

ABBREVIATIONS (SEE C.V.R. SHT. FOR COMPLETE LIST)		
AC	ASPHALTIC CONCRETE	
ADJ	ADJUST	
AGG	AGGREGATE	
BACK	BACK OF CURB	
BEG	BEGINNING OF CURB RETURN	
BEG	BEGIN	
BSW	BACK OF SIDEWALK	
BVC	BEGINNING OF VERTICAL CURVE	
CATV	CABLE TV	
CAUSA	CLARK COUNTY AREA	
CORFCD	UNIFORM STANDARD DRAWING CLARK COUNTY REGION	
CL	FLOOD CONTROL DISTRICT CENTERLINE	
CLV	CITY OF LAS VEGAS	
CLV	CLARK COUNTY MASONRY UNIT	
CO	CLEAN OUT	
COMM	COMMUNICATIONS	
CONC	CONCRETE	
COND	CONDUIT	
CULV	CULVERT	
DC	DEPRESSED CURB	
DIP	DRAIN INLET	
DOM	DOMESTIC	
ELEC	ELECTRIC	
EAC	EDGE OF AC	
END	END OF CURVE	
ECR	END OF CURB RETURN	
ELEV	ELEVATION	
EPV	EDGE OF PAVEMENT	
EV	END OF VERTICAL CURVE	
EX	EXISTING	
FAST	FREEWAY & ARTERIAL SYSTEM OF TRANSPORTATION	
FT	FINISH FLOOR	
FG	FINISH GRADE	
FH	FIRE HYDRANT	
FL	FLOW LINE	
FO	FIBER OPTICS	
FS	FINISHED SURFACE	
GB	GRADE BREAK	
HDE	HIGH DENSITY POLYETHYLENE	
HDWL	HEADWALK	
HGL	HYDRAULIC GRADE LINE	
HP	HIGH POINT	
INVERT	INVERT	
IRR	IRRIGATION	
LAT	LATERAL	
LF	LINEAL FEET	
LS	LANDSCAPE	
LEFT	LEFT	
LVVWD	LAS VEGAS VALLEY WATER DISTRICT	
MAX	MAXIMUM	
MH	MANHOLE	
MIN	MINIMUM	
MTR	METER	
PULL BOX	PULL BOX	
PL	PROPERTY LINE	
PP	POWER POLE	
PROP	PROPOSED	
PVC	POLY VINYL CHLORIDE PIPE	
PWT	PAVEMENT	
RM	TOP OF MANHOLE OR CLEANOUT	
RT	RIGHT	
ROW	RIGHT-OF-WAY	
SS	SANITARY SEWER	
SD	STORM DRAIN	
SNWA	SOUTHERN NEVADA WATER AUTHORITY	
STA	STATION	
STLT	STREET LIGHT	
STLTZ	SIGHT VISIBILITY ZONE	
SW	SIDEWALK	
TEL	TELEPHONE	
TO	TOP OF CURB	
TO	TOP OF FOOTING	
TW	TOP OF WALL	
TYP	TYPICAL	
UDACS	UNIFORM DESIGN AND CONSTRUCTION STANDARDS	
VG	VALLEY GUTTER	
WL	WATER LINE	

LEGEND		
DESCRIPTION	EXISTING	PROPOSED
UTILITIES		
B.O. VALVE		↑
FIRE HYDRANTS	⊕	⊕
CLEAN OUT	⊙	●
GATE VALVE	⊕	⊕
METER	⊕	⊕
REDUCER	⊕	⊕
CAP		⊕
11.25' ELBOW		⊕
22.5' ELBOW		⊕
45' ELBOW		⊕
90' ELBOW		⊕
CROSS		⊕
TEE		⊕
MANHOLES		
ELECTRICAL	⊕	⊕
SANITARY SEWER	⊕	⊕
STORM DRAIN	⊕	⊕
TELEPHONE	⊕	⊕
STREET LIGHTS		
100W HPS STL	⊕	⊕
150W HPS STL	⊕	⊕
200W HPS STL	⊕	⊕
250W HPS STL	⊕	⊕
400W HPS STL	⊕	⊕
GRADING		
SPOT ELEV.	(12.34)	12.34
SLOPE	(1.2%)	1.2%
5' CONT.	(2005)	2005
1' CONT.		2007
SITE		
SIGN	⊕	⊕
"L" CURB	⊕	⊕
"A" CURB	⊕	⊕
EDGE OF PAVT.	⊕	⊕
WALL	⊕	⊕
LINE TYPES		
CL OR SECTION LINE	⊕	⊕
PROPERTY LINE	⊕	⊕
RIGHT OF WAY LINE	⊕	⊕
EASEMENT LINE	⊕	⊕
SAWTOOTH LINE	⊕	⊕
FLOW LINE	⊕	⊕
SHADES		
HEAVY AC PAVEMENT	⊕	⊕
LIGHT AC PAVEMENT	⊕	⊕
CONCRETE PAVEMENT	⊕	⊕

CITY OF LAS VEGAS FIRE DEPARTMENT NOTES	
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. AUTHORIZED FIRE HYDRANTS ARE AS FOLLOWS: KENNEDY – GUARDIAN MODELS KB1A AND KB1D MUELLER – SUPER CENTURION 250, MODEL A-423 CLOW – MEDALLION MODEL F-2546LVO U.S. PIPE – METROFLOW-M-03	
3. A PERMIT IS REQUIRED FROM LAS VEGAS FIRE AND RESCUE FOR THE INSTALLATION OF ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTORS MATERIAL TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER 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 COMMENCEMENT OF ANY COMBUSTIBLE CONSTRUCTION. ALL FIRE 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 CENTERLINE OF THE STREET ADJACENT TO THE FIRE HYDRANTS. [IFC 507.5.7.3]	
6. ALL UNDERGROUND INSPECTIONS, PRESSURE AND FLUSH VERIFICATIONS OF ALL FIRE HYDRANTS AND FIRE LINES, SHALL BE CONDUCTED BEFORE COVERING THE LINES. CROWN 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.N.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 PHYSICAL DAMAGE AND NECESSARY PERMITS 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 C102] RESIDENTIAL – 500 FEET UNSPRINKLERED; 800 FEET SPRINKLERED. COMMERCIAL – 300 FEET UNSPRINKLERED; 400 FEET SPRINKLERED.	
12. WHERE THE WATER MAINS ARE EXTENDED ALONG STREETS OR NEW STREETS ARE INSTALLED, 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 (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 C102.8]	
13. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE RADIUS OF A CUL-DE-SAC OR WITHIN 20 FEET 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, STREET LIGHT OR ANY OTHER OBSTRUCTION. [IFC C102.12]	
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 C102.4]	
16. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A FIRE DEPARTMENT CONNECTION (FDC) SHALL NOT EXCEED 100 FT, AS MEASURED BY AN APPROVED ROUTE. [IFC C102.7]	
17. THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. [IFC C102.6]	
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 CAPABILITIES, AND SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF THE FIRE APPARATUS. [IFC 503.2.3]	
20. 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%. [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 RADII. [IFC 503.2.4]	
22. VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13 FT 6 INS. [IFC 503.2.1]	
23. FIRE DEPARTMENT ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF NOT LESS THAN 40 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 ROAD, NOT LESS THAN 24 FT WIDE, FLOW LINE TO FLOW LINE, WHERE NO PARKING IS PERMITTED ON EITHER SIDE. FIRE LINES FOLLOWING PARKING LOTS SHALL BE NOT LESS THAN 250 FT IF THE BUILDING IS SPRINKLERED. [IFC 503.1.1]	
24. A FIRE APPARATUS ACCESS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST FLOOR IS LOCATED MORE THAN 150 FT FROM A FIRE DEPARTMENT VEHICLE ACCESS. THIS DISTANCE COULD BE INCREASED TO 250 FT IF THE BUILDING IS SPRINKLERED. [IFC 503.1.1]	
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 AROUND 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 LINES. SIGNS TO BE PLACED ON BOTH SIDES OF THE ACCESS ROADWAY IF ACCESS ROADWAY IS 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 IN ADDITION TO THE SIGNS. [IFC 503.3]	
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 AND IFC APPENDIX M.	
REVISED 7/1/2014	

DEVIATIONS FROM STANDARDS	
NONE.	

CITY OF LAS VEGAS TRAFFIC NOTES (REVISED 4/15/10)	
1. ALL CONSTRUCTION SIGNING, BARRICADEING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.	
2. THE STREET SIGN CONTRACTOR SHALL OBTAIN STREET NAMES AND BLOCK NUMBERING FROM THE PLANNING DEPARTMENT PRIOR TO CONSTRUCTION.	
3. BEFORE ANY WORK IS STARTED IN A 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 STREET RIGHT-OF-WAY. THE CONTRACTOR MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.	
4. WHEN A DESIGNATED "SAFE ROUTE TO SCHOOL" IS ENCLOSED UPON BY A CONSTRUCTION WORK ZONE AND PUBLIC WORKS STAFF IDENTIFIES A NEED FOR STUDENTS TO BE AVOIDANT IN THE 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.	
5. IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY OBSTRUCTION, TEMPORARY REMOVAL OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKING, SIGN OR TRAFFIC MARKING SHALL BE RESTORED OR REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE CITY TRAFFIC ENGINEER.	
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALL ALL PERMANENT SIGNS SHOWN ON THE PLANS, ALL NEW TRAFFIC SIGNS SHALL BE FABRICATED WITH DIAMONDED GRAB-UP CLASS 6 REFLECTIVE SHEETING OR APPROVED EQUAL. ALL NEW TRAFFIC SIGNS, EXCEPT STREETNAME AND SCHOOL SPEED LIMIT SIGNS, SHALL HAVE 3M SERIES 1160 OR APPROVED EQUIVALENT ANTI-GRAFFITI PROTECTIVE OVERLAY FILM; SCHOOL ZONE SIGNS SHALL HAVE 3M SERIES 1150 ANTI-GRAFFITI PROTECTIVE OVERLAY FILM. STREET NAME SIGNS SHALL CONFORM IN THEIR ENTIRETY TO CURRENT CITY SPECIFICATIONS. ALL OTHER SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL SIGN POSTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT CITY STANDARDS.	
7. WHEN A PROPOSED STREET LIGHT STANDARD IS LOCATED WITH FIVE (5') FEET OF ANY PROPOSED SIGN SHOWN ON THE PLANS TO BE MOUNTED ON THE SIGNPOST, THE SIGN SHALL BE MOUNTED ON THE STREET LIGHT STANDARD AND THE SIGNPOST BE ELIMINATED.	
8. ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND IN FINAL POSITION PRIOR TO ALLOWING ANY PUBLIC TRAFFIC ONTO THE PORTIONS OF THE ROAD(S) BEING IMPROVED HERE UNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.	
9. STREET SIGNS AND STOP SIGNS SHALL BE INSTALL PER CITY STANDARD SPECIFICATIONS FOR THE PLACEMENT OF STREET NAME SIGNS.	
10. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL DEVICES AND FLAGGERS TO ENSURE THE SAFETY OF THE PUBLIC IN OR AROUND THE WORK AREA. THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL TECHNICIAN OR IMSA WORK ZONE SAFETY SPECIALIST SET-UP, MAINTAIN AND/OR REMOVE ALL TRAFFIC CONTROL DEVICES IN THE CITY OF LAS VEGAS RIGHT OF WAY.	
11. 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.	
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING CITIZENS AREA TRANSIT (CAT) IF THE CONSTRUCTION OF THE PROJECT WILL INTERRUPT BUS STOP OR HAS AN ADVERSE EFFECT ON BUS SERVICE ON THAT STREET TO ARRANGE FOR TEMPORARY RELOCATION OF STOP.	
13. GUARDS SHALL BE OBTAINED BY CONTACTING THE METROPOLITAN POLICE DEPARTMENT SPECIAL EVENTS UNIT (PHONE #828-3442) WHO WILL PROVIDE OFFICERS PROPERLY TRAINED IN TRAFFIC CONTROL. FEES FOR 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.	
14. ANY WORK WITHIN 300' OF A SIGNALIZED INTERSECTION WILL BE NIGHT WORK, UNLESS DIRECTED BY THE CITY OF LAS VEGAS TRAFFIC ENGINEER.	
15. CONTRACTOR SHALL CONTACT THE TRAFFIC ENGINEERING DIVISION (TRANSPORTATION SECTION) THROUGH THE PROJECT'S OFFSITE INSPECTOR PRIOR TO INITIATING PAVING OR RECEIVING APPROVAL FOR ANY PERMANENT OR TEMPORARY MODIFICATIONS TO THE APPROVED DRAWINGS REGARDING FINAL PAVEMENT TRANSITIONS, MARKINGS AND SIGNING THAT ARE REQUIRED TO MATCH ADJACENT ROADWAY SEGMENTS. THE CONTRACTOR SHALL PROVIDE A DRAWING FOR APPROVAL FOR TRAFFIC ENGINEERING DIVISION BEFORE MAKING ANY ADJUSTMENTS TO THE FINAL PAVEMENT PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS SUCH THAT ADEQUATE TRANSITIONS AND LANE TERMINATIONS BETWEEN ADJACENT ROADWAY SEGMENTS ARE CONSTRUCTED.	

GENERAL UTILITY NOTES	
1. ALL WATER LINES 4" OR GREATER TO BE CL 150, C900 PVC. ALL WATER LINES SMALLER THAN 4" TO BE SCH. 40 PVC. ALL WATER LINES CONNECTED TO REMOVE FIRE DEPT. CONNECTIONS TO BE CL 200, C900 PVC.	
2. ALL GRAVITY SANITARY SEWER LINES TO BE SD-35 PVC. ALL FORCE MAIN SANITARY SEWER LINES TO BE SCH. 40 PVC.	
3. WATER LINES TO HAVE THRUST BLOCKS CONSTRUCTED PER U.D.A.C.S. PLATE No. 5. THRUST BLOCKS TO BE LOCATED AT ALL ANGLE FITTINGS (BENDS), TEES, AND FIRE HYDRANTS. ANCHOR BLOCKS TO BE CONSTRUCTED PER U.D.A.C.S. PLATE No. 3. ANCHOR BLOCKS TO BE LOCATED AT ALL IN-LINE REDUCERS AND GATE VALVES.	
4. WET TAPS TO BE CONSTRUCTED IN CONFORMANCE WITH U.D.A.C.S. PLATE No. 22.	
5. THE FIRE SAFETY CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING THE SIZE OF PIPING THAT IS REQUIRED TO CONNECT FROM THE FIRE WATER LOOP TO FIRE SPRINKLER RISER. LINE SIZE SHOWN FOR INFORMATION PURPOSES ONLY.	
6. TRENCH BACKFILL FOR WATER LINES TO BE CONSTRUCTED PER U.D.A.C.S. PLATE No. 6A, 6B, 6C OR 6D.	
7. TRENCH BACKFILL FOR STORM DRAIN LINES TO BE CONSTRUCTED PER D.C.S.W.C.S. DRAWING No. SD-16B.	
8. ONLY SEWER LINES AND LATERALS MAY BE INSTALLED IN TRENCHES EXCAVATED FOR SEWER LINES. SEE D.C.S.W.C.S. SECTION 2.2.18 (TYPICAL).	
9. WATER AND SEWER SEPARATION OF TRENCHES MUST BE AT LEAST 10' MINIMUM (TYPICAL). SEE D.C.S.W.C.S. SECTION 2.2.21 "A", U.D.A.C.S. SECTION 2.19.01 "A".	
10. CONTRACTOR TO SAWCUT AND REMOVE EXISTING ASPHALT AND CONCRETE AS NECESSARY FOR UTILITY TRENCHES, BACKFILL AND PATCH ALL TRENCHES AS INDICATED ON DETAILS AND/OR ACCORDING TO THE GOVERNING ENTITY.	
11. THESE DRAWINGS MAY NOT INDICATE ALL EXISTING BURIED UTILITY LINES. CONTRACTOR IS TO EXERCISE GREAT CARE DURING EXCAVATION IN ORDER TO AVOID MAKING CONTACT WITH ANY EXISTING UTILITY LINES. IF UTILITY LINES ARE DAMAGED BY THE CONTRACTOR, SUCH DAMAGE SHALL BE REPLACED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.	
12. CONTRACTOR TO LOCATE AND VERIFY SIZE, LINE TYPE, CONDITION, DEPTH, PRELIMINARY LOCATION AND LOCATION OF UTILITY LINES WITHIN THE CONSTRUCTION AREA PRIOR TO CONSTRUCTION. THE CIVIL ENGINEER SHALL BE CONTACTED ONCE THE UTILITY LINE IS LOCATED.	
13. CONTRACTOR/OWNER TO OBTAIN C.P.-W. OFF-SITE IMPROVEMENT PERMIT FOR ALL WORK WITHIN PUBLIC RIGHT-OF-WAY.	
14. CONTRACTOR TO VERIFY UTILITY STUB LOCATIONS AND SIZE WITH PLUMBING PERSNS PRIOR TO INSTALLATION OF NEW UTILITIES.	
15. LATERALS SHALL NOT BE CONNECTED INTO STUBS EXTENDING FROM MANHOLES, SERVICE LATERALS 6" OR SMALLER WILL NOT BE ALLOWED TO CONNECT INTO MANHOLES. SEE D.C.S.W.C.S. SECTION 2.2.19 (TYPICAL).	
16. ALL EXISTING STREET LIGHTS INDICATED ON THESE PLANS ARE SHOWN FOR INFORMATION PURPOSES ONLY. LOCATION IS APPROXIMATE UNLESS NOTED WITH STATION AND OFFSET.	
17. ALL EXISTING GAS LINE LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATIONS ONLY. PROPOSED GAS LINES SHOWN ON THESE PLANS ARE FOR COORDINATION ONLY. SEE SOUTHWEST GAS PLANS FOR CONSTRUCTION.	
18. ALL EXISTING ELECTRICAL LINES SHOWN ON THESE PLANS ARE APPROXIMATIONS ONLY. PROPOSED ELECTRICAL LINES SHOWN ON THESE PLANS ARE FOR COORDINATION ONLY. SEE ELECTRICAL PLANS FOR CONSTRUCTION.	
19. SEE LEGEND FOR EXISTING AND PROPOSED UTILITY SYMBOLS.	
20. ALL DIMENSIONS TO UTILITIES LINES ARE TO CENTERLINE OF PIPE UNLESS INDICATED OTHERWISE.	
21. ALL LINEAR FEET OF STORM DRAIN AND SANITARY SEWER PIPE NOTED ON PLANS IS MEASURED FROM CENTER OF MANHOLE TO CENTER OF MANHOLE.	

CITY OF LAS VEGAS 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 SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY 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 ARCHITECT, ENGINEER AND/OR OWNER SHALL BE ALLOWED DUE TO THE PRIOR CONDITIONS.	
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 RECORDS. EXISTING UTILITIES AS SHOWN FROM C.V. 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 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 THAT 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 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 DESIGN 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 (1/2") ABOVE UP 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 DRAWINGS 235. EXACT 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 INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF TRANSITIONS TO BE AS SHOWN ON PLANS.	
12. ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.	
13. 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 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 PURPOSE OF REVIEWING GRADING RELATIONSHIPS; FLOOD CONTROL AND SIGHT DISTANCE AT INTERSECTIONS AND WALLS REQUIRE 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 NOTOT 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 ALL DEVICES HAVE BEEN PLACED 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 AND APPROVED PRIOR TO ACCEPTANCE OF FACILITY VIDEO 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 DROP INLET, THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN 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. FINAL LOCATION MAP(S) MUST BE SEALED AND CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSITIONAL CERTANTIES OF ± 0.09 METERS (± 0.3 FEET) HORIZONTALLY AND VERTICALLY. A SEPARATE ELECTRONIC CDMA DELIMITED FILE FOR THE SANITARY SEWER AND STORM DRAIN COORDINATES SHALL ALSO ACCOMPANY THE SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S), OR	
SANITARY SEWER AND STORM DRAIN FACILITIES SHOWN ON THESE PLANS SHALL BE USED TO MEET THE REQUIREMENTS OF NRS 455 AND SHALL SHOW AT A MINIMUM THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND AT THE CONNECTION TO A DROP INLET, AND THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXIT THE PUBLIC RIGHT-OF-WAY. ANY DEVIATIONS FROM THE INFORMATION SHOWN SHALL BE NOTED AND SUBMITTED AS A REVISION TO THE PLANS AND APPROVED PRIOR TO ACCEPTANCE OF FACILITY VIDEO INSPECTION.	
22. CCTV VIDEO INSPECTION IS REQUIRED FOR ALL SEWER AND STORM DRAINS. THE CCTV VIDEO INSPECTIONS NEED TO BE PERFORMED PER THE DESIGN CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST ADDITION.	
23. A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.	
REVISED 02/03/15	

ENGINEER'S GENERAL NOTES

1. THE CONTRACTOR IS TO VISIT THE SITE AND VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE BIDDING AND STARTING WORK, AND ACCEPT THEM AS HE FINDS THEM. UNLESS NOTIFYING THE ARCHITECT, ENGINEER AND/OR OWNER IN WRITING AND RECEIVING WRITTEN INSTRUCTIONS PRIOR TO BEGINNING WORK, NO EXTRA COST TO THE CONSTRUCTION CONTRACT, THE ARCHITECT, ENGINEER AND/OR OWNER SHALL BE ALLOWED DUE TO THE PRIOR CONDITIONS.
2. SHOULD CONFLICT AND/OR DISCREPANCY APPEAR IN/OR BETWEEN THE DRAWINGS AND THE SPEC'S, OR WORK PERFORMED BY OTHERS, WHICH AFFECTS THE WORK, THE CONTRACTOR IS TO NOTIFY THE ARCHITECT, ENGINEER AND/OR OWNER IN WRITING AT ONCE AND RECEIVE WRITTEN INSTRUCTIONS PRIOR TO PROCEEDING. SHOULD THE CONTRACTOR PROCEED PRIOR TO RECEIPT OF THE ARCHITECT'S, ENGINEER'S AND/OR OWNER'S WRITTEN INSTRUCTIONS, THE CONTRACTOR SHALL MAKE GOOD AND CORRECT ANY WORK AND/OR DAMAGES RESULTING FROM THE PROCEDURE. NO EXTRA COST TO THE CONSTRUCTION CONTRACT, THE ARCHITECT, ENGINEER AND/OR OWNER SHALL BE ALLOWED FOR SUCH CORRECTIONS.
3. SHOULD CONFLICT AND/OR DISCREPANCY APPEAR IN/OR BETWEEN THE DRAWINGS AND SPEC'S, IT IS DEEMED THE CONTRACTOR TO HAVE ESTIMATED THE MOST EXPENSIVE CONSTRUCTION METHOD OR MATERIAL INVOLVED UNLESS THE CONTRACTOR HAD ASKED FOR AND RECEIVED WRITTEN DECISIONS FROM THE ARCHITECT, ENGINEER AND/OR OWNER PRIOR TO SIGNING OF THE CONSTRUCTION AGREEMENT AS TO THE METHOD OR MATERIALS TO BE EMPLOYED, NO EXTRA COST TO THE CONSTRUCTION CONTRACT, THE ARCHITECT, ENGINEER AND/OR OWNER SHALL BE ALLOWED FOR THESE ITEMS.
4. SHOULD DIMENSIONAL ERRORS OCCUR THE CONTRACTOR SHALL NOTIFY THE ARCHITECT, ENGINEER AND/OR OWNER PRIOR TO COMMENCEMENT OF THAT PORTION OF THE WORK. DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE MEASUREMENTS AND DETAIL DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL SMALL SCALE DRAWINGS. DETAILS REPRESENTATIONS HAVING THE LARGER SCALE SHALL GOVERN. WORK INDICATED BUT NOT PARTICULARLY DETAILED OR SPECIFIED SHALL BE EQUAL TO SIMILAR PARTS THAT ARE DETAILED OR SPECIFIED. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD BEFORE SHOP DRAWINGS ARE MADE AND BEFORE ANY WORK IS CONSTRUCTED OR FABRICATED.
5. THE CONTRACTOR IS TO CONFIRM ADA ACCESS RAMPS AND AREAS ARE WITHIN THE ADA STANDARDS/REQUIREMENTS FOR CROSS SLOPE AND RUNNING SLOPE PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT, ENGINEER AND/OR OWNER, IN WRITING IMMEDIATELY OF ANY ADA ACCESS AREAS THAT DO NOT MEET ADA STANDARDS/REQUIREMENTS. SHOULD THE CONTRACTOR PROCEED PRIOR TO RECEIPT OF THE ARCHITECT'S, ENGINEER AND/OR OWNER'S WRITTEN INSTRUCTIONS, THE CONTRACTOR SHALL CORRECT THE WORK RESULTING FROM PROCEDURE. NO EXTRA COST TO THE CONSTRUCTION CONTRACT SHALL BE ALLOWED FOR SUCH CORRECTIONS.

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. 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 BACK FILL OF TYPE II CORROGATED FILL.
5. ALL MANHOLES IN PAVED STREETS EIGHTY (80') RADIUS AND LARGER, SHALL HAVE CONCRETE COLUMNS. STREETS LESS THAN EIGHTY (80') FOOT ROW 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 LVWD 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 THIS 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 REQUIRES THE USE OF C900 PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

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