

# FOREST LAKES FILING NO. 7

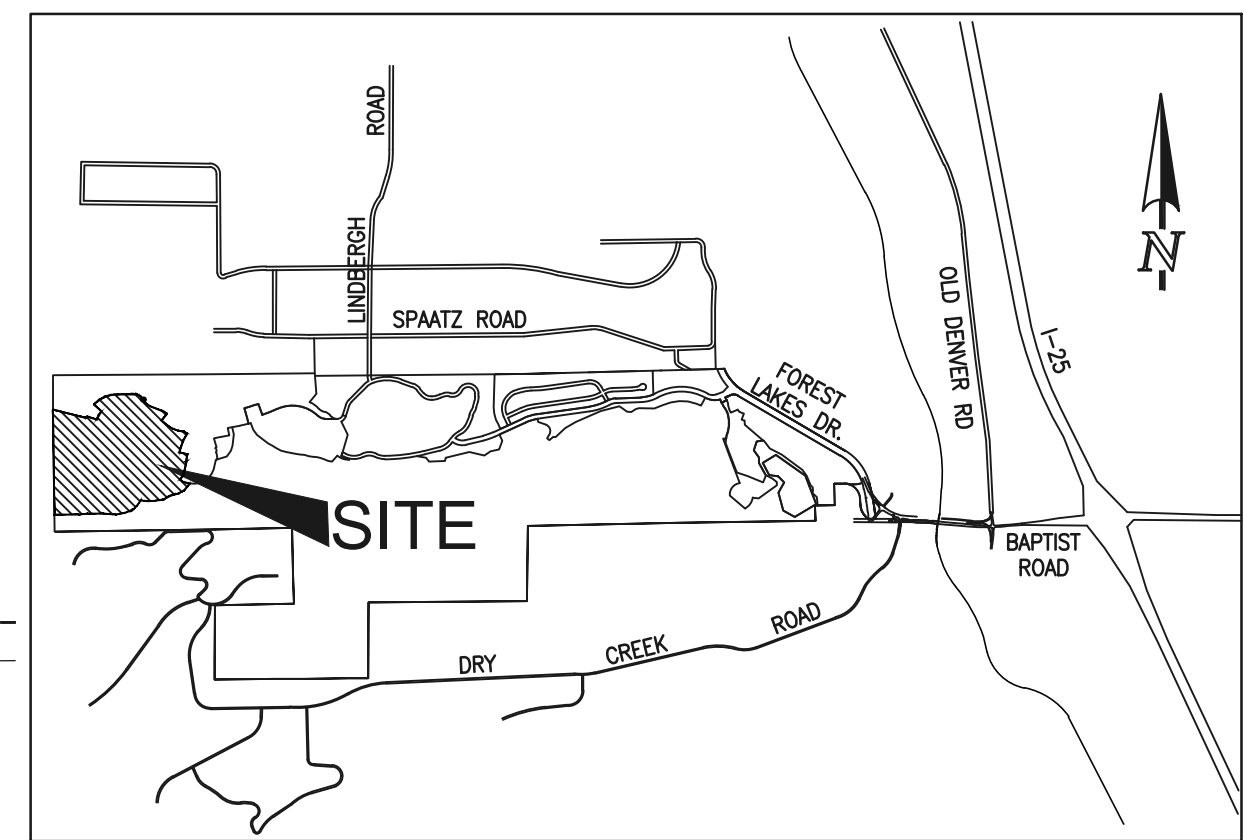
## COUNTY OF EL PASO, STATE OF COLORADO

# CONSTRUCTION PLANS

MAY 2021

(SECTIONS 27 AND 28, TOWNSHIP 11 SOUTH, RANGE 67 WEST)

EPC STORMWATER REVIEW COMMENTS ARE SHOWN IN ORANGE BOXES WITH BLACK TEXT



VICINITY MAP  
NOT TO SCALE

### GENERAL CONSTRUCTION NOTES:

- 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.
- BEFORE COMMENCING ANY EXCAVATION, CALL 1-800-922-1987 FOR EXISTING UTILITY LOCATIONS.
- 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.
- 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 (PCD).
- ALL STATIONING IS CENTERLINE UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE INDICATED.
- 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.
- ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAT LINES. REPAIR SHALL CONFORM TO THE EPC ECM APPENDIX K - 1.2C.
- ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
- BUILDING CONTRACTORS WILL BE RESPONSIBLE FOR CONSTRUCTING POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES.
- 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 PLANNING AND COMMUNITY DEVELOPMENT PRIOR TO CONSTRUCTION.
- 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.
- 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
- ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN COMPLIANCE WITH ANY AND ALL APPLICABLE EL PASO COUNTY STANDARDS.
- LOCATION OF THE CONCRETE WASHOUT, STORAGE FOR MAINTENANCE EQUIPMENT AND TEMPORARY DISPOSAL AREAS WILL BE ADDED TO THIS PLAN BY SWMP ADMINISTRATOR UPON COORDINATION WITH SELECTED CONTRACTOR.

### STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS:

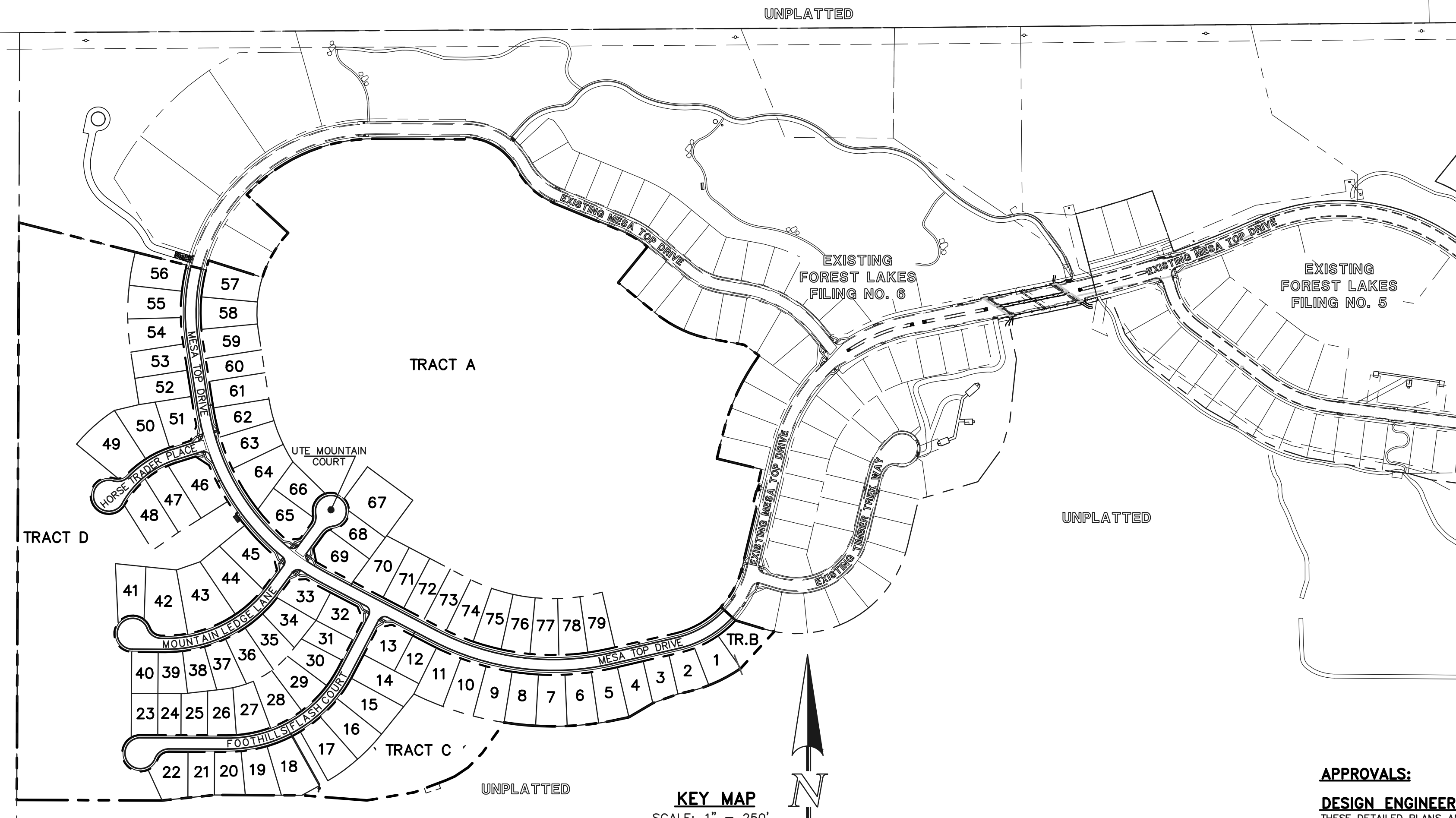
- ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION 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).
- 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:
  - EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
  - CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
  - COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
  - CDOT M & S STANDARDS
- 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.
- 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.
- CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT - INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
- 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.
- 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.
- ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.
- 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.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- 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.
- SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS AND MUTCD CRITERIA.
- 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.
- 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:

- ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- 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.
- ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT.
- 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.
- STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.
- ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.
- 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."
- ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.
- 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.
- ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" MINIMUM THICKNESS.
- 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 SHALL BE 12" WIDE AND 8' LONG PER CDOT S-627-1.
- 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.
- THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (719) 520-6819 PRIOR TO AND UPON COMPLETION OF SIGNING AND STRIPING.
- 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 1-1/2" ALUMINUM SURVEYORS CAP STAMPED "CES LLC PLS 30118" LOCATED AT THE SOUTHWESTERLY CORNER OF FOREST LAKES FILING NO. 6, APPROXIMATELY 572.93 FEET SOUTHERLY FROM THE CENTER QUARTER CORNER OF SECTION 29, TOWNSHIP 11 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN. ELEV. = 7302.74
- A 1-1/2" ALUMINUM SURVEYORS CAP STAMPED "CES LLC PLS 30118" LOCATED AT THE SOUTHWESTERLY CORNER OF FOREST LAKES FILING NO. 7, APPROXIMATELY 357.21 FEET NORTHERLY FROM THE SOUTH QUARTER CORNER OF SECTION 29, TOWNSHIP 11 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN. ELEV. = 7216.16



### CONSTRUCTION PLAN: SHEET INDEX

SHEET 1 OF 31	TITLE SHEET
SHEET 2 OF 31	GRADING AND EROSION CONTROL PLAN
SHEET 3 OF 31	GRADING AND EROSION CONTROL PLAN
SHEET 4 OF 31	GRADING AND EROSION CONTROL PLAN
SHEET 5 OF 31	GRADING AND EROSION CONTROL PLAN NOTES & DETAIL SHEET
SHEET 6 OF 31	GRADING AND EROSION CONTROL PLAN DETAIL SHEET
SHEET 7 OF 31	GRADING AND EROSION CONTROL PLAN DETAIL SHEET
SHEET 8 OF 31	KEY MAP WITH TYPICAL STREET SECTIONS
SHEET 9 OF 31	STREET IMPROVEMENT PLAN (MESA TOP DRIVE STA: 14+00-15+50)
SHEET 10 OF 31	STREET IMPROVEMENT PLAN (MESA TOP DRIVE STA: 15+50-END)
SHEET 11 OF 31	STREET IMPROVEMENT PLAN (HORSE TRADER PLACE)
SHEET 12 OF 31	STREET IMPROVEMENT PLAN (MOUNTAIN LEDGE LANE/UTE MOUNTAIN COURT)
SHEET 13 OF 31	STREET IMPROVEMENT PLAN (FOOTHILLS FLASH COURT)
SHEET 14 OF 31	PEDESTRIAN RAMP DETAILED GRADING
SHEET 15 OF 31	STREET LIGHT POLE LOCATION PLAN
SHEET 16 OF 31	STORM SEWER PLAN & PROFILE (MAIN A, & MAIN B)
SHEET 17 OF 31	STORM SEWER PLAN & PROFILE (MAIN C)
SHEET 18 OF 31	STORM SEWER PLAN & PROFILE (MAIN D & POND OUTFALL)
SHEET 19 OF 31	STORM SEWER PLAN & PROFILE (MAIN E)
SHEET 20 OF 31	STORM SEWER PLAN & PROFILE (BYPASS SYSTEM STA: 1+00-13+50)
SHEET 21 OF 31	STORM SEWER PLAN & PROFILE (BYPASS SYSTEM STA: 13+50-END)
SHEET 22 OF 31	PRIVATE POND 'A' FULL SPECTRUM DETENTION
SHEET 23 OF 31	POND OUTFALL - 30" IMPACT STRUCTURE & BYPASS MAIN - 48" IMPACT STRUCTURE
SHEET 24 OF 31	MAIN 'A' - 48" IMPACT STRUCTURE & FOREBAY
SHEET 25 OF 31	POND OUTLET BOX - PROFILE VIEW
SHEET 26 OF 31	POND OUTLET BOX AND MICROPOOL DETAILS
SHEET 27 OF 31	POND OUTLET BOX DETAILS
SHEET 28 OF 31	PRIVATE POND 'A' SPILLWAY DETAILS
SHEET 29 OF 31	DETAIL SHEET
SHEET 30 OF 31	DETAIL SHEET
SHEET 31 OF 31	DETAIL SHEET

### KEY MAP

SCALE: 1" = 250'

**NOTE:**  
THIS PROPERTY IS SUBJECT TO THE FINDINGS, SUMMARY AND CONCLUSIONS OF A GEOLOGIC HAZARDS EVALUATION AND PRELIMINARY GEOTECHNICAL INVESTIGATION PREPARED BY CTL/THOMPSON, DATED JULY 18, 2018.

### UTILITY CONSTRUCTION PLAN: SHEET INDEX

TITLE SHEET	SHEET 1 OF 11
SANITARY SEWER PLAN - MESA TOP DR. STA: 1+00.00 - 12+50.00	SHEET 2 OF 11
SANITARY SEWER PLAN - MESA TOP DR. STA: 12+50.00 - END	SHEET 3 OF 11
SANITARY SEWER PLAN - HORSE TRADER PL. & MOUNTAIN LEDGE LN.	SHEET 4 OF 11
SANITARY SEWER PLAN - FOOTHILLS FLASH CT. STA: 1+00.00 - END	SHEET 5 OF 11
PUBLIC 8" PVC WATER SYSTEM PLAN	SHEETS 6-9 OF 11
UTILITY SERVICE PLAN	SHEET 10 OF 11
UTILITY SERVICE PLAN/DETAILS	SHEET 11 OF 11

### 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 NEGLIGENCE, ACTS, ERRORS, OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

KYLE R. CAMPBELL COLORADO P.E. #29794 DATE \_\_\_\_\_  
FOR AND ON THE BEHALF OF CLASSIC CONSULTING ENGINEERS & SURVEYORS

#### OWNER/DEVELOPER'S STATEMENT:

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

JM BOULTON 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.

JENNIFER IRVINE, P.E. DATE \_\_\_\_\_  
COUNTY ENGINEER / ECM ADMINISTRATOR

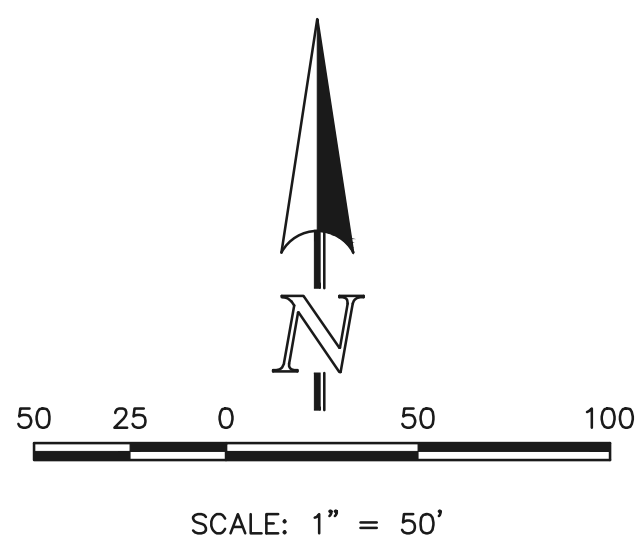
PCD FILE # SF-21-49

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS <b>811</b> UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW	NO. REVISION	DATE	REVIEW:
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.			PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC
			KYLE R. CAMPBELL, COLORADO P.E. #29794 DATE _____



FOREST LAKES FILING NO. 7 CONSTRUCTION PLANS TITLE SHEET			
DESIGNED BY	MAL	SCALE	DATE 05/21/21
DRAWN BY	MES	(H) 1" = N/A	SHEET 1 OF 31
CHECKED BY	(V) 1" = N/A	JOB NO.	1175.70

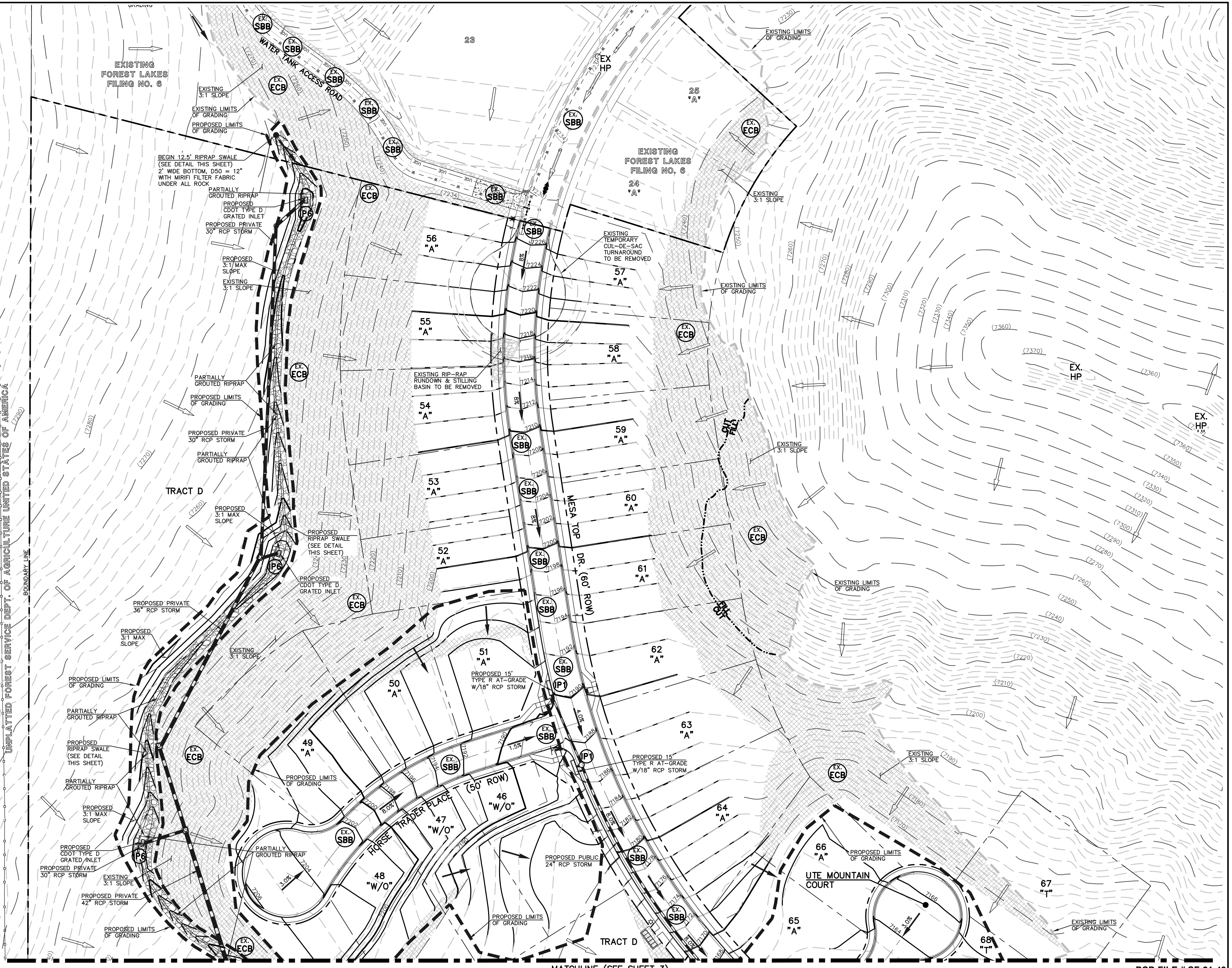
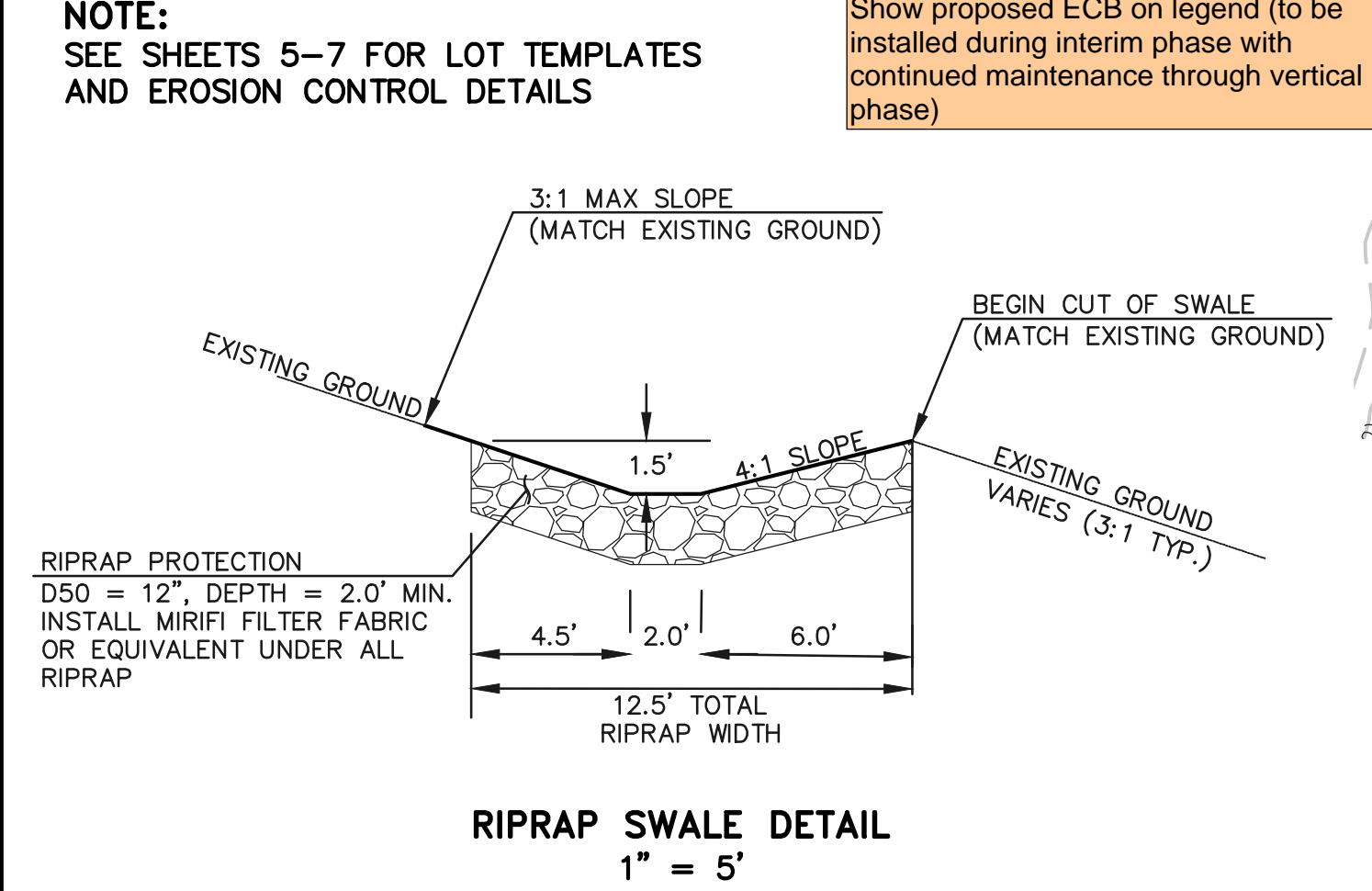




**PARTIALLY GROUTED RIPRAP:**  
 PORTIONS OF THE PROPOSED RIPRAP SWALE ARE TO BE "PARTIALLY GROUTED" PER CDOT SPECIFICATIONS, WITH THE GROUT FILLING ONLY 1/3 TO 1/2 OF THE TOTAL VOID SPACE. PORTLAND CEMENT BASED GROUT PLACED BY HOSE OR TREMIE, OR BY AUTOMATED MECHANICAL MEANS.

**NOTES:**  
 OVERLOT GRADING COMPLETED WITH PRE-DEVELOPMENT GRADING PLAN & PERMIT. EROSION CONTROL BLANKETS, TEMPORARY SEDIMENT BASINS, SILT FENCE & STRAW BALE BARRIERS INSTALLED PER THAT PLAN. THERE WILL BE NO ASPHALT, CONCRETE BATCH PLANTS AND MASONRY MIX STATIONS ON THIS SITE.

- LEGEND**
- (7700) --- EXISTING CONTOUR
  - 7700 --- PROPOSED CONTOUR
  - PROPOSED LIMITS OF GRADING/ CONSTRUCTION SITE BOUNDARY
  - BOUNDARY/R.O.W. LINE
  - EXISTING FLOW DIRECTION
  - PROPOSED FLOW
  - "A" A LOT
  - "B" B LOT
  - "W/O" WALKOUT LOT
  - "T" TRANSITION LOT
  - "G" GARDEN LOT
  - PROPOSED INLET
  - PROPOSED STORM SEWER PIPE
  - EX HP EXISTING HIGH POINT
  - EX LP EXISTING LOW POINT
  - EX TSB EXISTING TEMPORARY SEDIMENT BASIN
  - EX SF EXISTING SILT FENCE
  - EX SBB EXISTING STRAW BALE CHECK DAM
  - IP INLET PROTECTION
  - VTC VEHICLE TRACKING CONTROL
  - EX ECB EXISTING EROSION CONTROL BLANKET
- CCM PHASING**
- (INSTALL DURING INITIAL PHASE WITH CONTINUED MAINTENANCE THROUGH INTERIM PHASE)
  - (INSTALLED PRIOR TO INITIAL PHASE (EGP) WITH CONTINUED MAINTENANCE DURING INTERIM AND VERTICAL PHASES)
  - (INSTALLED DURING INITIAL PHASE (EGP) WITH CONTINUED MAINTENANCE DURING INTERIM AND VERTICAL PHASES)
  - (INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
  - (INSTALL PRIOR TO INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE OR SITE PAVING)
  - (INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)



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NO.	REVISION	DATE

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

KYLE R. CAMPBELL, COLORADO P.E. #29794 DATE

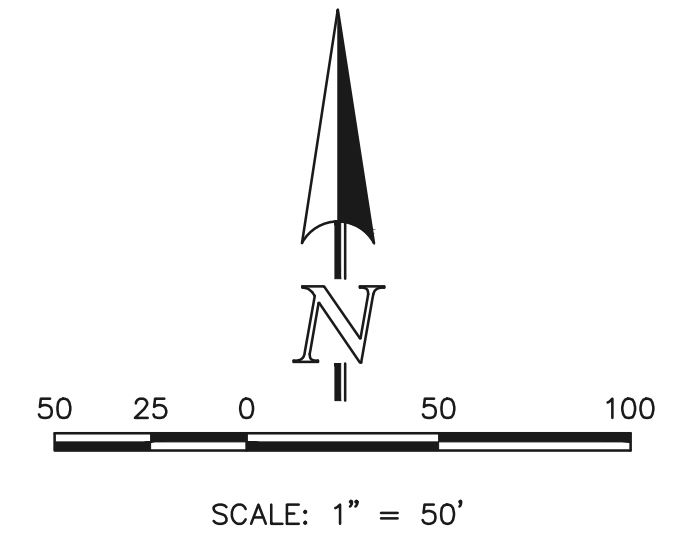


FOREST LAKES FILING NO. 7  
 GRADING AND EROSION CONTROL PLAN

DESIGNED BY MAL SCALE DATE 05/21/21  
 DRAWN BY MES (H) 1" = 50' SHEET 2 OF 31  
 CHECKED BY (V) 1" = N/A JOB NO. 1175.70

PCD FILE # SF-21-49

MATCHLINE (SEE SHEET 2)



**PARTIALLY GROUDED RIPRAP:**  
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- EXISTING TEMPORARY SEDIMENT BASIN
- EXISTING SILT FENCE
- EXISTING STRAW BALE CHECK DAM
- INLET PROTECTION
- VEHICLE TRACKING CONTROL
- EXISTING EROSION CONTROL BLANKET

**CCM PHASING**  
 (INSTALLED DURING INITIAL PHASE WITH CONTINUED MAINTENANCE THROUGH INTERIM PHASE)

(INSTALLED PRIOR TO INITIAL PHASE (EGP) WITH CONTINUED MAINTENANCE DURING INTERIM AND VERTICAL PHASES)

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(INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)

(INSTALL PRIOR TO INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE OR SITE PAVING)

(INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)

**NOTES:**  
 OVERLOT GRADING COMPLETED WITH PRE-DEVELOPMENT GRADING PLAN & PERMIT. EROSION CONTROL BLANKETS, TEMPORARY SEDIMENT BASINS, SILT FENCE & STRAW BALE BARRIERS INSTALLED PER THAT PLAN.  
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REVIEW:  
 PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

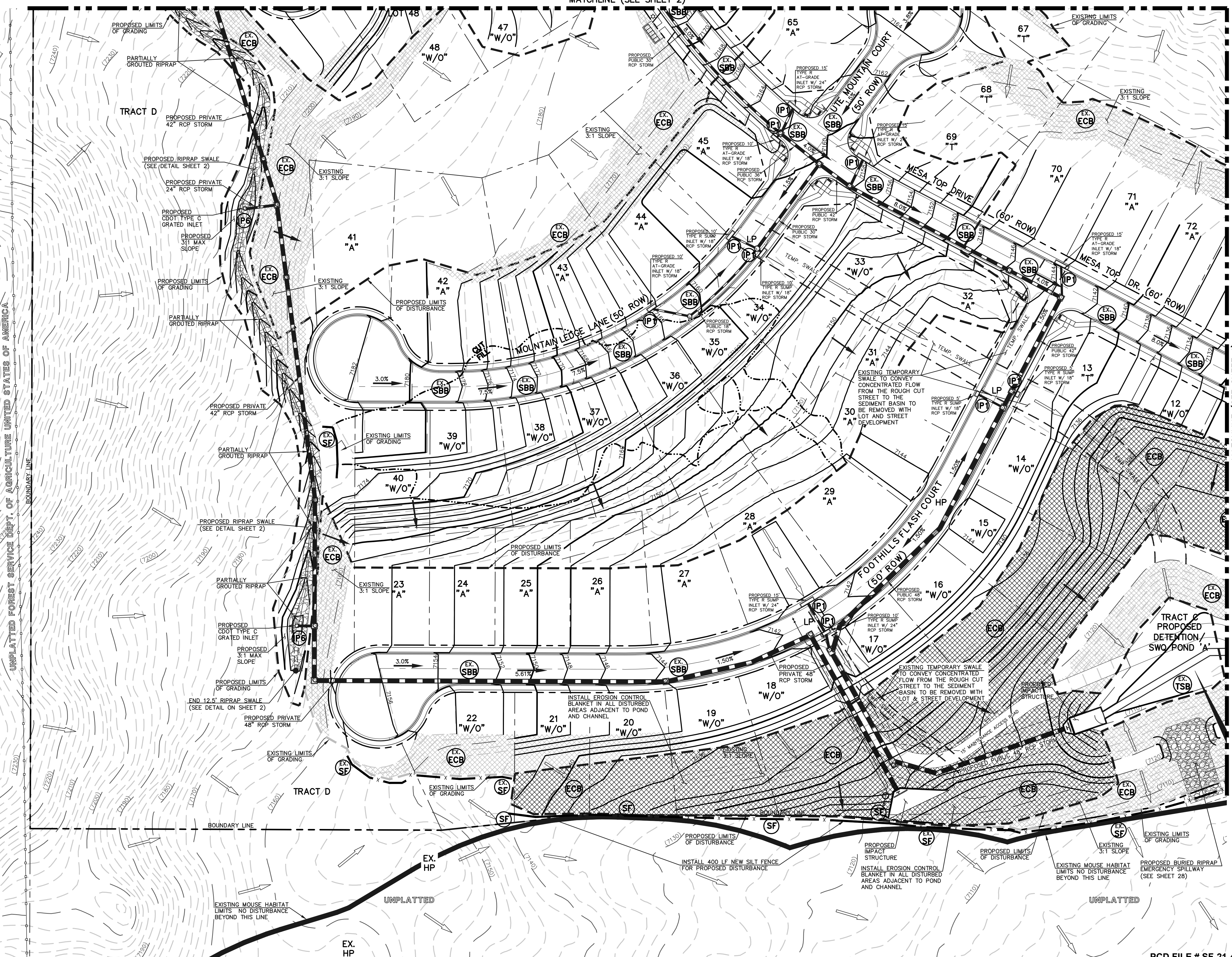
KYLE R. CAMPBELL, COLORADO P.E. #29794 DATE



FOREST LAKES FILING NO. 7  
 GRADING AND EROSION CONTROL PLAN

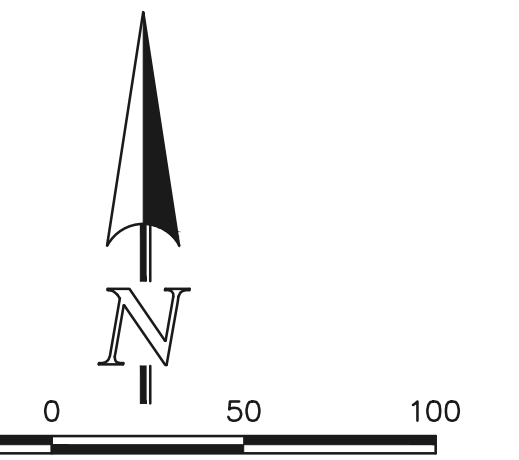
DESIGNED BY MAL SCALE DATE 05/21/21  
 DRAWN BY MES (H) 1" = 50' SHEET 3 OF 31  
 CHECKED BY (V) 1" = N/A JOB NO. 1175.70

PCD FILE # SF-21-49

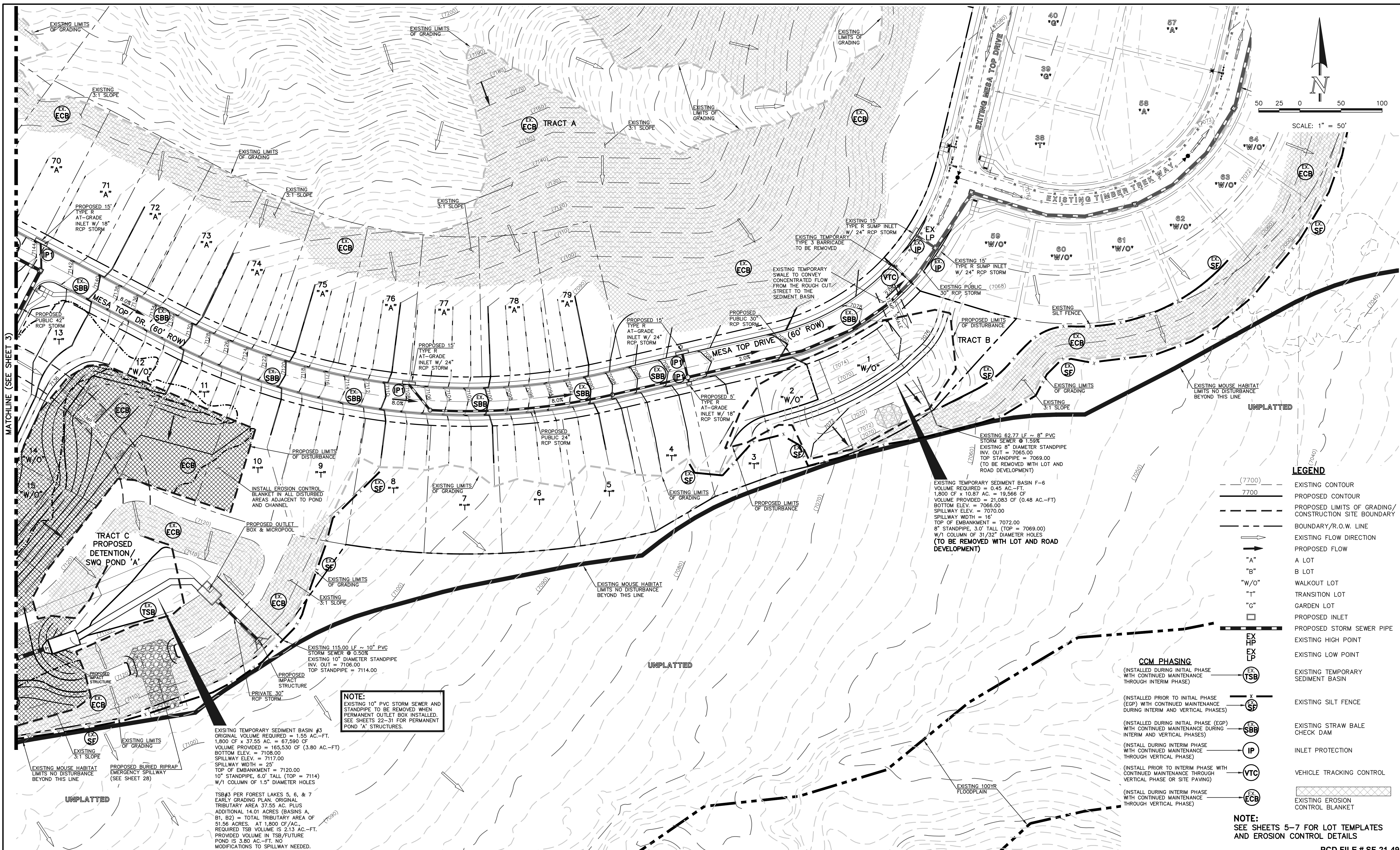


MATCHLINE (SEE SHEET 4)

N:\117570\DRAWINGS\CONSTRUCTION\GRADING-EROSION\03-117570-GR-02.dwg, 2/17/2022, 2:11:45 PM, 1:1



SCALE: 1" = 50'



**LEGEND**

- (7700) --- EXISTING CONTOUR
- 7700 --- PROPOSED CONTOUR
- - - - - PROPOSED LIMITS OF GRADING/ CONSTRUCTION SITE BOUNDARY
- - - - - BOUNDARY/R.O.W. LINE
- EXISTING FLOW DIRECTION
- PROPOSED FLOW
- "A" A LOT
- "B" B LOT
- "W/O" WALKOUT LOT
- "T" TRANSITION LOT
- "G" GARDEN LOT
- PROPOSED INLET
- - - - - PROPOSED STORM SEWER PIPE
- EX HP EXISTING HIGH POINT
- EX LP EXISTING LOW POINT
- EX TSB EXISTING TEMPORARY SEDIMENT BASIN
- EX SF EXISTING SILT FENCE
- EX SBB EXISTING STRAW BALE CHECK DAM
- EX IP INLET PROTECTION
- EX VTC VEHICLE TRACKING CONTROL
- EX ECB EXISTING EROSION CONTROL BLANKET

**CCM PHASING**

- (INSTALLED DURING INITIAL PHASE WITH CONTINUED MAINTENANCE THROUGH INTERIM PHASE)
- (INSTALLED PRIOR TO INITIAL PHASE WITH CONTINUED MAINTENANCE DURING INTERIM AND VERTICAL PHASES)
- (INSTALLED DURING INITIAL PHASE (EGP) WITH CONTINUED MAINTENANCE DURING INTERIM AND VERTICAL PHASES)
- (INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
- (INSTALL PRIOR TO INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE OR SITE PAVING)
- (INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)

**NOTE:** SEE SHEETS 5-7 FOR LOT TEMPLATES AND EROSION CONTROL DETAILS

PCD FILE # SF-21-49

**NOTE:**  
EXISTING 10" PVC STORM SEWER AND STANDPIPE TO BE REMOVED WHEN PERMANENT OUTLET BOX INSTALLED. SEE SHEETS 22-31 FOR PERMANENT POND 'A' STRUCTURES.

EXISTING TEMPORARY SEDIMENT BASIN #3  
ORIGINAL VOLUME REQUIRED = 1.55 AC.-FT.  
1,800 CF x 37.55 AC. = 67,590 CF  
VOLUME PROVIDED = 165,530 CF (3.80 AC.-FT)  
BOTTOM ELEV. = 7108.00  
SPILLWAY ELEV. = 7117.00  
SPILLWAY WIDTH = 25'  
TOP OF EMBANKMENT = 7120.00  
10" STANDPIPE, 6.0' TALL (TOP = 7114)  
W/1 COLUMN OF 1.5" DIAMETER HOLES

TSB#3 PER FOREST LAKES 5, 6, & 7  
EARLY GRADING PLAN, ORIGINAL  
TRIBUTARY AREA 37.55 AC. PLUS  
ADDITIONAL 14.01 ACRES (BASINS A,  
B1, B2) = TOTAL TRIBUTARY AREA OF  
51.56 ACRES. AT 1,800 CF/AC.  
REQUIRED TSB VOLUME IS 213 AC.-FT.  
PROVIDED VOLUME IN TSB/FUTURE  
POND IS 3.80 AC.-FT. NO  
MODIFICATIONS TO SPILLWAY NEEDED.

**NOTES:**  
OVERLOT GRADING COMPLETED WITH PRE-DEVELOPMENT GRADING PLAN & PERMIT. EROSION CONTROL BLANKETS, TEMPORARY SEDIMENT BASINS, SILT FENCE & STRAW BALE BARRIERS INSTALLED PER THAT PLAN.  
THERE WILL BE NO ASPHALT, CONCRETE BATCH PLANTS AND MASONRY MIX STATIONS ON THIS SITE.

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

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

KYLE R. CAMPBELL, COLORADO P.E. #29794 DATE



FOREST LAKES FILING NO. 7

GRADING AND EROSION CONTROL PLAN

DESIGNED BY	MAL	SCALE	DATE	05/21/21
DRAWN BY	MES	(H) 1" = 50'	SHEET	4 OF 31
CHECKED BY	(V) 1" = N/A	JOB NO.	1175.70	

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**EL PASO COUNTY GRADING AND EROSION CONTROL NOTES:**

- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
- 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 MANUAL, THE DRAINAGE 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.
- A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
- ONCE THE ESQCP IS APPROVED AND A 'NOTICE TO PROCEED' HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED DEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
- CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
- ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
- TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
- FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
- ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT AFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
- EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
- COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENEED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
- ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
- CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
- DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
- EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
- TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
- THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
- THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
- NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ON SITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
- BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ON SITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
- NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
- OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, BOOK VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
- PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY ENTECH ENGINEERING, INC. DATED AUGUST 12, 2020 AND SHALL BE CONSIDERED A PART OF THESE PLANS.
- AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT  
WATER QUALITY CONTROL DIVISION  
WOOD - PERMITS  
4300 CHERRY CREEK DRIVE SOUTH  
DENVER, CO 80246-1530  
ATTN: PERMITS UNIT

**CONSTRUCTION CONTROL MEASURES NOTES:**

- CONTRACTOR TO DETERMINE AREAS USED FOR STAGING, STORAGE OF MATERIALS, SOILS (STOCKPILES) OR WASTES AND SHALL MARK ON THE SITE SWMP AT ALL TIMES. THE USE OF CONSTRUCTION OFFICE TRAILERS REQUIRES PCD PERMITTING.
- THE EROSION CONTROL MEASURES SHOWN ON THE APPROVED "FOREST LAKES FILING NO. 5, 6, & 7 PRE-DEVELOPMENT GRADING AND EROSION CONTROL PLAN" SHOW AND CALL-OUT THE 'INITIAL' STAGE OF TEMPORARY CONSTRUCTION CONTROL MEASURES.
- THE PROPOSED GRADING/EROSION CONTROL PLAN (SHEETS 2-4) SHOW AND CALL-OUT THE 'INTERIM' STAGE OF CONSTRUCTION CONTROL MEASURES.
- 'FINAL' CONSTRUCTION CONTROL MEASURES ARE STABILIZED/DEVELOPED LOTS, CONSTRUCTED ROADS, RE-SEEDED OPEN SPACE, AND CONSTRUCTED DETENTION PONDS. A PLAN IS NOT NEEDED FOR THE FINAL STAGE.

**EROSION CONTROL CRITERIA:**

EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IN A MANNER THAT WILL PROTECT PROPERTIES AND PUBLIC FACILITIES FROM THE ADVERSE EFFECTS OF EROSION AND SEDIMENTATION AS A RESULT OF CONSTRUCTION AND EARTHWORK ACTIVITIES WITHIN THE PROJECT SITE.

- THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NON-EXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- DURING GRADING OPERATIONS, LOCATE AND SET THE STRAW BALE CHECK DAMS AND SILT FENCES AS SHOWN ON THE EROSION CONTROL PLAN. AT THIS TIME RESEED ALL DISTURBED AREAS WITH AN EL PASO COUNTY APPROVED SEED MIX.
- SEEDING APPLICATION: DRILLED TO A DEPTH OF .25" TO .50" INTO SOIL WHERE POSSIBLE. BROADCAST AND RAKED TO COVER ON STEEPER THAN 3:1 SLOPES WHERE ACCESS IS LIMITED OR UNSAFE FOR EQUIPMENT.
- MULCHING REQUIREMENT AND APPLICATION: 1.5 TONS PER ACRE NATIVE HAY MECHANICALLY CRIMPED INTO SOIL.
- THE STRAW BALE CHECK DAMS AND SILT FENCES SHALL BE KEPT IN PLACE AND MAINTAINED UNTIL EROSION AND SEDIMENTATION POTENTIAL IS MITIGATED. REMOVAL OF SILT AND SEDIMENT COLLECTED BY THE STRAW BALES IS REQUIRED ONCE IT REACHES HALF THE HEIGHT OF THE STRAW BALES OR SILT FENCE.
- SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN TWENTY-ONE (21) CALENDAR DAYS AFTER FINAL GRADING, OR FINAL EARTH DISTURBANCE, HAS BEEN COMPLETED. DISTURBED AREAS AND STOCKPILES WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS SHALL ALSO BE MULCHED WITHIN 21 DAYS AFTER INTERIM GRADING. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN 60 DAYS SHALL ALSO BE SEED, ON A CASE-BY-CASE BASIS. THE MSA PERMITTEE MAY ALLOW ANOTHER APPROPRIATE BMP TO BE IN PLACE THAT PREVENTS SEDIMENT FROM LEAVING THE SITE. ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND BMPs SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED.
- ALL FACILITIES, VEGETATION AND OTHER ITEMS REQUIRED BY THE APPROVED FINAL GRADING/EROSION CONTROL AND CLAMATION PLAN SHALL BE PROPERLY MAINTAINED BY THE OWNERS OF THE PROPERTY. SUCH MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO KEEPING ALL EROSION CONTROL FACILITIES IN GOOD ORDER AND FUNCTIONAL, REPAIRING ANY EROSION DAMAGE THAT OCCURS, KEEPING ALL VEGETATION HEALTHY AND IN GROWING CONDITION AND REPLACING ANY DEAD VEGETATION AS SOON AS PRACTICABLE.
- ALL SILT FENCES ARE TO BE REGULARLY INSPECTED AND REPAIRED AS NEEDED.
- THE CONTRACTOR SHALL PROVIDE VEHICLE TRACKING CONTROL FACILITIES FOR EACH ENTRANCE/EXIT TO THE SITE. THE CONTRACTOR SHALL SUBMIT A PLAN WHICH WILL ASSURE USAGE OF THIS FACILITY BY ALL VEHICLES LEAVING THE SITE.
- EROSION CONTROL MEASURES SHALL BE CHECKED AFTER EACH STORM EVENT AND REPAIRED WHEN NECESSARY.
- CONTRACTOR SHALL MAINTAIN ALL TEMPORARY EROSION CONTROL FACILITIES IN GOOD WORKING ORDER UNTIL SUCH TIME AS PERMANENT FACILITIES ARE IN PLACE AND THE CONSTRUCTION MANAGER HAS APPROVED THEIR REMOVAL.
- ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
- THE EROSION CONTROL MEASURES OUTLINED ON THE PLAN ARE THE RESPONSIBILITY OF THE DEVELOPER TO MONITOR AND REPLACE, REGRADE AND REBUILD AS NECESSARY UNTIL VEGETATION IS ESTABLISHED.
- MAXIMUM ACREAGE OPEN AT ANY GIVEN TIME IS TO BE 30 ACRES.

**SEEDING GUIDELINES:**

- SEEDBED PREPARATION**  
THE SEEDBED SHOULD BE WELL-SETTLED AND FIRM, BUT FRIBLE ENOUGH THAT THE SEED CAN BE PLACED AT THE SPECIFIED DEPTHS. COMPETITIVE STANDS OF WEEDS THAT ARE PRESENT BEFORE SEEDING MUST BE CONTROLLED BY SHALLOW TILLAGE OR BY APPLICATION OF HERBICIDES. SOILS THAT HAVE BEEN OVER-COMPACTED BY TRAFFIC OR EQUIPMENT, ESPECIALLY WHEN WET, SHOULD BE TILLED TO BREAK UP ROOTING-RESTRICTIVE LAYERS, THAN HARROWED, ROLLED, OR PACKED TO PREPARE THE REQUIRED FIRM SEEDBED.
- FERTILIZER**  
FERTILIZER SHOULD BE APPLIED AT A RATE OF 50 POUNDS OF AVAIL-ABLE NITROGEN PER ACRE AND 40 POUNDS OF AVAIL-ABLE PHOSPHATE PER ACRE. THE TIME OF APPLICATION SHOULD BE IMMEDIATELY PRIOR TO SEEDING, AT THE TIME OF SEEDING, OR IMMEDIATELY FOLLOWING SEEDING, DEPENDING ON THE KIND OF FERTILIZER AND TYPE OF EQUIPMENT USED.
- SEEDING**  
SEED SHOULD BE PLANTED WITH A GRASS DRILL ON ALL SLOPES OF 3:1 (3:1) OR FLATTER. SEED MAY BE BROADCAST BY HAND, BY MECHANICAL SPREADER, OR BY HYDRAULIC EQUIPMENT ON AREAS THAT ARE SMALL, TOO STEEP, OR NOT ACCESSIBLE FOR SEED DRILL OPERATIONS. SEED PLANTED WITH A DRILL SHOULD BE COVERED WITH SOIL TO A DEPTH OF 1/4 TO 3/4 INCH. SEED PLANTED BY THE BROADCAST METHOD SHALL BE INCORPORATED INTO THE SOIL SURFACE, NOT TO EXCEED A DEPTH OF 3/4 INCH, BY RAKING, HARROWING, OR OTHER PROVEN METHOD. THE TIME OF SEEDING IS FROM OCTOBER 15TH - MAY 31ST. SEED PLANTED IN THE LATE FALL WILL REMAIN DORMANT UNTIL SPRING, WHEN IT WILL GERMINATE.
- MULCHING**  
SEEDING AREAS SHOULD BE MULCHED TO CONSERVE MOISTURE; PREVENT SURFACE COMPACTION OR CRUSTING; REDUCE RUNOFF AND EROSION; CONTROL INSECTS; AND HELP ESTABLISH PLANT COVER.  
NATIVE HAY OR STRAW SHOULD BE APPLIED AT A RATE OF 4,000 POUNDS PER ACRE AND CRIMPED INTO THE GROUND. ON SLOPES GREATER THAN 3:1, AN AGRONOMY BLANKET SHOULD BE USED.
- SUPPLEMENTAL WATER**  
IN LOW RAINFALL AREAS, WHERE WATER IS AVAILABLE AND WHERE RAPID ESTABLISHMENT IS NEEDED, IRRIGATION OF NEW SEEDING SHOULD BE PERFORMED DURING THE FIRST GROWING SEASON. WATER SHOULD BE APPLIED AT APPROXIMATELY ONE WEEK INTERVALS, AT A RATE OF 3/4 TO 1 INCH PER APPLICATION, WHEN RAINFALL IS DEFICIENT FOR PLANT DEVELOPMENT.

**NOTES:**

AT LEAST TEN DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB 1 ACRE OR MORE, THE OWNER OR OPERATOR OF THE CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

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WATER QUALITY CONTROL DIVISION  
WOOD - PERMITS  
4300 CHERRY CREEK DRIVE SOUTH  
DENVER, CO 80246-1530  
ATTN: PERMITS UNIT

A PORTION OF THE OVERALL FOREST LAKES DEVELOPMENT IS LOCATED WITHIN A FLOODPLAIN AS DETERMINED BY THE FLOOD INSURANCE RATE MAPS (F.I.R.M.) MAP NUMBERS 08041 C0267G, C0266G, C0258G & C0259G EFFECTIVE DATE, DECEMBER 7, 2018. HOWEVER, THERE IS NO PORTION OF FILING 7 DEVELOPMENT WITHIN THE FLOODPLAIN LIMITS.

THE AVERAGE SOIL CONDITION REFLECTS HYDROLOGIC SOIL GROUP "B", MOSTLY JARRE-TECOLOTE COMPLEX AND PEYTON-PRING COMPLEX AS DETERMINED BY THE "SOIL SURVEY OF EL PASO COUNTY AREA" PREPARED BY THE U.S. SOIL CONSERVATION SERVICE.

EXISTING VEGETATION CONSISTS OF NATIVE GRASSES.

EMERGENCY OVERFLOW SWALES FOR INLETS IN THE INTERIM UNTIL CURB AND ASPHALT IS INSTALLED WILL BE THE LOTS, FINAL WILL BE TO OVERTOP THE HIGH POINT IN ROADWAY TO THE NEXT AVAILABLE INLET OR TO PROPOSED POND.

STOCKPILE LOCATIONS FOR HOMEBUILDING TO BE ON EACH INDIVIDUAL LOT THAT IS BEING BUILT UPON.

LIMITS OF DISTURBANCE FOR THIS PLAN INCLUDE UTILITY INSTALLATION AND ROADWAY CONSTRUCTION WITHIN THE R.O.W. AND OVERLOT GRADING FOR DEVELOPMENT THEN INDIVIDUAL LOTS FOR HOMEBUILDING ONCE CONSTRUCTION OF THE HOME BEGINS.

GRADING WITHIN THIS PHASE WILL BE FULLY DEVELOPED WITH HOME BUILDING OPERATIONS.

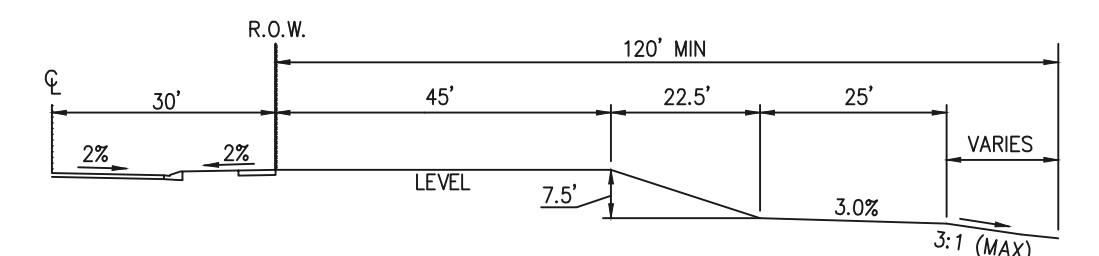
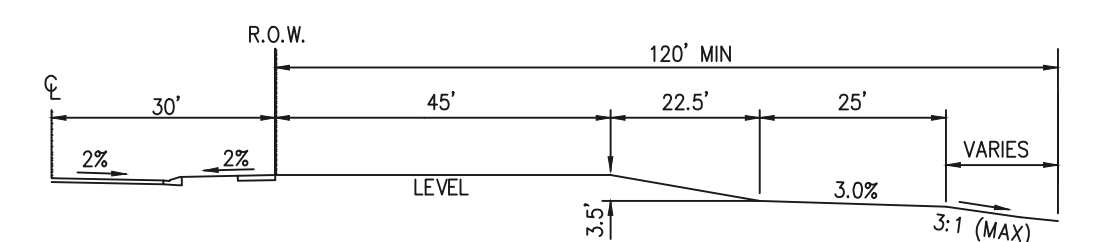
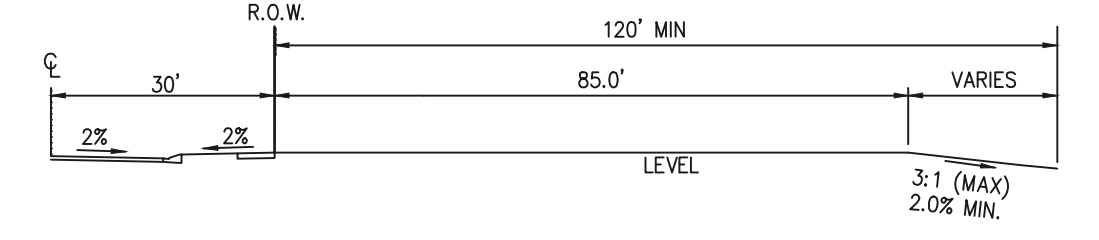
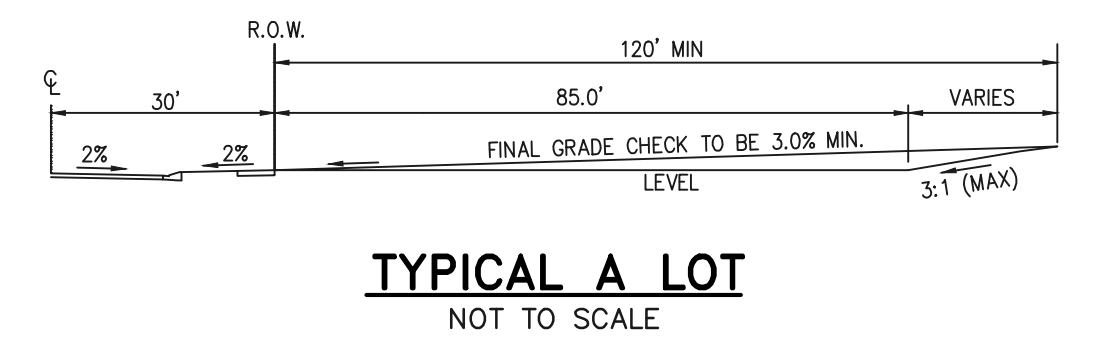
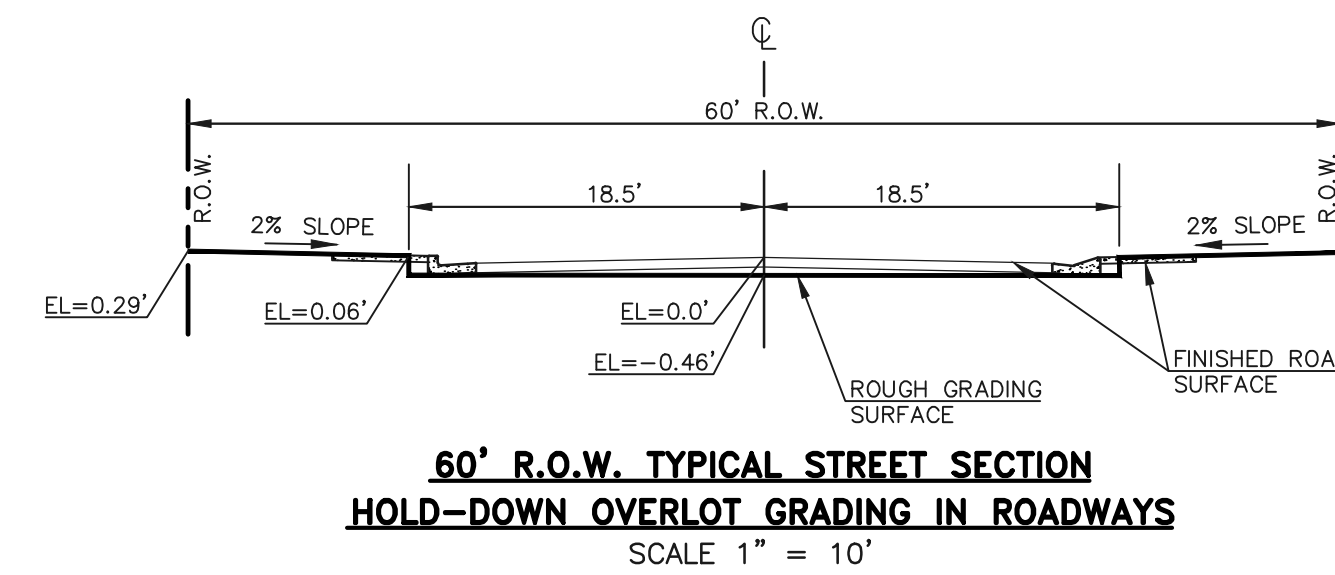
LOCATION OF THE CONCRETE WASHOUT, STORAGE FOR MAINTENANCE EQUIPMENT AND TEMPORARY DISPOSAL AREAS WILL BE ADDED TO THIS PLAN BY SWMP ADMINISTRATOR UPON COORDINATION WITH SELECTED CONTRACTOR.

ALL AREAS ARE TO BE RESEEDED OUTSIDE OF THE FILING NO. 5 AREA. RESEED ALL AREAS AS NEEDED TO PREVENT EROSION AND SEDIMENT RUNOFF ONTO CONSTRUCTION ACTIVITIES.

**SCHEDULE OF ANTICIPATED CONSTRUCTION ACTIVITY:**

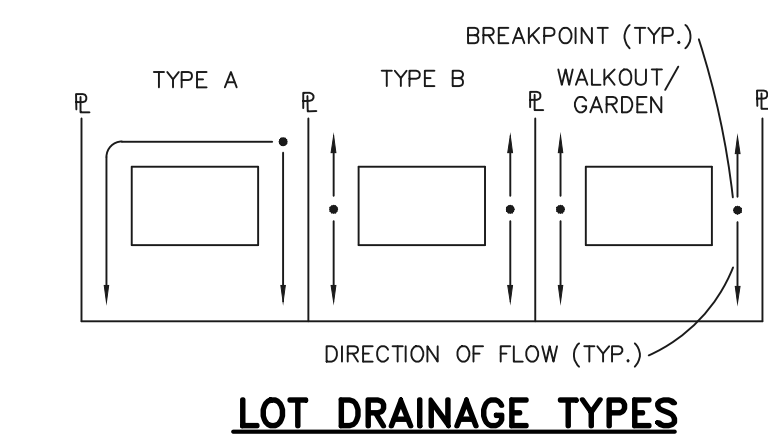
- INSTALL INITIAL BMP'S
- INSPECTION OF INTIAL BMP'S BY COUNTY STAFF
- PRECONSTRUCTION MEETING WITH COUNTY STAFF

BEGIN CONSTRUCTION UPON APPROVAL	ACTIVITY	COMPLETION MONTHS	EROSION CONTROL ALL SHOWN ON GRADING PLAN
	ALL SITE ROADWAY GRADING AND UTILITY INSTALLATION	6 MONTHS	

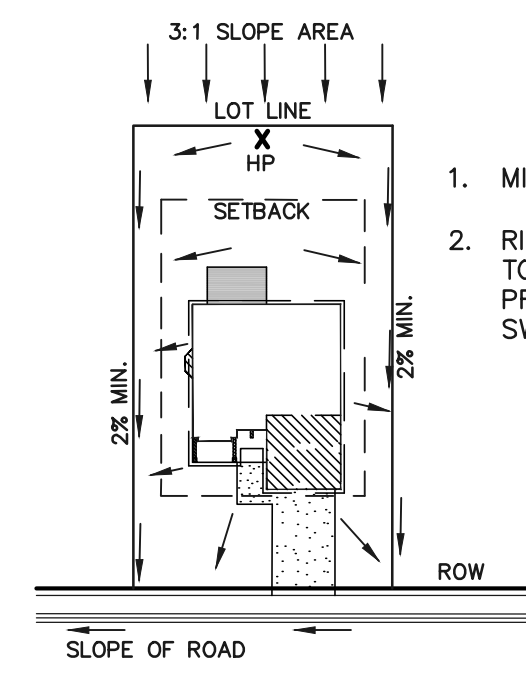
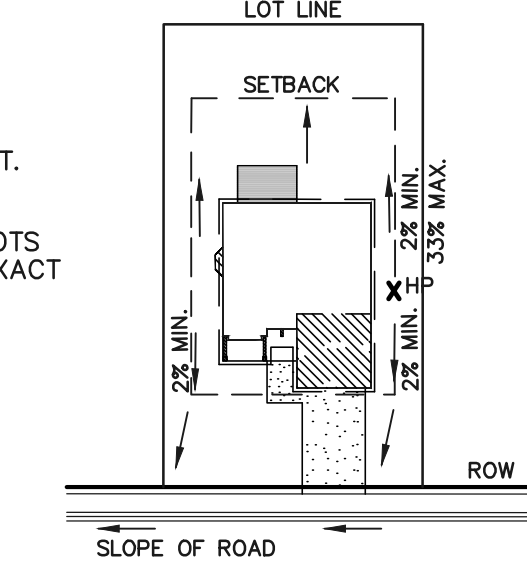
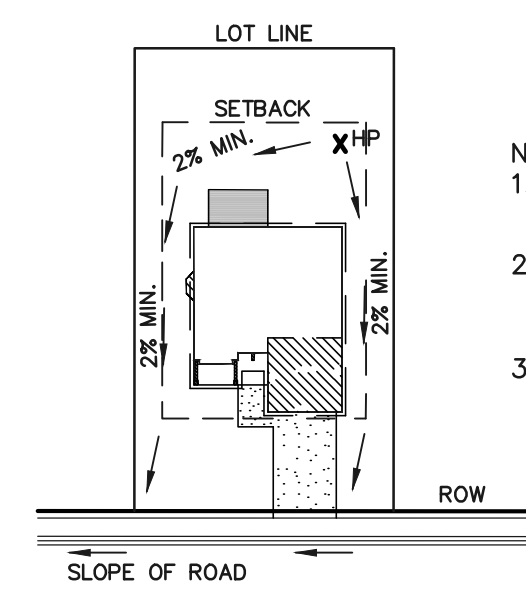


**NOTE:**  
"T" LOTS OR "TRANSITION" LOTS OCCUR IN PLACES WHERE BOTH PROPERTY LINES CANNOT BE GRADED AS THE TYPICAL STANDARD LOT TEMPLATES SHOWN. THESE LOTS WILL STILL BE GRADED TO CREATE POSITIVE DRAINAGE AWAY FROM THE STRUCTURE.

**NOTE:**  
SIDE LOT LINE SWALES ARE REQUIRED FOR ALL LOTS.



- MINIMUM LOT WIDTH ALONG SLOPE IS 70'.
- RIPRAP OR CONCRETE 'V' NOTCH SWALES TO BE INSTALLED ALONG SHARED PROPERTY & WITHIN SIDE LOT EASEMENTS. SWALES TO DISCHARGE ONTO ROADWAY.



TYPICAL "A" LOT DRAINAGE PATTERN N.T.S.

TYPICAL "B", "G", "W/O" LOT DRAINAGE PATTERN N.T.S.

"A" LOTS W/SLOPE BEHIND DRAINAGE PATTERN N.T.S.

PCD FILE # SF-21-49

NO.	REVISION	DATE
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<b>811</b>		
UTILITY NOTIFICATION CENTER OF COLORADO ITS THE LAW		
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PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC	
KYLE R. CAMPBELL, COLORADO P.E. #29794	DATE

FOREST LAKES FILING NO. 7 CONSTRUCTION PLANS GRADING AND EROSION CONTROL PLAN NOTES & DETAIL SHEET			
DESIGNED BY	MAL	SCALE	DATE 05/21/21
DRAWN BY	MES	(H) 1" = N/A	SHEET 5 OF 31
CHECKED BY	(V) 1" = N/A	JOB NO.	1175.70

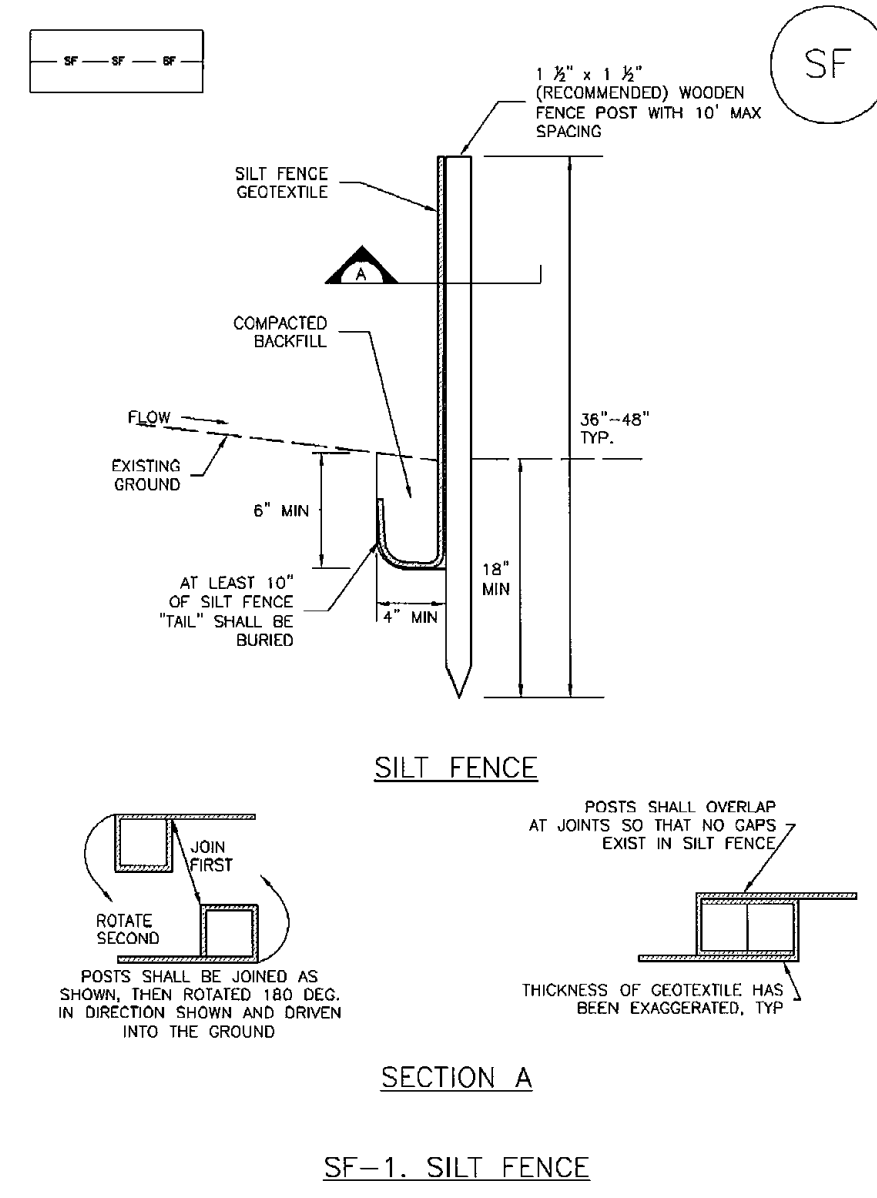
CLASSIC CONSULTING

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



**Silt Fence (SF)**

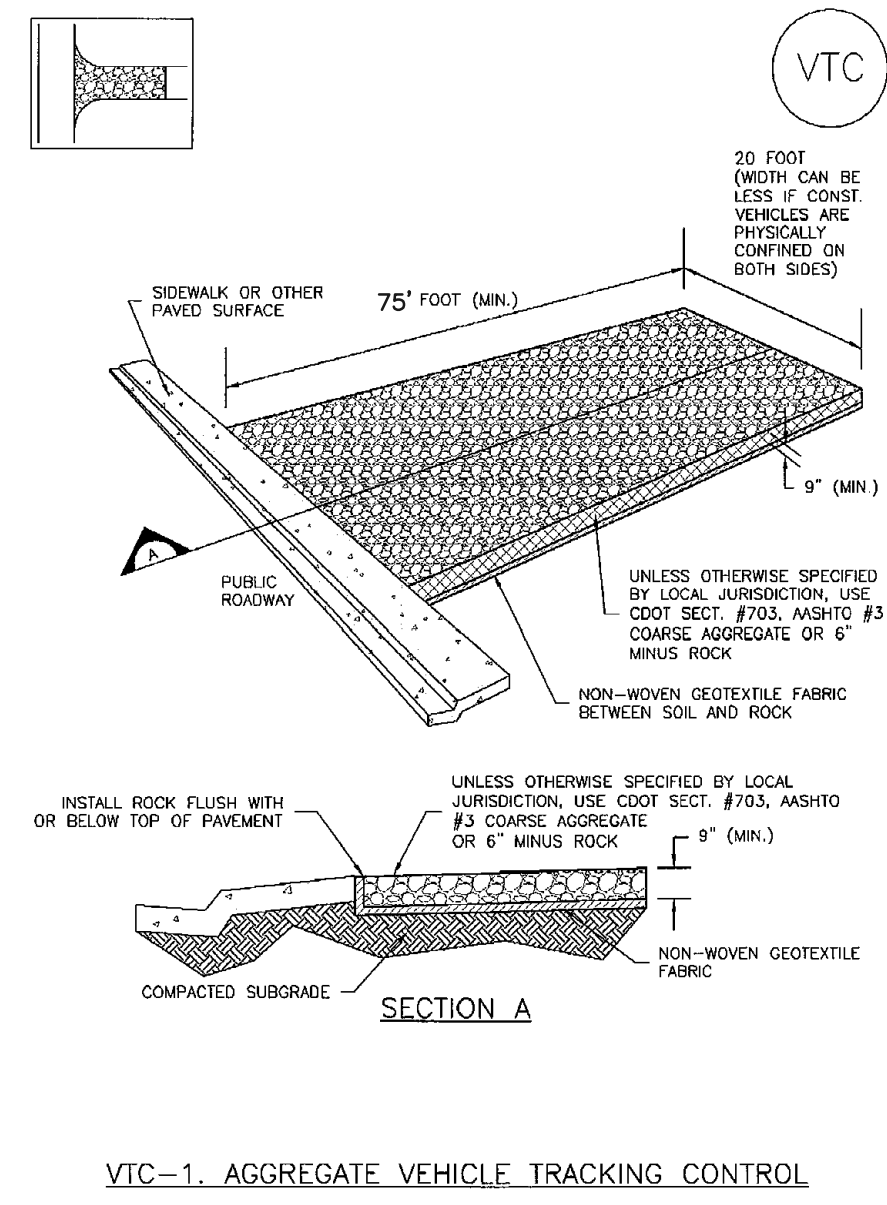
**SC-1**



November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SF-3

**Vehicle Tracking Control (VTC)**

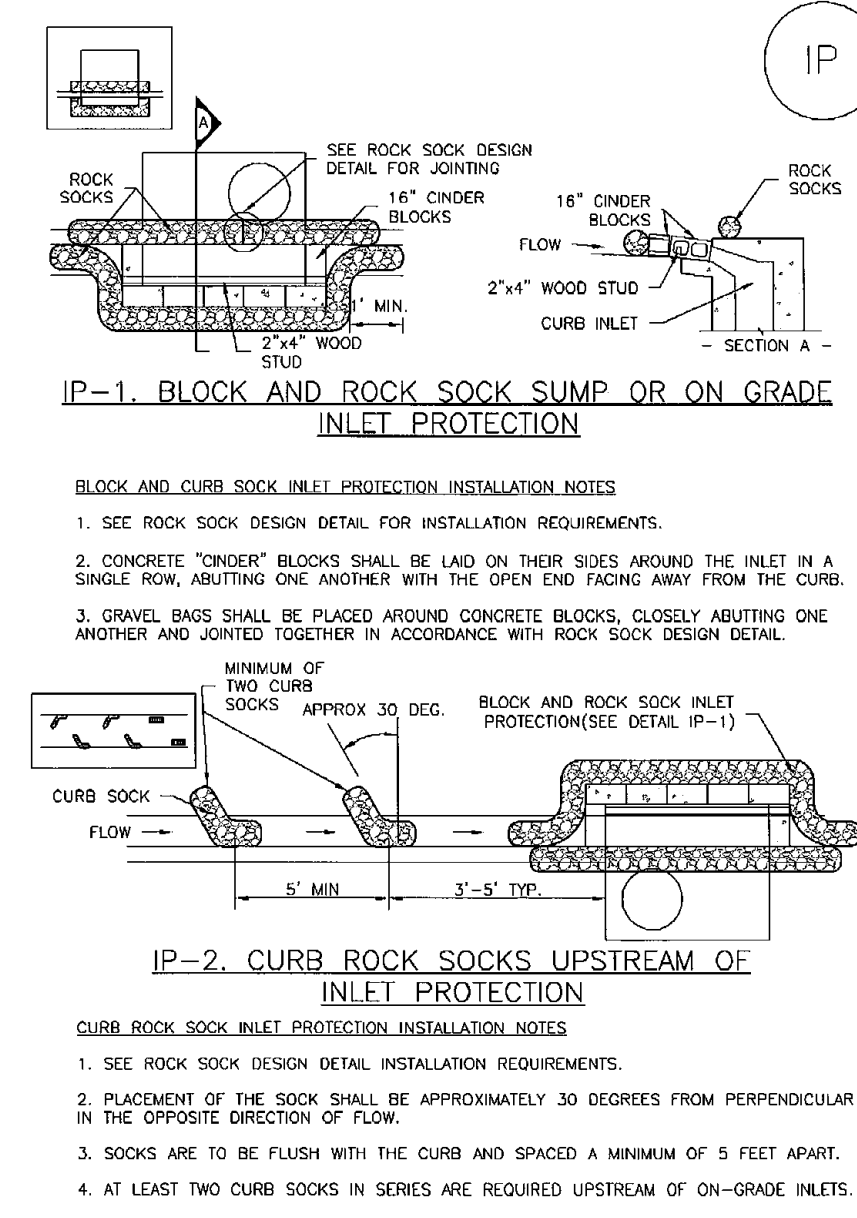
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November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 VTC-3

**SC-6**

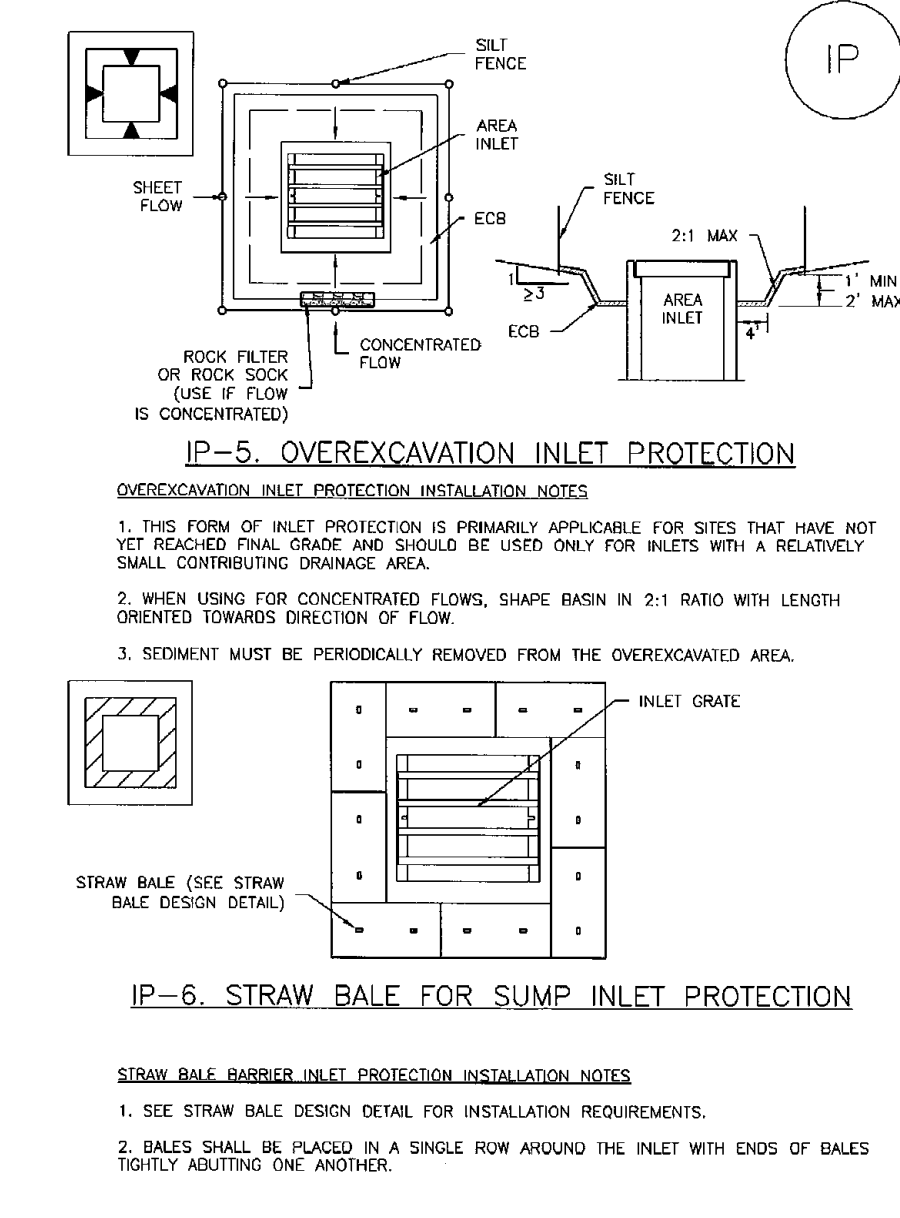
**Inlet Protection (IP)**



IP-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 August 2013

**SC-6**

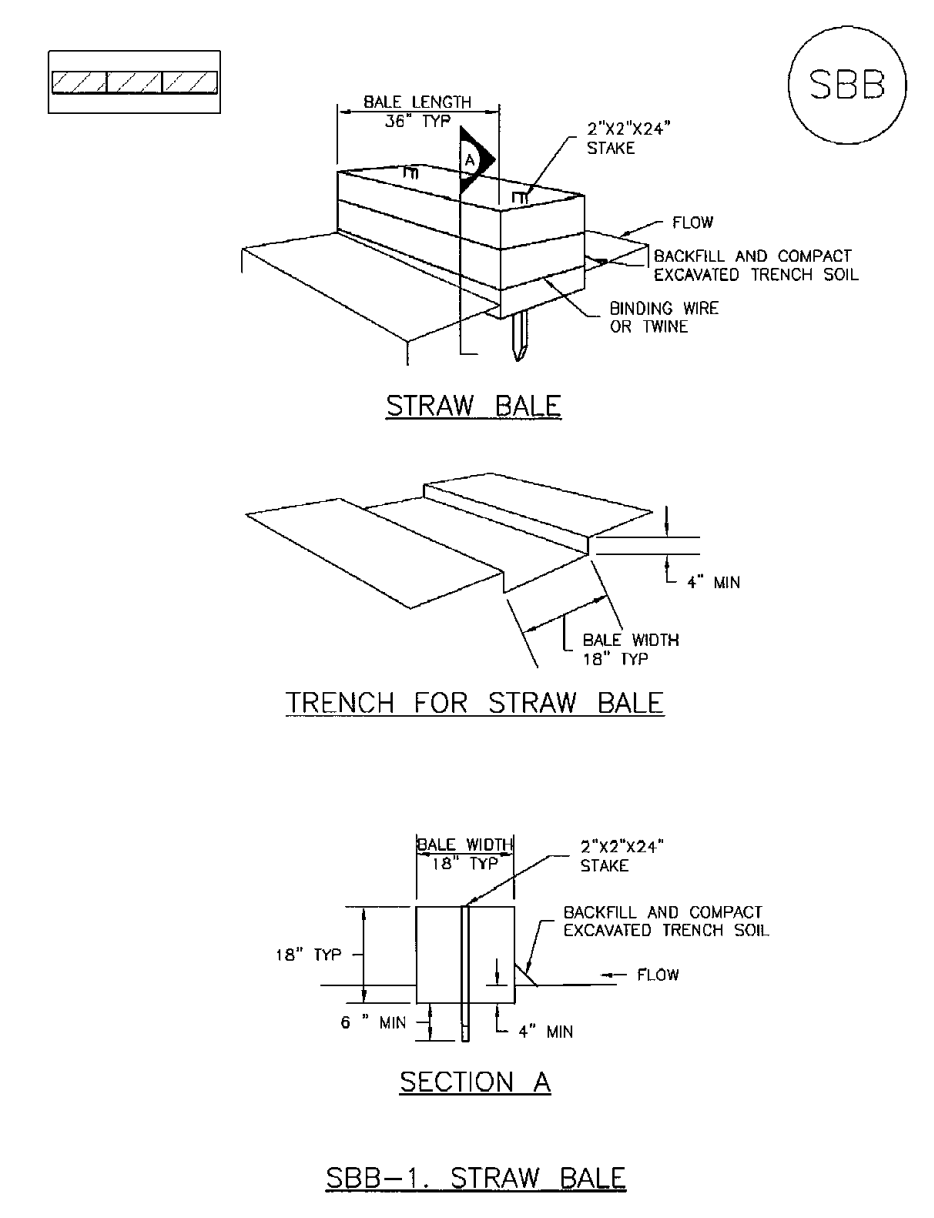
**Inlet Protection (IP)**



IP-6 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 August 2013

**SC-3**

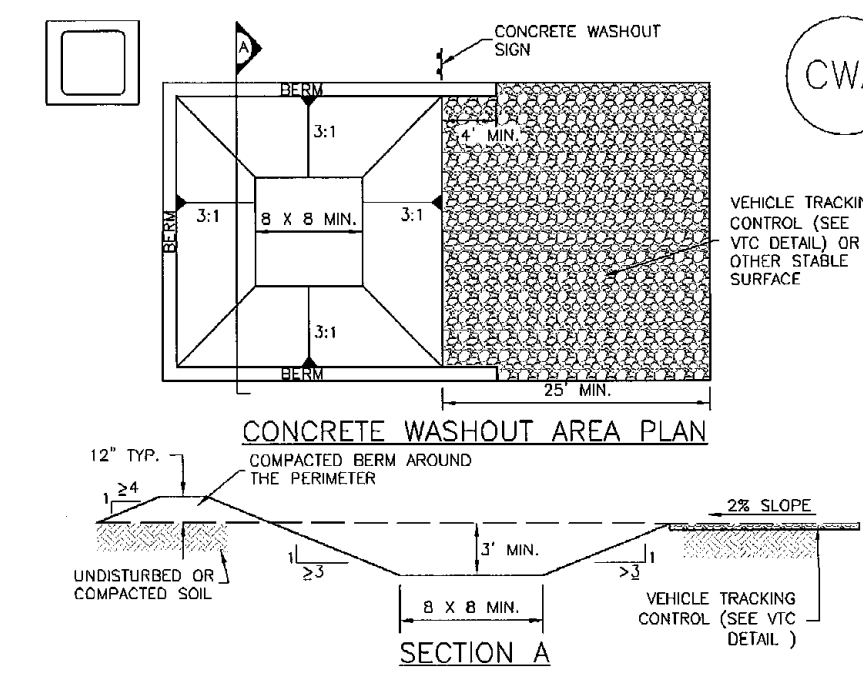
**Straw Bale Barrier (SBB)**



SBB-2 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

**Concrete Washout Area (CWA)**

**MM-1**



**CWA INSTALLATION NOTES**

- SEE PLAN VIEW FOR: -CWA INSTALLATION LOCATION.
- DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS UNFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (6 IN. MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE-GROUND STORAGE ARE SHOULD BE USED.
- THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
- CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER THE PIT SHALL BE AT LEAST 3' DEEP.
- BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
- VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
- SIGNAGE SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP TRUCKS.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 CWA-3

**MM-1**

**Concrete Washout Area (CWA)**

**CWA MAINTENANCE NOTES**

- INSPECT BEMPS EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BEMPS SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BEMPS AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BEMPS IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BEMPS HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
- CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
- THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
- WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM USDCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

CWA-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

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NO.	REVISION	DATE

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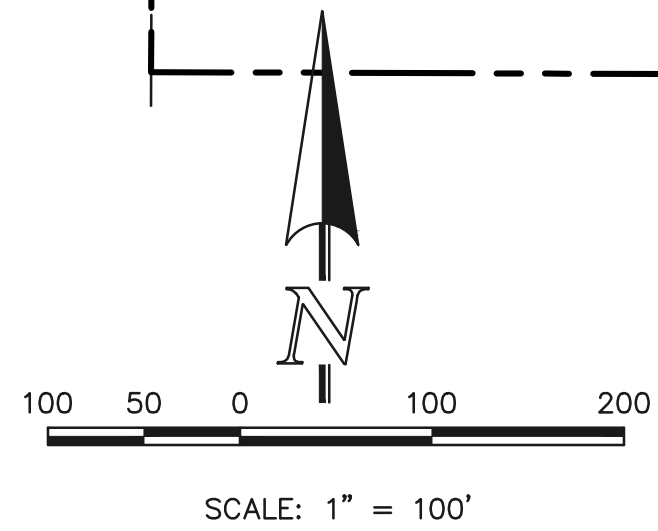
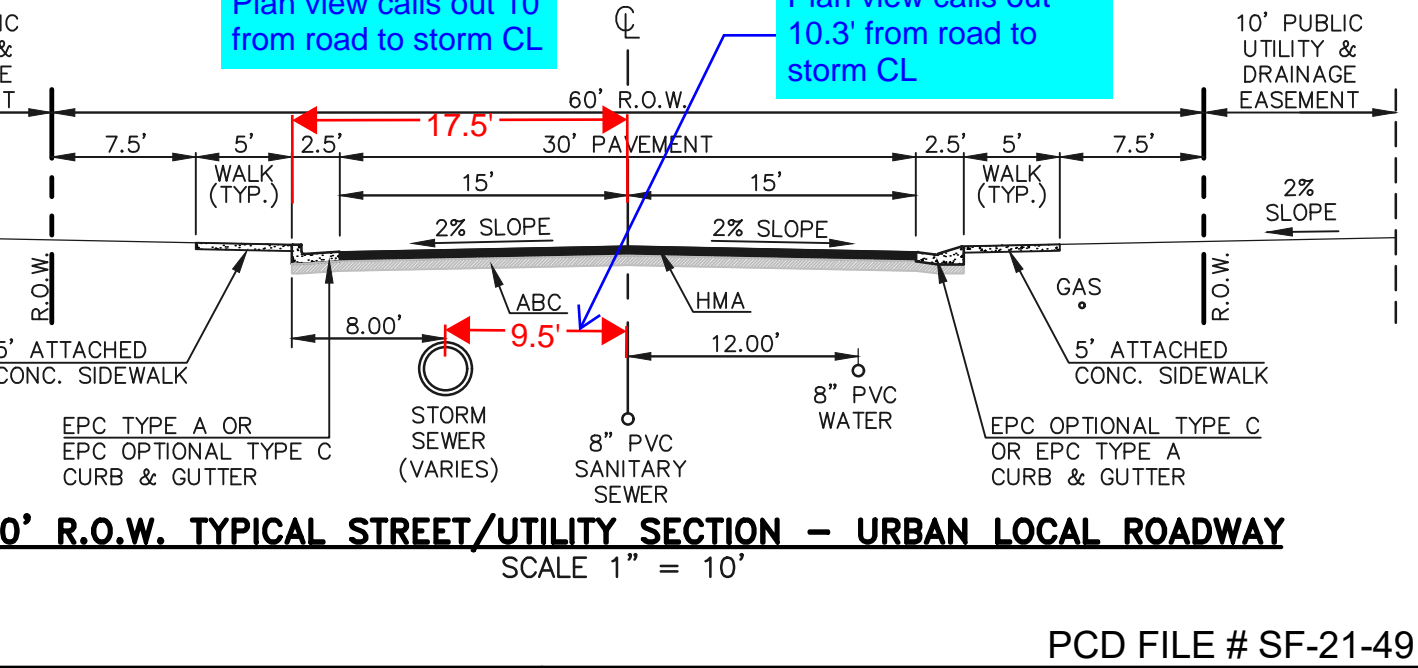
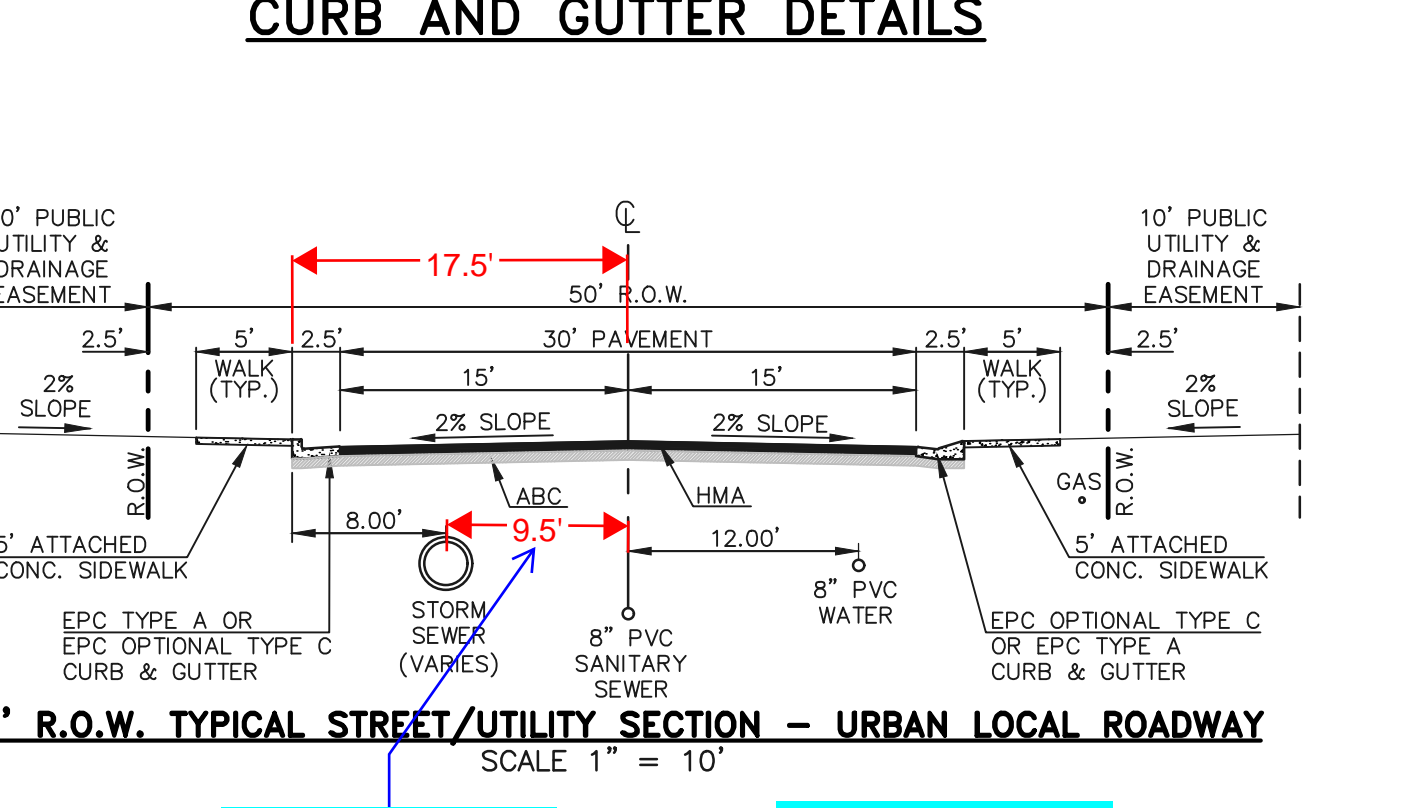
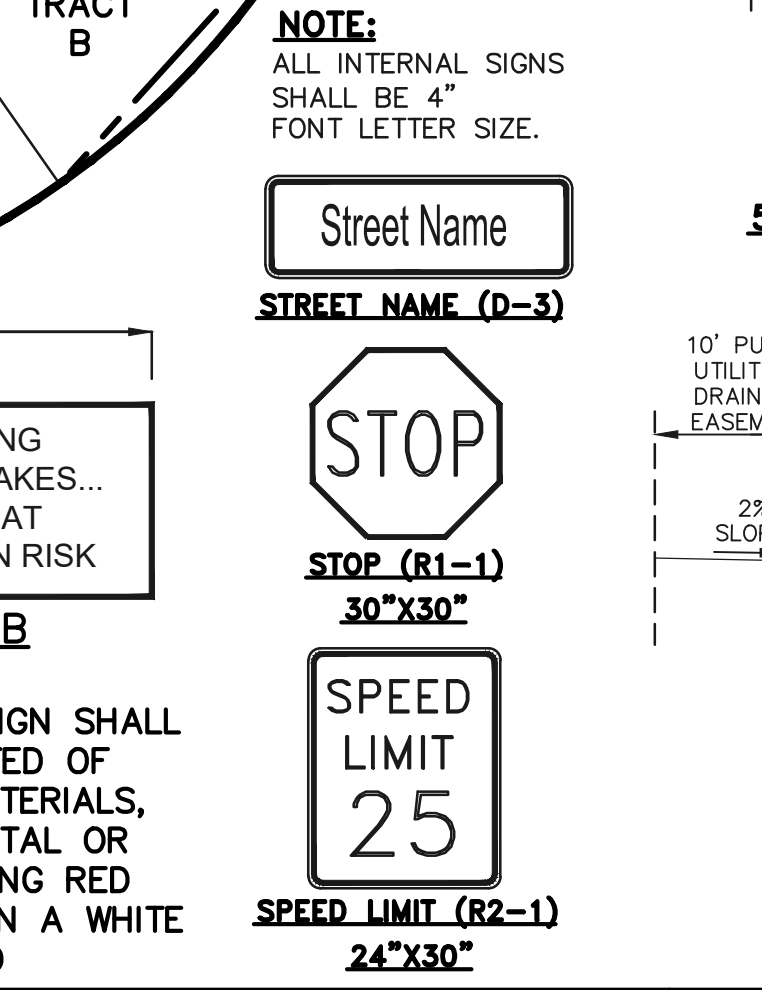
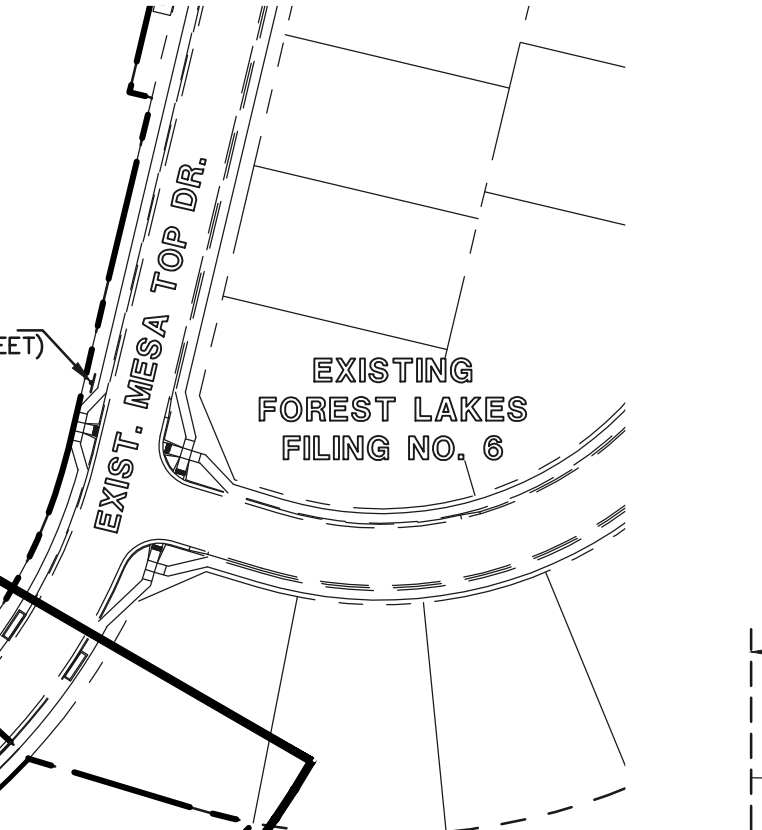
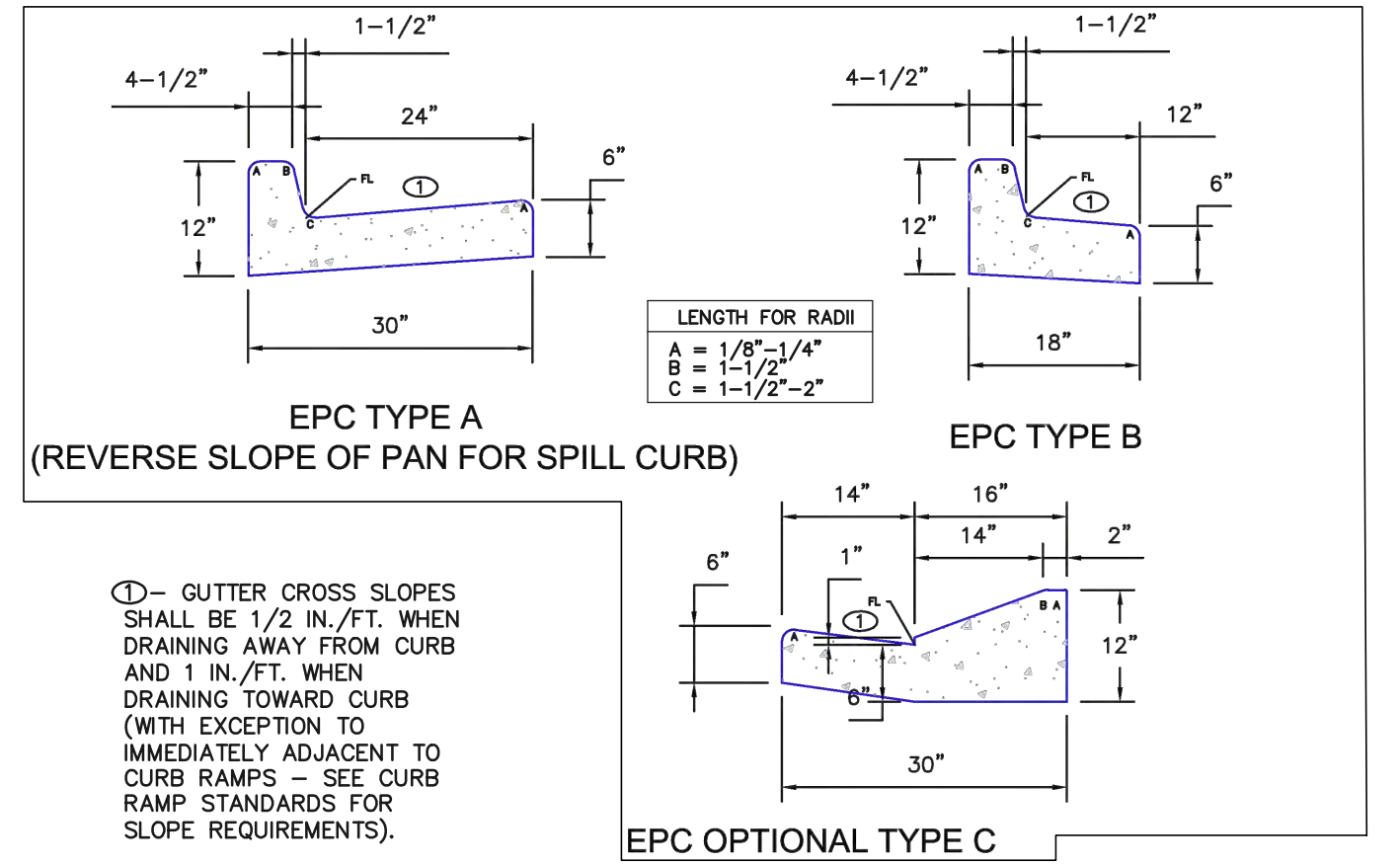
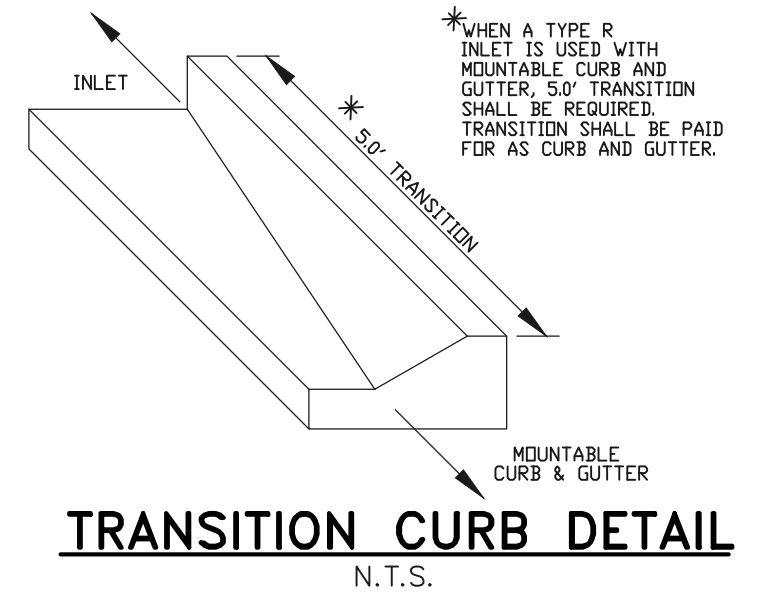
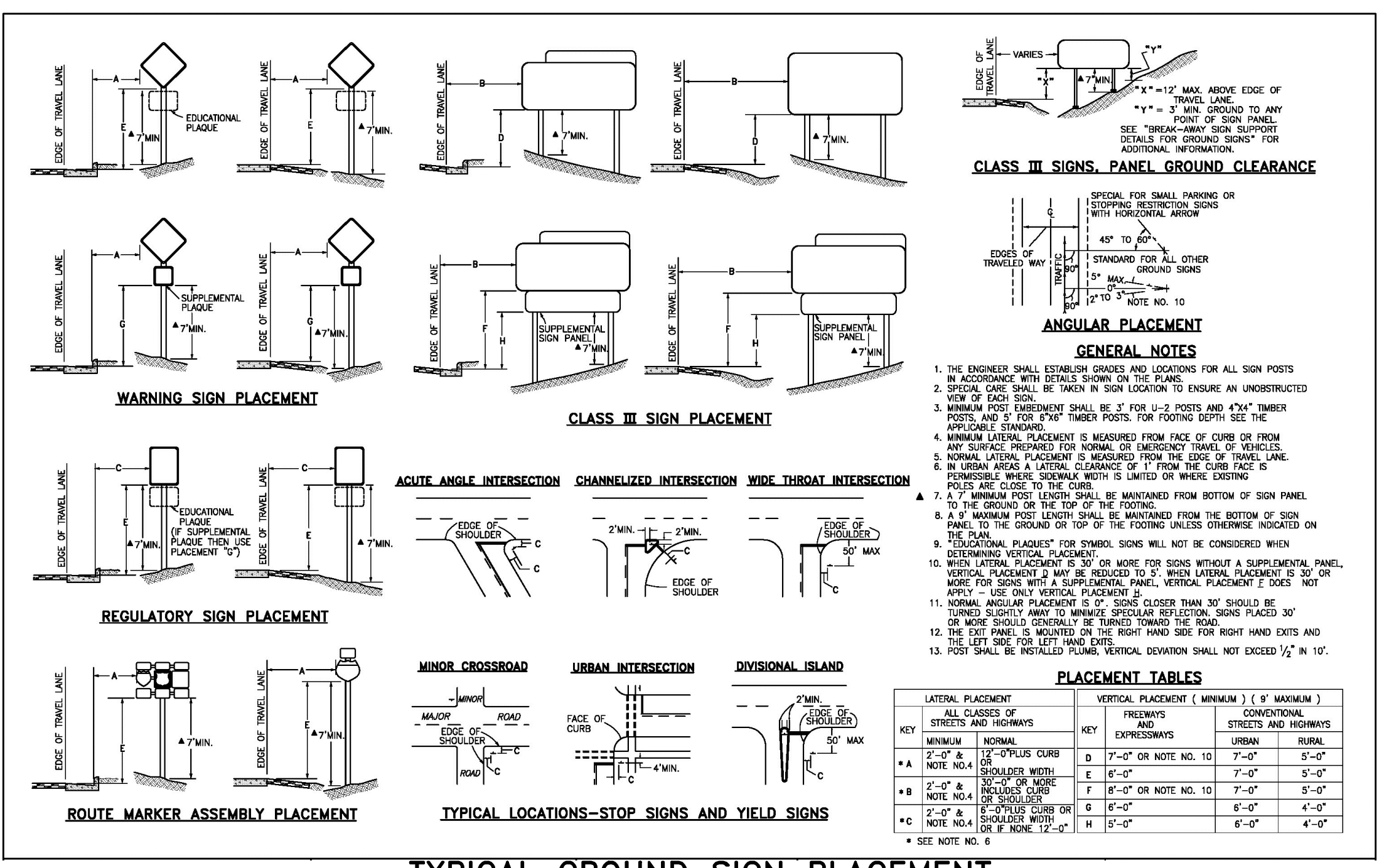
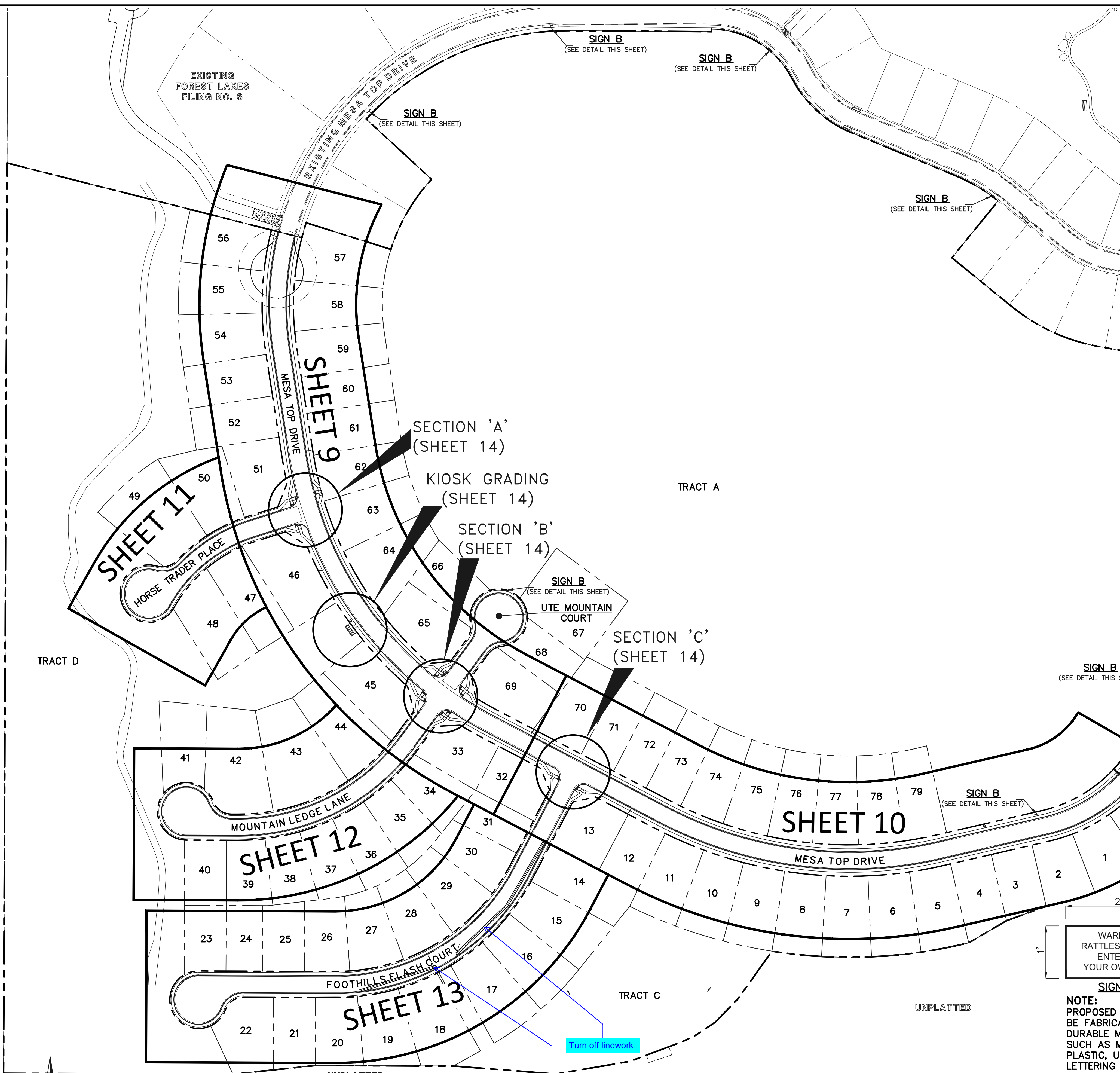
KYLE R. CAMPBELL, COLORADO P.E. #29794 DATE



FOREST LAKES FILING NO. 7  
CONSTRUCTION PLANS  
GRADING AND EROSION CONTROL PLAN  
EROSION CONTROL DETAILS

DESIGNED BY	MAL	SCALE	DATE	05/21/21
DRAWN BY	MES	(H) 1"= N/A	SHEET	7 OF 31
CHECKED BY		(V) 1"= N/A	JOB NO.	1175.70

UNPLATTED FOREST SERVICE DEPT. OF AGRICULTURE UNITED STATES OF AMERICA



ABBREVIATIONS: EPC EL PASO COUNTY, PVC POLYVINYL CHLORIDE PIPE, R.O.W. RIGHT-OF-WAY, HMA HOT MIX ASPHALT, ABC AGGREGATE BASE COURSE, CONC. CONCRETE, STA. STATION, C&G CURB & GUTTER, MIN. MINIMUM, FL. FLOWLINE, TYP. TYPICAL, I.F.O.B. INSIDE FACE OF BOX

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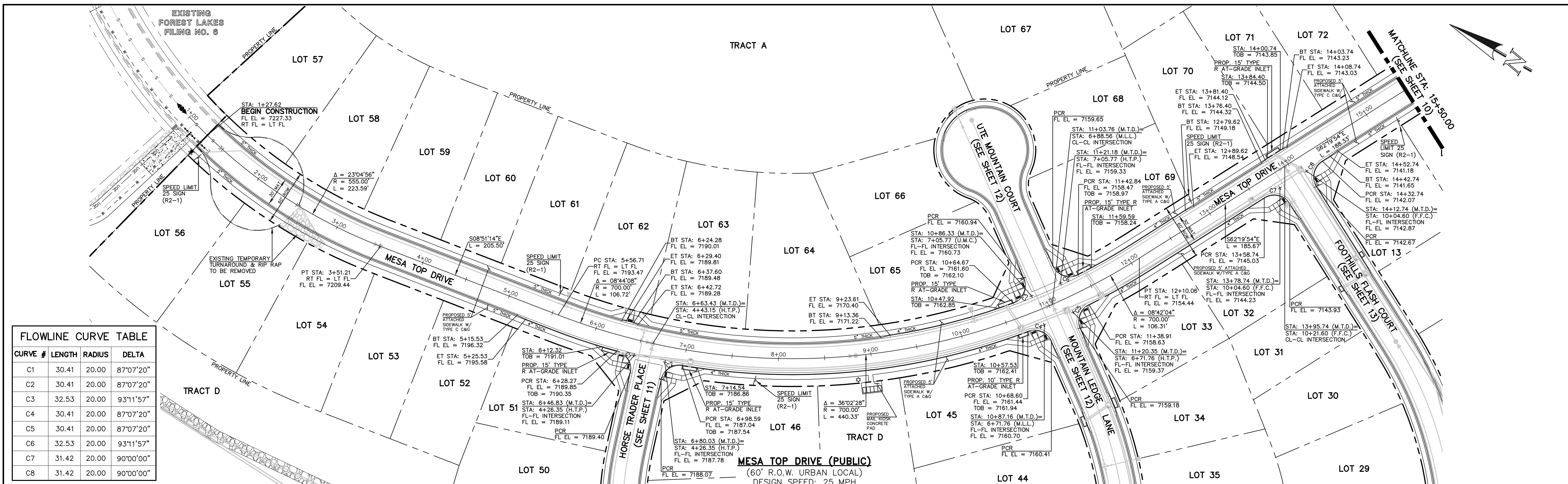
NO. REVISION DATE REVIEW: PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC. KYLE R. CAMPBELL, COLORADO P.E. #29794 DATE



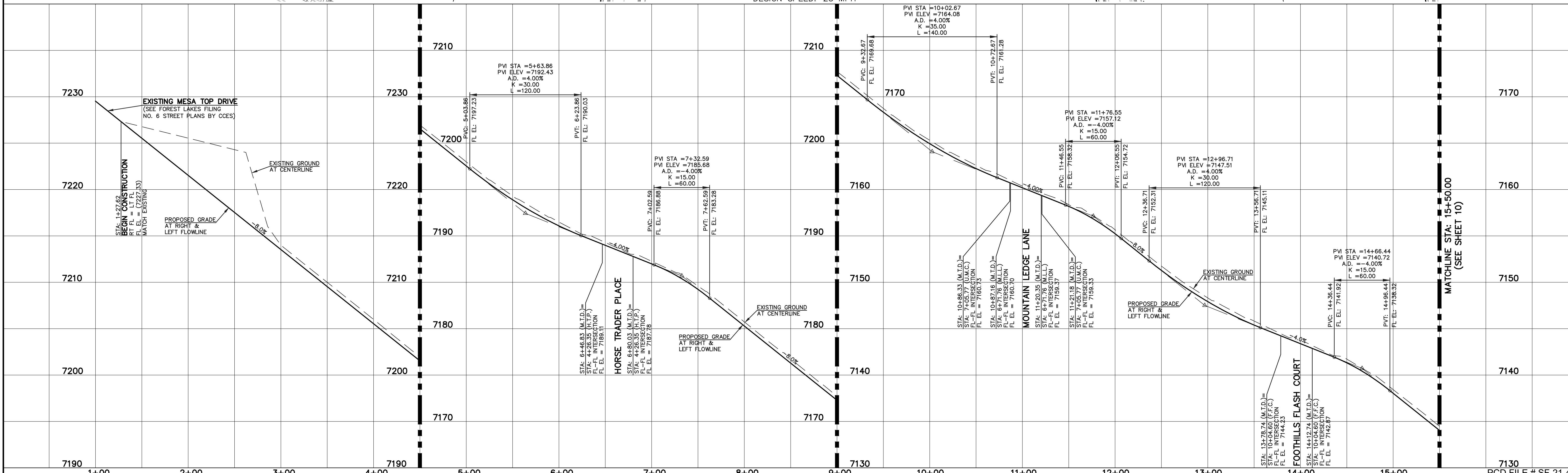
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PCD FILE # SF-21-49





CURVE #	LENGTH	RADIUS	DELTA
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C2	30.41	20.00	87°07'20"
C3	32.53	20.00	93°11'57"
C4	30.41	20.00	87°07'20"
C5	30.41	20.00	87°07'20"
C6	32.53	20.00	93°11'57"
C7	31.42	20.00	90°00'00"
C8	31.42	20.00	90°00'00"



**LEGEND**

- BOUNDARY LINE: ---
- ROW LINE: - - - -
- LOT LINE: - - - -
- CURB & GUTTER: =
- PED RAMP: [Symbol]
- LIGHT POLE: [Symbol]
- SIGN: [Symbol]
- TYPE R INLET: [Symbol]

**STREET ABBREVIATION INDEX**

- M.T.D. MESA TOP DRIVE
- H.T.P. HORSE TRADER PLACE
- M.L.L. MOUNTAIN LEDGE LANE
- U.M.C. UTE MOUNTAIN COURT
- F.F.C. FOOTHILLS FLASH COURT

**WALK CONSTRUCTION:**

4" THICK SIDEWALK ALLOWED ALONG OPEN SPACE TRACTS & 'ESTATE LOT' FRONTAGE. 5" THICK SIDEWALK TYPICAL ALONG RESIDENTIAL LOTS PER EL PASO COUNTY DIRECTION. 6" REQUIRED AT DRIVEWAY CONNECTIONS PER DETAILS SD 2-24 & SD 2-25 ON SHEET 6. WALK NOT INSTALLED AT 6" THICKNESS WILL BE RE-CONSTRUCTED WITH DRIVEWAY PERMIT AND INSTALLATION AS REQUIRED.

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NO. REVISION: [Table]  
DATE: [Table]

REVIEW: [Table]

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KYLE R. CAMPBELL, COLORADO P.E. #29794 DATE: [Table]

**CLASSIC CONSULTING**

FOREST LAKES FILING NO. 7  
PUBLIC STREET IMPROVEMENT PLAN  
MESA TOP DRIVE  
STA: 1+00.00 - 15+50.00

DESIGNED BY: MAL SCALE: DATE: 05/21/21  
DRAWN BY: MES (H) 1" = 50' SHEET 9 OF 31  
CHECKED BY: (V) 1" = 5' JOB NO. 1175.70

PCD FILE # SF-21-49

LEGEND

STREET ABBREVIATION INDEX

WALK CONSTRUCTION:

811

NO. REVISION

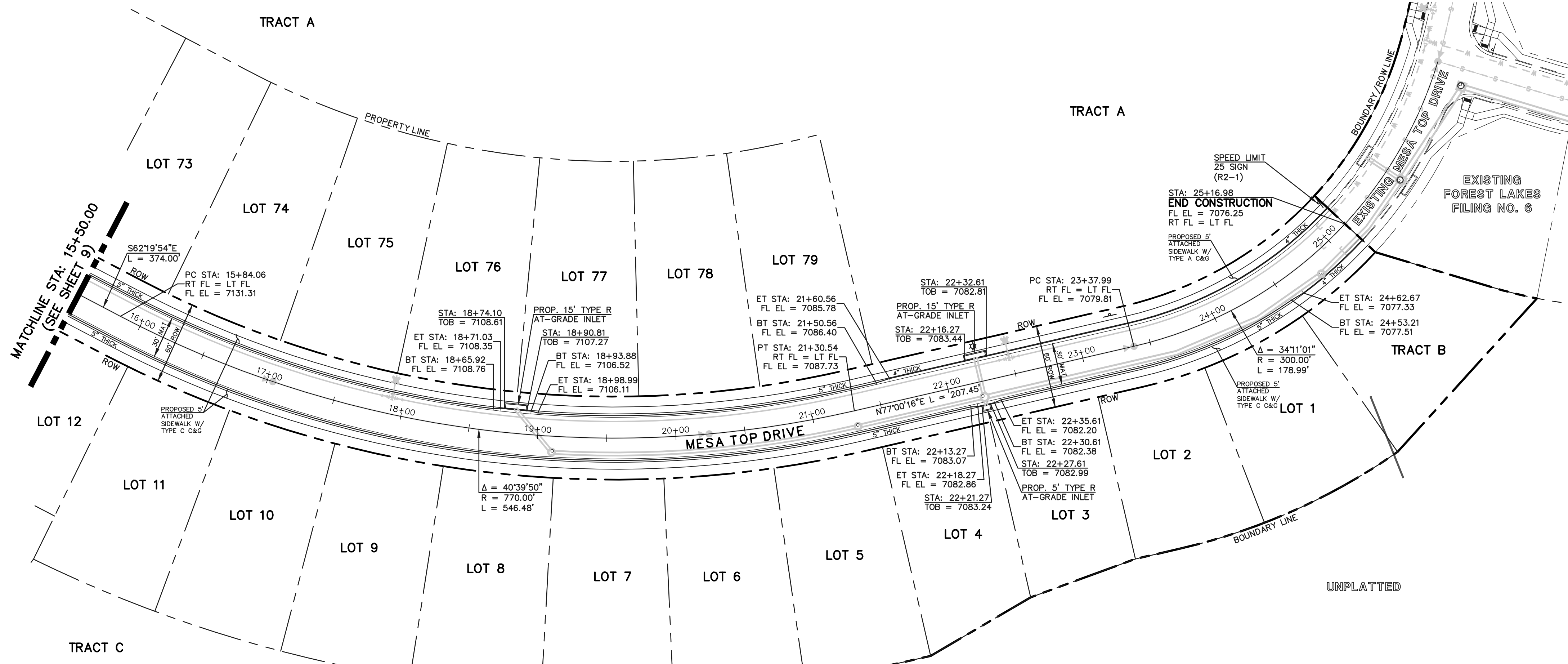
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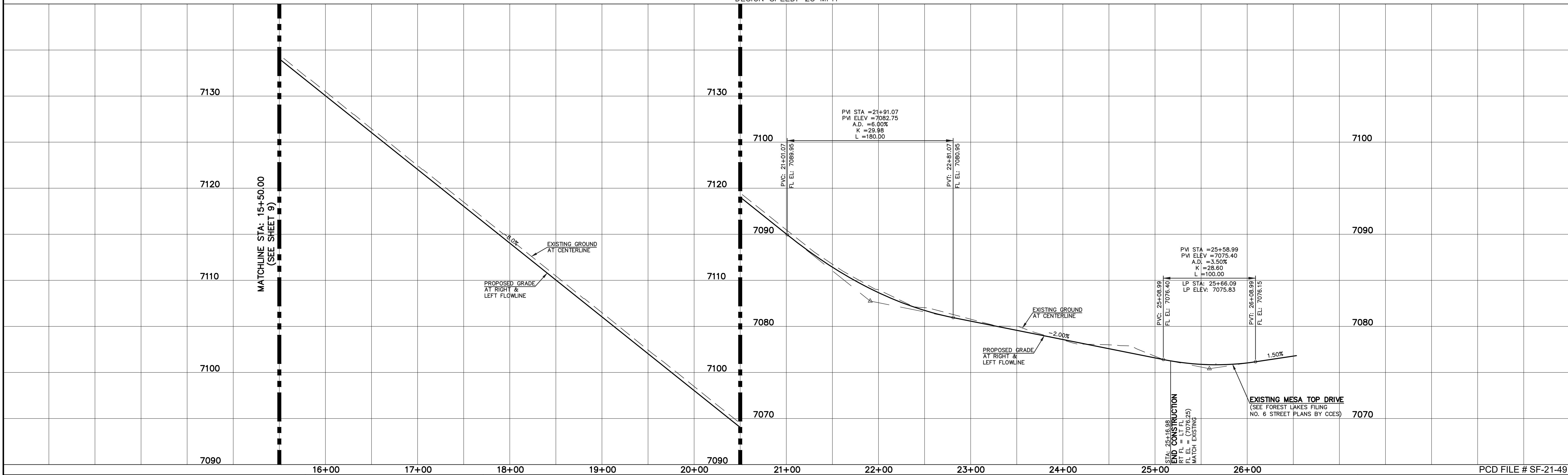
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MESA TOP DRIVE (PUBLIC)  
(60' R.O.W. URBAN LOCAL)  
DESIGN SPEED: 25 MPH



**LEGEND**

- BOUNDARY LINE
- ROW LINE
- LOT LINE
- CURB & GUTTER
- PED RAMP
- LIGHT POLE
- SIGN
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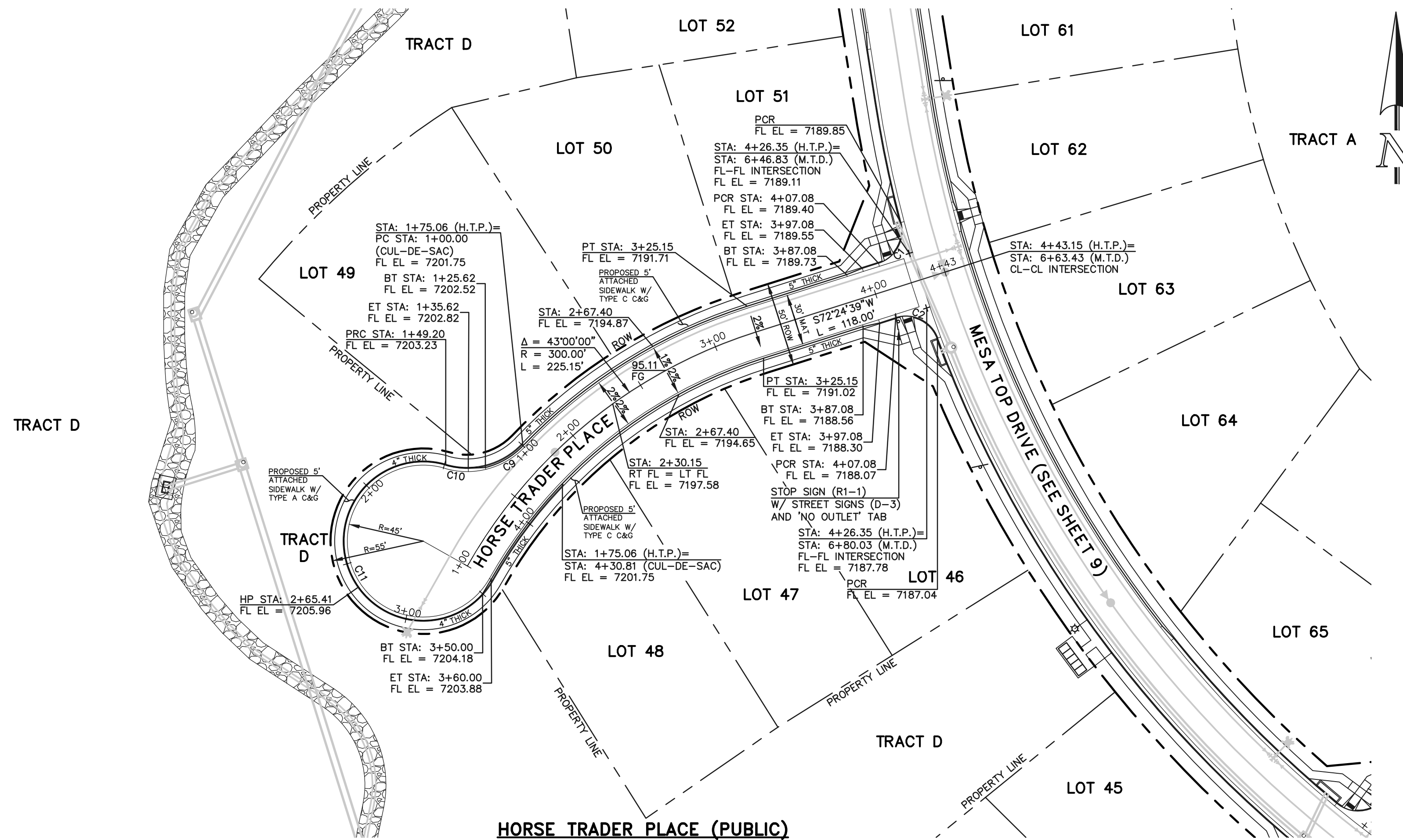
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PUBLIC STREET IMPROVEMENT PLAN  
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DESIGNED BY	MAL	SCALE	DATE	05/21/21
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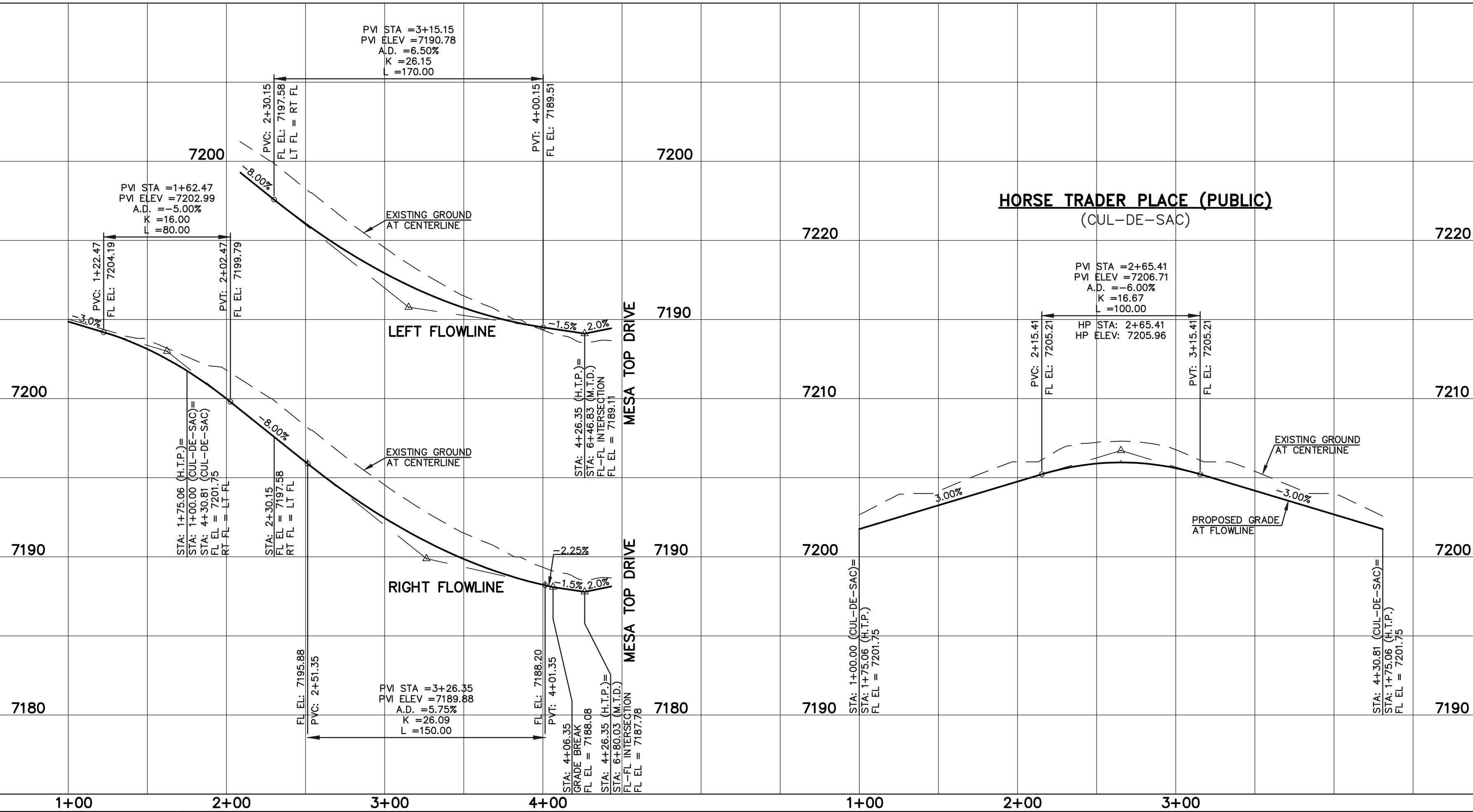
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FLOWLINE CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C1	30.41	20.00	87°07'20"
C2	30.41	20.00	87°07'20"
C9	26.09	45.83	32°37'16"
C10	13.58	45.00	17°17'24"
C11	200.80	47.00	244°47'21"



**HORSE TRADER PLACE (PUBLIC)**  
 (50' R.O.W. URBAN LOCAL)  
 DESIGN SPEED: 25 MPH



PCD FILE # SF-21-49

**LEGEND**

BOUNDARY LINE	---
ROW LINE	---
LOT LINE	---
CURB & GUTTER	---
PED RAMP	▭
LIGHT POLE	☆
SIGN	▲
TYPE R INLET	▭

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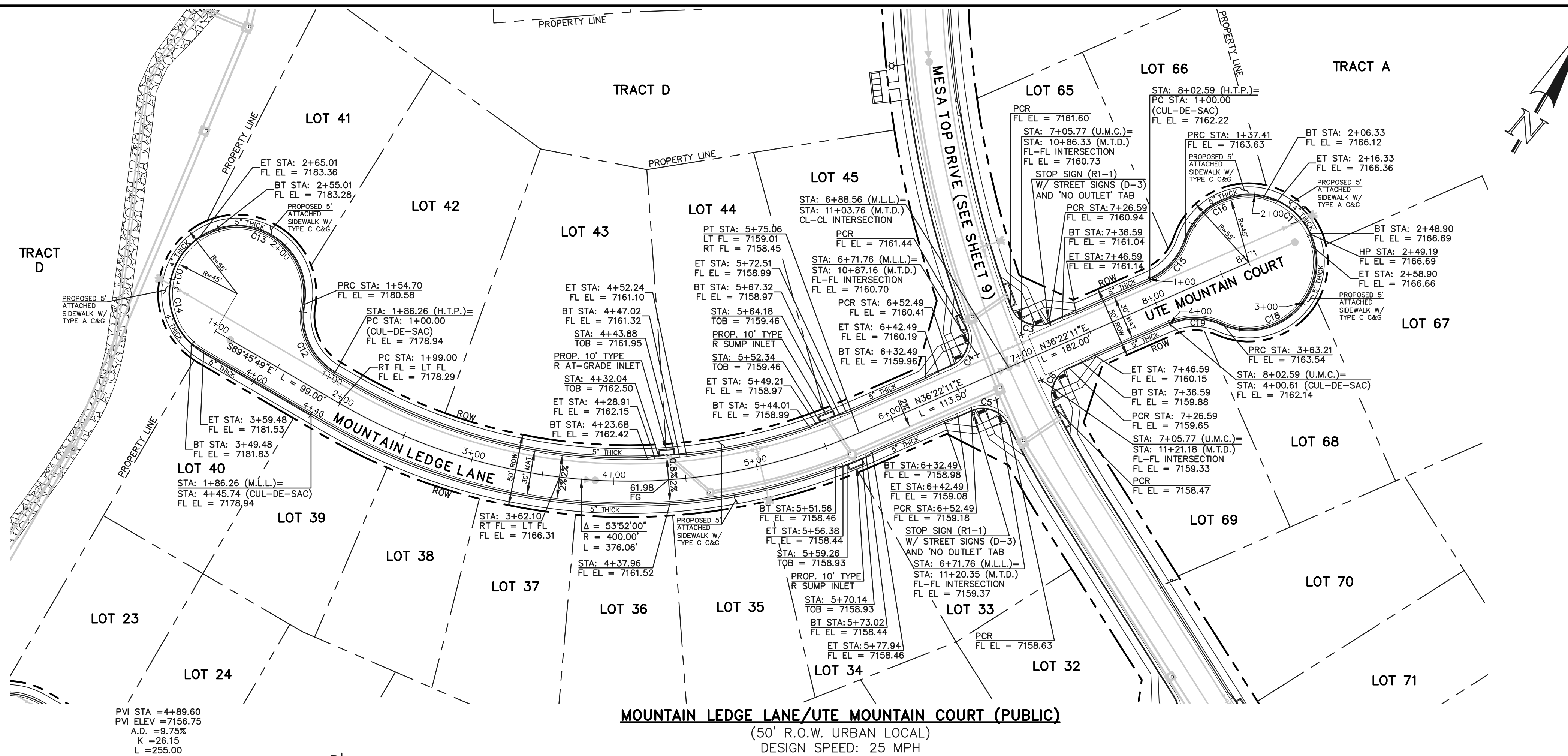
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 PUBLIC STREET IMPROVEMENT PLAN  
 HORSE TRADER PLACE

DESIGNED BY	MAL	SCALE	DATE	05/21/21
DRAWN BY	MES	(H) 1" = 50'	SHEET	11 OF 31
CHECKED BY	(V) 1" = 5'	JOB NO.	1175.70	

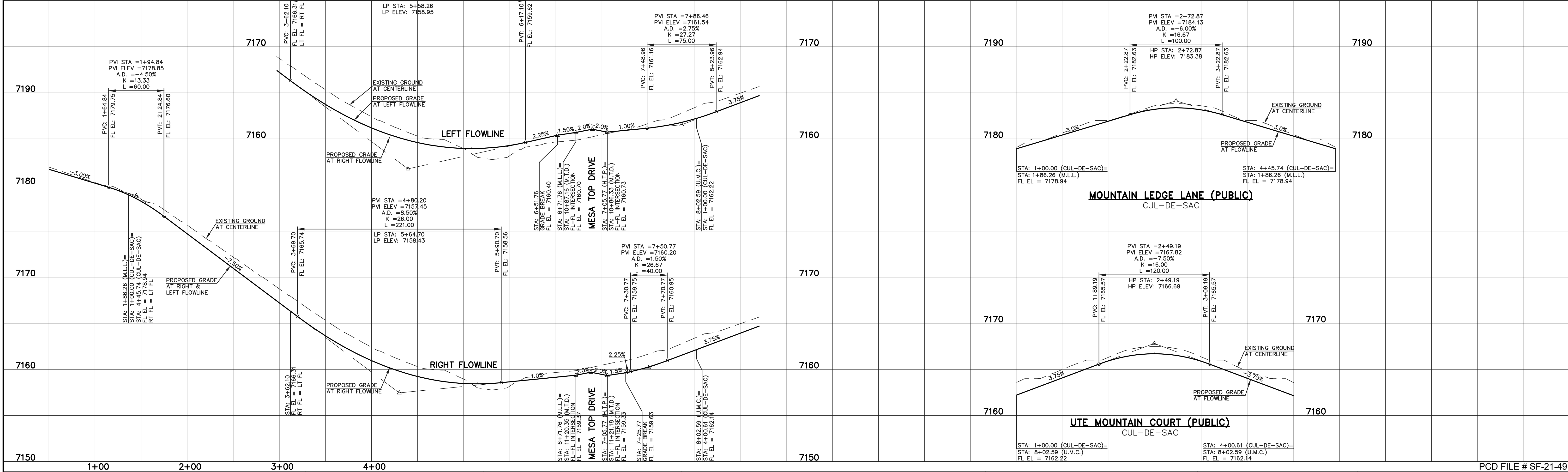


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FLOWLINE CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C3	32.53	20.00	93°11'57"
C4	30.41	20.00	87°07'20"
C5	30.41	20.00	87°07'20"
C6	32.53	20.00	93°11'57"
C12	55.71	45.83	69°38'44"
C13	98.54	46.17	122°17'23"
C14	84.47	47.00	102°58'29"
C15	38.10	45.83	47°37'49"
C16	67.71	46.17	84°01'20"
C17	32.57	47.00	39°42'09"
C18	102.46	46.17	127°09'16"
C19	38.10	45.83	47°37'49"



**MOUNTAIN LEDGE LANE/UTE MOUNTAIN COURT (PUBLIC)**  
 (50' R.O.W. URBAN LOCAL)  
 DESIGN SPEED: 25 MPH



**LEGEND**

- BOUNDARY LINE
- ROW LINE
- LOT LINE
- CURB & GUTTER
- PED RAMP
- LIGHT POLE
- SIGN
- TYPE R INLET

**STREET ABBREVIATION INDEX**

- M.T.D. MESA TOP DRIVE
- H.T.P. HORSE TRADER PLACE
- M.L.L. MOUNTAIN LEDGE LANE
- U.M.C. UTE MOUNTAIN COURT
- F.F.C. FOOTHILLS FLASH COURT

**WALK CONSTRUCTION:**

4" THICK SIDEWALK ALLOWED ALONG OPEN SPACE TRACTS & "ESTATE LOT" FRONTAGE. 5" THICK SIDEWALK TYPICAL ALONG RESIDENTIAL LOTS PER EL PASO COUNTY DIRECTION. 6" REQUIRED AT DRIVEWAY CONNECTIONS PER DETAILS SD 2-24 & SD 2-25 ON SHEET 6. WALK NOT INSTALLED AT 6" THICKNESS WILL BE RE-CONSTRUCTED WITH DRIVEWAY PERMIT AND INSTALLATION AS REQUIRED.

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** \_\_\_\_\_

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

KYLE R. CAMPBELL, COLORADO P.E. #29794 \_\_\_\_\_ DATE \_\_\_\_\_

**CLASSIC CONSULTING**

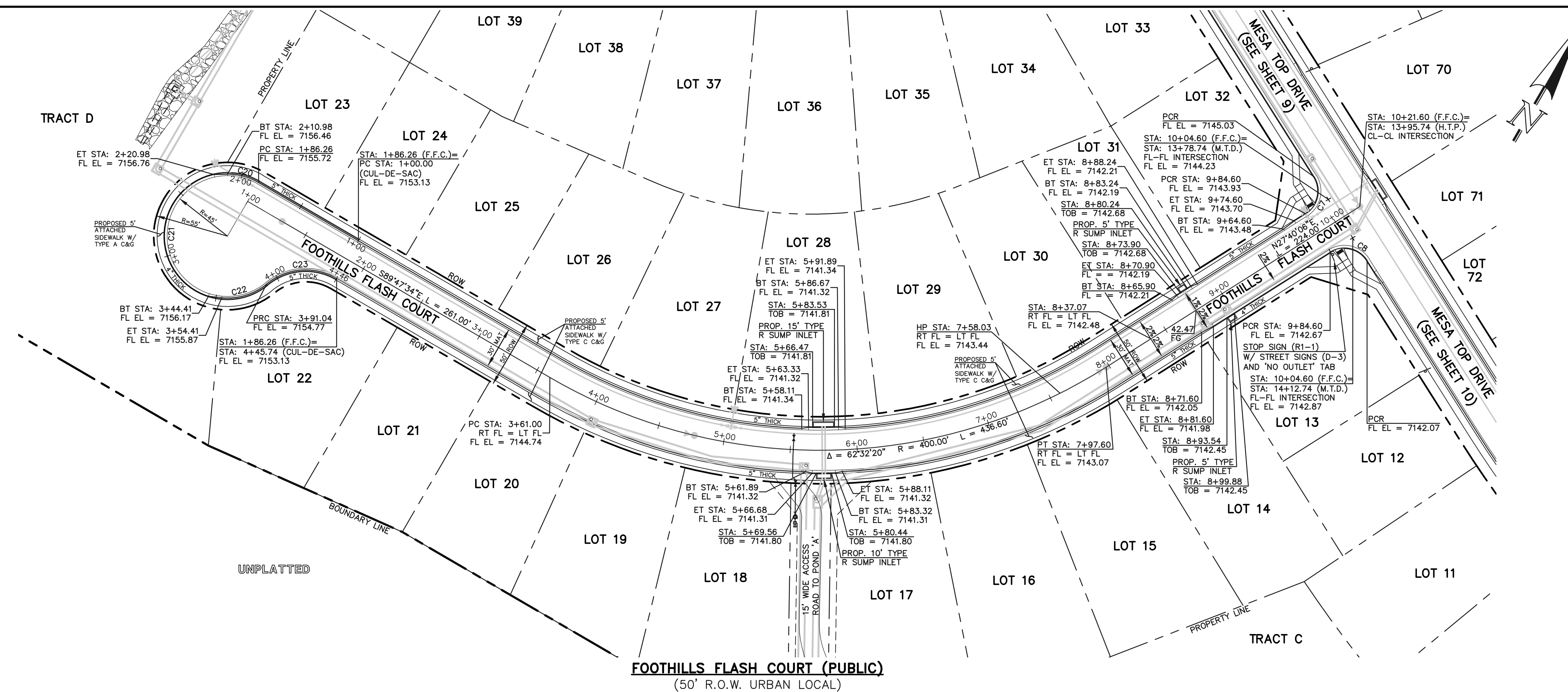
FOREST LAKES FILING NO. 7  
 PUBLIC STREET IMPROVEMENT PLAN  
 MOUNTAIN LEDGE LANE/UTE MOUNTAIN COURT

DESIGNED BY MAL SCALE DATE 05/21/21  
 DRAWN BY MES (H) 1" = 50' SHEET 12 OF 31  
 CHECKED BY (V) 1" = 5' JOB NO. 1175.70

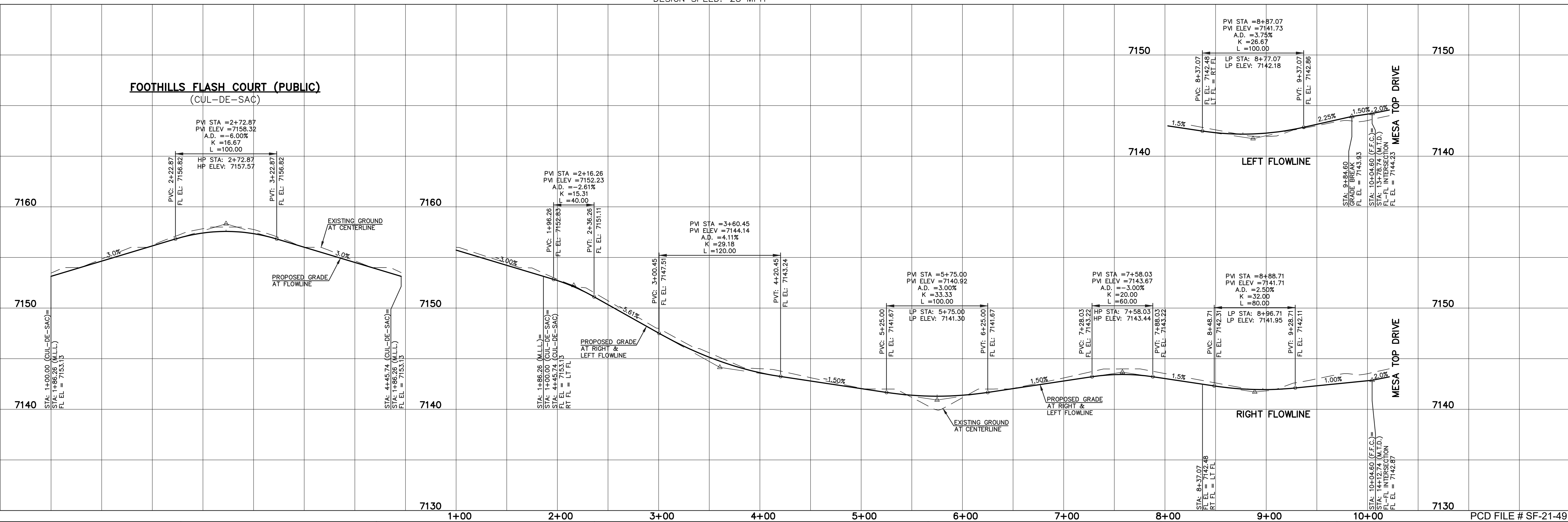
PCD FILE # SF-21-49

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FLOWLINE CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C7	31.42	20.00	90°00'00"
C8	31.42	20.00	90°00'00"
C20	24.29	46.17	30°08'46"
C21	123.42	47.00	150°27'40"
C22	35.99	46.17	44°39'26"
C23	55.71	45.83	69°38'44"



**FOOTHILLS FLASH COURT (PUBLIC)**  
(CUL-DE-SAC)



**LEGEND**

- BOUNDARY LINE
- ROW LINE
- LOT LINE
- CURB & GUTTER
- PED RAMP
- LIGHT POLE
- SIGN
- TYPE R INLET

**STREET ABBREVIATION INDEX**

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- H.T.P. HORSE TRADER PLACE
- M.L.L. MOUNTAIN LEDGE LANE
- U.M.C. UTE MOUNTAIN COURT
- F.F.C. FOOTHILLS FLASH COURT

50 25 0 50 100  
SCALE: 1" = 50' HORIZ./5' VERT.

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NO.	REVISION	DATE

REVIEW:

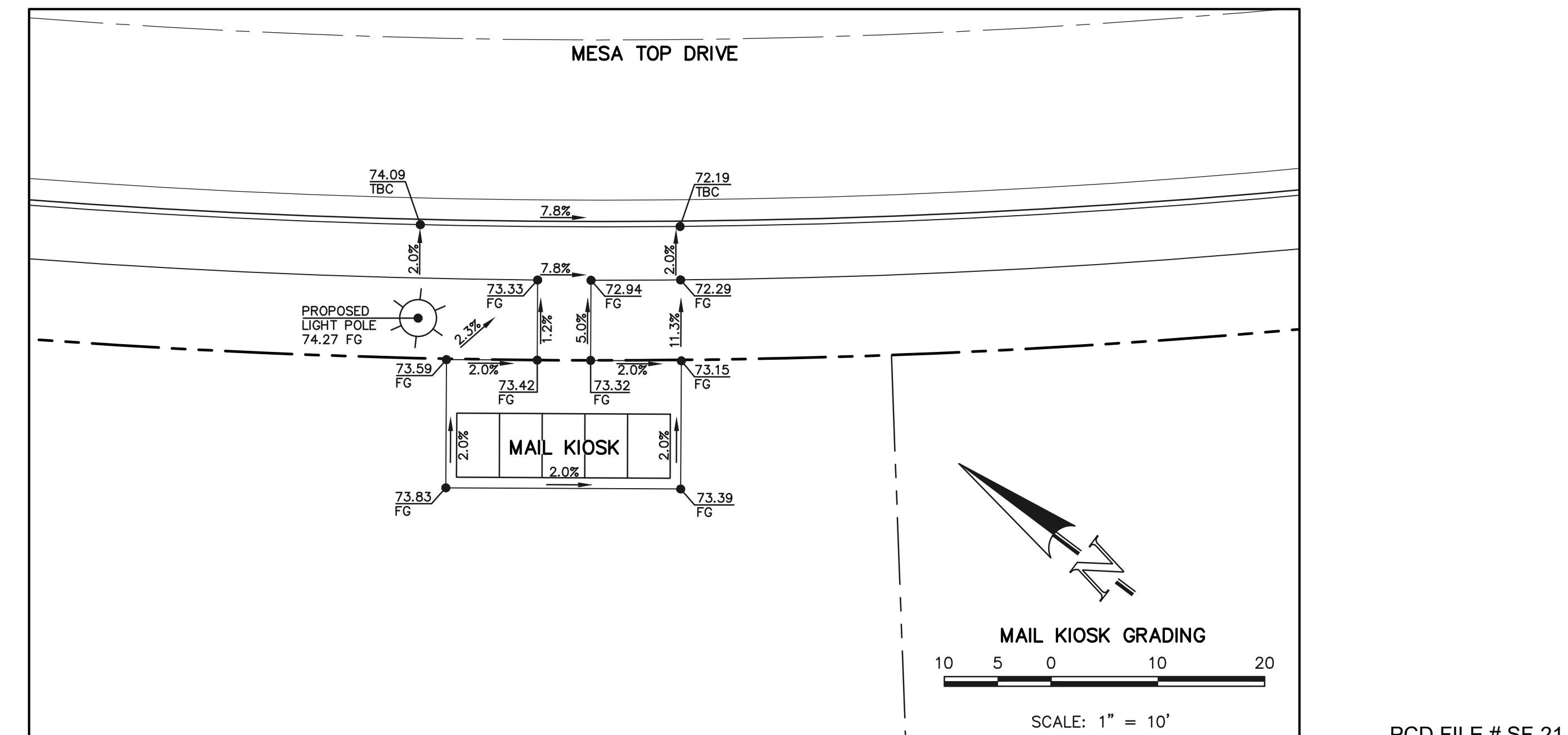
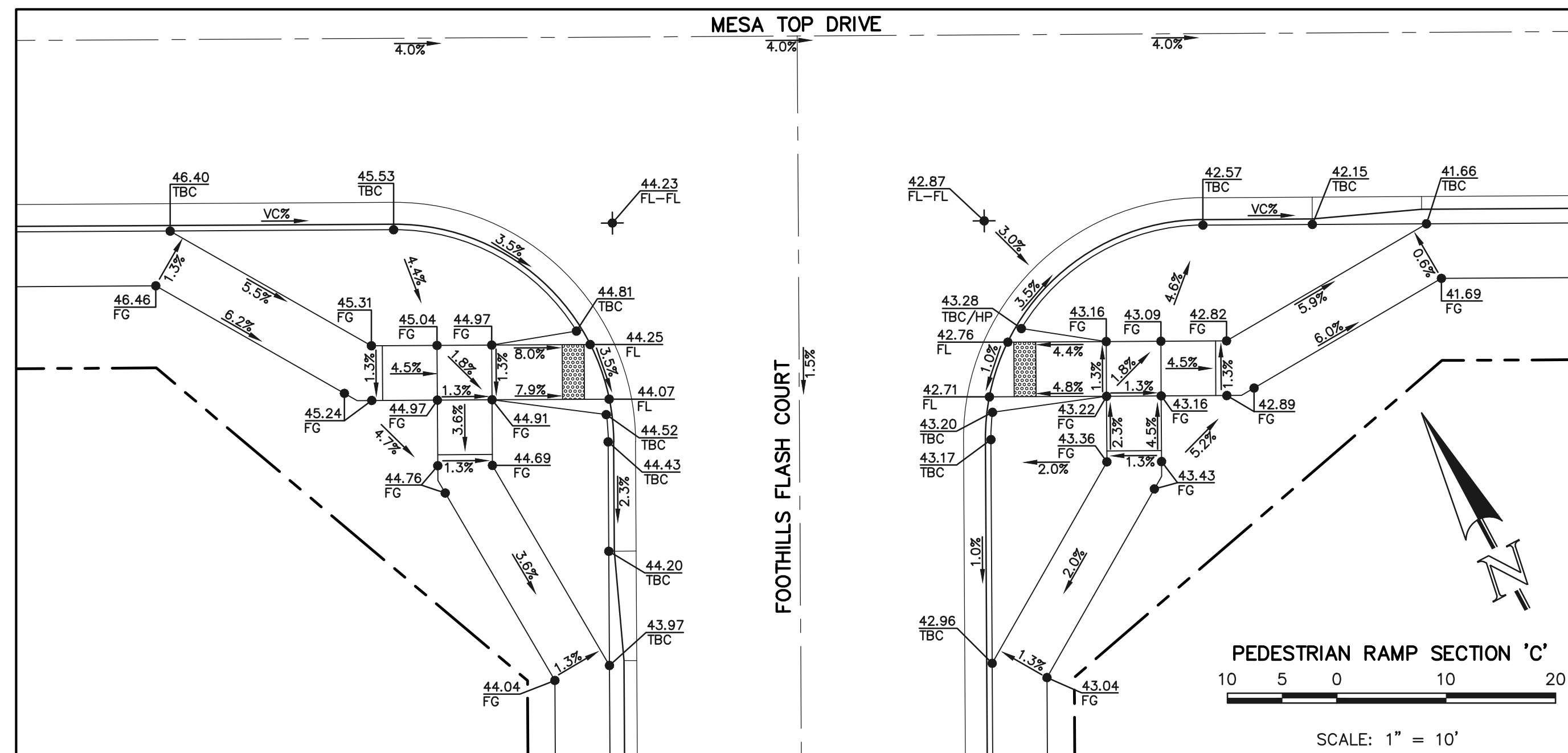
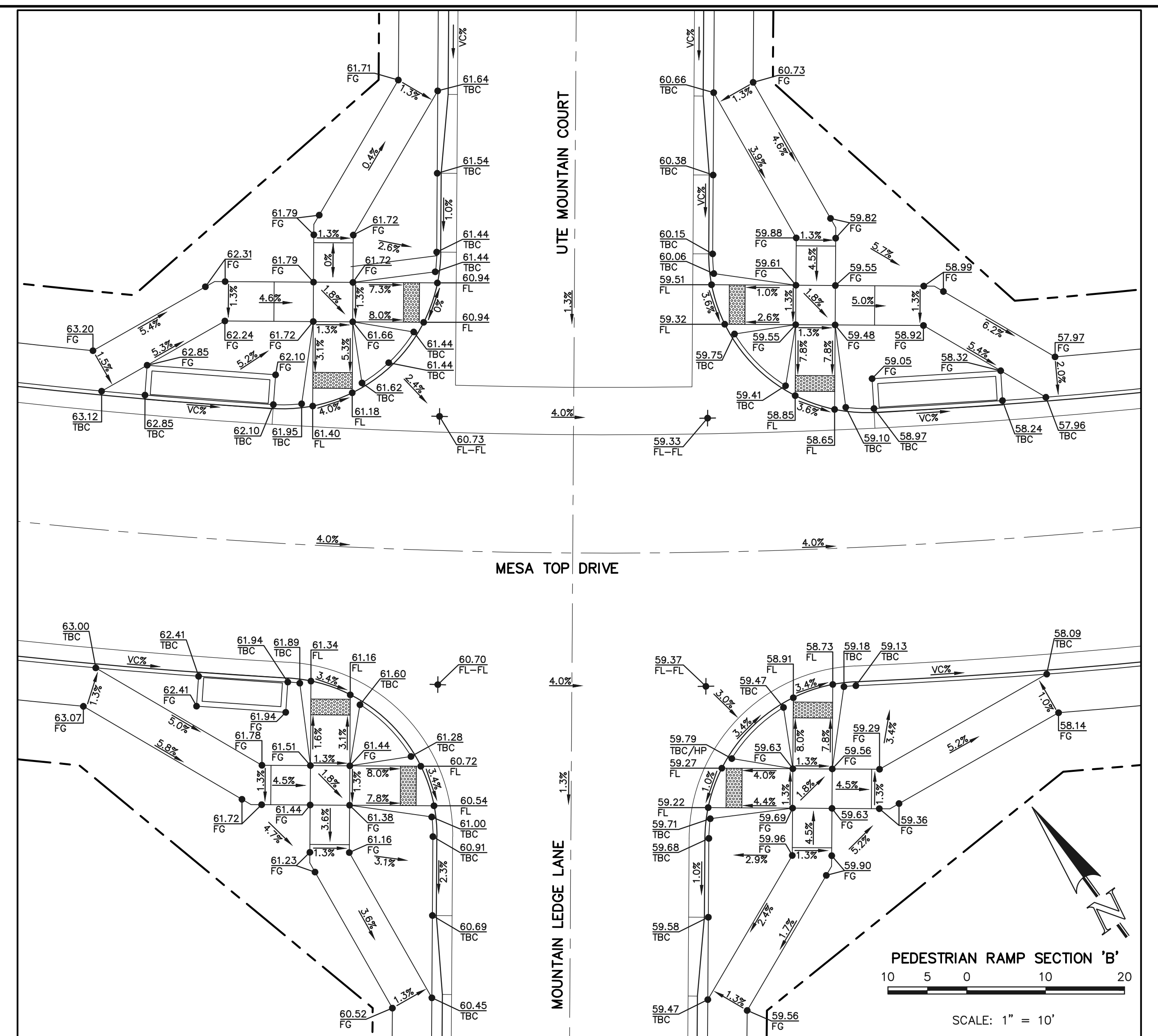
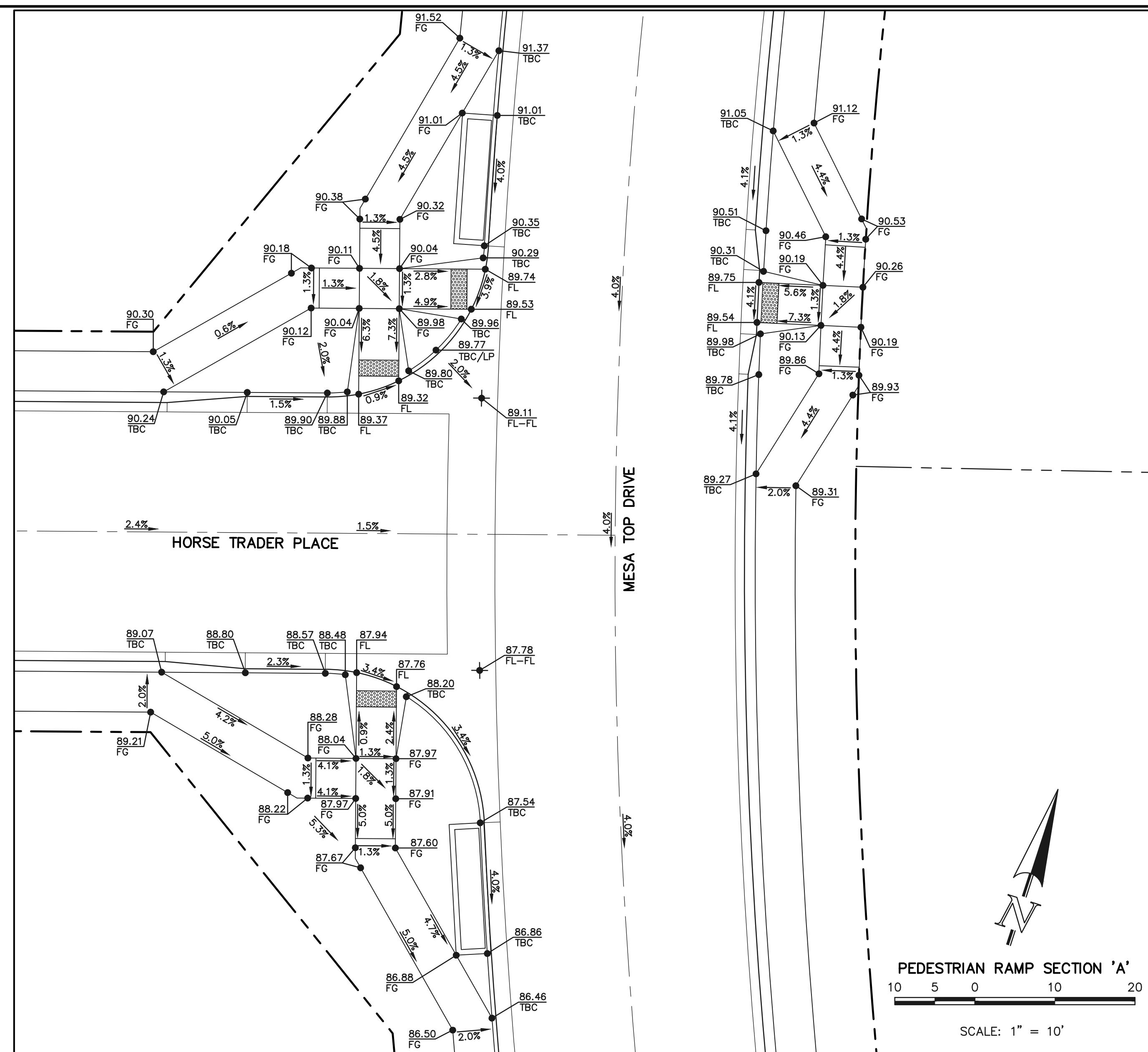
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

KYLE R. CAMPBELL, COLORADO P.E. #29794 DATE



FOREST LAKES FILING NO. 7  
PUBLIC STREET IMPROVEMENT PLAN  
FOOTHILLS FLASH COURT

DESIGNED BY MAL SCALE DATE 05/21/21  
DRAWN BY MES (H) 1" = 50' SHEET 13 OF 31  
CHECKED BY (V) 1" = 5' JOB NO. 1175.70



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KYLE R. CAMPBELL, COLORADO P.E. #29794      DATE



PCD FILE # SF-21-49

FOREST LAKES FILING NO. 7 PUBLIC STREET IMPROVEMENT PLAN PEDESTRIAN RAMP DESIGN			
DESIGNED BY	MES	SCALE	DATE 05/21/21
DRAWN BY	MES	(H) 1" = 10'	SHEET 14 OF 31
CHECKED BY	(V) 1" = N/A	JOB NO.	1175.70

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### American Revolution LED Series 247L

#### PRODUCT OVERVIEW



#### Features:

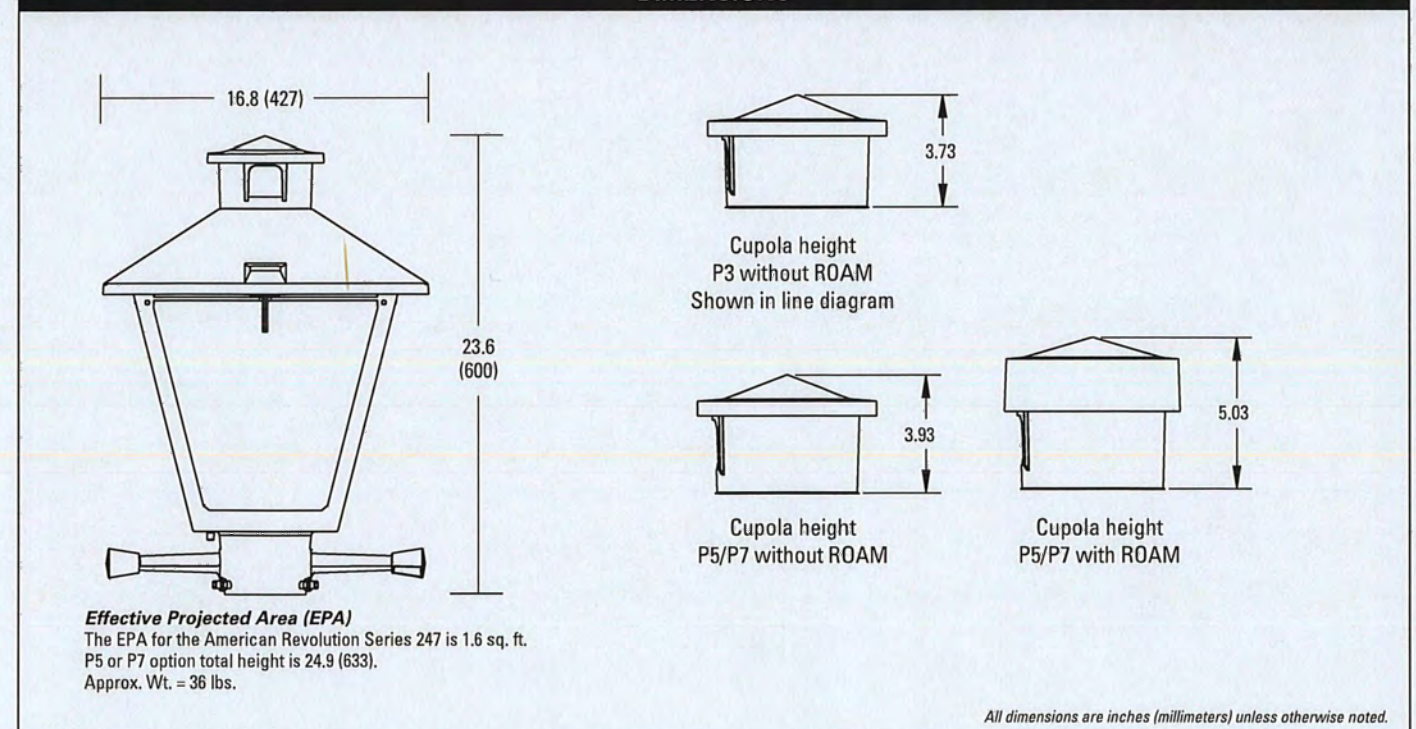
- Die-cast aluminum housing and hood for long-life performance
- Die-cast trigger latch (TL) and captive thumb screws option available for easy access to internal components
- Optical assembly designed for maximum performance, available in Type II, Type III and Type V
- Hinged hood and captive thumb screws provision afford quick, easy access to electrical and optical area for servicing
- Slipfitter with three set screws allows secure installation to pole sizes 2-3/8" or 3" O.D.
- Surge protection device (standard) exceeds ANSI C62.41 Category C1 criteria (surge tested at 10kV/5kA)
- Complies with ANSI: C136.2, C136.10, C136.15
- CSA listed and suitable for up to 30°C ambient
- Rated L70, LED life greater than 100,000 hours at 25°C
- Replaces up to 150W HPS light source incumbent models
- LED electronic 0V-10V dimmable driver
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at [www.designlights.org/DPL](http://www.designlights.org/DPL) to confirm which versions are qualified.

#### Applications:

- Streetscapes
- Walkways
- Pathways
- Parks

MVEA SPEC # 247L 10LEDE10 MVOLT 4K RS AY PCLL

#### DIMENSIONS



Note: Specifications subject to change without notice.  
American Revolution Series 247L LED



### American Revolution LED Series 247L

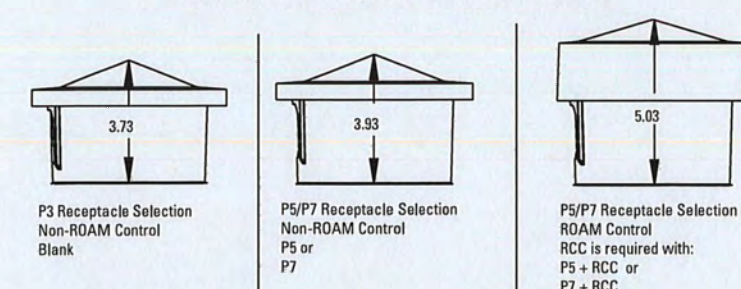
#### ORDERING INFORMATION

Example: 247L 20LEDE70 MVOLT 4K R3 AY

Series	Performance Package	Voltage	Color Temperature (CCT)
247L American Revolution LED	20LEDE10 20 Chips, 1050 mA Driver, 72 input watts 20LEDE70 20 Chips, 700 mA Driver, 45 input watts 10LEDE10 10 Chips, 1050 mA Driver, 28 input watts 10LEDE70 10 Chips, 700 mA Driver, 25 input watts 10LEDE35 10 Chips, 525 mA Driver, 18 input watts 10LEDE35 10 Chips, 350 mA Driver, 13 input watts	MVOLT Multi-volt, 120-277V 347 347V 480 480V	3K 3000K 4K 4000K 5K 5000K

Distribution	Optics	Options
R2 Type II R3 Type III RS Type V	AY Acrylic PY Polycarbonate	Paint 1 Black (standard) CY Gray DOB Dark Bronze WH White BZ Bronze Photocontrol (blank) 3 pin NEMA Photocontrol Receptacle (standard) NR 2 No Photocontrol Receptacle PS 1 5 pin NEMA Photocontrol Receptacle (dimmable driver included) P7 1 7 pin NEMA Photocontrol Receptacle (dimmable driver included) PCLL 4 Solid State Long Life Photocontrol PCSS 4A Not CSA Listed Solid State Long Life Photocontrol (120-277V)

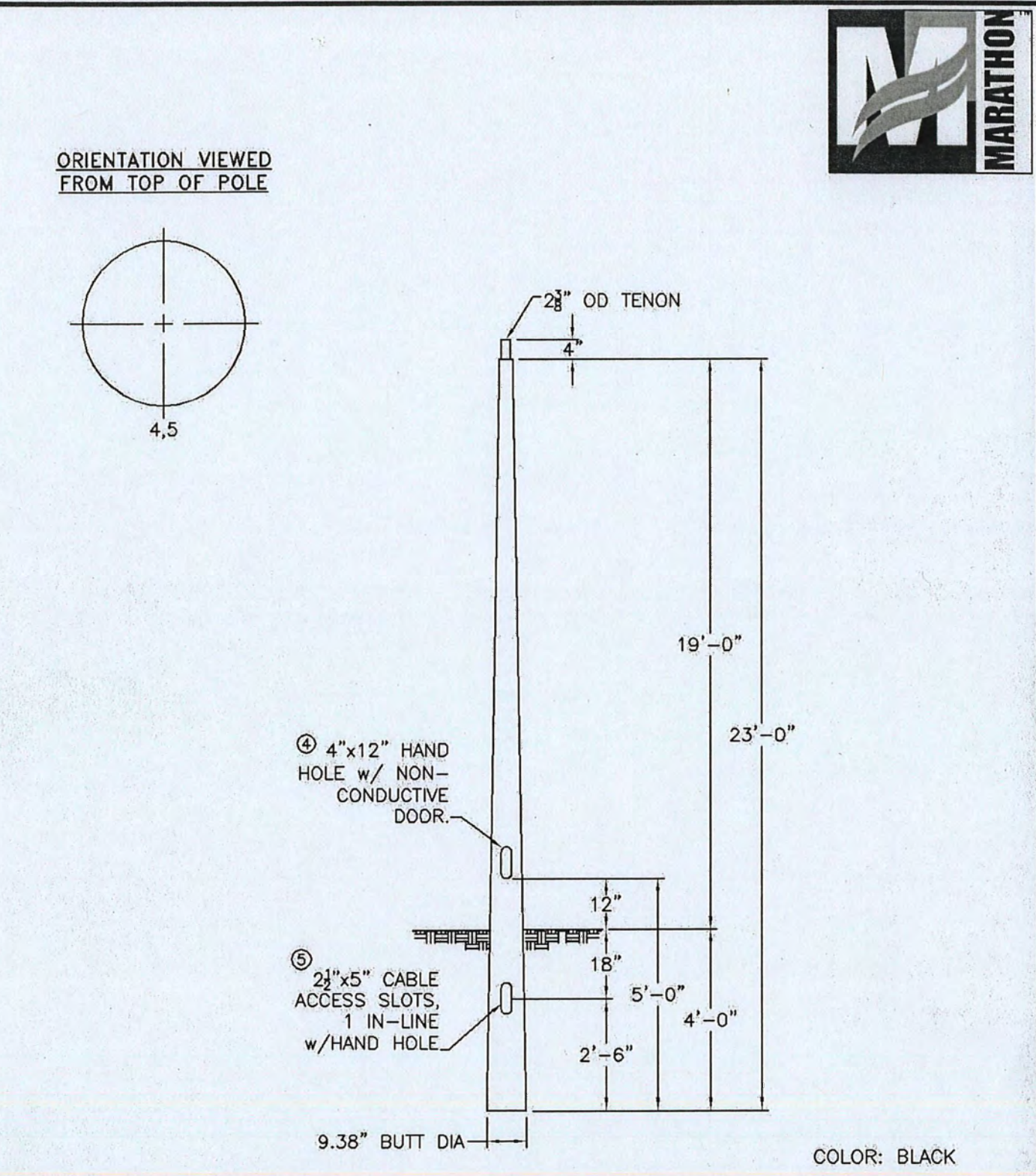
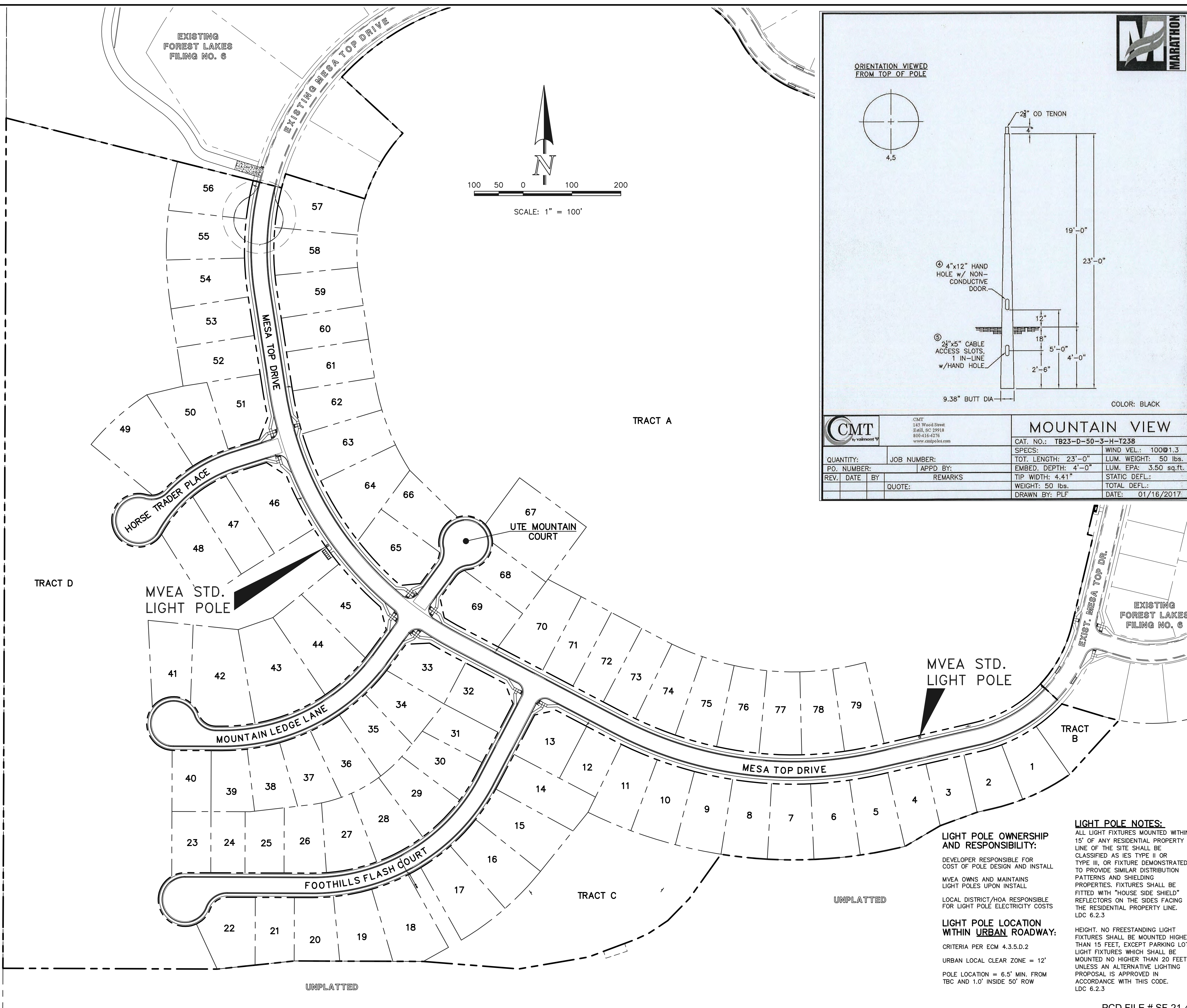
Cupola size based on type of control and receptacle



- Notes:
1. Other colors available, please contact factory
  2. PC and SH not available with NR option
  3. Taller cupola cover (RCC) is required when used with ROAM or other similar wireless monitoring control systems
  4. Standard failure mode: "Fall On"
  5. Photocontrols supplied with ANSI Standard Turn-On levels
  6. XL option is required
  7. Ships with unit, field installed
  8. Required when using ROAM or other similar wireless monitoring control systems



Warranty Five-year limited warranty. Complete warranty terms located at [www.aelbrands.com/CustomerResources/terms\\_and\\_conditions.asp](http://www.aelbrands.com/CustomerResources/terms_and_conditions.asp). Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.  
Please contact your sales representative for the latest product information.



<b>CMT</b>		145 Wood Street East, SC 29118 803-416-4215 www.cmtplc.com	
QUANTITY:		JOB NUMBER:	
PO. NUMBER:		APPD BY:	
REV. DATE BY:		REMARKS:	
QUOTE:		DATE:	

<b>MOUNTAIN VIEW</b>	
CAT. NO.: T823-D-50-3-H-T238	SPECS:
TOT. LENGTH: 23'-0"	WIND VEL.: 100@1.3
EMBED. DEPTH: 4'-0"	LUM. WEIGHT: 50 lbs.
TIP WIDTH: 4.41"	LUM. EPA: 3.50 sq.ft.
WEIGHT: 50 lbs.	STATIC DEFL.:
DRAWN BY: PLF	TOTAL DEFL.:
	DATE: 01/16/2017

**LIGHT POLE OWNERSHIP AND RESPONSIBILITY:**

DEVELOPER RESPONSIBLE FOR COST OF POLE DESIGN AND INSTALL

MVEA OWNS AND MAINTAINS LIGHT POLES UPON INSTALL

LOCAL DISTRICT/HOA RESPONSIBLE FOR LIGHT POLE ELECTRICITY COSTS

**LIGHT POLE LOCATION WITHIN URBAN ROADWAY:**

CRITERIA PER ECM 4.3.5.D.2

URBAN LOCAL CLEAR ZONE = 12'

POLE LOCATION = 6.5' MIN. FROM TBC AND 1.0' INSIDE 50' ROW

**LIGHT POLE NOTES:**

ALL LIGHT FIXTURES MOUNTED WITHIN 15' OF ANY RESIDENTIAL PROPERTY LINE OF THE SITE SHALL BE CLASSIFIED AS TYPE II OR TYPE III, OR FIXTURE DEMONSTRATED TO PROVIDE SIMILAR DISTRIBUTION PATTERNS AND SHIELDING PROPERTIES. FIXTURES SHALL BE FITTED WITH "HOUSE SIDE SHIELD" REFLECTORS ON THE SIDES FACING THE RESIDENTIAL PROPERTY LINE. LDC 6.2.3

HEIGHT, NO FREESTANDING LIGHT FIXTURES SHALL BE MOUNTED HIGHER THAN 15 FEET, EXCEPT PARKING LOT LIGHT FIXTURES WHICH SHALL BE MOUNTED NO HIGHER THAN 20 FEET UNLESS AN ALTERNATIVE LIGHTING PROPOSAL IS APPROVED IN ACCORDANCE WITH THIS CODE. LDC 6.2.3

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NO.	REVISION	DATE

REVIEW:

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

KYLE R. CAMPBELL, COLORADO P.E. #29794



FOREST LAKES FILING NO. 7 PUBLIC STREET IMPROVEMENT PLAN STREET LIGHT POLE LOCATION PLAN			
DESIGNED BY	MAL	SCALE	DATE 05/21/21
DRAWN BY	MES	(H) 1" = 100'	SHEET 15 OF 31
CHECKED BY	(V) 1" = N/A	JOB NO.	1175.70

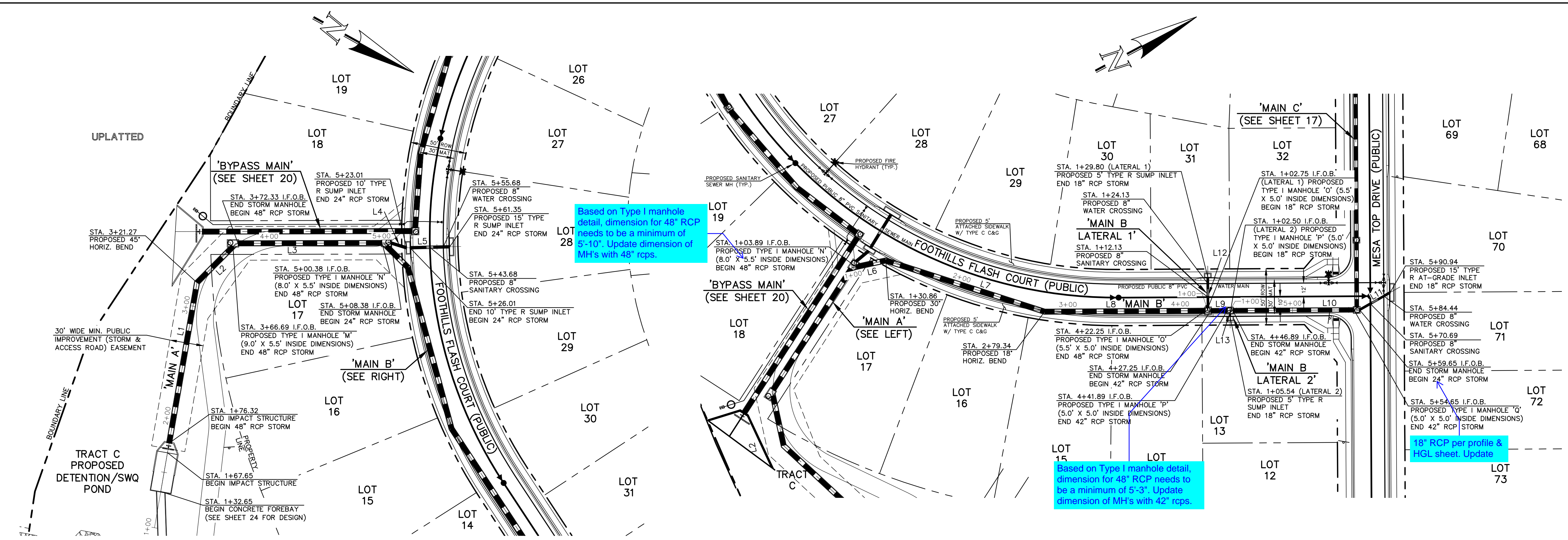
PCD FILE # SF-21-49



Line #	Length	Direction
L1	144.95	S70°51'03"W
L2	45.42	N74°08'57"W
L3	128.05	N29°08'57"W
L4	14.63	N11°41'04"W
L5	35.34	N30°26'46"W
L6	26.97	S15°51'03"W
L7	148.48	S45°51'03"W
L8	142.90	S27°40'06"W
L9	14.64	S27°40'06"W
L10	107.76	S27°40'06"W
L11	31.29	N01°35'11"W
L12	27.05	N62°19'54"W
L13	3.04	N62°19'54"W

**NOTES:**  
ALL STORM FACILITIES WITHIN R.O.W. ARE PUBLIC, UNLESS OTHERWISE NOTED.  
ALL STORM SEWER WITH 100-YR HGL ABOVE THE TOP OF PIPE SHALL BE INSTALLED WITH PRESSURE PIPE AND WATERTIGHT JOINTS WITH A 100-YEAR SERVICE LIFE.  
STORM MANHOLE AND INLET DETAILS ARE LOCATED ON SHEETS 30-31.

Add note or pipe labels that storm pipes are Class 3, except for those with velocity in excess of 18 fps, and those shall be Class 4.



Based on Type I manhole detail, dimension for 48" RCP needs to be a minimum of 5'-10". Update dimension of MH's with 48" rcps.

Based on Type I manhole detail, dimension for 48" RCP needs to be a minimum of 5'-3". Update dimension of MH's with 42" rcps.

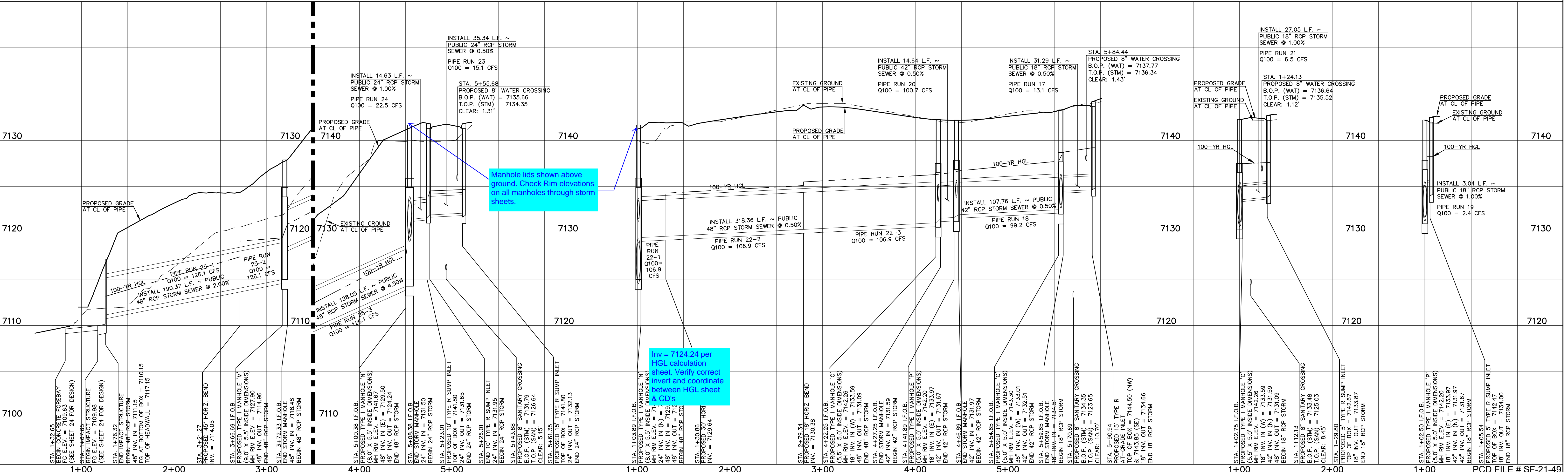
18" RCP per profile & HGL sheet. Update

PUBLIC 48"/24" RCP STORM - 'MAIN A'

PUBLIC 48"/42"/18" RCP STORM - 'MAIN B'

PUBLIC 18" RCP STORM - 'MAIN B LATERAL 1'

PUBLIC 18" RCP STORM - 'MAIN B LATERAL 2'



Manhole lids shown above ground. Check Rim elevations on all manholes through storm sheets.

Inv = 7124.24 per HGL calculation sheet. Verify correct invert and coordinate between HGL sheet & CD.

**LEGEND**

	PROPOSED FIRE HYDRANT		EXISTING FIRE HYDRANT
	PROPOSED WATER MAIN		EXISTING WATER MAIN
	PROPOSED SANITARY SEWER MAIN		EXISTING SANITARY SEWER MAIN
	PROPOSED STORM SEWER		EXISTING STORM SEWER
	PROPOSED STORM INLET		EXISTING STORM INLET
	ROW/BOUNDARY LINE		EXISTING GAS MAIN
			EXISTING ELECTRIC

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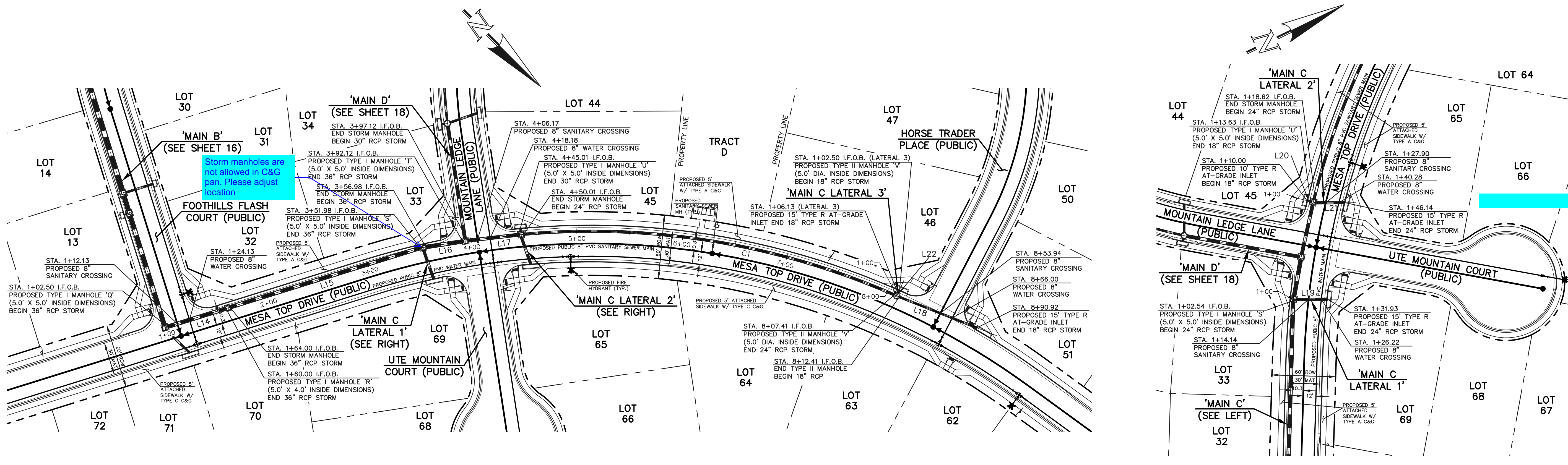
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KYLE R. CAMPBELL, COLORADO P.E. #29794 DATE



FOREST LAKES FILING NO. 7  
CONSTRUCTION PLANS  
PUBLIC STORM SEWER PLAN  
'MAIN A'/'MAIN B'/'MAIN B' LATERALS 1-2'  
DESIGNED BY: MAL SCALE: (H) 1" = 50' DATE: 06/01/21  
DRAWN BY: MES (V) 1" = 5' SHEET 16 OF 31  
CHECKED BY: DATE: JOB NO. 1175.70



50 25 0 50 100  
SCALE: 1" = 50' HORIZ. / 1" = 5' VERT.



Line #	Length	Direction
L14	57.50	S62°19'54"E
L15	187.98	S62°19'54"E
L16	35.14	S53°37'49"E
L17	47.89	S51°35'38"E
L18	78.51	N23°17'29"W
L19	29.39	N25°34'54"E
L20	3.63	N39°53'59"E
L21	27.50	S25°46'02"W
L22	3.63	N68°52'49"E

Curve #	Delta	Length	Radius
C1	28°46'43"	357.39	711.54

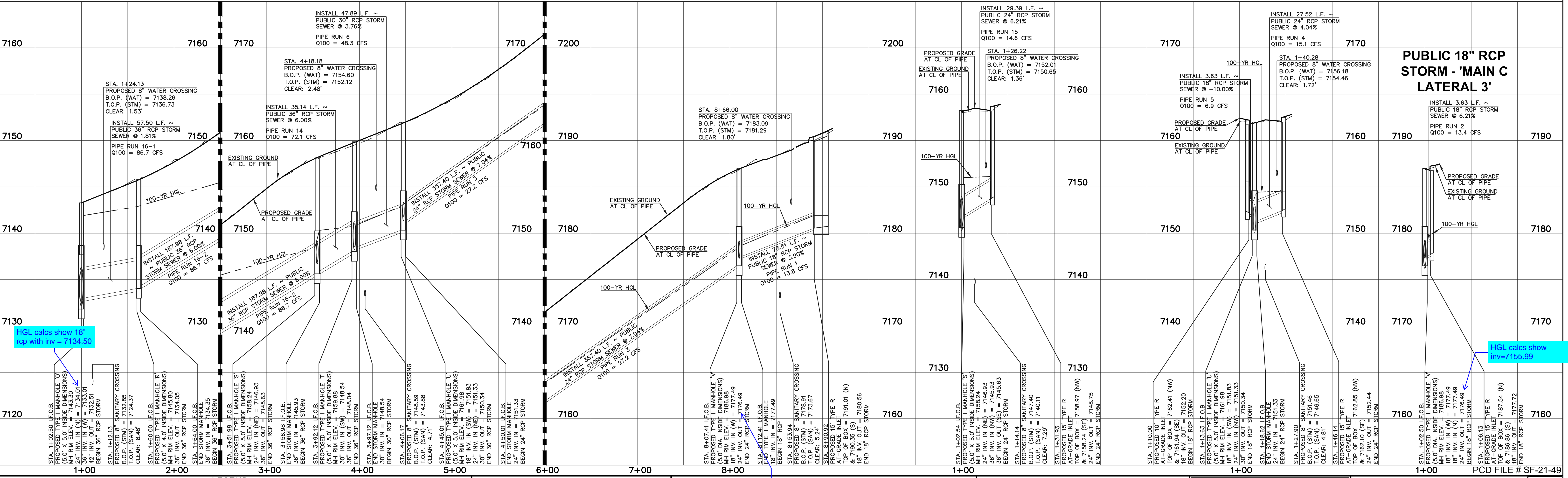
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**PUBLIC 36"/30"/24"/18" RCP STORM - 'MAIN C'**

**PUBLIC 24" RCP STORM - 'MAIN C LATERAL 1'**

**PUBLIC 24"/18" RCP STORM - 'MAIN C LATERAL 2'**

**PUBLIC 18" RCP STORM - 'MAIN C LATERAL 3'**



HGL calcs show 18" rcp with inv=7134.50

HGL calcs show inv=7155.99

**LEGEND**

	PROPOSED FIRE HYDRANT		EXISTING FIRE HYDRANT
	PROPOSED WATER MAIN		EXISTING WATER MAIN
	PROPOSED SANITARY SEWER MAIN		EXISTING SANITARY SEWER MAIN
	PROPOSED STORM SEWER		EXISTING STORM SEWER
	PROPOSED STORM INLET		EXISTING STORM INLET
	ROW/BOUNDARY LINE		EXISTING GAS MAIN
			EXISTING ELECTRIC

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NO.	REVISION	DATE
	HGL calcs show inv=7155.99	

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KYLE R. CAMPBELL, COLORADO P.E. #29794

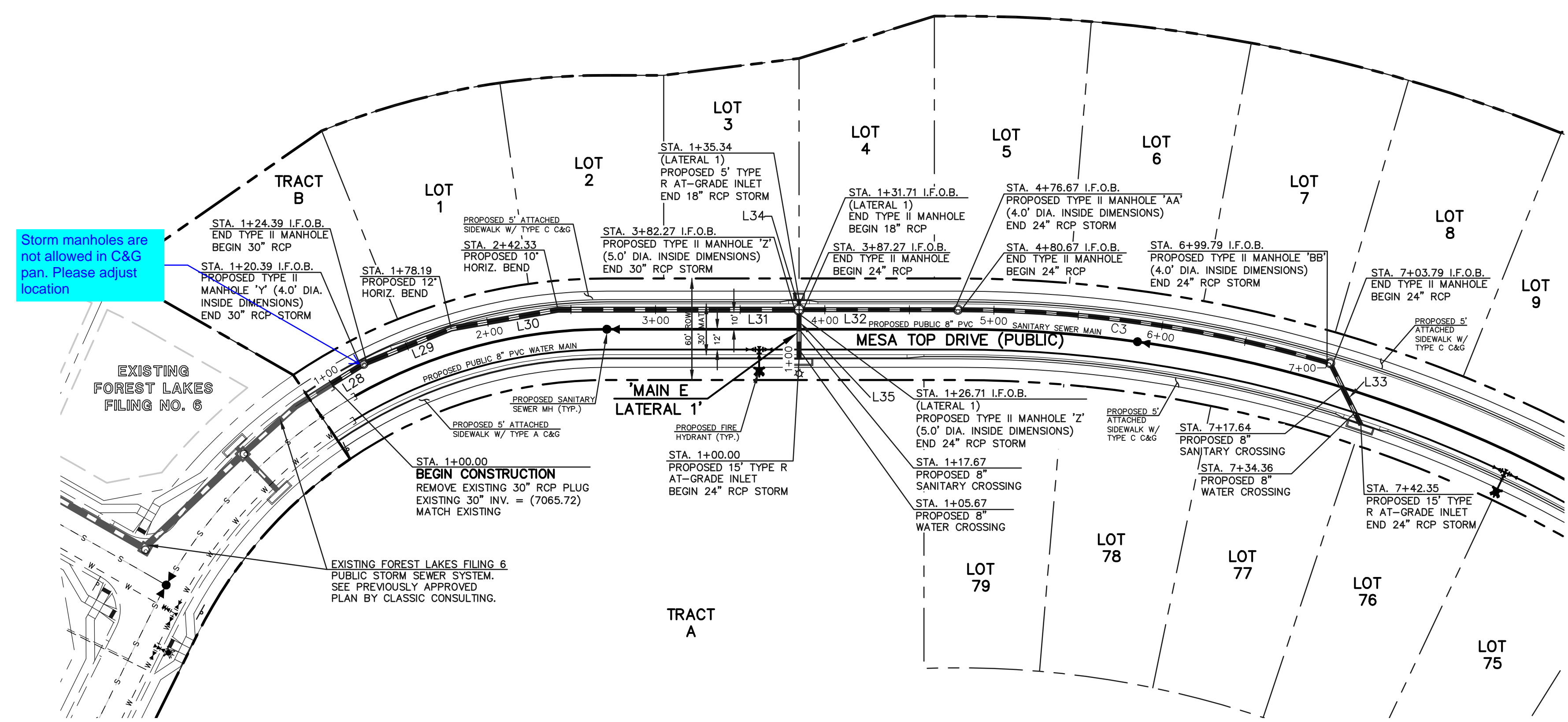
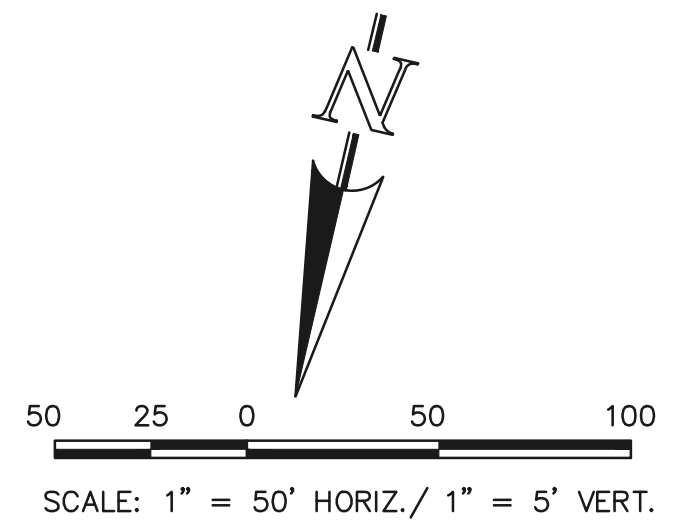
**CLASSIC CONSULTING**  
619 N Cascade Avenue, Suite 200  
Colorado Springs, Colorado 80903  
(719)785-0790  
(719)785-0799(fax)

**FOREST LAKES FILING NO. 7 CONSTRUCTION PLANS**  
PUBLIC STORM SEWER PLAN  
'MAIN C' / 'MAIN C LATERALS 1-3'

DESIGNED BY	MAL	SCALE	(H) 1" = 50'	DATE	06/01/21
DRAWN BY	MES	(V) 1" = 5'	SHEET	17	OF 31
CHECKED BY		JOB NO.	1175.70		

K:\17570\DRAWINGS\CONSTRUCT\CDX\STORMA17-117570-SW-03.dwg, 2/6/2022 5:11:16 PM, 1/1





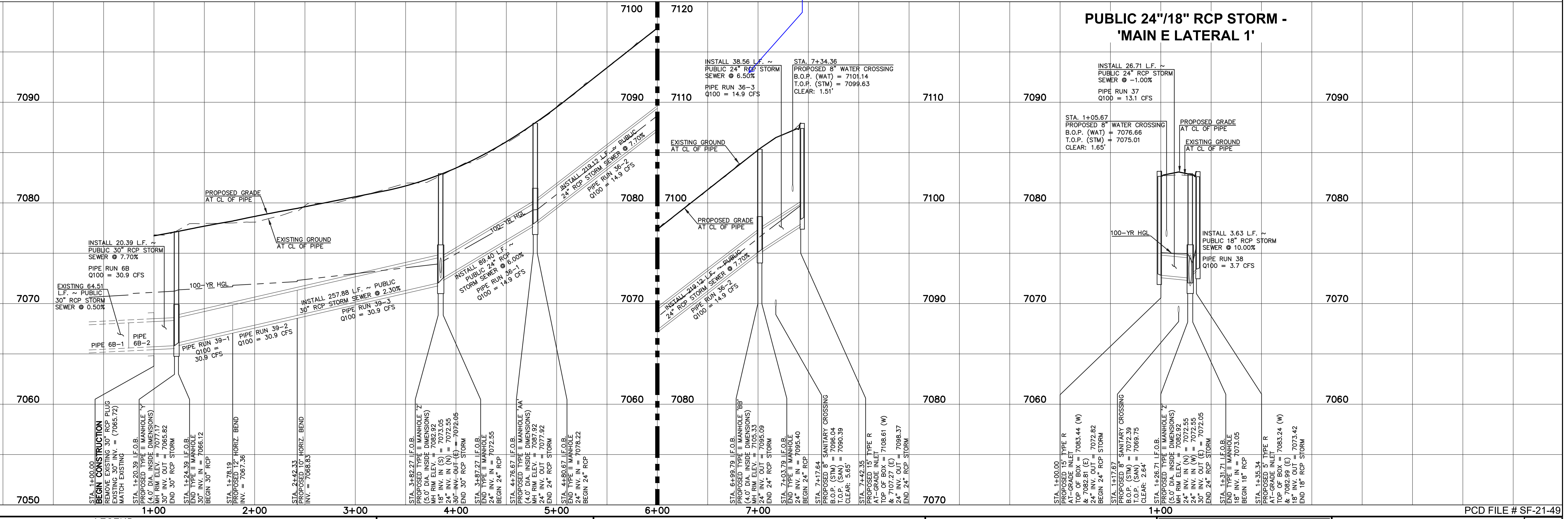
STORM LINE TABLE		
Line #	Length	Direction
L28	20.39	N45°00'16"E
L29	53.80	N55°00'16"E
L30	64.14	N67°00'16"E
L31	139.94	N77°00'16"E
L32	89.40	N77°00'16"E
L33	38.56	S39°32'06"E
L34	3.63	N12°59'44"W
L35	26.71	N12°59'44"W

STORM CURVE TABLE			
Curve #	Delta	Length	Radius
C3	16°03'50"	219.12	781.54

**NOTES:**  
 ALL STORM FACILITIES WITHIN R.O.W. ARE PUBLIC, UNLESS OTHERWISE NOTED.  
 ALL STORM SEWER WITH 100-YR HGL ABOVE THE TOP OF PIPE SHALL BE INSTALLED WITH PRESSURE PIPE AND WATER TIGHT JOINTS WITH A 100-YEAR SERVICE LIFE.  
 STORM MANHOLE AND INLET DETAILS ARE LOCATED ON SHEET 30-31.

**PUBLIC 30"/24" RCP STORM - 'MAIN E'**

HGL sheet shows 7.7%. Coordinate and update between CD's and HGL sheet accordingly.



K:\175\DRAWINGS\CONSTRUCT\104\STORMA\10-117570-SM-05.dwg, 2/7/2022 10:32:02 AM, 1:1

**LEGEND**

	PROPOSED FIRE HYDRANT		EXISTING FIRE HYDRANT
	PROPOSED WATER MAIN		EXISTING WATER MAIN
	PROPOSED SANITARY SEWER MAIN		EXISTING SANITARY SEWER MAIN
	PROPOSED STORM SEWER		EXISTING STORM SEWER
	PROPOSED STORM INLET		EXISTING STORM INLET
	ROW/BOUNDARY LINE		EXISTING GAS MAIN
			EXISTING ELECTRIC

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

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NO.	REVISION	DATE

REVIEW:

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

KYLE R. CAMPBELL, COLORADO P.E. #29794      DATE

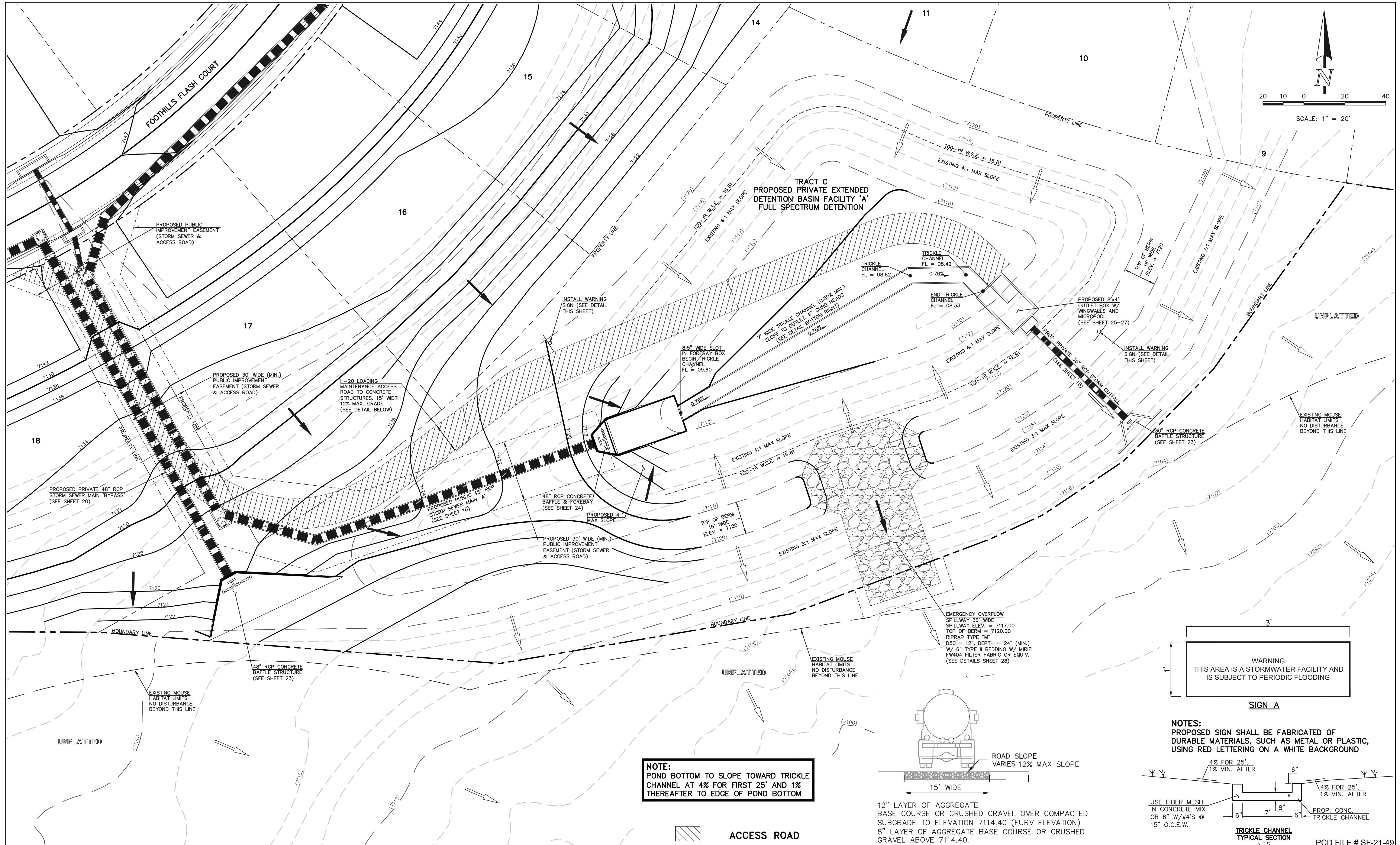
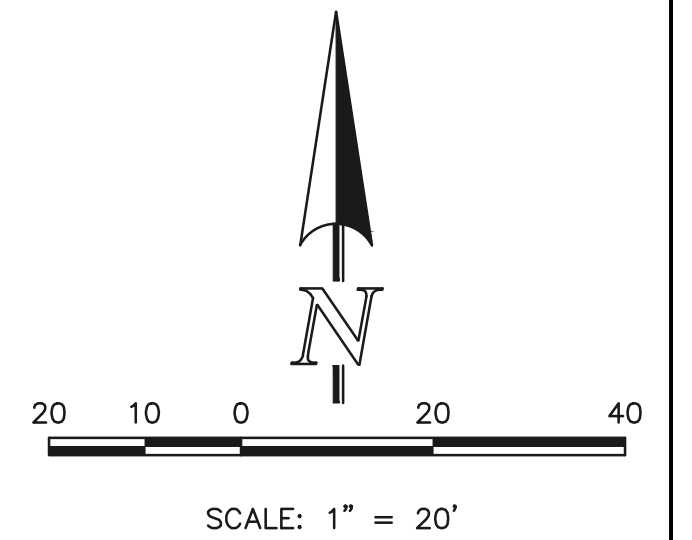
FOREST LAKES FILING NO. 7  
 CONSTRUCTION PLANS  
 PUBLIC STORM SEWER PLAN  
 'MAIN E' / 'MAIN E LATERAL 1'

DESIGNED BY	MAL	SCALE	DATE	06/01/21
DRAWN BY	MES	(H) 1" = 50'	SHEET	19 OF 31
CHECKED BY	(V) 1" = 5'	JOB NO.	1175.70	

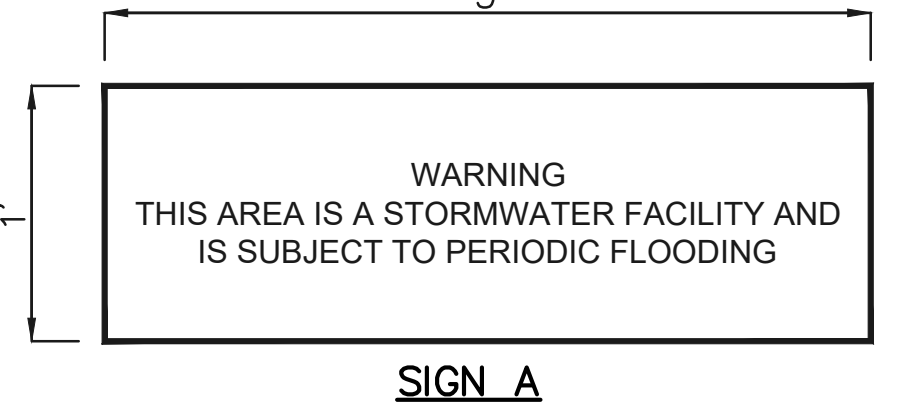
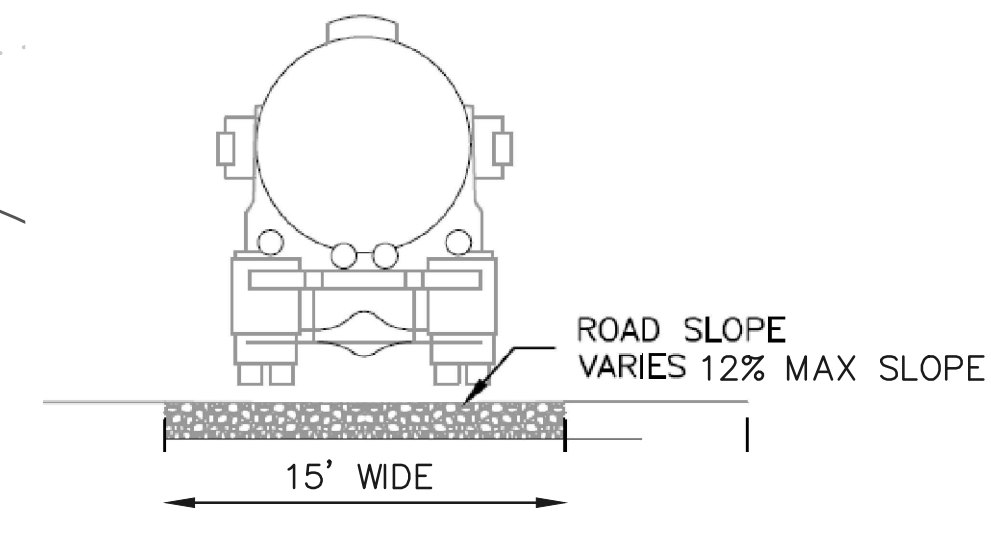
PCD FILE # SF-21-49



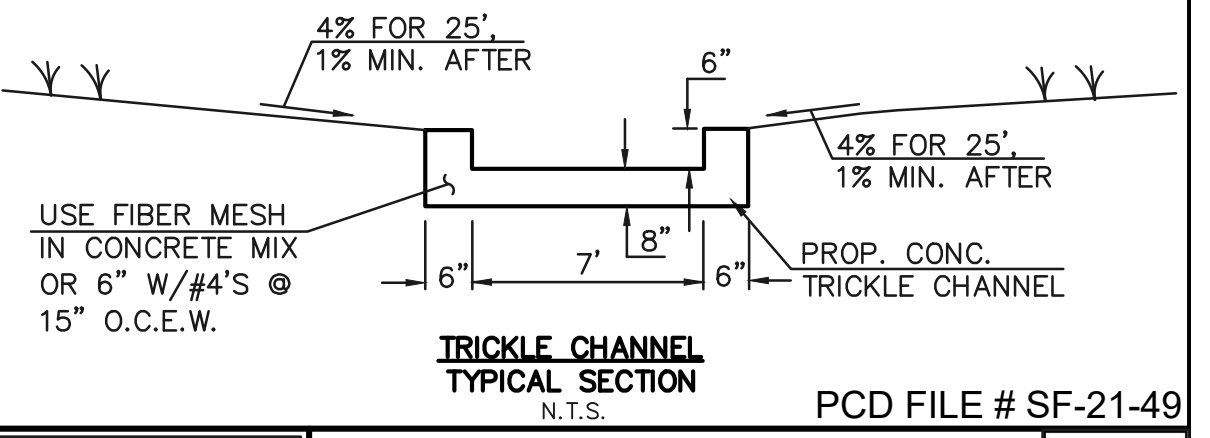




**NOTE:**  
POND BOTTOM TO SLOPE TOWARD TRICKLE CHANNEL AT 4% FOR FIRST 25' AND 1% THEREAFTER TO EDGE OF POND BOTTOM



**NOTES:**  
PROPOSED SIGN SHALL BE FABRICATED OF DURABLE MATERIALS, SUCH AS METAL OR PLASTIC, USING RED LETTERING ON A WHITE BACKGROUND



**LEGEND**

	PROPOSED FIRE HYDRANT		EXISTING FIRE HYDRANT
	PROPOSED WATER MAIN		EXISTING WATER MAIN
	PROPOSED SANITARY SEWER MAIN		EXISTING SANITARY SEWER MAIN
	PROPOSED STORM SEWER		EXISTING STORM SEWER
	PROPOSED STORM INLET		EXISTING STORM INLET
	ROW/BOUNDARY LINE		EXISTING GAS MAIN
			EXISTING ELECTRIC

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**811**

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NO.	REVISION	DATE

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KYLE R. CAMPBELL, COLORADO P.E. #29794      DATE

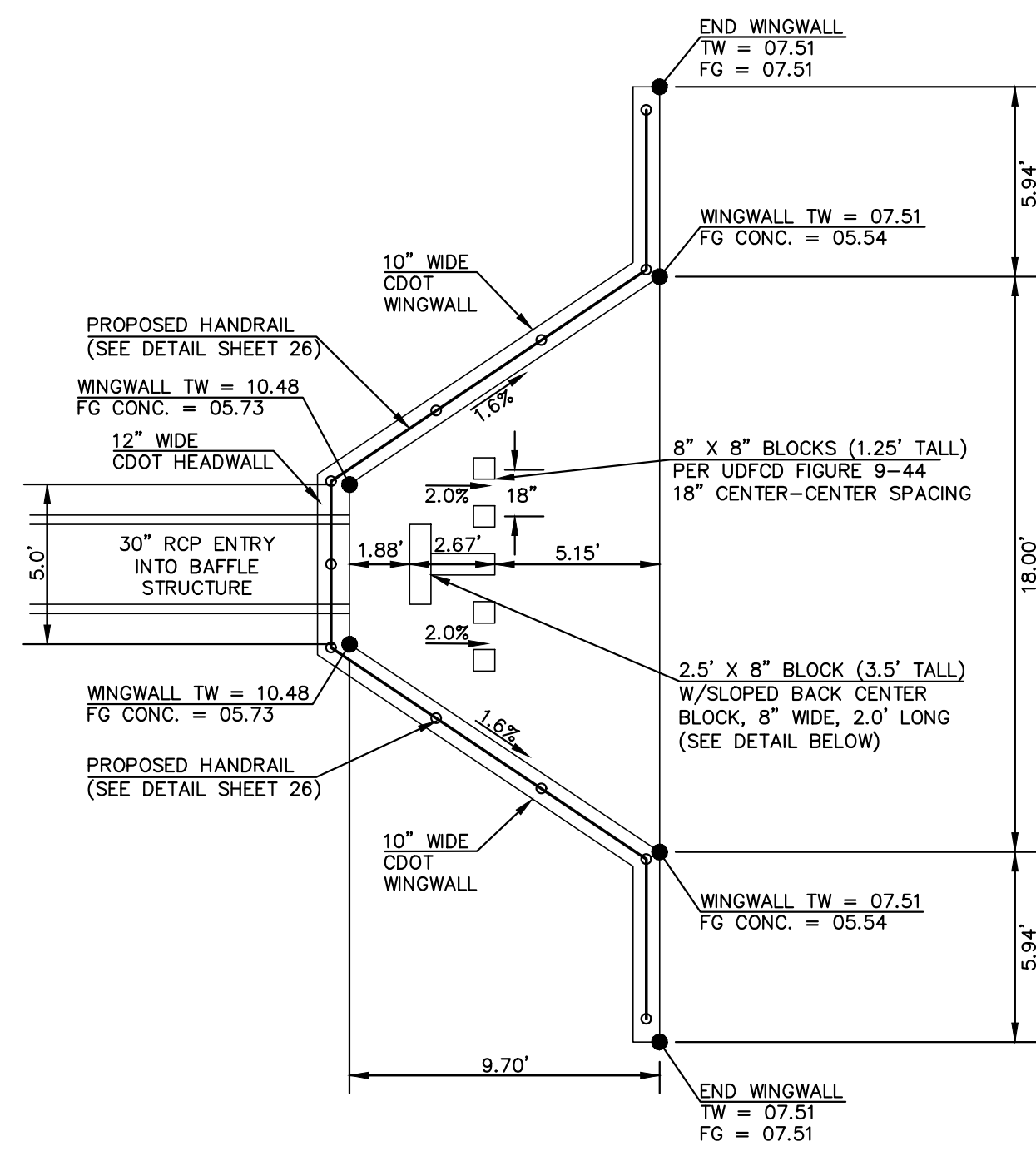


FOREST LAKES FILING NO. 7  
CONSTRUCTION PLANS  
PRIVATE POND "A"  
EDB - FULL SPECTRUM DETENTION

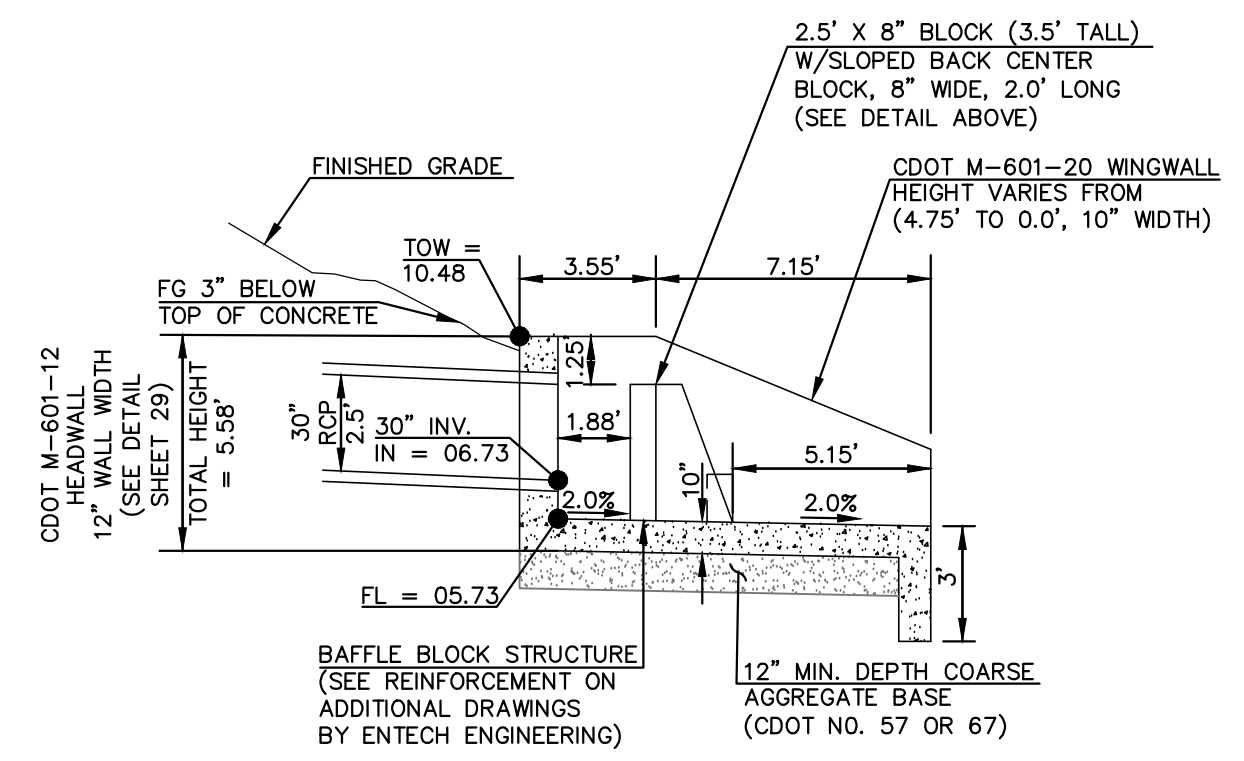
DESIGNED BY	MAL	SCALE	DATE	11/23/21
DRAWN BY	MES	(H) 1" = 20'	SHEET	22 OF 31
CHECKED BY	(V) 1" = N/A	JOB NO.	1175.70	

PCD FILE # SF-21-49

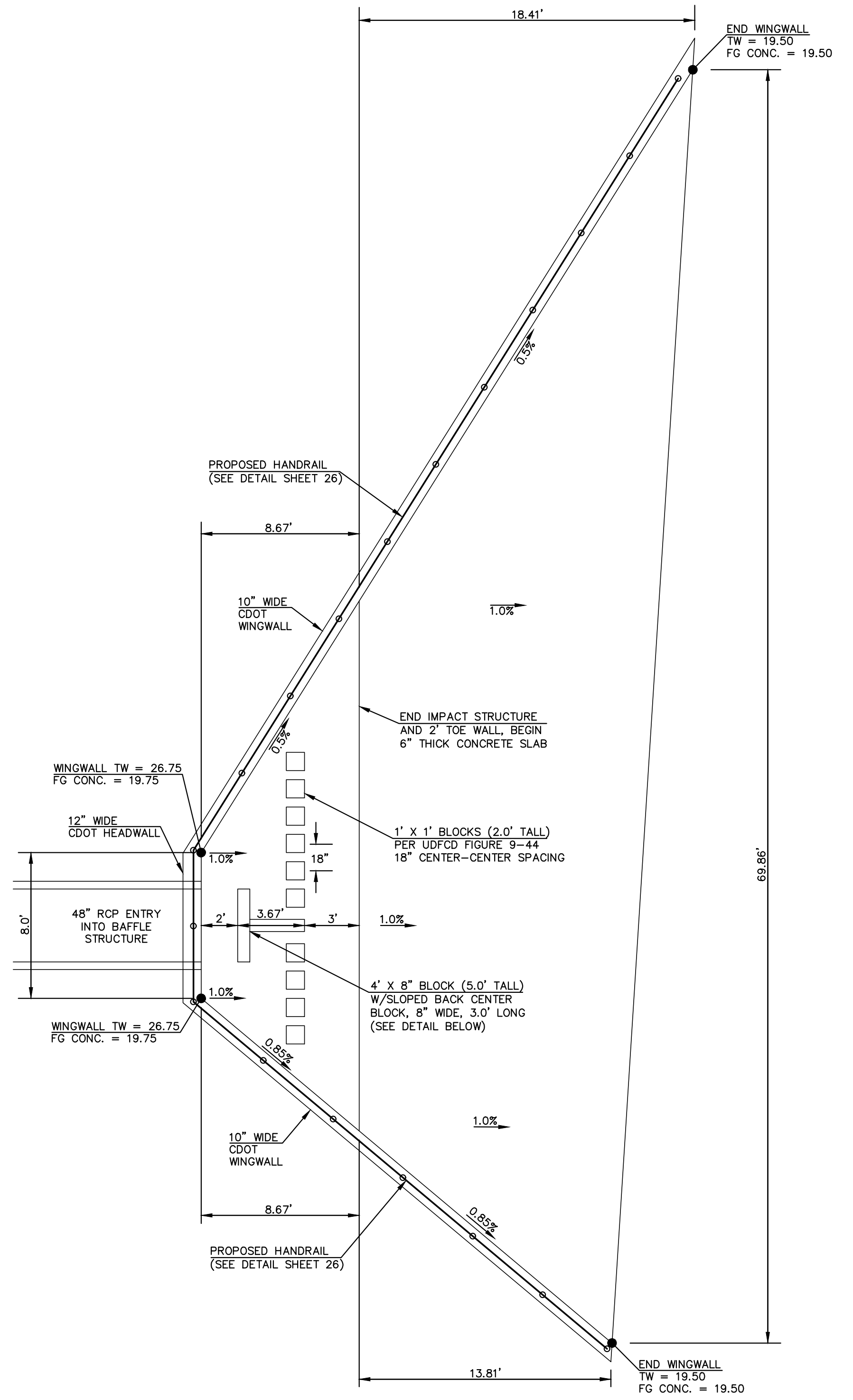
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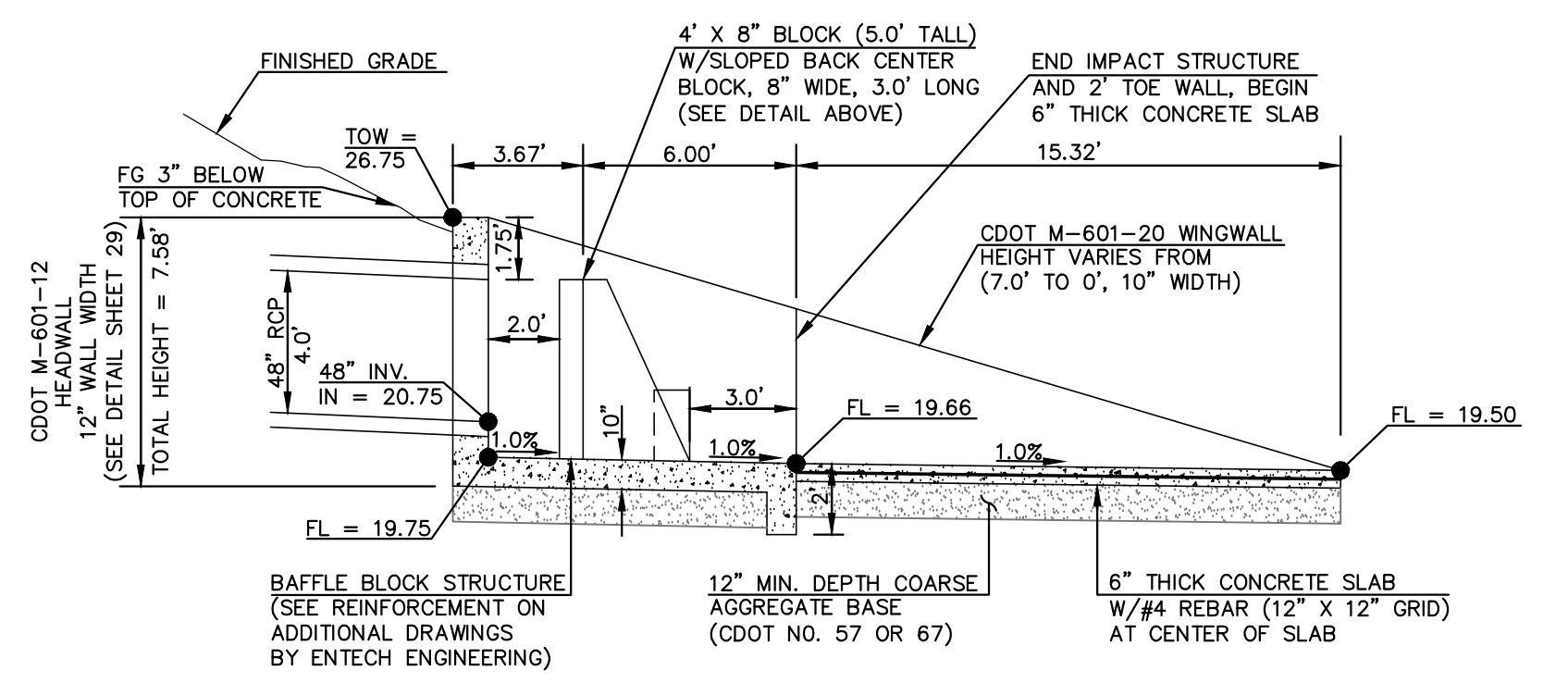
OUTFALL (POND A) 30" RCP BAFFLE STRUCTURE - PLAN VIEW  
SCALE 1" = 5'



OUTFALL 30" RCP BAFFLE STRUCTURE - PROFILE VIEW  
SCALE 1" = 5'



BYPASS MAIN 48" RCP BAFFLE STRUCTURE - PLAN VIEW  
SCALE 1" = 5'



BYPASS MAIN 48" RCP BAFFLE STRUCTURE - PROFILE VIEW  
SCALE 1" = 5'

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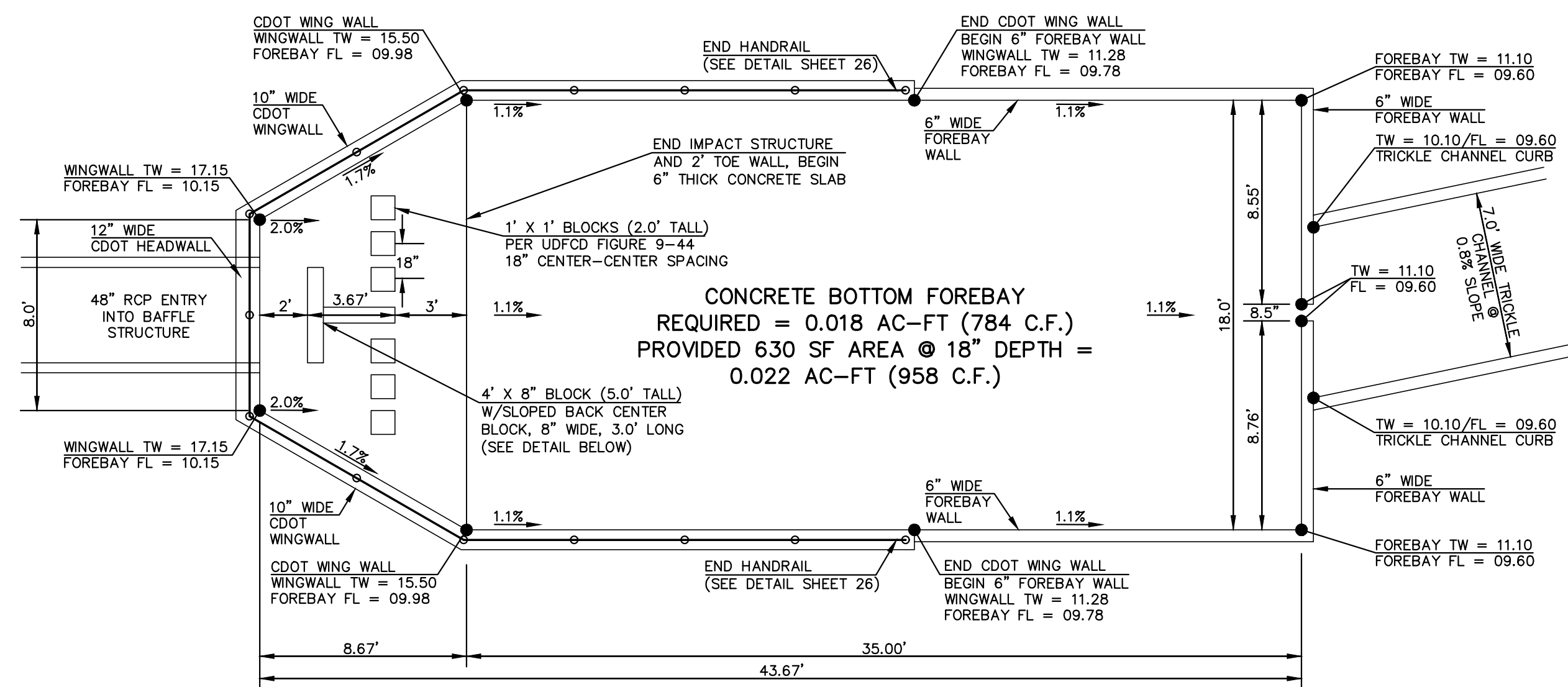
KYLE R. CAMPBELL, COLORADO P.E. #29794 DATE



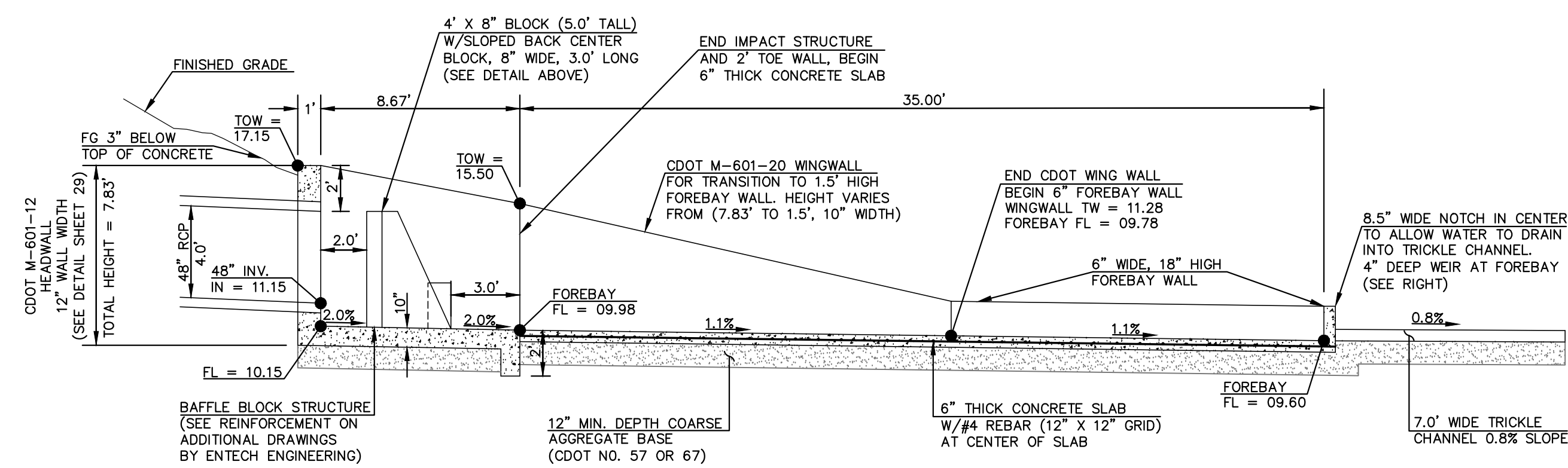
PCD FILE # SF-21-49

FOREST LAKES FILING NO. 7 CONSTRUCTION PLANS			
OUTFALL L- 30" IMPACT STRUCTURE			
BYPASS MAIN - 48" IMPACT STRUCTURE			
DESIGNED BY	MAL	SCALE	DATE 11/23/21
DRAWN BY	MES	(H) 1" = 5'	SHEET 23 OF 31
CHECKED BY	(V) 1" = N/A	JOB NO.	1175.70

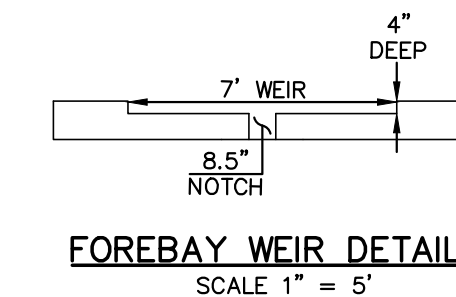
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MAIN 'A' 48" RCP FOREBAY & BAFFLE STRUCTURE - PLAN VIEW  
SCALE 1" = 5'



MAIN 'A' 48" RCP FOREBAY & BAFFLE STRUCTURE - PROFILE VIEW  
SCALE 1" = 5'



PCD FILE # SF-21-49

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NO.	REVISION	DATE

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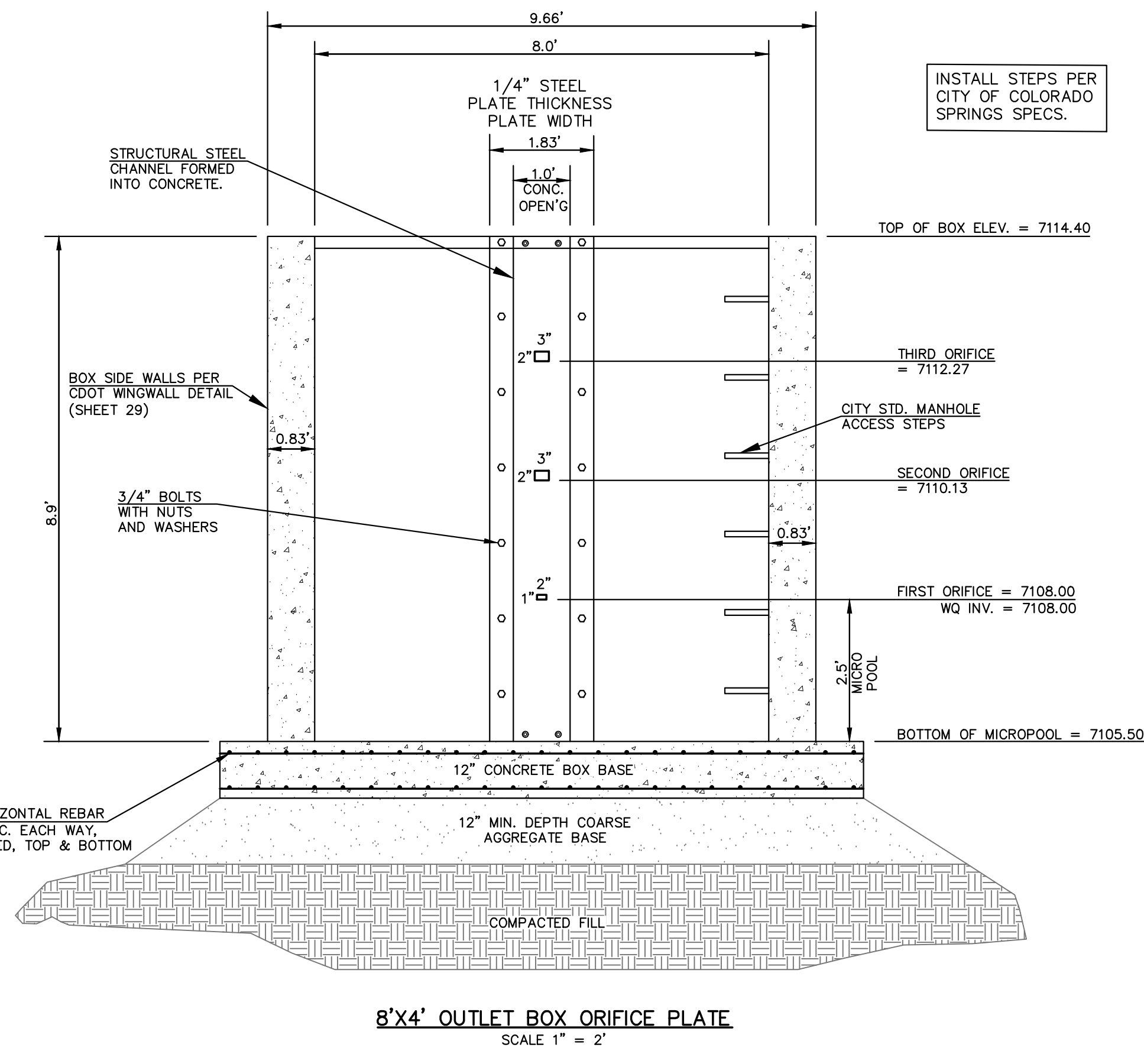
KYLE R. CAMPBELL, COLORADO P.E. #29794      DATE



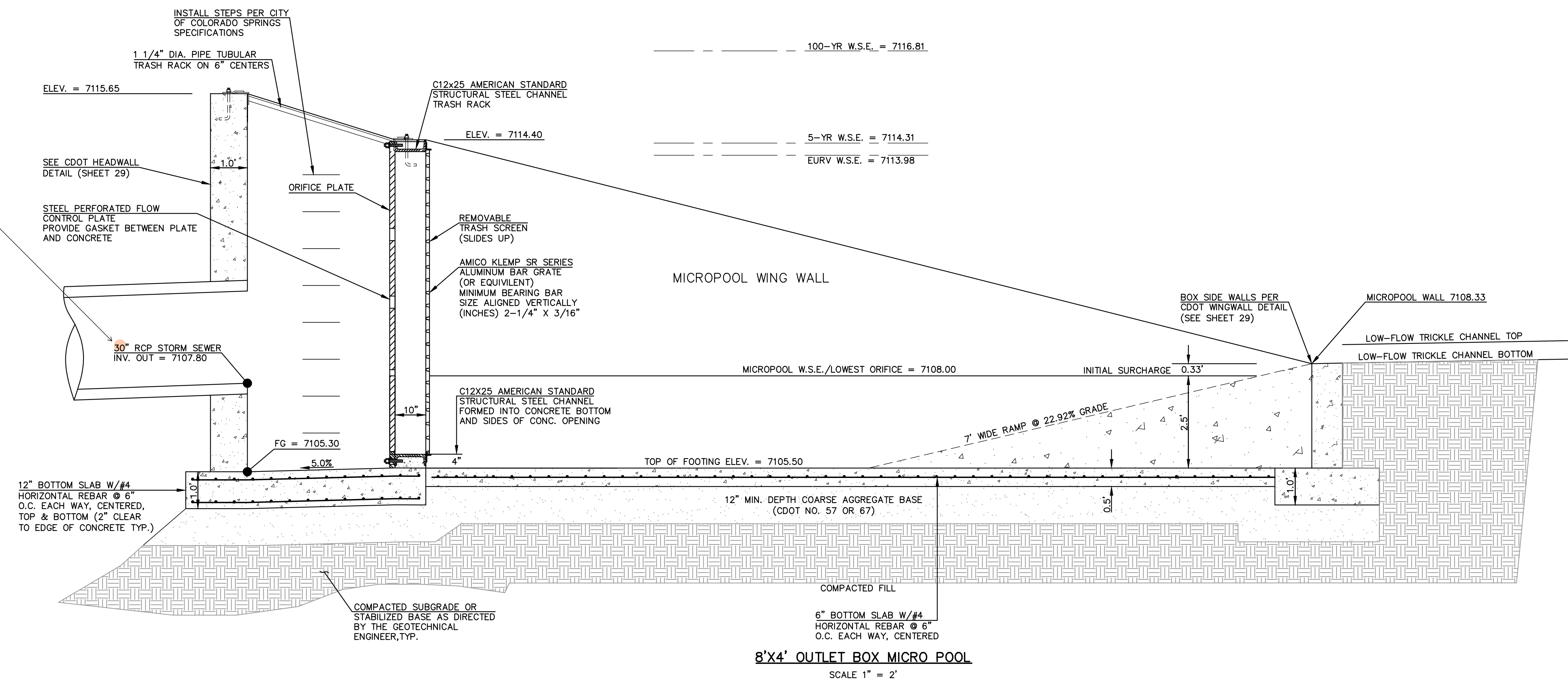
FOREST LAKES FILING NO. 7 CONSTRUCTION PLANS			
MAIN 'A' - 48" IMPACT STRUCTURE & FOREBAY			
DESIGNED BY	MAL	SCALE	DATE 11/23/21
DRAWN BY	MES	(H) 1" = 5'	SHEET 24 OF 31
CHECKED BY	(V) 1" = N/A	JOB NO.	1175.70

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



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

MCHFD Detention design calls for 36" diameter outlet pipe

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KYLE R. CAMPBELL, COLORADO P.E. #29794 DATE

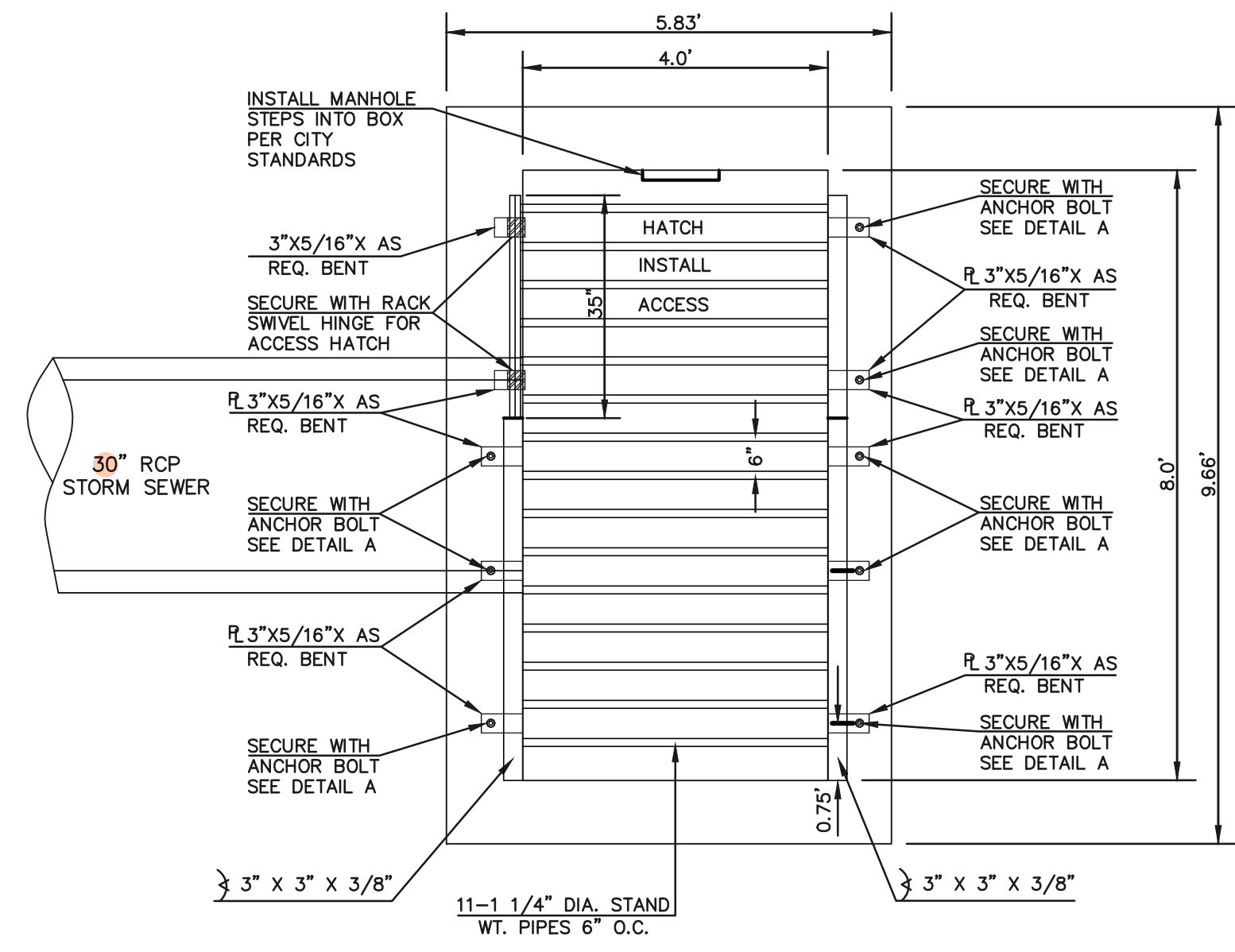
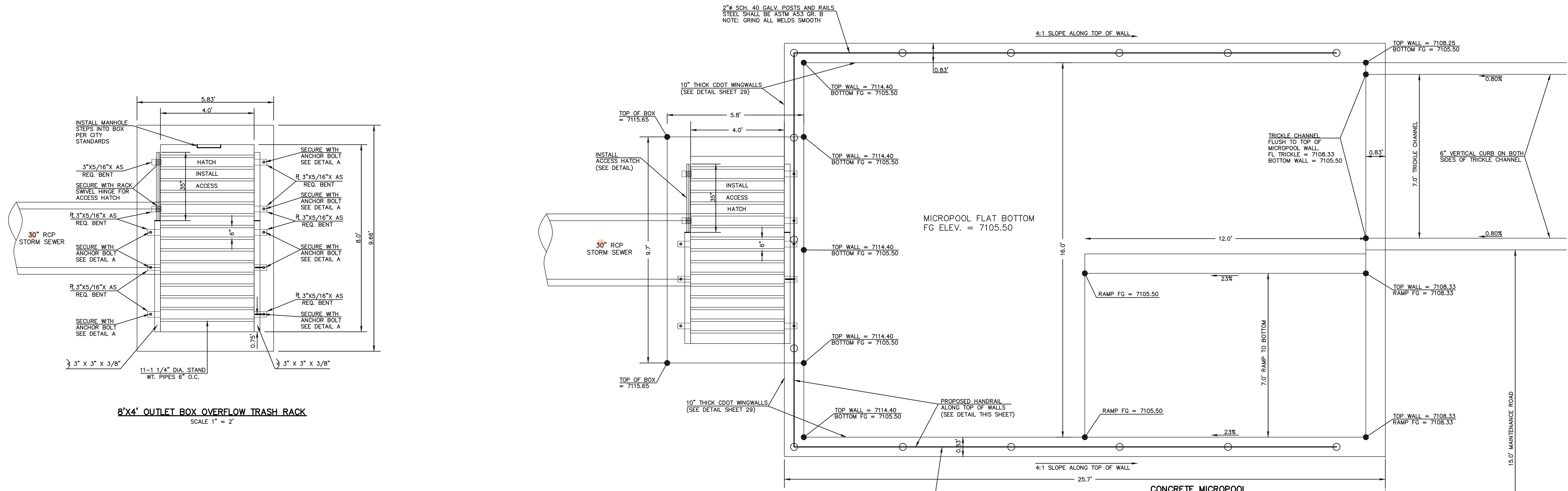


PCD FILE # SF-21-49

FOREST LAKES FILING NO. 7  
CONSTRUCTION PLANS  
POND OUTLET BOX - PROFILE VIEW

DESIGNED BY	MAL	SCALE	DATE	11/23/21
DRAWN BY	MES	(H) 1" = 2'	SHEET	25 OF 31
CHECKED BY	(V) 1" = N/A	JOB NO.	1175.70	

N:\17570\DRAWINGS\CONSTRUCT\BOX\STORM\25-117570-570-11-outlet structure.dwg, 2/7/2022 9:41:20 AM, 1:1



**8'X4' OUTLET BOX OVERFLOW TRASH RACK**  
SCALE 1" = 2'

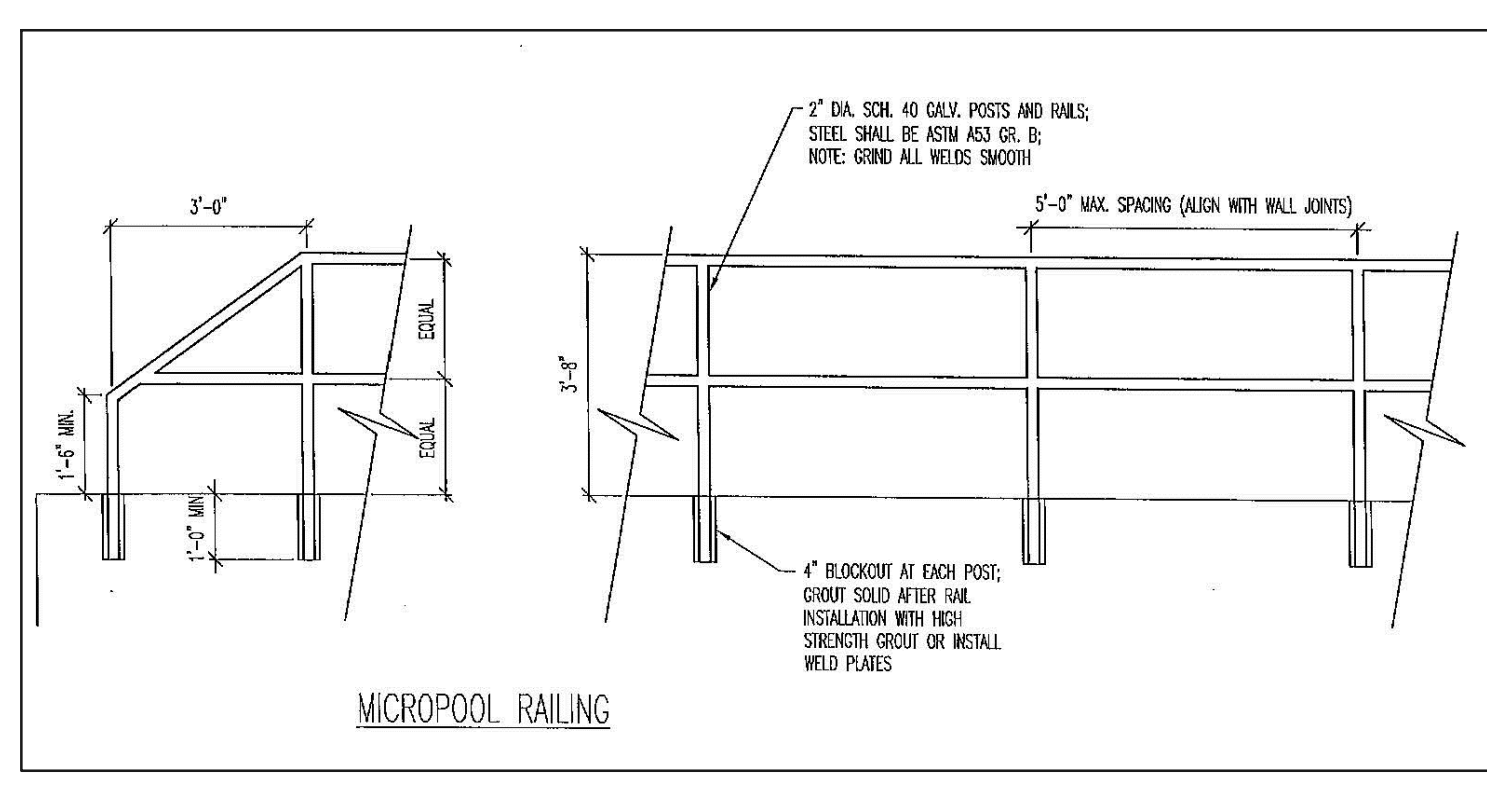
**CONCRETE MICROPOOL**  
SCALE 1" = 2'

**STEEL FABRICATION NOTES:**

- FABRICATED STEEL STRUCTURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AISC AND AWS SPECIFICATIONS.
- THE OUTLET STRUCTURE BARGRATE IS DESIGNED FOR A VERTICAL LOAD OF 300 LBS./SQ. FT.
- ALL STRUCTURAL STEEL SHAPES TO INCLUDE: ANGLE, PLATE, AND BAR SHALL MEET ASTM A36 SPECIFICATIONS, FY = 36 KSI MINIMUM. STRUCTURAL TUBING SHALL MEET ASTM A500 GRADE B SPECIFICATIONS, FY = 46 KSI MINIMUM. STEEL PIPE SHALL BE STANDARD WEIGHT PIPE ASTM A53 GRADE B, FY = 35 KSI MINIMUM.
- WELDS NOT INDICATED SHALL BE 1/8" MINIMUM FILLET OR GROOVE, CONTINUOUS SO FAR AS POSSIBLE, CONSIDER VANDALISM LOADS, WELD ACCORDINGLY AT CRITICAL LOCATIONS.
- PRIOR TO PAINTING REMOVE ALL OIL, SCALE, AND SLAG, GRIND OFF BURRS AND SHARP EDGES.
- PAINT WITH ONE SHOP COAT OF ZINC RICH PRIMER AND TWO COATS OF ALUMINUM PAINT, AASHTO M-69

**OVERFLOW TRASH RACKS:**

- ALL TRASH RACKS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE ACCESS PANELS (AS SHOWN)
- 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.

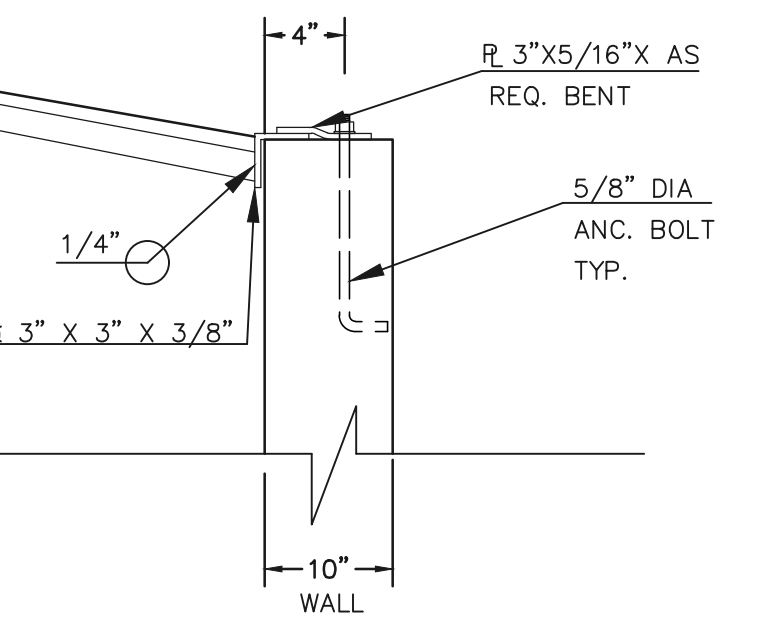
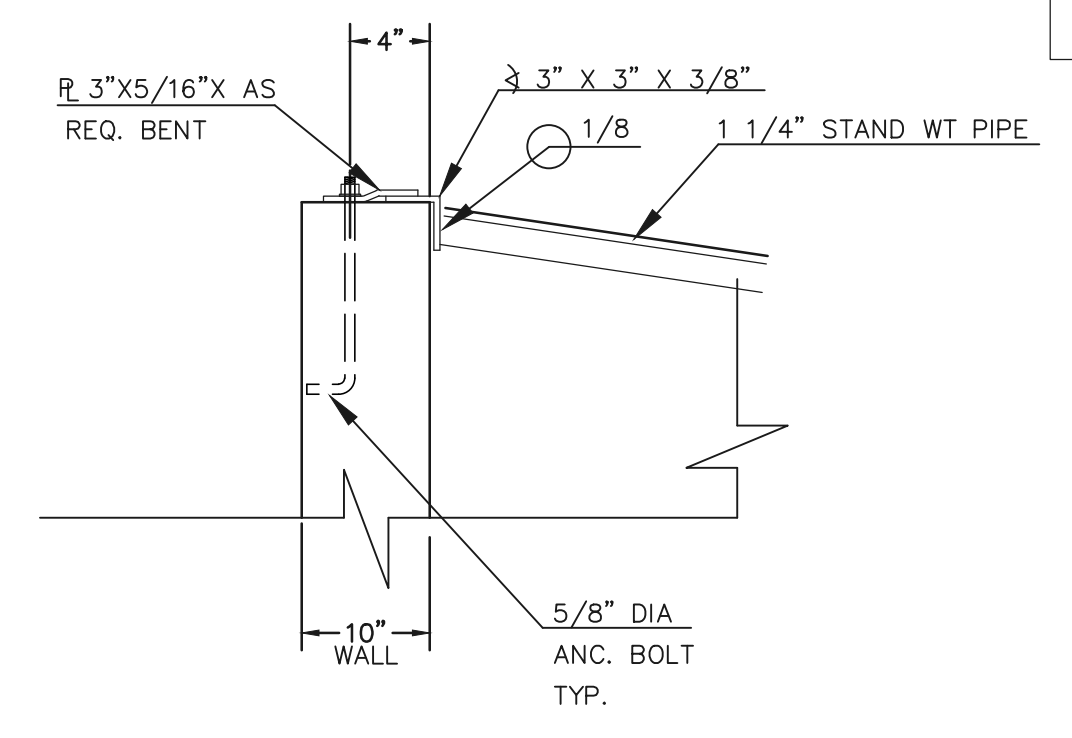


**MICROPOOL RAILING**

**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.
- HANDRAIL FINISH SHALL BE ONE COAT RED METAL PRIMER AND TWO COATS ENAMEL (RUSTOLEUM OR EQUIVALENT). COLOR SHALL BE APPROVED BY ENGINEER PRIOR TO APPLICATION.

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



**ANCHOR BOLT/GRATE DETAIL**  
N.T.S.

**LEGEND**

	PROPOSED FIRE HYDRANT		EXISTING FIRE HYDRANT
	PROPOSED WATER MAIN		EXISTING WATER MAIN
	PROPOSED SANITARY SEWER MAIN		EXISTING SANITARY SEWER MAIN
	PROPOSED STORM SEWER		EXISTING STORM SEWER
	PROPOSED STORM INLET		EXISTING STORM INLET
	ROW/BOUNDARY LINE		EXISTING GAS MAIN
			EXISTING ELECTRIC

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NO.	REVISION	DATE

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KYLE R. CAMPBELL, COLORADO P.E. #29794      DATE

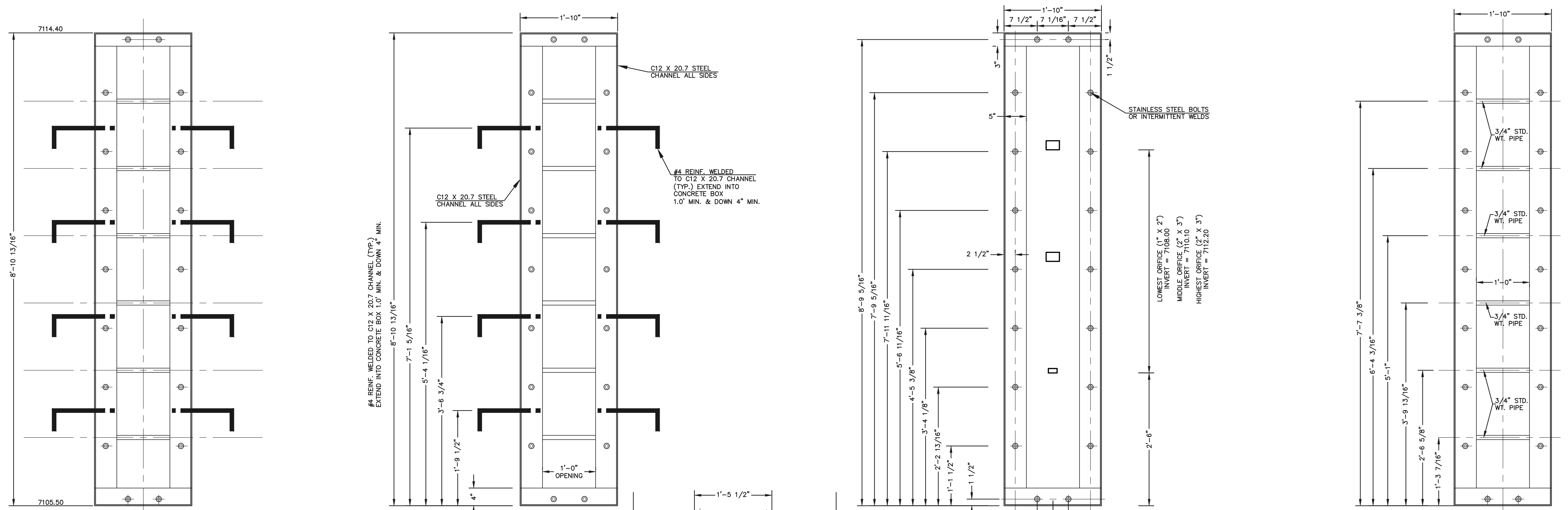
1919 N. Cascade Avenue, Suite 200  
Colorado Springs, Colorado 80903  
(719)785-0790  
(719)785-0799(fax)

PCD FILE # SF-21-49

**FOREST LAKES FILING NO. 7**  
**CONSTRUCTION PLANS**

POND OUTLET BOX AND MICROPOOL DETAILS

DESIGNED BY	MAL	SCALE	DATE	11/23/21
DRAWN BY	MES	(H) 1" = 2'	SHEET	26 OF 31
CHECKED BY	(V) 1" = N/A	JOB NO.	1175.70	

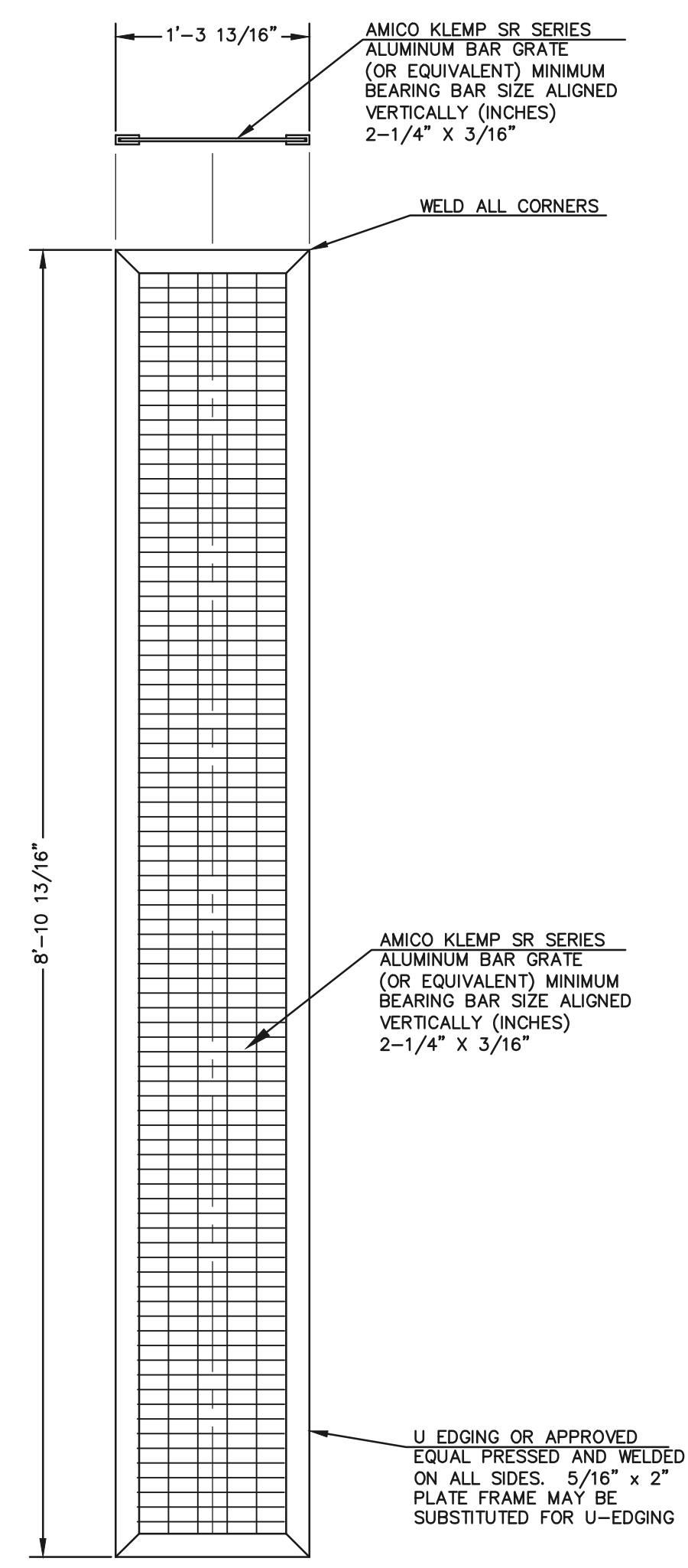


**OUTLET CONTROL PLATE AND FRAME**  
SCALE: 1"=1'

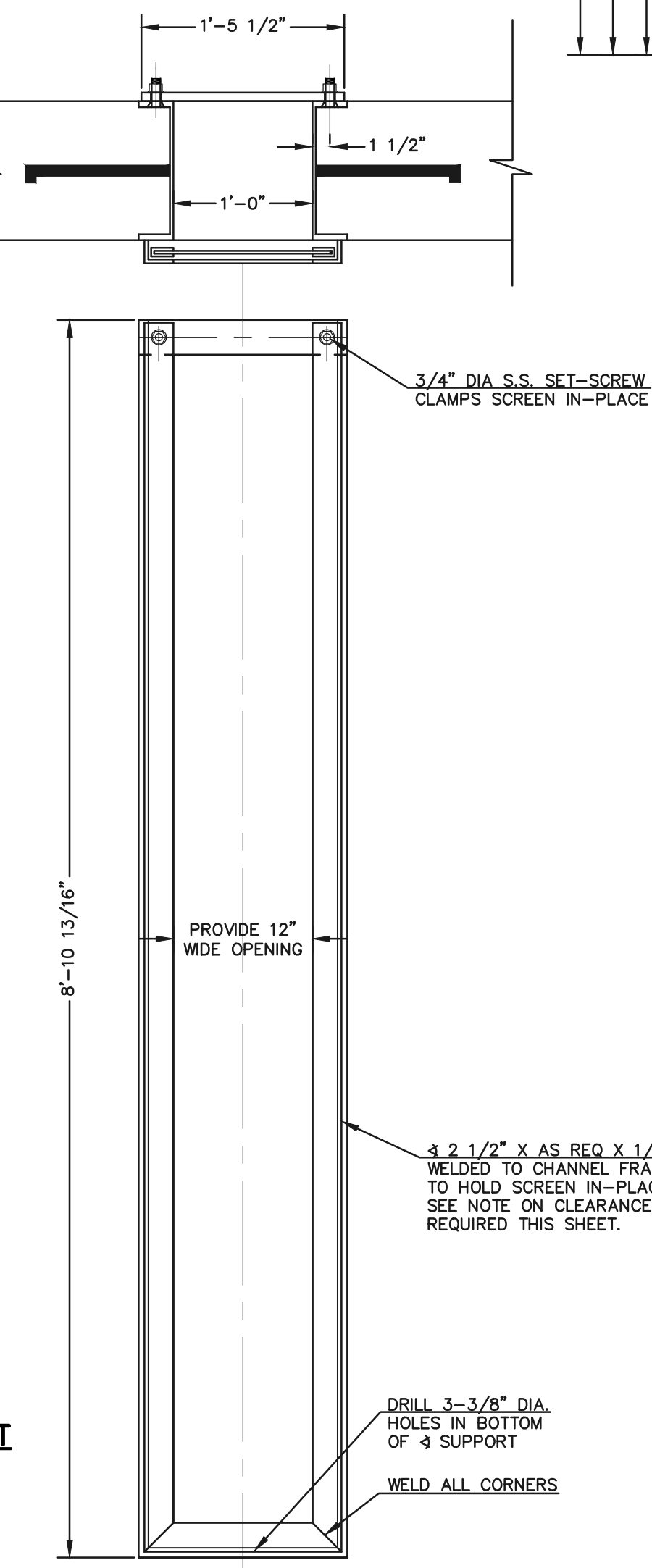
**CHANNEL FRAME WITH WALL ANCHORS**  
SCALE: 1"=1'

**1/4" THICK ORIFICE PLATE**  
SCALE: 1"=1'

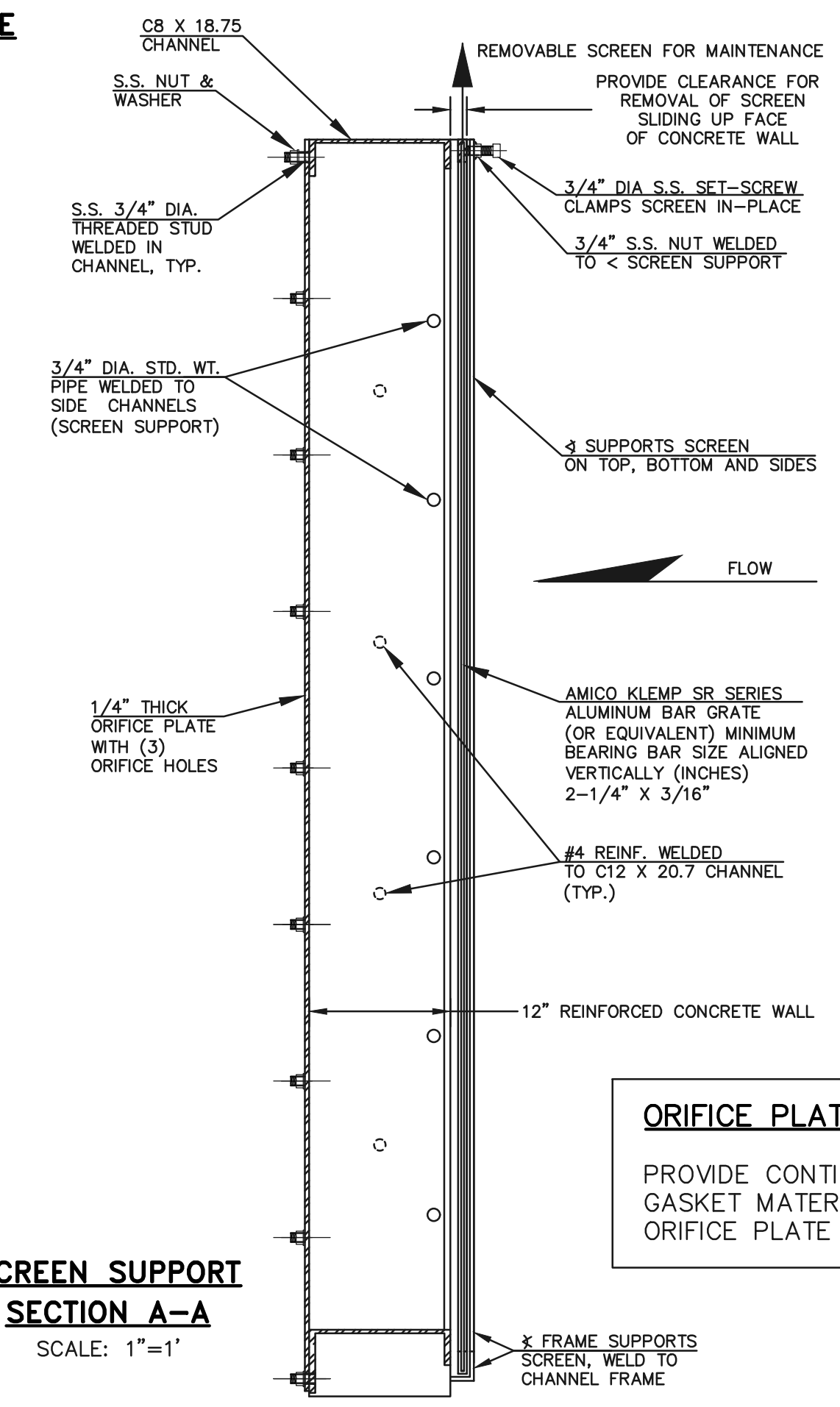
**CHANNEL FRAME**  
SCALE: 1"=1'



**TRASH SCREEN**  
SCALE: 1"=1'



**SCREEN SUPPORT**  
SCALE: 1"=1'



**SCREEN SUPPORT SECTION A-A**  
SCALE: 1"=1'

**ORIFICE PLATE NOTE:**  
 PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS		NO.	REVISION	DATE
<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.				

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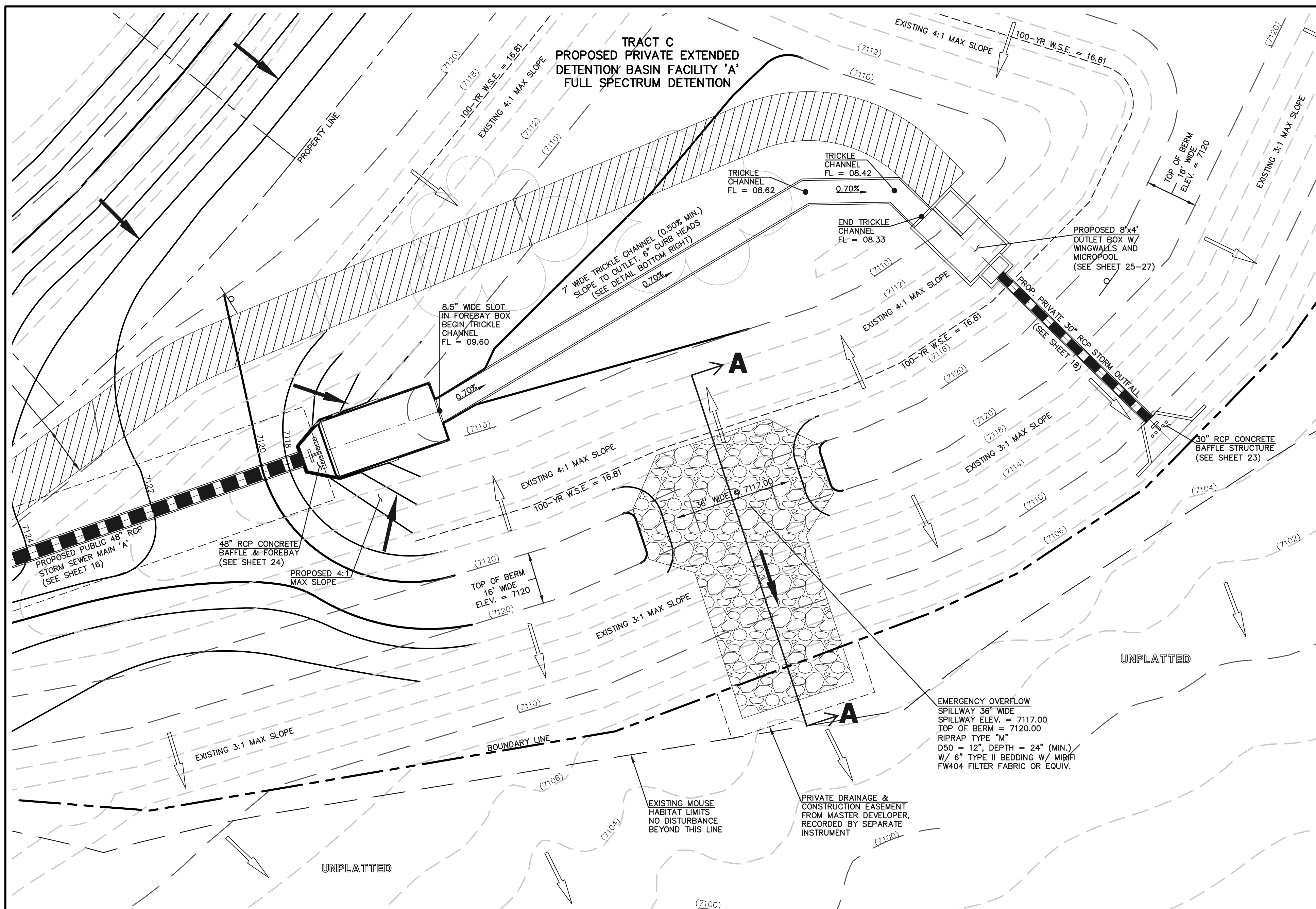
DATE



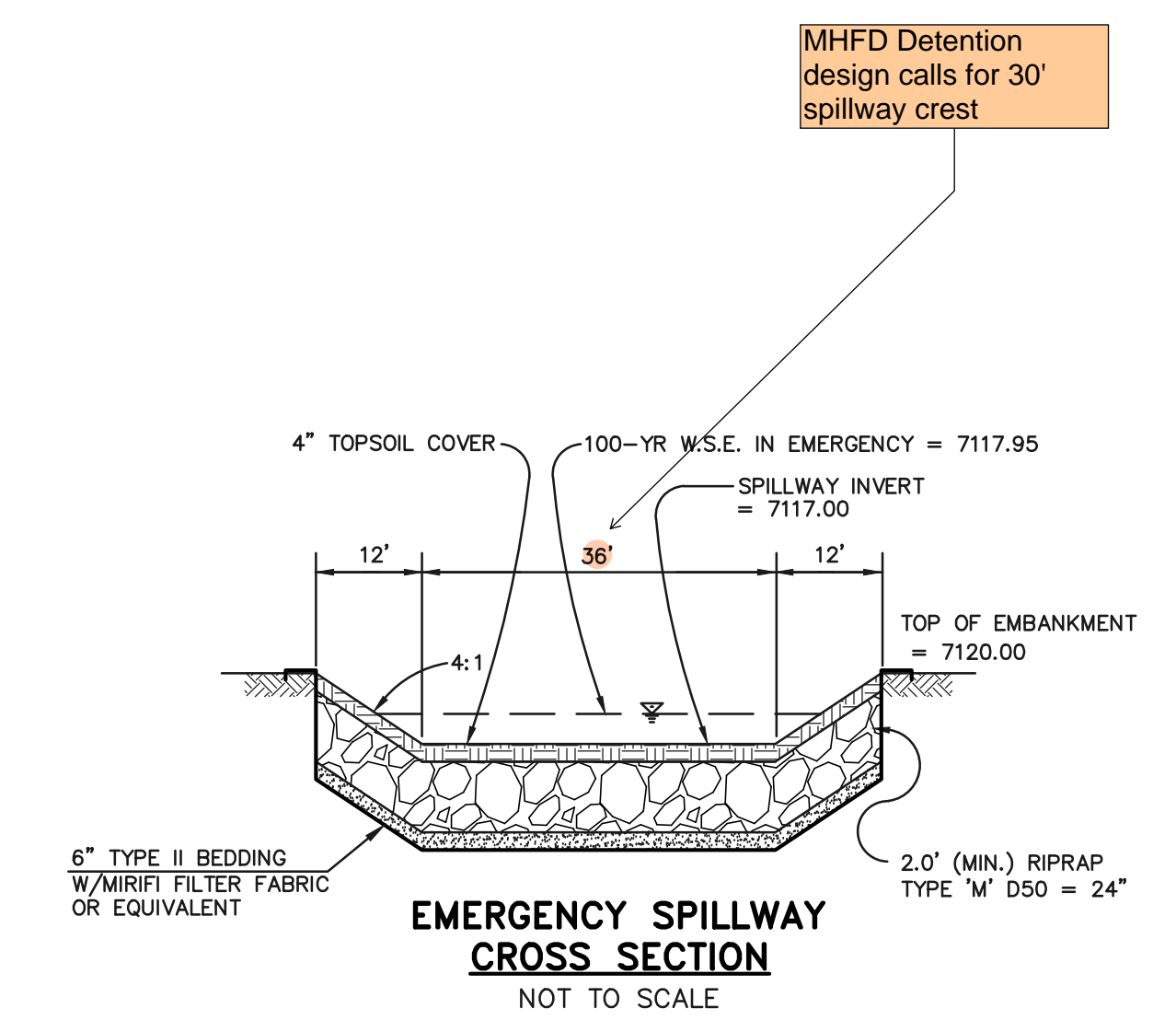
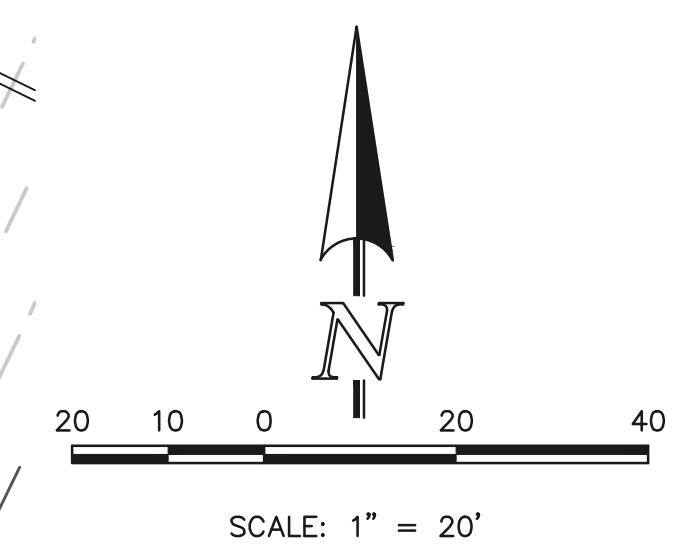
PCD FILE # SF-21-49

FOREST LAKES FILING NO. 7 CONSTRUCTION PLANS			
OUTLET BOX DETAILS			
DESIGNED BY	MAL	SCALE	DATE 11/23/21
DRAWN BY	MES	(H) 1"= 1'	SHEET 27 OF 31
CHECKED BY	(V) 1"= N/A	JOB NO.	1175.70

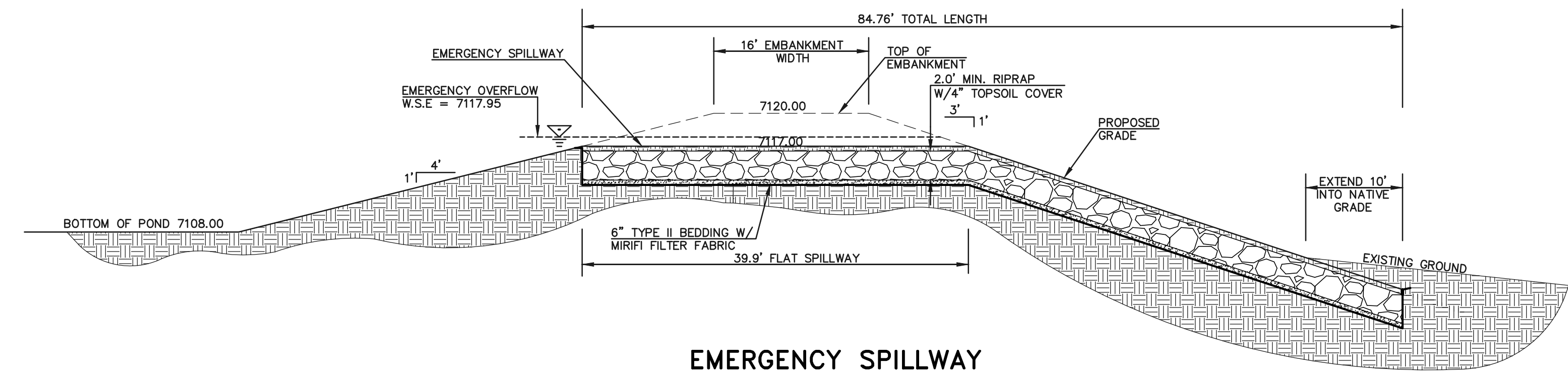
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**EMERGENCY SPILLWAY, EMBANKMENT, AND RUNDOWN PLAN VIEW**  
SCALE: 1" = 20'



**EMERGENCY SPILLWAY CROSS SECTION**  
NOT TO SCALE



**EMERGENCY SPILLWAY PROFILE AT EMBANKMENT SECTION A-A**  
SCALE: 1" = 10'

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PCD FILE # SF-21-49

FOREST LAKES FILING NO. 7  
CONSTRUCTION PLANS

POND SPILLWAY DETAILS

DESIGNED BY	MAL	SCALE	DATE	11/23/21
DRAWN BY	MES	(H) 1"=VARIES	SHEET	28 OF 31
CHECKED BY	(V) 1"= N/A	JOB NO.	1175.70	

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### CONCRETE HEADWALL INSTALLATIONS

SEE STANDARD PLAN M-601-10 FOR REINFORCING DETAILS.

**GENERAL NOTES**

- FOR SIZE AND LOCATION OF PIPES, SEE THE PLANS.
- ALL CONCRETE SHALL BE CLASS B.
- FOOTINGS IN ROCK SHALL BE POURED OUT TO ROCK AND NOT FORMED IN ACCORDANCE WITH SUBSECTION 602.02A.
- CORDED CONCRETE CORNERS SHALL BE CHAMFERED 3/4".
- HEADWALL SHALL HAVE REINFORCING STEEL INSTALLED IN A PATTERN SIMILAR TO STANDARD PLAN M-601-10.
- THE COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE WORK UNLESS THE STEEL QUANTITIES ARE LISTED IN THE PLANS AND ARE PAID FOR SEPARATELY.

**CONCRETE HEADWALL INSTALLATIONS**

PIPE TYPE	PIPE DIAMETER (AND EQUIVALENT DIAMETER) (IN.)											
	18		24		30		36		42		48	
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
CIRCULAR 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	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	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"	REBAR	2.0	3.5	5.4	7.8	10.7	15.9

**PIPE OUTLET PAVING (CUBIC YARDS)**

NOTE: VOLUME OCCUPIED BY PIPE HAS BEEN DEDUCTED.

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"	REBAR	2.0	3.5	5.4	7.8	10.7	15.9

**PIPE OUTLET PAVING (CUBIC YARDS)**

NOTE: VOLUME OCCUPIED BY PIPE HAS BEEN DEDUCTED.

**Computer File Information**

Creation Date: 07/04/12  
 Last Modification Date: 07/04/12  
 Drawing File Name: 60102101.dgn  
 CAD Ver: MicroStation V8  
 Scale: Not to Scale  
 Units: English

**Sheet Revisions**

Date	Comments

**Colorado Department of Transportation**  
 5201 East Arkansas Avenue  
 Denver, Colorado 80222  
 Phone: (303) 757-9000  
 Fax: (303) 757-9820

**Project Development Branch DD/LTA**

**HEADWALLS AND PIPE OUTLET PAVING**

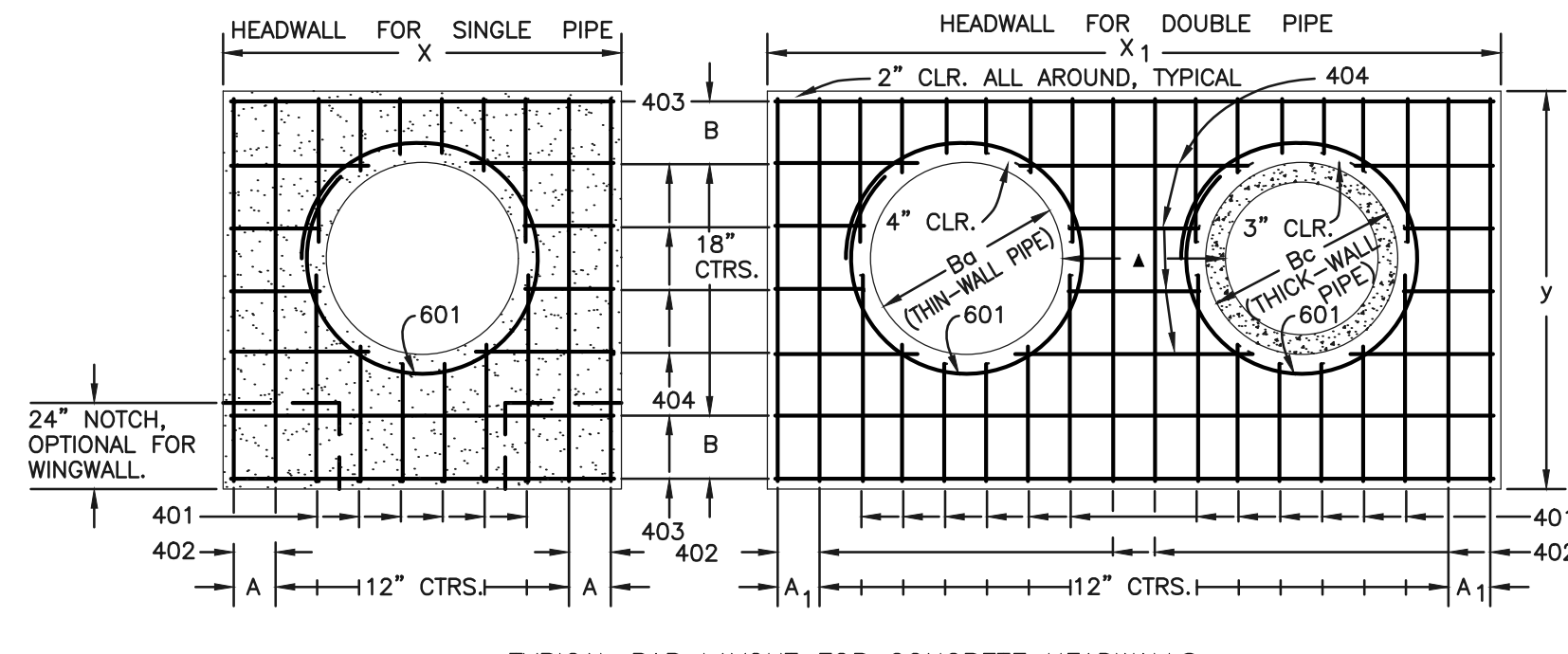
**STANDARD PLAN NO. M-601-12**

Issued By: Project Development Branch July 4, 2012

Sheet No. 1 of 1

### CDOT M-601-12 HEADWALL DETAIL

- GENERAL NOTES**
- ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4".
  - WINGWALL FOOTINGS AND FLOOR OF BOX CULVERT SHALL BE PLACED MONOLITHICALLY.
  - DIMENSIONS "H", "B", "R", "T", "L", "M" AND ANGLES FOR WINGWALLS SHALL BE AS SHOWN ON THE PLANS.
  - REINFORCING STEEL SHALL BE GRADE 60.
  - THE MINIMUM SPLICE LENGTH FOR COMMON BAR SIZES SHALL BE:
- | BAR           | #4    | #5    | #6    |
|---------------|-------|-------|-------|
| SPLICE LENGTH | 1'-3" | 1'-7" | 2'-0" |



**HEADWALL FOR THICK-WALL ROUND PIPE**

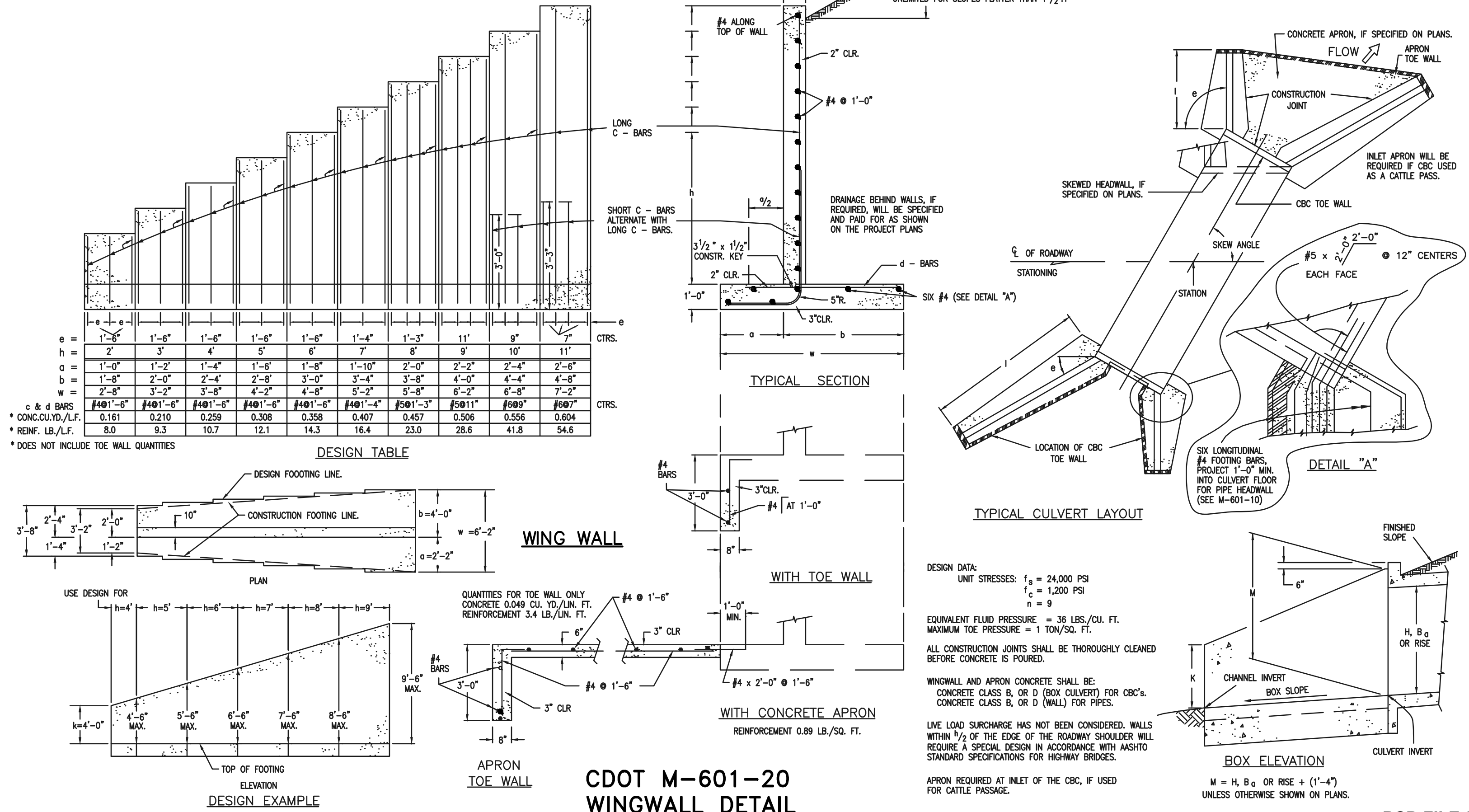
DIMENSIONS

CONCRETE QUANTITIES

Ba	Bc	X	A	X1	A1	y	B	X2	CONCRETE SGL	CONCRETE DBL	STEEL SGL	STEEL DBL
in.	in.	ft.-in.	in.	ft.-in.	in.	ft.-in.	in.	in.	cu.yd.	cu.yd.	lbs.	lbs.
54	65	8-9	8 1/2	15-6	7	9-2	17	20	2.12	3.55	209	304
60	72	9-6	7	17-0	10	9-8	11	21	2.35	3.99	236	414
66	79	10-3	11 1/2	18-6	7	10-2	14	22	2.60	4.44	249	453
72	86	11-0	10	20-0	10	10-8	17	23	2.85	4.91	270	476
78	93	11-9	8 1/2	21-3	11	11-2	11	24	3.11	5.29	306	527
84	100	12-6	7	22-6	7	11-8	14	25	3.38	5.68	333	572
90	107	13-3	11 1/2	23-9	8 1/2	12-2	17	26	3.66	6.09	335	593
96	114	14-0	10	25-0	10	12-8	11	27	3.94	6.48	379	649
102	121	14-9	8 1/2	26-3	11 1/2	13-2	14	28	4.24	6.89	400	664
108	128	15-6	7	27-6	7	13-8	17	29	4.54	7.30	424	707

**GENERAL NOTES**

- CONCRETE SHALL BE CLASS B.
- HEADWALL SHALL BE PERPENDICULAR TO THE CULVERT Q UNLESS OTHERWISE SHOWN ON THE PLANS. TABULATED DIMENSIONS AND QUANTITIES MUST BE ADJUSTED FOR SKEWED INSTALLATIONS.
- FOR WINGWALL DETAILS, SEE STANDARD M-601-20.
- VOLUME OCCUPIED BY PIPE HAS BEEN DEDUCTED FROM STEEL AND CONCRETE QUANTITIES.
- EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4".
- ALL BARS SHALL HAVE A 2" MINIMUM CLEARANCE.
- WHEN TWO OR MORE CONDUITS ARE LAID SIDE BY SIDE, THEY SHALL BE PLACED SO THAT THE ADJACENT PIPES WILL BE 1/2 INSIDE DIAMETER OR 1/2 INSIDE SPAN OR 3 FEET APART (INCLUDING WALL THICKNESS) WHICHEVER IS LESS.
- ADD 0.89 X (X OR X1) (LB.) WHEN APRON IS REQUIRED.



48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS

**811**

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 IT'S THE LAW

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NO.	REVISION	DATE

REVIEW:

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

KYLE R. CAMPBELL, COLORADO P.E. #29794

DATE



FOREST LAKES FILING NO. 7  
 CONSTRUCTION PLANS

DETAILS SHEET

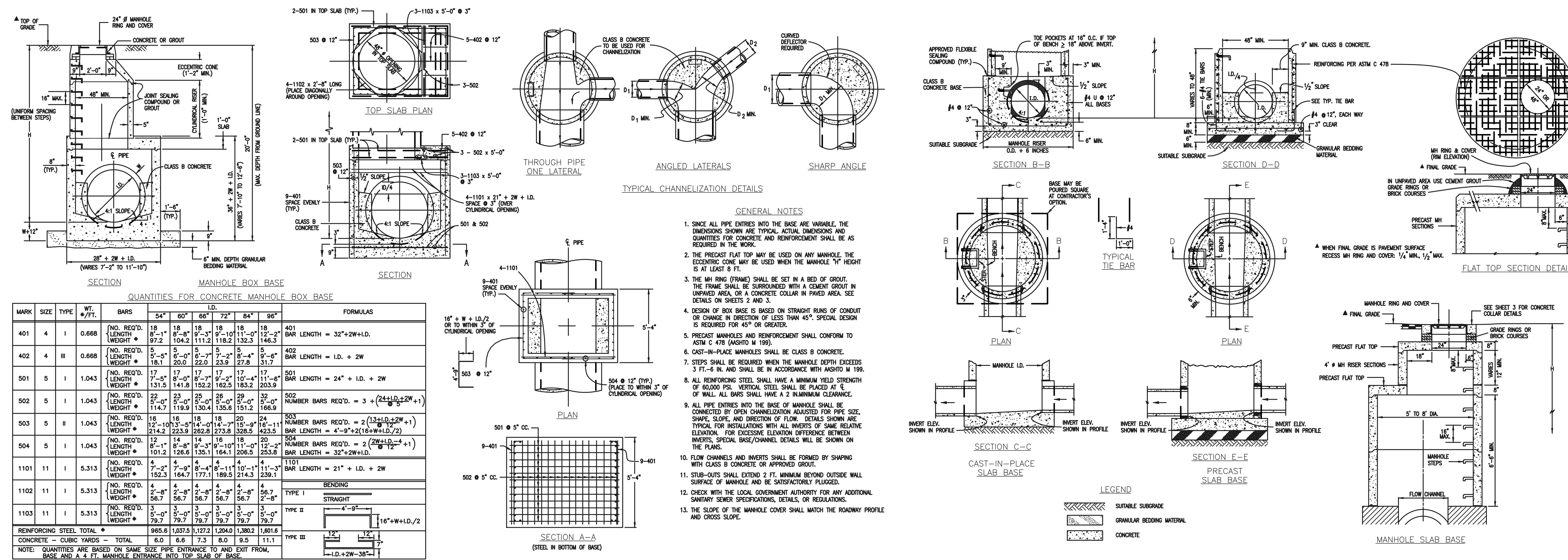
DESIGNED BY	SCALE	DATE
MES	(H) 1" = N/A	11/23/21

DRAWN BY	SCALE	SHEET	OF
MES	(V) 1" = N/A	29	31

CHECKED BY	SCALE	JOB NO.
	(V) 1" = N/A	1175.70

PCD FILE # SF-21-49

Include detail for Type II manhole



**QUANTITIES FOR CONCRETE MANHOLE BOX BASE**

MARK	SIZE	TYPE	WT. #/FT.	NO. BARS	5'x7'	6'x7'	7'x7'	8'x7'	9'x7'	FORMULAS
401	4	I	0.668	18	18	18	18	18	18	401 BAR LENGTH = 32'+2W+1D.
402	4	III	0.668	18	18	18	18	18	18	402 BAR LENGTH = LD. + 2W
501	5	I	1.043	22	22	22	22	22	22	501 BAR LENGTH = 24'+LD. + 2W
502	5	II	1.043	22	22	22	22	22	22	502 NUMBER BARS REQ'D. = 3 + (24+LD+2W+1) / 5
503	5	III	1.043	22	22	22	22	22	22	503 NUMBER BARS REQ'D. = 2 + (34+LD+2W+1) / 5
504	5	IV	1.043	22	22	22	22	22	22	504 NUMBER BARS REQ'D. = 2 + (28+LD+2W+1) / 5
1101	11	I	5.313	4	4	4	4	4	4	1101 BAR LENGTH = 32'+2W+1D.
1102	11	II	5.313	4	4	4	4	4	4	1102 BAR LENGTH = 21'+LD. + 2W
1103	11	III	5.313	4	4	4	4	4	4	1103 BAR LENGTH = 16'+W+LD/2

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

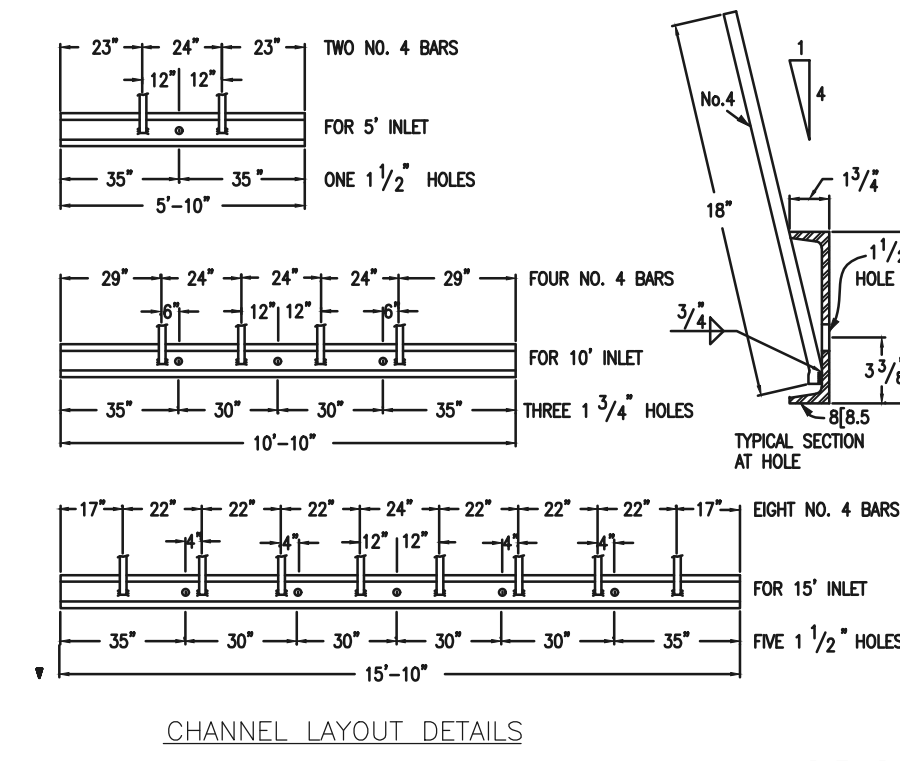
**TABLE ONE ~ BAR LIST FOR CURB INLETS, TYPE "R"**

MARK	DIA. IN.	O.C. SPACING	TYPE	ALL INLETS			INLETS, H ≤ 5'			INLETS, H > 5'		
				L=5'	10'	15'	L=5'	10'	15'	L=5'	10'	15'
401	11"	II	15	21	26	11	11	11	11	11	11	
402	11"	II	7	13	18	7	7	7	7	7	7	
403	9"	II	4	10	14	4	4	4	4	4	4	
405	6"	VI	11	6	10	11	6	10	11	6	10	
406	6"	VIII	7	13	17	7	13	17	7	13	17	
407	6"	IX	3	10	14	3	10	14	3	10	14	
408	6"	II	3	11	15	3	11	15	3	11	15	
409	8"	II	6	10	14	6	10	14	6	10	14	
410	11"	VII	3	3	3	3	3	3	3	3	3	
411	11"	II	3	5	7	3	5	7	3	5	7	
412	11"	II	3	2	2	3	2	2	3	2	2	
413	9"	II	2	7	10	2	7	10	2	7	10	
501	5 1/2"	IV	11	3	4	22	3	4	33	3	4	
502	5 1/2"	III	5	3	4	16	3	4	11	3	4	
503	5 1/2"	II	5	3	4	16	3	4	6	3	4	
504	5 1/2"	IX	3	3	4	5	3	4	5	3	4	
601	2 1/2"	V	2	8	10	2	8	10	2	8	10	
601.5	1	I	1	10	10	1	10	10	1	10	10	

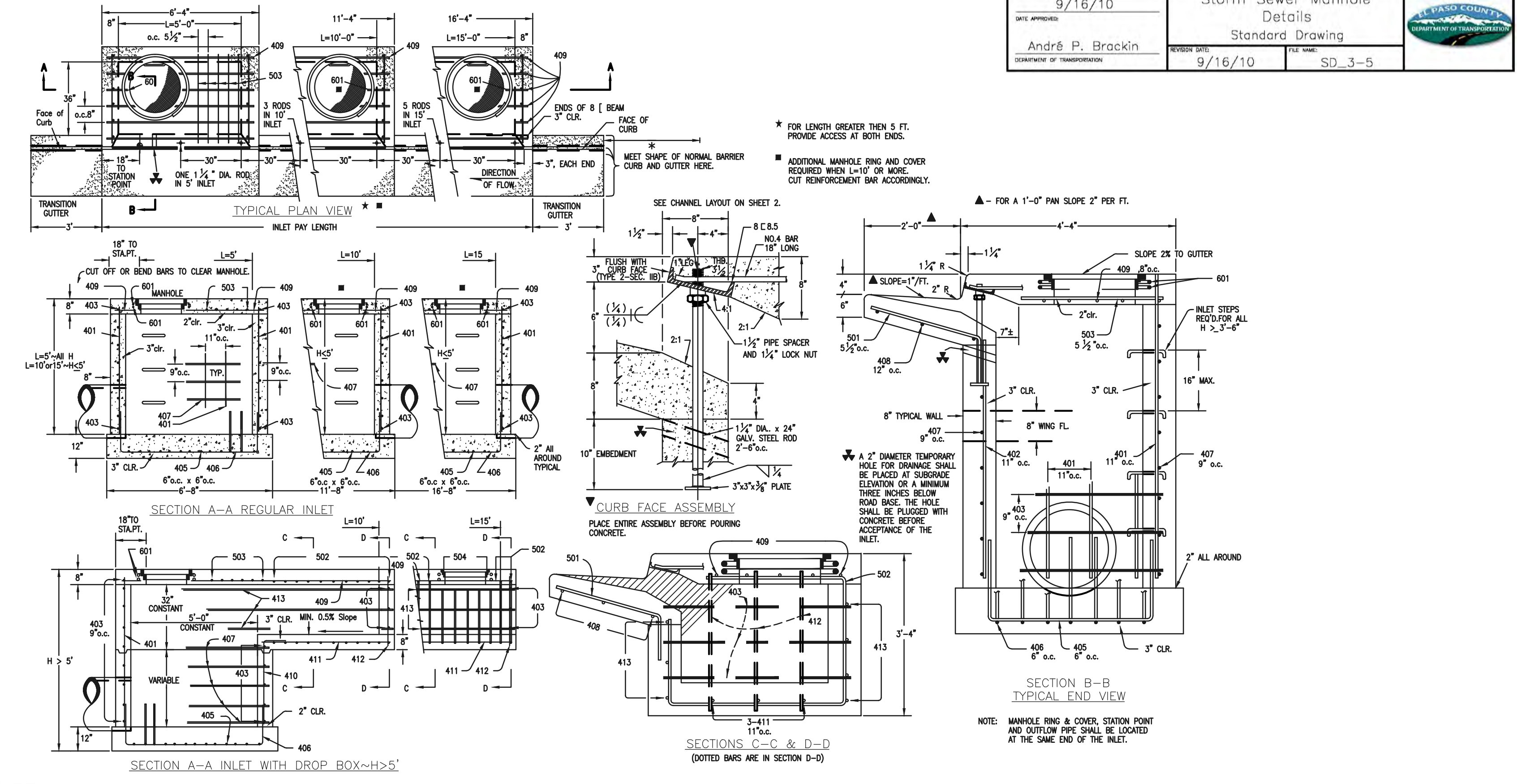
- GENERAL NOTES**
- ALL CONCRETE SHALL BE CLASS B.
  - CONCRETE WALLS SHALL BE FORMED ON BOTH SIDES AND SHALL BE 8 IN. THICK.
  - INLET STEPS SHALL BE IN ACCORDANCE WITH ASHTO M 199.
  - CURB FACE ASSEMBLY SHALL BE GALVANIZED AFTER WELDING.
  - EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 1/4 IN. CURB AND GUTTER CORNERS SHALL BE FINISHED TO MATCH THE EXISTING CURB AND GUTTER BEHIND THE TRANSITION GUTTER.
  - REINFORCING BARS SHALL BE DEFORMED AND SHALL HAVE A 2 IN. MINIMUM CLEARANCE. ALL REINFORCING BARS SHALL BE EPOXY COATED.
  - DIMENSIONS AND WEIGHTS OF TYPICAL MANHOLE RING AND COVER ARE NOMINAL.
  - MATERIAL FOR MANHOLE RINGS AND COVERS SHALL BE GRAY OR DUCTILE CAST IRON CONFORMING TO 712.06.
  - SINCE PIPE ENTRIES INTO THE INLET ARE VARIABLE, THE DIMENSIONS SHOWN ARE TYPICAL. ACTUAL DIMENSIONS AND QUANTITIES FOR CONCRETE AND REINFORCEMENT SHALL BE AS REQUIRED IN THE WORK. QUANTITIES INCLUDE VOLUMES OCCUPIED BY PIPES.
  - STRUCTURAL STEEL SHALL BE GALVANIZED AND SHALL CONFORM TO THE REQUIREMENTS OF 712.06.

**TABLE TWO ~ BARS AND QUANTITIES VARIABLE WITH "H"**

H'	L=5'		L=10'		L=15'	
	NO. REQ'D.	WT. (LB.)	NO. REQ'D.	WT. (LB.)	NO. REQ'D.	WT. (LB.)
3'-0"	4	3.2	7	5.3	10	7.4
3'-6"	4	3.4	7	5.7	10	7.9
4'-0"	4	3.7	7	6.0	10	8.4
4'-6"	4	3.9	7	6.4	10	8.8
5'-0"	4	4.1	7	6.7	10	9.3
5'-6"	4	4.4	7	7.0	10	9.7
6'-0"	4	4.6	7	7.3	10	10.1
6'-6"	4	4.8	7	7.6	10	10.5
7'-0"	4	5.0	7	7.9	10	10.9
7'-6"	4	5.2	7	8.2	10	11.3
8'-0"	4	5.4	7	8.5	10	11.7
8'-6"	4	5.6	7	8.8	10	12.1
9'-0"	4	5.8	7	9.1	10	12.5
9'-6"	4	6.0	7	9.4	10	12.9
10'-0"	4	6.2	7	9.7	10	13.3
10'-6"	4	6.4	7	10.0	10	13.7
11'-0"	4	6.6	7	10.3	10	14.1



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



PCD FILE # SF-21-49

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NO.	REVISION	DATE

REVIEW:

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KYLE R. CAMPBELL, COLORADO P.E. #29794

**CLASSIC CONSULTING**

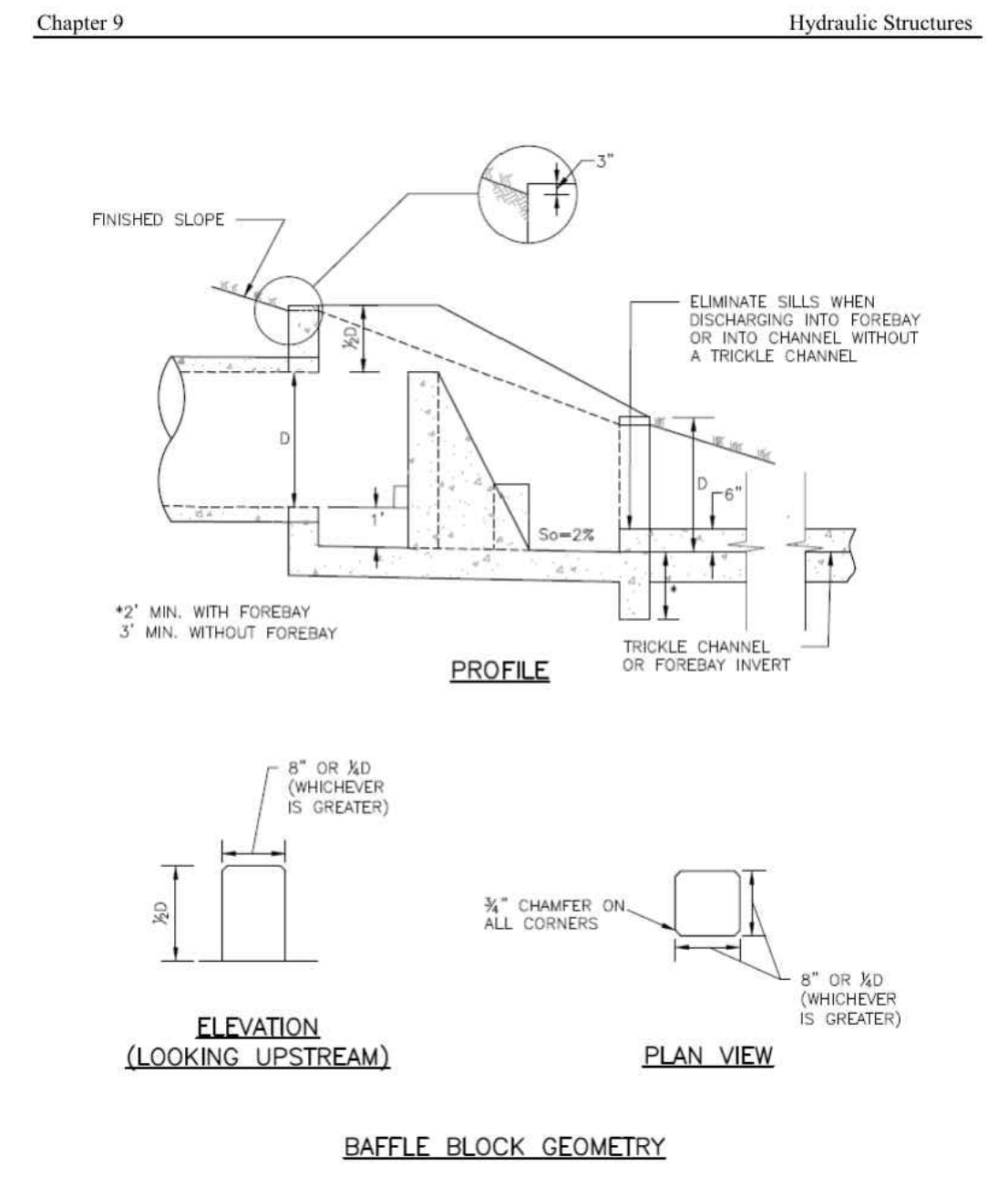
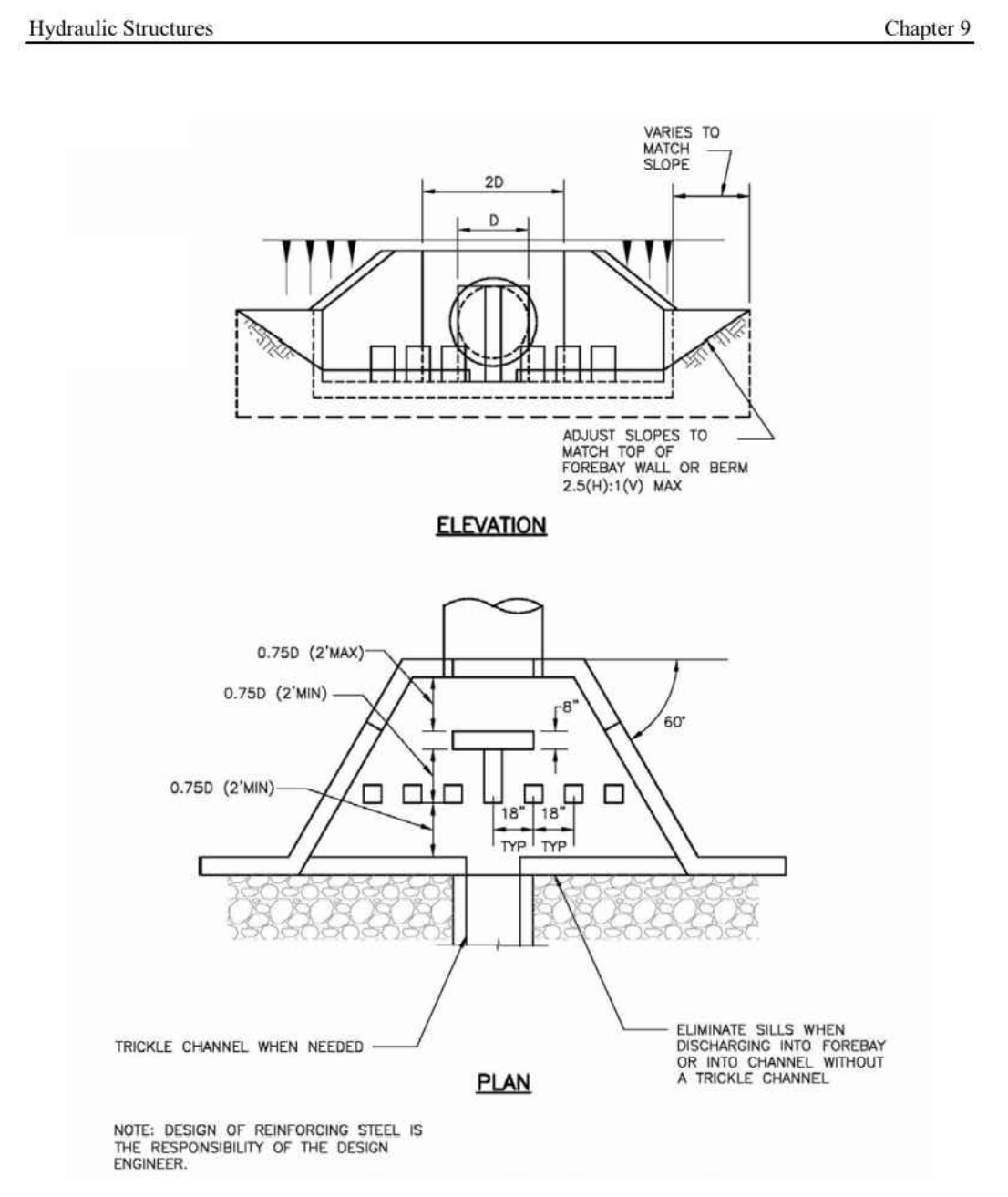
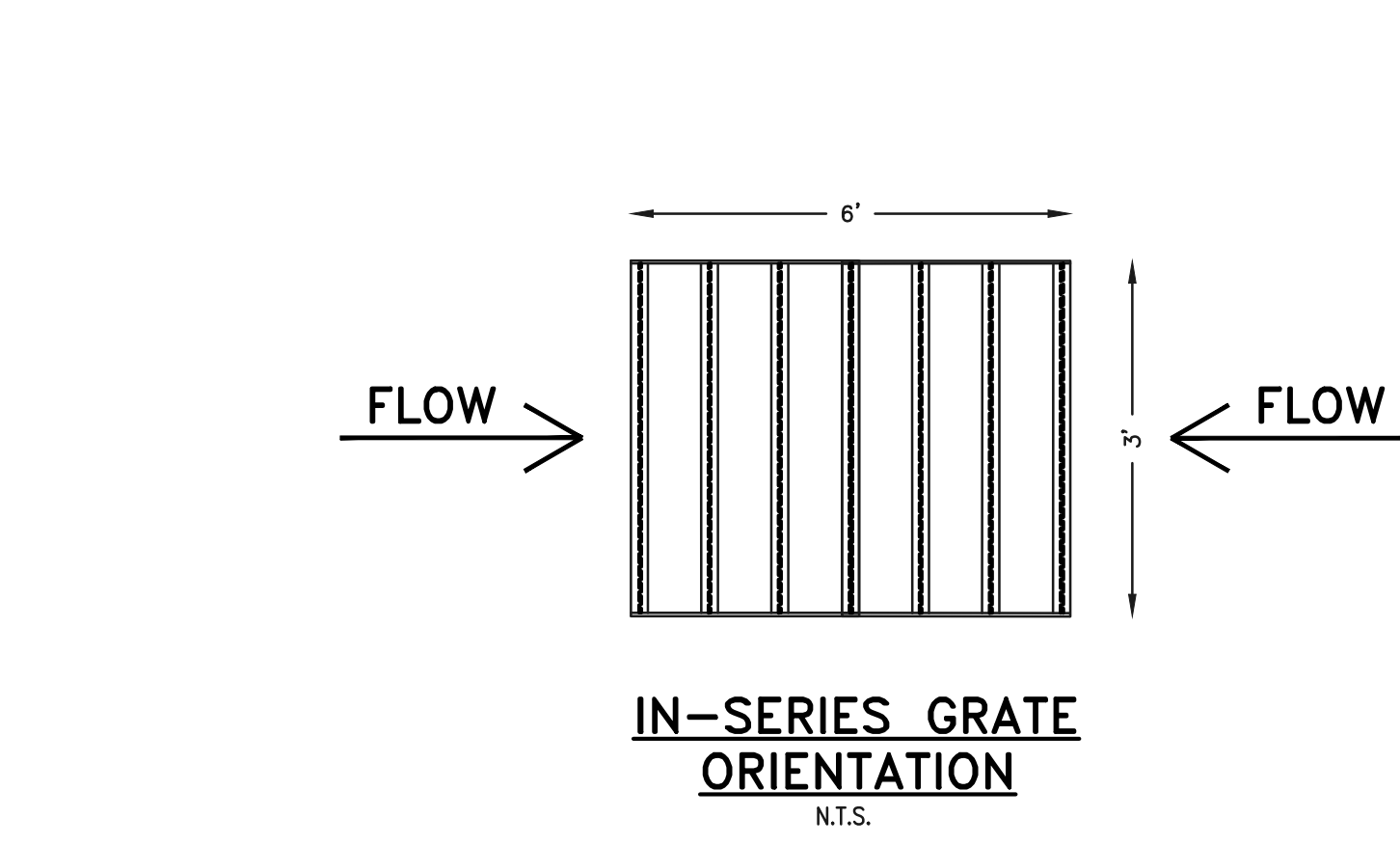
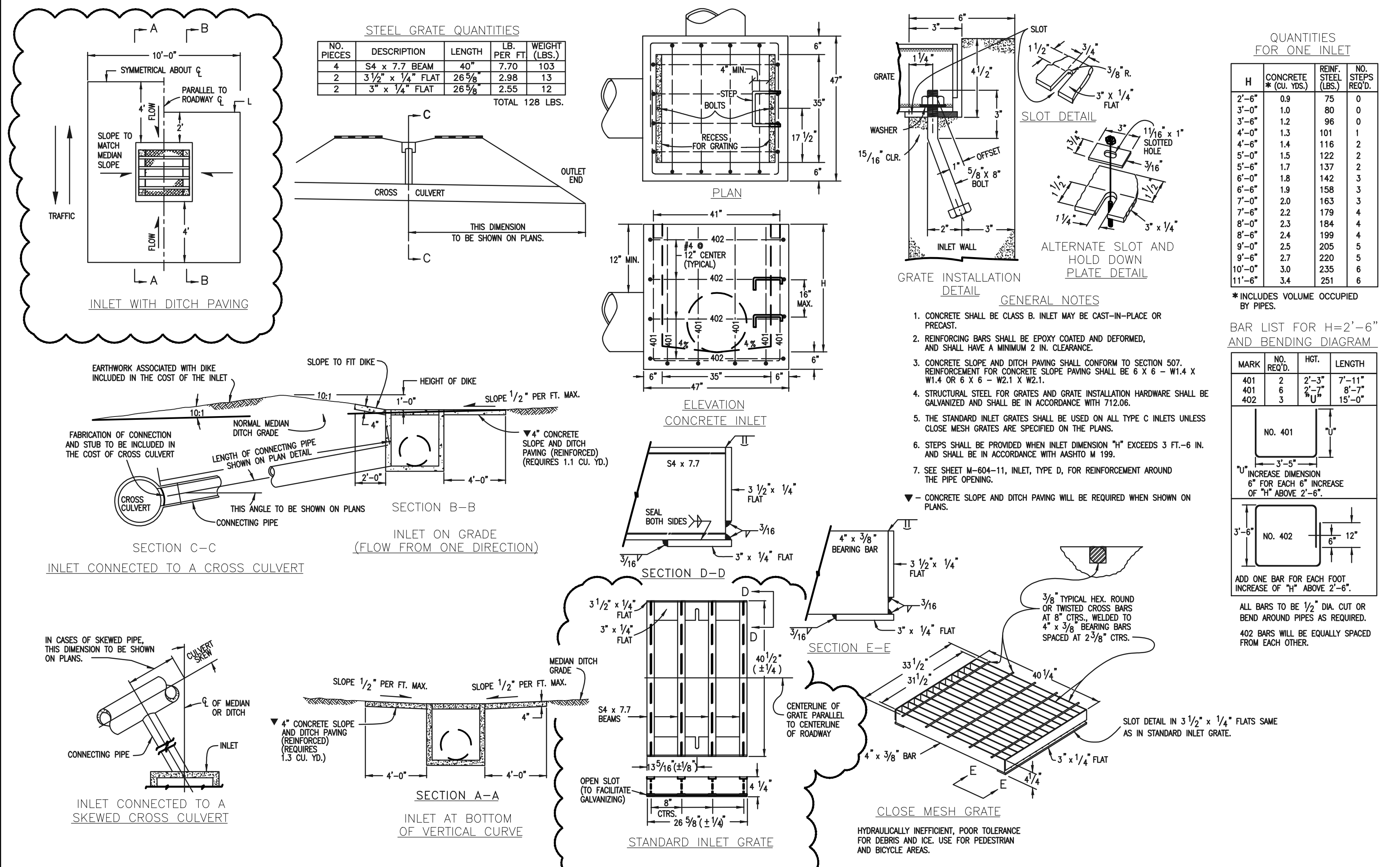
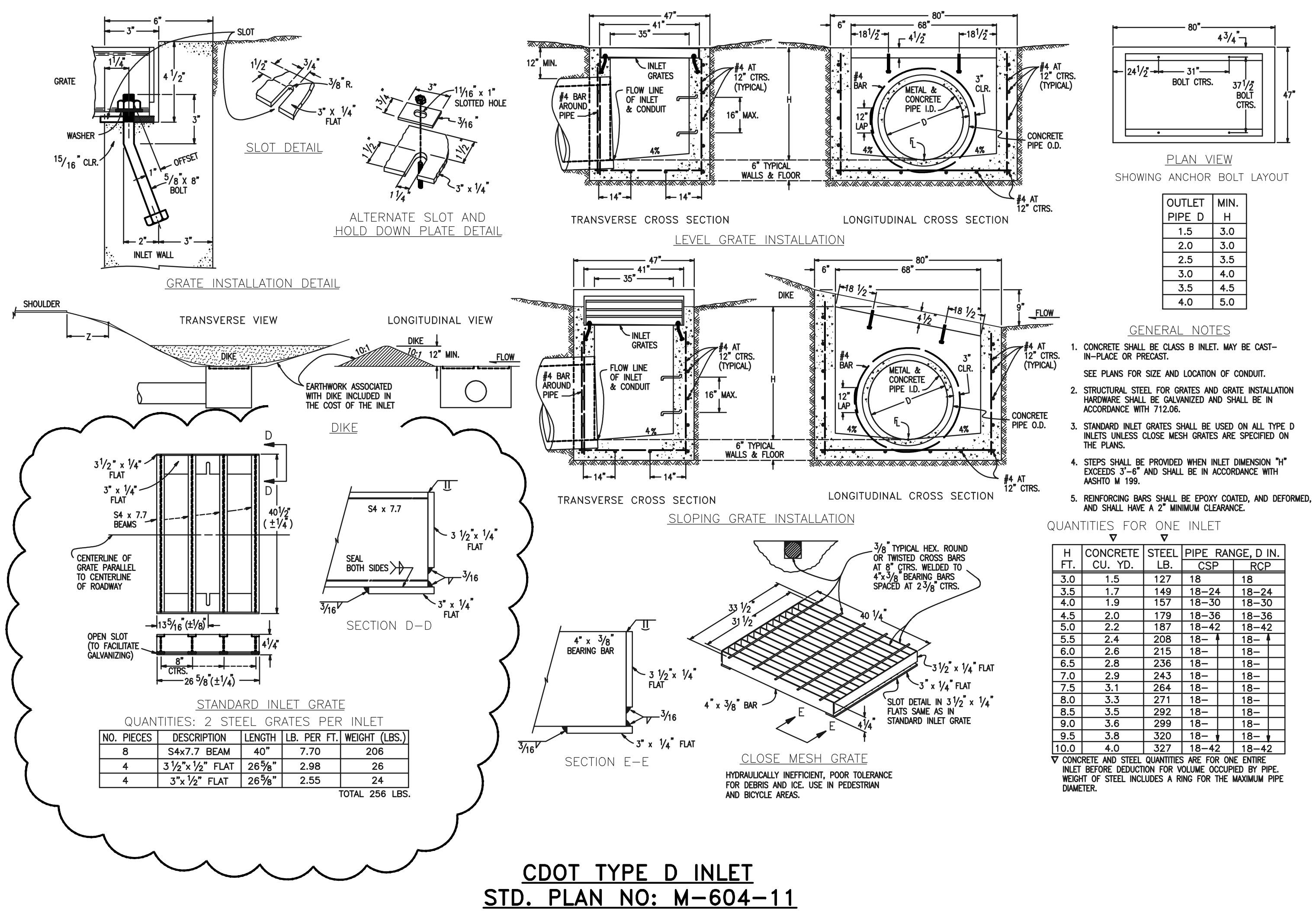
619 N. Cascade Avenue, Suite 200  
Colorado Springs, Colorado 80903

(719)785-0790  
(719)785-0799(Fax)

FOREST LAKES FILING NO. 7  
CONSTRUCTION PLANS

DETAILS SHEET

DESIGNED BY	SCALE	DATE	11/23/21
DRAWN BY	(H) 1" = N/A	SHEET	30 OF 31
CHECKED BY	(V) 1" = N/A	JOB NO.	1175.70



9-82 Urban Drainage and Flood Control District  
Urban Storm Drainage Criteria Manual Volume 2  
September 2017

9-83 Urban Drainage and Flood Control District  
Urban Storm Drainage Criteria Manual Volume 2  
September 2017

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**PCD FILE # SF-21-49**

<b>FOREST LAKES FILING NO. 7 CONSTRUCTION PLANS</b>  DETAILS SHEET		DESIGNED BY	SCALE	DATE	11/23/21
		DRAWN BY	MES	(H) 1" = N/A	SHEET 31 OF 31
CHECKED BY		(V) 1" = N/A	JOB NO.	1175.60	

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

N:\17570\DRAWINGS\CONSTRUCTION\STORM\31-117570-STM-17-Detalls.dwg, 2/2/2022, 5:41:08 PM, 1:1