REDUCED PRESSURE DETECTOR ASSEMBLY (2)-8"

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 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.

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 UDACS 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.

NOTE:

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

FIRE WATER AT DOMESTIC CROSSINGS

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.

FOR SUBDIVISIONS HAVING AN ONSITE FIRE PROTECTION WATER LOOP CONNECTED TO THE OFFSITE OR ONSITE POTABLE WATER MAIN BY MEANS OF A BACKFLOW PREVENTION DEVICE OR PUMP AND SEPARATE FROM THE ONSITE DOMESTIC/POTABLE WATER SUPPLY LINES (I.E. COMMERCIAL SUBDIVISIONS):

A. SUBMIT ANY PROVISIONS TO PERIODICALLY CIRCULATE AND/OR FLUSH POTABLE WATER THROUGH THE FIRE PROTECTION WATER LINES OR ELSE:
B. THE FIRE PROTECTION WATER IS CONSIDERED NON-POTABLE AND THEREFORE:
   i. THE FIRE PROTECTION WATER LINES WILL ADHERE TO THE UDACS SEPARATION REQUIREMENTS OF SUBSECTIONS 2.23.01, 2.22, AND 2.04 AS NON-POTABLE WATER LINES (i.e. 6' MINIMUM HORIZONTAL SEPARATION AND 6" MINIMUM VERTICAL SEPARATION FROM POTABLE WATER LINES).
   ii. SEPARATION OF THE FIRE WATER LINES FROM THE STORM AND SANITARY SEWER LINES (i.e. 5'-6' MINIMUM HORIZONTAL SEPARATION) SHOULD BE MAINTAINED IN ORDER TO PROTECT THE OFFSITE POTABLE WATER AFTER THE BACKFLOW PREVENTION DEVICE.

NOTE:

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

EASEMENT WITH TREES, SHRUBS, DECORATIVE ROCKS, BLOCK WALL, OR FENCE.

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 ACCESIBLE AT ALL TIMES.

RELOCATION OF FIRE HYDRANTS

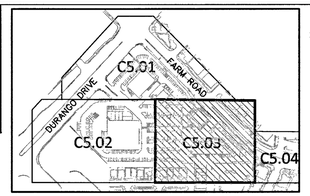
(EXTENSION OF EXISTING LATERAL)
THE CONTRACTOR SHALL REMOVE AND RELOCATE BOTH THE UPPER AND LOWER BARRELS OF THE EXISTING FIRE HYDRANT WHERE SHOWN, EXTEND THE EXISTING LATERAL AS REQUIRED, AND REINSTALL SUCH HYDRANT(S) AT THE NEW LOCATION(S) INDICATED. FIRE HYDRANTS SHALL BE TESTED PRIOR TO AND AFTER 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.

ANNULAR SPACE BETWEEN PIPE AND CASING SHALL BE FILLED WITH FINE SAND OR CONTROLLED LOW STRENGTH MATERIAL (CLSM 50 PSI – 75 PSI). SEE UDACS PLATES 16, 17, 18 AND 19 FOR BEDDING AND BACKFILL REQUIREMENTS.

INSTALL WATERLINE IN STEEL CASING PER UDACS PLATES NO.21 AND 23. MINIMUM CLEARANCE IS REQUIRED ABOVE THE TOP OF THE CASING. FROM THE UPPER BENDS THROUGHOUT THE LOWERED SECTION OF THE PIPE. DUCTILE IRON PIPE WITH RESTRAINED JOINTS IS REQUIRED. IN ADDITION, THRUST BLOCKS ARE TO BE INSTALLED AT THE UPPER BENDS.

NOTE:

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.



KEY MAP
NTS

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

BASIS OF BEARING

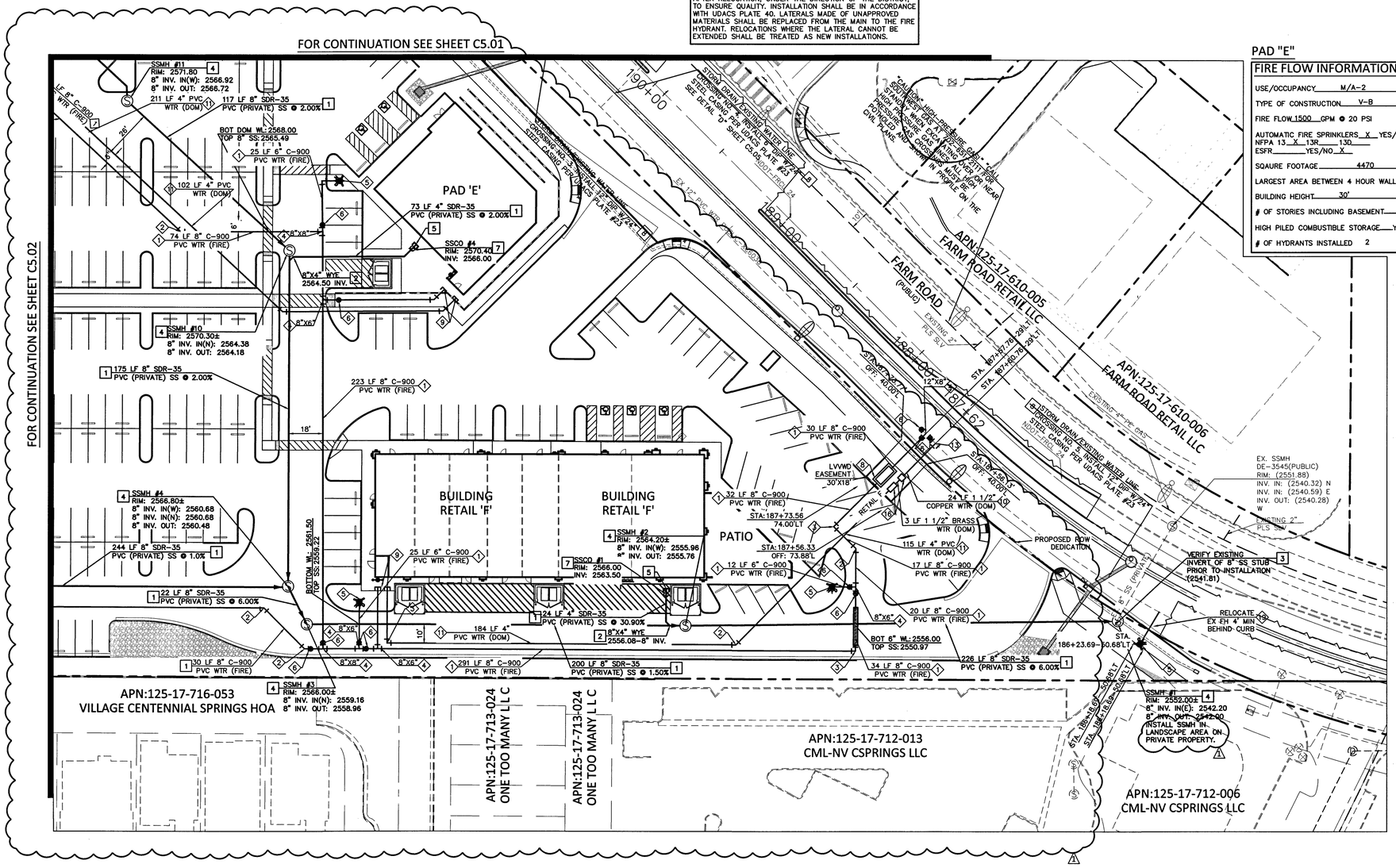
SOUTH 00°0657 WEST, BEING THE WEST LINE OF THE GOVERNMENT LOT 11, LYING WITHIN THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 17, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., AS SHOWN IN BOOK 140, PAGE 12 OF PLATS IN THE CLARK COUNTY, NEVADA, RECORDER'S OFFICE.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK # 5LV90 17S6

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



PAD "E"

FIRE FLOW INFORMATION BLOCK

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 13D
ESFR YES/NO X
SQUARE FOOTAGE 4470
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

WATER CONSTRUCTION NOTES

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" RPPA PER UDACS PLATE NO. 8.
16	INSTALL 1 1/2" DOMESTIC METER PER UDACS PLATE NO. 4 WITH 1 1/2" RPPA PER UDACS PLATE NO. 8.
17	INSTALL 1" DOMESTIC METER PER UDACS PLATE NO. 4 WITH 1" RPPA PER UDACS PLATE NO. 8.
18	POINT OF CONNECTION. SEE LANDSCAPING PLANS FOR CONTINUATION.
19	RELOCATE EXISTING FIRE HYDRANT IN ACCORDANCE WITH UDACS PLATE NO. 40.
20	INSTALL POST INDICATOR VALVE W/ ADJUSTABLE TYOE INDICATOR POST (MUELLER PART # A-20806) AND SUPERVISORY CONTROL VALVE SWITCH (POTTER PART# 1010107) OR APPROVED EQUIVALENT.
21	INSTALL VEHICULAR PROTECTION BOLLARD PER UDACS PLATE NO. 75.
22	INSTALL REDUCER (SIZE PER PLAN)

SEWER CONSTRUCTION NOTES

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 DCSWCS DWG. NO. SD-1A, SD-1B AND SD-4.
5	POINT OF CONNECTION. SEE PLUMBING PLANS FOR CONTINUATION AND USE.
6	INSTALL 60" SSMH PER DCSWCS DWG. NO. SD-1A, SD-1B AND SD-4.
7	INSTALL 6" CLEAN-OUT PER DCSWCS DWG. # SD-26 WITH TRAFFIC RATED LID.
8	STORM DRAIN/EXIST. WATER LINE CROSSING. PER UDACS PLATE NO. 23 SEE SHEET C5.05.
9	INSTALL SEWER BACK WATER VALVE SAME SIZE AS LINE SHOWN.

BUILDING F

FIRE FLOW INFORMATION BLOCK

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 13D
ESFR YES/NO X
SQUARE FOOTAGE 11,300
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

NDOT NOTE:

NDOT PERMIT REQUIRED. CONTRACTOR TO OBTAIN NDOT OCCUPANCY PERMIT PRIOR TO CONSTRUCTION IN NDOT RIGHT OF WAY

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.

CALL BEFORE YOU DIG
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY
Call 811 2 Business Days
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 WORK
1-702-227-2929

LEGEND

EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED		EXISTING	PROPOSED	
(0.00) XXX	0.00 XXX	ELEVATION TAG			FIRE HYDRANT			PL-RIGHT-OF-WAY			AC PAVEMENT
		DRAIN INLET			FIRE DEPARTMENT CONNECTION			PL-ADJACENT CENTERLINE			6" TYPE "A" CURB
		RETAINING WALL			WATER VALVE			EASEMENT LINE			24" TYPE "L" CURB & GUTTER
		SCREEN WALL			REDUCER			FLOW LINE			30" ROLL CURB
		UTILITY POLE			SEWER MANHOLE			SIGN W/POLE			
		STREET LIGHT			CLEANOUT			SAWCUT LINE			BWV BACK WATER VALVE
					GAS VALVE			AREA LIGHT			
								WATER METER			

LAS VEGAS FIRE & RESCUE — DATE 5/2/17

1st Submittal 10/24/16 APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE 5/3/17 PROJECT NO: 124663
LVVWD APPROVED FIRE FLOW 1875 GPM AT 20 PSI RESIDUAL
SHEETS: C1.01, C1.02, C4.05, C4.06, C4.07, C4.09, C4.10, C4.11, C4.12, C4.13, C5.01, C5.02, C5.03, C5.04, (C5.11, C5.12 NDOT).

UDACS NOTE

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

107V6734

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LAS VEGAS, NV 89117
PHONE: (702) 248-8000
FAX: (702) 248-8070
www.collinsengr.com

PROFESSIONAL ENGINEER — STATE OF NEVADA — THOMAS D. MILLER — EXP. 12-31-17 — CIVIL — NO. 15776 — 5-1-17

IMPROVEMENT PLANS FOR DC PLAZA
APN:125-17-613-001

UTILITY PLAN
8451 FARM ROAD
LAS VEGAS, NEVADA

NO.	DATE	DESIGN BY	DESCRIPTION
1	03/13/17	APPD: J.M 5/5/17	MOVED SS MH TO LANDSCAPE AREA, ADJUSTED FIRE LINE TO DOMESTIC LINES TO 6' SEPARATION FIRE LINE TO DOMESTIC LINES TO 6' SEPARATION ADDED 6" SS STUB. RVISE WATER LINE LOCATIONS TO MEW FIRE RISER (ROOM LOCATION) PAD "E"

CEI PROJECT: 4136
DESIGN BY: JDM SR
DRAWN BY: JDM SR
CHECKED BY: TDM P.E.
DATE: 03/13/17
SCALE: 1"=30'
SHEET NUMBER C5.03
SHEET 22 OF 45
H # 64486

H:\CAD\LAND\4136-DELTA\DWG\SHEETS\4136-C5.01-UTIL-D.DWG ,04/27/2017 02:22:30 PM