 #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 UNSPRINKLERED, 600 FEET SPRINKLERED.
    COMMERCIAL, INCLUDING MULTI-FAMILY - 300 FEET UNSPRINKLERED, 400 FEET SPRINKLERED.
11. 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.
12. NO FIRE HYDRANT SHALL BE LOCATED WITHIN 6 FEET OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREET LIGHT OR ANY OTHER OBSTRUCTION.
13. NO MORE THAN 2 HYDRANTS CAN BE OUT OF SERVICE DUE TO A SINGLE MAIN BREAK.
14. 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.
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 UFC 88, SECTION 10.207).
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.

NOTICE TO CONTRACTORS

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT. INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT. EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.

CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND SHALL REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.

AT THE COMPLETION OF THE PROJECT CONTRACTOR IS RESPONSIBLE IN RESTORING TO ITS ORIGINAL CONDITION THE AREAS SORROUNDING THE JOB SITE DISTURBED BY THE CONTRACTOR DURING HIS OPERATION.

IMPROVEMENTS NOTES

- 1/I — CONSTRUCT 5" A.C. OVER 13" A.B.
- 2/I — CONSTRUCT 8" MODIFIED "L" TYPE CURB AND GUTTER PER DETAIL 2 SHEET DE-1.
- 3/I — CONSTRUCT TYPE "A" ISLAND CURB PER CLARK COUNTY AREA STD 219.
- 4/I — CONSTRUCT 5' SIDEWALK PER CLARK COUNTY AREA STD 234.
- 5/I — CONSTRUCT MODIFIED SIDEWALK RAMPS PER DETAIL 3, SHEET DE-1.
- 6/I — INSTALL BARRICADE TYPE III PER N.D.O.T. STD.
- 7/I — INSTALL STREET NAME SIGN PER CLARK COUNTY AREA STD. 249, METRO 9".
- 8/I — INSTALL STREET LIGHTS, 250W H.P.S. PER CLARK COUNTY AREA STDS. 307.
- 9/I — CONSTRUCT MEDIAN ISLAND PER CLARK COUNTY AREA STD DWG 218 WITH 1 1/2" AC PAVEMENT
- 10/I — INSTALL STREET LIGHTS, 200W H.P.S. PER CLARK COUNTY AREA STDS. 304 & 307.
- 11/I — CONSTRUCT SIDEWALK DRAIN PER CLARK COUNTY AREA STD 236
- 12/I — CONSTRUCT CROSS GUTTER PER CLARK COUNTY AREA STD 228

WATER NOTES

- 1/W — INSTALL 16" WATER MAIN PER LVVWD STANDARDS.
- 2/W — INSTALL 8" WATER LINE PER LVVWD STANDARDS.
- 3/W — INSTALL 16" X 8" TEE W/ (1) 8" GATE VALVE W/THRUST BLOCK PER LVVWD STANDARDS.
- 4/W — INSTALL END CAP AND 2" MANUAL BLOW-OFF ASSEMBLY W/THRUST BLOCK PER LVVWD STD PLATE 4.
- 5/W — INSTALL 16" X 8" TEE W/ (1) 16" BUTTERFLY VALVE AND (1) 8" GATE VALVE WITH THRUST BLOCK PER LVVWD STANDARDS.
- 6/W — INSTALL 90° 16" ELBOW W/ THRUST BLOCK. PER LVVWD STANDARDS.
- 7/W — INSTALL 16" BUTTERFLY VALVE PER LVVWD STANDARDS.
- 8/W — INSTALL 45° 16" ELBOW W/ THRUST BLOCK. PER LVVWD STANDARDS.
- 9/W — INSTALL 45° 8" ELBOW W/ THRUST BLOCK. PER LVVWD STANDARDS.
- 10/W — INSTALL FIRE HYDRANT PER LVVWD STD PLATE NO. 7.
- 11/W — INSTALL 2" BLOW-OFF VALVE PER LVVWD STD PLATE NO. 4.
- 12/W — INSTALL 16" TEE W/ (1) 16" BUTTERFLY VALVE WITH THRUST BLOCK PER LVVWD STANDARDS.
- 13/W — INSTALL 16" X 12" REDUCER PER LVVWD STANDARDS
- 14/W — INSTALL 12" GATE VALVE PER LVVWD STANDARDS
- 15/W — INSTALL 12" WATER MAIN PER LVVWD STANDARDS.
- 16/W — INSTALL 12" TEE W/ (2) 12" GATE VALVES WITH THRUST BLOCK PER LVVWD STANDARDS.
- 17/W — INSTALL 12" X 8" TEE WITH (1) 8" GATE VALVE WITH THRUST BLOCK PER LVVWD STANDARDS.
- 18/W — INSTALL 12" X 8" TEE WITH (1) 12" GATE VALVE AND (1) 8" GATE VALVE WITH THRUST BLOCK PER LVVWD STANDARDS.
- 19/W — INSTALL 45° 8" ELBOW WITH THRUST BLOCK PER LVVWD STANDARDS.

SEWER NOTES

- 1/S — INSTALL STANDARD 4' DIA. SEWER MANHOLE PER CLARK COUNTY AREA STD SD-1.
- 2/S — INSTALL 8" PVC (SDR-35) SEWER LINE.
- 3/S — INSTALL SEWER PLUG.
- 4/S — INSTALL 12" SEWER LINE.
- 5/S — INSTALL 15" SEWER LINE.
- 6/S — INSTALL CONCRETE ENCASEMENT PER CLARK COUNTY AREA STD. DWG. NO. 505
- 7/S — INSTALL 18" SEWER LINE
- 8/S — INSTALL 5' DIA SEWER MANHOLE
- 9/S — INSTALL STANDARD 4' DIA. SEWER MANHOLE PER CLARK COUNTY AREA STANDARDS SD-1 WITH T-LOCK LINER
- 10/S — INSTALL STANDARD 5' DIA. SEWER MANHOLE PER CLARK COUNTY AREA STANDARDS SD-1 WITH T-LOCK LINER

DEVIATIONS FROM STANDARDS:

1. 8' CURB - DETAIL (2) SHEET DE-1
2. SIDEWALK RAMPS - DETAIL (3) SHEET DE-1

STORM DRAIN NOTES

- 1/SD — INSTALL TYPE I 60" DIA MANHOLE PER STD DWG NO 403
- 2/SD — INSTALL TYPE I 48" DIA MANHOLE PER STD DWG NO 403
- 3/SD — INSTALL TYPE "A" DROP INLET PER STD DWG NO 411, L = 4'.
- 4/SD — INSTALL 18" SD
- 5/SD — INSTALL 21" SD
- 6/SD — INSTALL 24" SD
- 7/SD — INSTALL 27" SD
- 8/SD — CONSTRUCT EARTH CHANNEL
- 9/SD — INSTALL UNGROUTED RIPRAP (D50=1.00")
- 10/SD — INSTALL BRICK AND MORTAR PLUG.
- 11/SD — INSTALL CONCRETE ENCASEMENT PER CLARK COUNTY AREA STANDARD DRAWING NO. 505
- 12/SD — BEVEL STORM DRAIN PIPE

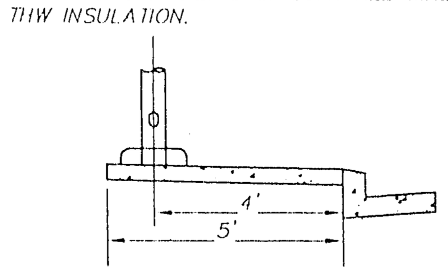
QUANTITIES

STREET IMPROVEMENTS:

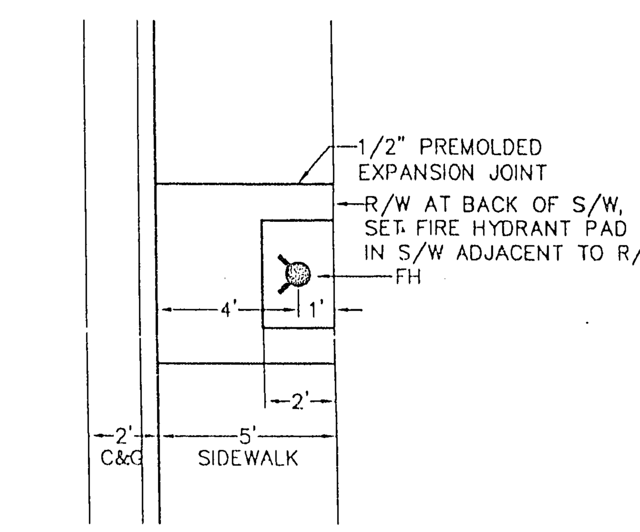
Description	Unit	Total
5" AC Pavement	S.Y.	69,481
Type I Aggregate Base	C.Y.	1,337
Type II Aggregate Base	C.Y.	26,676
Type "L" Modified C & G	L.F.	16,831
5' Sidewalk	S.F.	84,108
Sidewalk Ramp(Note Transition Lengths)	EA.	35
Valley Gutter	S.F.	6,090
1 1/2" Asphalt Conc. Paving Median	S.Y.	687
WATER		
STD. F.H. W/6" G.V. A.C.P. Lateral	EA.	10
Combination Air Valve	EA.	3
8" PVC	L.F.	1,156
12" PVC	L.F.	3,784
16" Water	L.F.	5,674
8" Gate Valve	EA.	17
16" BFV	EA.	4
8"-45° Bend	EA.	4
Conn. to Exist Water Line	EA.	1
16"-90° Bend	EA.	2
12"x16" Reducer	EA.	1
12"x8" Tee	EA.	7
12"x12" Tee	EA.	1
16"x12" Tee	EA.	1
16"x16" Tee	EA.	1
12" 45° Bend	EA.	4
16" 45° Bend	EA.	4
Conc. Water Encasement (16"W)	L.F.	20
SEWER		
8" PVC Sewer	L.F.	711
12" PVC Sewer	L.F.	3,030
15" Sewer	L.F.	5,122
18" Sewer	L.F.	1,705
STD. M.H. Over 6'	EA.	31
Conc. Sewer Encassement	L.F.	80
Conn. to Exist. Sanitary Sewer	EA.	1
STREET LIGHTS		
200W HRS Luminaire w/11 GA. Pole	EA.	66
250W HRS Luminaire w/11 GA. Pole	EA.	28
200 Amp Service	EA.	1
1 1/4" PVC Conduit	L.F.	19,187
1 1/2" Conduit	L.F.	20
2" PVC Conduit	L.F.	4,750
3" PVC Conduit	L.F.	1,080
3 1/2" Pull Box	EA.	8
#5 Pull Box	EA.	15
MISCELLANEOUS		
9" Metro 6"D Street Name Sign	EA.	17
30" R1-1 Stop Sign	EA.	6
Steel Casing (for 16" water line)	L.F.	36
STORM DRAIN		
18" R.C.P.	L.F.	837
21" R.C.P.	L.F.	310
24" R.C.P.	L.F.	516
27" R.C.P.	L.F.	163
STD. M.H.	EA.	4
Type A Inlet	EA	2

STREET LIGHT NOTE

1. 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.



STREET LIGHT LOCATION
(PER C.L.V. STD. DWG. #318)



FIRE HYDRANT LOCATION
NTS

APPROVALS

DENNIS ANDERSON, P.E. — 4-27-94 — DATE
CITY ENGINEER
CITY OF LAS VEGAS

LAS VEGAS VALLEY WATER DISTRICT — 1-25-94 — DATE

J. Lopardo — FIRE DEPARTMENT — 1/21/94 — DATE
CITY OF LAS VEGAS

PROFESSIONAL ENGINEER • STATE OF NEVADA — WILLIAM E. WHEELER — 1-19-94 — CIVIL — No. 910389

REV.	DATE	DESCRIPTION	DATE	APPROVAL

THE KEITH COMPANIES
• PLANNING • LAND SURVEYING • CIVIL ENGINEERING • WATER RESOURCES • ENVIRONMENTAL SERVICES • LANDSCAPE ARCHITECTURE
4052 SO. INDUSTRIAL RD. LAS VEGAS, NEVADA 89103 702-733-0350

WATT/MORADI CO.
ELKHORN SPRINGS - PHASE I
NOTES

SHEET CG-2
SHT 2 OF 38

11-3-1.9 .107Y-42-99-1