

RETREAT AT TIMBERRIDGE FILING NO. 3

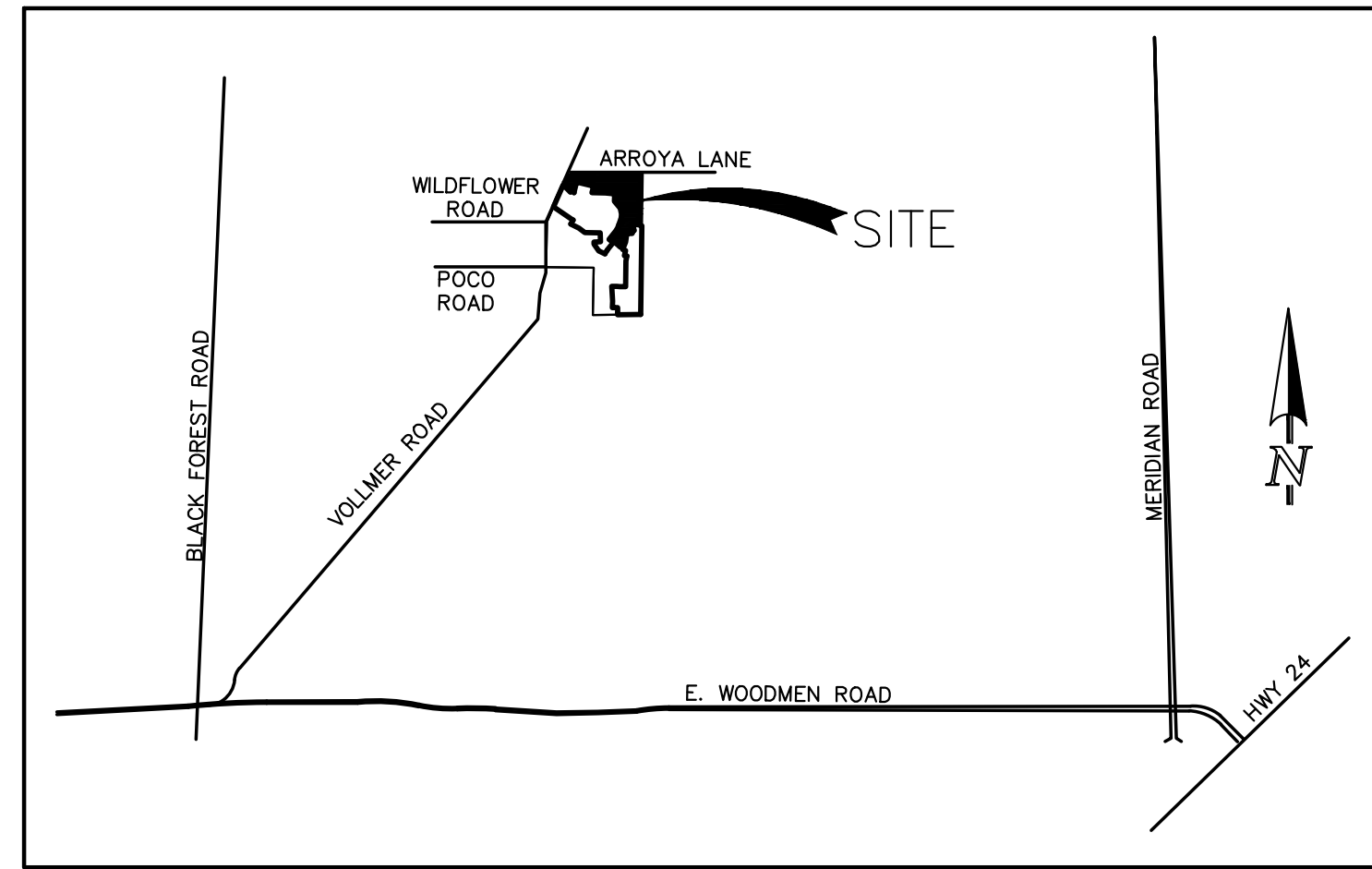
COUNTY OF EL PASO, STATE OF COLORADO

CONSTRUCTION DRAWINGS

NOVEMBER 2022

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 EGM 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.



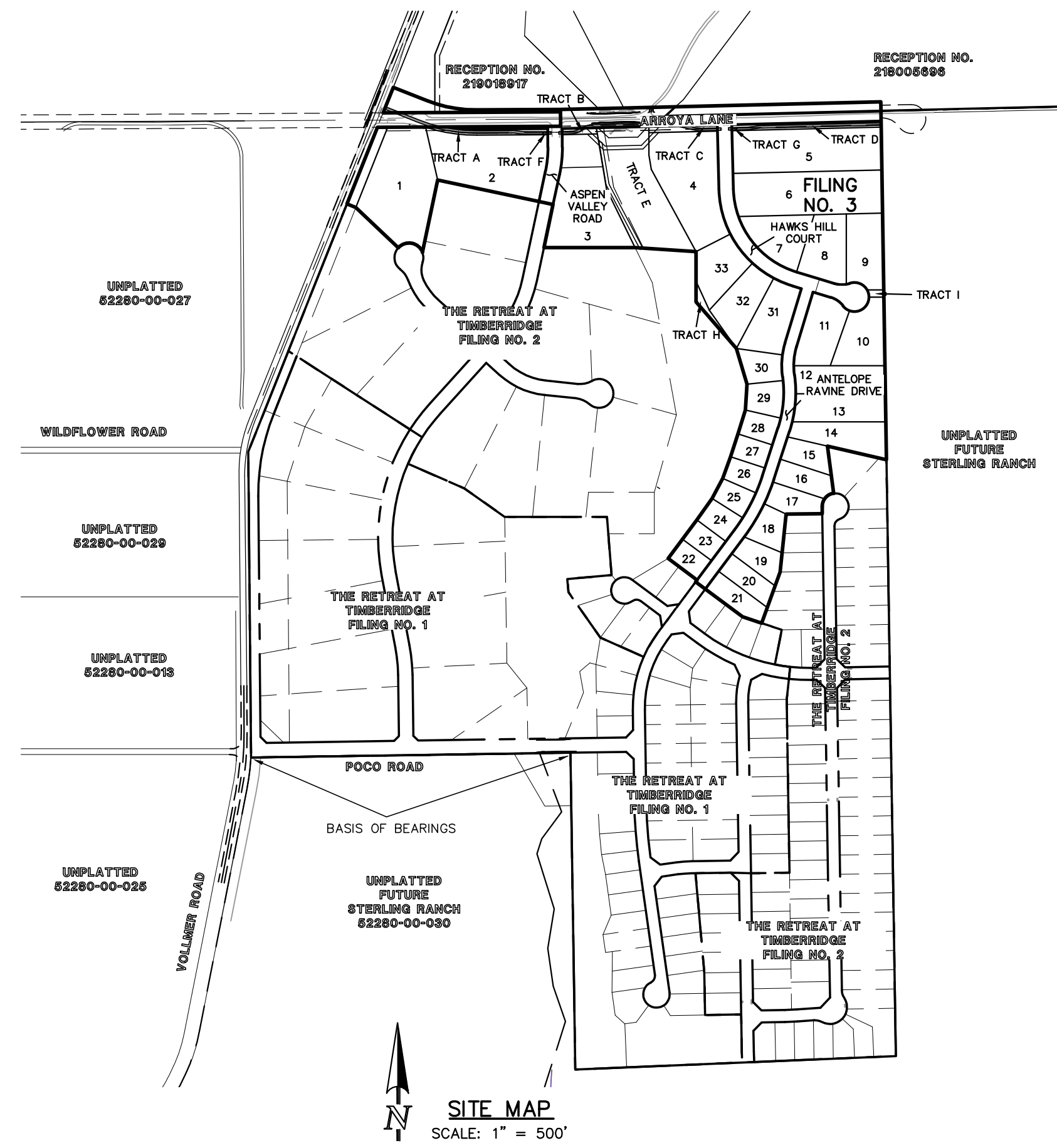
VICINITY MAP
N.T.S.

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 - 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 OR CLASS IV WITH WATER TIGHT JOINTS WHERE CALLED OUT, UNLESS OTHERWISE NOTED AND APPROVED BY EL PASO COUNTY - INSPECTIONS.
- CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY 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.
- 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 SUBBASE 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 ML THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S-627-1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE. STOP BARS SHALL BE 24" IN WIDTH. CROSSWALK LINES SHALL BE 12" WIDE AND 8" LONG PER CDOT S-627-1.
- ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15ML 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 INSPECTIONS (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.



SITE MAP
SCALE: 1" = 500'

BASIS OF BEARINGS:

THE SOUTH LINE OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 28, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, BEING MONUMENTED AT THE WEST END WHICH IS THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 28, BY A 3-1/4" ALUMINUM SURVEYORS CAP STAMPED "ESI 10376, 2006" AND AT THE EAST END, WHICH IS A 30" WITNESS CORNER TO THE EAST OF THE EAST QUARTER CORNER OF SAID SECTION 28, BY A 3-1/4" ALUMINUM SURVEYORS CAP STAMPED "ESI 10376, 2006", IS ASSUMED TO BEAR S89°08'28"W A DISTANCE OF 1326.68 FEET.

BENCHMARKS:

BENCHMARK #1: A 3.25 ALUMINUM SURVEYORS CAP STAMPED "WC 30/2006 PLS 10376" LOCATED 30' EAST OF THE EAST QUARTER CORNER OF SECTION 28, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN. ELEVATION: = 7168.20

BENCH MARK #2: A 3.25 ALUMINUM SURVEYORS CAP STAMPED "2006 PLS 10376" LOCATED AT THE SOUTHWEST CORNER OF SECTION 28, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN. ELEVATION: = 7141.36

AGENCIES:

- OWNER/DEVELOPER: TIMBERRIDGE DEVELOPMENT GROUP, LLC
2138 FLYING HORSE CLUB DR
COLORADO SPRINGS, CO 80921
MR. LOREN J. MORELAND, (719) 592-9333
- CIVIL ENGINEER: CLASSIC CONSULTING ENGINEERS & SURVEYORS
619 N. CASCADE AVENUE, SUITE 200
COLORADO SPRINGS, COLORADO 80903
MR. MARC A. WHORTON, P.E. (719) 785-2802
- COUNTY ENGINEERING: EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT
2880 INTERNATIONAL CIRCLE, SUITE 110
COLORADO SPRINGS, COLORADO 80910
MR. JEFF RICE (719) 520-7877
- GAS COMPANY: BLACKHILLS ENERGY
37 WIDEFIELD BOULEVARD
WIDEFIELD, COLORADO 80911
MR. GEORGE M. PETERSON, (719) 392-3491
- ELECTRIC COMPANY: MOUNTAIN VIEW ELECTRIC
P.O. BOX 1600
LIMON, COLORADO 80828
MR. LES ULFERS, (719) 495-2283
- FIRE DISTRICT: BLACK FOREST FIRE PROTECTION DISTRICT
11445 TEACOUT ROAD
COLORADO SPRINGS, CO 80908
CHIEF BRYAN JACK, (719) 495-4300
- TELEPHONE COMPANY: CENTURY LINK
(LOCATORS) 811
AT & T
(LOCATORS) 811

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APPROVALS:

DESIGN ENGINEER'S STATEMENT:

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

MARC A. WHORTON, COLORADO P.E. #37155
FOR AND ON THE BEHALF OF CLASSIC CONSULTING ENGINEERS & SURVEYORS
DATE: 2/2/2024

OWNER/DEVELOPER'S STATEMENT:

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

Loren J. Moreland
DATE: 11/9/2023

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 EGM 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.

JOSHUA PALMER, P.E.
COUNTY ENGINEER / EGM ADMINISTRATOR
DATE: _____

PCD NO. SF-2241

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS 811 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.	1	REVISED PER EPC COMMENTS	3-07-23
	2	REVISED PER ARROYA DESIGN CHANGE	1/31/24

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS & SURVEYORS, LLC
MARC A. WHORTON, COLORADO P.E. #37155
DATE: 2/2/2024

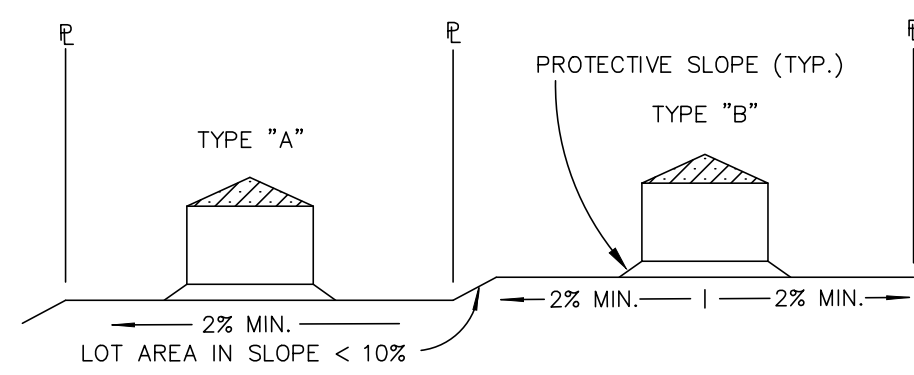


RETREAT AT TIMBERRIDGE FILING NO. 3 CONSTRUCTION DRAWINGS TITLE SHEET			
DESIGNED BY	PRA	SCALE	DATE 11-22-2022
DRAWN BY	PRA	(H) 1" = N/A	SHEET 1 OF 27
CHECKED BY		(V) 1" = N/A	JOB NO. 1185.30

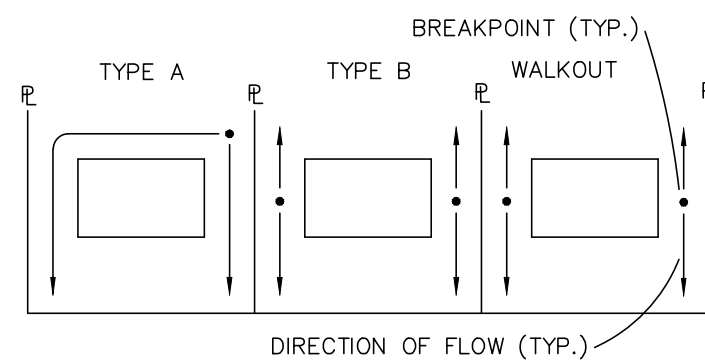


STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS:

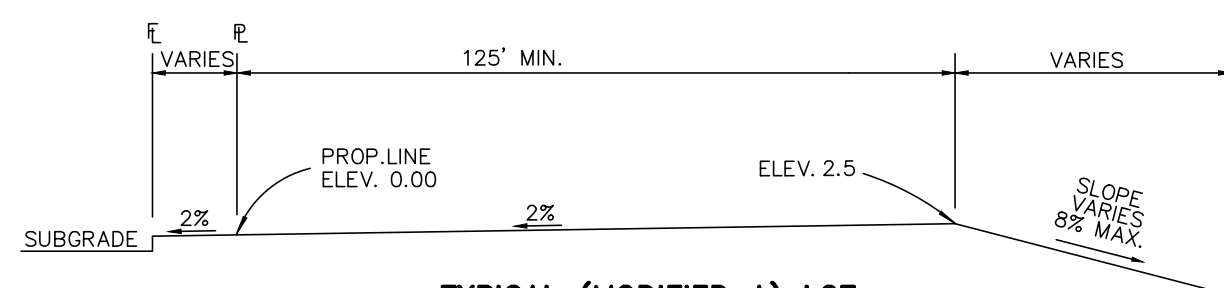
- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
- NOTWITHSTANDING ANYTHING 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 CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS TO 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. DURING CONSTRUCTION THE SWMP IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR AND 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 G.C. A PRE-CONSTRUCTION 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 MAY CONTRIBUTE POLLUTANTS TO STORMWATER. TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED 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 IS 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 AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLAN 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 DEFINED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE HYDROLOGY OR HYDRAULICS OF A PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE EGM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
- EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING 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 RUNOFF TO 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: 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 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 OFFSITE 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 ONSITE UNLESS PERMISSION FOR THE USE OF A SPECIFIC CHEMICAL(S) IS GRANTED IN WRITING BY THE EGM 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 LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR 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, DOM VOLUME II AND THE EGM 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 LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, OR COUNTY AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- PRIOR TO CONSTRUCTION THE PERMITEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- THE SOILS REPORTS FOR THIS SITE HAVE BEEN PREPARED BY ENTECH ENGINEERING, INC. TITLED "SOIL GEOLOGY, GEOLOGIC HAZARD STUDY - THE RETREAT AT TIMBERRIDGE FILING NO. 3," DATED JUNE 10, 2022, AND "SUBSURFACE SOIL INVESTIGATION RETREAT AT TIMBERRIDGE, FILING NO. 3, SAND CREEK CHANNEL IMPROVEMENTS BOX CULVERT-ARROYA LANE," DATED AUGUST 19, 2022. THESE REPORTS 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
 WQCD - PERMITS
 4300 CHERRY CREEK DRIVE SOUTH
 DENVER, CO 80246-1530
 ATTN: PERMITS UNIT



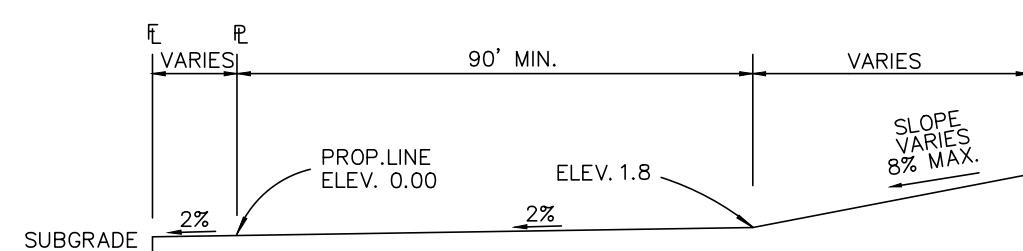
TYPICAL LOT SECTION DETAIL
N.T.S.



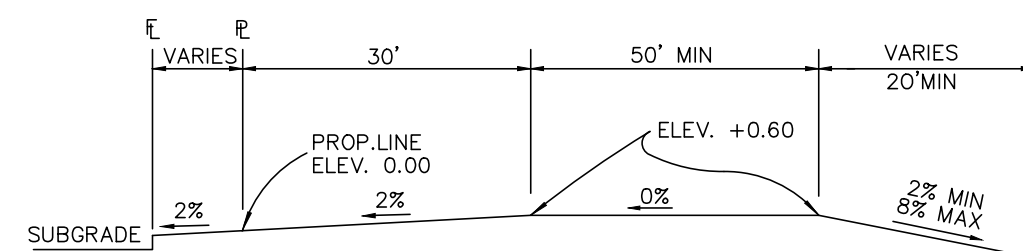
LOT DRAINAGE TYPES
N.T.S.



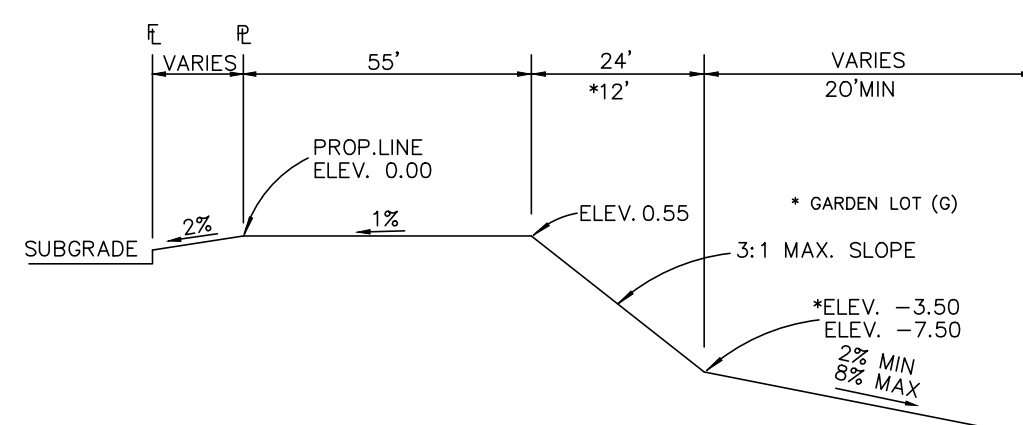
TYPICAL (MODIFIED A) LOT
N.T.S.



TYPICAL (A) LOT
N.T.S.



TYPICAL (B) LOT
N.T.S.



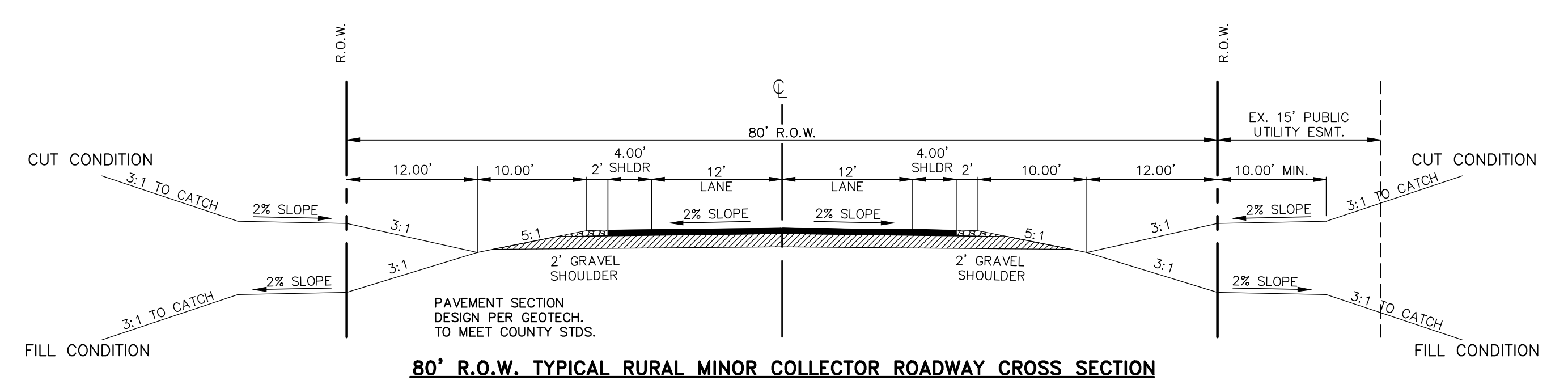
TYPICAL WALKOUT LOT (W/O) OR GARDEN (G)
N.T.S.

NOTES:

BASED ON GREATER TYPICAL DEPTH OF PROPOSED LOTS, ALL LOT TEMPLATES ADJUSTED AND ADDITIONAL 5'.

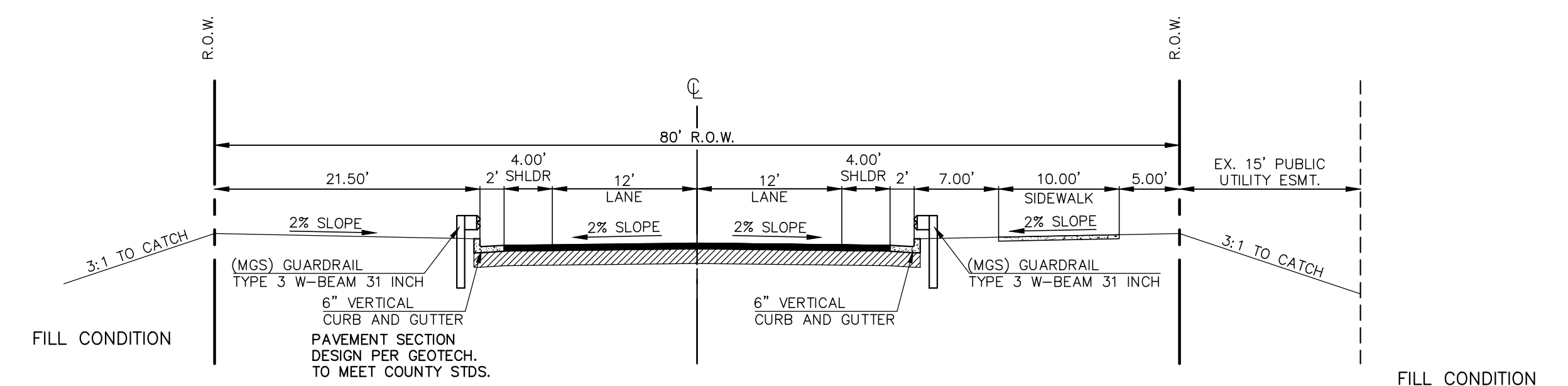
"T" LOTS OR "TRANSITION" LOTS OCCUR IN PLACES WHERE BOTH PROPERTY LINES CANNOT BE GRADED AS THE TYPICAL STANDARD LOT TEMPLATES SHOWN. THESE LOTS WILL STILL BE GRADED TO CREATE POSITIVE DRAINAGE AWAY FROM THE STRUCTURE.

SIDE LOT SWALES ARE REQUIRED ON THE DOWNHILL LOTS, EITHER BY BUILDER OR GRADING CONTRACTOR.



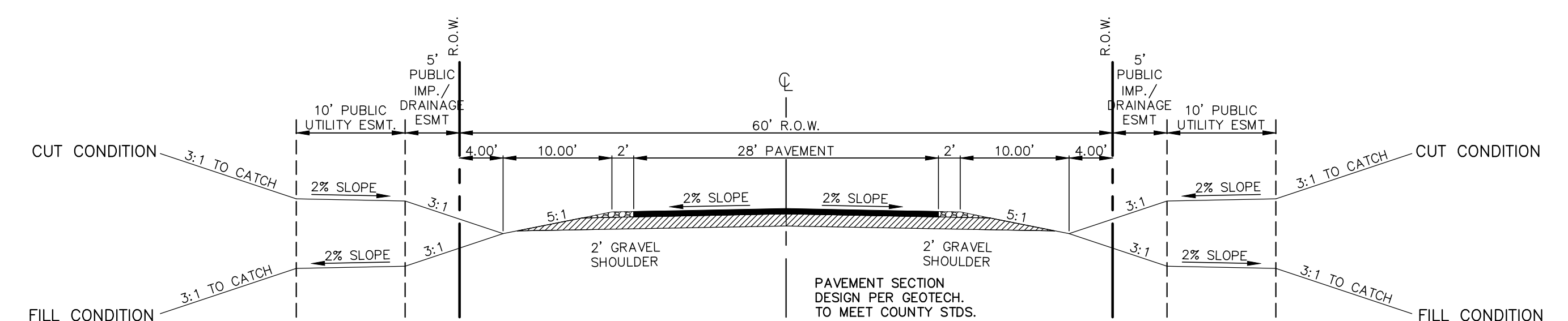
80' R.O.W. TYPICAL RURAL MINOR COLLECTOR ROADWAY CROSS SECTION
SCALE: 1" = 10'

SIGN PLACEMENT PER 2009 MUTCD
FIG. 2A-2 A AND LOCATED
8' BEHIND GRAVEL SHOULDER
-ARROYA LANE
(ALL STATIONS EXCEPT THOSE SHOWN BELOW)



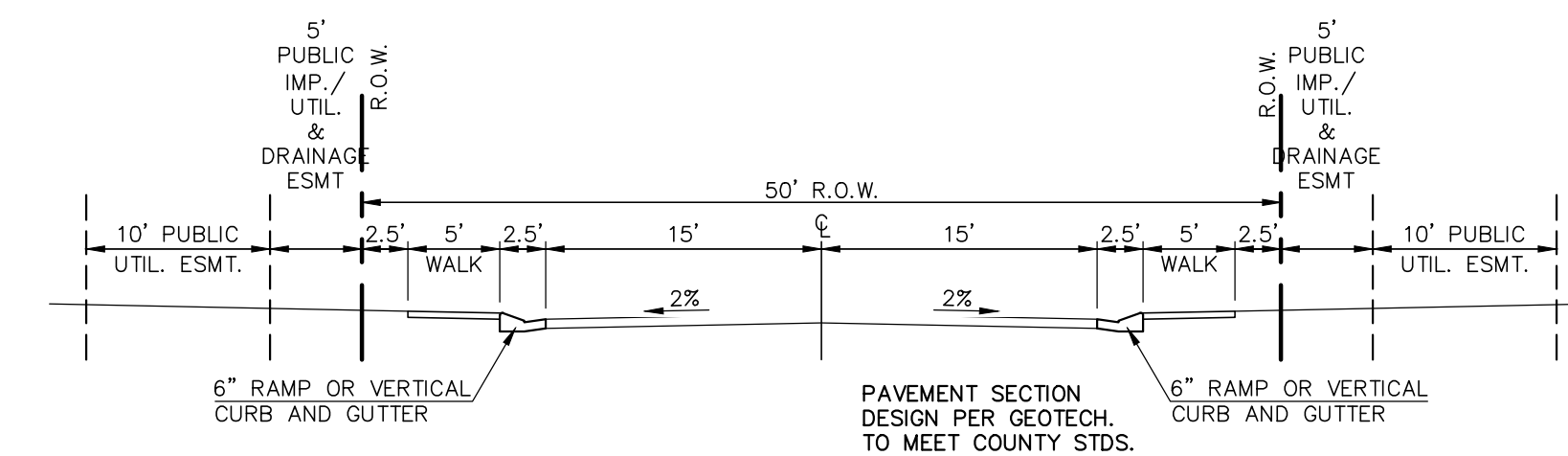
80' R.O.W. RURAL MINOR COLLECTOR ROADWAY CROSS SECTION W/C&G
SCALE: 1" = 10'

SIGN PLACEMENT PER 2009 MUTCD
FIG. 2A-2 A AND LOCATED
8' BEHIND GRAVEL SHOULDER
-ARROYA LANE
STA. 7+75.16 THROUGH STA. 13+91.87



60' R.O.W. TYPICAL RURAL LOCAL CROSS SECTION
SCALE: 1" = 10'

SIGN PLACEMENT PER 2009 MUTCD
FIG. 2A-2 A AND LOCATED
8' BEHIND GRAVEL SHOULDER
-ASPEN VALLEY ROAD AND
HAWKS HILL COURT



50' R.O.W. TYPICAL URBAN LOCAL CROSS SECTION
SCALE: 1" = 10'

-ANTELOPE RAVINE DRIVE

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 MAY BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NO.	REVISION	DATE
1	REVISED PER EPC COMMENTS	3-07-23

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

MARC A. WHORTON
REGISTERED PROFESSIONAL ENGINEER
#37155
2/2/2024
DATE



RETREAT AT TIMBERRIDGE FILING NO. 3
CONSTRUCTION DRAWINGS
STREET SECTIONS / EROSION CONTROL NOTES

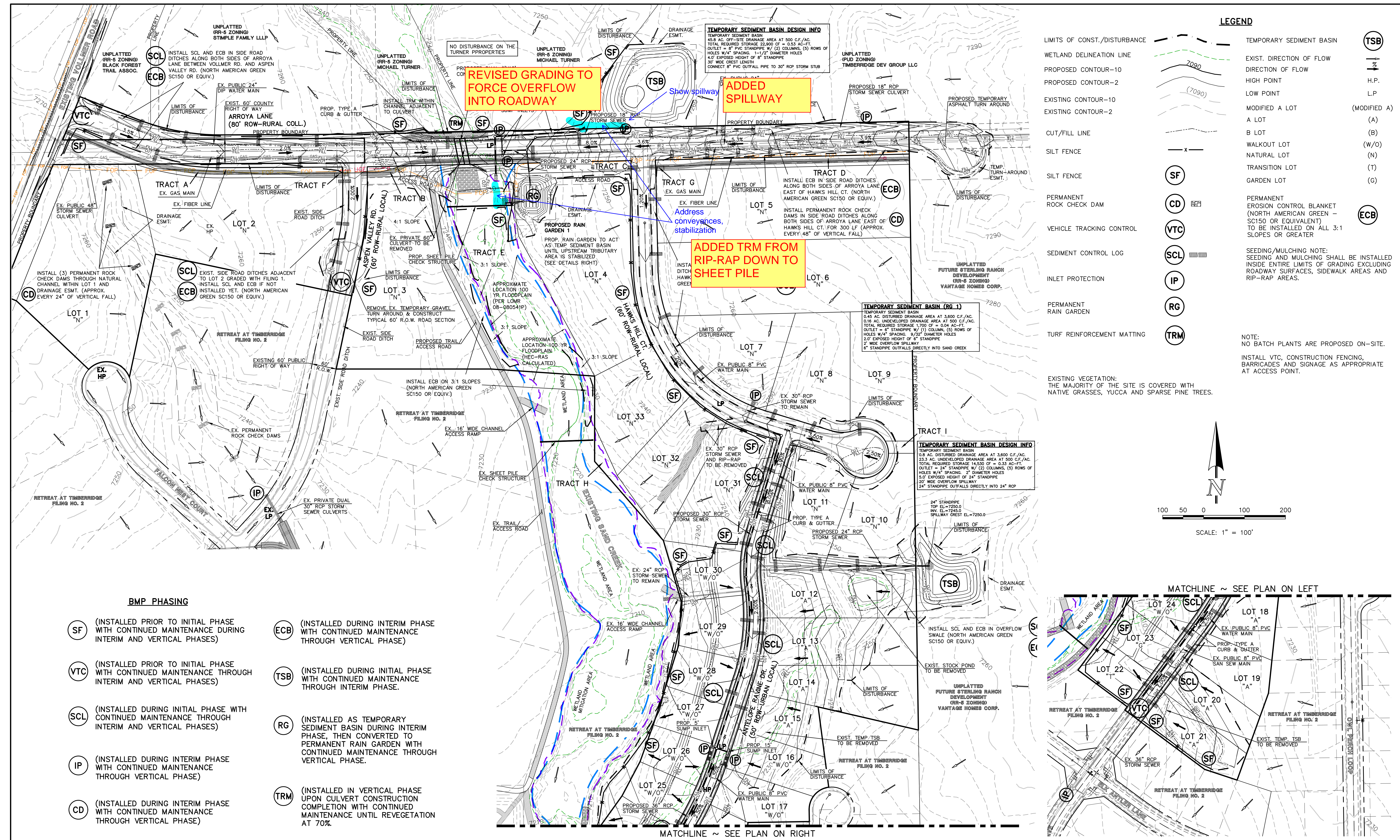
DESIGNED BY: PRA
DRAWN BY: PRA
CHECKED BY: (V)

SCALE: (H) 1" = N/A
(V) 1" = N/A

DATE: 11-22-2022
SHEET 2 OF 27
JOB NO. 1185.30

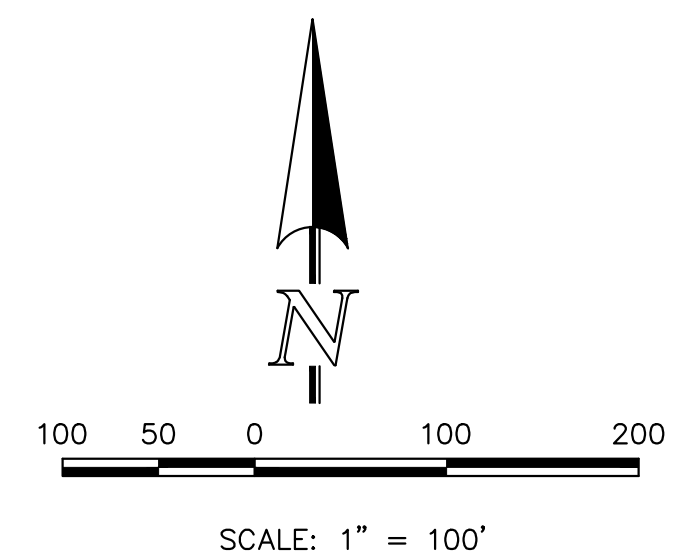


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LEGEND

LIMITS OF CONST./DISTURBANCE	---	TEMPORARY SEDIMENT BASIN	(TSB)
WETLAND DELINEATION LINE	---	EXIST. DIRECTION OF FLOW	→
PROPOSED CONTOUR-10	---	DIRECTION OF FLOW	→
PROPOSED CONTOUR-2	---	HIGH POINT	H.P.
EXISTING CONTOUR-10	---	LOW POINT	L.P.
EXISTING CONTOUR-2	---	MODIFIED A LOT	(MODIFIED A)
CUT/FILL LINE	---	A LOT	(A)
SILT FENCE	---	B LOT	(B)
SILT FENCE	---	WALKOUT LOT	(W/O)
PERMANENT ROCK CHECK DAM	---	NATURAL LOT	(N)
VEHICLE TRACKING CONTROL	---	TRANSITION LOT	(T)
SEDIMENT CONTROL LOG	---	GARDEN LOT	(G)
INLET PROTECTION	---	PERMANENT EROSION CONTROL BLANKET (NORTH AMERICAN GREEN - SC150 OR EQUIV.)	(ECB)
PERMANENT RAIN GARDEN	---	SEEDING/MULCHING NOTE: SEEDING AND MULCHING SHALL BE INSTALLED INSIDE ENTIRE LIMITS OF GRADING EXCLUDING ROADWAY SURFACES, SIDEWALK AREAS AND RIP-RAP AREAS.	
TURF REINFORCEMENT MATTING	---	NOTE: NO BATCH PLANTS ARE PROPOSED ON-SITE.	
		INSTALL VTC, CONSTRUCTION FENCING, BARRICADES AND SIGNAGE AS APPROPRIATE AT ACCESS POINT.	



BMP PHASING

- | | | | |
|-------|---|-------|---|
| (SF) | (INSTALLED PRIOR TO INITIAL PHASE WITH CONTINUED MAINTENANCE DURING INTERIM AND VERTICAL PHASES) | (ECB) | (INSTALLED DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE) |
| (VTC) | (INSTALLED PRIOR TO INITIAL PHASE WITH CONTINUED MAINTENANCE THROUGH INTERIM AND VERTICAL PHASES) | (TSB) | (INSTALLED DURING INITIAL PHASE WITH CONTINUED MAINTENANCE THROUGH INTERIM PHASE) |
| (SCL) | (INSTALLED DURING INITIAL PHASE WITH CONTINUED MAINTENANCE THROUGH INTERIM AND VERTICAL PHASES) | (RG) | (INSTALLED AS TEMPORARY SEDIMENT BASIN DURING INTERIM PHASE, THEN CONVERTED TO PERMANENT RAIN GARDEN WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE) |
| (IP) | (INSTALLED DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE) | (TRM) | (INSTALLED IN VERTICAL PHASE UPON CULVERT CONSTRUCTION COMPLETION WITH CONTINUED MAINTENANCE UNTIL REVEGETATION AT 70%) |
| (CD) | (INSTALLED DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE) | | |

REVISED GRADING TO FORCE OVERFLOW INTO ROADWAY

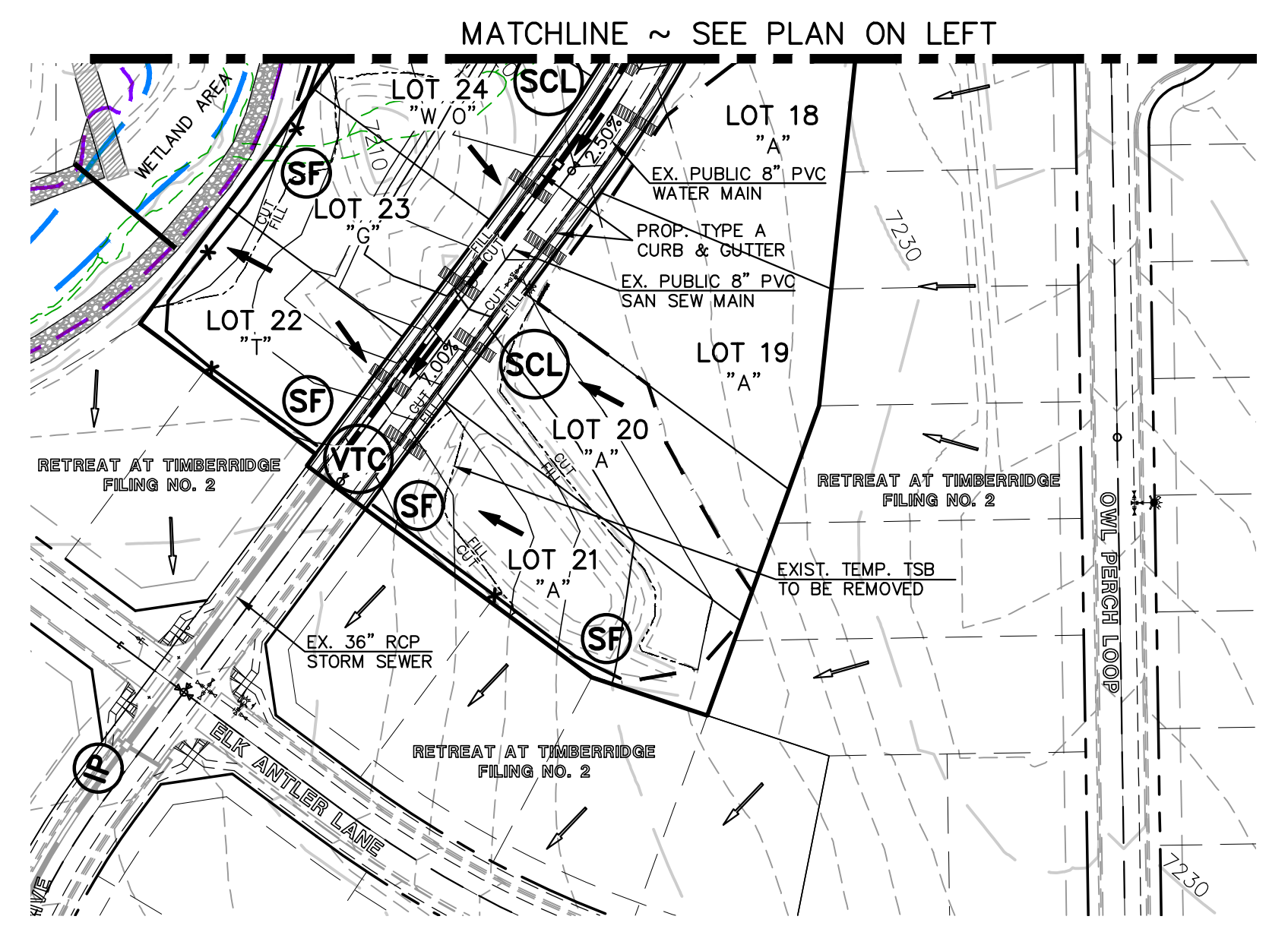
ADDED SPILLWAY

ADDED TRM FROM RIP-RAP DOWN TO SHEET PILE

TEMPORARY SEDIMENT BASIN DESIGN INFO
 TEMPORARY SEDIMENT BASIN
 0.45 AC. DISTURBED DRAINAGE AREA AT 3,600 C.F./AC.
 0.16 AC. UNDEVELOPED DRAINAGE AREA AT 500 C.F./AC.
 TOTAL REQUIRED STORAGE 1,700 CF = 0.04 AC-FT.
 OUTLET = 6" STANDPIPE W/ (2) COLUMNS, (5) ROWS OF HOLES W/4" SPACING, 1-1/2" DIAMETER HOLES
 4.0' EXPOSED HEIGHT OF 6" STANDPIPE
 30' WIDE CREST LENGTH
 CONNECT 8" PVC OUTFALL PIPE TO 30" RCP STORM STUB

TEMPORARY SEDIMENT BASIN (RG 1)
 TEMPORARY SEDIMENT BASIN
 0.45 AC. DISTURBED DRAINAGE AREA AT 3,600 C.F./AC.
 0.16 AC. UNDEVELOPED DRAINAGE AREA AT 500 C.F./AC.
 TOTAL REQUIRED STORAGE 1,700 CF = 0.04 AC-FT.
 OUTLET = 6" STANDPIPE W/ (1) COLUMN, (5) ROWS OF HOLES W/4" SPACING, 1-1/2" DIAMETER HOLES
 5.0' EXPOSED HEIGHT OF 6" STANDPIPE
 20' WIDE OVERFLOW SPILLWAY
 6" STANDPIPE OUTFALLS DIRECTLY INTO SAND CREEK

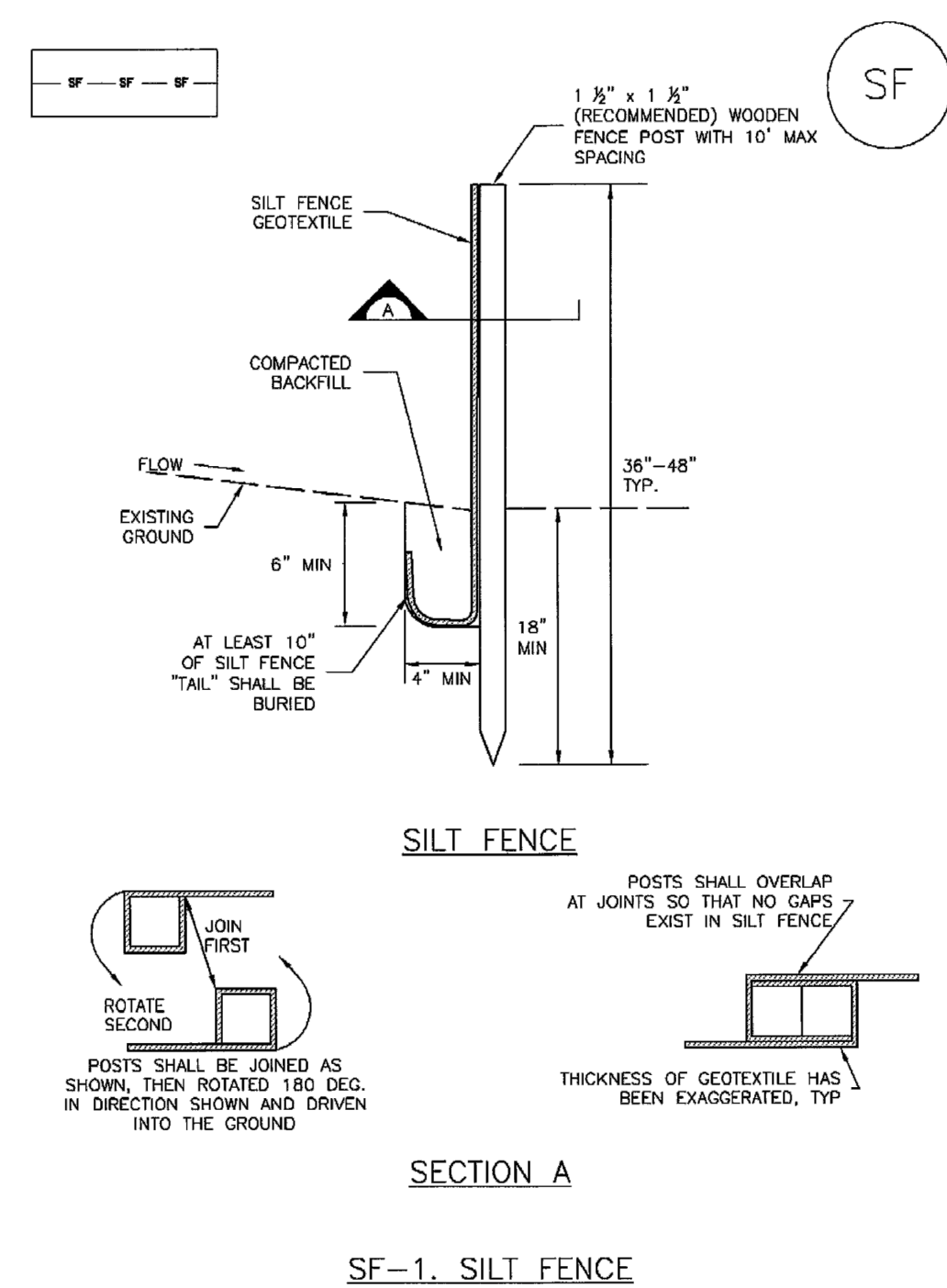
TEMPORARY SEDIMENT BASIN DESIGN INFO
 TEMPORARY SEDIMENT BASIN
 0.9 AC. DISTURBED DRAINAGE AREA AT 3,600 C.F./AC.
 23.3 AC. UNDEVELOPED DRAINAGE AREA AT 500 C.F./AC.
 TOTAL REQUIRED STORAGE 14,350 CF = 0.33 AC-FT.
 OUTLET = 24" STANDPIPE W/ (2) COLUMNS, (5) ROWS OF HOLES W/4" SPACING, 1-1/2" DIAMETER HOLES
 5.0' EXPOSED HEIGHT OF 24" STANDPIPE
 20' WIDE OVERFLOW SPILLWAY
 24" STANDPIPE OUTFALLS DIRECTLY INTO 24" RCP



<p>48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS</p> <p>811</p> <p>UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW</p> <p>THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.</p>	<p>NO. REVISION</p> <p>1 REVISED PER EPC COMMENTS</p> <p>2 REVISED PER EPC COMMENTS</p> <p>3 REVISED PER ARROYA DESIGN CHANGE</p>	<p>DATE</p> <p>9-21-23</p> <p>10/30/23</p> <p>1/31/24</p>	<p>REVIEW:</p> <p>PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING AND SURVEYING SURVEYORS, LLC</p> <p>MARC A. WHORTON, REGISTERED PROFESSIONAL ENGINEER #37155</p>	<p>DATE</p> <p>2/2/2024</p>	<p>619 N. Cascade Avenue, Suite 200 Colorado Springs, Colorado 80903</p> <p>(719) 785-0790 (719) 785-0799 (Fax)</p>	<p>RETREAT AT TIMBERBRIDGE FILING NO. 3 CONSTRUCTION PLANS GRADING & EROSION CONTROL PLAN</p> <p>DESIGNED BY: PRA DRAWN BY: PRA CHECKED BY:</p> <p>SCALE: (H) 1" = 100' (V) 1" = N/A</p> <p>DATE: 11-22-2022 SHEET 3 OF 27 JOB NO. 1185.30</p>
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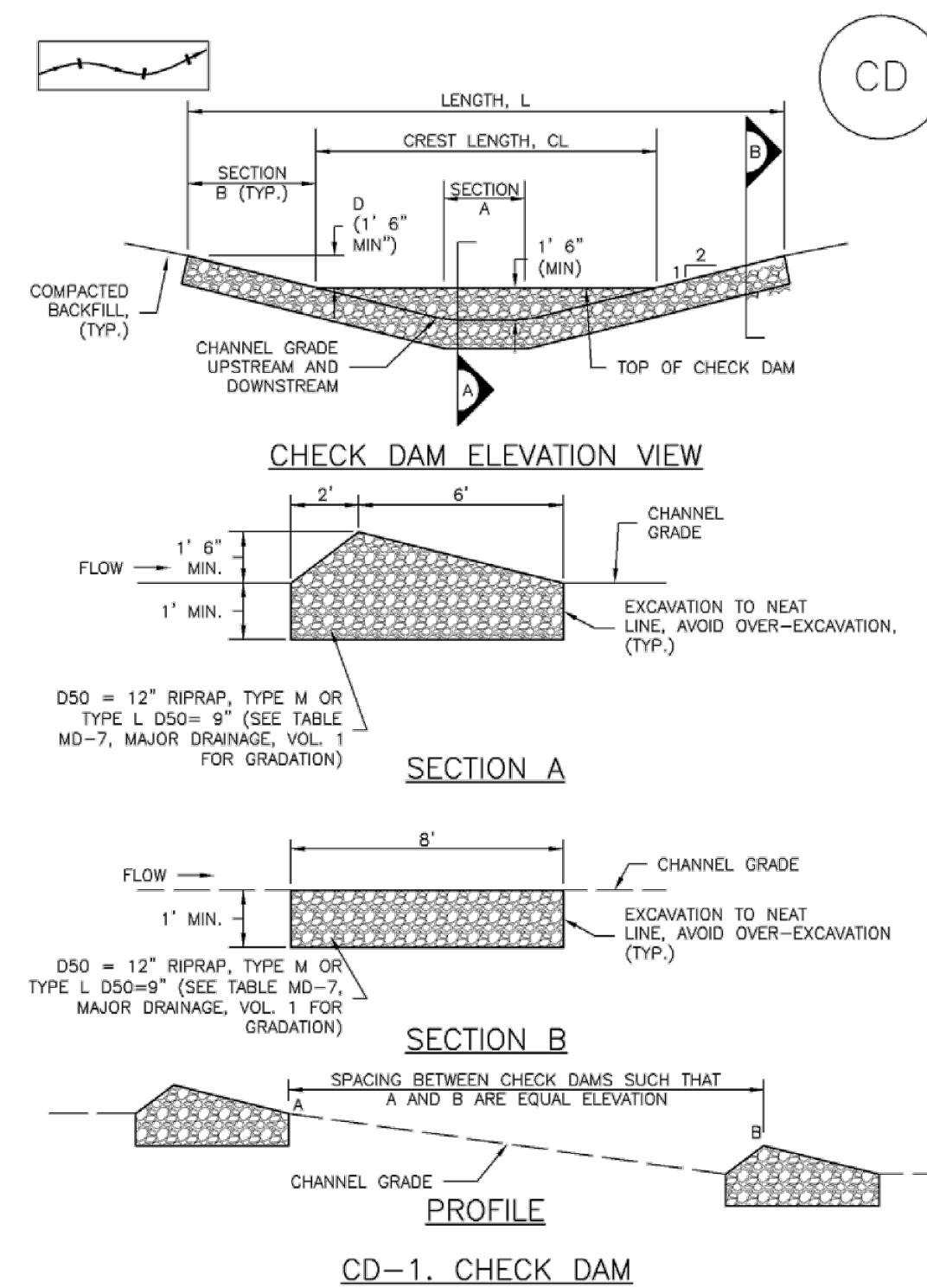
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Silt Fence (SF) SC-1



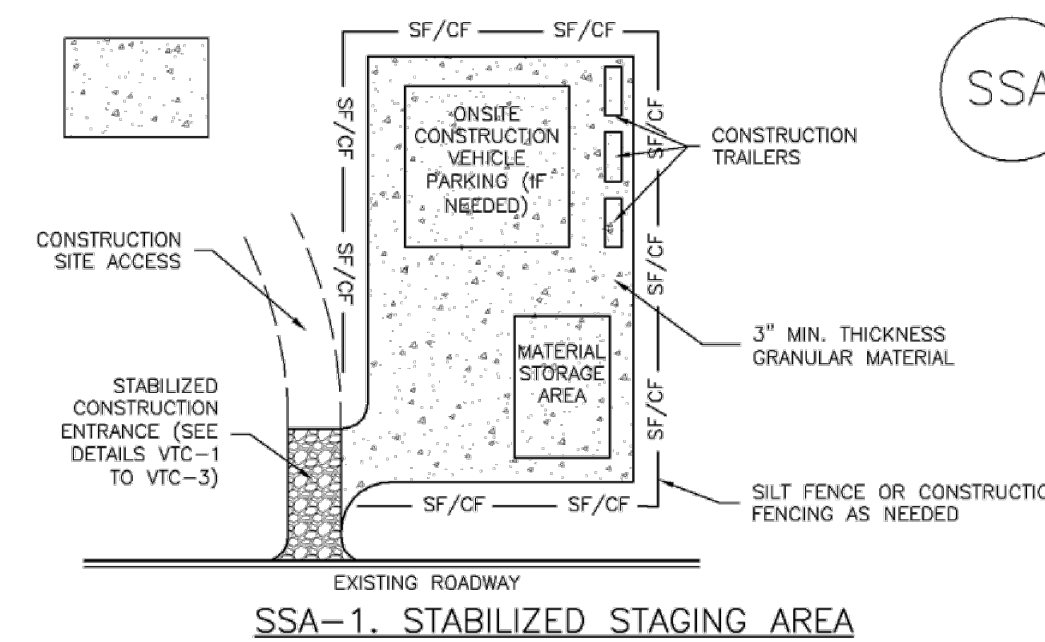
November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SF-3

Check Dams (CD) EC-12



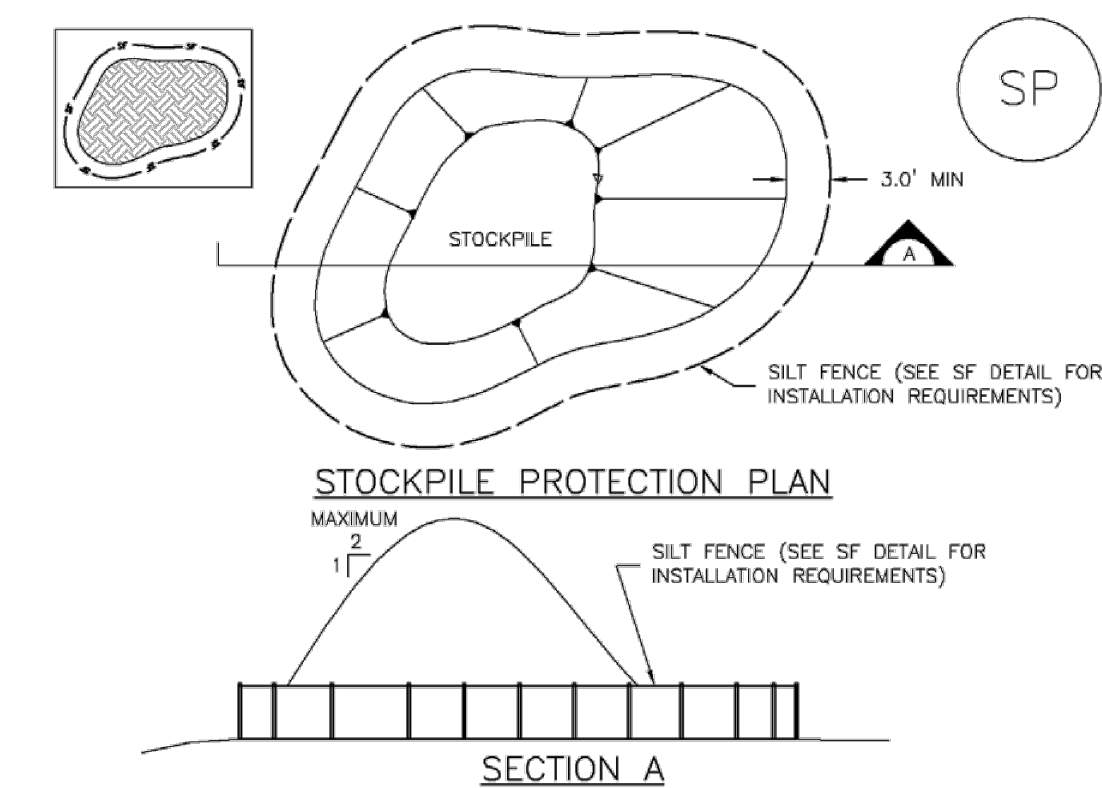
November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 CD-3

Stabilized Staging Area (SSA) SM-6



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

Stockpile Management (SP) MM-2



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

SC-1 Silt Fence (SF)

SILT FENCE INSTALLATION NOTES

- SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-3 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
- A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
- COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
- SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
- SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.
- AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J-HOOK." THE "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').
- SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs 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 BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".
- REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
- SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
- WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AUTOCAD)

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

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

EC-12 Check Dams (CD)

CHECK DAM INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION OF CHECK DAMS
 - CHECK DAM TYPE (CHECK DAM OR REINFORCED CHECK DAM)
 - LENGTH (L), CREST LENGTH (CL), AND DEPTH (D)
- CHECK DAMS INDICATED ON INITIAL SWMP SHALL BE INSTALLED AFTER CONSTRUCTION FENCE, BUT PRIOR TO ANY UPSTREAM LAND DISTURBING ACTIVITIES.
- RIPRAP UTILIZED FOR CHECK DAMS SHOULD BE OF APPROPRIATE SIZE FOR THE APPLICATION. TYPICAL TYPES OF RIPRAP USED FOR CHECK DAMS ARE TYPE M (D50 12") OR TYPE L (D50 9").
- RIPRAP PAD SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1'.
- THE ENDS OF THE CHECK DAM SHALL BE A MINIMUM OF 1' 6" HIGHER THAN THE CENTER OF THE CHECK DAM.

CHECK DAM MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs 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 BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- SEDIMENT ACCUMULATED UPSTREAM OF THE CHECK DAMS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS WITHIN 1/2 OF THE HEIGHT OF THE CREST.
- CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
- WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUITABLE COMPACTED BACKFILL. DISTURBED AREA SHALL BE SEEDED AND MULCHED AND COVERED WITH GEOTEXTILE OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

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

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

SM-6 Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
- THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

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

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

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

MM-2 Stockpile Management (SM)

STOCKPILE PROTECTION MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs 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 BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.
- STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.

(DETAILS ADAPTED FROM PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

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

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

48 HOURS BEFORE YOU DIG,
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811
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IT'S THE LAW

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NO.	REVISION	DATE
1	REVISED PER EPC COMMENTS	3-07-23

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

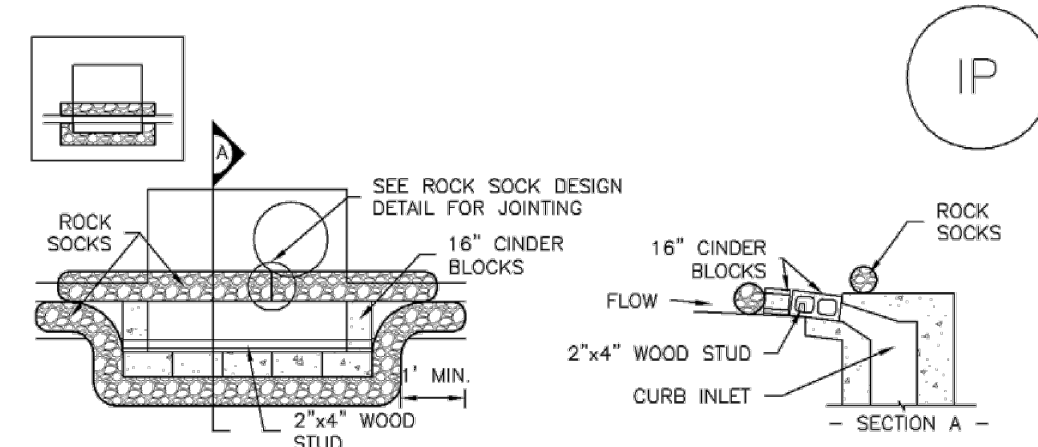
MARC A. WHORTON
REGISTERED PROFESSIONAL ENGINEER
#37155
DATE 2/2/2024

RETREAT AT TIMBERIDGE FILING NO. 3
CONSTRUCTION PLANS
GRADING & EROSION CONTROL PLAN
EROSION CONTROL DETAILS

DESIGNED BY	PRA	SCALE	DATE	11-22-2022
DRAWN BY	PRA	(H) 1" = N/A	SHEET	4 OF 27
CHECKED BY		(V) 1" = N/A	JOB NO.	1185.30

CLASSIC CONSULTING

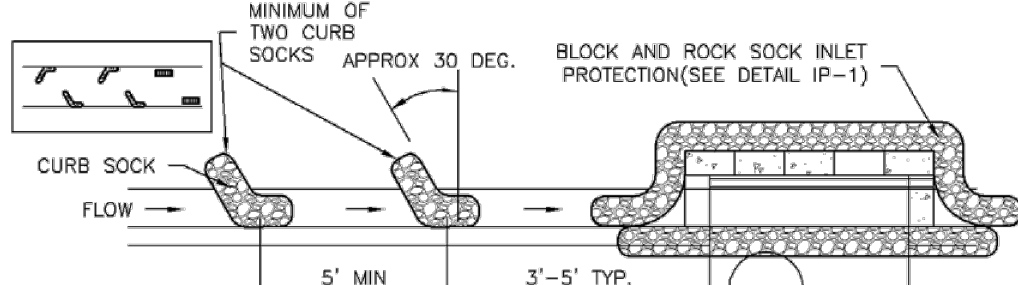
SC-6 Inlet Protection (IP)



IP-1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION

BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES

- SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
- CONCRETE "CINDER" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB.
- GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.



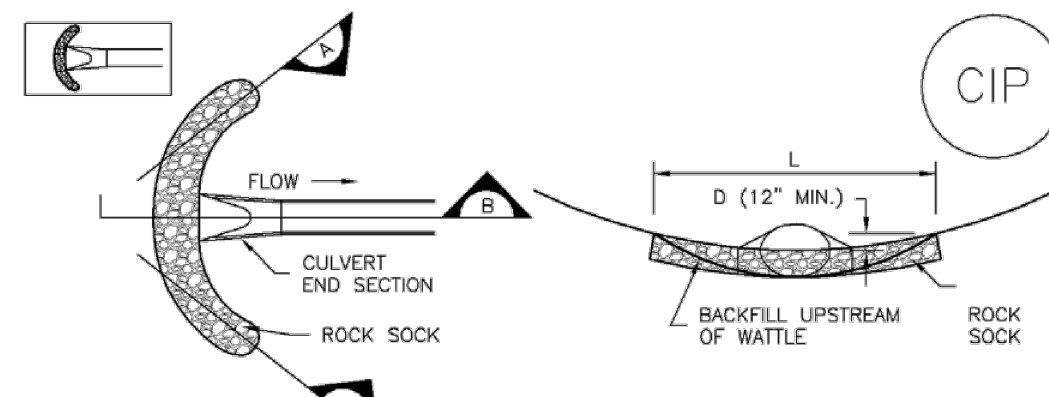
IP-2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES

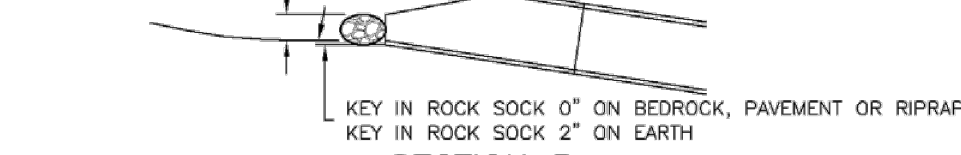
- SEE ROCK SOCK DESIGN DETAIL INSTALLATION REQUIREMENTS.
- PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.
- SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5 FEET APART.
- AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLETS.

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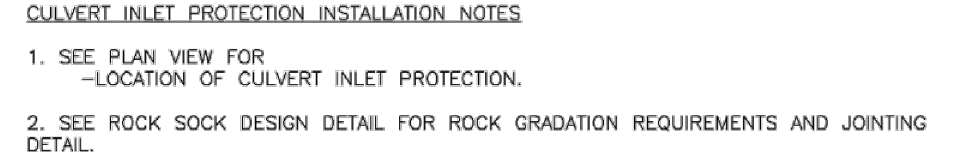
Inlet Protection (IP) SC-6



CIP-1. CULVERT INLET PROTECTION



SECTION B



- CULVERT INLET PROTECTION INSTALLATION NOTES
- SEE PLAN VIEW FOR -LOCATION OF CULVERT INLET PROTECTION.
 - SEE ROCK SOCK DESIGN DETAIL FOR ROCK GRADATION REQUIREMENTS AND JOINING DETAIL.

- CULVERT INLET PROTECTION MAINTENANCE NOTES
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs 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 BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - SEDIMENT ACCUMULATED UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS 1/2 THE HEIGHT OF THE ROCK SOCK.
 - CULVERT INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

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SC-6 Inlet Protection (IP)

GENERAL INLET PROTECTION INSTALLATION NOTES

- SEE PLAN VIEW FOR: -TYPE OF INLET PROTECTION (IP-1, IP-2, IP-3, IP-4, IP-5, IP-6)
- INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE. TYPICALLY WITHIN 48 HOURS. IF A RAINFALL/RUNOFF EVENT IS FORECAST, INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.
- MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

INLET PROTECTION MAINTENANCE NOTES

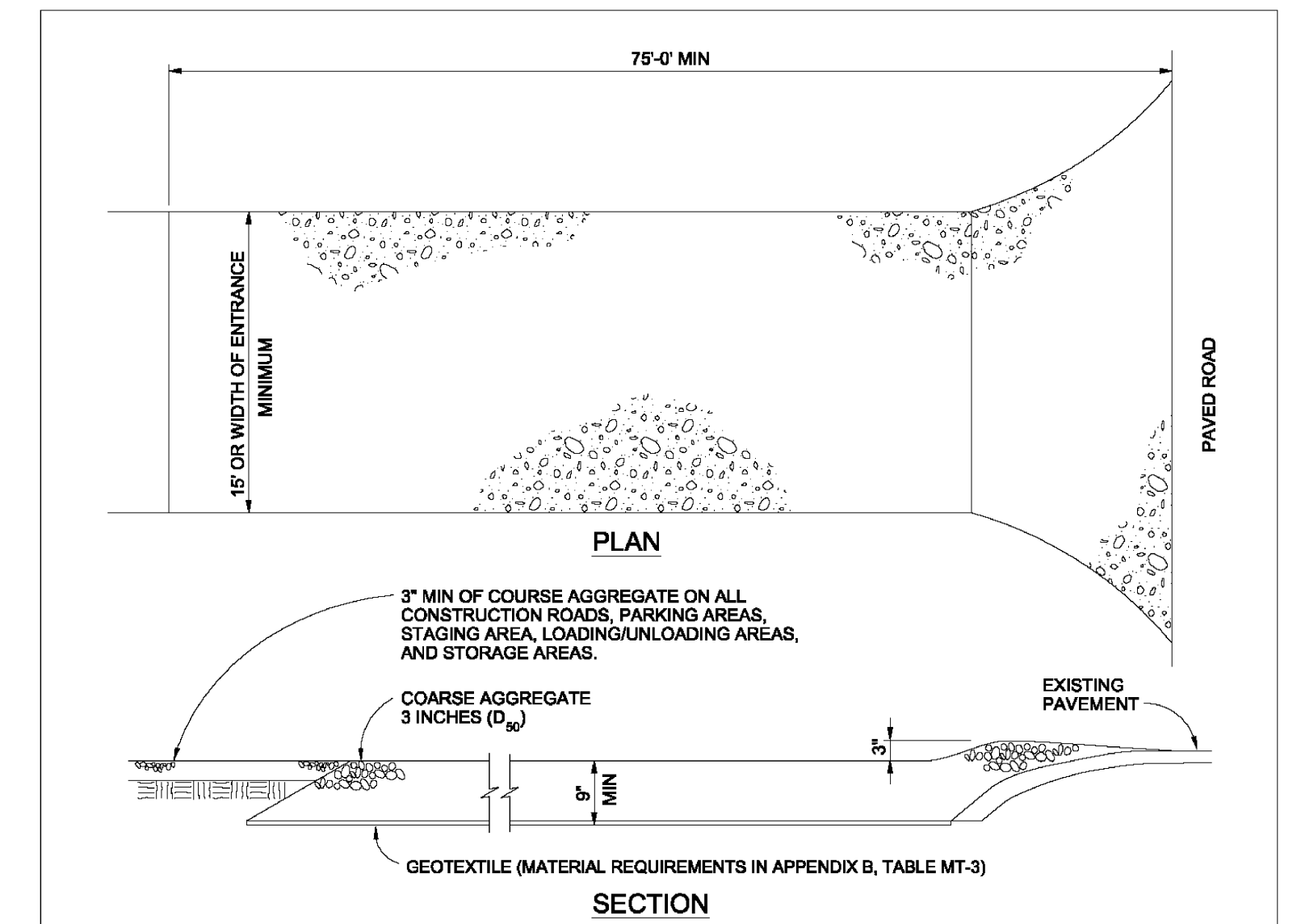
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED AS NECESSARY TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR 1/4 OF THE HEIGHT FOR STRAW BALES.
- INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED, UNLESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.
- WHEN INLET PROTECTION AT AREA INLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDS AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF INLET PROTECTION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY PROPRIETARY INLET PROTECTION METHODS ON THE MARKET. UDFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY INLET PROTECTION; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

NOTE: SOME MUNICIPALITIES DISCOURAGE OR PROHIBIT THE USE OF STRAW BALES FOR INLET PROTECTION. CHECK WITH LOCAL JURISDICTION TO DETERMINE IF STRAW BALE INLET PROTECTION IS ACCEPTABLE.

IP-8 Urban Drainage and Flood Control District August 2013
Urban Storm Drainage Criteria Manual Volume 3



VEHICLE TRACKING

VEHICLE TRACKING NOTES

INSTALLATION REQUIREMENTS

- ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.
- CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP.
- AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.
- CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED.
- CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADES THAT ARE EXCESSIVELY STEEP.

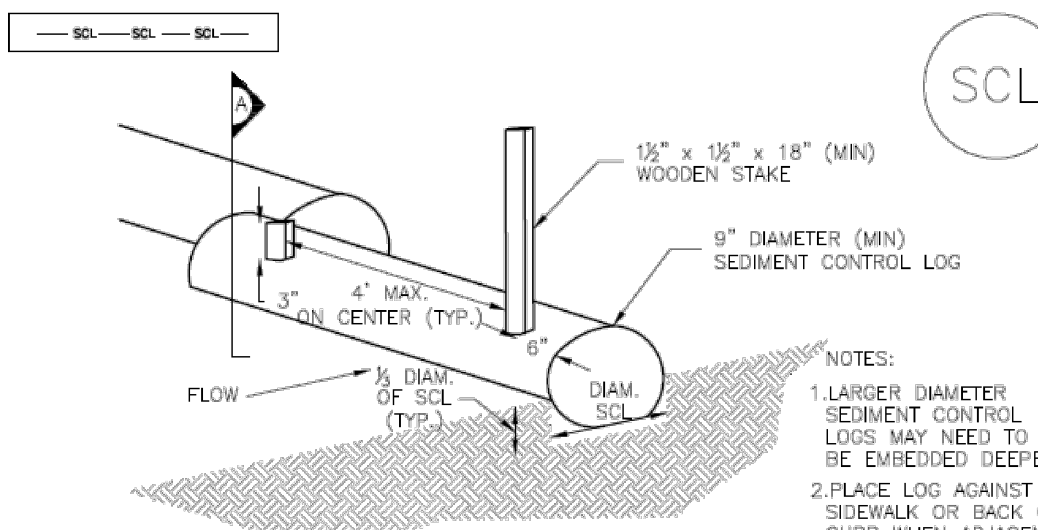
MAINTENANCE REQUIREMENTS

- REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.
- STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY.
- SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.
- STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.
- OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.

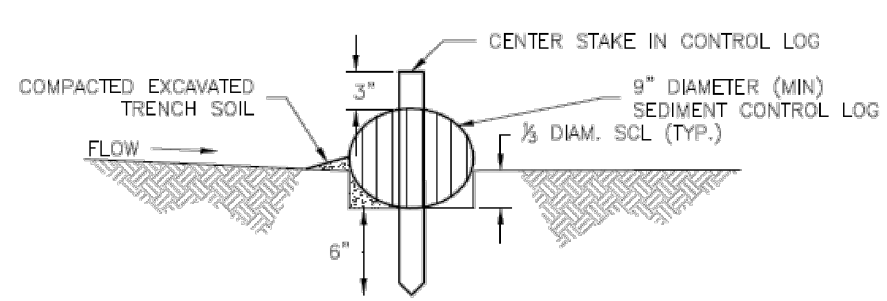
City of Colorado Springs
Stormwater Quality

Figure VT-2
Vehicle Tracking
Application Examples

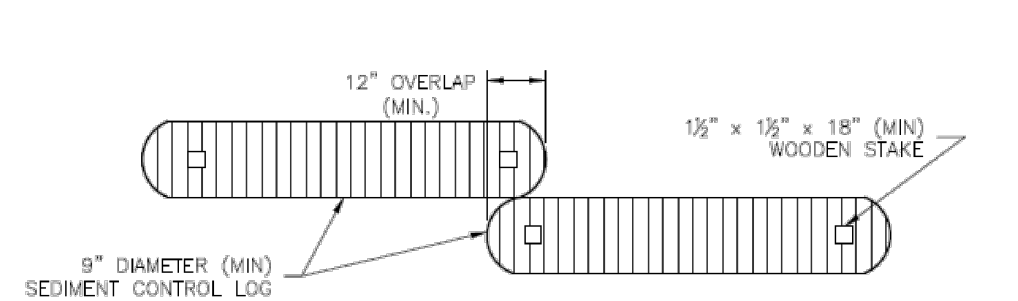
SC-2 Sediment Control Log (SCL)



TRENCHED SEDIMENT CONTROL LOG



SECTION A

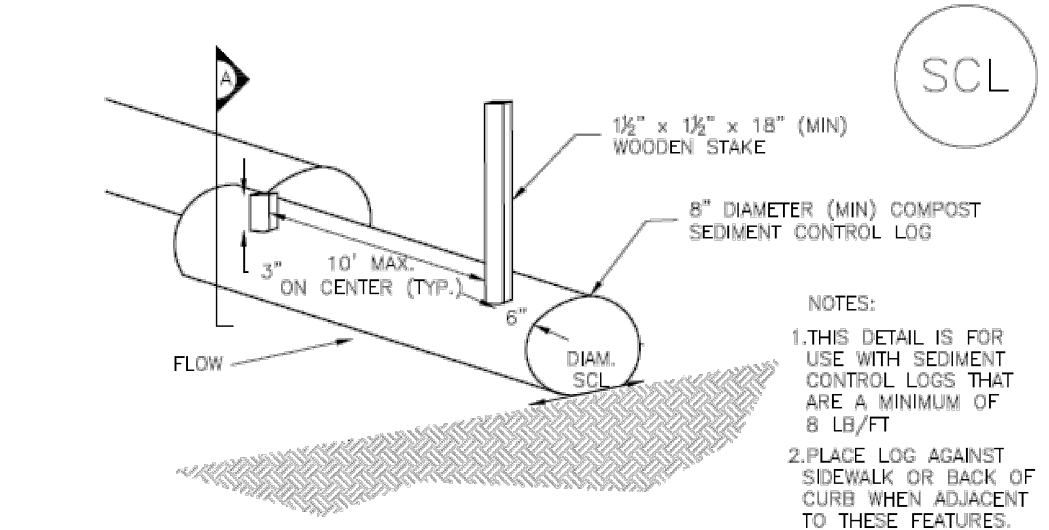


LOG JOINTS

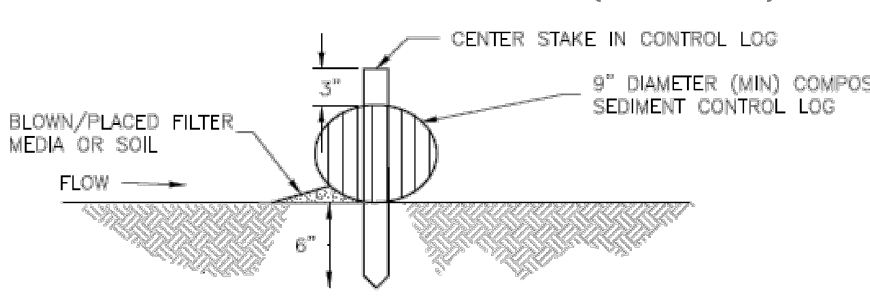
SCL-1. TRENCHED SEDIMENT CONTROL LOG

November 2015 Urban Drainage and Flood Control District November 2015 SCL-3
Urban Storm Drainage Criteria Manual Volume 3

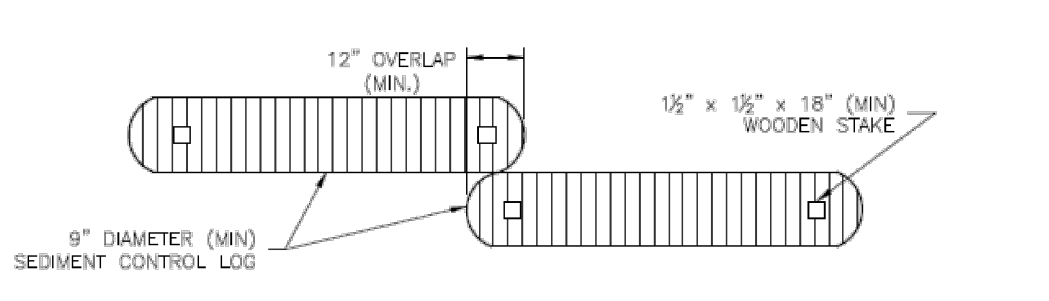
SC-2 Sediment Control Log (SCL)



COMPOST SEDIMENT CONTROL LOG (WEIGHTED)



SECTION A



LOG JOINTS

SCL-2. COMPOST SEDIMENT CONTROL LOG (WEIGHTED)

SCL-4 Urban Drainage and Flood Control District November 2015
Urban Storm Drainage Criteria Manual Volume 3

SC-2 Sediment Control Log (SCL)

SEDIMENT CONTROL LOG INSTALLATION NOTES

- SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.
- SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADE/ALTERATION ACTIVITY.
- SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.
- SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.
- IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY 1/3 OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.
- THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.
- FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
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- SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
- SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION. COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDS. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDS AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

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SCL-6 Urban Drainage and Flood Control District November 2015
Urban Storm Drainage Criteria Manual Volume 3

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2	REVISED PER EPC COMMENTS	10/30/23

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

MARC A. WHORTON, COLORADO PROFESSIONAL ENGINEER #37155

2/2/2024 DATE

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

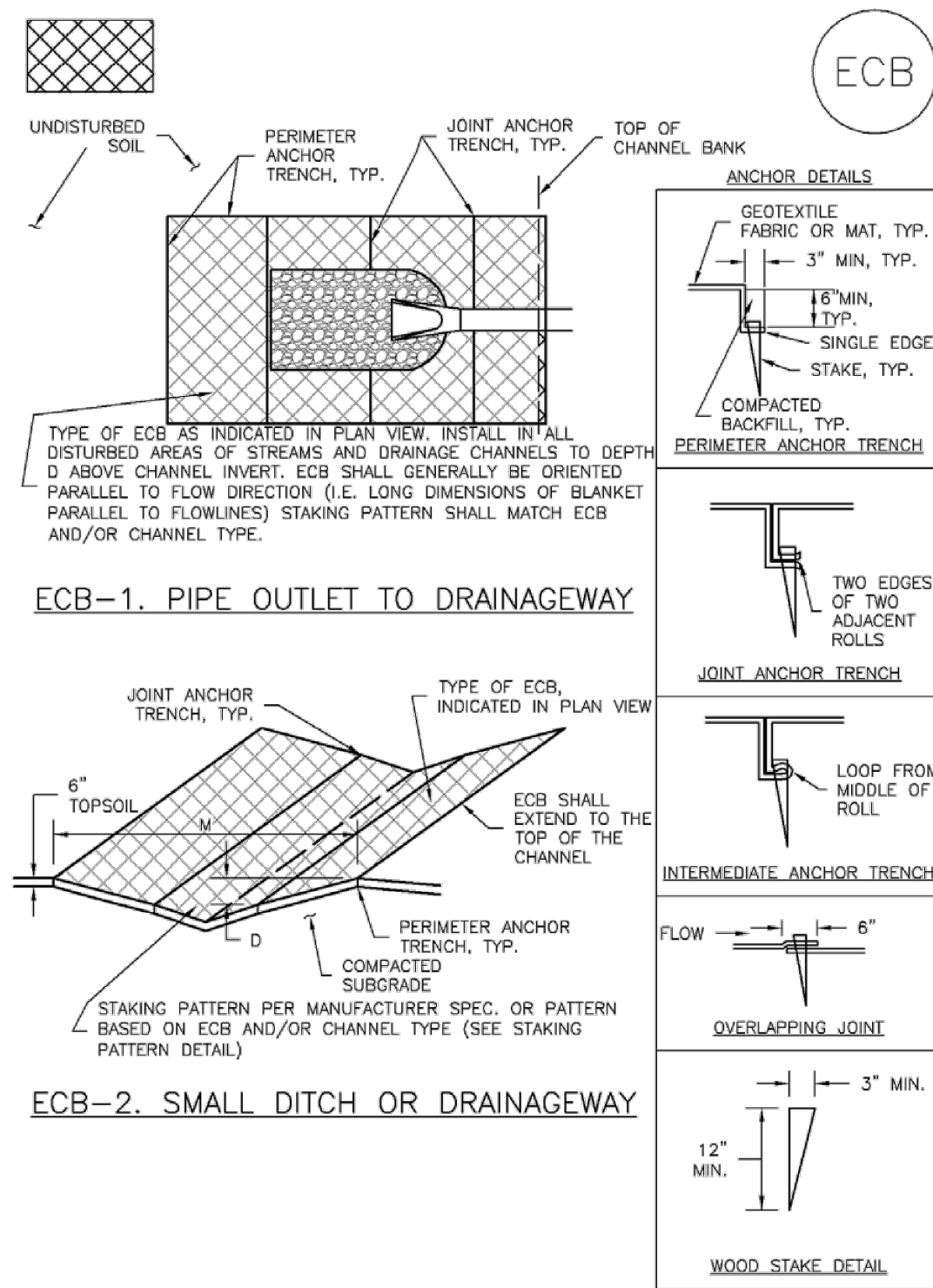
(719) 785-0790
(719) 785-0799 (Fax)

RETREAT AT TIMBERIDGE FILING NO. 3
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DESIGNED BY	MAW	SCALE	DATE	11-22-2022
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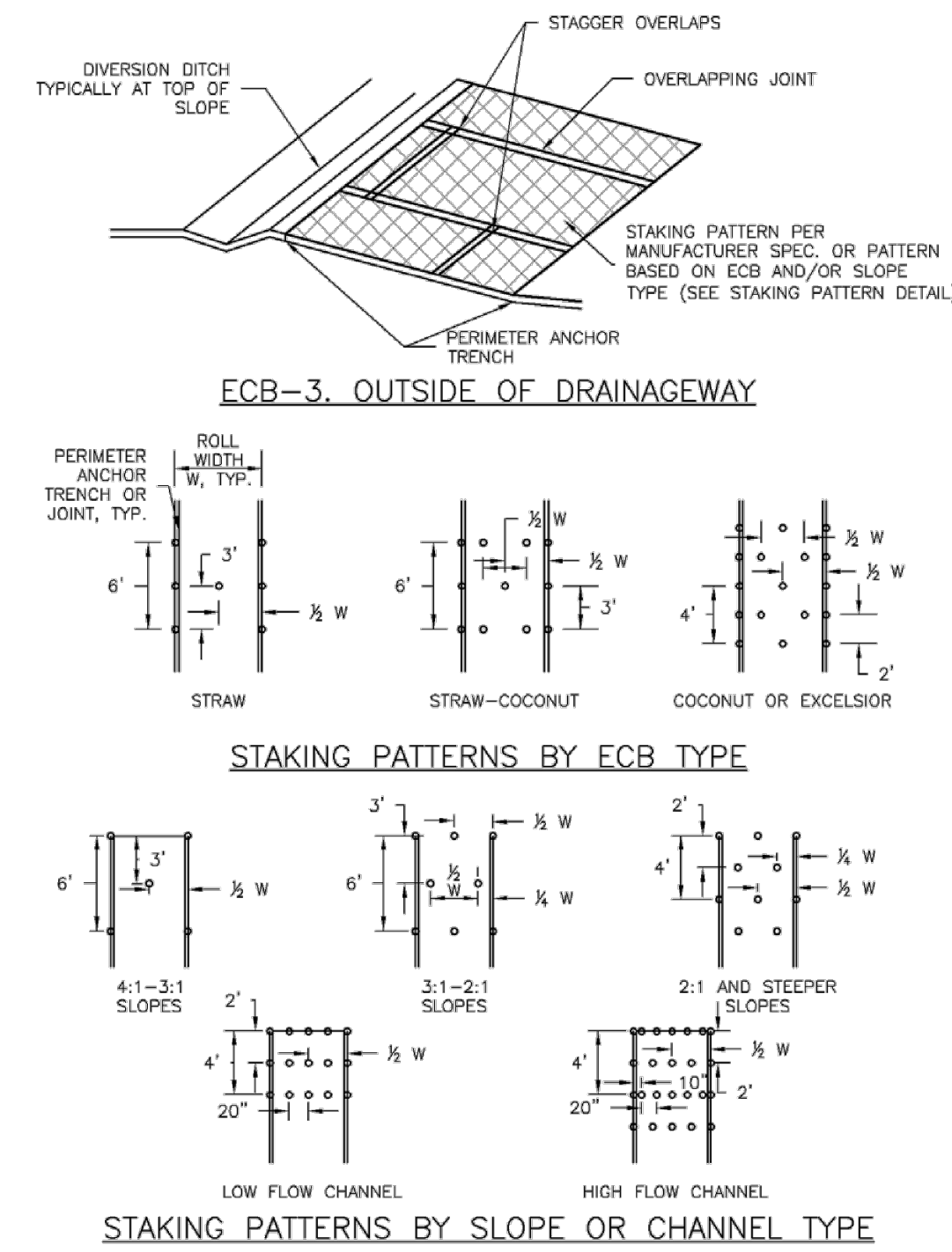


EC-6 Rolled Erosion Control Products (RECP)



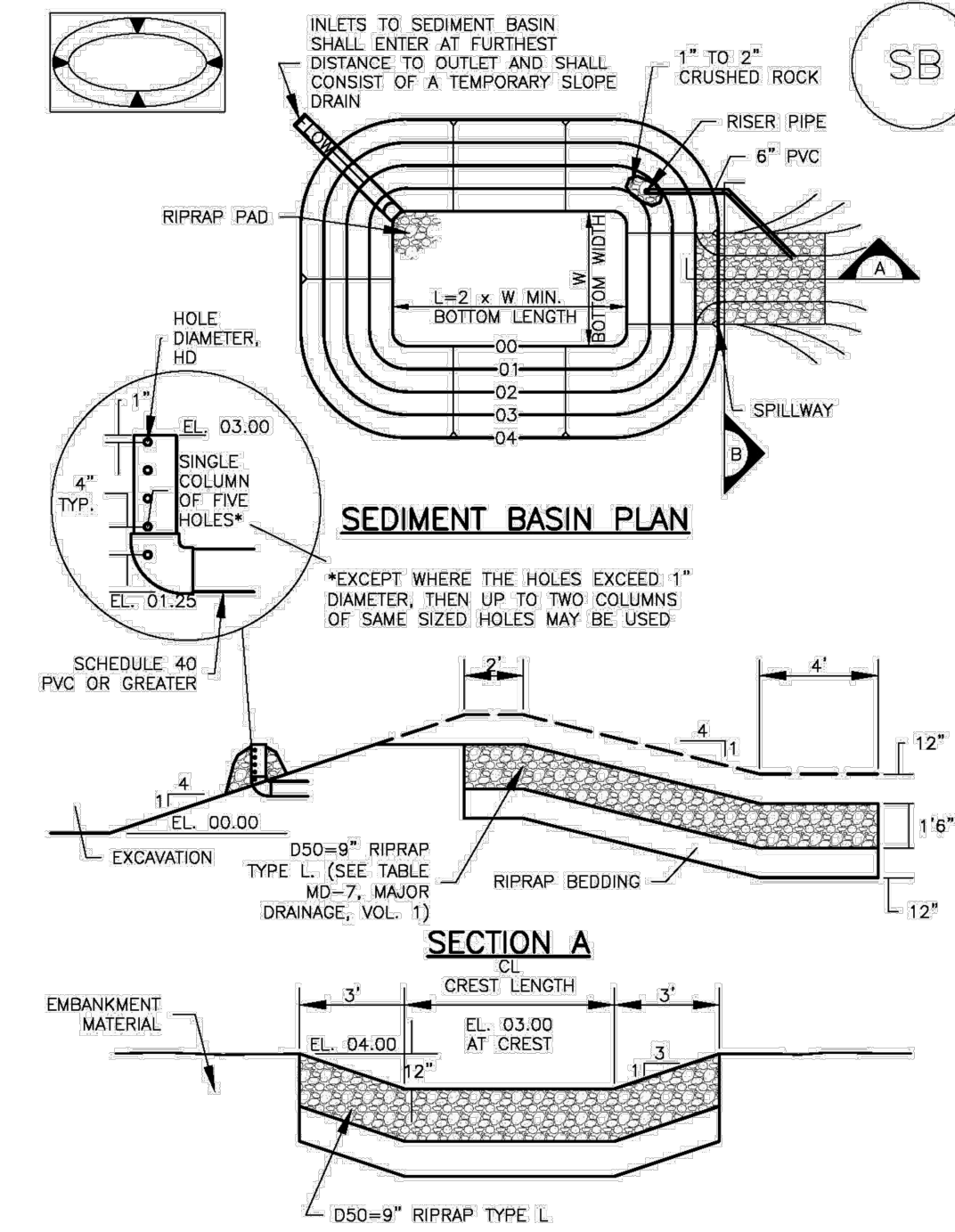
RECP-6 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

EC-6 Rolled Erosion Control Products (RECP) EC-6



November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 RECP-7

Sediment Basin (SB) SC-7



August 2013 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SB-5

EC-6 Rolled Erosion Control Products (RECP)

EROSION CONTROL BLANKET INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION OF ECB.
 - TYPE OF ECB (STRAW, STRAW-COCONUT, COCONUT, OR EXCELSIOR).
 - AREA, A, IN SQUARE YARDS OF EACH TYPE OF ECB.
- 100% NATURAL AND BIODEGRADABLE MATERIALS ARE PREFERRED FOR RECPs, ALTHOUGH SOME JURISDICTIONS MAY ALLOW OTHER MATERIALS IN SOME APPLICATIONS.
- IN AREAS WHERE ECBs ARE SHOWN ON THE PLANS, THE PERMITEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOST PRIOR TO ECB INSTALLATION AND THE ECB SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
- PERMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.
- JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL ECBs EXCEPT STRAW WHICH MAY USE AN OVERLAPPING JOINT.
- INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE-HALF ROLL LENGTH FOR COCONUT AND EXCELSIOR ECBs.
- OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER FOR ECBs ON SLOPES.
- MATERIAL SPECIFICATIONS OF ECBs SHALL CONFORM TO TABLE ECB-1.
- ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING ECBs SHALL BE RESEEDED AND MULCHED.
- DETAILS ON DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION WILL GOVERN IF DIFFERENT FROM THOSE SHOWN HERE.

TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	RECOMMENDED NETTING**
STRAW*	-	100%	-	DOUBLE/NATURAL
STRAW-COCONUT	30% MIN	70% MAX	-	DOUBLE/NATURAL
COCONUT	100%	-	-	DOUBLE/NATURAL
EXCELSIOR	-	-	100%	DOUBLE/NATURAL

*STRAW ECBs MAY ONLY BE USED OUTSIDE OF STREAMS AND DRAINAGE CHANNELS.
**ALTERNATE NETTING MAY BE ACCEPTABLE IN SOME JURISDICTIONS.

RECP-8 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

EC-6 Rolled Erosion Control Products (RECP) EC-6

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 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - ECBs SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE, UNLESS REQUESTED TO BE REMOVED BY THE LOCAL JURISDICTION.
 - ANY ECB PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE GEOTEXTILE THAT HAVE ERODED TO CREATE A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE ECB REINSTALLED.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO AND TOWN OF PARKER COLORADO, NOT AVAILABLE IN AUTOCAD)

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SC-7 Sediment Basin (SB)

Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (HD), (in)
1	12 1/2	2	5/8
2	21	3	1 1/8
3	28	5	1 1/2
4	33 1/2	6	1 5/8
5	38 1/2	8	2 1/8
6	43	9	2 1/4
7	47 1/2	11	2 3/8
8	51	12	2 1/2
9	55	13	2 3/4
10	58 1/2	15	3 1/8
11	61	16	3 1/4
12	64	18	3 1/2
13	67 1/2	19	3 3/4
14	70 1/2	21	4 1/8
15	73 1/2	22	4 1/4

SEDIMENT BASIN INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION OF SEDIMENT BASIN.
 - TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
 - FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE DIAMETER, HD.
 - FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE DIAMETER D.
- FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
- SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY THAT RELIES ON ON BASINS AS A STORMWATER CONTROL.
- EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.
- EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
- PIPE SCH 40 OR GREATER SHALL BE USED.
- THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.

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

Sediment Basin (SB) SC-7

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 - SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E., TWO FEET BELOW THE SPILLWAY CREST).
 - SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.
 - WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

August 2013 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SB-7

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

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NO.	REVISION	DATE
1	REVISED PER EPC COMMENTS	3-07-23

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

MARC A. WHORTON, REGISTERED PROFESSIONAL ENGINEER #37155

2/2/2024

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

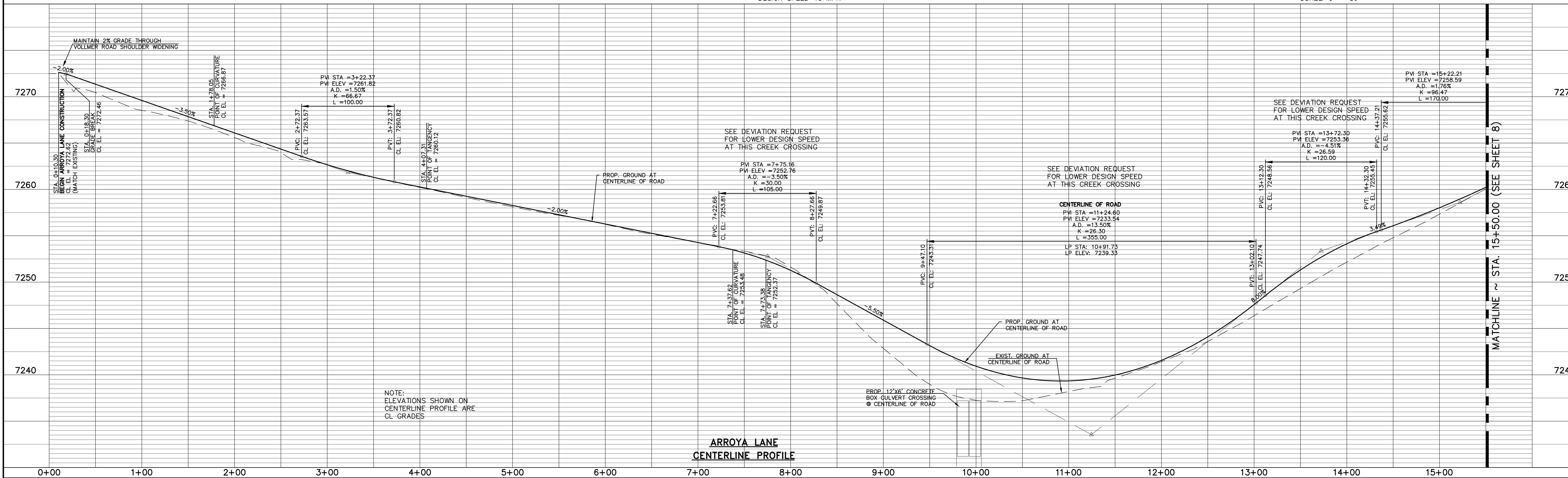
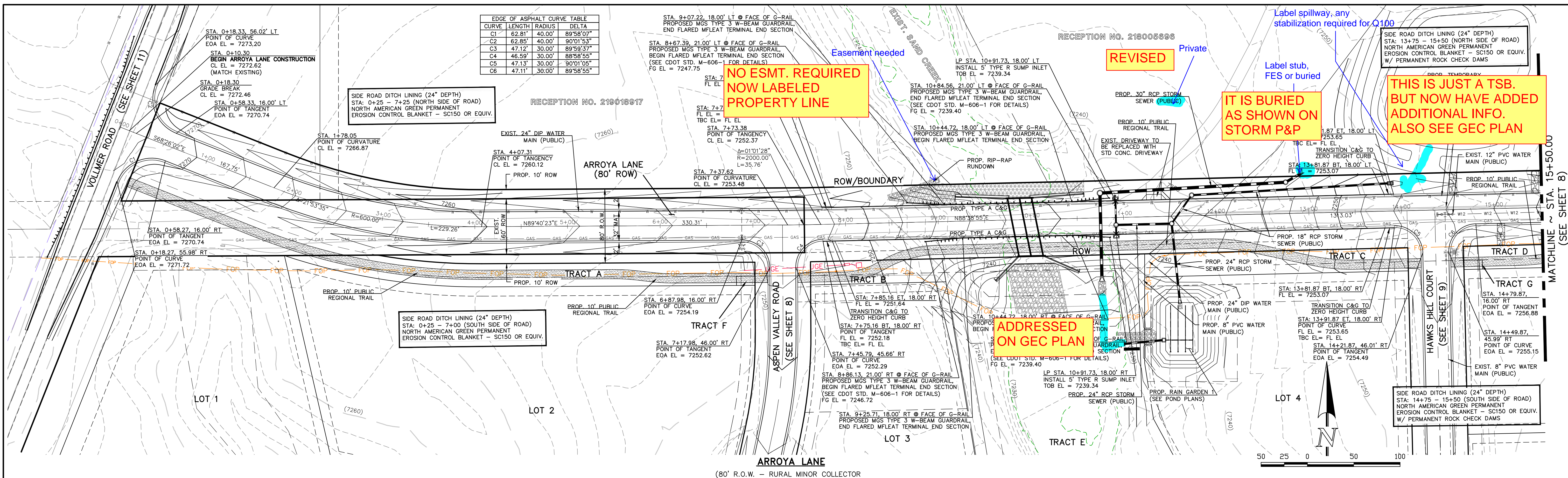
(719) 785-0790
(719) 785-0799 (Fax)

RETREAT AT TIMBERIDGE FILING NO. 3
CONSTRUCTION PLANS
GRADING & EROSION CONTROL PLAN
EROSION CONTROL DETAILS

DESIGNED BY	MAW	SCALE	DATE	11-22-2022
DRAWN BY	MAW	(H) 1" = N/A	SHEET	6 OF 27
CHECKED BY		(V) 1" = N/A	JOB NO.	1185.30

N:\118530\DRAWINGS\CONSTRUCTIVE\CONTRACTOR\06-118530-GR-05 DETALS.dwg, 3/9/2023 2:04:42 PM, 1:1

CURVE	LENGTH	RADIUS	DELTA
C1	62.81'	40.00'	89°58'07"
C2	62.85'	40.00'	90°01'53"
C3	47.12'	30.00'	89°59'37"
C4	46.59'	30.00'	89°59'54"
C5	47.13'	30.00'	90°01'05"
C6	47.11'	30.00'	89°58'55"



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NO.	REVISION	DATE
1	REVISED PER EPC COMMENTS	3-07-23
2	REVISED PER COUNTY PARKS COMMENTS	12-6-23
3	REVISED ROAD GRADE PER CULVERT REVISION	1-30-24

REVIEW:

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

MARC A. WHORTON, COLORADO REGISTERED SURVEYOR #37155

2/2/2024

CLASSIC CONSULTING

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

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

RETREAT AT TIMBERIDGE FILING NO. 3
CONSTRUCTION PLANS
STREET IMPROVEMENT PLANS
ARROYA LANE

DESIGNED BY: PRA
DRAWN BY: PRA
CHECKED BY: (V)

SCALE: (H) 1" = 50'
(V) 1" = 5'

DATE: 11-22-2022
SHEET 7 OF 27
JOB NO. 1185.30

V:\18530\UPDRAWINGS\CONSTRUCT\DRAW\07-18530-9-01.dwg, 2/2/2024, 10:59:23 AM, 1:1

MATCHLINE ~ STA. 15+50.00
(SEE SHEET 7)

SIDE ROAD DITCH LINING (24" DEPTH)
STA: 15+50 - 17+50 (NORTH SIDE OF ROAD)
NORTH AMERICAN GREEN PERMANENT
EROSION CONTROL BLANKET - SC150 OR EQUIV.
W/ PERMANENT ROCK CHECK DAMS

RECEPTION
NO. 218006888

ROW/BOUNDARY

TRACT D

SIDE ROAD DITCH LINING (24" DEPTH)
STA: 15+50 - 17+50 (SOUTH SIDE OF ROAD)
NORTH AMERICAN GREEN PERMANENT
EROSION CONTROL BLANKET - SC150 OR EQUIV.
W/ PERMANENT ROCK CHECK DAMS

PROP. 10' PUBLIC
REGIONAL TRAIL

SIDE ROAD DITCH LINING (24" DEPTH)
STA: 17+50 - 22+50 (SOUTH SIDE OF ROAD)
NORTH AMERICAN GREEN PERMANENT
EROSION CONTROL BLANKET - SC150 OR EQUIV.
W/ PERMANENT ROCK CHECK DAMS

LOT 5

SIDE ROAD DITCH LINING (24" DEPTH)
STA: 17+50 - 22+50 (NORTH SIDE OF ROAD)
NORTH AMERICAN GREEN PERMANENT
EROSION CONTROL BLANKET - SC150 OR EQUIV.

STA. 20+86.53
END TYPICAL ROAD SECTION &
BEGIN ASPHALT TURN AROUND
EOA EL = 7283.00

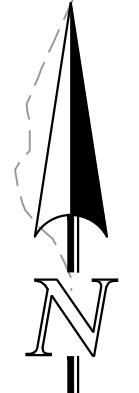
STA. 20+86.41
END ARROYA LANE
TYPICAL ROAD SECTION
CL EL = 7283.32

PROPOSED TEMPORARY
ASPHALT TURN AROUND

STA. 20+86.29
END TYPICAL ROAD SECTION &
BEGIN ASPHALT TURN AROUND
EOA EL = 7283.00

PROPOSED GRADING
ESMT. TO BE ACQUIRED
PRIOR TO APPROVAL
AND CONSTRUCTION

UNPLATTED
FUTURE STERLING
RANCH



50 25 0 50 100

ARROYA LANE
(80' R.O.W. - RURAL MINOR COLLECTOR)
DESIGN SPEED 40 MPH

SCALE: 1" = 50'

THE RETREAT AT
TIMBERRIDGE
FILING NO. 2

SIDE ROAD DITCH LINING (24" DEPTH)
STA: 25+67 - 29+00 (WEST SIDE OF ROAD)
NORTH AMERICAN GREEN PERMANENT
EROSION CONTROL BLANKET - SC150 OR EQUIV.

LOT 2

STA. 28+74.03, 14.00' LT
END LT EOA POINT OF
CURVATURE
EOA EL = 7254.19

EXISTING FIRE HYDRANT
TO REMAIN UNDISTURBED

STA. 28+74.03, 14.00' LT
LT EOA POINT OF CURVATURE
LT EOA EL = 7252.62

STA. 28+27.08, 14.00' LT
END TYPICAL STREET SECTION
& BEGIN LEFT EDGE OF
ASPHALT VERTICAL TRANSITION
LT EOA EL = 7251.10

STA. 28+03.89
POINT OF TANGENCY
CL EL = 7250.88

STA. 25+67.89
BEGIN FILING NO. 3 CONSTRUCTION
CL EL = 7245.75

EXISTING TEMPORARY TURN
AROUND TO BE REMOVED

STA. 26+96.26
POINT OF CURVATURE
CL EL = 7248.54

STA. 28+27.08, 14.00' RT
END TYPICAL STREET SECTION
& BEGIN RIGHT EDGE OF
ASPHALT VERTICAL TRANSITION
RT EOA EL = 7251.10

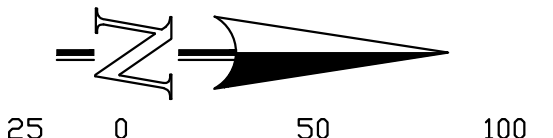
LOT 3

INSTALL EROSION CONTROL BLANKET ON SLOPE
STA: 25+67 - 29+00 (EAST SIDE OF ROAD)
NORTH AMERICAN GREEN PERMANENT
EROSION CONTROL BLANKET - SC150 OR EQUIV.

STA. 28+74.38, 14.00' RT
RT EOA POINT OF CURVATURE
RT EOA EL = 7252.28

STA. 29+02.37, 43.50' RT
END RT EOA POINT OF
CURVATURE & BEGIN
ARROYA LANE C&G
FL EL = 7252.28
(FL EL = TBC EL)

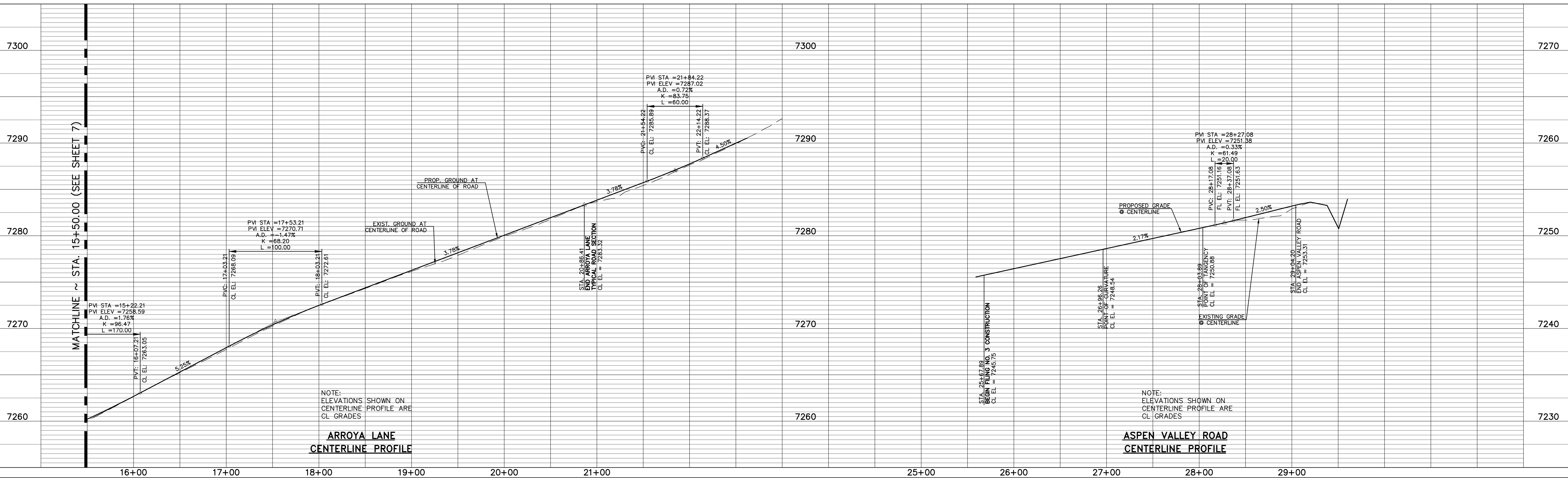
CURVE	LENGTH	RADIUS	DELTA
C3	47.12'	30.00'	89°59'37"
C4	46.59'	30.00'	88°58'55"



50 25 0 50 100

ASPEN VALLEY ROAD
(60' R.O.W. - RURAL LOCAL)
DESIGN SPEED 30 MPH

SCALE: 1" = 50'



NOTE:
ELEVATIONS SHOWN ON
CENTERLINE PROFILE ARE
CL GRADES

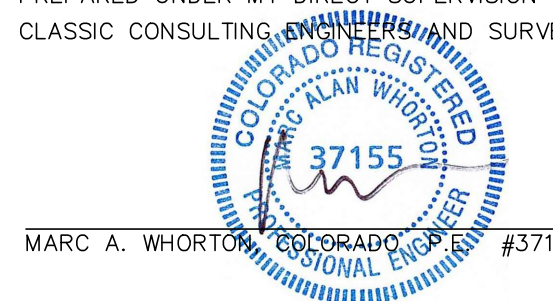
NOTE:
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CENTERLINE PROFILE ARE
CL GRADES

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NO.	REVISION	DATE
1	REVISED PER EPC COMMENTS	3-07-23
2	REVISED PER EPC COMMENTS	10/30/23
3	REVISED PER COUNTY PARKS COMMENTS	12-6-23

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



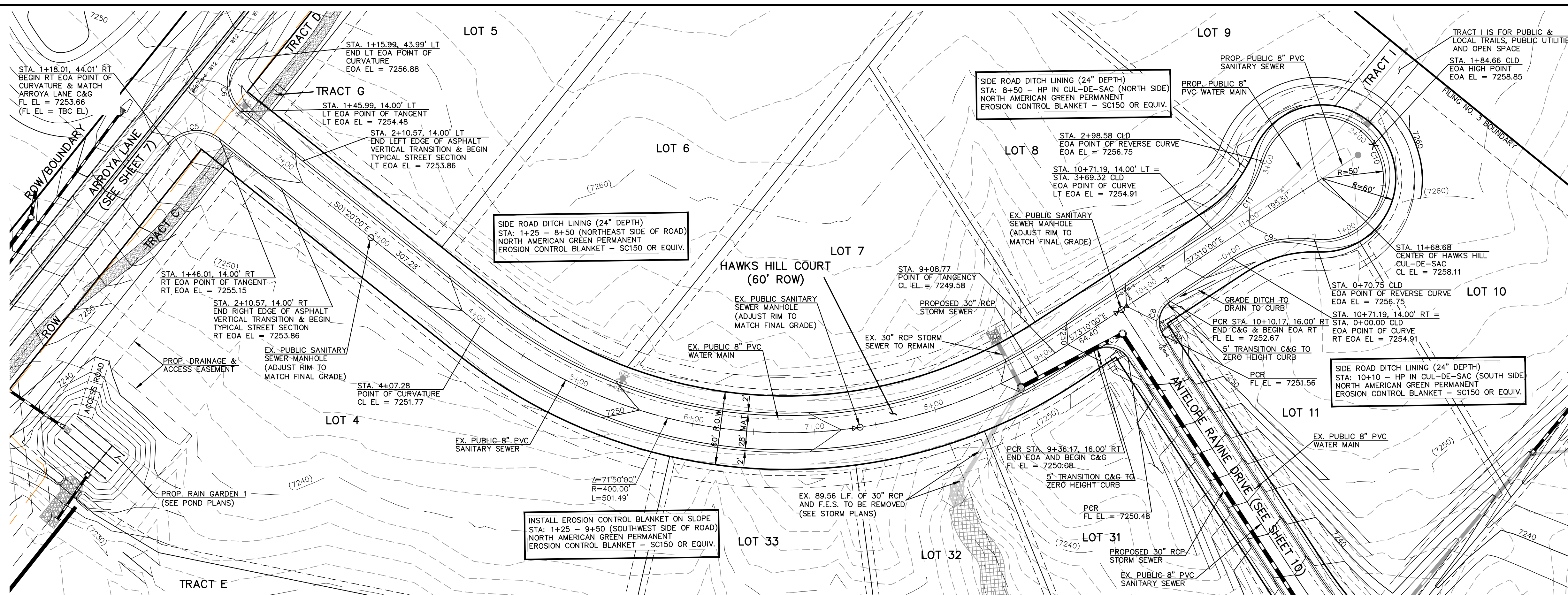
2/2/2024
DATE



RETREAT AT TIMBERRIDGE FILING NO. 3
CONSTRUCTION PLANS
STREET IMPROVEMENT PLANS
ARROYA LANE & ASPEN VALLEY ROAD

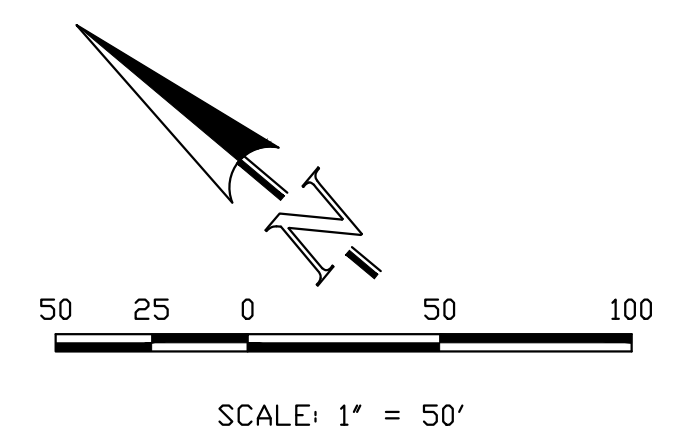
DESIGNED BY	PRA	SCALE	DATE
11-22-2022			
DRAWN BY	PRA	(H) 1" = 50'	SHEET 8 OF 27
CHECKED BY	(V) 1" = 5'	JOB NO.	1185.30

V:\18530\DRAWINGS\CONSTRUCT\DRAW\18530-9-402.dwg, 2/2/2024, 11:02:18 AM, 1:1

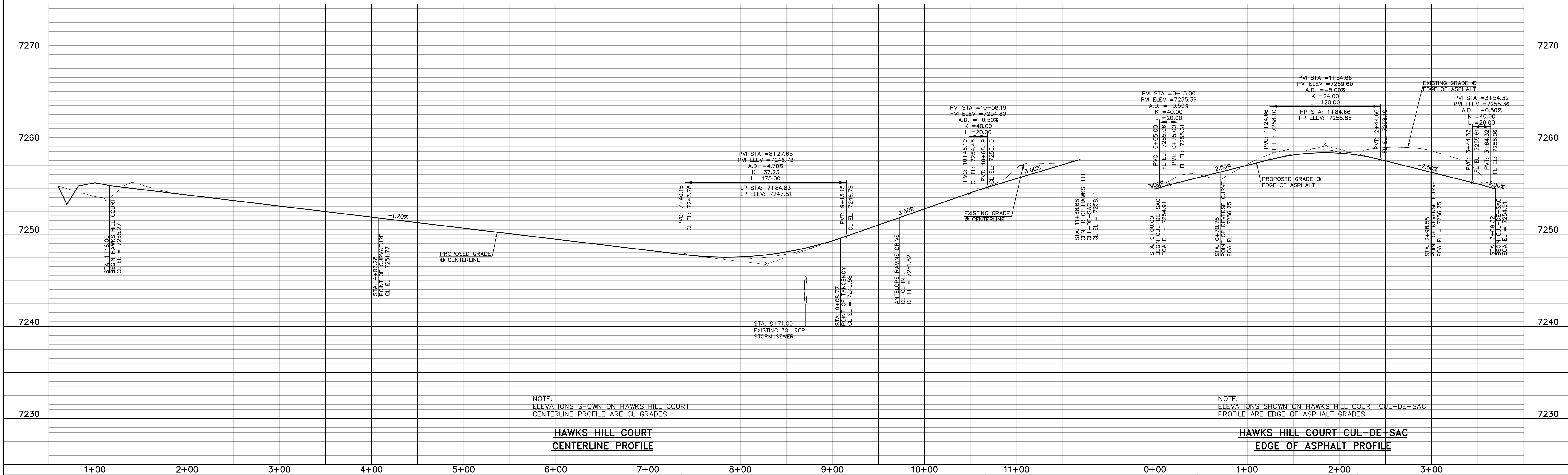


EDGE OF ASPHALT CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C5	47.13'	30.00'	90°01'05"
C6	47.11'	30.00'	89°58'55"
C9	70.75'	100.00'	40°32'09"
C10	227.83'	50.00'	261°04'18"
C11	70.75'	100.00'	40°32'09"

CURB FL CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C7	31.42'	20.00'	90°00'00"
C8	31.42'	20.00'	90°00'00"



HAWKS HILL COURT
(60' R.O.W. - RURAL LOCAL)
DESIGN SPEED 30 MPH



NOTE:
ELEVATIONS SHOWN ON HAWKS HILL COURT
CENTERLINE PROFILE ARE CL GRADES

**HAWKS HILL COURT
CENTERLINE PROFILE**

NOTE:
ELEVATIONS SHOWN ON HAWKS HILL COURT CUL-DE-SAC
PROFILE ARE EDGE OF ASPHALT GRADES

**HAWKS HILL COURT CUL-DE-SAC
EDGE OF ASPHALT PROFILE**

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NO.	REVISION	DATE
1	REVISED PER EPC COMMENTS	3-07-23

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

MARC A. WHORTON
#37155
DATE: 2/2/2024



RETREAT AT TIMBERIDGE FILING NO. 3
CONSTRUCTION PLANS
STREET IMPROVEMENT PLANS
HAWKS HILL COURT

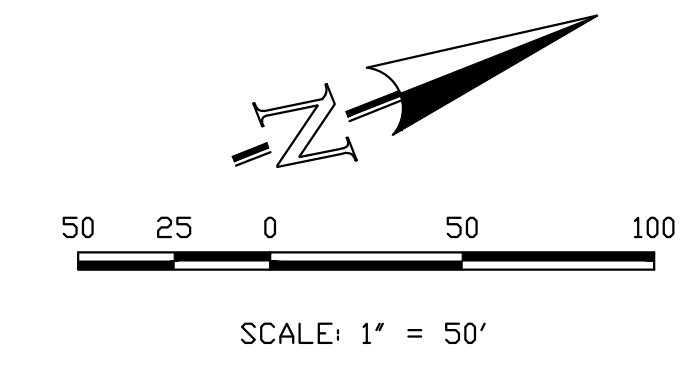
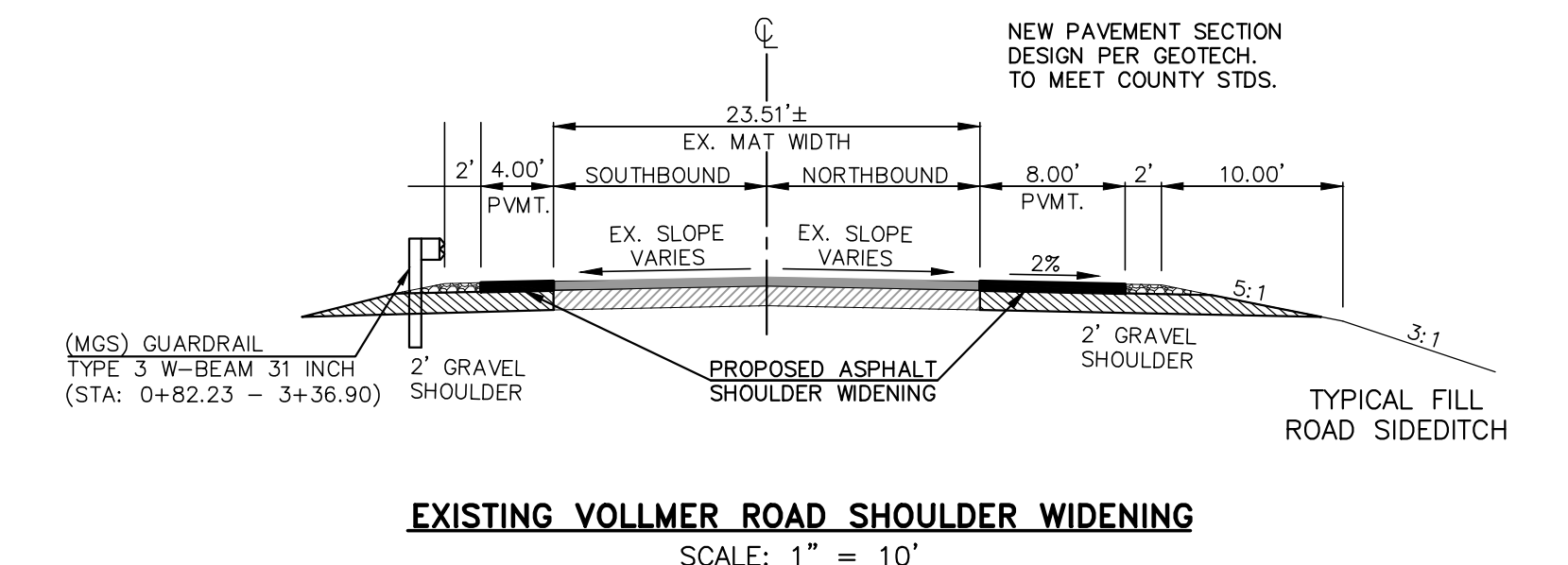
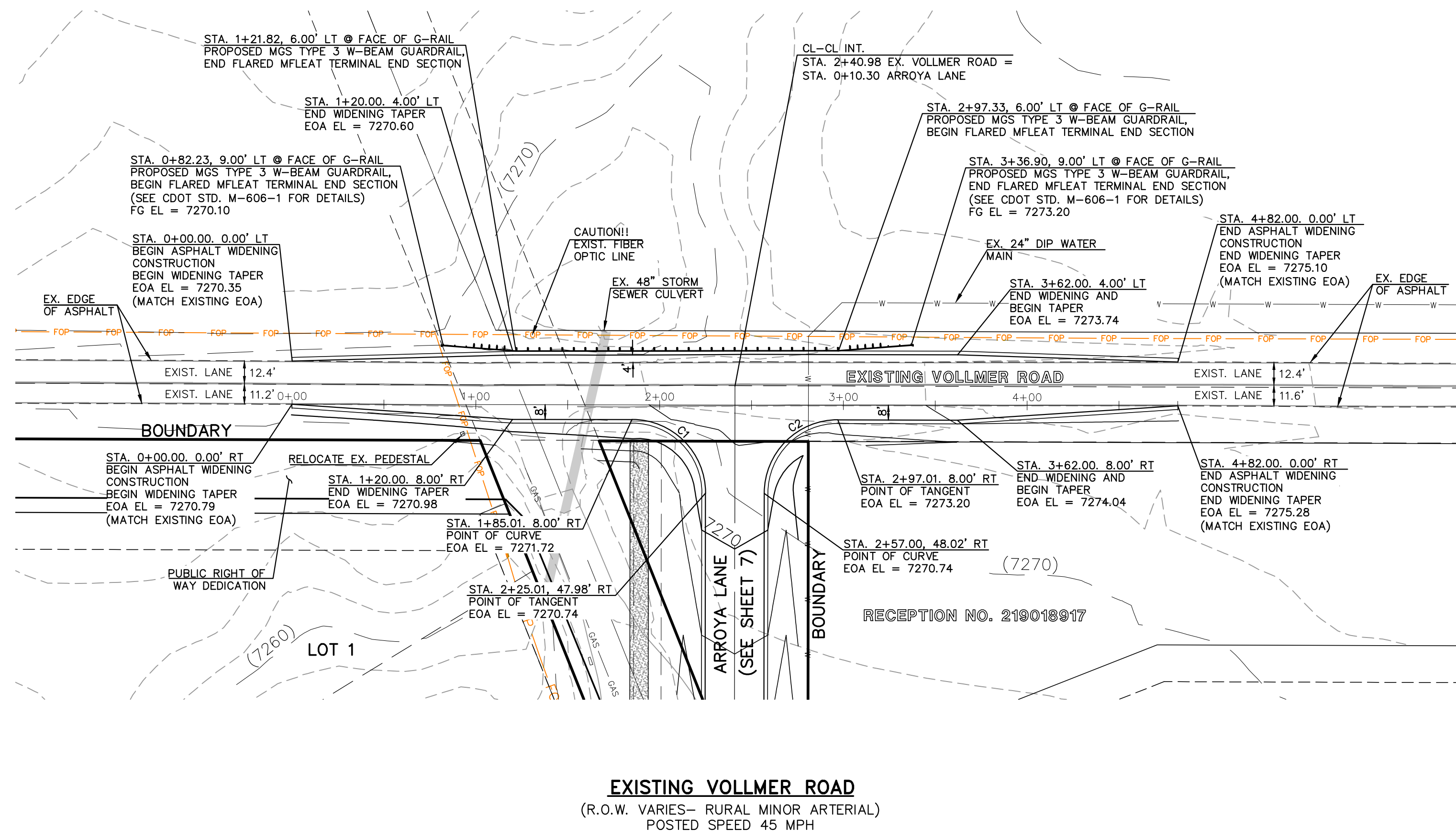
DESIGNED BY: PRA
DRAWN BY: PRA
CHECKED BY: PRA

SCALE: (H) 1" = 50'
(V) 1" = 5'

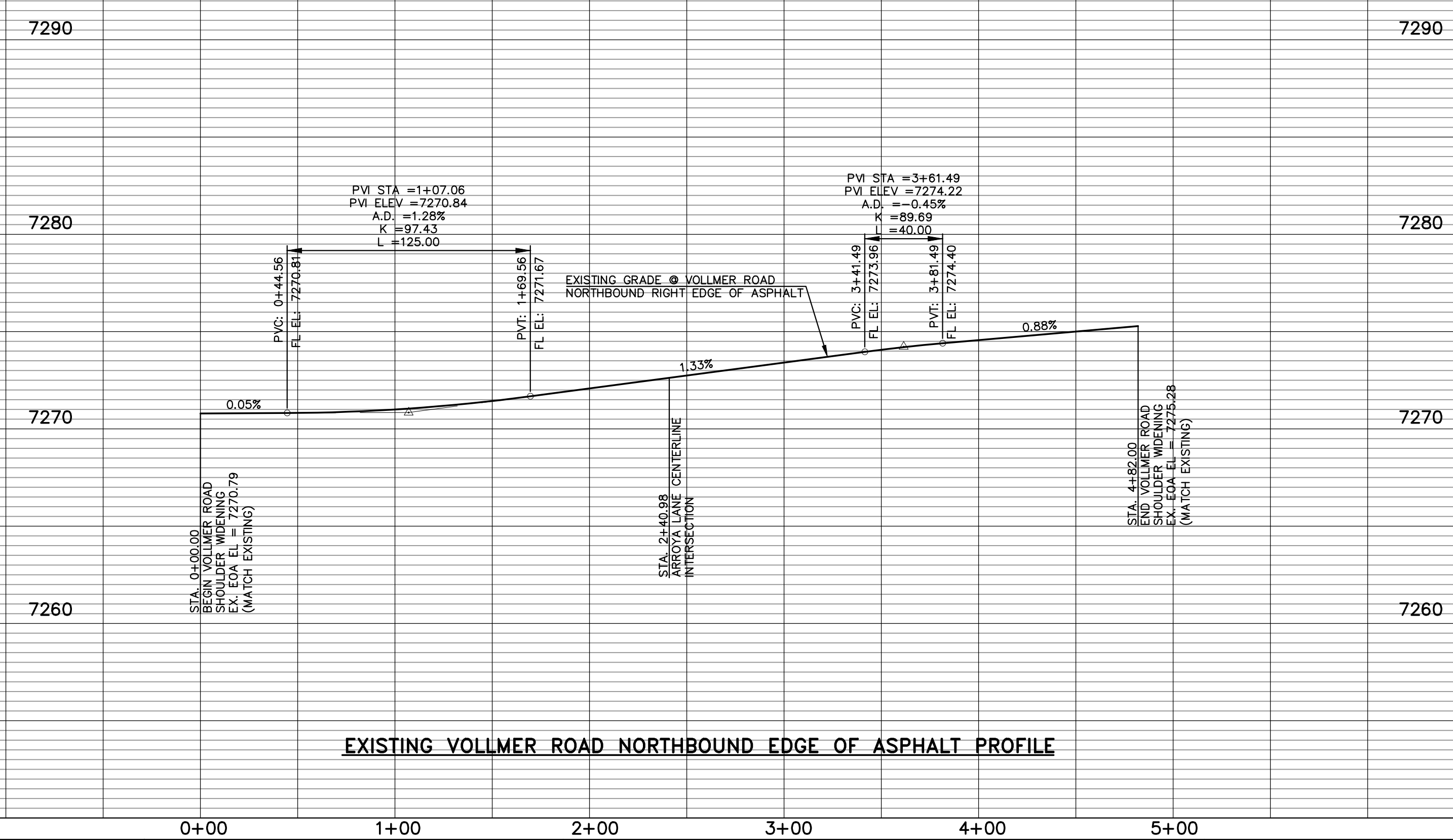
DATE: 11-22-2022
SHEET: 9 OF 27
JOB NO.: 1185.30



EDGE OF ASPHALT CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	62.81'	40.00'	89°58'07"
C2	62.85'	40.00'	90°01'53"



EXISTING VOLLMER ROAD
(R.O.W. VARIES- RURAL MINOR ARTERIAL)
POSTED SPEED 45 MPH



EXISTING VOLLMER ROAD NORTHBOUND EDGE OF ASPHALT PROFILE

<p>48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS 811 UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW</p> <p>THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.</p>	<p>NO. REVISION</p> <table border="1"> <tr> <td>1</td> <td>REVISED PER EPC COMMENTS</td> <td>3-07-23</td> </tr> <tr> <td>2</td> <td>REVISED PER EPC COMMENTS</td> <td>10/31/23</td> </tr> </table>	1	REVISED PER EPC COMMENTS	3-07-23	2	REVISED PER EPC COMMENTS	10/31/23	<p>REVIEW:</p> <p>PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING AND SURVEYORS, LLC</p> <p>MARC A. WHORTON #37155</p>	<p>DATE: 2/2/2024</p>	<p>619 N. Cascade Avenue, Suite 200 Colorado Springs, Colorado 80903</p> <p>(719) 785-0790 (719) 785-0799 (Fax)</p>	<p>RETREAT AT TIMBERRIDGE FILING NO. 3 CONSTRUCTION PLANS STREET IMPROVEMENT PLANS VOLLMER ROAD EAST SHOULDER WIDENING</p> <table border="1"> <tr> <td>DESIGNED BY</td> <td>PRA</td> <td>SCALE</td> <td>DATE</td> <td>11-22-2022</td> </tr> <tr> <td>DRAWN BY</td> <td>PRA</td> <td>(H) 1" = 50'</td> <td>SHEET</td> <td>11 OF 27</td> </tr> <tr> <td>CHECKED BY</td> <td></td> <td>(V) 1" = 5'</td> <td>JOB NO.</td> <td>1185.30</td> </tr> </table>	DESIGNED BY	PRA	SCALE	DATE	11-22-2022	DRAWN BY	PRA	(H) 1" = 50'	SHEET	11 OF 27	CHECKED BY		(V) 1" = 5'	JOB NO.	1185.30
	1	REVISED PER EPC COMMENTS	3-07-23																							
2	REVISED PER EPC COMMENTS	10/31/23																								
DESIGNED BY	PRA	SCALE	DATE	11-22-2022																						
DRAWN BY	PRA	(H) 1" = 50'	SHEET	11 OF 27																						
CHECKED BY		(V) 1" = 5'	JOB NO.	1185.30																						

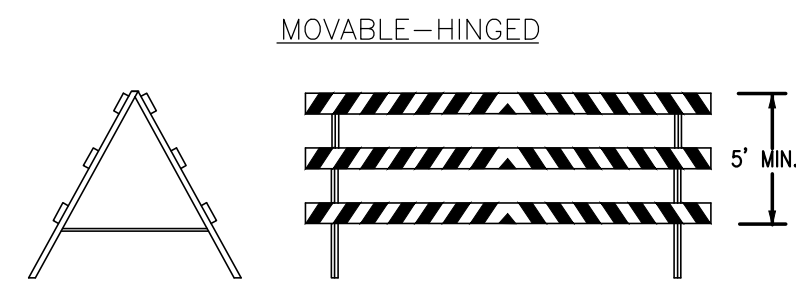
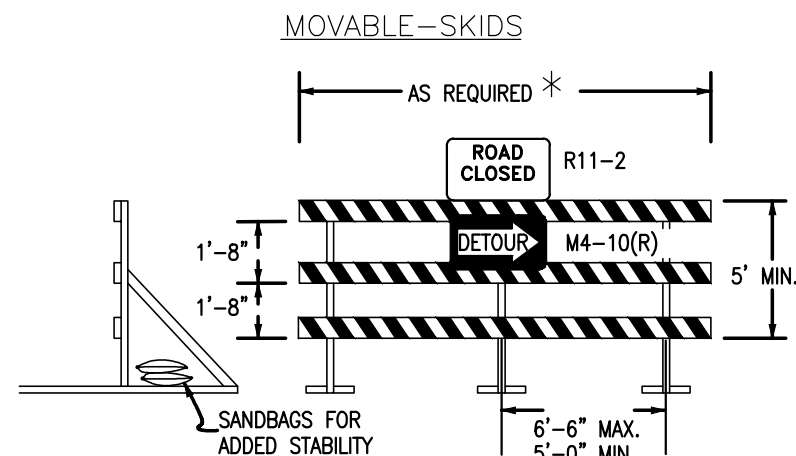
V:\18530\DRAWINGS\CONSTRUCT\DRAW\11-18530-9-05.dwg, 2/2/2024 11:06:26 AM, 1:1

RAIL LENGTH TABLE *

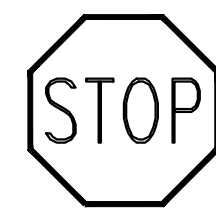
TYPE 3 BARRICADE	FIXED	MOVABLE	LENGTH
F - A	M - A		8' - 14'
F - B	M - B		15' - 24'
F - C	M - C		25' - 35'
F - D	M - D		> 35'

NOTES

- TYPE 3 BARRICADES HAVE 3 REFLECTORIZED RAIL FACES IF FACING TRAFFIC IN ONE DIRECTION AND 6 IF FACING TRAFFIC IN TWO DIRECTIONS.
- THE PORTION OF THE POST ABOVE THE GROUND LINE SHALL BE PAINTED IN ACCORDANCE WITH THE APPROPRIATE GENERAL NOTE.
- DETACHABLE EXTENSION WING RAILS FOR BYPASSING OF CONSTRUCTION EQUIPMENT ARE PERMITTED, WHEN NECESSARY, ON FIXED OR MOVABLE TYPE 3 BARRICADES. THE LENGTH SHALL BE ADEQUATE TO CLOSE THE SHOULDER AS REQUIRED.



TYPICAL TYPE 3 BARRICADES



STOP (R1-1)
30"X30"



Street Name (D-3)



SPEED LIMIT (R2-1)
24"X30"

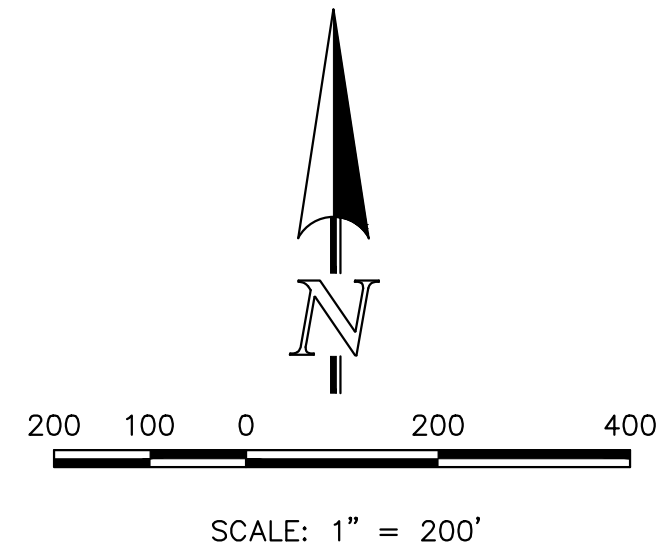
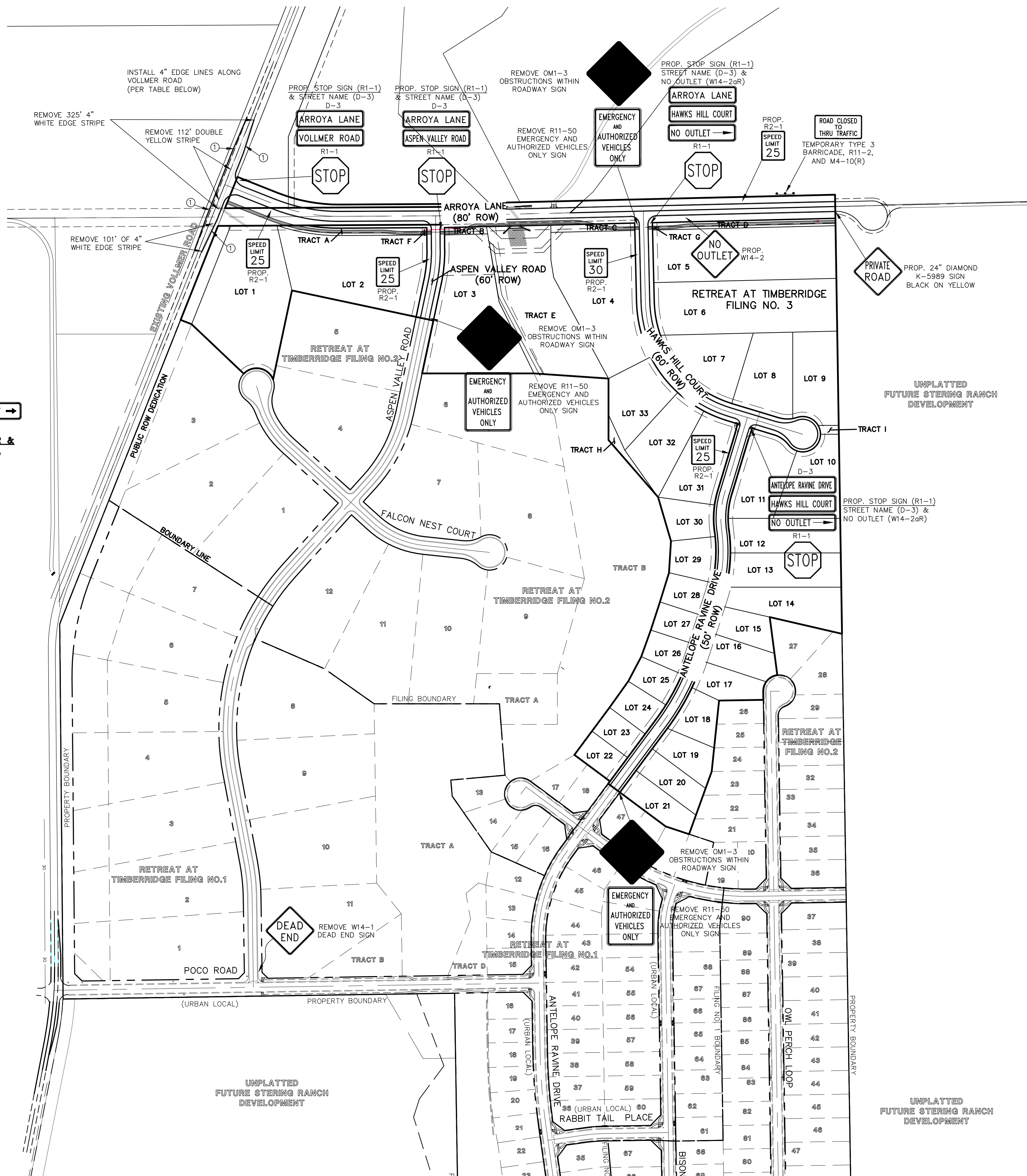


NO OUTLET
W14-2aR & W14-2aL

NOTE:
ALL INTERNAL SIGNS SHALL BE 4" FONT LETTER SIZE.
SIGNS AT VOLLMER INTERSECTION SHALL BE 6" FONT LETTER SIZE.

STRIPING LEGEND		
STRIPE	PAVEMENT MARKINGS	MARKING DESCRIPTION
1	EDGE LINES (EPOXY)	SOLID WHITE, 4" WIDE

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



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NO.	REVISION	DATE
1	REVISED PER COUNTY COMMENTS	9/22/23
2	REVISED PER ARROYA ROADWAY DESIGN CHANGE	1/30/24

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

MARC A. WHORTON, P.E., P.S., P.L.S., P.C.E.
#37155

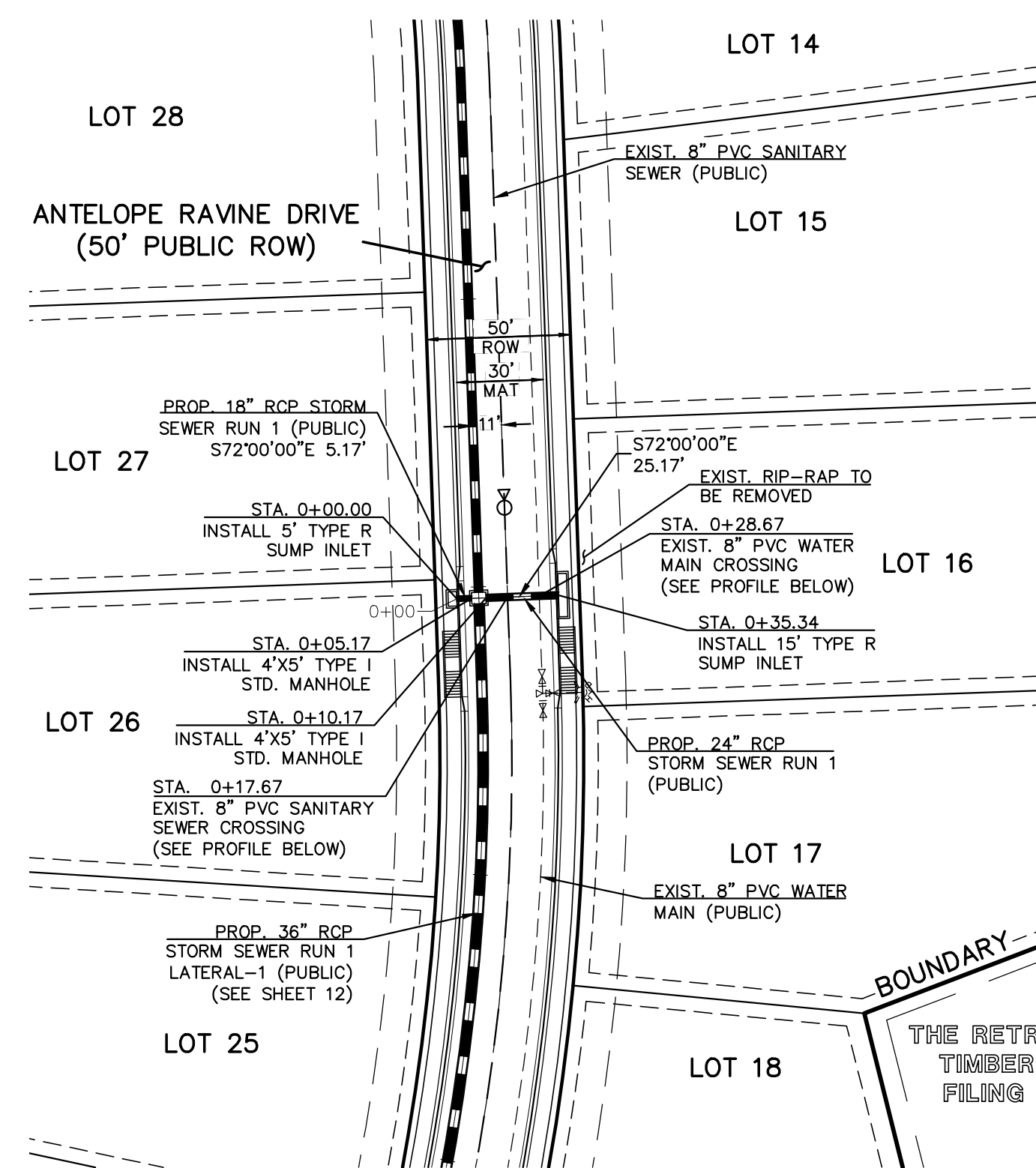
2/2/2024 DATE

RETREAT AT TIMBERIDGE FILING NO. 3 CONSTRUCTION PLANS			
SIGNAGE & STRIPING PLAN			
DESIGNED BY	PRA	SCALE	DATE 11-22-2022
DRAWN BY	PRA	(H) 1" = 200'	SHEET 12 OF 27
CHECKED BY	(V)	1" = N/A	JOB NO. 1185.30

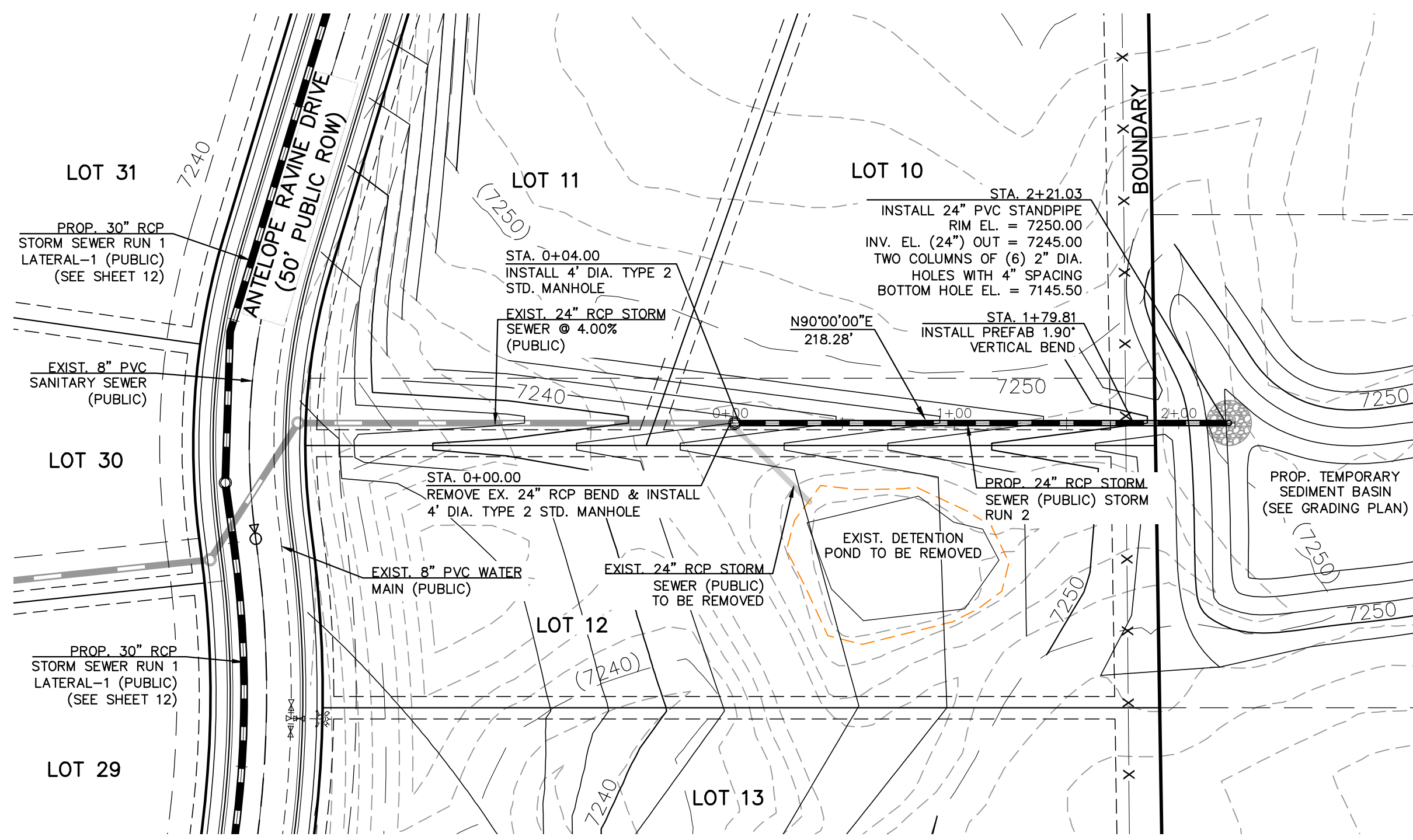
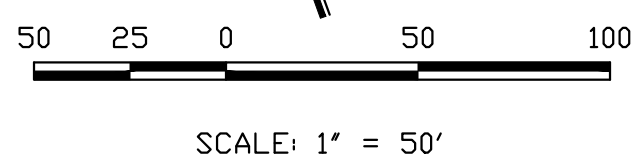
CLASSIC CONSULTING

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

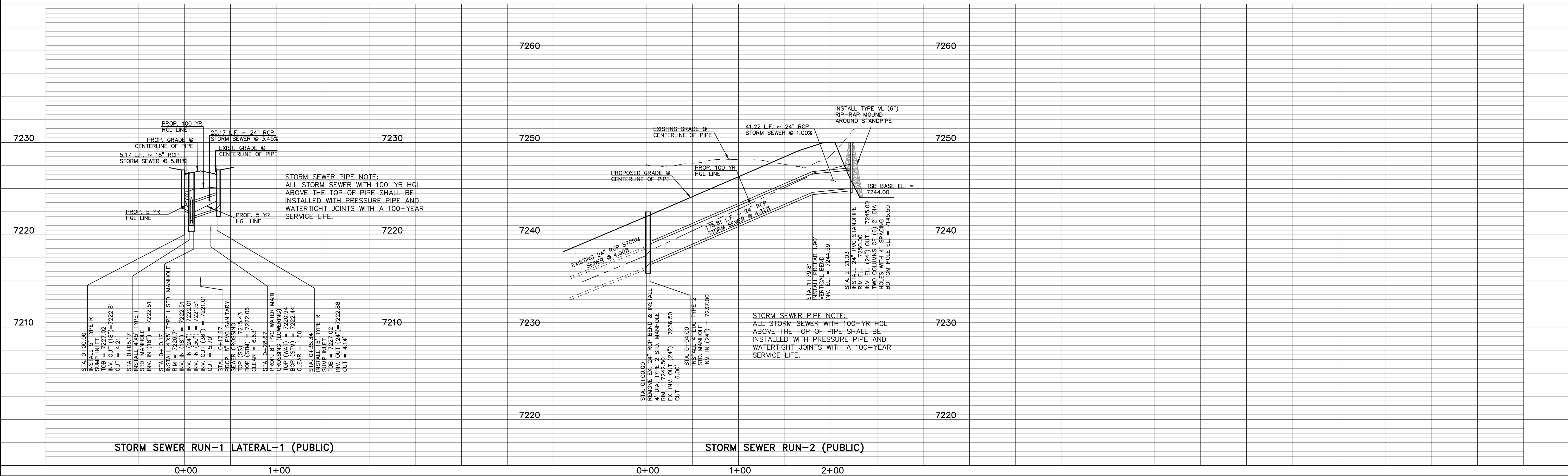
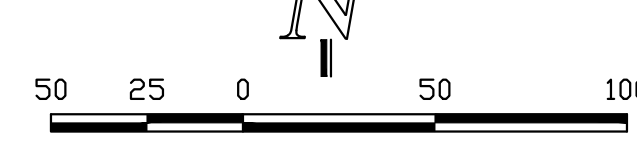
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STORM SEWER RUN-1 LATERAL-1 (PUBLIC)



STORM SEWER RUN-2 (PUBLIC)



STORM SEWER RUN-1 LATERAL-1 (PUBLIC)

STORM SEWER RUN-2 (PUBLIC)

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NO.	REVISION	DATE
1	REVISED PER COUNTY COMMENTS	9/25/23
2	REVISED PER COUNTY COMMENTS	10/30/23

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

MARC A. WHORTON, REGISTERED SURVEYOR #37155

2/2/2024

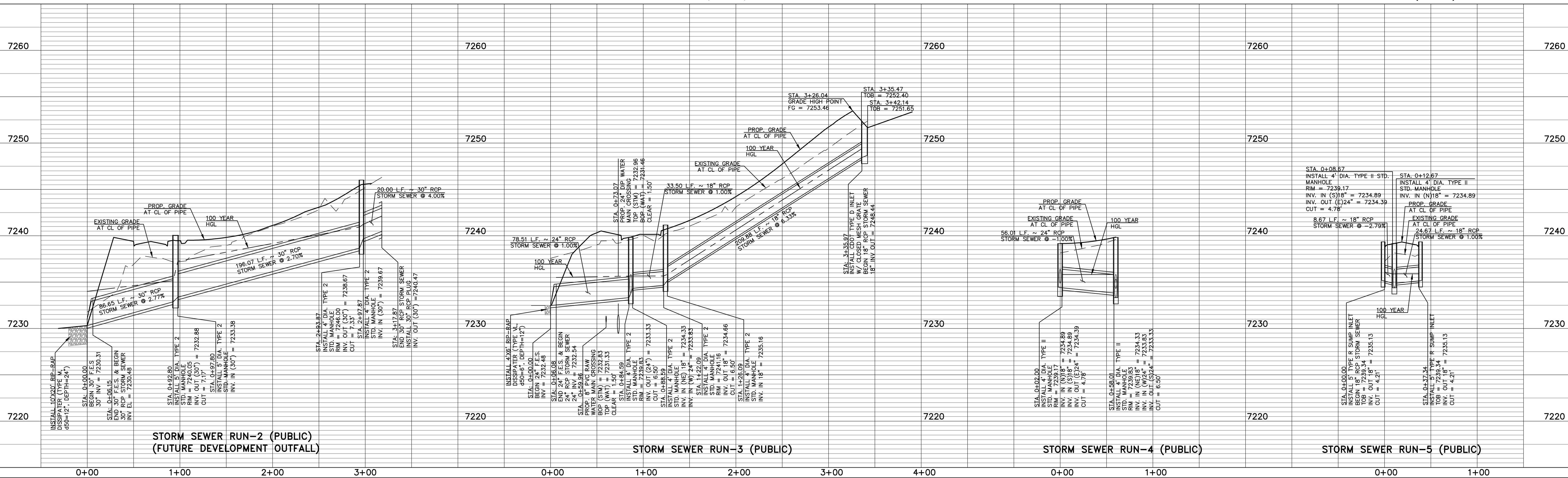
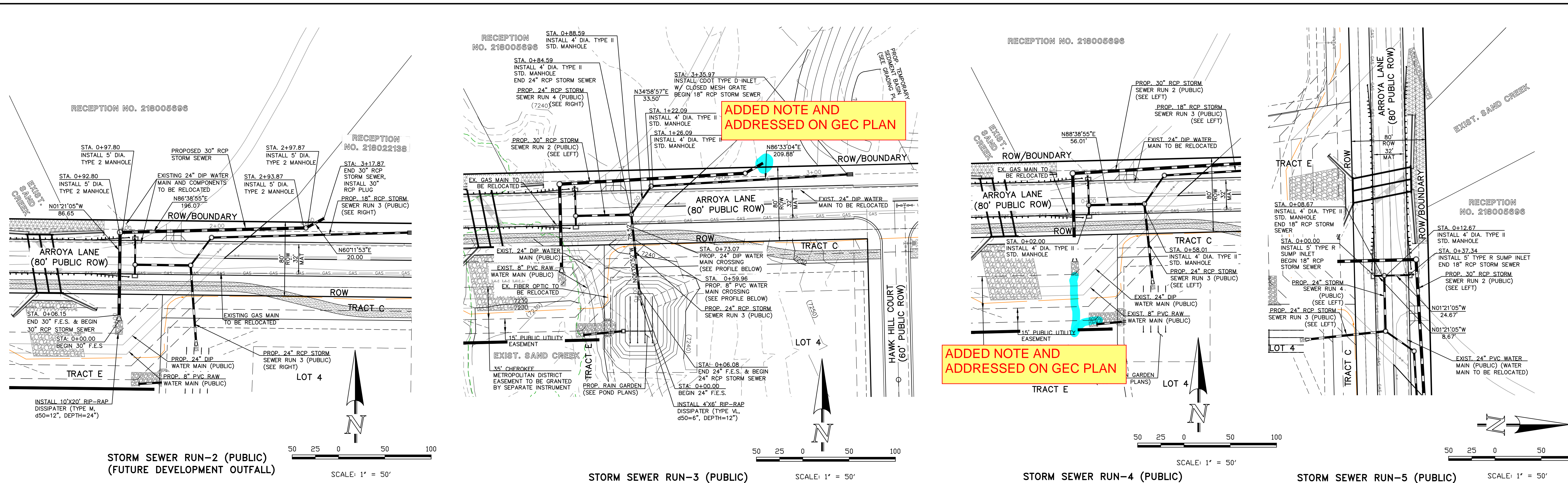
CLASSIC CONSULTING

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

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

RETREAT AT TIMBERIDGE FILING NO. 3
CONSTRUCTION PLANS
PUBLIC STORM SEWER PLAN

DESIGNED BY	PRA	SCALE	DATE
DRAWN BY	PRA	(H) 1" = 50'	SHEET 15 OF 27
CHECKED BY	(V) 1" = 5'	JOB NO.	1185.30



NO. REVISION		DATE
1	REVISED PER COUNTY COMMENTS	9/25/23
2	REVISED STORM SEWER PER ROAD GRADE CHANGE	1/30/24

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

MARC A. WHORTON, P.E., P.S., P.L.S., P.C.E. #37155

DATE: 2/2/2024

RETREAT AT TIMBERIDGE FILING NO. 3
CONSTRUCTION PLANS
PUBLIC STORM SEWER PLAN

DESIGNED BY: PRA
DRAWN BY: PRA
CHECKED BY: (V)

SCALE: (H) 1" = 50'
(V) 1" = 5'

DATE: 11-22-2022
SHEET 16 OF 27
JOB NO. 1185.30

CLASSIC CONSULTING

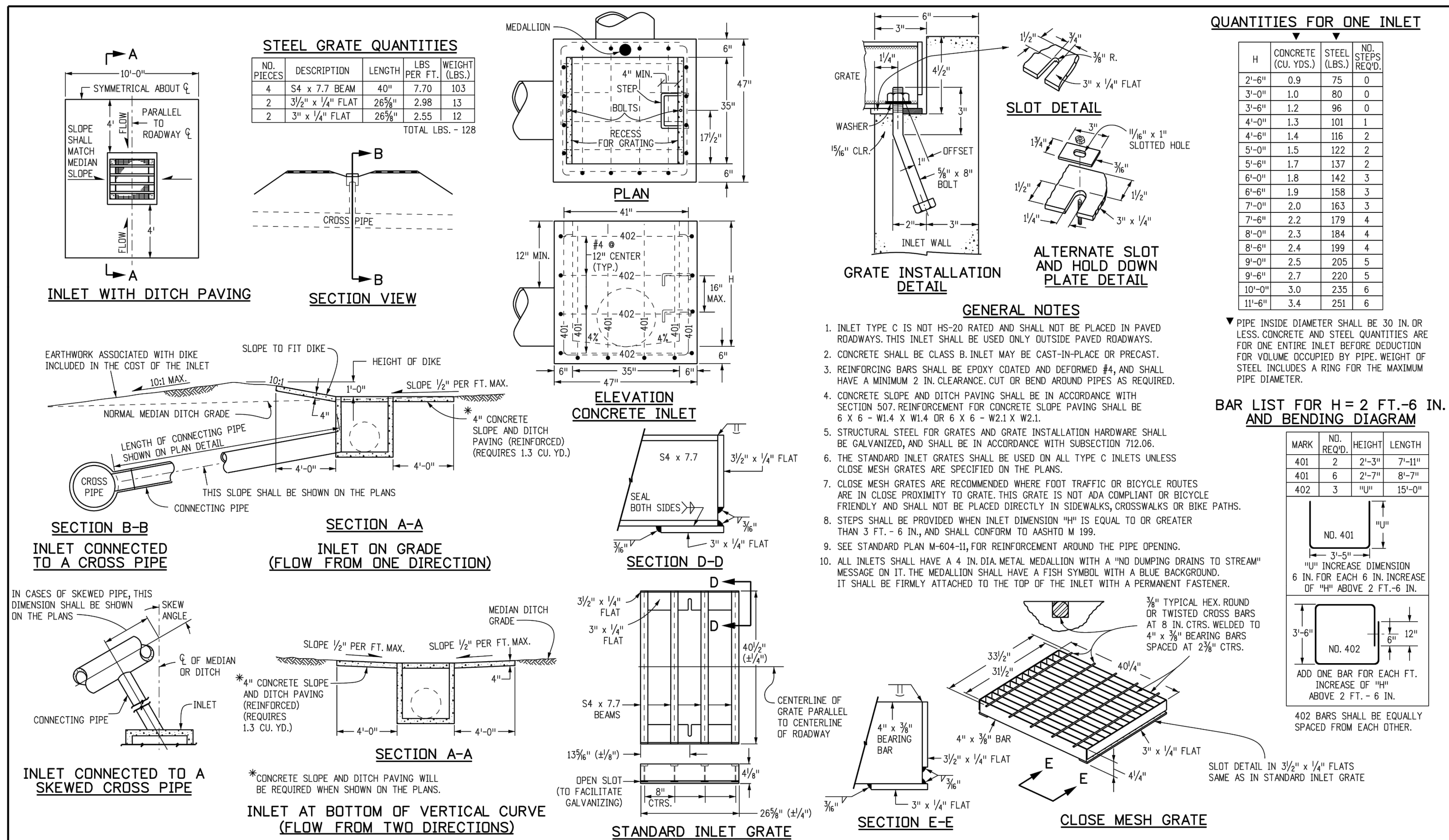
619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903
(719) 785-0790
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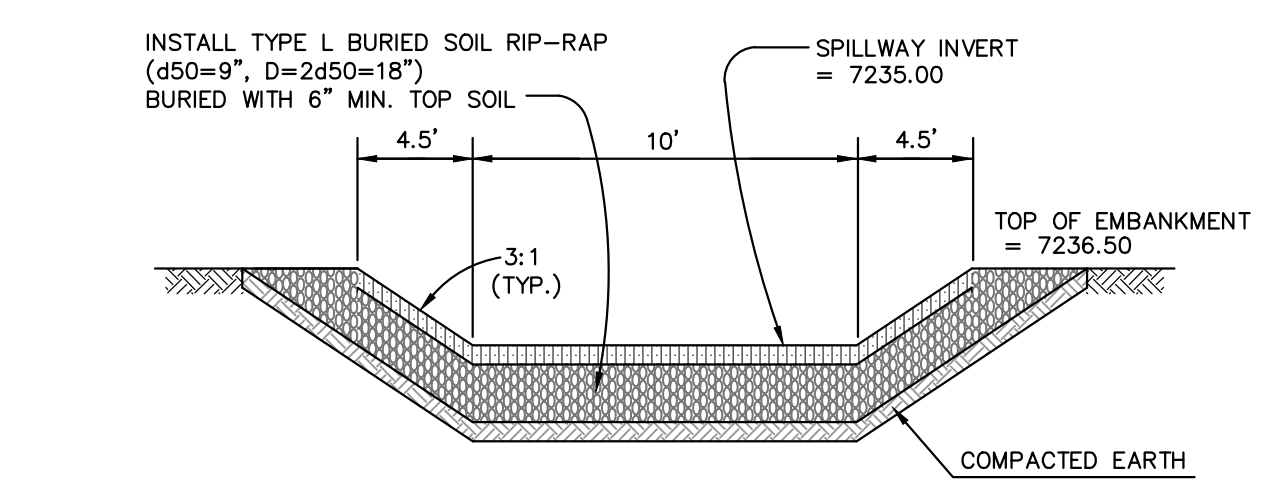
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

V:\18530\DRAWINGS\CONSTRUCT\DRAWING-18530-STM-03.dwg, 2/1/2024, 5:37:17 PM, 1:1

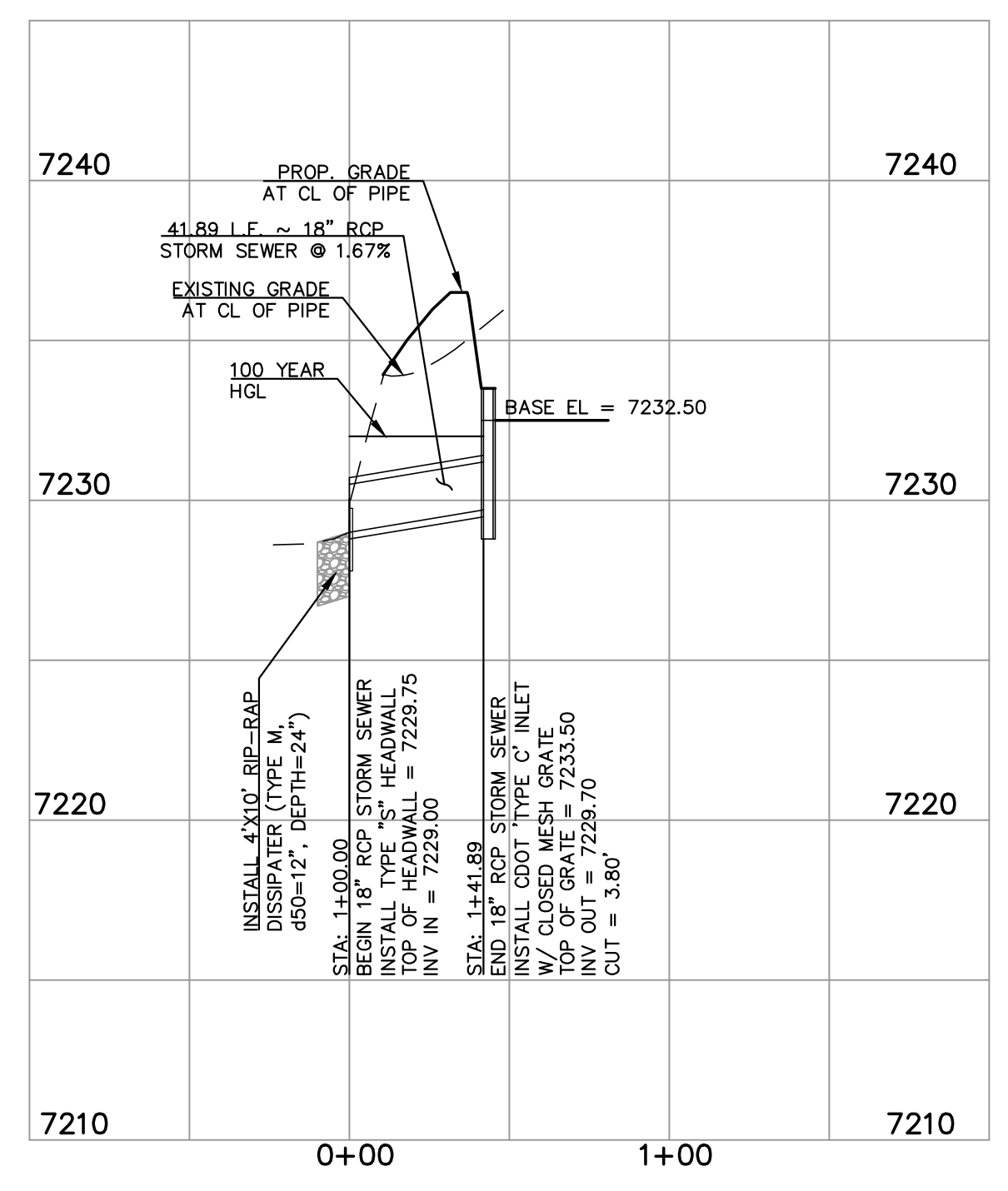
RECEPTION NO. 218022188



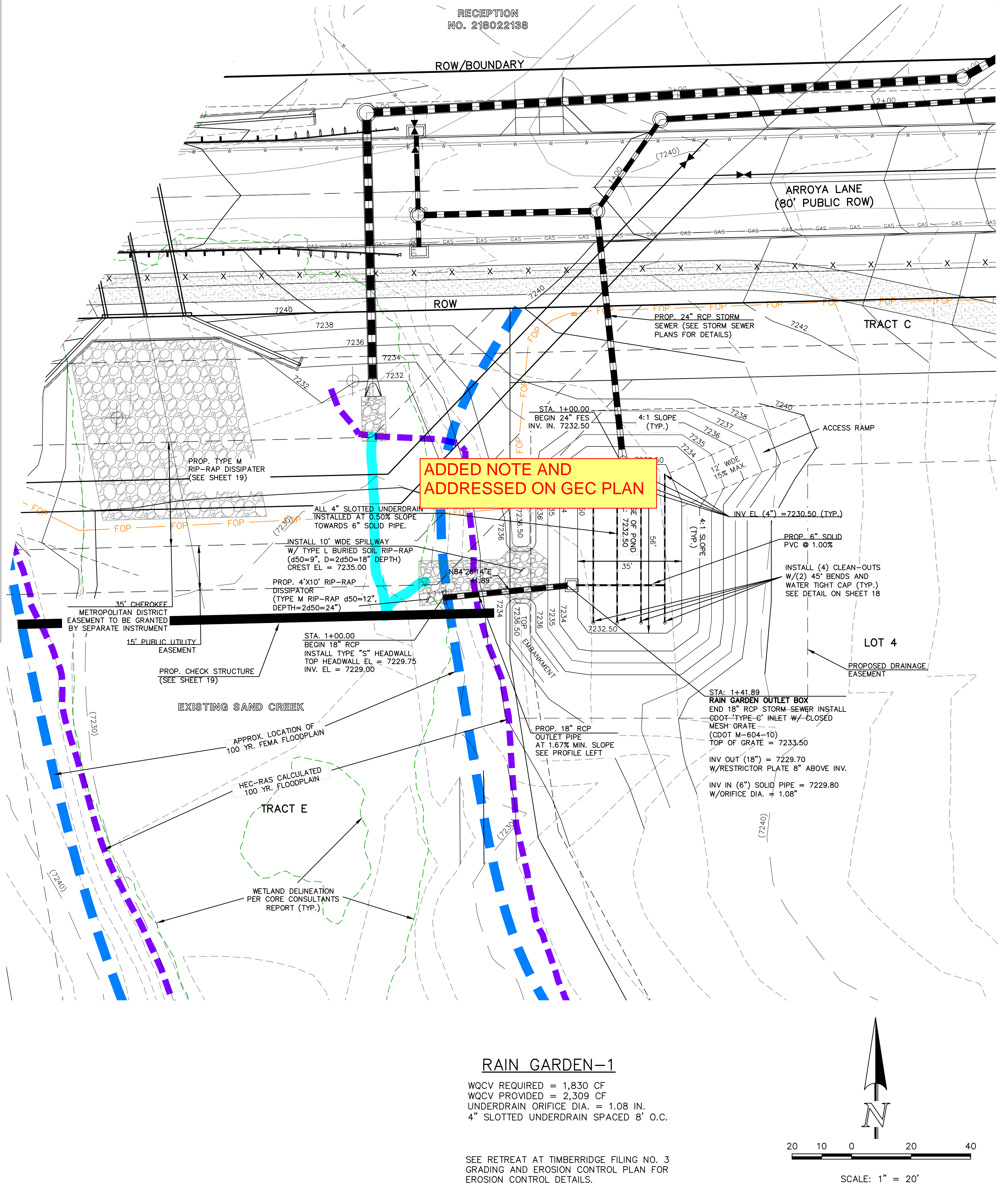
Computer File Information	Sheet Revisions	Colorado Department of Transportation	INLET, TYPE C	STANDARD PLAN NO.
Creation Date: 07/04/12 Last Modification Date: 07/04/12 Full Path: www.coloradodot.info/business/designsupport Drawing File Name: 6040100101.dgn CAD Ver.: MicroStation V8	Date: _____ Comments: _____	4201 East Arkansas Avenue Denver, Colorado 80222 Phone: (303) 757-9083 Fax: (303) 757-9920	Issued By: Project Development Branch July 4, 2012	M-604-10
		Project Development Branch DD/LTA		Sheet No. 1 of 1



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



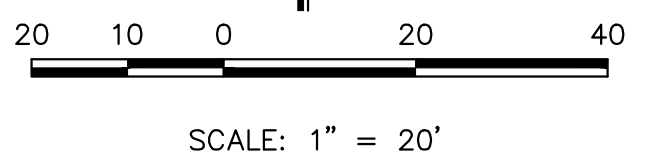
18" RCP STORM SEWER OUTFALL FROM RAIN GARDEN
SCALE 1" = 50' HORZ.
1" = 5' VERT.



RAIN GARDEN-1

WQCV REQUIRED = 1,830 CF
WQCV PROVIDED = 2,309 CF
UNDERDRAIN ORIFICE DIA. = 1.08 IN.
4" SLOTTED UNDERDRAIN SPACED 8' O.C.

SEE RETREAT AT TIMBERRIDGE FILING NO. 3
GRADING AND EROSION CONTROL PLAN FOR
EROSION CONTROL DETAILS.



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NO.	REVISION	DATE
1	REVISED PER COUNTY COMMENTS	9/22/23
2	REVISED PER COUNTY COMMENTS	10/31/23
3	REVISED ELEVATIONS PER ROADWAY CHANGE	1/26/24

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

MARC A. WHORTON
REGISTERED PROFESSIONAL ENGINEER
#37155

2/2/2024
DATE



RETREAT AT TIMBERRIDGE FILING NO. 3
CONSTRUCTION PLANS
RAIN GARDEN 1

DESIGNED BY MAW
DRAWN BY MAW
CHECKED BY

SCALE (H) 1" = 30'
SCALE (V) 1" = N/A

DATE 11-22-2022
SHEET 17 OF 27
JOB NO. 1185.30



Bioretention

T-3

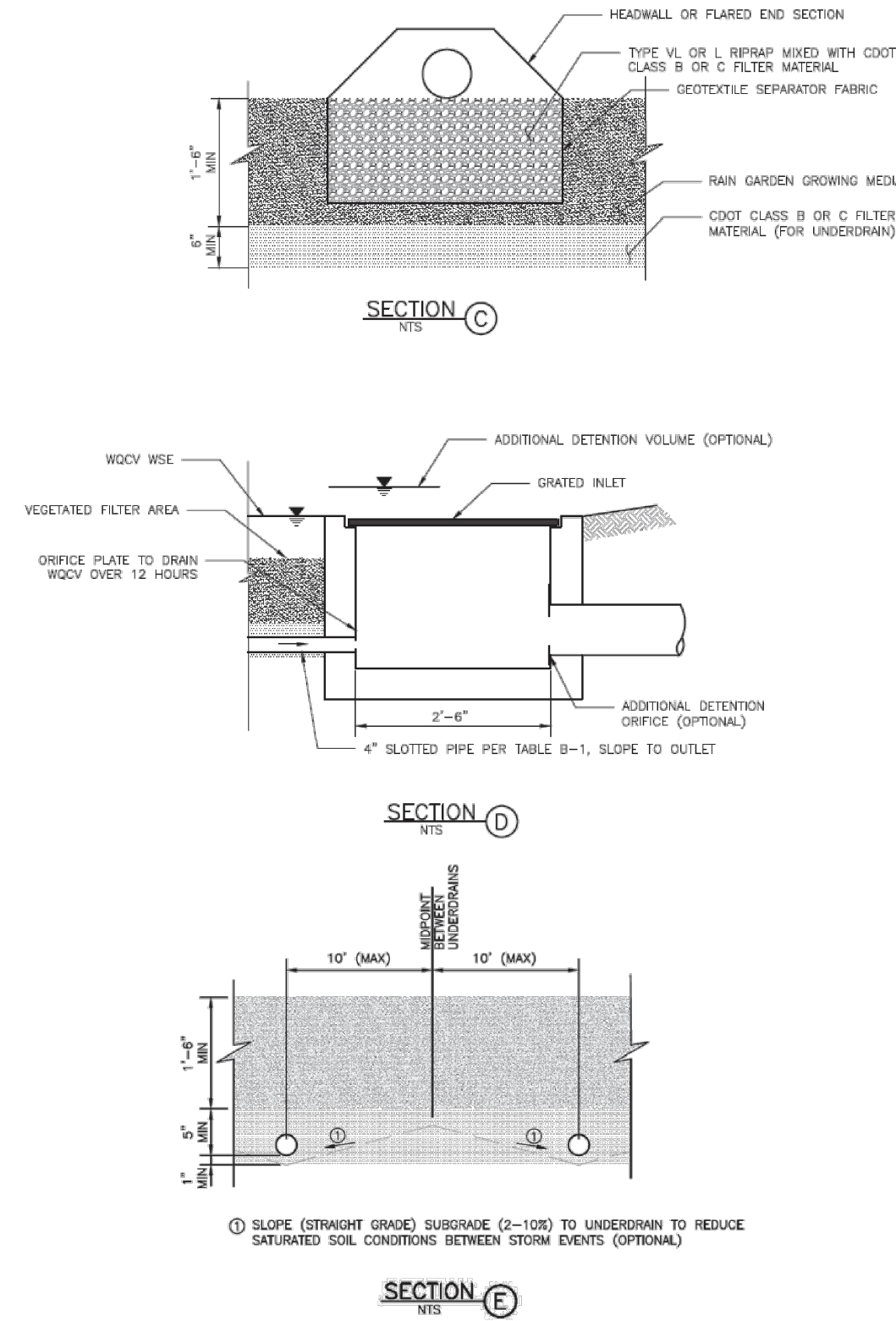
Table B-1. Material specification for bioretention/rain garden facilities

Material	Specification	Testing	Submittals	Notes
Bioretention (growing media) (for rain gardens)	Bioretention media shall be a minimum of 18" deep (18" minimum) and shall be composed of 50% coarse aggregate (3/8" to 1 1/2" nominal size) and 50% organic matter (compost or peat moss) with a minimum of 15% organic matter. The media shall be tested for pH (6.0 to 7.5) and electrical conductivity (EC) (1.5 to 2.5 mmhos/cm) and shall be approved by the engineer.		Particle size distribution and nutrient analysis required.	Percentage area in weight.
Bioretention (landscaping media)	Landscaping media shall be a minimum of 18" deep (18" minimum) and shall be composed of 50% coarse aggregate (3/8" to 1 1/2" nominal size) and 50% organic matter (compost or peat moss) with a minimum of 15% organic matter. The media shall be tested for pH (6.0 to 7.5) and electrical conductivity (EC) (1.5 to 2.5 mmhos/cm) and shall be approved by the engineer.		Particle size distribution and nutrient analysis required.	Percentage area in weight.
Underdrain aggregate	Underdrain aggregate shall be a minimum of 18" deep (18" minimum) and shall be composed of 100% coarse aggregate (3/8" to 1 1/2" nominal size) and shall be approved by the engineer.		Particle size distribution required.	Percentage area in weight.
Underdrain pipe	Underdrain pipe shall be a minimum of 18" deep (18" minimum) and shall be composed of 100% coarse aggregate (3/8" to 1 1/2" nominal size) and shall be approved by the engineer.		Particle size distribution required.	Percentage area in weight.
Impervious liner	Impervious liner shall be a minimum of 18" deep (18" minimum) and shall be composed of 100% coarse aggregate (3/8" to 1 1/2" nominal size) and shall be approved by the engineer.		Particle size distribution required.	Percentage area in weight.

November 2015 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 B-7

Bioretention

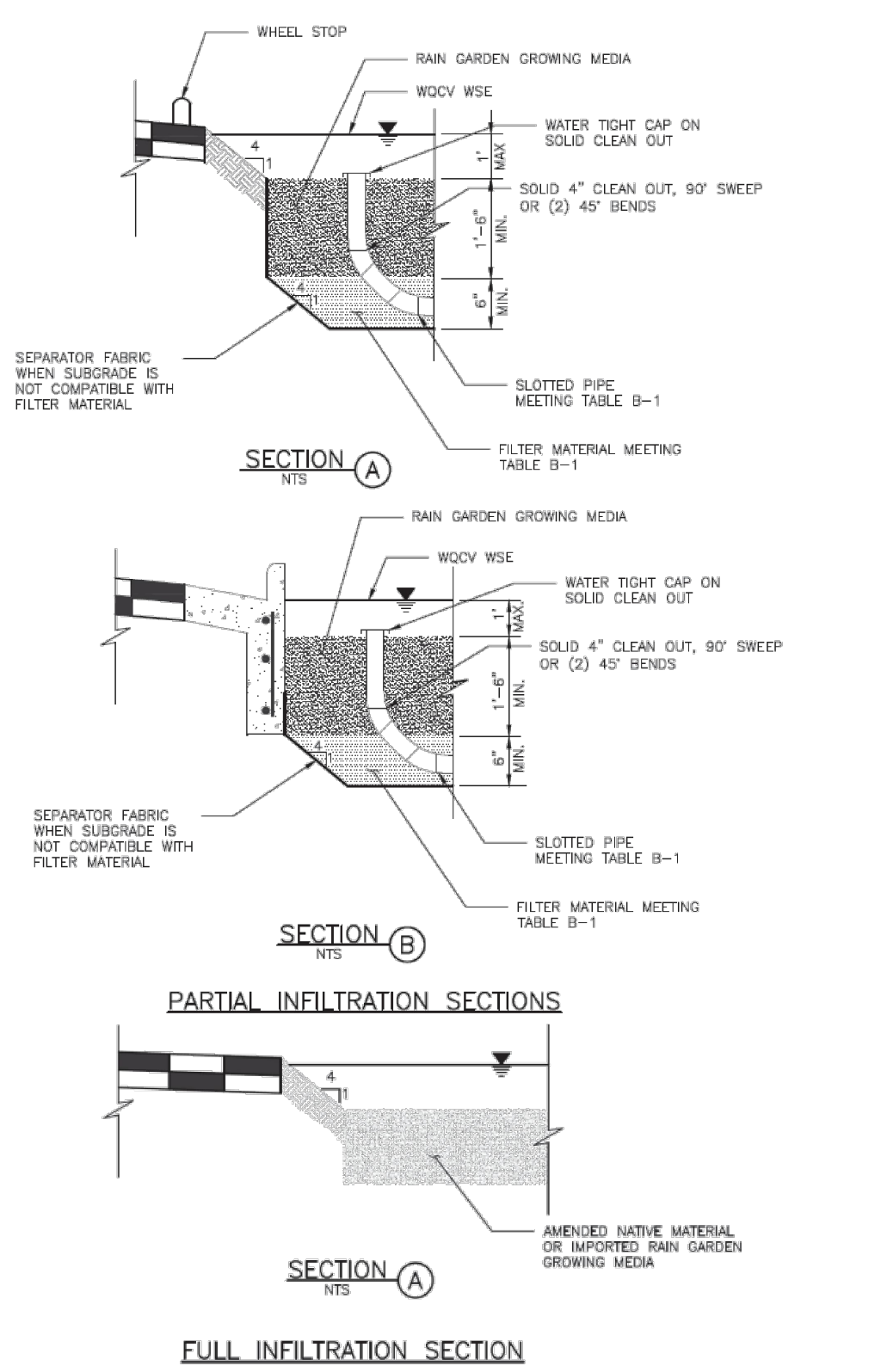
T-3



November 2015 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 B-17

T-3

Bioretention



B-16 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2015

T-3

Bioretention

Table B-3. Native seed mix for rain gardens

Common Name	Scientific Name	Variety	PLS ¹ lbs per Acre	Ounces per Acre
Sand bluestem	Andropogon hallii	Garden	3.5	
Sideoats grama	Bouteloua curtipendula	Butte	3	
Prairie sandreed	Calamovilfa longifolia	Goshen	3	
Indian ricegrass	Oryzopsis hymenoides	Paloma	3	
Switchgrass	Panicum virgatum	Blackwell	4	
Western wheatgrass	Pascopyrum smithii	Ariba	3	
Little bluestem	Schizachyrium scoparium	Patura	3	
Alkali sacaton	Sporobolus airoides		3	
Sand dropseed	Sporobolus cryptandrus		3	
Pasture sage ¹	Artemisia frigida			2
Blue aster ¹	Aster laevis			4
Blanket flower ¹	Gaillardia aristata			8
Prairie coneflower ¹	Ratibida columnifera			4
Purple prairieclover ¹	Dalea (Petalostemum) purpurea			4
Total lbs per acre:			27.5	22

¹ Wildflower seed (optional) for a more diverse and natural look.
² PLS = Pure Live Seed.

B-12 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2015

RANGE OF EQUIV. DIMS.	RANGE OF SPANS F	RANGE OF RISES F	ka	La	C	Ta	SINGLE		DOUBLE	
							CONCRETE	STEEL	CONCRETE	STEEL
36-42	39-47	30-36	36	84	71	185	0.72	26.2	1.22	48.8
42-48	48-59	31-41	41	118	89	207	1.04	36.5	1.77	68.7
54-60	60-71	40-51	51	142	107	249	1.53	52.2	2.81	97.2
60-75	72-83	44-49	49	166	119	285	2.49	78.3	4.14	143.0
72-81	84-95	63-72	72	190	131	321	2.53	93.1	4.76	166.5
84-90	96-107	69-76	76	214	143	357	3.42	110.1	5.45	194.6

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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 ENGINEERING SURVEYORS, LLC

MARC A. WHORTON
 #37155

2/2/2024

CLASSIC CONSULTING

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

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

RETREAT AT TIMBERIDGE FILING NO. 3
 CONSTRUCTION PLANS
 RAIN GARDEN 1 DETAILS

DESIGNED BY MAW SCALE DATE 11-22-2022
 DRAWN BY MAW (H) 1" = 30' SHEET 18 OF 27
 CHECKED BY (V) 1" = N/A JOB NO. 1185.30

CLASSIC CONSULTING

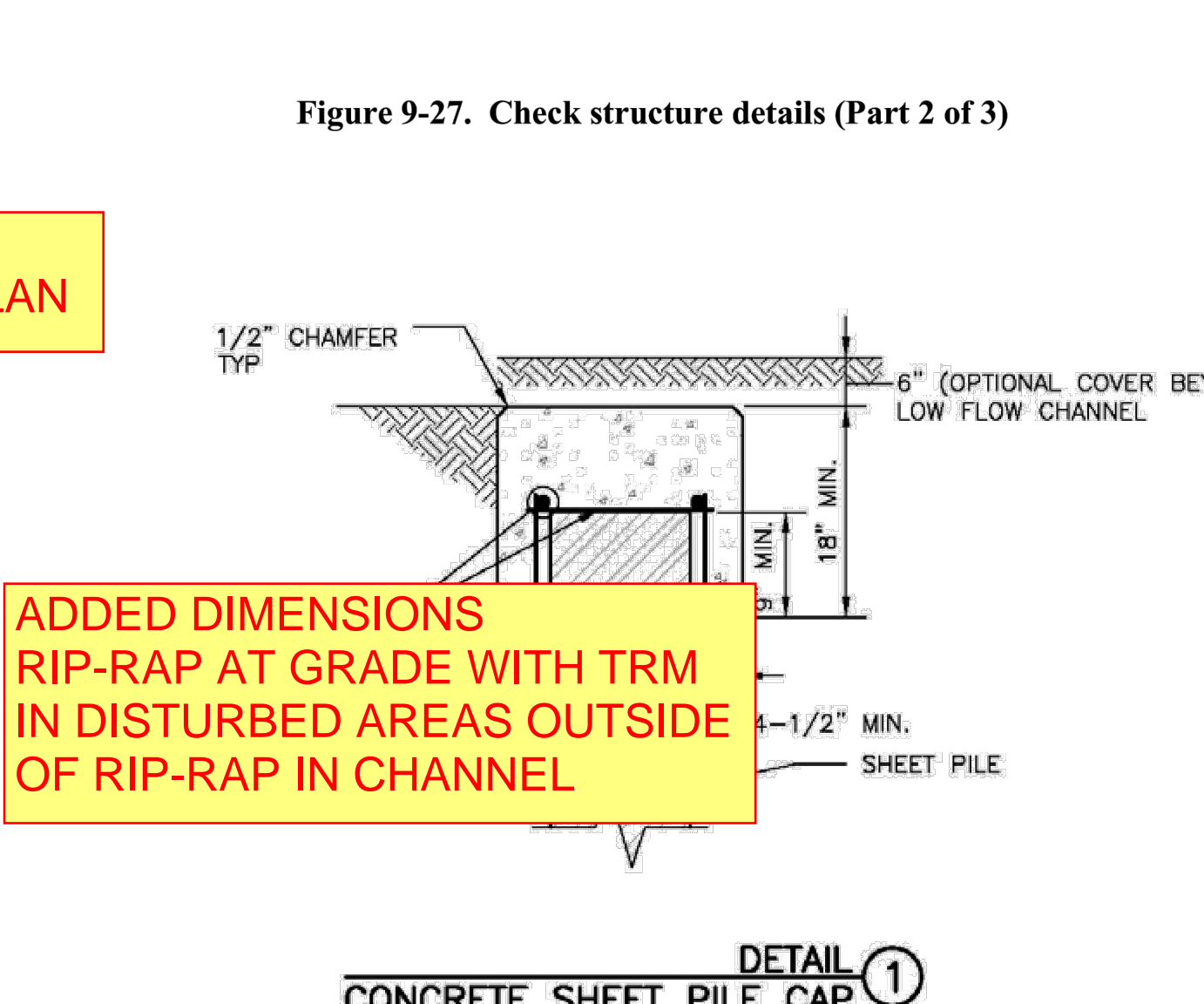
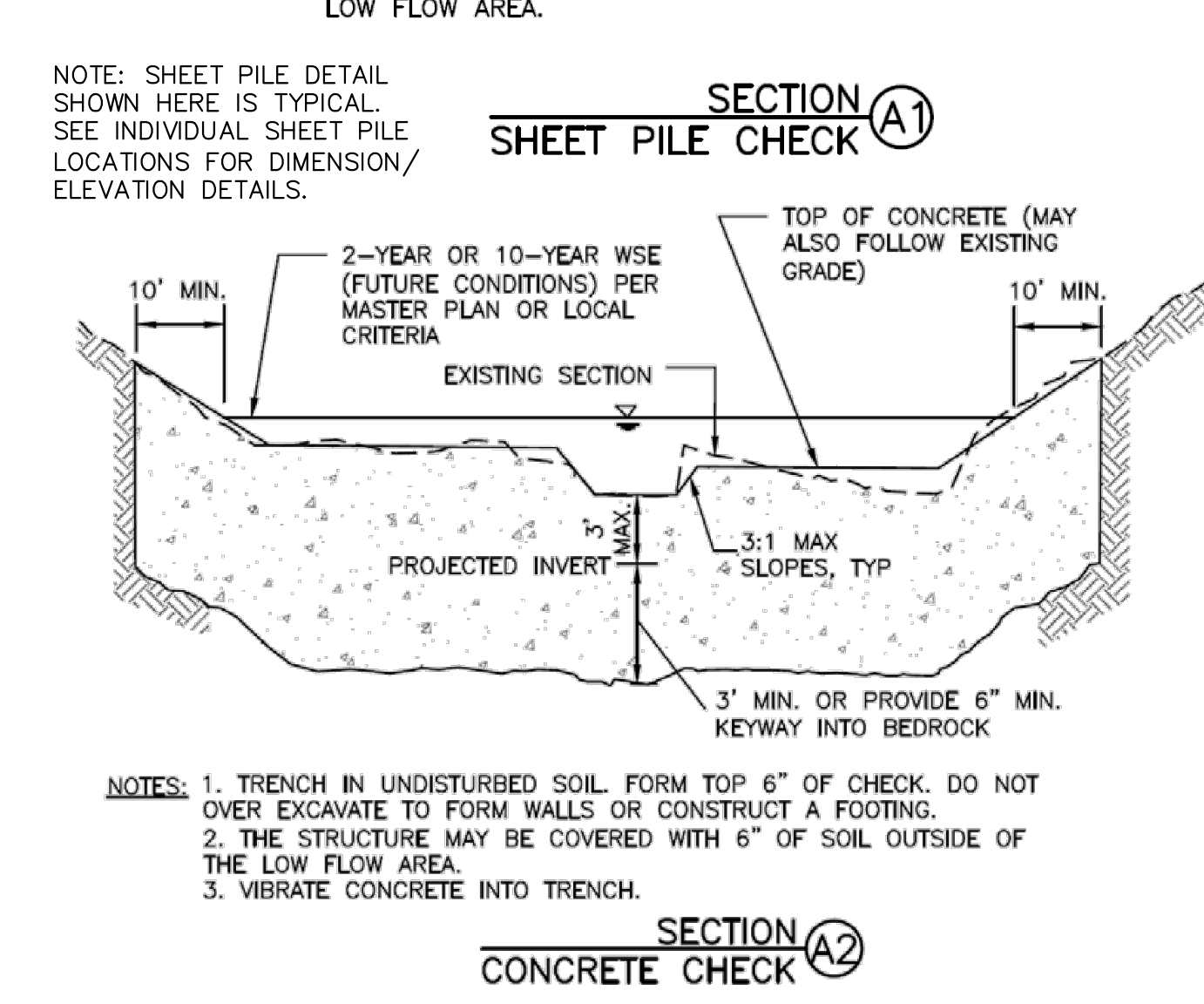
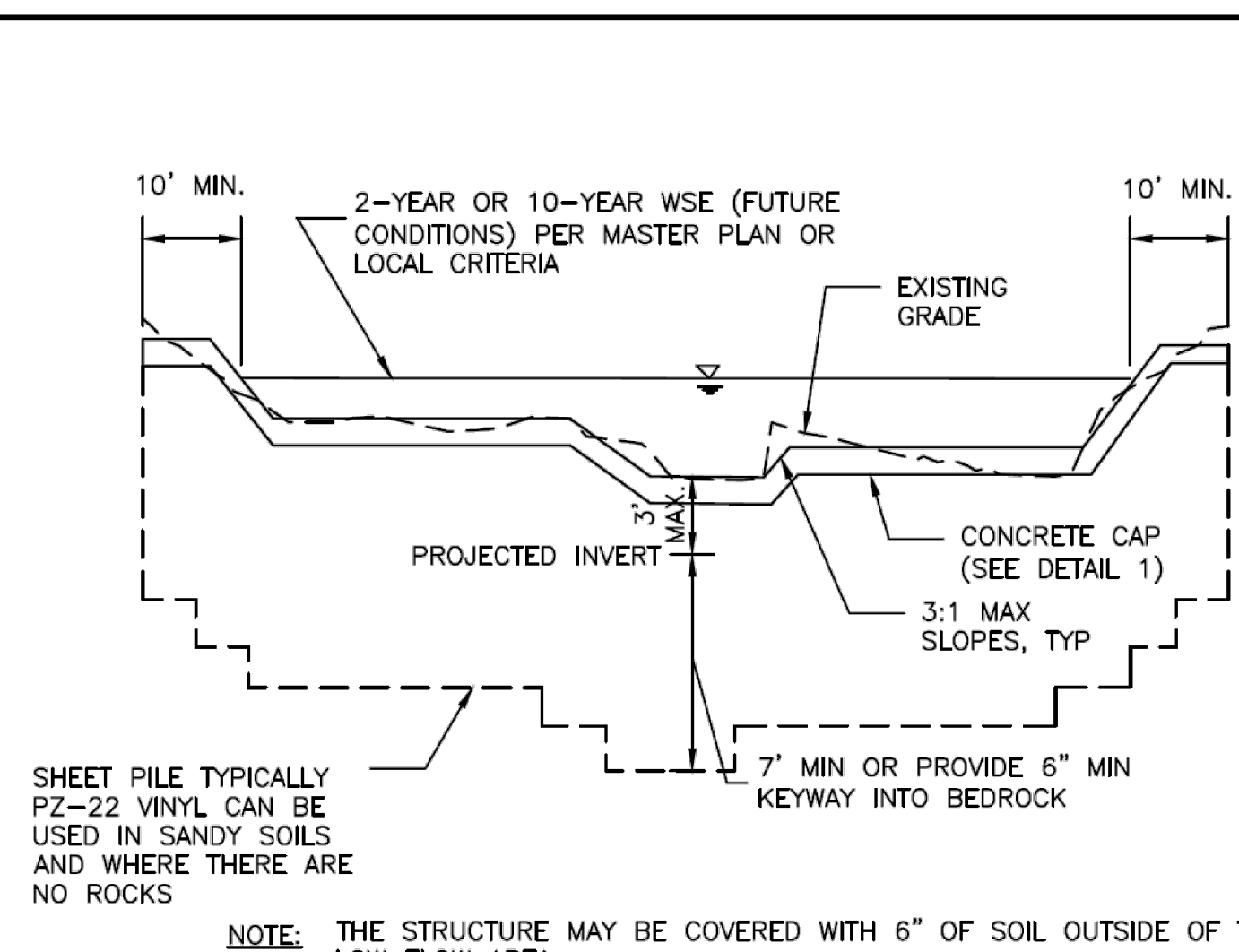
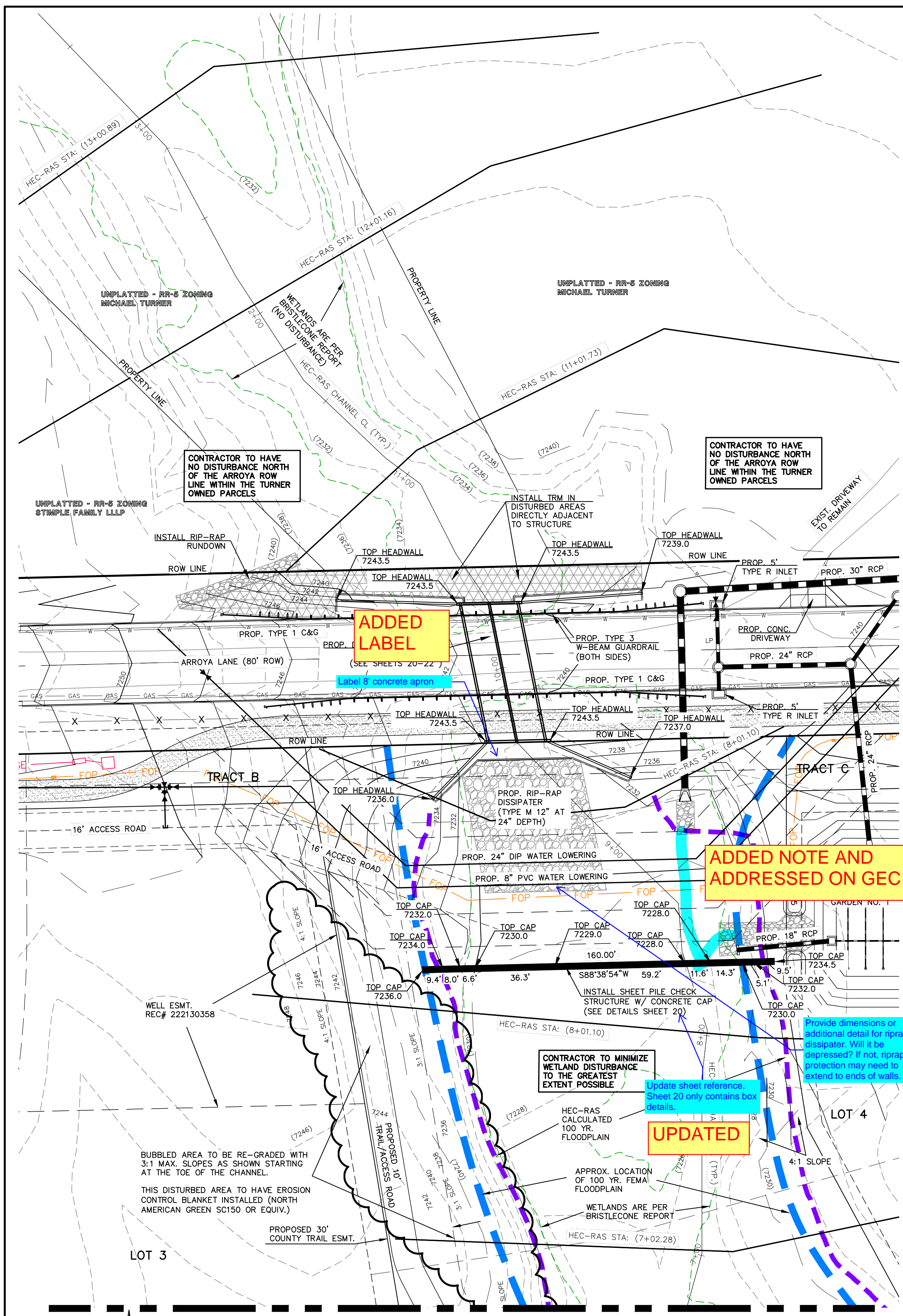
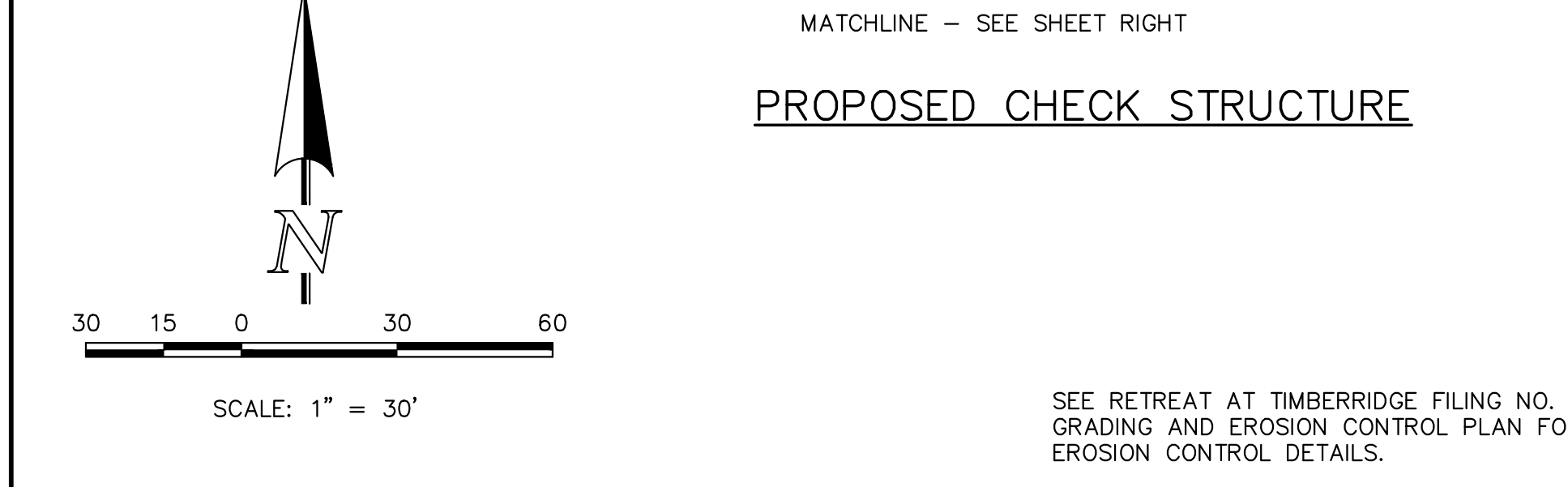
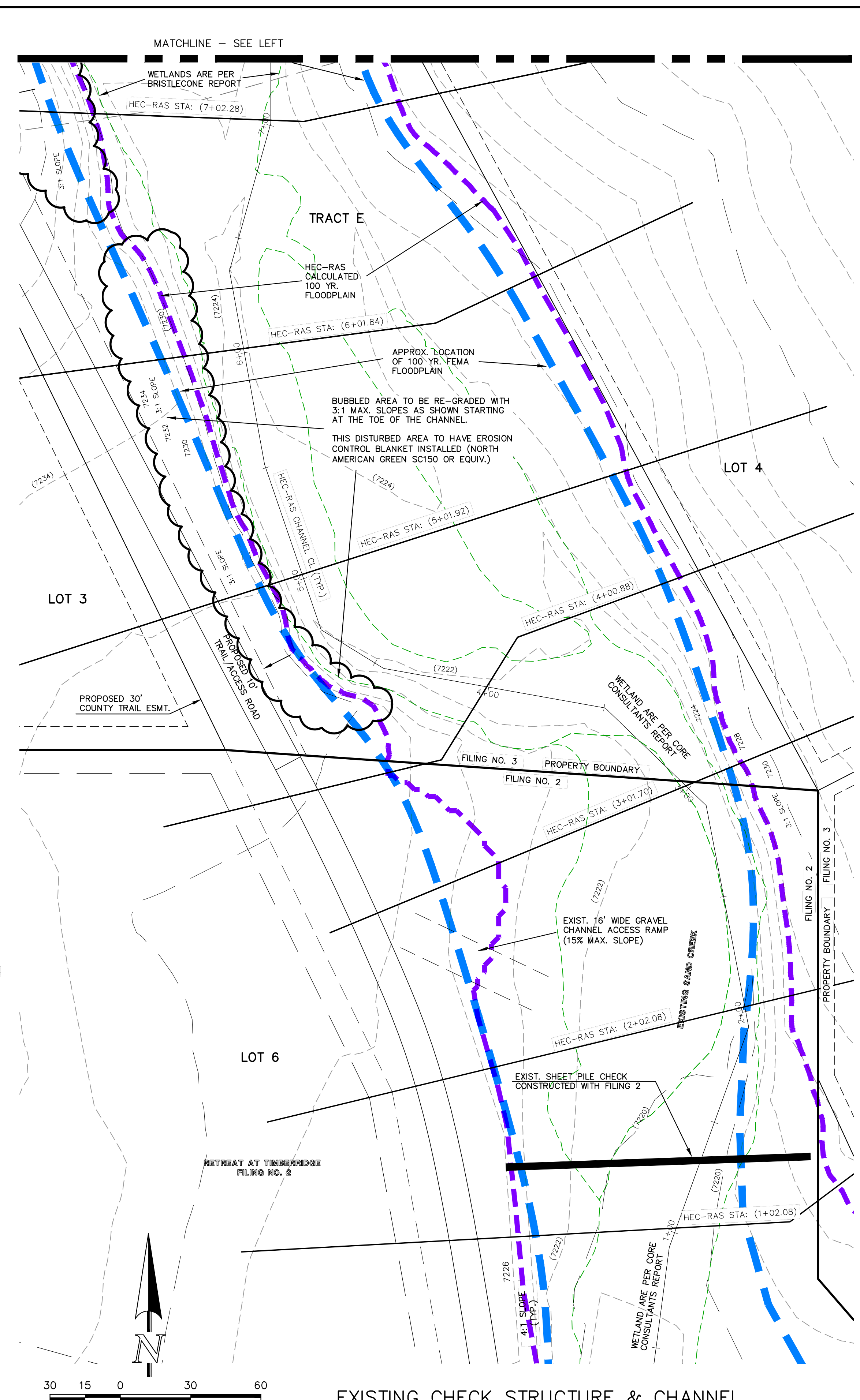


Figure 9-27. Check structure details (Part 2 of 3)

Figure 9-28. Check structure details (Part 3 of 3)



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NO.	REVISION	DATE
1	REVISED PER COUNTY COMMENTS	9/22/23
2	REVISED PER COUNTY COMMENTS	10/31/23
3	REVISED PER ROADWAY ELEVATION CHANGE	1/26/24

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

MARC A. WHORTON, COLORADO REGISTERED PROFESSIONAL ENGINEER #37155
DATE: 2/2/2024



RETREAT AT TIMBERIDGE FILING NO. 3
CONSTRUCTION PLANS
CHECK STRUCTURE

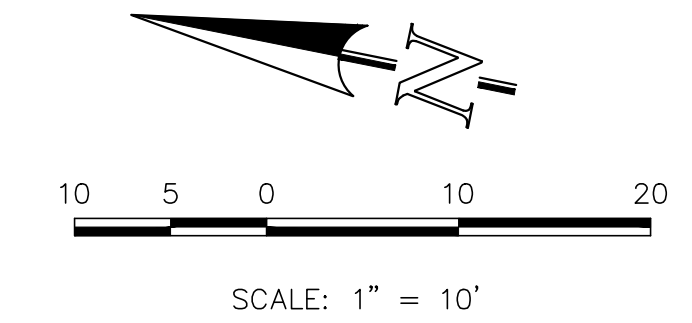
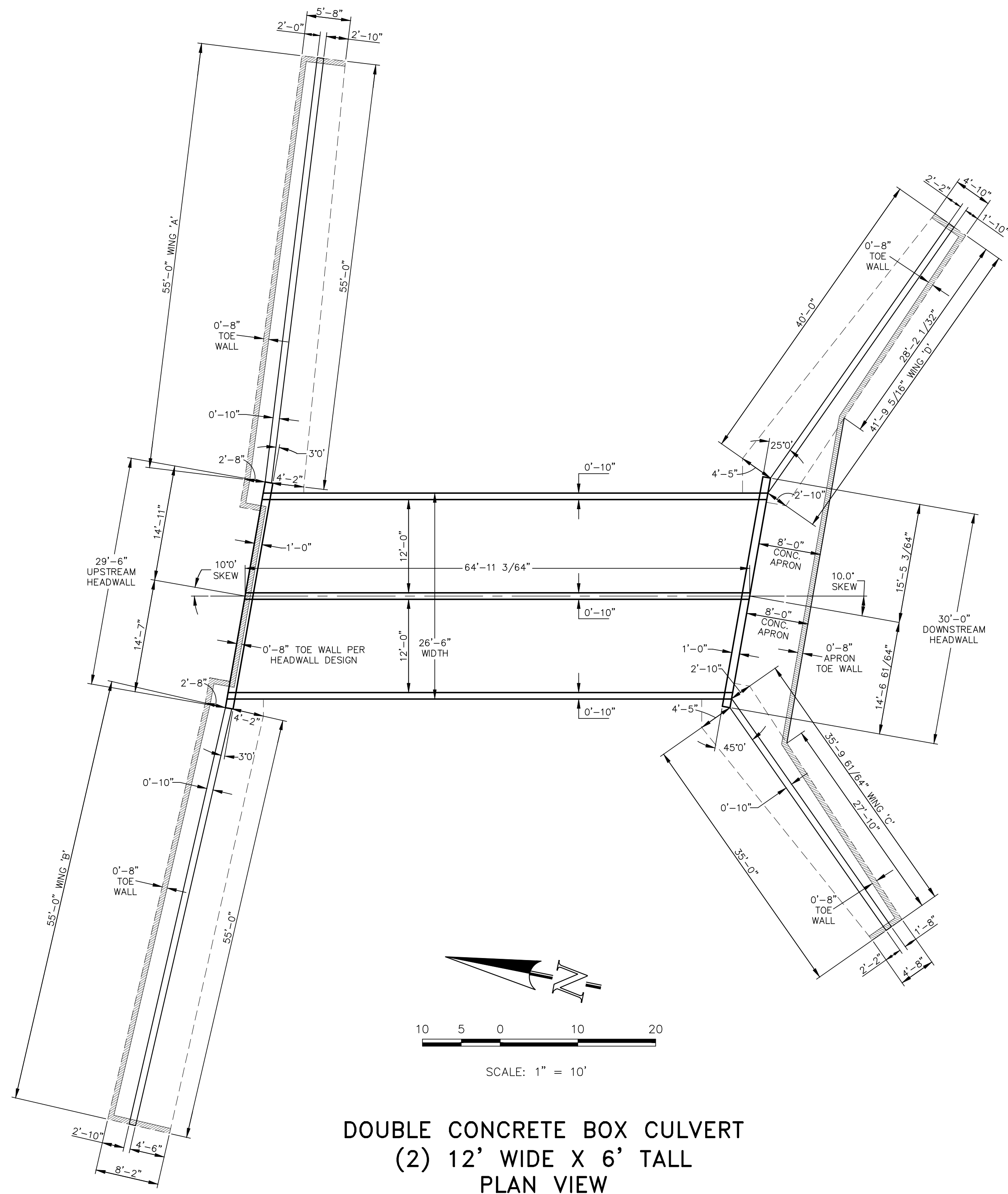
DESIGNED BY: MAW
DRAWN BY: MAW
CHECKED BY:

SCALE: (H) 1" = 30'
(V) 1" = N/A

DATE: 4-15-21
SHEET 19 OF 27
JOB NO. 1185.30

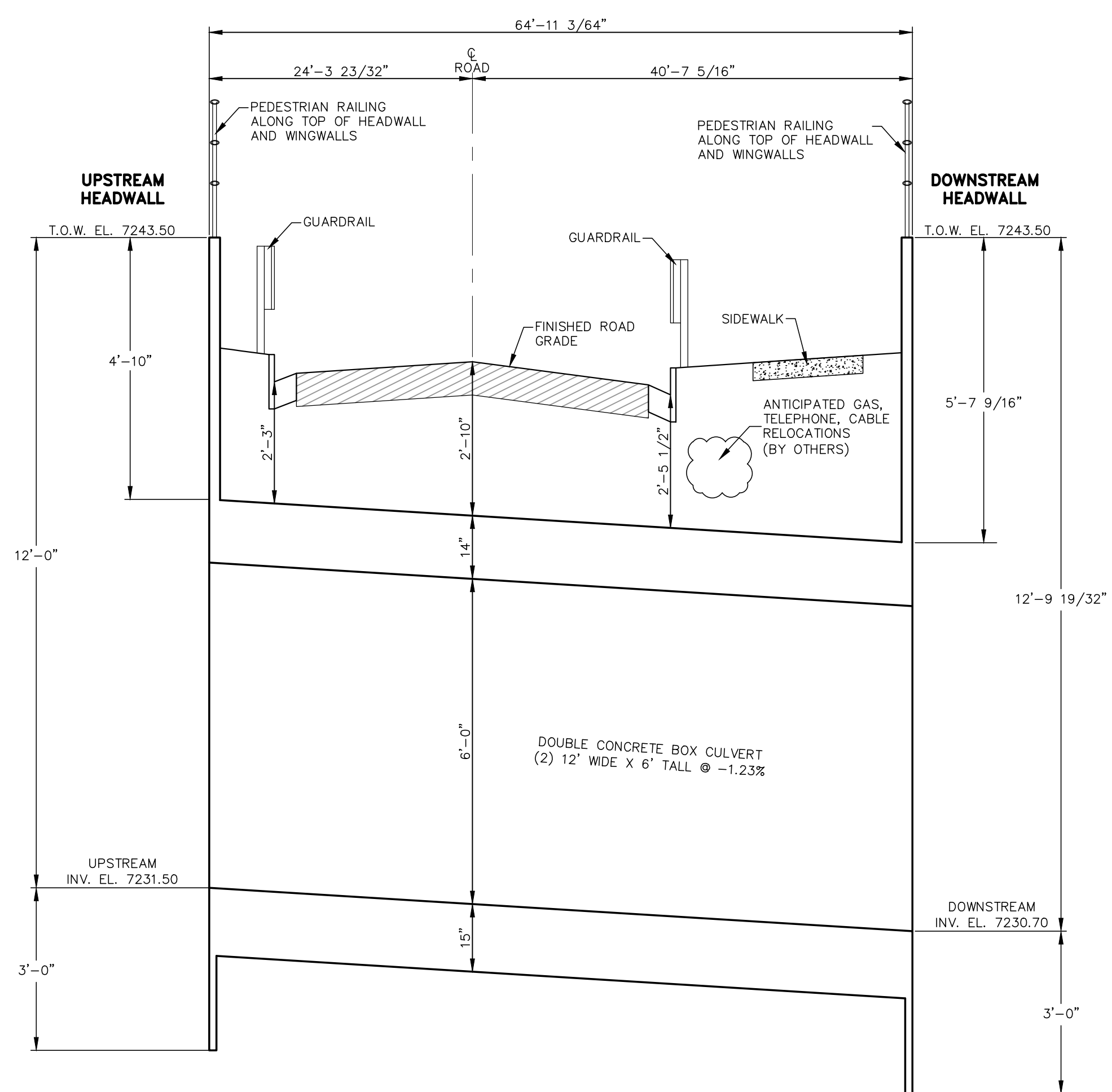


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**DOUBLE CONCRETE BOX CULVERT
(2) 12' WIDE X 6' TALL
PLAN VIEW**

NOTE:
SEE SHEET 22 FOR HEADWALL
AND WINGWALL DETAILS PER
CDOT M&S STANDARDS PLANS



NOTE:
ALL ELEVATIONS, LOCATIONS AND
GEOMETRY TO BE VERIFIED PRIOR
TO CONSTRUCTION.

**DOUBLE CONCRETE BOX CULVERT
(2) 12' WIDE X 6' TALL
PROFILE THROUGH CENTERLINE OF STRUCTURE
SCALE: 1"=10' (H), 1"=2' (V)**

NOTE:
SEE SHEET 22 FOR HEADWALL
AND WINGWALL DETAILS PER
CDOT M&S STANDARDS PLANS

48 HOURS BEFORE YOU DIG,
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NO.	REVISION	DATE

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

(Signature)
37155

MARC A. WHORTON, LICENSED PROFESSIONAL ENGINEER #37155 DATE 2/2/2024

CLASSIC CONSULTING

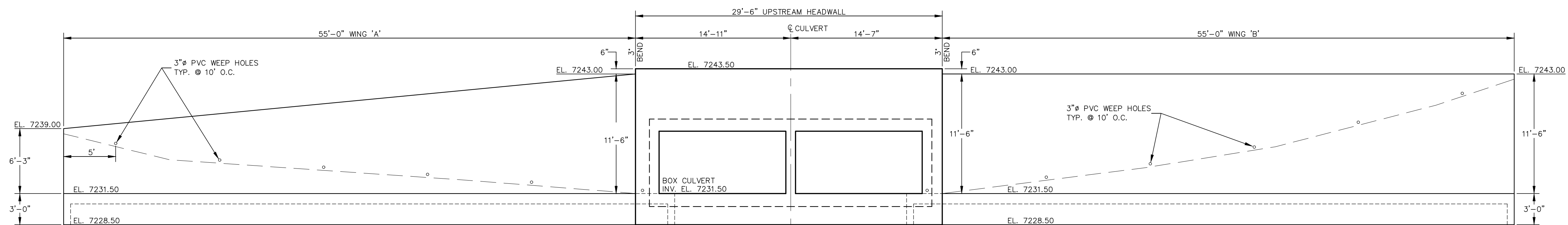
619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903
(719) 785-0790
(719) 785-0799 (Fax)

RETREAT AT TIMBERRIDGE FILING NO. 3
CONSTRUCTION PLANS
ARROYA CULVERT CROSSING
PLAN AND PROFILE

DESIGNED BY	MAW	SCALE	DATE	1/26/24
DRAWN BY	PRA	(H) 1"= 10"	SHEET	20 OF 27
CHECKED BY		(V) 1"= VARIES	JOB NO.	1185.30



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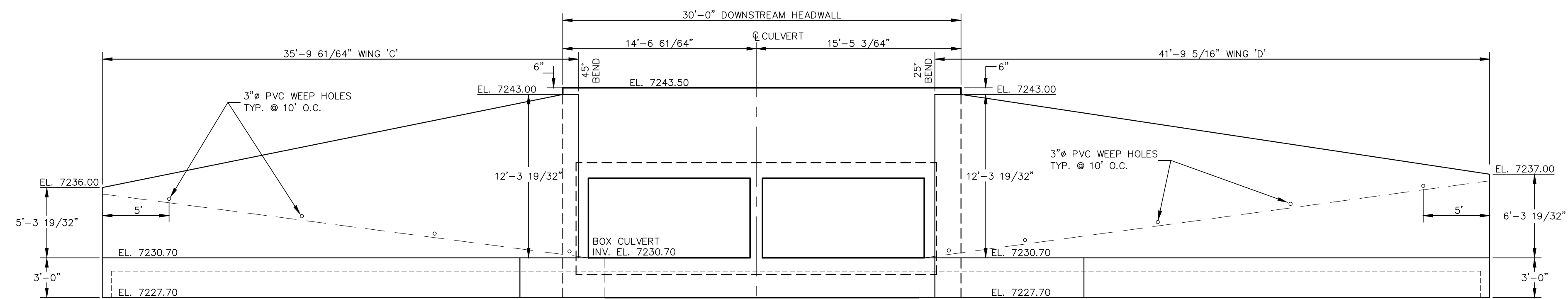


NOTE:
WINGWALLS ARE ROTATED FOR CLARITY

**DOUBLE CONCRETE BOX CULVERT
(2) 12' WIDE X 6' TALL
UPSTREAM END ELEVATION VIEW**



SCALE: 1" = 6'



NOTE:
WINGWALLS ARE ROTATED FOR CLARITY

**DOUBLE CONCRETE BOX CULVERT
(2) 12' WIDE X 6' TALL
DOWNSTREAM END ELEVATION VIEW**



SCALE: 1" = 6'

NOTE:
SEE SHEET 22 FOR HEADWALL
AND WINGWALL DETAILS PER
CDOT M&S STANDARDS PLANS

**48 HOURS BEFORE YOU DIG,
CALL UTILITY LOCATORS
811**
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NO.	REVISION	DATE

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

MARC A. WHORTON #37155 DATE 2/2/2024

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

RETREAT AT TIMBERRIDGE FILING NO. 3 CONSTRUCTION PLANS ARROYA CULVERT CROSSING END ELEVATION VIEWS			
DESIGNED BY	MAW	SCALE	DATE 1/26/24
DRAWN BY	PRA	(H) 1" = 6'	SHEET 21 OF 27
CHECKED BY		(V) 1" = 6'	JOB NO. 1185.30



V:\118530\DRAWINGS\CONSTRUCT\DRAW\21-118530-CROSSING-02.dwg, 2/2/2024, 11:18:04 AM, 1:1

GENERAL NOTES

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

TYPICAL BAR LAYOUT FOR CONCRETE HEADWALLS

HEADWALL FOR RIGID ROUND PIPE

HEADWALL FOR FLEXIBLE PIPE ARCH

HEADWALL FOR FLEXIBLE ROUND PIPE

HEADWALL FOR STRUCTURAL PLATE ARCH

DIMENSIONS		QUANTITIES	
BO	BC	CONCRETE	STEEL
IN.	IN.	CU. YD.	LB.
40	40	1.2	150
42	42	1.4	170
44	44	1.6	190
46	46	1.8	210
48	48	2.0	230
50	50	2.2	250
52	52	2.4	270
54	54	2.6	290
56	56	2.8	310
58	58	3.0	330
60	60	3.2	350
62	62	3.4	370
64	64	3.6	390
66	66	3.8	410
68	68	4.0	430
70	70	4.2	450
72	72	4.4	470
74	74	4.6	490
76	76	4.8	510
78	78	5.0	530
80	80	5.2	550
82	82	5.4	570
84	84	5.6	590
86	86	5.8	610
88	88	6.0	630
90	90	6.2	650
92	92	6.4	670
94	94	6.6	690
96	96	6.8	710
98	98	7.0	730
100	100	7.2	750

FRONT VIEW

TOP VIEW

WINGWALL CONNECTION

BAR BENDING

INLET/OUTLET ENDS OF FLEXIBLE PIPE

INLET/OUTLET ENDS OF RIGID PIPE

Computer File Information

Creation Date: 07/31/19

Designer Initials: JBK

Last Modification Date: 07/31/19

Detailer Initials: LTA

CAD Ver: MicroStation V8 Scale: Not to Scale Units: English

Sheet Revisions

Date	Comments

HEADWALL FOR PIPES

STANDARD PLAN NO. M-601-10

Standard Sheet No. 1 of 1

Issued by the Project Development Branch July 31, 2019

HEADWALL FOR PIPES

STANDARD PLAN NO. M-601-11

Standard Sheet No. 1 of 1

Issued by the Project Development Branch July 31, 2019

GENERAL NOTES

- CONCRETE SHALL BE CLASS B.
- EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 1/4" IN.
- IF A PRECAST HEADWALL IS USED, A PERMANENT EPOXY BOND, APPROVED BY THE ENGINEER, SHALL BE USED BETWEEN PIPE AND HEADWALL.
- HEADWALL SHALL BE PERPENDICULAR TO THE CALVERT CENTERLINE UNLESS OTHERWISE SPECIFIED. TABULATED DIMENSIONS AND QUANTITIES SHALL BE ADJUSTED FOR SKEWED INSTALLATIONS.
- HEADWALL ANCHOR BOLTS SHALL CONFORM TO A6153 AND SHALL BE INCLUDED IN THE COST OF PIPE.
- HEADWALL ANCHOR BOLTS SHALL BE USED ONLY WITH FLEXIBLE PIPE, BOTH ROUND AND ARCH.

TYPICAL GALVANIZED ANCHOR BOLTS

HEADWALL FOR METAL PIPE ARCH (MPA)

HEADWALL FOR ROUND PIPE

DIMENSIONS		QUANTITIES	
EQUIV. BO	SPAN	CONCRETE	STEEL
IN.	IN.	CU. YD.	LB.
40	40	1.2	150
42	42	1.4	170
44	44	1.6	190
46	46	1.8	210
48	48	2.0	230
50	50	2.2	250
52	52	2.4	270
54	54	2.6	290
56	56	2.8	310
58	58	3.0	330
60	60	3.2	350
62	62	3.4	370
64	64	3.6	390
66	66	3.8	410
68	68	4.0	430
70	70	4.2	450
72	72	4.4	470
74	74	4.6	490
76	76	4.8	510
78	78	5.0	530
80	80	5.2	550
82	82	5.4	570
84	84	5.6	590
86	86	5.8	610
88	88	6.0	630
90	90	6.2	650
92	92	6.4	670
94	94	6.6	690
96	96	6.8	710
98	98	7.0	730
100	100	7.2	750

FRONT VIEW

TOP VIEW

WINGWALL CONNECTION

BAR BENDING

INLET/OUTLET ENDS OF FLEXIBLE PIPE

INLET/OUTLET ENDS OF RIGID PIPE

Computer File Information

Creation Date: 07/31/19

Designer Initials: JBK

Last Modification Date: 07/31/19

Detailer Initials: LTA

CAD Ver: MicroStation V8 Scale: Not to Scale Units: English

Sheet Revisions

Date	Comments

HEADWALLS FOR PIPES

STANDARD PLAN NO. M-601-11

Standard Sheet No. 1 of 1

Issued by the Project Development Branch July 31, 2019

HEADWALLS FOR PIPES

STANDARD PLAN NO. M-601-12

Standard Sheet No. 1 of 1

Issued by the Project Development Branch July 31, 2019

GENERAL NOTES

- FOR SIZE AND LOCATION OF PIPES, SEE THE PLANS.
- ALL CONCRETE SHALL BE CLASS B.
- FOOTINGS IN ROCK SHALL BE WEARED OUT TO ROCK AND NOT FORMED IN ACCORDANCE WITH SUBSECTION 05.09.01.
- EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 1/4" IN.
- 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 OUTLET PAVING

PIPE TYPE	PIPE DIAMETER AND EQUIVALENT DIAMETER (IN.)								
	18	24	30	36	42	48	54	60	
CIRCULAR	RIGID	1.0	1.3	1.5	2.0	2.0	2.7	2.8	3.6
	FLEXIBLE	1.1	1.4	1.6	2.1	2.2	3.0	4.0	3.9
ELLIPTICAL	RIGID	2.3 x 1.4	3.0 x 1.9	3.8 x 2.4	4.5 x 2.9	5.3 x 3.4	6.0 x 4.4	6.8 x 5.0	7.5 x 5.8
	ARCH	2.2 x 1.3	2.9 x 1.8	3.6 x 2.2	4.3 x 2.7	5.0 x 3.1	5.8 x 3.6	6.6 x 4.4	7.4 x 5.0

CONCRETE QUANTITIES FOR ONE CONCRETE HEADWALL (CUBIC YARDS)

THICKNESS	MATERIAL	18	24	30	36	42	48
4"	CONCRETE	0.4	0.8	1.2	1.6	2.0	2.4
6"	CONCRETE	0.6	1.2	1.8	2.4	3.0	3.6
18"	RIPIRAP	2.0	3.5	5.4	7.8	10.7	13.9

PIPE OUTLET PAVING (CUBIC YARDS)

NOTE: VOLUME OCCUPIED BY PIPE HAS BEEN DEDUCTED.

THICKNESS	MATERIAL	18	24	30	36	42	48
4"	CONCRETE	0.4	0.8	1.2	1.6	2.0	2.4
6"	CONCRETE	0.6	1.2	1.8	2.4	3.0	3.6
18"	RIPIRAP	2.0	3.5	5.4	7.8	10.7	13.9

Computer File Information

Creation Date: 07/31/19

Designer Initials: JBK

Last Modification Date: 07/31/19

Detailer Initials: LTA

CAD Ver: MicroStation V8 Scale: Not to Scale Units: English

Sheet Revisions

Date	Comments

HEADWALLS AND PIPE OUTLET PAVING

STANDARD PLAN NO. M-601-12

Standard Sheet No. 1 of 1

Issued by the Project Development Branch July 31, 2019

HEADWALLS AND PIPE OUTLET PAVING

STANDARD PLAN NO. M-601-13

Standard Sheet No. 1 of 1

Issued by the Project Development Branch July 31, 2019

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NO. REVISION

NO.	REVISION	DATE

REVIEW:

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

MARC A. WHORTON, P.E. No. 37155

DATE: 2/2/2024

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

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(719) 785-0799 (Fax)

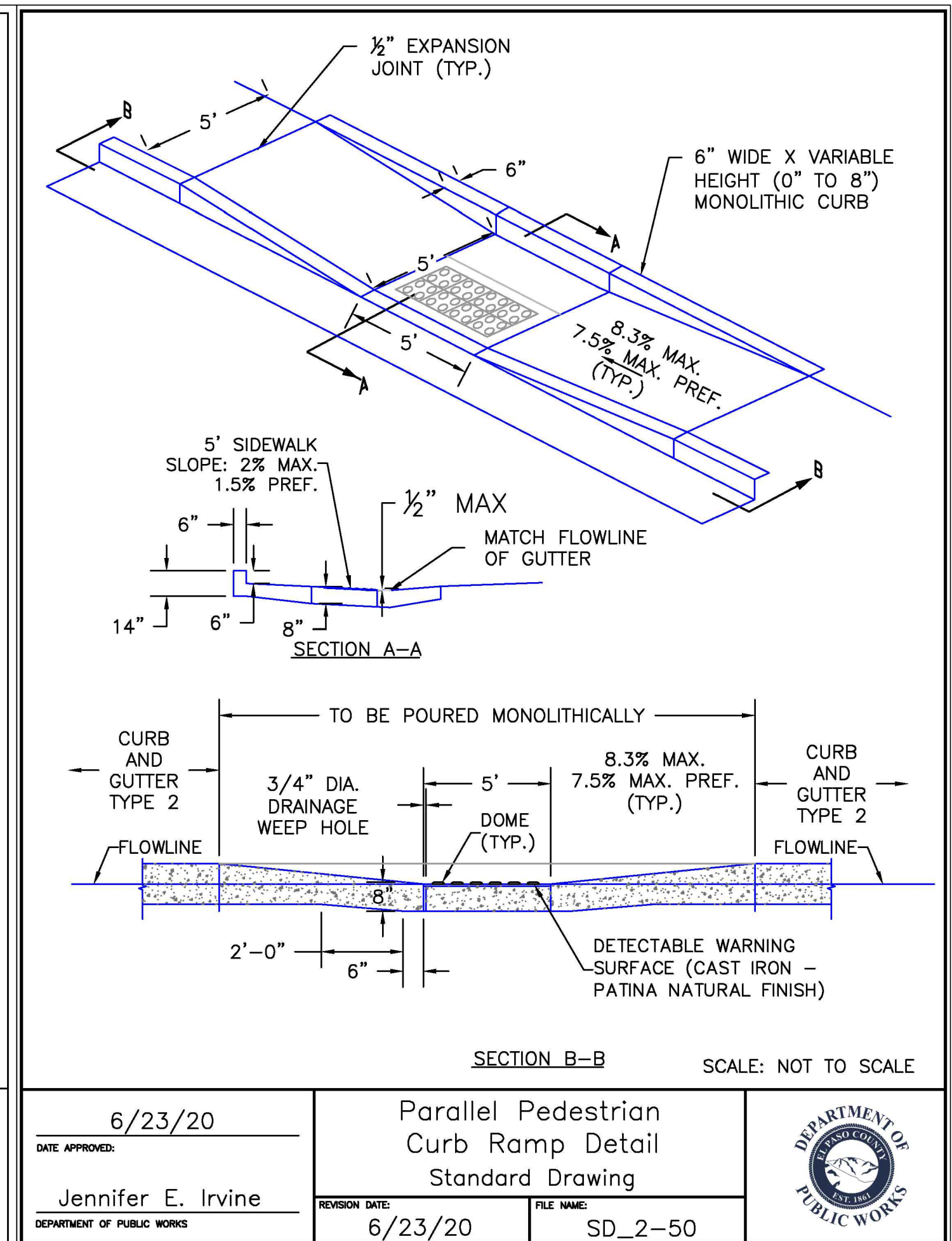
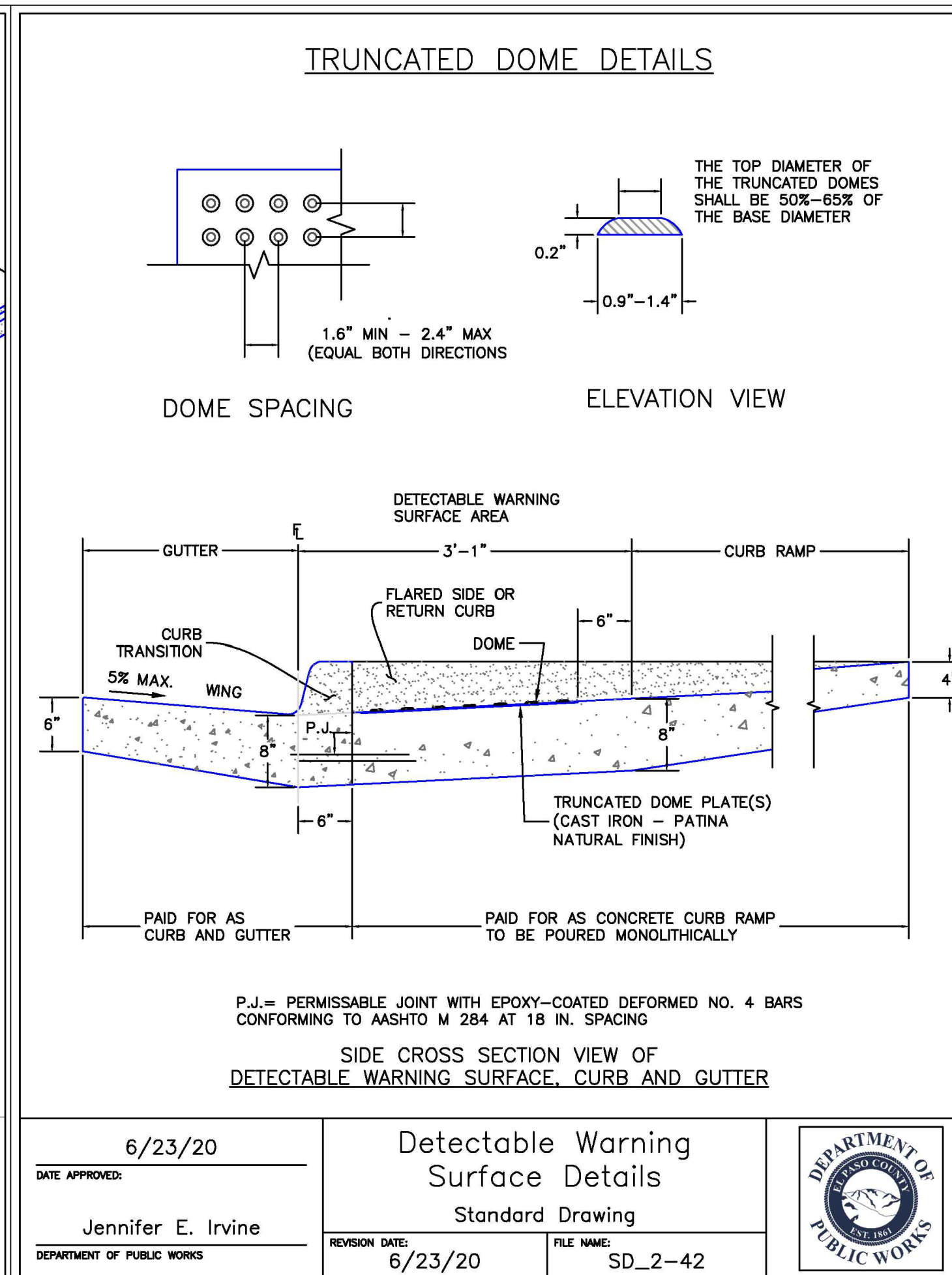
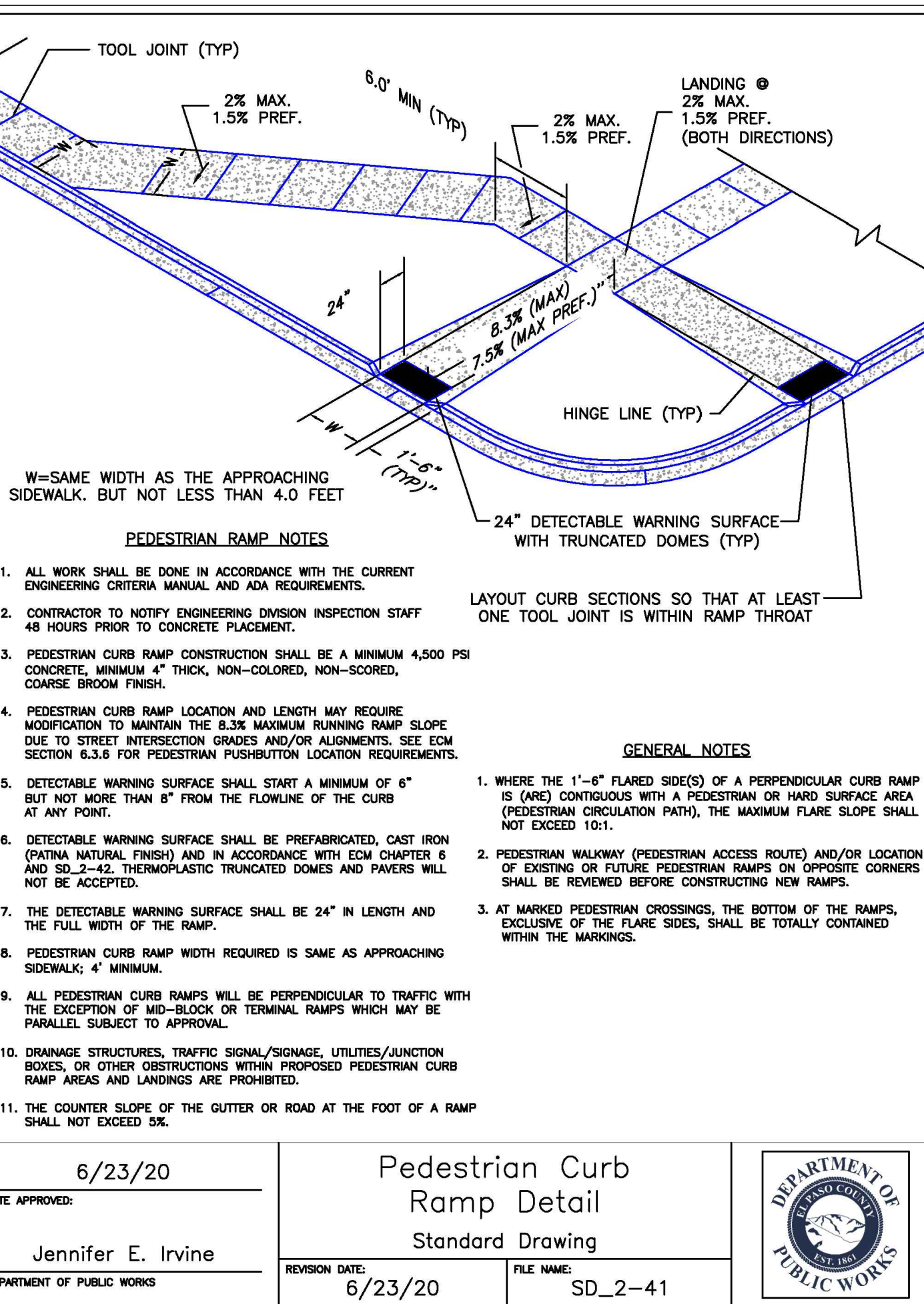
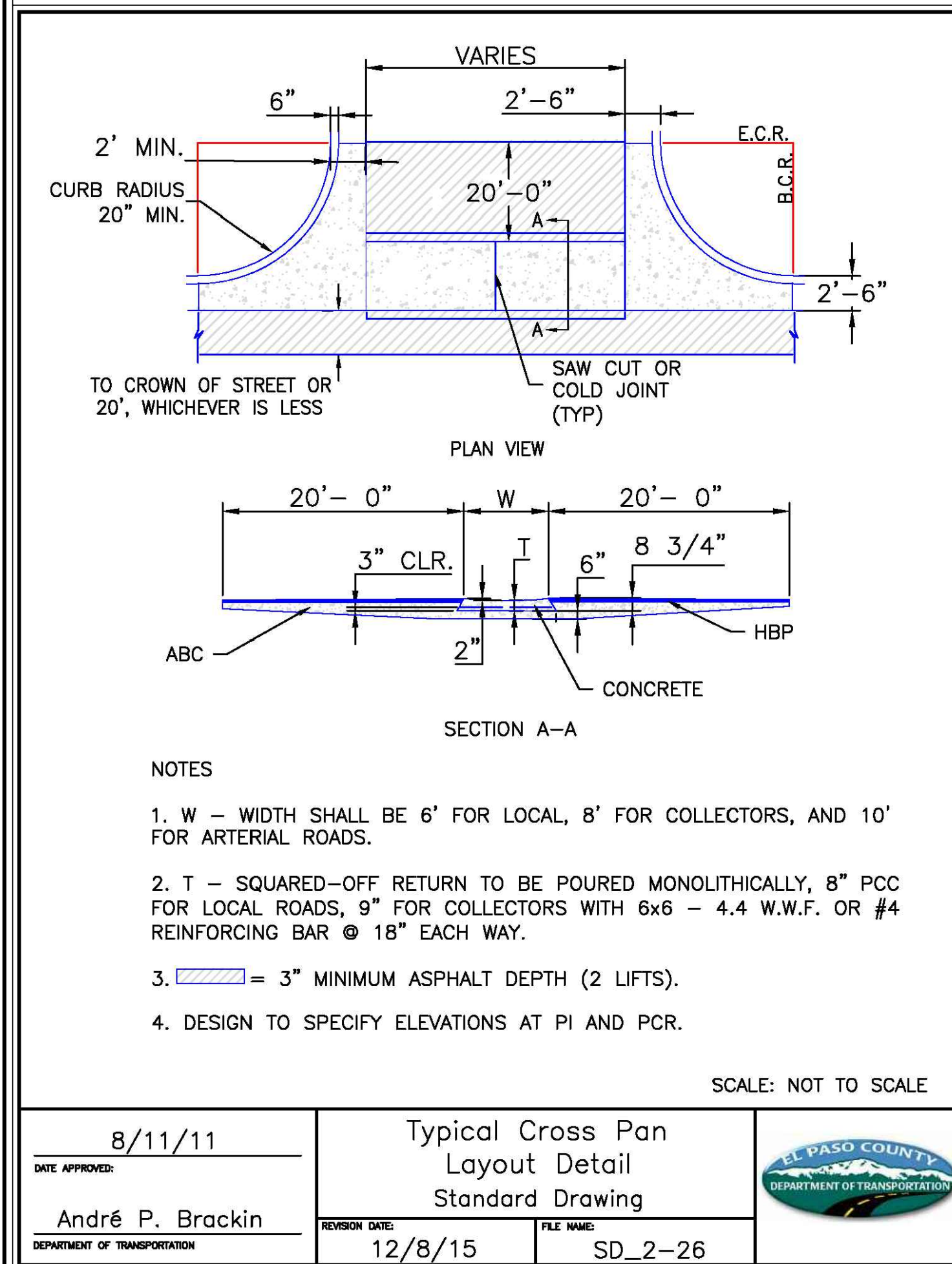
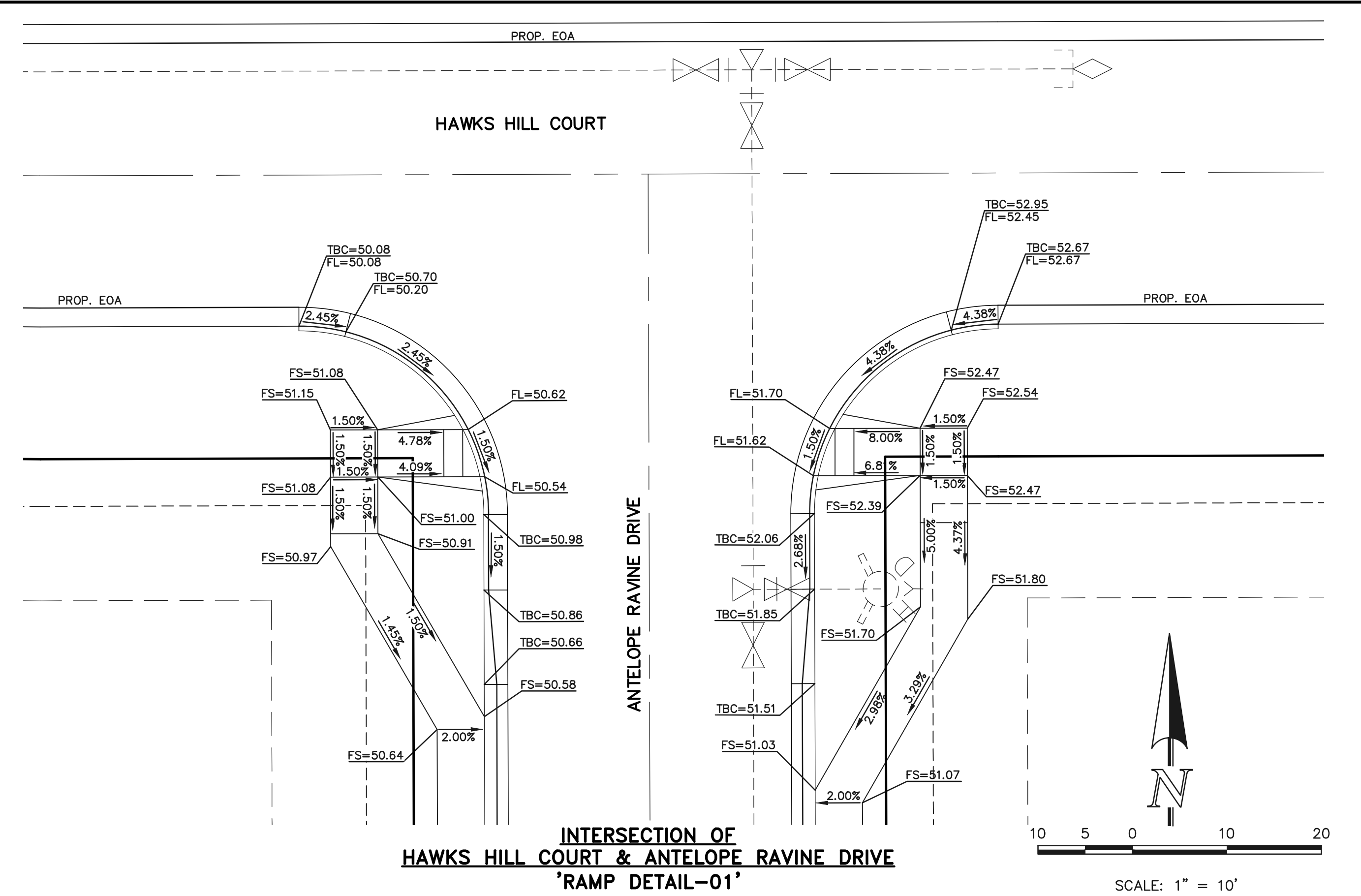
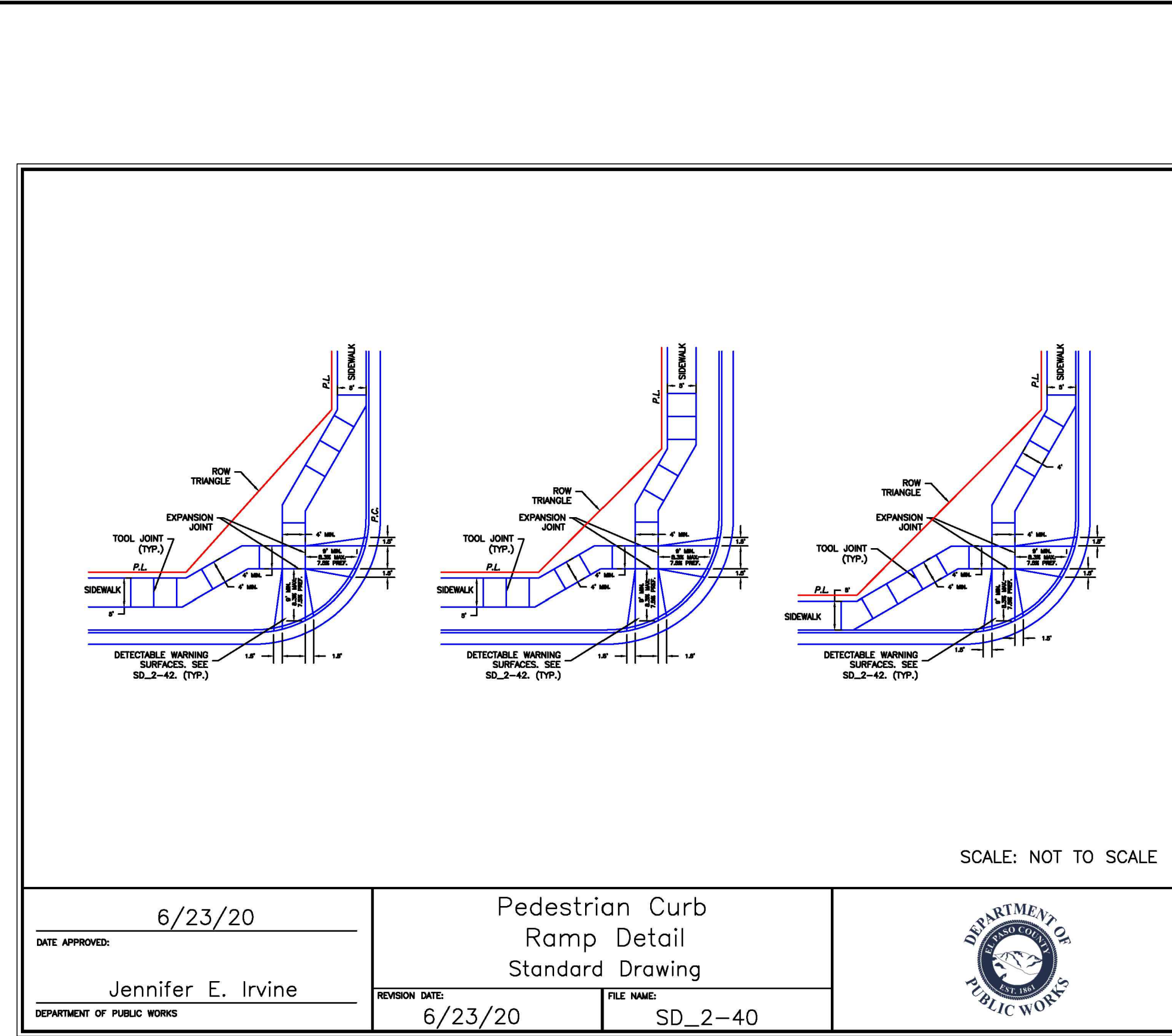
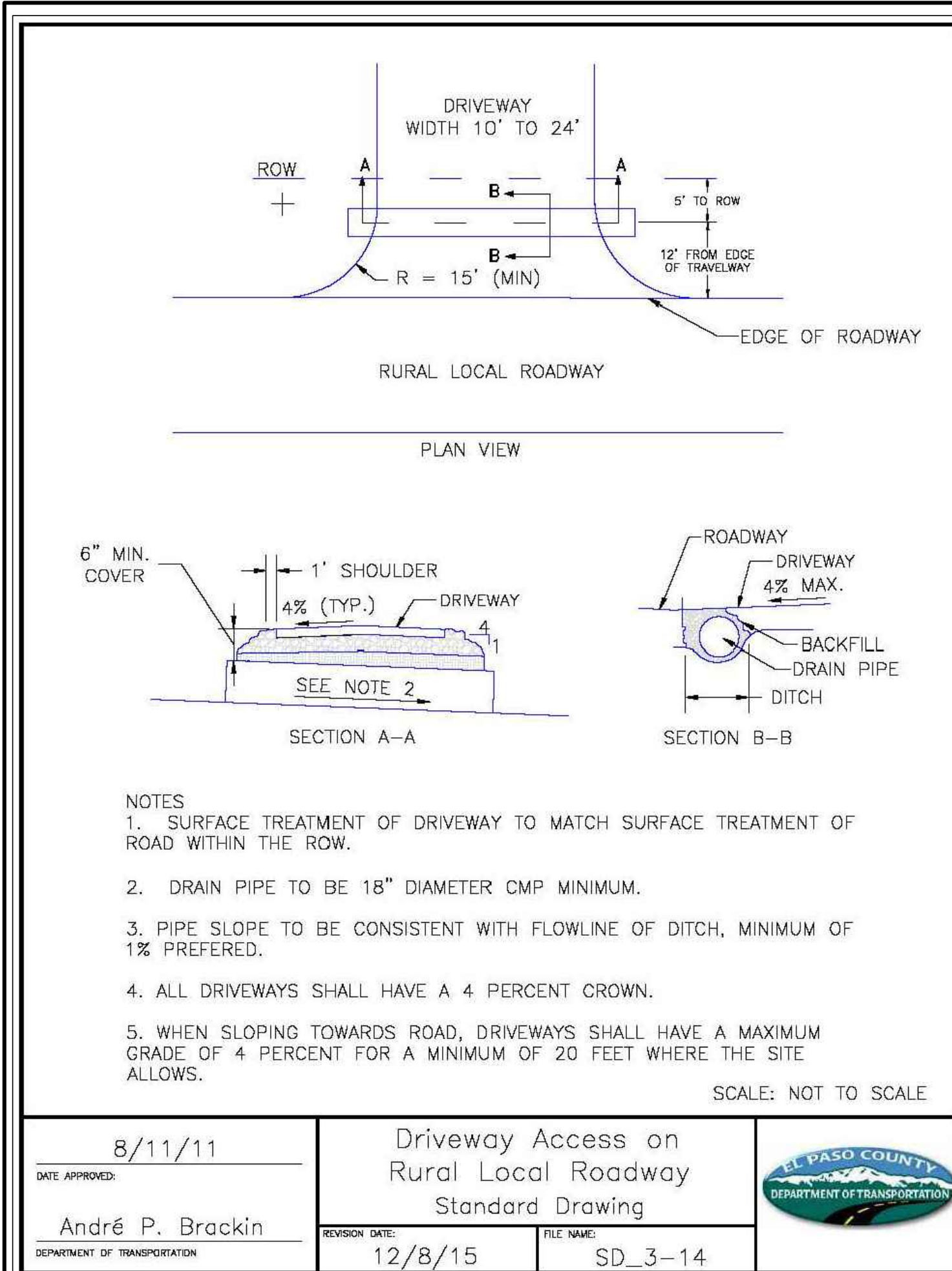
RETREAT AT TIMBERIDGE FILING NO. 3

CONSTRUCTION PLANS

DETAIL SHEET

DESIGNED BY	SCALE	DATE
MAW	(H) 1" = NA	11-22-2022
DRAWN BY	SHEET	JOB NO.
MAW	23 OF 27	1185.30
CHECKED BY	DATE	

V:\118530\DRAWINGS\CONSTRUCT\CONV\118530-DETAILS-01.dwg, 9/26/2023 10:30:23 AM, 1:1



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MARC A. WHORTON, REGISTERED PROFESSIONAL SURVEYOR, 37155

2/2/2024

DATE

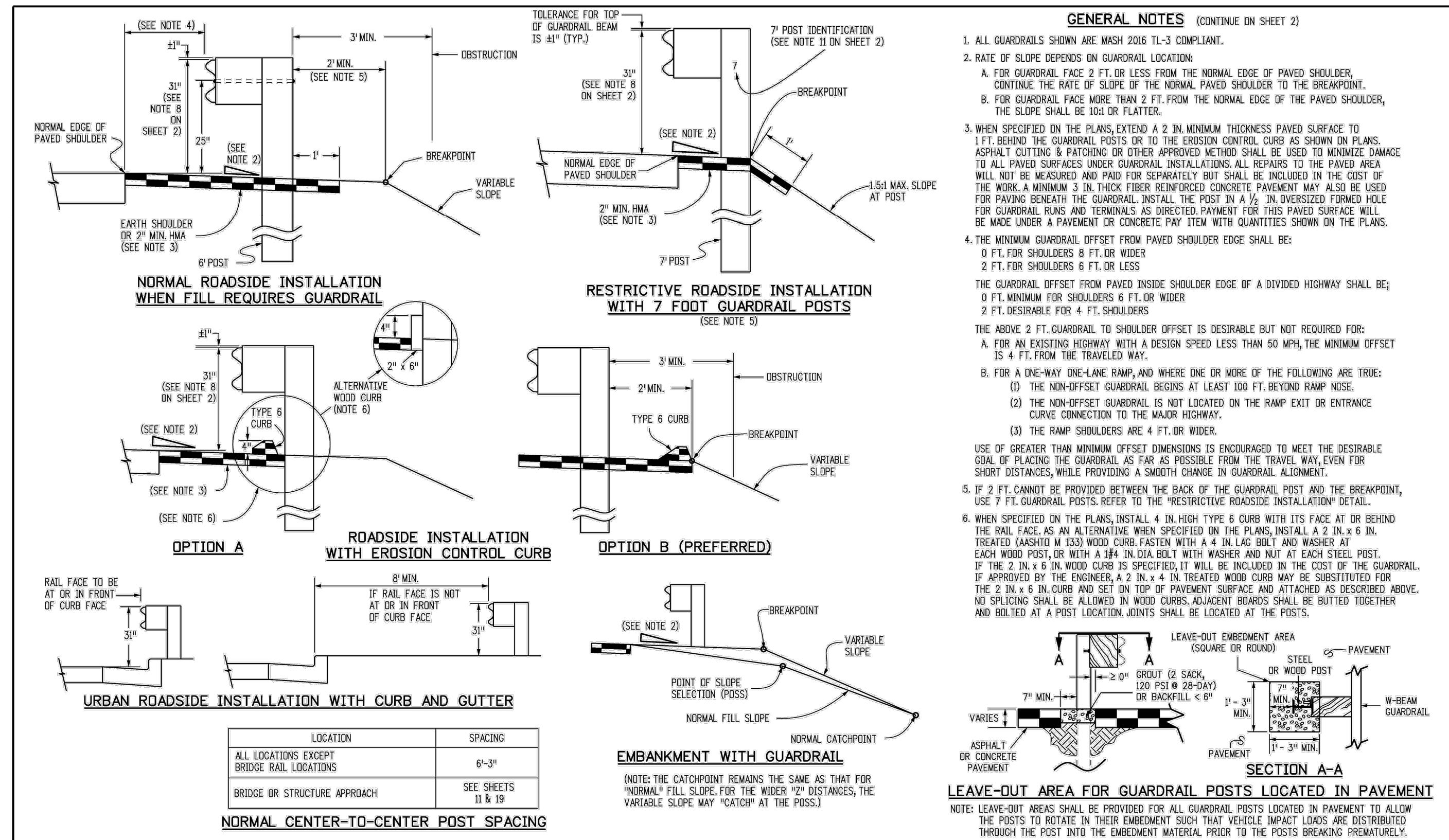
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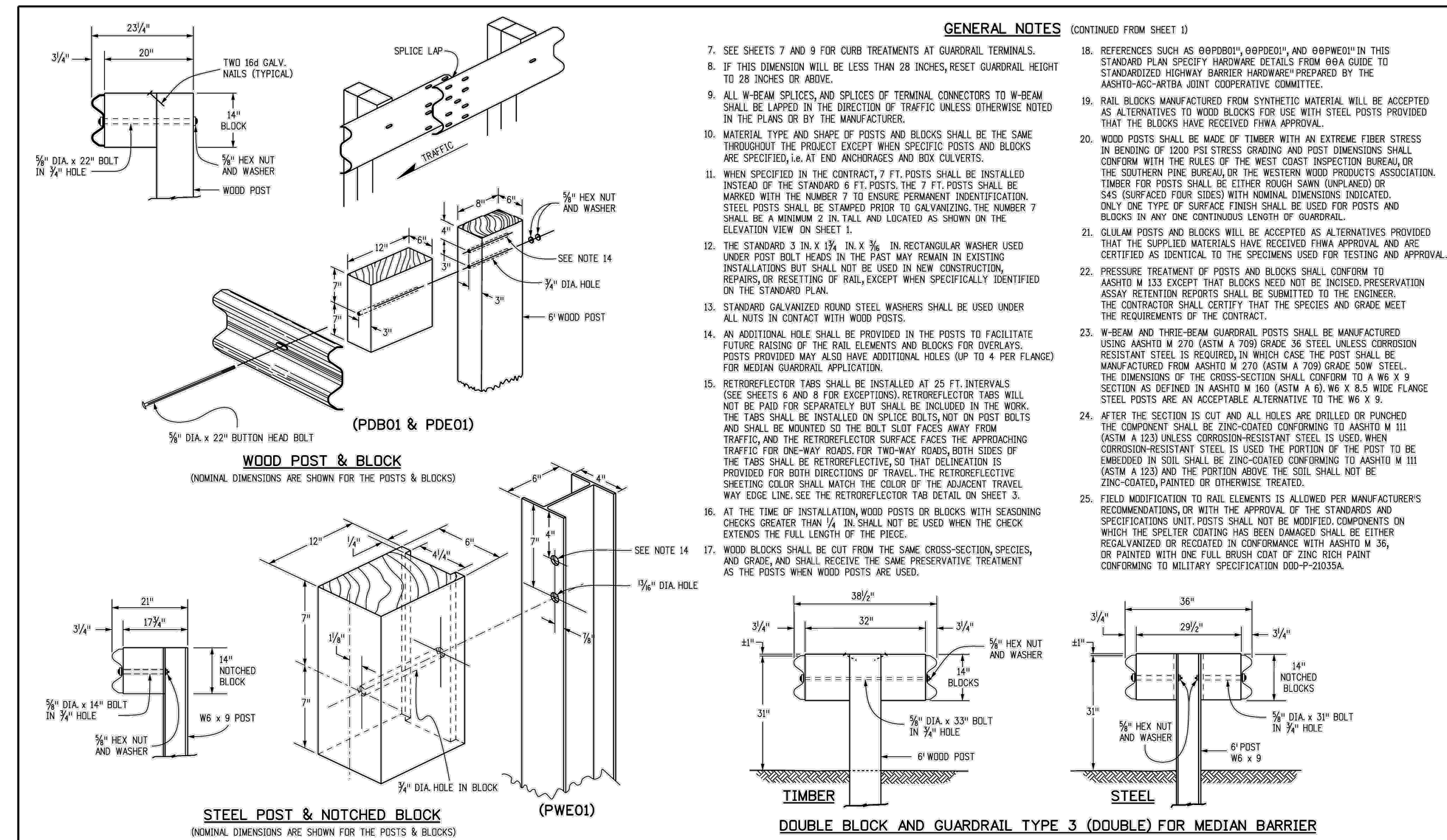
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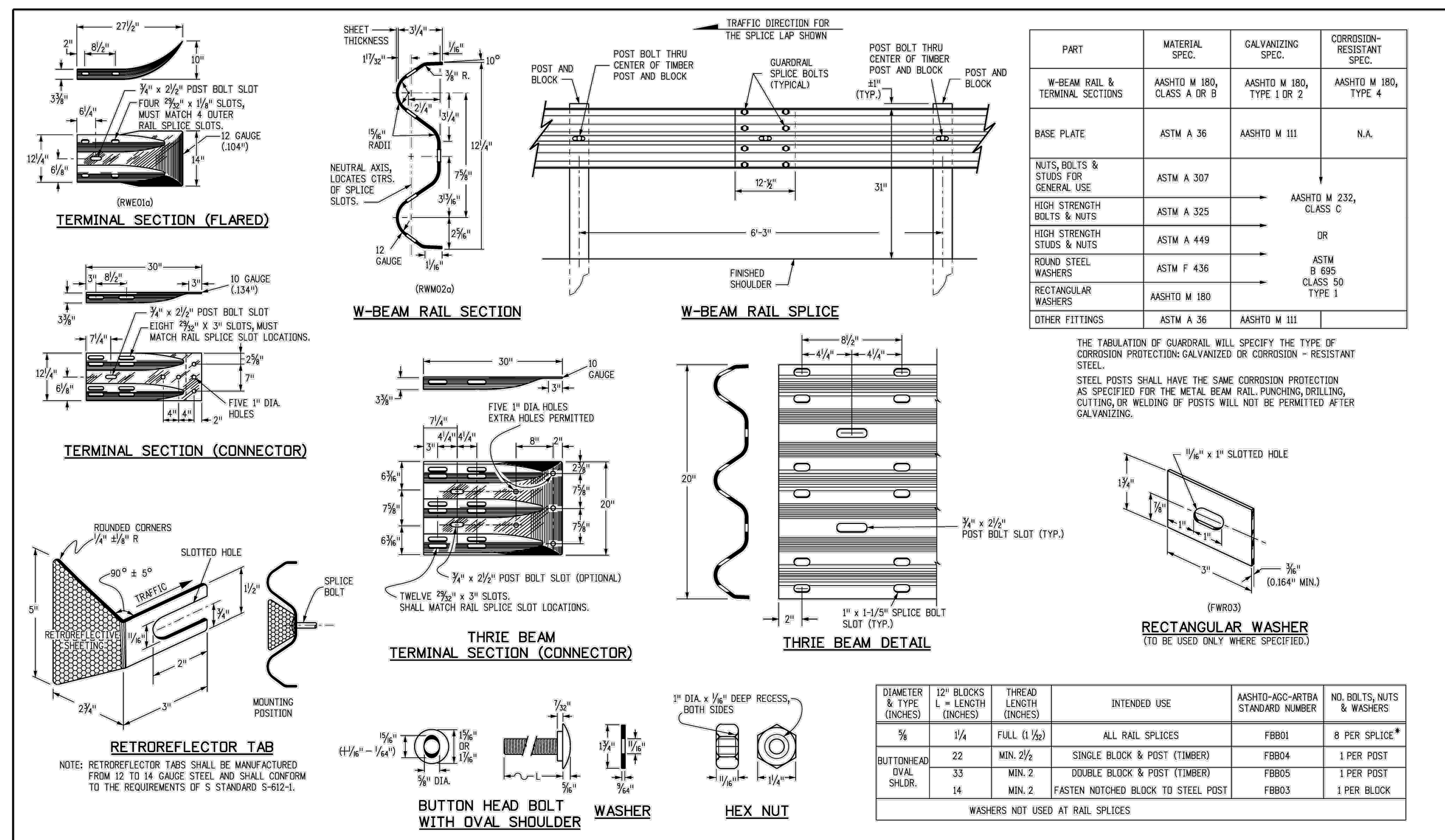
DESIGNED BY	MAW	SCALE	DATE	11-22-2022
DRAWN BY	MAW	(H) 1" = NA	SHEET	24 OF 27
CHECKED BY	(V) 1" = NA	JOB NO.	1185.30	



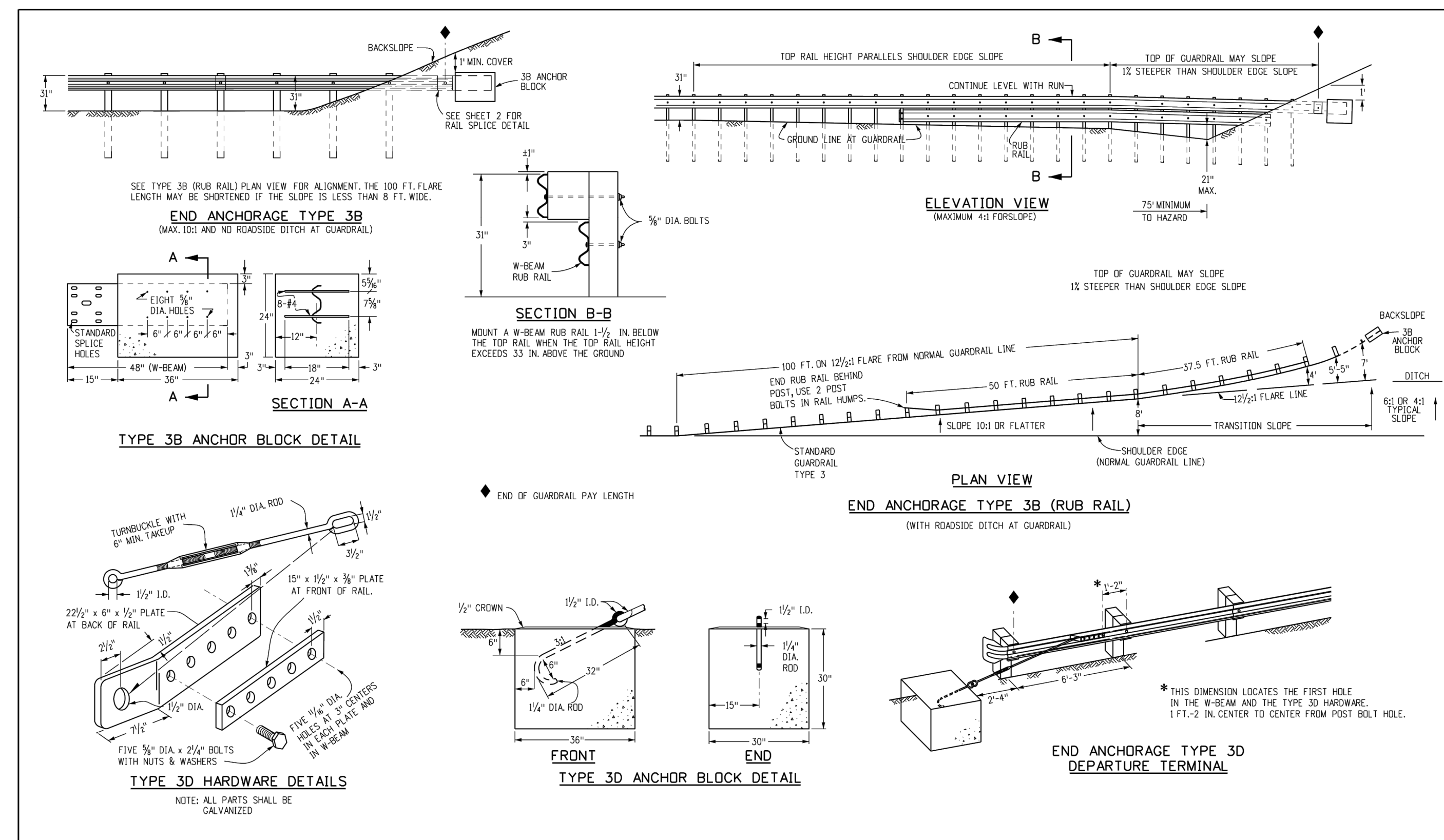
Computer File Information		Sheet Revisions		Colorado Department of Transportation		MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES		STANDARD PLAN NO. M-606-1	
Creation Date: 07/31/19	Designer Initials: JBR	Date: 03/05/20	Comments: Revised per Note 1 to show MASH compliant	2829 West Howard Place	CDOT HQ, 3rd Floor	Denver, CO 80204	Phone: 303-757-9021 FAX: 303-757-9868	Standard Sheet No. 1 of 19	Project Sheet Number:
Last Modification Date: 03/05/20	Detailer Initials: LTA			Project Development Branch	JBK				
CAD Ver: MicroStation V8	Scale: Not to Scale	Units: English							



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Last Modification Date: 03/05/20	Detailer Initials: LTA			Project Development Branch	JBK				
CAD Ver: MicroStation V8	Scale: Not to Scale	Units: English							



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Last Modification Date: 03/05/20	Detailer Initials: LTA			Project Development Branch	JBK				
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Last Modification Date: 03/05/20	Detailer Initials: LTA			Project Development Branch	JBK				
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MARC A. WHORTON, 37155

2/2/2024

RETREAT AT TIMBERIDGE FILING NO. 3
CONSTRUCTION PLANS
DETAIL SHEET

DESIGNED BY MAW SCALE DATE 11-22-2022
DRAWN BY MAW (H) 1"= NA SHEET 26 OF 27
CHECKED BY (V) 1"= NA JOB NO. 1185.30

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OFFSET NOTES

- POST OFFSET DIMENSIONS ARE GIVEN TO THE CENTER OF THE TRAFFIC FACE OF POSTS.
- THE GUARDRAIL BETWEEN POST 1 THRU 8 IS ON A STRAIGHT LINE FLARE.

PLAN

ELEVATION

**DETAIL A
IMPACT HEAD CONNECTION**

**DETAIL B
POST #1 CONNECTION**

**SECTION A-A
ANCHOR BRACKET**

**SECTION B-B
POST #2**

MFLAT TERMINAL (MASH CERTIFIED)

END ANCHORAGES (FLARED)

NOTES

- THE END ANCHORAGE (FLARED) SHALL BE THE MFLAT TERMINAL, AS MANUFACTURED BY ROAD SYSTEMS INC. (TELEPHONE 8-432-283-2833). ONE END ANCHORAGE (FLARED) SHALL INCLUDE ALL POST, RAIL, AND ALL HARDWARE ITEMS REQUIRED FOR A COMPLETE UNIT. THE END ANCHORAGE (FLARED) SHALL BE INSTALLED CONFORMING TO THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL PROVIDE A COPY OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND PARTS LIST TO THE ENGINEER PRIOR TO INSTALLATION OF THE DEVICE.
- RETROREFLECTOR TABS SHALL NOT BE USED ON END ANCHORAGE POSTS.
- DELIMITATION SHALL BE APPLIED TO THE END PIECE, AND SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.
- ESTHETIC TREATMENT OPTIONS MAY BE AVAILABLE WITH PRIOR APPROVAL OF THE PROJECT ENGINEER. CONTACT THE MANUFACTURER FOR APPROVED AESTHETIC TREATMENT OPTIONS.
- ALL BOLTS, NUTS, CABLE ASSEMBLIES, CABLE ANCHORS AND BEARING PLATES SHALL BE GALVANIZED.
- THE LOWER SECTIONS OF THE POSTS 1, 2, AND 3 SHALL NOT PROTRUDE MORE THAN 4 INCHES ABOVE THE GROUND MEASURED ALONG A 5 FOOT CIRCULAR SITE GRADING MAY BE NECESSARY TO MEET THIS REQUIREMENT.
- THE LOWER SECTIONS OF THE HINGED POSTS SHOULD NOT BE DRIVEN WITH THE UPPER POST ATTACHED. IF THE POST IS PLACED IN A DRILLED HOLE, THE DRILLED MATERIAL MUST BE SATISFACTORILY COMPACTED TO PREVENT SETTLEMENT.
- WHEN COMPETENT ROCK IS ENCOUNTERED, A 12 INCH DIA POST HOLE, DRILLED 20 INCHES DEEP INTO THE ROCK SURFACE SHALL BE USED IF APPROVED BY THE ENGINEER FOR POSTS 1 AND/OR 2. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE, APPROXIMATELY 2.5 INCHES DEEP TO PROVIDE DRAINAGE. THE FIRST AND/OR SECOND POST SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH SUITABLE BACKFILL. THE SOIL PLATE MAY BE TRIMMED IF REQUIRED.
- THE BREAKAWAY CABLE ASSEMBLY SHALL BE TAUT. A LOCKING DEVICE (VICE GRIPS OR CHANNEL LOCK PLIERS) SHOULD BE USED TO PREVENT THE CABLE FROM TWISTING WHEN TIGHTENING NUTS.

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NOTES

- PAYMENT FOR THE ADDED EMBANKMENT (APPROXIMATELY 45 CU YDS.) FOR THE FLARE SHALL BE AS FOLLOWS:
A. UNDER PAY ITEM 203 WHEN THE CONTRACT PLAN INCLUDES PAY ITEM 203 B. INCLUDED IN THE COST OF THE END ANCHORAGE (FLARED) WHEN THE CONTRACT PLAN DOES NOT INCLUDE PAY ITEM 203. THE ADDED EMBANKMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH SUBSECTION 203.07, PART 1, 99.
- WHEN THE WIDENED AREA IS PAVED, PAYMENT FOR THE PAVEMENT (APPROX. 70 SQ. YDS.) SHALL BE AS FOLLOWS:
A. UNDER PAY ITEM 403 OR 412 WHEN THE CONTRACT PLAN INCLUDES PAY ITEM 403 OR 412.
B. INCLUDED IN THE COST OF THE END ANCHORAGE (FLARED) WHEN THE CONTRACT PLAN DOES NOT INCLUDE PAY ITEM 403 OR 412. (SEE SHEET 1, NOTE 2 FOR PAVEMENT TYPES)
- CONCRETE PAVED AREAS SHALL HAVE THEIR TAPERED ENDS SQUARED OFF AS DIRECTED BY THE ENGINEER.
- WHEN OVERLAY PAVING, THE FINISHED SURFACE AT EACH POST SHALL NOT BE ABOVE THE TOP BREAKAWAY HOLE OR STRUT ASSEMBLY. THE WIDENED AREA AT THE FLARED END ANCHORAGE SHOULD NOT BE OVERLAPPED UNLESS PAVEMENT CONDITIONS WARRANT IT BEING OVERLAPPED. ANY OVERLAY PAVEMENT ADJUTING THE FLARED END ANCHORAGE SHALL BE TAPERED TO PREVENT A DROOP IN THE PAVED SURFACE BELOW THE RAIL.
- SEE SHEETS 1, 2, 3, AND 5 FOR STANDARD TYPE 3 GUARDRAIL INSTALLATION DETAILS.
- THE COST OF THE GUARDRAIL WILL BE PAID FOR AS "OUTLET TYPE 2 (2 FT.)" FOR A LENGTH OF 154 FT. OR "OUTLET TYPE 2 (3 FT.)" FOR A LENGTH OF 40 FT.
- INLETS OR RUNDOWS MAY BE USED INSTEAD OF THE GUTTER IF SPECIFIED ON THE PLANS. NO ADDITIONAL CURB SHALL BE ADDED IN THE VICINITY OF THE END ANCHORAGE.
- 4:1 OR FLATTER SLOPES IN THE TRAVERSIBLE AREA SHALL BE USED BEHIND THE END ANCHORAGE AND IN ADVANCE OF POST (C) IF THIS IS NOT POSSIBLE, A MINIMUM 3:1 SLOPE MAY BE USED IF APPROVED BY THE ENGINEER.
- THE WIDENED AREA EXCEPT FOR CURB OPTION A SHALL HAVE THE SAME GRADING AS THE ADJACENT GUARDRAIL RUN. THE SLOPE SHALL BE 2 FT. OR LESS FROM SHOULDER OR SLOPE EQUAL TO ROADWAY SLOPE IF 2 FT. OR LESS FROM SHOULDER.
- WIDENING FOR END ANCHORAGES SHALL BE PAVED ON INTERSTATES AND FREEWAYS. FOR OTHER HIGHWAYS, PAVING SHALL BE AS SHOWN ON THE PLANS.

**PLAN VIEW
WIDENING FOR END ANCHORAGE (FLARED)
WITH CURB OPTION A***

**PLAN VIEW
WIDENING FOR END ANCHORAGE (FLARED)
WITH CURB OPTION B***

SECTION A-A

SECTION B-B

SECTION C-C

Computer File Information	Sheet Revisions	Colorado Department of Transportation	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES	STANDARD PLAN NO. M-606-1
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NOTES

- POSTS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.
- THE NUMBER OF OMITTED POSTS IS DEPENDENT ON THE LENGTH OF THE GAP.
- ONE POST MAY BE OMITTED WITHOUT ANY MODIFICATION TO THE GUARDRAIL RUN.

LONG-SPAN RAILING FOR ONE, TWO, OR THREE OMITTED POSTS AT GAP

TIMBER POST

STEEL POST

BREAKWAY TIMBER POST

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NOTES

- LOCATION AND LENGTH OF MEDIAN GUARDRAIL APPROACHES TO CULVERTS WITH FULL HEADWALL AND SIDEWALLS SHALL BE AS SHOWN FOR BRIDGES ON SHEET IS THE GUARDRAIL TYPE 3 SHALL CONTINUE ACROSS THE CULVERT AS SHOWN ON THIS SHEET.
- RIGHT SHOULDER BOX CULVERT TREATMENT IS SHOWN ON THIS SHEET FOR CULVERTS 20 FT. OR LESS IN LENGTH.
- CONSTRUCTION AND PAYMENT FOR FILL HEIGHTS SHALL BE INCLUDED IN THE COST OF THE GUARDRAIL TYPE 3.
- ANCHORAGE 6" SIX BOLTS FOR BASE PLATE "B" WITH INSIDE MOUNT. THE BOLTS SHALL BE 7/8 IN. DIA X 10 IN. HIGH STRENGTH RODS THREADED FULL LENGTH AND ALL GALVANIZED RODS SHALL BE CAST-IN-PLACE FOR NEW STRUCTURES. FOR EXISTING STRUCTURES, THE RODS SHALL BE INSTALLED IN 1/4 IN. DIA HOLES WITH NON-SHANK GROUT OR EPOXY CONFORMING TO ASTM C 881. IF THE THICKNESS OF A CULVERT'S TOP PANEL REQUIRES BOLTS TO BE LESS THAN 10 IN. HIGH, THE BOLTS SHALL BE APPROVED BY THE ENGINEER.
- THE GUARDRAIL LENGTH DIMENSION "N" IS THE LENGTH AS DETERMINED BY THE LENGTH OF NEED COMPUTATION AND IS SHOWN ON THE PLANS. THE MINIMUM IS 12 FT. 6 IN. WHERE SITE CONDITIONS ALLOW THE OVERALL REQUIRED LENGTH OF NEED CAN INCLUDE THE LENGTH OF TRANSITION, THE LENGTH OF RAIL (N), AND ANY REDIRECTIVE LENGTH IN THE RAIL END TREATMENT.
- ALL POSTS, BASE PLATES, AND ANCHOR BOLTS SHALL BE FABRICATED FROM ASTM A 36 STEEL. THE ABOVE MATERIAL, W-BEAM, AND ALL ANCHOR BOLTS AND MISCELLANEOUS BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION AND ANCHORAGE WITH SECTION 609, CONCRETE, REINFORCING STEEL, AND STRUCTURAL STEEL ELEMENTS SHALL BE IN ACCORDANCE WITH SECTIONS 601, 602, AND 509, RESPECTIVELY.
- POST ANCHORS ENCASED IN CONCRETE SHALL BE ASTM A 36 STEEL, AND NEED NOT BE GALVANIZED.
- PRIOR TO INSTALLATION OF GUARDRAIL ON CULVERTS, THREE SETS OF WORKING DRAWINGS WHICH COMPLY WITH THE REQUIREMENTS OF SECTION 105 SHALL BE SUBMITTED TO THE ENGINEER FOR INFORMATION ONLY.

GUARDRAIL FOR CULVERTS

INSIDE MOUNT ON CBC

BASE PLATE B (FOR INSIDE MOUNT)

ANCHORAGE D (FOR INSIDE MOUNT)

RAIL PLACEMENT FOR INSIDE MOUNT

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37155

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DESIGNED BY: MAW
DRAWN BY: MAW
CHECKED BY: MAW

SCALE: (H) 1" = NA
(V) 1" = NA

DATE: 11-22-2022
SHEET: 27 OF 27
JOB NO.: 1185.30

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