

**LAS VEGAS VALLEY WATER DISTRICT STANDARD NOTES**

- LVWD PROJECT # \_\_\_\_\_
- NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN RELEASED FOR CONSTRUCTION BY THE LVWD. FOLLOWING WATER PLAN APPROVAL, 48 HOUR NOTICE SHALL BE GIVEN TO THE LVWD COMMUNICATION SUPPORT CENTER (258-7171) PRIOR TO THE START OF CONSTRUCTION. NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO A LVWD INSPECTION WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT # IDENTIFIED ABOVE.
  - ALL WORK SHALL CONFORM TO LVWD 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 OFF-SITE 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 GUTTERS.
  - THE FOLLOWING REQUIREMENTS MUST BE MET IN THE EVENT A WATER LINE AND A 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)
      - SLEEVING WITH POTABLE WATER SUPPLY QUALITY PIPE.
  - 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 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 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 PICKUP.
  - CONSTRUCTION MAY INTERRUPT SERVICE, WITH LVWD APPROVAL AND PROPER NOTIFICATION, BETWEEN THE HOURS OF 10 PM AND 6 AM, SUNDAY THROUGH THURSDAY. CIRCUMSTANCES MAY REQUIRE TEMPORARY SERVICE FEES TO BE INSTALLED, WITHOUT LVWD REIMBURSEMENT. ANY TEMPORARY SERVICE FEE MUST HAVE PRIOR LVWD APPROVAL.
  - ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST AS LISTED ON THE LVWD'S PRE APPROVED MATERIALS AND MANUFACTURERS LISTING FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS.

**DEVIATION FROM STANDARDS**

- STREET LIGHTS
- ROADWAY CROSS-SECTION

**GENERAL GRADING NOTES**

- ALL ELEVATIONS SHOWN HEREON WITHIN LANDSCAPED AREAS ARE ROUGH GRADES, WHICH ARE 0.30' BELOW FINISH GRADE.
- ALL LOTS ARE TO BE F.H.A. TYPE "A" DRAINAGE UNLESS OTHERWISE NOTED.
- SEE IMPROVEMENT PLANS FOR STREET SECTIONS AND DETAILS. SEE FINAL MAP FOR EXACT BEARINGS AND DISTANCES.
- CONTRACTORS SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND SHALL REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
- ALL GRADING AND SITE PREPARATION SHALL CONFORM TO THE REQUIREMENTS OF THE GEOTECHNICAL INVESTIGATION PREPARED BY: **SOE TEK, INC., # W.Q. NO. 4504-LV6, DATED JUNE 12, 2003.**
- ALL WORK PERFORMED OUTSIDE OF THE PROJECT BOUNDARY AND ON PRIVATE PROPERTY SHALL NOT BE PERFORMED UNTIL WRITTEN PERMISSION AND EASEMENT HAVE BEEN OBTAINED FROM THE OFFSITE OWNER.
- ALL WORK PERFORMED WITHIN PUBLIC RIGHT-OF-WAY AND OUTSIDE OF THE PROJECT BOUNDARY THAT IS NOT SHOWN ON THESE PLANS SHALL BE PERFORMED UNDER A SEPARATE ENCROACHMENT PERMIT ISSUED BY THE CONTROLLING AUTHORITY.
- FINISH FLOOR ELEVATION = PAD ELEVATION +0.80'.
- ALL STATIONING ON GRADING PLAN IS CENTERLINE STATIONING UNLESS OTHERWISE NOTED.
- THESE PLANS AND THE DESIGN CRITERIA CONTAINED WITHIN THESE PLANS ARE BASED UPON THE INFORMATION PRESENTLY KNOWN BY ENGINEER AND ARE NOT A GENERAL GUARANTEE FOR CONSTRUCTION. ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL STATUTES, LAWS, CODES, REGULATIONS AND ORDINANCES, INCLUDING BUT NOT LIMITED TO THE FEDERAL FAIR HOUSING AMENDMENTS ACT, AMERICANS WITH DISABILITIES ACT, THE ARCHITECTURAL BARRIERS ACT AND ANY APPLICABLE UNIFORM STANDARDS, SPECIFICATIONS OR DRAWINGS. THE PERSON OR ENTITY PERFORMING THE CONSTRUCTION SHALL BE FULLY RESPONSIBLE TO MAKE SURE CONSTRUCTION IS IN CONFORMANCE WITH ALL LOCAL, STATE AND FEDERAL STATUTES, LAWS, CODES, REGULATIONS, STANDARDS, GUIDELINES AND ORDINANCES AND FURTHER, IS IN CONFORMANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL LAWS, INCLUDING BUT NOT LIMITED TO SOILS REPORTS, ARCHITECTURAL PLANS AND SPECIFICATIONS, DRAINAGE PLANS OR STUDIES AND ANY OTHER CRITERIA, STANDARDS OR REQUIREMENTS LISTED IN THE PLANS OR THE GENERAL NOTES AND REQUIREMENTS PROVIDED BY ANYONE IN REFERENCE TO THIS PROJECT.

**CITY OF LAS VEGAS GENERAL NOTES**

- 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 REVISED ISSUE, AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY; THE LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS".
- THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES AS SHOWN FROM CLV PLANS LIBRARY ARE APPROXIMATE AND FOR RECORD PURPOSES. 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 UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT AND BE RESPONSIBLE FOR ALL COSTS AND LIABILITY IN CONNECTION THEREWITH.
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES AND STREET IMPROVEMENTS WHICH ARE TO REMAIN 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.
- ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
- 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 CITY, PRIOR TO THE USE ON THE PROJECT.
- PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
- EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTRUDED TYPE CURB.
- AS PAVEMENT TO BE ONE-HALF (1/2") ABOVE LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.
- CURB & GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REPAIRED AND REPLACED PER STANDARD DRAWING 221.
- 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.
- 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 TRANSITION TO BE AS SHOWN ON PLANS.
- 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.
- EXACT LOCATION OF ALL SAWCUT LINES MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS ENGINEER IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH N.R.S. STATUTE NO. 625.950.
- 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.
- ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSE OF REVIEWING GRADING RELATIONSHIPS; FLOOD CONTROL AND SIGHT DISTANCE AT INTERSECTIONS. NEW WALLS REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.
- ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.
- CONTRACTOR SHALL ADJUST ALL NEW & EXISTING INLETS, VALVE BOXES, MANHOLE RIMS, AND CLEAN OUTS, ETC. TO FINISH GRADE AS APPLICABLE WHETHER OR NOT THEY ARE SHOWN ON THE PLANS.
- MATERIALS, HANDLING AND PLACEMENT OF PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF MDT OR THE CLARK COUNTY AREA SPECIFICATIONS (AS APPLICABLE) AND THE PLANS AND DETAILS SHOWN HEREON.

**CITY OF LAS VEGAS 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, 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 223.1.0.3 (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 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. SERVICE POINTS SHALL BE SHOWN ON THE PLANS.
- 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.

**CITY OF LAS VEGAS TRAFFIC NOTES**

- ALL CONSTRUCTION SIGNING, BARRICAADING AND TRAFFIC DELINEATION SHALL CONFORM TO THE "NEVADA WORK ZONE TRAFFIC CONTROL HANDBOOK" LATEST EDITION, AND TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" LATEST EDITION.
- THE STREET SIGN CONTRACTOR SHALL PROVIDE STREET NAMES AND BLOCK NUMBERING FROM PLANNING DEPARTMENT PRIOR TO CONSTRUCTION.
- BEFORE ANY WORK IS STARTED IN THE RIGHT-OF-WAY, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS FOR THE CONSTRUCTION ZONE. THE CONTRACTOR SHALL INSTALL TEMPORARY STOP SIGNS AT ALL NEW STREET ENCROACHMENTS INTO EXISTING CITY STREETS WHERE WARRANTED IMMEDIATELY AFTER FIRST GRADING/PAVEMENT IS COMPLETED, AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.
- WHEN A DESIGNATED "SAFE ROUTE TO SCHOOL" IS ENCLOSED UPON BY A CONSTRUCTION WORK ZONE AND PUBLIC WORK STAFF IDENTIFIES A NEED FOR A SAFE CROSSING THROUGH THAT WORK ZONE, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE A QUALIFIED "CROSSING GUARD". THE GUARD SHALL BE PRESENT FOR THE FULL DURATION OF TIME THAT CHILDREN ARE LIKELY TO BE PRESENT.
- IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY OBSTRUCTION, TEMPORARY REMOVAL OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKING, SUCH PAVEMENT MARKING SHALL BE RESTORED OR REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE CITY TRAFFIC ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL PERMANENT SIGNS SHOWN ON THE PLANS. STREET NAME SIGNS SHALL CONFORM IN THEIR ENTIRETY TO CURRENT CITY STANDARDS. ALL OTHER SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH CURRENT CITY STANDARDS.
- WHEN A PROPOSED STREET LIGHT STANDARD IS LOCATED WITHIN FIVE (5) FEET OF ANY SIGN SHOWN ON THE PLANS TO BE MOUNTED ON A SIGNPOST, THE SIGN SHALL BE MOUNTED ON THE STREET LIGHT STANDARD AND THE SIGNPOST SHALL BE ELIMINATED.
- ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND IN FINAL POSITION PRIOR TO ALLOWING TRAFFIC ONTO THE PORTIONS OF THE ROAD(S) BEING IMPROVED THEREUNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.
- STREET SIGNS AND STOP SIGNS SHALL BE INSTALLED PER CITY STANDARD SPECIFICATION FOR PLACEMENT OF STREET NAMES SIGNS.
- THE CONTRACTOR SHALL PROVIDE BARRICADES, SIGNS, FLASHERS, OTHER EQUIPMENT AND PERSONNEL NECESSARY TO INSURE THE SAFETY OF WORKERS AND VISITORS.
- WORK IN PUBLIC STREETS, ONCE BEGUN, SHALL BE EXPEDITED TO COMPLETION SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING CITIZENS AREA TRANSIT (C.A.T.) IF THE CONSTRUCTION INTERRUPTS OR RELOCATES A BUS STOP OR HAS AN EFFECT ON BUS SERVICE ON THAT STREET TO ARRANGE FOR TEMPORARY RELOCATION OF STOP.
- GUARDS SHALL BE OBTAINED BY CONTACTING THE METROPOLITAN POLICE DEPARTMENT SPECIAL EVENTS UNIT (PHONE NO: 229-3442) WHO WILL PROVIDE OFFICERS PROPERLY TRAINED IN TRAFFIC CONTROL. THE USE OF THESE OFFICERS SHALL BE SET UP BY METRO AND WILL BE PAID BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR ALL ARRANGEMENTS WITH METRO. (UPDATED 9.26.03)

**LAS VEGAS FIRE & RESCUE GENERAL NOTES**

REVISED 2/4/04

- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CITY OF LAS VEGAS FIRE DEPARTMENT'S ORDINANCE # 2004-2, "HYDRANT SPECIFICATIONS", AND "HYDRANT INSTALLATION SPECIFICATION".
- AUTHORIZED FIRE HYDRANTS FOR THIS PROJECT ARE:
  - A. KENNEDY - GUARDIAN MODEL # 610
  - B. MUELLER - SUPER CENTURION 250 MODEL A-423
  - C. CLOW - MEDALLION MODEL F-2548LUD
- RES. PIPE - METRO. ALL ALONG STREETS OR NEW STREETS ARE INSTALLED.
- ON ANY RESIDENTIAL OR COMMERCIAL INSTALLATIONS FIRE HYDRANTS SHALL BE INSTALLED AND FIRE APPARATUS ACCESS ROADS SHALL BE MAINTAINED BEFORE COMMENCEMENT OF ANY COMBUSTIBLE CONSTRUCTION. ALL FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FLOW.
- TO IDENTIFY THE FIRE HYDRANT LOCATIONS, CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTER LINE OF STREET ADJACENT TO THE FIRE HYDRANTS AS REQUIRED BY ORDINANCE # 2004-2.
- ALL UNDERGROUND INSPECTIONS, PRESSURE AND FLUSH VERIFICATIONS OF ALL FIRE HYDRANTS AND FIRE LINES, SHALL BE CONDUCTED BEFORE COVERING THE LINES. CALL THE CITY OF LAS VEGAS INSPECTION UNIT AT 229-2071 TO REQUEST AN INSPECTION BY THE CITY OF LAS VEGAS FIRE DEPARTMENT.
- PAINTING OF THE CURBS AND FIRE HYDRANTS AND ALL OTHER WORK NECESSARY AS REQUIRED BY ORDINANCE # 2004-2, FOR THE PROTECTION OF FIRE HYDRANTS FROM PHYSICAL DAMAGE, SHALL BE COMPLETED BEFORE APPROVAL BY THE CITY OF LAS VEGAS FIRE DEPARTMENT.
- A PERMIT IS REQUIRED FROM THE CITY OF LAS VEGAS FIRE DEPARTMENT FOR THE ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK.
- PRIVATE FIRE HYDRANTS SHALL BE PAINTED RED.
- PRIOR TO THE FINAL OCCUPANCY, A FLOW TEST MUST BE WITNESSED BY THE CITY OF LAS VEGAS FIRE DEPARTMENT TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW.
- ALL ON-SITE UNDERGROUND WATER MAINS AND MATERIALS SHALL BE U.L. LISTED, A.W.W.A. APPROVED, AND SHALL BE RATED FOR THE APPROPRIATE WORKING PRESSURE.
  - FIRE HYDRANTS SPACING SHALL BE:
    - RESIDENTIAL - 500 FEET UNSPRINKLERED; 600 FEET SPRINKLERED.
    - COMMERCIAL - 300 FEET UNSPRINKLERED; 400 FEET SPRINKLERED.
  - WHERE NEW WATER MAINS ARE EXTENDED ALONG STREETS OR NEW STREETS ARE INSTALLED WHERE FIRE HYDRANTS ARE NOT NEEDED FOR PROTECTION OF THE STRUCTURES, FIRE HYDRANTS SHALL BE INSTALLED AT MAXIMUM 1,000 FOOT SPACING, TO PROVIDE FOR TRANSPORTATION HAZARDS WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS OR HAVE FOUR OR MORE TRAFFIC LANES AND HAVE A TRAFFIC COUNT OF MORE THAN 50,000 PER DAY. HYDRANTS ARE REQUIRED ON EACH SIDE OF THE STREET SPACED AT 500 FEET ON AN ALTERNATING BASIS.
  - NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE REQUIRED RADIUS OF A CUL-DE-SAC OR WITHIN 20 FEET OF THE PERIMETER OF THE RADIUS OF A CUL-DE-SAC OR NEARLY THERE.
  - NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FEET OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION.
  - THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A ONE-TWO FAMILY DWELLING SHALL NOT EXCEED 300 FEET, AS MEASURED BY AN APPROVED ROUTE.
  - THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FEET.
  - TWO SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE ARE 4 OR MORE FIRE HYDRANTS SPRINKLERED OR INSTALLED ON A SINGLE SYSTEM. A SECTIONAL CONTROL VALVE SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS CAN BE OUT OF SERVICE DUE TO A BREAK IN A WATER MAIN.
  - ALL FIRE APPARATUS ACCESS ROADS SHALL BE PAVED TO PROVIDE ALL-WEATHER DRIVING SURFACES, AND SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF THE FIRE APPARATUS.
  - THE GRADIENT FOR THE FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 12% ANGLES OF APPROACH AND ANGLES OF DEPARTURE SHALL NOT EXCEED 6% FOR 25 FEET PRIOR TO OR AFTER THE GRADE CHANGE. ADJACENT TO THE STRUCTURES GRADIENT SHALL NOT EXCEED 6%.
  - THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FEET OUTSIDE AND 28 FEET INSIDE TURNING RADIUS.
  - VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL BE NOT LESS THAN 13 FEET 6 INCHES.
  - FIRE DEPARTMENT ACCESS ROADS IN ALL RESIDENTIAL DEVELOPMENTS (EXCEPT FOR THE APARTMENT BUILDINGS) SHALL HAVE A MINIMUM STRUCTURAL WIDTH NOT LESS THAN 36 FEET FLOW LINE TO THE FLOW LINE (THIS WIDTH MAY BE REDUCED TO 24 FEET, IF ALL BUILDINGS FRONTING THE STREET ARE SPRINKLERED) FOR MAIN RESIDENTIAL STREETS, WITH PARKING PERMITTED ON BOTH SIDES OF THE ROAD. PRIVATE DRIVEWAYS SHALL BE INSTALLED AND SHALL BE ALLOWED TO BE REDUCED TO A MINIMUM WIDTH OF 24 FEET WIDE FLOW LINE TO THE FLOW LINE WHEN SERVING NO MORE THAN 6 RESIDENCES, AND WHEN ON STREET PARKING IS DISALLOWED.
  - ALL FIRE APPARATUS ACCESS ROADS IN COMMERCIAL DEVELOPMENTS AND APARTMENT COMPLEXES SHALL HAVE A MINIMUM STRUCTURED WIDTH NOT LESS THAN 24 FEET (FLOW LINE TO THE FLOW LINE), PROVIDED NO PARKING IS ALLOWED ON EITHER SIDE; 32 FEET (FLOW LINE TO THE FLOW LINE), IF PARALLEL PARKING IS ALLOWED ON ONE SIDE ONLY; AND 40 FEET (FLOW LINE TO THE FLOW LINE) IF PARALLEL PARKING IS ALLOWED ON BOTH SIDES. THESE WIDTHS MAY BE REDUCED BY 4 FEET IF ALL BUILDINGS ARE SPRINKLERED.
  - A FIRE DEPARTMENT ACCESS ROAD SHALL EXTEND TO WITHIN 50 FEET OF A SINGLE EXTERIOR DOOR PROVIDING ACCESS TO THE BUILDING.
  - A FIRE APPARATUS ACCESS 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. THIS DISTANCE COULD BE INCREASED TO 250 FEET IF THE BUILDING IS SPRINKLERED.
  - APPROVED SERVICE AREAS FOR FIRE APPARATUS SHALL BE PROVIDED FOR 100 OR MORE DWELLING UNITS, ROAD(S) WITH DEAD-ENDS OR WITH A SINGLE POINT OF ACCESS IN EXCESS OF 800 FEET, AND FOR ALL COMMERCIAL, INDUSTRIAL, AND MULTI-FAMILY RESIDENTIAL DEVELOPMENTS.
  - 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 TURN AROUND AREA HAVING A MINIMUM DIAMETER OF 100 FEET.
  - ALL FIRE APPARATUS 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 100 FEET ALONG ALL DESIGNATED FIRE LANES. SIGNS TO BE PLACED ON BOTH SIDES AND 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 CURB ALONG OR ON THE PAVEMENT OR CEMENT IF A CURB IS NOT PROVIDED SHALL BE PAINTED WITH A RED WEAR SURFACE IN ADDITION TO THE SIGN.
  - 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.

**CITY OF LAS VEGAS GRADING NOTES**

- IN THE EVENT THAT ANY UNFORESEEN CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DURING GRADING OPERATIONS, THE OWNER/ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTION.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THE PROJECTS AND THE RELATED OFF-SITE WORK, SO AS TO GENERATE THE DESIRED SUBGRADE, FINISH GRADES AND SLOPES SHOWN.
- CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL EXCAVATION. ADEQUATE SHORING SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR TO PREVENT UNDERMINING OF ANY ADJACENT FEATURES OR FACILITIES AND/OR CAVING OF EXCAVATION.
- THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE WAS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS BECOMES THE RESPONSIBILITY OF THE CONTRACTOR.
- THE GRADING CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE OWNER TO PROVIDE FOR THE REQUIREMENTS OF THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ASSOCIATED PERMITS.
- CONTRACTOR SHALL GRADE TO THE LINES AND ELEVATIONS SHOWN ON THE PLANS WITHIN THE FOLLOWING HORIZONTAL AND VERTICAL TOLERANCES AND DEGREES OF COMPACTION, IN THE AREAS INDICATED:
 

A. PAVEMENT AREA SUBGRADE	HORIZONTAL	VERTICAL COMPACTION
B. ENGINEERED FILL	0.1"±	+0.0' TO -0.1' SEE SOILS REPORT
	0.5"	+0.1' TO -0.1' SEE SOILS REPORT
- COMPACTION TESTING WILL BE PERFORMED BY THE OWNER OR HIS REPRESENTATIVE.
- ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.
- THE USE OF POTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER.
- THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS AND ALL OTHER PUBLIC RIGHT-OF-WAY IN A CLEAN, SAFE AND USEABLE CONDITION. EXCESS SOILS, ROCK OR CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE PUBLICLY OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC SHALL BE MAINTAINED IN A CLEAN, SAFE AND USABLE CONDITION.
- IN THE EVENT THAT ANY UNFORESEEN CONDITIONS NOT COVERED ON THESE DRAWINGS, THE OWNER AGREES TO PROVIDE AND INSTALL SUCH ITEM AT HIS OWN EXPENSE AND AT THE DIRECTION OF THE CITY ENGINEER. TEMPORARY CONSTRUCTION INCLUDES DITCHES, BERMS, ROAD SIGNS AND BARRICADES, ETC.

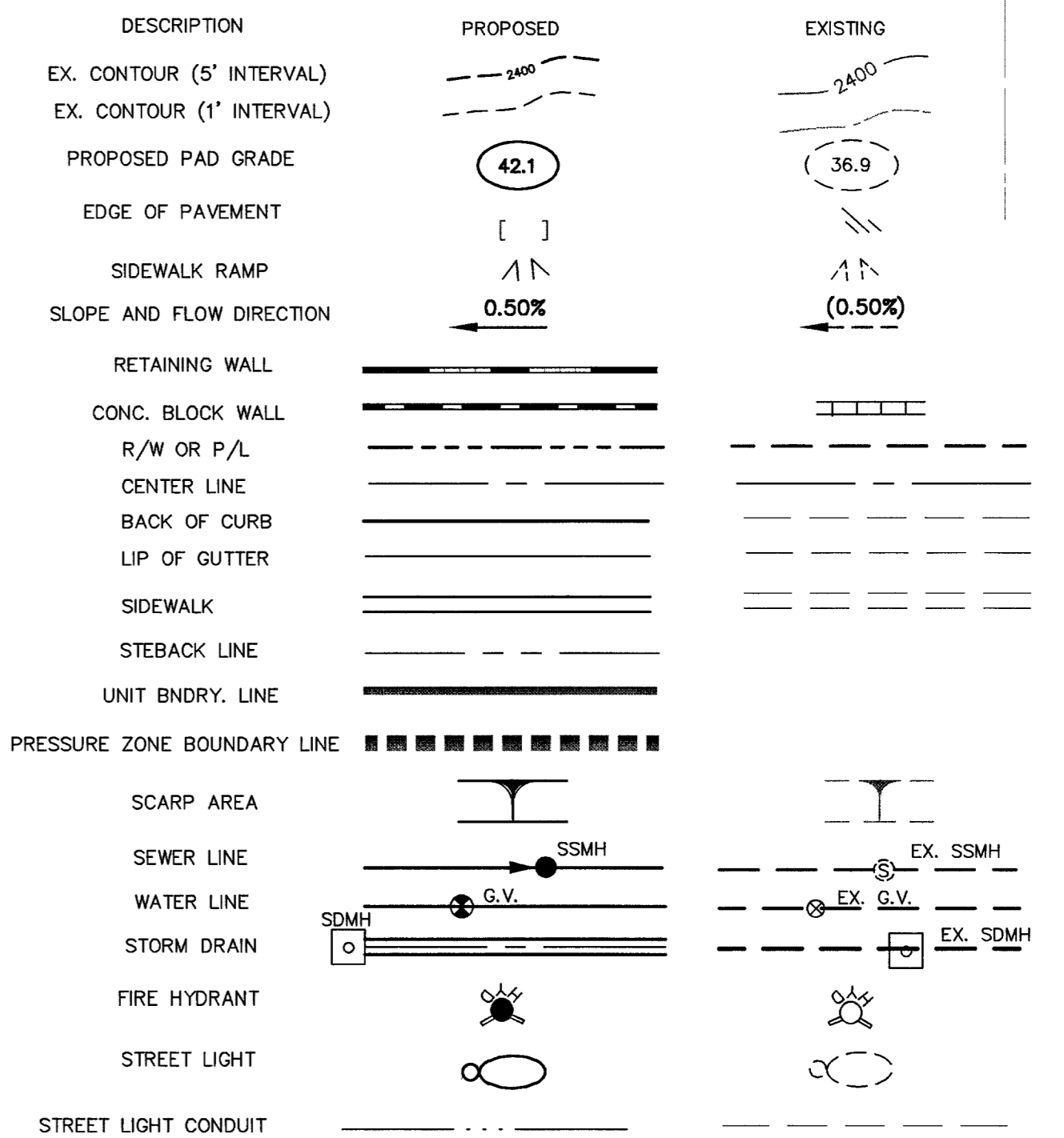
**CITY OF LAS VEGAS SEWER NOTES**

- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER TREATMENT PLANTS AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, AS AMENDED. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATIONS.
- 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 CITY ENGINEER.
- CHISEL OR "C" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
- POLYVINYL (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS. INSTALL TWELVE INCH (12") DIAMETER CONNECTIONS OF TYPE II AGGREGATE BASE.
- ALL MANHOLES PAVED IN STREETS EIGHTY (80') FOOT R/W AND LARGER SHALL HAVE CONCRETE COLLARS. STREETS LESS THAN EIGHTY (80') FOOT R/W WILL REQUIRE CONCRETE COLLARS. COLLARS SHALL CONFORM TO CITY STANDARDS AT THE MANHOLE.
- TEE SADDLES SHALL BE USED TO CONNECT SEWER LATERALS TO EXISTING MAINS. INSTALL TWELVE INCH (12") DIAMETER CONNECTIONS TO FIFTEEN INCH (15") OR LARGER SHALL REQUIRE SPECIAL PROCEDURES. IN LINE "Y" S SHALL BE USED TWELVE INCH (12") OR ABOVE.
- WATER MAINS SHALL BE PROTECTED IN ACCORDANCE WITH LVWD STANDARDS WHENEVER WATER MAINS CROSS OVER A SEWER MAIN OR THE SEWER IS LESS THAN EIGHTEEN INCH (18") UNDER THE WATER MAIN.
- ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CITY OF LAS VEGAS MUST BE STATE OF NEVADA CLASS "A" CONTRACTORS.
- 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 AT ANY LOCATION. 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 OF LAS VEGAS.
- INSTALLATION OF CURVE SEWER REQUIRES THE USE OF C-900 PVC PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

**ABBREVIATIONS**

FF	FINISH FLOOR	C/L	CENTER LINE
FG	FINISH GRADE	OC	OFFSET CROWN
FL	FLOW LINE	BC	BACK OF CURB
TC	TOP OF CURB	BCR	BEGIN CURB RETURN
TRC	TOP OF ROLL CURB	BCL	BACK OF CURB LENGTH
EP	EDGE OF PAVEMENT	TF	TOP OF FOOTING
FUT.	FUTURE	GB	GRADE BREAK
EX	EXISTING	PC	POINT OF CURVATURE
VG	VALLEY GUTTER	PT	POINT OF TANGENCY
NG	NATURAL GROUND	PRC	POINT OF REVERSE CURVATURE
H.P.	HIGH POINT	PCC	POINT OF COMPOUND CURVATURE
L.P.	LOW POINT	BVC	BEGIN VERTICAL CURVE
SSMH	SEWER MANHOLE	MVC	MID-POINT OF VERTICAL CURVE
W	WATER LINE	EVC	END VERTICAL CURVE
SD	STORM DRAIN	PRVC	POINT OF REVERSE VERTICAL CURVE
RCP	REINFORCED CONCRETE PIPE		

**LEGEND**



**Call before you Underground**  
1-702-455-7511  
CLARK COUNTY TRAFFIC OPERATIONS AND  
1-702-229-6611  
LAS VEGAS AREA COMPUTERIZED TRAFFIC SYSTEM

**Call before you Dig**  
1-800-227-2600

**Call before you Overhead**  
1-702-227-2929

**BASIS OF BEARINGS**

THE BASIS OF BEARINGS FOR THIS PROJECT IS NORTH 000°16" EAST BEING THE EAST LINE OF THE NORTHWEST QUARTER (NE 1/4) OF THE SECTION 24, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN ON A RECORD OF SURVEY ON FILE IN THE CLARK COUNTY, NEVADA, RECORDER'S OFFICE IN FILE 123 AT PAGE 32.

**PROJECT BENCHMARK**

PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV088)  
CLARK COUNTY VERTICAL CONTROL: 1000-6N6  
NAV088 ELEVATION: 787.794 METERS (2584.82 FEET)

RIVET AND SQUARE ALUMINUM PLATE IN A CONCRETE CYLINDER, LOCATED 25' SOUTH OF GRAND CANYON DRIVE AND RED COACH AVENUE, 1' WEST OF ELECTRICAL VAULT.

**CITY OF LAS VEGAS BENCHMARK**

DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV088)  
CITY OF LAS VEGAS BENCHMARK: BLV99-13SES  
NAV088 ELEVATION: 869.806 METERS (2853.03 FEET)

RIVET AND PLATE IN CONCRETE CYLINDER NW CORNER OF HUALAPAI AND ELKHORN

NOTE: ADD 0.34" ABOVE CITY OF LAS VEGAS BENCHMARK BLV99-13SES TO MATCH ORIGINAL PROJECT BENCHMARK, CLARK COUNTY BENCHMARK 1000-6N6 (2584.82 FEET) AS SHOWN ON RECORD OF SURVEY FILE 124 PAGE 94.

7	6	5	4	3	2	1	REV	DATE	BY
<b>CITY OF LAS VEGAS, NEVADA</b>									
<b>CLIFFS EDGE LLC.</b>									
3465 CLIFF SHADOWS PARKWAY, SUITE 290 LAS VEGAS, NEVADA 89129 (702) 777-1221									
<b>GENERAL NOTES SHEET</b>									
<b>CLIFFS' EDGE / PROVIDENCE</b>									
<b>GRAND TETON DRIVE STREET IMPROVEMENTS PULL ROAD TO HUALAPAI WAY</b>									
DRAWN BY:	APRIL '04'								
DESIGNED BY:	MARCH '04'								