

NOTE:

ALL EXISTING UNDERGROUND AND ABOVE GROUND UTILITY LOCATIONS, INVERTS AND SIZES ARE APPROXIMATE ONLY AND MUST BE FIELD VERIFIED PRIOR TO CONSTRUCTION. THE IN POINTS SHALL BE POTHOLED AND LOCATIONS, INVERTS AND SIZES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

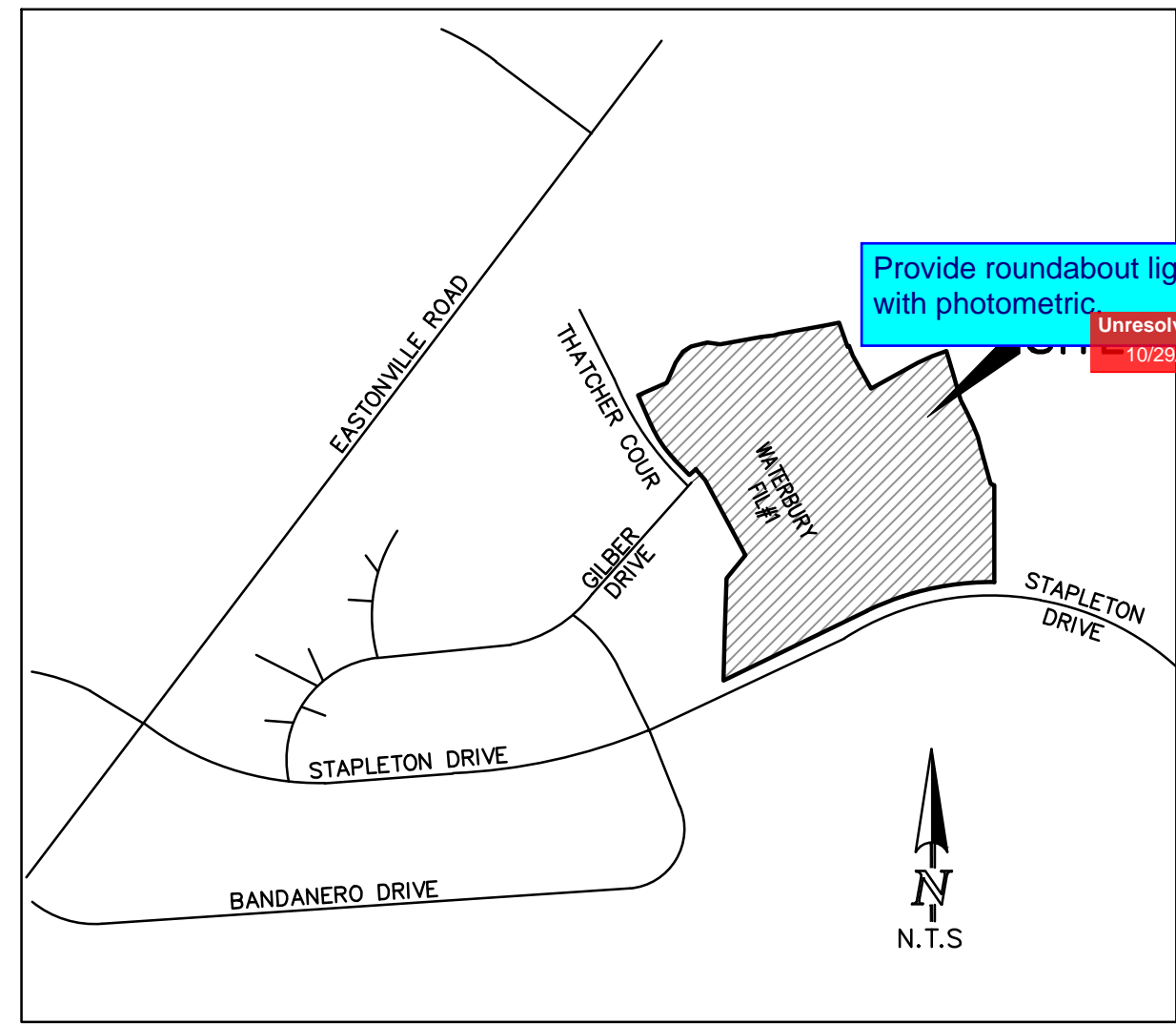
STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS

- 1. 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.
2. 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.
3. A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
4. 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 GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
5. CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
6. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
7. 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.
8. FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
9. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT AFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECOM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
10. 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.
11. 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).
12. 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.
13. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE 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.
14. DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
15. EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
16. 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.
17. WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
18. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
19. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIR, 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.
20. 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.
21. NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECOM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIFIC CONDITIONS AND MONITORING MAY BE REQUIRED.
22. BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
23. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
24. 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, DCM VOLUME 1 AND THE ECOM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO THE EXIST, FLOODPLAIN, 404, FUGITIVE DUST, ETC.), IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
26. PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
27. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
28. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY ENTECH ENGINEERING AND SHALL BE CONSIDERED A PART OF THESE PLANS. SOIL, GEOLOGY, AND GEOLOGIC HAZARD REPORT AND ADDENDUM, WATERBURY, FILINGS 1 AND 2, DATED OCTOBER 18, 2021 AND FEBRUARY 2, 2022, BY ENTECH ENGINEERING.
29. AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED STAR OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:
COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL DIVISION
WOOD - PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT

EL PASO COUNTY STANDARD CONSTRUCTION NOTES:

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

WATERBURY FILING NO. 1
EL PASO COUNTY, CO
CONSTRUCTION SET
OCTOBER 2024



VICINITY MAP

GENERAL NOTES

- 1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE SITE. THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NON-EXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
2. THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES, BUILDINGS, FENCES, AND ROADWAYS FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE ABOVE WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
3. BULK GRADING SHALL BE COMPLETED TO A SUBGRADE TOLERANCE OF PLUS OR MINUS 0.2'.
4. CONTRACTOR TO OBTAIN COPIES OF THE SOILS REPORT FROM THE GEOTECHNICAL ENGINEER AND TO BE KEPT ONSITE DURING ALL EARTHWORK OPERATIONS.
5. MAXIMUM CUT/FILL SLOPES SHALL NOT EXCEED 3:1, UNLESS OTHERWISE NOTED.
6. EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IN A MANNER THAT WILL PROTECT PROPERTIES AND PUBLIC FACILITIES FROM THE ADVERSE EFFECTS OF EROSION AND SEDIMENTATION AS A RESULT OF CONSTRUCTION AND EARTHWORK ACTIVITIES WITHIN THE PROJECT SITE.
7. EROSION CONTROL DEVICES SHOULD BE CHECKED AFTER EVERY STORM. REPAIRS OR REPLACEMENT SHOULD BE MADE AS NECESSARY TO MAINTAIN PROPER PROTECTION.
8. ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION
9. ALL STATIONING CENTERLINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE FLOWLINE UNLESS OTHERWISE NOTED.
10. ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAT LINES. REPAIR SHALL CONFORM TO THE EPC ECOM APPENDIX K - 1.2.C
11. ALL INTERSECTION ACCESS TO BE CONSTRUCTED WITH A 25 FOOT SIGHT VISIBILITY TRIANGLES EXCEPT STAPLETON DRIVE WHICH IS AN ARRIERAL AND A 50 FOOT SIGH VISIBILITY TRIANGLE IS REQUIRED AND THERE SHALL BE NO OBSTRUCTIONS GREATER THAN 18" IN THIS AREA.
12. ALL CULVERT AND STORM DRAIN PIPES SHALL BE SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE (HDPE) OR REINFORCED CONCRETE PIPE (RCP). ALL CULVERS SHALL BE PLACED WITH FLARED END SECTIONS. ADEQUACY OF MATERIAL THICKNESS FOR ANY CSP INSTALLED SHALL BE VERIFIED BY OWNER'S GEOTECHNICAL ENGINEER TO SUPPOR MINIMUM 50 YEAR DESIGN LIFE. CULVERS MUST CONFORM TO EPC ECOM SECTIONS 3.32 - 3.35.
13. TYPE L RIPRAP W/ MIRAFI FW 700 OR EQUAL IS REQUIRED UNDER ALL RIP RAP PADS.
14. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN COMPLIANCE WITH AND ALL APPLICABLE EL PASO COUNTY STANDARDS AND WITH 4WAY RANCH METRO DISTRICT CONSULTING ENGINEER APPROVAL.
15. ALL POTABLE WATER MATINS SHALL BE AWWA C9000-DR14 PVC WITH PUSH ON SINGLE GASKET TYPE JOINTS AND SHALL MEET THE REQUIREMENTS OF ANSI/NSF 61
16. ALL WATER MAIN FITTINGS SHALL BE CAST IRON AND FURNISHED WITH MECHANICAL JOINT ENDS. ALL FITTINGS SHALL HAVE A PRESSURE RATING OF 250 PSI AND SHALL MEET THE REQUIREMENTS OF ANSI/NSF 61.
17. MAXIMUM DEFLECTION OF 8' & 12' PVC WATER MAIN JOINTS IS 4 DEGREES. CORRESPONDING MINIMUM CURVE RADIUS IS 286'. ADDITIONAL 11.25 DEGREE OR 22.5 DEGREE BENDS MAY BE REQUIRED FOR PROPER ALIGNMENT.
18. CONTRACTOR IS RESPONSIBLE FOR PROVIDING DETAILED AS-BUILTS OF ALL WATER MAIN, STORM SEWER, AND SANITARY SEWER MAIN INSTALLATIONS, INCLUDING ACCURATE DISTANCES OF MAIN LINES, VALVES, FITTINGS, MANHOLES AND LOCATIONS OF WATER AND SEWER SERVICES.
19. SANITARY SEWER PIPE AND FITTING: PVC 4"-8" STM D3034, TYPE PSM, SDR 35 PUSH ON JOINTS AND MOLDED RUBBER GASKETS MAXIMUM HORIZONTAL DEFLECTION, AFTER INSTALLATION AND BACK FILLING SHALL NOT EXCEED 3% OF THE PIPE DIAMETER. MINIMUM CURVE RADIUS IS 100' FOR 8"VC SANITARY SEWER MAIN.

SIGNING AND STRIPING NOTES

- 1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THAT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.
3. ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT.
4. ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLAN SHALL BE NEW SIGNS. EXISTING SIGNS MAY REMAIN OR BE REUSED IF THEY MEET CURRENT EL PASO COUNTY AND MUTCD STANDARDS.
5. STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.
6. ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR
7. ALL STREET NAME SIGNS SHALL HAVE "D" SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 4" UPPER-LOWER CASE LETTERING ON 8" BLANK AND NON-LOCAL ROADWAY SIGNS BEING 6" LETTERING, UPPER-LOWER CASE ON 12" BLANK, WITH A WHITE BORDER THAT IS NOT RECESSED. MULTI-LANE ROADWAYS WITH SPEED LIMITS OF 40 MPH OR HIGHER SHALL HAVE 8" UPPER-LOWER CASE LETTERING ON 18" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON-RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE 2012 MUTCD "STANDARD HIGHWAY SIGNS"
8. ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.
9. ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75" X 1.75" SQUARE TUBE SIGN POST AND STUB POST BASE. FOR OTHER APPLICATIONS, REFER TO THE CDOT STANDARD S-61A-8 REGARDING USE OF THE P2 TUBULAR STEEL POST SLIPBASE DESIGN.
10. ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" MINIMUM THICKNESS.
11. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT THICKNESS, AND ARROWS SHALL BE A MINIMUM 125 MIL THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S-627-1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE. STOP BARS SHALL BE 24" IN WIDTH. CROSSWALKS LINES SHALL BE 24" WIDE AND 9' LONG PER CDOT S-627-1.
12. 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.
13. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (719) 520-8819 PRIOR TO AND UPON COMPLETION OF SIGNING AND STRIPING.
14. THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS (DPW) PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.

TRAFFIC CONTROL NOTE

THE CONTRACTOR SHALL PROVIDE ALL TRAFFIC CONTROL DEVICES AND MONITORING NECESSARY TO SAFELY COMPLETE THE WORK SHOWN IN THESE CONSTRUCTION DOCUMENTS IN CONFORMANCE WITH M.U.T.C.D. GUIDELINES. THE CONTRACTOR SHALL COMPLETE ALL NECESSARY WORK FOR PLAN REVIEW, PERMITS AND PROCESSING. TRAFFIC CONTROL WILL NOT BE PAID SEPARATELY BUT IS INCLUDED IN THE COST OF THE PROJECT.

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BASIS OF BEARING

THE NORTH LINE OF SECTION 28, TOWNSHIP 12 SOUTH, RANGE 64 WEST OF THE SIXTH PRINCIPAL MERIDIAN, EL PASO COUNTY, COLORADO BEING MONUMENTED AT EACH END BY A 3-1/4" ALUMINUM SURVEYOR'S CAP STAMPED "PINC SL 30087 AND ASSUMED TO BEAR S89°47'04"E A DISTANCE OF 5,285.07 FEET

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 CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

Signature of Quentin Armijo, P.E.
Professional Engineer
719-635-6426
721 S. 23RD STREET
COLORADO SPRINGS, CO 80904

OWNER/DEVELOPER'S STATEMENT

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

Signature of Andrew R. Klein
Authorized Representative
ACM ALF VII JV SUB II LLC
4100 E. MISSISSIPPI AVE., STE. 500
DENVER, CO 80246

EL PASO COUNTY APPROVAL

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 COMPLETED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.
IN ACCORDANCE WITH ECOM 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 THESE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTORS DISCRETION.

Signature of Joshua Palmer, P.E.
County Engineer / Director
719-635-6426

4-WAY RANCH METROPOLITAN DISTRICT NO 2

THESE CONSTRUCTION DOCUMENTS HAVE BEEN REVIEWED AND APPROVED FOR SANITARY SEWER, WATER MAIN AND ASSOCIATED UTILITY SERVICE CONSTRUCTION.

FOR AND ON BEHALF OF THE 4-WAY RANCH METRO. DISTRICT NO 2
DATE
SF237

REVISIONS table with columns for NO., DESCRIPTION, DATE. Includes a note: 'UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED, REVIEWING AGENCIES ARE NOT TO BE HELD RESPONSIBLE FOR ANY ERRORS OR OMISSIONS. TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECT AND FOR THE USES AUTHORIZED BY WRITTEN AUTHORIZATION.'

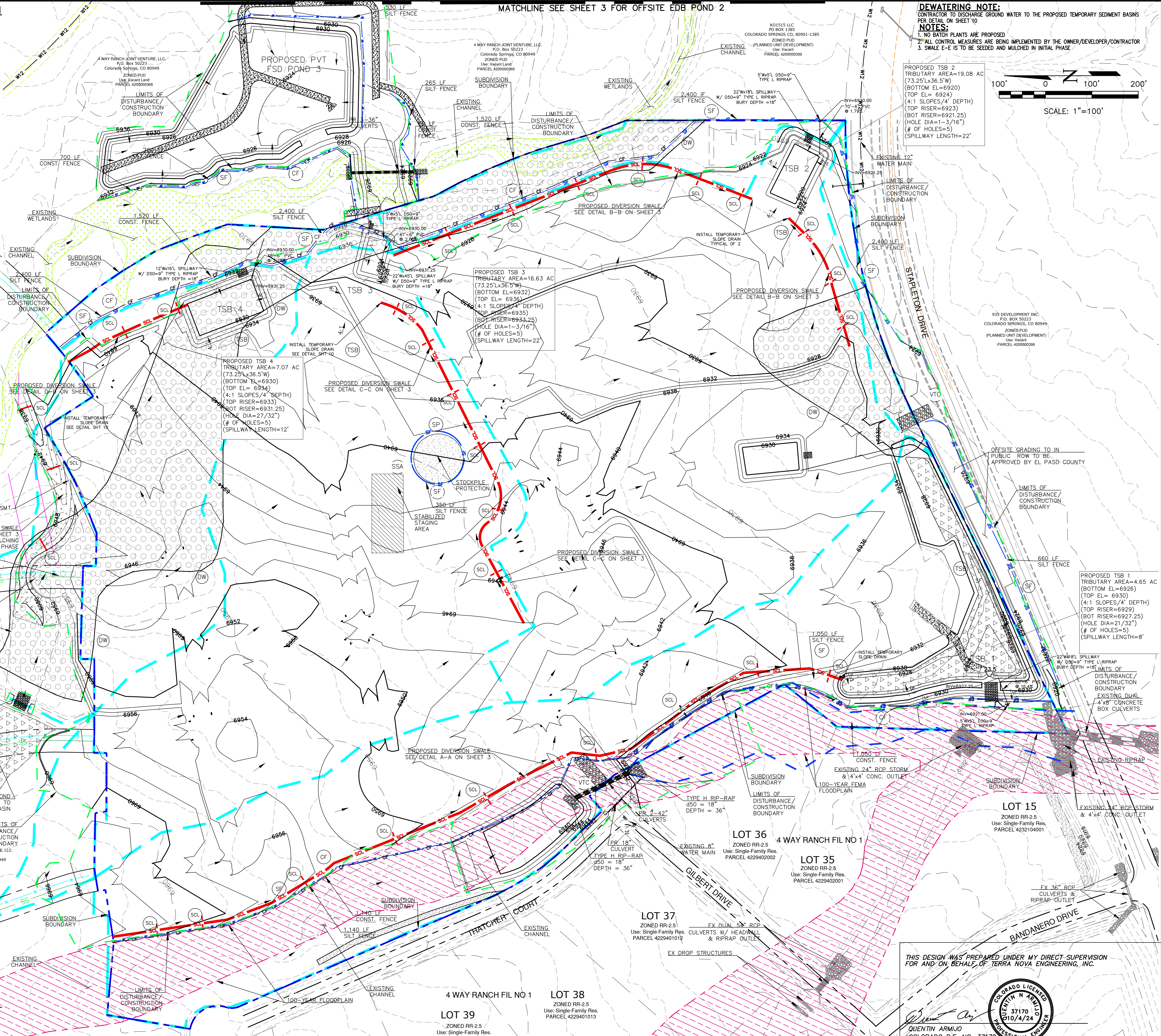
PREPARED FOR: ACM ALF VII JV SUB II LLC
ATTN: JASON POCK
100 E. MISSISSIPPI AVE., STE. 500
DENVER, CO 80246
303-984-9800
Terra Nova Engineering, Inc.
Civil Engineering
721 S. 23RD STREET
COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6426
FAX: 719-635-6426
www.tnecinc.com

WATERBURY FILING NO. 1
CONSTRUCTION SET
COVER SHEET
DESIGNED BY QNA
DRAWN BY QNA
CHECKED BY
H-SCALE AS SHOWN
V-SCALE N/A
JOB NO. 2356.00
DATE ISSUED 10/4/24
SHEET NO. 1 OF 52

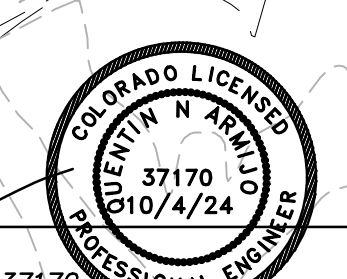
EROSION CONTROL LEGEND

KEY	TITLE	SYMBOL	IMPLEMENTATION PHASE
SF	SILT FENCE	— SF —	INITIAL
CF	CONSTRUCTION FENCE	— CF —	INITIAL
SCL	SEDIMENT CONTROL LOGS	— SCL —	INITIAL
SP	STOCKPILE PROTECTION	[Symbol]	INITIAL
VTC	VEHICLE TRACKING CONTROL	[Symbol]	INITIAL
SSA	STABILIZED STAGING AREA	[Symbol]	INITIAL
TSB	TEMPORARY SEDIMENT BASIN	[Symbol]	INITIAL
DW	DEWATERING	[Symbol]	INITIAL

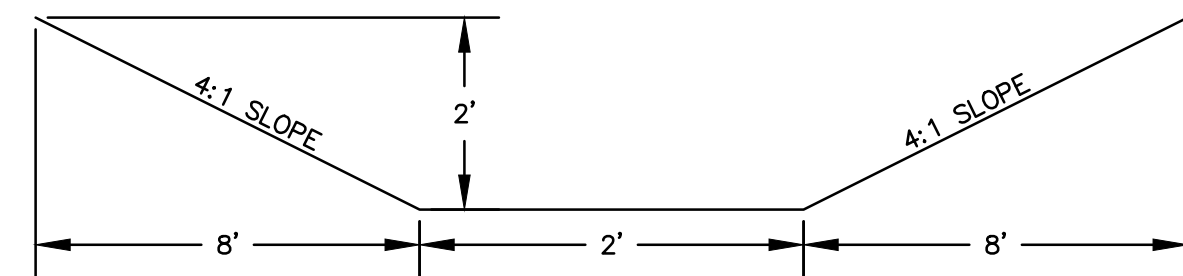
GRADING LEGEND	
8' EXISTING CONTOUR	— 8810 —
1' EXISTING CONTOUR	— 8802 —
5' PROPOSED CONTOUR	— 8810 —
1' PROPOSED CONTOUR	— 8802 —
LIMITS OF DISTURBANCE/CONSTRUCTION BOUNDARY	[Symbol]
SUBDIVISION BOUNDARY	[Symbol]
CUT/FILL LINE	[Symbol]
TRIBUTARY AREA TO TSB	[Symbol]
DIRECTION OF SURFACE FLOW	[Symbol]
HIGH POINT	HPX
LOW POINT	LPX
A LOT	"A"
B LOT	"B"
WALK OUT LOT MODIFIED	"WCM"
GARDEN LEVEL LOT MODIFIED	"GLM"
100-YEAR FLOODPLAIN	[Symbol]
AREAS OF DE-WATERING	[Symbol]



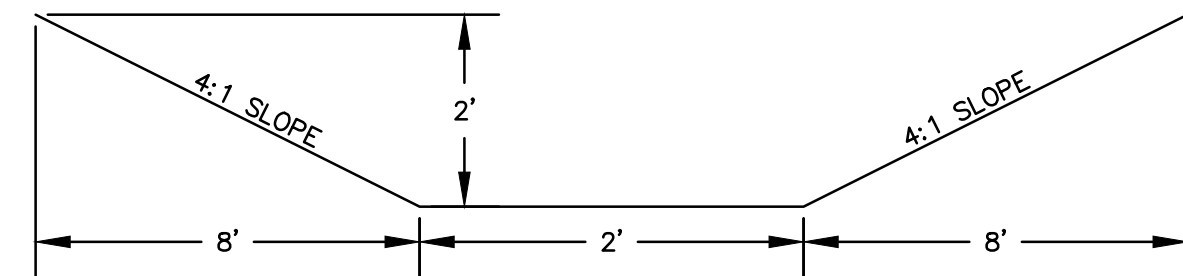
THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.



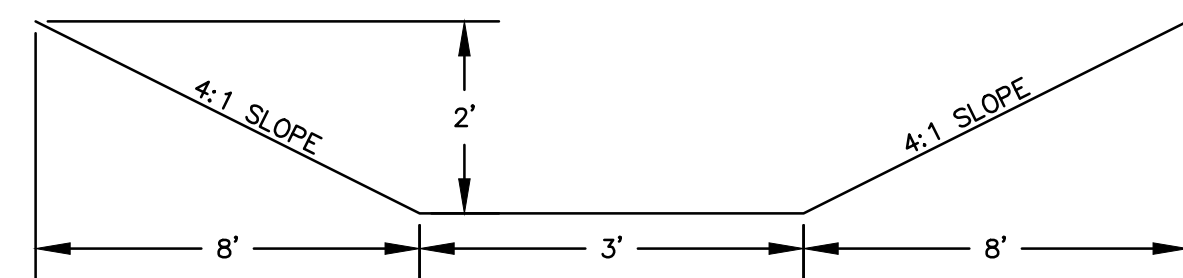
DATE	
DESCRIPTION	
REVISIONS	
NO.	
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE ARCHITECT/ENGINEER/TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECT AND FOR THE PURPOSES AUTHORIZED BY WRITTEN AUTHORIZATION.	
PREPARED FOR:	ACM ALF VIII JV SUB ATTN: JASON POCK 100 E. MISSISSIPPI AVE., STE 500 DENVER, CO 80246 303-984-9800
DESIGNED BY	DLF
DRAWN BY	QNA
CHECKED BY	QNA
H-SCALE	1" = 100'
V-SCALE	N/A
JOB NO.	1715.00
DATE ISSUED	10/4/24
SHEET NO.	2 OF 52



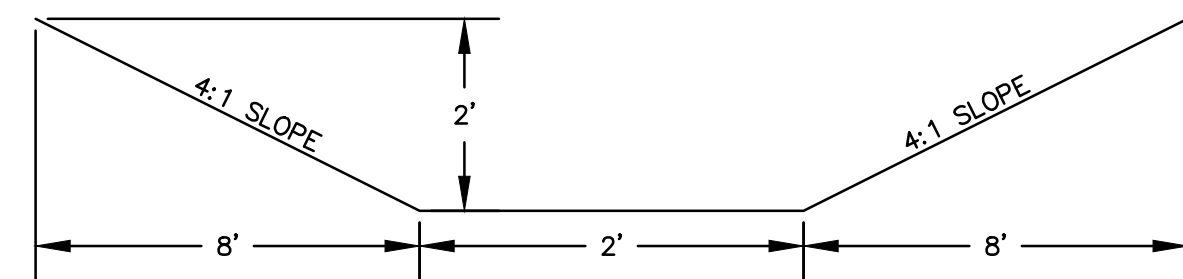
DIVERSION SWALE A-A
SEE PREVIOUS SHEET



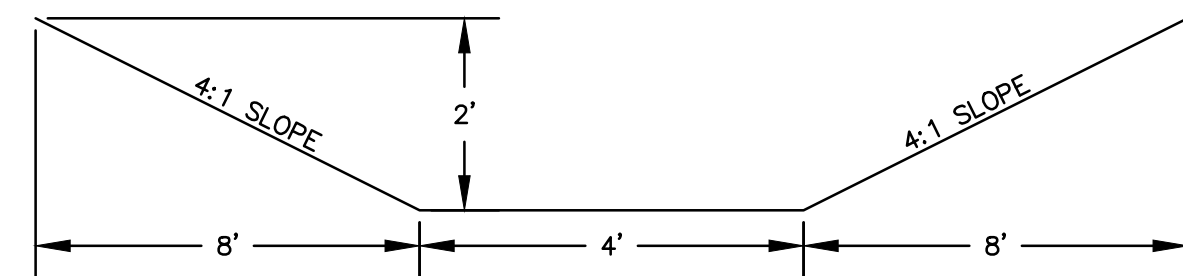
DIVERSION SWALE B-B
SEE PREVIOUS SHEET



DIVERSION SWALE C-C
SEE PREVIOUS SHEET



DIVERSION SWALE D-D
SEE PREVIOUS SHEET

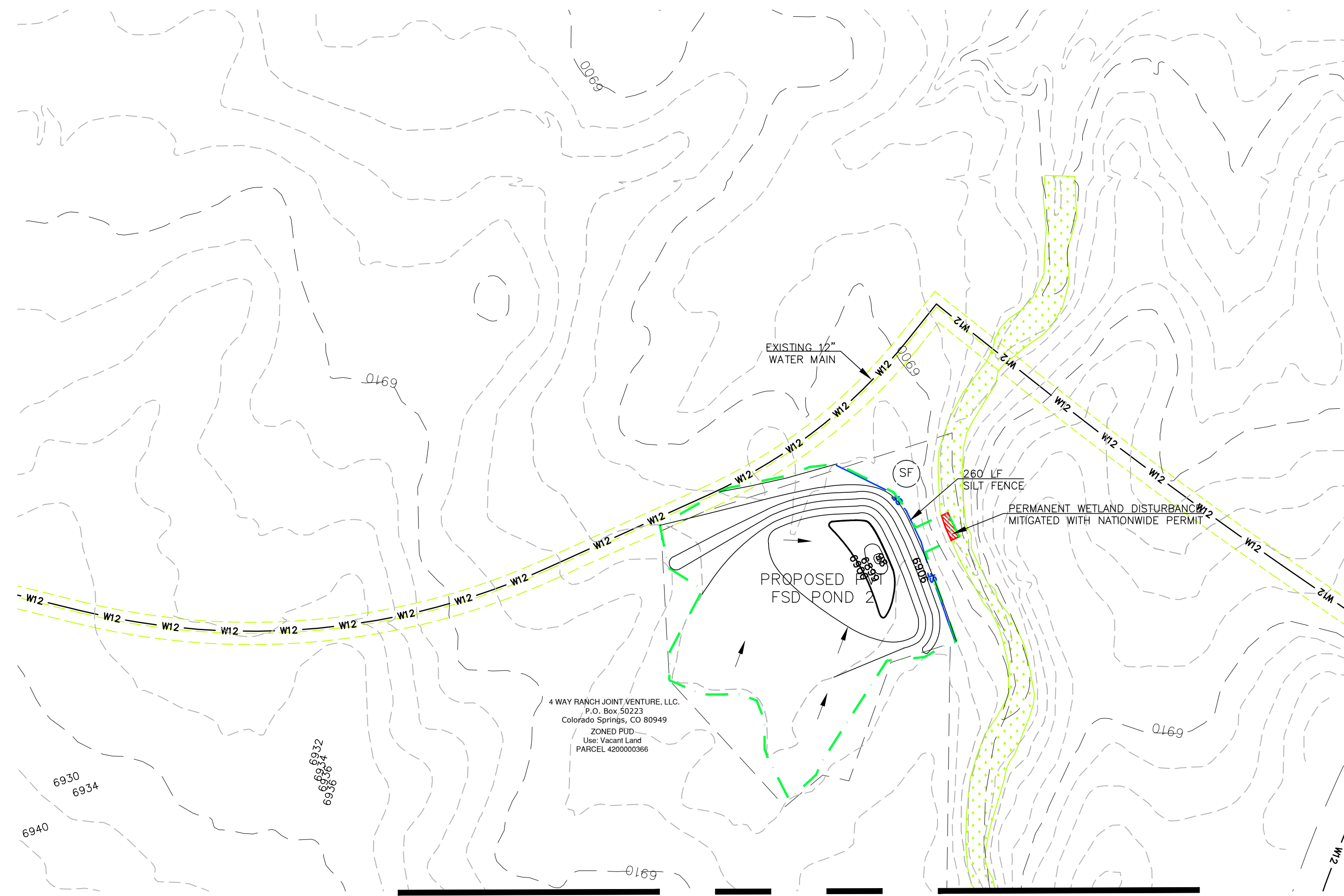


DIVERSION SWALE E-E
SEE PREVIOUS SHEET

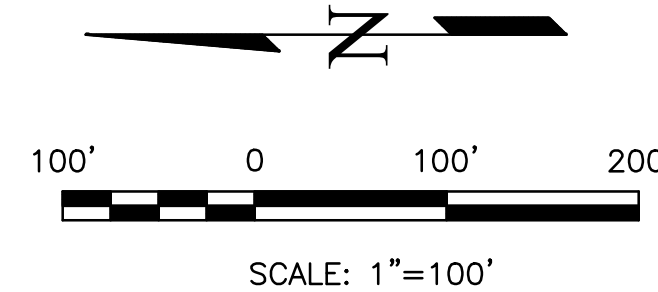
NOTES:
NO BATCH PLANTS ARE PROPOSED
ALL CONTROL MEASURES ARE BEING IMPLEMENTED BY THE OWNER/DEVELOPER/CONTRACTOR

GRADING LEGEND

10' EXISTING CONTOUR		6810
2' EXISTING CONTOUR		6802
LIMITS OF DISTURBANCE/ CONSTRUCTION BOUNDARY		
SUBDIVISION BOUNDARY		
TRIBUTARY AREA TO TSB		
PROPOSED DIVERSION SWALE		
DIRECTION OF SURFACE FLOW		
EXISTING WETLANDS		
100-Y FEMA FLOODPLAIN		
AREAS OF DE-WATERING		
PERMANENT WETLAND DISTURBANCE		



MATCHLINE SEE SHEET 2 FOR FILING 1 & FILING 2



GENERAL NOTES

- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE SITE. THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NON-EXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES, BUILDINGS, FENCES, AND ROADWAYS FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE ABOVE WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
- BULK GRADING SHALL BE COMPLETED TO A SUBGRADE TOLERANCE OF PLUS OR MINUS 0.2'.
- CONTRACTOR TO OBTAIN COPIES OF THE SOILS REPORT FROM THE GEOTECHNICAL ENGINEER AND TO BE KEPT ONSITE DURING ALL EARTHWORK OPERATIONS.
- MAXIMUM CUT/FILL SLOPES SHALL NOT EXCEED 3:1, UNLESS OTHERWISE NOTED.
- ALL BOTTOM OF WALL (BW) CALLOUTS ARE FOR THE BOTTOM OF WALL AT GRADE. THEY DO NOT REPRESENT THE BOTTOM OF THE CONSTRUCTED WALL OR FOOTING, WHICH IS NOT SPECIFIED ON THESE PLANS.

SOIL TYPES

ON-SITE SOILS ARE HYDROLOGIC GROUPS "A" (COLUMBINE GRAVELLY SANDY LOAM) AND "B" (STAPLETON SANDY LOAM) (PER NRCS WEB SOIL SURVEY MAP)

AREA OF DISTURBANCE

ESTIMATED AREA OF DISTURBANCE = 69.00 ACRES

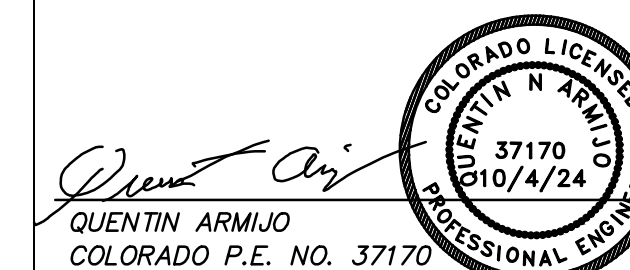
EARTHWORK VOLUMES

ESTIMATED CUT = 73,990 CY, ESTIMATED FILL = 287,149* CY, NET = 213,159 CY <FILL>
*20% COMPACTION ASSUMED FOR PLACEMENT OF FILL

BLACK SQUIRREL CREEK NOTE:

IF AN UNDERDRAIN SYSTEMS ARE NEEDED FOR HOMES LOCATED WITH HIGH GROUNDWATER WILL NEED TO DISCHARGE INTO A GROUNDWATER RECHARGE FACILITY, NOT A STORM DRAIN SYSTEM.

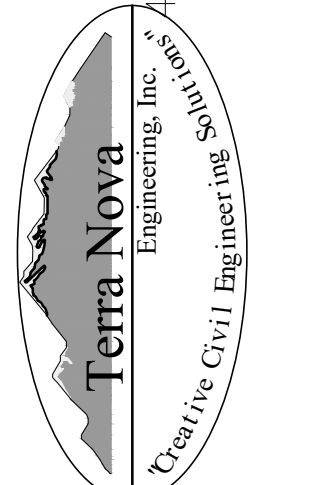
THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.



REVISIONS	NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE LOCAL JURISDICTIONAL AGENCIES, THESE DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION. TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECTS AUTHORIZED BY WRITTEN AUTHORIZATION.

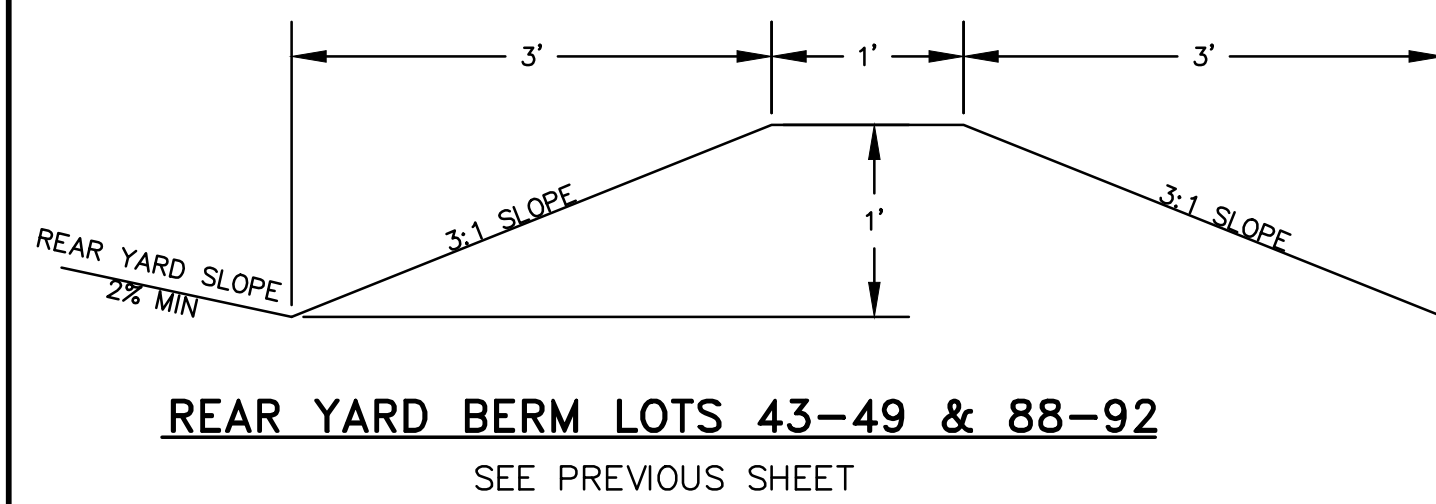
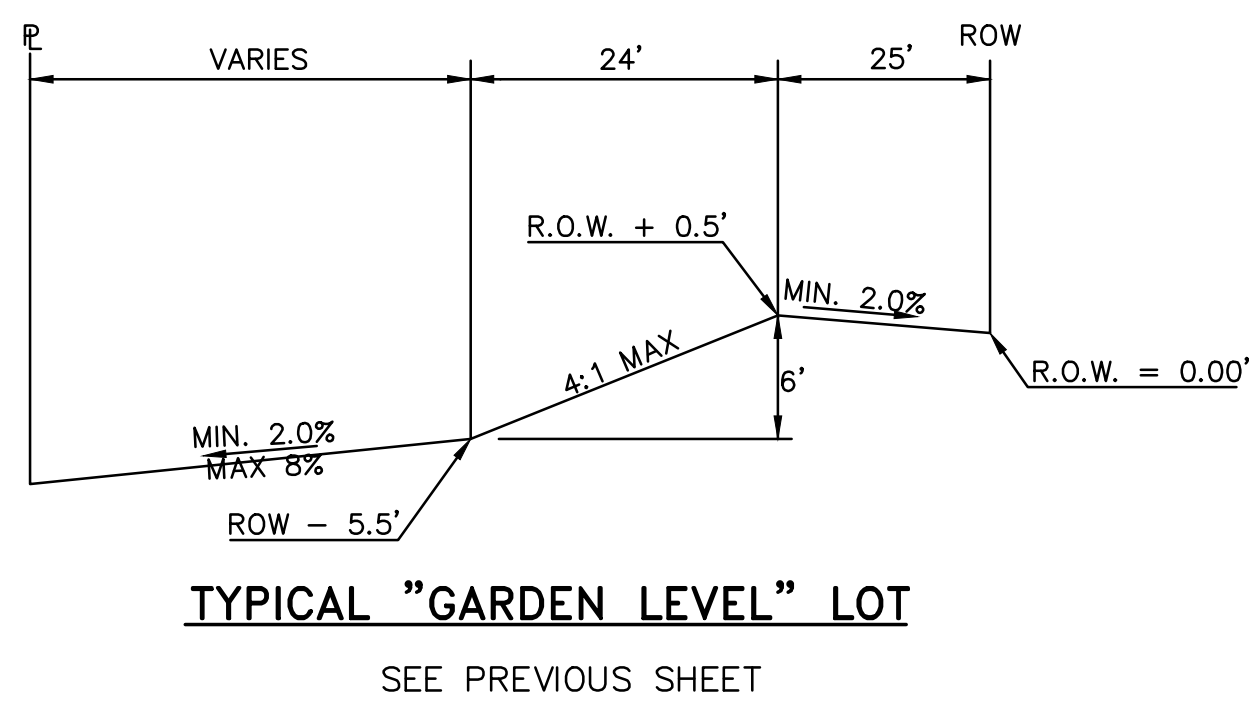
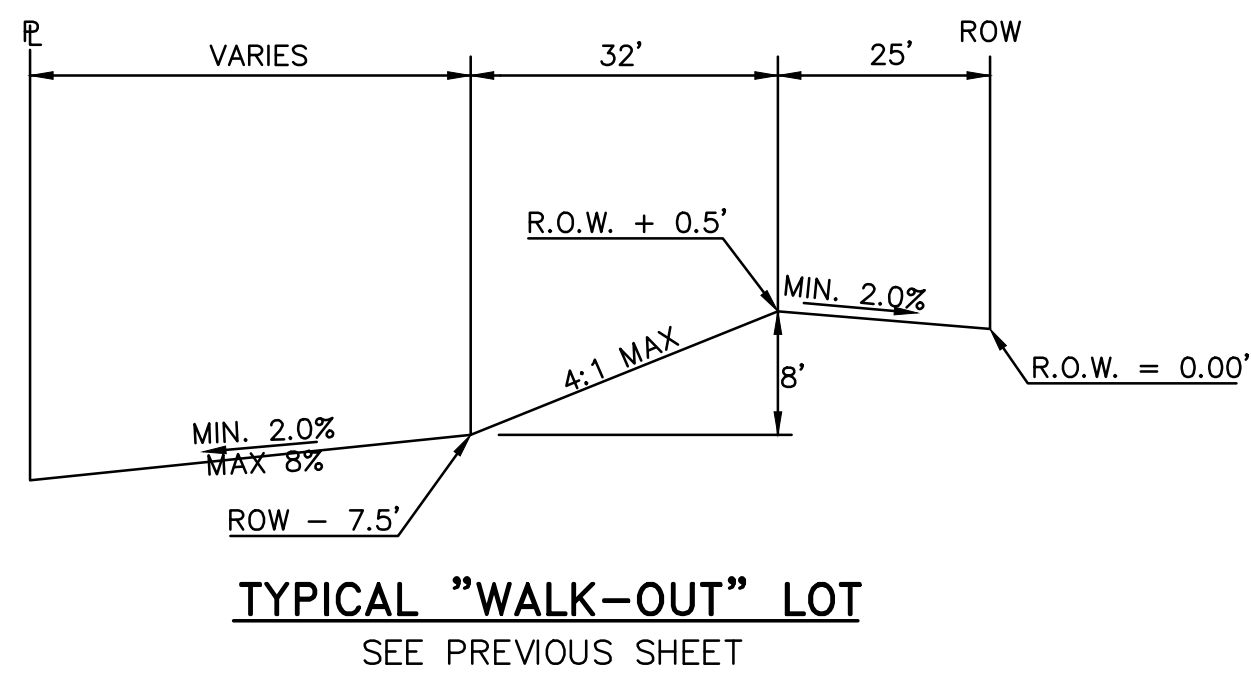
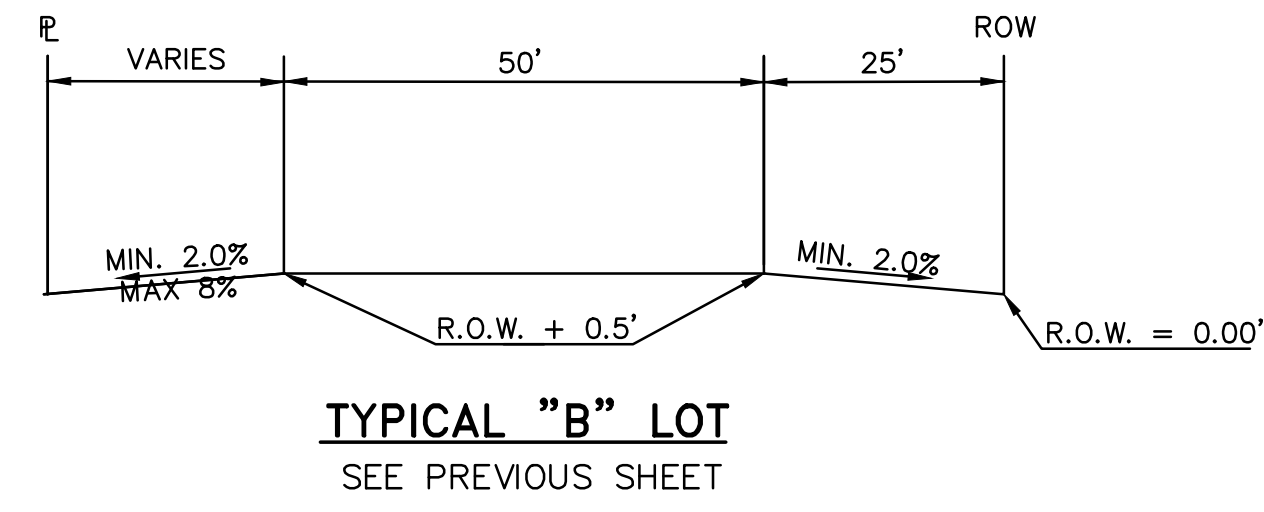
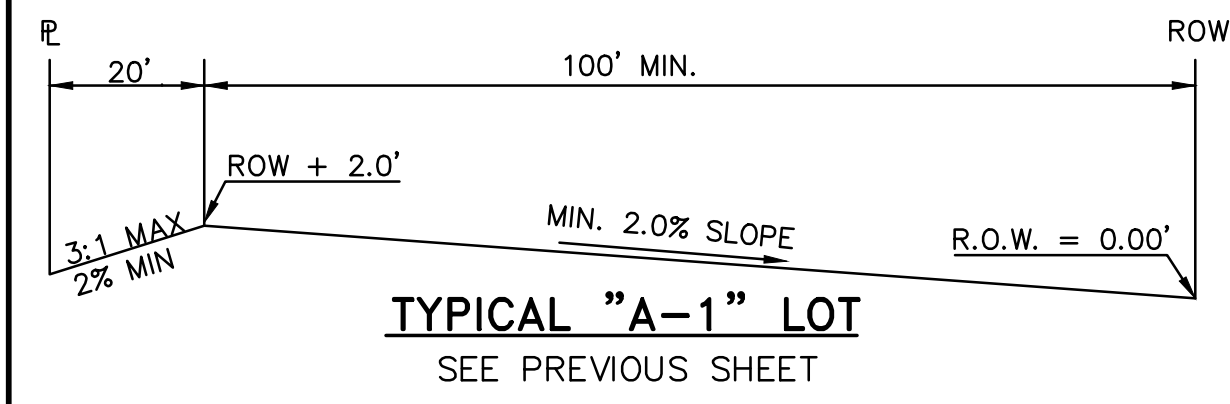
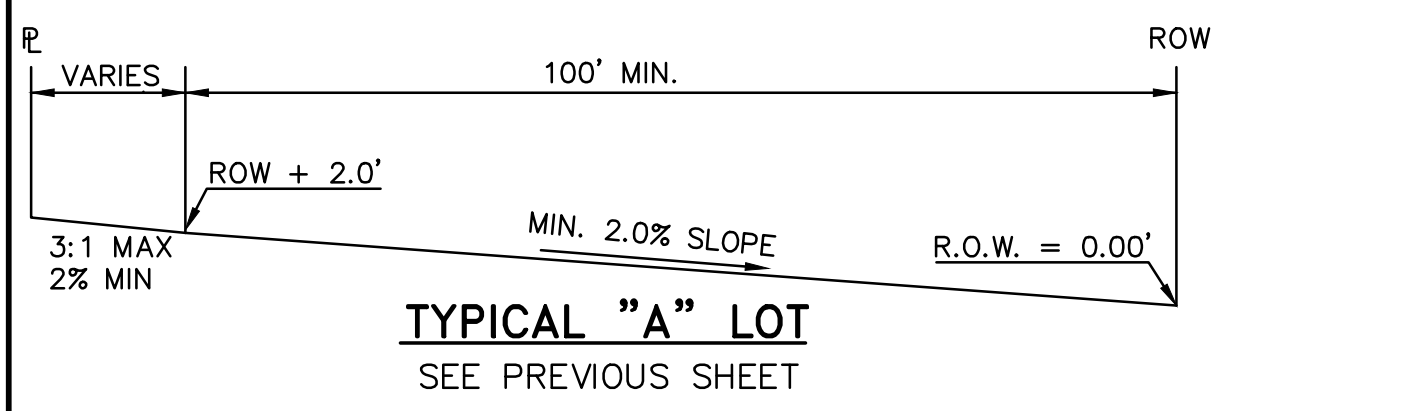
PREPARED FOR:
ACM ALF VIII JV SUB II LLC
ATTN: JASON POCK
100 E. MISSISSIPPI AVE., STE 500
DENVER, CO 80246
303-984-9800



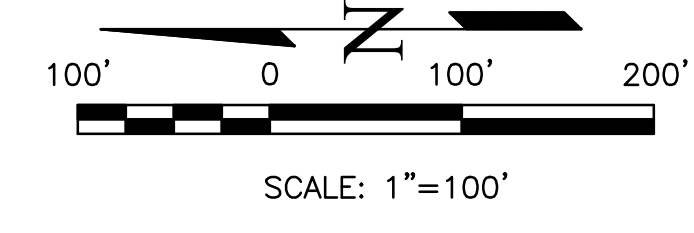
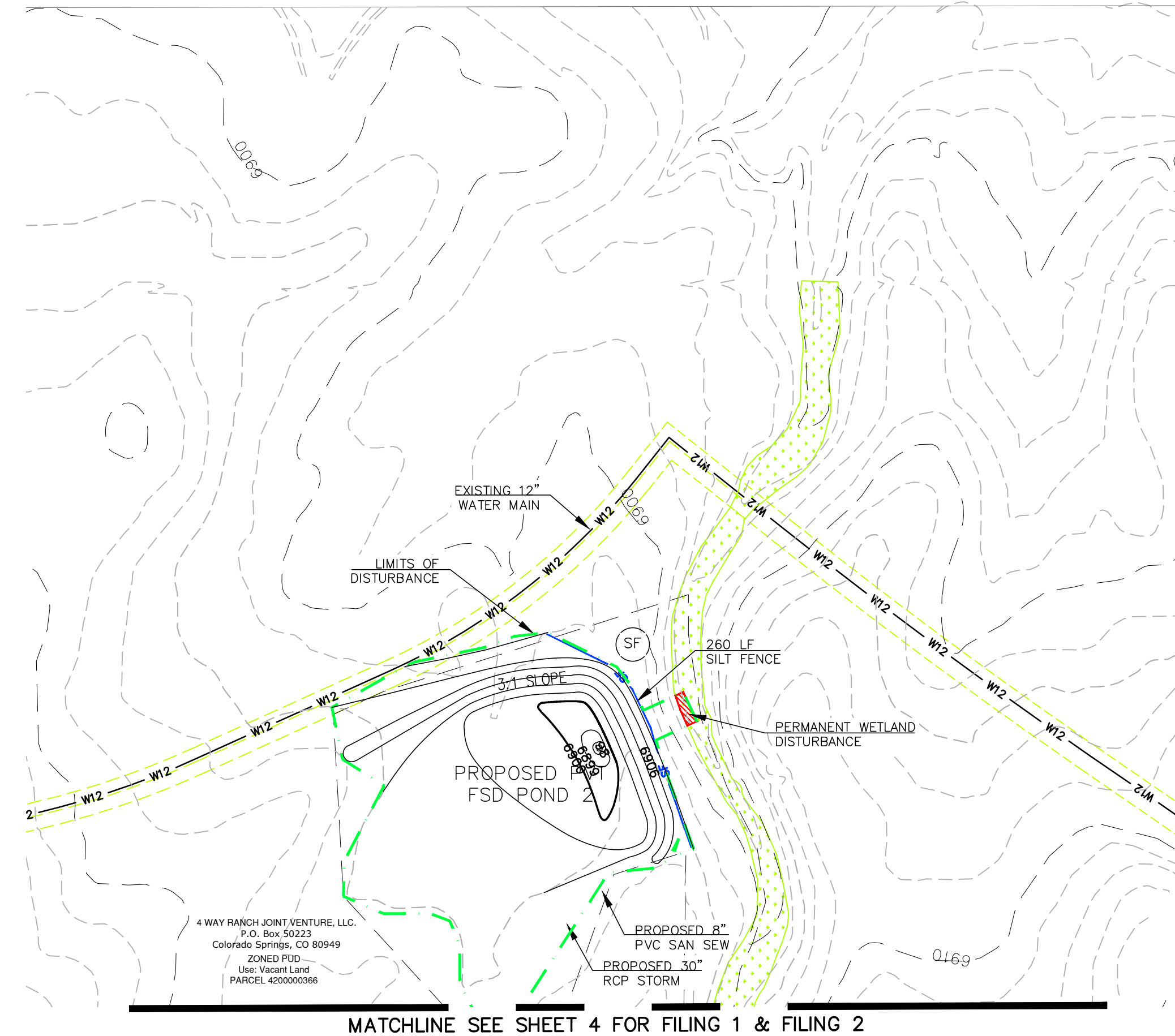
721 S. 23RD STREET
COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6422
FAX: 719-635-6426
www.tnec.com

WATERBURY FILING NO. 1
GRADING EROSION CONTROL PLAN
INITIAL EROSION CONTROL PLAN 2

DESIGNED BY	DLF
DRAWN BY	QNA
CHECKED BY	QNA
H-SCALE	NA
V-SCALE	N/A
JOB NO.	2356.00
DATE ISSUED	10/4/24
SHEET NO.	3 OF 52



- NOTES:**
NO BATCH PLANTS ARE PROPOSED
ALL CONTROL MEASURES ARE BEING IMPLEMENTED BY THE OWNER/DEVELOPER/CONTRACTOR
- GRADING LEGEND**
- 8' EXISTING CONTOUR
 - 1' EXISTING CONTOUR
 - 5' PROPEL CONTOUR
 - 1' PROPEL CONTOUR
 - LIMITS OF DISTURBANCE/ CONSTRUCTION BOUNDARY
 - SUBDIVISION BOUNDARY
 - CUT/FILL LINE
 - TRIBUTARY AREA TO TSB
 - DIRECTION OF SURFACE FLOW
 - HIGH POINT
 - LOW POINT
 - A LOT
 - B LOT
 - WALK OUT LOT MODIFIED
 - GARDEN LEVEL LOT MODIFIED
- WETLANDS LEGEND**
- EXISTING WETLANDS
 - PERMANENT WETLAND DISTURBANCE



REVISIONS	NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE LOCAL JURISDICTIONAL AGENCIES, THESE DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION. TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PURPOSES AUTHORIZED BY WRITTEN AUTHORIZATION.

PREPARED FOR:
ACM ALF VIII JV SUB II LLC
ATTN: JASON POKK
100 E. MISSISSIPPI AVE., STE 500
DENVER, CO 80246
303-984-9800

721 S. 23RD STREET
COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6422
FAX: 719-635-6426
www.tnengine.com

Terra Nova
Engineering, Inc.
Civil Engineering, Inc.

WATERBURY FILING NO. 1

GRADING EROSION & STORMWATER CONTROL PLAN
INTERIM EROSION CONTROL PLAN 2

THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

DESIGNED BY DLF
DRAWN BY QNA
CHECKED BY QNA

H-SCALE NA
V-SCALE N/A

JOB NO. 2356.00
DATE ISSUED 10/4/24
SHEET NO. 5 OF 52

QUENTIN ARMIJO
COLORADO P.E. NO. 37170

EROSION CONTROL LEGEND

KEY	TITLE	SYMBOL	IMPLEMENTATION PHASE
SF	SILT FENCE		INITIAL
CF	CONSTRUCTION FENCE		INITIAL
CIP	CULVERT INLET PROTECTION		INTERIM
IP	INLET PROTECTION		INTERIM
SBB	STRAW BALE BARRIER		INTERIM
SP	STOCKPILE PROTECTION		INITIAL
VTC	VEHICLE TRACKING CONTROL		INITIAL
CWA	CONCRETE WASHOUT AREA		INTERIM
SSA	STABILIZED STAGING AREA		INITIAL
TSM	TEMPORARY SEEDING AND MULCHING		INITIAL
PSM	PERMANENT SEEDING AND MULCHING		FINAL
DW	DE-WATERING		INITIAL

GRADING LEGEND

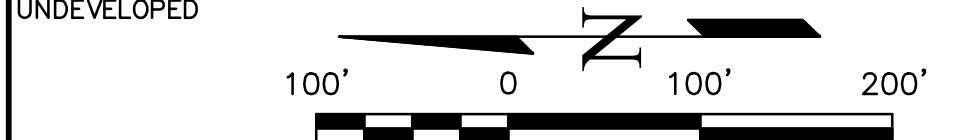
8' EXISTING CONTOUR	6810
1' EXISTING CONTOUR	6802
5' PROPOSED CONTOUR	6810
1' PROPOSED CONTOUR	6802
LIMITS OF DISTURBANCE/CONSTRUCTION BOUNDARY	
SUBDIVISION BOUNDARY	
CUT/FILL LINE	
TRIBUTARY AREA TO TSB	
DIRECTION OF SURFACE FLOW	
HIGH POINT	HPX
LOW POINT	LPX
A LOT	"A"
B LOT	"B"
WALK OUT LOT MODIFIED	"WO"
GARDEN LEVEL LOT MODIFIED	"G"
100-Y FEMA FLOODPLAIN	
100-Y HWL PER HECRAS ANALYSIS	
AREAS OF DE-WATERING	

WETLANDS LEGEND

EXISTING WETLANDS	
PERMANENT WETLAND DISTURBANCE	

RUNOFF REDUCTION LEGEND

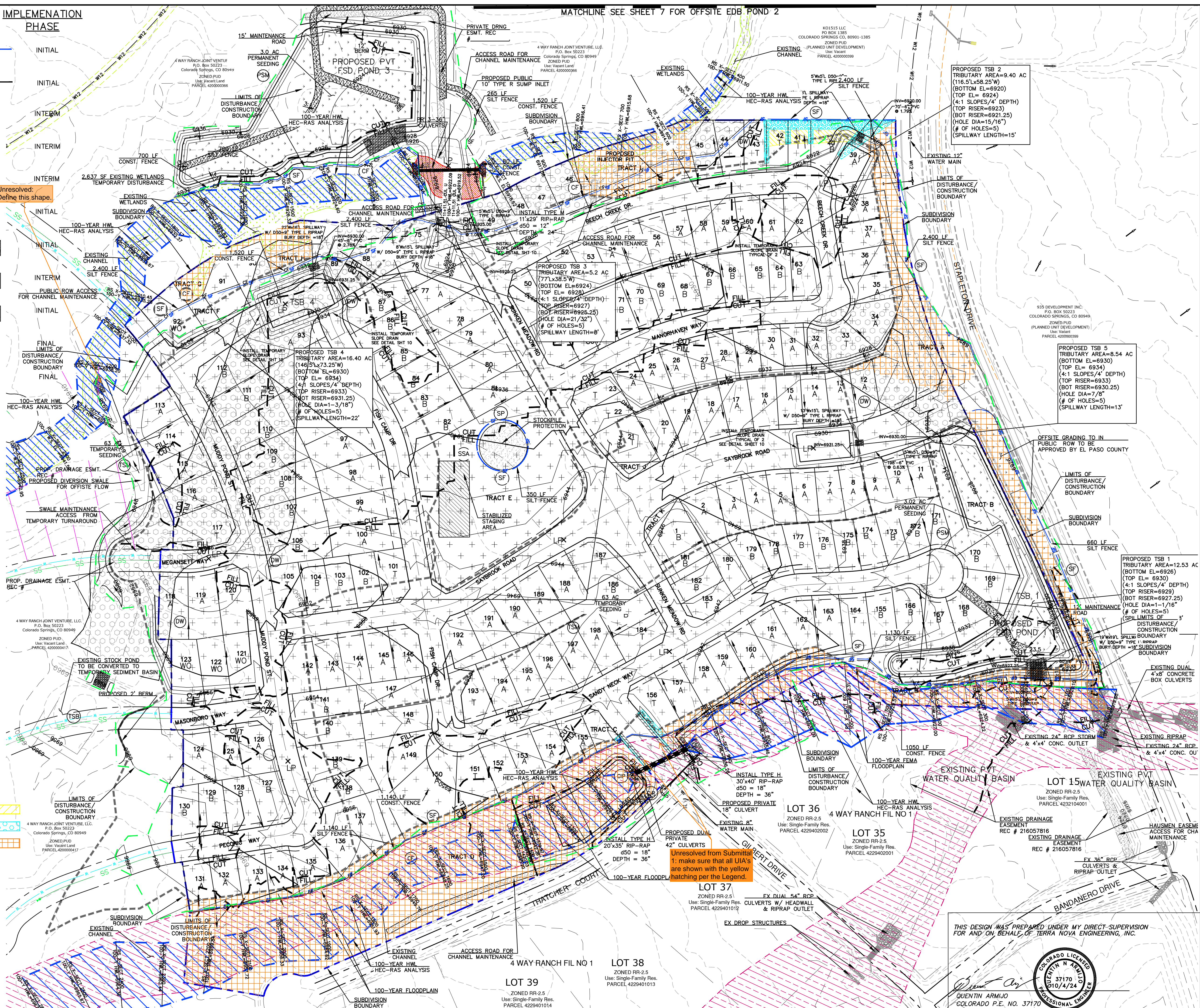
UNCONNECTED IMPERVIOUS AREA	
RECEIVING PERVIOUS AREA	
EXCLUDED UNDEVELOPED PERVIOUS AREA PER THE EXCLUSION IN EGM APPENDIX 1.7.1.B.7 - SITES WITH LAND DISTURBANCE TO UNDEVELOPED LAND THAT WILL REMAIN UNDEVELOPED	



VEGETATION NOTE:
EXISTING VEGETATION CONSISTS OF NATIVE PRAIRIE GRASSES AND SHRUBS WITH FAIR TO GOOD COVERAGE OF 50% TO 70%

GENERAL NOTE:
ALL AREAS TO BE VEGETATED WITH PERMANENT SEEDING SHOULD ALSO BE TEMPORARY STABILIZED VIA TRACK ROLLING OR SOME OTHER MEANS.

GENERAL NOTE:
1. NO BATCH PLANTS ARE PROPOSED
2. ALL CONTROL MEASURES ARE BEING IMPLEMENTED BY THE OWNER/DEVELOPER/CONTRACTOR
3. FOR INFORMATION ONLY? FOR PRE-SUBDIVISION SITE GRADING THERE WILL BE NO CURB AND GUTTER AND STORM DRAIN, ONLY SEEDING AND MULCHING.

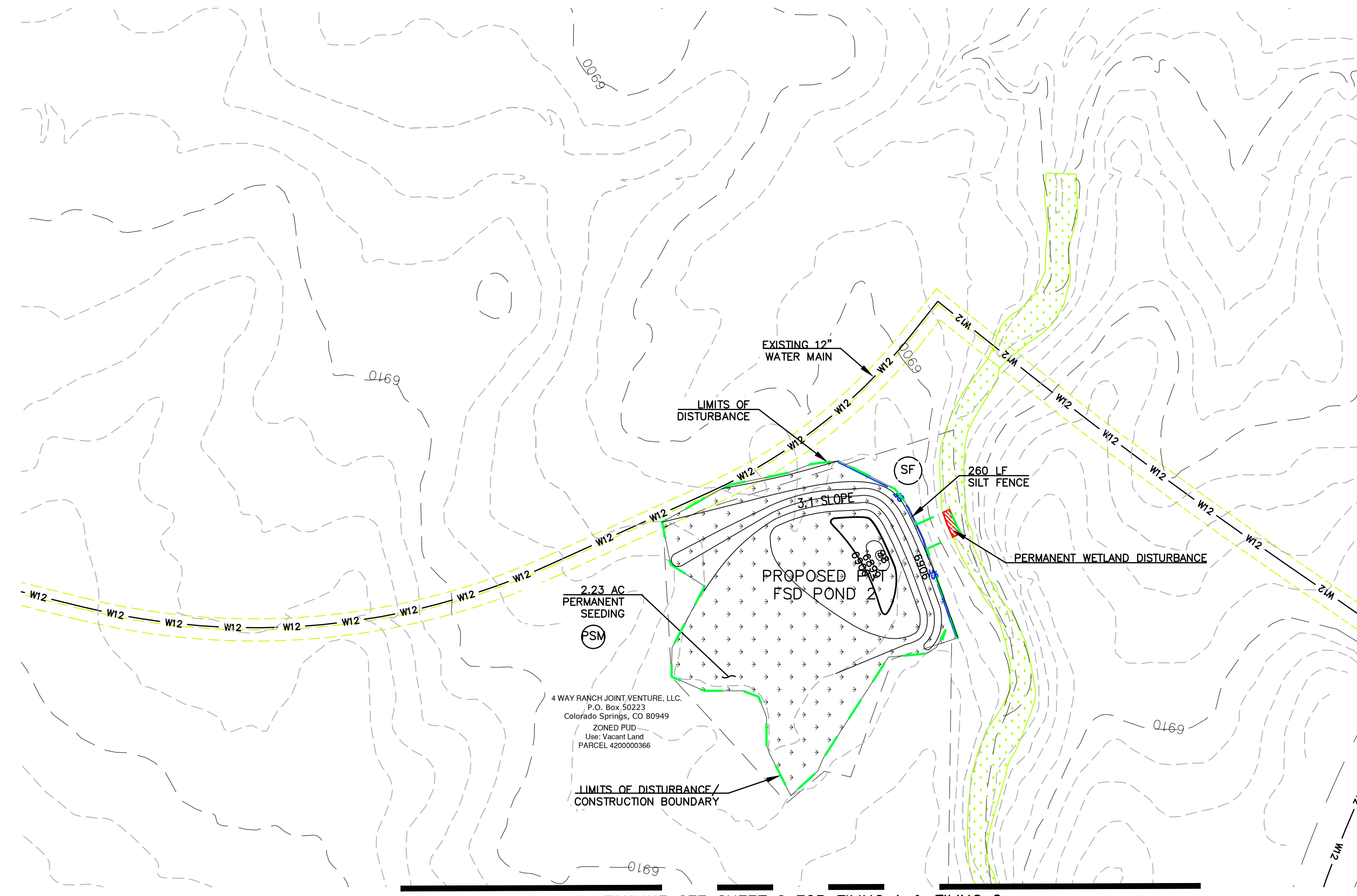


EROSION CONTROL LEGEND

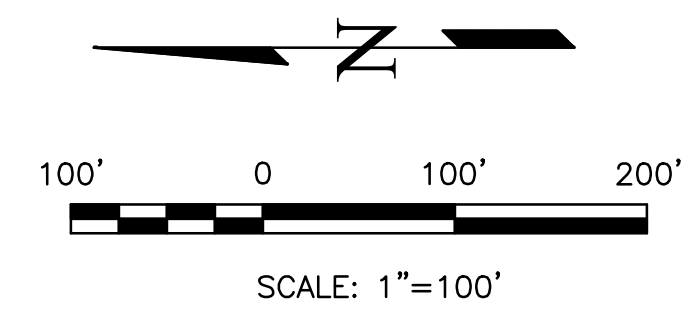
KEY	TITLE	SYMBOL
SF	SILT FENCE	SF
CF	CONSTRUCTION FENCE	CF
CIP	CULVERT INLET PROTECTION	CIP
IP	INLET PROTECTION	IP
SBB	STRAW BALE BARRIER	SBB
SP	STOCKPILE PROTECTION	SP
VTC	VEHICLE TRACKING CONTROL	VTC
CWA	CONCRETE WASHOUT AREA	CWA
SSA	STABILIZED STAGING AREA	SSA
TSM	TEMPORARY SEEDING AND MULCHING	TSM
PSM	PERMANENT SEEDING AND MULCHING	PSM
DW	DE-WATERING	DW

MINIMUM FINISHED FLOOR ELEVATIONS BASED 100-Y HWL

Lot 44	Min. FF	6915.00
Lot 45	HWL	6916.00
Lot 46	HWL	6919.00
Lot 47	HWL	6920.00
Lot 48	HWL	6921.00
Lot 49	HWL	6921.00
Lot 75	HWL	6925.00
Lot 88	HWL	6927.50
Lot 89	HWL	6928.00
Lot 90	HWL	6933.50
Lot 91	HWL	6935.00
Lot 92	HWL	6938.50
Lot 113	HWL	6941.00
Lot 131	HWL	6963.00
Lot 132	HWL	6961.00
Lot 133	HWL	6960.00
Lot 134	HWL	6959.00
Lot 135	HWL	6958.00
Lot 136	HWL	6956.00
Lot 137	HWL	6954.00
Lot 150	HWL	6952.00
Lot 151	HWL	6949.00
Lot 152	HWL	6947.00
Lot 153	HWL	6944.00
Lot 154	HWL	6944.00
Lot 155	HWL	6944.00
Lot 156	HWL	6941.00
Lot 157	HWL	6941.00
Lot 158	HWL	6938.00
Lot 159	HWL	6938.00
Lot 160	HWL	6938.00
Lot 161	HWL	6937.00
Lot 162	HWL	6936.00
Lot 163	HWL	6936.00
Lot 164	HWL	6935.00
Lot 165	HWL	6935.00



MATCHLINE SEE SHEET 6 FOR FILING 1 & FILING 2



NOTES:
 NO BATCH PLANTS ARE PROPOSED
 ALL CONTROL MEASURES ARE BEING IMPLEMENTED BY THE OWNER/DEVELOPER/CONTRACTOR

GRADING LEGEND

8' EXISTING CONTOUR	8810
1' EXISTING CONTOUR	8802
5' PROPED CONTOUR	8810
1' PROPED CONTOUR	8802
LIMITS OF DISTURBANCE/ CONSTRUCTION BOUNDARY	[Green dashed line]
SUBDIVISION BOUNDARY	[Blue dashed line]
CUT/FILL LINE	[Black dashed line]
TRIBUTARY AREA TO TSB	[Dotted pattern]
DIRECTION OF SURFACE FLOW	[Arrow]
HIGH POINT	HPX
LOW POINT	LPX
A LOT	"A"
B LOT	"B"
WALK OUT LOT MODIFIED	"WO"
GARDEN LEVEL LOT MODIFIED	"G"

100-Y FEMA FLOODPLAIN	[Pink hatched pattern]
100-Y HWL PER HECRAS ANALYSIS	[Blue hatched pattern]
AREAS OF DE-WATERING	[Circle pattern]

WETLANDS LEGEND

EXISTING WETLANDS	[Green dotted pattern]
PERMANENT WETLAND DISTURBANCE	[Red hatched pattern]

THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.



REVISIONS	NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE LOCAL JURISDICTION, TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECT AUTHORIZED BY WRITTEN AUTHORIZATION.

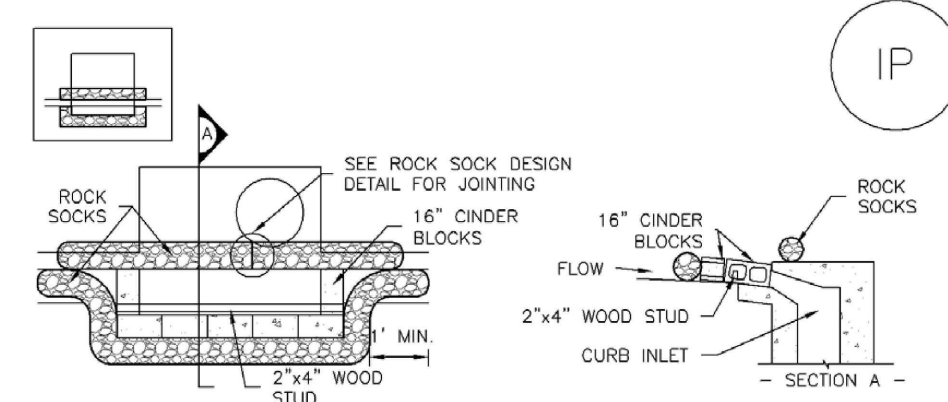
PREPARED FOR:
 ACM ALF VIII JV SUB II LLC
 ATTN: JASON POCK
 100 E. MISSISSIPPI AVE., STE 500
 DENVER, CO 80246
 303-984-9800

Terra Nova
 Engineering, Inc.
 Civil Engineering
 721 S. 23RD STREET
 COLORADO SPRINGS, CO 80904
 OFFICE: 719-635-6422
 FAX: 719-635-6426
 www.tnengine.com

WATERBURY FILING NO. 1
 GRADING EROSION & CONTROL PLAN
 FINAL EROSION CONTROL PLAN 2

DESIGNED BY	DLF
DRAWN BY	QNA
CHECKED BY	QNA
H-SCALE	NA
V-SCALE	N/A
JOB NO.	2356.00
DATE ISSUED	10/4/24
SHEET NO.	7 OF 52

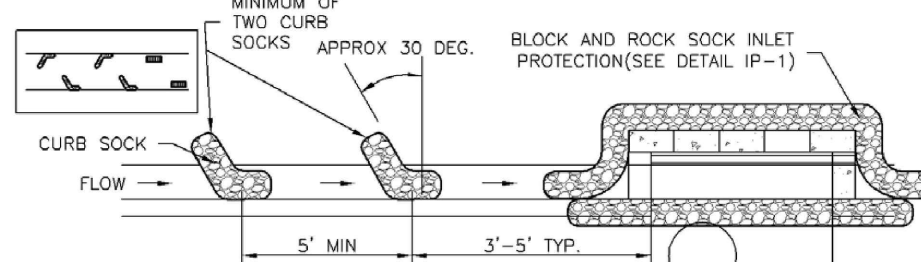
SC-6 Inlet Protection (IP)



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

BLOCK AND CURB SOCK INLET PROTECTION 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 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.

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

SC-6 Inlet Protection (IP)

GENERAL INLET PROTECTION INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION OF INLET PROTECTION
 - 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, SEEDED 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: 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.

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.

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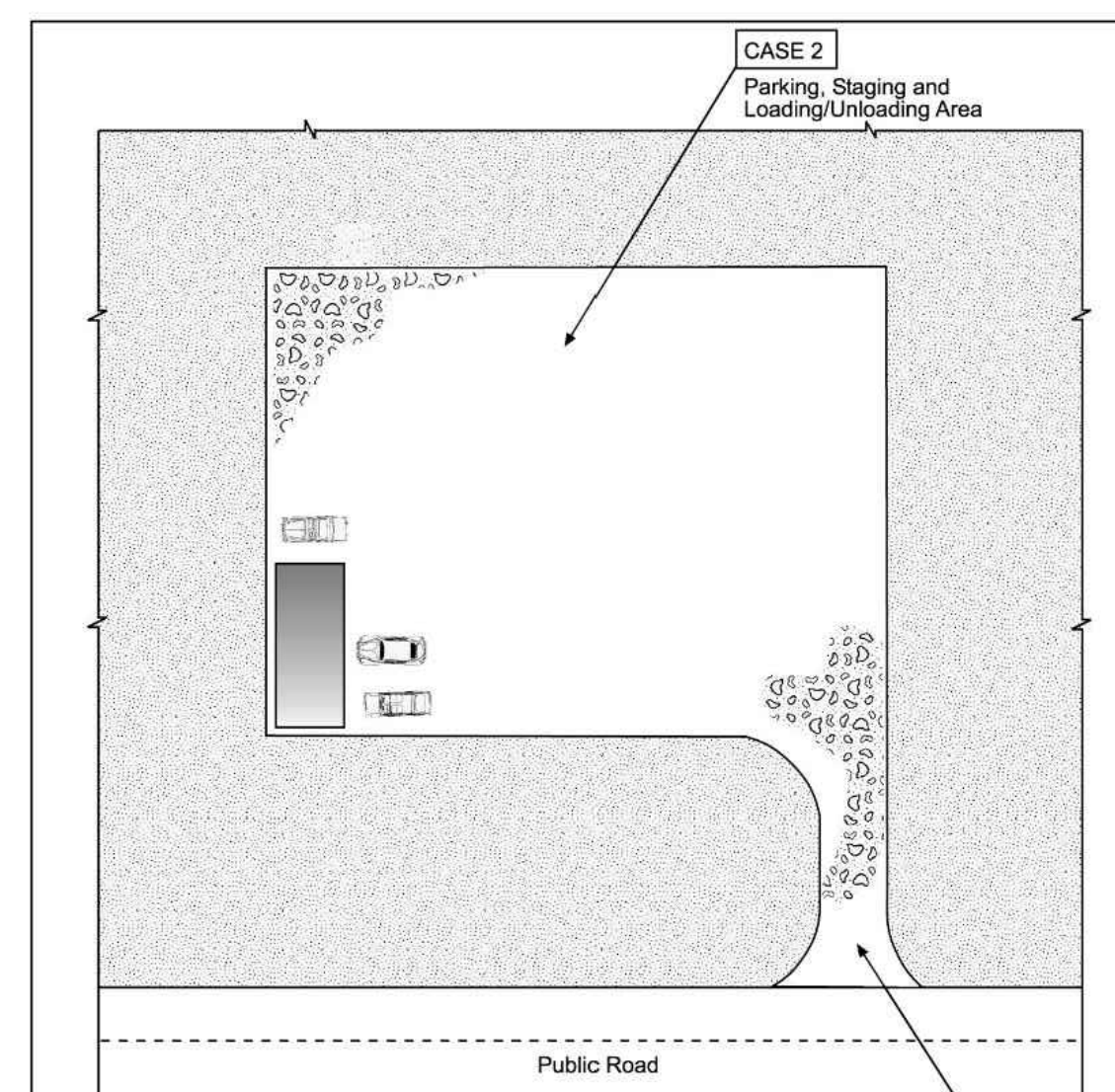
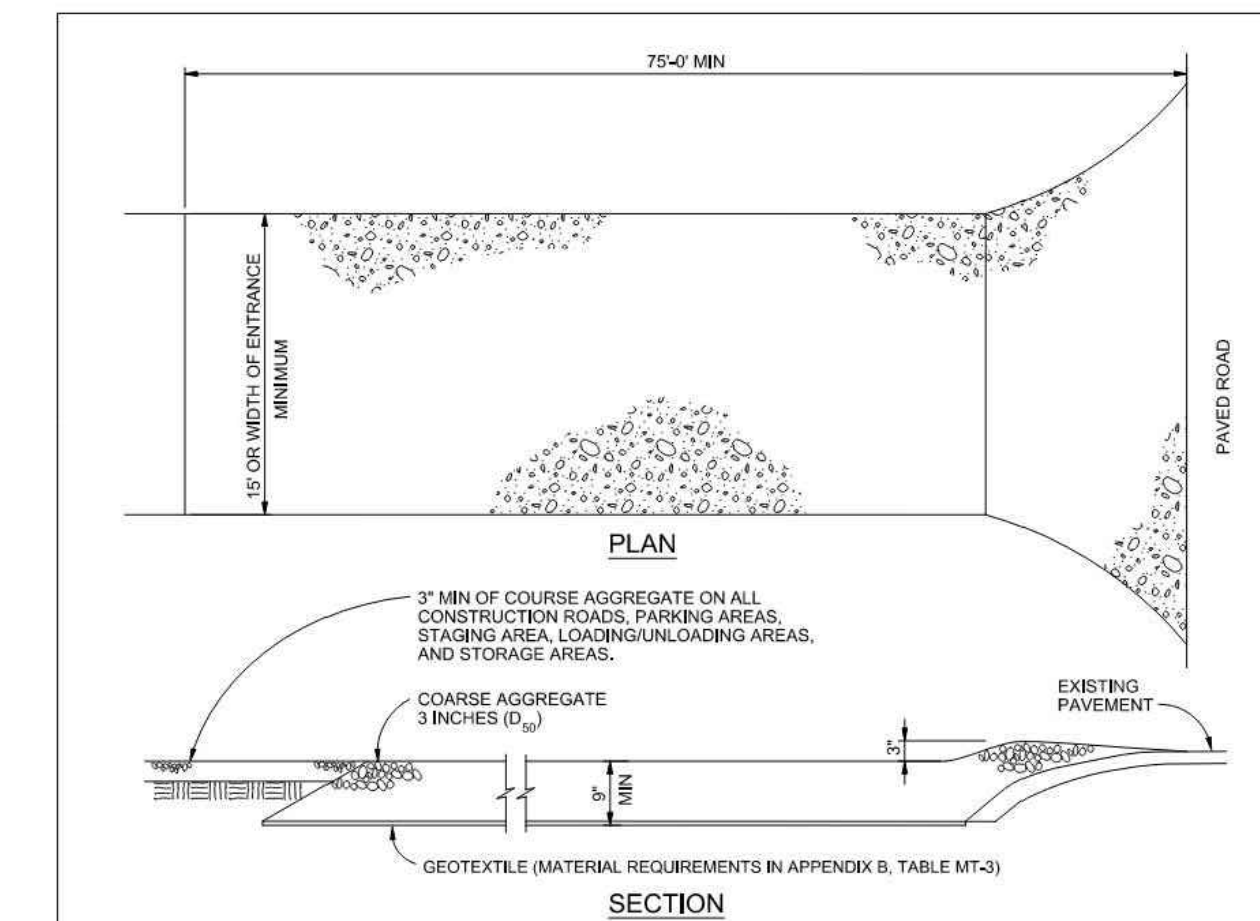


Table VT-1

	Case 1	Case 2
Gravel Thickness	9'	3'
Filter Fabric	YES	NO

City of Colorado Springs Storm Water Quality Figure VT-1 Vehicle Tracking Application Examples DENM150722.CSDRNYT-19-99 3-63



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 SHORT OVERLAY.
- 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 STEEP 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 3-64

Revegetation Chapter 14

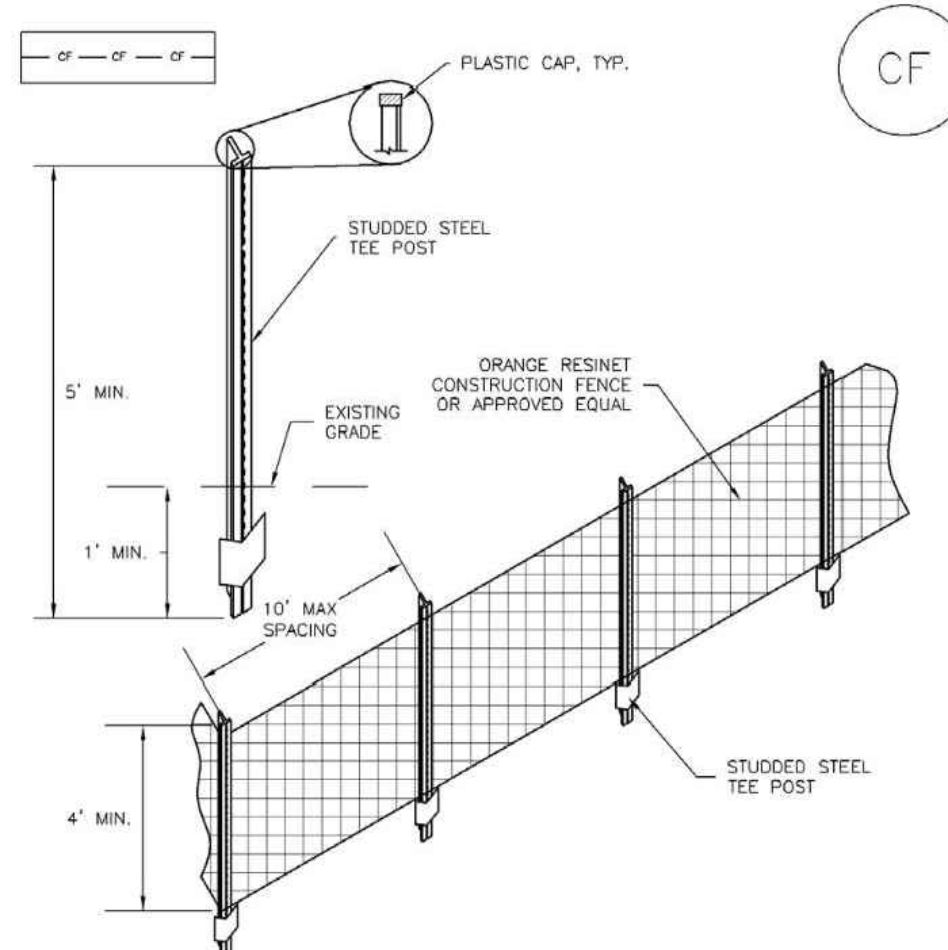
Table 14-10. Recommended Seed Mix for Transition Areas¹

Common Name (Variety)	Scientific Name	Growth Season	Growth Form	Seeds/Lb	Lbs PLS/Acre Drilled	Lbs Broadcast or Hydroseeded
Sheep fescue (Duras)	<i>Festuca ovina</i>	Cool	Bunch	680,000	1.3	2.6
Western wheatgrass (Arriba)	<i>Pascopyrum smithii</i>	Cool	Sod	110,000	7.9	15.8
Alkali sacaton	<i>Spolobolus airoides</i>	Warm	Bunch	1,758,000	0.5	1.0
Slender wheatgrass	<i>Elymus trachycaulus</i>	Cool	Bunch	159,000	5.5	11.0
Canadian bluegrass (Ruebens)	<i>Poa compressa</i>	Cool	Sod	2,500,000	0.3	0.6
Switchgrass (Pathfinder)	<i>Panicum virgatum</i>	Warm	Sod/Bunch	389,000	1.3	2.6
Annual rye	<i>Lolium multiflorum</i>	Cool	Cover crop	227,000	10.0	20.0
			TOTAL		26.8	53.6
Wildflowers						
Blanket flower	<i>Fallardia arvensis</i>	---	---	132,000	0.25	0.50
Prairie coneflower	<i>Ratibida columnaris</i>	---	---	1,230,000	0.20	0.40
Purple prairie clover	<i>Petalostemum purpurea</i>	---	---	210,000	0.20	0.40
Gayfeather	<i>Liatris punctata</i>	---	---	138,000	0.06	0.12
Flax	<i>Linum lewisii</i>	---	---	293,000	0.20	0.40
Penstemon	<i>Penstemon strictus</i>	---	---	592,000	0.20	0.40
Yarrow	<i>Achillea millefolium</i>	---	---	2,770,000	0.03	0.06
			TOTAL		1.14	2.28

¹For side slopes or between wet and dry areas.
²Substitute 1.7 lbs PLS/acre of inland saltgrass (*Dactylis spicata*) in salty soils.

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SM-3 Construction Fence (CF)



CF-1. PLASTIC MESH CONSTRUCTION FENCE

CONSTRUCTION FENCE INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION OF CONSTRUCTION FENCE.
- CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE, CONTRACTOR-GRADE MATERIAL THAT IS AT LEAST 4" HIGH. METAL POSTS SHOULD HAVE A PLASTIC CAP FOR SAFETY.
- STUDDED STEEL TEE POSTS SHALL BE UTILIZED TO SUPPORT THE CONSTRUCTION FENCE. MAXIMUM SPACING FOR STEEL TEE POSTS SHALL BE 10'.
- CONSTRUCTION FENCE SHALL BE SECURELY FASTENED TO THE TOP, MIDDLE, AND BOTTOM OF EACH POST.

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

Construction Fence (CF) SM-3

CONSTRUCTION FENCE MAINTENANCE NOTES

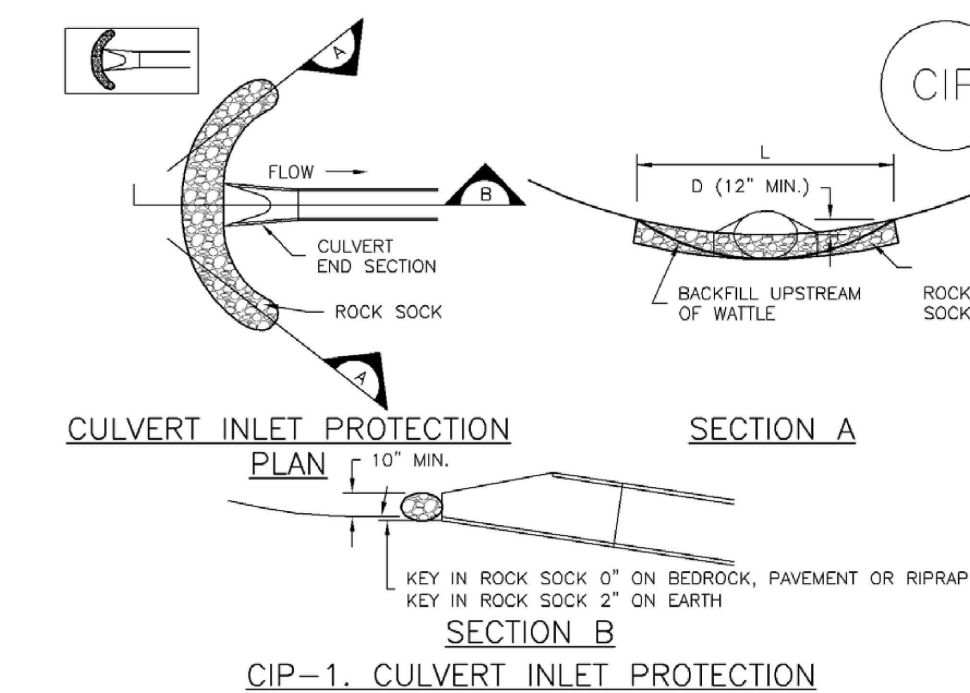
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS 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.
- CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
- WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

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.

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

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Inlet Protection (IP) SC-6



CIP-1. CULVERT INLET PROTECTION

CULVERT INLET PROTECTION INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION OF CULVERT INLET PROTECTION.
 - SEE ROCK SOCK DESIGN DETAIL FOR ROCK GRADATION REQUIREMENTS AND JOINTING 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.

(DETAILS ADAPTED FROM AURORA, 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.

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SEED MIX FOR POND BOTTOMS

THE CITY OF COLORADO SPRINGS ENGINEERING DEPARTMENT GENERAL SPECIFICATIONS SHOULD BE USED AS A RESOURCE WHEN DEVELOPING TECHNICAL SPECIFICATIONS FOR RE-VEGETATION. GENERAL GUIDELINES AND RECOMMENDATIONS FOR RE-VEGETATION INCLUDE:

- SEED MIXTURES SHOULD BE SOWN AT THE PROPER TIME OF YEAR FOR THE MIXTURE. GENERALLY, THERE ARE TWO OPTIMAL SEEDING PERIODS DURING THE YEAR. THE FIRST PERIOD IS IN THE SPRING, MARCH TO MAY. THE SECOND PERIOD IS IN LATE SUMMER TO EARLY FALL, AUGUST TO SEPTEMBER.
- SEED SHOULD BE DRILL-SEEDED, WHENEVER POSSIBLE.
- BROADCAST SEEDING OR HYDRO-SEEDED MAY BE SUBSTITUTED ON SLOPES STEEPER THAN 3:1 OR ON OTHER AREAS NOT PRACTICAL TO DRILL SEED.

- SEEDING RATES SHOULD BE DOUBLED FOR BROADCAST SEEDING OR INCREASED BY 50% IF USING A BRILLIANT DRILL OR HYDRO-SEEDED.
- BROADCAST SEED SHOULD BE LIGHTLY HAND-RAKED INTO THE SOIL.
- SEED DEPTH SHOULD BE 1/2 TO 1 INCH FOR MOST MIXTURES.
- SEEDED AREAS SHOULD BE MULCHED, AND THE MULCH SHOULD BE ADEQUATELY SECURED.
- IF HYDRO-SEEDED IS CONDUCTED, MULCHING SHOULD BE CONDUCTED AS A SEPARATE, SECOND OPERATION.

- CONTAINERIZED NURSERY STOCK SHOULD BE KEPT IN A LIVE AND HEALTHY CONDITION PRIOR TO INSTALLATION.
- CONTAINERIZED TREES AND SHRUBS SHOULD BE INSTALLED ACCORDING TO THE PLANTING DETAILS PROVIDED IN THE COLORADO SPRINGS LANDSCAPE CODE AND POLICY MANUAL, UNIT FOUR, APPENDICES FOR TREE AND SHRUB PLANTING DETAILS.
- LIVE STAKES, POLES AND WILLOW BUNDLES SHOULD BE INSTALLED WHEN DORMANT (LATE WINTER AND EARLY SPRING).
- IF BEAVER ARE KNOWN TO BE IN THE AREA, BEAVER PROTECTION SHOULD BE PROVIDED FOR TREES AND SHRUBS.

ALLOWABLE PLANT VARIETIES SPECIES

- WESTERN WHEATGRASS (PASCOPYRUM SMITHII)
 - SWITCHGRASS (PANICUM VIRGATUM)
 - SLENDER WHEATGRASS (ELYMUS TRACHYCAULUS SSP. TRACHYCAULUS)
 - PUBESCENT WHEATGRASS (TRIGIA INTERMEDIA SSP. TRICHOPHORUM)
 - INDIAN GRASS (ACHNATHERUM HYMENOIDES)
 - BIG BLUESTEM (POA AMPLA)
 - BLUE GRAMA (BOUTELLOU GRACILIS)
 - SWITCHGRASS (PANICUM VIRGATUM)
 - SIDE-OATS GRAMA (BOUTELLOU CURTIPENDULA)
 - NEEDLE AND THREAD (HESPEROSTIPA COMATA SSP. COMATA)
- *SEED MIX SHOULD BE APPROVED BY THE COUNTY**

REVISIONS	NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE ENGINEER, ALL WORK SHALL BE AT THE RISK OF THE USER. TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECT AND ONLY AS AUTHORIZED BY WRITTEN AUTHORIZATION.

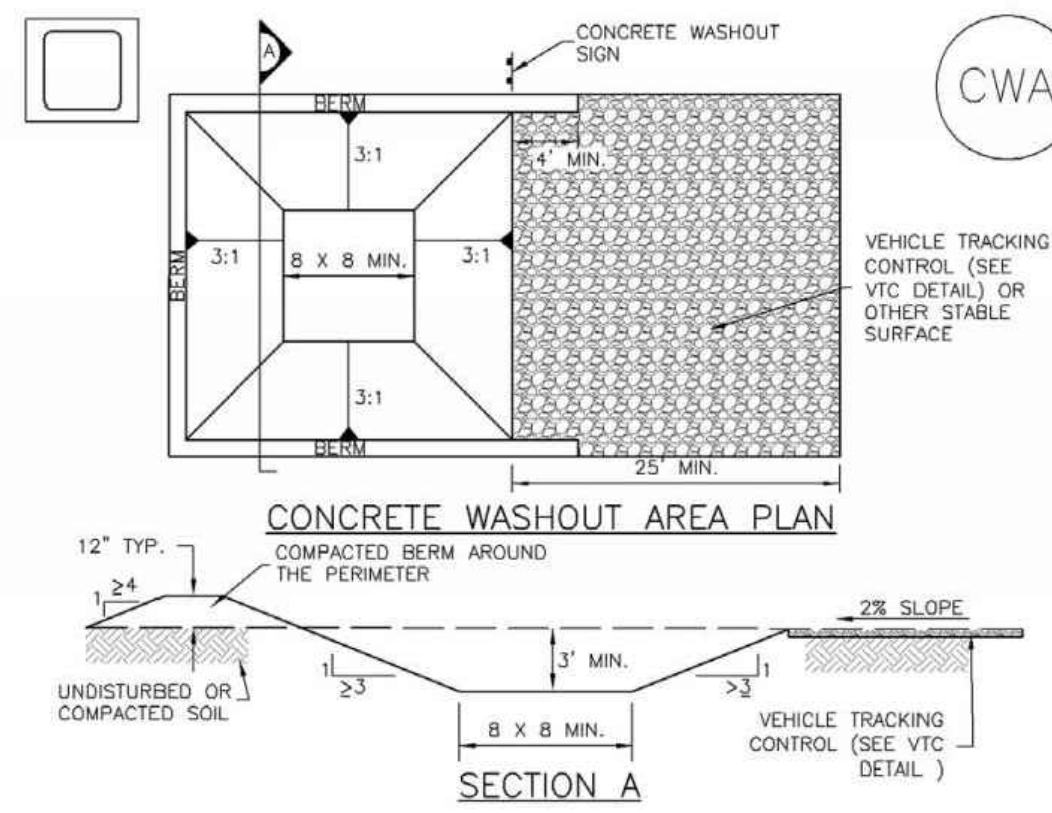
PREPARED FOR:
ACM ALF VIII JV SUB II LLC
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1000 E. MISSISSIPPI AVE., STE 500
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Terra Nova Engineering, Inc.
Civil Engineering
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COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6422
FAX: 719-635-6426
www.tnec.com

WATERBURY FILING NO. 1
GRADING EROSION & STORMWATER CONTROL PLAN
EROSION CONTROL DETAILS

DESIGNED BY	DLF
DRAWN BY	QNA
CHECKED BY	QNA
H-SCALE	N/A
V-SCALE	N/A
JOB NO.	2356.00
DATE ISSUED	10/4/24
SHEET NO.	8 OF 52

Concrete Washout Area (CWA) MM-1



CONCRETE WASHOUT AREA PLAN

SECTION A

CWA-1. CONCRETE WASHOUT AREA

- CWA INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
 - CWA INSTALLATION LOCATION.
 - DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
 - THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
 - CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
 - BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
 - VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
 - SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP TRIS.
 - USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

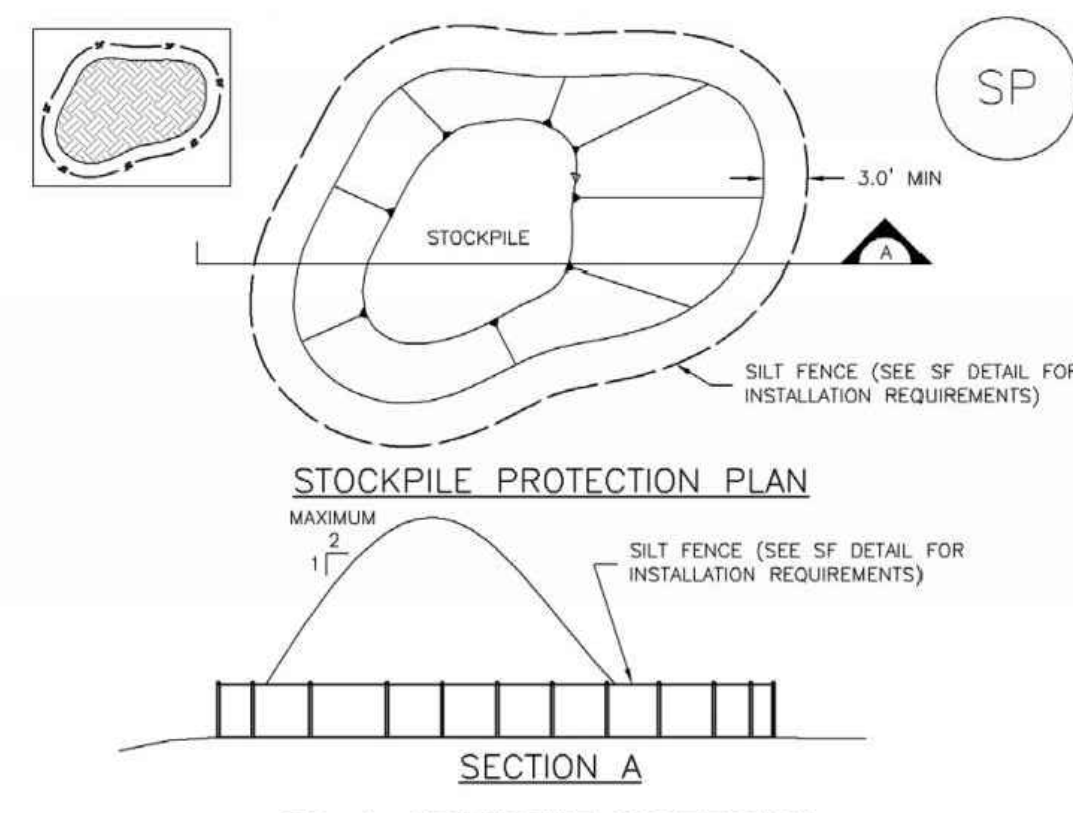
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MM-1 Concrete Washout Area (CWA)

- CWA 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.
 - THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
 - CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
 - THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
 - WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.
- (DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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Stockpile Management (SP) MM-2



STOCKPILE PROTECTION PLAN

SECTION A

SP-1. STOCKPILE PROTECTION

- STOCKPILE PROTECTION INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
 - LOCATION OF STOCKPILES.
 - TYPE OF STOCKPILE PROTECTION.
 - INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.
 - STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS, OR SOIL BINDERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30-60 DAYS).
 - FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

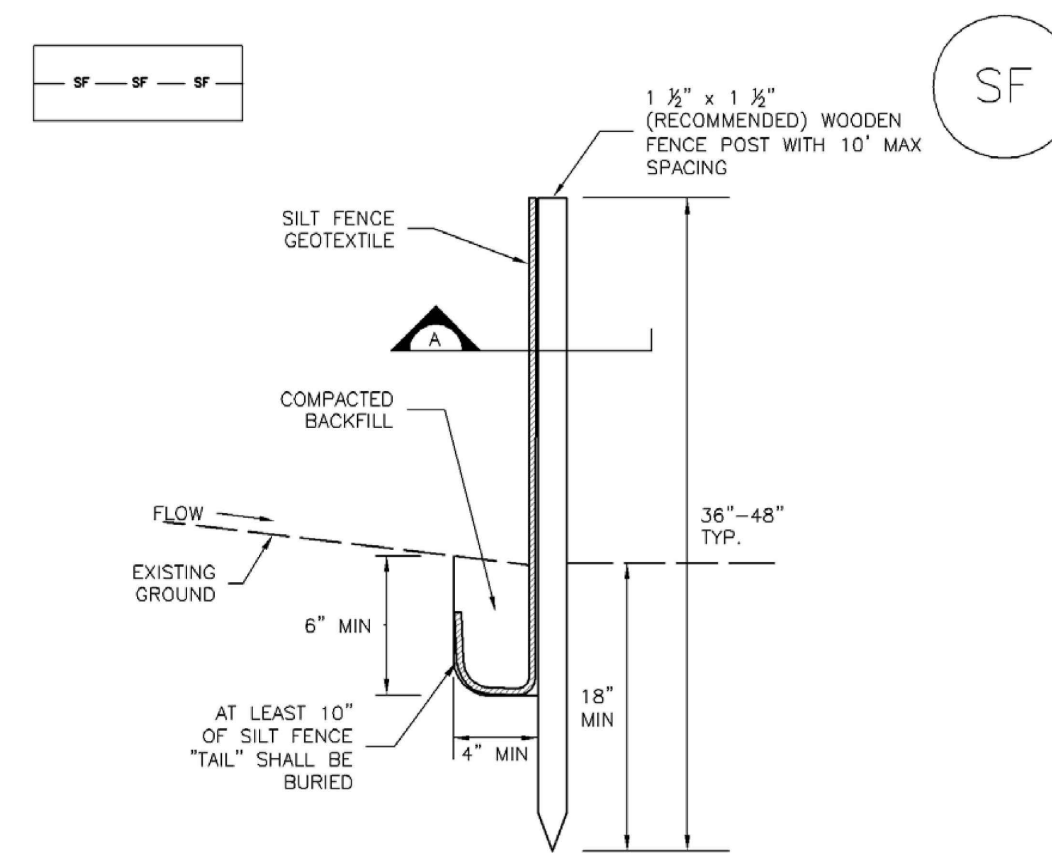
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MM-2 Stockpile Management (SM)

- 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.
- STOCKPILE PROTECTION MAINTENANCE NOTES**
- 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.

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Silt Fence (SF) SC-1



SILT FENCE

SECTION A

SF-1. SILT FENCE

- SILT FENCE INSTALLATION NOTES**
- SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PENETRATING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 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.

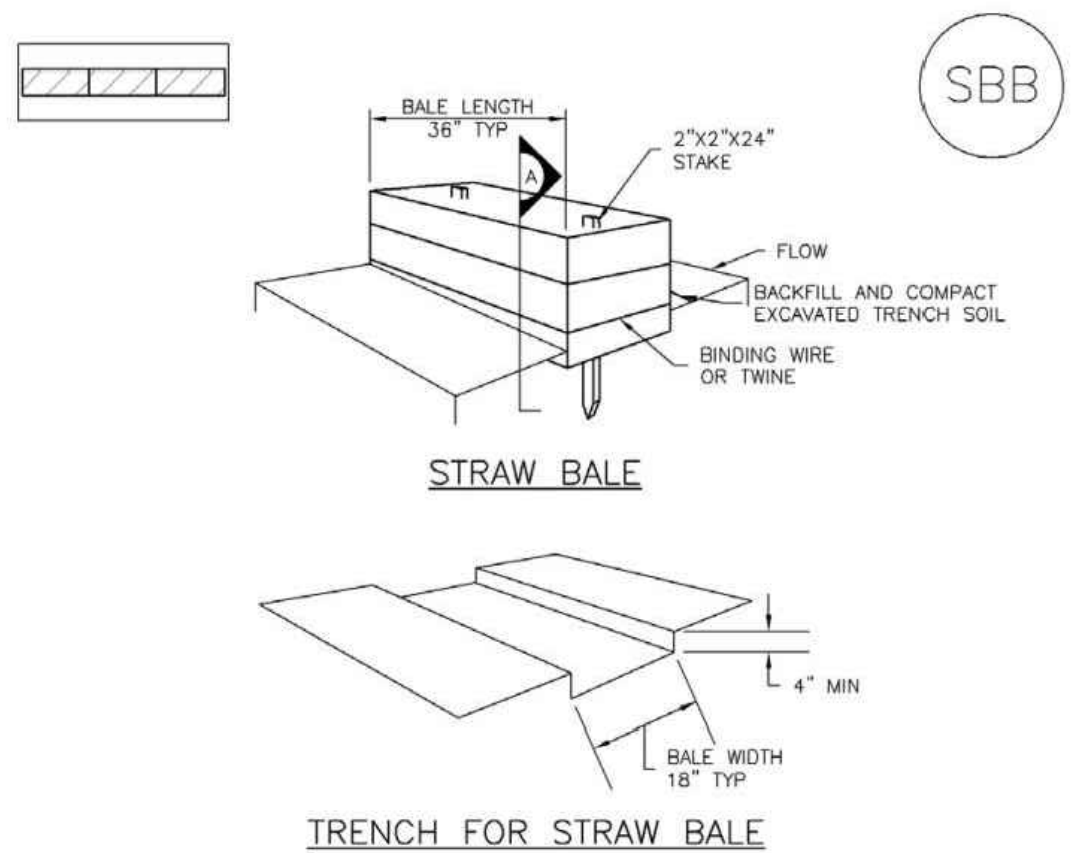
November 2010 Urban Drainage and Flood Control District SF-3
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SC-1 Silt Fence (SF)

- SILT FENCE INSTALLATION NOTES**
- SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PENETRATING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 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.
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 - 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)
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Urban Storm Drainage Criteria Manual Volume 3

SC-3 Straw Bale Barrier (SBB)



STRAW BALE

TRENCH FOR STRAW BALE

SECTION A

SBB-1. STRAW BALE

- STRAW BALE INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
 - LOCATION(S) OF STRAW BALES.
 - STRAW BALES SHALL CONSIST OF CERTIFIED WEED FREE STRAW OR HAY. LOCAL JURISDICTIONS MAY REQUIRE PROOF THAT BALES ARE WEED FREE.
 - STRAW BALES SHALL CONSIST OF APPROXIMATELY 5 CUBIC FEET OF STRAW OR HAY AND WEIGH NOT LESS THAN 35 POUNDS.
 - WHEN STRAW BALES ARE USED IN SERIES AS A BARRIER, THE END OF EACH BALE SHALL BE TIGHTLY ABUTTING ONE ANOTHER.
 - STRAW BALE DIMENSIONS SHALL BE APPROXIMATELY 36"x18"x18".
 - A UNIFORM ANCHOR TRENCH SHALL BE EXCAVATED TO A DEPTH OF 4". STRAW BALES SHALL BE PLACED SO THAT BINDING TWINE IS ENCOMPASSING THE VERTICAL SIDES OF THE BALES. ALL EXCAVATED SOIL SHALL BE PLACED ON THE UPHILL SIDE OF THE STRAW BALES(S) AND COMPACTED.
 - TWO (2) WOODEN STAKES SHALL BE USED TO HOLD EACH BALE IN PLACE. WOODEN STAKES SHALL BE 2"x2"x24". WOODEN STAKES SHALL BE DRIVEN 6" INTO THE GROUND.
- STRAW BALE 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.
 - STRAW BALES SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, ROTTEN, OR DAMAGED BEYOND REPAIR.
 - SEDIMENT ACCUMULATED UPSTREAM OF STRAW BALE BARRIER SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/4 OF THE HEIGHT OF THE STRAW BALE BARRIER.
 - STRAW BALES ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
 - WHEN STRAW BALES ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- (DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)
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SBB-2 Urban Drainage and Flood Control District November 2010
Urban Storm Drainage Criteria Manual Volume 3

Straw Bale Barrier (SBB) SC-3

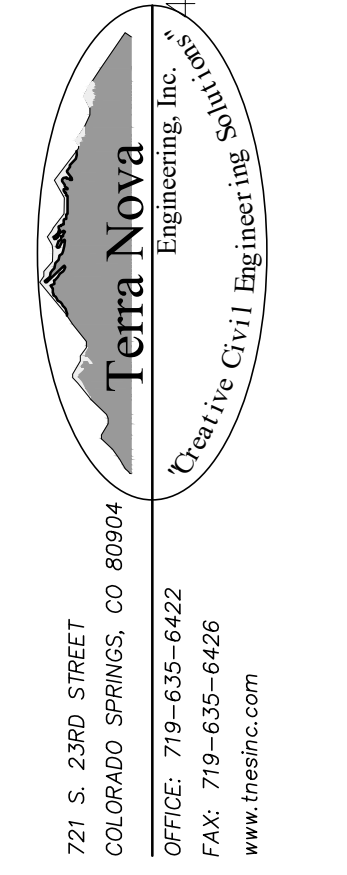
- STRAW BALE INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
 - LOCATION(S) OF STRAW BALES.
 - STRAW BALES SHALL CONSIST OF CERTIFIED WEED FREE STRAW OR HAY. LOCAL JURISDICTIONS MAY REQUIRE PROOF THAT BALES ARE WEED FREE.
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November 2010 Urban Drainage and Flood Control District SBB-3
Urban Storm Drainage Criteria Manual Volume 3

REVISIONS	NO.	DESCRIPTION	DATE

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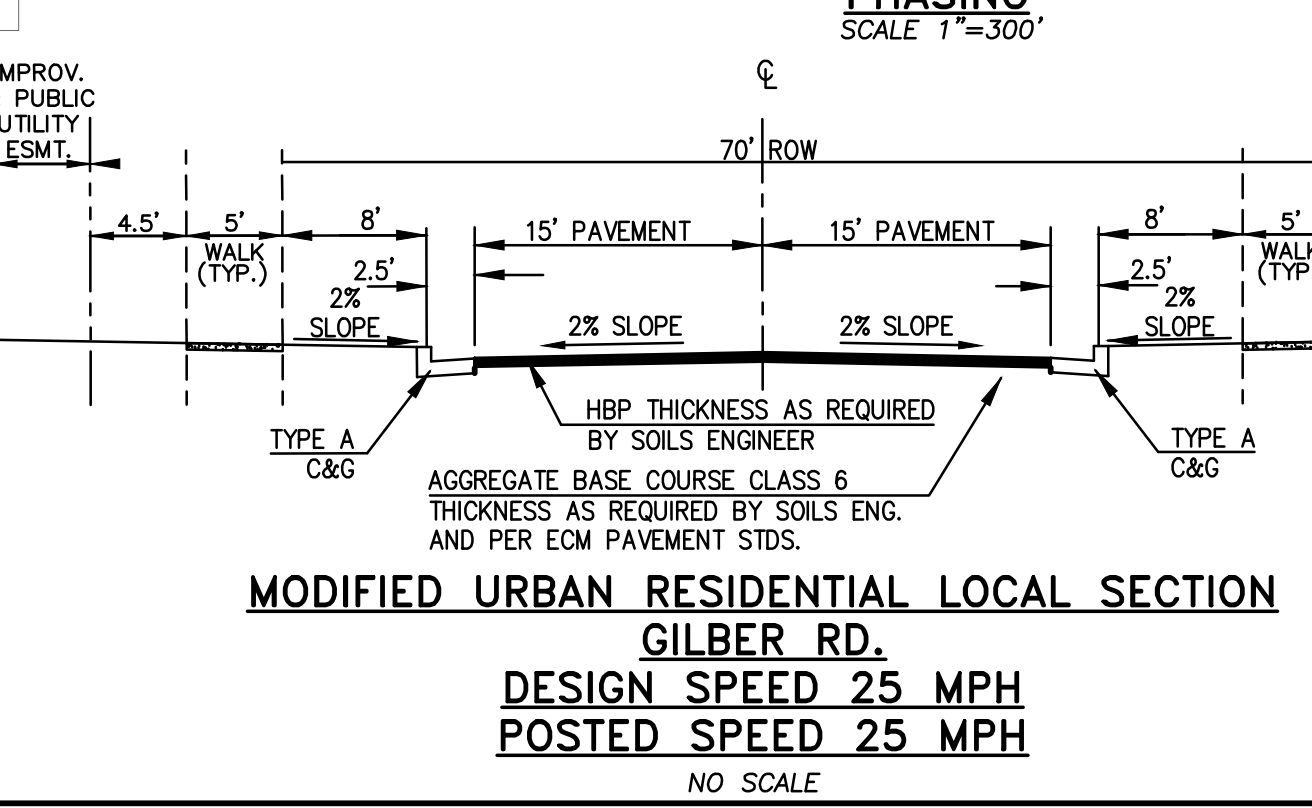
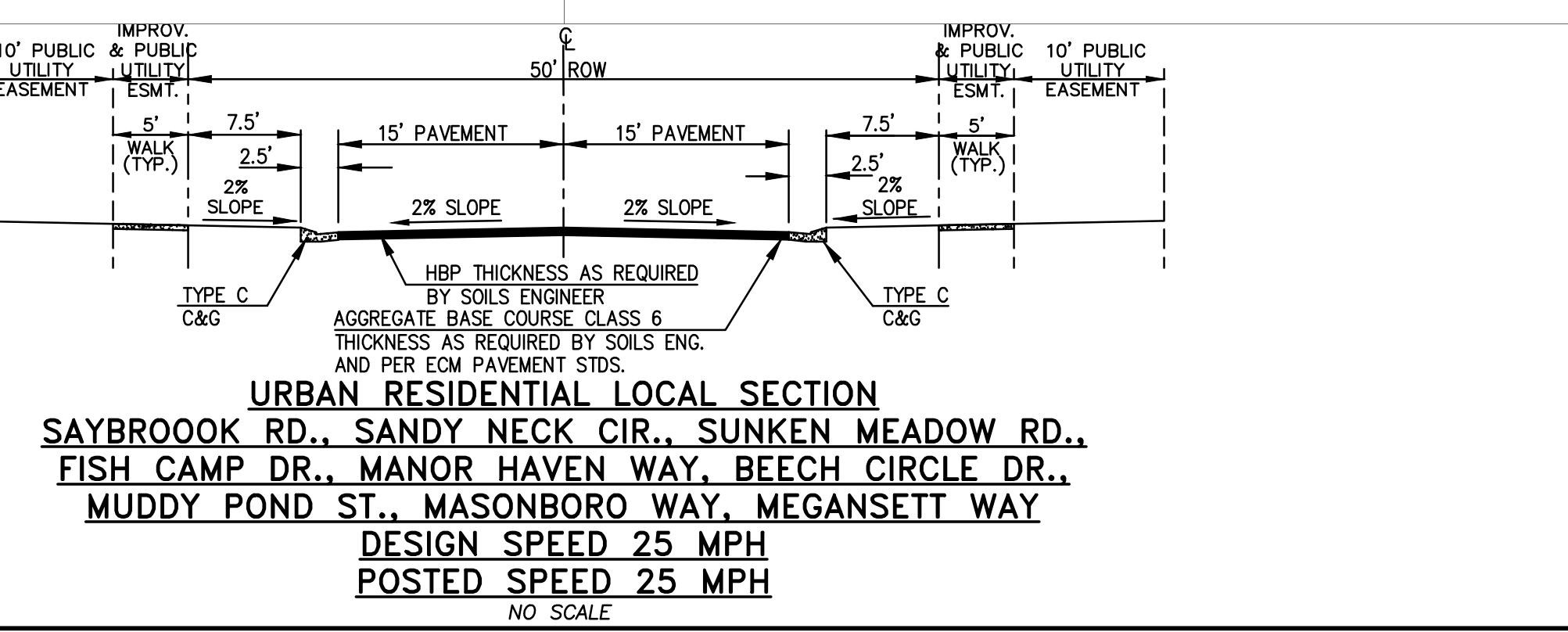
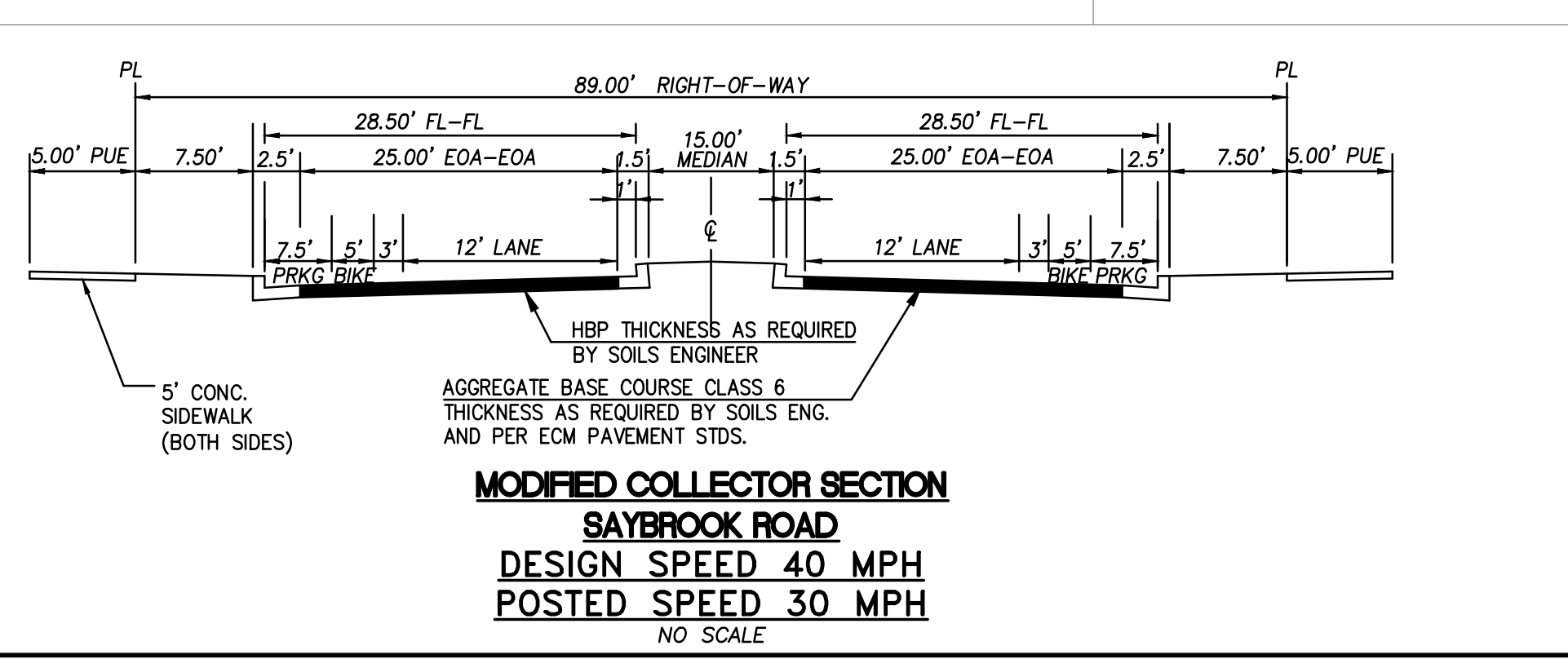
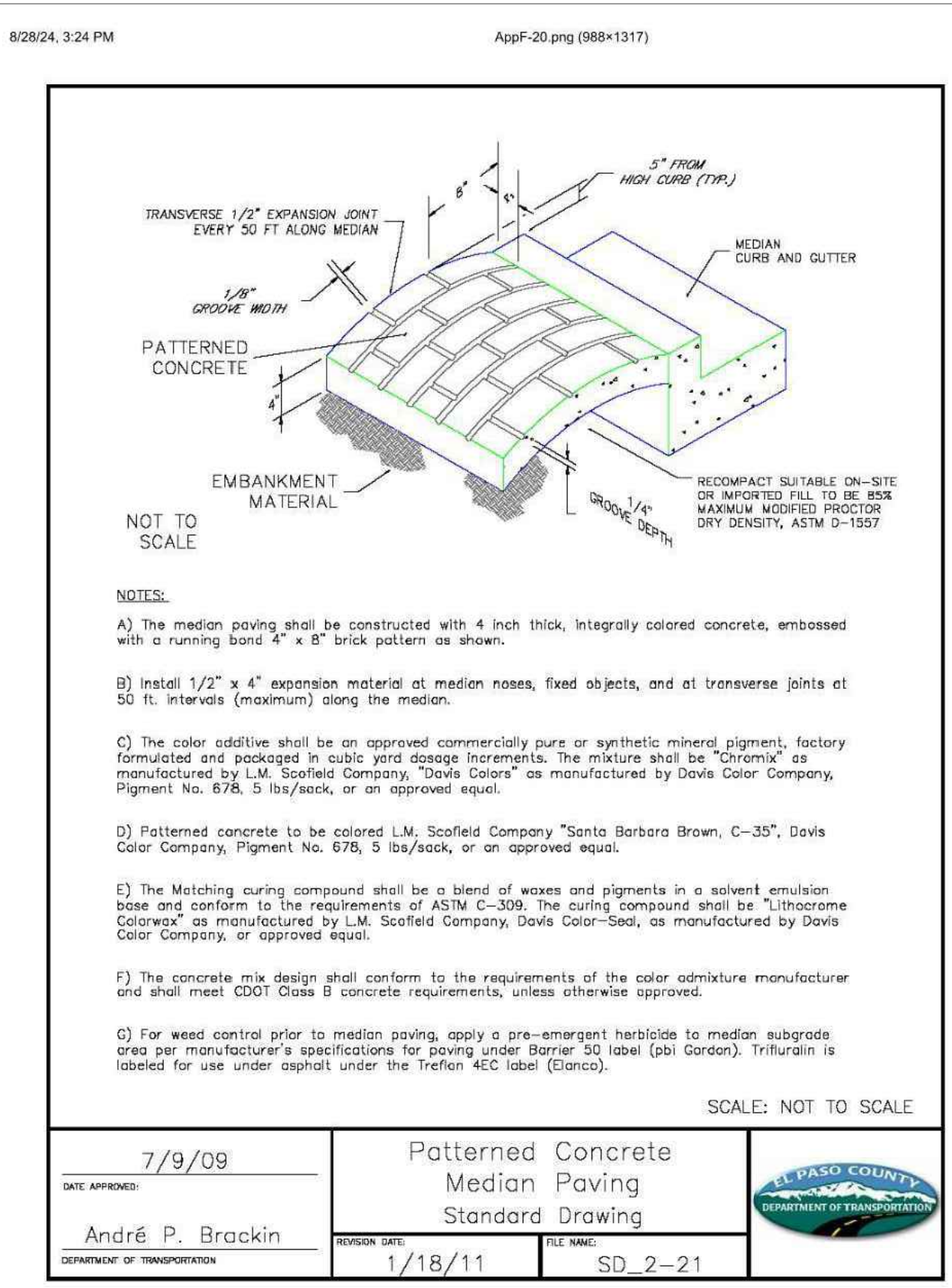
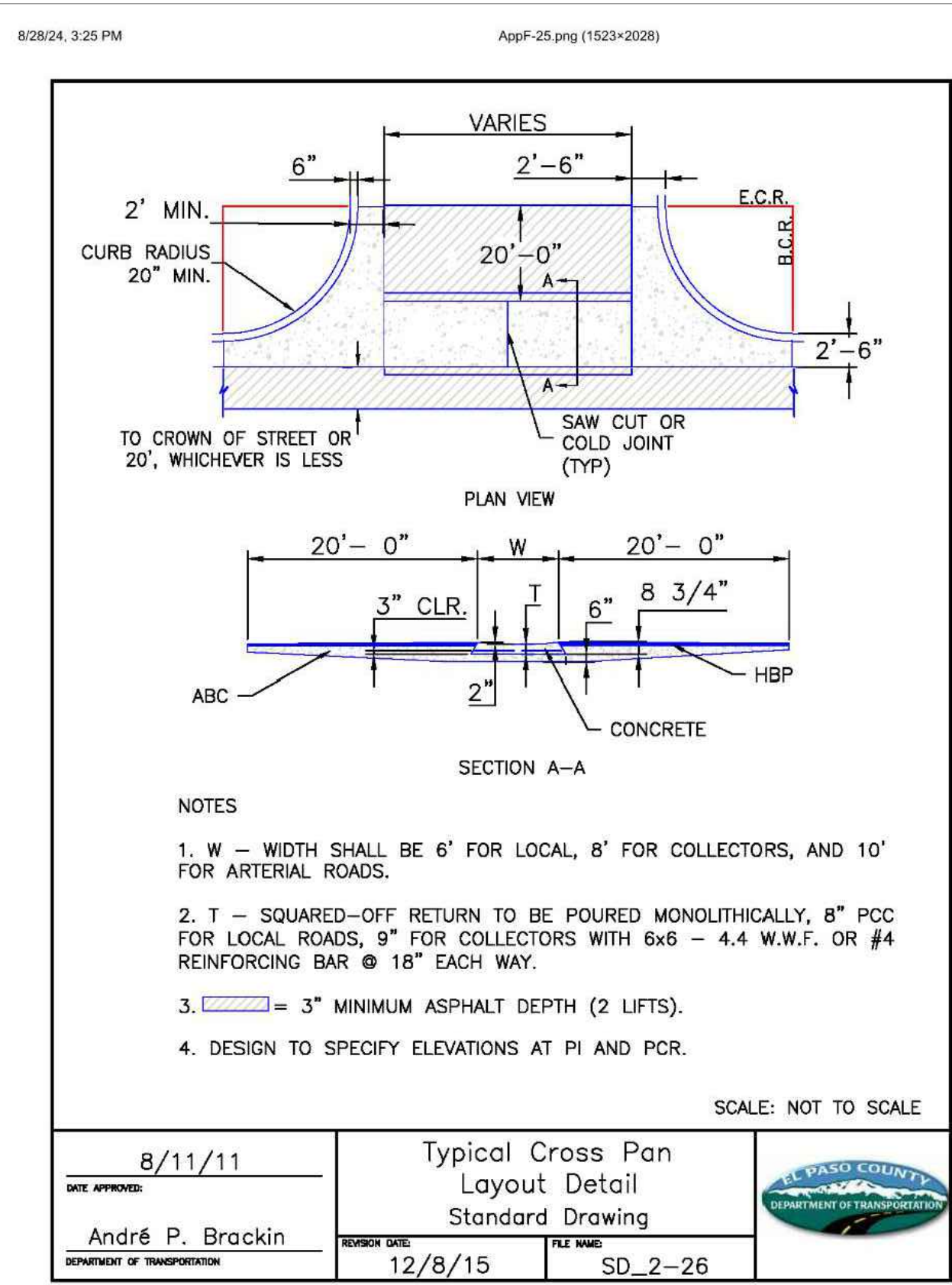
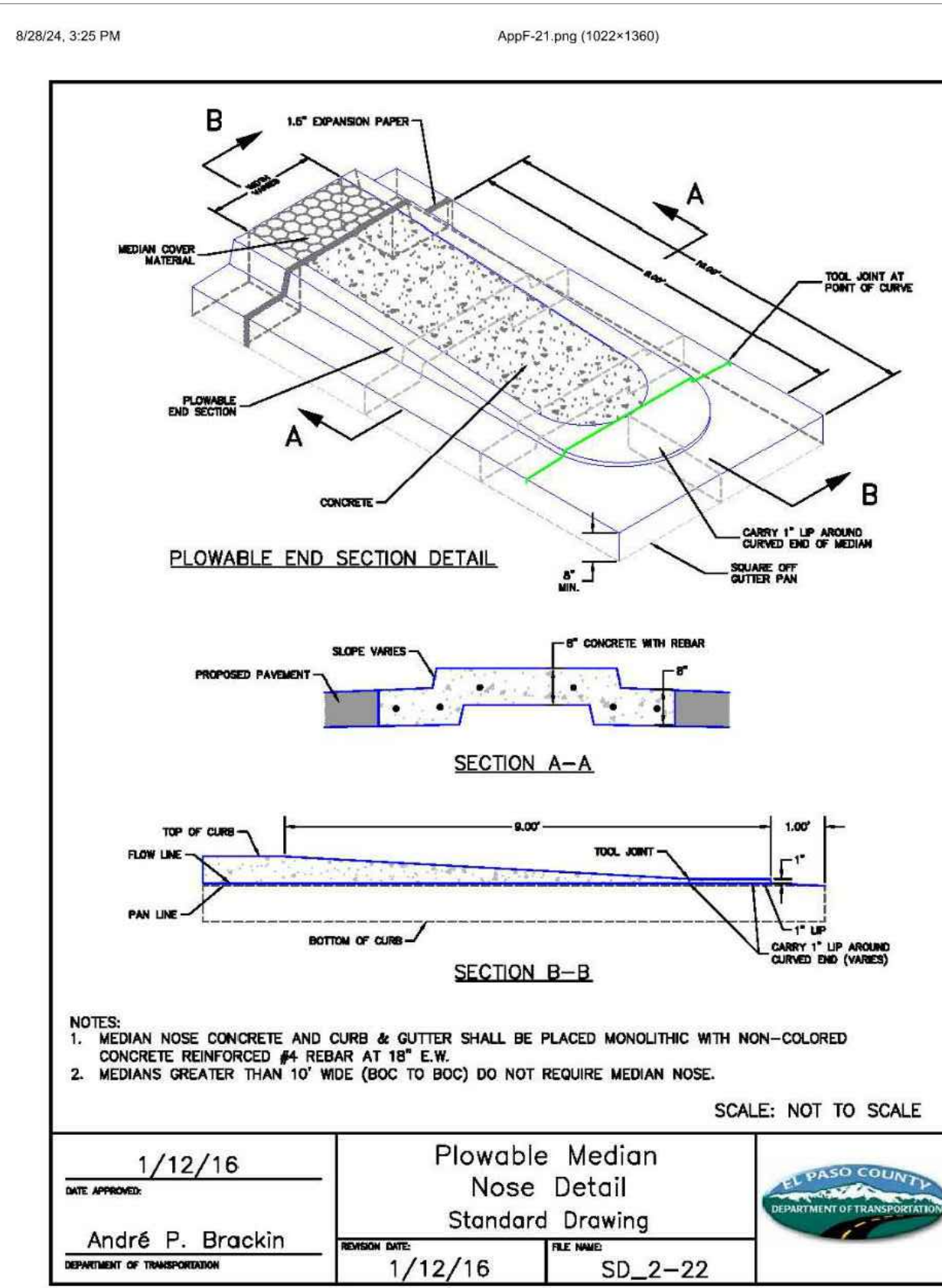
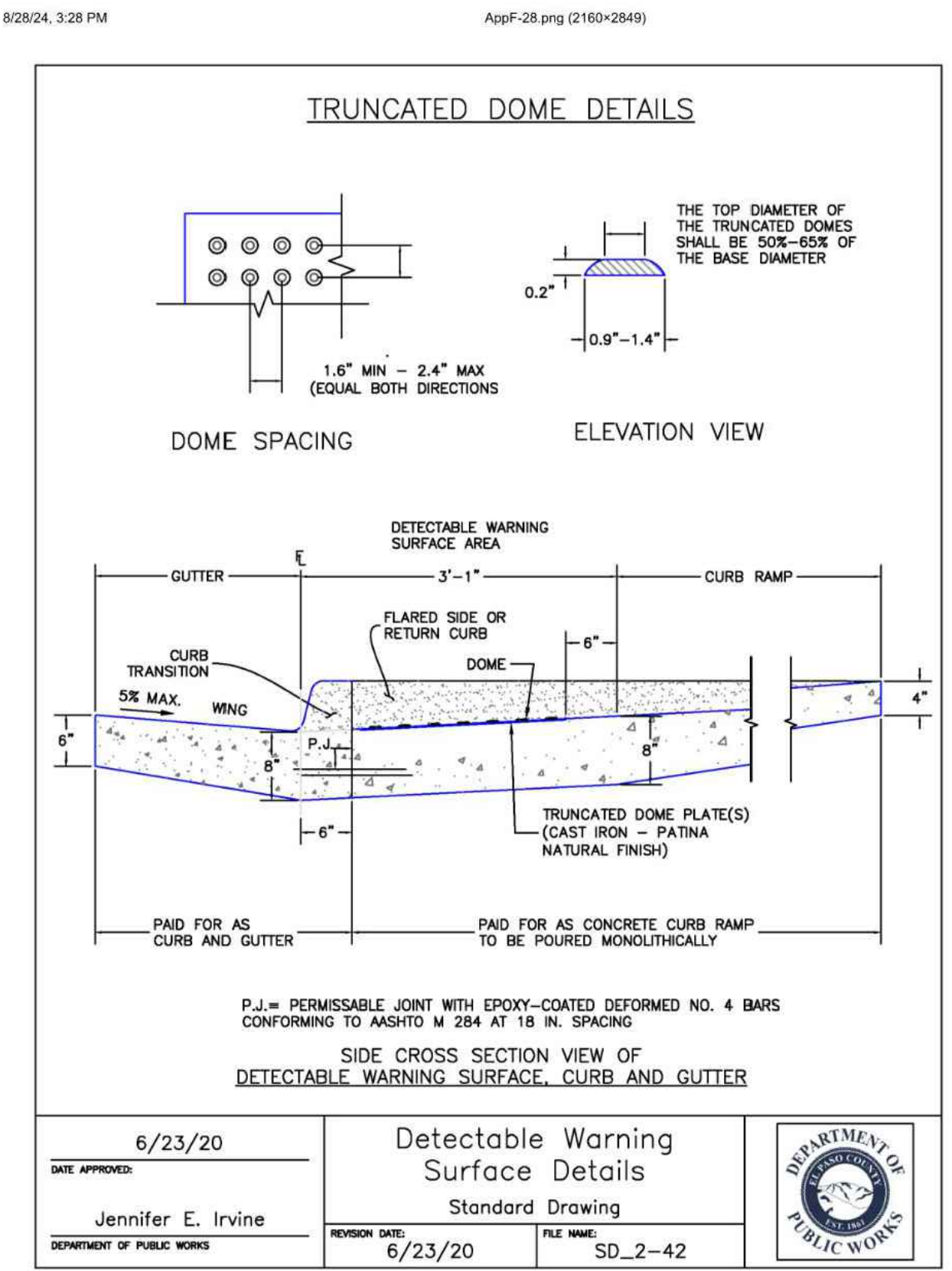
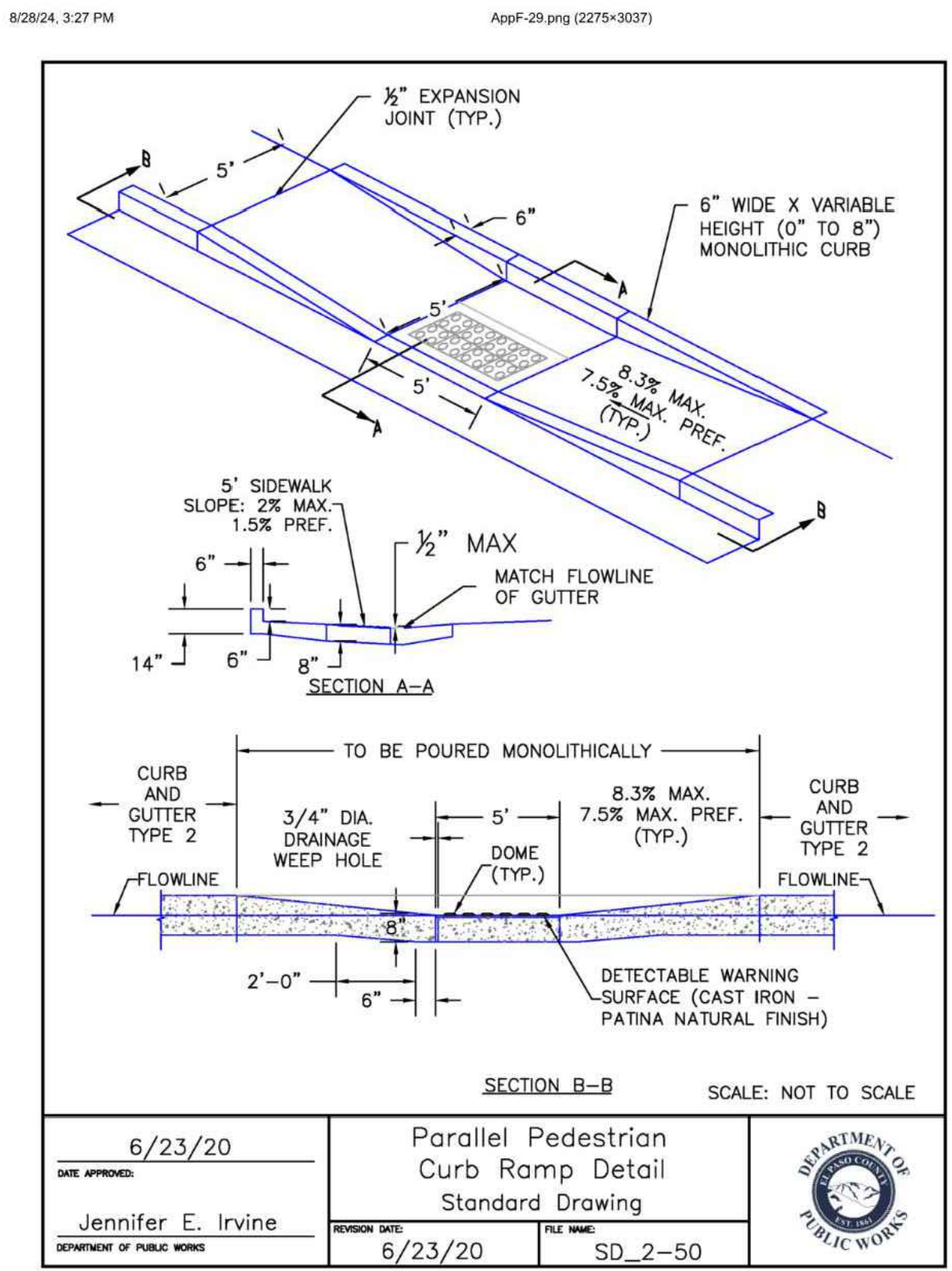
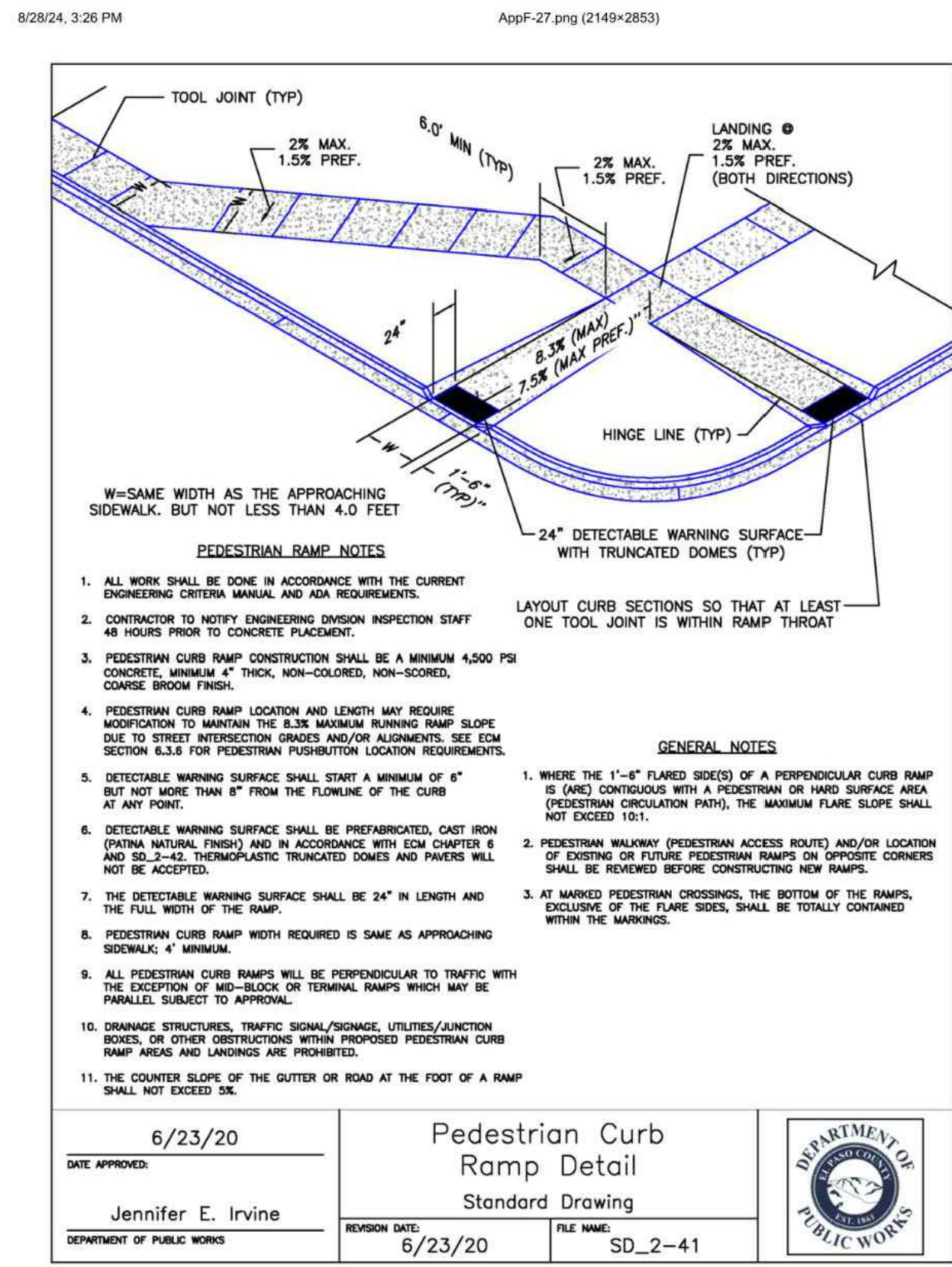
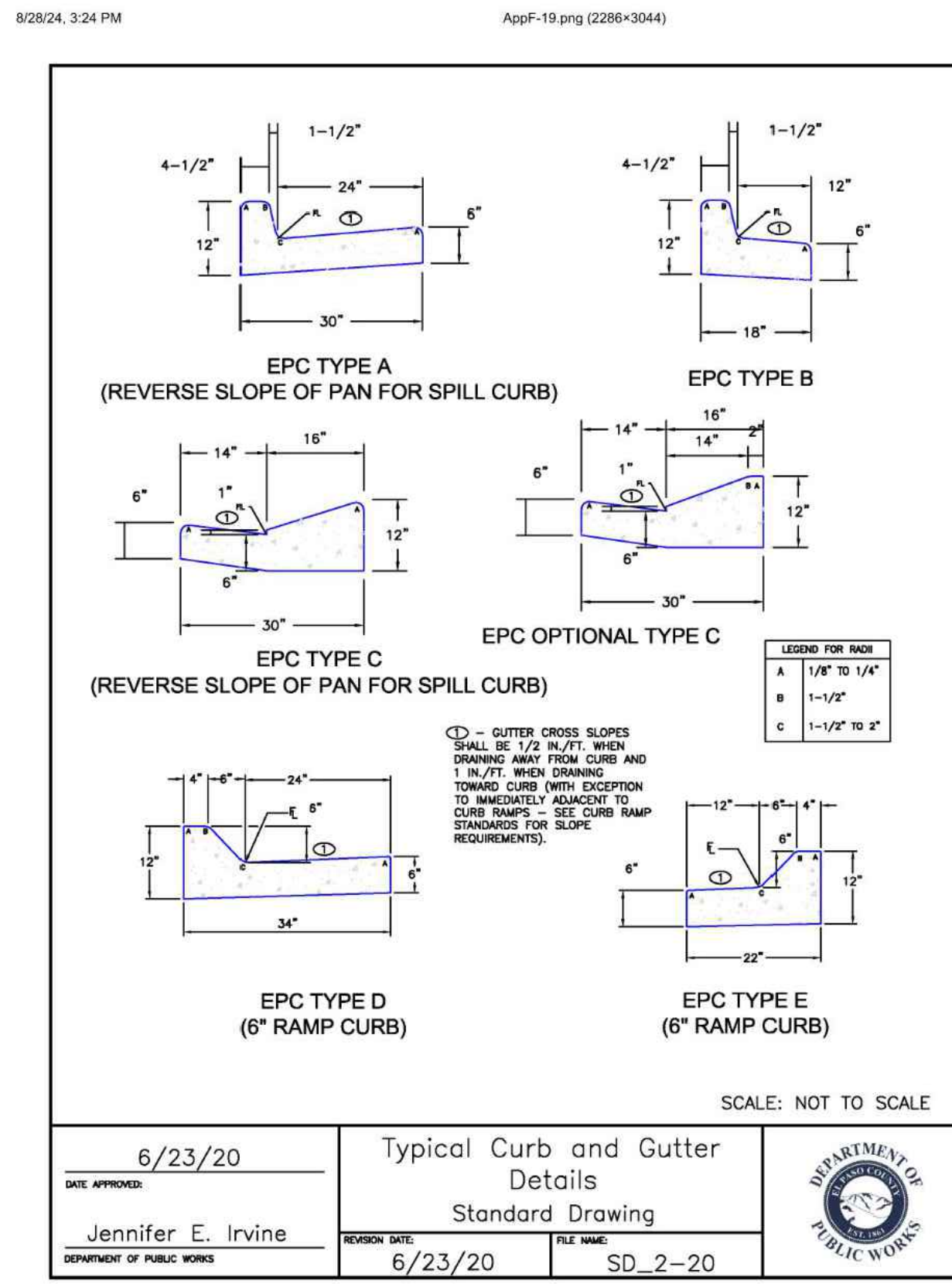
PREPARED FOR:
ACM ALF VIII JV SUB II LLC
ATTN: JASON POCK
100 E. MISSISSIPPI AVE., STE 500
DENVER, CO 80246
303-984-9800



WATERBURY FILING NO. 1

GRADING AND EROSION CONTROL PLAN
EROSION CONTROL DETAILS

DESIGNED BY	DLF
DRAWN BY	QNA
CHECKED BY	QNA
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V-SCALE	N/A
JOB NO.	2356.00
DATE ISSUED	10/4/24
SHEET NO.	9 OF 52



REVISIONS

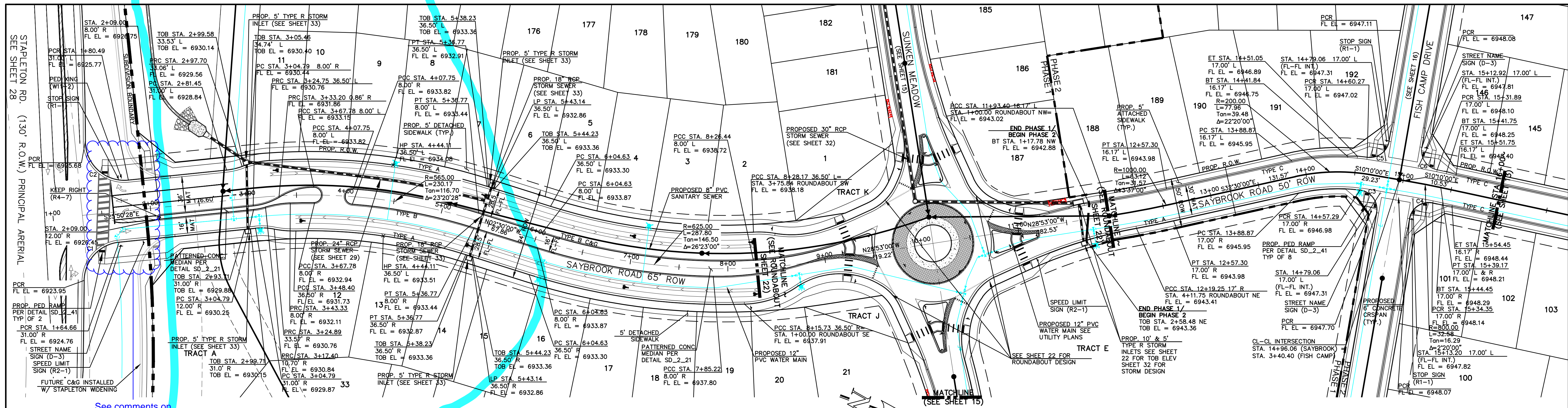
NO.	DESCRIPTION	DATE

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ACM ALF VIII JV SUB II LLC
ATTN: JASON POCK
100 E. MISSISSIPPI AVE., STE 500
DENVER, CO 80246
303-984-9800

DESIGNED BY: DLF
DRAWN BY: QNA
CHECKED BY: QNA

H-SCALE: N/A
V-SCALE: N/A
JOB NO. 2356.00
DATE ISSUED: 10/4/24
SHEET NO. 11 OF 52



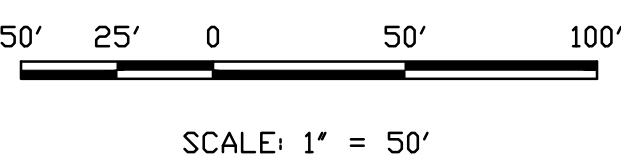
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C2	66.73'	40.00'	95°35'02"
C3	32.37'	20.00'	92°43'54"
C4	32.11'	20.00'	91°59'17"
C5	30.76'	20.00'	88°07'18"
C6	30.78'	20.00'	88°11'16"

SAYBROOK ROAD PHASE 1
STA. 1+00.00 - 8+28.17 - RES. COLLECTOR
(DESIGN SPEED 35 MPH)

SAYBROOK ROAD PHASE 2
STA. 11+94.17 - 16+00.00 - LOCAL
(DESIGN SPEED 25 MPH)

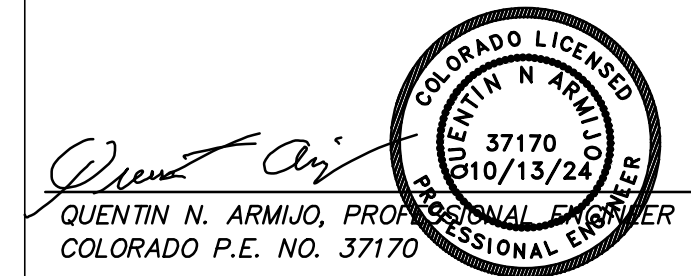
SEE APPROVED DEVIATION REQUESTS FOR LEFT AND RIGHT TURN LANES, MEDIAN WITHIN SAYBROOK ROAD AND POSTED SPEED LIMIT REDUCTION.



POSTED SPEED LIMIT IS 25 M.P.H.

Provide reference to sheet with specific details on groundwater/soils mitigation at the south end of Saybrook.

THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.



DATE: _____

DESCRIPTION: _____

REVISIONS:

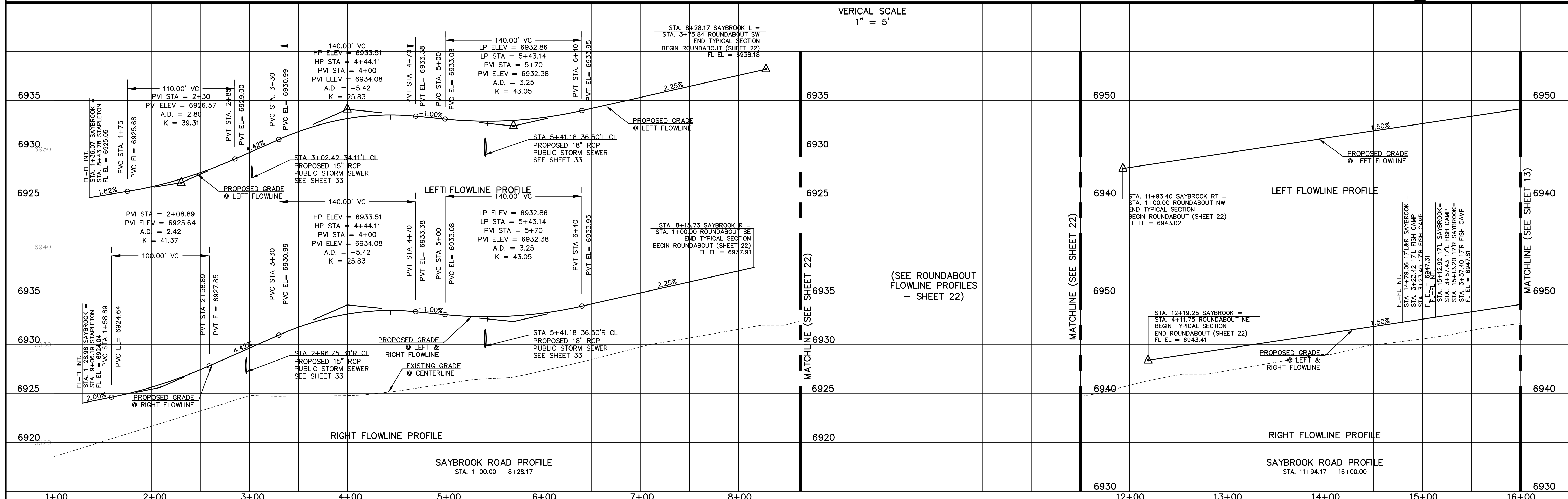
NO.	DESCRIPTION

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE LOCAL AGENCIES TERRA NOVA ENGINEERING AND SURVEYING, INC. APPROVES THEIR USE ONLY DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR: SUB: ACM ALF VIII JV SUB II LLC
JASON POKK
00 E. MISSISSIPPI AVE., STE 500
DENVER, CO 80246
303-984-9800

Terra Nova Engineering, Inc.
Professional Engineer
Colorado License No. 37170
10/13/24

QUENTIN N. ARMILJO, PROFESSIONAL ENGINEER
COLORADO P.E. NO. 37170



VERTICAL SCALE
1" = 5'

(SEE ROUNDABOUT FLOWLINE PROFILES - SHEET 22)

MATCHLINE (SEE SHEET 22)

MATCHLINE (SEE SHEET 13)

731 S. 2900 STREET
COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6422
FAK: 719-635-6426
www.tnec.com

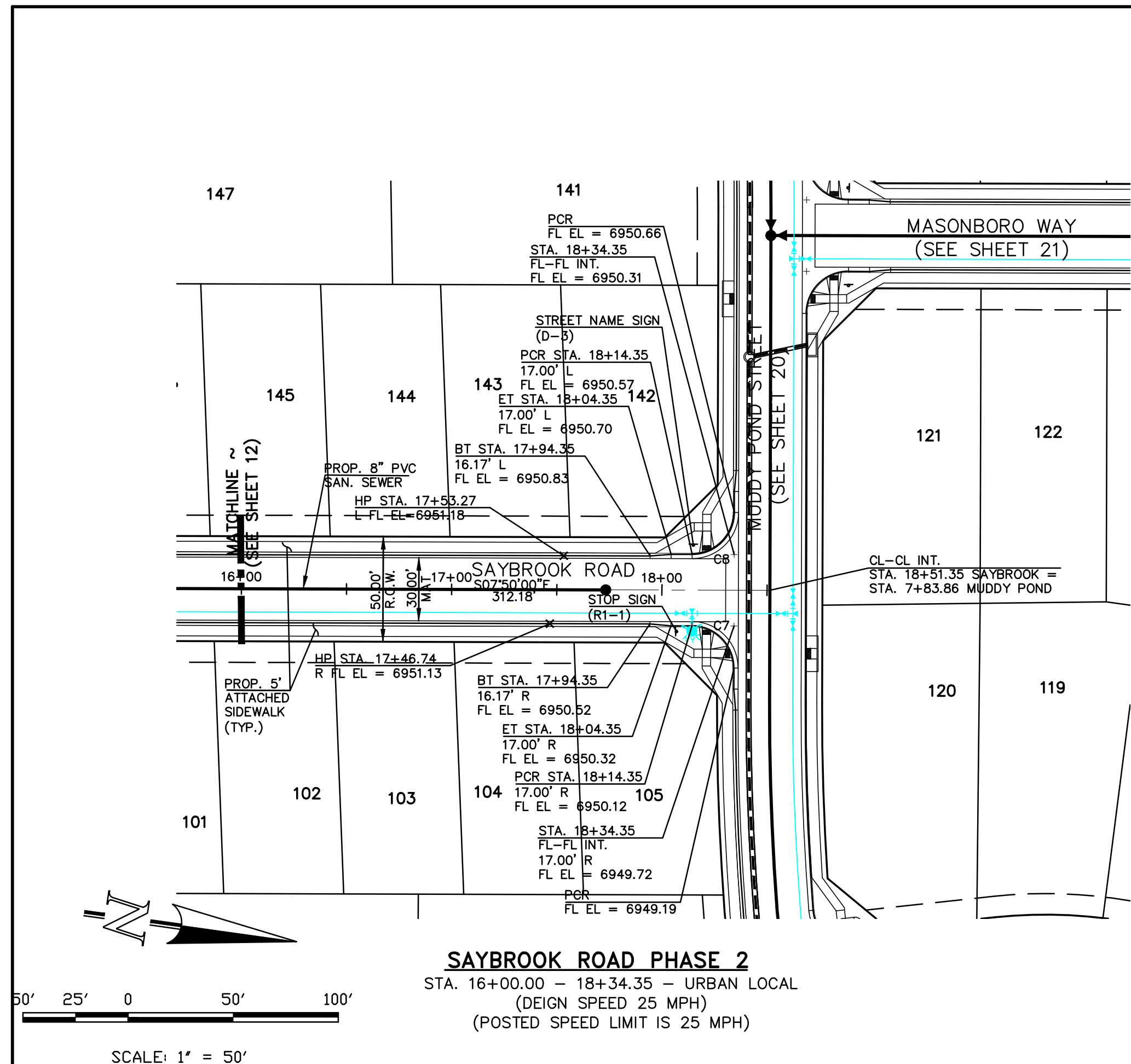
WATERBURY FILING NO. 1

CONSTRUCTION SET
STREET PLAN AND PROFILE
SAYBROOK ROAD

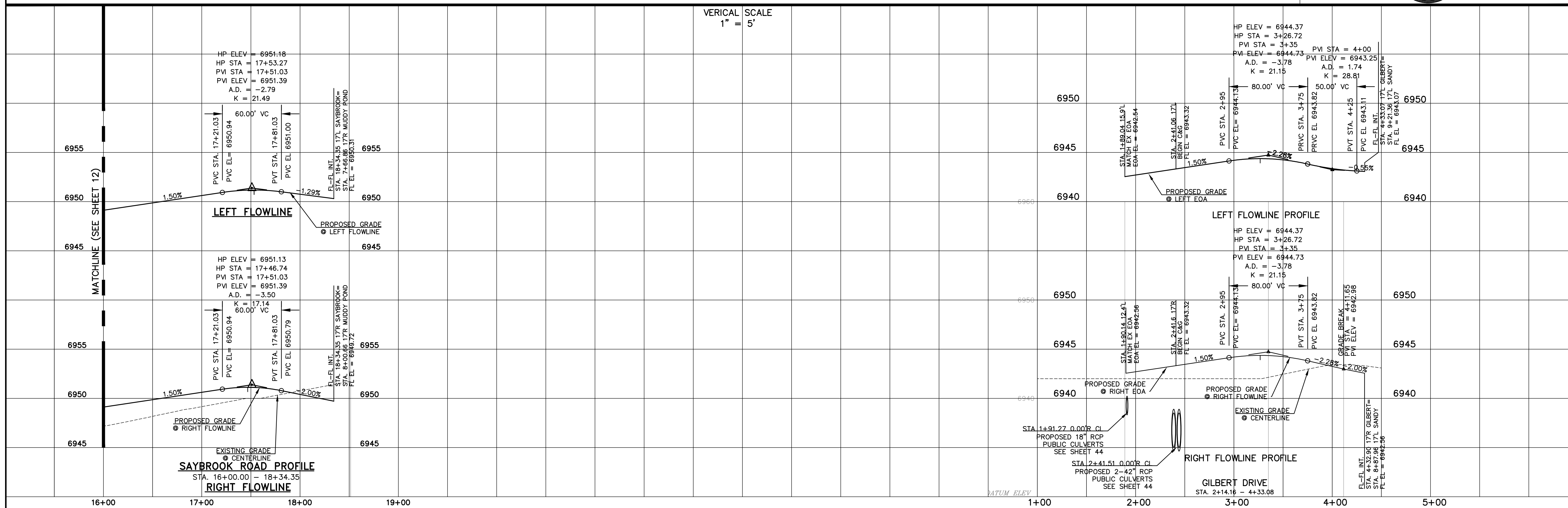
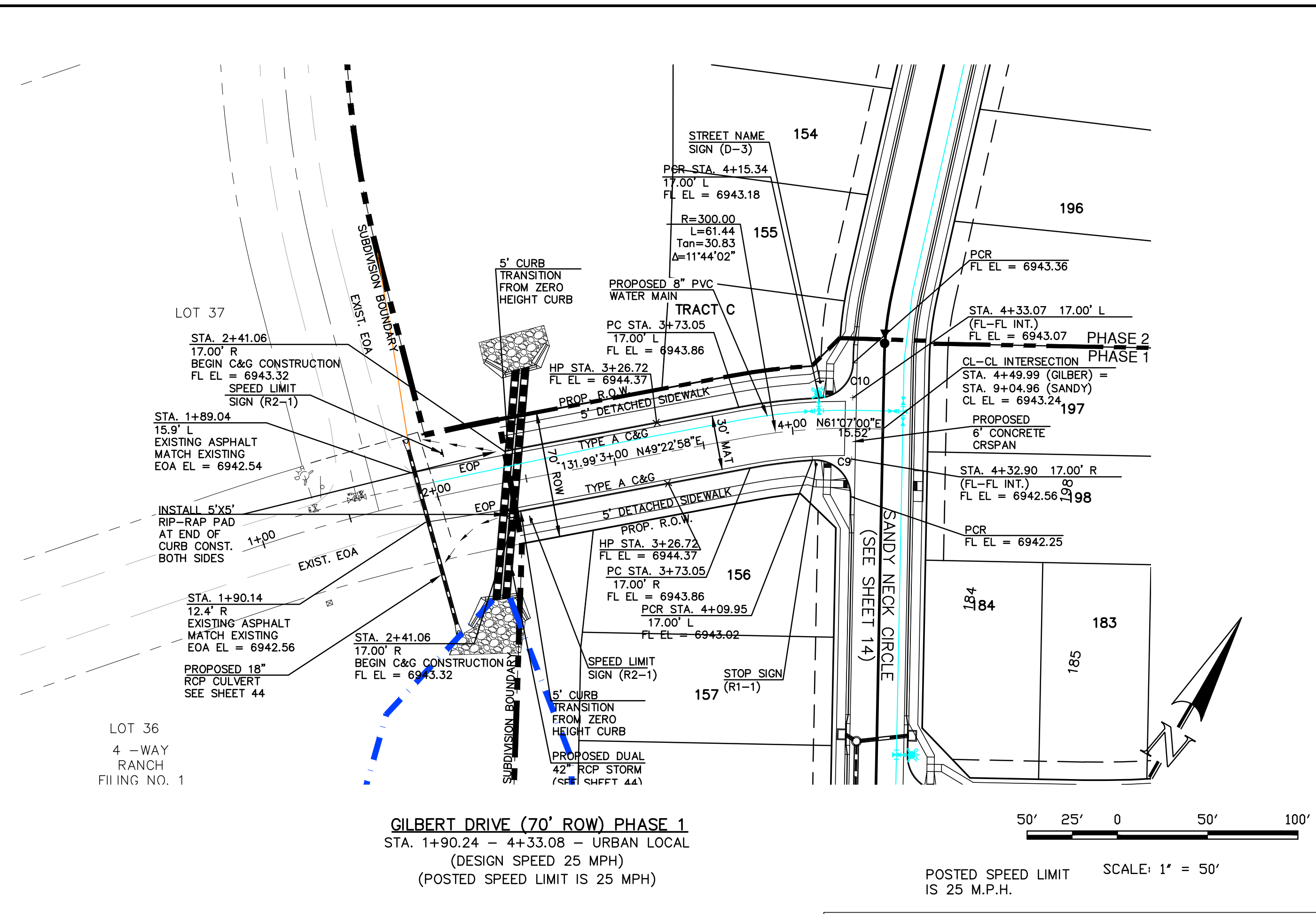
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DRAWN BY: QNA
CHECKED BY: _____

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V-SCALE: 1"=5'

JOB NO. 2356.00
DATE ISSUED 10/4/24
SHEET NO. 12 OF 52



CURVE	LENGTH	RADIUS	DELA
C7	31.42'	20.00'	90°00'00"
C8	31.42'	20.00'	90°00'00"
C9	33.05'	20.00'	94°41'12"
C10	30.14'	20.00'	86°20'39"



THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

Quentin N. Armijo
 QUENTIN N. ARMIJO, PROFESSIONAL ENGINEER
 COLORADO P.E. NO. 37170

DATE: _____

REVISIONS

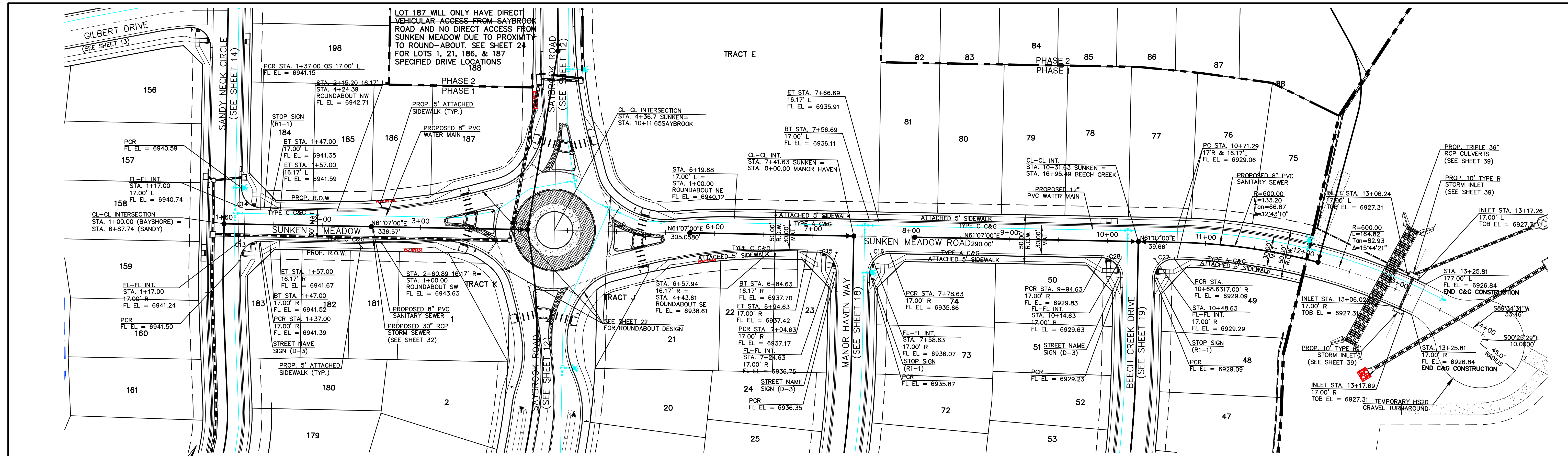
NO.	DESCRIPTION

UNTIL SUCH TIME AS APPROVED DRAWINGS ARE PROVIDED BY THE CLIENT, THESE DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION.

PREPARED FOR:
 ACM ALF VIII JV SUB II LLC
 JASON POKK
 100 E. MISSISSIPPI AVE., STE 500
 DENVER, CO 80246
 303-984-9800

DESIGNED BY QNA
 DRAWN BY QNA
 CHECKED BY _____

H-SCALE 1"=50'
 V-SCALE 1"=5'
 JOB NO. 2356.00
 DATE ISSUED 10/4/24
 SHEET NO. 13 OF 52

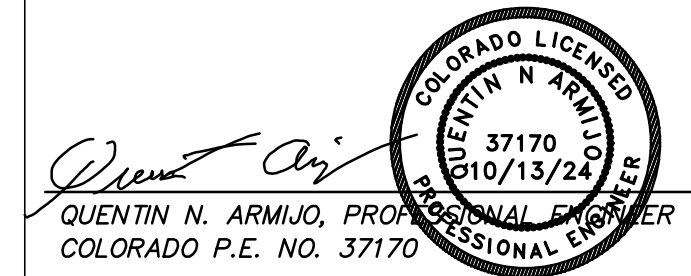


CURB RETURN CURVE TABLE

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C16	32.51'	20.00'	93°07'57"
C27	31.42'	20.00'	90°00'00"
C28	31.42'	20.00'	90°00'00"

SUNKEN MEADOW ROAD
 STA. 1+00.00 - STA. 13+25.81 - URBAN LOCAL
 (DESIGN SPEED 25 MPH)
 (POSTED SPEED LIMIT IS 25 MPH)

THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION
 FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.



REVISIONS

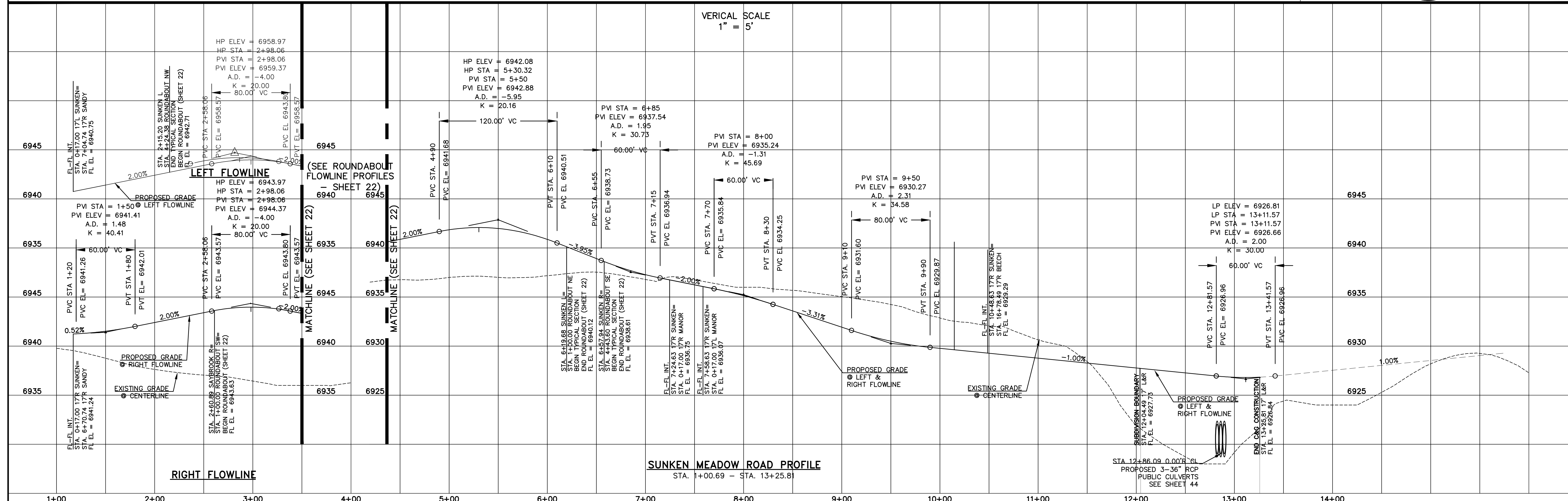
NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE BOARD OF ARCHITECTS, ENGINEERS AND SURVEYORS, INC. AND THEIR USE ONLY AUTHORIZED BY WRITTEN AUTHORIZATION.

PREPARED FOR:
ACM ALF VJ SUB II LLC
JASON POKK
 P.O. BOX 50223
 DENVER, CO 80246
 303-984-9800

721 S. 29th STREET
 COLORADO SPRINGS, CO 80904
 OFFICE: 719-635-6422
 FAX: 719-635-6426
 www.tnva.com

Terra Nova
 Engineering, Inc.
 A Terra Nova Group Company
 Professional Engineer
 Colorado License No. 37170

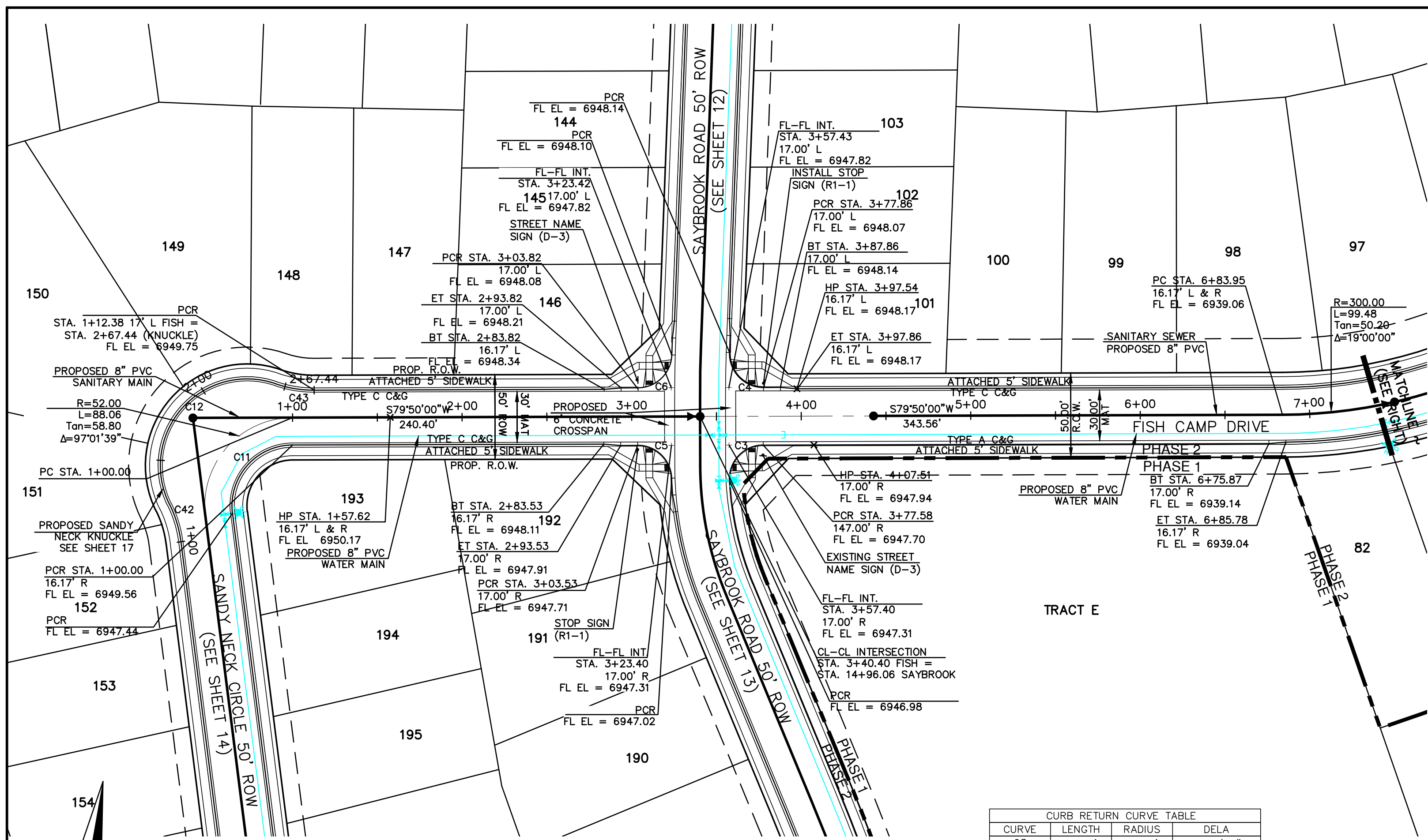


WATERBURY FILING NO. 1

CONSTRUCTION SET
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 SUNKEN MEADOW ROAD

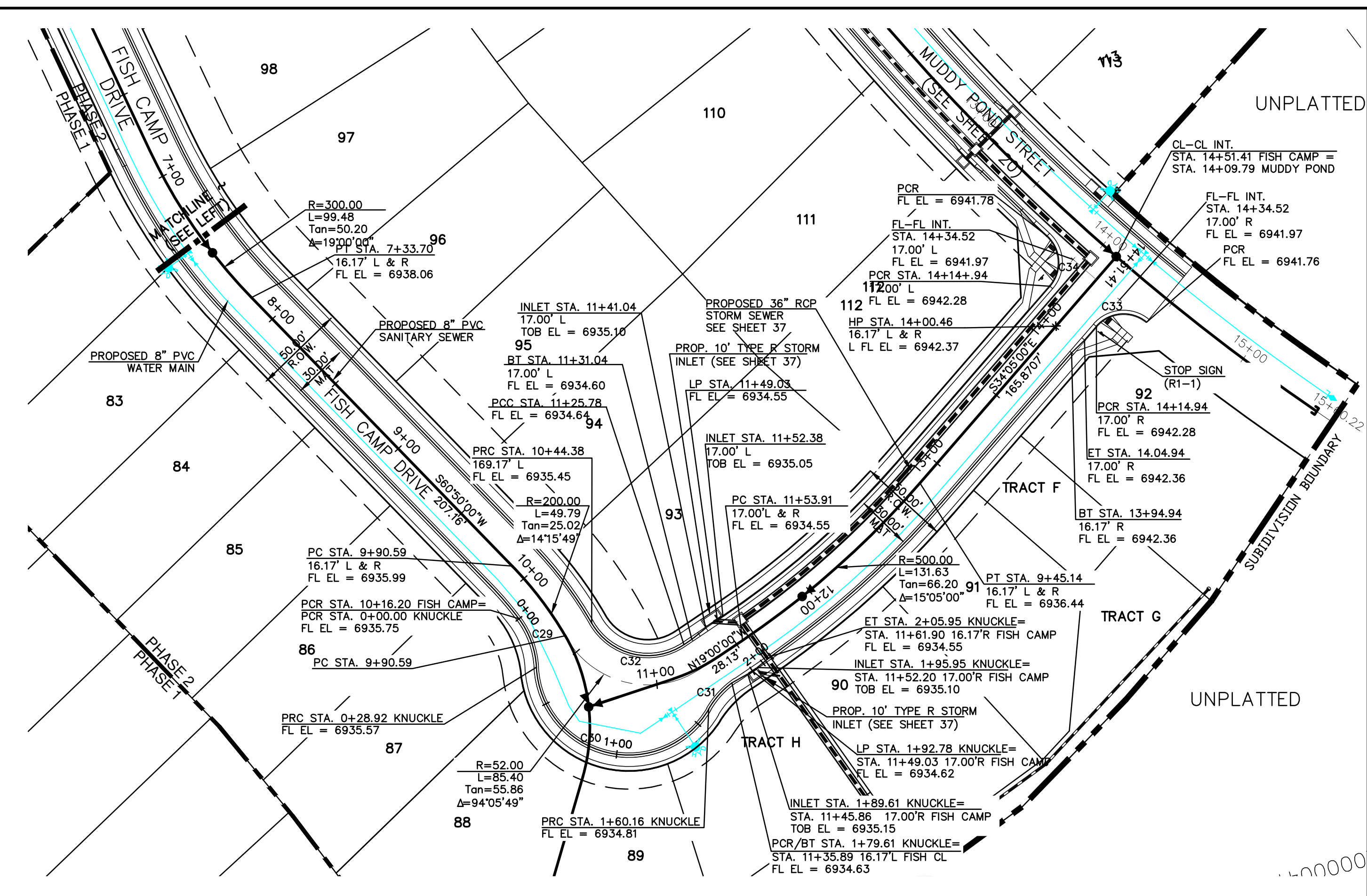
DESIGNED BY QNA
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 SHEET NO. 15 OF 52

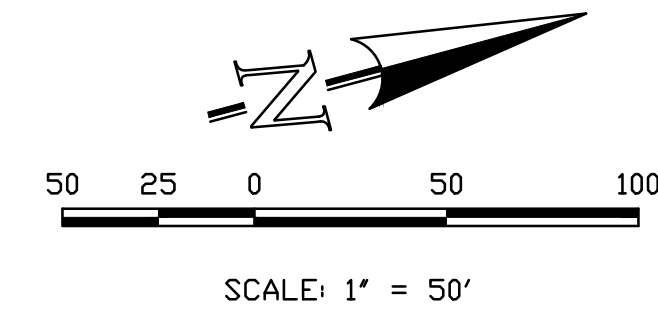


FISH CAMP DRIVE PHASE 2
 STA. 1+00.00 - 6+00.00 - URBAN LOCAL
 (DESIGN SPEED 25 MPH)
 (POSTED SPEED LIMIT IS 25 MPH)

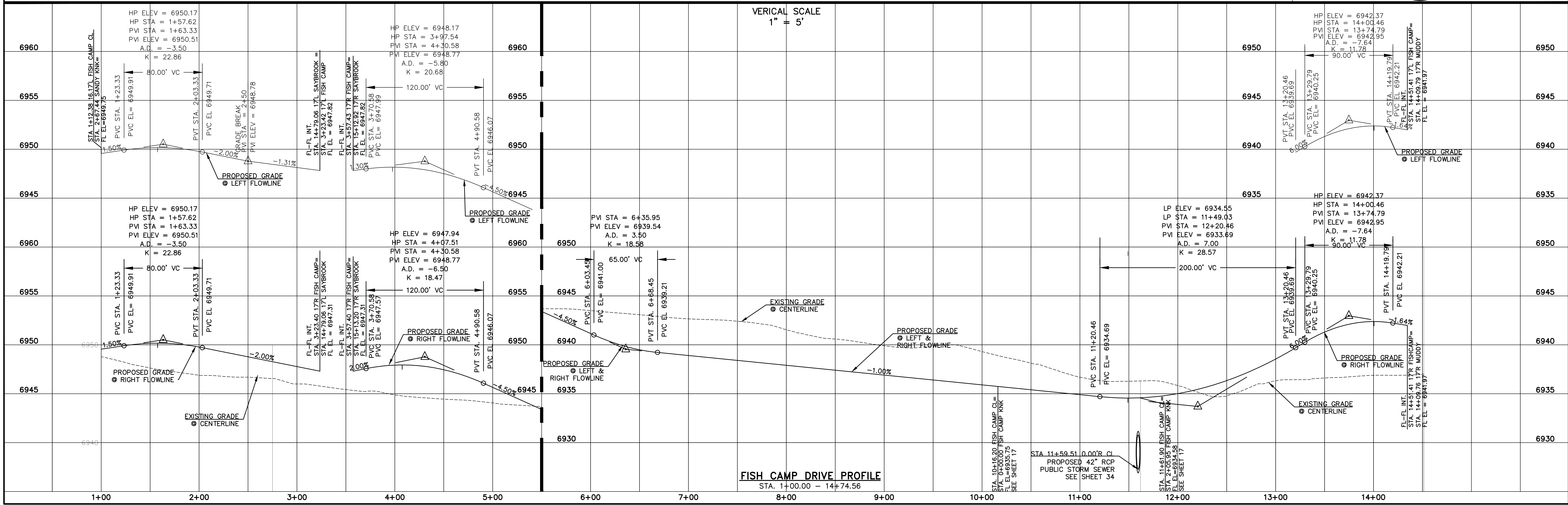
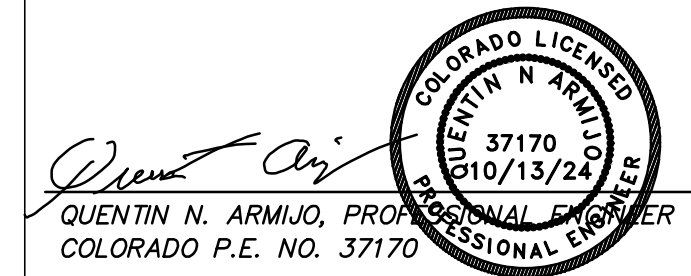
CURB RETURN CURVE TABLE			
CURVE	LENGTH	RADIUS	DELA
C3	32.37'	20.00'	92°43'54"
C4	32.11'	20.00'	91°59'17"
C5	30.76'	20.00'	88°07'18"
C6	30.78'	20.00'	89°11'16"
C11	69.68'	35.83'	97°01'39"
C12	121.10'	51.17'	135°36'09"
C19	28.92'	48.83'	33°56'21"
C30	131.24'	51.17'	146°57'06"
C31	19.44'	48.83'	22°48'47"
C32	58.84'	35.83'	94°05'49"
C33	30.84'	20.00'	89°21'09"
C34	30.84'	20.00'	89°21'09"
C43	23.17'	68.83'	191°71'5"
C44	23.17'	68.83'	191°71'5"



FISH CAMP DRIVE PHASE 2
 STA. 6+00.00 - 14+74.56 - URBAN LOCAL
 (DESIGN SPEED 25 MPH)
 (POSTED SPEED LIMIT IS 25 MPH)

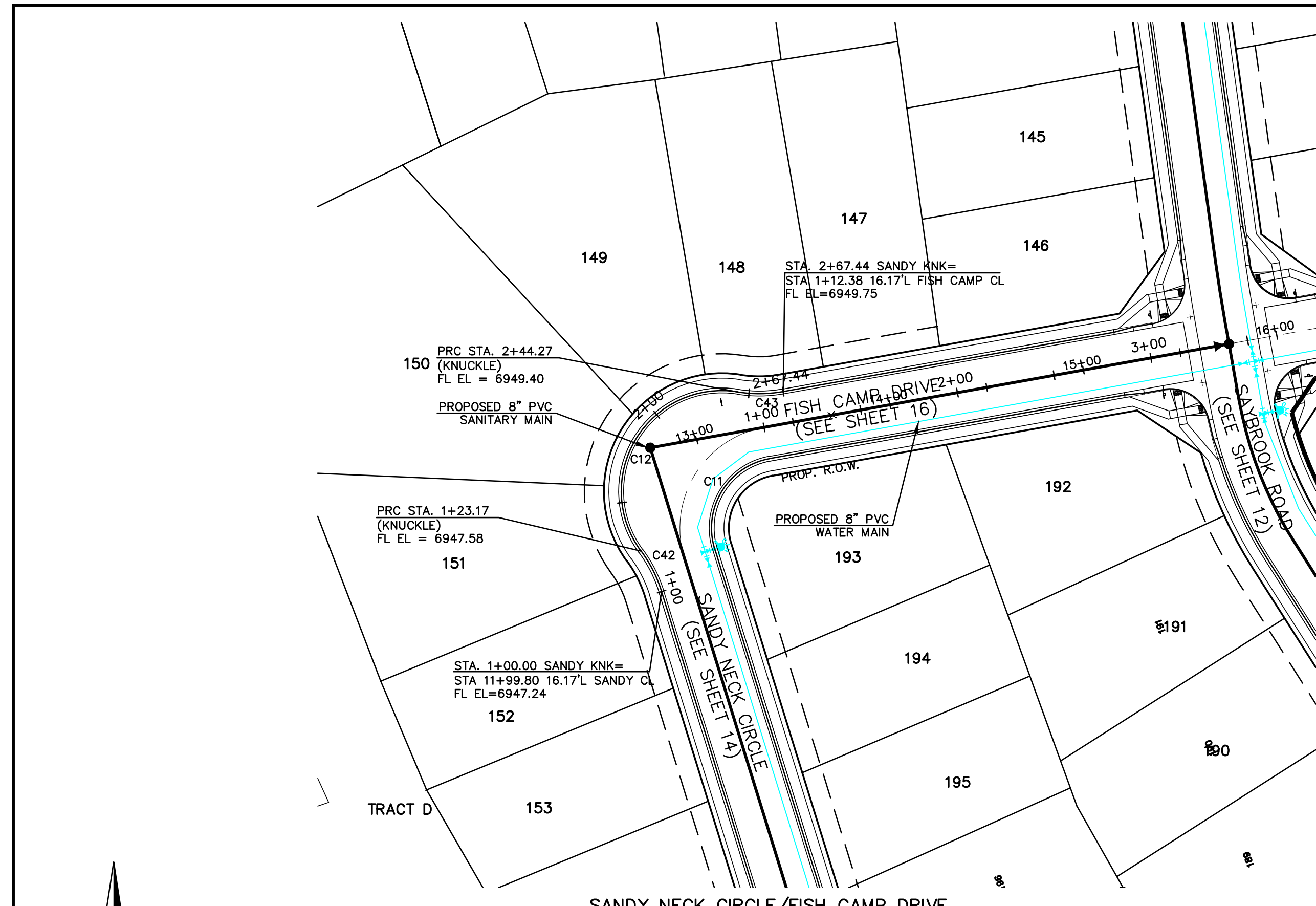


THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

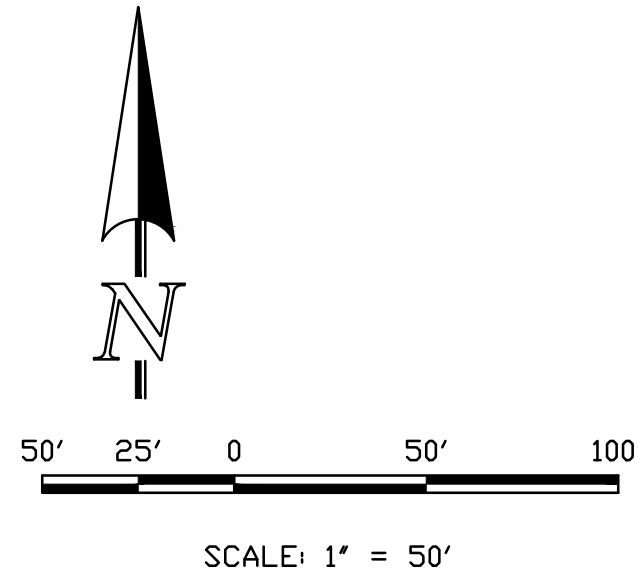


FISH CAMP DRIVE PROFILE
 STA. 1+00.00 - 14+74.56

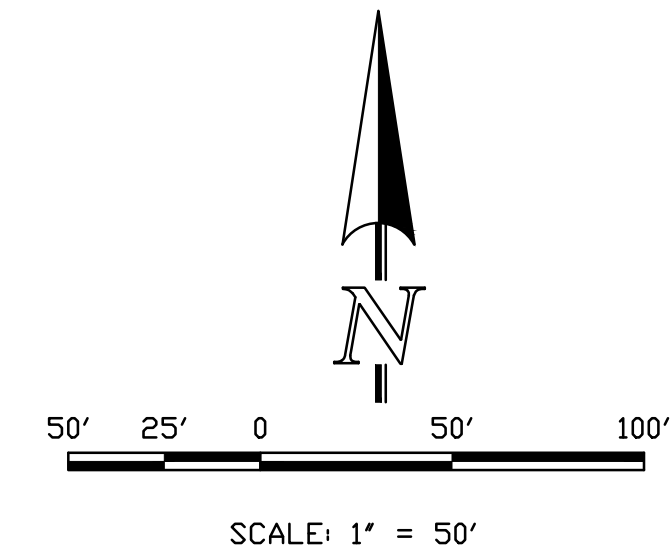
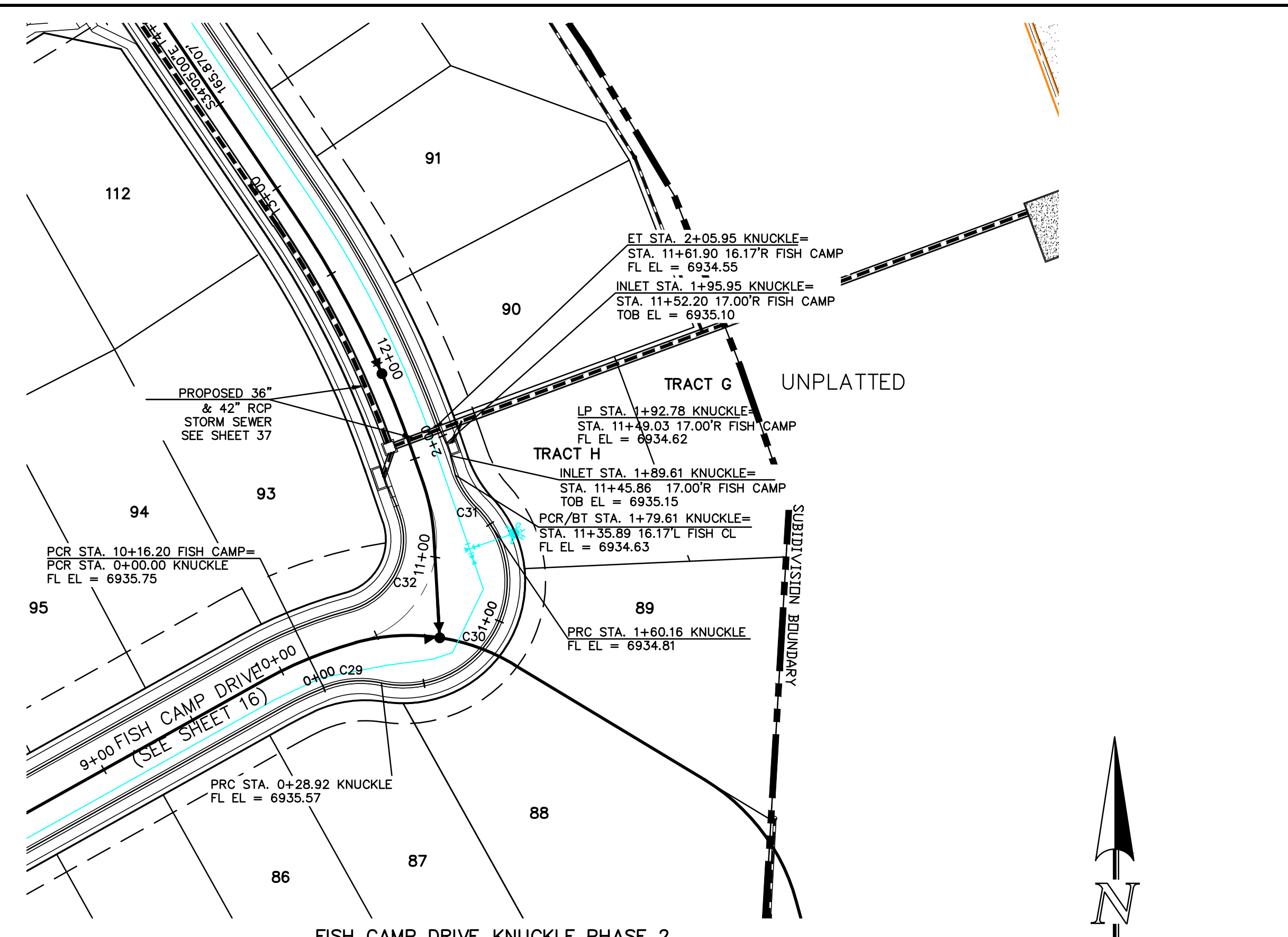
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE BOARD OF ARCHITECTS AND ENGINEERS OF THE STATE OF COLORADO. TERRA NOVA ENGINEERING AND SURVEYING, INC. APPROVES THEIR USE ONLY DESIGNATED BY WRITTEN AUTHORIZATION.	DATE	DESCRIPTION
	REVISIONS	
	NO.	
PREPARED FOR: ACM ALF VIII JV SUB II LLC JASON POKK 100 E. MISSISSIPPI AVE., STE 500 DENVER, CO 80246 303-984-9800	DESIGNER: QNA DRAWN BY: QNA CHECKED BY: H-SCALE: 1"=50' V-SCALE: 1"=5' JOB NO. 2356.00 DATE ISSUED 10/4/24 SHEET NO. 16 OF 52	



CURVE	LENGTH	RADIUS	DELA
C11	60.68'	35.83'	97°01'39"
C12	121.10'	51.17'	135°56'09"
C29	28.92'	48.83'	33°56'21"
C30	131.24'	51.17'	146°57'06"
C31	19.44'	48.83'	22°48'47"
C32	58.84'	35.83'	94°05'49"
C43	23.17'	68.83'	191°7'15"
C44	23.17'	68.83'	191°7'15"



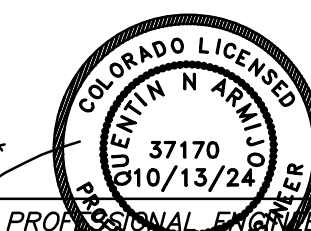
**SANDY NECK CIRCLE/FISH CAMP DRIVE
KNUCKLE PHASE 2**
 STA. 1+00.00 - 2+67.44 URBAN LOCAL
 (DESIGN SPEED 25 MPH)
 POSTED SPEED LIMIT
 IS 25 M.P.H.



FISH CAMP DRIVE KNUCKLE PHASE 2
 STA. 1+00.00 - 2+05.95 URBAN LOCAL
 (DESIGN SPEED 25 MPH)
 POSTED SPEED LIMIT
 IS 25 M.P.H.

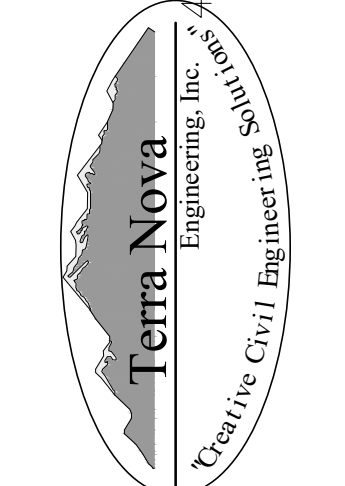
THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION
 FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

Quentin N. Armijo
 QUENTIN N. ARMUJO, PROFESSIONAL ENGINEER
 COLORADO P.E. NO. 37170

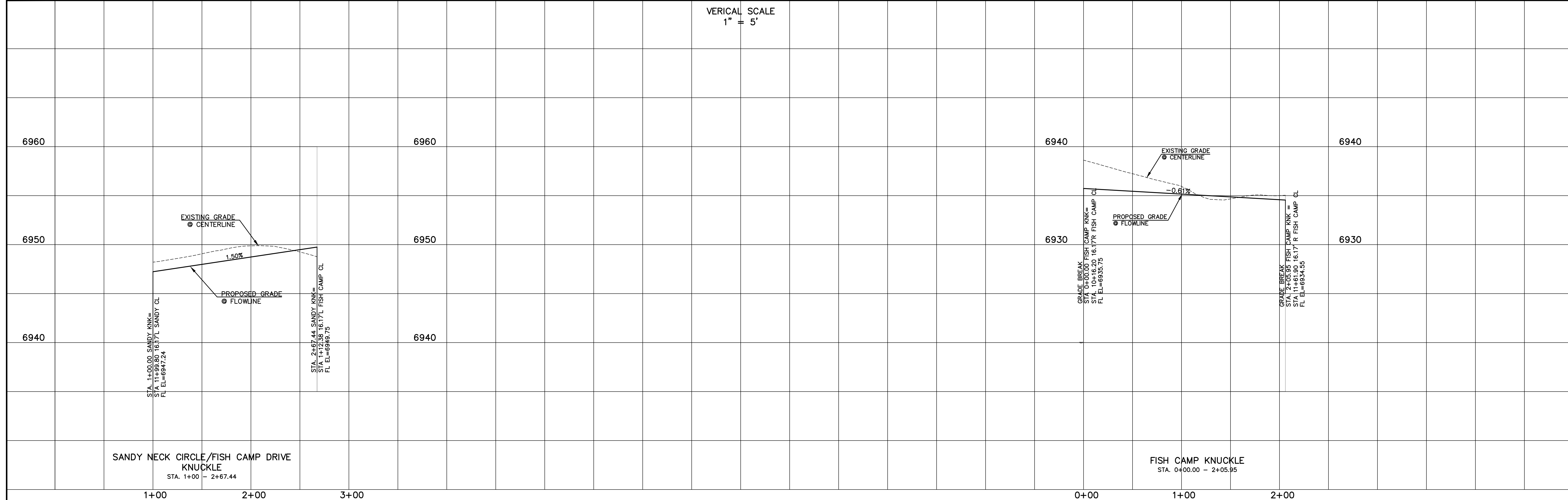


NO.	DESCRIPTION	DATE

PREPARED FOR:
ACM ALF JIV SUB II LLC
JASON POCK
 00 E. MISSISSIPPI AVE., STE 510
 DENVER, CO 80246
 303-948-9800



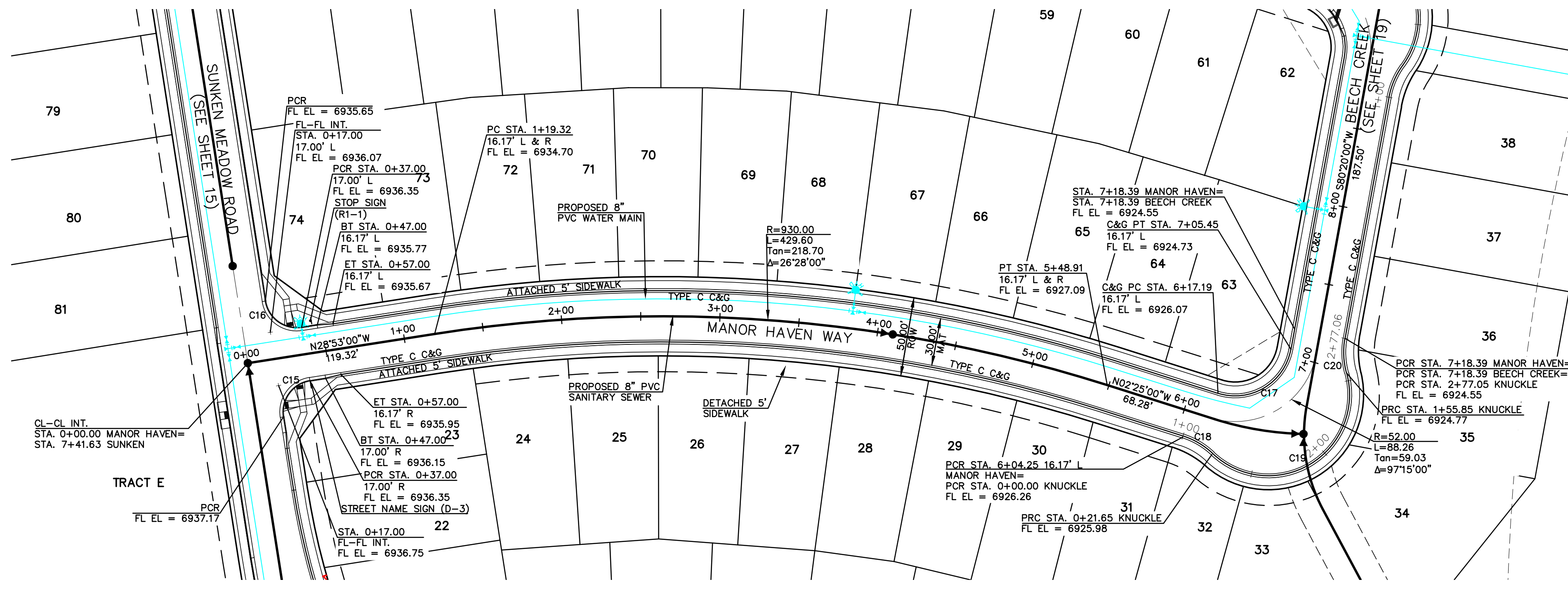
721 S. 23RD STREET
 COLORADO SPRINGS, CO 80904
 OFFICE: 719-635-4422
 FAX: 719-635-6426
 www.tnecinc.com



VERTICAL SCALE
 1" = 5'

WATERBURY FILING NO. 1
 CONSTRUCTION SET
 STREET PLAN AND PROFILE
 SANDY NECK/FISH CAMP KNUCKLE - FISH CAMP KNUCKLE

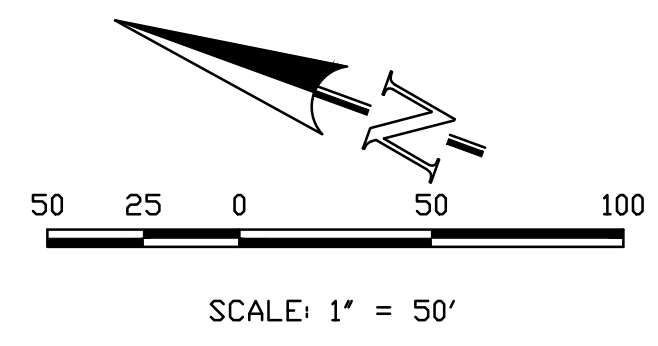
DESIGNED BY QNA
 DRAWN BY QNA
 CHECKED BY
 H-SCALE 1"=50'
 V-SCALE 1"=5'
 JOB NO. 2356.00
 DATE ISSUED 10/4/24
 SHEET NO. 17 OF 52



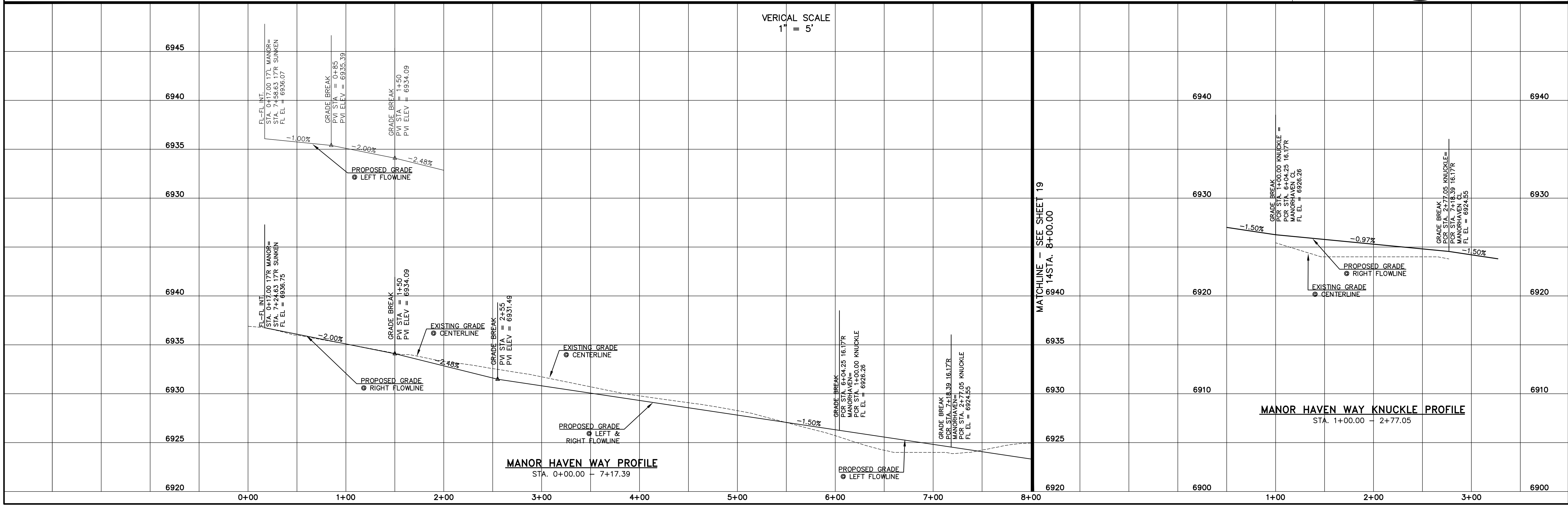
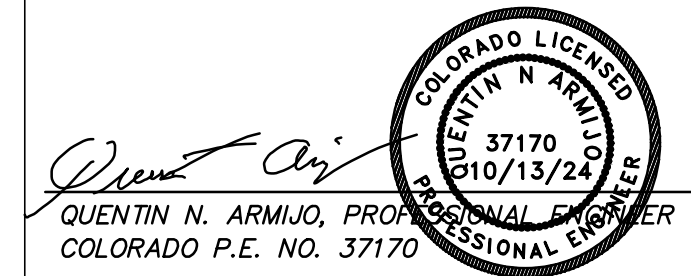
MANOR HAVEN WAY KNUCKLE PHASE 2
 STA. 1+00.00 - 2+77.05 - URBAN LOCAL
 (DESIGN SPEED 25 MPH)
 (POSTED SPEED LIMIT IS 25 MPH)

MANOR HAVEN WAY PHASE 2
 STA. 0+00.00 - 7+17.39 - URBAN LOCAL
 (DESIGN SPEED 25 MPH)
 (POSTED SPEED LIMIT IS 25 MPH)

CURVE	LENGTH	RADIUS	DELA
C15	31.42'	20.00'	90°00'00"
C16	32.51'	20.00'	93°07'57"
C17	60.82'	35.83'	97°15'00"
C18	22.02'	48.83'	25°50'31"
C19	133.01'	51.17'	148°56'02"
C20	22.02'	48.83'	25°50'31"



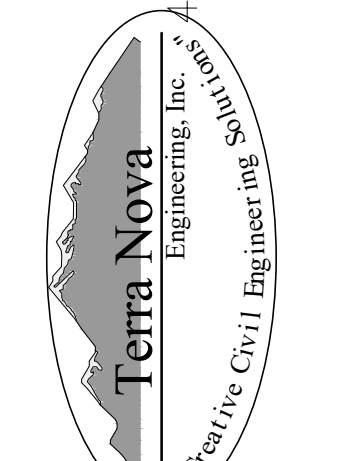
THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.



NO.	DESCRIPTION	DATE

UNTL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE BOARD OF PROFESSIONAL ENGINEERS AND SURVEYORS, INC. APPROVES THEIR USE ONLY DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR:
ACM ALF VIII JV SUB II LLC
JASON POCK
 00 E. MISSISSIPPI AVE., STE 500
 246949
 303-948-9800



721 S. 2900 STREET
 COLORADO SPRINGS, CO 80904
 OFFICE: 719-635-6422
 FAX: 719-635-6426
 www.tnase.com

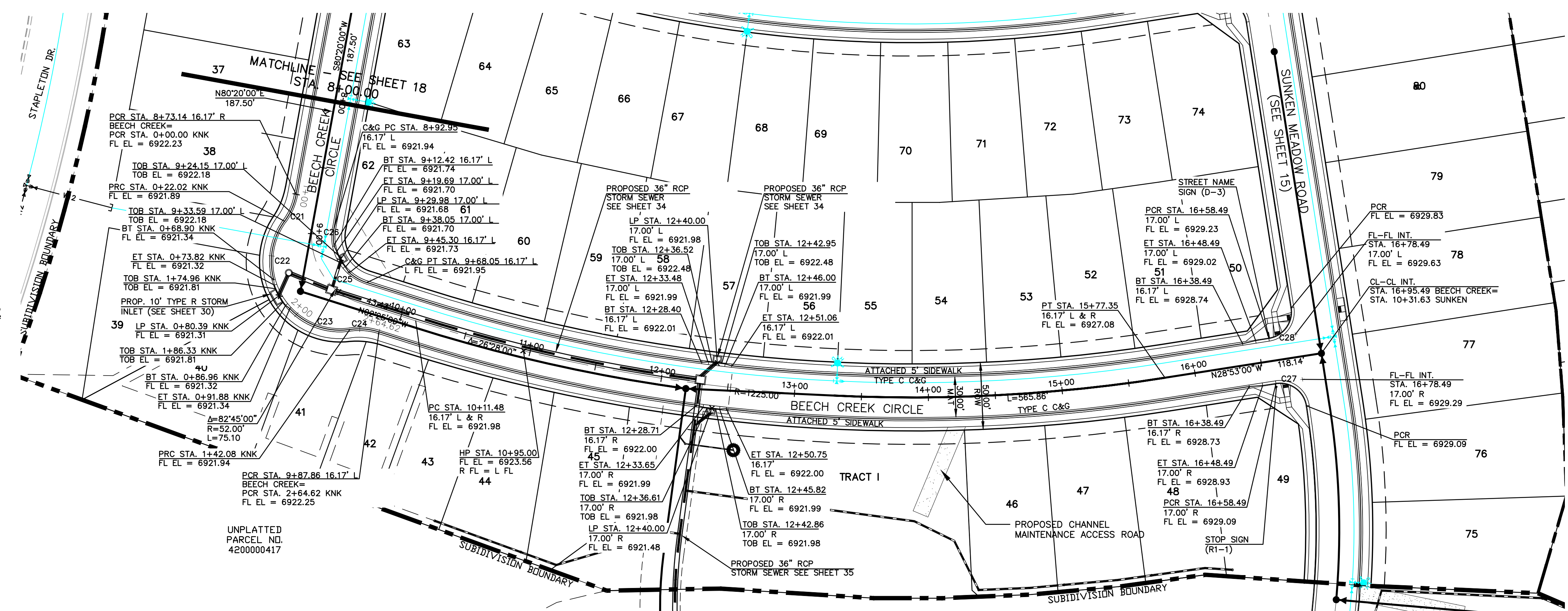
WATERBURY FILING NO. 1

CONSTRUCTION SET
 STREET PLAN AND PROFILE
 MANOR HAVEN WAY

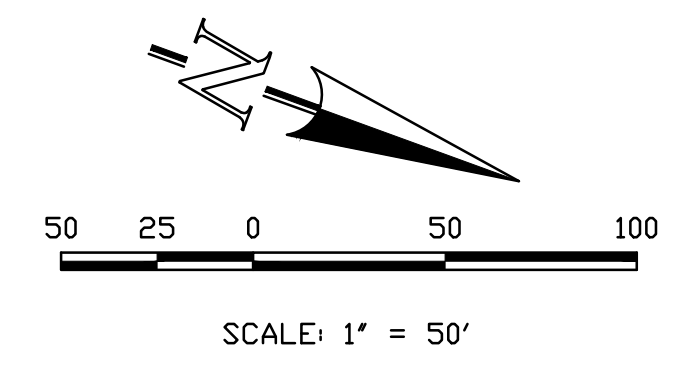
DESIGNED BY QNA
 DRAWN BY QNA
 CHECKED BY
 H-SCALE 1"=50'
 V-SCALE 1"=5'
 JOB NO. 2356.00
 DATE ISSUED 10/4/24
 SHEET NO. 18 OF 52

BEECH CREEK KNUCKLE PHASE 2
 STA. 1+00.00 - 2+77.05 - URBAN LOCAL
 (DESIGN SPEED 25 MPH)
 (POSTED SPEED LIMIT IS 25 MPH)

CURVE	LENGTH	RADIUS	DELA
C21	22.02'	48.83'	25°50'31"
C22	45.94'	51.17'	51°26'26"
C23	49.27'	51.17'	55°10'01"
C24	22.02'	48.83'	25°50'31"
C25	15.04'	35.83'	24°03'23"
C26	12.80'	35.83'	20°27'48"
C27	31.42'	20.00'	90°00'00"
C28	31.42'	20.00'	90°00'00"



BEECH CREEK CIRCLE PHASE 2
 STA. 8+00.00 - 16+95.49 - URBAN LOCAL
 (DESIGN SPEED 25 MPH)
 (POSTED SPEED LIMIT IS 25 MPH)



THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION
 FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

QUENTIN N. ARMIJO, PROFESSIONAL ENGINEER
 COLORADO P.E. NO. 37170

REVISIONS

NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE BOARD OF ARCHITECTS, ENGINEERS, SURVEYORS AND LAND SURVEYORS OF THE STATE OF COLORADO, THESE DRAWINGS ARE NOT TO BE USED FOR ANY PURPOSES WITHOUT THE WRITTEN AUTHORIZATION OF TERRA NOVA ENGINEERING, INC.

PREPARED FOR: **ACM ALF VIII JV SUB II LLC**
JASON POKK
 4100 E. MISSISSIPPI
 DENVER, CO 80246
 303-984-9800

721 S. 2950 STREET
 COLORADO SPRINGS, CO 80904
 OFFICE: 719-635-6422
 FAX: 719-635-6426
 www.tnase.com

Terra Nova
 Engineering, Inc.
 Professional Engineer
 Quentin N. Armijo, P.E. No. 37170

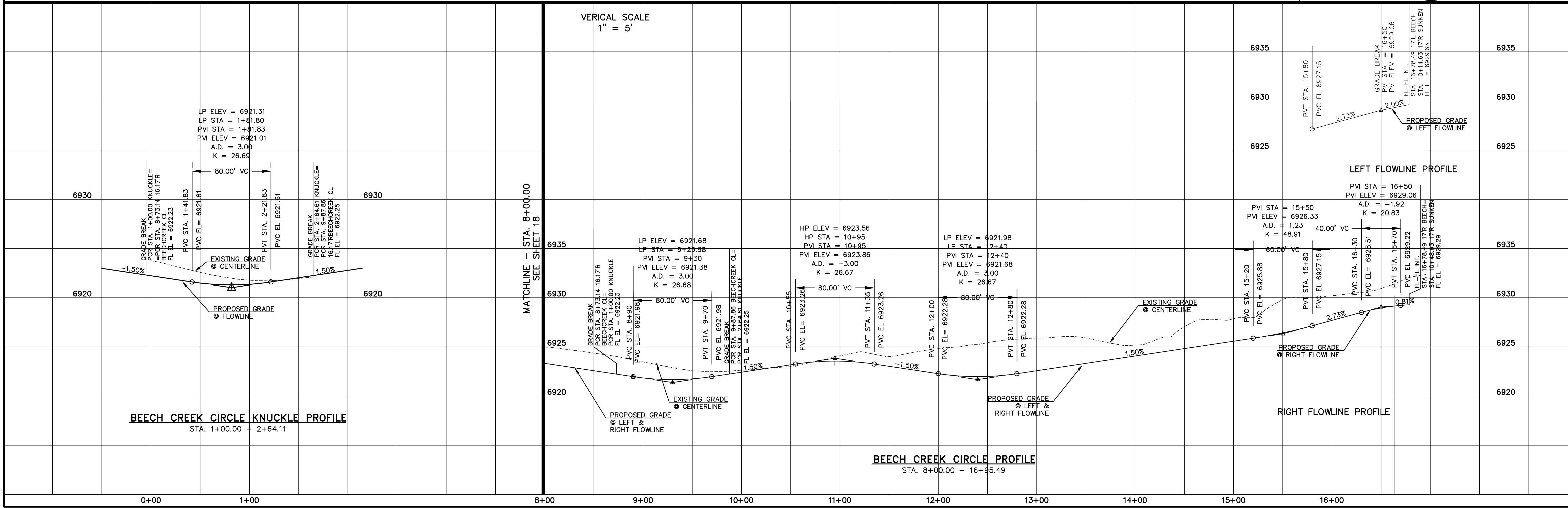
WATERBURY FILING NO. 1

CONSTRUCTION SET
 STREET PLAN AND PROFILE
 BEECH CREEK CIRCLE

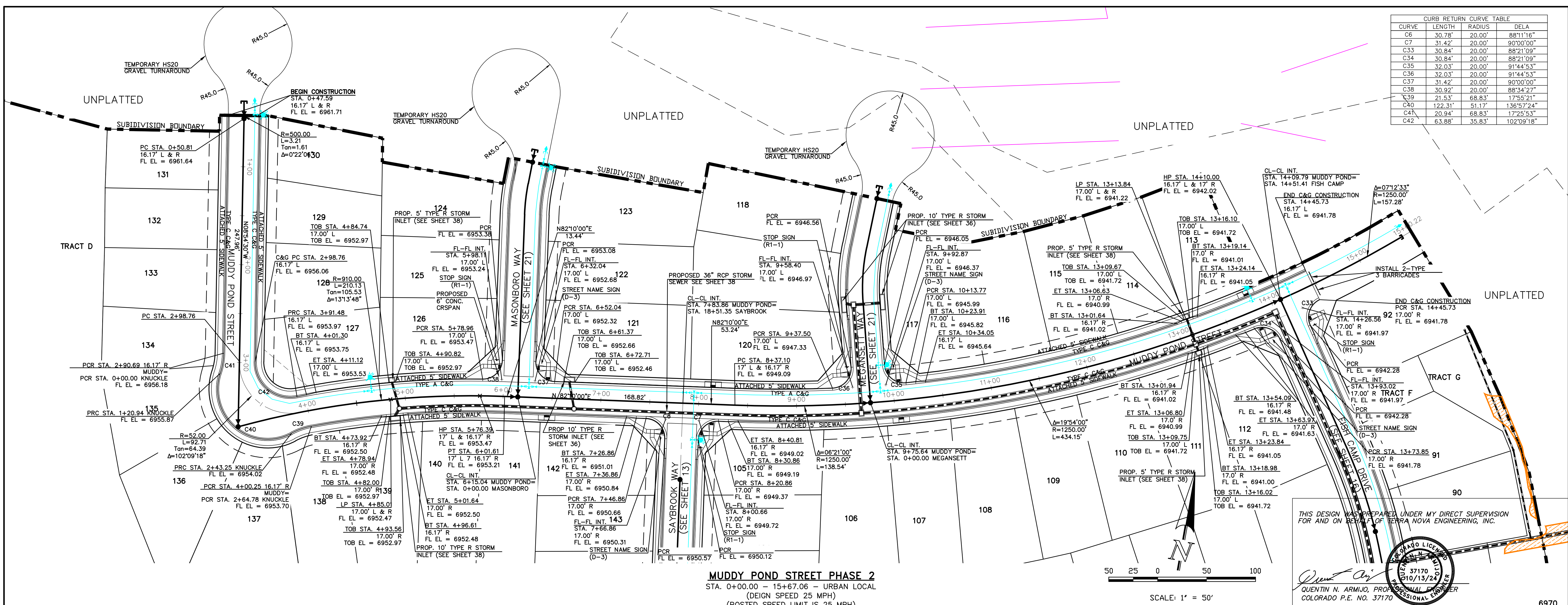
DESIGNED BY: QNA
 DRAWN BY: QNA
 CHECKED BY: QNA

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

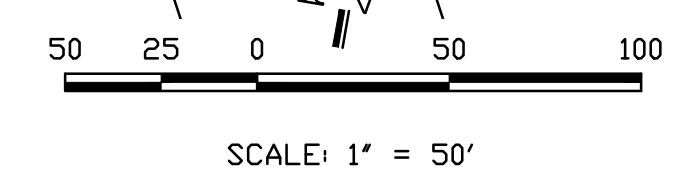
JOB NO. 2356.00
 DATE ISSUED 10/4/24
 SHEET NO. 19 OF 52



CURVE	LENGTH	RADIUS	DELA
C6	30.78'	20.00'	89°11'16"
C7	31.42'	20.00'	90°00'00"
C33	30.84'	20.00'	88°21'09"
C34	30.84'	20.00'	88°21'09"
C35	32.03'	20.00'	91°44'53"
C36	32.03'	20.00'	91°44'53"
C37	31.42'	20.00'	90°00'00"
C38	30.92'	20.00'	88°34'27"
C39	21.53'	68.83'	17°55'21"
C40	122.31'	51.17'	136°57'24"
C41	20.94'	68.83'	17°25'53"
C42	63.88'	35.83'	102°09'18"



MUDDY POND STREET PHASE 2
 STA. 0+00.00 - 15+67.06 - URBAN LOCAL
 (DESIGN SPEED 25 MPH)
 (POSTED SPEED LIMIT IS 25 MPH)



THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

Quentin N. Armijo
 QUENTIN N. ARMILJO, PROFESSIONAL ENGINEER
 COLORADO P.E. NO. 37170

DATE: _____

DESCRIPTION: _____

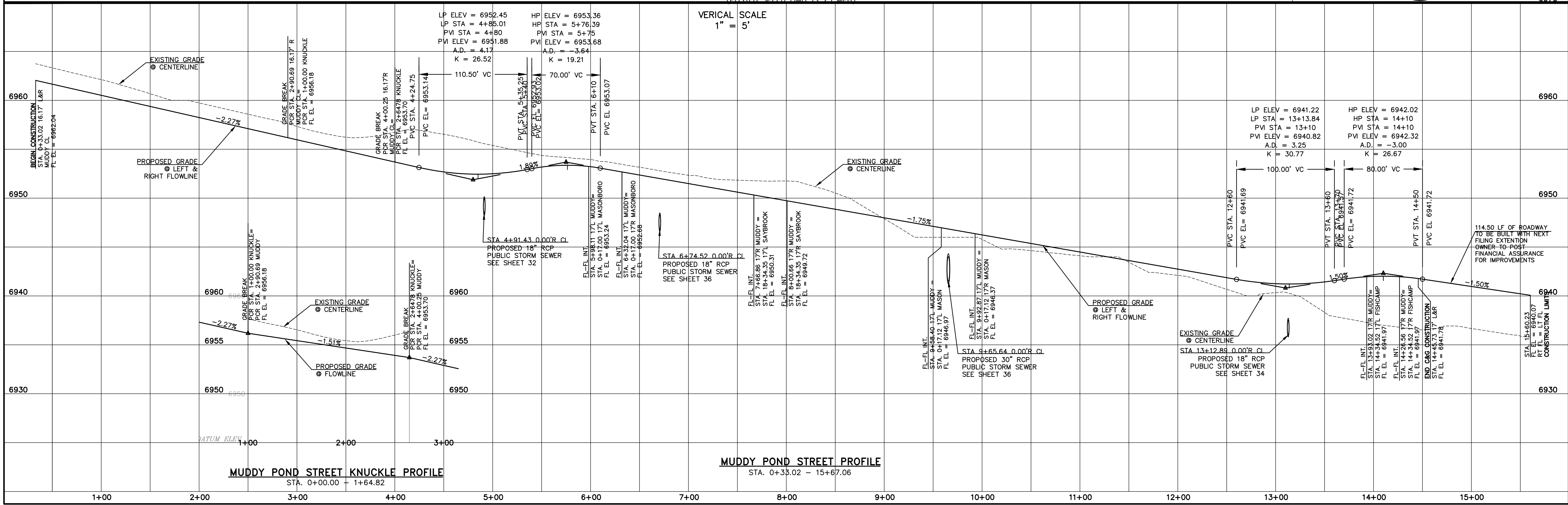
REVISIONS:

NO.	DESCRIPTION

UNTL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE BOARD OF COUNTY COMMISSIONERS, DENVER, COLORADO.

PREPARED FOR: SUB: ACM ALF VIII JV SUB II LLC
 JASON POKK
 100 E. MISSISSIPPI AVE., STE. 500
 DENVER, CO 80246
 303-984-9800

Engineer's Seal: Terra Nova Engineering, Inc. No. 37170, Exp. 10/13/24



MUDDY POND STREET PROFILE
 STA. 0+33.02 - 15+67.06

MUDDY POND STREET KNUCKLE PROFILE
 STA. 0+00.00 - 1+64.82

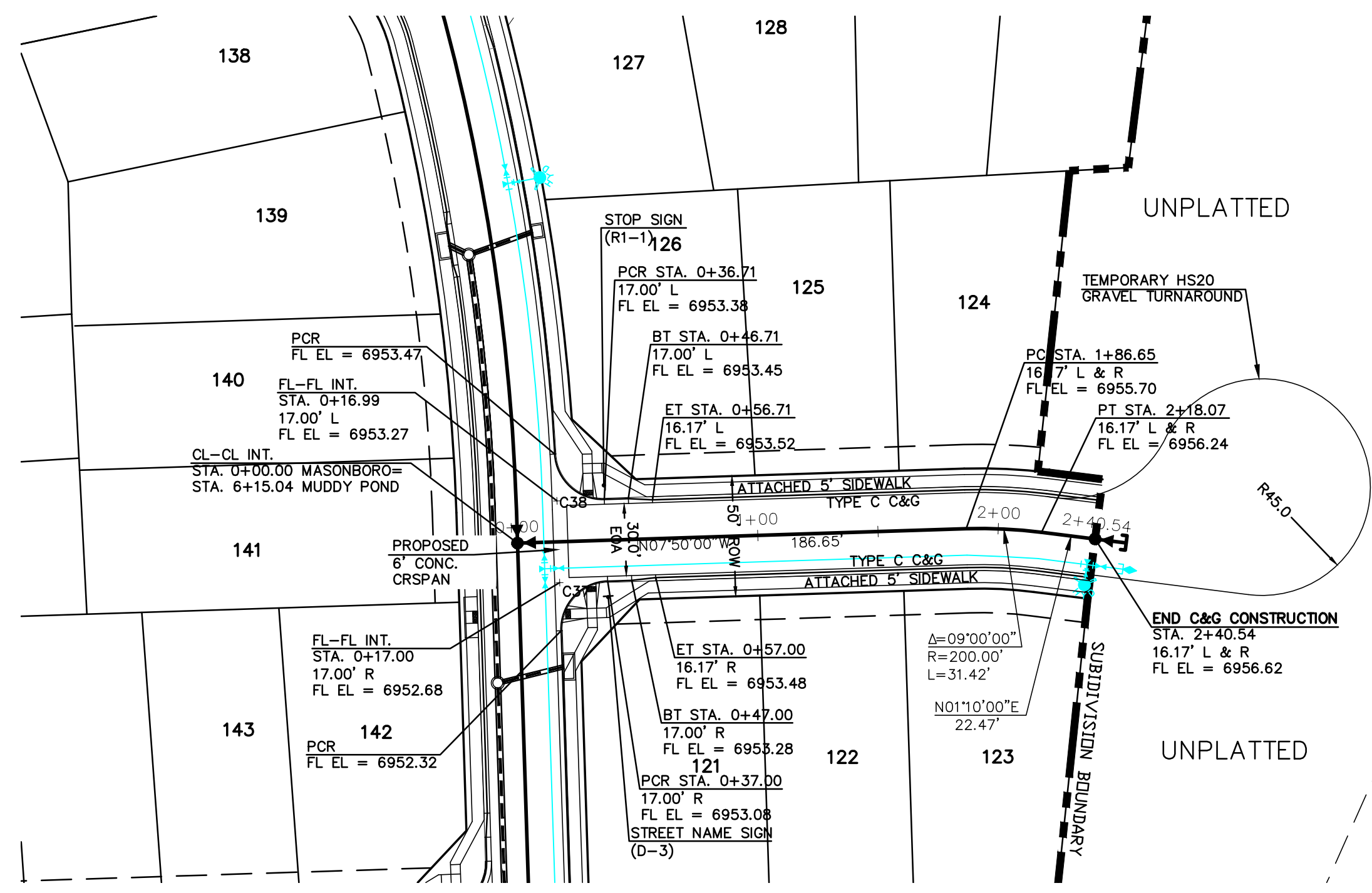
721 S. 29th STREET
 COLORADO SPRINGS, CO 80904
 OFFICE: 719-635-6422
 FAX: 719-635-6426
 www.tnase.com

Terra Nova
 Engineering, Inc.
 Professional Engineer

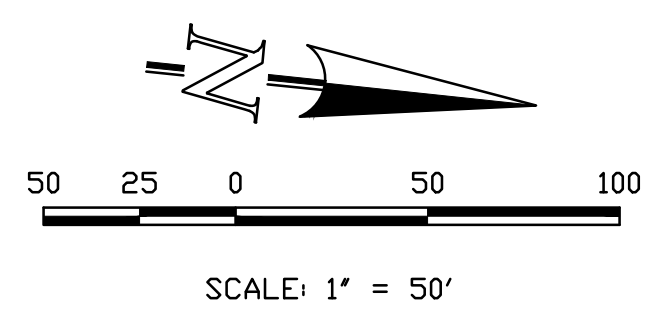
DESIGNED BY: QNA
 DRAWN BY: QNA
 CHECKED BY: _____

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

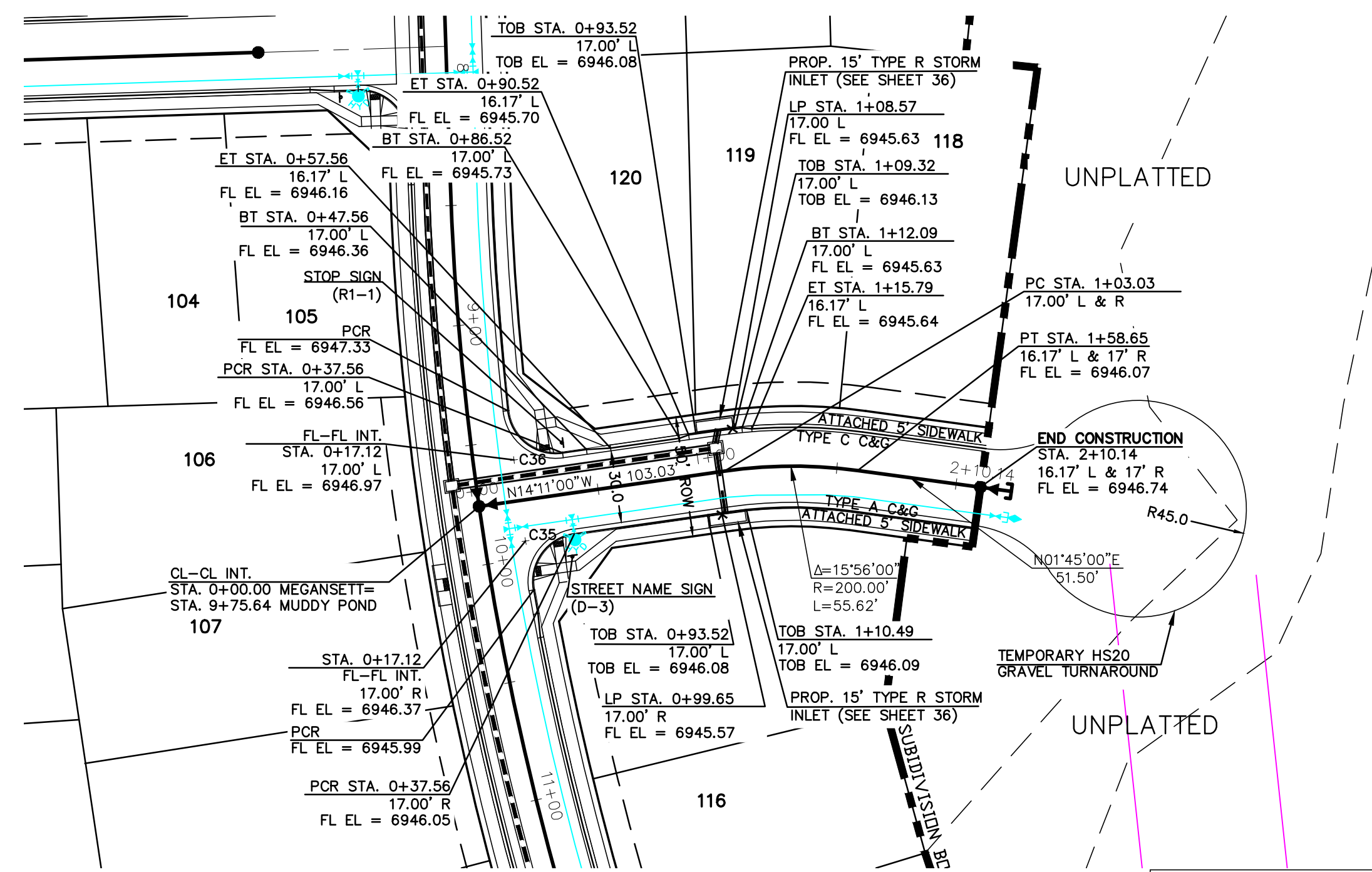
JOB NO. 2356.00
 DATE ISSUED 10/4/24
 SHEET NO. 20 OF 52



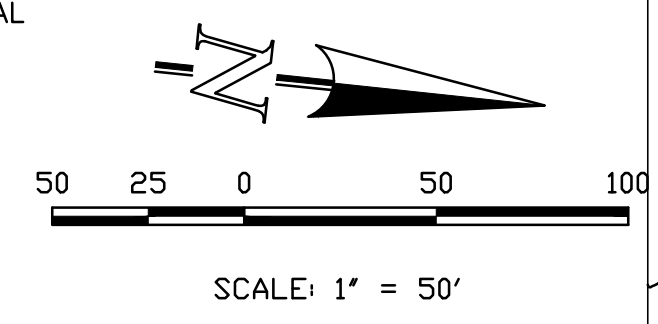
MASONBORO WAY PHASE 2
 STA. 0+00.00 - 2+40.54 - URBAN LOCAL
 (DESIGN SPEED 25 MPH)
 (POSTED SPEED LIMIT IS 25 MPH)



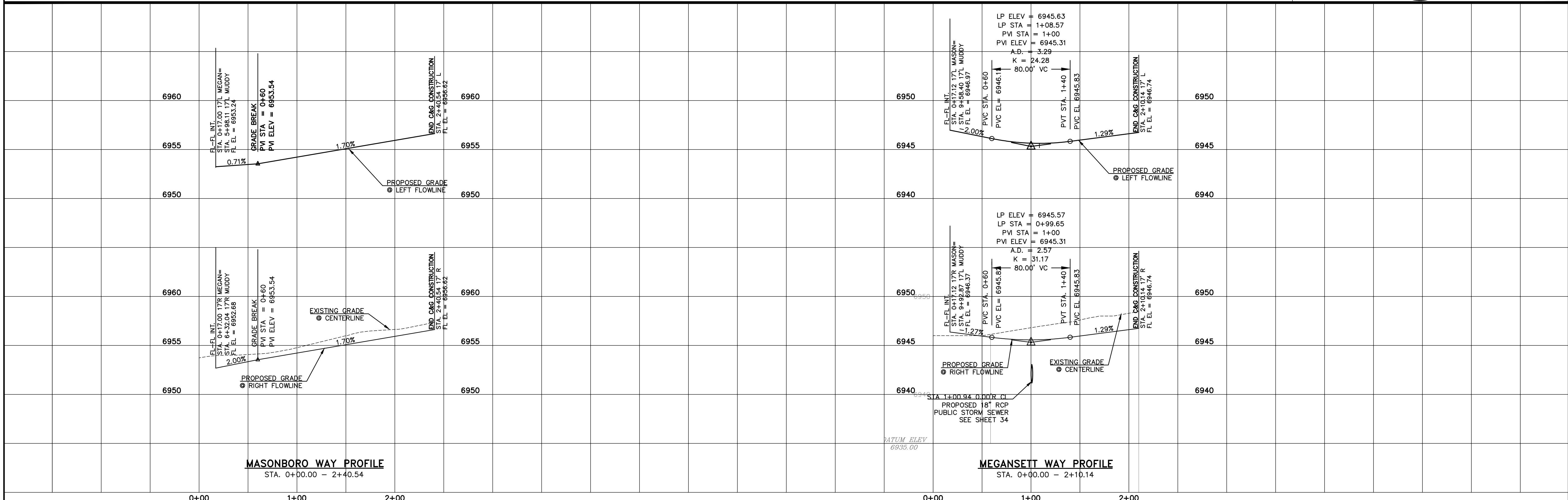
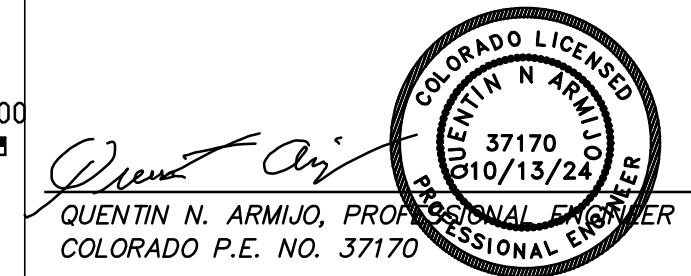
CURB RETURN CURVE TABLE			
CURVE	LENGTH	RADIUS	DELA
C35	32.03'	20.00'	91°44'53"
C36	32.03'	20.00'	91°44'53"
C37	31.42'	20.00'	90°00'00"
C38	30.92'	20.00'	88°34'27"



MEGANSSETT WAY PHASE 2
 STA. 0+00.00 - 2+10.14 - URBAN LOCAL
 (DESIGN SPEED 25 MPH)
 (POSTED SPEED LIMIT IS 25 MPH)



THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.



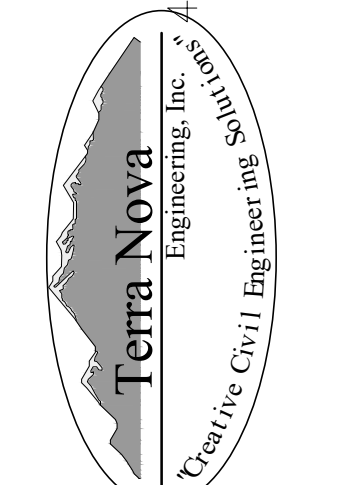
MASONBORO WAY PROFILE
 STA. 0+00.00 - 2+40.54

MEGANSSETT WAY PROFILE
 STA. 0+00.00 - 2+10.14

REVISIONS	NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE LOCAL AGENCIES TERRA NOVA ENGINEERING AND SURVEYING, INC. APPROVES THEIR USE ONLY DESIGNATED BY WRITTEN AUTHORIZATION.

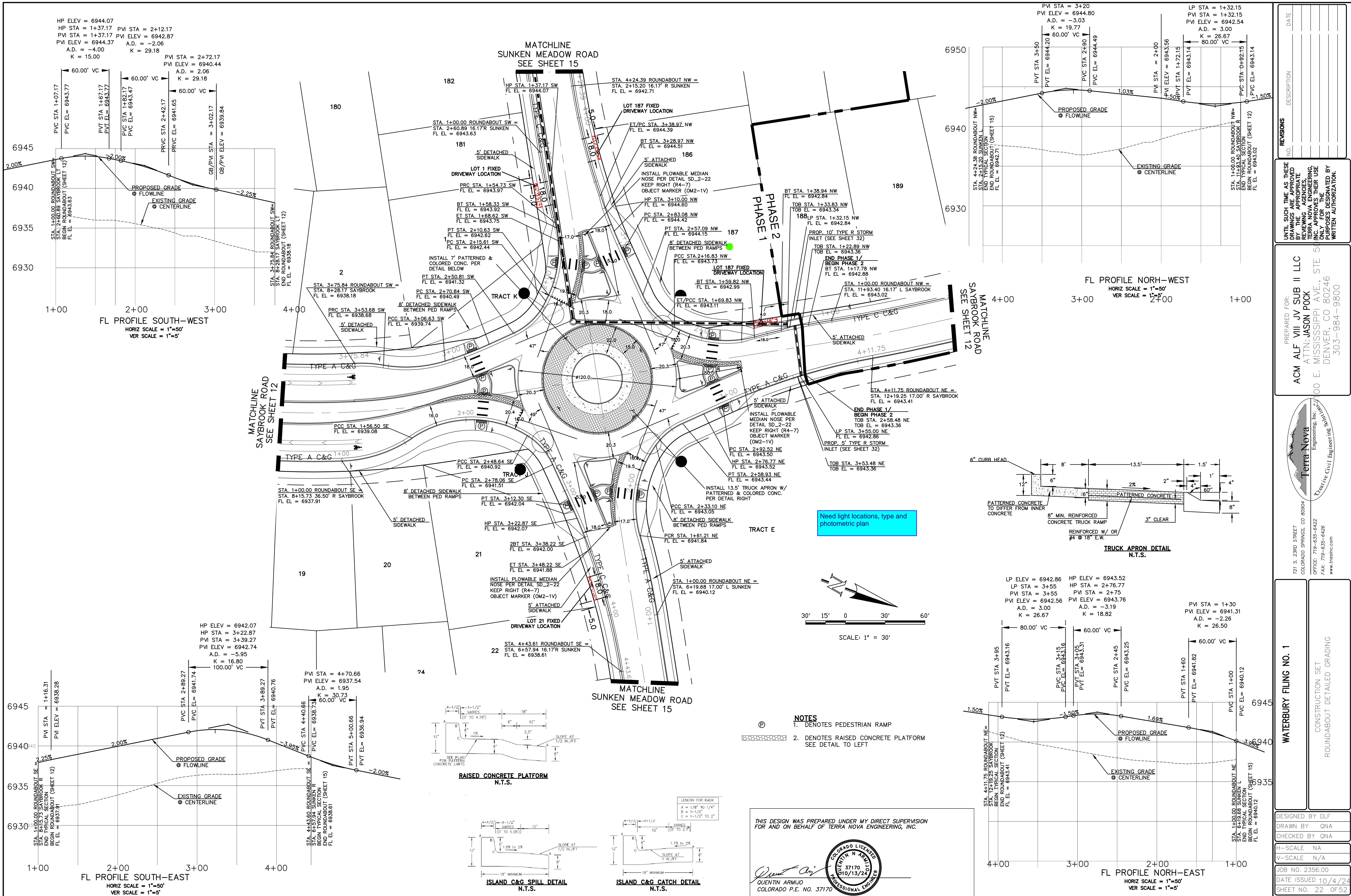
PREPARED FOR:
 ACM ALF VIII JV SUB II LLC
 JASON POKK
 00 E. MISSISSIPPI AVE., STE 500
 DENVER, CO 80246
 303-984-9800



721 S. 2960 STREET
 COLORADO SPRINGS, CO 80904
 OFFICE: 719-635-6422
 FAX: 719-635-6426
 www.tnase.com

WATERBURY FILING NO. 1
 CONSTRUCTION SET
 STREET PLAN AND PROFILE
 MASONBORO WAY & MEGANSSETT WAY

DESIGNED BY QNA
 DRAWN BY QNA
 CHECKED BY
 H-SCALE 1"=50'
 V-SCALE 1"=5'
 JOB NO. 2356.00
 DATE ISSUED 10/4/24
 SHEET NO. 21 OF 52



NO.	REVISIONS	DATE

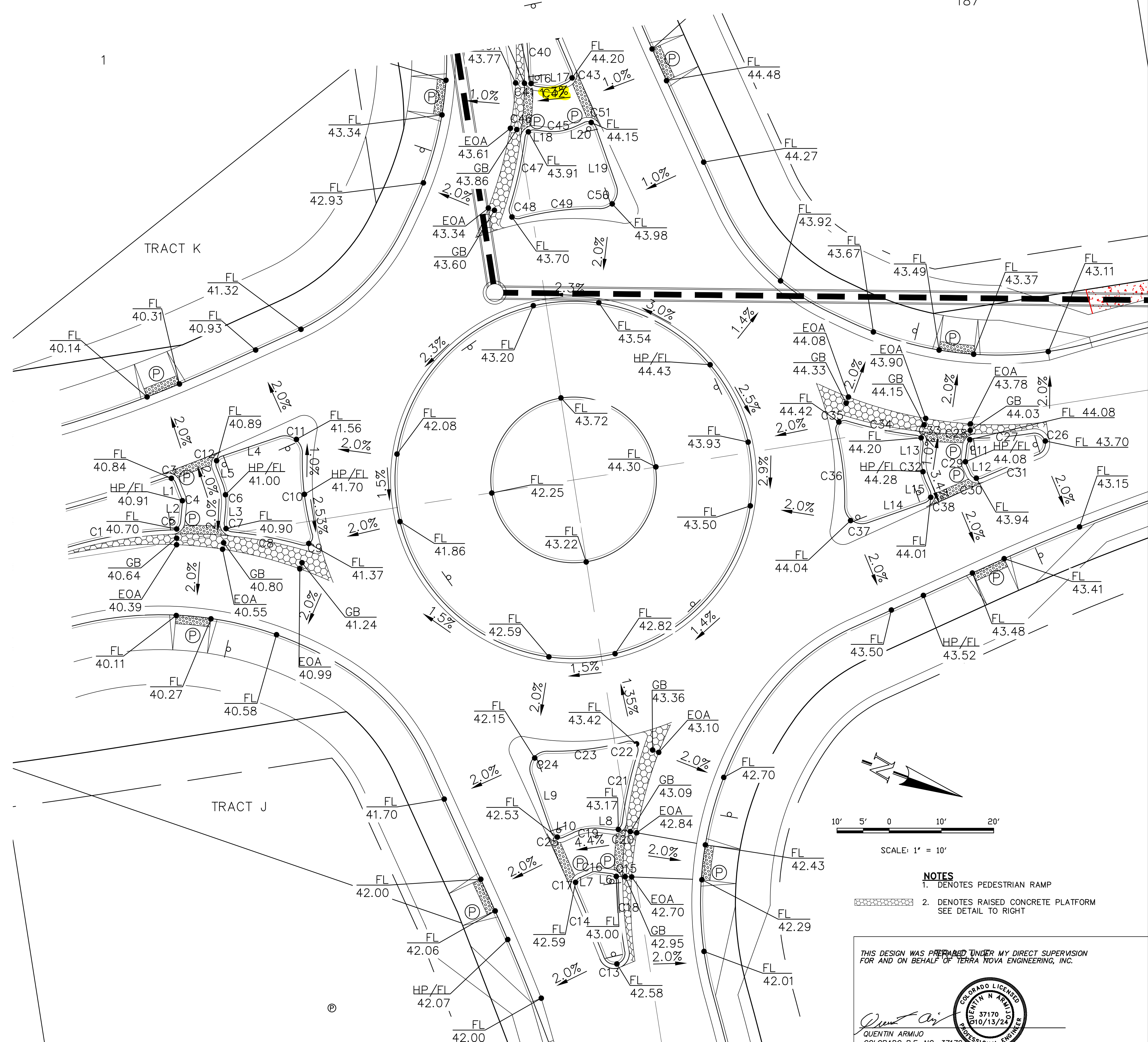
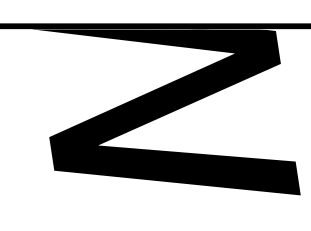
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE LOCAL JURISDICTION, TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECT AND FOR THE PURPOSES AUTHORIZED BY WRITTEN AUTHORIZATION.

PREPARED FOR:
ACM ALF VIII JV SUB II LLC
 ATTN: JASON POCK
 100 E. MISSISSIPPI AVE., STE. 500
 DENVER, CO 80246
 303-984-9800

Terra Nova
 Engineering, Inc.
 721 S. 23RD STREET
 COLORADO SPRINGS, CO 80904
 OFFICE: 719-635-6422
 FAX: 719-635-6426
 www.tnec.com

WATERBURY FILING NO. 1
 CONSTRUCTION SET
 ROUNDABOUT DETAILED GRADING

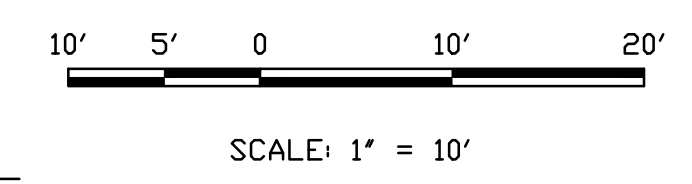
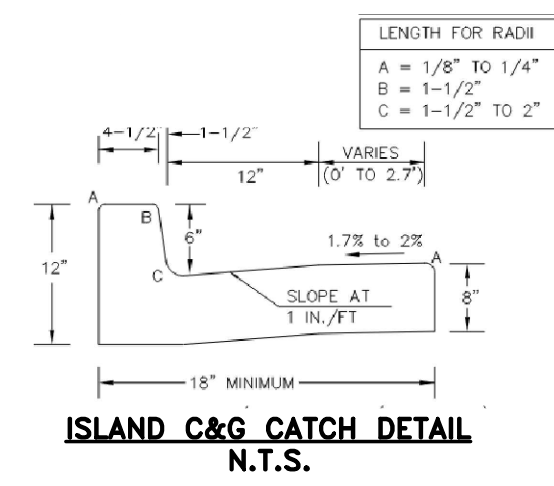
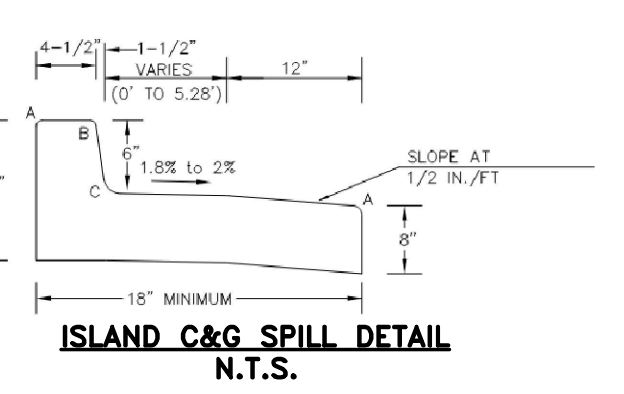
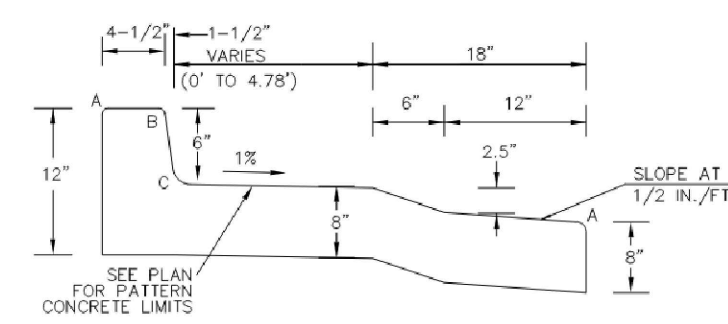
DESIGNED BY DLF
 DRAWN BY QNA
 CHECKED BY QNA
 H-SCALE NA
 V-SCALE N/A
 JOB NO. 2356.00
 DATE ISSUED 10/4/24
 SHEET NO. 22 OF 52



ROUNDABOUT ISLAND CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TYPE C&G
C1	28.99'	97.00'	1707'24"	SPILL
C2	91.94'	301.90'	1726'57"	SPILL
C3	3.10'	2.00'	88'40'34"	SPILL
C4	0.93'	2.00'	26'37'49"	CARRY
C5	2.87'	2.00'	82'16'43"	SPILL
C6	5.58'	12.00'	26'37'49"	SPILL
C7	3.13'	2.00'	89'35'44"	SPILL
C8	16.28'	97.00'	9'36'56"	CARRY
C9	4.22'	2.00'	120'52'49"	CARRY
C10	18.69'	64.00'	16'44'06"	SPILL
C11	7.68'	4.00'	109'57'33"	SPILL
C12	3.23'	2.00'	92'32'44"	SPILL
C13	7.35'	2.50'	168'26'54"	SPILL
C14	16.00'	97.00'	9'26'59"	SPILL
C15	2.89'	2.00'	82'54'05"	SPILL
C16	1.08'	2.00'	30'50'43"	SPILL
C17	3.11'	2.00'	89'12'04"	SPILL
C18	16.99'	500.00'	1'56'47"	SPILL
C19	6.46'	12.00'	30'50'43"	CARRY
C20	3.11'	2.00'	88'58'41"	CARRY
C21	16.45'	97.00'	9'43'01"	SPILL
C22	4.28'	2.00'	122'37'40"	SPILL
C23	18.43'	64.00'	16'29'57"	SPILL
C24	7.72'	4.00'	110'36'47"	CARRY
C25	3.31'	2.00'	94'50'33"	CARRY
C26	7.28'	2.50'	166'54'50"	SPILL
C27	13.23'	97.00'	7'48'45"	SPILL
C28	2.86'	2.00'	81'56'28"	CARRY
C29	1.10'	2.00'	31'27'17"	CARRY
C30	3.11'	2.00'	89'07'39"	CARRY
C31	14.18'	500.00'	1'37'28"	SPILL
C32	6.59'	12.00'	31'27'17"	SPILL
C33	3.14'	2.00'	89'55'48"	SPILL
C34	16.12'	97.00'	9'31'15"	SPILL
C35	4.22'	2.00'	120'56'17"	SPILL
C36	17.27'	64.00'	15'27'31"	SPILL
C37	7.71'	4.00'	110'22'54"	SPILL
C38	3.32'	2.00'	95'11'04"	SPILL
C39	7.35'	2.50'	168'26'54"	CARRY
C40	16.00'	97.00'	9'26'59"	SPILL
C41	2.89'	2.00'	82'54'05"	SPILL
C42	1.08'	2.00'	30'50'43"	SPILL
C43	3.11'	2.00'	89'12'04"	CARRY
C44	16.99'	500.00'	1'56'47"	CARRY
C45	6.46'	12.00'	30'50'43"	CARRY
C46	3.11'	2.00'	88'58'41"	CARRY
C47	16.45'	97.00'	9'43'01"	SPILL
C48	4.28'	2.00'	122'37'40"	SPILL
C49	18.43'	64.00'	16'29'57"	SPILL
C50	7.72'	4.00'	110'36'47"	SPILL
C51	3.31'	2.00'	94'50'33"	CARRY

ROUNDABOUT ISLAND LINE TABLE			
LINE	LENGTH	BEARING	TYPE C&G
L1	3.92	S48°49'28"W	CARRY
L2	4.47	S75°27'16"W	CARRY
L3	3.57	N75°27'16"E	SPILL
L4	13.96	S38°37'48"E	SPILL
L5	3.79	N48°49'28"E	SPILL
L6	3.46	S13°23'02"E	SPILL
L7	2.80	S44°13'45"E	SPILL
L8	2.72	N13°23'02"W	CARRY
L9	14.08	N50°36'49"E	SPILL
L10	2.60	N44°13'45"W	CARRY
L11	3.19	S76°55'44"W	CARRY
L12	2.34	S45°28'28"W	CARRY
L13	2.21	S76°55'44"W	SPILL
L14	13.90	N39°20'28"W	SPILL
L15	2.09	S45°28'28"W	SPILL
L16	3.46	N44°13'45"W	SPILL
L17	2.80	N13°23'02"E	SPILL
L18	2.72	S13°23'02"E	CARRY
L19	14.08	S50°36'49"W	CARRY
L20	2.60	S44°13'45"E	CARRY

NOTE
LINE AND CURVE TABLES REFER TO THE
FLOWLINE OF THE C&G

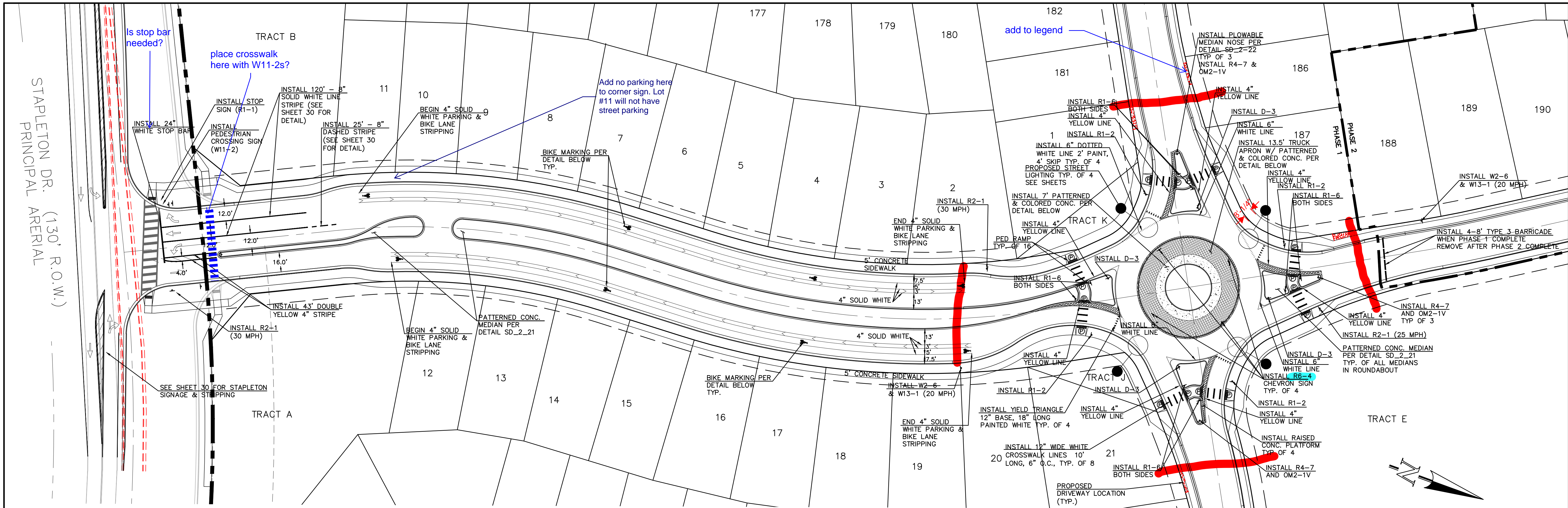


- NOTES
1. DENOTES PEDESTRIAN RAMP
 2. DENOTES RAISED CONCRETE PLATFORM
SEE DETAIL TO RIGHT

THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION
FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

QUENTIN ARUJO
 COLORADO P.E. NO. 37170

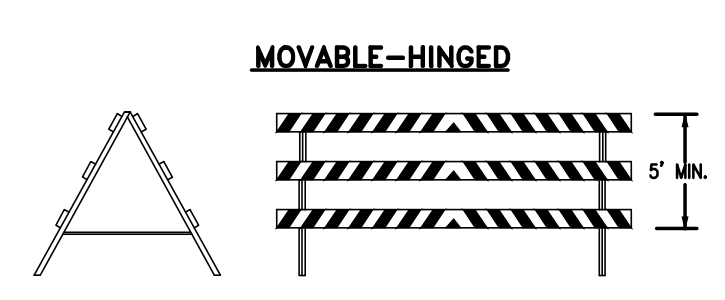
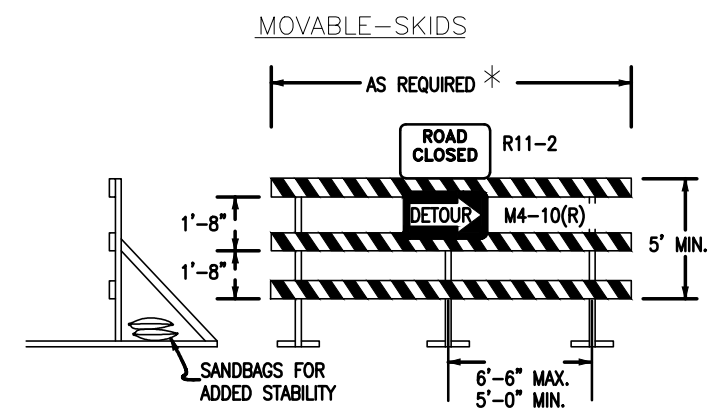
DATE	
DESCRIPTION	
REVISIONS	
NO.	
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE REVIEWING AGENCIES, TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECTS AUTHORIZED BY WRITTEN AUTHORIZATION.	
PREPARED FOR: ACM ALF VIII JV SUB II LLC ATTN: JASON POCK 100 E. MISSISSIPPI AVE., STE 500 DENVER, CO 80246 303-984-9800	
Terra Nova Engineering, Inc. 721 S. 23RD STREET COLORADO SPRINGS, CO 80904 OFFICE: 719-635-6422 FAX: 719-635-6426 www.tnec.com	
WATERBURY FILING NO. 1 CONSTRUCTION SET ROUNDABOUT DETAILED GRADING	
DESIGNED BY DLF DRAWN BY QNA CHECKED BY QNA H-SCALE NA V-SCALE N/A JOB NO. 2356.00 DATE ISSUED 10/4/24 SHEET NO. 23 OF 52	



SAYBROOK AND ROUNDABOUT SIGNING & STRIPING

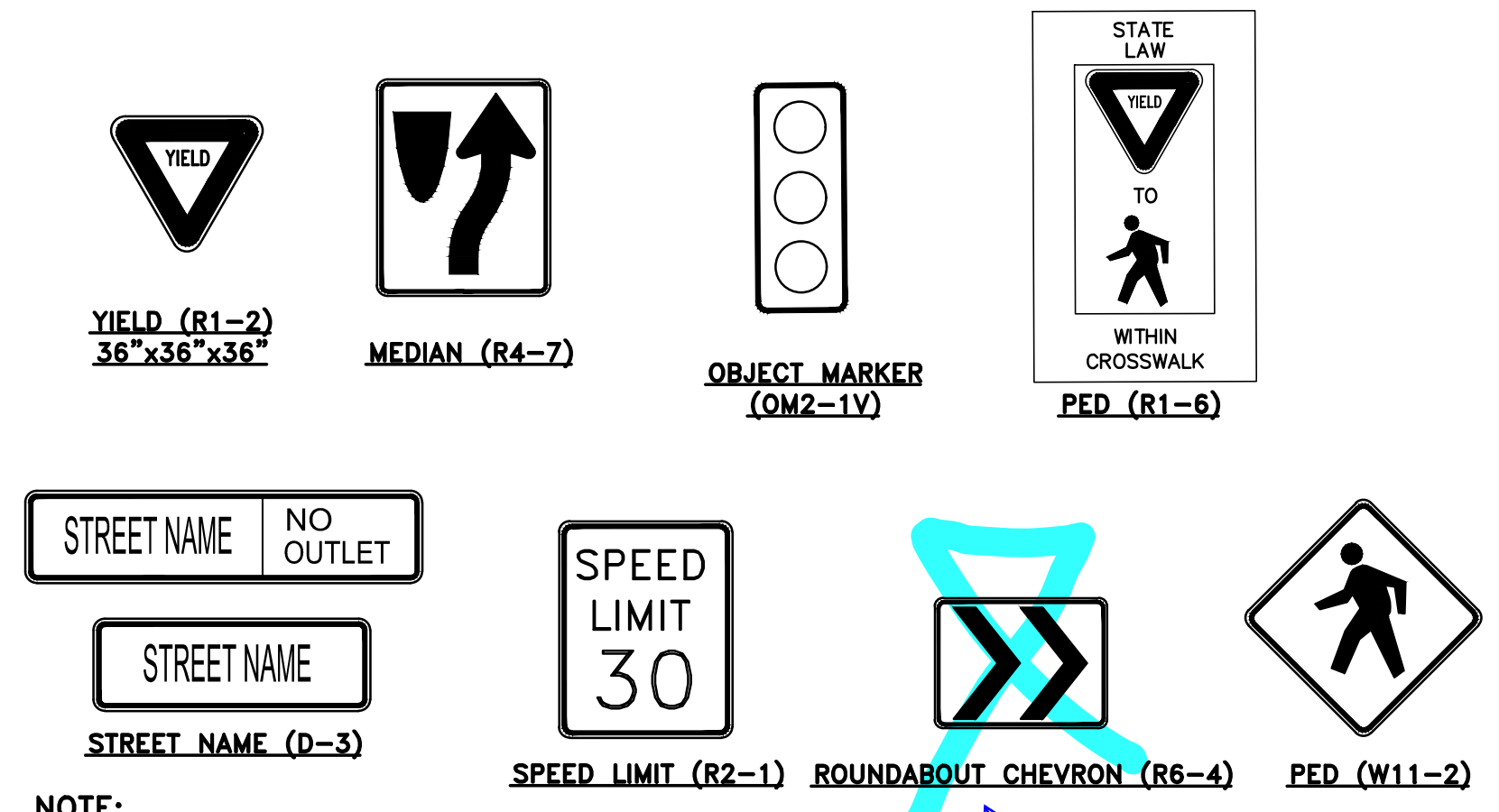
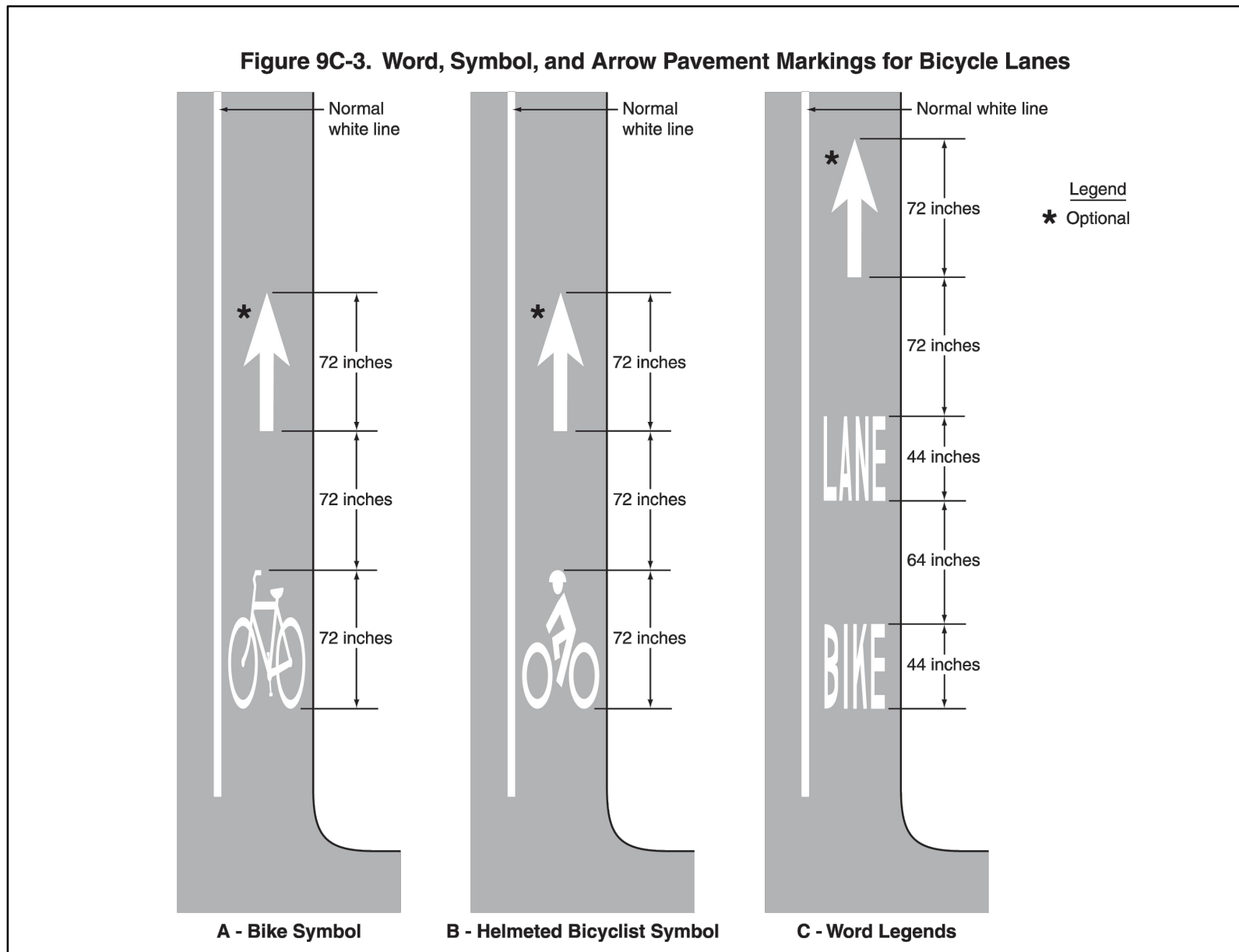
RAIL LENGTH TABLE *

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



- BARRICADE 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 BORROW PIT AND/OR SHOULDER AS REQUIRED.

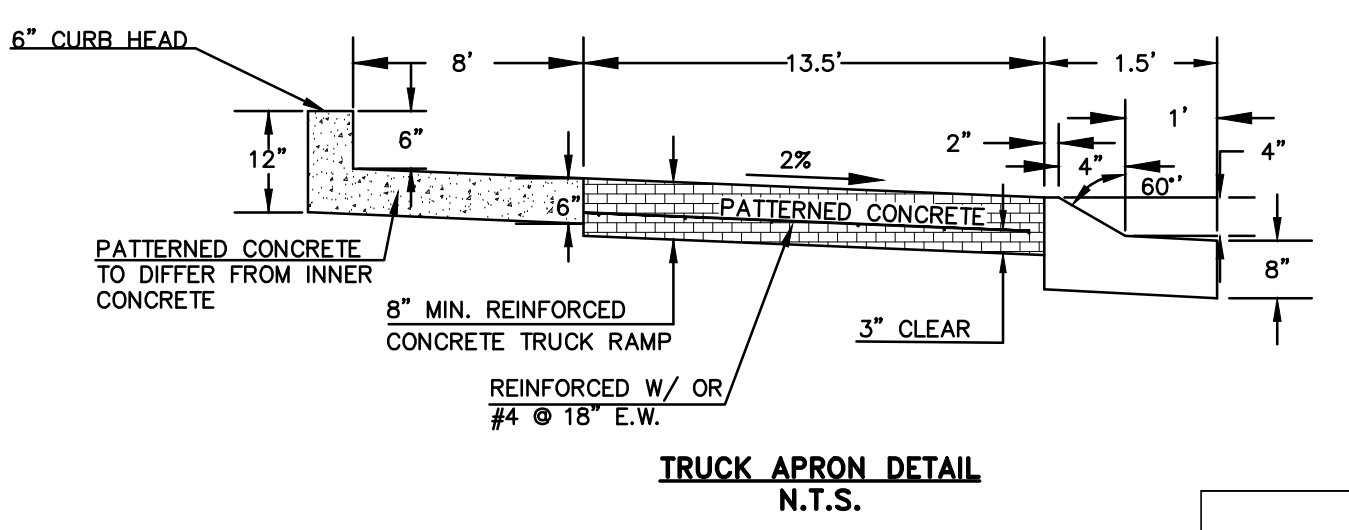
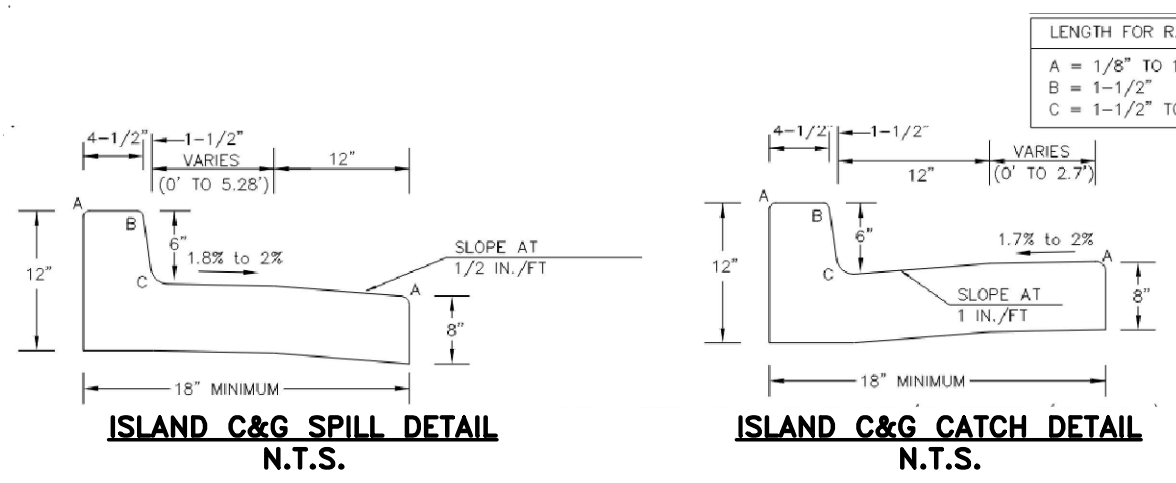
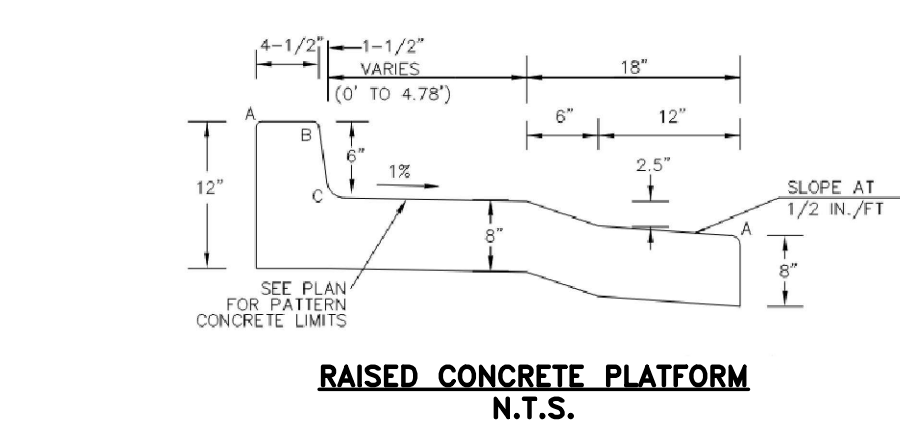
TYP. TYPE 3 BARRICADES



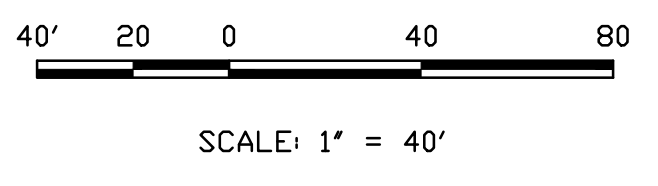
NOTE:
ALL INTERNAL SIGNS SHALL BE 4\"/>

Add note for letter and sign size at Stapleton intersection.

one-way signs per updated MUTCD



- NOTES**
- ⊙ DENOTES PEDESTRIAN RAMP
 - ⊙ DENOTES RAISED CONCRETE PLATFORM SEE DETAIL TO LEFT



REVISIONS

NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPLICABLE REVIEWING AGENCIES, TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECT AND FOR THE PURPOSES AUTHORIZED BY WRITTEN AUTHORIZATION.

PREPARED FOR:
ACM ALF VIII JV SUB II LLC
ATTN: JASON POCK
100 E. MISSISSIPPI AVE., STE 500
DENVER, CO 80246
303-984-9800

Terra Nova Engineering, Inc.
Civil Engineer
721 S. 23RD STREET
COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6422
FAX: 719-635-6426
www.tnec.com

WATERBURY FILING NO. 1

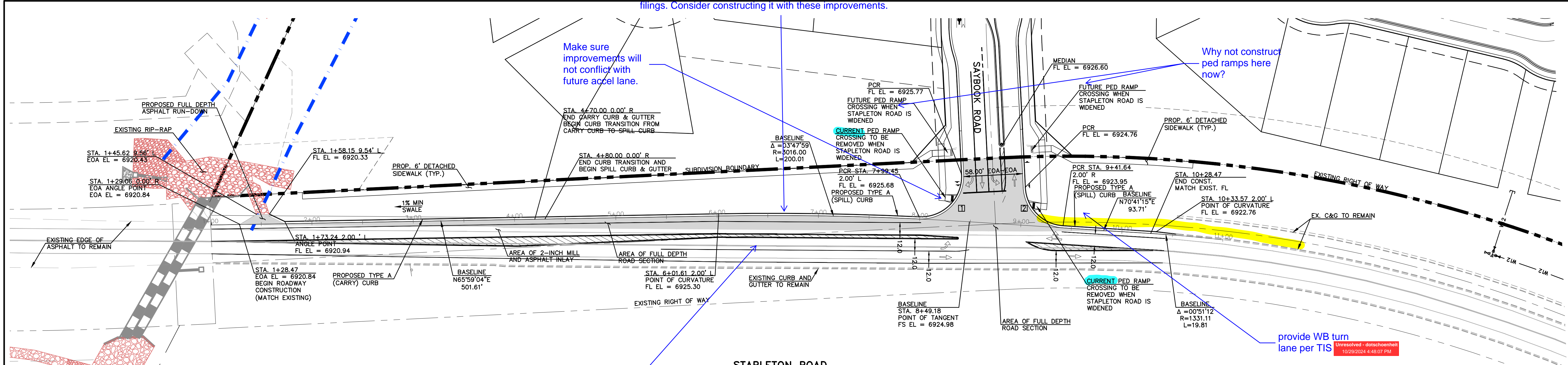
CONSTRUCTION SET
SIGNING & STRIPING
SAYBROOK & ROUNDABOUT

THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

DESIGNED BY DLF
DRAWN BY QNA
CHECKED BY QNA
H-SCALE NA
V-SCALE N/A
JOB NO. 2356.00
DATE ISSUED 10/4/24
SHEET NO. 24 OF 52

QUENTIN ARMIJO
COLORADO P.E. NO. 37170

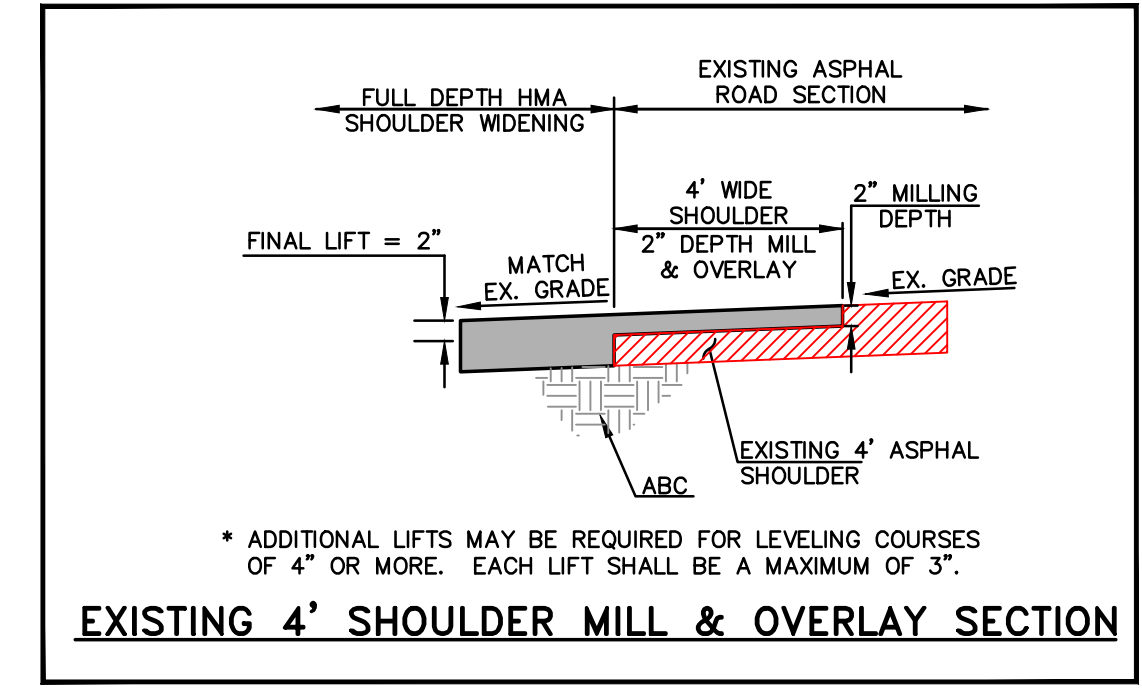
If a right-turn acceleration lane is required in the future, a future filing will be required to construct it, or escrow provided with all filings. Consider constructing it with these improvements.



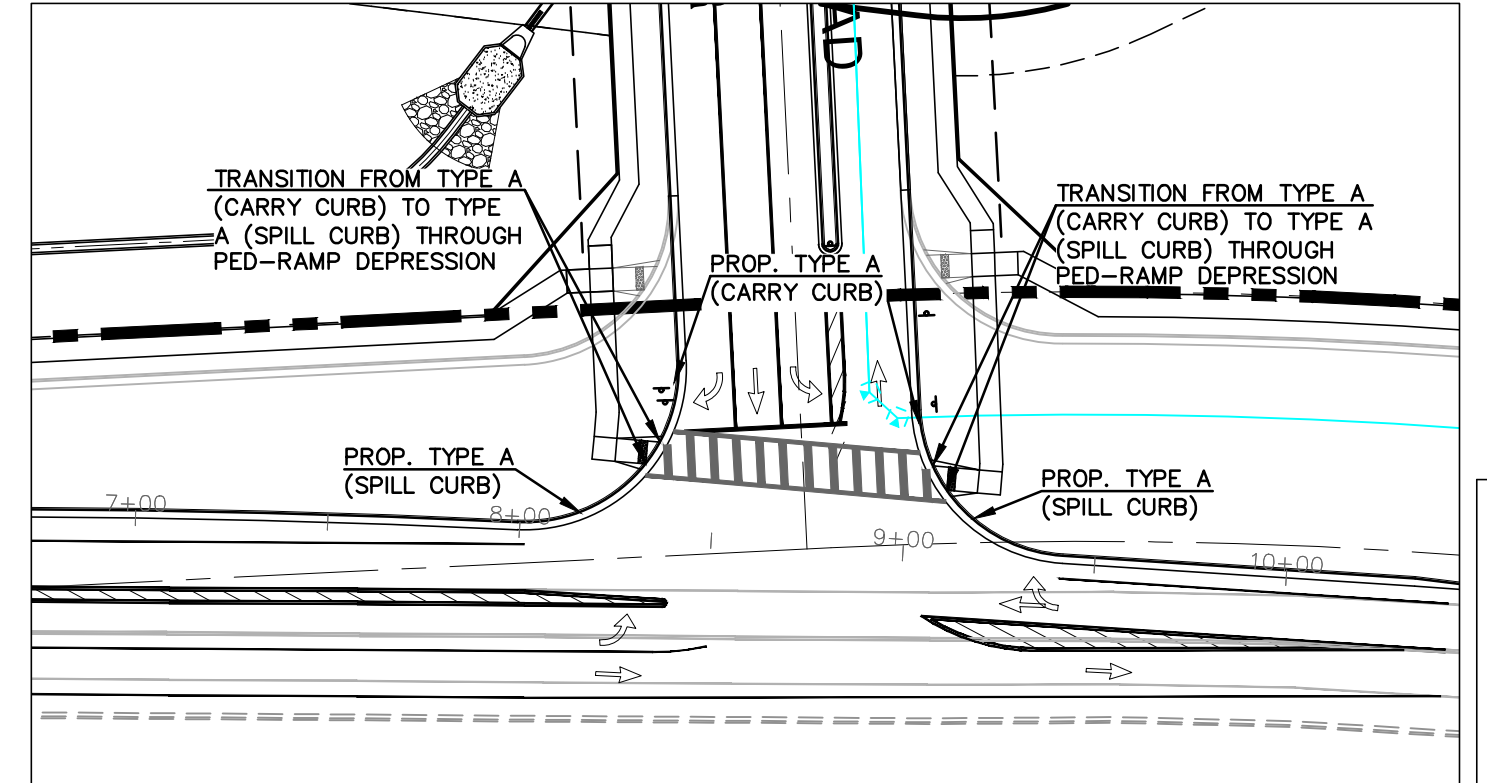
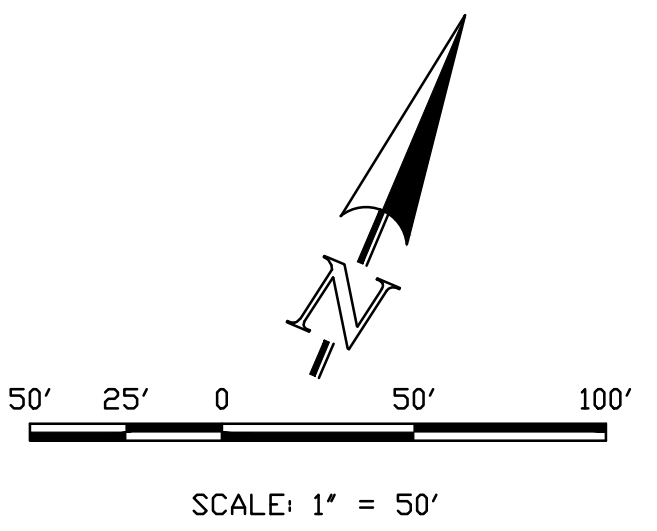
STAPLETON ROAD
STA. 1+00.00 - 10+53.39

turn lane needs to match TIS

provide WB turn lane per TIS



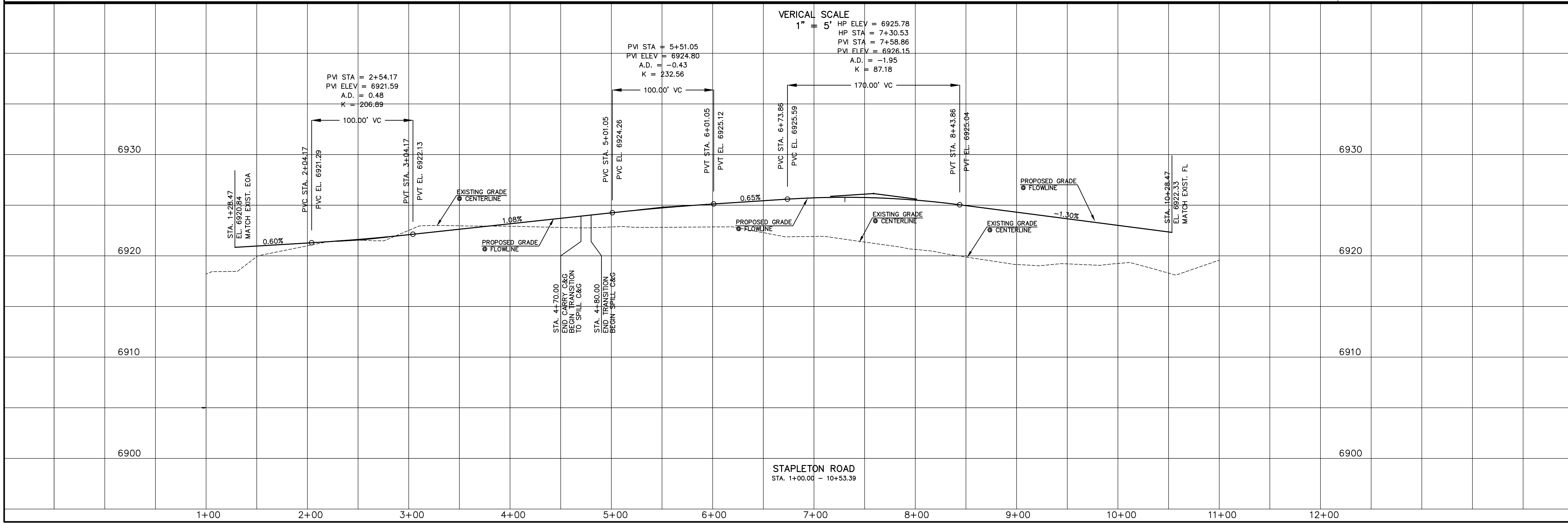
DESIGN SPEED IS 50 M.P.H.



CURB FL CURVE TABLE			
CURVE	LENGTH	RADIUS	DELA ANGLE
1	66.73	40.00	95°35'02"
2	58.27	40.00	83°28'17"

THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

QUENTIN N. ARMIJO, PROFESSIONAL ENGINEER
COLORADO P.E. NO. 37170



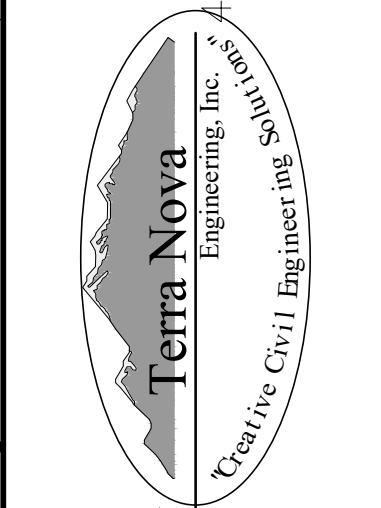
STAPLETON ROAD
STA. 1+00.00 - 10+53.39

REVISIONS

NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE BOARD OF COUNTY COMMISSIONERS, TERRA NOVA ENGINEERING AND SURVEYING, INC. APPROVES THEIR USE ONLY DESIGNATED BY WRITTEN AUTHORIZATION.

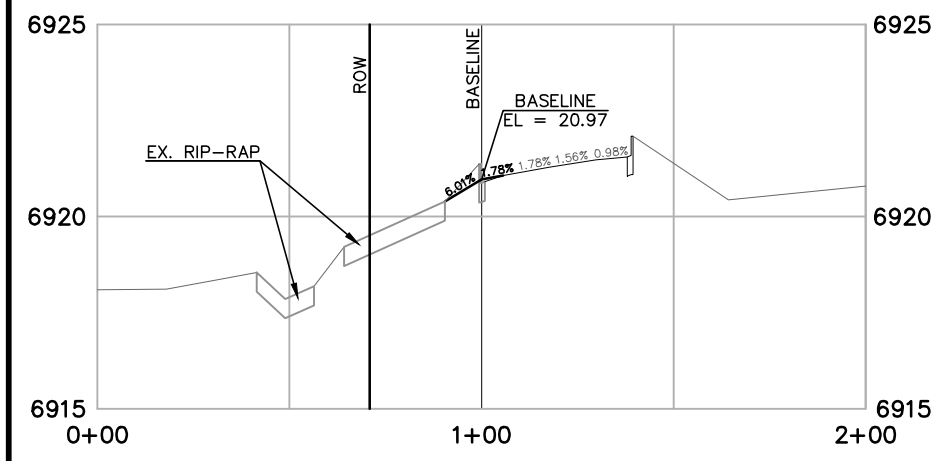
PREPARED FOR:
ACM ALF VIII JV SUB II LLC
JASON POCK
00 E. MISSISSIPPI AVE., STE 500
DENVER, CO 80246
303-984-9800



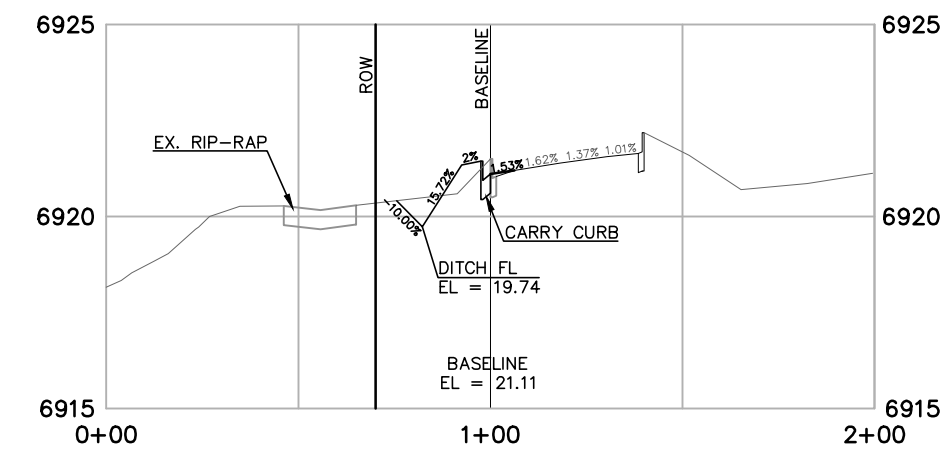
DESIGNED BY QNA
DRAWN BY QNA
CHECKED BY

WATERBURY FILING NO. 1
CONSTRUCTION SET
STREET PLAN AND PROFILE
STAPLETON ROAD

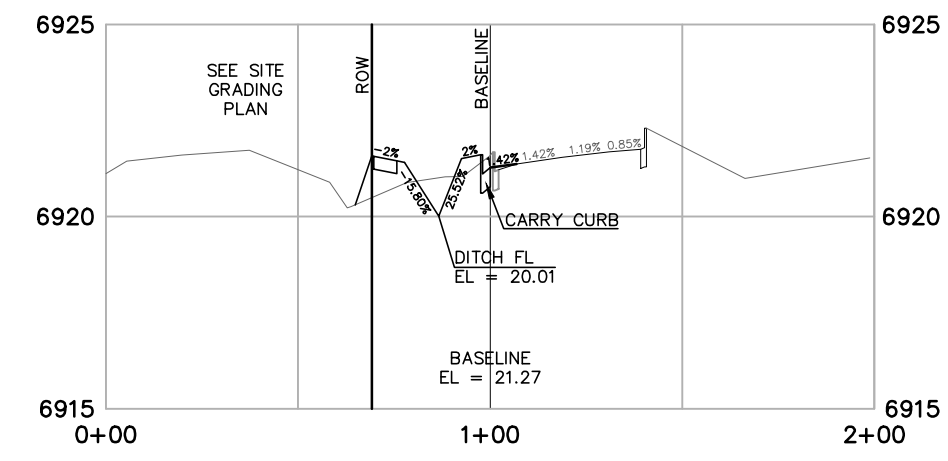
H-SCALE 1"=50'
V-SCALE 1"=5'
JOB NO. 2356.00
DATE ISSUED 10/4/24
SHEET NO. 28 OF 52



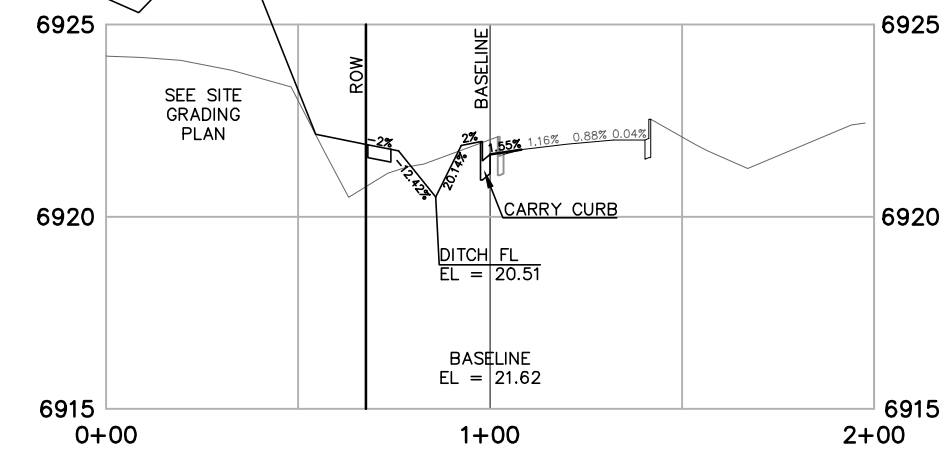
STAPLETON DRIVE
SECTION 1+50.00
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'



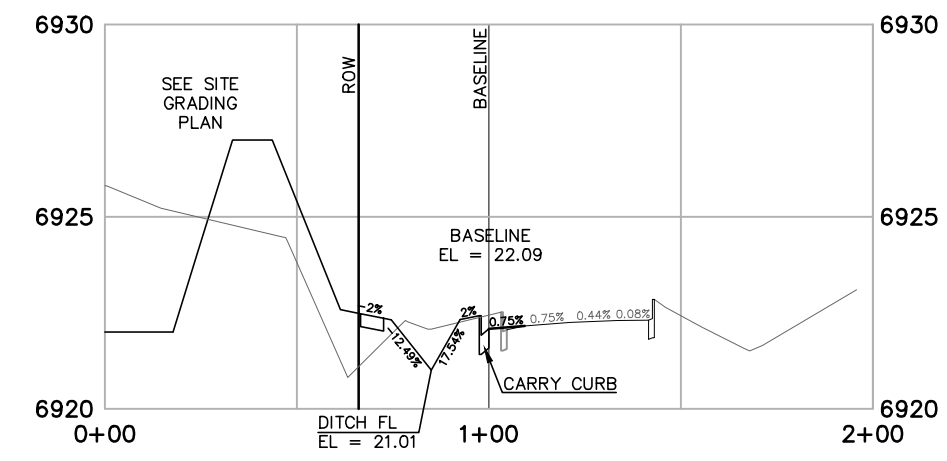
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SECTION 1+73.24
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'



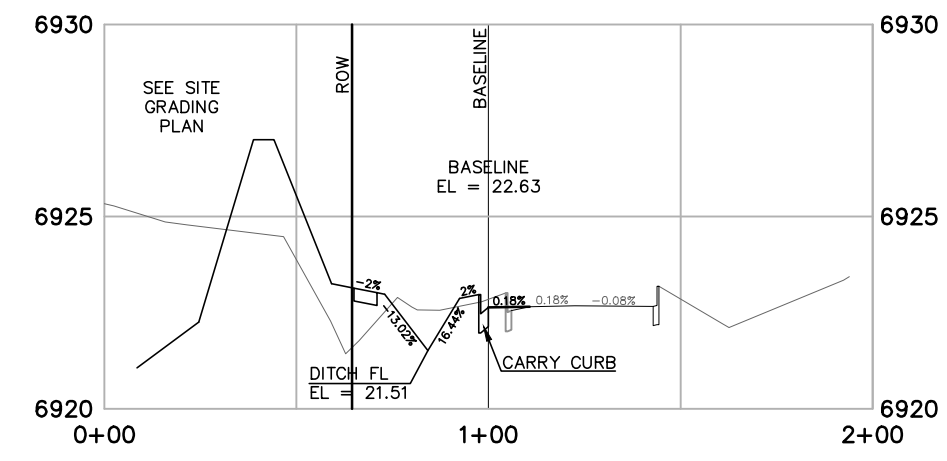
STAPLETON DRIVE
SECTION 2+00.00
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'



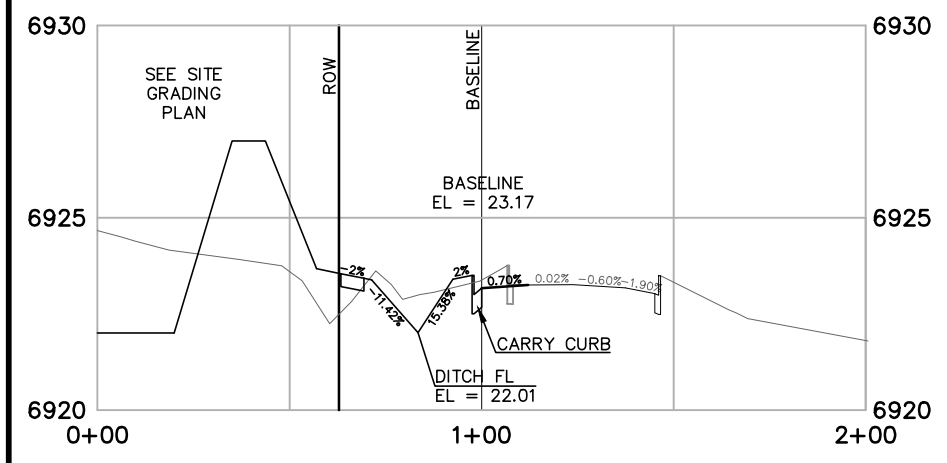
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SECTION 2+50.00
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'



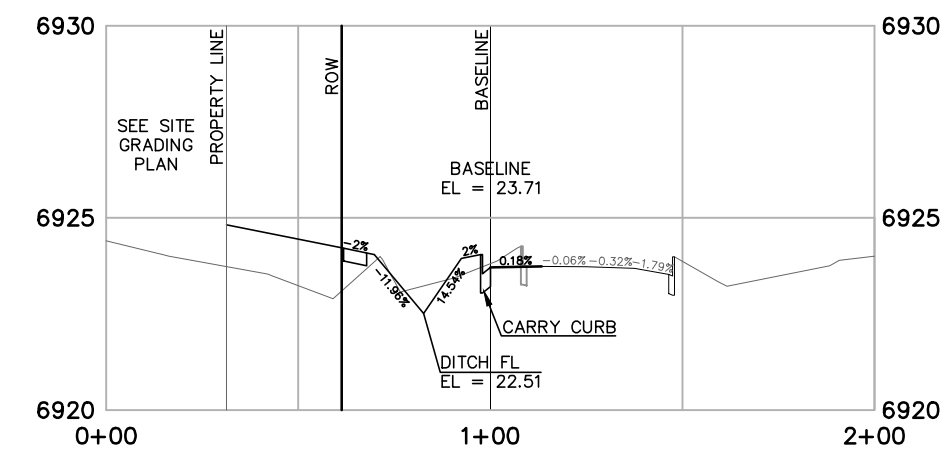
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HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'



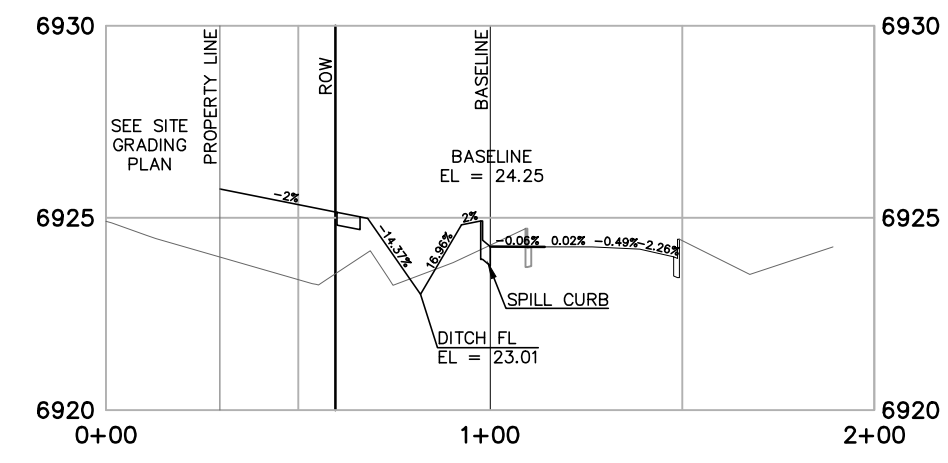
STAPLETON DRIVE
SECTION 3+50.00
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'



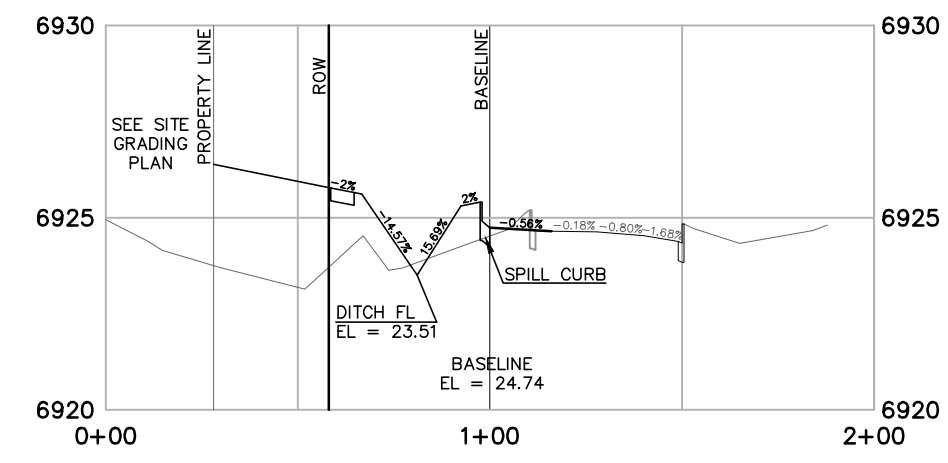
STAPLETON DRIVE
SECTION 4+00.00
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'



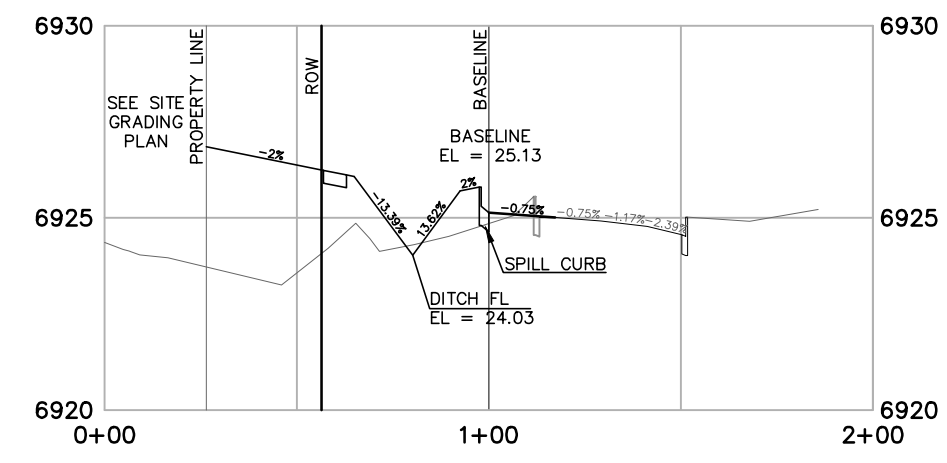
STAPLETON DRIVE
SECTION 4+50.00
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'



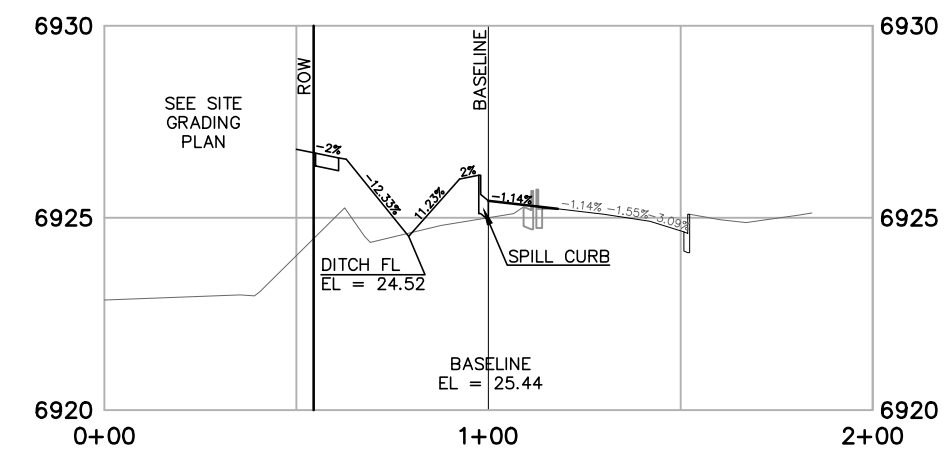
STAPLETON DRIVE
SECTION 5+00.00
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'



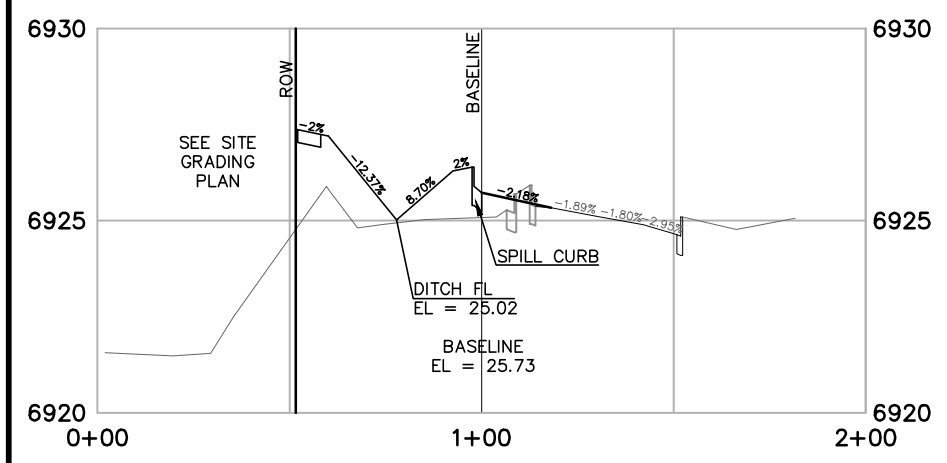
STAPLETON DRIVE
SECTION 5+50.00
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'



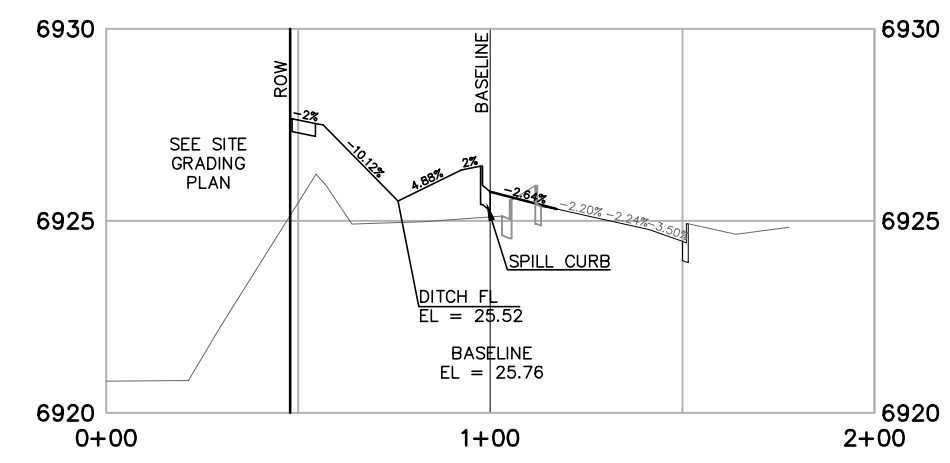
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SECTION 6+01.61
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'



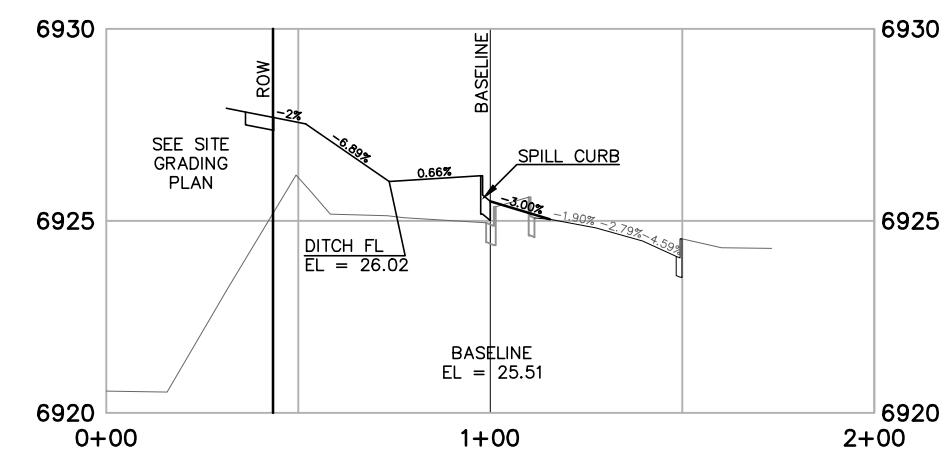
STAPLETON DRIVE
SECTION 6+50.00
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'



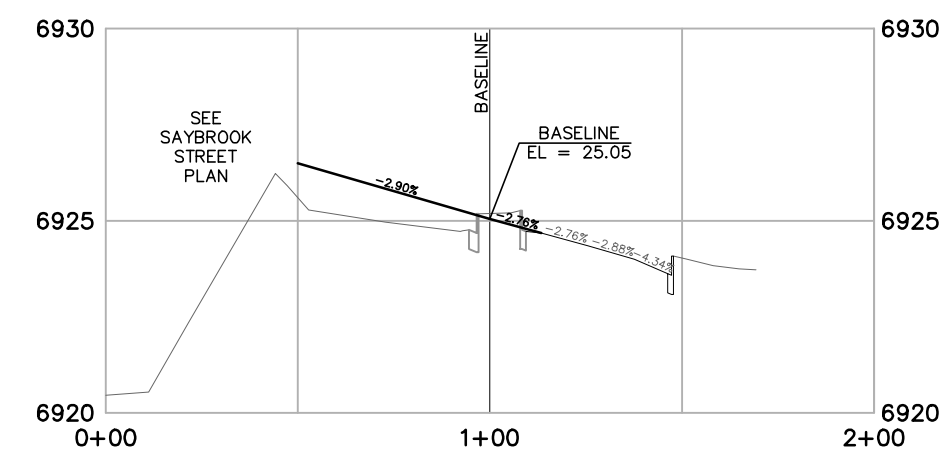
STAPLETON DRIVE
SECTION 7+00.00
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'



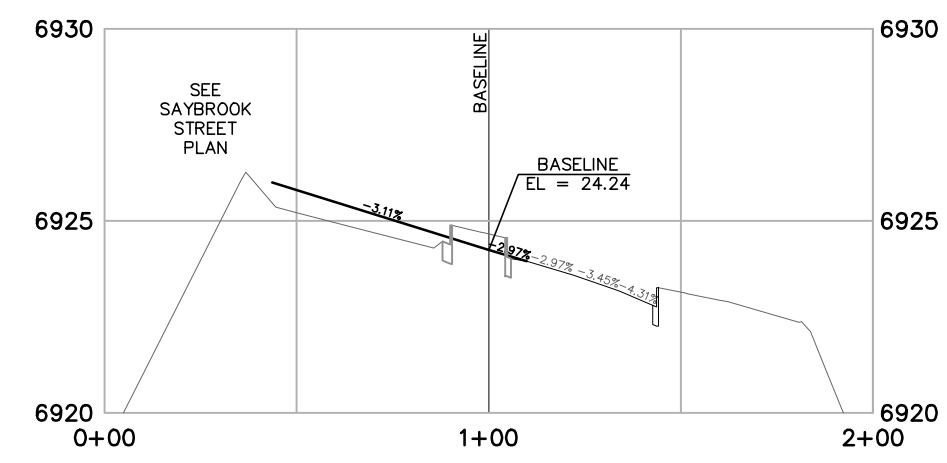
STAPLETON DRIVE
SECTION 7+50.00
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'



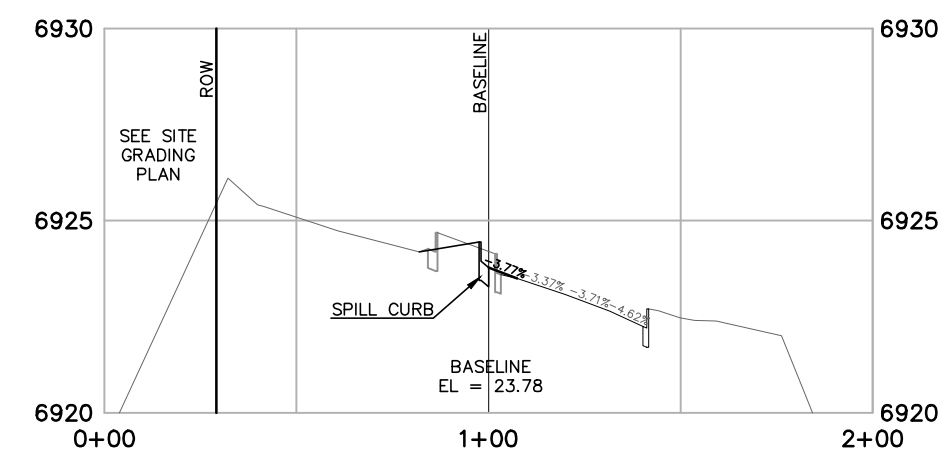
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SECTION 7+99.45
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'



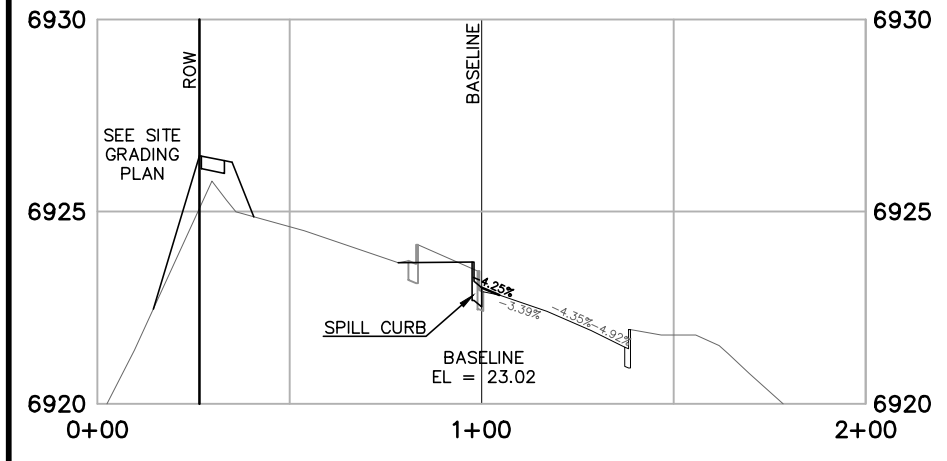
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SECTION 8+43.78
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'



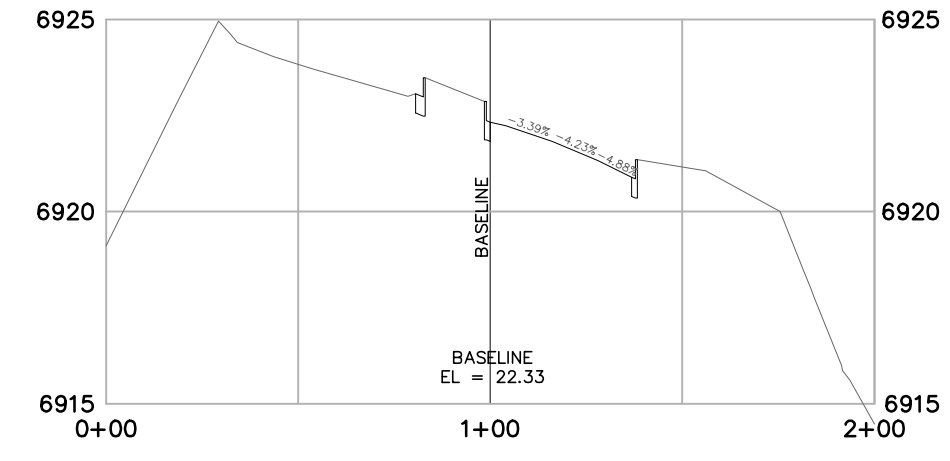
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SECTION 9+06.19
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'



STAPLETON DRIVE
SECTION 9+41.64
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'



STAPLETON DRIVE
SECTION 10+00.00
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'

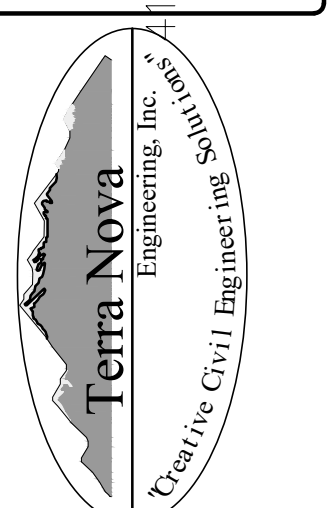


STAPLETON DRIVE
SECTION 10+53.39
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'

REVISIONS	NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE LOCAL JURISDICTIONAL AGENCIES, TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECTS AUTHORIZED BY WRITTEN AUTHORIZATION.

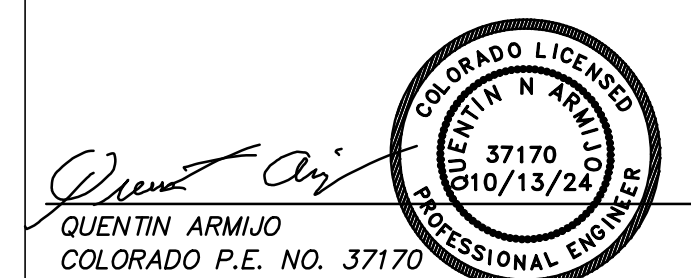
PREPARED FOR:
ACM ALF VIII JV SUB II LLC
ATTN: JASON POCK
100 E. MISSISSIPPI AVE., STE 500
DENVER, CO 80246
303-984-9800



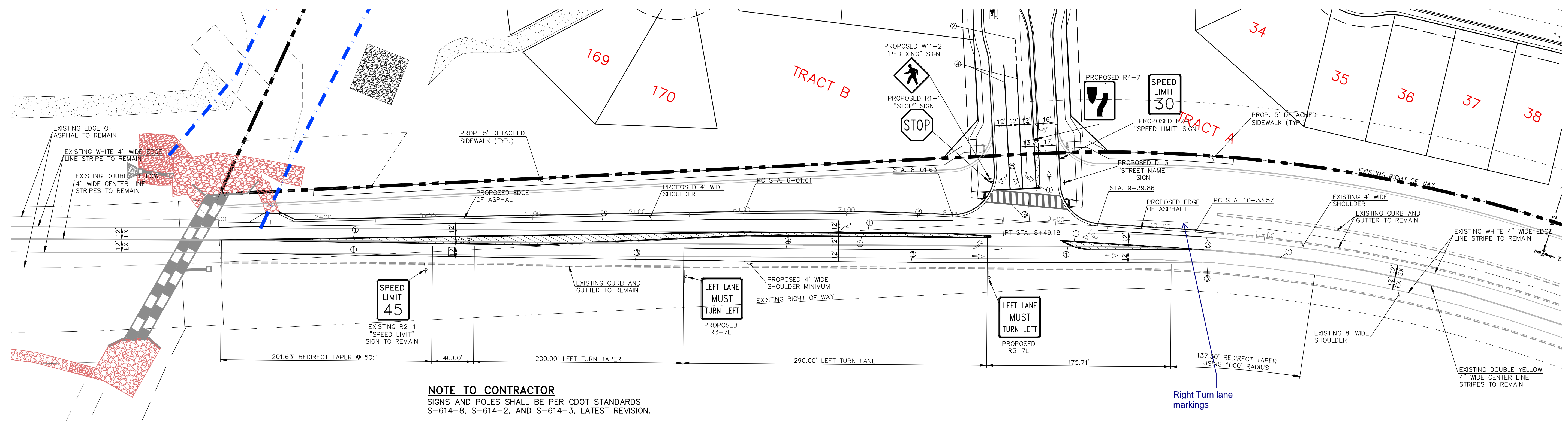
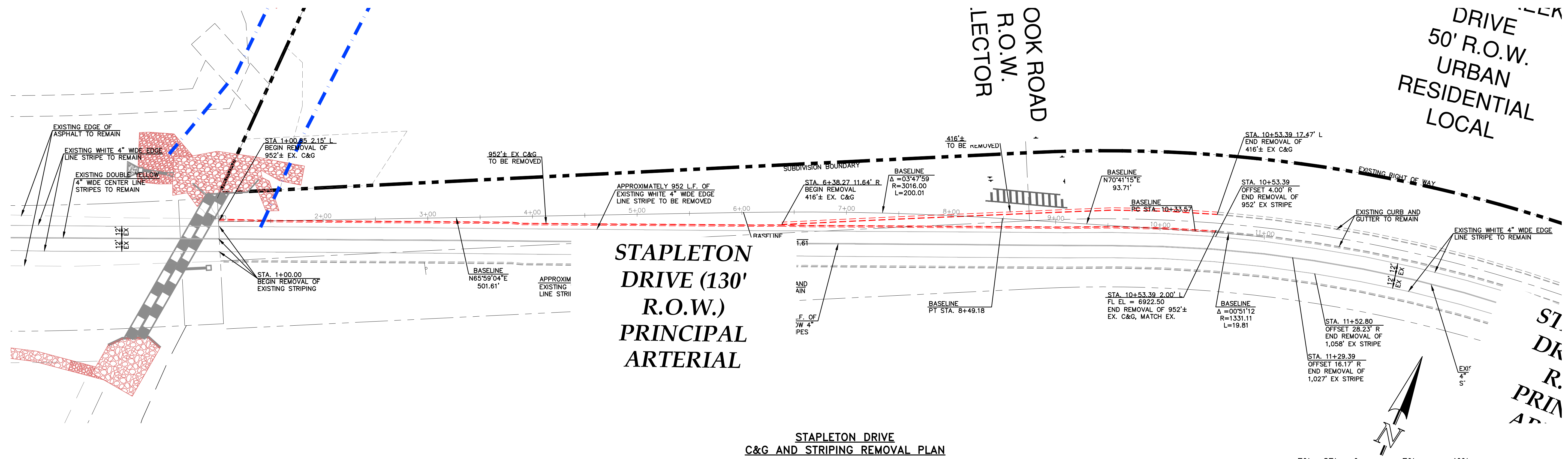
721 S. 23RD STREET
COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6422
FAX: 719-635-6426
www.tnecinc.com

WATERBURY FILING NO. 1
CONSTRUCTION SET
STAPLETON DRIVE
CROSS SECTIONS

THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.



DESIGNED BY	DLF
DRAWN BY	QNA
CHECKED BY	QNA
H-SCALE	NA
V-SCALE	N/A
JOB NO.	2356.00
DATE ISSUED	10/4/24
SHEET NO.	29 OF 52



NOTE TO CONTRACTOR
 SIGNS AND POLES SHALL BE PER CDOT STANDARDS S-614-8, S-614-2, AND S-614-3, LATEST REVISION.

ALL SIGNAGE INSTALLATION IS TO BE IN COMPLIANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL 4", 8" SOLID OR SKIP PAVEMENT MARKING ARE TO BE EPOXY.

STOP BARS ARE TO BE 90 MIL PREFORMED THERMOPLASTIC PAVEMENT MARKING TYPE B. (INLAYED)

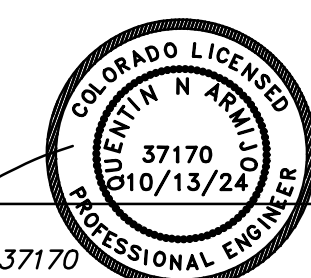
STAPLETON DRIVE SIGNING AND STRIPING PLAN

DESIGN SPEED IS 50 M.P.H.

STRIPING LEGEND		
STRIPE	PAVEMENT MARKINGS	MARKING DESCRIPTION
1	CENTER LINES (EPOXY)	DOUBLE SOLID YELLOW, 4" WIDE-SPACED 3" APART
2	LANE LINES (EPOXY)	BROKEN WHITE, 4" WIDE-10' SEGMENTS WITH 30' GAPS
3	EDGE LINES (EPOXY)	SOLID WHITE, 4" WIDE
4	CHANNELIZING LINES (EPOXY)	SOLID WHITE, 8" WIDE
5	STOP LINES (THERMO PLASTIC)	SOLID WHITE, 24" WIDE
6	CROSSWALK LINES (THERMO PLASTIC)	SOLID WHITE 24" WIDE PERPENDICULAR, SOLID WHITE 12" WHITE PARALLEL

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

THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.



QUENTIN ARMILJO
 COLORADO P.E. NO. 37170

REVISIONS	NO.	DESCRIPTION	DATE

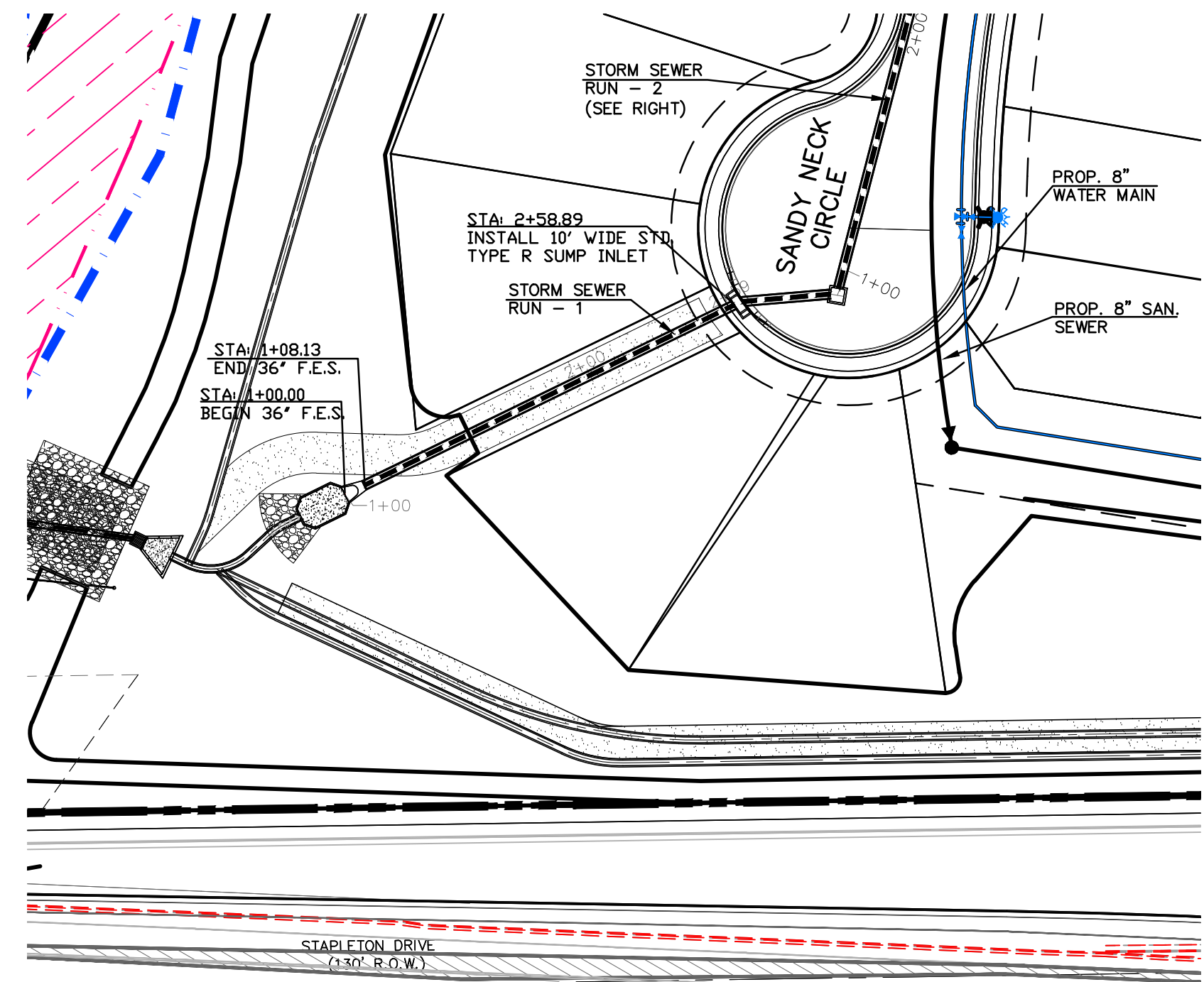
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE LOCAL AGENCIES TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECT AND FOR THE PURPOSES AUTHORIZED BY WRITTEN AUTHORIZATION.

PREPARED FOR:
 ACM ALF VIII JV SUB II LLC
 ATTN: JASON POKK
 100 E. MISSISSIPPI AVE., STE 500
 DENVER, CO 80246
 303-984-9800

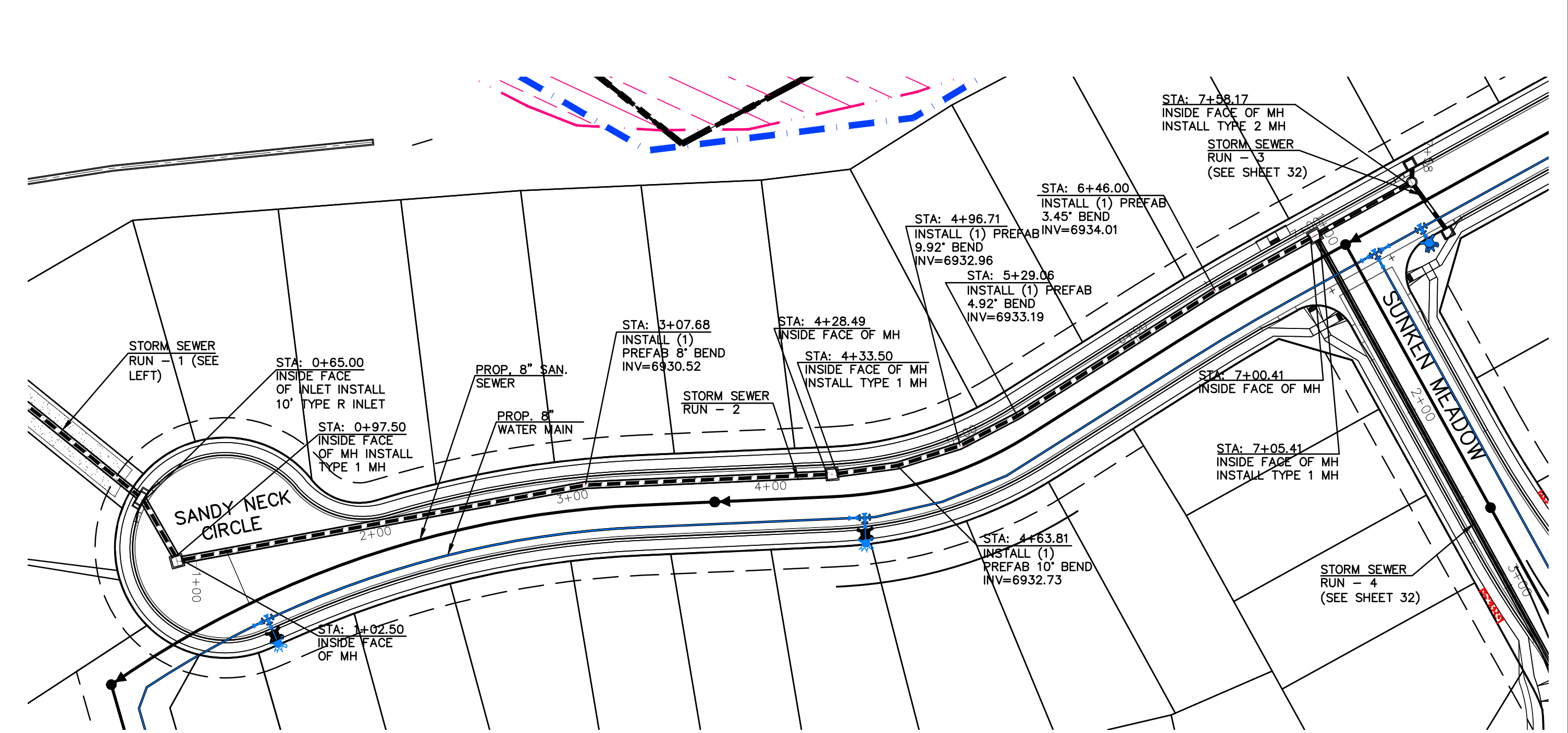
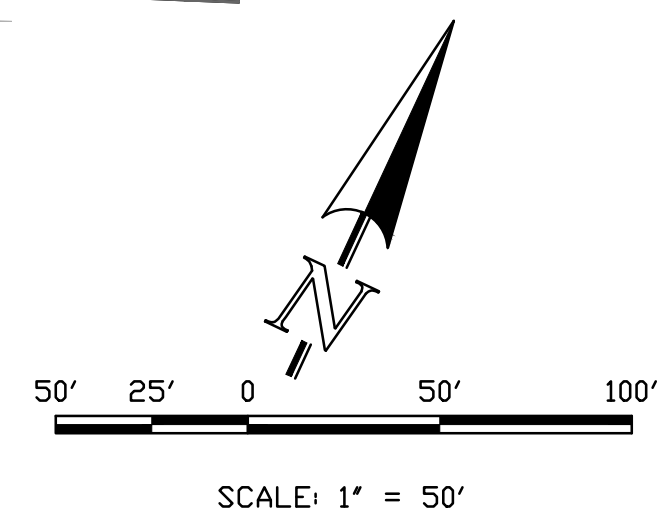
Terra Nova
 Engineering, Inc.
 721 S. 23RD STREET
 COLORADO SPRINGS, CO 80904
 OFFICE: 719-635-6422
 FAX: 719-635-6426
 www.terra-nova.com

WATERBURY FILING NO. 1
 SIGNING & STRIPING
 C&G AND STRIPING REMOVAL
 STAPLETON DRIVE

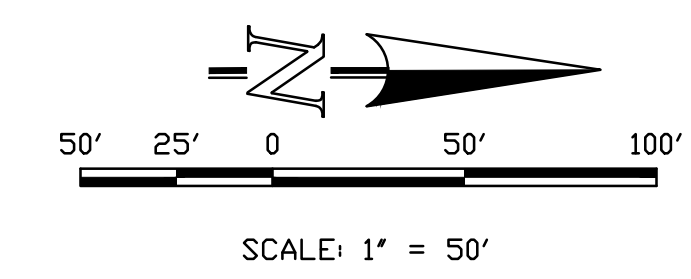
DESIGNED BY DLF
 DRAWN BY QNA
 CHECKED BY QNA
 H-SCALE NA
 V-SCALE N/A
 JOB NO. 2356.00
 DATE ISSUED 10/14/24
 SHEET NO. 30 OF 52



STORM SEWER RUN-1 (PIPE RUN 7) PHASE 1
 PROPOSED PUBLIC RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.

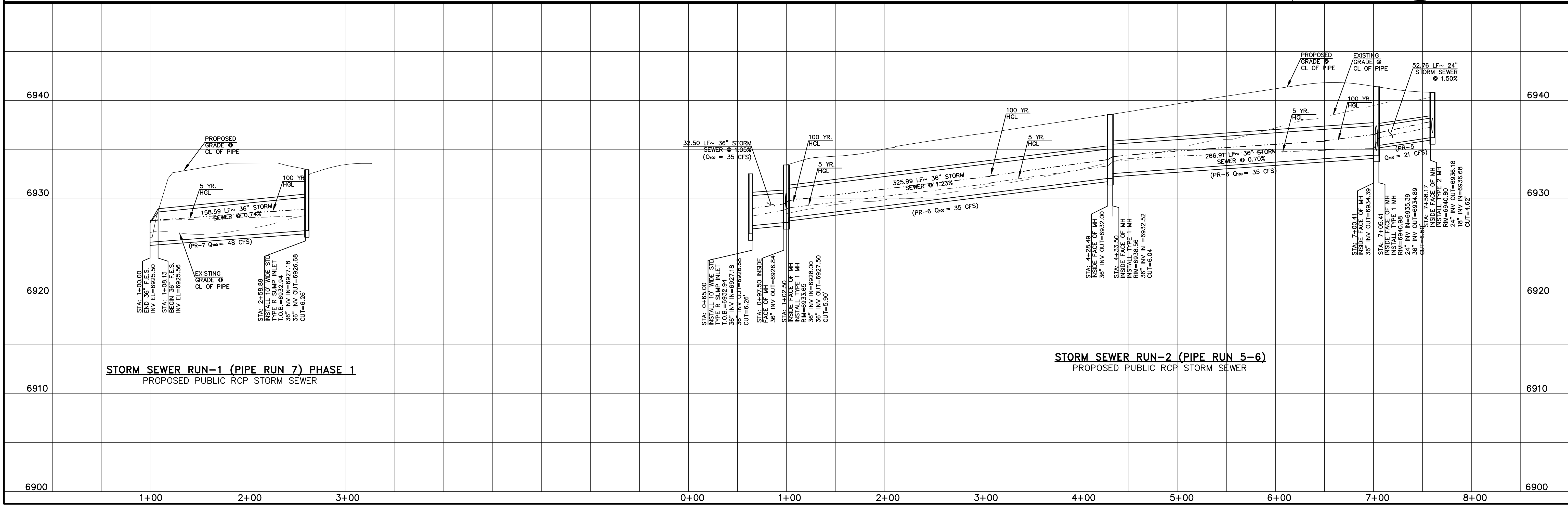


STORM SEWER RUN-2 (PIPE RUN 5-6) PHASE 1
 PROPOSED PUBLIC RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.



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 FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

Quentin N. Armijo
 QUENTIN N. ARMIJO, PROFESSIONAL ENGINEER
 COLORADO P.E. NO. 37170



STORM SEWER RUN-1 (PIPE RUN 7) PHASE 1
 PROPOSED PUBLIC RCP STORM SEWER

STORM SEWER RUN-2 (PIPE RUN 5-6)
 PROPOSED PUBLIC RCP STORM SEWER

NO.	DESCRIPTION	DATE

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PREPARED FOR:
 ACM ALF VIII JV SUB II LLC
 JASON POCK
 00 E. MISSISSIPPI AVE., STE 500
 DENVER, CO 80246
 303-984-9800

Terra Nova Engineering, Inc.
 Professional Engineer
 721 S. 2900 STREET
 COLORADO SPRINGS, CO 80904
 OFFICE: 719-635-6422
 FAX: 719-635-6426
 www.tnase.com

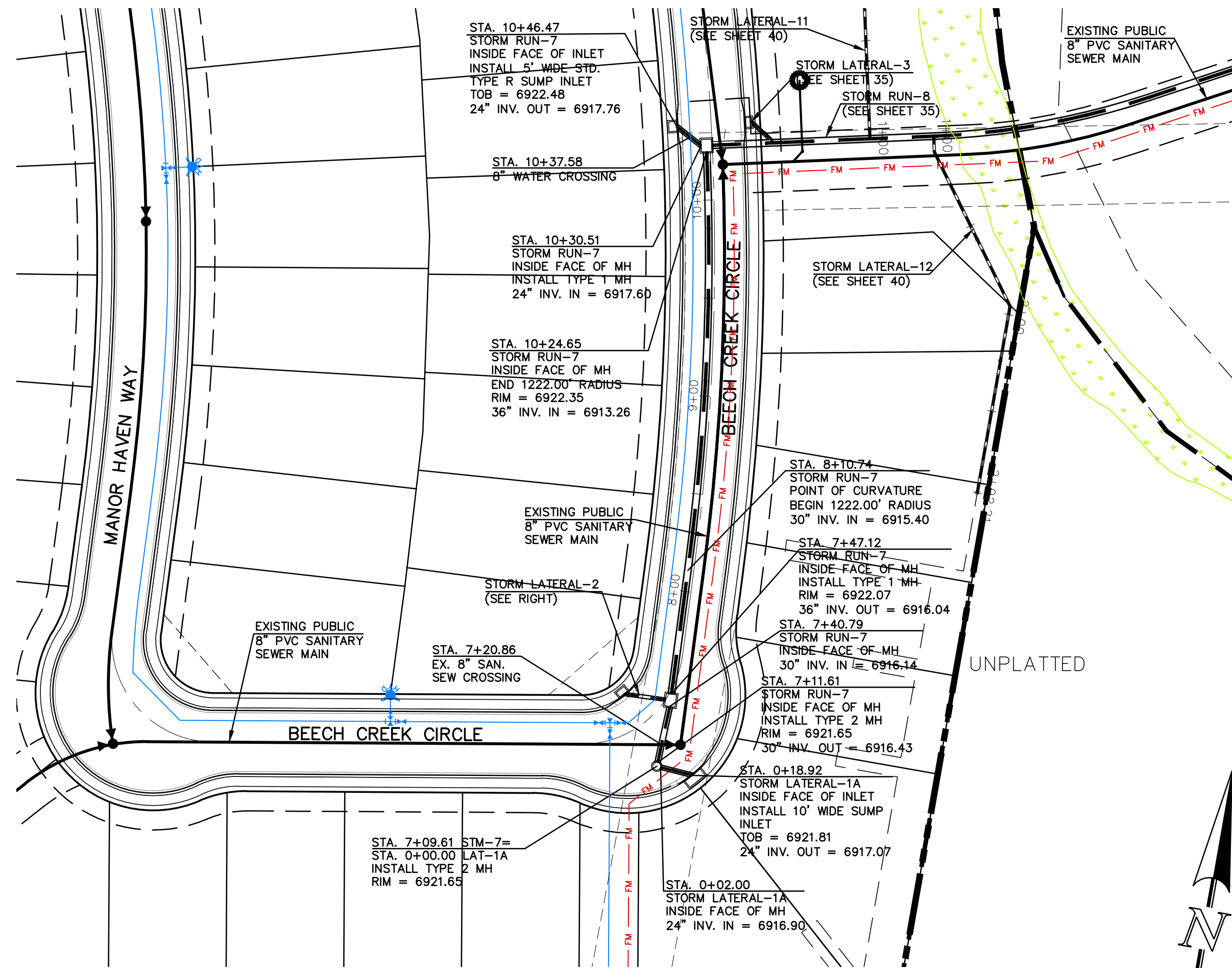
WATERBURY FILING NO. 1

CONSTRUCTION SET
 STORM SEWER PLAN AND PROFILE
 STORM RUNS 1 & 2

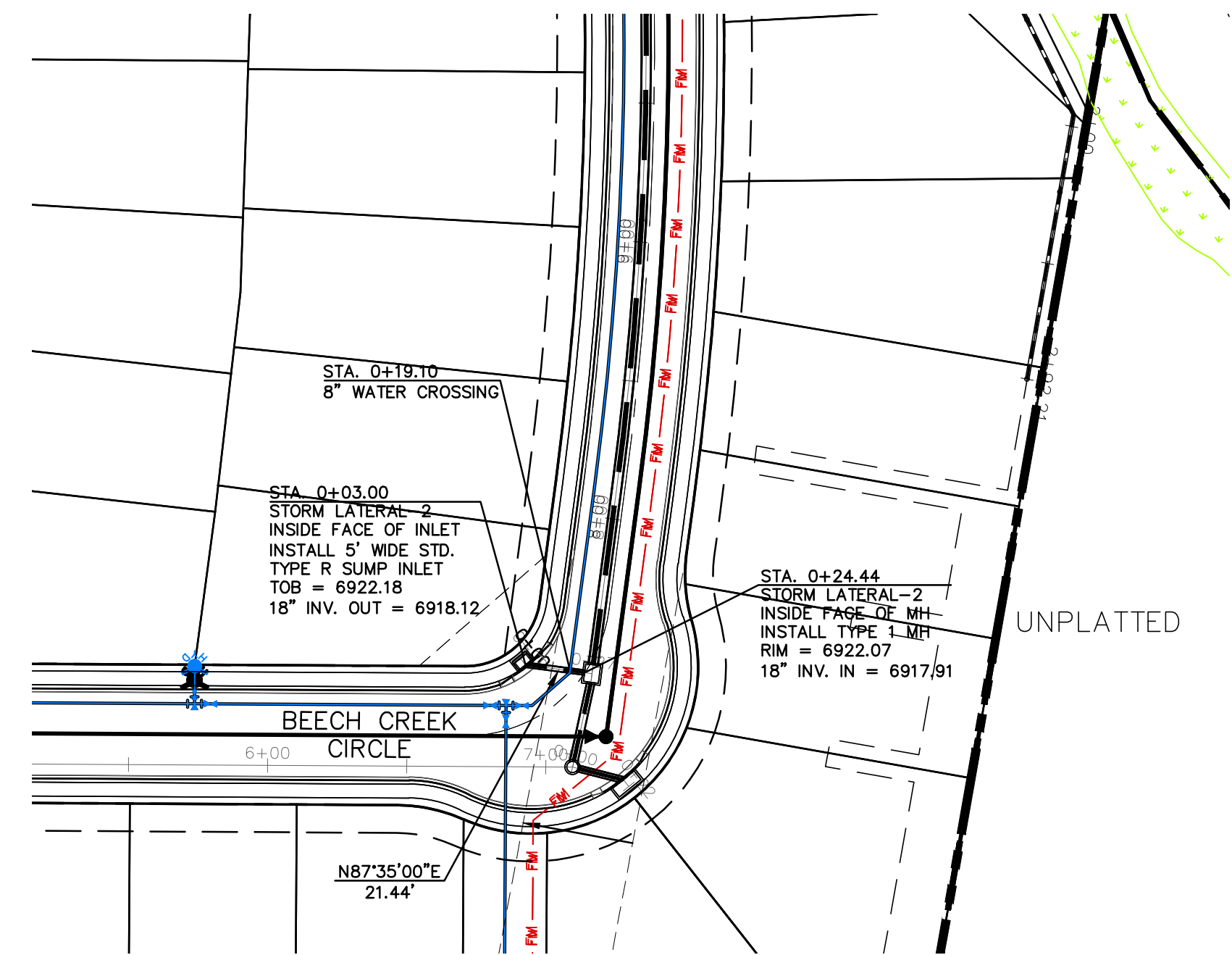
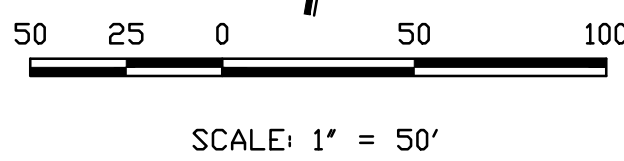
DESIGNED BY QNA
 DRAWN BY QNA
 CHECKED BY

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

JOB NO. 2356.00
 DATE ISSUED 10/4/24
 SHEET NO. 31 OF 52

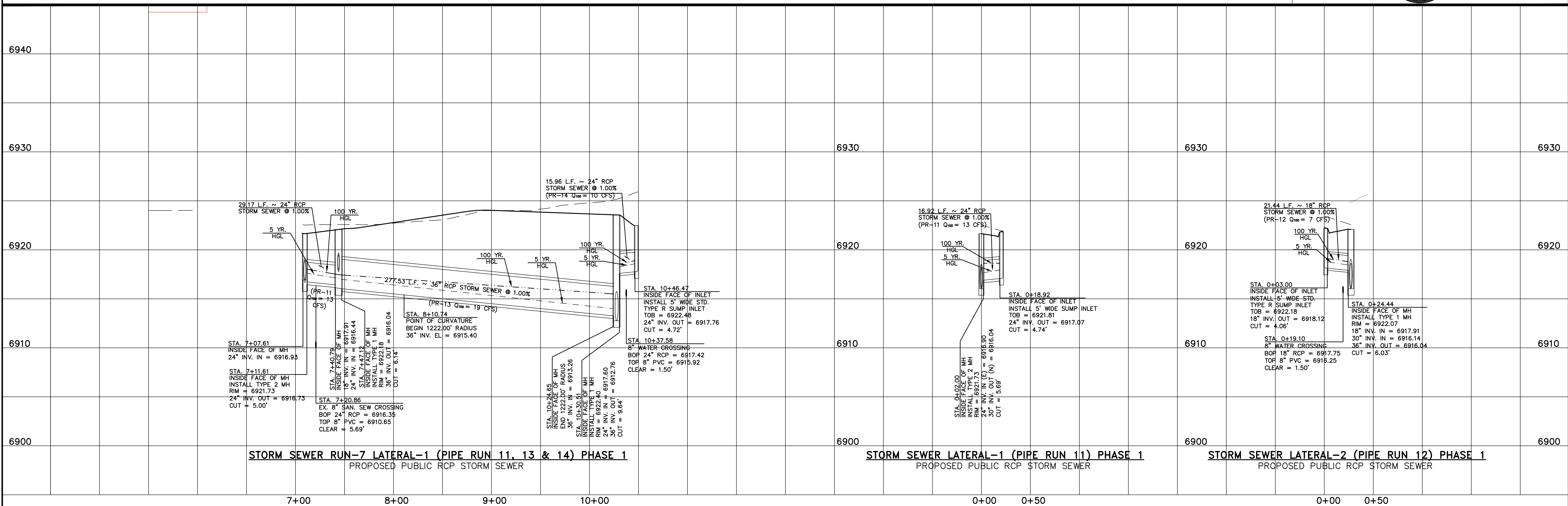


STORM SEWER RUN-7 & LATERAL-1 (PIPE RUN 11, 13 & 14) PHASE 1
 PROPOSED PUBLIC RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.



STORM SEWER LATERAL-2 (PIPE RUN 12) PHASE 1
 PROPOSED PUBLIC RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.

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STORM SEWER RUN-7 LATERAL-1 (PIPE RUN 11, 13 & 14) PHASE 1
 PROPOSED PUBLIC RCP STORM SEWER

STORM SEWER LATERAL-1 (PIPE RUN 11) PHASE 1
 PROPOSED PUBLIC RCP STORM SEWER

STORM SEWER LATERAL-2 (PIPE RUN 12) PHASE 1
 PROPOSED PUBLIC RCP STORM SEWER

NO.	DESCRIPTION	DATE

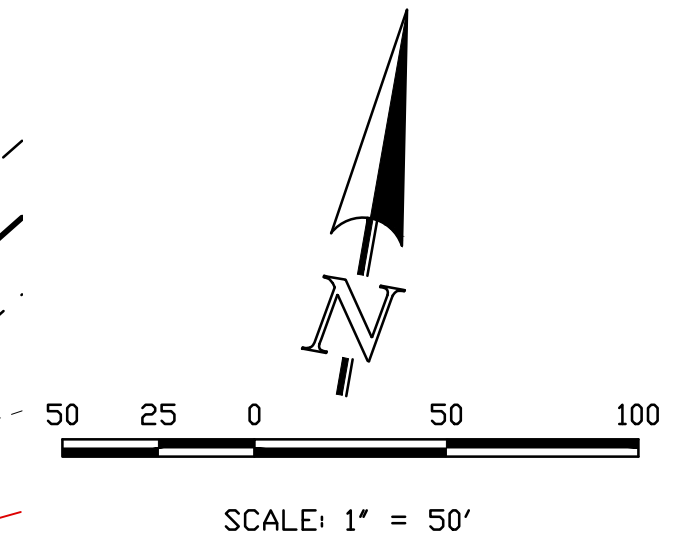
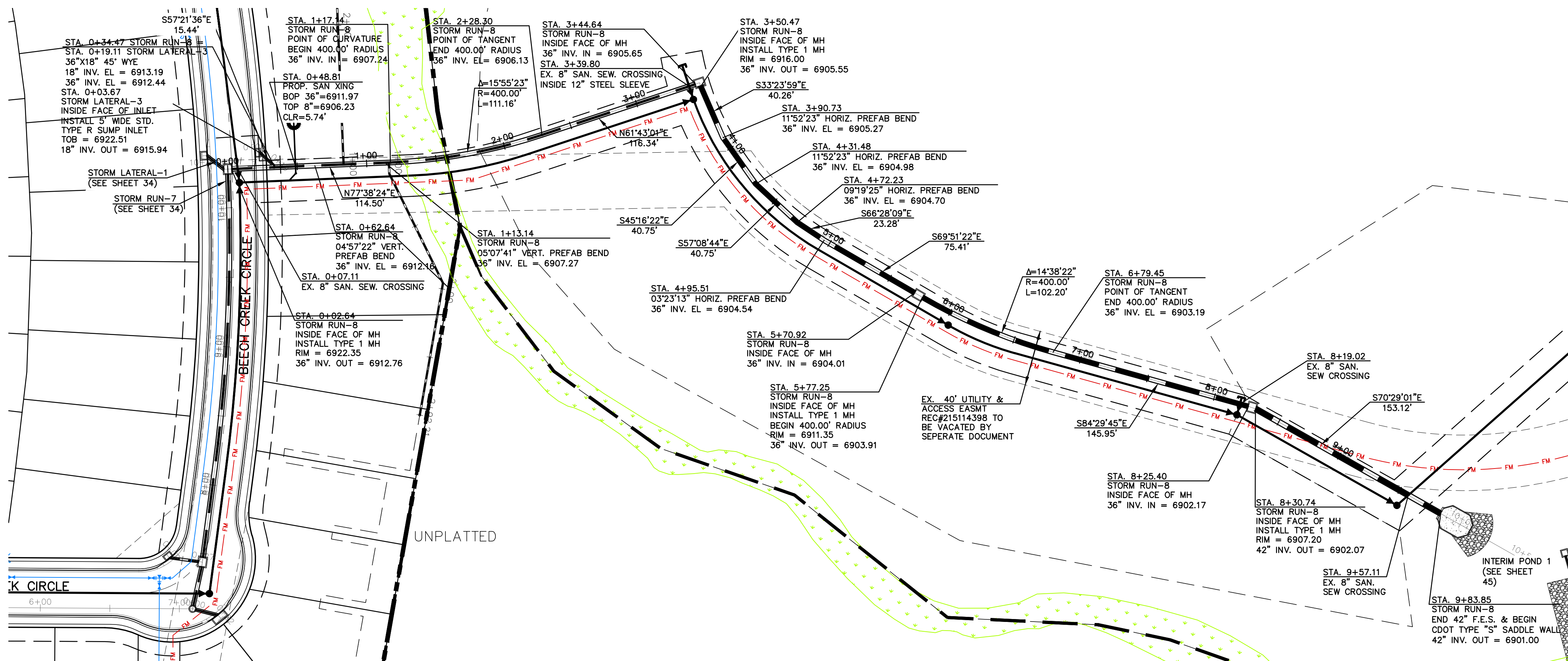
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 AND SURVEYING, INC.
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 ACM ALF VIII JV SUB II LLC
 JASON POCK
 00 E. MISSISSIPPI AVE., STE 500
 DENVER, CO 80246
 303-984-9800

721 S. 2900 STREET
 COLORADO SPRINGS, CO 80904
 OFFICE: 719-635-6422
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WATERBURY FILING NO. 1
 CONSTRUCTION SET
 STORM SEWER PLAN AND PROFILE
 STORM RUN-7 & LATERALS 1-2

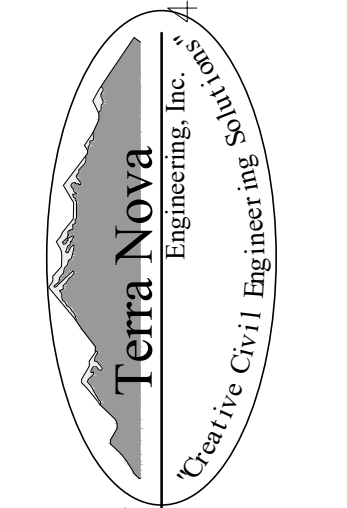
DESIGNED BY QNA
 DRAWN BY QNA
 CHECKED BY
 H-SCALE 1"=50'
 V-SCALE 1"=5'
 JOB NO. 2356.00
 DATE ISSUED 10/4/24
 SHEET NO. 34 OF 52



STORM SEWER LATERAL-3 & RUN-8 (PIPE RUN 16 & 17) PHASE 1
 PROPOSED PUBLIC RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.

THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION
 FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

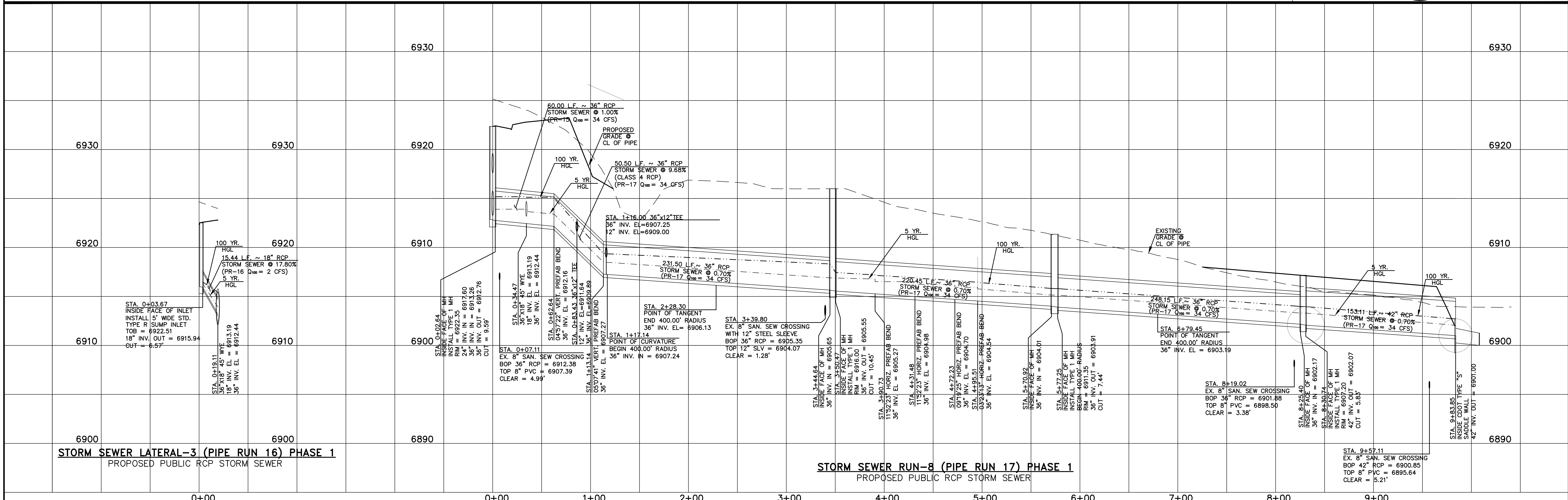
Quentin N. Armijo
 QUENTIN N. ARMIJO, PROFESSIONAL ENGINEER
 COLORADO P.E. NO. 37170



721 S. 2900 STREET
 COLORADO SPRINGS, CO 80904
 OFFICE: 719-635-6422
 FAX: 719-635-6426
 www.tnase.com

WATERBURY FILING NO. 1
 CONSTRUCTION SET
 STORM SEWER PLAN AND PROFILE
 LATERAL 3 & STORM RUN-8

DESIGNED BY QNA
 DRAWN BY QNA
 CHECKED BY
 H-SCALE 1"=50'
 V-SCALE 1"=5'
 JOB NO. 2356.00
 DATE ISSUED 10/4/24
 SHEET NO. 35 OF 52



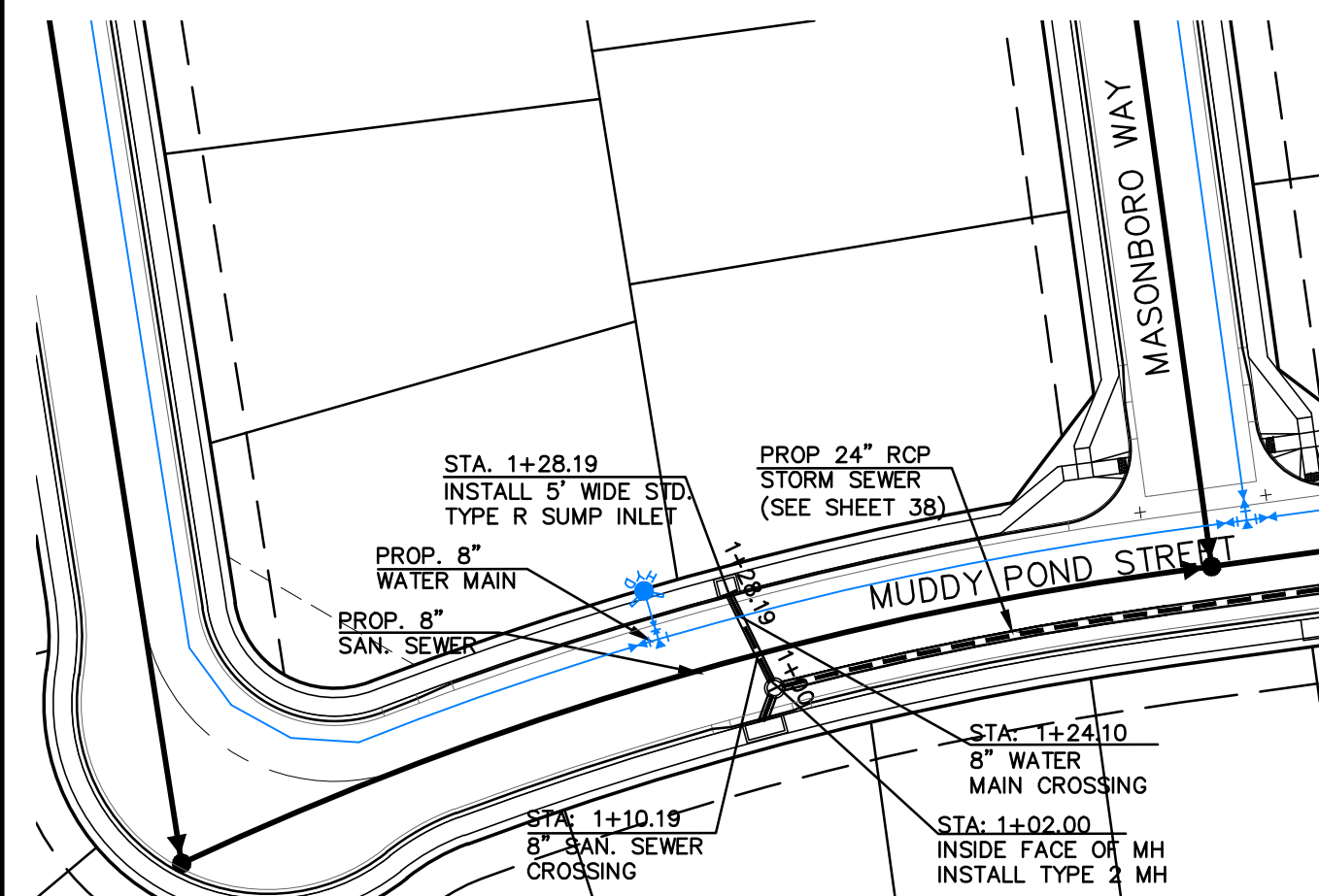
STORM SEWER LATERAL-3 (PIPE RUN 16) PHASE 1
 PROPOSED PUBLIC RCP STORM SEWER

STORM SEWER RUN-8 (PIPE RUN 17) PHASE 1
 PROPOSED PUBLIC RCP STORM SEWER

NO.	DESCRIPTION	DATE

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 DRAWINGS ARE APPROVED
 BY THE APPLICABLE
 REVIEWING AGENCIES
 TERRA NOVA ENGINEERING
 AND SURVEYING, INC.
 APPROVES THEIR USE ONLY
 AS DESIGNATED BY WRITTEN
 AUTHORIZATION.

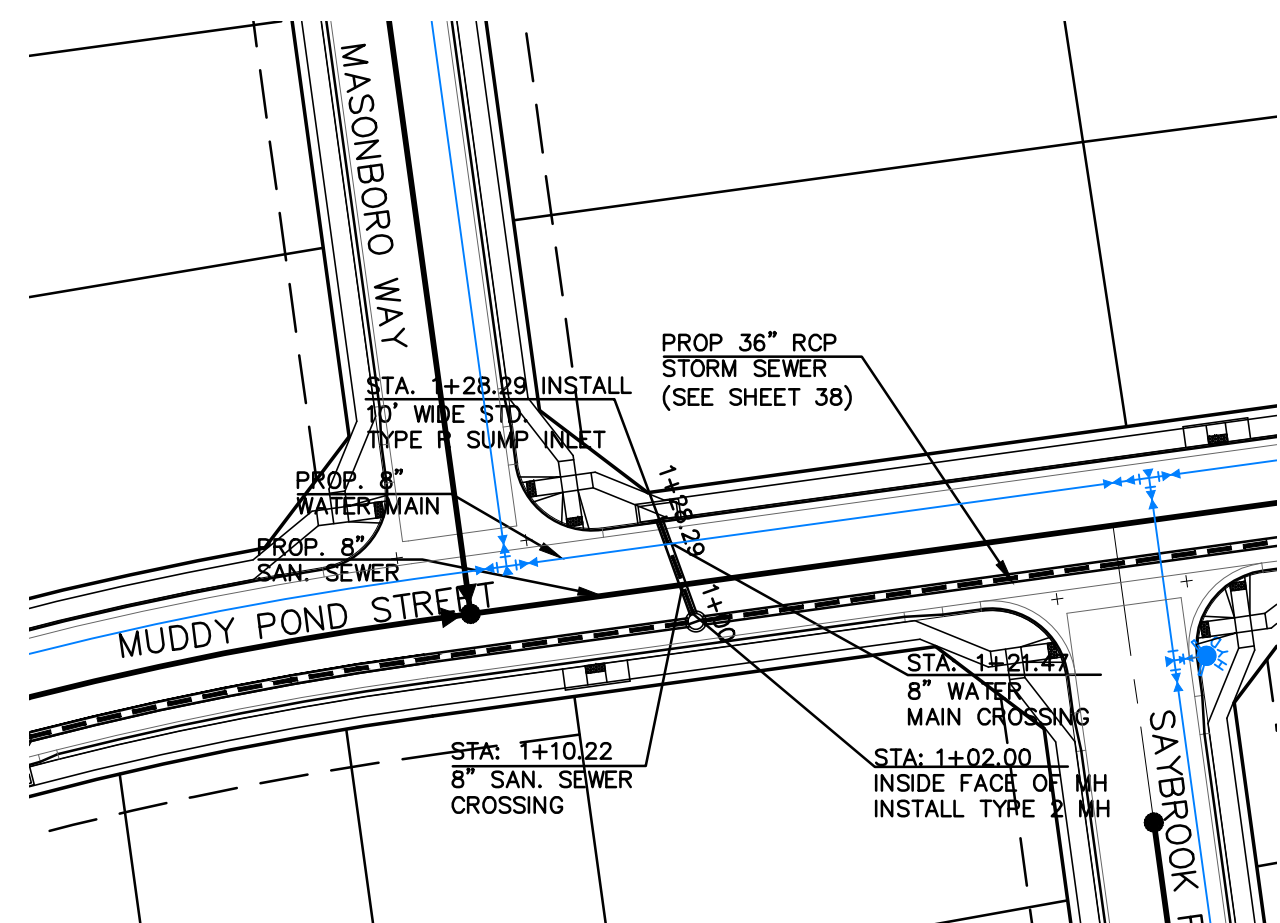
PREPARED FOR:
 ACM ALF VIII JV SUB II LLC
 JASON POKK
 00 E. MISSISSIPPI AVE., STE 500
 DENVER, CO 80246
 303-984-9800



STORM SEWER LATERAL - 4 (PIPE RUN 19) PHASE 2
PROPOSED PUBLIC RCP STORM SEWER
1" = 50' HORIZ. 1" = 5' VERT.



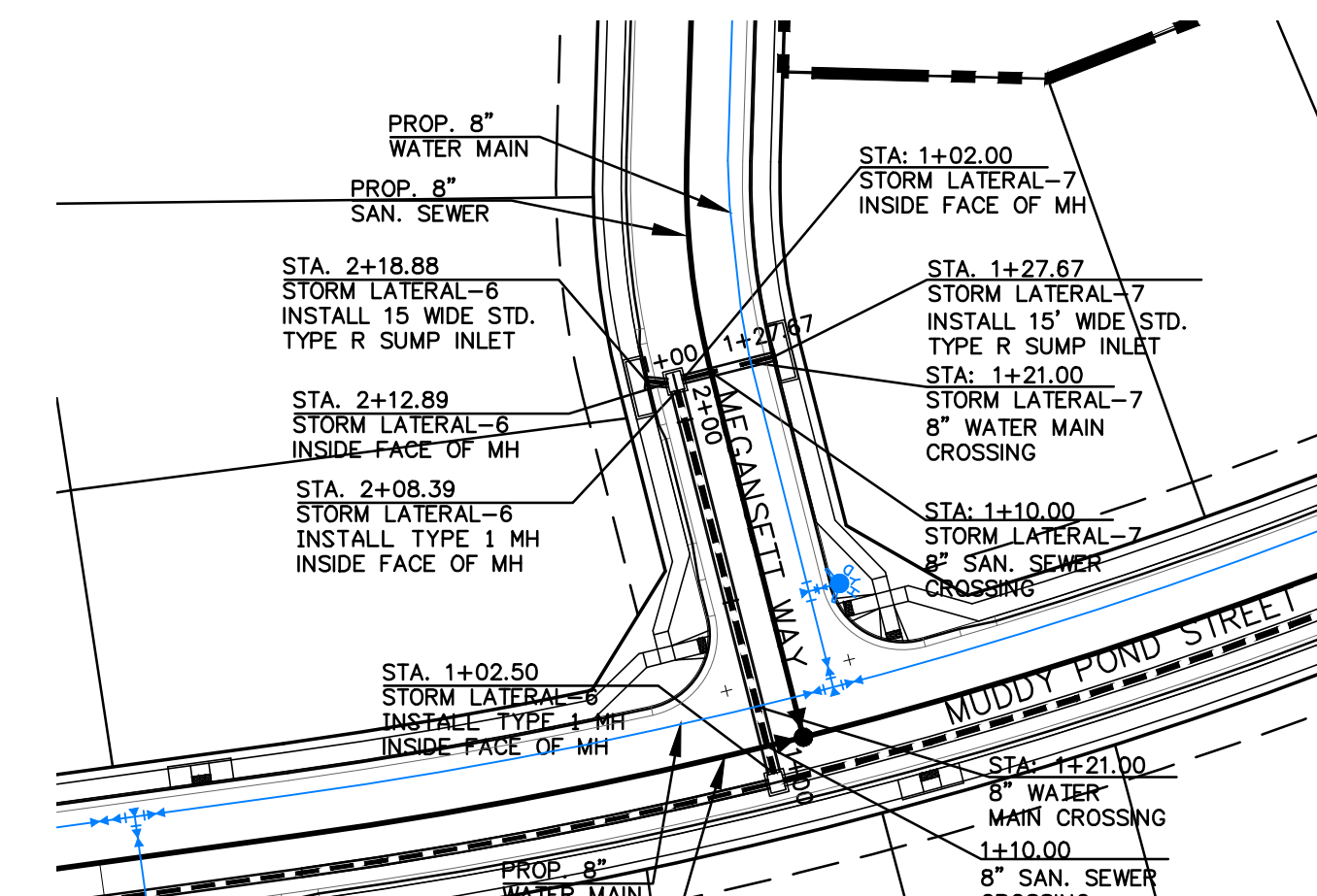
SCALE: 1" = 50'



STORM SEWER LATERAL - 5 (PIPE RUN 21) PHASE 2
PROPOSED PUBLIC RCP STORM SEWER
1" = 50' HORIZ. 1" = 5' VERT.



SCALE: 1" = 50'



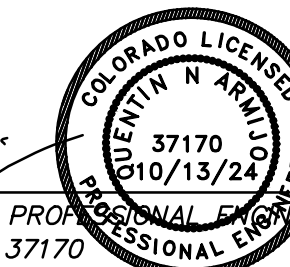
STORM SEWER LATERAL - 6 & 7 (PIPE RUN 23, 24 & 25) PHASE 2
PROPOSED PUBLIC RCP STORM SEWER
1" = 50' HORIZ. 1" = 5' VERT.



SCALE: 1" = 50'

THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

Quentin N. Armiyo
QUENTIN N. ARMIJO, PROFESSIONAL ENGINEER
COLORADO P.E. NO. 37170



REVISIONS

NO.	DESCRIPTION	DATE

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PREPARED FOR:
ACM ALF VIII JV SUB II LLC
JASON POCK
00 E. MISSISSIPPI AVE., STE 500
DENVER, CO 80246
303-984-9800

Station	Profile Description	Elevation	Profile Description	Elevation	Profile Description	Elevation	Profile Description	Elevation	Profile Description	Elevation
1+50	26.19 LF-18" STORM SEWER @ 1.00% (PR-19 Q _{max} = 5 CFS)	6930	26.19 LF-18" STORM SEWER @ 2.00% (PR-21 Q _{max} = 14 CFS)	6930	5.99 LF-24" STORM SEWER @ 1.00% (PR-23 Q _{max} = 19 CFS)	6930	25.67 LF-24" STORM SEWER @ 1.00% (PR-24 Q _{max} = 19 CFS)	6930		6930
1+00	26.19 LF-18" STORM SEWER @ 1.00% (PR-19 Q _{max} = 5 CFS)	6940	26.19 LF-18" STORM SEWER @ 2.00% (PR-21 Q _{max} = 14 CFS)	6940	5.99 LF-24" STORM SEWER @ 1.00% (PR-23 Q _{max} = 19 CFS)	6940	25.67 LF-24" STORM SEWER @ 1.00% (PR-24 Q _{max} = 19 CFS)	6940		6940
	26.19 LF-18" STORM SEWER @ 1.00% (PR-19 Q _{max} = 5 CFS)	6950	26.19 LF-18" STORM SEWER @ 2.00% (PR-21 Q _{max} = 14 CFS)	6950	5.99 LF-24" STORM SEWER @ 1.00% (PR-23 Q _{max} = 19 CFS)	6950	25.67 LF-24" STORM SEWER @ 1.00% (PR-24 Q _{max} = 19 CFS)	6950		6950
	26.19 LF-18" STORM SEWER @ 1.00% (PR-19 Q _{max} = 5 CFS)	6960	26.19 LF-18" STORM SEWER @ 2.00% (PR-21 Q _{max} = 14 CFS)	6960	5.99 LF-24" STORM SEWER @ 1.00% (PR-23 Q _{max} = 19 CFS)	6960	25.67 LF-24" STORM SEWER @ 1.00% (PR-24 Q _{max} = 19 CFS)	6960		6960

STORM SEWER LATERAL - 4 (PIPE RUN 19) PHASE 2
PROPOSED PUBLIC RCP STORM SEWER

STORM SEWER LATERAL - 5 (PIPE RUN 21) PHASE 2
PROPOSED PUBLIC RCP STORM SEWER

STORM SEWER LATERAL - 6 (PIPE RUN 23 & 25) PHASE 2
PROPOSED PUBLIC RCP STORM SEWER

STORM SEWER LATERAL - 7 (PIPE RUN 24) PHASE 2
PROPOSED PUBLIC RCP STORM SEWER

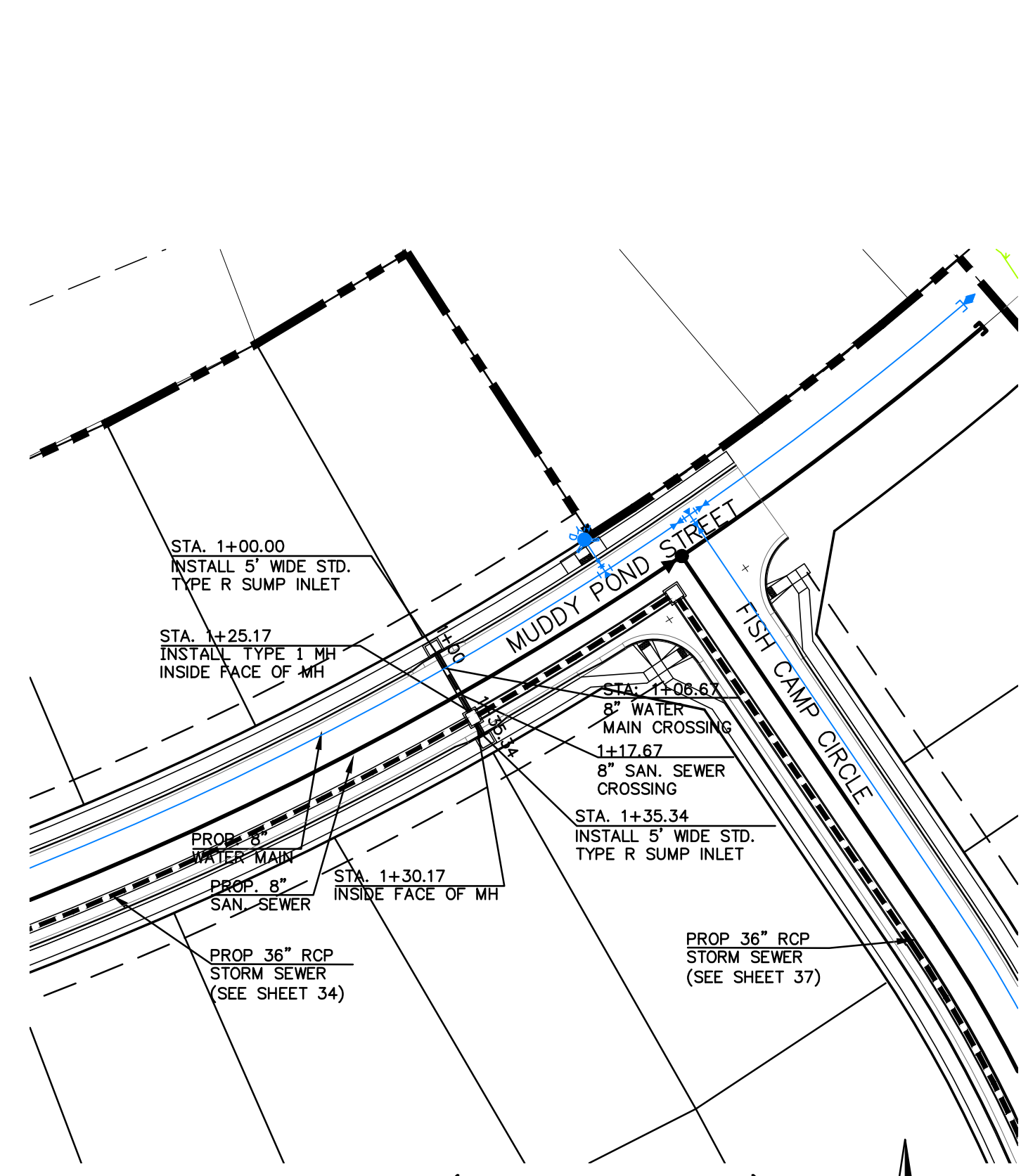
DESIGNED BY QNA
DRAWN BY QNA
CHECKED BY

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

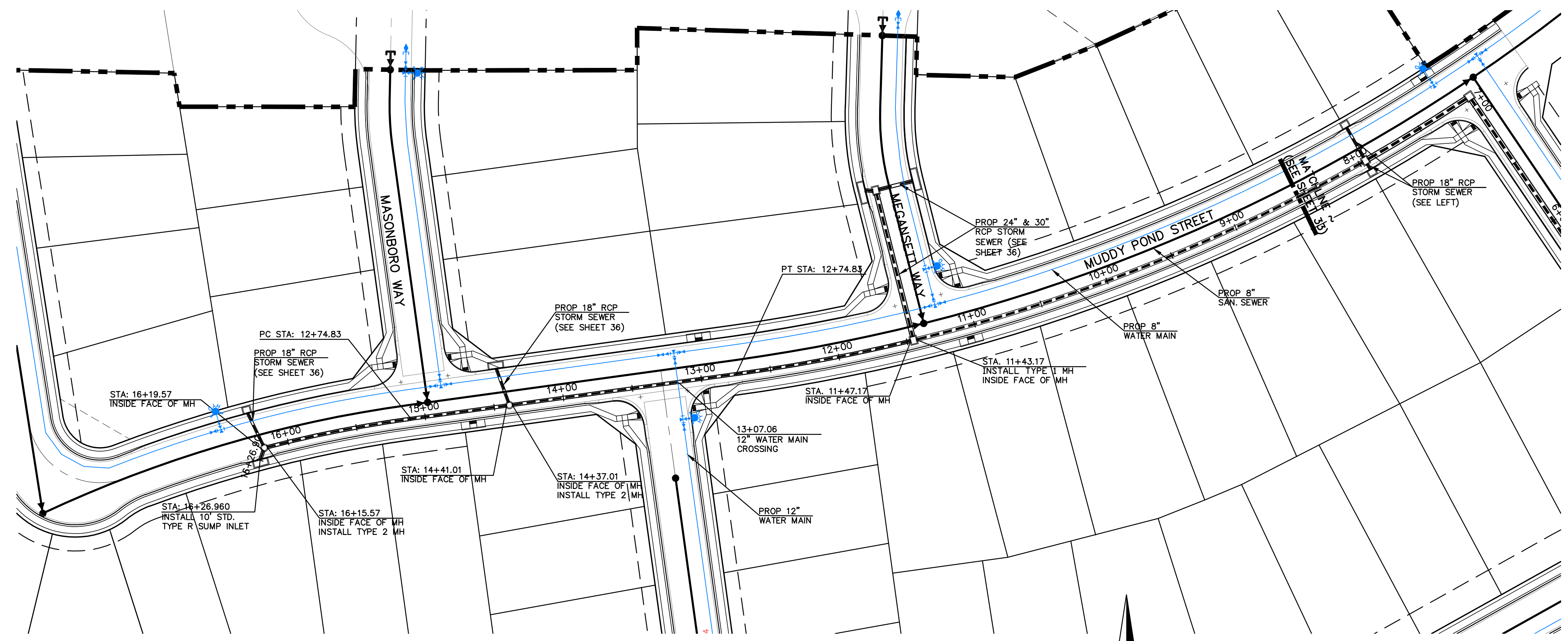
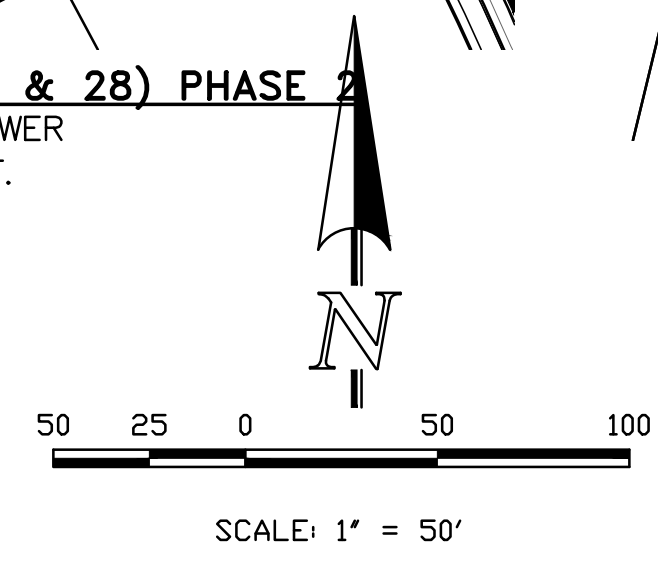
JOB NO. 2356.00
DATE ISSUED 10/4/24
SHEET NO. 36 OF 52

WATERBURY FILING NO. 1
CONSTRUCTION SET
STORM SEWER PLAN AND PROFILE
LATERALS 4-6

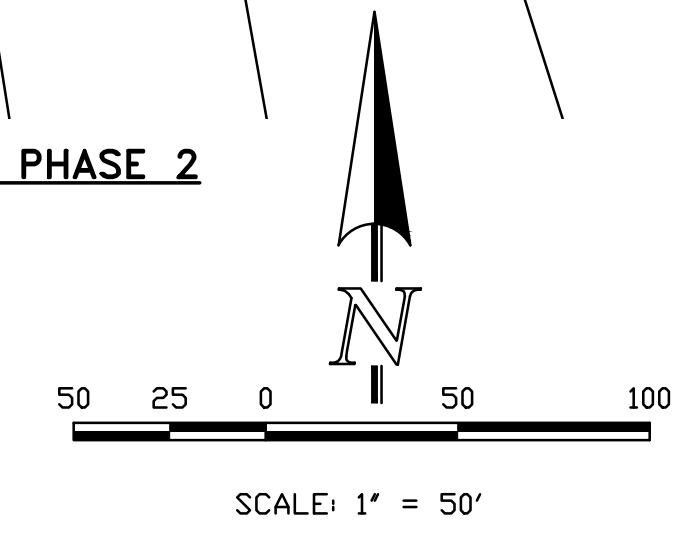
721 S. 23RD STREET
COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6422
FAX: 719-635-6426
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STORM SEWER LATERAL - 8 (PIPE RUN 27 & 28) PHASE 2
 PROPOSED PUBLIC RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.

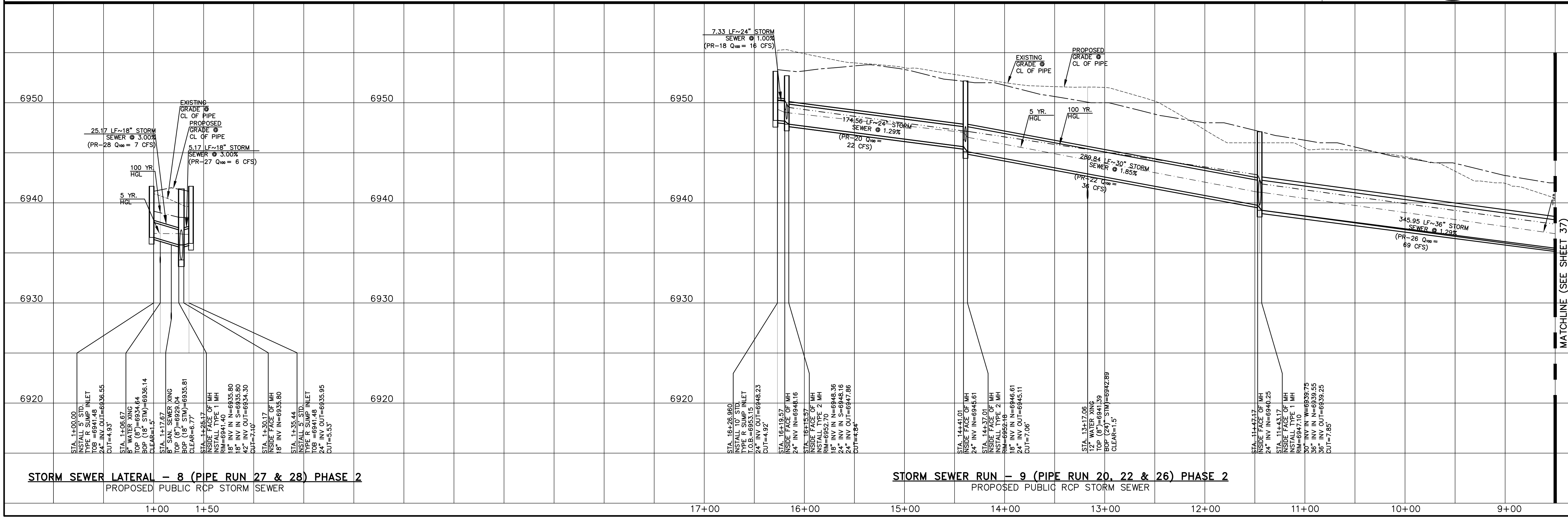


STORM SEWER RUN - 9 (PIPE RUN 20, 22 & 26) PHASE 2
 PROPOSED PUBLIC RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.



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 FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

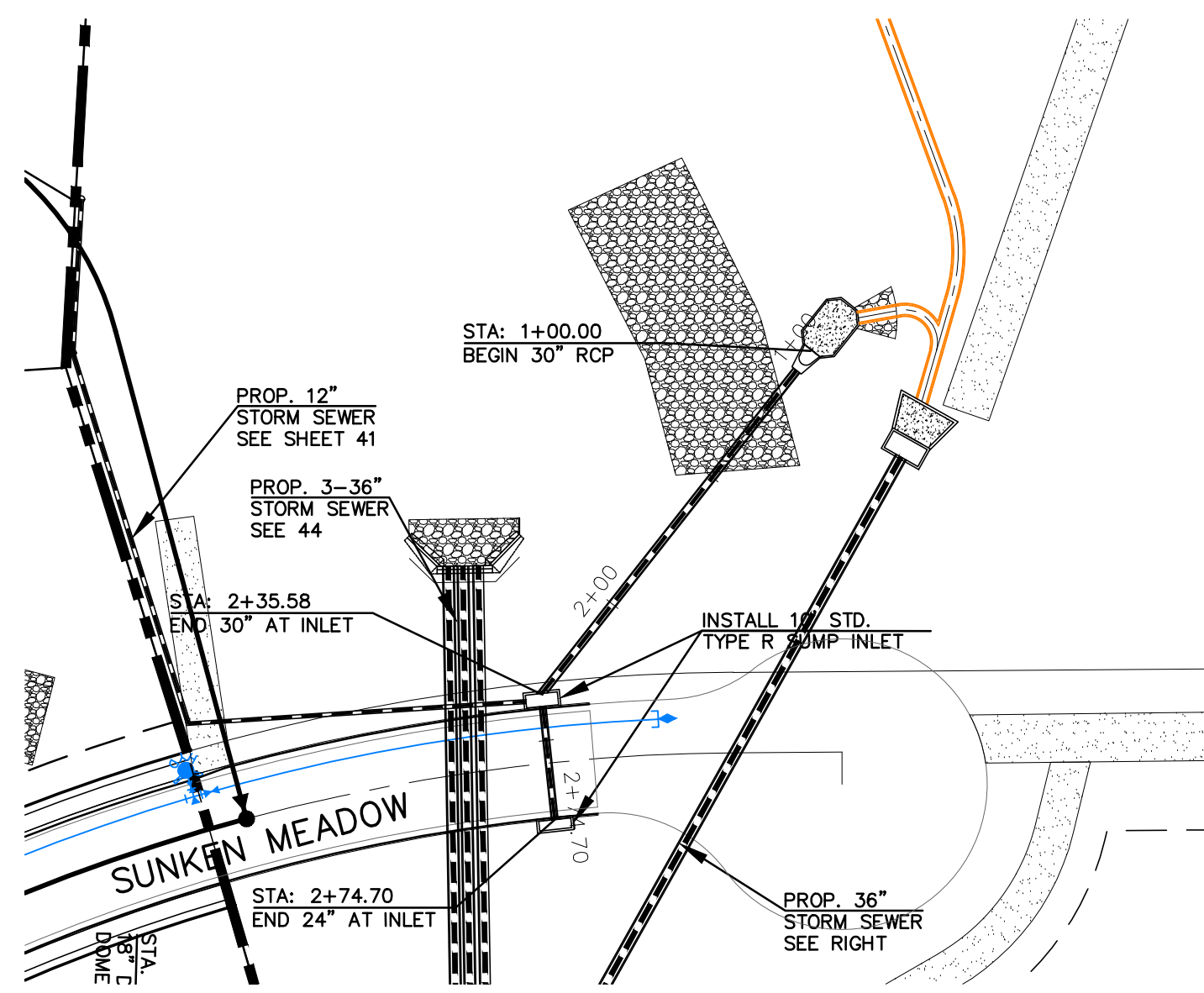
Quentin Armijo
 QUENTIN N. ARMIJO, PROFESSIONAL ENGINEER
 COLORADO P.E. NO. 37170



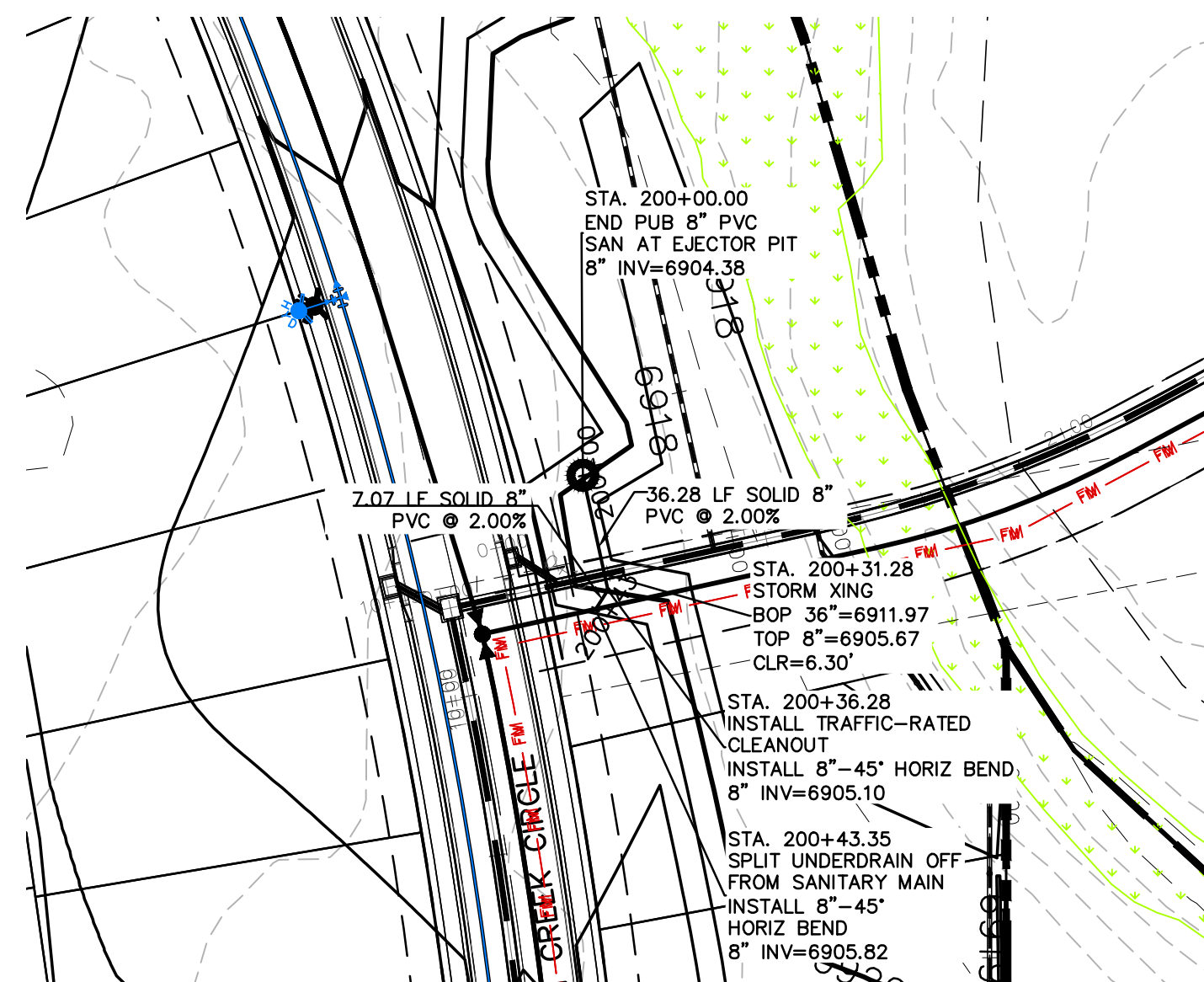
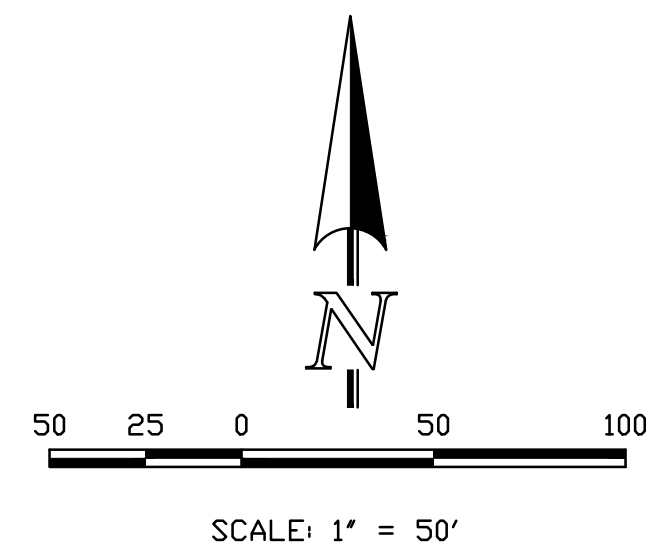
STORM SEWER LATERAL - 8 (PIPE RUN 27 & 28) PHASE 2
 PROPOSED PUBLIC RCP STORM SEWER

STORM SEWER RUN - 9 (PIPE RUN 20, 22 & 26) PHASE 2
 PROPOSED PUBLIC RCP STORM SEWER

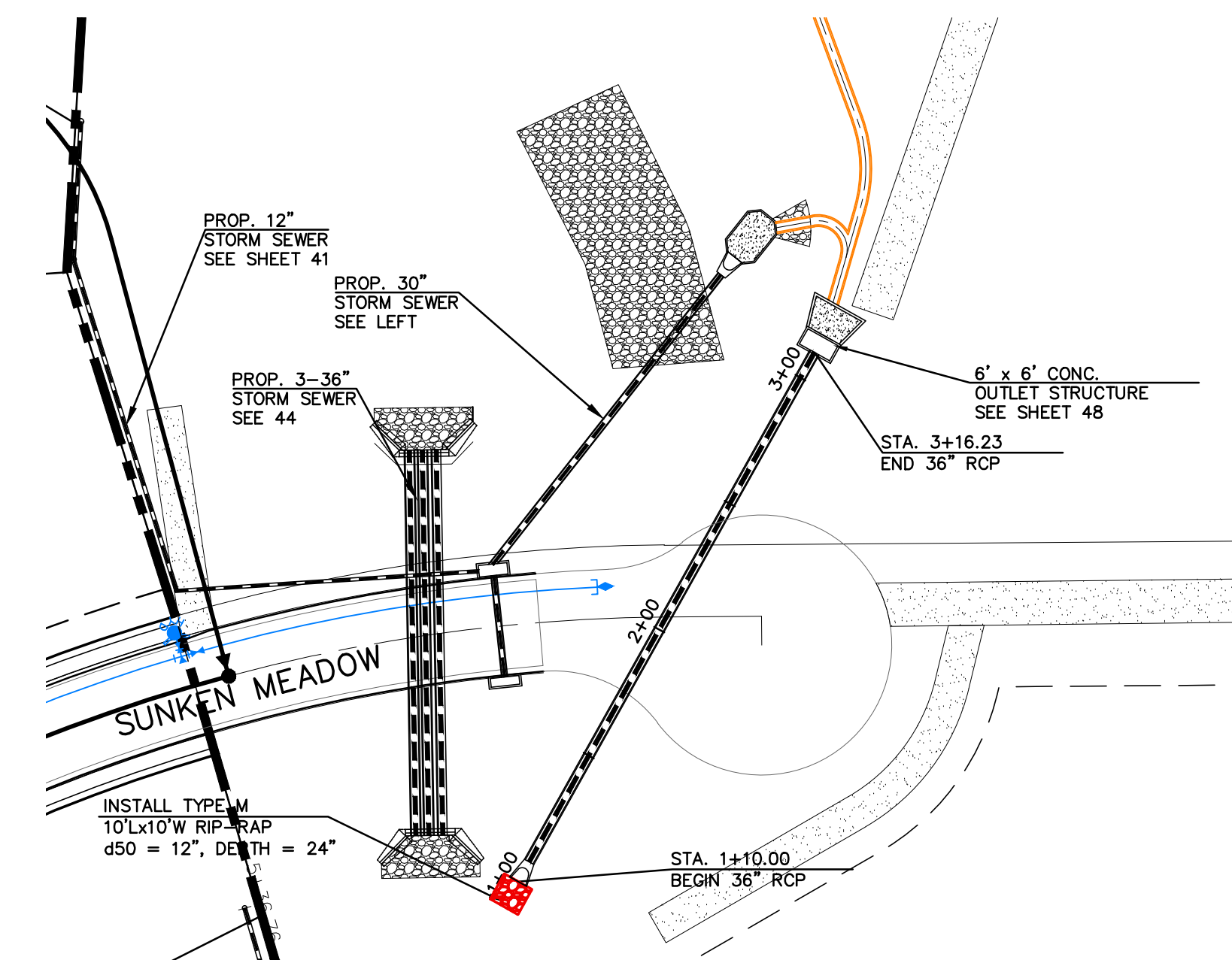
DATE	
DESCRIPTION	
REVISIONS	
NO.	
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 Terra Nova Engineering, Inc. 721 S. 2960 STREET COLORADO SPRINGS, CO 80904 OFFICE: 719-635-6422 FAX: 719-635-6426 www.tnashc.com	
WATERBURY FILING NO. 1 CONSTRUCTION SET STORM SEWER RUN 9 & LATERAL 8	
DESIGNED BY QNA DRAWN BY QNA CHECKED BY H-SCALE 1"=50' V-SCALE 1"=5' JOB NO. 2356.00 DATE ISSUED 10/4/24 SHEET NO. 38 OF 52	



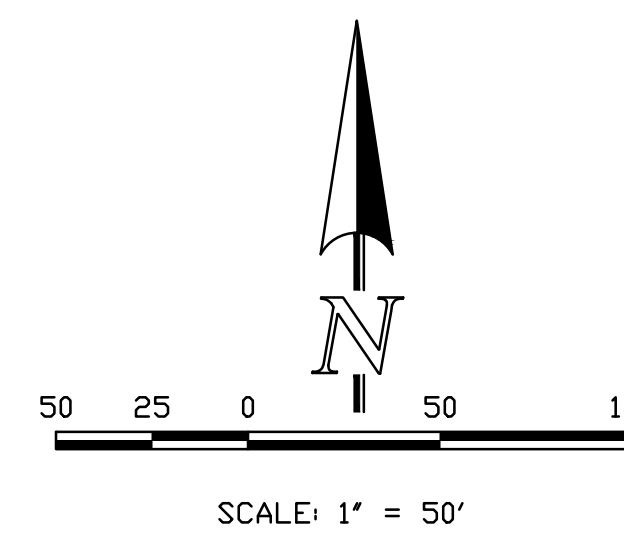
STORM SEWER LATERAL - 10 (PIPE RUN 34) PHASE 1
 PROPOSED PRIVATE RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.



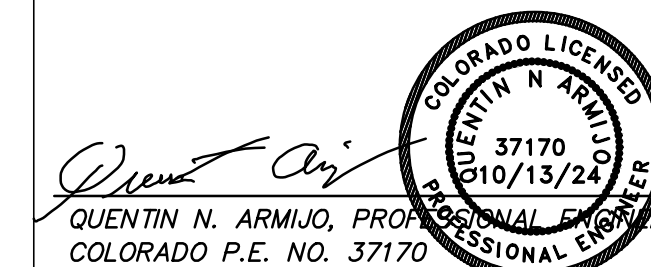
SANITARY SEWER UNDERDRAIN OUTFALL TO EJECTOR PIT - PHASE 1
 PROPOSED PUBLIC 8" PVC
 1" = 50' HORIZ. 1" = 5' VERT.



STORM SEWER RUN - 12 (PIPE RUN 35) PHASE 1
 PROPOSED PRIVATE RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.



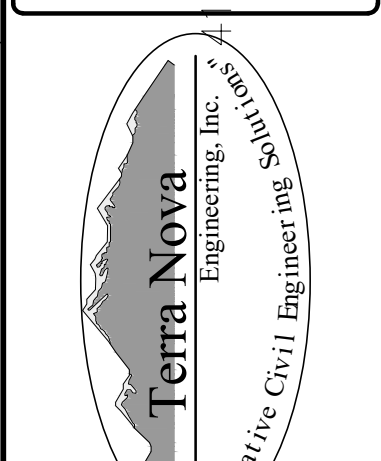
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 FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.



REVISIONS	NO.	DESCRIPTION	DATE

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PREPARED FOR:
 ACM ALF VIII JV SUB II LLC
 JASON POCK
 00 E. MISSISSIPPI AVE., STE 500
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 303-984-9800

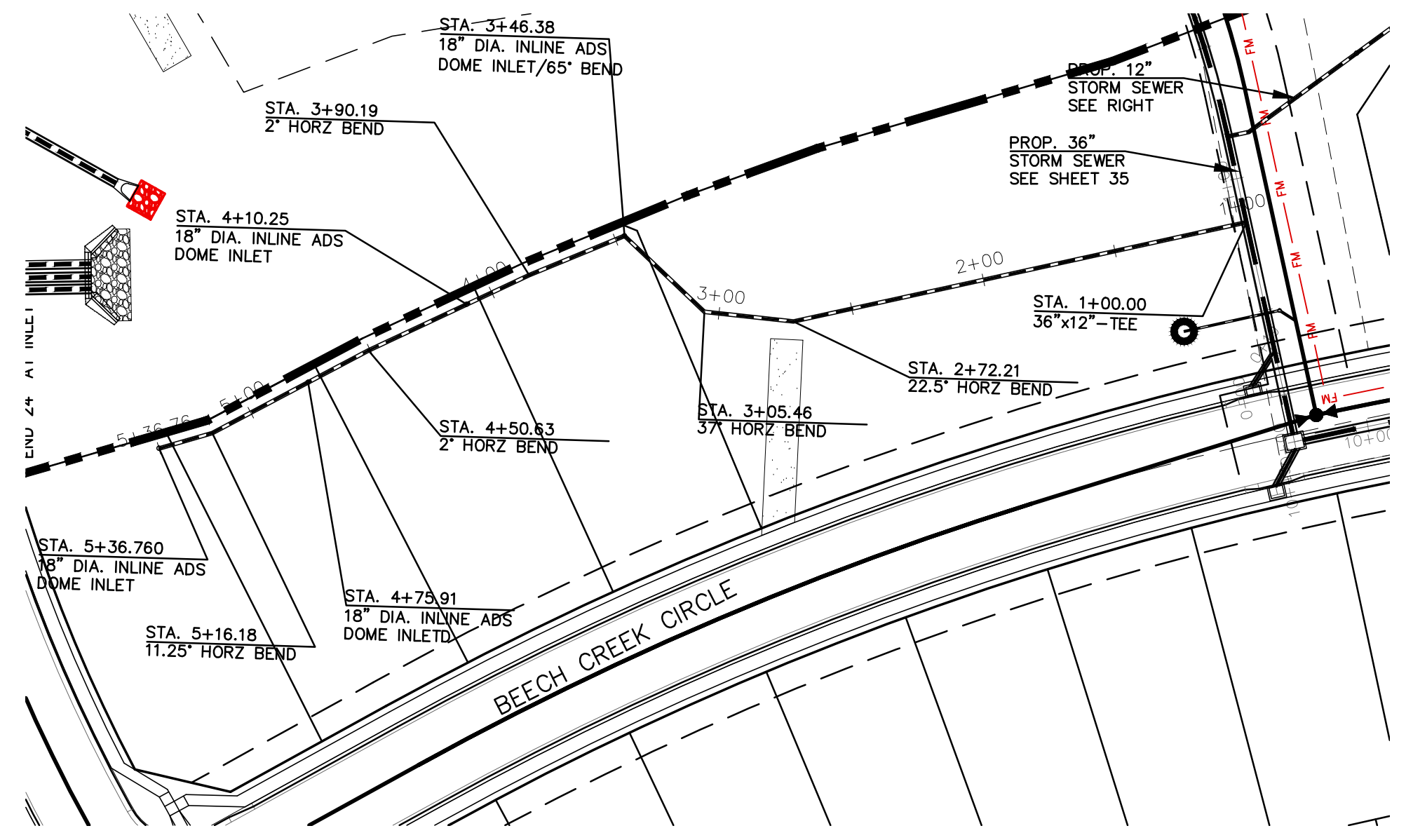


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 OFFICE: 719-635-6422
 FAX: 719-635-6426
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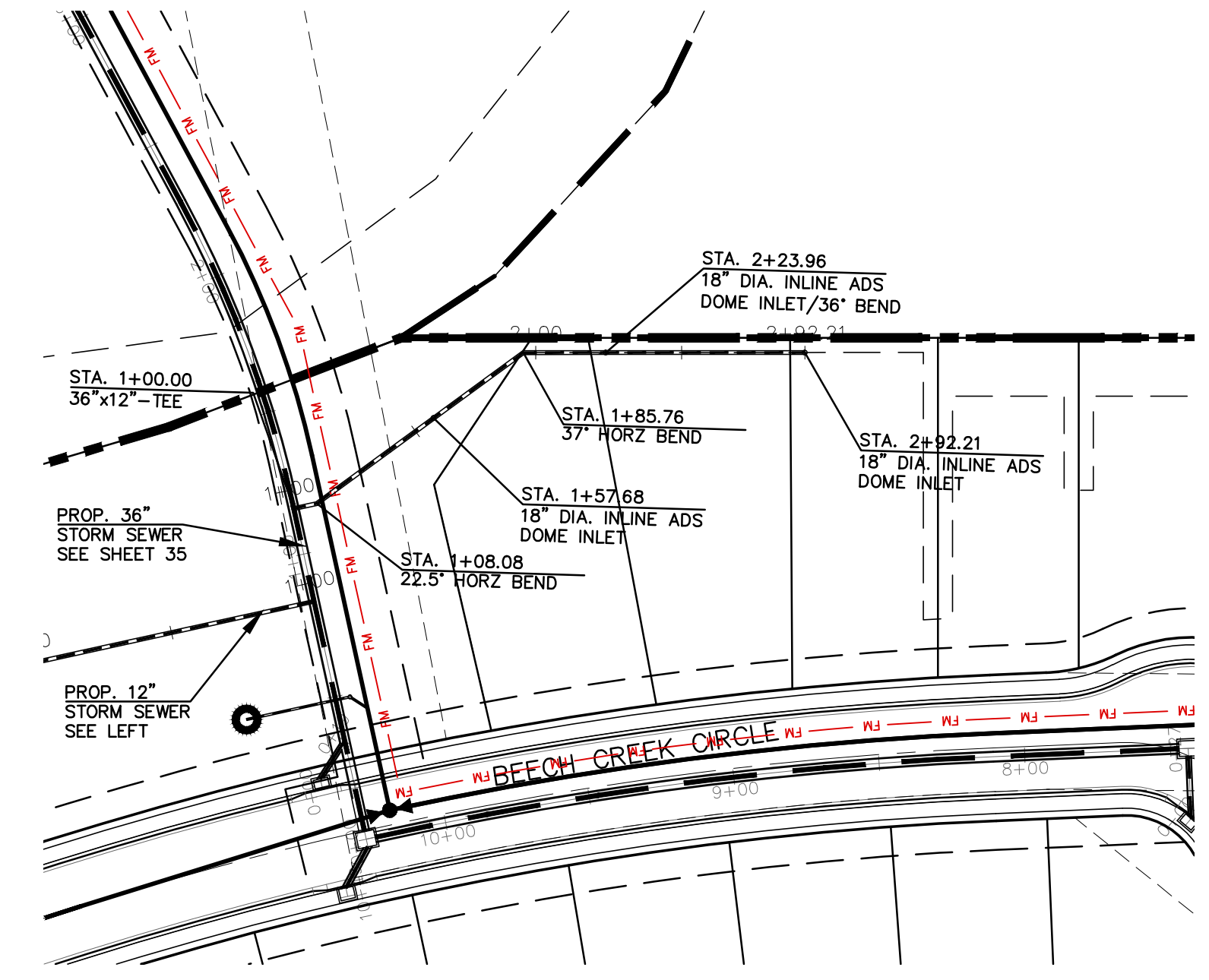
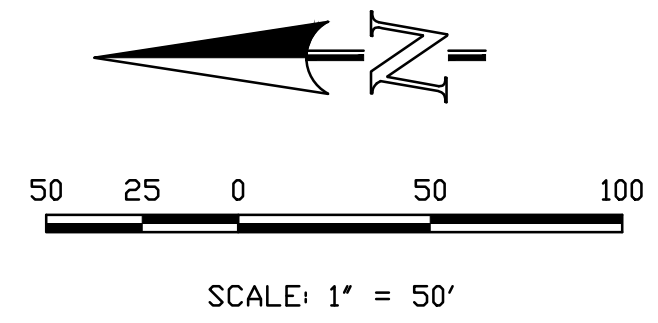
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6910	6910	6900	6900	6910	6910
6900	6900	6900	6900	6900	6900
3+00	2+00	1+00	200+50	200+00	1+00
<p>STORM SEWER RUN - 10 (PIPE RUN 34) PHASE 1 PROPOSED PUBLIC RCP STORM SEWER</p>	<p>SANITARY SEWER UNDERDRAIN OUTFALL TO EJECTOR PIT - PHASE 1 PROPOSED PUBLIC 8" PVC</p>	<p>STORM SEWER RUN - 12 (PIPE RUN 35) PHASE 1 PROPOSED PRIVATE RCP STORM SEWER</p>			

DESIGNED BY QNA
 DRAWN BY QNA
 CHECKED BY
 H-SCALE 1"=50'
 V-SCALE 1"=5'
 JOB NO. 2356.00
 DATE ISSUED 10/4/24
 SHEET NO. 39 OF 52

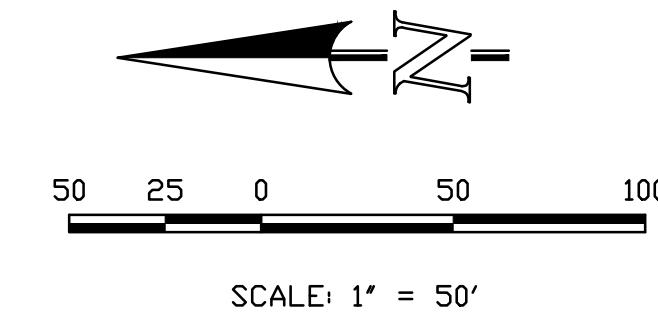
WATERBURY FILING NO. 1
 CONSTRUCTION SET
 STORM SEWER RUN 10, 11 & 12



STORM SEWER LATERAL-12 (PIPE RUN 39) PHASE 1
 PROPOSED PRIVATE 12" HDPE STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.

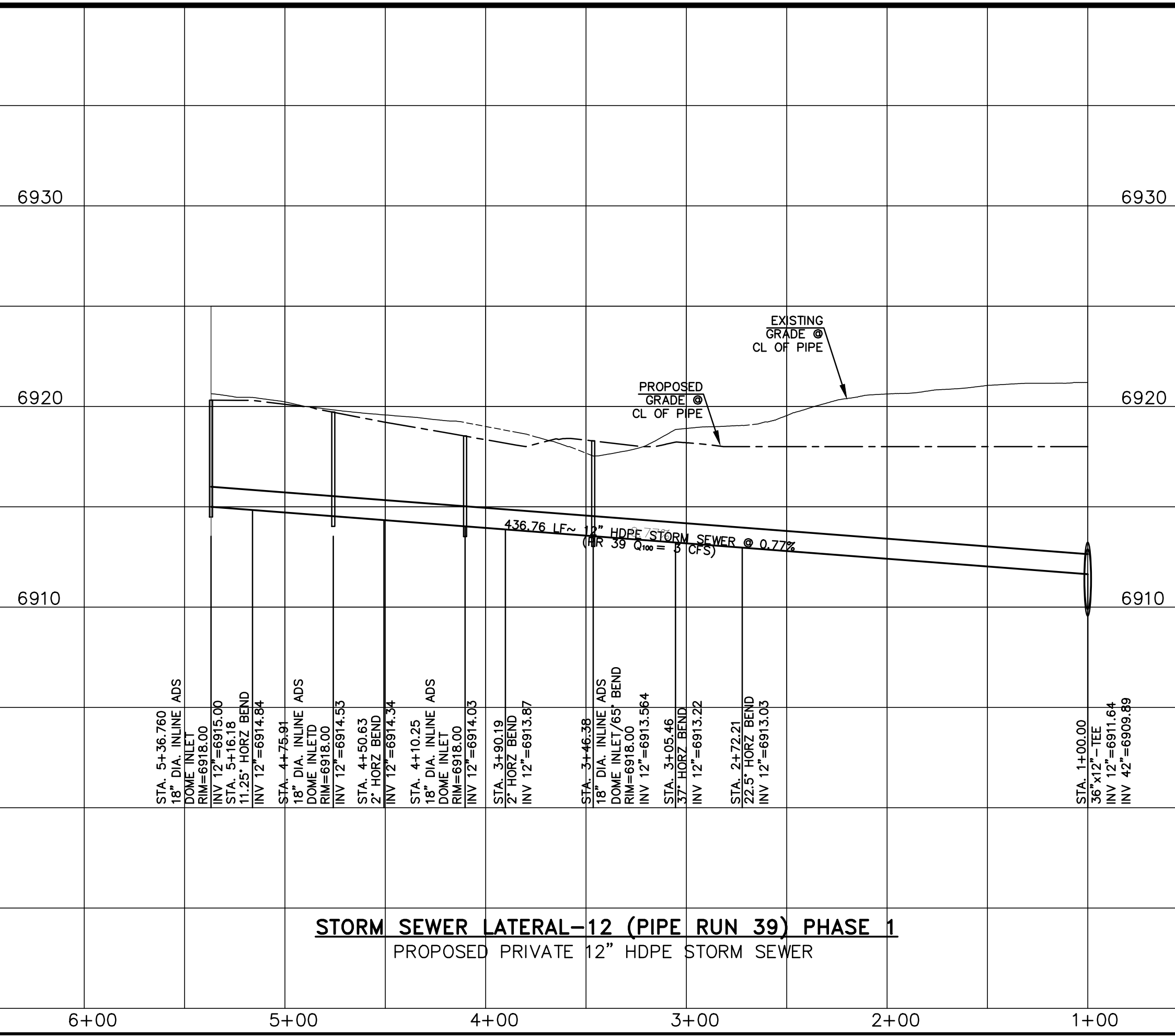


STORM SEWER LATERAL-13 (PIPE RUN 40) PHASE 1
 PROPOSED PRIVATE 12" HDPE STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.

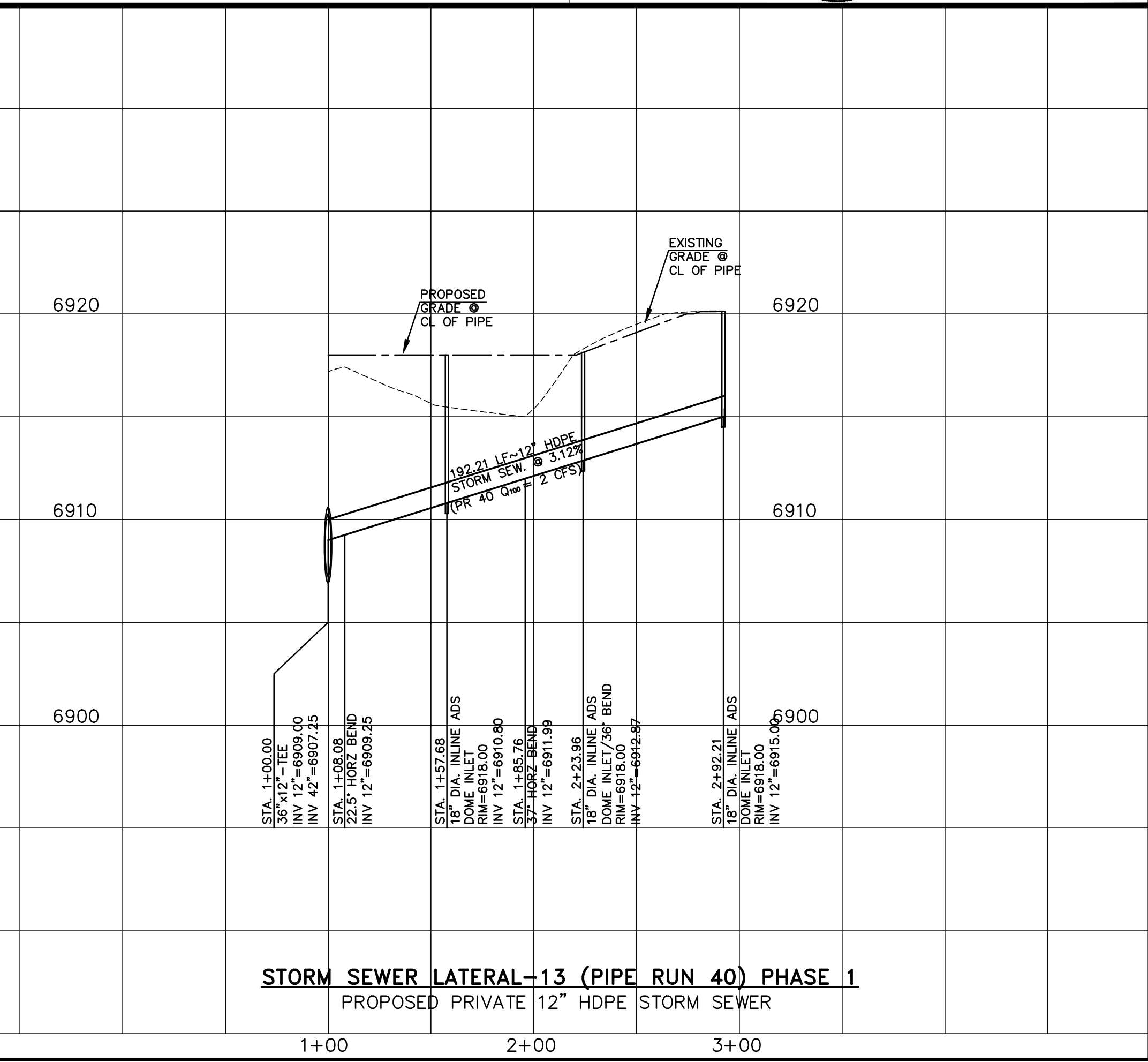


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 FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

QUENTIN N. ARMIJO, PROFESSIONAL ENGINEER
 COLORADO P.E. NO. 37170

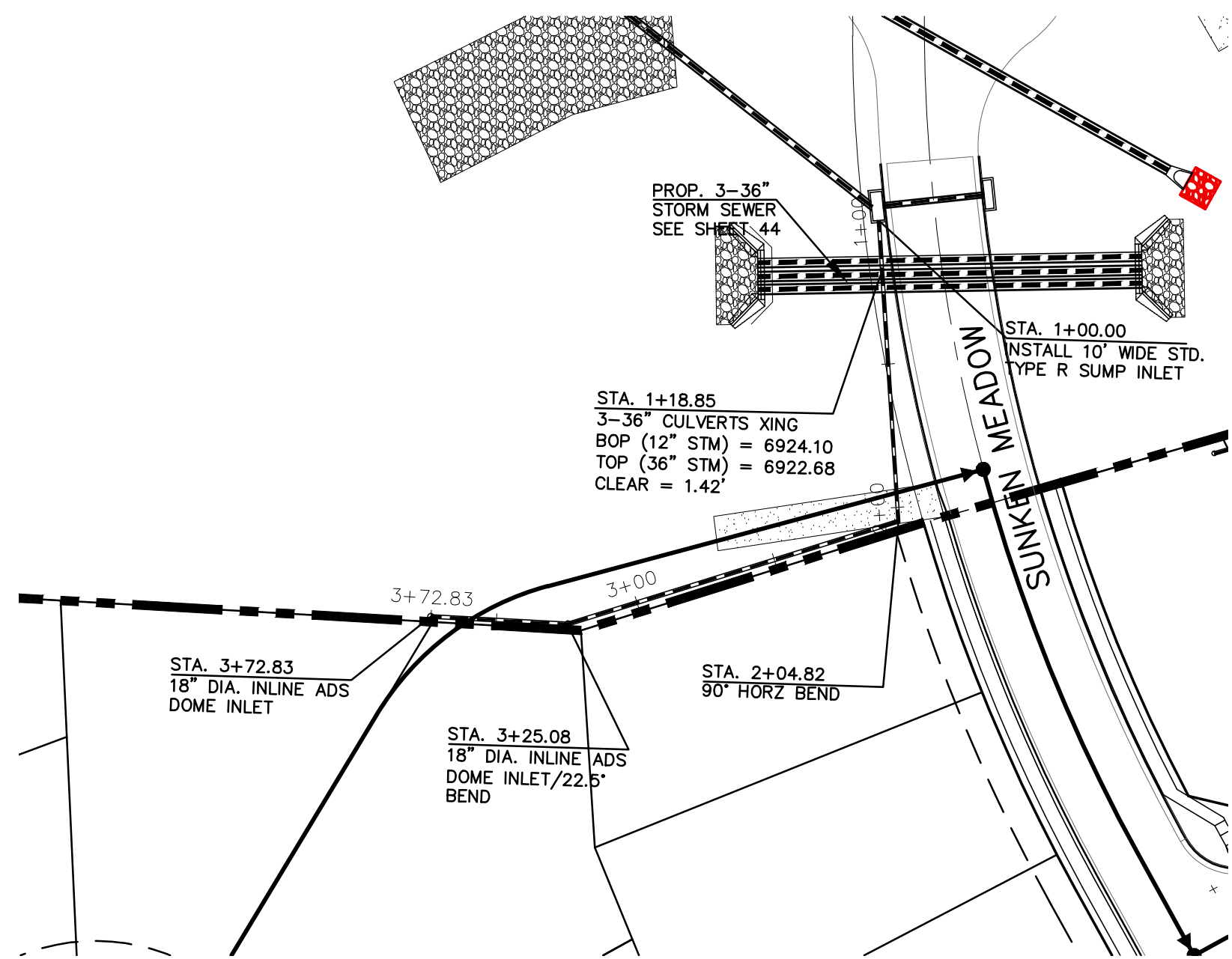


STORM SEWER LATERAL-12 (PIPE RUN 39) PHASE 1
 PROPOSED PRIVATE 12" HDPE STORM SEWER

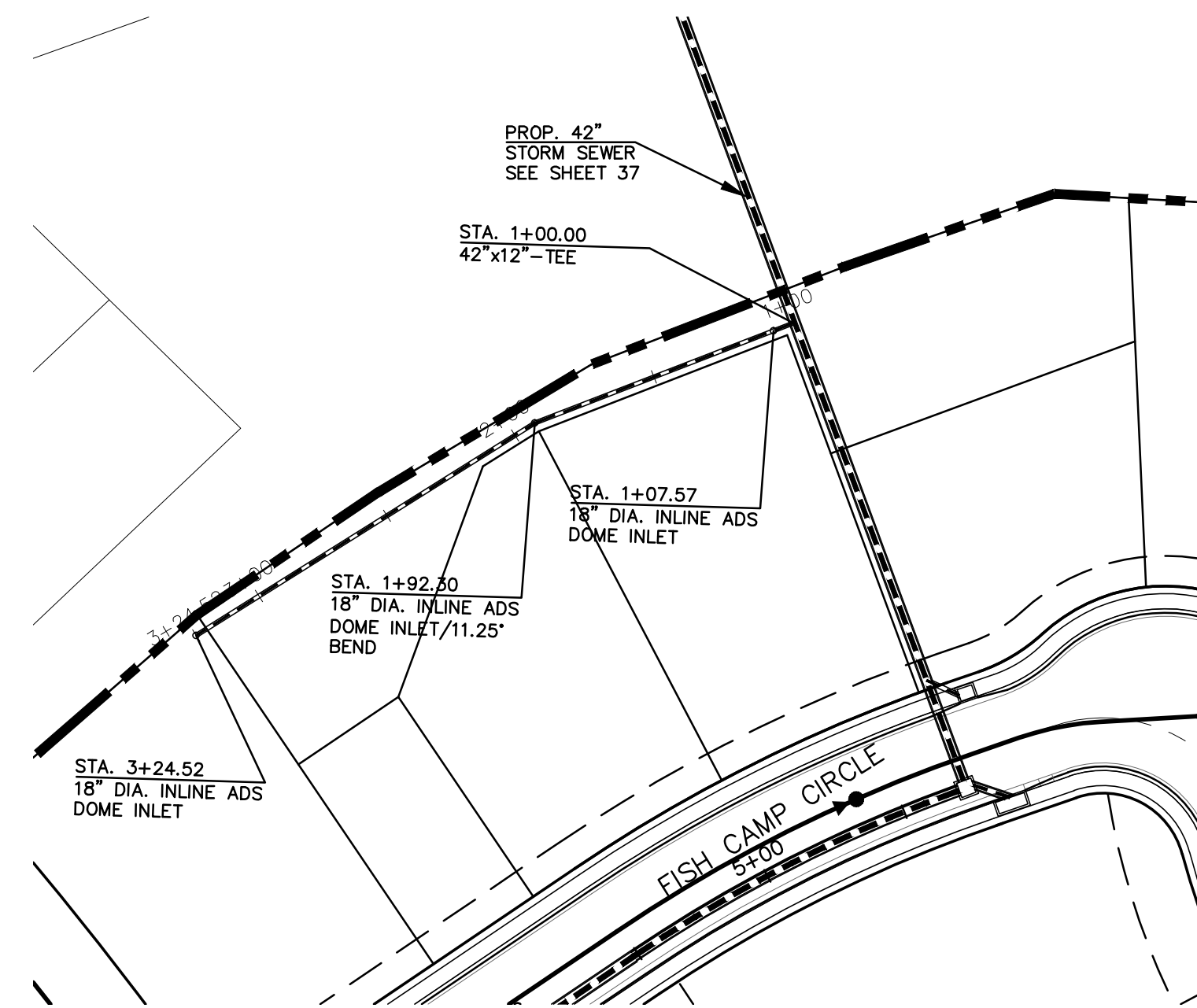
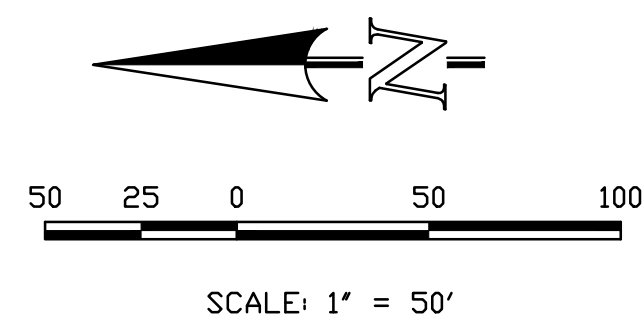


STORM SEWER LATERAL-13 (PIPE RUN 40) PHASE 1
 PROPOSED PRIVATE 12" HDPE STORM SEWER

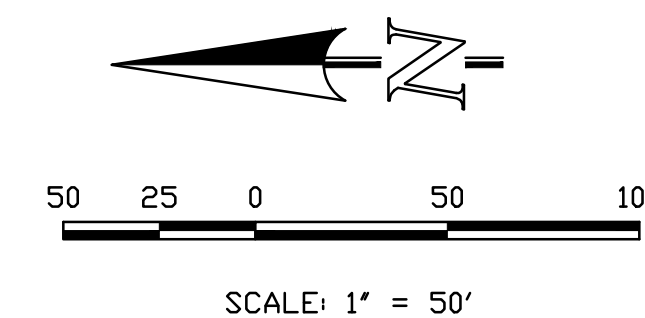
DATE	
DESCRIPTION	
REVISIONS	
NO.	
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PREPARED FOR:	ACM ALF VIII JV SUB II LLC
	JASON POCK
	00 E. MISSISSIPPI AVE., STE 500
	DENVER, CO 80246
	303-984-9800
721 S. 2900 STREET COLORADO SPRINGS, CO 80904 OFFICE: 719-635-6422 FAX: 719-635-6426 www.tnasec.com	
WATERBURY FILING NO. 1	
CONSTRUCTION SET	
STORM SEWER LATERAL 13, 14	
DESIGNED BY	QNA
DRAWN BY	QNA
CHECKED BY	
H-SCALE	1"=50'
V-SCALE	1"=5'
JOB NO.	2356.00
DATE ISSUED	10/4/24
SHEET NO.	40 OF 52



STORM SEWER LATERAL-14 PIPE RUN 38 PHASE 2
 PROPOSED PRIVATE 12" HDPE STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.

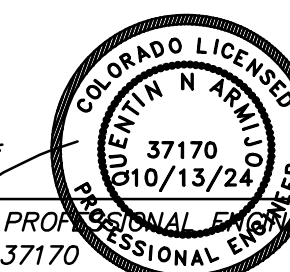


STORM SEWER LATERAL-15 (PIPE RUN 37) PHASE 2
 PROPOSED PRIVATE 12" HDPE STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.



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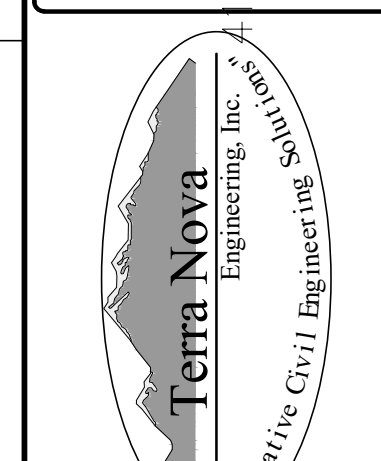
Quentin N. Armijo
 QUENTIN N. ARMILJO, PROFESSIONAL ENGINEER
 COLORADO P.E. NO. 37170



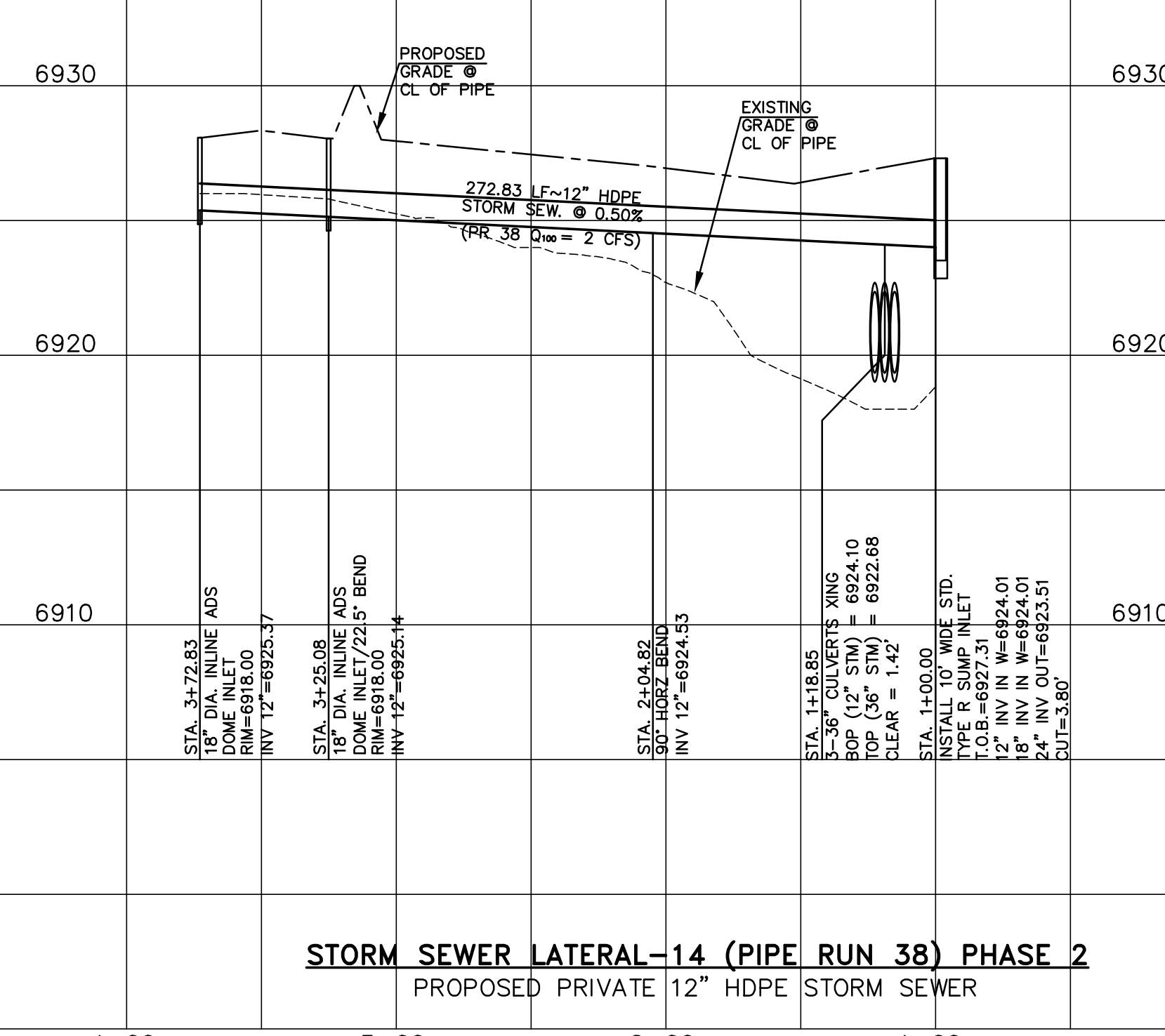
NO.	DESCRIPTION	DATE

UNLESS OTHERWISE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, TERRA NOVA ENGINEERING, INC. APPROVES THIS DESIGN FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

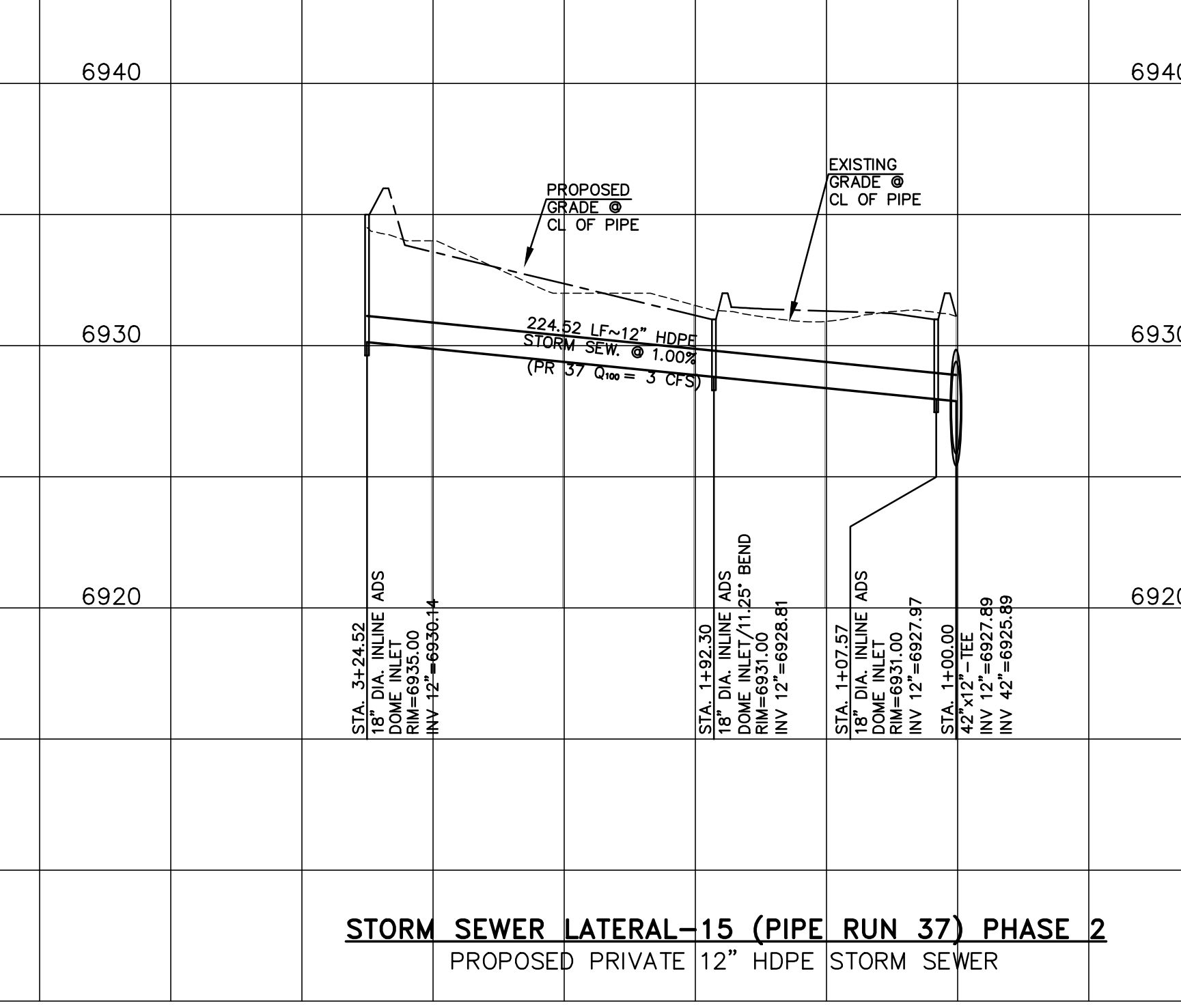
PREPARED FOR:
ACM ALF VII JV SUB II LLC
JASON POCK
 100 E. MISSISSIPPI AVE., STE 500
 DENVER, CO 80246
 303-984-9800



721 S. 23RD STREET
 COLORADO SPRINGS, CO 80904
 OFFICE: 719-635-6422
 FAX: 719-635-6426
 www.tnecinc.com



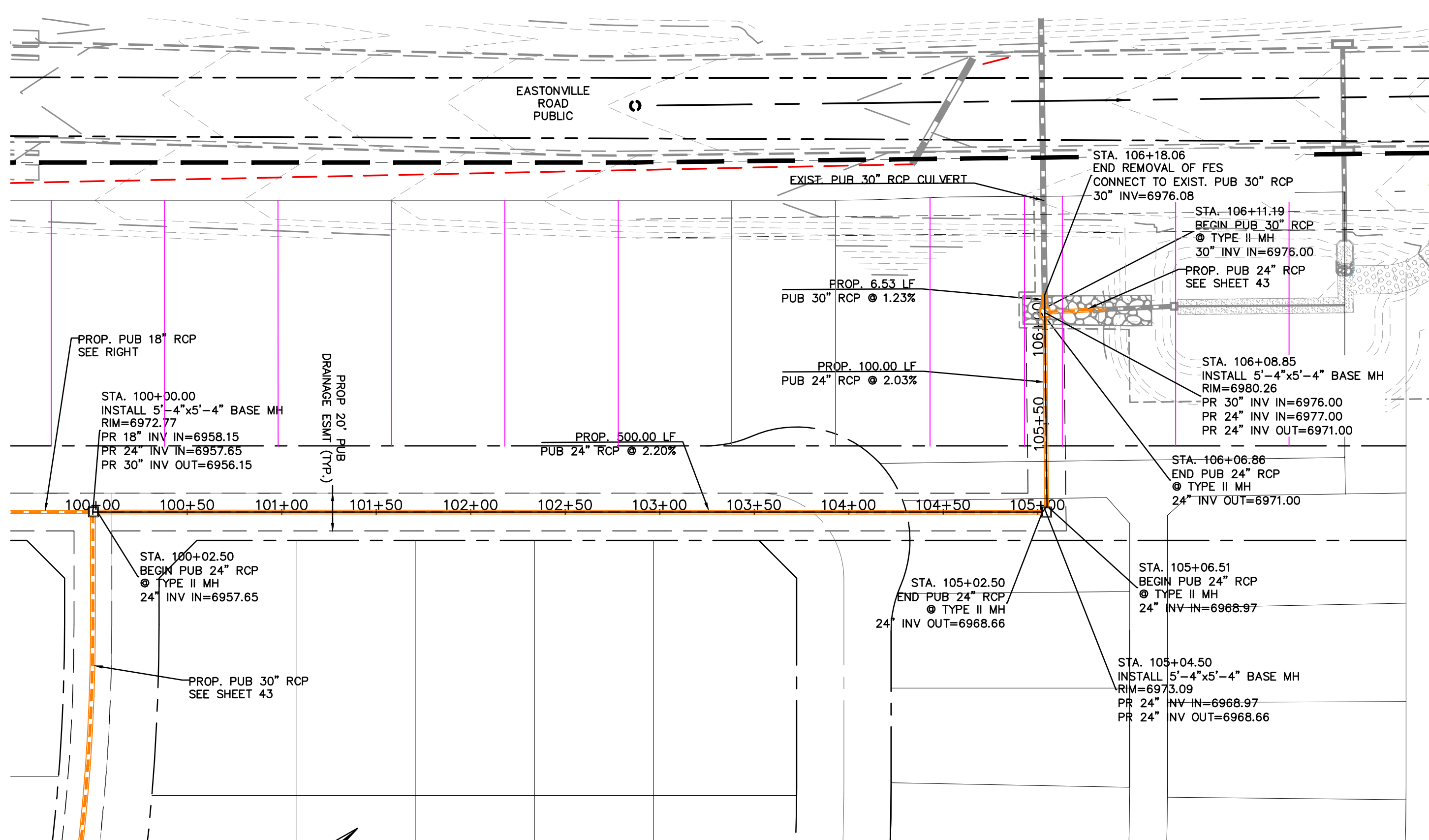
STORM SEWER LATERAL-14 (PIPE RUN 38) PHASE 2
 PROPOSED PRIVATE 12" HDPE STORM SEWER



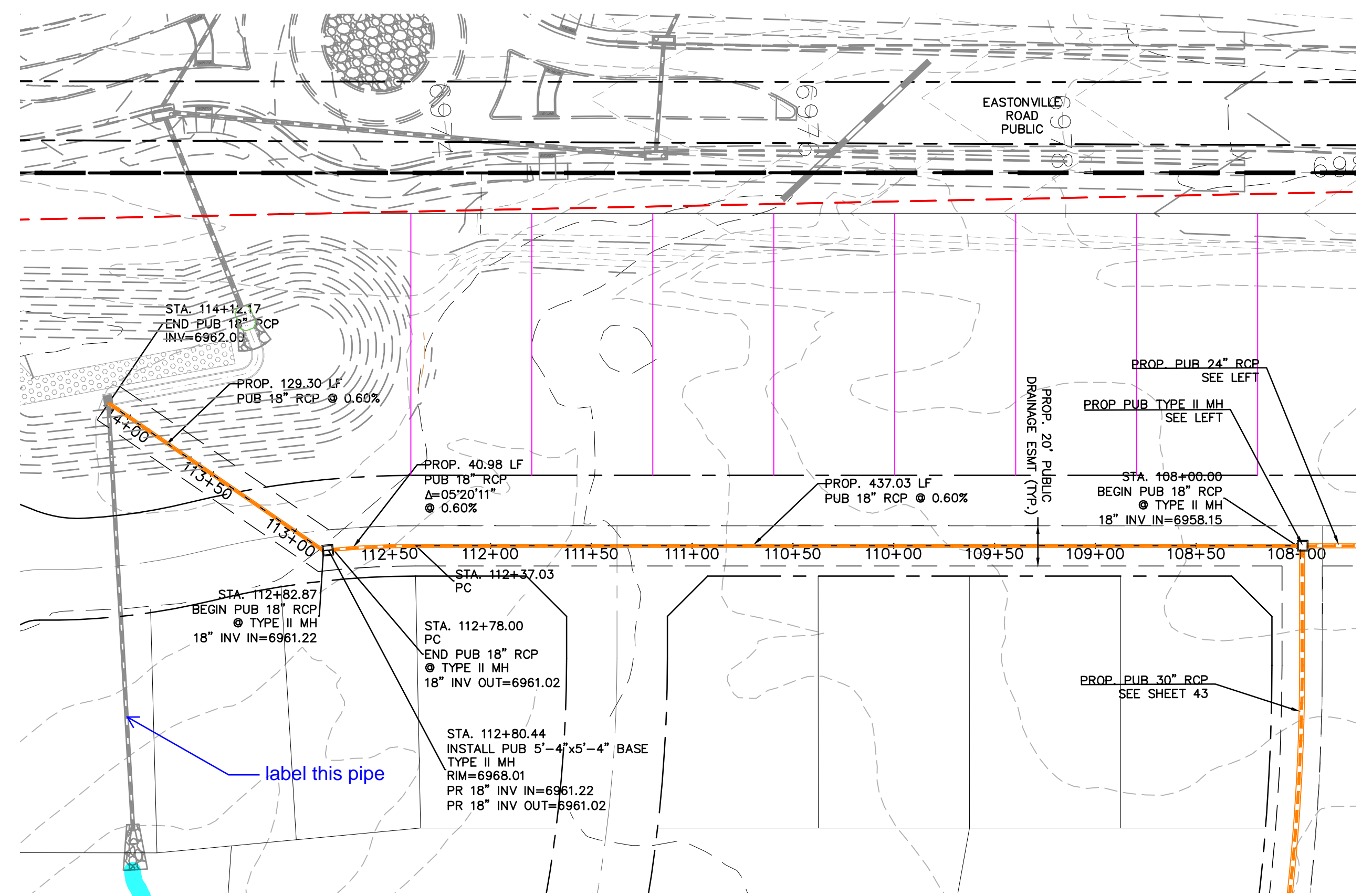
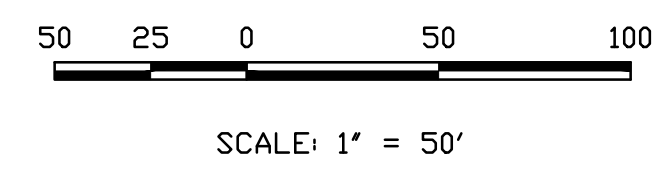
STORM SEWER LATERAL-15 (PIPE RUN 37) PHASE 2
 PROPOSED PRIVATE 12" HDPE STORM SEWER

WATERBURY FILING NO. 1
 CONSTRUCTION SET
 STORM SEWER LATERAL 11, 12

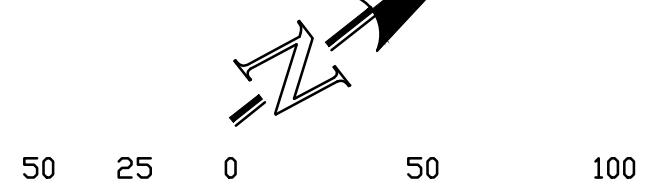
DESIGNED BY QNA
 DRAWN BY QNA
 CHECKED BY
 H-SCALE 1"=50'
 V-SCALE 1"=5'
 JOB NO. 2356.00
 DATE ISSUED 10/4/24
 SHEET NO. 41 OF 52



STORM SEWER RUN-16 (PIPE RUN 43) PHASE 1
 PROPOSED PUBLIC 24" RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.



STORM SEWER RUN-17 (PIPE RUN 44) PHASE 1
 PROPOSED PRIVATE 18" RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.



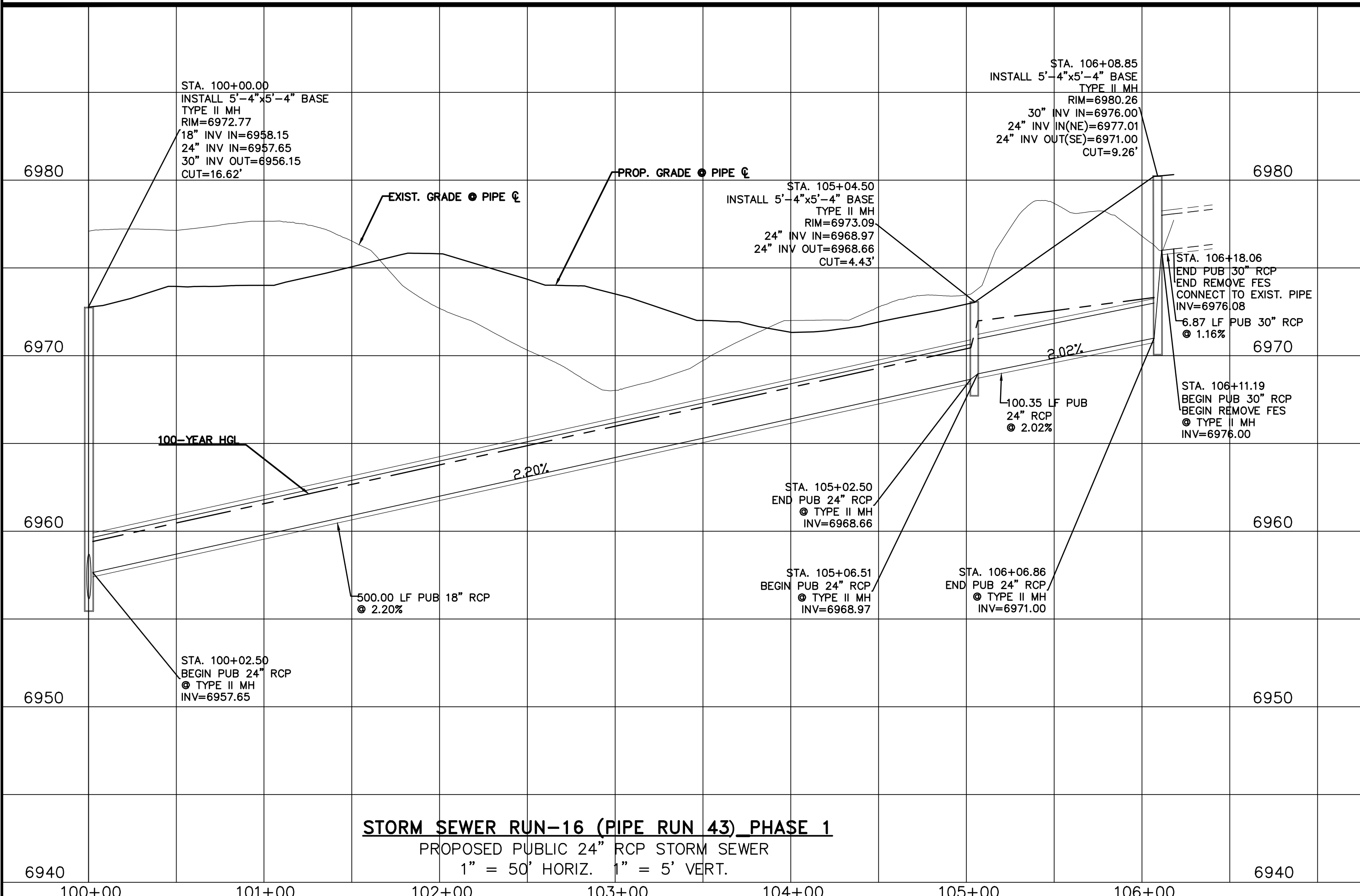
THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION
 FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

Quentin N. Armijo
 QUENTIN N. ARMIJO, PROFESSIONAL ENGINEER
 COLORADO P.E. NO. 37170

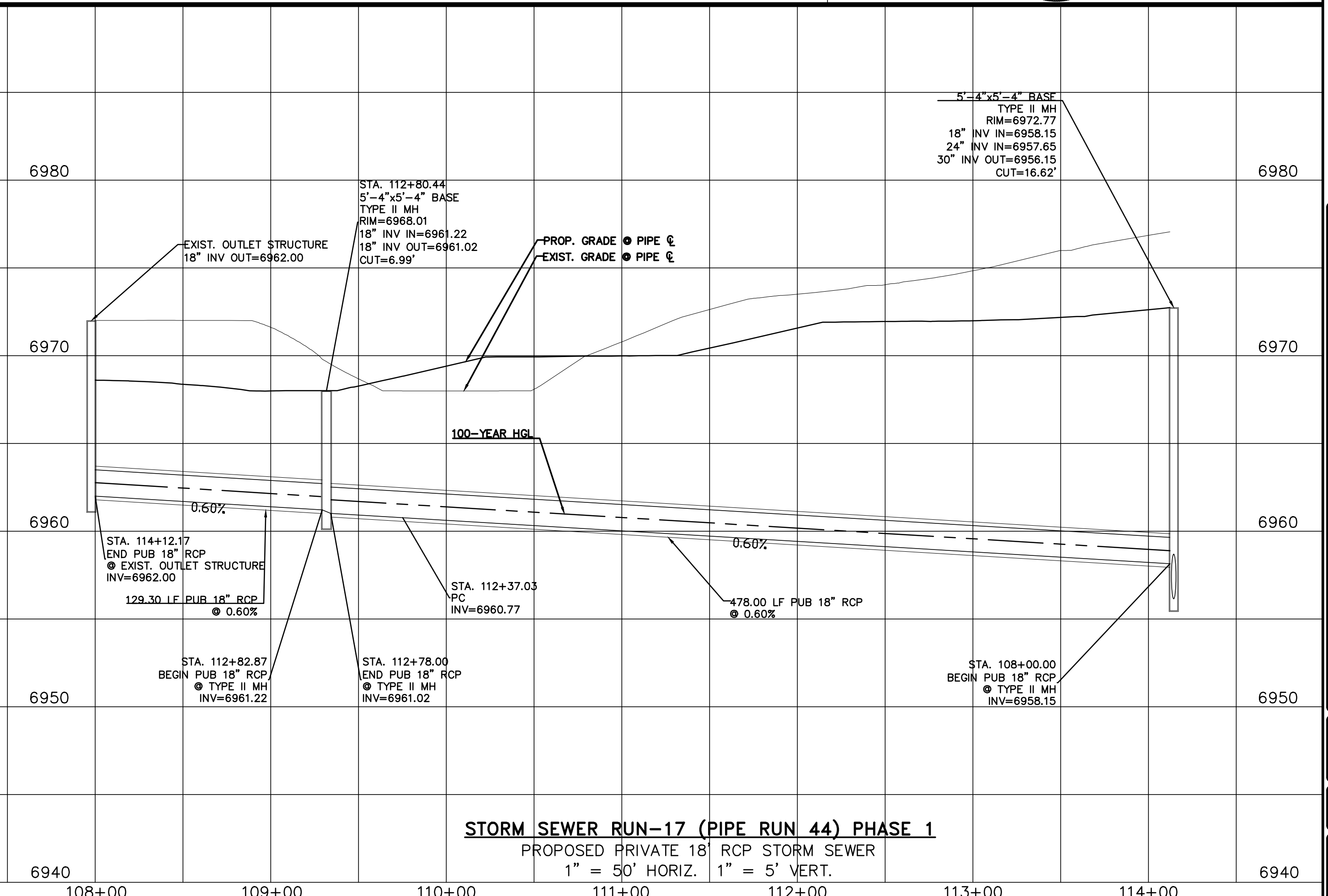
NO.	REVISIONS	DESCRIPTION	DATE

PREPARED FOR:
ACM ALF VII JV SUB II LLC
JASON POCK
 00 E. MISSISSIPPI AVE., STE 50
 DENVER, CO 80246
 303-984-9800

721 S. 23RD STREET
 COLORADO SPRINGS, CO 80904
 OFFICE: 719-635-6422
 FAX: 719-635-6426
 www.tnva.com



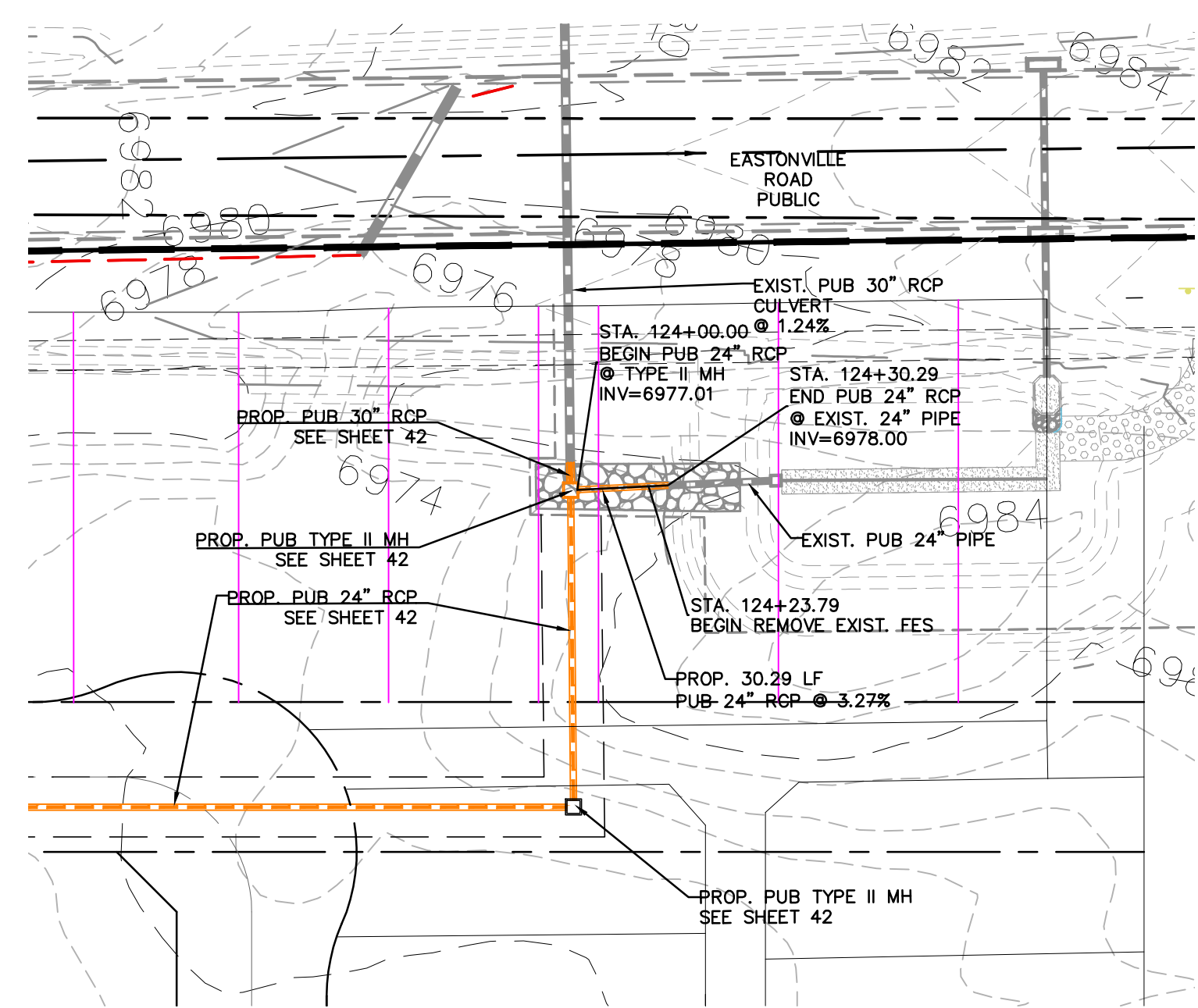
STORM SEWER RUN-16 (PIPE RUN 43) PHASE 1
 PROPOSED PUBLIC 24" RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.



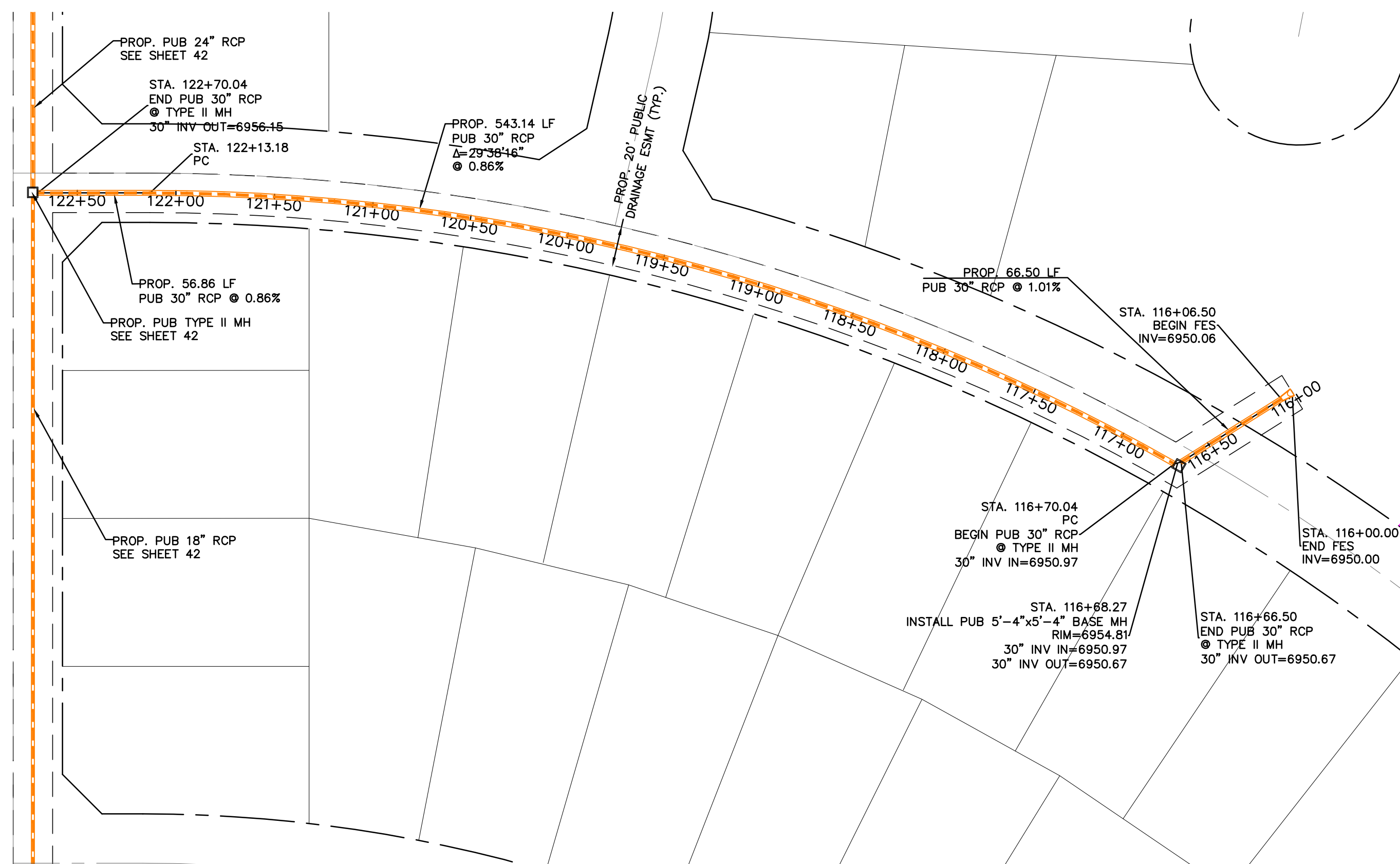
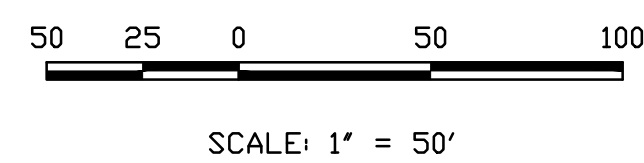
STORM SEWER RUN-17 (PIPE RUN 44) PHASE 1
 PROPOSED PRIVATE 18" RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.

WATERBURY FILING NO. 1
 CONSTRUCTION SET
 STORM SEWER RUNS 16 & 17

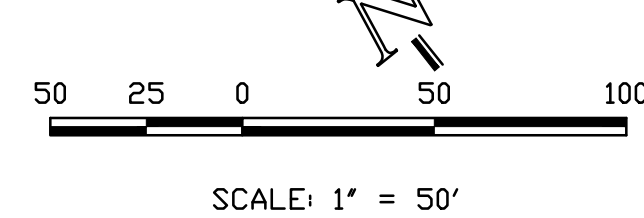
DESIGNED BY	QNA
DRAWN BY	QNA
CHECKED BY	
H-SCALE	1"=50'
V-SCALE	1"=5'
JOB NO.	2356.00
DATE ISSUED	10/4/24
SHEET NO.	42 OF 52



STORM SEWER RUN-15 (PIPE RUN 44) PHASE 1
 PROPOSED PUBLIC 18" RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.

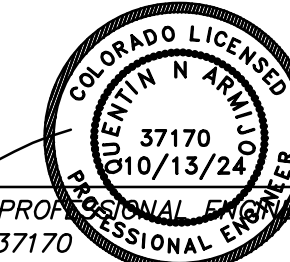


STORM SEWER RUN-18 (PIPE RUN 45) PHASE 1
 PROPOSED PUBLIC 30" RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.



THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

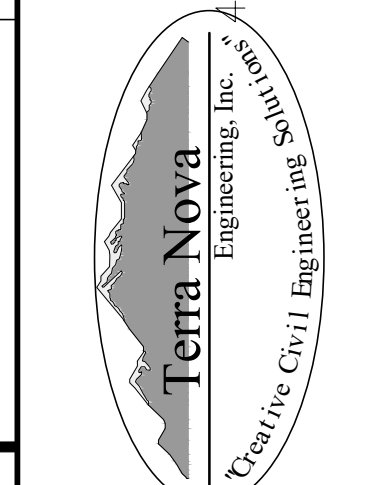
Quentin N. Armijo
 QUENTIN N. ARMUJO, PROFESSIONAL ENGINEER
 COLORADO P.E. NO. 37170



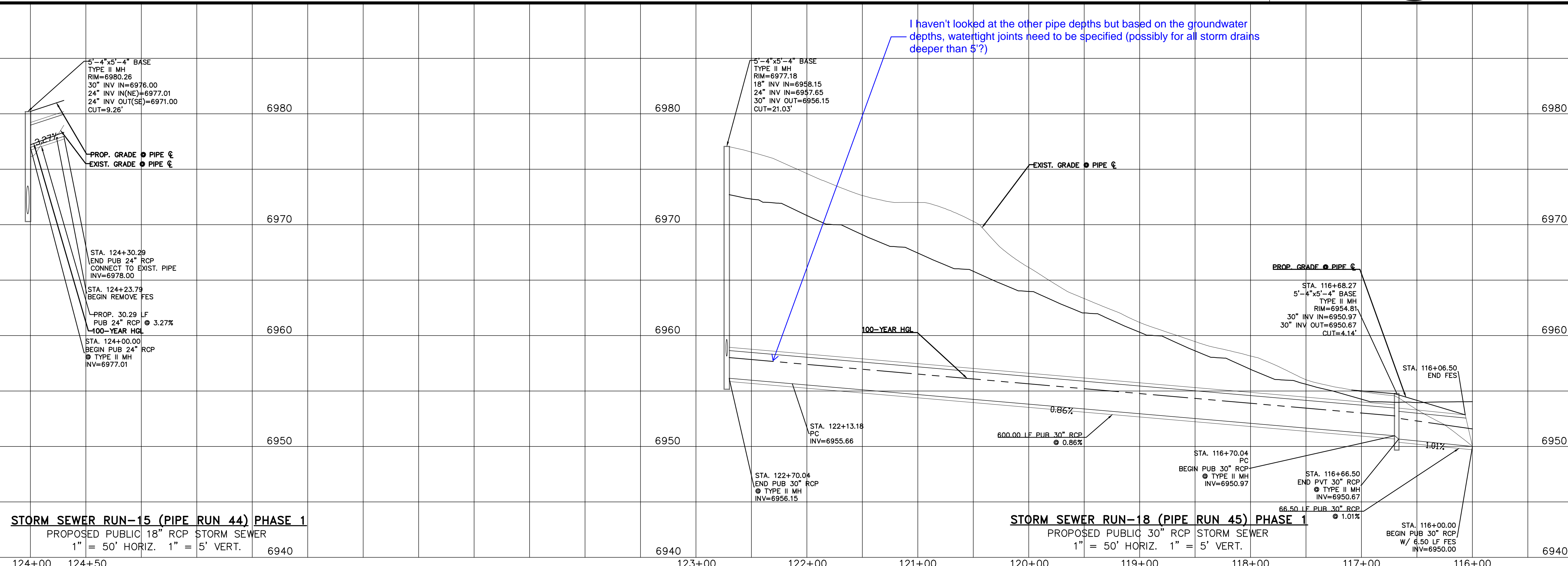
NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, THIS SUBMITTAL IS FOR INFORMATION ONLY. APPROVAL FOR THESE PURPOSES IS DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR:
ACM ALF VIII JV SUB
JASON POCK
 00 E. MISSISSIPPI AVE., STE 500
 DENVER, CO 80246
 303-984-9800



721 S. 23RD STREET
 COLORADO SPRINGS, CO 80904
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 www.tneng.com

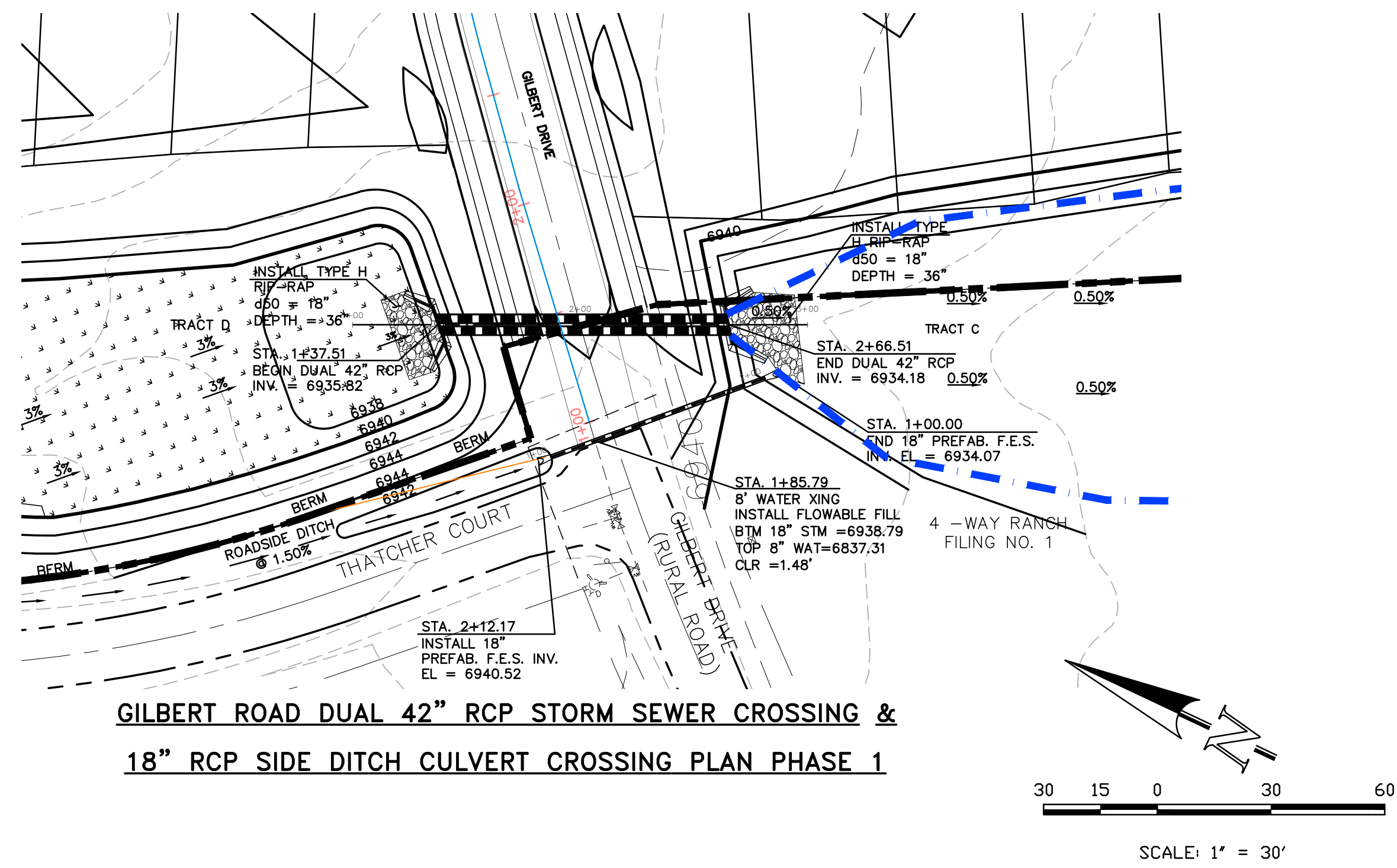


STORM SEWER RUN-15 (PIPE RUN 44) PHASE 1
 PROPOSED PUBLIC 18" RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.

STORM SEWER RUN-18 (PIPE RUN 45) PHASE 1
 PROPOSED PUBLIC 30" RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.

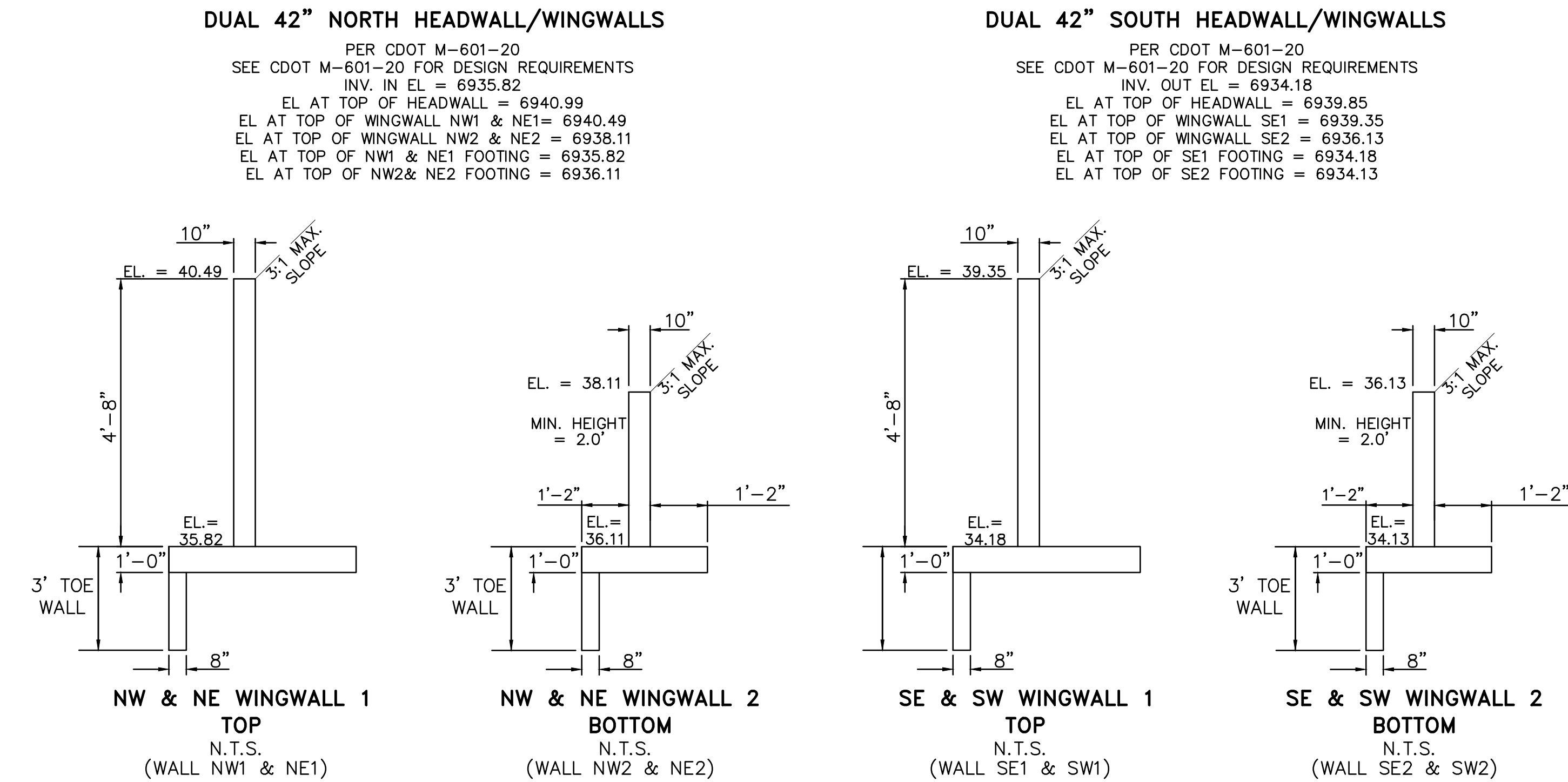
WATERBURY FILING NO. 1
 CONSTRUCTION SET
 STORM SEWER RUNS 15 & 18

DESIGNED BY QNA
 DRAWN BY QNA
 CHECKED BY
 H-SCALE 1"=50'
 V-SCALE 1"=5'
 JOB NO. 2356.00
 DATE ISSUED 10/4/24
 SHEET NO. 43 OF 52



GILBERT ROAD DUAL 42" RCP STORM SEWER CROSSING & 18" RCP SIDE DITCH CULVERT CROSSING PLAN PHASE 1

SCALE: 1" = 30'

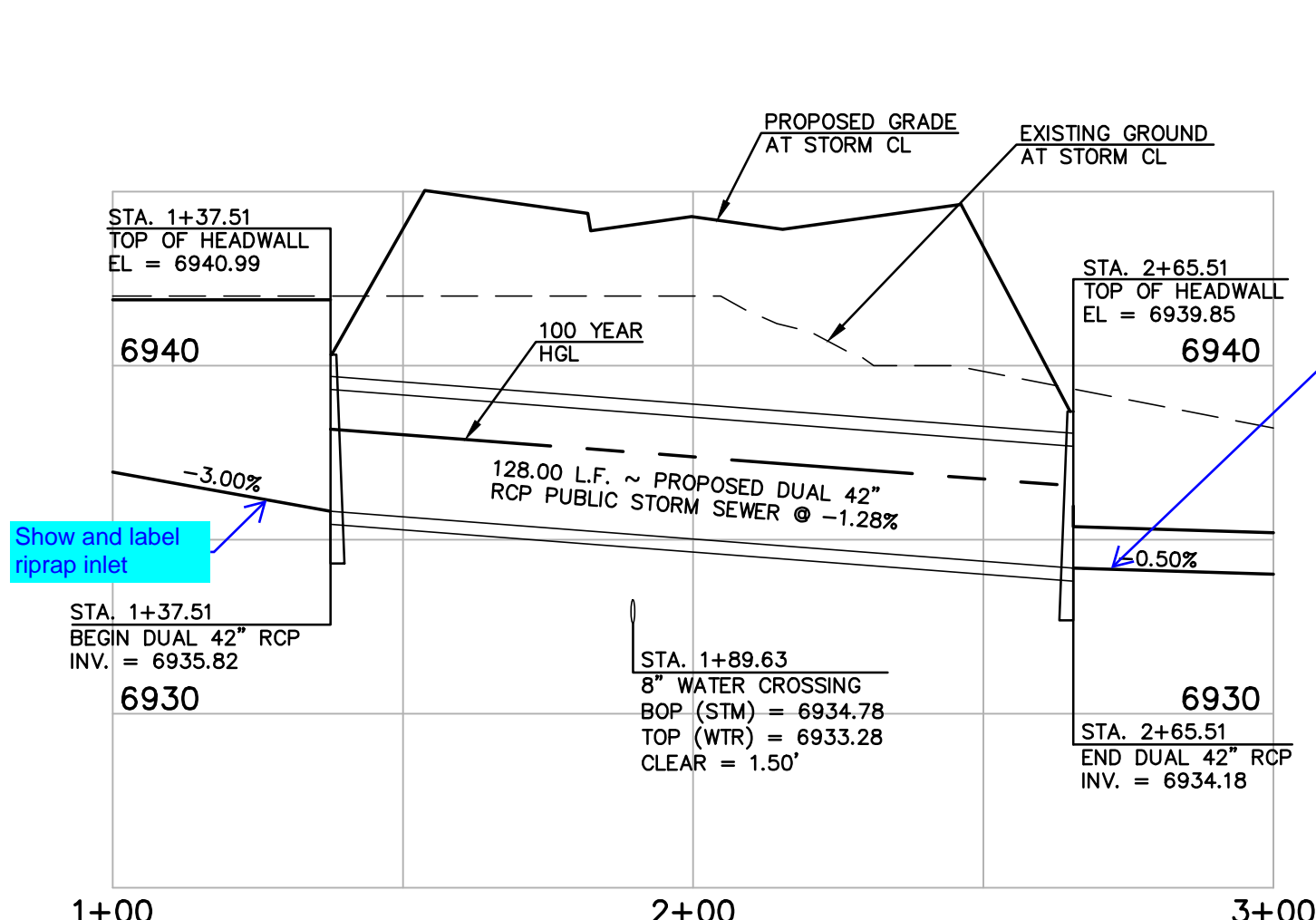


DUAL 42" NORTH HEADWALL/WINGWALLS

PER CDOT M-601-20
SEE CDOT M-601-20 FOR DESIGN REQUIREMENTS
INV. IN EL = 6935.82
EL AT TOP OF HEADWALL = 6940.99
EL AT TOP OF WINGWALL NW1 & NE1 = 6940.49
EL AT TOP OF WINGWALL NW2 & NE2 = 6938.11
EL AT TOP OF NW1 & NE1 FOOTING = 6935.82
EL AT TOP OF NW2 & NE2 FOOTING = 6936.11

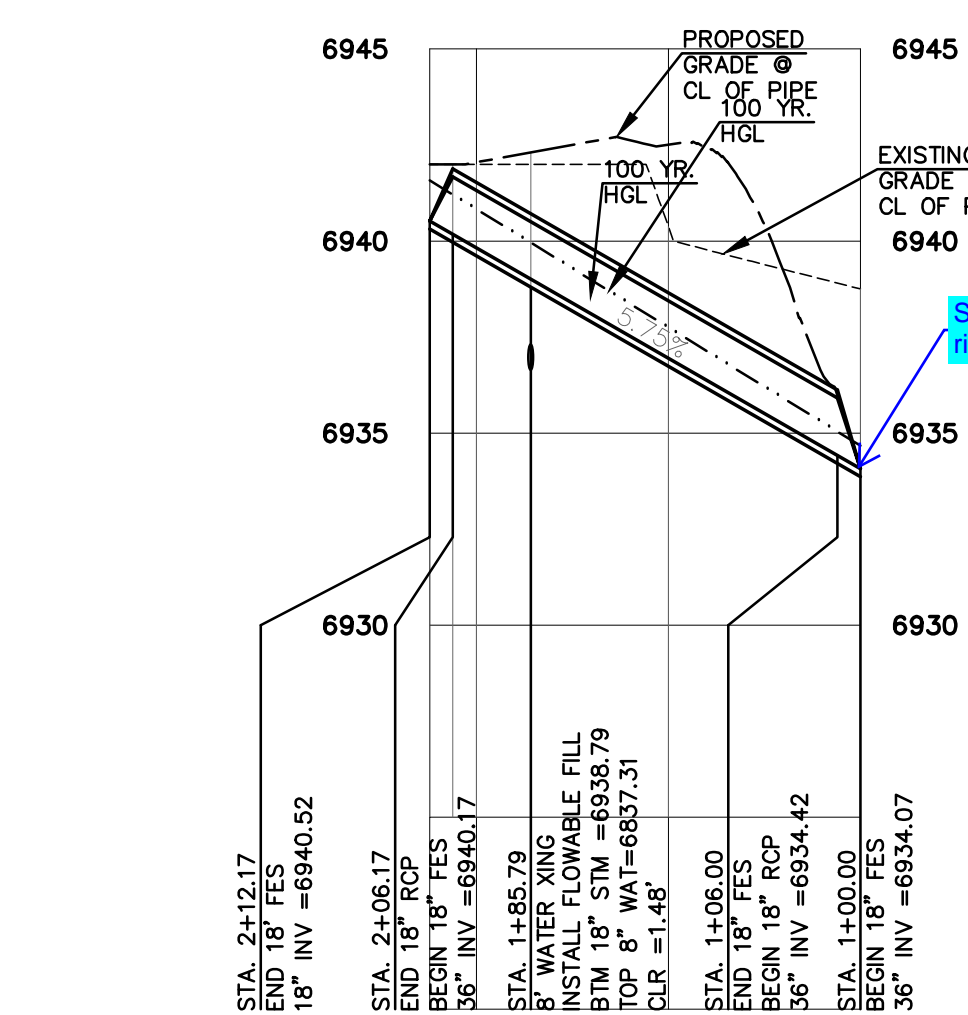
DUAL 42" SOUTH HEADWALL/WINGWALLS

PER CDOT M-601-20
SEE CDOT M-601-20 FOR DESIGN REQUIREMENTS
INV. OUT EL = 6934.18
EL AT TOP OF HEADWALL = 6939.85
EL AT TOP OF WINGWALL SE1 = 6939.35
EL AT TOP OF WINGWALL SE2 = 6936.13
EL AT TOP OF SE1 FOOTING = 6934.18
EL AT TOP OF SE2 FOOTING = 6934.13



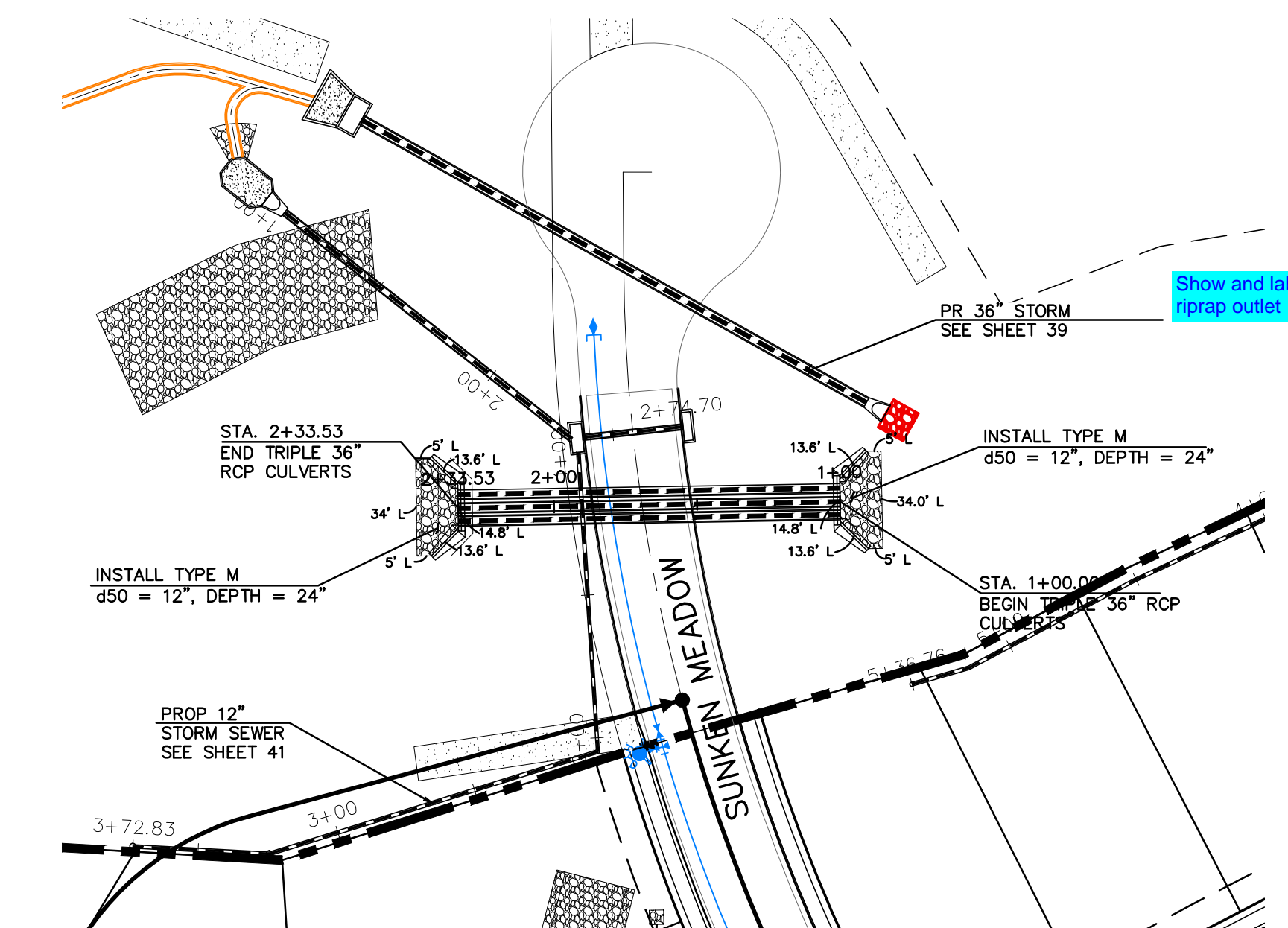
DUAL 42" RCP STORM SEWER CULVERT PROFILE PHASE 1

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 5'



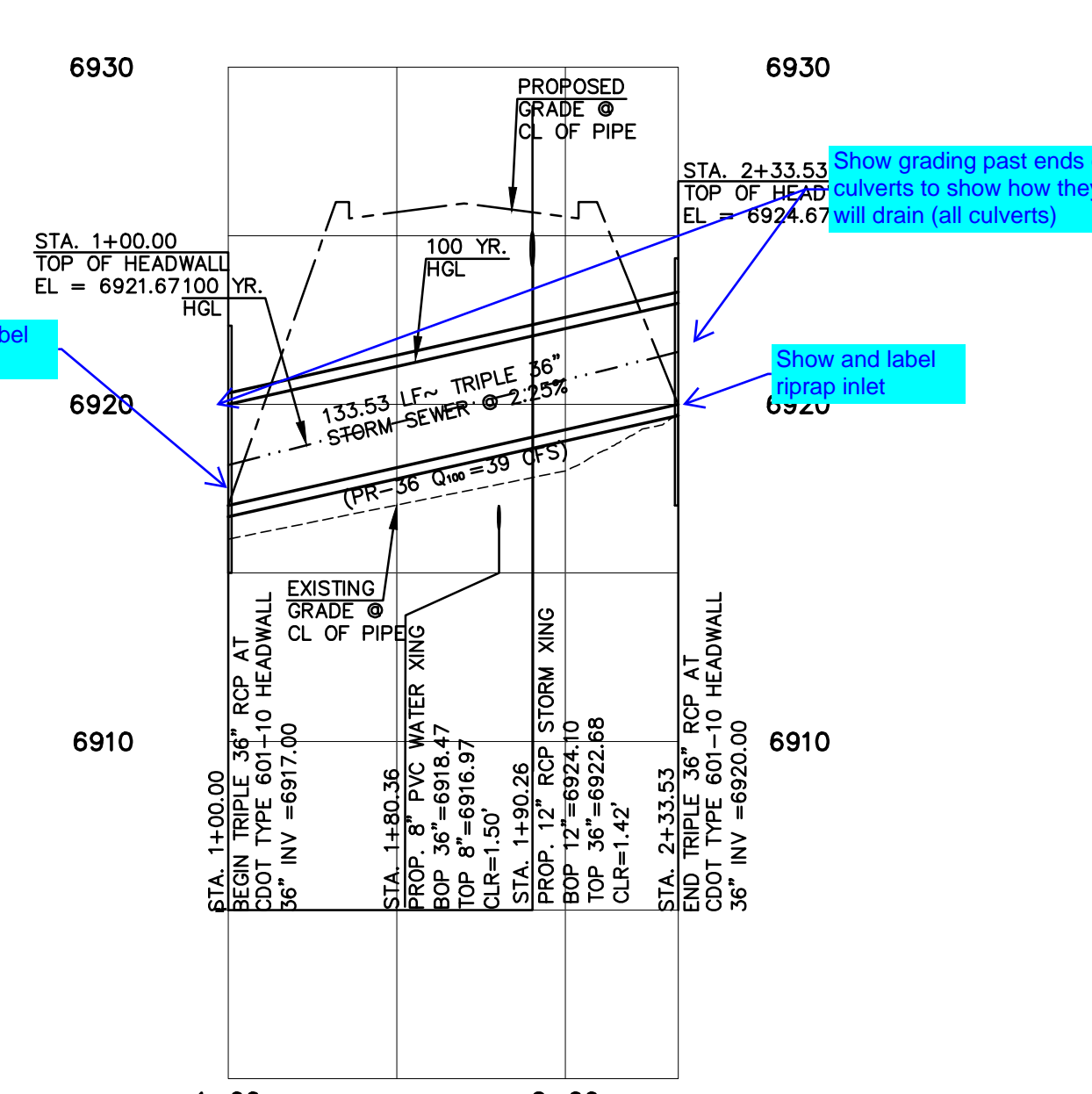
18" RCP STORM SEWER CULVERT PROFILE PHASE 1

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



SUNKEN MEADOW TRIPLE 36" CULVERT PLAN (PIPE RUN 36) PHASE 1

PROPOSED PUBLIC RCP STORM SEWER
1" = 50' HORIZ. 1" = 5' VERT.



SUNKEN MEADOW TRIPLE 36" CULVERT PROFILE (PIPE RUN 36) PHASE 1

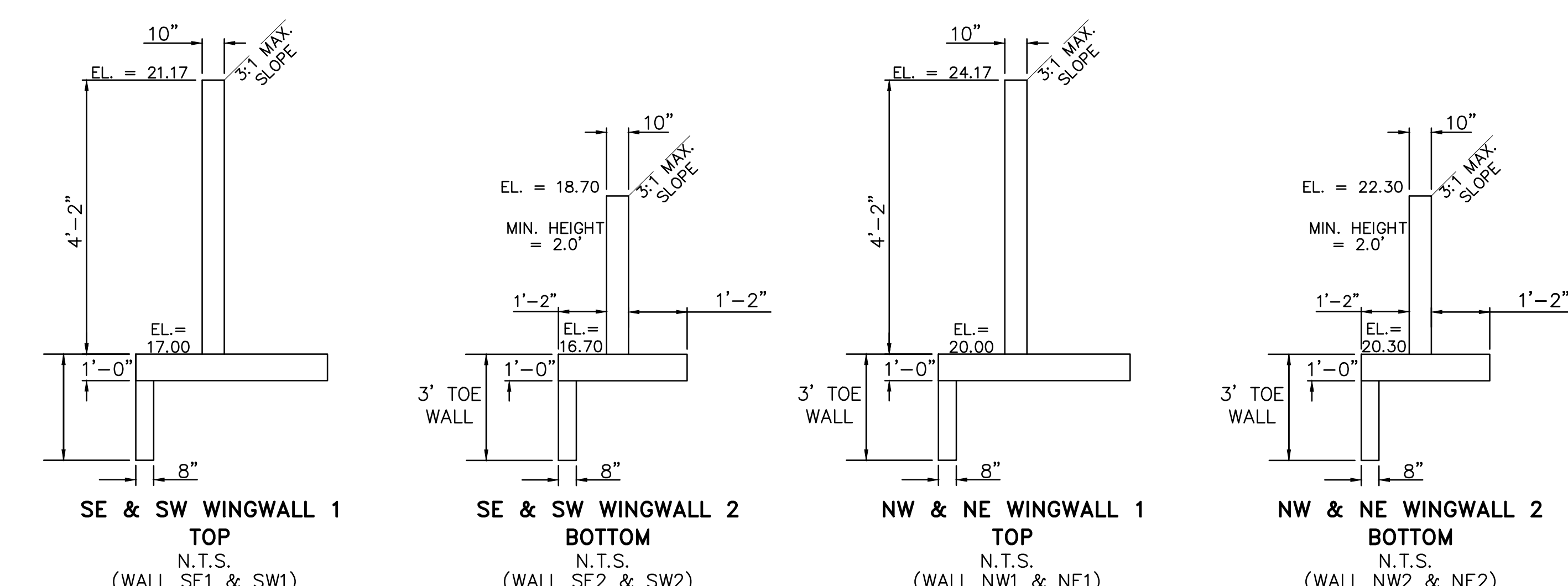
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

TRIPLE 36" SOUTH HEADWALL/WINGWALLS

PER CDOT M-601-20
SEE CDOT M-601-20 FOR DESIGN REQUIREMENTS
INV. OUT EL = 6917.00
EL AT TOP OF HEADWALL = 6921.67
EL AT TOP OF WINGWALL SE1 & SW1 = 6921.17
EL AT TOP OF WINGWALL SE2 & SW2 = 6918.70
EL AT TOP OF SE1 & SW1 FOOTING = 6917.00
EL AT TOP OF SE2 & SW2 FOOTING = 6916.70

TRIPLE 36" NORTH HEADWALL/WINGWALLS

PER CDOT M-601-20
SEE CDOT M-601-20 FOR DESIGN REQUIREMENTS
INV. IN EL = 6920.00
EL AT TOP OF HEADWALL = 6924.67
EL AT TOP OF WINGWALL NW1 & NE1 = 6924.17
EL AT TOP OF WINGWALL NW2 & NE2 = 6922.30
EL AT TOP OF NW1 & NE1 FOOTING = 6920.00
EL AT TOP OF NW2 & NE2 FOOTING = 6920.30



SE & SW WINGWALL 1 TOP
N.T.S.
(WALL SE1 & SW1)

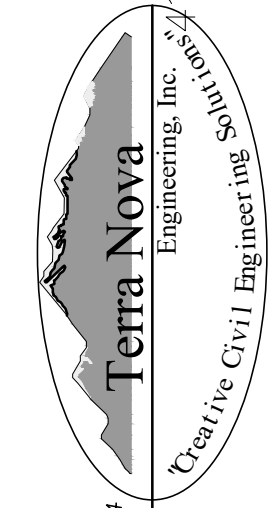
SE & SW WINGWALL 2 BOTTOM
N.T.S.
(WALL SE2 & SW2)

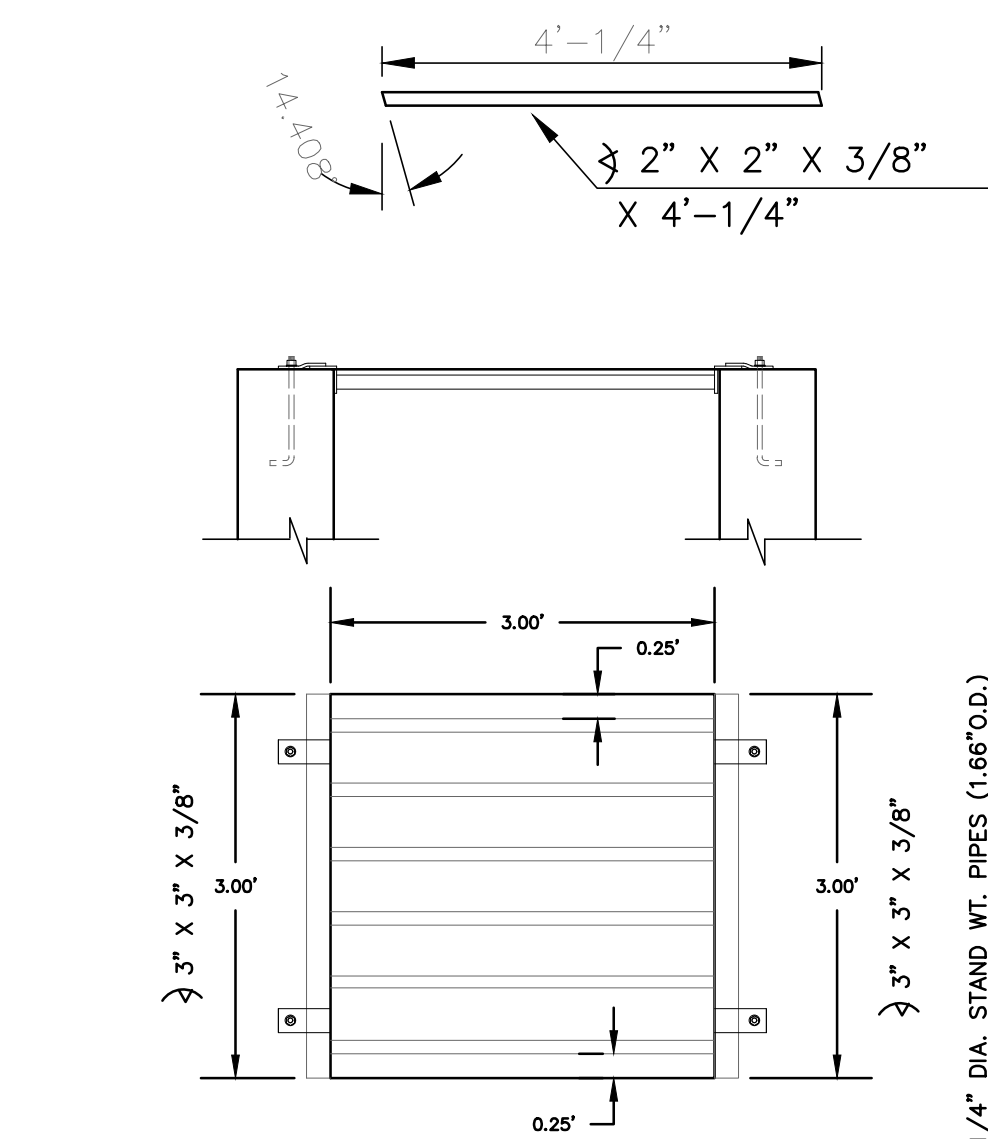
NW & NE WINGWALL 1 TOP
N.T.S.
(WALL NW1 & NE1)

NW & NE WINGWALL 2 BOTTOM
N.T.S.
(WALL NW2 & NE2)

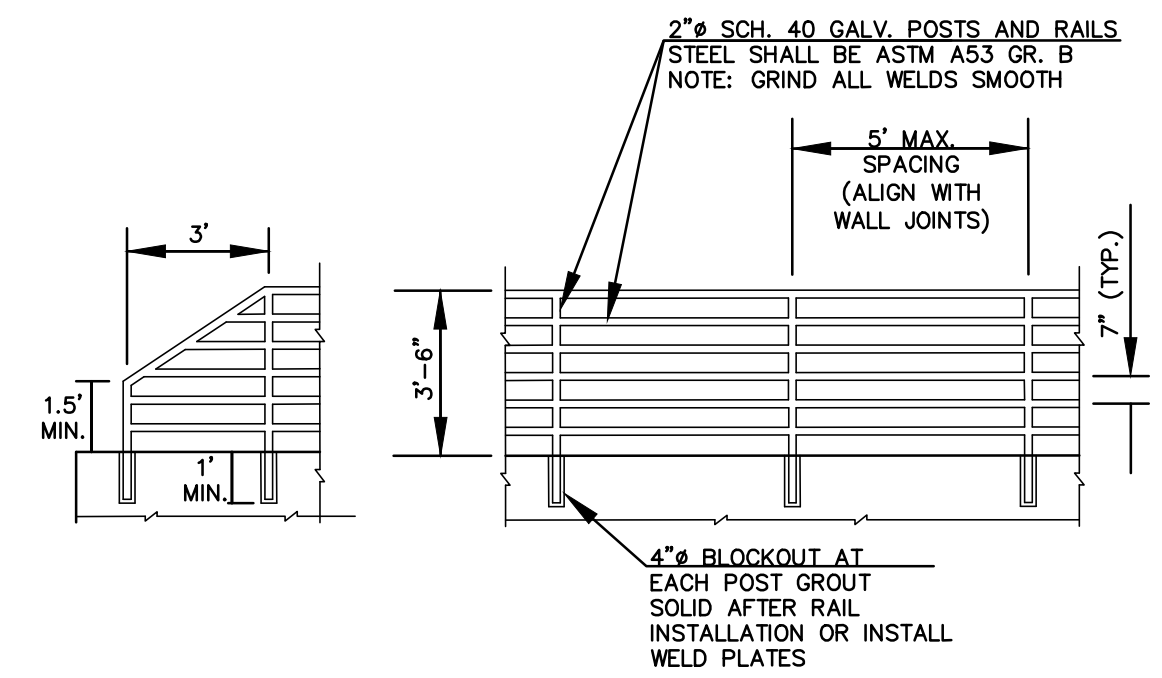
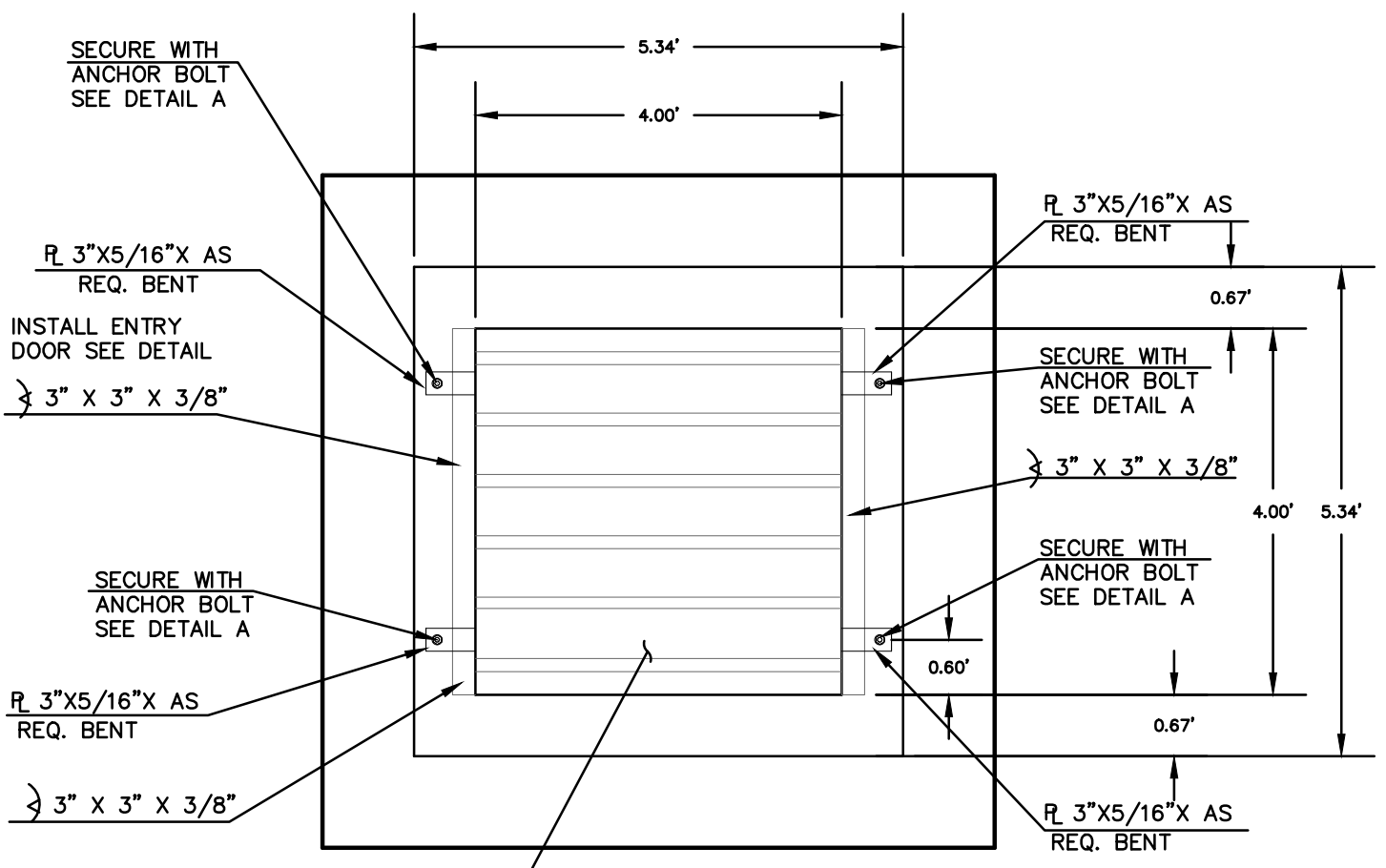
THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.



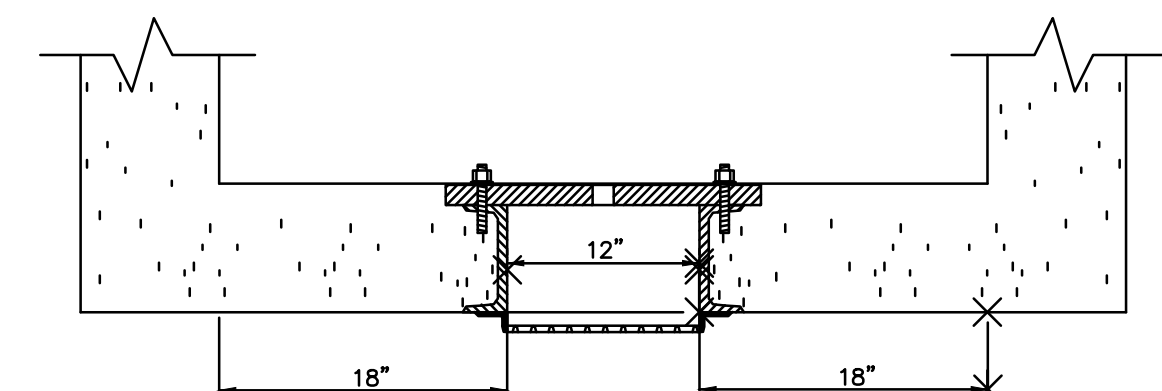
DATE	
DESCRIPTION	
REVISIONS	
NO.	
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE BOARD OF ARCHITECTS, ENGINEERS AND SURVEYORS OF THE STATE OF COLORADO, THIS DESIGN IS NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF TERRA NOVA ENGINEERING, INC.	
PREPARED FOR: ACM ALF VIII JV SUB II LLC ATTN: JASON POKK 100 E. MISSISSIPPI AVE., STE. 500 DENVER, CO 80246 303-984-9800	
 Terra Nova Engineering, Inc. Civil Engineering 721 S. 23RD STREET COLORADO SPRINGS, CO 80904 OFFICE: 719-635-6422 FAX: 719-635-6426 www.tnec.com	
WATERBURY FILING NO. 1	
CONSTRUCTION SET STORM SEWER PLAN AND PROFILE GILBERT DRIVE CROSSING CULVERTS	
DESIGNED BY	DLF
DRAWN BY	QNA
CHECKED BY	QNA
H-SCALE	NA
V-SCALE	N/A
JOB NO.	2356.00
DATE ISSUED	10/4/24
SHEET NO.	44 OF 52



GRATE PHASE 1 CONSTRUCTION
ALL WELDED CONSTRUCTION
SCALE: N.T.S.



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



SECTION B-B
SCALE: N.T.S.

STEEL FABRICATION NOTES:

FABRICATED STEEL STRUCTURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AISC AND AWS SPECIFICATIONS.

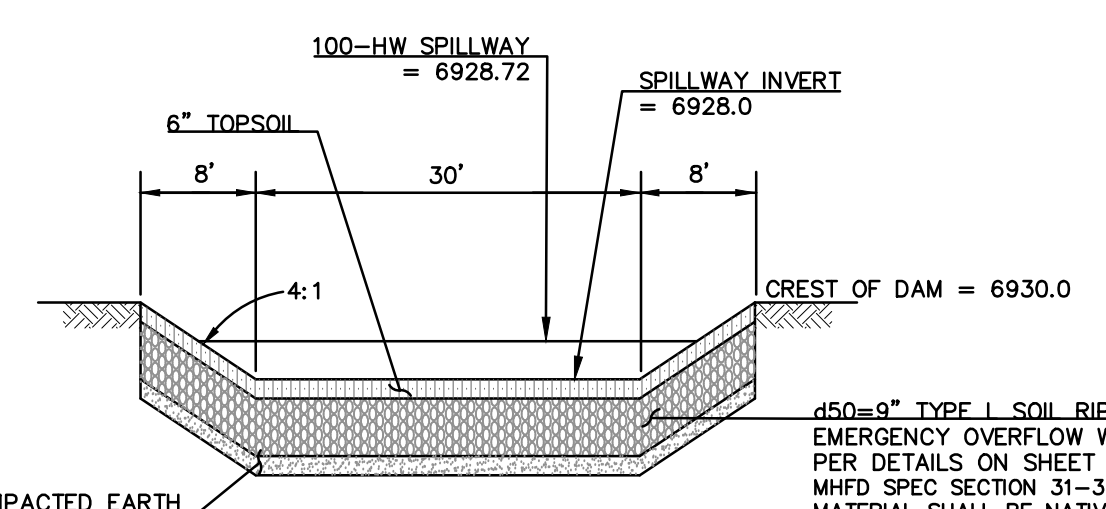
3.
THE OUTLET STRUCTURE BARGRATE IS DESIGNED FOR A VERTICAL LOAD OF 300 LBS./SQ. FT.

ALL STRUCTURAL STEEL SHAPES TO INCLUDE: ANGLE, PLATE, AND BAR SHALL MEET ASTM A36 SPECIFICATIONS, FY = 36 KSI MINIMUM. STRUCTURAL TUBING SHALL MEET ASTM A500 GRADE B SPECIFICATIONS, FY = 48 KSI MINIMUM. STEEL PIPE SHALL BE STANDARD WEIGHT PIPE ASTM A53 GRADE B, FY = 35 KSI MINIMUM.

WELDS NOT INDICATED SHALL BE 1/8" MINIMUM FILLET OR GROOVE, CONTINUOUS SO FAR AS POSSIBLE. CONSIDER VANDALISM LOADS, WELD ACCORDINGLY AT CRITICAL LOCATIONS.

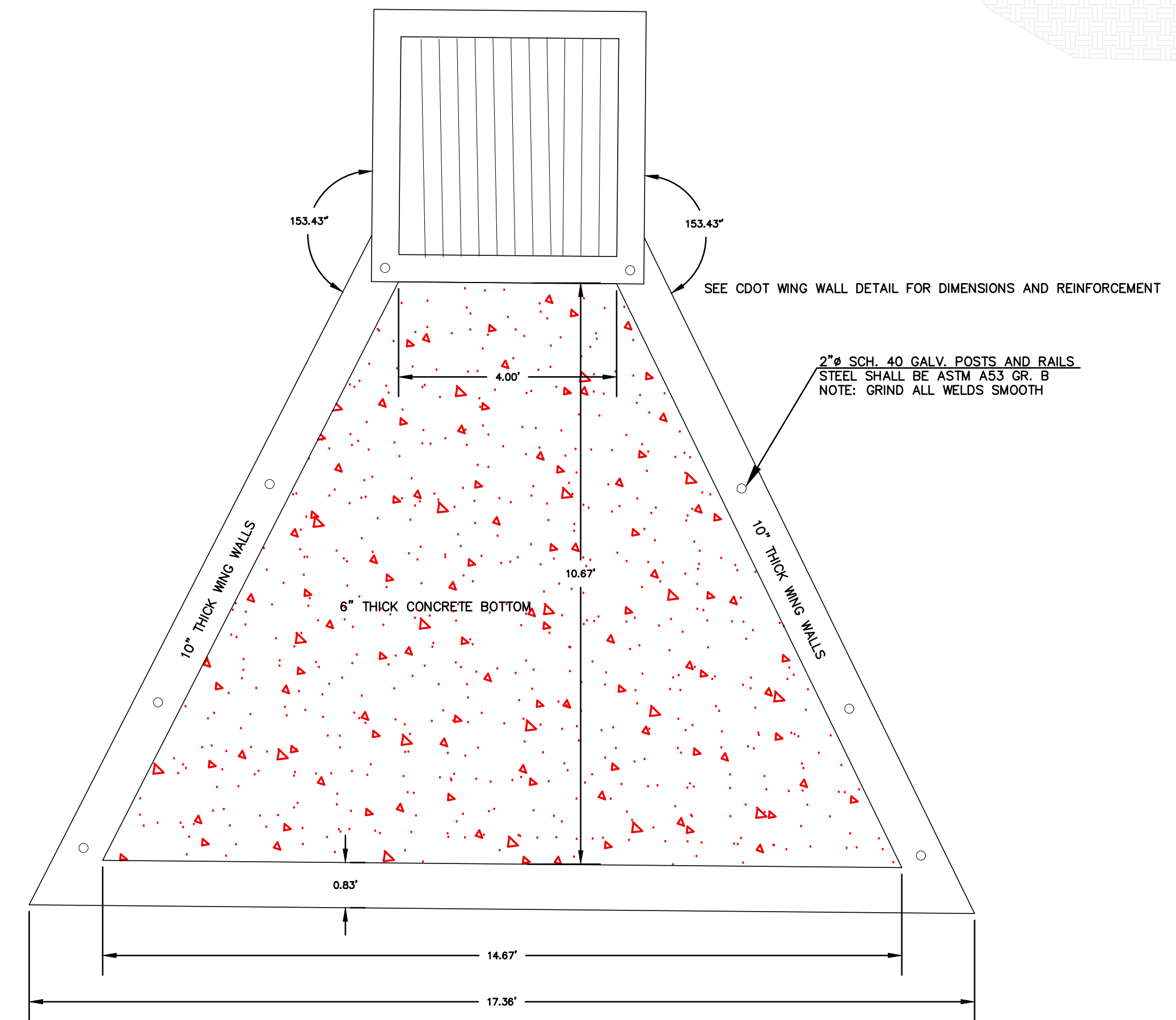
6.
PRIOR TO PAINTING REMOVE ALL OIL, SCALE, AND SLAG, GRIND OFF BURRS AND SHARP EDGES.

PAINT WITH ONE SHOP COAT OF ZINC RICH PRIMER AND TWO COATS OF ALUMINUM PAINT, AASHTO M-69



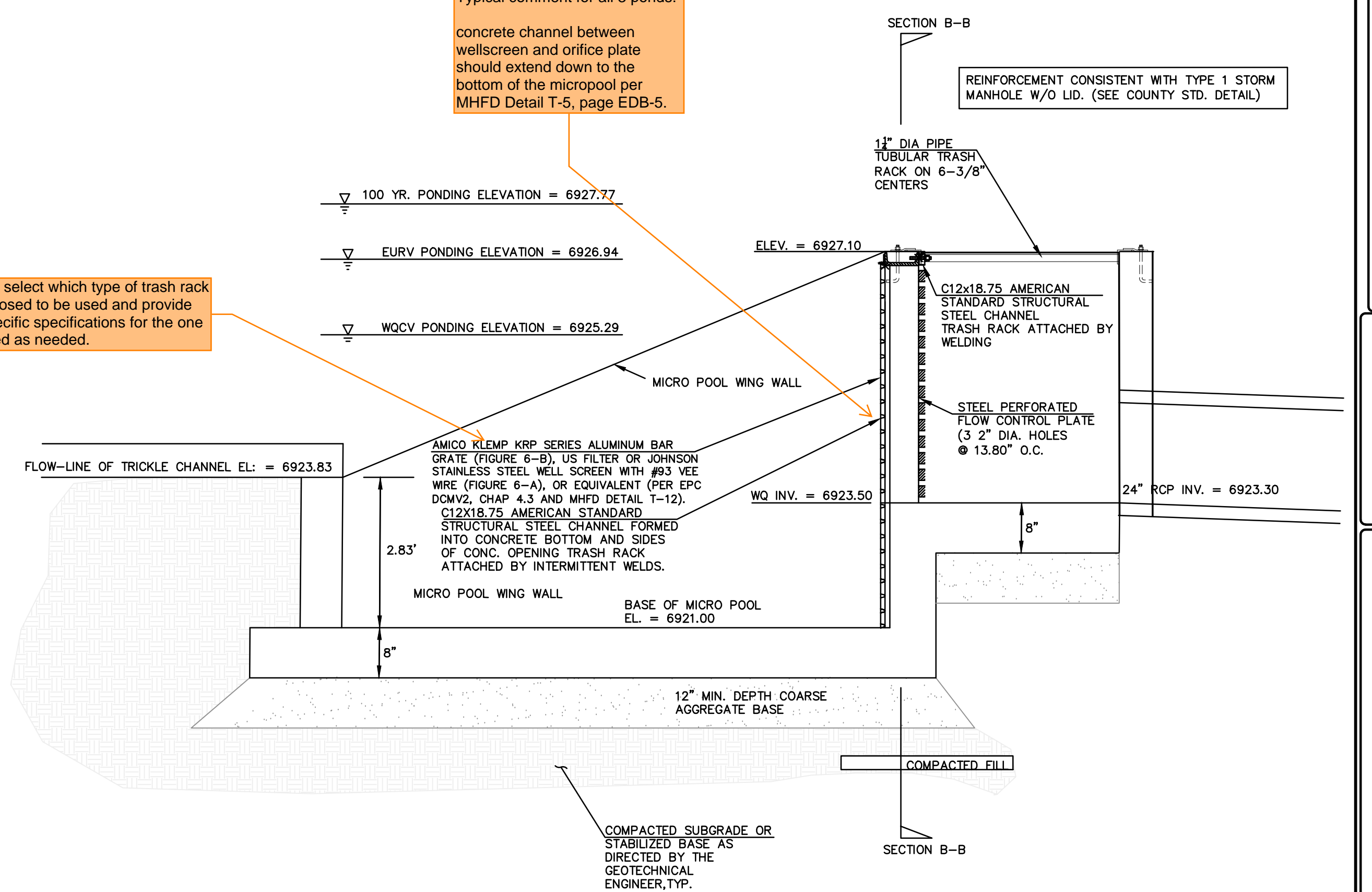
POND 1 EMERGENCY SPILLWAY CROSS SECTION PHASE 1
SCALE: N.T.S.

POND 1 CONCRETE MICROPOOL PHASE 1
SCALE: N.T.S.

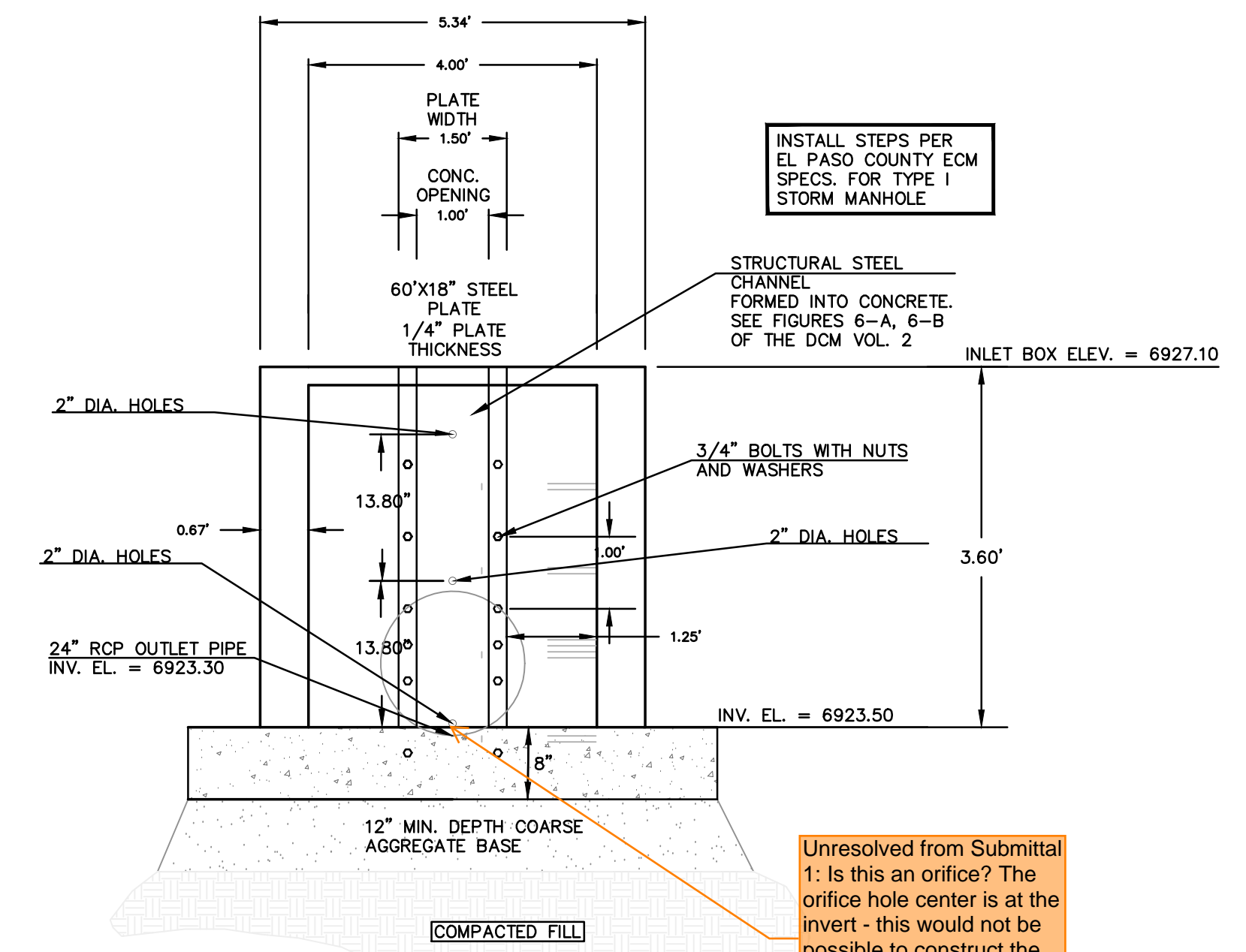


Please select which type of trash rack is proposed to be used and provide the specific specifications for the one selected as needed.

Unresolved:
Typical comment for all 3 ponds:
concrete channel between wellscreen and orifice plate should extend down to the bottom of the micropool per MHFD Detail T-5, page EDB-5.



POND 1 OUTLET STRUCTURE PHASE 1 MODIFIED TYPE 1 MH
SCALE: N.T.S.



Unresolved from Submittal 1: Is this an orifice? The orifice hole center is at the invert - this would not be possible to construct the full orifice hole as the bottom half is lower than the structural steel plate.

POND 1 OUTLET STRUCTURE PHASE 1 MODIFIED TYPE 1 MH
SCALE: N.T.S.

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

WARNING SIGN

PET WASTE
MUST BE
PICKED UP

PET WASTE SIGN

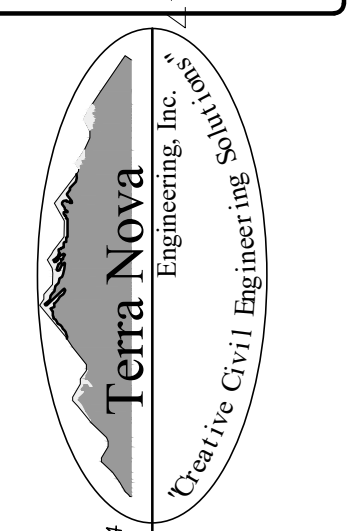
THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.



REVISIONS	NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE ENGINEER, NO CONTRACT SHALL BE ENTERED INTO. TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECT AND FOR THE PURPOSES AUTHORIZED BY WRITTEN AUTHORIZATION.

PREPARED FOR:
ACM ALF VIII JV SUB II LLC
ATTN: JASON POCK
100 E. MISSISSIPPI AVE., SE 50
DENVER, CO 80246
303-984-9800



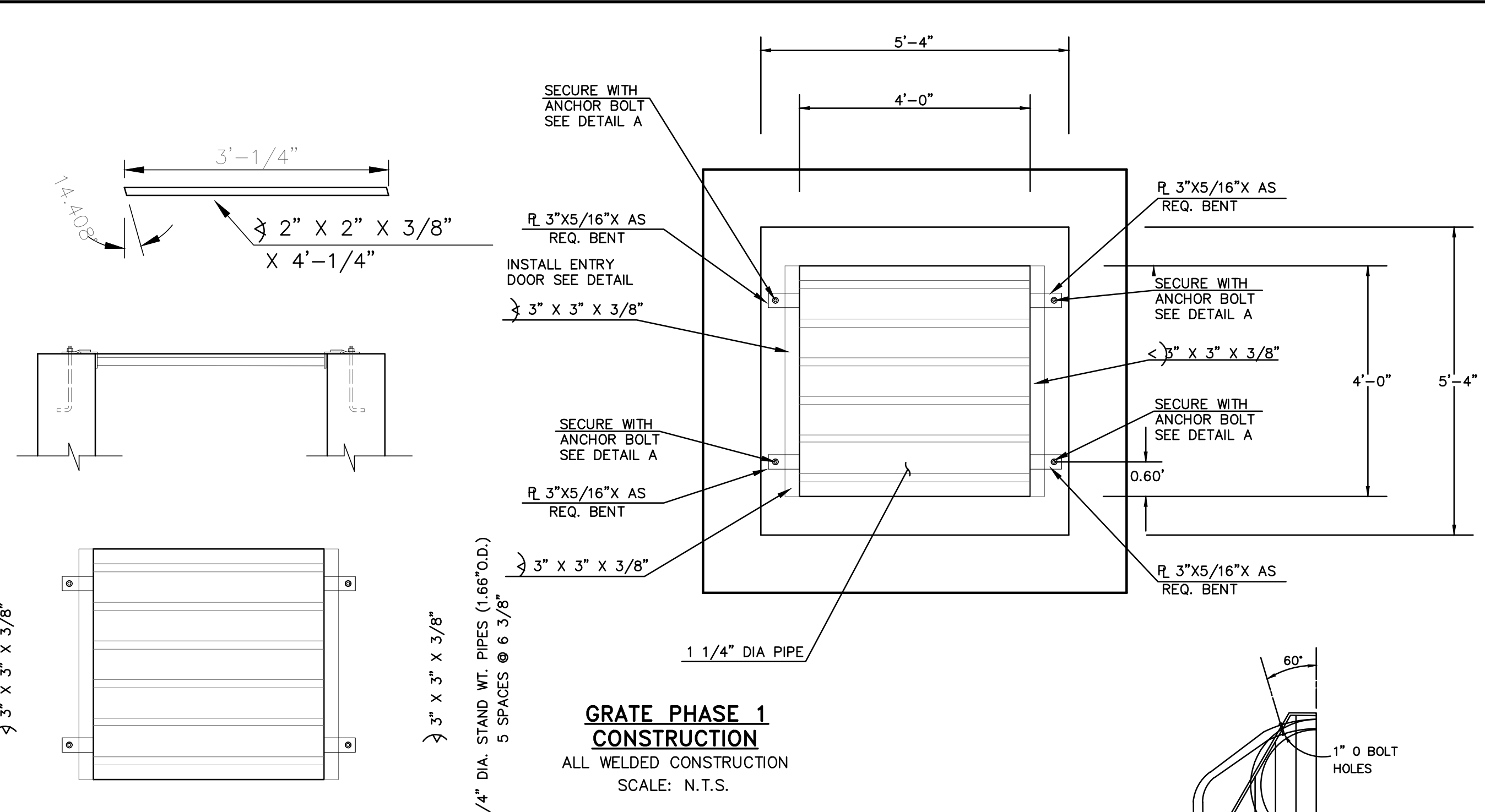
721 S. 23RD STREET
COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6422
FAX: 719-635-6426
www.tnec.com

DESIGNED BY DLF
DRAWN BY QNA
CHECKED BY QNA

H-SCALE NA
V-SCALE N/A

JOB NO. 2356.00
DATE ISSUED 10/4/24
SHEET NO. 46 OF 52

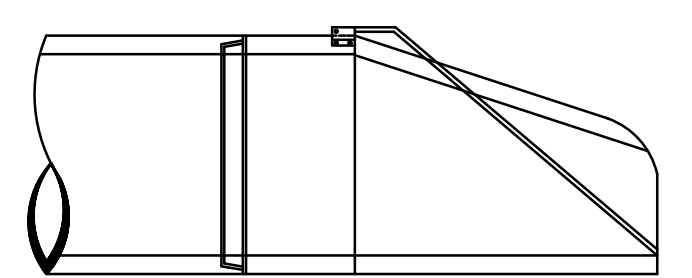
WATERBURY FILING NO. 1
CONSTRUCTION SET
POND 1 DETAILS



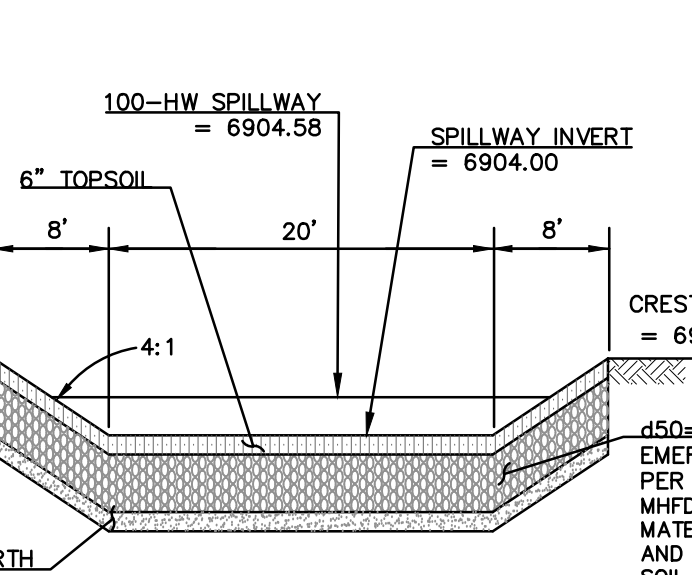
GRATE PHASE 1 CONSTRUCTION
ALL WELDED CONSTRUCTION
SCALE: N.T.S.

REINFORCEMENT CONSISTENT WITH TYPE 1 STORM MANHOLE W/O LID. (SEE COUNTY STD. DETAIL)

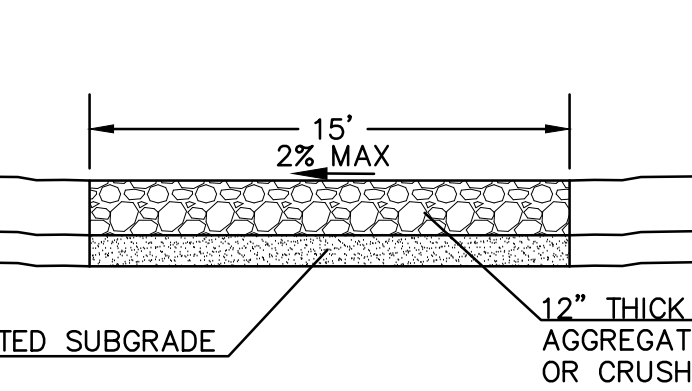
POND 2 FLARED END SECTION
SCALE: N.T.S.



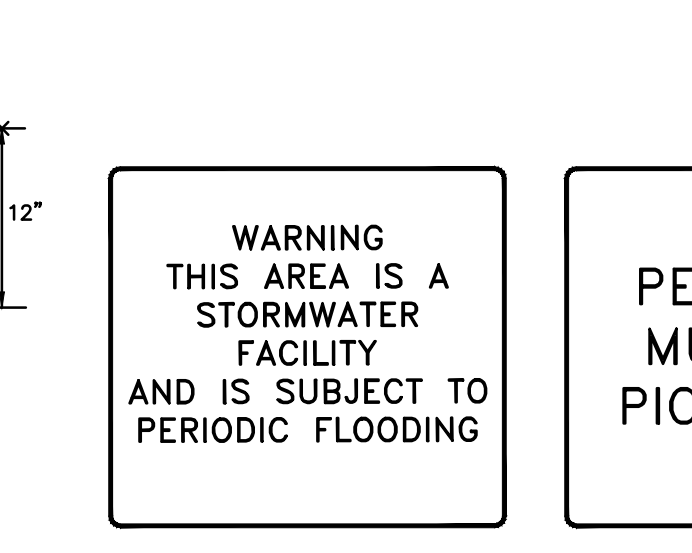
POND 2 TRASH RACK DETAIL: F.E.S. DETAIL
SCALE: N.T.S.



POND 2 EMERGENCY SPILLWAY CROSS SECTION PHASE 1
SCALE: N.T.S.

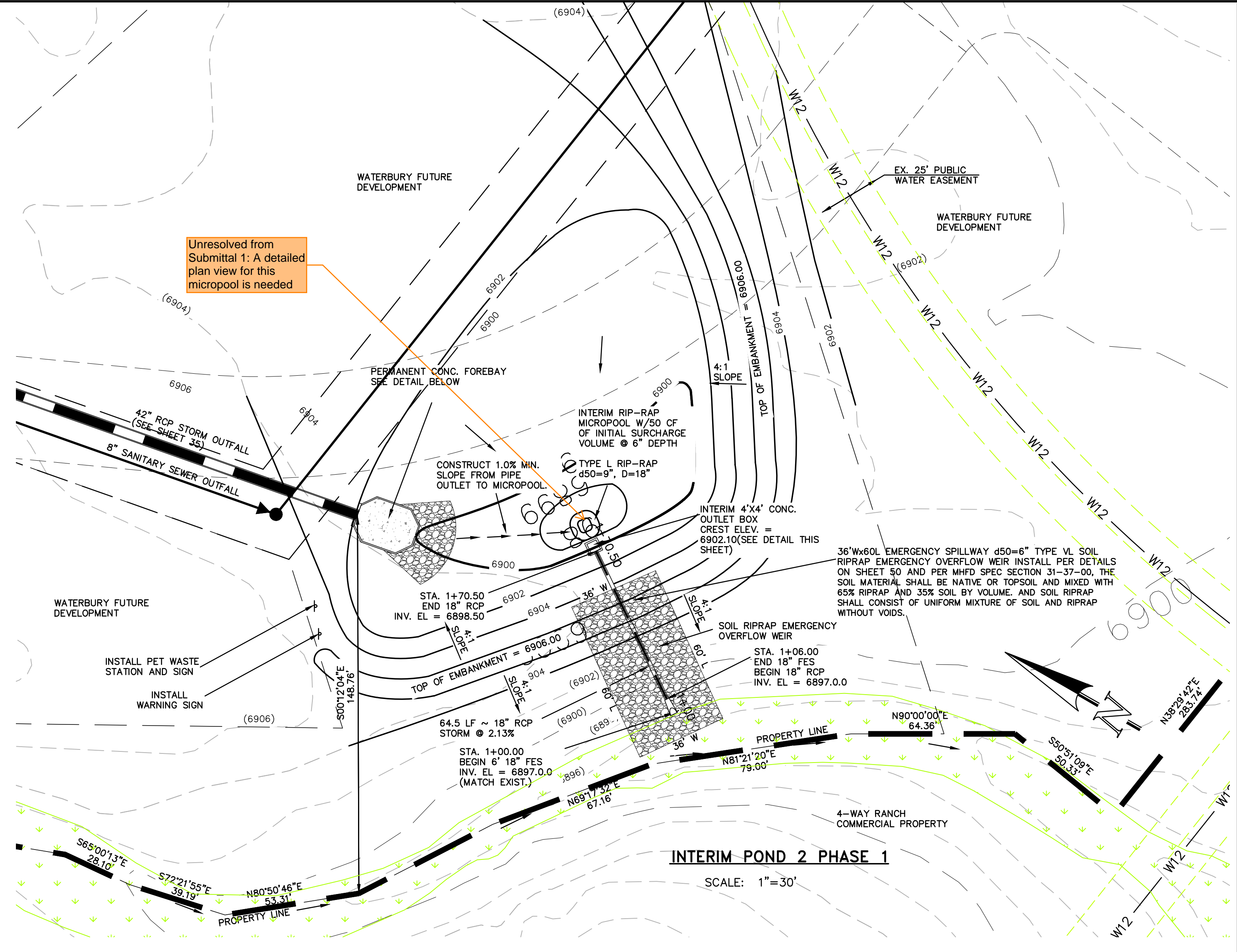


15' MAINTENANCE ACCESS ROAD SECTION PHASE 1
NOT TO SCALE

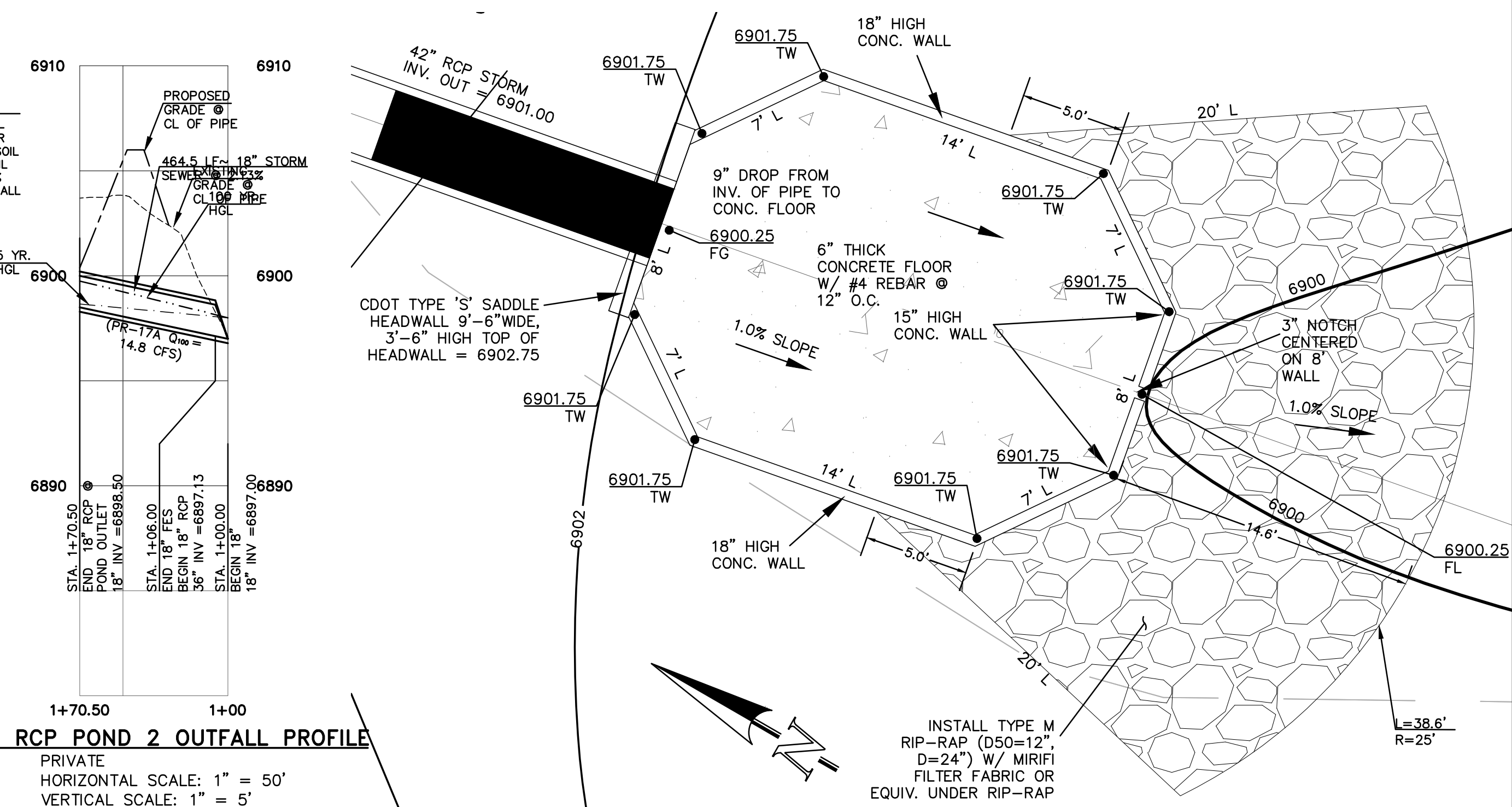


WARNING
THIS AREA IS A STORMWATER FACILITY AND IS SUBJECT TO PERIODIC FLOODING

PET WASTE MUST BE PICKED UP



INTERIM POND 2 PHASE 1
SCALE: 1"=30'



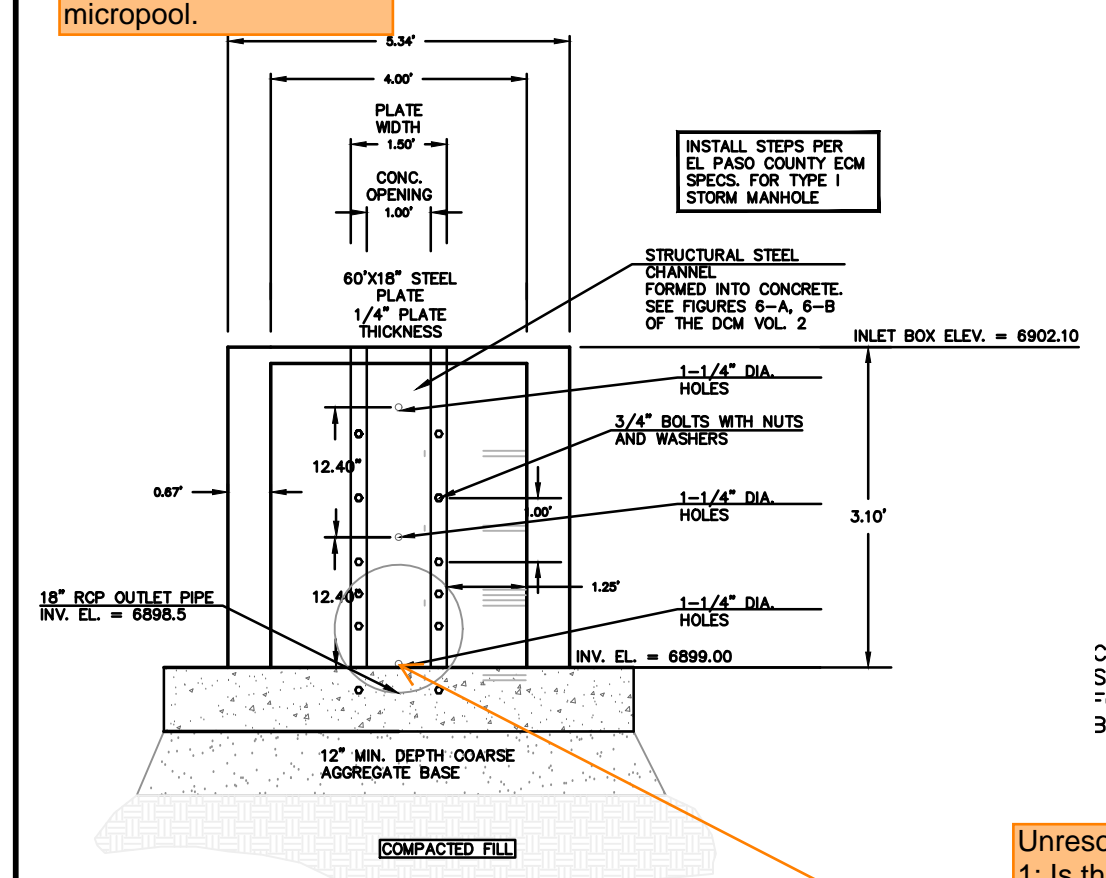
POND 2 PERMANENT FOREBAY DETAIL PHASE 1
SCALE: 1"=5'

24" RCP POND 2 OUTFALL PROFILE
PRIVATE HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

Unresolved from Submittal 1: What is this material type and depth?

What is the dimensions of this micropool? It appears to have some bottom width and then it goes up in elevation. Clarify and fully show micropool.

POND 2 CONCRETE OUTLET BOX DETAILS PHASE 1
SCALE: N.T.S.

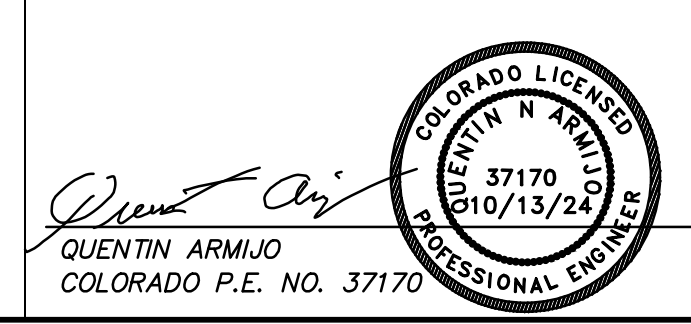


POND 2 OUTLET STRUCTURE MODIFIED TYPE 1 MH PHASE 1
SCALE: N.T.S.

Unresolved from Submittal 1: Is this an orifice? The orifice hole center is at the invert - this would not be possible to construct the full orifice hole as the bottom half is lower than the structural steel plate.

SECTION B-B
SCALE: N.T.S.

THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.



REVISIONS	NO.	DESCRIPTION	DATE

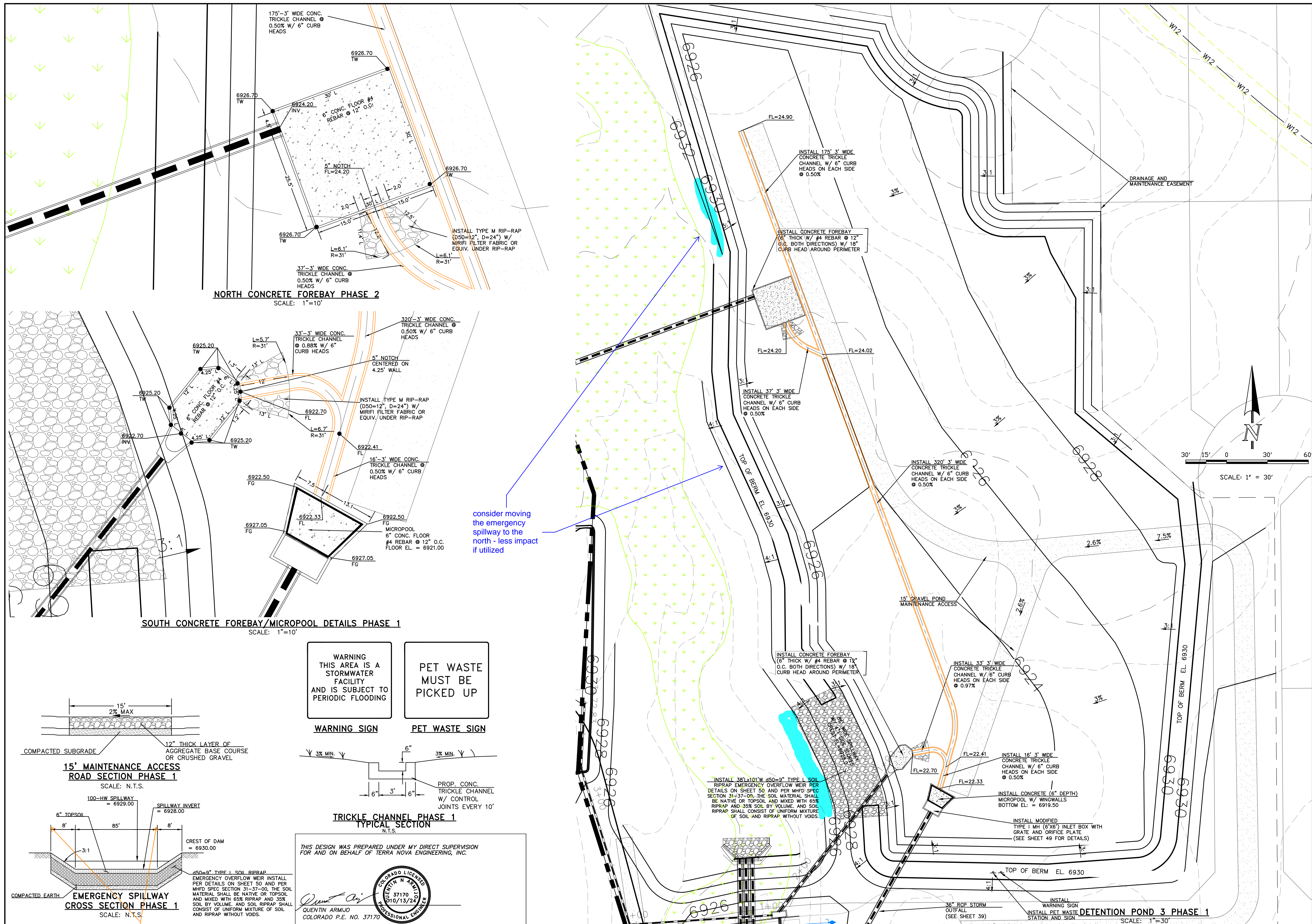
UNTL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE LOCAL AGENCIES REVIEWING AGENCIES TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECT AND ONLY AS AUTHORIZED BY WRITTEN AUTHORIZATION.

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ACM ALF VIII JV SUB II LLC
ATTN: JASON POKK
100 E. MISSISSIPPI AVE., STE 500
DENVER, CO 80246
303-984-9800

Terra Nova Engineering, Inc.
Civil Engineering
721 S. 23RD STREET
COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6422
FAX: 719-635-6426
www.terra-nova.com

WATERBURY FILING NO. 1
CONSTRUCTION SET
POND 2 DETAILS

DESIGNED BY	DLF
DRAWN BY	QNA
CHECKED BY	QNA
H-SCALE	NA
V-SCALE	N/A
JOB NO.	2356.00
DATE ISSUED	10/4/24
SHEET NO.	47 OF 52



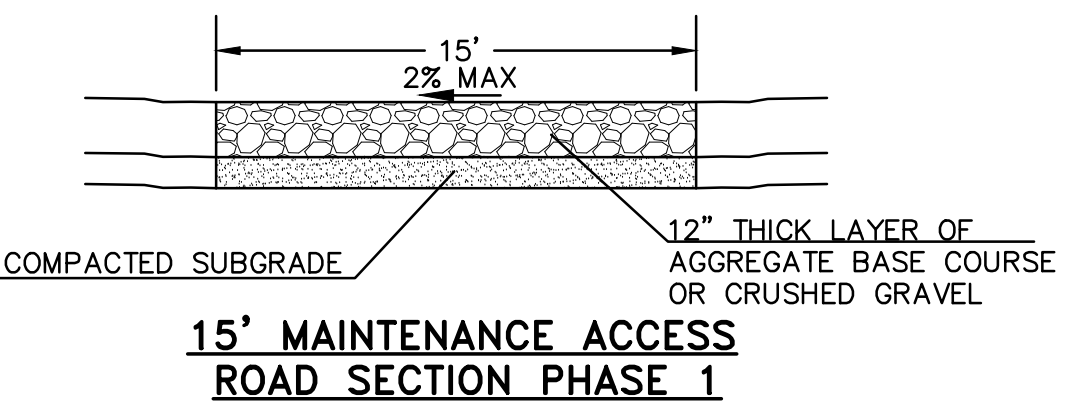
NORTH CONCRETE FOREBAY PHASE 2
SCALE: 1"=10'

SOUTH CONCRETE FOREBAY/MICROPOOL DETAILS PHASE 1
SCALE: 1"=10'

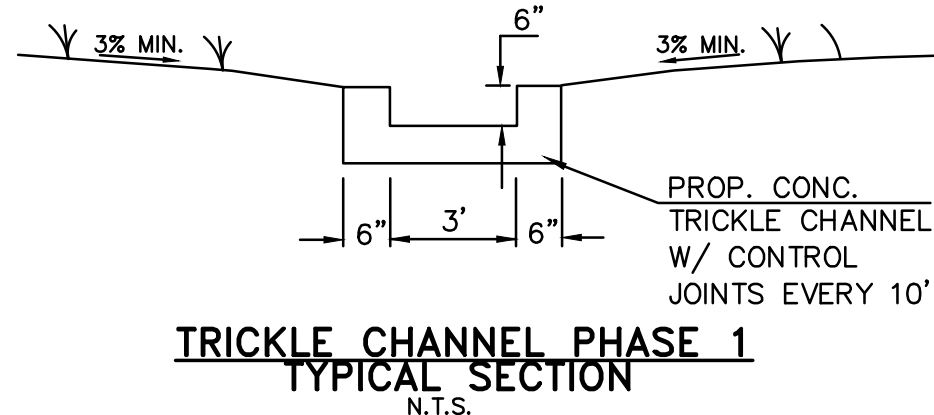
WARNING
THIS AREA IS A
STORMWATER
FACILITY
AND IS SUBJECT TO
PERIODIC FLOODING

**PET WASTE
MUST BE
PICKED UP**

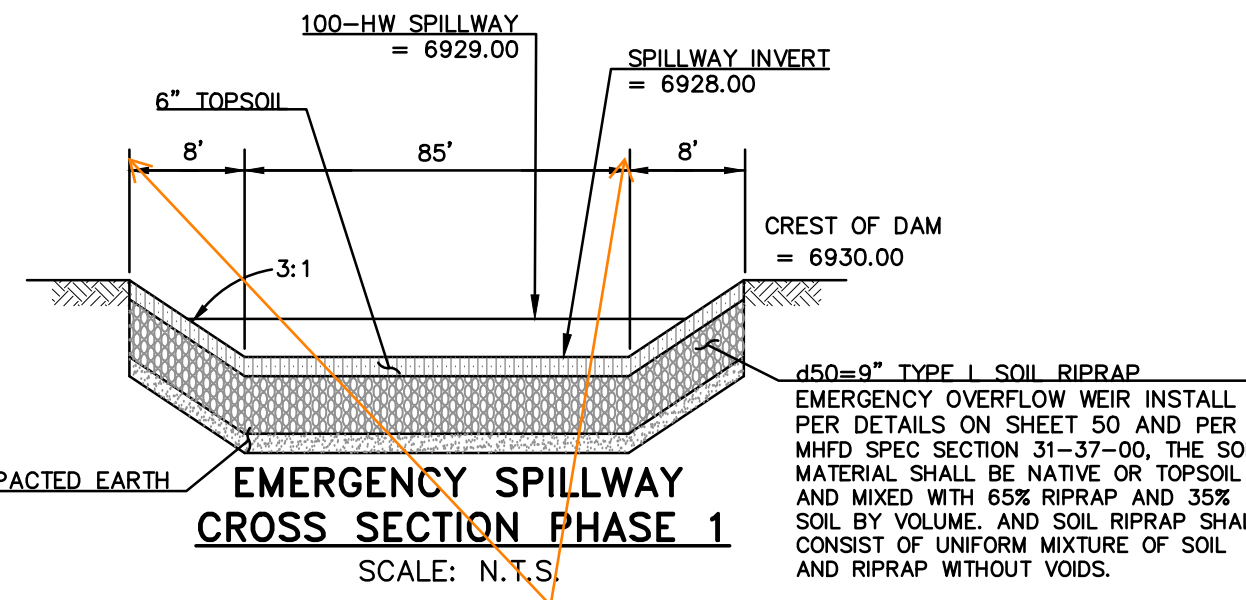
WARNING SIGN **PET WASTE SIGN**



15' MAINTENANCE ACCESS ROAD SECTION PHASE 1
SCALE: N.T.S.



TRICKLE CHANNEL PHASE 1 TYPICAL SECTION
N.T.S.



EMERGENCY SPILLWAY CROSS SECTION PHASE 1
SCALE: N.T.S.

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Quentin Armi
QUENTIN ARMI
COLORADO P.E. NO. 37170

Unresolved from Submittal 1: with 2ft elevation change and 3:1 slopes, these should be 6ft

DATE	
DESCRIPTION	
REVISIONS	
NO.	
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 Terra Nova Engineering, Inc. Civil Engineering 711 S. 23RD STREET COLORADO SPRINGS, CO 80904 OFFICE: 719-635-6422 FAX: 719-635-6426 www.tnecinc.com	
WATERBURY FILING NO. 1	
CONSTRUCTION SET POND 3 DETAILS	
DESIGNED BY DLF	
DRAWN BY QNA	
CHECKED BY QNA	
H-SCALE NA	
V-SCALE N/A	
JOB NO. 2356.00	
DATE ISSUED 10/4/24	
SHEET NO. 48 OF 52	

Riprap Materials

STEP 1 (Materials):

- Riprap should be crushed, angular granite.
- Verify that riprap meets requirements for color, size and gradation. Confirm size and gradations by checking delivery tickets and measure dimensions of the rock using a tape measure.
- Due to quarry availability and material variability, it may be necessary to adjust the size. Get approval from the Engineer before making any material adjustments.

The District has 5 different riprap sizes or gradations:

- Type VL (D50 6")
- Type L (D50 9")
- Type M (D50 12")
- Type H (D50 18")
- Type VH (D50 24")



Type VH Riprap (D50 = 24-inches)

Conventional and Soil Riprap Construction Guidance Checklist

4

Riprap Materials

Table 1: Riprap Gradation

Riprap Designation	% Smaller than Given Size by Weight	Intermediate Rock Dimension (inches)	d_{50} (inches)
Type VL	70 - 100	12	6
	50 - 70	9	
	35 - 50	6	
	2 - 10	2	
Type L	70 - 100	15	9
	50 - 70	12	
	35 - 50	9	
	2 - 10	3	
Type M	70 - 100	21	12
	50 - 70	18	
	35 - 50	12	
	2 - 10	4	
Type H	70 - 100	30	18
	50 - 70	24	
	35 - 50	18	
	2 - 10	6	
Type VH	70 - 100	41	24
	50 - 70	33	
	35 - 50	24	
	2 - 10	9	

* d_{50} - Mean Particle Size

Conventional and Soil Riprap Construction Guidance Checklist

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Soil Riprap Mixing

STEP 2 (Soil Riprap Mixing):

- Soil riprap is created by mixing 2/3 riprap with 1/3 soil by volume. Soil material should be native or topsoil.
- Front end loaders or excavators should be used to scoop up the riprap and soil material and add into a combined mixing pile.
- Verify that the proper proportions of the riprap and soil are used.
- Verify that the materials are thoroughly mixed using a loader or large track excavator. The final product should consist of a uniform mixture of soil and riprap without voids.



Soil riprap being mixed

Conventional and Soil Riprap Construction Guidance Checklist

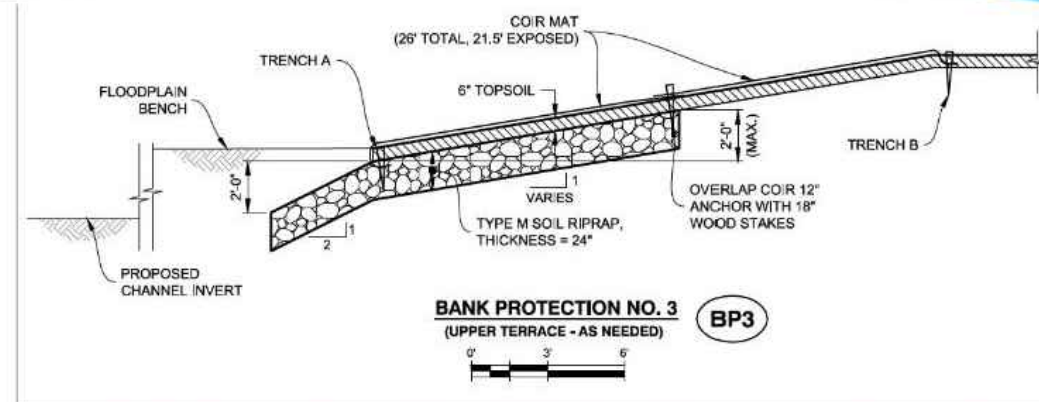
7

Conventional/Soil Riprap Subgrade

STEP 3 (Subgrade):

Verify that the subgrade is prepared prior to riprap installation.

- Confirm that areas to receive riprap are excavated to a depth that accounts for the riprap thickness, topsoil and granular bedding thickness if specified.
- Subgrade should be firm and unyielding.
- There should be no groundwater present during riprap installation.



Excavated subgrade for riprap

Conventional and Soil Riprap Construction Guidance Checklist

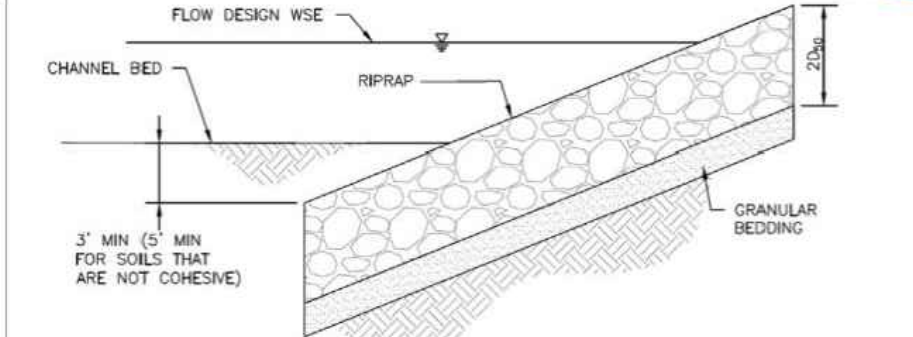
8

Conventional/Soil Riprap Installation

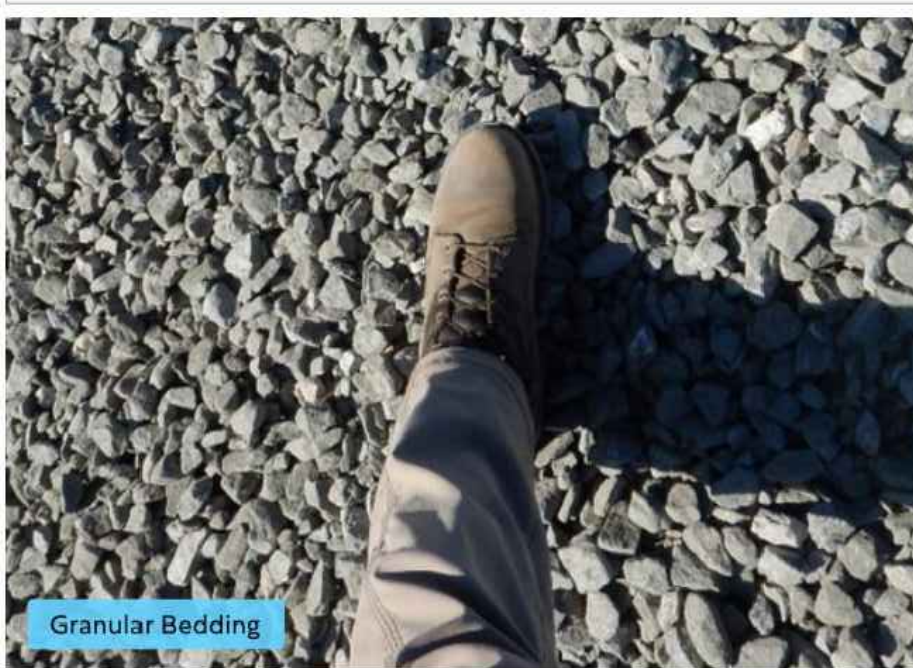
STEP 4 (Bedding):

Granular bedding material is generally required under conventional riprap to prevent piping of underlying subgrade soils. It is not typically required for soil riprap. Verify that:

- Granular bedding is crushed, angular rock that meets gradation requirements.
- Granular bedding is placed at specified thickness.



Conventional Riprap with Bedding



Granular Bedding

Conventional and Soil Riprap Construction Guidance Checklist

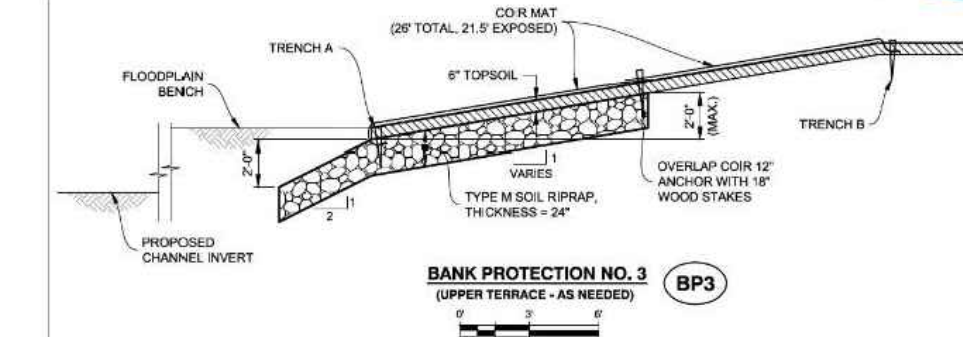
9

Conventional/Soil Riprap Installation

STEP 5 (Installation):

Riprap should be installed to the lines and grades shown on the plans. Verify that:

- Riprap is placed at thickness specified.
- Riprap is placed and well distributed such that there are no large accumulations of either smaller or larger sizes of stone. If segregation occurs during placement, riprap will need to be reworked to ensure that it is well mixed.
- Larger rock material is flush to the top surface and arranged to minimize voids with smaller rock material in between.



Soil riprap installation complete before topsoil placement

Conventional and Soil Riprap Construction Guidance Checklist

10

Conventional/Soil Riprap Installation

STEP 5 (Installation continued):

- Make sure that conventional and soil riprap is consolidated and compacted with an excavator bucket (plated) or a tracked piece of equipment to smooth the surface and interlock the rock material.
- For soil riprap, verify that there are no excessively thick zones or pockets of soil that could create a weak spot and be prone to washing out.



Conventional and Soil Riprap Construction Guidance Checklist

11

Conventional/Soil Riprap Installation

STEP 5 (Installation continued):

- Following placement, soil riprap is sometimes specified to be buried with several inches of topsoil.



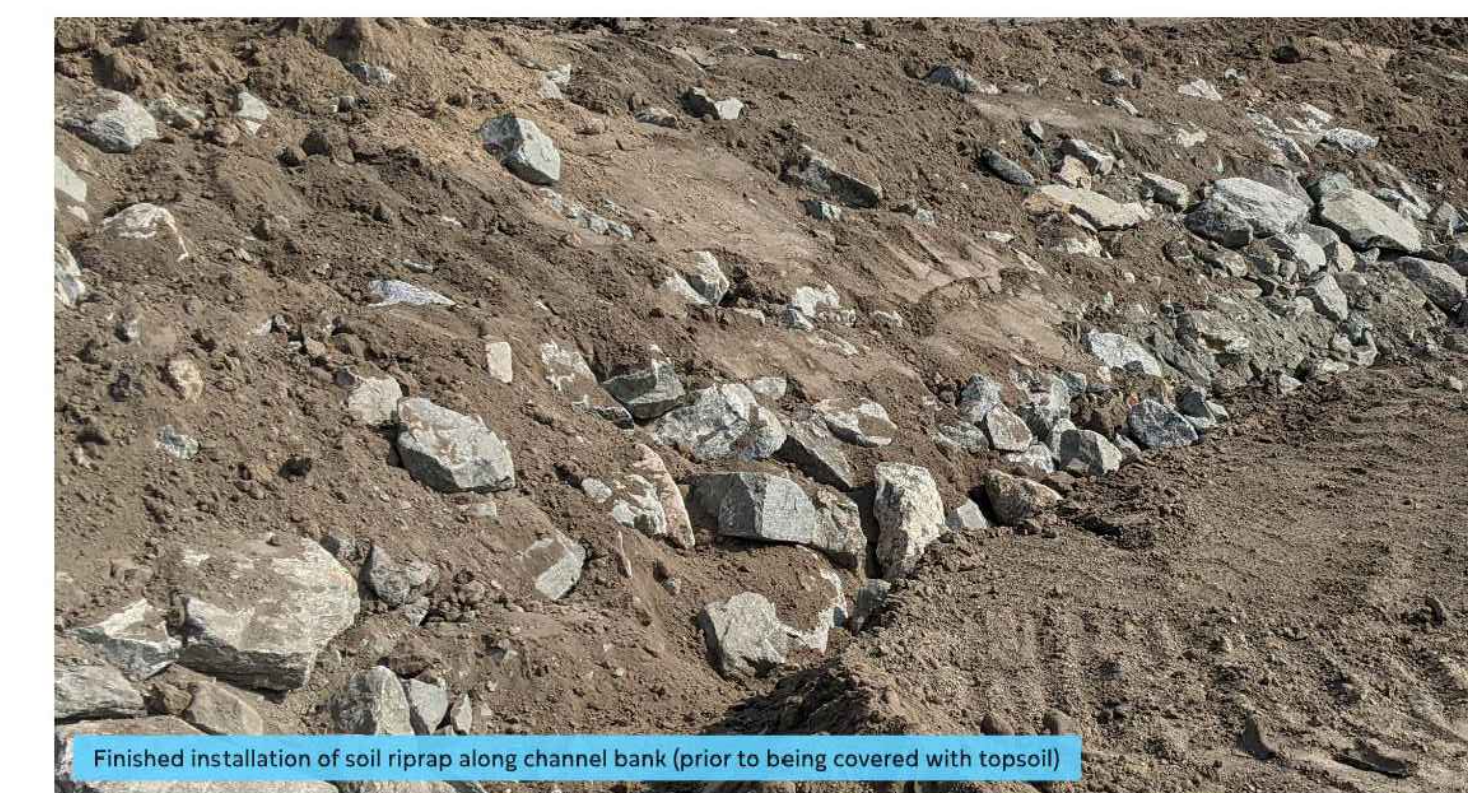
Soil riprap installed and ready to be covered with topsoil

Conventional and Soil Riprap Construction Guidance Checklist

12

Finished Installation

After mixing, placing and compacting, soil riprap should be smooth on the surface and all the voids filled with soil.



Finished installation of soil riprap along channel bank (prior to being covered with topsoil)

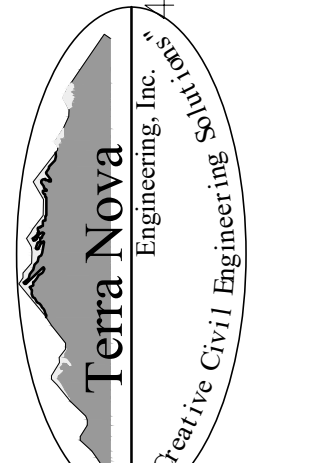
Conventional and Soil Riprap Construction Guidance Checklist

14

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700 E. MISSISSIPPI AVE., STE 500
DENVER, CO 80246
303-984-9800

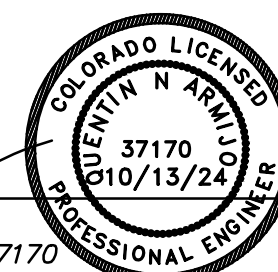


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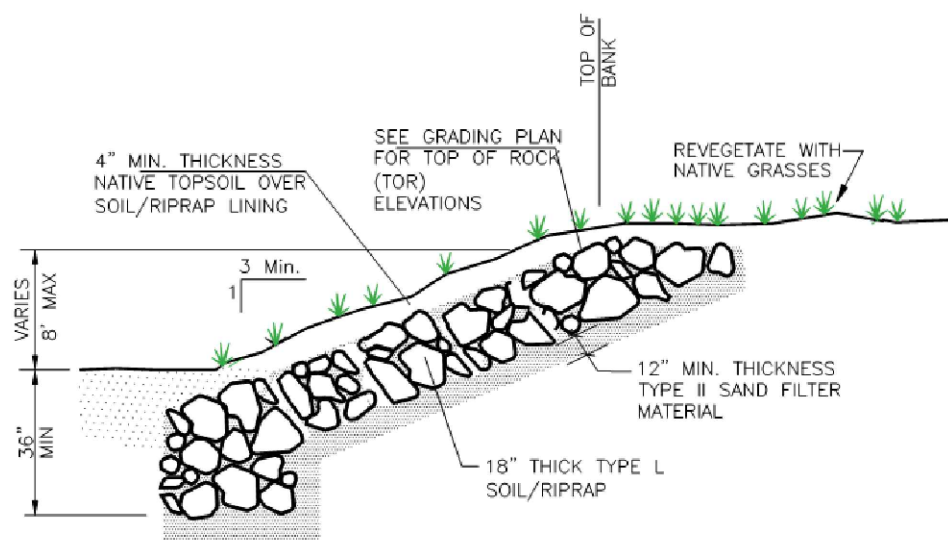
WATERBURY FILING NO. 1
CONSTRUCTION SET
SOIL RIPRAP DETAILS

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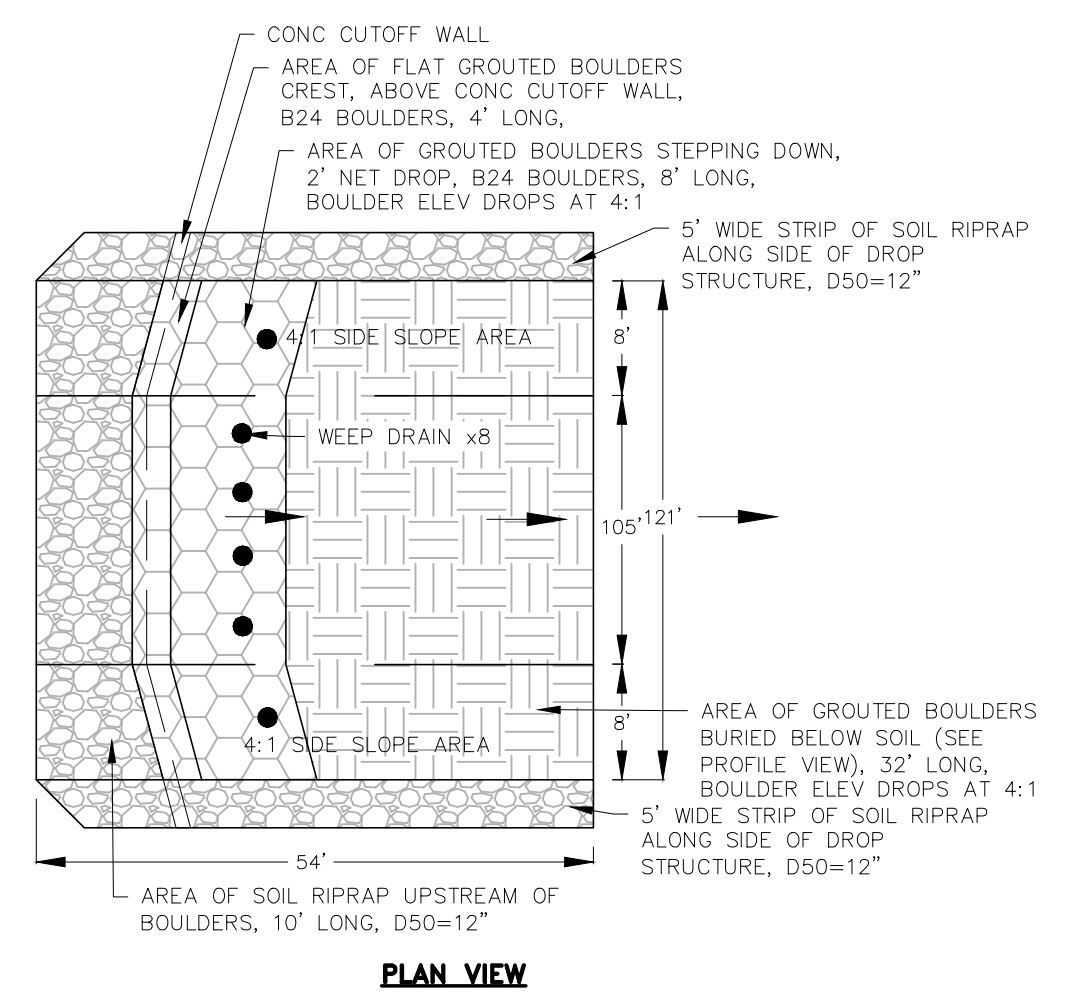
DESIGNED BY DLF
DRAWN BY QNA
CHECKED BY QNA
H-SCALE NA
V-SCALE N/A
JOB NO. 2356.00
DATE ISSUED 10/4/24
SHEET NO. 50 OF 52



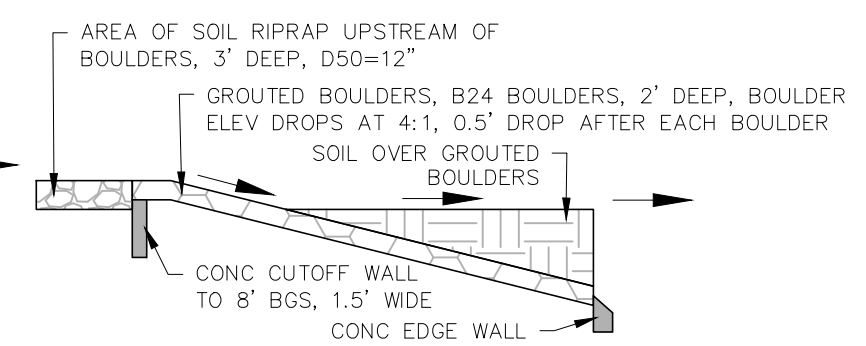
Quentin Armijo
COLORADO P.E. NO. 37170



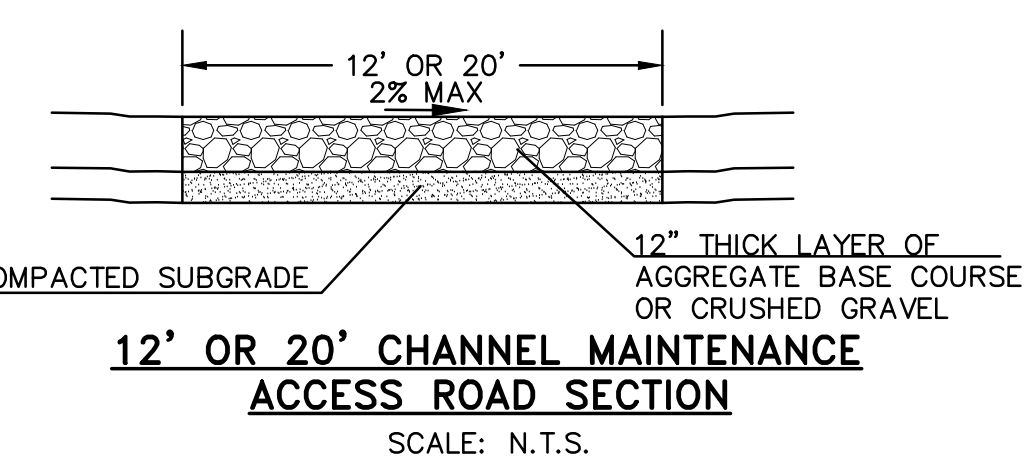
TYPICAL SOIL/RIPRAP BANK LINING
SCALE: N.T.S.



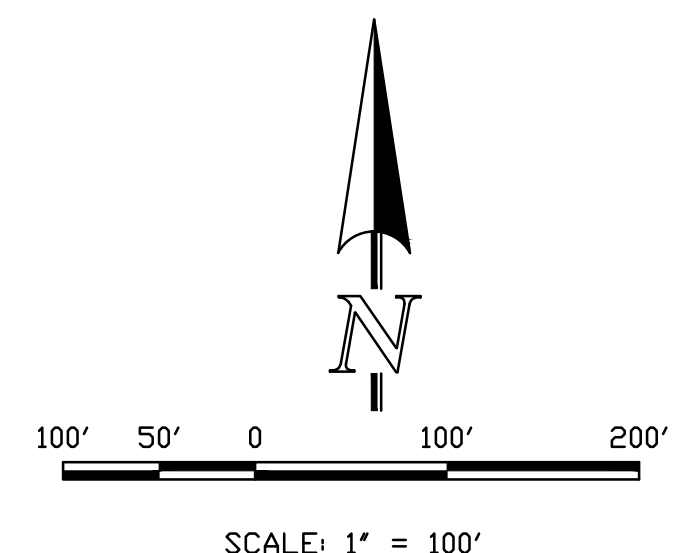
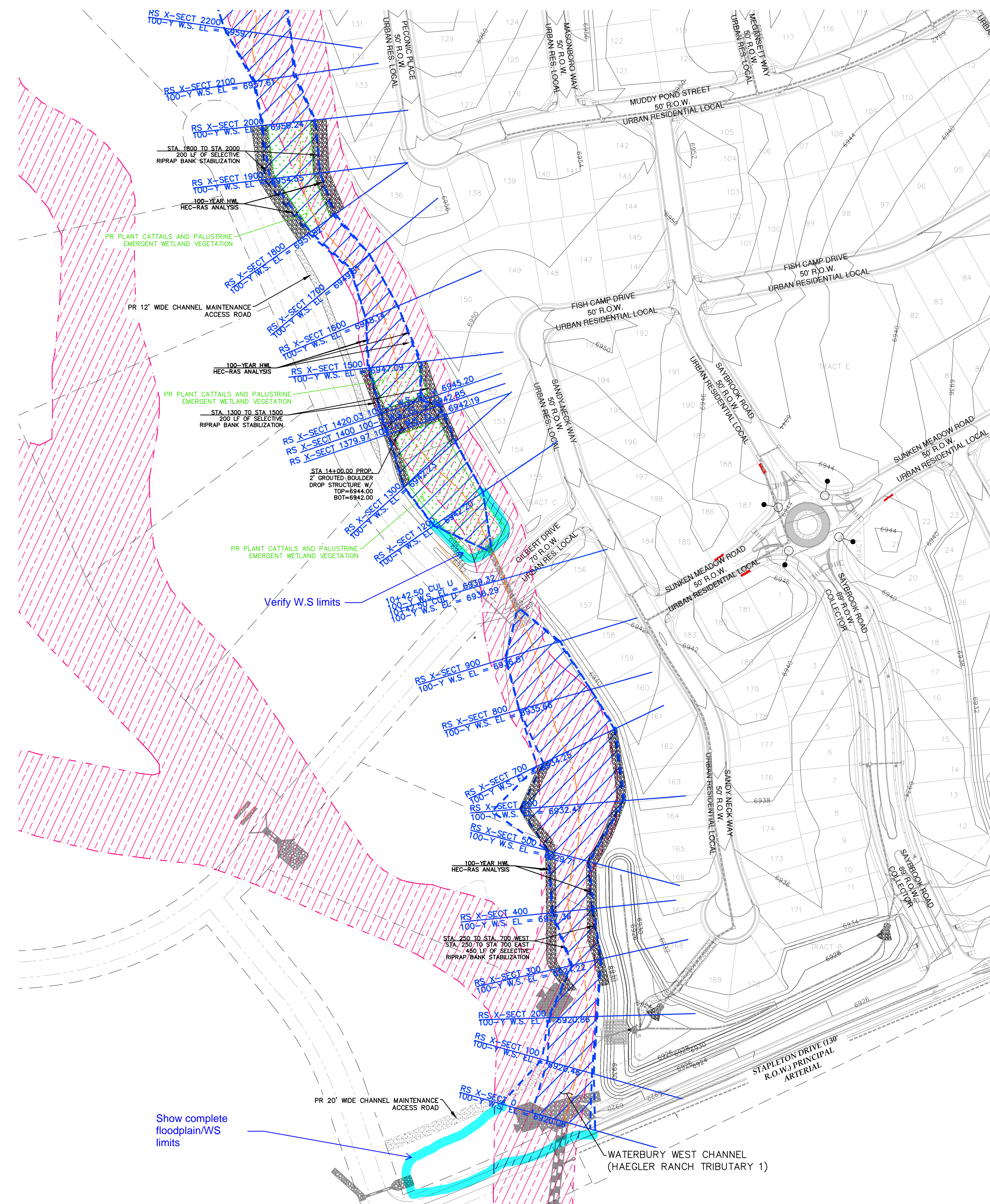
PLAN VIEW



PROFILE VIEW (CENTER LINE)
GROUTED BOULDER DROP STRUCTURE DETAIL
NOT TO SCALE



12' OR 20' CHANNEL MAINTENANCE ACCESS ROAD SECTION
SCALE: N.T.S.



GENERAL NOTES

1. B24 BOULDERS ARE 24"Ø MIN.

CONSTRUCTION REQUIREMENT NOTES

1. GROUT DEPTH RANGES FROM HALF TO FULL BOULDER HEIGHT. ALL GROUT SHALL BE A MINIMUM HALF BOULDER HEIGHT.
2. AN EDGE WALL IS REQUIRED AROUND THE ENTIRE DROP STRUCTURE.
3. THE MAX ALLOWABLE INDIVIDUAL DROP HEIGHT OFF A BOULDER IS 1.5' (0.5' USED IN DESIGN).

CHANNEL REVEGETATION SPECS (OUTSIDE WETLANDS)

SEED DISTURBED CHANNEL AREA PER COLORADO SPRINGS SCM TABLE 5-1 EL PASO COUNTY CONSERVATION DISTRICT ALL-PURPOSE MIX FOR UPLAND, TRANSITION AND PERMANENT CONTROL MEASURE AREAS AND COLORADO SPRINGS DCM VOL 1 TABLE 14-10 'WILDFLOWER MIX'. SEED ALL DISTURBED.

Provide a legend

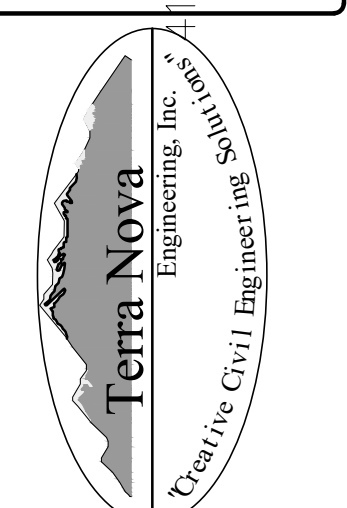
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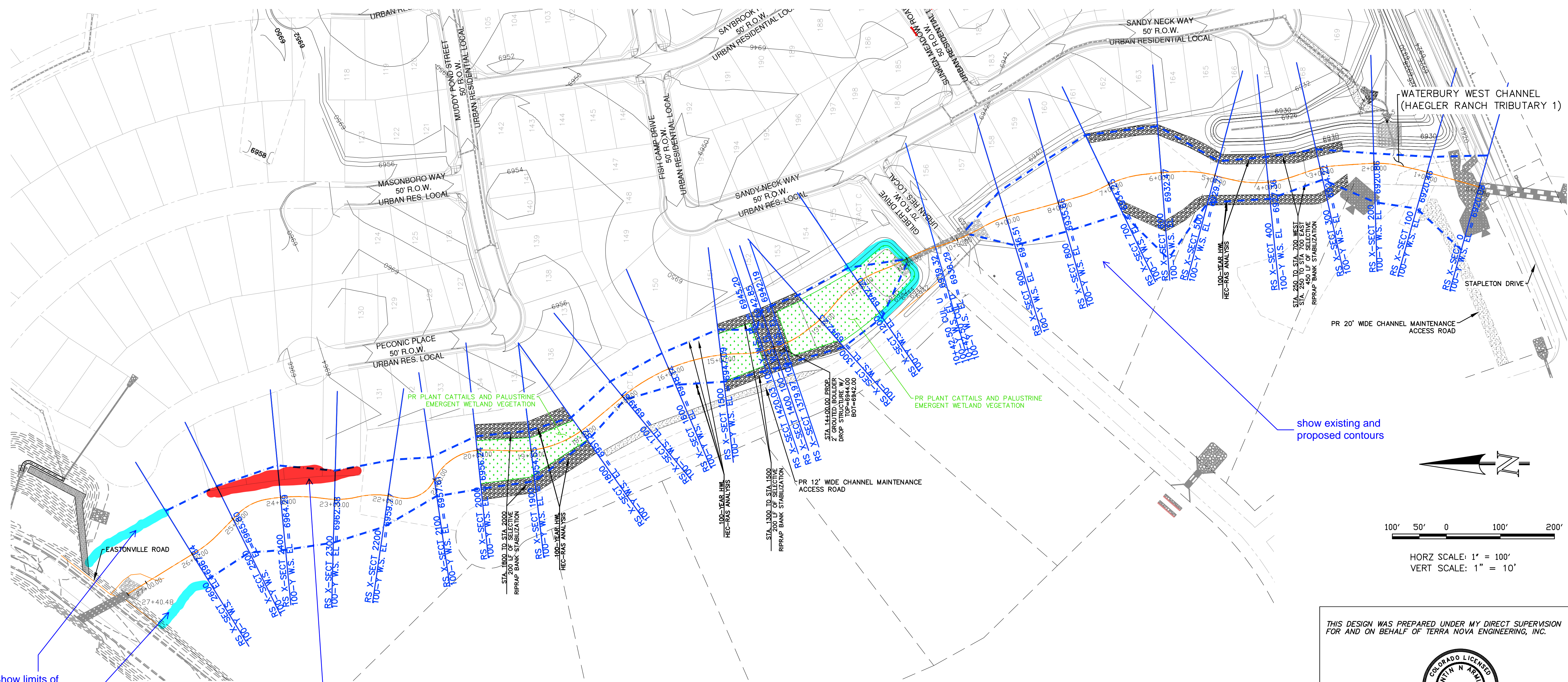
PREPARED FOR:
ACM ALF VIII JV SUB II LLC
ATTN: JASON POCK
100 E. MISSISSIPPI AVE., STE 500
DENVER, CO 80246
303-984-9800



721 S. 23RD STREET
COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6422
FAX: 719-635-6426
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WATERBURY FILING NO. 1
CONSTRUCTION SET
WEST CHANNEL - CHANNEL IMPROVEMENTS PLAN

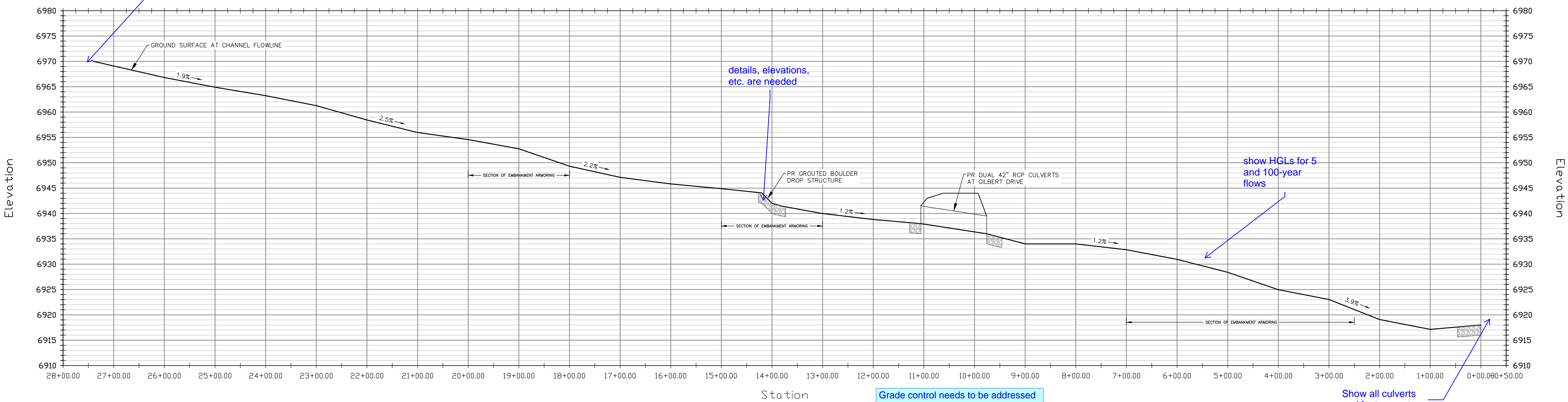
DESIGNED BY DLF
DRAWN BY QNA
CHECKED BY QNA
H-SCALE AS SHOWN
V-SCALE N/A
JOB NO. 2356.00
DATE ISSUED 10/4/24
SHEET NO. 51 OF 52



WATERBURY WEST CHANNEL (HAEPLER RANCH TRIBUTARY 1) PLAN & PROFILE VIEW
 HORZ SCALE: 1"=100' - VERT SCALE: 1"=10'

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QUENTIN ARMJO
 COLORADO P.E. NO. 37170



Grade control needs to be addressed per ECM 3.3.3 C and H

Show all culverts and features, etc.

Show limits of floodplain

Show all culverts and features, etc.

lots can't be in the floodplain

details, elevations, etc. are needed

show HGLs for 5 and 100-year flows

Provide a P&P for the east channel also.

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721 S. 23RD STREET COLORADO SPRINGS, CO 80904 OFFICE: 719-635-6422 FAX: 719-635-6426 www.tnec.com			
WATERBURY FILING NO. 1 CONSTRUCTION SET WEST CHANNEL - PLAN AND PROFILE			
DESIGNED BY DLF DRAWN BY QNA CHECKED BY QNA H-SCALE AS SHOWN V-SCALE AS SHOWN JOB NO. 2356.00 DATE ISSUED 10/4/24 SHEET NO. 52 OF 52			