CROSSROADS MIXED USE FILING NO. 1

COUNTY OF EL PASO, STATE OF COLORADO

CONSTRUCTION PLANS

APRIL 2022

AGENCIES:

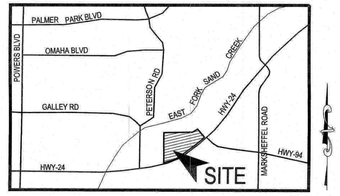
OWNER/DEVELOPER:	COLORADO SPRINGS EQUITIES LLC 90 S. CASCADE AVE., SUITE 1500 COLORADO SPRINGS, CO 80903 DANNY MIENTKA (719) 448-4034
CIVIL ENGINEER:	M & S CIVIL CONSULTANTS, INC. 212 N. WAHSATCH, SUITE 305 COLORADO SPRINGS, CO 80903 VIRGIL A. SANCHEZ P.E. (719) 955-5485
COUNTY ENGINEERING:	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 GILBERT LAFORCE, P.E. (719) 520-6300
TRAFFIC ENGINEERING:	EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS 3275 AKERS DRIVE COLORADO SPRINGS, CO 80922 JENNIFER IRVINE, P.E. (719) 520-6460
WATER RESOURCES:	CHEROKEE METROPOLITAN DISTRICT 6250 PALMER PARK BOULEVARD COLORADO SPRINGS, CO 80915-1721 JEFF MUNGER (719) 597-5080
FIRE DISTRICT:	CIMARRON HILLS FIRE DEPARTMENT 1835 TUSKEGEE PLACE COLORADO SPRINGS, CO 80915 (719) 591-0960
GAS DEPARTMENT:	COLORADO SPRINGS UTILITIES 7710 DURANT DR. COLORADO SPRINGS, CO 80947 TIM WENDT (719) 668-3556
ELECTRIC DEPARTMENT:	COLORADO SPRINGS UTILITIES 7710 DURANT DR. COLORADO SPRINGS, CO 80947 TIM WENDT (719) 668-3556
COMMUNICATIONS:	QWEST COMMUNICATIONS (U.N.C.C. LOCATORS) (800) 922-1987 AT&T (LOCATORS) (719) 635-3674

BASIS OF BEARINGS

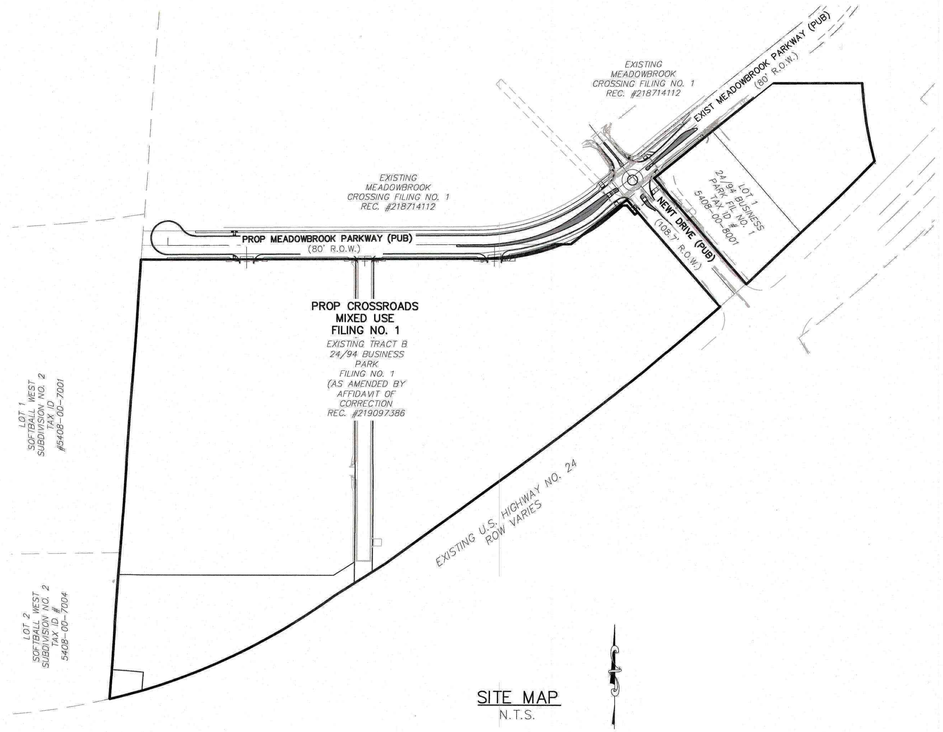
A PORTION OF THE EASTERLY LINE OF "SOFTBALL WEST SUBDIVISION NO. 2" RECORDED IN PLAT BOOK T-3 AT PAGE 112 OF THE RECORDS OF EL PASO COUNTY, COLORADO, BEING MONUMENTED ON THE SOUTH WITH A NO. 4 REBAR, FROM WHICH A NO. 5 REBAR WITH BLUE PLASTIC CAP STAMPED "RAMPART PLS 32820" BEARS N03°58'20"E A DISTANCE OF 1,170.16 FEET.

BENCHMARK:

1. NATIONAL GEODETIC VERTICAL DATUM OF 1929, MONUMENT R76 SET IN TOP OF CONCRETE MONUMENT
ELEVATION = 6286.32'
2. NATIONAL GEODETIC VERTICAL DATUM OF 1929, FOUND #5 REBAR AND ORANGE CAP PLS 32820
ELEVATION = 6325.50'



VICINITY MAP
N.T.S.



SITE MAP
N.T.S.

DESIGN ENGINEER'S STATEMENT

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND 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 PLANS 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 VIRGIL A. SANCHEZ 37160 05/03/22 PROFESSIONAL ENGINEER

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

OWNER/DEVELOPER'S STATEMENT:

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

4-22-2022

DANNY MIENTKA (MANAGER) — DATE
COLORADO SPRINGS EQUITIES LLC

EL PASO COUNTY:

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

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

IN ACCORDANCE WITH 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.

APPROVED
Engineering Department
06/09/2022 3:08:27 PM
dsdnijkamp
EPC Planning & Community Development Department

DATE

COUNTY ENGINER / ECM ADMINISTRATOR

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EL PASO COUNTY FILE NO. SF 21-029

COLORADO REGISTERED VIRGIL A. SANCHEZ 37160 03/13/2024 PROFESSIONAL ENGINEER

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES
FOR BURIED UTILITY INFORMATION
48 HRS BEFORE YOU DIG
CALL 1-800-922-1987

AS-BUILT
ENGINEERING RECORD DRAWINGS

CROSSROADS MIXED USE FILING NO.1
TITLE SHEET
PROJECT NO. 18-003
DESIGNED BY: CLP
DRAWN BY: CLP
CHECKED BY: VAS
DATE: 04/20/2022
SCALE: HORIZONTAL: N/A VERTICAL: N/A
SHEET 1 OF ~~24~~ 26
SI01

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

FOR AND ON BEHALF OF M & S CIVIL CONSULTANTS, INC.
VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160
COLORADO REGISTERED VIRGIL A. SANCHEZ 37160 05/03/22 PROFESSIONAL ENGINEER

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APPR'D. BY:	DATE:

THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

CAUTION

File: Q:\18003A-Crossroads Mixed Use\Colorado Springs Equities LLC\dwg\Const Dwg\Street\SI01.dwg Plotstamp: 4/22/2022 10:26 AM

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 PCD PRIOR TO CONSTRUCTION.

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 ON-SITE AND OFF-SITE, 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 DEPARTMENT – 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 DEPARTMENT OF PUBLIC WORKS AND MUTCD CRITERIA.
14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
15. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS 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.

SIGNAGE 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.

COLORADO REGISTERED PROFESSIONAL ENGINEER
VIRGIL A. SANCHEZ
37160
03/13/2024

AS-BUILT
ENGINEERING RECORD DRAWINGS

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES
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EPC 6/9/2022

CROSSROADS MIXED USE FILING NO. 1
CONSTRUCTION NOTES

PROJECT NO. 18-003
DESIGNED BY: CLP
DRAWN BY: CLP
CHECKED BY: VAS
SCALE: HORIZONTAL: N/A VERTICAL: N/A
DATE: 04/20/2022
SHEET 2 OF ~~24~~ 26
SI02

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

VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.
COLORADO REGISTERED PROFESSIONAL ENGINEER
VIRGIL A. SANCHEZ
37160
05/03/22

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APP'D. BY:	DATE:

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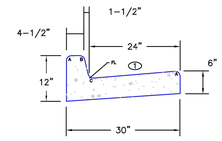
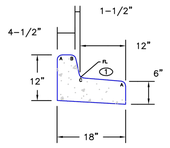
CAUTION

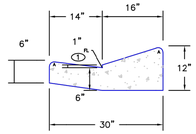
File: O:\18003A-Crossroads Mixed Use\Colorado Springs Equities LLC\dwg\Const Dwg\Street\SI02.dwg Plotstamp: 4/13/2022 11:43 AM



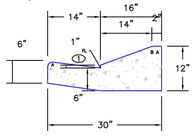
EPC TYPE A
(REVERSE SLOPE OF PAN FOR SPILL CURB)



EPC TYPE B



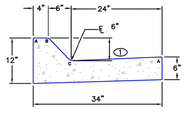
EPC TYPE C
(REVERSE SLOPE OF PAN FOR SPILL CURB)



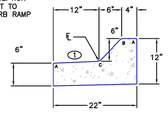
EPC OPTIONAL TYPE C

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).



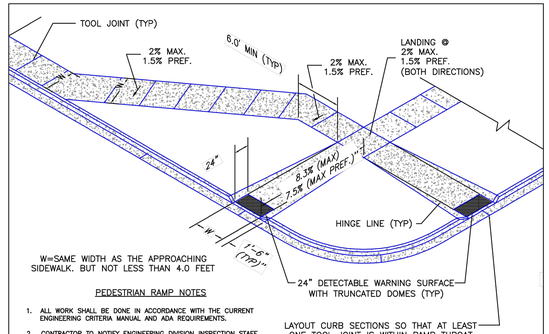
EPC TYPE D
(6" RAMP CURB)



EPC TYPE E
(6" RAMP CURB)

SCALE: NOT TO SCALE

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



W=SAME WIDTH AS THE APPROACHING SIDEWALK. BUT NOT LESS THAN 4.0 FEET

LAYOUT CURB SECTIONS SO THAT AT LEAST ONE TOOL JOINT IS WITHIN RAMP THROAT

PEDESTRIAN RAMP NOTES

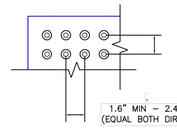
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT ENGINEERING CRITERIA MANUAL AND ADA REQUIREMENTS.
2. CONTRACTOR TO NOTIFY ENGINEERING DIVISION INSPECTION STAFF 48 HOURS PRIOR TO CONCRETE PLACEMENT.
3. PEDESTRIAN CURB RAMP CONSTRUCTION SHALL BE A MINIMUM 4,500 PSI CONCRETE, MINIMUM 4" THICK, 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 6.3.6 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

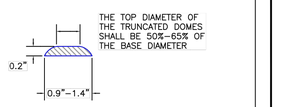
1. WHERE THE 1'–6" FLARED SIDE(S) OF A PERPENDICULAR CURB RAMP IS (ARE) CONTIGUOUS WITH A PEDESTRIAN OR HARD SURFACE AREA (PEDESTRIAN CIRCULATION PATH), THE MAXIMUM FLARE SLOPE SHALL NOT EXCEED 10:1.
2. PEDESTRIAN WALKWAY (PEDESTRIAN ACCESS ROUTE) AND/OR LOCATION OF EXISTING OR FUTURE PEDESTRIAN RAMPS 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	Pedestrian Curb Ramp Detail	
DATE APPROVED:	Standard Drawing	
Jennifer E. Irvine	REVISION DATE: 6/23/20	FILE NAME: SD_2–41
DEPARTMENT OF PUBLIC WORKS		

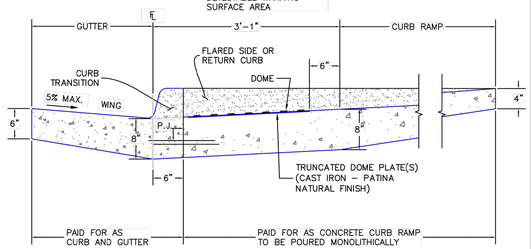
TRUNCATED DOME DETAILS



DOME SPACING



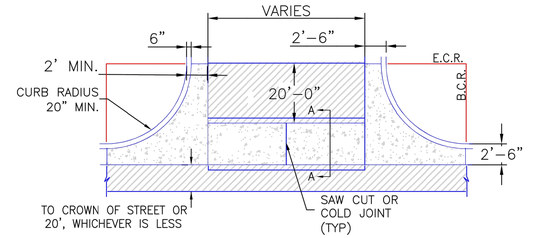
ELEVATION VIEW



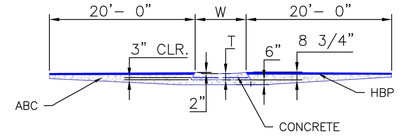
P.J.= PERMISSABLE JOINT WITH EPOXY–COATED DEFORMED NO. 4 BARS CONFORMING TO AASHTO M 284 AT 18 IN. SPACING

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

6/23/20	Detectable Warning Surface Details	
DATE APPROVED:	Standard Drawing	
Jennifer E. Irvine	REVISION DATE: 6/23/20	FILE NAME: SD_2–42
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	Typical Cross Pan Layout Detail	
DATE APPROVED:	Standard Drawing	
André P. Brackin	REVISION DATE: 12/8/15	FILE NAME: SD_2–26
DEPARTMENT OF TRANSPORTATION		

CROSSROADS MIXED USE FILING NO. 1

DETAILS

DATE: 04/20/2022

SHEET 3 OF ~~24~~ 26

SI03

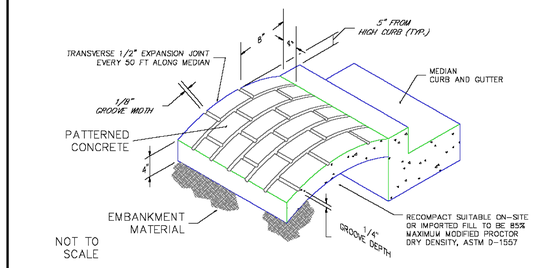
SCALE: HORIZONTAL: N/A VERTICAL: N/A

PROJECT NO. 18–003

DESIGNED BY: CLP
DRAWN BY: CLP
CHECKED BY: VAS

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

M&S CIVIL CONSULTANTS, INC.



NOTES:

A) The median paving shall be constructed with 4 inch thick, integrally colored concrete, embossed with a running bond 4" x 8" brick pattern as shown.

B) Install 1/2" x 4" expansion material at median noses, fixed objects, and at transverse joints at 50 ft. intervals (maximum) along the median.

C) The color additive shall be an approved commercially pure or synthetic mineral pigment, factory formulated and packaged in cubic yard dosage increments. The mixture shall be "Chromix" as manufactured by L.M. Scofield Company, "Davis Colors" as manufactured by Davis Color Company, Pigment No. 678, 5 lbs/sack, or an approved equal.

D) Patterned concrete to be colored L.M. Scofield Company "Santa Barbara Brown, C–35", Davis Color Company, Pigment No. 678, 5 lbs/sack, or an approved equal.

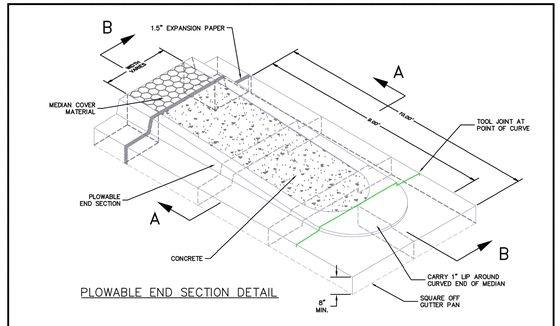
E) The Matching curing compound shall be a blend of waxes and pigments in a solvent emulsion base and conform to the requirements of ASTM C–309. The curing compound shall be "Lithoxorome Colorwax" as manufactured by L.M. Scofield Company, Davis Color–Seal, as manufactured by Davis Color Company, or approved equal.

F) The concrete mix design shall conform to the requirements of the color admixture manufacturer and shall meet CDOT Class B concrete requirements, unless otherwise approved.

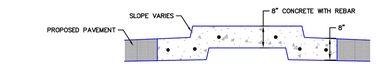
G) For weed control prior to median paving, apply a pre–emergent herbicide to median subgrade area per manufacturer's specifications for paving under Barrier 50 label (pbi Gordon). Trifluralin is labeled for use under asphalt under the Treflan 4EC label (Elanco).

SCALE: NOT TO SCALE

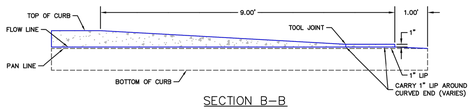
7/9/09	Patterned Concrete Median Paving	
DATE APPROVED:	Standard Drawing	
André P. Brackin	REVISION DATE: 1/18/11	FILE NAME: SD_2–21
DEPARTMENT OF TRANSPORTATION		



PLOWABLE END SECTION DETAIL



SECTION A–A

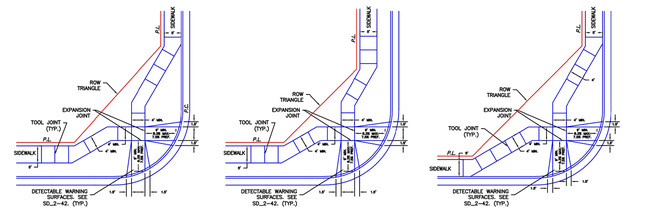


SECTION B–B

NOTES:
1. MEDIAN NOSE CONCRETE AND CURB & GUTTER SHALL BE PLACED MONOLITHIC WITH NON–COLORED CONCRETE REINFORCED #4 REBAR AT 18" E.W.
2. MEDIANS GREATER THAN 10' WIDE (BOC TO BOC) DO NOT REQUIRE MEDIAN NOSE.

SCALE: NOT TO SCALE

1/12/16	Plowable Median Nose Detail	
DATE APPROVED:	Standard Drawing	
André P. Brackin	REVISION DATE: 1/12/16	FILE NAME: SD_2–22
DEPARTMENT OF TRANSPORTATION		



SCALE: NOT TO SCALE

6/23/20	Pedestrian Curb Ramp Detail	
DATE APPROVED:	Standard Drawing	
Jennifer E. Irvine	REVISION DATE: 6/23/20	FILE NAME: SD_2–40
DEPARTMENT OF PUBLIC WORKS		

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

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

COLORADO REGISTERED PROFESSIONAL ENGINEER 37160 05/03/22

03/13/2024

AS-BUILT
ENGINEERING RECORD DRAWINGS

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APRV'D. BY:	DATE:

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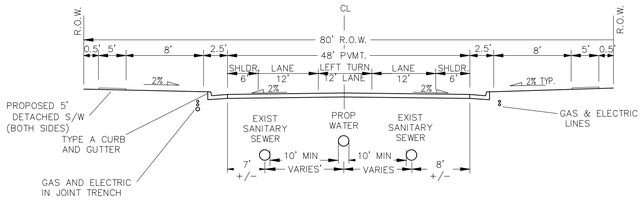
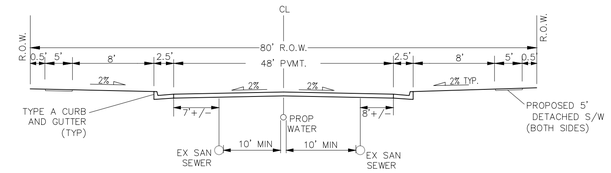
File: C:\18003A–Crossroads Mixed Use\Colorado Springs Equities LLC\dwg\Const Dwg\Street\SI03.dwg Plotstamp: 4/13/2022 11:44 AM



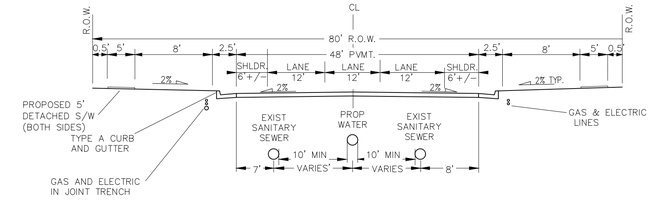
TYPICAL MEADOWBROOK PARKWAY WITH TURN LANE (PUB) 48' MAT

SCALE: NTS
STATION RANGE: 1+80–2+95
STATION RANGE: 3+45–4+65
DESIGN SPEED 40 MPH, POSTED SPEED 35 MPH



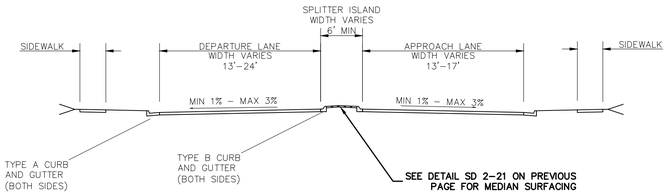
TYPICAL MEADOWBROOK PARKWAY (PUB) 48' MAT

NON-RESIDENTIAL COLLECTOR
SCALE: NTS
STATION RANGE: 2+95–3+45
STATION RANGE: 4+65–6+95
DESIGN SPEED 40 MPH, POSTED SPEED 35 MPH



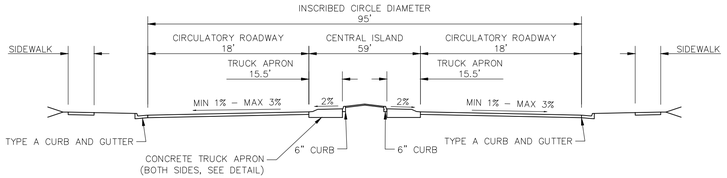
TYPICAL MEADOWBROOK PARKWAY WITH TURN LANE (PUB) 48' MAT

SCALE: NTS
STATION RANGE: 6+95–9+06.65
DESIGN SPEED 40 MPH, POSTED SPEED 35 MPH



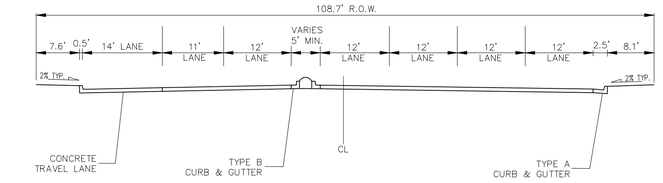
TYPICAL SECTION APPROACH

SCALE: NTS
STATION RANGE: 9+06.65–14+00 (MEADOWBROOK)
STATION RANGE: 14+90–16+75 (MEADOWBROOK)
STATION RANGE: 1+65–2+50 (NEWT)
STATION RANGE: 3+40–5+35 (NEWT)
DESIGN SPEED 40 MPH, POSTED SPEED 35 MPH



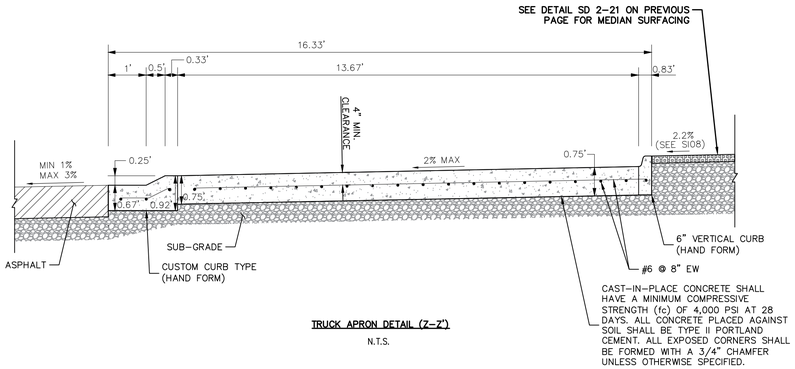
TYPICAL CIRCULATORY ROADWAY SECTION (ROUNDABOUT)

SCALE: NTS
STATION RANGE: 14+00–14+90 (MEADOWBROOK)
STATION RANGE: 2+50–3+40 (NEWT)



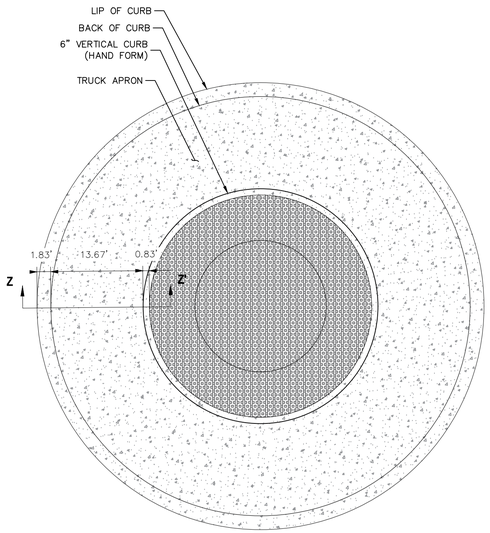
TYPICAL NEWT DRIVE (PUB) RAISED MEDIAN MEDIAN WIDTH VARIES PAVEMENT WIDTH VARIES

SCALE: NTS
STATION RANGE: 5+35–HIGHWAY 24
DESIGN SPEED 40 MPH, POSTED SPEED 35 MPH



TRUCK APRON DETAIL (Z–Z')

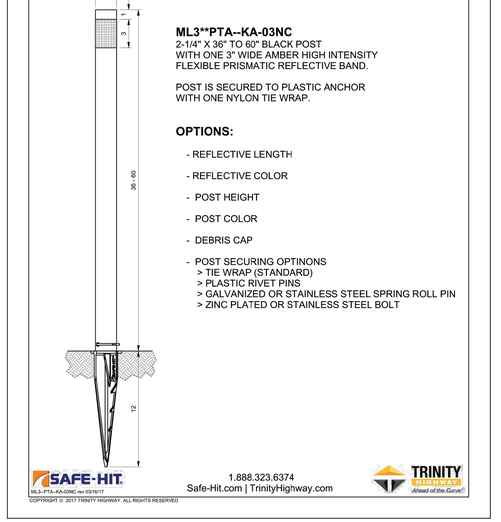
N.T.S.



TRUCK APRON CROSS SECTION (Z–Z')

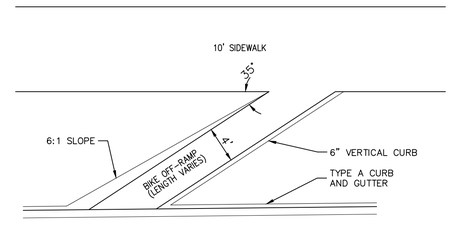
SEE TRUCK APRON DETAIL LEFT

N.T.S.



SAFE–HIT SNO–POST DETAIL

N.T.S.



BIKE OFF–RAMP GENERAL DETAIL

N.T.S.

COLORADO REGISTERED 37160 PROFESSIONAL ENGINEER
03/13/2024

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ENGINEERING RECORD DRAWINGS

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CROSSROADSM IXED USE FILING NO. 1
DETAILS AND STREET SECTIONS
DATE: 04/20/2022
SHEET 4 OF ~~24~~ 26
SI04
PROJECT NO. 18-003
SCALE: HORIZONTAL: N/A VERTICAL: N/A
DESIGNED BY: CVW
DRAWN BY: CVW
CHECKED BY: VAS

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

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.
VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160
COLORADO REGISTERED 37160 PROFESSIONAL ENGINEER
05/03/22

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APP'D.	BY:	DATE:

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CAUTION

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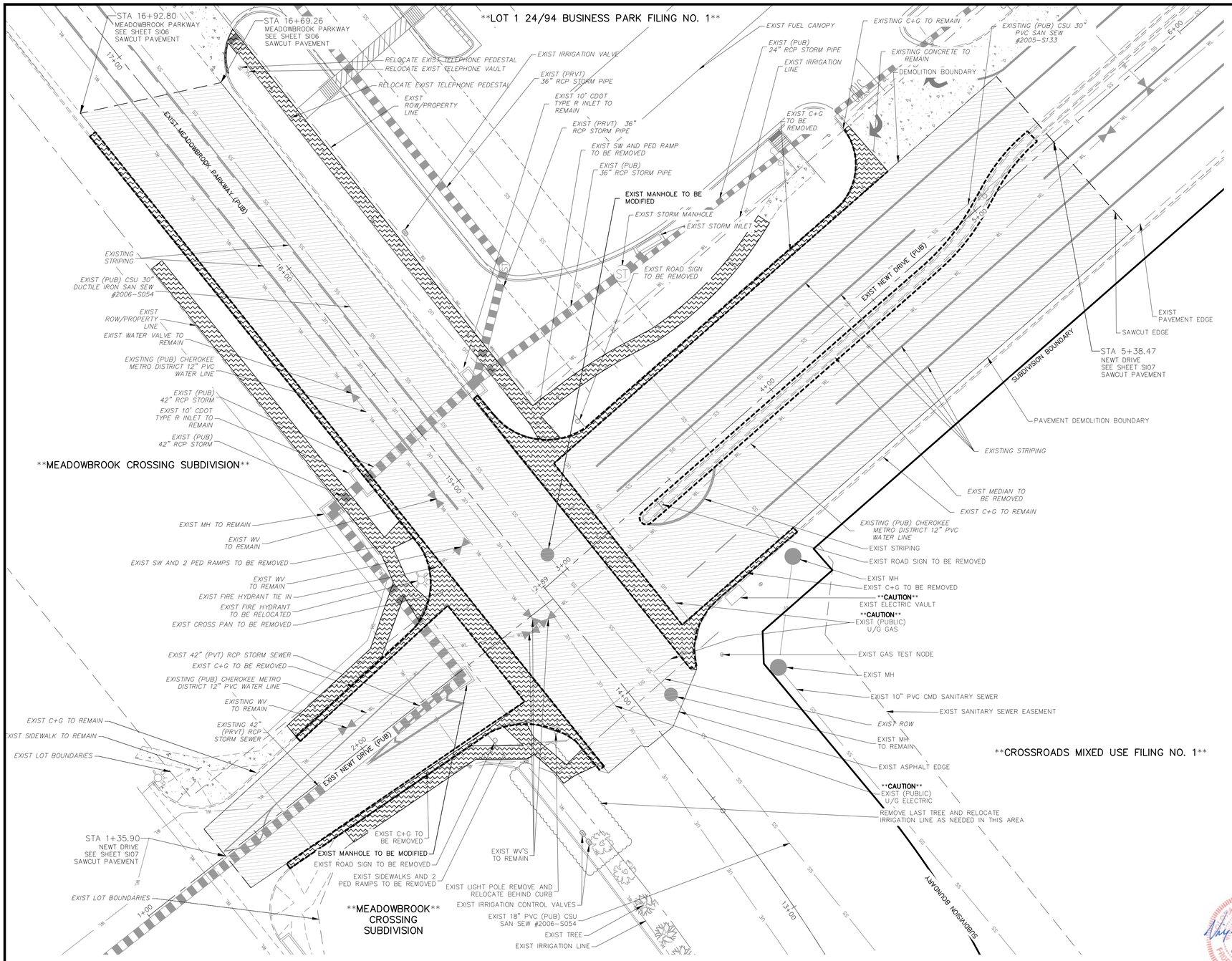

NEWT DRIVE AND MEADOWBROOK PARKWAY
DEMOLITION PLAN
SCALE: 1=20'

ABBREVIATION LEGEND

CL	CENTERLINE	LT	LEFT
FL–FL	FLOWLINE INTERSECTION	RT	RIGHT
BT	BEGIN TRANSITION	FL	FLOWLINE
ET	END TRANSITION	TBC	TOP BACK OF CURB
PC	POINT OF CURVE	XPAN	CROSSPAN
PCC	POINT OF COMPOUND CURVE	STD	STANDARD
PCR	POINT OF CURB RETURN	SHT	SHEET
PRC	POINT OF REVERSE CURVE	P&P	PLAN AND PROFILE
PT	POINT OF TANGENT	C&G	CURB AND GUTTER
EL	ELEVATION	W	WEST
CDS	CUL–DE–SAC	E	EAST
KN	KNUCKLE	ROW	RIGHT OF WAY
LP	LOW POINT	EOP	EDGE OF PAVEMENT
N	NORTH	WTR	WATER
S	SOUTH	SAN	SANITARY SEWER
HP	HIGH POINT	PVT	PRIVATE
PUB	PUBLIC	WV	WATER VALVE
C+G	CURB AND GUTTER	PED	PEDESTRIAN
CSU	COLORADO SPRINGS UTILITIES	SW	SIDEWALK
CMD	CHEROKEE METRO DISTRICT	PVMT	PAVEMENT
		CONC	CONCRETE

LEGEND

- PVMT./CONC. DEMO BOUNDARY
- SITE BOUNDARY
- ADJACENT PROPERTY
- EXIST STORM SEWER LINE
- EX. UNDERGROUND ELECTRIC LINE — UE
- EX. SANITARY SEWER LINE — SS
- EX. WATER LINE — WL
- EX. STORM SEWER LINE — ST
- EX. IRRIGATION VALVE — ICV
- EX. STORM INLET — ST
- EX. STORM INLET
- EX. GAS TEST NODE — G
- EX. TELEPHONE PEDESTAL — T
- EX. SANITARY MANHOLE — SS
- EX. WATER VALVE
- EX. FIRE HYDRANT
- EX. SANITARY MANHOLE
- CONCRETE DEMOLITION AREA
- PAVEMENT DEMOLITION AREA

1" = 20'
0 10 20 40
Scale in Feet

COLORADO REGISTERED PROFESSIONAL ENGINEER
37160
03/13/2024

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ENGINEERING RECORD DRAWINGS

EPC 6/9/2022

CROSSROADS MIXED USE FILING NO. 1
DEMOLITION PLAN
DATE: 04/20/2022
SHEET 5 OF ~~24~~ 26
SI05
PROJECT NO. 18-003
SCALE: HORIZONTAL: N/A VERTICAL: N/A
DESIGNED BY: CVW
DRAWN BY: CVW
CHECKED BY: VAS

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

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.
VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160
COLORADO REGISTERED PROFESSIONAL ENGINEER
37160
05/03/22

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APRVD. BY:	DATE:

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CAUTION

File: O:\18003A-Crossroads Mixed Use\Colorado Springs Equities LLC\dwg\Const Dwg\Street\SI05.dwg Plotstamp: 4/13/2022 11:41 AM

ABBREVIATION LEGEND

CL	CENTERLINE
LT	LEFT
RT	RIGHT
C&G	CURB AND GUTTER
EL	ELEVATION
W	WEST
CONST	CONSTRUCTION
N	NORTH
WTR	WATER
S	SOUTH
STM	STORM SEWER
PUB	PUBLIC
EX	EXISTING
STA	STATION
NTS	NOT TO SCALE
PROP	PROPOSED
SAN	SANITARY SEWER
CMD	CHEROKEE METROPOLITAN DISTRICT
CDS	CUL DE SAC

FLOWLINE CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C3	39.44	25.00	90°24'03"
C4	39.73	25.01	90°59'58"
C5	39.92	25.00	91°29'27"
C6	39.91	25.01	91°25'13"

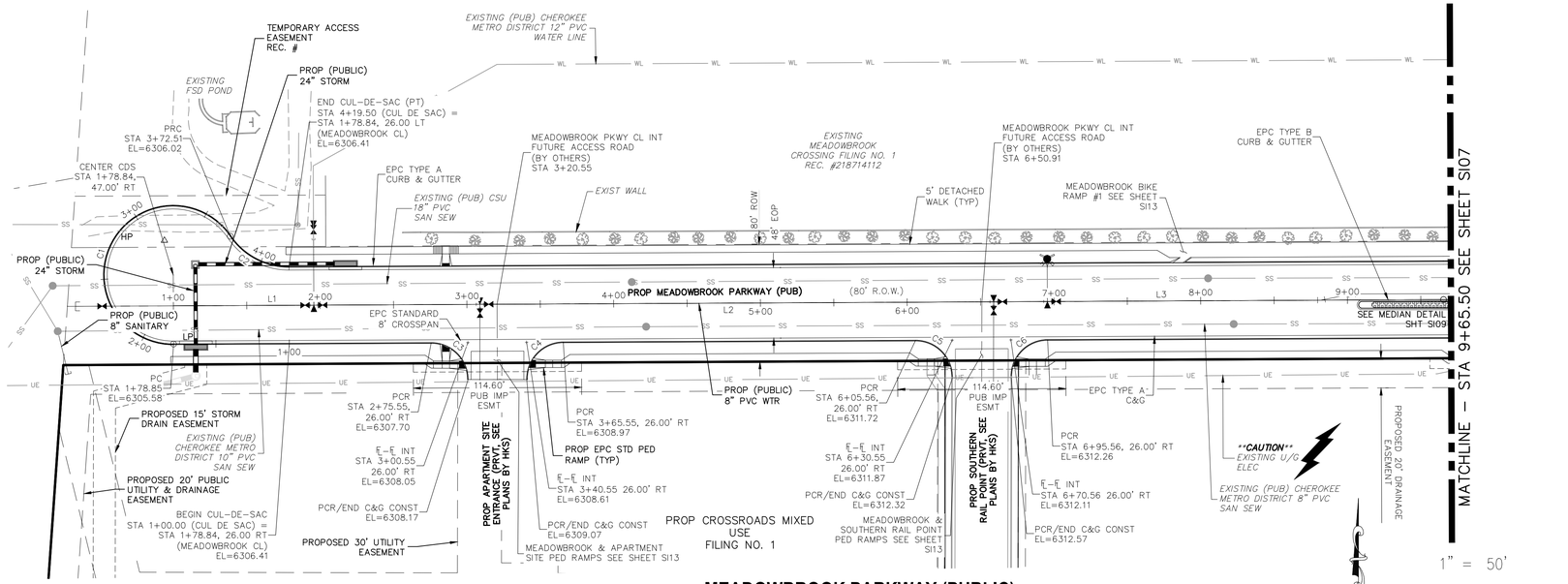
CDS FLOWLINE CURVE TABLE			
CURVE	RADIUS	LENGTH	DELTA
C1	47.00'	193.67'	236°05'23"
C2	48.00'	46.99'	56°05'24"

CENTERLINE LINE TABLE		
LINE	LENGTH	DIRECTION
L1	220.55	N89°43'00"E
L2	330.01	N89°43'00"E
L3	314.94	N89°43'00"E

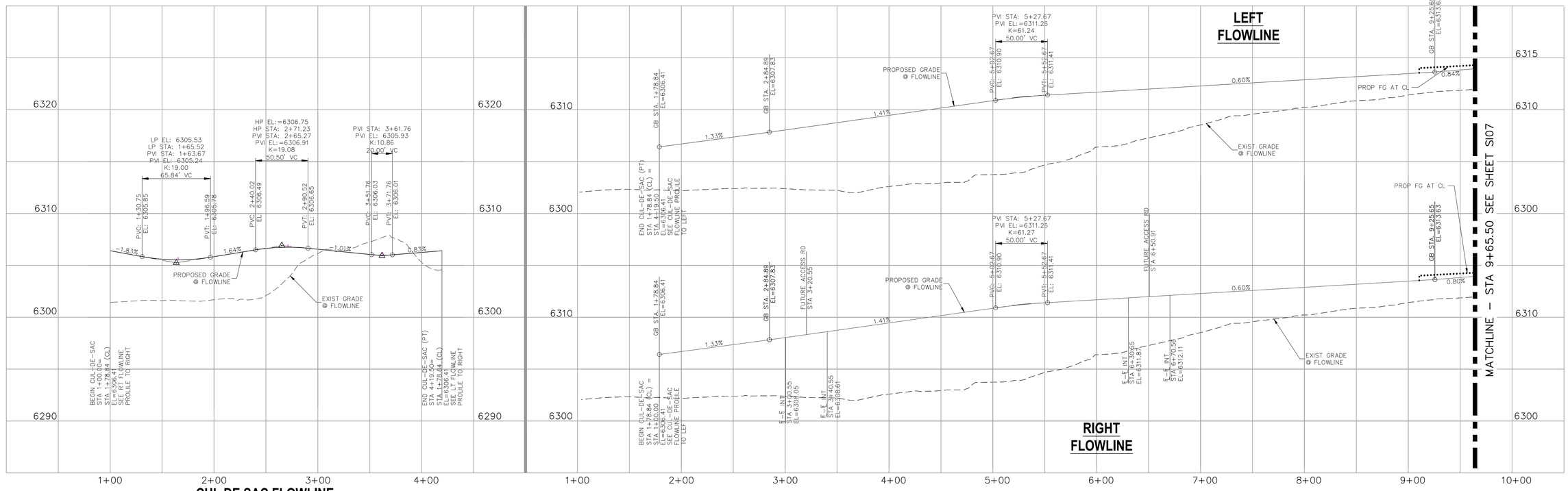
NOTES:

THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCIES FROM THE SHOWN UTILITIES SHALL BE COORDINATED TO THE ENGINEER.

CONTRACTOR SHALL ADJUST ALL EXISTING VALVE COVERS, SANITARY AND STORM SEWER MANHOLE RIMS, ELECTRIC VAULTS THAT LAY WITHIN THE PROPOSED PAVEMENT, CONCRETE CURB AND SIDEWALKS. ANY CONFLICTS SHALL BE COORDINATED WITH THE ENGINEER.



MEADOWBROOK PARKWAY (PUBLIC)
STA. 1+00.00 TO STA. 9+65.50



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COLORADO REGISTERED PROFESSIONAL ENGINEER 37160 03/13/2024

EPC 6/9/2022

AS-BUILT
ENGINEERING RECORD DRAWINGS

CROSSROADS MIXED USE FILING NO. 1

STREET IMPROVEMENT PLANS

DATE: 04/20/2022

SHEET 6 OF ~~24~~ 26

SI06

PROJECT NO. 18-003

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

DESIGNED BY: CLP
DRAWN BY: CLP
CHECKED BY: VAS

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

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

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

COLORADO REGISTERED PROFESSIONAL ENGINEER 37160 05/03/22

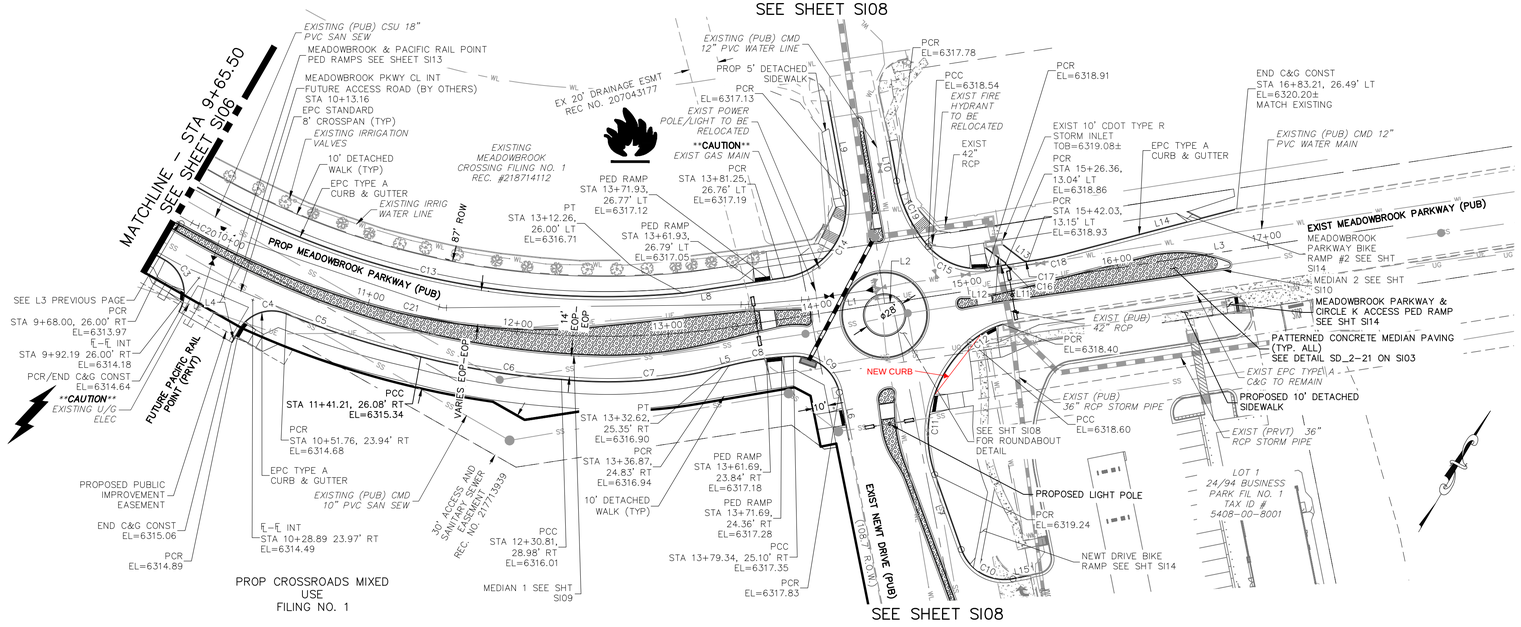
REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APRV'D. BY:	DATE:

THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

CAUTION

File: O:\18003A-Crossroads Mixed Use\Colorado Springs Equities LLC\dwg\Const Dwg\Street\SI06.dwg Plotstamp: 4/26/2022 1:32 PM



NOTES:

THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCIES FROM THE SHOWN UTILITIES SHALL BE COORDINATED TO THE ENGINEER.

CONTRACTOR SHALL ADJUST ALL EXISTING VALVE COVERS, SANITARY AND STORM SEWER MANHOLE RIMS, ELECTRIC VAULTS THAT LAY WITHIN THE PROPOSED PAVEMENT, CONCRETE CURB AND SIDEWALKS. ANY CONFLICTS SHALL BE COORDINATED WITH THE ENGINEER.

ABBREVIATION LEGEND

CL	CENTERLINE
LT	LEFT
RT	RIGHT
C&G	CURB AND GUTTER
EL	ELEVATION
W	WEST
CONST	CONSTRUCTION
N	NORTH
WTR	WATER
S	SOUTH
STM	STORM SEWER
PUB	PUBLIC
EX	EXISTING
STA	STATION
NTS	NOT TO SCALE
PROP	PROPOSED
SAN	SANITARY SEWER
CMD	CHEROKEE METRO DISTRICT
CDS	CUL DE SAC

FLOWLINE CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C3	39.56	25.00	90°40'15"
C4	35.86	25.00	82°10'54"
C5	93.44	587.00	9°07'12"
C6	94.05	501.84	10°44'15"
C7	107.18	302.00	20°20'03"
C8	42.87	198.00	12°24'23"
C9	42.14	30.00	80°28'53"
C10	42.81	30.00	81°45'45"
C11	96.15	80.00	68°51'45"
C12	24.51	60.00	23°24'07"
C13	330.80	539.00	35°09'52"
C14	76.90	48.00	91°47'54"
C15	43.43	43.00	57°52'06"
C16	2.34	1.00	134°13'59"
C17	3.99	5.00	45°46'01"
C18	26.85	248.00	6°12'12"
C19	48.66	90.00	30°58'42"

FLOWLINE LINE TABLE		
LINE	LENGTH	DIRECTION
L4	9.74	S0° 07' 03.14"W
L5	4.47	N45° 32' 32.26"E
L6	32.22	S41° 34' 30.75"E
L7	52.47	N49° 28' 46.47"W
L8	67.51	N51° 24' 11.38"E
L9	61.57	N40° 23' 42.29"W
L10	26.85	S40° 13' 19.82"E
L11	11.54	N50° 55' 52.14"E
L12	16.24	N82° 45' 56.56"W
L13	16.36	S82° 30' 41.86"E
L14	113.49	N45° 16' 12.76"E
L15	11.71	N48° 45' 28.51"E

CENTERLINE LINE TABLE		
LINE	LENGTH	DIRECTION
L1	100.04	N51° 18' 56.18"E
L2	4.96	N51° 18' 56.18"E
L3	250.83	N51° 18' 56.18"E

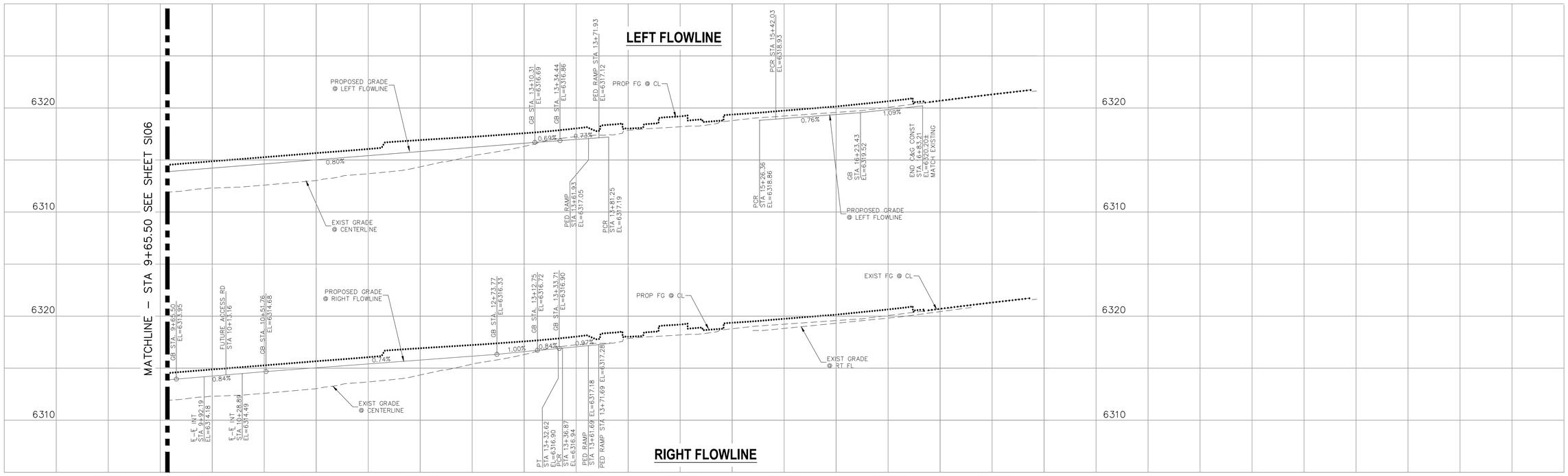
CENTERLINE CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C20	47.66	565.00	4°50'00"
C21	331.02	565.00	33°34'04"

1" = 50'

0 25 50 100

Scale in Feet

MEADOWBROOK PARKWAY (PUBLIC)
STA 9+65.50 TO STA 16+83.21



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

CROSSROADS MIXED USE FILING NO. 1

STREET IMPROVEMENT PLANS

PROJECT NO. 18-003 | SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5' | DATE: 04/20/2022 | SHEET 7 OF ~~24~~ 26 | SI07

DESIGNED BY: CLP
DRAWN BY: CLP
CHECKED BY: VAS

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

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

COLORADO REGISTERED ENGINEER VIRGIL A. SANCHEZ 37160 05/03/22 PROFESSIONAL ENGINEER

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APRV'D. BY:	DATE:

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CAUTION

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CALL 1-800-922-1987

COLORADO REGISTERED ENGINEER 37160 03/13/2024 PROFESSIONAL ENGINEER

AS-BUILT
ENGINEERING RECORD DRAWINGS

EPC 6/9/2022

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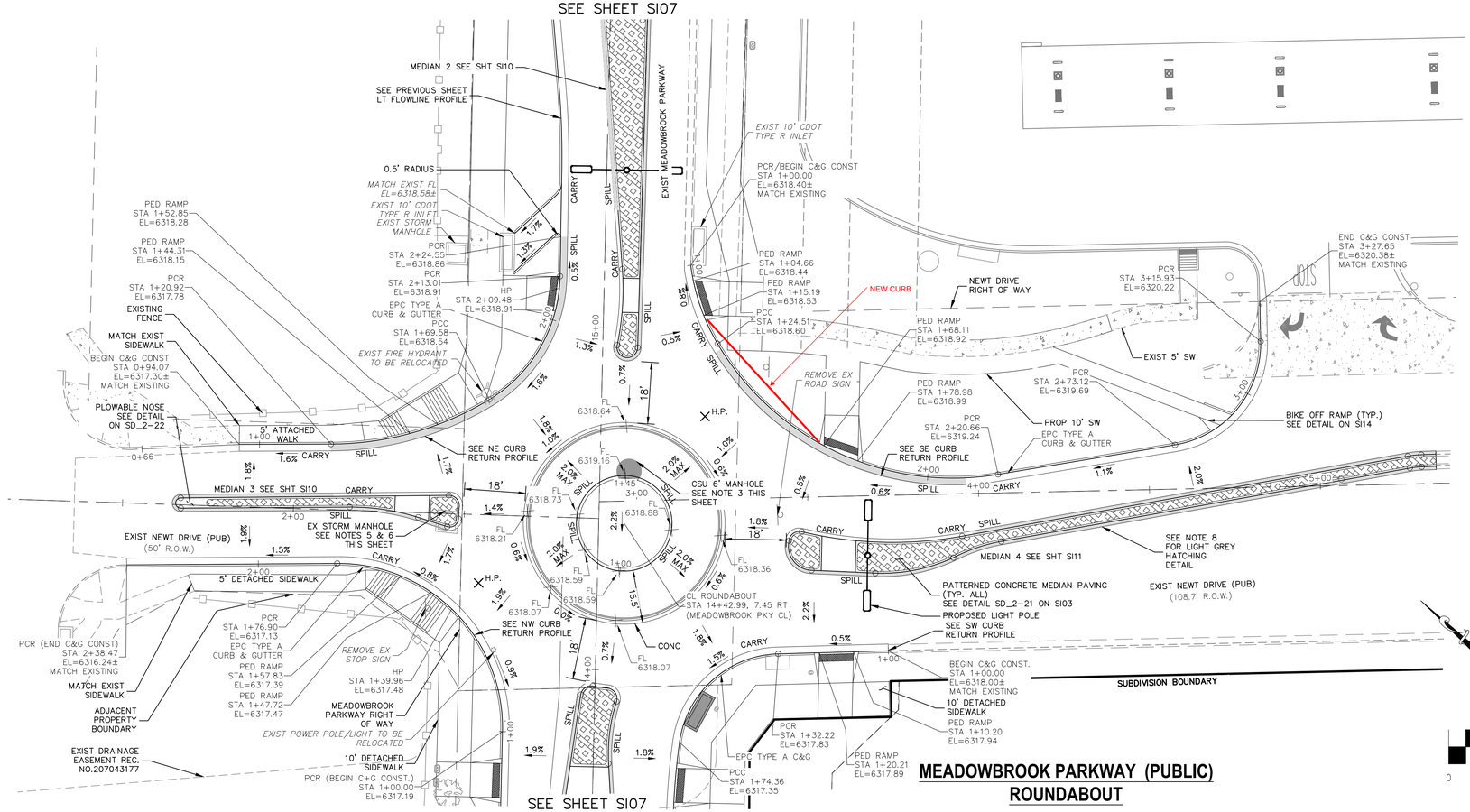

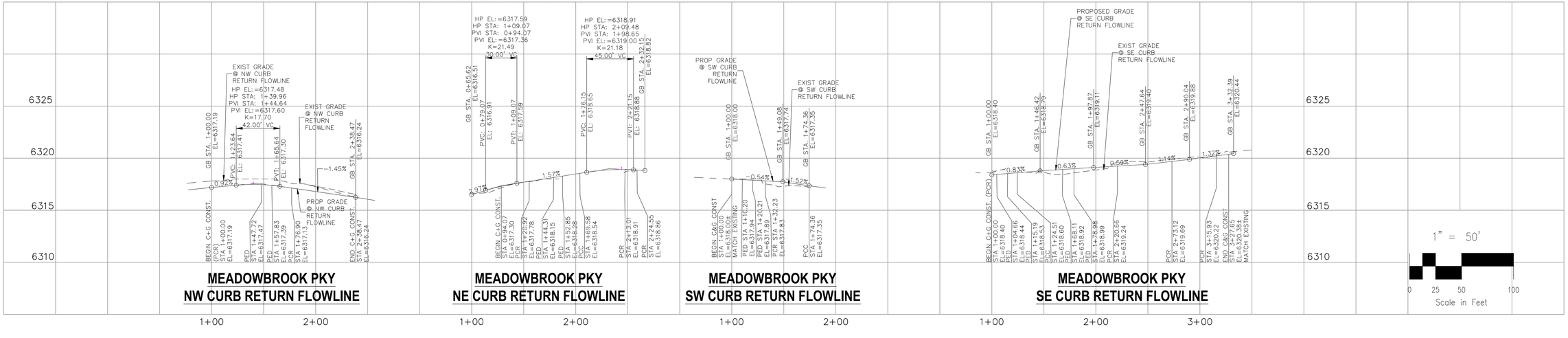

ABBREVIATION LEGEND

CL	CENTERLINE
LT	LEFT
RT	RIGHT
C&G	CURB AND GUTTER
EL	ELEVATION
W	WEST
CONST	CONSTRUCTION
N	NORTH
WTR	WATER
S	SOUTH
STM	STORM SEWER
PUB	PUBLIC
EX	EXISTING
STA	STATION
NTS	NOT TO SCALE
PROP	PROPOSED
SAN	SANITARY SEWER
CMD	CHEROKEE METROPOLITAN DISTRICT
CDS	CUL DE SAC
HP	HIGH POINT

NOTES:

1.) THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCIES FROM THE SHOWN UTILITIES SHALL BE COORDINATED TO THE ENGINEER.

2.) CONTRACTOR SHALL ADJUST ALL EXISTING VALVE COVERS, SANITARY AND STORM SEWER MANHOLE RIMS, ELECTRIC VAULTS THAT LAY WITHIN THE PROPOSED PAVEMENT, CONCRETE CURB AND SIDEWALKS. ANY CONFLICTS SHALL BE COORDINATED WITH THE ENGINEER.

3.) REMOVE AND REPLACE CONCENTRIC CONE WITH FULLY ECCENTRIC CONE (ROTATED OUT OF C+G) AND ADD RISERS AS NEEDED TO MATCH MEDIAN SURFACE. RESEAL MANHOLE LID. REMOVE AND REPLACE MANHOLE STEPS IF NEEDED. RE-INSTALL IN ACCORDANCE WITH CSU STANDARDS

4.) REFER TO SI07 FOR CURB RETURN LINE AND CURVE SUMMARY

5.) FIELD VERIFY EXISTING STORM MANHOLE IN RELATION TO CURB AND GUTTER PRIOR TO INSTALLATION

6.) IN THE EVENT OF NOTICEABLE CONFLICT, REMOVE AND REPLACE CONCENTRIC CONE WITH FULLY ECCENTRIC CONE (ROTATED OUT OF C+G) AND ADD RISERS AS NEEDED TO MATCH MEDIAN SURFACE. RESEAL MANHOLE LID IF NEEDED. REMOVE MANHOLE STEPS. RE-INSTALL IN ACCORDANCE WITH CSU & EL PASO COUNTY STANDARDS

7.) REFER TO SI14 FOR PED & BIKE RAMP DETAILS ON THIS SHEET

8.) LIGHT GREY HATCHING INDICATES SPILL-TYPE CURB CONFIGURATION AND MARKS APPROXIMATE TRANSITION LOCATIONS (MIN. 5').

9.) ALL ELEVATIONS ARE FL UNLESS OTHERWISE NOTED

CROSSROADS MIXED USE FILING NO. 1
STREET IMPROVEMENT PLANS
PROJECT NO. 18-003 | DESIGNED BY: CLP | DRAWN BY: CLP | CHECKED BY: VAS
SCALE: HORIZONTAL: 1"=20' VERTICAL: 1"=5'
DATE: 04/20/2022
SHEET 8 OF ~~24~~ 26
SI08

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

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

VIROIL A. SANCHEZ, COLORADO P.E. NO. 37160
COLORADO REGISTERED 37160 PROFESSIONAL ENGINEER
05/03/22

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APRV'D. BY:	DATE:

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COLORADO REGISTERED 37160 PROFESSIONAL ENGINEER
03/13/2024

AS-BUILT
ENGINEERING RECORD DRAWINGS

EPC 6/9/2022

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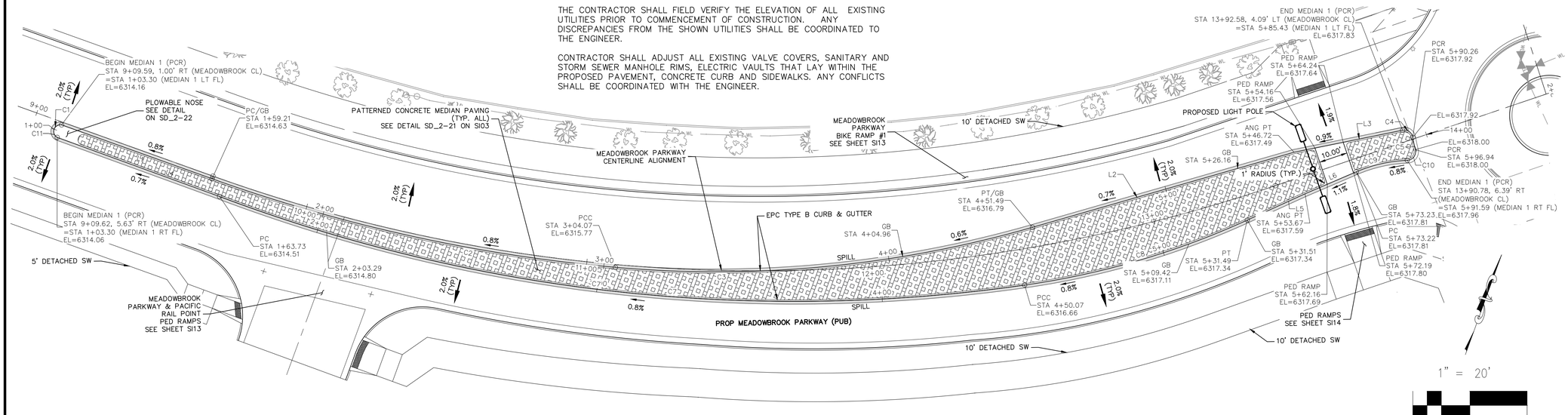
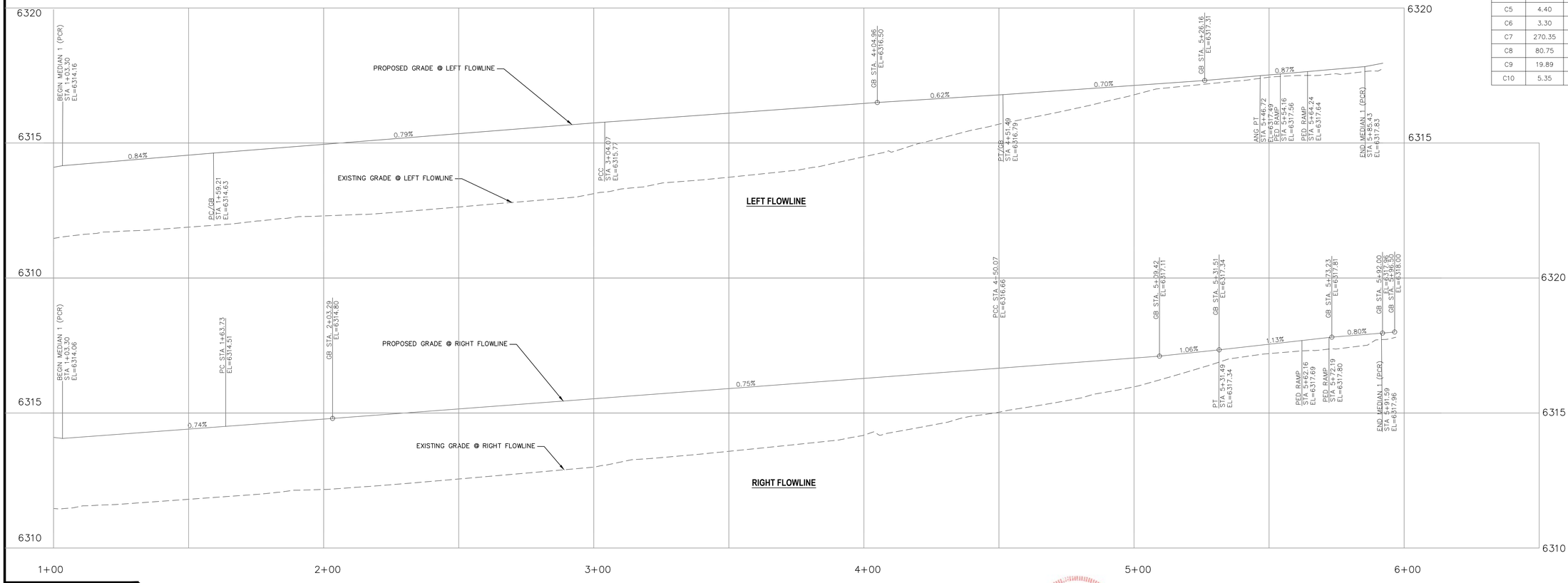


MEADOWBROOK PARKWAY (PUBLIC)
MEDIAN 1



ABBREVIATION LEGEND

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C&G	CURB AND GUTTER
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EX	EXISTING
STA	STATION
NTS	NOT TO SCALE
PROP	PROPOSED
SAN	SANITARY SEWER
CMD	CHEROKEE METRO. DISTRICT
CDS	CUL DE SAC

FLOWLINE LINE TABLE

LINE	LENGTH	DIRECTION
L1	55.91	N89°43'00"E
L2	95.23	S53°59'19"W
L3	38.71	S58°32'10"W
L4	60.43	N90°00'00"E
L5	22.82	S45°32'32"W
L6	18.05	N46°48'13"E

FLOWLINE CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA
C1	3.30	2.35	80°38'25"
C2	144.86	566.00	14°39'50"
C3	147.42	401.00	21°03'51"
C4	4.82	3.00	92°07'41"
C5	4.40	48.45	5°12'29"
C6	3.30	2.35	80°38'25"
C7	270.35	571.00	27°07'40"
C8	80.75	285.03	16°13'57"
C9	19.89	50.59	22°31'33"
C10	5.35	3.00	102°06'32"

CROSSROADS MIXED USE FILING NO. 1

MEDIAN DETAILS

PROJECT NO. 18-003 | DESIGNED BY: CVW | DRAWN BY: CVW | CHECKED BY: VAS

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

DATE: 04/20/2022

SHEET 9 OF ~~24~~ 26

SI09

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

CIVIL CONSULTANTS, INC.

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

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

COLORADO REGISTERED 37160 VIRGIL A. SANCHEZ PROFESSIONAL ENGINEER 05/03/22

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APRV'D. BY:	DATE:

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COLORADO REGISTERED 37160 PROFESSIONAL ENGINEER 03/13/2024

AS-BUILT
ENGINEERING RECORD DRAWINGS

EPC 6/9/2022

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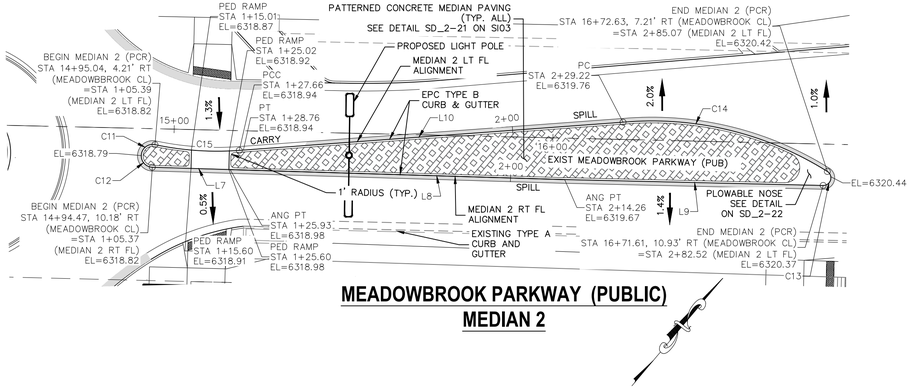
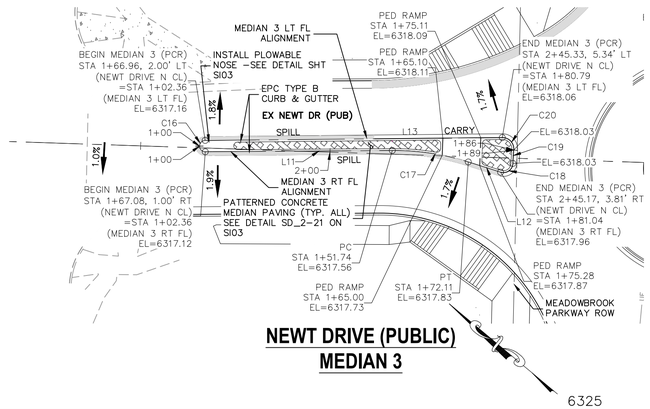
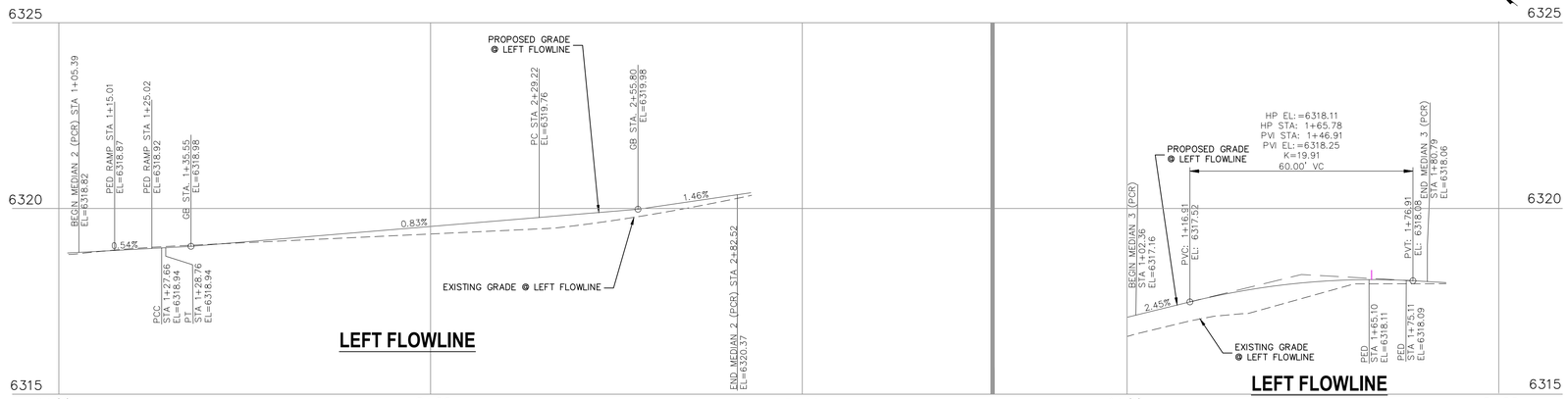


MEADOWBROOK PARKWAY (PUBLIC)
MEDIAN 2

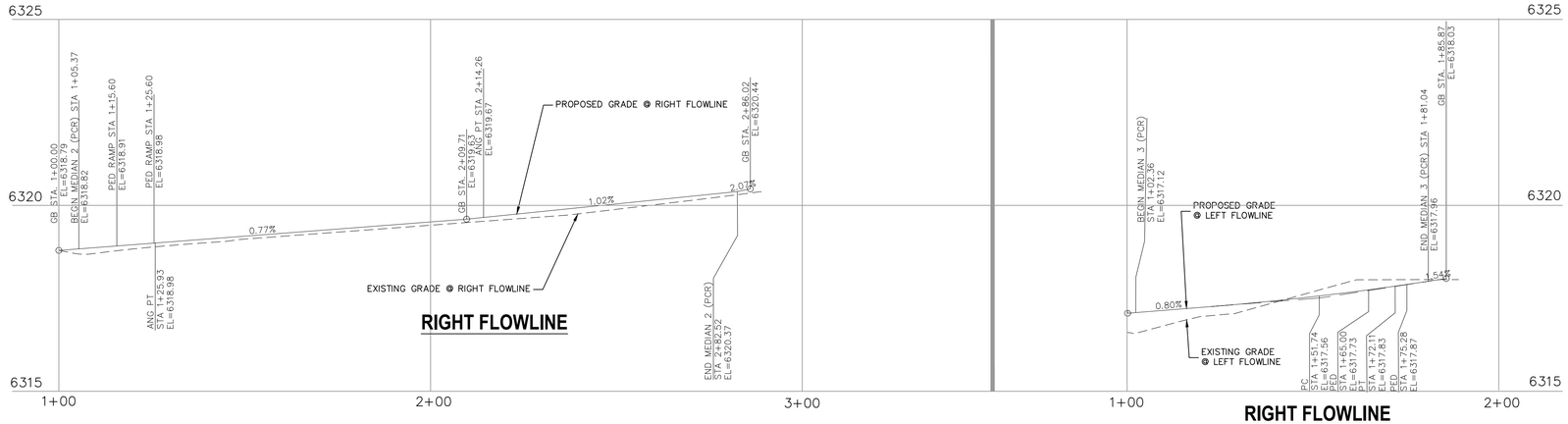


NEWT DRIVE (PUBLIC)
MEDIAN 3



LEFT FLOWLINE

LEFT FLOWLINE



RIGHT FLOWLINE

RIGHT FLOWLINE

FLOWLINE LINE TABLE		
LINE	LENGTH	DIRECTION
L7	20.56	N51°42'29"E
L8	88.33	N51°42'29"E
L9	68.26	N51°18'48"E
L10	101.56	S45°48'17"W
L11	49.38	S40°23'42"E
L12	8.93	N22°26'29"W
L13	78.43	S40°33'08"E

FLOWLINE CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C11	5.28	3.00	100°56'07"
C12	4.70	3.00	89°40'47"
C13	5.21	2.00	149°10'18"
C14	56.47	87.00	37°11'11"
C15	22.38	79.50	16°07'35"
C16	4.71	1.50	180°00'00"
C17	20.37	65.00	17°57'13"
C18	4.61	2.50	105°44'59"
C19	3.55	53.63	3°47'27"
C20	5.05	3.00	96°25'09"

1" = 20'

0 10 20 40

Scale in Feet

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AS-BUILT
ENGINEERING RECORD DRAWINGS

EPC 6/9/2022

CROSSROADS MIXED USE FILING NO. 1

MEDIAN DETAILS

DATE: 04/20/2022
SHEET 10 OF ~~24~~ 26
SI10

PROJECT NO. 18-003
DESIGNED BY: CVW
DRAWN BY: CVW
CHECKED BY: VAS
SCALE: HORIZONTAL: 1"=20' VERTICAL: 1"=5'

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

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

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

REGISTERED PROFESSIONAL ENGINEER
VIRGIL A. SANCHEZ
37160
05/03/22

REVISIONS:

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CAUTION

REGISTERED PROFESSIONAL ENGINEER
VIRGIL A. SANCHEZ
37160
03/13/2024

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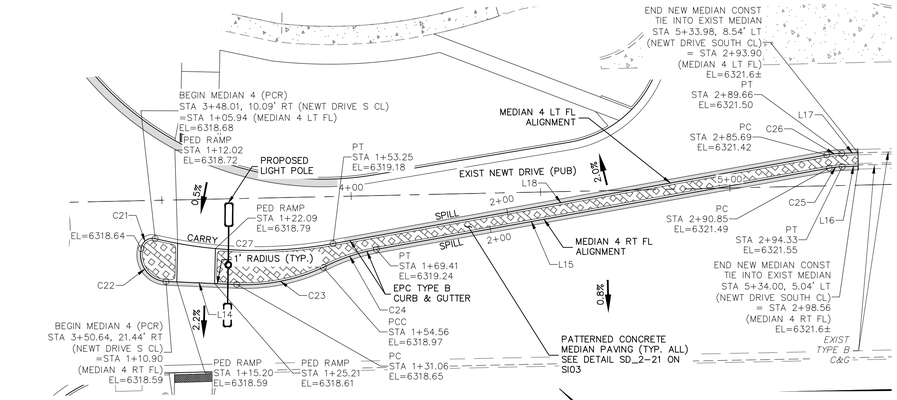
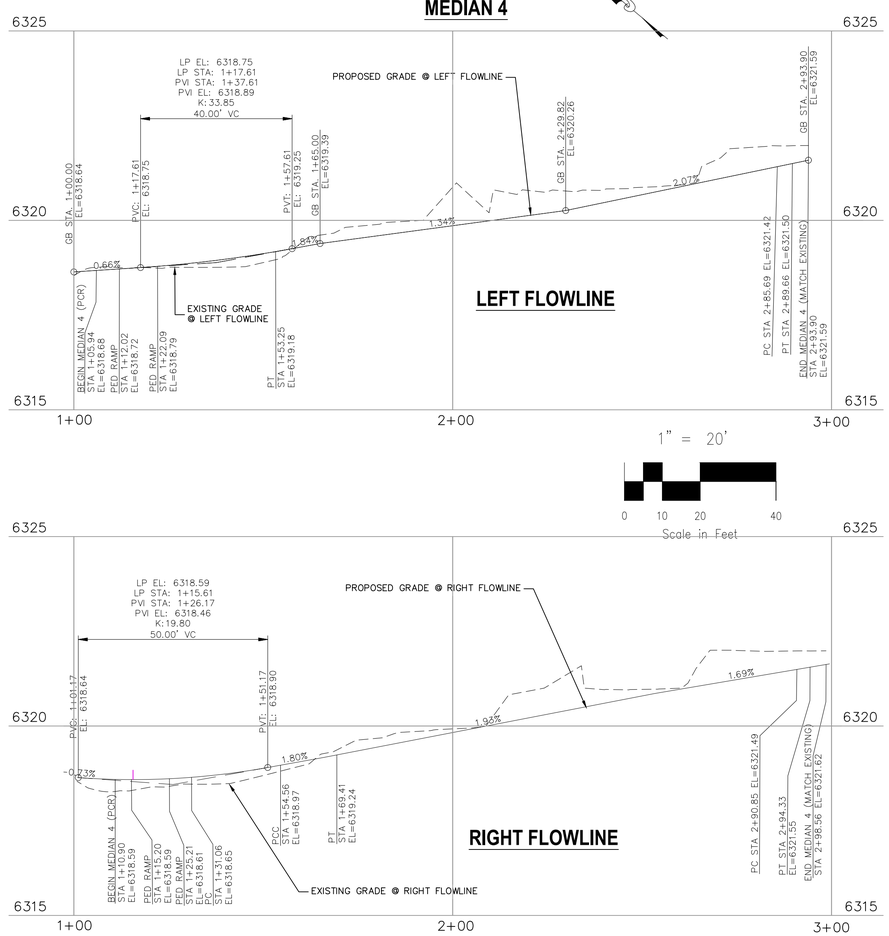


NEWT DRIVE (PUBLIC)
MEDIAN 4



FLOWLINE LINE TABLE		
LINE	LENGTH	DIRECTION
L14	18.71	S37°30'19"E
L15	121.44	S50°10'38"E
L16	4.24	S42°03'37"E
L17	4.28	S42°03'37"E
L18	132.44	N50°10'38"W

FLOWLINE CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C21	5.10	3.00	97°23'46"
C22	11.54	7.00	94°29'45"
C23	24.52	49.00	28°40'26"
C24	13.82	49.50	16°00'06"
C25	3.47	24.50	8°07'02"
C26	3.97	28.00	8°07'02"
C27	47.31	115.00	23°34'17"

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AS-BUILT
ENGINEERING RECORD DRAWINGS

EPC 6/9/2022

CROSSROADS MIXED USE FILING NO. 1

MEDIAN DETAILS

PROJECT NO. 18-003 | SCALE: HORIZONTAL: 1"=20' VERTICAL: 1"=5' | DATE: 04/20/2022 | SHEET 11 OF ~~24~~ 26 | SI11

DESIGNED BY: CVW
DRAWN BY: CVW
CHECKED BY: VAS

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

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COLORADO REGISTERED SANCHEZ 37160 05/03/22 PROFESSIONAL ENGINEER

COLORADO REGISTERED 37160 03/13/2024 PROFESSIONAL ENGINEER

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APPVD. BY:	DATE:

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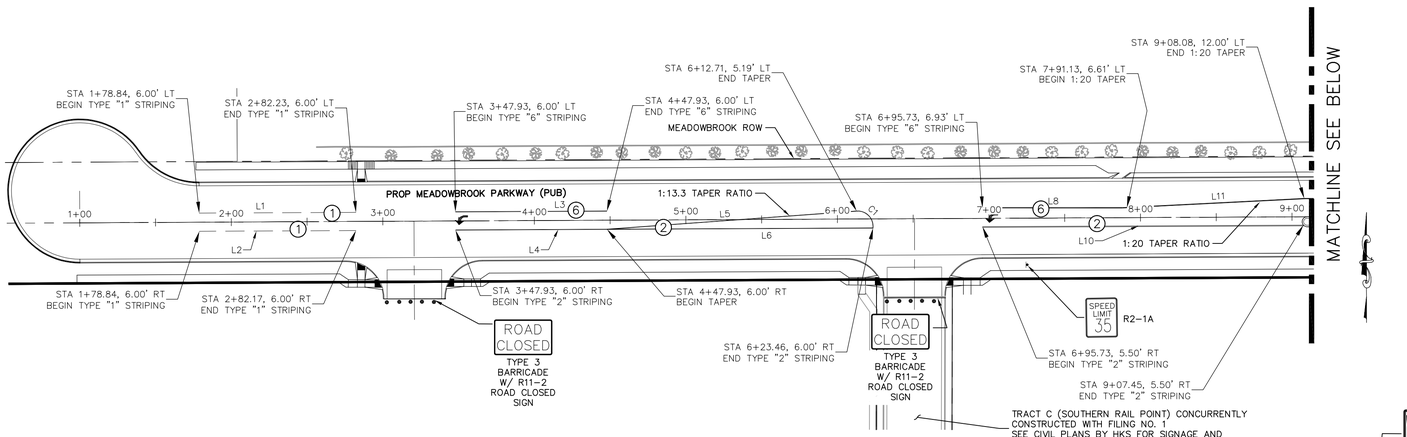
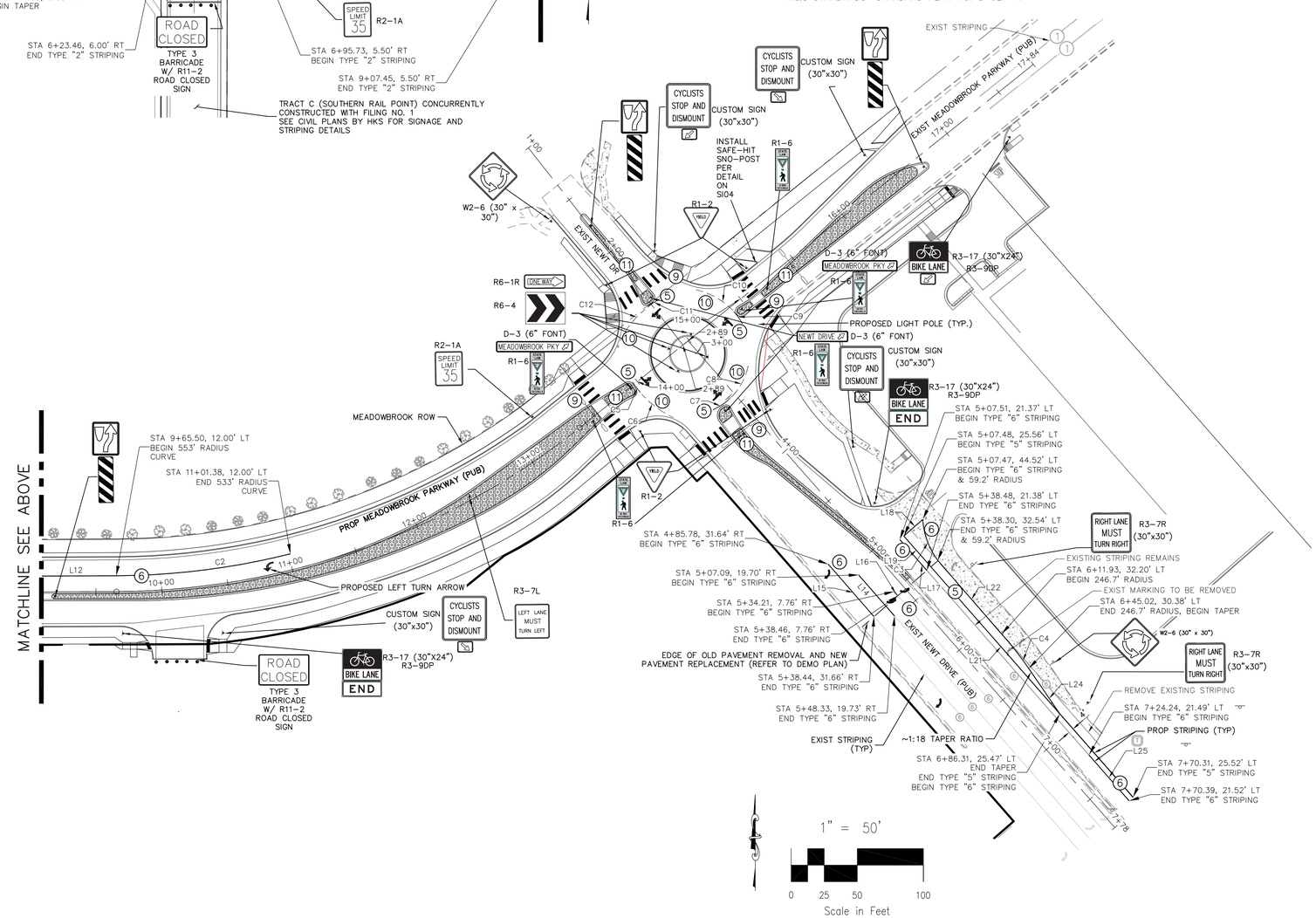


STRIPING LEGEND		
STRIPE	PAVEMENT MARKINGS	MARKING DESCRIPTION
①	2-WAY LEFT TURN LANE MARKINGS (EPOXY)	OUTSIDE: SOLID YELLOW, 4" WIDE, INSIDE: BROKEN YELLOW, 4" WIDE, 10' SEGMENTS WITH 30" GAPS
②	2-WAY CENTERLINE LANE MARKINGS (EPOXY)	PARALLEL SOLID YELLOW, 4" WIDE, 4" APART
③	LANE LANES (EPOXY)	BROKEN WHITE, 4" WIDE, 10' SEGMENTS WITH 30" GAPS
④	BROKEN EDGE/BIKE LANE LINES (EPOXY)	BROKEN WHITE, 4" WIDE, 5' SEGMENTS WITH 15" GAPS
⑤	EDGE/BIKE LANE LINES (EPOXY)	SOLID WHITE, 6" WIDE
⑥	CHANNELIZING LINES (EPOXY)	SOLID WHITE, 8" WIDE
⑦	STOP LINES (THERMO PLASTIC)	SOLID WHITE, 24" WIDE
⑧	CHEVRON/DIAGONAL CROSSHATCH	SOLID WHITE, 8" WIDE
⑨	TRANSVERSE MARKINGS	SOLID WHITE, 2' WIDE BY 10' LONG
⑩	EXTENSION LINES	12" BROKEN WHITE LINE
⑪	MEDIAN LIP (EDGE) LINES	4" SOLID YELLOW LINE

NOTE: ALL STRIPING INSTALLATION SHALL BE PER COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) "M&S STANDARDS" STANDARD PLAN NO. S-627-1.

STRIPING LINE TABLE		
Line #	Length	Direction
L1	103.39	N89° 43' 00.18"E
L2	103.33	N89° 43' 00.18"E
L3	100.00	N89° 43' 00.18"E
L4	115.53	N89° 43' 00.18"E
L5	165.16	N85° 49' 49.59"E
L6	175.53	S89° 43' 00.18"W
L8	92.33	N90° 00' 00.00"E
L10	211.72	N89° 43' 00.18"E
L11	120.15	N87° 04' 45.69"E
L12	57.41	N89° 43' 00.18"E
L14	41.24	N41° 12' 01.94"W
L15	52.66	S41° 12' 59.22"E
L16	4.25	S41° 12' 59.22"E
L17	30.97	N41° 16' 30.48"W
L18	18.96	S48° 43' 29.52"W
L19	262.89	S41° 16' 30.48"E
L21	262.89	S41° 16' 30.48"E
L22	73.63	N40° 55' 48.19"W
L24	41.58	N34° 27' 26.01"W
L25	46.15	S41° 16' 30.48"E

STRIPING CURVE TABLE			
Curve #	Length	Radius	Delta
C1	16.46	10.00	94.29
C2	133.00	553.00	13.78
C3	33.43	59.18	32.36
C4	33.17	261.21	7.28
C5	10.00	75.00	7.64
C6	30.01	75.00	22.93
C7	14.40	46.50	17.74
C8	27.32	46.50	33.66
C9	11.45	46.50	14.11
C10	32.32	56.01	33.07
C11	10.93	46.50	13.46
C12	30.32	63.78	27.24



NOTE TO CONTRACTOR:

1. ALL 4" AND 8" SOLID OR SKIP PAVEMENT MARKINGS ARE TO BE EPOXY.
2. SIGNS AND POLES SHALL BE PER CDOT STANDARDS S-614-8, S-1614-2, AND S-614-3, LATEST REVISION.
3. ALL SIGNAGE INSTALLATION IS TO BE IN COMPLIANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
4. ROUNDABOUT LIGHT POLES TO BE INSTALLED ONCE PHOTOMETRIC PLANS ARE APPROVED. LIGHTING PLANS TO BE INDEPENDENTLY APPROVED BY EL PASO COUNTY.

COLORADO REGISTERED PROFESSIONAL ENGINEER 37160 03/13/2024

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES
FOR BURIED UTILITY INFORMATION
48 HRS BEFORE YOU DIG
CALL 1-800-922-1987

AS-BUILT
ENGINEERING RECORD DRAWINGS

EPC 6/9/2022

CROSSROADS MIXED USE FILING NO. 1
SIGNAGE AND STRIPING PLAN
DATE: 04/20/2022
SHEET 12 OF ~~24~~ 26
S12
PROJECT NO. 18-003
SCALE: HORIZONTAL: 1"=50' VERTICAL: N/A
DESIGNED BY: CVW
DRAWN BY: CVW
CHECKED BY: VAS

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

FOR AND ON BEHALF OF MAKS CIVIL CONSULTANTS, INC.
VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160
COLORADO REGISTERED PROFESSIONAL ENGINEER 37160 05/03/22

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APRV'D. BY:	DATE:

THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

CAUTION

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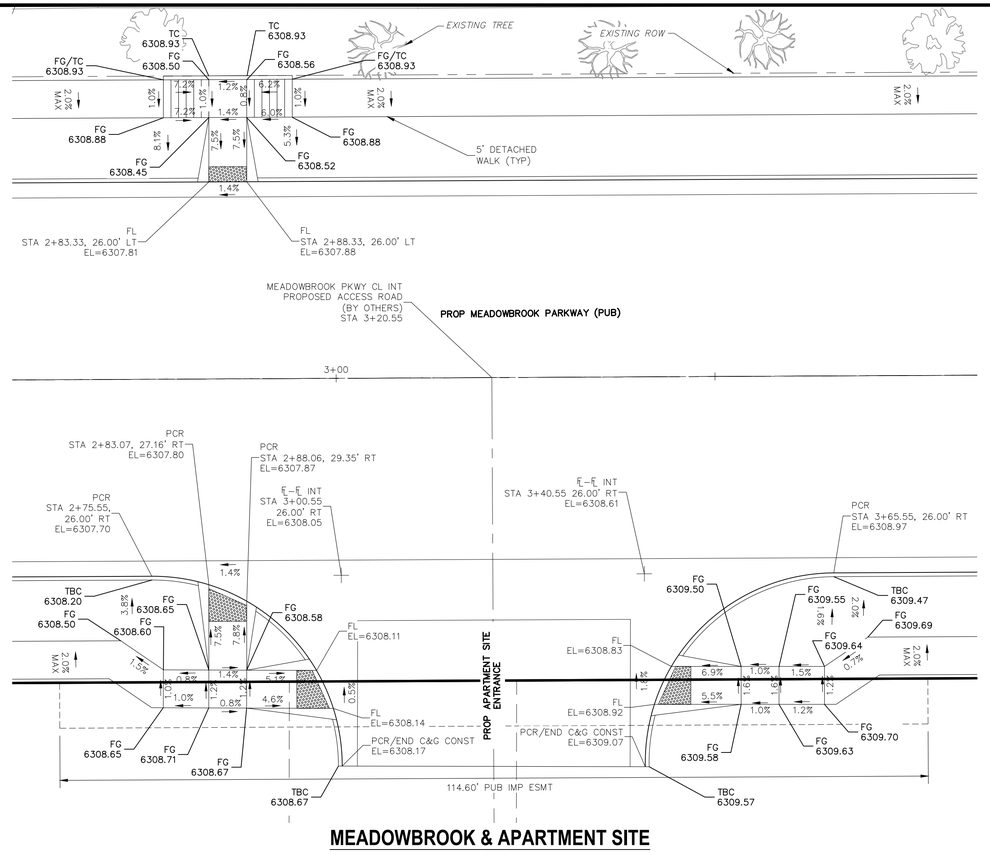
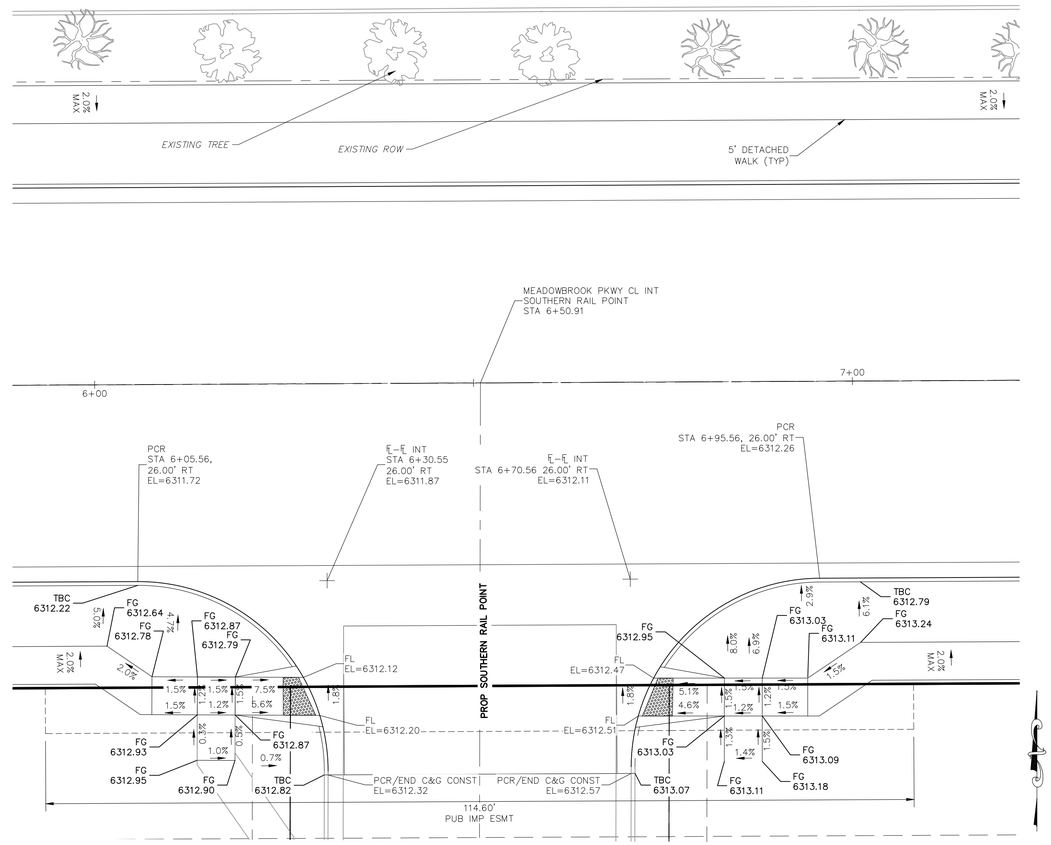


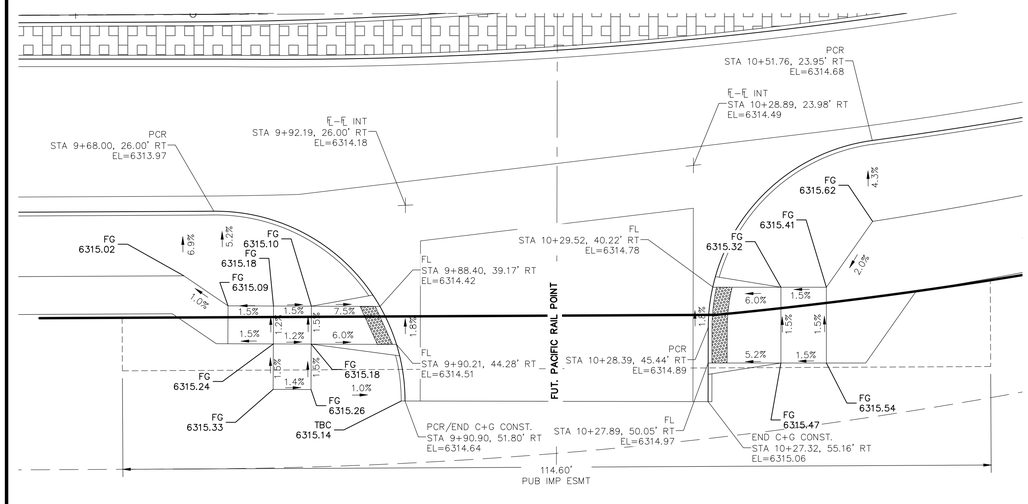
MEADOWBROOK & APARTMENT SITE

SCALE: 1"=10'



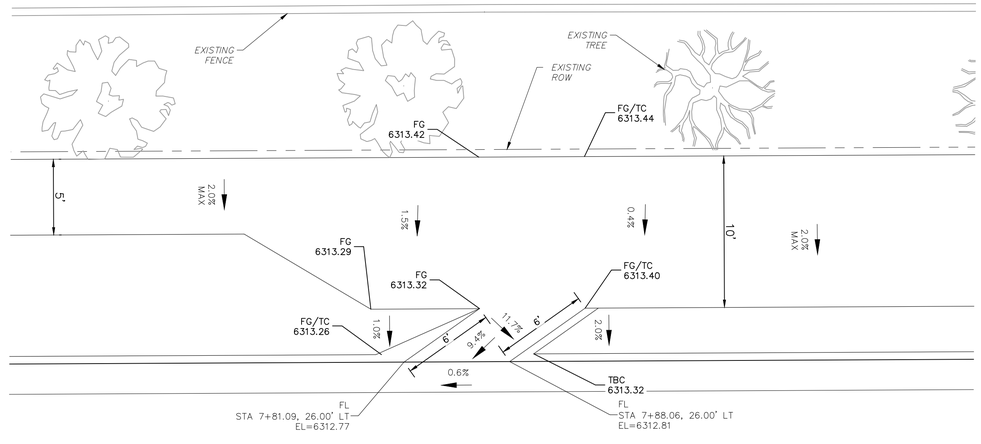
MEADOWBROOK PARKWAY & SOUTHERN RAIL POINT

SCALE: 1"=10'



MEADOWBROOK PARKWAY & PACIFIC RAIL POINT

SCALE: 1"=10'



MEADOWBROOK PARKWAY BIKE RAMP #1

SCALE: 1"=5'

EPC 6/9/2022

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES
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NOTES:

STATIONED OFF RESPECTIVE ALIGNMENTS FROM STREET IMPROVEMENT PLANS AT FLOWLINES

COLORADO REGISTERED PROFESSIONAL ENGINEER 37160 03/13/2024

AS-BUILT
ENGINEERING RECORD DRAWINGS

CROSSROADS MIXED USE FILING NO. 1
MEADOWBROOK PED & BIKE RAMP DETAILS
DATE: 04/20/2022
SHEET 13 OF ~~24~~ 26
SI13
PROJECT NO. 18-003
SCALE: HORIZONTAL: VARIES VERTICAL: N/A
DESIGNED BY: CVW
DRAWN BY: CVW
CHECKED BY: VAS

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

VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.
COLORADO REGISTERED PROFESSIONAL ENGINEER 37160 05/03/22

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APRV'D. BY:	DATE:

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CAUTION

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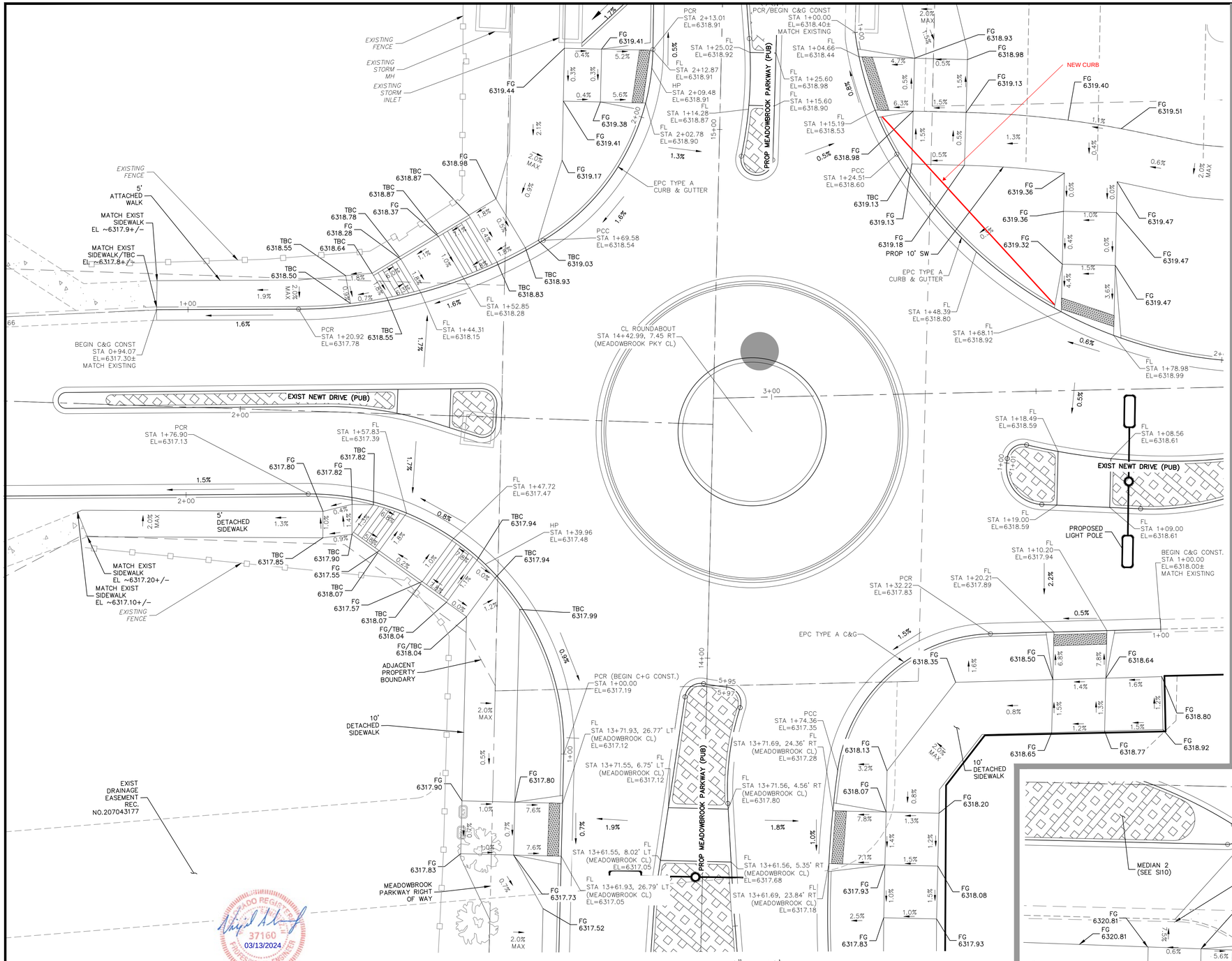
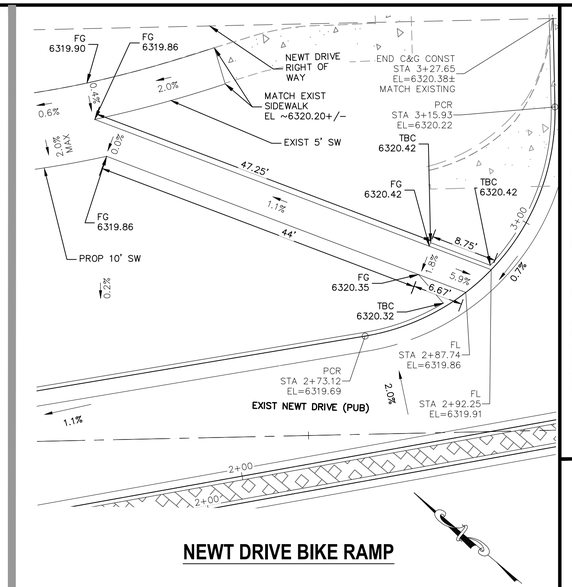
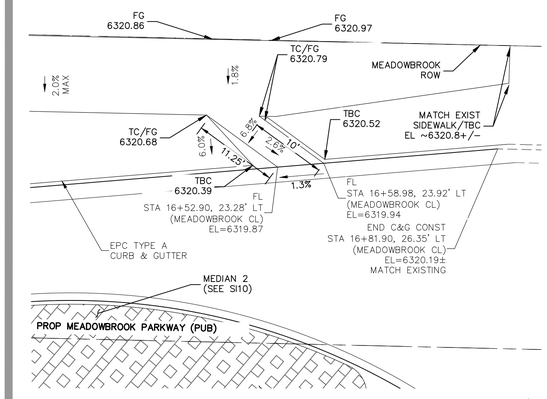


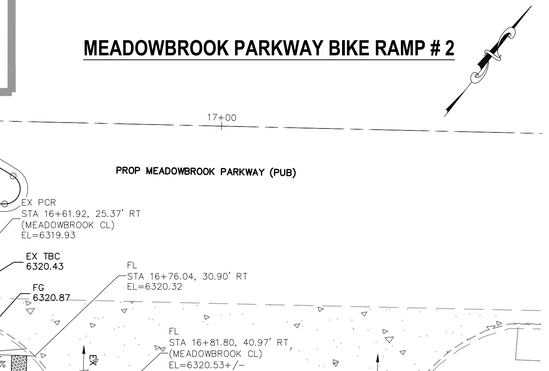
MEADOWBROOK & NEWT DRIVE



NEWT DRIVE BIKE RAMP



MEADOWBROOK PARKWAY BIKE RAMP # 2



MEADOWBROOK PARKWAY & CIRCLE K ACCESS

EPC 6/9/2022

AS-BUILT

ENGINEERING RECORD DRAWINGS

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES
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COLORADO REGISTERED 37160 PROFESSIONAL ENGINEER 03/13/2024

CROSSROADS MIXED USE FILING NO. 1

STREET IMPROVEMENT PLANS

PROJECT NO. 18-003 | SCALE: HORIZONTAL: 1"=10' VERTICAL: N/A | DATE: 04/20/2022 | SHEET 14 OF ~~24~~ 26 | SI14

DESIGNED BY: CVW
DRAWN BY: CVW
CHECKED BY: VAS

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

CIVIL CONSULTANTS, INC.

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

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

COLORADO REGISTERED 37160 PROFESSIONAL ENGINEER 05/03/22

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APP'D.	BY:	DATE:

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CAUTION

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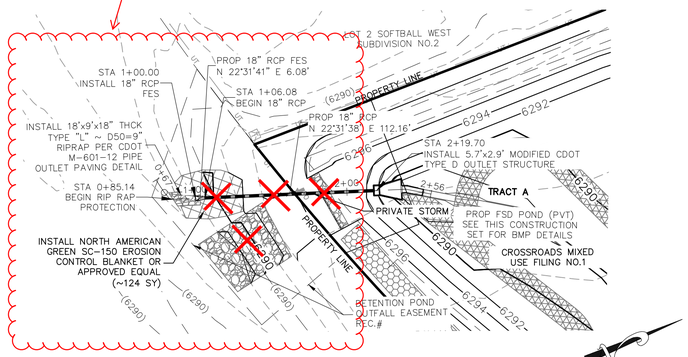
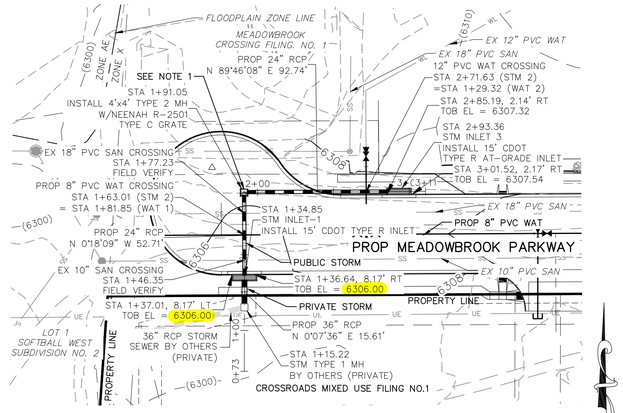
FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES

FOR BURIED UTILITY INFORMATION
48 HRS BEFORE YOU DIG
CALL 1-800-922-1987

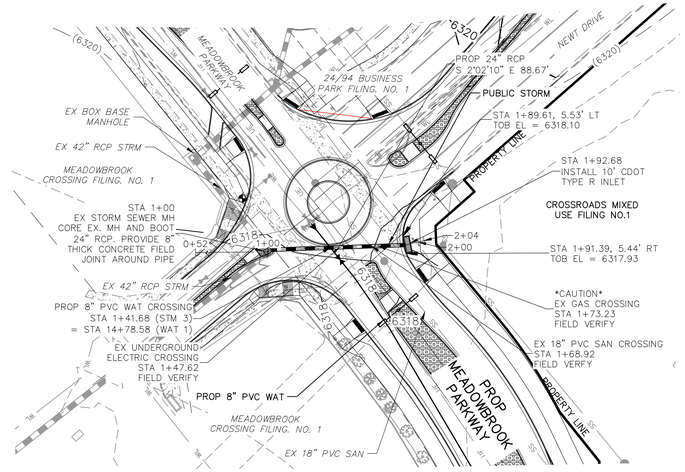
STORM 1 REVISED PER CDOT "FIELD CHANGE" REFER TO SHEET 25 FOR AS-BUILT ALIGNMENT AND ELEVATIONS



STORM 1 FSD POND OUTFALL
STA 1+00.00 TO STA 2+19.70
(PUBLIC/PRIVATE)



STORM 2
STA 1+15.22 TO STA 2+93.36
(PUBLIC/PRIVATE)



STORM 3
STA 1+00.00 TO STA 1+92.26
(PUBLIC)

1" = 50'
0 25 50 100
Scale in Feet

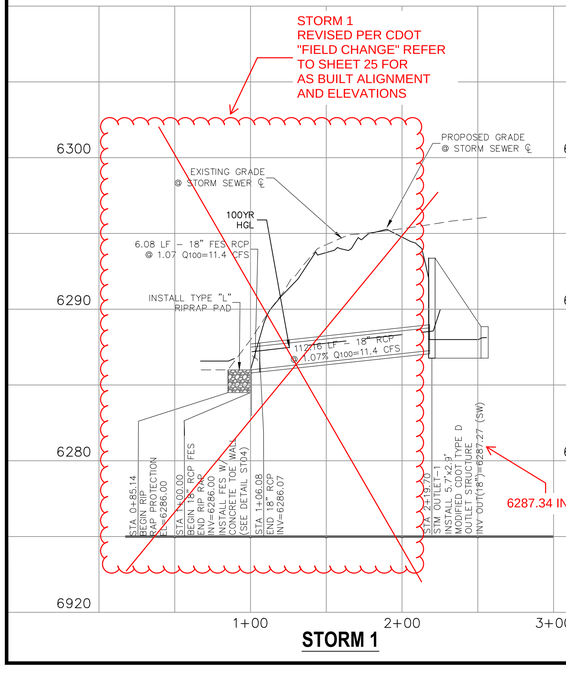
NOTE:

1.) GRATED INLET TO BE REPLACED WITH CRUB FACE INLET AT TIME OF MEADOWBROOK PARKWAY EXTENSION

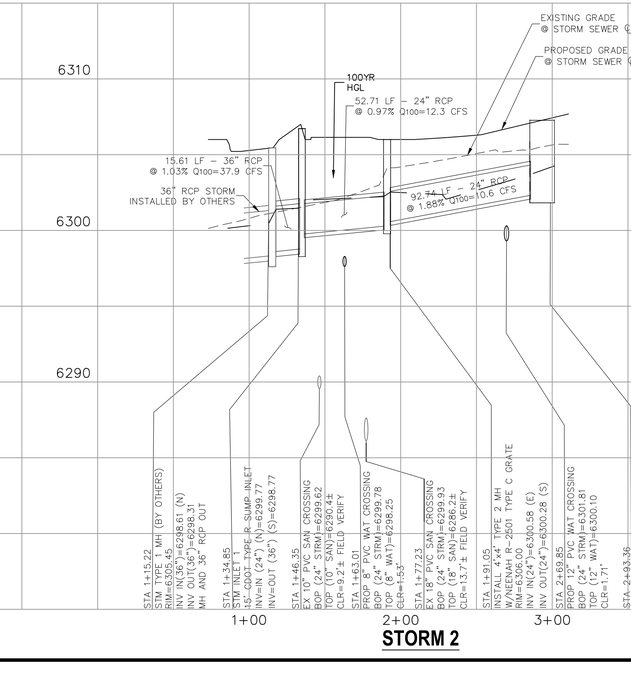
2.) ALL PRIVATE STORM SEWER CONSTRUCTED WITH THESE PLANS TO BE MAINTAINED BY THE CROSSROADS METROPOLITAN DISTRICT NO. 1

AS-BUILT
ENGINEERING RECORD DRAWINGS

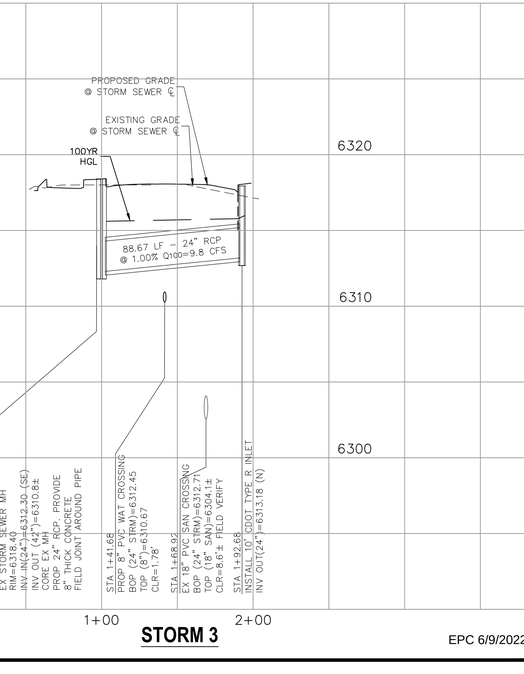
COLORADO REGISTERED PROFESSIONAL ENGINEER 37160 03/14/2024



STORM 1



STORM 2



STORM 3

EPC 6/9/2022

CROSSROADS MIXED USE FILING NO. 1
STORM SEWER PLANS

PROJECT NO. 18-003 | SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5' | DATE: 04/20/2022 | SHEET 15 OF 24 26 | ST01

DESIGNED BY: GT
DRAWN BY: GT
CHECKED BY: VAS

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

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

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

COLORADO REGISTERED PROFESSIONAL ENGINEER 37160 05/03/22

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APRV'D. BY:	DATE:

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CAUTION

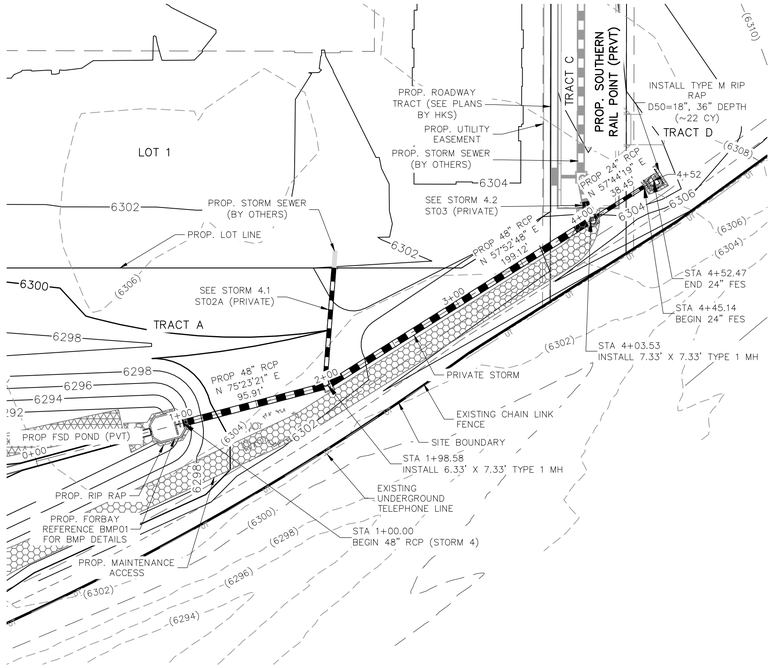
File: O:\18003A-Crossroads Mixed Use\Colorado Springs Equities LLC\dwg\Const Dwg\Storm Plans\ST01.dwg Plotstamp: 5/3/2022 12:50 PM

NOTES:

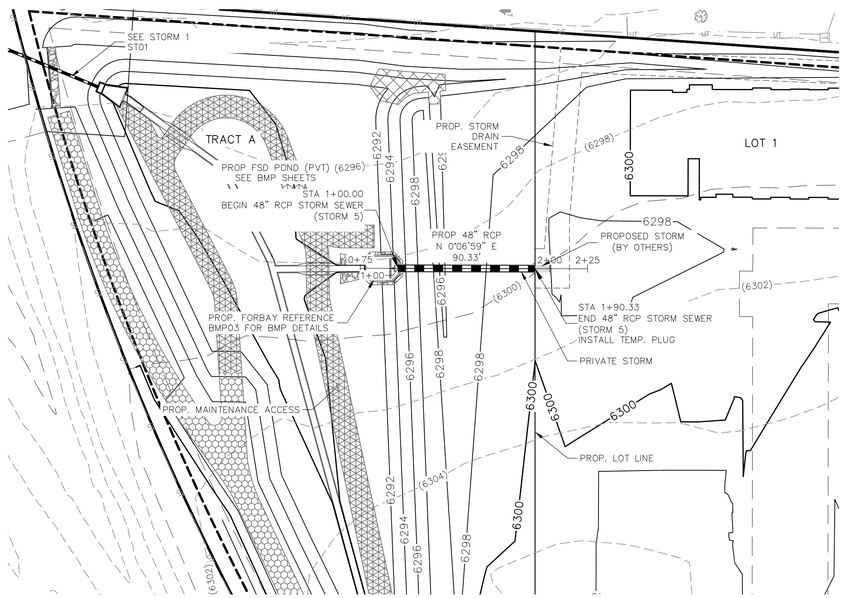
ALL PRIVATE STORM SEWER CONSTRUCTED WITH THESE PLANS TO BE MAINTAINED BY THE CROSSROADS METROPOLITAN DISTRICT NO. 1

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES

FOR BURIED UTILITY INFORMATION
48 HRS BEFORE YOU DIG
CALL 1-800-922-1987

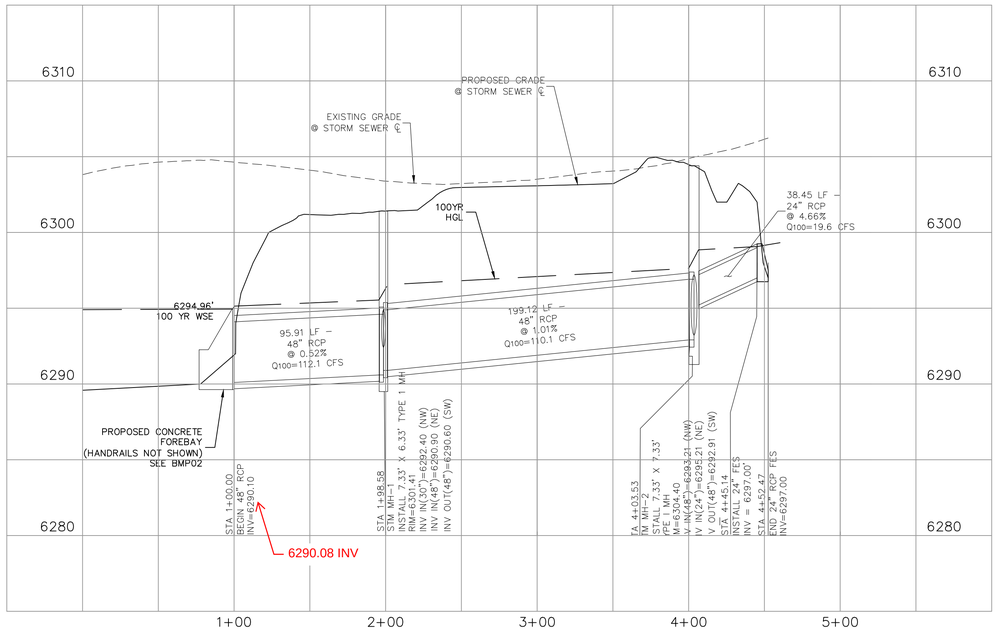


STORM 4 (PRIVATE)
STA 1+00.00 TO STA 4+52.47

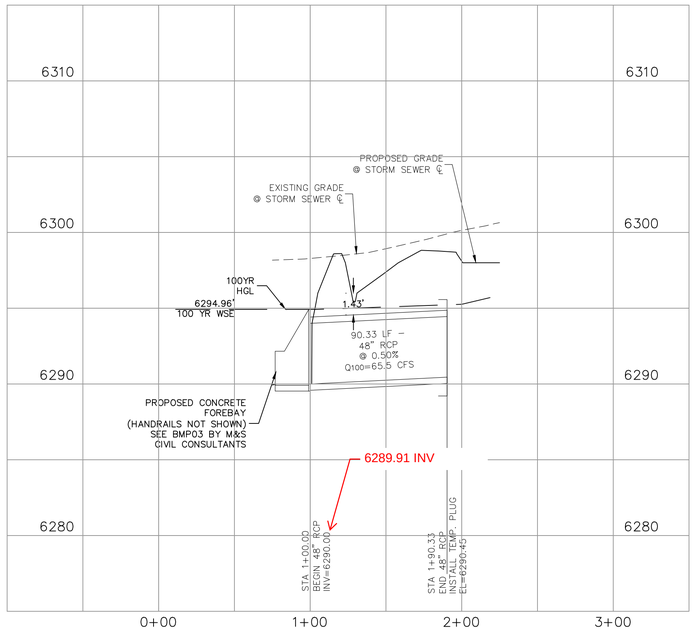


STORM 5 (PRIVATE)
STA 1+00.00 TO STA 1+90.33

AS-BUILT
ENGINEERING RECORD DRAWINGS



STORM 4 (PRIVATE)



STORM 5 (PRIVATE)

EPC 6/9/2022

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

CIVIL CONSULTANTS, INC.

CROSSROADS MIXED USE FILING NO. 1
STORM SEWER PLANS

PROJECT NO. 18-003
DESIGNED BY: CVW
DRAWN BY: CVW
CHECKED BY: VAS
SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'
DATE: 04/20/2022
SHEET 16 OF ~~24~~ 26
ST02

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

VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160
COLORADO REGISTERED ENGINEER
37160
05/03/22
PROFESSIONAL ENGINEER

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APRV'D. BY:	DATE:

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CAUTION

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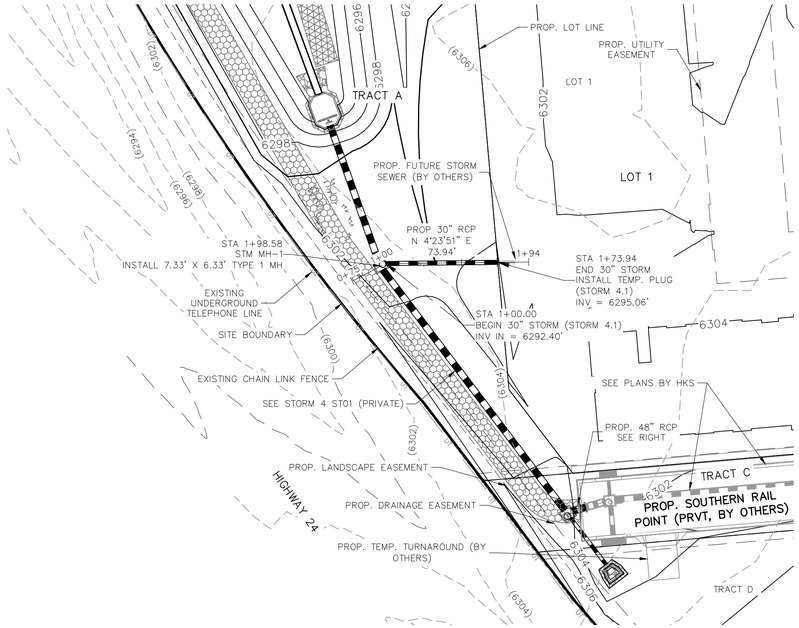
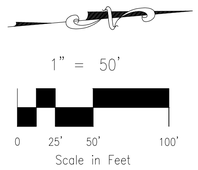
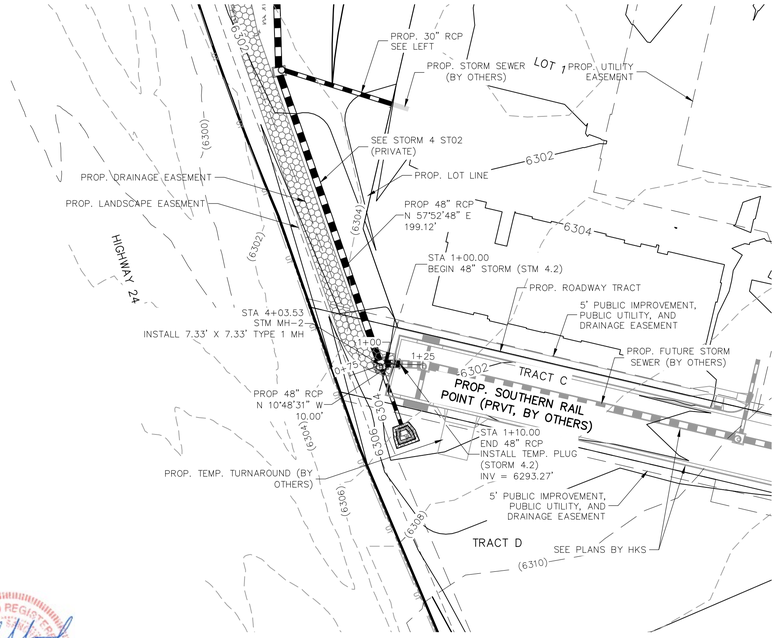


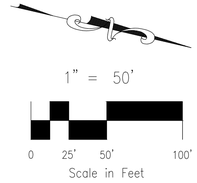


STORM 4.1 (PRIVATE)
STA 1+00.00 TO STA 1+94.00

NOTE:

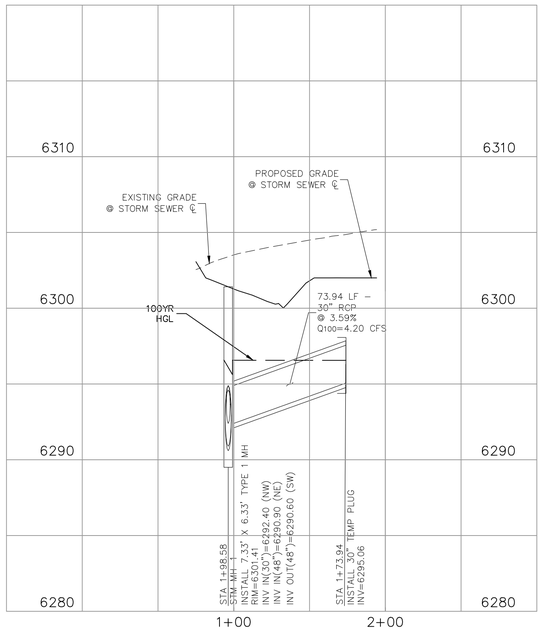
ALL PRIVATE STORM SEWER CONSTRUCTED WITH THESE PLANS TO BE MAINTAINED BY THE CROSSROADS METROPOLITAN DISTRICT NO. 1



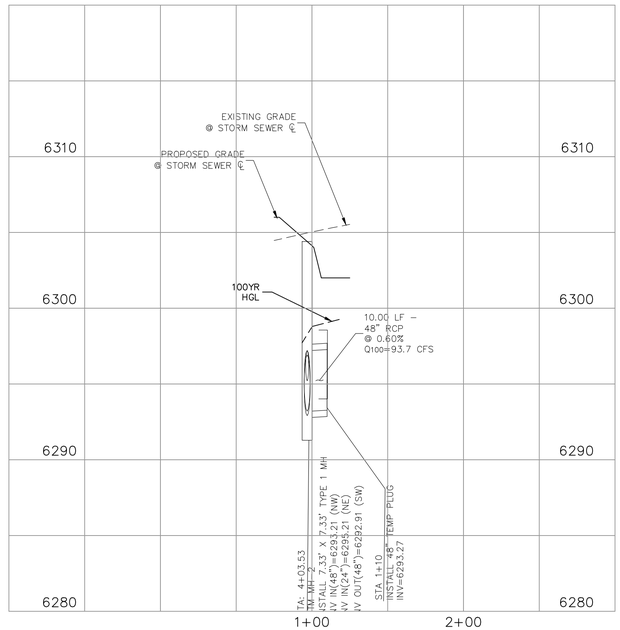


STORM 4.2 (PRIVATE)
STA 1+00.00 TO STA 1+00.00

AS-BUILT
ENGINEERING RECORD DRAWINGS



STORM 4.1 (PRIVATE)



STORM 4.2 (PRIVATE)

EPC 6/9/2022

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES
FOR BURIED UTILITY INFORMATION
48 HRS BEFORE YOU DIG
CALL 1-800-922-1987

CROSSROADS MIXED USE FILING NO. 1
STORM SEWER PLANS

PROJECT NO. 18-003 | SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5' | DATE: 04/20/2022 | SHEET 17 OF ~~24~~ 26 | ST03

DESIGNED BY: CW
DRAWN BY: CW
CHECKED BY: VAS

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

VIROIL A. SANCHEZ, COLORADO P.E. NO. 37160
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APRV'D. BY:	DATE:

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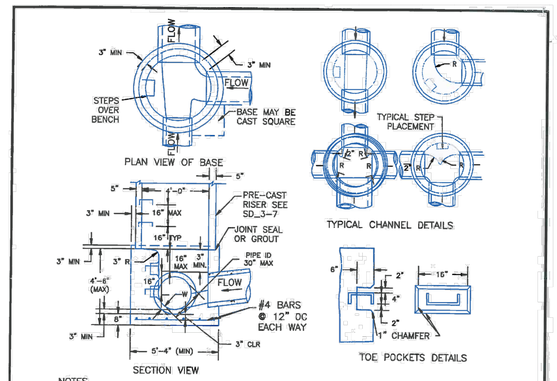
CAUTION

File: O:\YB003A-Crossroads Mixed Use\Colorado Springs Equities LLC\dwg\Const Dwg\Storm Plans\ST02-A.dwg Plotstamp: 5/3/2022 7:22 PM



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.

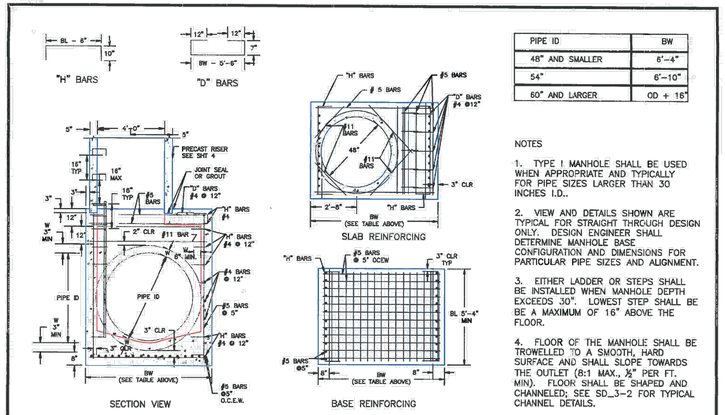
4. PIPES SHALL BE TRIMMED TO FINAL SHAPE AND SET BEFORE MANHOLE IS POURED.

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	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION
	REVISION DATE: 11/10/04 / FILE NAME: SD_3-2	



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..

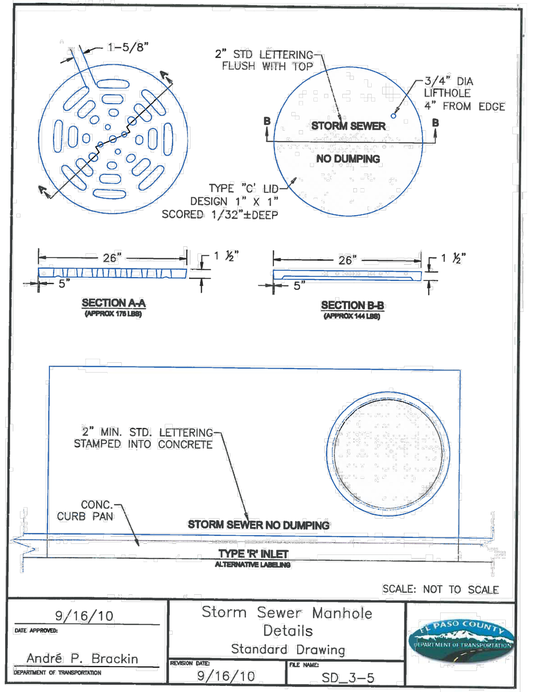
2. VIEW AND DETAILS SHOWN ARE TYPICAL FOR STRAIGHT THROUGH DESIGN ONLY. DESIGN ENGINEER SHALL DETERMINE MANHOLE BASE CONFIGURATION AND DIMENSIONS FOR PARTICULAR PIPE SIZES AND ALIGNMENT.

3. EITHER LADDER OR STEPS SHALL BE INSTALLED WHEN MANHOLE DEPTH EXCEEDS 30". LOWEST STEP SHALL BE 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.

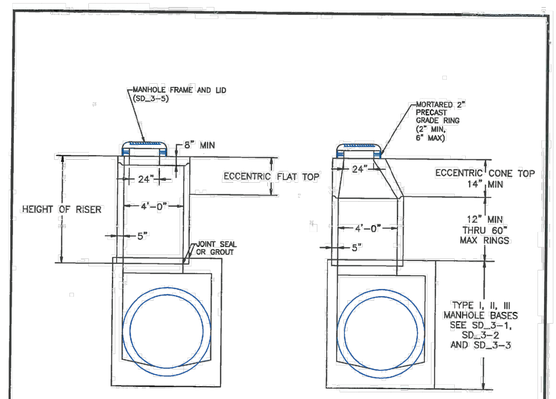
SCALE: NOT TO SCALE

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



SCALE: NOT TO SCALE

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

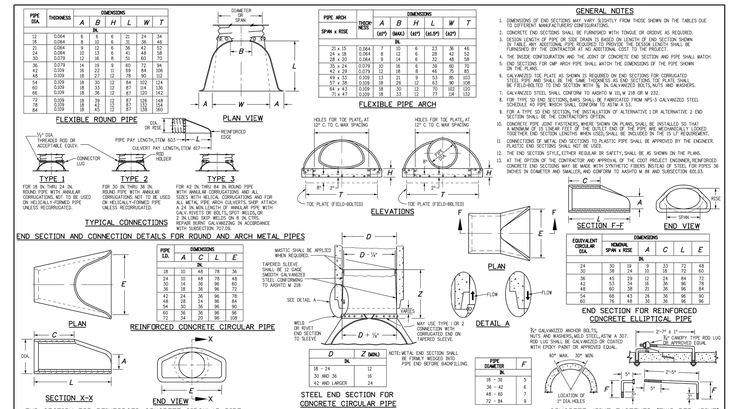


NOTES

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



GENERAL NOTES

1. DIMENSIONS OF END SECTIONS MAY VARY SLIGHTLY FROM THOSE SHOWN ON THE TABLES DUE TO DIFFERENT MANUFACTURERS' CONFIGURATIONS.
2. CONCRETE END SECTIONS SHALL BE FURNISHED WITH TONGUE OR GROOVE AS REQUIRED.
3. DESIGN LENGTH OF PIPE OR SIDE DRAIN IS BASED ON LENGTH OF END SECTION SHOWN IN TABLE. ANY ADDITIONAL PIPE REQUIRED TO PROVIDE THE DESIGN LENGTH SHALL BE FURNISHED AT THE CONTRACT UNIT PRICE FOR THE TYPE OF PIPE USED.
4. THE SHAPE CONFIGURATION AND THE JOINT OF CONCRETE END SECTION AND PIPE SHALL MATCH.
5. END SECTIONS FOR CMP ARCH PIPE SHALL MATCH THE DIMENSIONS OF THE PIPE SHOWN ON THE PLANS.
6. GALVANIZED TOE PLATE AS SHOWN IS REQUIRED ON END SECTIONS FOR CORRUGATED STEEL PIPE AND SHALL BE THE SAME THICKNESS AS END SECTIONS THE PLATE SHALL BE FIELD-BOLTED TO END SECTION WITH ⅜" GALVANIZED BOLTS,NUTS AND WASHERS.
7. GALVANIZED STEEL SHALL CONFORM TO AASHTO M 218 OR M 232.
8. FOR TYPE 1/2 END SECTIONS,BARS SHALL BE FABRICATED FROM MPS-3 GALVANIZED STEEL CONFORMING TO AASHTO M 223 AND BE GRADE 60.
9. FOR A TYPE 1/2 END SECTION,THE INSTALLATION OF ALTERNATIVE I OR ALTERNATIVE 2 END SECTION SHALL BE THE CONTRACTOR'S OPTION.
10. CONCRETE PIPE JOINT FASTENERS,WHERE SHOWN ON PLANS,SHALL BE INSTALLED SO THAT A MINIMUM OF 75 LINEAR FEET OF THE OUTLET END OF THE PIPE ARE MECHANICALLY LOCKED. THE JOINT FASTENERS SHALL BE PLACED AT THE JOINTS AS SHOWN IN THE 75 LF REQUIREMENT.
11. CONNECTIONS OF METAL END SECTIONS TO PLASTIC PIPE SHALL BE APPROVED BY THE ENGINEER. PLASTIC END SECTIONS SHALL NOT BE USED.
12. THE END SECTION STYLE,EITHER REGULAR OR SAFETY,SHALL BE AS SHOWN ON THE PLANS.
13. AT THE OPTION OF THE CONTRACTOR AND APPROVAL OF THE COST PROJECT ENGINEER,REINFORCED CONCRETE END SECTIONS MAY BE MADE WITH SYNTHETIC FIBERS INSTEAD OF STEEL FOR PIPES 36 INCHES IN DIAMETER AND SMALLER,AND CONFORM TO AASHTO M 86 AND SUBSECTION 601.03.

Computer File Information		Sheet Revisions		
Creation Date: 07/04/12	Initials: JBK	Date:	Comments	
Last Modification Date: 05/01/18	Initials: LTA	5/01/18	Added General Note 13.	
Full Path: www.coddot.gov/business/designsupport				
Drawing File Name: 600200202.dgn				
CAD Ver: MicroStation V8 Scale: Not to Scale Units: English				

Colorado Department of Transportation, 2829 West Howard Place, 2000 NO. 3rd Floor, Denver, CO 80204, Phone:303-757-9231 FAX: 303-757-9868, Division of Project Support, JBK/LTA	CONCRETE AND METAL END SECTIONS, Issued By:Project Development Branch July 4, 2012	STANDARD PLAN NO. M-603-10, Sheet No. 1 of 2

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, MANHOLES, AND WYES SHOWN ON THE PLANS SHALL BE PREFABRICATED. HORIZONTAL AND VERTICAL BENDS ARE INDICATED ON THE PLANS.
3. ALL CONNECTIONS BETWEEN DISSIMILAR MATERIALS (I.E. HP STORM PIPE AND CONCRETE STRUCTURES), SHALL BE WATER TIGHT. REFER TO ADS WATERSTOP STRUCTURE CONNECTION DETAILS (SEE THIS CONSTRUCTION SET) FOR ADDITIONAL INFORMATION.
4. THE CONTRACTOR SHOULD ATTEMPT TO LIMIT CONSTRUCTION TRAFFIC ATOP THE PROPOSED STORM SEWER INSTALLATION. AS PER THE MANUFACTURES RECOMMENDATIONS THE CONTRACTOR SHALL PROVIDE A MIN OF 12" OF COVER AT ALL TIMES ATOP THE BACKFILLED STORM SEWER TO TOP OF THE FINISHED GROUND OR BOTTOM OF FLEXIBLE PAVEMENT SURFACE TO PROTECT THE PIPE FROM H-25 VEHICULAR TRAFFIC. A MINIMUM OF 36" SHOULD BE PROVIDED TO PROTECT THE STORM SEWER FROM 30 T TO 60 T TRAFFIC AND MINIMUM OF 72" FOR TRAFFIC UP TO 78 T AXLE LOADS. FINAL GRADING SHOWN ON THE PLANS WILL PROHIBIT VEHICULAR TRAFFIC TO LOADS LESS THE H-25.
5. REFER TO THE DETAIL IN THIS CONSTRUCTION SET FOR PIPE TRENCH DETAILS AND PIPE SPECIFICATION.

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

COLORADO REGISTERED 37160 PROFESSIONAL ENGINEER 03/13/2024

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CROSSROADS MIXED USE FILING NO. 1
STORM SEWER DETAILS
DATE: 04/20/2022
SHEET 18 OF ~~24~~ 26
ST04
PROJECT NO. 18-003
SCALE: HORIZONTAL: NA VERTICAL: NA
DESIGNED BY: GT
DRAWN BY: GT
CHECKED BY: VAS

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

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.
VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160
COLORADO REGISTERED 37160 PROFESSIONAL ENGINEER 05/03/22

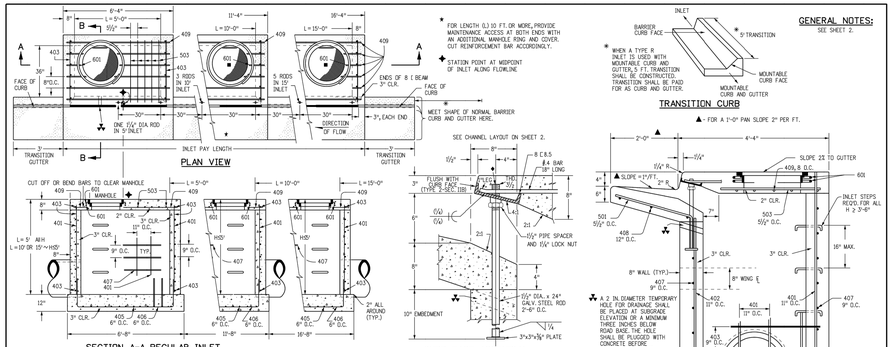
REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APPR'D. BY:	DATE:

THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

CAUTION

File: C:\18003A-Crossroads Mixed Use\Colorado Springs Equities LLC\dwg\Const Dwg\Storm Plans\ST03.dwg Plotstamp: 4/14/2022 11:41 AM

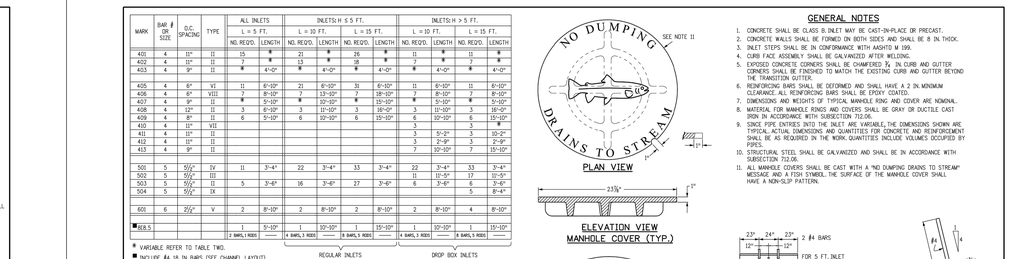


GENERAL NOTES: SEE SHEET 2.

- FOR LENGTH (L) 10 FT. OR MORE, PROVIDE MAINTENANCE ACCESS AT BOTH ENDS WITH AN ADDITIONAL MANHOLE RING AND COVER. CUT REINFORCEMENT BAR ACCORDINGLY.
- STATION POINT AT MIDPOINT OF INLET ALONG FLOWLINE

* WHEN A TYPE R INLET IS USED WITH MOUNTABLE CURB AND GUTTER, 5 FT. TRANSITION SHALL BE CONSTRUCTED. TRANSITION SHALL BE PAID FOR AS CURB AND GUTTER.

Computer File Information		Sheet Revisions		Colorado Department of Transportation		STANDARD PLAN NO.
Creation Date: 07/04/12 Initials: DD		Date:	Comments	4201 East Arkansas Avenue, Denver, Colorado 80222	CURB INLET TYPE R	M-604-12
Last Modification Date: 07/04/12 Initials: LTA	(SEQ)			Phone: (303) 757-9083 Fax: (303) 757-9820		
Full Path: www.coloradodot.info/business/designsupport	(SEQ)			Project Development Branch DD/LTA	Issued By: Project Development Branch July 4, 2012	Sheet No. 1 of 2
Drawing File Name: 604012202.dgn	(SEQ)					
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	(SEQ)					



MARK	BAR # OR SIZE	O.C. SPACING	TYPE	ALL INLETS L = 5 FT. NO. REQ'D.	LENGTH	INLETS: H ≤ 5 FT. L = 10 FT. NO. REQ'D.	LENGTH	L = 15 FT. NO. REQ'D.	LENGTH	INLETS: H > 5 FT. L = 10 FT. NO. REQ'D.	LENGTH	L = 15 FT. NO. REQ'D.	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	4	9"	II	*	8'-10"	*	10'-10"	*	15'-10"	*	8'-10"	*	8'-10"
408	4	12"	II	3	6'-10"	3	11'-10"	3	16'-10"	3	11'-10"	3	16'-10"
409	4	8"	II	6	5'-10"	6	10'-10"	6	15'-10"	6	10'-10"	6	15'-10"
410	4	12"	VII							3	*	3	*
411	4	11"	II							3	5'-2"	3	10'-2"
412	4	11"	II							3	2'-9"	3	7'-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"	III							11	11'-5"	17	11'-5"
503	5	5½"	II	5	3'-4"	16	3'-4"	27	3'-4"	6	3'-4"	6	3'-4"
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, 2 RODS		6 BARS, 3 RODS		4 BARS, 2 RODS		6 BARS, 3 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	402	410	NO. REQ'D. REGULAR 403	407	NO. REQ'D. DROP BOX 403	407	L = 5 FT. CONC. (CU. YDS.)	STEEL LBS.	L = 10 FT. CONC. (CU. YDS.)	STEEL LBS.	L = 15 FT. CONC. (CU. YDS.)	STEEL LBS.
3'-0"	2'-8"	3'-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"	2'-8"	3'-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'-10"	16	13	15	6	4.6	382	6.2	618	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	1029

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"

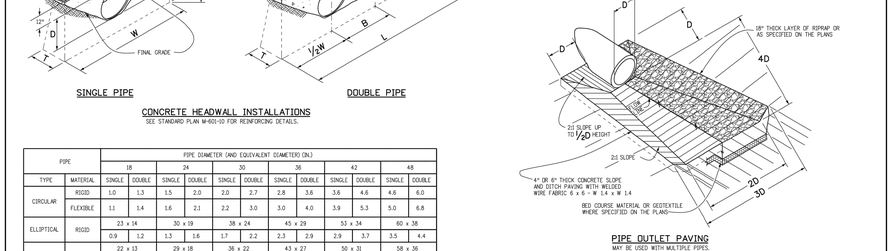
GENERAL NOTES

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 IN. 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 IN. 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 IN. MINIMUM CLEARANCE. ALL REINFORCING BARS SHALL BE 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 712.08.
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.

ELEVATION VIEW: WEIGHTS: COVER = 125 LBS. + RING = 135 LBS. TOTAL = 260 LBS.

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

Computer File Information		Sheet Revisions		Colorado Department of Transportation		STANDARD PLAN NO.
Creation Date: 07/04/12 Initials: DD		Date:	Comments	4201 East Arkansas Avenue, Denver, Colorado 80222	CURB INLET TYPE R	M-604-12
Last Modification Date: 07/04/12 Initials: LTA	(SEQ)			Phone: (303) 757-9083 Fax: (303) 757-9820		
Full Path: www.coloradodot.info/business/designsupport	(SEQ)			Project Development Branch DD/LTA	Issued By: Project Development Branch July 4, 2012	Sheet No. 2 of 2
Drawing File Name: 604012202.dgn	(SEQ)					
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	(SEQ)					



GENERAL NOTES

1. FOR SIZE AND LOCATION OF PIPES, SEE THE PLANS.
2. ALL CONCRETE SHALL BE CLASS B.
3. FOOTINGS IN ROCK SHALL BE POURED OUT TO ROCK AND NOT FORMED IN ACCORDANCE WITH SUBSECTION 601.09(b).
4. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾ IN.
5. HEADWALL SHALL HAVE REINFORCING STEEL INSTALLED IN A PATTERN SIMILAR TO STANDARD PLAN M-601-10.
6. THE COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE WORK UNLESS THE STEEL QUANTITIES ARE LISTED IN THE PLANS AND ARE PAID FOR SEPARATELY.

PIPE	PIPE DIAMETER (AND EQUIVALENT DIAMETER) (IN.)											
	18		24		30		36		42		48	
TYPE	MATERIAL	SINGLE	DOUBLE	SINGLE	DOUBLE	SINGLE	DOUBLE	SINGLE	DOUBLE	SINGLE	DOUBLE	SINGLE	DOUBLE
CIRCULAR	RIGID	1.0	1.3	1.5	2.0	2.0	2.7	2.8	3.6	3.6	4.6	4.6	6.0
	FLEXIBLE	1.1	1.4	1.6	2.1	2.2	3.0	3.0	4.0	3.9	5.3	5.0	6.8
ELLIPTICAL	RIGID	23 x 14		30 x 19		38 x 24		45 x 29		53 x 34		60 x 38	
		0.9	1.2	1.3	1.6	1.7	2.2	2.3	2.9	2.9	3.7	3.5	4.4
ARCH	METAL	22 x 13		29 x 18		36 x 22		43 x 27		50 x 31		58 x 36	
		0.9	1.3	1.4	1.9	1.8	2.4	2.4	3.4	3.2	4.4	3.4	5.0

CONCRETE QUANTITIES FOR ONE CONCRETE HEADWALL (CUBIC YARDS)

THICKNESS	MATERIAL	PIPE DIAMETER (IN.) 18	24	30	36	42	48
4"	CONCRETE	0.4	0.8	1.2			
6"	CONCRETE				2.6	3.6	4.7
18"	RIPRAP	2.0	3.5	5.4	7.8	10.7	13.9

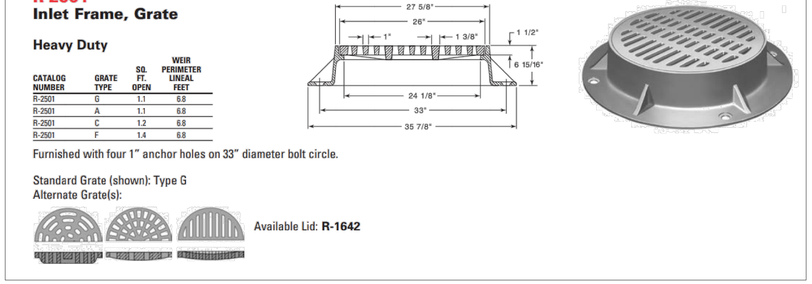
PIPE OUTLET PAVING (CUBIC YARDS)
NOTE: VOLUME OCCUPIED BY PIPE HAS BEEN DEDUCTED.

TYPE OF PIPE | HEADWALL DIMENSIONS

CIRCULAR: D = PIPE DIAMETER (INSIDE); H = D + 30"; W = 3D + 18"; T = 0.4 H (NEAREST IN.); B = 1.5 D (30" MINIMUM); L = W + B

ARCH OR ELLIPTICAL: D = EQUIVALENT CIRCULAR DIAMETER (INSIDE); H = RISE + 30"; W = 3D + 18"; T = 0.4 H (NEAREST IN.); B = 1.5 D (30" MINIMUM); L = W + B

Computer File Information		Sheet Revisions		Colorado Department of Transportation		STANDARD PLAN NO.
Creation Date: 07/04/12 Initials: DD		Date:	Comments	4201 East Arkansas Avenue, Denver, Colorado 80222	HEADWALLS AND PIPE OUTLET PAVING	M-601-12
Last Modification Date: 07/04/12 Initials: LTA	(SEQ)			Phone: (303) 757-9083 Fax: (303) 757-9820		
Full Path: www.coloradodot.info/business/designsupport	(SEQ)			Project Development Branch DD/LTA	Issued By: Project Development Branch July 4, 2012	Sheet No. 1 of 1
Drawing File Name: 601012201.dgn	(SEQ)					
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	(SEQ)					



CATALOG NUMBER	GRATE TYPE	SQ. FT. OPEN	WEIR PERIMETER LINEAL FEET
R-2501	G	1.1	6.8
R-2501	A	1.1	6.8
R-2501	C	1.2	6.8
R-2501	F	1.4	6.8

Furnished with four 1" anchor holes on 33" diameter bolt circle.

Standard Grate (shown): Type G
Alternate Grate(s):

Available Lid: **R-1642**

FLARED END SECTION CUT OFF WALL DIMENSIONS (IN)				
DIA	WALL*	A*	B	D
18	4.5	9	31.5	57.0

* MAY VARY SLIGHTLY BETWEEN MANUFACTURERS

NOTES:

SLIGHT VARIATIONS IN BOTH SHAPE AND DIMENSIONS FROM THOSE SHOWN MAY BE ACCEPTED IF APPROVED BY THE ENGINEER

TOE WALLS MAY BE CAST IN PLACE OR PRECAST

FLARED END SECTION W / TOE WALL

SCALE: ⅜" = 1'

CONCRETE TOE WALL DETAIL

EPC 6/9/2022

AS-BUILT
ENGINEERING RECORD DRAWINGS

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CROSSROADS MIXED USE FILING NO. 1
STORM SEWER DETAILS
DATE: 04/20/2022
SHEET 19 OF ~~24~~ 26
ST05
PROJECT NO. 18-003
SCALE: HORIZONTAL: NA VERTICAL: NA
DESIGNED BY: GT
DRAWN BY: GT
CHECKED BY: VAS

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

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.
VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160
REGISTERED PROFESSIONAL ENGINEER 37160 05/03/22

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APP'D. BY:	DATE:

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CAUTION

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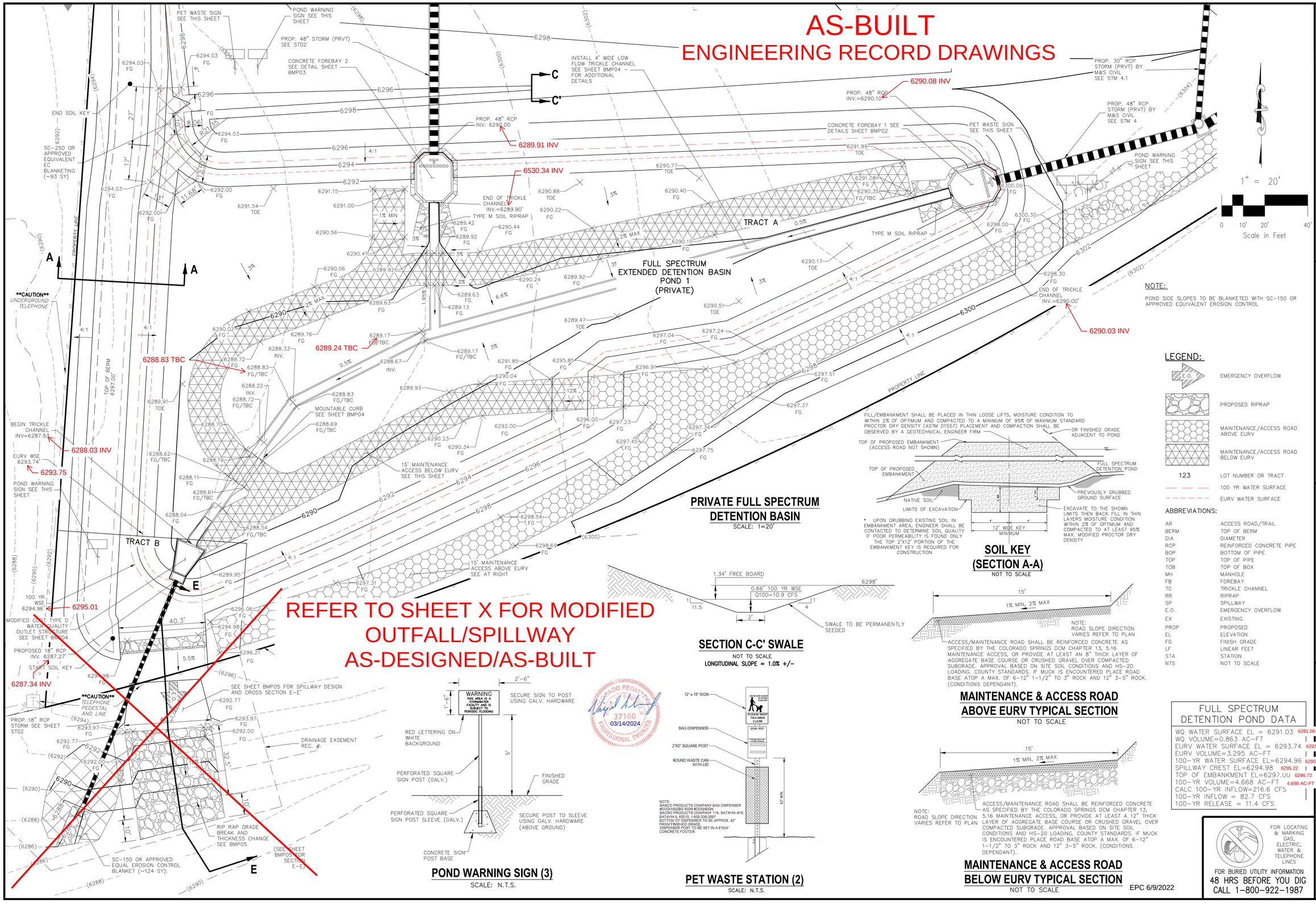
AS-BUILT
ENGINEERING RECORD DRAWINGS



PRIVATE FULL SPECTRUM DETENTION BASIN
SCALE: 1=20'

SOIL KEY (SECTION A-A)
NOT TO SCALE

SECTION C-C' SWALE
NOT TO SCALE
LONGITUDINAL SLOPE = 1.0% +/-

MAINTENANCE & ACCESS ROAD ABOVE EURV TYPICAL SECTION
NOT TO SCALE

MAINTENANCE & ACCESS ROAD BELOW EURV TYPICAL SECTION
NOT TO SCALE

REFER TO SHEET X FOR MODIFIED OUTFALL/SPILLWAY AS-DESIGNED/AS-BUILT

POND WARNING SIGN (3)
SCALE: N.T.S.

PET WASTE STATION (2)
SCALE: N.T.S.

COLORADO REGISTERED PROFESSIONAL ENGINEER 37160 03/14/2024

EPC 6/9/2022

CROSSROADS MIXED USE FILING NO. 1

PERMANENT BMP PLAN

DATE: 04/20/2022

SHEET 20 OF ~~24~~ 26

BMP01

PROJECT NO. 18-003
DESIGNED BY: CVW
DRAWN BY: CVW
CHECKED BY: DLM

SCALE: HORIZONTAL: VARIES VERTICAL: N/A

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

CIVIL CONSULTANTS, INC.

FULL SPECTRUM DETENTION POND DATA

WQ WATER SURFACE EL = 6291.03	6291.06
WQ VOLUME=0.863 AC-FT	
EURV WATER SURFACE EL = 6293.74	6293.75
EURV VOLUME=3.295 AC-FT	
100-YR WATER SURFACE EL=6294.96	6295.01
SPILLWAY CREST EL=6294.98	6295.22
TOP OF EMBANKMENT EL=6297.00	6296.72
100-YR VOLUME=4.668 AC-FT	4.690 AC-FT
CALC 100-YR INFLOW=216.6 CFS	
100-YR INFLOW = 82.7 CFS	
100-YR RELEASE = 11.4 CFS	

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

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

COLORADO REGISTERED PROFESSIONAL ENGINEER 37160 05/03/22

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES

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REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APPVD. BY:	DATE:

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CAUTION

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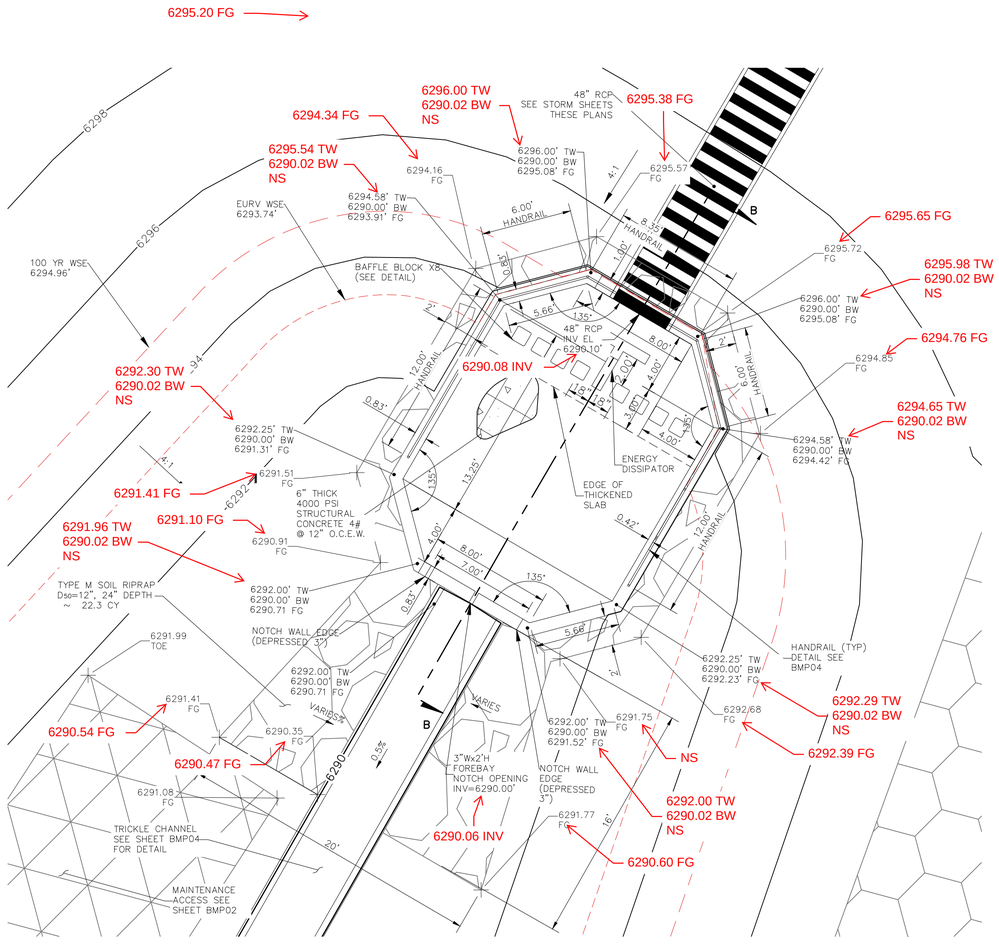
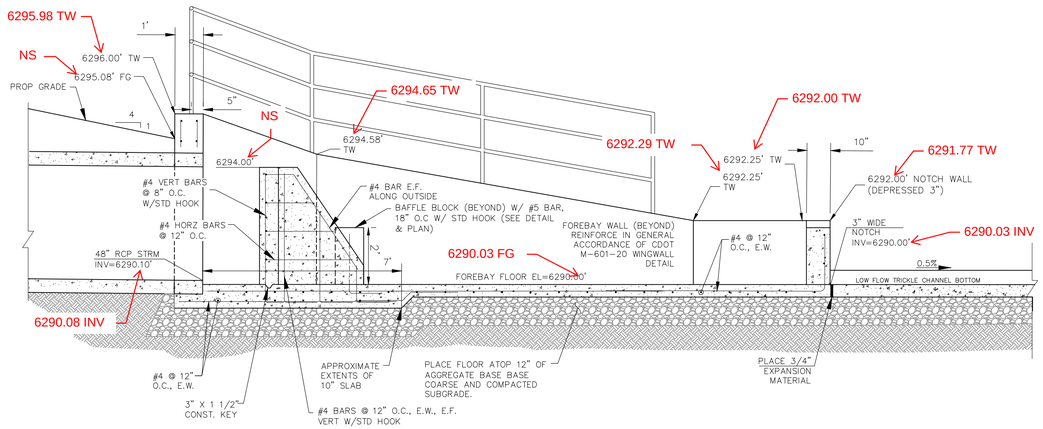


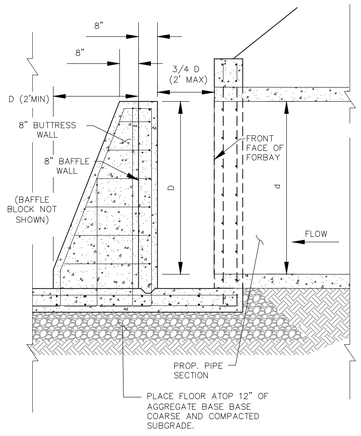
TRACT B FOREBAY CROSS SECTION

SCALE: 1" = 5'



FOREBAY CROSS SECTION B-B

SCALE: 3/8" = 1'



TYPICAL ENERGY DISSIPATION WALL DETAILS

SCALE: 1" = 5'

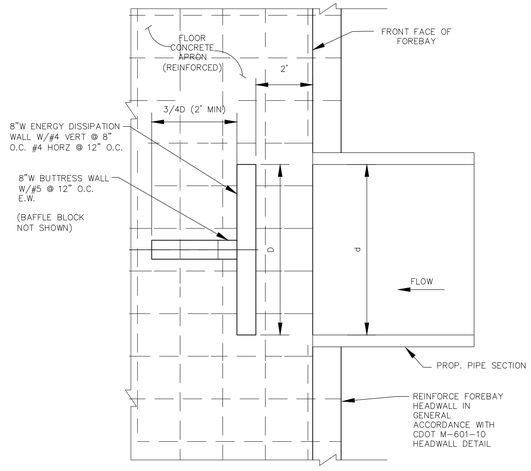
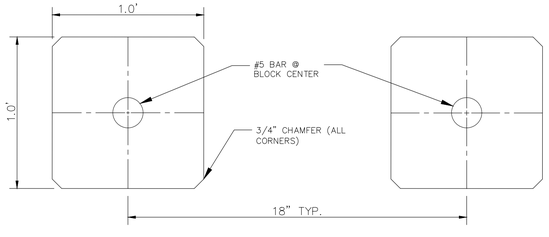


TABLE			
RCP PIPE SIZE INCH	d (WIDTH) INCH	BUTTRESS WALL FT	DISSIPATION WALL (D) FT
48"	48"	3'	4'

ENERGY DISSIPATOR TABLE

NOT TO SCALE



BAFFLE BLOCK DETAIL

SCALE: N.T.S.

EPC 6/9/2022

COLORADO REGISTERED PROFESSIONAL ENGINEER 37160 03/14/2024

AS-BUILT

ENGINEERING RECORD DRAWINGS

CROSSROADS MIXED USE FILING NO. 1

FOREBAY DETAILS

DATE: 04/20/2022

SHEET 21 OF 24 26

BMP02

PROJECT NO. 18-003

SCALE: HORIZONTAL: VARIES VERTICAL: N/A

DESIGNED BY: CVW
DRAWN BY: CVW
CHECKED BY: DLM

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

CIVIL CONSULTANTS, INC.

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

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

COLORADO REGISTERED PROFESSIONAL ENGINEER 37160 05/03/22

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APRV'D. BY:	DATE:

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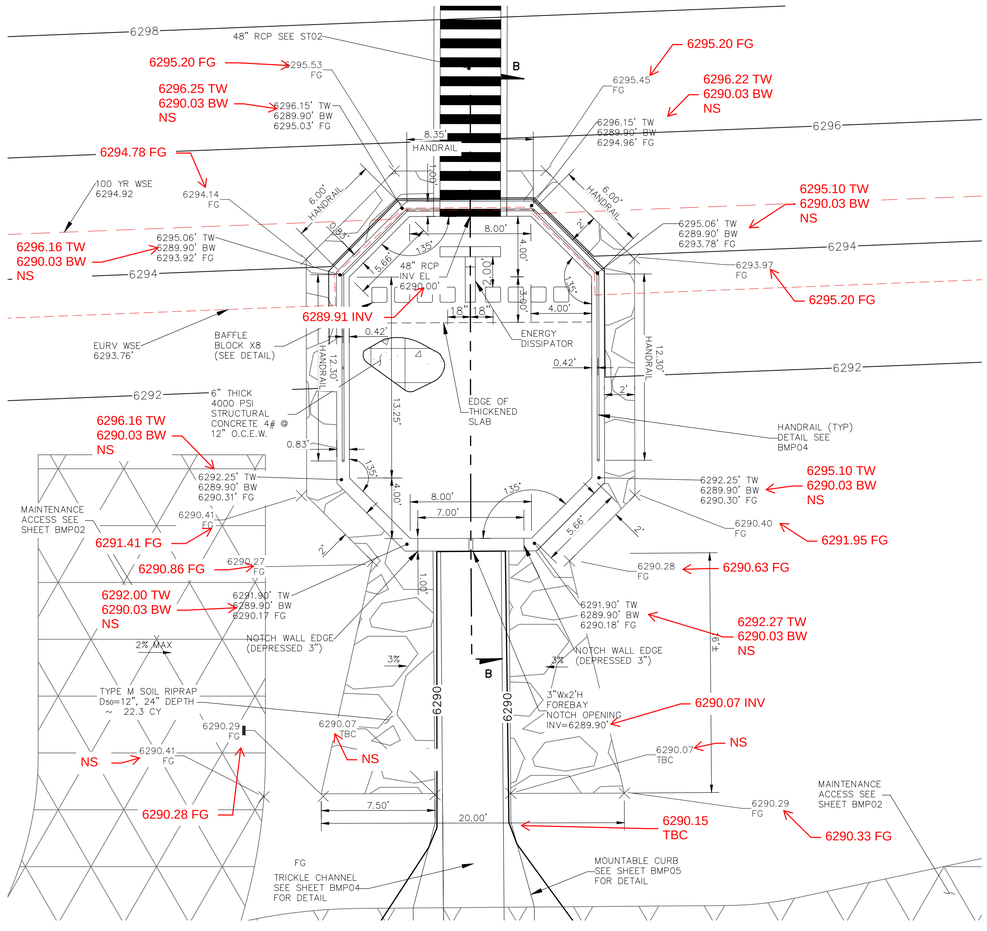
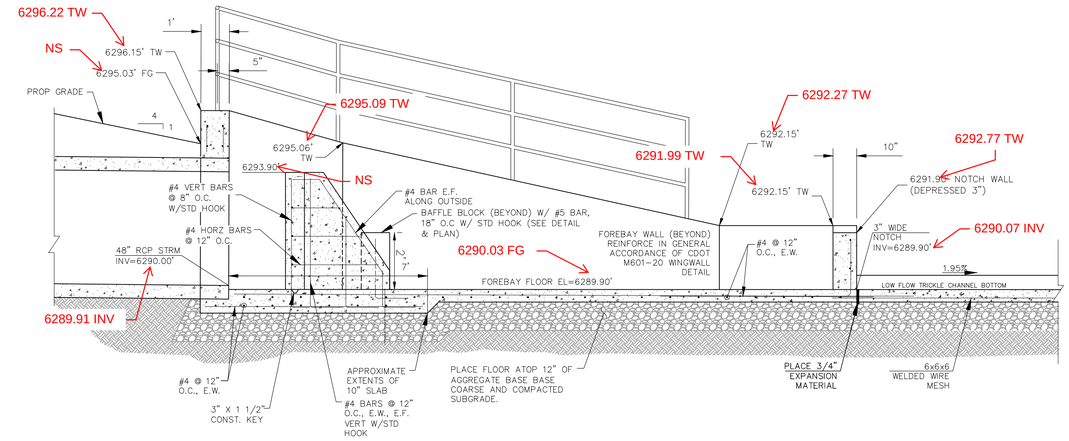


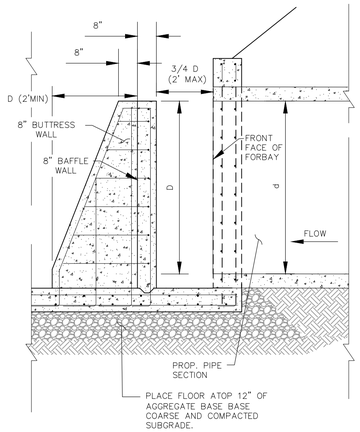
TRACT B FOREBAY 2 CROSS SECTION

SCALE: 1" = 5'



FOREBAY CROSS SECTION B-B

SCALE: 3/8" = 1'



TYPICAL ENERGY DISSIPATION WALL DETAILS

SCALE: 1" = 5'

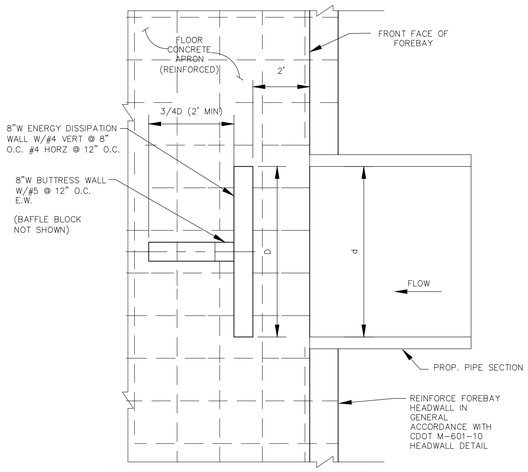
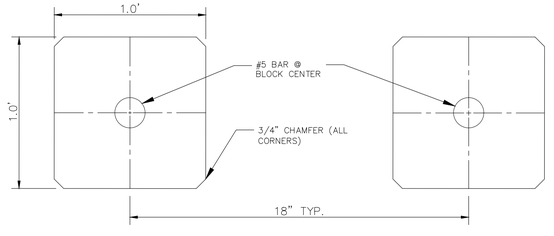


TABLE			
RCP PIPE SIZE INCH	d (WIDTH) INCH	BUTTRESS WALL FT	DISSIPATION WALL (D) FT
48"	48"	3'	4'

ENERGY DISSIPATOR TABLE

NOT TO SCALE



BAFFLE BLOCK DETAIL

SCALE: N.T.S.

AS-BUILT

ENGINEERING RECORD DRAWINGS

COLORADO REGISTERED PROFESSIONAL ENGINEER 37160 03/13/2024

EPC 6/9/2022

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CROSSROADS MIXED USE FILING NO. 1

FOREBAY DETAILS

PROJECT NO. 18-003 | DESIGNED BY: CVW | DRAWN BY: CVW | CHECKED BY: DLM

SCALE: HORIZONTAL: VARIES VERTICAL: N/A

DATE: 04/20/2022

SHEET 22 OF ~~24~~ 26

BMP03

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

CIVIL CONSULTANTS, INC.

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

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

COLORADO REGISTERED PROFESSIONAL ENGINEER 37160 05/03/22

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APPR'D. BY:	DATE:

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CAUTION

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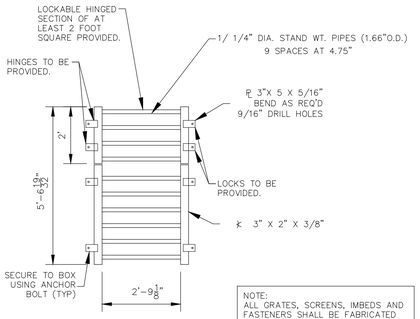
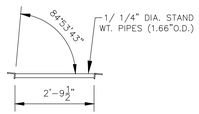


GRATE PLAN

SCALE: 3/8" = 1'

NOTE:
ALL GRATES, SCREENS, IMBEDS AND FASTENERS SHALL BE FABRICATED USING GALVANIZED STEEL, UNLESS OTHERWISE NOTED.

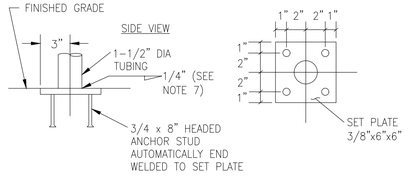
ALL GRATE DIMENSIONS TO BE FIELD VERIFIED PRIOR TO FABRICATION. ALL GRATE MATERIAL SHALL BE GALVANIZED.

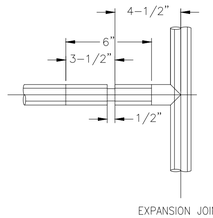


SECTION

SCALE: 3/8" = 1'

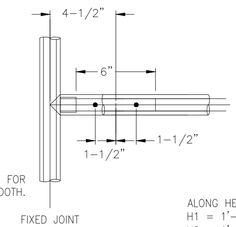
1) WELD PLATES MAY BE SUBSTITUTED FOR PIPE EMBEDMENT.
2) CONTRACTOR TO SUBMIT SHOP DRAWINGS TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION.
3) DESIGN CRITERIA SHALL BE IN ACCORDANCE WITH AASHTO STANDARDS.
4) HANDRAIL DESIGN SHALL BE COMPATIBLE WITH THE DESIGN OF THE WINGWALLS AND HEADWALLS.
5) RAILING POSTS SHALL BE SET TO NORMAL TO GRADE. RAILS SHALL RUN PARALLEL TO THE SLOPES OF THEE TOP OF WALLS
6) ALL RAILS SHALL BE FREE OF ANY SHARP EDGES OR CORNERS.





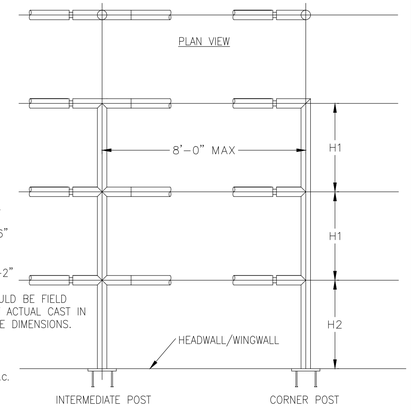
MECHANICAL TUBING, 1/4" MIN. WALL THICKNESS, 1/16" CHAMFER BOTH ENDS. REAM PIPE FOR SLIP FIT 0.03" MAX. CLEARANCE

13/32" DRILL AND CSK. PIPE 1/16" DEEP BOTH SIDES. PROVIDE 3/8" DIA SOFT STEEL ROD SUITABLE FOR FIELD RIVETING, GRIND SMOOTH.



HANDRAIL ASSEMBLY DETAILS

NOT TO SCALE



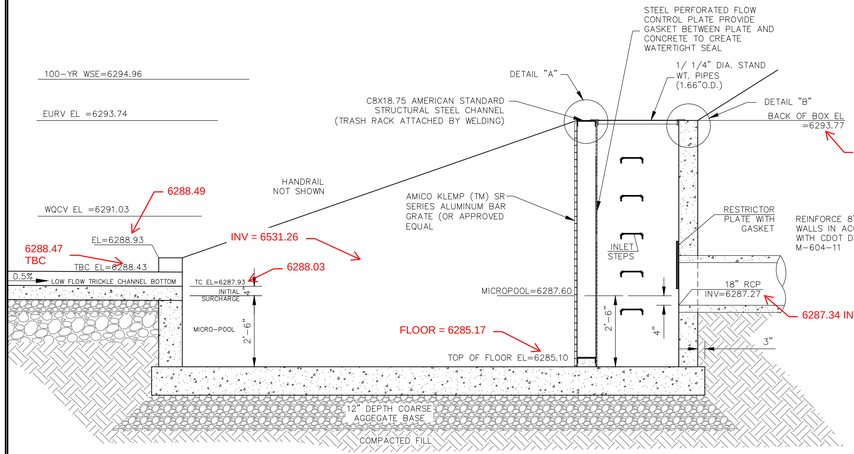
ALONG HEADWALL
H1 = 1'-2"
H2 = 1'-4 7/16"

ALONG WINGWALL
H1 & H2 = 1'-2"

DIMENSIONS SHOULD BE FIELD VERIFIED AGAINST ACTUAL CAST IN PLACE STRUCTURE DIMENSIONS.

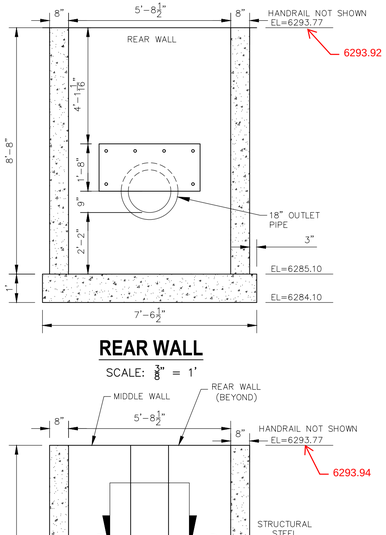
HANDRAIL ASSEMBLY DETAILS

NOT TO SCALE



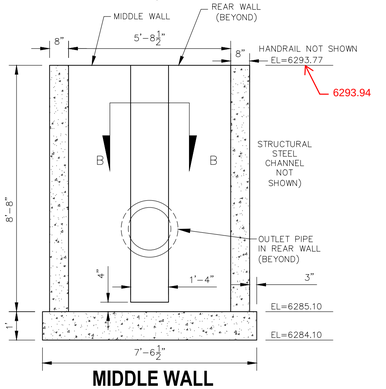
SECTION A-A

SCALE: 3/8" = 1'



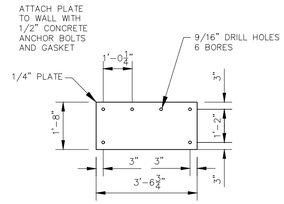
REAR WALL

SCALE: 3/8" = 1'



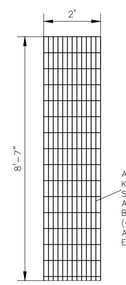
MIDDLE WALL

SCALE: 3/8" = 1'



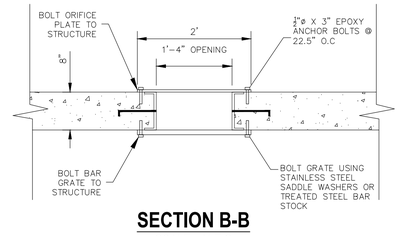
RESTRICTOR PLATE

SCALE: 3/8" = 1'



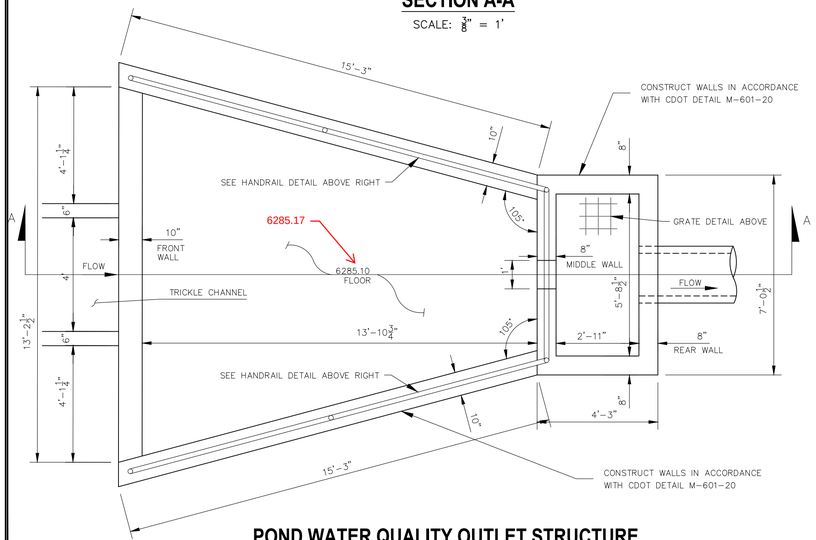
BAR GRATE DETAIL

SCALE: 3/8" = 1'



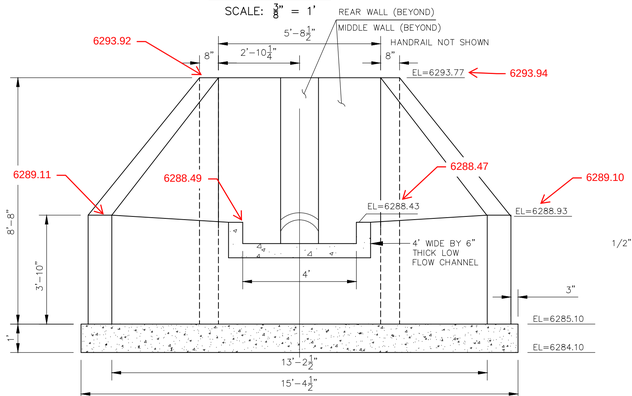
SECTION B-B

SCALE: N.T.S



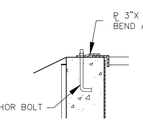
POND WATER QUALITY OUTLET STRUCTURE

SCALE: 3/8" = 1'



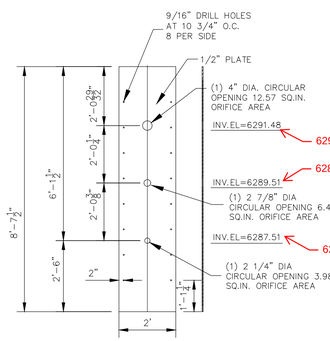
FRONT WALL

SCALE: 3/8" = 1'



GRATE DETAIL "A"

GRATE DETAIL "B"



ORIFICE PLATE

SCALE: 3/8" = 1'

EPC 6/9/2022

AS-BUILT

ENGINEERING RECORD DRAWINGS

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES

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REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APP'VD. BY:	DATE:

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CAUTION

CROSSROADS MIXED USE FILING NO. 1

OUTLET STRUCTURE/MISCELLANEOUS DETAILS

PROJECT NO. 18-003 | DATE: 04/20/2022 | SHEET 23 OF 24 26 | BMP04

DESIGNED BY: CVW | DRAWN BY: CVW | CHECKED BY: DLM | SCALE: HORIZONTAL: 3/8"=1' VERTICAL: N/A

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

CIVIL CONSULTANTS, INC.

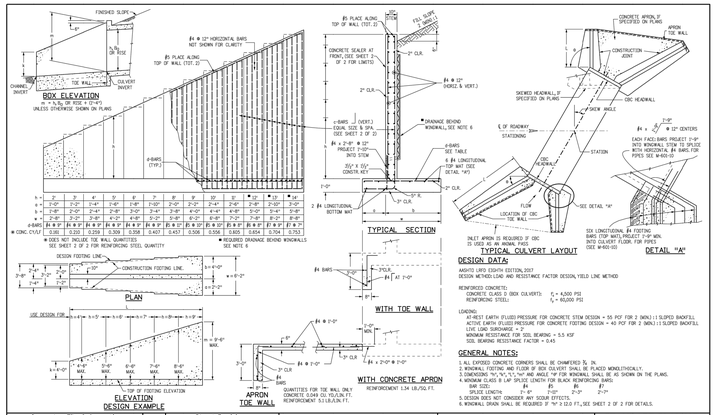
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

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

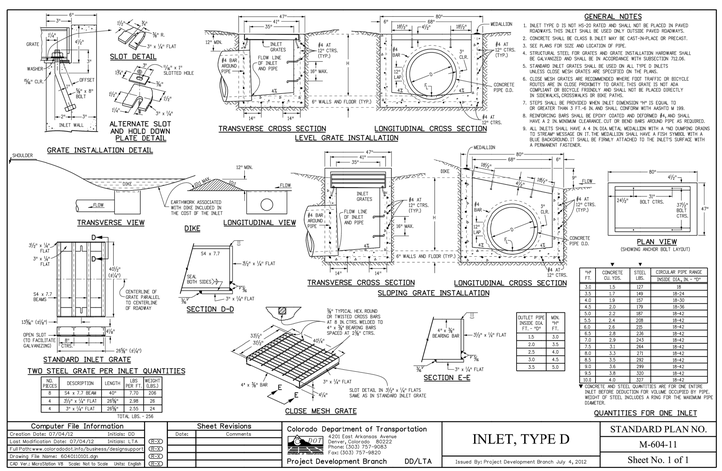
COLORADO REGISTERED 37160 PROFESSIONAL ENGINEER 05/03/22

COLORADO REGISTERED 37160 PROFESSIONAL ENGINEER 03/13/2024

File: O:\18003A-Crossroads Mixed Use\Colorado Springs Equities LLC\dwg\Const Dwg\BMP Plans\18003 BMP04.dwg Plotstamp: 4/14/2022 11:38 AM



Computer File Information		Sheet Revisions		Colorado Department of Transportation	WINGWALLS FOR PIPE OR BOX CULVERTS	STANDARD PLAN NO.
Creation Date: 07/31/18		Date:	Comments:	2829 West Howard Place		M-601-20
Designer Initials: JBK	CED			Denver, CO 80204		Standard Sheet No. 1 of 2
Last Modification Date: 07/31/19	CED			Phone: 303-757-9021 FAX: 303-757-9868		
Detailer Initials: LTA	CED			Project Development Branch JBK	Issued by the Project Development Branch July 31, 2019	Project Sheet Number
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	CED					



GENERAL NOTES

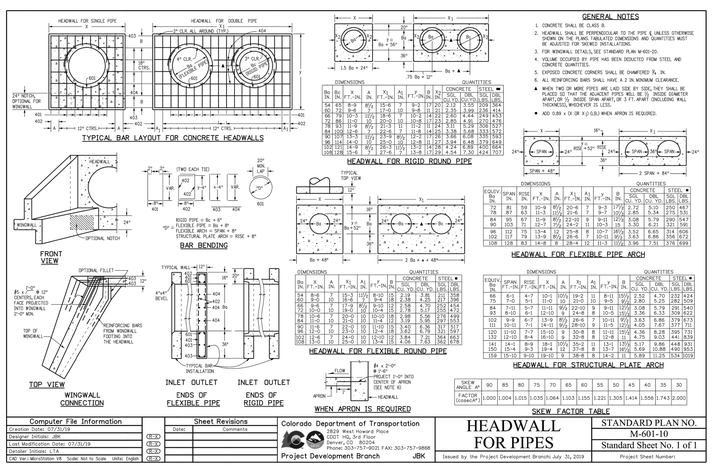
1. INLET TYPE D IS NOT H10-20 RATED AND SHALL NOT BE PLACED IN PAVED ROADWAYS. THIS INLET SHALL BE USED ONLY OUTSIDE PAVED ROADWAYS.
2. CONCRETE SHALL BE CLASS B. INLET MAY BE CAST-IN-PLACE OR PRECAST.
3. SEE PLANS FOR SIZE AND LOCATION OF PIPE.
4. ALL EXPOSED METAL SURFACES AND ALL INSTALLATION HARDWARE SHALL BE GALVANIZED AND SHALL BE IN ACCORDANCE WITH SUBSECTION 712.06.
5. STANDARD INLET GRATES SHALL BE USED ON ALL TYPE D INLETS UNLESS CLOSE MESH GRATES ARE SPECIFIED ON THE PLANS.
6. 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.
7. STOPS SHALL BE PROVIDED WHEN INLET DIMENSION "H" IS EQUAL TO OR GREATER THAN 3 FT.=6 IN. AND SHALL CONFORM WITH AASHTO M 199.
8. REINFORCING BARS SHALL BE EPOXY COATED AND DEFORMED #4, AND SHALL CONFORM TO AASHTO M 31 GRADE 60. STIRRUP SPACING SHALL BE AS REQUIRED.
9. ALL INLETS SHALL HAVE A 4 IN. 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 INLET'S SURFACE WITH A PERMANENT FASTENER.

"H" FT.	CONCRETE CU. YDS.	STEEL LBS.	CIRCULAR PIPE RANGE INSIDE DIA. IN.-"D"
3.0	1.5	127	18
3.5	1.7	148	18-24
4.0	1.9	157	18-30
4.5	2.0	179	18-36
5.0	2.2	187	18-42
5.5	2.4	208	18-42
6.0	2.6	225	18-42
6.5	2.8	226	18-42
7.0	2.9	243	18-42
7.5	3.1	264	18-42
8.0	3.3	281	18-42
8.5	3.5	282	18-42
9.0	3.6	299	18-42
9.5	3.8	330	18-42
10.0	4.0	327	18-42

▼ CONCRETE AND STEEL QUANTITIES ARE FOR ONE ENTIRE INLET BEFORE DEDUCTION FOR VOLUME OCCUPIED BY PIPE. WEIGHT OF STEEL INCLUDES A RING FOR THE MINIMUM PIPE DIAMETER.

OUTLET PIPE INSIDE DIA. FT.-"D"	MIN. "H" FT.
1.5	3.0
2.0	3.5
2.5	4.0
3.0	4.5
3.5	5.0

Computer File Information		Sheet Revisions		Colorado Department of Transportation	INLET, TYPE D	STANDARD PLAN NO.
Creation Date: 07/02/18		Date:	Comments:	4201 East Arkansas Avenue		M-604-11
Designer Initials: JBK	CED			Denver, Colorado 80222		Sheet No. 1 of 1
Last Modification Date: 07/31/19	CED			Phone: (303) 757-9083		
Detailer Initials: LTA	CED			Fax: (303) 757-9820		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	CED			Project Development Branch DD/LTA	Issued By: Project Development Branch July 4, 2012	



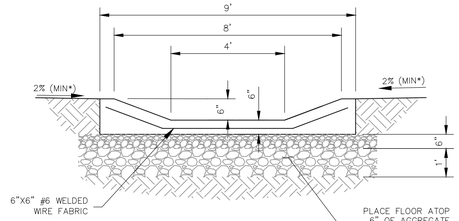
GENERAL NOTES

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 ¾ INSIDE DIAMETER APART, OR ½ INSIDE SPAN APART, OR 3 FT. APART (INCLUDING WALL THICKNESS), WHICHEVER IS LESS.
- ADD 0.89 x (X OR X-0.83) WHEN APRON IS REQUIRED.

Computer File Information		Sheet Revisions		Colorado Department of Transportation	HEADWALL FOR PIPES	STANDARD PLAN NO.
Creation Date: 07/31/19		Date:	Comments:	2829 West Howard Place		M-601-10
Designer Initials: JBK	CED			CDOT HQ, 3rd Floor		Standard Sheet No. 1 of 1
Last Modification Date: 07/31/19	CED			Denver, CO 80204		
Detailer Initials: LTA	CED			Phone: 303-757-9021 FAX: 303-757-9868		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	CED			Project Development Branch JBK	Issued by the Project Development Branch July 31, 2019	Project Sheet Number

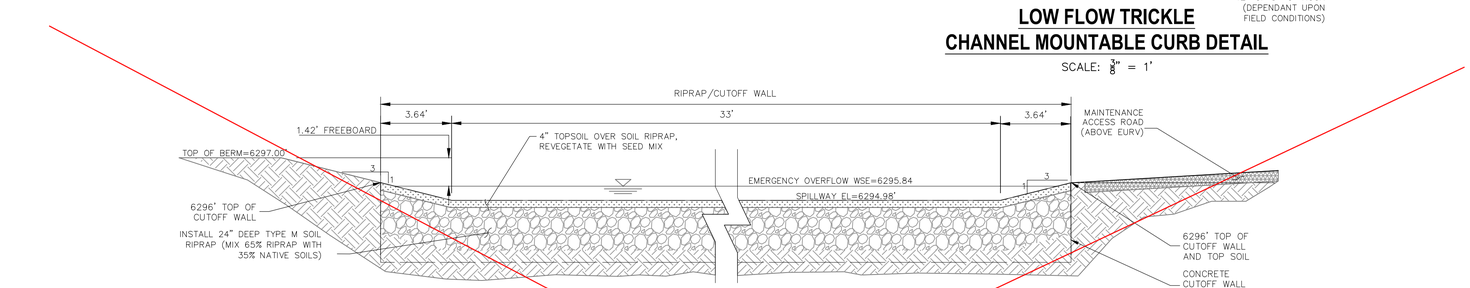
SOIL RIPRAP NOTES:

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.



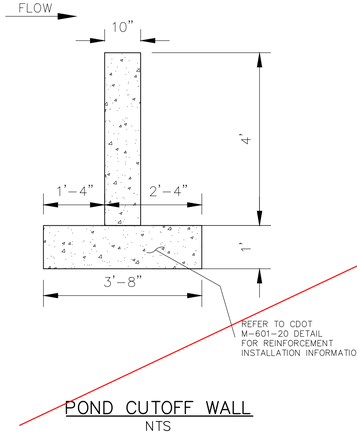
LOW FLOW TRICKLE CHANNEL MOUNTABLE CURB DETAIL

SCALE: 3" = 1'



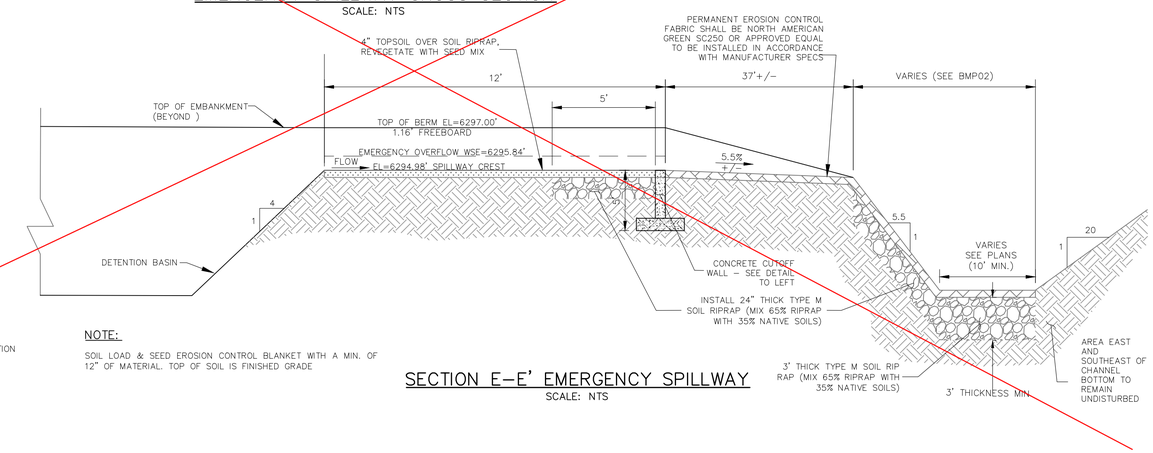
EMERGENCY SPILLWAY CROSS SECTION

SCALE: NTS



POND CUTOFF WALL

NTS



SECTION E-E' EMERGENCY SPILLWAY

SCALE: NTS

NOTE:

SOIL LOAD & SEED EROSION CONTROL BLANKET WITH A MIN. OF 12" OF MATERIAL. TOP OF SOIL IS FINISHED GRADE

REFER TO SHEET X FOR MODIFIED SPILLWAY AS-DESIGNED/AS-BUILT

EPC 6/9/2022

AS-BUILT

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CROSSROADS MIXED USE FILING NO. 1

MISCELLANEOUS DETAILS

DATE: 04/20/2022

SHEET 24 OF ~~24~~ 26

BMP05

SCALE: HORIZONTAL: N/A VERTICAL: N/A

PROJECT NO. 18-003

DESIGNED BY: CVW
DRAWN BY: CVW
CHECKED BY: DLM

212 N. WAHSATCH AVE., STE 305
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PHONE: 719.955.5485

CIVIL CONSULTANTS, INC.

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

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

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APRV'D. BY:	DATE:

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CAUTION

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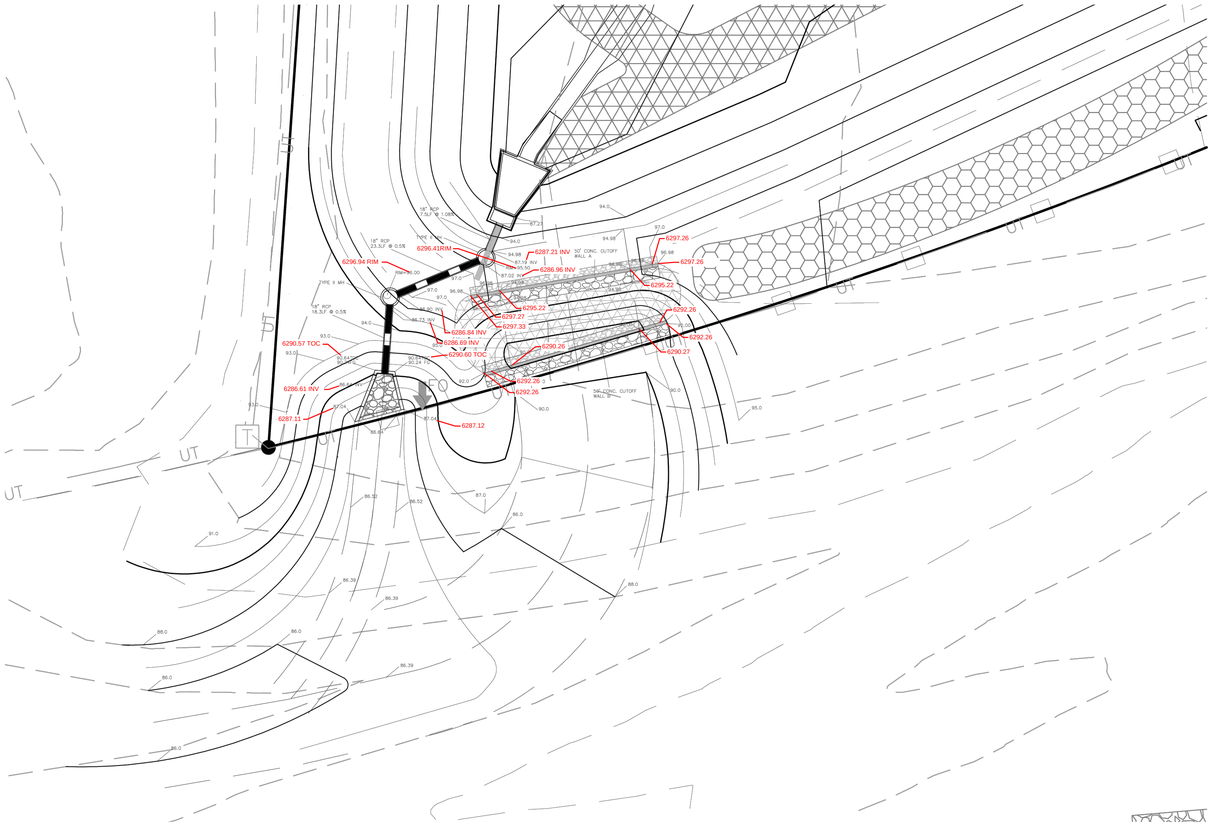
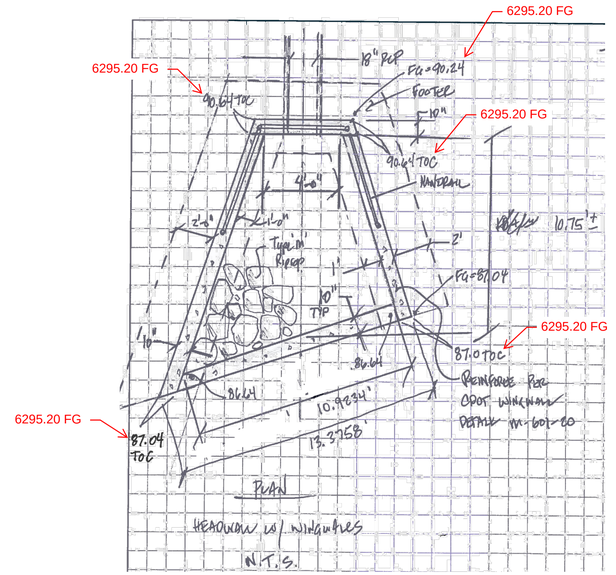


OUTLET WORKS REDESIGN PER CDOT REQUEST TO
REMOVE ALL IMPROVEMENTS FROM RIGHT-OF WAY



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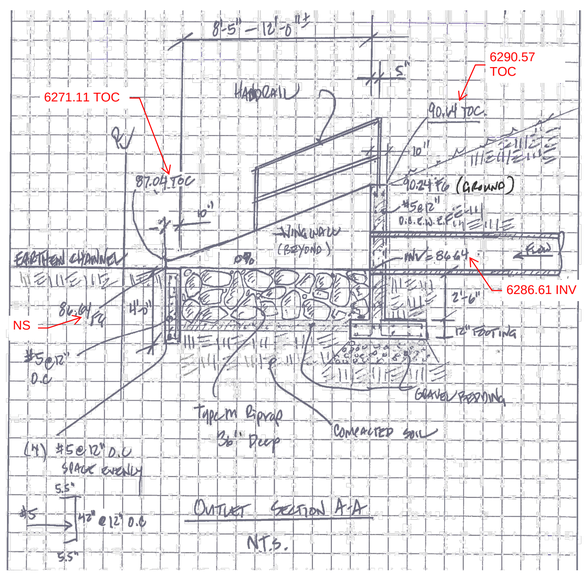
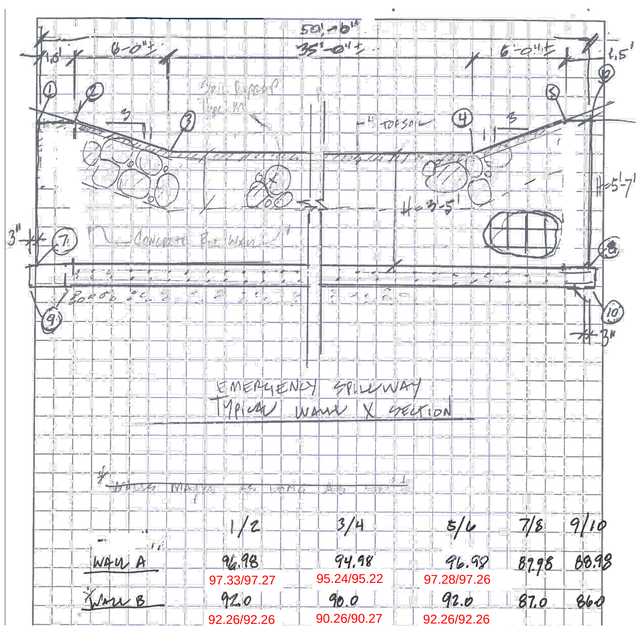
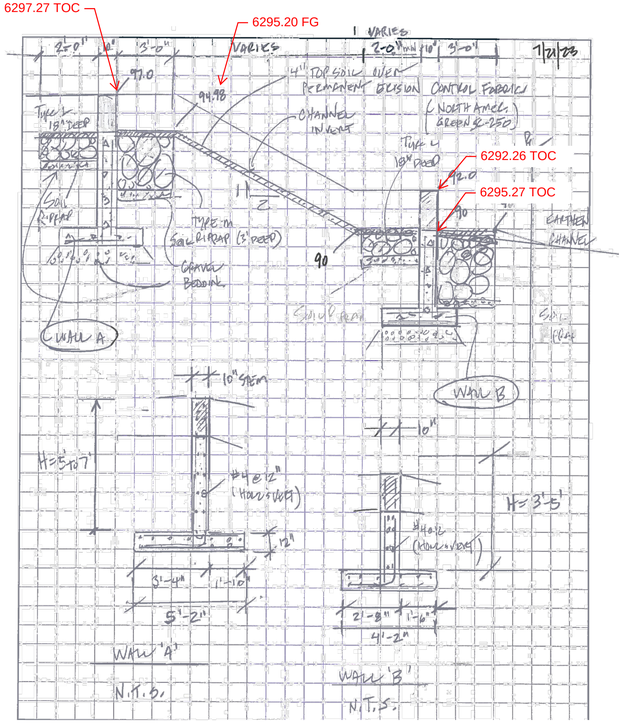
ENGINEERING RECORD DRAWINGS







CROSSROADS MIXED USE FILING NO. 1

PERMANENT BMP PLAN

PROJECT NO. 18-003 | SCALE: HORIZONTAL: VARIES VERTICAL: N/A | DATE: 04/14/2022 | SHEET 25 OF 26 | BMP05

DESIGNED BY: CVW
DRAWN BY: CVW
CHECKED BY: DLM

212 N. WAHSATCH AVE. STE 305
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PHONE: 719.955.5485

CIVIL CONSULTANTS, INC.

COLORADO REGISTERED 37160 PROFESSIONAL ENGINEER
03/13/2024

VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

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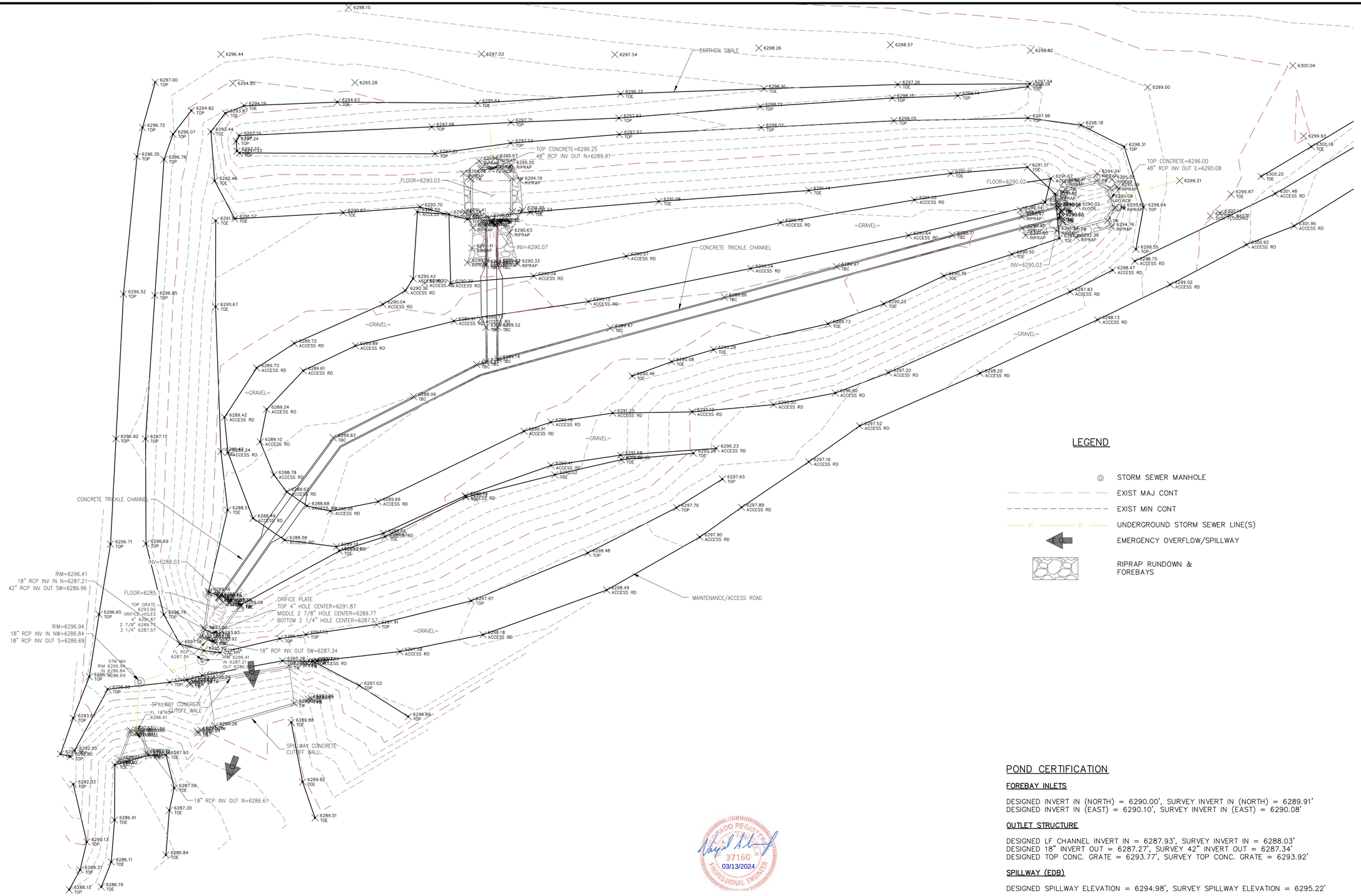

LEGEND

- STORM SEWER MANHOLE
- EXIST MAJ CONT
- EXIST MIN CONT
- UNDERGROUND STORM SEWER LINE(S)
- EMERGENCY OVERFLOW/SPILLWAY
- RIPRAP RUNDOWN & FOREBAYS

POND CERTIFICATION

FOREBAY INLETS

DESIGNED INVERT IN (NORTH) = 6290.00', SURVEY INVERT IN (NORTH) = 6289.91'
DESIGNED INVERT IN (EAST) = 6290.10', SURVEY INVERT IN (EAST) = 6290.08'

OUTLET STRUCTURE

DESIGNED LF CHANNEL INVERT IN = 6287.93', SURVEY INVERT IN = 6288.03'
DESIGNED 18" INVERT OUT = 6287.27', SURVEY 42" INVERT OUT = 6287.34'
DESIGNED TOP CONC. GRATE = 6293.77', SURVEY TOP CONC. GRATE = 6293.92'

SPILLWAY (EDB)

DESIGNED SPILLWAY ELEVATION = 6294.98', SURVEY SPILLWAY ELEVATION = 6295.22'

VOLUME

DESIGNED VOLUME = 4.668 ACRE FEET @ 6294.96' (100 YR SURFACE)
PROVIDED VOLUME = 4.690 ACRE FEET @ 6295.01' (100 YR SURFACE)

COLORADO REGISTERED 37160 PROFESSIONAL ENGINEER
03/13/2024

AS-BUILT
ENGINEERING RECORD DRAWINGS

CROSSROADS MIXED USE FILING NO. 1

PERMANENT BMP PLAN

PROJECT NO. 18-003 | SCALE: HORIZONTAL: VARIES VERTICAL: N/A | DATE: 04/14/2022 | SHEET 26 OF 26 | BMPAB

DESIGNED BY: CVW
DRAWN BY: CVW
CHECKED BY: DLM

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PHONE: 719.955.5485

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