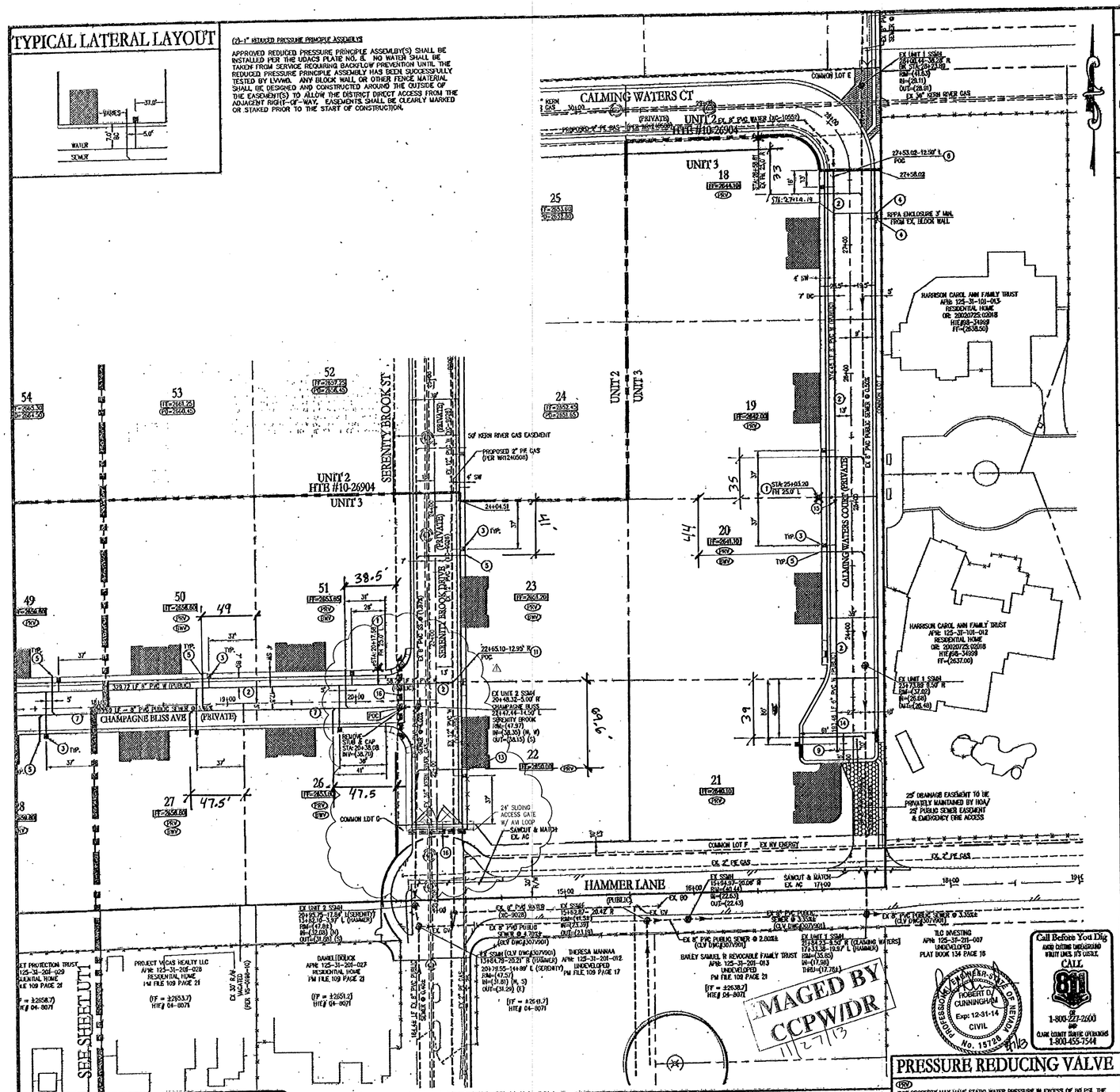
## TYPICAL LATERAL LAYOUT




(2)-1" REDUCED PRESSURE PRINCIPLE ASSEMBLYS

APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 6. NO WATER SHALL BE TAKEN FROM SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY LVVWD. 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. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.




## LVVWD NOTE

SERVICE LATERALS FOR LOTS 22 AND 23 WILL BE TAPPED ON EXISTING MAIN BY OWNER'S CONTRACTOR UNDER DIRECTION OF THE LVVWD.

## LVVWD NOTE

AT THE DIRECTION OF THE DEVELOPER, 3/4" WATER METERS ARE SHOWN TO BE INSTALLED ON THIS PROJECT. METER SIZE HAS BEEN DETERMINED BY FIXTURE UNIT CALCULATIONS BY THE PROJECT ENGINEER PER CHAPTER 6 OF THE UNIFORM PLUMBING CODE.

ANY OPTIONAL FEATURE ADDED TO THE STRUCTURES TO BE BUILT ON THESE LOTS, OR ANY CHANGE IN THE STANDARD FEATURES OF THE STRUCTURES TO BE BUILT ON THESE LOTS WHICH ADDS TO THE TOTAL FIXTURE UNIT COUNT FOR THAT STRUCTURE MAY RESULT IN NON-COMPLIANCE WITH THE UNIFORM PLUMBING CODE.

## BACKWATER VALVE

(PRV)

THE FOLLOWING LOTS HAVE DRAINAGE PIPING FEATURES THAT ARE LOWER THAN THE NEXT UPSTREAM SEWER MANHOLE COVER AND SHALL HAVE BACKWATER VALVES INSTALLED PER UCSWCS SD-22:

20, 23, 26, 27, 29, 30, 32, 41, 47, 48, 50, AND 51

TOTAL LOTS REQUIRING BACKWATER VALVES = 12

## PRESSURE REDUCING VALVE

(PRV)

THIS PROPERTY MAY HAVE STATIC WATER 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. PRV'S ARE THE DEVELOPER'S RESPONSIBILITY AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVVWD FACILITIES.

LOTS WITHIN THE 2060 PRESSURE ZONE WITH A FINISH FLOOR ELEVATION LESS THAN 2575.4 WILL REQUIRE A PRV.

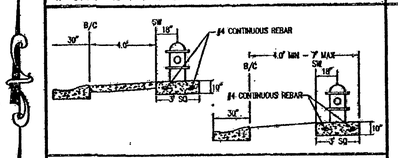
THE FOLLOWING LOTS REQUIRE A PRV:

ALL LOTS REQUIRE PRV'S

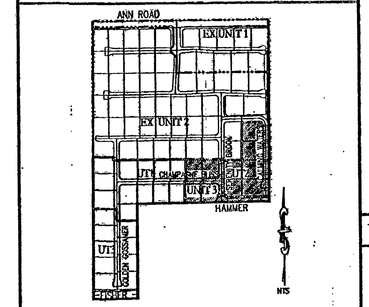
TOTAL LOTS REQUIRING PRV'S = 31 LOTS

(2) IRRIGATION METERS REQUIRE PRV'S

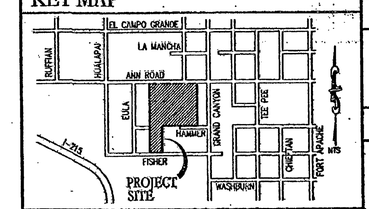
## FIRE HYDRANT DETAIL




## SITE MAP




## KEY MAP




## UTILITY NOTES

1. ALL WATER FACILITIES CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE "UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS" (UDACS), LATEST EDITION.

2. FIRE, WATER, AND SEWER SERVICES, AS APPROVED ON THIS PLAN, ARE INTENDED SPECIFICALLY FOR THE LOT AND USE SHOWN, AND ARE NOT INTENDED TO SERVICE ADDITIONAL PARCELS OR STRUCTURES WHICH MAY BE CREATED IN THE FUTURE. IN THE EVENT THAT THE PARCELS AND/OR LOTS SHOWN ON THIS PLAN ARE FURTHER DIVIDED TO CREATE ADDITIONAL PARCELS OR LOTS, THE OWNER IS REQUIRED TO PROVIDE SEPARATE FIRE, WATER, & SEWER SERVICES TO EACH.

3. WATER AND SEWER LATERALS SHALL BE INSTALLED A MINIMUM OF 48" APART IN SEPARATE TRENCHES. WATER LATERALS SHALL BE A MINIMUM OF 12" ABOVE THE SEWER LATERAL. (REF. UNIFORM PLUMBING CODE)

4. LOCATOR RIBBON SHALL BE USED FOR ALL SERVICE LATERALS NOT PERPENDICULAR TO THE MAIN. (TYPICAL)

5. ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF "UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS" (UDACS) FOR WATER AND STORM DRAIN CROSSINGS AND CLEARANCES.

6. ALL WORK TO BE PERFORMED OUTSIDE OF THE PROJECT BOUNDARY AND ON PRIVATE PROPERTY SHALL NOT BE PERFORMED UNTIL WRITTEN PERMISSION AND EASEMENTS HAVE BEEN OBTAINED FROM THE OFFSITE OWNER AND GIVEN TO CLARK COUNTY.

7. ALL ONSITE STREETS AND DRAINAGE EASEMENTS ARE TO BE PRIVATELY OWNED AND MAINTAINED.

## CONSTRUCTION NOTES

1. FIRE HYDRANT ASSEMBLY W/ 6" GATE VALVE (UDACS PLATE No. 40) – PUBLIC (SEE FIRE HYDRANT DETAIL THIS SHEET)
2. 8" PVC WATERLINE – PUBLIC
3. 1" COPPER WATER SERVICE W/ 3/4" METER (UDACS PLATE No. 4)
4. 3/4" IRRIGATION METER W/ 1" RPPA (UDACS PLATE No. 4 & No. 8)
5. 4" SEWER LATERAL WITH MARKER BALL & CURB MARKING (DCSWCS SD-22) – PRIVATE
6. REMOVE CAP AND BLOW OFF PER UDACS PLATE No. 36 & CONNECT TO EX. STUB
7. 8" PVC SEWER – PUBLIC
8. 48" SEWER MANHOLE (DCSWCS SD-1A) – PUBLIC
9. CAP & 2" BLOW OFF VALVE (UDACS PLATE No. 36) – PUBLIC
10. 8" TEE (UDACS PLATE No. 31) – PUBLIC
11. 8" x 8" TAPPING SLEEVE W/ 8" TAPPING VALVE – PUBLIC (UDACS 2.24.01 B AND UDACS PLATE No. 34 & No. 39)
12. 8" GATE VALVE (UDACS PLATE No. 30 & No. 39) – PUBLIC
13. 4" C900 SEWER LATERAL WITH MARKER BALL & CURB MARKING (DCSWCS SD-22) – PRIVATE
14. 8" PVC WATERLINE – PUBLIC
15. 8"X6" REDUCER (UDACS PLATE No. 30)
16. (4) 6" IRRIGATION CONDUITS – PRIVATE
17. 4" C900 SEWER LATERAL WITH MARKER BALL & CURB MARKING (DCSWCS SD-22) – MINIMUM 18" VERTICAL SEPARATION FROM WATER
18. 8" CLASS 53 DIP WATERLINE – PUBLIC

## APPROVAL SIGNATURES

| | |
|---|---|
| LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER | 06/18/13 DATE |
| PROJECT #121540 | |
| CLARK COUNTY FIRE DEPARTMENT 13-19303 PC 914 | 9 May 2013 DATE |

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 = 2,000 G.P.M. AT 20 PSI RESIDUAL.

## LEGEND

| | EXISTING | PROPOSED |
|---|---|---|
| CENTERLINE | | |
| RIGHT-OF-WAY | | |
| CUT LINE-ASPHALT | | |
| CURB AND GUTTER | | |
| FENCE | | |
| POWER POLE | | |
| SIDEWALK RAMP | | |
| CURB DROP INLET | | |
| STORM DRAIN W/MANHOLE | | |
| SIDEWALK | | |
| PROPERTY LINE | | |
| EDGE OF PAVEMENT | | |
| CAP & 2" BLOW OFF VALVE | | |
| WATERLINE FITTINGS | | |
| GATE VALVE | | |
| FIRE HYDRANT | | |
| SEWER LINE W/MANHOLE | | |
| SEWER LATERAL | | |
| WATER LINE | | |
| WATER LATERAL W/METER | | |
| PRESSURE REDUCING VALVE | | (PRV) |
| BACKWATER VALVE | | (BWV) |

## 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 MAXIMUM RADIUS OF CURVATURE OF 1,100 FEET, PER UDACS 2.07.01 AND 2.07.02.

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

## FIRE FLOW CALCULATIONS

FIRE FLOW REQUIREMENT IS 2,000 GPM AT 20 POUNDS PER SQUARE INCH RESIDUAL.
HYDRANTS TO BE INSTALLED: 6
BASED ON:
SQUARE FOOTAGE: 6,200 SQ.FT. — LARGEST AREA BETWEEN SEPARATE WALLS: N/A
HEIGHT: 35-FT — TYPE OF CONSTRUCTION: V-B
SPRINKLER SYSTEM: NO — OCCUPANCY: R-3
ROOF CONSTRUCTION: TILE — STORIES: 1-STORY
HIGH PILED COMBUSTIBLE STORAGE: NO — ESFR SYSTEM: NO

## UTILITY DISCLAIMER NOTE

EXISTING UTILITY LOCATIONS SHOWN HEREON 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 LOCATIONS.
CALL BEFORE YOU DIG: 1-800-227-2600
CALL BEFORE YOU OVERHEAD: 1-702-227-2929.

## SCALE

40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

## LEGAL DESCRIPTION

BEING A PORTION OF THE NORTHWEST QUARTER (¼) OF SECTION 31, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.B. & M., CLARK COUNTY, NEVADA

## BASIS OF BEARINGS

S 89°14'18" E, BEING THE NORTH LINE OF THE SE ¼ AND NW ¼, SECTION 31, T19S, R60E, M.D.M. AS SHOWN ON FILE 97, PAGE 85 OF PARCEL MAPS, CLARK COUNTY, NEVADA OFFICIAL RECORDS.

## BENCHMARK

B.M. #BV96-3104 CLV RIVET & ROUND PLATE IN CONC PAD WEST SIDE OF GRAND CANYON DR., 109 FEET SOUTH OF WASHBURN ROAD.

ELEVATION = 795.573 M (2610.14 FEET) NAVD 88

## NOTE

INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER UDACS PLATE NO. 15

## ABBREVIATIONS

| | | | |
|---|---|---|---|
| AC | ASPHALTIC CONCRETE | OC | ON CENTER |
| BC | BACK OF CURB | PB | PULL BOX |
| BCR | BACK OF CURB RADIUS | PC | POINT OF CURVE |
| BM | BENCHMARK | PCC | POINT OF COMPOUND CURVE |
| BVC | BEGIN VERTICAL CURVE | PI | POINT OF INTERSECTION |
| CATV | CABLE TELEVISION | PL | PROPERTY LINE |
| CC | CLARK COUNTY | PLT | PLANTER |
| CL | CENTERLINE | POC | POINT OF CONNECTION |
| COLV | CITY OF LAS VEGAS | PP | POWER POLE |
| CNLV | CITY OF NORTH LAS VEGAS | PRC | POINT OF REVERSE CURVE |
| CO | CLEAN OUT, SEWER | PT | POINT OF TANGENCY |
| COH | CITY OF HENDERSON | PVC | POLYVINYL CHLORIDE |
| CY | CURBS YARD | R | RADIUS |
| DCSWCS | DESIGN AND CONSTRUCTION STANDARDS OF WASTE WATER COLLECTION SYSTEMS | RCB | REINFORCED CONCRETE BOX |
| DG | DESIGN GRADE | RCP | REINFORCED CONCRETE PIPE |
| DI | DROP INLET | R/W | RIGHT-OF-WAY |
| DIP | DUCTILE IRON PIPE | RT | RIGHT |
| EC | END OF CURVE | SD | STORM DRAIN |
| EP | EDGE OF PAVEMENT | STLT | STREETLIGHT |
| EVC | END VERTICAL CURVE | SNWA | SOUTHERN NEVADA WATER AUTHORITY |
| EX | EXISTING | SS | SANITARY SEWER |
| FF | FINISH FLOOR ELEVATION | STA | STATION |
| FG | FINISH GRADE | STD | STANDARD |
| FH | FIRE HYDRANT | SVZ | SIGHT VISIBILITY ZONE |
| FL | FLOW LINE | SW | SIDEWALK |
| FT | FEET | TC | TOP OF CURB |
| GB | GRADE BREAK | TF | TOP OF FOOTING |
| GFF | GARAGE FINISH FLOOR | TR | TOP OF RETAINING |
| HP | HIGH POINT | TW | TOP OF WALL |
| INV | INVERT | TYP | TYPICAL |
| LF | LINEAR FEET | UDACS | UNIFORM DESIGN AND CONSTRUCTION STANDARDS |
| LT | LEFT | USD | UNIFORM STANDARD DRAWING |
| LVVWD | LAS VEGAS VALLEY WATER DISTRICT | VC | VERTICAL CURVE |
| MAX | MAXIMUM | VCP | VITRIFIED CLAY PIPE |
| MH | MANHOLE | VG | VALLEY GUTTER |
| MIN | MINIMUM | W | WATER |
| NTS | NOT TO SCALE | ZC | ZERO LIP CURB |

| NO. | DESCRIPTION | BY | DATE | APPR. |
|---|---|---|---|---|
| A | REVISED DATE AND SIDEWALK LOCATION | MAN/CLV | 03/10/03 | |

REVISIONS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TANEY ENGINEERING
6030 S. JONES BLVD STE#100
LAS VEGAS, NV 89118
(702) 362-8844 FAX: (702) 362-8233


ANN AND GRAND CANYON - UNIT 3
(SERENITY RIDGE)
A RESIDENTIAL SUBDIVISION

UTILITY PLAN - EAST

ROBERT D. CUNNINGHAM Exp. 12-31-14 CIVIL No. 15726 — ENGINEER'S SEAL

| | |
|---|---|
| DATE: | 5/8/13 |
| SCALE: | 1"=40' |
| JOB NO: | WLL-10-068 |
| DESIGNED BY: | MC |
| CHECKED BY: | RDC |
| SHEET NAME: | UT2 |
| SHEET: | 9 OF 17 |
| HTE# | 13-6603 |

FILE NAME: WLL10068UT2.DWG