HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

COUNTY OF EL PASO, STATE OF COLORADO

STREET IMPROVEMENT PLAN

JULY 2022

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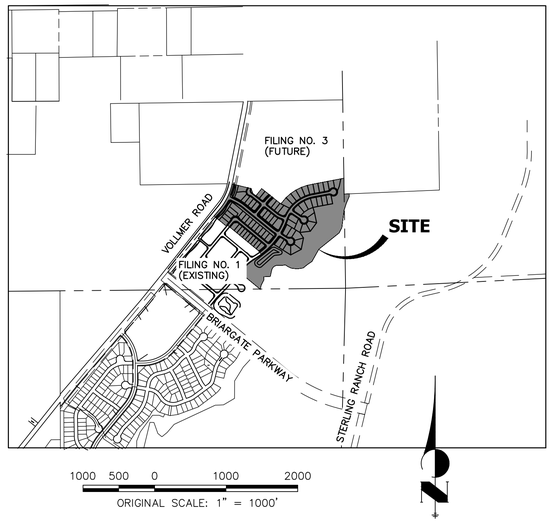
AGENCIES

OWNER/DEVELOPER:	SR LAND, LLC 20 BOULDER CRESCENT, SUITE 201 COLORADO SPRINGS, CO 80903 JAMES F. MORLEY (719) 471–1742	FIRE DISTRICT:	BLACK FOREST FIRE PROTECTION DISTRICT 11445 TEACHOUT ROAD COLORADO SPRINGS, CO 80908 CHIEF BRYAN JACK (719) 495–4300
CIVIL ENGINEER:	JR ENGINEERING, LLC 5475 TECH CENTER DRIVE COLORADO SPRINGS, CO 80919 MIKE BRAMLETT P.E. (303) 267–6240	GAS DEPARTMENT:	COLORADO SPRINGS UTILITIES 7710 DURANT DR. COLORADO SPRINGS, CO 80947 TIM WENDT (719) 668–3556
COUNTY ENGINEERING:	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 JEFF RICE, P.E. (719) 520–6300	ELECTRIC DEPARTMENT:	MOUNTAIN VIEW ELECTRIC 11140 E. WOODMEN ROAD FALCON, CO 80831 (719) 495–2283
TRAFFIC ENGINEERING:	EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS 3275 AKERS DRIVE COLORADO SPRINGS, CO 80922 JENNIFER IRVINE, P.E. (719) 520–6460	COMMUNICATIONS:	QWEST COMMUNICATIONS (U.N.C.C. LOCATORS) (800) 922–1987 AT&T (LOCATORS) (719) 635–3674
WATER RESOURCES:	STERLING RANCH METRO DISTRICT ENGINEERS JDS–HYDRO CONSULTANTS 545 E. PIKES PEAK AVE., SUITE 300 COLORADO SPRINGS, CO 80903 JOHN MCGINN (719) 668–8769		



BASIS OF BEARINGS

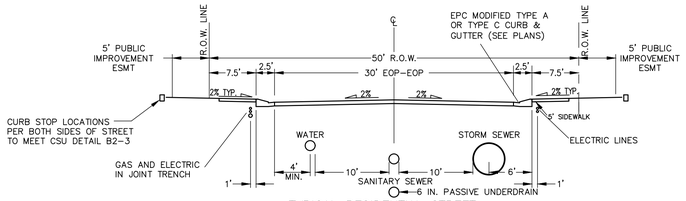
THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID SOUTHWEST QUARTER BY A 2–1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER BY A 2–1/2" ALUMINUM CAP STAMPED "LS 11624", SAID LINE BEARS N89°14'14"E A DISTANCE OF 2,722.69 FEET.

BENCHMARKS

1.THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION
NORTHING = 411416.273
EASTING = 235167.071
ELEVATION = 7023.42

2.THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION
NORTHING = 410095.404
EASTING = 235052.131
ELEVATION = 7000.40

3.THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDIVISION
NORTHING = 411399.962
EASTING = 233849.817
ELEVATION = 7030.82



TYPICAL RESIDENTIAL STREET
SCALE: NTS
DESIGN SPEED: 25 MPH POSTED SPEED: 25 MPH

NOTE

- VOLLMER ROAD (NORTH) STREET IMPROVEMENT PLAN PCD FILE NO. CDR–21–10
- SAND CREEK RESTORATION PUBLIC IMPROVEMENT CONSTRUCTION PLANS PCD FILE NO. CDR–20–004
- HOMESTEAD NORTH AT STERLING RANCH FILING NO. 1 PCD FILE NO. SF–22–2213
- HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2 STORM SEWER AND POND PLANS
- HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2 SANITARY SYSTEM PLAN
- HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2 WATER SYSTEM PLAN

Know what's below.
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ENGINEER'S STATEMENT

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLAN AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

EL PASO COUNTY STATEMENT

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

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

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

JOSHUA PALMER, P.E. DATE
INTERIM COUNTY ENGINEER/ECM ADMINISTRATOR

Remove Interim

DISTRICT APPROVALS

THESE DOCUMENTS HAVE BEEN REVIEWED AND APPROVED FOR STORM DRAIN AND ASSOCIATED UTILITY SERVICE CONSTRUCTION.

FOR AND ON BEHALF OF THE STERLING RANCH METRO DISTRICT DATE

OWNER/DEVELOPER STATEMENT

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

JAMES F. MORLEY DATE
SR LAND, LLC
20 BOULDER CRESCENT, SUITE 201
COLORADO SPRINGS, CO 80903

PCD FILING NO.: SF2218

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471–1742

J·R ENGINEERING
A Westrian Company
Centennial 303–740–9393 • Colorado Springs 719–593–2593
Fort Collins 970–491–9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H–SCALE	N/A
V–SCALE	N/A
DATE	7/11/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2
COVER SHEET

SHEET 1 OF 17
JOB NO. 25188.10

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GENERAL CONSTRUCTION NOTES:

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK. THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
2. 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.
3. ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
4. ALL BACKFILL, SUB-BASE, AND/OR BASE COURSE (CLASS 6) MATERIAL SHALL BE COMPACTED PER THE SOILS ENGINEER'S RECOMMENDATIONS, AND APPROVED BY EL PASO COUNTY PCD.
5. ALL STATIONING IS CENTERLINE OF IMPROVEMENTS UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE INDICATED AS TOP BACK OF CURB (TBC), ASPHALT (ASP), OR TOP OF INLET OR BOX (TOB).
6. ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAT LINES. REPAIR SHALL CONFORM TO EPC ECM APPENDIX K – 1.2C.
7. ALL INTERSECTION ACCESSES TO BE CONSTRUCTED WITH A 25 FOOT SIGHT VISIBILITY TRIANGLES IS REQUIRED AND THERE SHALL BE NO OBSTRUCTIONS GREATER THAN 18" VERTICAL IN THIS AREA.
8. ALL CULVERTS AND STORM DRAIN PIPES SHALL BE SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE (HDPE), REINFORCED CONCRETE PIPE (RCP). ALL CULVERTS SHALL BE PLACED COMPLETE WITH FLARED END SECTIONS. ADEQUACY OF MATERIAL THICKNESS FOR ANY CSP INSTALLED SHALL BE VERIFIED BY OWNER'S GEOTECHNICAL ENGINEER TO SUPPORT MINIMUM 50 YEAR DESIGN LIFE. CULVERTS MUST CONFORM TO EPC ECM SECTION 3.32 – CULVERTS.
9. ASPHALT THICKNESS AND BASE COURSE THICKNESS (COMPACTED) FOR ROADS SHALL BE PER DESIGN REPORT BY OWNER'S GEOTECHNICAL ENGINEER. OWNER'S GEOTECHNICAL ENGINEER TO BE ON SITE AT THE 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 EL PASO COUNTY DEVELOPMENT SERVICES ENGINEERING DIVISION PRIOR TO CONSTRUCTION.

SIGNING AND STRIPING NOTES:

1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THAT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.
3. ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT.
4. ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLAN SHALL BE NEW SIGNS. EXISTING SIGNS MAY REMAIN OR BE REUSED IF THEY MEET CURRENT EL PASO COUNTY AND MUTCD STANDARDS.
5. STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.
6. ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.
7. ALL STREET NAME SIGNS SHALL HAVE "D" SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 4" UPPER-LOWER CASE LETTERING ON 8" BLANK AND NON-LOCAL ROADWAY SIGNS BEING 6" LETTERING, UPPER-LOWER CASE ON 12" BLANK, WITH A WHITE BORDER THAT IS NOT RECESSED. MULTI-LANE ROADWAYS WITH SPEED LIMITS OF 40 MPH OR HIGHER SHALL HAVE 8" UPPER-LOWER CASE LETTERING ON 18" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON-RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE 2012 MUTCD "STANDARD HIGHWAY SIGNS"
8. ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.
9. ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75" X 1.75" SQUARE TUBE SIGN POST AND STUB POST BASE. FOR OTHER APPLICATIONS, REFER TO THE CDOT STANDARD S-614-8 REGARDING USE OF THE P2 TUBULAR STEEL POST SLIPBASE DESIGN.
10. ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" MINIMUM THICKNESS.
11. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE A MINIMUM 125 MIL THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S-627-1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE. STOP BARS SHALL BE 24" IN WIDTH. CROSSWALKS LINES SHALL BE 12" WIDE AND 8' LONG PER CDOT S-627-1.
12. ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15MIL THICKNESS EPOXY PAINT. ALL NON-LOCAL RESIDENTIAL ROADWAYS SHALL INCLUDE BOTH RIGHT AND LEFT EDGE LINE STRIPING AND ANY ADDITIONAL STRIPING AS REQUIRED BY CDOT S-627-1.
13. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (719) 520-6819 PRIOR TO AND UPON COMPLETION OF SIGNING AND STRIPING.
14. THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS (DPW) PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS:

1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).
3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
   a. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
   b. CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
   c. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
   d. CDOT M & S STANDARDS
4. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
6. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (PCD) – INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
9. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.
10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
12. SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.
13. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY PCD AND MUTCD CRITERIA. [IF APPLICABLE, ADDITIONAL SIGNING AND STRIPING NOTES WILL BE PROVIDED.]
14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DPW, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
15. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

SITE MAP
SCALE: 1"=100'

100 50 0 100 200
ORIGINAL SCALE: 1" = 100'

Know what's **below.** **Call** before you dig.

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
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No.	REVISION	BY	DATE

H-SCALE	1"=100'
V-SCALE	N/A
DATE	7/11/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

GENERAL NOTES

SHEET 2 OF 17

JOB NO. 25188.10

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LAYER LINETYPE LEGEND

	EXISTING	PROPOSED
PHASE LINE		
MATCH LINE		
SECTION LINE		
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
R.O.W. A LINE	A	A
CENTERLINE		
CITY LIMITS		
WIRE FENCE	X	X
CHAIN LINK FENCE	O	●
WOOD FENCE	◇	◆
MASONRY FENCE	□	■
GUARDRAIL		
CONC. BARRIER		
CABLE TV	TV	TV
ELECTRIC	E	E
FIBER OPTIC	FO	FO
GAS MAIN	G	G
IRRIGATION MAIN	IRR	IRR
OIL/PETRO. MAIN	O	O
OVERHEAD UTILITY	OHU	OHU
SANITARY SEWER	S	
STORM DRAIN		
TELEPHONE	T	T
WATER MAIN	W	
RAW WATER LINE	RWL	RWL
SWALE/WATERWAY FLOWLINE		
DIVERSION DITCH		
DIVERSION CHANNEL		
MAJOR DRAINAGE BASIN		
MINOR DRAINAGE BASIN		
TOP OF SLOPE		
TOE OF SLOPE		
EDGE OF WATER		
INDEX CONTOUR	6100	6100
INTERMEDIATE CONTOUR		
DEPRESSION CONT. (INDEX)	6100	6100
DEPRESSION CONT. (INTER)		
TOP OF CUTS		
TOE OF FILLS		
CUT AND FILL LINE		C/F
SILT FENCE	SF	SF
100 YEAR FLOODPLAIN	100YR	100YR
500 YEAR FLOODPLAIN	500YR	500YR
FLOODWAY	FLDWY	FLDWY
BASE FLOOD ELEVATION		
EDGE OF WETLANDS		
STONE WALL		

UTILITIES LEGEND

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE	Ⓢ	●
STORM INLET		▬
AREA INLET – SQUARE	□	
AREA INLET – ROUND	○	
FLARED END SECTION	▷	◁
RIPRAP		
SANITARY SEWER		
LINE MARKER	Mkr San	
SERVICE MARKER	S	
CLEAN–OUT		
MANHOLE W/ DIRECTIONAL FLOW ARROW	Ⓢ	
WATER LINE		
LINE MARKER	Mkr W	
SERVICE MARKER	W	
FIRE HYDRANT		
FIRE CONNECTION		
MANHOLE	Ⓦ	●
BEND		
BLOW–OFF VALVE		
WELL	WELL	WELL
METER	Ⓜ	●
VALVE	⋈	
REDUCER		
THRUST BLOCK		
CROSS		
PLUG W/ THRUST BLOCK		
TEE		
REVERSE ANCHOR		
ANODE		
AIR & VACUUM VALVE ASSEMBLY		
TRANSMISSION BLOW–OFF ASSEMBLY		
GAS LINE		
MARKER	Mkr G	
SERVICE MARKER	G	
METER	Ⓖ	●
VALVE	⋈	
PLUG		
TEE		
DRY UTILITIES		
CABLE TV MARKER	Mkr TV	
CABLE TELEVISION PEDESTAL	TV	
ELECTRIC MARKER	Mkr E	
ELECTRIC SERVICE MARKER	E	
ELECTRICAL PEDESTAL	E	
ELECTRICAL METER	E	
ELECTRICAL MANHOLE	E	
FIBER–OPTIC MARKER	Mkr FO	
IRRIGATION PEDESTAL	I	
TELEPHONE MARKER	Mkr T	
TELEPHONE PEDESTAL	T	
TELEPHONE MANHOLE	T	
UTILITY POLE		●
GUY ANCHOR		
GUY POLE		
MISC. UTILITIES		
VENT PIE	VP	VP
TEST HOLE DESIGNATOR	TH# FIRM AGENCY	

TRAFFIC LEGEND

	EXISTING	PROPOSED
PARKING METER		
TRAFFIC SIGNAL BOX		
TRAFFIC SIGNAL POLE		
TRAFFIC SIGNAL		
BARRICADE		
GUARD RAIL POST		
IMPACT ATTENUATOR		
BRIDGE STYLE HIGHWAY SIGN POST		
CANTILEVER STYLE HIGHWAY SIGN POST SIGN		
RAILROAD MARKER/SIGN	RR	
STREET LIGHT		
STREET LIGHT – SINGLE		
STREET LIGHT – DOUBLE		
LUMINAIRE		
ALTERNATE LUMINAIRE		
SIGNAL MAST ARM W/ LUMINAIRE		
PEDESTAL POLE FOUNDATION		
TRAFFIC SIGNAL POLE		
ROUND PULL BOX		
MEDIUM PULL BOX		
LARGE PULL BOX (20X33X15)		
SIGNAL HEAD WITHOUT BACK PLATE		
SIGNAL HEAD WITH BACK PLATE		
PEDESTRIAN SIGNAL HEAD		
VIDEO IMAGE DETECTOR		
OPTICOM DETECTOR		
VEHICLE DETECTION ZONE		V

LANDSCAPE LEGEND

	EXISTING	PROPOSED
TREE – CONIFEROUS		
TREE – DECIDUOUS		
SHRUB/BUSH		
SHRUBS AND BUSHES		
IRRIGATION BOX		
IRRIGATION SPRINKLER		
IRRIGATION VALVE		
BOLLARD		
FLAGPOLE	FP	

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ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

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V-SCALE	N/A
DATE	7/11/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

LEGEND

SHEET 3 OF 17

JOB NO. 25188.10

X:\25\10000.all\25188\10\Drawings\Sheet Dwgs\Sheet Plans\25188 STREET01 - COVER.dwg, STREET10 LEGEND, 7/13/2022 3:47:00 PM, CS

FUTURE HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3

END FILING NO. 2 IMPROVEMENTS
STA: 6+96.10
N: 416820.25
E: 237807.11

N11°07'11"E 368.88'

Δ=62°24'52" R=60.00' L=65.36'

PT: 6+72.28

BEGIN: 0+00.00
N: 416704.68
E: 237484.91

S63°04'00"E 157.49'

Δ=12°11'45" R=565.00' L=120.26'

PC: 1+37.49

N51°17'42"W 231.40'

PC: 2+57.75

BEGIN FILING NO. 2 IMPROVEMENTS
STA: 0+83.66
N: 416666.79
E: 237559.49

VOLLMER ROAD (CDR-21-010)

SAM BASS DR.

ASPEN VALLEY RD.

PERRY OWENS DR.

WHEATLAND DR.

ROBERT ALLISON CIR.

WILLEY PICKET DR.

TEXAS JACK DR.

HARVEY LOGAN DR.

EXISTING HOMESTEAD NORTH AT STERLING RANCH FILING NO. 1 SEE PLANS BY JR ENGINEERING (SF-22-2213)

SAND CREEK RESTORATION (CDR-20-004)

END FILING NO. 2 IMPROVEMENTS
STA: 3+51.20
N: 416709.47
E: 238107.95

Δ=5°49'03" R=565.00' L=57.37'

PI: 3+75.53

CL/CL INTERSECTION
PERRY OWENS DRIVE
STA: 3+75.53=
ASPEN VALLEY ROAD
STA: 1+95.82

N39°07'45"E 250.66'

Δ=59°33'35" R=500.00' L=519.76'

N: 416505.34
E: 238374.14

CL/CL INTERSECTION
ROBERT ALLISON CIRCLE
STA: 0+00.00=
WHEATLAND DRIVE
STA: 18+41.01

BEGIN: 0+00.00

S56°08'38"E 233.56'

PC: 17+13.87

BEGIN: 0+00.00

N51°17'40"W 231.62'

N19°44'41"E 1.98'

0+00

PI: 17+11.89

CL/CL INTERSECTION
PERRY OWENS DRIVE
STA: 0+00.00=
WHEATLAND DRIVE
STA: 17+11.89

N19°44'41"E 7.04'

PT: 17+04.86

END: 2+33.05

N: 416375.23
E: 238568.08

Δ=90°01'56" R=68.00' L=106.85'

CL/CL INTERSECTION
SAM BASS DRIVE
STA: 4+77.46=
ASPEN VALLEY ROAD
STA: 0+00.00

N: 416441.88
E: 237880.87

S50°52'15"E 508.48'

S50°26'12"E 490.25'

N39°31'51"E 866.99'

PC: 13+99.33

PC: 15+02.22

Δ=19°08'02" R=200.00' L=66.79'

PC: 0+77.11

N70°15'19"W 77.11'

N: 416390.53
E: 238315.85

PC: 7+86.23

PC: 8+52.68

BEGIN FILING NO. 2 IMPROVEMENTS
[SEE FILING NO. 1 CD FOR EXISTING CONNECTION POINT]
STA: 13+18.39
N: 416292.20
E: 237513.69

Δ=6°44'17" R=565.00' L=66.45'

S57°36'32"E 48.17'

PI: 9+00.84

CL/CL INTERSECTION
SAM BASS DRIVE
STA: 9+00.79=
WHEATLAND DRIVE
STA: 14+80.12

S57°36'32"E 197.79'

END: 12+98.63

N: 416076.46
E: 238381.96

Δ=39°21'17" R=1018.00' L=699.23'

PC: 19+92.47

Δ=5°16'50" R=350.00' L=32.26'

PT: 20+24.73

S45°09'22"E 23.86'

N: 416009.99
E: 238077.16

END: 20+48.59

CL/CL INTERSECTION
NAT LOVE DR.= TEXAS JACK DR.= WILLEY PICKET DR.
STA: 20+48.54=
WHEATLAND DRIVE
STA: 12+58.98

BEGIN FILING NO. 2 IMPROVEMENTS
[SEE FILING NO. 1 CD FOR EXISTING CONNECTION POINT]
STA: 11+05.76
N: 415909.88
E: 237961.37

PRC: 10+05.63

Delete highlighted text

30.00' CX UTILITY EASEMENT

25.00' TRAIL EASEMENT

FLOWY

100YR

7156

7152

7148

7144

7140

7136

N79°18'16"E 270.14'

END: 25+03.77

N: 416764.92
E: 238959.77

PT: 24+33.63

Know what's below. Call before you dig.

60 30 0 60 120
ORIGINAL SCALE: 1" = 60'

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE 1"=60'
V-SCALE N/A
DATE 7/11/22
DESIGNED BY QNL
DRAWN BY QNL
CHECKED BY

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

HORIZONTAL CONTROL

SHEET 4 OF 17

JOB NO. 25188.10

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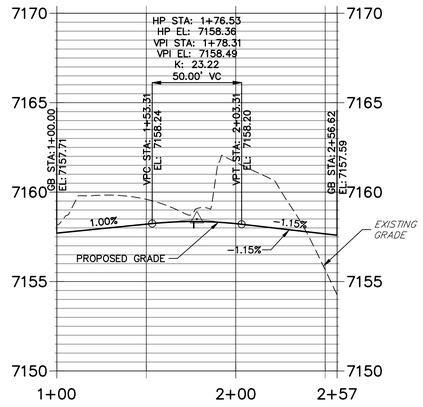
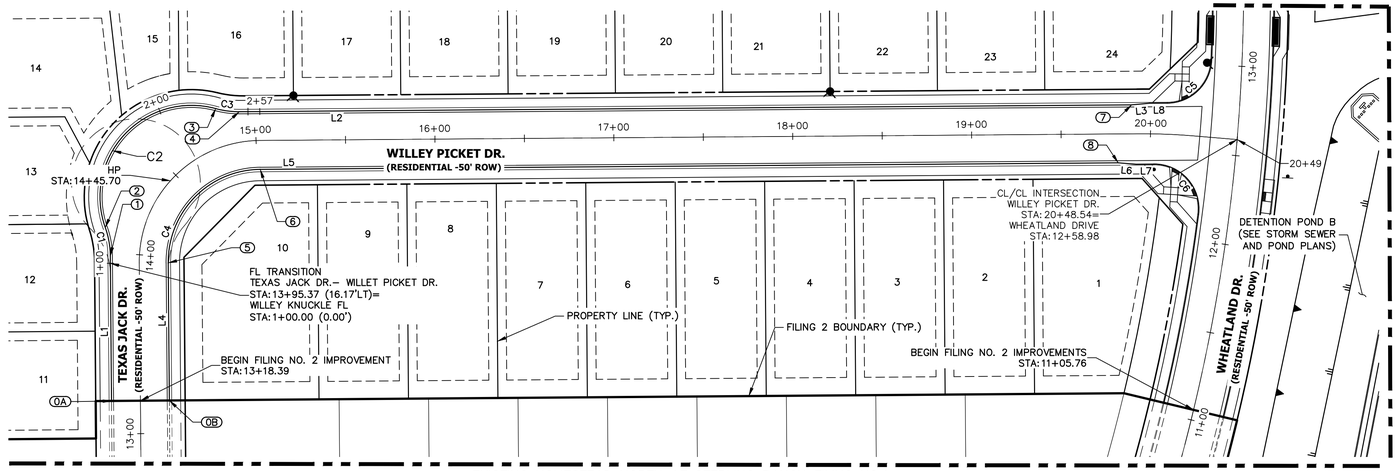
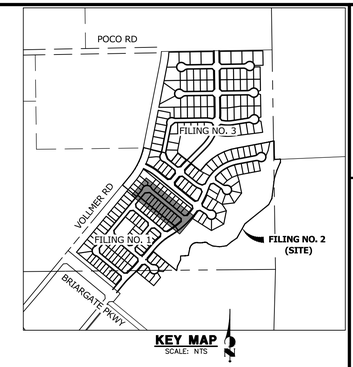
WILLEY KNUCKLE FL PROFILE
STA 1+00.00 TO 2+56.62



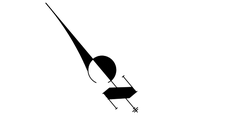


EXISTING HOMESTEAD NORTH AT STERLING RANCH FILING NO.1
SEE PLANS BY JR ENGINEERING (SF-22-2213)



811
Know what's below.
Call before you dig.

POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
0A	13+18.39	16.17' (LT)	Willey Picket Dr.	7155.32	CONNECT TO EX FL
0B	13+18.39	16.17' (RT)	Willey Picket Dr.	7155.33	CONNECT TO EX FL
1	13+98.67	16.27' (LT)	Willey Picket Dr.	7157.75	FL-PC
2	14+10.79	21.13' (LT)	Willey Picket Dr.	7157.98	FL-PRC
3	14+83.23	21.45' (LT)	Willey Picket Dr.	7157.94	FL-PRC
4	14+93.04	16.94' (LT)	Willey Picket Dr.	7157.72	FL-PT
5	13+95.37	16.17' (RT)	Willey Picket Dr.	7157.71	FL-PC
6	15+02.22	16.17' (RT)	Willey Picket Dr.	7157.58	FL-PT
7	19+89.58	16.17' (LT)	Willey Picket Dr.	7139.85	C&G TRANSITION
8	19+81.83	16.17' (RT)	Willey Picket Dr.	7140.08	C&G TRANSITION



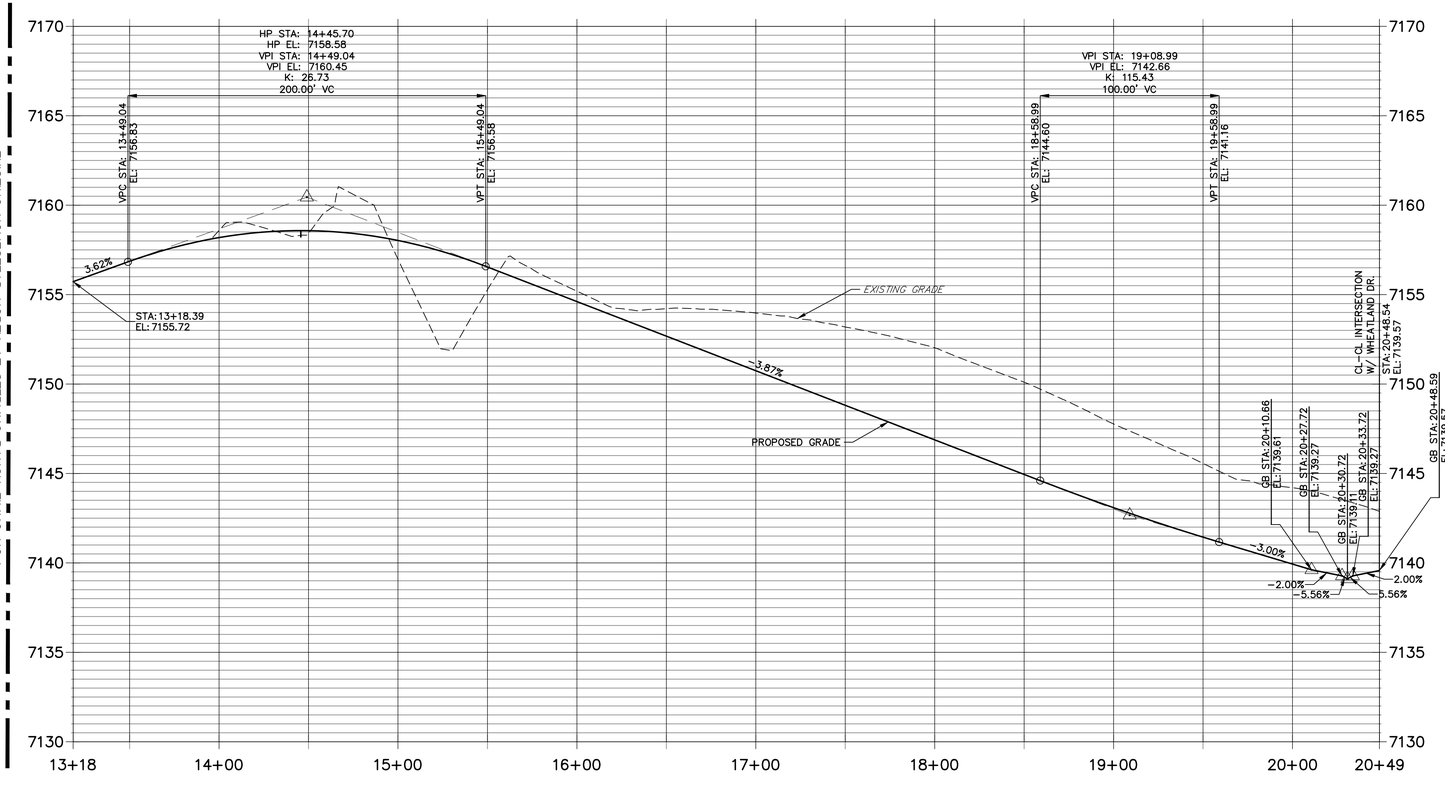
40 20 0 40 80

HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 4'

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N39°31'51"E	81.07'
L2	N50°26'12"W	424.58'
L3	N55°12'01"W	10.03'
L4	N39°32'00"E	76.98'
L5	S50°26'14"E	413.14'
L6	N45°39'24"W	10.00'
L7	N50°26'12"W	9.95'
L8	N50°26'12"W	9.95'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C1	19°03'56"	48.83'	16.25'
C2	124°48'20"	51.17'	111.45'
C3	15°42'28"	48.83'	13.39'
C4	90°01'56"	51.83'	81.44'
C5	87°11'03"	25.00'	38.04'
C6	97°46'11"	25.00'	42.66'

WILLEY PICKET DR. PROFILE
STA 13+18.39 TO 20+48.59



EXISTING HOMESTEAD NORTH AT STERLING RANCH FILING NO.1

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

32314

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS CIVIL DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=40'
V-SCALE	1"=4'
DATE	7/11/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2
ROADWAY PLAN AND PROFILE

SHEET 5 OF 17
JOB NO. 25188.10

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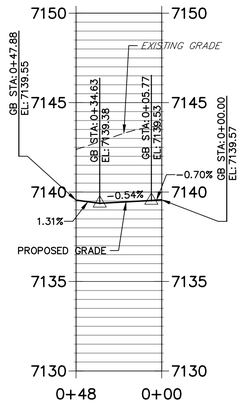
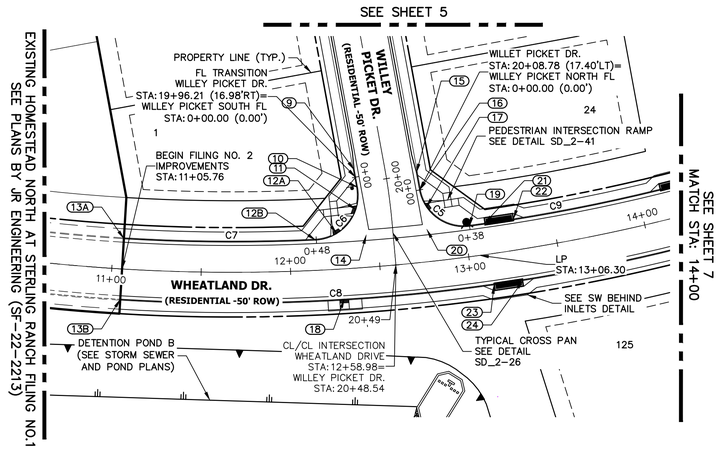
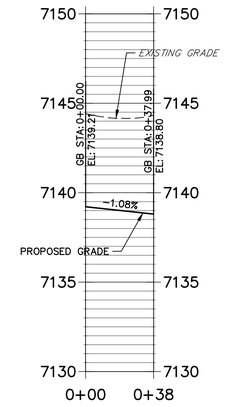
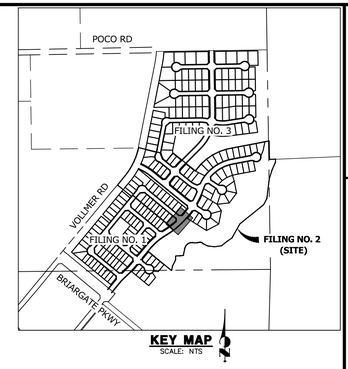
WILLEY PICKET SOUTH FL PROFILE
STA 0+00.00 TO 0+47.88



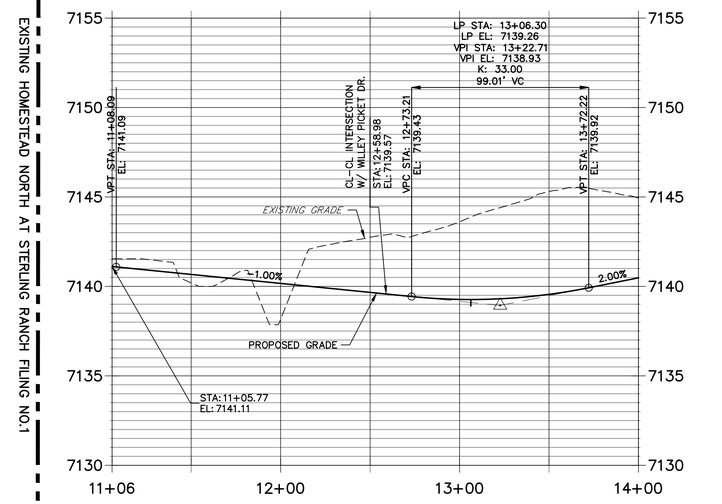


WILLEY PICKET NORTH FL PROFILE
STA 0+00.00 TO 0+37.99





WHEATLAND DRIVE PROFILE
STA 11+05.76 TO 14+00.00



CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C5	87°11'03"	25.00'	38.04'
C6	97°46'11"	25.00'	42.66'
C7	6°07'50"	1001.00'	107.11'
C8	18°47'58"	1035.00'	339.59'
C9	7°31'09"	1001.00'	131.37'

POINT TABULATION

POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
9	19+91.80	17.00' (RT)	Willey Picket Dr.	7139.71	C&G TRANSITION
10	20+02.22	16.87' (RT)	Willey Picket Dr.	7139.53	FL-PCR
11	12+38.78	32.71' (LT)	Wheatland Drive	7139.46	RAMP MID PT
12A	12+26.92	19.99' (LT)	Wheatland Drive	7139.39	RAMP MID PT
12B	12+14.68	17.00' (LT)	Wheatland Drive	7139.55	FL-PCR
13A	11+05.76	17.00' (LT)	Wheatland Drive	7141.19	CONNECT TO EX FL
13B	11+05.76	17.00' (RT)	Wheatland Drive	7141.11	CONNECT TO EX FL
14	12+43.66	17.95' (LT)	Wheatland Drive	7139.27	FL-FL INTERCEPT
15	19+99.31	17.07' (LT)	Willey Picket Dr.	7139.48	C&G TRANSITION
16	20+08.73	17.40' (LT)	Willey Picket Dr.	7139.21	FL-PCR
17	12+79.61	30.63' (LT)	Wheatland Drive	7139.10	RAMP MID PT
18	12+29.01	17.00' (RT)	Wheatland Drive	7139.41	RAMP MID PT
19	13+02.70	17.00' (LT)	Wheatland Drive	7138.80	FL-PCR
20	12+78.41	17.95' (LT)	Wheatland Drive	7138.93	FL-FL INTERCEPT
21	13+11.43	17.50' (LT)	Wheatland Drive	7139.27	INLET SIDE TBC
22	13+28.05	17.50' (LT)	Wheatland Drive	7139.35	INLET SIDE TBC
23	13+11.73	17.50' (RT)	Wheatland Drive	7139.26	INLET SIDE TBC
24	13+27.78	17.50' (RT)	Wheatland Drive	7139.38	INLET SIDE TBC

Know what's below. Call before you dig.

40 20 0 40 80
HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 4'

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

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PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
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No.	REVISION	BY	DATE

H-SCALE	1"=40'	DESIGNED BY	QNL
V-SCALE	1"=4'	DRAWN BY	QNL
DATE	7/11/22	CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

ROADWAY PLAN AND PROFILE

SHEET 6 OF 17

JOB NO. 25188.10

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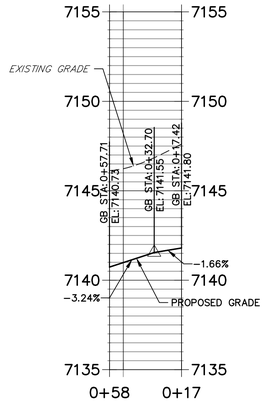
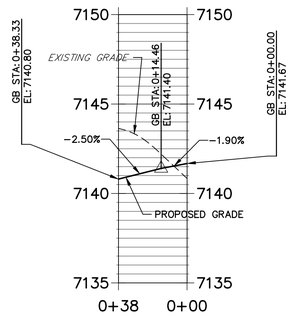
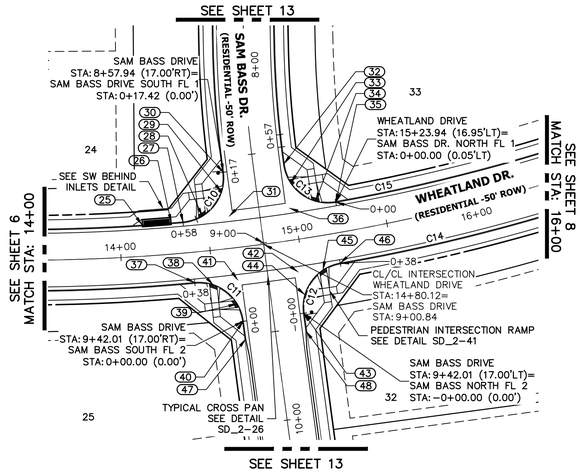
SAM BASS DRIVE SOUTH FL 1 PROFILE
STA 0+17.42 TO 0+57.71

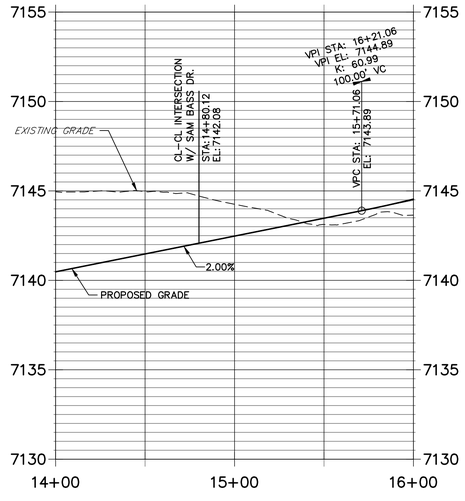


SAM BASS SOUTH FL 2 PROFILE
STA 0+00.00 TO 0+38.33

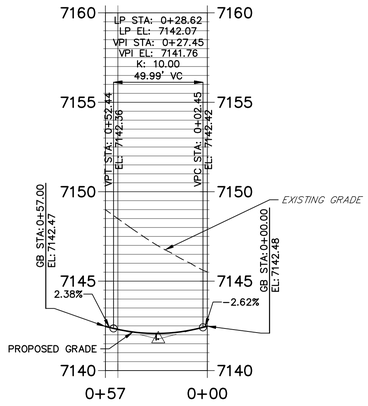




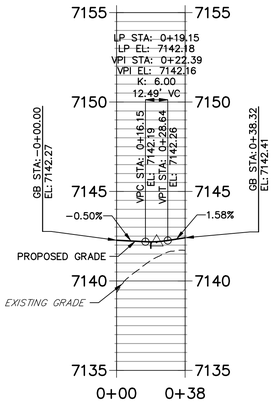
WHEATLAND DRIVE PROFILE (1)
STA 14+00.00 TO 16+00.00

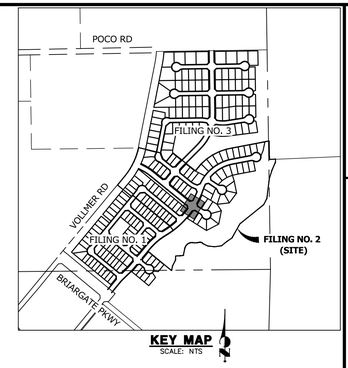


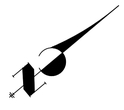
SAM BASS DR. NORTH FL 1 PROFILE
STA 0+00.00 TO 0+57.00

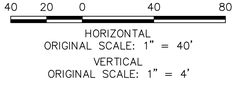


SAM BASS NORTH FL 2 PROFILE
STA 0+00.00 TO 0+38.32









CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C10	92°28'08"	25.00'	40.35'
C11	87°43'25"	25.00'	38.28'
C12	87°43'54"	25.00'	38.28'
C13	92°27'50"	25.00'	40.34'
C14	6°36'35"	1035.00'	119.40'
C15	8°07'46"	1001.00'	142.03'

POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
25	14+13.01	17.50' (LT)	Wheatland Drive	7140.70	INLET SIDE TBC
26	14+29.63	17.50' (LT)	Wheatland Drive	7141.10	INLET SIDE TBC
27	14+36.30	17.00' (LT)	Wheatland Drive	7140.74	FL-PCR
28	14+47.53	19.49' (LT)	Wheatland Drive	7141.10	RAMP MID PT
29	14+59.98	31.80' (LT)	Wheatland Drive	7141.61	RAMP MID PT
30	8+57.94	17.00' (RT)	Sam Bass Drive	7141.80	FL-PCR
31	14+62.81	17.95' (LT)	Wheatland Drive	7141.27	FL-FL INTERCEPT
32	8+57.89	17.00' (LT)	Sam Bass Drive	7142.14	FL-PCR
33	15+00.29	31.74' (LT)	Wheatland Drive	7142.12	RAMP MID PT
34	15+12.72	19.49' (LT)	Wheatland Drive	7142.27	RAMP MID PT
35	15+23.94	17.00' (LT)	Wheatland Drive	7142.48	FL-PCR
36	14+97.43	17.95' (LT)	Wheatland Drive	7141.96	FL-FL INTERCEPT
37	14+39.78	17.00' (RT)	Wheatland Drive	7140.80	FL-PCR

POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
38	14+49.73	19.20' (RT)	Wheatland Drive	7141.06	RAMP MID PT
39	14+61.58	31.28' (RT)	Wheatland Drive	7141.48	RAMP MID PT
40	9+41.96	17.00' (RT)	Sam Bass Drive	7141.67	FL-PCR
41	14+63.42	18.05' (RT)	Wheatland Drive	7141.28	FL-FL INTERCEPT
42	14+96.83	18.05' (RT)	Wheatland Drive	7141.95	FL-FL INTERCEPT
43	9+41.96	17.00' (LT)	Sam Bass Drive	7142.27	FL-PCR
44	14+98.67	31.28' (RT)	Wheatland Drive	7142.22	RAMP MID PT
45	15+10.51	19.20' (RT)	Wheatland Drive	7142.26	RAMP MID PT
46	15+20.47	17.00' (RT)	Wheatland Drive	7142.41	FL-PCR
47	9+52.01	17.00' (RT)	Sam Bass Drive	7141.78	C&G TRANSITION
48	9+52.01	17.00' (LT)	Sam Bass Drive	7142.38	C&G TRANSITION

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=40'
V-SCALE	1"=4'
DATE	7/11/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

ROADWAY PLAN AND PROFILE

SHEET 7 OF 17

JOB NO. 25188.10

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

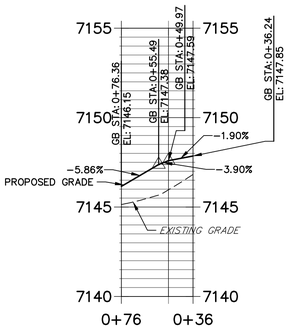
32314

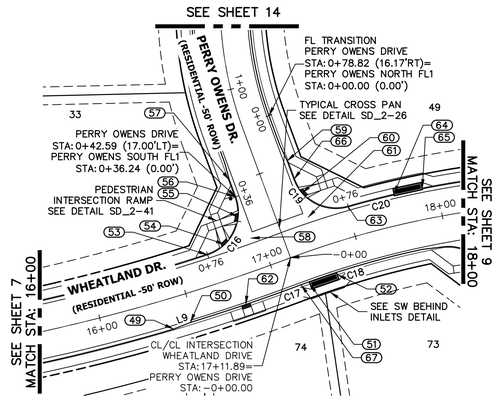
MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

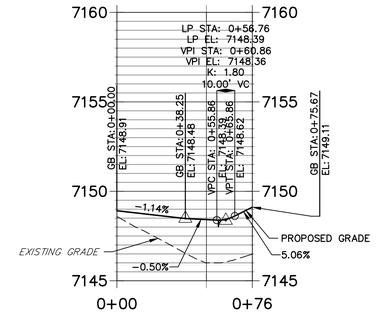
X:\2510000.all\25188.10\Drawings\Sheet Drwgs\Street Plans\25188.10 STREET01 SI_03_7132022 3:51:05 PM, CS

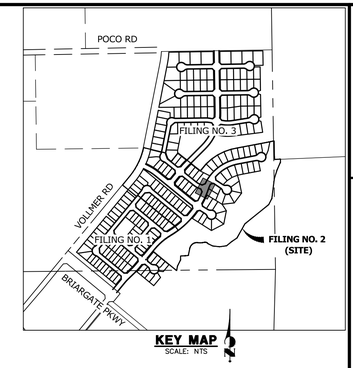
PERRY OWENS SOUTH FL1 PROFILE
STA 0+36.24 TO 0+76.36



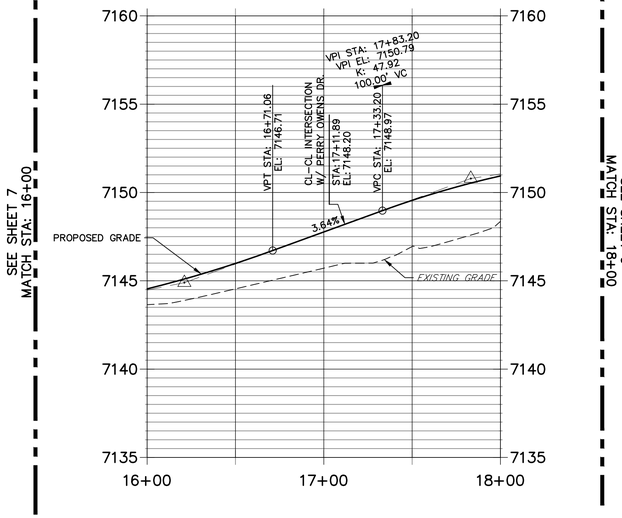


PERRY OWENS NORTH FL1 PROFILE
STA 0+00.00 TO 0+75.67





WHEATLAND DRIVE PROFILE (2)
STA 16+00.00 TO 18+00.00



POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
49	16+37.91	17.00' (RT)	Wheatland Drive	7145.13	C&G TRANSITION
50	16+47.75	16.17' (RT)	Wheatland Drive	7145.51	C&G TRANSITION
51	17+17.04	17.50' (RT)	Wheatland Drive	7148.48	INLET SIDE TBC
52	17+33.97	17.50' (RT)	Wheatland Drive	7149.10	INLET SIDE TBC
53	16+68.39	17.00' (LT)	Wheatland Drive	7146.15	FL–PCR
54	16+79.55	19.47' (LT)	Wheatland Drive	7146.82	RAMP MID PT
55	16+91.94	31.53' (LT)	Wheatland Drive	7147.64	RAMP MID PT
56	0+42.59	17.00' (LT)	Perry Owens Drive	7147.85	FL–PCR
57	0+52.60	17.00' (LT)	Perry Owens Drive	7148.13	C&G TRANSITION
58	16+94.72	17.94' (LT)	Wheatland Drive	7147.11	FL–FL INTERCEPT
59	0+51.49	17.00' (RT)	Perry Owens Drive	7148.60	C&G TRANSITION
60	17+29.45	32.11' (LT)	Wheatland Drive	7148.43	RAMP MID PT
61	17+28.37	18.02' (LT)	Wheatland Drive	7148.33	FL–FL INTERCEPT
62	16+79.80	16.20' (RT)	Wheatland Drive	7146.63	RAMP MID PT
63	17+50.83	17.00' (LT)	Wheatland Drive	7149.11	FL–PCR
64	17+76.35	17.50' (LT)	Wheatland Drive	7150.38	INLET SIDE TBC
65	17+92.13	17.50' (LT)	Wheatland Drive	7150.77	INLET SIDE TBC
66	0+40.52	17.00' (RT)	Perry Owens Drive	7148.48	FL–PCR
67	17+12.19	16.17' (RT)	Wheatland Drive	7147.81	FL–PRC

LINE TABLE		
LINE	BEARING	DISTANCE
L9	N18°28'13"E	10.03'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C16	92°03'11"	25.00'	40.17'
C17	3°31'46"	1060.84'	65.35'
C18	8°10'24"	483.18'	68.93'
C19	85°45'54"	25.00'	37.42'
C20	12°01'21"	517.00'	108.48'

40 20 0 40 80
HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 4'

Know what's **below.**
Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

32314

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
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DATE

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PREPARED FOR
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No.	REVISION	BY	DATE

H-SCALE 1"=40'
V-SCALE 1"=4'
DATE 7/11/22
DESIGNED BY QNL
DRAWN BY QNL
CHECKED BY

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2
ROADWAY PLAN AND PROFILE

SHEET 8 OF 17
JOB NO. 25188.10

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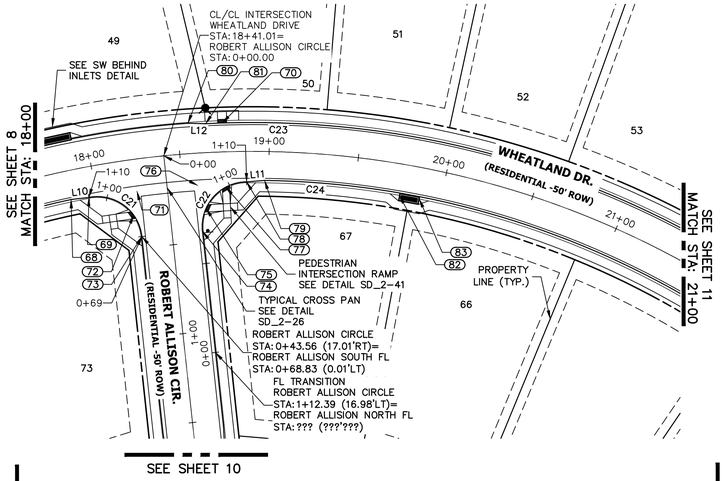
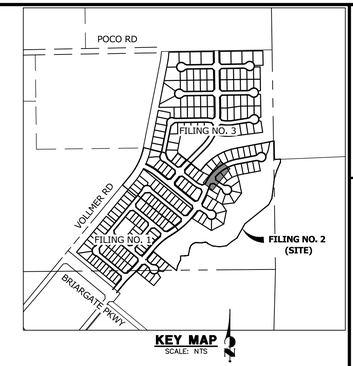
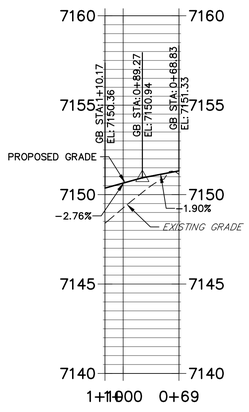
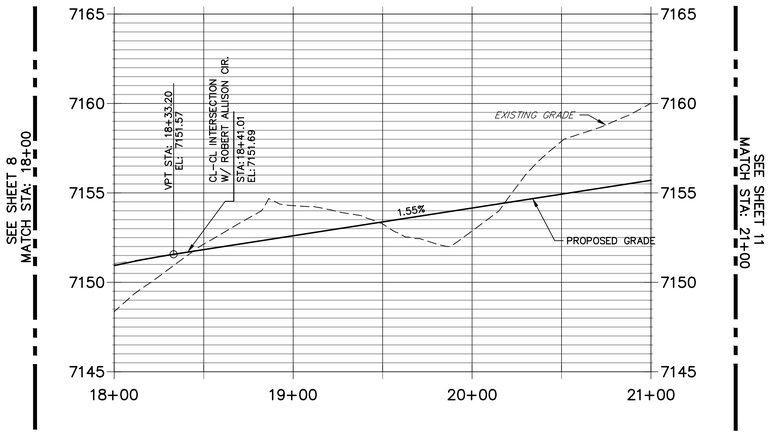




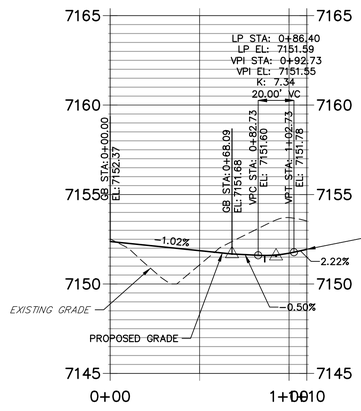
ROBERT ALLISON SOUTH FL PROFILE
STA 0+68.83 TO 1+10.17



WHEATLAND DRIVE PROFILE (3)
STA 18+00.00 TO 21+00.00



ROBERT ALLISION NORTH FL PROFILE
STA 0+00.00 TO 1+09.88



40 20 0 40 80

HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 4'

LINE TABLE		
LINE	BEARING	DISTANCE
L10	N33°14'51"E	10.07'
L11	N35°27'52"E	10.03'
L12	S41°20'58"W	9.92'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C21	94°45'35"	25.00'	41.35'
C22	95°45'50"	25.00'	41.78'
C23	42°12'22"	516.17'	380.23'
C24	38°30'00"	483.83'	325.11'

POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
68	17+85.10	16.17' (RT)	Wheatland Drive	7150.18	C&G TRANSITION
69	17+95.48	17.00' (RT)	Wheatland Drive	7150.36	FL-PCR
70	18+74.30	16.17' (LT)	Wheatland Drive	7151.81	RAMP MID PT
71	18+23.53	18.00' (RT)	Wheatland Drive	7150.94	FL-FL INTERCEPT
72	18+19.62	30.86' (RT)	Wheatland Drive	7151.08	RAMP MID PT
73	0+43.56	17.00' (RT)	Robert Allison Circle	7151.33	FL-PCR
74	0+44.30	17.00' (LT)	Robert Allison Circle	7151.68	FL-PCR
75	18+63.03	31.12' (RT)	Wheatland Drive	7151.61	RAMP MID PT
76	18+58.80	18.00' (RT)	Wheatland Drive	7151.50	FL-FL INTERCEPT
77	18+75.17	19.75' (RT)	Wheatland Drive	7151.70	RAMP MID PT
78	18+87.32	17.00' (RT)	Wheatland Drive	7151.93	FL-PCR
79	18+97.65	16.17' (RT)	Wheatland Drive	7152.17	C&G TRANSITION
80	18+55.74	17.00' (LT)	Wheatland Drive	7151.44	C&G TRANSITION
81	18+65.31	16.17' (LT)	Wheatland Drive	7151.65	C&G TRANSITION
82	19+76.19	17.50' (RT)	Wheatland Drive	7153.88	INLET SIDE TBC
83	19+87.94	17.50' (RT)	Wheatland Drive	7154.02	INLET SIDE TBC

Know what's **below.**
Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

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A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=40'
V-SCALE	1"=4'
DATE	7/11/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2
ROADWAY PLAN AND PROFILE

SHEET 9 OF 17
JOB NO. 25188.10

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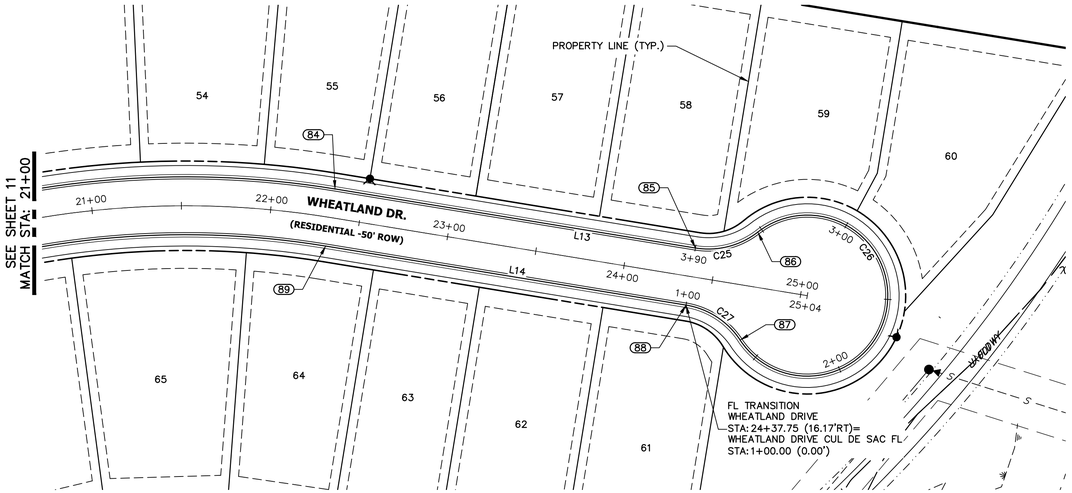
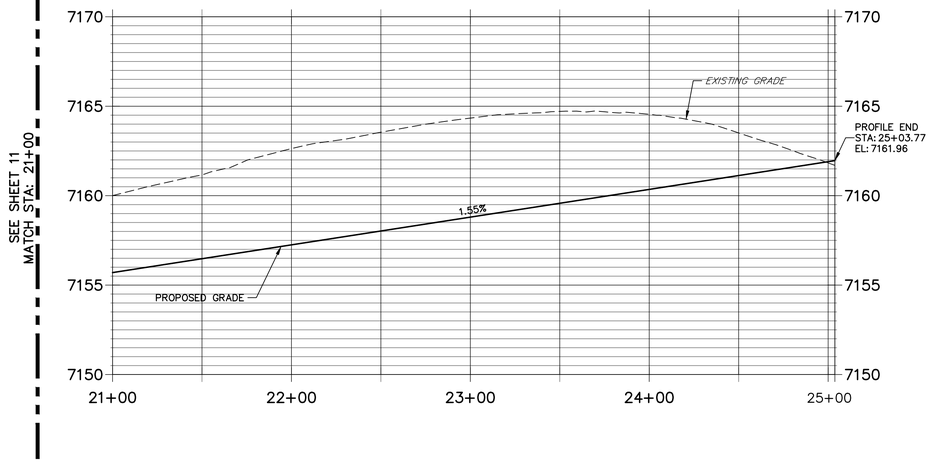
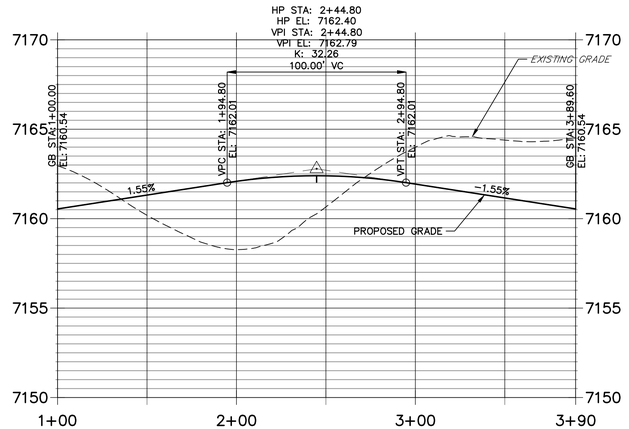
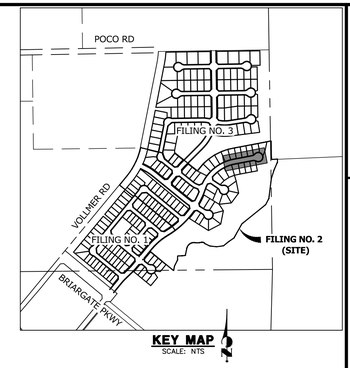


WHEATLAND DRIVE PROFILE (4)
STA 21+00.00 TO 25+03.77



WHEATLAND DRIVE CUL DE SAC FL PROFILE
STA 1+00.00 TO 3+89.60





40 20 0 40 80

HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 4'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C25	47°10'57"	45.00'	37.06'
C26	274°21'53"	45.00'	215.49'
C27	47°10'57"	45.00'	37.06'

LINE TABLE		
LINE	BEARING	DISTANCE
L13	S79°18'16"W	204.14'
L14	N79°18'16"E	204.12'

POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
84	22+33.61	16.17' (LT)	Wheatland Drive	7157.38	FL-PT
85	24+37.75	16.17' (LT)	Wheatland Drive	7160.54	FL-PT
86	24+70.76	30.58' (LT)	Wheatland Drive	7161.12	FL-PRC
87	24+70.76	30.59' (RT)	Wheatland Drive	7161.12	FL-PCR
88	24+37.75	16.17' (RT)	Wheatland Drive	7160.54	FL-PC
89	22+33.63	16.17' (RT)	Wheatland Drive	7157.38	FL-PT

Know what's **below.**
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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
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HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2
ROADWAY PLAN AND PROFILE

SHEET 10 OF 17

JOB NO. 25188.10

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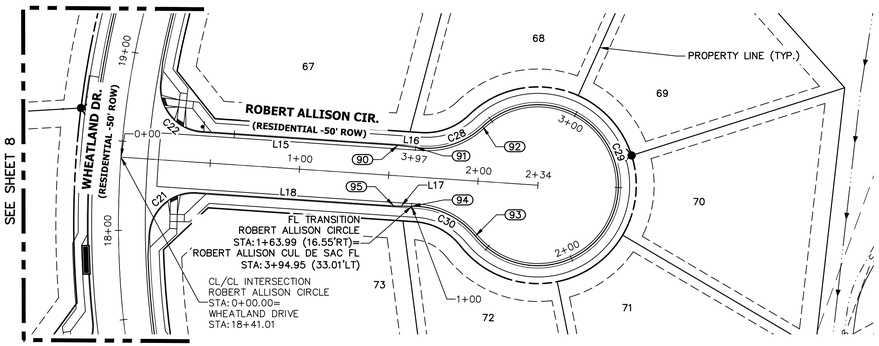
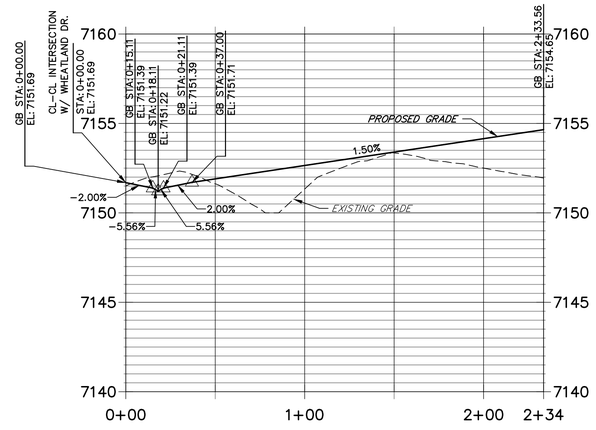
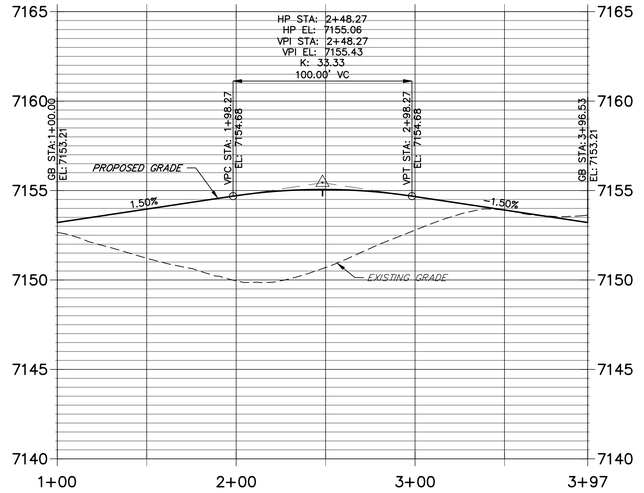
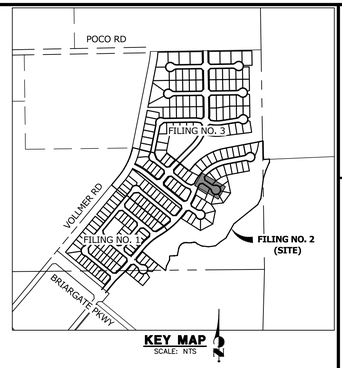


ROBERT ALLISON CIRCLE PROFILE
STA 0+00.00 TO 2+33.56



ROBERT ALLISON CUL DE SAC FL PROFILE
STA 1+00.00 TO 3+96.53





40 20 0 40 80

HORIZONTAL
ORIGINAL SCALE: 1" = 40'

VERTICAL
ORIGINAL SCALE: 1" = 4'

LINE TABLE		
LINE	BEARING	DISTANCE
L15	N56°08'38"W	109.69'
L16	N53°26'16"W	10.01'
L17	S58°51'00"E	10.01'
L18	S56°08'38"E	110.43'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C21	94°45'35"	25.00'	41.35'
C22	95°45'50"	25.00'	41.78'
C28	51°46'15"	45.00'	40.66'
C29	274°00'50"	45.00'	215.21'
C30	51°46'15"	45.00'	40.66'

POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
90	1+53.99	17.00' (LT)	Robert Allison Circle	7152.99	C&G TRANSITION
91	1+63.99	16.53' (LT)	Robert Allison Circle	7153.21	FL-PT
92	2+00.64	30.69' (LT)	Robert Allison Circle	7153.82	FL-PRC
93	2+00.64	30.69' (RT)	Robert Allison Circle	7153.82	FL-PRC
94	1+63.99	16.53' (RT)	Robert Allison Circle	7153.21	FL-PC
95	1+53.99	17.00' (RT)	Robert Allison Circle	7152.99	C&G TRANSITION

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COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

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HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

ROADWAY PLAN AND PROFILE

SHEET 11 OF 17

JOB NO. 25188.10

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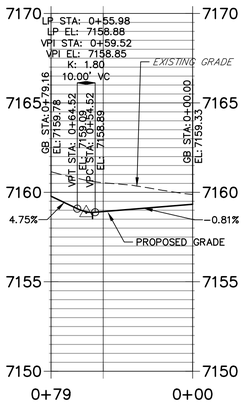
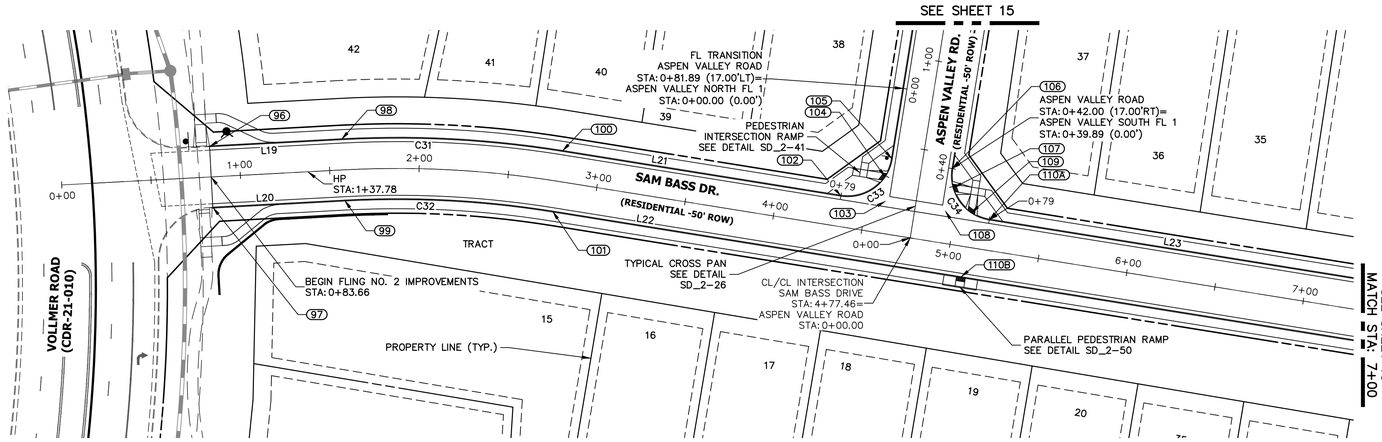
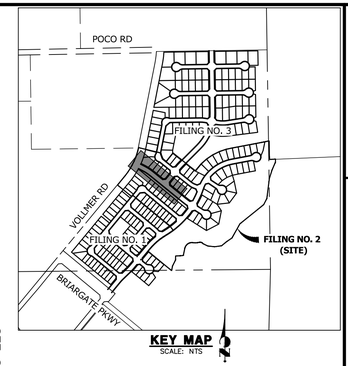
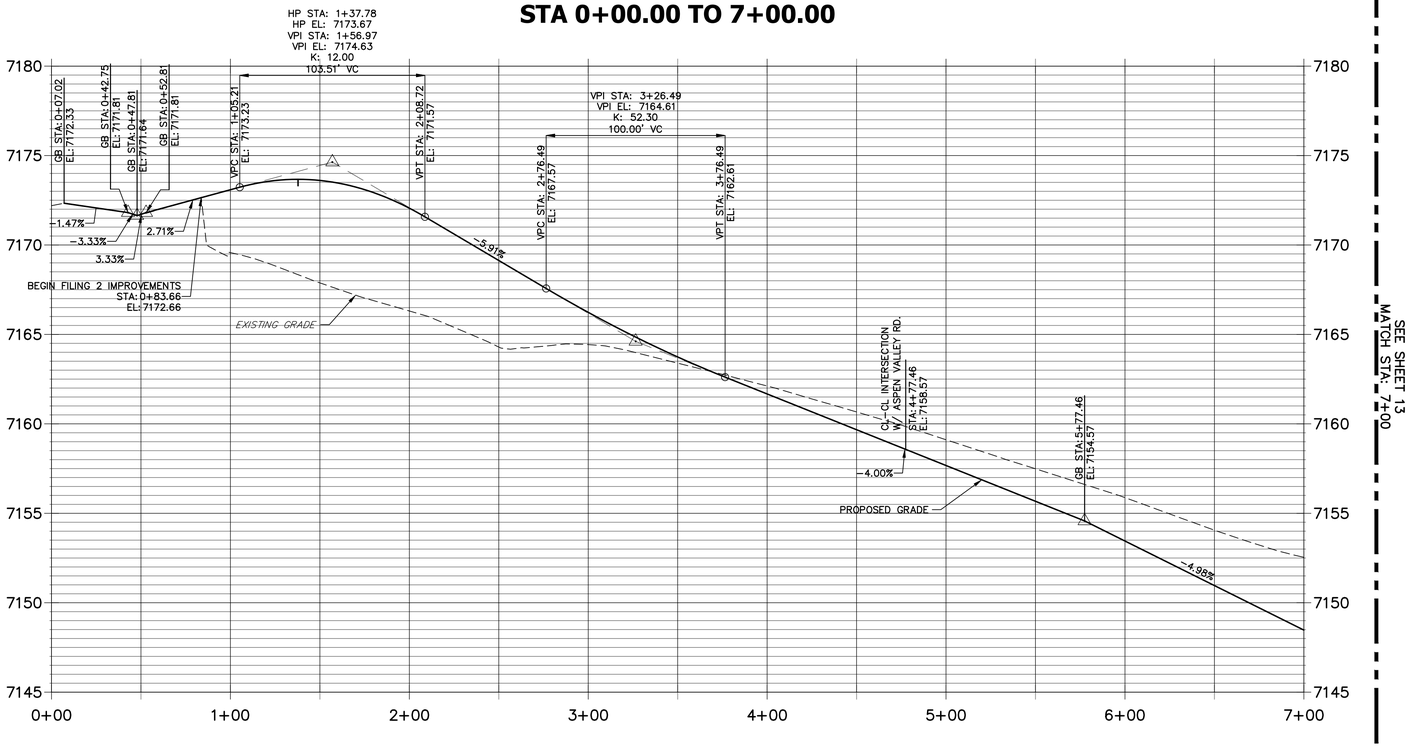
ASPEN VALLEY NORTH FL 1 PROFILE
STA 0+00.00 TO 0+79.16



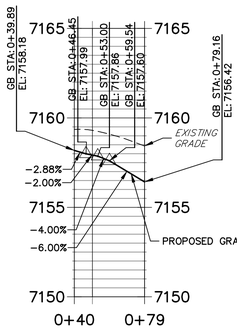




SAM BASS DRIVE PROFILE
STA 0+00.00 TO 7+00.00



ASPEN VALLEY SOUTH FL 1 PROFILE
STA 0+39.89 TO 0+79.16



POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
96	0+83.66	17.00' (LT)	Sam Bass Drive	7172.19	CONNECT TO EX FL
97	0+83.66	17.00' (RT)	Sam Bass Drive	7172.19	CONNECT TO EX FL
98	1+57.49	17.00' (LT)	Sam Bass Drive	7173.04	FL–PC
99	1+57.49	17.00' (RT)	Sam Bass Drive	7173.04	FL–PC
100	2+77.75	17.00' (LT)	Sam Bass Drive	7167.03	FL–PT
101	2+77.75	17.00' (RT)	Sam Bass Drive	7167.03	FL–PT
102	4+35.46	17.00' (LT)	Sam Bass Drive	7159.78	FL–PCR
103	4+60.46	18.00' (LT)	Sam Bass Drive	7158.79	FL–FL INTERCEPT
104	4+58.13	31.47' (LT)	Sam Bass Drive	7158.92	RAMP MID PT
105	0+42.00	17.00' (LT)	Aspen Valley Road	7159.01	FL–PCR
106	0+42.00	17.00' (RT)	Aspen Valley Road	7158.18	FL–PCR
107	4+96.77	31.50' (LT)	Sam Bass Drive	7157.91	RAMP MID PT
108	4+94.46	18.00' (LT)	Sam Bass Drive	7157.43	FL–FL INTERCEPT
109	5+08.89	19.35' (LT)	Sam Bass Drive	7157.08	RAMP MID PT
110A	5+19.46	17.00' (LT)	Sam Bass Drive	7156.42	FL–PCR
110B	5+08.93	17.00' (RT)	Sam Bass Drive	7156.85	RAMP MID PT

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C31	12°11'45"	582.00'	123.88'
C32	12°11'45"	548.00'	116.65'
C33	90°00'00"	25.00'	39.27'
C34	90°00'00"	25.00'	39.27'

LINE TABLE		
LINE	BEARING	DISTANCE
L19	N63°04'00"W	73.83'
L20	S63°04'00"E	73.83'
L21	N50°52'15"W	157.71'
L22	S50°52'15"E	508.48'
L23	S50°52'15"E	266.77'

811 Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE 1"=40'
V-SCALE 1"=4'
DATE 7/11/22
DESIGNED BY QNL
DRAWN BY QNL
CHECKED BY

HOMESTEAD NORTH AT
STERLING RANCH FILING NO. 2
ROADWAY PLAN AND PROFILE

SHEET 12 OF 17
JOB NO. 25188.10

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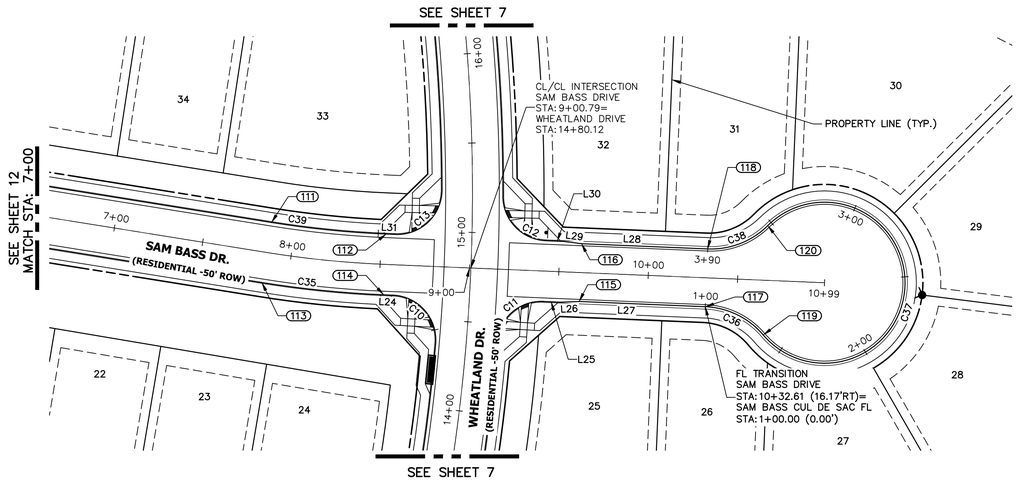

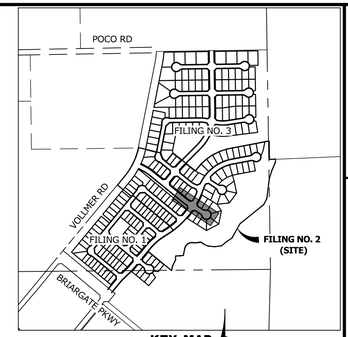

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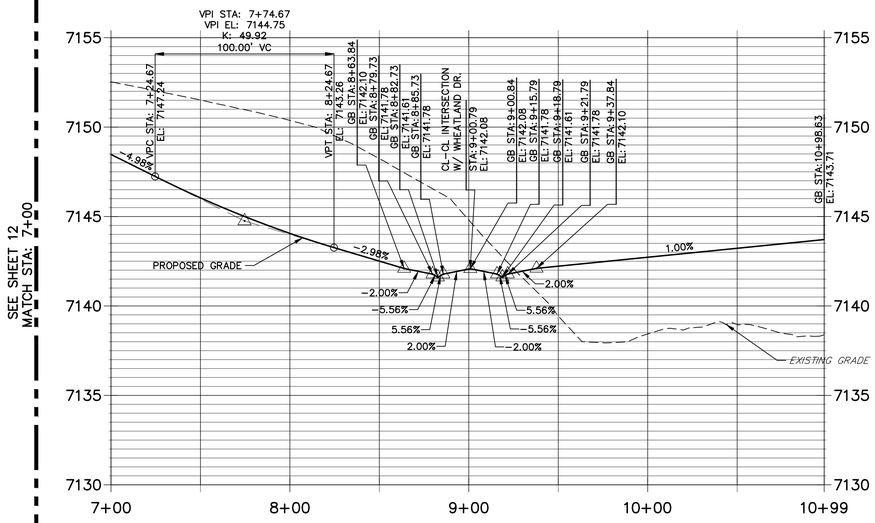
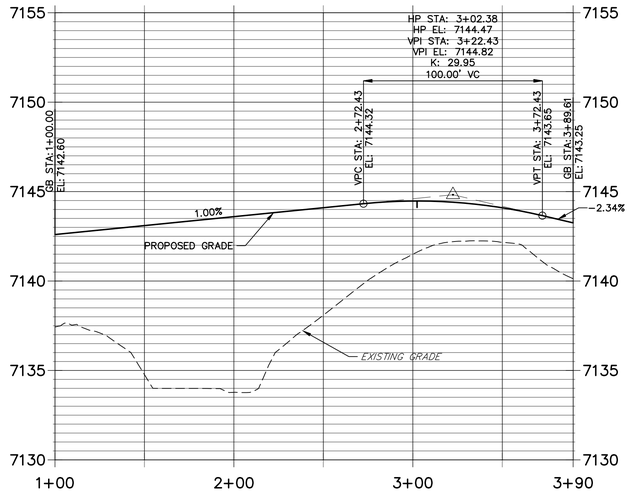
SAM BASS DRIVE PROFILE (5)
STA 7+00.00 TO 10+98.63



SAM BASS CUL DE SAC FL PROFILE
STA 1+00.00 TO 3+89.61



40 20 0 40 80
HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 4'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C10	92°28'08"	25.00'	40.35'
C11	87°43'25"	25.00'	38.28'
C12	87°43'54"	25.00'	38.28'
C13	92°27'50"	25.00'	40.34'
C35	6°44'17"	582.00'	68.44'
C36	47°11'07"	45.00'	37.06'
C37	274°22'14"	45.00'	215.49'
C38	47°11'07"	45.00'	37.06'

LINE TABLE		
LINE	BEARING	DISTANCE
L24	S57°36'32"E	5.21'
L25	N57°36'32"W	10.05'
L26	N62°22'00"W	10.05'
L27	N57°36'32"W	70.59'
L28	S57°36'32"E	70.60'
L29	N52°50'43"W	10.03'
L30	N57°36'32"W	10.05'
L31	S57°36'32"E	5.22'

POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
111	7+86.23	17.00' (LT)	Sam Bass Drive	7144.09	FL-PT
112	8+52.68	17.00' (LT)	Sam Bass Drive	7142.24	FL-PT
113	7+86.23	17.00' (RT)	Sam Bass Drive	7144.09	FL-PC
114	8+52.68	17.00' (RT)	Sam Bass Drive	7141.96	FL-PT
115	9+62.02	16.17' (RT)	Sam Bass Drive	7141.95	C&G TRANSITION
116	9+62.01	16.17' (LT)	Sam Bass Drive	7142.55	C&G TRANSITION
117	10+32.61	16.17' (RT)	Sam Bass Drive	7142.65	FL-PC
118	10+32.61	16.17' (LT)	Sam Bass Drive	7143.25	FL-PT
119	10+65.62	30.58' (RT)	Sam Bass Drive	7142.97	FL-PRC
120	10+65.62	30.58' (LT)	Sam Bass Drive	7144.05	FL-PRC

Know what's **below.**
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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. — DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

No.	REVISION	BY	DATE

H-SCALE	1"=40'
V-SCALE	1"=4'
DATE	7/11/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2
ROADWAY PLAN AND PROFILE

SHEET 13 OF 17
JOB NO. 25188.10

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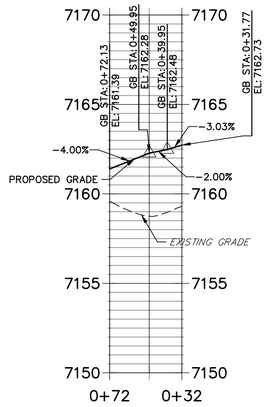
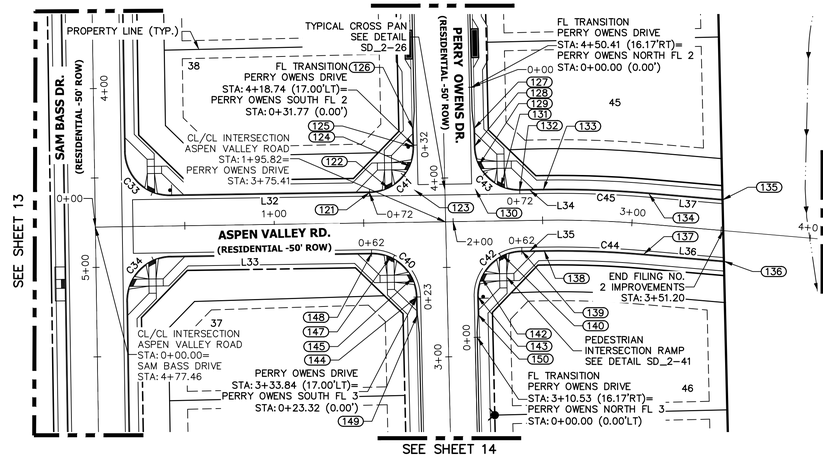
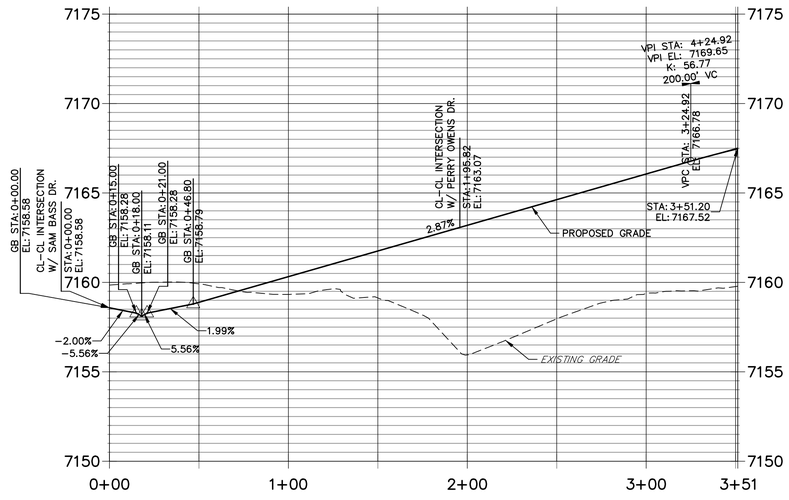
PERRY OWENS SOUTH FL 2 PROFILE
STA 0+31.77 TO 0+72.13



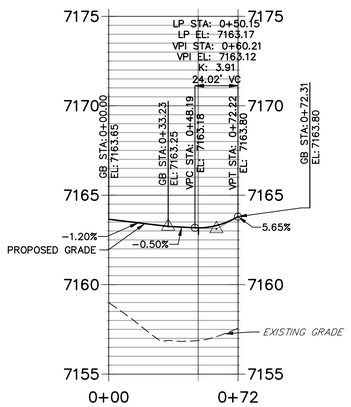
PERRY OWENS SOUTH FL 3 PROFILE
STA 0+23.32 TO 0+62.41

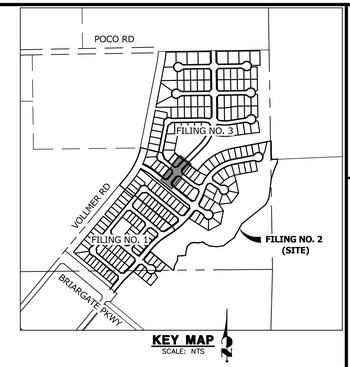


ASPEN VALLEY ROAD PROFILE
STA 0+00.00 TO 3+51.20

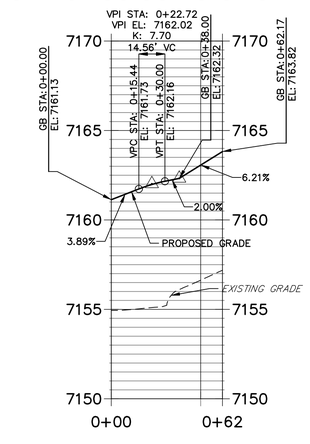


PERRY OWENS NORTH FL 2 PROFILE
STA 0+00.00 TO 0+72.31





PERRY OWENS NORTH FL 3 PROFILE
STA 0+00.00 TO 0+62.17



POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
121	1+53.51	17.00' (LT)	Aspen Valley Road	7161.39	FL–PCR
122	1+64.13	19.37' (LT)	Aspen Valley Road	7161.83	RAMP MID PT
123	1+78.70	18.00' (LT)	Aspen Valley Road	7162.11	FL–FL INTERCEPT
124	1+76.20	31.50' (LT)	Aspen Valley Road	7162.41	RAMP MID PT
125	4+17.84	17.00' (LT)	Perry Owens Drive	7162.70	FL–PCR
126	4+27.84	17.00' (LT)	Perry Owens Drive	7162.99	C&G TRANSISION
127	4+27.22	17.00' (RT)	Perry Owens Drive	7163.37	C&G TRANSISION
128	4+17.22	17.00' (RT)	Perry Owens Drive	7163.25	FL–PCR
129	2+14.88	31.37' (LT)	Aspen Valley Road	7163.20	RAMP MID PT
130	2+12.70	18.00' (LT)	Aspen Valley Road	7163.09	FL–FL INTERCEPT
131	2+27.01	19.31' (LT)	Aspen Valley Road	7163.36	RAMP MID PT
132	2+37.51	17.00' (LT)	Aspen Valley Road	7163.80	FL–PCR
133	2+50.66	17.00' (LT)	Aspen Valley Road	7164.18	FL–PC
134	3+08.03	17.00' (LT)	Aspen Valley Road	7165.83	FL–PT
135	3+49.23	17.00' (LT)	Aspen Valley Road	7166.96	FL–END

POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
136	3+53.06	17.00' (RT)	Aspen Valley Road	7167.15	FL–END
137	3+08.03	17.00' (RT)	Aspen Valley Road	7165.83	FL–PT
138	2+50.66	17.00' (RT)	Aspen Valley Road	7164.18	FL–PC
139	2+38.14	17.00' (RT)	Aspen Valley Road	7163.82	FL–PCR
140	2+27.51	19.37' (RT)	Aspen Valley Road	7163.15	RAMP MID PT
142	2+15.45	31.50' (RT)	Aspen Valley Road	7162.24	RAMP MID PT
143	3+33.21	17.00' (RT)	Perry Owens Drive	7161.98	FL–PCR
144	3+33.84	17.00' (LT)	Perry Owens Drive	7161.75	FL–PCR
145	1+76.75	31.35' (RT)	Aspen Valley Road	7161.81	RAMP MID PT
147	1+64.61	19.30' (RT)	Aspen Valley Road	7161.69	RAMP MID PT
148	1+54.13	17.00' (RT)	Aspen Valley Road	7161.41	FL–PCR
149	3+23.84	17.00' (LT)	Perry Owens Drive	7161.47	C&G TRANSISION
150	3+23.21	17.00' (RT)	Perry Owens Drive	7161.63	C&G TRANSISION

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C40	89°34'34"	25.00'	39.08'
C41	90°25'26"	25.00'	39.45'
C42	90°25'26"	25.00'	39.45'
C43	89°34'34"	25.00'	39.08'
C44	5°49'03"	548.00'	55.64'
C45	5°49'03"	582.00'	59.09'

LINE TABLE		
LINE	BEARING	DISTANCE
L32	S39°07'45"W	111.51'
L33	S39°07'45"W	83.33'
L34	S39°07'45"W	13.15'
L35	N39°07'45"E	12.53'
L36	N44°56'48"E	45.14'
L37	S44°56'48"W	41.20'

UNTIL SUCH TIME AS THESE PLANS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
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No.	REVISION	BY	DATE

H-SCALE	1"=40'	DESIGNED BY	QNL
V-SCALE	1"=4'	DRAWN BY	QNL
DATE	7/11/22	CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

ROADWAY PLAN AND PROFILE

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

SHEET 14 OF 17

JOB NO. 25188.10

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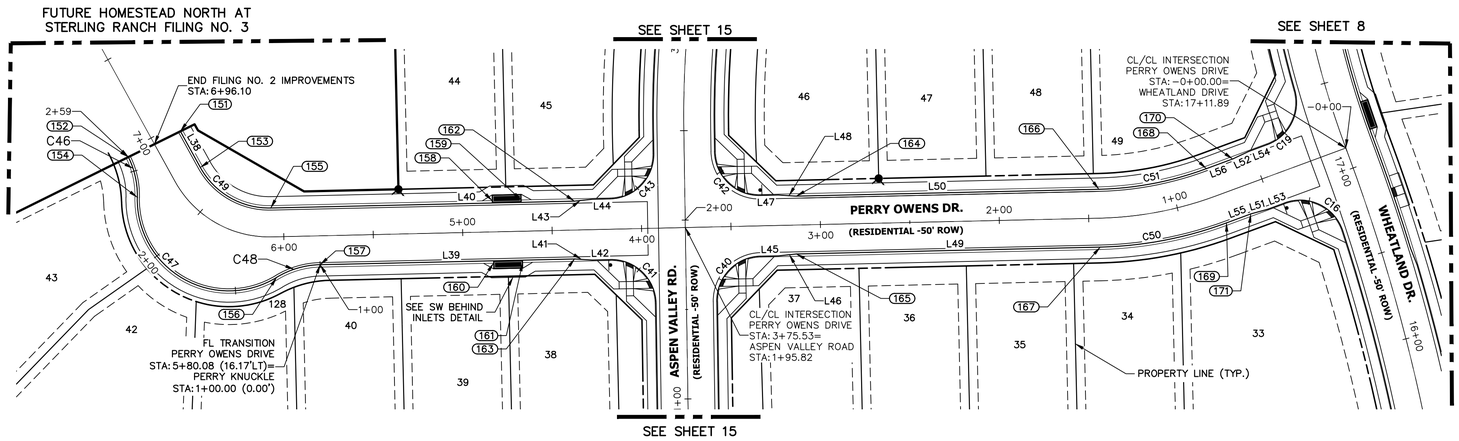
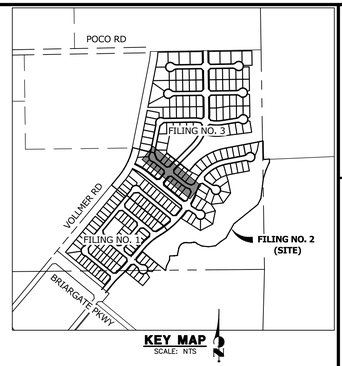
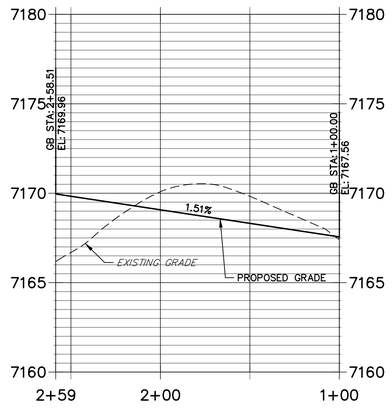
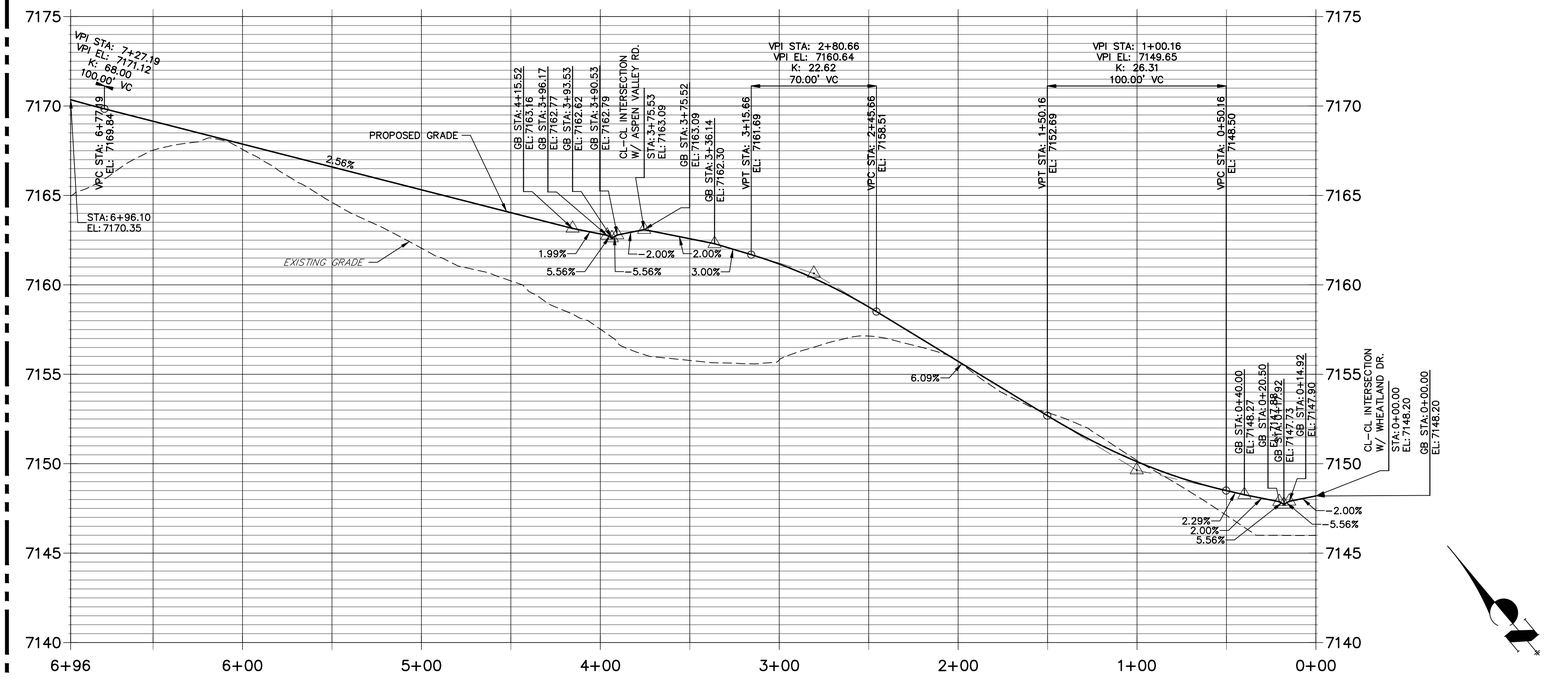




PERRY KNUCKLE PROFILE
STA 1+00.00 TO 2+58.51



PERRY OWENS DRIVE PROFILE
STA 0+00.00 TO 6+96.10



FUTURE HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C16	92°03'11"	25.00'	40.17'
C19	85°45'54"	25.00'	37.42'
C40	89°34'34"	25.00'	39.08'
C41	90°25'26"	25.00'	39.45'
C42	90°25'26"	25.00'	39.45'
C43	89°34'34"	25.00'	39.08'
C46	27°23'43"	48.83'	23.35'
C47	122°37'22"	51.17'	109.51'
C48	30°06'15"	48.83'	25.66'
C49	62°24'52"	43.83'	47.75'
C50	19°07'37"	216.17'	72.16'
C51	19°08'02"	183.83'	61.39'

LINE TABLE		
LINE	BEARING	DISTANCE
L38	S11°07'11"W	23.10'
L39	S51°17'41"E	142.24'
L40	S51°17'41"E	169.71'
L41	S46°31'52"E	10.03'
L42	S51°17'41"E	10.00'
L43	N56°03'44"W	10.03'
L44	N51°17'41"W	10.00'
L45	N51°17'41"W	10.00'
L46	N56°03'01"W	10.05'
L47	N51°17'41"W	10.00'
L48	N46°31'29"W	10.14'
L49	S51°17'41"E	169.91'
L50	S51°17'41"E	169.20'
L51	N65°29'30"W	10.03'
L52	N75°00'54"W	10.04'
L53	N70°15'19"W	9.97'
L54	N70°15'19"W	10.97'
L55	N70°15'19"W	14.49'
L56	N70°15'19"W	15.62'

POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
151	6+95.38	16.17' (RT)	Perry Owens Drive	7169.94	FL−END
152	6+96.82	16.22' (LT)	Perry Owens Drive	7170.03	FL−END
153	6+72.28	16.17' (RT)	Perry Owens Drive	7169.32	FL−PT
154	6+74.63	22.75' (LT)	Perry Owens Drive	7169.68	FL−PRC
155	6+06.92	16.17' (RT)	Perry Owens Drive	7167.65	FL−PC
156	6+04.58	22.75' (LT)	Perry Owens Drive	7167.98	FL−PRC
157	5+80.08	16.17' (LT)	Perry Owens Drive	7166.96	FL−PC
158	4+83.16	17.50' (RT)	Perry Owens Drive	7164.99	INLET SIDE TBC
159	4+66.83	17.50' (RT)	Perry Owens Drive	7164.57	INLET SIDE TBC
160	4+83.16	17.50' (LT)	Perry Owens Drive	7164.99	INLET SIDE TBC
161	4+66.83	17.50' (LT)	Perry Owens Drive	7164.57	INLET SIDE TBC

POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
162	4+37.22	16.17' (RT)	Perry Owens Drive	7163.49	C&G TRANSISION
163	4+37.84	16.17' (LT)	Perry Owens Drive	7163.32	C&G TRANSISION
164	3+13.10	16.17' (RT)	Perry Owens Drive	7161.24	C&G TRANSISION
165	3+13.82	16.17' (LT)	Perry Owens Drive	7161.23	C&G TRANSISION
166	1+43.90	16.17' (RT)	Perry Owens Drive	7151.92	FL−PT
167	1+43.90	16.17' (LT)	Perry Owens Drive	7151.92	FL−PT
168	0+77.11	16.17' (RT)	Perry Owens Drive	7148.89	FL−PC
169	0+77.09	16.17' (LT)	Perry Owens Drive	7148.87	FL−PC
170	0+61.50	16.17' (RT)	Perry Owens Drive	7148.72	C&G TRANSISION
171	0+62.60	16.17' (LT)	Perry Owens Drive	7148.47	C&G TRANSISION

40 20 0 40 80

HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 4'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE 1"=40'
V-SCALE 1"=4'
DATE 7/11/22
DESIGNED BY QNL
DRAWN BY QNL
CHECKED BY

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2
ROADWAY PLAN AND PROFILE

SHEET 15 OF 17
JOB NO. 25188.10

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FUTURE HOMESTEAD NORTH AT STERLING RANCH FILING NO. 3

If these signs are existing, please label that they are.

VOLLMER ROAD (CDR-21-010)

SAM BASS DR.

ASPEN VALLEY RD.

PERRY OWENS DR.

WHEATLAND DR.

ROBERT ALLISON CIR.

WILLEY PICKET DR.

TEXAS JACK DR.

HARVEY LOGAN DR.

EXISTING HOMESTEAD NORTH AT STERLING RANCH FILING NO. 1 (SF-22-2213)

SAND CREEK RESTORATION (CDR-20-004)

CL/CL INTERSECTION SAM BASS DRIVE STA: 4+77.46= ASPEN VALLEY ROAD STA: 0+00.00

CL/CL INTERSECTION PERRY OWENS DRIVE STA: 3+75.53= ASPEN VALLEY ROAD STA: 1+95.82

CL/CL INTERSECTION ROBERT ALLISON CIRCLE STA: 0+00.00= WHEATLAND DRIVE STA: 18+41.01

CL/CL INTERSECTION PERRY OWENS DRIVE STA: -0+00.00= WHEATLAND DRIVE STA: 17+11.89

CL/CL INTERSECTION SAM BASS DRIVE STA: 9+00.79= WHEATLAND DRIVE STA: 14+80.12

CL/CL INTERSECTION NAT LOVE DR.– TEXAS JACK DR.– WILLEY PICKET DR. STA: 20+48.54= WHEATLAND DRIVE STA: 12+58.98

R1-1 (30"x30") & D3-1 (30"x8") (1) (2) (3) (4) (5) (6) (7) (8) (9)

10003HP-C (SEE DETAIL ON SHEET 17) (10) (11)

PET WASTE N: 415828.01 E: 238221.52

25.00' TRAIL EASEMENT

30.00' E. UTILITY EASEMENT

100YR FLDWY

500YR FLDWY

60 30 0 60 120

ORIGINAL SCALE: 1" = 60'

Know what's below. Call before you dig.

POINT TABULATION				
POINT NUMBER	STATION	OFFSET	ALIGNMENT	DESCRIPTION
1	12+37.49	44.69' (LT)	Wheatland Drive	STOP SIGN AND STREET SIGNS
2	14+59.28	42.65' (LT)	Wheatland Drive	STOP SIGN AND STREET SIGNS
3	15+00.83	41.43' (RT)	Wheatland Drive	STOP SIGN AND STREET SIGNS
4	16+91.33	42.51' (LT)	Wheatland Drive	STOP SIGN AND STREET SIGNS
5	18+63.32	43.68' (RT)	Wheatland Drive	STOP SIGN AND STREET SIGNS
6	0+42.00	20.00' (LT)	Aspen Valley Road	STOP SIGN AND STREET SIGNS
7	1+75.51	42.16' (LT)	Aspen Valley Road	STOP SIGN AND STREET SIGNS
8	2+16.14	42.16' (RT)	Aspen Valley Road	STOP SIGN AND STREET SIGNS
9	0+70.48	20.60' (LT)	Sam Bass Drive	STOP SIGN AND STREET SIGNS
10	12+41.39	30.08' (RT)	Wheatland Drive	PET WASTE
11	12+36.76	230.99' (RT)	Wheatland Drive	PET WASTE

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER — DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
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No.	REVISION	BY	DATE

H-SCALE	1"=60'
V-SCALE	N/A
DATE	7/11/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

SIGNAGE

SHEET 16 OF 17

JOB NO. 25188.10

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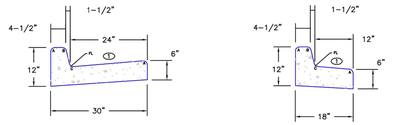
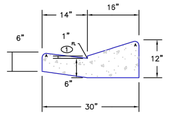
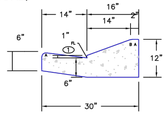


EPC TYPE A
(REVERSE SLOPE OF PAN FOR SPILL CURB)

EPC TYPE B



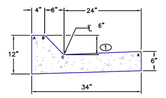
EPC TYPE C
(REVERSE SLOPE OF PAN FOR SPILL CURB)



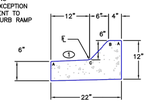
EPC OPTIONAL TYPE C

LEGEND FOR RADII	
A	1/8" TO 1/4"
B	1-1/2"
C	1-1/2" TO 2"

① – GUTTER CROSS SLOPES SHALL BE 1/2 IN./FT. WHEN DRAINING AWAY FROM CURB AND 1 IN./FT. WHEN DRAINING TOWARD CURB (WITH EXCEPTION TO IMMEDIATELY ADJACENT TO CURB RAMPS – SEE CURB RAMP STANDARDS FOR SLOPE REQUIREMENTS).



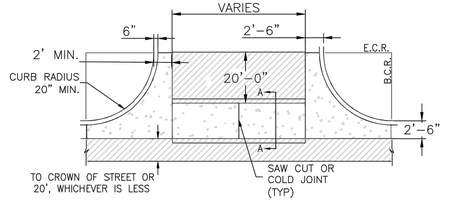
EPC TYPE D
(6" RAMP CURB)



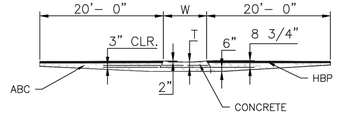
EPC TYPE E
(6" RAMP CURB)

SCALE: NOT TO SCALE

6/23/20 DATE APPROVED: Jennifer E. Irvine DEPARTMENT OF PUBLIC WORKS	Typical Curb and Gutter Details Standard Drawing REVISION DATE: 6/23/20 FILE NAME: SD_2-20	DEPARTMENT OF PUBLIC WORKS



PLAN VIEW



SECTION A–A

NOTES

1. W – WIDTH SHALL BE 6' FOR LOCAL, 8' FOR COLLECTORS, AND 10' FOR ARTERIAL ROADS.

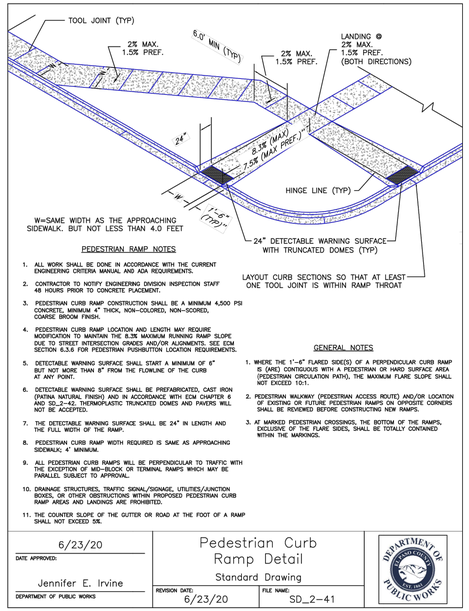
2. T – SQUARED–OFF RETURN TO BE POURED MONOLITHICALLY, 8" PCC FOR LOCAL ROADS, 9" FOR COLLECTORS WITH 6x6 – 4.4 W.W.F. OR #4 REINFORCING BAR @ 18" EACH WAY.

3. ▨ = 3" MINIMUM ASPHALT DEPTH (2 LIFTS).

4. DESIGN TO SPECIFY ELEVATIONS AT PI AND PCR.

SCALE: NOT TO SCALE

8/11/11 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Typical Cross Pan Layout Detail Standard Drawing REVISION DATE: 12/8/15 FILE NAME: SD_2-26	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION



PEDESTRIAN RAMP NOTES

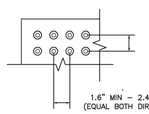
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT ENGINEERING CRITERIA MANUAL AND ADA REQUIREMENTS.
2. CONTRACTOR TO NOTIFY ENGINEERING DIVISION INSPECTION STAFF 48 HOURS PRIOR TO CONCRETE PLACEMENT.
3. PEDESTRIAN CURB RAMP CONSTRUCTION SHALL BE A MINIMUM 4,500 PSI CONCRETE, MINIMUM 4" THICK, NON–COLORED, NON–SCORED, COARSE BROOM FINISH.
4. PEDESTRIAN CURB RAMP LOCATION AND LENGTH MAY REQUIRE MODIFICATION TO MAINTAIN THE 8.3% MAXIMUM RUNNING RAMP SLOPE DUE TO STREET INTERSECTION GRADES AND/OR ALIGNMENTS. SEE ECM SECTION 6.3.G FOR PEDESTRIAN PUSHBUTTON LOCATION REQUIREMENTS.
5. DETECTABLE WARNING SURFACE SHALL START A MINIMUM OF 6" BUT NOT MORE THAN 8" FROM THE FLOWLINE OF THE CURB AT ANY POINT.
6. DETECTABLE WARNING SURFACE SHALL BE PREFABRICATED, CAST IRON (PATINA NATURAL FINISH) AND IN ACCORDANCE WITH ECM CHAPTER 6 AND SD_2–42. THERMOPLASTIC TRUNCATED DOMES AND PAVERS WILL NOT BE ACCEPTED.
7. THE DETECTABLE WARNING SURFACE SHALL BE 24" IN LENGTH AND THE FULL WIDTH OF THE RAMP.
8. PEDESTRIAN CURB RAMP WIDTH REQUIRED IS SAME AS APPROACHING SIDEWALK; 4' MINIMUM.
9. ALL PEDESTRIAN CURB RAMPS WILL BE PERPENDICULAR TO TRAFFIC WITH THE EXCEPTION OF MID–BLOCK OR TERMINAL RAMPS WHICH MAY BE PARALLEL, SUBJECT TO APPROVAL.
10. DRAINAGE STRUCTURES, TRAFFIC SIGNAL/SIGNAGE, UTILITIES/JUNCTION BOXES, OR OTHER OBSTRUCTIONS WITHIN PROPOSED PEDESTRIAN CURB RAMP AREAS AND LANDINGS ARE PROHIBITED.
11. THE COUNTER SLOPE OF THE GUTTER OR ROAD AT THE FOOT OF A RAMP SHALL NOT EXCEED 5%.

GENERAL NOTES

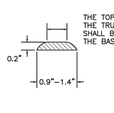
1. WHERE THE 1'–6" FLARED SIDE(S) OF A PERPENDICULAR CURB RAMP IS (ARE) CONTIGUOUS WITH A PEDESTRIAN OR HARD SURFACE AREA (PEDESTRIAN CIRCULATION PATH), THE MAXIMUM FLARE SLOPE SHALL NOT EXCEED 10:1.
2. PEDESTRIAN WALKWAY (PEDESTRIAN ACCESS ROUTE) AND/OR LOCATION OF EXISTING OR FUTURE PEDESTRIAN RAMPS ON OPPOSITE CORNERS SHALL BE REVIEWED BEFORE CONSTRUCTING NEW RAMPS.
3. AT MARKED PEDESTRIAN CROSSINGS, THE BOTTOM OF THE RAMPS, EXCLUSIVE OF THE FLARE SIDES, SHALL BE TOTALLY CONTAINED WITHIN THE MARKINGS.

6/23/20 DATE APPROVED: Jennifer E. Irvine DEPARTMENT OF PUBLIC WORKS	Pedestrian Curb Ramp Detail Standard Drawing REVISION DATE: 6/23/20 FILE NAME: SD_2-41	DEPARTMENT OF PUBLIC WORKS

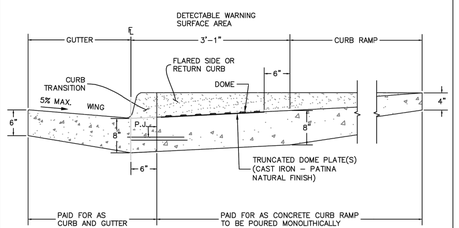
TRUNCATED DOME DETAILS



DOME SPACING



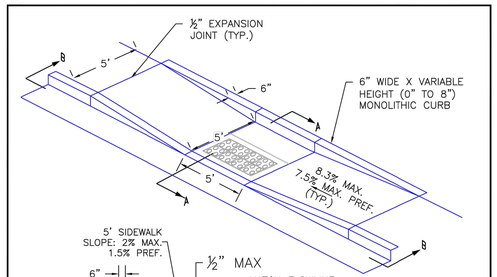
ELEVATION VIEW



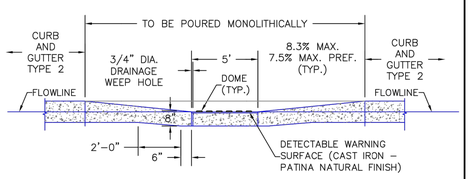
P.J.= PERMISSABLE JOINT WITH EPOXY–COATED DEFORMED NO. 4 BARS CONFORMING TO AASHTO M 284 AT 18 IN. SPACING

SIDE CROSS SECTION VIEW OF
DETECTABLE WARNING SURFACE, CURB AND GUTTER

6/23/20 DATE APPROVED: Jennifer E. Irvine DEPARTMENT OF PUBLIC WORKS	Detectable Warning Surface Details Standard Drawing REVISION DATE: 6/23/20 FILE NAME: SD_2-42	DEPARTMENT OF PUBLIC WORKS



SECTION A–A

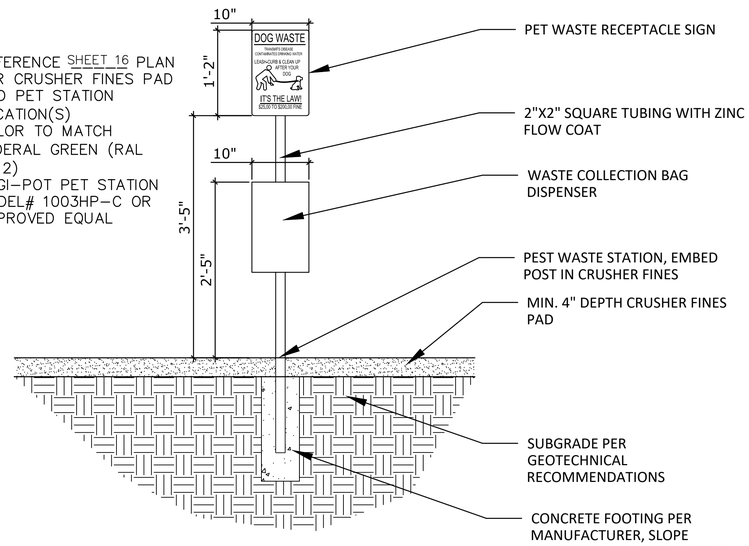


SECTION B–B

SCALE: NOT TO SCALE

6/23/20 DATE APPROVED: Jennifer E. Irvine DEPARTMENT OF PUBLIC WORKS	Parallel Pedestrian Curb Ramp Detail Standard Drawing REVISION DATE: 6/23/20 FILE NAME: SD_2-50	DEPARTMENT OF PUBLIC WORKS

NOTES:
1. REFERENCE SHEET 16 PLAN FOR CRUSHER FINES PAD AND PET STATION LOCATION(S)
2. COLOR TO MATCH FEDERAL GREEN (RAL 6012)
3. DOGI–POT PET STATION MODEL# 1003HP–C OR APPROVED EQUAL



PET WASTE STATION
SCALE: 1"=1'

Know what's **below.**
Call before you dig.

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
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Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H–SCALE	N/A	DESIGNED BY	QNL
V–SCALE	N/A	DRAWN BY	QNL
DATE	7/11/22	CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

DETAIL SHEET

SHEET 17 OF 17

JOB NO. 25188.10

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

X:\25\10000.all\25188.10\Drawings\Sheet Dwgs\Sheet Plans\25188.10 STREET01-DT.dwg, STREET01 DT01, 7/13/2022 3:57:19 PM, CS

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

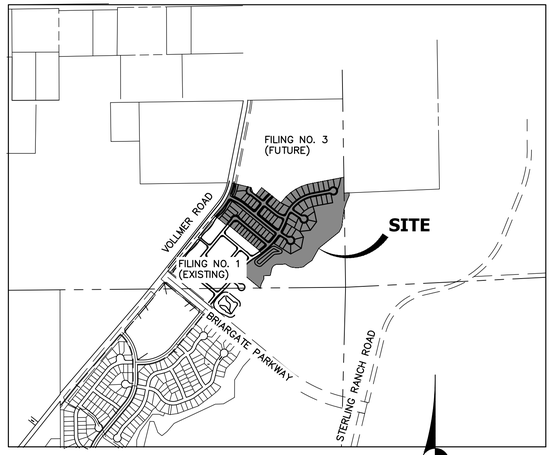
COUNTY OF EL PASO, STATE OF COLORADO

STORM SEWER AND POND PLANS

GENERAL NOTES

1. ALL UTILITY CONSTRUCTION TO BE CONDUCTED IN CONFORMANCE WITH THE CURRENT STERLING RANCH METROPOLITAN DISTRICT (SRMD, THE DISTRICT) SPECIFICATIONS.
2. ALL PLANS ON THE JOB SITE SHALL BE SIGNED BY THE DISTRICT AND THE DISTRICT'S ENGINEER. ANY REVISION TO THE PLANS SHALL BE SO NOTED WITH THE OLD DRAWING MARKED NOT VALID.
3. ALL STATIONING IS CENTERLINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE NOTED.
4. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE DISTRICT. THE DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
5. ALL WATER AND SEWER SERVICE LOCATIONS SHALL BE CLEARLY MARKED ON EITHER THE CURB HEAD OR THE FACE OF THE CURB, WITH AN "S" FOR SEWER AND A "W" FOR WATER.
6. DUCTILE IRON PIPES, INCLUDING FITTINGS, VALVES AND FIRE HYDRANTS, SHALL BE WRAPPED WITH POLYETHYLENE TUBING, DOUBLE BONDED AT EACH JOINT AND ELECTRICALLY ISOLATED. BONDING AND ANODE CONNECTIONS SHALL BE THOROUGHLY COATED WITH BITUMINUOUS COATINGS.
7. ALL DUCTILE IRON PIPE LESS THAN 12 INCHES AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WIRES WITH 17 LB MAGNESIUM ANODES EVERY 400 FEET AND 9 LB MAGNESIUM ANODES AT EACH FITTING. ALL DUCTILE IRON PIPE 12 INCHES AND GREATER AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WIRES WITH 17 LB MAGNESIUM ANODES EVERY 300 FEET AND 9 LB MAGNESIUM ANODES AT EACH FITTING.
8. ALL PIPE MATERIAL, BACKFILL AND INSTALLATION SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS, COLORADO DEPARTMENT OF TRANSPORTATION, EL PASO COUNTY DEPARTMENT OF TRANSPORTATION, COLORADO SPRINGS UTILITIES AND THE GEOTECHNICAL ENGINEER.
9. COMPACTION TESTS SHALL BE 95% STANDARD PROCTOR AS DETERMINED BY ASTM D698, UNLESS OTHERWISE APPROVED BY THE DISTRICT OR HIGHER STANDARD AS IMPOSED BY ANOTHER AGENCIES HAVING RIGHT-OF-WAY JURISDICTION. THIS SHALL INCLUDE ALL VALVES, FIRE HYDRANT RUNS, WATER & SEWER SERVICE LINES AND MANHOLES. ALL REPORTS SHALL BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.
10. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. THE LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. THE DISTRICT SHALL BE NOTIFIED OF ANY DEVIATIONS TO THE LINE AND/OR GRADE AS DEPICTED ON THE PLANS. CONTRACTOR SHALL SUBMIT TO THE DISTRICT AND THE ENGINEER OF RECORD A REPORT OF THE FIELD VERIFIED INFORMATION PRIOR TO THE START OF CONSTRUCTION.
11. ALL BENDS SHALL BE FIELD STAKED PRIOR TO THE START OF CONSTRUCTION.
12. BENDS, DEFLECTION & CUT PIPE LENGTHS SHALL BE USED TO HOLD HORIZONTAL ALIGNMENT OF SEWER AND WATER LINES TO NO MORE THAN 0.5' FROM THE DESIGNED ALIGNMENT. CONSTRUCTION STAKES TO BE AT 25' INTERVALS ALONG CURVES TO ASSURE LOCATION OF PIPE LINE CONSTRUCTION.
13. AT ALL LOCATIONS WHERE CAP AND STUB IS NOTED ON DRAWINGS, PROVIDE A PLUG AT THE END OF THE PIPE JOINT NEAREST THE SPECIFIED STATION. PROVIDE A REVERSE ANCHOR AT ALL WATER LINE PLUGS.
14. ALL UNUSED SALVAGED WATER UTILITY MATERIAL SHALL BE RETURNED TO THE METROPOLITAN DISTRICT AS REQUESTED.
15. AT THE CONTRACTOR'S EXPENSE, ALL UTILITY MAINS SHALL BE SUPPORTED AND PROTECTED SUCH THAT THEY SHALL FUNCTION CONTINUOUSLY DURING CONSTRUCTION OPERATIONS. SHOULD A UTILITY MAIN FAIL AS A RESULT OF THE CONTRACTOR'S OPERATION, IT SHALL BE REPLACED IMMEDIATELY BY THE CONTRACTOR OR BY THE DISTRICT AT FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR/DEVELOPER.
16. PUMPING OR BYPASS OPERATIONS SHALL BE REVIEWED AND APPROVED BY BOTH THE DISTRICT AND THE DISTRICT ENGINEER PRIOR TO EXECUTION.
17. THE CONTRACTOR SHALL REPLACE OR REPAIR DAMAGE TO ALL SURFACE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO FENCES, LANDSCAPING, CURB AND GUTTER AND/OR ASPHALT THAT MAY BE CAUSED DURING CONSTRUCTION.
18. ALL CONTRACTORS WORKING ON OR NEAR A WATER OR SEWER FACILITY (TO INCLUDE SERVICE LINE) SHALL HAVE LIABILITY INSURANCE NAMING THE DISTRICT AS AN ADDITIONAL INSURED AND SHALL PROVIDE A CURRENT COPY OF WORKERS COMPENSATION INSURANCE ON FILE WITH THE DISTRICT. NO WORK CAN PROCEED WITHOUT CURRENT CERTIFICATES ON FILE AT THE DISTRICTS' OFFICE.
19. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND ALL AFFECTED UTILITY COMPANIES ADJACENT TO THE PROPOSED UTILITY CONSTRUCTION A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF CONSTRUCTION. A WEEKLY CONSTRUCTION MEETING SHALL BE REQUIRED WITH THE CONTRACTOR, DISTRICT ENGINEER AND ALL OTHER PARTIES AS DEEMED NECESSARY BY THE DISTRICT.
20. COMMENCEMENT OF CONSTRUCTION OF WATER/SEWER SYSTEMS WITHIN THE METROPOLITAN DISTRICT:
    a. PRIOR TO THE START OF CONSTRUCTION, A PRE-CONSTRUCTION MEETING IS REQUIRED A MINIMUM OF 48 HOURS IN ADVANCE OF COMMENCEMENT OF WORK. A REPRESENTATIVE OF THE OWNER OR DEVELOPER, A REPRESENTATIVE OF THE CONTRACTOR AND DESIGN ENGINEER ARE REQUIRED TO ATTEND. CONTACT THE DISTRICT TO SCHEDULE THE PRE-CONSTRUCTION MEETING. NO PRE-CONSTRUCTION MEETING CAN BE SCHEDULED PRIOR TO FOUR (4) SIGNED/ APPROVED PLAN SETS ARE RECEIVED BY THE DISTRICT.
    b. THE CONTRACTOR IS REQUIRED TO NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 2 WEEKS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ALSO NOTIFY AFFECTED UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION ADJACENT TO THE KNOWN UTILITY LINES.
21. TESTING OF FACILITIES:
    a. THE CONTRACTOR SHALL NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF ANY TESTING.
    b. ALL SECTIONS OF WATER LINE ARE TO MEET THE FOLLOWING PRESSURE TESTING REQUIREMENTS:
        - TEST 100% OF ALL LINES
        - MUST PASS PRESSURE TEST TO 200 PSI FOR TWO HOURS (UNLESS OTHERWISE APPROVED ON THE PLANS).
    c. ALL SANITARY SEWER FACILITIES ARE TO MEET THE FOLLOWING TESTING REQUIREMENTS
        - ALL LINES SHALL BE JET CLEANED PRIOR TO VACUUM OR PRESSURE TESTING
        - ALL MANHOLES SHALL BE VACUUM TESTED WITH DISTRICT STAFF PRESENT PRIOR TO CCTV INSPECTION.
        - SEWER MAINS TO BE PRESSURE TEST PRIOR TO CCTV INSPECTION
        - ALL LINES SHALL BE CCTV INSPECTED AND VIDEO SHALL TO BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.
22. PRELIMINARY ACCEPTANCE SHALL BE DEFINED AS THE POINT IN TIME THAT THE DISTRICT ACCEPTS THE FACILITY FOR USE. ALL SURFACE IMPROVEMENTS AND RESTORATION SHALL BE COMPLETED WITHIN 30 DAYS OF COMMENCEMENT. SHOULD THE CONTRACTOR FAIL TO COMPLETE ALL SURFACE IMPROVEMENTS AND RESTORATION WITHIN 30 DAYS OF COMMENCEMENT OF SERVICE, THE DISTRICT, AT THEIR DISCRETION, MAY ELECT TO COMPLETE THE IMPROVEMENTS AT THE CONTRACTORS COST.
23. FINAL ACCEPTANCE BY THE DISTRICT OF ANY LINE OR SYSTEM SHALL NOT OCCUR UNTIL COMPLETION OF FINAL ASPHALT LAYERS AND/OR FINAL COMPLETION AND/OR RESTORATION OF ALL SURFACE IMPROVEMENTS. THE WARRANTY PERIOD FOR ALL FACILITIES PRIOR TO FINAL ACCEPTANCE SHALL BE 24 MONTHS COMMENCING AFTER PRELIMINARY ACCEPTANCE.
24. ACCEPTANCE:
    a. THE DISTRICT MAY GIVE PRELIMINARY ACCEPTANCE ONCE ALL OF THE TESTS ON ALL THE LINES HAVE BEEN COMPLETED AND A WALK-THRU HAS OCCURRED.
    b. A SECOND ACCEPTANCE MAY OCCUR ONCE FIRST LIFT OF ASPHALT GOES DOWN AND A SECOND WALK-THRU OF THE SYSTEM OCCURS. IF ALL FACILITIES ARE CLEAN AND ACCESSIBLE, A FINAL ACCEPTANCE MAY OCCUR (THE DISTRICT MAY REQUIRE CLEANING AND RE-VIDEO OF THE SYSTEM, DEPENDING ON THE SEVERITY OF THE CONTAMINATION).
25. ALL WATER AND SEWER MAINS, INCLUDING SERVICE LINES, SHALL HAVE "AS-BUILT" DRAWINGS PREPARED AND APPROVED PRIOR TO PRELIMINARY ACCEPTANCE BY THE DISTRICT.
26. ALL COMMERCIAL/BUSINESS DEVELOPMENTS SHALL HAVE AN EIGHT INCH (MIN.) WATER MAIN LOOPED THROUGH THE PROPOSED PROPERTY WITH GATE VALVES LOCATED WHERE THE MAIN ENTERS THE PROPERTY LINE. AN EIGHT INCH SEWER MAIN SHALL BE INSTALLED FOR SERVICE TO COMMERCIAL/BUSINESS DEVELOPMENTS, AND A MANHOLE SHALL BE LOCATED WHERE THE MAIN ENTERS THE PROPERTY. THE END OF THE MAINS SHALL BE MARKED WITH THE APPROPRIATE COLORED CARSONITE MARKER ALONG WITH TRACER WIRE.
27. AFTER REVIEW AND APPROVAL OF PLANS FOR THE EXTENSION OF LINES, FACILITIES AND/OR SERVICES, CONSTRUCTION MUST BE COMMENCED WITHIN 18 MONTHS FOR RESIDENTIAL SUBDIVISIONS AND 12 MONTHS FOR ANY COMMERCIAL INSTALLATIONS.
28. INSPECTION FEES: CALL THE DISTRICT (719-495-2500) FOR FEE SCHEDULE.

Know what's below.
Call before you dig.



1000 500 0 1000 2000

ORIGINAL SCALE: 1" = 1000'

SHEET INDEX

1	–	COVER SHEET
2	–	GENERAL NOTES
3	–	LEGEND
4–7	–	STORM PLANS
8–12	–	POND PLANS
13–15	–	DETAIL SHEET
15	–	TOTAL SHEETS

BASIS OF BEARINGS

THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624", SAID LINE BEARS N89°14'14"E A DISTANCE OF 2,722.69 FEET.

BENCHMARKS

1.THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION
NORTHING = 411416.273
EASTING = 235167.071
ELEVATION = 7023.42

2.THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION
NORTHING = 410095.404
EASTING = 235052.131
ELEVATION = 7000.40

3.THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDIVISION
NORTHING = 411399.962
EASTING = 233849.817
ELEVATION = 7030.82

DISTRICT APPROVALS

THESE DOCUMENTS HAVE BEEN REVIEWED AND APPROVED FOR STORM DRAIN AND ASSOCIATED UTILITY SERVICE CONSTRUCTION.

FOR AND ON BEHALF OF THE STERLING RANCH METRO DISTRICT DATE

AGENCIES

OWNER/DEVELOPER:	SR LAND, LLC 20 BOULDER CRESCENT, SUITE 201 COLORADO SPRINGS, CO 80903 JAMES F. MORLEY (719) 471-1742	FIRE DISTRICT:	BLACK FOREST FIRE PROTECTION DISTRICT 11445 TEACHOUT ROAD COLORADO SPRINGS, CO 80908 CHIEF BRYAN JACK (719) 495-4300
CIVIL ENGINEER:	JR ENGINEERING, LLC 5475 TECH CENTER DRIVE COLORADO SPRINGS, CO 80919 MIKE BRAMLETT P.E. (303) 267-6240	GAS DEPARTMENT:	COLORADO SPRINGS UTILITIES 7710 DURANT DR. COLORADO SPRINGS, CO 80947 TIM WENDT (719) 668-3556
COUNTY ENGINEERING:	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 JEFF RICE, P.E. (719) 520-6300	ELECTRIC DEPARTMENT:	MOUNTAIN VIEW ELECTRIC 11140 E. WOODMEN ROAD FALCON, CO 80831 (719) 495-2283
TRAFFIC ENGINEERING:	EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS 3275 AKERS DRIVE COLORADO SPRINGS, CO 80922 JENNIFER IRVINE, P.E. (719) 520-6460	COMMUNICATIONS:	QWEST COMMUNICATIONS (U.N.C.C. LOCATORS) (800) 922-1987 AT&T (LOCATORS) (719) 635-3674
WATER RESOURCES:	STERLING RANCH METRO DISTRICT ENGINEERS JDS-HYDRO CONSULTANTS 545 E. PIKES PEAK AVE., SUITE 300 COLORADO SPRINGS, CO 80903 JOHN MCGINN (719) 668-8769		

ENGINEER'S STATEMENT

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLAN AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

EL PASO COUNTY STATEMENT

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

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

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

Remove Interim

JOSHUA PALMER, P.E. DATE
INTERIM COUNTY ENGINEER/ECM ADMINISTRATOR

OWNER/DEVELOPER STATEMENT

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

JAMES F. MORLEY DATE

SR LAND, LLC
20 BOULDER CRESCENT, SUITE 201
COLORADO SPRINGS, CO 80903

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	N/A
V-SCALE	N/A
DATE	7/15/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2
COVER SHEET

SHEET 1 OF 15

JOB NO. 25188.10

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STANDARD CONSTRUCTION NOTES:

1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD LOCATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).
3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIME INCLUDING THE FOLLOWING:
   3.1 EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
   3.2 CITY OF COLORADO SPRINGS/EL PASO COUNTY ENGINEERING CRITERA MANUAL VOLUMES 1 AND 2.
   3.3 COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARDS SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION.
   3.4 CDOT M&S STANDARDS.
4. IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ACCURACY SHOW EXISTING CONDITION BOTH ONSITE AND OFFSITE ON THE CONSTRUCTION PLANS. ANY MODIFICATION NECESSARY DUE TO CONFLICT OMISSIONS OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPERS RESPONSIBILITY TO RECTIFY.
5. IT IS THE CONTRACTORS RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORM WATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, US ARMY CORPS OF ENGINEER ISSUED 401 AND/OR 404 PERMITS AND COUNTY AND STATE FUGITIVE DUST PERMITS.
6. ANY TEMPORARY SIGNAGE AND STRIPING SHALL COMPLY WITH EL PASO COUNTY PCD AND MUTCD CRITERIA.
7. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DOT INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
8. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFFSITE DISTURBANCE GRADING, OR CONSTRUCTION.

STORM SEWER GENERAL NOTES

1. ALL STATIONING IS ALONG STORM SEWER CENTERLINE UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE INVERT UNLESS OTHERWISE INDICATED.
2. ALL STORM SEWER BENDS AND WYES SHOWN ON THE PLAN SHALL BE PREFABRICATED.
3. HORIZONTAL AND VERTICAL BENDS ARE INDICATED ON THE PLANS.
4. JOINTS SHALL BE IN ACCORDANCE WITH ASTM C443 "STANDARD SPECIFICATIONS FOR JOINTS FOR CIRCULAR CONCRETE SEWER AND CULVERT PIPE USING RUBBER GASKET." IN NO CASE SHALL THE MAXIMUM JOINT OPENING FOR STRAIGHT ALIGNMENT EXCEED 1 INCH OR ONE AND ONE-HALF INCH ON CURVED ALIGNMENT.
5. INLET DIMENSIONS SHOWN ON PLANS REFER TO DISTANCES FROM INSIDE FACES OF BOX BETWEEN THE WIDTHS AND LENGTHS.
6. MANHOLE WIDTHS AND LENGTHS SHOWN ON PLAN REFER TO THE EXTERIOR WALL DIMENSIONS.
7. ALL STORM SEWER SHALL BE A MINIMUM OF CLASS III REINFORCED CONCRETE PIPE. SPECIFIC SEGMENTS OF STORM SEWER SHALL BE REQUIRED TO BE CONSTRUCTED OF A MINIMUM OF 5000 PSI CONCRETE DUE TO EXCESSIVE VELOCITIES. REFER TO ADDITIONAL NOTES WITHIN CONSTRUCTION PLANS.
8. SINCE ALL PIPE ENTRIES INTO THE BASE ARE VARIABLE, THE DIMENSIONS SHOWN ARE TYPICAL. ACTUAL DIMENSIONS AND QUANTITIES FOR CONCRETE AND REINFORCEMENT SHALL BE AS REQUIRED IN THE WORK.
9. THE MH RING (FRAME) SHALL BE SET IN A BED OF GROUT. THE FRAME SHALL BE SURROUNDED WITH A GROUT IN UNPAVED AREA, OR A CONCRETE COLLAR IN PAVED AREA.
10. PRECAST MANHOLES AND REINFORCEMENT SHALL CONFORM TO ASTM C 478 (AASHTO M 199).
11. CAST IN PLACE MANHOLES SHALL BE CLASS B CONCRETE.
12. STEPS SHALL BE REQUIRED WHEN THE MANHOLE DEPTH EXCEEDS 3'-6" AND SHALL BE IN ACCORDANCE WITH AASHTO M 199.
13. ALL REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 PSI. VERTICAL STEEL SHALL BE PLACED AT ℄ OF WALL. ALL BARS SHALL HAVE A 2" MINIMUM CLEARANCE.
14. FLOW CHANNELS AND INVERTS SHALL BE FORMED BY SHAPING WITH CLASS B CONCRETE OR APPROVED GROUT.
15. STUB-OUTS SHALL EXTEND 4 FT MINIMUM BEYOND OUTSIDE WALL SURFACE OF MANHOLE AND BE SATISFACTORILY PLUGGED.
16. CHECK WITH THE LOCAL GOVERNMENT AUTHORITY FOR ANY ADDITIONAL STORM SEWER SPECIFICATIONS, DETAILS, OR REGULATIONS.
17. THE SLOPE OF THE MANHOLE COVER SHALL MATCH THE ROADWAY PROFILE AND CROSS SLOPE.
18. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF ALL PREFABRICATED STRUCTURES TO THE ENGINEER FOR REVIEW PRIOR TO INSTALLATION.

SOIL RIPRAP NOTES:

1. THE SOIL MATERIAL SHALL BE NATIVE OR TOPSOIL AND MIXED WITH SIXTY FIVE PERCENT (65%) RIPRAP AND THIRTY FIVE PERCENT (35%) SOIL BY VOLUME.
2. SOIL RIPRAP SHALL CONSIST OF A UNIFORM MIXTURE OF SOIL AND RIPRAP WITHOUT VOIDS.
3. CONTRACTOR SHALL COOPERATE WITH ENGINEER IN OBTAINING AND PROVIDED SAMPLES OF ALL SPECIFIED MATERIALS.
4. CONTRACTOR SHALL SUBMIT CERTIFIED LABORATORY TEST CERTIFICATES FOR ALL ITEMS REQUIRED FOR SOIL RIPRAP.
5. RIPRAP USED SHALL BE THE TYPE DESIGNATED ON THE DRAWINGS AND SHALL CONFORM TO TABLE SHOWN TO THE RIGHT.
6. THE RIPRAP DESIGNATION AND TOTAL THICKNESS OF RIPRAP SHALL BE AS SHOWN ON THE DRAWINGS. THE MAXIMUM STONE SIZE SHALL NOT LARGER THAN THE THICKNESS OF THE RIPRAP.
7. NEITHER WIDTH NOR THICKNESS OF A SINGLE STONE OF RIPRAP SHALL BE LESS THAN ONE-THIRD (⅓) OF ITS LENGTH.
8. THE SPECIFIC GRAVITY OF THE RIPRAP SHALL BE TWO AND ONE-HALF (2.5) OR GREATER.
9. MINIMUM DENSITY FOR ACCEPTABLE RIPRAP SHALL BE ONE HUNDRED AND SIXTY FIVE (165) POUNDS PER CUBIC FOOT.
10. RIPRAP SPECIFIC GRAVITY SHALL BE ACCORDING TO THE BULK-SATURATED, SURFACE-DRY BASIS, IN ACCORDANCE WITH AASHTO T85.
11. BROKEN CONCRETE OR ASPHALT PAVEMENT SHALL NOT BE ACCEPTABLE FOR USE IN THE WORK.
12. ROUNDED RIPRAP (RIVER ROCK) IS NOT ACCEPTABLE, UNLESS SPECIFICALLY DESIGNATED ON THE DRAWINGS.

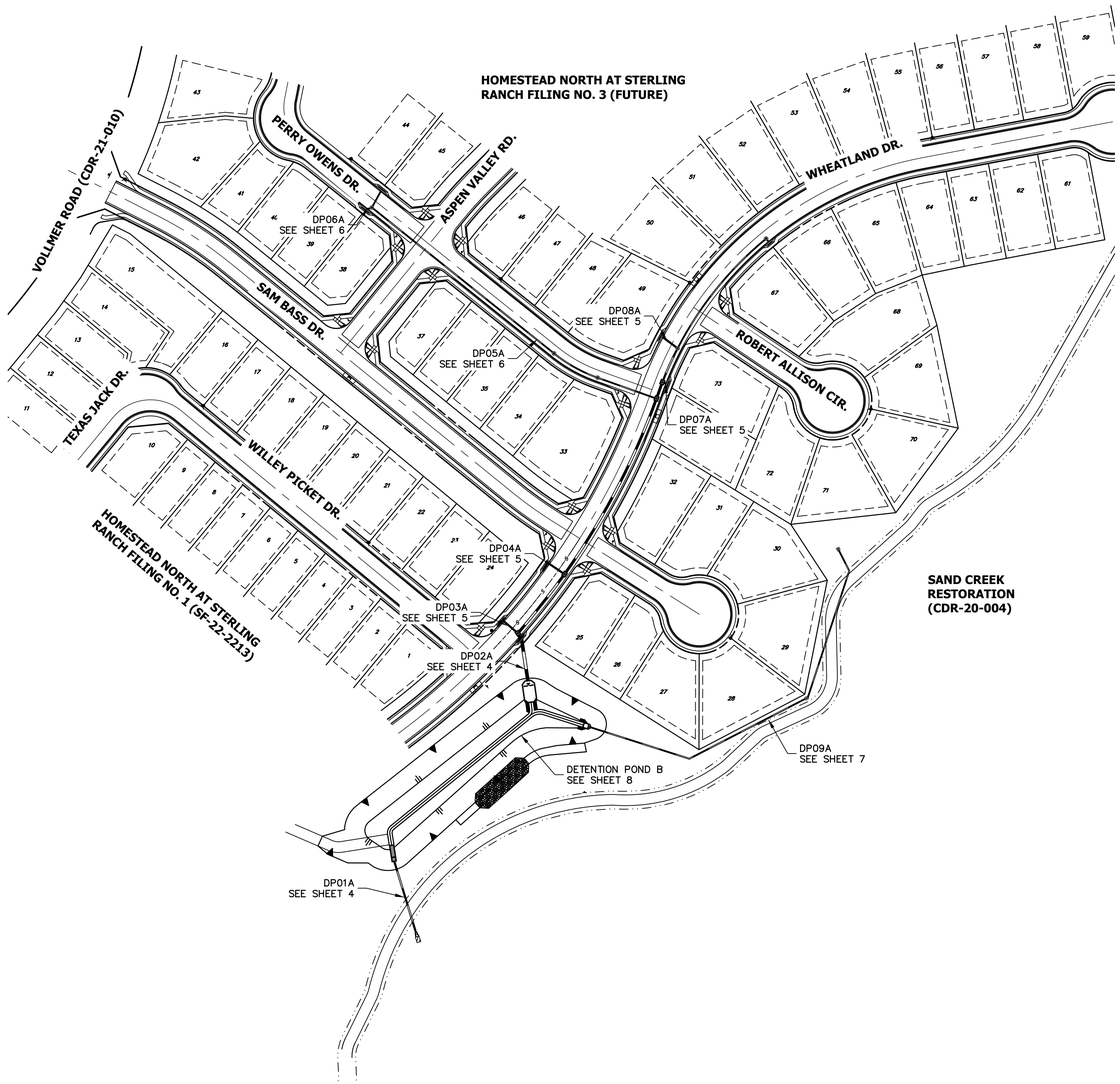
STRUCTURAL CONCRETE NOTES:

1. ALL CONSTRUCTION INVOLVING THE PLACEMENT OF STRUCTURAL CONCRETE SHALL BE COMPLETED IN ACCORDANCE WITH STANDARD SPECIFICATIONS, AND AS SUPPLEMENTED BY THE COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION.
2. STEEL REINFORCING SHALL BE GRADE 60 FOR ALL REINFORCING STEEL GREATER THAN #4. SPLICING, LAP SPLICING SHALL BE MINIMUM IN THE FOLLOWING TABLE UNLESS OTHERWISE SPECIFIED:

BAR SIZE	#4	#5	#6	#7	#8
SPLICE LENGTH	1'-9"	2'-2"	2'-7"	3'-4"	4'-3"

   ALL REINFORCING SHALL HAVE A 2-INCH MINIMUM COVER UNLESS OTHERWISE SPECIFIED. ALL REINFORCED STEEL TO BE EPOXY COATED.
3. CAST-IN-PLACE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (fc) OF 4,000 PSI AT 28 DAYS. ALL CONCRETE PLACED AGAINST SOIL SHALL BE TYPE II PORTLAND CEMENT. ALL EXPOSED CORNERS SHALL BE FORMED WITH A 3/4" CHAMFER UNLESS OTHERWISE SPECIFIED.
4. EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213.
5. BACKFILL AGAINST STRUCTURES SHALL NOT COMMENCE UNTIL ALL SUPPORTING DIAPHRAGMS ARE IN PLACE AND CONCRETE HAS OBTAINED ITS FULL SEVEN DAY STRENGTH. BACKFILL SHALL BE PLACED EQUALLY ON EACH SIDE OF RETAINING WALL STRUCTURES AND CUTOFF WALLS UNTIL THE FINAL GRADE IS REACHED.
6. FOOTING EXCAVATIONS SHALL BE EXAMINED BY THE GEOTECHNICAL ENGINEER WITH A 24-HOUR MINIMUM NOTIFICATION FOR SOIL AND/OR CONCRETE TESTING. PLACEMENT OF CONCRETE IN THE ABSENCE OF TESTING SHALL BE COMPLETED AT THE SOLE RISK OF THE CONTRACTOR.
7. PRIOR TO THE PLACEMENT OF CONCRETE IN AREAS WHERE SOIL IS PRESENT, THE SOIL SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 6-INCHES. THE MOISTURE CONTENT SHALL BE ADJUSTED TO WITHIN PLUS OR MINUS 2 PERCENT OF THE OPTIMUM MOISTURE CONTENT AND RECOMPACTED TO AT LEAST 95 PERCENT RELATIVE COMPACTION (AASHTO-T-180).

ABBREVIATIONS
EC -- EPOXY COATED O.F. -- OUTSIDE FACE E.F. -- EACH FACE E.W. -- EACH WAY I.F. -- INSIDE FACE N.F. -- NEAR FACE
T.O.C. -- TOP OF CONCRETE B.O.C. -- BOTTOM OF CONCRETE CONT. -- CONTINUOUS



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ORIGINAL SCALE: 1" = 100'

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ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

COLORADO 32314 MIKE A. BRAMLETT REGISTERED PROFESSIONAL ENGINEER

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
A Westrian Company
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Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	100
V-SCALE	N/A
DATE	7/15/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

GENERAL NOTES

SHEET 2 OF 15

JOB NO. 25188.10

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LAYER LINETYPE LEGEND

	EXISTING	PROPOSED
PHASE LINE		
MATCH LINE		
SECTION LINE		
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
R.O.W. A LINE	A	A
CENTERLINE		
CITY LIMITS		
WIRE FENCE		
CHAIN LINK FENCE		
WOOD FENCE		
MASONRY FENCE		
GUARDRAIL		
CONC. BARRIER		
CABLE TV	TV	TV
ELECTRIC	E	E
FIBER OPTIC	FO	FO
GAS MAIN	G	G
IRRIGATION MAIN	IRR	IRR
OIL/PETRO. MAIN	O	O
OVERHEAD UTILITY	OHU	OHU
SANITARY SEWER	S	
STORM DRAIN		
TELEPHONE	T	T
WATER MAIN	W	
RAW WATER LINE	RWL	RWL
SWALE/WATERWAY FLOWLINE		
DIVERSION DITCH		
DIVERSION CHANNEL		
MAJOR DRAINAGE BASIN		
MINOR DRAINAGE BASIN		
TOP OF SLOPE		
TOE OF SLOPE		
EDGE OF WATER		
INDEX CONTOUR	6100	6100
INTERMEDIATE CONTOUR		
DEPRESSION CONT. (INDEX)	6100	6100
DEPRESSION CONT. (INTER)		
TOP OF CUTS		
TOE OF FILLS		
CUT AND FILL LINE		C/F
SILT FENCE	SF	SF
100 YEAR FLOODPLAIN	100YR	100YR
500 YEAR FLOODPLAIN	500YR	500YR
FLOODWAY	FLDWY	FLDWY
BASE FLOOD ELEVATION		
EDGE OF WETLANDS		
STONE WALL		

UTILITIES LEGEND

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE		
STORM INLET		
AREA INLET – SQUARE		
AREA INLET – ROUND		
FLARED END SECTION		
RIPRAP		
SANITARY SEWER		
LINE MARKER	Mkr San	
SERVICE MARKER		
CLEAN–OUT		
MANHOLE W/ DIRECTIONAL FLOW ARROW		
WATER LINE		
LINE MARKER	Mkr W	
SERVICE MARKER		
FIRE HYDRANT		
FIRE CONNECTION		
MANHOLE		
BEND		
BLOW–OFF VALVE		
WELL	WELL	WELL
METER		
VALVE		
REDUCER		
THRUST BLOCK		
CROSS		
PLUG W/ THRUST BLOCK		
TEE		
REVERSE ANCHOR		
ANODE		
AIR & VACUUM VALVE ASSEMBLY		
TRANSMISSION BLOW–OFF ASSEMBLY		
GAS LINE		
MARKER	Mkr G	
SERVICE MARKER		
METER		
VALVE		
PLUG		
TEE		
DRY UTILITIES		
CABLE TV MARKER	Mkr TV	
CABLE TELEVISION PEDESTAL	TV	
ELECTRIC MARKER	Mkr E	
ELECTRIC SERVICE MARKER		
ELECTRICAL PEDESTAL	E	
ELECTRICAL METER	E	
ELECTRICAL MANHOLE	E	
FIBER–OPTIC MARKER	Mkr FO	
IRRIGATION PEDESTAL	I	
TELEPHONE MARKER	Mkr T	
TELEPHONE PEDESTAL	T	
TELEPHONE MANHOLE	T	
UTILITY POLE		
GUY ANCHOR		
GUY POLE		
MISC. UTILITIES		
VENT PIPE	VP	VP
TEST HOLE DESIGNATOR	TH# FIRM / AGENCY	

LANDSCAPE LEGEND

	EXISTING	PROPOSED
TREE – CONIFEROUS		
TREE – DECIDUOUS		
SHRUB/BUSH		
SHRUBS AND BUSHES		
IRRIGATION BOX		
IRRIGATION SPRINKLER		
IRRIGATION VALVE		
BOLLARD		
FLAGPOLE		FP

Know what's **below.**
Call before you dig.

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

MIKE A. BRAMLETT, P.E. 32314
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

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Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H–SCALE	N/A
V–SCALE	N/A
DATE	7/15/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

LEGEND

SHEET 3 OF 15

JOB NO. 25188.10

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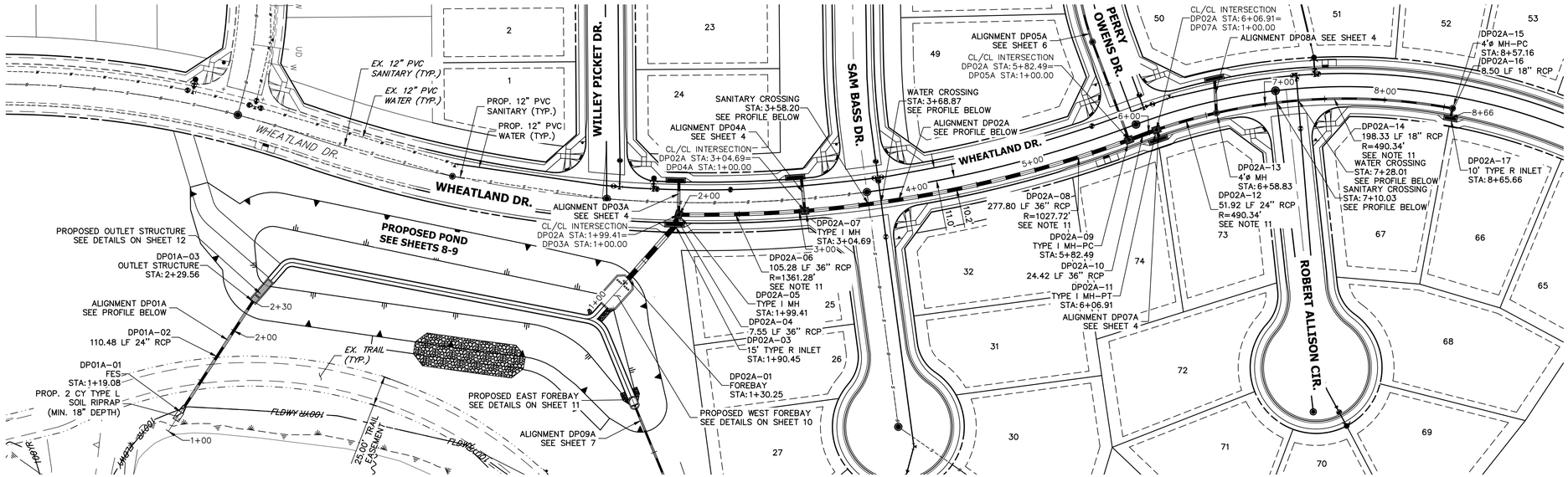

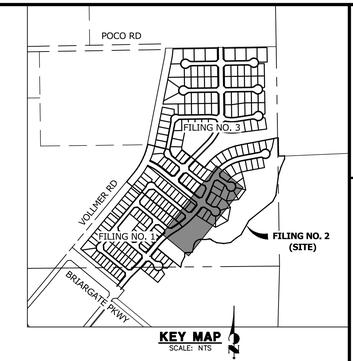

NOTES

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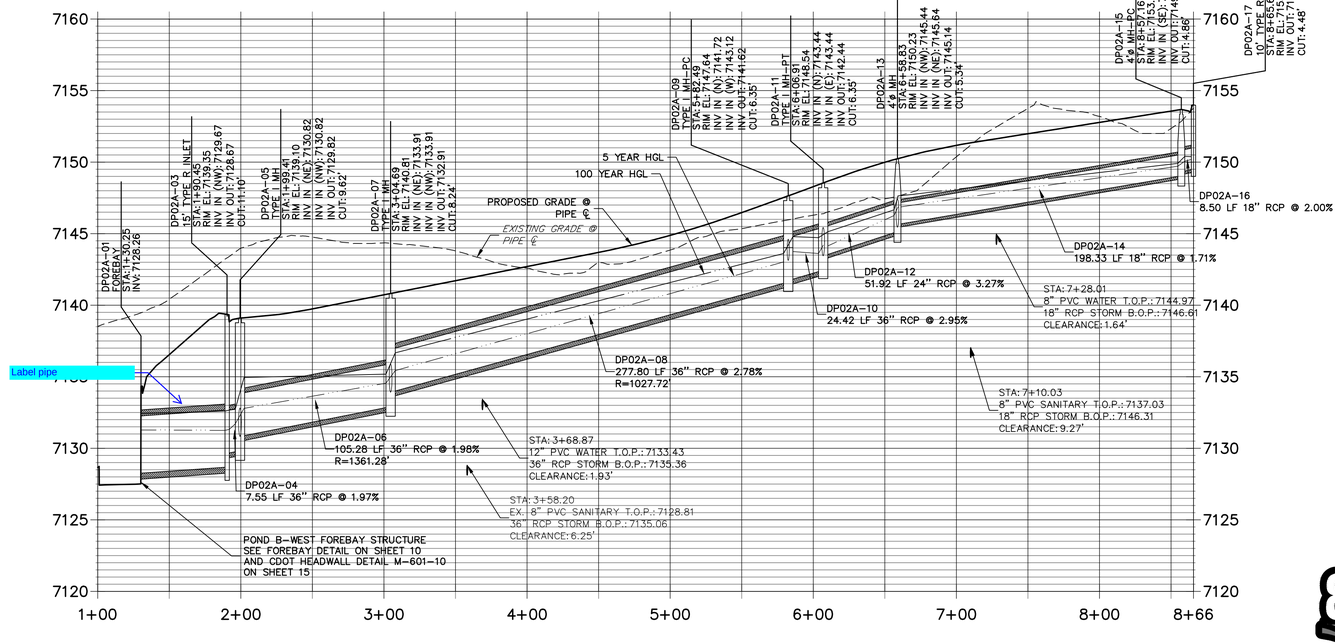
DP02A PROFILE
STA 1+00.00 TO 8+65.66



DP01A PROFILE
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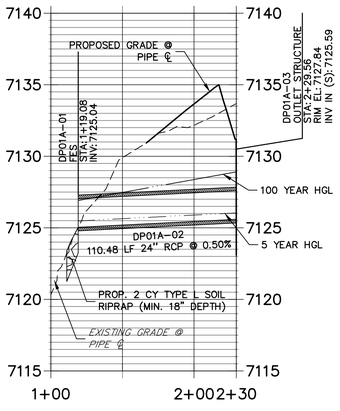

Know what's below. Call before you dig.

HORIZONTAL ORIGINAL SCALE: 1" = 50'
VERTICAL ORIGINAL SCALE: 1" = 5'

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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER LOCAL ENTITY

UNTIL SUCH TIME AS THESE PLANS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

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V-SCALE 1" = 5'
DATE 7/15/22
DESIGNED BY QNL
DRAWN BY QNL
CHECKED BY

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

STORM PLANS

SHEET 4 OF 15

JOB NO. 25188.10

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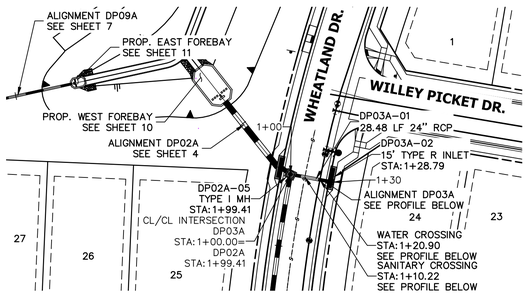
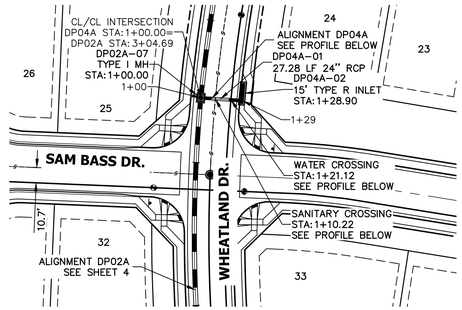
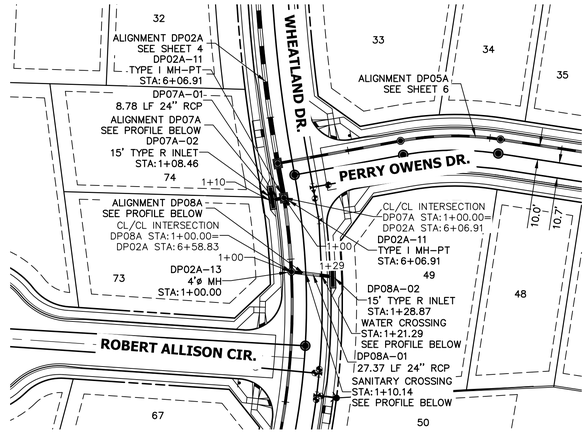


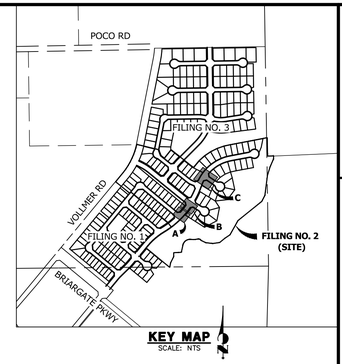
PLAN VIEW – A



PLAN VIEW – B



PLAN VIEW – C



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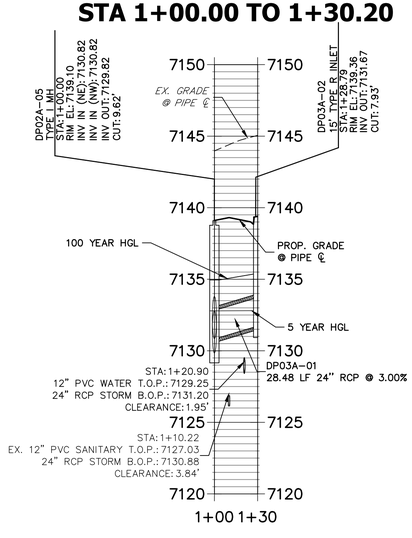
DP03A PROFILE
STA 1+00.00 TO 1+30.20



DP04A PROFILE
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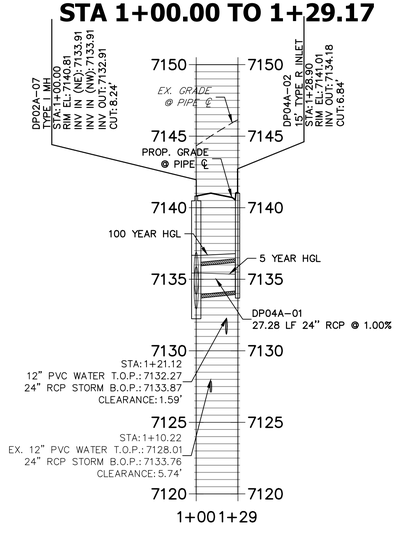

DP07A PROFILE
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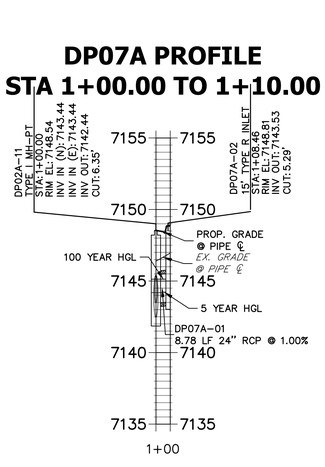

DP08A PROFILE
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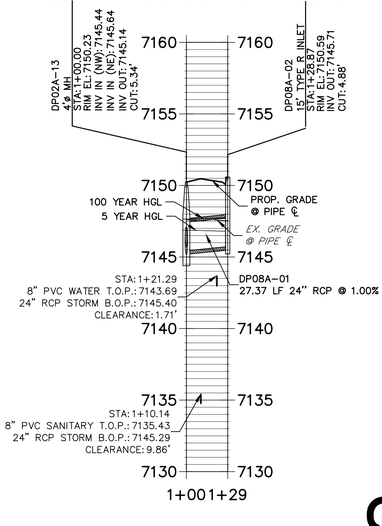

Know what's below. Call before you dig.

50 25 0 50 100

HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
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COLORADO REGISTERED MIKE K. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
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PREPARED FOR
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20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
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HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

STORM PLANS

SHEET 5 OF 15

JOB NO. 25188.10

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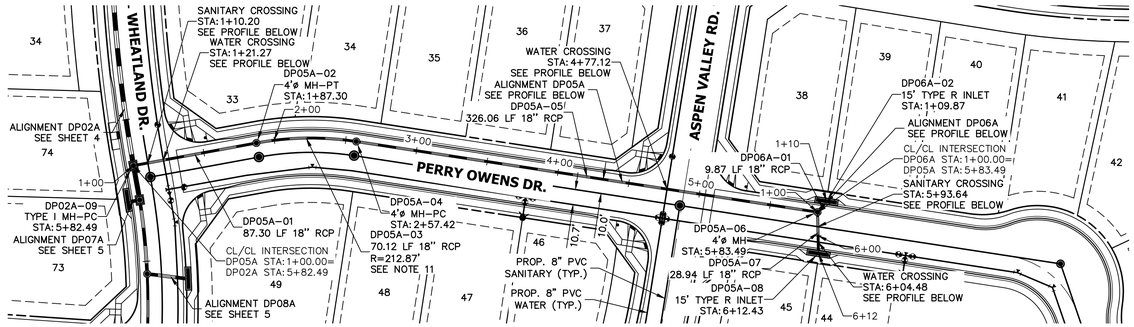

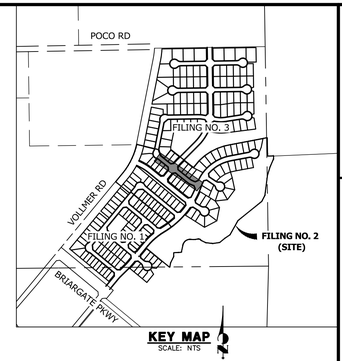

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DP05A PROFILE
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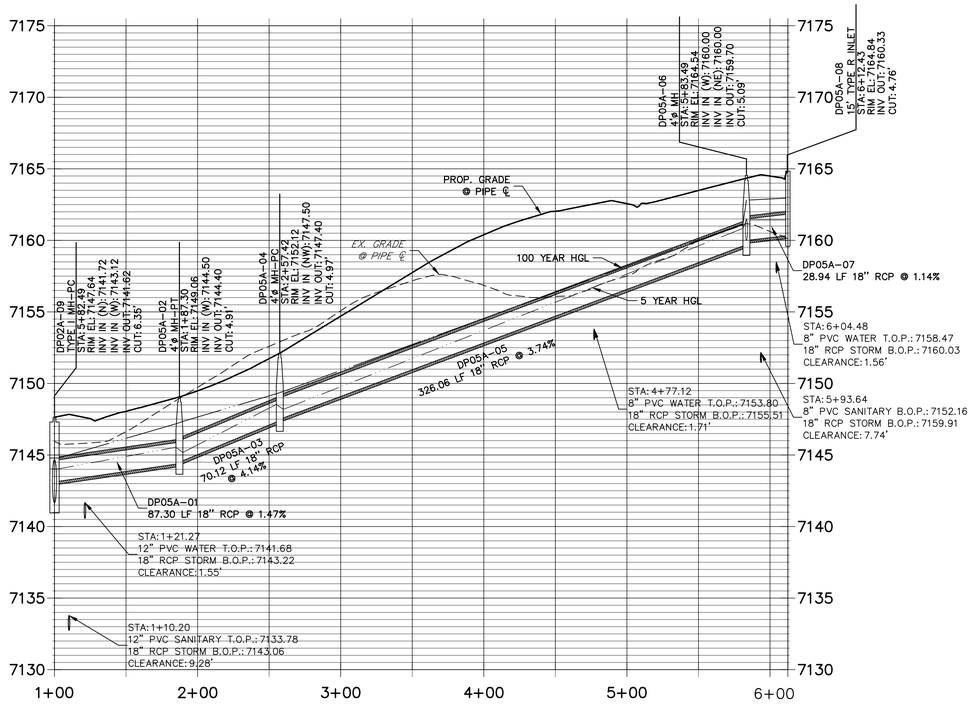

DP06A PROFILE
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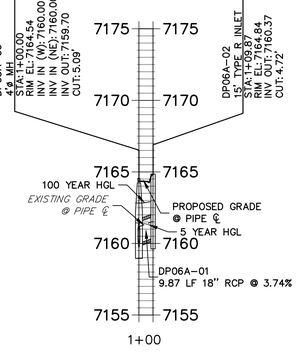

Know what's **below.**
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50 25 0 50 100
HORIZONTAL
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DATE	7/15/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

STORM PLANS

SHEET 6 OF 15

JOB NO. 25188.10

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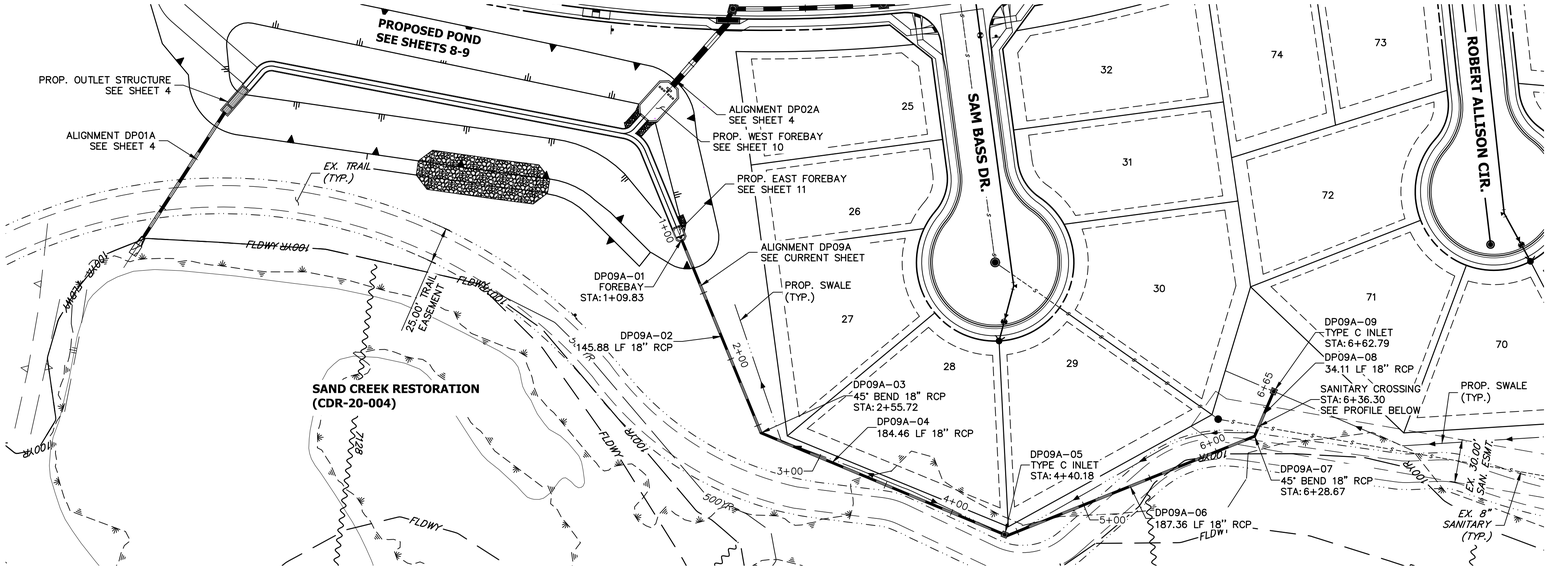

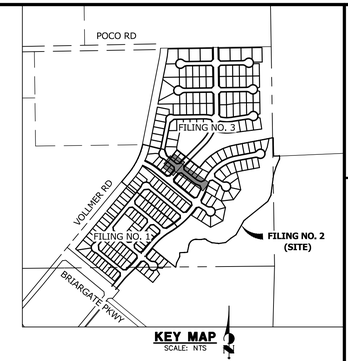

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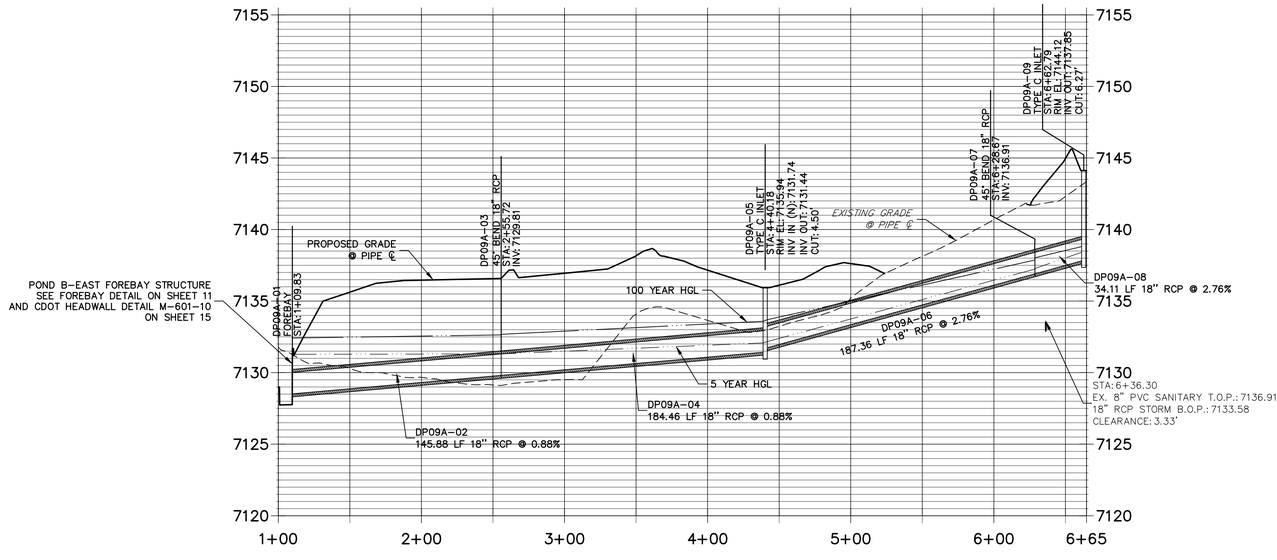
DP09A PROFILE
STA 1+00.00 TO 6+64.74



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COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=50'
V-SCALE	1"=5'
DATE	7/15/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

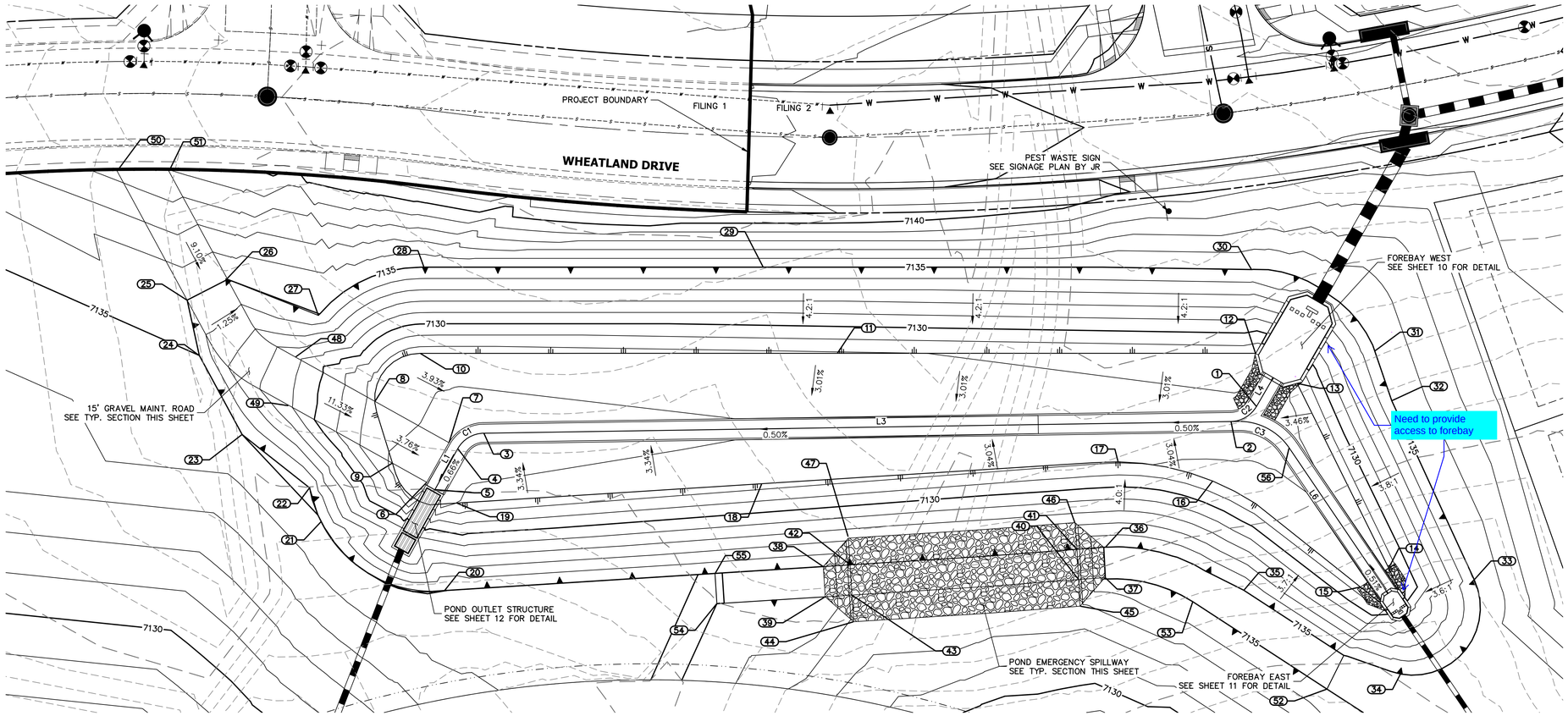
HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

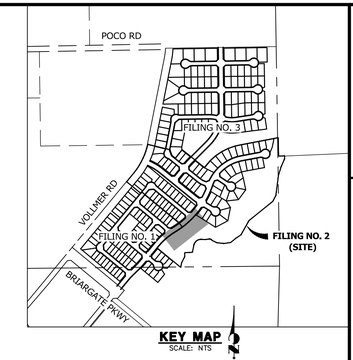
STORM PLANS

SHEET 7 OF 15

JOB NO. 25188.10

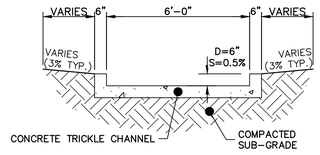
X:\25\10000.all\25188.10\Drawings\Sheet Dwgs\CD-Utility\Storm Plans\25188.10 STORM01.dwg, DP04, 7/15/2022 12:11:53 PM, CS





LINE TABLE		
LINE	BEARING	DISTANCE
L1	N09°01'10"W	15.48'
L3	N50°54'45"E	249.09'
L4	N08°05'30"W	10.96'
L6	N72°19'38"W	57.20'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C1	59°55'55"	10.00'	10.46'
C2	59°00'14"	10.00'	10.30'
C3	56°45'37"	20.00'	19.81'



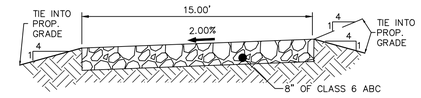
POND TRICKLE CHANNEL
SCALE: 1"=3'

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
1	TRICKLE CHANNEL	N: 415943.29 E: 238148.24	7127.37
2	TRICKLE CHANNEL	N: 415934.12 E: 238144.65	7127.32
3	TRICKLE CHANNEL	N: 415778.59 E: 237953.18	7126.08
4	TRICKLE CHANNEL	N: 415769.26 E: 237949.61	7126.03
5	TRICKLE CHANNEL	N: 415753.97 E: 237952.04	7125.93
6	MAINT. ROAD	N: 415754.23 E: 237948.46	7126.44
7	MAINT. ROAD	N: 415769.04 E: 237946.10	7126.53
8	MAINT. ROAD/ TOE	N: 415764.65 E: 237918.43	7127.66
9	MAINT. ROAD/ TOE	N: 415752.19 E: 237935.62	7126.85
10	TOE	N: 415786.35 E: 237920.36	7127.42
11	TOE	N: 415871.47 E: 238028.57	7127.89
12	TOE/ FOREBAY	N: 415956.86 E: 238137.22	7129.03
13	TOE/ FOREBAY	N: 415957.56 E: 238154.05	7128.92
14	TOE	N: 415928.33 E: 238215.49	7128.41
15	TOE	N: 415917.61 E: 238212.07	7128.43

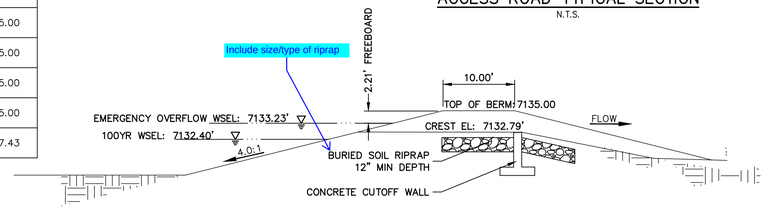
POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
16	TOE	N: 415914.97 E: 238152.13	7128.13
17	TOE	N: 415900.72 E: 238123.72	7127.91
18	TOE	N: 415822.26 E: 238035.68	7127.51
19	TOE	N: 415754.95 E: 237960.46	7127.01
20	TOP	N: 415729.70 E: 237975.12	7135.00
21	TOP	N: 415722.49 E: 237929.10	7135.00
22	TOP	N: 415728.88 E: 237919.21	7135.00
23	TOP	N: 415728.94 E: 237890.77	7135.00
24	TOP	N: 415740.74 E: 237863.52	7135.00
25	MAINT. ROAD/ TOP	N: 415752.61 E: 237849.06	7135.00
26	MAINT. ROAD/ TOP	N: 415766.39 E: 237855.01	7135.03
27	TOP	N: 415775.45 E: 237886.29	7134.87
28	TOP	N: 415809.56 E: 237903.84	7135.00
29	TOP	N: 415878.78 E: 237991.83	7135.00
30	TOP	N: 415977.83 E: 238119.03	7135.00

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
31	TOP	N: 415981.81 E: 238167.59	7135.00
32	TOP	N: 415972.36 E: 238182.15	7135.00
33	TOP	N: 415942.75 E: 238240.08	7135.00
34	TOP	N: 415903.23 E: 238240.31	7135.00
35	TOP	N: 415892.96 E: 238182.45	7135.00
36	SPILLWAY TOP	N: 415875.86 E: 238137.75	7135.00
37	SPILLWAY TOP	N: 415867.90 E: 238143.84	7134.96
38	SPILLWAY TOP	N: 415813.29 E: 238068.53	7135.00
39	SPILLWAY TOP	N: 415805.83 E: 238075.20	7135.00
40	SPILLWAY CREST	N: 415862.04 E: 238137.42	7132.79
41	SPILLWAY CREST	N: 415869.55 E: 238130.85	7132.79
42	SPILLWAY CREST	N: 415819.26 E: 238075.21	7132.79
43	SPILLWAY CREST	N: 415811.73 E: 238081.80	7132.79
44	SPILLWAY CREST	N: 415805.16 E: 238087.69	7132.79
45	SPILLWAY CREST	N: 415855.39 E: 238143.24	7132.79

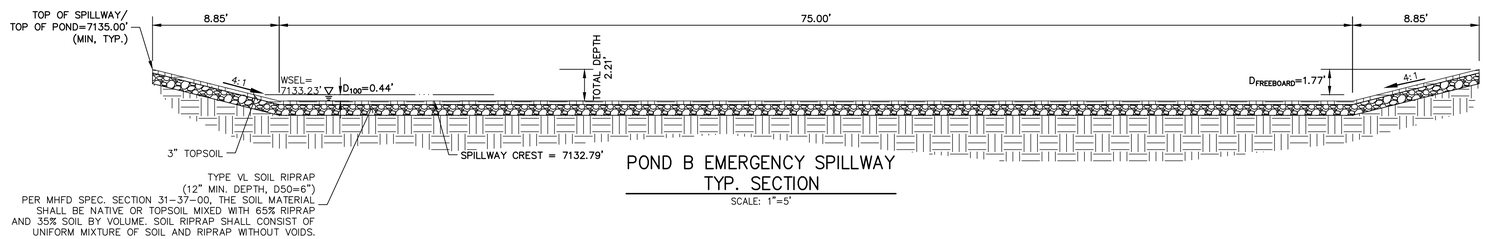
POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
46	SPILLWAY CREST	N: 415876.07 E: 238124.86	7132.79
47	SPILLWAY CREST	N: 415826.06 E: 238068.98	7132.69
48	MAINT. ROAD	N: 415759.94 E: 237888.76	7131.26
49	MAINT. ROAD	N: 415745.91 E: 237896.94	7131.18
50	MAINT. ROAD	N: 415771.84 E: 237804.50	7138.31
51	MAINT. ROAD	N: 415782.36 E: 237817.98	7138.94
52	TOP	N: 415884.27 E: 238224.25	7135.00
53	TOP	N: 415879.59 E: 238171.62	7135.00
54	TOP	N: 415781.94 E: 238048.50	7135.00
55	TOP	N: 415789.39 E: 238041.83	7135.00
56	TRICKLE CHANNEL	N: 415939.18 E: 238165.21	7127.43



15' GRAVEL MAINTENANCE
ACCESS ROAD TYPICAL SECTION
N.T.S.



DETENTION POND SECTION
SPILLWAY PROFILE
SCALE: NTS



POND B EMERGENCY SPILLWAY
TYP. SECTION
SCALE: 1"=5'

20 10 0 20 40
ORIGINAL SCALE: 1" = 20'

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

DATE

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PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
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V-SCALE	N/A
DATE	7/15/22
DESIGNED BY	APL
DRAWN BY	APL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2
POND PLANS

SHEET 8 OF 15
JOB NO. 25188.10

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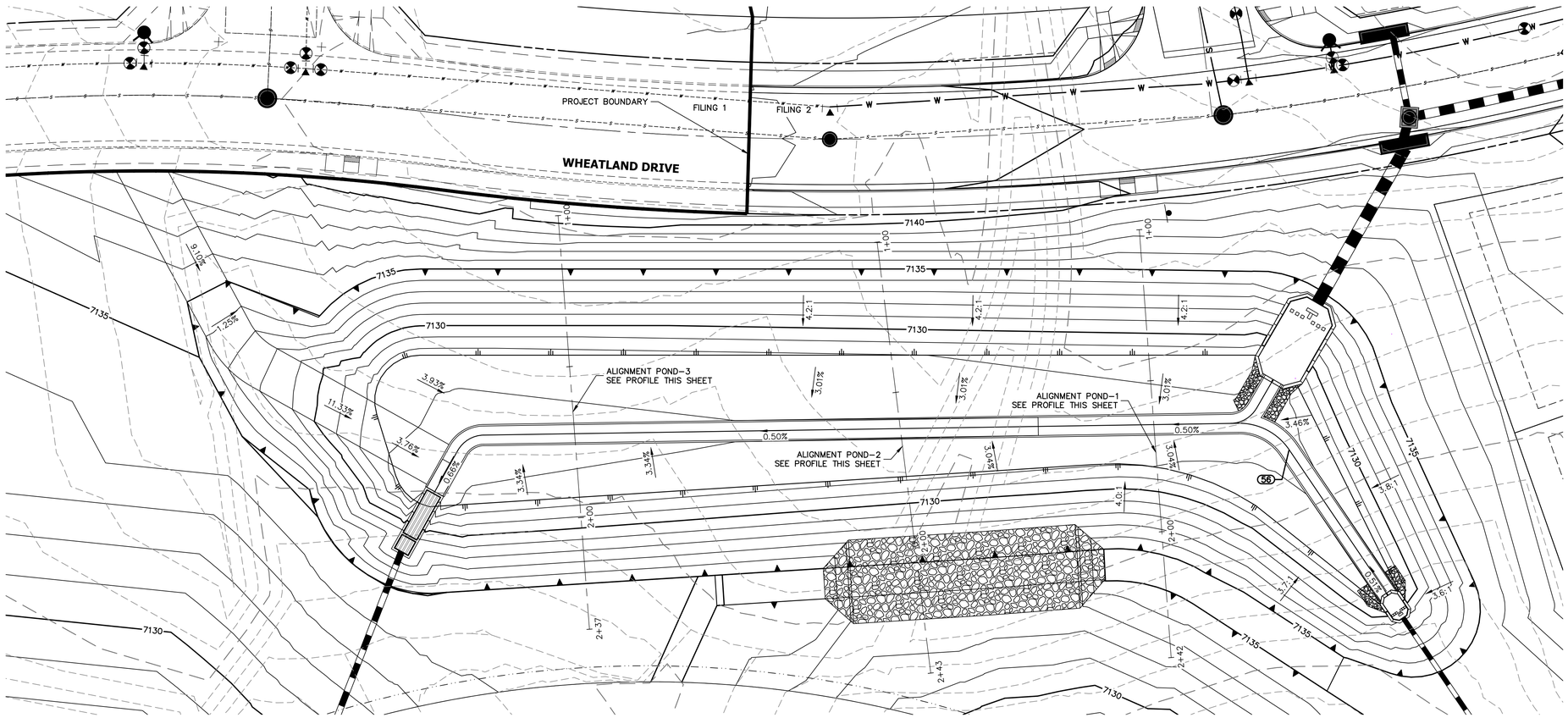

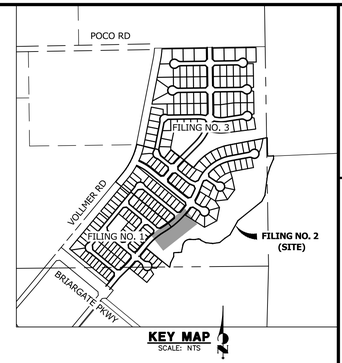

KEY MAP
SCALE: NTS

UNTIL SUCH TIME AS THESE PLANS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

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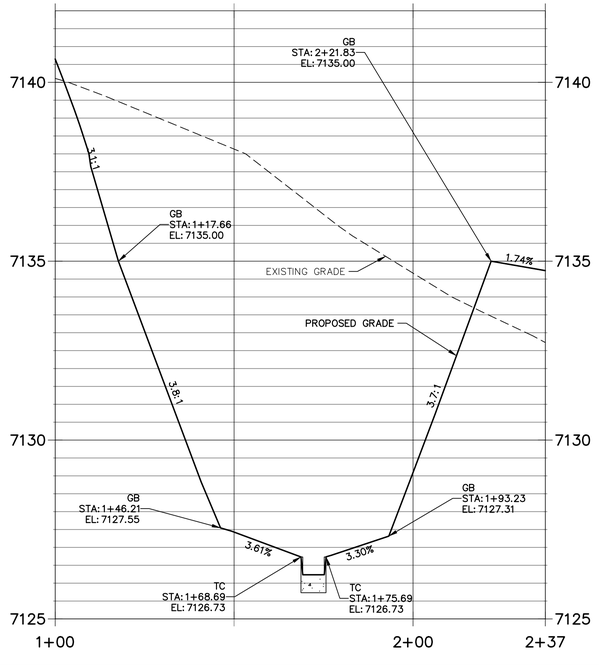
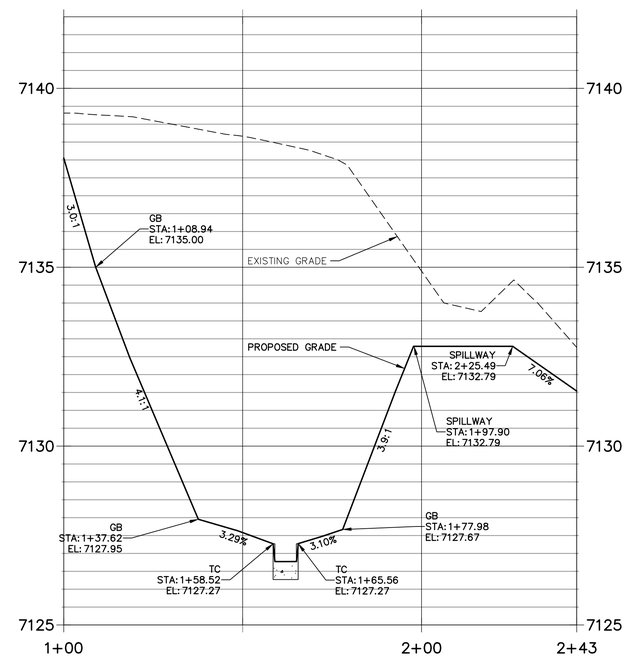
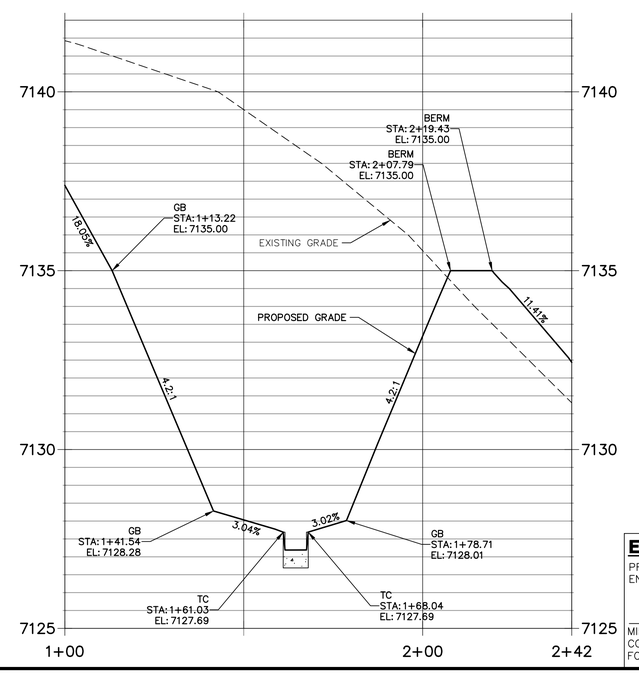
POND-3 PROFILE
STA 1+00.00 TO 2+36.96



POND-2 PROFILE
STA 1+00.00 TO 2+43.40



POND-1 PROFILE
STA 1+00.00 TO 2+41.67



Know what's **below.**
Call before you dig.

20 10 0 20 40

HORIZONTAL
ORIGINAL SCALE: 1" = 20'
VERTICAL
ORIGINAL SCALE: 1" = 2'

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

DATE

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V-SCALE	1"=2'
DATE	7/15/22
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CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2
POND PLANS

SHEET 9 OF 15

JOB NO. 25188.10

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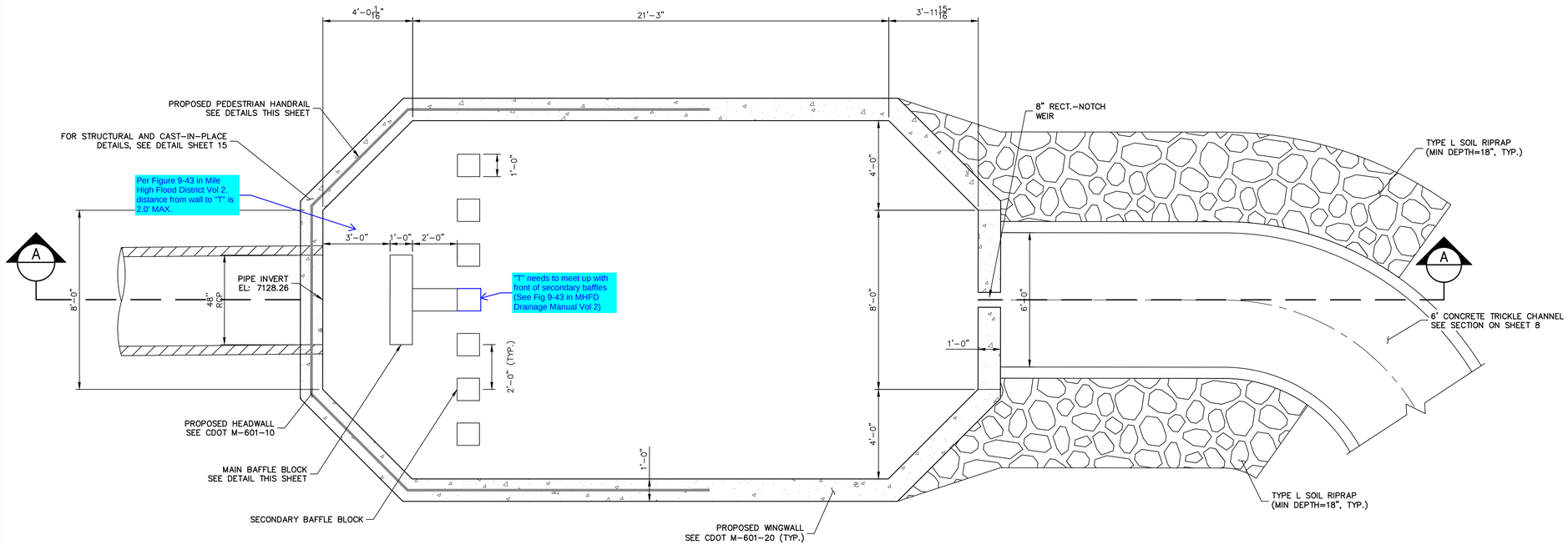
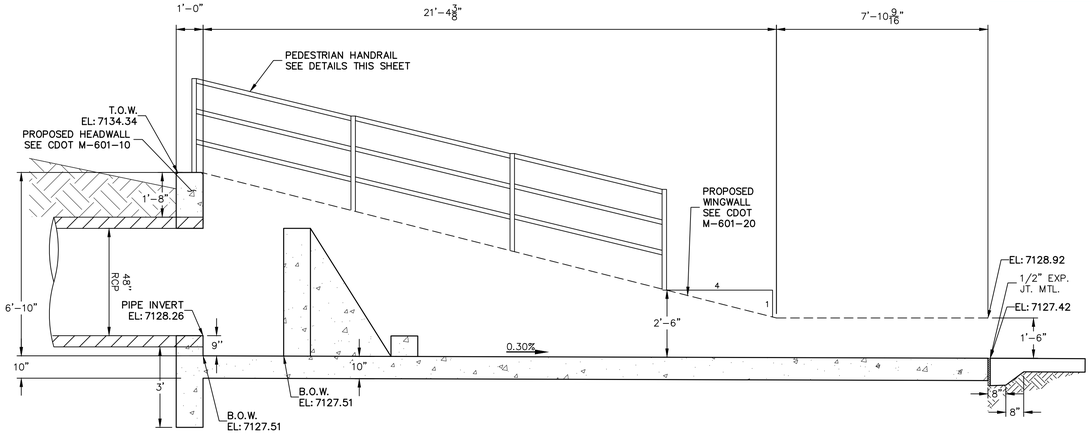


POND B-WEST FOREBAY PLAN VIEW

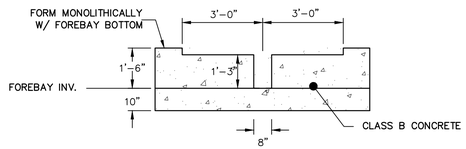
SCALE: 3/8"=1'

Include detail for storm water facility & Pet waste station signs. Show locations on plan view.



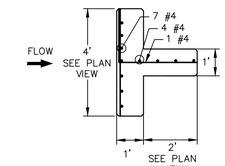
POND B-WEST FOREBAY CROSS SECTION A-A

SCALE: 3/8"=1'



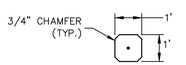
POND B-WEST FOREBAY SECTION AT WEIR

SCALE: 3/8"=1'



POND B-WEST FOREBAY MAIN BAFFLE BLOCK PLAN

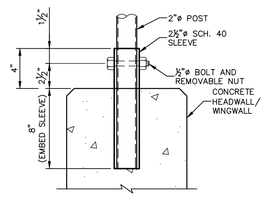
SCALE: 3/8"=1'



POND B-WEST FOREBAY SECONDARY BAFFLE BLOCK PLAN VIEW

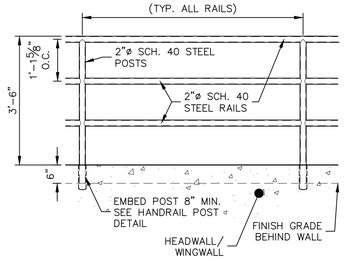
SCALE: 3/8"=1'

STANDARD FOREBAY DETAILS



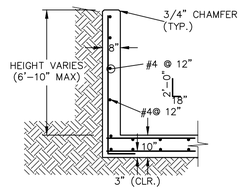
HANDRAIL POST DETAIL

SCALE: 1"=6'



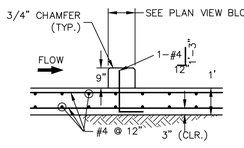
PEDESTRIAN RAILING DETAIL

SCALE: 1/2"=1'



POND B FOREBAY WINGWALL REINFORCING DETAIL (TYP.)

SCALE: N.T.S.



POND B FOREBAY SECONDARY BAFFLE BLOCK DETAILS

SCALE: 3/8"=1'

Know what's **below.** **Call** before you dig.

ENGINEER'S STATEMENT

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HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

POND PLANS

SHEET 10 OF 15

JOB NO. 25188.10

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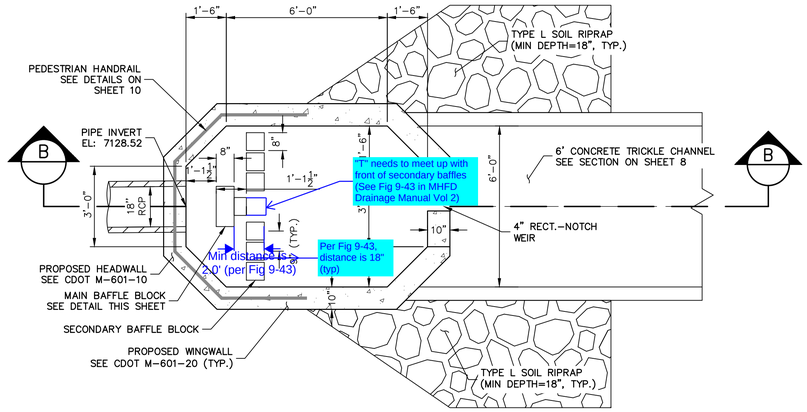
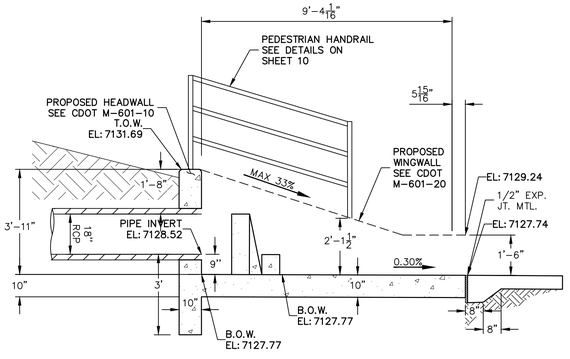
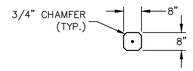


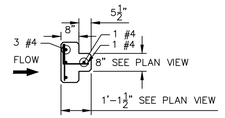
POND B-EAST FOREBAY
PLAN VIEW
SCALE: 3/8"=1'



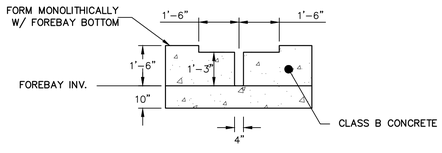
POND B-EAST FOREBAY
CROSS SECTION B-B
SCALE: 3/8"=1'



POND B-EAST FOREBAY
SECONDARY BAFFLE BLOCK
PLAN VIEW
SCALE: 3/8"=1'



POND B-EAST FOREBAY
MAIN BAFFLE BLOCK PLAN
SCALE: 3/8"=1'



POND B-EAST FOREBAY
SECTION AT WEIR
SCALE: 3/8"=1'

Know what's below.
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POND PLANS

SHEET 11 OF 15

JOB NO. 25188.10

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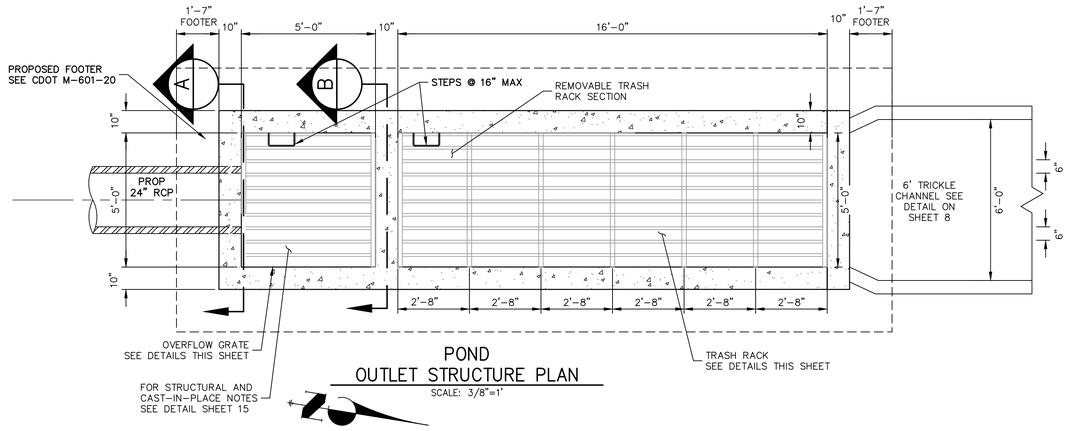
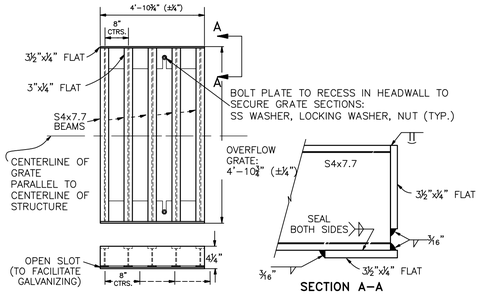


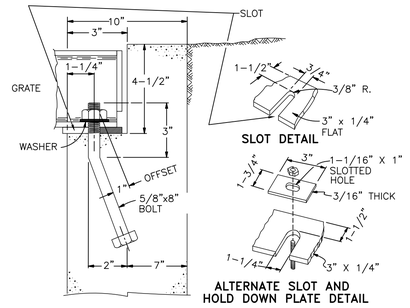
POND OUTLET STRUCTURE PLAN

SCALE: 3/8"=1'



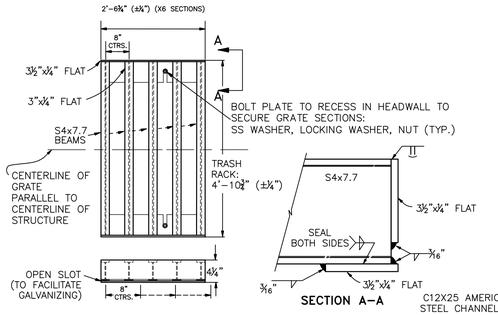
OVERFLOW GRATE DETAILS

N.T.S.



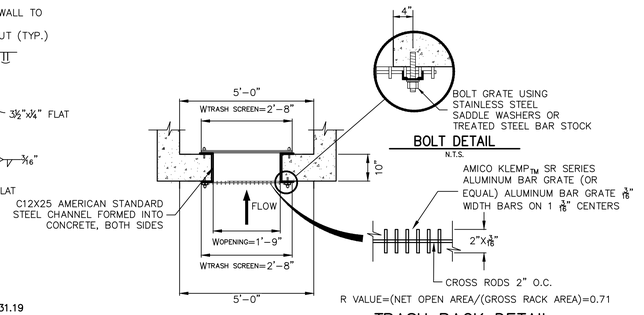
OVERFLOW GRATE/TRASH RACK INSTALLATION DETAIL

N.T.S.



TRASH RACK DETAILS

N.T.S.

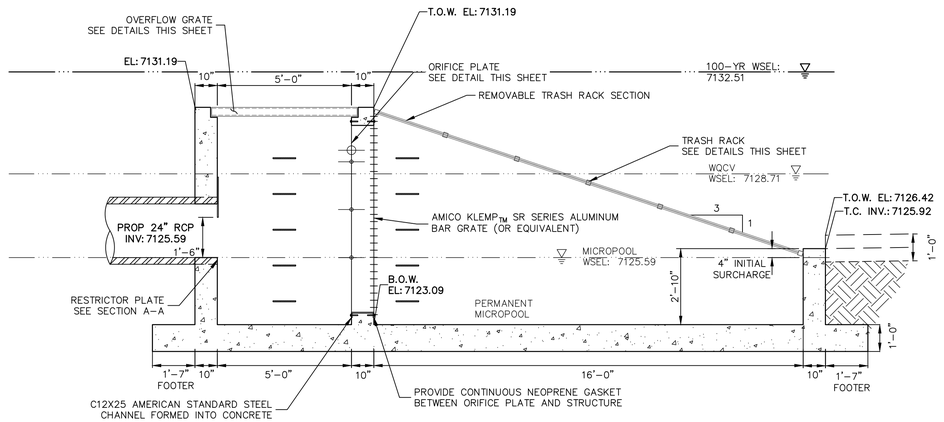


TRASH RACK AND PLATE DETAIL (PLAN)

N.T.S.

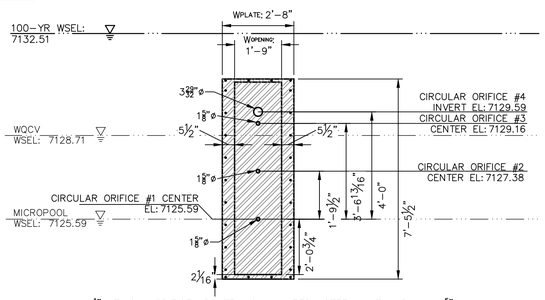
TRASH RACK DETAIL

N.T.S.



POND OUTLET STRUCTURE PROFILE

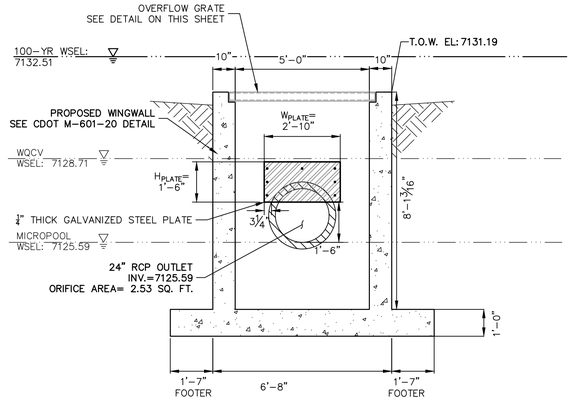
SCALE: 3/8"=1'



¼" THICK ORIFICE PLATE, GALVANIZED STEEL WITH 3 – 1⅞" ø CIRCULAR ORIFICE, AND 1 – 3 25/32" CIRCULAR ORIFICE BOLT PLATE TO CONCRETE @ 10" O.C. MAX. PROVIDE GASKET BETWEEN PLATE AND CONCRETE

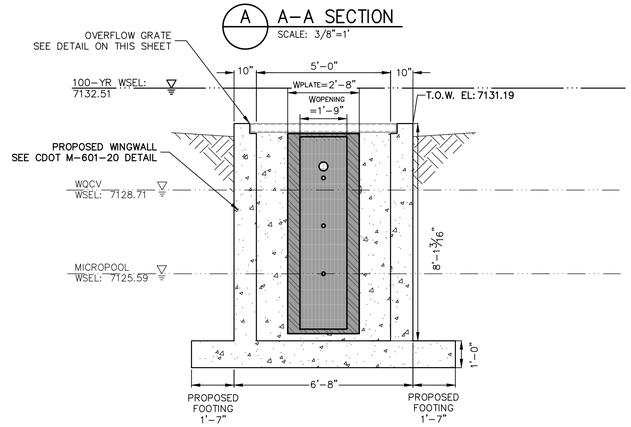
ORIFICE PLATE DETAIL

SCALE: 3/8"=1'



A A–A SECTION

SCALE: 3/8"=1'



B B–B SECTION

SCALE: 3/8"=1'

POND B OUTLET STRUCTURE NOTES:

ORIFICE PLATE:

1. PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE AND BETWEEN THE RESTRICTOR PLATE AND CONCRETE.
2. BOLT PLATE TO CONCRETE 12" MAX. ON CENTER.

TRASH RACKS:

3. TRASH RACKS SHALL BE 1¼" SCH.40 STEEL PIPE, GALVANIZED, @ 6" CENTERS. SUPPORT BARS SHALL BE ¼"x2" STEEL RECTANGULAR BARS, GALVANIZED, @ 36". ALL TRASH RACKS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE.
4. REMOVABLE TRASH RACK SECTIONS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED & LOCKABLE OR BOLTABLE ACCESS PANELS AS SHOWN ON THE PLANS.
5. STEEL TRASH RACKS SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
6. STRUCTURAL STEEL FOR GRATES, ORIFICE PLATES, AND BARS SHALL BE GALVANIZED AND SHALL BE IN ACCORDANCE WITH CDOT STANDARD SPECIFICATIONS, SUBSECTION 712.06.
7. ALL HARDWARE, BOLTS, AND FASTENERS SHALL BE STAINLESS STEEL.
8. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL PLATES AND GRATING FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

Know what's below. Call before you dig.

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 201
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	3/8"=1'	DESIGNED BY	APL
V-SCALE	3/8"=1'	DRAWN BY	APL
DATE	7/15/22	CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

POND PLANS

SHEET 12 OF 15

JOB NO. 25188.10

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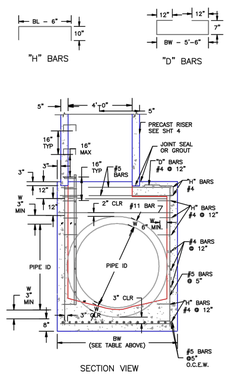


PIPE ID	BW
48" AND SMALLER	6'-4"
54"	6'-10"
60" AND LARGER	OD + 16"

NOTES

1. TYPE I MANHOLE SHALL BE USED WHEN APPROPRIATE AND TYPICALLY FOR PIPE SIZES LARGER THAN 30 INCHES I.D..

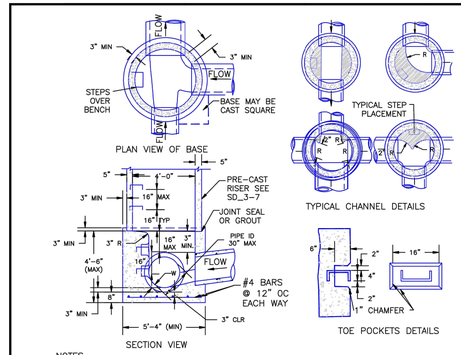
2. VIEW AND DETAILS SHOWN ARE TYPICAL FOR STRAIGHT THROUGH DESIGN ONLY. DESIGN ENGINEER SHALL DETERMINE MANHOLE BASE CONFIGURATION AND DIMENSIONS FOR PARTICULAR PIPE SIZES AND ALIGNMENT.

3. EITHER LADDER OR STEPS SHALL BE INSTALLED WHEN MANHOLE DEPTH EXCEEDS 30". LOWEST STEP SHALL BE BE A MAXIMUM OF 16" ABOVE THE FLOOR.

4. FLOOR OF THE MANHOLE SHALL BE TROWELLED TO A SMOOTH, HARD SURFACE AND SHALL SLOPE TOWARDS THE OUTLET (8:1 MAX., ½" PER FT. MIN). FLOOR SHALL BE SHAPED AND CHANNELED; SEE SD_3-2 FOR TYPICAL CHANNEL DETAILS.

SCALE: NOT TO SCALE

DATE APPROVED: 7/9/09	Storm Sewer Manhole Detail Type I Standard Drawing	
DEPARTMENT OF TRANSPORTATION: André Brackin	REVISION DATE: 7/9/09	FILE NAME: SD_3-1



NOTES

1. TYPE II MANHOLES SHALL BE USED WHEN APPROPRIATE AND TYPICALLY WHEN THE PIPE SIZES ARE 30" OR LESS INSIDE DIAMETER.

2. VIEW AND DETAILS ARE TYPICAL. DESIGN ENGINEER SHALL DETERMINE MANHOLE BASE CONFIGURATION AND DIMENSIONS FOR PARTICULAR PIPE SIZES AND ALIGNMENT.

3. EITHER LADDER OF STEPS SHALL BE INSTALLED WHEN MANHOLE DEPTH EXCEEDS 30". STEPS IN BASE SHALL BE INSTALLED IN "TOE POCKETS" (SEE DETAIL THIS SHEET). LOWEST STEP SHALL BE A MAXIMUM OF 16" ABOVE THE FLOOR.

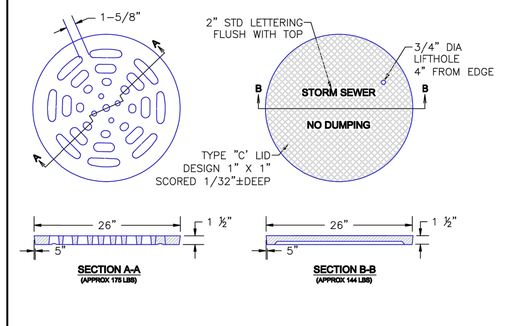
4. PIPES SHALL BE TRIMMED TO FINAL SHAPE AND SET BEFORE MANHOLE IS POURED.

5. BENCH SHALL BE SLOPED TOWARD CENTER OF MANHOLE BASE (4:1 MAX., ½" PER FOOT. MIN.).

6. FLOOR OF MANHOLE SHALL BE TROWELLED TO A SMOOTH, HARD SURFACE AND SHALL SLOPE TOWARDS THE OUTLET (8:1., ½" PER FT. MIN.) . FLOOR SHALL BE SHAPED AND CHANNELED; SEE DETAILS THIS SHEET.

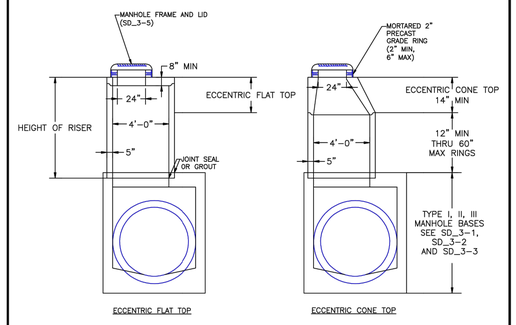
SCALE: NOT TO SCALE

DATE APPROVED: André P. Brackin, DEPARTMENT OF TRANSPORTATION	Storm Sewer Manhole Detail Type II Standard Drawing	
	REVISION DATE: 11/10/04	FILE NAME: SD_3-2



SCALE: NOT TO SCALE

DATE APPROVED: 9/16/10	Storm Sewer Manhole Details Standard Drawing	
DEPARTMENT OF TRANSPORTATION: André P. Brackin	REVISION DATE: 9/16/10	FILE NAME: SD_3-5

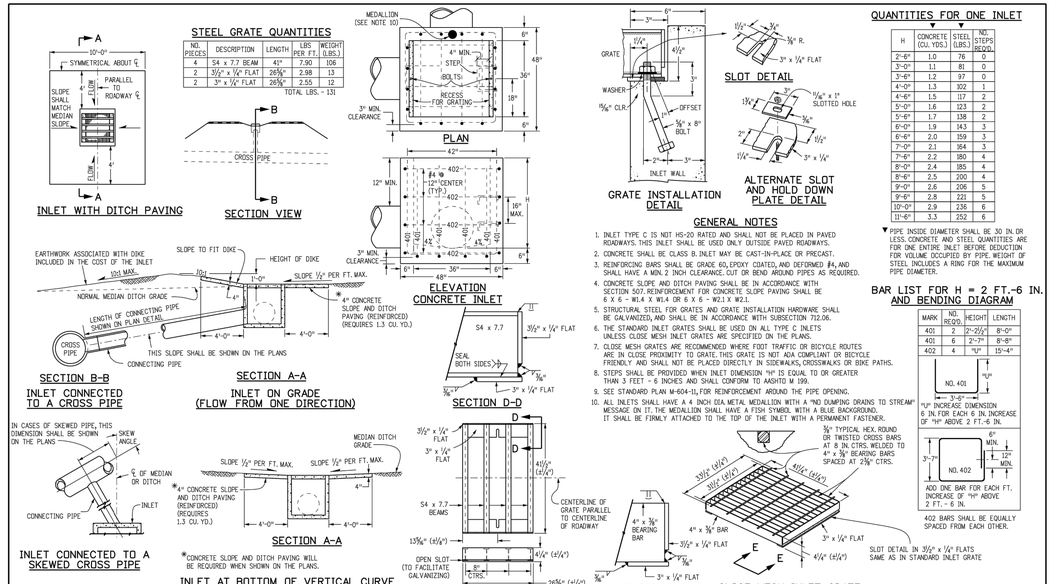


NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD AND SUPPLEMENTAL SPECIFICATIONS APPLICABLE TO THE PROJECT.
2. PRECAST RISERS SHALL CONFORM TO ASTM C478.
3 STEPS SHALL BE INSTALLED WHEN MANHOLE DEPTH EXCEEDS 30". STEPS SHALL BE CAST IRON OR EXTRUDED ALUMINUM, 1000 LB CAPACITY, 12" WIDE WITH NON-SKID GROOVES AND DROP FRONT ON SAFETY NOSES, IN ACCORDANCE WITH APPROVED OSHA REQUIREMENTS.

SCALE: NOT TO SCALE

DATE APPROVED: 8/11/11	Storm Sewer Manhole Riser and Cover Detail Standard Drawing	
DEPARTMENT OF TRANSPORTATION: André P. Brackin	REVISION DATE: 11/23/04	FILE NAME: SD_3-7



QUANTITIES FOR ONE INLET

H	CONCRETE (CU. YDS.)	STEEL (LBS.)	NO. STEPS REQ'D.
2'-6"	1.0	76	0
3'-0"	1.1	81	0
3'-6"	1.2	97	0
4'-0"	1.3	102	1
4'-6"	1.5	117	2
5'-0"	1.6	123	2
5'-6"	1.7	138	2
6'-0"	1.9	143	3
6'-6"	2.0	159	3
7'-0"	2.1	164	3
7'-6"	2.2	180	4
8'-0"	2.4	185	4
8'-6"	2.5	200	4
9'-0"	2.6	206	5
9'-6"	2.8	221	5
10'-0"	2.9	236	6
11'-0"	3.3	252	6

▼PIPE INSIDE DIAMETER SHALL BE 30 IN. OR LESS. CONCRETE AND STEEL QUANTITIES ARE FOR ONE ENTIRE INLET BEFORE DEDUCTION FOR VOLUME OCCUPIED BY PIPE. WEIGHT OF STEEL INCLUDES A RING FOR THE MAXIMUM PIPE DIAMETER.

BAR LIST FOR H = 2 FT.-6 IN. AND BENDING DIAGRAM

MARK	NO. REQ'D.	HEIGHT	LENGTH
401	2	2'-2½"	8'-0"
401	6	2'-7"	8'-8"
402	4	"H"	15'-4"

NO. 401 — 3'-6" — "H"

*H" INCREASE DIMENSION 6 IN. FOR EACH 6 IN. INCREASE OF "H" ABOVE 2 FT.-6 IN.

NO. 402 — 3'-7" — 6" MIN. — 12" MIN.

ADD ONE BAR FOR EACH FT. INCREASE OF "H" ABOVE 2 FT. - 6 IN.

402 BARS SHALL BE EQUALLY SPACED FROM EACH OTHER.

GENERAL NOTES

1. INLET TYPE C IS NOT HS-20 RATED AND SHALL NOT BE PLACED IN PAVED ROADWAYS. THIS INLET SHALL BE USED ONLY OUTSIDE PAVED ROADWAYS.
2. CONCRETE SHALL BE CLASS B. INLET MAY BE CAST-IN-PLACE OR PRECAST.
3. REINFORCING BARS SHALL BE GRADE 60, EPOXY COATED, AND DEFORMED #4, AND SHALL HAVE A MIN. 2 INCH CLEARANCE. CUT OR BEND AROUND PIPES AS REQUIRED.
4. CONCRETE SLOPE AND DITCH PAVING SHALL BE IN ACCORDANCE WITH SECTION 507. REINFORCEMENT FOR CONCRETE SLOPE PAVING SHALL BE 6 X 6 - W1.4 X W1.4 OR 6 X 6 - W2.1 X W2.1.
5. STRUCTURAL STEEL FOR GRATES AND GRATE INSTALLATION HARDWARE SHALL BE GALVANIZED, AND SHALL BE IN ACCORDANCE WITH SUBSECTION 712.06.
6. THE STANDARD INLET GRATES SHALL BE USED ON ALL TYPE C INLETS UNLESS CLOSE MESH INLET GRATES ARE SPECIFIED ON THE PLANS.
7. CLOSE MESH GRATES ARE RECOMMENDED WHERE FOOT TRAFFIC OR BICYCLE ROUTES ARE IN CLOSE PROXIMITY TO GRATE. THIS GRATE IS NOT ADA COMPLIANT OR BICYCLE FRIENDLY AND SHALL NOT BE PLACED DIRECTLY IN SIDEWALKS, CROSSWALKS OR BIKE PATHS.
8. STEPS SHALL BE PROVIDED WHEN INLET DIMENSION "H" IS EQUAL TO OR GREATER THAN 3 FEET - 6 INCHES AND SHALL CONFORM TO AASHTO M 199.
9. SEE STANDARD PLAN M-604-11, FOR REINFORCEMENT AROUND THE PIPE OPENING.
10. ALL INLETS SHALL HAVE A 4 INCH DIA. METAL MEDALLION WITH A "NO DUMPING DRAINS TO STREAM" MESSAGE ON IT. THE MEDALLION SHALL HAVE A FISH SYMBOL WITH A BLUE BACKGROUND. IT SHALL BE FIRMLY ATTACHED TO THE TOP OF THE INLET WITH A PERMANENT FASTENER.

Computer File Information		Sheet Revisions	
Creation Date: 07/31/19		Date:	Comments
Designer Initials: JBK	REVISION		
Last Modification Date: 07/31/19	REVISION		
Detailer Initials: LTA	REVISION		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	REVISION		

Colorado Department of Transportation
2829 West Howard Place
CDOT HQ, 3rd Floor
Denver, CO 80204
Phone: 303-757-9021 FAX: 303-757-9868
Project Development Branch JBK

INLET, TYPE C	STANDARD PLAN NO. M-604-10
Issued by the Project Development Branch: July 31, 2019	Standard Sheet No. 1 of 1
	Project Sheet Number:

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	N/A
V-SCALE	N/A
DATE	7/15/22
DESIGNED BY	GAG
DRAWN BY	GAG
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

DETAIL SHEET

SHEET 13 OF 15

JOB NO. 25188.10

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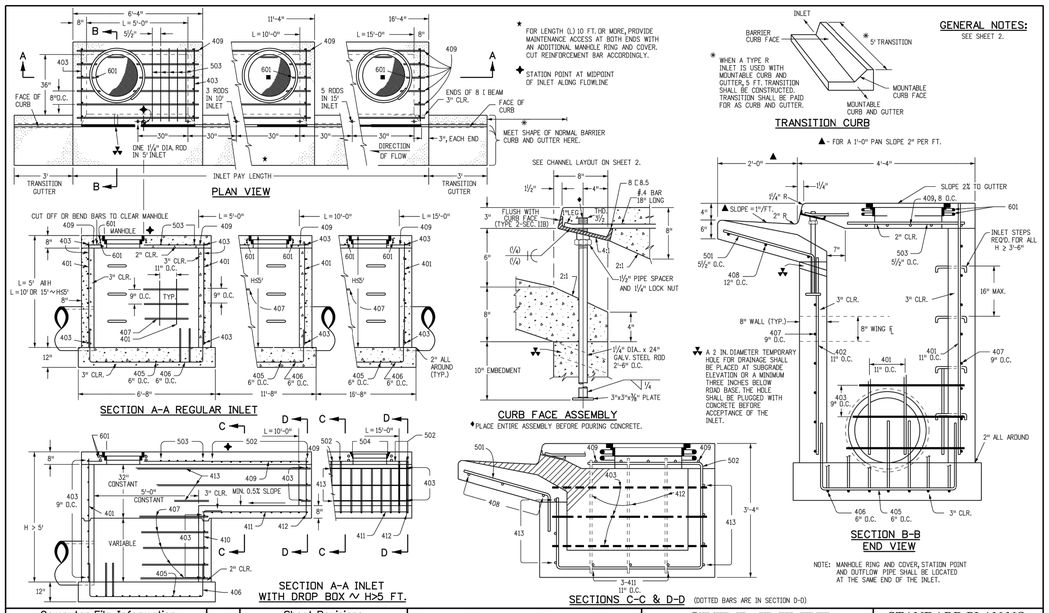

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Creation Date: 07/31/19		Date:	Comments
Designer Initials: JBK	(R-X)		
Last Modification Date: 07/31/19	(R-X)		
Detailer Initials: LTA	(R-X)		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	(R-X)		

Colorado Department of Transportation
2829 West Howard Place
CDOT HQ, 3rd Floor
Denver, CO 80204
Phone: 303-757-9021 FAX: 303-757-9868
Project Development Branch JBK

CURB INLET TYPE R

STANDARD PLAN NO. M-604-12
Standard Sheet No. 1 of 2
Project Sheet Number:

Issued by the Project Development Branch: July 31, 2019

MARK	BAR # OR SIZE	O.C. SPACING	TYPE	ALL INLETS L = 5 FT. NO. REQ'D.	ALL INLETS L = 5 FT. LENGTH	INLETS: H ≤ 5 FT. L = 10 FT. NO. REQ'D.	INLETS: H ≤ 5 FT. L = 10 FT. LENGTH	INLETS: H ≤ 5 FT. L = 15 FT. NO. REQ'D.	INLETS: H ≤ 5 FT. L = 15 FT. LENGTH	INLETS: H > 5 FT. L = 10 FT. NO. REQ'D.	INLETS: H > 5 FT. L = 10 FT. LENGTH	INLETS: H > 5 FT. L = 15 FT. NO. REQ'D.	INLETS: H > 5 FT. L = 15 FT. LENGTH
401	4	11"	II	15	*	21	*	26	*	11	*	11	*
402	4	11"	II	7	*	13	*	18	*	7	*	7	*
403	4	9"	II	*	4'-0"	*	4'-0"	*	4'-0"	*	4'-0"	*	4'-0"
405	4	6"	VI	11	6'-10"	21	6'-10"	31	6'-10"	11	6'-10"	11	6'-10"
406	4	6"	VIII	7	8'-10"	7	13'-10"	7	18'-10"	7	8'-10"	7	8'-10"
407	5	11"	II	*	5'-10"	*	10'-10"	*	15'-10"	*	5'-10"	*	5'-10"
408	4	12"	II	3	6'-10"	3	11'-10"	3	16'-0"	3	11'-10"	3	16'-0"
409	4	8"	II	6	5'-10"	6	10'-10"	6	15'-10"	6	10'-10"	6	15'-10"
410	4	11"	VII							3	*	3	*
411	4	11"	II							3	5'-2"	3	10'-2"
412	4	11"	II							3	2'-9"	3	2'-9"
413	4	9"	II							7	10'-10"	7	15'-10"
501	5	5½"	IV	11	3'-4"	22	3'-4"	33	3'-4"	22	3'-4"	33	3'-4"
502	5	5½"	II							11	11'-5"	17	11'-5"
503	5	5½"	II	5	3'-6"	16	3'-6"	27	3'-6"	6	3'-6"	6	3'-6"
504	5	5½"	IX									5	8'-4"
601	6	2½"	V	2	8'-10"	2	8'-10"	2	8'-10"	2	8'-10"	4	8'-10"
■R8.5				1	5'-10"	1	10'-10"	1	15'-10"	1	10'-10"	1	15'-10"
				2 BARS, 1 RODS		4 BARS, 3 RODS		8 BARS, 5 RODS		4 BARS, 2 RODS		8 BARS, 5 RODS	

* VARIABLE REFER TO TABLE TWO.
■ INCLUDE #4, 18 IN. BARS (SEE CHANNEL LAYOUT).

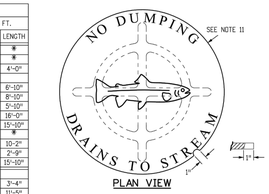
REGULAR INLETS | DROP BOX INLETS

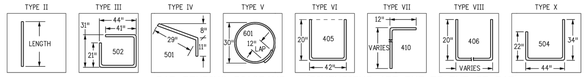
TABLE ONE ~ BAR LIST FOR CURB INLETS, TYPE "R"

"H"	LENGTH 401	LENGTH 402	LENGTH 410	NO. REQ'D. REGULAR 403	NO. REQ'D. REGULAR 407	NO. REQ'D. DROP BOX 403	NO. REQ'D. DROP BOX 407	L = 5 FT. CONC. CU. YDS.	L = 5 FT. STEEL LBS.	L = 10 FT. CONC. CU. YDS.	L = 10 FT. STEEL LBS.	L = 15 FT. CONC. CU. YDS.	L = 15 FT. STEEL LBS.
3'-0"	2'-8"	1'-8"		10	7			3.2	285	5.3	497	7.4	706
3'-6"	3'-2"	2'-2"		10	7			3.4	305	5.7	528	7.9	747
4'-0"	3'-8"	2'-8"		12	9			3.7	326	6.0	559	8.4	786
4'-6"	4'-2"	3'-2"		12	9			3.9	334	6.4	571	8.8	803
5'-0"	4'-8"	3'-8"		14	11			4.1	354	6.7	602	9.3	844
5'-6"	5'-2"	4'-2"	3'-5"	16	13	15	6	4.4	375	6.0	607	7.4	850
6'-0"	5'-8"	4'-8"	3'-11"	16	13	16	6	4.6	382	6.2	616	7.6	860
6'-6"	6'-2"	5'-2"	4'-5"	18	15	18	8	4.8	402	6.4	637	7.8	880
7'-0"	6'-8"	5'-8"	4'-11"	20	17	19	10	5.0	423	6.6	654	8.0	897
7'-6"	7'-2"	6'-2"	5'-5"	20	17	20	10	5.3	430	6.9	664	8.3	907
8'-0"	7'-8"	6'-8"	5'-11"	22	19	22	12	5.5	451	7.1	684	8.5	927
8'-6"	8'-2"	7'-2"	6'-5"	24	21	23	14	5.7	471	7.3	702	8.7	944
9'-0"	8'-8"	7'-8"	6'-11"	24	21	24	14	6.0	479	7.6	711	9.0	954
9'-6"	9'-2"	8'-2"	7'-5"	26	23	26	16	6.2	499	7.8	732	9.2	974
10'-0"	9'-8"	8'-8"	7'-11"	28	25	27	18	6.4	520	8.0	749	9.4	992
10'-6"	10'-2"	9'-2"	8'-5"	28	25	28	18	6.7	527	8.3	759	9.7	1001
11'-0"	10'-8"	9'-8"	8'-11"	30	27	30	20	6.9	547	8.5	779	9.9	1022

NOTES: FOR L = 5 FT., L=10 FT., AND L=15 FT.
REGULAR INLETS: TOTAL QUANTITIES NEEDED ARE OUTSIDE THE HEAVY BLACK LINE.
DROP BOX INLETS: TOTAL QUANTITIES NEEDED ARE INSIDE THE HEAVY BLACK LINE.
STEEL WEIGHTS DO NOT INCLUDE STRUCTURAL STEEL CHANNEL.

TABLE TWO ~ BARS AND QUANTITIES VARIABLE WITH "H"

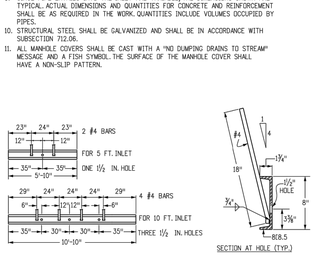




BAR BENDING DIAGRAMS ~ (DIMENSIONS ARE OUT-TO-OUT OF BAR)

GENERAL NOTES

1. CONCRETE SHALL BE CLASS B. INLET MAY BE CAST-IN-PLACE OR PRECAST.
2. CONCRETE WALLS SHALL BE FORMED ON BOTH SIDES AND SHALL BE 8 INCHES THICK.
3. INLET STEPS SHALL BE IN CONFORMANCE WITH AASHTO M 199.
4. CURB FACE ASSEMBLY SHALL BE GALVANIZED AFTER WELDING.
5. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾ OF A INCH. CURB AND GUTTER CORNERS SHALL BE FINISHED TO MATCH THE EXISTING CURB AND GUTTER BEYOND THE TRANSITION GUTTER.
6. REINFORCING BARS SHALL BE DEFORMED AND SHALL HAVE A 2 INCH MINIMUM CLEARANCE. ALL REINFORCING BARS SHALL BE GRADE 60 AND EPOXY COATED.
7. DIMENSIONS AND WEIGHTS OF TYPICAL MANHOLE RING AND COVER ARE NOMINAL.
8. MATERIAL FOR MANHOLE RINGS AND COVERS SHALL BE GRAY OR DUCTILE CAST IRON IN ACCORDANCE WITH SUBSECTION 712.06.
9. SINCE PIPE ENTRIES INTO THE INLET ARE VARIABLE, THE DIMENSIONS SHOWN ARE TYPICAL. ACTUAL DIMENSIONS AND QUANTITIES FOR CONCRETE AND REINFORCEMENT SHALL BE AS REQUIRED IN THE WORK. QUANTITIES INCLUDE VOLUMES OCCUPIED BY PIPES.
10. STRUCTURAL STEEL SHALL BE GALVANIZED AND SHALL BE IN ACCORDANCE WITH SUBSECTION 712.06.
11. ALL MANHOLE COVERS SHALL BE CAST WITH A "NO DUMPING DRAINS TO STREAM" MESSAGE AND A FISH SYMBOL. THE SURFACE OF THE MANHOLE COVER SHALL HAVE A NON-SLIP PATTERN.



CHANNEL LAYOUT DETAILS
SEE CURB FACE ASSEMBLY ON SHEET 1.

Computer File Information		Sheet Revisions	
Creation Date: 07/31/19		Date:	Comments
Designer Initials: JBK	(R-X)		
Last Modification Date: 07/31/19	(R-X)		
Detailer Initials: LTA	(R-X)		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	(R-X)		

Colorado Department of Transportation
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CDOT HQ, 3rd Floor
Denver, CO 80204
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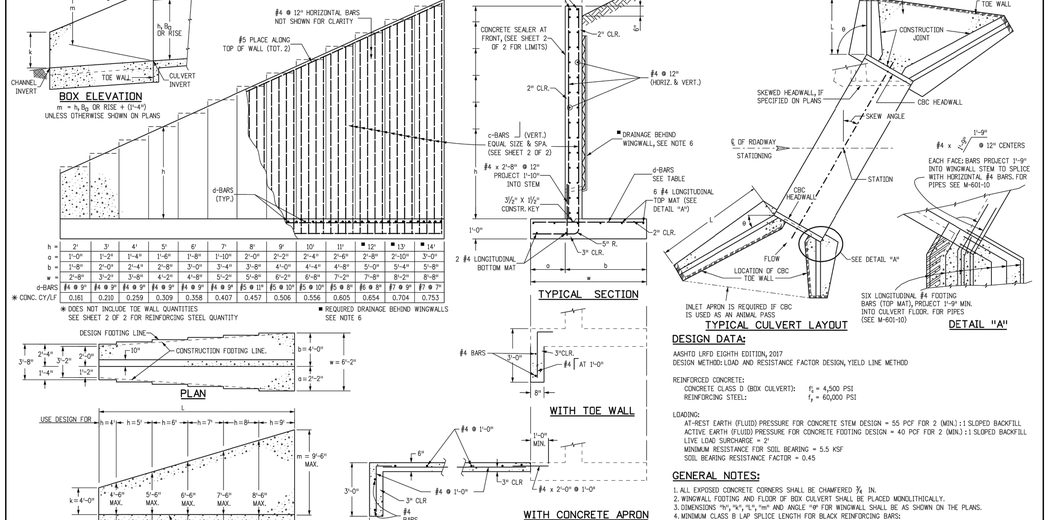
Project Development Branch JBK

CURB INLET TYPE R

STANDARD PLAN NO. M-604-12
Standard Sheet No. 2 of 2
Project Sheet Number:

Issued by the Project Development Branch: July 31, 2019



DESIGN DATA:

AASHTO LRFD EIGHTH EDITION, 2017
DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN, YIELD LINE METHOD

REINFORCED CONCRETE:
CONCRETE CLASS D (BOX CULVERT): f'_c = 4,500 PSI
REINFORCING STEEL: f_y = 60,000 PSI

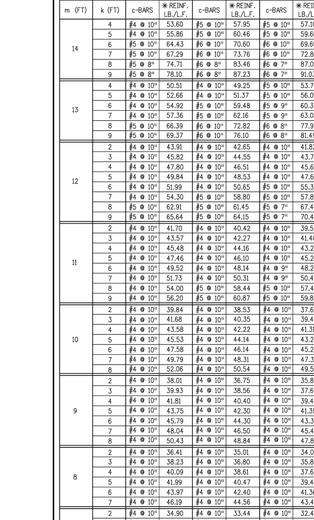
LOADING:
AT-REST EARTH (FLUID) PRESSURE FOR CONCRETE STEM DESIGN = 55 PCF FOR 2 (MIN.) : 1 SLOPED BACKFILL
ACTIVE EARTH (FLUID) PRESSURE FOR CONCRETE FOOTING DESIGN = 40 PCF FOR 2 (MIN.) : 1 SLOPED BACKFILL
LIVE LOAD SURCHARGE = 2'
MINIMUM RESISTANCE FOR SOIL BEARING = 5.5 KSF
SOIL BEARING RESISTANCE FACTOR = 0.45

GENERAL NOTES:

1. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾ IN.
2. WINGALL FOOTING AND FLOOR OF BOX CULVERT SHALL BE PLACED MONOLITHICALLY.
3. DIMENSIONS "W", "K", "L", "m" AND ANGLE "Θ" FOR WINGWALL SHALL BE AS SHOWN ON THE PLANS.
4. MINIMUM CLASS B LAP SPLICE LENGTH FOR BLACK REINFORCING BARS:

BAR SIZE:	#4	#5	#6	#7
SPLICE LENGTH:	1'- 6"	1'-11"	2'-3"	2'-7"

5. DESIGN DOES NOT CONSIDER ANY SCOUR EFFECTS.
6. WINGWALL DRAIN SHALL BE REQUIRED IF "h" ≥ 12.0 FT., SEE SHEET 2 OF 2 FOR DETAILS.



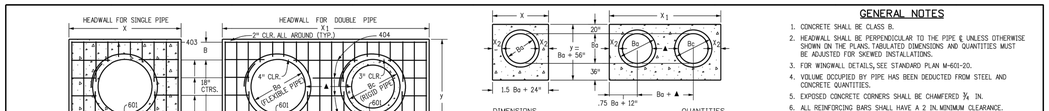
TYPICAL CULVERT LAYOUT

DETAIL "A"

c-BARS AND REINFORCING STEEL QUANTITY (EXCLUDE TOE WALL)

* REINFORCING STEEL QUANTITY INCLUDES STEM AND FOOTING QUANTITIES, BUT DOES NOT INCLUDE TOE WALL QUANTITIES.

L (MULTIPLE OF m)	≤ (1.0 x m)	≤ (1.25 x m)	≤ (1.5 x m)	≤ (1.75 x m)	≤ (2.0 x m)	≤ (2.25 x m)	≤ (2.5 x m)	≤ (2.75 x m)	≤ (3.0 x m)	≤ (3.25 x m)	≤ (3.5 x m)
m (FT)	k (FT)	c-BARS	c-BARS	c-BARS	c-BARS	c-BARS	c-BARS	c-BARS	c-BARS	c-BARS	c-BARS
		* REINF. LB./L.F.	* REINF. LB./L.F.	* REINF. LB./L.F.	* REINF. LB./L.F.	* REINF. LB./L.F.	* REINF. LB./L.F.	* REINF. LB./L.F.	* REINF. LB./L.F.	* REINF. LB./L.F.	* REINF. LB./L.F.
14	4	#4 @ 10" 53.60	#5 @ 10" 57.95	#5 @ 12" 57.10	#5 @ 8" 60.22	#5 @ 7" 62.43	#5 @ 7" 62.09	#5 @ 6" 65.38	#5 @ 6" 63.15	#6 @ 8" 67.10	#6 @ 8" 66.94
	5	#4 @ 10" 55.86	#5 @ 10" 60.46	#5 @ 10" 59.60	#5 @ 8" 62.89	#5 @ 7" 65.23	#5 @ 7" 64.88	#5 @ 6" 68.34	#5 @ 6" 68.11	#6 @ 8" 70.17	#6 @ 8" 70.00
	6	#5 @ 10" 64.43	#6 @ 10" 70.60	#6 @ 10" 69.69	#6 @ 8" 74.93	#6 @ 8" 74.45	#6 @ 7" 78.30	#6 @ 6" 83.64	#6 @ 6" 83.40	#6 @ 6" 83.22	#6 @ 6" 83.05
	7	#5 @ 10" 67.29	#6 @ 10" 73.76	#6 @ 10" 72.83	#6 @ 8" 78.32	#6 @ 8" 77.84	#6 @ 7" 81.87	#6 @ 6" 87.45	#6 @ 6" 87.21	#6 @ 6" 87.02	#6 @ 6" 86.86
	8	#5 @ 10" 74.31	#6 @ 8" 81.46	#6 @ 8" 80.56	#6 @ 7" 87.09	#6 @ 7" 92.54	#7 @ 7" 99.47	#7 @ 7" 99.08	#7 @ 6" 107.11	#7 @ 6" 106.86	#7 @ 6" 106.66
	9	#5 @ 8" 78.10	#6 @ 8" 87.23	#6 @ 7" 91.03	#6 @ 6" 96.72	#7 @ 7" 103.93	#7 @ 7" 103.54	#7 @ 6" 111.90	#7 @ 6" 111.65	#7 @ 6" 111.45	#7 @ 6" 111.28
13	4	#4 @ 10" 50.51	#4 @ 10" 49.25	#5 @ 10" 53.71	#5 @ 10" 53.09	#5 @ 10" 52.36	#5 @ 9" 53.85	#5 @ 8" 55.54	#5 @ 7" 57.85	#5 @ 7" 57.67	#5 @ 7" 57.51
	5	#4 @ 10" 52.66	#4 @ 10" 51.37	#5 @ 10" 56.09	#5 @ 10" 55.46	#5 @ 10" 54.99	#5 @ 9" 56.20	#5 @ 8" 58.08	#5 @ 7" 60.51	#5 @ 7" 60.33	#5 @ 7" 60.17
	6	#4 @ 10" 54.92	#4 @ 10" 53.48	#5 @ 9" 60.31	#5 @ 9" 67.56	#5 @ 8" 67.06	#5 @ 8" 73.12	#5 @ 7" 66.70	#5 @ 7" 69.53	#5 @ 7" 69.28	#5 @ 7" 72.06
	7	#4 @ 10" 57.36	#5 @ 10" 62.16	#5 @ 9" 63.05	#6 @ 9" 70.66	#6 @ 9" 70.16	#6 @ 9" 69.78	#6 @ 8" 72.75	#6 @ 8" 72.50	#6 @ 7" 76.52	#6 @ 7" 76.35
	8	#5 @ 10" 66.39	#6 @ 10" 72.82	#6 @ 8" 77.97	#6 @ 7" 81.69	#6 @ 7" 86.67	#6 @ 6" 86.37	#7 @ 7" 93.18	#7 @ 7" 92.97	#7 @ 7" 92.80	#7 @ 7" 92.64
	9	#5 @ 10" 69.27	#6 @ 10" 76.10	#6 @ 8" 81.49	#6 @ 7" 85.37	#6 @ 7" 84.87	#6 @ 6" 90.59	#6 @ 6" 90.29	#7 @ 7" 97.39	#7 @ 7" 97.18	#7 @ 7" 97.00
12	2	#4 @ 10" 43.91	#4 @ 10" 42.65	#4 @ 10" 41.82	#4 @ 10" 41.22	#4 @ 10" 40.78	#4 @ 9" 41.29	#5 @ 10" 44.61	#5 @ 10" 44.37	#5 @ 10" 44.18	#5 @ 10" 44.01
	3	#4 @ 10" 45.82	#4 @ 10" 44.55	#4 @ 10" 43.71	#4 @ 10" 43.11	#4 @ 10" 42.66	#4 @ 9" 43.22	#5 @ 10" 46.75	#5 @ 10" 46.51	#5 @ 10" 46.32	#5 @ 10" 46.15
	4	#4 @ 10" 47.80	#4 @ 10" 46.51	#4 @ 10" 45.65	#5 @ 10" 50.06	#5 @ 10" 49.59	#5 @ 10" 49.23	#5 @ 10" 48.94	#5 @ 10" 48.69	#5 @ 9" 50.00	#5 @ 8" 51.72
	5	#4 @ 10" 49.84	#4 @ 10" 48.53	#4 @ 10" 47.66	#5 @ 10" 52.33	#5 @ 10" 51.85	#5 @ 10" 51.49	#5 @ 10" 51.19	#5 @ 10" 50.94	#5 @ 9" 52.33	#5 @ 8" 54.14
	6	#4 @ 10" 51.99	#4 @ 10" 50.65	#5 @ 10" 55.34	#5 @ 8" 58.41	#5 @ 8" 57.93	#6 @ 10" 60.60	#6 @ 10" 60.29	#6 @ 9" 62.42	#6 @ 9" 62.22	#6 @ 9" 62.04
	7	#4 @ 10" 54.30	#5 @ 10" 58.80	#5 @ 10" 57.87	#5 @ 8" 61.10	#5 @ 8" 60.61	#6 @ 10" 63.43	#6 @ 10" 63.11	#6 @ 9" 65.35	#6 @ 9" 65.15	#6 @ 9" 64.97
	8	#5 @ 10" 62.91	#5 @ 10" 61.45	#5 @ 9" 67.46	#5 @ 6" 70.68	#5 @ 6" 70.20	#6 @ 7" 76.44	#6 @ 7" 76.13	#6 @ 7" 75.87	#6 @ 6" 81.30	#6 @ 6" 81.12
	9	#5 @ 10" 65.64	#5 @ 10" 64.15	#5 @ 7" 70.44	#5 @ 6" 73.82	#5 @ 6" 73.33	#6 @ 7" 79.86	#6 @ 7" 79.54	#6 @ 6" 84.95	#6 @ 6" 84.72	#6 @ 6" 84.52
11	2	#4 @ 10" 41.70	#4 @ 10" 40.42	#4 @ 10" 39.57	#4 @ 10" 38.96	#4 @ 10" 38.50	#4 @ 10" 38.15	#4 @ 10" 37.87	#4 @ 10" 37.63	#4 @ 9" 38.25	#5 @ 10" 41.46
	3	#4 @ 10" 43.57	#4 @ 10" 42.27	#4 @ 10" 41.40	#4 @ 10" 40.79	#4 @ 10" 40.33	#4 @ 10" 39.97	#4 @ 10" 39.69	#4 @ 10" 39.45	#4 @ 9" 40.12	#5 @ 10" 43.54
	4	#4 @ 10" 45.48	#4 @ 10" 44.18	#4 @ 10" 43.28	#4 @ 10" 42.66	#4 @ 9" 43.59	#5 @ 10" 46.57	#5 @ 10" 46.27	#5 @ 10" 46.02	#5 @ 10" 45.82	#5 @ 10" 45.65
	5	#4 @ 10" 47.46	#4 @ 10" 46.10	#4 @ 10" 45.21	#4 @ 10" 44.58	#4 @ 9" 45.06	#5 @ 10" 48.74	#5 @ 10" 48.44	#5 @ 10" 48.19	#5 @ 10" 47.99	#5 @ 10" 47.81
	6	#4 @ 10" 49.52	#4 @ 10" 48.14	#4 @ 9" 48.23	#5 @ 10" 51.88	#5 @ 10" 51.38	#5 @ 9" 52.57	#5 @ 9" 52.27	#5 @ 8" 53.99	#5 @ 8" 53.79	#5 @ 7" 56.16
	7	#4 @ 10" 51.73	#4 @ 10" 50.31	#4 @ 9" 50.43	#5 @ 10" 54.29	#5 @ 10" 53.78	#5 @ 9" 55.04	#5 @ 9" 54.73	#5 @ 8" 56.55	#5 @ 8" 56.35	#5 @ 7" 58.84
	8	#4 @ 10" 54.00	#5 @ 10" 58.44	#5 @ 10" 57.45	#5 @ 8" 60.64	#5 @ 7" 62.92	#5 @ 6" 66.25	#5 @ 6" 65.94	#5 @ 6" 65.69	#5 @ 6" 67.76	#5 @ 6" 67.57
	9	#4 @ 10" 56.20	#5 @ 10" 60.87	#5 @ 10" 59.85	#5 @ 8" 63.21	#5 @ 7" 65.60	#5 @ 6" 69.09	#5 @ 6" 68.78	#5 @ 6" 68.52	#5 @ 6" 70.69	#5 @ 6" 70.51
10	2	#4 @ 10" 39.84	#4 @ 10" 38.53	#4 @ 10" 37.65	#4 @ 10" 37.03	#4 @ 10" 36.57	#4 @ 10" 36.20	#4 @ 10" 35.91	#4 @ 10" 35.67	#4 @ 10" 35.48	#4 @ 9" 36.07
	3	#4 @ 10" 41.68	#4 @ 10" 40.35	#4 @ 10" 39.47	#4 @ 10" 38.84	#4 @ 10" 38.36	#4 @ 10" 38.00	#4 @ 10" 37.71	#4 @ 10" 37.46	#4 @ 10" 37.27	#4 @ 9" 37.91
	4	#4 @ 10" 43.58	#4 @ 10" 42.22	#4 @ 10" 41.31	#4 @ 10" 40.67	#4 @ 10" 40.19	#4 @ 10" 39.82	#4 @ 10" 39.53	#4 @ 10" 39.28	#4 @ 10" 39.08	#4 @ 9" 39.77
	5	#4 @ 10" 45.53	#4 @ 10" 44.14	#4 @ 10" 43.21	#4 @ 10" 42.56	#4 @ 10" 42.07	#5 @ 10" 46.44	#5 @ 10" 46.13	#5 @ 10" 45.87	#5 @ 10" 45.67	#5 @ 10" 45.49
	6	#4 @ 10" 47.58	#4 @ 10" 46.14	#4 @ 10" 45.20	#4 @ 10" 44.53	#4 @ 10" 44.03	#5 @ 10" 48.67	#5 @ 10" 48.35	#5 @ 10" 48.08	#5 @ 10" 47.88	#5 @ 10" 47.69
	7	#4 @ 10" 49.79	#4 @ 10" 48.31	#4 @ 10" 47.34	#4 @ 10" 51.97	#5 @ 10" 51.45	#5 @ 10" 51.04	#5 @ 9" 52.29	#5 @ 9" 52.03	#5 @ 8" 53.79	#5 @ 8" 53.61
	8	#4 @ 10" 52.06	#4 @ 10" 50.54	#4 @ 10" 49.54	#5 @ 10" 54.43	#5 @ 10" 53.89	#5 @ 10" 53.47	#5 @ 9" 54.80	#5 @ 9" 54.53	#5 @ 8" 56.39	#5 @ 8" 56.20
9	2	#4 @ 10" 38.01	#4 @ 10" 36.75	#4 @ 10" 35.85	#4 @ 10" 35.21	#4 @ 10" 34.73	#4 @ 10" 34.36	#4 @ 10" 34.06	#4 @ 10" 33.81	#4 @ 10" 33.61	#4 @ 10" 33.44
	3	#4 @ 10" 39.93	#4 @ 10" 38.56	#4 @ 10" 37.64	#4 @ 10" 36.99	#4 @ 10" 36.51	#4 @ 10" 36.13	#4 @ 10" 35.83	#4 @ 10" 35.58	#4 @ 10" 35.38	#4 @ 10" 35.21
	4	#4 @ 10" 41.81	#4 @ 10" 40.40	#4 @ 10" 39.47	#4 @ 10" 38.81	#4 @ 10" 38.31	#4 @ 10" 37.93	#4 @ 10" 37.63	#4 @ 10" 37.37	#4 @ 10" 37.17	#4 @ 10" 36.99
	5	#4 @ 10" 43.75	#4 @ 10" 42.30	#4 @ 10" 41.35	#4 @ 10" 40.67	#4 @ 10" 40.17	#4 @ 10" 39.78	#4 @ 10" 39.47	#4 @ 10" 39.20	#4 @ 9" 39.86	#5 @ 10" 43.28
	6	#4 @ 10" 45.79	#4 @ 10" 44.30	#4 @ 10" 43.31	#4 @ 10" 42.62	#4 @ 10" 42.10	#4 @ 10" 41.71	#4 @ 10" 41.39	#4 @ 10" 41.12	#4 @ 9" 41.82	#5 @ 10" 45.46
	7	#4 @ 10" 48.04	#4 @ 10" 46.50	#4 @ 10" 45.49	#4 @ 10" 44.77	#5 @ 10" 49.29	#5 @ 10" 48.86	#5 @ 10" 48.53	#5 @ 10" 48.24	#5 @ 10" 48.03	#5 @ 10" 47.84
	8	#4 @ 10" 50.43	#4 @ 10" 48.84	#4 @ 10" 47.80	#4 @ 10" 47.06	#5 @ 10" 51.83	#5 @ 10" 51.43	#5 @ 10" 51.05	#5 @ 10" 50.77	#5 @ 10" 50.54	#5 @ 10" 50.35
8	2	#4 @ 10" 36.41	#4 @ 10" 35.01	#4 @ 10" 34.08	#4 @ 10" 33.42	#4 @ 10" 32.92	#4 @ 10" 32.54	#4 @ 10" 32.23	#4 @ 10" 31.97	#4 @ 10" 31.77	#4 @ 10" 31.59
	3	#4 @ 10" 38.23	#4 @ 10" 36.80	#4 @ 10" 35.85	#4 @ 10" 35.18	#4 @ 10" 34.67	#4 @ 10" 34.28	#4 @ 10" 33.97	#4 @ 10" 33.70	#4 @ 10" 33.50	#4 @ 10" 33.32
	4	#4 @ 10" 40.09	#4 @ 10" 38.61	#4 @ 10" 37.64	#4 @ 10" 36.95	#4 @ 10" 36.



TYPICAL BAR LAYOUT FOR CONCRETE HEADWALLS

GENERAL NOTES

1. CONCRETE SHALL BE CLASS B.
2. HEADWALL SHALL BE PERPENDICULAR TO THE PIPE & UNLESS OTHERWISE SHOWN ON THE PLANS. TABULATED DIMENSIONS AND QUANTITIES MUST BE ADJUSTED FOR SKEWED INSTALLATIONS.
3. FOR WINGWALL DETAILS, SEE STANDARD PLAN M-601-20.
4. VOLUME OCCUPIED BY PIPE HAS BEEN DEDUCTED FROM STEEL AND CONCRETE QUANTITIES.
5. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾ IN.
6. ALL REINFORCING BARS SHALL HAVE A 2 IN. MINIMUM CLEARANCE.

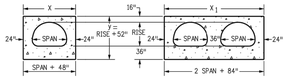
▲ WHEN TWO OR MORE PIPES ARE LAID SIDE BY SIDE, THEY SHALL BE PLACED SO THAT THE ADJACENT PIPES WILL BE ½ INSIDE DIAMETER APART, OR ½ INSIDE SPAN APART, OR 3 FT. APART (INCLUDING WALL THICKNESS), WHICHEVER IS LESS.

■ ADD 0.89 x (X OR X1) (LB.) WHEN APRON IS REQUIRED.

DIMENSIONS / QUANTITIES

Ba IN.	Bc IN.	X FT.-IN.	A IN.	X1 FT.-IN.	A1 IN.	Y FT.-IN.	B IN.	X2 IN.	CONCRETE SGL. CU. YD.	CONCRETE DBL. CU. YD.	STEEL ■ SGL. LBS.	STEEL ■ DBL. LBS.
54	65	8-9	8½	15-6	7	9-2	17	20	2.12	3.55	209	364
60	72	9-6	7	17-0	10	9-8	11	21	2.35	3.99	236	414
66	79	10-3	11½	18-6	7	10-2	14	22	2.60	4.44	249	453
72	86	11-0	10	20-0	10	10-8	17	23	2.85	4.91	270	476
78	93	11-9	8½	21-3	11	11-2	11	24	3.11	5.29	306	527
84	100	12-6	7	22-6	7	11-8	14	25	3.38	5.68	333	572
90	107	13-3	11½	23-9	8½	12-2	17	26	3.66	6.08	335	593
96	114	14-0	10	25-0	10	12-8	11	27	3.94	6.48	379	649
102	121	14-9	8½	26-3	11½	13-2	14	28	4.24	6.89	400	664
108	128	15-6	7	27-6	7	13-8	17	29	4.54	7.30	424	707

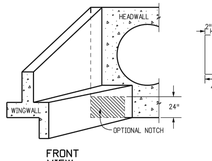
HEADWALL FOR RIGID ROUND PIPE



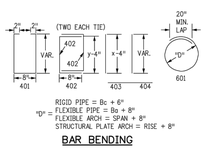
DIMENSIONS / QUANTITIES

EQUIV. Ba IN.	SPAN IN.	RISE IN.	X FT.-IN.	A IN.	X1 FT.-IN.	A1 IN.	Y FT.-IN.	B IN.	CONCRETE SGL. CU. YD.	CONCRETE DBL. CU. YD.	STEEL ■ SGL. LBS.	STEEL ■ DBL. LBS.
72	81	59	10-9	8½	20-6	7	9-3	17½	2.72	5.10	250	467
78	87	63	11-3	11½	21-6	7	9-7	10½	2.85	5.34	275	531
84	95	67	11-9	8½	22-10	9	9-11	12½	3.08	5.79	290	547
90	103	71	12-7	7½	24-2	11	10-3	15	3.30	6.21	321	591
96	112	75	13-4	12	25-8	8	10-7	16½	3.52	6.65	314	606
102	117	79	13-9	8½	26-6	7	10-11	9½	3.63	6.86	356	672
108	128	83	14-8	8	28-4	12	11-3	11½	3.96	7.51	376	699

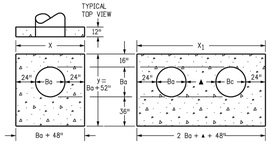
HEADWALL FOR FLEXIBLE PIPE ARCH



FRONT VIEW



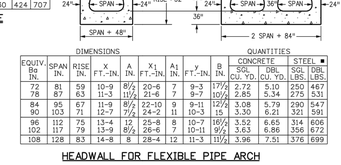
BAR BENDING



DIMENSIONS / QUANTITIES

Ba IN.	Bc IN.	X FT.-IN.	A IN.	X1 FT.-IN.	A1 IN.	Y FT.-IN.	B IN.	CONCRETE SGL. CU. YD.	CONCRETE DBL. CU. YD.	STEEL ■ SGL. LBS.	STEEL ■ DBL. LBS.
54	65	8-6	7	15-3	11½	8-10	15	2.19	3.81	211	358
60	72	9-0	10	16-6	7	9-4	18	2.38	4.25	217	396
66	79	9-6	7	17-9	8½	9-10	12	2.58	4.70	252	454
72	86	10-0	10	19-0	10	10-4	15	2.78	5.17	255	472
78	93	10-6	10	20-0	10	10-10	18	2.98	5.56	276	492
84	100	11-0	10	21-0	10	11-4	12	3.19	5.95	297	553
90	107	11-6	7	22-0	10	11-10	15	3.40	6.36	317	517
96	114	12-0	10	23-0	10	12-4	18	3.62	6.79	321	597
102	121	12-6	7	24-0	10	12-10	12	3.84	7.21	364	663
108	128	13-0	10	25-0	10	13-4	15	4.06	7.63	362	678

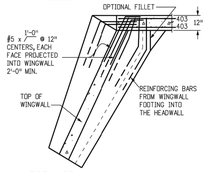
HEADWALL FOR FLEXIBLE ROUND PIPE



DIMENSIONS / QUANTITIES

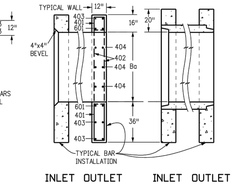
EQUIV. Ba IN.	SPAN IN.	RISE IN.	X FT.-IN.	A IN.	X1 FT.-IN.	A1 IN.	Y FT.-IN.	B IN.	CONCRETE SGL. CU. YD.	CONCRETE DBL. CU. YD.	STEEL ■ SGL. LBS.	STEEL ■ DBL. LBS.
66	73	44	8-1	10½	19-2	11	8-11	15½	2.52	4.70	232	424
75	83	50	9-1	9	21-0	10	9-5	9½	2.80	5.25	282	509
84	93	57	10-1	9½	22-10	9	9-11	12½	3.08	5.79	291	540
93	103	64	11-1	9	24-8	8	10-5	15½	3.36	6.33	309	622
102	112	71	12-1	8½	26-6	7	10-11	9½	3.63	6.86	379	673
111	122	77	13-1	9½	28-4	12	11-5	12½	4.05	7.67	377	711
120	132	84	14-1	9	30-2	8	11-11	15½	4.36	8.28	395	731
132	144	93	15-1	8½	32-8	8	12-8	11	4.75	9.03	441	839
141	153	99	16-1	10½	34-6	11	13-2	13½	5.17	9.86	448	931
150	162	106	17-1	9	36-4	8	13-8	16½	5.69	10.88	490	953
159	171	112	18-1	9½	38-2	8	14-2	11	5.89	11.25	534	1019

HEADWALL FOR STRUCTURAL PLATE ARCH



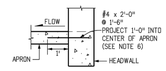
TOP VIEW

WINGWALL CONNECTION



INLET OUTLET
ENDS OF FLEXIBLE PIPE

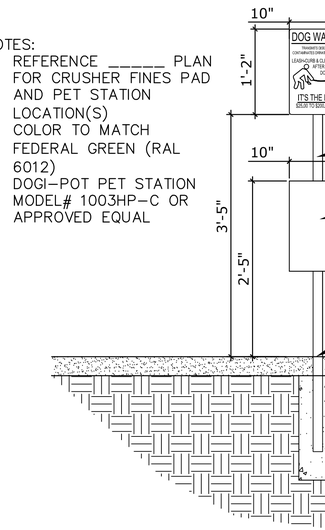
INLET OUTLET
ENDS OF RIGID PIPE



WHEN APRON IS REQUIRED

SKEW ANGLE A°	90	85	80	75	70	65	60	55	50	45	40	35	30
FACTOR (cosecA°)	1.000	1.004	1.015	1.035	1.064	1.103	1.155	1.221	1.305	1.414	1.556	1.743	2.000

SKEW FACTOR TABLE



PET WASTE STATION
SCALE: 1"=1'

Computer File Information	
Creation Date: 07/31/19	
Designer Initials: JBK	
Last Modification Date: 07/31/19	
Detailer Initials: LTA	
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	

Sheet Revisions	
Date:	Comments

Colorado Department of Transportation
2829 West Howard Place
CDOT HQ, 3rd Floor
Denver, CO 80204
Phone: 303-757-9021 FAX: 303-757-9868
Project Development Branch JBK

HEADWALL FOR PIPES

Issued by the Project Development Branch: July 31, 2019

STANDARD PLAN NO.
M-601-10
Standard Sheet No. 1 of 1
Project Sheet Number:

GENERAL STRUCTURE NOTES:

ALL WORK SHALL BE DONE IN ACCORDANCE WITH CITY OR COUNTY STANDARD CONSTRUCTION SPECIFICATIONS.
EXCEPT AS SHOWN IN THE PLANS, STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH CDOT M-206-1, AND M-206-2 EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213

THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO A 1-800-922-1987 AT LEAST 2 DAYS (NOT INCLUDING THE DAY OF NOTIFICATION) PRIOR TO ANY EXCAVATION OF OTHER.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DESIGNING AND PROVIDING ALL BRACING AND SHORING AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE EXCAVATION PROCEDURES INCLUDING ANY SHORING REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL METHODS AND MEANS OF CONSTRUCTION AS WELL AS ALL JOB SITE SAFETY & HEALTH PRECAUTIONS.

ALL SOILS WORK INCLUDING (BUT NOT LIMITED TO) PIER DRILLING AND CONSTRUCTION, SOILS EXCAVATION, FILL PLACEMENT, AND STRUCTURE BACKFILL SHALL BE IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT, UNLESS MORE STRINGENT REQUIREMENTS ARE PRINTED ON THE "IRRIGATION NOTES".

BACKFILL SHALL NOT BEGIN UNTIL CONCRETE WALLS REACH COMPRESSION STRENGTH AT LEAST 80 PERCENT OF THE REQUIRED 28 DAY STRENGTH, 0.8fc'.

REINFORCED CONCRETE:
CLASS D CONCRETE: fc'=4,500 psi
REINFORCING STEEL: fy=60,000 psi
ALL CAST-IN-PLACE CONCRETE SHALL BE CLASS D UNLESS NOTED OTHERWISE.

REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60 U.N.O.
REINFORCING BARS TO BE WELDED SHALL CONFORM TO ASTM A706, GRADE 60.
ALL REINFORCING, EXCEPT PIER REINFORCING, SHALL BE EPOXY COATED AND SHALL CONFORM TO ASTM A775.
ALL REINFORCING SHALL HAVE 2" CONCRETE COVER, U.N.O. ON PLANS, 3" AGAINST GROUND (BOTTOM SLAB)
ALL REINFORCING SHALL BE HOOKED AROUND CORNERS AND LAPPED, SEE DETAILS.
ALL LAP SPLICE LOCATIONS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

THE FOLLOWING TABLE GIVES THE MINIMUM CLASS B (STAGGERED) LAP SPLICE LENGTH FOR EPOXY COATED REINFORCING BARS PLACE IN ACCORDANCE WITH SUBSECTION 602.06. THESE SPLICE LENGTHS SHALL BE INCREASED BY 25% FOR BARS SPACED AT LESS THAN 6" ON CENTER. INCREASED BY 40% FOR HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE BELOW (TOP BARS.), AND INCREASED BY 75% IF BOTH CONDITIONS EXIST. THE INCREASES ABOVE FOR #6 THRU #11 BARS MAY BE 25%, 13%, AND 42% RESPECTIVELY.

#4	1'-3"	#5	1'-7"
#6	2'-5"	#7	2'-10"
#8	3'-8"	#9	4'-8"
#10	5'-11"	#11	7'-3"

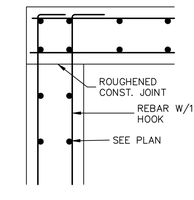
WHEN THE CONTRACTOR ELECTS TO SUBSTITUTE EPOXY COATED REINFORCEMENT FOR BLACK REINFORCING BARS. THE MINIMUM LAP SPLICE SHALL BE AS DESCRIBED ABOVE.

STATIONS, ELEVATIONS, AND DIMENSIONS CONTAINED IN THESE PLANS ARE CALCULATED FROM A RECENT FIELD SURVEY. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS IN THE FIELD BEFORE ORDERING OR FABRICATING ANY MATERIAL.

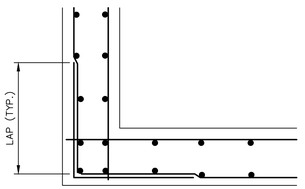
THE CONTRACTOR SHALL SUBMIT REINFORCING STEEL PLACING DRAWINGS (PRIOR TO CONSTRUCTION) TO THE ENGINEER FOR REVIEW FOR CONFORMANCE WITH THE DESIGN DRAWINGS. THE DESIGN DRAWINGS SHALL GOVERN OVER PLACING DRAWINGS IN ALL CASES UNLESS MODIFICATIONS ARE APPROVED IN WRITING BY ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.

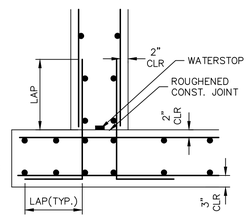
E.F.	=	EACH FACE	O.F.	=	OUTSIDE FACE
F.E.	=	FAR FACE	T.&B.	=	TOP AND BOTTOM
N.F.	=	NEAR FACE	T.F.	=	TOP FACE
I.F.	=	INSIDE FACE	B.F.	=	BOTTOM FACE
T.W.	=	TWO WAY	T.F.	=	TWO FACES
E.S.	=	EACH SIDE	Lp	=	LAP LENGTH



TYPICAL TOP CORNER WALL SECTION DETAIL



TYPICAL WALL CORNER PLAN VIEW



TYPICAL BOTTOM CORNER WALL SECTION DETAIL

CAST-IN-PLACE STRUCTURAL NOTES:

1. ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED BEFORE FRESH CONCRETE IS POURED.
2. ALL CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE APPROVED BY THE ENGINEER.
3. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
4. DO NOT BACKFILL UNTIL CONCRETE HAS REACHED DESIGN STRENGTH, F'c.
5. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾".
6. CONTRACTOR SHALL SUBMIT STEEL REINFORCING SHOP DRAWINGS FOR ALL CAST-IN-PLACE STRUCTURES FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.
7. HEADWALLS FOR PIPES SHALL BE CONSTRUCTED PER CDOT M-601-10.
8. WINGWALLS SHALL BE CONSTRUCTED PER CDOT M-601-20.

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	N/A	DESIGNED BY	GAG
V-SCALE	N/A	DRAWN BY	GAG
DATE	7/15/22	CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

DETAIL SHEET

SHEET 15 OF 15

JOB NO. 25188.10

X:\25\10000.all\25188.10\Drawings\Sheet Dwgs\CD-Utility\Storm Plans\25188.10 STORM_D7.dwg, D7.03, 7/15/2022 12:18:09 PM, CS

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

COUNTY OF EL PASO, STATE OF COLORADO

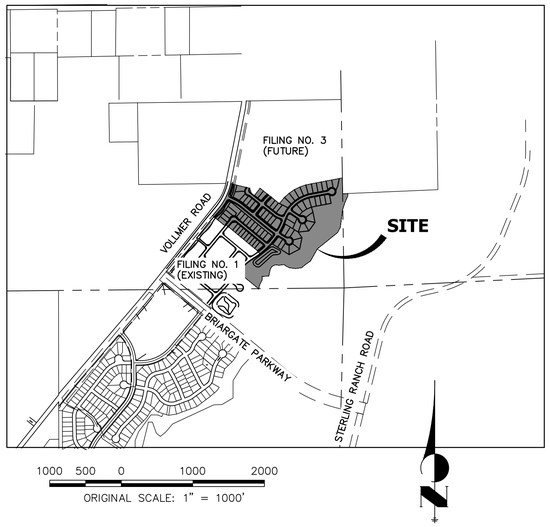
SANITARY SYSTEM PLAN

JULY 2022

GENERAL NOTES

1. ALL UTILITY CONSTRUCTION TO BE CONDUCTED IN CONFORMANCE WITH THE CURRENT STERLING RANCH METROPOLITAN DISTRICT (SRMD, THE DISTRICT) SPECIFICATIONS.
2. ALL PLANS ON THE JOB SITE SHALL BE SIGNED BY THE DISTRICT AND THE DISTRICT'S ENGINEER. ANY REVISION TO THE PLANS SHALL BE SO NOTED WITH THE OLD DRAWING MARKED NOT VALID.
3. ALL STATIONING IS CENTERLINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE NOTED.
4. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE DISTRICT. THE DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
5. ALL WATER AND SEWER SERVICE LOCATIONS SHALL BE CLEARLY MARKED ON EITHER THE CURB HEAD OR THE FACE OF THE CURB, WITH AN "S" FOR SEWER AND A "W" FOR WATER.
6. DUCTILE IRON PIPES, INCLUDING FITTINGS, VALVES AND FIRE HYDRANTS, SHALL BE WRAPPED WITH POLYETHYLENE TUBING, DOUBLE BONDED AT EACH JOINT AND ELECTRICALLY ISOLATED. BONDING AND ANODE CONNECTIONS SHALL BE THOROUGHLY COATED WITH BITUMINUOUS COATINGS.
7. ALL DUCTILE IRON PIPE LESS THAN 12 INCHES AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WIRES WITH 17 LB MAGNESIUM ANODES EVERY 400 FEET AND 9 LB MAGNESIUM ANODES AT EACH FITTING. ALL DUCTILE IRON PIPE 12 INCHES AND GREATER AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WIRES WITH 17 LB MAGNESIUM ANODES EVERY 300 FEET AND 9 LB MAGNESIUM ANODES AT EACH FITTING.
8. ALL PIPE MATERIAL, BACKFILL AND INSTALLATION SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS, COLORADO DEPARTMENT OF TRANSPORTATION, EL PASO COUNTY DEPARTMENT OF TRANSPORTATION, COLORADO SPRINGS UTILITIES AND THE GEOTECHNICAL ENGINEER.
9. COMPACTION TESTS SHALL BE 95% STANDARD PROCTOR AS DETERMINED BY ASTM D698, UNLESS OTHERWISE APPROVED BY THE DISTRICT OR HIGHER STANDARD AS IMPOSED BY ANOTHER AGENCIES HAVING RIGHT-OF-WAY JURISDICTION. THIS SHALL INCLUDE ALL VALVES, FIRE HYDRANT RUNS, WATER & SEWER SERVICE LINES AND MANHOLES. ALL REPORTS SHALL BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.
10. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. THE LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. THE DISTRICT SHALL BE NOTIFIED OF ANY DEVIATIONS TO THE LINE AND/OR GRADE AS DEPICTED ON THE PLANS. CONTRACTOR SHALL SUBMIT TO THE DISTRICT AND THE ENGINEER OF RECORD A REPORT OF THE FIELD VERIFIED INFORMATION PRIOR TO THE START OF CONSTRUCTION.
11. ALL BENDS SHALL BE FIELD STAKED PRIOR TO THE START OF CONSTRUCTION.
12. BENDS, DEFLECTION & CUT PIPE LENGTHS SHALL BE USED TO HOLD HORIZONTAL ALIGNMENT OF SEWER AND WATER LINES TO NO MORE THAN 0.5' FROM THE DESIGNED ALIGNMENT. CONSTRUCTION STAKES TO BE AT 25' INTERVALS ALONG CURVES TO ASSURE LOCATION OF PIPE LINE CONSTRUCTION.
13. AT ALL LOCATIONS WHERE CAP AND STUB IS NOTED ON DRAWINGS, PROVIDE A PLUG AT THE END OF THE PIPE JOINT NEAREST THE SPECIFIED STATION. PROVIDE A REVERSE ANCHOR AT ALL WATER LINE PLUGS.
14. ALL UNUSED SALVAGED WATER UTILITY MATERIAL SHALL BE RETURNED TO THE METROPOLITAN DISTRICT AS REQUESTED.
15. AT THE CONTRACTOR'S EXPENSE, ALL UTILITY MAINS SHALL BE SUPPORTED AND PROTECTED SUCH THAT THEY SHALL FUNCTION CONTINUOUSLY DURING CONSTRUCTION OPERATIONS. SHOULD A UTILITY MAIN FAIL AS A RESULT OF THE CONTRACTOR'S OPERATION, IT SHALL BE REPLACED IMMEDIATELY BY THE CONTRACTOR OR BY THE DISTRICT AT FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR/DEVELOPER.
16. PUMPING OR BYPASS OPERATIONS SHALL BE REVIEWED AND APPROVED BY BOTH THE DISTRICT AND THE DISTRICT ENGINEER PRIOR TO EXECUTION.
17. THE CONTRACTOR SHALL REPLACE OR REPAIR DAMAGE TO ALL SURFACE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO FENCES, LANDSCAPING, CURB AND GUTTER AND/OR ASPHALT THAT MAY BE CAUSED DURING CONSTRUCTION.
18. ALL CONTRACTORS WORKING ON OR NEAR A WATER OR SEWER FACILITY (TO INCLUDE SERVICE LINE) SHALL HAVE LIABILITY INSURANCE NAMING THE DISTRICT AS AN ADDITIONAL INSURED AND SHALL PROVIDE A CURRENT COPY OF WORKERS COMPENSATION INSURANCE ON FILE WITH THE DISTRICT. NO WORK CAN PROCEED WITHOUT CURRENT CERTIFICATES ON FILE AT THE DISTRICTS' OFFICE.
19. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND ALL AFFECTED UTILITY COMPANIES ADJACENT TO THE PROPOSED UTILITY CONSTRUCTION A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF CONSTRUCTION. A WEEKLY CONSTRUCTION MEETING SHALL BE REQUIRED WITH THE CONTRACTOR, DISTRICT ENGINEER AND ALL OTHER PARTIES AS DEEMED NECESSARY BY THE DISTRICT.
20. COMMENCEMENT OF CONSTRUCTION OF WATER/SEWER SYSTEMS WITHIN THE METROPOLITAN DISTRICT:
    a. PRIOR TO THE START OF CONSTRUCTION, A PRE-CONSTRUCTION MEETING IS REQUIRED A MINIMUM OF 48 HOURS IN ADVANCE OF COMMENCEMENT OF WORK. A REPRESENTATIVE OF THE OWNER OR DEVELOPER, A REPRESENTATIVE OF THE CONTRACTOR AND DESIGN ENGINEER ARE REQUIRED TO ATTEND. CONTACT THE DISTRICT TO SCHEDULE THE PRE-CONSTRUCTION MEETING. NO PRE-CONSTRUCTION MEETING CAN BE SCHEDULED PRIOR TO FOUR (4) SIGNED/ APPROVED PLAN SETS ARE RECEIVED BY THE DISTRICT.
    b. THE CONTRACTOR IS REQUIRED TO NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 2 WEEKS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ALSO NOTIFY AFFECTED UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION ADJACENT TO THE KNOWN UTILITY LINES.
21. TESTING OF FACILITIES:
    a. THE CONTRACTOR SHALL NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF ANY TESTING.
    b. ALL SECTIONS OF WATER LINE ARE TO MEET THE FOLLOWING PRESSURE TESTING REQUIREMENTS:
        - TEST 100% OF ALL LINES
        - MUST PASS PRESSURE TEST TO 200 PSI FOR TWO HOURS (UNLESS OTHERWISE APPROVED ON THE PLANS).
    c. ALL SANITARY SEWER FACILITIES ARE TO MEET THE FOLLOWING TESTING REQUIREMENTS
        - ALL LINES SHALL BE JET CLEANED PRIOR TO VACUUM OR PRESSURE TESTING
        - ALL MANHOLES SHALL BE VACUUM TESTED WITH DISTRICT STAFF PRESENT PRIOR TO CCTV INSPECTION.
        - SEWER MAINS TO BE PRESSURE TEST PRIOR TO CCTV INSPECTION
        - ALL LINES SHALL BE CCTV INSPECTED AND VIDEO SHALL TO BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.
22. PRELIMINARY ACCEPTANCE SHALL BE DEFINED AS THE POINT IN TIME THAT THE DISTRICT ACCEPTS THE FACILITY FOR USE. ALL SURFACE IMPROVEMENTS AND RESTORATION SHALL BE COMPLETED WITHIN 30 DAYS OF COMMENCEMENT. SHOULD THE CONTRACTOR FAIL TO COMPLETE ALL SURFACE IMPROVEMENTS AND RESTORATION WITHIN 30 DAYS OF COMMENCEMENT OF SERVICE, THE DISTRICT, AT THEIR DISCRETION, MAY ELECT TO COMPLETE THE IMPROVEMENTS AT THE CONTRACTORS COST.
23. FINAL ACCEPTANCE BY THE DISTRICT OF ANY LINE OR SYSTEM SHALL NOT OCCUR UNTIL COMPLETION OF FINAL ASPHALT LAYERS AND/OR FINAL COMPLETION AND/OR RESTORATION OF ALL SURFACE IMPROVEMENTS. THE WARRANTY PERIOD FOR ALL FACILITIES PRIOR TO FINAL ACCEPTANCE SHALL BE 24 MONTHS COMMENCING AFTER PRELIMINARY ACCEPTANCE.
24. ACCEPTANCE:
    a. THE DISTRICT MAY GIVE PRELIMINARY ACCEPTANCE ONCE ALL OF THE TESTS ON ALL THE LINES HAVE BEEN COMPLETED AND A WALK-THRU HAS OCCURRED.
    b. A SECOND ACCEPTANCE MAY OCCUR ONCE FIRST LIFT OF ASPHALT GOES DOWN AND A SECOND WALK-THRU OF THE SYSTEM OCCURS. IF ALL FACILITIES ARE CLEAN AND ACCESSIBLE, A FINAL ACCEPTANCE MAY OCCUR (THE DISTRICT MAY REQUIRE CLEANING AND RE-VIDEO OF THE SYSTEM, DEPENDING ON THE SEVERITY OF THE CONTAMINATION).
25. ALL WATER AND SEWER MAINS, INCLUDING SERVICE LINES, SHALL HAVE "AS-BUILT" DRAWINGS PREPARED AND APPROVED PRIOR TO PRELIMINARY ACCEPTANCE BY THE DISTRICT.
26. ALL COMMERCIAL/BUSINESS DEVELOPMENTS SHALL HAVE AN EIGHT INCH (MIN.) WATER MAIN LOOPED THROUGH THE PROPOSED PROPERTY WITH GATE VALVES LOCATED WHERE THE MAIN ENTERS THE PROPERTY LINE. AN EIGHT INCH SEWER MAIN SHALL BE INSTALLED FOR SERVICE TO COMMERCIAL/BUSINESS DEVELOPMENTS, AND A MANHOLE SHALL BE LOCATED WHERE THE MAIN ENTERS THE PROPERTY. THE END OF THE MAINS SHALL BE MARKED WITH THE APPROPRIATE COLORED CARSONITE MARKER ALONG WITH TRACER WIRE.
27. AFTER REVIEW AND APPROVAL OF PLANS FOR THE EXTENSION OF LINES, FACILITIES AND/OR SERVICES, CONSTRUCTION MUST BE COMMENCED WITHIN 18 MONTHS FOR RESIDENTIAL SUBDIVISIONS AND 12 MONTHS FOR ANY COMMERCIAL INSTALLATIONS.
28. INSPECTION FEES: CALL THE DISTRICT (719-495-2500) FOR FEE SCHEDULE.

811 Know what's below. Call before you dig.



AGENCIES

OWNER/DEVELOPER:	SR LAND, LLC 20 BOULDER CRESCENT, SUITE 201 COLORADO SPRINGS, CO 80903 JAMES F. MORLEY (719) 471-1742	FIRE DISTRICT:	BLACK FOREST FIRE PROTECTION DISTRICT 11445 TEACHOUT ROAD COLORADO SPRINGS, CO 80908 CHIEF BRYAN JACK (719) 495-4300
CIVIL ENGINEER:	JR ENGINEERING, LLC 5475 TECH CENTER DRIVE COLORADO SPRINGS, CO 80919 MIKE BRAMLETT P.E. (303) 267-6240	GAS DEPARTMENT:	COLORADO SPRINGS UTILITIES 7710 DURANT DR. COLORADO SPRINGS, CO 80947 TIM WENDT (719) 668-3556
COUNTY ENGINEERING:	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 JEFF RICE, P.E. (719) 520-6300	ELECTRIC DEPARTMENT:	MOUNTAIN VIEW ELECTRIC 11140 E. WOODMEN ROAD FALCON, CO 80831 (719) 495-2283
TRAFFIC ENGINEERING:	EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS 3275 AKERS DRIVE COLORADO SPRINGS, CO 80922 JENNIFER IRVINE, P.E. (719) 520-6460	COMMUNICATIONS:	QWEST COMMUNICATIONS (U.N.C.C. LOCATORS) (800) 922-1987 AT&T (LOCATORS) (719) 635-3674
WATER RESOURCES:	STERLING RANCH METRO DISTRICT ENGINEERS JDS-HYDRO CONSULTANTS 545 E. PIKES PEAK AVE., SUITE 300 COLORADO SPRINGS, CO 80903 JOHN MCGINN (719) 668-8769		

SHEET INDEX

1 :COVER

2 :LEGEND

3-6 :SANITARY SEWER PLANS

7 :SERVICE PLANS (SANITARY AND UNDER DRAIN)

8 :DETAIL SHEET

BASIS OF BEARINGS

THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624", SAID LINE BEARS N89°14'14"E A DISTANCE OF 2,722.69 FEET.

BENCHMARKS

1.THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION
NORTHING = 411416.273
EASTING = 235167.071
ELEVATION = 7023.42

2.THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION
NORTHING = 410095.404
EASTING = 235052.131
ELEVATION = 7000.40

3.THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDIVISION
NORTHING = 411399.962
EASTING = 233849.817
ELEVATION = 7030.82

WASTEWATER SYSTEM INSTALLATION NOTES

1. SANITARY SEWER LENGTHS ARE MH CENTER-MH CENTER (OR STRUCTURE CENTER-STRUCTURE CENTER). ALL SANITARY SEWER PIPES SHALL BE SDR 35 PVC OR EQUAL. SEWER LINES MAY NOT EXCEED 7% GRADE FOR ANY SIZE WITHOUT PRIOR APPROVAL OF THE DISTRICT. ALL NEWLY CONSTRUCTED RESIDENTIAL SANITARY SEWER TAPS SHALL USE PRE-MANUFACTURED IN-LINE PVC PUSH-ON WYES. TAPPING SADDLES MAY ONLY BE USED FOR TAPPING PRE-EXISTING MAINS.
2. ALL SANITARY SEWER MANHOLES SHALL BE WRAPPED WITH RU116 – RUBR-NEK JOINT WRAP OR EQUIVALENT AND COATED.
3. COMMENCEMENT OF USE OF SEWER LINES AND/OR SYSTEMS:
    a. NO SANITARY SEWER FACILITY SHALL BE PLACED IN SERVICE UNTIL AFTER THE COMPLETION OF ALL JET CLEANING, PRESSURE TESTING, CCTV INSPECTION, COMPACTION TESTING AND AS-BUILT DRAWINGS ARE SUBMITTED AND APPROVED BY THE DISTRICT.
    b. NO SANITARY SEWER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL SERVICE LINES ARE COMPLETED AND THE FIRST LIFT OF ASPHALT IS COMPLETED OVER THE LINE. IN THE CASE WHERE NO ASPHALT IS TO BE PLACED OVER THE LINE, ANY REQUIRED SURFACE SURFACE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO USE OF THE FACILITY.
    c. ALL NECESSARY EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICT, AND RECORDED.
    d. DOWNSTREAM PLUG CAN BE REMOVED ONCE FIRST LIFT OF ASPHALT IS DOWN AND THE ABOVE REQUIREMENTS ARE MET.

EL PASO COUNTY STATEMENT

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

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

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

JOSHUA PALMER, P.E. DATE

INTERIM COUNTY ENGINEER/ECM ADMINISTRATOR

Remove Interim

WATER & SEWER MAIN EXTENSIONS

ANY CHANGES OR ALTERATIONS AFFECTING THE GRADE, ALIGNMENT, ELEVATION AND/OR DEPTH OF COVER OF ANY WATER OR SEWER MAINS OR OTHER APPURTENANCE SHOWN ON THIS DRAWING SHALL BE THE RESPONSIBILITY OF THE OWNER/DEVELOPER. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR ALL OPERATIONAL DAMAGES AND DEFECTS IN INSTALLATION AND MATERIAL FOR MAINS AND SERVICES FROM THE DATE OF APPROVAL UNTIL FINAL ACCEPTANCE IS ISSUED.

SIGNED _____ DATE _____
JAMES F. MORLEY

SR LAND, LLC
20 BOULDER CRESCENT, SUITE 201
COLORADO SPRINGS, CO 80903
(719) 471-1742

DISTRICT APPROVALS

THE STERLING RANCH METROPOLITAN DISTRICT RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN AND HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY.

STERLING RANCH METROPOLITAN DISTRICT
WASTEWATER DESIGN APPROVAL

DATE:_____ BY:_____

PROJECT NO._____

IN CASE OF ERRORS OR OMISSIONS WITH THE WATER DESIGN AS SHOWN ON THIS DOCUMENT THE STANDARDS AS DEFINED IN THE "RULES AND REGULATIONS FOR INSTALLATION OF WASTEWATER MAINS AND SERVICES" SHALL RULE.

APPROVAL EXPIRES 180 DAYS FROM DESIGN APPROVAL.

ENGINEER'S STATEMENT

THIS WASTEWATER SYSTEM PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR WASTEWATER SYSTEM PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=1000'			
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DATE	7/8/22			
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DRAWN BY	QNL			
CHECKED BY				

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2
COVER SHEET

SHEET 1 OF 8

JOB NO. 25188.10

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LAYER LINETYPE LEGEND

	EXISTING	PROPOSED
PHASE LINE		
MATCH LINE		
SECTION LINE		
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
R.O.W. A LINE	A	A
CENTERLINE		
CITY LIMITS		
WIRE FENCE	X	X
CHAIN LINK FENCE	O	●
WOOD FENCE	◇	◆
MASONRY FENCE	□	■
GUARDRAIL		
CONC. BARRIER		
CABLE TV	TV	TV
ELECTRIC	E	E
FIBER OPTIC	FO	FO
GAS MAIN	G	G
IRRIGATION MAIN	IRR	IRR
OIL/PETRO. MAIN	O	O
OVERHEAD UTILITY	OHU	OHU
SANITARY SEWER	S	
STORM DRAIN		
TELEPHONE	T	T
WATER MAIN	W	
RAW WATER LINE	RWL	RWL
SWALE/WATERWAY FLOWLINE		
DIVERSION DITCH		
DIVERSION CHANNEL		
MAJOR DRAINAGE BASIN		
MINOR DRAINAGE BASIN		
TOP OF SLOPE		
TOE OF SLOPE		
EDGE OF WATER		
INDEX CONTOUR	6100	6100
INTERMEDIATE CONTOUR		
DEPRESSION CONT. (INDEX)	6100	6100
DEPRESSION CONT. (INTER)		
TOP OF CUTS		
TOE OF FILLS		
CUT AND FILL LINE	C/F	C/F
SILT FENCE	SF	SF
100 YEAR FLOODPLAIN	100YR	100YR
500 YEAR FLOODPLAIN	500YR	500YR
FLOODWAY	FLDWY	FLDWY
BASE FLOOD ELEVATION		
EDGE OF WETLANDS		
STONE WALL		

UTILITIES LEGEND

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE	Ⓓ	◉
STORM INLET		▣
AREA INLET – SQUARE	□	
AREA INLET – ROUND	○	
FLARED END SECTION	▷	
RIPRAP		
SANITARY SEWER		
LINE MARKER	Mkr San	
SERVICE MARKER	Ⓢ	
CLEAN-OUT	⊶	⊷
MANHOLE W/ DIRECTIONAL FLOW ARROW	Ⓢ◁	◉◀
WATER LINE		
LINE MARKER	Mkr W	
SERVICE MARKER	Ⓦ	
FIRE HYDRANT		
FIRE CONNECTION		
MANHOLE	Ⓦ	●
BEND		
BLOW-OFF VALVE		
WELL	WELL	WELL
METER	Ⓜ	●
VALVE	⋈	
REDUCER		
THRUST BLOCK		
CROSS		
PLUG W/ THRUST BLOCK		
TEE		
REVERSE ANCHOR		
ANODE		
AIR & VACUUM VALVE ASSEMBLY		
TRANSMISSION BLOW-OFF ASSEMBLY		
GAS LINE		
MARKER	Mkr G	
SERVICE MARKER	Ⓖ	
METER		●
VALVE	⋈	⋈
PLUG		
TEE		
DRY UTILITIES		
CABLE TV MARKER	Mkr TV	
CABLE TELEVISION PEDESTAL	Ⓣ	
ELECTRIC MARKER	Mkr E	
ELECTRIC SERVICE MARKER	Ⓔ	
ELECTRICAL PEDESTAL	Ⓔ	
ELECTRICAL METER	Ⓔ	
ELECTRICAL MANHOLE	Ⓔ	
FIBER-OPTIC MARKER	Mkr FO	
IRRIGATION PEDESTAL	Ⓘ	
TELEPHONE MARKER	Mkr T	
TELEPHONE PEDESTAL	Ⓣ	
TELEPHONE MANHOLE	Ⓣ	
UTILITY POLE		
GUY ANCHOR		
GUY POLE		
MISC. UTILITIES		
VENT PIPE	VP	VP
TEST HOLE DESIGNATOR	TH# FIRM	

FIRM/AGENCY

LANDSCAPE LEGEND

	EXISTING	PROPOSED
TREE – CONIFEROUS		
TREE – DECIDUOUS		
SHRUB/BUSH		
SHRUBS AND BUSHES		
IRRIGATION BOX		
IRRIGATION SPRINKLER		
IRRIGATION VALVE		
BOLLARD		
FLAGPOLE	FP	FP

Know what's **below.**
Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

32314

MIKE A. BRAMLETT, P.E. — DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

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DATE	7/8/22	CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

LEGEND

SHEET 2 OF 8

JOB NO. 25188.10

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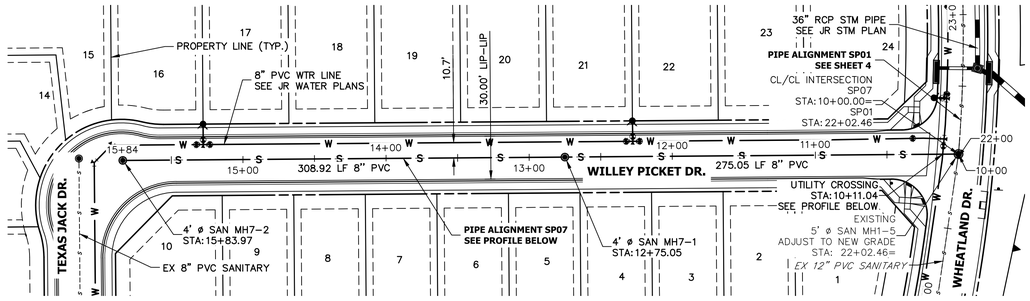

SEE EX HOMESTEAD NORTH AT STERLING RANCH FILING NO. 1

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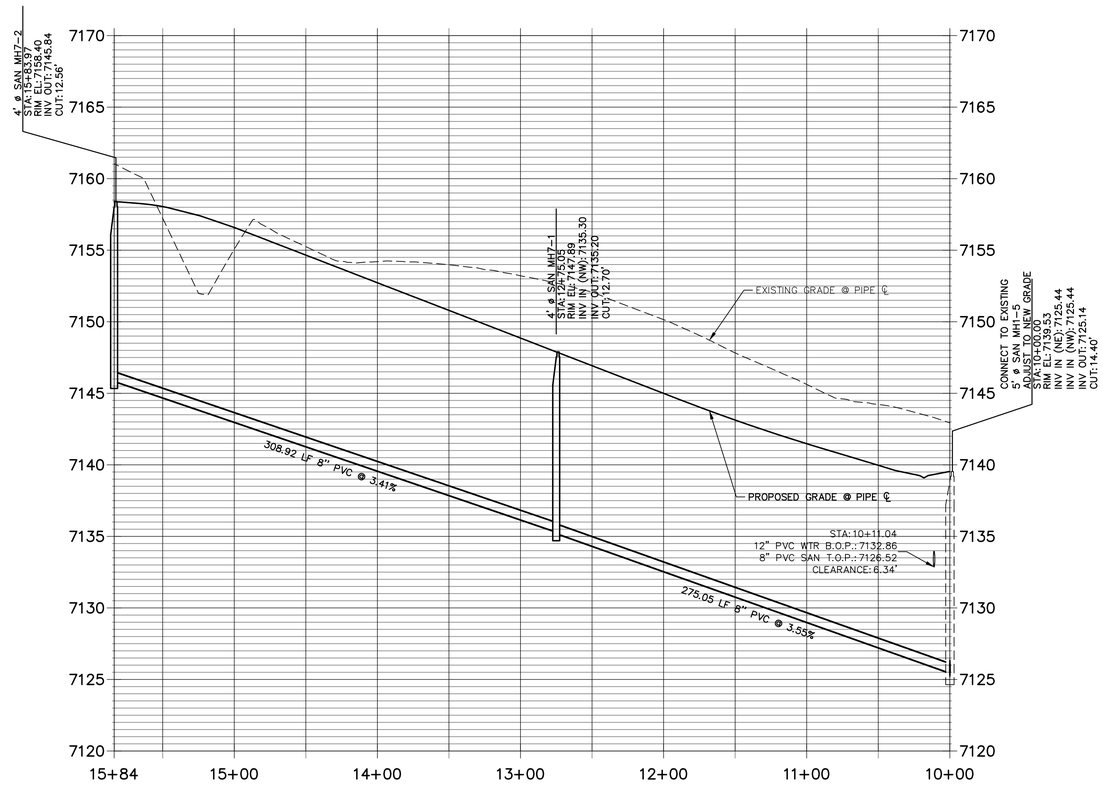

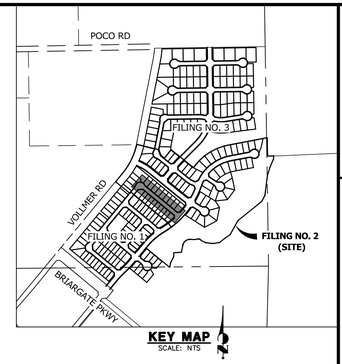

Know what's **below.**
Call before you dig.

50 25 0 50 100

HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE 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 ABOVE GROUND AND UNDERGROUND UTILITIES.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

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HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2
SANITARY SEWER PLANS

SHEET 3 OF 8
JOB NO. 25188.10

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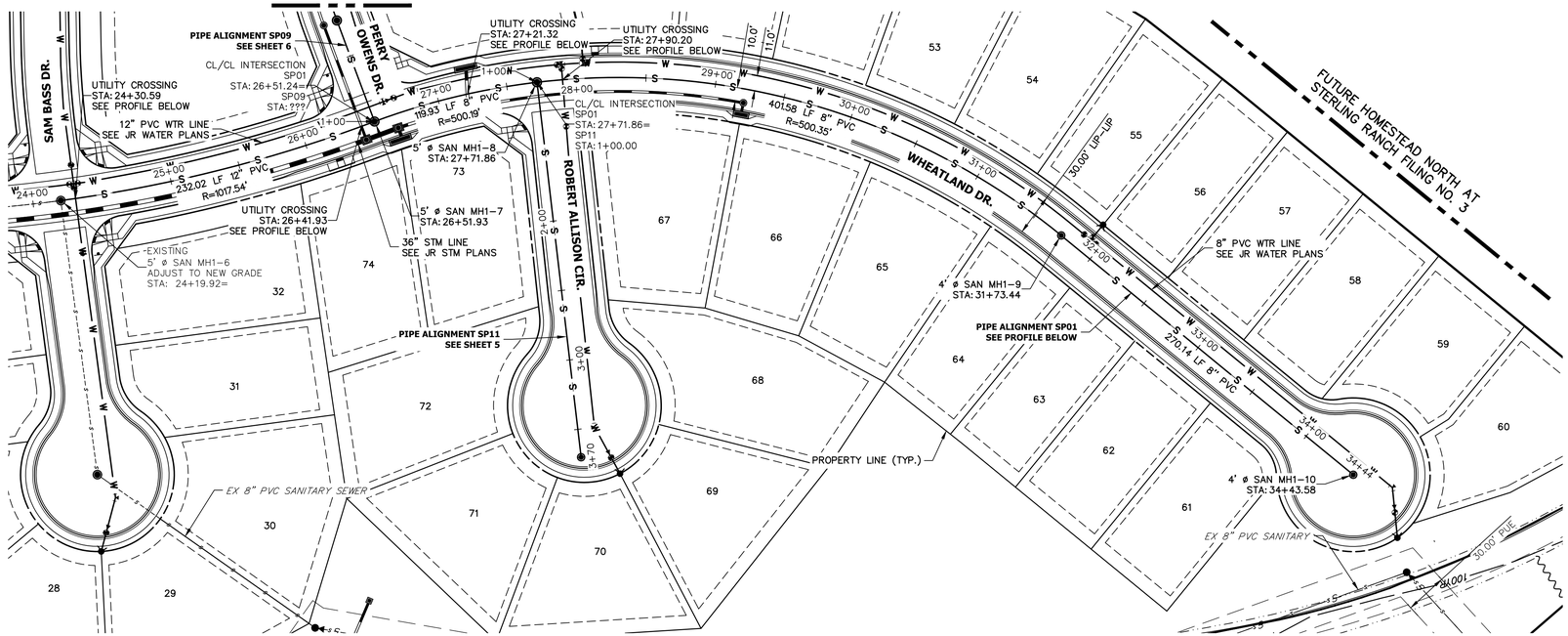

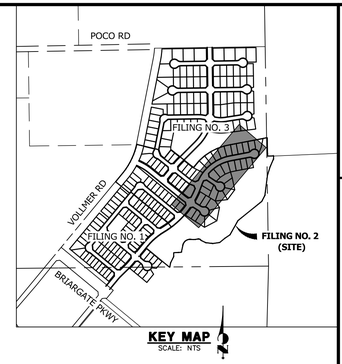

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HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

SP01 PROFILE
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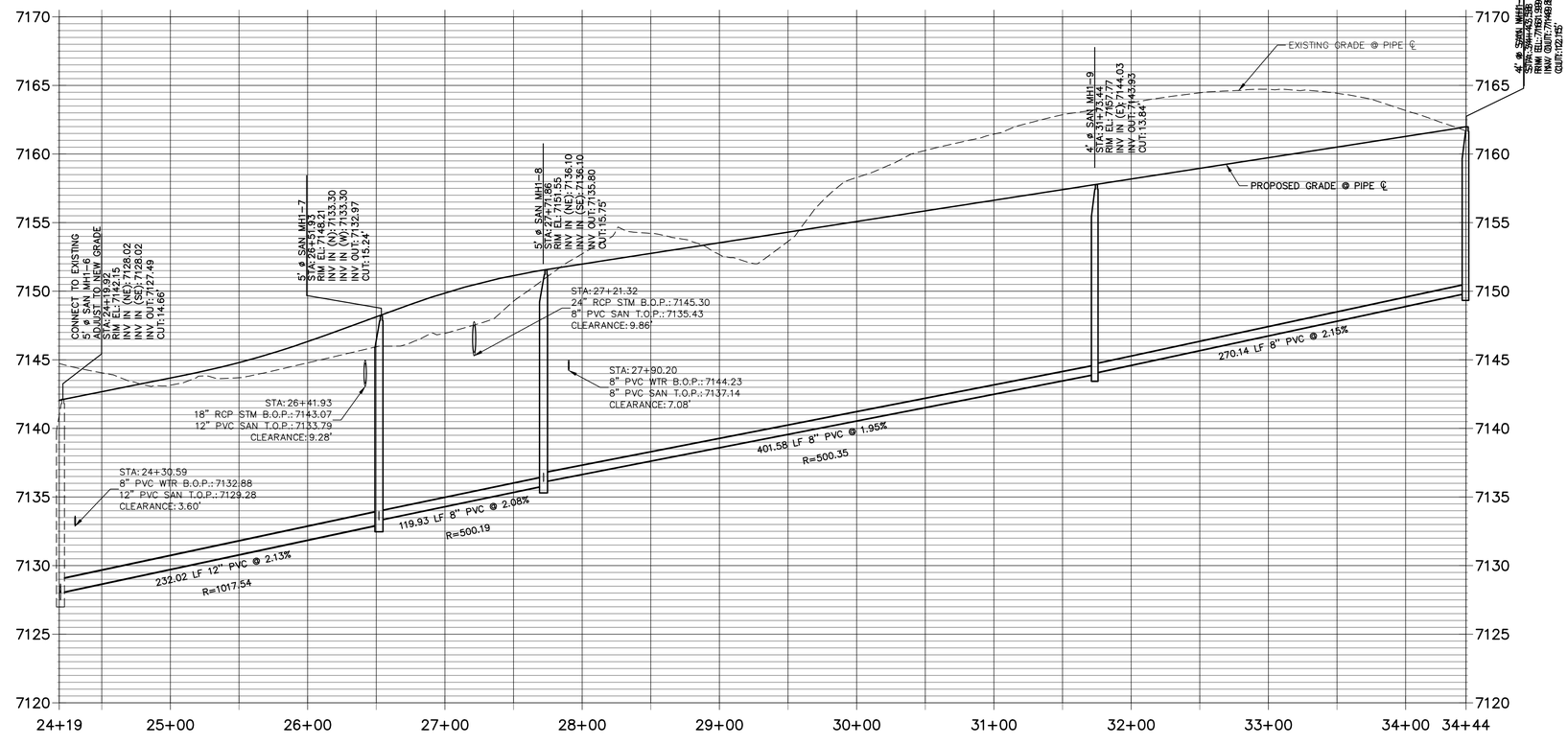

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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
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SANITARY SEWER PLANS

SHEET 4 OF 8

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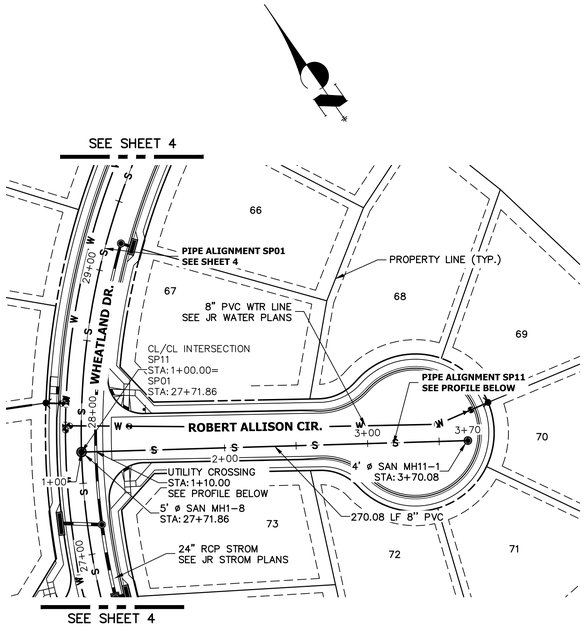

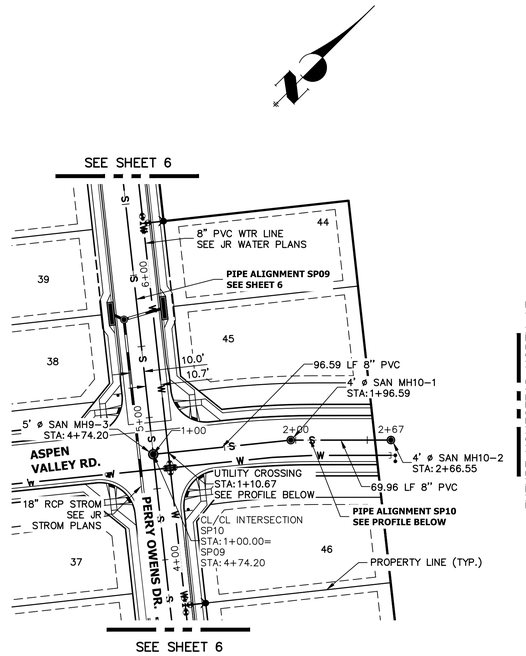

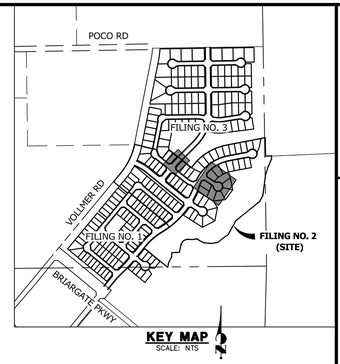

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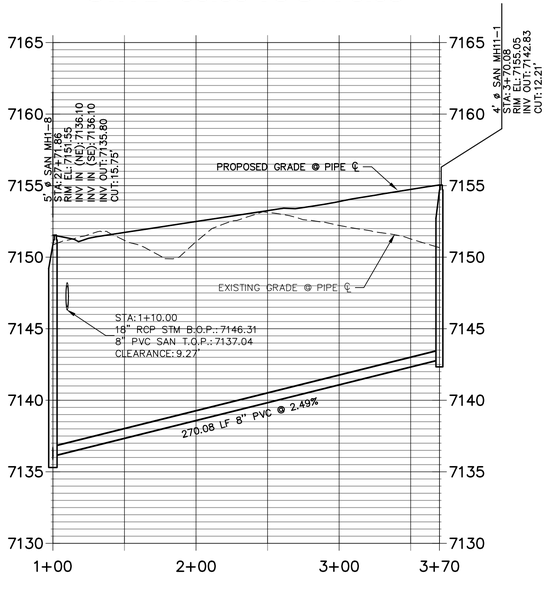

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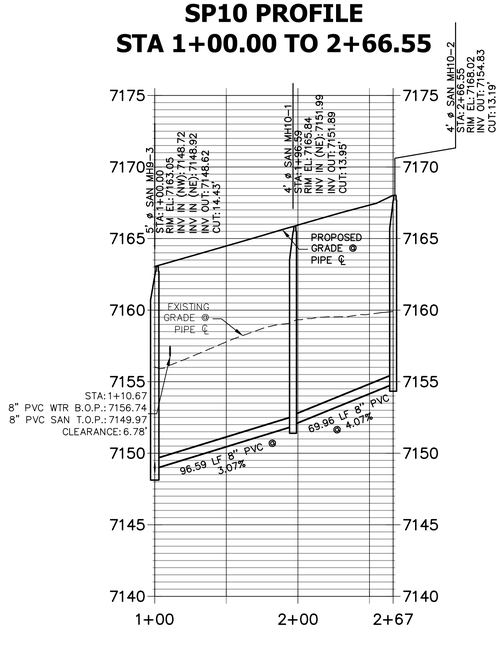

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VERTICAL
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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT PROFESSIONAL ENGINEER 32314

MIKE A. BRAMLETT, P.E.
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HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2
SANITARY SEWER PLANS

SHEET 5 OF 8

JOB NO. 25188.10

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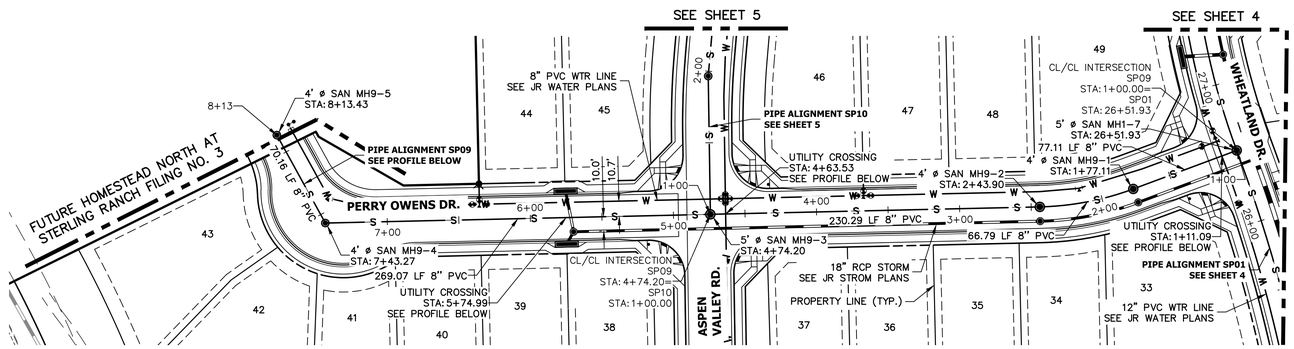
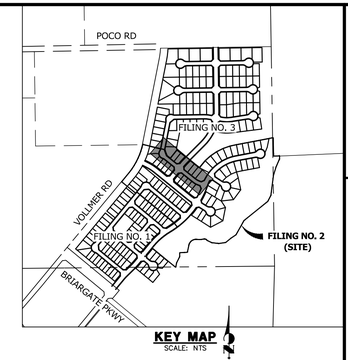
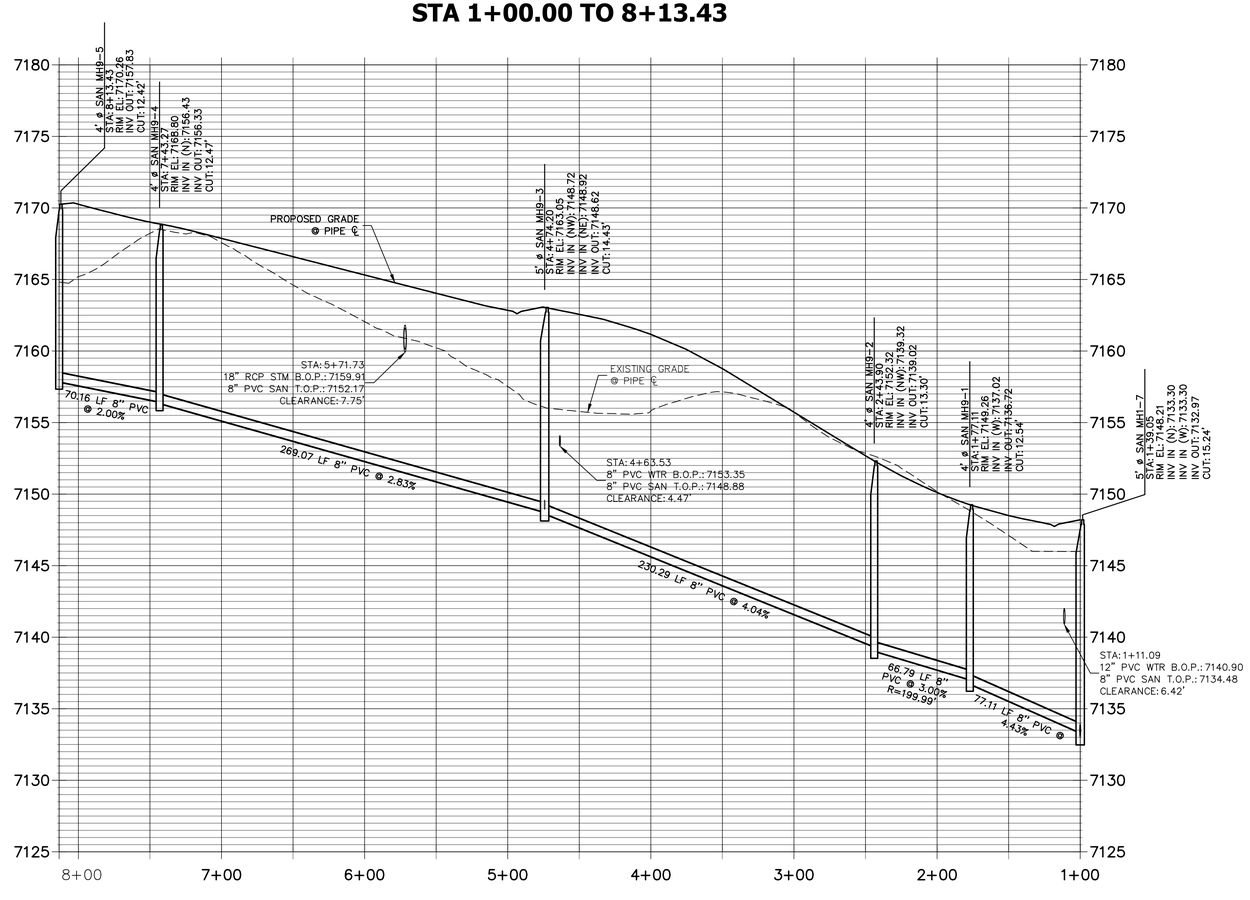




50 25 0 50 100

HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

SP09 PROFILE
STA 1+00.00 TO 8+13.43



Know what's below.
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THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE 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 ABOVE GROUND AND UNDERGROUND UTILITIES.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS THESE PLANS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
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BY	DATE	No.	REVISION

H-SCALE	1"=50'
V-SCALE	1"=5'
DATE	7/8/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

SANITARY SEWER PLANS

SHEET 6 OF 8

JOB NO. 25188.10

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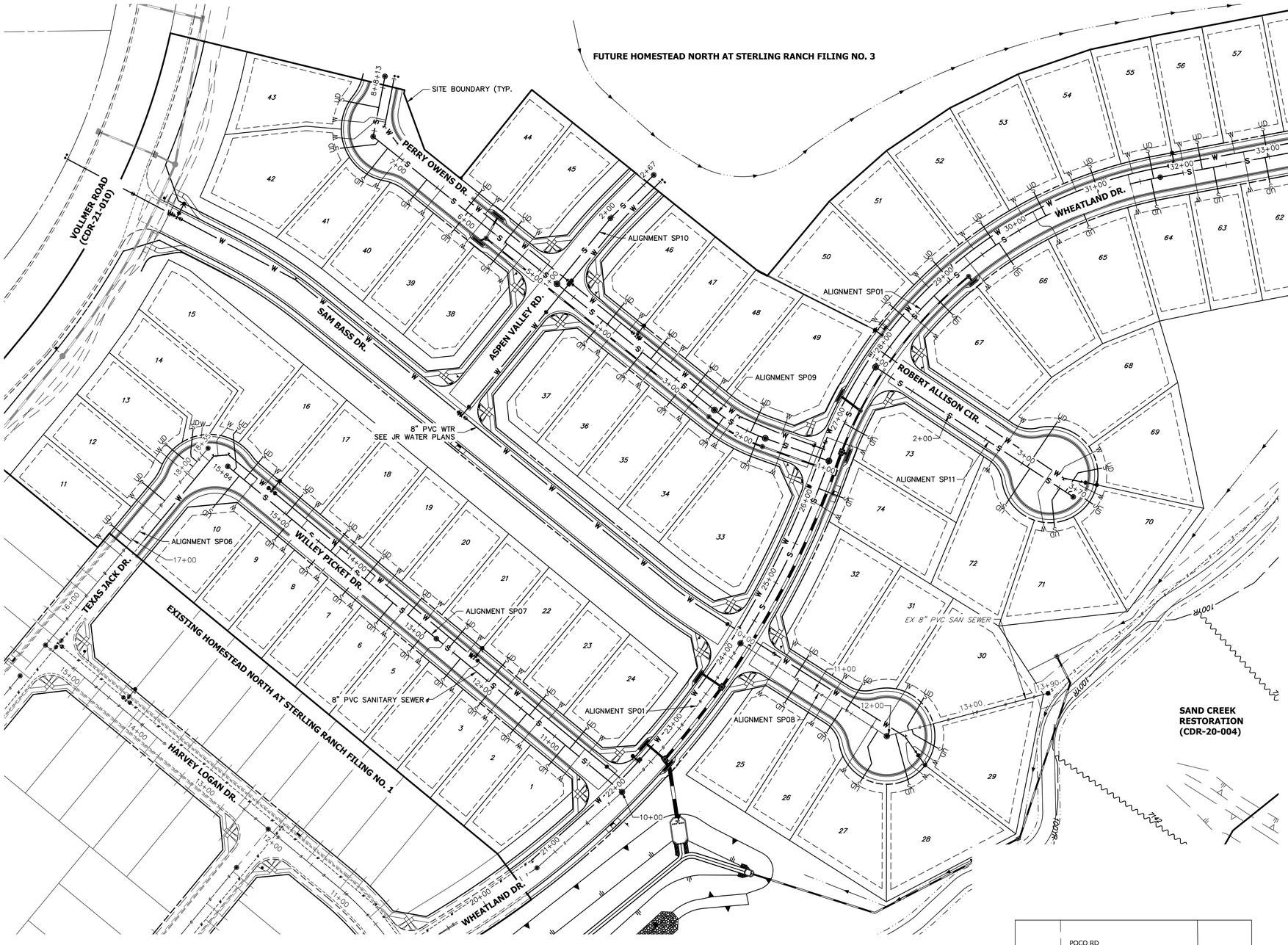
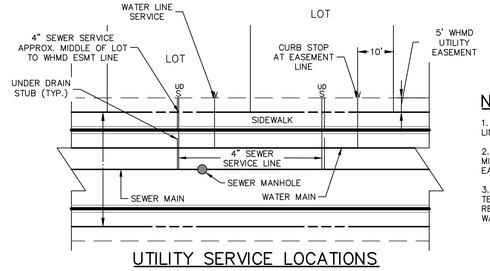


SANITARY SERVICE TABULATION		
SERVICE/LOT #	STATION	ALIGNMENT
SS-LOT 1	10+84.45	SP07
SS-LOT 2	11+41.20	SP07
SS-LOT 3	11+89.67	SP07
SS-LOT 4	12+39.67	SP07
SS-LOT 5	12+89.67	SP07
SS-LOT 6	13+39.67	SP07
SS-LOT 7	13+89.67	SP07
SS-LOT 8	14+39.67	SP07
SS-LOT 9	14+89.67	SP07
SS-LOT 10	15+67.25	SP07
SS-LOT 11	16+97.89	SP06
SS-LOT 12	17+57.89	SP06
SS-LOT 13	18+08.39	SP06
SS-LOT 14	18+15.89	SP06
SS-LOT 15	15+75.97	SP07
SS-LOT 16	15+60.16	SP07
SS-LOT 17	14+97.68	SP07
SS-LOT 18	14+32.17	SP07
SS-LOT 19	13+82.17	SP07
SS-LOT 20	13+17.68	SP07

SANITARY SERVICE TABULATION		
SERVICE/LOT #	STATION	ALIGNMENT
SS-LOT 21	12+57.68	SP07
SS-LOT 22	11+97.68	SP07
SS-LOT 23	11+37.70	SP07
SS-LOT 24	10+77.91	SP07
SS-LOT 25	10+79.26	SP08
SS-LOT 26	11+37.79	SP08
SS-LOT 27	11+86.05	SP08
SS-LOT 28	12+08.45	SP08
SS-LOT 29	12+27.89	SP08
SS-LOT 30	12+23.89	SP08
SS-LOT 31	11+42.79	SP08
SS-LOT 32	10+73.39	SP08
SS-LOT 33	1+85.78	SP09
SS-LOT 34	2+30.74	SP09
SS-LOT 35	2+89.50	SP09
SS-LOT 36	3+49.50	SP09
SS-LOT 37	4+07.49	SP09
SS-LOT 38	5+47.41	SP09
SS-LOT 39	6+05.00	SP09
SS-LOT 40	6+65.00	SP09

SANITARY SERVICE TABULATION		
SERVICE/LOT #	STATION	ALIGNMENT
SS-LOT 41	7+22.25	SP09
SS-LOT 42	7+35.77	SP09
SS-LOT 43	7+77.35	SP09
SS-LOT 44	6+08.50	SP09
SS-LOT 45	5+50.91	SP09
SS-LOT 46	4+00.89	SP09
SS-LOT 47	3+37.36	SP09
SS-LOT 48	2+77.36	SP09
SS-LOT 49	1+95.66	SP09
SS-LOT 50	28+36.98	SP01
SS-LOT 51	29+03.23	SP01
SS-LOT 52	29+69.18	SP01
SS-LOT 53	30+35.15	SP01
SS-LOT 54	31+01.15	SP01
SS-LOT 55	31+65.94	SP01
SS-LOT 56	32+22.46	SP01
SS-LOT 57	32+98.86	SP01
SS-LOT 58	33+54.04	SP01
SS-LOT 59	34+21.19	SP01
SS-LOT 60	34+33.58	SP01

SANITARY SERVICE TABULATION		
SERVICE/LOT #	STATION	ALIGNMENT
SS-LOT 61	33+65.86	SP01
SS-LOT 62	32+95.36	SP01
SS-LOT 63	32+35.46	SP01
SS-LOT 64	31+62.94	SP01
SS-LOT 65	30+76.41	SP01
SS-LOT 66	29+73.44	SP01
SS-LOT 67	28+77.65	SP01
SS-LOT 68	3+07.51	SP11
SS-LOT 69	3+59.59	SP11
SS-LOT 70	3+63.10	SP11
SS-LOT 71	3+52.10	SP11
SS-LOT 72	3+11.00	SP11
SS-LOT 73	26+98.57	SP01
SS-LOT 74	26+18.68	SP01



UTILITY SERVICE LOCATIONS

NTS

NOTES:

1. WATER SERVICE TO BE 10' FROM "DOWNSTREAM" PROPERTY LINE AND EXTENDED TO WHMD UTILITY EASEMENT LINE.

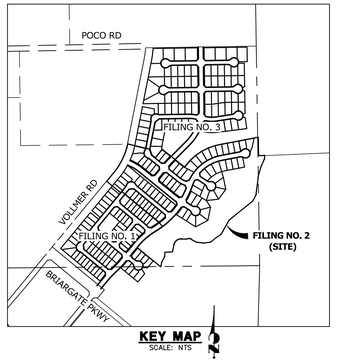
2. SEWER SERVICE TO BE PLACED APPROXIMATELY IN THE MIDDLE OF THE LOT AND EXTENDED TO WHMD UTILITY EASEMENT LINE.

3.SERVICE SHALL BE MARKED WITH 2"x4" POST AT TERMINATION POINT FOR LOCATION DURING CONNECTION TO RESIDENCE. POSTS SHALL BE SPRAY-PAINTED BLUE FOR WATER AND GREEN FOR SEWER.

811 Know what's **below.** **Call** before you dig.

60 30 0 60 120

ORIGINAL SCALE: 1" = 60'



KEY MAP
SCALE: NTS

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

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PREPARED FOR
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DRAWN BY	QNL
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HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

SERVICE PLAN

SHEET 7 OF 8

JOB NO. 25188.10

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PIPE SIZE AND MATERIAL	ALLOWABLE DEFLECTION	PIPE LENGTH AND CORRESPONDING RADIUS								
		20'	18'	16'	14'	12'	10'	8'	6'	4'
4" - 12" DIP	4°00'	286'	258'	229'	200'	172'	143'	115'	100'	100'
14" - 16" DIP	3°12'	358'	322'	287'	251'	215'	179'	143'	107'	100'
18" - 36" DIP	2°24'	477'	430'	382'	334'	286'	239'	191'	143'	100'
4" - 36" SDR 35 PVC	3°00'	382'	344'	306'	267'	230'	191'	153'	115'	100'

NOTES:

1. COLORADO SPRINGS UTILITIES USES A 1.25 SAFETY FACTOR FOR DIP SLIP JOINT DEFLECTION FROM THE MANUFACTURER'S ALLOWABLE DEFLECTION.
2. SDR 35 PVC SHALL NOT BE DEFLECTED WITHOUT THE USE OF FABRICATED 3° BENDS.
3. MINIMUM RADIUS FOR DIP AND SDR 35 PVC SHALL BE 100'.

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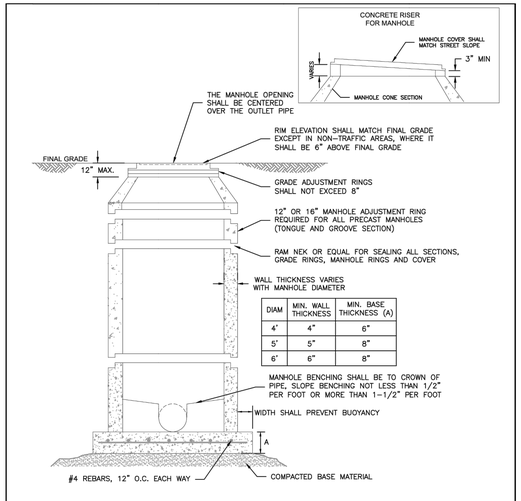
MINIMUM RADIUS FOR DIP AND PVC PIPE

C2-2

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.
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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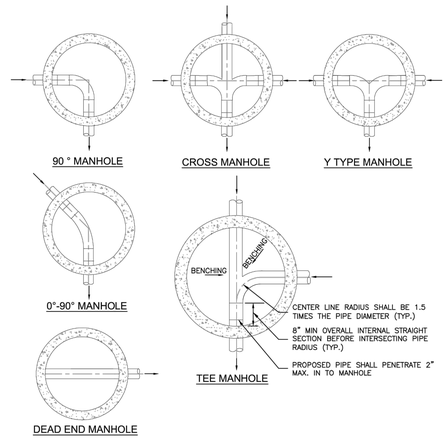
STANDARD CONCRETE MANHOLE

C3-1

DATED 5/2015

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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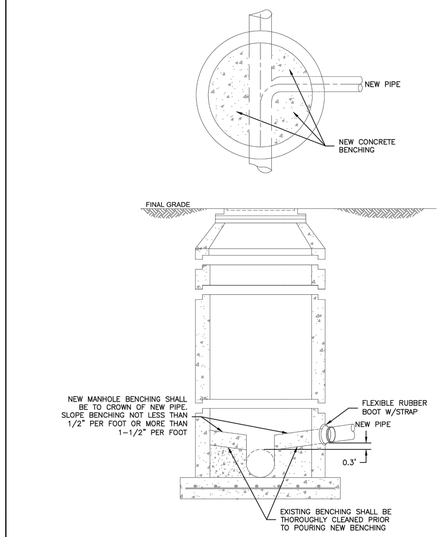
TYPICAL MANHOLE LAYOUTS AND INTERSECTIONS

C3-2

DATED 5/2015



NOTES:

1. SEE DETAIL DRAWING C3-1 FOR MANHOLE REQUIREMENTS.

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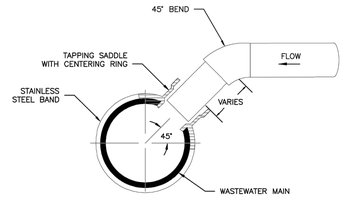
CORE DRILLING INTO AN EXISTING MANHOLE

C3-3

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

Know what's **below.**
Call before you dig.

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. — DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

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PREPARED FOR
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DRAWN BY	QNL
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HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

DETAIL SHEET

SHEET 8 OF 8

JOB NO. 25188.10

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HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

COUNTY OF EL PASO, STATE OF COLORADO

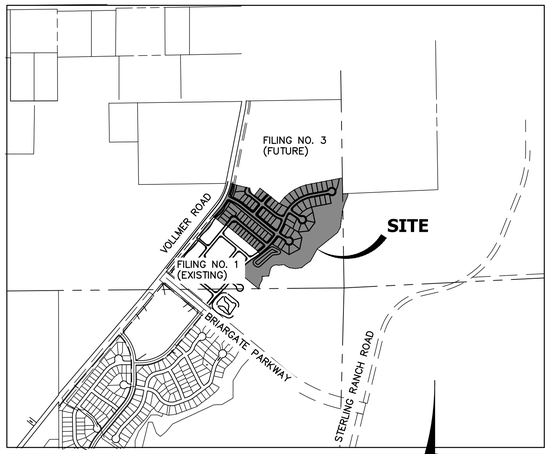
WATER SYSTEM PLAN

July 2022

GENERAL NOTES

1. ALL UTILITY CONSTRUCTION TO BE CONDUCTED IN CONFORMANCE WITH THE CURRENT STERLING RANCH METROPOLITAN DISTRICT (SRMD, THE DISTRICT) SPECIFICATIONS.
2. ALL PLANS ON THE JOB SITE SHALL BE SIGNED BY THE DISTRICT AND THE DISTRICT'S ENGINEER. ANY REVISION TO THE PLANS SHALL BE SO NOTED WITH THE OLD DRAWING MARKED NOT VALID.
3. ALL STATIONING IS CENTERLINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE NOTED.
4. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE DISTRICT. THE DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
5. ALL WATER AND SEWER SERVICE LOCATIONS SHALL BE CLEARLY MARKED ON EITHER THE CURB HEAD OR THE FACE OF THE CURB, WITH AN "S" FOR SEWER AND A "W" FOR WATER.
6. DUCTILE IRON PIPES, INCLUDING FITTINGS, VALVES AND FIRE HYDRANTS, SHALL BE WRAPPED WITH POLYETHYLENE TUBING, DOUBLE BONDED AT EACH JOINT AND ELECTRICALLY ISOLATED. BONDING AND ANODE CONNECTIONS SHALL BE THOROUGHLY COATED WITH BITUMINUOUS COATINGS.
7. ALL DUCTILE IRON PIPE LESS THAN 12 INCHES AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WIRES WITH 17 LB MAGNESIUM ANODES EVERY 400 FEET AND 9 LB MAGNESIUM ANODES AT EACH FITTING. ALL DUCTILE IRON PIPE 12 INCHES AND GREATER AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WIRES WITH 17 LB MAGNESIUM ANODES EVERY 300 FEET AND 9 LB MAGNESIUM ANODES AT EACH FITTING.
8. ALL PIPE MATERIAL, BACKFILL AND INSTALLATION SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS, COLORADO DEPARTMENT OF TRANSPORTATION, EL PASO COUNTY DEPARTMENT OF TRANSPORTATION, COLORADO SPRINGS UTILITIES AND THE GEOTECHNICAL ENGINEER.
9. COMPACTION TESTS SHALL BE 95% STANDARD PROCTOR AS DETERMINED BY ASTM D698, UNLESS OTHERWISE APPROVED BY THE DISTRICT OR HIGHER STANDARD AS IMPOSED BY ANOTHER AGENCIES HAVING RIGHT-OF-WAY JURISDICTION. THIS SHALL INCLUDE ALL VALVES, FIRE HYDRANT RUNS, WATER & SEWER SERVICE LINES AND MANHOLES. ALL REPORTS SHALL BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.
10. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. THE LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. THE DISTRICT SHALL BE NOTIFIED OF ANY DEVIATIONS TO THE LINE AND/OR GRADE AS DEPICTED ON THE PLANS. CONTRACTOR SHALL SUBMIT TO THE DISTRICT AND THE ENGINEER OF RECORD A REPORT OF THE FIELD VERIFIED INFORMATION PRIOR TO THE START OF CONSTRUCTION.
11. ALL BENDS SHALL BE FIELD STAKED PRIOR TO THE START OF CONSTRUCTION.
12. BENDS, DEFLECTION & CUT PIPE LENGTHS SHALL BE USED TO HOLD HORIZONTAL ALIGNMENT OF SEWER AND WATER LINES TO NO MORE THAN 0.5' FROM THE DESIGNED ALIGNMENT. CONSTRUCTION STAKES TO BE AT 25' INTERVALS ALONG CURVES TO ASSURE LOCATION OF PIPE LINE CONSTRUCTION.
13. AT ALL LOCATIONS WHERE CAP AND STUB IS NOTED ON DRAWINGS, PROVIDE A PLUG AT THE END OF THE PIPE JOINT NEAREST THE SPECIFIED STATION. PROVIDE A REVERSE ANCHOR AT ALL WATER LINE PLUGS.
14. ALL UNUSED SALVAGED WATER UTILITY MATERIAL SHALL BE RETURNED TO THE METROPOLITAN DISTRICT AS REQUESTED.
15. AT THE CONTRACTOR'S EXPENSE, ALL UTILITY MAINS SHALL BE SUPPORTED AND PROTECTED SUCH THAT THEY SHALL FUNCTION CONTINUOUSLY DURING CONSTRUCTION OPERATIONS. SHOULD A UTILITY MAIN FAIL AS A RESULT OF THE CONTRACTOR'S OPERATION, IT SHALL BE REPLACED IMMEDIATELY BY THE CONTRACTOR OR BY THE DISTRICT AT FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR/DEVELOPER.
16. PUMPING OR BYPASS OPERATIONS SHALL BE REVIEWED AND APPROVED BY BOTH THE DISTRICT AND THE DISTRICT ENGINEER PRIOR TO EXECUTION.
17. THE CONTRACTOR SHALL REPLACE OR REPAIR DAMAGE TO ALL SURFACE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO FENCES, LANDSCAPING, CURB AND GUTTER AND/OR ASPHALT THAT MAY BE CAUSED DURING CONSTRUCTION.
18. ALL CONTRACTORS WORKING ON OR NEAR A WATER OR SEWER FACILITY (TO INCLUDE SERVICE LINE) SHALL HAVE LIABILITY INSURANCE NAMING THE DISTRICT AS AN ADDITIONAL INSURED AND SHALL PROVIDE A CURRENT COPY OF WORKERS COMPENSATION INSURANCE ON FILE WITH THE DISTRICT. NO WORK CAN PROCEED WITHOUT CURRENT CERTIFICATES ON FILE AT THE DISTRICTS' OFFICE.
19. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND ALL AFFECTED UTILITY COMPANIES ADJACENT TO THE PROPOSED UTILITY CONSTRUCTION A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF CONSTRUCTION. A WEEKLY CONSTRUCTION MEETING SHALL BE REQUIRED WITH THE CONTRACTOR, DISTRICT ENGINEER AND ALL OTHER PARTIES AS DEEMED NECESSARY BY THE DISTRICT.
20. COMMENCEMENT OF CONSTRUCTION OF WATER/SEWER SYSTEMS WITHIN THE METROPOLITAN DISTRICT:
    a. PRIOR TO THE START OF CONSTRUCTION, A PRE-CONSTRUCTION MEETING IS REQUIRED A MINIMUM OF 48 HOURS IN ADVANCE OF COMMENCEMENT OF WORK. A REPRESENTATIVE OF THE OWNER OR DEVELOPER, A REPRESENTATIVE OF THE CONTRACTOR AND DESIGN ENGINEER ARE REQUIRED TO ATTEND. CONTACT THE DISTRICT TO SCHEDULE THE PRE-CONSTRUCTION MEETING. NO PRE-CONSTRUCTION MEETING CAN BE SCHEDULED PRIOR TO FOUR (4) SIGNED/ APPROVED PLAN SETS ARE RECEIVED BY THE DISTRICT.
    b. THE CONTRACTOR IS REQUIRED TO NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 2 WEEKS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ALSO NOTIFY AFFECTED UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION ADJACENT TO THE KNOWN UTILITY LINES.
21. TESTING OF FACILITIES:
    a. THE CONTRACTOR SHALL NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF ANY TESTING.
    b. ALL SECTIONS OF WATER LINE ARE TO MEET THE FOLLOWING PRESSURE TESTING REQUIREMENTS:
        - TEST 100% OF ALL LINES
        - MUST PASS PRESSURE TEST TO 200 PSI FOR TWO HOURS (UNLESS OTHERWISE APPROVED ON THE PLANS).
    c. ALL SANITARY SEWER FACILITIES ARE TO MEET THE FOLLOWING TESTING REQUIREMENTS
        - ALL LINES SHALL BE JET CLEANED PRIOR TO VACUUM OR PRESSURE TESTING
        - ALL MANHOLES SHALL BE VACUUM TESTED WITH DISTRICT STAFF PRESENT PRIOR TO CCTV INSPECTION.
        - SEWER MAINS TO BE PRESSURE TEST PRIOR TO CCTV INSPECTION
        - ALL LINES SHALL BE CCTV INSPECTED AND VIDEO SHALL TO BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.
22. PRELIMINARY ACCEPTANCE SHALL BE DEFINED AS THE POINT IN TIME THAT THE DISTRICT ACCEPTS THE FACILITY FOR USE. ALL SURFACE IMPROVEMENTS AND RESTORATION SHALL BE COMPLETED WITHIN 30 DAYS OF COMMENCEMENT. SHOULD THE CONTRACTOR FAIL TO COMPLETE ALL SURFACE IMPROVEMENTS AND RESTORATION WITHIN 30 DAYS OF COMMENCEMENT OF SERVICE, THE DISTRICT, AT THEIR DISCRETION, MAY ELECT TO COMPLETE THE IMPROVEMENTS AT THE CONTRACTORS COST.
23. FINAL ACCEPTANCE BY THE DISTRICT OF ANY LINE OR SYSTEM SHALL NOT OCCUR UNTIL COMPLETION OF FINAL ASPHALT LAYERS AND/OR FINAL COMPLETION AND/OR RESTORATION OF ALL SURFACE IMPROVEMENTS. THE WARRANTY PERIOD FOR ALL FACILITIES PRIOR TO FINAL ACCEPTANCE SHALL BE 24 MONTHS COMMENCING AFTER PRELIMINARY ACCEPTANCE.
24. ACCEPTANCE:
    a. THE DISTRICT MAY GIVE PRELIMINARY ACCEPTANCE ONCE ALL OF THE TESTS ON ALL THE LINES HAVE BEEN COMPLETED AND A WALK-THRU HAS OCCURRED.
    b. A SECOND ACCEPTANCE MAY OCCUR ONCE FIRST LIFT OF ASPHALT GOES DOWN AND A SECOND WALK-THRU OF THE SYSTEM OCCURS. IF ALL FACILITIES ARE CLEAN AND ACCESSIBLE, A FINAL ACCEPTANCE MAY OCCUR (THE DISTRICT MAY REQUIRE CLEANING AND RE-VIDEO OF THE SYSTEM, DEPENDING ON THE SEVERITY OF THE CONTAMINATION).
25. ALL WATER AND SEWER MAINS, INCLUDING SERVICE LINES, SHALL HAVE "AS-BUILT" DRAWINGS PREPARED AND APPROVED PRIOR TO PRELIMINARY ACCEPTANCE BY THE DISTRICT.
26. ALL COMMERCIAL/BUSINESS DEVELOPMENTS SHALL HAVE AN EIGHT INCH (MIN.) WATER MAIN LOOPED THROUGH THE PROPOSED PROPERTY WITH GATE VALVES LOCATED WHERE THE MAIN ENTERS THE PROPERTY LINE. AN EIGHT INCH SEWER MAIN SHALL BE INSTALLED FOR SERVICE TO COMMERCIAL/BUSINESS DEVELOPMENTS, AND A MANHOLE SHALL BE LOCATED WHERE THE MAIN ENTERS THE PROPERTY. THE END OF THE MAINS SHALL BE MARKED WITH THE APPROPRIATE COLORED CARSONITE MARKER ALONG WITH TRACER WIRE.
27. AFTER REVIEW AND APPROVAL OF PLANS FOR THE EXTENSION OF LINES, FACILITIES AND/OR SERVICES, CONSTRUCTION MUST BE COMMENCED WITHIN 18 MONTHS FOR RESIDENTIAL SUBDIVISIONS AND 12 MONTHS FOR ANY COMMERCIAL INSTALLATIONS.
28. INSPECTION FEES: CALL THE DISTRICT (719-495-2500) FOR FEE SCHEDULE.

Know what's below. Call before you dig.



BASIS OF BEARINGS

THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624", SAID LINE BEARS N89°14'14"E A DISTANCE OF 2,722.69 FEET.

BENCHMARKS

1.THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION
NORTHING = 411416.273
EASTING = 235167.071
ELEVATION = 7023.42

2.THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION
NORTHING = 410095.404
EASTING = 235052.131
ELEVATION = 7000.40

3.THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDIVISION
NORTHING = 411399.962
EASTING = 233849.817
ELEVATION = 7030.82

WATER SYSTEM INSTALLATION NOTES

1. ALL WATER AND FORCE MAIN PIPE SHALL BE AWWA C900 PVC, OR EQUAL, PRESSURE CLASS 200. ALL WATER AND FORCE MAIN FITTINGS SHALL HAVE MECHANICAL RESTRAINS AND THRUST BLOCKS. ALL WATER AND FORCE MAIN PIPE SHALL HAVE A MINIMUM COVER DEPTH OF FIVE AND ONE-HALF (5.5) FEET.
2. ALL WATER VALVES ASSOCIATED WITH THE POTABLE WATER SYSTEM SHALL BE OPEN CLOCKWISE. ALL VALVES INSTALLED IN LANDSCAPED AREAS AND/OR NOT WITHIN PAVED STREETS SHALL BE MARKED WITH CARSONITE MARKERS. ALL VALVES ASSOCIATED WITH THE RAW WATER SYSTEM SHALL BE OPEN COUNTERCLOCKWISE AND MARKED WITH CARSONITE MARKERS AS APPLICABLE.
3. THE DEVELOPER OR HIS ENGINEER SHALL LOCATE ALL FIRE HYDRANTS AND SERVCIE STUB-OUTS FOR FUTURE DEVELOPEMENT. ANY REQUIRED REALIGNMENT, (HORIZONTAL OR VERTICAL), SHALL BE AT THE EXPENSE OF THE DEVELOPER. FIRE HYDRANT LOCATION SHALL BE REVIEWED AND APPROVED BY THE APPLICABLE FIRE AUTHORITY.
4. FIRE HYDRANTS SHALL BE OPEN RIGHT WITH 7/8" x 7/8" SQUARE TAPERED ALONG WITH SERVICE CAPS. LUBRICATION TYPE: (GREASE). ACCEPTABLE BRANDS ARE AMERICAN AVK SERIES 2700 (MODERN) AND MUELLER SUPER CENTURION 250.
5. ALL MAIN LINES (PVC & DUCTILE IRON) SHALL BE INSTALLED WITH COATED #12 TRACER WIRE WITH TEST STATIONS AT INTERVALS NO GREATER THAN 500 FT (VALVE BOXES CAN BE USED AT INTERSECTIONS AND SERVICE STUBS).
6. CONTRACTOR SHALL MAKE CONNECTIONS TO EXISTING WATER LINE WITHOUT SHUTDOWN, OR ELSE NOTIFY THE DISTRICT OF ANY SERVICE SHUTDOWNS NECESSARY TO CONNECT TO EXISTING LINES.
7. IRRIGATION SERVICES SHALL HAVE A STOP AND WASTE CURB STOP VALVE INSTALLED ALONG WITH TRACER WIRE EXTENDING BACK TO THE MAIN LINE.
8. COMMENCEMENT OF USE OF WATER LINES AND/OR SYSTEMS:
    a. NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL AFTER THE COMPLETION OF ALL PRESSURE TESTING, FLUSHING, BAC-T TESTING, COMPACTION TESTING, AND AS-BUILT DRAWINGS ARE SUBMITTED AND APPROVED BY THE DISTRICT.
    b. NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL SERVICE LINES ARE COMPLETED AND THE FIRST LIFT OF ASPHALT IS COMPLETED OVER THE LINE. IN THE CASE WHERE NO ASPHALT IS TO BE PLACED OVER THE LINE, SURFACE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO USE OF THE FACILITY.
    c. ALL EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICT, AND RECORDED.

AGENCIES

OWNER/DEVELOPER:	SR LAND, LLC 20 BOULDER CRESCENT, SUITE 201 COLORADO SPRINGS, CO 80903 JAMES F. MORLEY (719) 471-1742	FIRE DISTRICT:	BLACK FOREST FIRE PROTECTION DISTRICT 11445 TEACHOUT ROAD COLORADO SPRINGS, CO 80908 CHIEF BRYAN JACK (719) 495-4300
CIVIL ENGINEER:	JR ENGINEERING, LLC 5475 TECH CENTER DRIVE COLORADO SPRINGS, CO 80919 MIKE BRAMLETT P.E. (303) 267-6240	GAS DEPARTMENT:	COLORADO SPRINGS UTILITIES 7710 DURANT DR. COLORADO SPRINGS, CO 80947 TIM WENDT (719) 668-3556
COUNTY ENGINEERING:	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 JEFF RICE, P.E. (719) 520-6300	ELECTRIC DEPARTMENT:	MOUNTAIN VIEW ELECTRIC 11140 E. WOODMEN ROAD FALCON, CO 80831 (719) 495-2283
TRAFFIC ENGINEERING:	EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS 3275 AKERS DRIVE COLORADO SPRINGS, CO 80922 JENNIFER IRVINE, P.E. (719) 520-6460	COMMUNICATIONS:	QWEST COMMUNICATIONS (U.N.C.C. LOCATORS) (800) 922-1987 AT&T (LOCATORS) (719) 635-3674
WATER RESOURCES:	STERLING RANCH METRO DISTRICT ENGINEERS JDS-HYDRO CONSULTANTS 545 E. PIKES PEAK AVE., SUITE 300 COLORADO SPRINGS, CO 80903 JOHN MCGINN (719) 668-8769		

SHEET INDEX

1 : COVER PAGE
2 : LEGEND
3 : WATER OVERVIEW
4 : WATER PLANS
5 : WATER LOWERINGS
6 : WATER SERVICE PLAN
7 : DETAIL SHEET

EL PASO COUNTY STATEMENT

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

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

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

Remove Interim

JOSHUA PALMER, P.E. DATE

INTERIM COUNTY ENGINEER/ECM ADMINISTRATOR

WATER & SEWER MAIN EXTENSIONS

ANY CHANGES OR ALTERATIONS AFFECTING THE GRADE, ALIGNMENT, ELEVATION AND/OR DEPTH OF COVER OF ANY WATER OR SEWER MAINS OR OTHER APPURTENANCE SHOWN ON THIS DRAWING SHALL BE THE RESPONSIBILITY OF THE OWNER/DEVELOPER. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR ALL OPERATIONAL DAMAGES AND DEFECTS IN INSTALLATION AND MATERIAL FOR MAINS AND SERVICES FROM THE DATE OF APPROVAL UNTIL FINAL ACCEPTANCE IS ISSUED.

SIGNED _____ DATE _____

JAMES F. MORLEY
SR LAND, LLC
20 BOULDER CRESCENT, SUITE 201
COLORADO SPRINGS, CO 80903
(719) 471-1742

DISTRICT APPROVALS

THE STERLING RANCH METROPOLITAN DISTRICT RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN AND HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY.

STERLING RANCH METROPOLITAN DISTRICT

WATER DESIGN APPROVAL

DATE: _____ BY: _____

PROJECT NO. _____

IN CASE OF ERRORS OR OMISSIONS WITH THE WATER DESIGN AS SHOWN ON THIS DOCUMENT THE STANDARDS AS DEFINED IN THE "RULES AND REGULATIONS FOR INSTALLATION OF WATER MAINS AND SERVICES" SHALL RULE.

APPROVAL EXPIRES 180 DAYS FROM DESIGN APPROVAL.

FIRE AUTHORITY APPROVAL

THE NUMBER OF FIRE HYDRANTS AND HYDRANT LOCATIONS SHOWN ON THIS WATER INSTALLATION PLAN ARE CORRECT AND ADEQUATE TO SATISFY THE FIRE PROTECTION REQUIREMENTS AS SPECIFIED BY THE FIRE DISTRICT SERVING THE PROPERTY NOTED ON THE PLANS.

FIRE PROTECTION DISTRICT _____

SIGNED _____ DATE _____
FIRE PROTECTION DISTRICT

ENGINEER'S STATEMENT

THIS WATER SYSTEM PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR WATER SYSTEM PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

BY	DATE	REVISION	No.

H-SCALE	1"=1000'
V-SCALE	N/A
DATE	7/14/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2
COVER SHEET

SHEET 1 OF 7

JOB NO. 25188.10

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LAYER LINETYPE LEGEND

	EXISTING	PROPOSED
PHASE LINE		
MATCH LINE		
SECTION LINE		
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
R.O.W. A LINE	A	A
CENTERLINE		
CITY LIMITS		
WIRE FENCE		
CHAIN LINK FENCE		
WOOD FENCE		
MASONRY FENCE		
GUARDRAIL		
CONC. BARRIER		
CABLE TV	TV	TV
ELECTRIC	E	E
FIBER OPTIC	FO	FO
GAS MAIN	G	G
IRRIGATION MAIN	IRR	IRR
OIL/PETRO. MAIN	O	O
OVERHEAD UTILITY	OHU	OHU
SANITARY SEWER	S	
STORM DRAIN		
TELEPHONE	T	T
WATER MAIN	W	
RAW WATER LINE	RWL	RWL
SWALE/WATERWAY FLOWLINE		
DIVERSION DITCH		
DIVERSION CHANNEL		
MAJOR DRAINAGE BASIN		
MINOR DRAINAGE BASIN		
TOP OF SLOPE		
TOE OF SLOPE		
EDGE OF WATER		
INDEX CONTOUR	6100	6100
INTERMEDIATE CONTOUR		
DEPRESSION CONT. (INDEX)	6100	6100
DEPRESSION CONT. (INTER)		
TOP OF CUTS		
TOE OF FILLS		
CUT AND FILL LINE		C/F
SILT FENCE	SF	SF
100 YEAR FLOODPLAIN	100YR	100YR
500 YEAR FLOODPLAIN	500YR	500YR
FLOODWAY	FLDWY	FLDWY
BASE FLOOD ELEVATION		
EDGE OF WETLANDS		
STONE WALL		

UTILITIES LEGEND

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE		
STORM INLET		
AREA INLET – SQUARE		
AREA INLET – ROUND		
FLARED END SECTION		
RIPRAP		
SANITARY SEWER		
LINE MARKER	Mkr San	
SERVICE MARKER		
CLEAN–OUT		
MANHOLE W/ DIRECTIONAL FLOW ARROW		
WATER LINE		
LINE MARKER	Mkr W	
SERVICE MARKER		
FIRE HYDRANT		
FIRE CONNECTION		
MANHOLE	W	
BEND		
BLOW–OFF VALVE		
WELL	WELL	WELL
METER	M	
VALVE		
REDUCER		
THRUST BLOCK		
CROSS		
PLUG W/ THRUST BLOCK		
TEE		
REVERSE ANCHOR		
ANODE		
AIR & VACUUM VALVE ASSEMBLY		
TRANSMISSION BLOW–OFF ASSEMBLY		
GAS LINE		
MARKER	Mkr G	
SERVICE MARKER		
METER	G	
VALVE		
PLUG		
TEE		
DRY UTILITIES		
CABLE TV MARKER	Mkr TV	
CABLE TELEVISION PEDESTAL	TV	
ELECTRIC MARKER	Mkr E	
ELECTRIC SERVICE MARKER		
ELECTRICAL PEDESTAL	E	
ELECTRICAL METER	E	
ELECTRICAL MANHOLE	E	
FIBER–OPTIC MARKER	Mkr FO	
IRRIGATION PEDESTAL	I	
TELEPHONE MARKER	Mkr T	
TELEPHONE PEDESTAL	T	
TELEPHONE MANHOLE	T	
UTILITY POLE		
GUY ANCHOR		
GUY POLE		
MISC. UTILITIES		
VENT PIPE	VP	VP
TEST HOLE DESIGNATOR	TH# FIRM AGENCY	

LANDSCAPE LEGEND

	EXISTING	PROPOSED
TREE – CONIFEROUS		
TREE – DECIDUOUS		
SHRUB/BUSH		
SHRUBS AND BUSHES		
IRRIGATION BOX		
IRRIGATION SPRINKLER		
IRRIGATION VALVE		
BOLLARD		
FLAGPOLE	FP	

Know what's **below.**
Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H–SCALE	N/A	DESIGNED BY	QNL
V–SCALE	N/A	DRAWN BY	QNL
DATE	7/14/22	CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

LEGEND

SHEET 2 OF 7

JOB NO. 25188.10

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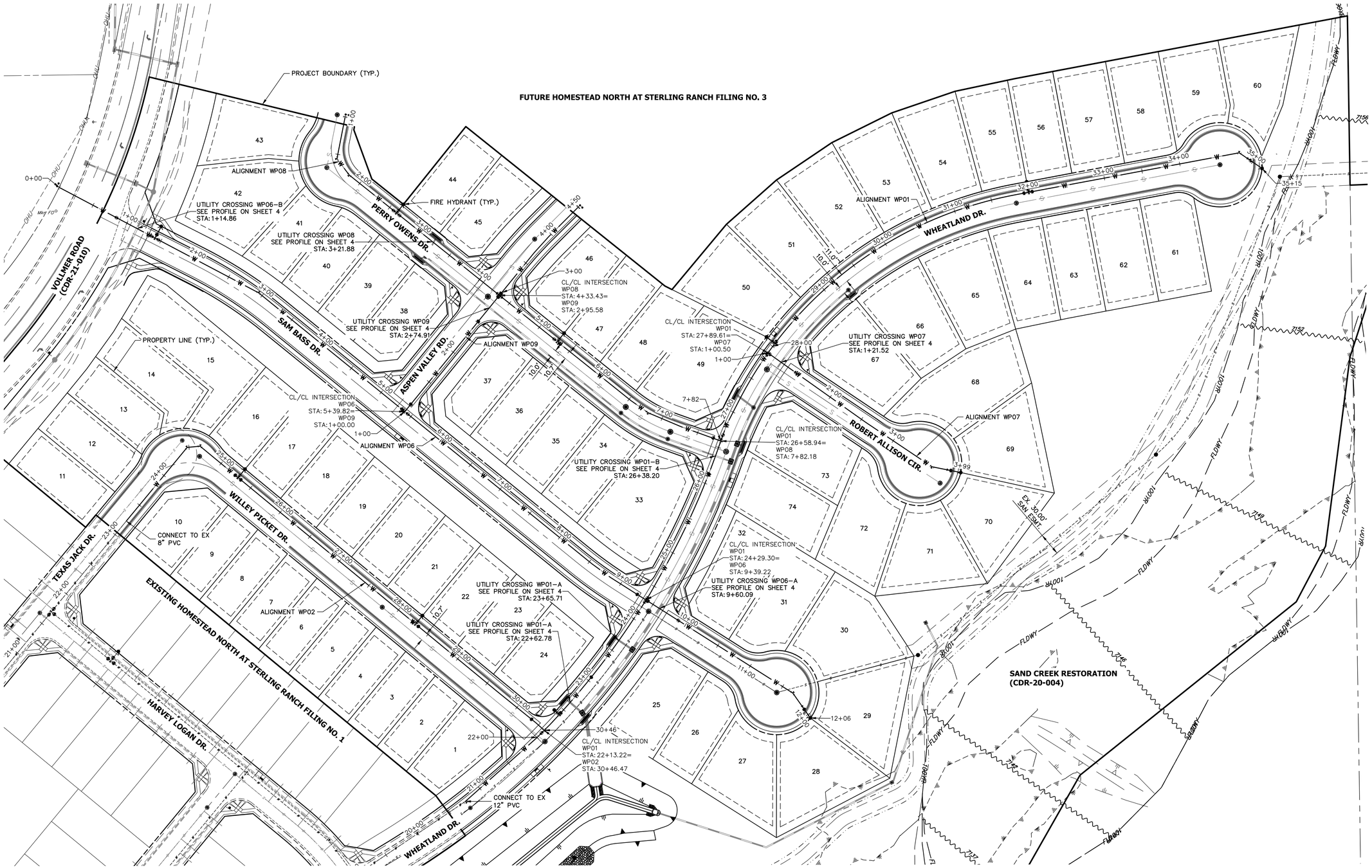

60 30 0 60 120

ORIGINAL SCALE: 1" = 60'

Know what's **below.** **Call** before you dig.

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MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

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No.	REVISION	BY	DATE

H-SCALE	1"=60'
V-SCALE	N/A
DATE	7/14/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

WATER OVERVIEW

SHEET 3 OF 7

JOB NO. 25188.10

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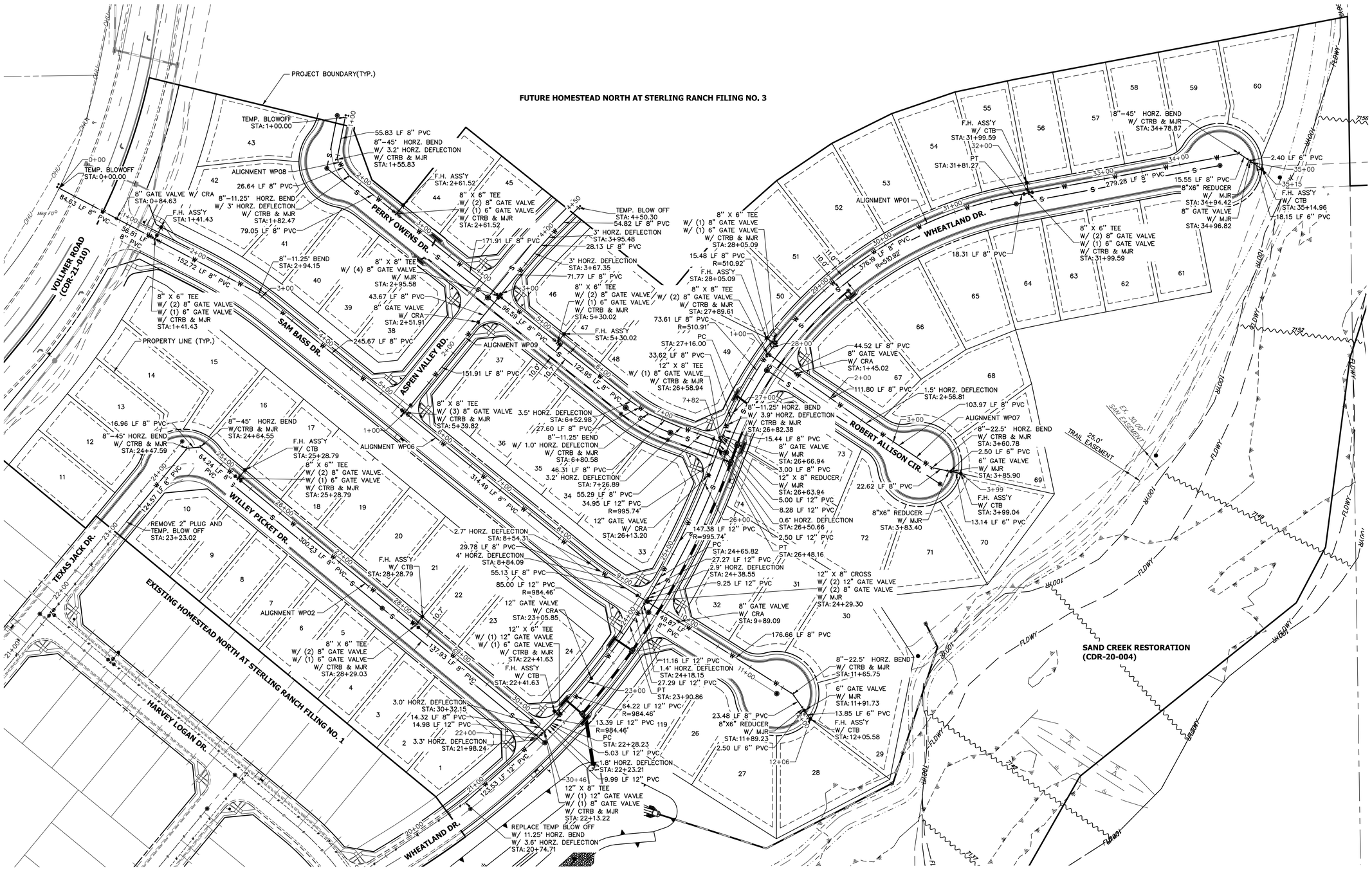

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

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No.	REVISION	BY	DATE

H-SCALE	1"=60'
V-SCALE	N/A
DATE	7/14/22
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HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2
WATER PLANS

SHEET 4 OF 7

JOB NO. 25188.10

811 Know what's below. Call before you dig.

60 30 0 60 120
ORIGINAL SCALE: 1" = 60'

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT PROFESSIONAL ENGINEER 32314

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

X:\2510000.all\25188.10\Drawings\Sheet Dwgs\CD-Utility\Water Plan\25188.10 WP01 Water Plans 7.14.2022 3:21:08 PM, CS

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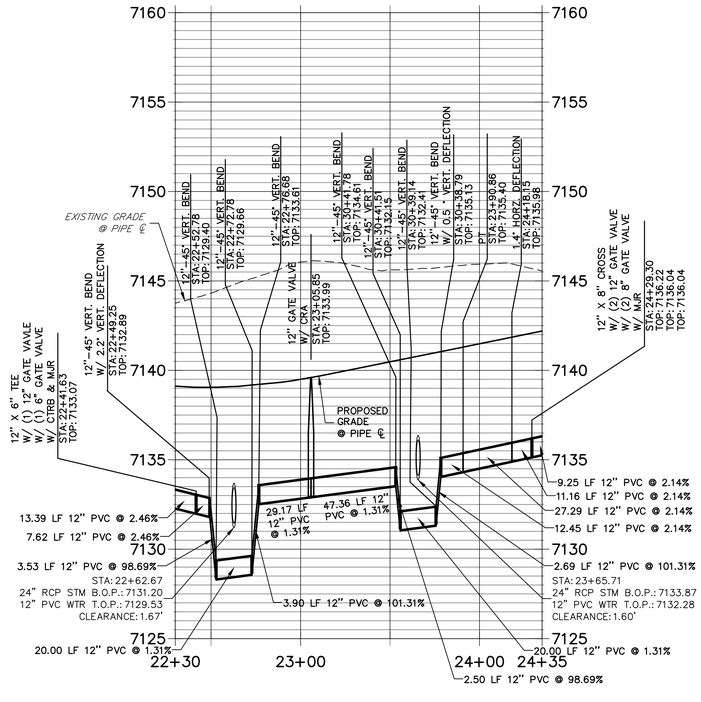

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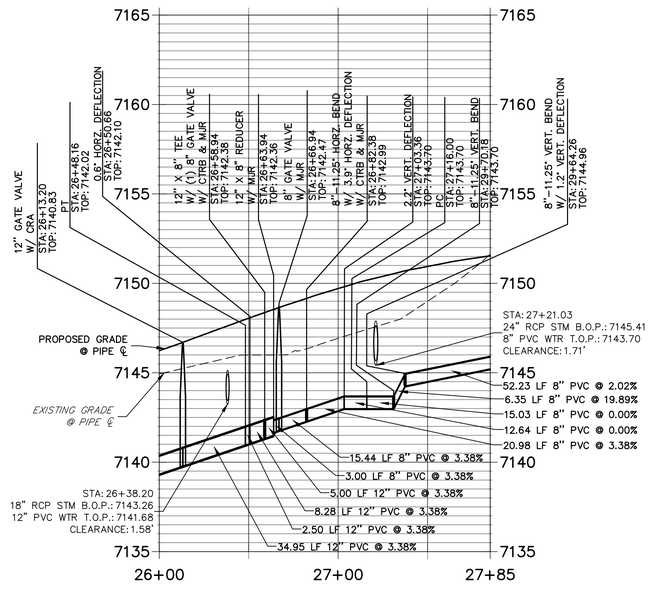

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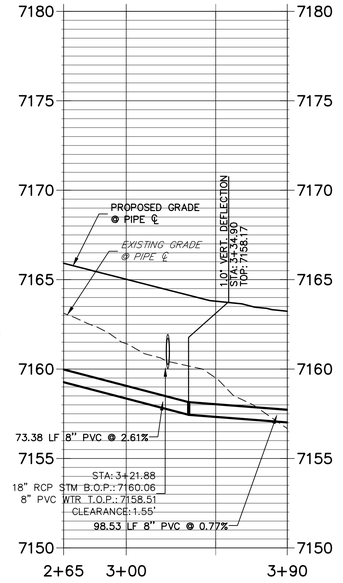

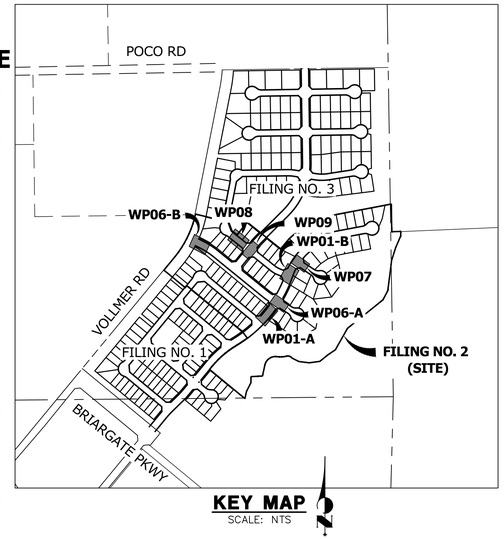

KEY MAP
SCALE: NTS

WATER NOTE

- ALL VERTICAL BENDS WILL REQUIRE MJR AND ALL PIPES ABOVE 10% VERTICAL SLOPE MUST BE RESTRAINED.
- ALL WATER MAINS SHALL BE INSTALLED AT STANDARD DEPTH OF 5'-6" UNLESS OTHERWISE SHOWN.

WP07 LOWERING PROFILE
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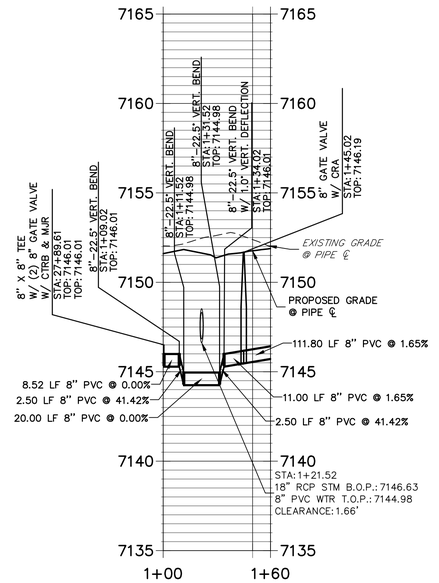

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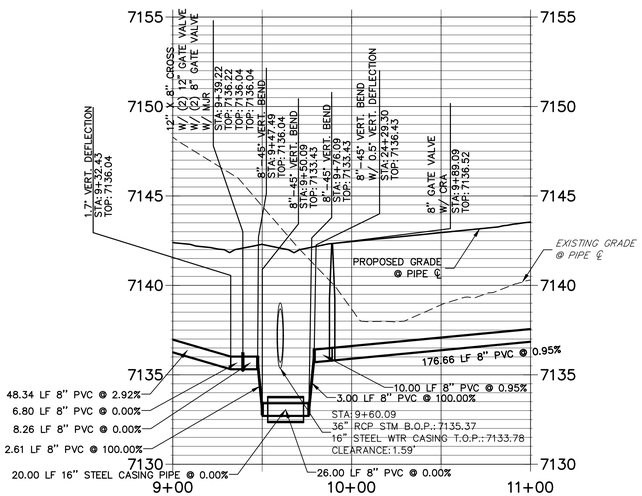

WP09 PROFILE
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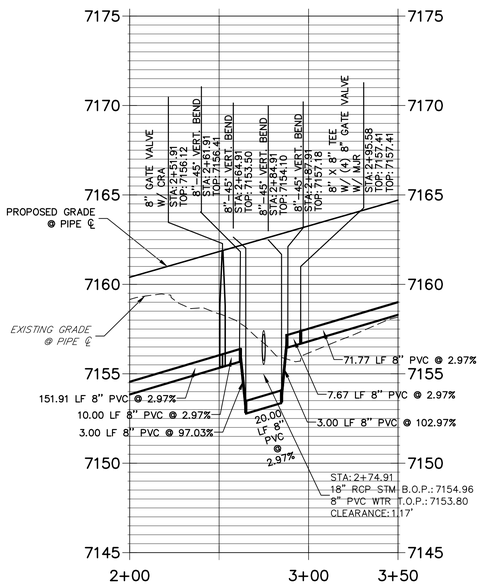

WP06 LOWERING PROFILE - B
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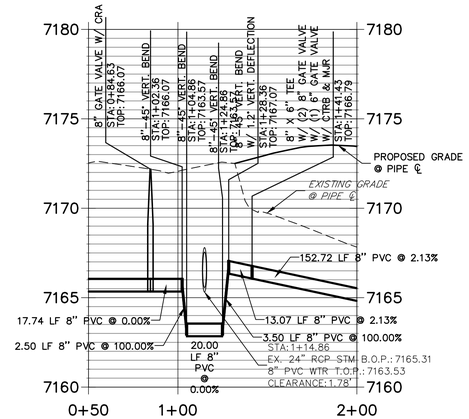

40 20 0 40 80
HORIZONTAL
ORIGINAL SCALE: 1" = 40'
VERTICAL
ORIGINAL SCALE: 1" = 4'

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED PROFESSIONAL ENGINEER MIKE A. BRAMLETT 32314

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

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(719) 471-1742

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE 1"=40' | V-SCALE 1"=4' | DATE 7/14/22 | DESIGNED BY QNL | DRAWN BY QNL | CHECKED BY

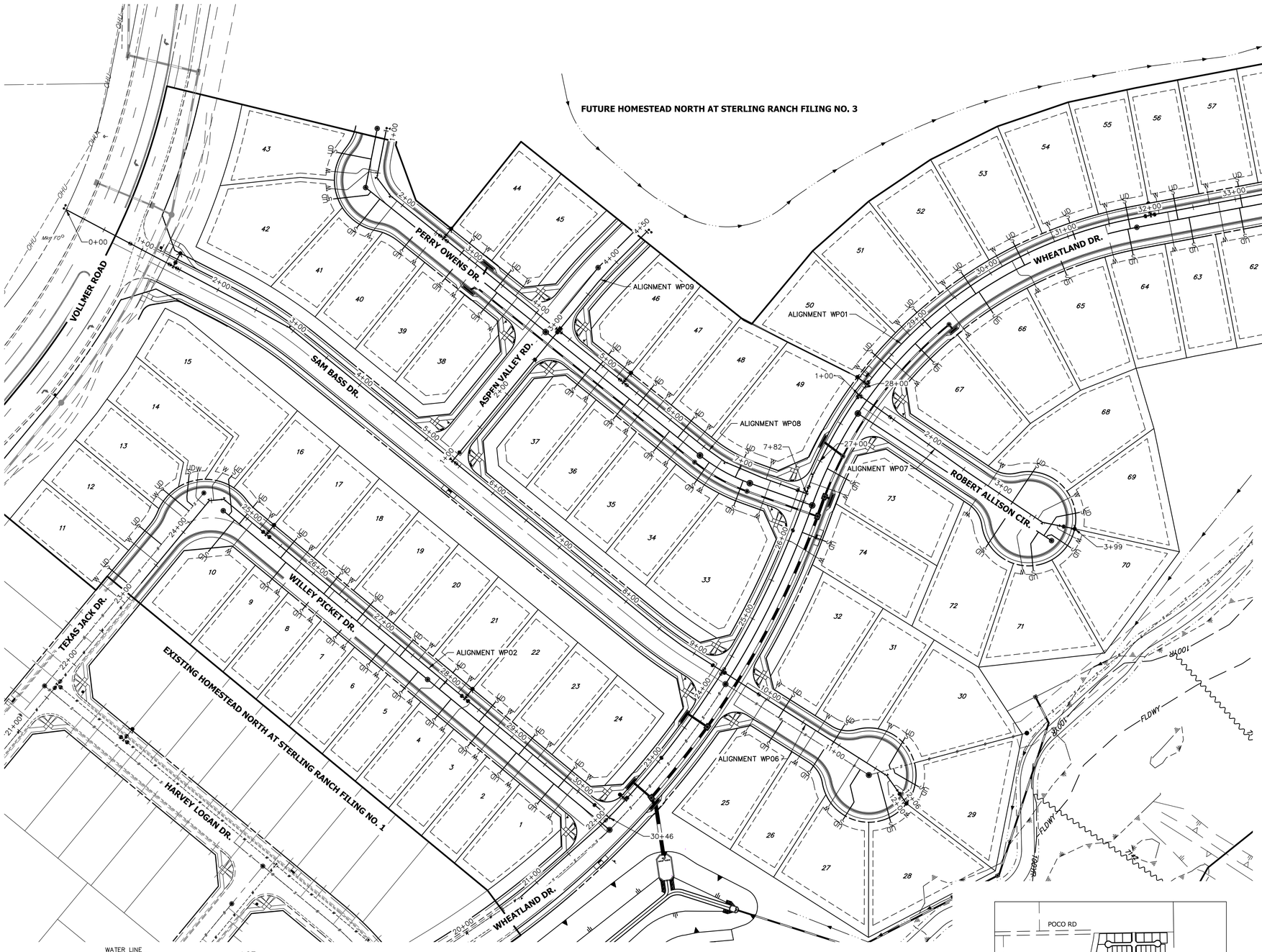
HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

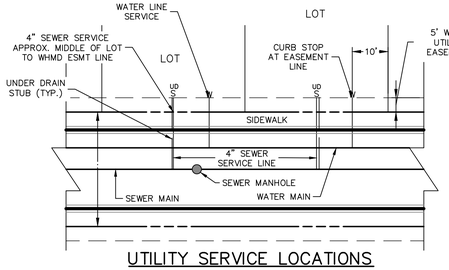
WATER LOWERINGS

SHEET 5 OF 7

JOB NO. 25188.10

X:\2510000.all\2518810\Drawings\Sheet Dwgs\CD-Utility\Water Plan\2518810 WP01 - Lowerings.dwg, WP01 Water Lowerings, 7/14/2022 3:25:47 PM, CS





UTILITY SERVICE LOCATIONS

NTS

NOTES:

1. WATER SERVICE TO BE 10' FROM "DOWNSTREAM" PROPERTY LINE AND EXTENDED TO WHMD UTILITY EASEMENT LINE.

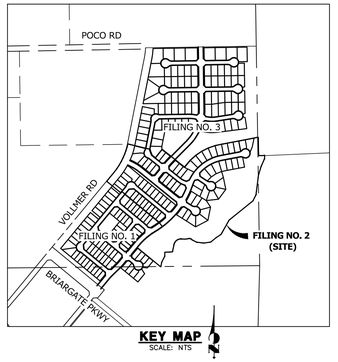
2. SEWER SERVICE TO BE PLACED APPROXIMATELY IN THE MIDDLE OF THE LOT AND EXTENDED TO WHMD UTILITY EASEMENT LINE.

3.SERVICE SHALL BE MARKED WITH 2"x4" POST AT TERMINATION POINT FOR LOCATION DURING CONNECTION TO RESIDENCE. POSTS SHALL BE SPRAY-PAINTED BLUE FOR WATER AND GREEN FOR SEWER.

811 Know what's **below.** **Call** before you dig.

60 30 0 60 120

ORIGINAL SCALE: 1" = 60'



KEY MAP

SCALE: NTS

WATER SERVICE TABULATION		
SERVICE/LOT #	STATION	ALIGNMENT
WS-LOT 1	29+92.46	WP02
WS-LOT 2	29+31.81	WP02
WS-LOT 3	28+81.81	WP02
WS-LOT 4	28+31.81	WP02
WS-LOT 5	27+91.36	WP02
WS-LOT 6	27+31.81	WP02
WS-LOT 7	26+81.81	WP02
WS-LOT 8	26+31.81	WP02
WS-LOT 9	25+81.81	WP02
WS-LOT 10	25+07.56	WP02
WS-LOT 11	22+93.02	WP02
WS-LOT 12	23+53.02	WP02
WS-LOT 13	24+13.02	WP02
WS-LOT 14	24+40.19	WP02
WS-LOT 15	24+52.72	WP02
WS-LOT 16	25+18.79	WP02
WS-LOT 17	25+78.79	WP02
WS-LOT 18	26+38.79	WP02
WS-LOT 19	26+98.79	WP02
WS-LOT 20	27+58.79	WP02

WATER SERVICE TABULATION		
SERVICE/LOT #	STATION	ALIGNMENT
WS-LOT 21	28+18.79	WP02
WS-LOT 22	28+78.79	WP02
WS-LOT 23	29+38.79	WP02
WS-LOT 24	29+98.80	WP02
WS-LOT 25	9+98.97	WP06
WS-LOT 26	10+67.50	WP06
WS-LOT 27	11+27.35	WP06
WS-LOT 28	11+72.60	WP06
WS-LOT 29	11+80.76	WP06
WS-LOT 30	11+38.01	WP06
WS-LOT 31	10+70.50	WP06
WS-LOT 32	10+01.97	WP06
WS-LOT 33	7+37.96	WP08
WS-LOT 34	6+76.18	WP08
WS-LOT 35	6+27.88	WP08
WS-LOT 36	5+67.88	WP08
WS-LOT 37	5+07.88	WP08
WS-LOT 38	3+71.89	WP08
WS-LOT 39	3+11.88	WP08
WS-LOT 40	2+51.88	WP08

WATER SERVICE TABULATION		
SERVICE/LOT #	STATION	ALIGNMENT
WS-LOT 41	1+91.88	WP08
WS-LOT 42	1+50.83	WP08
WS-LOT 43	1+48.33	WP08
WS-LOT 44	3+08.88	WP08
WS-LOT 45	3+68.89	WP08
WS-LOT 46	5+20.02	WP08
WS-LOT 47	5+80.02	WP08
WS-LOT 48	6+40.02	WP08
WS-LOT 49	7+32.27	WP08
WS-LOT 50	28+14.89	WP01
WS-LOT 51	28+81.15	WP01
WS-LOT 52	29+48.54	WP01
WS-LOT 53	30+15.95	WP01
WS-LOT 54	30+83.38	WP01
WS-LOT 55	31+50.83	WP01
WS-LOT 56	32+09.59	WP01
WS-LOT 57	32+69.59	WP01
WS-LOT 58	33+39.59	WP01
WS-LOT 59	34+09.58	WP01
WS-LOT 60	34+37.83	WP01

WATER SERVICE TABULATION		
SERVICE/LOT #	STATION	ALIGNMENT
WS-LOT 61	33+49.78	WP01
WS-LOT 62	32+79.78	WP01
WS-LOT 63	32+19.76	WP01
WS-LOT 64	31+45.53	WP01
WS-LOT 65	30+28.71	WP01
WS-LOT 66	29+35.05	WP01
WS-LOT 67	28+44.96	WP01
WS-LOT 68	2+84.40	WP07
WS-LOT 69	3+54.02	WP07
WS-LOT 70	3+78.52	WP07
WS-LOT 71	3+44.76	WP07
WS-LOT 72	2+81.42	WP07
WS-LOT 73	26+72.75	WP01
WS-LOT 74	26+00.28	WP01

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E. DATE
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

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DATE 7/14/22
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HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

SERVICE PLAN

SHEET 6 OF 7

JOB NO. 25188.10

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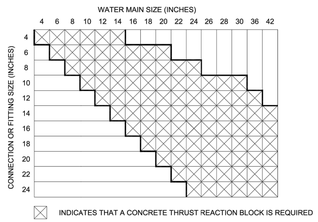
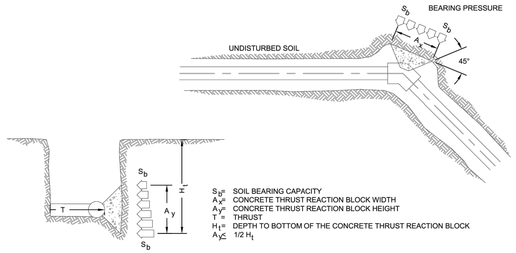
CONCRETE THRUST REACTION BLOCK REQUIREMENTS FOR TEES OR TAPS

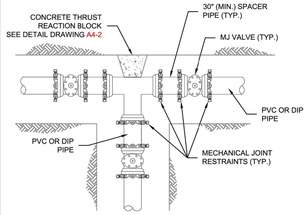




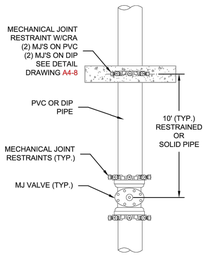
NOTES:

1. A SITE SPECIFIC DESIGN SHALL BE REQUIRED FOR CONNECTIONS OR FITTING SIZE COMBINATIONS NOT SHOWN ABOVE.
2. THE CONCRETE THRUST REACTION BLOCK SHALL BEAR AGAINST UNDISTURBED SOIL.
3. THE CONCRETE THRUST REACTION BLOCK SHALL BE INSTALLED WITH A 45° ANGLE FROM THE FITTING TO THE UNDISTURBED SOIL AS SHOWN IN THE DRAWING ABOVE.
4. REFER TO DETAIL DRAWING A4-2 FOR STANDARD CONCRETE THRUST REACTION BLOCK DIMENSIONS AND VOLUMES.
5. DUCTILE IRON FITTINGS AND PIPE SHALL BE WRAPPED IN POLYETHYLENE TUBING WHERE ADJACENT TO CONCRETE.

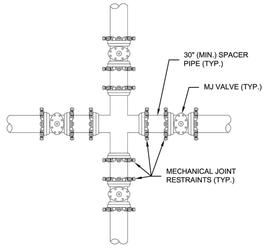
Colorado Springs Utilities	CONCRETE THRUST REACTION BLOCKS	A4-3
		DATED 03/2014



TEE INSTALLATION



IN LINE VALVE INSTALLATION

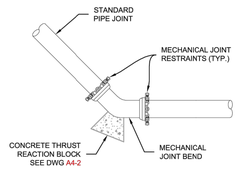


CROSS INSTALLATION

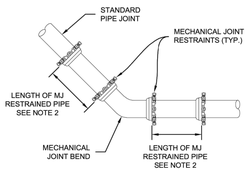
NOTES:

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.

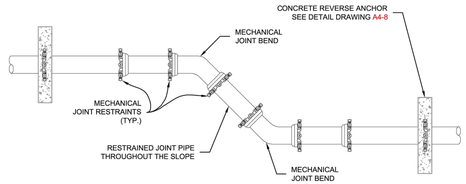
Colorado Springs Utilities	VALVE AND FITTINGS W/ MECHANICAL JOINT RESTRAINTS	A4-5
		DATED 06/2015



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

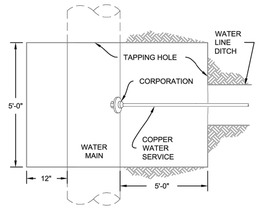
NOTES:

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.

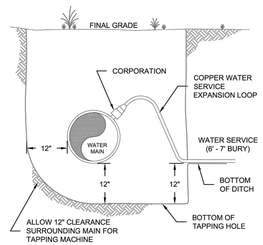
Colorado Springs Utilities	BEND CONFIGURATIONS AND RESTRAINTS	A4-6
		DATED 06/2015

TAPPING DETAIL FOR 3/4" AND 1" CONNECTION

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



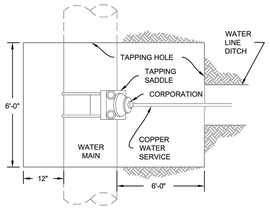
PLAN VIEW



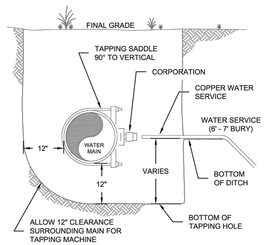
ELEVATION

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

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



PLAN VIEW

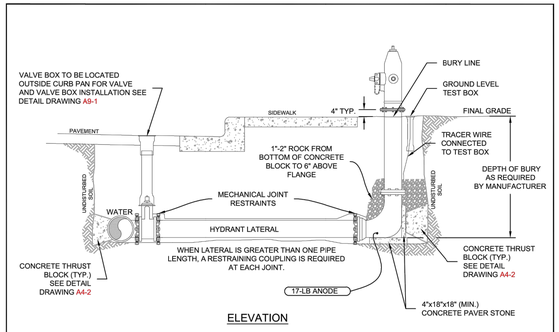


ELEVATION

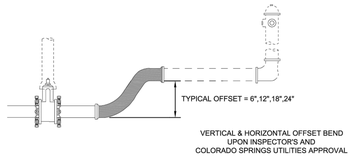
NOTES:

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.

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



ELEVATION



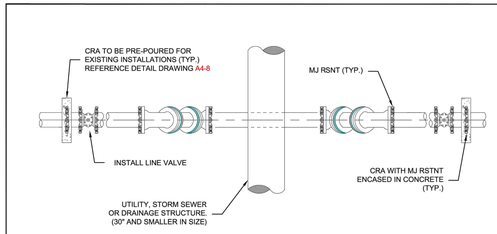
ELEVATION

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

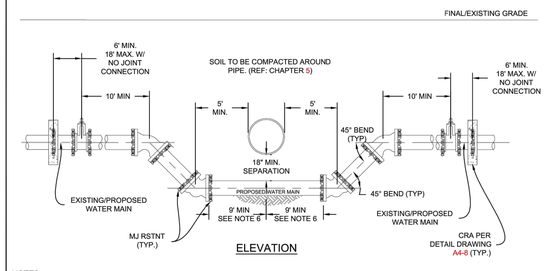
NOTES:

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.

Colorado Springs Utilities	FIRE HYDRANT INSTALLATION	A5-3
		DATED 03/2014



PLAN

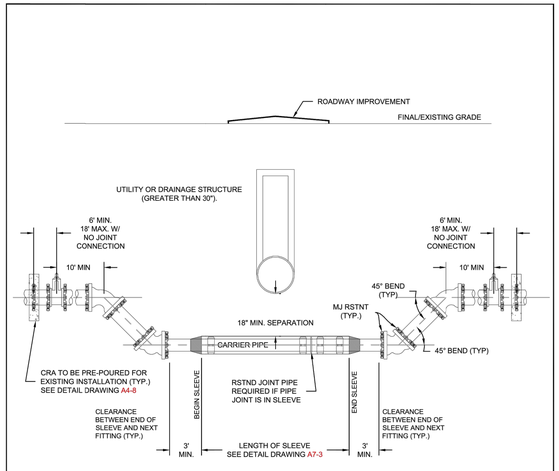


ELEVATION

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



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	LOWERING DETAIL W/CASING UTILITY CROSSING GREATER THAN 30"	A7-2
		DATED 08/2020

Know what's **below.**
Call before you dig.

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
SR LAND, LLC
20 BOULDER CRESCENT
SUITE 200
COLORADO SPRINGS, CO 80903
JAMES F. MORLEY
(719) 471-1742

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V-SCALE	N/A
DATE	7/14/22
DESIGNED BY	QNL
DRAWN BY	QNL
CHECKED BY	

HOMESTEAD NORTH AT STERLING RANCH FILING NO. 2

DETAIL SHEET

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

SHEET 7 OF 7

JOB NO. 25188.10

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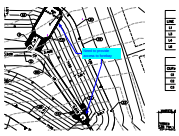
ENG-SF2218-R2-CDs.pdf Markup Summary

CDurham (23)



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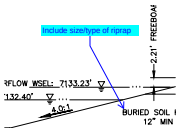

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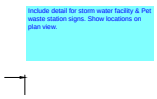

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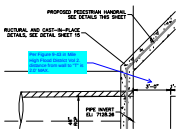
Include detail for storm water facility & Pet waste station signs. Show locations on plan view.



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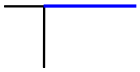
Per Figure 9-43 in Mile High Flood District Vol 2. distance from wall to "T" is 2.0' MAX.



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Page Label: [17] 17 STREET01 DT01
Author: CDurham
Date: 8/10/2022 5:16:57 PM
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Author: CDurham
Date: 8/10/2022 5:17:10 PM
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Date: 8/10/2022 5:17:17 PM
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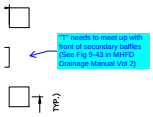

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Date: 8/10/2022 5:17:56 PM
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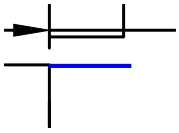
"T" needs to meet up with front of secondary baffles (See Fig 9-43 in MHFD Drainage Manual Vol 2)



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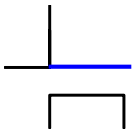

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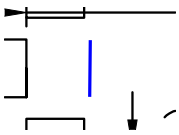

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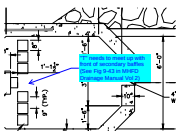

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Page Label: [17] 17 STREET01 DT01
Author: CDurham
Date: 8/10/2022 5:18:41 PM
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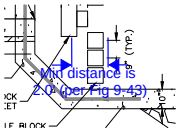
"T" needs to meet up with front of secondary baffles (See Fig 9-43 in MHFD Drainage Manual Vol 2)



Subject: Dimension
Page Label: [17] 17 STREET01 DT01
Author: CDurham
Date: 8/10/2022 5:20:45 PM
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Color:
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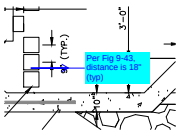
Min distance is
2.0' (per Fig 9-43)



Subject: Callout
Page Label: [17] 17 STREET01 DT01
Author: CDurham
Date: 8/10/2022 5:22:22 PM
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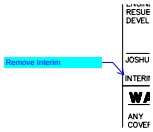
Per Fig 9-43, distance is 18" (typ)



Subject: Callout
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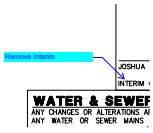
Remove Interim



Subject: Callout
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Subject: Highlight
Page Label: [17] 17 STREET01 DT01
Author: CDurham
Date: 8/10/2022 6:19:36 PM
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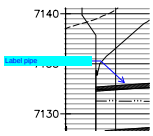

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Author: CDurham
Date: 8/10/2022 6:21:42 PM
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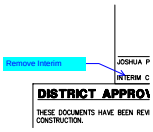
Label pipe



Subject: Callout
Page Label: [1] 1 STREET01 Cover Page
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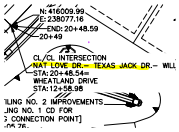

Subject: Highlight
Page Label: [4] 4 STREET01 HORIZINTAL CONTROL
Author: CDurham
Date: 8/8/2022 9:45:55 AM
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Subject: Callout
Page Label: [4] 4 STREET01 HORIZINTAL CONTROL
Author: CDurham
Date: 8/8/2022 9:46:12 AM
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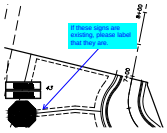
Delete highlighted text



Subject: Callout
Page Label: [16] 16 STREET01 Signage
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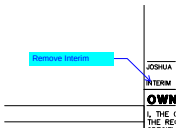
Space:

If these signs are existing, please label that they are.



Subject: Callout
Page Label: [17] 17 STREET01 DT01
Author: CDurham
Date: 8/8/2022 9:59:27 AM
Status:
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Remove Interim