

# PAINT BRUSH HILLS FILING 13E

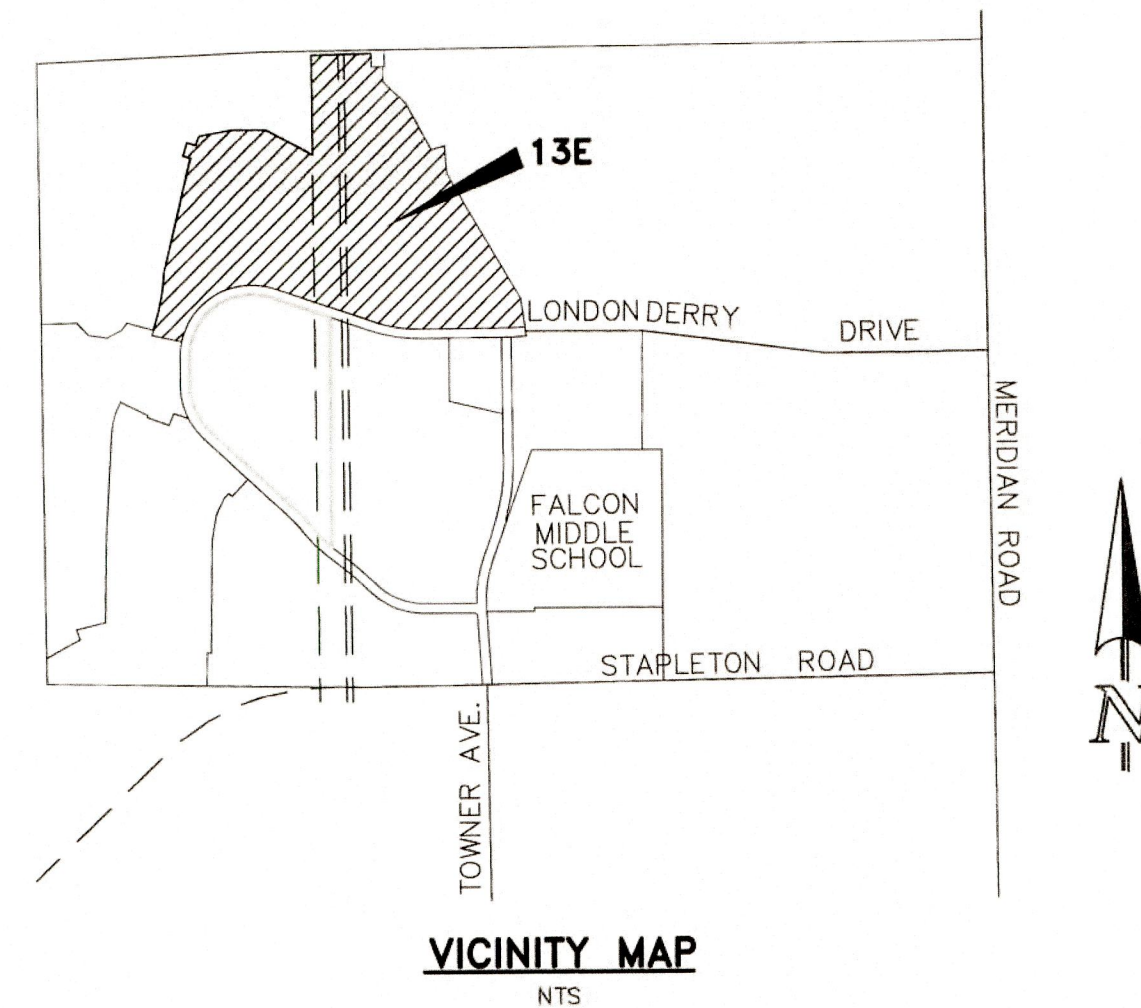
## COUNTY OF EL PASO, STATE OF COLORADO

# CONSTRUCTION PLANS

JULY 2018

**GENERAL CONSTRUCTION NOTES:**

1. THE LOCATION OF EXISTING UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND MAY NOT INCLUDE ALL UTILITIES. THE EXCAVATION CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES.
2. BEFORE COMMENCING ANY EXCAVATION, CALL 1-800-922-1887 FOR EXISTING UTILITY LOCATIONS.
3. THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE UTILITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
4. ALL BACKFILL, SUB-BASE AND/OR BASE COURSE (CLASS 6) MATERIAL SHALL BE COMPACTED TO THE SOILS ENGINEER'S RECOMMENDATIONS, AND APPROVED BY EL PASO COUNTY DEVELOPMENT SERVICES ENGINEERING DIVISION.
5. ALL STATIONING IS CENTERLINE UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE INDICATED.
6. THE CONTRACTOR SHALL REVEGETATE ALL DISTURBED AREAS AS SOON AS POSSIBLE AND EROSION CONTROL SHALL BE INSTALLED AND MAINTAINED IN A FUNCTIONAL MANNER AT ALL TIMES. DEVELOPER RESPONSIBLE FOR MAINTAINING DISTURBED AREAS UNTIL REVEGETATION IS COMPLETE.
7. ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAT LINES. REPAIR SHALL CONFORM TO THE EPC ECM APPENDIX K - 1.2C.
8. ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
9. BUILDING CONTRACTORS WILL BE RESPONSIBLE FOR CONSTRUCTING POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES.
10. ASPHALT THICKNESS AND BASE COURSE THICKNESS (COMPACTED) FOR ROADS SHALL BE PER DESIGN REPORT BY OWNER'S GEOTECHNICAL ENGINEER. OWNER'S GEOTECHNICAL ENGINEER TO BE ON SITE AT TIME OF ROAD CONSTRUCTION TO EVALUATE SOIL CONDITIONS AND DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY TO ASSURE STABILITY OF THE NEW ROADS. PAVEMENT DESIGN SHALL BE APPROVED BY DEVELOPMENT SERVICES DEPARTMENT PRIOR TO CONSTRUCTION.
11. THE CONTRACTOR SHALL REVEGETATE ALL DISTURBED AREAS WITHIN 21 DAYS OF SUBSTANTIAL GRADING COMPLETION. EROSION CONTROL SHALL BE INSTALLED AND MAINTAINED IN A FUNCTIONAL MANNER AT ALL TIMES. DEVELOPER IS RESPONSIBLE FOR MAINTAINING DISTURBED AREAS UNTIL REVEGETATION IS COMPLETE.
12. TYPE M RIP-RAP WITH 4" OF TYPE II GRANULAR BEDDING AND MIRAFI 180N OR EQUAL MAY BE SUBSTITUTED WHERE TYPE L RIP-RAP WITH MIRAFI FW 700 OR EQUAL IS SPECIFIED.
13. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN COMPLIANCE WITH ANY AND ALL APPLICABLE EL PASO COUNTY STANDARDS AND WITH PAINT BRUSH HILLS METRO DISTRICT CONSULTING ENGINEER APPROVAL.
14. ALL WATER MAINS SHALL BE AWWA C900-SDR18 PVC WITH PUSH-ON SINGLE GASKET TYPE JOINTS.
15. ALL WATER MAIN FITTINGS SHALL BE MADE FROM GRAY-IRON OR DUCTILE IRON AND FURNISHED WITH MECHANICAL JOINT ENDS. ALL FITTINGS SHALL HAVE A PRESSURE RATING OF 250 PSI.
16. ALL WATER LINE BENDS, TEES, BLOW-OFFS AND PLUGS AT DEAD-END MAINS SHALL BE PROTECTED FROM THRUST BY USING CONCRETE THRUST BLOCKS AND/OR ROODING AND RESTRAINED PIPE PER THE PAINT BRUSH HILLS METRO DISTRICT CONSULTING ENGINEER APPROVAL.
17. MAXIMUM DEFLECTION OF 8" & 12" PVC WATER MAIN JOINTS IS 4 DEGREES. CORRESPONDING MINIMUM CURVE RADIUS IS 286'. ADDITIONAL 11.25' OR 22.5' BENDS MAY BE REQUIRED FOR PROPER ALIGNMENT.
18. CONTRACTOR IS RESPONSIBLE FOR PROVIDING DETAILED AS-BUILTS OF ALL WATER MAIN, STORM SEW AND SAN. SEW. MAIN INSTALLATIONS, INCLUDING ACCURATE DISTANCES OF MAIN LINES, VALVES, FITTINGS, MANHOLES AND LOCATIONS OF WATER AND SEWER SERVICES.
19. SANITARY SEWER PIPE AND FITTINGS: PVC 4"-8" ASTM D3034, TYPE PSM, SDR 35; PUSH-ON JOINTS AND MOLDED RUBBER GASKETS MAXIMUM HORIZONTAL DEFLECTION, AFTER INSTALLATION AND BACK FILLING SHALL NOT EXCEED 3% OF THE PIPE DIAMETER. (MINIMUM CURVE RADIUS IS 100' FOR 8" PVC SAN. SEW. MAIN)



**AGENCIES:**

- OWNER/DEVELOPER:** AEROPLAZA FOUNTAIN LLC & HEIDI LLC  
212 NORTH WAHSATCH AVENUE, SUITE 301  
COLORADO SPRINGS, CO 80903  
MR. JEFF MARK, (719) 635-3200
- CIVIL ENGINEER:** CLASSIC CONSULTING ENGINEERS & SURVEYORS  
619 N. CASCADE AVENUE, SUITE 200  
COLORADO SPRINGS, COLORADO 80903  
MR. MARC A. WHORTON, P.E. (719) 785-2802
- COUNTY ENGINEERING:** EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT  
2880 INTERNATIONAL CIRCLE, SUITE 110  
COLORADO SPRINGS, COLORADO 80910  
MR. GILBERT LAFORCE (719) 520-7945
- METRO DISTRICT:** PAINT BRUSH HILLS METRO DISTRICT  
9830 LIBERTY GROVE DR.  
FALCON, CO 80831  
MR. LEON GOMES (719) 495-8188
- GAS COMPANY:** BLACKHILLS ENERGY  
37 WIDEFIELD BOULEVARD  
WIDEFIELD, COLORADO 80911  
MR. GEORGE M. PETERSON, (719) 392-3491
- ELECTRIC COMPANY:** MOUNTAIN VIEW ELECTRIC  
P.O. BOX 1600  
LIMON, COLORADO 80828  
MR. LES ULFERS, (719) 495-2283
- FIRE DEPARTMENT:** FALCON FIRE PROTECTION DISTRICT  
7030 N. MERIDIAN RD.  
FALCON, COLORADO 80831  
CHIEF HARWIG (719) 495-4050
- TELEPHONE COMPANY:** CENTURY LINK  
(LOCATORS) 811  
AT & T  
(LOCATORS) 811

**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 - INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
9. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.
10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
12. SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.
13. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS AND MUTCD CRITERIA.
14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
15. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS 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.

**SIGNING AND STRIPING NOTES:**

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

**BENCHMARKS:**

- A. SOUTH 1/4 CORNER OF SECTION 26, TOP OF 2 1/2" ALUMINUM CAP.  
ELEV. = 7140.91  
VERTICAL DATUM = NGVD 1929
- B. SOUTHWEST CORNER OF SECTION 25, TOP OF 3 1/4" ALUMINUM CAP  
ELEV. = 7136.34  
VERTICAL DATUM = NGVD 1929

**CONSTRUCTION PLAN SHEET INDEX**

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SHEET 13	OF 16-16	DETENTION FACILITY D POND PLAN
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**BASIS OF BEARINGS:**

THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 26, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN BEING MONUMENTED AT THE EAST BY A 3.25" ALUMINUM CAP STAMPED P.L.S. 12103, PRINCIPAL MERIDIAN AND AT THE WEST END BY A NO. 6 REBAR WITH 2.5" ALUMINUM CAP STAMPED P.L.S. 4842, ASSUMED TO BEAR N89°02'00"W, A DISTANCE OF 2614.11 FEET AS SHOWN ON A LAND SURVEY PLAT BY W. K. CLARK AND ASSOCIATES, DATED AUGUST 13, 1999.

**APPROVALS:**

**DESIGN ENGINEER'S STATEMENT:**

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



MARC A. WHORTON, COLORADO, P.E. #37155  
FOR AND ON THE BEHALF OF CLASSIC CONSULTING ENGINEERS & SURVEYORS

10/19/18  
DATE

**OWNER/DEVELOPER'S STATEMENT:**

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

*Jeff Mark*  
MR. JEFF MARK  
AEROPLAZA FOUNTAIN LLC AND HEIDI LLC

9/25/18  
DATE

**EL PASO COUNTY:**

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

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

IN ACCORDANCE WITH 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 DIRECTOR'S DISCRETION.

**Approved**

by Elizabeth Nijkamp  
El Paso County Planning and Community Development  
on behalf of Jennifer Irvine, County Engineer, ECM Administrator

**10/29/2018 9:39:17 AM**

JENNIFER IRVINE, P.E.  
COUNTY ENGINEER / ECM ADMINISTRATOR



## AS-BUILT ENGINEERING RECORD DRAWINGS

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS <b>811</b> UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW  THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.	NO. REVISION DATE	REVIEW: PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC 10/19/18 DATE MARC A. WHORTON, COLORADO, P.E. # 37155
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	10/19/18 DATE MARC A. WHORTON, COLORADO, P.E. # 37155
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**CLASSIC CONSULTING**

619 N. Cascade Avenue, Suite 200 (719) 785-0790  
Colorado Springs, Colorado 80903 (719) 785-0799(Fax)

<b>PAINT BRUSH HILLS FILING 13E</b>			
<b>CONSTRUCTION PLANS</b>			
TITLE SHEET			
DESIGNED BY	MAW	SCALE	DATE 7-12-18
DRAWN BY	MAW	(H) 1"= N/A	SHEET 1 OF 15-18
CHECKED BY	(V) 1"= N/A	JOB NO.	2053.50

PCD PROJECT NO. SF-189

PAIN BRUSH HILLS  
FILING NO. 3  
BOOK US, PAGE 79

PAIN BRUSH HILLS  
FILING NO. 2  
BOOK P3, PAGE 51

PAIN BRUSH HILLS  
FILING NO. 9

PAIN BRUSH HILLS  
FILING NO. 4  
RECEPTION NO. 201034699

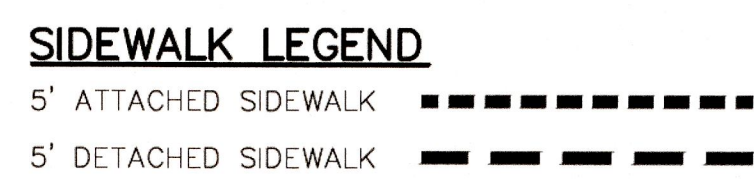
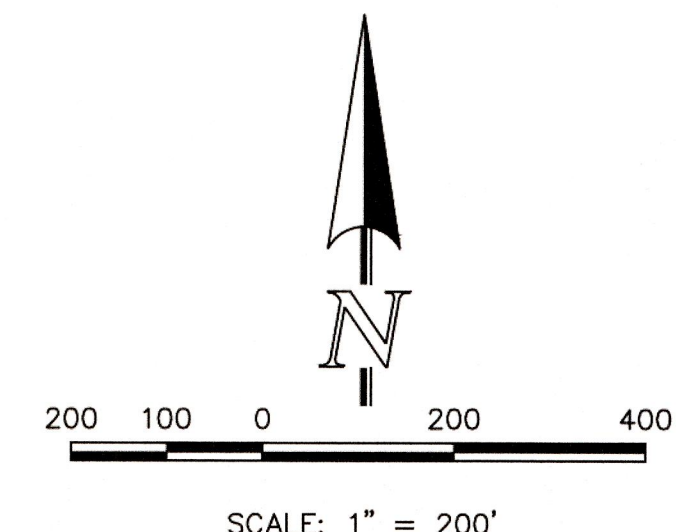
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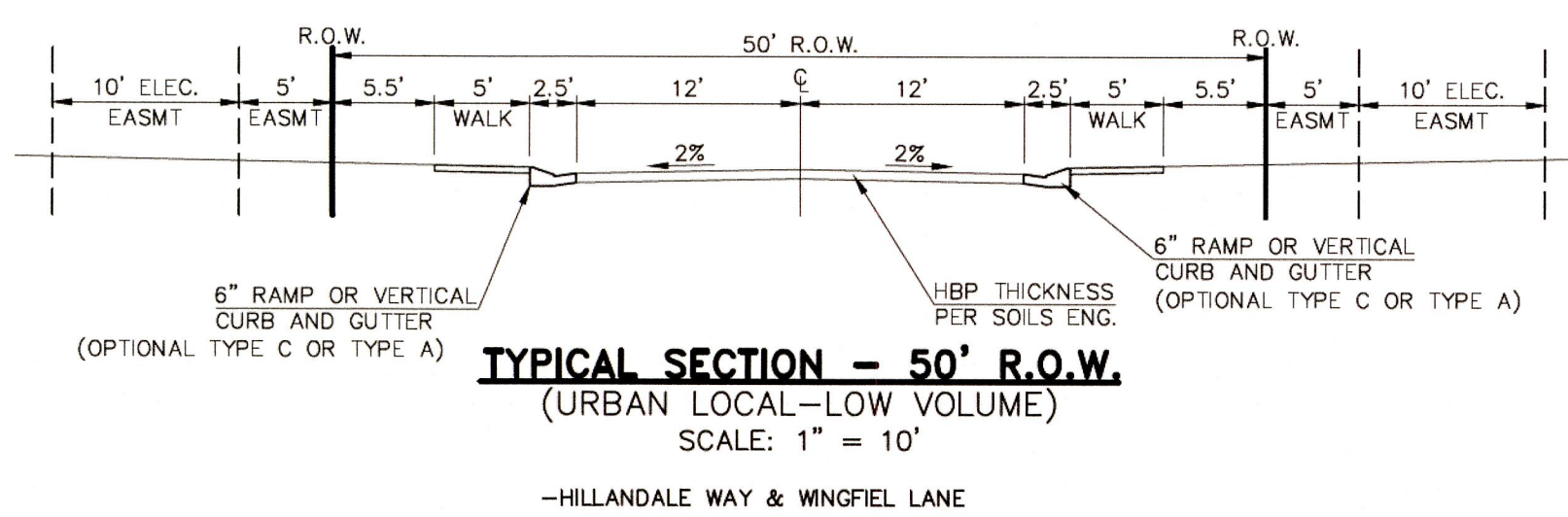
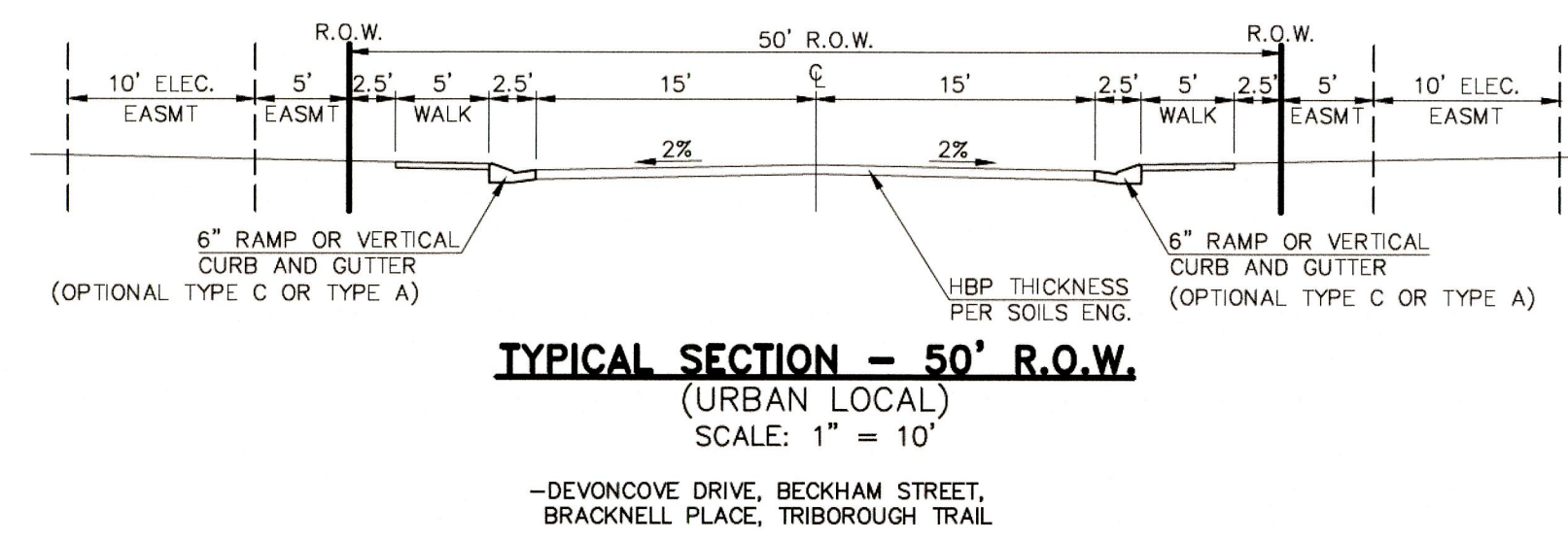
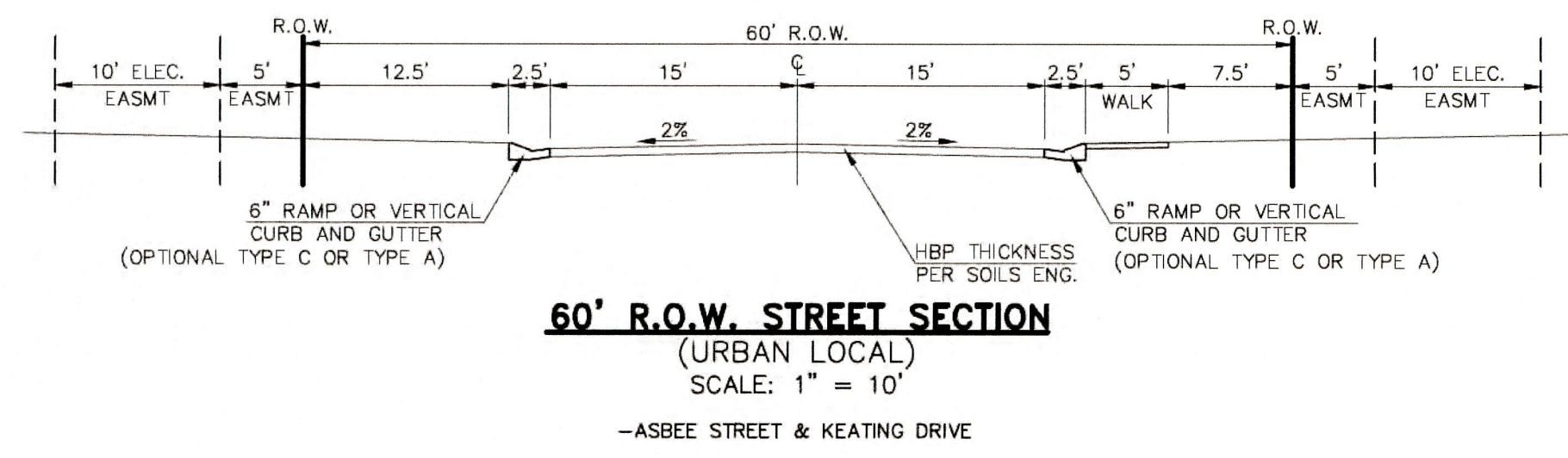
PAIN BRUSH HILLS  
FILING NO. 12

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SHEET 15 OF 17	DETENTION FACILITY D POND PLAN
SHEET 16 OF 17	DETENTION FACILITY D OUTLET BOX DETAILS
SHEET 17 OF 17	DETAIL SHEET

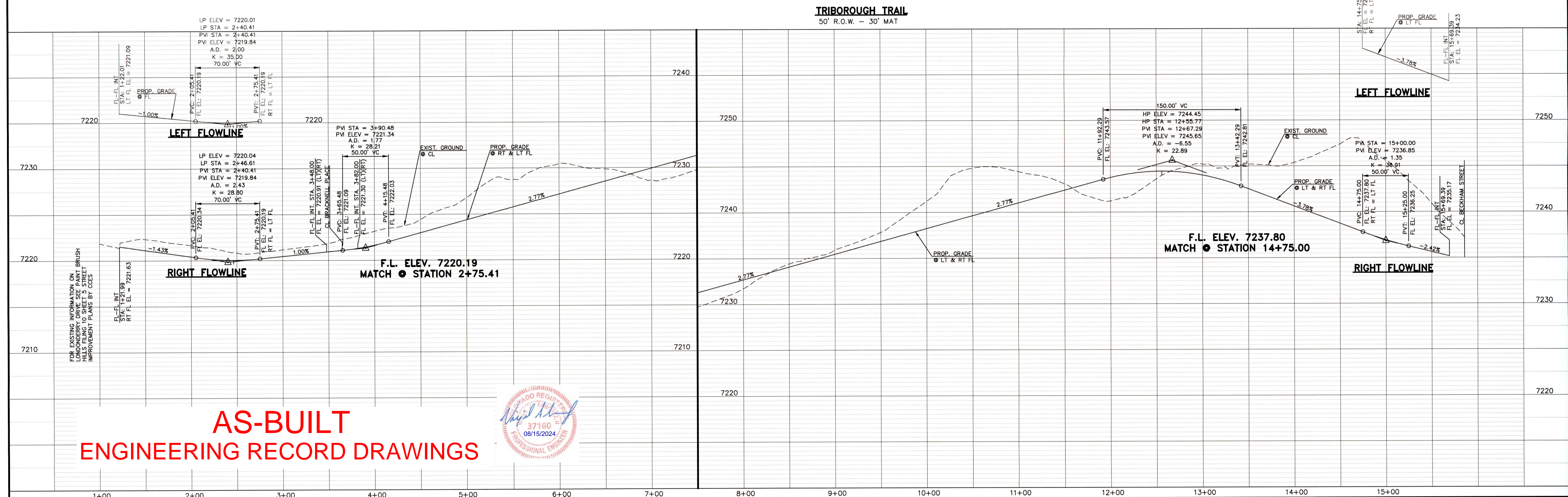
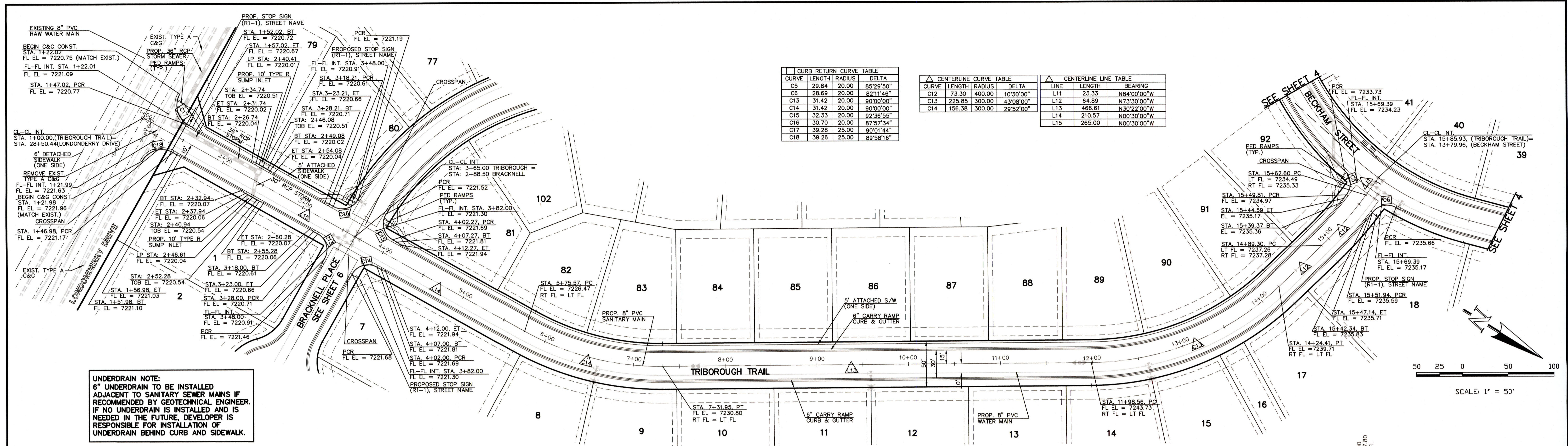


**AS-BUILT  
ENGINEERING RECORD DRAWINGS**

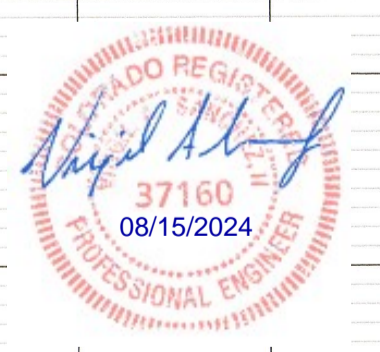


**SIDEWALK NOTES:**  
1. INSTALL 5' ATTACHED SIDEWALK ONLY WHERE IDENTIFIED ON THE CONSTRUCTION PLANS.

<p>48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS <b>811</b> UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW</p> <p>THE LOCATIONS OF EXISTING 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 UNDERGROUND UTILITIES.</p>	<p>NO. REVISION</p> <table border="1"> <tr><td>1</td><td>REVISED PER COUNTY COMMENTS</td><td>10-18-18</td></tr> </table>	1	REVISED PER COUNTY COMMENTS	10-18-18	<p>DATE</p> <p>10/19/18</p>	<p>REVIEW:</p> <p>PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC</p> <p>MARC A. WORTON, COLORADO P.E. # 37155</p>	<p><b>CLASSIC CONSULTING</b></p> <p>619 N. Cascade Avenue, Suite 200 Colorado Springs, Colorado 80903</p> <p>(719)785-0790 (719)785-0799(Fax)</p>	<p>PAIN BRUSH HILLS FILING NO. 13E CONSTRUCTION PLANS KEY MAP WITH SIDEWALK LOCATIONS INCLUDING TYPICAL ROAD SECTIONS</p> <table border="1"> <tr><td>DESIGNED BY</td><td>MAW</td><td>SCALE</td><td>DATE</td><td>09-18-18</td></tr> <tr><td>DRAWN BY</td><td>PRA</td><td>(H) 1" = 200'</td><td>SHEET</td><td>2 OF 17</td></tr> <tr><td>CHECKED BY</td><td>(V) 1" = N/A</td><td>DATE</td><td>JOB NO.</td><td>2053.50</td></tr> </table>	DESIGNED BY	MAW	SCALE	DATE	09-18-18	DRAWN BY	PRA	(H) 1" = 200'	SHEET	2 OF 17	CHECKED BY	(V) 1" = N/A	DATE	JOB NO.	2053.50
	1	REVISED PER COUNTY COMMENTS	10-18-18																				
DESIGNED BY	MAW	SCALE	DATE	09-18-18																			
DRAWN BY	PRA	(H) 1" = 200'	SHEET	2 OF 17																			
CHECKED BY	(V) 1" = N/A	DATE	JOB NO.	2053.50																			



**AS-BUILT  
ENGINEERING RECORD DRAWINGS**



DESIGN DATA: TRIBOROUGH TRAIL

PAVEMENT: TYPE: HMA  PCC   
THICKNESS \_\_\_\_\_

COMPOSITE SECTION \_\_\_\_\_  
BASE \_\_\_\_\_  
SUBGRADE STABILIZATION: \_\_\_\_\_  
CHEMICAL:  MECH.:

CURB TYPE:  1  5  3  A  C  X

R/W WIDTH: 50' MAT WIDTH: 30'

STREET TYPE: URBAN LOCAL HVEEM THICKNESS \_\_\_\_\_

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NO.	REVISION	DATE
1	REVISED PER COUNTY COMMENTS	9-21-18

REVIEW: \_\_\_\_\_  
PREPARED UNDER DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC  
10/19/18  
MARC A. WORTON, COLORADO P.E. #37155



PAINT BRUSH HILLS FILING 13E  
CONSTRUCTION PLANS  
STREET IMPROVEMENT PLANS  
TRIBOROUGH TRAIL

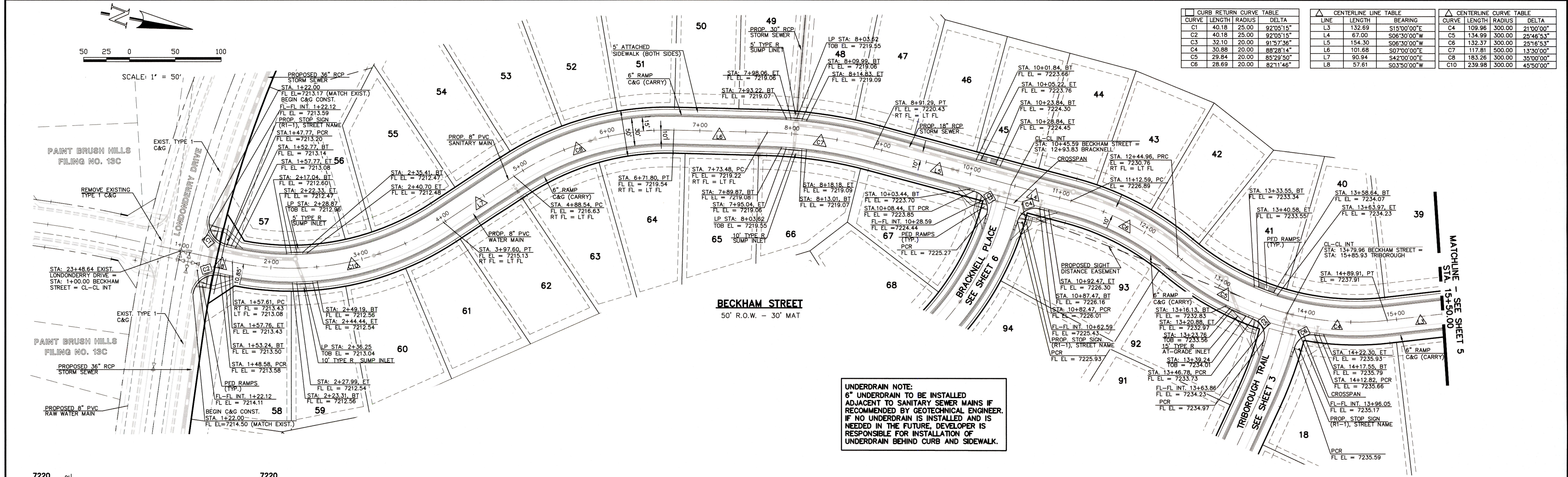
DESIGNED BY	MAW	SCALE	DATE
7-20-18			

DRAWN BY	MAW	(H) 1" = 50'	SHEET 3 OF 18

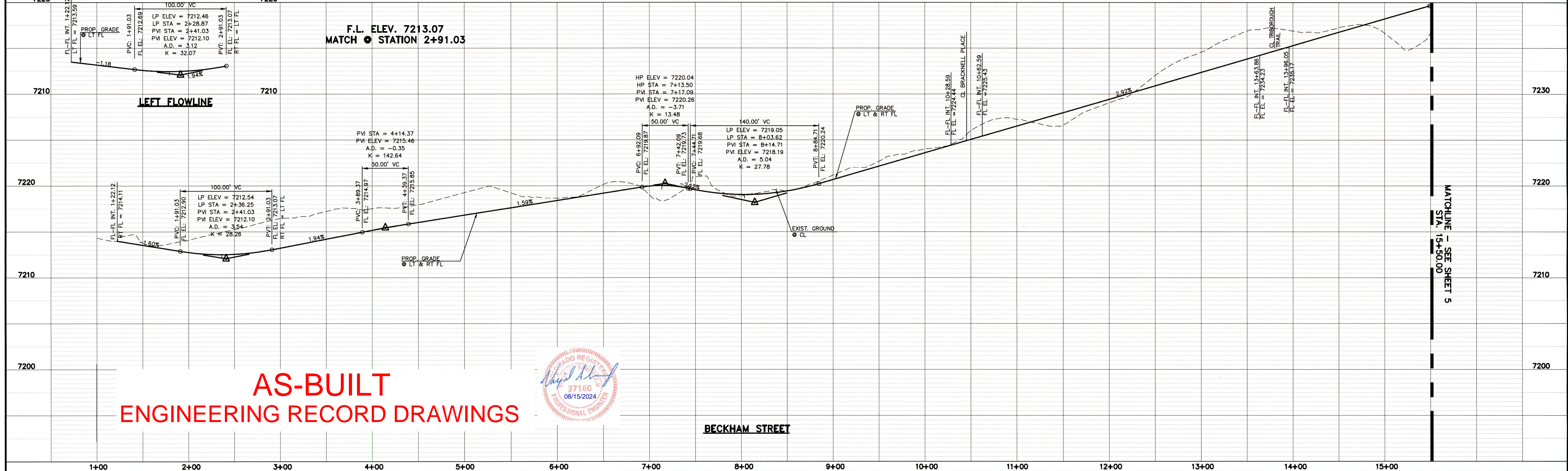
CHECKED BY	(V) 1" = 5'	JOB NO.	2053.50

N:\205350\DRAWINGS\CONSTRUCTION\Construction Plans\STREET AND STORM\_CDS\205350-501-SHEET\_3.dwg, 10/19/2018 11:21:36 AM, 1:1

CURB RETURN CURVE TABLE				CENTERLINE LINE TABLE		CENTERLINE CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	LINE	LENGTH	BEARING	CURVE	LENGTH	RADIUS	DELTA
C1	40.18	25.00	92°05'15"	L3	132.69	S15°00'00"E	C4	109.96	300.00	21°00'00"
C2	40.18	25.00	92°05'15"	L4	67.00	S06°30'00"W	C5	134.99	300.00	25°46'53"
C3	32.10	20.00	91°57'36"	L5	154.30	S07°00'00"E	C6	132.37	300.00	25°16'53"
C4	30.88	20.00	88°28'14"	L6	101.68	S07°00'00"E	C7	117.81	500.00	13°50'00"
C5	29.84	20.00	85°29'50"	L7	96.94	S42°00'00"E	C8	183.26	300.00	35°00'00"
C6	28.69	20.00	82°11'46"	L8	57.61	S03°50'00"W	C10	239.98	300.00	45°50'00"



**UNDERDRAIN NOTE:**  
 6" UNDERDRAIN TO BE INSTALLED ADJACENT TO SANITARY SEWER MAINS IF RECOMMENDED BY GEOTECHNICAL ENGINEER. IF NO UNDERDRAIN IS INSTALLED AND IS NEEDED IN THE FUTURE, DEVELOPER IS RESPONSIBLE FOR INSTALLATION OF UNDERDRAIN BEHIND CURB AND SIDEWALK.



**AS-BUILT ENGINEERING RECORD DRAWINGS**



DESIGN DATA: BECKHAM STREET

PAVEMENT: TYPE: HMA  PCC

THICKNESS \_\_\_\_\_

COMPOSITE SECTION \_\_\_\_\_

BASE \_\_\_\_\_

SUBGRADE STABILIZATION: CHEMICAL:  MECH:

TYPE: \_\_\_\_\_

THICKNESS \_\_\_\_\_

DESIGNED BY: MAW

DRAWN BY: MAW

CHECKED BY: \_\_\_\_\_

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NO.	REVISION	DATE
1	REVISED PER COUNTY COMMENTS	9-21-18

REVIEW: \_\_\_\_\_

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

MARC A. WHORTON, COLORADO P.E. #37155

DATE: 10/19/18



PAINT BRUSH HILLS FILING 13E  
CONSTRUCTION PLANS  
STREET IMPROVEMENT PLANS  
BECKHAM STREET

DESIGNED BY: MAW

DRAWN BY: MAW

CHECKED BY: \_\_\_\_\_

SCALE: (H) 1" = 50'

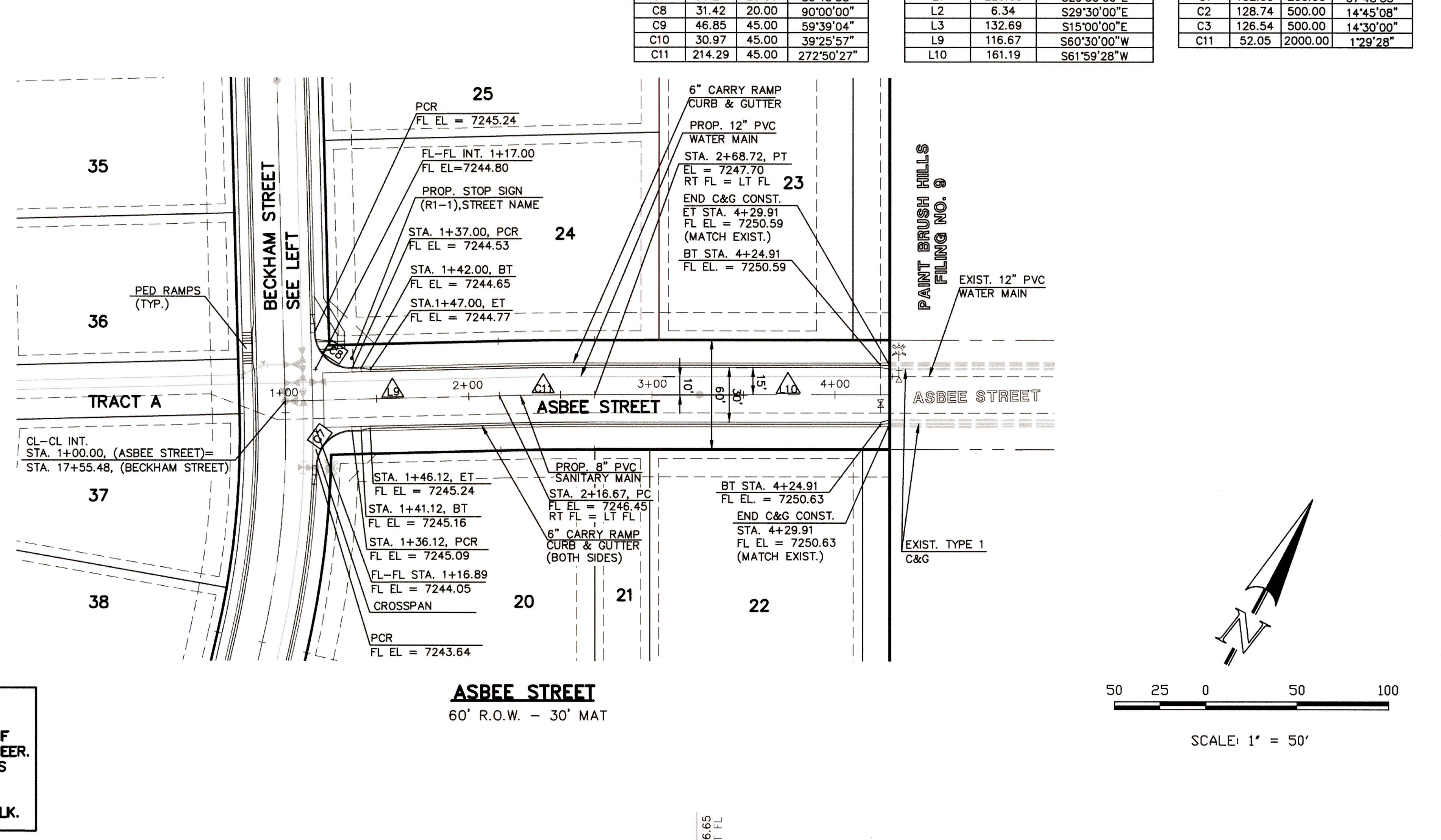
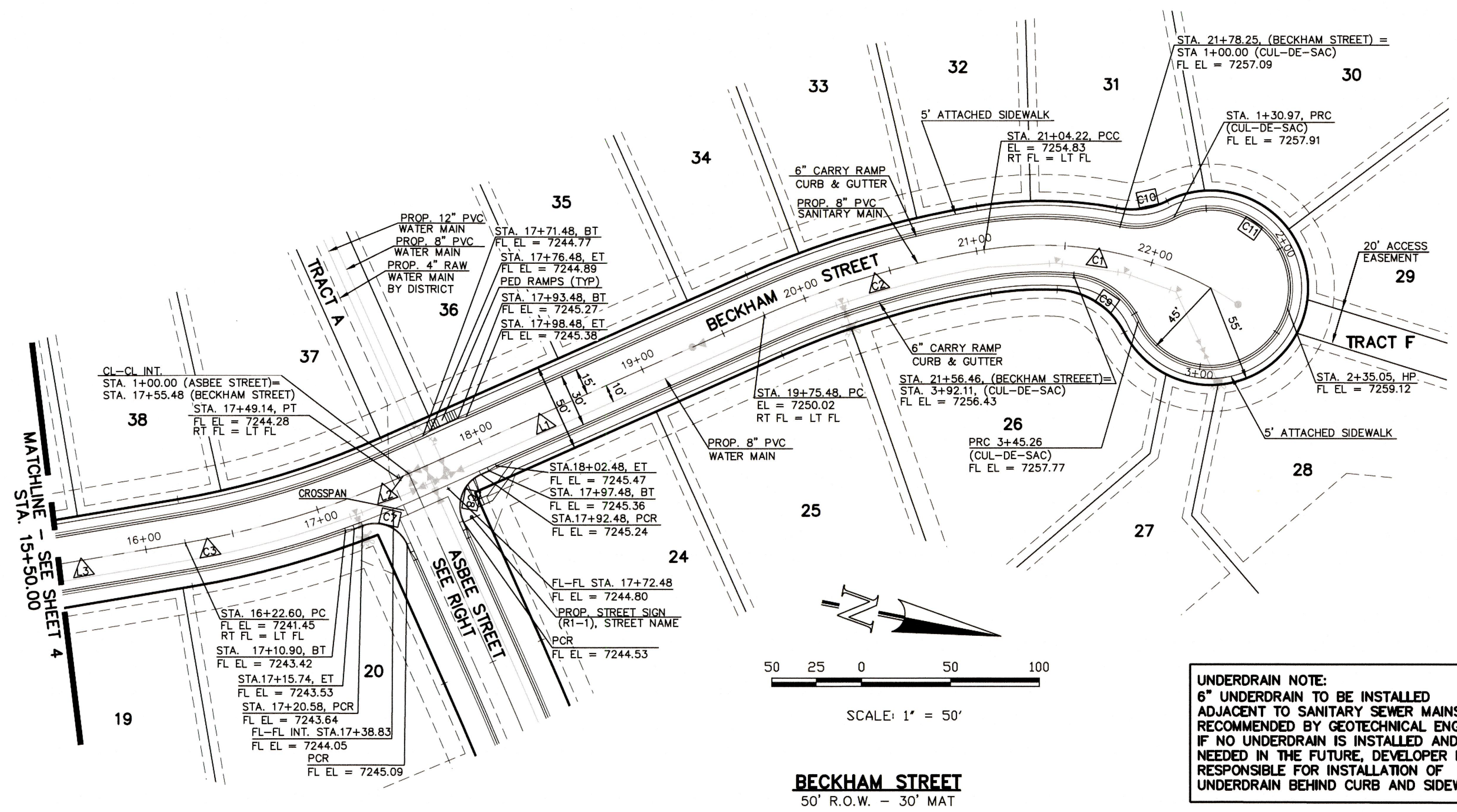
DATE: 7-20-18

SHEET 4 OF 18

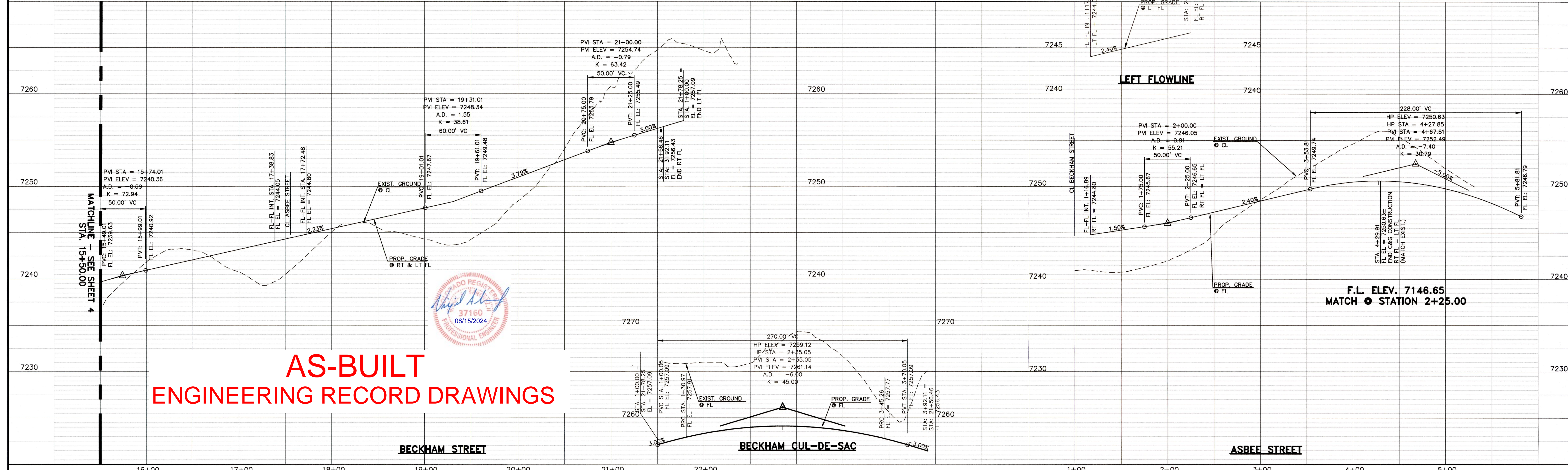
JOB NO. 2053.50

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CURB RETURN CURVE TABLE				CENTERLINE LINE TABLE			CENTERLINE CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA	LINE	LENGTH	BEARING	CURVE	LENGTH	RADIUS	DELTA
C7	30.27	20.00	86°43'38"	L1	220.00	S29°30'00"E	C1	132.00	200.00	37°48'55"
C8	31.42	20.00	90°00'00"	L2	6.34	S29°30'00"E	C2	128.74	500.00	14°45'08"
C9	46.85	45.00	59°39'04"	L3	132.69	S15°00'00"E	C3	126.54	500.00	14°30'00"
C10	30.97	45.00	39°25'57"	L9	116.67	S60°30'00"W	C11	52.05	2000.00	1°28'28"
C11	214.29	45.00	272°50'27"	L10	161.19	S61°59'28"W				



**UNDERDRAIN NOTE:**  
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**AS-BUILT ENGINEERING RECORD DRAWINGS**



DESIGN DATA: BECKHAM ROAD/ASBEE STREET

PAVEMENT: TYPE: HMA  PCC

THICKNESS: \_\_\_\_\_

COMPOSITE SECTION: \_\_\_\_\_

BASE: \_\_\_\_\_

SUBGRADE STABILIZATION: \_\_\_\_\_

CHEMICAL:  MECH:

TYPE: \_\_\_\_\_

THICKNESS: \_\_\_\_\_

SIDEWALKS: WIDTH: 5'

LOCATION:  Attached  Detached

CURB TYPE:  1  5  3  A  C

R/W WIDTH: 50' / 60' MAT WIDTH: 30'

STREET TYPE: URBAN LOCAL HVEEM \_\_\_\_\_

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NO.	REVISION	DATE
1	REVISED PER COUNTY COMMENTS	9-20-18

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

MARC A. WHORTON, COLORADO P.E. #37155

DATE: 10/19/18



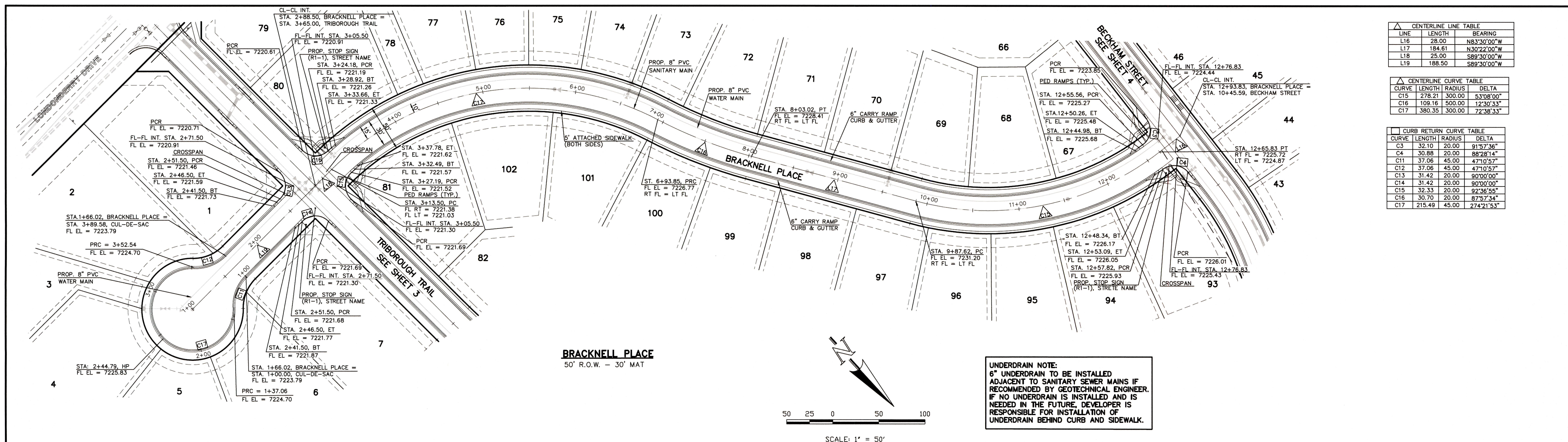
PAINT BRUSH HILLS FILING 13E CONSTRUCTION PLANS

STREET IMPROVEMENT PLANS

BECKHAM STREET/ASBEE STREET

DESIGNED BY	MAW	SCALE	DATE
DRAWN BY	MAW	(H) 1" = 50'	SHEET 5 OF 17-18
CHECKED BY	(V) 1" = 5'	JOB NO.	2053.50

N:\205350\DRAWINGS\CONSTRUCTION\Plans\STREET AND STORM\_CDS\205350-503-SHEET 5.dwg, 10/19/2018 11:25:06 AM, 1:1



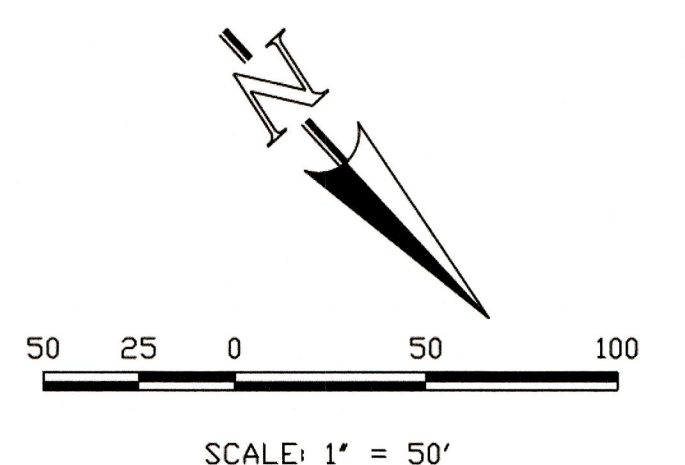
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LINE	LENGTH	BEARING
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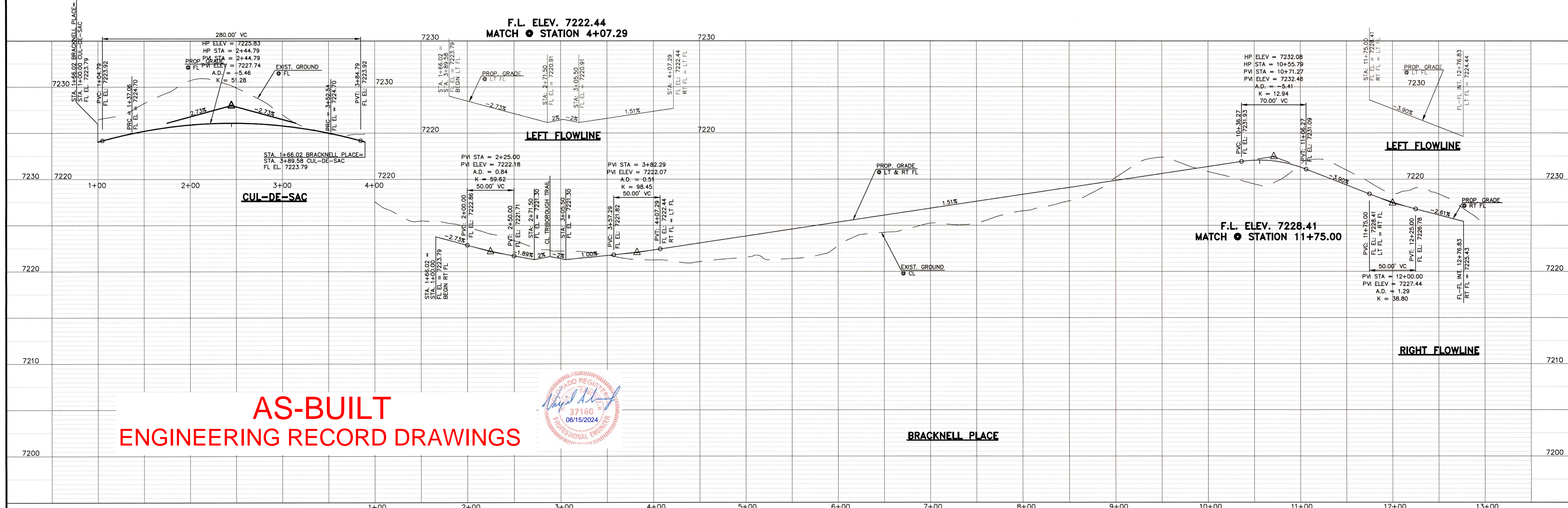
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CURVE	LENGTH	RADIUS	DELTA
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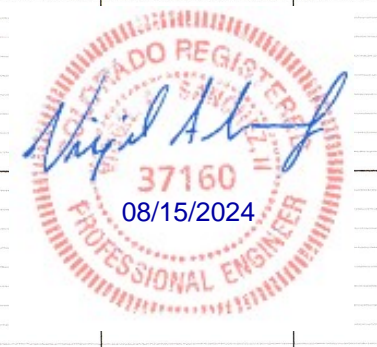
CURB RETURN CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C3	32.10	20.00	91°57'36\"/>



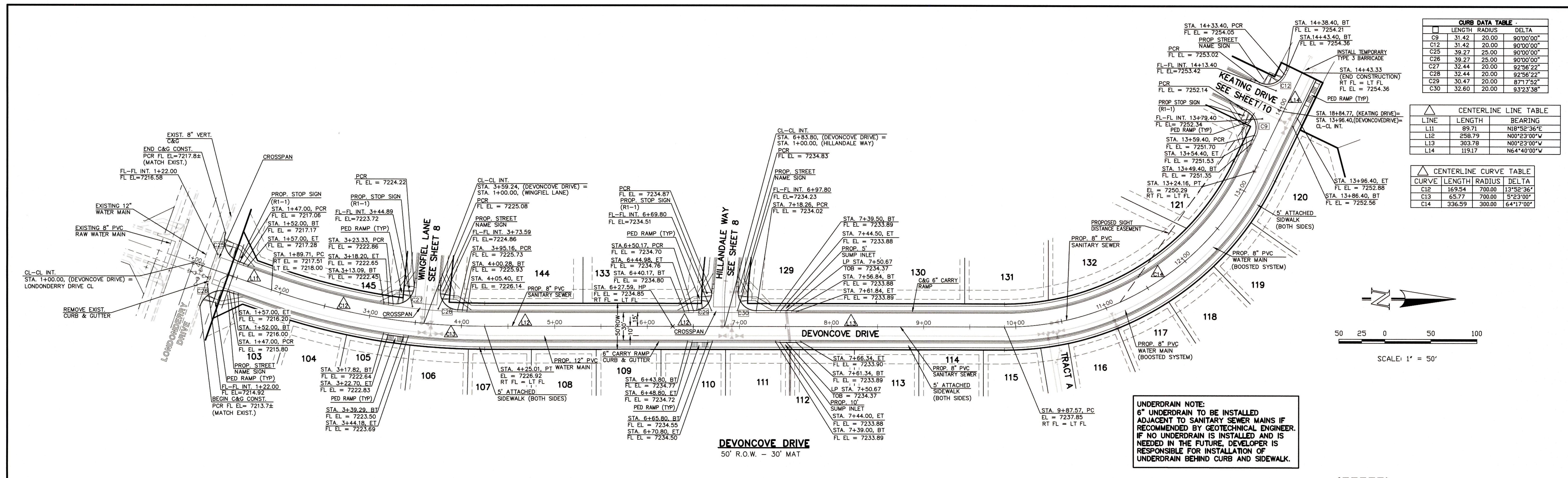
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**AS-BUILT  
 ENGINEERING RECORD DRAWINGS**



DESIGN DATA: BRACKNELL PLACE SIDEWALKS: WIDTH: 5' LOCATION: <input checked="" type="checkbox"/> Attached <input type="checkbox"/> Detached CURB TYPE: <input type="checkbox"/> 1 <input type="checkbox"/> 5 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> A <input type="checkbox"/> C R/W WIDTH: 50' MAT WIDTH: 30' STREET TYPE: URBAN LOCAL HVEEM	PAVEMENT: TYPE: HMA <input type="checkbox"/> PCC <input type="checkbox"/> THICKNESS: COMPOSITE SECTION HMA _____ BASE _____ SUBGRADE STABILIZATION: CHEMICAL: <input type="checkbox"/> MECH.: <input type="checkbox"/> TYPE: _____ THICKNESS: _____	48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS <b>811</b> UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.	NO. REVISION 1 REVISED PER COUNTY COMMENTS DATE: 9-20-18	REVIEW: PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC  MARC A. WHORION, COLORADO P.E. #37155 DATE: 10/19/18	 619 N. Cascade Avenue, Suite 200 (719)785-0790 Colorado Springs, Colorado 80903 (719)785-0799(Fax)	PAINT BRUSH HILLS FILING 13E CONSTRUCTION PLANS STREET IMPROVEMENT PLANS BRACKNELL PLACE DESIGNED BY: MAW SCALE: (H) 1" = 50' DATE: 7-20-18 DRAWN BY: MAW (V) 1" = 5' SHEET 6 OF 17-18 CHECKED BY: _____ JOB NO.: 2053.50



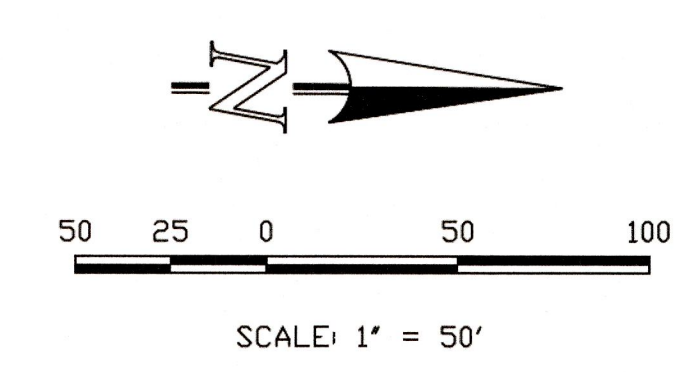
CURB DATA TABLE			
TYPE	LENGTH	RADIUS	DELTA
C9	31.42	20.00	90°00'00"
C12	31.42	20.00	90°00'00"
C25	39.27	25.00	90°00'00"
C26	39.27	25.00	90°00'00"
C27	32.44	20.00	92°56'22"
C28	32.44	20.00	92°56'22"
C29	30.47	20.00	87°17'52"
C30	32.60	20.00	93°23'58"

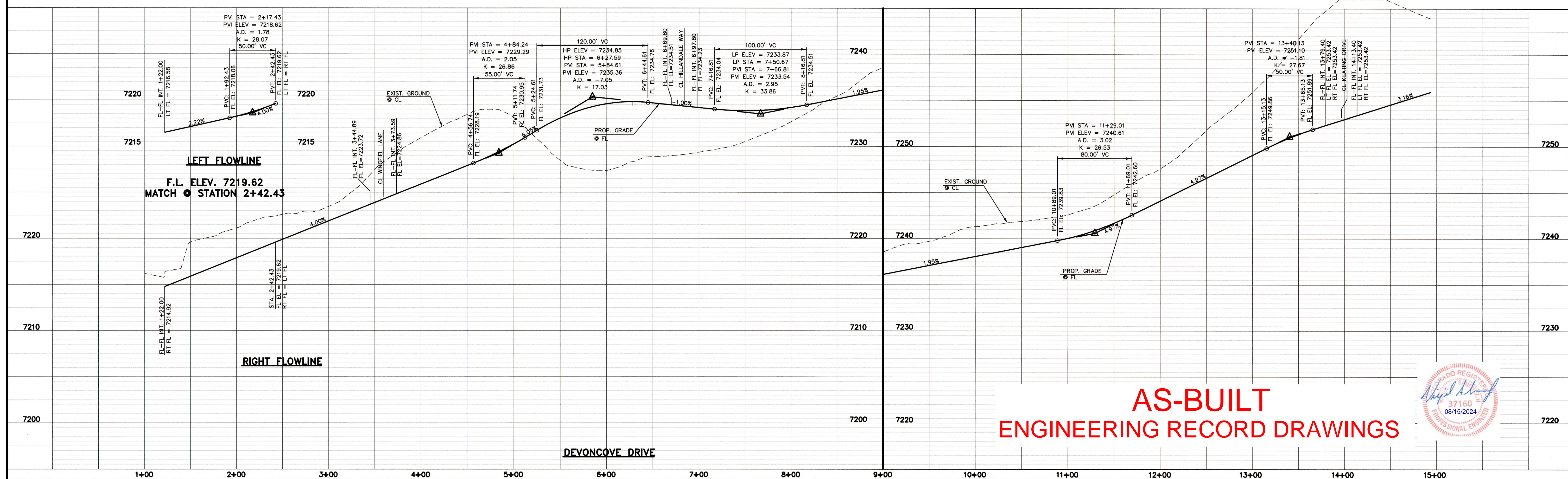
CENTERLINE LINE TABLE		
LINE	LENGTH	BEARING
L11	89.71	N18°52'36"E
L12	258.79	N00°23'00"W
L13	303.78	N00°23'00"W
L14	119.17	N64°40'00"W

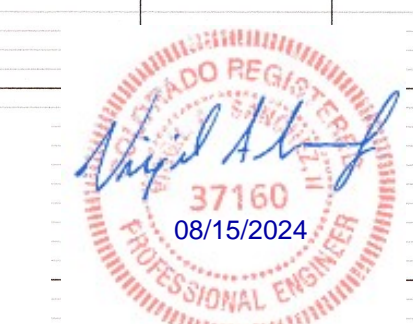
CENTERLINE CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C12	169.54	700.00	13°52'36"
C13	65.77	700.00	5°29'00"
C14	336.59	900.00	64°17'00"



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**AS-BUILT  
 ENGINEERING RECORD DRAWINGS**

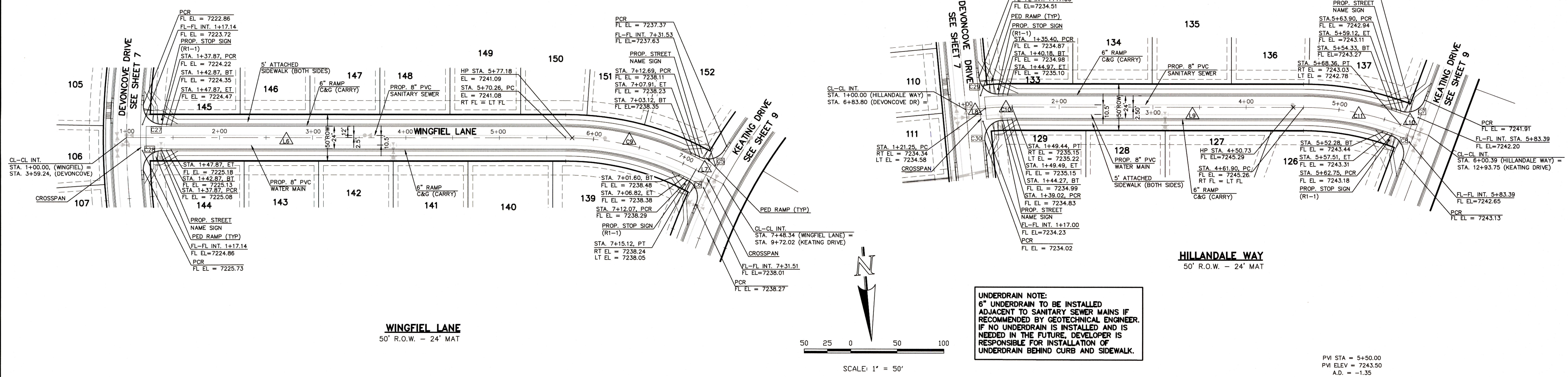


DESIGN DATA: DEVONCOVE DRIVE SIDEWALKS: WIDTH: 5' LOCATION: <input type="checkbox"/> Attached <input type="checkbox"/> Detached CURB TYPE: <input type="checkbox"/> 1 <input type="checkbox"/> 5 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> A <input type="checkbox"/> C R/W WIDTH: 50' MAT WIDTH: 30' STREET TYPE: URBAN LOCAL HVEEM	PAVEMENT: TYPE: HMA <input type="checkbox"/> PCC <input type="checkbox"/> THICKNESS: _____ COMPOSITE SECTION HMA _____ BASE _____ SUBGRADE STABILIZATION: CHEMICAL: <input type="checkbox"/> MECH: <input type="checkbox"/> TYPE: _____ THICKNESS: _____	48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS <b>811</b> UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.	NO. REVISION 1 REVISED PER COUNTY COMMENTS	DATE 9-20-18	REVIEW: PREPARED BY: _____ CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC 	DATE 10/19/18	PAINT BRUSH HILLS FILING 13E CONSTRUCTION PLANS STREET IMPROVEMENT PLANS DEVONCOVE DRIVE	DESIGNED BY: MAW DRAWN BY: MAW CHECKED BY: (V)	SCALE: (H) 1" = 50' (V) 1" = 5' SHEET 7 OF 17 JOB NO. 2053.50
			CLASSIC CONSULTING 619 N. Cascade Avenue, Suite 200 Colorado Springs, Colorado 80903 (719)785-0790 (719)785-0799(Fax)						

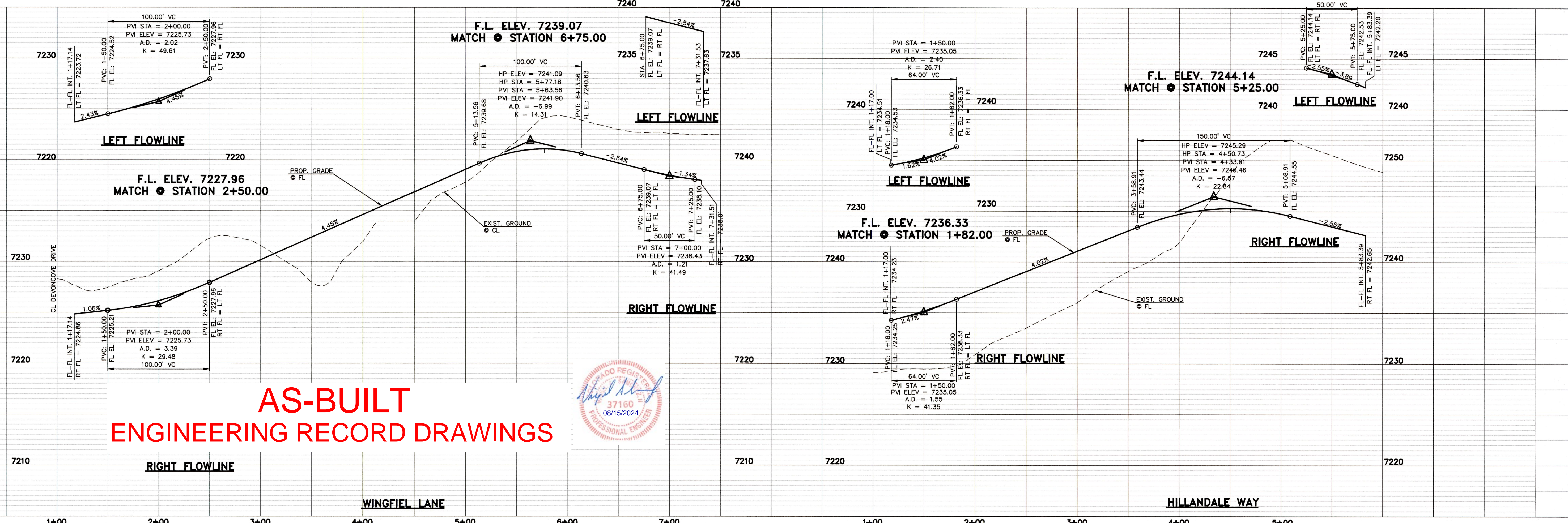
CURB DATA TABLE	LENGTH	RADIUS	DELTA
C5	29.99	20.00	85°54'26"
C6	30.35	20.00	86°57'02"
C7	31.12	20.00	89°08'48"
C8	31.79	20.00	91°04'17"
C27	32.44	20.00	92°36'22"
C28	32.44	20.00	92°36'22"
C29	30.47	20.00	87°17'52"
C30	32.60	20.00	93°23'38"

CENTERLINE LINE TABLE	LINE	LENGTH	BEARING
L6	470.26	S85°00'00"E	
L7	33.22	N57°20'00"W	
L8	21.25	N69°37'00"E	
L9	312.46	S85°00'00"E	
L10	32.03	N64°40'00"W	

CENTERLINE CURVE TABLE	CURVE	LENGTH	RADIUS	DELTA
C9	144.86	300.00	27°40'00"	
C10	28.19	300.00	5°23'00"	
C11	106.47	300.00	20°20'00"	



**UNDERDRAIN NOTE:**  
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**AS-BUILT  
 ENGINEERING RECORD DRAWINGS**



DESIGN DATA: WINGFIELD LANE/HILLDALE WAY	PAVEMENT: TYPE: HMA <input type="checkbox"/> PCC <input type="checkbox"/>
SIDEWALKS: WIDTH: 5'	THICKNESS: _____
LOCATION: <input checked="" type="checkbox"/> Attached <input type="checkbox"/> Detached	COMPOSITE SECTION: _____
CURB TYPE: <input type="checkbox"/> 1 <input type="checkbox"/> 5 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> A <input type="checkbox"/> C	BASE: _____
R/W WIDTH: 50' MAT WIDTH: 24'	SUBGRADE STABILIZATION: _____
STREET TYPE: URBAN LOCAL LV HVEEM _____	CHEMICAL: <input type="checkbox"/> MECH: <input type="checkbox"/>
	TYPE: _____
	THICKNESS: _____

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NO.	REVISION	DATE
1	REVISED PER COUNTY COMMENTS	9-20-18

REVIEW: \_\_\_\_\_

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

MARC A. WILSON, COLORADO P.E. #37155

DATE: 10/19/18



PAINT BRUSH HILLS FILING 13E CONSTRUCTION PLANS			
STREET IMPROVEMENT PLANS WINGFIELD LANE / HILLDALE WAY			
DESIGNED BY	MAW	SCALE	DATE
DRAWN BY	MAW	(H) 1" = 50'	SHEET 8 OF 47-18
CHECKED BY	(V) 1" = 5'	JOB NO.	2053.50

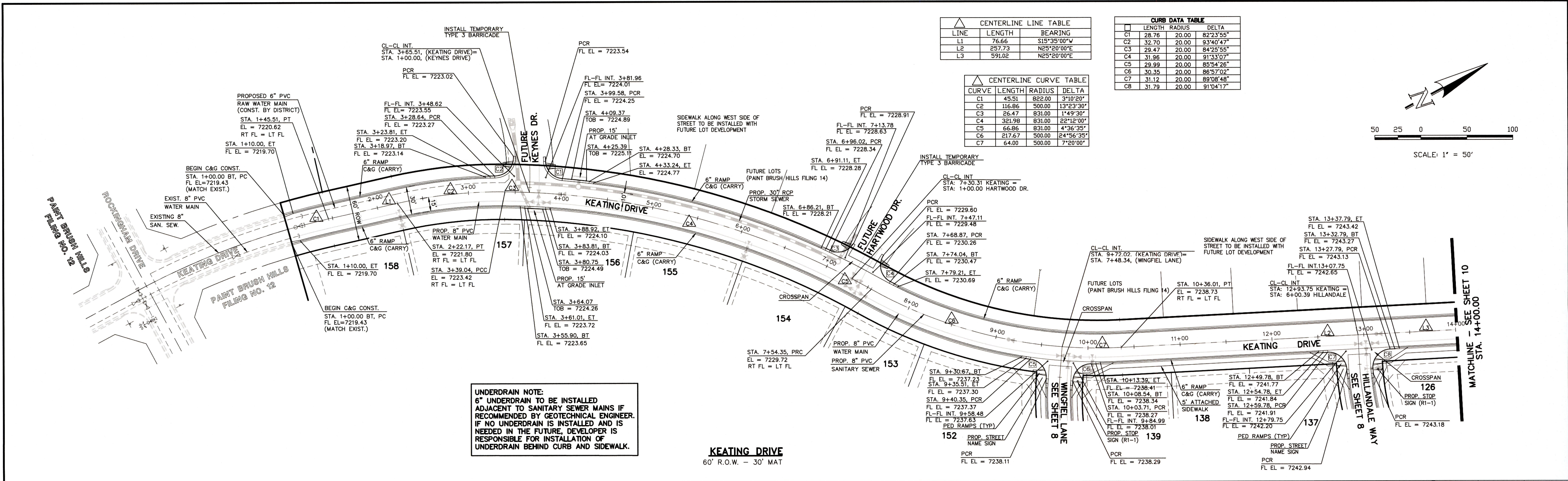
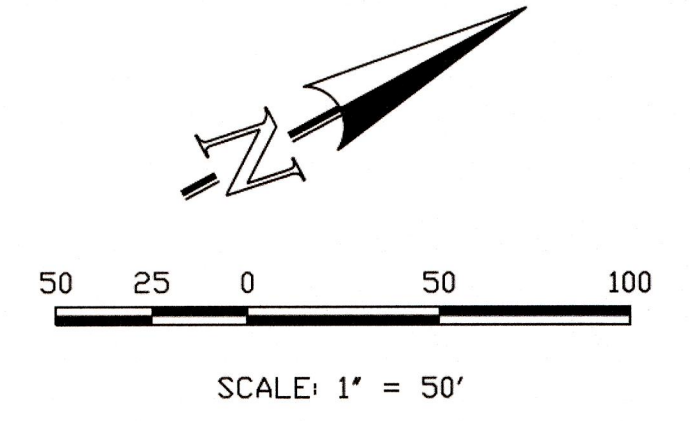
N:\205350\DRAWINGS\CONSTRUCTION\Construction Plans\STREET AND STORM\CD3\205350-S06-SHEET 8.dwg, 10/19/2018 11:28:03 AM, 1:1



CENTERLINE LINE TABLE		
LINE	LENGTH	BEARING
L1	76.66	S15°35'00"W
L2	257.73	N25°20'00"E
L3	591.02	N25°20'00"E

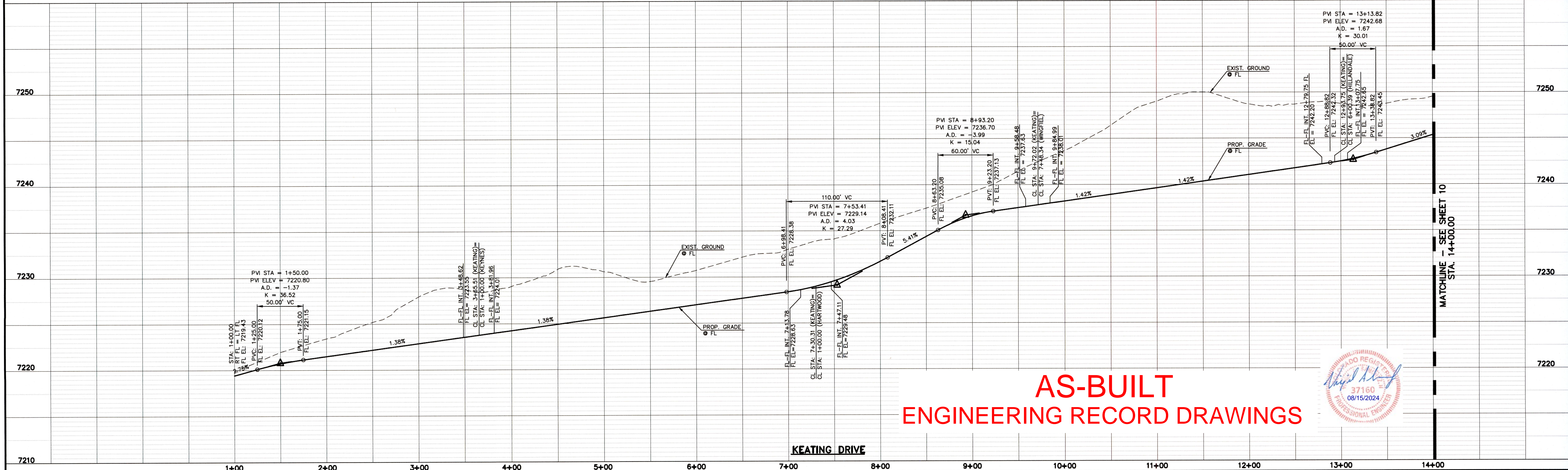
CURB DATA TABLE			
LINE	LENGTH	RADIUS	DELTA
C1	28.76	20.00	82°23'55"
C2	32.70	20.00	93°40'43"
C3	29.47	20.00	84°23'55"
C4	31.96	20.00	91°33'07"
C5	29.99	20.00	85°54'26"
C6	30.35	20.00	86°57'02"
C7	31.12	20.00	89°08'48"
C8	31.79	20.00	91°04'17"

CENTERLINE CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	45.51	822.00	3°10'20"
C2	116.86	500.00	13°23'30"
C3	26.47	831.00	1°49'30"
C4	321.98	831.00	22°12'00"
C5	66.86	831.00	4°36'35"
C6	217.67	500.00	24°56'35"
C7	64.00	500.00	7°20'00"

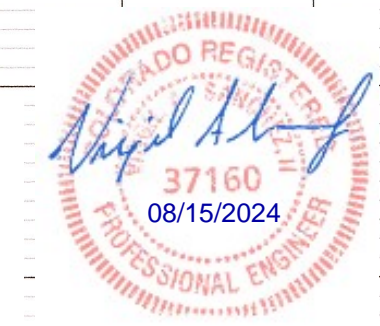


**UNDERDRAIN NOTE:**  
 6" UNDERDRAIN TO BE INSTALLED ADJACENT TO SANITARY SEWER MAINS IF RECOMMENDED BY GEOTECHNICAL ENGINEER. IF NO UNDERDRAIN IS INSTALLED AND IS NEEDED IN THE FUTURE, DEVELOPER IS RESPONSIBLE FOR INSTALLATION OF UNDERDRAIN BEHIND CURB AND SIDEWALK.

**KEATING DRIVE**  
 60' R.O.W. - 30' MAT

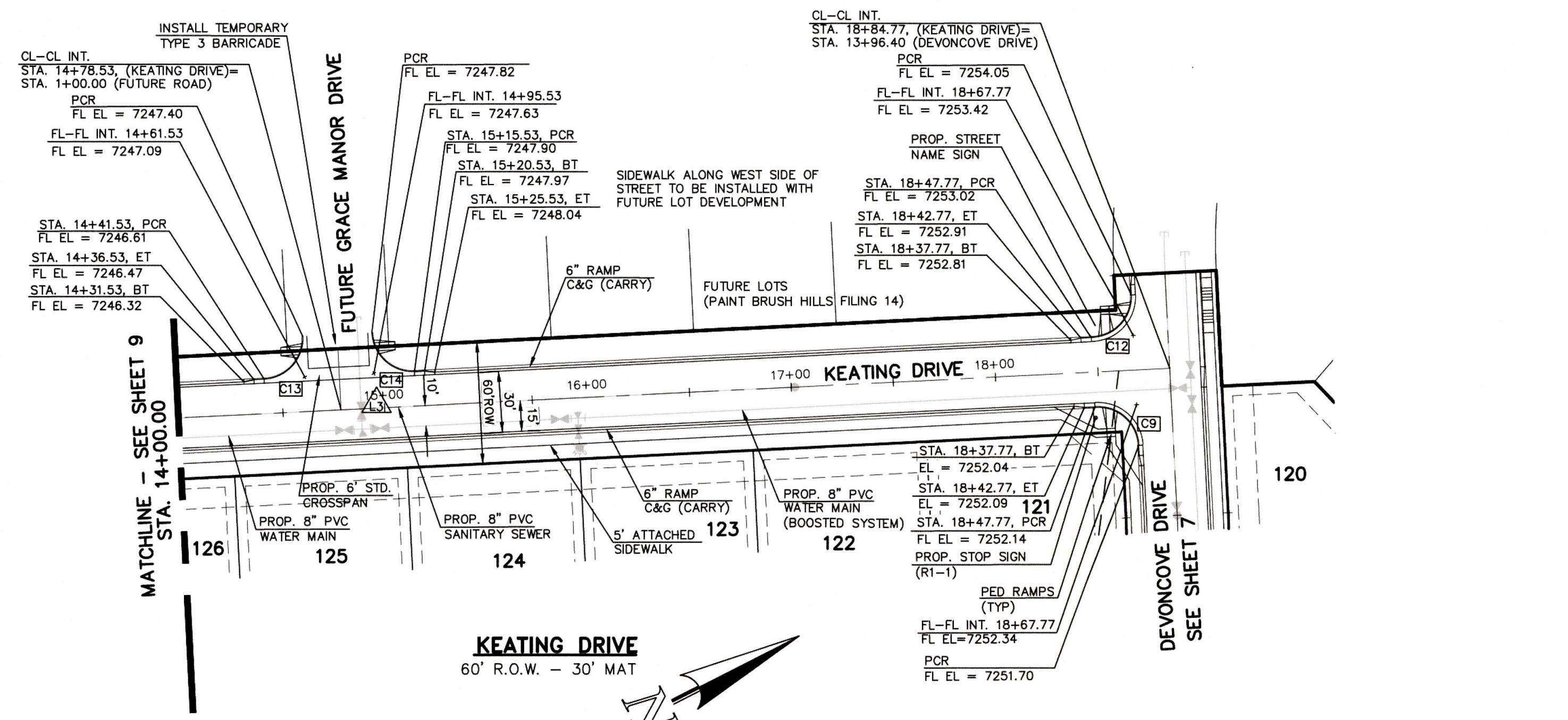


**AS-BUILT**  
**ENGINEERING RECORD DRAWINGS**



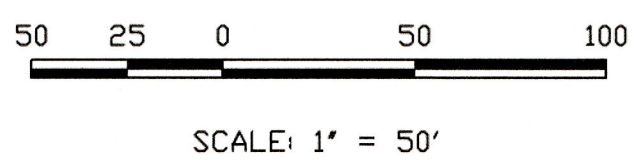
DESIGN DATA: KEATING DRIVE SIDEWALKS: WIDTH: 5' LOCATION: <input type="checkbox"/> Attached <input type="checkbox"/> Detached CURB TYPE: <input type="checkbox"/> 1 <input type="checkbox"/> 5 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> A <input type="checkbox"/> C R/W WIDTH: 60' MAT WIDTH: 30' STREET TYPE: URBAN LOCAL HVEEM _____	PAVEMENT: TYPE: HMA <input type="checkbox"/> PCC <input type="checkbox"/> THICKNESS _____ COMPOSITE SECTION _____ HMA _____ BASE _____ SUBGRADE STABILIZATION: _____ CHEMICAL: <input type="checkbox"/> MECH.: <input type="checkbox"/> TYPE: _____ THICKNESS _____	<b>48 HOURS BEFORE YOU DIG,          CALL UTILITY LOCATORS          811</b> UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.	NO. REVISION 1 REVISED PER COUNTY COMMENTS	DATE 9-20-18	REVIEW: PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC 10/19/18 MARC A. WHORTON, COLORADO P.E. #37155	<b>CLASSIC CONSULTING</b> 619 N. Cascade Avenue, Suite 200 Colorado Springs, Colorado 80903 (719)785-0790 (719)785-0799(Fax)	<b>PAINT BRUSH HILLS FILING 13E          CONSTRUCTION PLANS</b> STREET IMPROVEMENT PLANS KEATING DRIVE DESIGNED BY: MAW SCALE: DATE: 7-20-18 DRAWN BY: MAW (H) 1" = 50' SHEET 9 OF 17-18 CHECKED BY: (V) 1" = 5' JOB NO. 2053.50					
			DESIGN DATA: KEATING DRIVE SIDEWALKS: WIDTH: 5' LOCATION: <input type="checkbox"/> Attached <input type="checkbox"/> Detached CURB TYPE: <input type="checkbox"/> 1 <input type="checkbox"/> 5 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> A <input type="checkbox"/> C R/W WIDTH: 60' MAT WIDTH: 30' STREET TYPE: URBAN LOCAL HVEEM _____			NO. REVISION 1 REVISED PER COUNTY COMMENTS		DATE 9-20-18		REVIEW: PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC 10/19/18 MARC A. WHORTON, COLORADO P.E. #37155		<b>CLASSIC CONSULTING</b> 619 N. Cascade Avenue, Suite 200 Colorado Springs, Colorado 80903 (719)785-0790 (719)785-0799(Fax)

N:\205350\DRAWINGS\CONSTRUCTION\Storm\CD\205350-307-SHEET 9.dwg, 10/19/2018 11:29:30 AM, 1:1

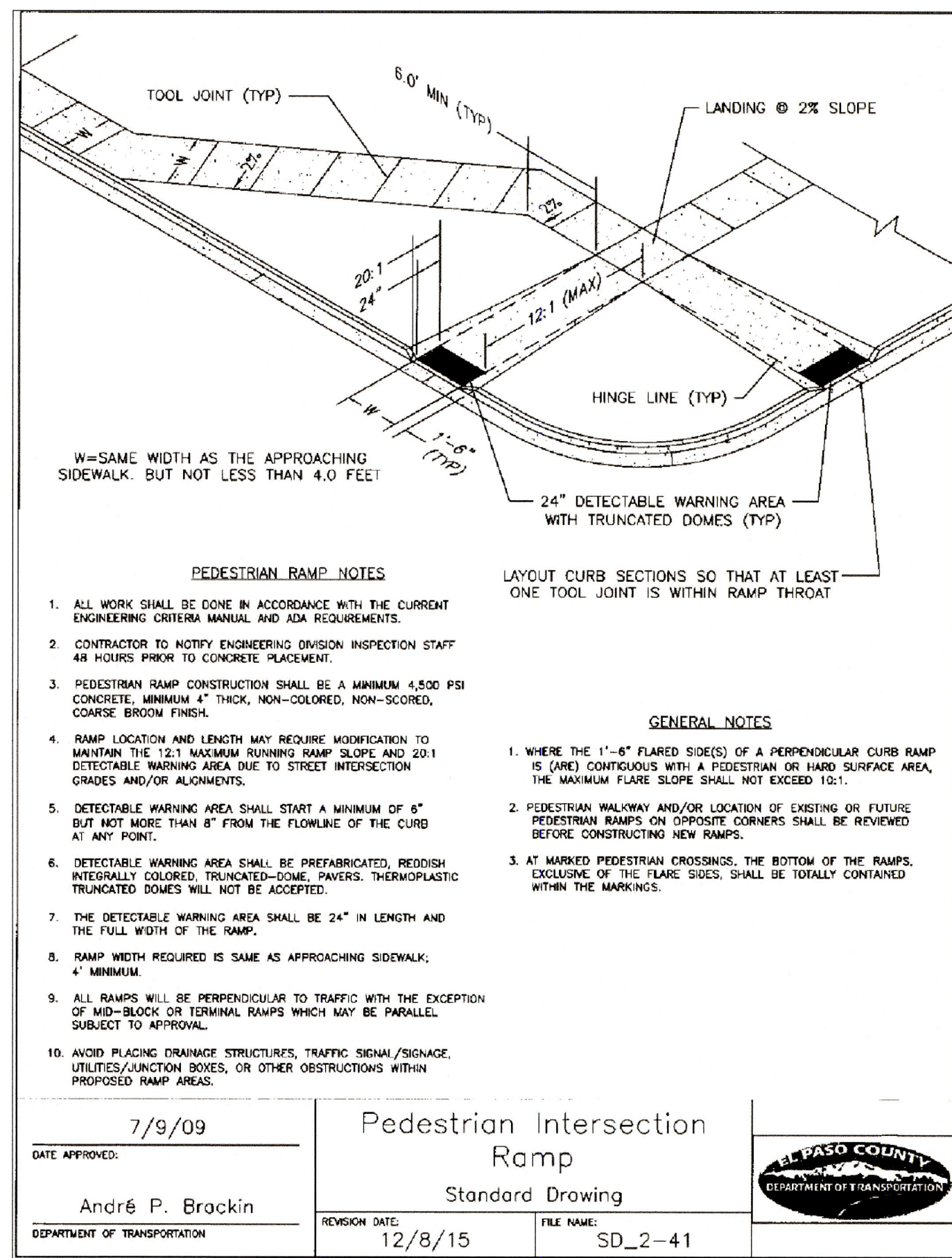


LINE	LENGTH	BEARING
L3	591.02	N25°20'00\"/>

LINE	LENGTH	RADIUS	DELTA								
C9	31.42	20.00	90°00'00\"/>								
C12	31.42	20.00	90°00'00\"/> <tr> <td>C13</td> <td>31.42</td> <td>20.00</td> <td>90°00'00\"/&gt;  <tr> <td>C14</td> <td>31.42</td> <td>20.00</td> <td>90°00'00\"/&gt;  </td></tr></td></tr>	C13	31.42	20.00	90°00'00\"/> <tr> <td>C14</td> <td>31.42</td> <td>20.00</td> <td>90°00'00\"/&gt;  </td></tr>	C14	31.42	20.00	90°00'00\"/>
C13	31.42	20.00	90°00'00\"/> <tr> <td>C14</td> <td>31.42</td> <td>20.00</td> <td>90°00'00\"/&gt;  </td></tr>	C14	31.42	20.00	90°00'00\"/>				
C14	31.42	20.00	90°00'00\"/>								



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 6" UNDERDRAIN TO BE INSTALLED ADJACENT TO SANITARY SEWER MAINS IF RECOMMENDED BY GEOTECHNICAL ENGINEER. IF NO UNDERDRAIN IS INSTALLED AND IS NEEDED IN THE FUTURE, DEVELOPER IS RESPONSIBLE FOR INSTALLATION OF UNDERDRAIN BEHIND CURB AND SIDEWALK.



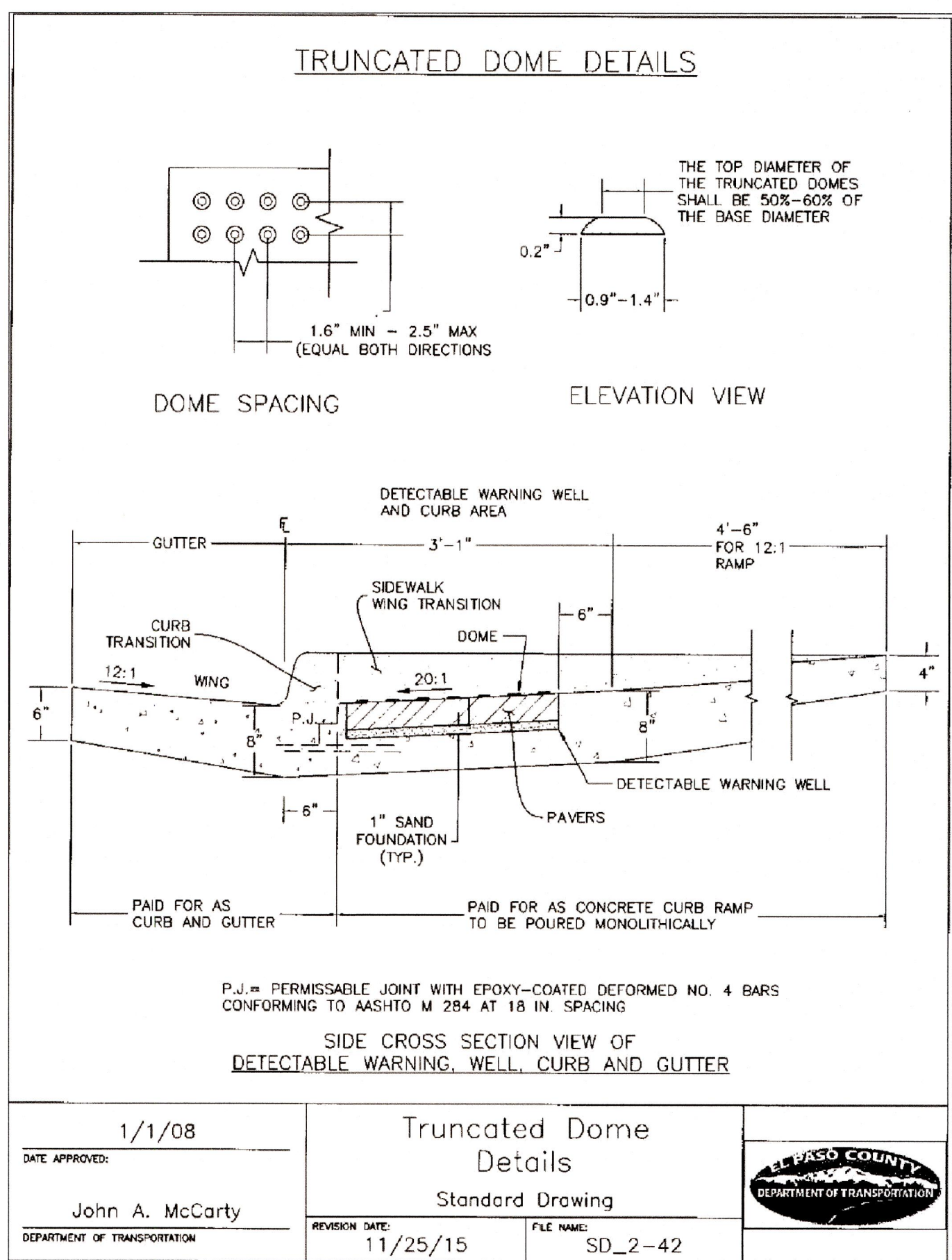
- PEDESTRIAN RAMP NOTES**
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT ENGINEERING CRITERIA MANUAL AND ADA REQUIREMENTS.
  - CONTRACTOR TO NOTIFY ENGINEERING DIVISION INSPECTION STAFF 48 HOURS PRIOR TO CONCRETE PLACEMENT.
  - PEDESTRIAN RAMP CONSTRUCTION SHALL BE A MINIMUM 4,500 PSI CONCRETE, MINIMUM 4" THICK, NON-COLORED, NON-SCORED, COARSE BROWN FINISH.
  - RAMP LOCATION AND LENGTH MAY REQUIRE MODIFICATION TO MAINTAIN THE 12:1 MAXIMUM RUNNING RAMP SLOPE AND 20:1 DETECTABLE WARNING AREA DUE TO STREET INTERSECTION GRADES AND/OR ALIGNMENTS.
  - DETECTABLE WARNING AREA SHALL START A MINIMUM OF 6" BUT NOT MORE THAN 8" FROM THE FLOWLINE OF THE CURB AT ANY POINT.
  - DETECTABLE WARNING AREA SHALL BE PREFABRICATED, REDDISH INTERNALLY COLORED, TRUNCATED-DOME, PAVERS, THERMOPLASTIC TRUNCATED DOMES WILL NOT BE ACCEPTED.
  - THE DETECTABLE WARNING AREA SHALL BE 24" IN LENGTH AND THE FULL WIDTH OF THE RAMP.
  - RAMP WIDTH REQUIRED IS SAME AS APPROACHING SIDEWALK; 4" MINIMUM.
  - ALL RAMP SHALL BE PERPENDICULAR TO TRAFFIC WITH THE EXCEPTION OF MID-BLOCK OR TERMINAL RAMP WHICH MAY BE PARALLEL. SUBJECT TO APPROVAL.
  - AVOID PLACING DRAINAGE STRUCTURES, TRAFFIC SIGNAL/SIGNAGE, UTILITIES/CONCRETE BOXES, OR OTHER OBSTRUCTIONS WITHIN PROPOSED RAMP AREA.
- GENERAL NOTES**
- WHERE THE 1'-6" FLARED SIDING OF A PERPENDICULAR CURB RAMP IS (ARE) CONTIGUOUS WITH A PEDESTRIAN OR HARD SURFACE AREA, THE MAXIMUM FLARE SLOPE SHALL NOT EXCEED 10:1.
  - PEDESTRIAN WALKWAY AND/OR LOCATION OF EXISTING OR FUTURE PEDESTRIAN RAMP ON OPPOSITE CORNERS SHALL BE REVIEWED BEFORE CONSTRUCTING NEW RAMP.
  - AT MARKED PEDESTRIAN CROSSINGS, THE BOTTOM OF THE RAMP, EXCLUSIVE OF THE FLARE SIDING, SHALL BE TOTALLY CONTAINED WITHIN THE MARKINGS.

7/9/09  
 DATE APPROVED: André P. Brackin  
 DEPARTMENT OF TRANSPORTATION

12/8/15  
 REVISION DATE: 12/8/15  
 DEPARTMENT OF TRANSPORTATION

FILE NAME: SD\_2-41

EL PASO COUNTY  
 DEPARTMENT OF TRANSPORTATION

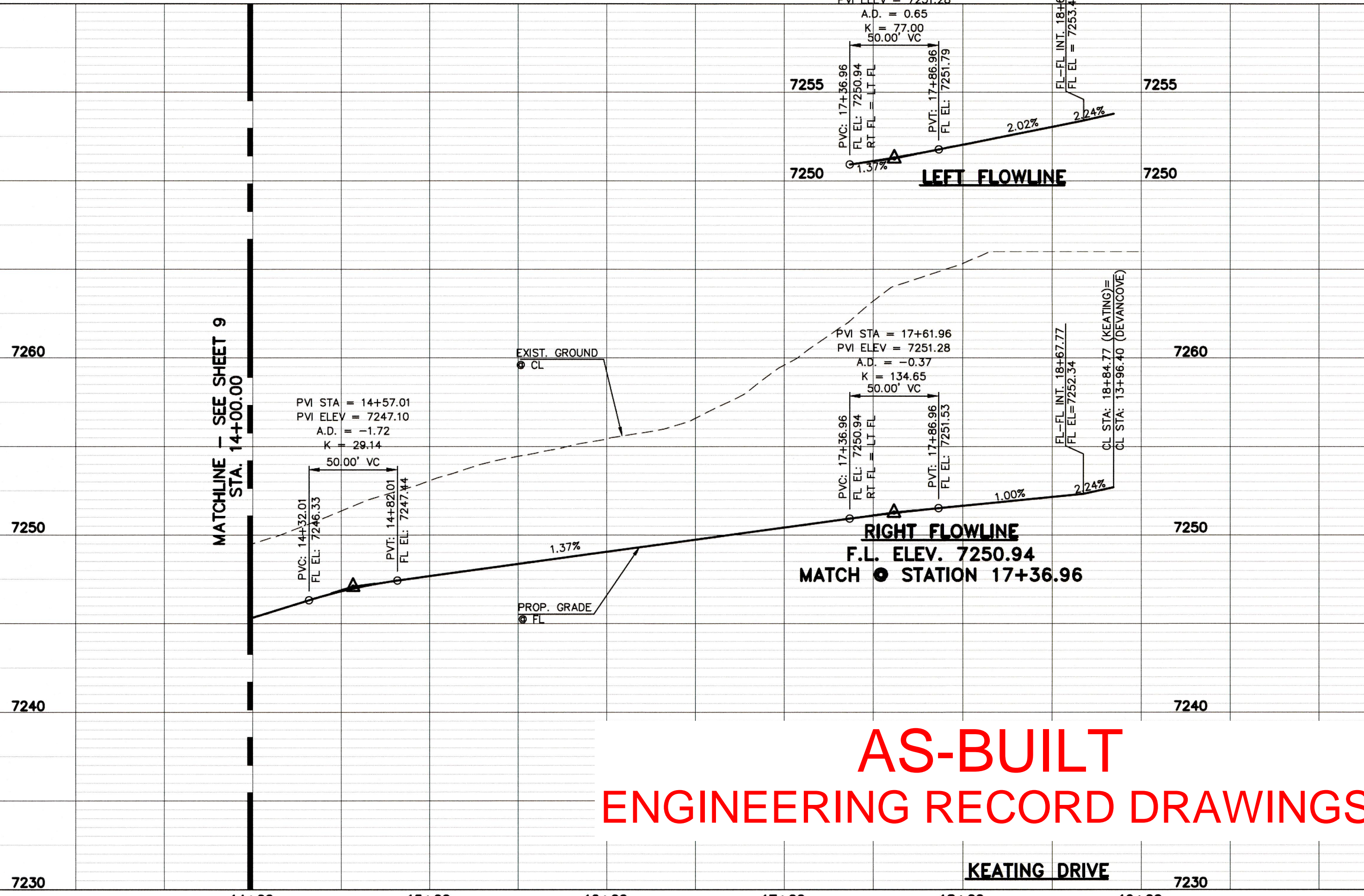


1/1/08  
 DATE APPROVED: John A. McCarty  
 DEPARTMENT OF TRANSPORTATION

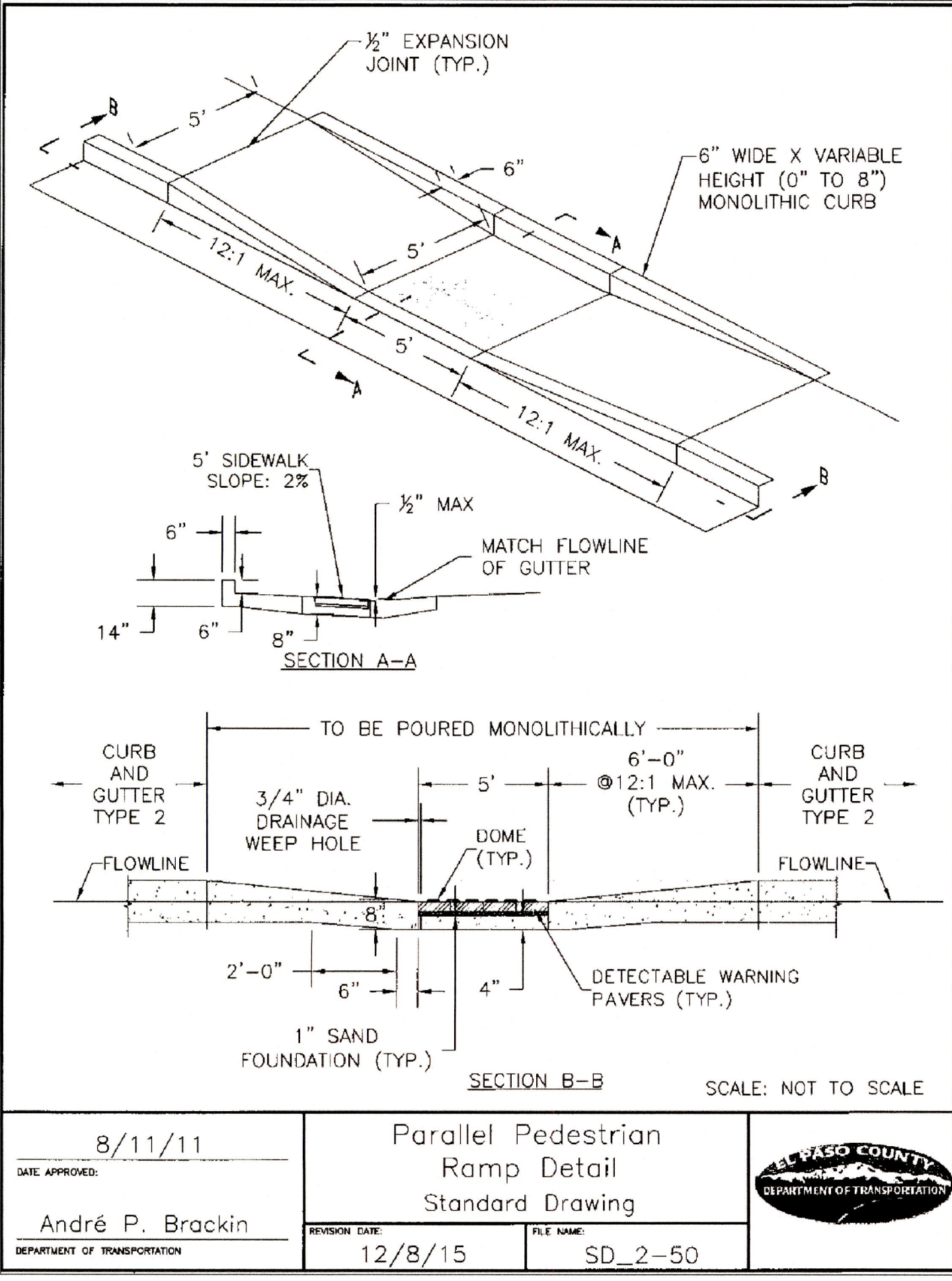
11/25/15  
 REVISION DATE: 11/25/15  
 DEPARTMENT OF TRANSPORTATION

FILE NAME: SD\_2-42

EL PASO COUNTY  
 DEPARTMENT OF TRANSPORTATION



**AS-BUILT ENGINEERING RECORD DRAWINGS**



8/11/11  
 DATE APPROVED: André P. Brackin  
 DEPARTMENT OF TRANSPORTATION

12/8/15  
 REVISION DATE: 12/8/15  
 DEPARTMENT OF TRANSPORTATION

FILE NAME: SD\_2-50

EL PASO COUNTY  
 DEPARTMENT OF TRANSPORTATION

DESIGN DATA: KEATING DRIVE	PAVEMENT: TYPE: HMA <input type="checkbox"/> PCC <input type="checkbox"/>	NO. REVISION	DATE
SIDEWALKS: WIDTH: 5'	THICKNESS: _____	1	9-20-18
LOCATION: <input checked="" type="checkbox"/> Attached <input type="checkbox"/> Detached	COMPOSITE SECTION: HMA _____		
CURB TYPE: <input type="checkbox"/> 1 <input type="checkbox"/> 5 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> A <input type="checkbox"/> C	BASE SUBGRADE STABILIZATION: _____		
R/W WIDTH: 60' MAT WIDTH: 30'	CHEMICAL: <input type="checkbox"/> MECH: <input type="checkbox"/>		
STREET TYPE: URBAN LOCAL HVEM _____	THICKNESS: _____		

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS	REVIEW:
<b>811</b>	PREPARED UNDER INDIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC
UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW	MARC A. WHORTON, COLORADO P.E. #37155
THE LOCATIONS OF EXISTING 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 UNDERGROUND UTILITIES.	DATE: 10/19/18

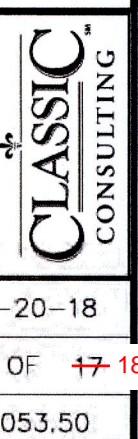
10/19/18  
 DATE

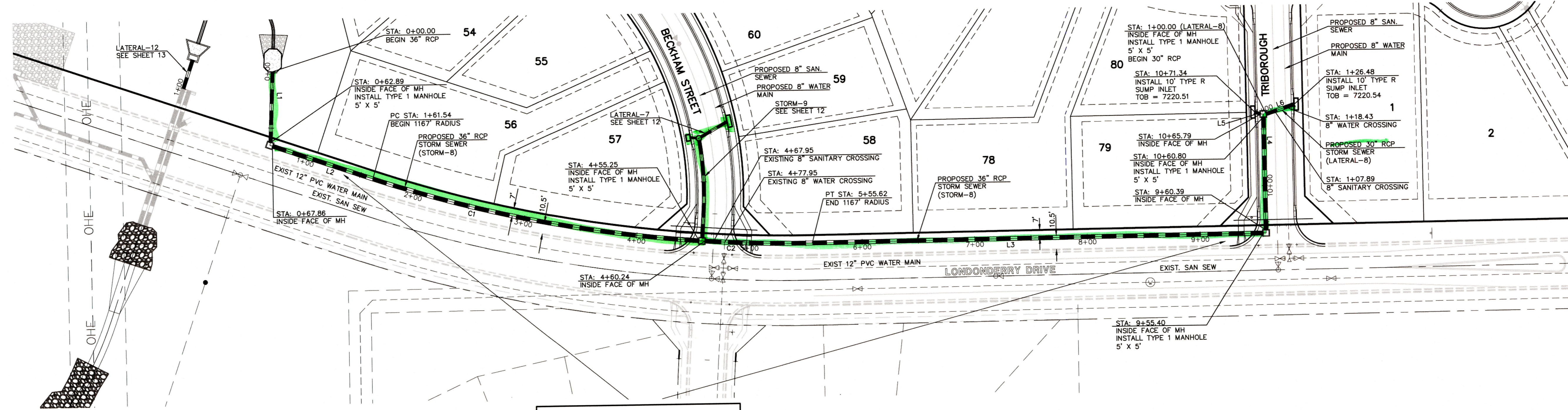
CLASSIC CONSULTING

CLASSIC CONSULTING

619 N. Cascade Avenue, Suite 200  
 Colorado Springs, Colorado 80903  
 (719)785-0790  
 (719)785-0799(Fax)

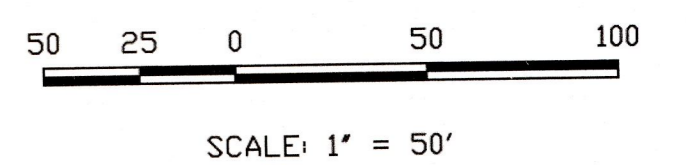
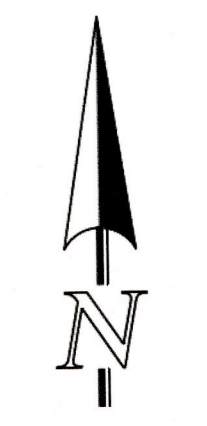
DESIGNED BY	MAW	SCALE	DATE	7-20-18
DRAWN BY	MAW	(H) 1" = 50'	SHEET	10 OF 47-18
CHECKED BY	(V) 1" = 5'	JOB NO.	2053.50	





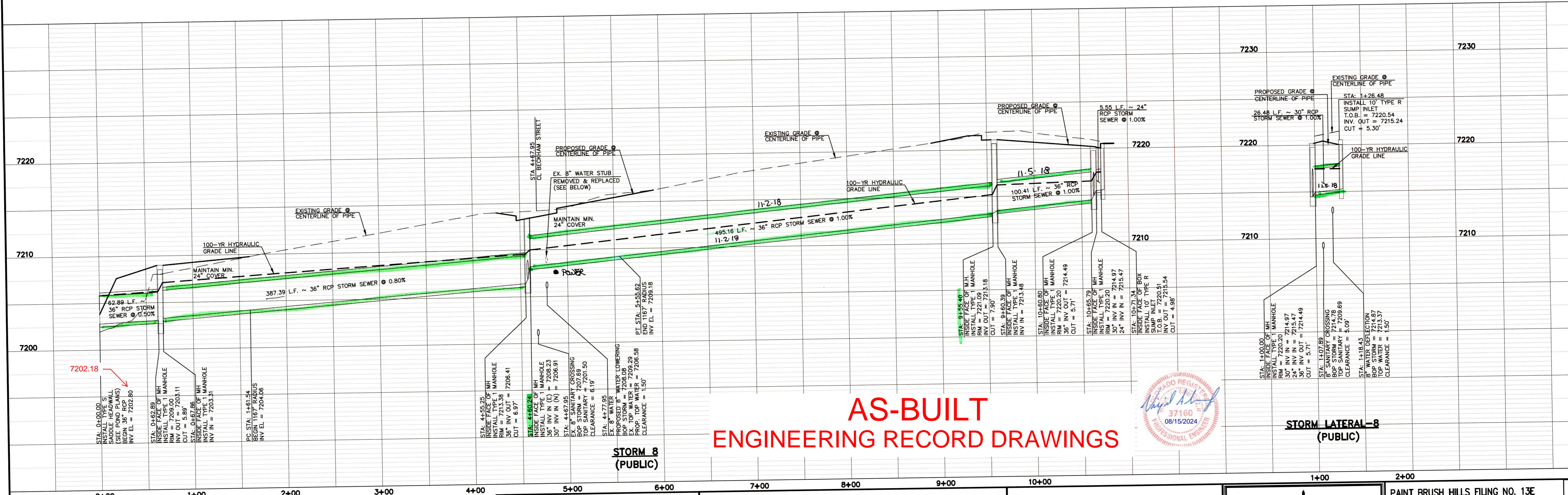
STORM LINE TABLE		
LINE	LENGTH	BEARING
L1	62.89'	S02°22'24"W
L2	93.69'	S71°07'24"E
L3	399.78'	N89°31'44"E
L4	100.41'	N00°30'00"W
L5	5.55'	N69°22'41"W
L6	26.48'	N71°27'12"E

STORM CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	293.71'	1167.00'	14°25'12"
C2	95.38'	1167.00'	4°40'59"

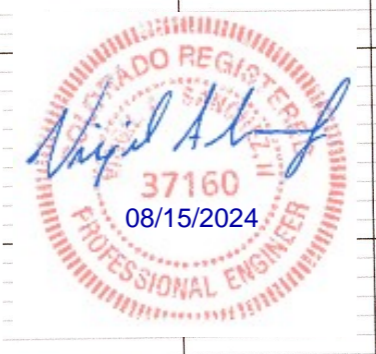


**UTILITY NOTE:**  
 BASED ON RECENT UTILITY LOCATES ALONG NORTH SIDE OF STREET, CONTRACTOR TO CONFIRM EXACT LOCATIONS OF ANY EXISTING UTILITIES PRIOR TO EXCAVATION FOR STORM SEWER WITHIN THE RIGHT-OF-WAY OF LONDONDERRY DR.

**STORM-8 & LATERAL-8 (PUBLIC)**



**AS-BUILT ENGINEERING RECORD DRAWINGS**



**STORM LATERAL-8 (PUBLIC)**

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

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NO.	REVISION	DATE
1	REVISED PER COUNTY COMMENTS	8-30-18

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

MARC A. WHORSTON, COLORADO P.E. #37155  
 DATE: 10/19/18

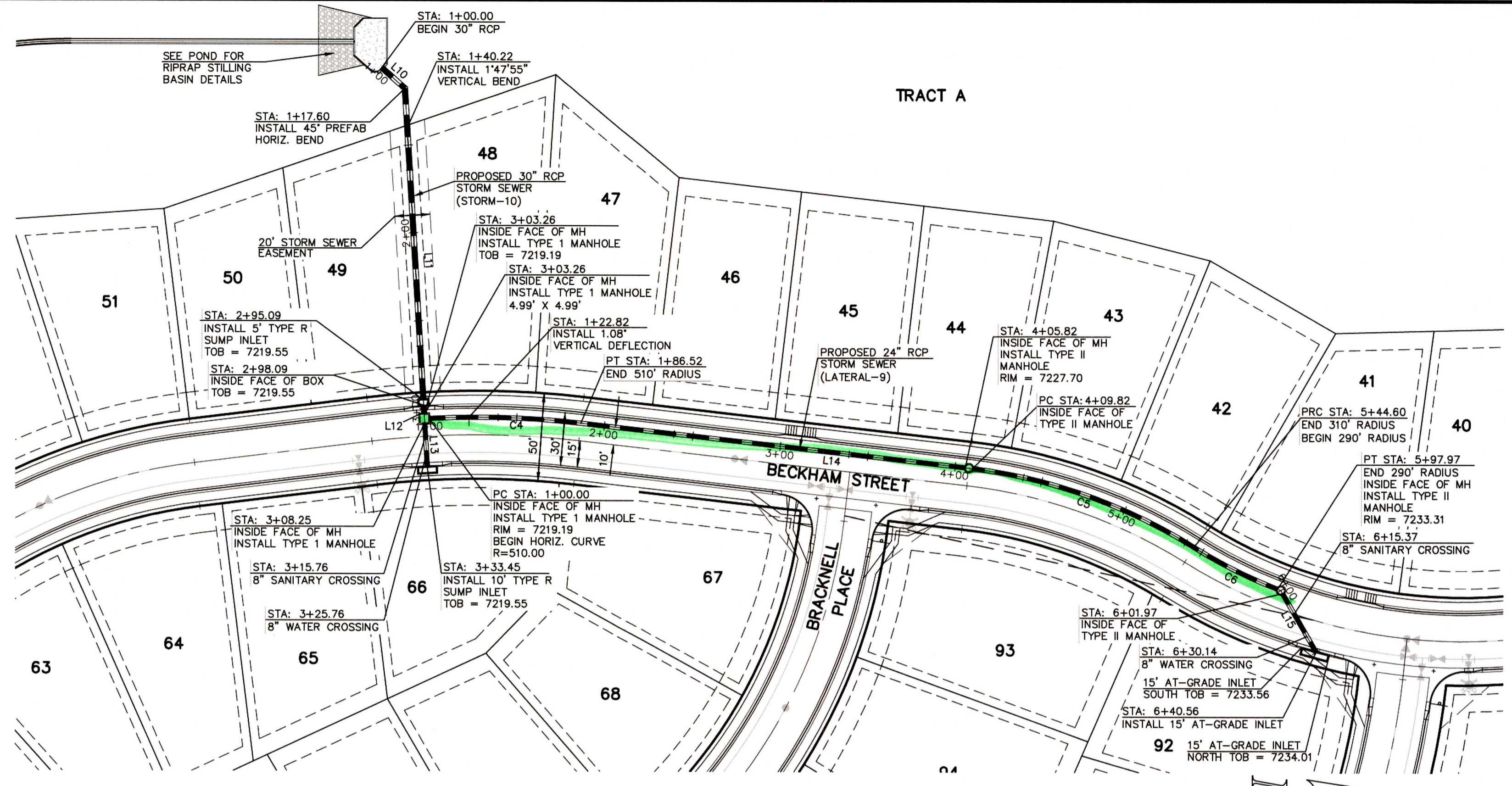
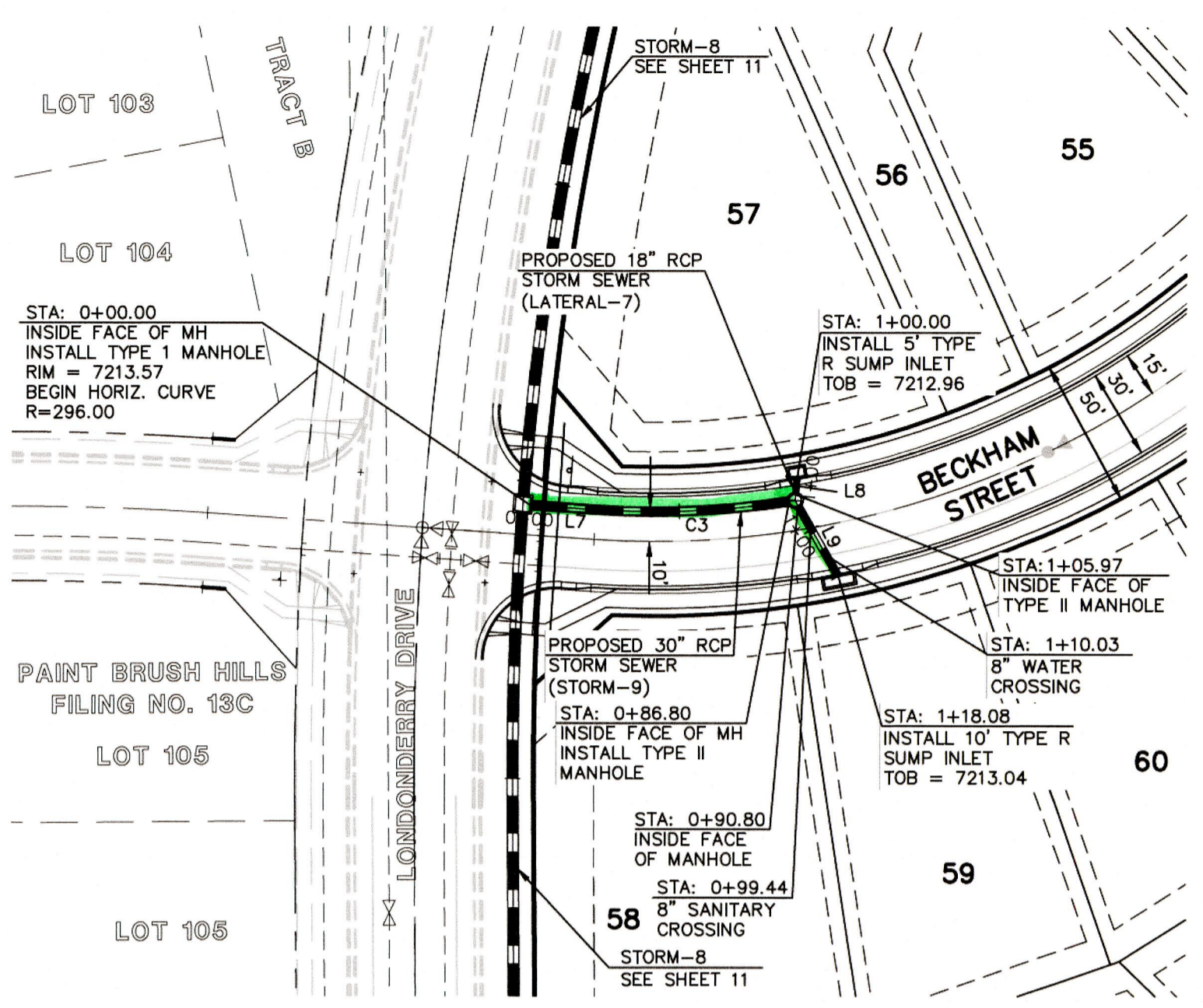
**CLASSIC CONSULTING**

619 N. Cascade Avenue, Suite 200  
 Colorado Springs, Colorado 80903  
 (719) 785-0780  
 (719) 785-0799 (fax)

PAINT BRUSH HILLS FILING NO. 13E  
 CONSTRUCTION PLANS  
 STORM SEWER PLAN

DESIGNED BY	ESO	SCALE	DATE
DRAWN BY	ESO	(H) 1" = 50'	7-20-18
CHECKED BY	(V) 1" = 5'	SHEET	11 OF 47-18
		JOB NO.	2053.50

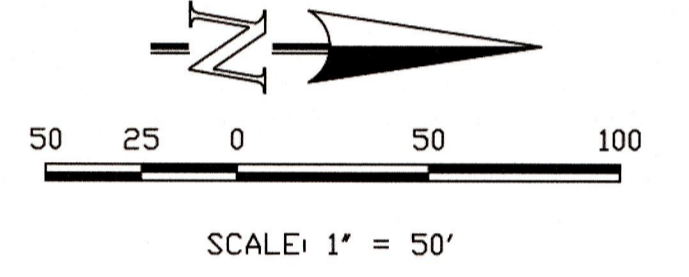
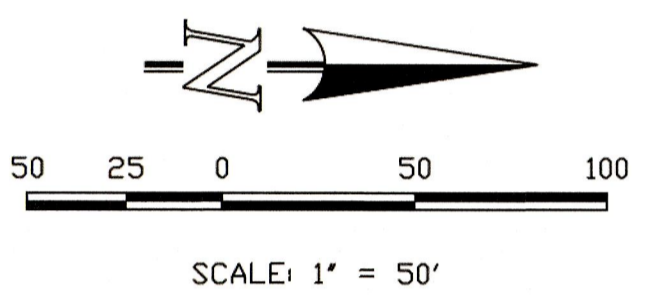
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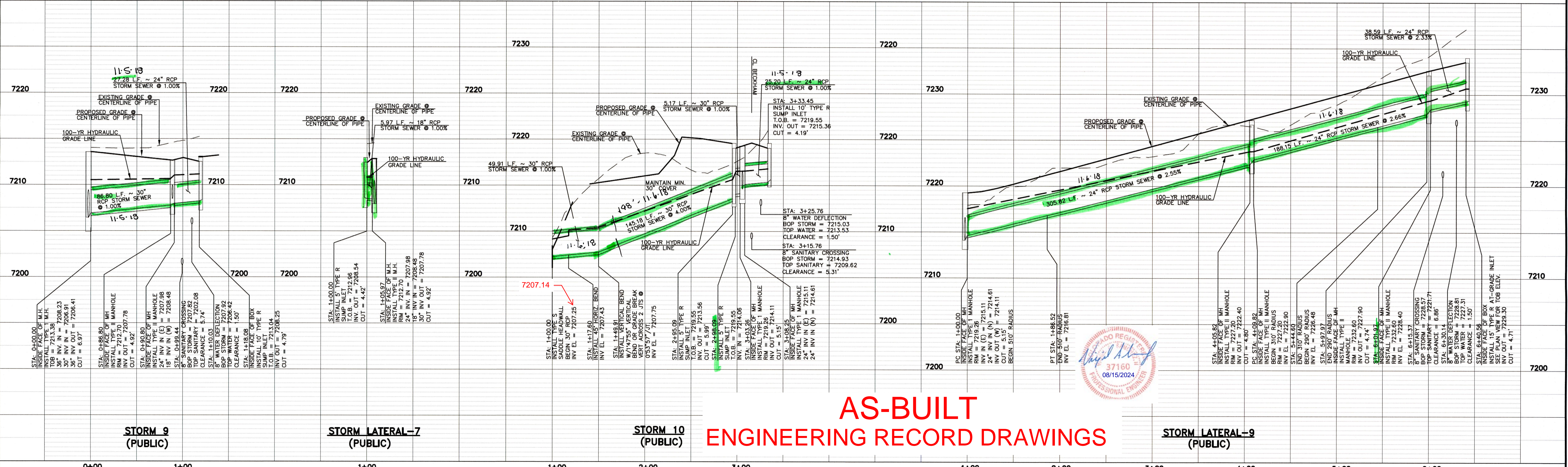
LINE	LENGTH	BEARING
L7	22.07'	N03°30'00"E
L8	5.97'	N84°03'30"W
L9	27.28'	N60°19'23"E
L10	17.60'	N41°30'00"E
L11	173.16'	N86°30'00"E
L12	5.17'	N86°30'00"E
L13	25.20'	N86°30'00"E
L14	219.30'	N06°30'00"E
L15	38.59'	N60°10'23"E

CURVE	LENGTH	RADIUS	DELTA
C3	64.73'	290.00'	12°47'18"
C4	86.52'	510.00'	09°43'11"
C5	134.79'	310.00'	24°57'42"
C6	53.36'	290.00'	10°32'37"

**STORM-9 & STORM LATERAL-7 (PUBLIC)**



**STORM-10 & STORM LATERAL-9 (PUBLIC)**



**AS-BUILT ENGINEERING RECORD DRAWINGS**

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

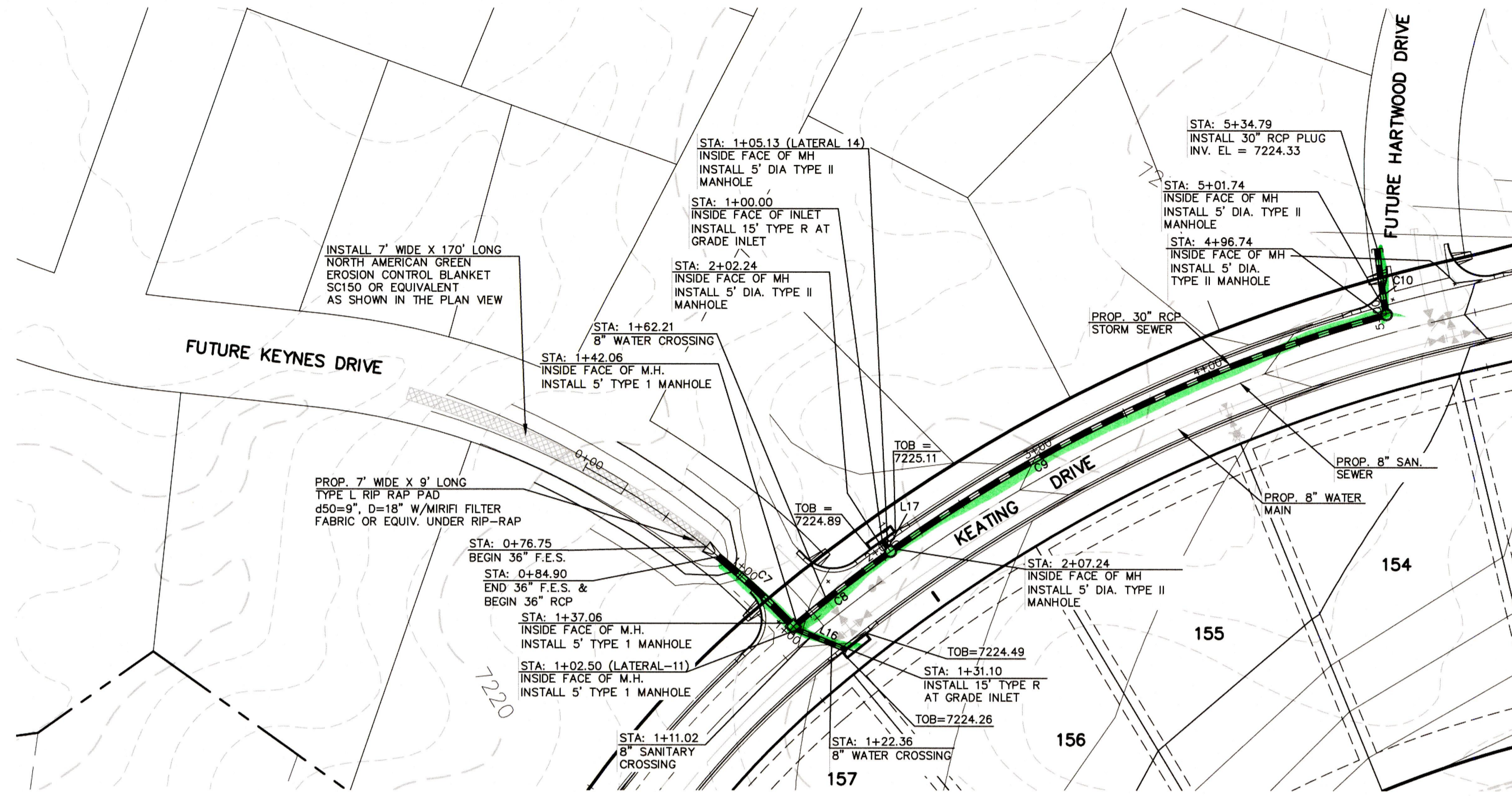
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE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

NO. REVISION	DATE
1 REVISED PER COUNTY COMMENTS	8-30-18
2 REVISED PER COUNTY COMMENTS	10-18-18

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

MARC A. WORTON, COLORADO P.E. #37155  
 DATE: 10/19/18

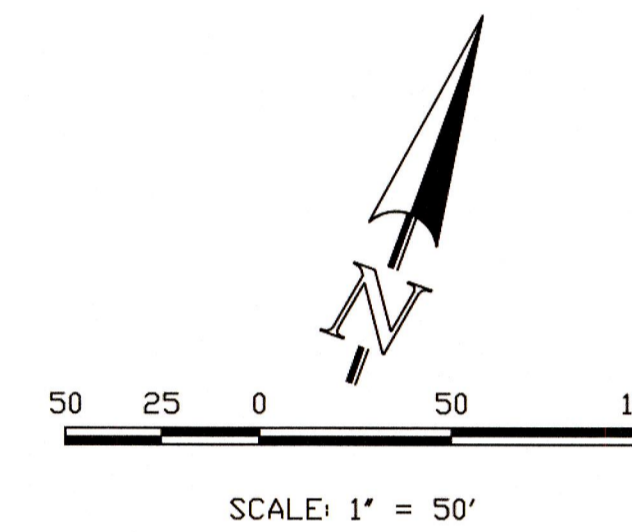
DESIGNED BY	SCALE	DATE
ESO	(H) 1" = 50'	7-20-18
DRAWN BY	SHEET	OF
ESO	12	17
CHECKED BY	JOB NO.	
(V) 1" = N/A	2053.50	



STORM LINE TABLE		
LINE	LENGTH	BEARING
L16	28.60'	S87°41'10\"/>

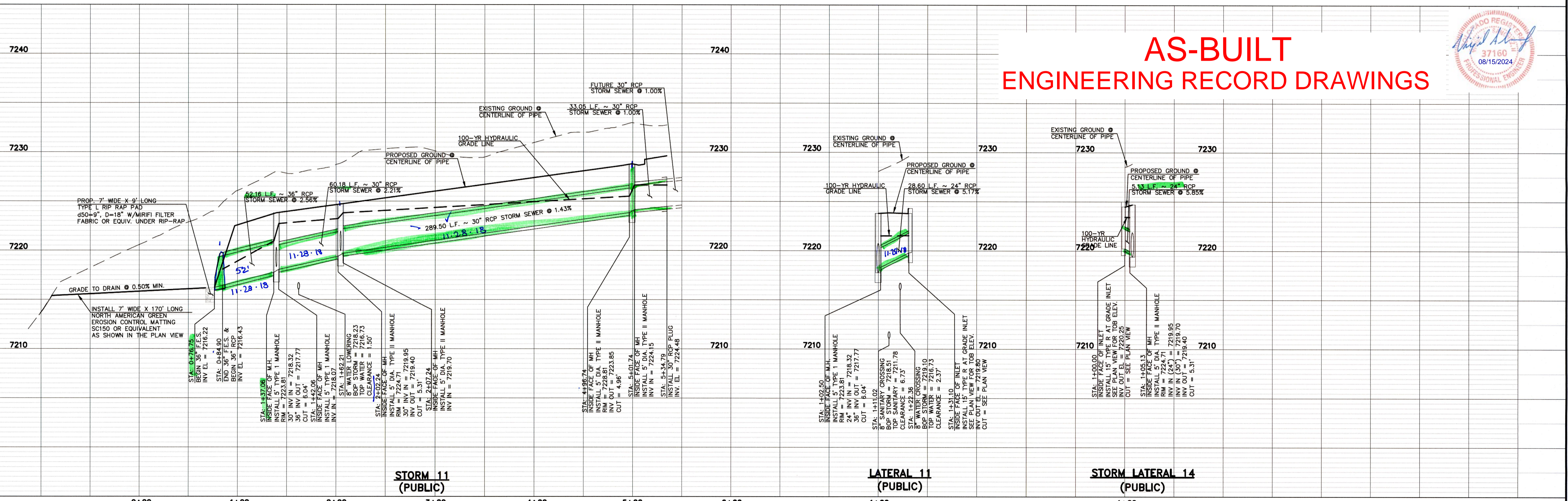
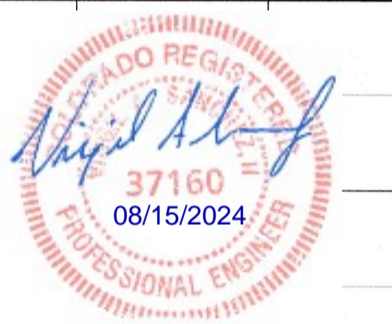
STORM CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C7	52.16'	452.00'	06°36'44\"/>

30" 52.16 + 290 +  
24" 27 + 5 +



**STORM-11 & STORM LATERAL 11 & LATERAL 14 (PUBLIC)**

# AS-BUILT ENGINEERING RECORD DRAWINGS



**STORM 11 (PUBLIC)**

**LATERAL 11 (PUBLIC)**

**STORM LATERAL 14 (PUBLIC)**

48 HOURS BEFORE YOU DIG,  
CALL UTILITY LOCATORS  
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UTILITY NOTIFICATION CENTER OF COLORADO  
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NO.	REVISION	DATE
1	REVISED PER COUNTY COMMENTS	9-20-18

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

MARC A. WHORTON, COLORADO P.E. #37155

DATE: 10/19/18



PAINT BRUSH HILLS FILING NO. 13E  
CONSTRUCTION PLANS  
STORM SEWER PLAN

DESIGNED BY	SCALE	DATE
ESO	(H) 1" = 50'	8-10-12

DRAWN BY	SCALE	SHEET	OF
ESO	(V) 1" = 5'	13	13

CHECKED BY	SCALE	JOB NO.
(V) 1" = 5'		2053.50

N:\205350\DRAWINGS\CONSTRUCTION\Construction Plans\STREET AND STORM\_CDS\205350-STMG-SHEET 13.dwg, 10/19/2018 11:32:26 AM, 1:1

LINE	LENGTH	BEARING
L19	35.61'	N82°36'44"E
L20	162.27'	N89°37'00"E
L21	64.00'	S62°10'18"E
L22	26.67'	N18°52'36"E

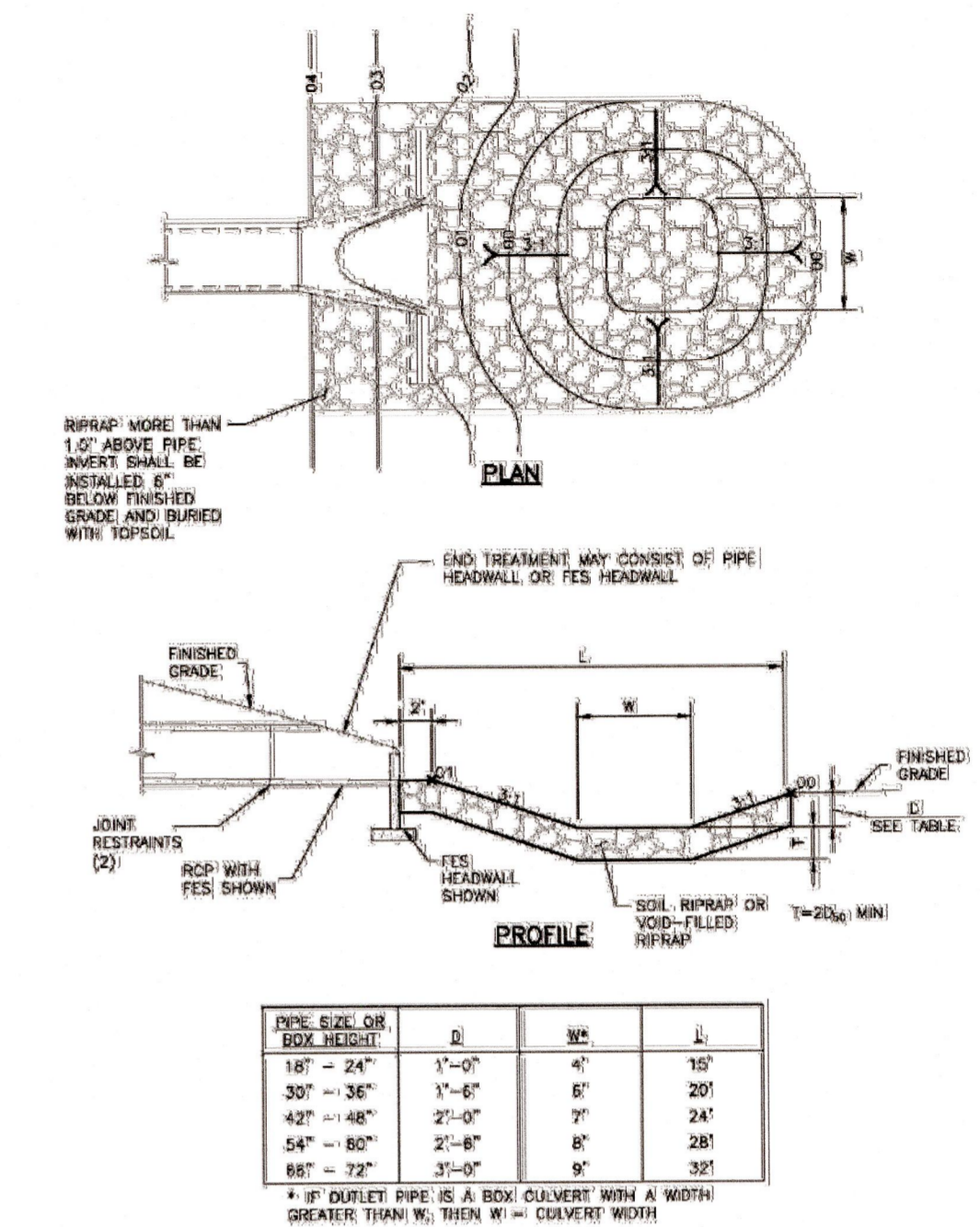
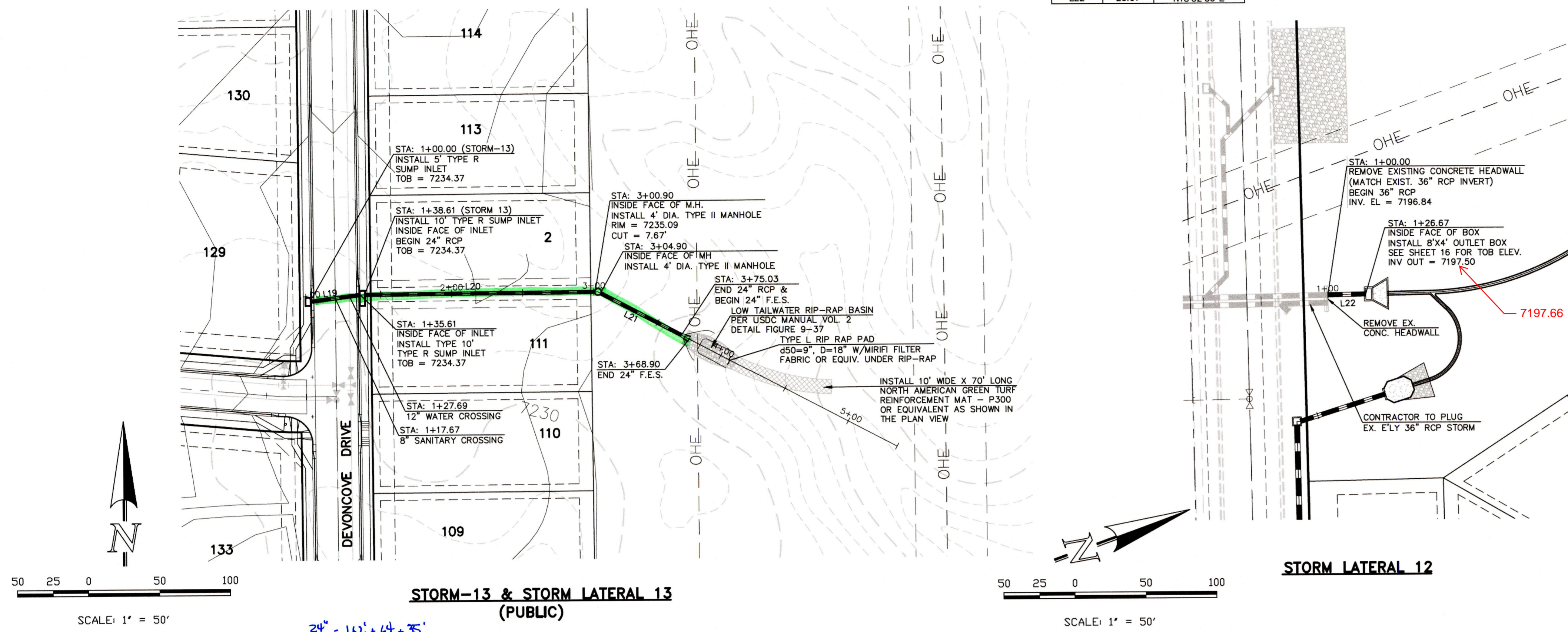
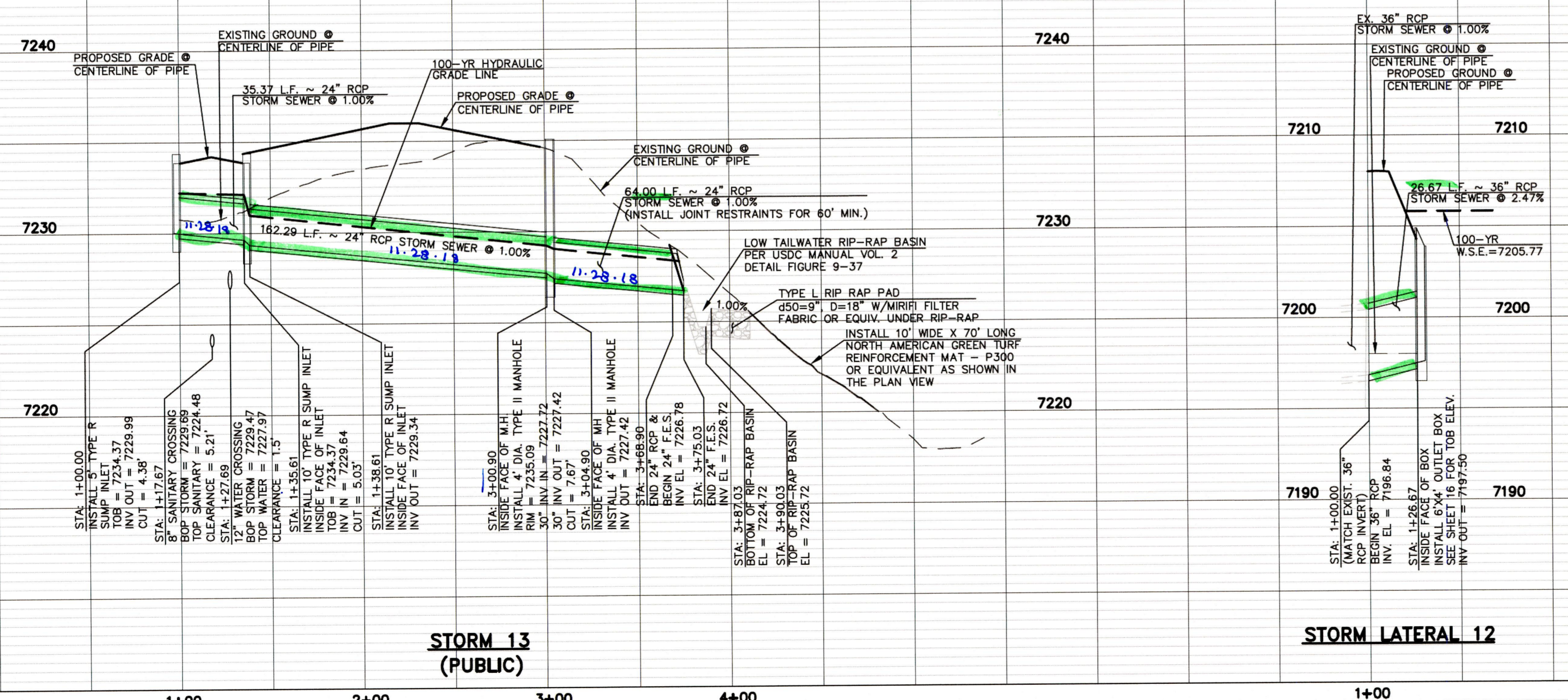


Figure 9-37. Low tailwater riprap basin

# AS-BUILT ENGINEERING RECORD DRAWINGS



<p>48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS</p> <p><b>811</b> UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW</p> <p>THE LOCATIONS OF EXISTING 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 UNDERGROUND UTILITIES.</p>		<table border="1"> <thead> <tr> <th>NO.</th> <th>REVISION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>REVISED PER COUNTY COMMENTS</td> <td>9-26-18</td> </tr> <tr> <td>2</td> <td>REVISED PER COUNTY COMMENTS</td> <td>10-18-18</td> </tr> </tbody> </table>	NO.	REVISION	DATE	1	REVISED PER COUNTY COMMENTS	9-26-18	2	REVISED PER COUNTY COMMENTS	10-18-18
NO.	REVISION	DATE									
1	REVISED PER COUNTY COMMENTS	9-26-18									
2	REVISED PER COUNTY COMMENTS	10-18-18									

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

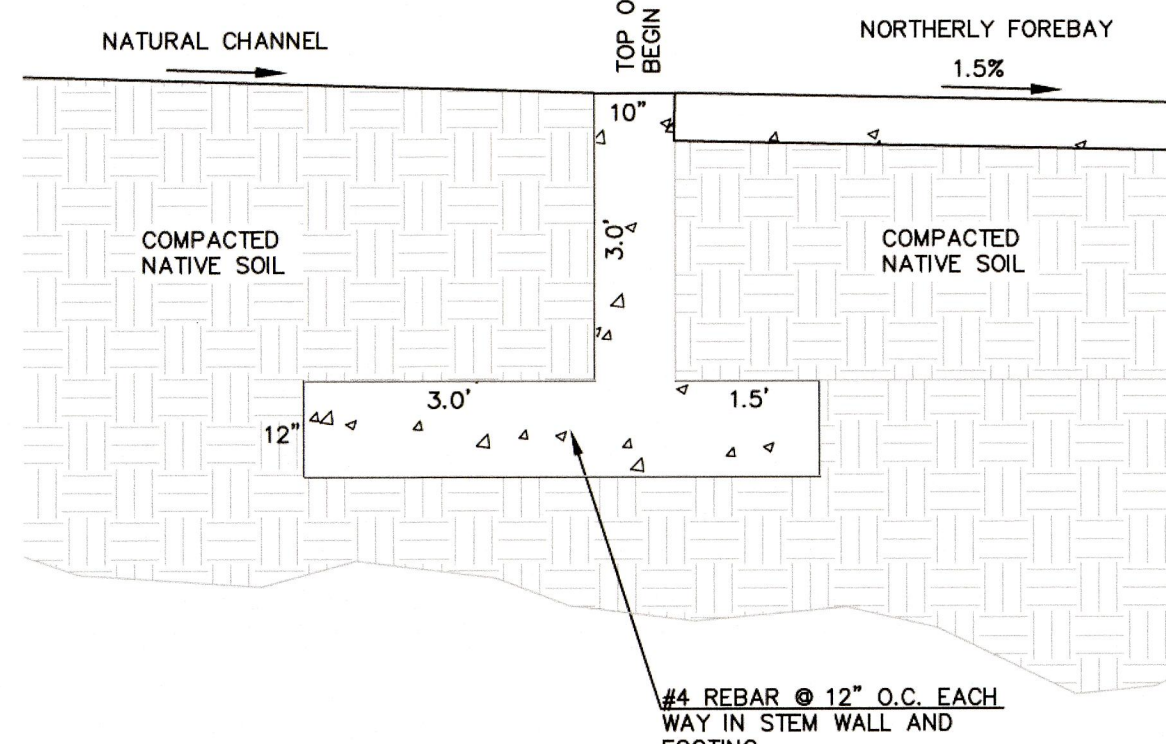
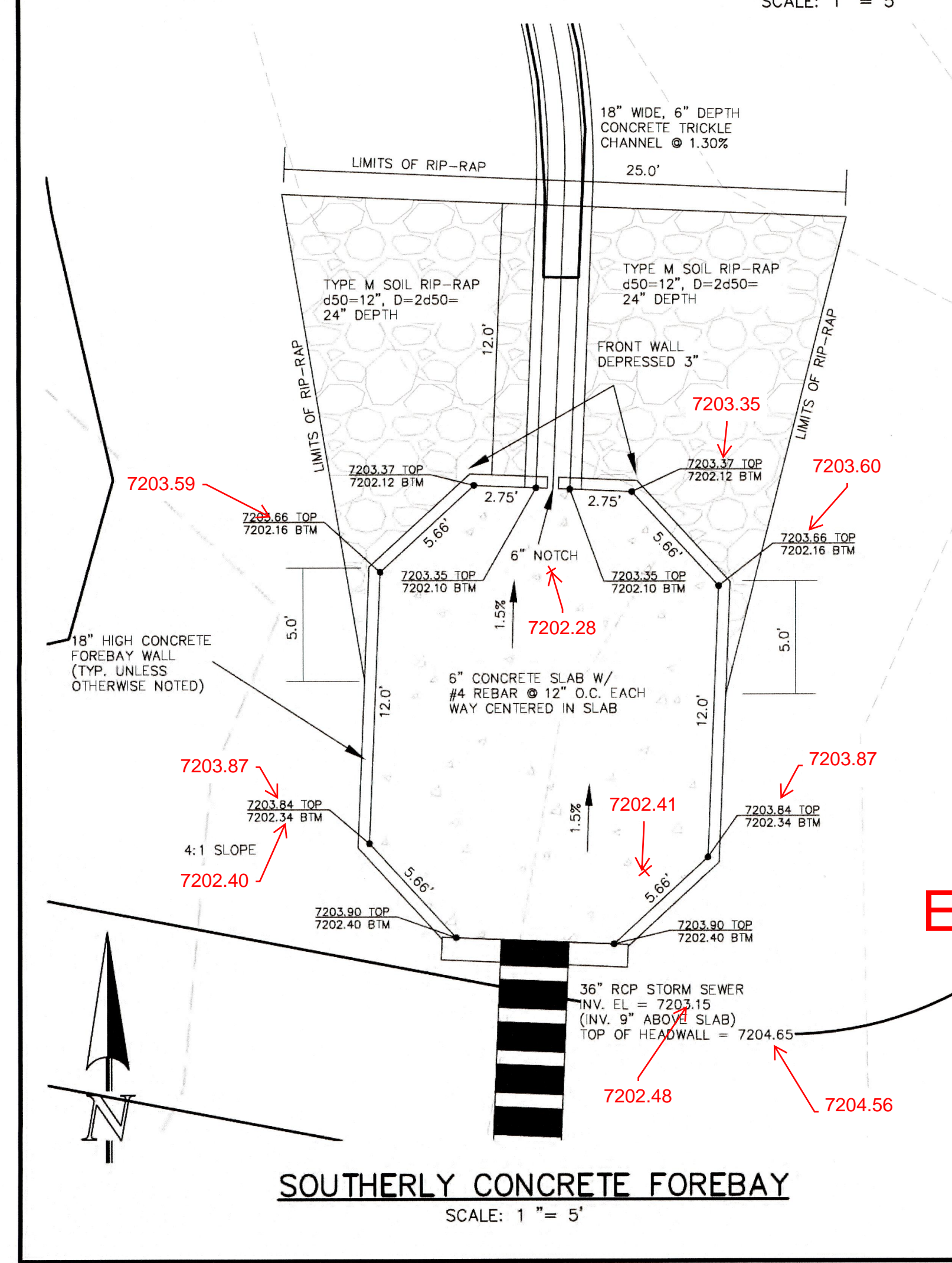
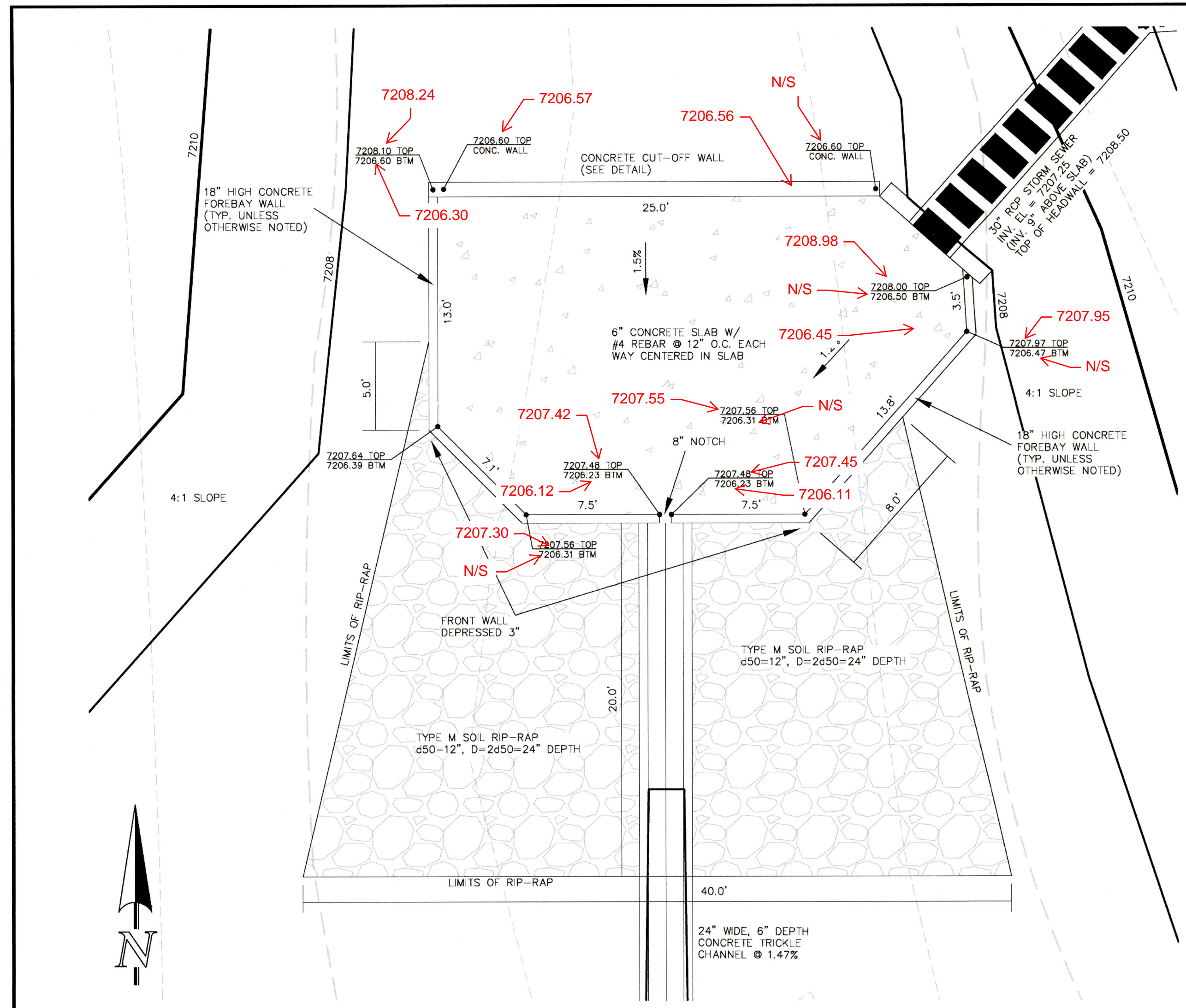
MARC A. WHORTON, COLORADO P.E. #37155

10/19/18

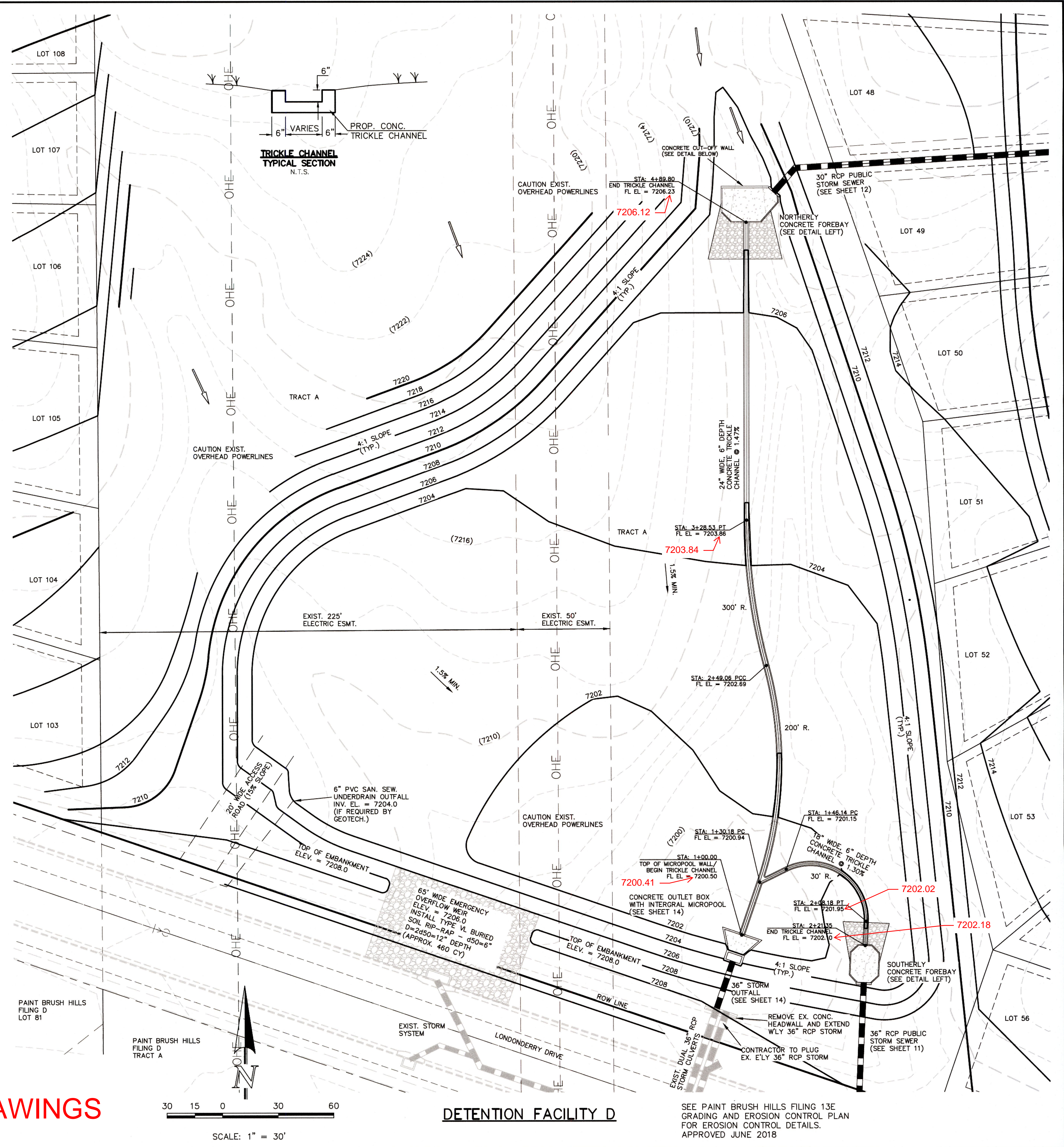


<p>PAINT BRUSH HILLS FILING NO. 13E CONSTRUCTION PLANS STORM SEWER PLAN</p>				
DESIGNED BY	ESO	SCALE	DATE	8-10-12
DRAWN BY	ESO	(H) 1" = 50'	SHEET 14 OF 47-18	
CHECKED BY	(V) 1" = 5'	JOB NO.	2053.50	

N:\205350\DRAWINGS\CONSTRUCTION\Construction Plans\STREET AND STORM\_CDS\205350-STMA-SHEET 14.dwg, 10/19/2018 11:34:45 AM, 1:1



**AS-BUILT ENGINEERING RECORD DRAWINGS**



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

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

NO.	REVISION	DATE
1	REVISED PER COUNTY COMMENTS	9-20-18

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

MARC A. WHORTON, COLORADO P.E. #37155  
 DATE: 10/19/18

**CLASSIC CONSULTING**

819 N. Cascade Avenue, Suite 200  
 Colorado Springs, Colorado 80903  
 (719)785-0790  
 (719)785-0799(Fax)

**PAINT BRUSH HILLS FILING 13A CONSTRUCTION PLANS**

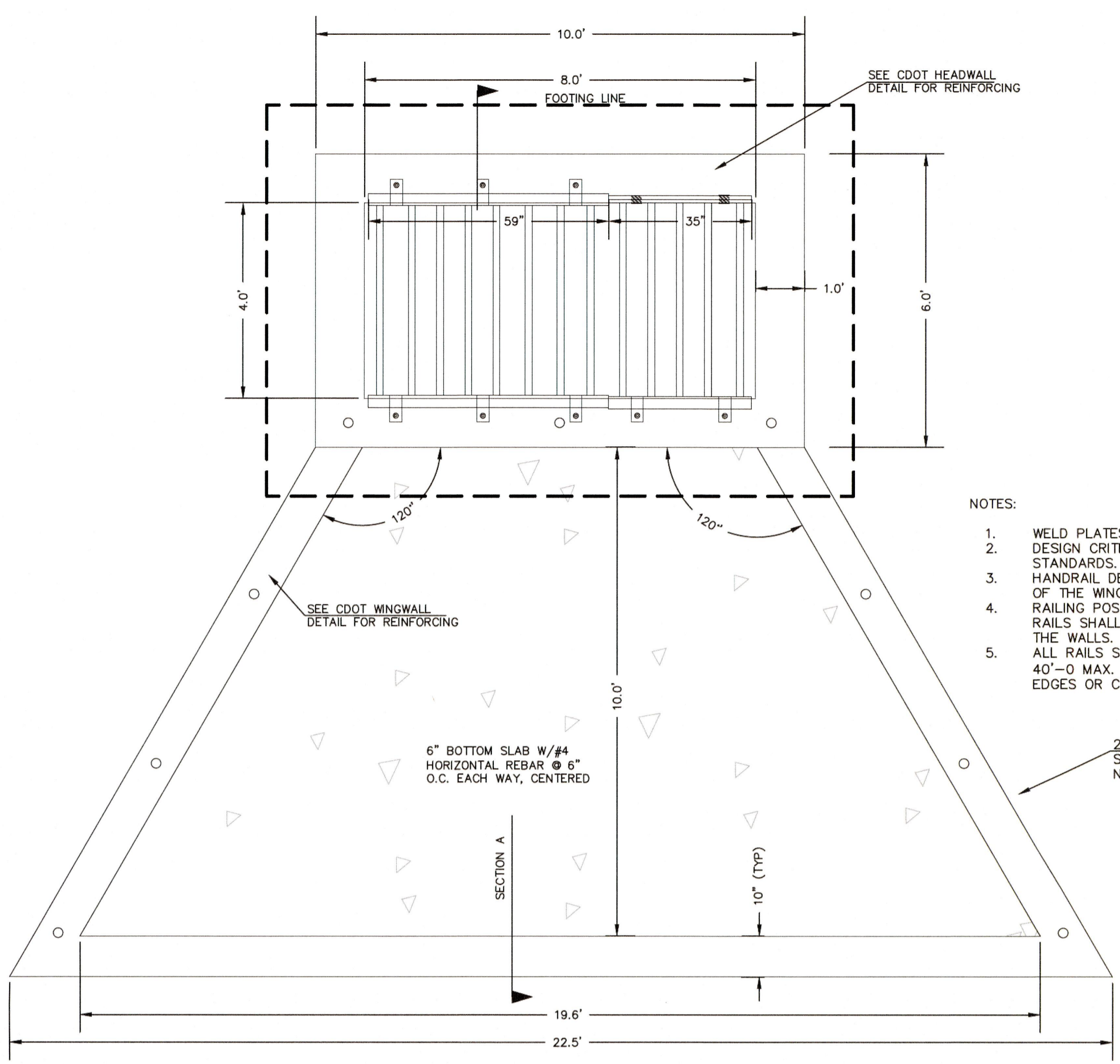
DETENTION FACILITY D  
 POND PLAN

DESIGNED BY	MAW	SCALE	DATE
7-12-18			

DRAWN BY	MAW	(H) 1" = 30'	SHEET 15 OF 18

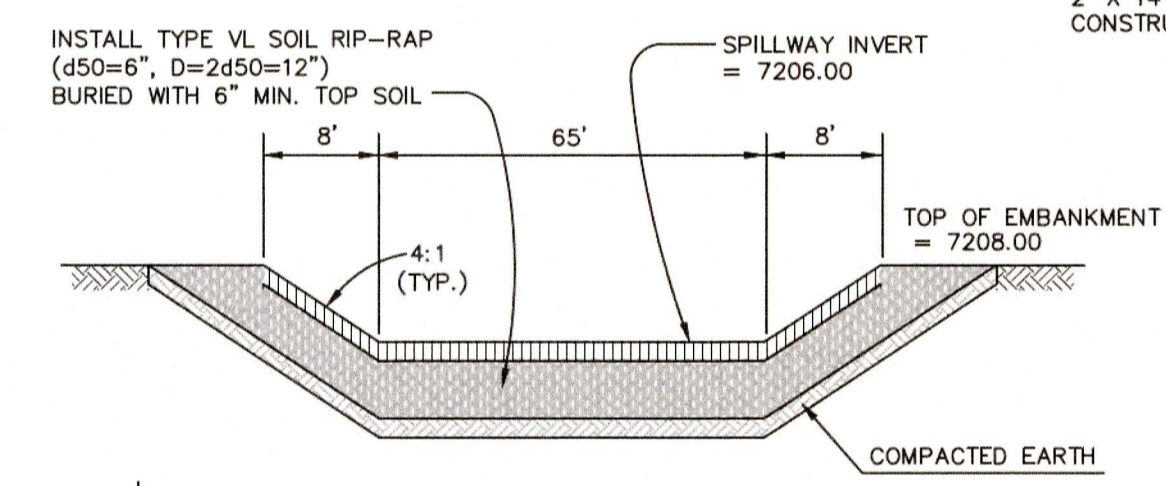
CHECKED BY	(V) 1" = N/A	JOB NO.	2053.50

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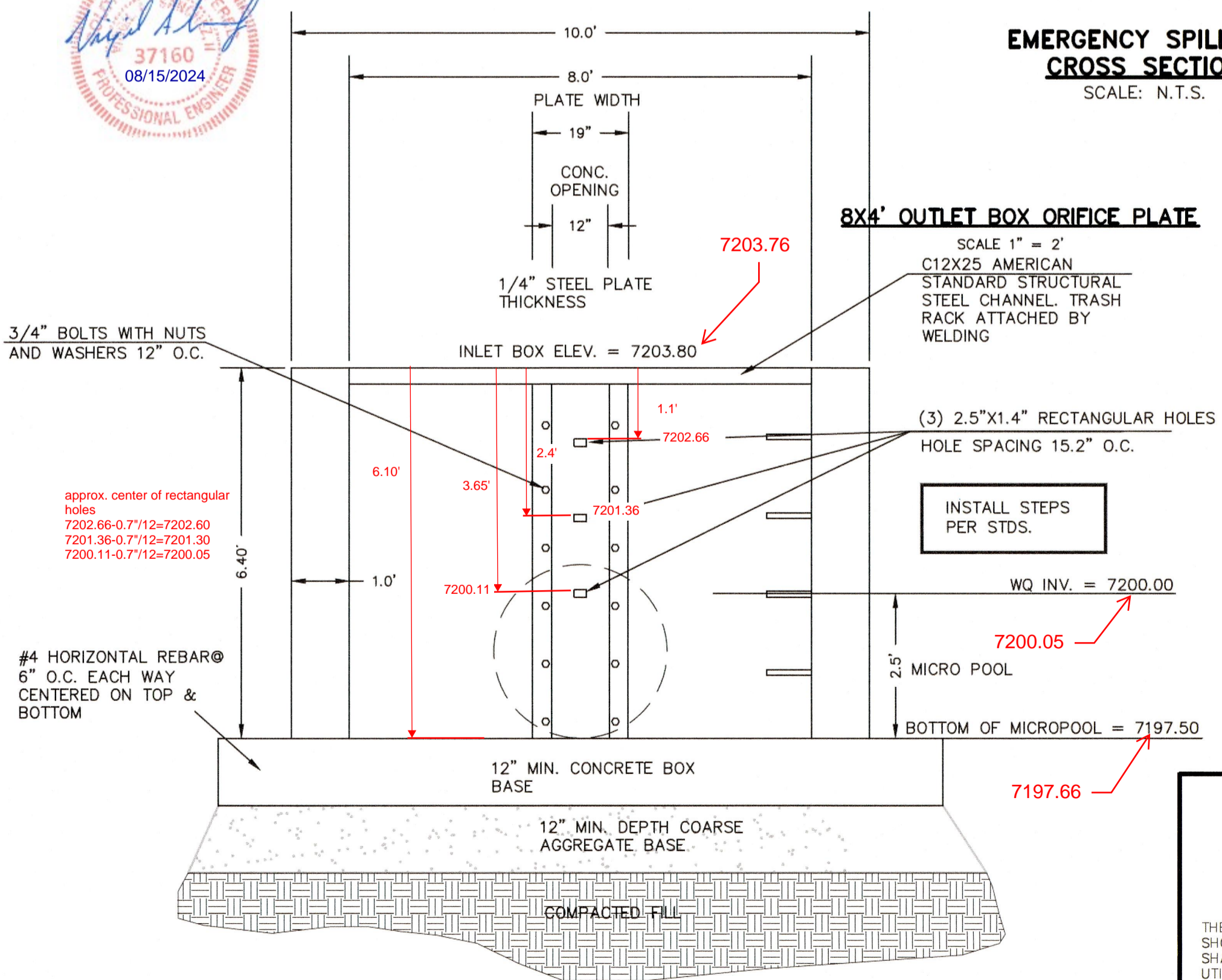


**CONCRETE MICROPOOL**  
SCALE 1" = 2'

**AS-BUILT  
ENGINEERING RECORD  
DRAWINGS**



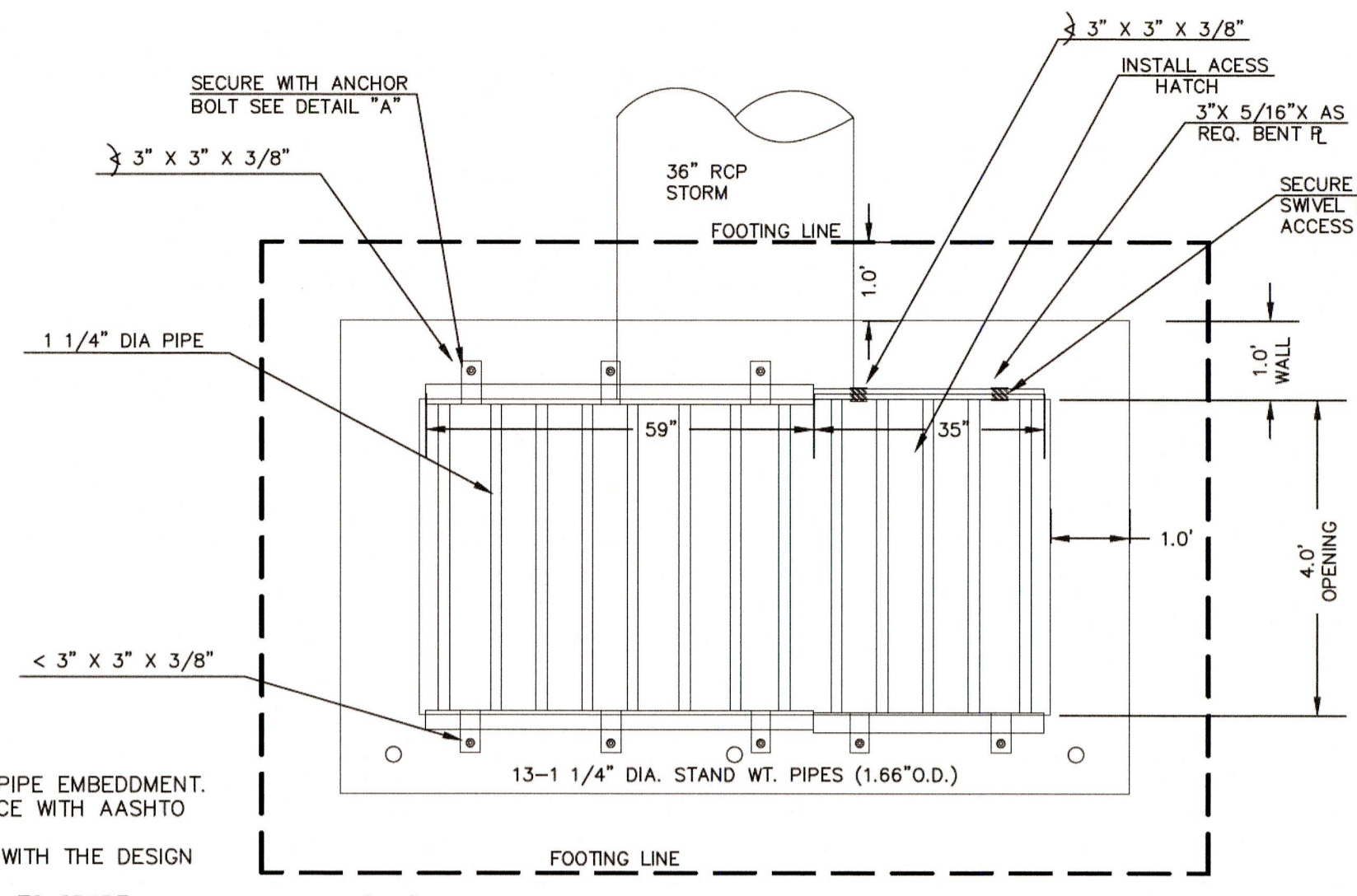
**EMERGENCY SPILLWAY CROSS SECTION**  
SCALE: N.T.S.



**8'x4' OUTLET BOX ORIFICE PLATE**  
SCALE 1" = 2'

(ALL MATERIALS PER EL PASO COUNTY SPECIFICATIONS)

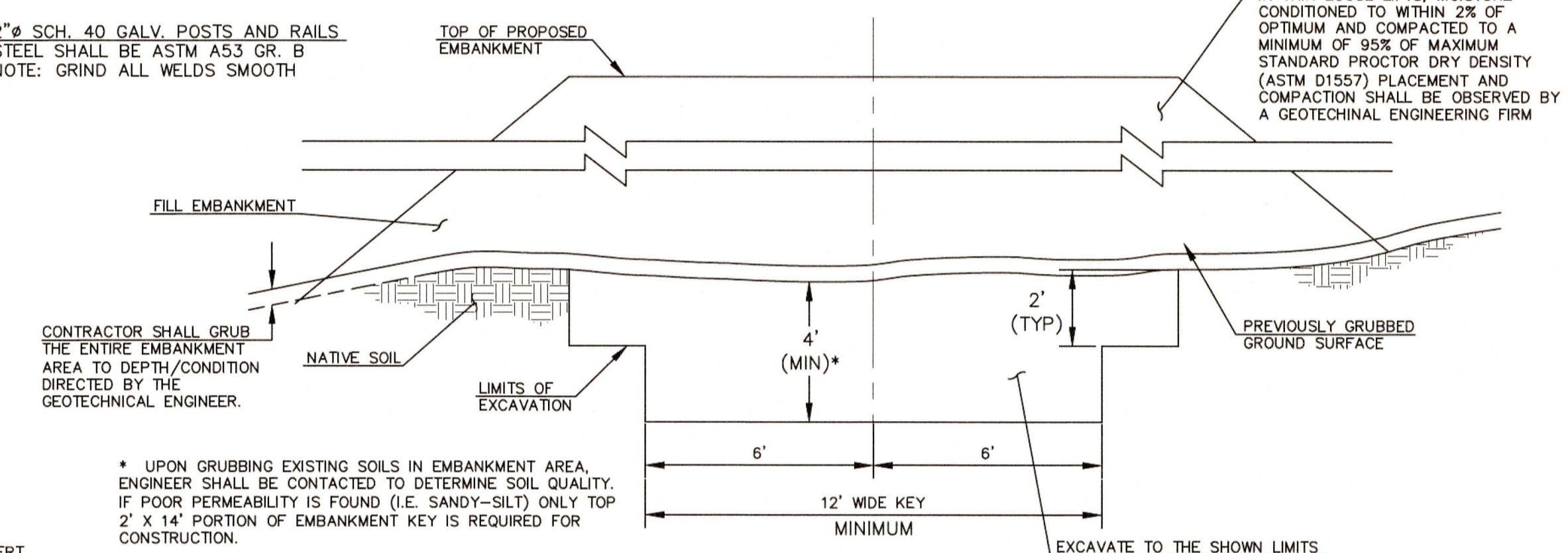
- ORIFICE PLATE NOTES:**
- INSTALL HOLES AS SHOWN ON DETAIL TO RIGHT.
  - PROVIDE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE
- EURV AND WQCV TRASH RACKS:**
- WELL-SCREEN TRASH RACKS SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE EDGE OF THE MOUNTING FRAME.
  - BAR GRATE TRASH RACKS SHALL BE ALUMINUM AND SHALL BE BOLTED USING STAINLESS STEEL HARDWARE.
  - STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF RACK
- OVERFLOW TRASH RACKS:**
- ALL TRASH RACKS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE OR BOLTABLE ACCESS PANELS.
  - TRASH RACKS SHALL BE STAINLESS STEEL, ALUMINUM, OR STEEL. STEEL TRASH RACKS SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
  - TRASH RACKS SHALL BE DESIGNED SUCH THAT THE DIAGONAL DIMENSION OF EACH OPENING IS SMALLER THAN THE DIAMETER OF THE OUTLET PIPE.
  - STRUCTURAL DESIGN OF THE TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.



**8'x4' OUTLET BOX OVERFLOW TRASH RACK**  
SCALE 1" = 2'

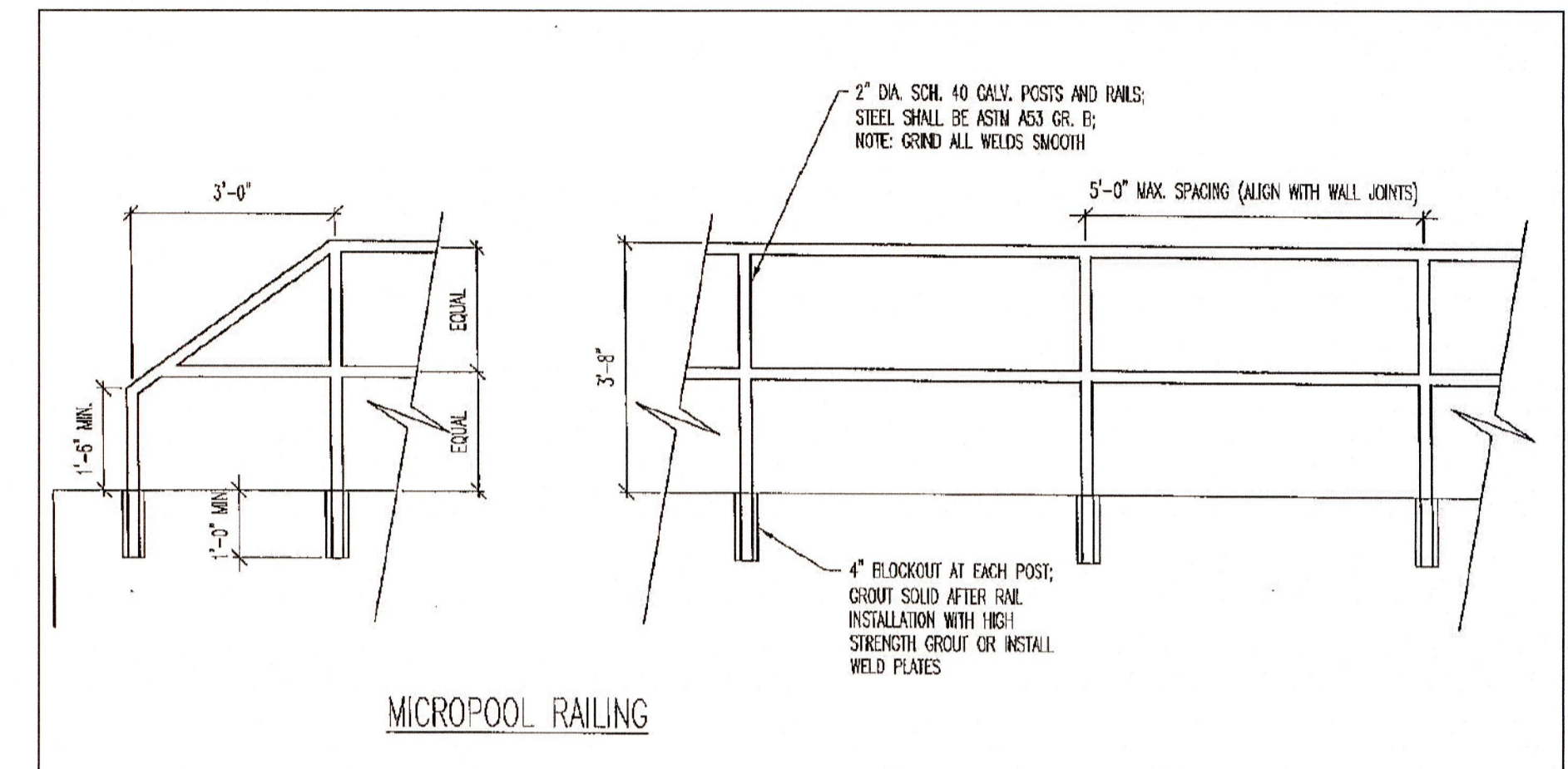
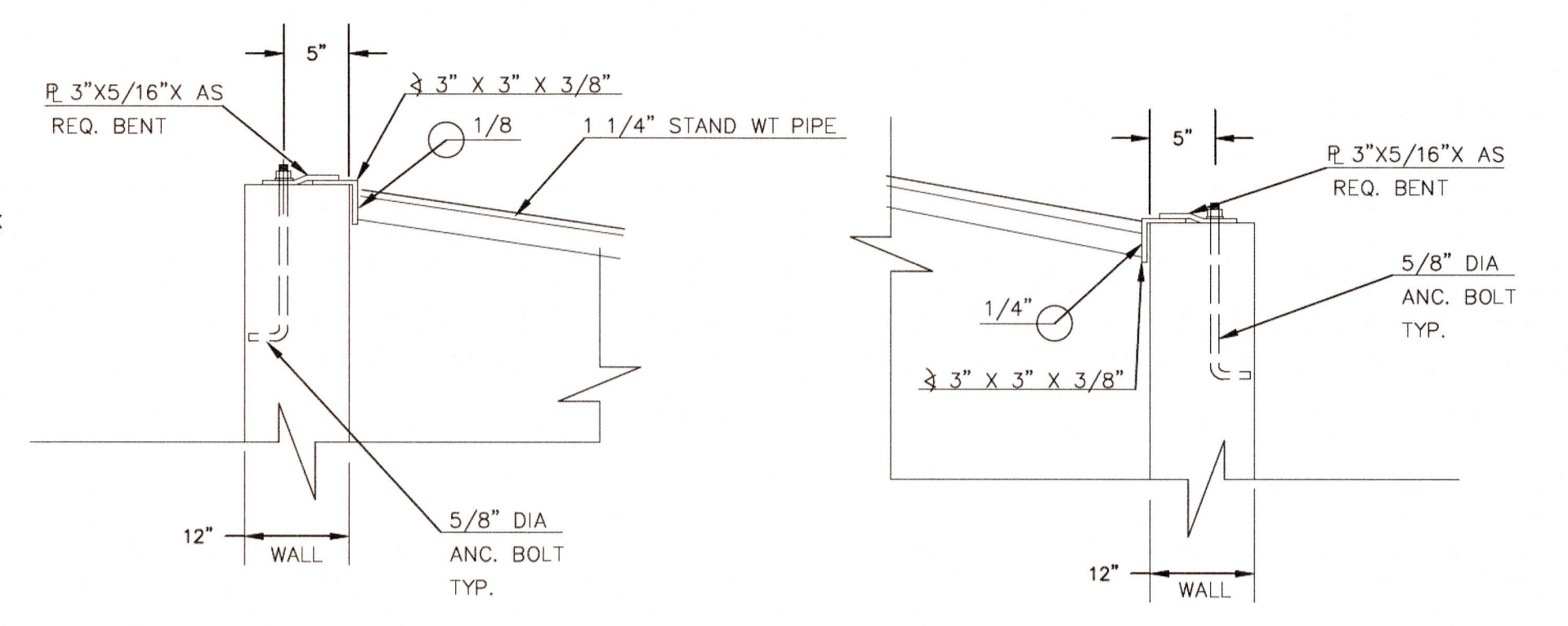
- NOTES:**
- WELD PLATES MAY BE SUBSTITUTED FOR PIPE EMBEDMENT. DESIGN CRITERIA SHALL BE IN ACCORDANCE WITH AASHTO STANDARDS.
  - HANDRAIL DESIGN SHALL BE COMPATIBLE WITH THE DESIGN OF THE WINGWALLS AND HEADWALLS.
  - RAILING POSTS SHALL BE SET TO NORMAL TO GRADE. RAILS SHALL RUN PARALLEL TO THE SLOPES OF TOPS OF THE WALLS.
  - ALL RAILS SHALL HAVE EXPANSION JOINTS SPACED AT 40'-0" MAX. JOINT ENDS SHALL BE FREE OF ANY SHARP EDGES OR CORNERS.

2" SCH. 40 GALV. POSTS AND RAILS. STEEL SHALL BE ASTM A53 GR. B. NOTE: GRIND ALL WELDS SMOOTH



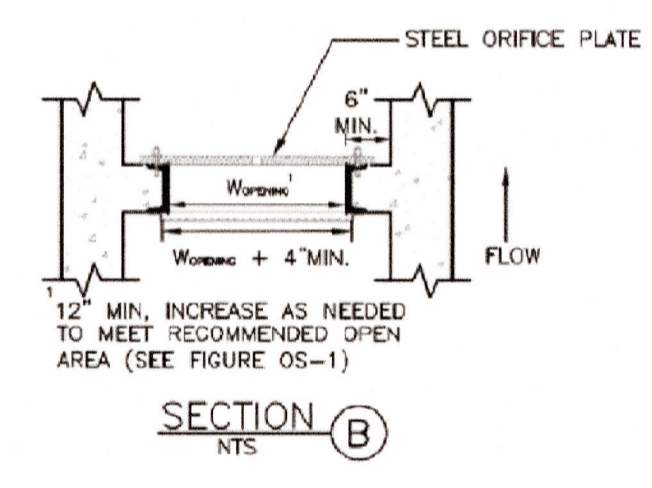
**SECTION A TYPICAL EMBANKMENT WITH SOIL KEYWAY**  
SCALE: N.T.S.

\* UPON GRUBBING EXISTING SOILS IN EMBANKMENT AREA, ENGINEER SHALL BE CONTACTED TO DETERMINE SOIL QUALITY. IF POOR PERMEABILITY IS FOUND (I.E. SANDY-SILT) ONLY TOP 2' x 14' PORTION OF EMBANKMENT KEY IS REQUIRED FOR CONSTRUCTION.

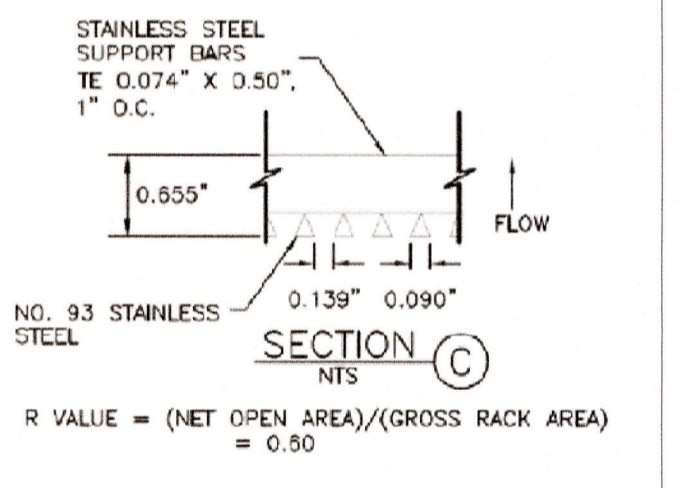


**MICROPOOL RAILING**

**OUTLET BOX RAILING**  
N.T.S.

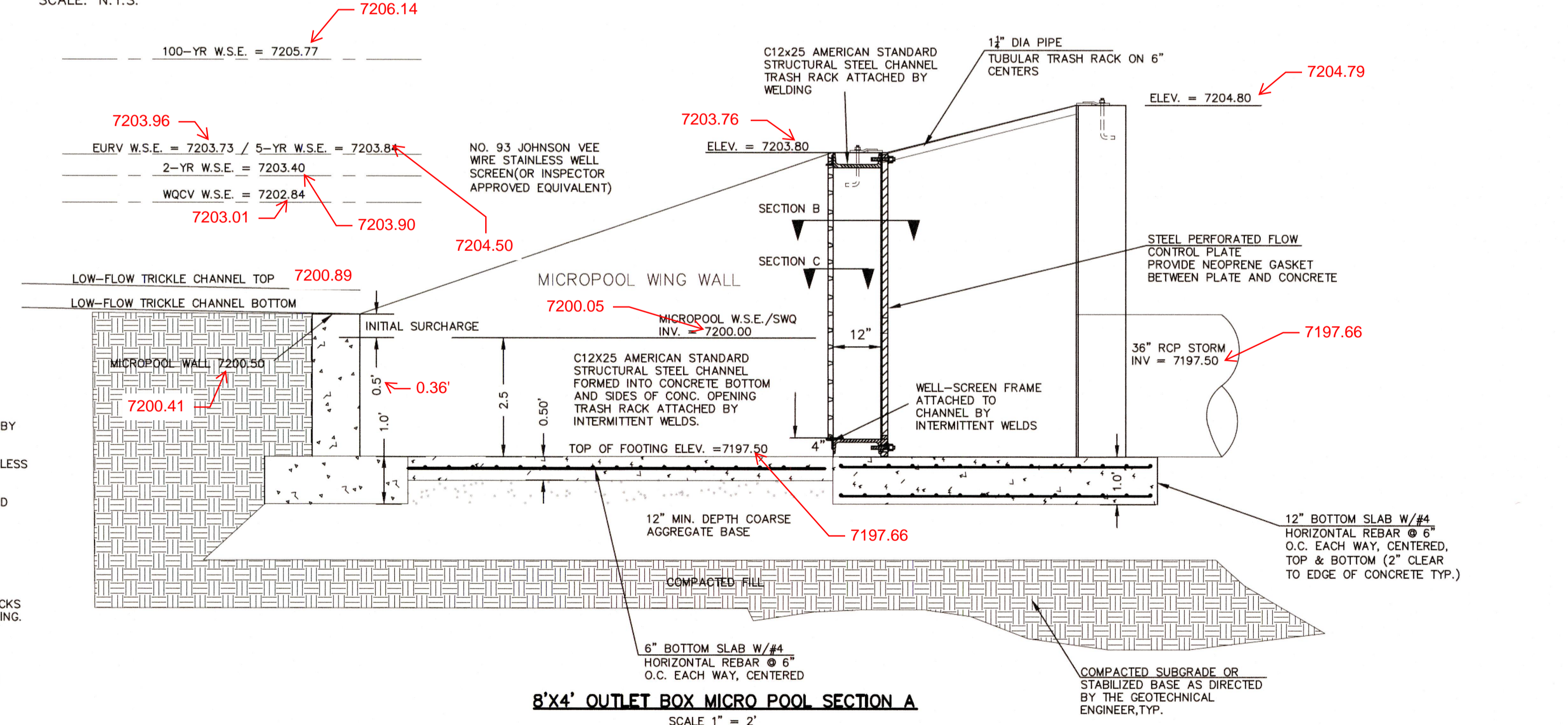


**SECTION B**  
N.T.S.



**SECTION C**  
N.T.S.

R VALUE = (NET OPEN AREA)/(GROSS RACK AREA) = 0.50



**8'x4' OUTLET BOX MICRO POOL SECTION A**  
SCALE 1" = 2'

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NO.	REVISION	DATE
1	REVISED PER COUNTY COMMENTS	9-21-18
2	REVISED PER COUNTY COMMENTS	10-18-18

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

MARC A. WORTON, COLORADO P.E. #37155

DATE: 10/19/18

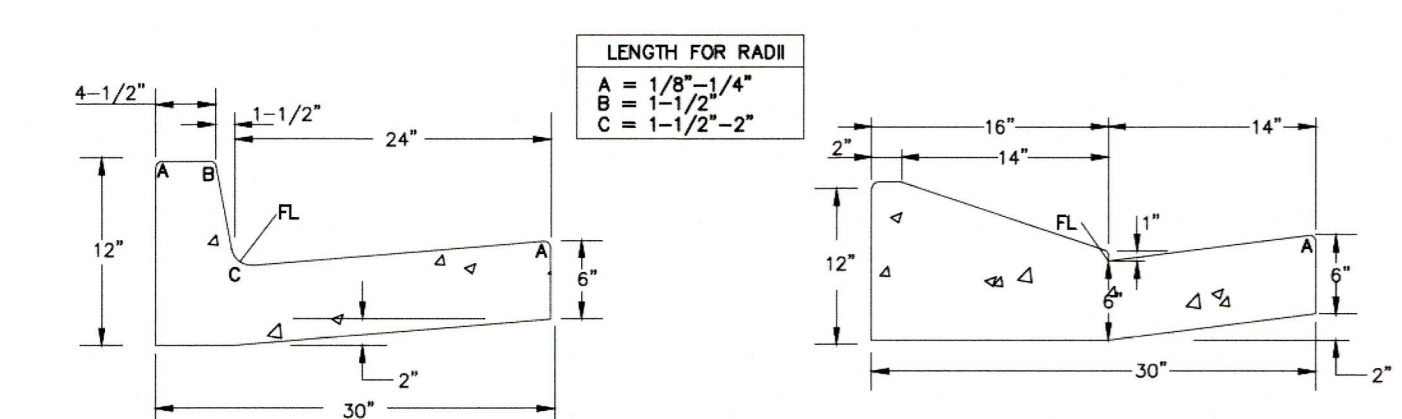


PAINT BRUSH HILLS FILING 13A  
CONSTRUCTION PLANS  
DETENTION FACILITY D  
OUTLET BOX DETAILS

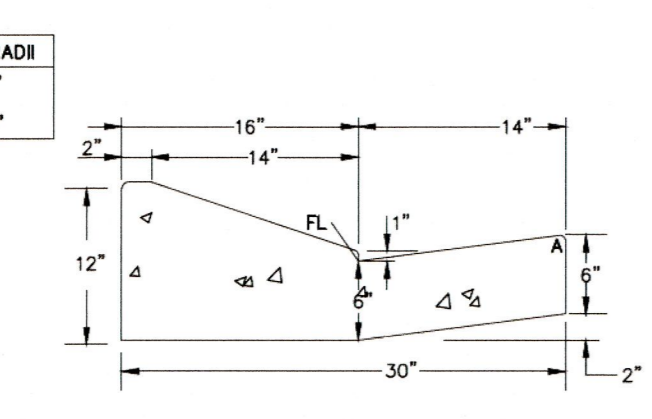
DESIGNED BY: MAW SCALE: DATE: 7-12-18  
DRAWN BY: MAW (H) 1" = N/A SHEET 16 OF 47-18  
CHECKED BY: (V) 1" = N/A JOB NO. 2053.50



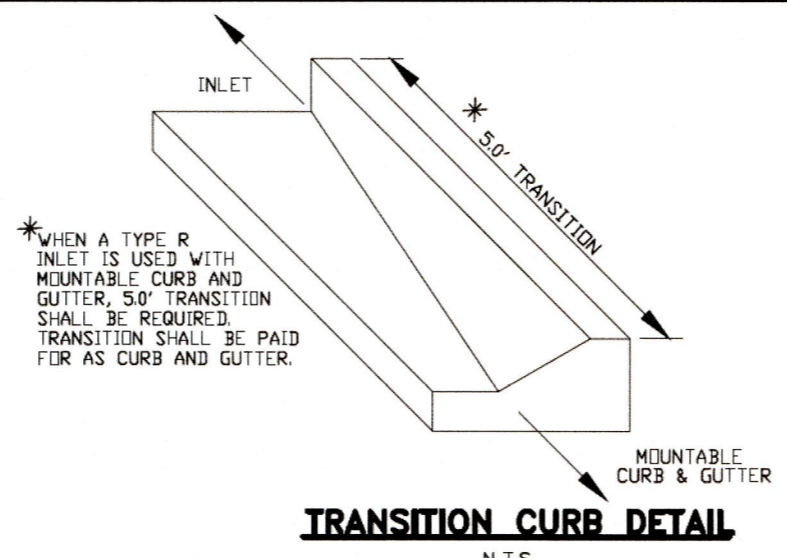




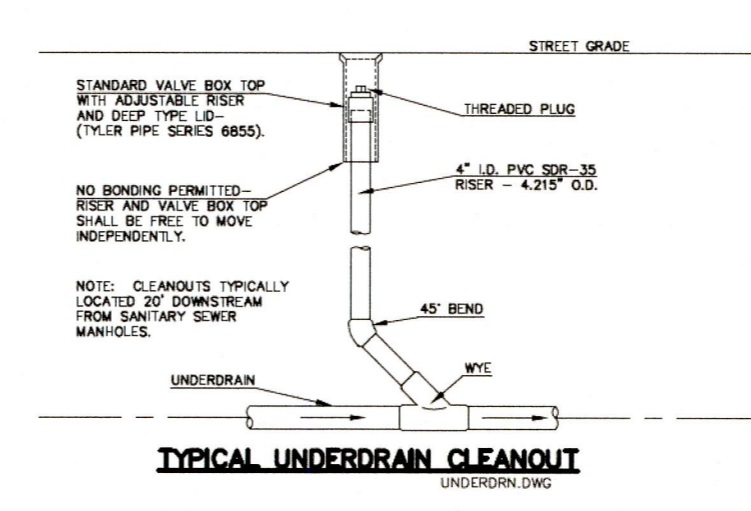
EPC TYPE A CURB & GUTTER DETAIL



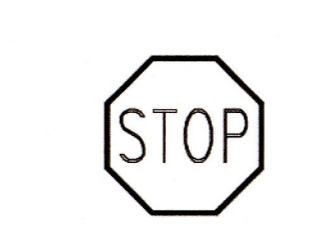
EPC OPTIONAL TYPE C CURB & GUTTER DETAIL



TRANSITION CURB DETAIL



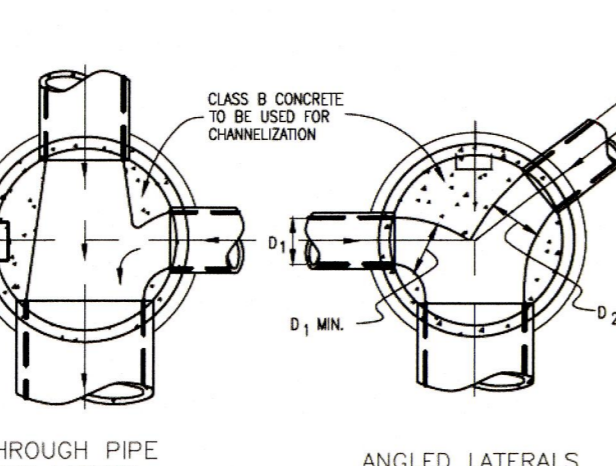
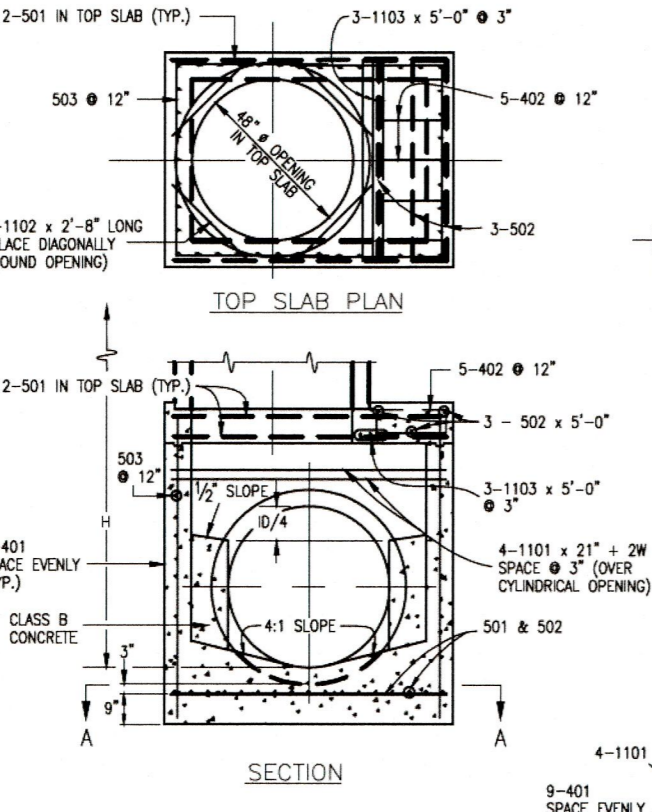
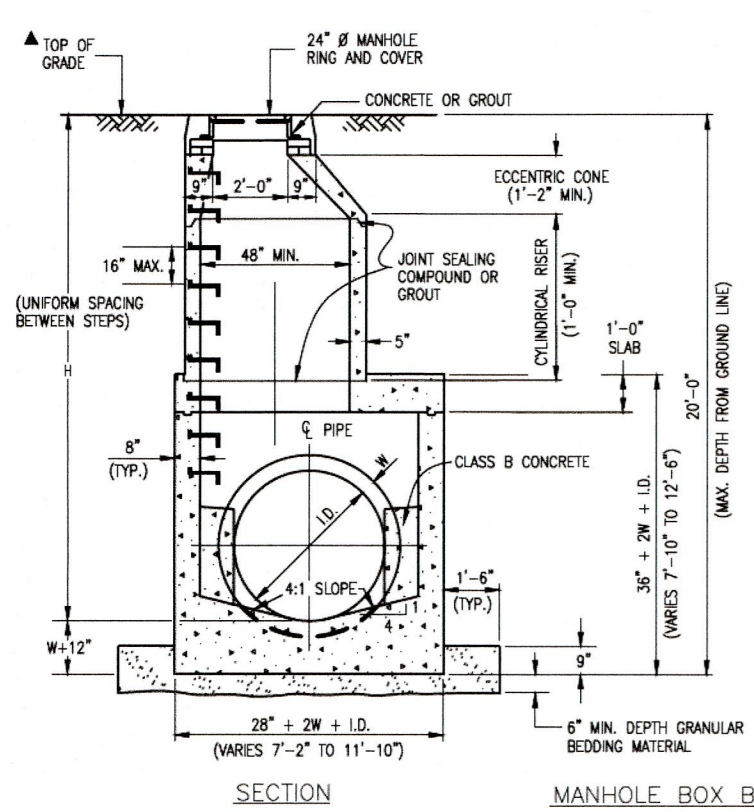
TYPICAL UNDERDRAIN CLEANOUT



CDOT R1-1 STOP SIGN  
30" X 30"



CDOT R2-1 SPEED LIMIT SIGN  
(MINOR RES. STREETS)  
24" X 30"



TYPICAL CHANNELIZATION DETAILS

GENERAL NOTES

- SINCE ALL PIPE ENTRIES INTO THE BASE ARE VARIABLE, THE DIMENSIONS SHOWN ARE TYPICAL. ACTUAL DIMENSIONS AND QUANTITIES FOR CONCRETE AND REINFORCEMENT SHALL BE AS REQUIRED IN THE WORK.
- THE PRECAST FLAT TOP MAY BE USED ON ANY MANHOLE. THE ECONOMIC CONE MAY BE USED WHEN THE MANHOLE "H" HEIGHT IS AT LEAST 8 FT.
- THE MH RING (FRAM) SHALL BE SET IN A BED OF GROUT. THE FRAME SHALL BE SURROUNDED WITH A CEMENT GROUT IN UNPAVED AREA, OR A CONCRETE COLLAR IN PAVED AREA. SEE DETAILS ON SHEETS 2 AND 3.
- DESIGN OF BOX BASE IS BASED ON STRAIGHT RUNS OF CONDUIT OR CHANGE IN DIRECTION OF LESS THAN 45°. SPECIAL DESIGN IS REQUIRED FOR 45° OR GREATER.
- PRECAST MANHOLES AND REINFORCEMENT SHALL CONFORM TO ASTM C 478 (MS10 M 199).
- CAST-IN-PLACE MANHOLES SHALL BE CLASS B CONCRETE.
- STEPS SHALL BE REQUIRED WHEN THE MANHOLE DEPTH EXCEEDS 5 FT. 6 IN. AND SHALL BE IN ACCORDANCE WITH MS10 M 199.
- ALL REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 PSI. VERTICAL STEEL SHALL BE PLACED AT 16" OF WALL. ALL BARS SHALL HAVE A 2" MINIMUM CLEARANCE.
- ALL PIPE ENTRIES INTO THE BASE OF MANHOLE SHALL BE CONNECTED BY OPEN CHANNELIZATION ADJUSTED FOR PIPE SIZE, SHAPE, SLOPE, AND DIRECTION OF FLOW. DETAILS SHOWN ARE TYPICAL FOR INSTALLATIONS WITH ALL INVERTS OF SAME RELATIVE ELEVATION. FOR EXCESSIVE ELEVATION DIFFERENCES BETWEEN INVERTS, SPECIAL BASE/CHANNEL DETAILS WILL BE SHOWN ON THE PLANS.
- FLOW CHANNELS AND INVERTS SHALL BE FORMED BY SHAPING WITH CLASS B CONCRETE OR APPROVED GROUT.
- STUB-OUTS SHALL EXTEND 2 FT. MINIMUM BEYOND OUTSIDE WALL SURFACE OF MANHOLE AND BE SATISFACTORILY PLUGGED.
- CHECK WITH THE LOCAL GOVERNMENT AUTHORITY FOR ANY ADDITIONAL SANITARY STEER SPECIFICATIONS, DETAILS, OR REGULATIONS.
- THE SLOPE OF THE MANHOLE COVER SHALL MATCH THE ROADWAY PROFILE AND CROSS SLOPE.

QUANTITIES FOR CONCRETE MANHOLE BOX BASE

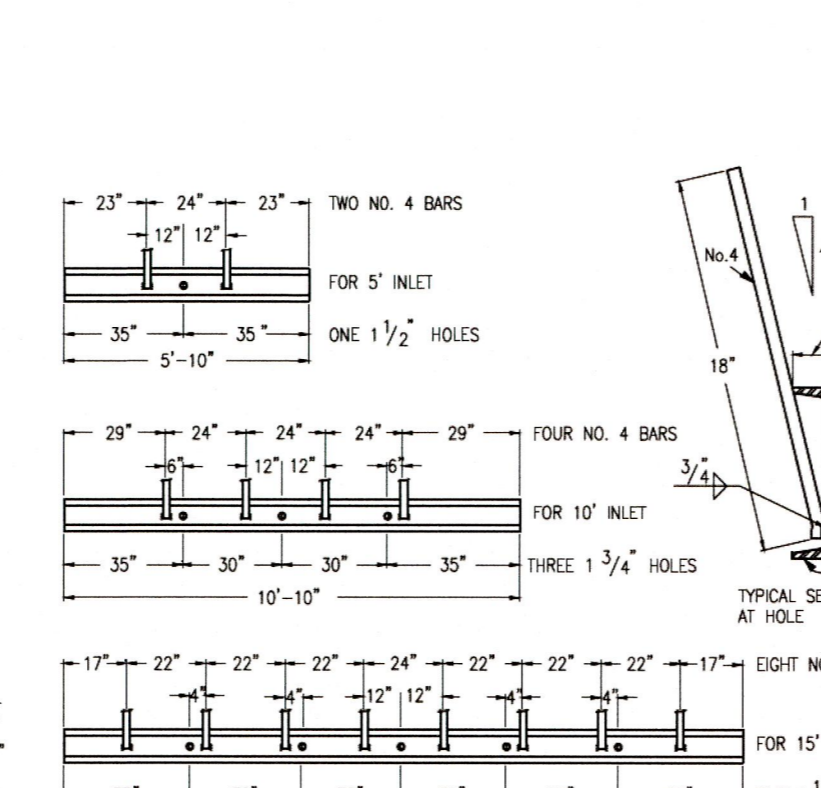
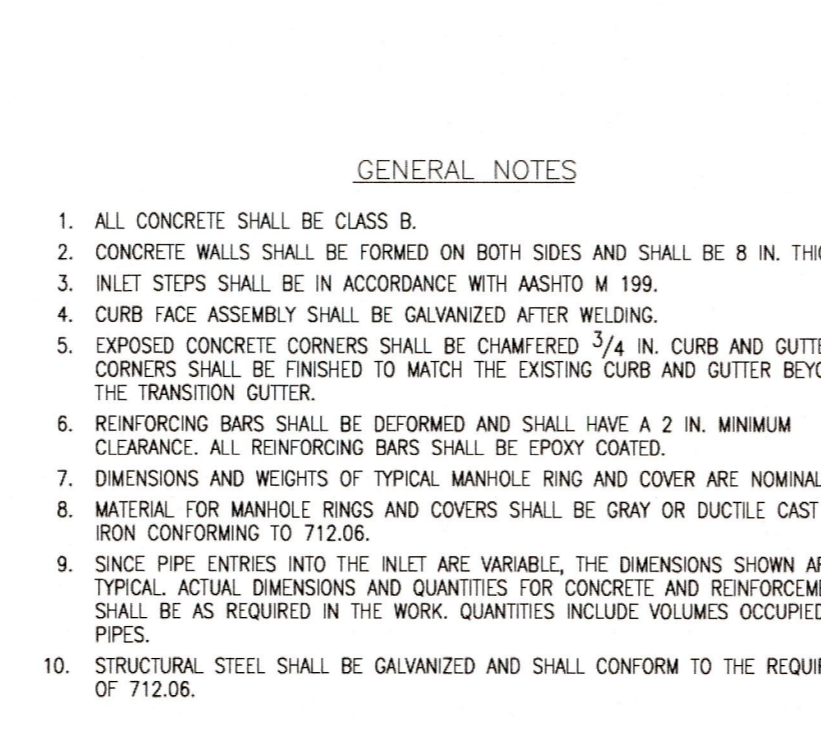
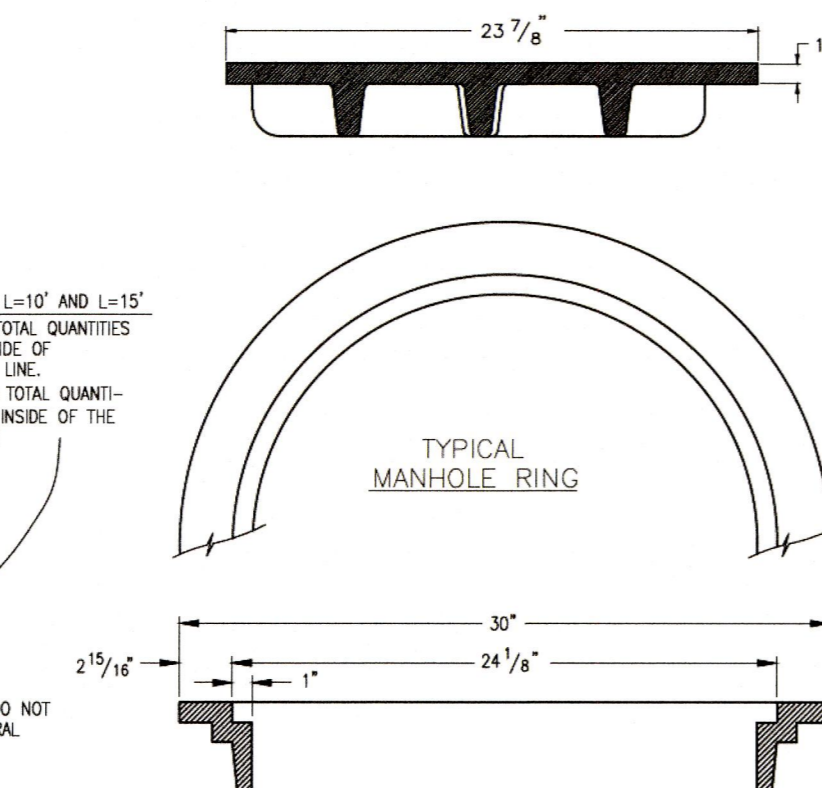
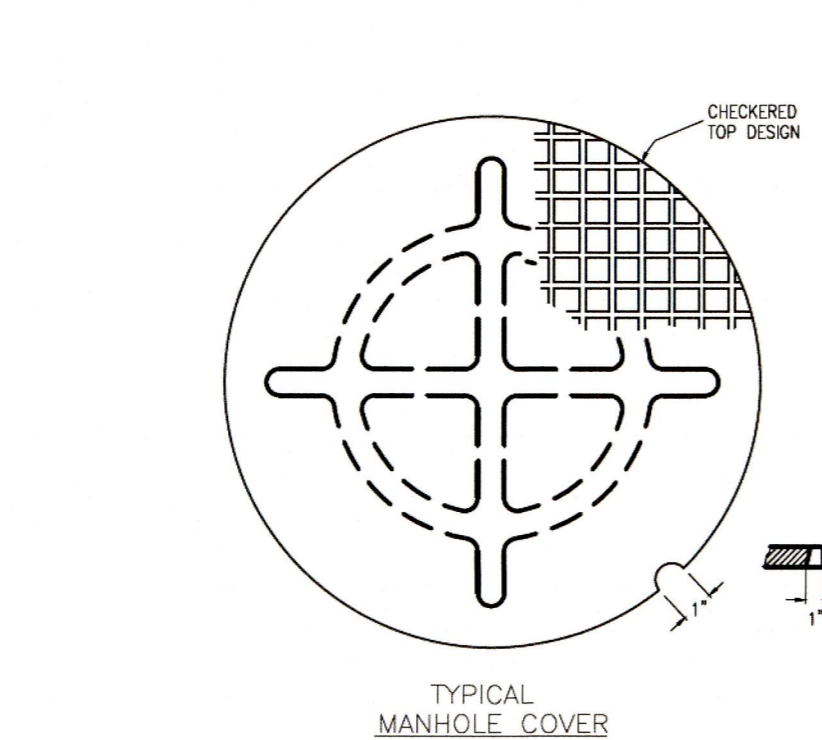
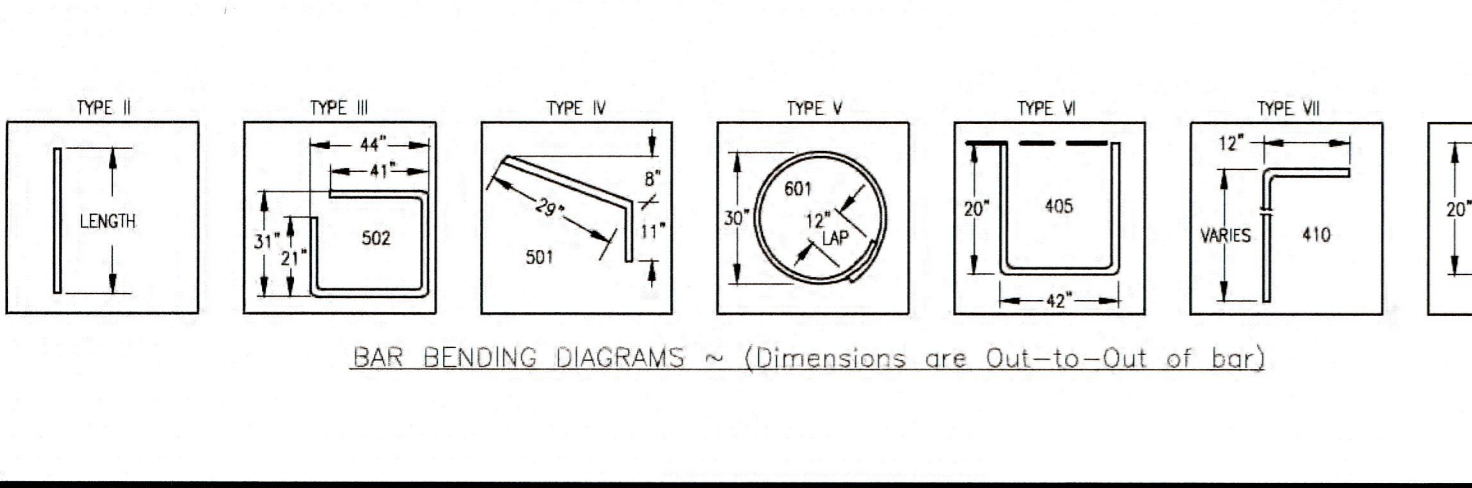
MARK	SIZE	TYPE	WT. /YD.	NO. REQ'D	LENGTH	NO. REQ'D	LENGTH	NO. REQ'D	LENGTH	NO. REQ'D	LENGTH	NO. REQ'D	LENGTH	FORMULAS
401	4	I	0.668	18	18'-0"	18	18'-0"	18	18'-0"	18	18'-0"	18	18'-0"	401 BAR LENGTH = 32'+2W+I.D.
402	4	II	0.668	5	5'-0"	5	5'-0"	5	5'-0"	5	5'-0"	5	5'-0"	402 BAR LENGTH = I.D. + 2W
501	5	I	1.043	17	17'-0"	17	17'-0"	17	17'-0"	17	17'-0"	17	17'-0"	501 BAR LENGTH = 24' + I.D. + 2W
502	5	I	1.043	22	22'-0"	22	22'-0"	22	22'-0"	22	22'-0"	22	22'-0"	502 NUMBER BARS REQ'D. = 3 * (24'+I.D.+2W+1)
503	5	II	1.043	12	12'-0"	12	12'-0"	12	12'-0"	12	12'-0"	12	12'-0"	503 NUMBER BARS REQ'D. = 2 * (13'+I.D.+2W+1)
504	5	I	1.043	12	12'-0"	12	12'-0"	12	12'-0"	12	12'-0"	12	12'-0"	504 NUMBER BARS REQ'D. = 2 * (2W+I.D.+2)
1101	11	I	5.313	4	4'-0"	4	4'-0"	4	4'-0"	4	4'-0"	4	4'-0"	1101 BAR LENGTH = 21' + I.D. + 2W
1102	11	I	5.313	2	2'-0"	2	2'-0"	2	2'-0"	2	2'-0"	2	2'-0"	TYPE I STRAIGHT
1103	11	I	5.313	2	2'-0"	2	2'-0"	2	2'-0"	2	2'-0"	2	2'-0"	TYPE II
REINFORCING STEEL TOTAL = 995.6 CUBIC YARDS - TOTAL 6.0 6.6 7.3 8.0 9.5 11.1														

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

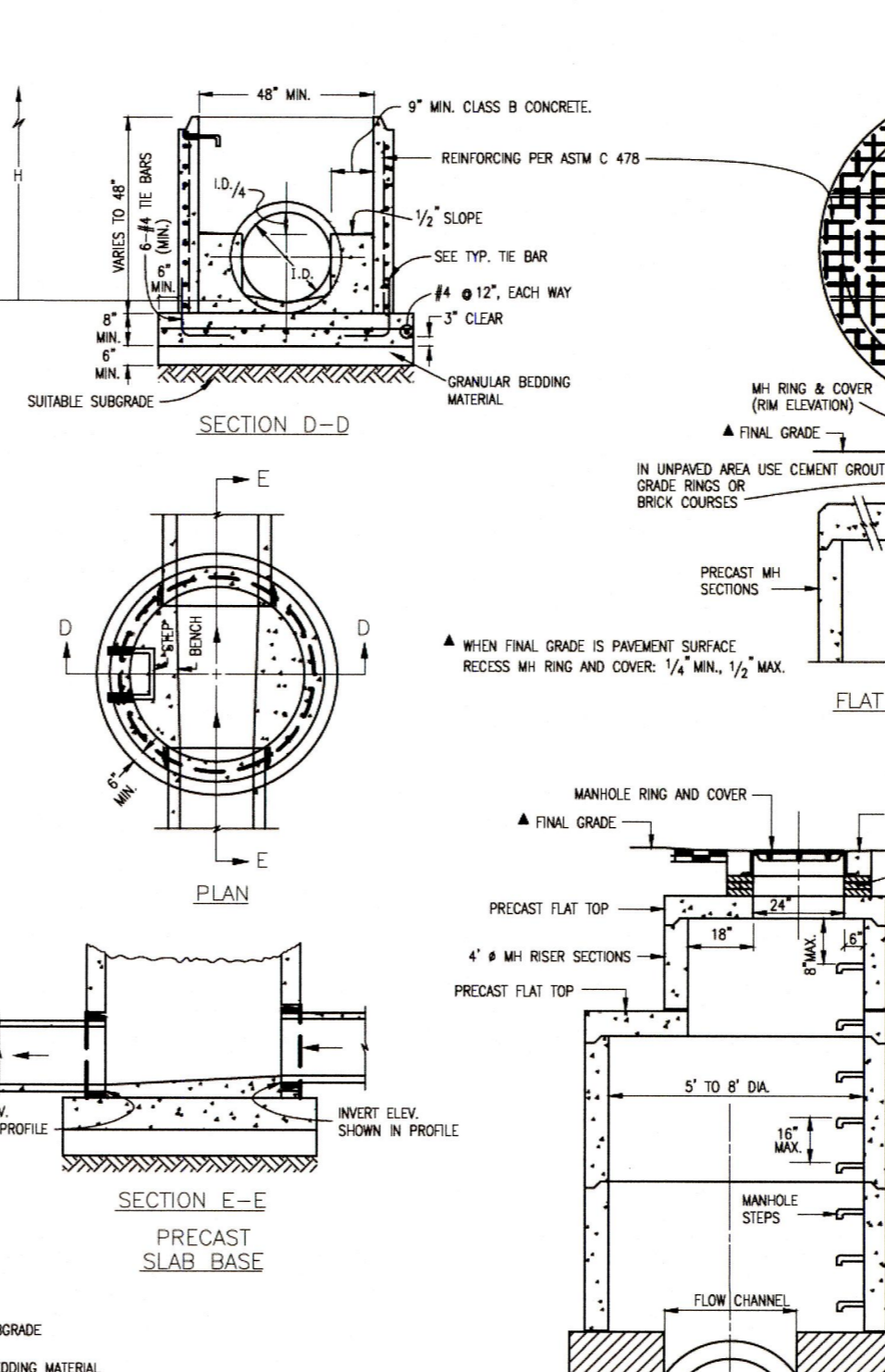
MARK	DIA. IN.	O.C. SPACING	TYPE	ALL INLETS, H ≤ 5'			INLETS, H > 5'			
				NO. REQ'D	LENGTH	NO. REQ'D	LENGTH	NO. REQ'D	LENGTH	
401	11"	II	15	15'	21	21'	26	26'	11	11'
402	11"	II	7	7'	13	13'	18	18'	7	7'
403	9"	II	4	4'-10"	4	4'-10"	4	4'-10"	4	4'-10"
405	6"	VI	11	6'-10"	21	6'-10"	31	6'-10"	11	6'-10"
406	6"	VIII	7	8'-10"	7	13'-10"	7	18'-10"	7	8'-10"
407	6"	II	5	5'-10"	5	5'-10"	5	5'-10"	5	5'-10"
408	12"	II	3	6'-10"	3	11'-0"	3	16'-0"	3	16'-0"
409	8"	II	6	5'-10"	6	10'-10"	6	15'-10"	6	15'-10"
410	11"	VII	3	3'	3	3'	3	3'	3	3'
411	11"	II	3	5'-2"	3	10'-2"	3	15'-2"	3	10'-2"
412	11"	II	3	2'-9"	3	2'-9"	3	2'-9"	3	2'-9"
413	9"	II	7	10'-10"	7	15'-10"	7	20'-10"	7	15'-10"

TABLE TWO ~ BARS AND QUANTITIES VARIABLE WITH "H"

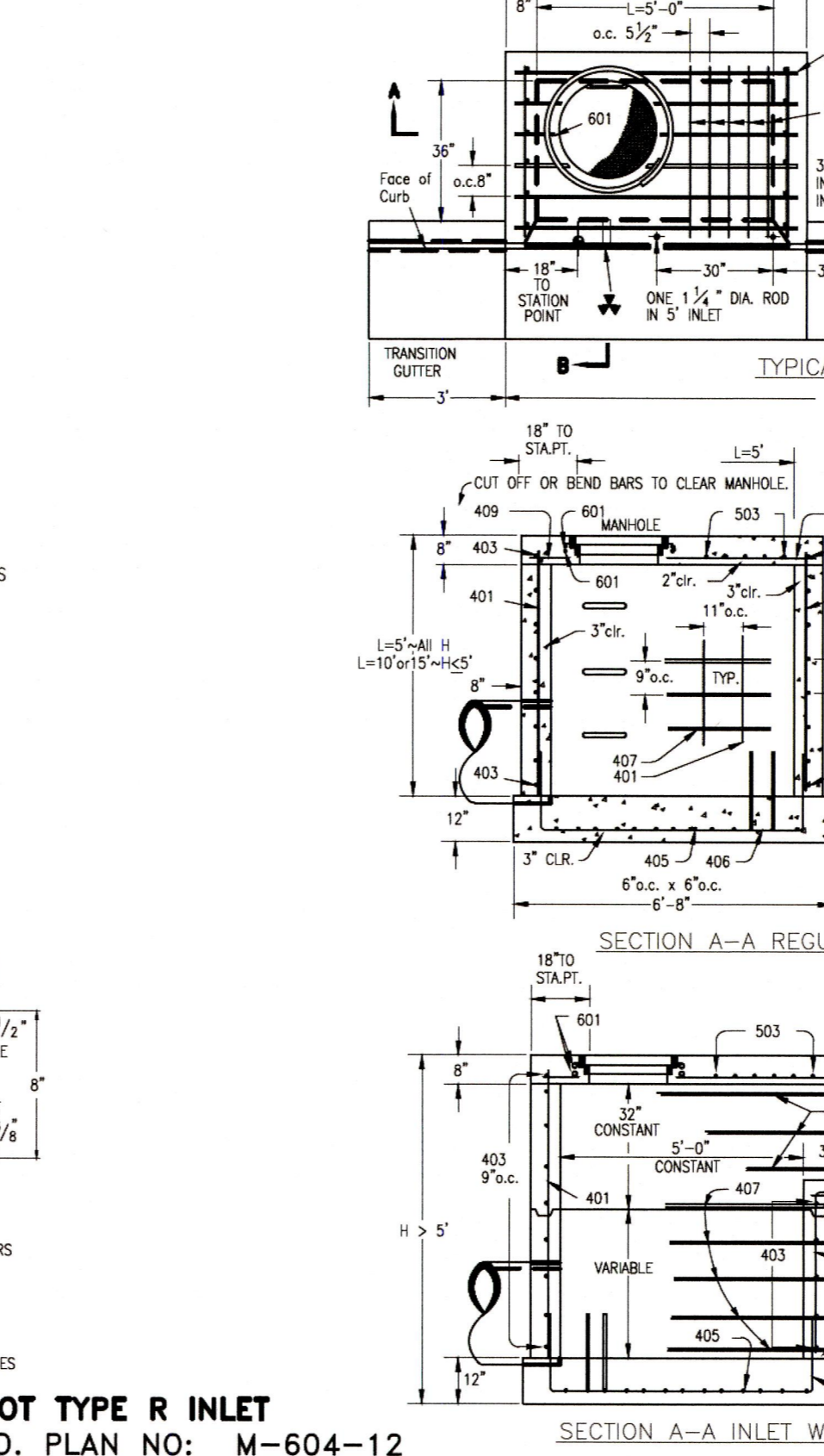
H'	REGULAR		DROPPED		L=5'		L=10'		L=15'	
	NO. REQ'D	LENGTH	NO. REQ'D	LENGTH	NO. REQ'D	LENGTH	NO. REQ'D	LENGTH	NO. REQ'D	LENGTH
3'-0"	401	402	410	407	403	407	3.2	285	5.3	497
3'-6"	3'-0"	11'-0"	10	7	7	7	3.4	305	5.7	528
4'-0"	3'-6"	11'-0"	12	9	9	9	3.7	326	6.0	569
4'-6"	4'-0"	11'-0"	12	9	9	9	3.9	334	6.4	571
5'-0"	4'-6"	11'-0"	14	11	11	11	4.1	354	6.7	602
5'-6"	5'-0"	11'-0"	16	13	13	13	4.4	375	7.0	627
6'-0"	5'-6"	11'-0"	16	13	13	13	4.6	382	7.2	636
6'-6"	6'-0"	11'-0"	18	15	15	15	4.8	402	7.4	650
7'-0"	6'-6"	11'-0"	20	17	17	17	5.0	423	7.6	664
7'-6"	7'-0"	11'-0"	20	17	17	17	5.3	430	7.8	673
8'-0"	7'-6"	11'-0"	22	19	19	19	5.5	451	8.0	687
8'-6"	8'-0"	11'-0"	24	21	21	21	5.7	471	8.2	701
9'-0"	8'-6"	11'-0"	24	21	21	21	6.0	479	8.4	710
9'-6"	9'-0"	11'-0"	26	23	23	23	6.2	499	8.6	724
10'-0"	9'-6"	11'-0"	28	25	25	25	6.4	520	8.8	738
10'-6"	10'-0"	11'-0"	28	25	25	25	6.7	527	9.0	747
11'-0"	10'-6"	11'-0"	30	27	27	27	6.9	547	9.2	761



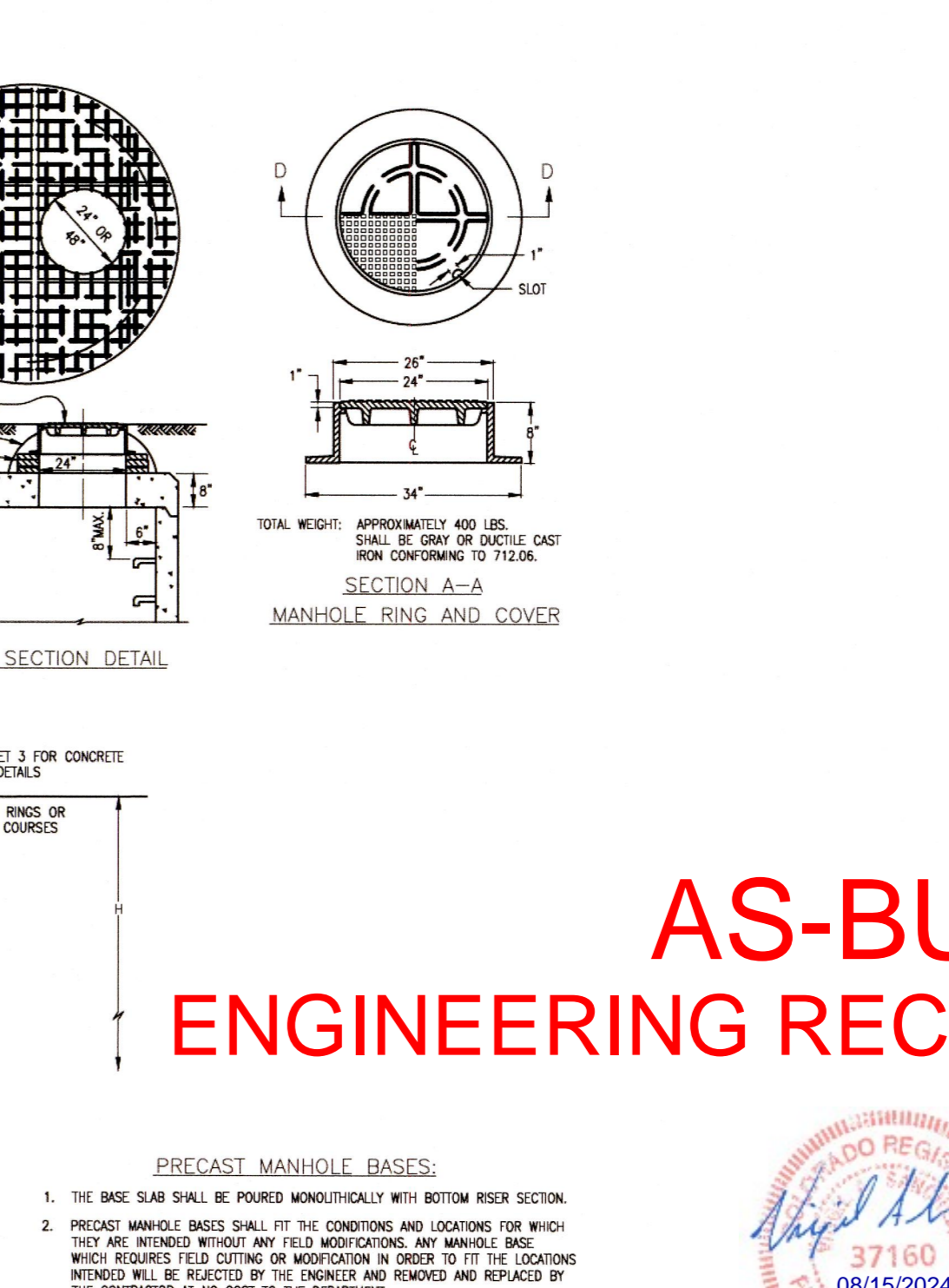
CDOT TYPE R INLET  
STD. PLAN NO: M-604-12



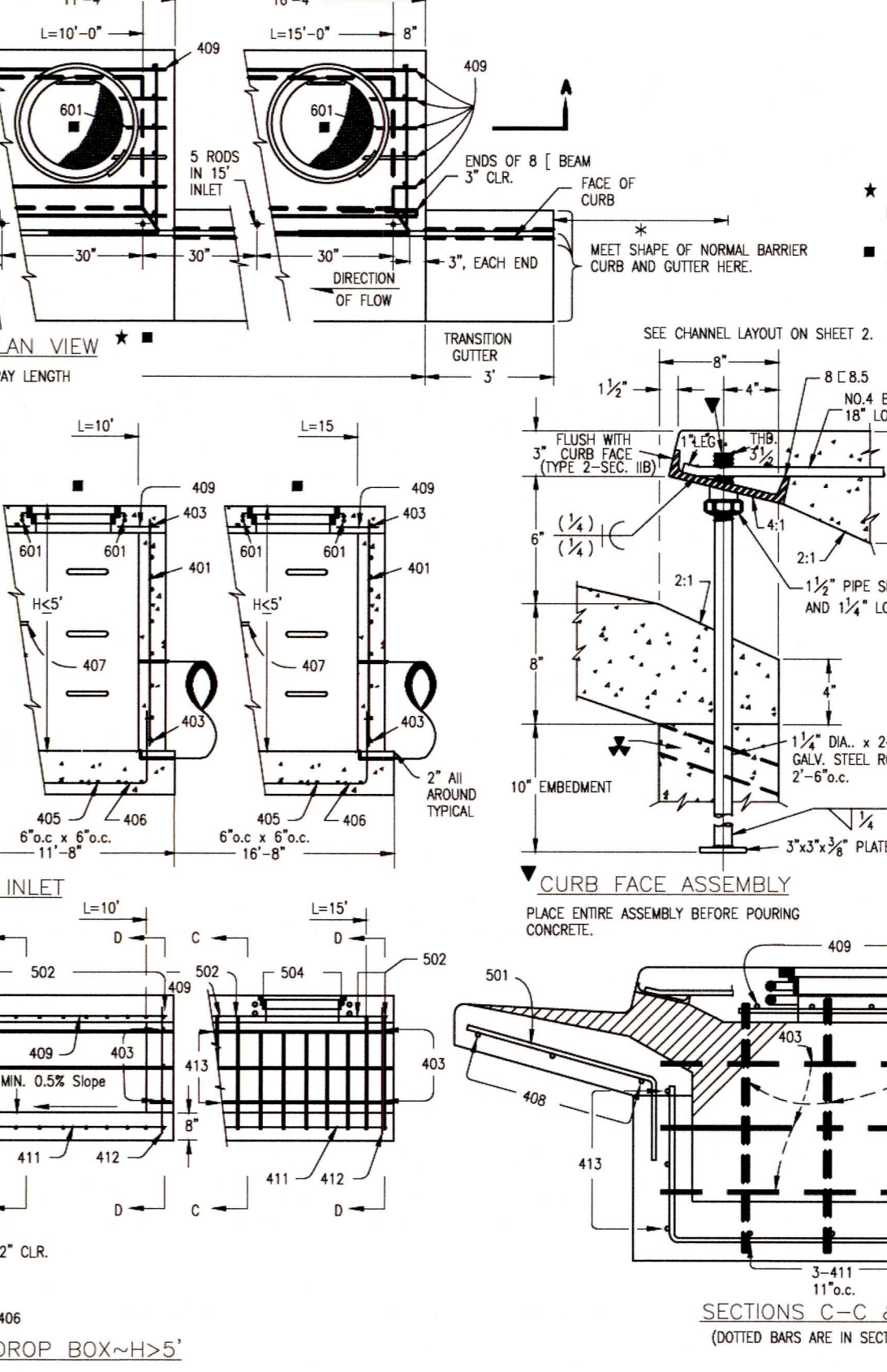
CDOT MANHOLES  
STD. PLAN NO: M-604-20



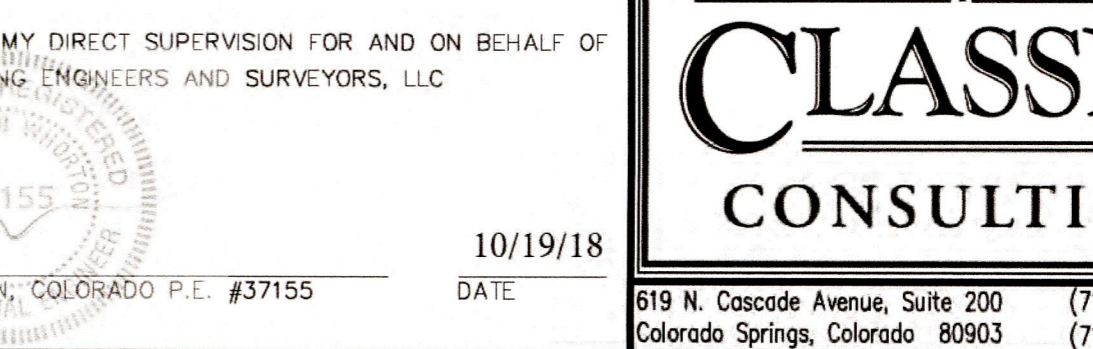
SECTION A-A REGULAR INLET  
SECTION A-A INLET WITH DROP BOX-H=5'



MANHOLE RING AND COVER



TYPICAL PLAN VIEW  
SECTIONS C-C & D-D



CURB FACE ASSEMBLY

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NO. REVISION	DATE	REVIEW:
1	9-26-18	PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC A. WHORTON, COLORADO P.E. #37155  
DATE 10/19/18

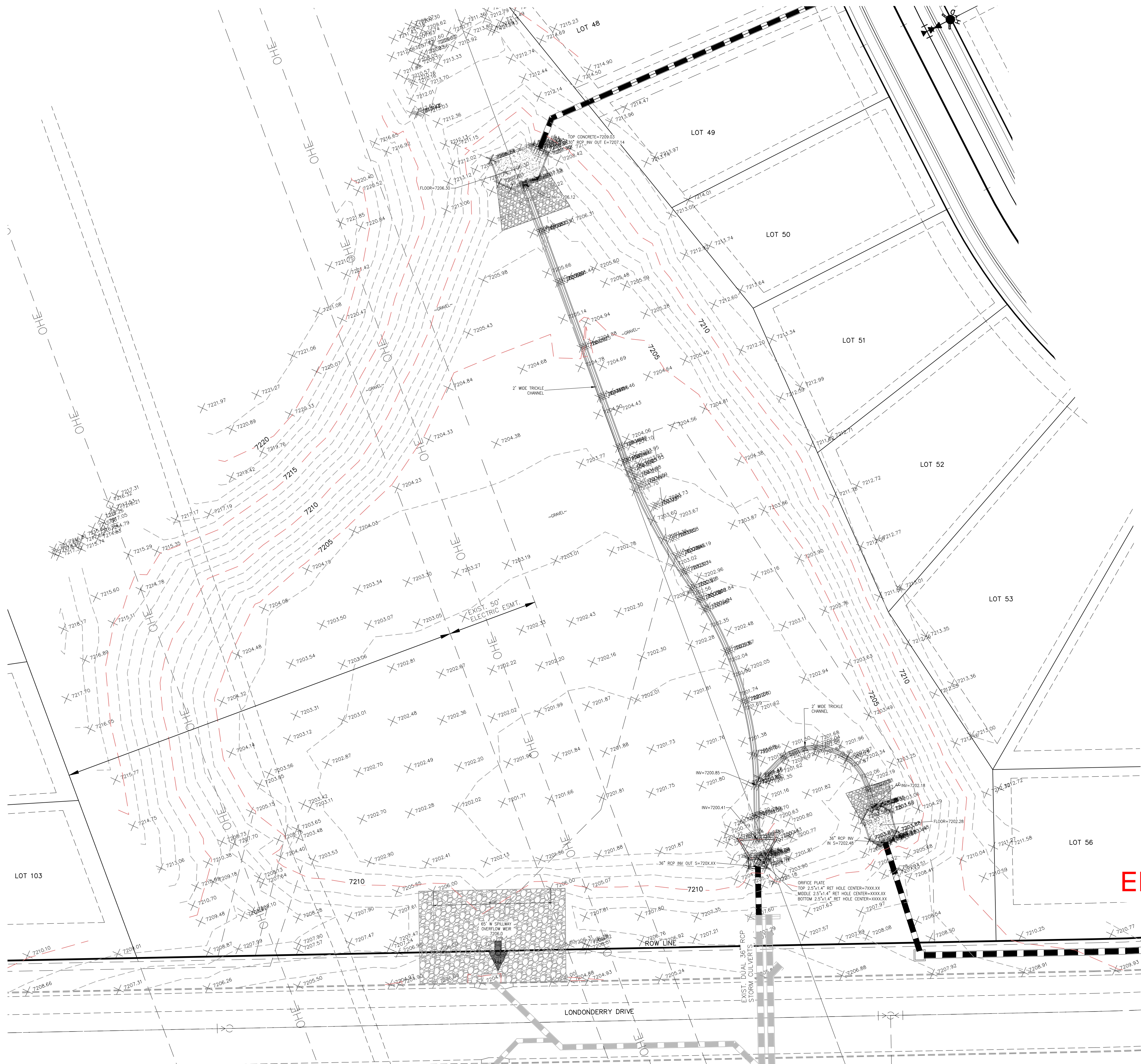
**CLASSIC CONSULTING**

619 N. Cascade Avenue, Suite 200  
Colorado Springs, Colorado 80903  
(719)785-0790  
(719)785-0799(Fax)

PAINT BRUSH HILLS FILING NO. 13E  
CONSTRUCTION PLANS  
DETAIL SHEET

DESIGNED BY	MAW	SCALE	DATE	7-20-18
DRAWN BY	MAW	(H) 1" = NA	SHEET	17 OF 17-18
CHECKED BY	(V) 1" = NA	JOB NO.	2053.50	

N:\205350\UNPAVED\CONSTRUCTION\Plans\STREET AND SIDEWALK\CDOS\030320-01-FINAL\_9/27/2018\_3:06:29 PM



**LEGEND**

- EXIST MAJ CONT
- EXIST MIN CONT
- UNDERGROUND STORM SEWER LINE(S)
- EMERGENCY OVERTFLOW/SPILLWAY
- RIPRAP

**POND CERTIFICATION**

**FOREBAY INLETS**  
 DESIGNED INVERT 30" IN (NE) = 7207.25', SURVEY INVERT 30" IN (NE) = 7207.14'  
 DESIGNED INVERT 36" IN (S) = 7202.80', SURVEY INVERT 36" IN (S) = 7202.48'

**OUTLET STRUCTURE**  
 DESIGNED LF CHANNEL INVERT IN = 7200.50', SURVEY INVERT IN = 7200.41'  
 DESIGNED 36" INVERT OUT (S) = 7197.50', SURVEY 36" INVERT OUT (S) = 7197.66'  
 DESIGNED TOP CONC. BOX/GRATE (FRONT) = 7203.80', SURVEY TOP CONC. GRATE = 7203.76'  
 DESIGNED TOP CONC. BOX/GRATE (BACK) = 7204.80', SURVEY TOP CONC. GRATE = 7204.79'

**SPILLWAY (EDB)**  
 DESIGNED SPILLWAY ELEVATION = 7206.00', SURVEY SPILLWAY ELEVATION = 7206.00'

**VOLUME**  
 DESIGNED VOLUME = 5.941 ACRE FEET @ 7205.77' (100 YR SURFACE)  
 PROVIDED VOLUME = 6.211 ACRE FEET @ 7206.14' (100 YR SURFACE)

# AS-BUILT ENGINEERING RECORD DRAWINGS



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

PAINT BRUSH HILLS FILING 13A	
PERMANENT BMP PLAN	
PROJECT NO. 43-124	DATE: 03/28/2024
DESIGNED BY: DLM	HORIZONTAL SCALE: 1"=20'
DRAWN BY: DLM	VERTICAL SCALE: N/A
CHECKED BY: DLM	BMPAB
212 N. WAHATCH AVE, STE 305 COLORADO SPRINGS, CO 80903 PHONE 719.555.5885	
FOR AND ON BEHALF OF MRS. CIVIL CONSULTANTS, INC.	
VIRGIL A. SANCHEZ, COLORADO, P.E. NO. 37160	
NO. DATE: BY: DESCRIPTION:	DATE: APPROV. BY:
THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARED OF THESE PLANS.	
CAUTION	