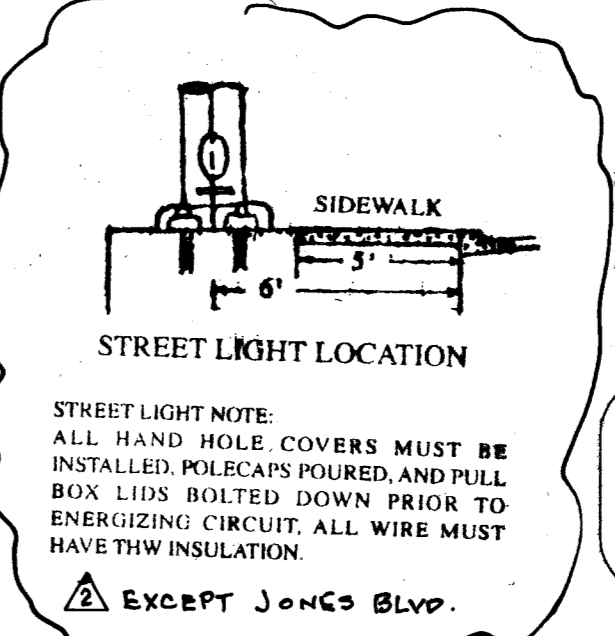


NDOT OCCUPANCY PERMIT REQUIREMENTS
 PLANS FOR THE PROJECT SHOW PROPOSED WORK WITHIN EXISTING NDOT RIGHT-OF-WAY. DRAWING MUST BE SUBMITTED TO NDOT FOR REVIEW PRIOR TO SUBMITTAL OF MYLARS. TO LVVWD FOR ENCROACHMENT PERMIT AFTER PLAN APPROVAL. NOT FOR CONSTRUCTION. THE FOLLOWING INFORMATION IS INCLUDED ON THE PLANS:

- STREET NAME (NDOT RIGHT-OF-WAY IDENTIFIED AS SR140, etc.)
- NDOT RIGHT-OF-WAY BOUNDARY IDENTIFIED AND CLEARLY STATED
- NDOT TRENCH DETAIL OR BORE DETAIL
- MAJOR CROSS STREETS
- NDOT STATIONING
- UNDERLYING FEE OWNERSHIP OF PARCEL
- DISTANCE FROM WORK LOCATION TO MAJOR CROSS STREET
- DIMENSION OF TRENCH OR WORK AREA IDENTIFY NDOT CENTERLINE
- ENGINEER TO COORDINATE WITH NDOT § 702-385-8500 TO DETERMINE IF RIGHT-OF-WAY IS ONLY MAINTAINED BY NDOT, THE ENGINEER/DEVELOPER WILL PROVIDE LVVWD WITH EASEMENT FOR RIGHT-OF-WAY FOR UNDER SURFACE INSTALLATION PRIOR TO WATER PLAN APPROVAL.

- CONSTRUCTION NOTES:**
- FIRE HYDRANT W/ASSEMBLY @ STA 10+93.06, PER UDACS PLATE 7
 - 8" GATE VALVE
 - 8" X 8" TEE PER UDACS PLATE 5
 - 8" X 6" TEE W/ THRUST BLOCK PER UDACS PLATE 5
 - 6" GATE VALVE
 - 1" WATER LATERAL WITH METER PER UDACS PLATE 1B & 1D
 - CAP & 2" BLOWOFF ASSEMBLY PER UDACS PLATE 4A
 - 4" PVC SEWER LATERAL
 - 1" WATER LINE (IRRIGATION) WITH 3/4" METER & 1" RPPA PER UDACS PLATE 1D & 11A. BRASS CONNECTION BETWEEN METER & RPPA
 - 8" X 6" REDUCER
 - 6" 90° BEND W/THRUST BLOCK PER UDACS PLATE 5
 - INSTALL #33 PULLBOX PER STD. DWG. #326
 - 8" 5' BEND W/ RESTRAINT JOINTS
 - INSTALL R1-1 STOP SIGN (30") PER MUTCD SEC 2B-4
 - INSTALL (2) 9" D-3 STREET NAME SIGNS PER MUTCD SEC 2D-39
 - INSTALL BLUE MARKER 16" FROM FACE OF CURB
 - INSTALL SIGNS AS SPECIFIED
 - INSTALL W14-2 "NO OUTLET"
 - INSTALL 24"X8" TAPPING SLEEVE WITH 8" TAPPING VALVE REFER TO UDACS SECTION 3.14 (PG. 3-19) FOR CONNECTION REQUIREMENTS
 - INSTALL PIPE TRENCH SECTION PER UDACS PLATE 6B
 - 8" 45° PER UDACS PLT 5
 - INSTALL 200 AMP SERVICE PER DETAIL THIS SHEET.

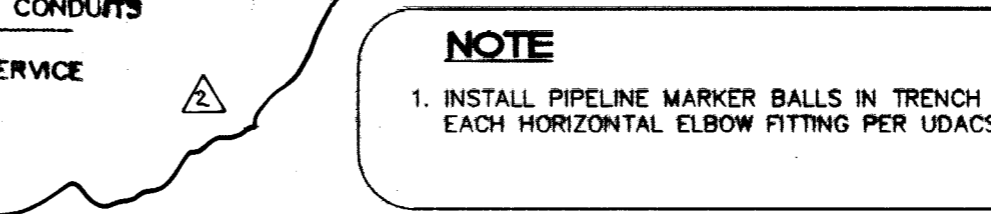
APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 11A. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.



SIGHT VISIBILITY ZONE (SVZ)
 SVZ SIGHT VISIBILITY ZONE NO OBSTRUCTION TO BE OVER 24" FROM TC IN HEIGHT IN HATCHED AREA.

SEWER CALCULATION
 SEWER AVERAGE DAILY FLOWS = 1225 GPD
 PEAK FLOWS = 4287.5 GPD

LVVWD FIRE SPRINKLER NOTE
 FIRE SPRINKLER SYSTEM SHALL BE PLUMBED TO MASTER TOILET. NO EXCEPTIONS ALLOWED.



UTILITY DISCLAIMER NOTE
 UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD 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.

- UTILITY LEGEND**
- EX 8" WL --- EXISTING WATER LINE W/SIZE
 - 8" PVC WL --- PROPOSED WATER LINE W/SIZE
 - 1" PROPOSED WATER LATERAL & 3/4" METER PER UDACS PLATE 1B UNLESS OTHERWISE NOTED
 - PROPOSED FIRE HYDRANT W/6" LATERAL & 6" G.V.
 - EX 8" SS --- EXISTING SEWER LINE W/SIZE
 - 8" PVC SS --- PROPOSED SEWER LINE W/SIZE
 - PROPOSED SEWER LATERAL
 - PROPOSED SEWER MANHOLE
 - GATE VALVE
 - 8" WL --- 6" WL --- WATER REDUCER
 - PROPOSED BLOW-OFF ST. LT. CONDUIT
 - CONCRETE DRIVEWAY
 - 100 W HPS LUMINAIRE --- REQUIRES BACKWATER VALVE
 - 150W HPS LUMINAIRE --- REQUIRES PRESSURE REDUCER VALVE
 - 250 W HPS LUMINAIRE

BASIS OF BEARING
 NORTH 04°13'42" WEST, BEING THE CENTERLINE OF MUSTANG ROAD, THE WEST LINE OF THE NW 1/4 OF THE SW 1/4 OF THE NE 1/4 OF SECTION 14, TOWNSHIP 20 SOUTH, RANGE 60 EAST, M.D.M., AS SHOWN ON PARCEL MAP FILE 13, PAGE 23, CLARK COUNTY, NEVADA.

BENCHMARK
 PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88)
 CITY OF LAS VEGAS BENCHMARK #725, BLV00 1456
 ELEVATION: 694.8875 METERS (2279.81 FEET)
 RIVET & PLATE IN TOP OF CURB ON THE WEST SIDE OF MAVERICK STREET @ CARTIER

200 AMP 240V PAD MOUNT SERVICE WITH:
 2-2 POLE 60 AMP CIRCUIT BREAKERS
 1-1 POLE 15 AMP CIRCUIT BREAKERS
 2-2 POLE 60 AMP CONTACTORS
 1-BY-PASS SWITCH PER CONTACTORS

LAS VEGAS VALLEY WATER DISTRICT (LVVWD) STANDARD NOTES.
 LVVWD PROJECT# 111161

- 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 COMMUNICATIONS 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.
- ALL WORK SHALL CONFORM TO LVVWD STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS, AND TO THE 2003 EDITION OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS).
- 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 OFF-SITE IMPROVEMENT, CLARK COUNTY AREA.
- A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVWD.
- ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING WITH LVVWD APPROVED SERVICE SADDLES.
- ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
- ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY AND CURB GUTTERS.
- ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSINGS SHALL CONFORM TO SECTION 2.19 OF THE 2003 EDITION OF THE UDACS.
- 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.
- ANY INTERRUPTION OF SERVICE MUST BE PREFORMED IN ACCORDANCE WITH UDACS SECTION 3.13.01, AND APPROVED BY THE LVVWD INSPECTION DIVISION PRIOR TO SHUTDOWN. PROPER WRITTEN NOTIFICATION MUST BE GIVEN TO ALL AFFECTED CUSTOMERS.
- ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVVWD PRE-APPROVED MATERIALS AND MANUFACTURER'S LISTING FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS.
- TELEPHONE "CALL BEFORE YOU DIG" AT 1-800-227-2600

FIRE FLOW CALCULATIONS

FIRE FLOW REQUIREMENTS IS: 1500 GALLONS PER MINUTE
 AT 20 PSI RESIDUAL PRESSURE.

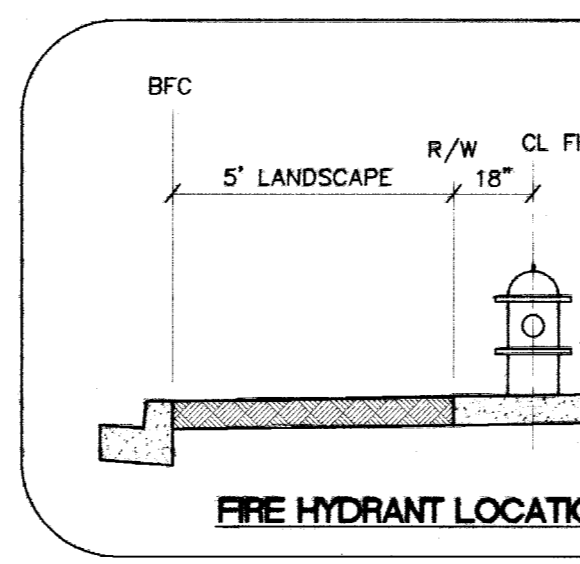
BASED ON: SQUARE FOOTAGE 4000 SF
 LARGEST AREA BETWEEN 4-HOUR AREA SEPARATION WALLS: N/A
 BUILDING HEIGHT 30' ±
 NUMBER OF STORIES 2
 TYPE OF CONSTRUCTION TYPE V-N
 OCCUPANCY SINGLE-FAMILY
 FULL AUTOMATIC FIRE SPRINKLER SYSTEM YES

REVIEWED BY: [Signature] DATE: 10/12/06

ESTIMATE OF WATER QUANTITIES

6" PVC WATER MAIN	137 LF
8" PVC WATER MAIN	349 LF
8" 22.50' BEND	0 EA
8" 90° BEND	1 EA
8" 5' BEND	1 EA
8" 45° BEND	1 EA
8" GATE VALVE	2 EA
8"X8" TEE	1 EA
8"X8" TEE	0 EA
8"X8" REDUCER	1 EA
6" GATE VALVE	0 EA
2" BLOW-OFF ASSEMBLY W/CAP PER UDACS PLATE 4A	1 EA
STD. FIRE HYDRANT ASSEMBLY W/ 6" LATERAL, 6" GATE VALVE	1 EA
1" WATER METER UDACS 1D	4 EA
3/4" WATER METER PER UDACS PLATE 1B	3 EA
3/4" WATER METER (IRRIGATION) W/1" RPPA PER UDACS PLATE 1D & 11A	1 EA
24"X8" TAPPING SLEEVE AND 8" TAPPING VALVE	1 EA

NOTE: QUANTITIES ARE APPROXIMATE ONLY- CONTRACTOR TO VERIFY.



WATER MAIN JOINT DEFLECTION (PVC 4"-24")
 PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,500 FEET, PER UDACS 2.06.01 & 2.06.02.

FOR CHANGES IN THE DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

NOTE
 ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.19 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSING AND CLEARANCES.

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. PLANS SHOWING WORK IN NDOT RIGHT-OF-WAY MUST SHOW NDOT STATIONING. THE DEVELOPER ASSUMES ALL LIABILITY FOR WORK CONDUCTED UNDER THE DISTRICT OBTAINED PERMIT THROUGH WARRANTY EXPIRATION.

APPROVALS

SEE ASBMT
 CITY FIRE MARSHAL _____ DATE _____

[Signature] 10/31/06
 LAB VEGAS VALLEY WATER DISTRICT PROJECT: 111161 DATE

SANITARY SEWER MANHOLE SCHEDULE

M#	ID	TYPE	STATION	OFFSET	RIM EL.	N INV EL.	S INV EL.	E INV EL.	W INV EL.	COMMENTS
SSMH1	SD-1	DORCHESTER HEIGHTS CT-STA 9+93.84	5' LT	2255.3	2243.59	2243.34	2243.53	XX		
SSMH2	SD-1	DORCHESTER HEIGHTS CT-STA 11+38.94	27.56' LT	2255.5	2248.78		2248.96	XX		
SSMH3	SD-1	DORCHESTER HEIGHTS CT-STA 12+40.51	5.0' LT	2256.9		2256.00		XX		

DISCLAIMER NOTE
 Avoid cutting underground utility lines. It's costly.
 Call before you dig 1-800-227-2600 (UNDERGROUND SERVICE ONLY)

Avoid overhead power line contact.
 Call before you overhead 1-702-227-2929 (UNDERGROUND SERVICE ONLY)

Avoid hitting, under, or straddling signal systems and street light systems.
 Call before you under ground 1-702-455-7511 (CLARK COUNTY SIGNAL AND STREET LIGHT SYSTEMS) AND 1-702-229-6611 (LAS VEGAS SIGNAL SERVICE DIVISION)

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NDOT STATIONING
 ALL NDOT STATIONING IS BASED ON NDOT PROJECT NO. CL-3145 MATCHING 10+00.00 TO THE REFERENCED PLAN USING A WELL MONUMENT FOUND AT THE INTERSECTION OF MADRE MESA DR. AND N. JONES BLVD.

NOTES
 NDOT PERMIT REQUIRED FOR ENCROACHMENT ALL WORK IN NDOT MAINTENANCE RESPONSIBILITY ON JONES BOULEVARD.
 BOUNDARY PROVIDED BY STANLEY CONSULTANT LTD. TOPO PROVIDED BY TRC. SUMMIT ENGINEERING DOES NOT ASSUME RESPONSIBILITY FOR THE BOUNDARY AND TOPO INFORMATION.

SUMMIT ENGINEERING CORPORATION
 1421 E. SUNSET RD. SUITE 17, LAS VEGAS, NV 89109
 PHONE (702) 252-3028 FAX (702) 252-3847

DESIGNED BY: RQ
 DRAWN BY: J-Clark
 CHECKED BY: AH
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CIVIL IMPROVEMENT PLANS FOR BUNKER COMMONS IV UTILITY AND STREET LIGHT PLAN

NEVADA
 CLARK COUNTY
 LAS VEGAS

BY: RQ
 DATE: 10/12/06
 SCALE: N/A
 SHEET: 7 OF 8

REVISIONS:
 1. 10/12/06 RQ/CL/ASBMT
 2. 10/12/06 RQ/CL/ASBMT
 3. 10/12/06 RQ/CL/ASBMT

PROJECT: BUNKER COMMONS IV UTILITY AND STREET LIGHT PLAN
 SHEET NO: 70003
 DATE: 10-12-06

CLV# 1074843-4