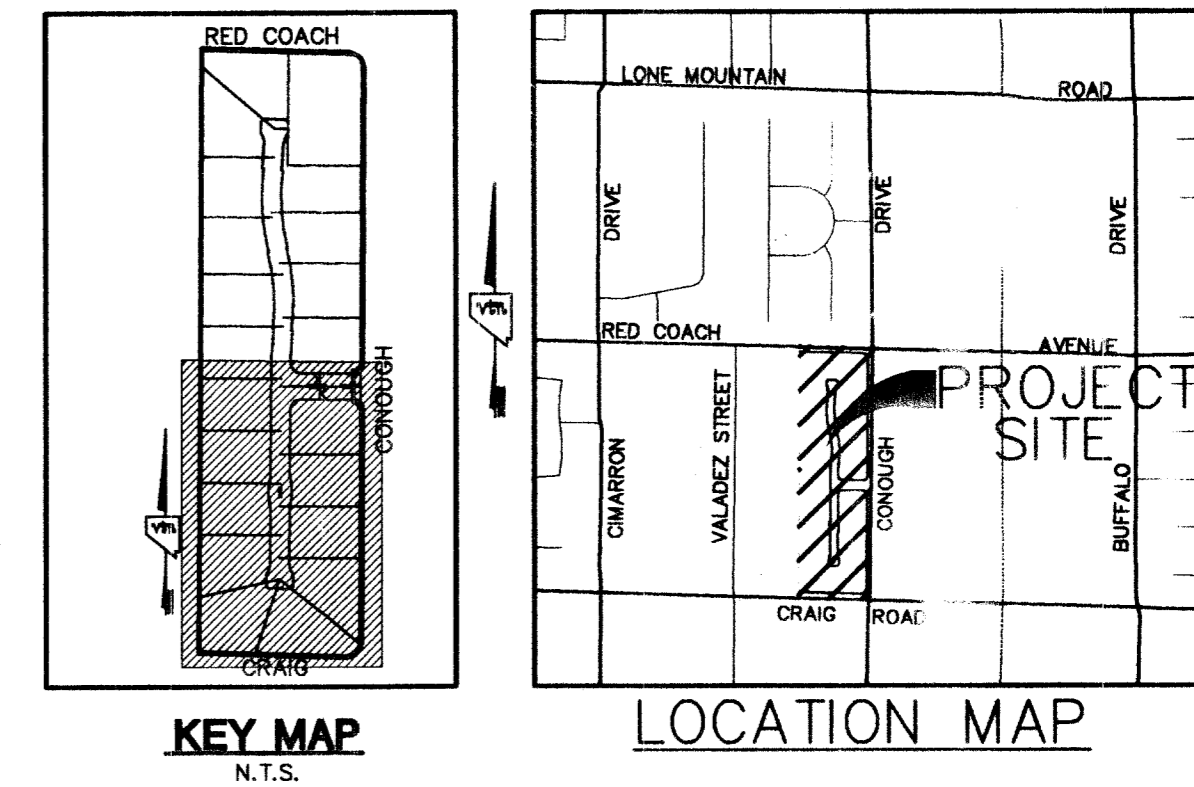


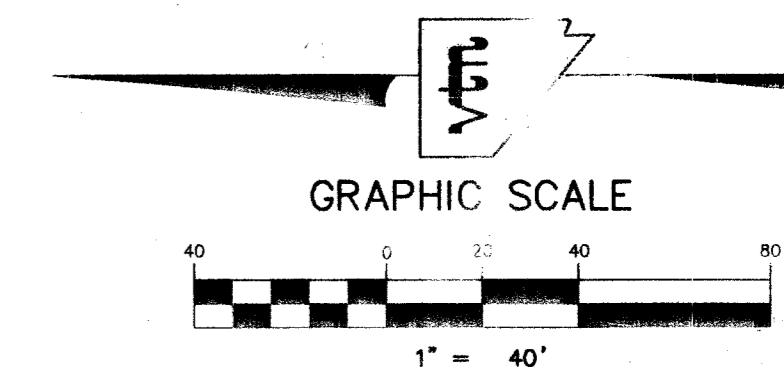
Call before you Dig
1-800-227-2600

Call before you Overhead
1-702-583-6111



BENCHMARK
PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM (NAVD83)
CITY OF LAS VEGAS BENCHMARK #BLV00-466
NAVD88 ELEVATION: 718.087 METERS (2355.91 FEET)
RIVET AND PLATE IN CONCRETE CYLINDER AT SOUTHEAST CORNER OF CRAIG AND CONOUGH

BASIS OF BEARINGS
THE BASIS OF BEARINGS FOR THIS PROJECT IS NORTH 00°19'04" EAST BEING EAST LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 4, TOWNSHIP 30 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN ON A FINAL MAP ON FILE IN THE CLARK COUNTY, NEVADA, RECORDER'S OFFICE IN FILE 9 AT PAGE 40.



FOR ALL ADDITIONAL NOTES AND LEGEND / QUANTITIES SEE SHEET NO. UT1 OR UT2

SANITATION SEWER NOTE:
ALL SEWER STATIONING IS BASED ON CENTER OF PIPE LENGTHS FROM MANHOLE TO MANHOLE AND IS NOT RELATIVE IN ANY WAY TO STREET CENTERLINE STATIONING. STREET CENTERLINE STATIONING IS SHOWN ON PLAN FOR ROAD REFERENCE ONLY.
2. ALL MANHOLES ARE 48" SIZED MANHOLES PER STD.DWG# SD-1, UNLESS OTHERWISE NOTED ON PLAN.

STREET NOTE:
NOTE: ALL ONSITE DRIVES ARE COMMON LOTS, PUBLIC SEWER EASEMENTS & P.U.E. TO BE PRIVATELY OWNED & MAINTAINED.

CITY OF LAS VEGAS SEWER NOTES

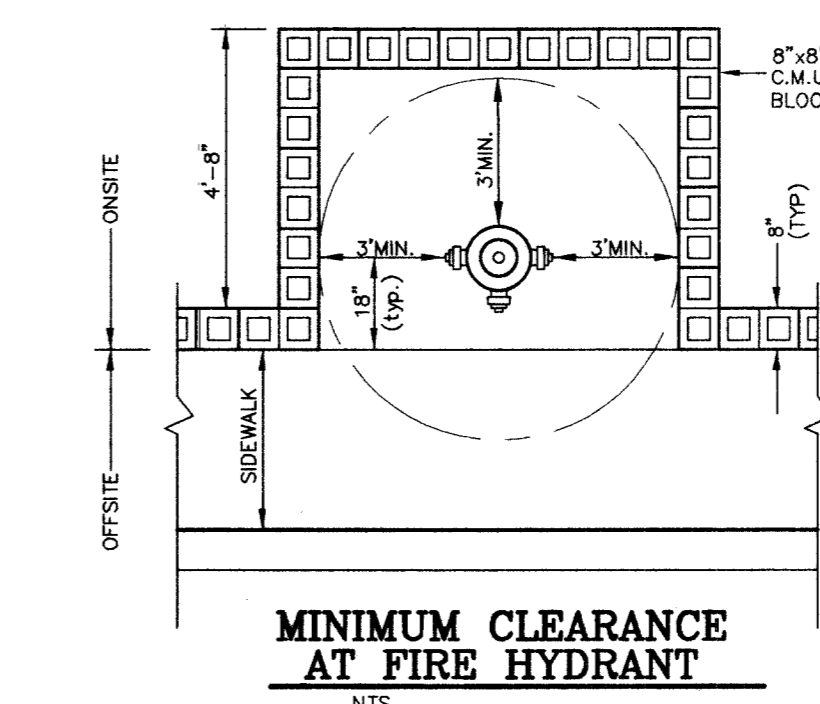
- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS' CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY, NEVADA, AS AMENDED. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATIONS.
- 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 CITY ENGINEER.
- CHISEL "S" OR "G" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
- POLYETHYLENE (PE) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE II AGGREGATE BASE.
- ALL MANHOLES PAVED IN STREETS EIGHTY (80') FOOT R/W AND LARGER SHALL HAVE CONCRETE COLLARS. STREETS LESS THAN EIGHTY (80') FOOT R/W WILL REQUIRE RETROFIT IF PAVING DOES NOT CONFORM TO CITY STANDARDS AT THE MANHOLE.
- TEE SADDLES SHALL BE USED TO CONNECT SEWER LATERALS TO EXISTING MAIN LINES UP TO TWELVE INCH (12") DIAMETER. CONNECTIONS TO FIFTEEN INCH (15") OR LARGER SHALL REQUIRE SPECIAL PROCEDURES. IN LINE "Y" SHALL BE USED TWELVE INCH (12") OR ABOVE. WATER MAINS SHALL BE PROTECTED IN ACCORDANCE WITH LVWD STANDARDS WHENEVER A SEWER MAIN CROSSES OVER A WATER MAIN OR THE SEWER IS LESS THAN EIGHTEEN INCH (18") UNDER THE WATER MAIN.
- ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CITY OF LAS VEGAS MUST BE STATE OF NEVADA CLASS "A" CONTRACTORS.
- THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAINS WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN ONE TENTH (0.1) OF FOOT FROM THE APPROVED CONSTRUCTION PLANS AT ANY LOCATION. SEWER MAINS FOUND TO EXCEED THIS TOLERANCE WILL HAVE TO BE REPAIRED OR REMOVED AND REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY OF LAS VEGAS.
- INSTALLATION OF CURVED SEWER REQUIRES THE USE OF C-900 PVC PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

ESTIMATE OF QUANTITIES/LEGEND

WATER	PRIVATE	PUBLIC
① FIRE HYDRANT ASSEMBLY (8"x6" TEE & 6"GV)(udacs plate 7)	3 EA.	0 EA.
② 8" GATE VALVE	2 EA.	0 EA.
③ 8" TEE W/THRUST BLOCK (udacs plate 5)	2 EA.	0 EA.
④ 8" 11.25° BEND	3 EA.	0 EA.
⑤ 8" X 6" REDUCER	2 EA.	0 EA.
⑥ 8" 11.25° BEND	1 EA.	0 EA.
⑦ 6" CAP W/ 2" B.O. (udacs plate 4A)	2 EA.	0 EA.
⑧ 3/4" IRRIGATION METER PER UDACS PLATE 1-d W/ 1" BRPA PER UDACS PLATE 11-g & 1" SERVICE SADDLE	1 EA.	0 EA.
⑨ 8"x8" MECHANICAL JOINT TAPPING TEE W/ 8" TAPPING VALVE PER UNIFORM DESIGN STANDARDS 2.21.	0 EA.	1 EA.
⑩ MAIL BOX	2 EA.	0 EA.
⑪ 1" SERVICE W/ 3/4" METER (udacs plate 1D)	21 EA.	0 EA.
* PRESSURE REDUCING VALVE	0 EA.	0 EA.
3" PVC IRRIGATION SLEEVE	116 LF.	0 LF.
6" WATER FIRE LINE (PRIVATE)	36 LF.	0 LF.
6" WATER MAIN (PRIVATE)	281 LF.	0 LF.
6" WATER MAIN (PRIVATE)	639 LF.	0 LF.

SEWER	PRIVATE	PUBLIC
● STANDARD MANHOLE (PUBLIC)	0 EA.	6 EA.
● 8" SEWER MAIN (PUBLIC)	0 LF.	1,229 LF.
● 6" SEWER LINE (PUBLIC)	0 LF.	0 LF.
* SEWER LATERALS (PRIVATE)	544 LF.	0 LF.
* SEWER WYES (PUBLIC)	0 EA.	21 EA.
● BWV BACKWATER VALVES (PRIVATE)	0 EA.	0 EA.

SEWER CONTRIBUTION (BASED ON 20 LOTS)
AVERAGE DAILY FLOW = 0.005 MGD.
PEAK FLOW (PF=3.5) = 0.018 MGD.



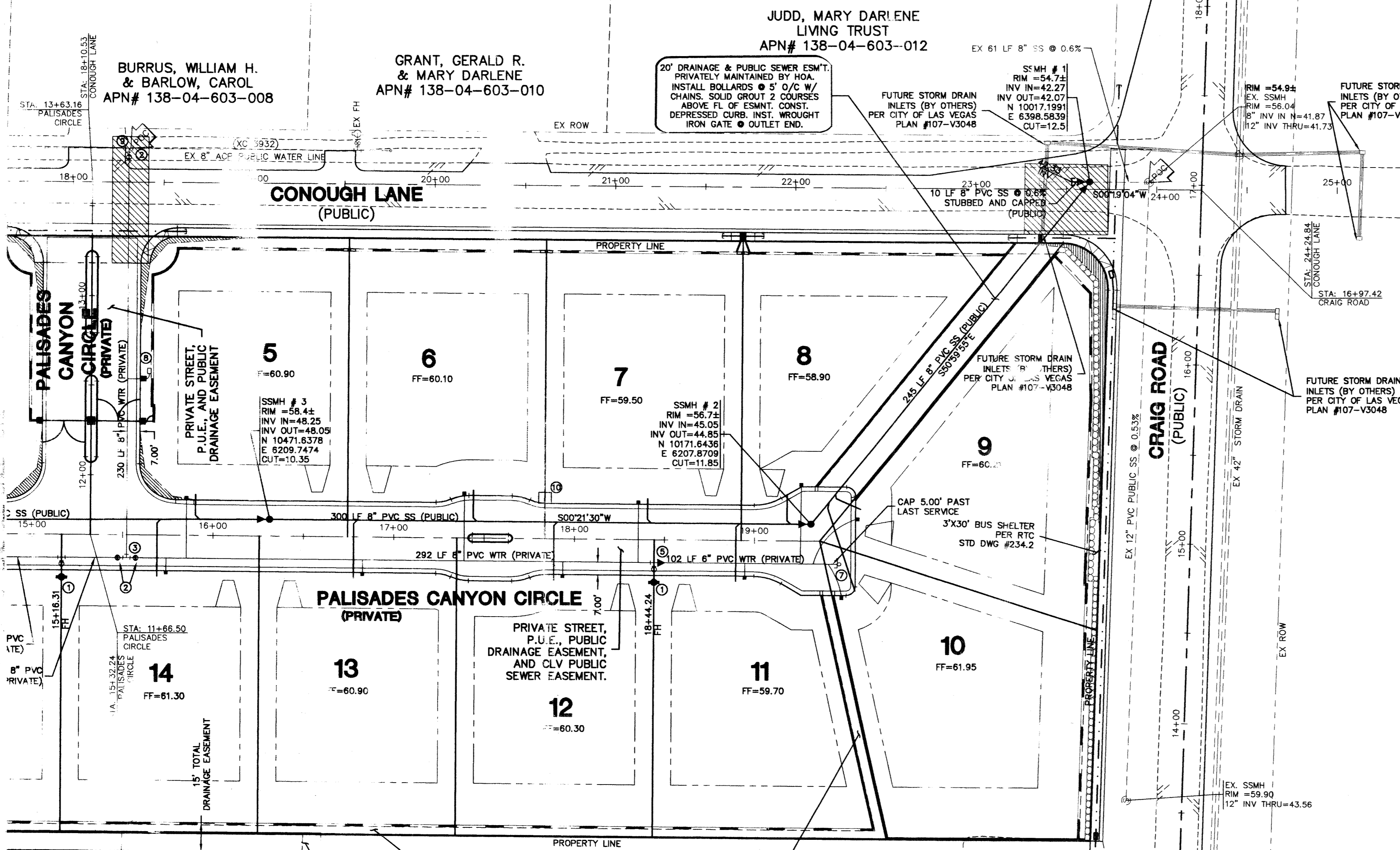
FIRE FLOW CALCULATIONS
FIRE FLOW REQUIREMENT IS 1,750 GALLONS PER MINUTE AT 20 PSI RESIDUAL PRESSURE.

BASED ON:

SQUARE FOOTAGE:	3,990 SQ. FT.
LARGEST AREA BETWEEN 4-HOUR AREA SEPARATION WALLS:	3,990 SQ. FT.
BUILDING HEIGHT:	30 FEET
NUMBER OF STORES:	2
TYPE OF CONSTRUCTION:	V-N
OCCUPANCY:	SER
FULL AUTOMATIC FIRE SPRINKLER SYSTEM:	N/A

FIRE DEPARTMENT APPROVAL
APPROVED BY: *[Signature]* DATE: 5/16/04
BY: *[Signature]* DATE: 5/16/04
APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS. FIRE FLOW 1750 GPM AT 20 P.S.I. RESIDUAL.

LAS VEGAS VALLEY WATER DISTRICT APPROVAL
APPROVED BY: *[Signature]* DATE: 6/04/04
LAS VEGAS VALLEY WATER DISTRICT PROJECT #28021



WHYLOCK CHRIS & KATHRYN
APN# 138-04-602-012

SMITH, PAUL LINN
DEARMOND, LEE
APN# 138-04-602-010

DEARMOND, LEE
APN# 138-04-602-010

WEST CRAIG ROAD
BAPTIST CHURCH
APN# 138-04-602-013

PROJECT NAME: CONOUGH / CRAIG
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.
LVWD SHTS. CV, UT1, & UT2 DATE: 5/17/04 ESN:052

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

ENGINEER 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 AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES 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.

ALL NEW WATER MAIN TO HAVE MINIMUM 42" DEPTH OF COVER PER UDACS SECTION 2.07

REDUCED PRESSURE PRINCIPLE ASSEMBLY (4) T
APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 11A. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACK FLOW 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.

D & S DEVELOPMENT LLC
CLARK COUNTY, NEVADA
2727 SOUTH RAINBOW BOULEVARD, LAS VEGAS, NEVADA 89146-5148
PH: (702) 875-7556 FAX: (702) 362-2357
www.dandsdevelopment.com

UTILITY PLAN
CONOUGH / CRAIG

DRAWN BY: JMN 7-9-03
DESIGNED BY: DEH 7-9-03
CHECKED BY: KKI 7-9-03
PROJECT NO: 8202
SCALE: 1"=40' HORIZ. N/A VERT.

EXPIRES 6-30-05

SHEET **UT1**
3 OF 17 SHEETS
DRAWING NO. HTE# 04-15163