





# 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 Dig  
AVOID CUTTING UNDERGROUND  
UTILITY LINES. IT'S COSTLY.

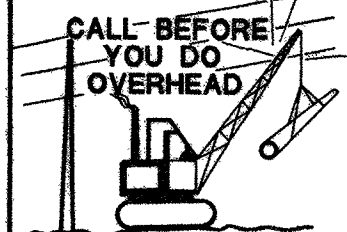


1-800-227-2600

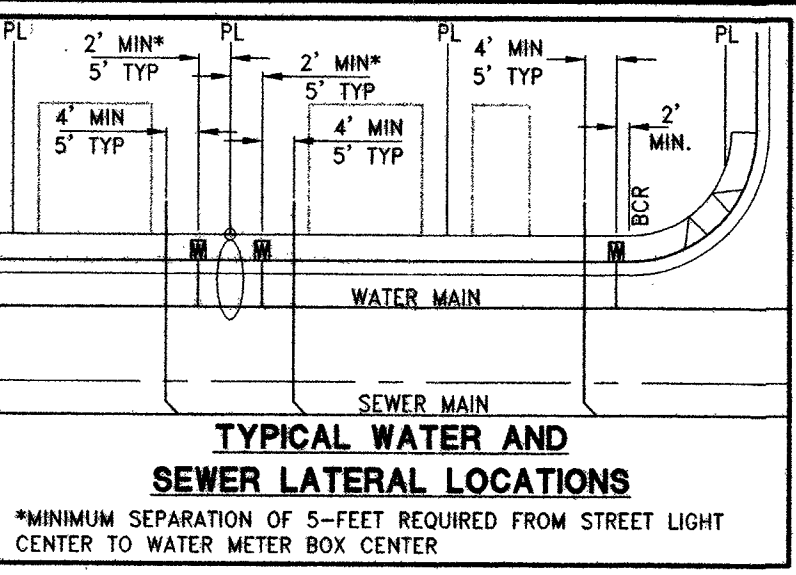


Call before you Dig  
Underground  
1-702-432-5300  
FREEDWAY AND ARTERIAL  
SYSTEM OF TRANSPORTATION

AVOID HITTING OVERHEAD  
POWER LINES. IT'S COSTLY.



1-702-227-2929



TYPICAL WATER AND  
SEWER LATERAL LOCATIONS

NOTES:  
1. ADJUST WATER VALVE BOXES TO FINISH GRADE PER UDACS PLATE NO. 39. VALVES SHALL BE ACCESSIBLE AT ALL TIMES.  
2. ALL SEWER/STORM DRAINS CROSSING WATERLINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSING AND CLEARANCES.  
3. ALL WATER PIPE DIMENSIONS SHOWN ARE GIVEN FROM FITTING TO FITTING AND ARE FOR REFERENCE ONLY. CONTRACTOR TO VERIFY ALL DIMENSION PRIOR TO CONSTRUCTION.

# WATER NOTE FOR ALL LOTS

1. THIS PROJECT RESIDES WITHIN THE 2860 WATER ZONE. THEREFORE ALL LOTS WITH A FINISH FLOOR ELEVATION LESS THAN 2651.38 WILL REQUIRE AN INDIVIDUAL, ON SITE (PRIVATE) PRESSURE REDUCING VALVE.  
2. THIS PROPERTY DOES HAVE STATIC WATER PRESSURE IN EXCESS OF 80 PSI. THEREFORE THE LOTS WITHIN THIS PROJECT REQUIRE PRESSURE REDUCING VALVES. THE UNIFORM PLUMBING CODE REQUIRES THAT INDIVIDUAL, ON-SITE (PRIVATE) PRESSURE REDUCING VALVES BE INSTALLED WHENEVER THE PRESSURE EXCEEDS 80 PSI. PRIVATE PRESSURE REDUCING VALVES ARE THE DEVELOPER'S RESPONSIBILITY AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVWD FACILITIES. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

# EXISTING UTILITY NOTE:

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# SEWER CONNECTION NOTE:

ONE OR MORE SEGMENTS OF THE DOWNSIDE SEWER SYSTEM THAT WILL SERVE THIS PROJECT HAS NOT BEEN COMPLETED AND/OR ACCEPTED FOR MAINTENANCE BY THE CITY OF LAS VEGAS. ANY WORK DONE ON THIS PROJECT PRIOR TO THE COMPLETION AND/OR ACCEPTANCE OF THE DOWNSIDE SEWER SYSTEM(S) SHALL BE DONE AT THE DEVELOPER'S OWN RISK. THE CITY OF LAS VEGAS RESERVES THE RIGHT TO PREVENT THE PHYSICAL CONNECTION OF THIS PROJECT INTO THE DOWNSIDE SEWER SYSTEM UNTIL ALL SEGMENTS HAVE BEEN COMPLETED AND ACCEPTED FOR MAINTENANCE, OR UNTIL SUCH TIME AS THEY ARE DEEMED AVAILABLE FOR SERVICE.

# 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 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.  
FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

# NOTE:

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

# BENCHMARK

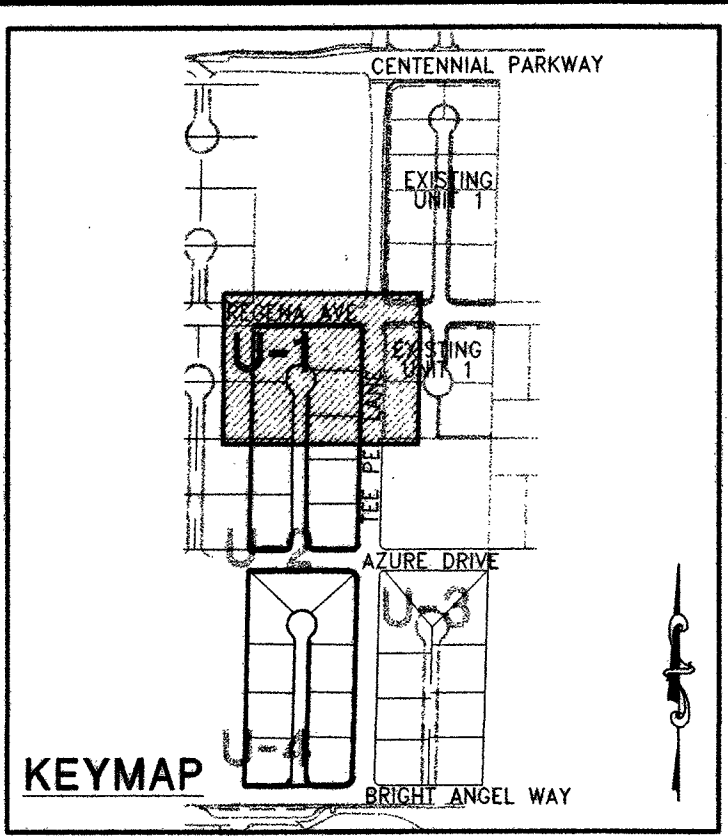
CITY OF LAS VEGAS BENCHMARK 6LV99-24SES  
A RIVET AND PLATE IN THE TOP OF CURB AT THE NORTHWEST CORNER OF CENTENNIAL PARKWAY AND HUALAPAI WAY.  
ELEVATION=844.924 METERS (NAVD'88)  
ELEVATION=2772.06 US SURVEY FEET (NAVD'88)

# BASIS OF BEARINGS

SOUTH 89°47'00" EAST BEING THE BEARING OF THE NORTH LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 30, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M. CLARK COUNTY, NEVADA AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 89, PAGE 3 OF SURVEYS.

# PRESSURE REDUCING VALVE

[PRV] ALL LOTS WITH THIS SYMBOL REQUIRE A PRESSURE REDUCING VALVE



30' 15' 0' 30' 60'  
SCALE: 1" = 30'

# UTILITY LATERAL NOTE:

WATER AND SEWER LATERAL STATIONS SHOWN ON THIS PLAN SET ARE CALCULATED AT THE BACK OF CURB

WASTEWATER FLOW CALCULATION  
18 ERU (18 LOTS) \* 250 GPD = 0.0045 MGD  
= 0.0045 \* 3.5 = 0.0158 MGD PEAK  
DESIGN FLOW (25% WET WEATHER ALLOWANCE)  
DESIGN FLOW 0.0158 + 25% = 0.0198 MGD

# BUILDING INFORMATION

TYPE OF CONSTRUCTION: V-B  
TOTAL LIVING AREA: < 5,000 S.F.  
TOTAL SF UNDER ROOF: < 6,000 S.F.  
NUMBER OF STORIES: 2  
BUILDING USE: SINGLE FAMILY RESIDENTIAL  
SPRINKLERED: NO  
NUMBER OF FIRE HYDRANTS: 4  
FIRE FLOW: 2,000 GPM AT 20 PSI RESIDUAL

# FOR DRY UTILITY SEPARATION WITH WATER:

1. MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING.  
2. MAINTAIN A MINIMUM 3' PARALLEL SEPARATION.  
3. ANY EXCAVATION AT BACK OF CURB MUST REMAIN OPEN FOR INSPECTION OF COPPER SERVICE LATERALS. ANY COPPER SERVICE LATERAL KNICK, BENT, OR OTHERWISE DAMAGED MUST BE REPLACED FROM THE MAIN TO THE ANGLE METER STOP.

# WATER CONSTRUCTION NOTES

1. INSTALL FIRE HYDRANT ASSEMBLY PER UDACS PLATE NO. 40 (INCLUDES 6" GATE VALVE)
2. INSTALL 1" COPPER SERVICE LATERAL WITH 3/4" METER PER UDACS PLATE NO. 2
3. INSTALL 8" X 6" GATE VALVE PER UDACS PLATE NO. 30 & NO. 39
4. INSTALL 8" X 6" TEE PER UDACS PLATE NO. 31
5. INSTALL 8" X 8" TEE PER UDACS PLATE NO. 31
6. INSTALL 8" X 6" REDUCER PER UDACS PLATE NO. 30
7. INSTALL 10" X 8" REDUCER PER UDACS PLATE NO. 30
8. INSTALL 6" CAP WITH 2" BLOW OFF ASSEMBLY PER UDACS PLATE NO. 36
9. REMOVE CAP AND BLOWOFF AND CONNECT TO EXISTING WATER MAIN PER UDACS PLATE NO. 36
10. INSTALL 6" 90° BEND PER UDACS PLATE NO. 31
11. INSTALL 8" X 8" CROSS PER UDACS PLATE NO. 31
12. INSTALL (2) 4" SCHEDULE 40 PVC IRRIGATION SLEEVES
13. INSTALL 1" COPPER SERVICE LATERAL WITH 3/4" WATER METER (FOR IRRIGATION) WITH 1" RPPA PER UDACS PLATE NO. 3 & 8 (1" BRASS WATERLINE BETWEEN WATER AND RPPA)
14. INSTALL 8" CAP WITH 2" BLOW OFF ASSEMBLY PER UDACS PLATE NO. 36
15. INSTALL 1" COPPER SERVICE LATERAL WITH 1" METER PER UDACS PLATE NO. 2
16. ADJUST FIRE HYDRANT TO FINISH GRADE PER UDACS PLATE NO. 40
17. INSTALL TEMPORARY FLUSHING VALVE PER WATER QUALITY MITIGATION PLAN AND DETAILS ON SHEET U-5

# SEWER CONSTRUCTION NOTES

21. INSTALL 48" STANDARD MANHOLE (PER DCSWCS STD. NO. 30-1A, SD-4, SD-5 & SD-6) WITH SINGLE COVER
22. (TYP) INSTALL 4" SEWER LATERAL (PER DCSWCS STD. NO. 30-17, SD-22 & SD-25)
23. TYPICAL LOCATION FOR SEWER LATERAL AT WATER MAIN CROSSING. ALL SEWER LATERALS MUST MAINTAIN 18" VERTICAL CLEARANCE BELOW WATER MAIN AT CROSSINGS.

[BWV] ALL LOTS WITH THIS SYMBOL REQUIRE A BACKWATER VALVE

# CLARK COUNTY FIRE DEPARTMENT APPROVAL

BY: *E. Kamath* DATE: 5-2-16  
APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR ANY APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS.  
APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM THE LVWD.  
FIRE FLOW 2000 GPM AT 20 PSI RESIDUAL

# APPROVED FOR CONSTRUCTION

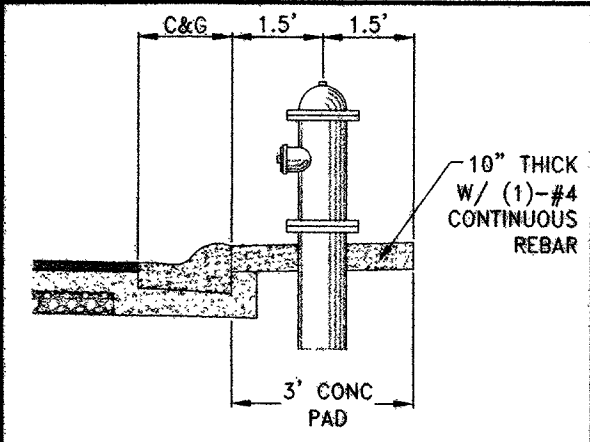
BY: *DISAPPROVED FOR CONSTRUCTION*  
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER  
DATE: 5/9/16 PROJECT: 123818  
LVWD APPROVED FIRE FLOW 2000 GPM AT 20 PSI RESIDUAL  
4#59963  
307 V1114

| DATE: April 27, 2016 | DESCRIPTION | BY | APPD | DATE |
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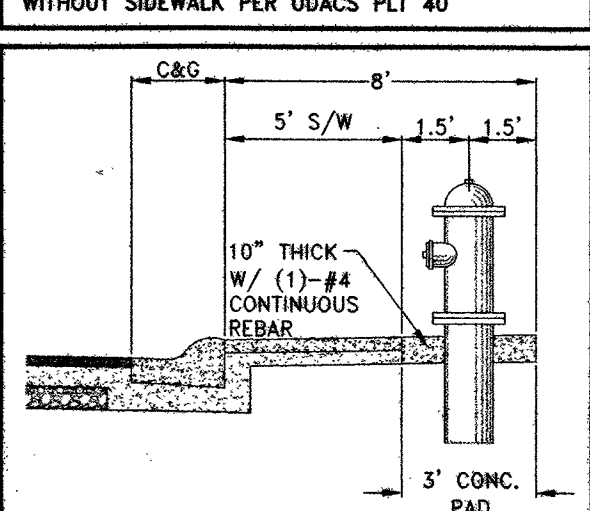
LENNAR®  
2490 PASO VERDE PARKWAY SUITE 120 HENDERSON, NV 89074  
PHONE: (702) 756-5100 FAX: (702) 756-9200  
RCI Engineering  
4325 Dean Martin Road, Suite 300, Las Vegas, NV 89103  
PHONE: (702) 453-0800 FAX: (702) 453-0801

IMPROVEMENT PLANS FOR  
CENTENNIAL AND TEE PEE UNIT 2  
A SINGLE FAMILY RESIDENTIAL SUBDIVISION  
UTILITY PLAN  
(SHEET 1 OF 5)  
PROJ. # 123818 AGR: 115542 Q5:125-30-NE XC 11148 NEVADA  
CLARK COUNTY  
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER  
DATE: 5/9/16 PROJECT: 123818  
LVWD APPROVED FIRE FLOW 2000 GPM AT 20 PSI RESIDUAL

4-27-16  
DRAWING  
U-1  
SHT 10 OF 24  
HTE NUMBER  
15-27518



PUBLIC FIRE HYDRANT INSTALLATION  
WITHOUT SIDEWALK PER UDACS PLT 40



PUBLIC FIRE HYDRANT INSTALLATION  
WITH SIDEWALK PER UDACS PLATE NO. 40



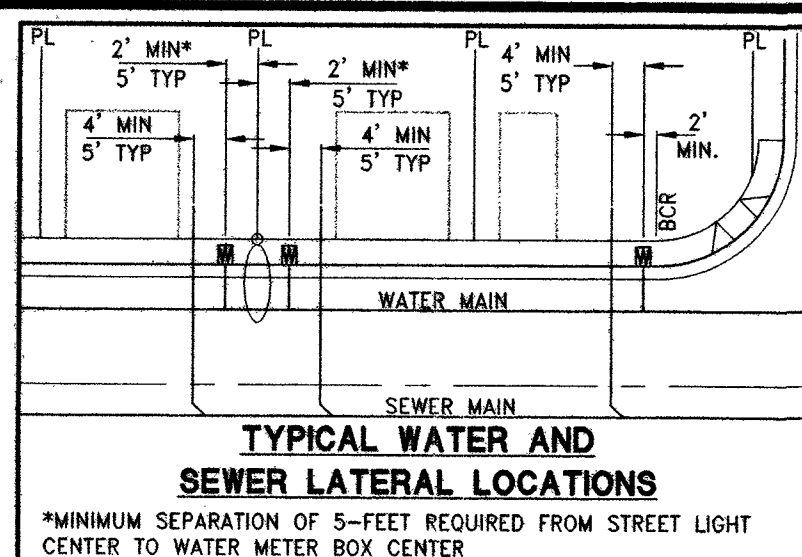
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Call before you Dig  
Call 811  
1-800-227-2600

**FAST**  
Call before you UnderGround  
1-702-432-5300  
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.  
CALL BEFORE YOU DO OVERHEAD  
1-702-227-2929



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## REDUCED PRESSURE PRINCIPLE ASSEMBLY (2) 1"

APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLIES SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWD. ANY BLOCK WALL OR OTHER OBSTACLE SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT TO ALLOW THE DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENT SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

## WATER MAIN JOINT DEFLECTION (PVC 4'-24")

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## BENCHMARK

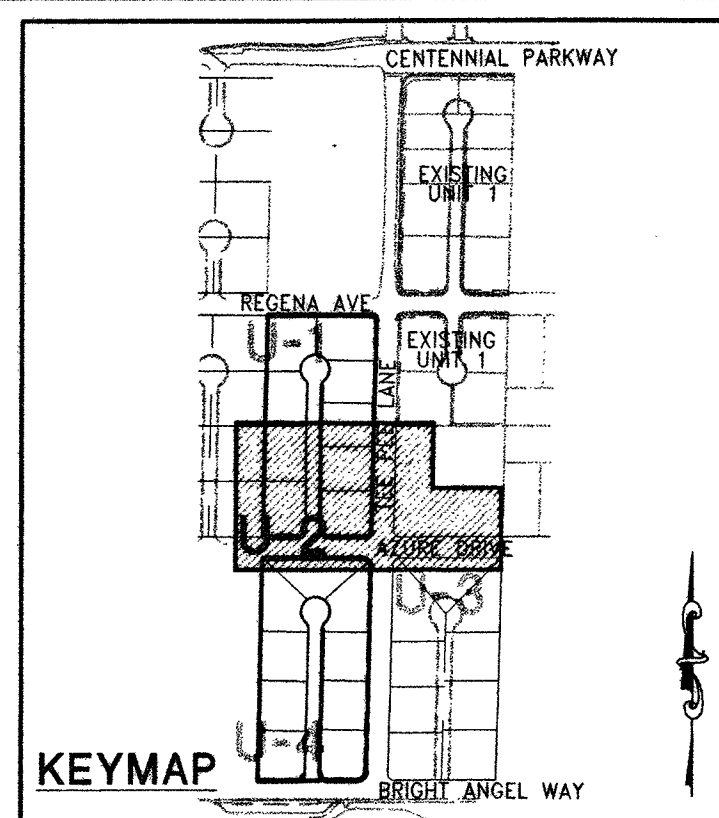
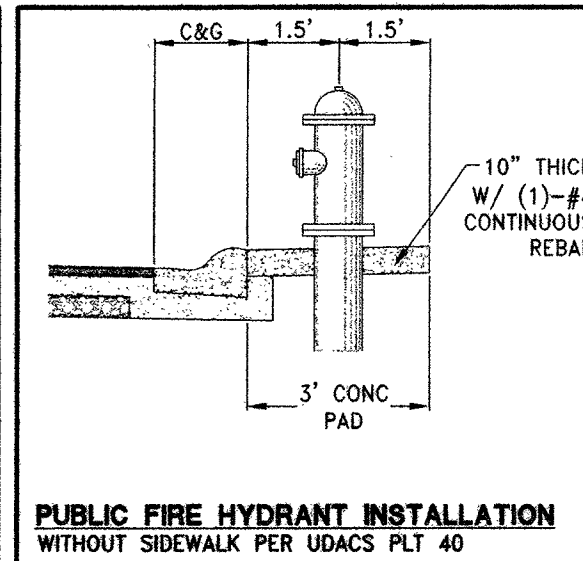
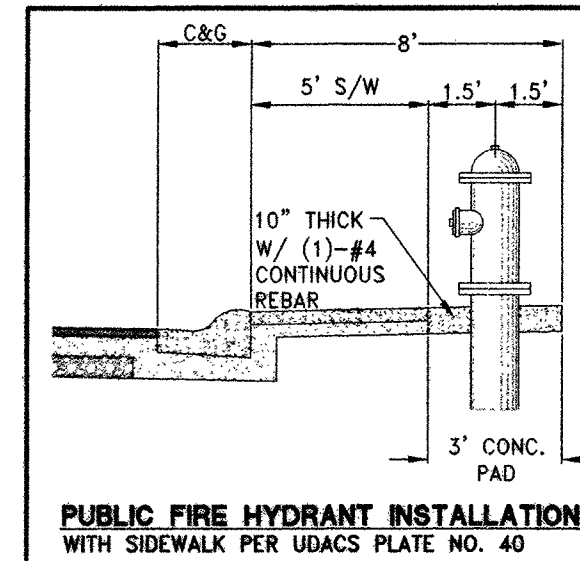
CITY OF LAS VEGAS BENCHMARK 61V99 24SES  
A RIVET AND PLATE IN THE TOP OF CURB AT THE NORTHWEST CORNER OF CENTENNIAL PARKWAY AND HUALAPAI WAY.  
ELEVATION=844.924 METERS (NAVD'88)  
ELEVATION=2772.06 US SURVEY FEET (NAVD'88)

## BASIS OF BEARINGS

SOUTH 89°47'00" EAST BEING THE BEARING OF THE NORTH LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 30, TOWNSHIP 19 SOUTH, RANGE 60 EAST, W.D.M., CLARK COUNTY, NEVADA AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 89, PAGE 3 OF SURVEYS.

## PRESSURE REDUCING VALVE

PRV ALL LOTS WITH THIS SYMBOL REQUIRE A PRESSURE REDUCING VALVE



30' 15' 0' 30' 60'  
SCALE: 1" = 30'

## UTILITY LATERAL NOTE:

WATER AND SEWER LATERAL STATIONS SHOWN ON THIS PLAN SET ARE CALCULATED AT THE BACK OF CURB

## WASTEWATER FLOW CALCULATION

18 ERU (18 LOTS) \* 250 GPD = 0.0045 MGD  
= 0.0045 \* 3.5 = 0.0158 MGD PEAK  
DESIGN FLOW (25% WET WEATHER ALLOWANCE)  
DESIGN FLOW 0.0158 \* 25% = 0.0198 MGD

## BUILDING INFORMATION

TYPE OF CONSTRUCTION: V-B  
TOTAL LIVING AREA: < 5,000 S.F.  
TOTAL SF UNDER ROOF: < 6,000 S.F.  
NUMBER OF STORIES: 2  
BUILDING USE: SINGLE FAMILY RESIDENTIAL  
NUMBER OF FIRE HYDRANTS: 2,000 GPM AT 20 PSI RESIDUAL  
FIRE FLOW: 4

## FOR DRY UTILITY SEPARATION WITH WATER:

- MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING.
- MAINTAIN A MINIMUM 3" PARALLEL SEPARATION.
- ANY EXCAVATION AT BACK OF CURB MUST REMAIN OPEN FOR INSPECTION OF COPPER SERVICE LATERALS. ANY COPPER SERVICE LATERAL KINKED, BENT, OR OTHERWISE DAMAGED MUST BE REPLACED FROM THE MAIN TO THE ANGLE METER STOP.

## WATER CONSTRUCTION NOTES

1. INSTALL FIRE HYDRANT ASSEMBLY PER UDACS PLATE NO. 40 (INCLUDES 6" GATE VALVE)
2. INSTALL 1" COPPER SERVICE LATERAL WITH 3/4" METER PER UDACS PLATE NO. 2
3. INSTALL 8" GATE VALVE PER UDACS PLATE NO. 30 & NO. 39
4. INSTALL 8" X 6" TEE PER UDACS PLATE NO. 31
5. INSTALL 8" X 8" TEE PER UDACS PLATE NO. 31
6. INSTALL 8" X 6" REDUCER PER UDACS PLATE NO. 30
7. INSTALL 10" X 8" REDUCER PER UDACS PLATE NO. 30
8. INSTALL 6" CAP WITH 2" BLOW OFF ASSEMBLY PER UDACS PLATE NO. 36
9. REMOVE CAP AND BLOWOFF AND CONNECT TO EXISTING WATER MAIN PER UDACS PLATE NO. 36
10. INSTALL 6" 90° BEND PER UDACS PLATE NO. 31
11. INSTALL 8" X 8" CROSS PER UDACS PLATE NO. 31
12. INSTALL (2) 4" SCHEDULE 40 PVC IRRIGATION SLEEVES
13. INSTALL 1" COPPER SERVICE LATERAL WITH 3/4" WATER METER (FOR IRRIGATION) WITH 1" RPPA PER UDACS PLATE NO. 4 & 8 (1" BRASS WATERLINE BETWEEN METER AND RPPA)
14. INSTALL 8" CAP WITH 2" BLOW OFF ASSEMBLY PER UDACS PLATE NO. 36
15. INSTALL 1" COPPER SERVICE LATERAL WITH 1" METER PER UDACS PLATE NO. 2
16. ADJUST FIRE HYDRANT TO FINISH GRADE PER UDACS PLATE NO. 40
17. INSTALL TEMPORARY FLUSHING VALVE PER WATER QUALITY MITIGATION PLAN AND DETAILS ON SHEET U-5

## SEWER CONSTRUCTION NOTES

21. INSTALL 48" STANDARD MANHOLE (PER DCSWCS STD. NO. SD-1A, SD-4, SD-5 & SD-6) WITH SINGLE COVER
22. (TYP) INSTALL 4" SEWER LATERAL (PER DCSWCS STD. NO. SD-1, SD-2 & SD-3)
23. TYPICAL LOCATION FOR SEWER LATERAL AT WATER MAIN CROSSING. ALL SEWER LATERALS MUST MAINTAIN 18" VERTICAL CLEARANCE BELOW WATER MAIN AT CROSSINGS.

(BWV) ALL LOTS WITH THIS SYMBOL REQUIRE A BACKWATER VALVE

## CLARK COUNTY FIRE DEPARTMENT APPROVAL

BY: *[Signature]* DATE: 5-2-16  
APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR ANY APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS.  
APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM THE LVWD.  
FIRE FLOW 2000 GPM AT 20 PSI RESIDUAL

## APPROVED FOR CONSTRUCTION

4. *[Signature]* DISAPORI FOR DISM  
LAS VEGAS VALLEY-WATER DISTRICT ENGINEERING SERVICES MANAGER  
DATE: 5/9/16 PROJECT: 123816  
LVWD APPROVED FIRE FLOW 2000 GPM AT 20 PSI RESIDUAL  
H#59963  
307V1114

| DATE                                                                                                                                                                                                                                                               | BY                  | APPD          | DESCRIPTION    | REV                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------|----------------|----------------------|
| APRIL 27, 2016                                                                                                                                                                                                                                                     | 12-30               |               |                |                      |
| HORIZ. SCALE: 1"=30'                                                                                                                                                                                                                                               | VERT. SCALE: 1"=10' | DRAWN BY: SJA | CHECKED BY: CZ | PROJECT #: 3040.0036 |
| <p><b>LENNAR</b><br/>2800 PASEO VERDE PARKWAY SUITE 120 HENDERSON, NV 89074<br/>PHONE: (702) 736-9100 FAX: (702) 736-9200</p> <p><b>RCI Engineering</b><br/>4225 Dean Martin Blvd. Suite 300 Las Vegas, NV 89103<br/>PHONE: (702) 453-0000 FAX: (702) 453-0001</p> |                     |               |                |                      |
| <p>IMPROVEMENT PLANS FOR<br/>CENTENNIAL AND TEE PEE UNIT 2<br/>A SINGLE FAMILY RESIDENTIAL SUBDIVISION<br/>UTILITY PLAN<br/>(SHEET 2 OF 5)</p>                                                                                                                     |                     |               |                |                      |
| <p>CLARK COUNTY PROJECT: 123816 AG#R: 115542 Q5:125-30-NE XC 11148<br/>NEVADA<br/>4/27/16 11:21 am<br/>C:\3040\LENNAR\0036-Centennial and Tee Pee\Utility Plans\U-2.dwg created by: SJA</p>                                                                        |                     |               |                |                      |
| <p>4-27-16<br/>DRAWING<br/>U-2<br/>SHT 11 OF 24<br/>HTE NUMBER<br/>15-27518</p>                                                                                                                                                                                    |                     |               |                |                      |



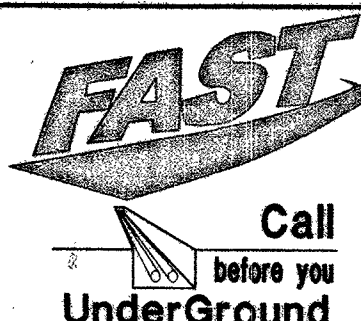
# DISCLAIMER NOTE:

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 Dig  
AVOID CUTTING UNDERGROUND  
UTILITY LINES. IT'S COSTLY.

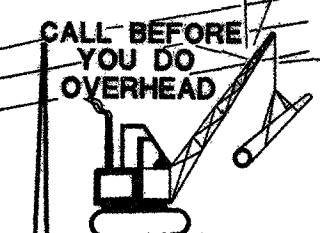


1-800-227-2600



Call before you  
UnderGround  
1-702-432-5300

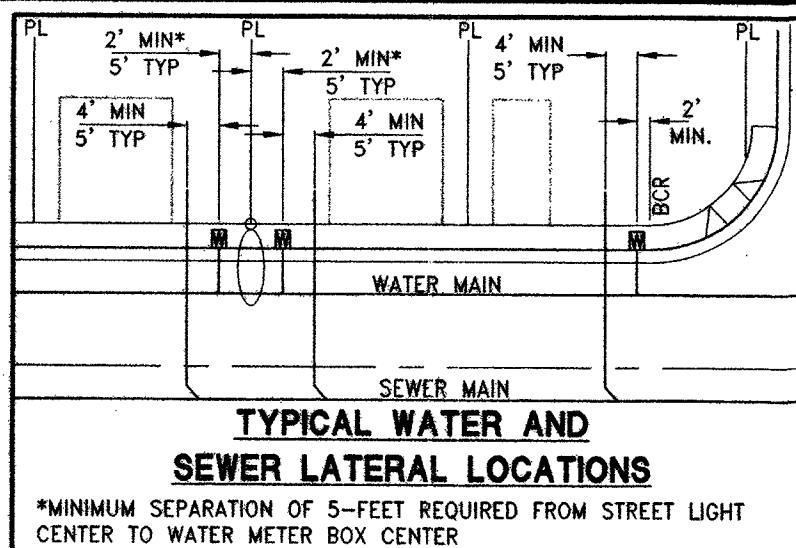
AVOID HITTING OVERHEAD  
POWER LINES. IT'S COSTLY.



1-702-227-2929

## SEWER CONNECTION NOTE:

ONE OR MORE SEGMENTS OF THE DOWNSIDE SEWER SYSTEM THAT WILL SERVE THIS PROJECT HAS NOT BEEN COMPLETED AND/OR ACCEPTED FOR MAINTENANCE BY THE CITY OF LAS VEGAS. ANY WORK DONE ON THIS PROJECT PRIOR TO THE COMPLETION AND/OR ACCEPTANCE OF THE DOWNSIDE SEWER SYSTEM(S) SHALL BE DONE AT THE DEVELOPER'S OWN RISK. THE CITY OF LAS VEGAS RESERVES THE RIGHT TO PREVENT THE PHYSICAL CONNECTION OF THIS PROJECT INTO THE DOWNSIDE SEWER SYSTEM UNTIL ALL SEGMENTS HAVE BEEN COMPLETED AND ACCEPTED FOR MAINTENANCE, OR UNTIL SUCH TIME AS THEY ARE DEEMED AVAILABLE FOR SERVICE.



## WATER NOTE FOR ALL LOTS

1. THIS PROJECT RESIDES WITHIN THE 2860 WATER ZONE. THEREFORE ALL LOTS WITH A FINISH FLOOR ELEVATION LESS THAN 2651.38 WILL REQUIRE AN INDIVIDUAL ON SITE (PRIVATE) PRESSURE REDUCING VALVE.
2. THIS PROPERTY DOES HAVE STATIC WATER PRESSURE IN EXCESS OF 80 PSI. THEREFORE THE LOTS WITHIN THIS PROJECT REQUIRE PRESSURE REDUCING VALVES. 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. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

## EXISTING UTILITY NOTE:

1. EXISTING UTILITIES AS SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR TO FIELD VERIFY BOTH VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. ENGINEER ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITIES SHOWN INCORRECTLY OR OTHERWISE NOT SHOWN.

## NOTES:

1. ADJUST WATER VALVE BOXES TO FINISH GRADE PER UDACS PLATE NO. 39. VALVES SHALL BE ACCESSIBLE AT ALL TIMES.
2. ALL SEWER/STORM DRAINS CROSSING WATERLINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSING AND CLEARANCES.
3. ALL WATER PIPE DIMENSIONS SHOWN ARE GIVEN FROM FITTING TO FITTING AND ARE FOR REFERENCE ONLY. CONTRACTOR TO VERIFY ALL DIMENSION PRIOR TO CONSTRUCTION.

## REDUCED PRESSURE PRINCIPLE ASSEMBLY (21 1")

APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE LINE PRIOR TO THE REDUCED PRESSURE PRINCIPLE ASSEMBLY. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT TO ALLOW THE DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENT SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

## 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 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.

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

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

## BENCHMARK

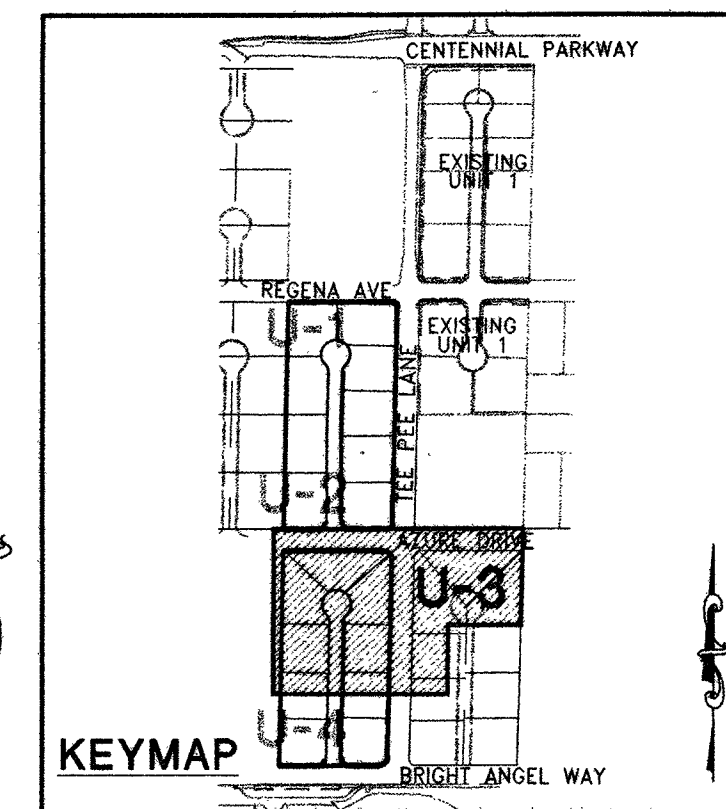
CITY OF LAS VEGAS BENCHMARK 6LV99 24SES  
A RIVET AND PLATE IN THE TOP OF CURB AT THE NORTHWEST CORNER OF CENTENNIAL PARKWAY AND HUALAPAI WAY.  
ELEVATION=844.924 METERS (NAVD'83)  
ELEVATION=2772.06 US SURVEY FEET (NAVD'83)

## BASIS OF BEARINGS

SOUTH 89°47'00" EAST BEING THE BEARING OF THE NORTH LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 30, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 89, PAGE 3 OF SURVEYS.

## PRESSURE REDUCING VALVE

PRV ALL LOTS WITH THIS SYMBOL REQUIRE A PRESSURE REDUCING VALVE



30' 15' 0' 30' 60'  
SCALE: 1" = 30'

## UTILITY LATERAL NOTE:

WATER AND SEWER LATERAL STATIONS SHOWN ON THIS PLAN SET ARE CALCULATED AT THE BACK OF CURB

**WASTEWATER FLOW CALCULATION**  
18 ERU (18 LOTS) \* 250 GPD = 0.0045 MGD  
= 0.0045 \* 3.5 = 0.0158 MGD PEAK  
DESIGN FLOW (25% WET WEATHER ALLOWANCE)  
DESIGN FLOW 0.0158 \* 25% = 0.0198 MGD

## BUILDING INFORMATION

TYPE OF CONSTRUCTION: V-B  
TOTAL LIVING AREA: < 5,000 S.F.  
TOTAL SF UNDER ROOF: < 6,000 S.F.  
NUMBER OF STORIES: 2  
BUILDING USE: SINGLE FAMILY RESIDENTIAL  
SPRINKLERED: NO  
NUMBER OF FIRE HYDRANTS: 4  
FIRE FLOW: 2,000 GPM AT 20 PSI RESIDUAL

## FOR DRY UTILITY SEPARATION WITH WATER:

- MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING.
- MAINTAIN A MINIMUM 3' PARALLEL SEPARATION.
- ANY EXCAVATION AT BACK OF CURB MUST REMAIN OPEN FOR INSPECTION OF COPPER SERVICE LATERALS. ANY COPPER SERVICE LATERAL KINKED, BENT, OR OTHERWISE DAMAGED MUST BE REPLACED FROM THE MAIN TO THE ANGLE METER STOP.

## WATER CONSTRUCTION NOTES

1. INSTALL FIRE HYDRANT ASSEMBLY PER UDACS PLATE NO. 40 (INCLUDES 6" GATE VALVE)
2. INSTALL 1" COPPER SERVICE LATERAL WITH 3/4" METER PER UDACS PLATE NO. 2
3. INSTALL 8" GATE VALVE PER UDACS PLATE NO. 30 & No. 39
4. INSTALL 8" X 6" TEE PER UDACS PLATE NO. 31
5. INSTALL 8" X 8" TEE PER UDACS PLATE NO. 31
6. INSTALL 8" X 6" REDUCER PER UDACS PLATE NO. 30
7. INSTALL 10" X 8" REDUCER PER UDACS PLATE NO. 30
8. INSTALL 6" CAP WITH 2" BLOW OFF ASSEMBLY PER UDACS PLATE NO. 36
9. REMOVE CAP AND BLOWOFF AND CONNECT TO EXISTING WATER MAIN PER UDACS PLATE NO. 36
10. INSTALL 6" 90° BEND PER UDACS PLATE NO. 31
11. INSTALL 8" X 8" CROSS PER UDACS PLATE NO. 31
12. INSTALL (2) 4" SCHEDULE 40 PVC IRRIGATION SLEEVES
13. INSTALL 1" COPPER SERVICE LATERAL WITH 3/4" WATER METER (FOR IRRIGATION) WITH 1" RPPA PER UDACS PLATE NO. 3 & 8 (1" BRASS WATERLINE BETWEEN WATER AND RPPA)
14. INSTALL 8" CAP WITH 2" BLOW OFF ASSEMBLY PER UDACS PLATE NO. 36
15. INSTALL 1" COPPER SERVICE LATERAL WITH 1" METER PER UDACS PLATE NO. 2
16. ADJUST FIRE HYDRANT TO FINISH GRADE PER UDACS PLATE NO. 40
17. INSTALL TEMPORARY FLUSHING VALVE PER WATER QUALITY MITIGATION PLAN AND DETAILS ON SHEET U-5

## SEWER CONSTRUCTION NOTES

21. INSTALL 40" STANDARD MANHOLE (PER DCSWCS STD. No. SD-1A, SD-4, SD-5 & SD-6) WITH SINGLE COVER
22. (TYP) INSTALL 4" SEWER LATERAL (PER DCSWCS STD. No. SD-17, SD-22 & SD-25)
23. TYPICAL LOCATION FOR SEWER LATERAL AT WATER MAIN CROSSING. SEWER LATERALS MUST MAINTAIN 18" VERTICAL CLEARANCE BELOW WATER MAIN AT CROSSINGS.

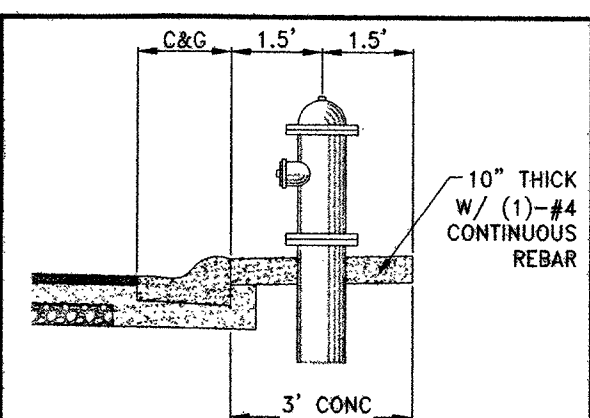
(BWV) ALL LOTS WITH THIS SYMBOL REQUIRE A BACKWATER VALVE

## CLARK COUNTY FIRE DEPARTMENT APPROVAL

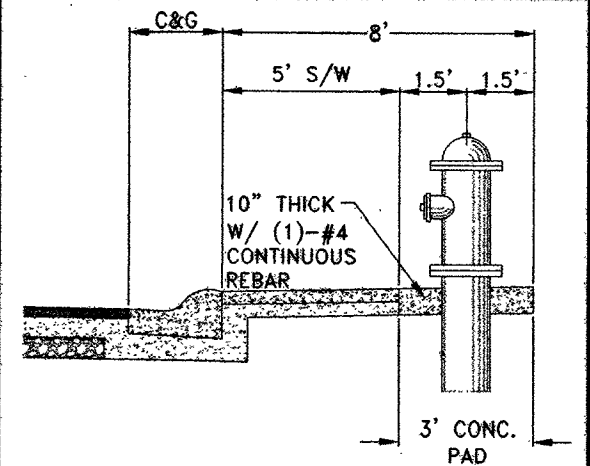
BY: *[Signature]* DATE: 5-2-16  
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APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM THE LVWD.  
FIRE FLOW 2000 GPM AT 20 PSI RESIDUAL

## APPROVED FOR CONSTRUCTION

DATE: 5/19/16 PROJECT: 123816  
LVWD APPROVED FIRE FLOW 2000 GPM AT 20 PSI RESIDUAL  
H#59963  
307V1114



## PUBLIC FIRE HYDRANT INSTALLATION WITHOUT SIDEWALK PER UDACS PLT 40



## PUBLIC FIRE HYDRANT INSTALLATION WITH SIDEWALK PER UDACS PLATE NO. 40

MATCHLINE SEE U-4

MATCHLINE SEE U-4

| DATE                 | BY | APPD | DESCRIPTION |
|----------------------|----|------|-------------|
| APRIL 27, 2016       |    |      |             |
| REV                  |    |      |             |
| DATE: APRIL 27, 2016 |    |      |             |
| HORIZ. SCALE: 1"=30' |    |      |             |
| VERT. SCALE: N/A     |    |      |             |
| DRAWN BY: MJD        |    |      |             |
| DESIGNED BY: AW      |    |      |             |
| CHECKED BY: CZ       |    |      |             |
| APPROVED BY: CZ      |    |      |             |
| PROJECT #: 3040-0038 |    |      |             |

**LENNAR**  
2480 PASEO VERDE PARKWAY SUITE 120 HENDERSON, NV 89074  
PHONE: (702) 736-5100 FAX: (702) 736-9200

IMPROVEMENT PLANS FOR  
CENTENNIAL AND TEE PEE UNIT 2  
A SINGLE FAMILY RESIDENTIAL SUBDIVISION  
UTILITY PLAN  
(SHEET 3 OF 5)

4-27-16  
DRAWING  
U-3  
SHT 12 OF 24  
HTE NUMBER  
15-27518



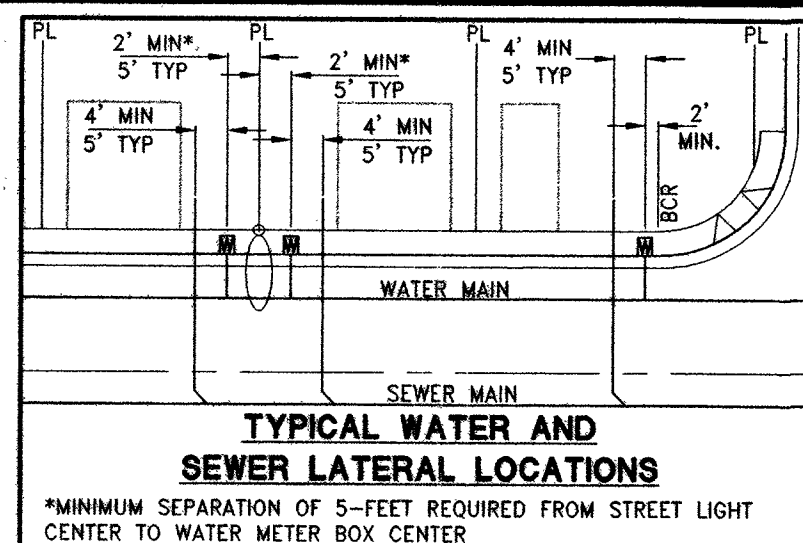
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Call before you Dig  
Call 811  
1-800-227-2600

FAST  
Call before you UnderGround  
1-702-432-5300

Call before you Overhead  
1-702-227-2929



## WATER NOTE FOR ALL LOTS

- THIS PROJECT RESIDES WITHIN THE 2860 WATER ZONE. THEREFORE ALL LOTS WITH A FINISH FLOOR ELEVATION LESS THAN 2651.38 WILL REQUIRE AN INDIVIDUAL, ON-SITE (PRIVATE) PRESSURE REDUCING VALVE.
- THIS PROPERTY DOES HAVE STATIC WATER PRESSURE IN EXCESS OF 80 PSI. THEREFORE THE LOTS WITHIN THIS PROJECT REQUIRE PRESSURE REDUCING VALVES. THE UNIFORM PLUMBING CODE REQUIRES THAT INDIVIDUAL, ON-SITE (PRIVATE) PRESSURE REDUCING VALVES BE INSTALLED WHENEVER THE PRESSURE EXCEEDS 80 PSI. PRIVATE PRESSURE REDUCING VALVES ARE THE DEVELOPER'S RESPONSIBILITY AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVWD FACILITIES. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

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## NOTES:

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## 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 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02. FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

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

## SEWER CONNECTION NOTE:

ONE OR MORE SEGMENTS OF THE DOWNSIDE SEWER SYSTEM THAT WILL SERVE THIS PROJECT HAS NOT BEEN COMPLETED AND/OR ACCEPTED FOR MAINTENANCE BY THE CITY OF LAS VEGAS. ANY WORK DONE ON THIS PROJECT PRIOR TO THE COMPLETION AND/OR ACCEPTANCE OF THE DOWNSIDE SEWER SYSTEM(S) SHALL BE DONE AT THE DEVELOPER'S OWN RISK. THE CITY OF LAS VEGAS RESERVES THE RIGHT TO PREVENT THE PHYSICAL CONNECTION OF THIS PROJECT INTO THE DOWNSIDE SEWER SYSTEM UNTIL ALL SEGMENTS HAVE BEEN COMPLETED AND ACCEPTED FOR MAINTENANCE, OR UNTIL SUCH TIME AS THEY ARE DEEMED AVAILABLE FOR SERVICE.

## BENCHMARK

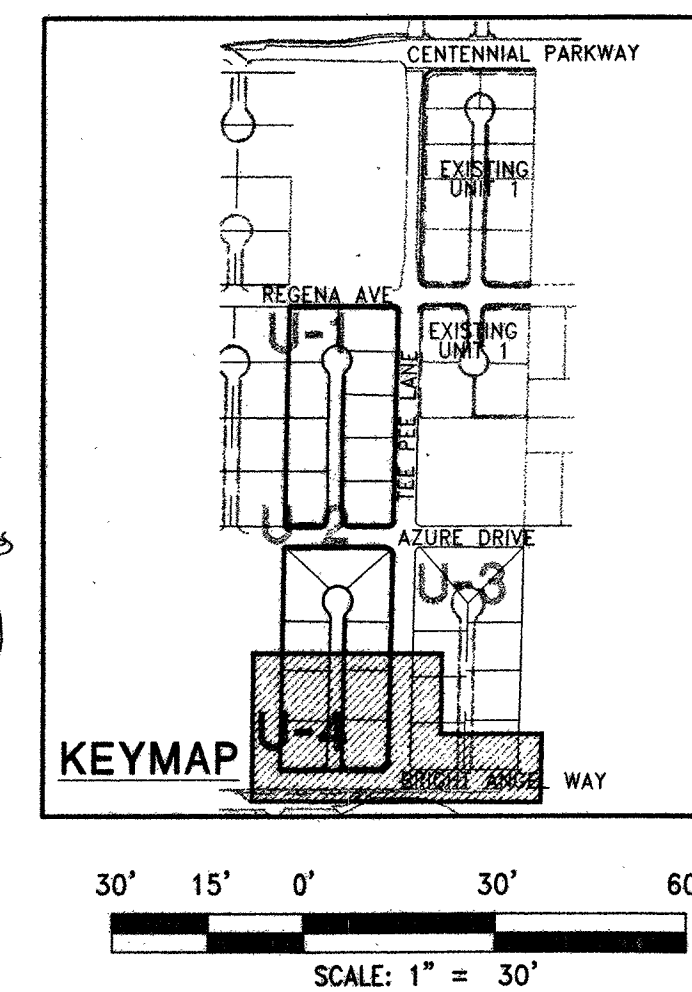
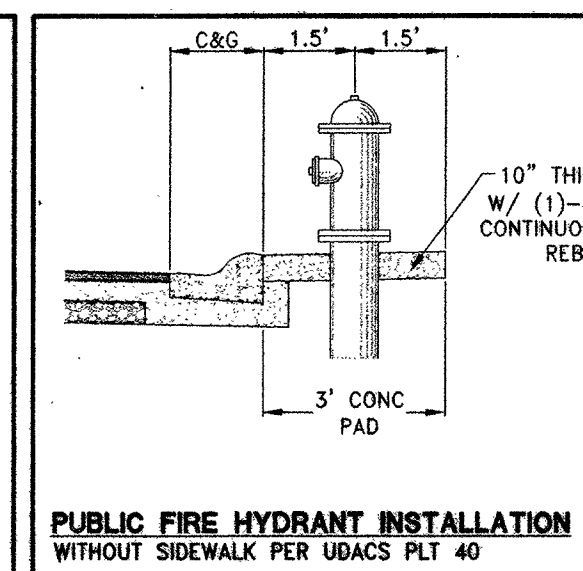
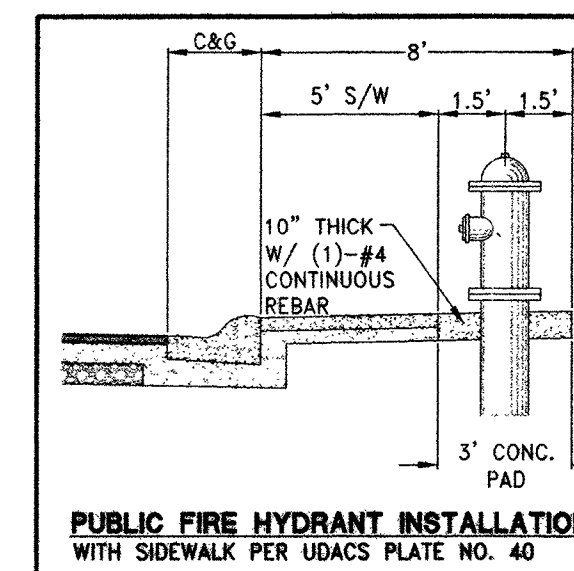
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ELEVATION=844.924 METERS (NAVD'88)  
ELEVATION=2772.06 US SURVEY FEET (NAVD'88)

## BASIS OF BEARINGS

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## PRESSURE REDUCING VALVE

PRV ALL LOTS WITH THIS SYMBOL REQUIRE A PRESSURE REDUCING VALVE



30' 15' 0' 30' 60'  
SCALE: 1" = 30'

## UTILITY LATERAL NOTE:

WATER AND SEWER LATERAL STATIONS SHOWN ON THIS PLAN SET ARE CALCULATED AT THE BACK OF CURB

## WASTEWATER FLOW CALCULATION

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## BUILDING INFORMATION

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NUMBER OF STORIES: 2  
BUILDING USE: SINGLE FAMILY RESIDENTIAL  
SPRINKLERED: NO  
NUMBER OF FIRE HYDRANTS: 4  
FIRE FLOW: 2,000 GPM AT 20 PSI RESIDUAL

## FOR DRY UTILITY SEPARATION WITH WATER:

- MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING.
- MAINTAIN A MINIMUM 3" PARALLEL SEPARATION.
- ANY EXCAVATION AT BACK OF CURB MUST REMAIN OPEN FOR INSPECTION OF COPPER SERVICE LATERALS. ANY COPPER SERVICE LATERAL KINKED, BENT, OR OTHERWISE DAMAGED MUST BE REPLACED FROM THE MAIN TO THE ANGLE METER STOP.

## WATER CONSTRUCTION NOTES

- INSTALL FIRE HYDRANT ASSEMBLY PER UDACS PLATE NO. 40 (INCLUDES 6" GATE VALVE)
- INSTALL 1" COPPER SERVICE LATERAL WITH 3/4" METER PER UDACS PLATE NO. 2
- INSTALL 8" GATE VALVE PER UDACS PLATE NO. 30 & No. 39
- INSTALL 8" X 6" TEE PER UDACS PLATE NO. 31
- INSTALL 8" X 8" TEE PER UDACS PLATE NO. 31
- INSTALL 8" X 6" REDUCER PER UDACS PLATE NO. 30
- INSTALL 10" X 8" REDUCER PER UDACS PLATE NO. 30
- INSTALL 6" CAP WITH 2" BLOW OFF ASSEMBLY PER UDACS PLATE NO. 36
- REMOVE CAP AND BLOWOFF AND CONNECT TO EXISTING WATER MAIN PER UDACS PLATE NO. 36
- INSTALL 6" 90° BEND PER UDACS PLATE NO. 31
- INSTALL 8" X 8" CROSS PER UDACS PLATE NO. 31
- INSTALL (2) 4" SCHEDULE 40 PVC IRRIGATION SLEEVES
- INSTALL 1" COPPER SERVICE LATERAL WITH 3/4" WATER METER (FOR IRRIGATION) WITH 1" RPPA PER UDACS PLATE NO. 5 & 4 (1" BRASS WATERLINE BETWEEN METER AND RPPA)
- INSTALL 8" CAP WITH 2" BLOW OFF ASSEMBLY PER UDACS PLATE NO. 36
- INSTALL 1" COPPER SERVICE LATERAL WITH 1" METER PER UDACS PLATE NO. 2
- ADJUST FIRE HYDRANT TO FINISH GRADE PER UDACS PLATE NO. 40
- INSTALL TEMPORARY FLUSHING VALVE PER WATER QUALITY MITIGATION PLAN AND DETAILS ON SHEET U-5

## SEWER CONSTRUCTION NOTES

- INSTALL 48" STANDARD MANHOLE (PER DCSWCS STD. NO. SD-1A, SD-4, SD-5 & SD-6) WITH SINGLE COVER
- INSTALL 4" SEWER LATERAL (PER DCSWCS STD. NO. SD-17, SD-22 & SD-25)
- TYPICAL LOCATION FOR SEWER LATERAL AT WATER MAIN CROSSING. ALL SEWER LATERALS MUST MAINTAIN 18" VERTICAL CLEARANCE BELOW WATER MAIN AT CROSSINGS.

ALL LOTS WITH THIS SYMBOL REQUIRE A BACKWATER VALVE

## CLARK COUNTY FIRE DEPARTMENT APPROVAL

APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR ANY APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS.  
APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM THE LVWD.  
FIRE FLOW 2000 GPM AT 20 PSI RESIDUAL

## APPROVED FOR CONSTRUCTION

DATE: 5/9/16 PROJECT#: 123816  
LVWD APPROVED FIRE FLOW 2000 GPM AT 20 PSI RESIDUAL

| DATE                 | BY        | APPROVED | DESCRIPTION |
|----------------------|-----------|----------|-------------|
| April 27, 2016       | 123816    |          |             |
| VERT. SCALE: 1"=30'  | N/A       |          |             |
| HORIZ. SCALE: 1"=30' | N/A       |          |             |
| DRAWN BY: M.D.       | AW        |          |             |
| DESIGNED BY: M.D.    | AW        |          |             |
| CHECKED BY: M.D.     | CZ        |          |             |
| APPROVED BY: M.D.    | CZ        |          |             |
| PROJECT #:           | 3060.0038 |          |             |

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4325 Dean Martin Road Suite 300, Las Vegas, NV 89103  
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**U-4**  
SHEET 13 OF 24  
DATE: 5/9/16  
PROJECT#: 123816  
HTE NUMBER: 15-27518

