

**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 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".
- 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 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 OVERHEAD AND UNDERGROUND 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.
- 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.
- 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 QUALITY CONTROL DIVISION PRIOR TO 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.
- AC PAVEMENT TO BE 1/2" ABOVE LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS.
- APPLY FOG SEAL ONLY AFTER ALL CORRECTIONS AND ADJUSTMENTS HAVE BEEN MADE.
- CURB AND 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.
- SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING No. 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY THE CITY INSPECTOR.
- THE 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.
- 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 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.
- 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.
- 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:
  - ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN FOR THE PURPOSE OF GRADING RELATIONSHIPS.
  - THE STRUCTURAL AND ARCHITECTURAL DESIGN OF ALL WALLS, RETAINING OR NON-RETAINING, MUST BE APPROVED BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
- ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT ON CITY STREETS.

**LAS VEGAS VALLEY WATER DISTRICT NOTES**

- 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.
- CALL BEFORE YOU DIG 1-800-227-2600
- ALL WORK SHALL CONFORM TO LVVWD LATEST STANDARD PLATES, DRAWINGS AND SPECIFICATIONS.
- ALL WORK, EXCEPT AS MODIFIED HEREON OR BY NOTE 3, SHALL BE DONE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY, AREA.
- 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.
- COPPER SERVICE LATERALS: ALL 3/4" TO 2" SERVICE LATERAL SHALL BE OF COPPER TUBING IN ACCORDANCE WITH THE DISTRICT'S SPECIFICATIONS AND STANDARD PLATES.
- 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'	2.5'	3.5'
8 - 12 INCH	2.5'	2.5'	2.5'
14 - 16 INCH	2'	1.5'	1.5'
18 - 24 INCH	N/A	1.5'	1.5'
- ON PVC PIPE, THE MAXIMUM OFFSET FOR A 20 FOOT 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 THE OFFSETS CONFLICT WITH THE PIPE MANUFACTURER'S RECOMMENDATION, THE MORE STRINGENT REQUIREMENT SHALL APPLY.
- ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
- ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS AND VALLEY GUTTERS.
- DETECTOR TAPE IS REQUIRED IN ACCORDANCE WITH STANDARD PLATE No. 27 WHERE INDICATED AND AS FOLLOWS:
  - OVER ALL MAINS NOT INSTALLED 6 FEET FROM BACK OF CURB.
  - OVER ALL SERVICE LATERALS NOT INSTALLED AT RIGHT ANGLES TO MAIN.
- ALL WATER MAINS ARE TO BE PRESSURE TESTED AT 200 PSI FOR A CONTINUOUS TWO HOUR PERIOD, IN ACCORDANCE WITH DISTRICT STANDARDS.
- 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 DISTRICT'S SYSTEM.
- CONTRACTOR TO OBTAIN ALL METERS 2" AND SMALLER FROM L.V.V.W.D. CENTRAL STORES. TELEPHONE 258-3152 FORTY-EIGHT (48) HOURS PRIOR TO PICK-UP.

LAS VEGAS VALLEY WATER DISTRICT

DATE

**ESTIMATE OF QUANTITIES**

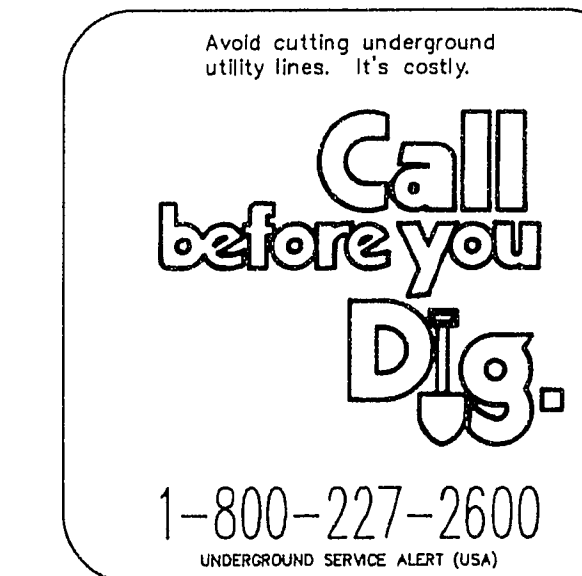
DESCRIPTION	ESTIMATED QUANTITY	UNIT
<b>ON-SITE STREETS</b>		
TACK-ON ISLAND CURB	435	LF
"A" TYPE CURB	135	LF
"L" TYPE CURB	480	LF
30" ROLL CURB	3060	LF
TRANSITION CURB ("L" TYPE TO 30" ROLL)	40	LF
3' CONCRETE VALLEY GUTTER	291	SF
4' CONCRETE SIDEWALK	1150	SF
4' VALLEY GUTTER	308	SF
2" AC	3980	SY
4" TYPE II AGGREGATE BASE	580	CY
6" TYPE I AGGREGATE BASE	870	CY
R1-1 SIGN ( STOP)	1	Eo
D3 SIGN (STREET NAME)	6	Eo
"L" TYPE CURB AND GUTTER REMOVAL	111	LF
<b>OFF-SITE</b>		
"L" TYPE CURB AND GUTTER	666	LF
3" AC	1,845	SY
TEMPORARY 3" AC	121	SY
4" TYPE II AGGREGATE BASE	230	CY
6" TYPE I AGGREGATE BASE	315	CY
FOG SEAL	1	Ton
PRIME COAT	2	Ton
AC REMOVAL	74	SY
TYPE III A BARRICADE	20	LF
EXCAVATION	755	CY
EMBANKMENT	555	CY
ADJUST CATV BOX	1	Eo
W14-2 SIGN (NO OUTLET)	1	Eo
R11-2 SIGN (ROAD CLOSED)	1	Eo
6" CONCRETE DRIVEWAY	5	CY
100 WATT HPS STREET LIGHT	2	Eo
8" CROSS GUTTER	1003	SF
SIDEWALK DRAIN	2	EA
<b>WATER</b>		
8" PVC WATER MAIN	2,315	LF
FIRE HYDRANT ASSEMBLY	6	Eo
3/4" WATER METER AND SERVICE	81	Eo
1 1/2" WATER METER AND SERVICE	4	Eo
8" GATE VALVE	1	Eo
8" MECHANICAL JOINT TEE and 8" TAPPING TEE	1	Eo
8" PVC CAP WITH THRUST BLOCK	3	Eo
<b>SEWER</b>		
SEWER MANHOLE	2	Eo
8" PVC SEWER MAIN	2,111	LF
6" PVC SEWER LATERAL	69	LF
6" PVC CAPS	2	Eo
4" PVC SEWER LATERAL	2,111	LF
<b>STORM DRAIN</b>		
60" TYPE I MANHOLE	2	Eo
TYPE "B" DROP INLET	2	Eo
18" CLASS III RCP	476	LF

**CITY OF LAS VEGAS FIRE DEPARTMENT NOTES**

- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CITY OF LAS VEGAS FIRE DEPARTMENT "HYDRANT SPECIFICATIONS", "HYDRANT INSTALLATION SPECIFICATIONS" AND ORDINANCE #3677.
- AUTHORIZED HYDRANTS FOR THIS PROJECT ARE:
  - KENNEDY GUARDIAN
  - MUELLER A-423 CENTURIAN
  - CLOW MODEL 2546 MEDALLION
- 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.
- THE CONTRACTOR SHALL PLACE A BLUE REFERENCE MARKER AT THE CENTERLINE OF STREET ADJACENT TO FIRE HYDRANT AS REQUIRED IN ORDINANCE #3677 TO IDENTIFY FIRE HYDRANT LOCATIONS.
- CALL THE LAS VEGAS BUILDING DEPARTMENT AT 229-2071 FOR UNDERGROUND INSPECTION, PRESSURE AND FLUSH VERIFICATION OF ALL FIRE HYDRANTS AND FIRE LINES BEFORE COVERING.
- PAINTING OF THE CURBS AND HYDRANTS 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.
- A PERMIT IS REQUIRED FROM THE FIRE DEPARTMENT FOR ON-SITE WATER LINE AND FIRE HYDRANTS. THE PERMIT AND CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER PRIOR TO ANY WORK BEGINNING.
- A FLOW TEST MUST BE WITNESSED BY THE FIRE DEPARTMENT PRIOR TO OCCUPANCY FOR VERIFICATION OF REQUIRED ON-SITE WATER SUPPLY.
- ALL ON-SITE FIRE MAIN MATERIALS MUST BE U.L. LISTED AND F.M. APPROVED.
- FIRE HYDRANT SPACING:
  - RESIDENTIAL / 500 FEET UNSPRINKLERED, 600 FEET SPRINKLERED
  - COMMERCIAL, INCLUDING MULTI-FAMILY / 300 FEET UNSPRINKLERED, 400 SPRINKLERED
- 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.
- NO FIRE HYDRANT SHALL BE LOCATED WITHIN 6 FEET OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREET LIGHT OR ANY OTHER OBSTRUCTION.
- NOT MORE THAN 2 HYDRANTS CAN BE OUT OF SERVICE DUE TO A SINGLE MAIN BREAK.
- 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.
- 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 EXCEPTION IN UFC 88, SECTION 10.207)
- 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. (SEE ORDINANCE #3677)

**CITY OF LAS VEGAS SEWER NOTES**

- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE STANDARD AND 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 SUPERCEDE THE UNIFORM STANDARD SPECIFICATIONS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATION BOOKS.
- 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.
- CHISEL "S" OR "G" IN CURB WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
- POLYVINYL (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE II GRAVEL.
- ALL MANHOLES IN PAVED STREETS 80 FOOT RIGHT-OF-WAY AND LARGER, SHALL HAVE CONCRETE COLLARS.
- TEE SADDLES SHALL BE USED TO CONNECT SEWER LATERALS TO EXISTING MAIN LINES UP TO 12 INCHES DIAMETER SIZE. CONNECTIONS TO 15 INCHES OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES.
- A SEWER MAIN CROSSING OVER A WATER MAIN OR LESS THAN 18 INCHES 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.
- ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CONTROLLING AGENCY MUST BE CLASS "A" CONTRACTORS.



REVISIONS  
 No. Date Description  
 1 10/13/93  
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DESIGNED: [Signature]  
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 JOB NO: 415-2-98  
 SCALE: [Signature]  
 HORIZ: [Signature]  
 VERT: [Signature]

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**NEA**  
 CONSULTING ENGINEERS

PROJECT: LAKES PACIFIC TOWNHOMES  
 DESCRIPTION: NOTES and ESTIMATE OF QUANTITIES  
 SHEET: C-2  
 2 OF 9

11/1/97 1074-4282