MARKSHEFFEL ROAD - SEGMENT M3

EL PASO COUNTY, COLORADO

STREET IMPROVEMENT PLANS

PCD FILE NO. CDR-2413

Know what's below. Call before you dig.

GENERAL CONSTRUCTION NOTES:

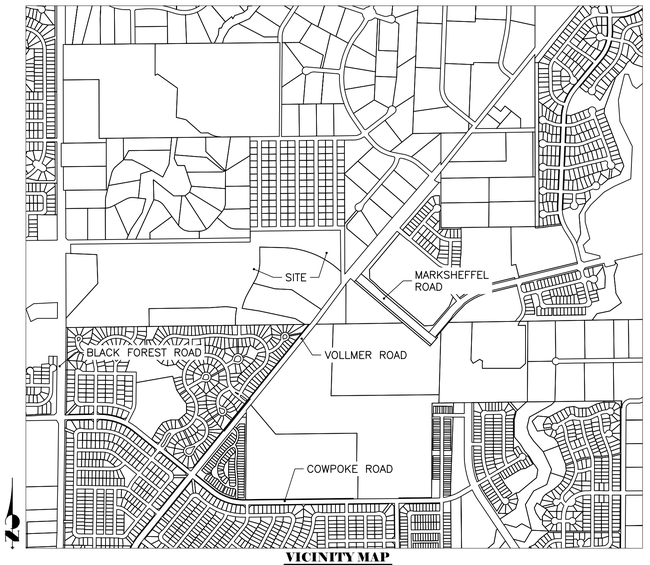
1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK. THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
2. THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE UTILITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
3. ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
4. ALL BACKFILL, SUB-BASE, AND/OR BASE COURSE (CLASS 6) MATERIAL SHALL BE COMPACTED PER THE SOILS ENGINEER'S RECOMMENDATIONS, AND APPROVED BY EL PASO COUNTY PCD.
5. ALL STATIONING IS CENTERLINE OF IMPROVEMENTS UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE INDICATED AS TOP BACK OF CURB (TBC), ASPHALT (ASP), OR TOP OF INLET OR BOX (TOB).
6. ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAT LINES. REPAIR SHALL CONFORM TO EPC ECM APPENDIX K – 1.2C.
7. ALL INTERSECTION ACCESSES TO BE CONSTRUCTED WITH A 25 FOOT SIGHT VISIBILITY TRIANGLES IS REQUIRED AND THERE SHALL BE NO OBSTRUCTIONS GREATER THAN 18" VERTICAL IN THIS AREA.
8. ALL CULVERTS AND STORM DRAIN PIPES SHALL BE SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE (HDPE), REINFORCED CONCRETE PIPE (RCP). ALL CULVERTS SHALL BE PLACED COMPLETE WITH FLARED END SECTIONS. ADEQUACY OF MATERIAL THICKNESS FOR ANY CSP INSTALLED SHALL BE VERIFIED BY OWNER'S GEOTECHNICAL ENGINEER TO SUPPORT MINIMUM 50 YEAR DESIGN LIFE. CULVERTS MUST CONFORM TO EPC ECM SECTION 3.32 – CULVERTS.
9. ASPHALT THICKNESS AND BASE COURSE THICKNESS (COMPACTED) FOR ROADS SHALL BE PER DESIGN REPORT BY OWNER'S GEOTECHNICAL ENGINEER. OWNER'S GEOTECHNICAL ENGINEER TO BE ON SITE AT THE TIME OF ROAD CONSTRUCTION TO EVALUATE SOIL CONDITIONS AND DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY TO ASSURE STABILITY OF THE NEW ROADS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY DEVELOPMENT SERVICES ENGINEERING DIVISION PRIOR TO CONSTRUCTION.
10. THE DEVELOPER IS REQUIRED TO REMIT THE AMOUNT OF $100,000 FOR THE FUTURE ANTICIPATED TRAFFIC SIGNAL AT THE INTERSECTION OF MARKSHEFFEL ROAD & VOLLMER ROAD.

EL PASO COUNTY SIGNING AND STRIPING NOTES:

1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT\ THAT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.
3. ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS (DPW).
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 35 MPH OR HIGHER SHALL HAVE 8" UPPER-LOWER CASE LETTERING ON 12" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON-RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE FHWA STANDARD HIGHWAY SIGNS: 2004 EDITION WITH 2012 SUPPLEMENT. SIGNAL POLE MOUNTED AND OVERHEAD STREET NAME SIGNS SHALL BE PER MUTCD SIZE STANDARDS.
8. ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM DIAMOND GRADE RETROREFLECTIVE SHEETING THAT MEETS ASTM D4956 TYPE XI SHEETING REQUIREMENTS.
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 0.125" 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. STOP BARS SHALL BE 24" IN WIDTH. CROSSWALKS LINES SHALL BE 24" WIDE AND A MINIMUM OF 9' LONG. CROSSWALKS SHALL BE INLAID IN ACCORDANCE WITH SECTION 627 OF THE 2025 CDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION.
12. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE.
13. ALL LONGITUDINAL LINES SHALL BE A MINIMUM 18 MIL 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.
14. ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH CDOT STANDARD S-614-1 OR MUTCD FIGURE 2A-2.
15. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY DPW – INSPECTIONS (719) 520-6819 PRIOR TO AND UPON COMPLETION OF SIGNING AND STRIPING.
16. THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY DPW PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS:

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



VICINITY MAP
SCALE: 1"=1000'

AGENCIES

OWNER/DEVELOPER:	TURKEY CANON QUARRY, LLC 20 BOULDER CRESCENT, SUITE 201 COLORADO SPRINGS, CO 80903 JAMES F. MORLEY (719) 471-1742	WATER & WASTEWATER:	FALCON AREA WATER & WASTEWATER AUTHORITY ENGINEERS – RESPEC 5540 E. TECH CENTER DR. COLORADO SPRINGS, CO 80919 719.227.0072
CIVIL ENGINEER:	ALL TERRAIN ENGINEERING LLC 1004 WEST VAN BUREN STREET COLORADO SPRINGS, CO 80907 RYAN BURNS P.E. 203.577.8656	FIRE DISTRICT:	BLACK FOREST FIRE PROTECTION DISTRICT 11445 TEACHOUT ROAD COLORADO SPRINGS, CO 80908 CHIEF BRYAN JACK (719) 495-4300
COUNTY ENGINEERING:	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 (719) 520-6300	GAS DEPARTMENT:	COLORADO SPRINGS UTILITIES 7710 DURANT DR. COLORADO SPRINGS, CO 80947 TIM WENDT (719) 668-3556
TRAFFIC ENGINEERING:	EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS 3275 AKERS DRIVE COLORADO SPRINGS, CO 80922 (719) 520-6300	ELECTRIC DEPARTMENT:	MOUNTAIN VIEW ELECTRIC 11140 E. WOODMEN ROAD FALCON, CO 80831 (719) 495-2283

BASIS OF BEARINGS

THE NORTH LINE OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 5, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN, BEING MONUMENTED AT THE NORTHEAST CORNER OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 5 BY A 3-1/4" ALUMINUM CAP STAMPED "LS 10376" AND AT THE NORTH QUARTER CORNER BY A 3-1/4" ALUMINUM CAP STAMPED "LS 4842 1996", BEARING S89°14'13"W.

BENCHMARKS (NGVD 29)

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

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

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

SHEET INDEX

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Engineer's Opinion of Probable Costs (City)
Street Improvements (Marksheffel M3)

Item	Quantity	Unit	Unit Price	Cost
Arterial Street	1,535	LF	$ 713.00	$ 1,094,455.00
Pedestrian Ramp	654	SF	$ 41.00	$ 26,814.00
Sidewalk	1058.56	SY	$ 70.00	$ 74,098.89
Sidewalk/Trail 10' Wide	1596	SY	$ 86.00	$ 137,256.00
Turn Lane	335	LF	$ 175.00	$ 58,625.00
Cross Pan	154	SY	$ 146.00	$ 22,484.00
			Sub Total	$ 1,413,732.89
		Contingency	20%	$ 282,746.58
			TOTAL	$ 1,696,479.47

CITY STATEMENT

THE CITY OF COLORADO SPRINGS RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN. THE CITY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. RESUBMITTAL REQUIRED IF CONSTRUCTION HAS NOT COMMENCED WITHIN 180 DAYS AFTER REVIEW DATE.

MARKSHEFFEL ROAD SHALL BE BUILT TO CITY STANDARDS AND SPECIFICATIONS. BRUSH TOP ROAD SHALL BE BUILT TO COUNTY STANDARDS AND SPECIFICATIONS. CONTRACTOR RESPONSIBLE FOR COORDINATING WITH APPROPRIATE CITY AND COUNTY INSPECTORS. CITY AND COUNTY BOTH RESERVE THE RIGHT TO INSPECT ALL CONSTRUCTION PROPOSED WITHIN THIS PLAN SET.

UTILITY GRADE REVIEW

CENTERLINE LINE AND GRADE IS REVIEWED FOR CONFORMANCE TO STANDARDS TO ALLOW FOR THE DESIGN AND CONSTRUCTION OF UTILITY MAINS. DRAINAGE FACILITIES DESIGN HAS BEEN CHECKED BY THE DESIGN ENGINEER TO AVOID CONFLICTS WITH UTILITY MAINS. THIS IS NOT A CURB & GUTTER REVIEW AND THE DEVELOPER WILL BE RESPONSIBLE FOR ANY COST DUE TO DESIGN CHANGES PRIOR TO CURB & GUTTER REVIEW. THIS REVIEW EXPIRES IN 180 DAYS.

OWNER/DEVELOPER STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

JIM MORLEY — DATE

TURKEY CANON QUARRY LLC
20 BOULDER CRESCENT, SUITE 200
COLORADO SPRINGS, CO 80903

EL PASO COUNTY STATEMENT

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

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

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

JOSHUA J. PALMER, P.E. — DATE

COUNTY ENGINEER/ECM ADMINISTRATOR

DISTRICT APPROVALS

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

FOR AND ON BEHALF OF THE STONEBRIDGE METRO DISTRICT — DATE

ENGINEER'S STATEMENT

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

RYAN E. BURNS, P.E. — DATE
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

CS JOB NO. STM-REV25-1210
PCD FILE NO. CDR-2413

DESIGN DATA

SIDEWALKS: _____ WIDTH: _____ ROW WIDTH: _____

LOCATION: ATTACHED: ☐ DETACHED: ☐ FL-FL: _____

DESIGN SPEED: _____ THICKNESS: _____

CURB TYPE: ☐1 ☐2 ☐3 ☐4 ☐5 COMPOSITE SECTION: _____

HMA: BASE COURSE:

STREET DESIGN FOR CITY ENGINEERING

UTILITY GRADE REVIEW: _____ DATE: _____

CURB & GUTTER REVIEW: _____ DATE: _____

FINAL REVIEW: _____ DATE: _____

DRAINAGE DESIGN: _____ DATE: _____

THIS IS FILED IN ACCORDANCE WITH SECTION 7.7.906 (DRAINAGE ORDINANCE) OF THE CORD OF THE CITY OF COLORADO SPRINGS, 2001 AS AMENDED.

ALL TERRAIN ENGINEERING
1004 WEST VAN BUREN STREET, COLORADO SPRINGS, CO 80907
RYAN E. BURNS, P.E. 203.577.8656 – RBURNS@ALLTERRAINENG.COM
JAMES F. MORLEY, PE 330.397.7655 – JMORLEY@ALLTERRAINENG.COM

PREPARED FOR:
TURKEY CANON QUARRY INC.
20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719) 491-3024
JMORLEY73870@AOL.COM

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

REV.	DESCRIPTION	DATE

JOB NO. 24013 LOCATION: EPC

MARKSHEFFEL ROAD - SEGMENT M3

COVER SHEET

DESIGN: REB
REVIEW: NQJ
DATE: 10/01/2026

H-SCALE: 1"=1000'
V-SCALE: N/A

SHEET 1 OF 15

PLANEMETRICS

	EXISTING	PROPOSED
SECTION LINE		
RIGHT–OF–WAY		
PARCEL LINE		
EASEMENT LINE		
BOUNDARY LINE		
CENTER LINE		

CONSTRUCTION

	EXISTING	PROPOSED
C&G		
EDGE OF ASPHALT		
CONCRETE		
SIDE WALK		
CROSS PAN		
PARKING LOT STRIPING		
ROADWAY STRIPING – DASHED		
ROADWAY STRIPING – DOTTED		
GUARDRAIL		
FENCE		
SOUNDWALL		
DEMO		
GRAVEL		
RIPRAP		
DIRT		
TRAIL/PATH		
RAIL LINE		

GRADING

	EXISTING	PROPOSED
CONTOUR INTERMEDIATE		
CONTOUR INDEX		
TOP OF SLOPE		
TOE OF SLOPE		
CUT/FILL BOUNDARY		
LIMITS OF GRADING		LOG LOG LOG LOG LOG
LIMITS OF DISTURBANCE		

UTILITIES

	EXISTING	PROPOSED
SANITARY SEWER		SS SS SS SS SS
SANITARY SEWER SERVICE		SS SS SS SS SS
POTABLE WATER MAIN		W W W W
POTABLE WATER SERVICE		W W W W
RAW WATER MAIN	RAW RAW RAW	RAW RAW RAW
IRRIGATION MAIN		
SANITARY FORCE MAIN	FM FM FM FM	FM FM FM FM
UNDER–DRAIN	UD UD UD UD	UD UD UD UD
GAS PIPE	G G G G	G G G G G
HIGH PRESSURE GAS	HPG HPG HPG HPG	HPG HPG HPG HPG
OIL/PETROLEUM LINE	O O O O	O O O O
UNDER–GROUND ELECTRIC	UGE UGE UGE UGE	UGE UGE UGE UGE
OVER–HEAD ELECTRIC	OHU OHU OHU OHU	OHU OHU OHU OHU
FIBER OPTIC	FO FO FO FO	FO FO FO FO
COMMUNICATION LINES MISC.	COM COM COM	COM COM COM
STORM PIPE		
HGL MINOR		
HGL MAJOR		

DRAINAGE

	EXISTING	PROPOSED
BASE FLOOD ELEVATION		
100–YR FLOOD PLAIN	100YR 100YR	100YR 100YR
500–YR FLOOD PLAIN	500YR 500YR	500YR 500YR
FLOODWAY	FLOOD FLOOD	FLOOD FLOOD
SWALE/DITCH		
THALWEG (STREAM/CREEK)		
LIMITS OF WETLANDS		
EDGE OF WATER		
SILT FENCE		
CONSTRUCTION FENCE/MARKERS		CF CF CF CF

UTILITY SYMBOLS

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE		
STORM INLET		
AREA INLET – SQUARE		
AREA INLET – ROUND		
FLARED END SECTION		

TRAFFIC

	EXISTING	PROPOSED
TRAFFIC SIGNAL BOX		
TRAFFIC SIGNAL POLE		
SIGN		
STREET LIGHT		
STREET LIGHT – SINGLE		
STREET LIGHT – DOUBLE		
LUMINAIRE		

LANDSCAPE

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

UTILITY SYMBOLS

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

GENERAL CONSTRUCTION NOTES:

1. ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION OF SITE IMPROVEMENTS SHALL MEET OR EXCEED THE SITE WORK STANDARDS AND SPECIFICATIONS AND THE STANDARDS AND SPECIFICATIONS SET FORTH CITY OF COLORADO SPRINGS SUBDIVISION POLICY MANUAL AND STANDARD SPECIFICATIONS, AND APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS. WHERE THERE IS CONFLICT BETWEEN THESE PLANS AND THE SPECIFICATIONS, OR ANY APPLICABLE STANDARDS, THE HIGHER QUALITY STANDARD SHALL APPLY.
2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES, AS SHOWN ON THESE PLANS, IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY PERTINENT LOCATIONS AND ELEVATIONS, ESPECIALLY AT THE CONNECTION POINTS AND AT POTENTIAL UTILITY CONFLICTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.
3. THE CONTRACTOR SHALL SECURE ALL APPLICABLE LICENSES AND PERMITS TO COMPLETE THE CONSTRUCTION IN COMPLIANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATION
4. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH THE CITY OF COLORADO SPRINGS AND ALL UTILITY COMPANIES INVOLVED WITH REGARD TO RELOCATIONS OR ADJUSTMENTS OF EXISTING UTILITIES DURING CONSTRUCTION AND TO ASSURE THAT THE WORK IS ACCOMPLISHED IN A TIMELY FASHION AND WITH THE MINIMUM DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING CONC. BARRIER ALL PARTIES AFFECTED BY ANY DISRUPTION OF ANY UTILITY SERVICE.
5. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE APPROVED PLANS, ONE (1) COPY OF THE APPROPRIATE STANDARDS AND SPECIFICATIONS, AND A COPY OF ALL PERMITS NEEDED FOR THE JOB, ON–SITE AT ALL TIMES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF SAFETY INCLUDING, BUT NOT LIMITED TO, EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL, AND SECURITY.
7. IF, DURING THE CONSTRUCTION PROCESS, CONDITIONS ARE ENCOUNTERED THAT COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD AND THE CITY OF COLORADO SPRINGS INSPECTOR IMMEDIATELY.
8. ALL REFERENCES TO ANY PUBLISHED STANDARDS SHALL REFER TO THE LATEST REVISION OF SAID STANDARD, UNLESS SPECIFICALLY STATED OTHERWISE.
9. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN, IN ACCORDANCE WITH M.U.T.C.D. TO THE APPROPRIATE RIGHT–OF–WAY AUTHORITY (CITY, COUNTY, OR STATE) FOR APPROVAL, PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN, OR AFFECTING THE RIGHT–OF–WAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY AND ALL TRAFFIC CONTROL DEVICES AS MAY BE REQUIRED BY THE CONSTRUCTION ACTIVITIES.
10. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS NECESSARY FOR THE COMPLETION OF THE INTENDED IMPROVEMENTS SHOWN ON THESE DRAWINGS OR DESIGNATED TO BE PROVIDED, INSTALLED, OR CONSTRUCTED, UNLESS SPECIFICALLY NOTED OTHERWISE.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ROADWAYS FREE AND CLEAR OF ALL CONSTRUCTION DEBRIS AND DIRT TRACKED FROM THE SITE.
12. HE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING AS–BUILT INFORMATION ON A SET OF RECORD DRAWINGS KEPT AT THE CONSTRUCTION SITE, WHICH SHALL BE AVAILABLE TO THE CITY OF COLORADO SPRINGS AT ALL TIMES.
13. THE CONTRACTOR SHALL SEQUENCE THE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO MINIMIZE POTENTIAL UTILITY CONFLICTS. IN GENERAL, WATERLINES AND SANITARY SEWER SHOULD BE CONSTRUCTED PRIOR TO INSTALLATION OF STORM SEWER AND DRY UTILITIES.
14. NO SITE–RELATED IMPROVEMENTS MAY COMMENCE UNTIL A PRE–CONSTRUCTION MEETING IS HELD WITH THE CITY OF COLORADO SPRINGS AND ALL APPLICABLE PERMITS ARE OBTAINED.
15. CONTRACTOR IS TO OBTAIN COPIES OF THE SOILS REPORT FROM THE GEOTECHNICAL ENGINEER AND A COPY IS TO BE KEPT ONSITE DURING ALL EARTH WORK OPERATIONS.
16. ALL BACKFILL, SUB–BASE, AND/OR BASE COURSE MATERIAL SHALL BE COMPACTED PER CITY SPECIFICATIONS, AND GEOTECHNICAL ENGINEERS RECOMMENDATIONS.
17. CONCRETE USED IN CURB AND GUTTER, SIDEWALK, AND CROSSPAN CONSTRUCTION SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
18. PEDESTRIAN RAMPS SHALL BE INSTALLED AT ALL INTERSECTIONS AND CONFORM TO THE CITY OF COLORADO SPRINGS ENGINEERING DIVISION, STANDARDS AND SPECIFICATIONS.

SIGNAGE & STRIPING GENERAL NOTES:

1. THE INSTALLATION OF ALL STRIPING, SIGNS AND PAVEMENT MARKERS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REMOVAL OF EXISTING PAVEMENT MARKINGS (SCARRING OF PAVEMENT IS NOT PERMITTED). AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR OVERLAYING OR CHIP SEALING ROADWAY, IF SCARRING OCCURS DURING REMOVAL OF EXISTING OR TEMPORARY PAVEMENT MARKINGS. THE CITY TRAFFIC ENGINEER WILL DETERMINE METHOD OF PAVEMENT REPAIR.
4. ALL STRIPING AND SIGNING SHALL CONFORM TO THE MOST RECENT ADOPTED EDITION OF THE FOLLOWING MANUALS AND THEIR SUPPLEMENTAL AMENDMENTS:
   - 4.1. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
   - 4.2. CITY OF COLORADO SPRINGS SIGNAGE AND PAVEMENT MARKING GUIDELINES
   - 4.3. CITY OF COLORADO SPRINGS STANDARDS SPECIFICATIONS
   - 4.4. CITY OF COLORADO SPRINGS PUBLIC WORKS DESIGN MANUAL
5. ALL SIGNING AND STRIPING IS SUBJECT TO THE APPROVAL OF THE CITY TRAFFIC ENGINEER PRIOR TO INSTALLATION AND/OR REMOVAL.
6. CONTRACTOR SHALL REMOVE ALL CONFLICTING STRIPING, PAVEMENT MARKING AND LEGENDS BY HYDROBLASTING, SANDBLASTING AND/OR GRINDING. ANY DEBRIS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
7. SIGN POSTS SHALL BE INSTALLED WITH A MINIMUM OF 1 ½" X 1 ½" X 10' SQUARE PERFORATED STEEL SQUARE TUBING WITH A 2" X 2" X 3" SLEEVE OR A 2" X 2" X 10" SQUARE TUBING PER CITY OF COLORADO SPRINGS STANDARDS. STREET NAME SIGNS MEASURING 9" OR TALLER SHALL BE MOUNTED ON A 2" X 2" X 10' SQUARE PERFORATED STEEL TUBING WITH SLEEVE PER CITY OF COLORADO SPRINGS STANDARD.
8. ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM OF HIGH INTENSITY GRADE SHEETING.
9. ANY DEVIATION FROM THE SIGNAGE AND PAVEMENT MARKING PLANS SHALL BE APPROVED BY THE ENGINEER OF WORK AND THE CITY TRAFFIC ENGINEER PRIOR TO ANY CHANGES BEING MADE IN THE FIELD.
10. ALL SIGNS SHOWN ON THE SIGNAGE AND PAVEMENT MARKING PLANS SHALL BE NEW SIGNS PROVIDED AND INSTALLED BY THE CONTRACTOR, EXCEPT FOR EXISTING SIGNS SPECIFICALLY INDICATED TO BE RESTED, RELOCATED OR TO REMAIN.
11. STRIPED CROSSWALKS SHALL HAVE AN INSIDE DIMENSION 10 FEET AND CONTINENTAL CROSSWALKS SHALL HAVE MINIMUM LENGTH OF 6 FEET AND MAXIMUM LENGTH OF 10 FEET PER SET REQUIREMENTS UNLESS INDICATED OTHERWISE.
12. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS (EXCEPT WITHIN BIKE LANES) SHALL BE A MINIMUM OF 90 MIL THICKNESS THERMOPLASTIC OR PERFORM PLASTIC TAPE.
13. ALL LONGITUDINAL LINES HALL BE A MINIMUM OF 15 MIL THICKNESS EPOXY.
14. CONTRACTOR TO DELIVER TALL REMOVED SIGN TO THE CITY OF COLORADO SPRINGS SIGNS/MARKINGS SHOP AT 404 FONTANERO STREET, (719) 385–6721.
15. CONTRACTOR SHALL NOTIFY CITY TRAFFIC ENGINEER AT (719) 385–5908 A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO AND UPON COMPLETION OF SIGNAGE AND PAVEMENT MARKINGS INSTALLED.

TRAFFIC ENGINEERING GENERAL NOTES:

1. BEFORE EXCAVATING, CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITIES.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONUMENTATION AND/OR BENCHMARKS WHICH WILL BE DISTURBED OR DESTROYED BY CONSTRUCTION. SUCH POINTS SHALL BE REFERENCED AND REPLACED WITH APPROPRIATE MONUMENTATION BY A REGISTERED CIVIL ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING.
3. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED BY CITY ENGINEERING INSPECTIONS.
4. THE APPROVAL OF THESE PLANS OR ISSUANCE OF A PERMIT BY THE CITY OF COLORADO SPRINGS DOES NOT AUTHORIZE THE SUB DIVIDER AND OWNER TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS OR POLICIES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NEW , TEMPORARY AND EXISTING TRAFFIC SIGNS FROM THE START OF THE CONSTRUCTION PROJECT UNTIL ACCEPTANCE BY CITY TRAFFIC ENGINEERING.
6. ALL TRAFFIC SIGNS, PAVEMENT MARKINGS, AND TRAFFIC SIGNALS SHALL MEET OR EXCEED MUTCD STANDARDS.
7. THE CONTRACTOR SHALL NOT REMOVE ANY EXISTING SIGNS, PAVEMENT MARKING OR TRAFFIC SIGNALS DURING THE PROJECT WITHOUT SIGNED AUTHORIZATION FROM CITY TRAFFIC ENGINEERING INSPECTOR ASSIGNED TO THE PROJECT.
8. CONTRACTOR SHALL PREPARE A DETAILED TRAFFIC CONTROL PLAN, SUBMIT TO CITY TRAFFIC ENGINEER FOR APPROVAL AND OBTAIN APPROPRIATE PERMITS IN ACCORDANCE WITH THE "TRAFFIC CONTROLS FOR STREET CONSTRUCTION, UTILITY WORK AND MAINTENANCE OPERATIONS," MUTCD SUPPLEMENT FOR THE CITY OF COLORADO SPRINGS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NEW, TEMPORARY AND EXISTING TRAFFIC SIGNAL MODIFICATIONS.

CS JOB NO. STM-REV25-1210
PCD FILE NO. CDR-2413

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF ALL TERRAIN ENGINEERING

RYAN E. BURNS, P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE

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20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719) 491-3024
JMORLEY3870@AOL.COM

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

JOB NO. 24013 LOCATION: EPC

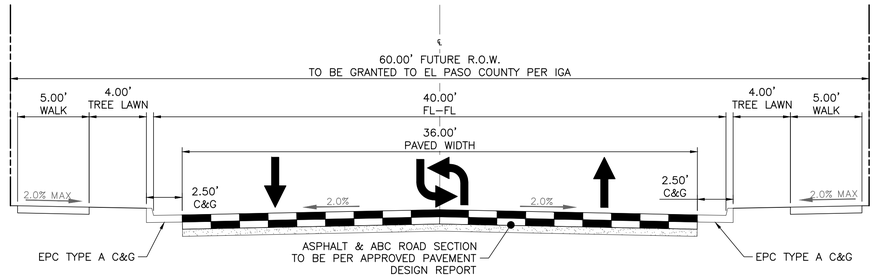
REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD - SEGMENT M3

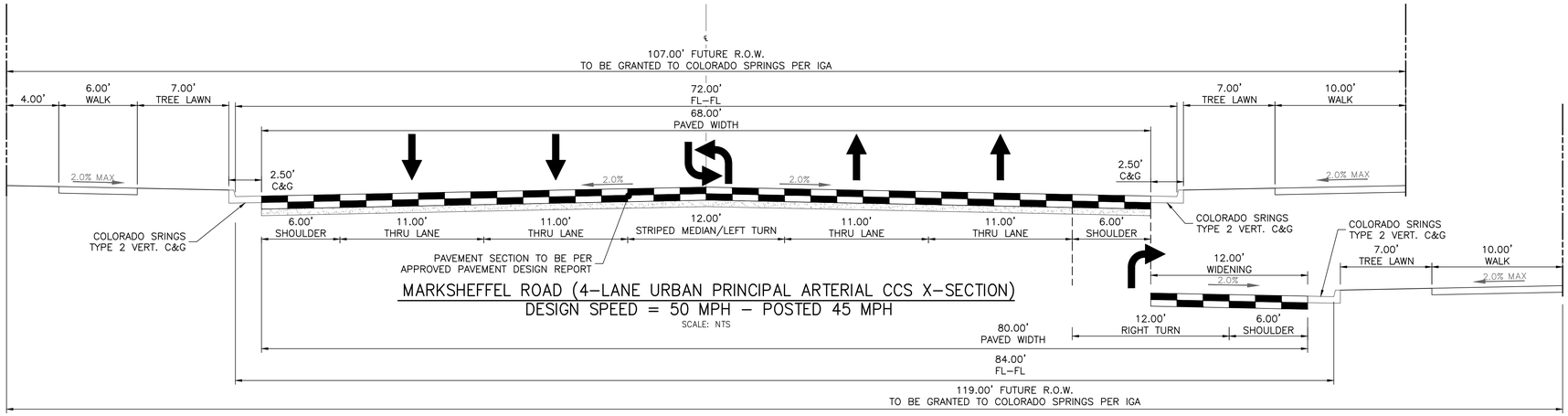
LEGEND & NOTES

DESIGN: REB
REVIEW: NQJ
DATE: 10/01/2026
H-SCALE: N/A
V-SCALE: N/A

SHEET 2 OF 15



BRUSH TOP ROAD
EPC URBAN RESIDENTIAL COLLECTOR (DESIGN SPEED = 40 MPH – POSTED 35 MPH)
SCALE: NTS



MARKSHEFFEL ROAD (4–LANE URBAN PRINCIPAL ARTERIAL CCS X–SECTION)
DESIGN SPEED = 50 MPH – POSTED 45 MPH
SCALE: NTS

MARKSHEFFEL ROAD @ VOLLMER
TYPICAL SECTION
SCALE: NTS

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

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

CS JOB NO. STM-REV25-1210
PCD FILE NO. CDR-2413

STREET DESIGN FOR CITY ENGINEERING

UTILITY GRADE REVIEW: _____ DATE: _____
CURB & GUTTER REVIEW: _____ DATE: _____
FINAL REVIEW: _____ DATE: _____
DRAINAGE DESIGN: _____ DATE: _____

THIS IS FILED IN ACCORDANCE WITH SECTION 7.7.906 (DRAINAGE ORDINANCE) OF THE CORD OF THE CITY OF COLORADO SPRINGS, 2001 AS AMENDED.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF ALL TERRAIN ENGINEERING

RYAN E. BURNS, P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE

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NICHOLAS Q. JOVICEVIC, PE
559.391.1656 – NICK@ALLTERRAINENGINEERING.COM

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JOB NO: 24013 LOCATION: EPC

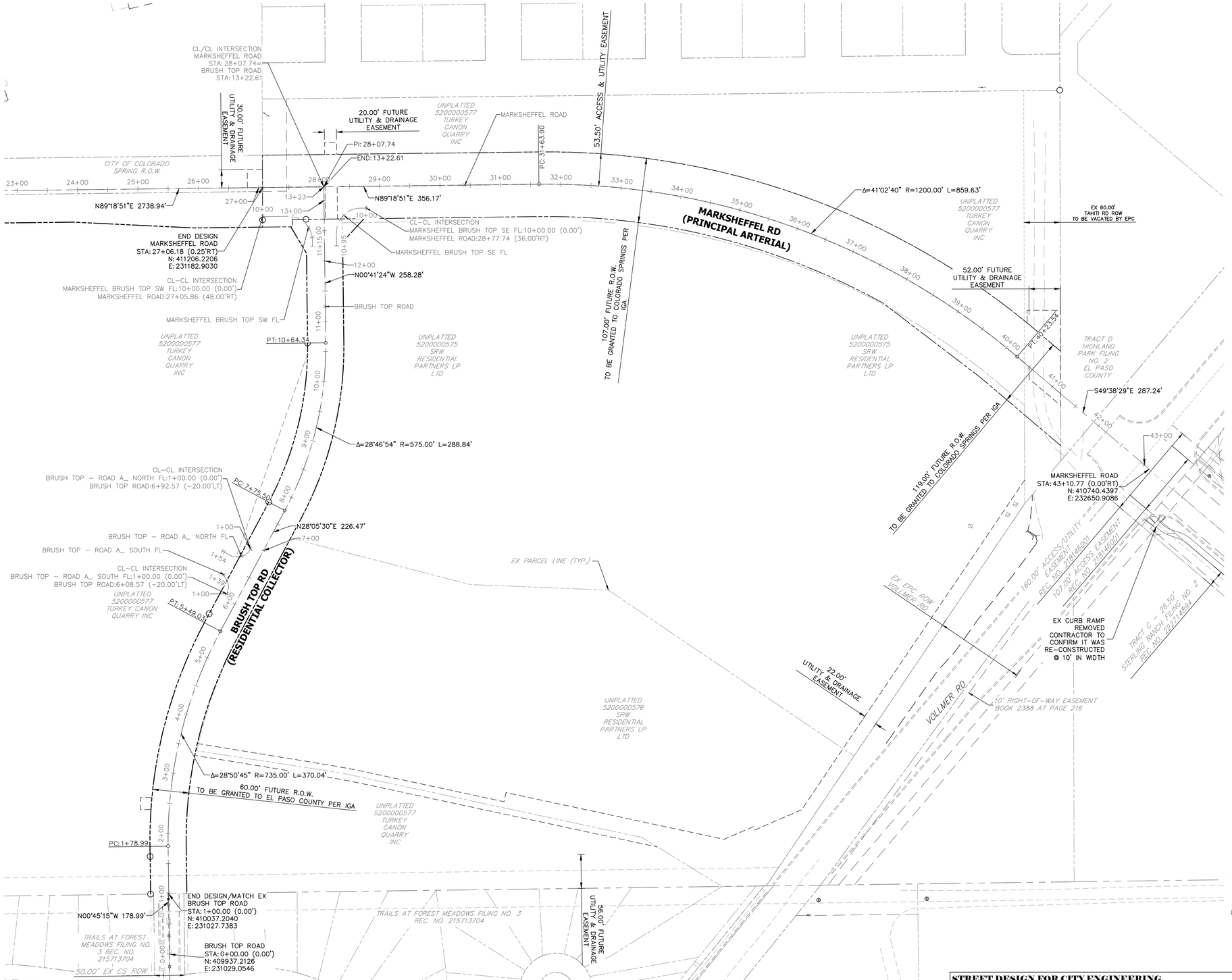
REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD - SEGMENT M3

TYPICAL SECTIONS

DESIGN: REB
REVIEW: NQJ
DATE: 10/01/2026
H-SCALE: N/A
V-SCALE: N/A

SHEET
3 OF 15



STREET IMPROVEMENT NOTES:

1. SEE SHEET 9-10 FOR FLOWLINE PROFILES.
2. ALL ELEVATIONS ARE FLOWLINE, UNLESS OTHERWISE NOTED.
3. SEE SEPARATE STORM, UTILITY, GEC, AND PCM PLANS FOR ASSOCIATED DESIGN INFORMATION.
4. ALL INLETS REQUIRE A FLOW LINE TRANSITION PER THE APPLICABLE DETAIL. ON-GRADE INLETS TOP OF BOX SHALL MATCH THE TOP BACK CURB ELEVATIONS ON EACH END, FOLLOWING THE STREET GRADE. SUMP INLETS SHALL BE FLAT AND HAVE A TOP OF BOX ELEVATION = TO THE TOP BACK CURB ELEVATION @ INLET LOCATION. SEE STORM SEWER PLANS FOR DESIGN INFORMATION.
5. INLETS ALONG MARKSHEFFEL ROAD SHALL BE INSTALLED PER LATEST COLORADO SPRINGS DETAILS. REFER TO STORM SEWER PLANS.
6. RIGHT OF WAY TO BE GRANTED PER THE IGA (DA-251). EASEMENTS TO BE CREATED BY PLAT OR SEPARATE INSTRUMENT.
7. MARKSHEFFEL ROAD SHALL BE BUILT TO CITY STANDARDS AND SPECIFICATIONS. BRUSH TOP ROAD SHALL BE BUILT TO COUNTY STANDARDS AND SPECIFICATIONS. CONTRACTOR RESPONSIBLE FOR COORDINATING WITH APPROPRIATE CITY AND COUNTY INSPECTORS. CITY AND COUNTY BOTH RESERVE THE RIGHT TO INSPECT ALL CONSTRUCTION PROPOSED WITHIN THIS PLAN SET.
8. VOLLMER ROAD CURB RETURNS TO BE INSPECTED BY CITY ENGINEERING DEVELOPMENT REVIEW AND UPGRADED AS NECESSARY TO MEET CITY ENGINEERING STANDARDS

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CS JOB NO. STM-REV25-1210
PCD FILE NO. CDR-2413

STREET DESIGN FOR CITY ENGINEERING

UTILITY GRADE REVIEW: _____ DATE: _____
CURB & GUTTER REVIEW: _____ DATE: _____
FINAL REVIEW: _____ DATE: _____
DRAINAGE DESIGN: _____ DATE: _____

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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF ALL TERRAIN ENGINEERING

RYAN E. BURNS, P.E. _____ DATE
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

Know what's below. Call before you dig.

ALL TERRAIN ENGINEERING

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333.371.1655 - RYAN@ATTERRAINENGINEERING.COM

NICHOLAS Q. JOVICEVIC, PE
333.371.1655 - NICK@ATTERRAINENGINEERING.COM

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JOB NO. 24013 LOCATION: EPC

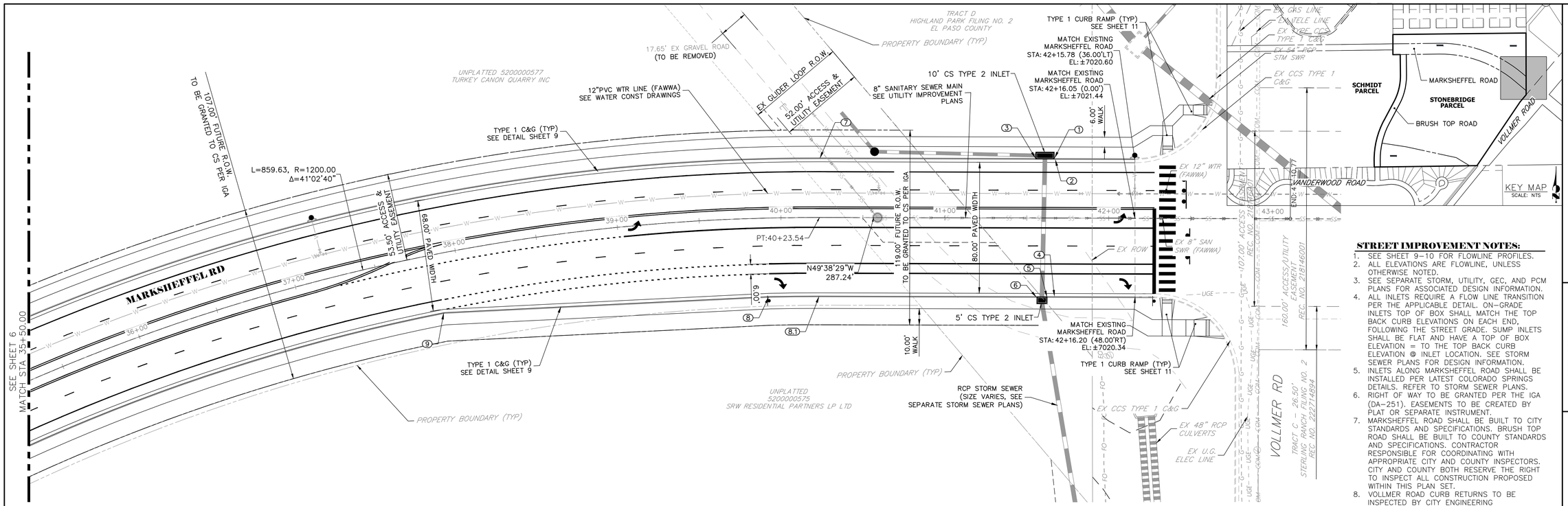
REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD - SEGMENT M3

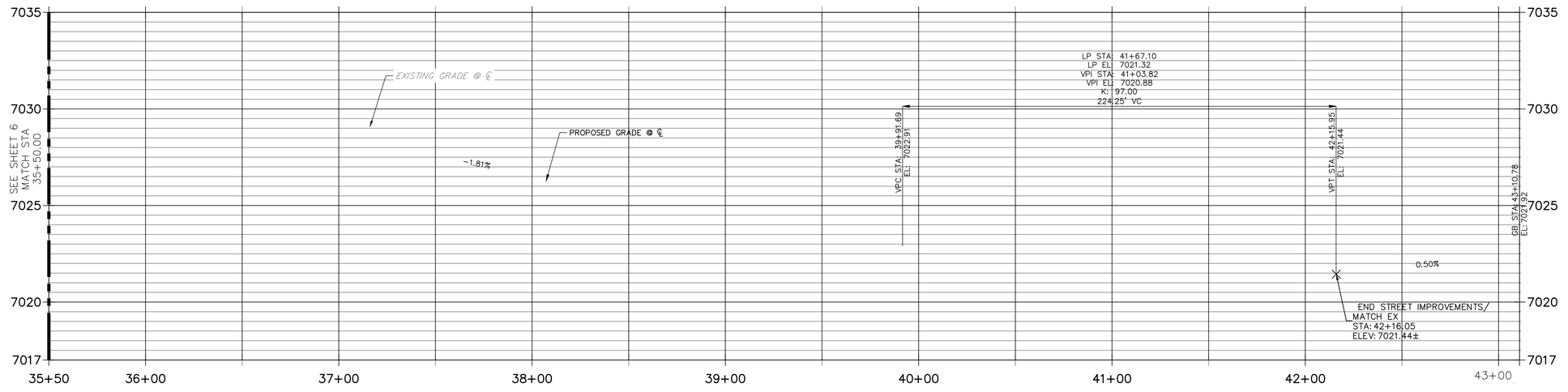
HORIZONTAL CONTROL PLAN

DESIGN: REB
REVIEW: NQJ
DATE: 10/01/2026
H-SCALE: 1"=80'
V-SCALE: N/A

SHEET
4 OF 15



MARKSHEFFEL ROAD CL PROFILE
STA 35+50.00 TO 43+10.86



STREET IMPROVEMENT NOTES:

1. SEE SHEET 9-10 FOR FLOWLINE PROFILES.
2. ALL ELEVATIONS ARE FLOWLINE, UNLESS OTHERWISE NOTED.
3. SEE SEPARATE STORM, UTILITY, GEC, AND PCM PLANS FOR ASSOCIATED DESIGN INFORMATION.
4. ALL INLETS REQUIRE A FLOW LINE TRANSITION PER THE APPLICABLE DETAIL. ON-GRADE INLETS TOP OF BOX SHALL MATCH THE TOP BACK CURB ELEVATIONS ON EACH END, FOLLOWING THE STREET GRADE. SUMP INLETS SHALL BE FLAT AND HAVE A TOP OF BOX ELEVATION = TO THE TOP BACK CURB ELEVATION @ INLET LOCATION. SEE STORM SEWER PLANS FOR DESIGN INFORMATION.
5. INLETS ALONG MARKSHEFFEL ROAD SHALL BE INSTALLED PER LATEST COLORADO SPRINGS DETAILS. REFER TO STORM SEWER PLANS.
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8. VOLLMER ROAD CURB RETURNS TO BE INSPECTED BY CITY ENGINEERING DEVELOPMENT REVIEW AND UPGRADED AS NECESSARY TO MEET CITY ENGINEERING STANDARDS

POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
1	41+66.65	36.50' (LT)	Marksheffel Road	7021.18	INLET EDGE @ TBC
2	41+67.09	36.00' (LT)	Marksheffel Road	7020.51	LP
3	41+55.31	36.50' (LT)	Marksheffel Road	7021.19	INLET EDGE @ TBC
4	41+67.09	48.00' (RT)	Marksheffel Road	7020.27	LP
5	41+62.59	48.50' (RT)	Marksheffel Road	7020.94	INLET EDGE @ TBC
6	41+56.26	48.50' (RT)	Marksheffel Road	7020.95	INLET EDGE @ TBC
7	40+23.54	36.00' (LT)	Marksheffel Road	7021.58	PT
8	39+91.57	48.00' (RT)	Marksheffel Road	7022.63	PI/PC
8.1	40+23.54	48.00' (RT)	Marksheffel Road	7022.05	PT
9	37+85.92	36.00' (RT)	Marksheffel Road	7025.82	PI

30 15 0 30 60
HORIZONTAL ORIGINAL SCALE: 1" = 30'
VERTICAL ORIGINAL SCALE: 1" = 3'

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DESIGN DATA

SIDEWALKS: _____ WIDTH: _____ ROW WIDTH: _____

LOCATION: ATTACHED: ☐ DETACHED: ☐ FL-FL: _____

DESIGN SPEED: _____ THICKNESS: _____

CURB TYPE: ☐1 ☐2 ☐3 ☐4 ☐5 COMPOSITE SECTION: _____

HMA: BASE COURSE:

STREET DESIGN FOR CITY ENGINEERING

UTILITY GRADE REVIEW: _____ DATE: _____

CURB & GUTTER REVIEW: _____ DATE: _____

FINAL REVIEW: _____ DATE: _____

DRAINAGE DESIGN: _____ DATE: _____

THIS IS FILED IN ACCORDANCE WITH SECTION 7.7.906 (DRAINAGE ORDINANCE) OF THE CORD OF THE CITY OF COLORADO SPRINGS, 2001 AS AMENDED.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF ALL TERRAIN ENGINEERING

_____ DATE

RYAN E. BURNS, P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

ALL TERRAIN ENGINEERING

RYAN E. BURNS, PE 303.997.1655 - RYAN@ALLTERRAINENG.COM

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JOB NO: 24013
LOCATION: EPC

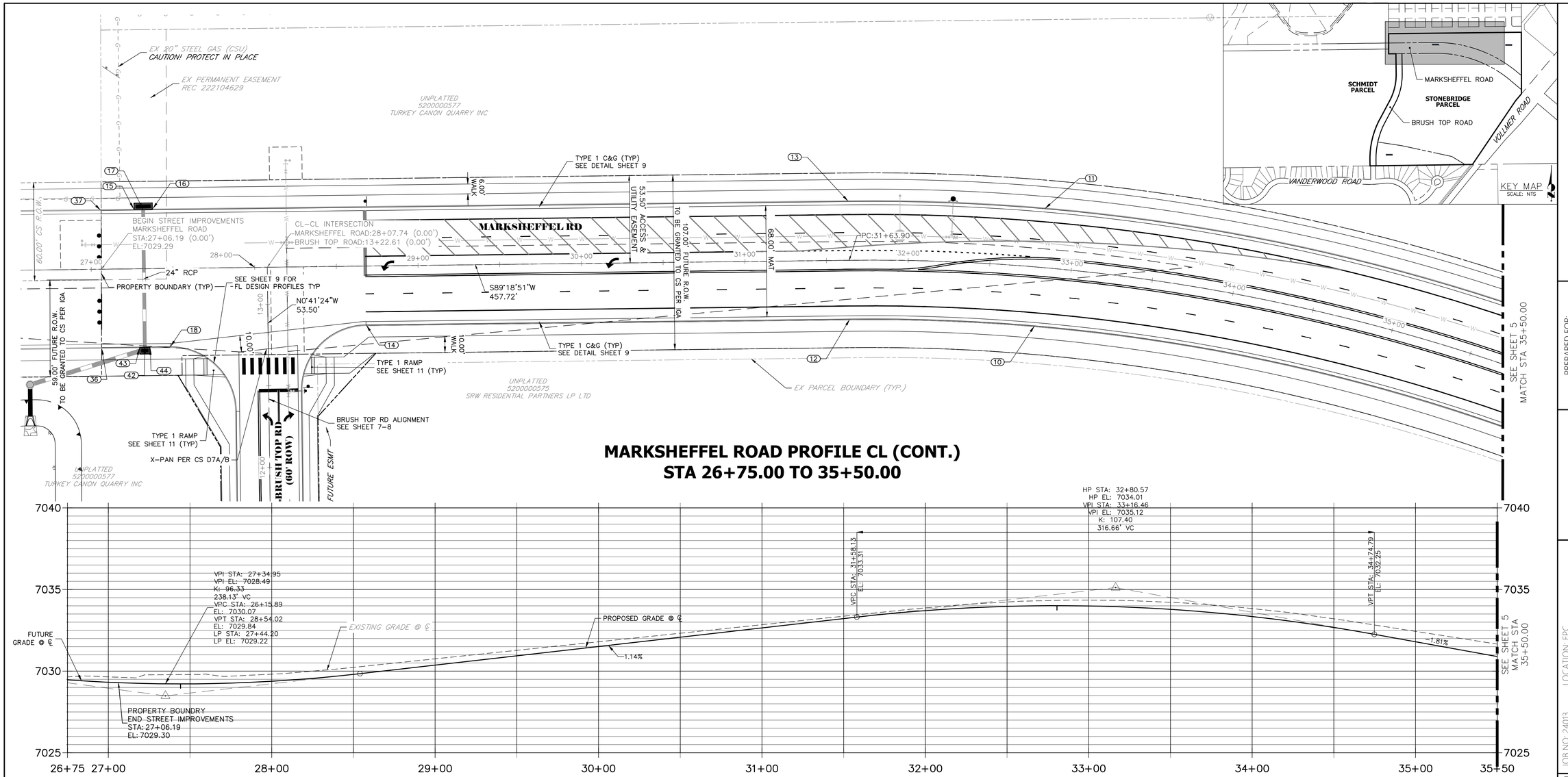
REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD - SEGMENT M3

MARKSHEFFEL ROAD

DESIGN: REB
REVIEW: NQJ
DATE: 10/01/2026
H-SCALE: 1" = 30'
V-SCALE: 1" = 3'

SHEET 5 OF 15



MARKSHEFFEL ROAD PROFILE CL (CONT.)
STA 26+75.00 TO 35+50.00

STREET IMPROVEMENT NOTES:

1. SEE SHEET 9-10 FOR FLOWLINE PROFILES.
2. ALL ELEVATIONS ARE FLOWLINE, UNLESS OTHERWISE NOTED.
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5. INLETS ALONG MARKSHEFFEL ROAD SHALL BE INSTALLED PER LATEST COLORADO SPRINGS DETAILS. REFER TO STORM SEWER PLANS.
6. RIGHT OF WAY TO BE GRANTED PER THE IGA (DA-251). EASEMENTS TO BE CREATED BY PLAT OR SEPARATE INSTRUMENT.
7. MARKSHEFFEL ROAD SHALL BE BUILT TO CITY STANDARDS AND SPECIFICATIONS. BRUSH TOP ROAD SHALL BE BUILT TO COUNTY STANDARDS AND SPECIFICATIONS. CONTRACTOR RESPONSIBLE FOR COORDINATING WITH APPROPRIATE CITY AND COUNTY INSPECTORS. CITY AND COUNTY BOTH RESERVE THE RIGHT TO INSPECT ALL CONSTRUCTION PROPOSED WITHIN THIS PLAN SET.
8. VOLLMER ROAD CURB RETURNS TO BE RECONSTRUCTED AT TIME OF UPGRADED AS SHOWN IN APPROVED ENGINEERING PLANS.

Know what's below. Call before you dig.

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

POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
10	32+80.57	36.00' (RT)	Marksheffel Road	7033.20	HP
11	32+80.57	36.00' (LT)	Marksheffel Road	7033.20	HP
12	31+63.90	36.00' (RT)	Marksheffel Road	7032.57	PC
13	31+63.90	36.00' (LT)	Marksheffel Road	7032.57	PC
14	28+67.74	36.00' (RT)	Marksheffel Road	7029.15	PT
15	27+26.55	36.50' (LT)	Marksheffel Road	7029.10	INLET EDGE @ TBC
16	27+37.88	36.50' (LT)	Marksheffel Road	7029.08	INLET EDGE @ TBC
17	27+32.31	36.00' (LT)	Marksheffel Road	7028.42	LP
18	27+47.74	48.00' (RT)	Marksheffel Road	7028.13	PC
36	27+05.86	48.00' (RT)	Marksheffel Road	7029.39	BEGIN T2 C&G

POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
37	27+06.51	36.00' (LT)	Marksheffel Road	7028.49	BEGIN T2 C&G
42	12+74.62	75.43' (LT)	Brush Top Road	7028.18	LP
43	12+74.12	78.69' (LT)	Brush Top Road	7028.85	INLET EDGE @ TBC
44	12+74.12	72.36' (LT)	Brush Top Road	7028.84	INLET EDGE @ TBC

30 15 0 30 60

HORIZONTAL
ORIGINAL SCALE: 1" = 30'

VERTICAL
ORIGINAL SCALE: 1" = 3'

N

DESIGN DATA

SIDEWALKS: _____ WIDTH: _____ ROW WIDTH: _____

LOCATION: ATTACHED: ☐ DETACHED: ☐ FL-FL: _____

DESIGN SPEED: _____ THICKNESS: _____

CURB TYPE: ☐1 ☐2 ☐3 ☐4 ☐5 COMPOSITE SECTION: _____

HMA: BASE COURSE:

STREET DESIGN FOR CITY ENGINEERING

UTILITY GRADE REVIEW: _____ DATE: _____

CURB & GUTTER REVIEW: _____ DATE: _____

FINAL REVIEW: _____ DATE: _____

DRAINAGE DESIGN: _____ DATE: _____

THIS IS FILED IN ACCORDANCE WITH SECTION 7.7.906 (DRAINAGE ORDINANCE) OF THE CORD OF THE CITY OF COLORADO SPRINGS, 2001 AS AMENDED.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF ALL TERRAIN ENGINEERING

RYAN E. BURNS, P.E. DATE
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

ALL TERRAIN ENGINEERING

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303.577.8656 - RBURNS@ALLTERRAINENG.COM

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TURKEY CANON QUARRY INC.
20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719) 491-3024
JMORLEY73870@AOL.COM

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

JOB NO: 24013
LOCATION: EPC

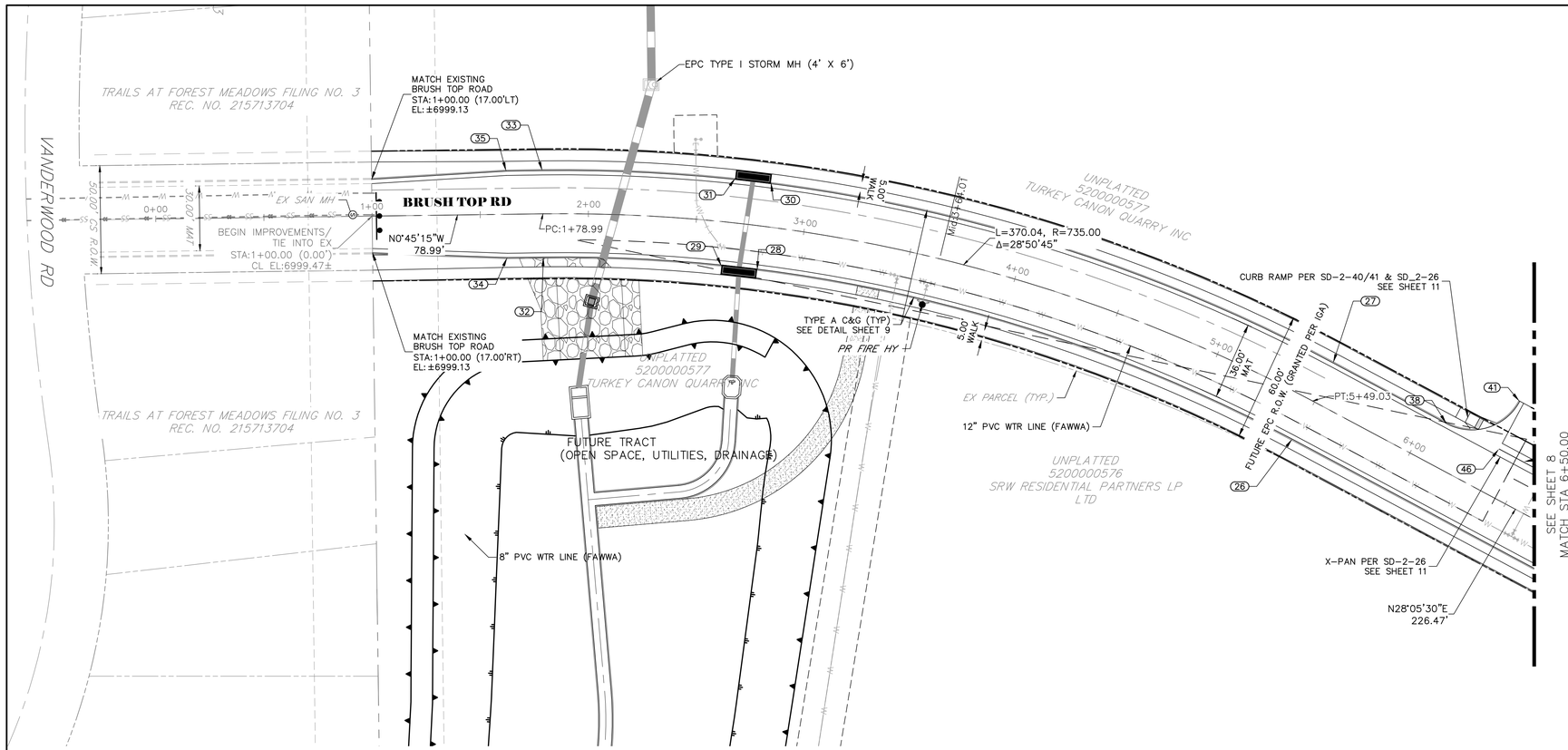
REV	DESCRIPTION	DATE

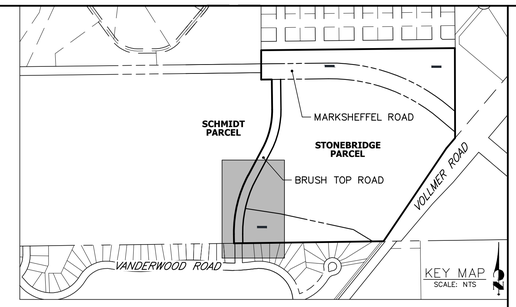
MARKSHEFFEL ROAD - SEGMENT M3

MARKSHEFFEL ROAD (CONT.)

DESIGN: REB
REVIEW: NQJ
DATE: 10/01/2026
H-SCALE: 1" = 30'
V-SCALE: 1" = 3'

SHEET
6 OF 15

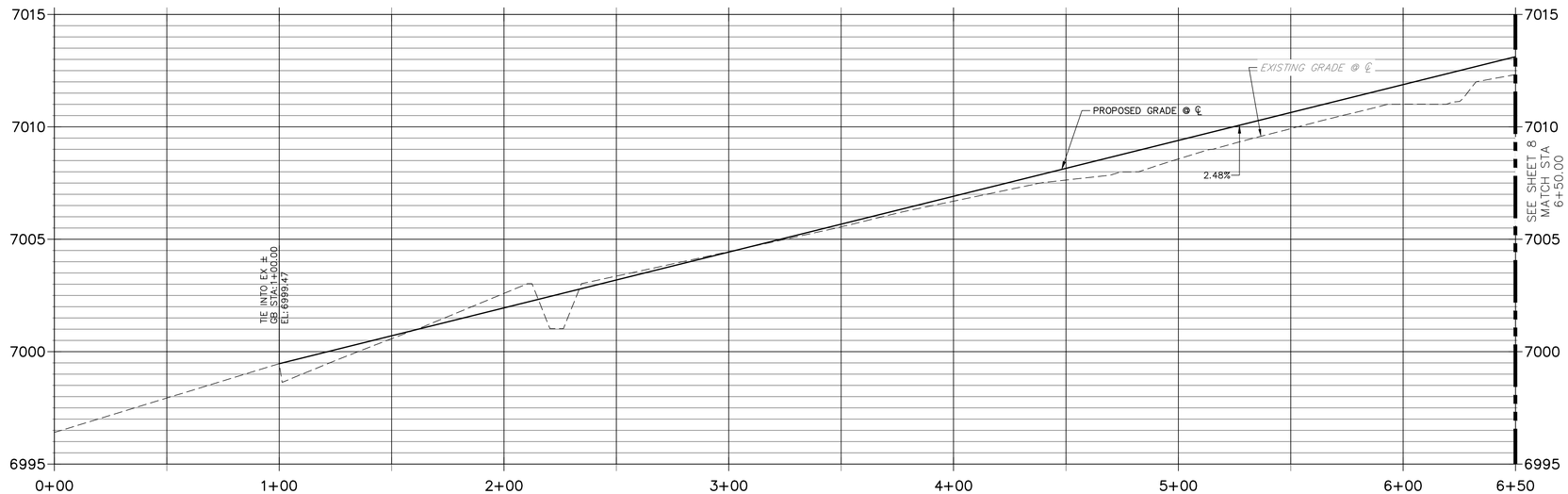




STREET IMPROVEMENT NOTES:

1. SEE SHEET 9-10 FOR FLOWLINE PROFILES.
2. ALL ELEVATIONS ARE FLOWLINE, UNLESS OTHERWISE NOTED.
3. SEE SEPARATE STORM, UTILITY, GEC, AND PCM PLANS FOR ASSOCIATED DESIGN INFORMATION.
4. ALL INLETS REQUIRE A FLOW LINE TRANSITION PER THE APPLICABLE DETAIL. ON-GRADE INLETS TOP OF BOX SHALL MATCH THE TOP BACK CURB ELEVATIONS ON EACH END, FOLLOWING THE STREET GRADE. SUMP INLETS SHALL BE FLAT AND HAVE A TOP OF BOX ELEVATION = TO THE TOP BACK CURB ELEVATION @ INLET LOCATION. SEE STORM SEWER PLANS FOR DESIGN INFORMATION.
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BRUSH TOP ROAD CL PROFILE
STA 0+00.00 TO 6+50.00



POINT TABULATION					
POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
26	5+49.03	20.00' (RT)	Brush Top Road	7010.13	PT
27	5+49.03	20.00' (LT)	Brush Top Road	7010.13	PT
28	2+80.64	20.50' (RT)	Brush Top Road	7003.96	INLET EDGE @ TBC
29	2+63.83	20.50' (RT)	Brush Top Road	7003.55	INLET EDGE @ TBC
30	2+81.86	20.50' (LT)	Brush Top Road	7003.99	INLET EDGE @ TBC
31	2+65.97	20.50' (LT)	Brush Top Road	7003.60	INLET EDGE @ TBC
32	1+78.99	20.00' (RT)	Brush Top Road	7000.94	PC
33	1+78.99	20.00' (LT)	Brush Top Road	7000.94	PC
34	1+62.27	20.00' (RT)	Brush Top Road	7000.54	PI/END TAPER
35	1+62.27	20.00' (LT)	Brush Top Road	7000.53	PI/END TAPER
38	6+08.57	20.00' (LT)	Brush Top Road	7011.66	PCR
41	6+33.57	45.00' (LT)	Brush Top Road	7012.66	PCR
46	6+35.57	21.00' (LT)	Brush Top Road	7012.39	FL-FL

Know what's below. Call before you dig.

30 15 0 30 60

HORIZONTAL
ORIGINAL SCALE: 1" = 30'
VERTICAL
ORIGINAL SCALE: 1" = 3'

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RYAN E. BURNS, P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE

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NICHOLAS Q. JOVICEVIC, PE
559.391.1655 - NJOVICEVIC@ALLTERRAINENG.COM
RYAN E. BURNS, PE
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20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
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JMORLEY73870@AOL.COM

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JOB NO: 24013
LOCATION: EPC

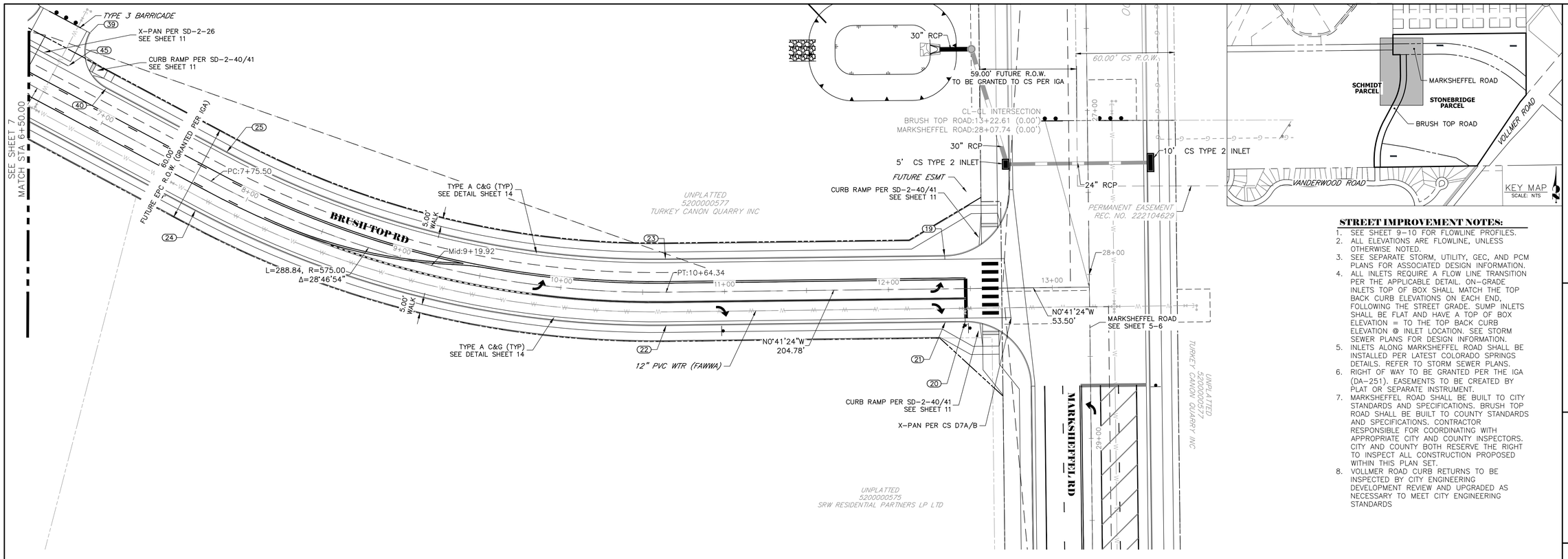
REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD - SEGMENT M3

BRUSH TOP ROAD

DESIGN: REB
REVIEW: NQJ
DATE: 10/01/2026
H-SCALE: 1" = 30'
V-SCALE: 1" = 3'

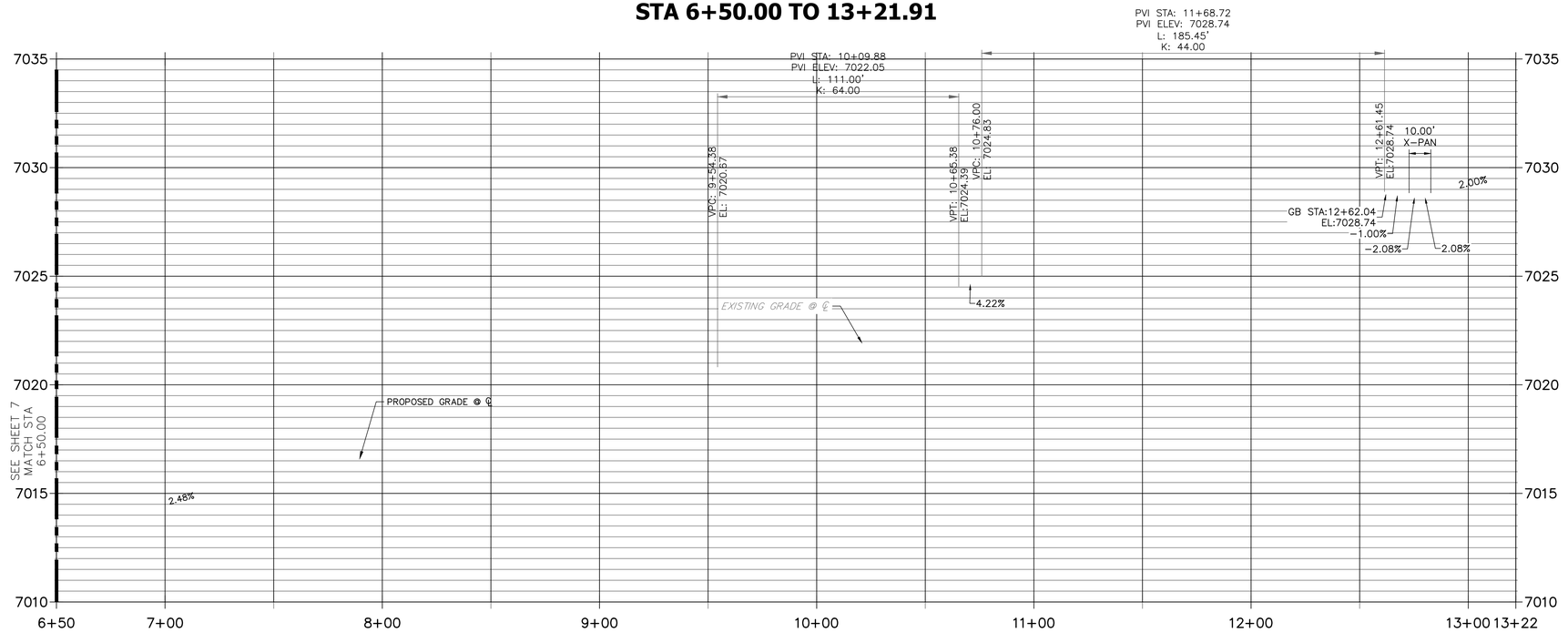
SHEET
7 OF 15



STREET IMPROVEMENT NOTES:

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BRUSH TOP ROAD CL PROFILE (CONT.)
STA 6+50.00 TO 13+21.91



POINT TABULATION

POINT NUMBER	STATION	OFFSET	ALIGNMENT	ELEVATION	DESCRIPTION
19	12+34.62	20.00' (LT)	Brush Top Road	7028.19	PC
20	12+46.61	20.00' (RT)	Brush Top Road	7028.08	PC
21	12+34.62	20.00' (RT)	Brush Top Road	7028.10	GB
22	10+64.34	20.00' (RT)	Brush Top Road	7023.86	PT
23	10+64.34	20.00' (LT)	Brush Top Road	7023.86	PT
24	7+75.50	20.00' (RT)	Brush Top Road	7015.75	PC
25	7+75.50	20.00' (LT)	Brush Top Road	7015.75	PC
39	6+67.57	45.00' (LT)	Brush Top Road	7013.06	PCR
40	6+92.57	20.00' (LT)	Brush Top Road	7013.75	PCR
45	6+65.57	21.00' (LT)	Brush Top Road	7013.14	FL-FL

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30 15 0 30 60

HORIZONTAL
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VERTICAL
ORIGINAL SCALE: 1" = 3'

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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF ALL TERRAIN ENGINEERING

RYAN E. BURNS, P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE

ALL TERRAIN ENGINEERING
NICHOLAS Q. JOVICEVIC, PE
559.349.1668 - NICK@ALLTERRAINENG.COM
RYAN E. BURNS, PE
559.577.8668 - RYAN@ALLTERRAINENG.COM

PREPARED FOR:
TURKEY CANON QUARRY INC.
20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
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JMORLEY3870@AOL.COM

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JOB NO: 24013
LOCATION: EPC

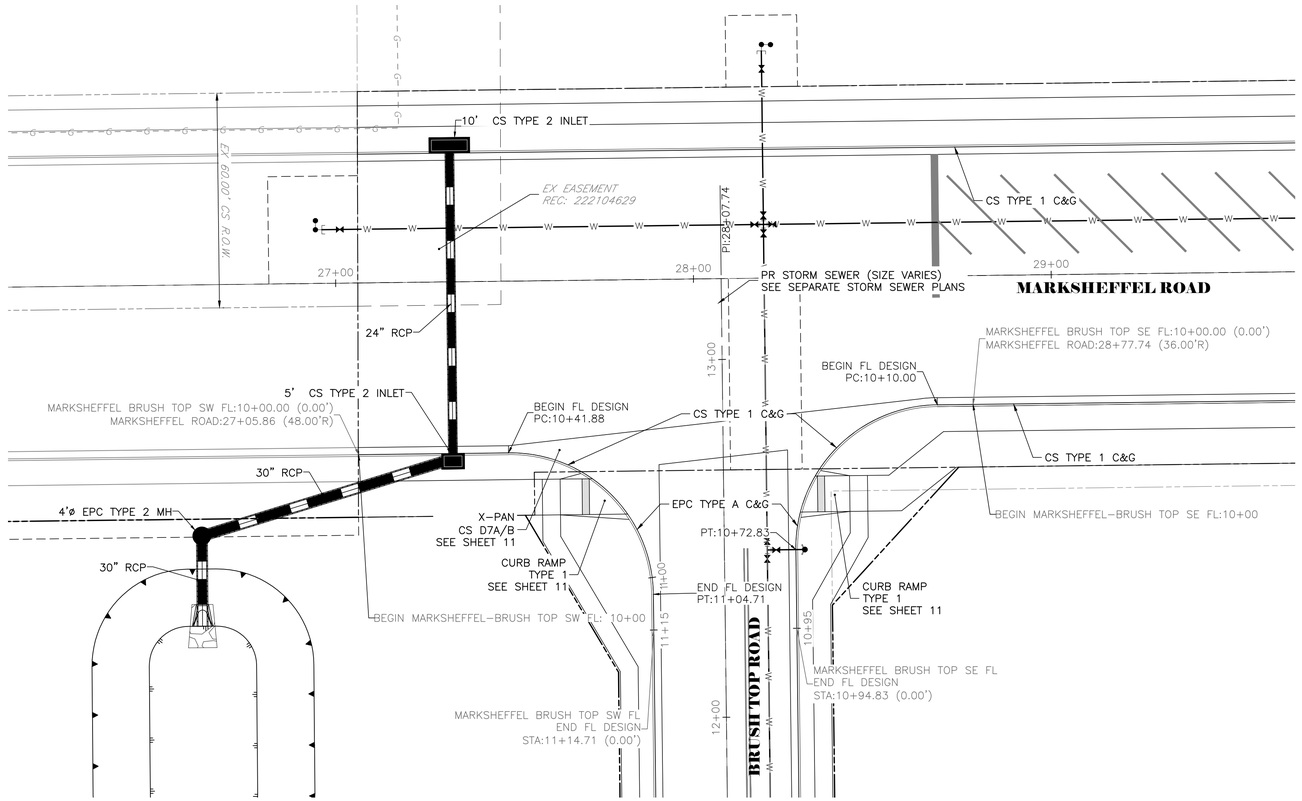
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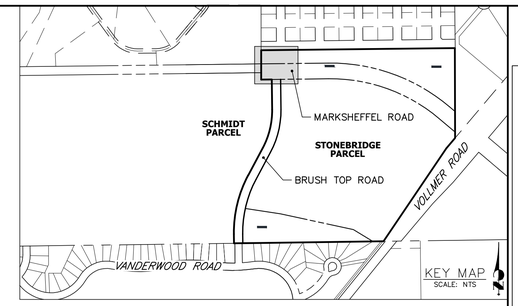
MARKSHEFFEL ROAD - SEGMENT M3

BRUSH TOP ROAD (CONT.)

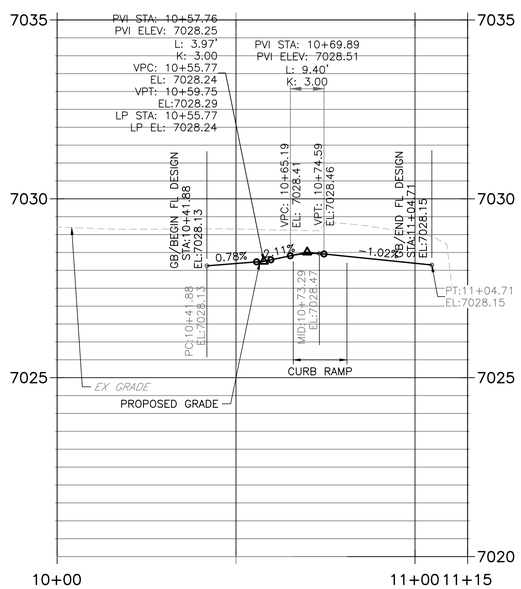
DESIGN: REB
REVIEW: NQJ
DATE: 10/01/2026
H-SCALE: 1" = 30'
V-SCALE: 1" = 3'

SHEET
8 OF 15

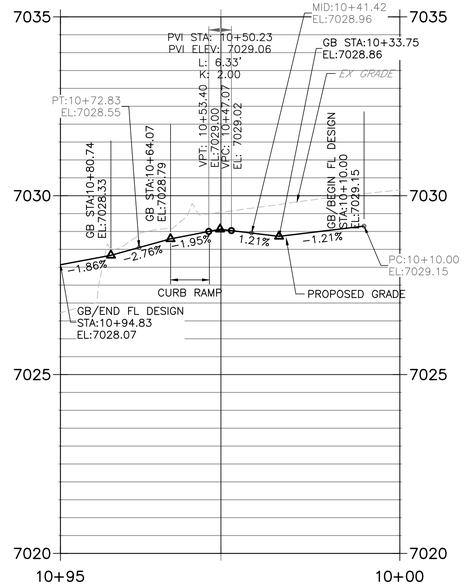




MARKSHEFFEL-BRUSH TOP SW FL
STA 10+00.00 TO 11+14.71



MARKSHEFFEL-BRUSH TOP SE FL
STA 10+00.00 TO 10+94.83



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

ENGINEER'S STATEMENT

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RYAN E. BURNS, P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE

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RYAN E. BURNS, P.E.
719.377.7688 - RYAN@ATERRAIN.COM
NICHOLAS Q. JOVICEVIC, P.E.
719.377.7688 - NICK@ATERRAIN.COM

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JOB NO: 24013 LOCATION: EPC

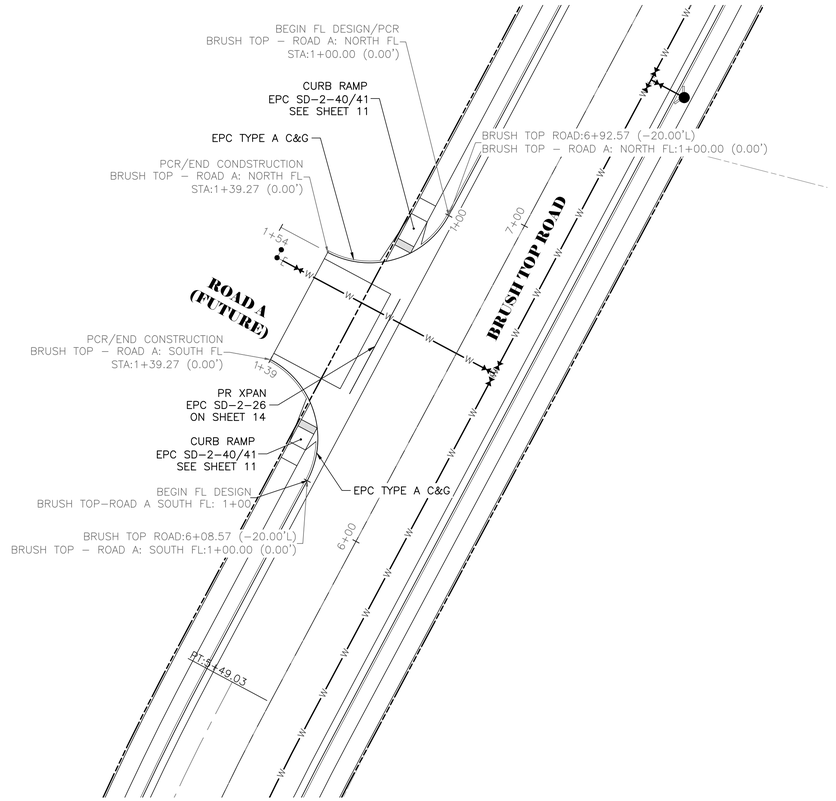
REV	DESCRIPTION	DATE

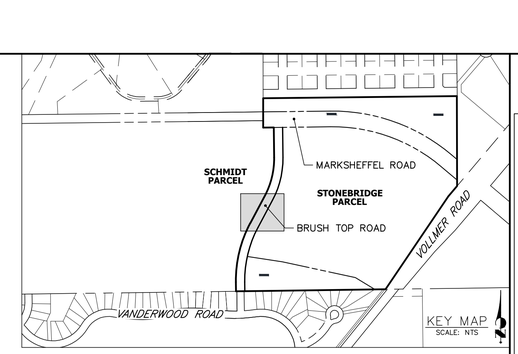
MARKSHEFFEL ROAD - SEGMENT M3

FLOWLINE PROFILES

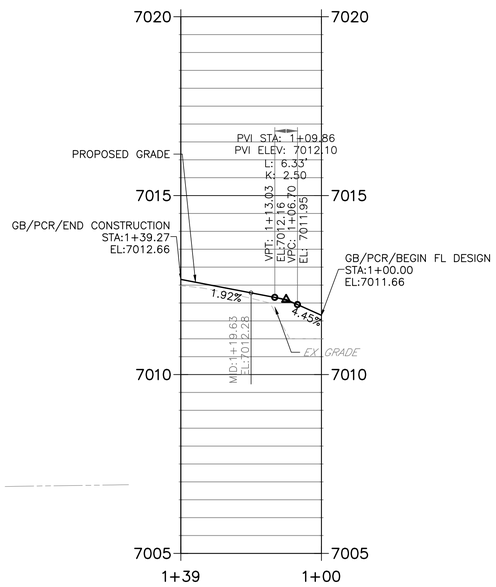
DESIGN: REB
REVIEW: NQJ
DATE: 10/01/2026
H-SCALE: 1" = 20'
V-SCALE: 1"= 2'

SHEET
9 OF 15

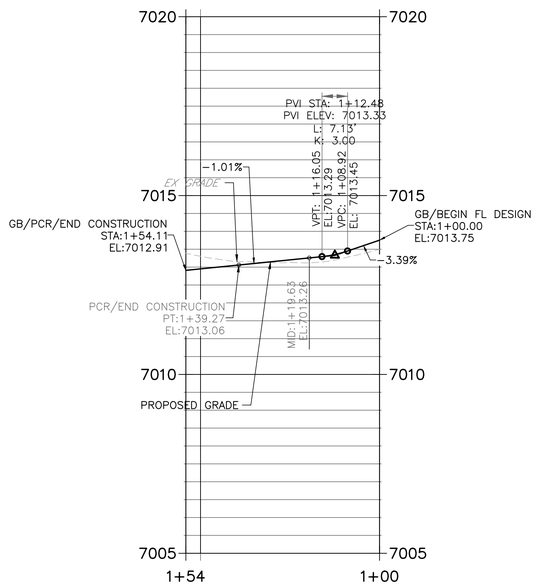




BRUSH TOP - ROAD A SOUTH FL
STA 1+00.00 TO 1+39.27



BRUSH TOP - ROAD A NORTH FL
STA 1+00.00 TO 1+54.11



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VERTICAL
ORIGINAL SCALE: 1" = 2'

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JOB NO: 24013 LOCATION: EPC

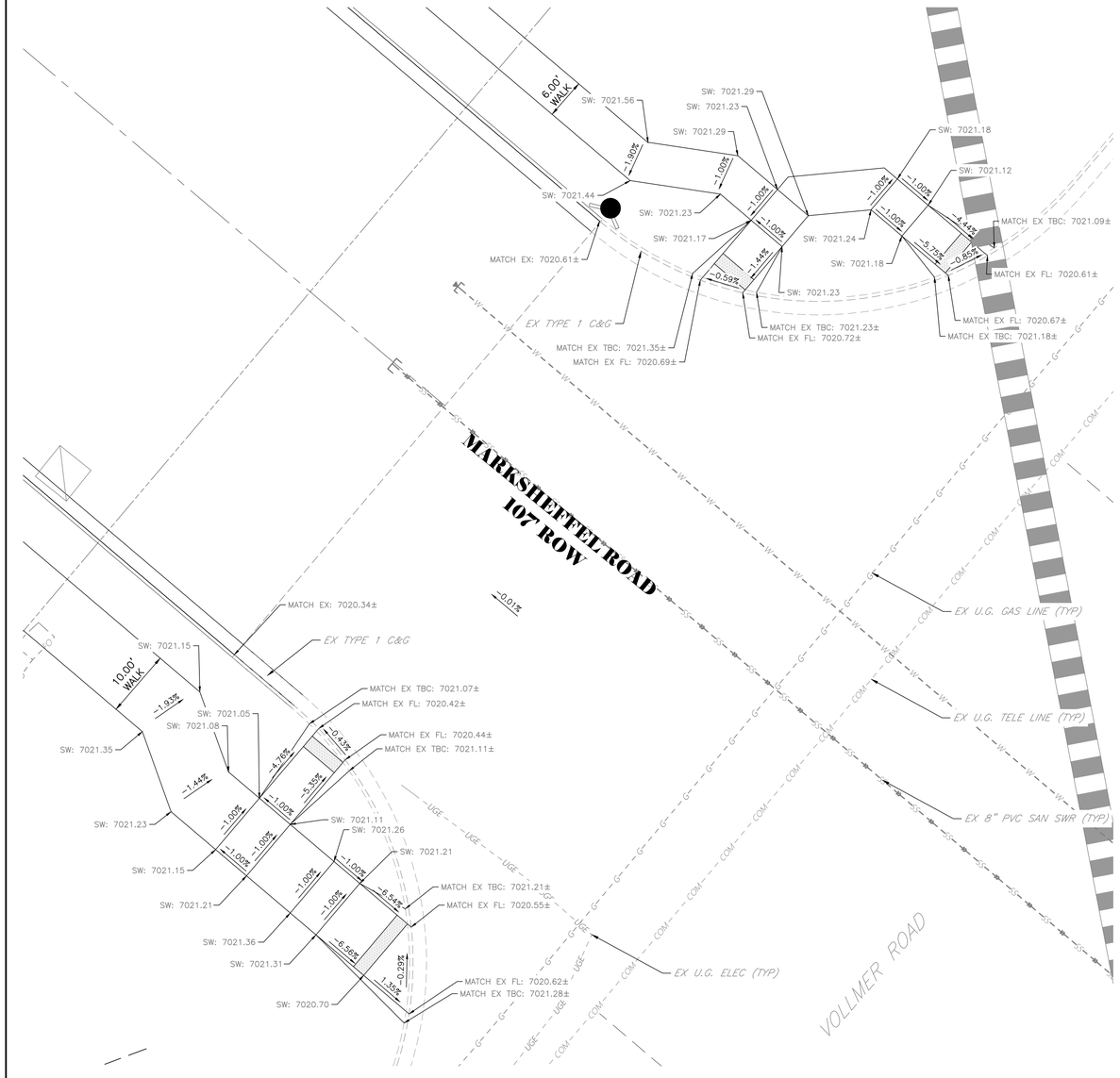
REV	DESCRIPTION	DATE

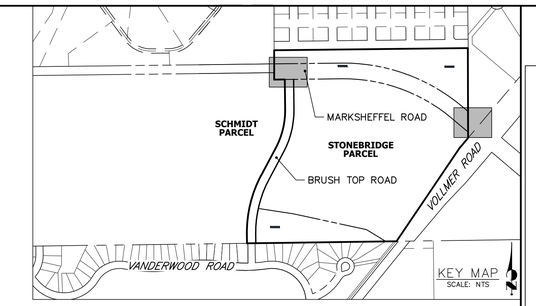
MARKSHEFFEL ROAD - SEGMENT M3

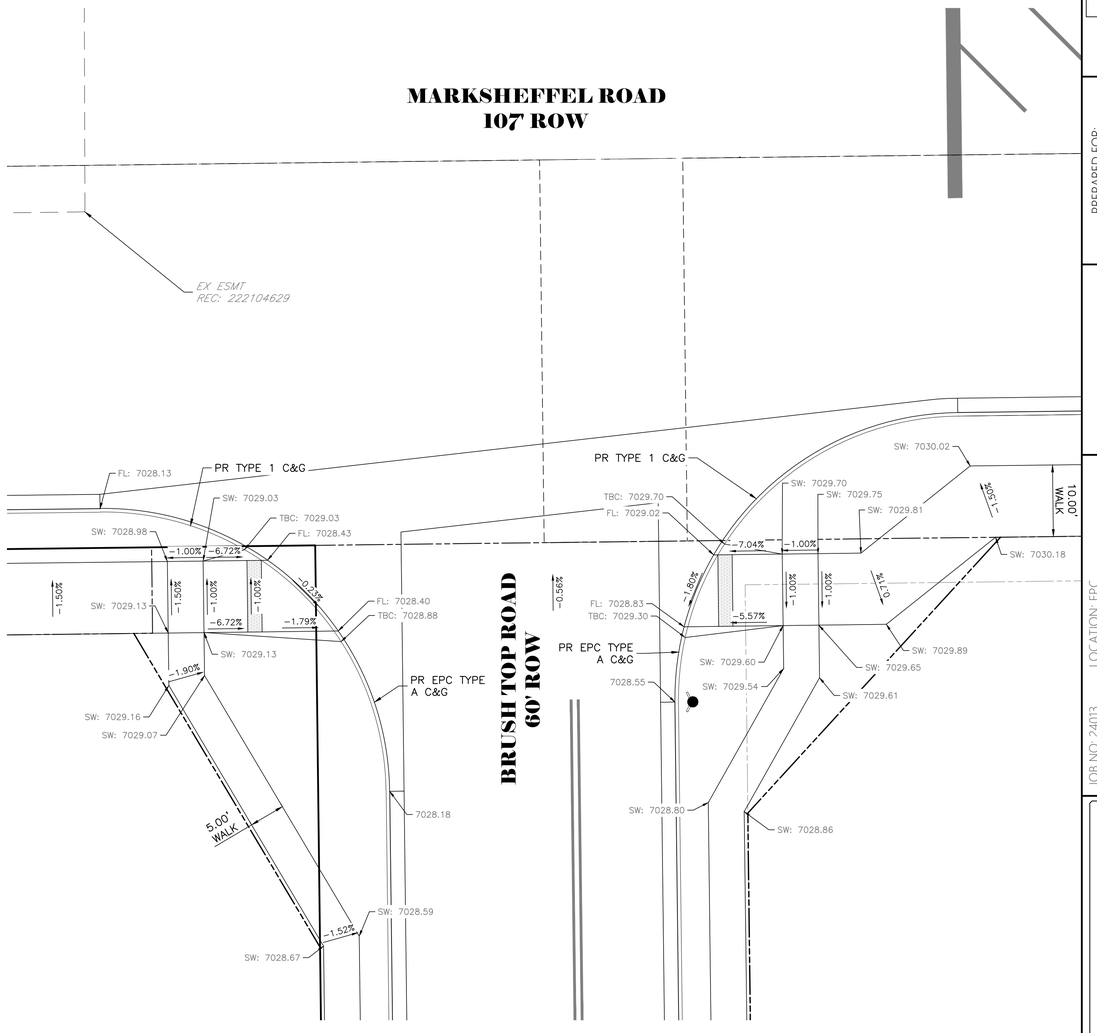
FLOWLINE PROFILES (CONT.)

DESIGN: REB
REVIEW: NQJ
DATE: 10/01/2026
H-SCALE: 1" = 20'
V-SCALE: 1"=2'

SHEET
10 OF 15







CURB RAMP GRADING NOTES:

1. SEE CURB RETURN PROFILES ON SHEET 9-10 FOR FLOWLINE DESIGN PROFILES.
2. ALL ELEVATIONS ARE FLOWLINE, UNLESS OTHERWISE NOTED.
3. SEE CURB, GUTTER & CROSS PAN DETAILS ON SHEET 14-15.

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

10 5 0 10 20

HORIZONTAL
ORIGINAL SCALE: 1" = 10'
VERTICAL
ORIGINAL SCALE: 1" = 1'

STREET DESIGN FOR CITY ENGINEERING

UTILITY GRADE REVIEW: _____ DATE: _____
CURB & GUTTER REVIEW: _____ DATE: _____
FINAL REVIEW: _____ DATE: _____
DRAINAGE DESIGN: _____ DATE: _____

THIS IS FILED IN ACCORDANCE WITH SECTION 7.7.906 (DRAINAGE ORDINANCE) OF THE CORD OF THE CITY OF COLORADO SPRINGS, 2001 AS AMENDED.

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PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF ALL TERRAIN ENGINEERING

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FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

ALL TERRAIN ENGINEERING

RYAN E. BURNS, PE
719.377.1655 - RYAN@ATERRAIN.COM

RYAN E. BURNS, PE
303.577.4656 - RYAN@ATERRAIN.COM

PREPARED FOR:
TURKEY CANON QUARRY INC.
20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719) 491-3024
JMORLEY3870@AOL.COM

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

JOB NO: 24013 LOCATION: EPC

REV	DESCRIPTION	DATE

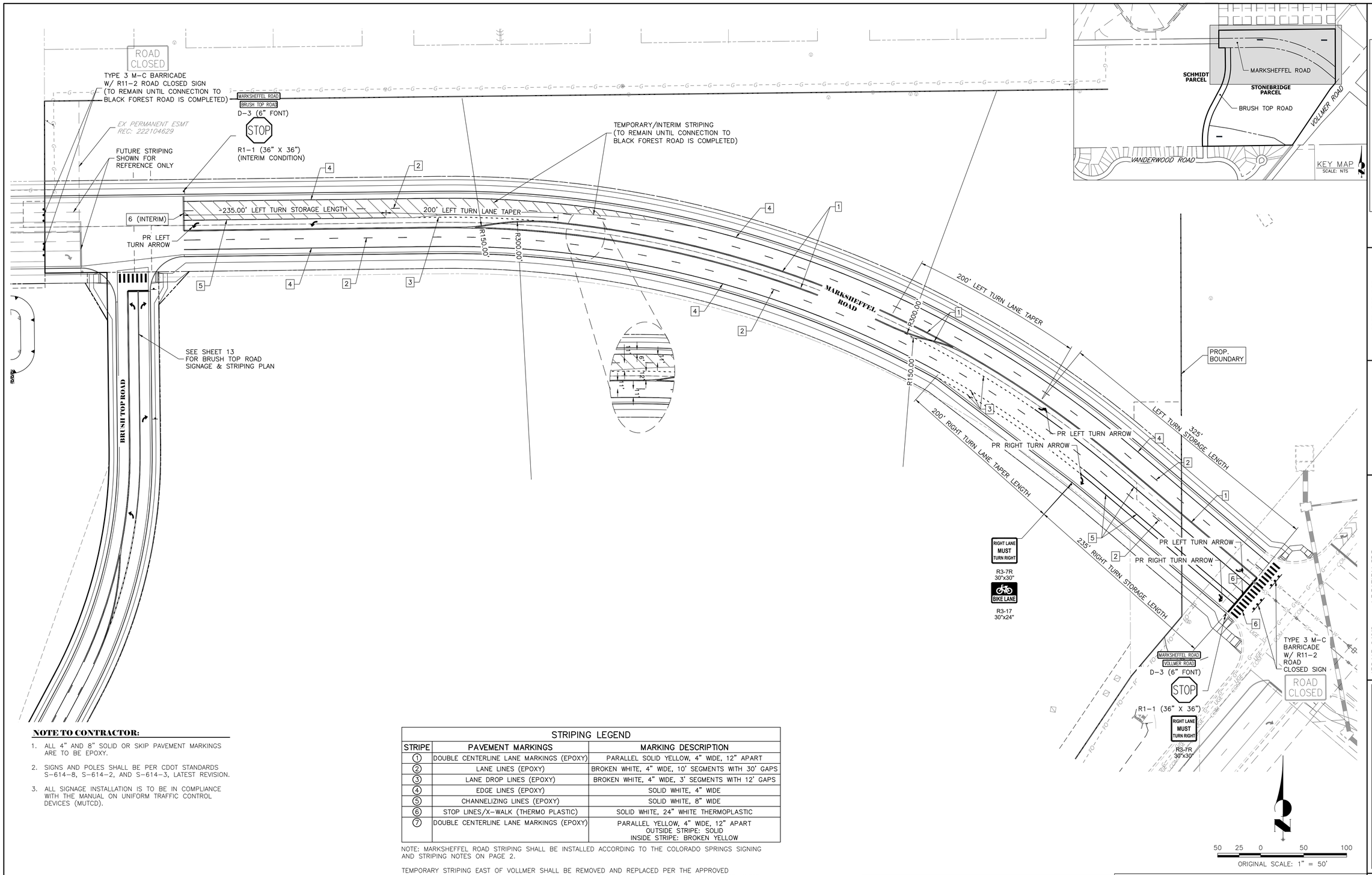
MARKSHEFFEL ROAD - SEGMENT M3

CURB RAMP DETAILS

DESIGN: REB
REVIEW: NQJ
DATE: 10/01/2026

H-SCALE: 1" = 10'
V-SCALE: N/A

SHEET
11 OF 15



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-614-2, AND S-614-3, LATEST REVISION.
3. ALL SIGNAGE INSTALLATION IS TO BE IN COMPLIANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

STRIPING LEGEND		
STRIPE	PAVEMENT MARKINGS	MARKING DESCRIPTION
1	DOUBLE CENTERLINE LANE MARKINGS (EPOXY)	PARALLEL SOLID YELLOW, 4" WIDE, 12" APART
2	LANE LINES (EPOXY)	BROKEN WHITE, 4" WIDE, 10' SEGMENTS WITH 30' GAPS
3	LANE DROP LINES (EPOXY)	BROKEN WHITE, 4" WIDE, 3' SEGMENTS WITH 12' GAPS
4	EDGE LINES (EPOXY)	SOLID WHITE, 4" WIDE
5	CHANNELIZING LINES (EPOXY)	SOLID WHITE, 8" WIDE
6	STOP LINES/X-WALK (THERMO PLASTIC)	SOLID WHITE, 24" WHITE THERMOPLASTIC
7	DOUBLE CENTERLINE LANE MARKINGS (EPOXY)	PARALLEL YELLOW, 4" WIDE, 12" APART OUTSIDE STRIPE: SOLID INSIDE STRIPE: BROKEN YELLOW

NOTE: MARKSHEFFEL ROAD STRIPING SHALL BE INSTALLED ACCORDING TO THE COLORADO SPRINGS SIGNING AND STRIPING NOTES ON PAGE 2.

TEMPORARY STRIPING EAST OF VOLLMER SHALL BE REMOVED AND REPLACED PER THE APPROVED MARKSHEFFEL M1 STREET IMPROVEMENT PLANS (CDR20-005) UPON THE OPENING OF MARKSHEFFEL WEST OF VOLLMER

BRUSHTOP AND MARKSHEFFEL TO REMAIN CLOSED TO THE PUBLIC UNTIL THE FINAL PLAT IS RECORDED AND ROW IS GRANTED TO THE CITY/COUNTY.

LANE LENGTHS ARE PER "TIS FOR SCHMIDT PROPERTY PRELIMINARY PLAN" BY SM ROCHA OR CITY/COUNTY CRITERIA, WHICHEVER IS GREATER

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

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

STREET DESIGN FOR CITY ENGINEERING

UTILITY GRADE REVIEW: _____ DATE: _____

CURB & GUTTER REVIEW: _____ DATE: _____

FINAL REVIEW: _____ DATE: _____

DRAINAGE DESIGN: _____ DATE: _____

THIS IS FILED IN ACCORDANCE WITH SECTION 7.7.906 (DRAINAGE ORDINANCE) OF THE CORD OF THE CITY OF COLORADO SPRINGS, 2001 AS AMENDED.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF ALL TERRAIN ENGINEERING

_____ DATE

RYAN E. BURNS, P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

ALL TERRAIN ENGINEERING

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REV	DESCRIPTION	DATE

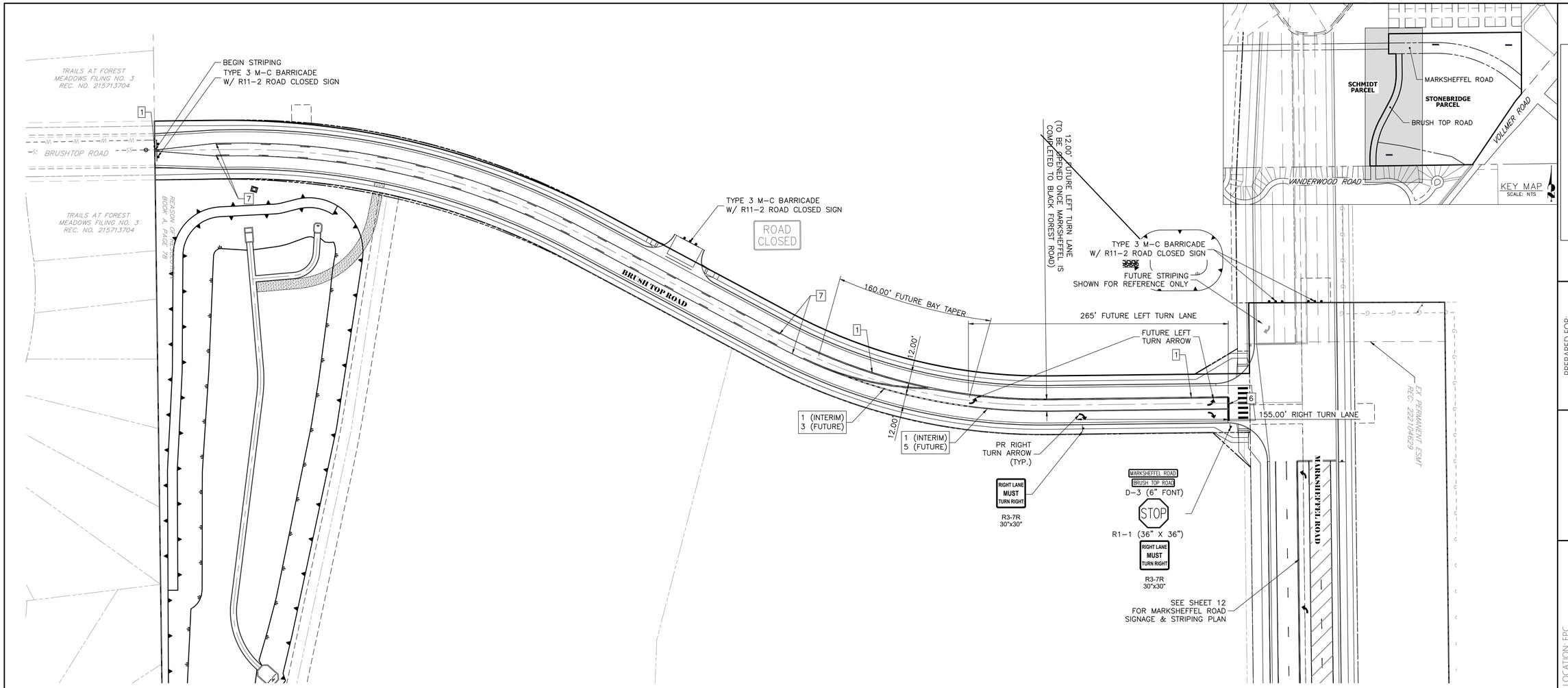
JOB NO: 24013
LOCATION: EPC

MARKSHEFFEL ROAD - SEGMENT M3

SIGNAGE & STRIPING PLAN

DESIGN: REB
REVIEW: NQJ
DATE: 10/01/2026
H-SCALE: 1"=50'
V-SCALE: N/A

SHEET
12 OF 15



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-614-2, AND S-614-3, LATEST REVISION.
3. ALL SIGNAGE INSTALLATION IS TO BE IN COMPLIANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

STRIPING LEGEND		
STRIPE	PAVEMENT MARKINGS	MARKING DESCRIPTION
①	DOUBLE CENTERLINE LANE MARKINGS (EPOXY)	PARALLEL SOLID YELLOW, 4" WIDE, 12" APART
②	LANE LINES (EPOXY)	BROKEN WHITE, 4" WIDE, 10' SEGMENTS WITH 30' GAPS
③	LANE DROP LINES (EPOXY)	BROKEN WHITE, 4" WIDE, 3' SEGMENTS WITH 12' GAPS
④	EDGE LINES (EPOXY)	SOLID WHITE, 4" WIDE
⑤	CHANNELIZING LINES (EPOXY)	SOLID WHITE, 8" WIDE
⑥	STOP LINES/X-WALK (THERMO PLASTIC)	SOLID WHITE, 24" WHITE THERMOPLASTIC
⑦	DOUBLE CENTERLINE LANE MARKINGS (EPOXY)	PARALLEL YELLOW, 4" WIDE, 12" APART OUTSIDE STRIPE: SOLID INSIDE STRIPE: BROKEN YELLOW

NOTE: BRUSH TOP ROAD STRIPING SHALL BE INSTALLED ACCORDING TO THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL – SIGNING AND STRIPING NOTES ON PAGE 1.

LANE LENGTHS ARE PER "TIS FOR SCHMIDT PROPERTY PRELIMINARY PLAN" BY SM ROCHA OR CITY/COUNTY CRITERIA, WHICHEVER IS GREATER

TEMPORARY STRIPING SHALL BE REMOVED AND REPLACED WITH FUTURE DESIGN UPON COMPLETION OF MARKSHEFFEL ROAD EXTENSION TO BLACK FOREST ROAD. BRUSHTOP TO REMAIN CLOSED UNTIL THE FINAL PLAT IS RECORDED AND ROW IS GRANTED.

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

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50 25 0 50 100
ORIGINAL SCALE: 1" = 50'

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF ALL TERRAIN ENGINEERING

RYAN E. BURNS, P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE

ALL TERRAIN ENGINEERING
ANDREW G. ZDUENCYK, PE
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RYAN E. BURNS, PE
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JOB NO: 24013 LOCATION: EPC

REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD - SEGMENT M3

SIGNAGE & STRIPING PLAN (2)

DESIGN: REB
REVIEW: NQJ
DATE: 10/01/2026
H-SCALE: 1"=50'
V-SCALE: N/A

SHEET 13 OF 15

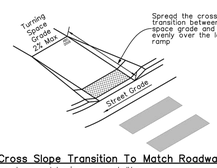
General Notes

1. All work shall be done in accordance with the current City of Colorado Springs Engineering Division (the City) Standard Specifications.
2. The Contractor shall obtain all required permits and notify City Engineering by 1500 hours the business day before inspection is required.
3. Concrete shall have a minimum compressive strength of 4,000 psi and use a City-approved concrete mix.
4. A broom finish, with sweeps perpendicular to the direction of pedestrian traffic, shall be applied to all ramp surfaces.
5. The Contractor shall stamp their company name and construction date at the top right corner of the ramp as viewed from the street.
6. Detectable warnings shall be installed at sidewalk to street transitions and shall consist of prefabricated truncated dome panels approved by the City. The detectable warning panels shall be set into the wet concrete. The domes shall be in a square grid pattern and aligned with pedestrian traffic.
7. All detectable warning surfaces at the base of ramps shall start a minimum of 6 inches from the flowline of the curb and not be more than 8 inches from any point on the flowline of the curb, with the exception for ramps that are constructed within the curved portion of the return as approved by the City.
8. Ramp and detectable warning running slope shall be 8.3% or flatter except on long ramps as specified by Note 14.
9. Drainage structures, traffic signal equipment, or other obstructions shall not be installed in the ramp or turning space areas.
10. If a traffic signal pedestrian push button cannot be mounted within 10 inches horizontally of the pedestrian path or is obstructed from reach then a separate pedestrian push button post assembly shall be installed. Push buttons shall meet the requirements of MUTCD Chapter 4 for pedestrian detectors.
11. Diagonal ramps on the apex are not allowed in new construction. A single diagonal ramp on the apex may be permitted during reconstruction or alteration where physical or site constraints prevent two ramps from being installed and shall require approval from the City on a case-by-case basis.
12. Ramps, excluding flared sides or blended transitions, shall be wholly contained within the width of the crosswalk and/or the pedestrian street crossing that they serve.
13. All ramp joints and grade breaks shall be flush (0"±¼"). The joint between the roadway surface and gutter pan shall be flush.
14. In retrofit applications, to avoid chasing grade indefinitely on steep streets, ramp length is not required to exceed 15 feet.
15. The counter slope of the gutter or road at the foot of a ramp, turning space, or blended transition shall not exceed 5.0%.
16. Flared side slopes may exceed 10% only where they abut a non-walkable surface (landscaping or domed surface) or the adjacent circulation path is blocked such that it is unlikely for a pedestrian to walk across the flared side slope.
17. The minimum turning space for new construction is 5 feet by 5 feet. The minimum turning space allowed for retrofit applications is 4 feet by 4 feet. In all types of construction where the turning space is constrained by an element taller than 2 inches such as curb, the turning space shall be 5 feet by 5 feet.
18. Contact the City Forestry Division if it is necessary to disturb trees or roots.
19. All curb ramps shall have a minimum concrete thickness of 6 inches.
20. All sidewalks and turning spaces shall have a cross slope between 0.5% and 2.0%.
21. Ramps shall align with each other across the street.

Slope Table

The table below is intended to be used to convert between the percent (rise/run) and ratio (run:rise) methods of expressing the magnitude of a slope:

PERCENT SLOPE	0.5%	1.0%	2.0%	5.0%	7.1%	8.3%	10.0%
RATIO SLOPE	200:1	100:1	50:1	20:1	14:1	12:1	10:1



Ramp Cross Slope Transition To Match Roadway Profile

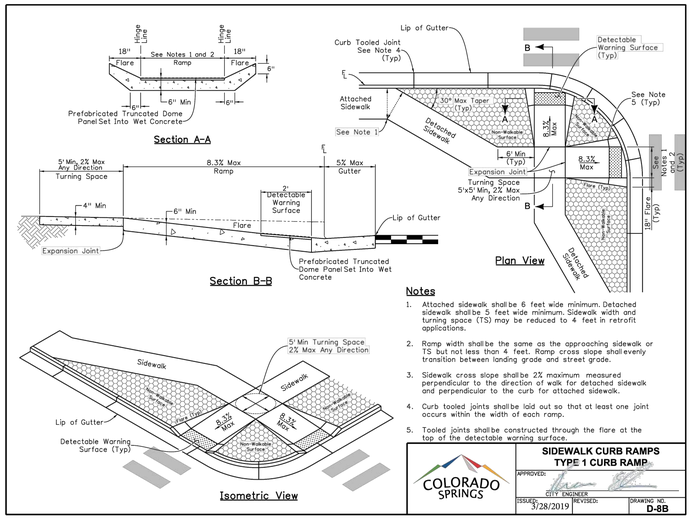
Ramp cross slopes and turning spaces shall be:

A. 2% max when a yield or stop control is present.

B. Permitted to equal the street grade when there is no yield or stop control, when a traffic signal is present, at a mid block crossing location, or in retrofit applications.

COLORADO SPRINGS

SIDEWALK CURB RAMPS GENERAL NOTES AND DETAILS		
APPROVED: CITY ENGINEER		
ISSUED: 3/28/2019	REVISED:	DRAWING NO. D-8A

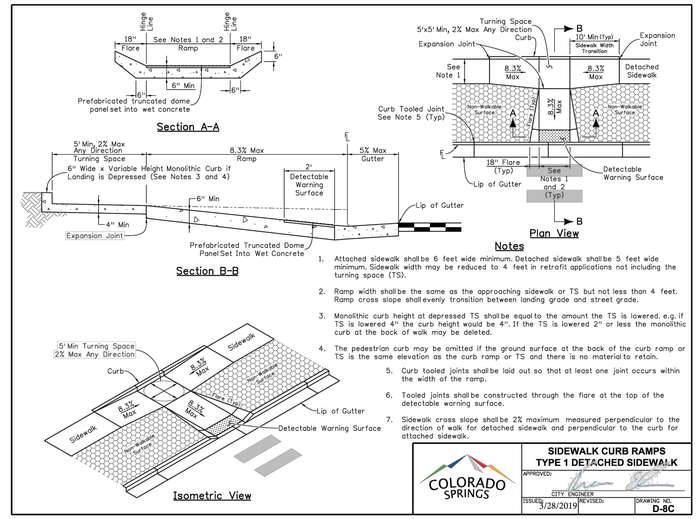


Notes

1. Attached sidewalk shall be 6 feet wide minimum. Detached sidewalk shall be 5 feet wide minimum. Sidewalk width and turning space (TS) may be reduced to 4 feet in retrofit applications.
2. Ramp width shall be the same as the approaching sidewalk or TS but not less than 4 feet. Ramp cross slope shall evenly transition between landing grade and street grade.
3. Sidewalk cross slope shall be 2% maximum measured perpendicular to the direction of walk for detached sidewalk and perpendicular to the curb for attached sidewalk.
4. Curb tooled joints shall be laid out so that at least one joint occurs within the width of each ramp.
5. Tooled joints shall be constructed through the flare at the top of the detectable warning surface.

COLORADO SPRINGS

SIDEWALK CURB RAMPS TYPE 1 CURB RAMP		
APPROVED: CITY ENGINEER		
ISSUED: 3/28/2019	REVISED:	DRAWING NO. D-8B



Notes

1. Attached sidewalk shall be 6 feet wide minimum. Detached sidewalk shall be 5 feet wide minimum. Sidewalk width may be reduced to 4 feet in retrofit applications not including the turning space (TS).
2. Ramp width shall be the same as the approaching sidewalk or TS but not less than 4 feet. Ramp cross slope shall evenly transition between landing grade and street grade.
3. Monolithic curb height at depressed TS shall be equal to the amount the TS is lowered. e.g. if TS is lowered 4" the curb height would be 4". If the TS is lowered 2" or less the monolithic curb at the back of walk may be deleted.
4. The pedestrian curb may be omitted if the ground surface at the back of the curb ramp or TS is the same elevation as the curb ramp or TS and there is no material to retain.
5. Curb tooled joints shall be laid out so that at least one joint occurs within the width of the ramp.
6. Tooled joints shall be constructed through the flare at the top of the detectable warning surface.
7. Sidewalk cross slope shall be 2% maximum measured perpendicular to the direction of walk for detached sidewalk and perpendicular to the curb for attached sidewalk.

COLORADO SPRINGS

SIDEWALK CURB RAMPS TYPE 1 DETACHED SIDEWALK		
APPROVED: CITY ENGINEER		
ISSUED: 3/28/2019	REVISED:	DRAWING NO. D-8C

GENERAL NOTES:

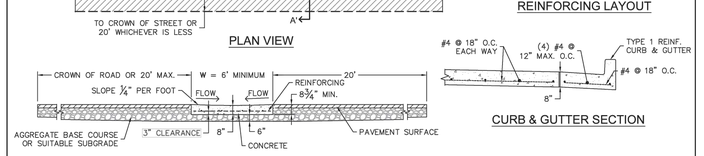
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH CURRENT CITY OF COLORADO SPRINGS ENGINEERING DIVISION (THE CITY) STANDARD SPECIFICATIONS.
2. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS. FOR CITY PERMITS CONTRACTORS SHALL USE THE ACCELA ON-LINE PERMIT SYSTEM. ONCE CITY PERMITS ARE APPROVED AND PAID, THEN APPROPRIATE SCHEDULING AND NOTIFICATIONS SHALL BE IN ACCELA.
3. CONTACT CITY PARKS PRIOR TO STARTING WORK IF IT IS NECESSARY TO DISTURB MEDIAN LANDSCAPING OR WORK IS ADJACENT TO AN EXISTING PARK.
4. CONTACT THE CITY FORESTRY DIVISION, PRIOR TO STARTING WORK, IF IT IS NECESSARY TO DISTURB TREES OR ROOTS.
5. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AND BE A CITY APPROVED CONCRETE MIX DESIGN.
6. A BROOM FINISH, WITH SWEEPS IN THE DIRECTION OF FLOW, SHALL BE APPLIED TO ALL GUTTER AND CROSS PANS.
7. PRIOR TO OPENING TO TRAFFIC, CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,200 PSI AS DEMONSTRATED BY FIELD CURE CYLINDERS.
8. NEW ASPHALT SHALL NOT BE PLACED AGAINST FRESHLY POURED CONCRETE. CONCRETE SHALL BE 5-DAYS OLD OR HAVE A COMPRESSIVE STRENGTH OF 3,200 PSI AS DEMONSTRATED BY FIELD CURE CYLINDERS. WHERE PATCHING IN AN EXISTING ROADWAY, PATCHING SHALL BE IN ACCORDANCE WITH ASPHALT REPAIR DRAWINGS.
9. THE CONTRACTOR SHALL STAMP THEIR COMPANY NAME AND CONSTRUCTION DATE ON FRONT FACE OF CURB.
10. WHITE CURE SHALL BE PLACED WITH 100% COVERAGE, AND MEET THE SPECIFICATION OF SECTION 500.



EXPANSION JOINT DETAIL

COLORADO SPRINGS

CROSS PAN NOTES		
APPROVED: CITY ENGINEER		
ISSUED: 6/4/21	REVISED:	DRAWING NO. 07A

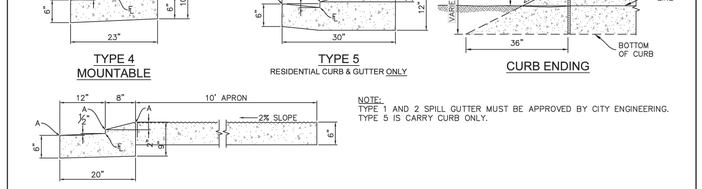


NOTES:

1. SQUARED-OFF RETURN TO BE POURED MONOLITHIC 8-INCHES P.C.C. MINIMUM WITH #4 AT 18-INCHES EACH WAY.
2. ASPHALT PATCH SHALL BE PER "ASPHALT PAVEMENT REPAIR" DETAIL.
3. SQUARED-OFF RETURN AREAS REQUIRE REINFORCING FROM B.C.R. TO E.C.R.
4. POLYURETHANE JOINT FILLER REQUIRED OVER EXPANSION JOINTS.
5. MINIMUM DEPTH OF SAWCUT OR TOOL JOINT SHALL BE 2-INCHES.
6. CURB RAMPS SHALL BE LOCATED OUTSIDE OF CROSSPAN FLOWLINE.
7. DOWELED EXPANSION JOINT SHALL BE INSTALLED WHEN POURING HALF PANS.

COLORADO SPRINGS

CROSS PAN		
APPROVED: CITY ENGINEER		
ISSUED: 6/4/21	REVISED:	DRAWING NO. 07B



NOTE:
TYPE 1 AND 2 SPILL GUTTER MUST BE APPROVED BY CITY ENGINEERING.
TYPE 5 IS CARRY CURB ONLY.

RADII LEGEND	
A	¼"-½"
B	1½"
C	1½"-2"

COLORADO SPRINGS

CURB & GUTTER DETAILS		
APPROVED: CITY ENGINEER		
ISSUED: 2/26/20	REVISED:	DRAWING NO. 6B

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF ALL TERRAIN ENGINEERING

RYAN E. BURNS, P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE

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JOB NO: 24013 LOCATION: EPC

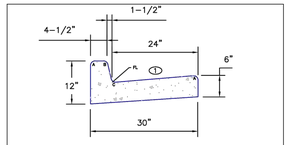
REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD - SEGMENT M3

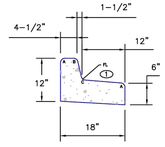
CITY STREET DETAILS

DESIGN: REB
REVIEW: NQJ
DATE: 10/01/2026
H-SCALE: NA
V-SCALE: NA

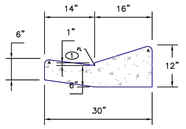
SHEET
14 OF 15

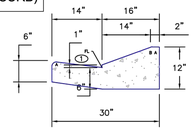


EPC TYPE A
(REVERSE SLOPE OF PAN FOR SPILL CURB)



EPC TYPE B

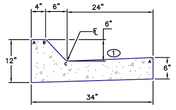




EPC TYPE C
(REVERSE SLOPE OF PAN FOR SPILL CURB)

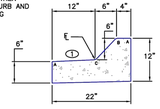
EPC OPTIONAL TYPE C

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



EPC TYPE D
(6" RAMP CURB)

① – GUTTER CROSS SLOPES SHALL BE 1/2 IN./FT. WHEN DRAINING AWAY FROM CURB AND 1 IN./FT. WHEN DRAINING TOWARD CURB.

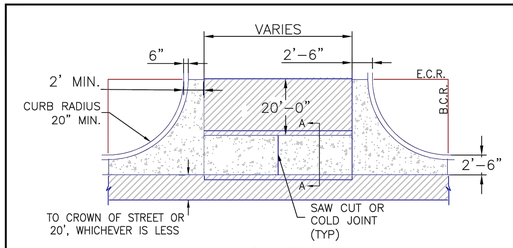


EPC TYPE E
(6" RAMP CURB)

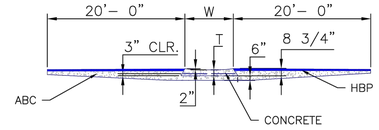
NOTE: SIDEWALK/CURB & GUTTER SHALL NOT BE POURED MONOLITHICALLY

SCALE: NOT TO SCALE

6/23/20 DATE APPROVED: Joshua J. Palmer DEPARTMENT OF PUBLIC WORKS	Typical Curb and Gutter Details Standard Drawing REVISION DATE: 7/18/23 FILE NAME: SD_2-20	EL PASO COUNTY COLORADO EST. 1861



PLAN VIEW



SECTION A–A

NOTES

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

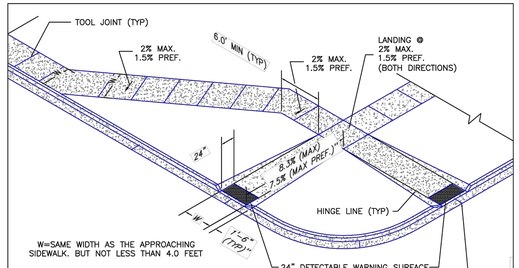
2. T = SQUARED–OFF RETURN TO BE POURED MONOLITHICALLY, 8" PCC FOR LOCAL ROADS, 9" FOR COLLECTORS WITH 6x6 – 4.4 W.W.F. OR #4 REINFORCING BAR @ 18" EACH WAY.

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

4. DESIGN TO SPECIFY ELEVATIONS AT PI AND PCR.

SCALE: NOT TO SCALE

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



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

PEDESTRIAN RAMP NOTES

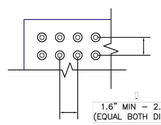
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT ENGINEERING CRITERIA MANUAL AND ADA REQUIREMENTS.
2. CONTRACTOR TO NOTIFY ENGINEERING DIVISION INSPECTION STAFF 48 HOURS PRIOR TO CONCRETE PLACEMENT.
3. PEDESTRIAN CURB RAMP CONSTRUCTION SHALL BE A MINIMUM 4,500 PSI CONCRETE, MINIMUM 4" THICK,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

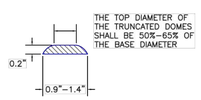
1. WHERE THE 1'–6" FLARED SIDE(S) OF A PERPENDICULAR CURB RAMP IS (ARE) CONTIGUOUS WITH A PEDESTRIAN OR HARD SURFACE AREA (PEDESTRIAN CIRCULATION PATH), THE MAXIMUM FLARE SLOPE SHALL NOT EXCEED 10:1.
2. PEDESTRIAN WALKWAY (PEDESTRIAN ACCESS ROUTE) AND/OR LOCATION OF EXISTING OR FUTURE PEDESTRIAN RAMPS 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 DATE APPROVED: Jennifer E. Irvine DEPARTMENT OF PUBLIC WORKS	Pedestrian Curb Ramp Detail Standard Drawing REVISION DATE: 6/23/20 FILE NAME: SD_2-41	DEPARTMENT OF PUBLIC WORKS EL PASO COUNTY COLORADO EST. 1861

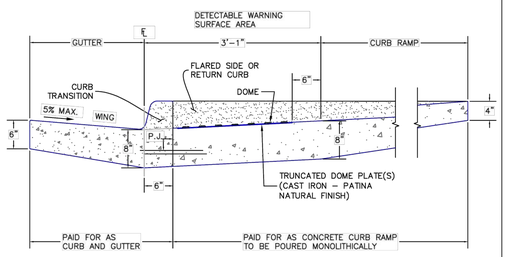
TRUNCATED DOME DETAILS



DOME SPACING



ELEVATION VIEW



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

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

6/23/20 DATE APPROVED: Jennifer E. Irvine DEPARTMENT OF PUBLIC WORKS	Detectable Warning Surface Details Standard Drawing REVISION DATE: 6/23/20 FILE NAME: SD_2-42	DEPARTMENT OF PUBLIC WORKS EL PASO COUNTY COLORADO EST. 1861

P:\ECM\July_2022_Edits\SD_2-20.dwg, Layout1, 7/27/2023 10:37:45 AM, ddonorfon, Supersedes All Previously Dated Sets

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RYAN E. BURNS, PE – 970.247.2.
539.391.1688 – RYAN@ATERRAINENG.COM
PAM F. BURNS, PE
303.517.1668 – PBURNS@ATERRAINENG.COM

PREPARED FOR:
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20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719) 491-3024
JMORLEY73870@AOL.COM

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

JOB NO: 24013
LOCATION: EPC

REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD - SEGMENT M3

COUNTY STREET DETAILS

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF ALL TERRAIN ENGINEERING

RYAN E. BURNS, P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE

DESIGN: REB
REVIEW: NQJ
DATE: 10/01/2026
H-SCALE: NA
V-SCALE: NA

SHEET
15 OF 15

MARKSHEFFEL ROAD SEGMENT M3

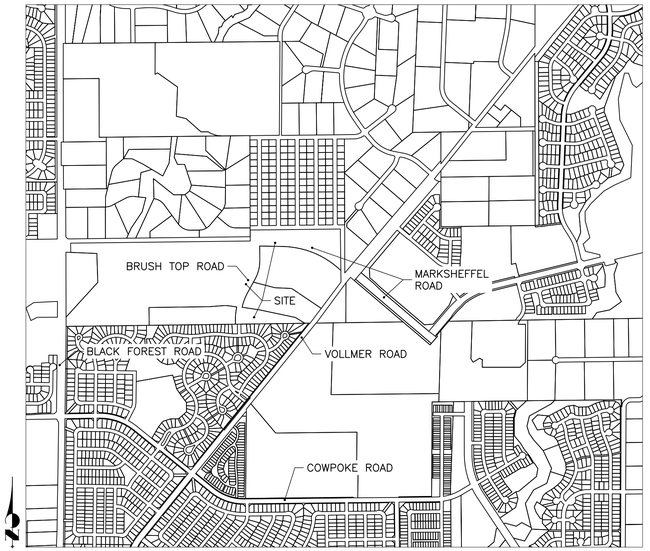
EL PASO COUNTY, COLORADO

STORM SEWER CONSTRUCTION DOCUMENTS

PCD FILE NO. CDR-2413

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS:

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



VICINITY MAP
SCALE: 1"=1000'

SHEET INDEX

1	–	COVER SHEET
2	–	LEGEND
3-8	–	STORM SEWER PLAN & PROFILE
9	–	EPC STORM DETAILS
10	–	CS STORM DETAILS

AGENCIES

OWNER/DEVELOPER:	TURKEY CANON QUARRY, LLC 20 BOULDER CRESCENT, SUITE 201 COLORADO SPRINGS, CO 80903 JAMES F. MORLEY (719) 471-1742	WATER & WASTEWATER:	FALCON AREA WATER & WASTEWATER AUTHORITY ENGINEERS - RESPEC 5540 E. TECH CENTER DR. COLORADO SPRINGS, CO 80919 719.227.0072
CIVIL ENGINEER:	ALL TERRAIN ENGINEERING LLC 1004 WEST VAN BUREN STREET COLORADO SPRINGS, CO 80907 RYAN BURNS P.E. 203.577.8656	FIRE DISTRICT:	BLACK FOREST FIRE PROTECTION DISTRICT 11445 TEACHOUT ROAD COLORADO SPRINGS, CO 80908 CHIEF BRYAN JACK (719) 495-4300
COUNTY ENGINEERING:	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 (719) 520-6300	GAS DEPARTMENT:	COLORADO SPRINGS UTILITIES 7710 DURANT DR. COLORADO SPRINGS, CO 80947 TIM WENDT (719) 668-3556
TRAFFIC ENGINEERING:	EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS 3275 AKERS DRIVE COLORADO SPRINGS, CO 80922 (719) 520-6300	ELECTRIC DEPARTMENT:	MOUNTAIN VIEW ELECTRIC 11140 E. WOODMEN ROAD FALCON, CO 80831 (719) 495-2283

BASIS OF BEARINGS

THE NORTH LINE OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 5, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN, BEING MONUMENTED AT THE NORTHEAST CORNER OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 5 BY A 3-1/4" ALUMINUM CAP STAMPED "LS 10376" AND AT THE NORTH QUARTER CORNER BY A 3-1/4" ALUMINUM CAP STAMPED "LS 4842 1996", BEARING S89°14'13"W.

BENCHMARKS (NGVD 29)

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

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

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

OWNER/DEVELOPER STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

JIM MORLEY — DATE

TURKEY CANON QUARRY LLC
20 BOULDER CRESCENT, SUITE 200
COLORADO SPRINGS, CO 80903

DISTRICT APPROVALS

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

FOR AND ON BEHALF OF THE STONEBRIDGE METRO DISTRICT — DATE

EL PASO COUNTY STATEMENT

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

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

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

JOSHUA J. PALMER, P.E. — DATE

COUNTY ENGINEER/ECM ADMINISTRATOR

ENGINEER'S STATEMENT

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

RYAN E. BURNS, P.E. — DATE
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

Know what's below. Call before you dig.

PCD FILE NO. CDR-2413

ALL TERRAIN ENGINEERING
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RYAN E. BURNS, PE
203.577.8656 - RBURNS@ATERRAINENG.COM

PREPARED FOR:
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JMORLEY73870@AOL.COM

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JOB NO: 24013
LOCATION: EPC

REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD SEGMENT M3

COVER

DESIGN: REB
REVIEW: NQJ
DATE: 10/20/2026
H-SCALE: 1"=1000'
V-SCALE: N/A

SHEET 1 OF 10

PLANEMETRICS

	EXISTING	PROPOSED
SECTION LINE		
RIGHT–OF–WAY		
PARCEL LINE		
EASEMENT LINE		
BOUNDARY LINE		
CENTER LINE		

CONSTRUCTION

	EXISTING	PROPOSED
C&G		
EDGE OF ASPHALT		
CONCRETE		
SIDE WALK		
CROSS PAN		
PARKING LOT STRIPING		
ROADWAY STRIPING – DASHED		
ROADWAY STRIPING – DOTTED		
GUARDRAIL		
FENCE		
SOUNDWALL		
DEMO		
GRAVEL		
RIPRAP		
DIRT		
TRAIL/PATH		
RAIL LINE		

GRADING

	EXISTING	PROPOSED
CONTOUR INTERMEDIATE		
CONTOUR INDEX		
TOP OF SLOPE		
TOE OF SLOPE		
CUT/FILL BOUNDARY		
LIMITS OF GRADING		LOG LOG LOG LOG LOG
LIMITS OF DISTURBANCE		

UTILITIES

	EXISTING	PROPOSED
SANITARY SEWER		SS SS SS SS
SANITARY SEWER SERVICE		SS SS SS SS
POTABLE WATER MAIN		W W W W
POTABLE WATER SERVICE		W W W W
RAW WATER MAIN	RAW	RAW RAW RAW
IRRIGATION MAIN		
SANITARY FORCE MAIN	FM	FM FM FM FM
UNDER–DRAIN	UD	UD UD UD UD
GAS PIPE	G	G G G G G
HIGH PRESSURE GAS	HPG	HPG HPG HPG HPG
OIL/PETROLEUM LINE	O	O O O O
UNDER–GROUND ELECTRIC	UGE	UGE UGE UGE UGE
OVER–HEAD ELECTRIC	OHU	OHU OHU OHU
FIBER OPTIC	FO	FO FO FO FO
COMMUNICATION LINES MISC.	COM	COM COM COM
STORM PIPE		
HGL MINOR		
HGL MAJOR		

DRAINAGE

	EXISTING	PROPOSED
BASE FLOOD ELEVATION		
100–YR FLOOD PLAIN	100YR	100YR 100YR
500–YR FLOOD PLAIN	500YR	500YR 500YR
FLOODWAY	FLOOD	FLOOD FLOOD
SWALE/DITCH		
THALWEG (STREAM/CREEK)		
LIMITS OF WETLANDS		
EDGE OF WATER		
SILT FENCE		
CONSTRUCTION FENCE/MARKERS		CF CF CF CF

UTILITY SYMBOLS

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE		
STORM INLET		
AREA INLET – SQUARE		
AREA INLET – ROUND		
FLARED END SECTION		

TRAFFIC

	EXISTING	PROPOSED
TRAFFIC SIGNAL BOX		
TRAFFIC SIGNAL POLE		
SIGN		
STREET LIGHT		
STREET LIGHT – SINGLE		
STREET LIGHT – DOUBLE		
LUMINAIRE		

LANDSCAPE

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

UTILITY SYMBOLS

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

ABBREVIATIONS:

ASCE – AMERICAN SOCIETY OF CIVIL ENGINEERS
BLDG – BUILDING
BW – BOTTOM OF WALL
CG – CURB AND GUTTER
CIP – CAST IRON PIPE
CL – CENTERLINE
CMP – CORRUGATED METAL PIPE
CONC – CONCRETE
DIP – DUCTILE IRON PIPE
DS – DOWNSPOUT
EL – ELEVATION
ESMT – EASEMENT
EX – EXISTING
FES – FLARED END SECTION
FL – FLOWLINE
GB – GRADE BREAK
HP – HIGH POINT
HYD – HYDRANT
INV – INVERT ELEVATION
LF – LINEAR FEET
LP – LOW POINT
MH – MANHOLE
MIN – MINIMUM
OH – OVERHEAD
PB – PUBLIC
PC – POINT OF CURVATURE
PCC – POINT OF COMPOUND CURVATURE
PCR – POINT OF CURB RETURN
PR – PROPOSED
PRC – POINT OF REVERSE CURVATURE
PVC – POLYVINYL CHLORIDE PIPE
PVT – PRIVATE
PT – POINT OF TANGENCY
P.U.E – PUBLIC UTILITY EASEMENT
P.U.A.E – PUBLIC UTILITY & ACCESS EASEMENT
P.U.D.E – PUBLIC UTILITY & DRAINAGE EASEMENT
P.I.E – PUBLIC IMPROVEMENT EASEMENT
R – RADIUS
RIM – RIM ELEVATION
STM – STORM
TBC – TOP BACK OF CURB
TW – TOP OF WALL
TYP – TYPICAL
UD – UNDERDRAIN
UT – UTILITY
WTR – WATER
XPAN – CROSSPAN

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

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

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JOB NO: 24013 LOCATION: EPC

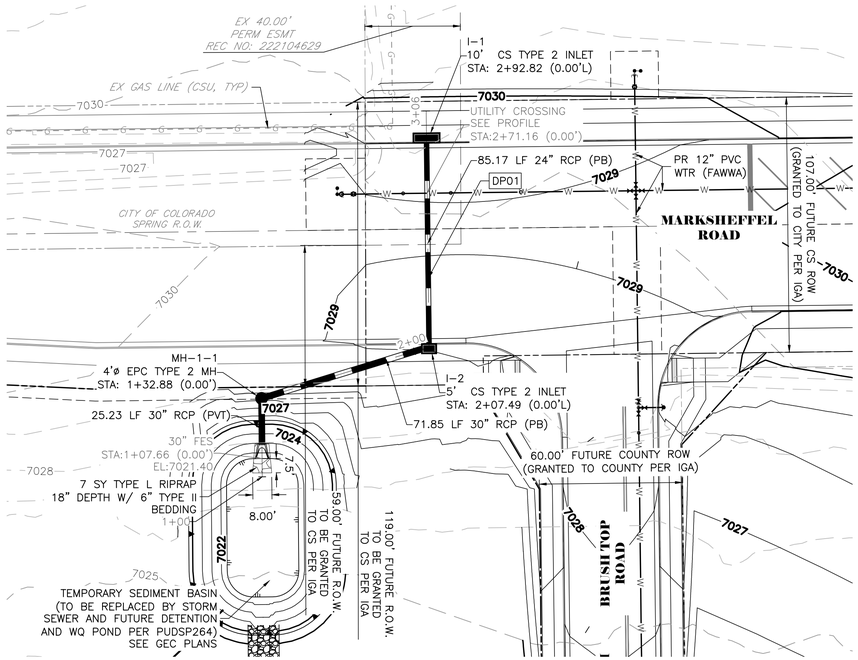
REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD SEGMENT M3

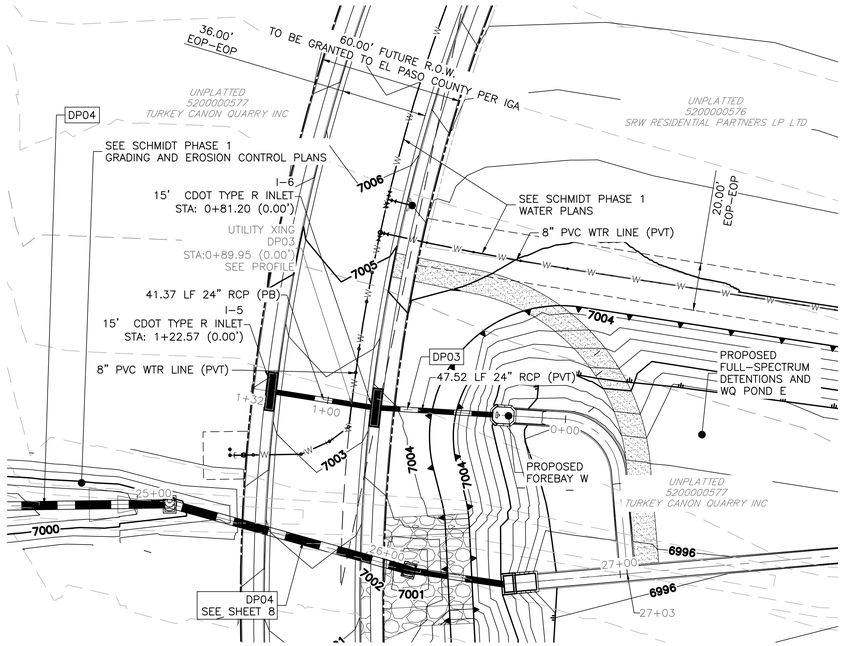
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DESIGN: REB
REVIEW: NQJ
DATE: 10/20/2026
H-SCALE: N/A
V-SCALE: N/A

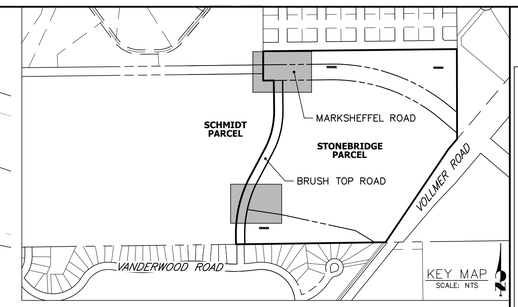
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2 OF 10

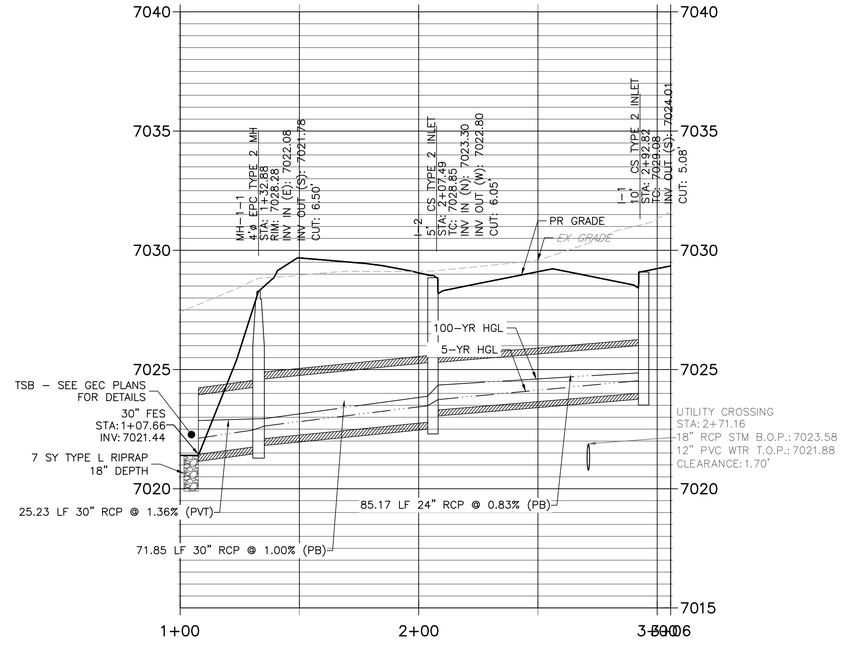


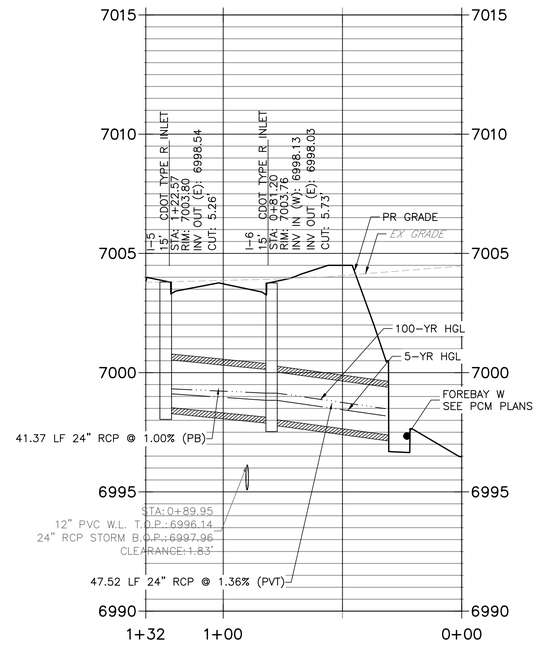
DP01
STA 1+00.00 TO 3+05.66

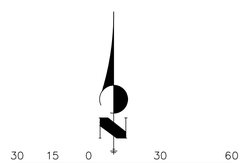


DP03
STA 0+00.00 TO 1+32.41









Know what's below. Call before you dig.

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

ENGINEER'S STATEMENT

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

RYAN E. BURNS, P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE

PCD FILE NO. CDR-2413

ALL TERRAIN ENGINEERING
RYAN E. BURNS, PE
719.491.3069 - RYAN@ALLTERRAINENG.COM
PAM F. EVERTZ, PE
303.377.1666 - PAM@ALLTERRAINENG.COM

PREPARED FOR:
TURKEY CANON QUARRY INC.
20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719) 491-3024
JMORLEY73870@AOL.COM

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

JOB NO: 24013 LOCATION: EPC

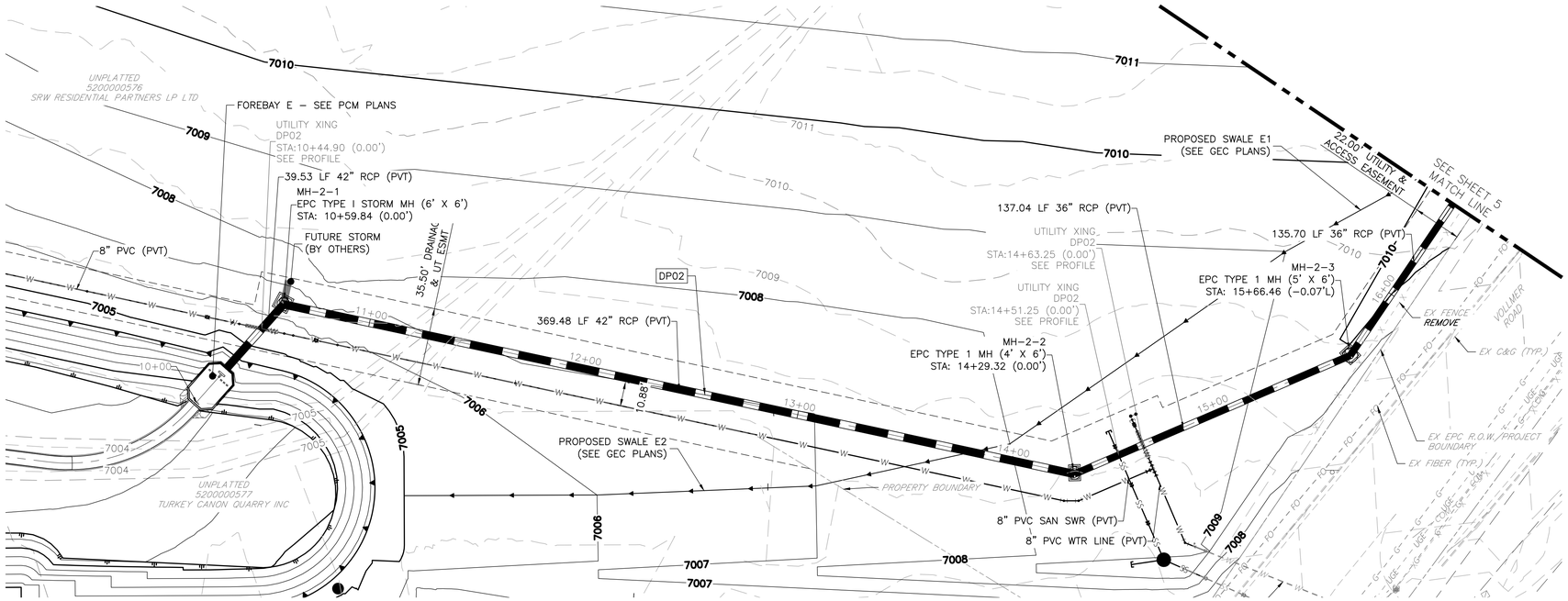
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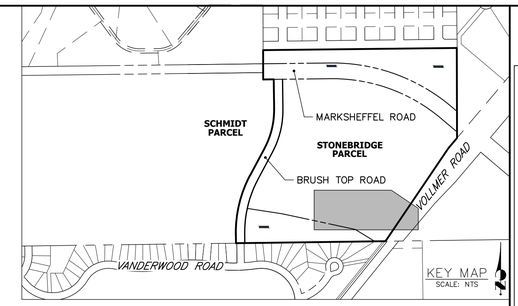
MARKSHEFFEL ROAD SEGMENT M3

STORM SEWER PLAN & PROFILE

DESIGN: REB
REVIEW: NQJ
DATE: 10/20/2026
H-SCALE: 1" = 30'
V-SCALE: 1" = 3'

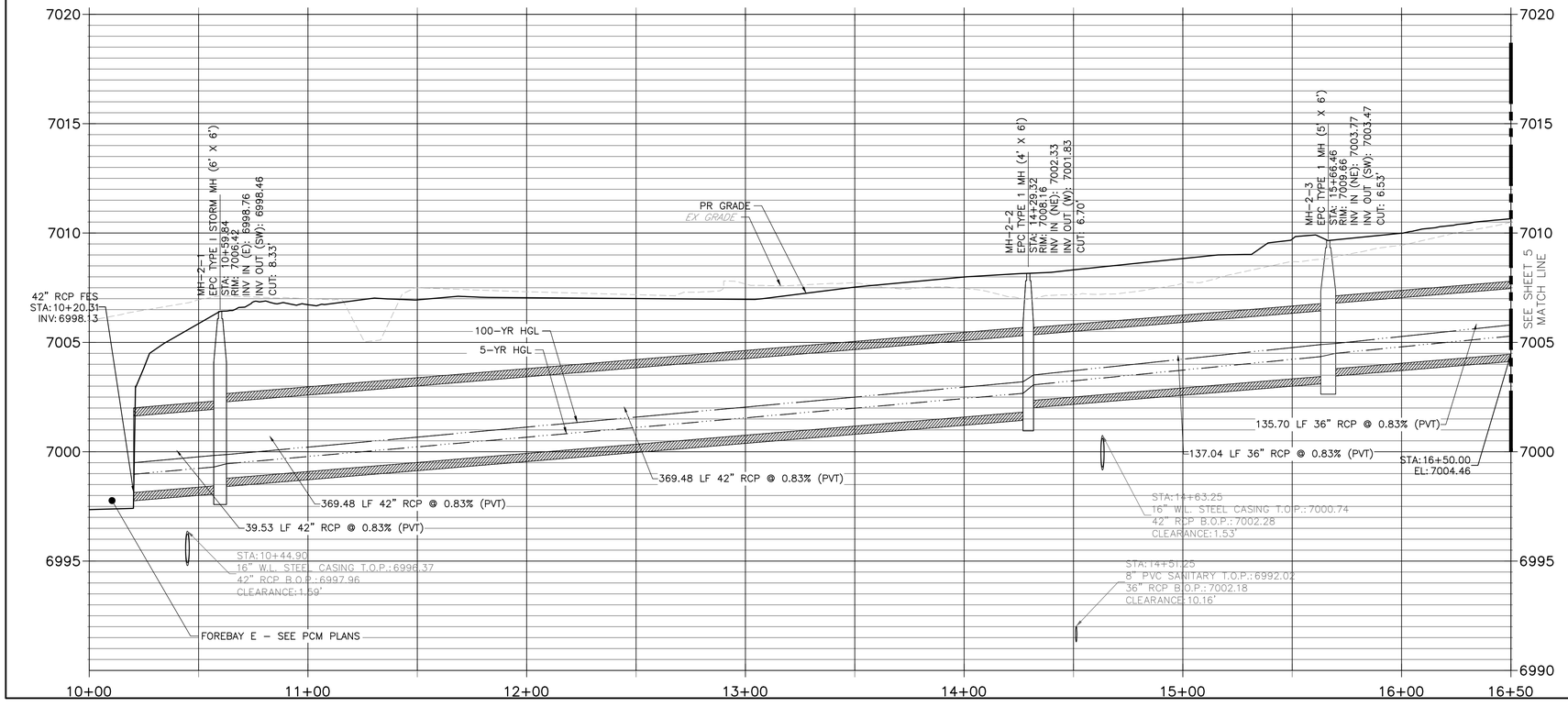
SHEET
3 OF 10





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DP02-1
STA 10+00.00 TO 16+50.00



PCD FILE NO. CDR-2413

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

30 15 0 30 60

ORIGINAL SCALE: 1" = 30'

ENGINEER'S STATEMENT

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RYAN E. BURNS, P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE

ALL TERRAIN ENGINEERING
RYAN E. BURNS, PE
719.377.6656 – RYAN@ALLTERRAINENG.COM
PAM F. BURNS, PE
719.377.6656 – PAM@ALLTERRAINENG.COM

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TURKEY CANON QUARRY INC.
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COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
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JMORLEY73870@AOL.COM

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JOB NO: 24013
LOCATION: EPC

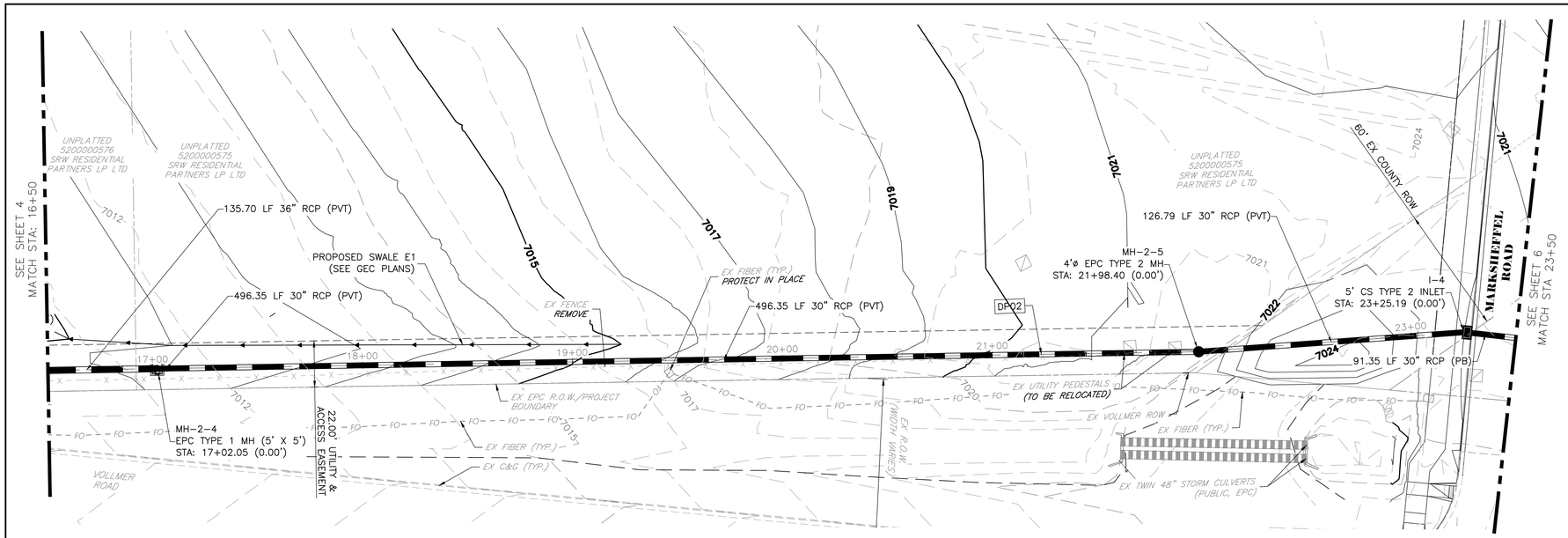
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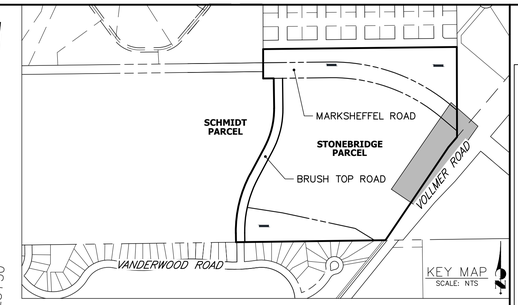
MARKSHEFFEL ROAD SEGMENT M3

STORM SEWER PLAN & PROFILE

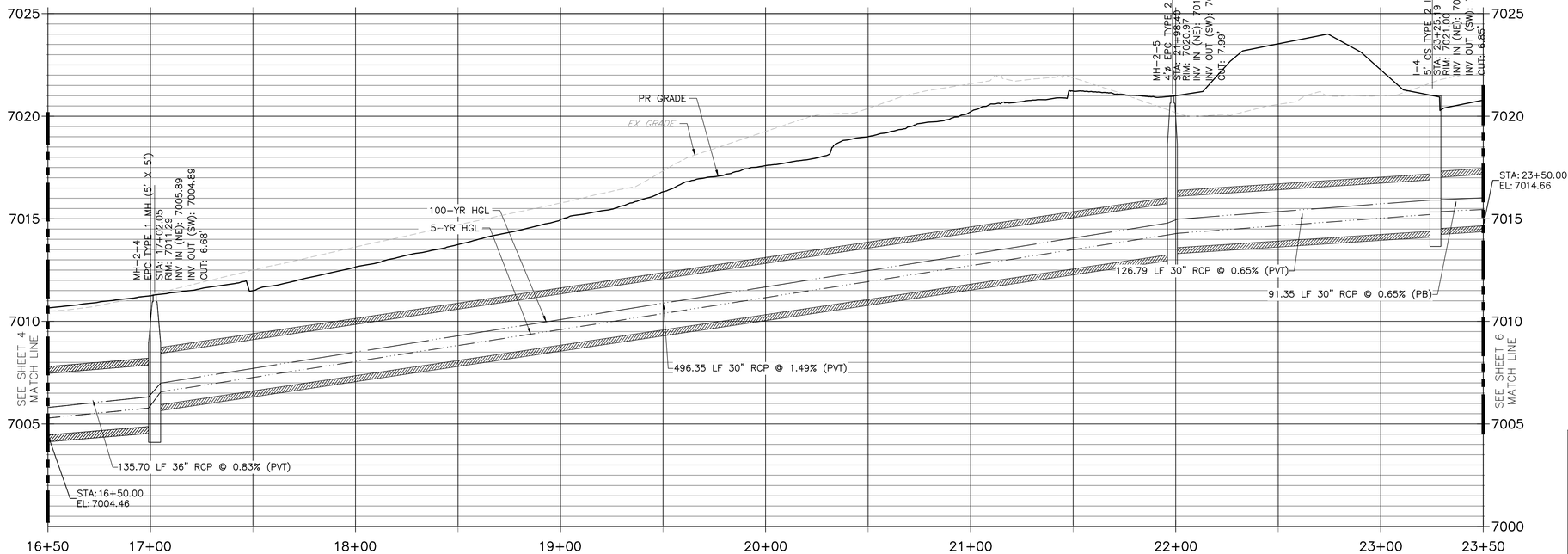
DESIGN: REB
REVIEW: NQJ
DATE: 10/20/2026
H-SCALE: 1" = 30'
V-SCALE: 1" = 3'

SHEET
4 OF 10





DP02-2
STA 16+50.00 TO 23+50.00



PCD FILE NO. CDR-2413

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

30 15 0 30 60
ORIGINAL SCALE: 1" = 30'

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RYAN E. BURNS, P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE

ALL TERRAIN ENGINEERING
RYAN E. BURNS, PE
719.377.1655 - RYAN@ATERRAINENG.COM
RYAN F. BURNS, PE
303.377.1655 - RYAN@ATERRAINENG.COM

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COLORADO SPRINGS, CO 80903
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JMORLEY73870@AOL.COM

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REV	DESCRIPTION	DATE

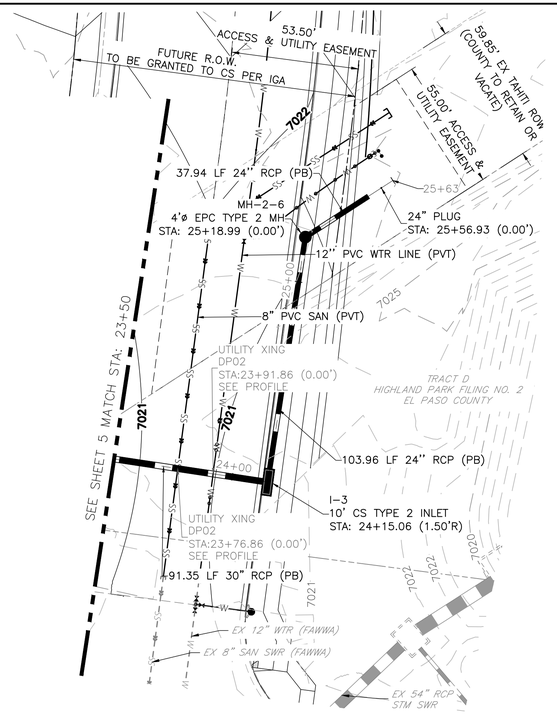
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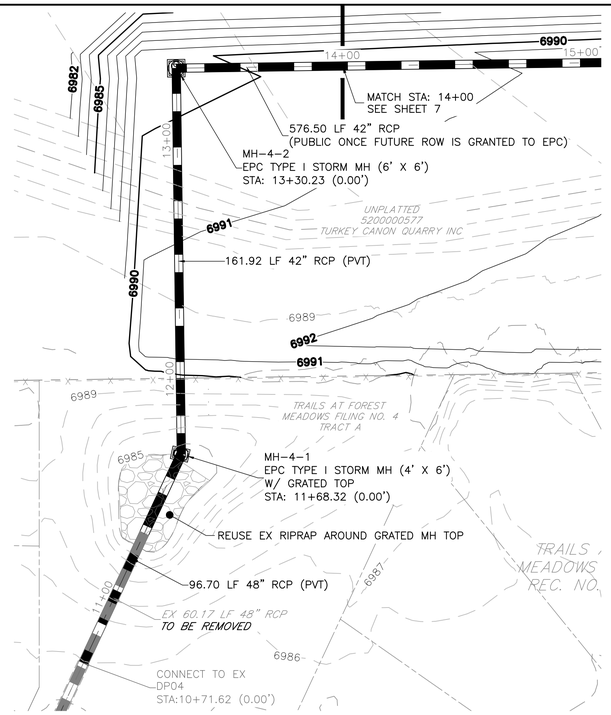
MARKSHEFFEL ROAD SEGMENT M3

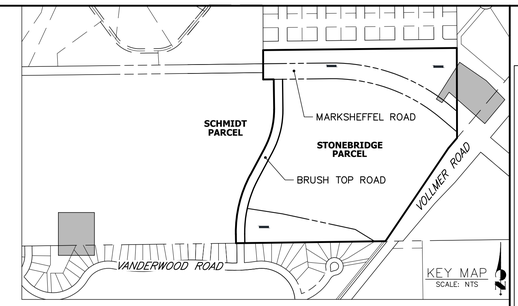
STORM SEWER PLAN & PROFILE

DESIGN: REB
REVIEW: NQJ
DATE: 10/20/2026
H-SCALE: 1" = 30'
V-SCALE: 1" = 3'

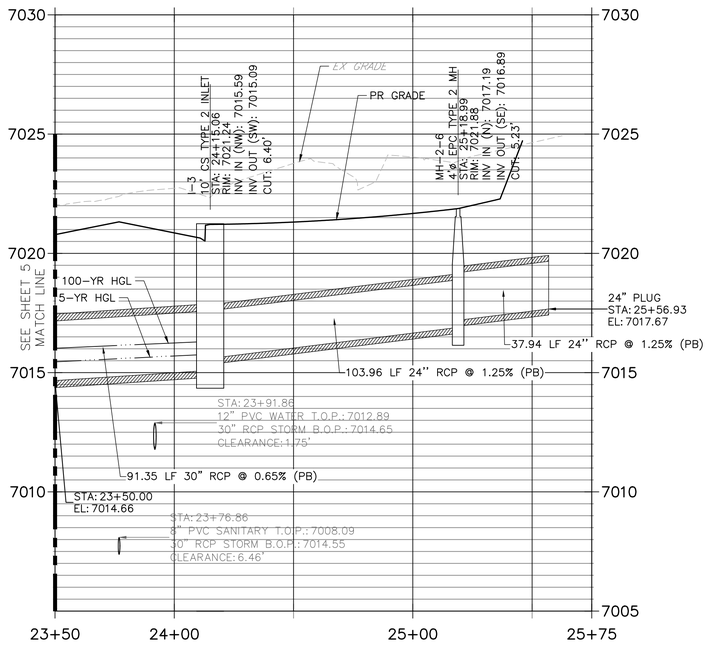
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5 OF 10





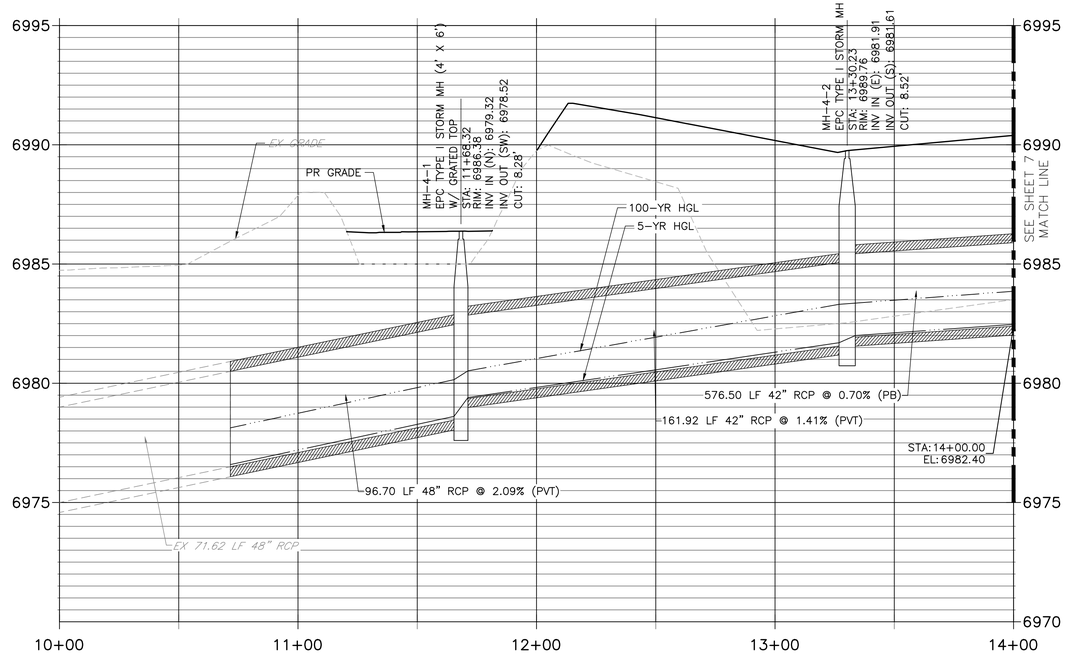


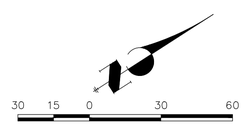
DP02-3
STA 23+50.00 TO 25+75.00



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DP04
STA 10+00.00 TO 14+00.00





Know what's below. Call before you dig.

ENGINEER'S STATEMENT

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RYAN E. BURNS, P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE

PCD FILE NO. CDR-2413

ALL TERRAIN ENGINEERING
NICHOLAS G. JOVICEVIC, PE
(303) 397-7656 - NJOVICEVIC@ALLTERRAINENG.COM
RYAN E. BURNS, PE
(303) 577-8656 - RBURNS@ALLTERRAINENG.COM

PREPARED FOR:
TURKEY CANON QUARRY INC.
20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719) 491-3024
JMORLEY13870@AOL.COM

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JOB NO: 24013 LOCATION: EPC

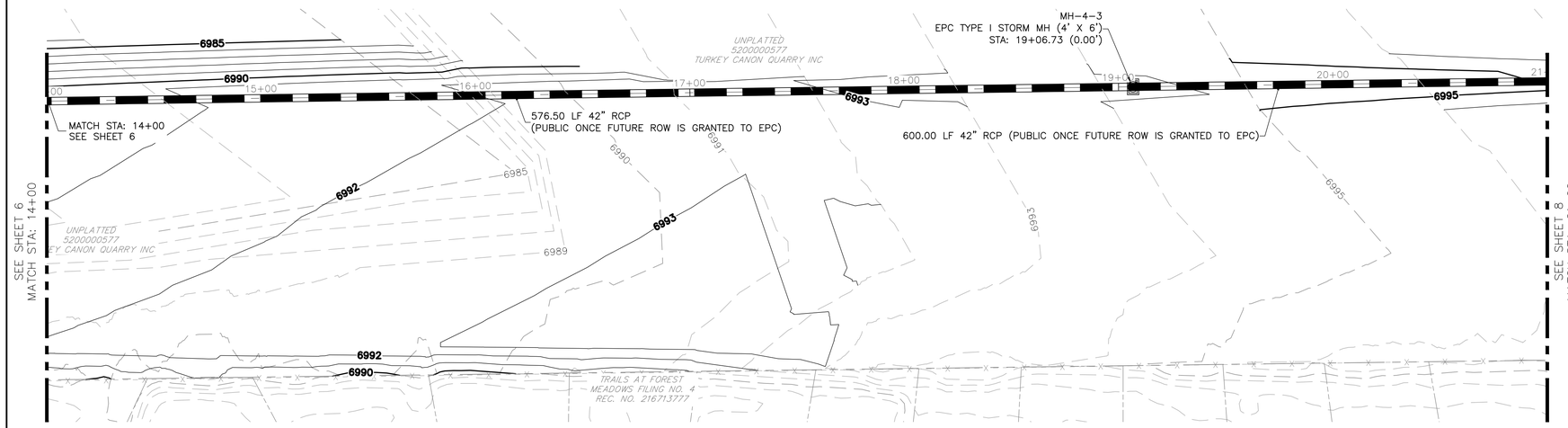
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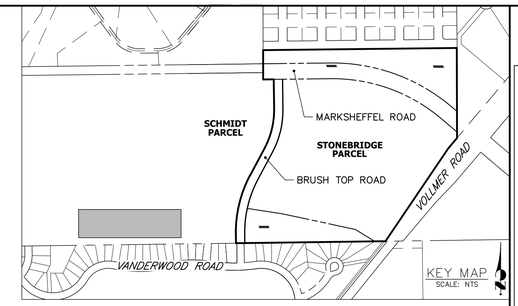
MARKSHEFFEL ROAD SEGMENT M3

STORM SEWER PLAN & PROFILE

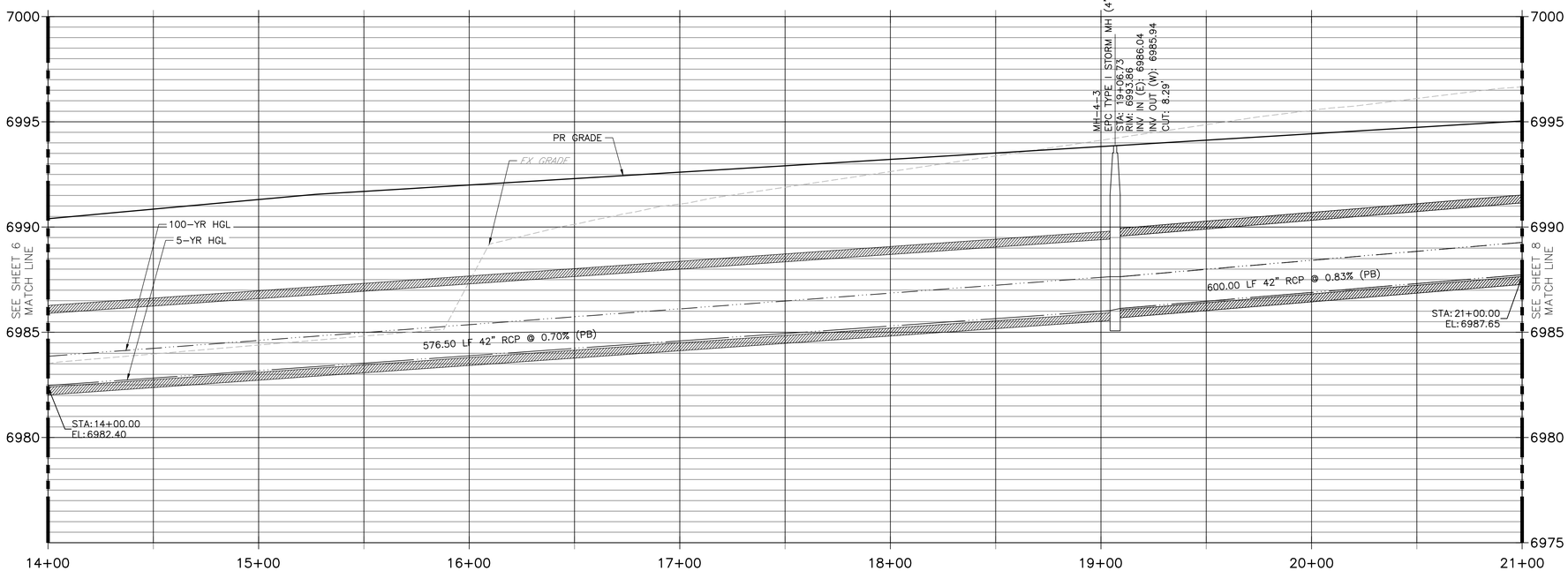
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REVIEW: NQJ
DATE: 10/20/2026
H-SCALE: 1" = 30'
V-SCALE: 1" = 3'

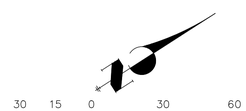
SHEET
6 OF 10





DP04-2
STA 14+00.00 TO 21+00.00





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

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PCD FILE NO. CDR-2413

ENGINEER'S STATEMENT

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RYAN E. BURNS, P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE

ALL TERRAIN ENGINEERING

RYAN E. BURNS, PE - RYAN@ALLTERRAINENG.COM
719.377.1655 - 4170 DUDLEY CT, COLORADO SPRINGS, CO 80907
EVAN F. EVERIST, PE - EVAN@ALLTERRAINENG.COM
303.577.8868 - 4170 DUDLEY CT, COLORADO SPRINGS, CO 80907

PREPARED FOR:
TURKEY CANON QUARRY INC.
20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
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JMORLEY3870@AOL.COM

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JOB NO: 24013 LOCATION: EPC

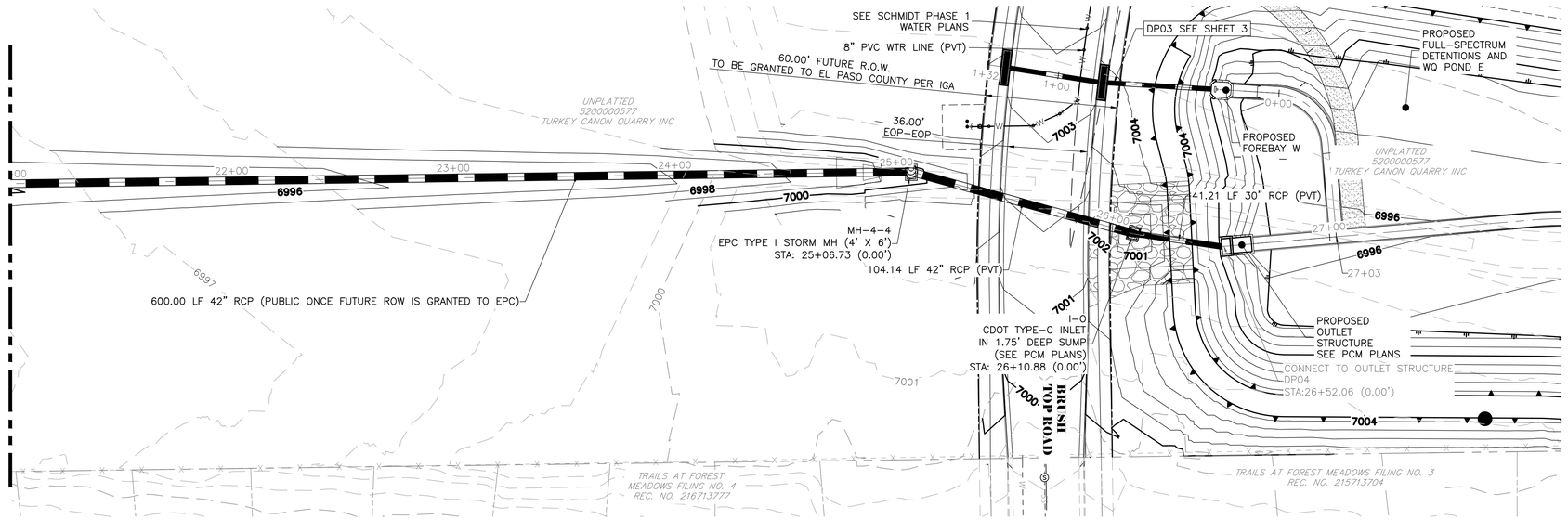
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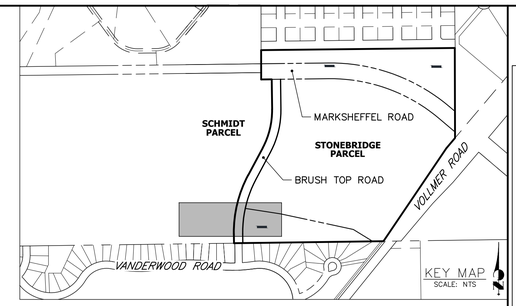
MARKSHEFFEL ROAD SEGMENT M3

STORM SEWER PLAN & PROFILE

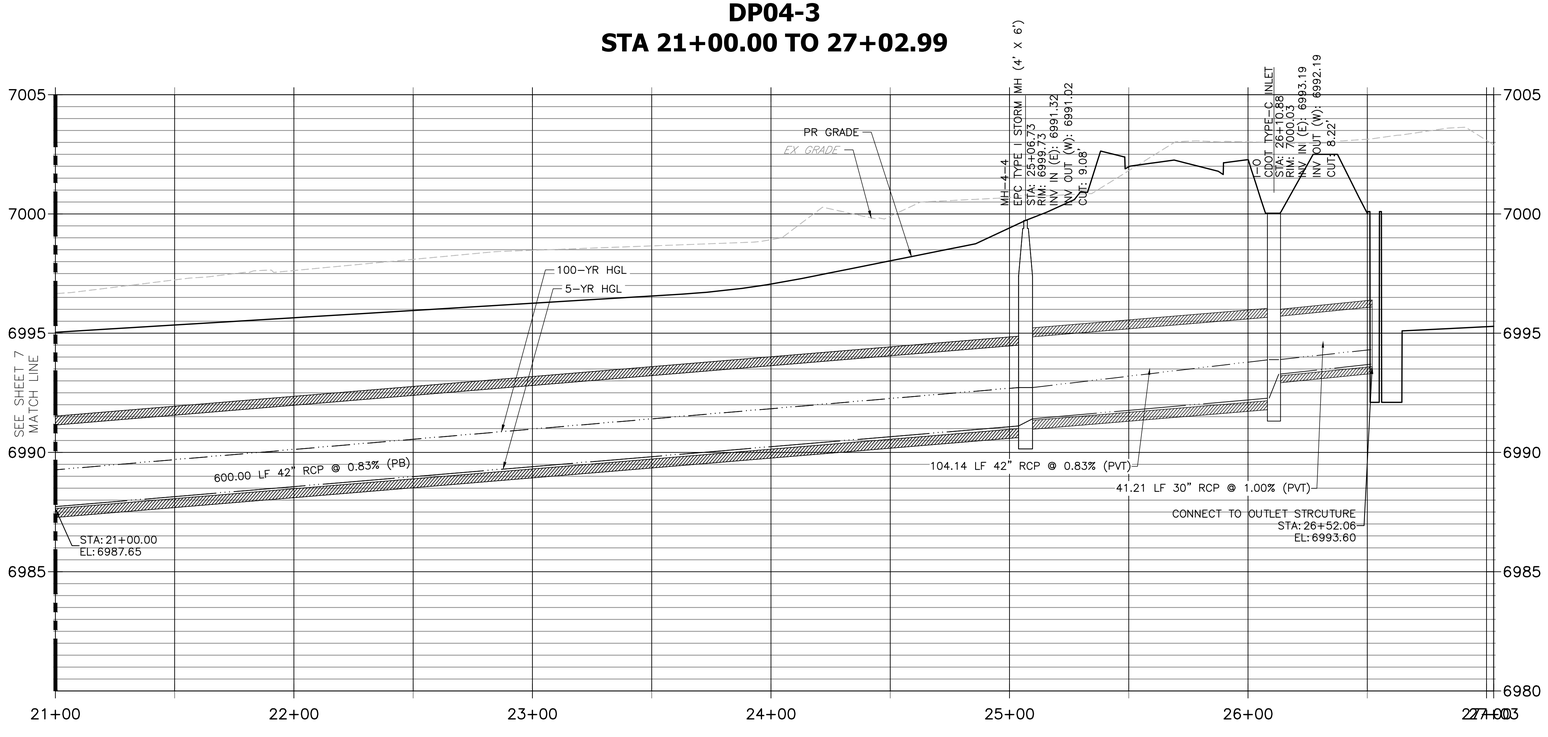
DESIGN: REB
REVIEW: NQJ
DATE: 10/20/2026
H-SCALE: 1" = 30'
V-SCALE: 1" = 3'

SHEET
7 OF 10





DP04-3
STA 21+00.00 TO 27+02.99



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PCD FILE NO. CDR-2413

30 15 0 30 60
ORIGINAL SCALE: 1" = 30'

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

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RYAN E. BURNS, P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE

ALL TERRAIN ENGINEERING
RYAN E. BURNS, PE
719.377.1655 - RYAN@ATERRAINENG.COM
MICHAEL Q. JOUCOFF, PE
530.391.1655 - MJOUCOFF@ATERRAINENG.COM

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JOB NO: 24013 LOCATION: EPC

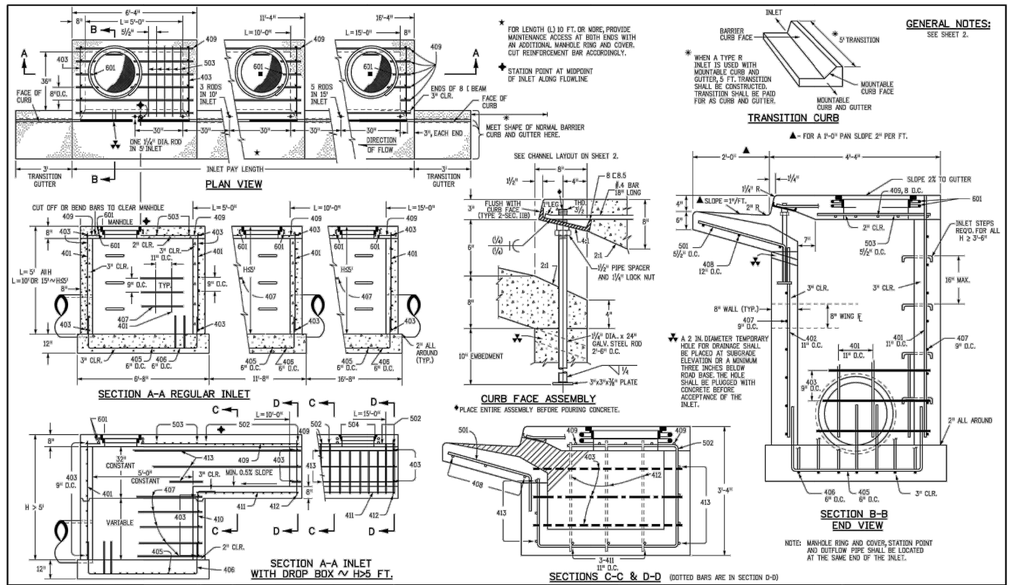
REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD SEGMENT M3

STORM SEWER PLAN & PROFILE

DESIGN: REB
REVIEW: NQJ
DATE: 10/20/2026
H-SCALE: 1" = 30'
V-SCALE: 1" = 3'

SHEET
8 OF 10



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

Colorado Department of Transportation		CURB INLET TYPE R	STANDARD PLAN NO.
2829 West Howard Place, CDOT HQ, 3rd Floor, Denver, CO 80204, Phones 303-757-9021 FAX: 303-757-9888			M-604-12
Project Development Branch	JBK	Issued by the Project Development Branch: July 31, 2019	Standard Sheet No. 1 of 2
			Project Sheet Number:

MARK	BAR # OR SIZE	O.C. SPACING	TYPE	ALL INLETS	INLETS: H ≤ 5 FT.				INLETS: H > 5 FT.			
					L = 5 FT.		L = 10 FT.		L = 15 FT.		L = 10 FT.		L = 15 FT.	
					NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH
401	4	11"	II	15	*	21	*	28	*	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	*	5'-10"	*	10'-10"	*	15'-10"	*	5'-10"	*	5'-10"
408	4	12"	II	3	6'-10"	3	11'-10"	3	16'-0"	3	11'-10"	3	16'-0"
409	4	8"	II	6	5'-10"	6	10'-10"	6	15'-10"	6	10'-10"	6	15'-10"
410	4	11"	VII							3	*	3	*
411	4	11"	II							3	5'-2"	3	10'-2"
412	4	11"	II							3	2'-8"	3	2'-8"
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	5'-0"	17	11'-5"
503	5	5½"	II	5	3'-6"	16	3'-6"	27	3'-6"	6	3'-6"	6	3'-6"
504	5	5½"	IX									5	8'-4"
601	6	7½"	V	2	8'-10"	2	8'-10"	2	8'-10"	2	8'-10"	4	8'-10"
■ RC8.5				1	5'-10"	1	10'-10"	1	15'-10"	1	10'-10"	1	15'-10"
				2 #4@5.1 RC05	—	4 #4@5.3 RC05	—	8 #4@5.5 RC05	—	4 #4@5.3 RC05	—	8 #4@5.5 RC05	—

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

REGULAR INLETS | DROP BOX INLETS

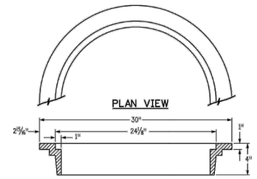
TABLE ONE ~ BAR LIST FOR CURB INLETS, TYPE "R"

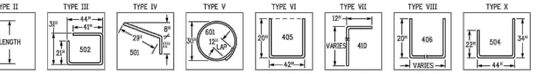
"H"	LENGTH			NO. REQ'D. REGULAR		NO. REQ'D. DROP BOX		L = 5 FT.		L = 10 FT.		L = 15 FT.	
	401	402	410	403	407	403	407	CONC. CU. YDS.	STEEL LBS.	CONC. CU. YDS.	STEEL LBS.	CONC. CU. YDS.	STEEL LBS.
3'-0"	2'-8"	1'-8"		10	7			3.2	285	5.3	497	7.4	706
3'-6"	3'-2"	2'-2"		10	7			3.4	305	5.7	528	7.9	747
4'-0"	3'-8"	2'-8"		12	9			3.7	326	6.0	559	8.4	786
4'-6"	4'-2"	3'-2"		12	9			3.9	334	6.4	571	8.8	803
5'-0"	4'-8"	3'-8"		14	11			4.1	354	6.7	602	9.3	844
5'-6"	5'-2"	4'-2"	3'-5"	16	13	15	6	4.4	375	6.0	607	7.4	850
6'-0"	5'-8"	4'-8"	3'-11"	16	13	16	6	4.6	382	6.2	615	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	431	7.1	684	8.5	927
8'-6"	8'-2"	7'-2"	6'-5"	24	21	23	14	5.7	471	7.3	702	8.7	944
9'-0"	8'-8"	7'-8"	6'-11"	24	21	24	14	6.0	479	7.6	711	9.0	954
9'-6"	9'-2"	8'-2"	7'-5"	26	23	26	16	6.2	499	7.8	732	9.2	974
10'-0"	9'-8"	8'-8"	7'-11"	28	25	27	18	6.4	520	8.0	749	9.4	992
10'-6"	10'-2"	9'-2"	8'-5"	28	25	28	18	6.7	527	8.3	759	9.7	1001
11'-0"	10'-8"	9'-8"	8'-11"	30	27	30	20	6.9	547	8.5	779	9.9	1022

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

TABLE TWO ~ BARS AND QUANTITIES VARIABLE WITH "H"

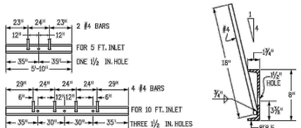






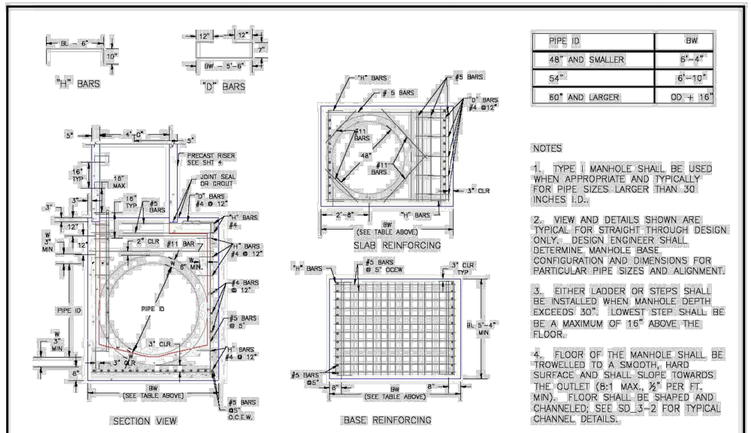
GENERAL NOTES

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



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

Colorado Department of Transportation		CURB INLET TYPE R	STANDARD PLAN NO.
2829 West Howard Place, CDOT HQ, 3rd Floor, Denver, CO 80204, Phones 303-757-9021 FAX: 303-757-9888			M-604-12
Project Development Branch	JBK	Issued by the Project Development Branch: July 31, 2019	Standard Sheet No. 2 of 2
			Project Sheet Number:



PIPE ID	BW
48" AND SMALLER	5'-4"
54"	6'-10"
60" AND LARGER	OD + 16"

NOTES

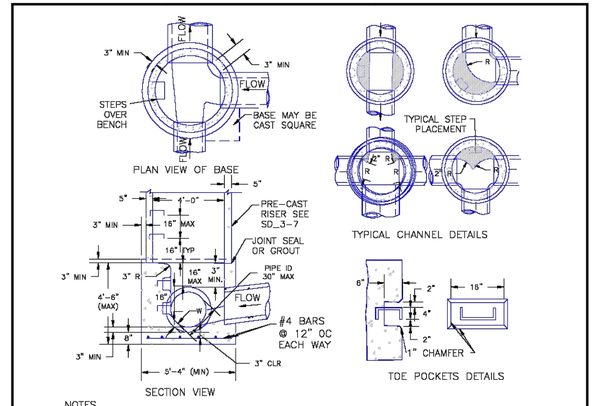
1. TYPE I MANHOLE SHALL BE USED WHEN APPROPRIATE AND TYPICALLY FOR PIPE SIZES LARGER THAN 30 INCHES I.D..

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.

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



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.

ENGINEER'S STATEMENT

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

RYAN E. BURNS, P.E. — DATE
COLORADO P.E. 0054412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING, LLC

ALL TERRAIN ENGINEERING
719.491.3024 — JMORLEY3870@AOL.COM
PREPARED FOR:
TURKEY CANON QUARRY INC.
20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719) 491-3024
JMORLEY3870@AOL.COM
PREPARED BY:
RYAN E. BURNS, PE
330.317.1655 — RYAN.BURNS@ALLTERRAINENG.COM
MICHAEL Q. JOVICEVIC, PE
330.317.1655 — MICHAEL.JOVICEVIC@ALLTERRAINENG.COM

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

JOB NO: 24013 LOCATION: EPC

REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD SEGMENT M3

EPC STORM DETAILS

DESIGN: REB
REVIEW: NQJ
DATE: 10/20/2026
H-SCALE: N/A
V-SCALE: N/A

SHEET 9 OF 10

General Notes:

1. All work shall be done in accordance with current City of Colorado Springs Engineering Division (the City) Standard Specifications.
2. The contractor shall obtain all required permits. For city permits contractors shall use the ACCELA on-line permit system. Once city permits are approved and paid, then appropriate scheduling and notifications shall be in ACCELA.
3. Curb face assembly shall be painted safety yellow. One coat of shop primer and two coats of industrial enamel paint shall be used.
4. Concrete used for inlets and connections shall be a City-approved structural concrete mix design.
5. A minimum of 6-inches thick of granular bedding material shall be provided below all inlets.
6. Reinforcing bars shall be ASTM A615, Grade 60 deformed steel marked with bar designation, grade and mill marking.
7. Reinforcing shall have a minimum 2-inch clearance, except as noted.
8. Pipe entries into inlets are variable; the dimensions and reinforcing details shown are typical.
9. Inlet floors shall be channelized and finished with a City-approved concrete mix to a smooth surface that slopes towards the outlet (2% min. for inlets). Floor slope shall either be poured monolithic with the base or after floor and pipe openings are constructed. Epoxy between pipe and invert if there is a cold joint.
10. Curb inlet depth and length may vary. Curb inlet length shall be 5-feet, 10-feet, or 15-feet; not to exceed 15-feet unless approved by Stormwater Enterprise. Where curb inlets with lengths greater than 10-feet are approved, provide maintenance access at both ends; ensure inlet and outlet pipes are near to these access points.
11. Curb inlet top deck slab shall be sloped toward the street (0.5% min.; 2% max.).
12. The opening and top deck slab of curb inlets shall match the running slope of the street grade and/or the designed curb line profile at each location. Curb inlets shall not create unnecessary dips or bumps in the roadway cross section which adversely affect drivability of the pavement surface.
13. Stub-outs shall extend a minimum of 2-foot beyond outside wall surface of inlets and shall be plugged as approved by the Inspector.
14. No formwork shall remain inside inlets after completion.
15. Concrete walls shall be formed on both sides. Casting of sidewalls against earth is not permitted.
16. Exposed concrete corners shall be chamfered 3/4-inch. Curb and gutter corners shall be finished to match the existing curb and gutter beyond the transition for curb inlets.
17. A minimum of one vertical support bar is required. Curb inlets greater than 5-feet wide shall have support bars installed at maximum 3-foot intervals evenly spaced across the opening.
18. Grates for area inlets shall be installed during construction of the box, with the grate bolted to the frame.
19. Steps shall be installed for inlets with internal height greater than 30-inches at 16-inches spacing with the top step located 16 to 18-inches below the lid. Steps shall conform to AASHTO M-199. Steps shall align vertically and shall not interfere with pipe openings.
20. Outer wall of pipe shall be a minimum of 6-inches from interior side walls and top of inlets.
21. All reinforcement dimensions are on-center (O.C.) unless otherwise noted.
22. Precast inlets may be used upon annual City acceptance of shop drawings and concrete mix design. Contractor shall provide proof of acceptance prior to installation.
23. Precast base slab shall be poured monolithically with bottom riser section.
24. Precast base shall fit the conditions and locations for which they are intended without any field modifications. Bases which require field cutting or modification in order to fit the location intended will be rejected by the Inspector and removed and replaced by the contractor at no additional cost.
25. Storm sewers shall have tracer wire installed per the tracer wire detail prior to acceptance.
26. Cast-in-place inlets greater than 10-feet in depth shall be designed by a structural engineer per section 636 for the City Specifications and structural calculations shall be submitted with the drainage plan and profile drawings for review. If field conditions change and modifications to the cast-in-place inlet are required, modifications to the inlet will be designed by a structural engineer and calculation and drawing submitted to development review for acceptance.
27. Precast inlets shall have shop drawings submitted to the inspector at the time of installation and meet the requirements of ASTM C-789 and C-850. If field conditions change and modifications to the precast inlet are required, modifications to the inlet will be designed and complete by the precast manufacturer. A letter will be provided to the inspector stating the modifications do not alter the structural integrity of the inlet.

Inlet Type	Maximum Pipe Size (I.D.)			
	Straight Side	Angled (Max. 45°)		
		Side	Back & Front (5')	Back & Front (10')
Curb Inlet Type 1	24"	15"	24"	60"
Curb Inlet Type 2	18"	<12"	24"	60"
Curb Inlet Type 3 (Single)	18"	12"	18"	–
Curb Inlet Type 3 (Double)	18"	12"	–	42"
Curb Inlet Type 4	15"	–	24"	60"
Area Inlet Type 1 (Single)	21"	12"	–	–
Area Inlet Type 1 (Double)	21"	18"	–	30"
Area Inlet Type 2	30"	18"	–	–

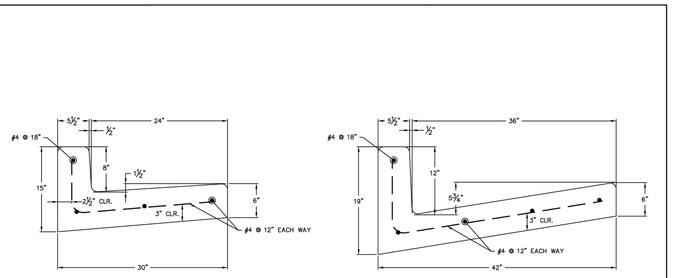
Alternate sizing and angles are listed in the Drainage Criteria Manual

COLORADO SPRINGS

STORM DRAIN
INLET GENERAL NOTES

APPROVED: Jayla Sturdivant, CITY ENGINEER

ISSUED:	REVISED:	DRAWING NO.
7/8/24		D-9A



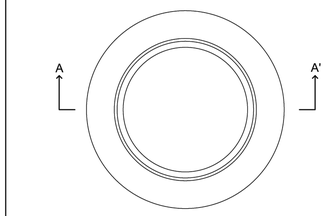
CURB AND GUTTER TRANSITION

COLORADO SPRINGS

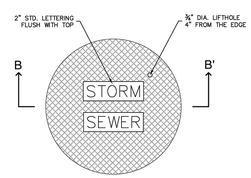
STORM DRAIN
CURB & GUTTER TRANSITION

APPROVED: Jayla Sturdivant, CITY ENGINEER

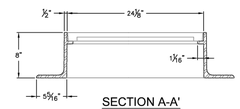
ISSUED:	REVISED:	DRAWING NO.
7/8/24		D-9B



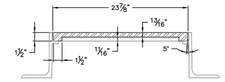
PLAN VIEW - RING



PLAN VIEW - COVER



SECTION A-A'



SECTION B-B'

NOTES:

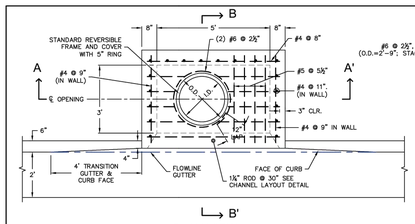
1. DECORATIVE LIDS MAY BE USED WITH PRE-APPROVAL.
2. DECORATIVE LIDS SHALL NOT BE USED WHERE LIDS WILL BE IN THE SIDEWALK.

COLORADO SPRINGS

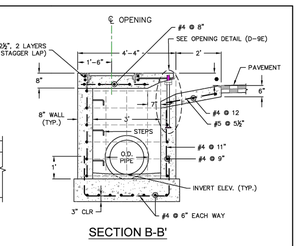
STORM DRAIN
STORM SEWER
FRAME AND COVER

APPROVED: Jayla Sturdivant, CITY ENGINEER

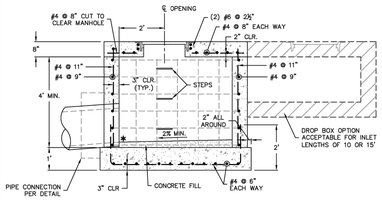
ISSUED:	REVISED:	DRAWING NO.
7/8/24		D-9D



PLAN VIEW

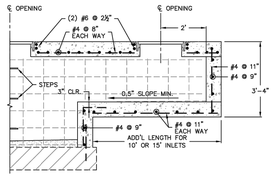


SECTION B-B'



*MINIMUM CONCRETE INVERT DEPTH SHALL EQUAL PIPE WALL THICKNESS

SECTION A-A'



COLORADO SPRINGS

STORM DRAIN
CURB INLET TYPE 2

APPROVED: Jayla Sturdivant, CITY ENGINEER

ISSUED:	REVISED:	DRAWING NO.
7/8/24		D-9C

ALL TERRAIN ENGINEERING
4676 F. EVERGREEN PKWY
303.577.8656 - 720.810.9441 TERRAINENG@AOL.COM
4676 F. EVERGREEN PKWY
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PREPARED FOR:
TURKEY CANON QUARRY INC.
20 BOULDER CRESCENT STREET, SUITE 100
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ATTN: JIM MORLEY
(719) 491-3024
JMORLEY73870@AOL.COM

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

REV	DESCRIPTION	DATE

JOB NO: 24013 LOCATION: EPC

MARKSHEFFEL ROAD SEGMENT M3

CS STORM DETAILS

DESIGN: REB
REVIEW: NQJ
DATE: 10/20/2026

H-SCALE: N/A
V-SCALE: N/A

SHEET
10 OF 10

ENGINEER'S STATEMENT

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

COLORADO REGISTERED RYAN E. BURNS 0054412 PROFESSIONAL ENGINEER

0054412

RYAN E. BURNS, P.E.
COLORADO P.E. 0054412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE

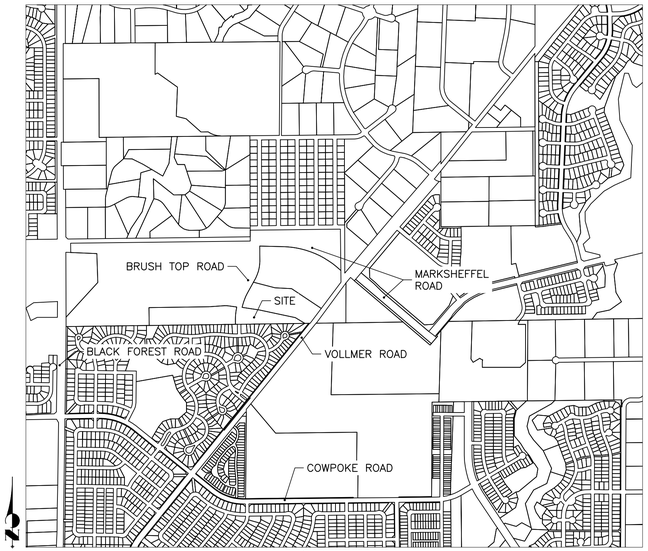
MARKSHEFFEL ROAD - SEGMENT 3 CD

EL PASO COUNTY, COLORADO

PERMANENT CONTROL MEASURE CONSTRUCTION DRAWINGS

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS:

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



VICINITY MAP
SCALE: 1"=1000'

SHEET INDEX

1 - COVER SHEET
2 - LEGEND
3 - POND GRADING
4 - FOREBAY W DETAILS
5 - FOREBAY E DETAILS
6 - FOREBAY E DETAILS
7 - OUTLET STRUCTURE DETAILS
8 - OUTLET STRUCTURE DETAILS (CONT.)

AGENCIES

OWNER/DEVELOPER:	TURKEY CANON QUARRY, LLC 20 BOULDER CRESCENT, SUITE 201 COLORADO SPRINGS, CO 80903 JAMES F. MORLEY (719) 471-1742	WATER & WASTEWATER:	FALCON AREA WATER & WASTEWATER AUTHORITY ENGINEERS - RESPEC 5540 E. TECH CENTER DR. COLORADO SPRINGS, CO 80919 719.227.0072
CIVIL ENGINEER:	ALL TERRAIN ENGINEERING LLC 1004 WEST VAN BUREN STREET COLORADO SPRINGS, CO 80907 RYAN BURNS P.E. 203.577.8656	FIRE DISTRICT:	BLACK FOREST FIRE PROTECTION DISTRICT 11445 TEACHOUT ROAD COLORADO SPRINGS, CO 80908 CHIEF BRYAN JACK (719) 495-4300
COUNTY ENGINEERING:	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 (719) 520-6300	GAS DEPARTMENT:	COLORADO SPRINGS UTILITIES 7710 DURANT DR. COLORADO SPRINGS, CO 80947 TIM WENDT (719) 668-3556
TRAFFIC ENGINEERING:	EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS 3275 AKERS DRIVE COLORADO SPRINGS, CO 80922 (719) 520-6300	ELECTRIC DEPARTMENT:	MOUNTAIN VIEW ELECTRIC 11140 E. WOODMEN ROAD FALCON, CO 80831 (719) 495-2283

BASIS OF BEARINGS

THE NORTH LINE OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 5, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN, BEING MONUMENTED AT THE NORTHEAST CORNER OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 5 BY A 3-1/4" ALUMINUM CAP STAMPED "LS 10376" AND AT THE NORTH QUARTER CORNER BY A 3-1/4" ALUMINUM CAP STAMPED "LS 4842 1996", BEARING S89°14'13"W.

BENCHMARKS (NGVD 29)

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

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

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

OWNER/DEVELOPER STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

JIM MORLEY — DATE

TURKEY CANON QUARRY LLC
20 BOULDER CRESCENT, SUITE 200
COLORADO SPRINGS, CO 80903

DISTRICT APPROVALS

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

FOR AND ON BEHALF OF THE STONEBRIDGE METRO DISTRICT — DATE

EL PASO COUNTY STATEMENT

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

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

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

JOSHUA J. PALMER, P.E. — DATE

COUNTY ENGINEER/ECM ADMINISTRATOR

ENGINEER'S STATEMENT

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

RYAN E. BURNS, P.E. — DATE
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

Know what's below. Call before you dig.

ALL TERRAIN ENGINEERING
MICHAEL G. JOVICEVIC, PE
559.391.1655 - MJOVICEVIC@ATENGINEERING.COM
RYAN E. BURNS, PE
303.577.8656 - RBURNS@ATENGINEERING.COM

PREPARED FOR:
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20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719)
JMORLEY3870@AOL.COM

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

JOB NO: 24013 LOCATION: EPC

REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD - SEGMENT 3 CD

COVER SHEET

DESIGN: REB
REVIEW: NQJ
10/29/2026

H-SCALE: 1"=1000'
V-SCALE: N/A

SHEET 1 OF 8

PLANEMETRICS

	EXISTING	PROPOSED
SECTION LINE		
RIGHT–OF–WAY		
PARCEL LINE		
EASEMENT LINE		
BOUNDARY LINE		
CENTER LINE		

CONSTRUCTION

	EXISTING	PROPOSED
C&G		
EDGE OF ASPHALT		
CONCRETE		
SIDE WALK		
CROSS PAN		
PARKING LOT STRIPING		
ROADWAY STRIPING – DASHED		
ROADWAY STRIPING – DOTTED		
GUARDRAIL		
FENCE		
SOUNDWALL		
DEMO		
GRAVEL		
RIPRAP		
DIRT		
TRAIL/PATH		
RAIL LINE		

GRADING

	EXISTING	PROPOSED
CONTOUR INTERMEDIATE		
CONTOUR INDEX		
TOP OF SLOPE		
TOE OF SLOPE		
CUT/FILL BOUNDARY		
LIMITS OF GRADING		LOG LOG LOG LOG LOG
LIMITS OF DISTURBANCE		

UTILITIES

	EXISTING	PROPOSED
SANITARY SEWER		SS SS SS SS
SANITARY SEWER SERVICE		SS SS SS SS
POTABLE WATER MAIN	W W W W W	W W W W
POTABLE WATER SERVICE	W W W W	W W W W
RAW WATER MAIN	RAW RAW RAW RAW	RAW RAW RAW
IRRIGATION MAIN		
SANITARY FORCE MAIN	FM FM FM FM FM	FM FM FM FM
UNDER–DRAIN	UD UD UD UD UD	UD UD UD UD
GAS PIPE	G G G G G G	G G G G
HIGH PRESSURE GAS	HPG HPG HPG HPG HPG	HPG HPG HPG HPG
OIL/PETROLEUM LINE	O O O O O O	O O O O
UNDER–GROUND ELECTRIC	UGE UGE UGE UGE UGE	UGE UGE UGE UGE
OVER–HEAD ELECTRIC	OHU OHU OHU OHU OHU	OHU OHU OHU OHU
FIBER OPTIC	FO FO FO FO FO	FO FO FO FO
COMMUNICATION LINES MISC.	COM COM COM COM COM	COM COM COM COM
STORM PIPE		
HGL MINOR		
HGL MAJOR		

DRAINAGE

	EXISTING	PROPOSED
BASE FLOOD ELEVATION		
100–YR FLOOD PLAIN	100YR 100YR 100YR	100YR 100YR 100YR
500–YR FLOOD PLAIN	500YR 500YR 500YR	500YR 500YR 500YR
FLOODWAY	FLOOD FLOOD FLOOD	FLOOD FLOOD FLOOD
SWALE/DITCH		
THALWEG (STREAM/CREEK)		
LIMITS OF WETLANDS		
EDGE OF WATER		
SILT FENCE		
CONSTRUCTION FENCE/MARKERS		CF CF CF CF

UTILITY SYMBOLS

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE		
STORM INLET		
AREA INLET – SQUARE		
AREA INLET – ROUND		
FLARED END SECTION		

TRAFFIC

	EXISTING	PROPOSED
TRAFFIC SIGNAL BOX		
TRAFFIC SIGNAL POLE		
SIGN		
STREET LIGHT		
STREET LIGHT – SINGLE		
STREET LIGHT – DOUBLE		
LUMINAIRE		

LANDSCAPE

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

UTILITY SYMBOLS

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

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

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

ALL TERRAIN ENGINEERING

RYAN E. BYERLY, PE
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NICHOLAS Q. JOVICEVIC, PE
559.291.1933 – NICK@ATERRAINGROUP.COM

PREPARED FOR:
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JMORLEY3870@AOL.COM

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

JOB NO. 24013
LOCATION: EPC

REV	DESCRIPTION	DATE

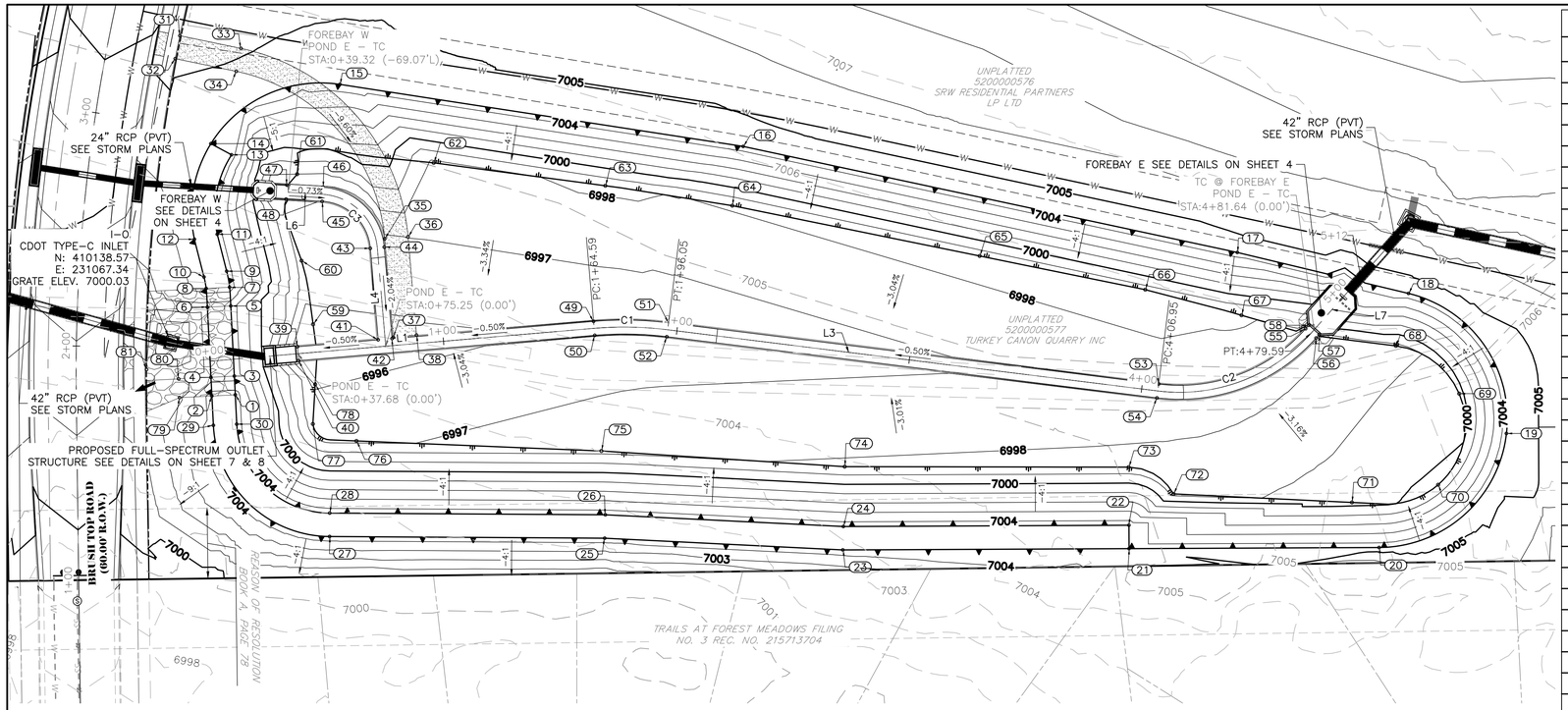
MARKSHEFFEL ROAD – SEGMENT 3 CD

LEGEND

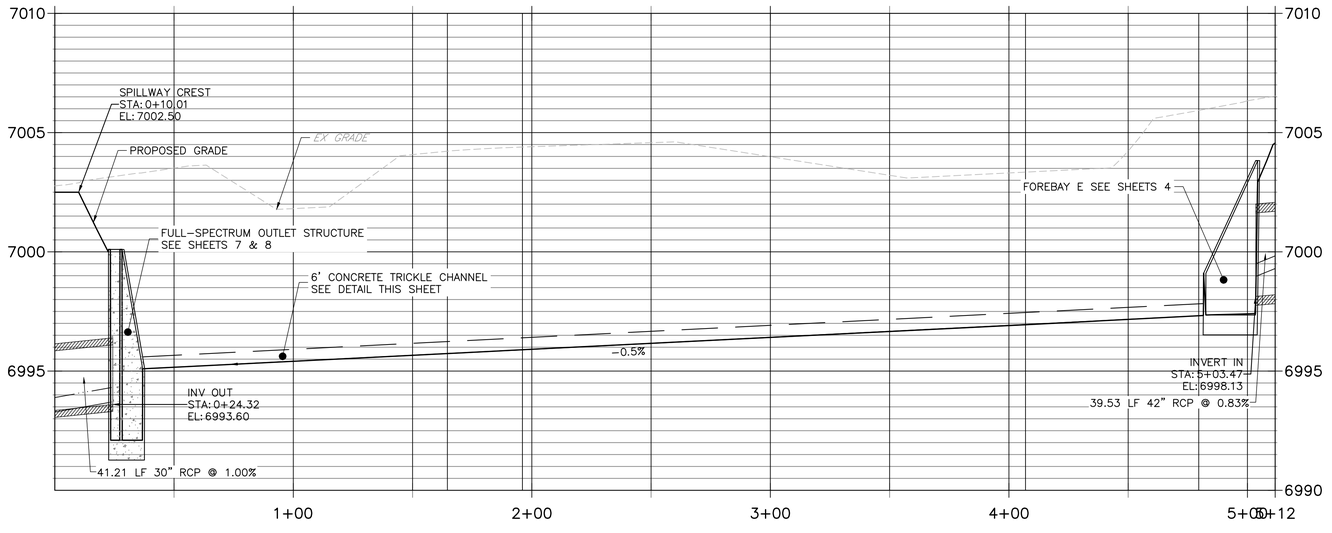
DESIGN: REB
REVIEW: NQJ
DATE: 10/29/2026

H-SCALE: N/A
V-SCALE: N/A

SHEET
2 OF 8

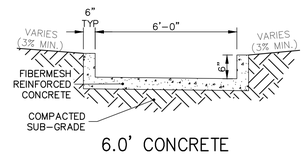


POND E - TC
STA 0+00.00 TO 5+11.64



Structure Table				
#	DESC.	NORTHING	EASTING	ELEVATION
1	SPILLWAY TOP	410116.3	231094.60	7004.50
2	SPILLWAY TOP	410115.8	231084.61	7004.50
3	SPILLWAY CREST	410124.3	231094.19	7002.50
4	SPILLWAY CREST	410123.8	231084.21	7002.50
5	SPILLWAY CREST	410154.3	231092.68	7002.50
6	SPILLWAY CREST	410153.8	231082.69	7002.50
7	SPILLWAY	410162.3	231092.18	7004.50
8	SPILLWAY	410161.8	231082.17	7004.50
9	TOP BERM	410169.1	231090.93	7004.50
10	TOP BERM	410166.7	231081.24	7004.50
11	TOP BERM	410184.9	231086.90	7004.50
12	TOP BERM	410182.8	231077.16	7004.50
13	TOP BERM	410218.8	231093.00	7004.50
14	TOP BERM	410223.6	231084.18	7004.50
15	TOP POND	410248.9	231139.24	7004.51
16	TOP POND	410222.4	231311.47	7004.50
17	TOP POND	410177.1	231522.46	7004.50
18	TOP POND	410159.6	231595.55	7004.50
19	SPILLWAY	410099.8	231637.39	7004.50
20	TOP POND	410051.2	231583.01	7004.50
21	TOP BERM	410050.7	231476.23	7004.50
22	TOP BERM	410060.7	231476.19	7004.50
23	TOP BERM	410050.1	231354.03	7004.50
24	TOP BERM	410060.1	231354.25	7004.50
25	TOP BERM	410055.1	231252.35	7004.50
26	TOP BERM	410065.1	231252.63	7004.50
27	TOP BERM	410055.8	231134.88	7004.50
28	TOP BERM	410065.8	231134.94	7004.50
29	TOP BERM	410103.3	231085.24	7004.50
30	TOP BERM	410103.8	231095.23	7004.50
31	MAINT. ROAD @ SW	410269.7	231070.95	7005.61
32	MAINT. ROAD @ SW	410259.9	231068.98	7005.35
33	MAINT. ROAD PC	410264.3	231097.07	7005.08
34	MAINT. ROAD PC	410254.5	231095.03	7004.88
35	MAINT. ROAD PT	410183.0	231158.43	6996.82
36	MAINT. ROAD PT	410183.8	231168.39	6997.02
37	MAINT. ROAD @ TC	410140.9	231162.03	6995.80
38	MAINT. ROAD @ TC	410141.8	231171.98	6995.85
39	BEGIN T.C. FL	410136.9	231121.15	6995.10
40	BEGIN T.C. FL	410130.9	231121.66	6995.10
41	T.C. FL PI	410139.8	231155.59	6995.27

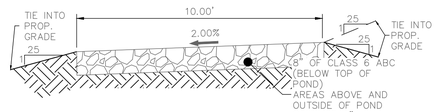
Structure Table				
#	DESC.	NORTHING	EASTING	ELEVATION
42	T.C. FL PI	410140.4	231161.57	6995.30
43	T.C. FL PC	410178.9	231152.25	6996.09
44	T.C. FL PC	410179.4	231158.23	6996.09
45	T.C. FL PT	410199.0	231131.67	6996.49
46	T.C. FL PT	410205.0	231132.03	6996.49
47	END T.C. FL	410205.9	231116.68	6996.60
48	END T.C. FL	410199.9	231116.31	6996.60
49	T.C. FL PC	410147.7	231247.60	6995.73
50	T.C. FL PC	410141.7	231248.11	6995.73
51	T.C. FL PT	410147.1	231279.61	6995.89
52	T.C. FL PT	410141.1	231278.87	6995.89
53	T.C. FL PC	410121.0	231488.90	6996.94
54	T.C. FL PC	410115.0	231488.15	6996.94
55	T.C. FL PT	410144.6	231551.64	6997.32
56	T.C. FL PT	410140.6	231556.12	6997.32
57	END T.C. FL	410142.0	231557.42	6997.33
58	END T.C. FL	410146.0	231552.93	6997.33
59	TOE SLOPE	410146.5	231127.83	6995.82
60	TOE SLOPE	410173.6	231122.91	6996.46
61	TOE SLOPE	410210.6	231121.03	6997.99
62	TOE SLOPE	410215.4	231179.34	6997.75
63	TOE SLOPE	410205.6	231252.62	6998.16
64	TOE SLOPE	410197.1	231306.82	6998.07
65	TOE SLOPE	410175.6	231412.44	6998.36
66	TOE SLOPE	410161.2	231483.17	6998.55
67	TOE SLOPE	410150.3	231524.23	6998.08
68	TOE SLOPE	410137.2	231590.19	6998.74
69	TOE SLOPE	410116.8	231617.20	6999.54
70	TOE SLOPE	410077.9	231608.21	7000.23
71	TOE SLOPE	410070.4	231571.41	6999.63
72	TOE SLOPE	410074.0	231495.24	6998.68
73	TOE SLOPE	410085.5	231476.07	6998.30
74	TOE SLOPE	410085.7	231354.83	6998.11
75	TOE SLOPE	410092.4	231250.96	6997.70
76	TOE SLOPE	410096.6	231146.35	6996.78
77	TOE SLOPE	410103.9	231127.72	6996.43
78	TOE SLOPE	410120.8	231128.73	6995.94
79	RIPRAP	410115.1	231070.83	7001.78
80	RIPRAP	410123.1	231070.43	7001.78
81	RIPRAP	410127.1	231056.72	7001.78



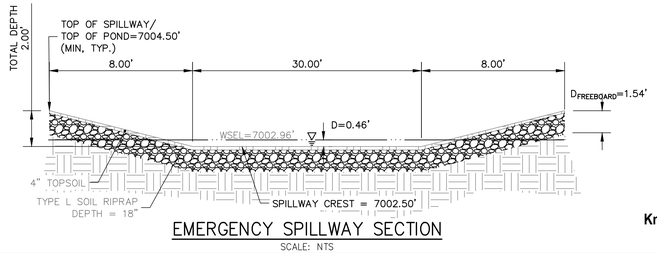
6.0' CONCRETE TRICKLE CHANNEL
SCALE: NTS

LINE TABLE		
LINE	BEARING	DISTANCE
L4	N4°53'40.71"W	42.19
L6	N86°31'03.49"W	14.73
L1	N85°06'19.29"E	164.59
L3	S82°52'51.16"E	210.91
L7	N41°37'35.21"E	32.05

CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C3	35.61	25.00	81.62
C1	31.45	150.00	12.01
C2	72.64	75.00	55.49



10' ACCESS ROAD TYPICAL SECTION
N.T.S.



EMERGENCY SPILLWAY SECTION
SCALE: NTS

30 15 0 30 60
ORIGINAL SCALE: 1" = 30'

POND GRADING NOTES:

1. POND WARNING SIGNS TO BE INSTALLED AT LOCATIONS IDENTIFIED ABOVE. POND WARNING SIGNS SHALL BE 3 SQ. FT. AND SHALL READ:

WARNING
THIS AREA IS A STORMWATER FACILITY
AND IS SUBJECT TO PERIODIC FLOODING

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

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

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF ALL TERRAIN ENGINEERING

RYAN E. BURNS, P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE

ALL TERRAIN ENGINEERING

RYAN E. BURNS, P.E.
555 PARK STREET, SUITE 3 - BOULDER, CO 80302
PHONE: 303.327.8668 - EMAIL: RYAN@ALLTERRAINENG.COM

PREPARED FOR:
TURKEY CANON QUARRY INC.
20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719) 491-3024
JMORLEY73870@AOL.COM

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REV	DESCRIPTION	DATE

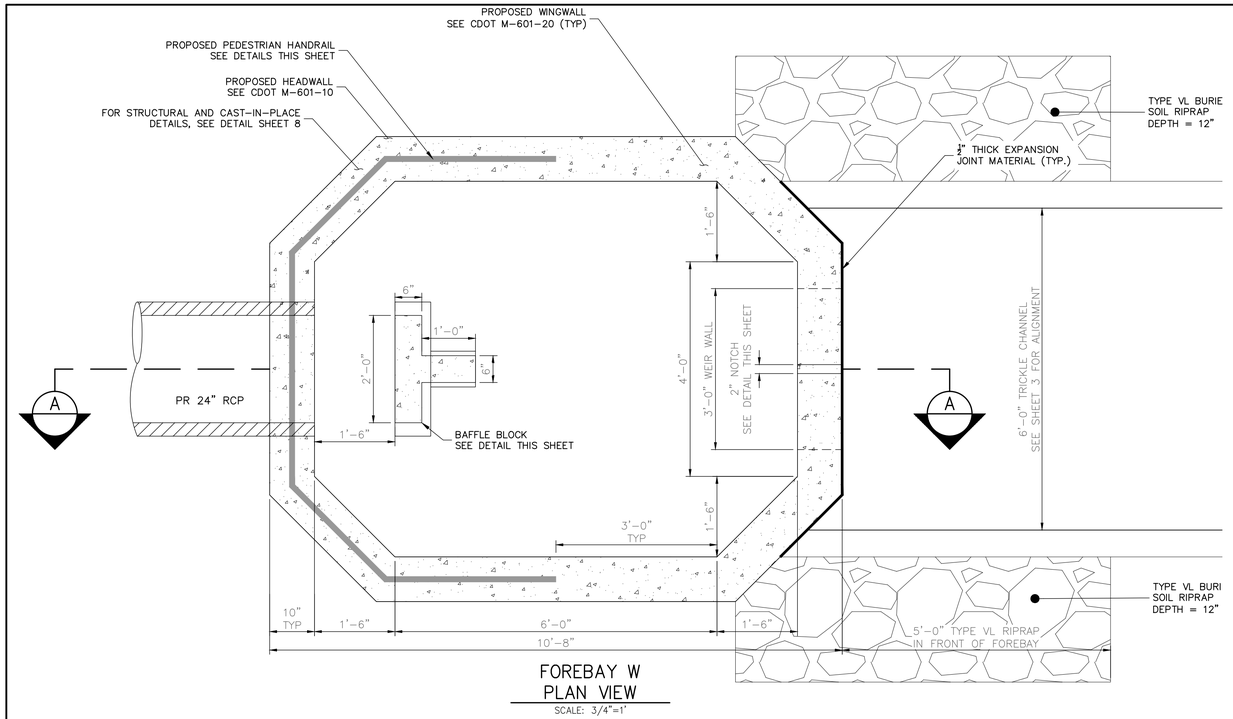
JOB NO: 24013
LOCATION: EPC

MARKSHEFFEL ROAD - SEGMENT 3 CD

POND GRADING

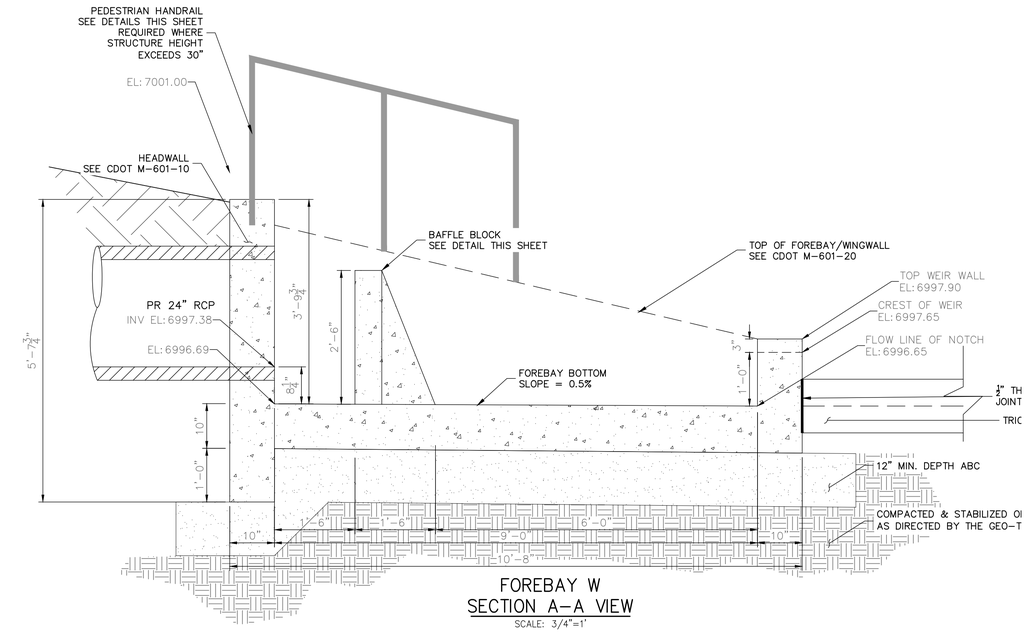
DESIGN: REB
REVIEW: NQJ
DATE: 10/29/2026
H-SCALE: 1" = 20'
V-SCALE: NA

SHEET
3 OF 8



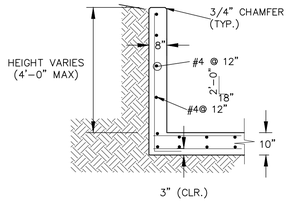
FOREBAY W
PLAN VIEW

SCALE: 3/4"=1'



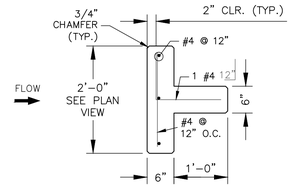
FOREBAY W
SECTION A-A VIEW

SCALE: 3/4"=1'



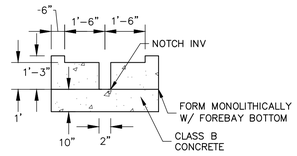
FOREBAY WINGWALL
REINFORCING DETAIL (TYP.)

SCALE: N.T.S.



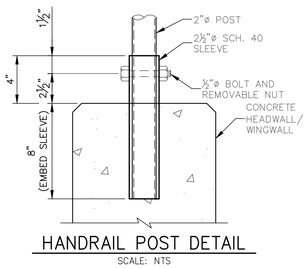
FOREBAY BAFFLE BLOCK PLAN

SCALE: NTS



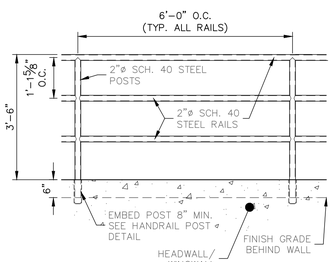
FOREBAY NOTCH/WEIR WALL

SCALE: NTS



HANDRAIL POST DETAIL

SCALE: NTS



PEDESTRIAN RAILING DETAIL

SCALE: NTS

10 5 0 10 20

ORIGINAL SCALE: 1" = 10'

N

CAST-IN-PLACE STRUCTURAL NOTES:

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2. ALL CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE APPROVED BY THE ENGINEER.
3. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
4. DO NOT BACKFILL UNTIL CONCRETE HAS REACHED DESIGN STRENGTH, F'c.
5. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾".
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8. WALLS AND FLOOR TO BE POURED MONOLITHICALLY.
9. REINFORCING STEEL SHALL BE GRADE 60 & MIN. SLICE LENGTHS PER CDOT STANDARDS AND APPLICABLE M-STANDARD DRAWINGS FOR HEADWALLS AND WINGWALLS
10. SEE GENERAL STRUCTURE NOTES ON SHEET 8.

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RYAN E. BURNS, P.E. — DATE
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719.337.1655 - RYAN@ALLTERRAINENG.COM
719.337.1655 - ALEX@ALLTERRAINENG.COM

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JOB NO: 24013
LOCATION: EPC

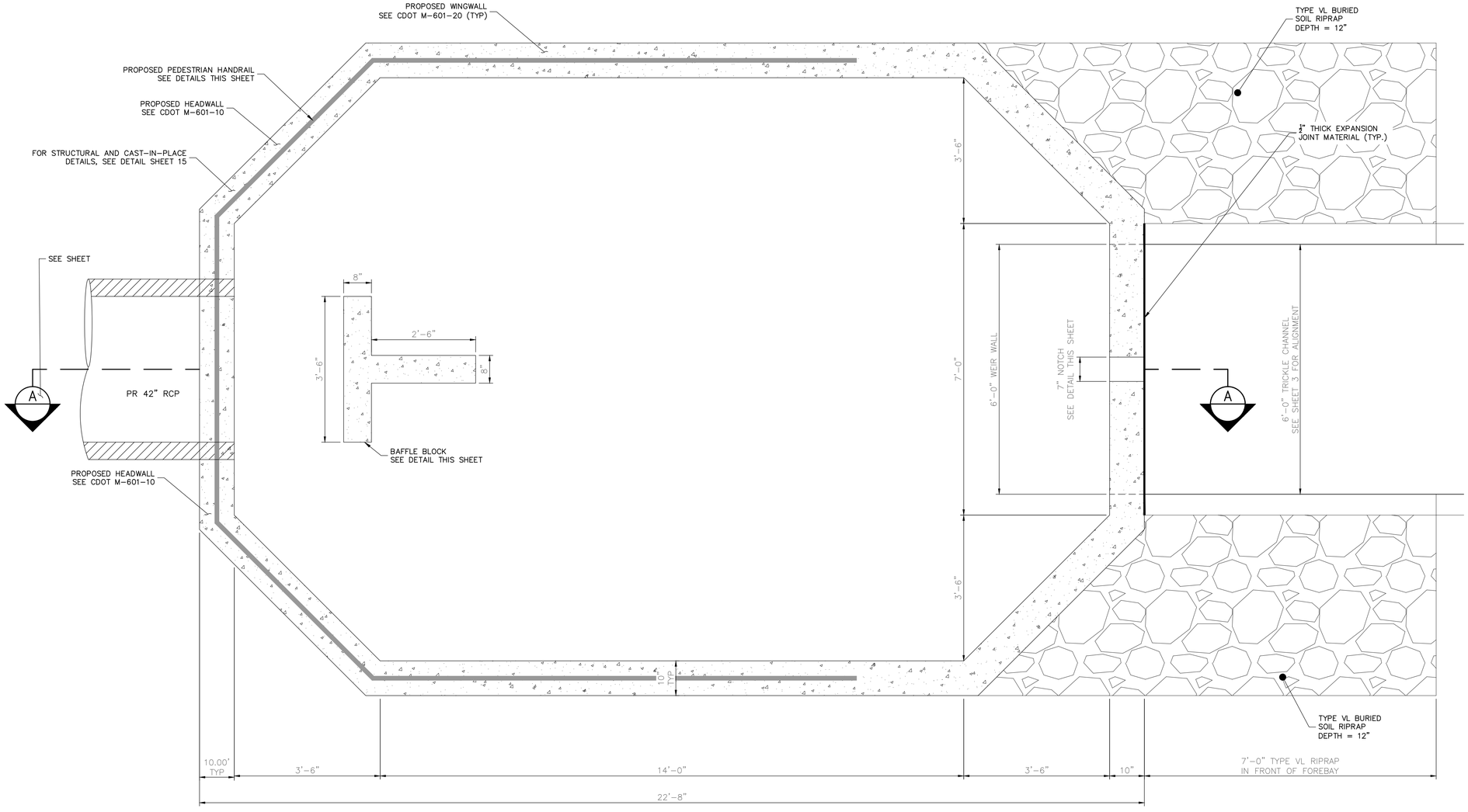
REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD - SEGMENT 3 CD

FOREBAY W DETAILS

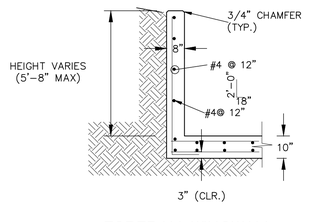
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REVIEW: NQJ
DATE: 10/29/2026
H-SCALE: VARIES
V-SCALE: VARIES

SHEET
4 OF 8



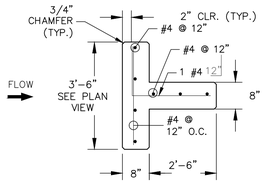
FOREBAY E
PLAN VIEW

SCALE: 3/4"=1'



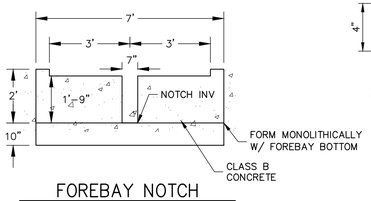
FOREBAY WINGWALL REINFORCING DETAIL (TYP.)

SCALE: N.T.S.



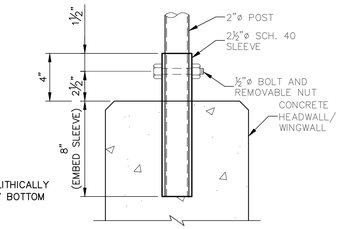
FOREBAY BAFFLE BLOCK PLAN

SCALE: NTS



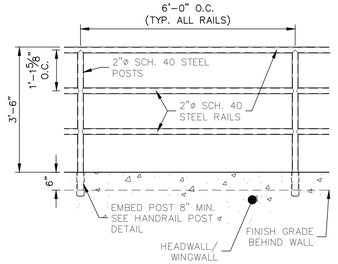
FOREBAY NOTCH

SCALE: NTS



HANDRAIL POST DETAIL

SCALE: NTS

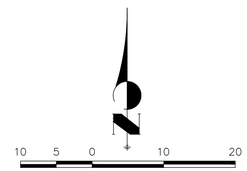


PEDESTRIAN RAILING DETAIL

SCALE: NTS

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RYAN E. BURNS, P.E.
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DATE

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303.517.1668 - RBURNS@ALLTERRAINENG.COM

NICHOLAS Q. JOVICEVIC, PE
530.391.1655 - NJOVICEVIC@ALLTERRAINENG.COM

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JOB NO. 24013 LOCATION: EPC

REV	DESCRIPTION	DATE

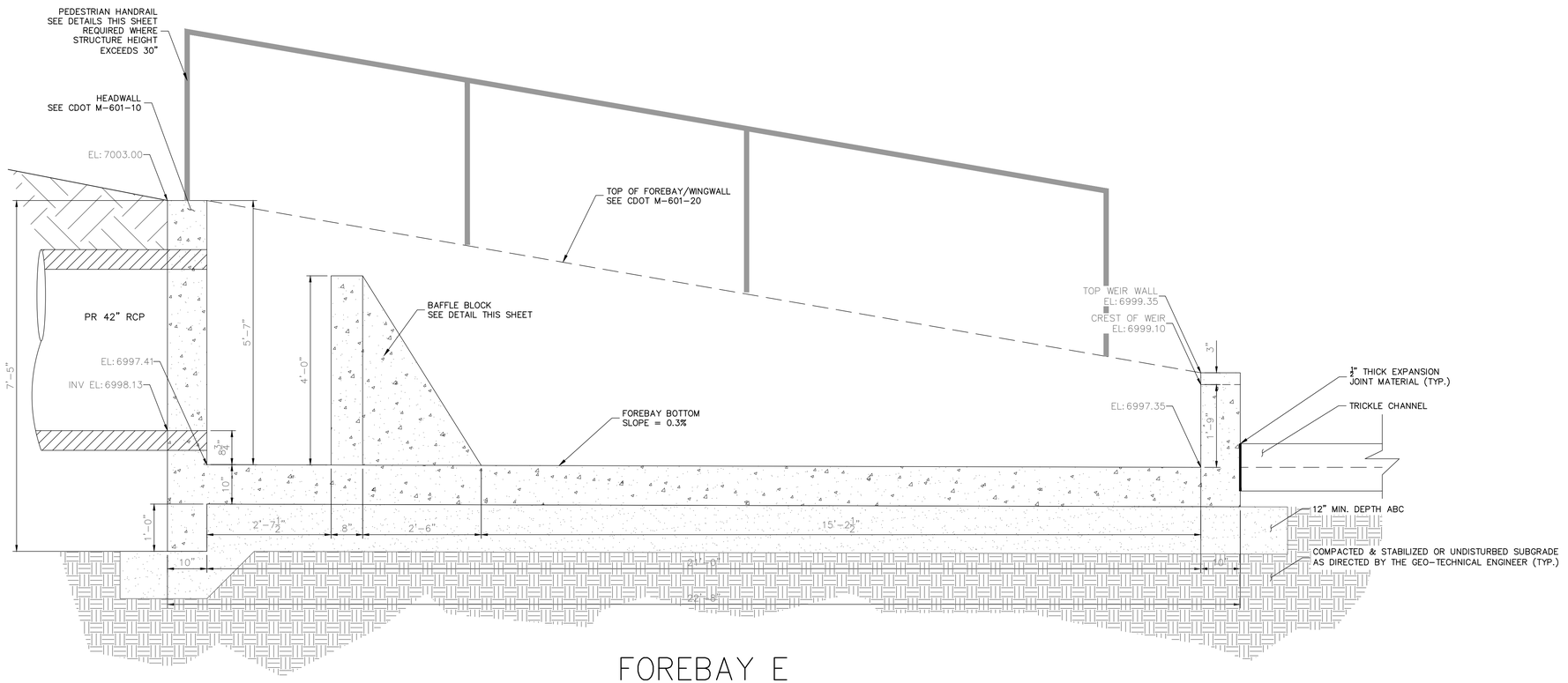
MARKSHEFFEL ROAD - SEGMENT 3 CD

FOREBAY E DETAILS

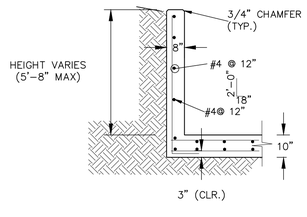
DESIGN: REB
REVIEW: NQJ
DATE: 10/29/2026

H-SCALE: VARIES
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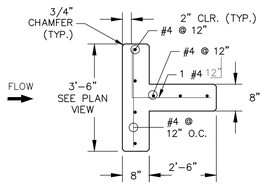
SHEET
5 OF 8



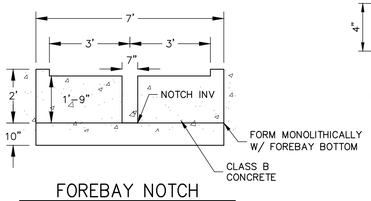
FOREBAY E
SECTION A–A VIEW
SCALE: 3/4"=1'



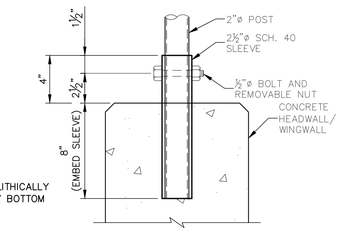
FOREBAY WINGWALL
REINFORCING DETAIL (TYP.)
SCALE: N.T.S.



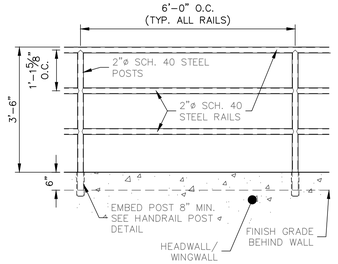
FOREBAY BAFFLE BLOCK PLAN
SCALE: NTS



FOREBAY NOTCH
SCALE: NTS



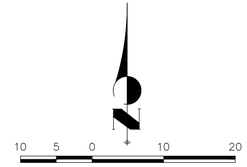
HANDRAIL POST DETAIL
SCALE: NTS



PEDESTRIAN RAILING DETAIL
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ORIGINAL SCALE: 1" = 10'

ENGINEER'S STATEMENT

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RYAN E. BURNS, P.E.
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JOB NO: 24013 LOCATION: EPC

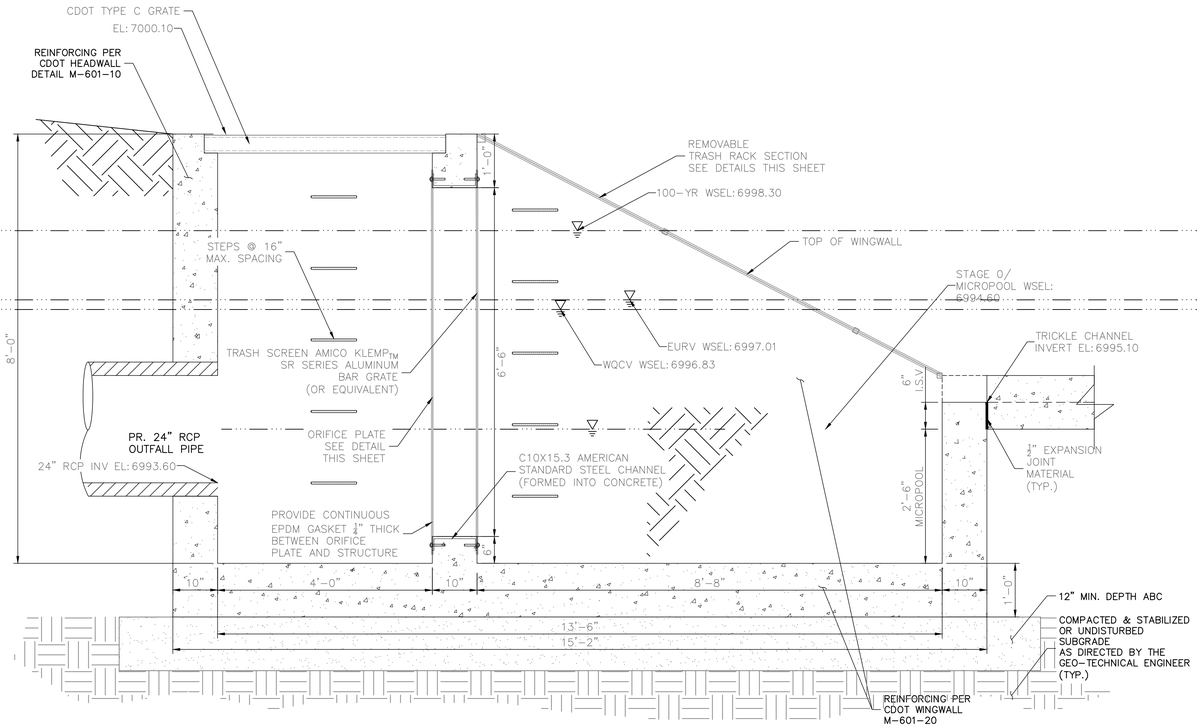
REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD - SEGMENT 3 CD

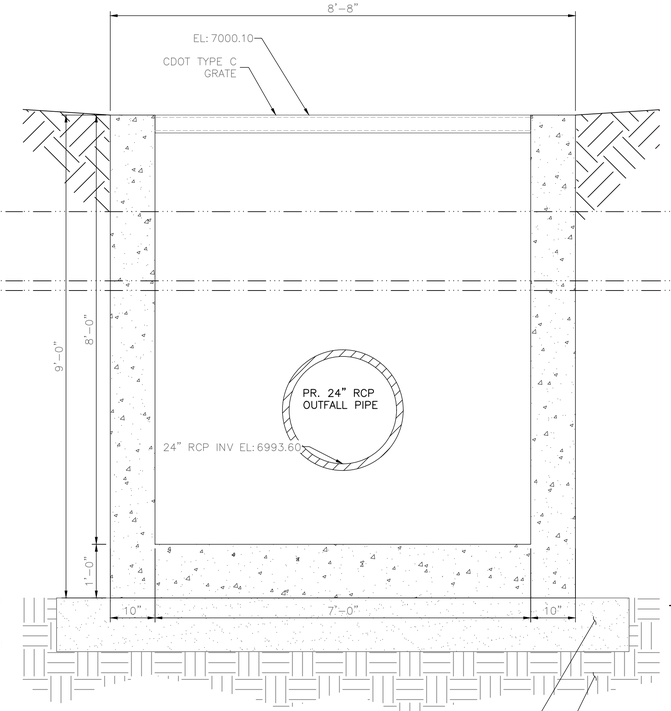
FOREBAY E DETAILS

DESIGN: REB
REVIEW: NQJ
DATE: 10/29/2026
H-SCALE: VARIES
V-SCALE: VARIES

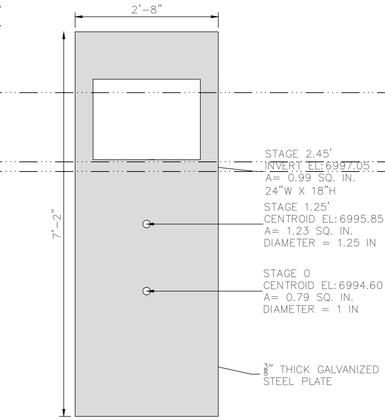
SHEET
6 OF 8



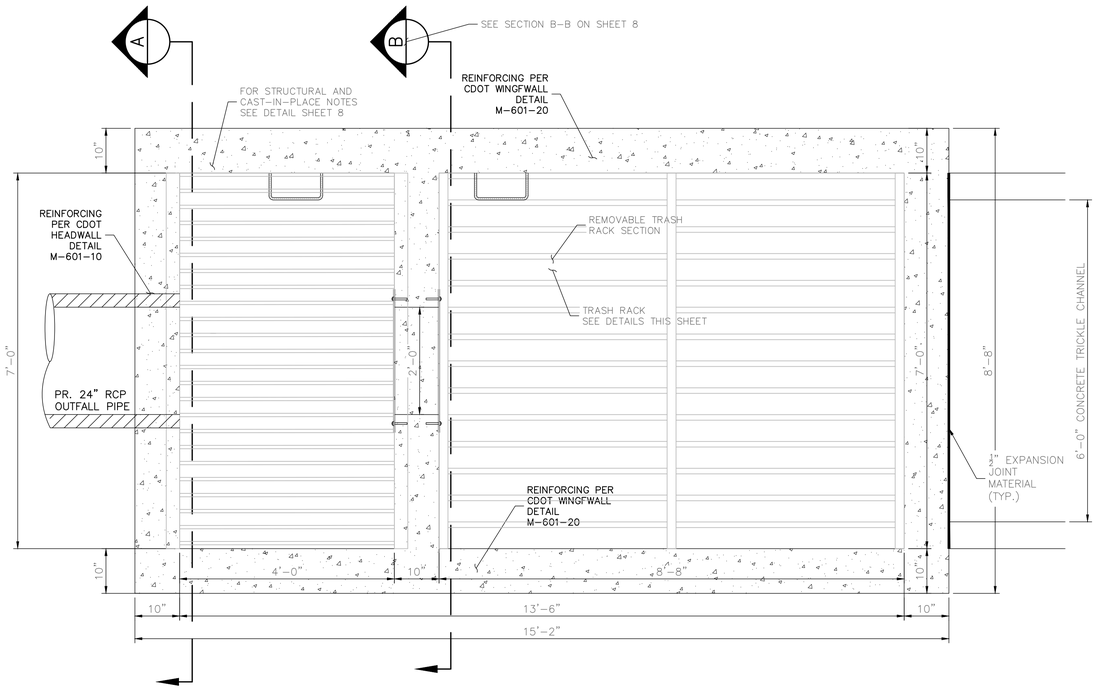
POND
OUTLET STRUCTURE PROFILE
SCALE: 3/4"=1'



A A-A SECTION
SCALE: 3/4"=1'



ORIFICE PLATE DETAIL
SCALE: 3/4"=1'



POND
OUTLET STRUCTURE PLAN
SCALE: 3/4"=1'

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JOB NO: 24013 LOCATION: EPC

REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD - SEGMENT 3 CD

OUTLET STRUCTURE DETAILS

DESIGN: REB
REVIEW: NQJ
DATE: 10/29/2026
H-SCALE: 3/4" = 1'
V-SCALE: 3/4" = 1'

SHEET
7 OF 8

GENERAL STRUCTURE NOTES:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

OUTLET STRUCTURE PLATE, GRATE, AND RAIL NOTES:

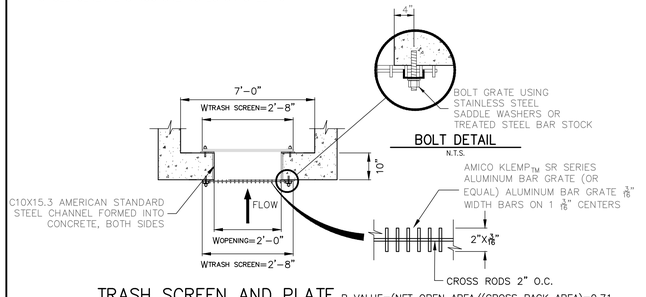
ORIFICE PLATE:
1. PROVIDE CONTINUOUS EPDM GASKET ¼" THICK BETWEEN ORIFICE PLATE AND STRUCTURE.
2. THE GASKET SHALL BE MADE OF 1/4-INCH THICK, 60 DUROMETER EPDM RUBBER IN A CONTINUOUS SHEET THE SIZE OF THE ORIFICE PLATE. THE SHEET SHALL BE PLACED BETWEEN THE ORIFICE PLATE AND THE CONCRETE WALL WITH THE WIDTH OF THE OVERLAP BETWEEN THE PLATE AND THE CONCRETE. OPENINGS SHALL BE CUT INTO THE SHEET CORRESPONDING TO THE PLATE BOLT HOLES AND THE CONCRETE WALL OPENING, CUTS MADE EITHER BY THE CONTRACTOR IN THE FIELD OR BY THE MANUFACTURER. OR EQUIVALENT APPROVED BY EPC.
3. BOLT PLATE TO CONCRETE 12" MAX. ON CENTER.

TRASH RACKS & GRATES:
4. RACKS AND GRATE OPEN AREAS ARE FOR THE SPECIFIED MATERIALS/MANUFACTURERS. ALTERNATIVE MANUFACTURERS AND MATERIALS WITH DIFFERING DIMENSIONS ARE ACCEPTABLE PROVIDED THEY MEET THE THE GROSS OPEN AREA RATIO (R VALUE) AND ARE CONSIDERED EQUAL BY THE ENGINEER AND EPC. SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO PROCUREMENT.
5. TRASH RACKS SHALL BE 1¼" SCH.40 STEEL PIPE, GALVANIZED, @ 6" CENTERS. SUPPORT BARS SHALL BE ¼"x2" STEEL RECTANGULAR BARS, GALVANIZED, @ 36". ALL TRASH RACKS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE.
6. REMOVABLE TRASH RACK SECTIONS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED & LOCKABLE OR BOLTABLE ACCESS PANELS AS SHOWN ON THE PLANS.
7. STEEL TRASH RACKS SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
8. STRUCTURAL STEEL FOR GRATES, ORIFICE PLATES, AND BARS SHALL BE GALVANIZED AND SHALL BE IN ACCORDANCE WITH CDOT STANDARD SPECIFICATIONS, SUBSECTION 712.06.
9. ALL HARDWARE, BOLTS, AND FASTENERS SHALL BE STAINLESS STEEL.
10. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL PLATES AND GRATING FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.

HAND RAILS:
11. WELD PLATES MAY BE SUBSTITUTED FOR PIPE EMBEDMENT.
12. STRUCTURES THAT CREATE A 30" OR GREATER DROP HEIGHT REQUIRE HAND RAILS FOR FALL PROTECTION.
13. CONTRACTOR TO ENSURE HANDRAIL DESIGN AND MOUNTING SYSTEM IS COMPATBLE WITH HW/WW DESIGN AND REINFORCING.
14. DESIGN CRITERIA SHALL BE ACCORDANCE W/ AASHTO

CAST-IN-PLACE STRUCTURAL NOTES:

1. ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED BEFORE FRESH CONCRETE IS POURED.
2. ALL CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE APPROVED BY THE ENGINEER.
3. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
4. DO NOT BACKFILL UNTIL CONCRETE HAS REACHED DESIGN STRENGTH, F'c.
5. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾".
6. CONTRACTOR SHALL SUBMIT STEEL REINFORCING SHOP DRAWINGS FOR ALL CAST-IN-PLACE STRUCTURES FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION. REINFORCING SHOWN IS FOR INFORMATION ONLY.
7. REINFORCING AND WALLS SHALL BE PER CDOT-M-604-10.
8. WALLS AND FLOOR TO BE POURED MONOLITHICALLY.
9. REINFORCING STEEL SHALL BE GRADE 60 & MIN. SLICE LENGTHS PER CDOT STANDARDS AND APPLICABLE M-STANDARD DRAWINGS FOR HEADWALLS AND WINGWALLS
10. SEE GENERAL STRUCTURE NOTES ON SHEET 6.

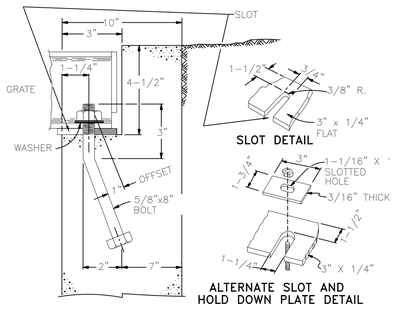


BOLT DETAIL
N.T.S.

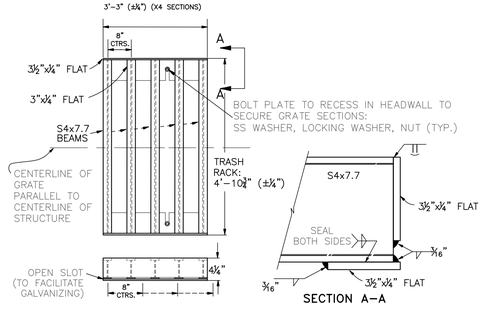
TRASH SCREEN AND PLATE DETAIL (PLAN)
N.T.S.

TRASH SCREEN DETAIL
N.T.S.

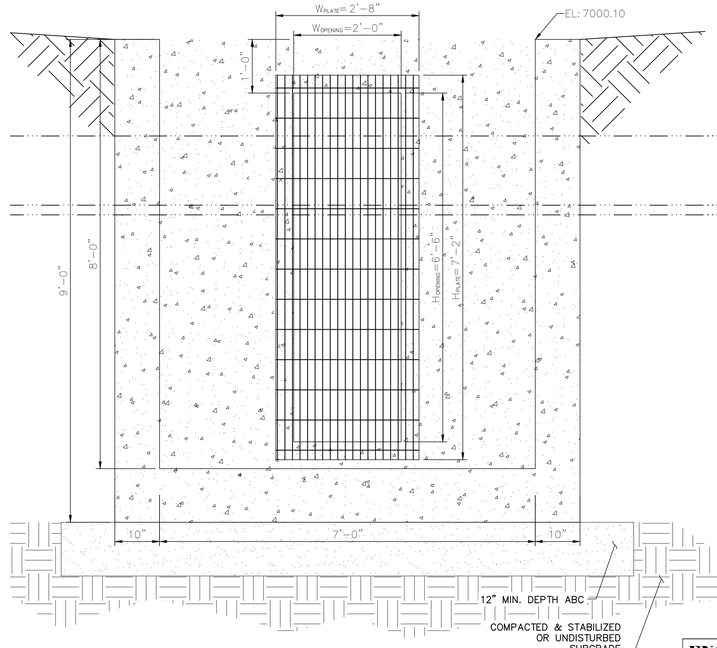
R VALUE=(NET OPEN AREA/(GROSS RACK AREA)=0.71



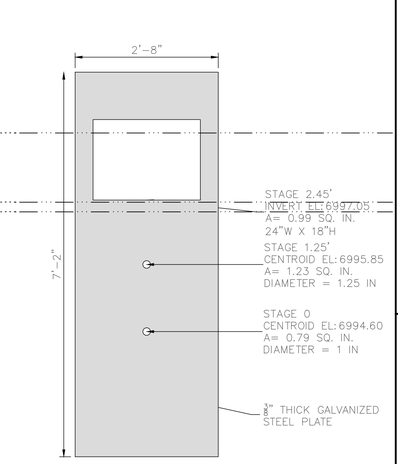
OVERFLOW GRATE/TRASH RACK INSTALLATION DETAIL
N.T.S.



TRASH RACK DETAILS
N.T.S.



B B-B SECTION
SCALE: 3/4"=1'



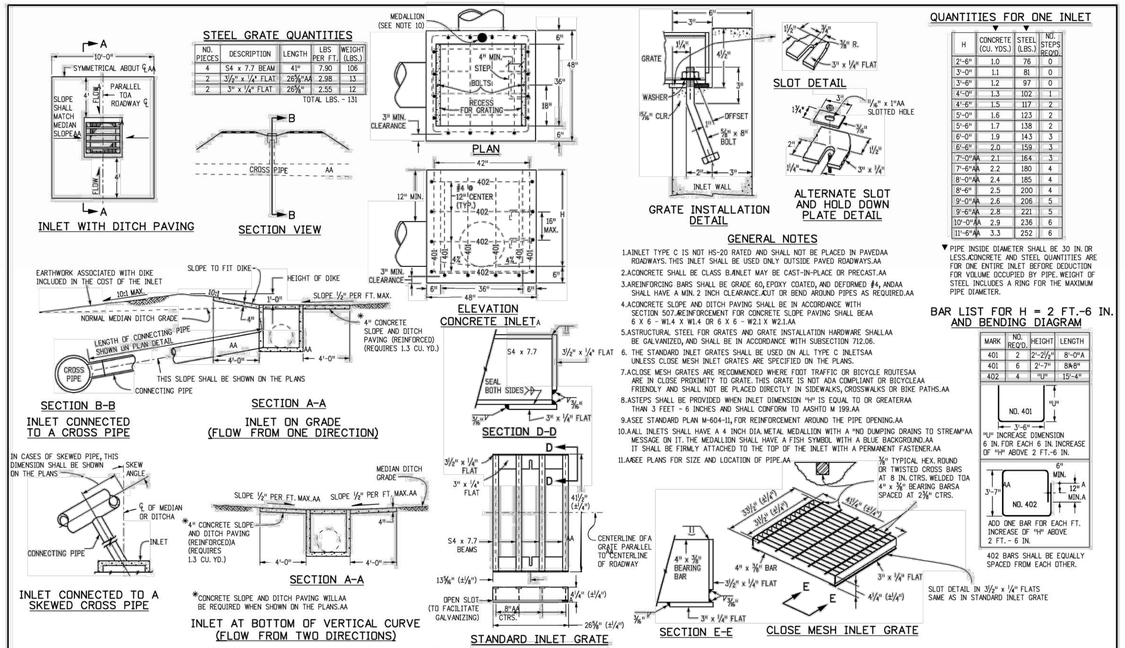
ORIFICE PLATE DETAIL
SCALE: 3/4"=1'

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF ALL TERRAIN ENGINEERING

RYAN E. BURNS, P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE


A
10'-0"
SYMMETRICAL ABOUT ℄AA
PARALLEL TOA ROADWAY ℄
SLOPE SHALL MATCH MEDIAN SLOPE
4'
FLOW LINE
4"
INLET WITH DITCH PAVING
B
CROSS PIPE
AA
B
SECTION VIEW
MEDALLION (SEE NOTE 10)
4" MIN. STEP
BOLTS
RECESS FOR GRATING
3" MIN. CLEARANCE
6"
45°
36"
18"
6"
PLAN
42"
12" MIN.
#4 @ 12" CENTER (TYP.)
402
402
402

MARKSHEFFEL ROAD - SEGMENT M3

EL PASO COUNTY, CO

SANITARY SEWER MAIN EXTENSION

FAWWA GENERAL NOTES

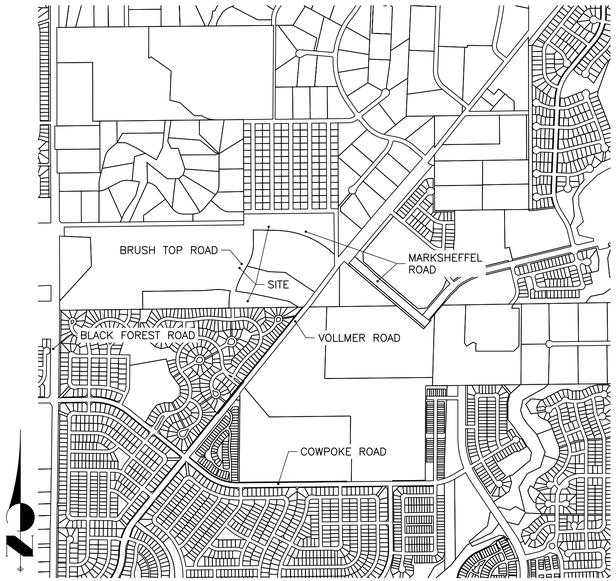
1. ALL UTILITY CONSTRUCTION TO BE CONDUCTED IN CONFORMANCE WITH THE CURRENT FALCON AREA WATER AND WASTEWATER AUTHORITY (FAWWA, THE DISTRICT) SPECIFICATIONS.
2. ALL PLANS ON THE JOB SITE SHALL BE SIGNED BY THE DISTRICT AND THE DISTRICT'S ENGINEER. ANY REVISION TO THE PLANS SHALL BE SO NOTED WITH THE OLD DRAWING MARKED 'NOT VALID.'
3. ALL STATIONING IS CENTERLINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE NOTED.
4. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE DISTRICT. THE DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
5. ALL OVER-LOT GRADING MUST BE COMPLETED TO WITHIN ONE (1) FOOT OF FINAL GRADE PRIOR TO INSTALLATION OF WATER AND WASTEWATER INFRASTRUCTURE.
6. ALL WATER AND SEWER SERVICE LOCATIONS SHALL BE CLEARLY MARKED ON EITHER THE CURB HEAD OR THE FACE OF THE CURB, WITH AN "S" FOR SEWER AND A "W" FOR WATER.
7. DUCTILE IRON PIPES, INCLUDING FITTINGS, VALVES, AND FIRE HYDRANTS, SHALL BE WRAPPED WITH POLYETHYLENE TUBING, DOUBLE BONDED AT EACH JOINT, AND ELECTRICALLY ISOLATED. BONDING AND ANODE CONNECTIONS SHALL BE THOROUGHLY COATED WITH BITUMINOUS COATINGS.
8. ALL DUCTILE IRON PIPE LESS THAN TWELVE INCHES (12") AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO (2) NO. 6 WIRES WITH 17 LB. MAGNESIUM ANODES EVERY 400 FEET AND 9 LB. MAGNESIUM ANODES AT EACH FITTING. ALL DUCTILE IRON PIPE TWELVE INCHES (12") AND GREATER AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO (2) NO. 6 WIRES WITH 17 LB. MAGNESIUM ANODES EVERY 300 FEET AND 9 LB. MAGNESIUM ANODES AT EACH FITTING.
9. ALL PIPE MATERIAL, BACKFILL, AND INSTALLATION SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE DISTRICT, COLORADO DEPARTMENT OF TRANSPORTATION, EL PASO COUNTY DEPARTMENT OF TRANSPORTATION, COLORADO SPRINGS UTILITIES, AND THE GEOTECHNICAL ENGINEER.
10. COMPACTION TESTS SHALL BE 95% STANDARD PROCTOR AS DETERMINED BY ASTM D698, UNLESS OTHERWISE APPROVED BY THE DISTRICT OR HIGHER STANDARD AS IMPOSED BY ANOTHER AGENCIES HAVING RIGHT-OF-WAY JURISDICTION. THIS SHALL INCLUDE ALL VALVES, FIRE HYDRANT RUNS, WATER & SEWER SERVICE LINES, AND MANHOLES. ALL REPORTS SHALL BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.
11. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. THE LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. THE DISTRICT SHALL BE NOTIFIED OF ANY DEVIATIONS TO THE LINE AND/OR GRADE AS DEPICTED ON THE PLANS. CONTRACTOR SHALL SUBMIT TO THE DISTRICT AND THE ENGINEER OF RECORD A REPORT OF THE FIELD-VERIFIED INFORMATION PRIOR TO THE START OF CONSTRUCTION.
12. ALL BENDS SHALL BE FIELD STAKED PRIOR TO THE START OF CONSTRUCTION.
13. BENDS, DEFLECTION, AND CUT PIPE LENGTHS SHALL BE USED TO HOLD HORIZONTAL ALIGNMENT OF SEWER AND WATER LINES TO NO MORE THAN 0.5° FROM THE DESIGNED ALIGNMENT. CONSTRUCTION STAKES TO BE AT TWENTY-FIVE FEET (25') INTERVALS ALONG CURVES TO ENSURE LOCATION OF PIPELINE CONSTRUCTION.
14. AT ALL LOCATIONS WHERE CAP AND STUB IS NOTED ON DRAWINGS, PROVIDE A PLUG AT THE END OF THE PIPE JOINT NEAREST THE SPECIFIED STATION. PROVIDE A REVERSE ANCHOR AT ALL WATER LINE PLUGS.
15. ALL UNUSED, SALVAGED WATER UTILITY MATERIAL SHALL BE RETURNED TO THE DISTRICT AS REQUESTED.
16. AT THE CONTRACTOR'S EXPENSE, ALL UTILITY MAINS SHALL BE SUPPORTED AND PROTECTED SUCH THAT THEY SHALL FUNCTION CONTINUOUSLY DURING CONSTRUCTION OPERATIONS. SHOULD A UTILITY MAIN FAIL AS A RESULT OF THE CONTRACTOR'S OPERATION, IT SHALL BE REPLACED IMMEDIATELY BY THE CONTRACTOR OR BY THE DISTRICT AT FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR/DEVELOPER.
17. PUMPING OR BYPASS OPERATIONS SHALL BE REVIEWED AND APPROVED BY BOTH THE DISTRICT AND THE DISTRICT ENGINEER PRIOR TO EXECUTION.
18. THE CONTRACTOR SHALL REPLACE OR REPAIR DAMAGE TO ALL SURFACE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO FENCES, LANDSCAPING, CURB AND GUTTER, AND/OR ASPHALT THAT MAY BE CAUSED DURING CONSTRUCTION.
19. ALL CONTRACTORS WORKING ON OR NEAR A WATER OR SEWER FACILITY (TO INCLUDE SERVICE LINES) SHALL HAVE LIABILITY INSURANCE NAMING THE DISTRICT AS AN ADDITIONAL INSURED AND SHALL PROVIDE A CURRENT COPY OF WORKER'S COMPENSATION INSURANCE ON FILE WITH THE DISTRICT. NO WORK CAN PROCEED WITHOUT CURRENT CERTIFICATES ON FILE AT THE DISTRICTS' OFFICE.
20. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND ALL AFFECTED UTILITY COMPANIES ADJACENT TO THE PROPOSED UTILITY CONSTRUCTION A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF CONSTRUCTION. A WEEKLY CONSTRUCTION MEETING SHALL BE REQUIRED WITH THE CONTRACTOR, DISTRICT ENGINEER AND ALL OTHER PARTIES AS DEEMED NECESSARY BY THE DISTRICT.
21. COMMENCEMENT OF CONSTRUCTION OF WATER/SEWER SYSTEMS WITHIN METROPOLITAN DISTRICT:
    - 21.1. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR MUST SCHEDULE A PRECONSTRUCTION MEETING WITH THE DISTRICT'S ENGINEER. THE PRECONSTRUCTION MEETING MUST OCCUR A MINIMUM OF SEVENTY-TWO (72) HOURS IN ADVANCE OF COMMENCING WORK. SEE SECTION 1.9.5 HEREIN REGARDING PRECONSTRUCTION MEETINGS.
    - 21.2. UNLESS CONSTRUCTION COMMENCES WITHIN SIX (6) MONTHS FROM THE DATE OF PLAN APPROVAL, APPROVAL SHALL BECOME NULL AND VOID.
22. TESTING OF FACILITIES:
    - 22.1. THE CONTRACTOR SHALL NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF ANY TESTING.
    - 22.2. ALL SECTIONS OF WATER LINE ARE TO MEET THE FOLLOWING PRESSURE TESTING REQUIREMENTS
        - ☐ TEST 100% OF ALL LINES.
        - ☐ MUST PASS PRESSURE TEST TO 200 PSI FOR TWO HOURS (UNLESS OTHERWISE APPROVED ON THE PLANS).
    - 22.3. ALL SANITARY SEWER FACILITIES ARE TO MEET THE FOLLOWING TESTING REQUIREMENTS:
        - ☐ ALL LINES SHALL BE JET CLEANED PRIOR TO VACUUM OR PRESSURE TESTING.
        - ☐ ALL MANHOLES SHALL BE VACUUM TESTED WITH DISTRICT STAFF PRESENT PRIOR TO CCTV INSPECTION.
        - ☐ SEWER MAINS TO BE PRESSURE TESTED PRIOR TO CCTV INSPECTION.
        - ☐ ALL LINES SHALL BE CCTV INSPECTED AND VIDEO SHALL TO BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.
23. PRELIMINARY ACCEPTANCE SHALL BE DEFINED AS THE POINT IN TIME THAT THE DISTRICT ACCEPTS THE FACILITY FOR USE. ALL SURFACE IMPROVEMENTS AND RESTORATION SHALL BE COMPLETED WITHIN 30 DAYS OF COMMENCEMENT. SHOULD THE CONTRACTOR FAIL TO COMPLETE ALL SURFACE IMPROVEMENTS AND RESTORATION WITHIN 30 DAYS OF COMMENCEMENT OF SERVICE, THE DISTRICT, AT THEIR DISCRETION, MAY ELECT TO COMPLETE THE IMPROVEMENTS AT THE CONTRACTOR'S COST.
24. FINAL ACCEPTANCE BY THE DISTRICT OF ANY LINE OR SYSTEM SHALL NOT OCCUR UNTIL COMPLETION OF FINAL ASPHALT LAYERS AND/OR FINAL COMPLETION AND/OR RESTORATION OF ALL SURFACE IMPROVEMENTS. THE WARRANTY PERIOD FOR ALL FACILITIES PRIOR TO FINAL ACCEPTANCE SHALL BE 24 MONTHS COMMENCING AFTER PRELIMINARY ACCEPTANCE.
25. ACCEPTANCE
    - 25.1. THE DISTRICT MAY GIVE PRELIMINARY ACCEPTANCE ONCE ALL OF THE TESTS ON ALL THE LINES HAVE BEEN COMPLETED AND A WALK-THROUGH HAS OCCURRED.
    - 25.2. A SECOND ACCEPTANCE MAY OCCUR ONCE THE FIRST LIFT OF ASPHALT GOES DOWN AND A SECOND WALK-THROUGH OF THE SYSTEM OCCURS. IF ALL FACILITIES ARE CLEAN AND ACCESSIBLE, A FINAL ACCEPTANCE MAY OCCUR (THE DISTRICT MAY REQUIRE CLEANING AND RE-VIDEO OF THE SYSTEM, DEPENDING ON THE SEVERITY OF THE CONTAMINATION).
26. ALL WATER AND SEWER MAINS, INCLUDING SERVICE LINES, SHALL HAVE "AS-BUILT" DRAWINGS PREPARED AND APPROVED PRIOR TO PRELIMINARY ACCEPTANCE BY THE DISTRICT.
27. ALL COMMERCIAL/BUSINESS DEVELOPMENTS SHALL HAVE AN EIGHT INCH (MIN.) WATER MAIN LOOPED THROUGH THE PROPOSED PROPERTY WITH GATE VALVES LOCATED WHERE THE MAIN ENTERS THE PROPERTY LINE. AN EIGHT-INCH SEWER MAIN SHALL BE INSTALLED FOR SERVICE TO COMMERCIAL/BUSINESS DEVELOPMENTS, AND A MANHOLE SHALL BE LOCATED WHERE THE MAIN ENTERS THE PROPERTY. THE END OF THE MAINS SHALL BE MARKED WITH THE APPROPRIATE COLORED CARSONITE MARKER ALONG WITH TRACER WIRE.
28. AFTER REVIEW AND APPROVAL OF PLANS FOR THE EXTENSION OF LINES, FACILITIES, AND/OR SERVICES, CONSTRUCTION MUST HAVE COMMENCED WITHIN 18 MONTHS FOR RESIDENTIAL SUBDIVISIONS AND 12 MONTHS FOR ANY COMMERCIAL INSTALLATIONS.
29. INSPECTION FEES: CALL THE DISTRICT (719-495-2500) FOR FEE SCHEDULE.

WATER SYSTEM INSTALLATION NOTES

30. ALL WATER AND FORCE MAIN PIPE SHALL BE AWWA C900 PVC, OR APPROVED EQUAL, DR-18. ALL WATER AND FORCE MAIN FITTINGS SHALL HAVE MECHANICAL RESTRAINTS AND THRUST BLOCKS. ALL WATER AND FORCE MAIN PIPE SHALL HAVE A MINIMUM COVER DEPTH OF FIVE-AND-ONE-HALF (5.5) FEET.
31. ALL WATER VALVES ASSOCIATED WITH THE POTABLE WATER SYSTEM SHALL BE OPEN CLOCKWISE. ALL VALVES INSTALLED IN LANDSCAPED AREAS AND/OR NOT WITHIN PAVED STREETS SHALL BE MARKED WITH CARSONITE MARKERS. ALL VALVES ASSOCIATED WITH THE RAW WATER SYSTEM SHALL BE OPEN COUNTERCLOCKWISE AND MARKED WITH CARSONITE MARKERS AS APPLICABLE.
32. THE DEVELOPER OR HIS ENGINEER SHALL LOCATE ALL FIRE HYDRANTS AND SERVICE STUB-OUTS FOR FUTURE DEVELOPMENT. ANY REQUIRED REALIGNMENT, HORIZONTAL OR VERTICAL, SHALL BE AT THE EXPENSE OF THE DEVELOPER. FIRE HYDRANT LOCATION SHALL BE REVIEWED AND APPROVED BY THE APPLICABLE FIRE AUTHORITY.
33. FIRE HYDRANTS SHALL BE OPEN RIGHT WITH 7/8"X 7/8"SQUARE TAPERED ALONG WITH SERVICE CAPS. LUBRICATION TYPE: GREASE. ACCEPTABLE BRAND IS KENNEDY GUARDIAN (K81D, K81A, AND K81AM). EACH FIRE HYDRANT LOCATION SHALL ALSO BE USED AS TEST STATION.
34. CONTRACTOR SHALL MAKE CONNECTIONS TO EXISTING WATER LINE WITHOUT SHUTDOWN, OR ELSE NOTIFY THE DISTRICT OF ANY SERVICE SHUTDOWNS NECESSARY TO CONNECT TO EXISTING LINES.
35. IRRIGATION SERVICES SHALL HAVE A STOP-AND-WASTE CURB STOP VALVE INSTALLED ALONG WITH TRACER WIRE EXTENDING BACK TO THE MAIN LINE.
36. COMMENCEMENT OF USE OF WATER LINES AND/OR SYSTEMS:
    - 36.1. NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL AFTER THE COMPLETION OF ALL PRESSURE TESTING, FLUSHING, BAC-TTESTING, AND COMPACTION TESTING, AND AS-BUILT DRAWINGS ARE SUBMITTED AND APPROVED BY THE DISTRICT.
    - 36.2. NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL SERVICE LINES ARE COMPLETED AND THE FIRST LIFT OF ASPHALT IS COMPLETED OVER THE LINE. IN THE CASE WHERE NO ASPHALT IS TO BE PLACED OVER THE LINE, SURFACE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO USE OF THE FACILITY.
    - 36.3. ALL EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICT, AND RECORDED.

WASTEWATER SYSTEM INSTALLATION NOTES

37. SANITARY SEWER LENGTHS ARE MH CENTER -MH CENTER. ALL SANITARY SEWER PIPES SHALL BE SDR 35 PVC OR APPROVED EQUAL. SEWER LINES MAY NOT EXCEED 7% GRADE FOR ANY SIZE WITHOUT PRIOR APPROVAL OF THE DISTRICT. ALL NEWLY CONSTRUCTED RESIDENTIAL SANITARY SEWER TAPS SHALL USE PRE-MANUFACTURED, INLINE PVC PUSH-ON WYES. SINGLE SADDLE TAP ALLOWED ON EXISTING MAINS. MULTIPLE SADDLE TAPS ON EXISTING MAINS MUST BE APPROVED BY THE DISTRICT ON A CASE BY CASE BASIS
38. ALL SANITARY SEWER MANHOLES SHALL BE WRAPPED WITH RU116 - RUBR-NEK JOINT WRAP, OR APPROVED EQUAL, AND COATED.
39. ALL SEWER LINES MUST BE BEDDED WITH SQUEEGEE OR ¾" CRUSHED ROCK.
40. COMMENCEMENT OF USE OF SEWER LINES AND/OR SYSTEMS:
    - 40.1. NO SANITARY SEWER FACILITY SHALL BE PLACED IN SERVICE UNTIL THE COMPLETION OF ALL JET CLEANING, PRESSURE TESTING, VACUUM TESTING, CCTV INSPECTION, AND COMPACTION TESTING, AND AS-BUILT DRAWINGS ARE SUBMITTED AND APPROVED BY THE DISTRICT.
    - 40.2. NO SANITARY SEWER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL SERVICE LINES ARE COMPLETED AND THE FIRST LIFT OF ASPHALT IS COMPLETED OVER THE LINE. IN THE CASE WHERE NO ASPHALT IS TO BE PLACED OVER THE LINE, ANY REQUIRED SURFACE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO USE OF THE FACILITY.
    - 40.3. ALL NECESSARY EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICT, AND RECORDED.
    - 40.4. DOWNSTREAM PLUG CAN BE REMOVED ONCE THE FIRST LIFT OF ASPHALT IS DOWN AND THE ABOVE REQUIREMENTS ARE MET.



VICINITY MAP
SCALE: 1"=1,000'

AGENCIES

OWNER/DEVELOPER:	TURKEY CANON QUARRY, LLC 20 BOULDER CRESCENT, SUITE 201 COLORADO SPRINGS, CO 80903 JAMES F. MORLEY (719) 471-1742	WATER & WASTEWATER:	FALCON AREA WATER & WASTEWATER AUTHORITY ENGINEERS - RESPEC 5540 E. TECH CENTER DR. COLORADO SPRINGS, CO 80919 719.227.0072
CIVIL ENGINEER:	ALL TERRAIN ENGINEERING LLC 1004 WEST VAN BUREN STREET COLORADO SPRINGS, CO 80907 RYAN BURNS P.E. 203.577.8656	FIRE DISTRICT:	BLACK FOREST FIRE PROTECTION DISTRICT 11445 TEACHOUT ROAD COLORADO SPRINGS, CO 80908 CHIEF BRYAN JACK (719) 495-4300
COUNTY ENGINEERING:	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 (719) 520-6300	GAS DEPARTMENT:	COLORADO SPRINGS UTILITIES 7710 DURANT DR. COLORADO SPRINGS, CO 80947 TIM WENDT (719) 668-3556
TRAFFIC ENGINEERING:	EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS 3275 AKERS DRIVE COLORADO SPRINGS, CO 80922 (719) 520-6300	ELECTRIC DEPARTMENT:	MOUNTAIN VIEW ELECTRIC 11140 E. WOODMEN ROAD FALCON, CO 80831 (719) 495-2283

SHEET INDEX

1	-	COVER
2	-	LEGEND
3	-	SANITARY PLAN & PROFILE
5	-	DETAILS
5	-	TOTAL SHEETS

BASIS OF BEARINGS

THE NORTH LINE OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 5, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN, BEING MONUMENTED AT THE NORTHEAST CORNER OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 5 BY A 3-1/4" ALUMINUM CAP STAMPED "LS 10376" AND AT THE NORTH QUARTER CORNER BY A 3-1/4" ALUMINUM CAP STAMPED "LS 4842 1996", BEARING S89°14'13"W.

BENCHMARKS (NGVD 29)

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

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

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

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

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

PCD FILING NO.: CDR-2413

EL PASO COUNTY STATEMENT

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

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

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

JOSHUA PALMER, P.E. DATE

COUNTY ENGINEER/ECM ADMINISTRATOR

WATER & SEWER MAIN EXTENSIONS

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

SIGNED _____ DATE _____
JAMES F. MORLEY

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

FALCON AREA WATER & WASTEWATER AUTHORITY - WASTEWATER DESIGN APPROVAL

THE FALCON AREA WATER & WASTEWATER AUTHORITY RECOGNIZED THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN AND HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY.

PROJECT NO._____

SIGNED _____ DATE _____
FAWWA ENGINEER

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

ENGINEER'S STATEMENT

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

RYAN E. BURNS P.E. DATE
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

ALL TERRAIN ENGINEERING
JEREMIAH Q. JOVERCIT, PE
559.391.1655 - JEREMIAH@ATERRAINENG.COM
RYAN E. BURNS, PE
203.577.8656 - RYAN@ATERRAINENG.COM

PREPARED FOR:
TURKEY CANON QUARRY INC.
20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719) 491-3024
####

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

REV	DESCRIPTION	DATE

JOB NO: 24013
LOCATION: ####

MARKSHEFFEL ROAD - SEGMENT M3

COVER

DESIGN: NQJ
REVIEW: REB
DATE: 10/1/2026
H-SCALE: 1" = 1000'
V-SCALE: N/A
SHEET 1 OF 5

PLANEMETRICS

	EXISTING	PROPOSED
SECTION LINE		
RIGHT–OF–WAY		
PARCEL LINE		
EASEMENT LINE		
BOUNDARY LINE		
CENTER LINE		

CONSTRUCTION

	EXISTING	PROPOSED
C&G		
EDGE OF ASPHALT		
CONCRETE		
SIDE WALK		
CROSS PAN		
PARKING LOT STRIPING		
ROADWAY STRIPING – DASHED		
ROADWAY STRIPING – DOTTED		
GUARDRAIL		
FENCE		
SOUNDWALL		
DEMO		
GRAVEL		
RIPRAP		
DIRT		
TRAIL/PATH		
RAIL LINE		

GRADING

	EXISTING	PROPOSED
CONTOUR INTERMEDIATE		
CONTOUR INDEX		
TOP OF SLOPE		
TOE OF SLOPE		
CUT/FILL BOUNDARY		
LIMITS OF GRADING		LOG LOG LOG LOG LOG
LIMITS OF DISTURBANCE		

UTILITIES

	EXISTING	PROPOSED
SANITARY SEWER	SS	SS
SANITARY SEWER SERVICE	SS	SS
POTABLE WATER MAIN	W	W
POTABLE WATER SERVICE	W	W
RAW WATER MAIN	RAW	RAW
IRRIGATION MAIN		
SANITARY FORCE MAIN	FM	FM
UNDER–DRAIN	UD	UD
GAS PIPE	G	G
HIGH PRESSURE GAS	HPG	HPG
OIL/PETROLEUM LINE	O	O
UNDER–GROUND ELECTRIC	UGE	UGE
OVER–HEAD ELECTRIC	OHU	OHU
FIBER OPTIC	FO	FO
COMMUNICATION LINES MISC.	COM	COM
STORM PIPE		
HGL MINOR		
HGL MAJOR		

DRAINAGE

	EXISTING	PROPOSED
BASE FLOOD ELEVATION		
100–YR FLOOD PLAIN	100YR	100YR
500–YR FLOOD PLAIN	500YR	500YR
FLOODWAY	FLOOD	FLOOD
SWALE/DITCH		
THALWEG (STREAM/CREEK)		
LIMITS OF WETLANDS		
EDGE OF WATER		
SILT FENCE		
CONSTRUCTION FENCE/MARKERS		CF

UTILITY SYMBOLS

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE		
STORM INLET		
AREA INLET – SQUARE		
AREA INLET – ROUND		
FLARED END SECTION		

TRAFFIC

	EXISTING	PROPOSED
TRAFFIC SIGNAL BOX		
TRAFFIC SIGNAL POLE		
SIGN		
STREET LIGHT		
STREET LIGHT – SINGLE		
STREET LIGHT – DOUBLE		
LUMINAIRE		

LANDSCAPE

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

UTILITY SYMBOLS

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

ABBREVIATIONS:

ASCE – AMERICAN SOCIETY OF CIVIL ENGINEERS
BLDG – BUILDING
BW – BOTTOM OF WALL
CG – CURB AND GUTTER
CIP – CAST IRON PIPE
CL – CENTERLINE
CMP – CORRUGATED METAL PIPE
CONC – CONCRETE
DIP – DUCTILE IRON PIPE
DS – DOWNSPOUT
EL – ELEVATION
ESMT – EASEMENT
EX – EXISTING
FES – FLARED END SECTION
FL – FLOWLINE
GB – GRADE BREAK
HP – HIGH POINT
HYD – HYDRANT
INV – INVERT ELEVATION
LF – LINEAR FEET
LP – LOW POINT
MH – MANHOLE
MIN – MINIMUM
OH – OVERHEAD
PB – PUBLIC
PC – POINT OF CURVATURE
PCC – POINT OF COMPOUND CURVATURE
PCR – POINT OF CURB RETURN
PR – PROPOSED
PRC – POINT OF REVERSE CURVATURE
PVC – POLYVINYL CHLORIDE PIPE
PVT – PRIVATE
PT – POINT OF TANGENCY
P.U.E – PUBLIC UTILITY EASEMENT
P.U.A.E – PUBLIC UTILITY & ACCESS EASEMENT
P.U.D.E – PUBLIC UTILITY & DRAINAGE EASEMENT
P.I.E – PUBLIC IMPROVEMENT EASEMENT
R – RADIUS
RIM – RIM ELEVATION
STM – STORM
TBC – TOP BACK OF CURB
TW – TOP OF WALL
TYP – TYPICAL
UD – UNDERDRAIN
UT – UTILITY
WTR – WATER
XPAN – CROSSPAN

ALL TERRAIN ENGINEERING
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JOB NO: 24013 LOCATION: EPC

REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD - SEGMENT M3

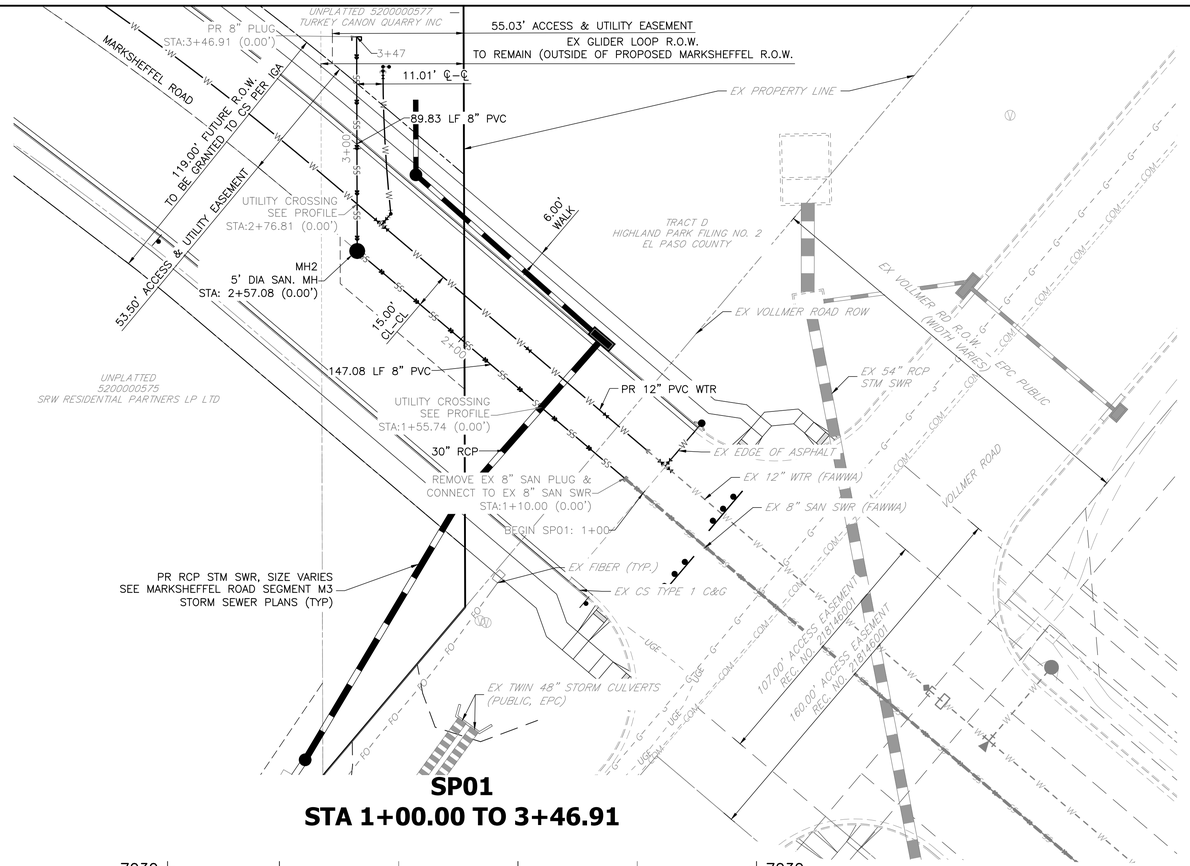
LEGEND

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

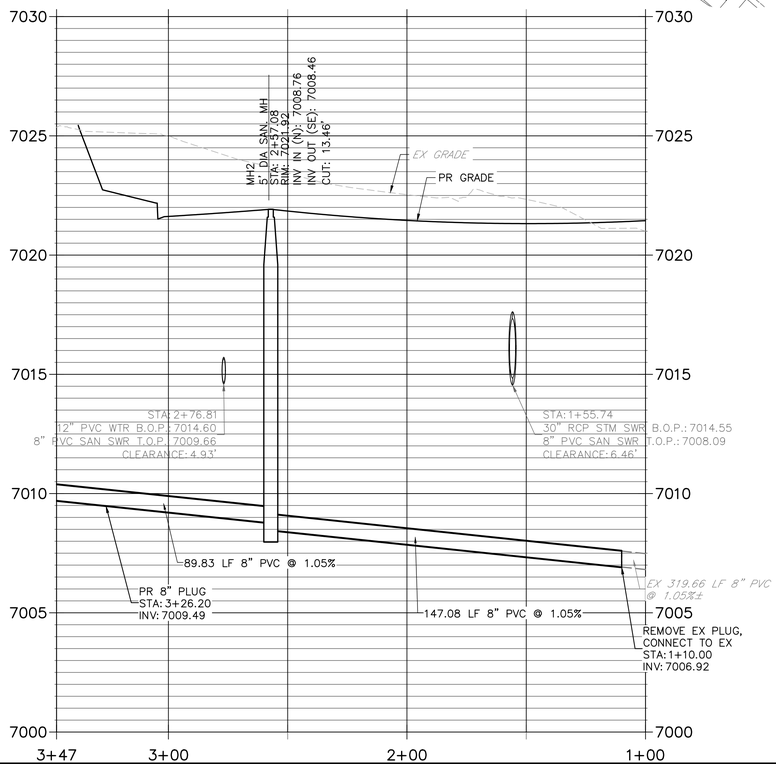
DESIGN: NQJ
REVIEW: REB
DATE: 10/1/2026
H-SCALE: N/A
V-SCALE: N/A

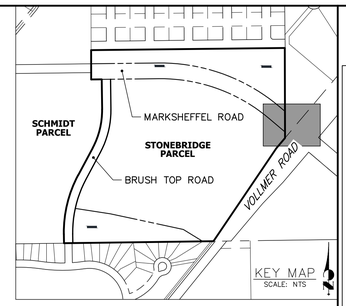
SHEET 2 OF 5

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SP01
STA 1+00.00 TO 3+46.91





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30 15 0 30 60
ORIGINAL SCALE: 1" = 30'

ENGINEER'S STATEMENT

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RYAN E. BURNS P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE

ALL TERRAIN ENGINEERING

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MICHAEL Q. JOVICEVIC, PE
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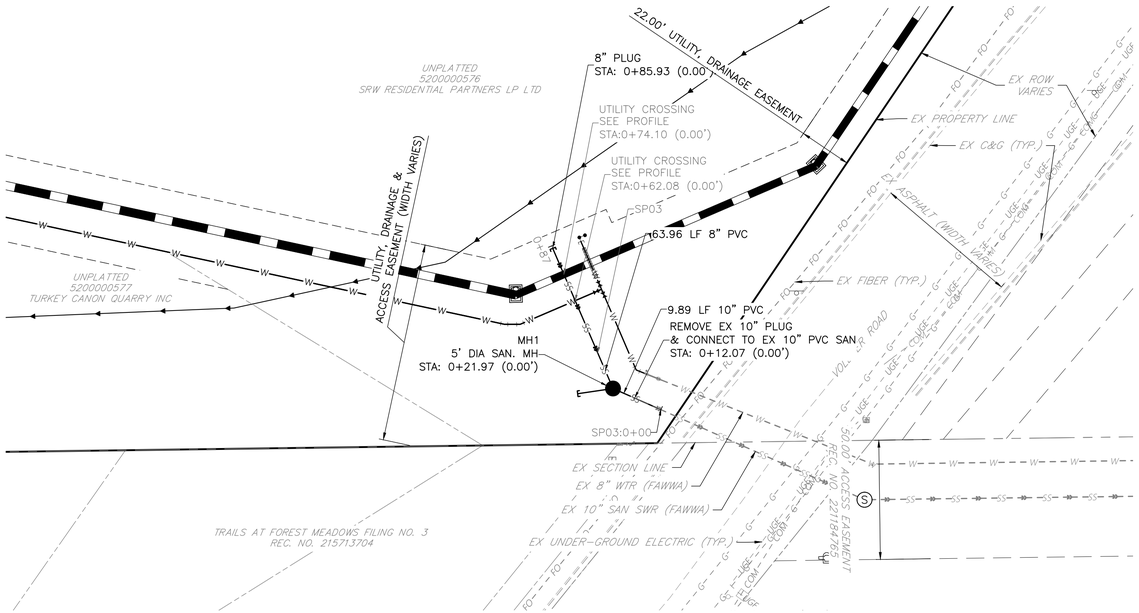
REV	DESCRIPTION	DATE

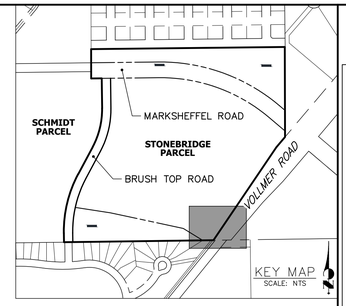
MARKSHEFFEL ROAD - SEGMENT M3

SANITARY PLAN & PROFILE

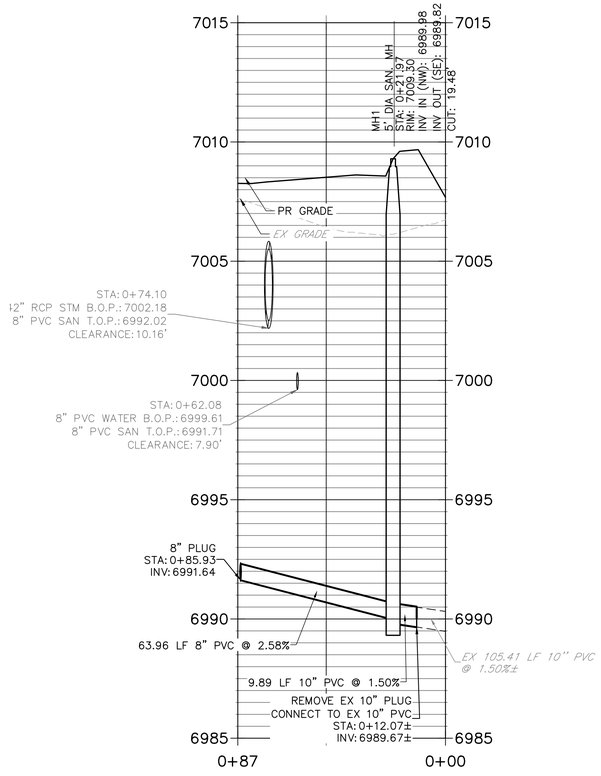
DESIGN: NQJ
REVIEW: REB
DATE: 10/1/2026
H-SCALE: 1" = 30'
V-SCALE: 1" = 3'

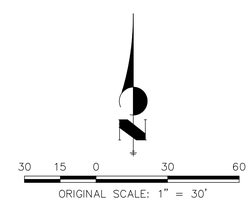
SHEET
3 OF 5





SP03
STA 0+00.00 TO 0+87.08





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COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE

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RYAN E. BURNS, PE
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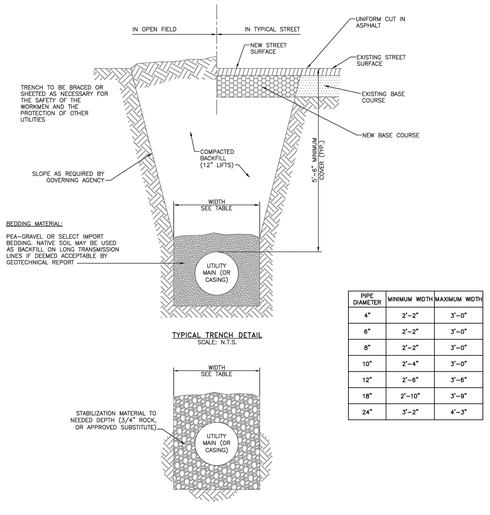
REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD - SEGMENT M3

SANITARY PLAN & PROFILE

DESIGN: NQJ
REVIEW: REB
DATE: 10/1/2026
H-SCALE: 1" = 30'
V-SCALE: 1" = 3'

SHEET
4 OF 5



PIPE DIAMETER	MINIMUM WIDTH	MAXIMUM WIDTH
4"	2'-2"	3'-0"
6"	2'-2"	3'-0"
8"	2'-2"	3'-0"
10"	2'-4"	3'-0"
12"	2'-6"	3'-6"
18"	2'-10"	3'-9"
24"	3'-2"	4'-3"

TYPICAL TRENCH DETAIL
SCALE: N.T.S.

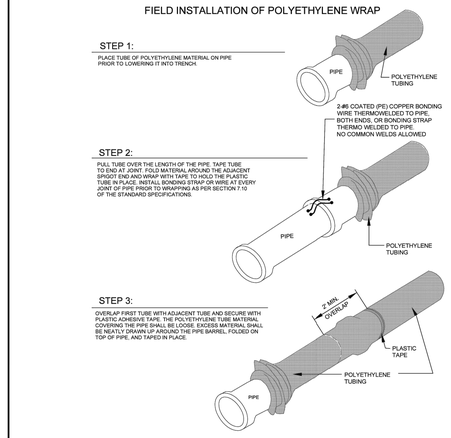
UNSTABLE TRENCH DETAIL
SCALE: N.T.S.

NOTE:

1. AN OVER-EXCAVATED TRENCH SHALL BE REFILLED WITH BEDDING MATERIAL AND THOROUGHLY COMPACTED AS PER THE SPECIFICATIONS.

TYPICAL TRENCH CROSS SECTION

Drawn: GGM/SKG	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT · WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	WW–1
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		



POLYETHYLENE PIPE WRAP

Drawn: GGM	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT · WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	WW–9
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		

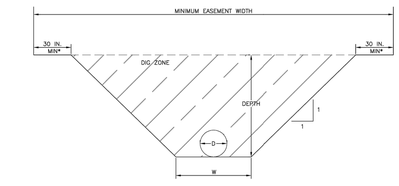
MAXIMUM DEFLECTION
PER SLIP JOINT OF D.I.P.

PIPE DIAMETER I.D. (IN)	PIPE DIAMETER O.D. (IN)	PIPE DIAMETER O.D. (FT)	MFRS. DEFL.	DESIGN DEFLECTION (80% MAX.) MAX. DEFL. DIST. (1)	(2)	APPROX. RADIUS FOR DEFLECTING CURVES WITHOUT BENDS 20'L	18'L
4"	4.80"	.400'	5°00'00"	4°00'00"	16"	15"	286'	258'
6"	6.90"	.575'	5°00'00"	4°00'00"	16"	15"	286'	258'
8"	9.05"	.754'	5°00'00"	4°00'00"	16"	15"	286'	258'
10"	11.10"	.925'	5°00'00"	4°00'00"	16"	15"	286'	258'
12"	13.20"	1.100'	5°00'00"	4°00'00"	16"	15"	286'	258'
14"	15.30"	1.275'	3°00'00"	2°24'00"	10"	9"	477'	430'
16"	17.40"	1.450'	3°00'00"	2°24'00"	10"	9"	477'	430'
18"	19.50"	1.625'	3°00'00"	2°24'00"	10"	9"	477'	430'
20"	21.60"	1.800'	3°00'00"	2°24'00"	10"	9"	477'	430'
24"	25.80"	2.150'	3°00'00"	2°24'00"	10"	9"	477'	430'
30"	32.00"	2.666'	2°30'00"	2°00'00"	8"	7"	573'	516'
36"	38.30"	3.192'	2°00'00"	1°36'00"	6"	6"	716'	645'
42"	44.50"	3.708'	2°00'00"	1°36'00"	6"	6"	716'	645'

(1) 20'L = NORMAL 20–FOOT JOINT LAYING LENGTH
(2) 18'L = NORMAL 18–FOOT JOINT LAYING LENGTH

MAXIMUM PIPELINE DEFLECTION DATA

Drawn: GGM	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT · WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	WW–11
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		



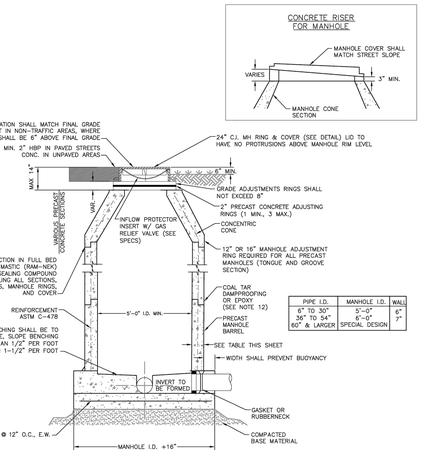
PIPE DIAMETER D	MINIMUM W
≤ 12 IN.	3 FT.
≤ 18 IN.	4 FT.
≤ 24 IN.	5 FT.
≤ 30 IN.	6 FT.

NOTES:

1. MINIMUM EASEMENT = 20 FT.
2. TYPICAL WATER ≤12 IN. WITH 5 FT COVER = 20 FT.
3. NO OTHER UTILITY IN DIG ZONE.
4. POTABLE WATER TO SEWER 10 FT MINIMUM HORIZONTAL.
5. MINIMUM CLEAR DISTANCE BETWEEN WH LINE = 30".
6. MINIMUM CLEAR DISTANCE BETWEEN WH LINE AND OTHER = 5 FT.
7. *SIDE SETBACK OF 30" MAY BE APPLIED EACH SIDE OR 5' ON SINGLE SIDE AS LONG AS DIG ZONE IS WITHIN EASEMENT.

EASEMENT & SEPARATION STANDARDS – WATER/SEWER MAINS

Drawn: GGM	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT · WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	WW–18
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		



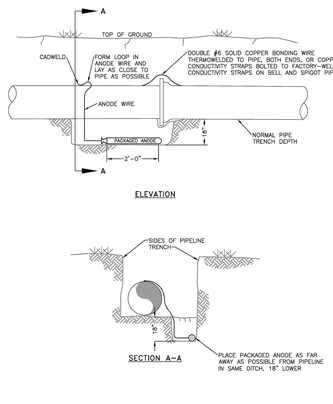
PIPE I.D.	MANHOLE I.D.	WALL
6" TO 30"	5'-0"	6"
36" TO 54"	6'-0"	7"
60" & LARGER	SPECIAL DESIGN	

NOTES:

1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 4,000 PSI @ 28 DAYS AND DESIGNED FOR HS-20 LOADING CONDITIONS.
2. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED.
3. FOR CAST-IN-PLACE MANHOLES, DO NOT DROP CONCRETE A DISTANCE OF MORE THAN 5' UNLESS APPROVED BY THE DISTRICT.
4. 3/4" CRUSHED ROCK REQUIRED UNDER BASE TO A DEPTH OF 6" UP TO SPRINGLINE OF PIPE, 2'-3" RADIUS AROUND BASE.
5. ALL STEPS SHALL BE REMOVED FOLLOWING CONSTRUCTION.
6. STRUCTURAL REINFORCEMENT SHALL COMPLY TO ASTM C-478 AND SHALL BE STAMPED ON THE OUTSIDE OF THE MANHOLE.
7. SHAPING FOR SMOOTH MANHOLE INVERTS MUST BE DONE BY FORMING/SHAPING CONCRETE BASE.
8. PRECAST SECTIONS TO CONFORM TO ASTM C-478.
9. STUB-OUTS SHALL EXTEND A MINIMUM OF 6' PAST MANHOLE O.D. AND BE SATISFACTORILY PLUGGED.
10. CONCRETE MANHOLES MAY BE POURED IN PLACE ONLY WITH PRIOR DESIGN AND INSPECTION APPROVAL.
11. ALL MORTAR GROUT SHALL BE MIXED WITH TYPE V CEMENT.
12. APPLY COAL TAR EPOXY DAMP-PROOFING TO ALL EXTERIOR CONCRETE SURFACES.
13. CENTER REINF. IN BASE. POUR BELOW PIPE O.D. AT FL.
14. ALL EXTERIOR JOINTS SHALL RECEIVE BUTYL RUBBER JOINT WRAP. REFER TO SPECIFICATIONS.
15. MANHOLE RIMS SHALL HAVE A HOLE IN LIEU OF A NOTCH FOR REMOVAL.

PRECAST MANHOLE

Drawn: GGM/SKG	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT · WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	WW–2
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		

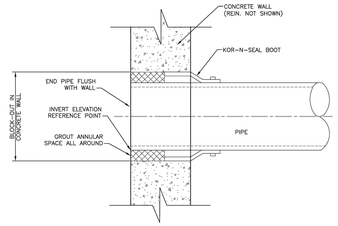


NOTES:

1. CADWELD CONNECTION TO BE PRIMED AND COATED CAREFULLY. PACKAGED ANODE SHOULD BE COVERED WITH FINE SOIL CONTAINING NO ROCKS OR DIRT CLUMPS, TAMPED.
2. WHEN ANODES ARE REQUIRED WITH METAL FITTINGS AND APPURTENANCES TOGETHER WITH PVC PIPE INSTALLATION, THE ANODES SHALL BE PLACED AND ATTACHED TO THE METAL IN SAME MANNER AS SHOWN ON THIS DRAWING. 9 LB. ANODES CAN BE USED ON METAL FITTINGS 12" AND LESS IN DIAMETER AND 17 LB. ANODES FOR METAL FITTINGS GREATER THAN 12" DIAMETER WHEN USING PVC PIPE.
3. PACKAGED ANODE TO BE WETTED AND COVERED WITH SOIL PRIOR TO BACKFILLING.

BONDING JOINT & ANODE INSTALLATION

Drawn: GGM	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT · WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	WW–10
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		



KOR–N–SEAL BOOT DETAIL

Drawn: GGM	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT · WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	WW–16
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		

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RYAN F. EVERLY, PE
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PREPARED FOR:
TURKEY CANON QUARRY INC.
20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719) 491-3024
####

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

JOB NO: 24013 LOCATION: EPC

REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD - SEGMENT M3

DETAILS

DESIGN: NQJ
REVIEW: REB
DATE: 10/1/2026

H-SCALE: 1" = 30'
V-SCALE: 1" = 3'

SHEET
5 OF 5

MARKSHEFFEL ROAD - SEGMENT M3

EL PASO COUNTY, COLORADO

WATER MAIN EXTENSION

FAWWA GENERAL NOTES

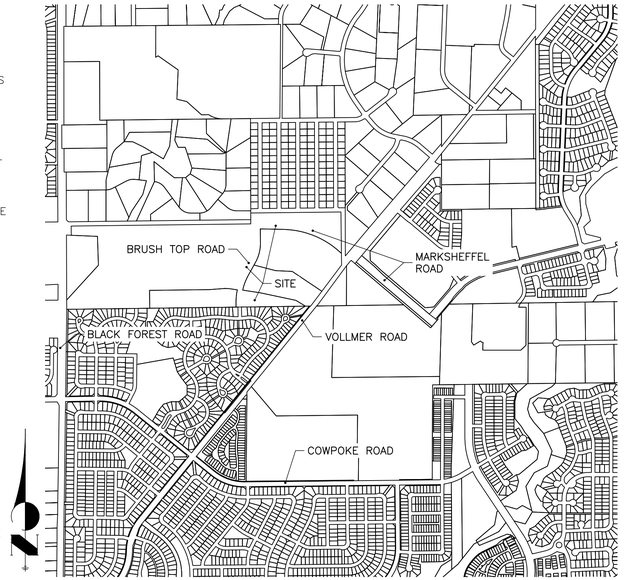
1. ALL UTILITY CONSTRUCTION TO BE CONDUCTED IN CONFORMANCE WITH THE CURRENT FALCON AREA WATER AND WASTEWATER AUTHORITY (FAWWA, THE DISTRICT) SPECIFICATIONS.
2. ALL PLANS ON THE JOB SITE SHALL BE SIGNED BY THE DISTRICT AND THE DISTRICT'S ENGINEER. ANY REVISION TO THE PLANS SHALL BE SO NOTED WITH THE OLD DRAWING MARKED 'NOT VALID.'
3. ALL STATIONING IS CENTERLINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE NOTED.
4. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE DISTRICT. THE DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
5. ALL OVER-LOT GRADING MUST BE COMPLETED TO WITHIN ONE (1) FOOT OF FINAL GRADE PRIOR TO INSTALLATION OF WATER AND WASTEWATER INFRASTRUCTURE.
6. ALL WATER AND SEWER SERVICE LOCATIONS SHALL BE CLEARLY MARKED ON EITHER THE CURB HEAD OR THE FACE OF THE CURB, WITH AN "S" FOR SEWER AND A "W" FOR WATER.
7. DUCTILE IRON PIPES, INCLUDING FITTINGS, VALVES, AND FIRE HYDRANTS, SHALL BE WRAPPED WITH POLYETHYLENE TUBING, DOUBLE BONDED AT EACH JOINT, AND ELECTRICALLY ISOLATED. BONDING AND ANODE CONNECTIONS SHALL BE THOROUGHLY COATED WITH BITUMINOUS COATINGS.
8. ALL DUCTILE IRON PIPE LESS THAN TWELVE INCHES (12") AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO (2) NO. 6 WIRES WITH 17 LB. MAGNESIUM ANODES EVERY 400 FEET AND 9 LB. MAGNESIUM ANODES AT EACH FITTING. ALL DUCTILE IRON PIPE TWELVE INCHES (12") AND GREATER AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO (2) NO. 6 WIRES WITH 17 LB. MAGNESIUM ANODES EVERY 300 FEET AND 9 LB. MAGNESIUM ANODES AT EACH FITTING.
9. ALL PIPE MATERIAL, BACKFILL, AND INSTALLATION SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE DISTRICT, COLORADO DEPARTMENT OF TRANSPORTATION, EL PASO COUNTY DEPARTMENT OF TRANSPORTATION, COLORADO SPRINGS UTILITIES, AND THE GEOTECHNICAL ENGINEER.
10. COMPACTION TESTS SHALL BE 95% STANDARD PROCTOR AS DETERMINED BY ASTM D698, UNLESS OTHERWISE APPROVED BY THE DISTRICT OR HIGHER STANDARD AS IMPOSED BY ANOTHER AGENCIES HAVING RIGHT-OF-WAY JURISDICTION. THIS SHALL INCLUDE ALL VALVES, FIRE HYDRANT RUNS, WATER & SEWER SERVICE LINES, AND MANHOLES. ALL REPORTS SHALL BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.
11. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. THE LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. THE DISTRICT SHALL BE NOTIFIED OF ANY DEVIATIONS TO THE LINE AND/OR GRADE AS DEPICTED ON THE PLANS. CONTRACTOR SHALL SUBMIT TO THE DISTRICT AND THE ENGINEER OF RECORD A REPORT OF THE FIELD-VERIFIED INFORMATION PRIOR TO THE START OF CONSTRUCTION.
12. ALL BENDS SHALL BE FIELD STAKED PRIOR TO THE START OF CONSTRUCTION.
13. BENDS, DEFLECTION, AND CUT PIPE LENGTHS SHALL BE USED TO HOLD HORIZONTAL ALIGNMENT OF SEWER AND WATER LINES TO NO MORE THAN 0.5° FROM THE DESIGNED ALIGNMENT. CONSTRUCTION STAKES TO BE AT TWENTY-FIVE FEET (25') INTERVALS ALONG CURVES TO ENSURE LOCATION OF PIPELINE CONSTRUCTION.
14. AT ALL LOCATIONS WHERE CAP AND STUB IS NOTED ON DRAWINGS, PROVIDE A PLUG AT THE END OF THE PIPE JOINT NEAREST THE SPECIFIED STATION. PROVIDE A REVERSE ANCHOR AT ALL WATER LINE PLUGS.
15. ALL UNUSED, SALVAGED WATER UTILITY MATERIAL SHALL BE RETURNED TO THE DISTRICT AS REQUESTED.
16. AT THE CONTRACTOR'S EXPENSE, ALL UTILITY MAINS SHALL BE SUPPORTED AND PROTECTED SUCH THAT THEY SHALL FUNCTION CONTINUOUSLY DURING CONSTRUCTION OPERATIONS. SHOULD A UTILITY MAIN FAIL AS A RESULT OF THE CONTRACTOR'S OPERATION, IT SHALL BE REPLACED IMMEDIATELY BY THE CONTRACTOR OR BY THE DISTRICT AT FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR/DEVELOPER.
17. PUMPING OR BYPASS OPERATIONS SHALL BE REVIEWED AND APPROVED BY BOTH THE DISTRICT AND THE DISTRICT ENGINEER PRIOR TO EXECUTION.
18. THE CONTRACTOR SHALL REPLACE OR REPAIR DAMAGE TO ALL SURFACE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO FENCES, LANDSCAPING, CURB AND GUTTER, AND/OR ASPHALT THAT MAY BE CAUSED DURING CONSTRUCTION.
19. ALL CONTRACTORS WORKING ON OR NEAR A WATER OR SEWER FACILITY (TO INCLUDE SERVICE LINES) SHALL HAVE LIABILITY INSURANCE NAMING THE DISTRICT AS AN ADDITIONAL INSURED AND SHALL PROVIDE A CURRENT COPY OF WORKER'S COMPENSATION INSURANCE ON FILE WITH THE DISTRICT. NO WORK CAN PROCEED WITHOUT CURRENT CERTIFICATES ON FILE AT THE DISTRICTS' OFFICE.
20. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND ALL AFFECTED UTILITY COMPANIES ADJACENT TO THE PROPOSED UTILITY CONSTRUCTION A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF CONSTRUCTION. A WEEKLY CONSTRUCTION MEETING SHALL BE REQUIRED WITH THE CONTRACTOR, DISTRICT ENGINEER AND ALL OTHER PARTIES AS DEEMED NECESSARY BY THE DISTRICT.
21. COMMENCEMENT OF CONSTRUCTION OF WATER/SEWER SYSTEMS WITHIN METROPOLITAN DISTRICT:
    - 21.1. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR MUST SCHEDULE A PRECONSTRUCTION MEETING WITH THE DISTRICT'S ENGINEER. THE PRECONSTRUCTION MEETING MUST OCCUR A MINIMUM OF SEVENTY-TWO (72) HOURS IN ADVANCE OF COMMENCING WORK. SEE SECTION 1.9.5 HEREIN REGARDING PRECONSTRUCTION MEETINGS.
    - 21.2. UNLESS CONSTRUCTION COMMENCES WITHIN SIX (6) MONTHS FROM THE DATE OF PLAN APPROVAL, APPROVAL SHALL BECOME NULL AND VOID.
22. TESTING OF FACILITIES:
    - 22.1. THE CONTRACTOR SHALL NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF ANY TESTING.
    - 22.2. ALL SECTIONS OF WATER LINE ARE TO MEET THE FOLLOWING PRESSURE TESTING REQUIREMENTS
        - ☐ TEST 100% OF ALL LINES.
        - ☐ MUST PASS PRESSURE TEST TO 200 PSI FOR TWO HOURS (UNLESS OTHERWISE APPROVED ON THE PLANS).
    - 22.3. ALL SANITARY SEWER FACILITIES ARE TO MEET THE FOLLOWING TESTING REQUIREMENTS:
        - ☐ ALL LINES SHALL BE JET CLEANED PRIOR TO VACUUM OR PRESSURE TESTING.
        - ☐ ALL MANHOLES SHALL BE VACUUM TESTED WITH DISTRICT STAFF PRESENT PRIOR TO CCTV INSPECTION.
        - ☐ SEWER MAINS TO BE PRESSURE TESTED PRIOR TO CCTV INSPECTION.
        - ☐ ALL LINES SHALL BE CCTV INSPECTED AND VIDEO SHALL TO BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.
23. PRELIMINARY ACCEPTANCE SHALL BE DEFINED AS THE POINT IN TIME THAT THE DISTRICT ACCEPTS THE FACILITY FOR USE. ALL SURFACE IMPROVEMENTS AND RESTORATION SHALL BE COMPLETED WITHIN 30 DAYS OF COMMENCEMENT. SHOULD THE CONTRACTOR FAIL TO COMPLETE ALL SURFACE IMPROVEMENTS AND RESTORATION WITHIN 30 DAYS OF COMMENCEMENT OF SERVICE, THE DISTRICT, AT THEIR DISCRETION, MAY ELECT TO COMPLETE THE IMPROVEMENTS AT THE CONTRACTOR'S COST.
24. FINAL ACCEPTANCE BY THE DISTRICT OF ANY LINE OR SYSTEM SHALL NOT OCCUR UNTIL COMPLETION OF FINAL ASPHALT LAYERS AND/OR FINAL COMPLETION AND/OR RESTORATION OF ALL SURFACE IMPROVEMENTS. THE WARRANTY PERIOD FOR ALL FACILITIES PRIOR TO FINAL ACCEPTANCE SHALL BE 24 MONTHS COMMENCING AFTER PRELIMINARY ACCEPTANCE.
25. ACCEPTANCE
    - 25.1. THE DISTRICT MAY GIVE PRELIMINARY ACCEPTANCE ONCE ALL OF THE TESTS ON ALL THE LINES HAVE BEEN COMPLETED AND A WALK-THROUGH HAS OCCURRED.
    - 25.2. A SECOND ACCEPTANCE MAY OCCUR ONCE THE FIRST LIFT OF ASPHALT GOES DOWN AND A SECOND WALK-THROUGH OF THE SYSTEM OCCURS. IF ALL FACILITIES ARE CLEAN AND ACCESSIBLE, A FINAL ACCEPTANCE MAY OCCUR (THE DISTRICT MAY REQUIRE CLEANING AND RE-VIDEO OF THE SYSTEM, DEPENDING ON THE SEVERITY OF THE CONTAMINATION).
26. ALL WATER AND SEWER MAINS, INCLUDING SERVICE LINES, SHALL HAVE "AS-BUILT" DRAWINGS PREPARED AND APPROVED PRIOR TO PRELIMINARY ACCEPTANCE BY THE DISTRICT.
27. ALL COMMERCIAL/BUSINESS DEVELOPMENTS SHALL HAVE AN EIGHT INCH (MIN.) WATER MAIN LOOPED THROUGH THE PROPOSED PROPERTY WITH GATE VALVES LOCATED WHERE THE MAIN ENTERS THE PROPERTY LINE. AN EIGHT-INCH SEWER MAIN SHALL BE INSTALLED FOR SERVICE TO COMMERCIAL/BUSINESS DEVELOPMENTS, AND A MANHOLE SHALL BE LOCATED WHERE THE MAIN ENTERS THE PROPERTY. THE END OF THE MAINS SHALL BE MARKED WITH THE APPROPRIATE COLORED CARSONITE MARKER ALONG WITH TRACER WIRE.
28. AFTER REVIEW AND APPROVAL OF PLANS FOR THE EXTENSION OF LINES, FACILITIES, AND/OR SERVICES, CONSTRUCTION MUST HAVE COMMENCED WITHIN 18 MONTHS FOR RESIDENTIAL SUBDIVISIONS AND 12 MONTHS FOR ANY COMMERCIAL INSTALLATIONS.
29. INSPECTION FEES: CALL THE DISTRICT (719-495-2500) FOR FEE SCHEDULE.

WATER SYSTEM INSTALLATION NOTES

30. ALL WATER AND FORCE MAIN PIPE SHALL BE AWWA C900 PVC, OR APPROVED EQUAL, DR-18. ALL WATER AND FORCE MAIN FITTINGS SHALL HAVE MECHANICAL RESTRAINTS AND THRUST BLOCKS. ALL WATER AND FORCE MAIN PIPE SHALL HAVE A MINIMUM COVER DEPTH OF FIVE-AND-ONE-HALF (5.5) FEET.
31. ALL WATER VALVES ASSOCIATED WITH THE POTABLE WATER SYSTEM SHALL BE OPEN CLOCKWISE. ALL VALVES INSTALLED IN LANDSCAPED AREAS AND/OR NOT WITHIN PAVED STREETS SHALL BE MARKED WITH CARSONITE MARKERS. ALL VALVES ASSOCIATED WITH THE RAW WATER SYSTEM SHALL BE OPEN COUNTERCLOCKWISE AND MARKED WITH CARSONITE MARKERS AS APPLICABLE.
32. THE DEVELOPER OR HIS ENGINEER SHALL LOCATE ALL FIRE HYDRANTS AND SERVICE STUB-OUTS FOR FUTURE DEVELOPMENT. ANY REQUIRED REALIGNMENT, HORIZONTAL OR VERTICAL, SHALL BE AT THE EXPENSE OF THE DEVELOPER. FIRE HYDRANT LOCATION SHALL BE REVIEWED AND APPROVED BY THE APPLICABLE FIRE AUTHORITY.
33. FIRE HYDRANTS SHALL BE OPEN RIGHT WITH 7/8" X 7/8" SQUARE TAPERED ALONG WITH SERVICE CAPS. LUBRICATION TYPE: GREASE. ACCEPTABLE BRAND IS KENNEDY GUARDIAN (K81D, K81A, AND K81AM). EACH FIRE HYDRANT LOCATION SHALL ALSO BE USED AS TEST STATION.
34. CONTRACTOR SHALL MAKE CONNECTIONS TO EXISTING WATER LINE WITHOUT SHUTDOWN, OR ELSE NOTIFY THE DISTRICT OF ANY SERVICE SHUTDOWNS NECESSARY TO CONNECT TO EXISTING LINES.
35. IRRIGATION SERVICES SHALL HAVE A STOP-AND-WASTE CURB STOP VALVE INSTALLED ALONG WITH TRACER WIRE EXTENDING BACK TO THE MAIN LINE.
36. COMMENCEMENT OF USE OF WATER LINES AND/OR SYSTEMS:
    - 36.1. NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL AFTER THE COMPLETION OF ALL PRESSURE TESTING, FLUSHING, BAC-TTESTING, AND COMPACTION TESTING, AND AS-BUILT DRAWINGS ARE SUBMITTED AND APPROVED BY THE DISTRICT.
    - 36.2. NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL SERVICE LINES ARE COMPLETED AND THE FIRST LIFT OF ASPHALT IS COMPLETED OVER THE LINE. IN THE CASE WHERE NO ASPHALT IS TO BE PLACED OVER THE LINE, SURFACE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO USE OF THE FACILITY.
    - 36.3. ALL EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICT, AND RECORDED.

WASTEWATER SYSTEM INSTALLATION NOTES

37. SANITARY SEWER LENGTHS ARE MH CENTER -MH CENTER. ALL SANITARY SEWER PIPES SHALL BE SDR 35 PVC OR APPROVED EQUAL. SEWER LINES MAY NOT EXCEED 7% GRADE FOR ANY SIZE WITHOUT PRIOR APPROVAL OF THE DISTRICT. ALL NEWLY CONSTRUCTED RESIDENTIAL SANITARY SEWER TAPS SHALL USE PRE-MANUFACTURED, INLINE PVC PUSH-ON WYES. SINGLE SADDLE TAP ALLOWED ON EXISTING MAINS. MULTIPLE SADDLE TAPS ON EXISTING MAINS MUST BE APPROVED BY THE DISTRICT ON A CASE BY CASE BASIS
38. ALL SANITARY SEWER MANHOLES SHALL BE WRAPPED WITH RU116 – RUBR-NEK JOINT WRAP, OR APPROVED EQUAL, AND COATED.
39. ALL SEWER LINES MUST BE BEDDED WITH SQUEEGEE OR ¾" CRUSHED ROCK.
40. COMMENCEMENT OF USE OF SEWER LINES AND/OR SYSTEMS:
    - 40.1. NO SANITARY SEWER FACILITY SHALL BE PLACED IN SERVICE UNTIL THE COMPLETION OF ALL JET CLEANING, PRESSURE TESTING, VACUUM TESTING, CCTV INSPECTION, AND COMPACTION TESTING, AND AS-BUILT DRAWINGS ARE SUBMITTED AND APPROVED BY THE DISTRICT.
    - 40.2. NO SANITARY SEWER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL SERVICE LINES ARE COMPLETED AND THE FIRST LIFT OF ASPHALT IS COMPLETED OVER THE LINE. IN THE CASE WHERE NO ASPHALT IS TO BE PLACED OVER THE LINE, ANY REQUIRED SURFACE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO USE OF THE FACILITY.
    - 40.3. ALL NECESSARY EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICT, AND RECORDED.
    - 40.4. DOWNSTREAM PLUG CAN BE REMOVED ONCE THE FIRST LIFT OF ASPHALT IS DOWN AND THE ABOVE REQUIREMENTS ARE MET.



VICINITY MAP
SCALE: 1"=1,000'

BASIS OF BEARINGS

THE NORTH LINE OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 5, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN, BEING MONUMENTED AT THE NORTHEAST CORNER OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 5, BY A 3-1/4" ALUMINUM CAP STAMPED "LS 10376" AND AT THE NORTH QUARTER CORNER BY A 3-1/4" ALUMINUM CAP STAMPED "LS 4842 1996", BEARING S89°14'13"W.

BENCHMARKS (NGVD 29)

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

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

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

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

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

AGENCIES

OWNER/DEVELOPER:	TURKEY CANON QUARRY, LLC 20 BOULDER CRESCENT, SUITE 201 COLORADO SPRINGS, CO 80903 JAMES F. MORLEY (719) 471-1742	WATER & WASTEWATER:	FALCON AREA WATER & WASTEWATER AUTHORITY ENGINEERS - RESPEC 5540 E. TECH CENTER DR. COLORADO SPRINGS, CO 80919 719.227.0072
CIVIL ENGINEER:	ALL TERRAIN ENGINEERING LLC 1004 WEST VAN BUREN STREET COLORADO SPRINGS, CO 80907 RYAN BURNS P.E. 203.577.8656	FIRE DISTRICT:	BLACK FOREST FIRE PROTECTION DISTRICT 11445 TEACHOUT ROAD COLORADO SPRINGS, CO 80908 CHIEF BRYAN JACK (719) 495-4300
COUNTY ENGINEERING:	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 (719) 520-6300	GAS DEPARTMENT:	COLORADO SPRINGS UTILITIES 7710 DURANT DR. COLORADO SPRINGS, CO 80947 TIM WENDT (719) 668-3556
TRAFFIC ENGINEERING:	EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS 3275 AKERS DRIVE COLORADO SPRINGS, CO 80922 (719) 520-6300	ELECTRIC DEPARTMENT:	MOUNTAIN VIEW ELECTRIC 11140 E. WOODMEN ROAD FALCON, CO 80831 (719) 495-2283

SHEET INDEX

1	–	COVER
2	–	LEGEND
3	–	WATER MAIN EXTENSION
7 – 9	–	DETAILS
9	–	TOTAL SHEETS

EL PASO COUNTY STATEMENT

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

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

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

GILBERT LAFORCE, P.E. DATE

COUNTY ENGINEER/ECM ADMINISTRATOR

WATER & SEWER MAIN EXTENSIONS

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

SIGNED _____ DATE _____
JAMES F. MORLEY

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

FALCON AREA WATER & WASTEWATER AUTHORITY - WATER DESIGN APPROVAL

THE FALCON AREA WATER & WASTEWATER AUTHORITY RECOGNIZED THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN AND HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY.

PROJECT NO._____

SIGNED _____ DATE _____
FAWWA ENGINEER

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

FIRE AUTHORITY APPROVAL

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

FIRE PROTECTION DISTRICT_____

SIGNED _____ DATE _____
FIRE PROTECTION DISTRICT

ENGINEER'S STATEMENT

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

_____ DATE _____
RYAN E. BURNS, P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING, LLC

PCD FILING NO.: CDR-2413

ALL TERRAIN ENGINEERING

RYAN E. BURNS, PE 203.577.8656 - RBURNS@ALLTERRAINENG.COM
MICHAEL G. JOVICEVIC, PE 530.391.1655 - MJOVICEVIC@ALLTERRAINENG.COM

PREPARED FOR:
TURKEY CANON QUARRY INC.
20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719) 491-3024
JMORLEY3870@AOL.COM

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

REV	DESCRIPTION	DATE

JOB NO: 24013
LOCATION: ####

MARKSHEFFEL ROAD - SEGMENT M3

COVER

DESIGN: REB
REVIEW: NQJ
DATE: 04/27/26
H-SCALE: 1" = 1000'
V-SCALE: N/A

SHEET
1 OF 9

PLANEMETRICS

	EXISTING	PROPOSED
SECTION LINE		
RIGHT–OF–WAY		
PARCEL LINE		
EASEMENT LINE		
BOUNDARY LINE		
CENTER LINE		

CONSTRUCTION

	EXISTING	PROPOSED
C&G		
EDGE OF ASPHALT		
CONCRETE		
SIDE WALK		
CROSS PAN		
PARKING LOT STRIPING		
ROADWAY STRIPING – DASHED		
ROADWAY STRIPING – DOTTED		
GUARDRAIL		
FENCE		
SOUNDWALL		
DEMO		
GRAVEL		
RIPRAP		
DIRT		
TRAIL/PATH		
RAIL LINE		

GRADING

	EXISTING	PROPOSED
CONTOUR INTERMEDIATE		
CONTOUR INDEX		
TOP OF SLOPE		
TOE OF SLOPE		
CUT/FILL BOUNDARY		
LIMITS OF GRADING		LOG
LIMITS OF DISTURBANCE		

UTILITIES

	EXISTING	PROPOSED
SANITARY SEWER	SS	SS
SANITARY SEWER SERVICE	SS	SS
POTABLE WATER MAIN	W	W
POTABLE WATER SERVICE	W	W
RAW WATER MAIN	RAW	RAW
IRRIGATION MAIN		
SANITARY FORCE MAIN	FM	FM
UNDER–DRAIN	UD	UD
GAS PIPE	G	G
HIGH PRESSURE GAS	HPG	HPG
OIL/PETROLEUM LINE	O	O
UNDER–GROUND ELECTRIC	UGE	UGE
OVER–HEAD ELECTRIC	OHU	OHU
FIBER OPTIC	FO	FO
COMMUNICATION LINES MISC.	COM	COM
STORM PIPE		
HGL MINOR		
HGL MAJOR		

DRAINAGE

	EXISTING	PROPOSED
BASE FLOOD ELEVATION		
100–YR FLOOD PLAIN	100YR	100YR
500–YR FLOOD PLAIN	500YR	500YR
FLOODWAY	FLOOD	FLOOD
SWALE/DITCH		
THALWEG (STREAM/CREEK)		
LIMITS OF WETLANDS		
EDGE OF WATER		
SILT FENCE		
CONSTRUCTION FENCE/MARKERS		CF

UTILITY SYMBOLS

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE		
STORM INLET		
AREA INLET – SQUARE		
AREA INLET – ROUND		
FLARED END SECTION		

TRAFFIC

	EXISTING	PROPOSED
TRAFFIC SIGNAL BOX		
TRAFFIC SIGNAL POLE		
SIGN		
STREET LIGHT		
STREET LIGHT – SINGLE		
STREET LIGHT – DOUBLE		
LUMINAIRE		

LANDSCAPE

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

UTILITY SYMBOLS

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

ABBREVIATIONS:

ASCE – AMERICAN SOCIETY OF CIVIL ENGINEERS
BLDG – BUILDING
BW – BOTTOM OF WALL
CG – CURB AND GUTTER
CIP – CAST IRON PIPE
CL – CENTERLINE
CMP – CORRUGATED METAL PIPE
CONC – CONCRETE
DIP – DUCTILE IRON PIPE
DS – DOWNSPOUT
EL – ELEVATION
ESMT – EASEMENT
EX – EXISTING
FES – FLARED END SECTION
FL – FLOWLINE
GB – GRADE BREAK
HP – HIGH POINT
HYD – HYDRANT
INV – INVERT ELEVATION
LF – LINEAR FEET
LP – LOW POINT
MH – MANHOLE
MIN – MINIMUM
OH – OVERHEAD
PB – PUBLIC
PC – POINT OF CURVATURE
PCC – POINT OF COMPOUND CURVATURE
PCR – POINT OF CURB RETURN
PR – PROPOSED
PRC – POINT OF REVERSE CURVATURE
PVC – POLYVINYL CHLORIDE PIPE
PVT – PRIVATE
PT – POINT OF TANGENCY
P.U.E – PUBLIC UTILITY EASEMENT
P.U.A.E – PUBLIC UTILITY & ACCESS EASEMENT
P.U.D.E – PUBLIC UTILITY & DRAINAGE EASEMENT
P.I.E – PUBLIC IMPROVEMENT EASEMENT
R – RADIUS
RIM – RIM ELEVATION
STM – STORM
TBC – TOP BACK OF CURB
TW – TOP OF WALL
TYP – TYPICAL
UD – UNDERDRAIN
UT – UTILITY
WTR – WATER
XPAN – CROSSPAN

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FRANK E. BONTRAGER, PE
303.577.4656 – FBONTRAGER@ATERRAENGINEERING.COM

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COLORADO SPRINGS, CO 80903
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JOB NO. 24013 LOCATION: EPC

REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD - SEGMENT M3

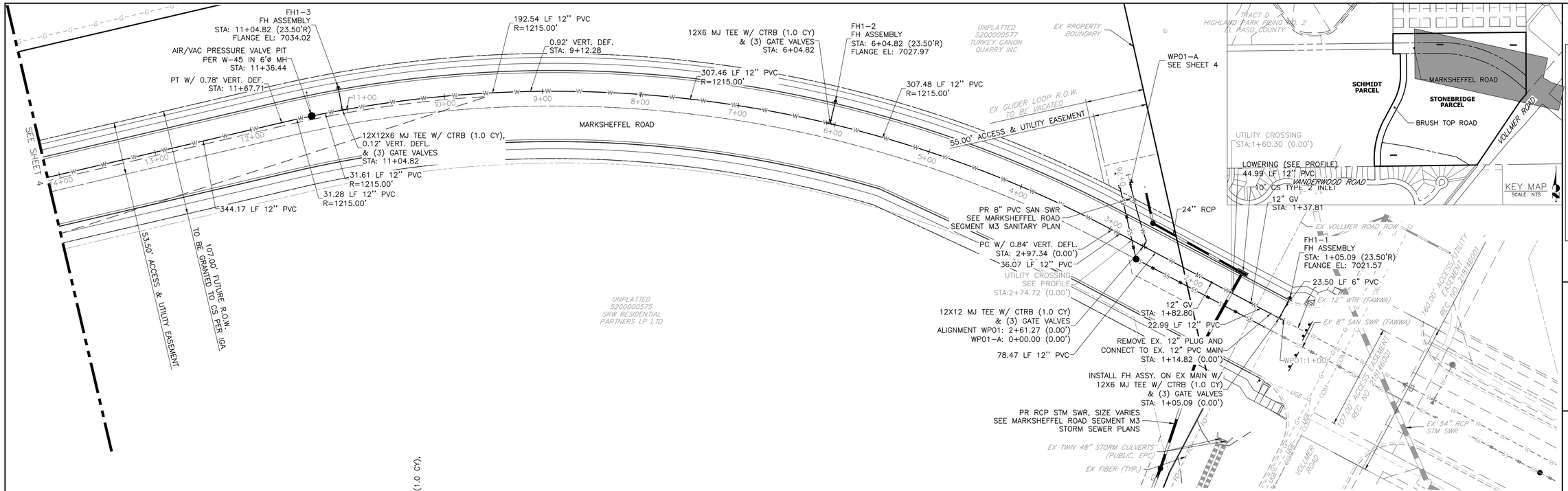
LEGEND

Know what's below. Call before you dig.

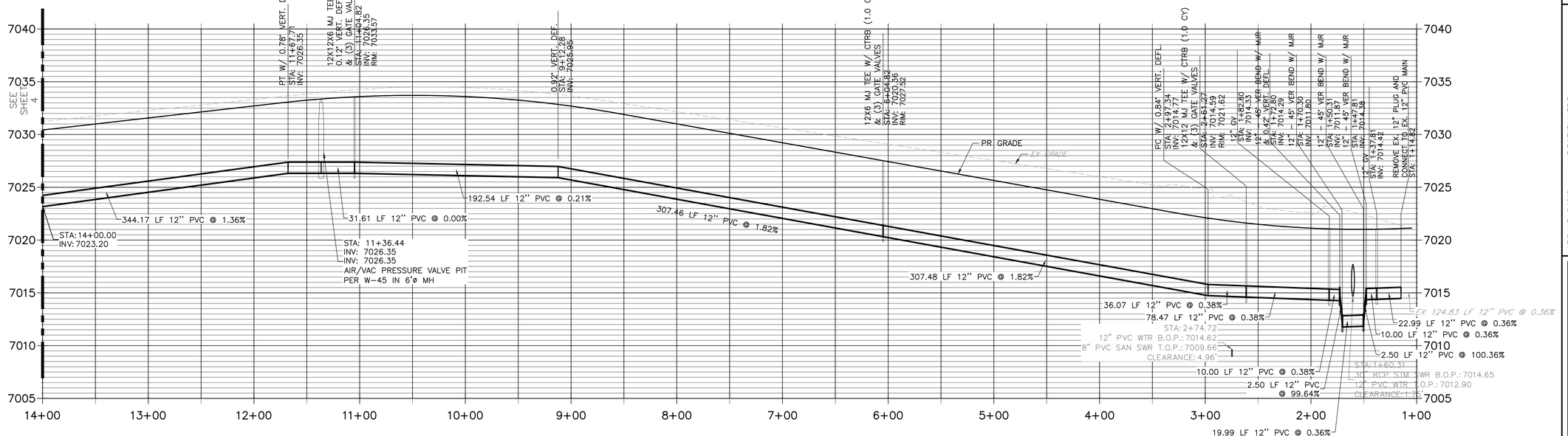
DESIGN: REB
REVIEW: NQJ
DATE: 04/27/26
H-SCALE: N/A
V-SCALE: N/A

SHEET 2 OF 9

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ALIGNMENT WP01
STA 1+00.00 TO 14+00.00



50 25 0 50 100

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

PCD FILE NO. CDR-2413

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RYAN E. BURNS P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE

ALL TERRAIN ENGINEERING
719.377.1655 - 4170 AUSTIN BLUFFS PARKWAY, COLORADO SPRINGS, CO 80918
RYAN E. BURNS, PE - 4170 AUSTIN BLUFFS PARKWAY, COLORADO SPRINGS, CO 80918
719.377.1655 - RBURNS@ALLTERRAINENG.COM

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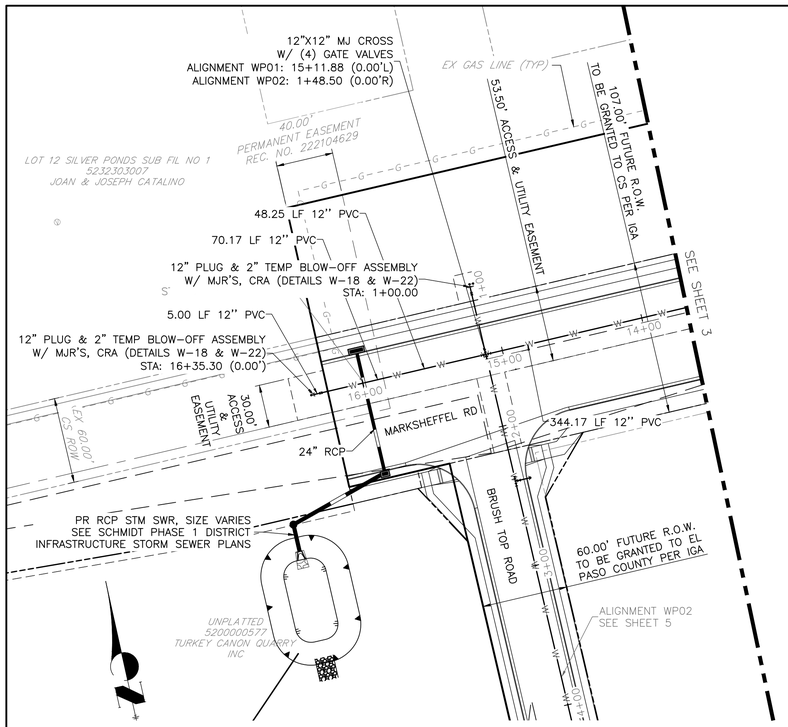
REV	DESCRIPTION	DATE

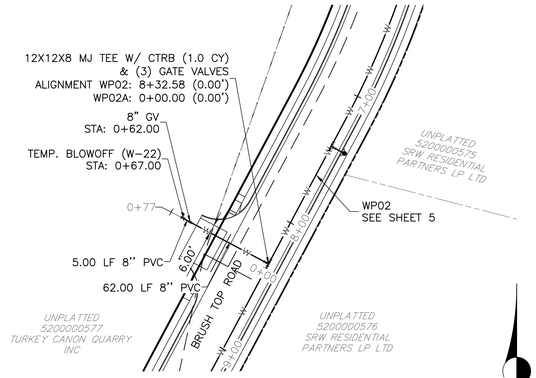
MARKSHEFFEL ROAD - SEGMENT M3

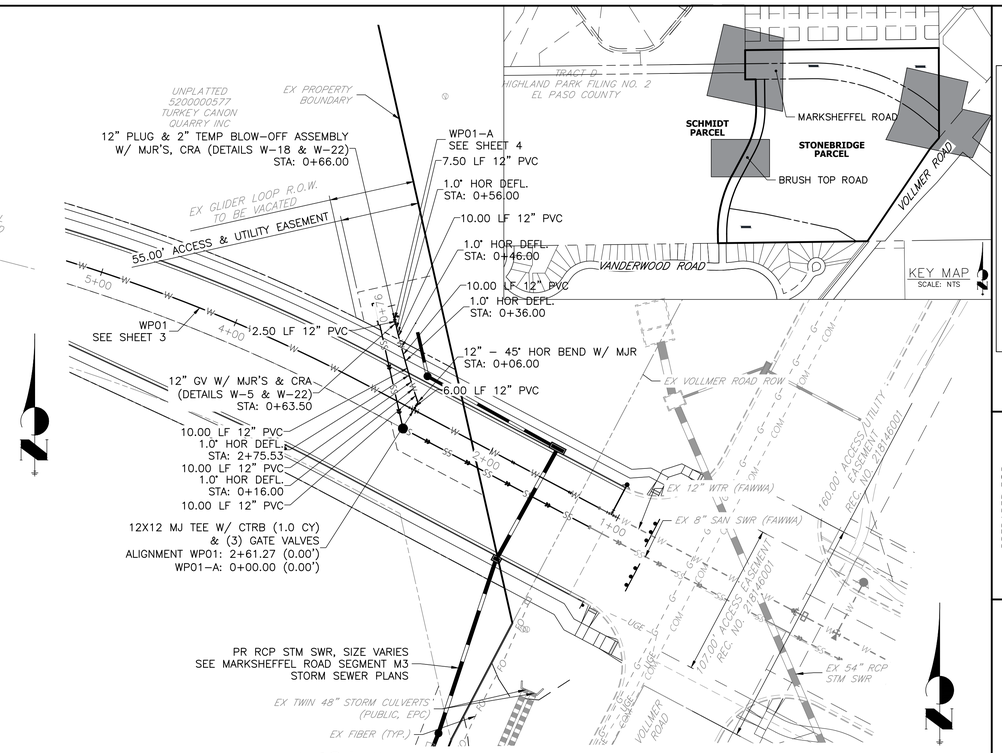
WATER MAIN EXTENSION

DESIGN: REB
REVIEW: NQJ
DATE: 04/27/26
H-SCALE: 1" = 50'
V-SCALE: 1" = 5'

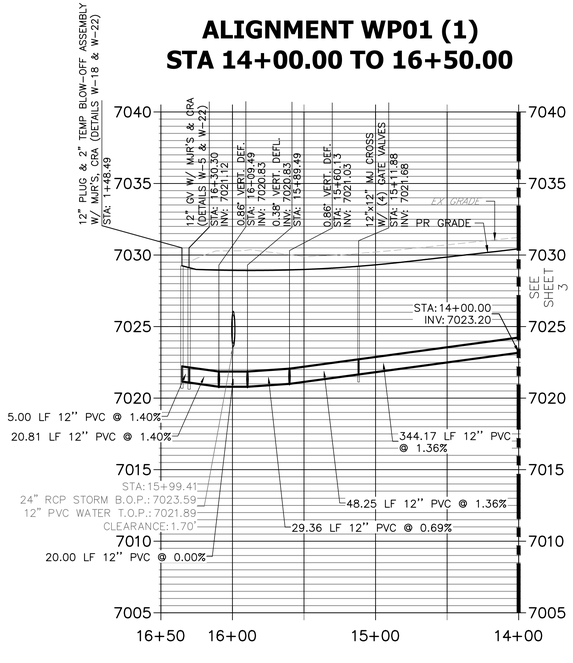
SHEET
3 OF 9



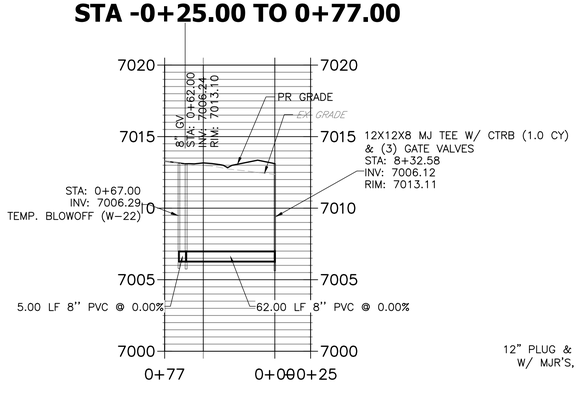




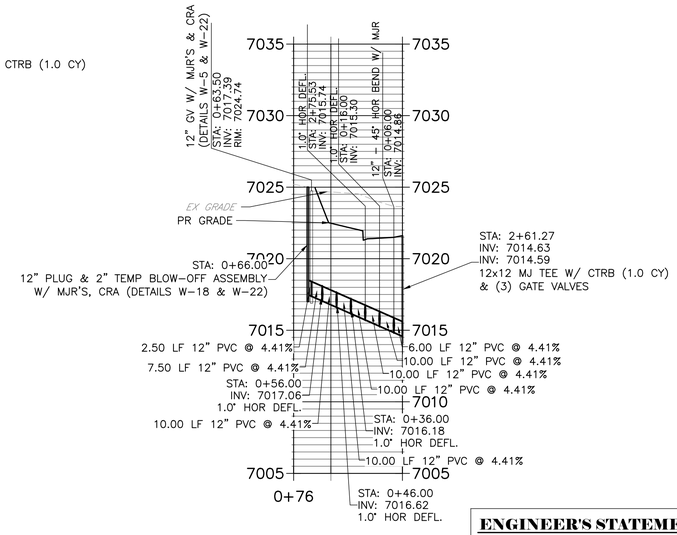
ALIGNMENT WP01 (1)
STA 14+00.00 TO 16+50.00



WP04
STA -0+25.00 TO 0+77.00



WP01-A
STA 0+00.00 TO 0+76.00



50 25 0 50 100
HORIZONTAL ORIGINAL SCALE: 1" = 50'
VERTICAL ORIGINAL SCALE: 1" = 5'

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RYAN E. BURNS P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE

PCD FILE NO. CDR-2413

ALL TERRAIN ENGINEERING

RYAN E. BURNS, PE 303.377.1555 - RYAN@ATERRAINGINEERING.COM
NICHOLAS Q. JOVICEVIC, PE 530.391.1555 - NICK@ATERRAINGINEERING.COM

PREPARED FOR:
TURKEY CANON QUARRY INC.
2020 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
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JMORLEY73870@AOL.COM

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JOB NO: 24013 LOCATION: EPC

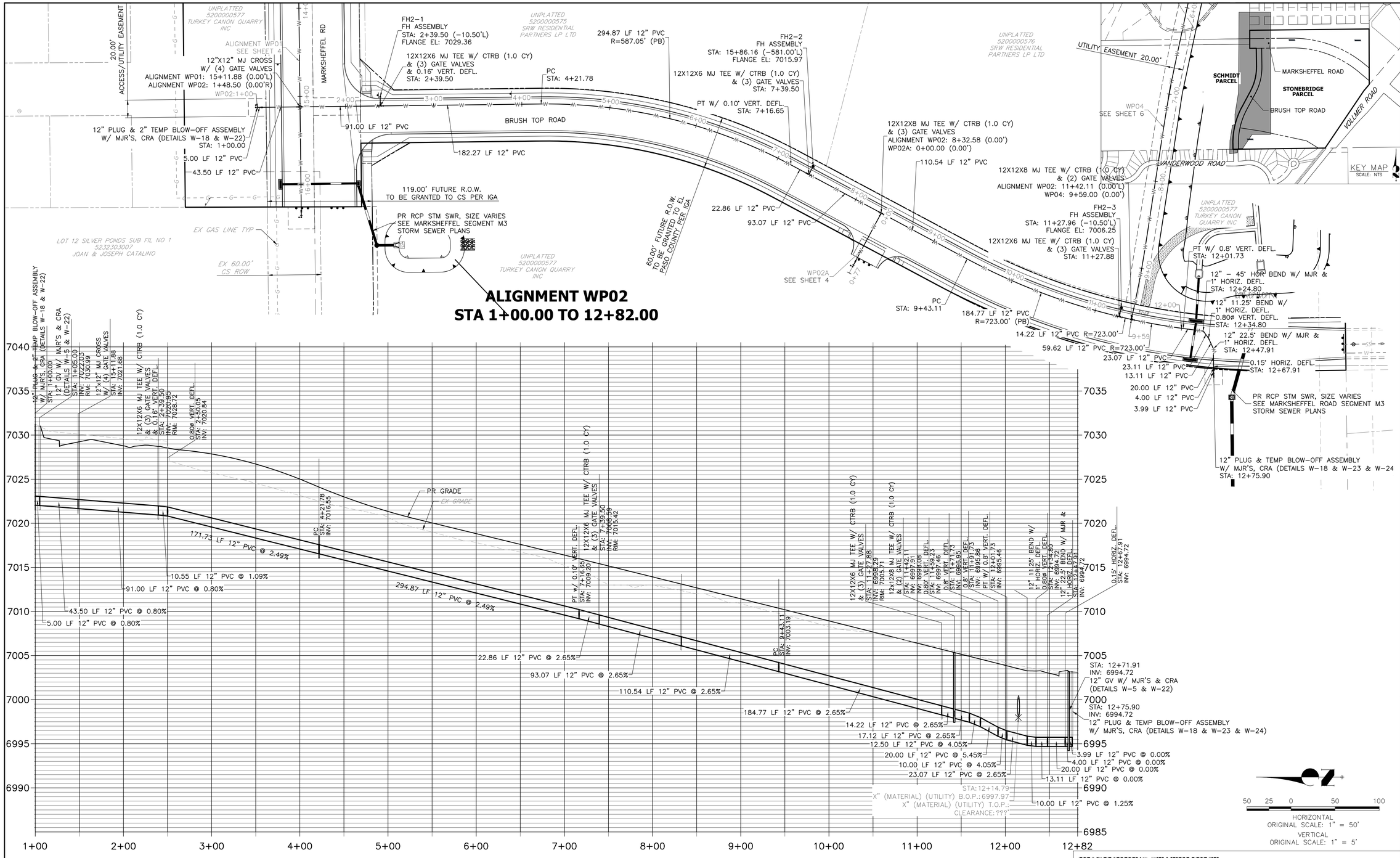
REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD - SEGMENT M3

WATER MAIN EXTENSION

DESIGN: REB
REVIEW: NQJ
DATE: 04/27/26
H-SCALE: 1" = 50'
V-SCALE: 1" = 5'

SHEET 4 OF 9



50 25 0 50 100

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

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

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MICHAEL Q. JEVZEVICH, PE
530.391.1668 - MJEVZEVICH@ALLTERRAINENG.COM

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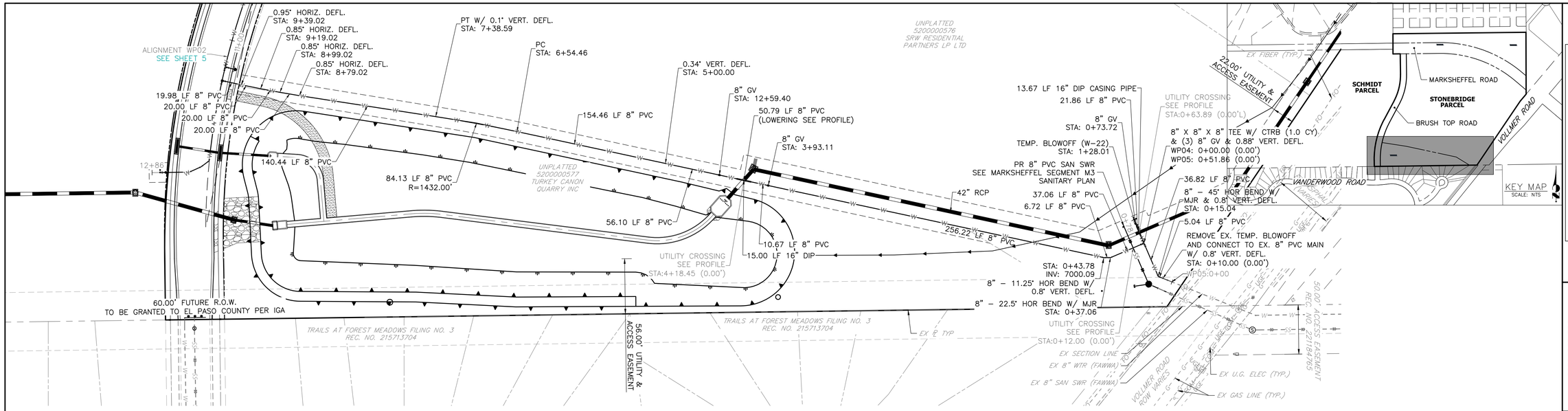
REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD - SEGMENT M3

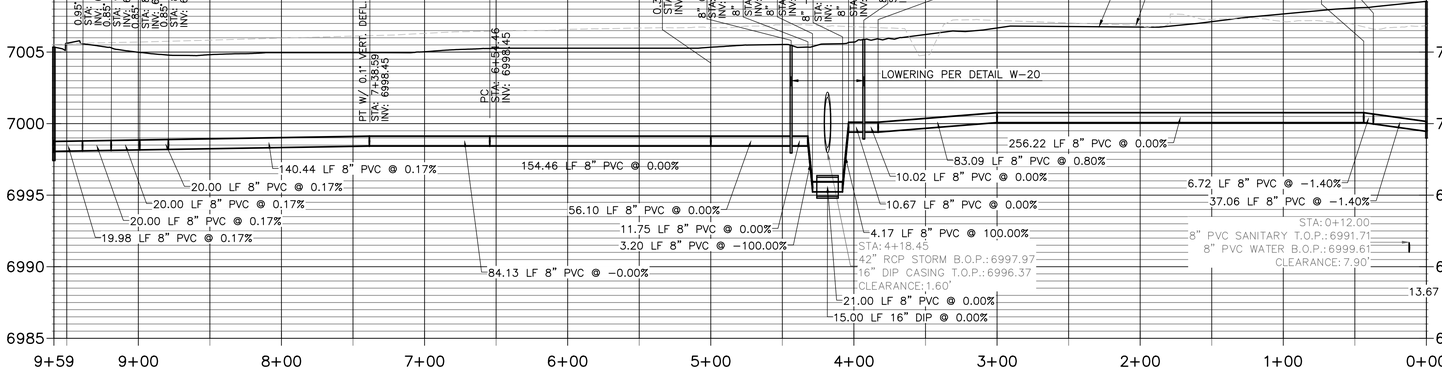
WATER MAIN EXTENSION

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DATE: 04/27/26
H-SCALE: 1" = 50'
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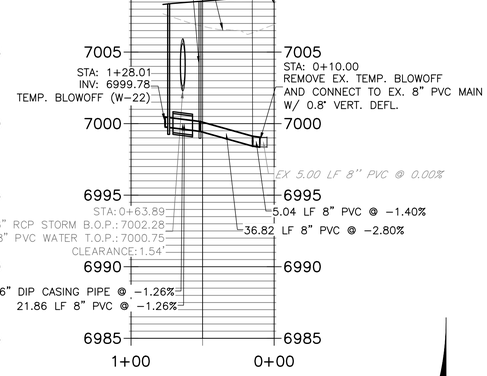
SHEET
5 OF 9



WP04 (1)
STA 0+00.00 TO 9+59.00



WP05
STA 0+00.00 TO 1+00.00



50 25 0 50 100

HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
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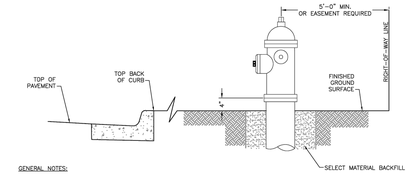
MARKSHEFFEL ROAD - SEGMENT M3

WATER MAIN EXTENSION

DESIGN: REB
REVIEW: NQJ
DATE: 04/27/26

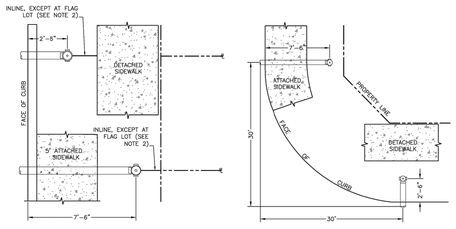
H-SCALE: 1" = 50'
V-SCALE: 1" = 5

SHEET
6 OF 9



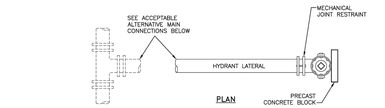
GENERAL NOTES:

1. HYDRANT NOZZLE SHALL BE POSITIONED AT RIGHT ANGLES TO THE CURB. IF NO CURB OR SIDEWALK EXISTS, NOZZLE SHALL BE PLACED AT RIGHT ANGLES TO STREET OR ALLEY.
2. HYDRANTS INSTALLED AT FLAG LOT LINES SHALL BE OFFSET 3 FEET FROM THE LOT LINE (AWAY FROM STEM).
3. HYDRANTS WILL BE PLACED A MINIMUM OF 5 FEET FROM ANY UTILITY OR DRAINAGE STRUCTURE.
4. EASEMENTS MUST BE PROVIDED FOR ANY PUBLIC HYDRANT WHICH IS CLOSER THAN 5 FEET TO THE RIGHT-OF-WAY LINE.
5. ANY HYDRANTS BEING INSTALLED WITH CONDITIONS OTHER THAN THOSE MENTIONED AND/OR DETAILED BELOW WILL REQUIRE SIGNED APPROVAL FROM THE DISTRICT AND THE FIRE DEPARTMENT.

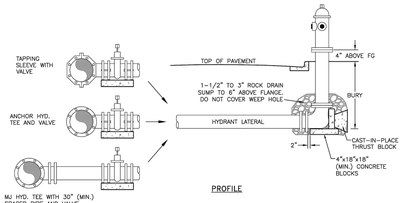


FIRE HYDRANT LOCATIONS

Drawn: GGM	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-1
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		



PLAN

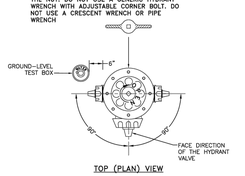


PROFILE

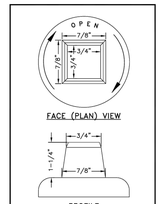
FIRE HYDRANT INSTALLATION

Drawn: GGM/SKG	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-2
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		

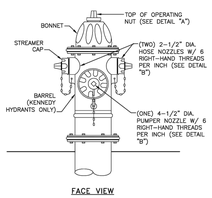
TAPERED SQUARE NUT, USE ONLY DEFINITE PURPOSE HYDRANT WRENCH THAT EXACTLY FITS THE NUT. DO NOT USE A GENERIC HYDRANT WRENCH WITH ADJUSTABLE CORNER BOLT. DO NOT USE A CRESCENT WRENCH OR PIPE WRENCH



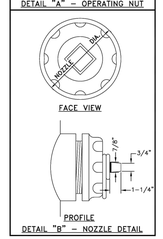
TOP (PLAN) VIEW



DETAIL "A" – OPERATING NUT



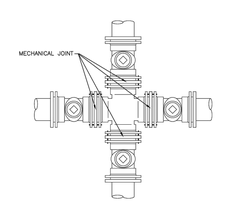
FACE VIEW

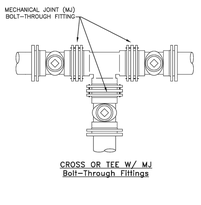


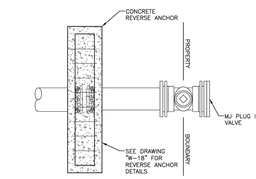
DETAIL "B" – NOZZLE DETAIL

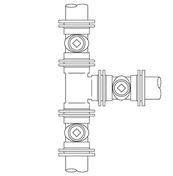
FIRE HYDRANT SPECIFICATIONS

Drawn: GGM	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-3
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		







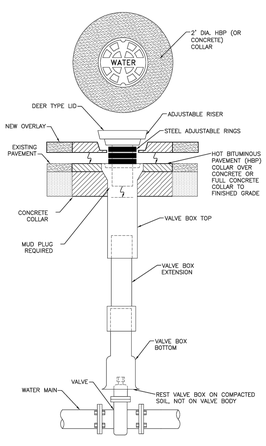


GENERAL NOTES:

1. ON ANY VALVE INSTALLATION NEAR A FITTING, THE VALVE SHALL BE ANCHORED BY RODS, REVERSE ANCHOR, AND MECHANICAL JOINT RESTRAINTS. 3/4" ALL-THREAD RODS SHALL BE USED WITH FIG. 7 BOLTS OR APPROVED DUCTILE TIE LUGS FOR DEAD-END VALVES AND/OR PLUGS. ALL METALLIC COMPONENTS SHALL BE WRAPPED IN POLYETHYLENE TUBING.
2. ANCHOR PIPE OR FOSTER COUPLINGS MAY BE SUBSTITUTED FOR SPACER PIPE AND RODS.
3. THE CONCRETE REVERSE ANCHORS USED SHALL BE SIZED AS INDICATED ON DRAWING "W-18".
4. SEE DRAWINGS "W-13" AND "W-28" FOR APPLICATION OF MECHANICAL JOINT RESTRAINTS.
5. SEE DRAWING "W-6" FOR VALVE BOX INSTALLATION.

VALVE INSTALLATION & LOCATION

Drawn: GGM	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-5
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		



NOTES:

1. SLIP-TYPE 5-1/4" I.D. SHAFT TYLER PIPE SERIES 664-A OR EQUIVALENT, APPROVED BY THE DISTRICT.
2. MAIN AND FIRE HYDRANT VALVES AND VALVE BOXES SHALL BE LOCATED IN AND UNDER THE DRIVING SURFACE OF THE STREET, NOT IN THE CURB PAN, CURB, OR BEHIND THE CURB.
3. SEE DRAWING "W-10" FOR TRACER WIRE INSTALLATION AT VALVE BOXES.

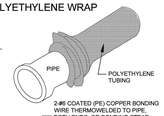
VALVE BOX INSTALLATION

Drawn: GGM	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-6
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		

FIELD INSTALLATION OF POLYETHYLENE WRAP

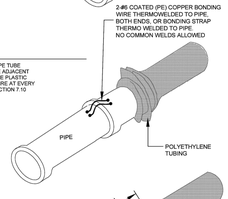
STEP 1:

PLACE TUBE OF POLYETHYLENE MATERIAL ON PIPE PRIOR TO LOWERING IT INTO TRENCH



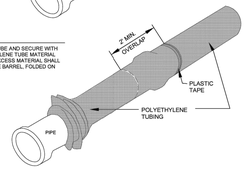
STEP 2:

PULL TUBE OVER THE LENGTH OF THE PIPE. TAPE TUBE TO END AT JOINT. FOLD MATERIAL AROUND THE ADJACENT SPIGOT END AND WRAP WITH TAPE TO HOLD THE PLASTIC TUBE IN PLACE. INSTALL BONDING STRAP OR WIRE AT EVERY JOINT (IF PIPE REQUIRES WRAPPING AS PER SECTION 7.10 OF THE STANDARD SPECIFICATIONS.



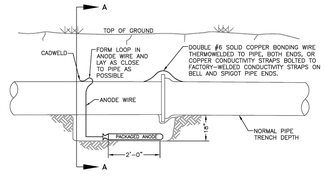
STEP 3:

OVERLAP FIRST TUBE WITH ADJACENT TUBE AND SECURE WITH PLASTIC ADHESIVE TAPE. THE POLYETHYLENE TUBE MATERIAL COVERING THE PIPE SHALL BE LOOSE. EXCESS MATERIAL SHALL BE NEATLY DRAWN UP AROUND THE PIPE BARREL, FOLDED ON TOP OF PIPE, AND TAPED IN PLACE.

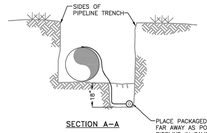


POLYETHYLENE WRAP

Drawn: GGM	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-7
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		



ELEVATION

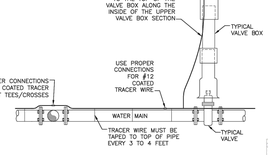


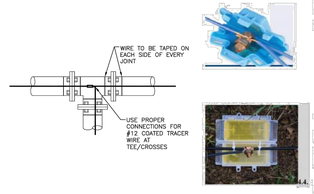
NOTES:

1. CADWELD CONNECTION TO BE PRIMED AND COATED CAREFULLY. PACKAGED ANODE SHOULD BE COVERED WITH FINE SOIL CONTAINING NO ROCKS OR DIRT CLUMPS, TAMPED.
2. WHEN ANODES ARE REQUIRED WITH METAL FITTINGS AND APPURTENANCES TOGETHER WITH PVC PIPE INSTALLATION, THE ANODES SHALL BE PLACED AND ATTACHED TO THE METAL IN SAME MANNER AS SHOWN ON THIS DRAWING. 9LB. ANODES CAN BE USED ON METAL FITTINGS 12" AND LESS IN DIAMETER AND 17LB. ANODES FOR METAL FITTINGS GREATER THAN 12" DIAMETER WHEN USING PVC PIPE.
3. PACKAGED ANODE TO BE WETTED AND COVERED WITH SOIL PRIOR TO BACKFILLING.

BONDING JOINT & ANODE INSTALLATION

Drawn: GGM	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-8
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		





General: Housing is to protect split bolt wire nut and tracer wire in buried applications.

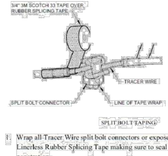
Specifications: Housing shall be made of high impact polypropylene and be filled with a dielectric silicone gel.

Aqua Housing 69105

Min. Voltage: 50V
Housing: High Impact Polypropylene
Sealant: Dielectric Silicone Gel
Wire Range: #14-10 Solid Copper, #14-10 Steel Core Tracer Wire
Split bolt size not to exceed 1.07" tall by 0.8" wide by 0.27" deep

Visioneck Housing 98040

Max. Voltage: 600V
Temperature Rating: -40°C~90°C (-40°F~194°F)
Measurements: See specification sheet for complete product measurements.
Wire Range:
#8 - .109" (.36")~.625" O.D.
#12~#14/3C~7 - .445" O.D.
Amperage not to exceed maximum temperature of the conductor



1. Wrap all Tracer Wire split bolt connectors or exposed wire using 1" 3M Scotch 130C Linerless Rubber Splicing Tape making sure to seal all ends to prevent moisture penetration.

TRACER WIRE INSTALLATION DETAILS

Drawn: GGM/SKG	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-10
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		

ALL TERRAIN ENGINEERING
RYAN E. BURNS, P.E. 330 ELM TREE - ELIZABETH, CO 80107 - 303.517.8656 - RBURNS@ALLTERRAINENG.COM
MICHAEL Q. JOVICEVIC, PE 330 ELM TREE - ELIZABETH, CO 80107 - 720.217.1633 - MJOVICEVIC@ALLTERRAINENG.COM

PREPARED FOR:
TURKEY CANON QUARRY INC.
20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719) 491-3024
JMORLEY73870@AOL.COM

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

REV	DESCRIPTION	DATE

JOB NO: 24013 LOCATION: EPC

MARKSHEFFEL ROAD - SEGMENT M3

DETAILS

DESIGN: REB
REVIEW: NQJ
DATE: 04/27/26
H-SCALE: N/A
V-SCALE: N/A

SHEET 7 OF 9

ENGINEER'S STATEMENT

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

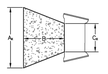
RYAN E. BURNS, P.E.
COLORADO P.E. 0054412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING, LLC

COLORADO — RYAN E. BURNS — 0054412 — REGISTERED PROFESSIONAL ENGINEER

DATE

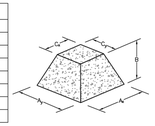
THRUST BLOCK DIMENSIONS & VOLUMES – PVC & DIP 250 psi

MAIN SIZE (IN.)	TYPE OF FITTING	MINIMUM BEARING SURFACE AREA (ft^2)	MINIMUM A_x (ft)	MINIMUM A_y (ft)	MINIMUM C_x (ft)	MINIMUM C_y (ft)	MINIMUM B	APPROXIMATE VOLUME (yd^3)
4	11.25° BEND	1.00	1.00	1.00	0.25	0.33	2.00	0.25
4	22.5° BEND	2.00	2.00	1.41	0.21	0.33	22.00	0.25
4	45° BEND	3.50	3.50	1.87	0.42	0.33	2.00	0.25
4	TEE & DEAD END	4.75	4.75	2.18	0.67	0.33	4.75	0.25
6	11.25° BEND	2.00	2.00	1.41	0.25	0.50	2.00	0.25
6	22.5° BEND	3.75	3.75	1.94	0.38	0.50	2.00	0.25
6	45° BEND	7.25	7.25	2.69	0.58	0.50	2.00	0.25
6	TEE & DEAD END	9.50	9.50	3.08	0.83	0.50	2.00	0.50
8	11.25° BEND	3.25	3.25	1.80	0.34	0.67	2.00	0.25
8	22.5° BEND	6.50	6.50	2.55	0.48	0.67	2.00	0.25
8	45° BEND	12.50	12.50	3.57	0.67	0.67	2.00	0.50
8	TEE & DEAD END	16.25	16.25	4.64	1.08	0.67	2.00	0.75



THRUST BLOCK DIMENSIONS & VOLUMES – PVC (Maximum Static Pressure = 170 psi)

MAIN SIZE (IN.)	TYPE OF FITTING	MINIMUM BEARING SURFACE AREA (ft^2)	MINIMUM A_x (ft)	MINIMUM A_y (ft)	MINIMUM C_x (ft)	MINIMUM C_y (ft)	MINIMUM B	APPROXIMATE VOLUME (yd^3)
12	11.25° BEND	4.75	2.18	2.18	0.43	1.00	2.00	0.25
12	22.5° BEND	9.25	3.04	3.04	0.64	1.00	2.00	0.50
12	45° BEND	18.00	4.92	3.66	1.00	1.00	2.00	0.75
12	TEE & DEAD END	23.50	6.42	3.66	1.46	1.00	2.48	1.00
16	11.25° BEND	8.00	2.83	2.83	0.44	1.33	2.00	0.50
16	22.5° BEND	16.00	4.27	3.75	0.66	1.33	2.00	0.75
16	45° BEND	31.00	8.27	3.75	1.00	1.33	3.64	1.75
16	TEE & DEAD END	40.50	10.80	3.75	1.92	1.33	4.44	3.00



THRUST BLOCK DIMENSIONS & VOLUMES – DIP (Maximum Static Pressure = 250 psi)

MAIN SIZE (IN.)	TYPE OF FITTING	MINIMUM BEARING SURFACE AREA (ft^2)	MINIMUM A_x (ft)	MINIMUM A_y (ft)	MINIMUM C_x (ft)	MINIMUM C_y (ft)	MINIMUM B	APPROXIMATE VOLUME (yd^3)
12	11.25° BEND	6.75	2.60	2.60	0.43	1.00	2.00	0.50
12	22.5° BEND	13.50	3.69	3.66	0.64	1.00	2.00	0.50
12	45° BEND	26.25	7.17	3.66	1.00	1.00	3.09	1.50
12	TEE & DEAD END	34.25	9.36	3.66	1.46	1.00	3.95	2.25
16	11.25° BEND	11.75	3.43	3.43	0.44	1.33	2.00	0.50
16	22.5° BEND	23.25	6.20	3.75	0.66	1.33	2.77	1.00
16	45° BEND	45.50	12.13	3.75	1.00	1.33	5.57	4.00
16	TEE & DEAD END	59.50	15.87	3.75	1.92	1.33	6.98	6.50

NOTES:
1. THE MINIMUM BEARING SURFACE AREAS SHOWN ARE BASED ON A MAX STATIC PIPE PRESSURE OF 170/250 POUNDS PER SQUARE INCH PLUS A SAFETY FACTOR OF 1.5, AND AN ALLOWABLE SOIL BEARING CAPACITY OF 1,500 POUNDS PER SQUARE FOOT. BEARING SURFACE AREA IS ROUNDED UP TO THE NEAREST 0.25 SQUARE FEET. REFERENCE AWWA M-23 AND M-41.
2. THE DESIGN ENGINEER IS RESPONSIBLE FOR VERIFYING ASSUMPTIONS BASED ON ACTUAL SITE CONDITIONS. IF SITE CONDITIONS VARY FROM THE ASSUMPTIONS, THE DESIGN ENGINEER SHALL PROVIDE A SITE-SPECIFIC DESIGN IN ACCORDANCE WITH AWWA M-23, PVC PIPE – DESIGN AND INSTALLATION AND AWWA M-41, DUCTILE-IRON PIPE AND FITTINGS. SITE-SPECIFIC DESIGNS INCLUDING GEOTECHNICAL INFORMATION SHALL BE SUBMITTED TO THE DISTRICT FOR REVIEW.
3. THE MINIMUM BEARING SURFACE AREA AND APPROXIMATE VOLUME OF CONCRETE SHALL BE SHOWN ON THE CONSTRUCTION PLANS FOR ALL CONCRETE THRUST BLOCKS. SEE SECTION 9.4 FOR CONCRETE REQUIREMENTS. SEE SECTION 4.8 FOR THRUST BLOCK REQUIREMENTS.
4. THE APPROXIMATE VOLUMES SHOWN ARE BASED ON THE MINIMUM BEARING SURFACE AREA AND THE MINIMUM TRENCH DIMENSIONS. THE APPROXIMATE VOLUME IS ROUNDED UP TO THE NEAREST 0.25 CUBIC YARDS.
5. THESE CHARTS MAY ONLY BE USED IF THE BLOCK HEIGHT (A_y) IS EQUAL TO OR LESS THAN ONE-HALF THE TOTAL DEPTH (H) FROM THE FINISHED GRADE TO THE BOTTOM OF THE BLOCK. THE MINIMUM DIMENSIONS SHOWN ARE BASED ON A PIPE DEPTH OF 5.5 FEET.
6. A SITE-SPECIFIC DESIGN SHALL BE REQUIRED FOR PIPES LARGER THAN 16 INCHES OR MAX STATIC PIPE PRESSURES GREATER THAN 250 POUNDS PER SQUARE INCH. THE DESIGN ENGINEER HAS THE OPTION OF PROVIDING A SITE-SPECIFIC DESIGN FOR PIPES SMALLER THAN 16 INCHES OR MAX STATIC PRESSURES LESS THAN 250 POUNDS PER SQUARE INCH.
7. ALL CALCULATIONS SHALL BE PROVIDED TO THE DISTRICT FOR REVIEW.

THRUST BLOCK DATA

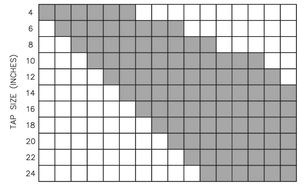
Drawn: SKG	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W–11
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		

CONCRETE THRUST BLOCKS

WATER MAIN AND TAP SIZE COMBINATIONS WHICH REQUIRE A CONCRETE THRUST REACTION BLOCK BEHIND THE MAIN AT THE TAPPING SLEEVE OR SADDLE.

ALL WATER MAINS

INDICATES CONCRETE THRUST BLOCK REQUIRED

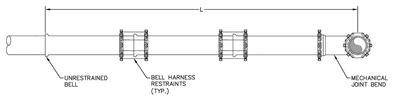


ANY THRUST REACTION BLOCK REQUIREMENTS FOR WATER MAIN AND TAP SIZE COMBINATIONS OTHER THAN THOSE SHOWN ABOVE WILL REQUIRE SPECIAL DESIGN APPROVAL BY THE DISTRICT.

THRUST BLOCKS REQUIRED FOR TAPS

Drawn: GDM/SKG	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W–12
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		

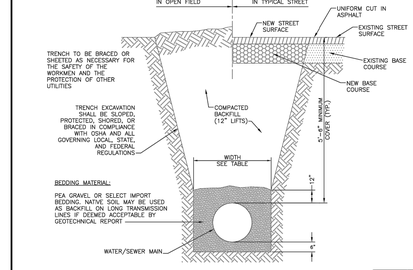
PIPE DIAMETER	L = MINIMUM RESTRAINED PIPE LENGTH									DEAD-END VALVE OR PLUG, TO INCLUDE PUBLIC VALVES (SEE NOTE 7)		
	45° BEND			22-1/2° BEND			11-1/4° BEND					
MAX. STATIC PRESSURE (PSI)	<100	100–150	150–200	<100	100–150	150–200	<100	100–150	150–200	<100	100–150	150–200
6–INCH DUCTILE IRON AND PVC	6	9	12	3	5	6	2	3	3	49	73	97
8–INCH DUCTILE IRON AND PVC	8	12	16	4	6	8	2	3	4	63	94	125
12–INCH DUCTILE IRON AND PVC	12	17	23	6	8	11	3	4	6	89	133	177
16–INCH DUCTILE IRON AND PVC	15	22	29	7	11	14	4	5	7	USE CONCRETE REVERSE ANCHOR	USE CONCRETE REVERSE ANCHOR	USE CONCRETE REVERSE ANCHOR
20–INCH DUCTILE IRON AND PVC	18	26	35	9	13	17	4	6	8			
24–INCH DUCTILE IRON AND PVC	20	30	40	10	15	20	5	7	10			
30–INCH DUCTILE IRON AND PVC	24	36	48	12	18	24	6	9	12			
36–INCH DUCTILE IRON AND PVC	28	42	56	14	20	27	7	10	14			



NOTES:
1. PRESSURE GREATER THAN 200 PSI REQUIRES SPECIAL DESIGN APPROVED BY THE DISTRICT.
2. LENGTH IS BASED ON MINIMUM 5 FEET OF GROUND COVER AND COMPACTED SOIL. IF THE DEPTH IS LESS THAN 5 FEET, RESTRAINED LENGTH MUST BE DESIGNED BY THE DESIGN ENGINEER.
3. RESTRAINED PIPE LENGTH APPLIES TO CONDITION WHERE NO CONCRETE THRUST REACTION BLOCK IS PRESENT.
4. CALCULATIONS ARE BASED ON POORLY-GRADED SANDS, GRAVEL, AND GRAVEL-SAND MIXTURE, LITTLE OR NO FINES, TYPE 4 BEDDING CONDITIONS – "PIPE BEDDED IN SAND, GRAVEL, OR CRUSHED STONE TO A DEPTH OF 1/8 PIPE DIAMETER (4" MIN.)." FACTOR OF SAFETY 2:1.
5. FIGURES ARE BASED ON DIP WRAPPED IN POLYETHYLENE MATERIAL.
6. USE CRA FOR DOWN-TURNING BENDS.
7. RESTRAINED LENGTH FOR DEAD END MAY BE USED AT THE DISCRETION OF THE DISTRICT.

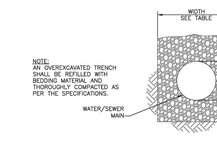
RESTRAINED PIPE LENGTH (FT) W/ MECHANICAL JOINT RESTRAINTS

Drawn: SKG	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W–13
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		



TYPICAL TRENCH SECTION
SCALE: N.T.S.

PIPE DIAMETER	MINIMUM WIDTH	MAXIMUM WIDTH
4"	2'-2"	3'-0"
6"	2'-2"	3'-0"
8"	2'-2"	3'-0"
10"	2'-4"	3'-0"
12"	2'-6"	3'-6"
18"	2'-10"	3'-9"
24"	3'-2"	4'-3"

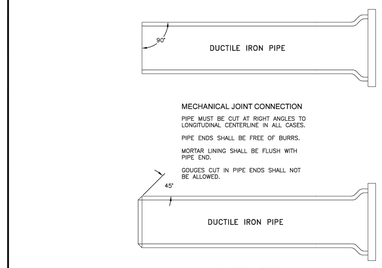


NOTE:
AN OVEREXCAVATED TRENCH SHALL BE REFILLED WITH BEDDING MATERIAL AND THOROUGHLY COMPACTED AS PER THE SPECIFICATIONS.

UNSTABLE TRENCH BEDDING DETAIL
SCALE: N.T.S.

TYPICAL TRENCH CROSS-SECTION

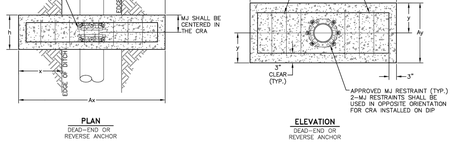
Drawn: GDM/SKG	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W–14
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		



GENERAL NOTES:
1. ALL PIPE CUTTING EQUIPMENT AND PIPE CUTS MUST BE APPROVED BY THE WATER AND SANITATION DISTRICT INSPECTOR.
2. ALL PIPE ENDS TO BE USED IN INSTALLATION SHALL BE DRESSED SMOOTH TO THE SATISFACTION OF THE INSPECTOR PRIOR TO INSTALLATION.
3. AT THE REQUEST OF THE CONTRACTOR MAKING THE INSTALLATION, THE DISTRICT WILL MAKE PIPE CUTS, PROVIDED THE CURRENT FEE PER CUT IS PAID AND 24-HOUR NOTICE IS GIVEN (THE CURRENT FEE IS SUBJECT TO CHANGE.)
4. ALL DIP DELIVERED TO JOB SITE MUST BE NEW MATERIAL.

PIPE CUTTING

Drawn: SKG	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W–17
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		



PLAN
DEAD-END OR REVERSE ANCHOR

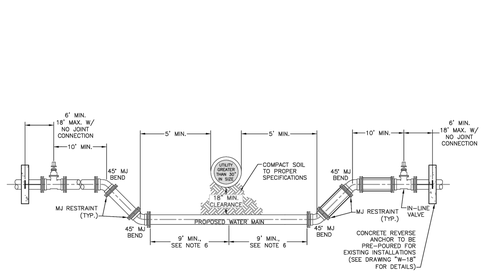
ELEVATION
DEAD-END OR REVERSE ANCHOR

DIAMETER (in)	PRESSURE (psi)	x (in)	Ax (in)	y (in)	Ay (in)	Ab (ft^2)	h (in)	Vol (cy)
4	250	12	72	12	28.80	6.80	18	1.0
6	250	18	84	12	30.90	9.73	18	1.0
8	250	36	120	12	33.05	18.53	18	1.5
12	170	36	120	15	43.20	24.60	18	2.0
12	250	48	144	18	49.20	36.80	24	3.75
16	170	54	156	18	53.40	44.05	24	4.25
16	250	60	168	24	65.40	60.50	36	8.5

NOTES:
1. THE MINIMUM BEARING SURFACE AREAS SHOWN ARE BASED ON A MAX. STATIC PIPE PRESSURE OF 170/250 POUNDS PER SQUARE INCH PLUS A SAFETY FACTOR OF 1.5, AND AN ALLOWABLE SOIL BEARING CAPACITY OF 1,500 POUNDS PER SQUARE FOOT. FOR HDPE, ADDITIONAL ASSUMPTIONS INCLUDE A MAX DOPT, TEMPERATURE CHANGE AND A POISSON RATIO OF 0.45. REFERENCE AWWA M-23, M-41, AND M-55.
2. THE DESIGN ENGINEER IS RESPONSIBLE FOR VERIFYING ASSUMPTIONS BASED ON ACTUAL SITE CONDITIONS. IF SITE VARIES FROM THE ASSUMPTIONS, THE DESIGN ENGINEER SHALL PROVIDE A SITE-SPECIFIC DESIGN THAT SHALL BE IN ACCORDANCE WITH AWWA M-23, PVC PIPE DESIGN AND INSTALLATION, AND AWWA M-41, DUCTILE IRON PIPE, AND FITTINGS. SITE-SPECIFIC DESIGNS USING GEOTECHNICAL INFORMATION SHALL BE SUBMITTED TO THE DISTRICT FOR APPROVAL.
3. THE MINIMUM LATERAL BEARING SURFACE AREA (Ab) AND APPROXIMATE VOLUME OF CONCRETE (Vol) SHALL BE SHOWN ON THE CONSTRUCTION PLANS FOR ALL CONCRETE REVERSE ANCHORS.
4. THE APPROXIMATE VOLUMES SHOWN ARE BASED ON THE MINIMUM DIMENSIONS IN THE TABLE. THE APPROXIMATE VOLUME IS ROUNDED UP TO THE NEAREST 0.25 CUBIC YARDS.
5. A SITE-SPECIFIC DESIGN SHALL BE REQUIRED FOR PIPES LARGER THAN 16 INCHES OR MAX. STATIC PIPE PRESSURES GREATER THAN 250 POUNDS PER SQUARE INCH. THE DESIGN ENGINEER HAS THE OPTION OF PROVIDING A SITE-SPECIFIC DESIGN FOR PIPES SMALLER THAN 16 INCHES OR MAX. STATIC PRESSURES LESS THAN THE PRESSURE LISTED IN THE TABLE.
6. COAT RODS WITH EPOXY POLYAMIDE COATING, 10 MILS THICK, MIN.
7. A TRENCH WIDTH OF 4 FEET AND 6" BEDDING UNDER THE PIPE ARE ASSUMED FOR BEARING CALCULATIONS, (A_x, A_y, AND y).
8. THE DESIGN ENGINEER SHALL ENSURE THE CONSTRUCTION OF THE CONCRETE REVERSE ANCHOR SHALL NOT CONFLICT WITH OTHER UTILITIES.
9. DUCTILE IRON FITTINGS AND PIPE SHALL BE WRAPPED IN POLYETHYLENE TUBING WHERE ADJACENT TO CONCRETE.

CONCRETE REVERSE ANCHOR FOR MECHANICAL JOINT RESTRAINTS

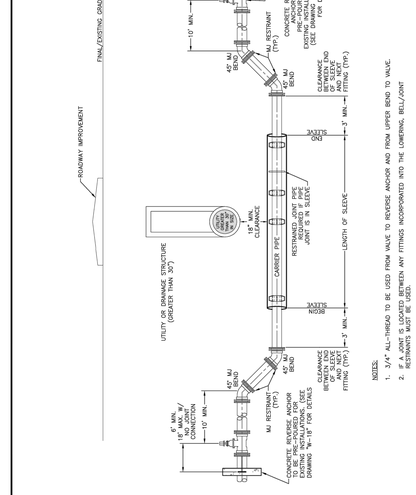
Drawn: GDM/SKG	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W–18
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		



NOTES:
1. ALL DUCTILE IRON FITTINGS AND PIPE SHALL BE CATHODICALLY PROTECTED.
2. ALL FITTINGS SHALL HAVE MJ RESTRAINTS.
3. EXAMPLE CAN VARY DUE TO SITE CONDITIONS AND DISTRICT INSPECTOR'S DIRECTION.
4. RESTRAINED JOINTS ARE REQUIRED WITHIN LOWERING.
5. NO TAPS OR TEES ARE ALLOWED WITHIN THE LOWERING.
6. WHERE WATER MAIN CROSSES UNDER STORM SEWER, WASTEWATER, OR NON-POTABLE WATER INFRASTRUCTURE, A MINIMUM OF 9 FEET IS REQUIRED BETWEEN THE CENTERLINE OF THE CROSSING AND THE FIRST JOINT.

LOWERING DETAIL – UTILITY CROSSING 30" & SMALLER

Drawn: SKG	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W–19
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		



NOTES:
1. 3/4" ALL-THREAD TO BE USED FROM VALVE TO REVERSE ANCHOR AND FROM UPPER BEND TO VALVE.
2. IF A JOINT IS LOCATED BETWEEN ANY FITTINGS INCORPORATED INTO THE LOWERING, BELL/JOINT RESTRAINTS MUST BE USED.
3. CASING PIPE MUST BE CLEAN AND FREE OF ALL DIRT AND DEBRIS BEFORE INSTALLING CARRIER PIPE AND CASING END SEALS.
4. CARRIER PIPE SHALL BE DIP, UNLESS OTHERWISE APPROVED.
5. FURNISH AND INSTALL JOINT BONDING POLYETHYLENE TUBING, AND 17 LB. MAGNESIUM ANODE ON DIP LOWERING PER STANDARD SPECIFICATIONS.
6. EXTERNALLY COAT CLAMPING / TIEBACK MAGNESIUM ANODE PER 20 FEET OR LESS OF CASING PIPE.
7. EXTERIOR LENGTH OF CLAMPING / TIEBACK VERTICAL BEND TO LOWER VERTICAL BEND SHALL REST ON 18" MINIMUM OF 3/4" ROCK BELOW CASING AND UP TO SPRINGLINE OF CASING AND CARRIER PIPE.

LOWERING DETAIL W/CASING UTILITY CROSSING GREATER THAN 30"

Drawn: SKG	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W–20
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		

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JIMMY F. MORLEY, PE 303.517.8656 - JIMMY@ATERENGINEERING.COM

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

PREPARED FOR:
TURKEY CANON QUARRY INC.
20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719) 491-3024
JMORLEY73870@AOL.COM

JOB NO: 24013 LOCATION: EPC

REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD - SEGMENT M3

DETAILS

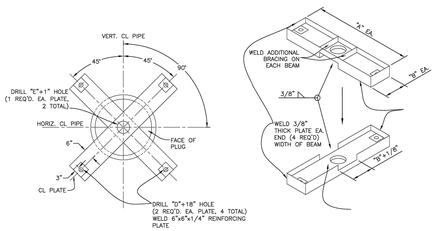
DESIGN: REB
REVIEW: NQJ
DATE: 04/27/26
H-SCALE: N/A
V-SCALE: N/A

SHEET 8 OF 9

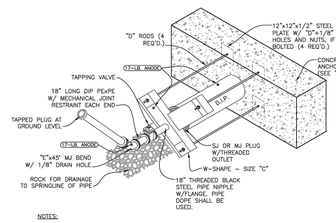
ENGINEER'S STATEMENT
STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

COLORADO REGISTERED PROFESSIONAL ENGINEER RYAN E. BURNS 0054412

RYAN E. BURNS, P.E. DATE
COLORADO P.E. 0054412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING, LLC



REFER TO W-24 FOR ALL DIMENSIONS & SIZES
"E"=SIZE OF BLOW-OFF ASSEMBLY
(WHERE "E"=2", USE STANDARD BLOW-OFF ASSEMBLY, W-22)



NOTES:

1. PIPE DOPE APPROVED FOR USE IN POTABLE WATER SYSTEMS MUST BE USED ON ALL THREADED JOINTS.
2. ENTIRE BLOW-OFF ASSEMBLY MUST BE FULLY SUPPORTED SO NO LOAD BEARS ON BLOW-OFF PIPING.
3. IF APPROPRIATE LOCATION FOR DISCHARGED WATER CANNOT BE REACHED BY ROLLING THE BEND, ADDITIONAL BENDS MAY BE REQUIRED.
4. COAT TIE-RODS, BEAMS, AND BLACK IRON PIPE WITH EPOXY POLYAMIDE COATING, 10 MILS THICK, MIN.

TEMP & PERMANENT BLOW-OFF ASSEMBLIES FOR MAINS 12"+

Drawn: GGM/SWD	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-23
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		

BLOW-OFF ASSEMBLY SIZING

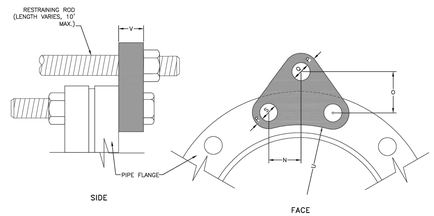
MAIN PIPE DIA. (IN.)	STATIC PRESSURE RANGE (P.S.I.)	DIMENSIONS FROM DRAWING "W-23" "A" (IN)	"B" (IN)	"C" (W-SHAPE)	"D" ROD SIZE (IN)	"E" BLOW-OFF PIPE SIZE (IN)
12	≤100 101–150 151–200 201–250	36 36 36 36	10 1/2 10 1/2 10 1/2 10 1/8	W310 x 115 W310 x 115 W310 x 115 W10 x 22	5/8 5/8 5/8 3/4	3 3 3 2
16	≤100 101–150 151–200 201–250	40 40 40 40	12 1/4 12 1/4 12 1/2 12 1/2	W12 x 26 W12 x 26 W12 x 26 W12 x 35	7/8 7/8 1 1 1/8	4 4 4 4
18	≤100 101–150 151–200 201–250	42 42 42 42	12 1/2 12 1/2 12 1/2 12 1/2	W12 x 26 W12 x 26 W12 x 26 W12 x 40	1 1 1 1 1/8	4 4 4 4
20	≤100 101–150 151–200 201–250	44 44 44 44	12 1/2 12 1/2 12 1/2 12 1/2	W12 x 26 W12 x 26 W12 x 40 W12 x 40	1 1 1 1 1/8	4 4 4 4
24	≤100 101–150 151–200 201–250	48 48 48 48	12 1/2 12 1/2 12 1/2 12 1/2	W12 x 26 W12 x 26 W12 x 40 W12 x 53	1 1 1 1 1/4	6 6 6 6
30	≤100 101–150 151–200 201–250	54 54 54 54	12 1/2 12 1/2 12 1/2 12 1/2	W12 x 26 W12 x 26 W12 x 50 W12 x 50	1 1 1 1 1/4	6 6 6 6
36	≤100 101–150 151–200	60 60 60	12 1/2 12 1/2 12 3/4	W12 x 26 W12 x 26 W12 x 96	1 1 1 1/4	8 8 8

NOTES:

1. ALL W-SHAPES FABRICATED FROM A36 STEEL.
2. ALL RODS SHALL BE MIN. GRADE A307 EXCEPT WHERE NOTED AS *. THESE SHALL BE MINIMUM STRENGTH EQUAL TO ASTM A325 RODS.
3. A 50% SURGE FACTOR HAS BEEN INCLUDED IN DESIGN.
4. FOR SIZES AND PRESSURES GREATER THAN THOSE SHOWN, SPECIAL DESIGN IS REQUIRED, APPROVED BY THE DISTRICT.

BLOW-OFF ASSEMBLY DIMENSION DATA FOR MAINS 12" +

Drawn: GGM	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-24
Date: MARCH 2011	Revised:		
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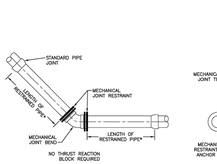
PIPE DIA. (IN.)	PRESS. CLASS (PSI)	"N" (IN.)	"O" (IN.)	H.S. ROD "P" (IN.)	H.S. ROD "Q" (IN.)	H.S. ROD ROD DIA. (IN.)	M.S. ROD "P" (IN.)	M.S. ROD "Q" (IN.)	M.S. ROD ROD DIA. (IN.)	"R" (IN.)	"S" (IN.)	"U" (IN.)	"V" (IN.)	NO. REQ'D (EA.)
6	150	1–15/16	2–1/4	1	7/8	3/4	1	7/8	3/4	7/8	7/8	3–3/4	3/4	2
	300	1–3/8	2–3/4	1	1	7/8	1	1	7/8	7/8	7/8	4–7/16	1	4
8	150	2–1/4	2–3/4	1	7/8	3/4	1	7/8	3/4	1	7/8	4–7/8	3/4	2
	300	1–11/16	2–7/8	1	1	7/8	1	1	7/8	1	1	5–1/2	1	
12	150	2–3/16	2–3/4	1–1/4	1–1/8	1	1–1/4	1–1/8	1	1–1/8	1	7–1/4	7/8	2
	300	1–3/4	3–1/4	1–3/8	1–1/4	1–1/2	1–3/8	1–3/8	1–1/4	1–1/4	1–1/8	7–5/8	1–1/4	
16	150	2–1/16	2–3/4	1–1/2	1–3/8	1–1/4	1–1/2	1–3/8	1–1/4	1–1/4	1–1/8	9–3/8	1–1/8	3
	300	1–3/4	4–1/4	1–1/2	1–1/2	1–3/8	1–1/2	1–1/2	1–3/8	1–1/2	1–3/8	9–7/8	1–1/2	
18	150	2–1/4	2–1/2		1–1/8	1		1–1/8	1		1–1/8	10	1–1/8	4
	300	2	3–1/16	1–3/8	1–9/16	1–1/2	1–3/8	1–9/16	1–1/2	1–3/8	1–3/8	10–3/16	2	4
20	150	2–5/8	1–15/16		1–1/8	1		1–1/8	1		1–1/4	11–1/8	1–1/4	4
	300	2	3–1/16	1–3/8	1–9/16	1–1/2	1–3/8	1–9/16	1–1/2	1–3/8	1–3/8	10–1/2	2–1/2	4
24	150	2–5/16	2–5/8		1–1/8	1		1–1/8	1		1–3/8	13–1/4	1–1/4	6
	300	2–5/16	3–1/8	1–1/2	1–9/16	1–1/2	1–1/2	1–9/16	1–1/2	1–1/2	1–5/8	12–1/2	2–1/4	6

NOTES:

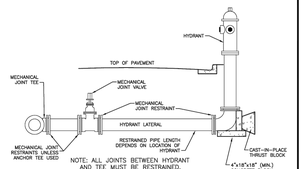
1. M.S. MEANS MILD STEEL ROD, ASTM STANDARD DESIGNATION A–36. NUTS SHALL BE ASTM STANDARD DESIGNATION A–307
2. H.S. MEANS HIGH STRENGTH STEEL ROD, ASTM STANDARD DESIGNATION A–193 GRADE B–7. NUTS SHALL BE ASTM STANDARD DESIGNATION A–193 GRADE 2–H.

FLANGE – LUG DETAIL

Drawn: GGM	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-27
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		

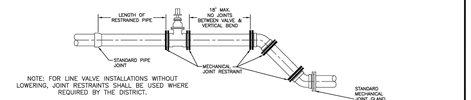


INSTALLATION FOR BENDS



NOTE: ALL JOINTS BETWEEN HYDRANT AND TEE MUST BE RESTRAINED.

INSTALLATION FOR BENDS



NOTE: FOR LINE VALVE INSTALLATIONS WITHOUT LOWERING, JOINT RESTRAINTS SHALL BE USED WHERE REQUIRED BY THE DISTRICT.

INSTALLATION FOR LINE VALVE & LOWERING

NOTES:

1. MECHANICAL JOINTS SHALL BE APPROVED ACCORDING TO MATERIAL SPECIFICATION FOR DIP AND PVC PIPE.
2. LENGTH OF PIPE REQUIRING JOINT RESTRAINT SHALL BE DETERMINED FROM CHART ON DRAWING W–13.
3. RESTRAINED JOINT PVC PIPE SHALL NOT BE USED FOR LOWERINGS.
4. IF A JOINT IS LOCATED BETWEEN ANY FITTINGS INCORPORATED INTO THE ASSEMBLY, BELL/JOINT RESTRAINTS MUST BE USED.

APPLICATIONS FOR MECHANICAL JOINT RESTRAINTS

Drawn: GGM	Revised: DECEMBER 2021	WOODMEN HILLS METROPOLITAN DISTRICT WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-28
Date: MARCH 2011	Revised:		
Scale: N.T.S.	Revised:		

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

JOB NO: 24013 LOCATION: EPC

REV	DESCRIPTION	DATE

MARKSHEFFEL ROAD - SEGMENT M3

DETAILS

DESIGN: REB
REVIEW: NQJ
DATE: 04/27/26
H-SCALE: N/A
V-SCALE: N/A

SHEET
9 OF 9

ENGINEER'S STATEMENT

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

COLORADO REGISTERED RYAN E. BURNS 0054412 PROFESSIONAL ENGINEER

RYAN E. BURNS, P.E. DATE
COLORADO P.E. 0054412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC