

THE REDUCED PRESSURE DETECTOR ASSEMBLIES SHALL BE INSTALLED IN ACCORDANCE WITH THE UDACS PLATE NO. 59. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY LVVMD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) SO AS TO ALLOW LVVMD DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

**REDUCED PRESSURE PRINCIPLE ASSEMBLY (5)-1 1/2"; (2)-2"; (1)-1"**

THE REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED IN ACCORDANCE WITH THE UDAPS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE 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) SO AS TO ALLOW LVVWD DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

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

ALL NON-POTABLE FIRE WATER LINES CROSSING POTABLE DOMESTIC WATER LINES ARE TO BE INSTALLED WITH A "VERTICAL SEPARATION OF NO LESS THAN SIX INCHES..." AND IN ACCORDANCE WITH THE UDACS 2.23.01, 2.04.03, 2.22.02.B1, AND 2.22.02.B2.

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

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

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

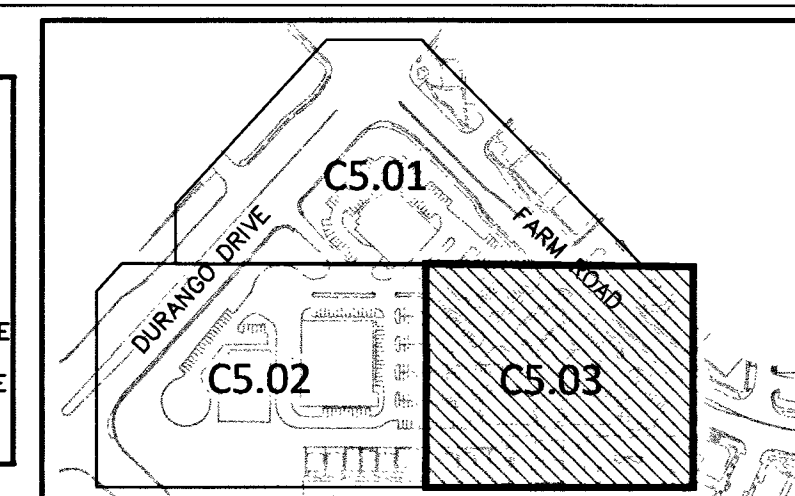
TREES, SHRUBS, OR DECORATIVE ROCKS, AND ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS TO THE VAULT(S), BACKFLOW ASSEMBLIES, AND PIPING FROM THE ADJACENT RIGHT-OF-WAY.

**WARNING FIRE LANE (NON-POTABLE WATER)**  
**ALL EXISTING, RELOCATED OR PROPOSED DCDA/RPDA**  
**INSTALLATIONS**

"TO COMPLY WITH THE FEDERAL SAFE DRINKING WATER ACT, THE FIRE LINE OR ANY OF ITS COMPONENTS, SHALL NOT BE USED FOR POTABLE DRINKING WATER AT ANY TIME"

PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISHED GRADE. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.

(EXTENSION OF EXISTING LATERAL)  
 1. CONTRACTOR SHALL REMOVE AND RELOCATE BOTH THE UPPER AND LOWER BARREL OF THE EXISTING FIRE HYDRANT WHERE SHOWN, EXTEND THE EXISTING LATERAL AS REQUIRED, AND REINSTALL SUCH HYDRANT(S) AT THE NEW LOCATION(S) INDICATED. FIRE HYDRANTS SHALL BE TESTED PRIOR TO AND AFTER RELOCATION, UNDER THE DIRECTION OF THE DISTRICT, TO ENSURE QUALITY. INSTALLATION SHALL BE IN ACCORDANCE WITH UDACS PLATE 40. LATERALS MADE OF UNAPPROVED MATERIALS SHALL BE REPLACED FROM THE MAIN TO THE FIRE HYDRANT. RELOCATIONS WHERE THE LATERAL CANNOT BE EXTENDED SHALL BE TREATED AS NEW INSTALLATIONS.



KEY MAPS

30 0 15 30

SCALE: 1"=30'

SOUTH 00°06'57" WEST, BEING THE WEST LINE OF THE GOVERNMENT LOT 11, LYING WITHIN THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 17, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., AS SHOWN IN BOOK 140, PAGE 12 OF PLATS IN THE CLARK COUNTY, NEVADA, RECORDER'S OFFICE.

**BENCHMARK**  
CITY OF LAS VEGAS BENCHMARK # 5LV90 1756  
A RIVET AND PLATE IN THE TOP OF CURB AT THE NORTHWEST CORNER OF  
OSO BLANCA ROAD AND DURANGO DRIVE.

NAVD 88 ELEVATION = 798.4331 METERS / 2619.53 FEET  
NORTH AMERICAN DATUM OF 1988

| NO. | ITEM                                                                                        | UDACS: PLATE NO. PER UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS |
|-----|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| ①   | INSTALL PVC WATER LINE (C-900) (SIZE PER PLAN) PER UDACS PLATE NO. 17.                      |                                                                                               |
| ②   | INSTALL 45° BEND (SAME SIZE AS LINE) PER UDACS PLATE NO. 31.                                |                                                                                               |
| ③   | INSTALL 90° BEND (SAME SIZE AS LINE) PER UDACS PLATE NO. 31.                                |                                                                                               |
| ④   | INSTALL TEE (SIZE PER PLAN) PER UDACS PLATE NO. 31.                                         |                                                                                               |
| ⑤   | INSTALL FIRE HYDRANT ASSEMBLY PER UDACS PLATE NO. 40.                                       |                                                                                               |
| ⑥   | INSTALL GATE VALVE (SAME SIZE AS LINE) PER UDACS PLATE NO. 30 & 39.                         |                                                                                               |
| ⑦   | INSTALL 12"x8" TAPPING SLEEVE W/8" TAPPING VALVE PER UDACS PLATE NO. 34 & SEC 2.24.01.      |                                                                                               |
| ⑧   | INSTALL 8" RPDA PER UDACS PLATE NO. 59.                                                     |                                                                                               |
| ⑨   | POINT OF CONNECTION. SEE PLUMBING PLANS FOR CONTINUATION.                                   |                                                                                               |
| ⑩   | INSTALL COPPER TYPE "K" WATER LINE (SIZE PER PLAN) PER UDACS PLATE NO. 4.                   |                                                                                               |
| ⑪   | INSTALL PVC WATER LINE (SIZE PER PLAN) PER UDACS PLATE NO. 17.                              |                                                                                               |
| ⑫   | INSTALL 12"x 2" SERVICE SADDLE PER UDACS PLATE NO. 4.                                       |                                                                                               |
| ⑬   | INSTALL 12"x 1 1/2" SERVICE SADDLE PER UDACS PLATE NO. 4.                                   |                                                                                               |
| ⑭   | INSTALL 12"x 1" SERVICE SADDLE PER UDACS PLATE NO. 4.                                       |                                                                                               |
| ⑮   | INSTALL 2" DOMESTIC METER PER UDACS PLATE NO. 4 WITH 2" RPDA PER UDACS PLATE NO. 8.         |                                                                                               |
| ⑯   | INSTALL 1 1/2" DOMESTIC METER PER UDACS PLATE NO. 4 WITH 1 1/2" RPDA PER UDACS PLATE NO. 8. |                                                                                               |
| ⑰   | INSTALL 1" DOMESTIC METER PER UDACS PLATE NO. 4 WITH 1" RPDA PER UDACS PLATE NO. 8.         |                                                                                               |
| ⑱   | POINT OF CONNECTION. SEE LANDSCAPING PLANS FOR CONTINUATION.                                |                                                                                               |
| ⑲   | RELOCATE EXISTING FIRE HYDRANT PER NOTE.                                                    |                                                                                               |

| NO. | ITEM                                                                                     | *SS STD PER DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS |
|-----|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| 1   | INSTALL PVC SEWER LINE (SDR-35) PER DCSWCS, DWG. NO. SD-15, DWG. NO. SD-17. (PAVED AREA) |                                                                                 |
| 2   | INSTALL WYE PER DCSWCS DWG. NO. SD-22 AND DETAIL "U" SHEET C8.01.                        |                                                                                 |
| 3   | REMOVE EXISTING CAP AND CONNECT TO EXISTING SEWER MAIN.                                  |                                                                                 |
| 4   | INSTALL 48" SSMH PER SD1-A, SD1B AND SD-4.                                               |                                                                                 |
| 5   | POINT OF CONNECTION. SEE PLUMBING PLANS FOR CONTINUATION AND USE.                        |                                                                                 |
| 6   | INSTALL 60" SSMH PER SD-1A, SD-1B AND SD-4.                                              |                                                                                 |
| 7   | INSTALL 6" CLEAN-OUT PER DCSWCS DWG. NO. SD-26                                           |                                                                                 |
| 8   | STORM DRAIN/EXIST. WATER LINE CROSSING. PER UDACS PLATE NO. 21 SEE SHEET C5.05           |                                                                                 |
| 9   | INSTALL SEWER BACK WATER VALVE SAME SIZE AS LINE SHOWN.                                  |                                                                                 |

USE/OCCUPANCY M/A-2

TYPE OF CONSTRUCTION V-B

FIRE FLOW 1500 GPM @ 20 PSI

AUTOMATIC FIRE SPRINKLERS X YES/NO  
NFPA 13 X 13R 130  
ESFR YES/NO X

SQAURE FOOTAGE 11,245

LARGEST AREA BETWEEN 4 HOUR WALLS NO

BUILDING HEIGHT 30'

# OF STORIES INCLUDING BASEMENT 1

HIGH PILED COMBUSTIBLE STORAGE YES/NO X

# OF HYDRANTS INSTALLED 2

92 mth 17/6/16  
LAS VEGAS FIRE & RESCUE DATE

APPROVED FOR CONSTRUCTION

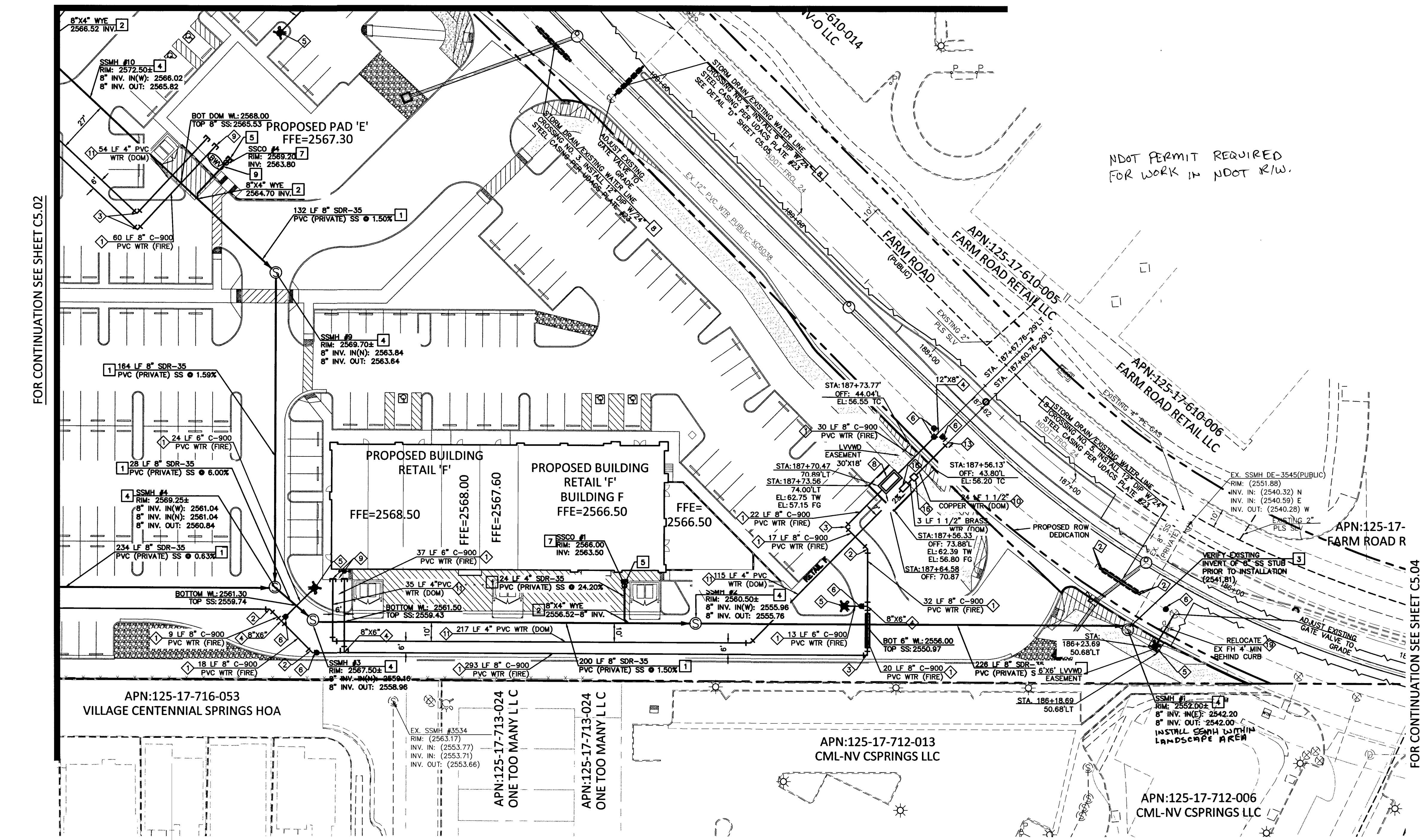
4 DISCARD: RSD

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE: 01/24/16 PROJECT NO: 124683

LVVWD APPROVED FIRE FLOW 1075 GPM AT 20 PSI RESIDUAL

SHEETS: C1.01, C1.02, C4.05-C4.09, C4.10, C4.11, C4.12, C4.13, C5.01, C5.02, C5.03, C5.04, C5.05, C5.11-C5.12



|                                                                                                                                          |                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>CALL BEFORE YOU DIG<br/>AVOID CUTTING UNDERGROUND<br/>UTILITY LINES. IT'S COSTLY</p> <p>Call<br/><b>811</b></p> <p>1-800-227-2600</p> | <p>AVOID HITTING UNDERGROUND<br/>ELECTRIC, SIGNAL AND<br/>LIGHT SYSTEMS. IT'S COSTLY.</p> <p>CALL BEFORE<br/>YOU DO<br/>UNDERGROUND<br/>WORK</p>  <p>CALL 1-702-432-5300<br/><small>FOR A FREE BROCHURE</small></p> | <p>AVOID HITTING OVERHEAD<br/>POWER LINES. IT'S COSTLY.</p> <p>CALL BEFORE<br/>YOU DO<br/>OVERHEAD<br/>WORK</p>  <p>1-702-227-2929</p> |
|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

COLLINS ENGINEERS ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITY LOCATIONS AND ELEVATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR TO FIELD VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION. IF A CONFLICT EXISTS BETWEEN WHAT IS SHOWN ON THESE DRAWINGS AND WHAT EXISTS IN THE FIELD, THE CONTRACTOR IS TO NOTIFY THE ARCHITECT OR ENGINEER IMMEDIATELY.

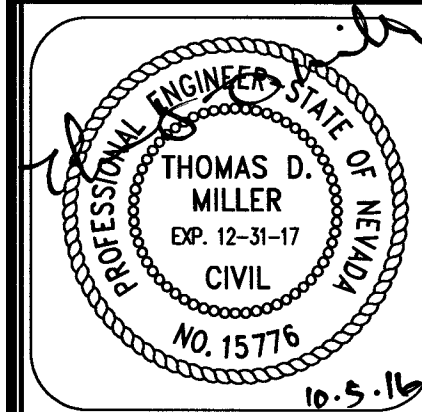
## LEGEND

| EXISTING      | PROPOSED    |                     | EXISTING | PROPOSED |                  |
|---------------|-------------|---------------------|----------|----------|------------------|
| (0.00)<br>XXX | 0.00<br>XXX | ELEVATION TAG       | -E#-     | -E#-     | POWER LINE/POLE  |
| -T-           | -T-         | TELEPHONE LINE      | -W-      | -W-      | WATER LINE       |
| -SS-          | -SS-        | SANITARY SEWER LINE | -D-      | -D-      | STORM SEWER LINE |
| -G-           | -G-         | GAS LINE            | M        | M        | STORM MANHOLE    |
| —             | —           | RETAINING WALL      | —        | —        | SCREEN WALL      |
| —             | —           | UTILITY POLE        | —        | —        | STREET LIGHT     |
| —             | —           | DRAIN INLET         |          |          |                  |

| EXISTING                                                                              | PROPOSED                                                                              |                            |
|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------|
|  |  | FIRE HYDRANT               |
|  |  | FIRE DEPARTMENT CONNECTION |
|  |  | WATER VALVE                |
|  |  | REDUCER                    |
|  |  | SEWER MANHOLE              |
|  |  | CLEANOUT                   |
|  |  | GAS VALVE                  |

| EXISTING | PROPOSED |                 |
|----------|----------|-----------------|
| _____    | _____    | PL-RIGHT-OF-WAY |
| _____    | _____    | PL-ADJACENT     |
| _____    | _____    | CENTERLINE      |
| _____    | _____    | EASEMENT LINE   |
| _____    | _____    | FLOW LINE       |
| _____    | _____    | SIGN W/POLE     |
| _____    | _____    | SAWCUT LINE     |
| _____    | _____    | AREA LIGHT      |
| _____    | _____    | WATER METER     |

| EXISTING | PROPOSED |                               |
|----------|----------|-------------------------------|
|          |          | AC PAVEMENT                   |
|          |          | 6" TYPE "A" CURB              |
|          |          | 24" TYPE "I"<br>CURB & GUTTER |
|          |          | 30" ROLL CURB                 |
|          |          | BACK WATER VALVE              |



**IMPROVEMENT PLANS FOR DC PLAZA**  
**AAPN:125-17-601-007,010,013,020 AND 021**

UTILITY PLAN  
8451 FARM ROAD  
LAS VEGAS, NEVADA

|                              | NO. | DATE | DESIGN BY | DESCRIPTION |
|------------------------------|-----|------|-----------|-------------|
|                              |     |      |           |             |
| <b>CEI PROJECT:</b>          |     |      |           | 4136        |
| <b>DESIGN BY:</b>            |     |      |           | JDM SR      |
| <b>DRAWN BY:</b>             |     |      |           | JDM SR      |
| <b>CHECKED BY:</b>           |     |      |           | TDM P.E.    |
| DATE:<br>09/19/16            |     |      |           |             |
| SCALE:<br>1"=30'             |     |      |           |             |
| SHEET NUMBER<br><b>C5.03</b> |     |      |           |             |
| SHEET 22 OF 46               |     |      |           |             |
| 107V6734 H# 84488            |     |      |           |             |