

WATER AND SANITARY SEWER SERVICE INSTALLATIONS GENERAL NOTES:

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE CHEROKEE METROPOLITAN DISTRICT STANDARDS AND THE CITY OF COLORADO SPRINGS CONSTRUCTION STANDARDS UNLESS OTHERWISE NOTED. IN THE EVENT OF CONFLICTING STANDARDS CHEROKEE METROPOLITAN DISTRICT STANDARDS SHALL GOVERN.
2. ALL WATER SYSTEM MAINS PIPE MATERIAL SHALL BE POLYETHYLENE GLASS (PE) CLASS 300 (DR-14) PER ANNA C-200 AND ASTM D241 SPECIFICATIONS, EXCEPT WHERE NOTED. SPECIFICALLY, SECTIONS OF WATER PIPE THAT CROSS UNDER MAJOR DRAINAGEWAYS OR MAJOR THOROUGHFARES SHALL BE DUCTILE IRON PIPE.
3. ALL FITTINGS SHALL BE CONSTRUCTED OF GRAY-IRON MATERIAL AND FURNISHED WITH MECHANICAL JOINT ENDS. ALL FITTINGS SHALL HAVE A MINIMUM PRESSURE RATING OF 250 PSI AND SHALL BE WRAPPED WITH A 3-MIL THICKNESS POLYETHYLENE MATERIAL PER ANNA STANDARD C105.
4. ALL WATER PIPES SHALL BE INSTALLED WITH A MINIMUM COVER OF FIVE (5) FEET BELOW FINISHED GRADE.
5. ALL BENDS, TEES, FIRE HYDRANTS, BLOW-OFF, AND PLUGS AT DEAD END MAINS SHALL BE INSTALLED WITH CONCRETE THRUST BLOCKS.
6. VALVE BOXES SHALL BE TYLER SLIP, TYPE "C" CAST IRON VALVE BOX ASSEMBLY SERIES 6850 WITH NO. 160 OVAL BASE OR APPROVED EQUAL.
7. ALL WATER SYSTEM COMPONENTS SHALL BE FLUSHED AND CHLORINATED PER ANNA C-401, "DISINFECTING WATER MAINS" PRIOR TO ACCEPTANCE. THE CONTRACTOR SHALL PRODUCE A 25 MG/L SOLUTION BY ADHERING CHLORINE TABLETS TO THE PIPE SECTION WITH PERMATEX CLEAR TAP INSIDE THE SYSTEM. CHLORINATION SHALL OCCUR PRIOR TO HYDROSTATIC TESTING. THE CONTRACTOR SHALL OBTAIN A BACTERIOLOGICAL SAMPLE AFTER THE SYSTEM HAS BEEN FLUSHED. A CLEAN BACTERIOLOGICAL SAMPLE MUST BE OBTAINED PRIOR TO THE SYSTEM BEING PLACED INTO SERVICE.
8. HYDROSTATIC TESTING: ALL WATER SYSTEM MAINS SHALL BE FLED PRESSURE TESTED TO A MINIMUM OF 150 PSI OR 1 1/2 TIMES THE STATIC OPERATING PRESSURE, WHICHEVER IS GREATER. MAXIMUM ALLOWABLE LEAKAGE FOR EACH SECTION OF PIPE BETWEEN LINE VALVES SHALL NOT EXCEED THE FOLLOWING: 110 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY.
9. ALL VALVES SHALL CONFORM TO OPEN LEFT CONVENTION PER CHEROKEE METROPOLITAN DISTRICT STANDARDS.
10. WHEN IT IS NECESSARY TO RAISE OR LOWER WATER MAINS AT OTHER UTILITY CROSSINGS THE CONTRACTOR SHALL INSURE A MINIMUM CLEARANCE OF 18" WHERE POSSIBLE BETWEEN THE OUTSIDE DIAMETERS OF PIPES.
11. WHILE CONSTRUCTING THE WATER AND WASTE WATER SYSTEM THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT LEAST ONE "APPROVED FOR CONSTRUCTION" SET OF UPDATED PLANS AT ALL TIMES. APPROVED FIELD MODIFICATIONS TO THE PLAN SETS SHALL BE CLEARLY IDENTIFIED IN RED INK ON THE PLANS BY THE CONTRACTOR PER FIELD CONSTRUCTION. THESE AS-BUILT CHANGES SHALL BE DATED AND SUBMITTED TO THE ENGINEER OF RECORD. THE ENGINEER OF RECORD SHALL PREPARE A COMPLETE SET OF "AS CONSTRUCTED" DRAWINGS AND DELIVER THE SETS TO THE CHEROKEE METROPOLITAN DISTRICT PRIOR TO FINAL ACCEPTANCE OF THE WATER SYSTEM.
12. PRIOR TO TAPPING ANY EXISTING WATER MAIN THE CONTRACTOR SHALL SUBMIT AND RECEIVE APPROVAL FOR SAID TAP IN ACCORDANCE WITH THE CHEROKEE METROPOLITAN DISTRICT STANDARDS.
13. ALL NONMETALLIC PIPES SHALL HAVE TRACER WIRE ATTACHED TO ITS TOP DURING CONSTRUCTION. THE TRACER WIRE SHALL BE #12 AWG INSULATED COPPER WIRE WITH NO. 12 COPPER CONNECTIONS AND SHALL BE PERMANENTLY ATTACHED TO THE TOP OF THE PIPE USING TAPE AT 4' INTERVALS. TRACER WIRE SHALL BE 3-WAY OR 4-WAY LOCABLE MECHANICAL CONNECTORS SPECIFICALLY MANUFACTURED FOR USE IN UNDERGROUND TRACER WIRE INSTALLATIONS. NON-LOCKING FRET FIT, TWIST-ON, OR TAPED CONNECTIONS ARE NOT PERMITTED. THE TRACER WIRE SHALL ALSO BE CORROSION BY EPOXY OR SILICON COATING. ROUTE TRACER WIRES TO SURFACE AT ALL VALVE BOXES.
14. THE CONTRACTOR ASSUMES RESPONSIBILITY FOR THE PROTECTION OF ALL UTILITIES DURING THE WORK. PRIOR TO EXCAVATION, CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT (800) 922-1887 AT LEAST TWO WORKING DAYS PRIOR TO DIGGING.
15. SANITARY SEWER PIPE SHALL CONFORM TO ASTM D3034 SDR35 PVC.
16. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING INVERTS PRIOR TO INSTALLATION OF NEW SANITARY SEWER SYSTEM.
17. ALL SANITARY SEWER MANHOLES, LIDS, BASES AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH CHEROKEE METROPOLITAN DISTRICT STANDARD MANHOLE DETAILS (5' MIN DIAMETER). EXCEPT AS NOTED ON THESE PLANS, WHERE REQUIRED ON THESE PLANS, WATER TIGHT MANHOLES, LIDS AND CONNECTIONS SHALL BE PROVIDED BY COLORADO SPRINGS STANDARDS. ALL NEW MANHOLES (IF ANY) SHALL BE COATED & LINED PER CMO STANDARDS.
18. SANITARY SEWER SERVICE LINES SHALL BE LOCATED PER THE DETAIL ON THE UTILITY SERVICE PLAN, OR AT THE DIRECTION OF THE INSPECTOR.
19. OVERLOT GRADING AND STREET SUB-GRADE MUST BE WITHIN +/- ONE (1) FOOT PRIOR TO ANY UTILITY INSTALLATION.
20. TRACER WIRE IS TO BE INSTALLED WITH ALL SANITARY SEWER MAIN LINES AND SERVICES (FROM THE MAIN LINE TO THE BUILDING STRUCTURE), AS OUTLINED IN COMMENT #13.
21. MINIMUM DEPTH OF SANITARY SEWER IS 6 FEET OF COVER. THE FOLLOWING ALLOWABLE DEPTH RULES APPLY FOR BURY DEPTHS BETWEEN 1' AND 30' IN CONSIDERATION OF THE MINIMUM DEPTH SHALL BE APPLIED: (SEE CSU WASTEWATER LESS 2.5.B FOR MORE INFORMATION)
DEPTH GREATER THAN 4 FEET (AND LESS THAN 20'): MATERIAL TYPE DR 11 HOPE
DEPTH BETWEEN 2 & 4 FEET (AND UP TO 20 FEET): MATERIAL TYPE SDR 26 OR SDR 35 PVC/PS 48
DEPTH BETWEEN 1 & 2 FEET (AND BETWEEN 20 & 30 FEET): MATERIAL TYPE DIP.
22. WATER SERVICE MUST BE OVER THE SEWER AT ALL TIMES (MINIMUM 18" INCHES) OTHERWISE STEEL CASING MUST BE USED. SEWER SERVICE PIPE LOCATED WITHIN ONE FOOT OF THE WATER SERVICE LINE MUST BE CONSTRUCTED WITH SCH 40 PIPE OR DIP.
23. ALL EXTERIOR SEWER CLEAN OUTS (CO) MUST HAVE A CAST IRON, TRAFFIC RATED COVER, OR EQUIVALENT CONCRETE COLLAR.
24. UPON COMPLETION OF CONSTRUCTION AND PRIOR TO ACCEPTANCE BY THE DISTRICT, TWO (2) COPIES OF "AS-CONSTRUCTED" PLANS AND TWO (2) SETS OF ELECTRONIC DATA FILES OF THE PLANS SHALL BE SUBMITTED TO THE DISTRICT FOR RECORD.
a. THE TWO (2) COPIES SHALL BE COMPLETE WITH ALL "AS-CONSTRUCTED" INFORMATION TOGETHER WITH A CERTIFICATION BY THE PARTY RESPONSIBLE FOR CONSTRUCTION THAT ALL DATA THEREON IS ACCURATE AND REPRESENTS ACTUAL CONSTRUCTED CONDITIONS.
b. THE TWO PLAN SETS SHALL BE SUBMITTED ON SHEETS THAT ARE 22" X 34" IN SIZE.
c. THE PLAN SET SHALL BE ON A DURABLE MEDIA THAT CAN BE RUN THROUGH PHOTOCOPIING EQUIPMENT.
d. THE TWO ELECTRONIC DATA FORMATS SHALL BE SUBMITTED. THE FIRST ELECTRONIC DATA FILE SET SHALL BE IN AUTOCAD 2006 OR NEWER FORMAT WITH NO EXTERNAL REFERENCE DRAWINGS. ALL EXTERNAL REFERENCES MUST BE BOUND INTO THE DRAWING SET. THE SECOND SET OF ELECTRONIC DATA FILES SHALL BE IN ADOBE ACROBAT PDF FORMAT.
e. "AS-CONSTRUCTED" PLANS SHALL BE SUBMITTED WITHIN TWO WEEKS OF COMPLETION OF THE WATER AND/OR SANITARY SEWER UTILITIES.
f. NO AUTHORIZATION TO CONNECT TO THE SYSTEM OR DISCHARGE TO THE SYSTEM WILL BE ALLOWED UNTIL THE "AS-CONSTRUCTED" DOCUMENTS HAVE BEEN RECEIVED AND ACCEPTED BY THE DISTRICT.
g. ALL PLANS, SPECIFICATIONS AND SUPPORTING DOCUMENTS SHALL BE PREPARED BY OR UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF COLORADO. ALL PLANS AND SPECIFICATIONS SHALL BEAR THE SEAL AND SIGNATURE OF SAID LICENSED PROFESSIONAL ENGINEER.

WATER INSTALLATION CORROSION CONTROL REQUIREMENTS

REQUIRED, DESCRIBED AS FOLLOWS: PROMOTE CATHODIC PROTECTION & WRAP ALL METAL JOINTS, VALVES, PIPES AND HYDRANTS.

BENCHMARKS:

1. FMS MONUMENT FB1, LOCATED ON THE NORTH SIDE OF EAST PLAT AVE, 50' WEST OF FORD STREET.
ELEV.=6275.85' (NAV088)
2. MUELLER BOLT ON HYDRANT FLANGE, HYDRANT LOCATED AT THE SW CORNER OF LOT 3.
ELEV.=6265.48' (NAV088)

BASIS OF BEARINGS

THE EASTERLY LINE OF LOTS 2 AND 3, OF "CLEARWAY NO. 2" PLAT NO. 10231 OF THE RECORDS OF EL PASO COUNTY, COLORADO, BEING MONUMENTED AT THE SOUTH END BY A 1.5" ALUMINUM CAP STAMPED PLS 30808, FROM WHICH A NAIL & WASHER, EL: 6267.44 BEARS 00°00'00"W, A DISTANCE OF 300.02 FEET.

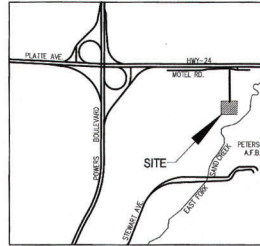
CLEARWAY, LOT 5

COUNTY OF EL PASO, STATE OF COLORADO

WATER PLANS

(INCLUDING UTILITY SERVICE PLAN)

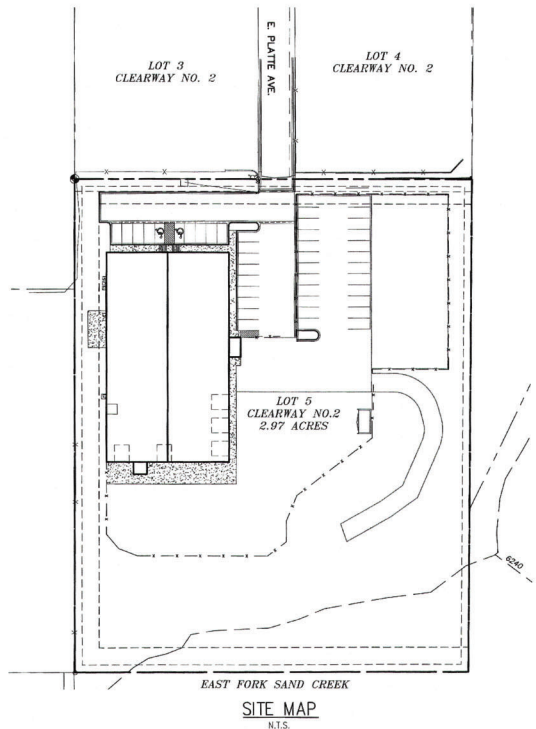
JUNE 2023



VICINITY MAP
N.T.S.

SHEET INDEX

SHEET 1	TITLE SHEET
SHEET 2	PLAN & PROFILE (INCLUDING UTILITY SERVICES)
SHEET 3	DETAILS



AGENCIES:

OWNER/DEVELOPER:	WRENTH HOME SERVICES 6395 E PLATTE AVE. COLORADO SPRINGS, CO 80915 TRENT URBAN (719) 227-0500
CIVIL ENGINEER:	M & S CIVIL CONSULTANTS, INC. 212 N. WASHATCH, SUITE 305 COLORADO SPRINGS, CO 80903 VIRGIL A. SANCHEZ P.E. (719) 925-5485
COUNTY ENGINEERING:	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2800 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 (719) 520-6300
TRAFFIC ENGINEERING:	EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS 3275 ANDER DRIVE COLORADO SPRINGS, CO 80922 JOSHUA PALMER, P.E. (719) 520-6480
WATER RESOURCES:	CHEROKEE METROPOLITAN DISTRICT 6250 PALMER PARK BOULEVARD COLORADO SPRINGS, CO 80915-1721 JEFF MUMGER (719) 597-5080
FIRE DISTRICT:	CIMARRON HILLS FIRE DEPARTMENT 1835 TURKISH PLACE COLORADO SPRINGS, CO 80915 (719) 591-0950
GAS DEPARTMENT:	COLORADO SPRINGS UTILITIES 7710 DURANT DR. COLORADO SPRINGS, CO 80947 TIM WENGT (719) 688-3556
ELECTRIC DEPARTMENT:	COLORADO SPRINGS UTILITIES 7710 DURANT DR. COLORADO SPRINGS, CO 80947 TIM WENGT (719) 688-3556
COMMUNICATIONS:	QWEST COMMUNICATIONS (UNLAC. LOCATIONS) (800) 922-1987 AT&T (LOCATIONS) (719) 635-3574

ENGINEER'S STATEMENT

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION AND I AM CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLANS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE CHEROKEE METROPOLITAN DISTRICT. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY NEGLIGENCE, ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS REPORT.

VIRGIL A. SANCHEZ, COLORADO P.E. #37160
FOR AND ON BEHALF OF M & S CIVIL CONSULTANTS, INC.

DATE

CHEROKEE METROPOLITAN DISTRICT WATER & WASTEWATER PLAN APPROVAL

THE CHEROKEE METROPOLITAN DISTRICT RECOGNIZES THE DESIGN PROFESSIONAL OF RECORD AS THE LICENSED ENGINEER HAVING RESPONSIBILITY FOR THE SUBMITTED DESIGN AND THAT THE DISTRICT HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. AS SUCH, THE APPROVAL GRANTED HEREIN IS FOR THE CONSTRUCTION OF THE FACILITIES AS REPRESENTED ON THESE DOCUMENTS. APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE BELOW AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

APPROVED BY: *Kevin Brown* 10-24-2023
DATE

CIMARRON HILLS FIRE DEPARTMENT

ACCORDING TO THE MODELED CALCULATIONS REVIEWED BY THE GOVERNING WATER DISTRICT AND/OR COLORADO REGISTERED CIVIL ENGINEER/DESIGNER, THE THEORETICAL AVAILABLE FIRE FLOW AT NODE "F4-1" IS 2000 GPM UNDER MAXIMUM DAILY DEMAND CONDITIONS AT 28.3PSI RESIDUAL. THE ACTUAL FIRE FLOW MAY VARY DUE TO VARIOUS PARAMETERS. UPON DETAILED REVIEW OF THE AVAILABLE WATER SUPPLY, FIRE-HYDRANT LOCATIONS AND HOSE LAID DISTANCES, THESE PLANS ARE HEREBY CONSIDERED APPROVED.

FIRE DEPARTMENT SIGNATURE: *[Signature]* DATE: *10-27-2023*

OWNER/DEVELOPER'S STATEMENT:

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS IN THESE DETAILED PLANS AND SPECIFICATIONS.

[Signature] 10/11/23
TRENT URBAN UPL, LLC DATE

EL PASO COUNTY:

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH EOW SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTORS DISCRETION.

Approved

By: *Gilbert LaForce, P.E.*
Engineering Manager

Date: 11/16/2023 5:14:09 PM
El Paso County Department of Public Works



CLEARWAY, LOT 5

WATER PLANS

DATE: 06/14/2023

SHEET 1 OF 3

212 N. WASHATCH AVE, SUITE 305
COLORADO SPRINGS, CO 80903
PHONE 719.955.9485



FOR AND ON BEHALF OF M & S CIVIL CONSULTANTS, INC.

DATE: 10/18/2023

VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160



DATE: 10/18/2023



DATE: 10/18/2023



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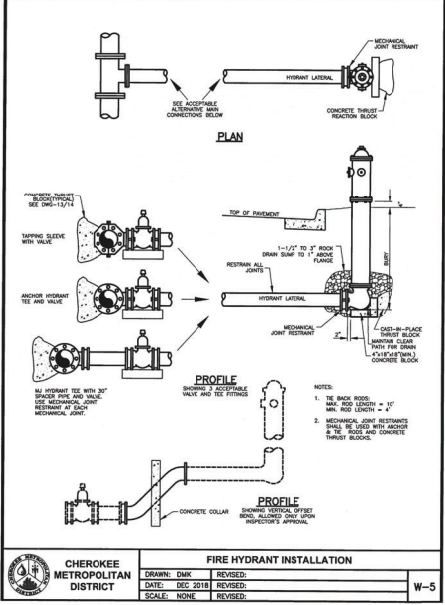
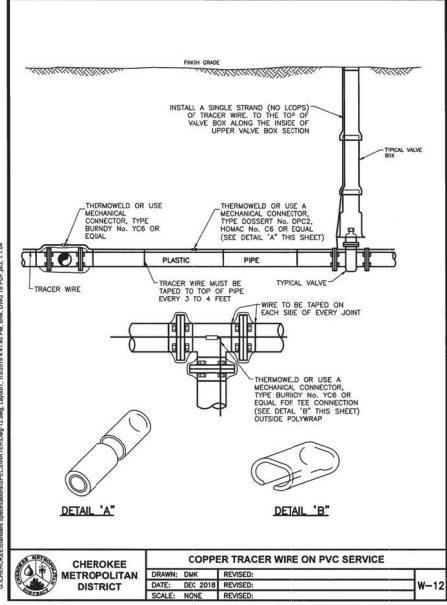
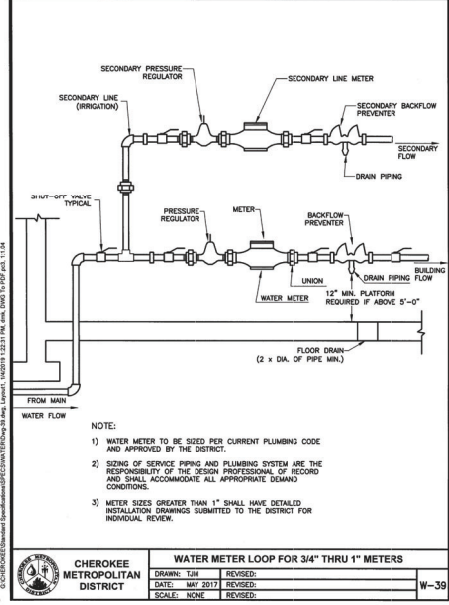
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CAUTION



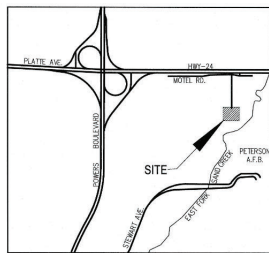
COUNTY OF EL PASO, STATE OF COLORADO

AUGUST 2023

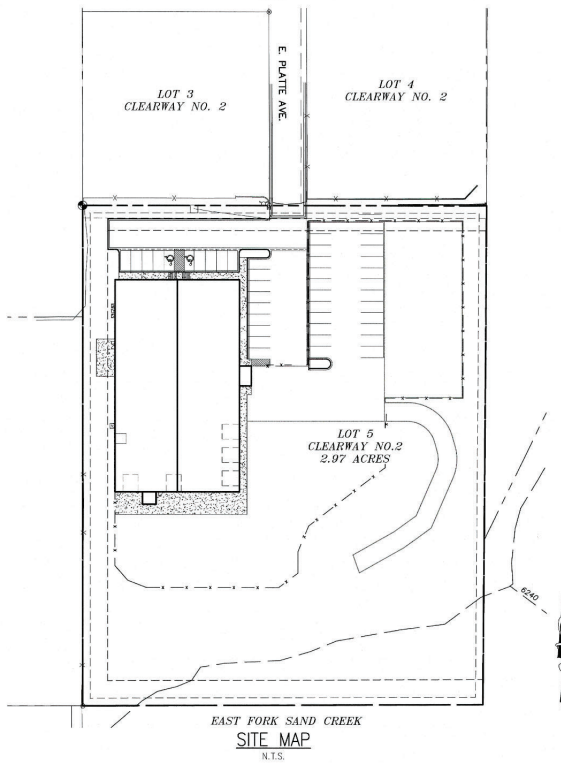
WATER AND SANITARY SEWER SERVICE INSTALLATIONS

GENERAL NOTES:

- ALL MATERIALS AND WORKSHOP SHALL BE IN CONFORMANCE WITH THE CHEROKEE METROPOLITAN DISTRICT STANDARDS AND THE CITY OF COLORADO SPRINGS CONSTRUCTION STANDARDS UNLESS OTHERWISE NOTED. IN THE EVENT OF CONFLICTING STANDARDS, CHEROKEE METROPOLITAN DISTRICT STANDARDS SHALL GOVERN.
14. ALL WATER SYSTEM MAINS PIPE MATERIAL SHALL BE POLYETHYLENE GLASS (PEVG) CLASS 200 (DR-14) PER ANWA C-600 AND ASTM D241 SPECIFICATIONS, EXCEPT WHERE NOTED. SPECIFICALLY, SECTIONS OF WATER PIPE THAT CROSS MAJOR DRAINAGE WAYS (SAND CREEK) OR MAJOR THOROUGHFARES SHALL BE DUCTILE IRON PIPE.
15. ALL FITTINGS SHALL BE CONSTRUCTED OF GRAY-IRON MATERIAL AND FURNISHED WITH MECHANICAL JOINT ENDS. ALL FITTINGS SHALL HAVE A MINIMUM SLOPE RATING OF 250 PSI AND PIPE SHALL BE WRAPPED WITH A 9-MIL THICKNESS POLYETHYLENE MAINTENANCE JOINT STANDARD C-20.
16. ALL WATER PIPE SHALL BE INSTALLED AT A MINIMUM DEPTH OF FIVE (5) FEET BELOW FINISHED GRADE.
17. ALL BENDS, TEES, FIRE HYDRANTS, BLOW-OFF, AND PLUGS AT DEAD END MAINS SHALL BE INSTALLED WITH CONCRETE THROUST BLOCKS.
18. VALVE BOXES SHALL BE TYLER SLIP TYPE "C" CAST IRON VALVE BOX ASSEMBLY SERIES 8860 WITH NO. 160 OVAL BASE OR APPROVED EQUIV.
19. ALL WATER SYSTEM COMPONENTS SHALL BE FLUSHED AND CHLORINATED PER ANWA C-601, "DISINFECTING WATER MAINS" PRIOR TO ACCEPTANCE. THE CONTRACTOR SHALL PRODUCE A 2% NaOCL SOLUTION BY ADDING CHLORINE TABLETS TO THE WATER. THE CHLORINE SOLUTION SHALL BE APPLIED TO EACH SECTION OF PIPE. THE ENGINEER OF RECORD SHALL OBSERVE THE CHLORINATION. THE CONTRACTOR SHALL OBTAIN A BACTERIOLOGICAL SAMPLE AFTER THE SYSTEM HAS BEEN FLUSHED. A CLEAN BACTERIOLOGICAL SAMPLE MUST BE OBTAINED PRIOR TO THE SYSTEM BEING PLACED INTO SERVICE.
20. HYDROSTATIC TESTING: ALL WATER SYSTEM MAINS SHALL BE FLEUP PRESSURED TO A MINIMUM OF 150 PSI OR 1 1/2 TIMES THE OPERATING PRESSURE, WHICHEVER IS GREATER. LEAKAGE SHALL OCCUR PRIOR TO HYDROSTATIC TESTING. THE CONTRACTOR SHALL OBTAIN A BACTERIOLOGICAL SAMPLE AFTER THE SYSTEM HAS BEEN FLUSHED. A CLEAN BACTERIOLOGICAL SAMPLE MUST BE OBTAINED PRIOR TO THE SYSTEM BEING PLACED INTO SERVICE.
21. ALL VALVES SHALL CONFORM TO OPEN LEFT CONVENTION PER CHEROKEE METROPOLITAN DISTRICT STANDARDS.
22. WHEN IT IS NECESSARY TO RAISE OR LOWER WATER MAINS AT OTHER UTILITY CROSSINGS THE CONTRACTOR SHALL INSURE A MINIMUM CLEARANCE OF 18" WHERE POSSIBLE BETWEEN THE OUTSIDE DIAMETERS OF PIPES.
23. WHILE CONSTRUCTING THE WATER AND WASTE WATER SYSTEM THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT LEAST ONE "APPROVED FOR CONSTRUCTION" SET OF UPDATED PLANS AT ALL TIMES. APPROVED FIELD MODIFICATIONS TO THE PLAN SETS SHALL BE CLEARLY IDENTIFIED IN RED INK ON THE PLANS BY THE CONTRACTOR FIELD PERSONNEL. THE CONTRACTOR SHALL PREPARE A COMPLETE SET OF "AS CONSTRUCTED" DRAWINGS AND DELIVER THE SETS TO THE CHEROKEE METROPOLITAN DISTRICT PRIOR TO FINAL PAYMENT OF THE PROJECT.
24. PRIOR TO TAPPING ANY EXISTING WATER MAIN THE CONTRACTOR SHALL SUBMIT AND RECEIVE APPROVAL FOR SMD TAP IN ACCORDANCE WITH THE CHEROKEE METROPOLITAN DISTRICT STANDARDS.
25. ALL NONMETALLIC PIPES SHALL HAVE TRACER WIRE ATTACHED TO ITS TOP DURING CONSTRUCTION. THE TRACER WIRE SHALL BE #12 AWG INSULATED COPPER WIRE WITH NO. 12 COPPER CONNECTIONS AND SHALL BE PERMANENTLY AFFIXED TO THE TOP OF THE PIPE USING TAPE AT 4' INTERVALS. TRACER WIRE SHALL BE JOINED 3-WAY OR 4-WAY LOCABLE MECHANICAL CONNECTIONS. NON-LOCABLE MECHANICAL CONNECTIONS ARE NOT PERMITTED. THE CONTRACTOR SHALL INSTALL LOCABLE, NON-LOCATING FRICTION FIT, TWIST-ON, OR TAPPED CONNECTIONS ARE NOT PERMITTED. THE TRACER WIRE SHALL ALSO BE CORROSION BY EPOXY OR SODIUM COATING. ROUTE TRACER WIRES TO SURFACE AT ALL VALVE BOXES.
26. THE CONTRACTOR ASSUMES RESPONSIBILITY FOR THE PROTECTION OF ALL UTILITIES DURING THE WORK. PRIOR TO EXCAVATION, CONTACT THE UTILITY NOTIFICATION CENTER (TNCN) AT (303) 922-1867 AT LEAST TWO WORKING DAYS PRIOR TO DIGGING.
27. SANITARY SEWER PIPE SHALL CONFORM TO ASTM D3534 SDR35 PIPE.
28. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING INVERTS PRIOR TO INSTALLATION OF NEW SANITARY SEWER SYSTEM.
29. ALL SANITARY SEWER MANHOLES, LIDS, BASES AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH CHEROKEE METROPOLITAN DISTRICT STANDARD MANHOLE DETAILS (5" MIN. DIAMETER), EXCEPT AS NOTED ON THESE PLANS, WHERE REQUIRED. NEWER PLANS WITH NO EXTERNAL MANHOLE LIDS AND CONNECTIONS SHALL BE PERFORMED BY COLORADO SPRINGS STANDARD.
30. SANITARY SEWER SERVICE LINES SHALL BE LOCATED PER THE DETAIL ON THE UTILITY SERVICE PLAN, OR AT THE DIRECTION OF THE INSPECTOR.
31. OVERLOT GRADING AND STREET SUB-GRADE MUST BE WITHIN +/- ONE (1) FOOT PRIOR TO ANY UTILITY INSTALLATION.
32. TRACER WIRE IS TO BE INSTALLED WITH ALL SANITARY SEWER MAIN LINES (FROM THE MAIN LINE TO THE BUILDING STRUCTURE), AS OUTLINED IN COMPLETION #13.
33. MINIMUM DEPTH OF SANITARY SEWER IS 6 FEET OF COVER. IF THIS MINIMUM CANNOT BE ACHIEVED DUE TO SHALLOW SEWER STOP THEN THE FOLLOWING APPLIES: OTHERWISE THE SEWER SERVICE MUST BE 6 FEET OF COVER:
- DEPTH GREATER THAN 4 FEET: MATERIAL: TYPE SDR 35
- DEPTH GREATER THAN 4 FEET & 6 FEET: MATERIAL: TYPE 40 OR DR CRP OR DR CRP (CIP)
- DEPTH LESS THAN 4 FEET: MATERIAL: TYPE 40 OR CIP WITH CONCRETE CAP.
34. WATER SERVICE MUST BE OVER THE SEWER AT ALL TIMES (MINIMUM 18" INCHES) EXCEPT STEEL CASING MUST BE USED, SEWER SERVICE MUST LOCATED WITHIN ONE FOOT OF THE WATER SERVICE LINE MUST BE CONSTRUCTED WITH SCH 40 PIPE OR EQUIV.
35. ALL EXTERIOR SEWER CLEAN OUTS (CO) MUST HAVE A CAST IRON, TRAFFIC-BEARING, OR EQUIVALENT CONCRETE COLLAR.
36. UPON COMPLETION OF CONSTRUCTION AND PRIOR TO ACCEPTANCE BY THE DISTRICT, TWO (2) COPIES OF "AS-CONSTRUCTED" PLANS AND TWO (2) SETS OF ELECTRONIC DATA FILES OF THE PLANS SHALL BE SUBMITTED TO THE DISTRICT FOR RECORD.
37. THE TWO (2) COPIES SHALL BE COMPLETE WITH ALL "AS-CONSTRUCTED" INFORMATION TOGETHER WITH A CERTIFICATION BY THE CONTRACTOR RESPONSIBLE FOR CONSTRUCTION THAT ALL DATA THEREON IS ACCURATE AND REPRESENTS ACTUAL CONSTRUCTED CONDITIONS.
38. THE TWO PLAN SETS SHALL BE SUBMITTED ON SHEETS THAT ARE 24" X 36" IN SIZE.
39. THE PLAN SET SHALL BE ON A DURABLE MEDIA THAT CAN BE RUN THROUGH PHOTO COPYING EQUIPMENT.
40. THE TWO ELECTRONIC DATA FORMATS SHALL BE SUBMITTED. THE FIRST ELECTRONIC DATA FILE SET SHALL BE IN AUTOCAD 2000 (DWG) AND THE SECOND SET SHALL BE IN MICROSOFT EXCEL. ALL EXTERNAL REFERENCES SHALL BE BOUND INTO THE DRAWING SET. THE SECOND SET OF ELECTRONIC DATA FILES SHALL BE IN ADOBE ADOBE PDF FORMAT.
41. "AS-CONSTRUCTED" PLANS SHALL BE SUBMITTED WITHIN TWO WEEKS OF COMPLETION OF THE WATER AND/OR SANITARY SEWER.
42. NO AUTHORIZATION TO CONNECT TO THE SYSTEM OR DISCONNECT TO THE SYSTEM WILL BE ALLOWED UNTIL THE SYSTEM HAS BEEN INSPECTED AND ACCEPTED BY THE DISTRICT.
43. ALL PLANS, SPECIFICATIONS AND SUPPORTING DOCUMENTS SHALL BE PREPARED BY OR UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF COLORADO. ALL PLANS AND SPECIFICATIONS SHALL BE IN ACCORDANCE WITH THE CHEROKEE METROPOLITAN DISTRICT STANDARDS AND THE CITY OF COLORADO SPRINGS CONSTRUCTION STANDARDS UNLESS OTHERWISE NOTED.



VICINITY MAP
N.T.S.



SITE MAP
N.T.S.



CONTACTS

OWNER/DEVELOPER:	WIRENET HOME SERVICES 809 E. PLATTE AVE COLORADO SPRINGS, CO 80915 TRIS VENT CONSULTANTS, INC 1719 227-0050
CIVIL ENGINEER	MS CIVIL CONSULTANTS, INC 20 BOUL. PRESIDENT, ST 110 COLORADO SPRINGS, CO 80903 VIGIL A. SANCHEZ, P.E. 719-491-3818
WATER AND WASTEWATER	CHEMCOKE METROPOLITAN DISTRICT 6250 PALMER PARK BOULEVARD COLORADO SPRINGS, CO 80915-1721 JETT WINGER 719-597-5080
FIRE DEPARTMENT	CIMARRON HILLS FIRE DEPARTMENT 1535 YUKTERIDGE PLACE COLORADO SPRINGS, CO 80919 719-591-0960
TELEPHONE COMPANY	U.S. WEST COMMUNICATIONS (LOCATORS) 800-922-1987 ATA# (LOCATORS) 719-635-3674

ENGINEER'S STATEMENT

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLANS HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE CHEROKEE METROPOLITAN DISTRICT. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS REPORT.



VIRGIL A. SANCHEZ, COLORADO P.E. #37160
FOR AND ON BEHALF OF M. & S. CIVIL CONSULTANTS, INC.

PRIVATE MAIN EXTENSIONS WATER STATEMENT:

THE UNDERSIGNED OWNER/DEVELOPER AGREES THAT THE INSTALLATION OF THESE PROPOSED WATER FACILITIES WILL BE MAKE IN ACCORDANCE WITH CHEROKEE METROPOLITAN DISTRICT SPECIFICATIONS AND SHALL PROVIDE A MINIMUM OF 5 FEET AND A MAXIMUM OF 6 FEET OF COVER OVER THE WATER MAIN(S). THE UNDERSIGNED UNDERSTANDS THAT ALL WATER INSTALLATION PLAN SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE MAINTAINED BY THE OWNER.

TRENT URBAN UPG, LLC 10/11/23
DATE

WATER PLAN APPROVAL

SIGNED BY: Kevin Brown 11/9/23

CHEROKEE METROPOLITAN DISTRICT DATE

APPROVAL EXPIRES ONE YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

BENCHMARKS:

1. FIMS MONUMENT FB1, LOCATED ON THE NORTH SIDE OF EAST PLAT AVE, 50' WEST OF FORD STREET.
ELEV.=6275.86' (NAVD88)
2. MUELLER BOLT ON HYDRANT FLANGE, HYDRANT LOCATED AT THE SW CORNER OF LOT 3.
ELEV.=6265.48' (NAVD88)

BASIS OF BEARINGS

THE EASTERLY LINE OF LOTS 2 AND 3, OF "CLEARWAY NO 2" PLAT NO 10231 OF THE RECORDS OF EL PASO COUNTY, COLORADO, BEING MONUMENTED AT THE SOUTH END BY A 1.5" ALUMINUM CAP STAMPED PLS 38658, FROM WHICH A NAIL & WASHER, EL: 6267.44 BEARS N00°00'00"W, A DISTANCE OF 300.02 FEET.

SHEET INDEX

SHEET 1	TITLE SHEET
SHEET 2	SANITARY SEWER ~ FORCE MAIN PLAN & PROFILE
SHEET 3	DETAILS

CLEARWAY, LOT 5 SANITARY SEWER PLAN ~ FORCE MAIN	PROJECT NO. 44-042	SCALE:		DATE: 06/14/2023	SS01
		DESIGNED BY: DJM DRAWN BY: TAU CHECKED BY: WS	HORIZONTAL: VERTICAL: N/A		

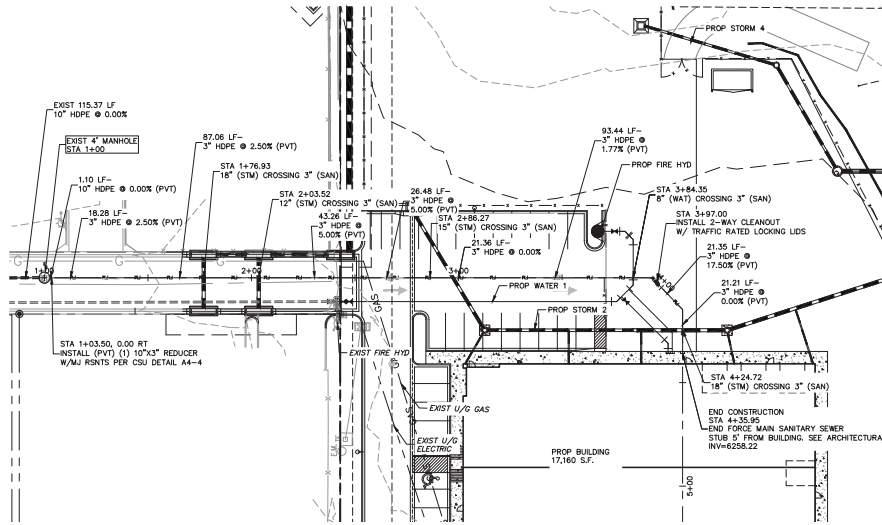
212 N. WAHSATCH AVE., STE 305
COLORADO SPRINGS, CO 80903
PHONE: 719.955.5485



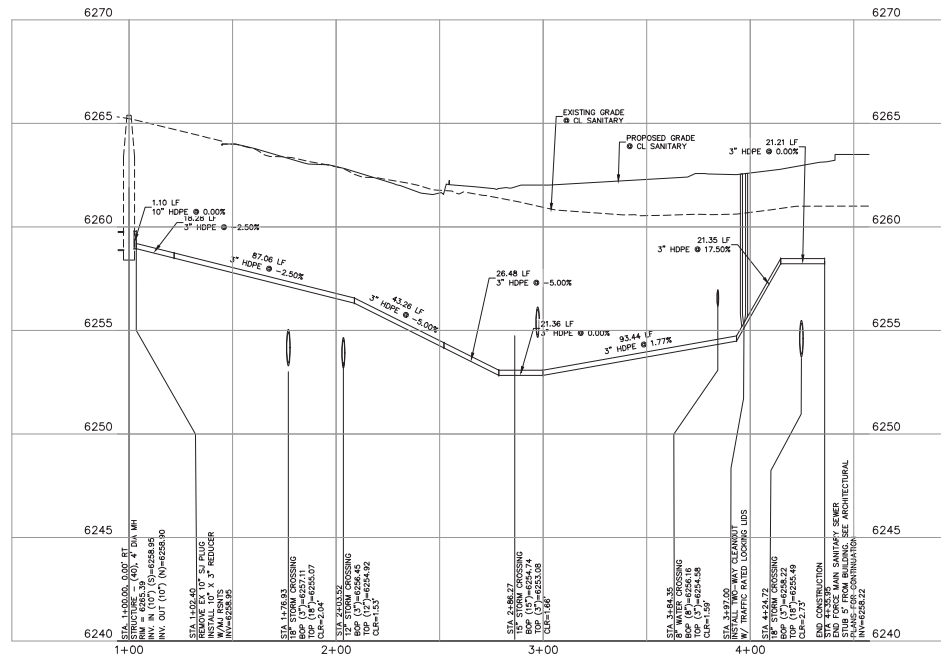
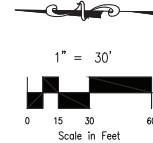
WIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160

[illegible]

CAUTION



SANITARY 1 (PRIVATE)
STA 1+00.00 TO STA 4+35.95



SANITARY 1 STA 1+00.00 TO STA 4+35.95



ABBREVIATION LEGEND

C&G	CURB AND GUTTER
CL	CENTERLINE
CONST	CONSTRUCTION
EL	ELEVATION
EX	EXISTING
N	NORTH
LT	LEFT
NTS	NOT TO SCALE
PUB	PUBLIC
PVT	PRIVATE
PROP	PROPOSED
RT	RIGHT
S	SOUTH
SAN	SANITARY SEWER
SLV	SLEEVE
SRV	SERVICE
STA	STATION
STM	STORM SEWER
W	WEST
WTR	WATER

NOTE:

ALL STORM SEWER TO BE PRIVATE.
CONTRACTOR TO CROSS REFERENCE
DETAILED GRADING PLANS TO
VERIFY TOP OF BOX OR GRATE
ELEVATIONS

CLEARWAY, LOT 5	
SANITARY SEWER PLANS ~ FORCE MAIN	
PROJECT NO. 44-042	SCALE: HORIZONTAL: 1"=30' VERTICAL: 1"=3'
DESIGNED BY: DLM	DATE: 08/10/2023
DRAWN BY: TAU	SHEET 2 OF 3
CHECKED BY: VAS	SS02

212 N. WABASH AVE., STE. 305
COLORADO SPRINGS, CO 80903
PHONE: 719.553.5465

FOR AND ON BEHALF OF
MAYOR
CONSULTANTS,
INC.

UNAPPROVED
8/10/23
37160
PROFESSIONAL
SEAL

REVISIONS:	NO.	DATE	DESCRIPTION	APPROVAL BY:	SHEET

IF ANY CHANGES ARE MADE TO THESE PLANS, THE REVISIONS MUST BE RECORDED IN THE REVISIONS SECTION. ANY CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARED BY THESE PLANS.

CAUTION

L = MINIMUM RESTRAINED PIPE LENGTH (FEET)													
PIPE DIAMETER		45° BEND			22-12° BEND			11-14° BEND			MINIMUM VALUE OR PLUS, TO EXCEED MINIMUM VALUES (SEE NOTE 9)		
MAX. STATIC PRESSURE (PSI)		<100	100-150	150-200	<100	100-150	150-200	<100	100-150	150-200	<100	100-150	150-200
6 INCH	DUCTILE IRON AND PVC	6	9	12	3	5	6	2	3	3	40	73	97
8 INCH	DUCTILE IRON AND PVC	8	12	16	4	6	8	2	3	4	53	94	125
12 INCH	DUCTILE IRON AND PVC	12	17	23	6	8	11	3	4	6	89	133	177
16 INCH	DUCTILE IRON AND PVC	15	22	29	7	11	14	4	5	7			
20 INCH	DUCTILE IRON AND PVC	18	26	35	9	13	17	4	6	8			
24 INCH	DUCTILE IRON AND PVC	20	30	40	10	15	20	5	7	10			
30 INCH	DUCTILE IRON AND PVC	24	36	48	12	18	24	6	9	12			
36 INCH	DUCTILE IRON AND PVC	28	42	56	14	20	27	7	10	14			

UNRESTRAINED BELL BELL HARNESS RESTRAINTS (TYP.) MECHANICAL JOINT BEND

NOTES:

- PRESSURE GREATER THAN 200 PSI REQUIRE SPECIAL DESIGN APPROVED BY SPRINGS UTILITIES, APPROVED BY COLORADO SPRINGS UTILITIES.
- LENGTH IS BASED ON MINIMUM 1 FEET OF GROUND COVER AND SOIL COMPACTED ACCORDING TO CHAPTER 5 OF THESE WATER LOSS, IF THE DEPTH IS LESS THAN 5 FEET RESTRAINED LENGTH MUST BE DESIGNED BY THE DESIGN ENGINEER.
- APPROVED METHODS OF RESTRAINED PIPE BEYOND INITIAL FITTING SHALL BE IN ACCORDANCE WITH CHAPTER 4.
- RESTRAINED PIPE LENGTH APPLIES TO CONDITIONS WHERE NO CONCRETE THRUST REACTION BLOCK IS PRESENT.
- CALCULATIONS ARE BASED ON A POORLY GRADED SANDS, GRAVEL, AND GRAVEL-SAND MIXTURE, LITTLE OR NO FINES, TYPE 4 BEDDING CONDITIONS - PIPE BEDDED IN SAND, GRAVEL OR CRUSHED STONE TO A DEPTH OF 18 PIPE DIAMETER (4" MIN.) * FACTOR OF SAFETY 2:1.
- FIGURES ARE BASED ON DIP WRAPPED IN POLYETHYLENE MATERIAL.
- MEASUREMENTS ARE IN FEET.
- USE CMA FOR DOWN TURNING BENDS.
- RESTRAINED LENGTH FOR DEAD END MAY BE USED AT THE DISCRETION OF COLORADO SPRINGS UTILITIES.

Colorado Springs Utilities
It's how we do it. Guaranteed.

RESTRAINED
PIPE LENGTH (FEET)
W/MECHANICAL JOINT RESTRAINTS

A4-4
DATED: 03/09/14

CLEARWAY, LOT 5

DETAILS

PROJECT NO. 44-042

DESIGNED BY: DLM

DRAWN BY: TAU

CHECKED BY: VMS

DATE: 06/14/2023

SCALE: HORIZONTAL: VERTICAL: N/A

SHEET 3 OF 3

SS03

212 N. WABATCHE AVE., STE 305
COLORADO SPRINGS, CO 80903
PHONE: 719.553.5465

CIVIL CONSULTANTS, INC.

FOR AND ON
BEHALF OF
CIVIL CONSULTANTS,
INC.

REVISIONS:

NO.	DATE	BY	DESCRIPTION	APPROV. BY	DATE

THE ENGINEER PROVIDES THESE PLANS WILL NOT BE RESPONSIBLE FOR THE PRO-
JECT OR FOR THE CONSTRUCTION OF THE PROJECT. THE ENGINEER'S PLANS
MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARED OF THESE PLANS.

CAUTION