FALCON RESERVE PONDS

COUNTY OF EL PASO, STATE OF COLORADO

CONSTRUCTION DOCUMENTS

AUGUST 2026

GENERAL 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 **1-800-922-1987** 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 PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT (PCD).
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 9COMPACTED) 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 PLANNING AND COMMUNITY DEVELOPMENT 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 MIRIFI 180N OR EQUAL MAY BE SUBSTITUTED WHERE TYPE L RIP-RAP WITH MIRIFI FW 700 OR EQUAL IS SPECIFIED.
13. ALL MATERIALS AND INSTALLATION PRODECURES 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 RODDING 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.

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS

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

SIGNING AND STRIPING NOTES:

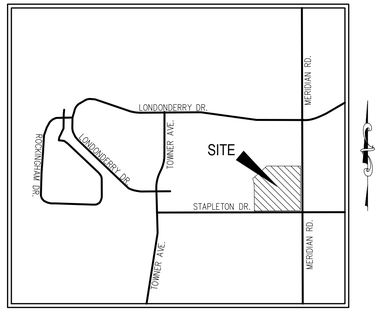
1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THAT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

BENCHMARKS

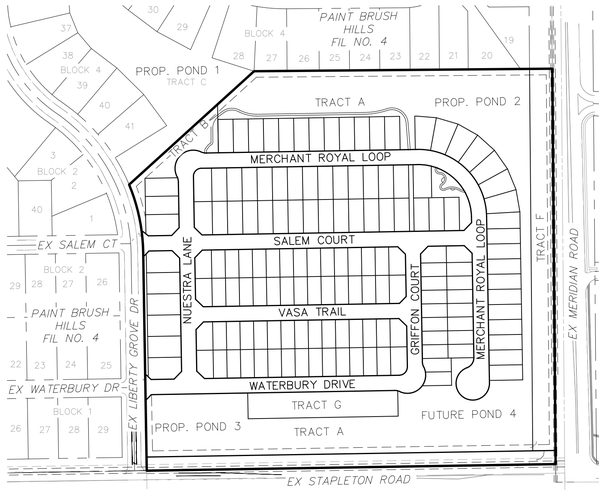
1. SOUTH ¼ CORNER OF SECTION 26, TOP OF 2 ½" ALUMINUM CAP.
   ELEV. =7140.91
   VERTICAL DATUM = NGVD 1929
2. SOUTHWEST CORNER OF SECTION 25, TOP OF 3 ¼" ALUMINUM CAP.
   ELEV. = 7136.34
   VERTICAL DATUM = NGVD 1929

BASIS OF BEARINGS:

THE NORTH LINE OF SAID TRACT E , SAID LINE ALSO BEING THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 26, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, EL PASO COUNTY, COLORADO, BEING MONUMENTED AT THE NORTHWEST CORNER WITH A 2-1/2" ALUMINUM CAP STAMPED "PLS 4842" AND AT THE NORTHEAST CORNER WITH A 2-1/2" ALUMINUM CAP STAMPED "PLS 4842". SAID LINE IS ASSUMED TO BEAR N88°44'51"E A DISTANCE OF 2640.24 FEET. THE UNIT OF MEASUREMENT IS U.S. SURVEY FEET.



VICINITY MAP
N.T.S.



SITE MAP
N.T.S.

SHEET INDEX

SHEET 1	COVER SHEET
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SHEET 6	STORM 3, 3.1, & 3.2 PLAN & PROFILE
SHEET 7	STORM SEWER DETAILS
SHEET 8	POND 1 OVERALL PLAN
SHEET 9	POND 1 OUTLET STRUCTURE DETAILS
SHEET 10	POND 1 NORTH FOREBAY
SHEET 11	POND 1 WEST FOREBAY
SHEET 12	POND 2 OVERALL PLAN
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SHEET 14	POND 2 WEST FOREBAY
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SHEET 19	POND 3 SOUTH FOREBAY
SHEET 20	TYPICAL POND DETAILS
SHEET 21	TYPICAL POND DETAILS

NOTE:

ALL STORM SEWER TO BE PRIVATE.

CONTRACTOR TO CROSS REFERENCE DETAILED GRADING PLANS TO VERIFY TOP OF BOX OR GRATE ELEVATIONS

ABBREVIATION LEGEND

CL-CL	CENTERLINE INTERSECTION
FL-FL	FLOWLINE INTERSECTION
BT	BEGIN TRANSITION
ET	END TRANSITION
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PCR	POINT OF CURB RETURN
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENT
EL	ELEVATION
CDS	CUL-DE-SAC
KN	KNUCKLE
LP	LOOP
N	NORTH
S	SOUTH
HP	HIGH POINT
LT	LEFT
RT	RIGHT
FL	FLOWLINE
CONST	CONSTRUCTION
EX	EXISTING
NTS	NOT TO SCALE
SRV	SERVICE
STA	STATION
CONST	CONSTRUCTION
EX	EXISTING
TBC	TOP BACK OF CURB
PUB	PUBLIC
PVT	PRIVATE
SLV	SLEEVE
STM	STORM SEWER
WTR	WATER
XPAN	CROSSPAN
STD	STANDARD
SHT	SHEET
P&P	PLAN AND PROFILE
C&G	CURB AND GUTTER
W	WEST
E	EAST
ROW	RIGHT OF WAY
EOP	EDGE OF PAVEMENT
WTR	WATER
SAN	SANITARY SEWER
PROP	PROPOSED
COLL	COLLECTOR
LP	LOW POINT
RES	RESIDENTIAL
MRL	MERCHANT ROYAL LOOP

AGENCIES

OWNER/DEVELOPER:	THE LANDHUIS COMPANY 212 N. WAHSATCH AVE., SUITE 301 COLORADO SPRINGS, CO 80903 JEFF MARK (719) 635-3200
CIVIL ENGINEER:	M & S CIVIL CONSULTANTS, INC. 212 N. WAHSATCH AVE., SUITE. 305 COLORADO SPRINGS, CO 80903 VIRGIL A. SANCHEZ P.E. (719) 955-5485
COUNTY ENGINEERING:	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 MR. GILBERT LAFORCE (719) 520-7945
METRO DISTRICT:	PAINT BRUSH HILLS METRO DISTRICT 9830 LIBERTY GROVE DR. FALCON, CO 80831 MR. ROBERT GUEVARA (719) 495-8188
FIRE DEPARTMENT:	FALCON FIRE PROTECTION DISTRICT 7030 OLD MERIDIAN RD. FALCON, CO 80831 CURTIS L. KAUFFMAN (719) 641-2139
GAS DEPARTMENT:	BLACKHILLS ENERGY 37 WIDEFIELD BOULEVARD, WIDEFIELD, COLORADO 80911 MR GEORGE M. PETERSON (719) 392-3491
ELECTRIC DEPARTMENT:	MOUNTAIN VIEW ELECTRIC P.O. BOX 1600 LIMON, CO 80828 MR. LES ULFERS, (719) 495-2283
TELEPHONE COMPANY:	CENTURY LINK (LOCATORS) 811 AT&T (LOCATORS) 811

APPROVALS:

ENGINEER'S STATEMENT:

DETAILED CONSTRUCTION PLANS AND SPECIFICATIONS ENGINEER'S STATEMENT:
THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID DETAILED 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 THE APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITY(S) 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 THE DETAILED PLANS AND SPECIFICATIONS.

COLORADO REGISTERED VIRGIL A. SANCHEZ 37160 PROFESSIONAL ENGINEER

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

08/28/26
DATE

OWNER/DEVELOPER STATEMENT:

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

MR. JEFF MARK
THE LANDHUIS COMPANY, PRESIDENT

08/28/26
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 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, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH THE 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 YET 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.

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

DATE

CDR2511

FALCON RESERVE PONDS
COVER SHEET
DATE: 08/12/2026
SHEET 1 OF 20
CVR
PROJECT NO. 43-144A
SCALE: HORIZONTAL: N/A VERTICAL: N/A
DESIGNED BY: GT
DRAWN BY: GT
CHECKED BY: VAS

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

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

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

COLORADO REGISTERED VIRGIL A. SANCHEZ 37160 PROFESSIONAL ENGINEER 08/28/26

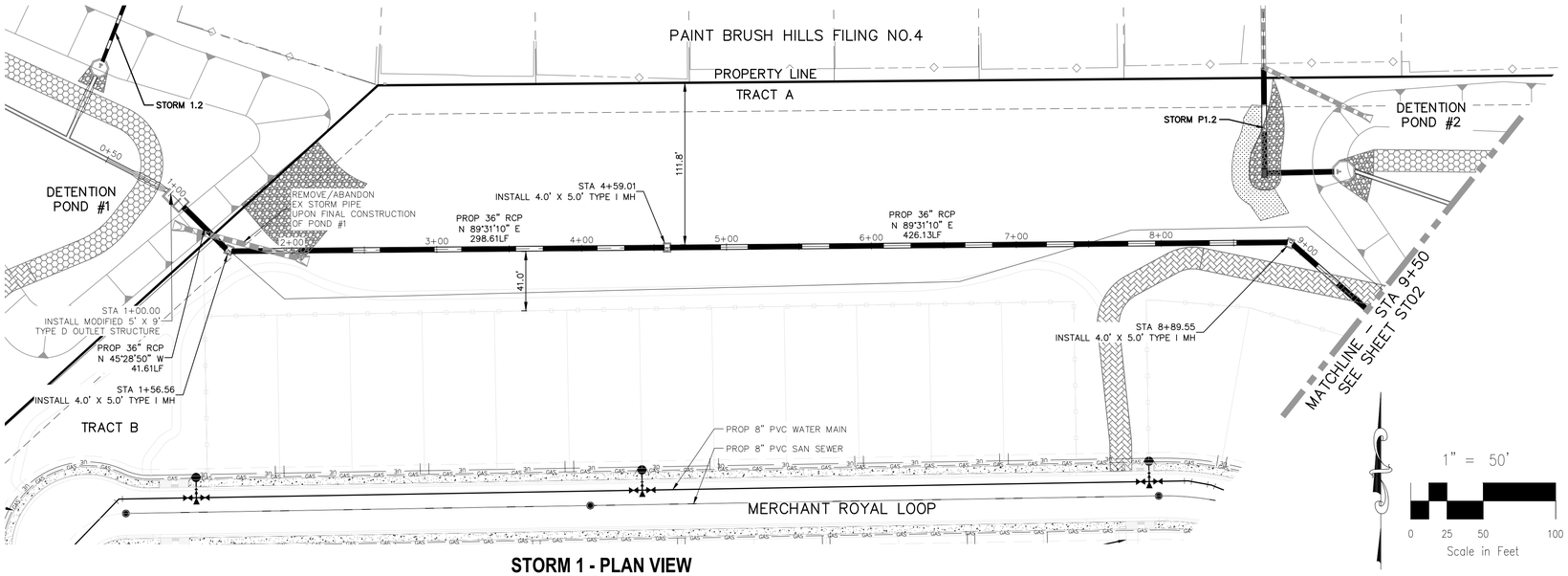
REVISIONS:

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

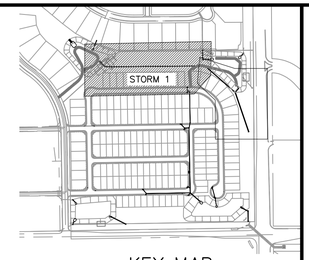
THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE, OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

CAUTION

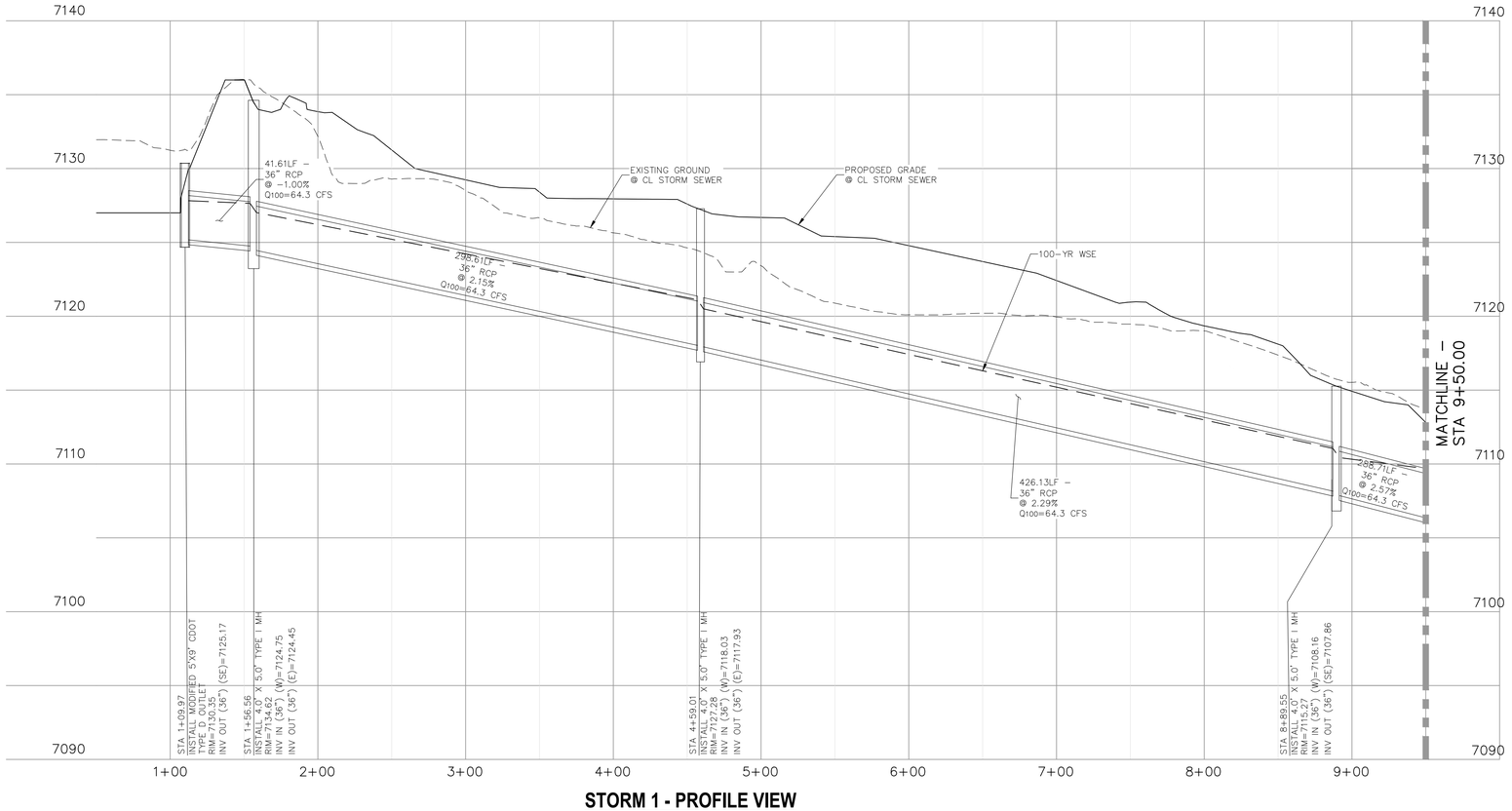
File: C:\43144A-Falcon Reserve\Landhuis\Dwg\Const Dwg\PCM\Phase 1 - Ponds\43144-PCM CVR.dwg Plotstamp: 8/28/2026 1:56 PM



STORM 1 - PLAN VIEW
STA 1+00.00 TO STA 9+50.00



KEY MAP
Scale in Feet



STORM 1 - PROFILE VIEW

FALCON RESERVE PONDS
STORM 1 PLAN & PROFILE

PROJECT NO. 43-144A
DESIGNED BY: GT
DRAWN BY: GT
CHECKED BY: VAS

SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'
DATE: 08/12/2026
SHEET 2 OF 20
STM01

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

CIVIL CONSULTANTS, INC.

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

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

COLORADO REGISTERED VIRGIL A. SANCHEZ 37160 PROFESSIONAL ENGINEER 10/22/26

REVISIONS:

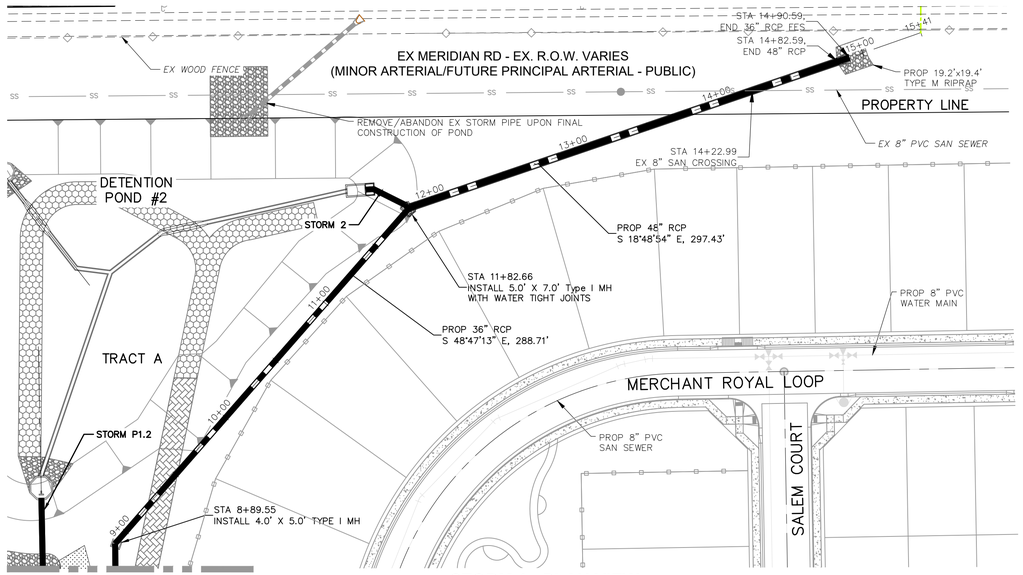
NO.	DATE:	BY:	DESCRIPTION:	APP'D. BY:	DATE:

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

CAUTION

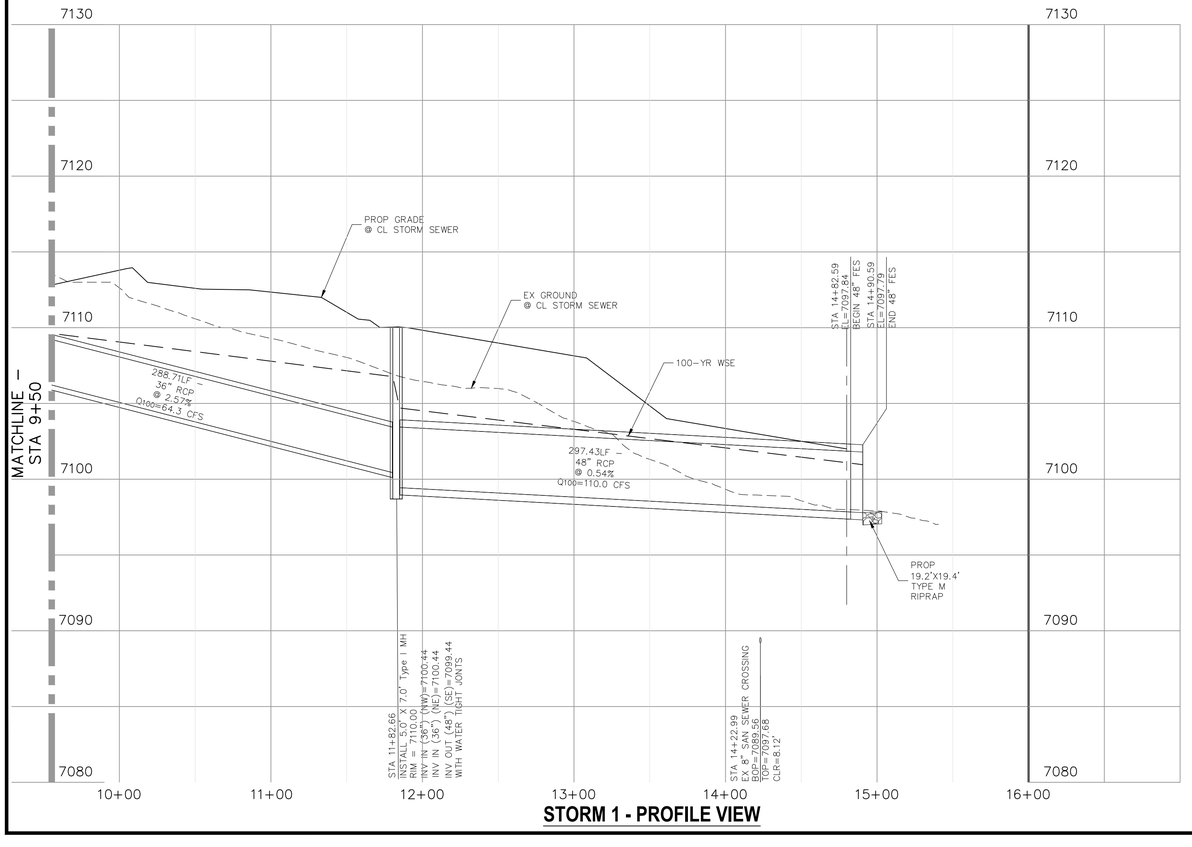
FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES
FOR BURIED UTILITY INFORMATION
48 HRS BEFORE YOU DIG
CALL 1-800-922-1987

File: O:\43144A-Falcon Reserve\Landfills\Dwg\Const Dwg\Storm\Phase 1 - Ponds\43144-ST02.dwg Plotstamp: 10/22/2026 1:35 PM

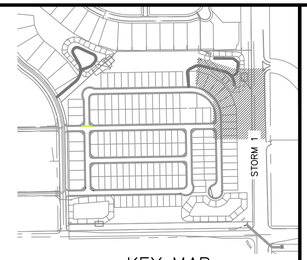


MATCHLINE – STA 9+50
SEE SHEET ST01

STORM 1 - PLAN VIEW
STA 9+50.00 TO STA 14+90.59



STORM 1 - PROFILE VIEW

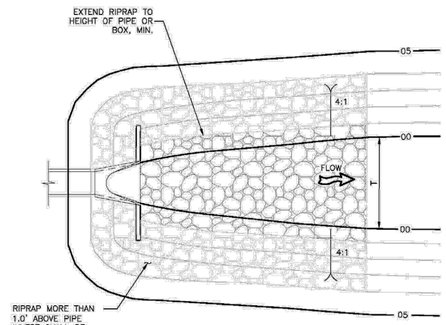


KEY MAP
Scale in Feet

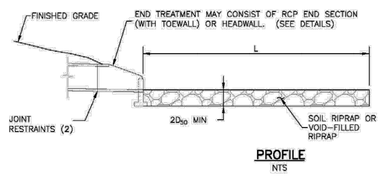
1" = 50'

0 25 50 100
Scale in Feet

Hydraulic Structures Chapter 9



PLAN VIEW
NTS



PROFILE
NTS

Figure 9-34. Riprap apron detail for culverts in-line with the channel

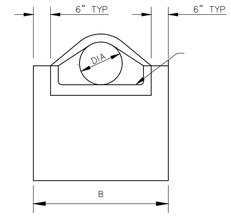
FLARED END SECTION CUT OFF WALL DIMENSIONS (IN)		
DIA	A*	B*
36	72	92
48	84	107.5

* MAY VARY SLIGHTLY BETWEEN MANUFACTURERS

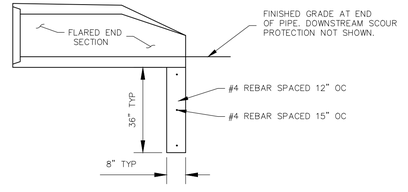
NOTES:

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

TOE WALLS MAY BE CAST IN PLACE OR PRECAST



END VIEW



SECTION VIEW

FLARED END SECTION W / TOE WALL
SCALE: 3/8" = 1'

CONCRETE TOE WALL DETAIL

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FALCON RESERVE PONDS
STORM 1 PLAN & PROFILE
PROJECT NO. 43-144A
DESIGNED BY: GT
DRAWN BY: GT
CHECKED BY: VAS
SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'
DATE: 08/12/2026
SHEET 3 OF 20
STM02

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

VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.
COLORADO REGISTERED VIRGIL A. SANCHEZ 37160 PROFESSIONAL ENGINEER
10/22/26

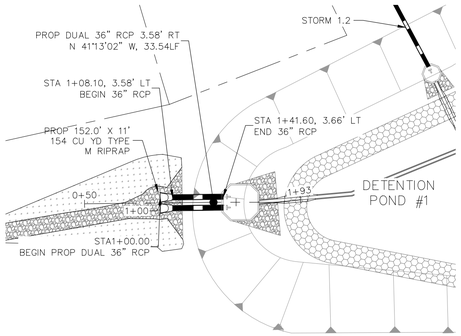
REVISIONS:

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

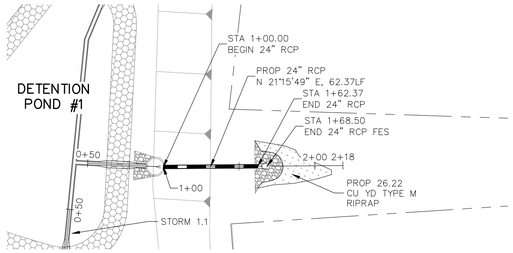
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CAUTION

File: O:\43144A-Falcon Reserve\Landmuls\Dwg\Const Dwg\Storm\Phase 1 – Ponds\43144-ST03.dwg Plotstamp: 10/22/2026 1:33 PM



STORM 1.1 - PLAN VIEW
STA 1+00.00 TO STA 1+41.64



STORM 1.2 - PLAN VIEW
STA 1+00.00 TO STA 1+68.50

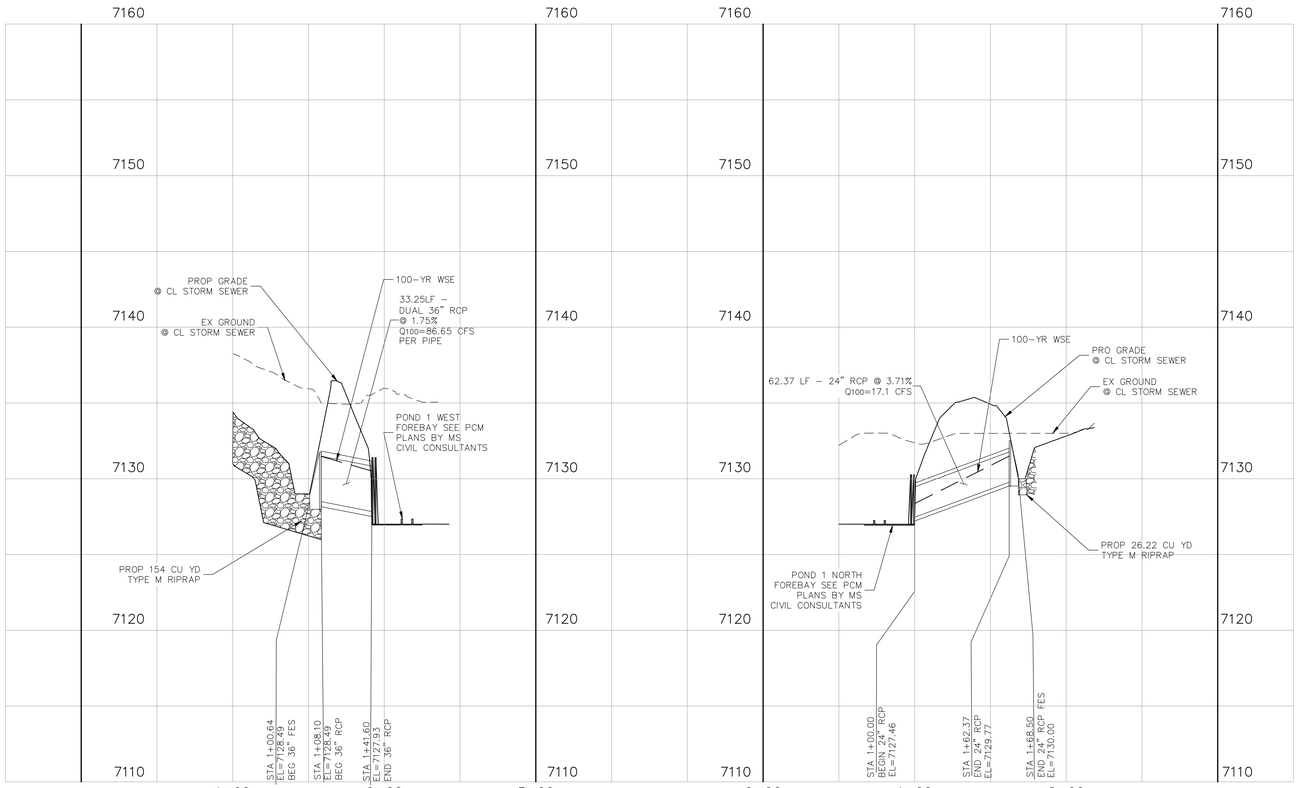
1" = 50'

0 25 50 100

Scale in Feet



KEY MAP
Scale in Feet



STORM 1.1 - PROFILE VIEW



STORM 1.2 - PROFILE VIEW

FALCON RESERVE PONDS

STORM 1.1 & 1.2 PLAN & PROFILE

PROJECT NO. 43-144A
DATE: 08/12/2026
SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'
SHEET 4 OF 20
STM03
DESIGNED BY: GT
DRAWN BY: GT
CHECKED BY: VAS

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

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

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

COLORADO REGISTERED PROFESSIONAL ENGINEER 37160 0828/26

REVISIONS:

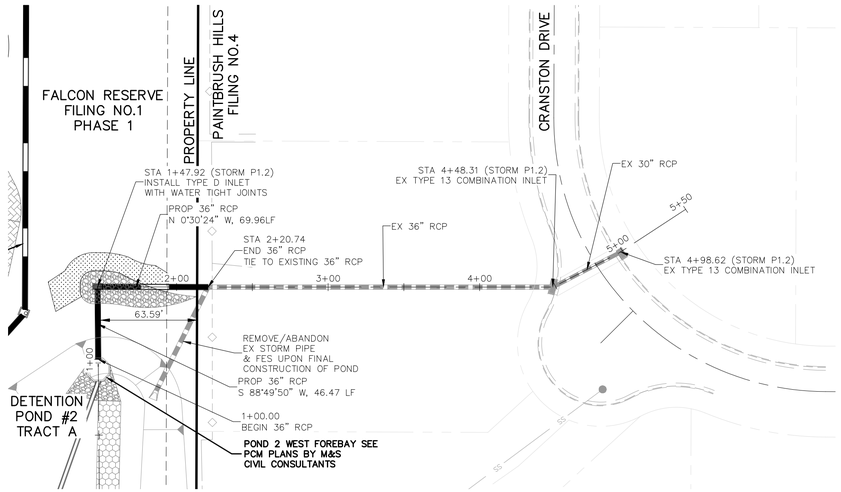
NO.	DATE:	BY:	DESCRIPTION:	APPV'D. BY:	DATE:

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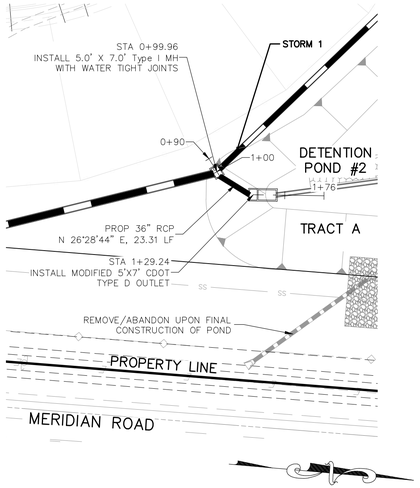
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CAUTION

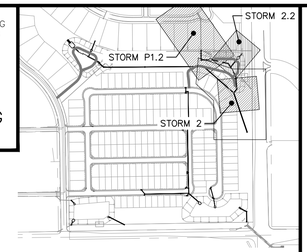
File: C:\43144A-Falcon Reserve\Landfluris\Dwg\Const Dwg\Storm\Phase 1 - Ponds\43144-ST04.dwg Plotstamp: 8/28/2026 1:57 PM



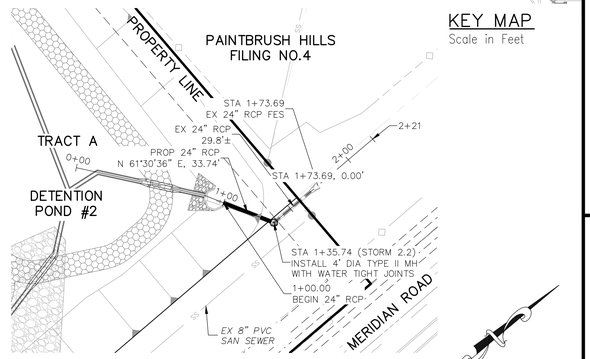
STORM P1.2 - PLAN VIEW
STA 1+00.00 TO STA 2+30.53



STORM 2 - PLAN VIEW
STA 1+00.00 TO STA 1+57.37

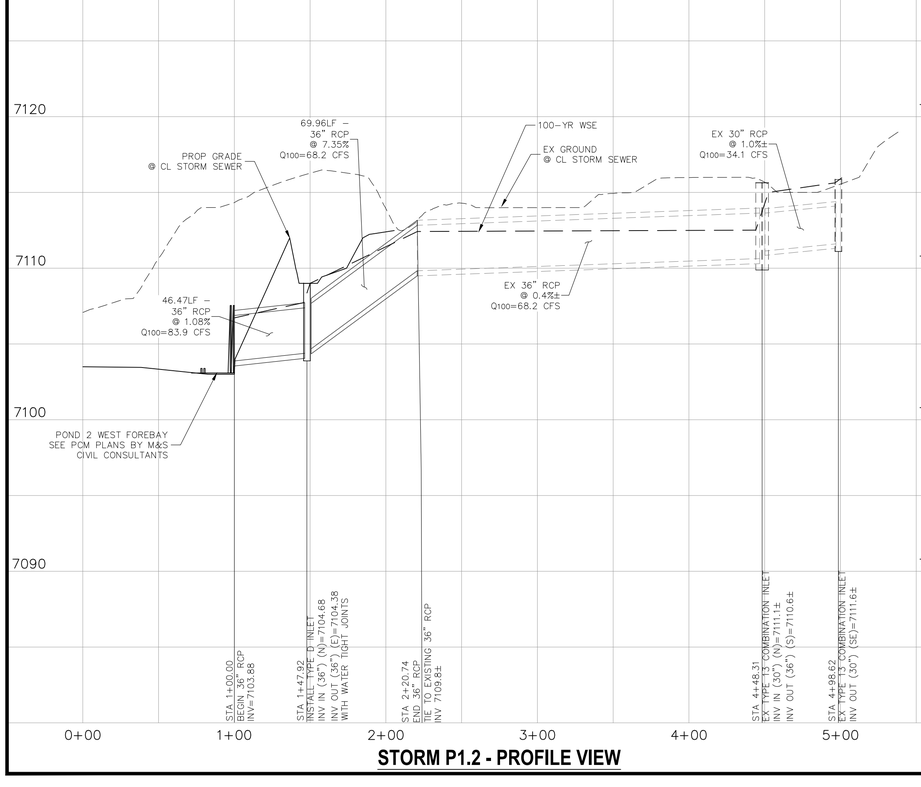


KEY MAP
Scale in Feet

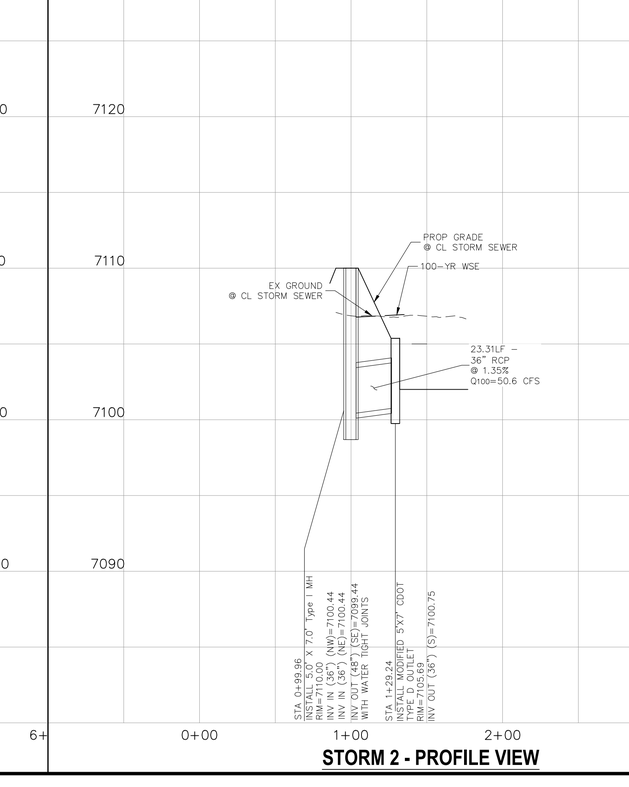


1" = 50'
0 25 50 100
Scale in Feet

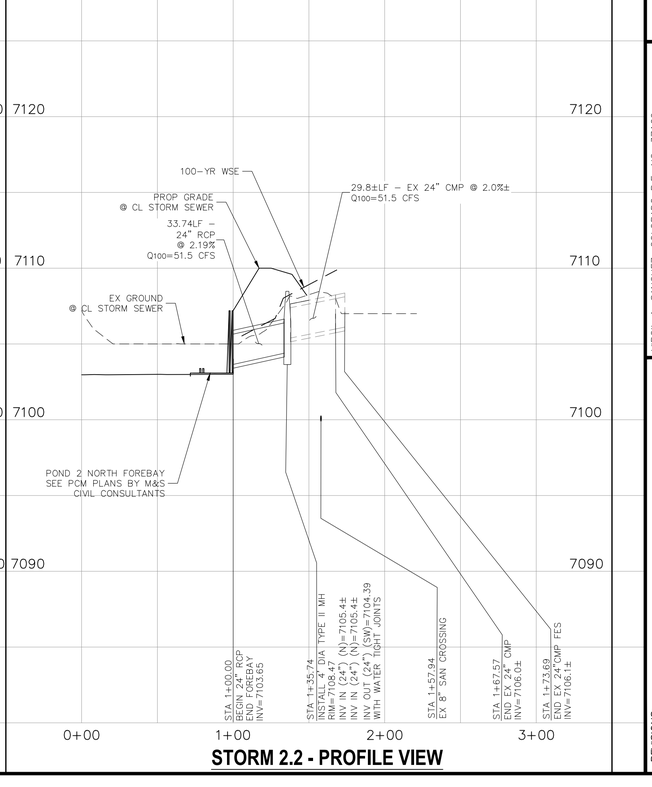
STORM 2.2 - PLAN VIEW
STA 1+00.00 TO STA 1+29.78



STORM P1.2 - PROFILE VIEW



STORM 2 - PROFILE VIEW



STORM 2.2 - PROFILE VIEW

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FALCON RESERVE PONDS
STORM P1.2, 2, & 2.2 PLAN & PROFILE

PROJECT NO. 43-144A
SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'
DATE: 08/12/2026
SHEET 5 OF 20
STM04

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

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COLORADO SPRINGS, CO 80903
PHONE: 719.955.5485

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

COLORADO REGISTERED 37160 PROFESSIONAL ENGINEER
VIRGIL A. SANCHEZ
08/28/26

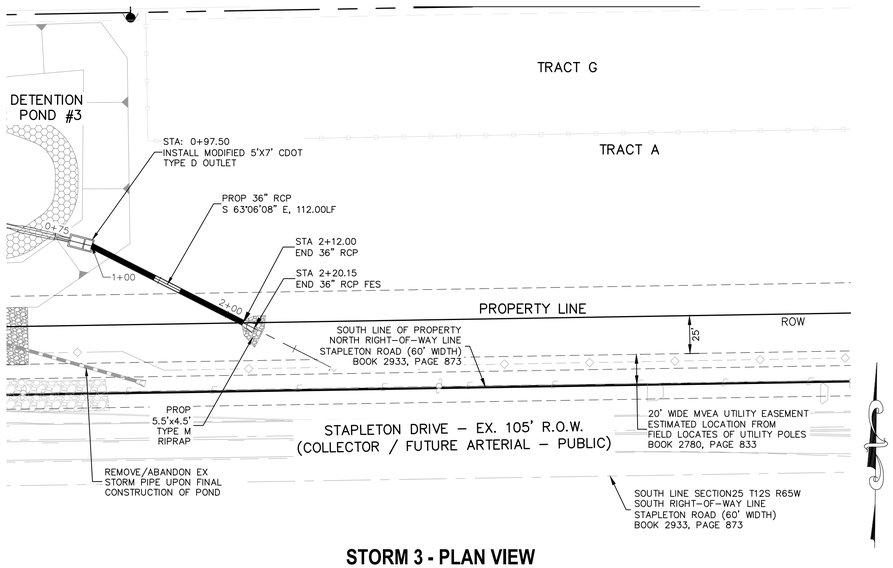
REVISIONS:

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

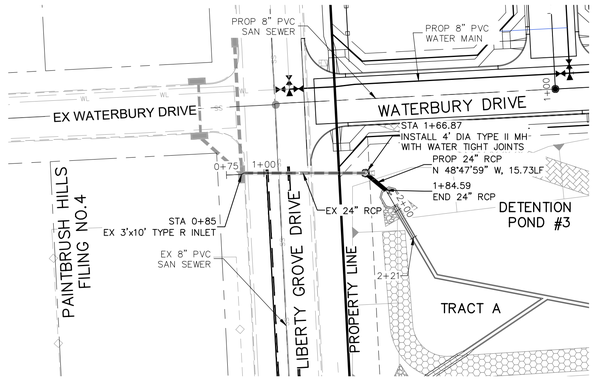
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CAUTION

File: O:\43144A-Falcon Reserve\Landfluris\Dwg\Const Dwg\Storm\Phase 1 - Ponds\43144-ST05.dwg Plotstamp: 8/28/2026 1:57 PM

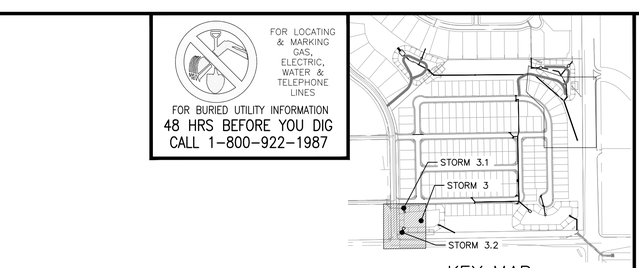


STORM 3 - PLAN VIEW
STA 0+97.50 TO STA 2+20.15

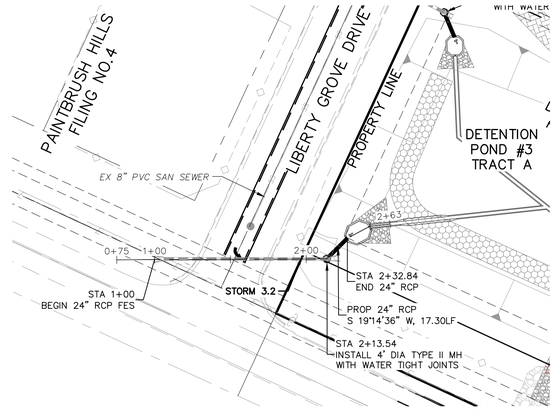


STORM 3.1 - PLAN VIEW
STA 0+85.00 TO STA 1+84.59

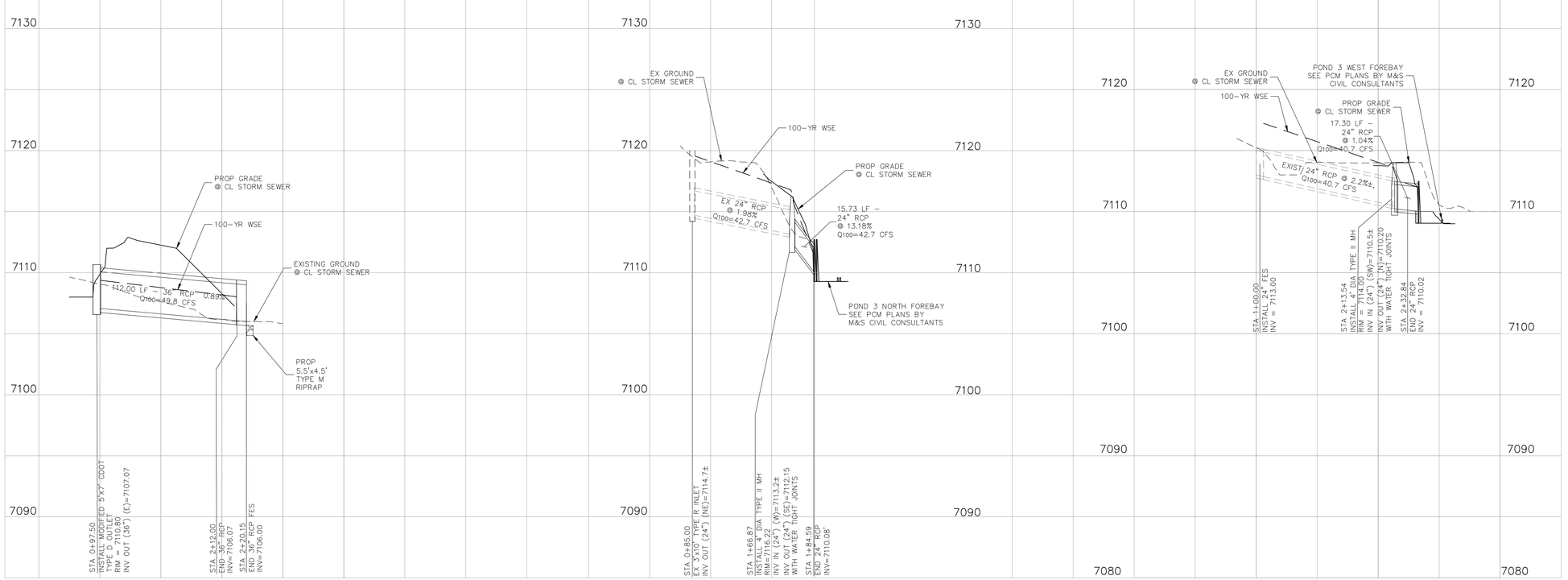
1" = 50'
0 25 50 100
Scale in Feet



KEY MAP
Scale in Feet



STORM 3.2 - PLAN VIEW
STA 1+00.00 TO STA 2+32.84



STORM 3 - PROFILE VIEW

STORM 3.1 - PROFILE VIEW

STORM 3.2 - PROFILE VIEW

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FALCON RESERVE PONDS
STORM 3, 3.1, & 3.2 PLAN & PROFILE

PROJECT NO. 43-144A
DATE: 08/12/2026
SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'
SHEET 6 OF 20
STM05
DESIGNED BY: GT
DRAWN BY: GT
CHECKED BY: VAS

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FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.
VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160
STATE OF COLORADO REGISTERED PROFESSIONAL ENGINEER VIRGIL A. SANCHEZ 37160
08/28/26

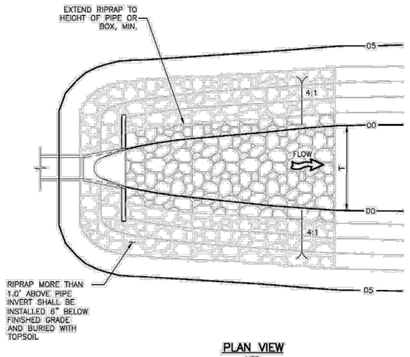
REVISIONS:

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

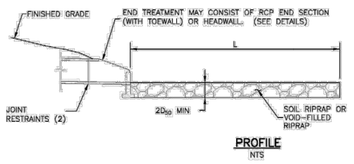
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CAUTION

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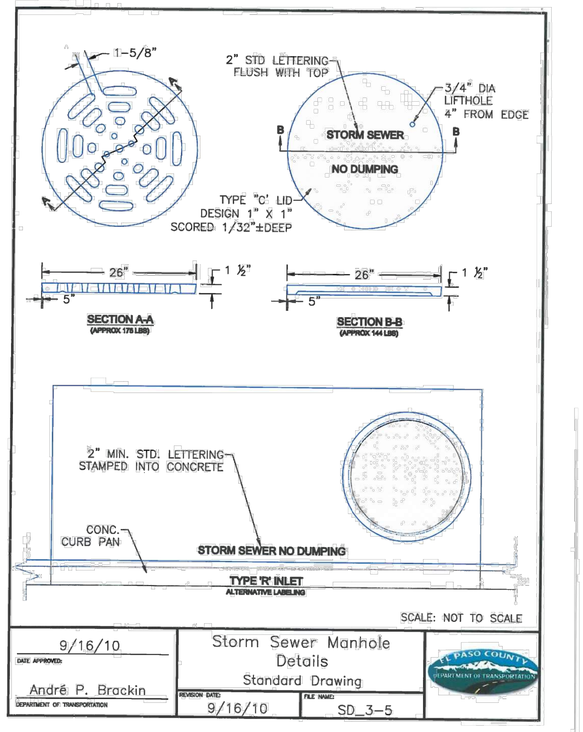


PLAN VIEW
NTS



PROFILE
NTS

Figure 9-34. Riprap apron detail for culverts in-line with the channel



STORM SEWER GENERAL NOTES

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

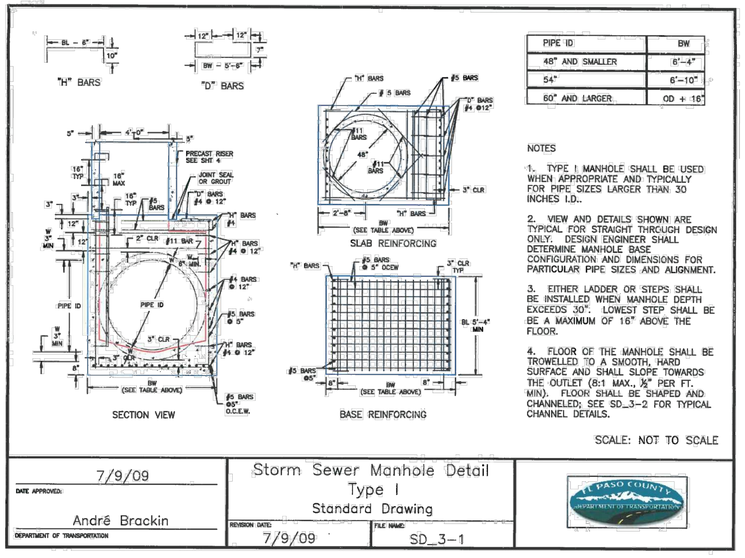
STRUCTURAL CONCRETE NOTES:

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

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

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

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



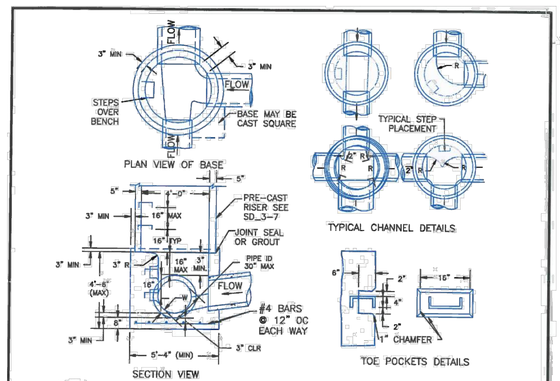
PIPE ID	BW
48" AND SMALLER	6'-4"
54"	6'-10"
60" AND LARGER	OD + 16"

NOTES

1. TYPE I MANHOLE SHALL BE USED WHEN APPROPRIATE AND TYPICALLY FOR PIPE SIZES LARGER THAN 30 INCHES I.D..
2. VIEW AND DETAILS SHOWN ARE TYPICAL FOR STRAIGHT THROUGH DESIGN ONLY. DESIGN ENGINEER SHALL DETERMINE MANHOLE BASE CONFIGURATION AND DIMENSIONS FOR PARTICULAR PIPE SIZES AND ALIGNMENT.
3. EITHER LADDER OR STEPS SHALL BE INSTALLED WHEN MANHOLE DEPTH EXCEEDS 30". LOWEST STEP SHALL BE BE A MAXIMUM OF 16" ABOVE THE FLOOR.
4. FLOOR OF THE MANHOLE SHALL BE TROWELLED TO A SMOOTH, HARD SURFACE AND SHALL SLOPE TOWARDS THE OUTLET (8:1 MAX., ½" PER FT. MIN). FLOOR SHALL BE SHAPED AND CHANNELED; SEE SD_3-2 FOR TYPICAL CHANNEL DETAILS.

SCALE: NOT TO SCALE

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

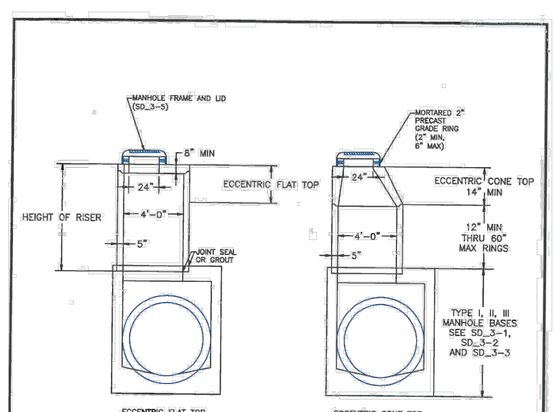


NOTES

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.

SCALE: NOT TO SCALE

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



NOTES

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

SCALE: NOT TO SCALE

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

FALCON RESERVE PONDS
STORM SEWER DETAILS
DATE: 08/12/2026
SHEET 7 OF 20
STM06
SCALE: HORIZONTAL: N/A VERTICAL: N/A
PROJECT NO. 43-144A
DESIGNED BY: GT
DRAWN BY: GT
CHECKED BY: VAS

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

VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.
COLORADO REGISTERED PROFESSIONAL ENGINEER 37160 08/28/26

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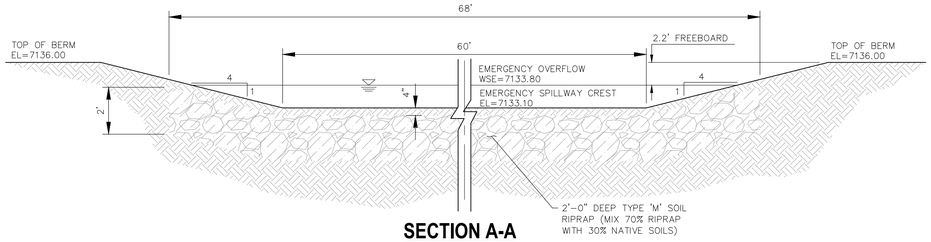
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NO.	DATE:	BY:	DESCRIPTION:	APPV'D. BY:	DATE:

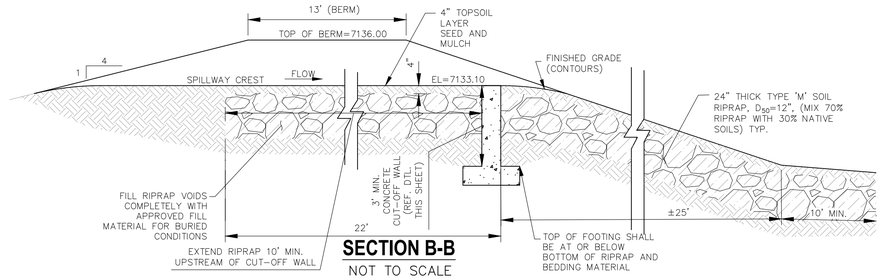
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CAUTION

File: C:\43144A-Falcon Reserve\Landfuels\Dwg\Const Dwg\Storm\Phase 1 - Ponds\43144-STM7.dwg Plotstamp: 8/28/2026 1:58 PM



SECTION A-A
NOT TO SCALE



SECTION B-B
NOT TO SCALE

LEGEND

EXT	EXISTING
FUT	FUTURE
PROP	PROPOSED

- PROP MAJ CONT
- PROP MIN CONT
- EXIST MAJ CONT
- EXIST MIN CONT
- 100 YR WATER SURFACE
- EURY WATER SURFACE
- EX RIPRAP
- PROP RIPRAP
- STABILZED MAINTENANCE ROAD ABOVE EURV
- STABILIZED MAINT. ROAD BELOW EURV
- CONC LOW FLOW CHANNEL
- EX. FLOW ARROW
- PROP. FLOW ARROW
- EMERGENCY OVERFLOW
- PROPERTY LINE
- PROP STORM SEWER PIPE
- EASEMENT LINE
- WARNING SIGN

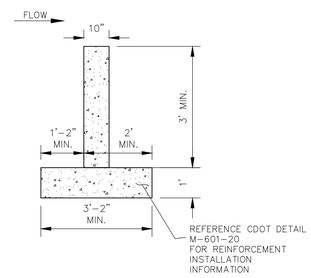
FULL SPECTRUM DETENTION POND, POND 1 (PRIVATE)	
WQ WATER SURFACE ELEV	7128.74
WQ VOLUME	1.003 AC-FT
EURV WATER SURFACE ELEV	7130.34
EURV VOLUME	2.213 AC-FT
100-YR WATER SURFACE ELEV	7132.91
100-YR VOLUME	4.624 AC-FT
SPILLWAY CREST ELEV	7133.10
TOP OF EMBANKMENT ELEV	7136.00
RATIONAL CALC 100-YR INFLOW	192.4 CFS
100-YR INFLOW	110.0 CFS
100-YR RELEASE	64.3 CFS

1" = 20'

0 10 20 40

Scale in Feet

PRIVATE FULL SPECTRUM DETENTION BASIN (POND 1)
SCALE: 1"=20'



POND CUTOFF WALL
NOT TO SCALE

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

FOR BURIED UTILITY INFORMATION
48 HRS BEFORE YOU DIG
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FALCON RESERVE PONDS

POND 1 OVERALL PLAN

PROJECT NO. 43-144A | SCALE: HORIZONTAL: 1"=20' VERTICAL: N/A | DATE: 08/12/2026 | SHEET 8 OF 20 | PCM01

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

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

CIVIL CONSULTANTS, INC.

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

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

COLORADO REGISTERED VIRGIL A. SANCHEZ 37160 08/28/26 PROFESSIONAL ENGINEER

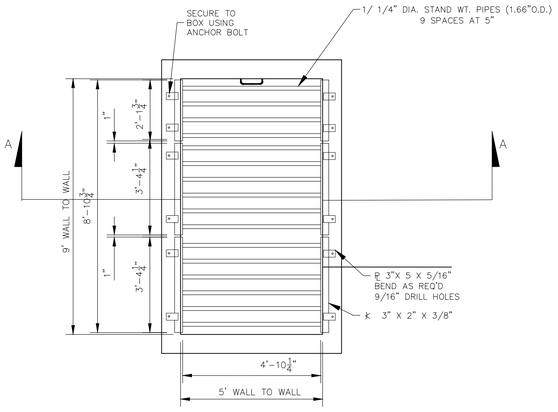
REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APPRVD. BY:	DATE:

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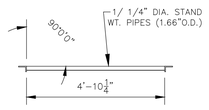
CAUTION

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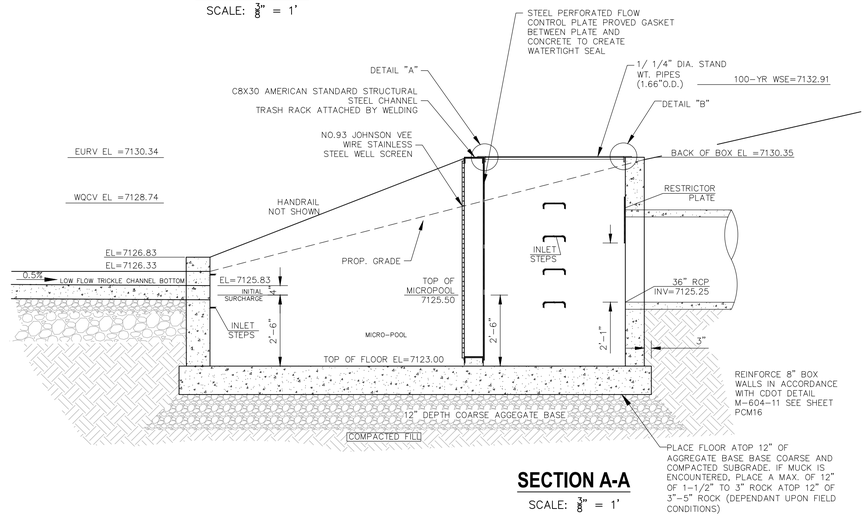
GRATE PLAN

SCALE: 3/8" = 1'



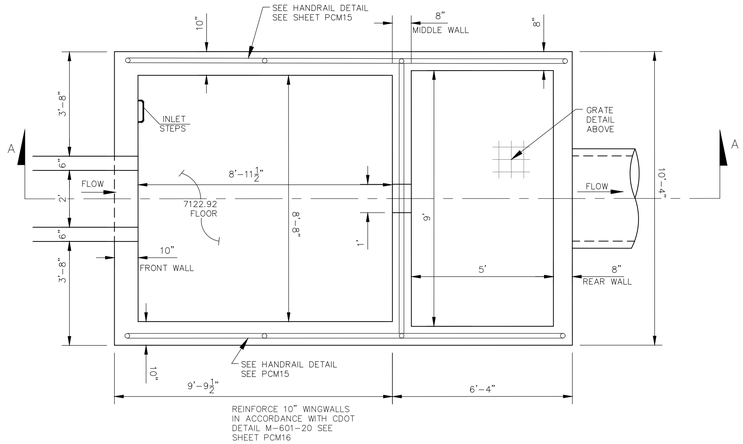
SECTION

SCALE: 3/8" = 1'



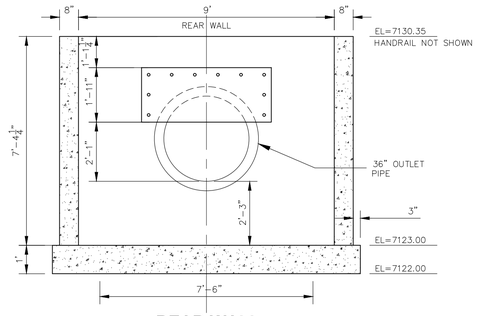
SECTION A-A

SCALE: 3/8" = 1'



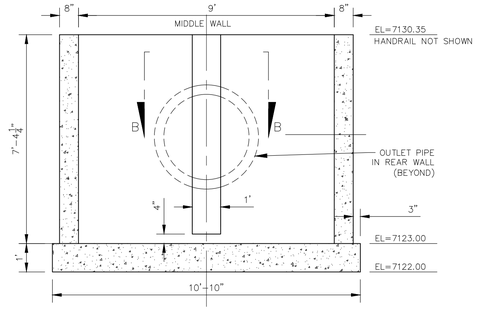
POND 1 WATER QUALITY OUTLET STRUCTURE

SCALE: 3/8" = 1'



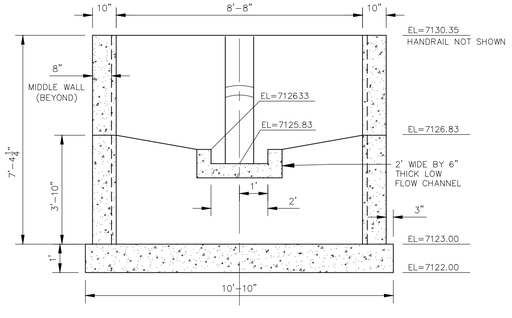
REAR WALL

SCALE: 3/8" = 1'



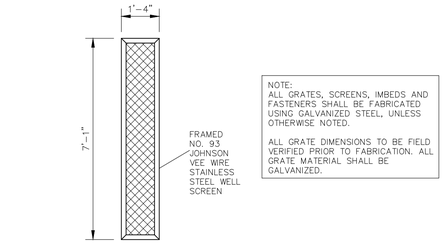
MIDDLE WALL

SCALE: 3/8" = 1'



FRONT WALL

SCALE: 3/8" = 1'

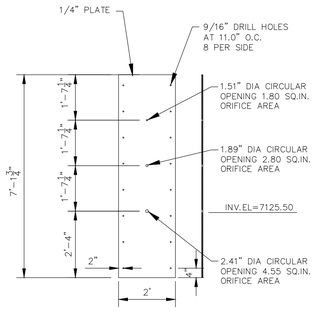


NOTE:
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ALL GRATE DIMENSIONS TO BE FIELD VERIFIED PRIOR TO FABRICATION. ALL GRATE MATERIAL SHALL BE GALVANIZED.

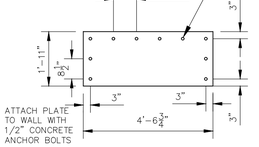
TRASH SCREEN DETAIL

SCALE: 3/8" = 1'



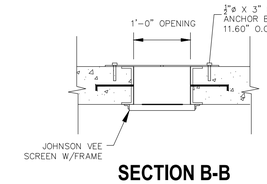
ORIFICE PLATE

SCALE: 3/8" = 1'



RESTRICTOR PLATE

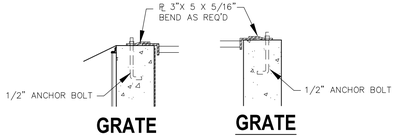
SCALE: 3/8" = 1'



SECTION B-B

SCALE: 3/16" = 1'

NOTE:
CENTER ORIFICE PLATE AND TRASH SCREEN HORIZONTALLY ACROSS 1'-0" OPENING IN STRUCTURE



GRATE DETAIL "A"

GRATE DETAIL "B"

FALCON RESERVE PONDS

POND 1 OUTLET STRUCTURE DETAILS

PROJECT NO. 43-144A | SCALE: HORIZONTAL: N/A VERTICAL: N/A | DATE: 08/12/2026 | SHEET 9 OF 20 | PCM02

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

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

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

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

REGISTERED PROFESSIONAL ENGINEER 37160 08/28/26

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APPRVD. BY:	DATE:

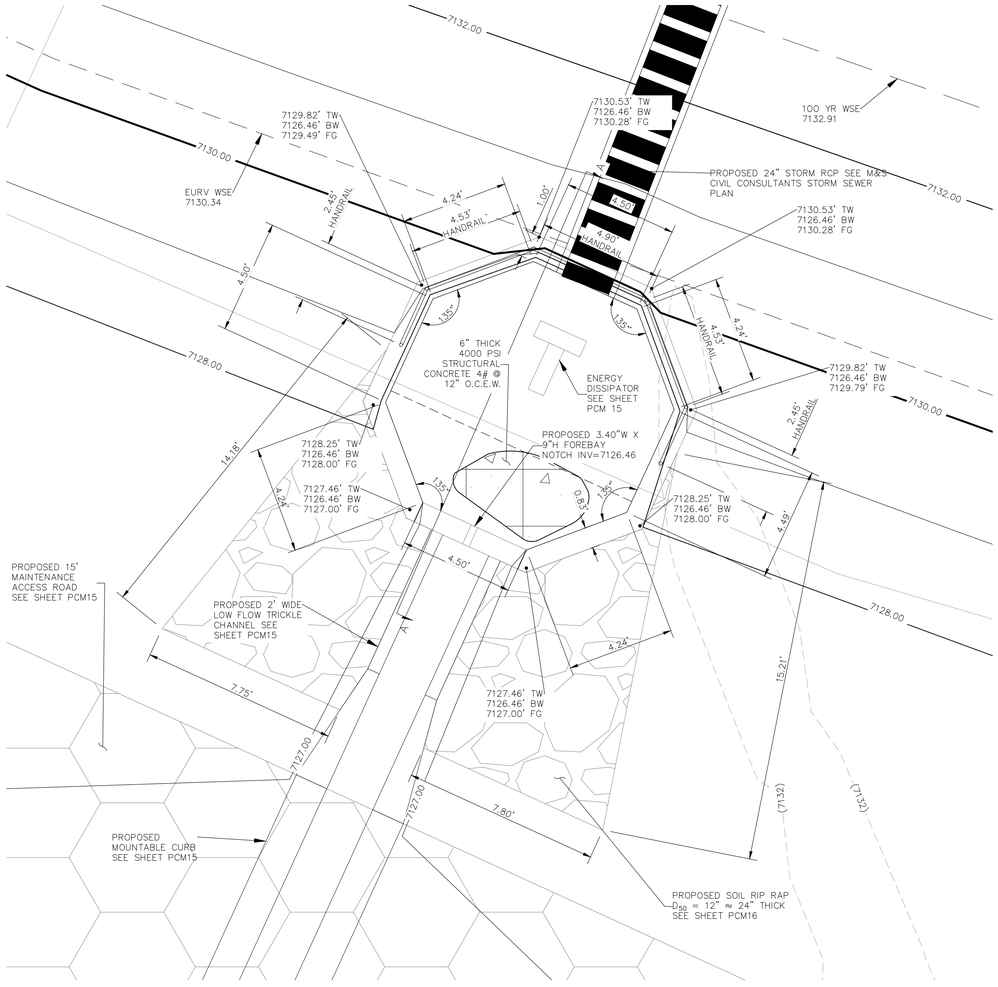
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CAUTION

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

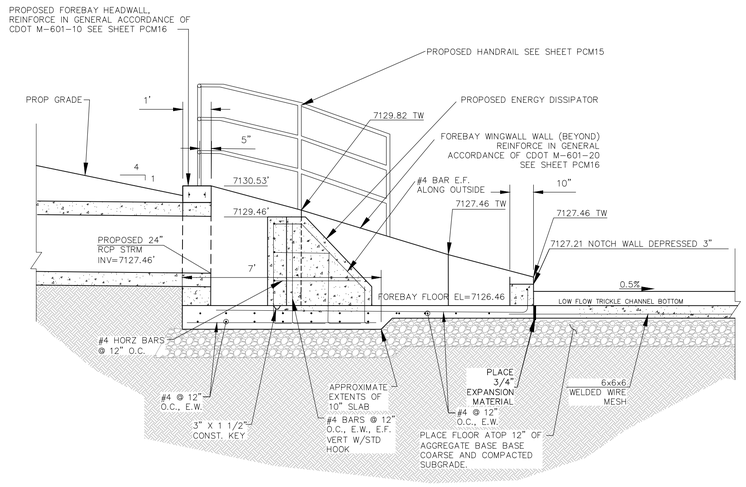
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File: O:\43144A-Falcon Reserve\Landfluis\Dwg\Const Dwg\PCM\Phase 1 - Ponds\43144-PCM-02.dwg Plotstamp: 8/28/2026 1:59 PM



POND 1 NORTH FOREBAY PLAN

SCALE: 1" = 3'



POND 1 NORTH FOREBAY CROSS SECTION A-A

SCALE: 3/8" = 1'

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

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FALCON RESERVE PONDS

POND 1 NORTH FOREBAY

PROJECT NO. 43-144A | SCALE: HORIZONTAL: N/A VERTICAL: N/A | DATE: 08/12/2026 | SHEET 10 OF 20 | PCM03

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

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

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COLORADO REGISTERED VIRGIL A. SANCHEZ 37160 08/28/26 PROFESSIONAL ENGINEER

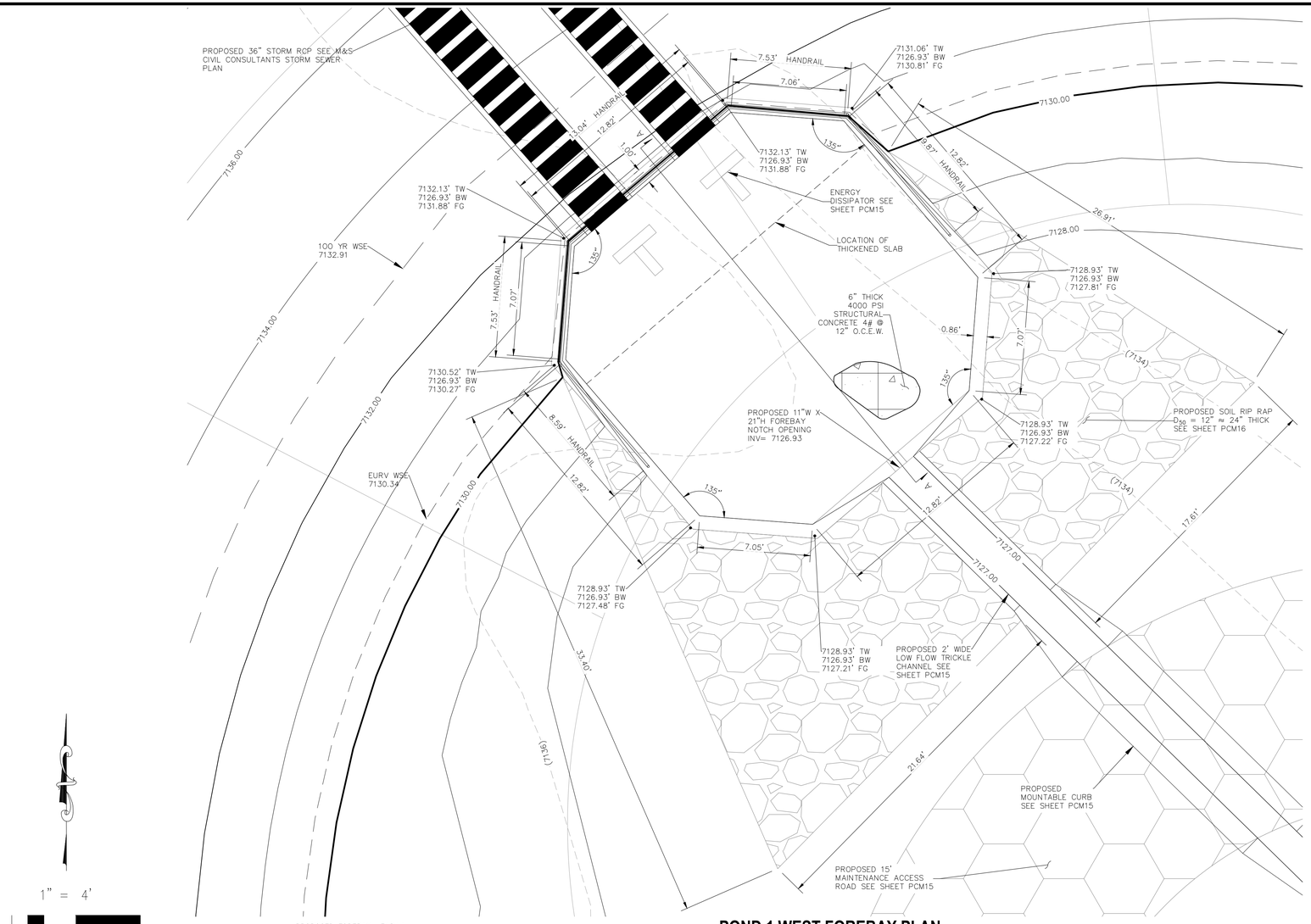
REVISIONS:

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

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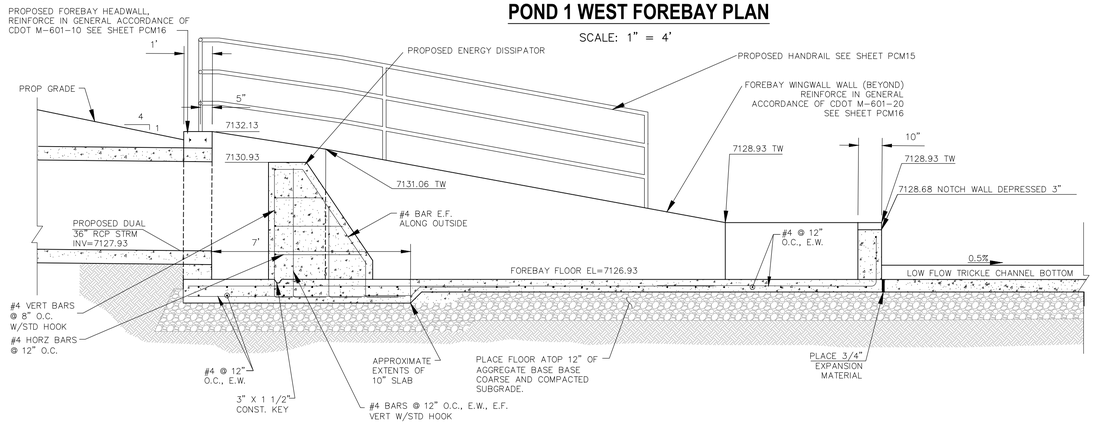
POND 1 WEST FOREBAY PLAN

SCALE: 1" = 4'

1" = 4'

0 2 4 8

Scale in Feet



POND 1 WEST FOREBAY CROSS SECTION A-A

SCALE: 3/8" = 1'

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FOR BURIED UTILITY INFORMATION
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CALL 1-800-922-1987

File: O:\43144A-Falcon Reserve\Landhus\Dwg\Const Dwg\POM\Phase 1 - Ponds\43144-POM-04.DWG Plotstamp: 8/28/2026 2:00 PM

FALCON RESERVE PONDS

POND 1 WEST FOREBAY

PROJECT NO. 43-144A
DESIGNED BY: GT
DRAWN BY: GT
CHECKED BY: VAS

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

DATE: 08/12/2026

SHEET 11 OF 20

PCM04

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COLORADO SPRINGS, CO 80903
PHONE: 719.955.5485

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

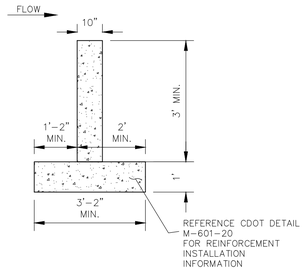
REGISTERED PROFESSIONAL ENGINEER 37160 08/28/26

REVISIONS:

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

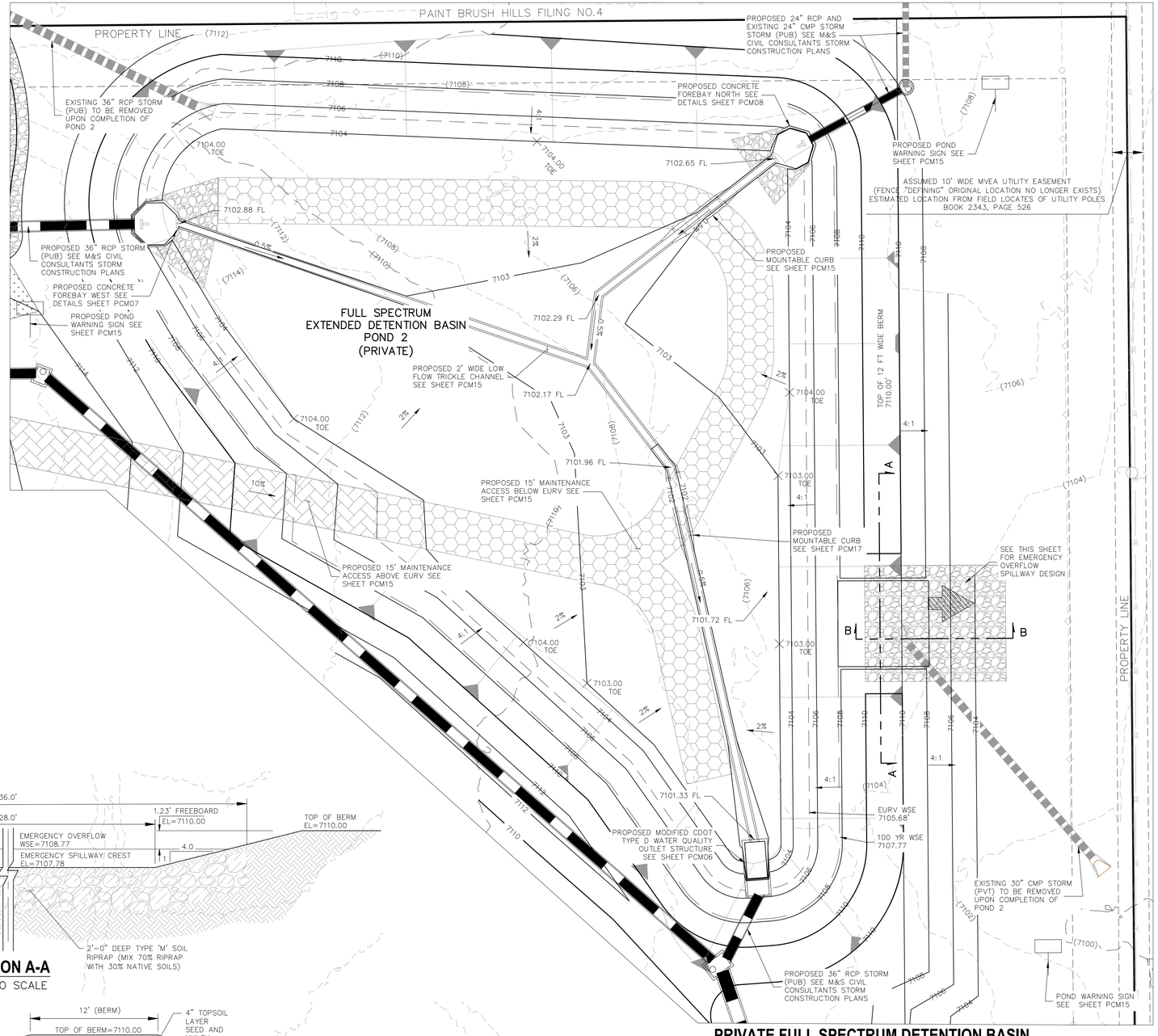
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CAUTION



POND CUTOFF WALL

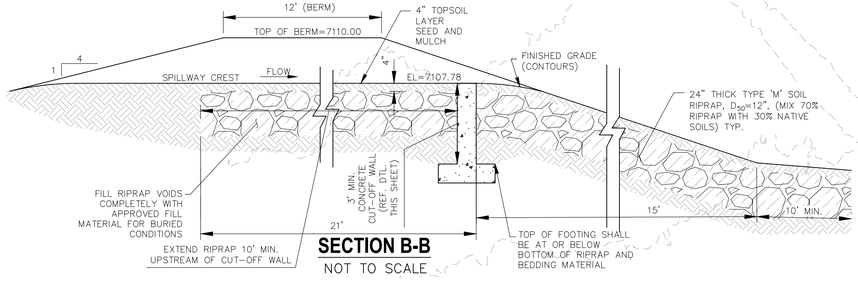
NOT TO SCALE



PRIVATE FULL SPECTRUM DETENTION BASIN (POND 2)

SECTION A-A

NOT TO SCALE



SECTION B-B

NOT TO SCALE

FULL SPECTRUM DETENTION POND, POND 2 (PRIVATE)	
EPC/URBAN DRAINAGE EDB	
WQ WATER SURFACE ELEV	7104.22
WQ VOLUME	0.780 AC-FT
EURV WATER SURFACE ELEV	7105.68
EURV VOLUME	1.897 AC-FT
100-YR WATER SURFACE ELEV	7107.77
100-YR VOLUME	3.772 AC-FT
SPILLWAY CREST ELEV	7107.78
TOP OF EMBANKMENT ELEV	7110.00
CALC 100-YR INFLOW	130.3 CFS
100-YR INFLOW	92.2 CFS
100-YR RELEASE	50.6 CFS

1" = 20'

0 10 20 40

Scale in Feet

LEGEND

EXT	EXISTING
FUT	FUTURE
PROP	PROPOSED
	PROP MAJ CONT
	PROP MIN CONT
	EXIST MAJ CONT
	EXIST MIN CONT
	100 YR WATER SURFACE
	EURY WATER SURFACE
	EX RIPRAP
	PROP RIPRAP
	STABILZED MAINTENANCE ROAD ABOVE EURV
	STABILIZED MAINT. ROAD BELOW EURV
	CONC LOW FLOW CHANNEL
	EX. FLOW ARROW
	PROP. FLOW ARROW
	EMERGENCY OVERFLOW
	PROPERTY LINE
	PROP STORM SEWER PIPE
	EASEMENT LINE
	WARNING SIGN

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FALCON RESERVE PONDS

POND 2 OVERALL PLAN

PROJECT NO. 43-144A | SCALE: HORIZONTAL: 1"=20' VERTICAL: N/A | DATE: 08/12/2026 | SHEET 12 OF 20 | PCM05

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

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

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

COLORADO REGISTERED 37160 PROFESSIONAL ENGINEER 08/28/26

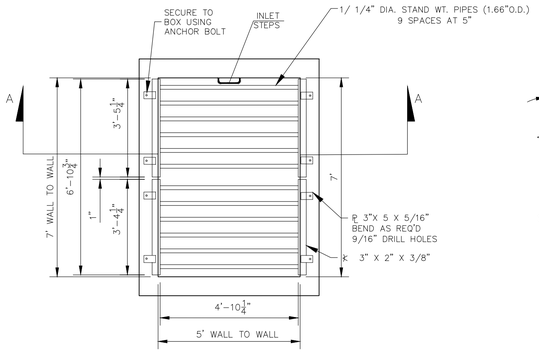
REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APPRVD. BY:	DATE:

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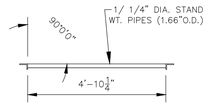
CAUTION

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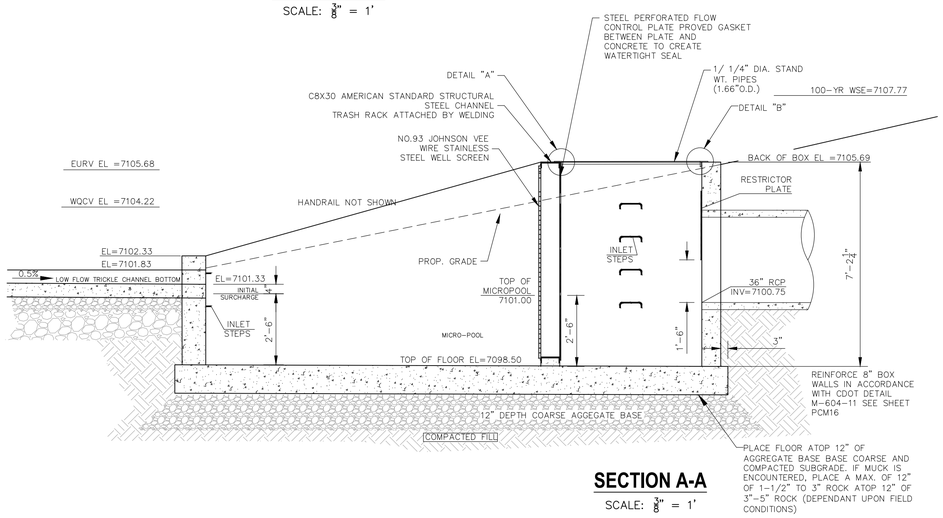
GRATE PLAN

SCALE: 3/8" = 1'



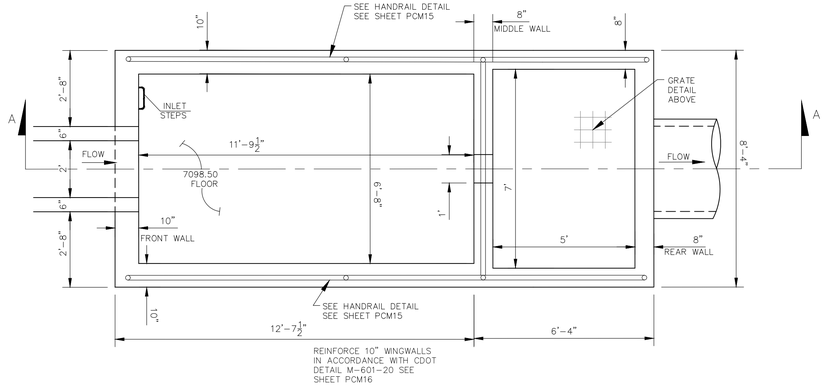
SECTION

SCALE: 3/8" = 1'



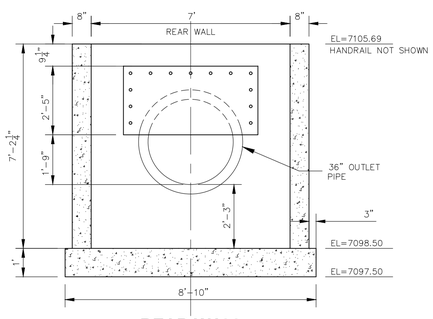
SECTION A-A

SCALE: 3/8" = 1'



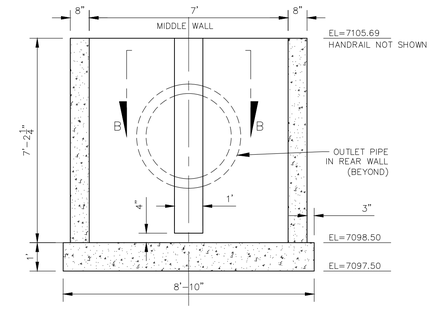
POND 2 WATER QUALITY OUTLET STRUCTURE

SCALE: 3/8" = 1'



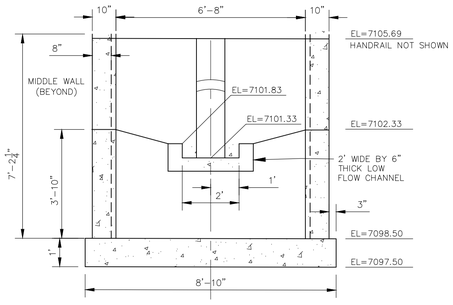
REAR WALL

SCALE: 3/8" = 1'



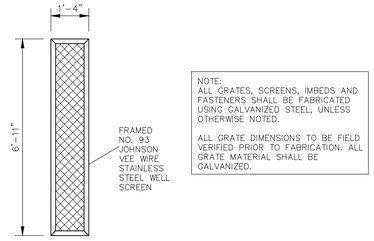
MIDDLE WALL

SCALE: 3/8" = 1'



FRONT WALL

SCALE: 3/8" = 1'

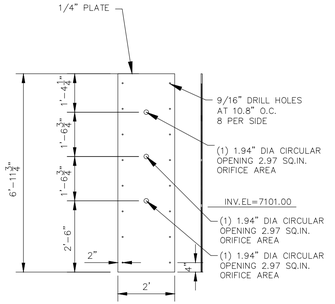


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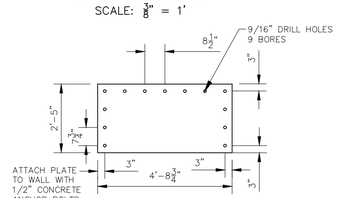
TRASH SCREEN DETAIL

SCALE: 3/8" = 1'



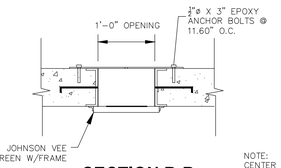
ORIFICE PLATE

SCALE: 3/8" = 1'



RESTRICTOR PLATE

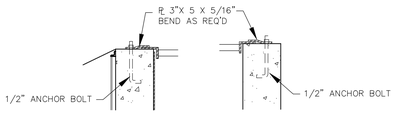
SCALE: 3/8" = 1'



SECTION B-B

SCALE: 3/16" = 1'

NOTE:
CENTER ORIFICE PLATE AND TRASH SCREEN HORIZONTALLY ACROSS 1'-0" OPENING IN STRUCTURE



GRATE DETAIL "A"

GRATE DETAIL "B"

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

FOR BURIED UTILITY INFORMATION
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FALCON RESERVE PONDS

POND 2 OUTLET STRUCTURE DETAILS

PROJECT NO. 43-144A | SCALE: HORIZONTAL: N/A VERTICAL: N/A | DATE: 08/12/2026 | SHEET 13 OF 20 | PCM06

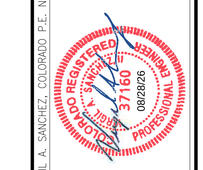
DESIGNED BY: GT
DRAWN BY: GT
CHECKED BY: VAS

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

CIVIL CONSULTANTS, INC.

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

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



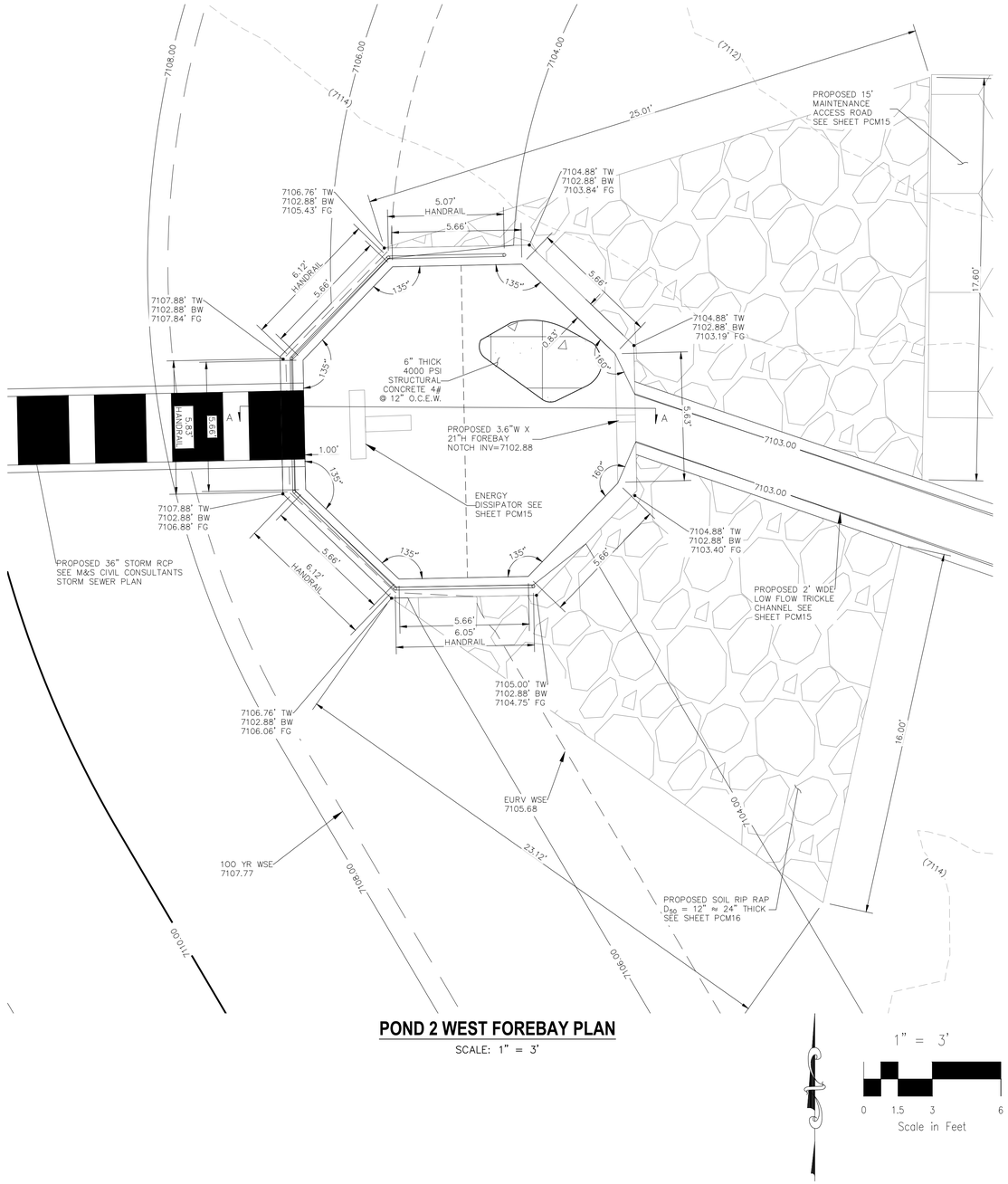
REVISIONS:

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

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CAUTION

File: Q:\43144A-Falcon Reserve\Landhuis\Dwg\Const Dwg\PCM\Phase 1 - Ponds\43144-PCM-06.dwg Plotstamp: 8/28/2026 2:00 PM



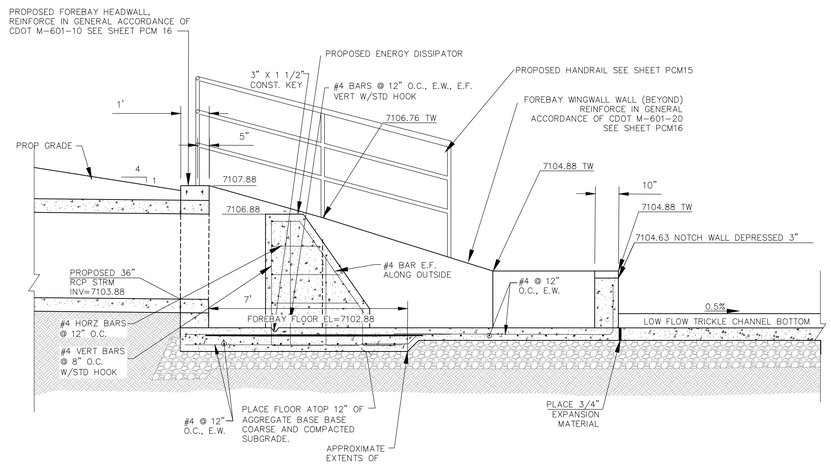
POND 2 WEST FOREBAY PLAN

SCALE: 1" = 3'

1" = 3'

0 1.5 3 6

Scale in Feet



POND 2 WEST FOREBAY CROSS SECTION A-A

SCALE: 3/8" = 1'

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File: O:\43144A-Falcon Reserve\Landfuis\Dwg\Const Dwg\PCM\Phase 1 - Ponds\43144-PCM-07.DWG Plotstamp: 8/28/2026 2:01 PM

FALCON RESERVE PONDS

POND 2 WEST FOREBAY

PROJECT NO. 43-144A
DESIGNED BY: GT
DRAWN BY: GT
CHECKED BY: VAS
SCALE: HORIZONTAL: N/A VERTICAL: N/A
DATE: 08/12/2026
SHEET 14 OF 20
PCM07

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PHONE: 719.955.5485

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

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

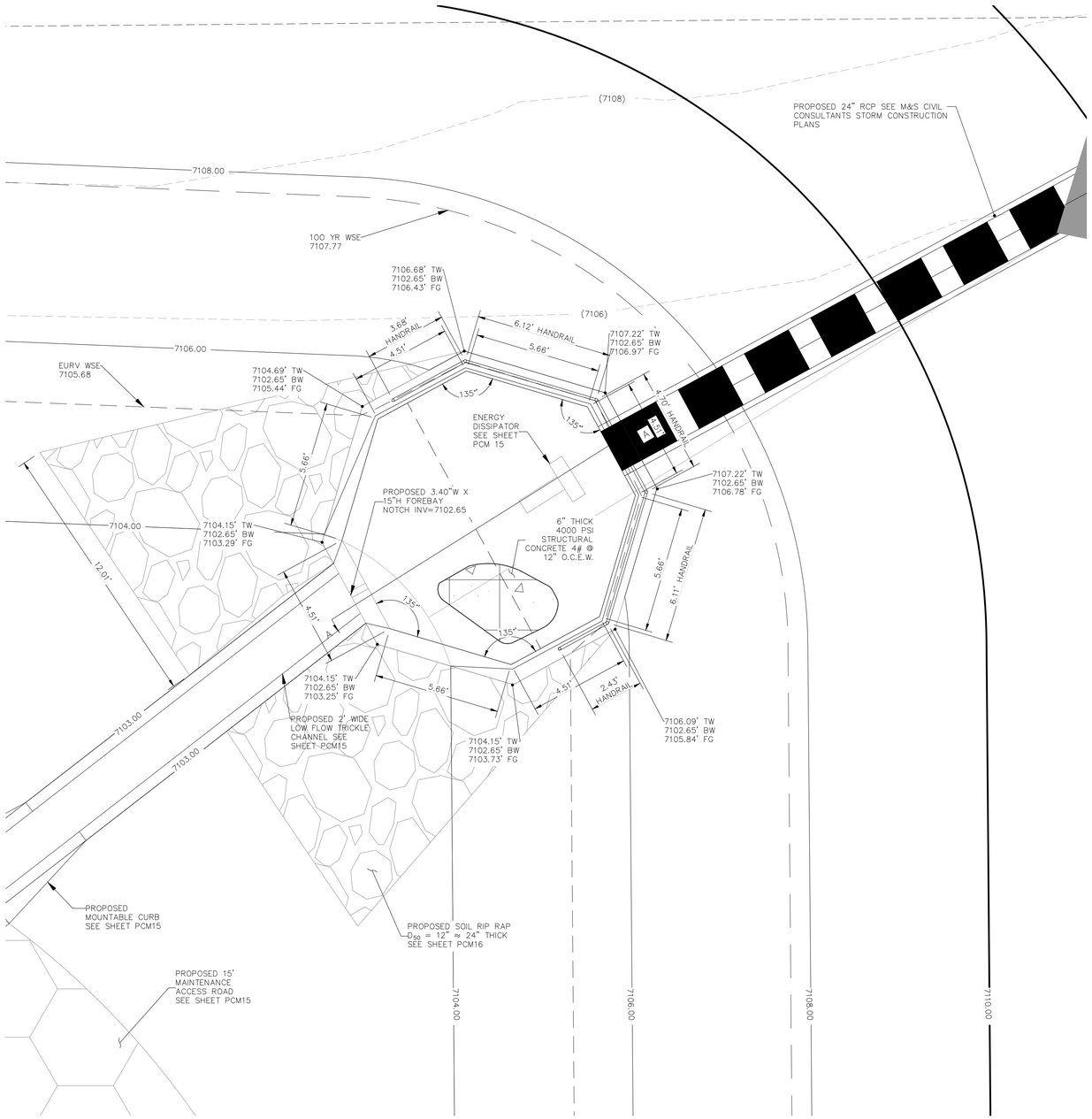
COLORADO REGISTERED PROFESSIONAL ENGINEER
VIRGIL A. SANCHEZ
37160
08/28/26

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APPRVD. BY:	DATE:

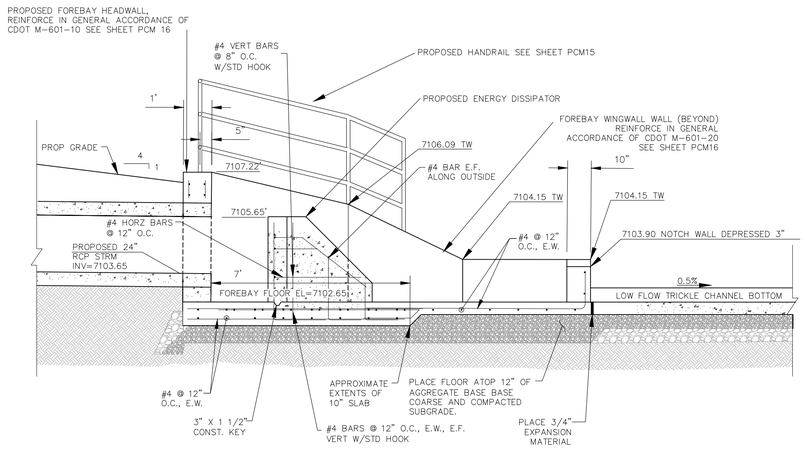
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CAUTION



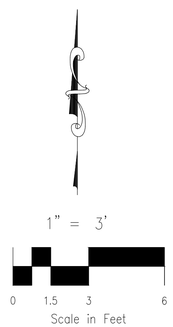
POND 2 NORTH FOREBAY PLAN

SCALE: 1" = 3'



POND 2 NORTH FOREBAY CROSS SECTION B-B

SCALE: 3/8" = 1'



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

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FALCON RESERVE PONDS

POND 2 NORTH FOREBAY

PROJECT NO. 43-144A | SCALE: HORIZONTAL: N/A VERTICAL: N/A | DATE: 08/12/2026 | SHEET 15 OF 20 | PCM08

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

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PHONE: 719.955.5485

CIVIL CONSULTANTS, INC.

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

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

REGISTERED PROFESSIONAL ENGINEER
COLORADO
VIRGIL A. SANCHEZ
37160
08/28/26

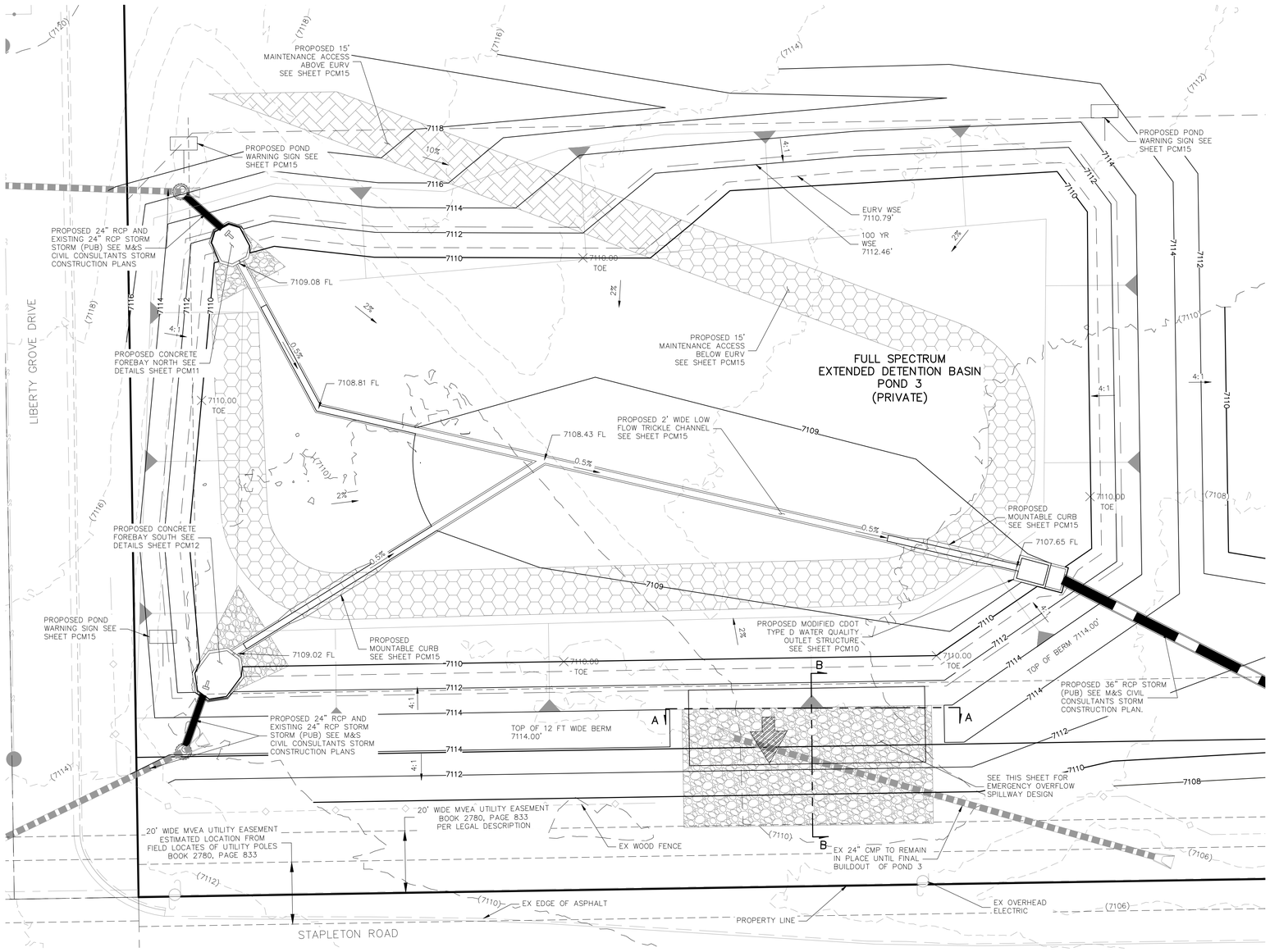
REVISIONS:

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

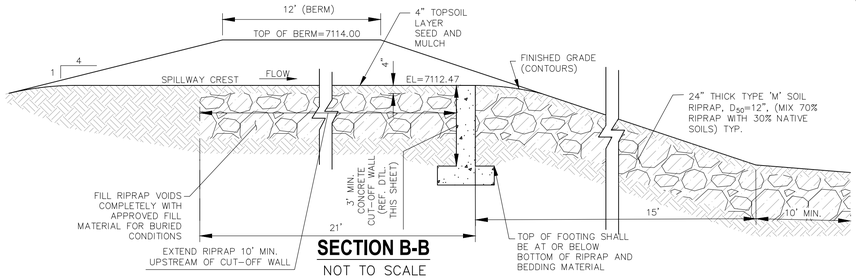
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CAUTION

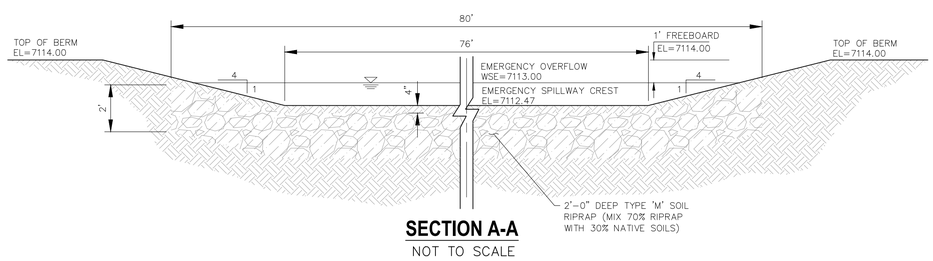
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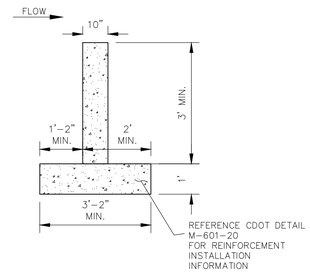
PRIVATE FULL SPECTRUMDETENTION BASIN (POND 3)



SECTION B-B
NOT TO SCALE



SECTION A-A
NOT TO SCALE



POND CUTOFF WALL
NOT TO SCALE

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

LEGEND

EXT	EXISTING
FUT	FUTURE
PROP	PROPOSED
	PROP MAJ CONT
	PROP MIN CONT
	EXIST MAJ CONT
	EXIST MIN CONT
	100 YR WATER SURFACE
	EURY WATER SURFACE
	EX RIPRAP
	PROP RIPRAP
	STABILZED MAINTENANCE ROAD ABOVE EURV
	STABILIZED MAINT. ROAD BELOW EURV
	CONC LOW FLOW CHANNEL
	EX. FLOW ARROW
	PROP. FLOW ARROW
	EMERGENCY OVERFLOW
	PROPERTY LINE
	PROP STORM SEWER PIPE
	EASEMENT LINE
	WARNING SIGN

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FALCON RESERVE PONDS
POND 3 OVERALL PLAN

PROJECT NO. 43-144A | SCALE: HORIZONTAL: 1"=20' VERTICAL: N/A | DATE: 08/12/2026 | SHEET 16 OF 20 | PCM09

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

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PHONE: 719.955.5485

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

COLORADO REGISTERED PROFESSIONAL ENGINEER 37160 08/28/26

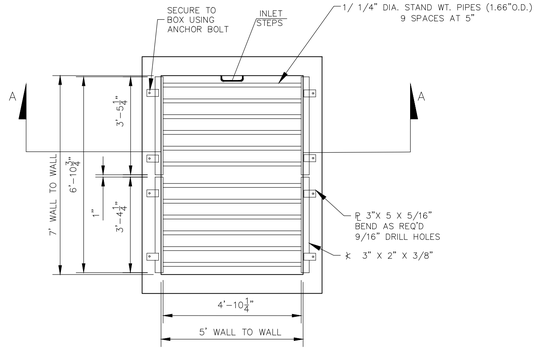
REVISIONS:

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

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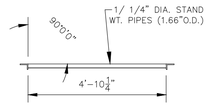
CAUTION

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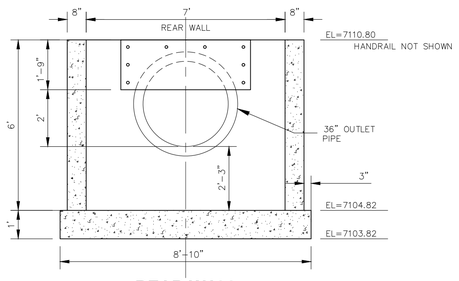
GRATE PLAN

SCALE: 3/8" = 1'



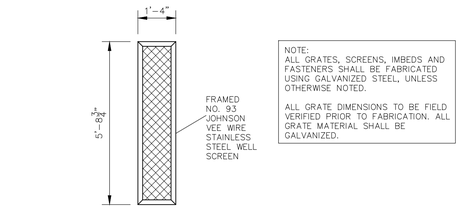
SECTION

SCALE: 3/8" = 1'



REAR WALL

SCALE: 3/8" = 1'

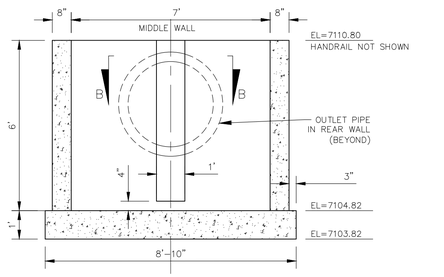


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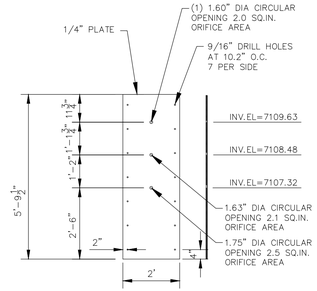
TRASH SCREEN DETAIL

SCALE: 3/8" = 1'



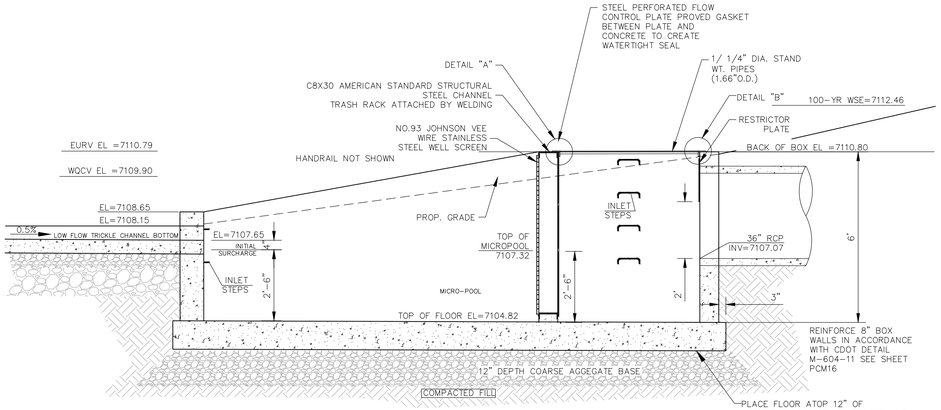
MIDDLE WALL

SCALE: 3/8" = 1'



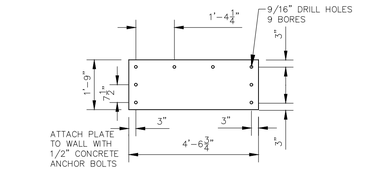
ORIFICE PLATE

SCALE: 3/8" = 1'



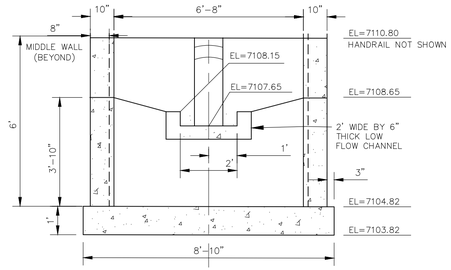
SECTION A-A

SCALE: 3/8" = 1'



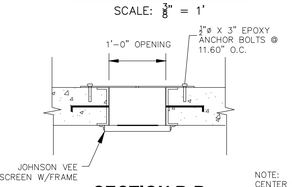
RESTRICTOR PLATE

SCALE: 3/8" = 1'



FRONT WALL

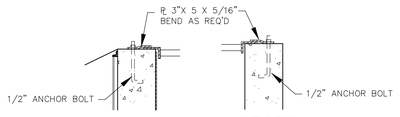
SCALE: 3/8" = 1'



NOTE:
CENTER ORIFICE PLATE AND TRASH SCREEN HORIZONTALLY ACROSS 1'-0" OPENING IN STRUCTURE

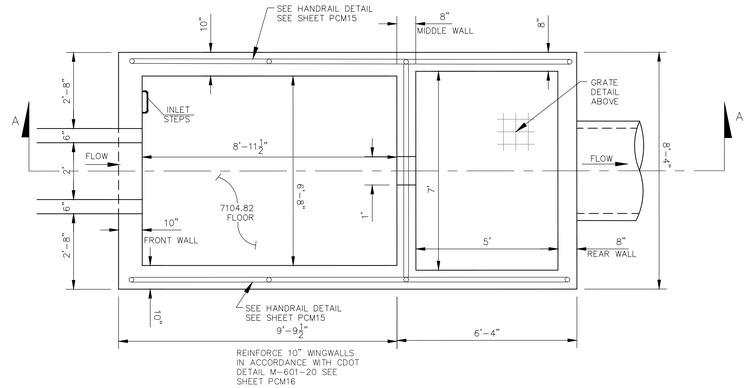
SECTION B-B

SCALE: 3/16" = 1'



GRATE DETAIL "A"

GRATE DETAIL "B"



POND 2 WATER QUALITY OUTLET STRUCTURE

SCALE: 3/8" = 1'

FALCON RESERVE PONDS

POND 3 OUTLET STRUCTURE DETAILS

PROJECT NO. 43-144A
DATE: 08/12/2026
SCALE: HORIZONTAL: N/A VERTICAL: N/A
DESIGNED BY: GT
DRAWN BY: GT
CHECKED BY: VAS
SHEET 17 OF 20
PCM10

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COLORADO SPRINGS, CO 80903
PHONE: 719.955.5485

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

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



REVISIONS:

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

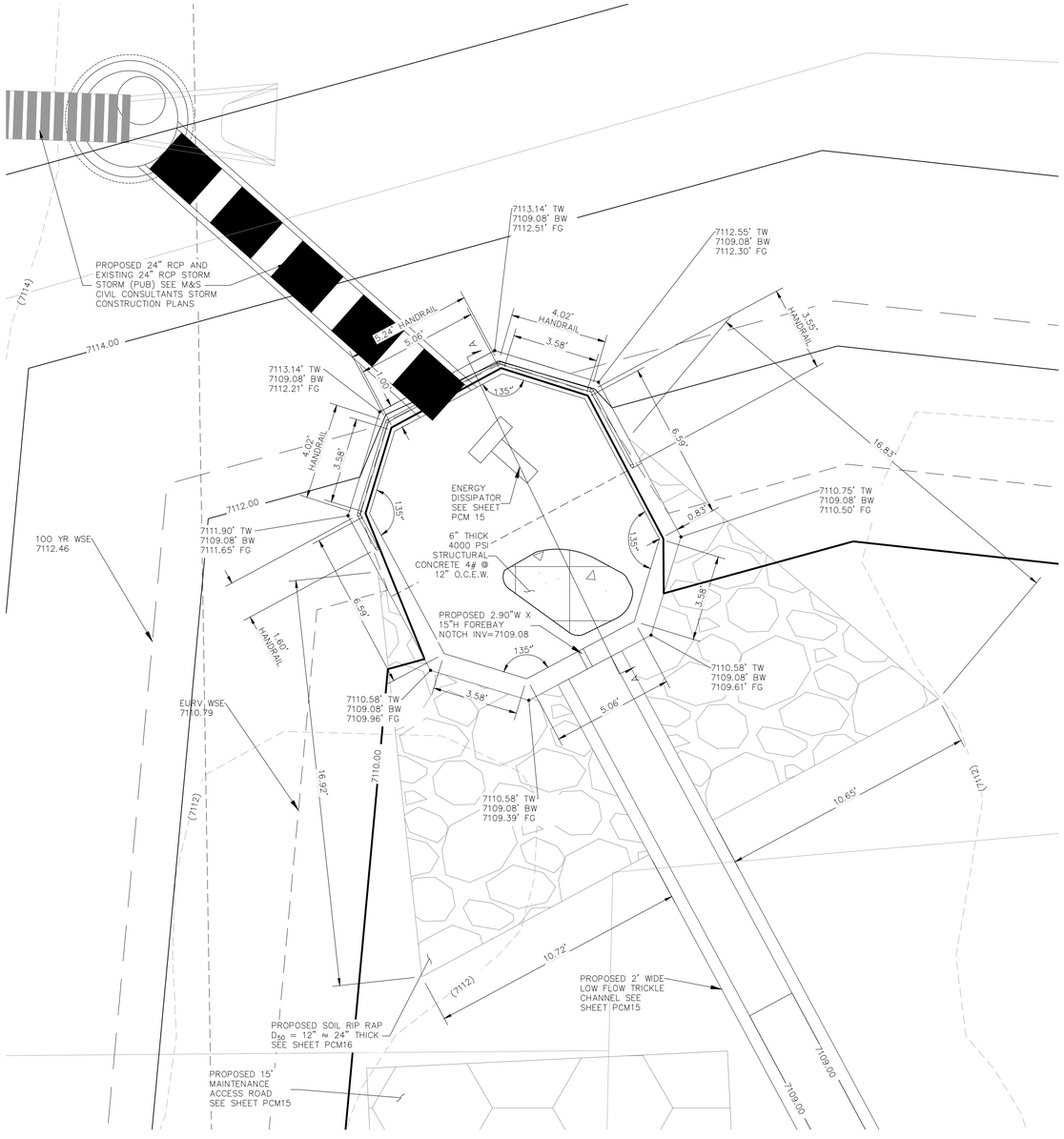
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CAUTION

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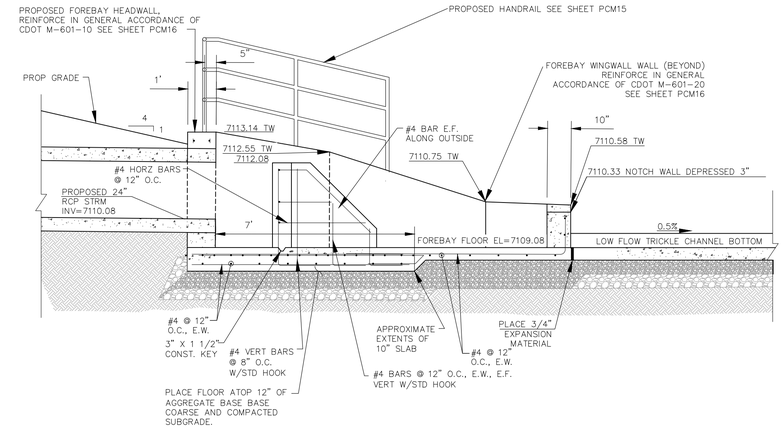
POND 3 NORTH FOREBAY PLAN

SCALE: 1" = 3'

1" = 3'

0 1.5 3 6

Scale in Feet



POND 3 NORTH FOREBAY CROSS SECTION A-A

SCALE: 3/8" = 1'

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FALCON RESERVE PONDS

POND 3 NORTH FOREBAY

PROJECT NO. 43-144A
DESIGNED BY: GT
DRAWN BY: GT
CHECKED BY: VAS
SCALE: HORIZONTAL: N/A VERTICAL: N/A
DATE: 08/12/2026
SHEET 18 OF 20
PCM11

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COLORADO SPRINGS, CO 80903
PHONE: 719.955.5485

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

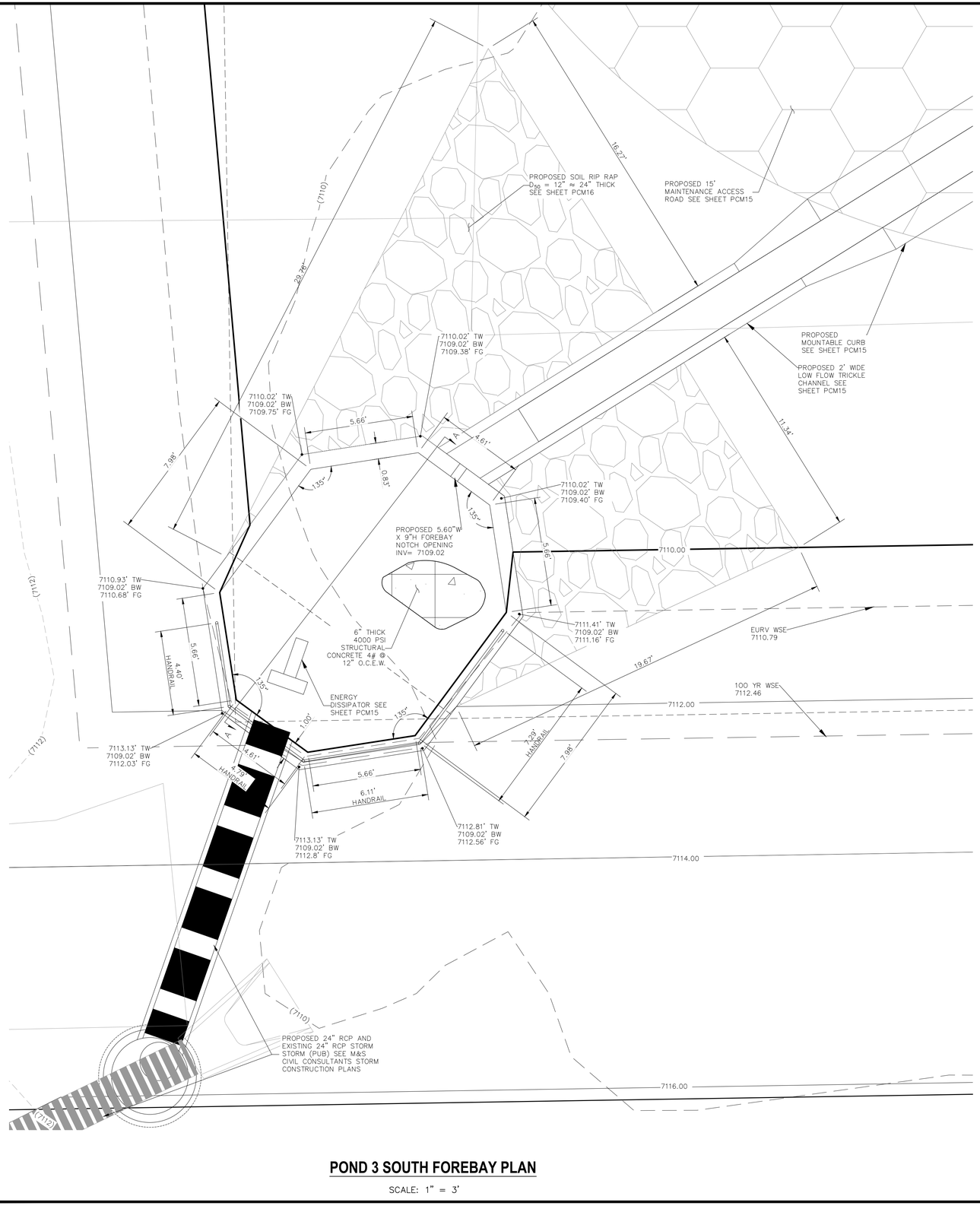


REVISIONS:

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

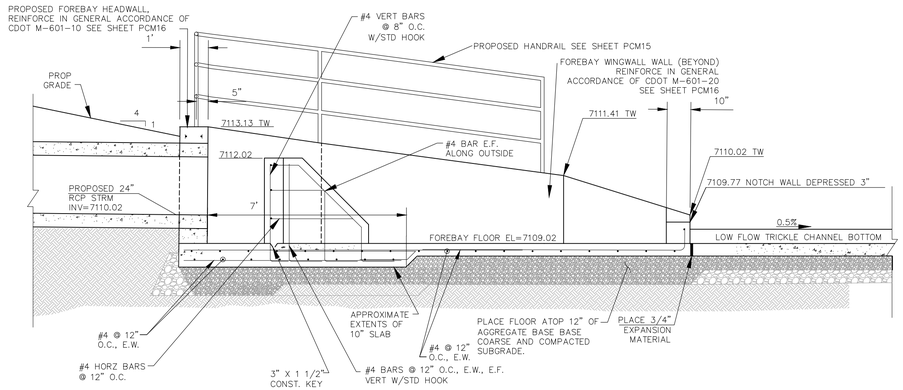
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CAUTION



POND 3 SOUTH FOREBAY PLAN

SCALE: 1" = 3'



POND 3 SOUTH FOREBAY CROSS SECTION A-A

SCALE: 3/8" = 1'

1" = 3'

0 1.5 3 6

Scale in Feet

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

FOR BURIED UTILITY INFORMATION
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FALCON RESERVE PONDS

POND 3 SOUTH FOREBAY

PROJECT NO. 43-144A
DESIGNED BY: GT
DRAWN BY: GT
CHECKED BY: VAS
SCALE: HORIZONTAL: N/A VERTICAL: N/A
DATE: 08/12/2026
SHEET 19 OF 20
PCM12

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

CIVIL CONSULTANTS, INC.

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

COLORADO REGISTERED PROFESSIONAL ENGINEER
VIRGIL A. SANCHEZ
37160
08/28/26

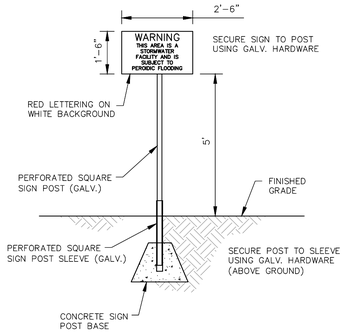
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NO.	DATE:	BY:	DESCRIPTION:	APPRVD. BY:	DATE:

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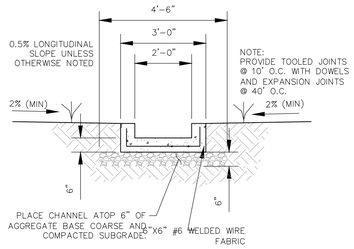
CAUTION

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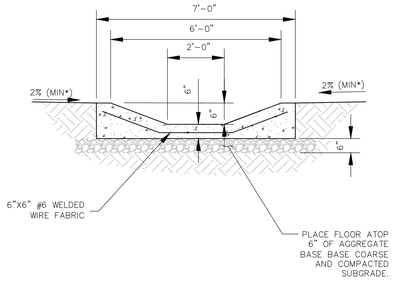
POND WARNING SIGN

NOT TO SCALE



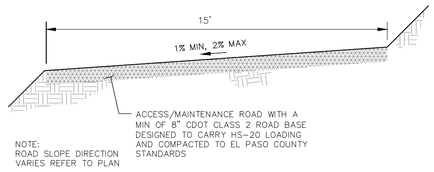
LOW FLOW CHANNEL TYPICAL SECTION

SCALE: 3/8" = 1'



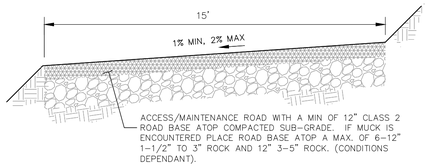
LOW FLOW TRICKLE CHANNEL MOUNTABLE CURB DETAIL

SCALE: 3/8" = 1'



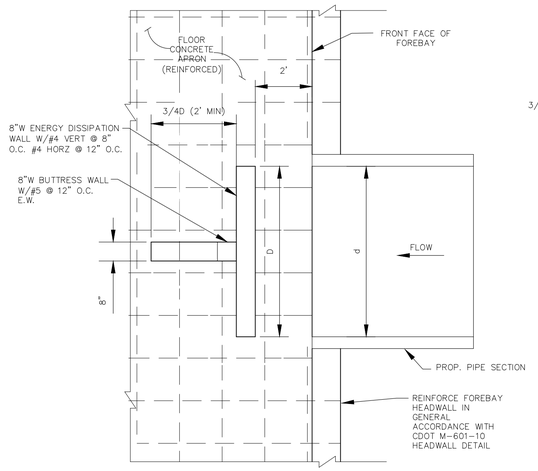
MAINTENANCE & ACCESS ROAD ABOVE EURV TYPICAL SECTION

NOT TO SCALE



MAINTENANCE & ACCESS ROAD BELOW EURV TYPICAL SECTION

NOT TO SCALE



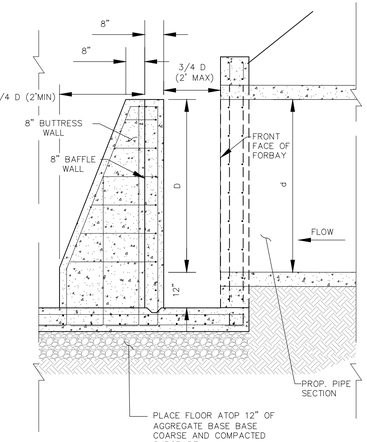
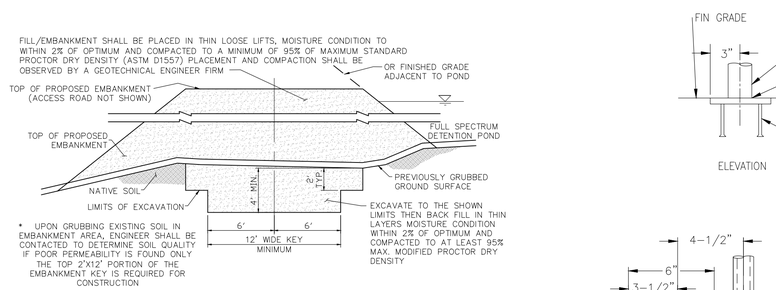


TABLE		
RCP PIPE SIZE (d) INCH	BUTTRESS WALL FT	DISSIPATION WALL (D) FT
24"	2'	2'
30"	2'	2.5'
36"	2.25'	3'

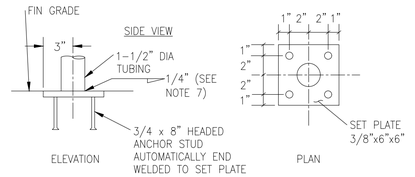
ENERGY DISSIPATOR TABLE

NOT TO SCALE

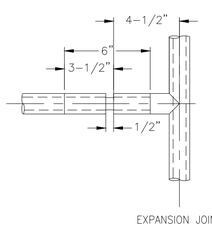


SOIL KEY (SECTION A-A)

NOT TO SCALE

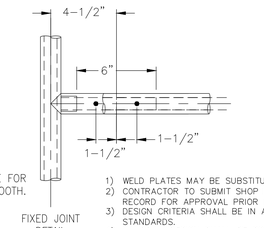


SET PLATE ANCHOR DETAILS (NTS)



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

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



HANDRAIL ASSEMBLY DETAILS

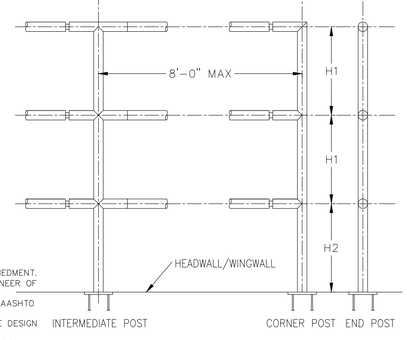
NOT TO SCALE

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

ALONG WINGWALL
H1 & H2 = 1'-2"

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

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



HANDRAIL ASSEMBLY DETAILS

NOT TO SCALE

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FALCON RESERVE PONDS

TYPICAL POND DETAILS

PROJECT NO. 43-144A | DATE: 08/12/2026 | SHEET 20 OF 20 | PCM13

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

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

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

CIVIL CONSULTANTS, INC.

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

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

COLORADO REGISTERED VIRGIL A. SANCHEZ 37160 PROFESSIONAL ENGINEER 08/28/26

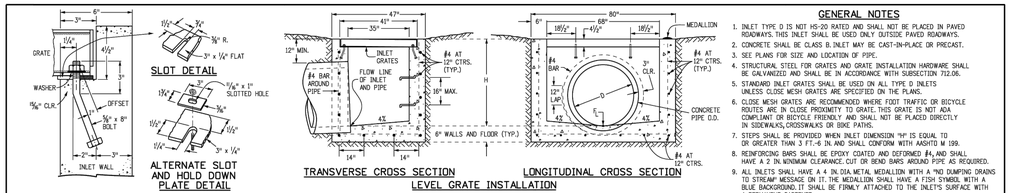
REVISIONS:

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

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CAUTION

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Last Modification Date: 07/04/12	Initials: LTA
Full Path: www.coloradodot.info/business/designsupport	
Drawing File Name: 6040110101.dgn	
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	

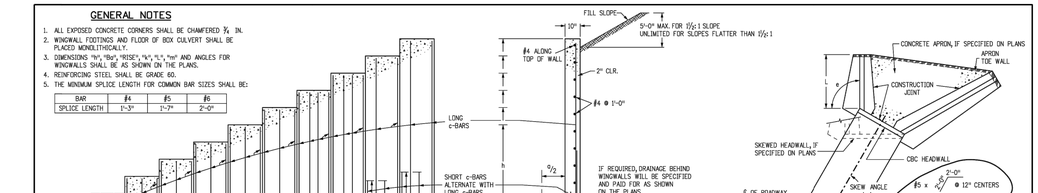
Sheet Revisions	
Date:	Comments

Colorado Department of Transportation
4201 East Arkansas Avenue
Denver, Colorado 80222
Phone: (303) 757-9083
Fax: (303) 757-9820
Project Development Branch DD/LTA

INLET, TYPE D

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STANDARD PLAN NO.
M-604-11
Sheet No. 1 of 1



Computer File Information	
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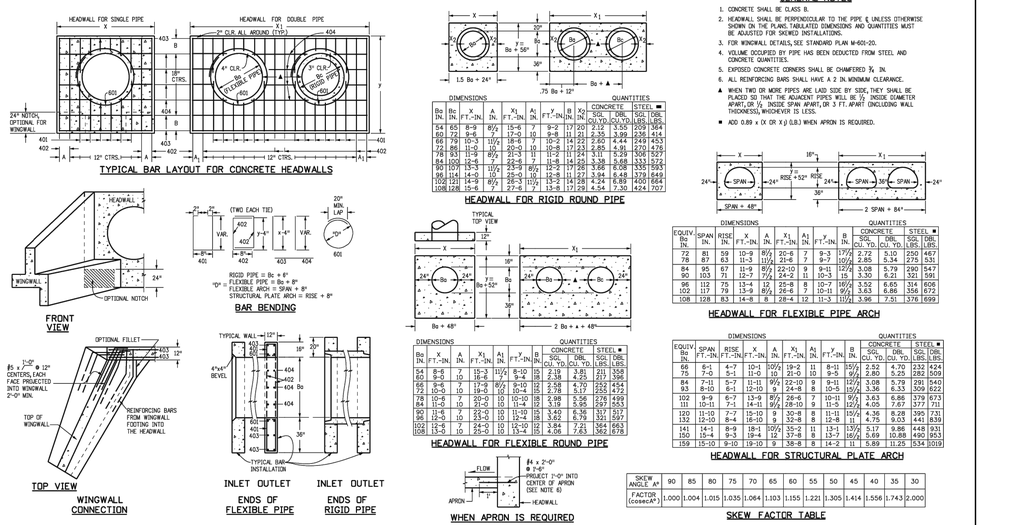
Sheet Revisions	
Date:	Comments

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4201 East Arkansas Avenue
Denver, Colorado 80222
Phone: (303) 757-9083
Fax: (303) 757-9820
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WINGWALLS FOR PIPE OR BOX CULVERTS

Issued By: Project Development Branch July 4, 2012

STANDARD PLAN NO.
M-601-20
Sheet No. 1 of 1



Computer File Information	
Creation Date: 07/04/12	Initials: DD
Last Modification Date: 07/04/12	Initials: LTA
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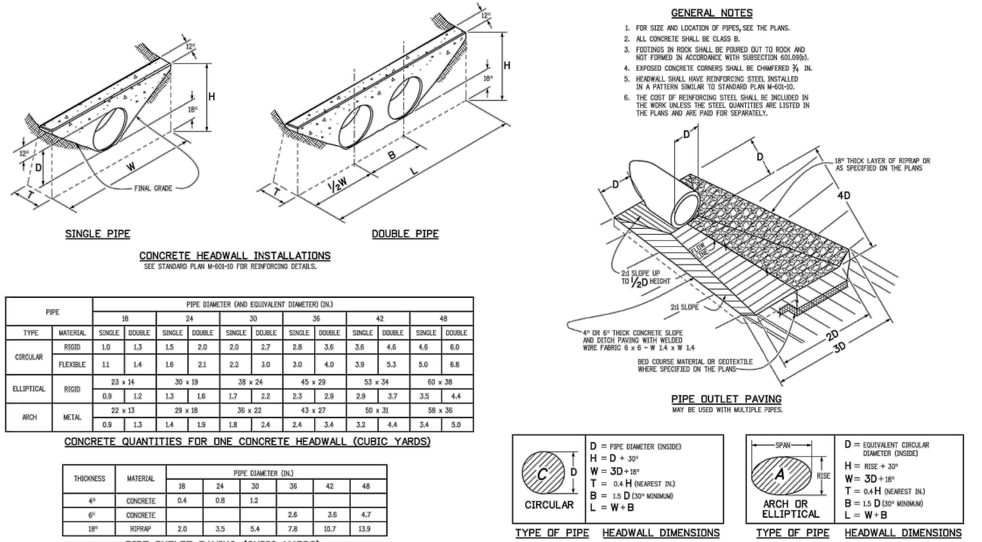
Sheet Revisions	
Date:	Comments

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Denver, Colorado 80222
Phone: (303) 757-9083
Fax: (303) 757-9820
Project Development Branch DD/LTA

HEADWALL FOR PIPES

Issued By: Project Development Branch July 4, 2012

STANDARD PLAN NO.
M-601-10
Sheet No. 1 of 1



PIPE | PIPE DIAMETER (AND EQUIVALENT DIAMETER) (IN.)

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

CONCRETE QUANTITIES FOR ONE CONCRETE HEADWALL (CUBIC YARDS)

THICKNESS | MATERIAL | PIPE DIAMETER (IN.)

		18	24	30	36	42	48
4"	CONCRETE	0.4	0.8	1.2			
6"	CONCRETE				2.6	3.6	4.7
18"	RIPRAP	2.0	3.5	5.4	7.8	10.7	13.9

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

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

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

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

Sheet Revisions	
Date:	Comments

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

HEADWALLS AND PIPE OUTLET PAVING

Issued by the Project Development Branch: July 31, 2019

STANDARD PLAN NO.
M-601-12
Standard Sheet No. 1 of 1
Project Sheet Number:

FALCON RESERVE PONDS
TYPICAL POND DETAILS
PROJECT NO. 43-144A
SCALE: HORIZONTAL: N/A VERTICAL: N/A
DATE: 08/12/2026
SHEET 21 OF 20
PCM14
DESIGNED BY: GT
DRAWN BY: GT
CHECKED BY: VAS

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

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.
VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160
COLORADO REGISTERED 37160 PROFESSIONAL ENGINEER
08/28/26

REVISIONS:
NO. | DATE: | BY: | DESCRIPTION: | APPV'D: BY: | DATE:

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