

# HANNAH RIDGE AT FEATHERGRASS FILING NO. 5

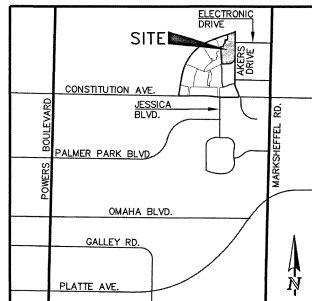
## CHEROKEE METROPOLITAN DISTRICT, COUNTY OF EL PASO, STATE OF COLORADO

### UTILITY CONSTRUCTION PLANS

OCTOBER 2018

#### SANITARY SEWER CONSTRUCTION NOTES:

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH CHEROKEE METROPOLITAN DISTRICT STANDARDS AND THE CITY OF COLORADO SPRINGS CONSTRUCTION STANDARDS UNLESS NOTED OTHERWISE. IN THE EVENT OF CONFLICTING STANDARDS, CHEROKEE METROPOLITAN DISTRICT STANDARDS SHALL GOVERN.
2. SANITARY SEWER PIPE SHALL CONFORM TO ASTM D3034 SDR35 PVC OR SDR26 PVC IS INDICATED ON THE DRAWINGS.
3. ALL SANITARY SEWER PIPELINES WITH A COVER DEPTH GREATER THAN 14" SHALL BE INSTALLED USING ASTM D3034 SDR26 PVC PIPE EMBEDDED IN 3/4" RECYCLED CONCRETE AGGREGATE FROM 4" BELOW THE PIPE TO 12" ABOVE THE PIPE.
4. TRACER WIRE IS TO BE INSTALLED WITH ALL SANITARY SEWER MAIN LINES AND SERVICES FROM THE MAINLINE TO THE BUILDING STRUCTURE. ALL NONMETALLIC PIPES SHALL HAVE A TRACER WIRE ATTACHED TO ITS TOP DURING CONSTRUCTION. THE TRACER WIRE SHALL BE #12 AWG INSULATED COPPER WIRE WITH #12 TYPE 10537 COPPER CONNECTORS AND SHALL BE PERMANENTLY AFFIXED TO THE TOP OF THE PIPE USING TAPE AT 4' INTERVALS.
5. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING INVERTS PRIOR TO INSTALLATION OF NEW SANITARY SEWER SYSTEM.
6. THE CONTRACTOR ASSUMES RESPONSIBILITY FOR THE PROTECTION OF ALL UTILITIES DURING THE WORK. PRIOR TO ANY EXCAVATION, CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 811 AT LEAST TWO WORKING DAYS PRIOR TO DIGGING.
7. INFILTRATION AND EXFILTRATION TESTS CONDUCTED BY AND AT THE EXPENSE OF THE CONTRACTOR SHALL BE PERFORMED ON A REPRESENTATIVE PORTION OF THE PROJECT IN ACCORDANCE WITH SECTION 7.04 OF THE CITY OF COLORADO SPRINGS CONSTRUCTION STANDARDS.
8. ALL SANITARY SEWER MANHOLES, LIDS, BASES AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH (AW) CHEROKEE METROPOLITAN DISTRICT DETAILS STANDARD MANHOLE DETAIL W-1-S, EXCEPT AS NOTED ON THESE PLANS. WIRE REQUIRED ON THESE PLANS, WATER TIGHT MANHOLES, LIDS AND CONNECTORS SHALL BE PROVIDED IN ACCORDANCE WITH CHEROKEE METROPOLITAN DISTRICT STANDARDS.
9. ALL SANITARY SEWER MANHOLES SHALL BE 5.0' INSIDE DIAMETER (Ø) MANHOLES.
10. WHERE NECESSARY, THE CONTRACTOR SHALL PROVIDE 3 DEGREE BENDS ON ALL CURVILINEAR SANITARY SEWER PIPE.
11. SANITARY SEWER SERVICE LINES SHALL BE LOCATED PER THE DETAIL ON THE UTILITY SERVICE PLAN, OR AT THE DISCRETION OF THE CONSTRUCTION MANAGER.
12. OVERLOT GRADING AND STREET SUBGRADE MUST BE WITHIN ONE (1) FOOT PRIOR TO ANY UTILITY INSTALLATION.
13. WHILE CONSTRUCTING THE SANITARY SEWER SYSTEM THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT LEAST ONE "APPROVED FOR CONSTRUCTION" SET OF UPDATED PLANS AT ALL TIMES. APPROVED/ILED MODIFICATIONS TO PLAN SETS SHALL BE CLEARLY IDENTIFIED IN RED INK ON THE PLANS BY THE CONTRACTOR PER FIELD CONSTRUCTION. THESE AS-BUILT CHANGES SHALL BE DATED AND SUBMITTED TO THE ENGINEER OF RECORD. THE ENGINEER OF RECORD SHALL PREPARE A COMPLETE SET OF "AS CONSTRUCTED" DRAWINGS AND DELIVER THE SETS TO THE CHEROKEE METROPOLITAN DISTRICT PRIOR TO FINAL ACCEPTANCE OF THE SANITARY SEWER SYSTEM.
14. CONTRACTOR TO CONTRACTUAL ALL MANHOLES AND STRUCTURES TO FINISH GRADE.
15. FOR PIPELINES 1.048" OR LESS GRADE THE FOLLOWING ADDITIONAL INSTALLATION PRACTICES SHALL BE USED:
  - A. THE BOTTOM OF THE PIPE TRENCH SHALL BE PLATE TAMPED PRIOR TO THE INSTALLATION OF ANY PIPE OR BEDDING MATERIAL.
  - B. SELECT BEDDING MATERIAL SHALL BE INSTALLED PER CHAPTER 2 OF THE "COLORADO SPRINGS UTILITIES, WASTEWATER STANDARDS".
  - C. TRENCH BACKFILL MATERIAL SHALL BE INSTALLED PER CHAPTER 2 OF THE "COLORADO SPRINGS UTILITIES, WASTEWATER STANDARDS".
16. PIPELINES FOR LESS THAN 1.048" SHALL BE "AS CONSTRUCTED" BY A LICENSED SURVEYOR OR A APPOINTED REPRESENTATIVE UNDER HIS DIRECT SUPERVISION. THE "AS CONSTRUCTED" MANHOLE INVERTS SHALL BE RECORDED ON THE RECORD DRAWINGS) SUBMITTED TO THE CHEROKEE METROPOLITAN DISTRICT.



VICINITY MAP  
NOT TO SCALE

#### BENCHMARKS:

A #5 REBAR LOCATED APPROXIMATELY 170 FEET NORTHEAST OF THE NORTHEASTLY CORNER OF TRACT JJ AS PLATED IN HANNAH RIDGE AT FEATHERGRASS FILING NO. 1, LABELED AS PANEL POINT #11 ELEVATION = 8623.79 (NAVD 1929) (7)MS

A 1 INCH ORANGE PLASTIC CAP STAMPED "13222" LOCATED AT THE SOUTHWESTERN CORNER OF TRACT AA AS PLATED IN HANNAH RIDGE AT FEATHERGRASS FILING NO. 1, LABELED AS PANEL POINT #11 ELEVATION = 8483.00 (NAVD 1929) (7)MS

#### BASIS OF BEARINGS:

BEARING REFERRED TO HEREIN ARE BASED ON THE SOUTH LINE OF TRACT FF, HANNAH RIDGE AT FEATHERGRASS FILING NO. 1, ASSUMED TO BEAR NORTH 87°00'00" MONUMENTED AT EACH END W/ 1" ALUMINUM CAP MARKED "POLARIS, PLS 2705".

CONSTRUCTION TYPE	VB
MIN. SQUARE FOOTAGE	4,882 SF
REQUIRED FIRE FLOW	1,750 GPM
REQUIRED # OF HYDRANTS	2
AVERAGE SPACING	500 FEET
MAX HOSE DISTANCE	250 FEET

ANTICIPATED HOMES WITH LESS 4,800 GROSS SQUARE FEET WILL BE BUILT IN THIS SUBDIVISION.

#### CHEROKEE METROPOLITAN DISTRICT WASTEWATER PLAN APPROVAL

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

APPROVED BY: [Signature] DATE: 07/08/2019

#### CHEROKEE METROPOLITAN DISTRICT WATER PLAN APPROVAL

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

APPROVED BY: [Signature] DATE: 07/08/2019

APPROVED Engineering Department  
01/06/2019 10:14 AM  
[Signature]  
EPC Planning & Community Development Department

#### FALCON FIRE DEPARTMENT:

ACCORDING TO THE MODELED CALCULATIONS REVIEWED BY THE GOVERNING WATER DISTRICT AND/OR COLORADO REGISTERED CIVIL ENGINEER/DESIGNER, THE THEORETICAL AVAILABLE FIRE FLOW AT NODE "A" IS 1,750 GALLONS PER MINUTE UNDER MAXIMUM DAILY DEMAND CONDITIONS AT 200PSI RESIDUAL. THE ACTUAL FIRE FLOW MAY VARY DUE TO VARIOUS PARAMETERS.

UPON DETAILED REVIEW OF THE AVAILABLE WATER SUPPLY, FIRE HYDRANT LOCATIONS AND HOSE LAY DISTANCES, THESE PLANS ARE HEREBY CONSIDERED APPROVED. (6 PROPOSED HYDRANTS)

[Signature] 7-10-2019  
FALCON FIRE DEPARTMENT SIGNATURE DATE

#### OWNER / DEVELOPER STATEMENT:

THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF THIS UTILITY CONSTRUCTION PLANS.

[Signature] DATE

#### SHEET INDEX:

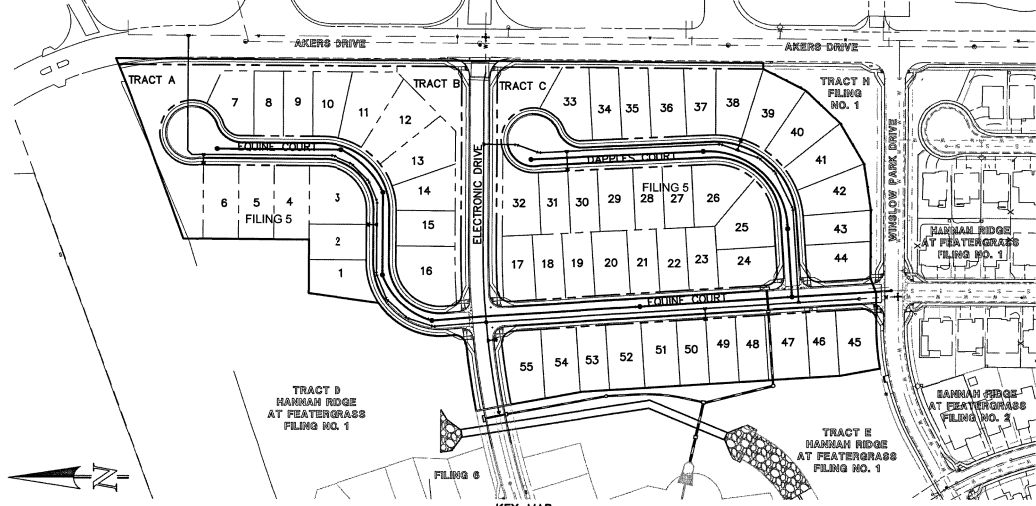
TITLE SHEET	SHEET 1 OF 5
PUBLIC 8" PVC SANITARY SEWER PLAN & PROFILE	SHEET 2 OF 5
PUBLIC 8" PVC SANITARY SEWER PLAN & PROFILE	SHEET 3 OF 5
PUBLIC 8" & 12" PVC WATER SYSTEM PLAN INCLUDING UTILITY SERVICES	SHEET 4 OF 5
PUBLIC 8" & 12" PVC WATER SYSTEM PROFILES	SHEET 5 OF 5

#### GENERAL CONSTRUCTION NOTES:

1. THE LOCATION OF EXISTING UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND MAY NOT INCLUDE UTILITIES. THE EXCAVATION CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES.
2. BEFORE COMMENCING ANY EXCAVATION, CALL 811 FOR EXISTING UTILITY LOCATIONS.
3. THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE UTILITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
4. ALL BACKFILL, SUB-BASE AND/OR BASE COURSE (CLASS C) MATERIAL SHALL BE COMPACTED TO THE SOILS ENGINEER'S RECOMMENDATIONS, AND APPROVED BY EL PASO COUNTY DEVELOPMENT SERVICES ENGINEERING DIVISION.
5. ALL STATIONING IS CENTERLINE UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE INDICATED.
6. THE CONTRACTOR SHALL REVEAL/STATE ALL DISTURBED AREAS AS SOON AS POSSIBLE AND EROSION CONTROL SHALL BE INSTALLED AND MAINTAINED IN A FUNCTIONAL MANNER AT ALL TIMES. DEVELOPER RESPONSIBLE FOR MAINTAINING DISTURBED AREAS UNTIL REVEGETATION IS COMPLETE.
7. ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAR LEVEL. REPAIR SHALL CONFORM TO THE EPC EDO APPENDIX K - 1.5C.
8. ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
9. BUILDING CONTRACTORS WILL BE RESPONSIBLE FOR CONSTRUCTING POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES.
10. ASPHALT THICKNESS AND BASE COURSE THICKNESS (COMPACTED) FOR ROADS SHALL BE PER DESIGN REPORT BY OWNER'S GEOTECHNICAL ENGINEER. OWNER'S GEOTECHNICAL ENGINEER SHALL BE ON SITE AT TIME OF ROAD CONSTRUCTION TO EVALUATE SOIL CONDITIONS AND DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY TO ASSURE STABILITY OF THE NEW ROADS. PAVEMENT DESIGN SHALL BE APPROVED BY DEVELOPMENT SERVICES DEPARTMENT PRIOR TO CONSTRUCTION.
11. THE CONTRACTOR SHALL REVEAL/STATE ALL DISTURBED AREAS WITHIN 21 DAYS OF SUBSTANTIAL GRADING COMPLETION. EROSION CONTROL SHALL BE INSTALLED AND MAINTAINED IN A FUNCTIONAL MANNER AT ALL TIMES. DEVELOPER IS RESPONSIBLE FOR MAINTAINING DISTURBED AREAS UNTIL REVEGETATION IS COMPLETE.
12. TYPE M RIP-RAP WITH 4" OF TYPE 3 GRANULAR BEDDING AND MIRA1 1800 OR EQUAL MAY BE SUBSTITUTED WHERE TYPE L RIP-RAP WITH MIRA1 FW 700 OR EQUAL IS SPECIFIED.

#### WATER SYSTEM CONSTRUCTION NOTES:

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH CHEROKEE METROPOLITAN DISTRICT STANDARDS AND THE CITY OF COLORADO SPRINGS CONSTRUCTION STANDARDS UNLESS NOTED OTHERWISE. IN THE EVENT OF CONFLICTING STANDARDS, CHEROKEE METROPOLITAN DISTRICT STANDARDS SHALL GOVERN.
2. ALL WATER SYSTEM MAINS PIPE MATERIAL SHALL BE POLYETHYLENE GLYCOL (PE) CLASS 300 (DR-14) PER AWWA C-900 AND ASTM D2651 SPECIFICATIONS, EXCEPT WHERE NOTED. SPOKEWELD SECTIONS OF WATER PIPE THAT CROSS UNDER MAJOR DRAINAGE WALES (SAND CREEK) OR MAJOR THROUGHWAYS SHALL BE DUCTILE IRON PIPE.
3. ALL FITTINGS SHALL BE CONSTRUCTED OF GRAY-IRON MATERIAL AND FURNISHED WITH MECHANICAL JOINT ENDS. ALL FITTINGS SHALL BE MINIMUM AVERAGE RATING OF 300 PSI AND SHALL BE WRAPPED WITH A 9-MIL THICK POLYETHYLENE MATERIAL PER AWWA STANDARD C10.
4. ALL WATER PIPES SHALL BE INSTALLED AT A MINIMUM DEPTH OF 5 (5) FEET BELOW FINISHED GRADE.
5. ALL BENDS, TEE, FIRE HYDRANTS, BLOW-OFFS, AND PLUGS AT DEAD END MAINS SHALL BE INSTALLED WITH CONCRETE THRUST BLOCKS.
6. FIRE HYDRANT ASSEMBLIES SHALL INCLUDE ALL PIPES, FITTINGS, VALVES, APPURTENANCES, MATERIALS AND LABOR THAT ARE NECESSARY TO INSTALL A COMPLETE AND USABLE FIRE HYDRANT. FIRE HYDRANT ASSEMBLIES SHALL BE ONE OF THE FOLLOWING TYPES:
  - MUELLER GUNTER, MODEL A-473
  - MONNEY VALVE
  - AMERICAN A/V
  - OR ENGINEER/DISTRICT APPROVED EQUAL
  - FURNISH CHEROKEE METROPOLITAN DISTRICT STANDARD W/ /RI OPEN CONVENTION
7. VALVE BOXES SHALL BE TYLER SUP, TYPE "C" CAST IRON VALVE BOX ASSEMBLY SERIES 6860 WITH NO. 160 OVAL BASE OR APPROVED EQUAL.
8. CONTRACTOR SHALL PRESSURE TEST THE SYSTEM PRIOR TO CONNECTING TO EXISTING MAINS.
9. ALL WATER SYSTEM COMPONENTS SHALL BE FLUSHED AND CHLORINATED PER AWWA C-601, "DISINFECTING WATER MAINS" PRIOR TO BEING PLACED INTO SERVICE. CONTRACTOR SHALL PRODUCE A 25 MPA SOLUTION BY ADHERING CHLORINE TABLETS TO THE PIPE SECTION WITH PERMATEX CLEAR TAP WITH THE SYSTEM. CHLORINATION SHALL OCCUR PRIOR TO HYDROSTATIC TESTING. THE CONTRACTOR SHALL OBTAIN A BACTERIOLOGICAL SAMPLE AFTER THE SYSTEM HAS BEEN FLUSHED. CLEAR BACTERIOLOGICAL SAMPLE MUST OBTAIN PRIOR TO THE SYSTEM BEING PLACED INTO SERVICE.
10. HYDROSTATIC TESTING:
  - ALL WATER SYSTEM MAINS SHALL BE FIELD PRESSURE TESTED TO A MINIMUM OF 150 PSI OR 1 1/2 TIMES THE STATIC OPERATING PRESSURE, WHICHEVER IS GREATER, MAXIMUM ALLOWABLE LEAKAGE FOR EACH SECTION OF PIPE BETWEEN LINE VALVES SHALL NOT EXCEED THE FOLLOWING: "10 GALLONS PER INCH OF PIPE DIAMETER PER HOUR PER DAY".
11. ALL VALVES SHALL CLOSE UPON LEAKY CONTACT PER CHEROKEE METROPOLITAN DISTRICT STANDARDS. SERVICE LINE STOP VALVES/BOXES SHALL BE LOCATED A MINIMUM OF 7 FEET BETWEEN THE PROPERTY LINE OR PER THE SERVICE DETAIL ON THE UTILITY SERVICE PLAN. ALL OTHER VALVES SHALL BE LOCATED PER THESE PLANS.
12. WHEN IT IS NECESSARY TO RAISE OR LOWER WATER MAINS AT OTHER UTILITY CROSSINGS THE CONTRACTOR SHALL INSURE A MINIMUM CLEARANCE OF 18" WHERE POSSIBLE BETWEEN THE OUTSIDE DIAMETER OF PIPES.
13. WHILE CONSTRUCTING THE WATER SYSTEM THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT LEAST ONE "APPROVED FOR CONSTRUCTION" SET OF UPDATED PLANS AT ALL TIMES. APPROVED/ILED MODIFICATIONS TO PLAN SETS SHALL BE CLEARLY IDENTIFIED IN RED INK ON THE PLANS BY THE CONTRACTOR PER FIELD CONSTRUCTION. THESE AS-BUILT CHANGES SHALL BE DATED AND SUBMITTED TO THE ENGINEER OF RECORD. THE ENGINEER OF RECORD SHALL PREPARE A COMPLETE SET OF "AS CONSTRUCTED" DRAWINGS AND DELIVER THE SETS TO THE CHEROKEE METROPOLITAN DISTRICT PRIOR TO FINAL ACCEPTANCE OF THE WATER SYSTEM.
14. CONTRACT TESTING RESULTS OF ALL TRENCHES AND BEDDING MATERIAL SHALL BE SUBMITTED TO THE ENGINEER OF RECORD PRIOR TO ACCEPTANCE OF THE WATER SYSTEM.
15. PRIOR TO TAPPING ANY EXISTING WATER MAIN THE CONTRACTOR SHALL SUBMIT AND RECEIVE APPROVAL FOR SAID TAP IN ACCORDANCE WITH THE CHEROKEE METROPOLITAN DISTRICT STANDARDS.
16. PVC PIPE MUST BE PRESSURIZED PRIOR TO TAPPING.
17. THE WATER SYSTEM CONTRACTOR SHALL INSTALL ALL IRRIGATION TAPS AND METERS PER THESE PLANS.
18. FIVE MINUTE DEMAND IS 1600 GPM FOR A 3 HOUR DURATION AT A 20-PSI MINIMUM RESIDUAL MAIN LINE PRESSURE. ALL 3/4" MANHOLES ARE TO BE INSTALLED AND PAINTED FOR SERVICES. WATER AND SEWER SERVICES TO INCLUDE 4" TALL STAMPS IN THE TOP OF THE CURB HEAD TO MARK THE ACCURATE WATER SERVICE LOCATION (MARKED WITH "W") AND SANITARY SEWER SERVICE LOCATION (MARKED WITH "S") FOR EACH INDIVIDUAL LOT.
19. AS CONSTRUCTED DRAWINGS HAVE BEEN SUBMITTED TO THE DISTRICT, DRAWINGS TO INCLUDE ANY CHANGES FROM CONSTRUCTION DRAWINGS. THE LENGTH, DEPTH, GRADE AND LOCATION OF ALL SEWER SERVICES, THE LENGTH DEPTH AND LOCATION OF WATER SERVICES.
20. ALL ELECTRIC AND GAS UTILITIES ARE INSTALLED.
21. CONTRACTOR IS TO NOTIFY CHEROKEE METROPOLITAN DISTRICT'S INSPECTOR 24 HOURS PRIOR TO ALL STORM SEWER CIRCULAR CROSSING OVER WATER AND SEWER LINES, TO VERIFY CLEARANCE.
22. FIRE HYDRANTS MUST BE PAINTED, BLUE CAPS AND BURNNETS AND WHITE BARREL SECTIONS. CONTACT JANOTHAN SMITH AT CHEROKEE METROPOLITAN DISTRICT FOR COLOR CODES (719) 591-5080.



KEY MAP  
SCALE: 1" = 100'

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS <b>811</b> UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW	NO. REVISION	DATE	REVIEW: PREPARED BY MY DIRECT SUPERVISOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS & SURVEYORS, LLC [Signature] DATE: 07/19/19 KYLE R. CAMPBELL, COLORADO REG. #29794
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 619 N. Cascade Avenue, Suite 200 Colorado Springs, Colorado 80903	HANNAH RIDGE AT FEATHERGRASS FILING NO. 5 UTILITY CONSTRUCTION DRAWINGS TITLE SHEET			
	DESIGNED BY	KRC	SCALE	DATE
DRAWN BY	KC	(4) 1"=VARIES	SHEET	1 OF 5
CHECKED BY	(V) 1"=NA	JOB NO.	1116	05

Line #	Length	Direction
L1	247.70	S27°21'32.94"W
L2	136.40	N89°38'27.06"E
L3	82.03	S4°40'44.62"E
L4	691.72	S3°40'25.25"E

Curve #	Length	Radius	Delta
C1	103.68	150.00	39.56
C2	118.15	125.00	54.16
C3	4.39	250.00	1.01

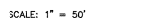
**STREET ABBREVIATION INDEX:**

EQC	EQUINE COURT
ETD	ELECTRONIC DRIVE
DFC	DAPPLES COURT
WPC	WINDLOW PARK DRIVE

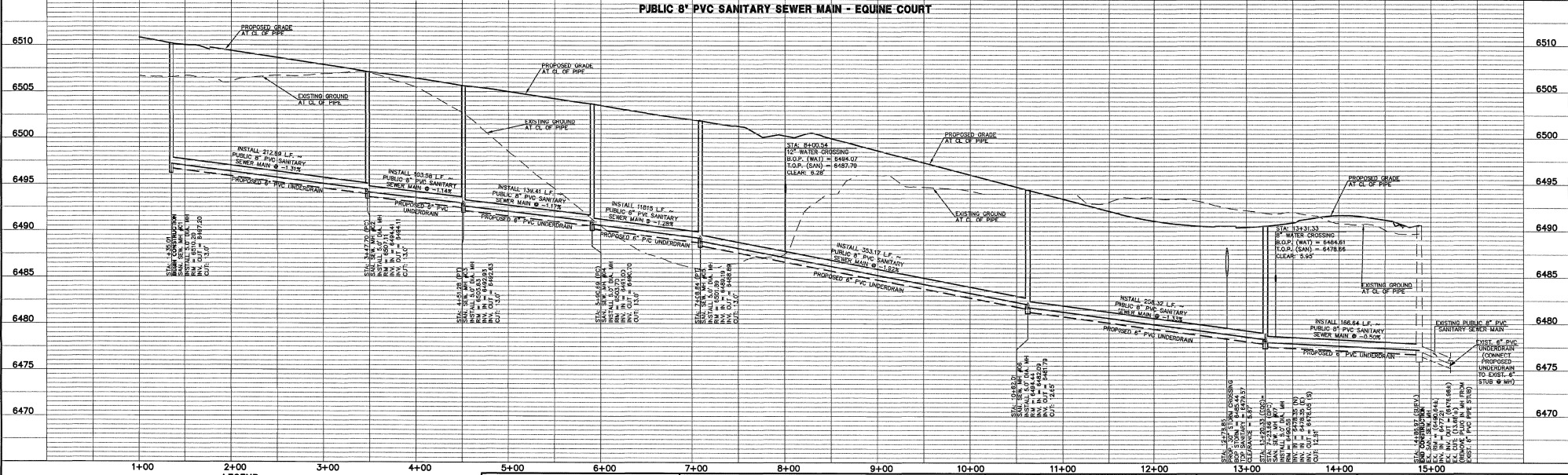
**NOTE:**  
NO TREES WILL BE ALLOWED WITHIN 15' OF ANY PUBLIC WATER/WASTEWATER MAINLINES.

**NOTE:**  
EXISTING UTILITIES AND STORM SEWER SHOWN IN AN APPROXIMATE WAY ONLY. ALL EXISTING UTILITIES AND STORM SEWER TO BE POTHOLED AND VERIFIED BOTH HORIZONTALLY & VERTICALLY PRIOR TO CONSTRUCTION & CONFLICTS REPORTED TO ENGINEER.

- SANITARY SEWER CONSTRUCTION NOTE:**
- SANITARY SEWER PIPE AND FITTINGS: PVC 4"-8" ASTM D3034, TYPE FPM SDR 35 - PUSH-ON JOINTS AND MILDED RUBBER GASKETS. MAXIMUM HORIZONTAL DEFLECTION, AFTER INSTALLATION AND BACK FILLING SHALL NOT EXCEED 1/8" OF THE PIPE SPAN. (MINIMUM CURVE RADIUS FOR 8" PVC SANITARY SEWER MAIN MUST BE WITHIN MANUFACTURER'S RECOMMENDATIONS). ALL HORIZONTAL DEFLECTIONS SHALL BE ACCOMPLISHED BY BENDING THE PIPE RATHER THAN DEFLECTING THE PIPE JOINTS.
  - SANITARY SEWER UNDERDRAIN PIPE AND SERVICES: 3" & 4" SDR 35 ASTM D3034 SOLID PVC SOLVENT WELD PIPE TO BE WHITE IN COLOR.



**PUBLIC 8" PVC SANITARY SEWER MAIN - EQUINE COURT**



**LEGEND**

	PROPOSED FIRE HYDRANT		EXISTING FIRE HYDRANT
	PROPOSED WATER MAIN		EXISTING WATER MAIN
	PROPOSED SANITARY SEWER MAIN		EXISTING SANITARY SEWER MAIN
	PROPOSED STORM SEWER		EXISTING STORM SEWER
	PROPOSED STORM INLET		EXISTING STORM INLET
	ROW/BOUNDARY LINE		EXISTING GAS MAIN
			EXISTING ELECTRIC

**48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS 811**

UTILITY NOTIFICATION CENTER OF COLORADO  
IT'S THE LAW

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NO. REVISION

DATE

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

*[Signature]*

RYEL R. CAMPBELL, COLORADO P.E. #29784

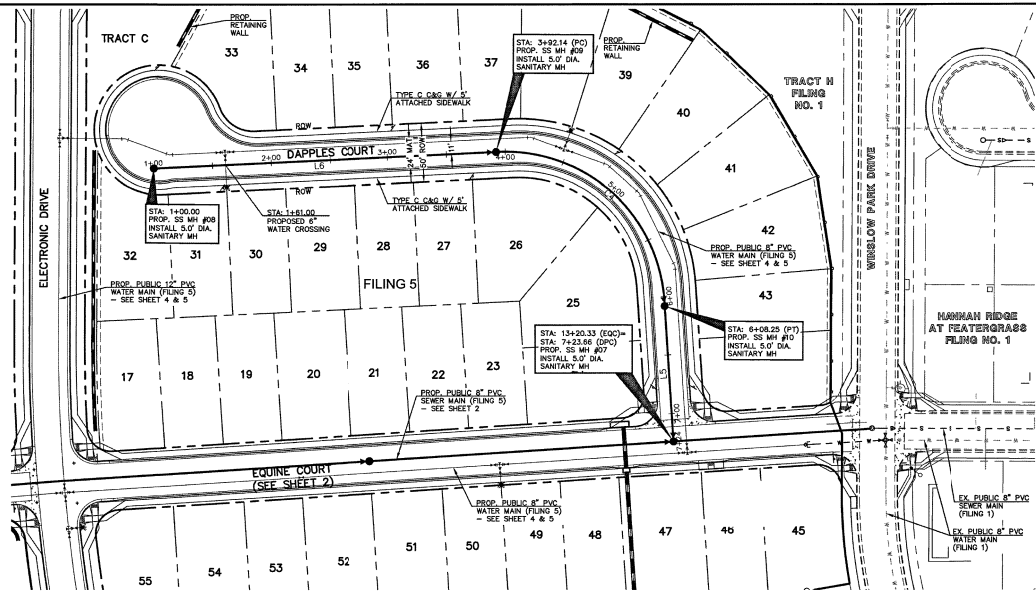
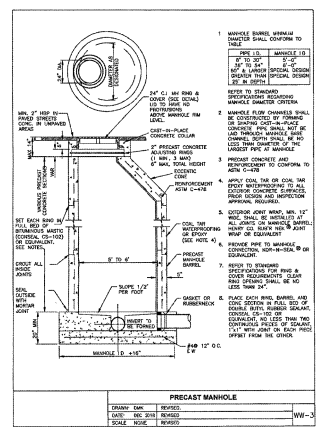
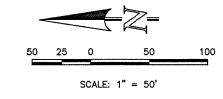
DATE

**CLASSIC CONSULTING ENGINEERS & SURVEYORS**

519 N. Cascade Avenue, Suite 200  
Colorado Springs, Colorado 80903  
(719) 585-0790  
(719) 585-0799 ext.

**HANNAH RIDGE AT FEATHERGRASS FILING NO. 5**  
PUBLIC 8" PVC SANITARY SEWER PLAN AND PROFILE

DESIGNED BY	KRC	SCALE	DATE
DRAWN BY	KC	(H) 1" = 50'	10/12/18
CHECKED BY	(V) 1" = 5'	SHEET 2 OF 5	
		JOB NO. 1116.05	



- SANITARY SEWER CONSTRUCTION NOTES:**
1. SANITARY SEWER PIPE AND FITTINGS: PVC 4"-8" ASTM D3034, TYPE PSM, SDR 35. PUSH-ON JOINTS AND MOLDED RUBBER GASKETS. MAXIMUM HORIZONTAL DEFLECTION AFTER INSTALLATION AND BACK FILLING SHALL NOT EXCEED 3% OF THE PIPE DIAMETER. (MINIMUM CURVE RADIUS FOR 8" PVC SANITARY SEWER MAIN MUST BE WITHIN MANUFACTURER'S RECOMMENDATIONS). ALL HORIZONTAL DEFLECTIONS SHALL BE ACCOMPLISHED BY BENDING THE PIPE RATHER THAN DEFLECTING THE PIPE JOINTS.
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Line #	Length	Direction
L5	115.41'	N88° 19' 34.75"E
L6	292.14'	N2° 44' 58.68"W

Curve #	Length	Radius	Data
C4	216.10	135.00'	91.72

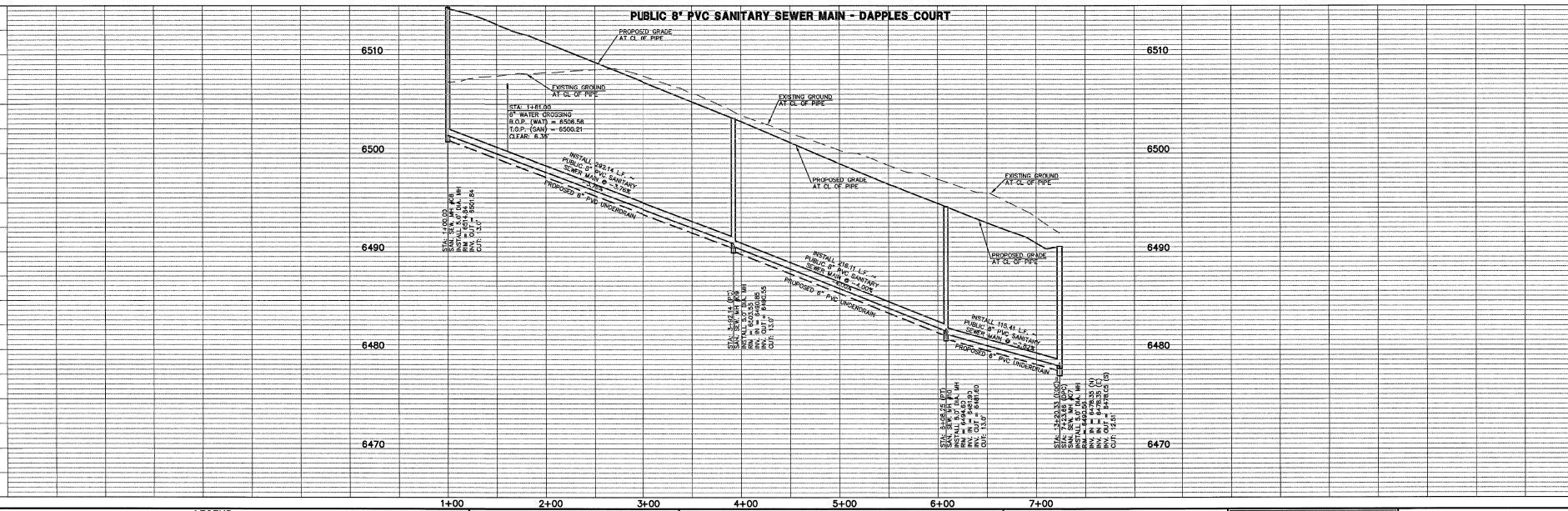
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**PUBLIC 8" PVC SANITARY SEWER MAIN - DAPPLES COURT**



**LEGEND**

	PROPOSED FIRE HYDRANT		EXISTING FIRE HYDRANT
	PROPOSED WATER MAIN		EXISTING WATER MAIN
	PROPOSED SANITARY SEWER MAIN		EXISTING SANITARY SEWER MAIN
	PROPOSED STORM SEWER		EXISTING STORM SEWER
	PROPOSED STORM INLET		EXISTING STORM INLET
	ROW/BOUNDARY LINE		EXISTING GAS MAIN
			EXISTING ELECTRIC

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NO. REVISION

DATE

REVIEW: PREPARED UNDER MY SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS & SURVEYORS, LLC

*Kyle R. Campbell*  
 KYLE R. CAMPBELL, COLORADO P.E. #29794

DATE

619 N. Cascade Avenue, Suite 200  
 Colorado Springs, Colorado 80903

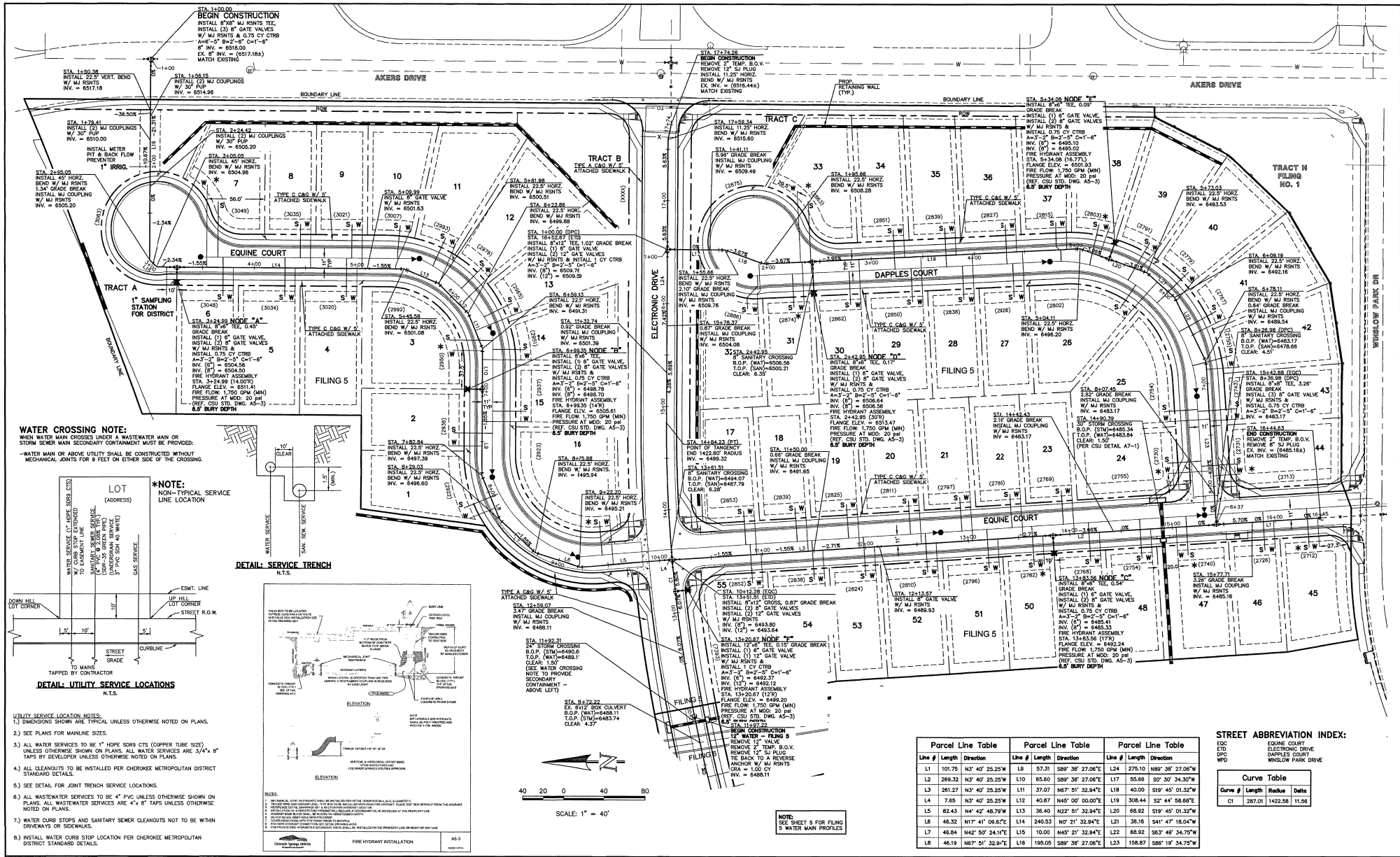
(719) 785-0790  
 (719) 785-0799(x2)

**HANNAH RIDGE AT FEATHERGRASS FILING NO. 5**

**PUBLIC 8" PVC SANITARY SEWER PLAN AND PROFILE**

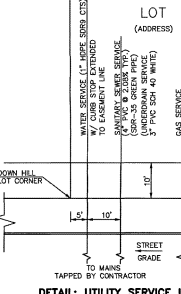
DESIGNED BY: KRC SCALE: DATE: 10/12/18  
 DRAWN BY: KC (1) 1" = 50' SHEET 3 OF 5  
 CHECKED BY: (V) 1" = 5' JOB NO.: 1116.05

CLASSIC CONSULTING ENGINEERS & SURVEYORS



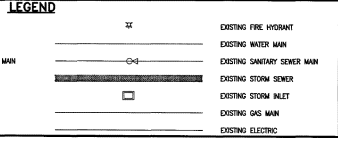
**WATER CROSSING NOTE:**  
 WHEN WATER MAIN CROSSES UNDER A WASTEWATER MAIN OR STORM SEWER MAIN SECONDARY CONTAINMENT MUST BE PROVIDED.  
 - WATER MAIN OR ABOVE UTILITY SHALL BE CONSTRUCTED WITHOUT MECHANICAL JOINTS FOR A FEET ON EITHER SIDE OF THE CROSSING.

**\*NOTE:**  
 NON-TYPICAL SERVICE LINE LOCATION



**DETAIL: UTILITY SERVICE LOCATIONS N.T.S.**

- UTILITY SERVICE LOCATION NOTES:**
- DIMENSIONS SHOWN ARE TYPICAL UNLESS OTHERWISE NOTED ON PLANS.
  - SEE PLANS FOR MANLINE SIZES.
  - ALL WATER SERVICES TO BE 4" HDPE SD15 CTR (COPPER TUBE SIZE) UNLESS OTHERWISE SHOWN ON PLANS. ALL WATER SERVICES ARE 3/4" x 8" TAPS BY DEVELOPER UNLESS OTHERWISE NOTED ON PLANS.
  - ALL CLEANSOUTS TO BE INSTALLED PER CHEROKEE METROPOLITAN DISTRICT STANDARD DETAILS.
  - SEE DETAIL FOR JOINT TRENCH SERVICE LOCATIONS.
  - ALL WASTEWATER SERVICES TO BE 4" PVC UNLESS OTHERWISE SHOWN ON PLANS. ALL WASTEWATER SERVICES ARE 4" x 8" TAPS UNLESS OTHERWISE NOTED ON PLANS.
  - WATER CURB STOPS AND SANITARY SINKER CLEANOUTS NOT TO BE WITHIN DRIVEWAYS OR SIDEWALKS.
  - INSTALL WATER CURB STOP LOCATION PER CHEROKEE METROPOLITAN DISTRICT STANDARD DETAILS.



**48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS 811**  
 UTILITY NOTIFICATION CENTER OF COLORADO  
 IT'S THE LAW

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NO. REVISION	DATE	REVIEW:
		PREPARED BY MY DESIGNATION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS & SURVEYORS, LLC
		<i>[Signature]</i>
		DATE: 10/12/18

Parcel Line Table			Parcel Line Table			Parcel Line Table		
Line #	Length	Direction	Line #	Length	Direction	Line #	Length	Direction
L1	101.75	N3° 40' 25.25" W	L8	57.31	S89° 38' 27.06" E	L4	275.10	N88° 38' 27.06" W
L2	289.32	N3° 40' 25.25" W	L10	65.80	S89° 38' 27.06" E	L17	55.66	S0° 30' 34.30" W
L3	281.27	N3° 40' 25.25" W	L11	37.07	N67° 51' 32.94" E	L18	40.00	S19° 45' 01.32" W
L4	7.85	N3° 40' 25.25" W	L12	40.87	N45° 00' 00.00" E	L19	308.44	S2° 44' 58.86" E
L5	82.43	N4° 42' 48.79" W	L13	38.40	N32° 51' 32.94" E	L20	168.92	S59° 45' 01.32" W
L6	46.32	N17° 41' 09.84" E	L14	240.53	N0° 21' 32.94" E	L21	38.18	S41° 47' 16.80" W
L7	48.84	N42° 57' 24.14" E	L15	10.00	N47° 21' 32.94" E	L22	68.82	S63° 48' 34.75" W
L8	46.19	N67° 51' 32.94" E	L16	198.05	S89° 38' 27.06" E	L23	158.87	S86° 19' 34.75" W

**STREET ABBREVIATION INDEX:**  
 EQ EQUINE COURT  
 ED ELECTRONIC DRIVE  
 DP DAPPLES COURT  
 WP WINDSLOW PARK DRIVE

**Curve Table**

Curve #	Length	Radius	Data
CT	287.01	1422.58	11.58

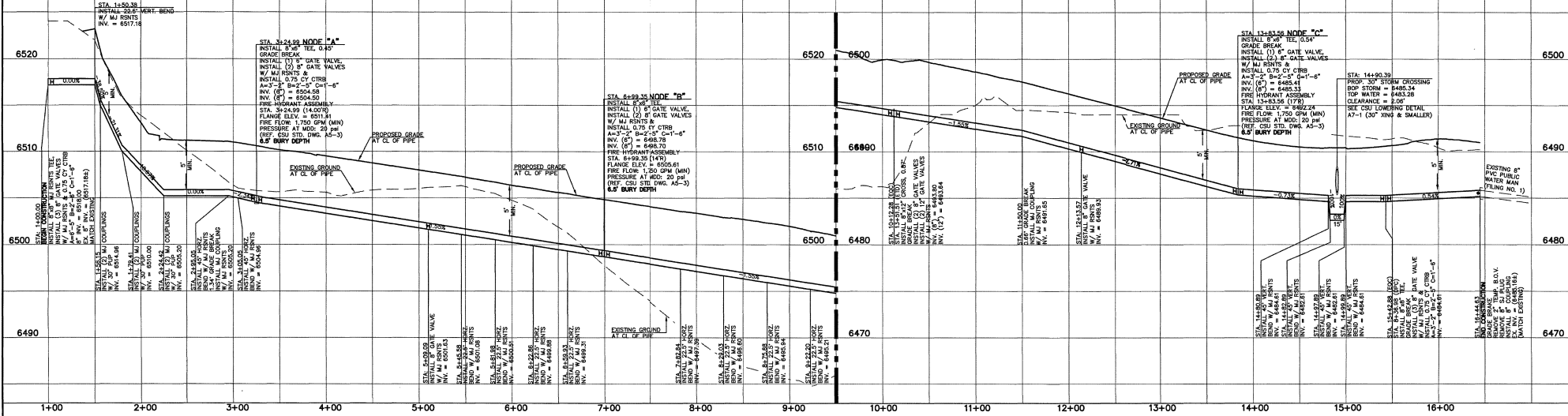
**CLASSIC CONSULTING ENGINEERS & SURVEYORS**  
 819 N. Cascade Avenue, Suite 200 (719)785-0790  
 Colorado Springs, Colorado 80903 (719)785-0790(x)

**HANNAH RIDGE AT FEATHERGRASS FILING NO. 5**  
 PUBLIC 8" & 12" PVC WATER SYSTEM PLANS INCLUDING UTILITY SERVICES

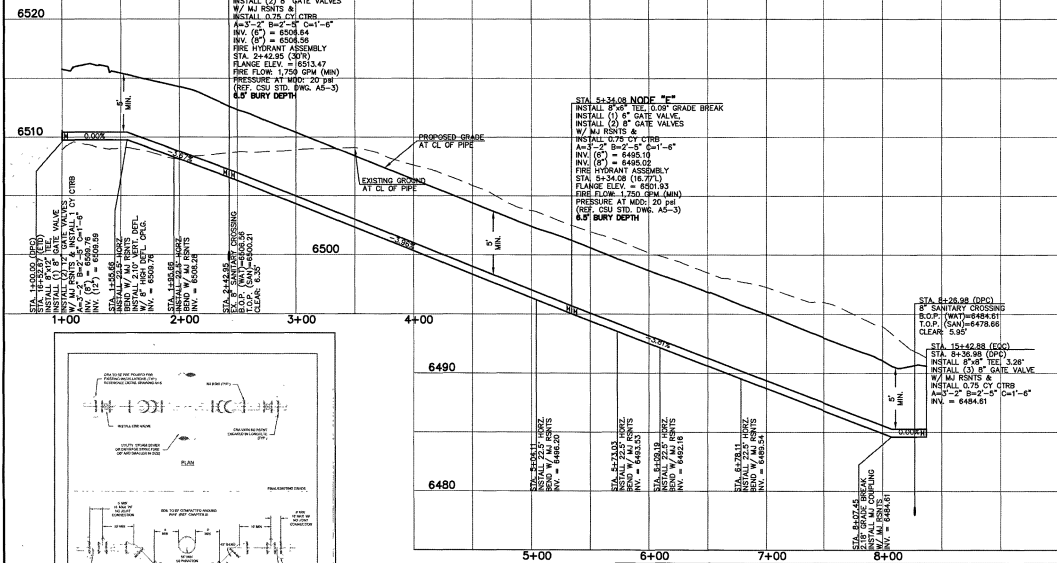
DESIGNED BY	KRC	SCALE	DATE
DRAWN BY	KC	(1" = 40')	SHEET 4 OF 5
CHECKED BY	(V)	1" NA	JOB NO. 1116.05

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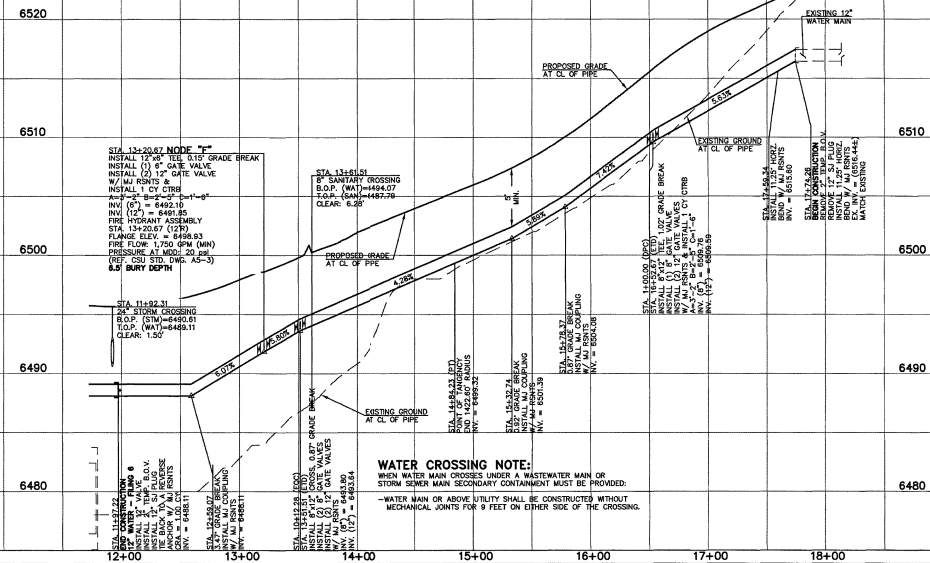
# 8" WATER - EQUINE CT - FILING 5



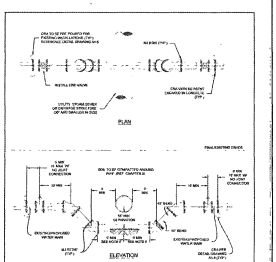
# 8" WATER - DAPPLES CT - FILING 5



# 12" WATER - ELECTRONIC DR - FILING 5



**WATER CROSSING NOTE:**  
 WHEN WATER MAIN CROSSES UNDER A WASTEWATER MAIN OR STORM SEWER MAIN SECONDARY CONTAINMENT MUST BE PROVIDED.  
 -WATER MAIN OR ABOVE UTILITY SHALL BE CONSTRUCTED WITHOUT MECHANICAL JOINTS FOR 8 FEET ON EITHER SIDE OF THE CROSSING.



<p>48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS</p> <p><b>811</b></p> <p>UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW</p> <p>THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE MANNER ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.</p>	<p>NO. REVISION</p>	<p>DATE</p>	<p>REVIEW:</p> <p>PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS &amp; SURVEYORS, LLC</p> <p><i>Kyle R. Campbell</i> KYLE R. CAMPBELL, COLORADO LICENSE NO. 29794</p>	<p>DESIGNED BY: KRC</p> <p>DRAWN BY: KC</p> <p>CHECKED BY: (V)</p>	<p>SCALE: (4) 1" = 50'</p> <p>DATE: 10/12/18</p> <p>SHEET 5 OF 5</p> <p>JOB NO. 1116.05</p>	<p>HANNAH RIDGE AT FEATHERGRASS FILING NO. 5 PUBLIC 8" &amp; 12" PVC WATER SYSTEM PROFILES</p> <p><b>CLASSIC</b> CONSULTING ENGINEERS &amp; SURVEYORS</p> <p>819 N. Cascade Avenue, Suite 200 Colorado Springs, Colorado 80903</p> <p>(719) 785-0790 (719) 785-0799 (fax)</p>
	<p>38 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS</p> <p><b>811</b></p> <p>UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW</p>		<p>DATE</p>		<p>DATE: 10/12/18</p>	

N:\11082\DRAWINGS\CONSTRUCTION\PLANS\5\UTILITIES\5-11082-WAT-02.dwg, 6/28/2018, 4:19:48 PM, 1:1