

SEWER AS-BUILTS

DOMESTIC AND FIRE PROTECTION WATER SERVICE FOR THIS PROJECT IS DEPENDENT UPON THE COMPLETION OF THE 3090 ZONE PIPELINE PHASE II & III WITH HOWARD HUGHES PROPERTIES OVERSIZING AGREEMENT NUMBER 72-001. A PORTION OF THIS PROJECT IS LOCATED WITHIN THE 3205 WATER ZONE. A PROPOSED AGREEMENT BETWEEN DEL WEBB COMMUNITIES INC. AND THE LAS VEGAS VALLEY WATER DISTRICT IS PENDING.

SEWER NOTES

- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN & CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, AS AMENDED. IN ALL CASES, THESE STANDARDS SHALL SUPERSEDE THE UNIFORM STANDARD SPECIFICATIONS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE 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.
- CHESEL "S" OR "G" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
- POLYVINE (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SDR35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BAKED/OLDFIELD TYPE II GROMMET.
- ALL MANHOLES IN PAVED STREETS, 80' R/W AND LARGER, SHALL HAVE CONCRETE COLLARS.
- TEE SADDLES SHALL BE USED TO CONNECT SEWER LATERALS TO EXISTING MAIN LINES UP TO 12" DIA. SIZE. CONNECTION TO 15" OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES.
- A SEWER MAIN CROSSING OVER A WATER MAIN OR LESS THAN 18" UNDER A WATER MAIN, MUST BE REINFORCED CONCRETE ENCASED FOR A DISTANCE NOT LESS THAN TEN FEET (10') TO EACH SIDE OF THE CENTERLINE OF THE WATER MAIN. SEE WATER-SEWER/STORM DRAIN CROSSING NOTE THIS SHEET.
- ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CONTROLLING AGENCY, MUST BE CLASS "A" CONTRACTORS.

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 #3877.
- AUTHORIZED HYDRANTS FOR THIS PROJECT ARE:
A - KENNEDY QUADRAM
B - MUELLER 4-43 QUADRAM
C - CLOW MODEL 2948 METALUMIN
- ON ANY NEW HOME OR BUILDING INSTALLATION, ACCESSIBLE FIRE HYDRANTS SHALL BE INSTALLED BEFORE COMMENCEMENT OF CONSTRUCTION COMMENCES AND SAID FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER WITH AN ADEQUATE WATER SUPPLY.
- CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT CENTERLINE OF STREET ADJACENT TO FIRE HYDRANT AS REQUIRED IN ORDINANCE #3877 TO IDENTIFY FIRE HYDRANT LOCATIONS.
- CALL THE LAS VEGAS BUILDING DEPARTMENT AT 228-2071 FOR UNDERGROUND INSPECTION, PRESSURE AND FLUSH VERIFICATION OF ALL FIRE HYDRANTS AND FIRE LINES BEFORE COVERING.
- PAINTING OF THE CURBS AND HYDRANT AND ANY WORK NECESSARY FOR PROTECTION OF HYDRANTS FROM PHYSICAL DAMAGE PER ORDINANCE #3877 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 HYDRANT. THE PERMIT AND CONTRACTORS MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER (E200) AT 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 FEET SPRINKLERED
- NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE REQUIRED RADIUS OF A CURB-DE-SAC OR WITHIN 20 FEET OF THE PERIMETER OF THE RADIUS OF THE CURB.
- NO FIRE HYDRANT SHALL BE LOCATED WITHIN 5 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 EXCEPTIONS IN UPC 88, SECTION 10.207).
- ALL DEAD END FIRE APPARATUS ACCESS ROADS AND/OR FIRE LANES PUBLIC OR PRIVATE IN EXCESS OF 150 FEET IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURNAROUND AREA. SEE ORDINANCE #3877.

FUTURE SUN CITY LAS VEGAS RECREATION CENTER

WATER-SEWER/STORM DRAIN CROSSING

THE FOLLOWING REQUIREMENTS MUST BE MET IN THE EVENT OF A WATER-SEWER/STORM CROSSING:

WHEN PROTECTION OF THE WATER LINE IS CONSIDERED, THE MINIMUM VERTICAL DISTANCE OF 18 INCHES MUST BE MAINTAINED WHEN THE WATERLINE IS INSTALLED OVER THE SEWER/STORM LINE. IF THIS DISTANCE CANNOT BE MAINTAINED BECAUSE OF PHYSICAL OBSTRUCTIONS ON THE WATERLINE MUST BE PLACED UNDER THE SEWER/STORM LINE. THE SEWER/STORM LINE MUST BE CONSTRUCTED WITH ANY ONE OF THE FOLLOWING:

- EXTRA HEAVY CAST IRON OR DUCTILE IRON PIPE.
- WATER SUPPLY QUALITY MATERIAL.
- ENCASEMENT WITH 4 INCHES MINIMUM CONCRETE SLEEVING OR WITH WATER QUALITY PIPE.

EACH OF THESE PROVISIONS MUST BE EXTENDED FOR 10 FEET ON EITHER SIDE OF THE WATERLINE AT 90 DEGREES TO THE CROSSING.

LAS VEGAS FIRE DEPARTMENT

Fire flow Requirement is 1527 gallons per minute at 20 pounds per square inch residual.

Based on: _____

Square footage 3948 S.F.

Largest area between area separation walls N/A

Height 21 FEET

Type of Construction FRAME/STUCCO

Exposure 15 FEET

Sprinkler System NONE

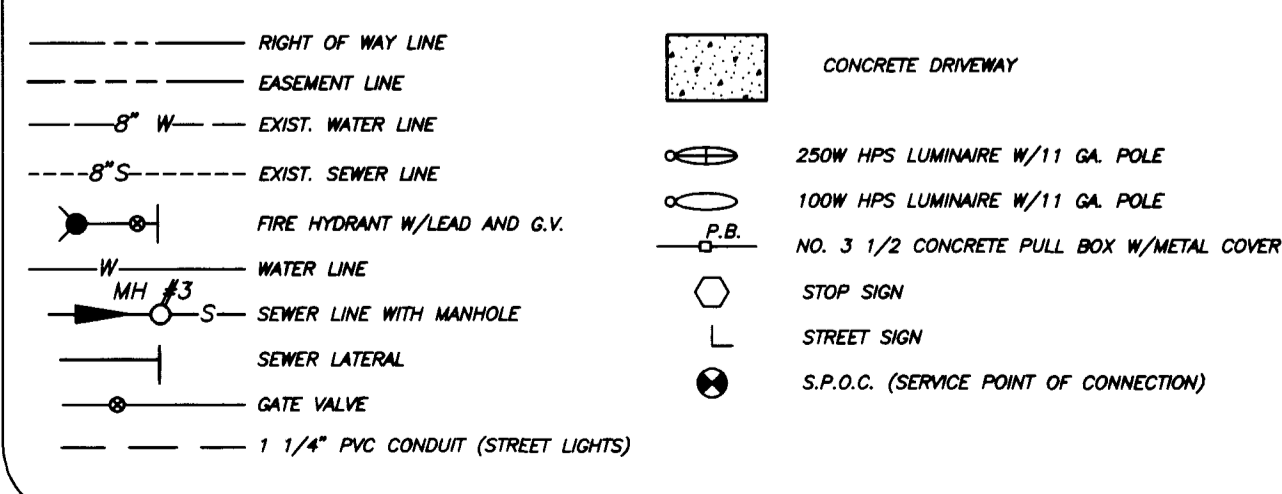
Occupancy RESIDENTIAL

Roof Construction TILE

Review By: _____

Date: _____

LEGEND



BENCHMARKS

CLV BENCHMARK: TOP OF CURB AT END OF CURB, WEST SIDE OF DURANGO DRIVE, 250' SOUTH OF WESTCLIFF BOULEVARD. ELEVATION: 2610.16

PROJECT BENCHMARK: BRASS CAP IN IRON PIPE, 100' NORTH AND 100' WEST OF THE INTERSECTION OF SUN CITY BLVD. AND THOMAS W. RYAN BLVD. N 532,706.153, E 577,416.901 ELEVATION: 2855.24

STREET LIGHTING NOTE

ALL STREET LIGHT INSTALLATIONS SHALL CONFORM TO THE STANDARD DETAILS AND SPECIFICATIONS OF THE CITY OF LAS VEGAS AND SHALL ALSO CONFORM TO THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OF OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, LATEST EDITION, UNLESS OTHERWISE NOTED. SEE UNIFORM STANDARD DRAWING NO. 319.

LAS VEGAS VALLEY WATER DISTRICT STANDARD NOTES

- NO WORK SHALL BEGIN ON THE WATER PLANS UNTIL THEY HAVE BEEN RELEASED FOR CONSTRUCTION BY THE LVWD. FOLLOWING APPROVAL OF THE PLANS, NOTICE MUST BE GIVEN TO THE LVWD CUSTOMER SERVICE DEPARTMENT (972-4194) 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 LVWD LATEST STANDARD PLATES, DRAWINGS AND SPECIFICATIONS.
 - ALL WORK, EXCEPT AS ADOPTED HEREON OR BY NOTE 3, SHALL BE DONE IN ACCORDANCE WITH THE MOST CURRENT DRAFT OR ADOPTION 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 1/4" AND 1" SERVICE LATERALS. SERVICE SADDLES ONLY WILL BE PERMITTED ON 1-1/2" AND 2" SERVICE LATERALS. DOUBLE TAPPED COLLARS ARE NOT PERMITTED.
 - COOPER SERVICE LATERALS: ALL 1/4" TO 2" SERVICE LATERALS 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 | DUCTILE IRON |
|--------------|-------------|--------------|------------------|
| | | SLIP JOINT | MECHANICAL JOINT |
| 8 INCH | 2.5 DEGREES | 2.5 DEGREES | 1.5 DEGREES |
| 8 - 12 INCH | 2.5 DEGREES | 2.5 DEGREES | 2.5 DEGREES |
| 14 - 18 INCH | 2 DEGREES | 1.5 DEGREES | 1.5 DEGREES |
| 18 - 24 INCH | N/A | 1.5 DEGREES | 1.5 DEGREES |
- ON PVC PIPE, THE MAXIMUM OFFSET FOR A 30' LENGTH OF FACTORY BELLED PIPE SHALL BE 17 INCHES FOR A 6" PIPE, 12 INCHES FOR 8" PIPE, 11 INCHES FOR 10" PIPE AND 9" FOR 12" PIPE.
- ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS AND VALLEY OUTLETS.
 - ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS AND VALLEY OUTLETS.
 - DETECTOR TAP IS REQUIRED IN ACCORDANCE WITH STANDARD PLATE NO. 27 WHERE INDICATED, AND AS FOLLOWS:
A) OVER ALL MAINS NOT INSTALLED 6 FEET FROM BACK OF CURB
B) OVER ALL SERVICE LATERALS NOT INSTALLED AT RIGHT ANGLES TO MAIN
 - ALL WATER MAINS ARE TO BE PRESSURED TESTED AT 200 PSI FOR A CONTINUOUS TWO HOUR PERIOD.
 - ALL WATER MAINS AND LATERALS SHALL BE DISINFECTED AND FLUSHED, AND AN ACCEPTABLE WATER SAMPLE OBTAINED, PRIOR TO ACCEPTANCE BY THE DISTRICT.
 - CONTRACTOR TO OBTAIN ALL METERS 2" AND SMALLER FROM LVV.W.D. CENTRAL STORES. TELEPHONE 358-3152 FORTY-EIGHT (48) HOURS PRIOR TO PICKUP.

ESTIMATE OF QUANTITIES

1 STD. F.H. W/4" G.V. & 6" A.C.P. LATERAL	EA	18
2 3/4" SERVICE W/METER BOX	EA	214
3 3/4" METER BY LVV.W.D.	EA	214
4 BLOW OFF VALVE	EA	5
5 1 1/2" IRRIGATION METER & SERVICE	EA	2
6 8" PVC	L.F.	5,511
7 6" PVC	L.F.	3,604
8 6" GATE VALVE	EA	9
9 6" GATE VALVE	EA	7
10 8" 6" TEE	EA	4
11 8" 6" TEE	EA	5
12 8" 6" REDUCER	EA	2
13 8" 6" BEND	EA	2
14 6" 6" TEE	EA	2
15 CONNECT TO EXISTING WATER LINE	EA	2

TRAFFIC SIGN QUANTITIES

1 6" D-3 STREET NAME SIGN	EA	17
2 30" R1-1 STOP SIGN	EA	2

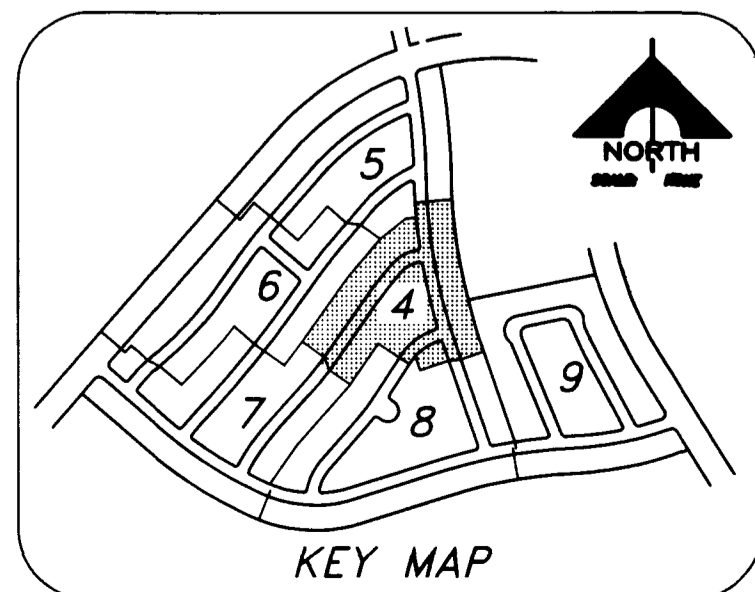
THIS APPROVAL IS ONLY FOR THE PLACEMENT AND CLEARANCE OF STREET LIGHT AND SIGNAL LIGHT INSTALLATIONS.

(DATE) _____

BY: NEVADA POWER COMPANY

APPROVED FOR CONSTRUCTION

Las Vegas Water District _____ DATE _____



JOB NO. 701.170 PLOTTED: 01/25/93 08:38 am

Call before you Dig
1-800-227-2600

RECOMMENDED: MICHAEL D. ROSS P.E. NO. 6218 DATE

G. C. WALLACE, INC. Engineering/Architecture 1555 SOUTH RAINBOW BLVD./LAS VEGAS, NEVADA 89102

DEL WEBB COMMUNITIES, INC. SUN CITY LAS VEGAS UNIT NO. 40 UTILITY PLAN 1

"As Built" 307Y-4141-40

