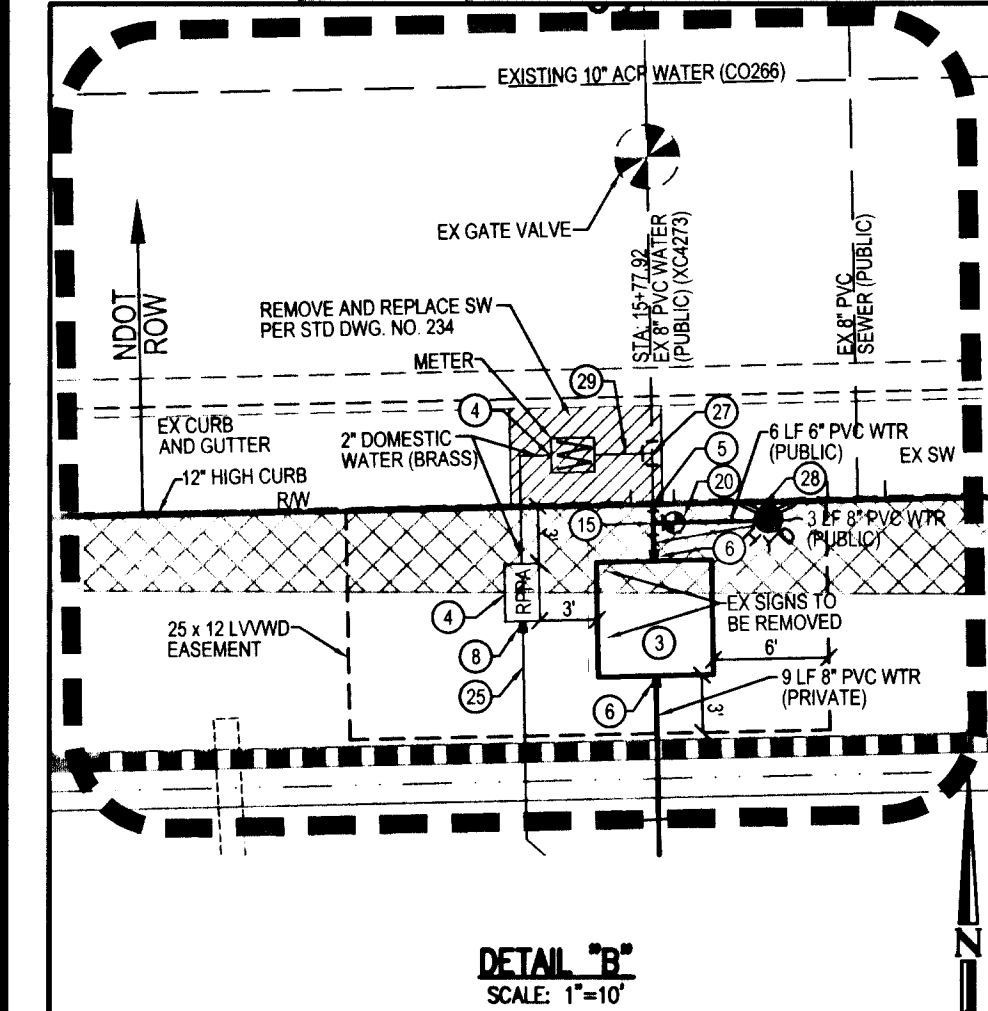
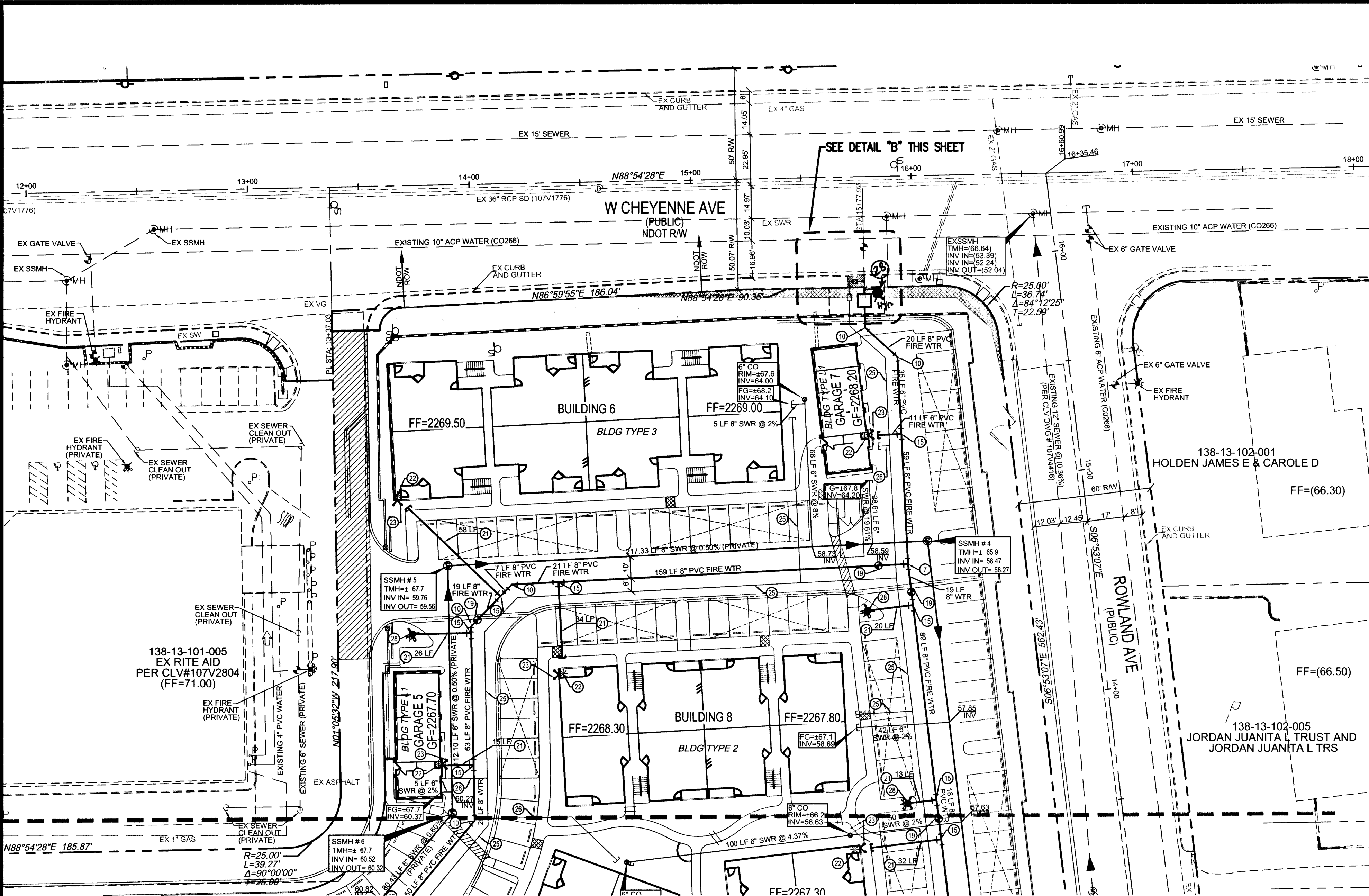


FILENAME: W:\2008\LV06-405 Trammell-Crow Residential Utility Plan 2.dwg, LAST SAVED ON: Jan 10 2008 9:30am, PLOTTED BY: BRAD, ON: Jan 10 2008 9:31am



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 OR 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. CONTRACTOR TO NOTIFY ENGINEER OF ANY CHANGES OR DISCREPANCIES.

Call before you Overhead
1-702-593-6111
NEVADA POWER CORPORATION AND SAFETY SERVICES DEPARTMENT

Call before you Dig
811 or
1-800-227-2600

Call before you UnderGround
1-702-229-6611
F.A.S.T.

UTILITY DEMAND			
USE	QUANTITY		
MULTI-FAMILY	196,580 SQ. FT. (61 UNITS & 1 CLUBHOUSE)		

WATER METER SUMMARY TABLE			
SIZE	TYPE	USE	QTY
2"	PD	DOMESTIC	2

NOTE
ALL ABOVE GROUND UTILITY APPEARANCES SHALL CONFORM TO THE REQUIREMENTS OF TITLE 19.12.040.

CROSSING NOTE
ALL SEWER/STORM DRAIN CROSSING WATER LINES MUST CONFORM TO SECTION 2110 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

NOTE
NO STRUCTURE, VEGETATION, OR OBJECT OF ANY KIND IS PERMITTED TWENTY-FOUR (24) INCHES IN HEIGHT OR OVER (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.

NOTE:
CALL SOUTHWEST GAS AT (702) 365-2296 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES.

REDUCED PRESSURE PRINCIPLE ASSEMBLY (2) 2"
APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 11C. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVMD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENTS 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.

DOUBLE CHECK DETECTOR ASSEMBLY (DCDA) 2) 10"
THE DOUBLE CHECK DETECTOR ASSEMBLY(S) SHALL BE INSTALLED IN ACCORDANCE WITH THE UDACS PLATE NO. 11C. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENTS 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.

SEWER CONSTRUCTION NOTES

- SEWER POINT OF CONNECTION
- INSTALL 48" STANDARD MANHOLE PER UDCS SD-26
- STUB AND CAP 8" PVC SEWER
- CONCRETE ENCASEMENT PER STD DWG NO. 2.19.02.3B
- INSTALL C900 WATER QUALITY PIPE PER STD DWG NO. 2.19.02.3A

PRIVATE FIRE HYDRANT INSTALLATION
FIRE HYDRANT(S) TO BE INSTALLED IN ACCORDANCE WITH THE UDACS STANDARD PLATE NO. 7, (PUBLIC)

WATER CONSTRUCTION NOTES

- WATER POINT OF CONNECTION
- INSTALL 6" X 6" MECHANICAL JOINT TAPPING SLEEVE W/ TAPPING VALVE PER UDCS PLATE NO. 22
- INSTALL 10" DCDA PER UDACS PLATE NO. 11C
- INSTALL 2" METER PER UDACS PLATE NO. 10, AND 2" RPPA PER UDACS PLATE NO. 11A
- REMOVE CAP AND CONNECT TO EXISTING 8" WATER
- INSTALL 10" X 8" REDUCER WITH ANCHOR BLOCKS PER UDACS PLATE NO. 3
- INSTALL 8" TEE WITH THRUST BLOCKS PER UDACS PLATE NO. 5
- INSTALL 3" X 2" REDUCER WITH ANCHOR BLOCKS PER UDACS PLATE NO. 3
- INSTALL 8" 90° BEND WITH THRUST BLOCKS PER UDACS PLATE NO. 5
- INSTALL 8" 45° BEND WITH THRUST BLOCKS PER UDACS PLATE NO. 5
- INSTALL 8" 22.5° BEND WITH THRUST BLOCKS PER UDACS PLATE NO. 5
- INSTALL 8" 11.25° BEND WITH THRUST BLOCKS PER UDACS PLATE NO. 5
- INSTALL 8" 6" REDUCER WITH ANCHOR BLOCKS PER UDACS PLATE NO. 3
- INSTALL 8" X 6" TEE WITH THRUST BLOCKS PER UDACS PLATE NO. 5
- INSTALL 8" 90° BEND WITH THRUST BLOCKS PER UDACS PLATE NO. 5
- INSTALL 8" 45° BEND WITH THRUST BLOCKS PER UDACS PLATE NO. 5
- INSTALL 8" TEE WITH THRUST BLOCKS PER UDACS PLATE NO. 5
- INSTALL 8" GATE VALVE WITH THRUST BLOCKS PER UDACS PLATE NO. 3 & 8
- INSTALL 6" GATE VALVE WITH THRUST BLOCKS PER UDACS PLATE NO. 3 & 8
- INSTALL 6" PVC FIRE WATER (PVC)
- ONE HOUR RATED RISER ROOM WITH EXTERIOR DOOR AND KNOX LOCK
- INSTALL FIRE DEPARTMENT CONNECTION (FDC)
- INSTALL 6" 11.25° BEND WITH THRUST BLOCKS PER UDACS PLATE NO. 5
- INSTALL 3" DOMESTIC WATER (PVC)
- INSTALL 2" DOMESTIC WATER (PVC)
- INSTALL 8" X 2" SERVICE SADDLE PER UDACS PLATE NO. 1D
- INSTALL FIRE HYDRANT ASSEMBLY PER UDACS PLATE NO. 7
- INSTALL 2" DOMESTIC WATER (COPPER)

FIRE FLOW CALCULATIONS						
	BUILDING TYPE 1	BUILDING TYPE 2	BUILDING TYPE 3	BUILDING TYPE 4	CLUBHOUSE	BUILDING TYPE L1
FIRE FLOW REQUIREMENTS AT 20 PSI RESIDUAL PRESSURE:	1,500 GPM	1,500 GPM	1,625 GPM	1,500 GPM	1,500 GPM	1,500 GPM
BASED ON SQUARE FOOTAGE:	28,119 SQ. FT.	23,981 SQ. FT.	30,882 SQ. FT.	17,508 SQ. FT.	16,302 SQ. FT.	2,044 SQ. FT.
LARGEST AREA BETWEEN 4-HOURS AREA SEPARATION WALLS:	NA	NA	NA	NA	NA	NA
BUILDING HEIGHT:	3-STORY	3-STORY	3-STORY	3-STORY	3-STORY	2-STORY
NUMBER OF STORIES:	3	3	3	3	3	2
TYPE OF CONSTRUCTION:	V-1HR	V-1HR	V-1HR	V-1HR	V-1HR	V-B
OCCUPANCY:	R-2	R-2	R-2	R-2	A-3, B	U
FULL AUTOMATIC SPRINKLER SYSTEM:	YES	YES	YES	YES	YES	YES

REMOVE CAP AND BLOW OFF PER UDACS PLATE NO. 24, NOTE 1, AND CONNECT TO EXISTING MAIN.

BENCHMARK
NORTH 88°54'28" EAST, BEING THE CENTERLINE OF CHEYENNE AVENUE AS SHOWN ON FILE #1 PAGE 9 OF PARCEL MAPS, OFFICIAL RECORDS, CLARK COUNTY, NEVADA.

BASIS OF BEARING
CITY OF LAS VEGAS BENCHMARK NUMBER LV0001250, BEING A RIVET AND PLATE IN TOP OF CURB @ NE CORNER OF CHEYENNE AND JONES.

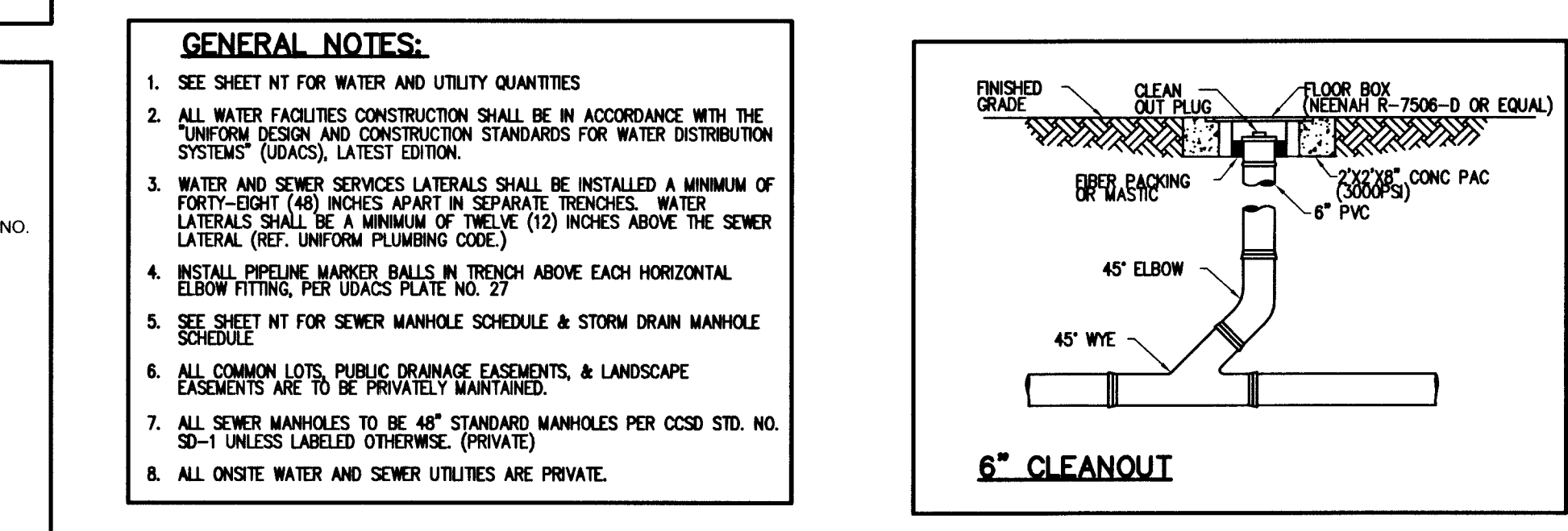
691.6323 METERS NAVD83 DATUM (PUBLISHED)
2269.13 FEET NAVD 88 DATUM (CONVERTED)

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 1140 FEET PER UDACS 2.06.01 AND 2.06.02. FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

ABANDONED VALVES
ALL VALVES TO BE ABANDONED SHALL BE ABANDONED IN THE CLOSED POSITION, UNLESS SHOWN OTHERWISE. BY REMOVING A MINIMUM OF THE TOP TWENTY-FOUR (24) INCHES OF THE VALVE BOX AND THEN FILLING THE BOTTOM OF THE BOX WITH A MINIMUM OF EIGHT (8) INCHES OF SAND OR TYPE OF MATERIAL AS SPECIFIED. THE REMAINING PORTION OF THE VALVE BOX SHALL BE FILLED WITH CONCRETE HAVING A COMPRESSIVE STRENGTH OF AT LEAST TWO THOUSAND (2,000) PSI.

GENERAL NOTES:

- SEE SHEET NT FOR WATER AND UTILITY QUANTITIES
- ALL WATER FACILITIES CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS (UDACS), LATEST EDITION.
- WATER AND SEWER SERVICES LATERALS SHALL BE INSTALLED A MINIMUM OF FORTY-EIGHT (48) INCHES APART IN SEPARATE TRENCHES. WATER LATERALS SHALL BE A MINIMUM OF TWELVE (12) INCHES ABOVE THE SEWER LATERAL (REF. UNIFORM PLUMBING CODE).
- INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER UDACS PLATE NO. 27
- SEE SHEET NT FOR SEWER MANHOLE SCHEDULE & STORM DRAIN MANHOLE SCHEDULE
- ALL COMMON LOTS, PUBLIC DRAINAGE EASEMENTS, & LANDSCAPE EASEMENTS ARE TO BE PRIVATELY MAINTAINED.
- ALL SEWER MANHOLES TO BE 48" STANDARD MANHOLES PER CCSD STD. NO. 50-1 UNLESS LABELED OTHERWISE. (PRIVATE)
- ALL ONSITE WATER AND SEWER UTILITIES ARE PRIVATE.



APPROVAL

CITY OF LAS VEGAS FIRE DEPT

APPROVED BY: [Signature] DATE: 1/10/08

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 OF COUNTY LAWS.

APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM THE LVMD.

FIRE FLOW 1,825 GPM AT 20 P.S.I. RESIDUAL.

DATE

BY

TRAMMELL CROW RESIDENTIAL

7373 N. SCOTTSDALE RD, SUITE C-228 SCOTTSDALE, AZ 85253

PHONE (480) 596-6696 FAX (480) 596-8848

Development Resource Consultants, Inc.

Civil Engineering Land Surveying & Planning

9330 WEST MARTIN AVENUE LAS VEGAS, NV 89148 (702) 270-6119

JONES AND CHEYENNE

UTILITY PLAN 2

DATE: DEC. 2007

DRAWN BY: TMG

DESIGNED BY: TMG

CHECKED BY: DPW

PROJECT NO: LV06-405

SCALE:

PROFESSIONAL ENGINEER

SEAL

DENNIS P. WERTZLER

EXP. 6/30/08

CIVIL

NO. 11970

SHEET

UP2

10 OF 19 SHEETS

DRAWING NO.

107N5000