

**SEWER KEY NOTES AND QUANTITIES:**

1	TYPE 1 MANHOLE PER U.S.D.C.S. DWG. NO. 403	19 EA.
2	4" PVC SEWER LATERALS	73 EA.
	8" PVC SEWER MAIN	4385± LF
	BACK WATER VALVE (PRIVATE)	73 EA.

**SEWER CONTRIBUTION**  
 AVERAGE DAILY FLOW ----- 0.1325 MGD  
 PEAK FLOW (PF=3.4) ----- 0.4590 MGD

**WATER KEY NOTES AND QUANTITIES**

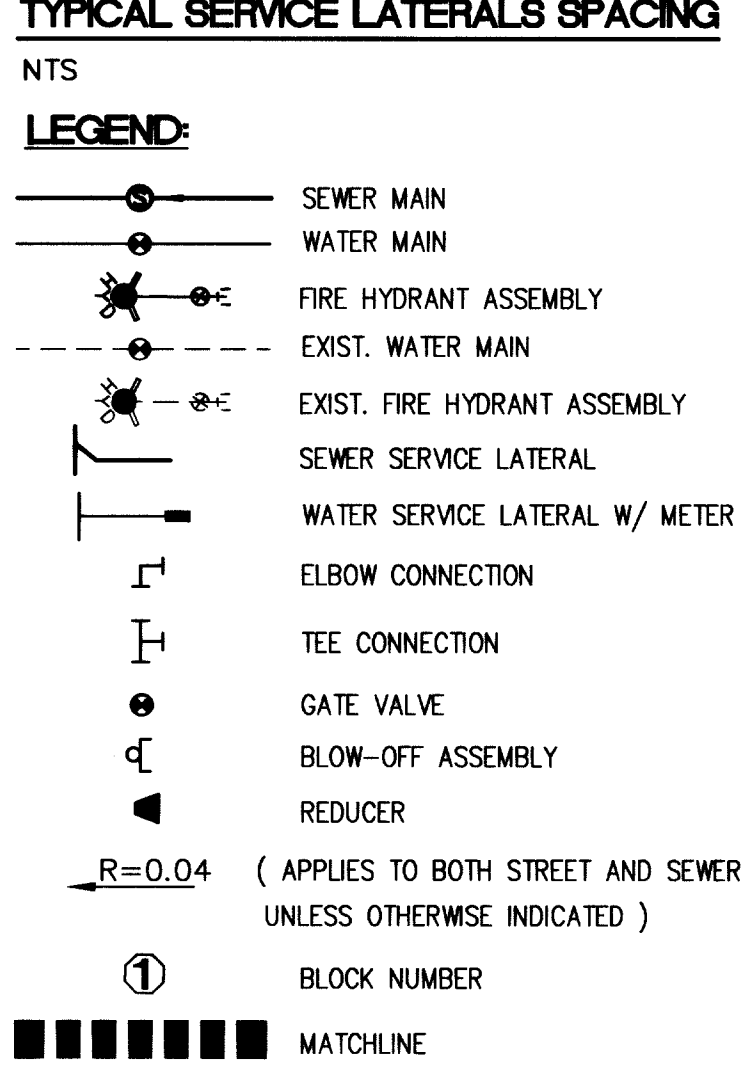
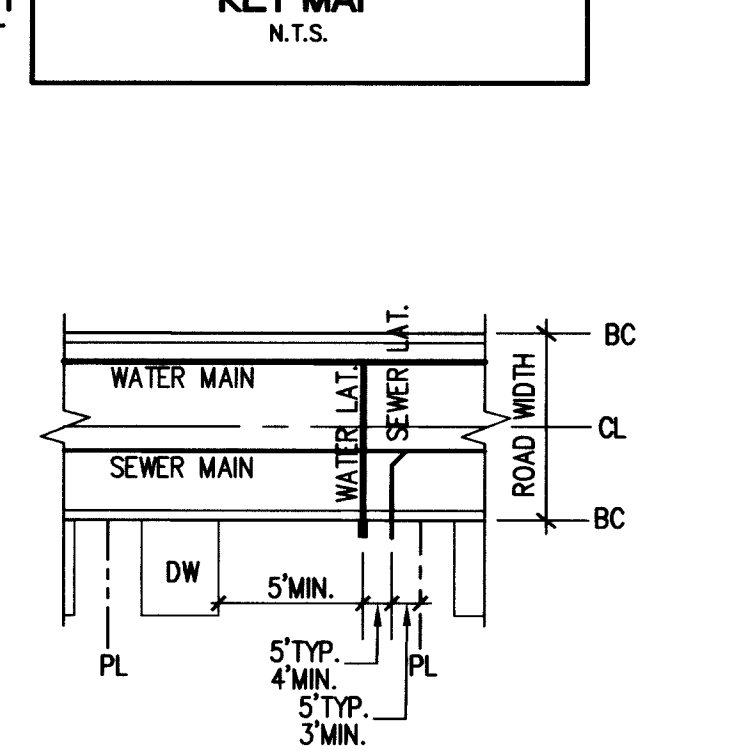
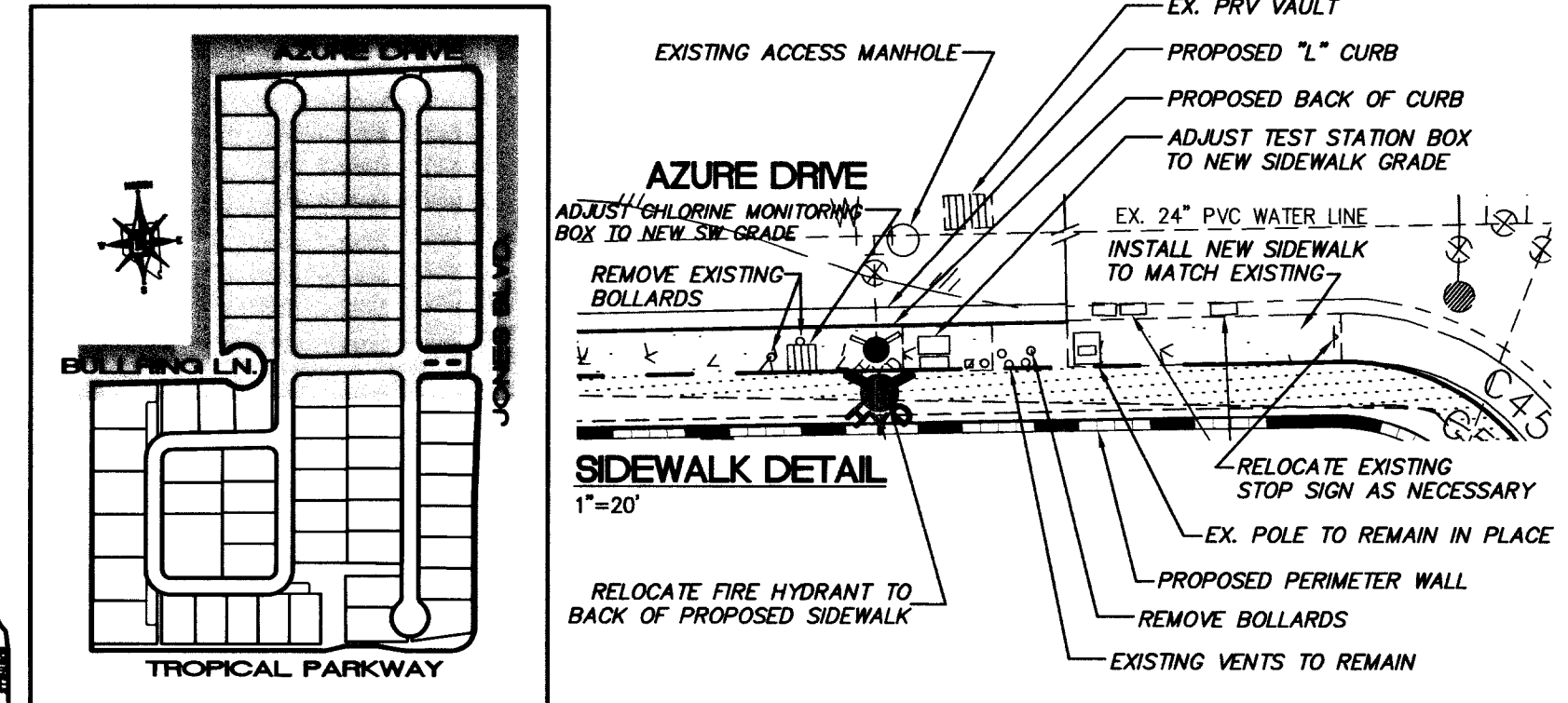
A	INSTALL FIRE HYDRANT ASSEMBLY PER UDACS STD. PLATE NO. 7	9 EA.
B	8" GATE VALVE (PER U.D.A.C.S. PLATE NO. 8)	9 EA.
C	CAP AND 2" BLOW OFF PER UDACS STD. PLATE 4	4 EA.
D	3/4" METER AND 1" LATERAL (PER U.D.A.C.S. PLATE # 18) TYP.	67 EA.
E	8" TEE	6 EA.
F	8" 90° BEND	1 EA.
G	8" x 6" REDUCER	2 EA.
H	8" 45° BEND	H EA.
I	8" 11.25° BEND	2 EA.
J	IRRIGATION CONDUIT 2-4", SCH. 40 PVC	1 EA.
K	6" GATE VALVE (PER U.D.A.C.S. PLATE NO. 8)	1 EA.
L	24" x 8" TAPPING TEE WITH 8" TAPPING VALVE	2 EA.
M	1" TYPE K COPPER LATERAL 1" METER, 1" RPPA PER U.D.A.C.S. PLATE #10 & 11A	2 EA.
N	3/4" METER AND 1" LATERAL (PER U.D.A.C.S. PLATE #10)	6 EA.
O	8" x 6" TEE	7 EA.
	8" PVC WATER MAIN	315± LF
	8" PVC WATER MAIN	3788± LF
	8" DIP WATER MAIN	135.31± LF
P	2" TYPE K COPPER LATERAL 2" METER, 2" RPPA PER U.D.A.C.S. PLATE #10 & 11A	1 EA.

**BENCHMARK**  
 CITY OF LAS VEGAS BENCHMARK 5LV90 28C4  
 RIVET AND PLATE IN CONCRETE PAD (TRANSFORMER) ON SOUTH SIDE OF TROPICAL PARKWAY +/- 170 FT WEST OF TORREY PINES  
 ELEVATION: 705.7667 METERS (NAVD 88)  
 2315.50 FEET (NAVD 88)

**BASIS OF BEARINGS**  
 NORTH 05°19'28" EAST, BEING THE BEARING OF THE EAST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 26, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY A MAP ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE, CLARK COUNTY, NEVADA FILE NO. 90 OF PARCEL MAPS, AT PAGE 74.

Avoid cutting underground utility lines. It's costly.  
**Call before you dig**  
 1-800-227-2600  
 UNDERGROUND SERVICES (USA)

Avoid overhead power line contact.  
**Call before you Overhead**  
 1-702-593-6111  
 NEVADA POWER ENVIRONMENT SAFETY SERVICES DEPARTMENT



**ABANDONED VALVE CUT AND CAP**  
 ALL VALVES TO BE ABANDONED IN THE CLOSED POSITION, UNLESS SHOWN OTHERWISE, BY REMOVING A MINIMUM OF THE TOP 12 INCHES OF THE VALVE BOX AND THEN FILLING THE REMAINING PORTION OF THE VALVE BOX WITH CONCRETE HAVING A COMPRESSIVE STRENGTH OF AT LEAST 2,000 PSI.  
 THE CONTRACTOR SHALL CUT THE EXISTING PIPE WITHIN 3' OF THE ABANDONED VALVE OR WHERE SHOWN ON THE PLANS AND INSTALL A CAP WHERE A JOINT OR COUPLING IN THE EXISTING PIPE IS UNMOVED AT THE CUT AND CAP LOCATION. THE INSTALLATION OF A PLUG MAY BE PERMITTED WITH DISTRICT APPROVAL. THE CONTRACTOR SHALL INSTALL A CONCRETE THRUST BLOCK IN ACCORDANCE WITH THE PROVISIONS OF THE UDACS PLATE NO. 5 AT ALL CAP OR PLUG LOCATIONS. (ESN.033)

**NOTE**  
 ALL PRIVATE STREETS & DRIVES ARE CITY OF LAS VEGAS SEWER EASEMENTS, P.U.E. AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED.

**NOTE (ALL LOTS)**  
 THIS PROPERTY MAY HAVE STATIC PRESSURE IN EXCESS OF 80 PSI. THE UNIFORM PLUMBING CODE REQUIRES THAT INDIVIDUAL, ON-SITE (PRIVATE), PRESSURE REDUCING VALVES BE INSTALLED WHENEVER THE PRESSURE EXCEEDS 80 PSI. PRIVATE ARE THE DEVELOPER'S RESPONSIBILITY AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVWD FACILITIES.

**UTILITY NOTE**

1. NOTIFY TETRA TECH, INC. IMMEDIATELY OF ANY DISCREPANCIES IN THE PLAN OR CONDITIONS IN THE FIELD.
2. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL LOCATE AND VERIFY SIZE, MATERIAL, DEPTH, CONDITION, PRESSURE AND LOCATION OF ALL EXISTING UTILITY LINES WITHIN THE CONSTRUCTION AREA. TETRA TECH, INC. SHALL BE CONTACTED ONCE THE UTILITY IS LOCATED.
3. PLANS MAY NOT INDICATE ALL EXISTING UTILITY LINES. CONTRACTOR IS TO EXERCISE EXTREME CAUTION DURING EXCAVATION IN ORDER TO AVOID DAMAGING ANY EXISTING UTILITY LINES. IF THE UTILITY LINES ARE DAMAGED BY THE CONTRACTOR, SUCH DAMAGE SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.
4. CONTRACTOR TO SAWCUT AND REMOVE EXISTING ASPHALT AND CONCRETE AS NECESSARY FOR UTILITY TRENCHES, BACKFILL, AND PATCH ALL TRENCHES ACCORDING TO CITY OF LAS VEGAS STANDARDS.
5. ALL WATER SERVICE LINES AND METERS SHALL BE INSTALLED PER LAS VEGAS VALLEY WATER DISTRICT STANDARDS AND SPECIFICATIONS.
6. CONTRACTOR TO FIELD VERIFY LOCATION AND INVERT OF MANHOLE PRIOR TO CONSTRUCTION. TETRA TECH, INC. SHALL BE CONTACTED ONCE THIS INFORMATION HAS BEEN OBTAINED.

**FIRE FLOW CALCULATIONS**

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

BASED ON:

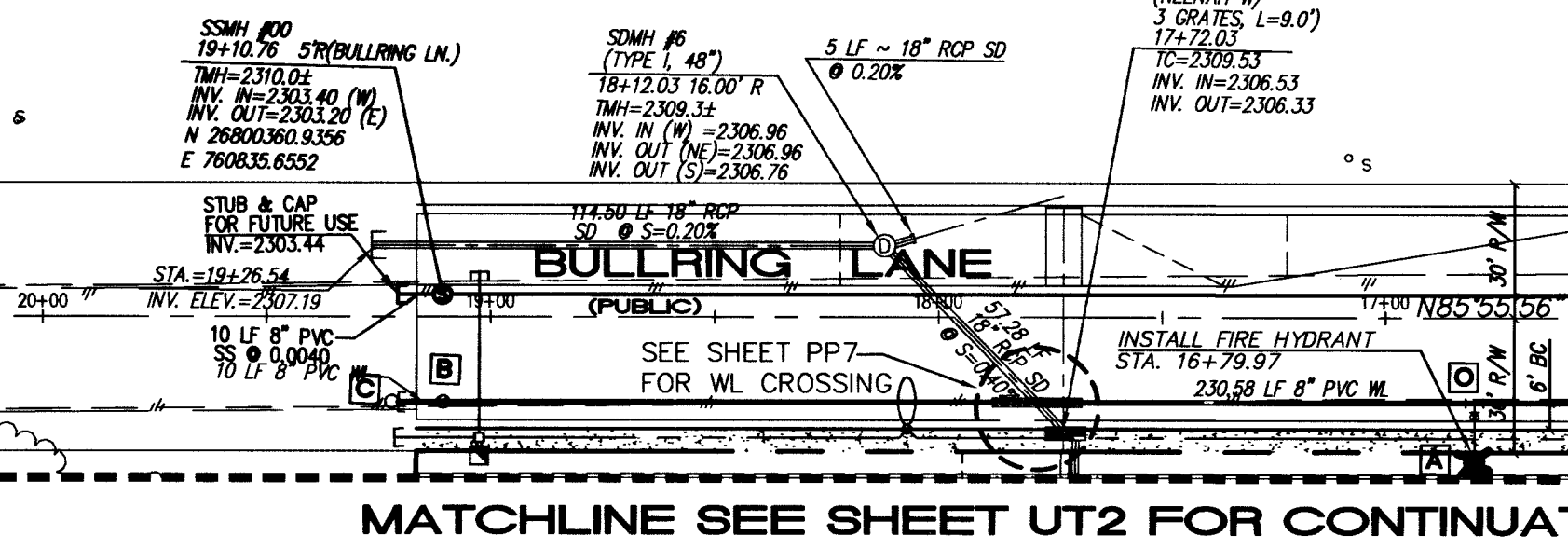
SQUARE FOOTAGE:	3800	SQ. FT.
LARGEST AREA BETWEEN 4-HOUR SEPARATION WALLS:	35±	SQ. FT.
BUILDING HEIGHT:	2	FT.
NUMBER OF STORIES:	V-N	
TYPE OF CONSTRUCTION:	RESIDENTIAL	
OCCUPANCY:		
FULL AUTOMATIC FIRE SPRINKLER SYSTEM:	NO	
ROOF CONSTRUCTION:	TILE	

REVIEWED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

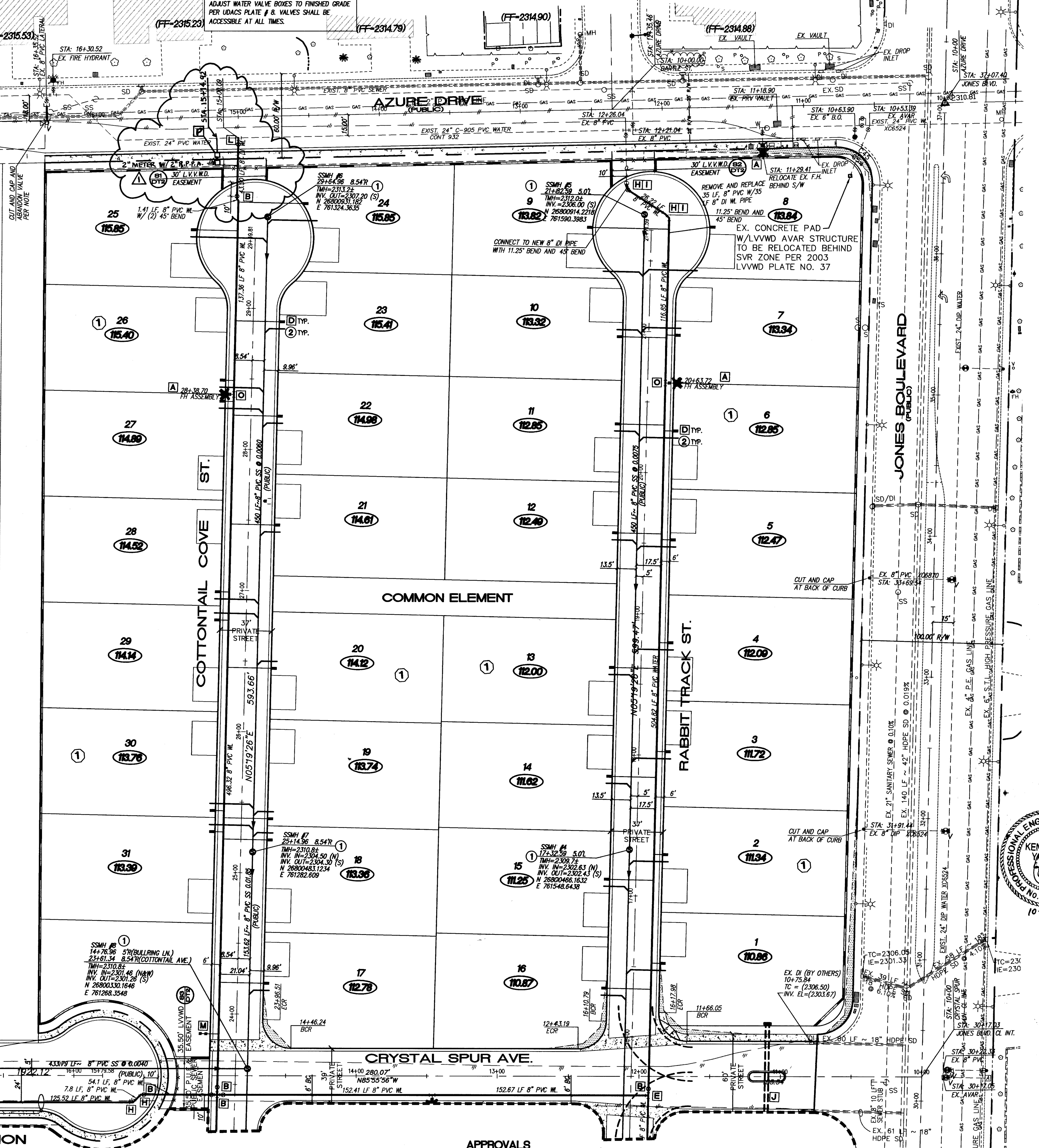
**NOTE**  
 INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER MANUFACTURER INSTRUCTIONS.

**NOTE**  
 ADJUST WATER VALVE BOXES TO FINISHED GRADE PER UDACS PLATE 8 VALVE SHALL BE ACCESSIBLE AT ALL TIMES.

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



**RELOCATION OF FIRE HYDRANTS (Extension of Existing Laterals)**  
 STA. 11+20.41-AZURE DR  
 STA. 11+20.90-TROPICAL PARKWAY  
 THE CONTRACTOR SHALL REMOVE AND RELOCATE BOTH THE UPPER AND LOWER BARRELS OF THE EXISTING FIRE HYDRANTS WHERE SHOWN, EXTEND THE EXISTING LATERAL AS REQUIRED, AND REINSTALL SUCH HYDRANTS AT THE NEW LOCATION(S) INDICATED. RELOCATIONS WHERE THE LATERAL CANNOT BE EXTENDED SHALL BE TREATED AS NEW INSTALLATIONS.



**REDUCED PRESSURE PRINCIPLE ASSEMBLY (1) (1) 2"**  
 APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 11A. NO WATER SHALL BE TAKEN FROM A SERVICE REDUCING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY.

**DISCLAIMER NOTE:**  
 UTILITY LOCATION 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 LOCATIONS. NOTIFY ENGINEER IMMEDIATELY IF DISCREPANCIES ARE ENCOUNTERED.

**APPROVALS**

LAS VEGAS VALLEY WATER DISTRICT TECHNICAL APPROVAL  
 PROJECT NAME: Azure Jones Project #2750  
 SHEET 1-6 OF 7  
 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 AND THIS SIGNATURE DOES NOT PROVIDE OR IMPLY A WATER COMMITMENT.  
 DATE: 9/8/03

LAS VEGAS VALLEY WATER DISTRICT  
 DATE: 9/8/03

LAS VEGAS VALLEY FIRE DEPARTMENT  
 DATE: 9/8/03

**US HOME CORPORATION**  
 3765 E. SUNSET ROAD STE. B-1  
 LAS VEGAS, NEVADA 89120  
 (702) 458-7700

**TETRA TECH, INC.**  
 INFRASTRUCTURE SOLUTIONS GROUP  
 401 N. BURNING DR. SUITE 100, LAS VEGAS, NEVADA 89101  
 (702) 848-1600

**UTILITY PLAN**  
 AZURE / JONES  
 CITY OF LAS VEGAS, NEVADA

**PROFESSIONAL ENGINEER - STATE OF NEVADA**  
 KENNETH T. YAMADIT  
 LICENSE NO. 16534  
 SEAL

**PROFESSIONAL ENGINEER - STATE OF NEVADA**  
 JOSEPH D. THOMASON  
 LICENSE NO. 11907  
 SEAL

QUALITY CONTROL BY: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 SCALE: 1"=40'  
 PROJECT NO. P10027-0004  
 SHEET UT1  
 5 OF 22  
 DRAWING NO. 10747774