

ABN - ABANDON
 AC - ASPHALTIC CONCRETE
 AGN - AGGREGATE
 A&N - AND
 ASR - ASSESSOR PARCEL NUMBER
 APPROX - APPROXIMATE
 ASSTY - ASSEMBLY
 AVE - AVENUE

 BC - BACK OF CURB
 BCR - BACK OF CURB RETURN
 BK - BOOK/BACK
 BLDG - BUILDING
 BLK - BLOCK
 BLU - BUREAU OF LAND MANAGEMENT
 BOV - BOULEVARD
 BM - BENCHMARK
 BO - BENCH MARK
 BOC - BACK OF CURB
 BOT - BOTTOM
 BOW - BACK OF CURB
 BRG - BEARING
 BRV - BACK OF VERTICAL CURVE
 BW - BACK WATER VALVE
 BWV - BACK WATER VALVE

 C/C - CENTER TO CENTER
 C&G - CURB & GUTTER
 CL - CLARK COUNTY
 CE - COMMON ELEMENT
 C - CAST IRON
 CP - CAST IRON PIPE/CAST IN PLACE
 CR - CIRCLE
 CL OR C - CENTERLINE
 CLV - CITY OF LAS VEGAS
 CNY - CITY OF NOTH

 CO - COUNTY
 COH - CITY OF HENDERSON
 CONC - CONCRETE
 CONT - CONTINUOUS
 COORD - COORDINATE
 CTR - CENTER
 CV - CONTROL VALVE

 Δ - DELTA ANGLE
 D/W OR DWY - DRIVEWAY
 DEPT - DEPARTMENT
 DET - DETAIL
 DEV - DEVELOPMENT
 DG - DESIGN GRADE
 DI - DROP INLET/DUCTILE IRON
 DIA OR D - DIAMETER
 DM - DIMENSION
 DIP - DUCTILE IRON PIPE
 DIR - DIRECTION
 DIST - DISTANCE
 DMH - DROP MANHOLE
 DN - DOWN
 DR - DRIVE
 DRW - DRAWING
 E - EAST/EDGE
 EA - EACH
 EAG - EACH
 ELEV - ELEVATION
 EOP - EDGE OF PAVEMENT
 EOS - EDGE OF SHOULDER
 EQ - EQUAL
 ESP - EQUALLY SPACED
 EQMT - EASEMENT
 EST - ESTIMATE
 EVC - END OF VERTICAL CURVE
 EW - EACH WAY
 EXIST - EXISTING

 F/F - FACE TO FACE
 FC - FACE OF CURB
 FT - FINISHED FLOOR
 FNSH - FINISHED GRADE
 FH - FIRE HYDRANT
 FIG - FIGURE
 FL OR FL - FLOW LINE
 FL - FLOOR
 FN - FENCE
 FND - FOUND
 FOC - FACE OF CURB
 FOW - FACE OF WALL
 FT - FEET PER MINUTE
 FPM - FEET PER SECOND
 FT - FEET OR FEET
 FUT - FOOTING
 FUT - FUTURE

 G/B - GRADE BREAK
 GALV - GALVANIZED
 GB - GRADE BREAK
 GND - GROUND
 GP - GALLONS PER DAY
 GPH - GALLONS PER HOUR
 GPM - GALLONS PER MINUTE
 GR - GRADE
 GV - GATE VALVE
 GT - GATE

 HORIZ - HORIZONTAL
 HP - HIGH POINT
 HPO - HIGH PRESSURE GAS
 HT - HEIGHT
 HWY - HIGHWAY

 IN - INCH
 INST - INSTALL
 INT - INTERIOR
 INV - INVERT
 IRR - IRRIGATION

 LB OR L - POUND
 LEN OR L - LENGTH OF CURVATURE
 LF - LINEAR FOOT
 LG - LONG
 LH - LANE
 LT - LEFT/LIGHT
 LVYMD - LAS VEGAS VALLEY WATER DISTRICT
 LWR - LOWER

 M - METER
 M&M - MATERIAL
 MA - MAXIMUM
 MEGH - MECHANICAL
 MFR - MANUFACTURER
 MOT - MOTION
 MGD - MILLION GALLONS PER DAY
 MN - MANHOLE
 MIN - MINIMUM
 MSC - MISCELLANEOUS
 MJ - MECHANICAL JOINT
 MKR - MARKER
 ML - MOSTER LINED
 MLC - MOSTER LINED & COATED
 MVC - MIDDLE OF VERTICAL CURVE

 N - NORTH
 N/A - NOT APPLICABLE
 NAP - NOT A PART
 NDOT - NEVADA DEPARTMENT OF TRANSPORTATION
 NE - NORTHEAST
 NF - NORTH FACE
 NG - NATURAL GROUND
 NO. OR # - NUMBER
 NTS - NOT TO SCALE
 NW - NORTHWEST

 O/O - OUT TO OUT
 OC - ON CENTER
 OD - OUTSIDE DIAMETER
 OF - OUTSIDE FACE
 OHP - OVER HEAD POWER
 OTEL - OVER HEAD TELEPHONE
 ORG - ORIGINAL
 OWL - OVERFLOW

 O/O - OUT TO OUT
 OC - ON CENTER
 OD - OUTSIDE DIAMETER
 OF - OUTSIDE FACE
 OHP - OVER HEAD POWER
 OTEL - OVER HEAD TELEPHONE
 ORG - ORIGINAL
 OWL - OVERFLOW

 PL OR P - PROPERTY LINE
 PAVMT - PAVEMENT
 PB - PULL BOX
 PC - POINT OF CURVE
 PCC - POINT OF COMPOUND CURVE
 PE - POLYETHYLENE
 PED - PEDESTAL
 PERM - PERMANENT
 PERP - PERPENDICULAR
 PH - PHASE
 PI - POINT OF INTERSECTION
 PKG - PACKAGE
 PKWY - PARKWAY
 PL - PLACE/PLATE/PARCEL LINE
 PLT - PLATE (DRAWING)
 POLY - POLYETHYLENE
 PP - POWER POLE
 PR - PAIR
 PRG - POINT OF REVERSE/CURVE
 PREMB - PRELIMINARY
 PROP - PROPOSED
 PRV - PRESSURE REGULATING VALVE
 PS - PUMP STATION
 PSF - POUNDS PER SQUARE FOOT
 PSF - POUNDS PER SQUARE INCH
 PT - POINT/POINT OF TANGENT
 PUE - PUBLIC UTILITY EASEMENT
 PV - POINT OF VERTICAL INTERSECTION
 PWC - POLYVINYL CHLORIDE PIPE
 QTR - QUARTER
 QTY - QUANTITY

 R - RADIUS
 (R) - RADIAL
 R/W - RIGHT OF WAY
 RCB - REINFORCED CONCRETE BOX
 RCP - REINFORCED CONCRETE PIPE
 RD - ROAD
 RED - REDUCER
 REQ - REQUIRED
 RET - RETURN
 REV - REDUCION OR REVERSE
 ROW - RIGHT OF WAY
 RPPA - REMOVED PRESSURE PRINCIPLE ASSEMBLY
 RR - RAILROAD
 RT - RIGHT

 S - SOUTH/SLOPE
 S/C - SAW CUT
 SCH - SCHED. CYLINDER CONCRETE
 S&W - SIDEWALK
 SOH - SCHEDULE
 SD - STORM DRAIN
 SDMH - STORM DRAIN MANHOLE
 SOW - SEWAGE
 SE - SOUTHEAST
 SEC - SECTION/SECOND
 SEW - SEWAGE
 SHDR - SHOULDER
 SHT - SHEET
 SSI - SPECIAL IMPROVEMENT DISTRICT
 SIG - SIGNAL
 SL - SLOPE
 SLS - SLEEVE
 SNWA - SOUTHERN NEVADA WATER AUTHORITY
 SPEC(S) - SPECIFICATION(S)
 SQ - SQUARE
 SQ FT - SQUARE FOOT/FEET
 SQ YD - SQUARE YARD
 SS - SANITARY SINKER
 ST - STREET
 STA - STATION
 STD - STANDARD
 STL - STEEL
 STLT - STREET LIGHT
 SUR - SURVEY
 SW - SIDEWALK OR SOUTHWEST
 SY - SQUARE YARD
 SYS - SYMBOL
 SYS - SYSTEM

 T&B - TOP & BOTTOM
 TAN - TANGENT
 TBM - TEMPORARY BENCH MARK
 TC - TOP OF CURB
 TD - TRENCH DRAIN
 TEMP - TEMPORARY
 TH () - THICKNESS
 THR BK - THRUST BLOCK
 TM - TOP OF MANHOLE
 TOF - TOP OF FOOTING
 TOGR - TOP OF GRATE
 TOP - TOP OF PIPE
 TOR - TOP OF RIM
 TOW - TOP OF SLOPE
 TOSW - TOP OF SIDEWALK
 TOT - TOTAL
 TOP - TOP OF WALL
 (TP) - TYPICAL

 UN - UNLESS NOTED OTHERWISE
 UPRR - UNION PACIFIC RAILROAD
 USGS - UNITED STATES GEOLOGIC SURVEY
 UTL - UTILITY

 V - VOLT OR VALVE
 VAR - VARIES
 VB - VALVE BOX
 VOP - VITRIFIED
 VO - VERTICAL CURVE
 VEL - VELOCITY
 VLT - VERTICAL
 VLT - VERTICAL
 VOL - VOLUME
 VPI - VERTICAL POINT OF INTERSECTION

 W/ - WITH
 W - WEST/WATER
 W/O - WITH OUT
 W - WIDTH
 WDN - WASTE DRAIN
 WN - WROUGHT IRON
 W - WASTE LINE
 WS - WORK POINT/WEATHER PROOF
 WS - WATER SURFACE
 WT - WEIGHT
 W - WATER
 WV - WATER VALVE
 WW - WELDED WIRE FABRIC
 WW - WELDED MIRE MESH

 XFMR - TRANSFORMER
 XTFR - TRANSFER
 XSEC - CROSS SECTION

 YD - YARD
 YLD - YIELD

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 EDITION; THE "UNIFORM STANDARD DRAWINGS FOR THE CITY OF LAS VEGAS AREA NEVADA", LATEST REVISED EDITION; THE "SUMMERLIN IMPROVEMENT STANDARDS" FOR WORK IN THE SUMMERLIN AREA; 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 A RESEARCH OF THE AVAILABLE RECORD INFORMATION AND FIELD SURVEY. THE INFORMATION IS BELIEVED TO BE 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 SHALL BE RESPONSIBLE FOR ALL COST 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. ANY DAMAGE TO EXISTING UTILITIES OR STRUCTURES OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED SATISFACTORILY TO THE CITY ENGINEER AND 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 DESIGNS TO BE APPROVED BY THE CITY, PRIOR TO THE 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 ONE-HALF INCH ($\frac{1}{2}$ ") ABOVE LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.
9. CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER STANDARD DRAWING 216.
10. SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXISTING LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.
11. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR ACCESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF THE TRANSITIONS TO BE AS SHOWN ON PLANS.
12. ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY THE () COMPANY, — REPORT #, DATE) APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.
13. EXISTANT 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 RELOCATIONS.
14. 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. 625.380 & CITY OF LAS VEGAS TITLE 18, APPENDIX D.
15. 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.

WALL NOTES:

16. ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSES OF REVIEWING GRADING RELATIONSHIPS. THE HORIZONTAL (INVERT) LOCATION OF PUBLIC SEWER INTERSECTIONS, NEW WALLS REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.
17. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.
18. CONTRACTOR SHALL ADJUST ALL NEW AND EXISTING INLETS, VALVE BOXES, MANHOLE RIMS, AND SEWER CLEAN OUTS, ETC. TO FINISH GRADE AS APPLICABLE WHETHER OR NOT THEY ARE SHOWN ON THE PLANS.
19. MATERIALS, HANDLING AND PLACEMENT OF PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF NDOT OR THE CLARK COUNTY AREA SPECIFICATIONS (AS APPLICABLE) AND THE PLANS AND DETAILS SHOWN HEREON.
20. WHEN INSTALLING UNDERGROUND FACILITIES THAT REQUIRE UNDERGROUND LOCATING DEVICES SUCH AS MARKER BALLS, LOCATING RIBBON, ETC, THE CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION TO OFFSITE INSPECTION AND TESTING CERTIFYING THAT THE LOCATING DEVICES ARE INSTALLED AND VERIFIED TO BE IN GOOD WORKING CONDITION PRIOR TO THE CONSTRUCTION OF ANY ROAD BASE.
21. SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S) SHALL BE PROVIDED TO THE CITY ENGINEER APPROVED PRIOR TO ACCEPTANCE OF FACILITY UDEW INSPECTION. THE MAP(S) SHALL INCLUDE THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES AND TRANSITION STRUCTURES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND AT THE CONNECTION TO A STORM DRAIN NETWORK OF THE CITY OF LAS VEGAS. THE LOCATION MAP(S) MUST BE SEALED AND WHERE THE SEWER SERVICE LATERALS EXIT THE PUBLIC RIGHT-OF-WAY, AND STORM DRAIN MAIN ALIGNMENT, INCLUDING DEFLECTION POINTS. THE LOCATION SHALL BE DESCRIBED BY COORDINATES WHICH SHALL BE BASED ON THE OFFICIAL HORIZONTAL AND VERTICAL CONTROL NETWORKS OF THE CITY OF LAS VEGAS. THE LOCATION MAP(S) MUST BE SEALED AND CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSITIONAL CERTAINITIES OF ± 0.09 METERS (± 0.3 FEET) HORIZONTALLY AND VERTICALLY. A COORDINATE DATUM, COMMA DELIMITED FILE FOR THE SANITARY SEWER AND STORM DRAIN COORDINATES SHALL ALSO COMPLEMENT THE SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S).

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE ORDINANCE # 6325 FOR HYDRANT SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATIONS.

2. ONLY FIRE HYDRANTS THAT ARE ON THE LAS VEGAS VALLEY WATER DISTRICT'S - APPROVED PRODUCTS LIST ARE ALLOWED TO BE INSTALLED.

3. A PERMIT IS REQUIRED FROM LAS VEGAS FIRE AND RESCUE FOR THE INSTALLATION OF ANY HYDRANT. THE PERMIT AND THE REQUIRED FIRE HYDRANT CONTRACTORS MATERIAL TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION DIVISION BEFORE COMMENCEMENT OF WORK. [IFC § 105.7.12]

4. ON ANY RESIDENTIAL OR COMMERCIAL INSTALLATIONS, FIRE HYDRANTS SHALL BE INSTALLED AND FIRE APPARATUS ACCESS ROADS SHALL BE MAINTAINED BEFORE ANY CONSTRUCTION OR COMBINATION OF CONSTRUCTION. ALL HYDRANTS SHALL BE IN GOOD WORKING ORDER AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW. [IFC § 3310, § 3312]

5. TO IDENTIFY THE FIRE HYDRANT LOCATIONS, THE CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTER LINE OF THE STREET ADJACENT TO THE FIRE HYDRANTS. [IFC § 507.5.7.3]

6. ALL UNDERGROUND INSPECTIONS, PRESSURE, RESCUE AND FLUSH VERIFICATIONS OF ALL FIRE HYDRANTS AND FIRE LINES SHALL BE CONDUCTED BEFORE COVERING THE LINE. A CENTER LOADING IS ACCEPTABLE FOR THE HYDRO TESTS WITH PRIOR FIRE PREVENTION APPROVAL. [IFC 106.3]

7. 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. [IFC § 507.2.1, NFPA 24]

8. PAINTING OF CURBS, FIRE HYDRANTS, PADS, PROTECTION OF FIRE HYDRANTS FROM DAMAGE BY OTHER VEHICLES, OTHER WORK NECESSARY PER PLANS SHALL BE COMPLETED BEFORE APPROVAL BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION. [IFC § 507]

9. PRIVATE HYDRANTS SHALL BE PAINTED RED. [IFC § 507.5.7.1]

10. PRIOR TO THE FINAL OCCUPANCY, A FIRE FLOW TEST SHALL BE WITNESSED BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. [IFC § 507]

11. FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: [IFC § 1102.2]

- RESIDENTIAL - 500 FT UNSPRINKLERED; 600 FT SPRINKLERED.
- COMMERCIAL - 300 FT UNSPRINKLERED; 400 FT SPRINKLERED.

12. WHERE THE 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 A MAXIMUM OF 1000 FT SPACING, TO PROVIDE FOR TRANSPORTATION HAZARDS, WHERE STREETS ARE PROVIDED WITH ONE OR MORE TRAFFIC LANES (4) OR MORE TRAFFIC LANES AND HAVE A TRAFFIC COUNT OF MORE THAN 30,000 PER DAY, HYDRANTS ARE REQUIRED ON EACH SIDE OF THE STREET SPACED AT 500 FT ON AN ALTERNATING BASIS. [IFC § 1102.8]

13. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE RADIUS OF A CUL-DE-SAC OR WITHIN 20 FT OF THE PERIMETER OF THE RADIUS OF THE CUL-DE-SAC.

14. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FT OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION. [IFC § 1102.12]

15. A MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A ONE-TWO FAMILY DWELLING SHALL NOT EXCEED 300 FT, AS MEASURED BY AN APPROVED ROUTE. [IFC § 1102.4]

16. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A FIRE DEPARTMENT CONNECTION SHALL NOT EXCEED 100 FT, AS MEASURED BY AN APPROVED ROUTE. [IFC § 1102.7]

17. THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. [IFC § 1102.6]

18. TWO (2) SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE IS 4 OR MORE FIRE HYDRANTS/SPRINKLER LEAD-INS ARE INSTALLED ON A SINGLE SYSTEM. SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS CAN BE OUT OF SERVICE DUE TO A BREAK IN A WATER MAIN. [IFC § C104]

19. ALL FIRE APPARATUS ACCESS ROADS SHALL BE PAVED TO PROVIDE ALL-WEATHER DRIVING CONDITIONS, AND SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPROVED GRADES OF THE FIRE APPARATUS. [IFC § 503.2.3]

20. THE LOADS FOR THE FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 12% ANGLES OF APPROACH AND ANGLES OF DEPARTURE SHALL NOT EXCEED 6% FOR 25 FT PRIOR TO OR AFTER THE GRADE CHANGE, ADJACENT TO THE STRUCTURES GRADIENT SHALL NOT EXCEED 6%. [IFC § 503.2.7, § 503.2.8]

21. THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FT OUTSIDE AND 28 FT INSIDE TURNING RADIUS. [IFC § 503.2.4]

22. VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13FT 6 INS. [IFC § 503.2.1]

23. FIRE DEPARTMENT ACCESS ROADS SHALL HAVE A MINIMUM UNSTRUCTURED WIDTH OF 12 FT LESS THAN 10 FT FLOW LINE TO FLOW LINE WITH PARALLEL PARKING PERMITTED ON BOTH SIDES. NOT LESS THAN 32 FT WIDE, FLOW-LINE TO FLOW-LINE, WHERE PARKING IS PERMITTED ONLY ON ONE SIDE OF THE FIRE APPARATUS ACCESS ROAD, THE WIDTH OF THE ROAD ON BOTH SIDES OF AN ACCESS ROADWAY IF PARKING IS PERMITTED ON EITHER SIDE, FIRE LINES THROUGH PARKING LOTS SHALL BE NOT LESS THAN 24 FT. [IFC § 503.2.1.1]

24. A FIRE APPARATUS ACCESS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN 150 FT FROM A FIRE DEPARTMENT CONNECTION. THIS DISTANCE COULD BE INCREASED TO 250 FT IF THE BUILDING IS SPRINKLERED. [IFC § 503.2.1.2]

25. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 100 OR MORE DWELLING UNITS, ROAD(S) WITH DEAD-ENDS OR WITH A SINGLE POINT OF ACCESS IN EXCESS OF 600 FT. COMMERCIAL AND INDUSTRIAL DEVELOPMENTS WHERE BUILDINGS EXCEED 2 STORIES OR 30 FEET IN HEIGHT, OR EXCEEDING 62,000 SQUARE FEET IN AREA. [IFC § 503.1.2]

26. ALL DEAD-END FIRE APPARATUS ROADS AND/OR FIRE LINES, PUBLIC OR PRIVATE, IN EXCESS OF 150 FT IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURN ARROUND HAVING A MINIMUM DIAMETER OF 81 FT. [IFC § 503.2.5]

27. 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 OF 100 FT ALONG THE DESIGNATED FIRE LANE. SIGNS SHALL BE PLACED ON BOTH SIDES OF THE ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE. SIGNS TO BE INSTALLED NO HIGHER THAN 10 FT OR LESS THAN 6 FT FROM THE ROADWAY LEVEL. THE CURB ALONG OR ON THE PAVEMENT OR CEMENT (IF NO CURB IS PROVIDED) SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT. [IFC § 503.2.1.3]

28. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM, SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE IFC § 503.6 & IFC APPENDIX M.

EFFECTIVE DATE: MARCH 1ST, 2018.

	UNIT BOUNDARY
	PROPOSED 1' GRADE CONTOUR
	PROPOSED 5' GRADE CONTOUR
	EXISTING 1' GRADE CONTOUR
	EXISTING 5' GRADE CONTOUR
	PROPOSED PROPERTY LINE
	PROPOSED SETBACK LINE
	PROPOSED HINGE LINE
	PROPOSED SWALE
	EXISTING CURB AND GUTTER
	PROPOSED CURB AND GUTTER
	RETAINING WALL
	GARDEN WALL WITH SOLID GROUT
	8' WIDE CMU FLOOD WALL
	EXISTING FENCE
	EXISTING EDGE OF PAVEMENT
	PROPOSED EDGE OF PAVEMENT
	PROPOSED STREETLIGHT CONDUIT
	PULL NO. 3 1/2 CONCRETE PUSH BOX W/ METAL COVER
	EXISTING GAS
	EXISTING SEWER MAIN
	PROPOSED SEWER MAIN
	PROPOSED SEWER LATERAL
	EXISTING STORM DRAIN
	PROPOSED STORM DRAIN
	EXISTING WATER MAIN
	PROPOSED WATER MAIN
	PROPOSED FIRE HYDRANT
	LOT NUMBER
	PROPOSED FINISH FLOOR
	PROPOSED PAD ELEVATION
	EXISTING STREET LIGHT
	PROPOSED 100w HPS STREET LIGHT
	PROPOSED 150w HPS STREET LIGHT
	PROPOSED 200w HPS STREET LIGHT
	PROPOSED 250w HPS STREET LIGHT
	PROPOSED 400w HPS STREET LIGHT
	PROPOSED HANDICAP RAMP
	PROPOSED CONCRETE DRIVEWAY
	0' LIP DRIVEWAY
	2:1 SCARP
	COURSES OF 8' CMU NUMBER OF COURSES
	CUL-DE-SAC BACK OF CURB STATION
	KNUCKLE BACK OF CURB STATION
	SIGHT VISIBILITY ZONE
	PROPOSED RATE & FLOW DIRECTION
	PROPOSED ELEVATION WITH DESCRIPTION
	EXISTING ELEVATION WITH DESCRIPTION

ITEMS

<u>STREET IMPROVEMENTS (PUBLIC)</u>	
1. 3" THICK AC WITH 4" TYPE II BASE	2,139 SY
<u>STREET IMPROVEMENTS (PRIVATE)</u>	
1. 2" THICK AC WITH 4" TYPE II BASE	2,719 SY
2. 24" WIDE L-TYPE CURB AND GUTTER WITH 6" TYPE II BASE	1,233 LF
3. A CURB AND GUTTER WITH 6" TYPE II BASE	201 LF
<u>DRAINAGE IMPROVEMENTS (PUBLIC)</u>	
1. RIP-RAP, D50= 8" x 16" DEPTH	622 CY
2. 3' x 1' CONCRETE CUT-OFF WALL	943 LF
3. 3,000 PSI CONCRETE WITH 6" TYPE II BASE	86 CY
4. 12" x 6" CONCRETE GUTTER WITH 6" TYPE II BASE	12 CY
<u>SEWER IMPROVEMENTS</u>	
1. 48" DIAMETER MANHOLE (PUBLIC)	10 EA
2. 8" PVC PUBLIC SEWER MAIN (PUBLIC)	1,881 LF
3. 8" CSO0 PUBLIC SEWER MAIN (PUBLIC)	90 LF
4. 4" PVC SERVICE LATERAL (PRIVATE)	17 EA
5. 18" STEEL SLEEVE	55 LF
6. BACK WATER VALVE	1 EA
<u>WATER IMPROVEMENTS (PUBLIC)</u>	
1. 8" PVC PUBLIC WATER MAIN	2,063 LF
2. 6" PVC PUBLIC WATER MAIN	40 LF
3. 8" CLASS 53 D.I.P. (DUCTILE IRON PIPE) PUBLIC WATER MAIN	82 LF
4. 8" 45° BEND PER UDACS PLATE NO. 31	6 EA
5. 8" TEE PER UDACS PLATE NO. 31	3 EA
6. 8" GATE VALVE PER UDACS PLATE NO. 30 AND PLATE NO. 39	8 EA
7. FLOW OFF ASSEMBLY WITH CAP PER UDACS PLATE NO. 36	3 EA
8. FIRE HYDRANT ASSEMBLY WITH 6" GATE VALVE, 6" LATERAL, AND 80% TEE PER UDACS PLATE NO. 40	5 EA
9. 1" COPPER WATER SERVICE WITH 3/4" VALVE PER UDACS PLATE No. 4	17 EA
10. 3/4" IRRIGATION WATER W/ 1" RPPA PER UDACS PLATE No. 4 & 8	1 EA
11. 18" STEEL SLEEVE	54 LF
12. 3,000 PSI CONCRETE WITH 6" TYPE II BASE (LVWD EASEMENT)	16 CY
13. 8" CLASS 53 D.I.P. (DUCTILE IRON PIPE) PUBLIC WATER MAIN IN 16" CASING	43 LF
<u>TRAFFIC IMPROVEMENTS</u>	
SEE SHEET 17 FOR TRAFFIC QUANTITIES.	
<u>NOTE TO CONTRACTOR:</u>	
QUANTITIES SHOWN ARE APPROXIMATIONS ONLY AND ARE INTENDED TO ILLUSTRATE SCOPE OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT QUANTITIES INVOLVED.	

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, CLINT COUNTY AREA, NEVADA, AS AMENDED. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATIONS.
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 CITY ENGINEER.
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 AGGREGATE BASE.
5. 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 RETROFIT IF PAVING DOES NOT CONFORM TO CITY STANDARDS AT THE MANHOLE.
6. TEE SADDLES SHALL BE USED TO CONNECT SEWER LATERALS TO EXISTING MAIN LINES UP TO TWELVE INCH (12") DIAMETER. CONNECTIONS TO FIFTEEN INCH (15") OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES. IN LINE "Y" S SHALL BE USED ON LINES TWELVE INCHES (12") OR ABOVE.
7. WATER MAINS SHALL BE PROTECTED IN ACCORDANCE WITH LVWDG STANDARDS WHENEVER A SEWER MAIN CROSSES OVER A WATER MAIN OR THE SEWER IS LESS THAN EIGHTEEN INCH (18") UNDER A WATER MAIN.
8. 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.
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 AT ANY LOCATION. SEWER MAINS FOUND TO EXCEED TOLERANCE WILL HAVE TO BE REPAIRED OR REMOVED OR REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY OF LAS VEGAS.
10. INSTALLATION OF CURVED SEWER PIPE USING THE USE OF C-900 PVC PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

1. NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN APPROVED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING WATER PLAN APPROVAL, NOTICE SHALL BE GIVEN TO THE LVVWD COMMUNICATION SUPPORT CENTER (258-7171). TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. FOR FUTURE INSPECTIONS, NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO THE REQUESTED LVVWD INSPECTION. WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT # IDENTIFIED ABOVE.
2. ALL WORK SHALL CONFORM TO LVVWD STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS, AND TO THE 2010 EDITION OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS). THE LATEST EDITION OF UDACS SHALL SUPERSEDE ANY CONFLICTS CONTAINED IN THE APPROVED DRAWINGS AND/OR SPECIFICATIONS.
3. ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2 ABOVE, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT 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 TYPE K 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, VALLEY AND CURB GUTTERS.
8. ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSINGS SHALL CONFORM TO SECTION 2.22 OF THE 2010 EDITION OF THE UDACS.
9. ALL WATER FACILITIES SHALL BE FILLED, DISINFECTED, PRESSURE TESTED, FLUSHED, FILLED, AND AN ACCEPTABLE WATER SAMPLE OBTAINED, PRIOR TO CONNECTION TO THE LVVWD DISTRIBUTION SYSTEM.
10. THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 OR 258-3802, TWO (2) WORKING DAYS PRIOR TO METER PICKUP.
11. ANY INTERRUPTION OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UDACS SECTION 3.14.01, AND APPROVED BY THE LVVWD INSPECTION DIVISION PRIOR TO SHUTDOWN. PROPER WRITTEN NOTIFICATION MUST BE GIVEN TO ALL AFFECTED CUSTOMERS.
12. ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVVWD APPROVED MANUFACTURER'S LISTING FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS.
13. TELEPHONE "CALL BEFORE YOU DIG" AT "811" OR 1-800-227-2600.
14. THE INSTALLATION OF LAS VEGAS VALLEY WATER DISTRICT (LVVWD) MUNICIPAL WATER FACILITIES WITHIN ALL STREETS IS ASSUMED TO BE IN COMPLIANCE WITH THE UNIFORM STANDARDS, INCLUDING THE PLACEMENT OF ASPHALT PAVING STREET SURFACES. ANY REPAIR WORK DONE BY THE LVVWD TO THE MUNICIPAL WATER FACILITIES WILL INCLUDE THE PLACEMENT OF APPROPRIATELY SIZED ASPHALT REPAIR PATCH ON THE STREET SURFACE.
15. ANY DECORATIVE PAVING SURFACE WITHIN THE STREET IS THE RESPONSIBILITY OF THE OWNER'S ASSOCIATION, OR THE INDIVIDUAL PROPERTY OWNERS IF NO OWNER'S ASSOCIATION IS IN EXISTENCE, OR THE AGENCY HAVING JURISDICTION DECORATIVE SURFACE MATERIALS BE PLACED WITHIN THE 10 FOOT EASEMENT ADJUTING A PUBLIC OR PRIVATE STREET, IF DISTURBED BY THE LVVWD DURING THE REPAIR OR OPERATION OF ITS FACILITIES, WILL BE PLACED BY LVVWD WITH AN APPROPRIATELY SIZED PLAIN FINISH CONCRETE PATCH. THE LVVWD WILL NOT RESTORE, AND WILL NOT BE RESPONSIBLE FOR THE RESTORATION OF ANY DECORATIVE PAVING SURFACE WITHIN THE STREET. THE LVVWD WILL NOT ATTEMPT TO MATCH COLOR OR FINISH OF ANY ADJACENT MATERIALS.



Avoid overhead power line contact. It's costly.

Call
before you
Overhead
1-702-227-2929

Call before you Dig
Avoid cutting underground
utility lines. It's costly.

CALL

811

OR

1-800-227-2600

1. PRIVATE INTERIOR STREET TO BE 37' WIDE RIGHT OF WAY WITH NO SIDEWALK ON EITHER SIDE.

4 / D. SHARIF, P.E. JS
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE: 11/03/16 PROJECT No.: 122399