BRADLEY HEIGHTS FILING 4
PUBLIC WATER MAIN DISTRIBUTION PLAN

LOCATED WITHIN A PORTION OF SECTION 9, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M., CITY OF COLORADO SPRINGS, COUNTY OF EL PASO, STATE OF COLORADO

WATER PLAN NOTES

THE CONTRACTOR SHALL NOTIFY COLORADO SPRINGS UTILITIES' INSPECTIONS OFFICE 719-668-4658 A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

GENERAL:

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL MEET *COLORADO SPRINGS UTILITIES' WATER LINE EXTENSION AND SERVICE STANDARDS* (*WATER LESS*).
2. THE CONTRACTOR SHALL OBTAIN LOCATES PRIOR TO ANY EXCAVATION.
3. COLORADO SPRINGS UTILITIES DOES NOT GUARANTEE THE ACCURACY OF LOCATIONS OF EXISTING PIPELINES, HYDRANTS, VALVES AND SERVICE LINES. IF FIELD CONDITIONS ARE FOUND TO BE DIFFERENT THAN SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE INSPECTOR AND THE ENGINEER OF RECORD IMMEDIATELY.
4. NO TREES OR STRUCTURES ARE PERMITTED WITHIN FIFTEEN FEET (15') OF A WATER MAIN.
5. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY FACILITIES AS A RESULT OF HIS ACTIONS. THE CONTRACTOR SHALL MAKE ALL THE REQUIRED REPAIRS IMMEDIATELY TO THE SATISFACTION OF COLORADO SPRINGS UTILITIES.
6. ALL FIELD STAKING SHALL COMPLY WITH THE *WATER LESS*.
7. THE CONTRACTOR SHALL MAKE THEIR BEST EFFORT TO ENSURE THAT WATER SERVICE TO ADJACENT PROPERTIES IS MAINTAINED DURING CONSTRUCTION.
8. CORROSION PROTECTION MEASURES SHALL COMPLY WITH THE *WATER LESS*.
9. NO SERVICE TAPS WILL BE ALLOWED UNTIL THE MAIN IS EXTENDED TO THE NEXT MAIN-LINE VALVE.
10. NO SERVICE TAPS SHALL BE MADE UNTIL AUTHORIZATION HAS BEEN GRANTED BY THE COLORADO SPRINGS UTILITIES' INSPECTOR.
11. ALL BENDS SHALL BE FIELD STAKED PRIOR TO CONSTRUCTION AND THE STATIONING ON THE FIELD STAKES SHALL MATCH THE STATIONING ON THE PLANS.
12. FIELD MODIFICATIONS TO A FIRE SERVICE LINE OR FIRE HYDRANT DESIGN OR LOCATION MAY NEED TO BE APPROVED BY THE DESIGN ENGINEER, COLORADO SPRINGS FIRE DEPARTMENT AND COLORADO SPRINGS UTILITIES, AS REQUIRED BY THE INSPECTOR.
13. REUSE OR SALVAGE OF ANY MATERIAL IS LEFT TO THE DISCRETION OF THE COLORADO SPRINGS UTILITIES INSPECTOR.
14. ALL TRENCH BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE *CITY OF COLORADO SPRINGS STANDARD SPECIFICATIONS MANUAL*.
15. ALL WATER SERVICE LINES SHOULD ENTER THE BUILDING WITHIN 3 FEET OF AN EXTERIOR WALL. EXPOSED WATER PLUMBING SHALL BE MINIMIZED INSIDE THE BUILDING PRIOR TO THE WATER METER AND/OR APPROVED BACKFLOW PREVENTION ASSEMBLY OR METHOD.

WATER PROJECT - SPECIFIC NOTES

	APPLICABLE	NOT–APPLICABLE	
1.	☐	☒	ANY EXISTING STUBS AND APPURTENANCES THAT WILL NOT BE USED SHALL BE REMOVED AND REPLACED WITH AN ACCEPTABLE SECTION OF MAIN AT THE EXPENSE OF THE CONTRACTOR.
2.	☒	☐	A CONNECTION TO AN EXISTING STUB IS PROPOSED. COLORADO SPRINGS UTILITIES DOES NOT GUARANTEE THE ACCURACY OF THE DEPTHS OR LOCATIONS OF EXISTING STUBS SHOWN ON ANY "AS-BUILT" DRAWINGS.
3.	☒	☐	A WATER STUB-OUT(S) IS/ARE PROPOSED. COLORADO SPRINGS UTILITIES DOES NOT GUARANTEE THAT THE DESIGN OR INSTALLATION OF THE PROPOSED WATER STUB-OUT WILL MEET FUTURE DEVELOPMENT NEEDS.
4.	☐	☒	A WATER QUALITY PLAN HAS BEEN APPROVED FOR THIS PROJECT.

BASIS OF BEARINGS:

THE NORTH-SOUTH CENTERLINE OF SECTION 9, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO, BEING MONUMENTED AT BOTH ENDS BY A 3 1/4" ALUMINUM CAP STAMPED "RLS 10377", IS ASSUMED TO BEAR S 00 °19'23" E, A DISTANCE OF 5252.20 FEET.

BENCHMARK:

ELEVATIONS ARE BASED UPON THE COLORADO SPRINGS UTILITIES FIMS MONUMENT F230 (PUBLISHED ELEVATION=5779.16 NAVD88).

PLAN INFORMATION

FIMs MAP NUMBER: S-43

TAX SCHEDULE NO: 5500000463

WATER PRESSURE ZONE: SOUTHLINE

MAX STATIC PRESSURE (LOLN): 153 PSI

MAX STATIC PRESSURE (SOLN): 78 PSI

UTILITY DESIGN CAD FILE NO: CF20243674

UAP FILE NO. OR PLAT RECEPTION NO: N/A

EASEMENT RECEPTION NO: PER PLAT

DEVELOPMENT PLAN NO: AR PUD 22-00279

DEVELOPMENT PLAN APPROVAL DATE: 08/30/2024

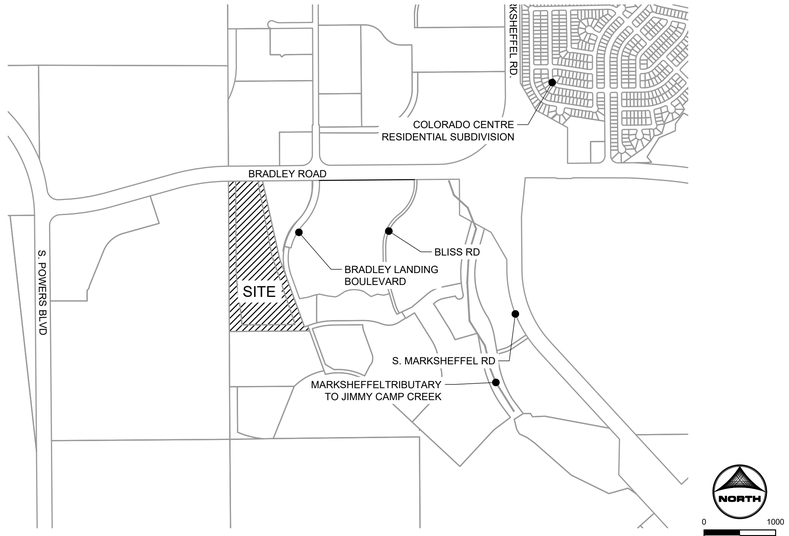
NOTICE OF PRIVATE WATER SYSTEM REC NO: N/A

BUILDING SPRINKLED: NO

BUILDING DATA	
BUILDING SIZE (GROSS S.F.)	2,200
TYPE OF CONSTRUCTION:	V-B
LARGEST BUILDING S.F:	2,200
REQ GPM FIRE FLOW.:	1,500
REQ. MIN. NUMBER HYDRANTS:	1
AVE. DIST. BETWEEN HYD:	500'
MAX. HOSE LAY DIST:	250'
BUILDING SPRINKLED:	NO

ACCORDING TO CALCULATIONS REVIEWED BY COLORADO SPRINGS UTILITIES, THE THEORETICAL AVAILABLE FIRE FLOW AT EACH FIRE HYDRANT NODE UNDER MAXIMUM DAY DEMAND CONDITIONS WITH A 20 PSI RESIDUAL IS AS FOLLOWS (ACTUAL FIRE FLOW MAY VARY DUE TO VARIOUS PARAMETERS):

FIRE FLOW			
NODE	FIRE FLOW (GPM)	PSI @ MDD	MAX PSI @ BURY DEPTH
F	3000	141	153
G	2700	70	75
H	2900	133	145
I	2900	138	149
J	2900	133	145
K	2600	66	71
L	2200	68	73
M	1900	72	78



VICINITY MAP
SCALE: 1"=1000'

SHEET INDEX:

1 - COVER
2 - LEGEND & TYPICAL SECTIONS
3 - WATER PLAN & PROFILE 01
4 - WATER PLAN & PROFILE 02
5 - WATER PLAN & PROFILE 03
6 - WATER PLAN & PROFILE 04
7 - WATER PLAN & PROFILE 05
8 - FIRE HYDRANT & OVERALL PLAN
9 - WATER DETAILS
10 - WATER DETAILS-02

1

LEGAL DESCRIPTION:

A PARCEL OF LAND LYING WITHIN THE SOUTHEAST QUARTER OF SECTION 9, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: THE NORTH-SOUTH CENTERLINE OF SAID SECTION 9, MONUMENTED AT BOTH ENDS BY A 3 1/4" ALUMINUM CAP STAMPED "RLS 10377", AND IS ASSUMED TO BEAR S 00°19'23" E, A DISTANCE OF 5252.20 FEET.

A PARCEL OF LAND LYING WITHIN THE EAST HALF OF SECTION 9, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH/ P.M., COUNTY OF EL PASO, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: THE NORTH-SOUTH CENTERLINE OF SAID SECTION 9, MONUMENTED AT BOTH ENDS BY A 3 1/4" ALUMINUM CAP STAMPED "RLS 10377", IS ASSUMED TO BEAR S 00°19'23" E, A DISTANCE OF 5252.20 FEET.

COMMENCING AT THE SOUTH QUARTER CORNER OF SAID SECTION 9;
THENCE N 00°19'23" W ALONG SAID NORTH-SOUTH CENTERLINE, A DISTANCE OF 1577.02 FEET TO THE POINT OF BEGINNING;
THENCE CONTINUING ALONG SAID NORTH-SOUTH CENTERLINE N 00°19'23" W, A DISTANCE OF 2061.22 FEET TO A POINT ON THE SOUTH LINE OF BRADLEY ROAD AS RECORDED UNDER BOOK 5307 AT PAGE 1472 OF THE RECORDS OF EL PASO COUNTY;
THENCE N 89°30'18" E ALONG SAID SOUTH LINE, A DISTANCE OF 475.67 FEET TO THE NORTHEASTERLY CORNER OF THAT PARCEL OF LAND DESCRIBED IN THE PERSONAL REPRESENTATIVE'S DEED AS TSN 55000-00-392 (PAGE 15 OF 27) AS RECORDED UNDER RECEPTION NO. 221054106 OF SAID RECORDS;
THENCE THE FOLLOWING THREE (3) COURSES ALONG THE EASTERLY EXTERIOR OF SAID PARCEL OF LAND IN SAID PERSONAL REPRESENTATIVE'S DEED:
1) THENCE S 12°12'47" E, A DISTANCE OF 1131.93 FEET;
2) THENCE S 19°56'27" E, A DISTANCE OF 292.74 FEET;
3) THENCE N 70°03'49" E, A DISTANCE OF 13.00 FEET;
THENCE S 19°56'27" E, A DISTANCE OF 396.84 FEET;
THENCE 77.66 FEET ALONG THE ARC OF A 437.50 FOOT RADIUS CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 10°10'15" AND A CHORD THAT BEARS S 14°51'20" E, 77.56 FEET;
THENCE 46.60 FEET ALONG THE ARC OF A 262.50 FOOT RADIUS REVERSE CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 10°10'15" AND A CHORD THAT BEARS S 14°51'20" E, 46.54 FEET;
THENCE S 19°56'27" E, A DISTANCE OF 128.89 FEET;
THENCE S 25°03'33" W, A DISTANCE OF 42.43 FEET;
THENCE S 70°03'33" W, A DISTANCE OF 52.19 FEET;
THENCE 103.73 FEET ALONG THE ARC OF A 298.00 FOOT RADIUS CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 19°56'36" AND A CHORD THAT BEARS S 80°01'51" W, 103.20 FEET;
THENCE N 89°59'51" W, A DISTANCE OF 857.99 FEET TO THE POINT OF BEGINNING.

CONTAINING A CALCULATED AREA OF 1,501,005 SQUARE FEET (34.46 ACRES) OF LAND, MORE OR LESS.

TO BE PLATTED AS BRADLEY HEIGHTS FILING 3 AND 4

APPROVED
06/16/2026 8:43:48 AM
mgackle
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1 REVISION #1:
- TYPICAL SECTION CHANGE SIDEWALK & JOINT TRENCH LOCATION (SHEET 2)
- WATER PLAN NOTE 6 (SHEETS 3-7)
- STORM CROSSING CHANGE (SHEET 4)
- PIPE MATERIAL CHANGE & HYDRANT RELOCATION (SHEET 07)

CSFD ACCEPTANCE

ALL FIRE HYDRANTS SHALL BE INSTALLED ACCORDING TO COLORADO SPRINGS UTILITIES' WATER LINE EXTENSION AND SERVICE STANDARDS.

THE NUMBER OF HYDRANTS AND HYDRANT LOCATIONS AS SHOWN ON THIS WATER PLAN ARE CORRECT AND ADEQUATE TO SATISFY THE FIRE PROTECTION REQUIREMENTS AS SPECIFIED BY THE CITY OF COLORADO SPRINGS FIRE DEPARTMENT.

APPROVED
10-30-2024 13:55:07
Water Mgr
Colorado Springs Fire Department

SIGNED: _____
CSFD, DIVISION OF THE FIRE MARSHAL

CSFD PLAN REVIEW NO.: FCS-C-FH-24-00036

COLORADO SPRINGS UTILITIES WATER MAIN DESIGN APPROVAL

APPROVED
12/26/2025 9:51:30 AM
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Colorado Springs Utilities
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PROJECT NUMBER: 2024-W1148

WORK ORDER NUMBER: 4149838

CSU SHEET 1 OF 8

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

OWNER/DEVELOPER PLAN APPROVAL

THE UNDERSIGNED OWNER/DEVELOPER AGREES THAT THEY SHALL, AT THEIR EXPENSE, BE SOLELY RESPONSIBLE FOR 1) THE INSTALLATION OF THE PROPOSED UTILITY INFRASTRUCTURE IN ACCORDANCE WITH THESE PLANS, AND 2) ALL DAMAGES AND DEFECTS ARISING FROM, OR RELATED TO, THE INSTALLATION, MAINTENANCE OR OPERATION OF THE PUBLIC UTILITY INFRASTRUCTURE FROM THE DATE OF PRELIMINARY ACCEPTANCE FOR A PERIOD OF TWO YEARS, OR UNTIL FINAL ACCEPTANCE, WHICHEVER IS LATER.

THE UNDERSIGNED UNDERSTANDS THAT ALL PRIVATE UTILITY INFRASTRUCTURE, AS INDICATED ON THESE PLANS, SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE MAINTAINED BY THE OWNER, AS REQUIRED BY *COLORADO SPRINGS UTILITIES' LINE EXTENSION AND SERVICE STANDARDS*.

☒ PUBLIC WATER MAIN PROPOSED ☐ PUBLIC WASTEWATER MAIN PROPOSED ☐ PRIVATE WATER SERVICE LINE (<4") AND/OR PRIVATE WASTEWATER SERIVE LINE (<8")
☐ PUBLIC FACILITIES PROPOSED ☐ PRIVATE FACILITIES PROPOSED

SIGNED: Jim Byers DATE: 12/18/25
OWNER/DEVELOPER
Jim Byers VP of Community Development
OWNER/DEVELOPER (PRINT NAME)

DBA: Challenger Homes, LLC

ADDRESS: 8605 Explorere Dr. Suite 250
Colorado Springs, CO, 80920

PHONE: 719-598-5192

EMAIL: jim@challengerhomes.com

COLORADO LICENSED
KENNETH MICHAEL KEMP
0054022
05/29/26
PROFESSIONAL ENGINEER

DRAWN BY: DLH	JOB DATE: 5/29/2026	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH ADJUST SCALE ACCORDINGLY.	
APPROVED: KMH	JOB NUMBER: 211448		
CAD DATE: 5/29/2026			
CAD FILE: J:\2021\211448\CAD\Dwgs\C\CDs\F3_CSU\Water\COVER-F4			

NO.	DATE	BY	REVISION DESCRIPTION
1	5/29/26	CVW	HYDRANT RELOCATIONS/MATERIAL CHANGE

HRGreen
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
FAX: 713.965.0044

BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
COVER

SHEET CV

1

HUHN, KEN, 5/29/2026 4:02 PM
HR GREEN Xrefs: water_plan_notes; bm_bob; legal_description; csu_wtr_approval_block; csfd_approval_block; csu_developer_approval; vicinity_map; Legend; typical_sections; xgt-1-arch dh01-CD-F4; csu_plan_information_block; csu_fire_flow; csu_wtr_approval_block_F4; CO-Stamp-Signed-Current

LEGEND

	EXISTING	PROPOSED
MATCH LINE		
PHASE LINE		
SECTION LINE		
PROPERTY BOUNDARY		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
CENTERLINE		
CHAIN LINK FENCE		
WOODEN FENCE		
ROD IRON FENCE		
GUARDRAIL		
CABLE TV	TV	TV
U.G. ELECTRIC	UE	UE
OVERHEAD ELECTRIC	OE	OE
FIBER OPTIC	FO	FO
GAS MAIN		
SANITARY SEWER	SS	
STORM DRAIN		
TELEPHONE	UT	UT
WATER MAIN	W	W
SWALE		
TRAIL		
CURB & GUTTER		
DRAINAGE BASIN		
INDEX CONTOUR		
INTER. CONTOUR		
100-YR FLOODPLAIN		
FLOODWAY		
EDGE OF WETLANDS		

DRAINAGE

	EXISTING	PROPOSED
DRAINAGE BASIN		
BASIN TAG		I.D. AREA
DESIGN POINT		1

STORM SEWER

	EXISTING	PROPOSED
MANHOLE	ST	D
STORM INLET		
FLARED END SECTION		
RIPRAP		

SANITARY SEWER

	EXISTING	PROPOSED
CLEAN OUT		
MANHOLE		S
PLUG		

WATER

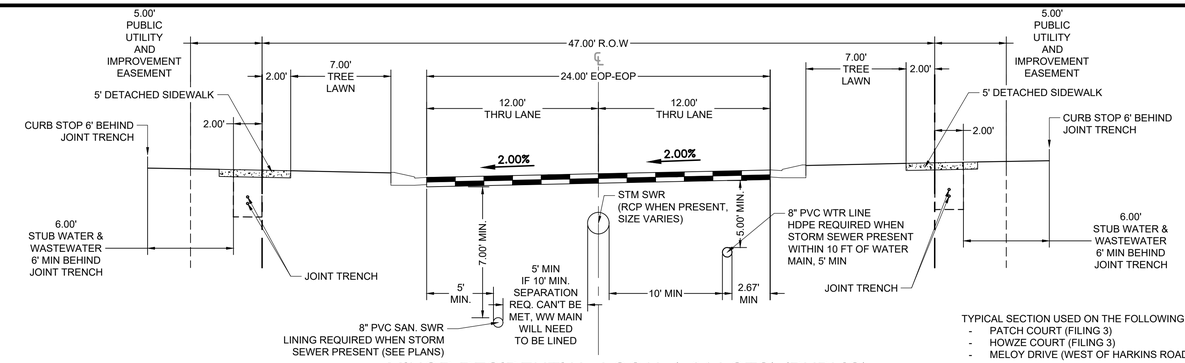
	EXISTING	PROPOSED
FIRE HYDRANT		
FIRE DEPT. CONNECTION	FDC	FDC
GATE VALVE		
MANHOLE	W	W
METER	M	M
TEE		
REDUCER		

DRY UTILITIES

ELECTRIC METER
ELECTRIC PEDESTAL
ELECTRICAL CABINET
ELECTRIC VAULT
FIBER OPTIC PULL BOX
FIBER OPTIC MANHOLE
FIBER OPTIC PEDESTAL
FIBER OPTIC SIGN
FIBER OPTIC VAULT
GAS METER
GAS SIGN
GAS VAULT
TELEPHONE CABINET
TELEPHONE MANHOLE
TELEPHONE SIGNAL/MAST
TELEPHONE SIGN
TELEPHONE PEDESTAL
TRANSFORMER
LIGHT POLE
FIBER OPTIC VAULT

MISCELLANEOUS

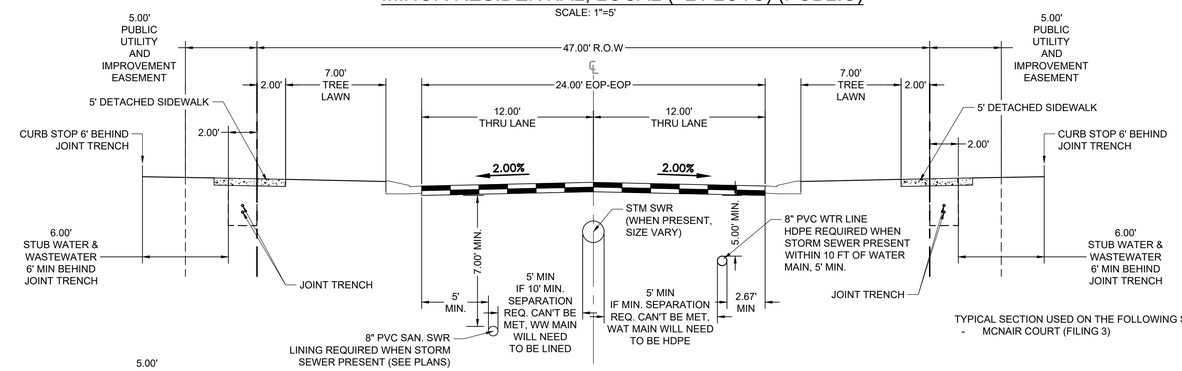
SIGN
BOLLLARD
ACCESSIBLE PARKING



TYPICAL SECTION USED ON THE FOLLOWING STREETS:
- PATCH COURT (FILING 3)
- HOWZE COURT (FILING 3)
- MELOY DRIVE (WEST OF HARKINS ROAD) (FILING 3)

MINOR RESIDENTIAL, LOCAL (<21 LOTS) (PUBLIC)

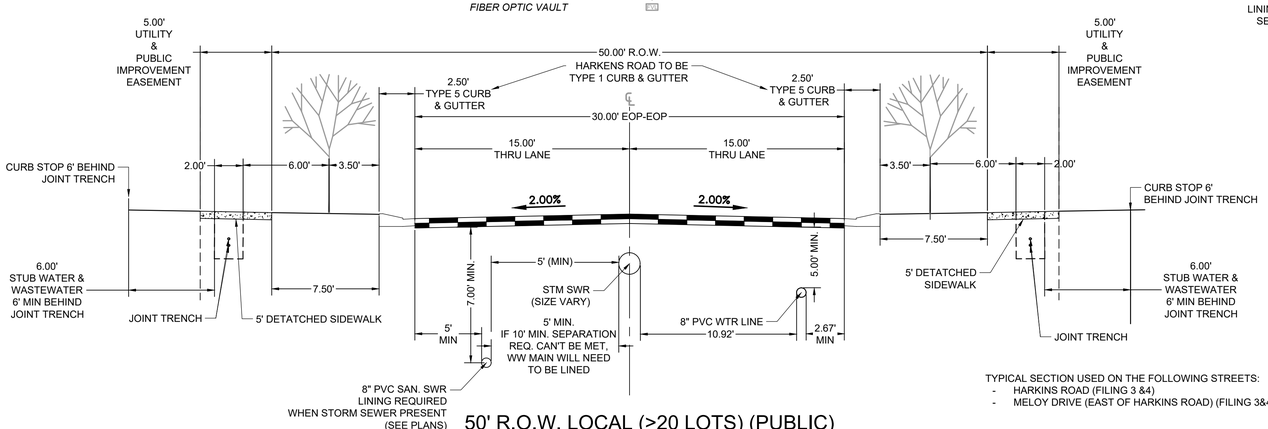
SCALE: 1"=5'



TYPICAL SECTION USED ON THE FOLLOWING STREETS:
- MCNAIR COURT (FILING 3)

MINOR RESIDENTIAL, LOCAL (<21 LOTS) (PUBLIC)

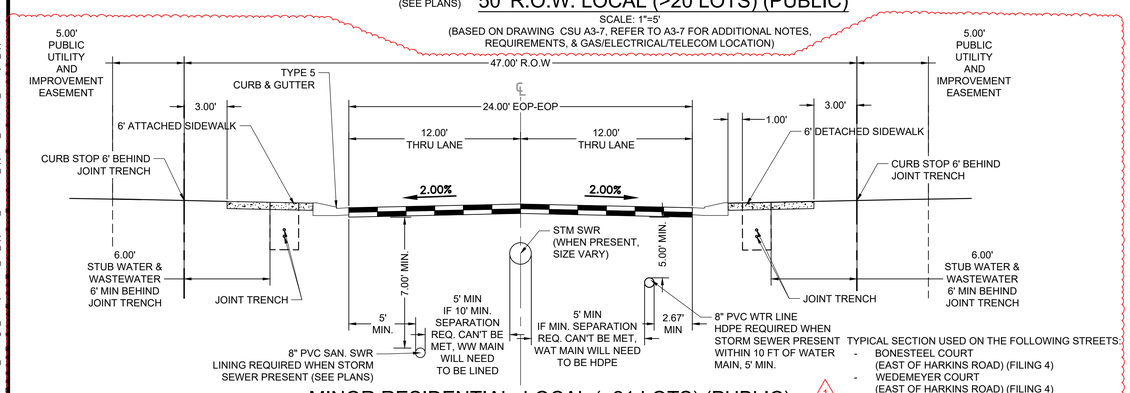
SCALE: 1"=5'



TYPICAL SECTION USED ON THE FOLLOWING STREETS:
- HARKINS ROAD (FILING 3 &4)
- MELOY DRIVE (EAST OF HARKINS ROAD) (FILING 3&4)

50' R.O.W. LOCAL (>20 LOTS) (PUBLIC)

SCALE: 1"=5'
(BASED ON DRAWING CSU A3-7, REFER TO A3-7 FOR ADDITIONAL NOTES, REQUIREMENTS, & GAS/ELECTRICAL/TELECOM LOCATION)

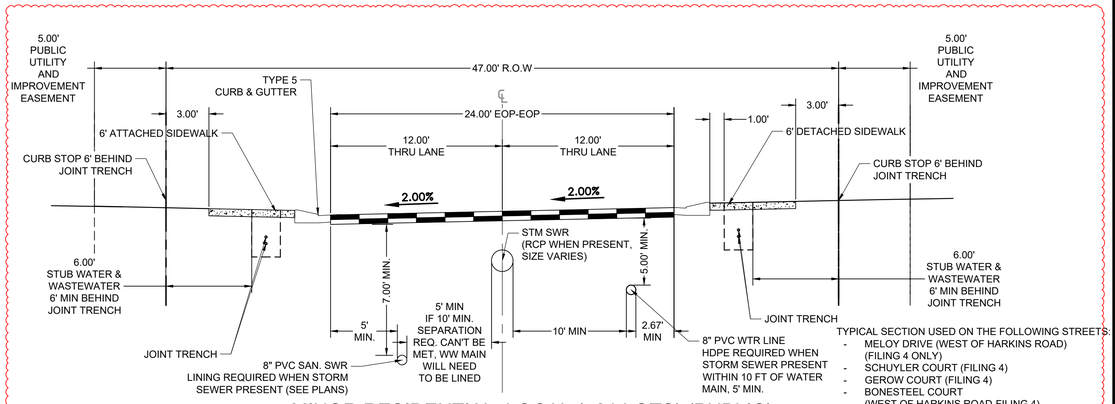


TYPICAL SECTION USED ON THE FOLLOWING STREETS:
- BONESTEEL COURT (EAST OF HARKINS ROAD) (FILING 4)
- WEDEMEYER COURT (EAST OF HARKINS ROAD) (FILING 4)

MINOR RESIDENTIAL, LOCAL (<21 LOTS) (PUBLIC)

1

SCALE: 1"=5'



TYPICAL SECTION USED ON THE FOLLOWING STREETS:
- MELOY DRIVE (WEST OF HARKINS ROAD) (FILING 4 ONLY)
- SCHUYLER COURT (FILING 4)
- GEROW COURT (FILING 4)
- BONESTEEL COURT (WEST OF HARKINS ROAD-FILING 4)
- WEDMEYER COURT (WEST OF HARKINS ROAD-FILING 4)

MINOR RESIDENTIAL, LOCAL (<21 LOTS) (PUBLIC)

1

SCALE: 1"=5'

1

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06/16/2026 8:44:02 AM
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1 REVISION #1:
- TYPICAL SECTION CHANGE SIDEWALK & JOINT TRENCH LOCATION (SHEET 2)
- WATER PLAN NOTE 6 (SHEETS 3-7)
- STORM CROSSING CHANGE (SHEET 4)
- PIPE MATERIAL CHANGE & HYDRANT RELOCATION (SHEET 07)

COLORADO SPRINGS UTILITIES
WATER MAIN DESIGN APPROVAL

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12/26/2025 9:51:39 AM
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PROJECT NUMBER: 2024-W1148
WORK ORDER NUMBER: 4149838
CSU SHEET 2 OF 8

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

COLORADO LICENSED
KENNETH MICHAEL HUHN
0054022
06/11/26
PROFESSIONAL ENGINEER

DRAWN BY: DLH JOB DATE: 6/11/2026
APPROVED: KMH JOB NUMBER: 211448
CAD DATE: 6/11/2026
CAD FILE: J:\2021\211448\CAD\Dwgs\C\CDs\F3_CSU\Water\COVER-F4

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION
1	5/29/26	CVW	HYDRANT RELOCATIONS/MATERIAL CHANGE

HRGreen
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
FAX: 713.965.0044

BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

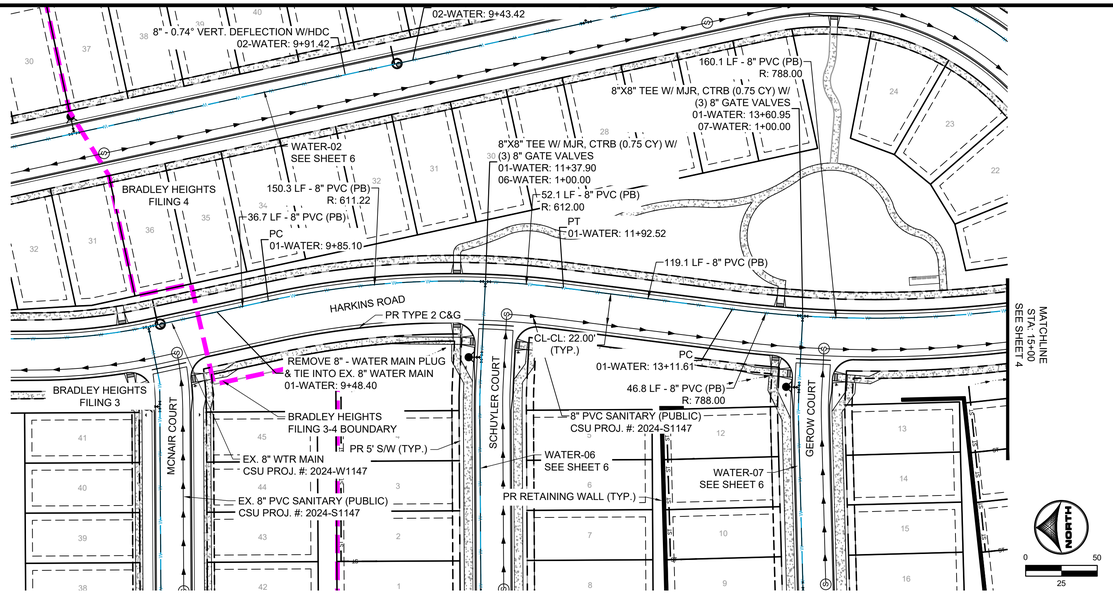
CHALLENGER HOMES

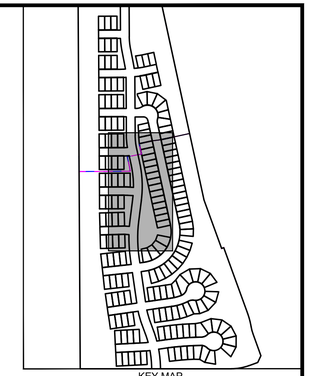
CONSTRUCTION DOCUMENTS
LEGEND & TYPICAL SECTIONS

SHEET LG

2

HUHN, KEN, 6/11/2026 8:14 AM
HR GREEN Xrefs: water_plan_notes; bm_bob; legal_description; csu_wtr_approval_block; cs4d_approval_block; csu_developer_approval; vicinity_map; Legend; typical_sections; xgt-1-arch dl01-CD-F4; csu_plan_information_block; csu_fire_flow; csu_wtr_approval_block; csu_wtr_approval_block_F4; CO-Stamp-Signed-Current





KEY MAP
SCALE: NTS

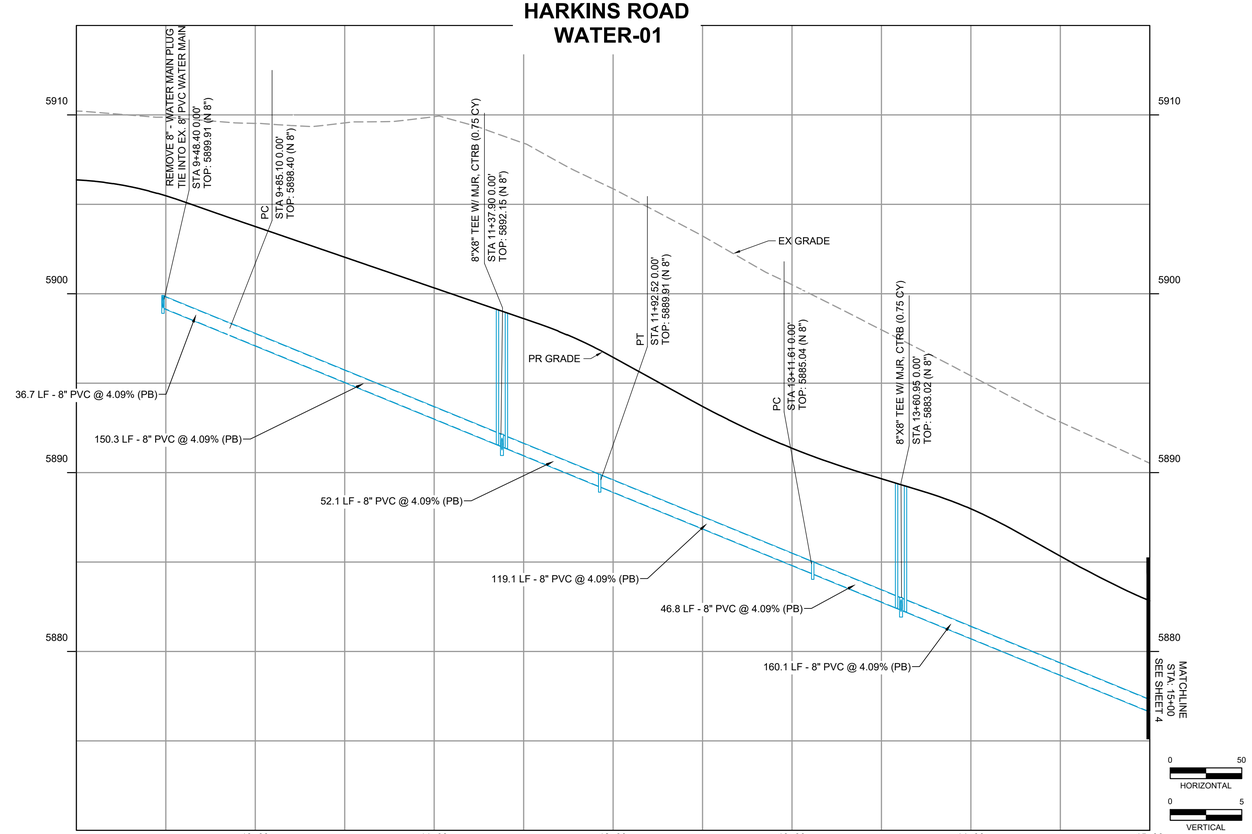
WATER PLAN NOTES:

1. GAS AND ELECTRIC MAIN EXTENSIONS ASSOCIATED WITH THE PROJECT ARE TO BE DESIGNED BY COLORADO SPRINGS UTILITIES (CSU). CONTACT CSU REGARDING PROPOSED ALIGNMENTS.
2. ALL ONSITE WATER MAINS ARE 8" PVC AND PUBLIC.
3. ALL ONSITE FIRE HYDRANT LATERALS ARE 6" PVC AND PUBLIC.
4. ALL WATER MAIN AND SERVICE LINES WITH SLOPE GREATER THAN 10% WILL NEED TO BE FULLY RESTRAINED PER CSU WATER LESS STANDARDS.
5. WATER METER AND BACKFLOW PREVENTION ASSEMBLY WILL BE LOCATED INSIDE BUILDING. REFER TO ARCHITECTURAL PLANS.
6. 1 LOTS 66-78, AND 87-100 ARE SINGLE FAMILY DETACHED UNITS
7. MJ RESTRAINTS ARE REQUIRED ON ALL TEES, VALVES, BENDS, ETC.

ABBREVIATIONS:

P.U.E - PUBLIC UTILITY EASEMENT
P.U.D.E - PUBLIC UTILITY & DRAINAGE EASEMENT
MJR - MECHANICAL JOINT RESTRAINT
CTRB - CONCRETE THRUST REACTION BLOCK
PB - PUBLIC
FE - FLANGE ELEVATION

HARKINS ROAD
WATER-01



APPROVED
06/16/2026 8:44:09 AM
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1

REVISION #1:
- TYPICAL SECTION CHANGE SIDEWALK & JOINT TRENCH LOCATION (SHEET 2)
- WATER PLAN NOTE 6 (SHEETS 3-7)
- STORM CROSSING CHANGE (SHEET 4)
- PIPE MATERIAL CHANGE & HYDRANT RELOCATION (SHEET 07)

COLORADO SPRINGS UTILITIES
WATER MAIN DESIGN APPROVAL

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12/26/2025 9:51:46 AM
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PROJECT NUMBER: 2024-W1148
WORK ORDER NUMBER: 4149838
CSU SHEET 3 OF 8

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

COLORADO LICENSED
KENNETH MICHAEL KAHN
0054022
05/29/26
PROFESSIONAL ENGINEER

DRAWN BY: DLH	JOB DATE: 5/29/2026		BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.
APPROVED: KMH	JOB NUMBER: 211448		
CAD DATE: 5/29/2026			
CAD FILE: J:\2021\211448\CAD\Dwgs\C\CDs\F3_CSU\Water\Water_PNP			

NO.	DATE	BY	REVISION DESCRIPTION

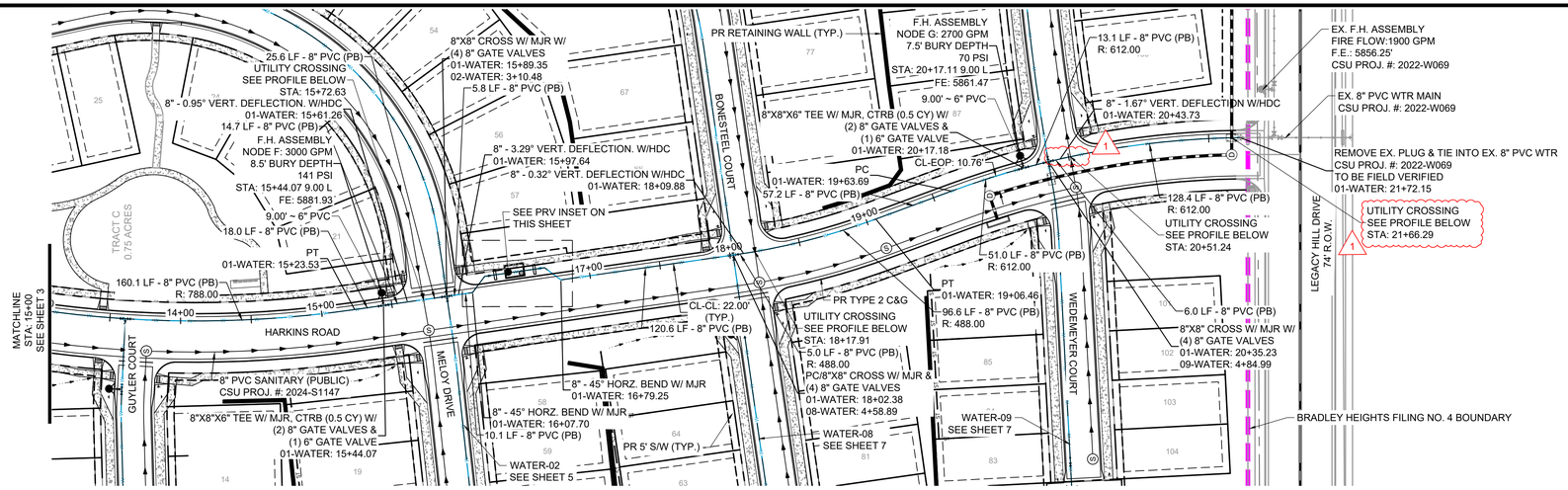
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
FAX: 713.965.0044

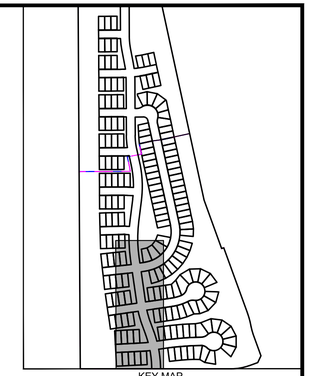
BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

CONSTRUCTION DOCUMENTS
WATER PLAN & PROFILE 01

SHEET WTR 3

HUHN, KEN, 5/29/2026 4:03 PM
HR GREEN Xrefs: xc-03-util; xc-03-row; xc-03-dsgn; key_map; xv-util; xv-row; xv-dsgn; xc-util-matrix; xc-dsgn-matrix; csu_water_cd_notes; csu_wtr_approval_block; xgt-1-arch dh01-CD-F3; xgt-1-arch dh01-CD-F3; CO-Stamp-Signed-Current; csu_wtr_approval_block_F3





WATER PLAN NOTES:

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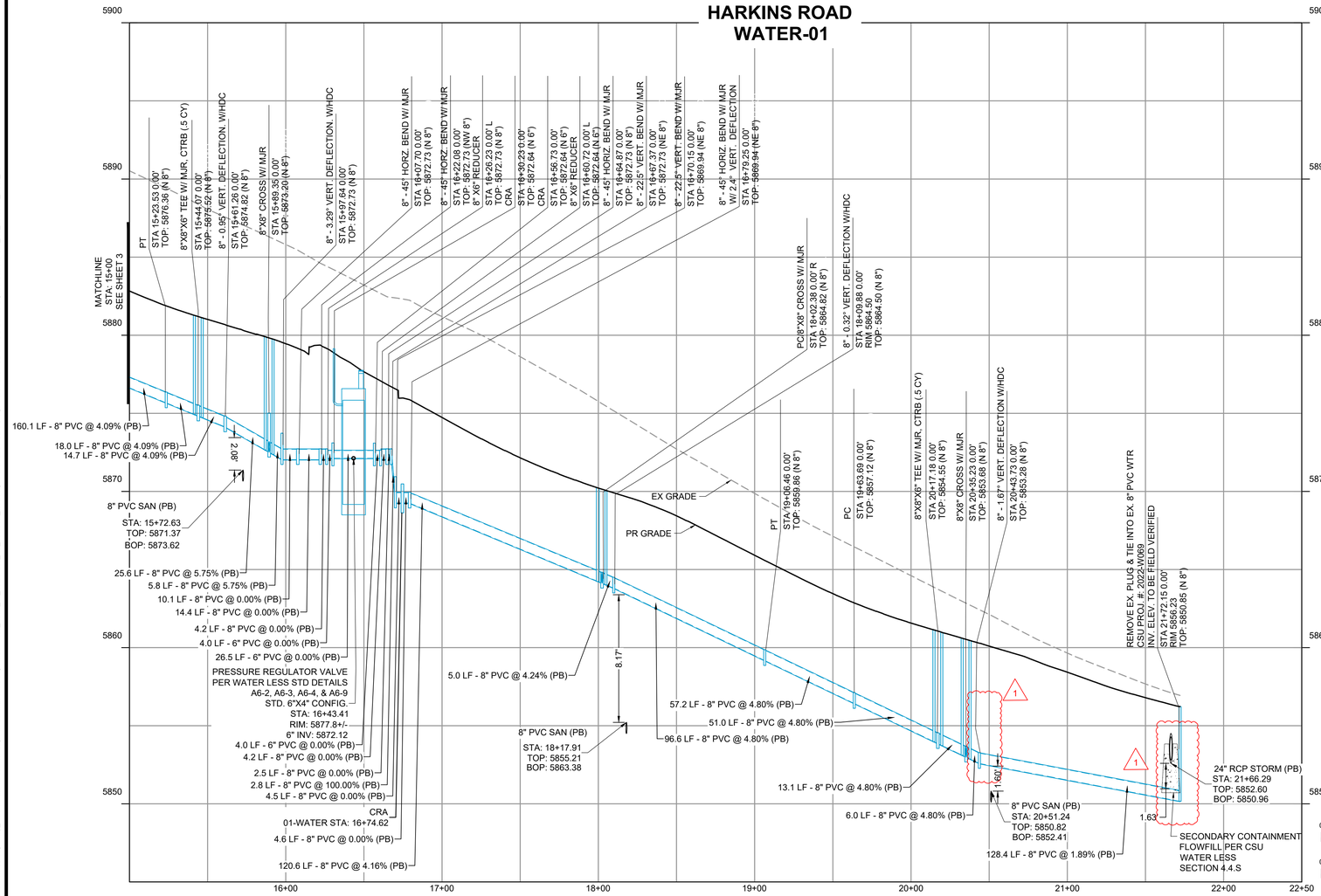
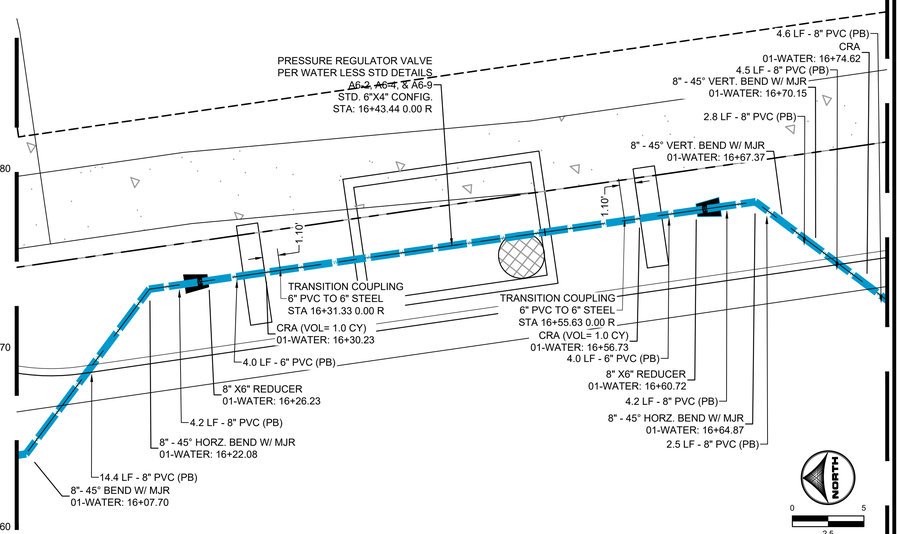
MJR - MECHANICAL JOINT RESTRAINT
CTRB - CONCRETE THRUST REACTION BLOCK
PB - PUBLIC
FE - FLANGE ELEVATION

HARKINS ROAD WATER-01





PRESSURE REGULATOR VALVE INSET

1 APPROVED 06/16/2026 8:44:15 AM mgackle Water Colorado Springs Utilities It's how we're all connected

1 REVISION #1:
- TYPICAL SECTION CHANGE SIDEWALK & JOINT TRENCH LOCATION (SHEET 2)
- WATER PLAN NOTE 6 (SHEETS 3-7)
- STORM CROSSING CHANGE (SHEET 4)
- PIPE MATERIAL CHANGE & HYDRANT RELOCATION (SHEET 07)

COLORADO SPRINGS UTILITIES WATER MAIN DESIGN APPROVAL

APPROVED 12/26/2025 9:51:54 AM mgackle Water Colorado Springs Utilities It's how we're all connected

PROJECT NUMBER: 2024-W1148
WORK ORDER NUMBER: 4149838
CSU SHEET 4 OF 8

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

COLORADO LICENSED KENNETH MICHAEL HUHN 0054022 06/11/26 PROFESSIONAL ENGINEER

DRAWN BY: DLH JOB DATE: 6/10/2026
APPROVED: KMH JOB NUMBER: 211448
CAD DATE: 6/10/2026
CAD FILE: J:\2021\211448\CAD\Dwgs\C\CDs\F3_CSU\Water\Water_PNP

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NO.	DATE	BY	REVISION DESCRIPTION
1	5/29/26	CVW	HYDRANT RELOCATIONS/MATERIAL CHANGE

HRGreen
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
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BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
WATER PLAN & PROFILE 02

SHEET WTR 4

HUHN, KEN, 6/10/2026 4:48 PM

HR GREEN Xrefs: xc-03-util; xc-03-row; xc-03-dsgn; key_map; xv-utl; xv-row; xv-dsgn; xc-util-matrix; xc-dsgn-matrix; csu_water_cd_notes; csu_wtr_approval_block; xgr1-arch dfr01-CD-F3; xgr1-arch dfr01-CD-F4; CO-Stamp-Signed-Current; csu_wtr_approval_block_F3

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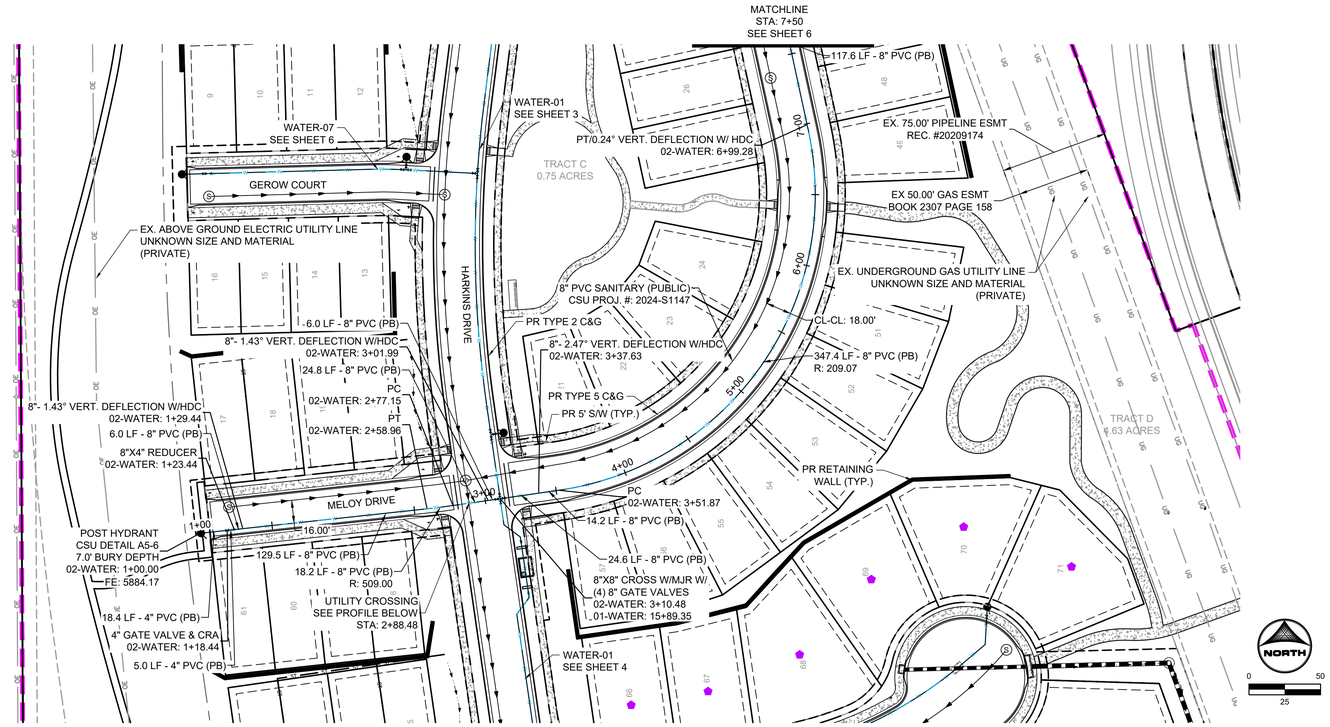

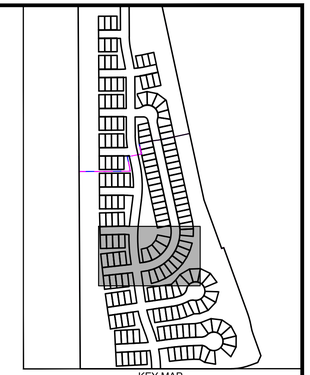

KEY MAP
SCALE: NTS

WATER PLAN NOTES:

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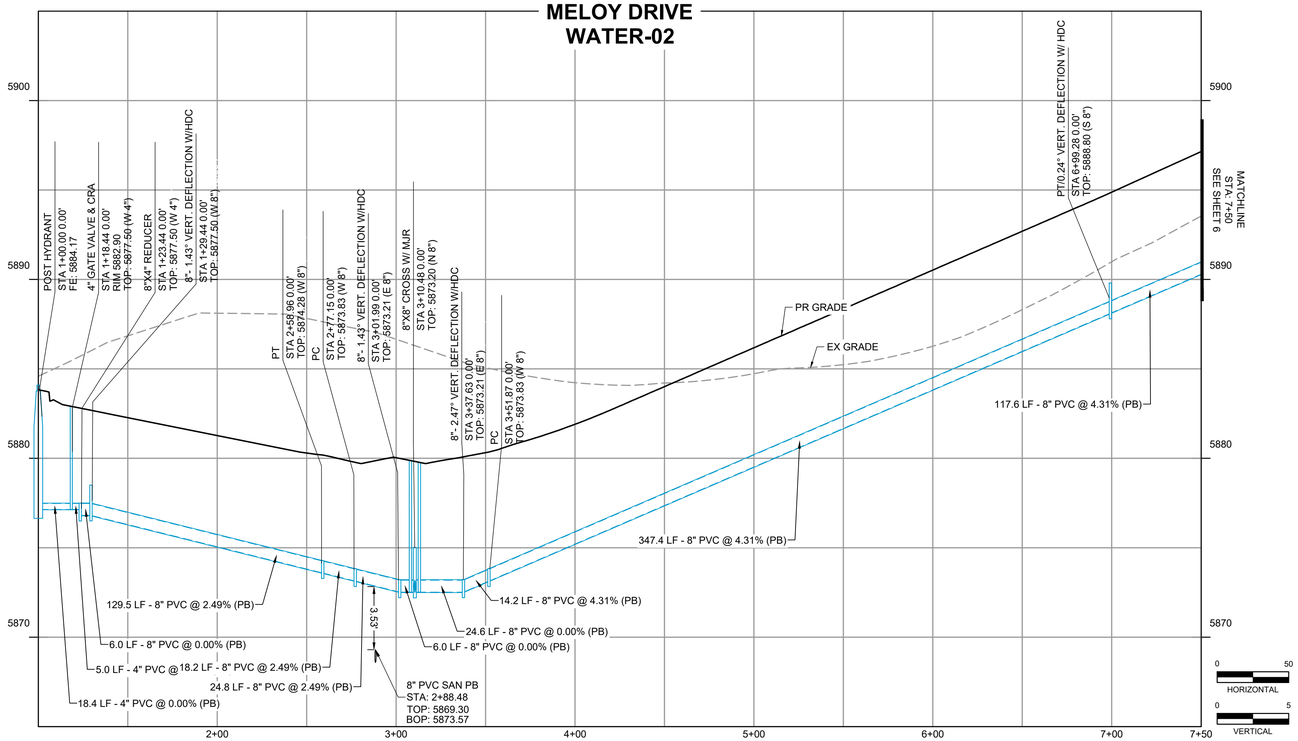

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REVISION #1:
- TYPICAL SECTION CHANGE SIDEWALK & JOINT TRENCH LOCATION (SHEET 2)
- WATER PLAN NOTE 6 (SHEETS 3-7)
- STORM CROSSING CHANGE (SHEET 4)
- PIPE MATERIAL CHANGE & HYDRANT RELOCATION (SHEET 07)

COLORADO SPRINGS UTILITIES
WATER MAIN DESIGN APPROVAL

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PROJECT NUMBER: 2024-W1148
WORK ORDER NUMBER: 4149838
CSU SHEET 5 OF 8

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COLORADO LICENSED
KENNETH MICHAEL HUHN
0054022
05/29/26
PROFESSIONAL ENGINEER

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APPROVED: KMH	JOB NUMBER: 211448	IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
CAD DATE: 5/29/2026			
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NO.	DATE	BY	REVISION DESCRIPTION

HRGreen
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
FAX: 713.965.0044

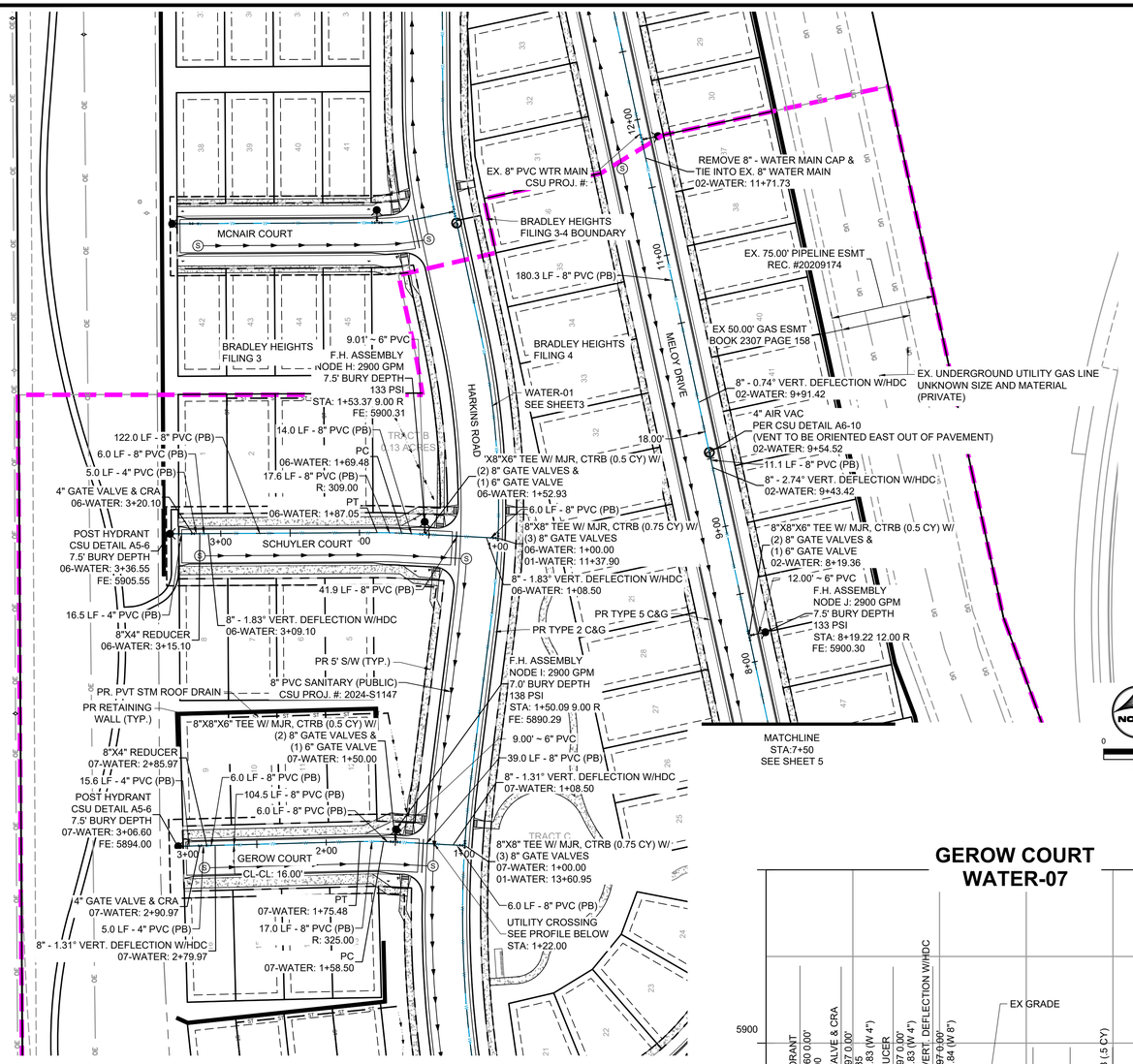
BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

CHALLENGER HOMES

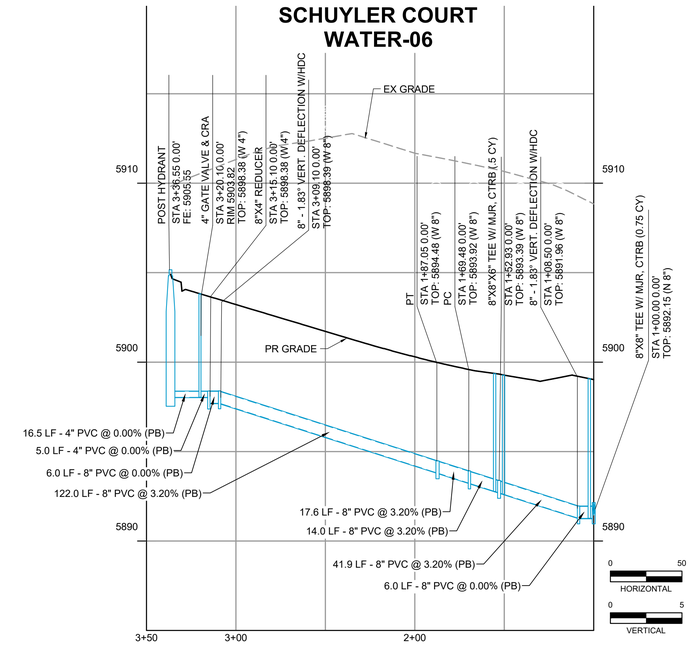
CONSTRUCTION DOCUMENTS
WATER PLAN & PROFILE 03

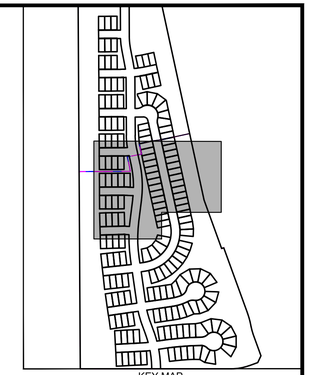
SHEET
WTR
5

HR GREEN Xrefs: xc-03-util; xc-03-row; xc-03-dsgn; key_map; xv-util; xv-row; xv-dsgn; xc-util-matrix; xc-dsgn-matrix; csu_wtr_approval_block; xgf-1-arch dh01-CD-F4; CO-Stamp-Signed-Current; csu_wtr_approval_block_F3



SCHUYLER COURT WATER-06





KEY MAP
SCALE: NTS

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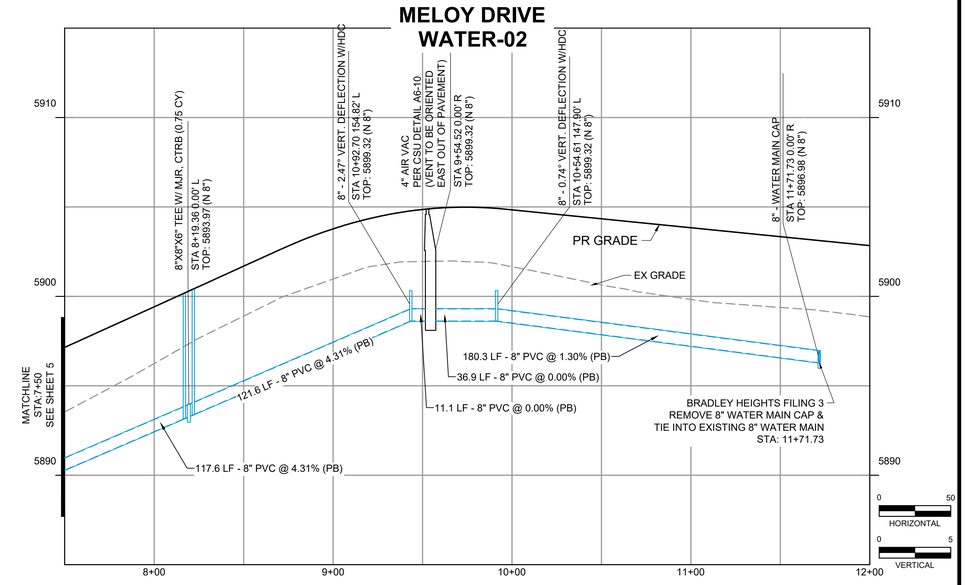
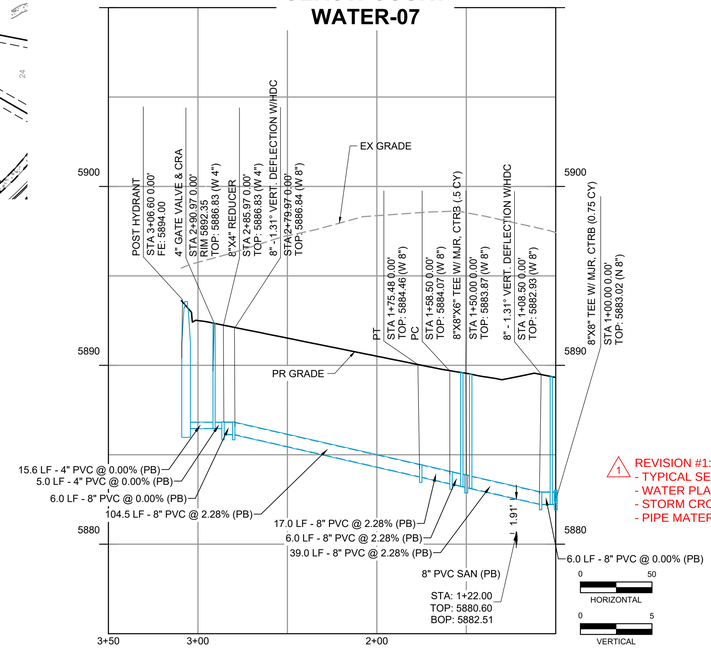
MELOY DRIVE WATER-02



GEROW COURT WATER-07



REVISION #1:
- TYPICAL SECTION CHANGE SIDEWALK & JOINT TRENCH LOCATION (SHEET 2)
- WATER PLAN NOTE 6 (SHEETS 3-7)
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PROJECT NUMBER: 2024-W1148
WORK ORDER NUMBER: 4149838
CSU SHEET 6 OF 8

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COLORADO LICENSED 0054022 KENNETH MICHAEL HUHN 06/11/26 PROFESSIONAL ENGINEER

DRAWN BY: DLH	JOB DATE: 6/10/2026	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
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NO.	DATE	BY	REVISION DESCRIPTION
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HRGreen
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
FAX: 713.965.0044

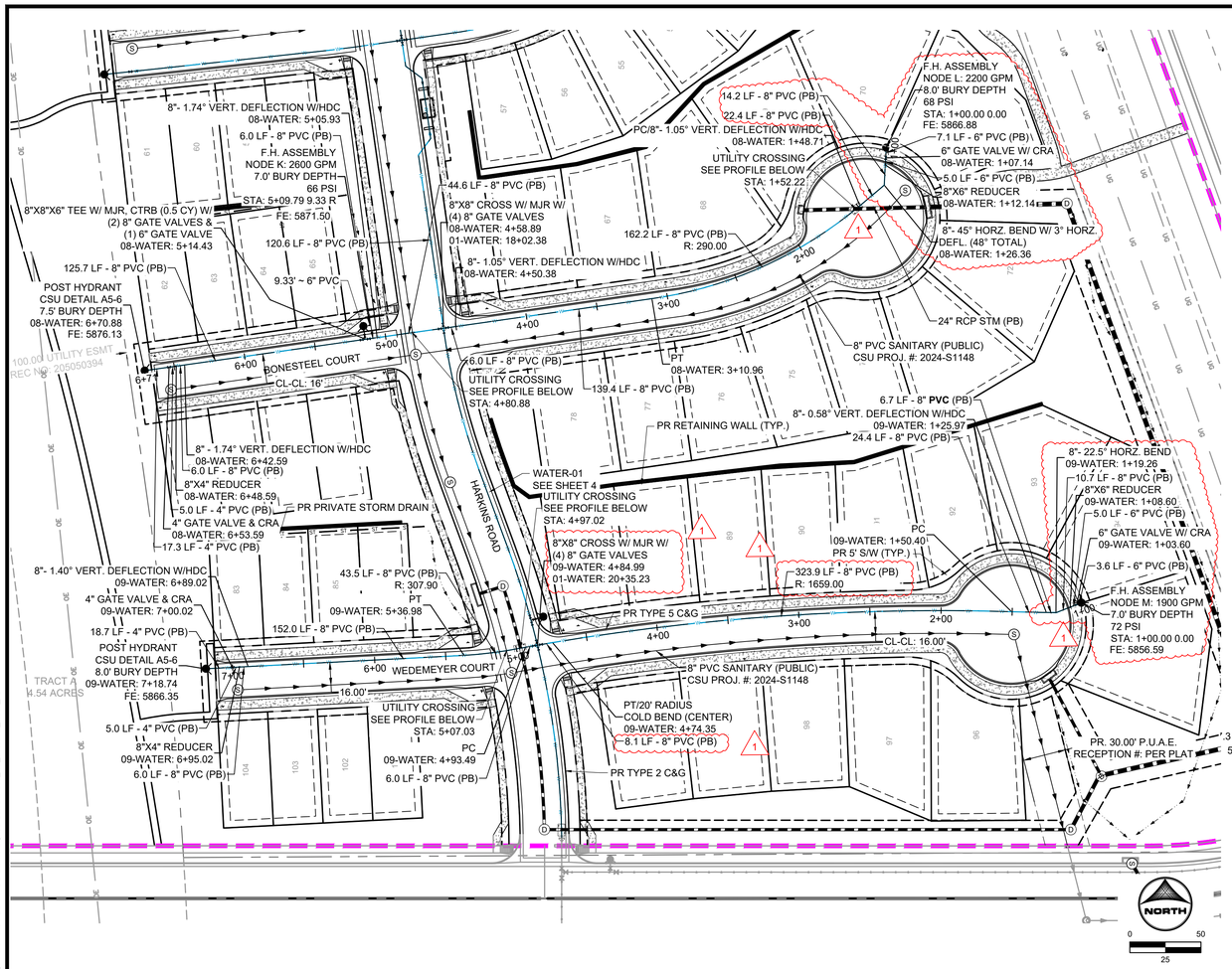
BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
WATER PLAN & PROFILE 04

SHEET WTR 6

HUHN, KEN, 6/10/2026 4:47 PM
HR GREEN Xrefs: xc-03-util; xc-03-row; xc-03-dsgn; key_map; xv-util; xv-row; xv-dsgn; xc-util-matrix; csu_water_cd_notes; csu_wtr_approval_block; xgt-1-arch dh01-CD-F3; xgt-1-arch dh01-CD-F4; CO-Stamp-Signed-Current; csu_wtr_approval_block_F3



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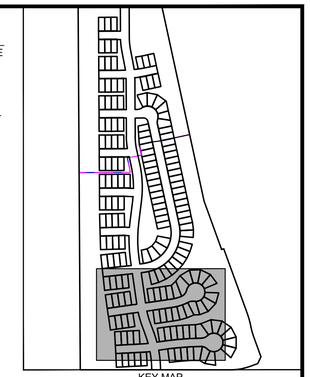
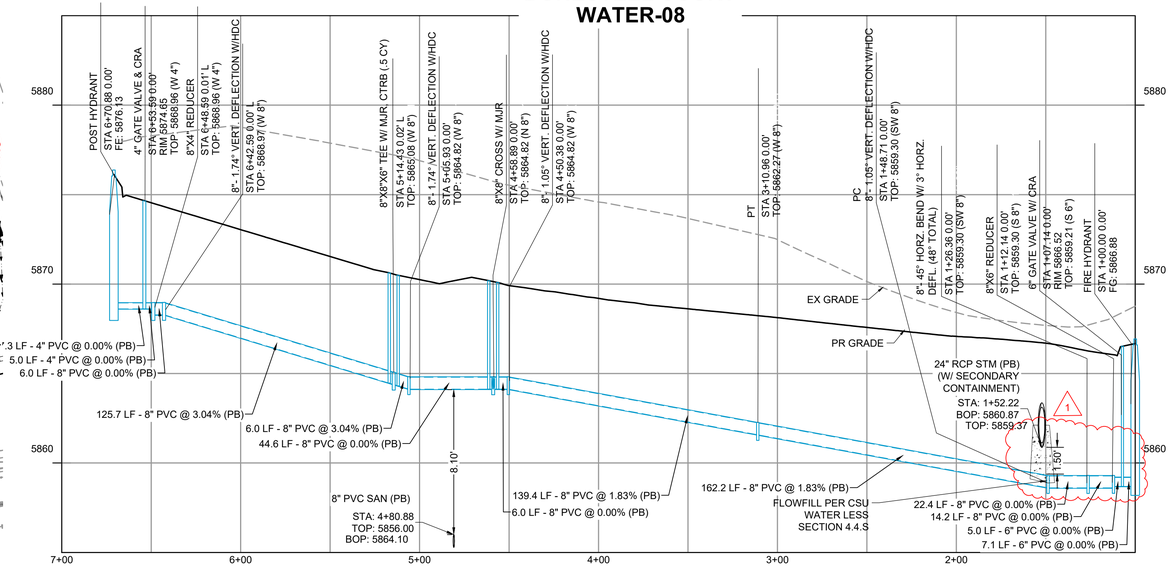
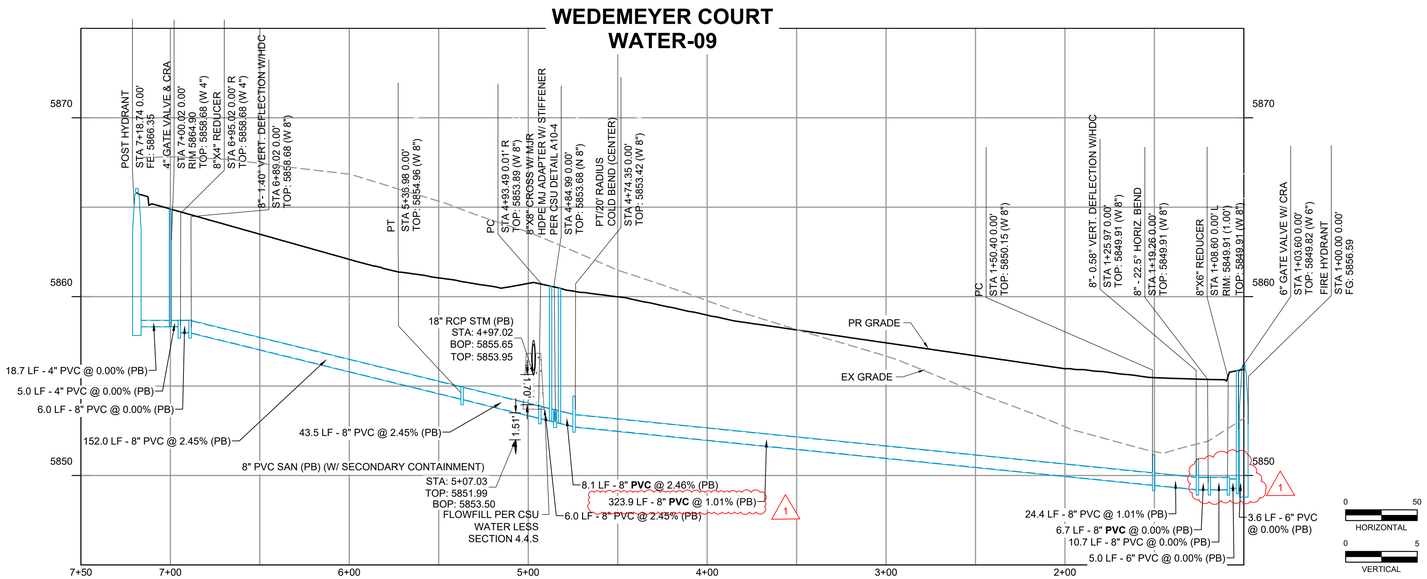


KEY MAP
SCALE: NTS

BONESTEEL COURT
WATER-08



WEDEMEYER COURT
WATER-09



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(1) REVISION #1:
- TYPICAL SECTION CHANGE SIDEWALK & JOINT TRENCH LOCATION (SHEET 2)
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COLORADO SPRINGS UTILITIES
WATER MAIN DESIGN APPROVAL

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PROJECT NUMBER: 2024-W1148
WORK ORDER NUMBER: 4149838
CSU SHEET 7 OF 8

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COLORADO LICENSED
KENNETH MICHAEL KUHN
0054022
06/11/26
PROFESSIONAL ENGINEER

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HRGreen
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1975 RESEARCH PARKWAY SUITE 230
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PHONE: 719.300.4140
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BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

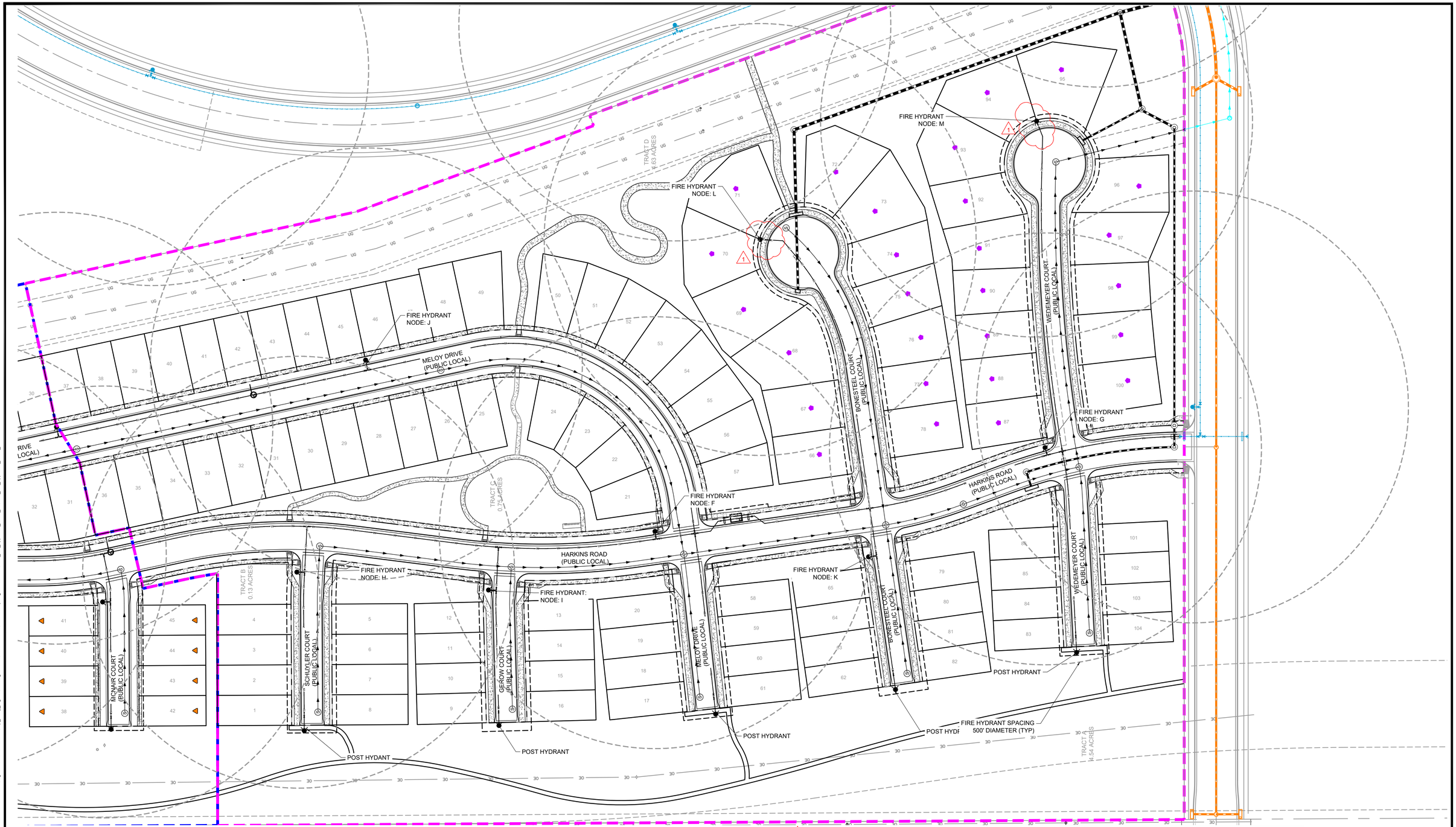
CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
WATER PLAN & PROFILE 05

SHEET
WTR
7

HUHN, KEN, 6/10/2026 5:01 PM
HR GREEN Xrefs: xc-03-util; xc-03-row; xc-03-dsgn; key_map; xv-util; xv-row; xv-dsgn; xc-util-matrix; xc-dsgn-matrix; csu_water_cd_notes; csu_wr_approval_block; xgf-1-arch dh01-CD-F3; xgf-1-arch dh01-CD-F4; CO-Stamp-Signed-Current; csu_wr_approval_block_F3

HUHN, KEN, 5/29/2026 4:06 PM



UTILITY LEGEND

EX WATER LINE (TO BE REMOVED)	EX SEWER (TO REMAIN)
EX WATER LINE (TO REMAIN)	PROPOSED 8" SEWER
PROPOSED 8" WATER LINE	PROPOSED 8" SEWER (BY BHMD)
PROPOSED 8" WATER LINE (BY BHMD)	PROPOSED STORM SEWER
FUTURE 24" WATER LINE (BY OTHERS)	PROPOSED STORM SEWER (BY BHMD)
FILING 3 BOUNDARY	
FILING 4 BOUNDARY	

1

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COLORADO SPRINGS UTILITIES
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PROJECT NUMBER: 2024-W1148
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CSU SHEET 8 OF 8

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NORTH
0 25 50

COLORADO LICENSED
KENNETH MICHAEL HUHN
0054022
05/29/26
PROFESSIONAL ENGINEER

DRAWN BY: DLH
JOB DATE: 5/15/2026
APPROVED: KMH
JOB NUMBER: 211448
CAD DATE: 5/29/2026
CAD FILE: J:\2021\211448\CAD\Dwgs\C\CDs\F3_CSU\Water\FIRE HYDRANT PLAN

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0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION
1	5/29/26	CVW	HYDRANT RELOCATIONS/MATERIAL CHANGE

HRGreen
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
FAX: 713.965.0044

BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
FIRE HYDRANT & OVERALL PLAN

SHEET FH

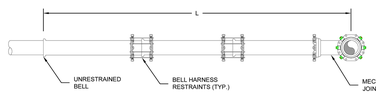
8

HR GREEN Xrefs: xc-03-util; xv-dsgn; xv-row; xv-util; xc-03-dsgn; xc-03-row; xgl-1-arch dft01-CD-F4; dp_utility_legend; xc-dsgn-matrix; xc-util-matrix; CO-Stamp-Signed-Current; csu_wtr_approval_block_F3; csu_wtr_approval_block_F4

HUHN, KEN, 12/18/2025 1:15 PM

L = MINIMUM RESTRAINED PIPE LENGTH (FEET)

PIPE DIAMETER		45° BEND			22-1/2° BEND			11-1/4° BEND			DEAD END VALVE OR PLUG TO INCLUDE IN-LINE VALVES (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	49	73	97
8 INCH	DUCTILE IRON AND PVC	8	12	16	4	6	8	2	3	4	63	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	USE CONCRETE REVERSE ANCHOR	USE CONCRETE REVERSE ANCHOR	USE CONCRETE REVERSE ANCHOR
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			



NOTES:

1. PRESSURE GREATER THAN 200 PSI REQUIRE SPECIAL DESIGN APPROVED BY SPRINGS UTILITIES. APPROVED BY COLORADO SPRINGS UTILITIES.
2. LENGTH IS BASED ON MINIMUM 5 FEET OF GROUND COVER AND SOIL COMPACTED ACCORDING TO CHAPTER 5 OF THESE WATER LESS. IF THE DEPTH IS LESS THAN 5 FEET RESTRAINED LENGTH MUST BE DESIGNED BY THE DESIGN ENGINEER.
3. APPROVED METHODS OF RESTRAINED PIPE BEYOND INITIAL FITTING SHALL BE IN ACCORDANCE WITH CHAPTER 4.
4. RESTRAINED PIPE LENGTH APPLIES TO CONDITIONS WHERE NO CONCRETE THRUST REACTION BLOCK IS PRESENT.
5. 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 1/8 PIPE DIAMETER (4" MIN.)." FACTOR OF SAFETY 2:1.
6. FIGURES ARE BASED ON DIP WRAPPED IN POLYETHYLENE MATERIAL.
7. MEASUREMENTS ARE IN FEET.
8. USE CRA FOR DOWN TURNING BENDS.
9. RESTRAINED LENGTH FOR DEAD END MAY BE USED AT THE DISCRETION OF COLORADO SPRINGS UTILITIES.

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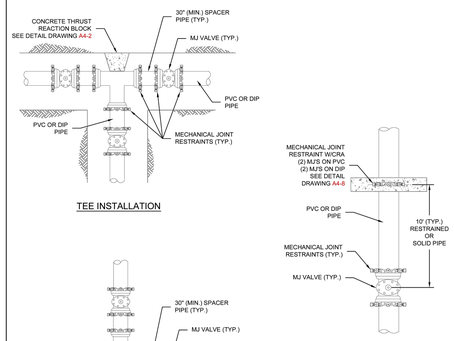
RESTRAINED PIPE LENGTH (FEET) W/MECHANICAL JOINT RESTRAINTS — A4-4 — DATED 03/2014



NOTES:

1. MECHANICAL JOINT RESTRAINTS SHALL BE APPROVED ACCORDING TO CHAPTER 4 FOR DIP AND PVC PIPE.
2. DUCTILE IRON FITTINGS AND PIPE SHALL BE WRAPPED IN POLYETHYLENE TUBING WHERE ADJACENT TO CONCRETE.

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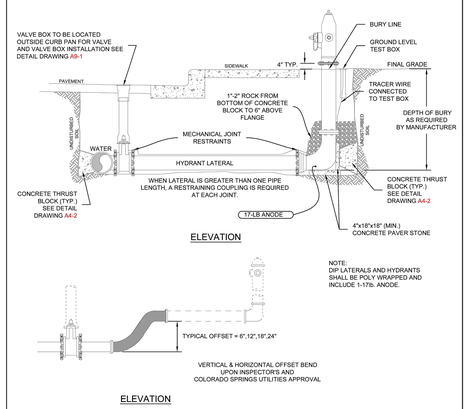
VALVE AND FITTINGS W/ MECHANICAL JOINT RESTRAINTS — A4-5 — DATED 06/2015



NOTES:

1. MECHANICAL JOINT RESTRAINTS SHALL BE INSTALLED PER DETAIL DRAWINGS A4-4, A4-5, & CHAPTER 5.
2. TRACER WIRE AND GROUND LEVEL TEST BOX TO BE INSTALLED WITH EACH FIRE HYDRANT. PLACE TEST BOX WITHIN 6" FROM THE HYDRANT.
3. REFERENCE DETAIL DRAWINGS A5-1 & A5-2 FOR FIRE HYDRANT LOCATION.
4. INSTALLATION OF A PRIVATE FIRE HYDRANT WILL REQUIRE A SECONDARY VALVE INSTALLED AT THE PROPERTY LINE.
5. HYDRANT BASE BLOCK SHALL BE PLACED ON UNDISTURBED EARTH.
6. DO NOT BLOCK WEEP HOLE WITH POLYWRAP.
7. COVER DRAIN ROCK WITH POLYWRAP PRIOR TO BACKFILL.
8. FOR HDPE HYDRANT CONNECTION SEE DETAIL DRAWING A10-9.
9. FOR PRIVATE FIRE HYDRANTS A SECONDARY VALVE SHALL BE INSTALLED ON THE PROPERTY LINE OR RIGHT-OF WAY LINE.

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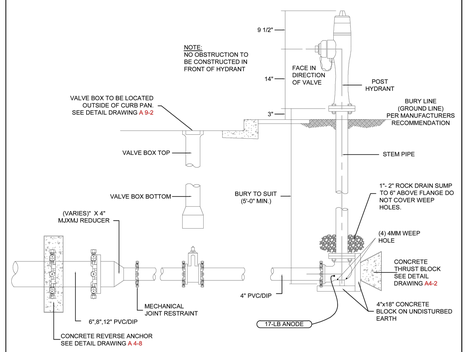
FIRE HYDRANT INSTALLATION — A5-3 — DATED 03/2014

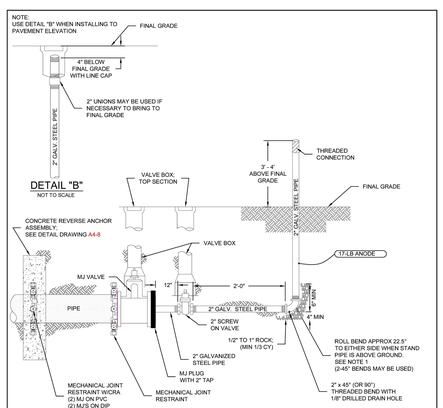


NOTE:

1. TRACER WIRE AND 17lb ANODE TO BE INSTALLED WITH EACH POST HYDRANT.
2. WHEN LATERAL IS GREATER THAN ONE PIPE LENGTH A RESTRAINING COUPLING IS REQUIRED AT EACH JOINT.
3. MAINTAIN 9' MIN. CLEARANCE AROUND POST HYDRANT FROM ABOVE GROUND STRUCTURE/VAULTS.
4. REFERENCE DETAIL DRAWING A5-1 FOR POST HYDRANT LOCATION.

Colorado Springs Utilities — It's how we're all connected

POST HYDRANT DETAIL FOR USE ON TEMPORARY OR PERMANENT DEAD ENDS — A5-6 — DATED 01/2018

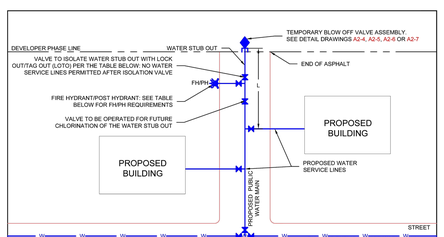


NOTES:

1. IF APPROPRIATE LOCATION FOR DISCHARGED WATER CANNOT BE REACHED BY ROLLING THE BEND ADDITIONAL BENDS MAY BE REQUIRED BY THE COLORADO SPRINGS UTILITIES INSPECTOR.
2. COAT TIE RODS, BEAM AND GALVANIZED STEEL PIPE. SEE DETAIL DRAWING A8-11.
3. ENTIRE BLOW-OFF ASSEMBLY MUST BE ADEQUATELY SUPPORTED. CONCRETE PAVER STONES MAY BE REQUIRED.
4. PIPE DOPE APPROVED FOR USE IN POTABLE WATER SYSTEMS MUST BE USED ON ALL THREADED FITTINGS.
5. TEMPORARY BLOW-OFF VALVE ASSEMBLIES SHALL BE INSPECTED BY THE COLORADO SPRINGS UTILITIES INSPECTOR PRIOR TO BACKFILL. BACKFILL COMPACTION TO BE SAME AS AS PIPE COMPACTION SPECIFICATIONS.
6. 2" GALVANIZED PIPE MUST BE RATED TO 250 PSI AND CONFORM TO NSF-61 SPECIFICATIONS.
7. THE COLORADO SPRINGS UTILITIES INSPECTOR MAY REQUIRE TIE-BACK RODS IN ADDITION TO THE MJ RESTRAINTS DEPENDING ON FIELD CONDITIONS AND SYSTEM PRESSURES. SEE TIE-BACK ROD DETAIL DRAWING A2-4.

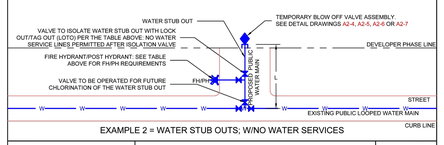
Colorado Springs Utilities — It's how we're all connected

TEMPORARY BLOW-OFF ASSEMBLIES- 4", 6" & 8" MAINS WITH MECHANICAL JOINT PLUG — A2-5 — DATED 01/2017



EXAMPLE 1 = WATER STUB OUTS; WITH WATER SERVICES

BLOW-OFF AND FIRE HYDRANT REQUIREMENTS			
LENGTH (L) OF TEMPORARY DEAD END MAIN (FEET)	TEMPORARY BLOW-OFF REQUIRED AT END OF MAIN	FIRE HYDRANT/POST HYDRANT REQUIRED NEAR END OF MAIN	LOCK OUT/TAG OUT REQUIRED
L ≤ 400' FOR 8" ≤ 200' FOR 12"	YES	NO	YES
L > 400' FOR 8" > 200' FOR 12"	YES	YES	YES
ANY LENGTH FOR 16" AND GREATER	YES	YES	YES



EXAMPLE 2 = WATER STUB OUTS; W/NO WATER SERVICES

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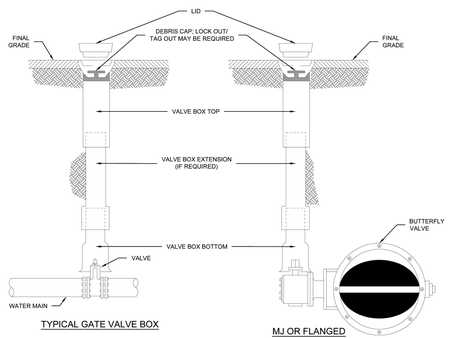
WATER STUB OUTS — A2-3 — DATED 03/2014



NOTES:

1. MAIN AND FIRE HYDRANT VALVES AND VALVE BOXES SHALL NOT BE IN THE CURB PAN, CURB OR SIDEWALK.
2. VALVE BOXES SHALL BE SLIP TYPE, PER CHAPTER 4.
3. DEBRIS CAPS SHALL BE INSTALLED AS CLOSE UNDER THE CAST IRON COVER WITHOUT INTERFERING WITH COVER OPERATIONS.
4. DEBRIS CAPS WITH FLEXIBLE SKIRTS SHALL BE TRIMMED TO PROVIDE A SMOOTH CONTACT WITH THE INTERIOR OF THE VALVE BOX.
5. FOR SERVICE LINES 4" AND GREATER, TRACER WIRE WILL BE BROUGHT UP IN THE SECONDARY VALVE BOX.

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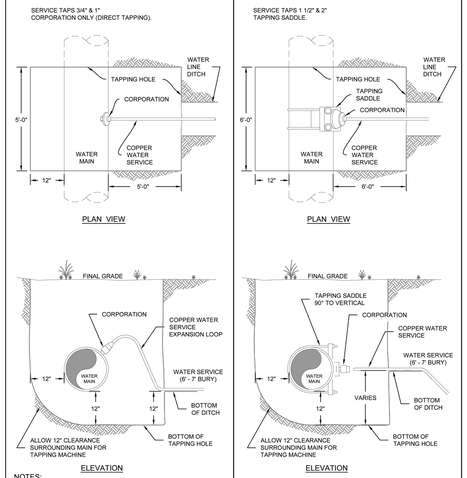
VALVE BOX INSTALLATION — A9-1 — DATED 03/2014



NOTES:

1. TRENCH WALLS AND SHORING SHALL COMPLY WITH OSHA STANDARDS.
2. FOR HDPE TAPS USE A SIDEWALL FUSION TAPPING SADDLE CONFIGURATION AT 90° SEE SECTION 6.7.B.
3. TO BE READ IN CONJUNCTION WITH SECTION 2.7.C AND SECTION 5.31-E.
4. WHERE COMPACTION CANNOT BE ACHIEVED UNDER THE WATER MAIN FLOWFILL SHALL BE USED.
5. SEE DETAIL DRAWING A8-10 FOR CATHODIC PROTECTION.

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TAPPING DETAILS 3/4" THRU 2" FOR TYPE "K" COPPER — B1-1 — DATED 03/2014

COLORADO LICENSED — KENNETH MICHAEL HUHN — 0054022 — 12/18/25 — PROFESSIONAL ENGINEER

DRAWN BY: DLH	JOB DATE: 3/21/2025	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"	
APPROVED: KMH	JOB NUMBER: 211448	IF NOT ONE INCH ADJUST SCALE ACCORDINGLY.	
CAD DATE: 12/18/2025			
CAD FILE: J:\2021\211448\CAD\Dwgs\C\CDs\F3_CSU\Water\DETAILS-F4			

NO.	DATE	BY	REVISION DESCRIPTION

HRGreen
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
FAX: 713.965.0044

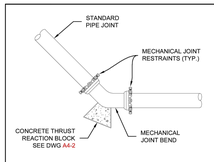
BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

CHALLENGER HOMES

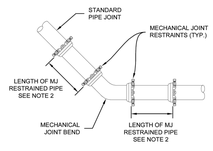
CONSTRUCTION DOCUMENTS
WATER DETAILS

SHEET DT 9

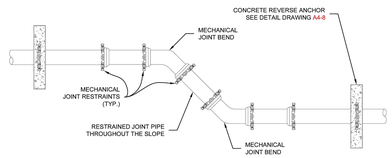
HR GREEN Xrefs: xgr-1-arch d$01-CD-F4, CO-Stamp-Signed-Current



HORIZONTAL BENDS W/MJ RESTRAINTS AND CTRB



HORIZONTAL BENDS W/MJ RESTRAINTS WITHOUT CTRB



VERTICAL BENDS W/ CONCRETE REVERSE ANCHORS ON SLOPES 10% OR GREATER

NOTES:

1. MECHANICAL JOINT RESTRAINTS SHALL BE APPROVED ACCORDING TO CHAPTER 4 FOR DIP AND PVC PIPE.
2. LENGTH OF PIPE REQUIRING JOINT RESTRAINT SHALL BE DETERMINED FROM CHART ON DETAIL DRAWING A4-4.
3. DUCTILE IRON FITTINGS AND PIPE SHALL BE WRAPPED IN POLYETHYLENE TUBING WHERE ADJACENT TO CONCRETE.

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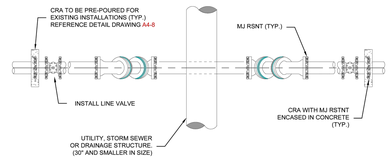
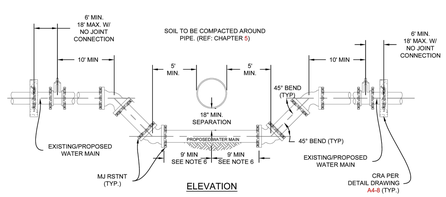
BEND CONFIGURATIONS AND RESTRAINTS | A4-6 | DATED 06/2015



PLAN



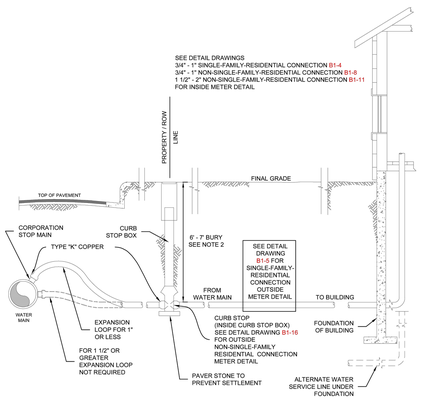
ELEVATION

NOTES:

1. ALL DUCTILE IRON FITTINGS AND PIPE SHALL BE CATHODICALLY PROTECTED PER SECTION 2.6.I.
2. ALL FITTINGS SHALL HAVE MJ RESTRAINTS IN ACCORDANCE WITH CHAPTER 5.
3. EXAMPLE CAN VARY DUE TO SITE CONDITIONS AND COLORADO SPRINGS UTILITIES INSPECTOR'S DIRECTION.
4. RESTRAINED JOINTS ARE REQUIRED WITHIN LOWERING.
5. NO TAPS OR TEES ARE ALLOWED WITHIN THE LOWERING.
6. THE LOWERINGS MAY BE ACCOMPLISHED WITH ANY DEGREE OF BENDS, HOWEVER, THE MAXIMUM DEGREE OF BEND ALLOWED IS 45 DEGREES.
7. WHERE WATER MAIN CROSSES UNDER STORM SEWER, WASTEWATER OR NON-POTABLE WATER INFRASTRUCTURE, A MINIMUM OF 9 FEET REQUIRED BETWEEN THE CENTERLINE OF THE CROSSING AND THE FIRST JOINT. THIS MEETS THE REQUIREMENTS FOR SECONDARY CONTAINMENT AS DESCRIBED IN SECTION 2.6.H.2.

Colorado Springs Utilities — It's how we're all connected

LOWERING DETAIL UTILITY CROSSING 30" & SMALLER | A7-1 | DATED 08/2020

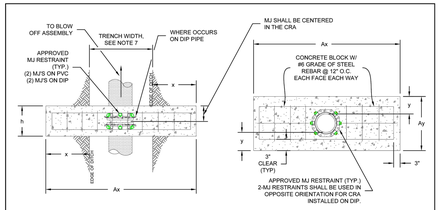


NOTES:

1. REFERENCE SECTION 2.7 WATER SERVICE LINE DESIGN.
2. FOR AREAS WITH DEEPER FROST DEPTHS SEE SECTION 2.6.H.1 FOR DEPTH OF BURY REQUIREMENTS.
3. SEE DETAIL DRAWING B1-16 FOR NON-SINGLE-FAMILY-RESIDENTIAL CONNECTION OUTSIDE METER DETAIL.

Colorado Springs Utilities — It's how we're all connected

TYPICAL INSTALLATION FOR TYPE "K" COPPER SERVICE LINE, STOP BOX AND METER INSTALLATION 3/4" - 2" | B1-3 | DATED 01/2017



PLAN
DEAD END OR REVERSE ANCHOR

ELEVATION
DEAD END OR REVERSE ANCHOR

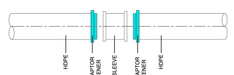
DIAMETER (in)	PRESSURE (psi)	x (in)	Ax (in)	y (in)	Ay (in)	Ab (sf)	h (in)	Vol (cy)
4	250	12	72	12	28.80	6.80	18	1.0
6	250	18	84	12	30.90	9.73	18	1.0
8	250	36	120	12	33.05	18.53	18	1.5
12	170	36	120	15	43.20	24.60	18	2.0
12	250	48	144	18	49.20	36.80	24	3.75
16	170	54	156	18	53.40	44.05	24	4.25
16	250	60	168	24	65.40	60.50	36	8.5

NOTES:

1. THE MINIMUM BEARING SURFACE AREAS SHOWN ARE BASED ON A MAX STATIC PIPE PRESSURE OF 170/250 POUNDS PER SQUARE INCH PLUS A SAFETY FACTOR OF 1.5, AND AN ALLOWABLE SOIL BEARING CAPACITY OF 1500 POUNDS PER SQUARE FOOT. FOR HDPE ADDITIONAL ASSUMPTIONS INCLUDE A MAX 50° 4' TEMPERATURE CHANGE AND A POISSON RATIO OF 0.45. REFERENCE AWWA M-23, M-41 AND M-55.
2. THE DESIGN ENGINEER IS RESPONSIBLE FOR VERIFYING ASSUMPTION BASED ON ACTUAL SITE CONDITIONS. IF SITE VARY FROM THE ASSUMPTIONS THE DESIGN ENGINEER SHALL PROVIDE A SITE SPECIFIC DESIGN THAT SHALL BE IN ACCORDANCE WITH AWWA M-23, PVC PIPE - DESIGN AND INSTALLATION AND AWWA M-41, DUCTILE-IRON PIPE AND FITTINGS. SITE SPECIFIC DESIGNS USING GEOTECHNICAL INFORMATION SHALL BE SUBMITTED TO COLORADO SPRINGS UTILITIES FOR APPROVAL.
3. THE MINIMUM LATERAL BEARING SURFACE AREA (Ab) AND APPROXIMATE VOLUME OF CONCRETE (Vol) SHALL BE SHOWN ON THE CONSTRUCTION PLANS FOR ALL CONCRETE REVERSE ANCHORS.
4. THE APPROXIMATE VOLUMES SHOWN ARE BASED ON THE MINIMUM DIMENSIONS IN THE TABLE. THE APPROXIMATE VOLUME IS ROUNDED UP TO THE NEAREST 0.25 CUBIC YARDS.
5. A SITE SPECIFIC DESIGN SHALL BE REQUIRED FOR PIPES LARGER THAN 16 INCHES OR MAX STATIC PIPE PRESSURES GREATER THAN 250 POUNDS PER SQUARE INCH. THE DESIGN ENGINEER HAS THE OPTION OF PROVIDING A SITE SPECIFIC DESIGN FOR PIPES SMALLER THAN 16 INCHES OR MAX STATIC PRESSURES LESS THAN THE PRESSURE LISTED IN THE TABLE.
6. FOR CORROSION PROTECTION OF THE RODS SEE DETAIL DRAWING A5-1.
7. A TRENCH WIDTH OF 4 FEET AND 6" BEDDING UNDER THE PIPE ARE ASSUMED FOR BEARING CALCULATIONS, (Ax, Ay, x AND y).
8. THE DESIGN ENGINEER SHALL ENSURE THE CONSTRUCTION OF THE CONCRETE REVERSE ANCHOR SHALL NOT CONFLICT WITH OTHER UTILITIES.
9. DUCTILE IRON FITTINGS AND PIPE SHALL BE WRAPPED IN POLYETHYLENE TUBING WHERE ADJACENT TO CONCRETE.

Colorado Springs Utilities — It's how we're all connected

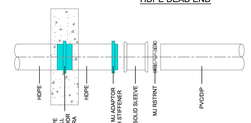
CONCRETE REVERSE ANCHOR FOR MECHANICAL JOINT RESTRAINTS | A4-8 | DATED 06/2015



TRANSITION HDPE TO HDPE W/BREAK POINT

TRANSITION HDPE TO HDPE BY BUTT FUSION

HDPE DEAD END



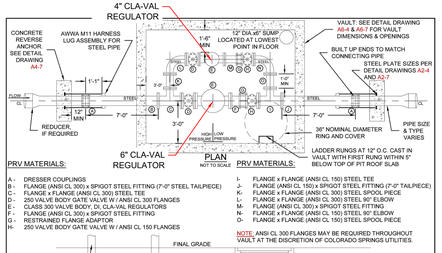
TRANSITION HDPE TO OTHER PIPE MATERIAL

NOTES: DENOTES HDPE FITTINGS

1. FLANGED FITTINGS TO BE APPROVED BY COLORADO SPRINGS UTILITIES. FOR 16" OR LARGER HDPE PIPE USE BUTTERFLY VALVES.
2. SEE DETAIL DRAWING A10-7 FOR WALL ANCHOR DETAIL.
3. SEE DETAIL DRAWING A4-8 FOR CONCRETE REVERSE ANCHOR DIMENSIONS AND SIZING.
4. WHEN CONNECTING AN MJ FITTING TO AN MJ FITTING, AN MJ KIT SHALL BE USED. THE MJ KIT CONSISTS OF A GASKET AND BOLTS (AND A RING IF NOT ON THE FITTING)
5. POISSON AND THERMAL EFFECTS TO BE CALCULATED BY THE ENGINEER TO DETERMINE CRA SIZE.

Colorado Springs Utilities — It's how we're all connected

HDPE TRANSITION TO HDPE OR OTHER PIPE MATERIAL | A10-6 | DATED 08/2022



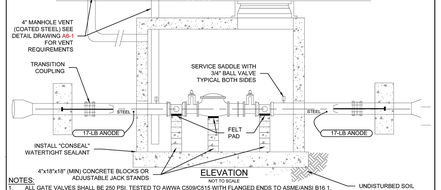
PRV MATERIALS:

A - DRESSER COUPLINGS
B - FLANGE (ANSI CL 300) x SPIGOT STEEL FITTING (7'-0" STEEL TAILPIECE)
C - FLANGE x FLANGE (ANSI CL 300) STEEL TEE
D - 250 VALVE BODY GATE VALVE W / ANSI CL 300 FLANGES
E - CLASS 300 VALVE BODY, DI, CLA-VAL REGULATORS
F - FLANGE (ANSI CL 300) x SPIGOT STEEL FITTING
G - RESTRAINED FLANGE ADAPTOR
H- 250 VALVE BODY GATE VALVE W / ANSI CL 150 FLANGES

PRV MATERIALS:

I- FLANGE x FLANGE (ANSI CL 150) STEEL TEE
J- FLANGE (ANSI CL 150) x SPIGOT STEEL FITTING (7'-0" TAILPIECE)
K- FLANGE x FLANGE (ANSI CL 300) STEEL SPOOL PIECE
L- FLANGE x FLANGE (ANSI CL 300) STEEL 90° ELBOW
M- FLANGE (ANSI CL 300) x SPIGOT STEEL FITTING
N- FLANGE x FLANGE (ANSI CL 150) STEEL 90° ELBOW
O- FLANGE x FLANGE (ANSI CL 150) STEEL SPOOL PIECE

NOTE: ANSI CL 300 FLANGES MAY BE REQUIRED THROUGHOUT VAULT AT THE DISCRETION OF COLORADO SPRINGS UTILITIES.



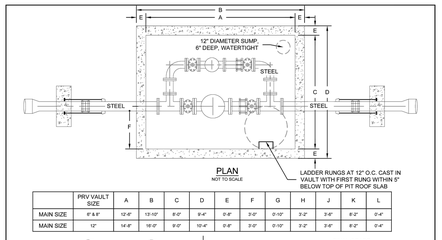
ELEVATION
NOT TO SCALE

NOTES:

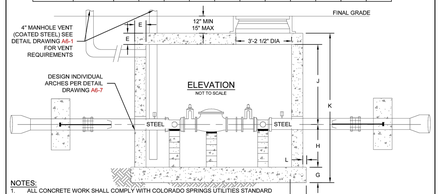
1. ALL GATE VALVES SHALL BE 250 PSI, TESTED TO AWWA C509/C515 WITH FLANGED ENDS TO ASME/ANSI B16.1.
2. ALL PRESSURE REGULATORS SHALL BE CLA-VAL (ASTM A536) WITH ASME/ANSI B16.42/B16.5, CL 300 FLANGES.
3. ALL STEEL PIPE DIMENSIONS SHALL COMPLY WITH ANSI/AWWA C208-07.
4. ALL STEEL PIPE FLANGE DIMENSIONS FOR OUTSIDE AND INSIDE DIAMETER OF FLANGE, BOLT CIRCLE PATTERN, NUMBER OF BOLTS AND DIAMETER OF BOLT HOLES SHALL COMPLY WITH ANSI B16.42 / B16.5, CL 150 OR CL 300. ALL STEEL PIPE FLANGE THICKNESS SHALL COMPLY WITH ANSI/AWWA C207-07, CLASS E.
5. JOINT HARNESS TIE BOLTS AND LUGS SHALL CONFORM TO AWWA M11 FOR STEEL PIPE.
6. REFER TO DETAIL DRAWINGS A6-6 AND A6-7 FOR VAULT DIMENSIONS AND DETAILS.
7. A SITE SPECIFIC DESIGN SHALL BE REQUIRED FOR ALL PRESSURE REGULATOR STATIONS WITH PRESSURE REGULATORS LARGER THAN 16 INCH.
8. ALL MATERIALS SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR. INTERNAL COMPONENTS MAY BE REIMBURSED BY COLORADO SPRINGS UTILITIES.
9. ALL CONCRETE VAULTS SHALL BE DESIGNED FOR HS-20 TRAFFIC LOADING CONDITIONS AND 300 PSF SURCHARGE LOAD.
8. STEEL PIPE SHALL BE COATED PER SECTION 4.4.B.7.
9. DIP FITTINGS, BENDS, REDUCERS, AND TEES MUST BE CEMENT MORTAR LINED PER SECTIONS 4.4.B.1 AND 4.4.B.2.

Colorado Springs Utilities — It's how we're all connected

PRESSURE REGULATOR STATIONS 6", 8" & 12" COMPONENT CONFIGURATION & MATERIALS | A6-3 | DATED 07/2022



	PRV VAULT SIZE	A	B	C	D	E	F	G	H	J	K	L
MAIN SIZE	6" & 8"	12'-6"	13'-10"	9'-4"	9'-4"	9'-8"	3'-0"	0'-10"	3'-2"	3'-6"	8'-2"	9'-4"
MAIN SIZE	12"	14'-8"	16'-0"	9'-0"	10'-4"	9'-8"	3'-0"	0'-10"	3'-2"	3'-6"	8'-2"	9'-4"

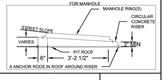


ELEVATION
NOT TO SCALE

NOTES:

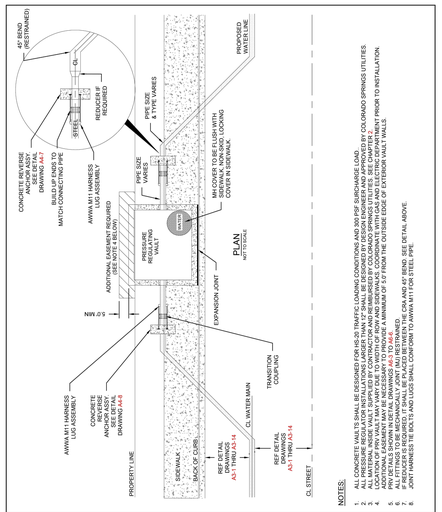
1. ALL CONCRETE WORK SHALL COMPLY WITH COLORADO SPRINGS UTILITIES STANDARD SPECIFICATIONS AND THE LATEST ACI-318 CODE.
2. ALL CONCRETE VAULTS SHALL BE DESIGNED FOR HS-20 TRAFFIC LOADING CONDITIONS AND 300 PSF SURCHARGE LOAD.
3. VAULTS FOR PRESSURE REGULATOR STATIONS LARGER THAN 16 INCH WILL BE SPECIFICALLY DESIGNED BY THE ENGINEER AND APPROVED BY COLORADO SPRINGS UTILITIES.
4. HEIGHT OF VAULT MAY CHANGE DUE TO DEPTH OF PIPE.
5. SHOP DETAIL DRAWINGS FOR ALL VAULTS ARE REQUIRED AND WILL BE APPROVED BY COLORADO SPRINGS UTILITIES.
6. FOR VAULT OPENINGS SEE PER DETAIL DRAWING A6-7.
8. STEEL PIPE SHALL BE COATED PER SECTION 4.4.B.7.
9. DIP FITTINGS, BENDS, REDUCERS, AND TEES MUST BE CEMENT MORTAR LINED PER SECTIONS 4.4.B.1 AND 4.4.B.2.

DETAIL 'A'



Colorado Springs Utilities — It's how we're all connected

PRESSURE REGULATOR STATIONS 6", 8" & 12" VAULT DIMENSIONS | A6-4 | DATED 07/2022



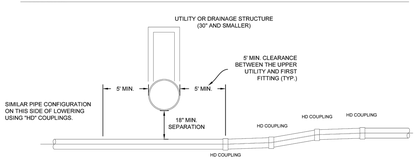
NOTES:

1. ALL CONCRETE VAULTS SHALL BE DESIGNED FOR HS-20 TRAFFIC LOADING CONDITIONS AND 300 PSF SURCHARGE LOAD.
2. ALL PRESSURE REGULATORS SHALL BE CLA-VAL (ASTM A536) WITH ASME/ANSI B16.42/B16.5, CL 300 FLANGES.
3. ALL MATERIAL INSIDE VAULT SUPPLIED BY CONTRACTOR AND REIMBURSED BY COLORADO SPRINGS UTILITIES. SEE CHAPTER 1.
4. ALL PIPE, FITTINGS, VALVES, AND FLANGES SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR. ALL PIPE SHALL BE PRESSURE TESTED PRIOR TO INSTALLATION.
5. ADDITIONAL EASEMENT MAY BE NECESSARY TO PROVIDE A MINIMUM OF 5'-0" FROM THE OUTSIDE EDGE OF EXTERIOR VAULT WALLS.
6. ALL FITTINGS TO BE MECHANICALLY JOINT (MJ) RESTRAINED.
7. ALL PIPE, FITTINGS, VALVES, AND FLANGES SHALL BE SUPPLIED BY THE CONTRACTOR. CRA AND 45° BEND. SEE DETAIL ABOVE.
8. JOINT HARNESS TIE BOLTS AND LUGS SHALL CONFORM TO AWWA M11 FOR STEEL PIPE.

Colorado Springs Utilities — It's how we're all connected

LOCATION OF PRESSURE REGULATOR STATION | A6-8 | DATED 06/2015

EXAMPLE OF A SLIP JOINT OF PVC PIPE WITH HIGH DEFL COUPLINGS



NOTE:

1. MINIMUM PIPE LENGTH 5' BETWEEN EACH HD COUPLING.

ELEVATION

PER SLIP JOINT OF PVC PIPE W/HIGH DEFLECTION COUPLINGS

	PIPE DATA		MFRS. TOTAL JOINT DEFL. OF COUPL.	DESIGN DEFLECTION (80% MAX.)		MIN. RADIUS FOR DEFLECTING CURVES WITH HIGH DEFL. COUPLINGS
	PIPE SIZE		(HORZ DEFL.)	(HORZ. DEFL.)	(VERT. DEFL.)	20%
CLASS 305 (DR 14)	4"		5°00'	4°00'	6.99%	28lf
	6"		5°00'	4°00'	6.99%	28lf
	8"		5°00'	4°00'	6.99%	28lf
	12"		5°00'	4°00'	6.99%	28lf
CLASS 235 (DR 18)	NO DEFLECTION COUPLINGS FOR 16" OR GREATER					DATA FOR PVC PIPES

NOTES:

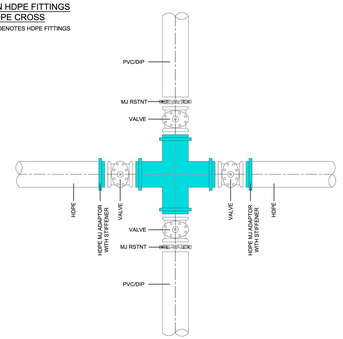
1. SEE DETAIL DRAWING A4-1 DETAIL FOR HORIZONTAL RADIUS.

Colorado Springs Utilities — It's how we're all connected

LOWERING WITH HIGH DEFLECTION COUPLINGS | A7-9 | DATED 03/2014

TIE-IN HDPE FITTINGS W/HDPE CROSS

DENOTES HDPE FITTINGS



NOTES:

1. FLANGED FITTINGS TO BE APPROVED BY COLORADO SPRINGS UTILITIES. FOR 16" OR LARGER HDPE PIPE USE BUTTERFLY VALVES.
2. WHEN CONNECTING AN MJ FITTING TO AN MJ FITTING, AN MJ KIT SHALL BE USED. THE MJ KIT CONSISTS OF A GASKET AND BOLTS (AND A RING IF NOT ON THE FITTING)

Colorado Springs Utilities — It's how we're all connected

HDPE MAIN CROSS CONNECTION TO PVC/DIP USING HDPE FITTINGS AND/OR DUCTILE FITTINGS | A10-4 | DATED 08/2022

COLORADO LICENSED — KEVIN MICHAEL HUHN — 0054022 — 12/18/25 — PROFESSIONAL ENGINEER

DRAWN BY: DLH	JOB DATE: 3/21/2025	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"	
APPROVED: KMH	JOB NUMBER: 211448	IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
CAD DATE: 12/18/2025			
CAD FILE: J:\2021\211448\CAD\Dwgs\C\CDs\F3_CSU\Water\DETAILS-F4			

NO.	DATE	BY	REVISION DESCRIPTION

HRGreen
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
FAX: 713.965.0044

BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
WATER DETAILS-02

SHEET DT | 10

BRADLEY HEIGHTS FILING 4
PUBLIC WASTEWATER MAIN EXTENSION

LOCATED WITHIN A PORTION OF SECTION 9, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M., CITY OF COLORADO SPRINGS, COUNTY OF EL PASO, STATE OF COLORADO

WASTEWATER PLAN NOTES

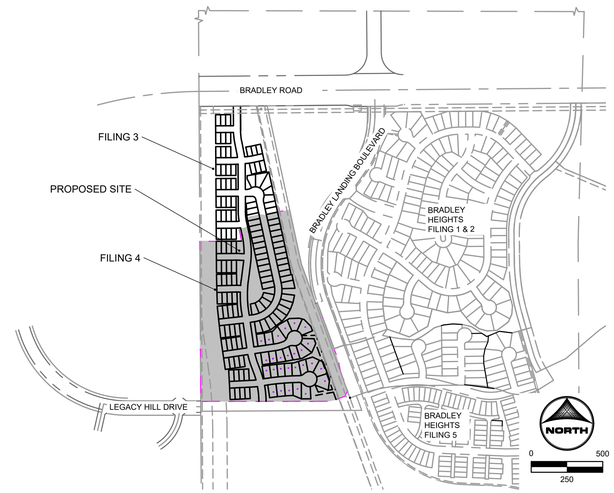
THE CONTRACTOR SHALL NOTIFY COLORADO SPRINGS UTILITIES' INSPECTIONS OFFICE (NORTH: 668-4396 OR SOUTH: 668-4658) A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

GENERAL:

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL MEET COLORADO SPRINGS UTILITIES' WASTEWATER LINE EXTENSION AND SERVICE STANDARDS (WASTEWATER STANDARDS).
2. THE CONTRACTOR SHALL OBTAIN LOCATES PRIOR TO ANY EXCAVATION.
3. COLORADO SPRINGS UTILITIES DOES NOT GUARANTEE THE ACCURACY OF LOCATIONS OF EXISTING PIPELINES, MANHOLES AND SERVICE LINES. IF FIELD CONDITIONS ARE FOUND TO BE DIFFERENT THAN SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE INSPECTOR AND THE ENGINEER OF RECORD IMMEDIATELY.
4. NO TREES OR STRUCTURES ARE PERMITTED WITHIN FIFTEEN (15') OF A WASTEWATER MAIN.
5. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY FACILITIES AS A RESULT OF HIS ACTIONS. THE CONTRACTOR SHALL MAKE ALL THE REQUIRED REPAIRS IMMEDIATELY TO THE SATISFACTION OF COLORADO SPRINGS UTILITIES.
6. ALL FIELD STAKING SHALL COMPLY WITH THE WASTEWATER STANDARDS.
7. THE CONTRACTOR SHALL ENSURE THAT WASTEWATER SERVICE TO ADJACENT PROPERTIES IS MAINTAINED DURING CONSTRUCTION.
8. ALL MANHOLES LOCATED WITHIN THE PROJECT LIMITS SHALL BE ADJUSTED TO FINISH GRADE. IF MANHOLES ARE IN POOR CONDITION OR IF THE DISTANCE BETWEEN THE RING/COVER AND CONE OF THE MANHOLE EXCEEDS THE WASTEWATER STANDARDS, THE CONTRACTOR MAY BE REQUIRED TO REPLACE PART OR ALL OF THE EXISTING MANHOLES.
9. REUSE OR SALVAGE OF ANY MATERIALS IS LEFT TO THE DISCRETION OF THE COLORADO SPRINGS UTILITIES INSPECTOR.
10. ALL TRENCH BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE CITY OF COLORADO SPRINGS STANDARDS SPECIFICATIONS MANUAL.

WASTEWATER PROJECT - SPECIFIC NOTES

APPLICABLE	NON-APPLICABLE	
☐	☒	1. CORROSION PROTECTION IS REQUIRED FOR ALL DUCTILE IRON PIPE. ALL PROTECTION SHALL COMPLY WITH THE WASTEWATER STANDARDS.
☐	☒	2. THIS PROJECT IS CONNECTION TO AN EXISTING MANHOLE. A MANHOLE ASSESSMENT HAS BEEN COMPLETED FOR THIS PROJECT. THE FOLLOWING CHECKED ITEMS ARE REQUIRED: ☐ THE CONTRACTOR SHALL PROVIDE A BYPASS PUMPING PLAN FOR APPROVAL BY COLORADO SPRINGS UTILITIES AND COMPLY WITH ALL THE REQUIREMENTS THEREIN. ☐ REPAIR THE EXISTING MANHOLE (REFER TO PLAN AND PROFILE FOR REQUIREMENTS) ☐ REPLACE THE EXISTING MANHOLE (REFER TO PLAN AND PROFILE FOR REQUIREMENTS)
☐	☒	3. MANHOLE ARE BEING ABANDONED, THE CONTRACTOR SHALL: • PLUG THE "IN" AND "OUT" INVERTS WITH A WATERTIGHT MECHANICAL PLUG AND GROUT WITH APPROVED MATERIAL. • REMOVE AND DISPOSE OF THE CONE SECTION. • REMOVE THE RING AND COVER AND RETURN THEM TO COLORADO SPRINGS UTILITIES. • FILL THE MANHOLE WITH APPROVED MATERIAL.
☐	☒	4. WASTEWATER MAINS EXISTS UNDERNEATH A PROPOSED STRUCTURE, ☐ REMOVE IT ☐ GROUT IT FULL
☐	☒	5. WASTEWATER MAIN TO BE ABANDONED EXISTS WITHIN RIGHT-OF-WAY, THE CONTRACTOR SHALL: ☐ REMOVE IT ☐ GROUT IT FULL
☐	☒	6. PIPELINES LESS THAN 1.04% GRADE ARE PROPOSED. THE CONTRACTOR SHALL COMPLY WITH THE ADDITIONAL REQUIREMENTS AS SPECIFIED WITHIN THE WASTEWATER STANDARDS.
☒	☐	7. THIS PROJECT IS UTILIZING EXISTING WASTEWATER STUB(S) IN AN "AS-IS" CONDITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THE THE STUB(S), CONNECTION AND SUBSEQUENT EXTENSION MEET ALL CURRENT WASTEWATER STANDARDS AND DO NOT HAVE ANY DEFECTS.
☒	☐	8. COLORADO SPRINGS UTILITIES DOES NOT GUARANTEE THE ACCURACY OF THE DEPTH, LOCATION OR CONDITION OF ANY EXISTING STUB(S) SHOWN ON ANY *AS CONSTRUCTED* DRAWINGS. FURTHER, THE EXISTING STUB SHALL BE INCLUDED IN THE TWO-YEAR WARRANTY PERIOD FOR THIS PROJECT.
☒	☐	9. A WASTEWATER STUB OR STUBS ARE PROPOSED WITHIN THIS PROJECT. COLORADO SPRINGS UTILITIES WILL INSPECT THE CONSTRUCTION BUT DOES NOT GUARANTEE THAT THE DESIGN OR INSTALLATION OF THE PROPOSED STUB(S) WILL MEET FUTURE DEVELOPMENT REQUIREMENTS. FURTHER, THE PROPOSED STUB(S) WILL NOT BE INCLUDED IN THE TWO-YEAR WARRANTY PERIOD FOR THIS PROJECT AND WILL NOT BE ACCEPTED OR OWNED BY COLORADO SPRINGS UTILITIES.



VICINITY MAP
1"=500'

SHEET INDEX:

1 - COVER SHEET
2 - LEGEND & TYPICAL SECTIONS
3 - SEWER 9 PLAN AND PROFILE
4 - SEWER 1 PLAN AND PROFILE
5 - SEWER 2 PLAN AND PROFILE
6 - SEWERS 6-7 PLAN AND PROFILE
7 - SEWER 8 PLAN AND PROFILE
8 - DETAILS

PLAN INFORMATION

FIMs MAP NUMBER: S-43

TAX SCHEDULE NO: 5500000463

WATER PRESSURE ZONE: SOUTHLINE

MAX STATIC PRESSURE (LOLN): 153 PSI

MAX STATIC PRESSURE (SOLN): 78 PSI

UTILITY DESIGN CAD FILE NO: CF20243674

UAP FILE NO. OR PLAT RECEPTION NO: N/A

EASEMENT RECEPTION NO: PER PLAT

DEVELOPMENT PLAN NO: AR PUD 22-00279

DEVELOPMENT PLAN APPROVAL DATE: 08/30/2024

NOTICE OF PRIVATE WATER SYSTEM REC NO: N/A

BUILDING SPRINKLED: NO

LEGAL DESCRIPTION:

A PARCEL OF LAND LYING WITHIN THE SOUTHEAST QUARTER OF SECTION 9, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: THE NORTH-SOUTH CENTERLINE OF SAID SECTION 9, MONUMENTED AT BOTH ENDS BY A 3 1/4" ALUMINUM CAP STAMPED "RLS 10377", AND IS ASSUMED TO BEAR S 00°19'23" E, A DISTANCE OF 5252.20 FEET.

A PARCEL OF LAND LYING WITHIN THE EAST HALF OF SECTION 9, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH/ P.M., COUNTY OF EL PASO, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: THE NORTH-SOUTH CENTERLINE OF SAID SECTION 9, MONUMENTED AT BOTH ENDS BY A 3 1/4" ALUMINUM CAP STAMPED "RLS 10377", IS ASSUMED TO BEAR S 00°19'23" E, A DISTANCE OF 5252.20 FEET.

COMMENCING AT THE SOUTH QUARTER CORNER OF SAID SECTION 9;
THENCE N 00°19'23" W ALONG SAID NORTH-SOUTH CENTERLINE, A DISTANCE OF 1577.02 FEET TO THE POINT OF BEGINNING;
THENCE CONTINUING ALONG SAID NORTH-SOUTH CENTERLINE N 00°19'23" W, A DISTANCE OF 2061.22 FEET TO A POINT ON THE SOUTH LINE OF BRADLEY ROAD AS RECORDED UNDER BOOK 5307 AT PAGE 1472 OF THE RECORDS OF EL PASO COUNTY;
THENCE N 89°30'18" E ALONG SAID SOUTH LINE, A DISTANCE OF 475.67 FEET TO THE NORTHEASTERLY CORNER OF THAT PARCEL OF LAND DESCRIBED IN THE PERSONAL REPRESENTATIVE'S DEED AS TSN 55000-00-392 (PAGE 15 OF 27) AS RECORDED UNDER RECEPTION NO. 221054106 OF SAID RECORDS;
THENCE THE FOLLOWING THREE (3) COURSES ALONG THE EASTERLY EXTERIOR OF SAID PARCEL OF LAND IN SAID PERSONAL REPRESENTATIVE'S DEED:
1) THENCE S 12°12'47" E, A DISTANCE OF 1131.93 FEET;
2) THENCE S 19°56'27" E, A DISTANCE OF 292.74 FEET;
3) THENCE N 70°03'49" E, A DISTANCE OF 13.00 FEET;
THENCE S 19°56'27" E, A DISTANCE OF 396.84 FEET;
THENCE 77.66 FEET ALONG THE ARC OF A 437.50 FOOT RADIUS CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 10°10'15" AND A CHORD THAT BEARS S 14°51'20" E, 77.56 FEET;
THENCE 46.60 FEET ALONG THE ARC OF A 262.50 FOOT RADIUS REVERSE CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 10°10'15" AND A CHORD THAT BEARS S 14°51'20" E, 46.54 FEET;
THENCE S 19°56'27" E, A DISTANCE OF 128.89 FEET;
THENCE S 25°03'33" W, A DISTANCE OF 42.43 FEET;
THENCE S 70°03'33" W, A DISTANCE OF 52.19 FEET;
THENCE 103.73 FEET ALONG THE ARC OF A 298.00 FOOT RADIUS CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 19°56'36" AND A CHORD THAT BEARS S 80°01'51" W, 103.20 FEET;
THENCE N 89°59'51" W, A DISTANCE OF 857.99 FEET TO THE POINT OF BEGINNING.

CONTAINING A CALCULATED AREA OF 1,501,005 SQUARE FEET (34.46 ACRES) OF LAND, MORE OR LESS.

TO BE PLATTED AS BRADLEY HEIGHTS FILING 3 AND 4

OWNER/DEVELOPER PLAN APPROVAL

THE UNDERSIGNED OWNER/DEVELOPER AGREES THAT THEY SHALL, AT THEIR EXPENSE, BE SOLELY RESPONSIBLE FOR 1) THE INSTALLATION OF THE PROPOSED UTILITY INFRASTRUCTURE IN ACCORDANCE WITH THESE PLANS, AND 2) ALL DAMAGES AND DEFECTS ARISING FROM, OR RELATED TO, THE INSTALLATION, MAINTENANCE OR OPERATION OF THE PUBLIC UTILITY INFRASTRUCTURE FROM THE DATE OF PRELIMINARY ACCEPTANCE FOR A PERIOD OF TWO YEARS, OR UNTIL FINAL ACCEPTANCE, WHICHEVER IS LATER.

THE UNDERSIGNED UNDERSTANDS THAT ALL PRIVATE UTILITY INFRASTRUCTURE, AS INDICATED ON THESE PLANS, SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE MAINTAINED BY THE OWNER, AS REQUIRED BY *COLORADO SPRINGS UTILITIES' LINE EXTENSION AND SERVICE STANDARDS.*

☐ **PUBLIC WATER MAIN PROPOSED** ☒ **PUBLIC WASTEWATER MAIN PROPOSED** ☐ **PRIVATE WATER SERVICE LINE (<4") AND/OR PRIVATE WASTEWATER SERIVE LINE (<8")**
☐ **PUBLIC FACILITIES PROPOSED** ☐ **PRIVATE FACILITIES PROPOSED**

SIGNED: Jim Byers DATE: 12/18/25
OWNER/DEVELOPER
Jim Byers VP of Community Development
OWNER/DEVELOPER (PRINT NAME)
DBA: Challenger Homes, LLC
ADDRESS: 8605 Explorere Dr. Suite 250
Colorado Springs, C0, 80920
PHONE: 719-598-5192
EMAIL: jim@challengerhomes.com

APPROVED
06/16/2026 8:45:18 AM
mgackle
Wastewater
Colorado Springs Utilities
It's how we're all connected

1 REVISION #1
- TYPICAL SECTION CHANGE SIDEWALK & JOINT TRENCH LOCATION (SHEET 2)
- PIPE MATERIAL CHANGE (SHEET 03)

COLORADO SPRINGS UTILITIES
WASTEWATER MAIN DESIGN APPROVAL

APPROVED
12/26/2025 9:54:52 AM
mgackle
Wastewater
Colorado Springs Utilities
It's how we're all connected

PROJECT NUMBER: 2024-S1148
WORK ORDER NUMBER: 4149839
CSU SHEET 1 OF 7

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

COLORADO LICENSED
KENNETH MICHAEL HUHN
0054022
05/29/26
PROFESSIONAL ENGINEER

DRAWN BY: DLH	JOB DATE: 6/1/2026	BAR IS ONE INCH ON OFFICIAL DRAWINGS.	
APPROVED: KMH	JOB NUMBER: 211448	0 1"	
CAD DATE: 6/1/2026		IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
CAD FILE: J:\2021\211448\CAD\Dwgs\C\CDs\F4_CSU\Sewer\Cover_Sheet_Filing_4			

NO.	DATE	BY	REVISION DESCRIPTION
1	5/29/26	CVW	MATERIAL CHANGE

HRGreen
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
FAX: 713.965.0044

BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
COVER SHEET

SHEET CV

1

HUHN, KEN, 6/1/2026 11:52 AM
HR GREEN Xrefs: legal_description; xc-03-row; xv-row; xc-row; L Legend; typical_sections; 05-XC-ROW; csu_wastewater_plan_notes; csu_ww_approval_block; csu_developer_approval; plan_information_block; xgt-1-arch dh01-CD-F4; CO-Stamp-Signed-Current

LEGEND

	EXISTING	PROPOSED
MATCH LINE		
PHASE LINE		
SECTION LINE		
PROPERTY BOUNDARY		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
CENTERLINE		
CHAIN LINK FENCE		
WOODEN FENCE		
SPLIT RAIL-SAFETY FENCE		
GUARDRAIL		
CABLE TV	TV	TV
U.G. ELECTRIC	UE	UE
OVERHEAD ELECTRIC	OE	OE
FIBER OPTIC	FO	FO
GAS MAIN		
SANITARY SEWER	SS	
STORM DRAIN		
TELEPHONE	UT	UT
WATER MAIN	W	W
SWALE		
TRAIL		
CURB & GUTTER		
DRAINAGE BASIN		
INDEX CONTOUR		
INTER. CONTOUR		
100-YR FLOODPLAIN		
FLOODWAY		
EDGE OF WETLANDS		

DRAINAGE

	EXISTING	PROPOSED
DRAINAGE BASIN		
BASIN TAG		I.D. / AREA
DESIGN POINT		

STORM SEWER

	EXISTING	PROPOSED
MANHOLE	ST	D
STORM INLET		
FLARED END SECTION		
RIPRAP		

SANITARY SEWER

	EXISTING	PROPOSED
CLEAN OUT		
MANHOLE		S
PLUG		

WATER

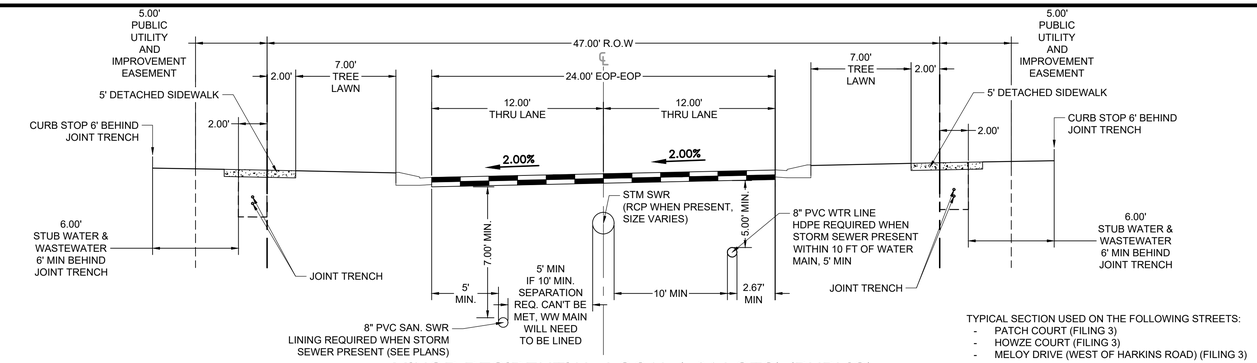
	EXISTING	PROPOSED
FIRE HYDRANT		
FIRE DEPT. CONNECTION		
GATE VALVE		
MANHOLE	W	W
METER	W	W
TEE		
REDUCER		

DRY UTILITIES

ELECTRIC METER
ELECTRIC PEDESTAL
ELECTRICAL CABINET
ELECTRIC VAULT
FIBER OPTIC PULL BOX
FIBER OPTIC MANHOLE
FIBER OPTIC PEDESTAL
FIBER OPTIC SIGN
FIBER OPTIC VAULT
GAS METER
GAS SIGN
GAS VAULT
TELEPHONE CABINET
TELEPHONE MANHOLE
TELEPHONE SIGNAL/MAST
TELEPHONE SIGN
TELEPHONE PEDESTAL
TRANSFORMER
LIGHT POLE
FIBER OPTIC VAULT

MISCELLANEOUS

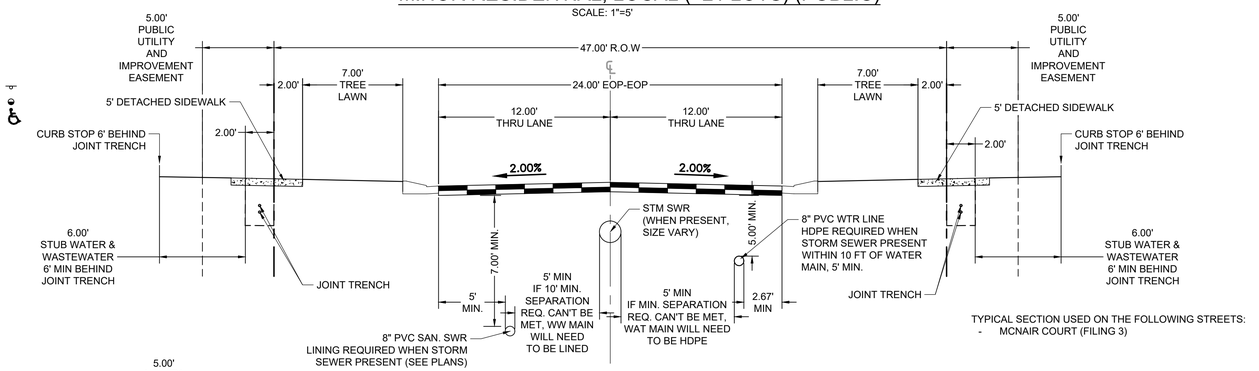
SIGN
BOLLLARD
ACCESSIBLE PARKING



TYPICAL SECTION USED ON THE FOLLOWING STREETS:
- PATCH COURT (FILING 3)
- HOWZE COURT (FILING 3)
- MELOY DRIVE (WEST OF HARKINS ROAD) (FILING 3)

MINOR RESIDENTIAL, LOCAL (<21 LOTS) (PUBLIC)

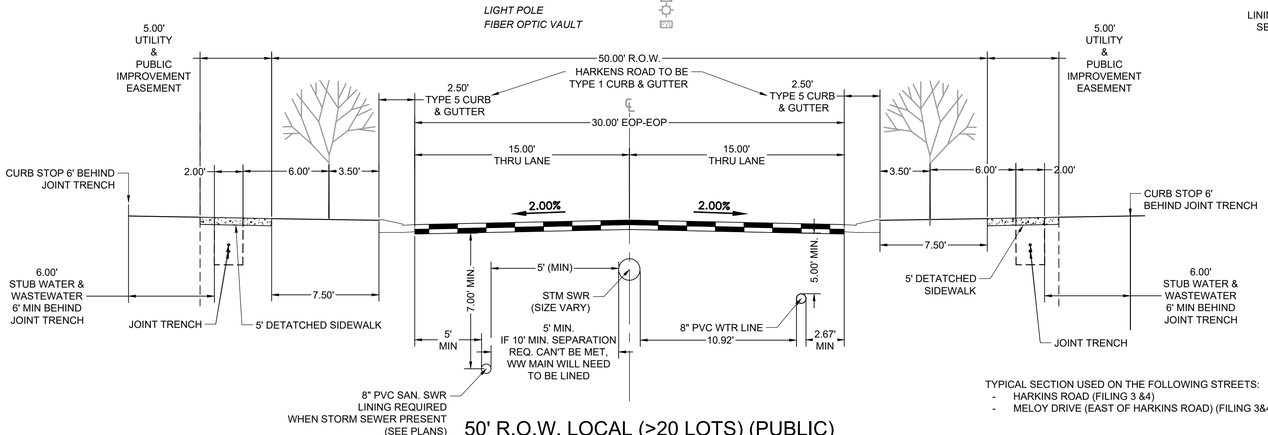
SCALE: 1"=5'



TYPICAL SECTION USED ON THE FOLLOWING STREETS:
- MCNAIR COURT (FILING 3)

MINOR RESIDENTIAL, LOCAL (<21 LOTS) (PUBLIC)

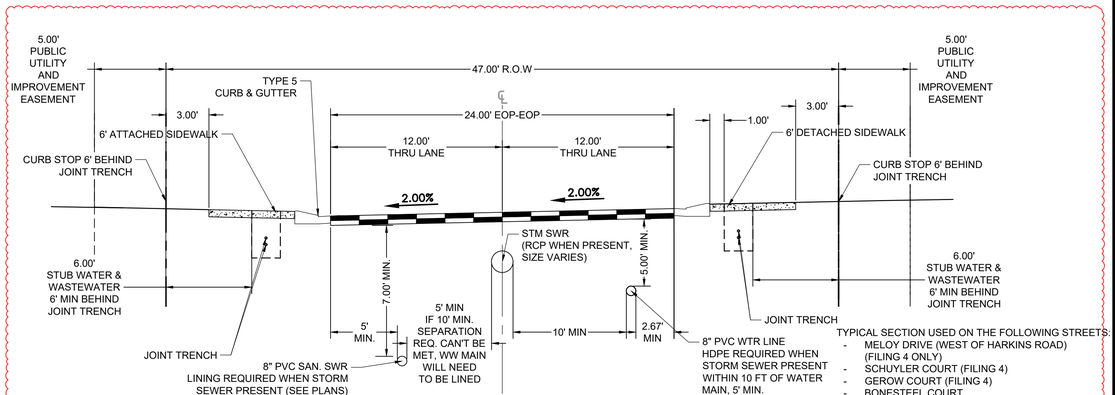
SCALE: 1"=5'



TYPICAL SECTION USED ON THE FOLLOWING STREETS:
- HARKINS ROAD (FILING 3 &4)
- MELOY DRIVE (EAST OF HARKINS ROAD) (FILING 3&4)

50' R.O.W. LOCAL (>20 LOTS) (PUBLIC)

SCALE: 1"=5'
(BASED ON DRAWING CSU A3-7, REFER TO A3-7 FOR ADDITIONAL NOTES, REQUIREMENTS, & GAS/ELECTRICAL/TELECOM LOCATION)

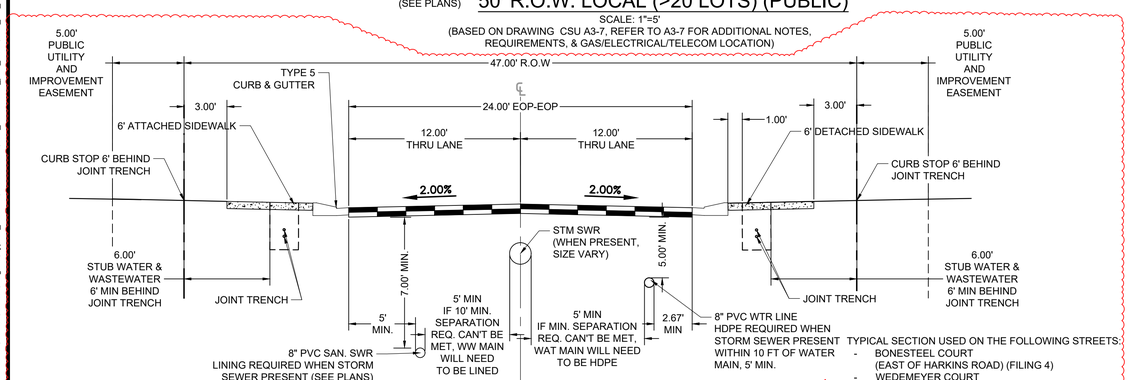


TYPICAL SECTION USED ON THE FOLLOWING STREETS:
- MELOY DRIVE (WEST OF HARKINS ROAD) (FILING 4 ONLY)
- SCHUYLER COURT (FILING 4)
- GEROW COURT (FILING 4)
- BONESTEEL COURT (WEST OF HARKINS ROAD-FILING 4)
- WEDMEYER COURT (WEST OF HARKINS ROAD-FILING 4)

MINOR RESIDENTIAL, LOCAL (<21 LOTS) (PUBLIC)

1

SCALE: 1"=5'



TYPICAL SECTION USED ON THE FOLLOWING STREETS:
- BONESTEEL COURT (EAST OF HARKINS ROAD) (FILING 4)
- WEDEMEYER COURT (EAST OF HARKINS ROAD) (FILING 4)

MINOR RESIDENTIAL, LOCAL (<21 LOTS) (PUBLIC)

1

SCALE: 1"=5'

COLORADO SPRINGS UTILITIES
WASTEWATER MAIN DESIGN APPROVAL

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12/26/2025 9:55:02 AM
mgackle
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It's how we're all connected

PROJECT NUMBER: 2024-S1148
WORK ORDER NUMBER: 4149839
CSU SHEET 2 OF 7

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

1

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COLORADO LICENSED
KENNETH MICHAEL HUHN
0054022
06/11/26
PROFESSIONAL ENGINEER

1 REVISION #1
- TYPICAL SECTION CHANGE SIDEWALK & JOINT TRENCH LOCATION (SHEET 2)
- PIPE MATERIAL CHANGE (SHEET 03)

DRAWN BY: DLH	JOB DATE: 6/11/2026	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"	
APPROVED: KMH	JOB NUMBER: 211448	IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
CAD DATE: 6/11/2026			
CAD FILE: J:\2021\211448\CAD\Dwgs\C\CDs\F4_CSU\Sewer\Cover_Sheet_Filing_4			

NO.	DATE	BY	REVISION DESCRIPTION
1	5/29/26	CVW	MATERIAL CHANGE

HRGreen
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
FAX: 713.965.0044

BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

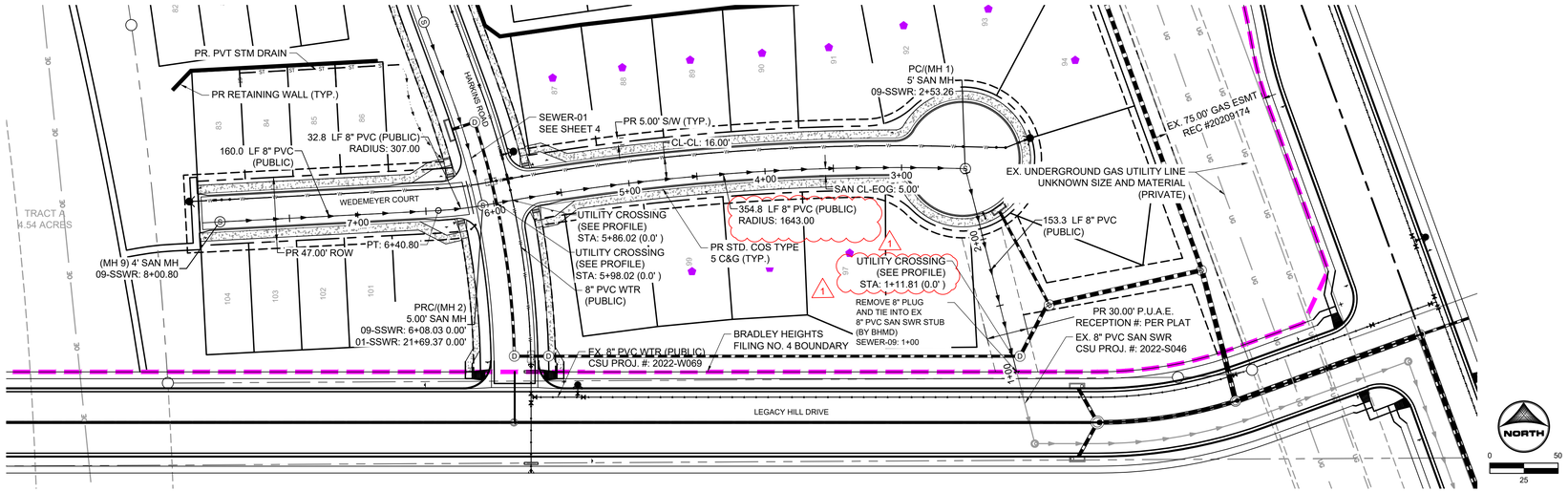
CHALLENGER HOMES

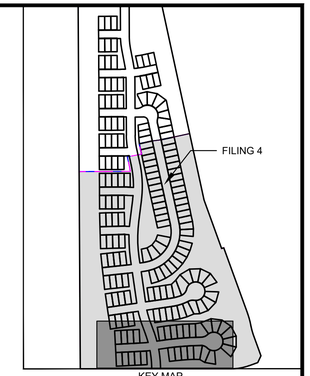
CONSTRUCTION DOCUMENTS
LEGEND & TYPICAL SECTIONS

SHEET LG

2

HUHN, KEN, 6/11/2026 8:23 AM
HR GREEN Xrefs: legal_description; xc-03-row; xr-row; xc-row; Legend; typical_sections; 05-XC-ROW; csu_wastewater_plan_notes; csu_ww_approval_block; csu_developer_approval; plan_information_block; xgl-1-arch dft01-CD-F4; CO-Stamp-Signed-Current





KEY MAP
SCALE: NTS

WASTEWATER PLAN NOTES:

1. GAS AND ELECTRIC MAIN EXTENSIONS ASSOCIATED WITH THE PROJECT ARE TO BE DESIGNED BY COLORADO SPRINGS UTILITIES (CSU). CONTACT CSU REGARDING PROPOSED ALIGNMENTS.
2. THERE ARE NO MULTIFAMILY RESIDENCES PROPOSED WITHIN FILING 3.
3. WITHIN FILING NO. 4, LOTS 66, 68, 70, 74, 77, 89, 91, 93, 96, 100 ARE DETACHED MULTIFAMILY DUPLEX UNITS. LOTS 67, 69, 71, 72, 73, 75, 76, 78, 87, 88, 90, 92, 94, 95, 97, 99 ARE ATTACHED MULTIFAMILY DUPLEX UNITS.

ABBREVIATIONS:

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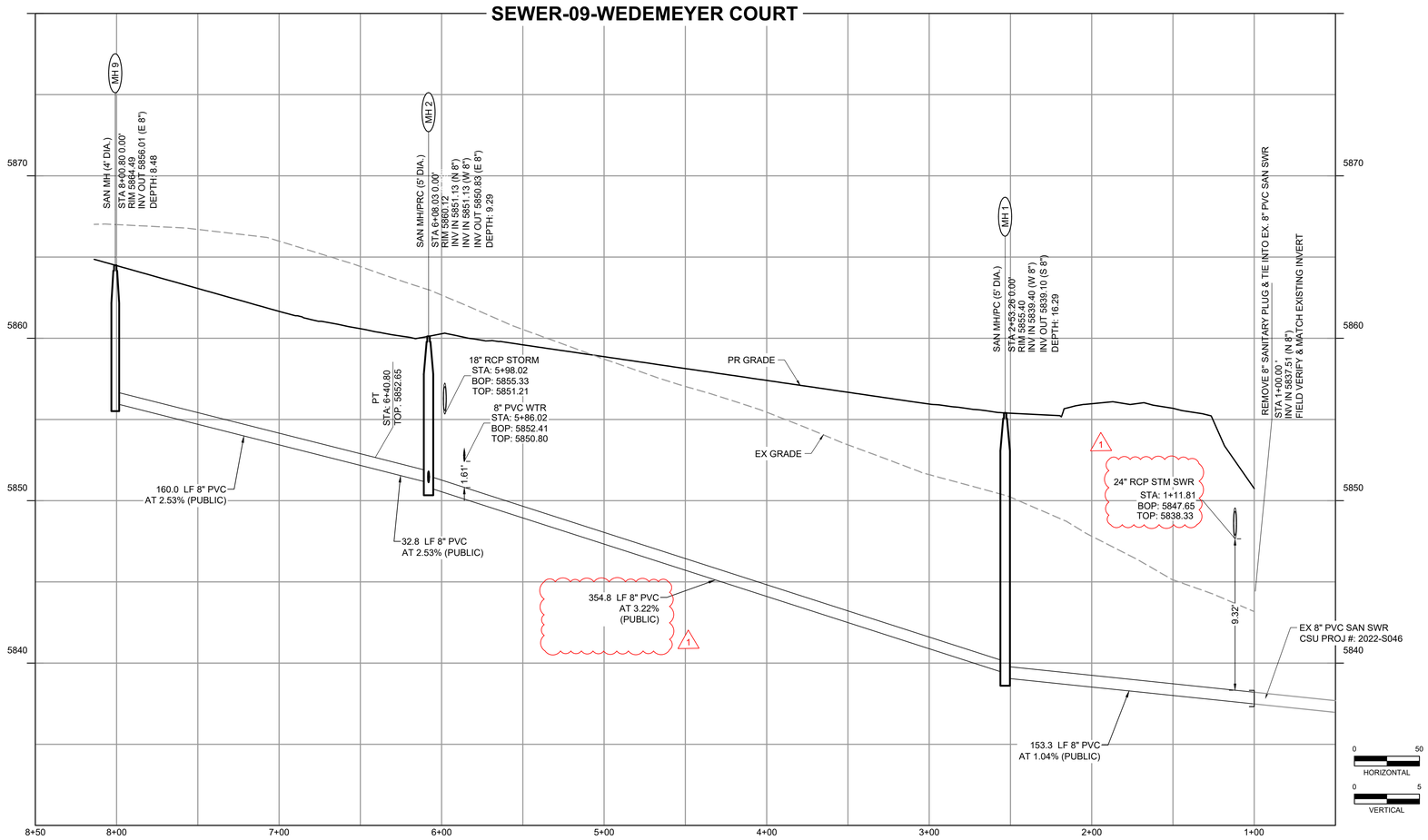
P.U.A.E - PUBLIC UTILITY & ACCESS EASEMENT
P.I.U.E. - PUBLIC IMPROVEMENTS UTILITY EASEMENT

SEWER-09-WEDEMEYER COURT



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06/16/2026 8:45:34 AM
mgackle
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Colorado Springs Utilities
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1 REVISION #1 PIPE MATERIAL CHANGE (SHEET 03)

COLORADO SPRINGS UTILITIES
WASTEWATER MAIN DESIGN APPROVAL

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PROJECT NUMBER: 2024-S1148
WORK ORDER NUMBER: 4149839
CSU SHEET 3 OF 7

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

COLORADO LICENSED
KENNETH MICHAEL HUHN
0054022
05/29/26
PROFESSIONAL ENGINEER

DRAWN BY: DLH JOB DATE: 5/29/2026
APPROVED: KMH JOB NUMBER: 211448
CAD DATE: 5/29/2026
CAD FILE: J:\2021\211448\CAD\Dwgs\C\CDs\F4_CSU\Sewer\Sewer_PNP_Filing_4

BAR IS ONE INCH ON OFFICIAL DRAWINGS.
0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION
1	5/29/26	CVW	MATERIAL CHANGE

HRGreen
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
FAX: 713.965.0044

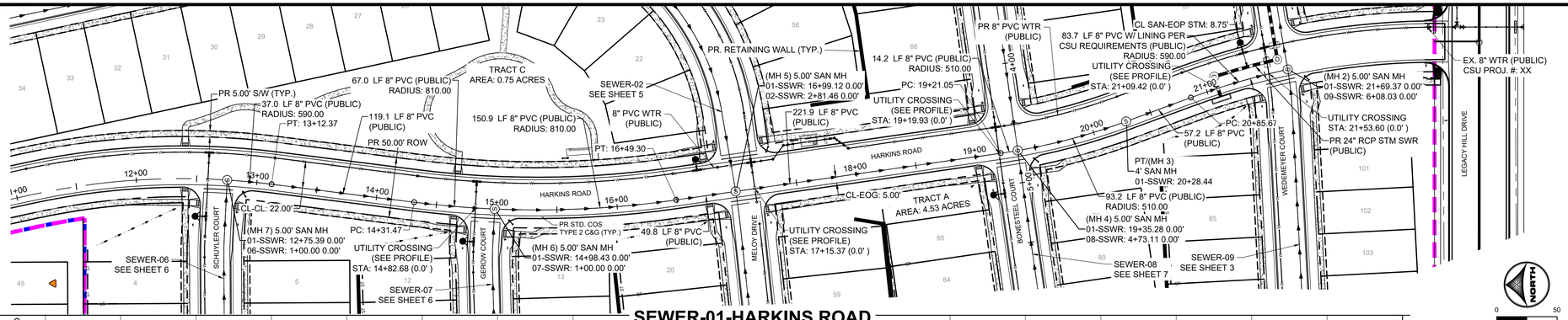
BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

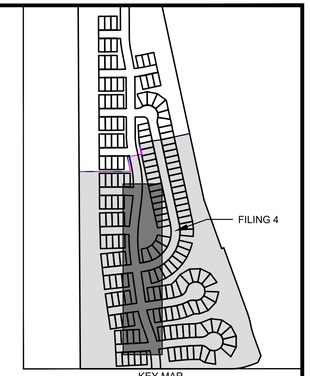
CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
SEWER 9 PLAN AND PROFILE

SHEET
SAN
3

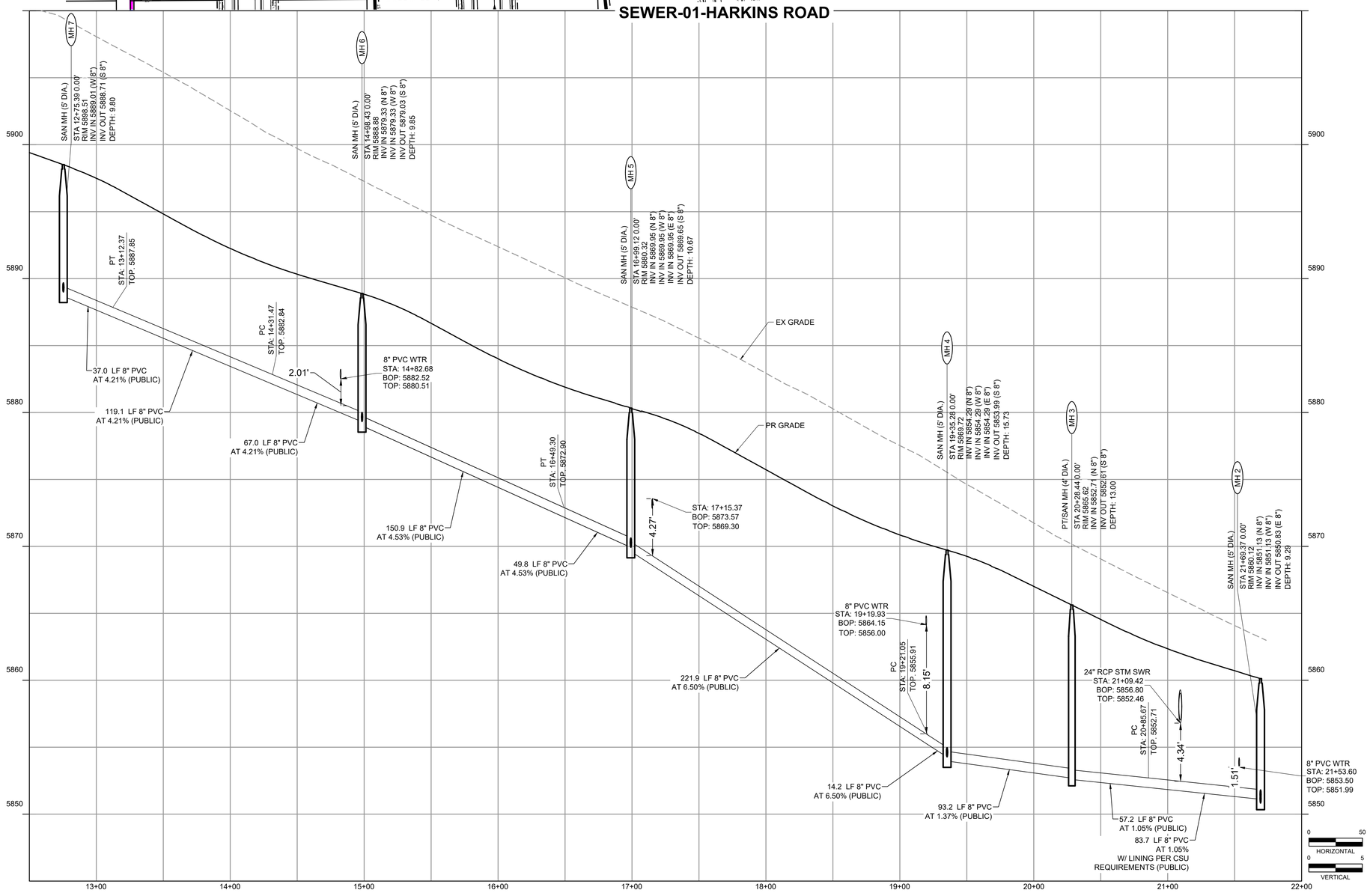
HUHN, KEN, 5/29/2026 3:40 PM
HR GREEN Xrefs: xc-03-dsgn; xc-03-row; xc-03-util; xc-util-matrix; xv-dsgn; xv-row; xv-util; xc-dsgn-matrix; csu_wastewater_cd_notes; csu_ww_approval_block; key_map; xgt-1-arch dh01-CD-F4; CO-Stamp-Signed-Current





KEY MAP
SCALE: NTS

SEWER-01-HARKINS ROAD



WASTEWATER PLAN NOTES:

1. GAS AND ELECTRIC MAIN EXTENSIONS ASSOCIATED WITH THE PROJECT ARE TO BE DESIGNED BY COLORADO SPRINGS UTILITIES (CSU). CONTACT CSU REGARDING PROPOSED ALIGNMENTS.
2. THERE ARE NO MULTIFAMILY RESIDENCES PROPOSED WITHIN FILING 3.
3. WITHIN FILING NO. 4, LOTS 66, 68, 70, 74, 77, 89, 91, 93, 96, 100 ARE DETACHED MULTIFAMILY DUPLEX UNITS. LOTS 67, 69, 71, 72, 73, 75, 76, 78, 87, 88, 90, 92, 94, 95, 97, 99 ARE ATTACHED MULTIFAMILY DUPLEX UNITS.

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P.U.A.E - PUBLIC UTILITY & ACCESS EASEMENT
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COLORADO SPRINGS UTILITIES
WASTEWATER MAIN DESIGN APPROVAL

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PROJECT NUMBER: 2024-S1148
WORK ORDER NUMBER: 4149839
CSU SHEET 4 OF 7

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

COLORADO LICENSED
KENNETH MICHAEL HUHN
0054022
12/18/25
PROFESSIONAL ENGINEER

DRAWN BY: DLH	JOB DATE: 11/25/2024	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"	
APPROVED: KMH	JOB NUMBER: 211448	IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
CAD DATE: 12/18/2025			
CAD FILE: J:\2021\211448\CAD\Dwgs\C\CDs\F4_CSU\Sewer\Sewer_PNP_Filing_4			

NO.	DATE	BY	REVISION DESCRIPTION

HRGreen
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
FAX: 713.965.0044

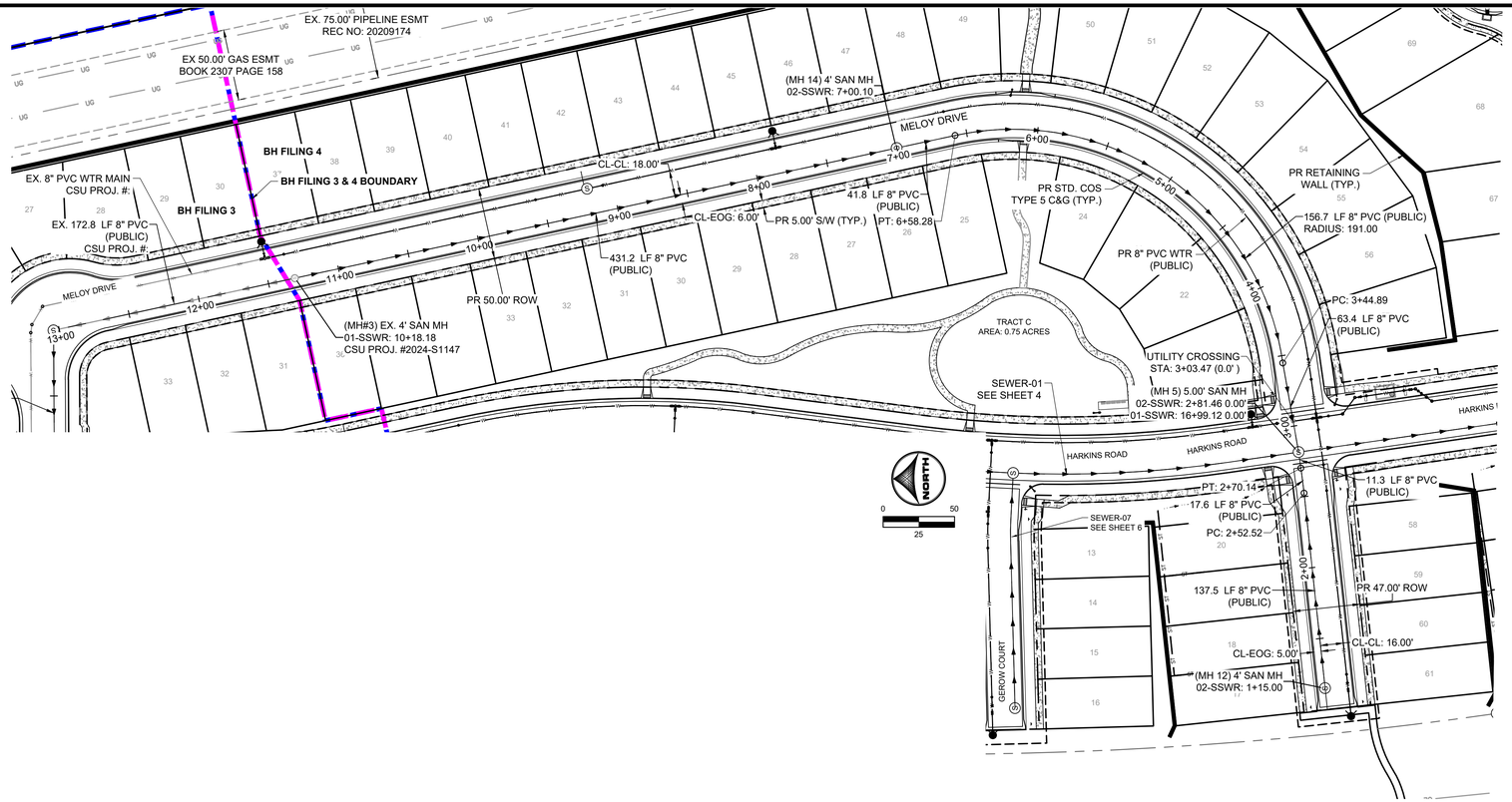
BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

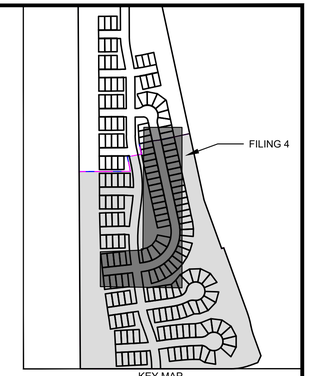
CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
SEWER 1 PLAN AND PROFILE

SHEET
SAN
4

HUHN, KEN. 12/18/2025 1:42 PM
HR GREEN Xrefs: xc-03-dsgn; xc-03-row; xc-03-util; xc-util-matrix; xv-dsgn; xv-row; xv-util; xc-dsgn-matrix; csu_ww_approval_block; key_map; xgf-1-arch dfr01-CD-F4; CO-Stamp-Signed-Current





KEY MAP
SCALE: NTS

WASTEWATER PLAN NOTES:

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COLORADO SPRINGS UTILITIES
WASTEWATER MAIN DESIGN APPROVAL

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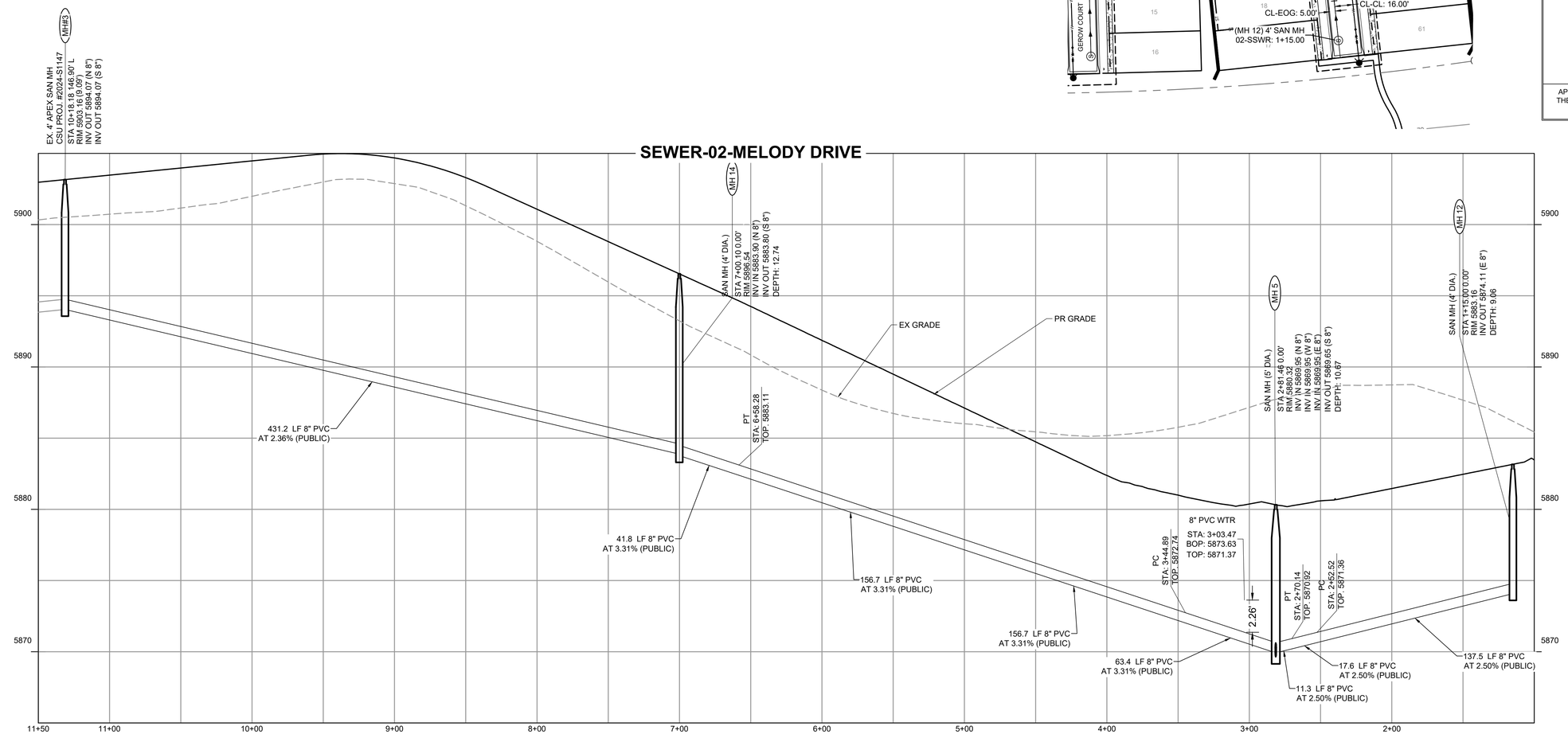
PROJECT NUMBER: 2024-S1148
WORK ORDER NUMBER: 4149839
CSU SHEET 5 OF 7

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.



0 50 HORIZONTAL
0 5 VERTICAL

COLORADO LICENSED
KENNETH MICHAEL KUHN
0054022
12/18/25
PROFESSIONAL ENGINEER

DRAWN BY: DLH	JOB DATE: 11/25/2024	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"	
APPROVED: KMH	JOB NUMBER: 211448	IF NOT ONE INCH ADJUST SCALE ACCORDINGLY.	
CAD DATE: 12/18/2025			
CAD FILE: J:\2021\211448\CAD\Dwgs\C\CDs\F4_CSU\Sewer\Sewer_PNP_Filing_4			

NO.	DATE	BY	REVISION DESCRIPTION

HRGreen
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
FAX: 713.965.0044

BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

CHALLENGER HOMES

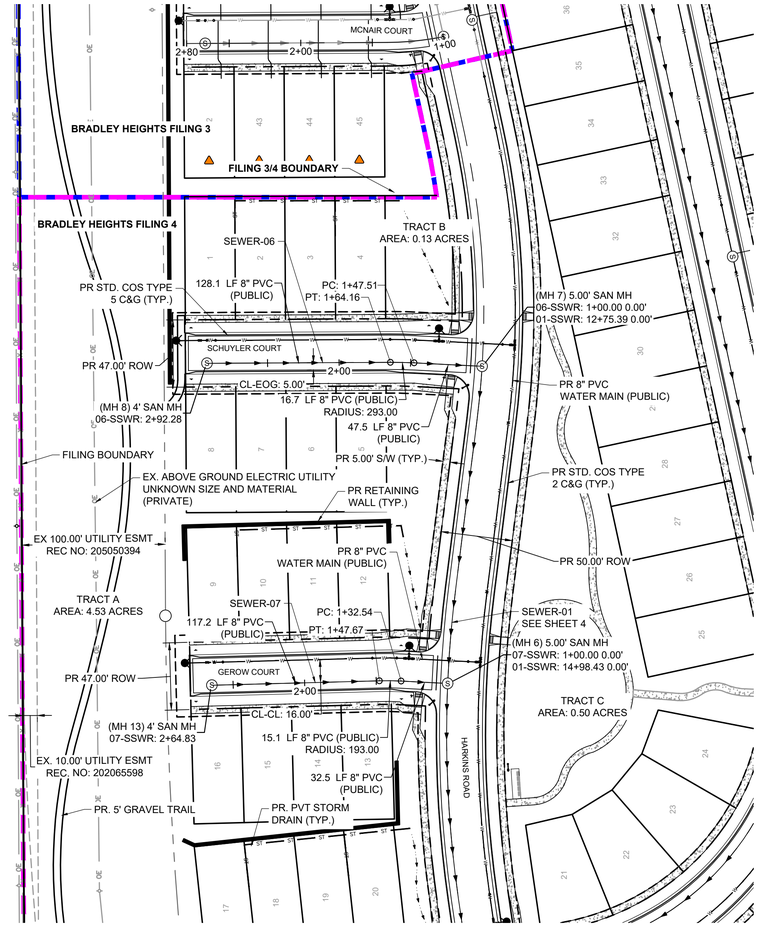
CONSTRUCTION DOCUMENTS
SEWER 2 PLAN AND PROFILE

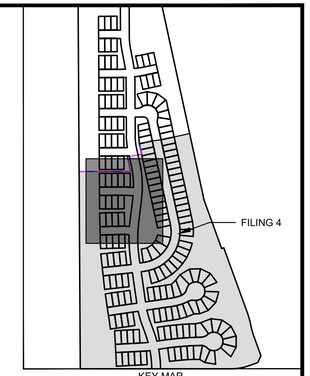
SHEET
SAN
5

HUHN, KEN, 12/18/2025 1:42 PM

HR GREEN Xrefs: xc-03-dsgn; xc-03-row; xc-03-util; xc-util-matrix; xv-dsgn; xv-row; xv-util; xc-dsgn-matrix; csu_wastewater_cd_notes; csu_ww_approval_block; key_map; xgt-1-arch dh01-CD-F4; CO-Stamp-Signed-Current

HUHN, KEN, 12/18/2025 1:42 PM





KEY MAP
SCALE: NTS

WASTEWATER PLAN NOTES:

1. GAS AND ELECTRIC MAIN EXTENSIONS ASSOCIATED WITH THE PROJECT ARE TO BE DESIGNED BY COLORADO SPRINGS UTILITIES (CSU). CONTACT CSU REGARDING PROPOSED ALIGNMENTS.
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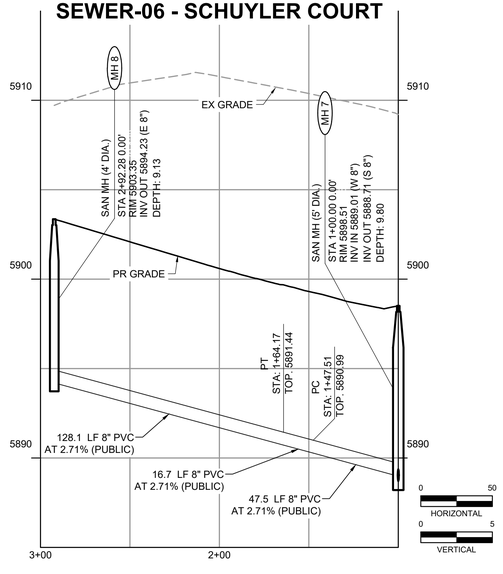
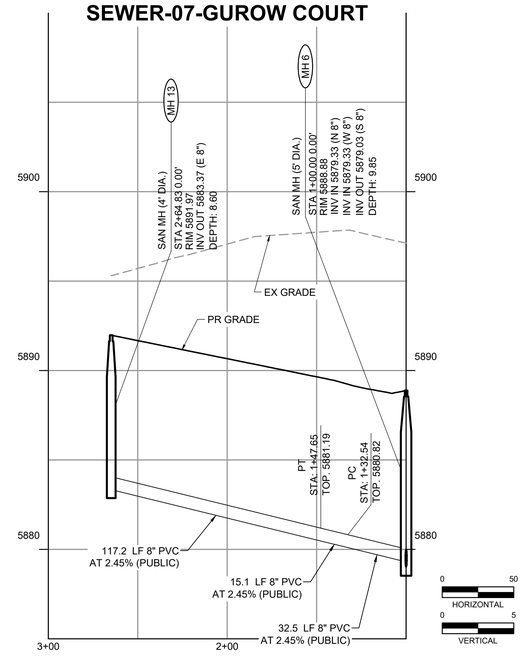
P.U.A.E - PUBLIC UTILITY & ACCESS EASEMENT
P.I.U.E. - PUBLIC IMPROVEMENTS UTILITY EASEMENT

SEWER-06 - SCHUYLER COURT



SEWER-07-GUROW COURT



COLORADO SPRINGS UTILITIES
WASTEWATER MAIN DESIGN APPROVAL

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12/26/2025 9:55:35 AM
mgackle
Wastewater
Colorado Springs Utilities
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PROJECT NUMBER: 2024-S1148
WORK ORDER NUMBER: 4149839
CSU SHEET 6 OF 7

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

COLORADO LICENSED
KENNETH MICHAEL HUHN
0054022
12/18/25
PROFESSIONAL ENGINEER

DRAWN BY: DLH	JOB DATE: 11/25/2024	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
APPROVED: KMH	JOB NUMBER: 211448		
CAD DATE: 12/18/2025			
CAD FILE: J:\2021\211448\CAD\Dwgs\C\CDs\F4_CSU\Sewer\Sewer_PNP_Filing_4			

NO.	DATE	BY	REVISION DESCRIPTION

HRGreen
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
FAX: 713.965.0044

BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

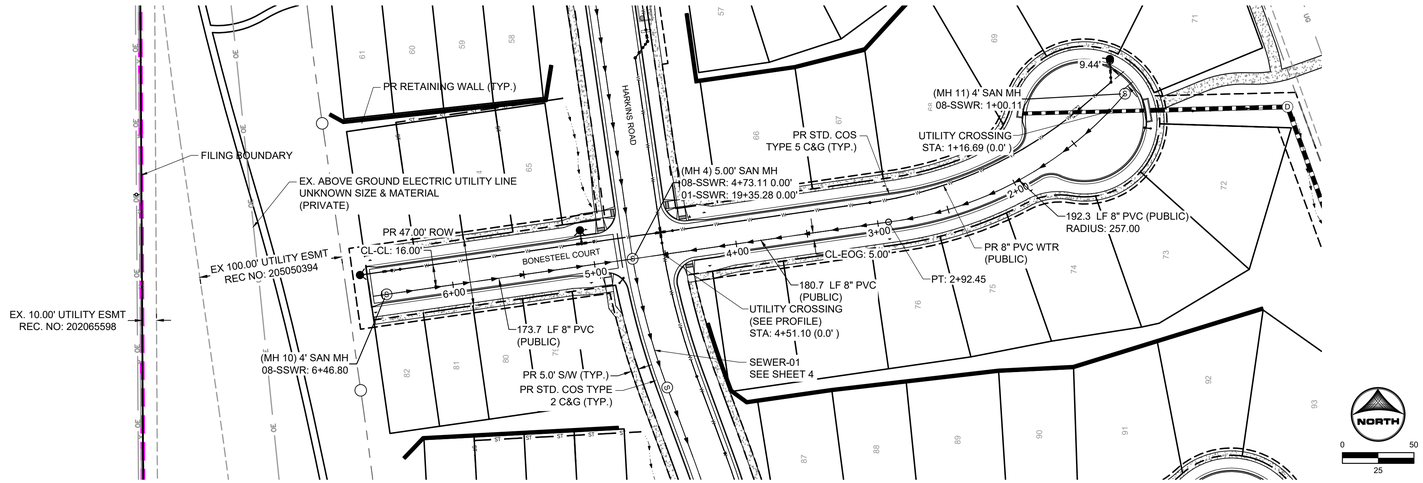
CHALLENGER HOMES

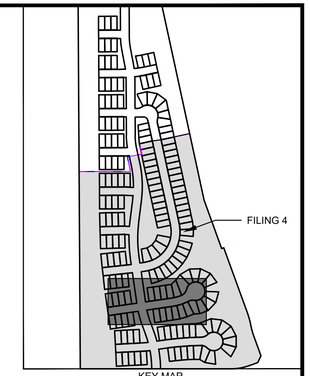
SANITARY SEWER PLAN AND PROFILE
SEWERS 6-7 PLAN AND PROFILE

SHEET
SAN
6

HR GREEN Xrefs: xc-03-dsgn; xc-03-row; xc-03-util; xc-util-matrix; xv-dsgn; xv-row; xv-util; xc-dsgn-matrix; csu_wastewater_cd_notes; csu_ww_approval_block; key_map; xgl-1-arch dh01-CD-F4; CO-Stamp-Signed-Current

HUHN, KEN, 12/18/2025 1:42 PM





KEY MAP
SCALE: NTS

WASTEWATER PLAN NOTES:

1. GAS AND ELECTRIC MAIN EXTENSIONS ASSOCIATED WITH THE PROJECT ARE TO BE DESIGNED BY COLORADO SPRINGS UTILITIES (CSU). CONTACT CSU REGARDING PROPOSED ALIGNMENTS.
2. THERE ARE NO MULTIFAMILY RESIDENCES PROPOSED WITHIN FILING 3.
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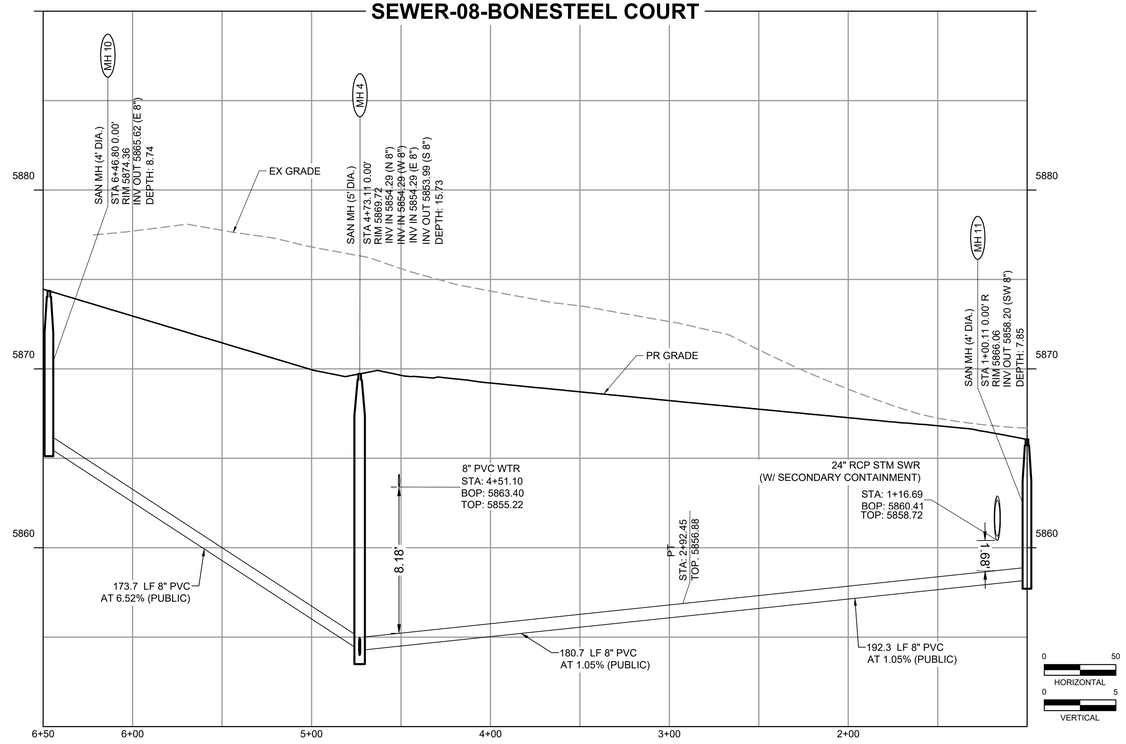
P.I.U.E. - PUBLIC IMPROVEMENTS UTILITY EASEMENT

SEWER-08-BONESTEEL COURT



COLORADO SPRINGS UTILITIES
WASTEWATER MAIN DESIGN APPROVAL

APPROVED
12/26/2025 9:55:41 AM
mgackle
Wastewater

Colorado Springs Utilities
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PROJECT NUMBER: 2024-S1148
WORK ORDER NUMBER: 4149839
CSU SHEET 7 OF 7

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

COLORADO LICENSED
KENNETH MICHAEL HUHN
0054022
12/18/25
PROFESSIONAL ENGINEER

DRAWN BY: DLH	JOB DATE: 11/25/2024	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"	
APPROVED: KMH	JOB NUMBER: 211448	IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
CAD DATE: 12/18/2025			
CAD FILE: J:\2021\211448\CAD\Dwgs\C\CDs\F4_CSU\Sewer\Sewer_PNP_Filing_4			

NO.	DATE	BY	REVISION DESCRIPTION

HRGreen
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
FAX: 713.965.0044

BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

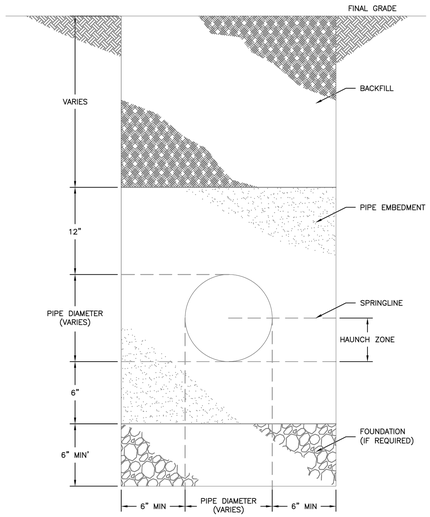
CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
SEWER 8 PLAN AND PROFILE

SHEET
SAN
7

HR GREEN Xrefs: xc-03-dsgn; xc-03-row; xc-03-util; xc-util-matrix; xv-dsgn; xv-row; xv-util; xc-dsgn-matrix; csu_wastewater_cd_notes; csu_ww_approval_block; key_map; xgt-1-arch dh01-CD-F4; CO-Stamp-Signed-Current

HUHN, KEN, 12/18/2025 1:42 PM



NOTE:

1. TRENCH BACKFILL SHALL CONFORM TO THE SPECIFICATIONS OF THE AUTHORITY HAVING JURISDICTION AND ASTM D2321.

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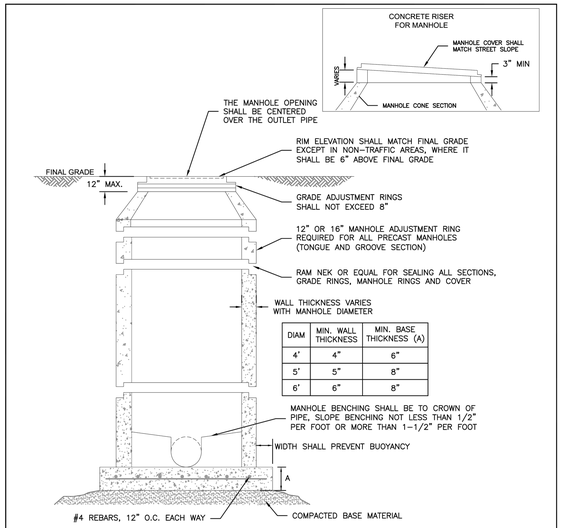
TYPICAL TRENCH SECTION

C2–1
DATED 5/2015



DIAM	MIN. WALL THICKNESS	MIN. BASE THICKNESS (A)
4'	4"	6"
5'	5"	8"
6'	6"	8"

NOTES:

1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 4000 PSI @ 28 DAYS AND DESIGNED FOR HS–20 LOADING CONDITIONS.
2. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED.
3. FOR CAST IN PLACE MANHOLES, DO NOT DROP CONCRETE A DISTANCE OF MORE THAN 5' UNLESS APPROVED BY COLORADO SPRINGS UTILITIES.
4. 3/4" CRUSHED ROCK REQUIRED UNDER BASE TO A DEPTH OF 6" UP TO SPRINGLINE OF PIPE, 2'–3' RADIUS AROUND BASE.
5. ALL STEPS SHALL BE REMOVED FOLLOWING CONSTRUCTION. SEE SECTION 4.2.H.1.
6. STRUCTURAL REINFORCEMENT SHALL COMPLY TO ASTM C–478. ASTM C–478 SHALL BE STAMPED ON THE OUTSIDE OF THE MANHOLE.

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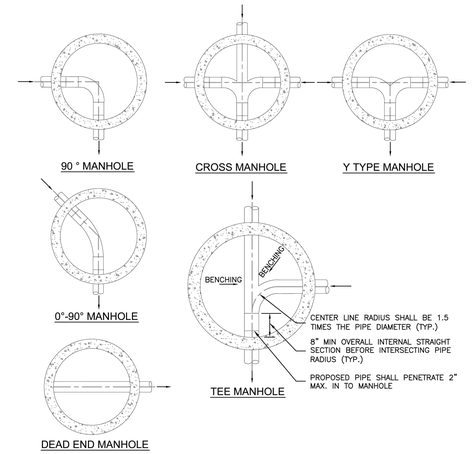
STANDARD CONCRETE MANHOLE

C3–1
DATED 12/2015

TYPICAL INTERSECTING PIPE MANHOLE LAYOUTS



NOTES:

1. SEE DETAIL DRAWING C3–1 FOR MANHOLE REQUIREMENTS.
2. LAYOUTS SHOWN ARE FOR 8"–12" PIPES; LAYOUTS FOR LARGER DIAMETER PIPELINES AND MANHOLES SHALL BE DESIGNED BY THE DESIGN ENGINEER AND APPROVED BY COLORADO SPRINGS UTILITIES.
3. TO BE READ IN CONJUNCTION WITH CHAPTER 2, MANHOLE SIZES.

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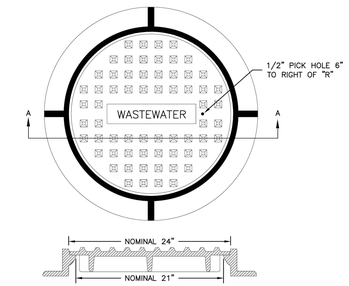
TYPICAL MANHOLE LAYOUTS AND INTERSECTIONS

C3–2
DATED 5/2015



SECTION A-A
COVER SECTION

NOTES:

1. SEE CHAPTER 4 FOR ADDITIONAL INFORMATION AND SPECIFIC DIMENSIONS.

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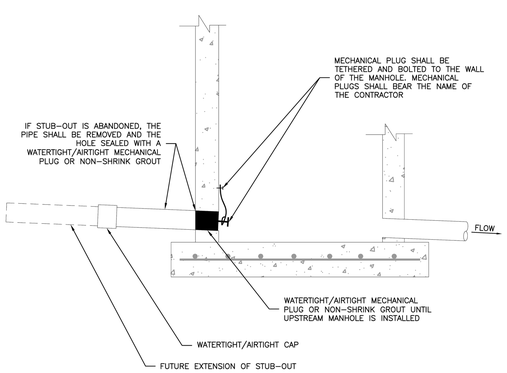
STANDARD MANHOLE RING AND COVER IN TRAFFIC AREAS

C3–9
DATED 5/2015



Colorado Springs Utilities
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WASTEWATER MAIN STUB–OUT FROM MANHOLE

C3–4
DATED 5/2015

HR GREEN Xrefs: xgi-1-arch dl101-CD-F4; CO-Stamp-Signed-Current

DRAWN BY: DLH JOB DATE: 11/25/2024
APPROVED: KMH JOB NUMBER: 211448
CAD DATE: 12/18/2025
CAD FILE: J:\2021\211448\CAD\Dwgs\C\CDs\F4_CSU\Sewer\Details_Filing_4

BAR IS ONE INCH ON OFFICIAL DRAWINGS.
0 1"
IF NOT ONE INCH ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION

HRGreen
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
FAX: 713.965.0044

BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
DETAILS

SHEET
DT

8

BRADLEY HEIGHTS FILING 4
UTILITY SERVICE PLAN

LOCATED WITHIN A PORTION OF SECTION 9, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M., CITY OF COLORADO SPRINGS, COUNTY OF EL PASO, STATE OF COLORADO

UTILITY SERVICE PLAN NOTES

THE CONTRACTOR SHALL NOTIFY COLORADO SPRINGS UTILITIES' INSPECTIONS OFFICE (NORTH: 668-4396 OR SOUTH: 668-4658) A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

GENERAL:

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL MEET COLORADO SPRINGS UTILITIES' WASTEWATER AND WATER LINE EXTENSION AND SERVICE STANDARDS (WATER/WASTEWATER LESS).
2. COLORADO SPRINGS UTILITIES DOES NOT GUARANTEE THE ACCURACY OF LOCATIONS OF EXISTING PIPELINES, MANHOLES AND SERVICE LINES. IF FIELD CONDITIONS ARE FOUND TO BE DIFFERENT THAN SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE INSPECTOR AND THE ENGINEER OF RECORD IMMEDIATELY.
3. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY FACILITIES AS A RESULT OF HIS ACTIONS. THE CONTRACTOR SHALL MAKE ALL THE REQUIRED REPAIRS IMMEDIATELY TO THE SATISFACTION OF COLORADO SPRINGS UTILITIES.
4. ALL FIELD STAKING SHALL COMPLY WITH THE WASTEWATER STANDARDS.
5. CORROSION PROTECTION MEASURES SHALL COMPLY WITH THE WATER/WASTEWATER LESS.
6. FINAL LOCATION OF ALL WASTEWATER AND WATER SERVICES SHALL BE APPROVED IN THE FIELD BY THE COLORADO SPRINGS UTILITIES.
7. ALL TRENCH BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE CITY OF COLORADO SPRINGS STANDARDS SPECIFICATIONS MANUAL.

WASTEWATER:

1. SERVICE STUBS SHALL BE INSTALLED A MINIMUM OF SEVEN FEET (7') INTO THE PROPERTY, UNLESS OTHERWISE SHOWN, AND THE END OF THE STUB SHALL BE MARKED WITH A 2"X4"x12' STEEL OR WOODEN POST.
2. SERVICES SHALL BE CONNECTED A MINIMUM OF FIVE FEET (5') FROM THE OUTSIDE EDGE OF ANY MANHOLE ON THE MAIN LINE AND SHALL MAINTAIN TWO FEET (2') OF SEPARATION BETWEEN TAPS CENTER TO CENTER.
3. ALL CLEANOUTS SHALL BE THE SAME SIZE AS THE SERVICE LINE.
4. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY DEPARTMENT OF HEALTH AND ENVIRONMENT WHEN ANY SEPTIC TANK IS TO BE ABANDONED AND PAY ALL FEES NECESSARY TO OBTAIN A PERMIT.

WATER:

1. SERVICE STUBS SHALL BE INSTALLED WITH THE CURB STOP AT OR NEAR PROPERTY LINE AND SHALL NOT BE INSTALLED WITHIN DRIVEWAYS OR SIDEWALKS (SEE DETAIL DRAWING B2-3).
2. SERVICE TAPS SHALL BE MADE A MINIMUM OF THREE FEET (3') FROM THE BELL OR APPURTENANCE ON THE WATER MAIN. TAPS SHALL BE A MINIMUM OF THREE FEET (3') APART ON THE SAME SIDE OF THE WATER MAIN AND A MINIMUM OF ONE-AND-A-HALF FEET (1.5') WHEN TAPS ARE MADE ON OPPOSITE SIDES OF THE WATER MAIN.
3. ALL SERVICES FOR COMMERCIAL USE AND SOME RESIDENTIAL USES REQUIRE THE INSTALLATION OF A BACKFLOW PREVENTION ASSEMBLY IMMEDIATELY AFTER THE METER. THE BACKFLOW PREVENTION ASSEMBLY SHALL BE APPROVED BY THE FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH OF THE UNIVERSITY OF SOUTHERN CALIFORNIA (USC-FCCCHR) AND INSTALLED IN ACCORDANCE WITH THIS LISTING.
4. ALL TAPS ON COLORADO SPRINGS UTILITIES WATER MAINS SHALL BE PERFORMED BY COLORADO SPRINGS UTILITIES. ALL OTHER TAPS SHALL BE PERFORMED BY THE CONTRACTOR.
5. ANY ABANDONED SERVICES MUST BE PHYSICALLY DISCONNECTED AT THE MAIN. ANY NECESSARY REPAIRS THE THE MAIN AND/OR SHUT DOWN OF THE TAPPING VALVE SHALL BE AS DIRECTED BY COLORADO SPRINGS UTILITIES.
6. ALL WATER SERVICE LINES SHOULD ENTER THE BUILDING WITHIN THREE FEET OF AN EXTERIOR WALL. EXPOSED WATER PLUMBING SHALL BE MINIMIZED INSIDE THE BUILDING PRIOR TO THE WATER METER AND/OR APPROVED BACKFLOW PREVENTION ASSEMBLY OR METHOD.
7. ALL HDPE WATER SERVICE LINES MUST EXTEND A MINIMUM OF 6 INCHES ABOVE THE FLOOR AND BE 90 DEGREES FROM THE FLOOR PLAN TO ALLOW FOR BRACING AND TRANSITION TO THE METER LOOP ASSEMBLY.

PLAN INFORMATION

FIMs MAP NUMBER: S-43

TAX SCHEDULE NO: 5500000463

WATER PRESSURE ZONE: SOUTHLINE

MAX STATIC PRESSURE (LOLN): 153 PSI

MAX STATIC PRESSURE (SOLN): 78 PSI

UTILITY DESIGN CAD FILE NO: CF20243674

UAP FILE NO. OR PLAT RECEPTION NO: N/A

EASEMENT RECEPTION NO: PER PLAT

DEVELOPMENT PLAN NO: AR PUD 22-00279

DEVELOPMENT PLAN APPROVAL DATE: 08/30/2024

NOTICE OF PRIVATE WATER SYSTEM REC NO: N/A

BUILDING SPRINKLED: NO

OWNER/DEVELOPER PLAN APPROVAL

THE UNDERSIGNED OWNER/DEVELOPER AGREES THAT THEY SHALL, AT THEIR EXPENSE, BE SOLELY RESPONSIBLE FOR 1) THE INSTALLATION OF THE PROPOSED UTILITY INFRASTRUCTURE IN ACCORDANCE WITH THESE PLANS, AND 2) ALL DAMAGES AND DEFECTS ARISING FROM, OR RELATED TO, THE INSTALLATION, MAINTENANCE OR OPERATION OF THE PUBLIC UTILITY INFRASTRUCTURE FROM THE DATE OF PRELIMINARY ACCEPTANCE FOR A PERIOD OF TWO YEARS, OR UNTIL FINAL ACCEPTANCE, WHICHEVER IS LATER.

THE UNDERSIGNED UNDERSTANDS THAT ALL PRIVATE UTILITY INFRASTRUCTURE, AS INDICATED ON THESE PLANS, SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE MAINTAINED BY THE OWNER, AS REQUIRED BY *COLORADO SPRINGS UTILITIES' LINE EXTENSION AND SERVICE STANDARDS.*

- ☐ PUBLIC WATER MAIN PROPOSED
- ☐ PUBLIC WASTEWATER MAIN PROPOSED
- ☒ PRIVATE WATER SERVICE LINE (<4") AND/OR PRIVATE WASTEWATER SERIVE LINE (<8")
- ☐ PUBLIC FACILITIES PROPOSED
- ☐ PRIVATE FACILITIES PROPOSED

SIGNED: Jim Byers DATE: 12/18/25
OWNER/DEVELOPER

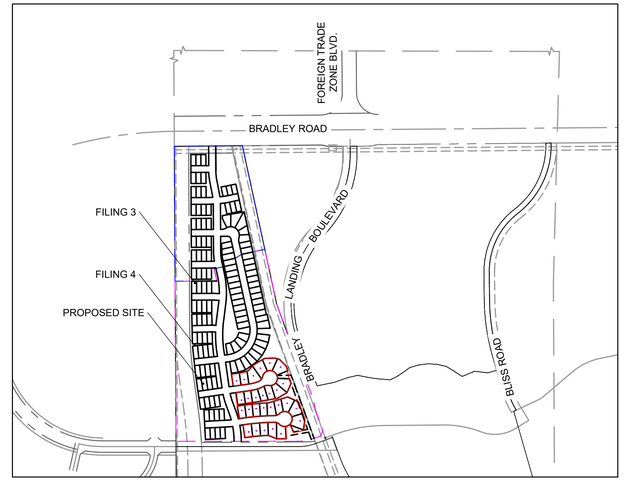
Jim Byers VP of Community Development
OWNER/DEVELOPER (PRINT NAME)

DBA: Challenger Homes, LLC

ADDRESS: 8605 Explorere Dr, Suite 250
Colorado Springs, C0, 80920

PHONE: 719-598-5192

EMAIL: jim@challengerhomes.com



VICINITY MAP
1" = 500'

NORTH
0 250 500

SHEET INDEX:

1 - COVER SHEET
2 - LEGEND
3 - UTILITY SERVICE PLAN
4 - UTILITY SERVICE PLAN
5 - DETAILS

LEGAL DESCRIPTION:

A PARCEL OF LAND LYING WITHIN THE SOUTHEAST QUARTER OF SECTION 9, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: THE NORTH-SOUTH CENTERLINE OF SAID SECTION 9, MONUMENTED AT BOTH ENDS BY A 3 1/4" ALUMINUM CAP STAMPED "RLS 10377", AND IS ASSUMED TO BEAR S 00°19'23" E, A DISTANCE OF 5252.20 FEET.

A PARCEL OF LAND LYING WITHIN THE EAST HALF OF SECTION 9, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH/ P.M., COUNTY OF EL PASO, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: THE NORTH-SOUTH CENTERLINE OF SAID SECTION 9, MONUMENTED AT BOTH ENDS BY A 3 1/4" ALUMINUM CAP STAMPED "RLS 10377", IS ASSUMED TO BEAR S 00°19'23" E, A DISTANCE OF 5252.20 FEET.

COMMENCING AT THE SOUTH QUARTER CORNER OF SAID SECTION 9;
THENCE N 00°19'23" W ALONG SAID NORTH-SOUTH CENTERLINE, A DISTANCE OF 1577.02 FEET TO THE POINT OF BEGINNING;
THENCE CONTINUING ALONG SAID NORTH-SOUTH CENTERLINE N 00°19'23" W, A DISTANCE OF 2061.22 FEET TO A POINT ON THE SOUTH LINE OF BRADLEY ROAD AS RECORDED UNDER BOOK 5307 AT PAGE 1472 OF THE RECORDS OF EL PASO COUNTY;
THENCE N 89°30'18" E ALONG SAID SOUTH LINE, A DISTANCE OF 475.67 FEET TO THE NORTHEASTERLY CORNER OF THAT PARCEL OF LAND DESCRIBED IN THE PERSONAL REPRESENTATIVE'S DEED AS TSN 55000-00-392 (PAGE 15 OF 27) AS RECORDED UNDER RECEPTION NO. 221054106 OF SAID RECORDS;
THENCE THE FOLLOWING THREE (3) COURSES ALONG THE EASTERLY EXTERIOR OF SAID PARCEL OF LAND IN SAID PERSONAL REPRESENTATIVE'S DEED:
1) THENCE S 12°12'47" E, A DISTANCE OF 1131.93 FEET;
2) THENCE S 19°56'27" E, A DISTANCE OF 292.74 FEET;
3) THENCE N 70°03'49" E, A DISTANCE OF 13.00 FEET;
THENCE S 19°56'27" E, A DISTANCE OF 396.84 FEET;
THENCE 77.66 FEET ALONG THE ARC OF A 437.50 FOOT RADIUS CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 10°10'15" AND A CHORD THAT BEARS S 14°51'20" E, 77.56 FEET;
THENCE 46.60 FEET ALONG THE ARC OF A 262.50 FOOT RADIUS REVERSE CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 10°10'15" AND A CHORD THAT BEARS S 14°51'20" E, 46.54 FEET;
THENCE S 19°56'27" E, A DISTANCE OF 128.89 FEET;
THENCE S 25°03'33" W, A DISTANCE OF 42.43 FEET;
THENCE S 70°03'33" W, A DISTANCE OF 52.19 FEET;
THENCE 103.73 FEET ALONG THE ARC OF A 298.00 FOOT RADIUS CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 19°56'36" AND A CHORD THAT BEARS S 80°01'51" W, 103.20 FEET;
THENCE N 89°59'51" W, A DISTANCE OF 857.99 FEET TO THE POINT OF BEGINNING.

CONTAINING A CALCULATED AREA OF 1,501,005 SQUARE FEET (34.46 ACRES) OF LAND, MORE OR LESS.

TO BE PLATTED AS BRADLEY HEIGHTS FILING 3 AND 4

BASIS OF BEARINGS:

THE NORTH-SOUTH CENTERLINE OF SECTION 9, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO, BEING MONUMENTED AT BOTH ENDS BY A 3 1/4" ALUMINUM CAP STAMPED "RLS 10377", IS ASSUMED TO BEAR S 00 °19'23" E, A DISTANCE OF 5252.20 FEET.

BENCHMARK:

ELEVATIONS ARE BASED UPON THE COLORADO SPRINGS UTILITIES FIMS MONUMENT F230 (PUBLISHED ELEVATION=5779.16 NAVD88).

LEGEND

	EXISTING	PROPOSED
MATCH LINE		
PHASE LINE		
SECTION LINE		
PROPERTY BOUNDARY		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
CENTERLINE		
CHAIN LINK FENCE		
WOODEN FENCE		
ROD IRON FENCE		
GUARDRAIL		
CABLE TV	TV	TV
U.G. ELECTRIC	UE	UE
OVERHEAD ELECTRIC	OE	OE
FIBER OPTIC	FO	FO
GAS MAIN		
SANITARY SEWER	SS	
STORM DRAIN		
TELEPHONE	UT	UT
WATER MAIN	W	W
SWALE		
TRAIL		
CURB & GUTTER		
DRAINAGE BASIN		
INDEX CONTOUR		
INTER. CONTOUR		
100-YR FLOODPLAIN		
FLOODWAY		
EDGE OF WETLANDS		

DRAINAGE

	EXISTING	PROPOSED
DRAINAGE BASIN		
BASIN TAG		I.D. AREA
DESIGN POINT		

STORM SEWER

	EXISTING	PROPOSED
MANHOLE		D
STORM INLET		
FLARED END SECTION		
RIPRAP		

SANITARY SEWER

CLEAN OUT
MANHOLE
PLUG

WATER

FIRE HYDRANT
FIRE DEPT. CONNECTION
GATE VALVE
MANHOLE
METER
TEE
REDUCER

DRY UTILITIES

ELECTRIC METER
ELECTRIC PEDESTAL
ELECTRICAL CABINET
ELECTRIC VAULT
FIBER OPTIC PULL BOX
FIBER OPTIC MANHOLE
FIBER OPTIC PEDESTAL
FIBER OPTIC SIGN
FIBER OPTIC VAULT
GAS METER
GAS SIGN
GAS VAULT
TELEPHONE CABINET
TELEPHONE MANHOLE
TELEPHONE SIGNAL/MAST
TELEPHONE SIGN
TELEPHONE PEDESTAL
TRANSFORMER
LIGHT POLE
FIBER OPTIC VAULT

MISCELLANEOUS

SIGN
BOLLLARD
ACCESSIBLE PARKING

APPROVED
06/16/2026 8:45:59 AM
mgackle
Utility Service
Colorado Springs Utilities
It's how we're all connected

1 REVISION #1:
- ADDED LOT TYPICALS FOR HERITAGE MODELS (SHEET 2)
- SERVICE CHANGE LOTS 66-78, 87-100 (SHEETS 3&4)

COLORADO SPRINGS UTILITIES
RESIDENTIAL UTILITY SERVICE PLAN DESIGN APPROVAL

APPROVED
12/26/2025 9:58:02 AM
mgackle
Utility Service
Colorado Springs Utilities
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PROJECT NUMBER: 2024-W1148
WORK ORDER NUMBER: 4149838
CSU SHEET 1 OF 4

PROJECT NUMBER: 2024-S1148
WORK ORDER NUMBER: 4149839
CSU SHEET 1 OF 4

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

COLORADO LICENSED
KENNETH MICHAEL KUHN
0054022
05/29/26
PROFESSIONAL ENGINEER

DRAWN BY: AXB JOB DATE: 6/1/2026
APPROVED: KMH JOB NUMBER: 211448
CAD DATE: 6/1/2026
CAD FILE: J:\2021\211448\CAD\Dwgs\C\CDs\F4_CSU\USP\Cover_sheet

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION
1	5/29/26	CVW	SERVICE CHANGE LOTS 66-78, 87-100

HRGreen
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
FAX: 713.965.0044

BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

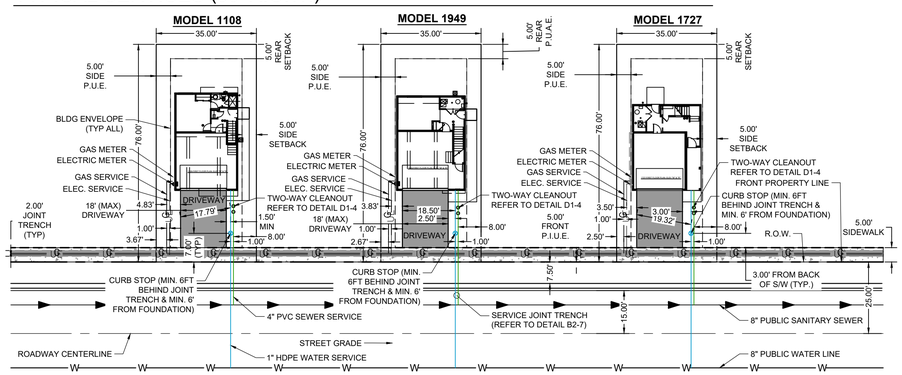
CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
COVER

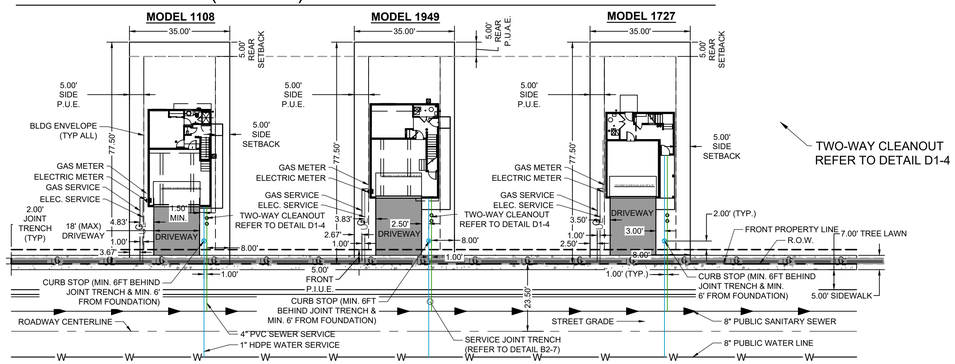
SHEET CS 1

HUHN, KEN, 6/1/2026 11:26 AM
HR GREEN Xrefs: legal_description; Legend: csu_usp_notes; csu_usp_developer_approval; csu_plan_information_block; xv-row; xc-03-row; bm_bob; typical_sections; xgt-1-arch dh01-CD-F4; csu_approval_block; service_lot_typicals; csu_approval_block

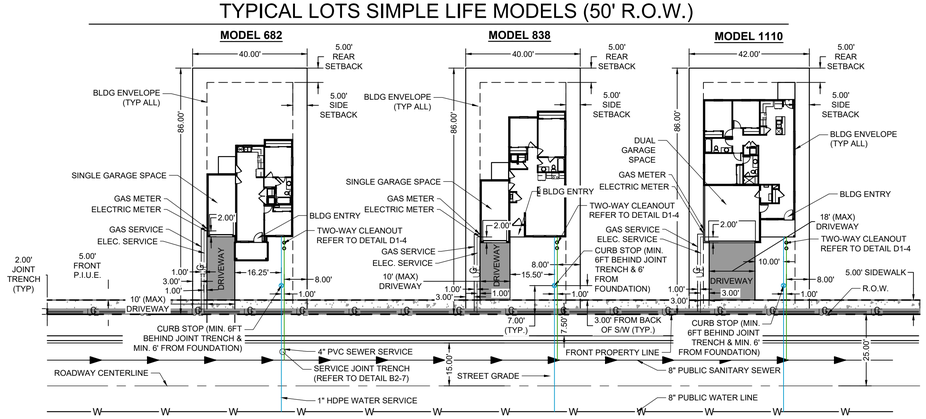
TYPICAL SERVICES (50' R.O.W.)



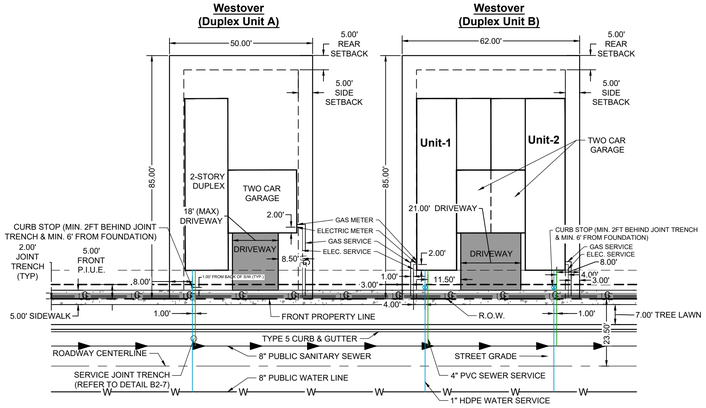
TYPICAL SERVICES (47' ROW)



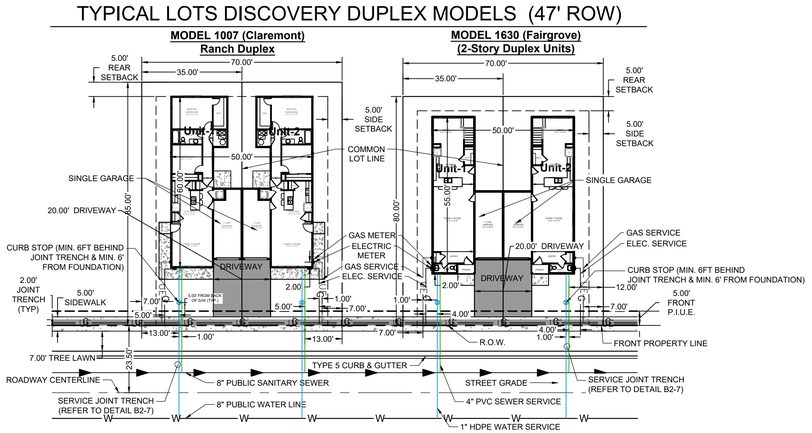
TYPICAL LOTS SIMPLE LIFE MODELS (50' R.O.W.)



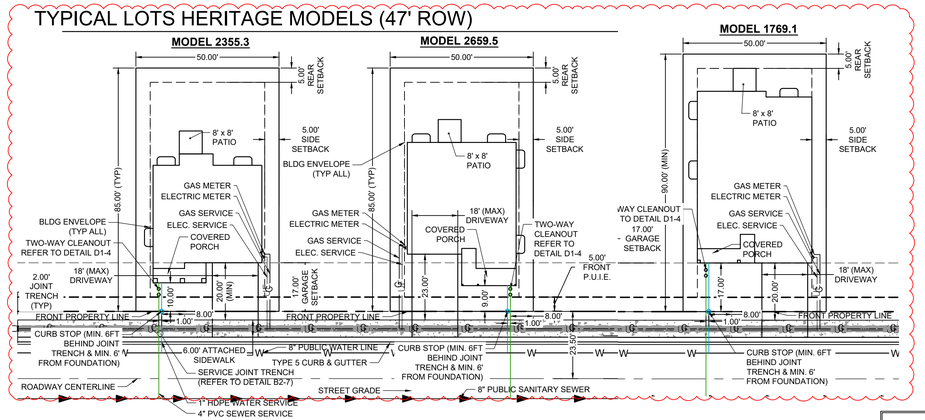
TYPICAL LOTS WESTOVER DUPLEX MODELS (47' ROW)



TYPICAL LOTS DISCOVERY DUPLEX MODELS (47' ROW)



TYPICAL LOTS HERITAGE MODELS (47' ROW)



1 APPROVED
06/16/2026 8:46:10 AM
mgackle
Utility Service
Colorado Springs Utilities
It's how we're all connected

1 REVISION #1:
- ADDED LOT TYPICALS FOR HERITAGE MODELS (SHEET 2)
- SERVICE CHANGE LOTS 66-78, 87-100 (SHEETS 3&4)

COLORADO SPRINGS UTILITIES
RESIDENTIAL UTILITY SERVICE PLAN DESIGN APPROVAL

APPROVED
12/26/2025 9:58:14 AM
mgackle
Utility Service
Colorado Springs Utilities
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PROJECT NUMBER: 2024-W1148
WORK ORDER NUMBER: 4149838
CSU SHEET 2 OF 4

PROJECT NUMBER: 2024-S1148
WORK ORDER NUMBER: 4149839
CSU SHEET 2 OF 4

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

COLORADO DO LICENSED KENNETH MICHAEL KMH 0054022 06/11/26 PROFESSIONAL ENGINEER

DRAWN BY: AXB	JOB DATE: 6/1/2026	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
APPROVED: KMH	JOB NUMBER: 211448		
CAD DATE: 6/10/2026			
CAD FILE: J:\2021\211448\CAD\Dwgs\C\CDs\F4_CSU\USP\Cover_sheet			

NO.	DATE	BY	REVISION DESCRIPTION
1	05/2026	CVW	SERVICE CHANGE LOTS 66-78, 87-100

HRGreen
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
FAX: 713.965.0044

BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

CHALLENGER HOMES

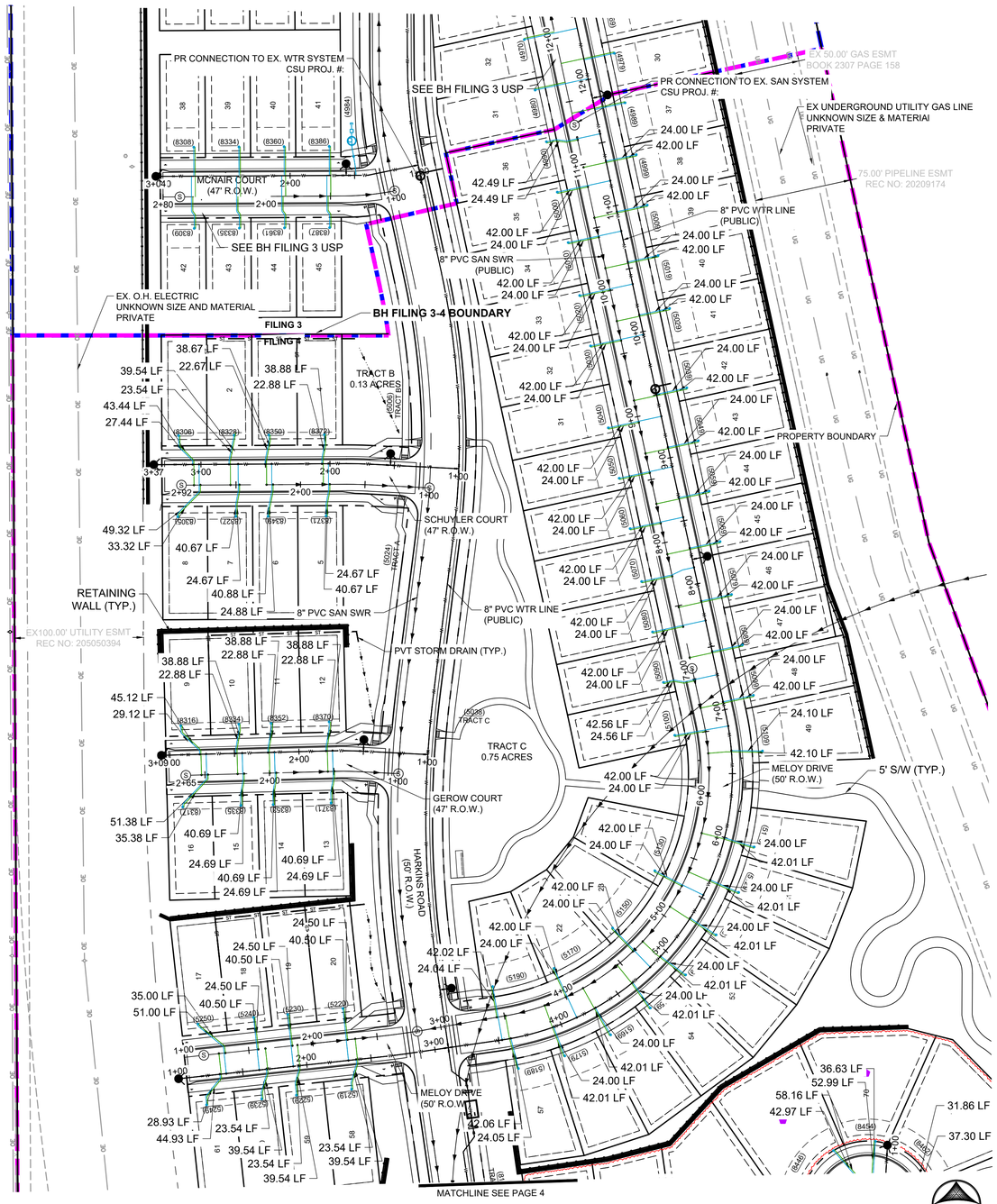
CONSTRUCTION DOCUMENTS
LEGEND

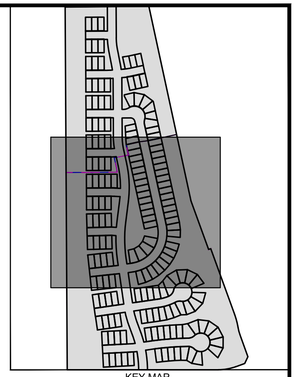
SHEET LE

2

HUHN, KEN, 6/10/2026 5:13 PM
HR GREEN Xrefs: legal_description; Legend; csu_usp_notes; csu_usp_developer_approval; csu_plan_information_block; xv-row; xc-03-row; bm_bob; typical_sections; xgf-1-arch dh01-CD-F4; csu_approval_block; service_lot_typicals; csu_approval_block; F4; CO-Stamp-Signed-Current

HUHN, KEN, 6/1/2026 11:27 AM





KEY MAP
SCALE: NTS

NOTES:

1. WASTEWATER SERVICE LINES THAT CROSS PROPOSED WATER MAINS SHALL MAINTAIN A VERTICAL SEPERATION OF AT LEAST 18 INCHES.
2. LOTS 66-78 ARE SINGLE FAMILY DETACHED UNITS.
3. LOTS 87-100 ARE SINGLE FAMILY DETACHED UNITS.
4. WATER METER AND BACKFLOW PREVENTION ASSEMBLY WILL BE LOCATED WITHIN THE BUILDINGS, REFER TO ARCHITECTURAL PLANS.

1

SEWER SERVICE TABLE

LOT (FIL#)	DESC.	ALIGNMENT	STATION
1(4)	4" PVC SWR SERVICE	06-SSWR	STA 2+82.53
2(4)	4" PVC SWR SERVICE	06-SSWR	STA 2+54.28
3(4)	4" PVC SWR SERVICE	06-SSWR	STA 2+26.28
4(4)	4" PVC SWR SERVICE	06-SSWR	STA 1+82.28
5(4)	4" PVC SWR SERVICE	06-SSWR	STA 1+77.28
6(4)	4" PVC SWR SERVICE	06-SSWR	STA 2+21.28
7(4)	4" PVC SWR SERVICE	06-SSWR	STA 2+47.28
8(4)	4" PVC SWR SERVICE	06-SSWR	STA 2+77.53
9(4)	4" PVC SWR SERVICE	07-SSWR	STA 2+52.70
10(4)	4" PVC SWR SERVICE	07-SSWR	STA 2+24.70
11(4)	4" PVC SWR SERVICE	07-SSWR	STA 1+99.70
12(4)	4" PVC SWR SERVICE	07-SSWR	STA 1+54.70
13(4)	4" PVC SWR SERVICE	07-SSWR	STA 1+49.70
14(4)	4" PVC SWR SERVICE	07-SSWR	STA 1+94.70
15(4)	4" PVC SWR SERVICE	07-SSWR	STA 2+19.70
16(4)	4" PVC SWR SERVICE	07-SSWR	STA 2+47.70
17(4)	4" PVC SWR SERVICE	02-SSWR	STA 1+31.75
18(4)	4" PVC SWR SERVICE	02-SSWR	STA 1+57.47
19(4)	4" PVC SWR SERVICE	02-SSWR	STA 1+84.00
20(4)	4" PVC SWR SERVICE	02-SSWR	STA 2+27.00
21(4)	4" PVC SWR SERVICE	02-SSWR	STA 3+44.07
22(4)	4" PVC SWR SERVICE	02-SSWR	STA 4+00.06
23(4)	4" PVC SWR SERVICE	02-SSWR	STA 4+63.42
24(4)	4" PVC SWR SERVICE	02-SSWR	STA 5+26.77
25(4)	4" PVC SWR SERVICE	02-SSWR	STA 6+50.35
26(4)	4" PVC SWR SERVICE	02-SSWR	STA 6+90.35
27(4)	4" PVC SWR SERVICE	02-SSWR	STA 7+33.30
28(4)	4" PVC SWR SERVICE	02-SSWR	STA 7+73.30
29(4)	4" PVC SWR SERVICE	02-SSWR	STA 8+15.30
30(4)	4" PVC SWR SERVICE	02-SSWR	STA 8+55.30
31(4)	4" PVC SWR SERVICE	02-SSWR	STA 8+95.29
32(4)	4" PVC SWR SERVICE	02-SSWR	STA 9+60.29
33(4)	4" PVC SWR SERVICE	02-SSWR	STA 10+00.29
34(4)	4" PVC SWR SERVICE	02-SSWR	STA 10+42.29
35(4)	4" PVC SWR SERVICE	02-SSWR	STA 10+82.29
36(4)	4" PVC SWR SERVICE	02-SSWR	STA 11+19.53
37(4)	4" PVC SWR SERVICE	02-SSWR	STA 11+21.53
38(4)	4" PVC SWR SERVICE	02-SSWR	STA 10+97.75
39(4)	4" PVC SWR SERVICE	02-SSWR	STA 10+57.75
40(4)	4" PVC SWR SERVICE	02-SSWR	STA 10+17.75
41(4)	4" PVC SWR SERVICE	02-SSWR	STA 9+75.75
42(4)	4" PVC SWR SERVICE	02-SSWR	STA 9+12.75
43(4)	4" PVC SWR SERVICE	02-SSWR	STA 8+70.75
44(4)	4" PVC SWR SERVICE	02-SSWR	STA 8+30.75
45(4)	4" PVC SWR SERVICE	02-SSWR	STA 7+90.75
46(4)	4" PVC SWR SERVICE	02-SSWR	STA 7+48.75
47(4)	4" PVC SWR SERVICE	02-SSWR	STA 7+08.75
48(4)	4" PVC SWR SERVICE	02-SSWR	STA 6+68.75
49(4)	4" PVC SWR SERVICE	02-SSWR	STA 6+33.11
50(4)	4" PVC SWR SERVICE	02-SSWR	STA 5+70.70
51(4)	4" PVC SWR SERVICE	02-SSWR	STA 5+38.90
52(4)	4" PVC SWR SERVICE	02-SSWR	STA 5+08.31
53(4)	4" PVC SWR SERVICE	02-SSWR	STA 4+73.96
54(4)	4" PVC SWR SERVICE	02-SSWR	STA 4+47.00
55(4)	4" PVC SWR SERVICE	02-SSWR	STA 4+15.00
56(4)	4" PVC SWR SERVICE	02-SSWR	STA 3+82.31
57(4)	4" PVC SWR SERVICE	02-SSWR	STA 3+50.87
58(4)	4" PVC SWR SERVICE	02-SSWR	STA 2+33.00
59(4)	4" PVC SWR SERVICE	02-SSWR	STA 1+88.00
60(4)	4" PVC SWR SERVICE	02-SSWR	STA 1+63.00
61(4)	4" PVC SWR SERVICE	02-SSWR	STA 1+26.75

WATER SERVICE TABLE

LOT (FIL#)	DESC.	ALIGNMENT	STATION
1(4)	1" HDPE WTR SERVICE	06-WATER	STA 3+06.42
2(4)	1" HDPE WTR SERVICE	06-WATER	STA 2+78.17
3(4)	1" HDPE WTR SERVICE	06-WATER	STA 2+50.17
4(4)	1" HDPE WTR SERVICE	06-WATER	STA 2+06.17
5(4)	1" HDPE WTR SERVICE	06-WATER	STA 2+01.17
6(4)	1" HDPE WTR SERVICE	06-WATER	STA 2+45.17
7(4)	1" HDPE WTR SERVICE	06-WATER	STA 2+71.17
8(4)	1" HDPE WTR SERVICE	06-WATER	STA 3+01.42
9(4)	1" HDPE WTR SERVICE	07-WATER	STA 2+76.97
10(4)	1" HDPE WTR SERVICE	07-WATER	STA 2+48.97
11(4)	1" HDPE WTR SERVICE	07-WATER	STA 2+23.97
12(4)	1" HDPE WTR SERVICE	07-WATER	STA 1+78.97
13(4)	1" HDPE WTR SERVICE	07-WATER	STA 1+73.97
14(4)	1" HDPE WTR SERVICE	07-WATER	STA 2+18.97
15(4)	1" HDPE WTR SERVICE	07-WATER	STA 2+43.97
16(4)	1" HDPE WTR SERVICE	07-WATER	STA 2+71.97
17(4)	1" HDPE WTR SERVICE	02-WATER	STA 1+37.19
18(4)	1" HDPE WTR SERVICE	02-WATER	STA 1+62.91
19(4)	1" HDPE WTR SERVICE	02-WATER	STA 1+89.44
20(4)	1" HDPE WTR SERVICE	02-WATER	STA 2+32.44
21(4)	1" HDPE WTR SERVICE	02-WATER	STA 3+52.62
22(4)	1" HDPE WTR SERVICE	02-WATER	STA 4+13.23
23(4)	1" HDPE WTR SERVICE	02-WATER	STA 4+82.57
24(4)	1" HDPE WTR SERVICE	02-WATER	STA 5+52.28
25(4)	1" HDPE WTR SERVICE	02-WATER	STA 6+87.13
26(4)	1" HDPE WTR SERVICE	02-WATER	STA 7+27.88
27(4)	1" HDPE WTR SERVICE	02-WATER	STA 7+70.83
28(4)	1" HDPE WTR SERVICE	02-WATER	STA 8+12.96
29(4)	1" HDPE WTR SERVICE	02-WATER	STA 8+52.83
30(4)	1" HDPE WTR SERVICE	02-WATER	STA 8+92.83
31(4)	1" HDPE WTR SERVICE	02-WATER	STA 9+32.82
32(4)	1" HDPE WTR SERVICE	02-WATER	STA 9+97.82
33(4)	1" HDPE WTR SERVICE	02-WATER	STA 10+37.81
34(4)	1" HDPE WTR SERVICE	02-WATER	STA 10+79.81
35(4)	1" HDPE WTR SERVICE	02-WATER	STA 11+19.81
36(4)	1" HDPE WTR SERVICE	02-WATER	STA 11+57.06
37(4)	1" HDPE WTR SERVICE	02-WATER	STA 11+59.06
38(4)	1" HDPE WTR SERVICE	02-WATER	STA 11+35.28
39(4)	1" HDPE WTR SERVICE	02-WATER	STA 10+95.28
40(4)	1" HDPE WTR SERVICE	02-WATER	STA 10+55.28
41(4)	1" HDPE WTR SERVICE	02-WATER	STA 10+13.28
42(4)	1" HDPE WTR SERVICE	02-WATER	STA 9+50.28
43(4)	1" HDPE WTR SERVICE	02-WATER	STA 9+08.28
44(4)	1" HDPE WTR SERVICE	02-WATER	STA 8+68.28
45(4)	1" HDPE WTR SERVICE	02-WATER	STA 8+28.28
46(4)	1" HDPE WTR SERVICE	02-WATER	STA 7+86.28
47(4)	1" HDPE WTR SERVICE	02-WATER	STA 7+46.28
48(4)	1" HDPE WTR SERVICE	02-WATER	STA 7+06.28
49(4)	1" HDPE WTR SERVICE	02-WATER	STA 6+67.86
50(4)	1" HDPE WTR SERVICE	02-WATER	STA 5+99.72
51(4)	1" HDPE WTR SERVICE	02-WATER	STA 5+65.17
52(4)	1" HDPE WTR SERVICE	02-WATER	STA 5+31.69
53(4)	1" HDPE WTR SERVICE	02-WATER	STA 4+94.32
54(4)	1" HDPE WTR SERVICE	02-WATER	STA 4+64.53
55(4)	1" HDPE WTR SERVICE	02-WATER	STA 4+29.59
56(4)	1" HDPE WTR SERVICE	02-WATER	STA 3+93.90
57(4)	1" HDPE WTR SERVICE	02-WATER	STA 3+59.52
58(4)	1" HDPE WTR SERVICE	02-WATER	STA 2+38.44
59(4)	1" HDPE WTR SERVICE	02-WATER	STA 1+93.44
60(4)	1" HDPE WTR SERVICE	02-WATER	STA 1+68.44
61(4)	1" HDPE WTR SERVICE	02-WATER	STA 1+32.19

1

APPROVED
06/16/2026 8:46:26 AM
mgackle
Utility Service
Colorado Springs Utilities
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1 REVISION #1:
- ADDED LOT TYPICALS FOR HERITAGE MODELS (SHEET 2)
- SERVICE CHANGE LOTS 66-78, 87-100 (SHEETS 3&4)

COLORADO SPRINGS UTILITIES
RESIDENTIAL UTILITY SERVICE PLAN DESIGN APPROVAL

APPROVED
12/26/2025 9:58:23 AM
mgackle
Utility Service
Colorado Springs Utilities
It's how we're all connected

PROJECT NUMBER: 2024-W1148
WORK ORDER NUMBER: 4149838
CSU SHEET 3 OF 4

PROJECT NUMBER: 2024-S1148
WORK ORDER NUMBER: 4149839
CSU SHEET 3 OF 4

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

COLORADO LICENSED
KENNETH MICHAEL HUHN
0054022
05/29/26
PROFESSIONAL ENGINEER

DRAWN BY: AXB JOB DATE: 6/1/2026
APPROVED: KMH JOB NUMBER: 211448
CAD DATE: 6/1/2026
CAD FILE: J:\2021\211448\CAD\Dwgs\C\CDs\F4_CSU\USP\Util_serv_F4

BAR IS ONE INCH ON OFFICIAL DRAWINGS.
0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION
1	5/29/26	CVW	SERVICE CHANGE LOTS 66-78, 87-100

HRGreen
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
FAX: 713.965.0044

BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
UTILITY SERVICE PLAN

SHEET
USP1

3

HR GREEN Xrefs: xc-03-util; xc-03-dsgn; xc-03-row; xv-dsgn; xv-util; xgl-1-arch dft01-CD-F4; csu_approval_block; xc-util-matrix; xc-dsgn-matrix; xv-row; key_map; CO-Stamp-Signed-Current

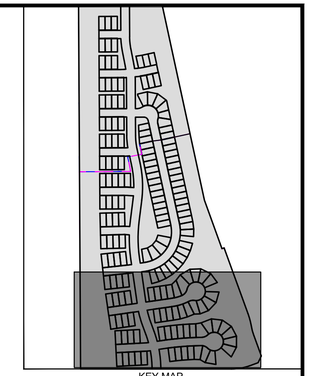
HUHN, KEN, 6/1/2026 11:27 AM

WATER SERVICE TABLE			
LOT (FIL#)	DESC.	ALIGNMENT	STATION
62(4)	1" HDPE WTR SERVICE	08-WATER	STA 6+39.59
63(4)	1" HDPE WTR SERVICE	08-WATER	STA 6+09.88
64(4)	1" HDPE WTR SERVICE	08-WATER	STA 5+82.88
65(4)	1" HDPE WTR SERVICE	08-WATER	STA 5+39.88
66(4)	1" HDPE WTR SERVICE	08-WATER	STA 4+07.44
67(4)	1" HDPE WTR SERVICE	08-WATER	STA 3+14.44
68(4)	1" HDPE WTR SERVICE	08-WATER	STA 2+35.17
69(4)	1" HDPE WTR SERVICE	08-WATER	STA 1+42.20
70(4)	1" HDPE WTR SERVICE	08-WATER	STA 1+36.82
71(4)	1" HDPE WTR SERVICE	08-WATER	STA 1+22.25
72(4)	1" HDPE WTR SERVICE	08-WATER	STA 1+30.75
73(4)	1" HDPE WTR SERVICE	08-WATER	STA 1+57.03
74(4)	1" HDPE WTR SERVICE	08-WATER	STA 1+83.83
75(4)	1" HDPE WTR SERVICE	08-WATER	STA 2+22.92
76(4)	1" HDPE WTR SERVICE	08-WATER	STA 2+65.94
77(4)	1" HDPE WTR SERVICE	08-WATER	STA 3+08.57
78(4)	1" HDPE WTR SERVICE	08-WATER	STA 3+95.57
79(4)	1" HDPE WTR SERVICE	08-WATER	STA 5+32.88
80(4)	1" HDPE WTR SERVICE	08-WATER	STA 5+77.88
81(4)	1" HDPE WTR SERVICE	08-WATER	STA 6+03.88
82(4)	1" HDPE WTR SERVICE	08-WATER	STA 6+34.59
83(4)	1" HDPE WTR SERVICE	09-WATER	STA 6+86.02
84(4)	1" HDPE WTR SERVICE	09-WATER	STA 6+55.03
85(4)	1" HDPE WTR SERVICE	09-WATER	STA 6+30.03
86(4)	1" HDPE WTR SERVICE	09-WATER	STA 5+85.03
87(4)	1" HDPE WTR SERVICE	09-WATER	STA 4+57.50
88(4)	1" HDPE WTR SERVICE	09-WATER	STA 3+77.60
89(4)	1" HDPE WTR SERVICE	09-WATER	STA 3+28.65
90(4)	1" HDPE WTR SERVICE	09-WATER	STA 2+80.62
91(4)	1" HDPE WTR SERVICE	09-WATER	STA 2+18.54
92(4)	1" HDPE WTR SERVICE	09-WATER	STA 1+70.89
93(4)	1" HDPE WTR SERVICE	09-WATER	STA 1+55.71
94(4)	1" HDPE WTR SERVICE	09-WATER	STA 1+43.70
95(4)	1" HDPE WTR SERVICE	09-SSWR	STA 2+53.26
96(4)	1" HDPE WTR SERVICE	09-WATER	STA 1+57.74
97(4)	1" HDPE WTR SERVICE	09-WATER	STA 2+16.61
98(4)	1" HDPE WTR SERVICE	09-WATER	STA 2+78.64
99(4)	1" HDPE WTR SERVICE	09-WATER	STA 3+37.84
100(4)	1" HDPE WTR SERVICE	09-WATER	STA 4+38.62
101(4)	1" HDPE WTR SERVICE	09-WATER	STA 5+80.04
102(4)	1" HDPE WTR SERVICE	09-WATER	STA 6+24.03
103(4)	1" HDPE WTR SERVICE	09-WATER	STA 6+50.03
104(4)	1" HDPE WTR SERVICE	09-WATER	STA 6+81.02

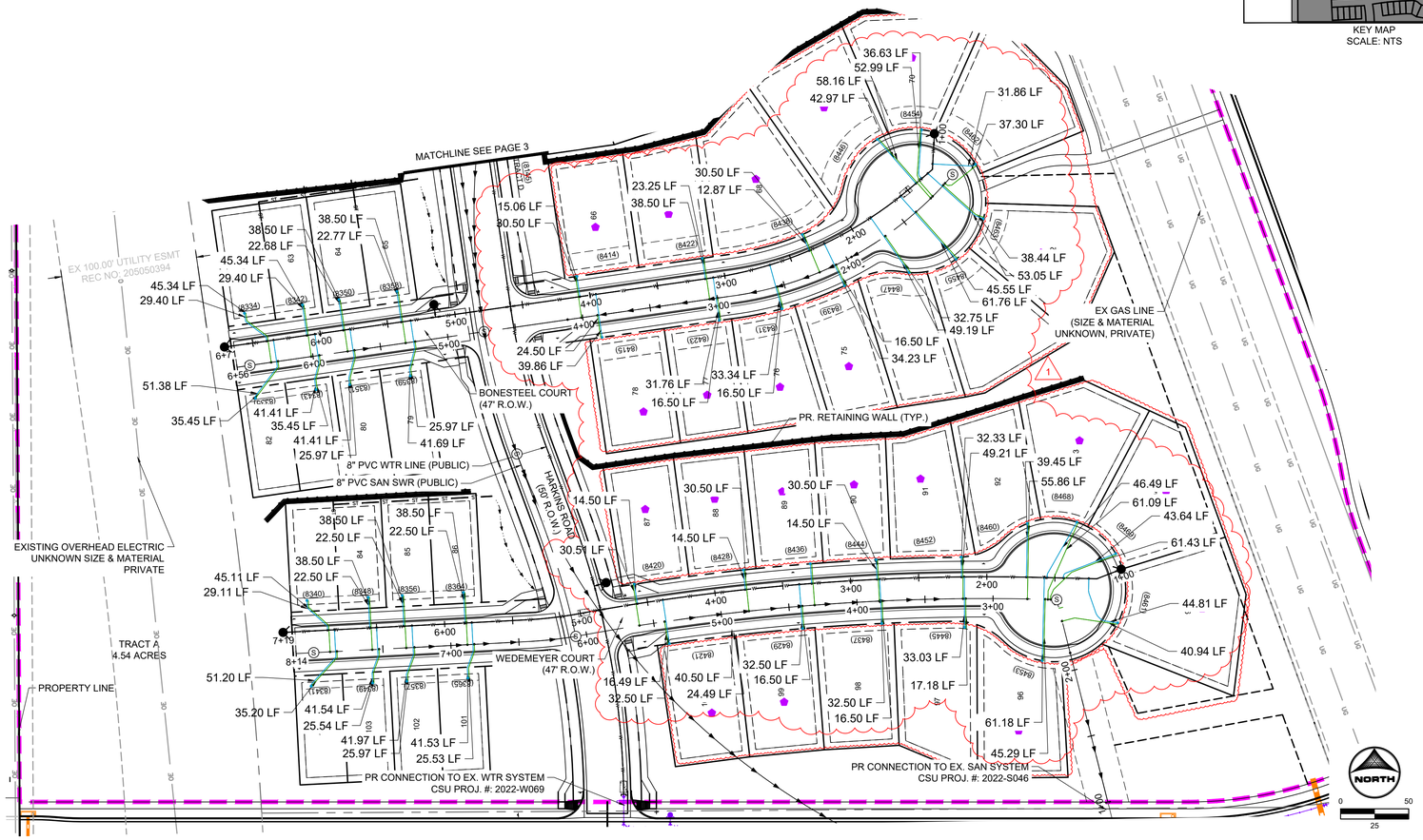
SEWER SERVICE TABLE			
LOT (FIL#)	DESC.	ALIGNMENT	STATION
62(4)	4" PVC SWR SERVICE	08-SSWR	STA 6+31.01
63(4)	4" PVC SWR SERVICE	08-SSWR	STA 6+01.30
64(4)	4" PVC SWR SERVICE	08-SSWR	STA 5+74.30
65(4)	4" PVC SWR SERVICE	08-SSWR	STA 5+31.30
66(4)	4" PVC SWR SERVICE	08-SSWR	STA 4+00.86
67(4)	4" PVC SWR SERVICE	08-SSWR	STA 3+05.86
68 B(4)	4" PVC SWR SERVICE	08-SSWR	STA 1+96.43
68(4)	4" PVC SWR SERVICE	08-SSWR	STA 2+22.37
69(4)	4" PVC SWR SERVICE	08-SSWR	STA 1+23.84
70(4)	4" PVC SWR SERVICE	08-SSWR	STA 1+21.83
71(4)	4" PVC SWR SERVICE	08-SSWR	STA 1+08.61
72(4)	4" PVC SWR SERVICE	08-SSWR	STA 1+10.61
73(4)	4" PVC SWR SERVICE	08-SSWR	STA 1+38.55
74(4)	4" PVC SWR SERVICE	08-SSWR	STA 1+67.26
75(4)	4" PVC SWR SERVICE	08-SSWR	STA 2+09.21
76(4)	4" PVC SWR SERVICE	08-SSWR	STA 2+55.36
77 B(4)	4" PVC SWR SERVICE	08-SSWR	STA 3+88.99
77(4)	4" PVC SWR SERVICE	08-SSWR	STA 3+00.00
78(4)	4" PVC SWR SERVICE	08-SSWR	STA 4+11.17
79(4)	4" PVC SWR SERVICE	08-SSWR	STA 5+24.30
80(4)	4" PVC SWR SERVICE	08-SSWR	STA 5+69.30
81(4)	4" PVC SWR SERVICE	08-SSWR	STA 5+95.30
82(4)	4" PVC SWR SERVICE	08-SSWR	STA 6+26.01
83(4)	4" PVC SWR SERVICE	09-SSWR	STA 7+88.80
84(4)	4" PVC SWR SERVICE	09-SSWR	STA 7+57.80
85(4)	4" PVC SWR SERVICE	09-SSWR	STA 7+32.80
86(4)	4" PVC SWR SERVICE	09-SSWR	STA 6+87.80
87(4)	4" PVC SWR SERVICE	09-SSWR	STA 5+60.62
88(4)	4" PVC SWR SERVICE	09-SSWR	STA 4+79.51
89(4)	4" PVC SWR SERVICE	09-SSWR	STA 4+31.08
90(4)	4" PVC SWR SERVICE	09-SSWR	STA 3+83.49
91(4)	4" PVC SWR SERVICE	09-SSWR	STA 3+22.05
92(4)	4" PVC SWR SERVICE	09-SSWR	STA 2+74.79
93(4)	4" PVC SWR SERVICE	09-SSWR	STA 2+59.76
94(4)	4" PVC SWR SERVICE	09-WATER	STA 1+52.69
95(4)	4" PVC SWR SERVICE	09-SSWR	STA 2+36.99
96 A(4)	4" PVC SWR SERVICE	09-SSWR	STA 2+12.91
96(4)	4" PVC SWR SERVICE	09-SSWR	STA 2+61.76
97(4)	4" PVC SWR SERVICE	09-SSWR	STA 3+20.07
98(4)	4" PVC SWR SERVICE	09-SSWR	STA 3+81.49
99(4)	4" PVC SWR SERVICE	09-SSWR	STA 4+40.21
100(4)	4" PVC SWR SERVICE	09-SSWR	STA 5+41.92
101(4)	4" PVC SWR SERVICE	09-SSWR	STA 6+82.81
102(4)	4" PVC SWR SERVICE	09-SSWR	STA 7+26.80
103(4)	4" PVC SWR SERVICE	09-SSWR	STA 7+52.80
104(4)	4" PVC SWR SERVICE	09-SSWR	STA 7+83.80

NOTES:

1. WASTEWATER SERVICE LINES THAT CROSS PROPOSED WATER MAINS SHALL MAINTAIN A VERTICAL SEPERATION OF AT LEAST 18 INCHES.
2. LOTS 66-78 ARE SINGLE FAMILY DETACHED UNITS.
3. LOTS 87-100 ARE SINGLE FAMILY DETACHED UNITS.
4. WATER METER AND BACKFLOW PREVENTION ASSEMBLY WILL BE LOCATED WITHIN THE BUILDINGS, REFER TO ARCHITECTURAL PLANS.



KEY MAP
SCALE: NTS



APPROVED
06/16/2026 8:46:33 AM
mgackle
Utility Service
Colorado Springs Utilities
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REVISION #1:
- ADDED LOT TYPICALS FOR HERITAGE MODELS (SHEET 2)
- SERVICE CHANGE LOTS 66-78, 87-100 (SHEET 3&4)

COLORADO SPRINGS UTILITIES
RESIDENTIAL UTILITY SERVICE PLAN DESIGN APPROVAL

APPROVED
12/26/2025 9:58:30 AM
mgackle
Utility Service
Colorado Springs Utilities
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PROJECT NUMBER: 2024-W1148
WORK ORDER NUMBER: 4149838
CSU SHEET 4 OF 4

PROJECT NUMBER: 2024-S1148
WORK ORDER NUMBER: 4149839
CSU SHEET 4 OF 4

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

COLORADO LICENSED
KENNETH MICHAEL HUHN
0054022
05/29/26
PROFESSIONAL ENGINEER

DRAWN BY: AXB JOB DATE: 6/1/2026
APPROVED: KMH JOB NUMBER: 211448
CAD DATE: 6/1/2026
CAD FILE: J:\2021\211448\CAD\Dwgs\C\CDs\F4_CSU\USP\Util_serv_F4

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION
1	5/29/26	CVW	SERVICE CHANGE LOTS 66-78, 87-100

HRGreen
HR GREEN - COLORADO SPRINGS
1975 RESEARCH PARKWAY SUITE 230
COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
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BRADLEY HEIGHTS FILING 4
CHALLENGER HOMES
COLORADO SPRINGS, COLORADO

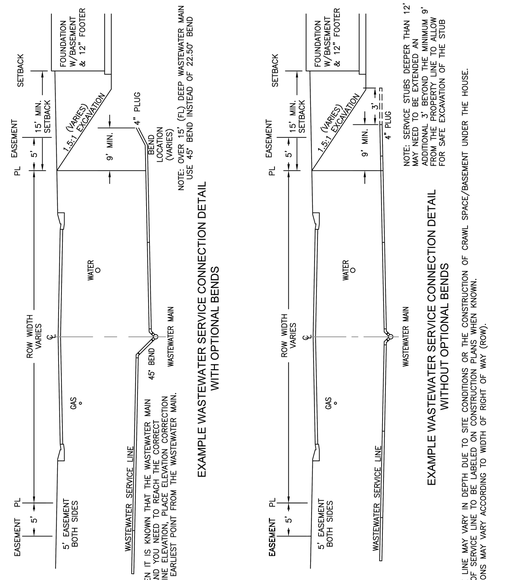
CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
UTILITY SERVICE PLAN

SHEET USP2 4

HR GREEN Xrefs: xc-03-util; xc-03-dsgn; xc-03-row; xv-dsgn; xv-util; xgt-1-arch dfi01-CD-F4; csu_approval_block; xc-util-matrix; xc-dsgn-matrix; xv-row; key_map; CO-Stamp-Signed-Current

HUHN, KEN, 12/18/2025 1:11 PM



EXAMPLE WASTEWATER SERVICE CONNECTION DETAIL
WITH OPTIONAL BENDS

EXAMPLE WASTEWATER SERVICE CONNECTION DETAIL
WITHOUT OPTIONAL BENDS

NOTES:

1. SERVICE LINE MAY VARY IN DEPTH DUE TO SITE CONDITIONS OR THE CONSTRUCTION OF CRAWL SPACE/BASEMENT UNDER THE HOUSE.
2. DEPTH OF SERVICE LINE TO BE LABELED ON CONSTRUCTION PLANS WHEN KNOWN.
3. DIMENSIONS MAY VARY ACCORDING TO WIDTH OF RIGHT OF WAY (ROW).

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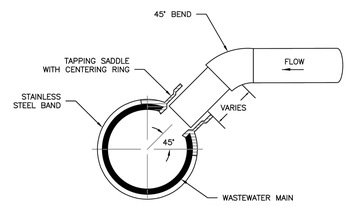
EXAMPLE OF A SERVICE WITH A BASEMENT

D1–2 — DATED 5/2015



TYPICAL WASTEWATER SERVICE TAPPING SADDLE

NOTES:

1. WHEN THE WASTEWATER MAIN IS VCP, USE THE SDR 35 PVC SADDLE WITH A LARGER SKIRT. SADDLE SHALL BE ONE NOMINAL SIZE LARGER THAN THE WASTEWATER MAIN.
2. PIPE WILL BE CUT WITH AN O.D. HOLE SAW OR TAPPING MACHINE. A 4–1/2" O.D. HOLE SAW SHALL BE USED FOR 4" TAPS AND A 6–1/2" O.D. HOLE SAW SHALL BE USED FOR 6" TAPS.
3. ONLY 4" AND 6" TAP SIZES ARE ALLOWED.
4. WASTEWATER TAPPING SADDLES SHALL HAVE A CENTERING RING.
5. A GASKET SHALL BE USED TO ENSURE AN AIRTIGHT SEAL BETWEEN THE SADDLE AND THE PIPE.

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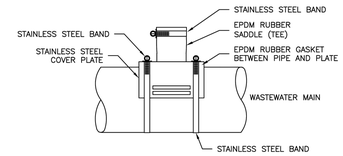
TYPICAL WASTEWATER SERVICE LINE TAPPING METHOD

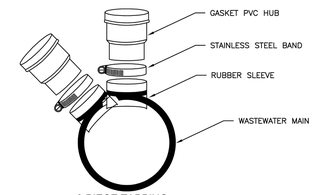
D1–6 — DATED 5/2015



RUBBER GASKET SADDLE - 4" & 6"

RUBBER GASKET NOTE:

1. ALL ELASTOMERIC SEALS (RUBBER GASKETS) SHALL COMPLY WITH ASTM F477.
2. PIPE WILL BE CUT WITH AN O.D. HOLE SAW OR TAPPING MACHINE. A 4–1/2" O.D. HOLE SAW SHALL BE USED FOR 4" TAPS AND A 6–1/2" O.D. HOLE SAW SHALL BE USED FOR 6" TAPS.



3 PIECE TAPPING
SERVICE CONNECTION

3 PIECE TAP NOTES:

1. 3 PIECE TAPS MAY BE ALLOWED ON WASTEWATER MAINS WITH APPROVAL FROM COLORADO SPRINGS UTILITIES. 3 PIECE TAPS SHOULD ONLY BE USED FOR WASTEWATER MAINS GREATER THAN 12".
2. THE CONTRACTOR SHALL ENSURE THAT THE CORRECT 3 PIECE TAP HAS BEEN ORDERED TO FIT THE MATERIAL AND DIAMETER OF THE MAIN AND THE MATERIAL AND DIAMETER OF THE TAP. THE 3 PIECE TAP SHALL BE PROVIDED TO THE INSPECTOR FOR APPROVAL PRIOR TO INSTALLATION.
3. 3 PIECE TAPS FOR WASTEWATER MAINS 12" AND LESS WILL REQUIRE THAT THE SERVICE BE CCTV'D AFTER BACKFILL OF THE SERVICE LINE. IF THE INSERT PROTRUDES INTO THE WASTEWATER MAIN GREATER THAN 1/4", THEN THE TAP WILL BE REJECTED AND WILL NEED TO BE REMOVED, REINSTALLED AND RE–CCTV'D.

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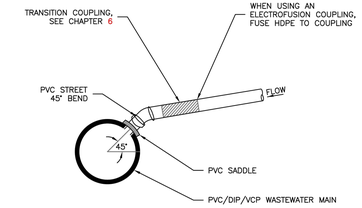
ALTERNATIVE WASTEWATER SERVICE LINE TAPPING METHODS

D1–7 — DATED 5/2015



HDPE SERVICE LINE TO PVC/DIP/VCP WASTEWATER MAIN

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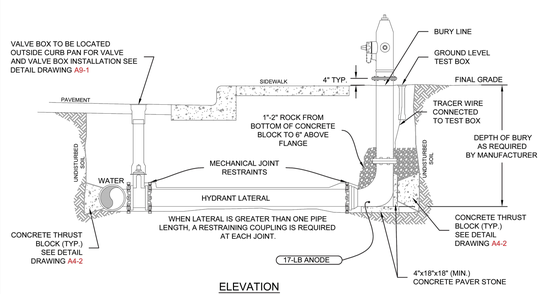
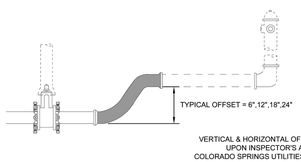
HDPE SERVICE LINE CONNECTION TO PVC/DIP/VCP WASTEWATER MAIN

D1–9 — DATED 5/2015



ELEVATION



NOTE:
DIP LATERALS AND HYDRANTS SHALL BE POLY WRAPPED AND INCLUDE 1-17lb. ANODE.

ELEVATION

NOTES:

1. MECHANICAL JOINT RESTRAINTS SHALL BE INSTALLED PER DETAIL DRAWINGS A4-4, A4-5, & CHAPTER 5.
2. TRACER WIRE AND GROUND LEVEL TEST BOX TO BE INSTALLED WITH EACH FIRE HYDRANT. PLACE TEST BOX WITHIN 6" FROM THE HYDRANT.
3. REFERENCE DETAIL DRAWINGS A5-1 & A5-2 FOR FIRE HYDRANT LOCATION.
4. INSTALLATION OF A PRIVATE FIRE HYDRANT WILL REQUIRE A SECONDARY VALVE INSTALLED AT THE PROPERTY LINE.
5. HYDRANT BASE BLOCK SHALL BE PLACED ON UNDISTURBED EARTH.
6. DO NOT BLOCK WEEP HOLE WITH POLYWRAP.
7. COVER DRAIN ROCK WITH POLYWRAP PRIOR TO BACKFILL.
8. FOR HDPE HYDRANT CONNECTION SEE DETAIL DRAWING A10-9.
9. FOR PRIVATE FIRE HYDRANTS A SECONDARY VALVE SHALL BE INSTALLED ON THE PROPERTY LINE OR RIGHT-OF WAY LINE.

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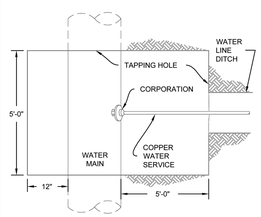
FIRE HYDRANT INSTALLATION

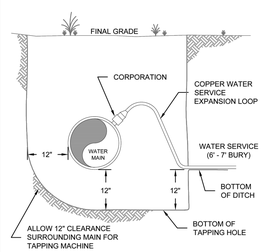
A5-3 — DATED 03/2014

TAPPING DETAIL FOR 3/4" AND 1" CONNECTION

SERVICE TAPS 3/4" & 1"
CORPORATION ONLY (DIRECT TAPPING).



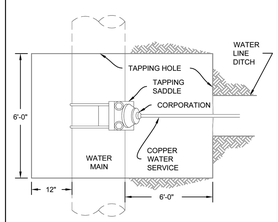
PLAN VIEW



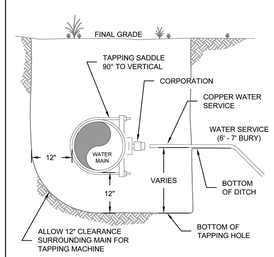
ELEVATION

TAPPING DETAIL FOR 1 1/2" AND 2" CONNECTION

SERVICE TAPS 1 1/2" & 2"
TAPPING SADDLE.



PLAN VIEW



ELEVATION

NOTES:

1. TRENCH WALLS AND SHORING SHALL COMPLY WITH OSHA STANDARDS.
2. FOR HDPE TAPS USE A SIDEWALL FUSION TAPPING SADDLE CONFIGURATION AT 90° SEE SECTION 6.7.B.
3. TO BE READ IN CONJUNCTION WITH SECTION 2.7.C AND SECTION 5.21-E.
4. WHERE COMPACTION CANNOT BE ACHIEVED UNDER THE WATER MAIN FLOWFILL SHALL BE USED.
5. SEE DETAIL DRAWING A8-10 FOR CATHODIC PROTECTION.

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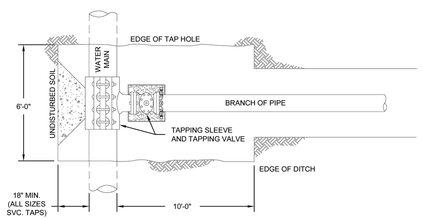
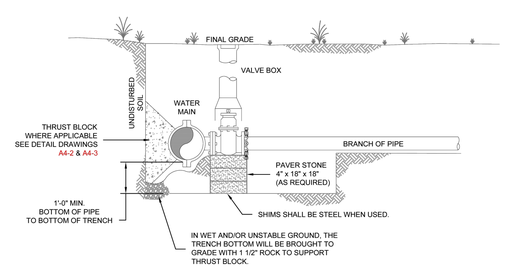
TAPPING DETAILS 3/4" THRU 2" FOR TYPE "K" COPPER

B1-1 — DATED 03/2014



PLAN VIEW



ELEVATION

NOTES:

1. 4" WATER SERVICE LINES TYPICALLY REQUIRE A TEE AND VALVE PER SECTION 2.6.D. THIS DRAWING MAY ONLY BE USED AT THE DISCRETION OF COLORADO SPRINGS UTILITIES.
2. TRENCH WALLS AND SHORING SHALL COMPLY WITH OSHA STANDARDS.
3. WHERE COMPACTION CANNOT BE ACHIEVED UNDER THE WATER MAIN FLOWFILL SHALL BE USED.
4. ATTACH ANODES FOR CATHODIC PROTECTION.

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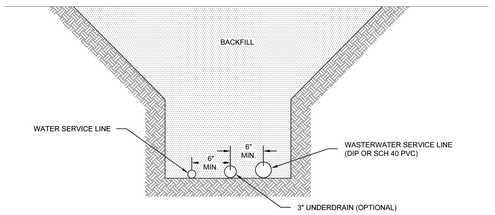
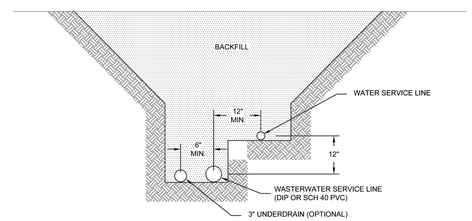
DETAILS FOR TAPS 4" AND OVER FOR DUCTILE OR PVC PIPE

B1-2 — DATED 03/2014



ALTERNATE 1



ALTERNATE 2

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TYPICAL COMMON SERVICE TRENCH SECTION

B2-1 — DATED 03/2014

COLORADO LICENSED — KENNETH MICHAEL HUHN — 0029922 — 12/18/25 — PROFESSIONAL ENGINEER

DRAWN BY: AXB	JOB DATE: 10/2/2024	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH ADJUST SCALE ACCORDINGLY.	
APPROVED: KMH	JOB NUMBER: 211448		
CAD DATE: 12/18/2025			
CAD FILE: J:\2021\211448\CAD\Dwgs\C\CDs\F4_CSU\USP\USP_DETAILS			

NO.	DATE	BY	REVISION DESCRIPTION

HRGreen
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COLORADO SPRINGS CO 80920
PHONE: 719.300.4140
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BRADLEY HEIGHTS FILING 4
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COLORADO SPRINGS, COLORADO

CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
DETAILS

SHEET DE 5

HR GREEN Xrefs: xgf-1-arch dfi01-CD-F4; CO-Stamp-Signed-Current