

VICINITY MAP

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 DRAFT OR ADDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE 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 LATERALS WILL BE OF COPPER TUBING IN ACCORDANCE WITH THE DISTRICT SPECIFICATION TITLED "3503 - COPPER WATER TUBING".
- 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 DEGREES	2.5 DEGREES	3.5 DEGREES
8-12 INCH	2.5 DEGREES	2.5 DEGREES	2.5 DEGREES
14-16 INCH	2.0 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 20' LENGTH OF FACTORY BELLED PIPE SHALL BE 17 INCHES FOR 6" PIPE, 12 INCHES FOR 8" PIPE, 11 INCHES FOR 10" PIPE, AND 9 INCHES FOR 12" PIPE.
- 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.
 - ALL WATER MAINS AND LATERALS SHALL BE DISINFECTED & FLUSHED, AND AN ACCEPTABLE WATER SAMPLE OBTAINED, PRIOR TO ACCEPTANCE BY THE DISTRICT.
 - CONTRACTOR TO OBTAIN ALL METERS 2" OR SMALLER FROM LVVWD CENTRAL STORES, TELEPHONE NUMBER 258-3152, FORTY-EIGHT (48) HOURS PRIOR TO PICKUP.

LAS VEGAS FIRE DEPARTMENT

FIRE FLOW REQUIREMENT IS 2250 GALLONS PER MINUTE AT 20 POUNDS PER SQUARE INCH RESIDUAL BASED ON:

AREA SEPARATION FIRE WALLS MUST BE IDENTIFIED.

SQUARE FOOTAGE 11,280 (SPRINKLERED);
3,600 (UNSPRINKLERED)

LARGEST AREA BETWEEN AREA SEPARATION WALLS _____

HEIGHT SINGLE STORY

TYPE OF CONSTRUCTION X-N

EXPOSURES _____

SPRINKLER SYSTEM YES (2 LG. BLDGS.); NO (10 SM. BLDGS.)

OCCUPANCY B-2

ROOF CONSTRUCTION TILE

REVIEWED BY: [Signature]

DATE: 5/23/91

____ GPM REQUIRED WITHIN 500 FT. OF ALL BUILDING AREAS.

BENCHMARK

#C1003104: C.L.V. BRASS CAP AT INTERSECTION OF SAHARA AVENUE AND TENAYA WAY, S. 1/4 COR. SEC. 3. ELEVATION = 2451.33'

QUANTITY ESTIMATE (PHASE I & II)

- ① FIRE HYDRANT W/ASSEMBLY _____ 3 EA
- ② 8" X 8" X 8" TEE _____ 1 EA
- ④ 90° ELBOW _____ 2 EA
- ⑤ 8" GATE VALVE _____ 3 EA
- ⑦ 8" X 6" REDUCER _____ 2 EA
- ⑧ 6" X 2" SENSUS OR APPROVED EQUAL _____ 2 EA
- 2" SERVICE _____ 12 EA
- 8" WATER MAIN _____ 840 LF
- 6" WATER MAIN _____ 90 LF

NOTE: THESE QUANTITIES ARE ONLY ESTIMATES, CONTRACTOR TO VERIFY.

QUANTITY ESTIMATE PHASE III

- 8" WATER MAIN _____ 426 LF
- ① FIRE HYDRANT _____ 1 EA
- ④ 45° ELBOW _____ 2 EA
- ⑤ 8" BLOWOFF _____ 1 EA
- 2" SERVICE _____ 6 EA

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 #3545.
- AUTHORIZED HYDRANTS FOR THIS PROJECT ARE:
 - A - KENNEDY GUARDIAN
 - B - MUELLER A-423 CENTURIAN
 - C - 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.
- CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT CENTERLINE OF STREET ADJACENT TO FIRE HYDRANTS AS REQUIRED IN ORDINANCE #3545 TO IDENTIFY FIRE HYDRANT LOCATIONS.
- CALL THE LAS VEGAS BUILDING DEPARTMENT AT 799-2071 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 #3545 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 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 FEET 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.
- NOT MORE THAN 2 HYDRANTS CAN BE OUT OF SERVICE DUE TO A SINGLE MAIN BREAK.
- THE TURNING RADIUS FOR ANY 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 UFC 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 #3545.

RELOCATION OF FIRE HYDRANTS (EXTENSION OF EXISTING LATERAL)
THE CONTRACTOR SHALL REMOVE AND RELOCATE BOTH THE UPPER AND LOWER BARRELS OF THE EXISTING FIRE HYDRANT(S) WHERE SHOWN, EXTEND THE EXISTING LATERAL AS REQUIRED, AND REINSTALL SUCH HYDRANT(S) AT THE NEW LOCATION(S) INDICATED.

NEVADA DEPARTMENT OF TRANSPORTATION (NDOT) PERMIT REQUIRED
AN APPROVED NDOT OCCUPANCY PERMIT SHALL BE OBTAINED THROUGH THE DISTRICT PRIOR TO ANY CONSTRUCTION WITHIN THE NDOT RIGHT-OF-WAY.

PROJECT NAME: SAHARA PROFESSIONAL PARK PHASE I

This project water plan complies with the Las Vegas Valley Water District's technical requirements; however, this water plan is NOT APPROVED FOR CONSTRUCTION at this time.

DATE: 5-23-91

- FLANGED SCHED 40 FABRICATED STEEL EPOXY COATED AND LINED WALL SPOOL WITH THRUST RING
- FLANGED GATE VALVE
- SENSUS 6" X 2" OP APPROVED EQUAL
- FLANGED X PLAIN END SCHED 40 FABRICATED STEEL EPOXY COATED AND LINED SPOOL
- SLEEVE TYPE COUPLING
- INSTALL ADJUSTABLE PIPE SUPPORTS, ORNAMENT NO. 284 OR APPROVED EQUAL

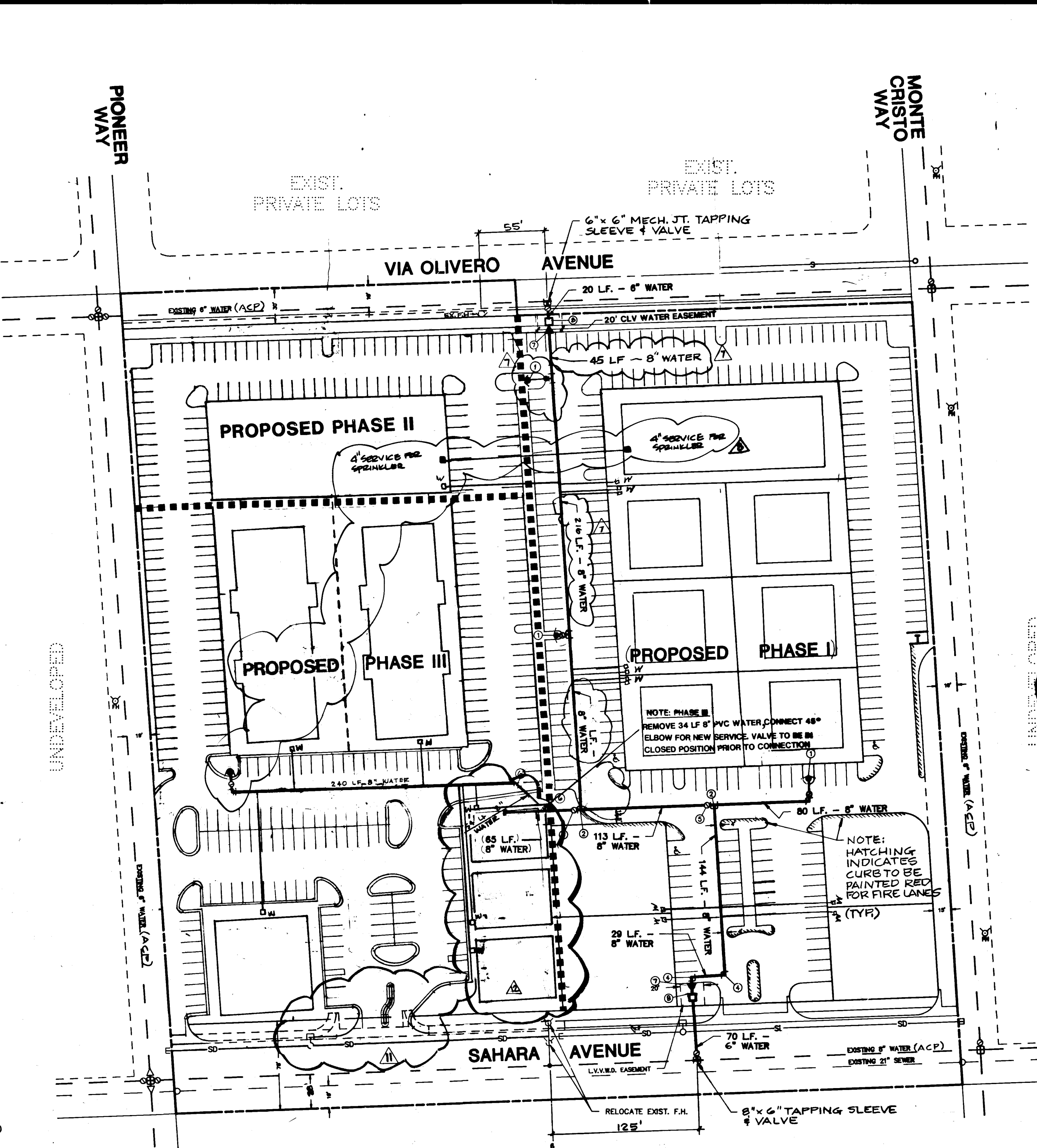
NOTE:

EXISTING UTILITY LOCATIONS SHOWN HEREIN ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

APPROVAL

[Signature] 1-27-92
LAS VEGAS VALLEY WATER DISTRICT DATE

[Signature] 5/23/91
C.L.V. FIRE DEPARTMENT DATE



REV	DATE	DESCRIPTION
1	3/28/91	DSR REV'D & REDRAWN FOR MASTER METER
2	5/2/91	DSR REV'D PER LVVWD REVIEW
3	5/10/91	DSR REV'D PER FIRE LANES PER CLVFD
4	5/18/91	DSR REV'D PER AREA SCHEDULED FOR REMOVAL
5	10/12/91	DSR REV'D PER AREA SCHEDULED FOR REMOVAL
6	11/27/91	DSR REV'D PER DATA PER PREVIOUS REV'S
7	12/28/91	DSR REV'D PER QUANTITY ESTIMATE B WATER LENGTHS
8	1-14-92	DSR REV'D PER QUANTITY ESTIMATE B WATER LENGTHS

SCALE: 1" = 60'

ES&S ENGINEERS & SURVEYORS, INC.
7018 W. CHARLESTON BLVD.
LAS VEGAS, NEVADA 89117
(702) 388-8816

4/10/91
[Signature]

REVISIONS AFTER 7/25/93

MASTER WATER PLAN

SAHARA PROFESSIONAL PARK PHASE I-III
(A COMMERCIAL SUBDIVISION)

Call before you Dig.
1-800-227-2600
UNDERGROUND SERVICE (USA)

W.O. # : 742-9617
BY : DSR
DATE : FEB 1991
SCALE : 1" = 60'
SHEET 7 OF 7 SHEETS



VELOCITY MAP

LAS VEGAS VALLEY FIRE DISTRICT NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF LAS VEGAS FIRE DEPARTMENT SPECIFICATIONS AND THE CITY OF LAS VEGAS FIRE DEPARTMENT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
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LAS VEGAS FIRE DEPARTMENT

NAME OF CONTRACTOR: _____
 ADDRESS: _____
 PHONE: _____
 TYPE OF CONTRACT: _____
 APPROVED: _____
 DATE: _____

RECORDS

RECORDS OF THE CITY OF LAS VEGAS FIRE DEPARTMENT SHALL BE MAINTAINED IN ACCORDANCE WITH THE CITY OF LAS VEGAS FIRE DEPARTMENT STANDARD SPECIFICATIONS FOR CONSTRUCTION.

QUANTITY ESTIMATE PHASE I & II

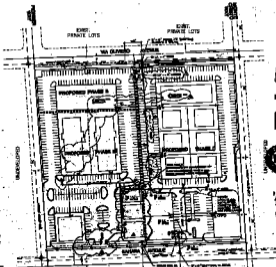
1. CONCRETE	1000
2. REINFORCING	1000
3. STEEL	1000
4. PAINT	1000
5. OTHER	1000

QUANTITY ESTIMATE PHASE III

1. CONCRETE	1000
2. REINFORCING	1000
3. STEEL	1000
4. PAINT	1000
5. OTHER	1000

CITY OF LAS VEGAS FIRE DEPARTMENT NOTES

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APPROVAL:

 DATE: _____

MASTER WATER PLAN
BARBARA PROFESSIONAL ENGINEERING

NO. 21-16-001
 DATE: 10-10-00
 SHEET: 10-000

7

PL 17-1079