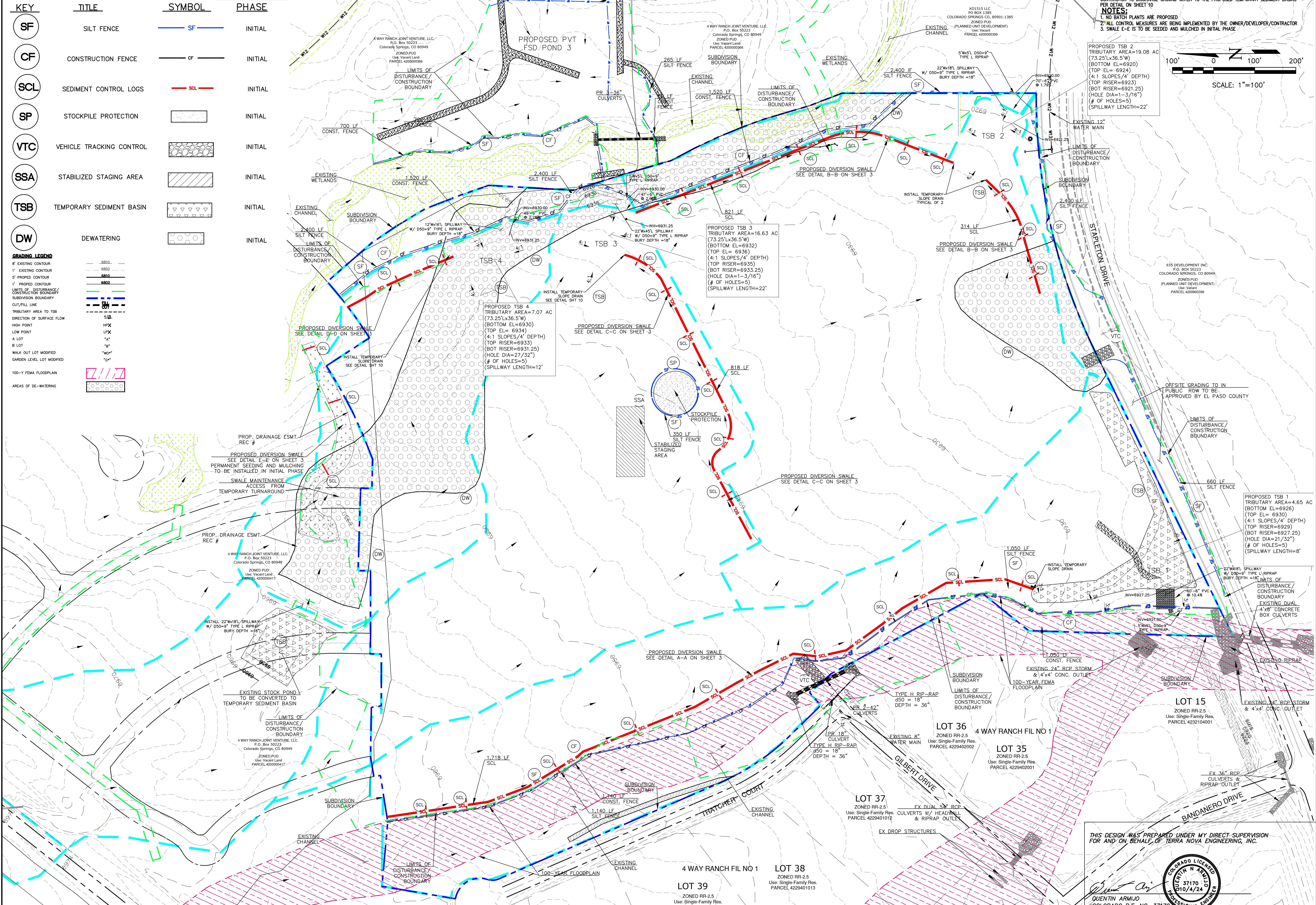


EROSION CONTROL LEGEND

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

GRADING LEGEND	
8' EXISTING CONTOUR	
5' EXISTING CONTOUR	
1' PROPOSED CONTOUR	
1' PROPOSED 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	
100-Y FEMRA FLOODPLAIN	
AREAS OF DE-WATERING	



DEWATERING NOTE:
 CONTRACTOR TO DISCHARGE GROUND WATER TO THE PROPOSED TEMPORARY SEDIMENT BASINS PER DETAIL ON SHEET 10

NOTES:
 1. NO BATCH PLANTS ARE PROPOSED
 2. ALL CONTROL MEASURES ARE BEING IMPLEMENTED BY THE OWNER/DEVELOPER/CONTRACTOR
 3. SWALE E-E IS TO BE SEEDED AND MULCHED IN INITIAL PHASE

SCALE: 1"=100'

DATE: _____

REVISIONS

NO.	DESCRIPTION

UNTL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE ENGINEER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED. TERRA NOVA ENGINEERING, INC. APPROVES THE USE ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED 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

Terra Nova
 Engineering, Inc.
 Civil Engineering

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

WATERBURY FILING NO. 1

GRADING AND EROSION CONTROL PLAN
 INITIAL EROSION CONTROL PLAN 1

DESIGNED BY DLF
 DRAWN BY QNA
 CHECKED BY QNA

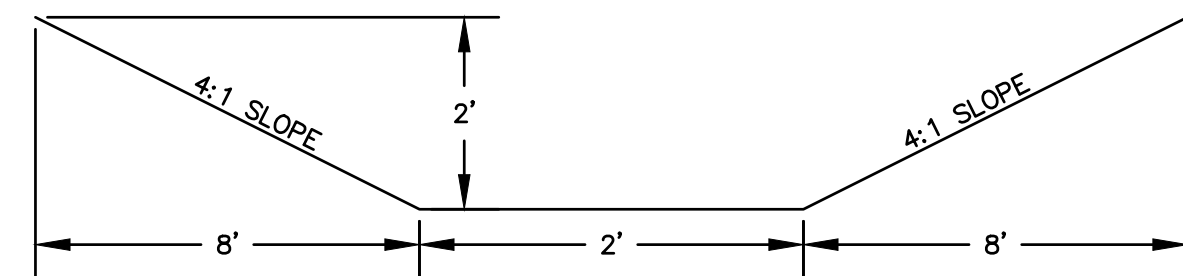
H-SCALE 1" = 100'
 V-SCALE N/A

JOB NO. 2356.00
 DATE ISSUED 12/22/24
 SHEET NO. 2 OF 54

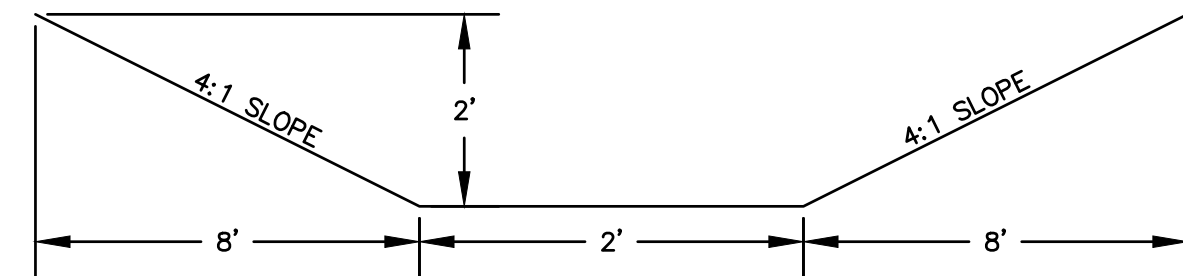
THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

Quentin Armojo
 QUENTIN ARMOJO
 COLORADO P.E. NO. 37170

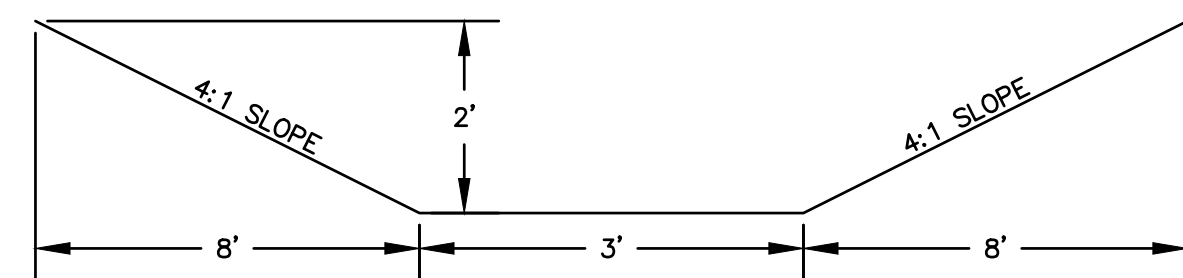
COLORADO LICENSED PROFESSIONAL ENGINEER
 37170
 11/14/24



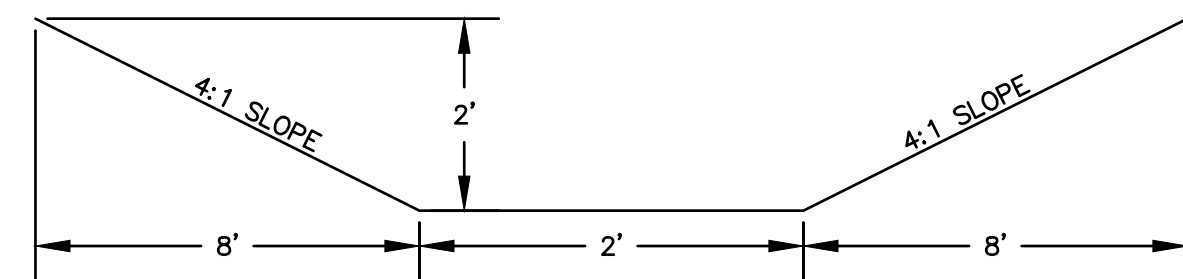
DIVERSION SWALE A-A
SEE PREVIOUS SHEET



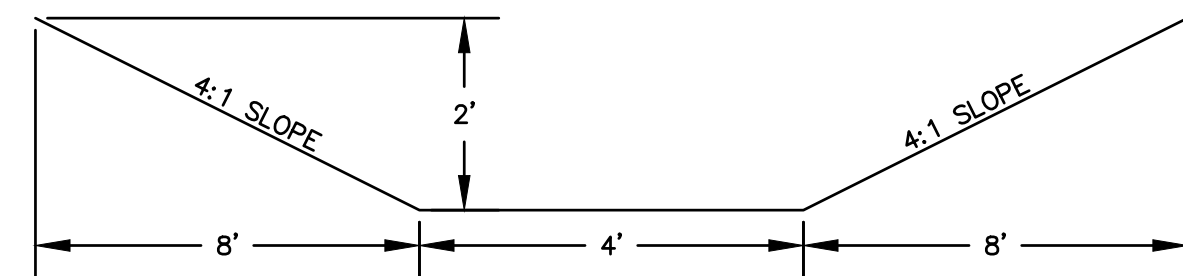
DIVERSION SWALE B-B
SEE PREVIOUS SHEET



DIVERSION SWALE C-C
SEE PREVIOUS SHEET



DIVERSION SWALE D-D
SEE PREVIOUS SHEET

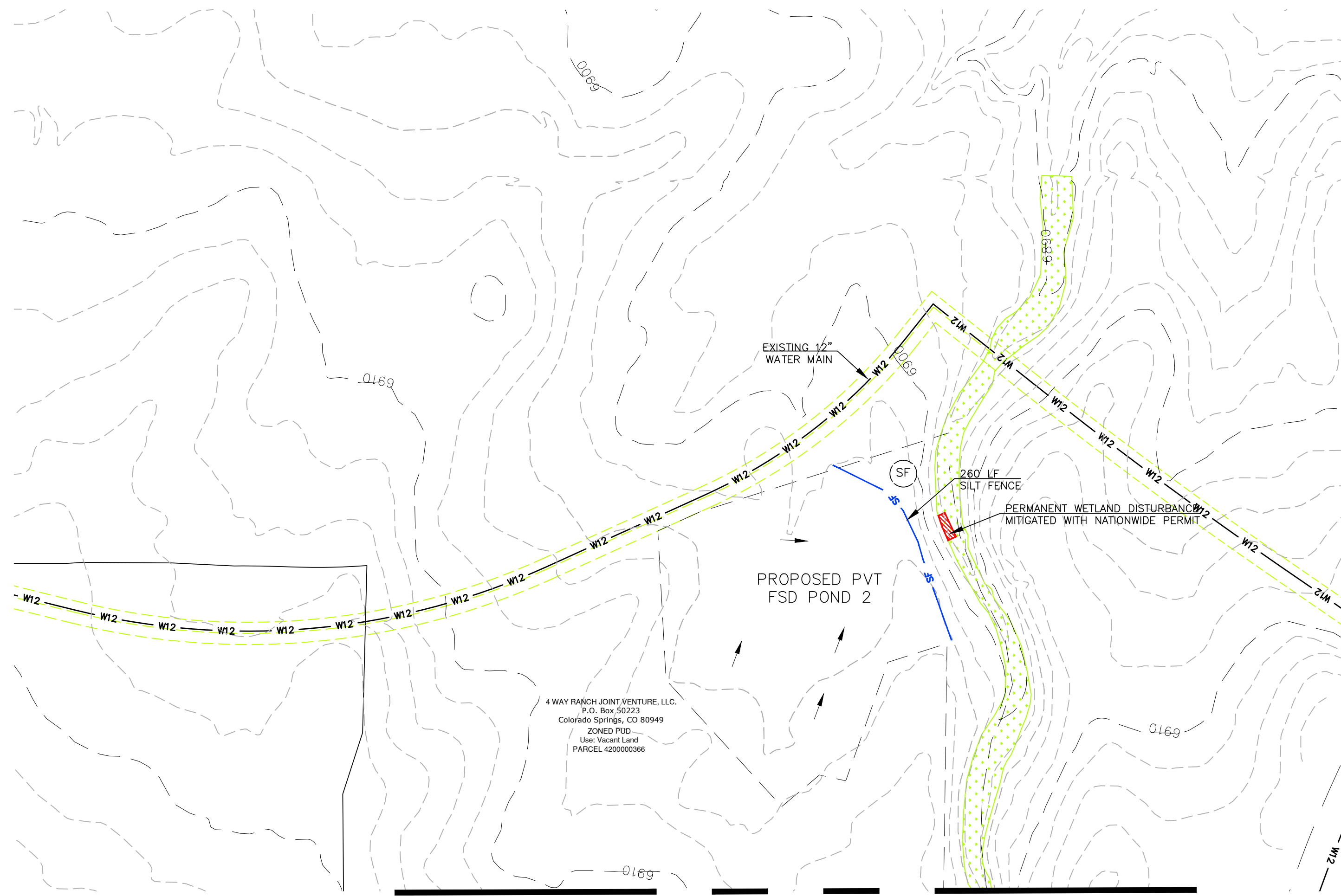


DIVERSION SWALE E-E
SEE PREVIOUS SHEET

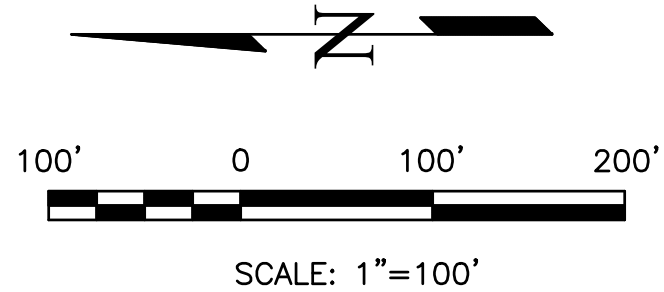
NOTES:
NO BATCH PLANTS ARE PROPOSED
ALL CONTROL MEASURES ARE BEING IMPLEMENTED BY THE OWNER/DEVELOPER/CONTRACTOR

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 = 74.33 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.

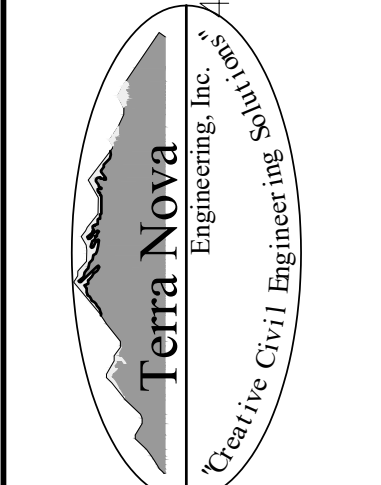
THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.



REVISIONS	NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE BOARD OF PROFESSIONAL ENGINEERS, 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
GRADING EROSION CONTROL PLAN
INITIAL EROSION CONTROL PLAN 2

DESIGNED BY	DLF
DRAWN BY	QNA
CHECKED BY	QNA
H-SCALE	AS SHOWN
V-SCALE	N/A
JOB NO.	2356.00
DATE ISSUED	12/22/24
SHEET NO.	3 OF 54

EROSION CONTROL LEGEND

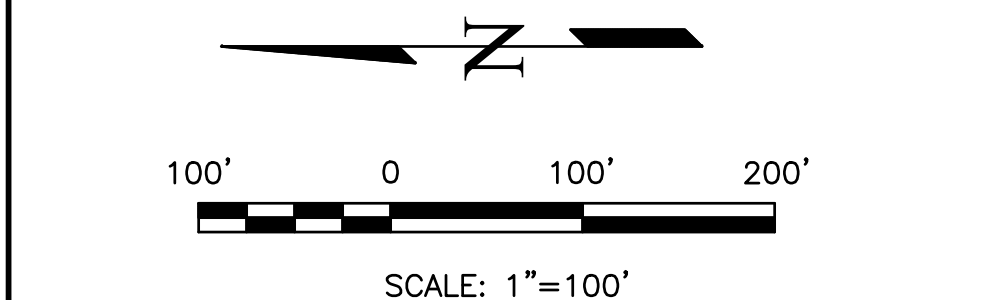
KEY	TITLE	SYMBOL	IMPLEMENTATION PHASE
SF	SILT FENCE		INITIAL
CF	CONSTRUCTION FENCE		INITIAL
CIP	CULVERT INLET PROTECTION		INTERIM
IP	INLET PROTECTION		INTERIM
SBB	STRAW BALE BARRIER		INTERIM
SP	STOCKPILE PROTECTION		INITIAL
VTC	VEHICLE TRACKING CONTROL		INITIAL
CWA	CONCRETE WASHOUT AREA		INTERIM
SSA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

GRADING LEGEND

8' EXISTING CONTOUR		6810
1' EXISTING CONTOUR		6802
5' PROPED CONTOUR		6810
1' PROPED CONTOUR		6802
LIMITS OF DISTURBANCE/CONSTRUCTION BOUNDARY		
SUBDIVISION BOUNDARY		
CUT/FILL LINE		
TRIBUTARY AREA TO TSB		
DIRECTION OF SURFACE FLOW		4.0%
HIGH POINT		HPX
LOW POINT		LPX
A LOT		"A"
B LOT		"B"
WALK OUT LOT MODIFIED		"WO"
GARDEN LEVEL LOT MODIFIED		"G"
100-Y FEM A FLOODPLAIN		
AREAS OF DE-WATERING		

WETLANDS LEGEND

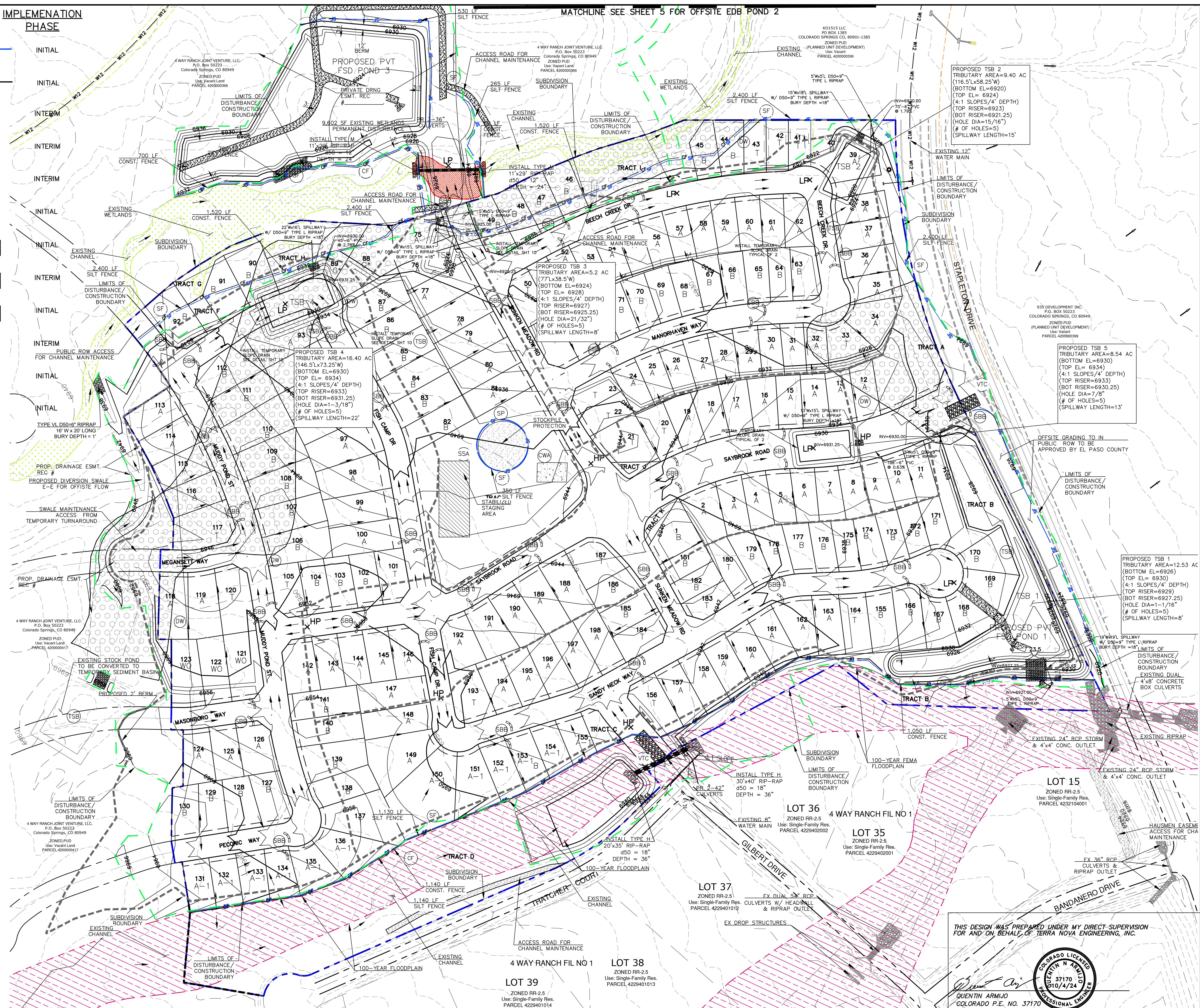
EXISTING WETLANDS	
PERMANENT WETLAND DISTURBANCE	



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

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

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



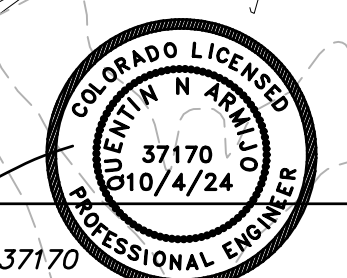
NO.	DESCRIPTION

UNTL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE ENGINEER, THE USER SHALL BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS. TERRA NOVA ENGINEERING, INC. APPROVES THE USE OF THESE DRAWINGS FOR THE PROJECT ONLY FOR THE USE AND PURPOSES SPECIFIED BY WRITTEN AUTHORIZATION.

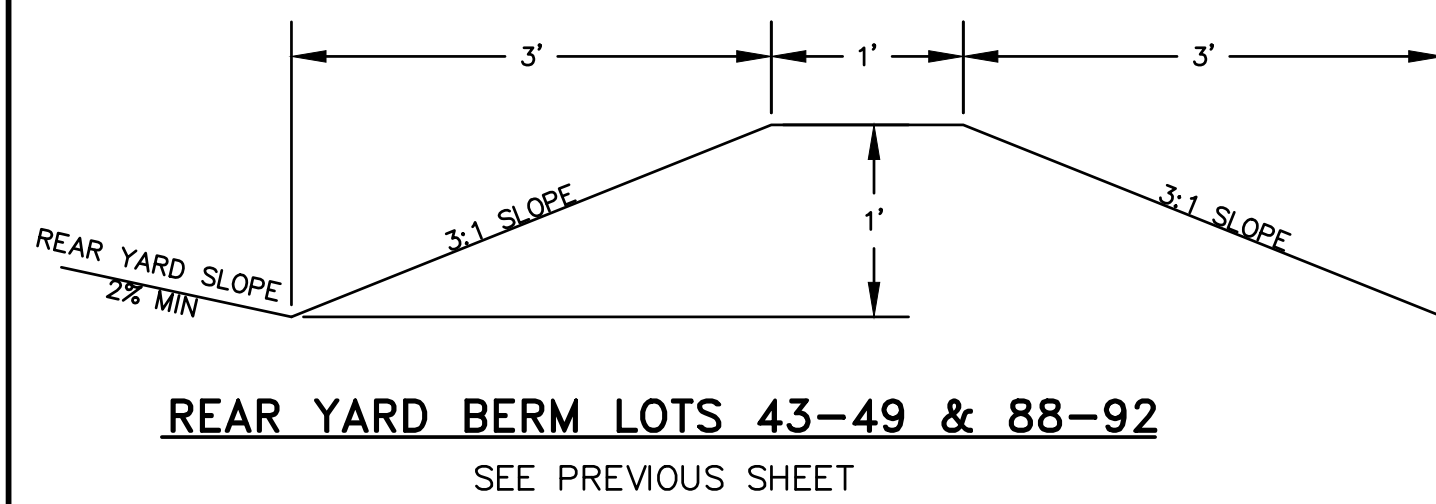
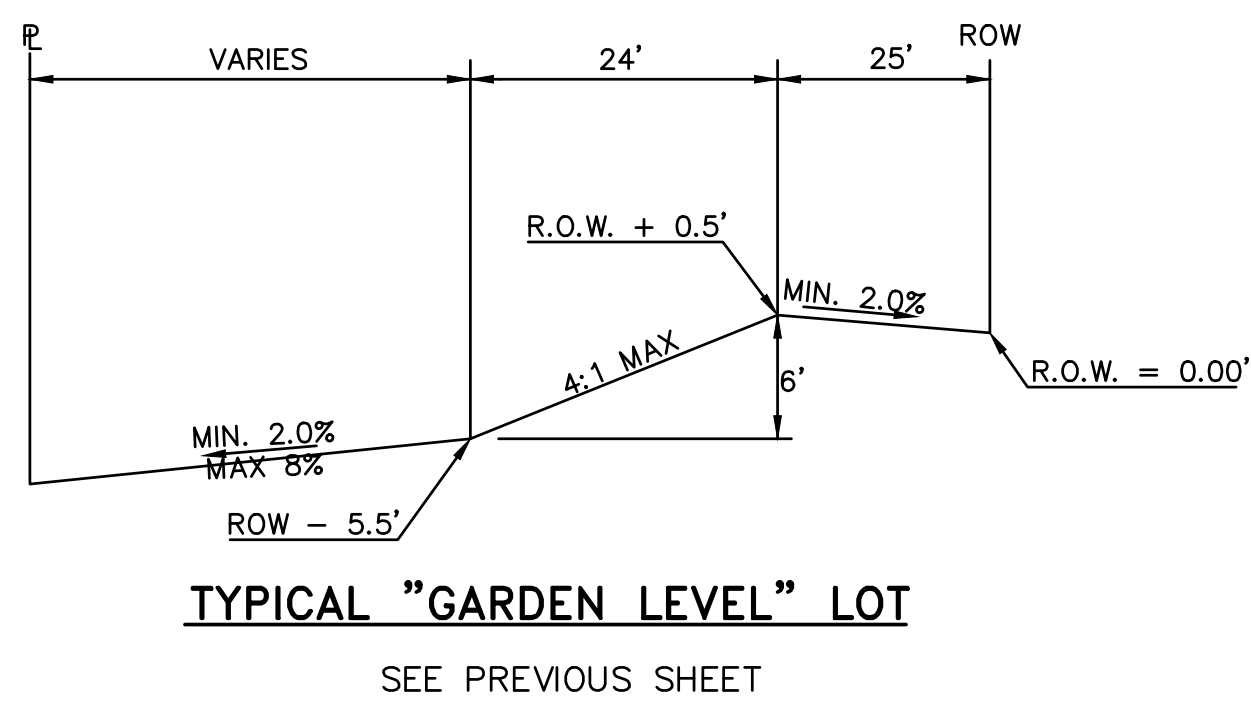
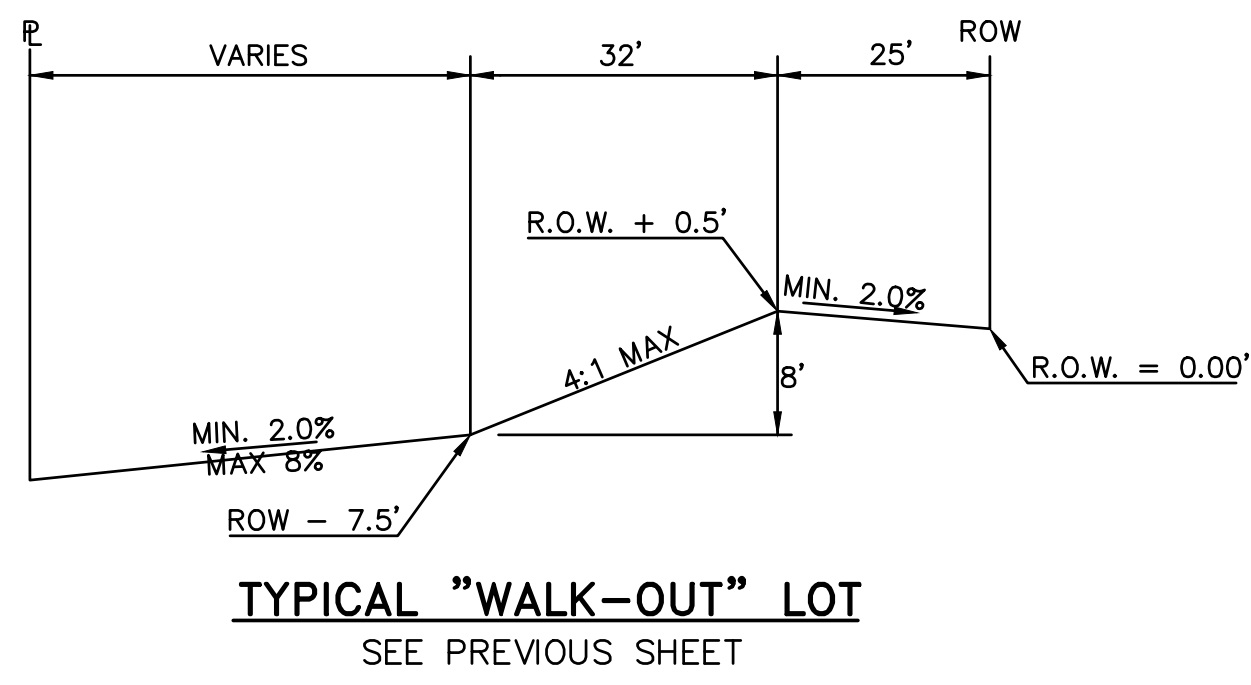
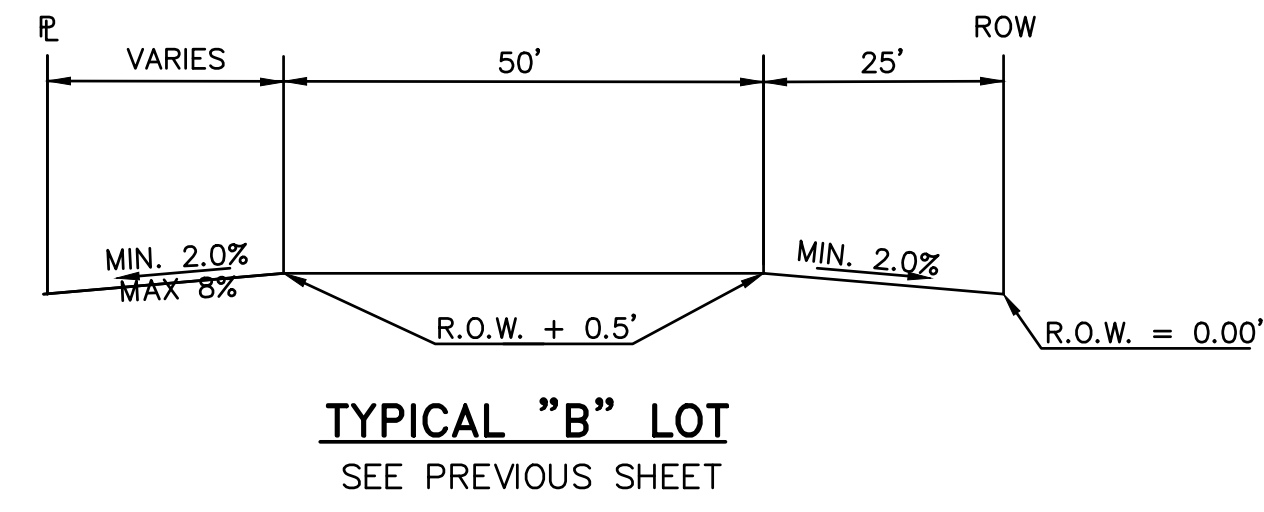
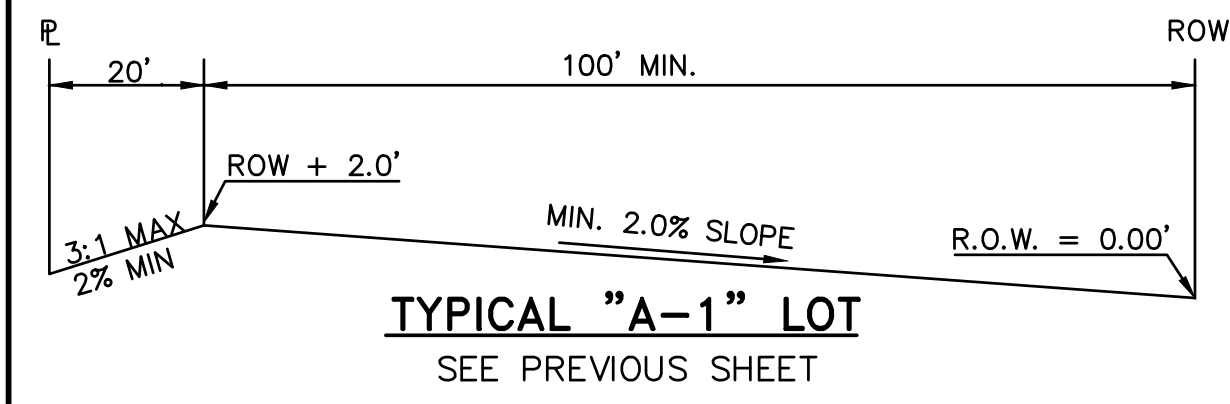
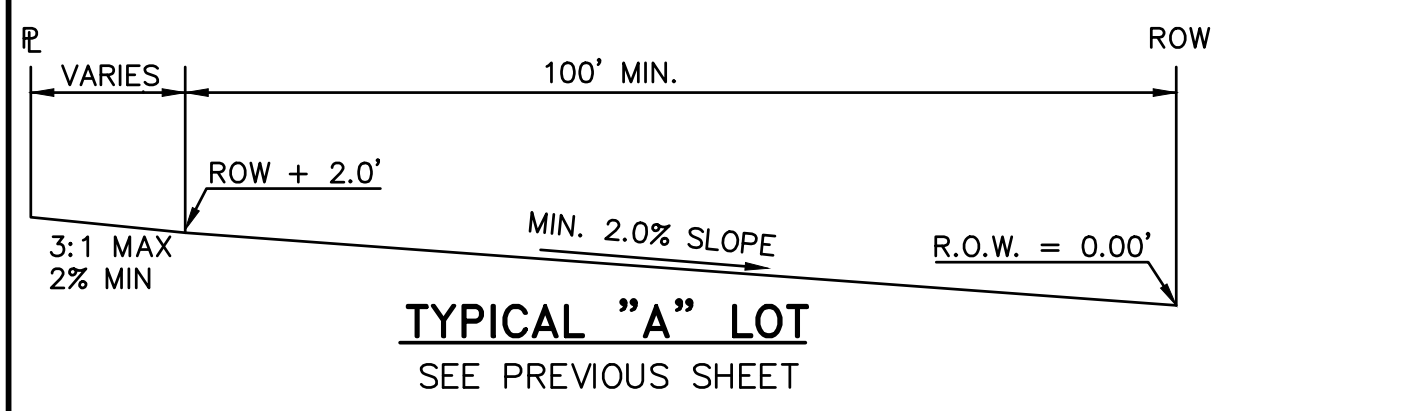
PREPARED FOR:
ACM ALF VIII JV SUB II LLC
 ATTN: JASON POCK
 100 E. MISSISSIPPI AVE., STE 500
 DENVER, CO 80246
 303-984-9800

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

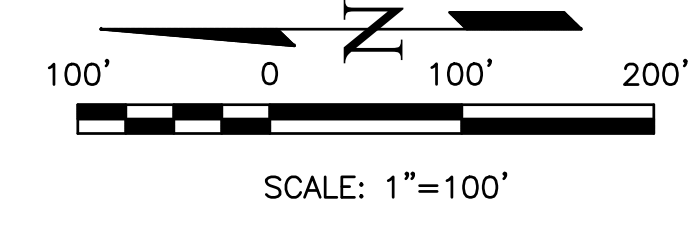
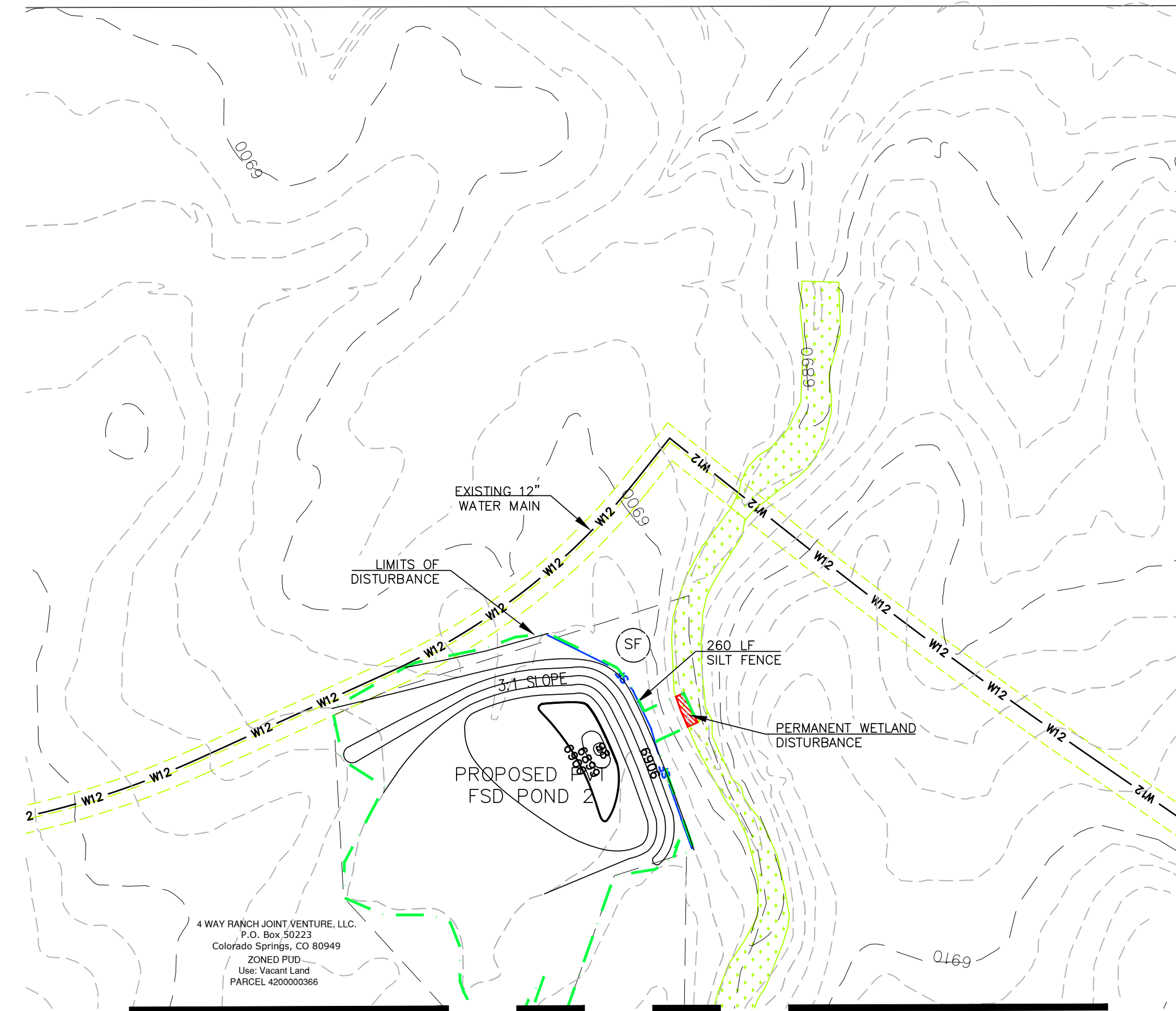
DESIGNED BY	DLF
DRAWN BY	QNA
CHECKED BY	QNA
H-SCALE	1" = 100'
V-SCALE	N/A
JOB NO.	2356.00
DATE ISSUED	12/22/24
SHEET NO.	4 OF 54



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



- 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 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 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.tnecinc.com

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.

Quentin Armijo
QUENTIN ARMIJO
COLORADO P.E. NO. 37170

DESIGNED BY	DLF
DRAWN BY	QNA
CHECKED BY	QNA
H-SCALE	AS SHOWN
V-SCALE	N/A
JOB NO.	2356.00
DATE ISSUED	12/22/24
SHEET NO.	5 OF 54

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.



MINIMUM FINISHED FLOOR ELEVATIONS BASED 100-Y

Lot	Min. FF	HWL
Lot 44	6915.00	
Lot 45	6916.00	
Lot 46	6919.00	
Lot 47	6920.00	
Lot 48	6921.00	
Lot 49	6921.00	
Lot 75	6925.50	
Lot 88	6927.00	
Lot 89	6928.00	
Lot 90	6933.50	
Lot 91	6935.00	
Lot 92	6938.50	
Lot 113	6941.00	
Lot 131	6964.00	
Lot 132	6962.00	
Lot 133	6960.00	
Lot 134	6959.00	
Lot 135	6958.00	
Lot 136	6957.00	
Lot 137	6954.00	
Lot 150	6952.00	
Lot 151	6949.00	
Lot 152	6947.00	
Lot 153	6946.00	
Lot 154	6944.00	
Lot 155	6944.00	
Lot 156	6941.00	
Lot 157	6941.00	
Lot 158	6939.00	
Lot 159	6939.00	
Lot 160	6938.00	
Lot 161	6937.00	
Lot 162	6936.00	
Lot 163	6936.00	
Lot 164	6935.00	
Lot 165	6935.00	

REVISIONS

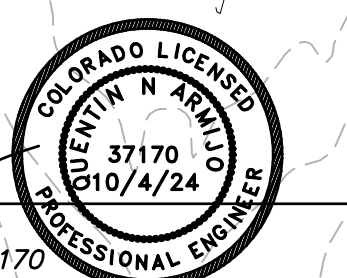
NO.	DESCRIPTION

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.terranovalinc.com

WATERBURY FILING NO. 1
GRADING AND EROSION CONTROL PLAN
FINAL EROSION CONTROL PLAN 1

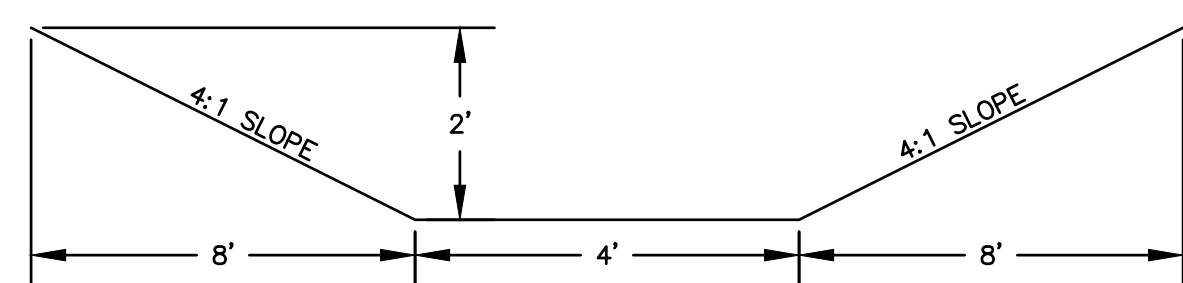
DESIGNED BY DLF
DRAWN BY QNA
CHECKED BY QNA
H-SCALE 1" = 100'
V-SCALE N/A
JOB NO. 2356.00
DATE ISSUED 12/22/24
SHEET NO. 6 OF 54



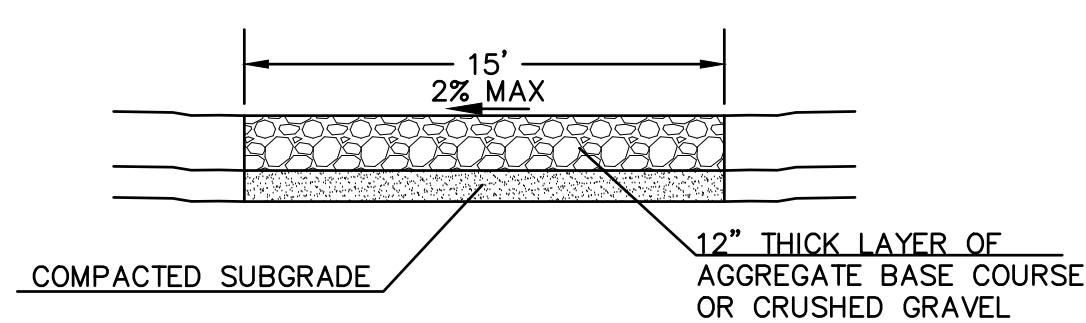
THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

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



DIVERSION SWALE E-E

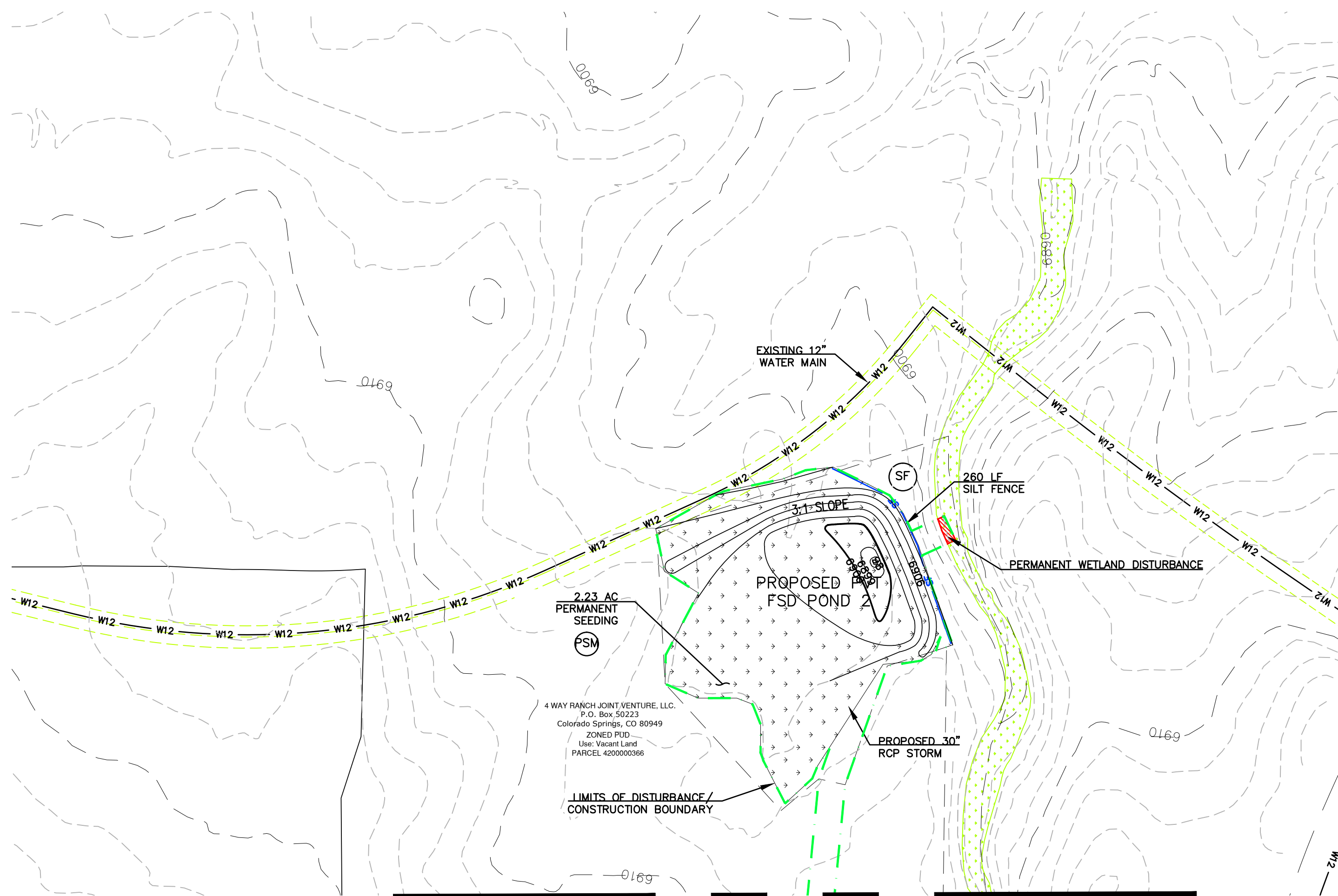


15' MAINTENANCE ACCESS ROAD SECTION PHASE 1

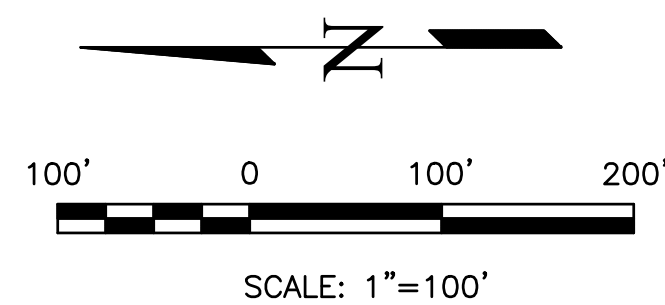
SCALE: N.T.S.

MINIMUM FINISHED FLOOR ELEVATIONS BASED 100-Y

Lot	Min. FF	HWL
Lot 44	Min. FF	6915.00
Lot 45	Min. FF	6916.00
Lot 46	Min. FF	6919.00
Lot 47	Min. FF	6920.00
Lot 48	Min. FF	6921.00
Lot 49	Min. FF	6921.00
Lot 75	Min. FF	6925.50
Lot 88	Min. FF	6927.00
Lot 89	Min. FF	6928.00
Lot 90	Min. FF	6933.50
Lot 91	Min. FF	6935.00
Lot 92	Min. FF	6938.50
Lot 113	Min. FF	6941.00
Lot 131	Min. FF	6964.00
Lot 132	Min. FF	6962.00
Lot 133	Min. FF	6960.00
Lot 134	Min. FF	6959.00
Lot 135	Min. FF	6958.00
Lot 136	Min. FF	6957.00
Lot 137	Min. FF	6954.00
Lot 150	Min. FF	6952.00
Lot 151	Min. FF	6949.00
Lot 152	Min. FF	6947.00
Lot 153	Min. FF	6946.00
Lot 154	Min. FF	6944.00
Lot 155	Min. FF	6944.00
Lot 156	Min. FF	6941.00
Lot 157	Min. FF	6941.00
Lot 158	Min. FF	6939.00
Lot 159	Min. FF	6939.00
Lot 160	Min. FF	6938.00
Lot 161	Min. FF	6937.00
Lot 162	Min. FF	6936.00
Lot 163	Min. FF	6936.00
Lot 164	Min. FF	6935.00
Lot 165	Min. FF	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	---
1' EXISTING CONTOUR	---
5' PROPED CONTOUR	---
1' PROPED CONTOUR	---
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	---

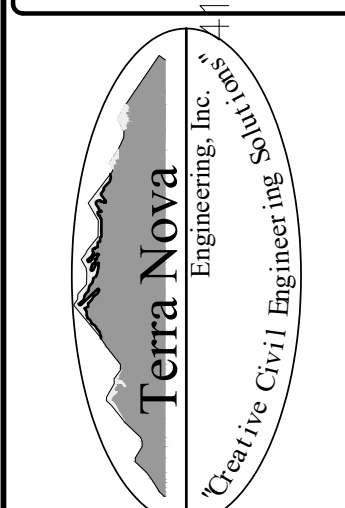
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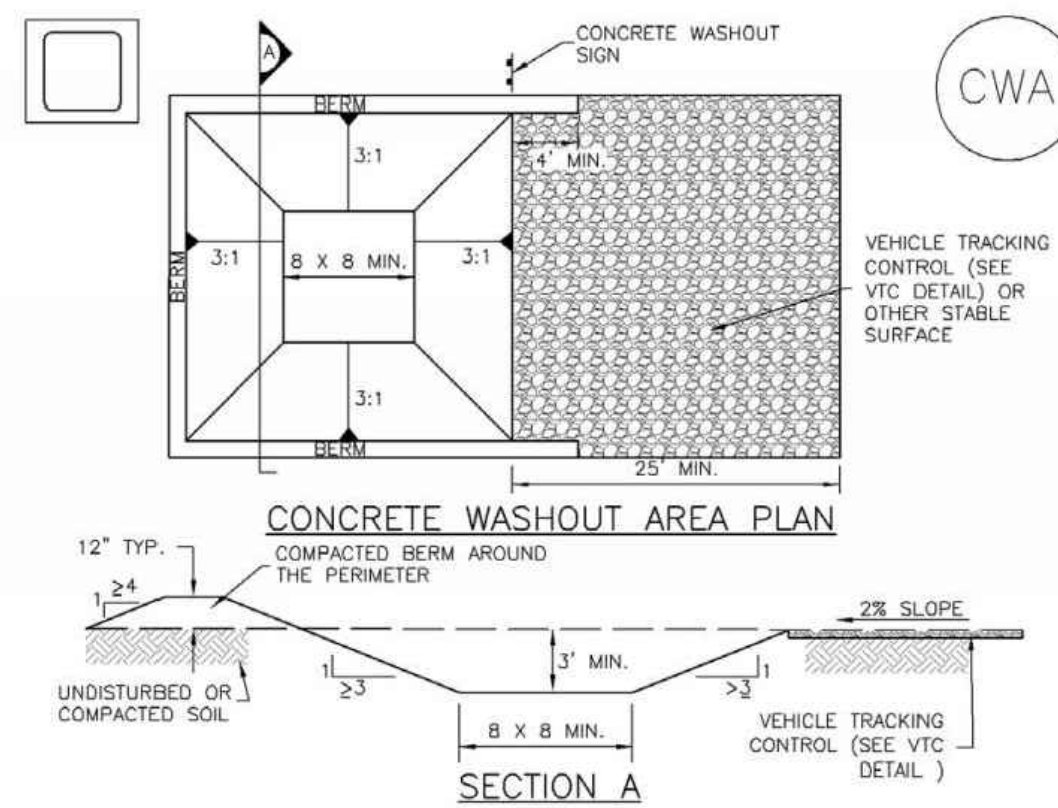


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WATERBURY FILING NO. 1
GRADING EROSION & CONTROL PLAN
FINAL EROSION CONTROL PLAN 2

DESIGNED BY	DLF
DRAWN BY	QNA
CHECKED BY	QNA
H-SCALE	AS SHOWN
V-SCALE	N/A
JOB NO.	2356.00
DATE ISSUED	12/22/24
SHEET NO.	7 OF 54

Concrete Washout Area (CWA) MM-1



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 TRUCKS.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

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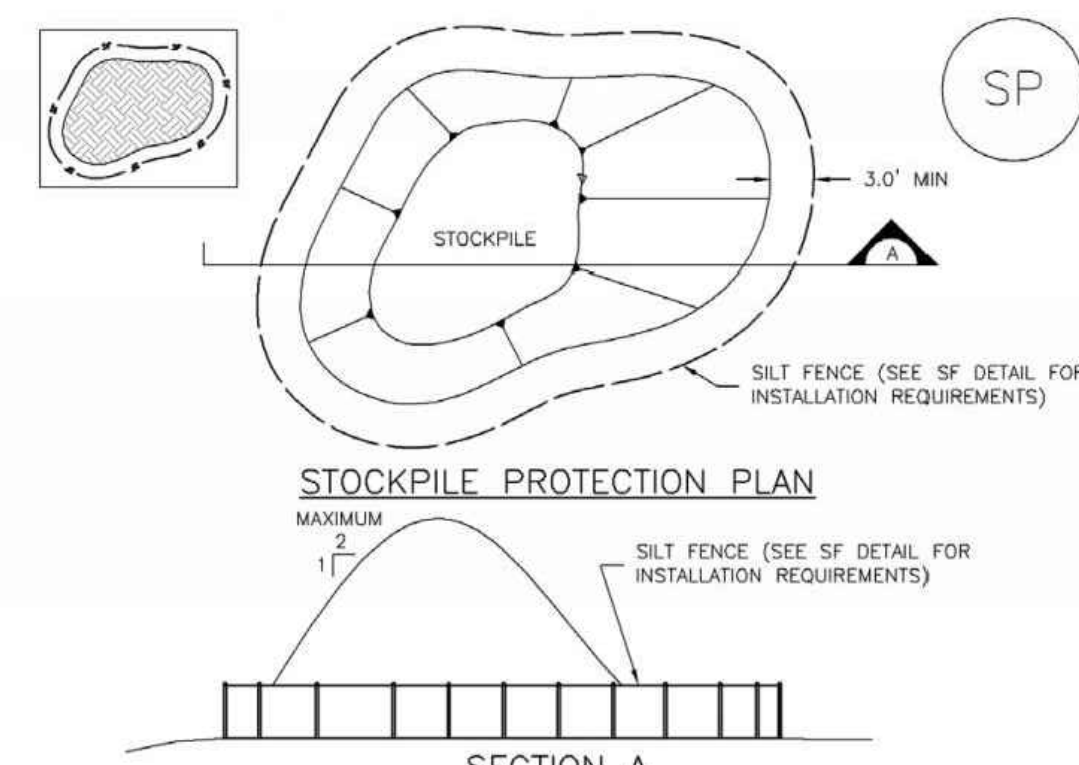
Concrete Washout Area (CWA) MM-1

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



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 IMPERVIOUS 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 SEED 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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Stockpile Management (SM) MM-2

STOCKPILE PROTECTION MAINTENANCE NOTES

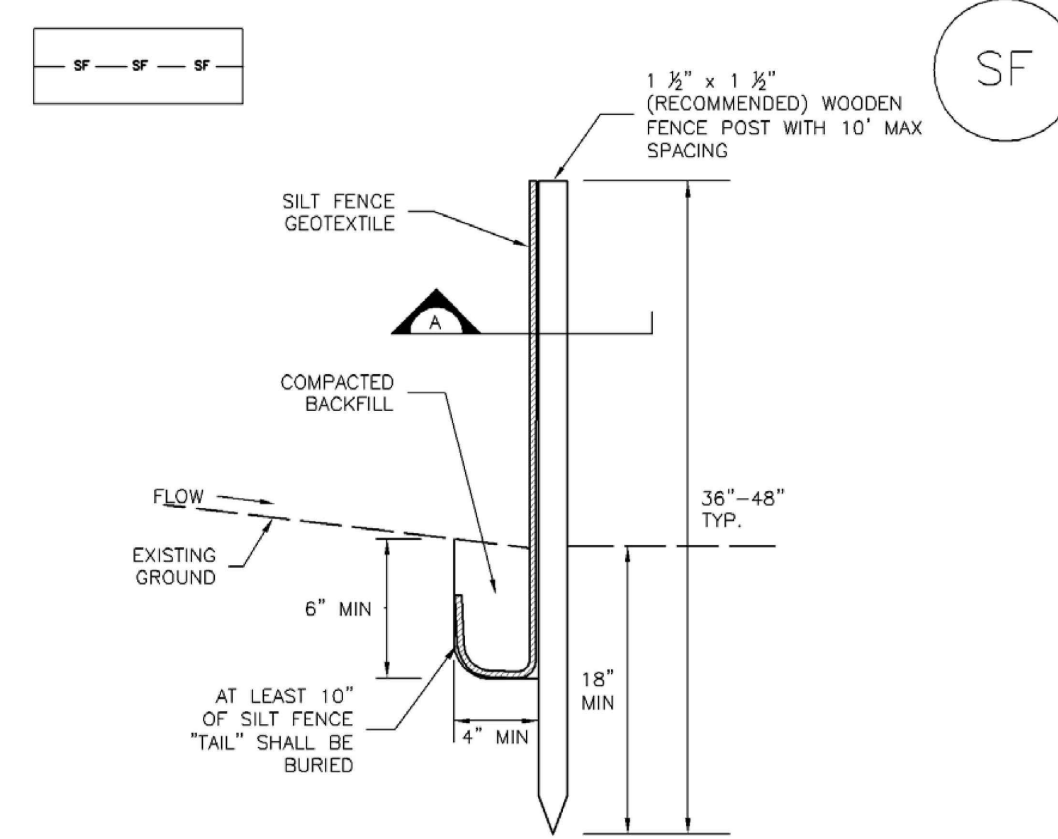
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.
- STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.

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

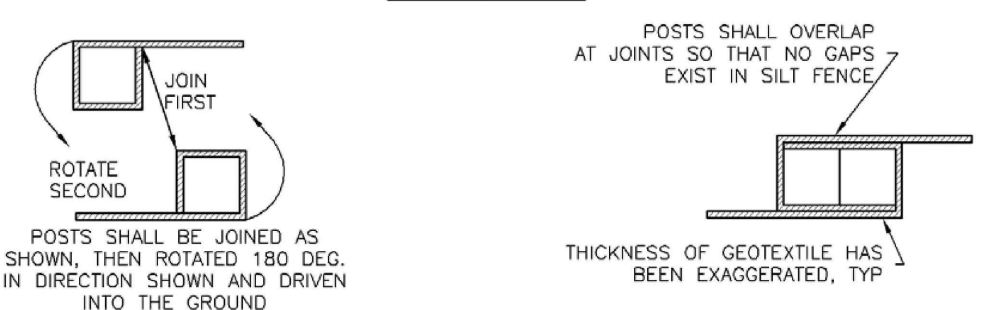
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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Silt Fence (SF) SC-1



SF-1. SILT FENCE



Silt Fence (SF) SC-1

SILT FENCE INSTALLATION NOTES

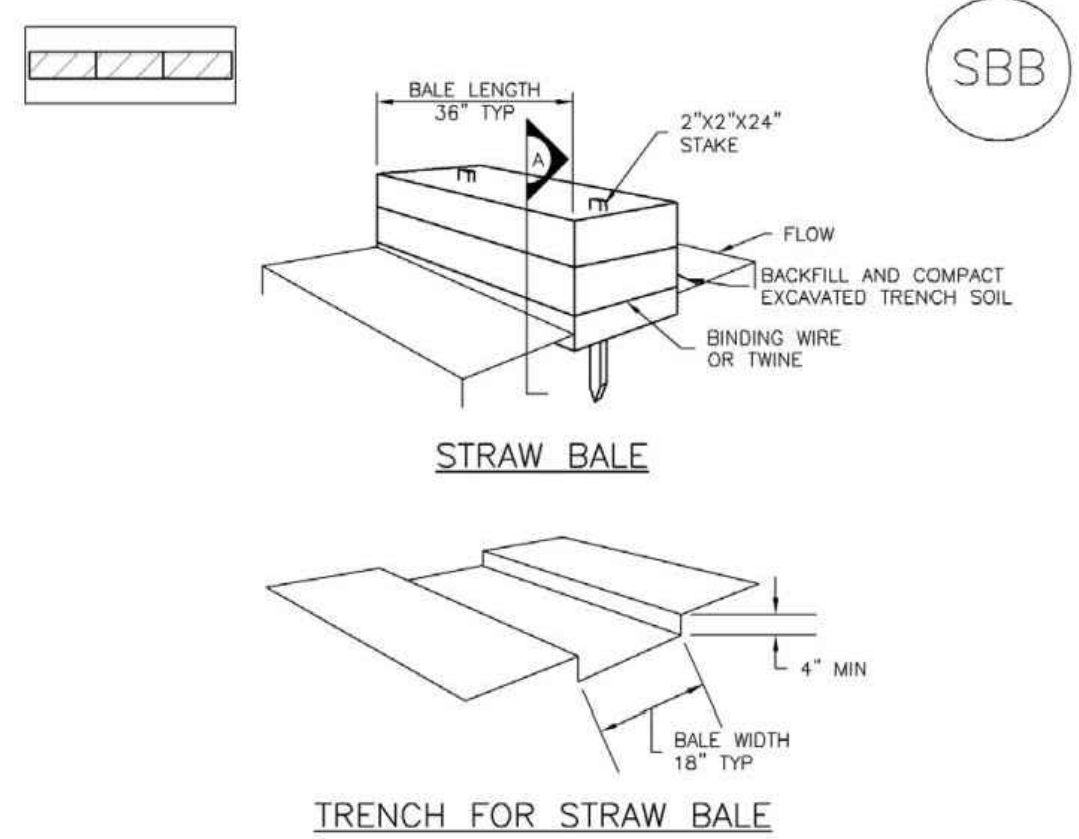
- SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
- A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER 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

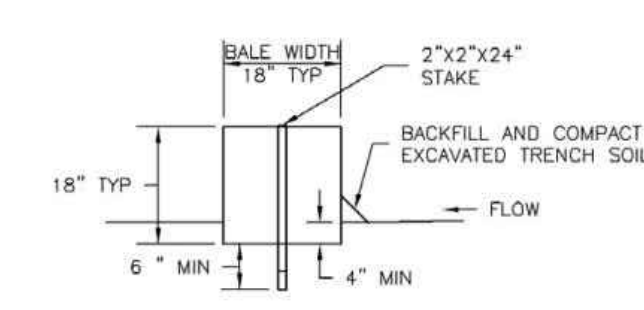
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS 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, SEED AND MULCH 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.

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Straw Bale Barrier (SBB) SC-3



SBB-1. STRAW BALE



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Urban Storm Drainage Criteria Manual Volume 3

Straw Bale Barrier (SBB) SC-3

STRAW BALE INSTALLATION NOTES

- SEE PLAN VIEW FOR: -LOCATIONS(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 BALET(S). ALL EXCAVATED SOIL SHALL BE PLACED ON THE UPHILL SIDE OF THE STRAW BALET(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, SEED AND MULCH OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- (DETAILS ADAPTED FROM TOWN 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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V-SCALE N/A
JOB NO. 2356.00
DATE ISSUED 12/22/21
SHEET NO. 9 OF 54

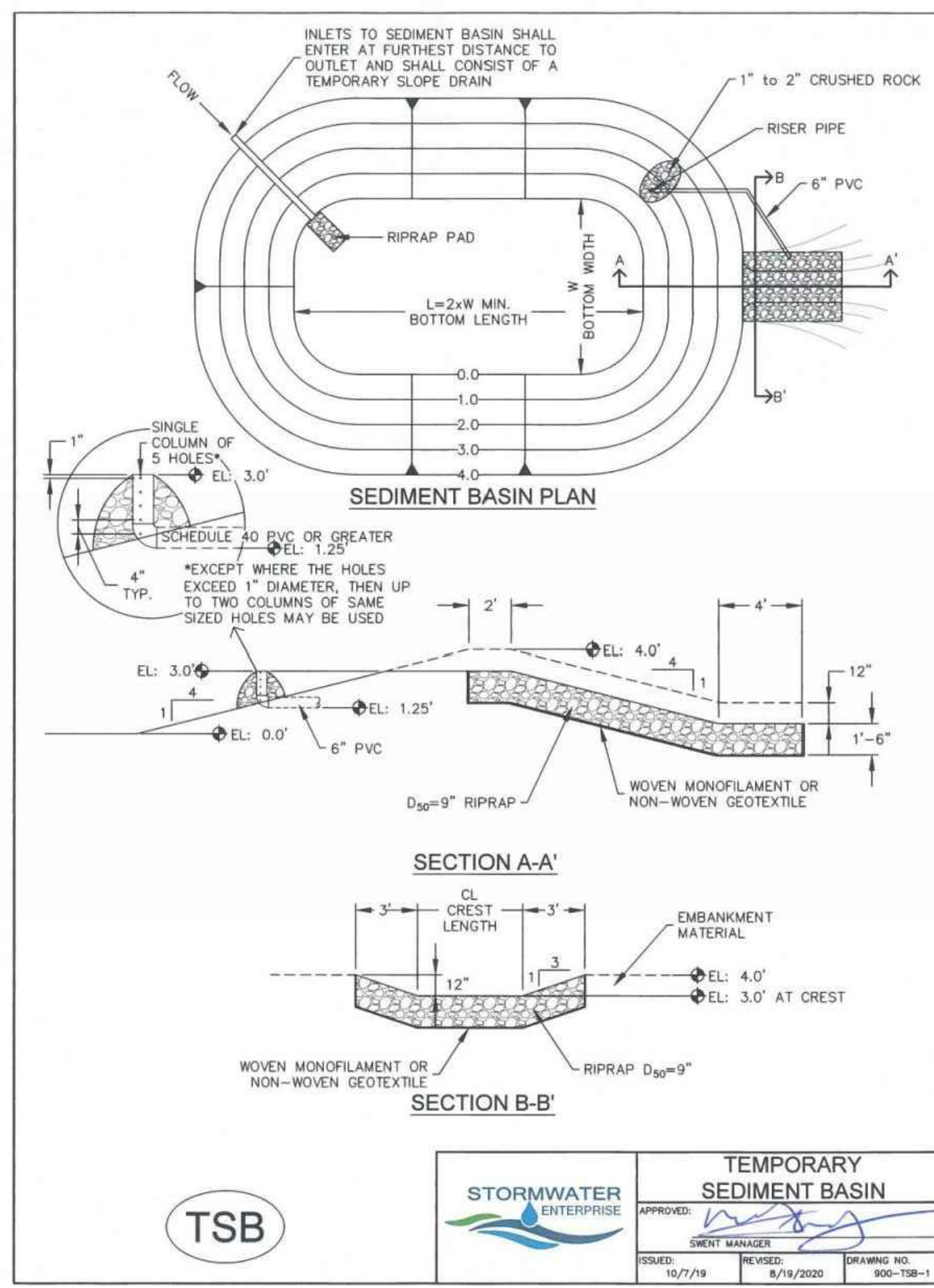


TABLE SB-1, SIZING INFORMATION FOR STANDARD SEDIMENT BASIN			
UPSTREAM DRAINAGE AREA (ROUNDED TO NEAREST ACRE), (AC)	Basin Bottom Width (W), (FT)	Spillway Crest Length (L), (FT)	Hole Diameter (HD), (IN)
1	12 2/3	2	3/8
2	21	3	1/2
3	28	4	5/8
4	33 1/2	5	3/4
5	38 1/2	6	7/8
6	43	7	1
7	47 1/2	8	1 1/8
8	51	9	1 1/4
9	55	10	1 1/2
10	58 1/2	11	1 5/8
11	61	12	1 3/4
12	64	13	1 7/8
13	67 1/2	14	2
14	70 1/2	15	2 1/8
15	73 1/2	16	2 1/4

INSTALLATION NOTES

- FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
- EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE, GREATER THAN 3 INCHES, AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE No. 200 SIEVE.
- EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-698.
- PIPE SCHEDULE 40 OR GREATER SHALL BE USED.
- THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES. DESIGN CALCULATIONS MUST BE APPROVED PRIOR TO IMPLEMENTATION.

MAINTENANCE NOTES

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN CONTROL MEASURE EFFECTIVENESS, TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E. TWO FEET BELOW SPILLWAY CREST).
- SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED.
- PERMANENTLY STABILIZE AREA AFTER SEDIMENT BASIN REMOVAL.

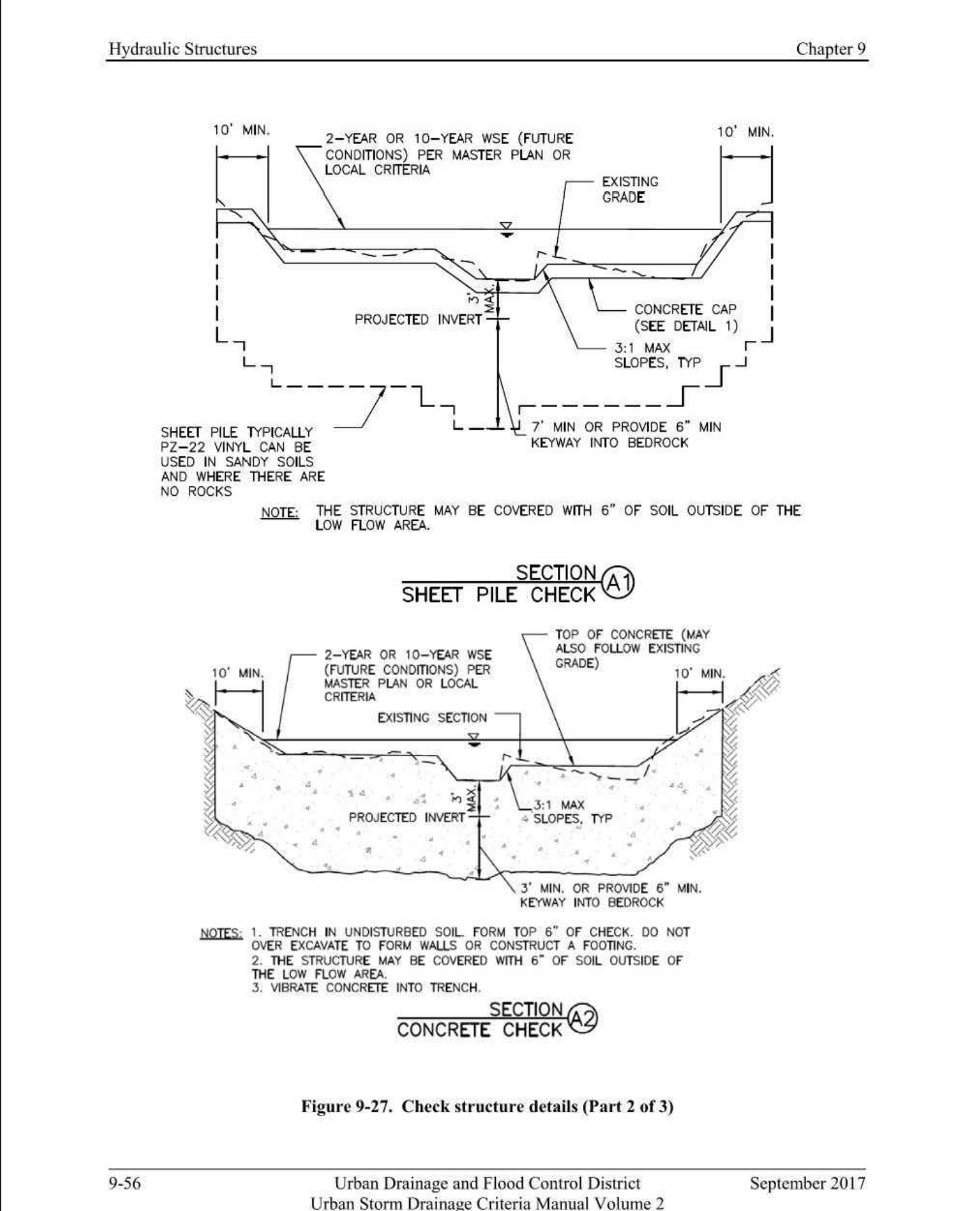
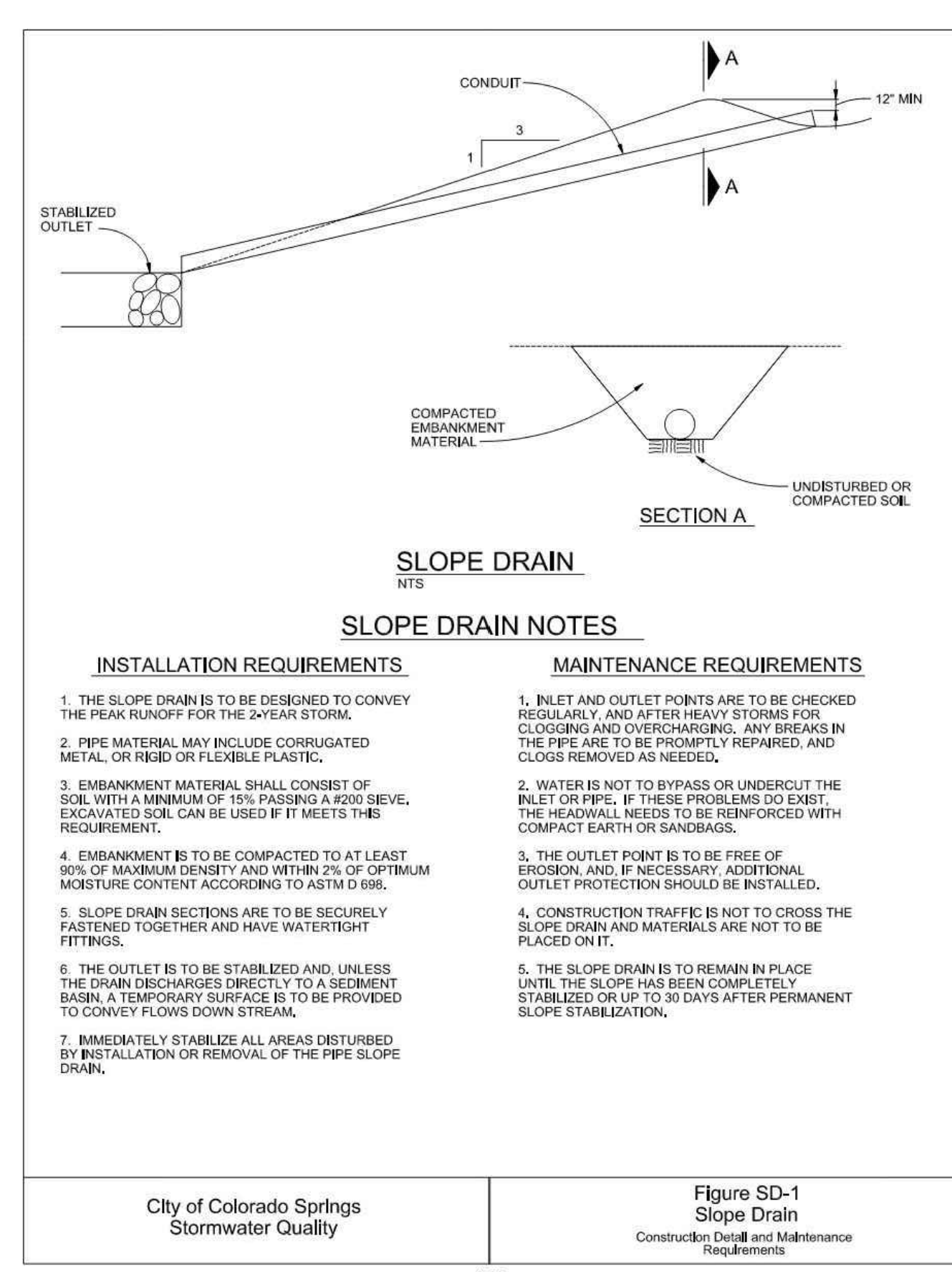
TSB

STORMWATER ENTERPRISE

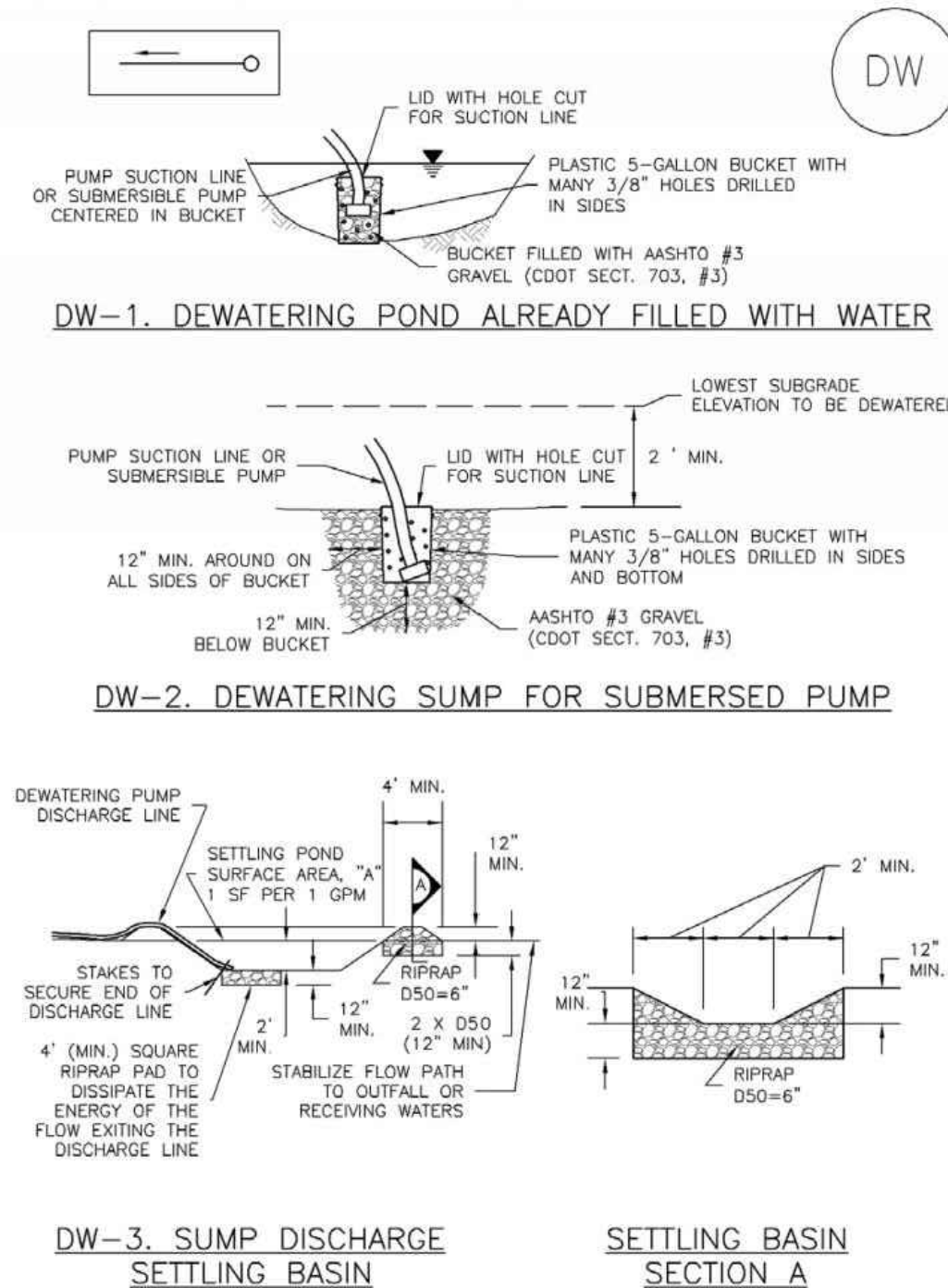
TEMPORARY SEDIMENT BASIN

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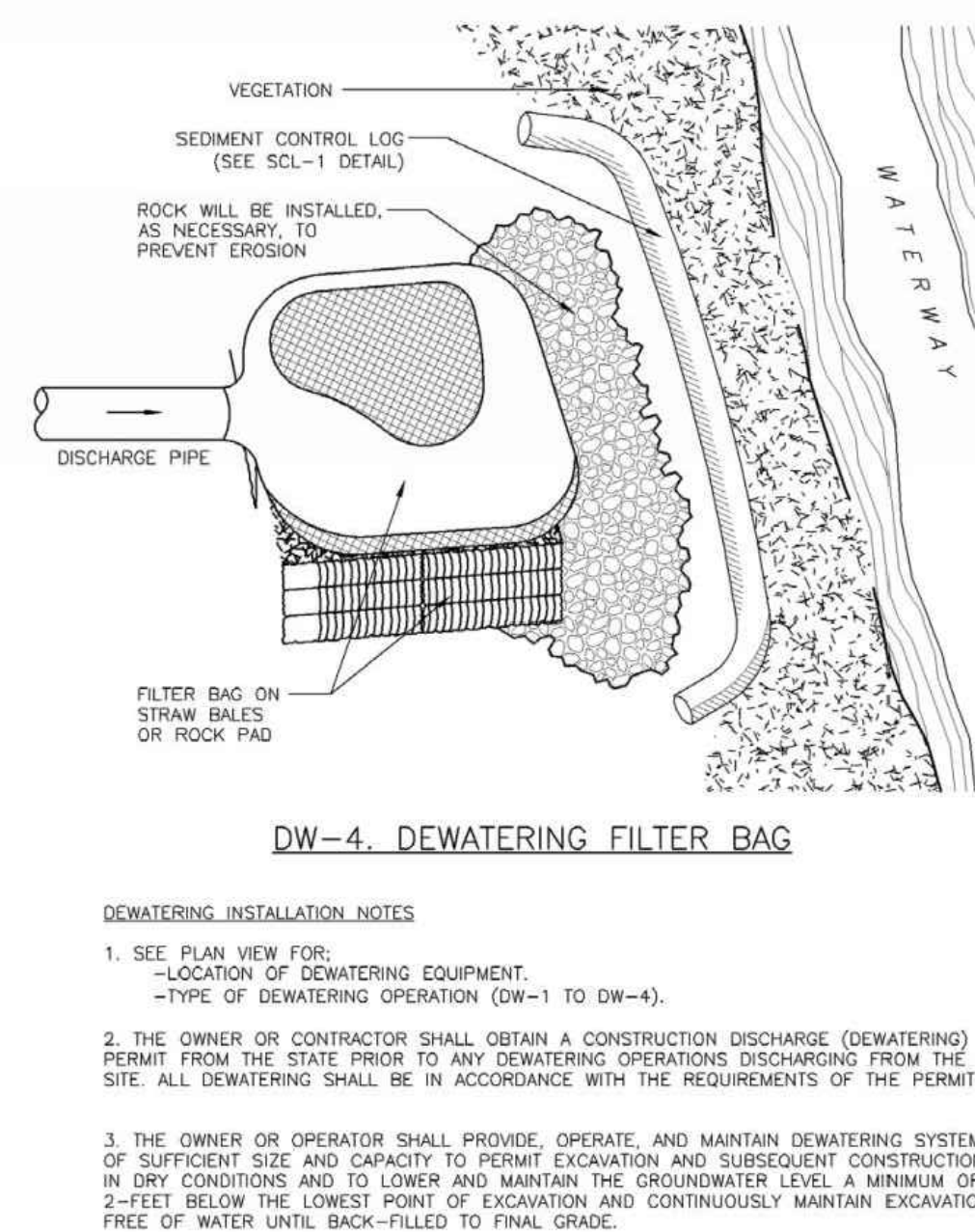
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Dewatering Operations (DW) SM-9



SM-9 Dewatering Operations (DW)



Dewatering Operations (DW) SM-9

DEWATERING INSTALLATION NOTES

- DEWATERING OPERATIONS SHALL USE ONE OR MORE OF THE DEWATERING HUMPS SHOWN ABOVE, WELL POINTS, OR OTHER MEANS APPROVED BY THE LOCAL JURISDICTION TO REDUCE THE PUMPING OF SEDIMENT. AND SHALL PROVIDE A TEMPORARY SEDIMENT BASIN OR FILTRATION BMP TO REDUCE SEDIMENT TO ALLOWABLE LEVELS PRIOR TO RELEASE OFF SITE OR TO A RECEIVING WATER. A SEDIMENT BASIN MAY BE USED IN LIEU OF SUMP DISCHARGE SETTLING BASIN SHOWN ABOVE IF A 4'-FOOT-SQUARE RIPRAP PAD IS PLACED AT THE DISCHARGE POINT AND THE DISCHARGE END OF THE LINE IS STAKED IN PLACE TO PREVENT MOVEMENT OF THE LINE.

DEWATERING 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.
- DEWATERING BMPs ARE REQUIRED IN ADDITION TO ALL OTHER PERMIT REQUIREMENTS.
- TEMPORARY SETTLING BASINS SHALL BE REMOVED WHEN NO LONGER NEEDED FOR DEWATERING OPERATIONS. ANY DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

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

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

Chapter 9 Hydraulic Structures

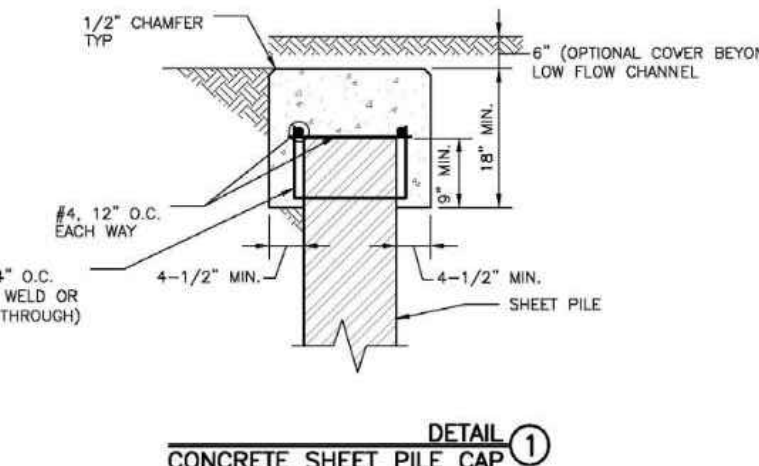


Figure 9-28. Check structure details (Part 3 of 3)

REVISIONS

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TSB

STORMWATER ENTERPRISE

TEMPORARY SEDIMENT BASIN

APPROVED: [Signature]

DRAWING NO. 905-TSR-1

721 S. 23RD STREET COLORADO SPRINGS, CO 80904

OFFICE: 719-635-6422

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WATERBURY FILING NO 1

GRADING AND EROSION CONTROL PLAN

EROSION CONTROL DETAILS

DESIGNED BY DLF

DRAWN BY QNA

CHECKED BY QNA

H-SCALE NA

V-SCALE N/A

JOB NO. 2356.00

DATE ISSUED 12/22/20

SHEET NO. 10 OF 52

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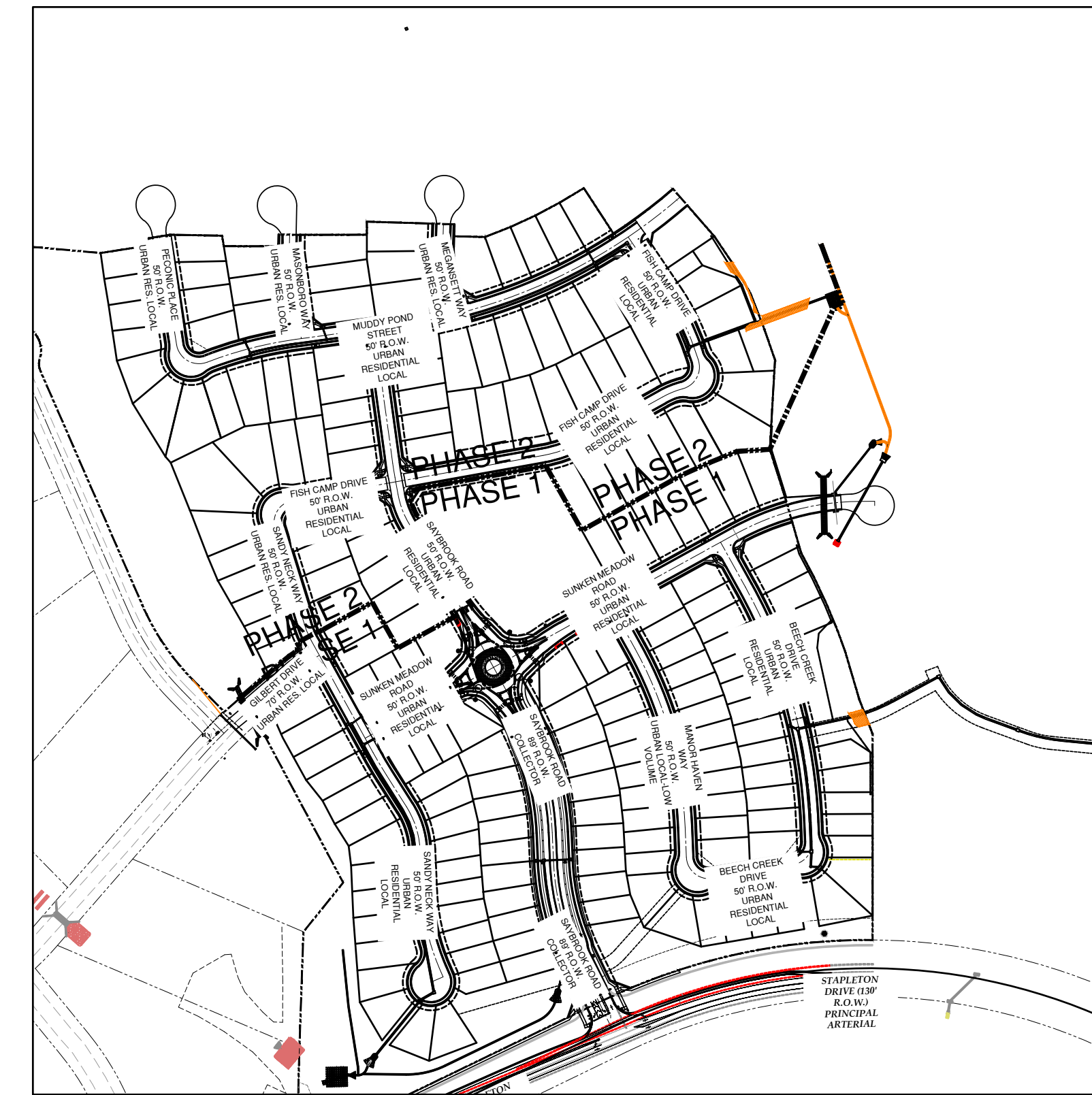
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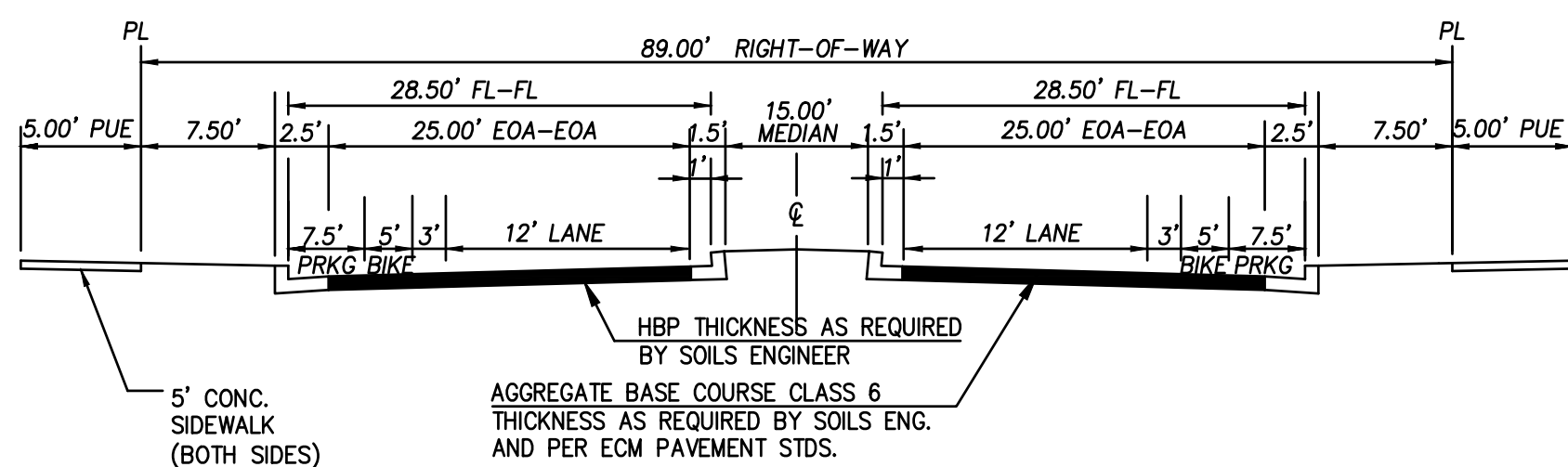
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...\\...\\shared\\Standards\\El Paso County\\Engineering standards\\X-PAN.jpg

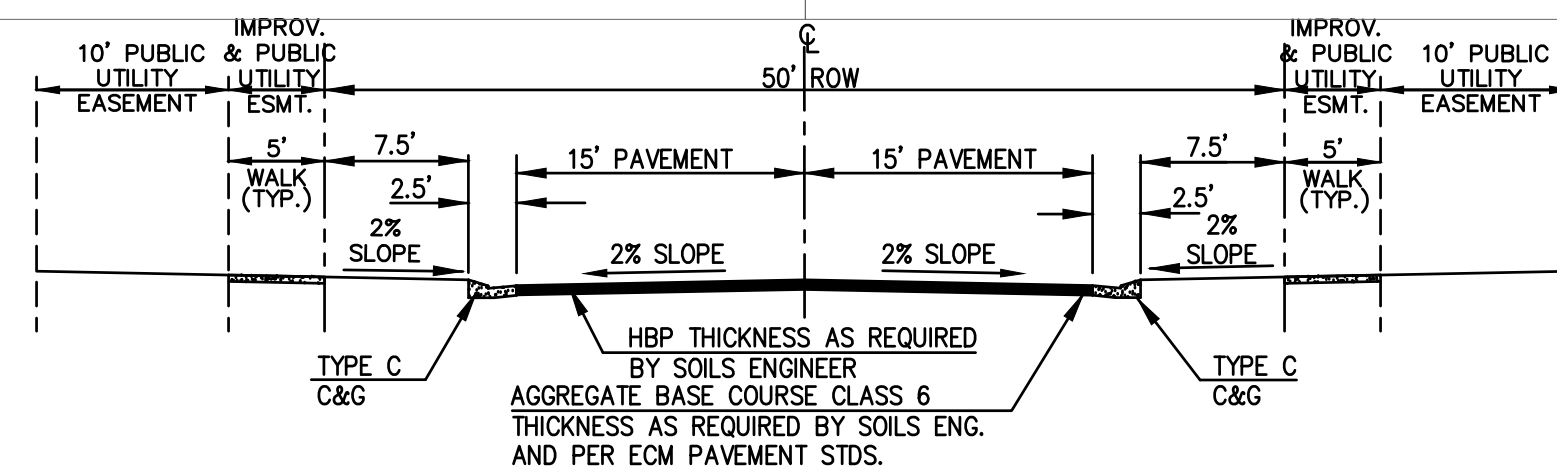
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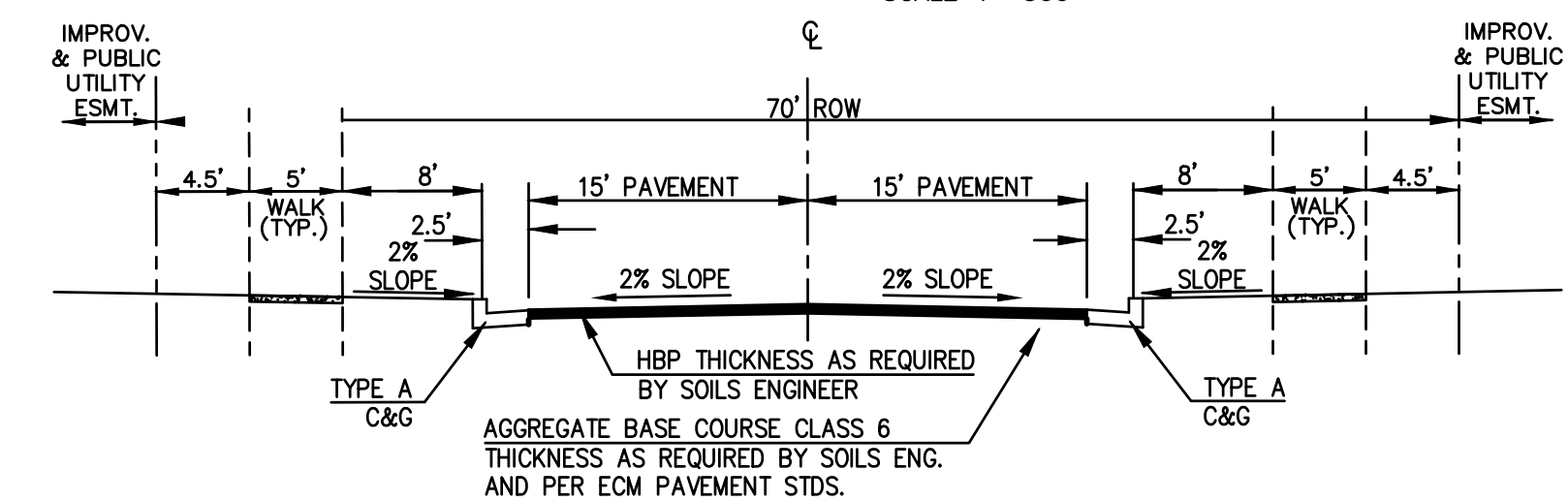
PHASING
SCALE 1"=300'



MODIFIED COLLECTOR SECTION
SAYBROOK ROAD
DESIGN SPEED 40 MPH
POSTED SPEED 30 MPH
NO SCALE



URBAN RESIDENTIAL LOCAL SECTION
SAYBROOK RD., SANDY NECK CIR., SUNKEN MEADOW RD.,
FISH CAMP DR., MANOR HAVEN WAY, BEECH CIRCLE DR.,
MUDDY POND ST., MASONBORO WAY, MEGANSETT WAY
DESIGN SPEED 25 MPH
POSTED SPEED 25 MPH
NO SCALE



MODIFIED URBAN RESIDENTIAL LOCAL SECTION
GILBER RD.
DESIGN SPEED 25 MPH
POSTED SPEED 25 MPH
NO SCALE

REVISIONS NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE CITY ENGINEER, 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.
Civil Engineering

721 S. ZABO STREET
COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6422
FAX: 719-635-6428
www.tnec.com

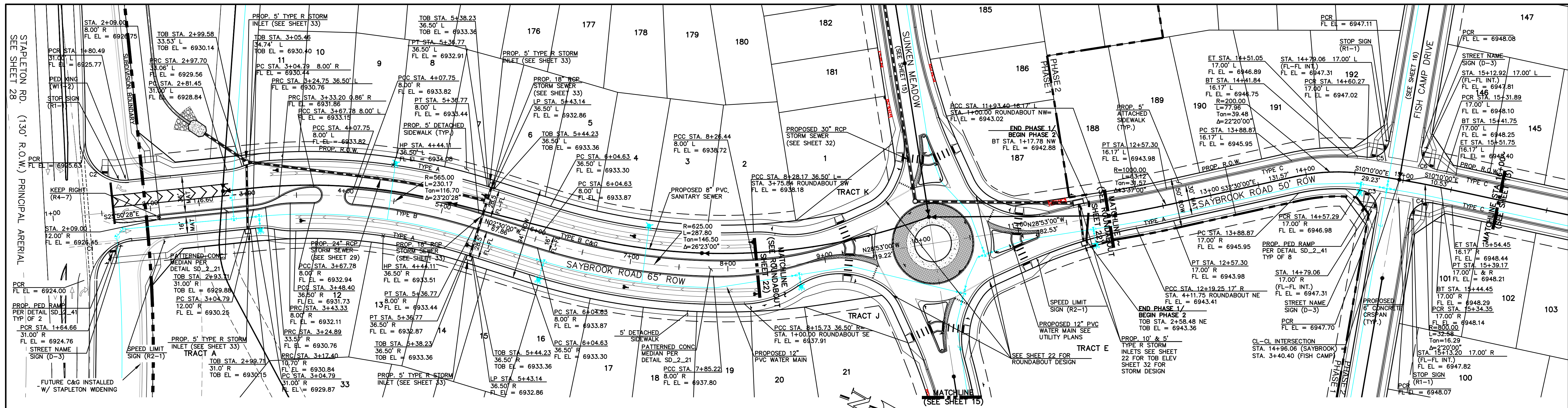
WATERBURY FILING NO. 1

CONSTRUCTION SET
STREET DETAILS

DESIGNED BY DLF
DRAWN BY QNA
CHECKED BY QNA

H-SCALE N/A
V-SCALE N/A

JOB NO. 2356.00
DATE ISSUED 12/22/24
SHEET NO. 11 OF 54



CURVE	LENGTH	RADIUS	DELTA
C1	58.27'	40.00'	83°28'17"
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"

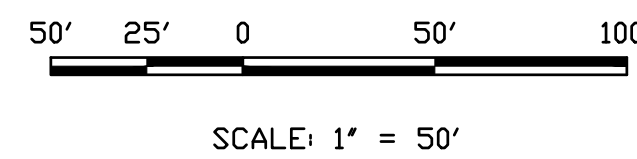
SAYBROOK ROAD PHASE 1
 STA. 1+00.00 - 8+28.17 - RES. COLLECTOR
 (DESIGN SPEED 35 MPH)

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

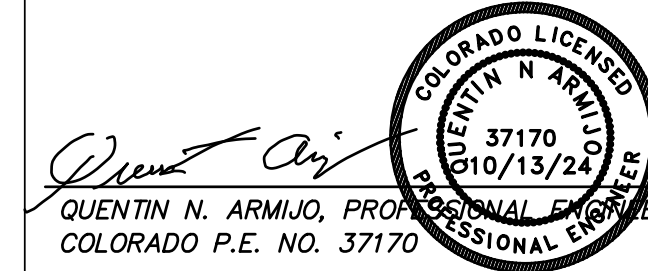
POSTED SPEED LIMIT IS 30 M.P.H.

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

POSTED SPEED LIMIT IS 25 M.P.H.

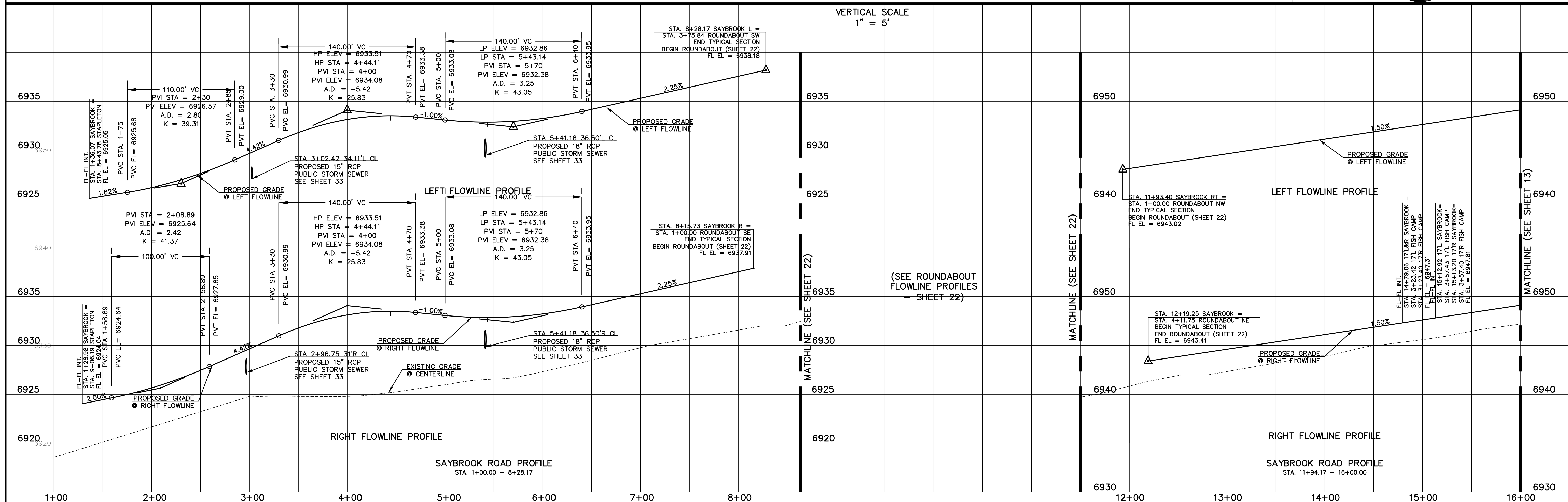


THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.



DATE: _____
 REVISIONS: _____
 UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE BOARD OF ARCHITECTS, ENGINEERS AND SURVEYORS, 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

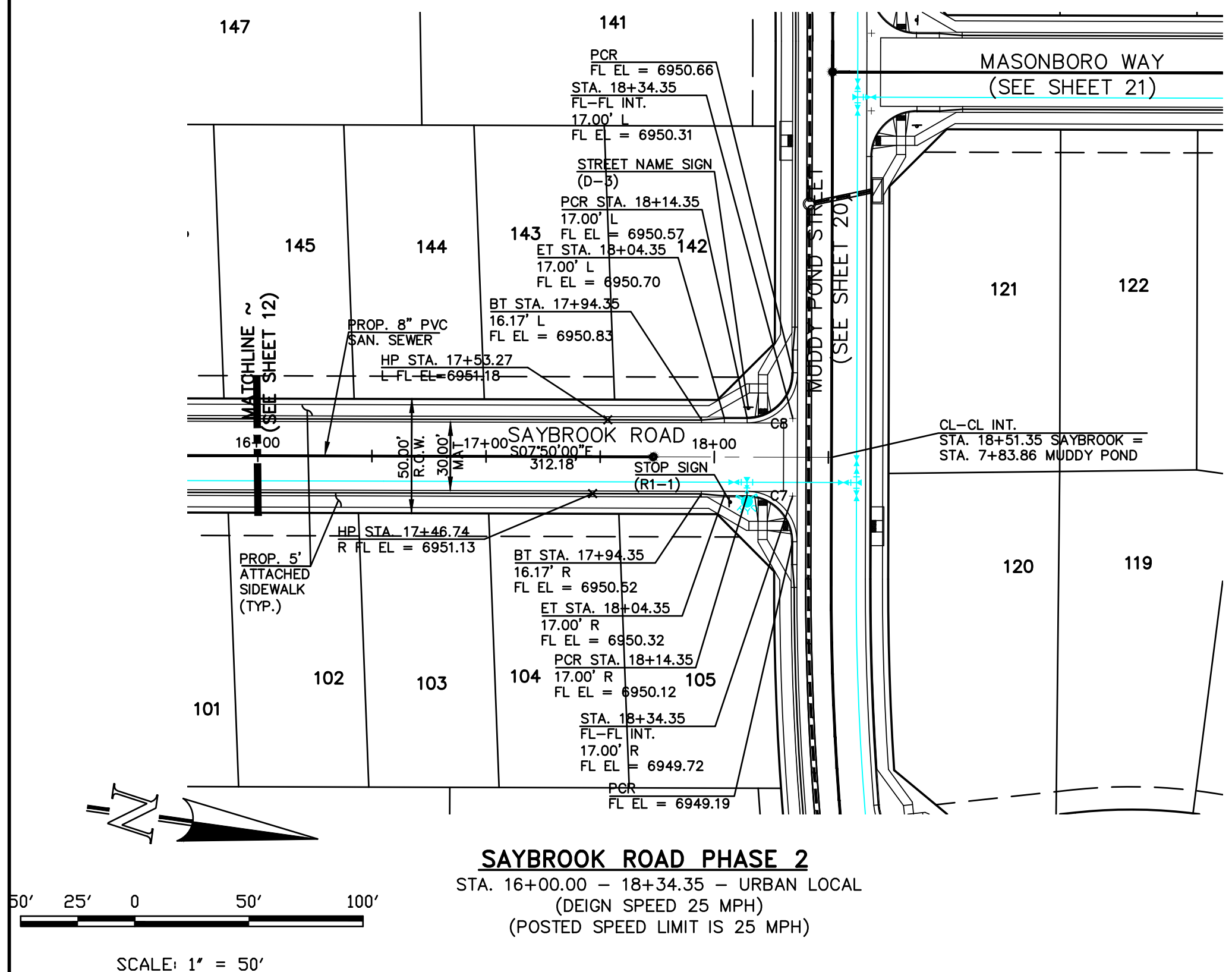


721 S. 2960 STREET
 COLORADO SPRINGS, CO 80904
 OFFICE: 719-635-6422
 FAX: 719-635-6426
 www.tnec.com

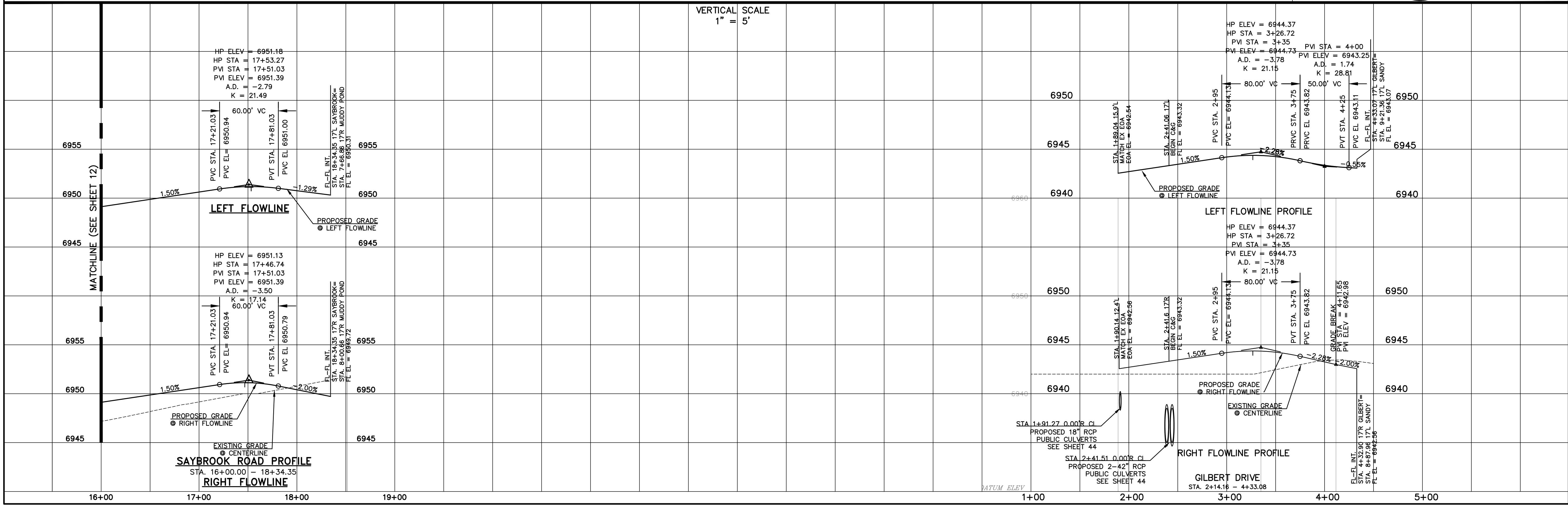
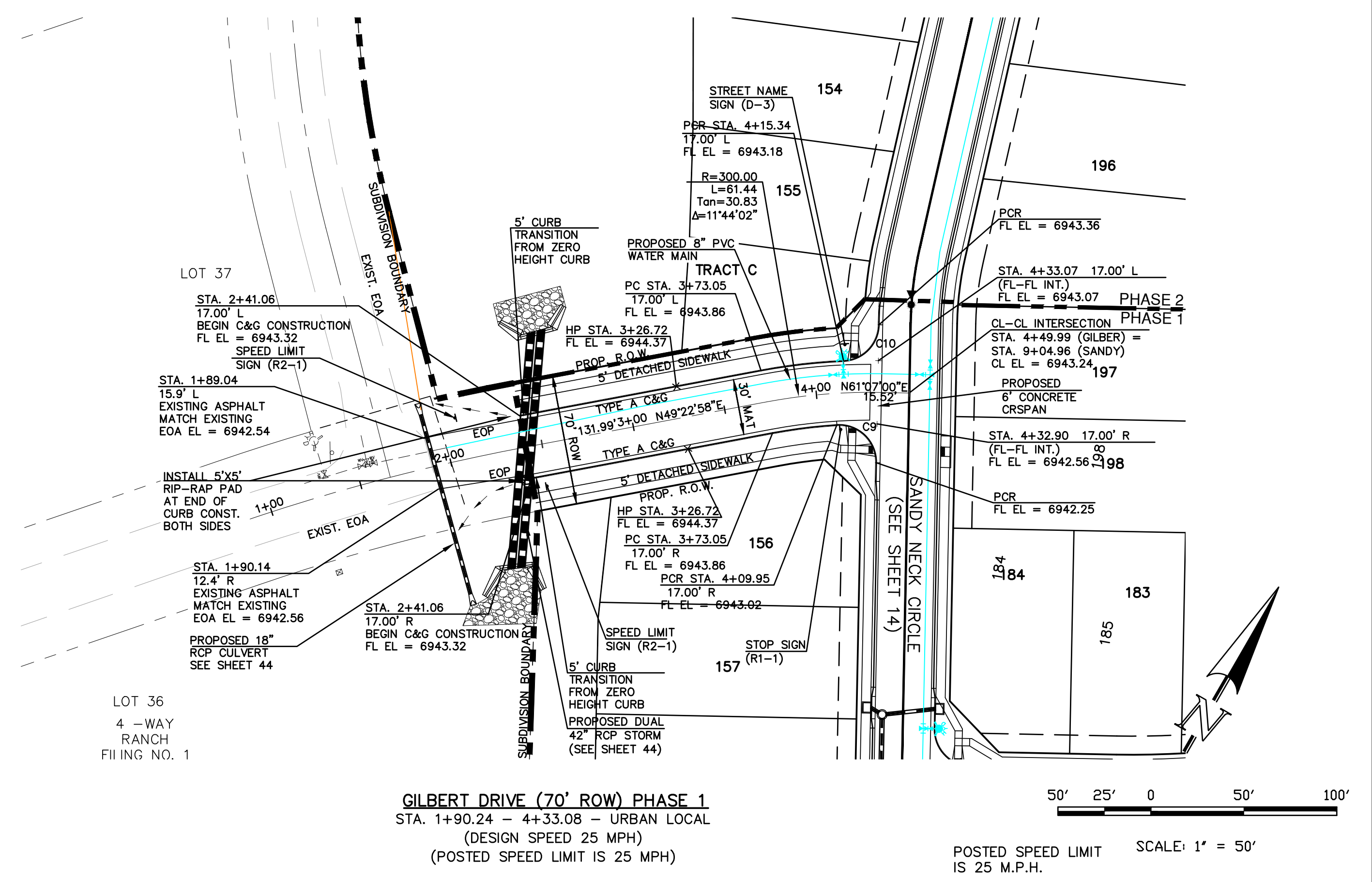
Terra Nova
 Engineering, Inc.
 A Terra Nova Group Company
 Creative Civil Engineer

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

DESIGNED BY QNA
 DRAWN BY QNA
 CHECKED BY JS
 H-SCALE 1"=50'
 V-SCALE 1"=5'
 JOB NO. 2356.00
 DATE ISSUED 12/22/24
 SHEET NO. 12 OF 54



CURVE	LENGTH	RADIUS	DELTA
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 ENGINEER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION SHOWN HEREON. APPROVED FOR THE CLIENT: JASON POCK, TERRA NOVA ENGINEERING AND SURVEYING, INC. APPROVED FOR THE USER: _____ 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

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

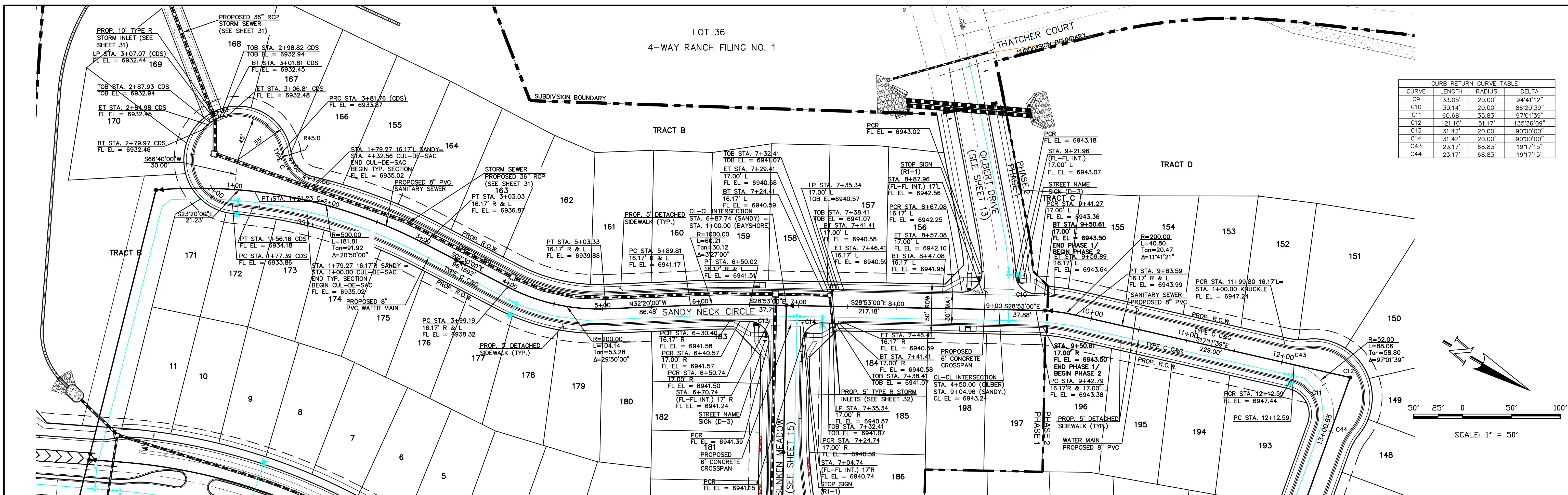
Terra Nova
 Engineering, Inc.
 Professional Engineer
 Colorado License No. 37170
 10/13/24

WATERBURY FILING NO. 1

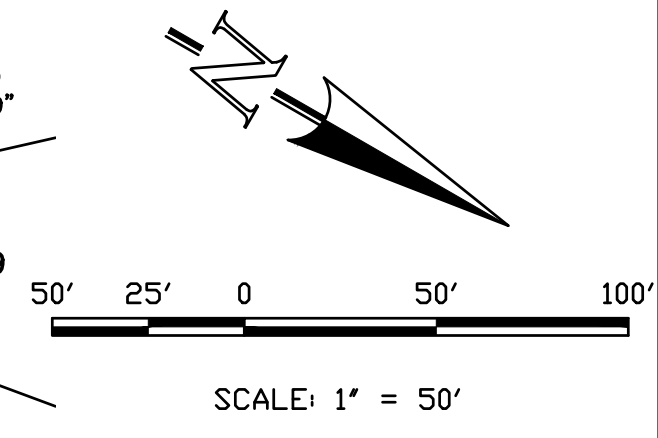
CONSTRUCTION SET
 STREET PLAN AND PROFILE
 SAYBROOK ROAD CONT'D & GILBERT DRIVE

DESIGNED BY QNA
 DRAWN BY QNA
 CHECKED BY JS

H-SCALE 1"=50'
 V-SCALE 1"=5'
 JOB NO. 2356.00
 DATE ISSUED 12/22/24
 SHEET NO. 13 OF 54



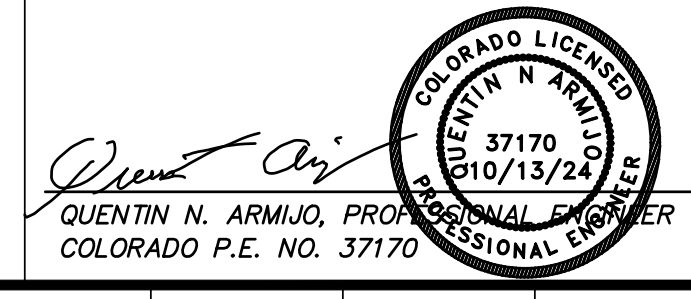
CURVE	LENGTH	RADIUS	DELTA
C9	33.05'	20.00'	94°41'12"
C10	30.14'	20.00'	86°20'39"
C11	60.68'	35.83'	97°01'39"
C12	121.10'	51.17'	135°36'09"
C13	31.42'	20.00'	90°00'00"
C14	31.42'	20.00'	90°00'00"
C43	23.17'	68.83'	191°7'15"
C44	23.17'	68.83'	191°7'15"



SANDY NECK CIRCLE PHASE 1 & 2
 STA. 1+00.00 - 11+00.00 - URBAN LOCAL
 (DESIGN SPEED 25 MPH)
 (POSTED SPEED LIMIT IS 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.



DATE: _____

REVISIONS:

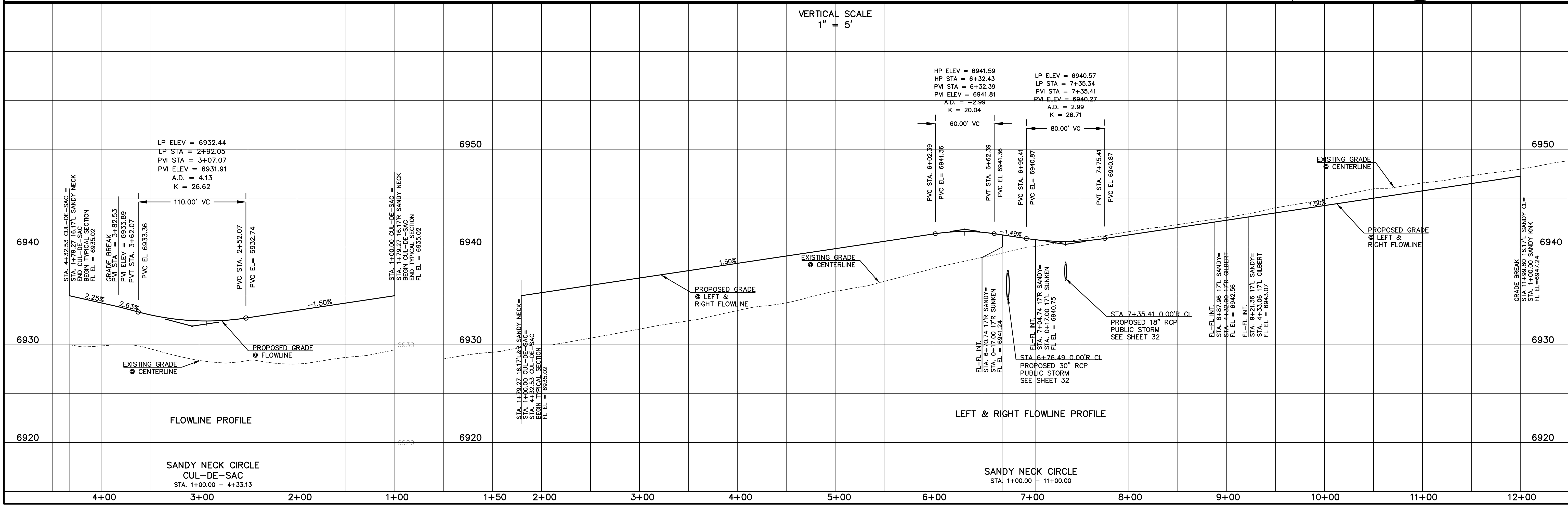
NO.	DESCRIPTION

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:
 ACM ALF VIII JV SUB II LLC
 JASON POKK
 100 E. MISSISSIPPI AVE., STE 5
 DENVER, CO 80246
 303-984-9800

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
 Civil Engineer No. 37170



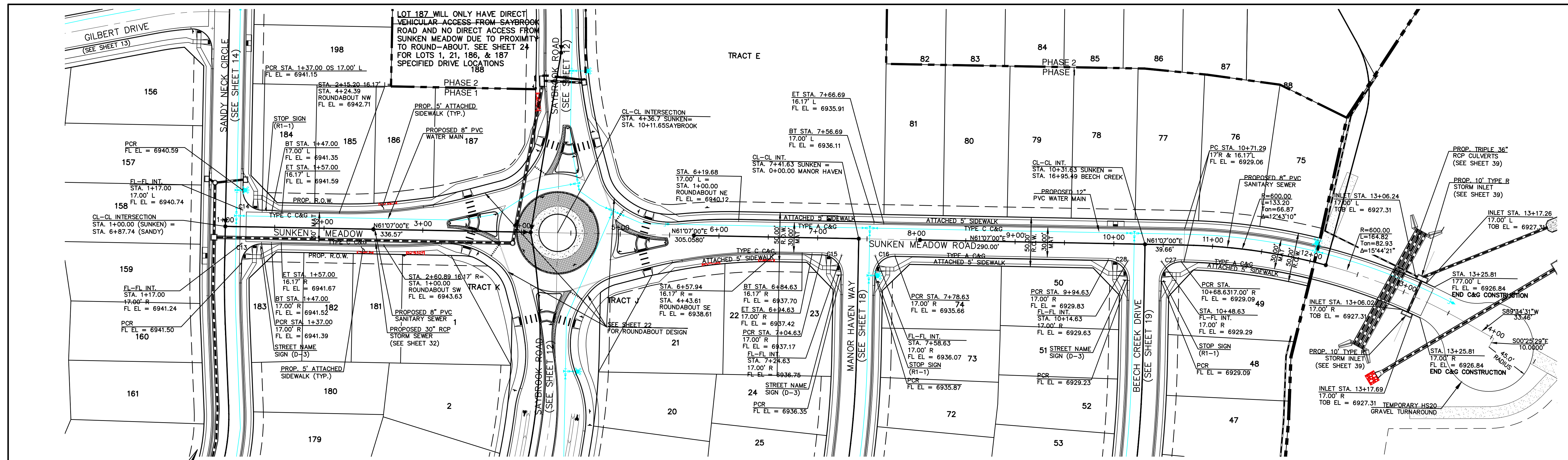
WATERBURY FILING NO. 1

CONSTRUCTION SET
 STREET PLAN AND PROFILE
 SANDY NECK CIR.

DESIGNED BY QNA
 DRAWN BY QNA
 CHECKED BY JS

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

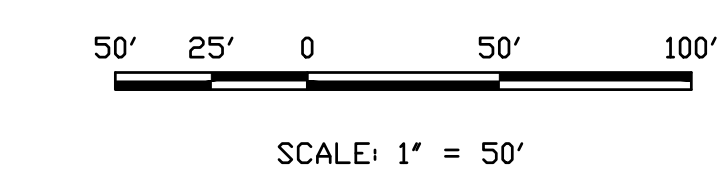
JOB NO. 2356.00
 DATE ISSUED 12/22/24
 SHEET NO. 14 OF 54



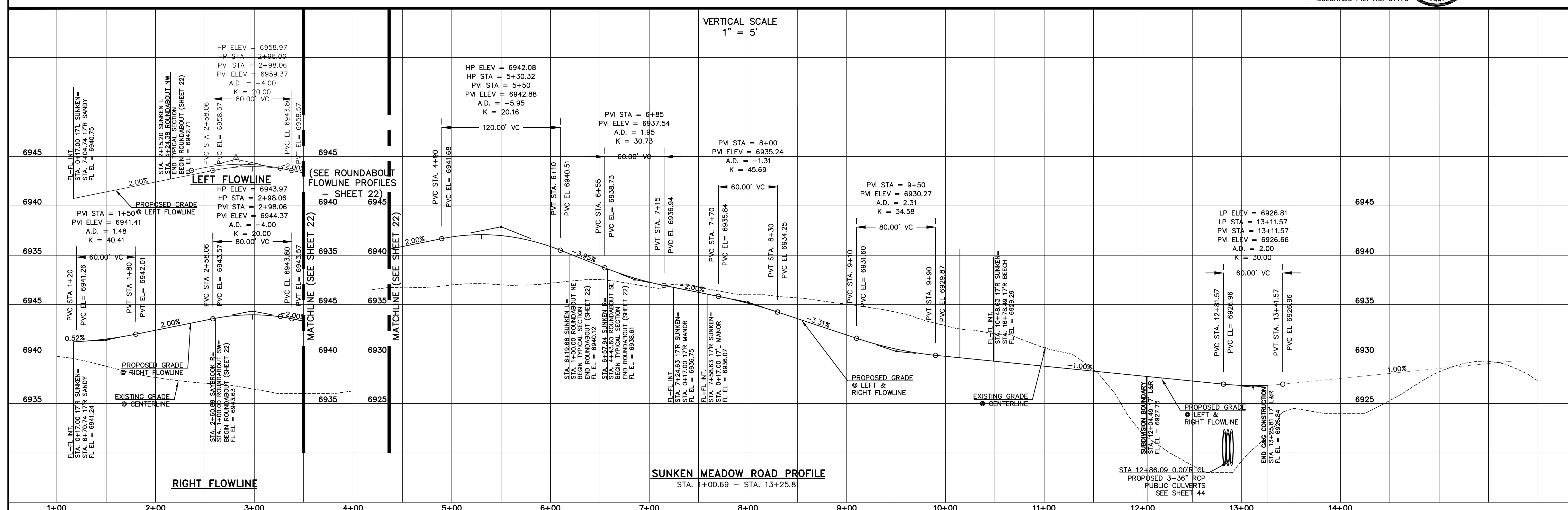
CURB RETURN CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA
C13	31.42'	20.00'	90°00'00"
C14	31.42'	20.00'	90°00'00"
C15	31.42'	20.00'	90°00'00"
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.



SUNKEN MEADOW ROAD PROFILE
 STA. 1+00.00 - STA. 13+25.81

DATE: _____
 REVISIONS: _____
 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 VIII JV 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.tnove.com

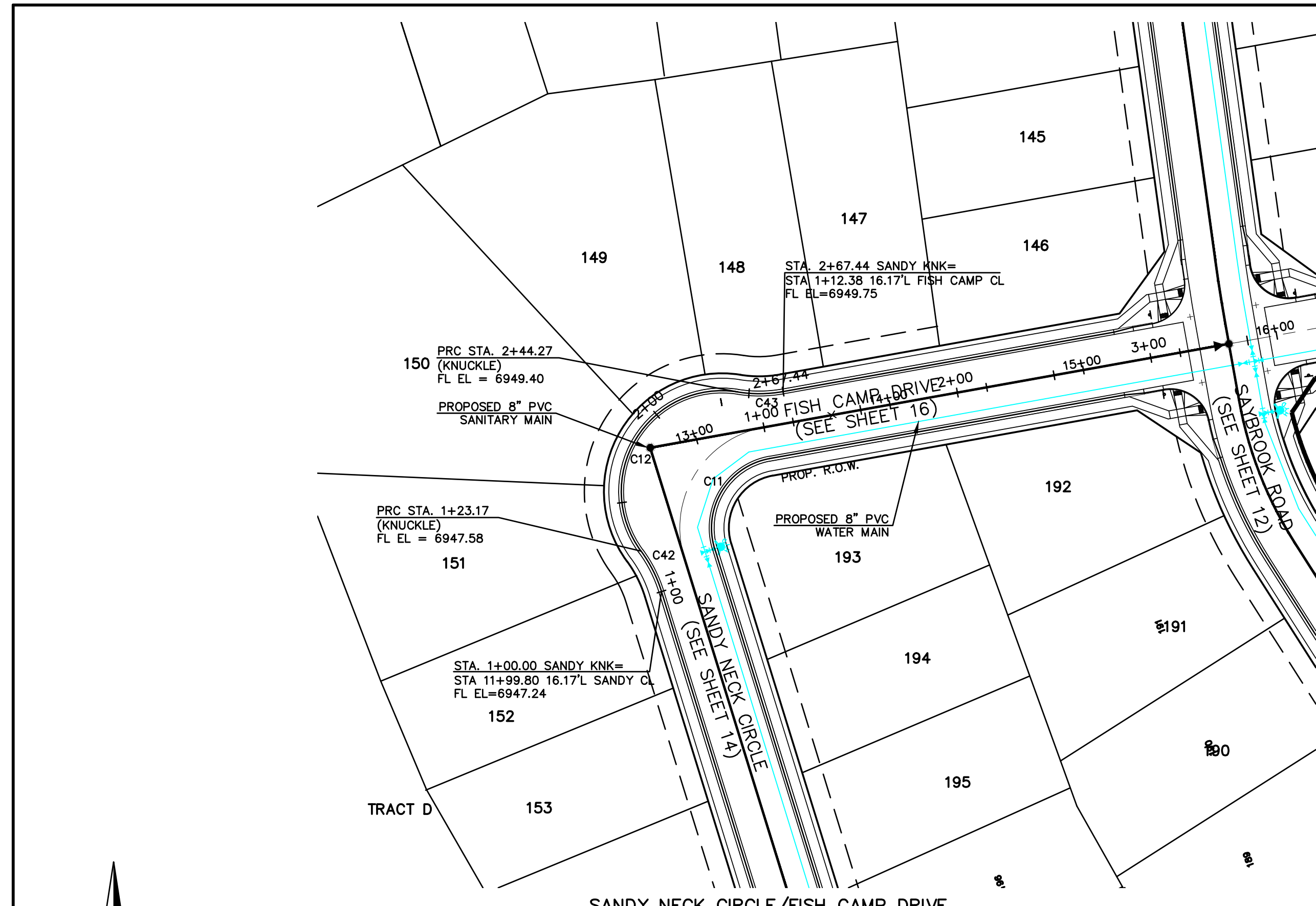
Terra Nova
 Engineering, Inc.
 A Terra Nova Group Company
 Professional Engineer
 Colorado License No. 37170
 10/13/24

WATERBURY FILING NO. 1

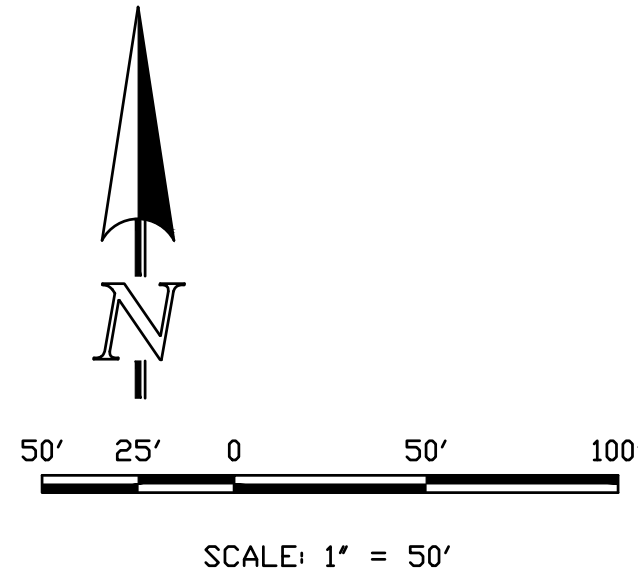
CONSTRUCTION SET
 STREET PLAN AND PROFILE
 SUNKEN MEADOW ROAD

DESIGNED BY QNA
 DRAWN BY QNA
 CHECKED BY JS

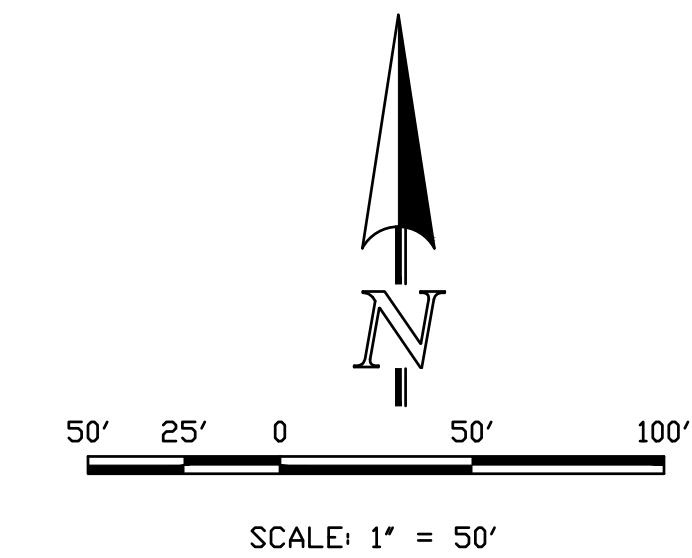
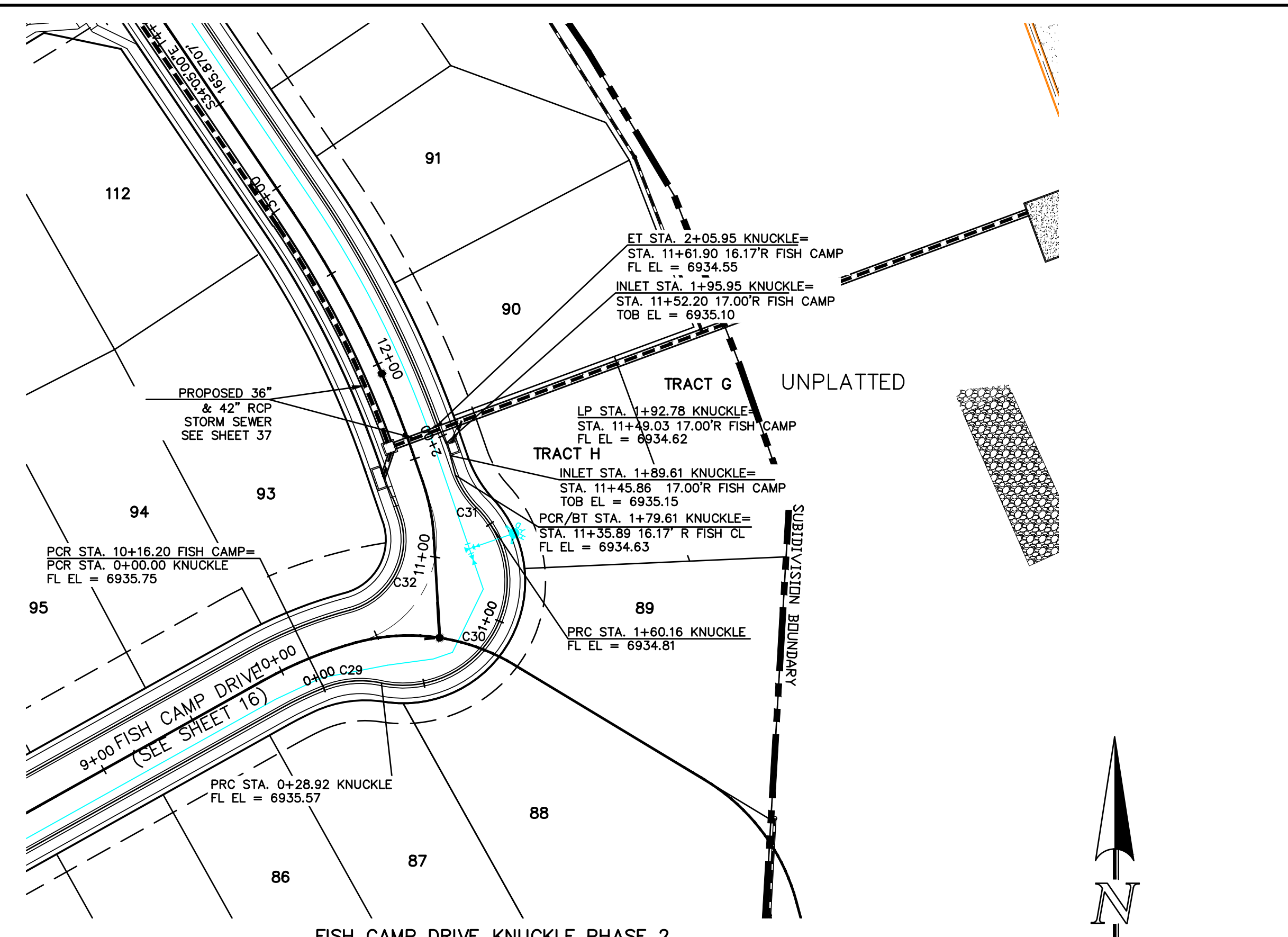
H-SCALE 1"=50'
 V-SCALE 1"=5'
 JOB NO. 2356.00
 DATE ISSUED 12/22/24
 SHEET NO. 15 OF 54



CURVE	LENGTH	RADIUS	DELTA
C11	60.68'	35.83'	97°01'39"
C12	121.10'	51.17'	135°36'09"
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'	19°17'15"
C44	23.17'	68.83'	19°17'15"



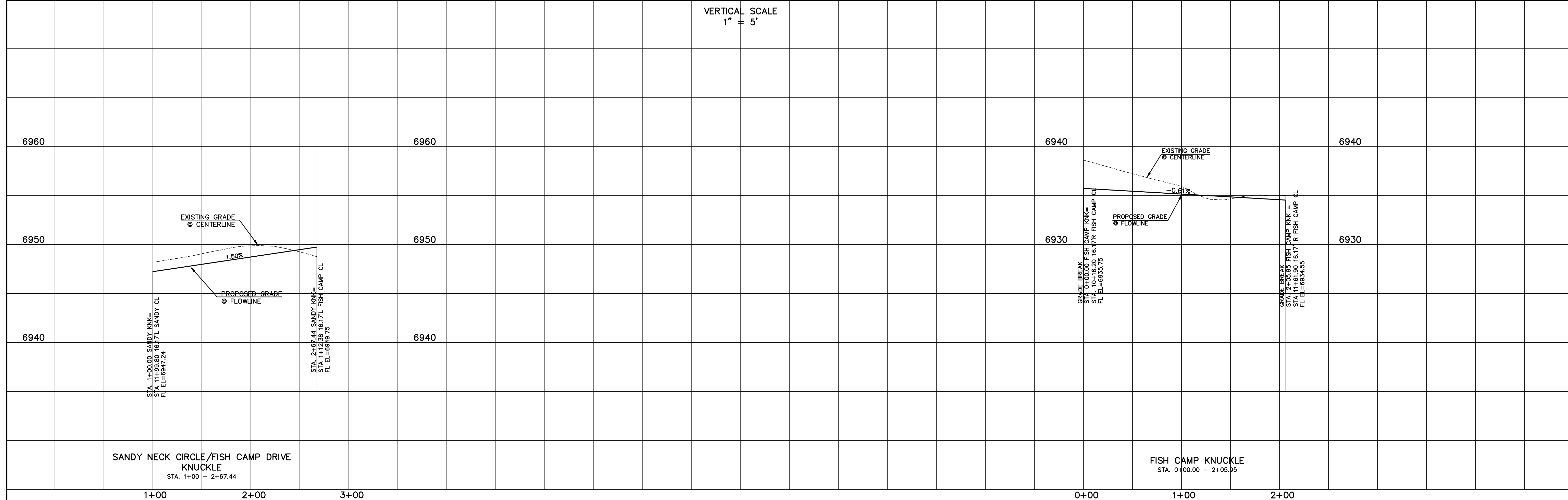
**SANDY NECK CIRCLE/FISH CAMP DRIVE
KNUCKLE PHASE 2**
 STA. 1+00.00 - 2+67.44 URBAN LOCAL
 (DESIGN SPEED 25 MPH)
 POSTED SPEED LIMIT
 IS 25 M.P.H.



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



REVISIONS

NO.	DESCRIPTION	DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES TERRA NOVA ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR:
ACM ALF VIII JV 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.tnaseinc.com

Terra Nova
 Engineering, Inc.
 Creative Civil Engineering

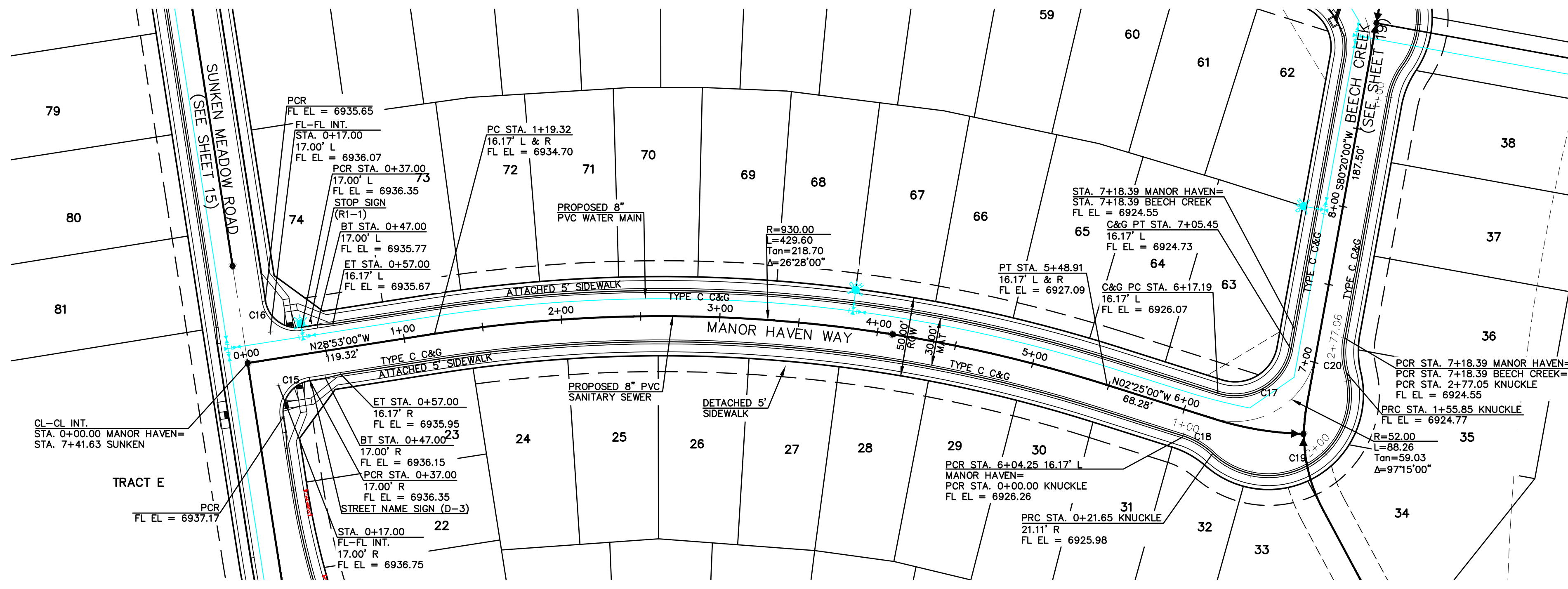
WATERBURY FILING NO. 1

CONSTRUCTION SET
 STREET PLAN AND PROFILE
 SANDY NECK/FISH CAMP KNUCKLE - FISH CAMP KNUCKLE

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

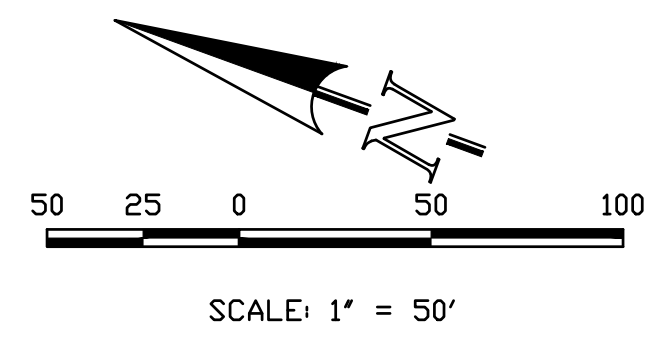
H-SCALE: 1"=50'
 V-SCALE: 1"=5'

JOB NO. 2356.00
 DATE ISSUED 12/22/24
 SHEET NO. 17 OF 54



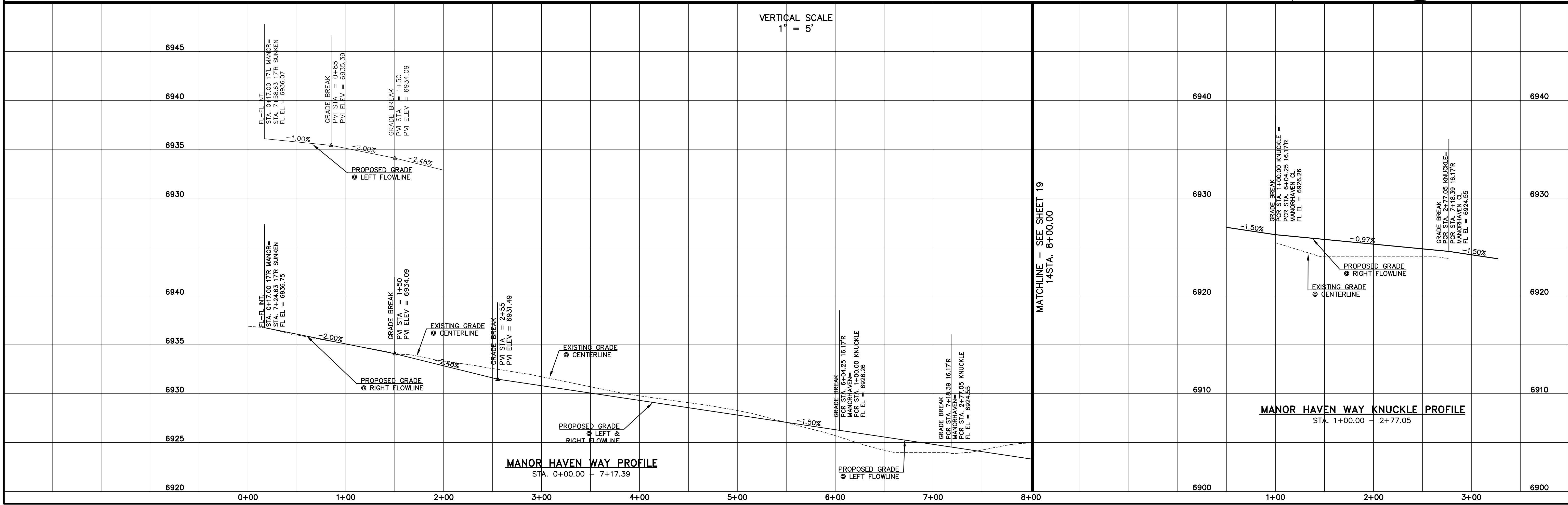
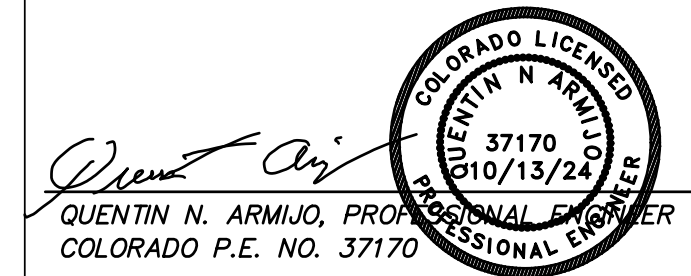
MANOR HAVEN WAY PHASE 2
 STA. 0+00.00 - 7+17.39 - URBAN LOCAL
 (DESIGN SPEED 25 MPH)
 (POSTED SPEED LIMIT IS 25 MPH)

CURVE	LENGTH	RADIUS	DELTA
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"



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)

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



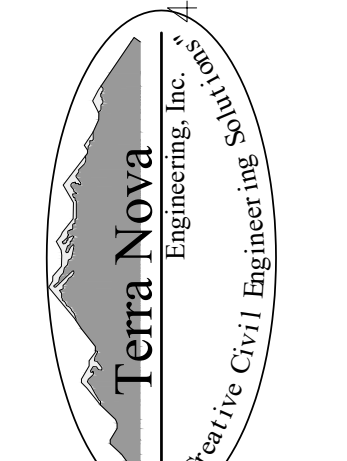
MANOR HAVEN WAY PROFILE
 STA. 0+00.00 - 7+17.39

MANOR HAVEN WAY KNUCKLE PROFILE
 STA. 1+00.00 - 2+77.05

NO.	DESCRIPTION	DATE

UNTIL 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

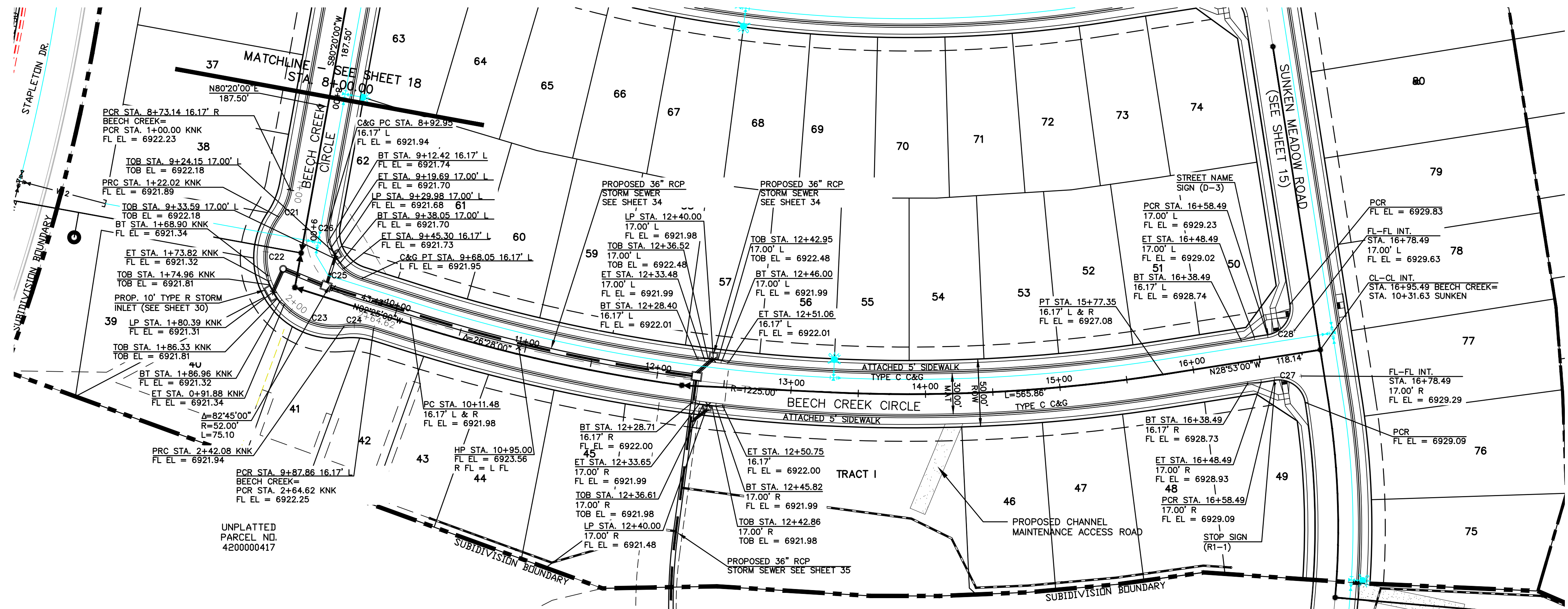
CONSTRUCTION SET
 STREET PLAN AND PROFILE
 MANOR HAVEN WAY

DESIGNED BY QNA
 DRAWN BY QNA
 CHECKED BY JS

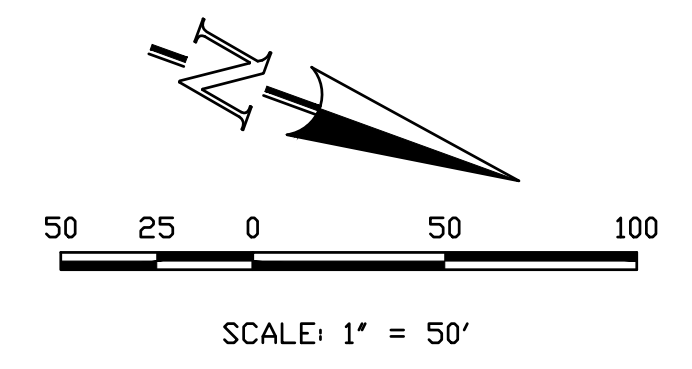
H-SCALE 1"=50'
 V-SCALE 1"=5'
 JOB NO. 2356.00
 DATE ISSUED 12/22/24
 SHEET NO. 18 OF 54

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

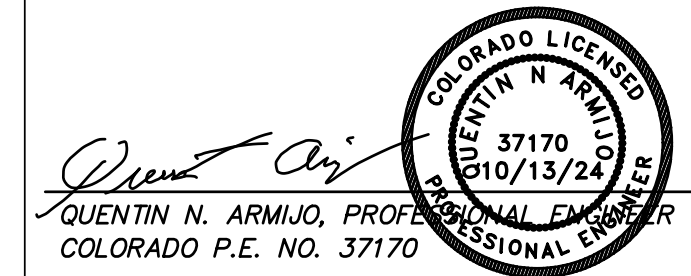
CURVE	LENGTH	RADIUS	DELTA
C21	22.02'	48.83'	25°50'31"
C22	45.94'	51.17'	51°26'26"
C23	49.27'	51.17'	55°10'01"
C24	22.02'	48.83'	25°50'31"
C25	15.94'	35.83'	24°03'23"
C26	12.80'	35.83'	20°27'48"
C27	31.42'	20.00'	90°00'00"
C28	31.42'	20.00'	90°00'00"



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

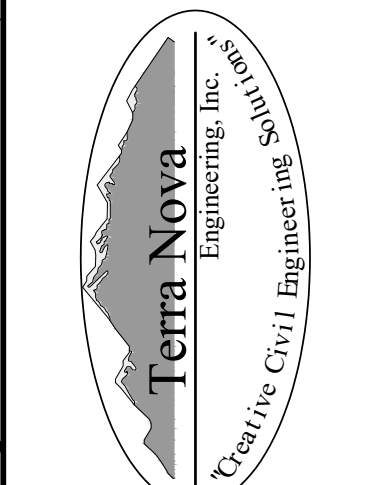


THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION
 FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.



REVISIONS
 NO. DESCRIPTION
 UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE BOARD OF ARCHITECTS, ENGINEERS AND SURVEYORS, INC. APPROVED FOR THEIR USE ONLY AS DESIGNATED BY WRITTEN AUTHORIZATION.

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



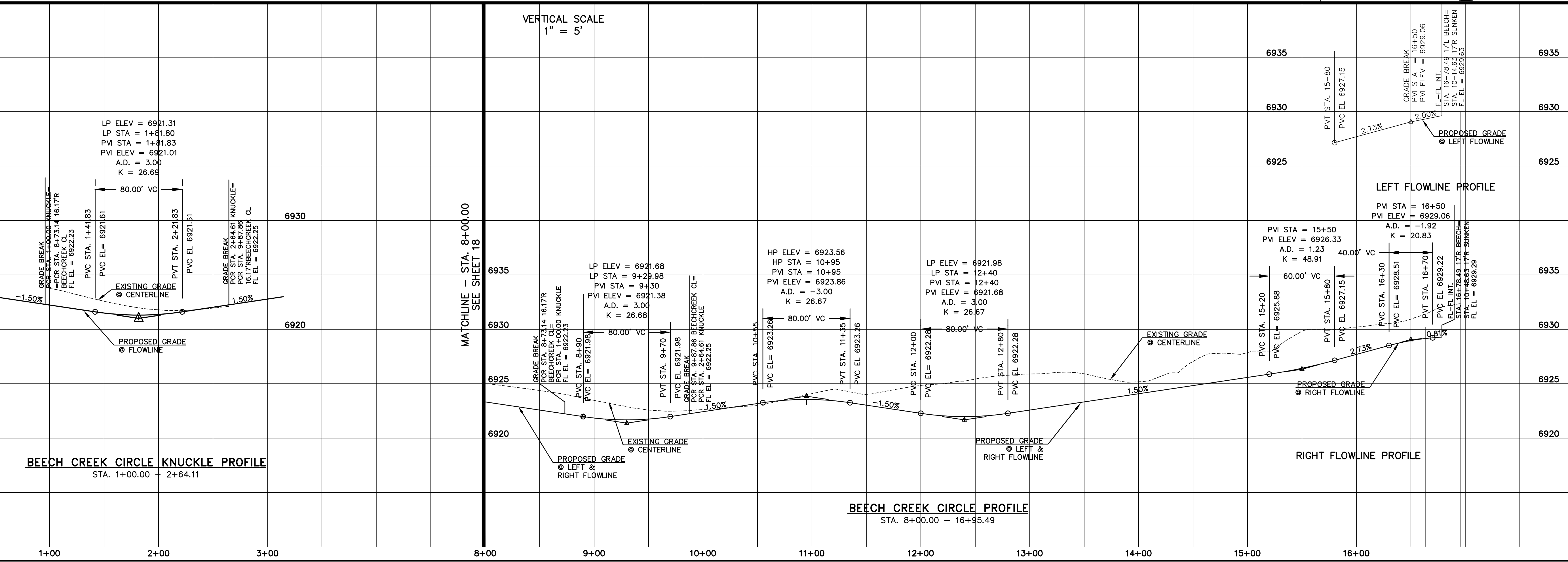
721 S. 29th STREET
 COLORADO SPRINGS, CO 80904
 OFFICE: 719-635-6422
 FAX: 719-635-6426
 www.tnase.com

WATERBURY FILING NO. 1

CONSTRUCTION SET
 STREET PLAN AND PROFILE
 BEECH CREEK CIRCLE

DESIGNED BY QNA
 DRAWN BY QNA
 CHECKED BY JS

H-SCALE 1"=50'
 V-SCALE 1"=5'
 JOB NO. 2356.00
 DATE ISSUED 12/22/24
 SHEET NO. 19 OF 54



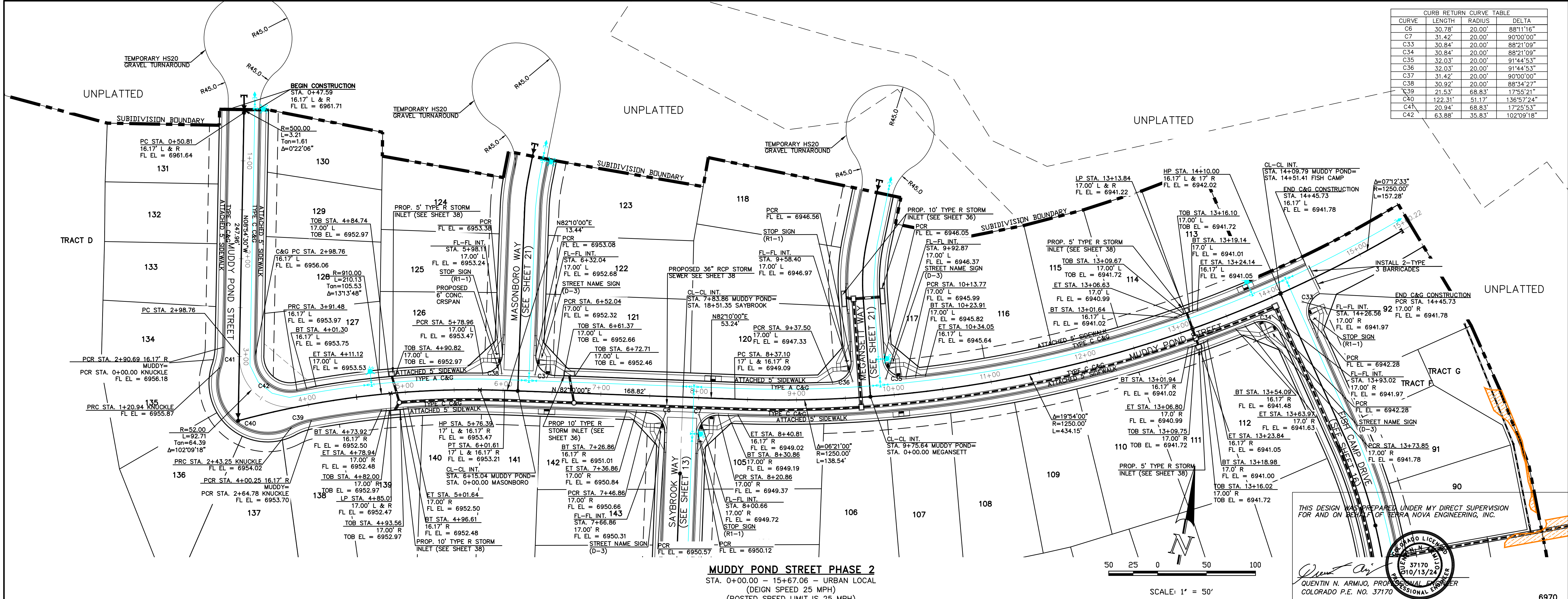
BEECH CREEK KNUCKLE PROFILE
 STA. 1+00.00 - 2+64.11

BEECH CREEK CIRCLE PROFILE
 STA. 8+00.00 - 16+95.49

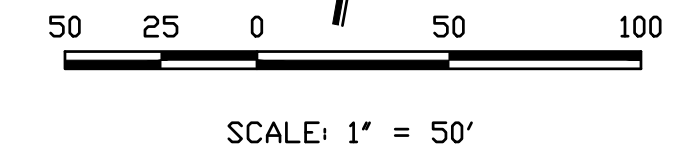
LEFT FLOWLINE PROFILE

RIGHT FLOWLINE PROFILE

CURVE	LENGTH	RADIUS	DELTA
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+67.08 - URBAN LOCAL
 (DESIGN SPEED 25 MPH)
 (POSTED SPEED LIMIT IS 25 MPH)

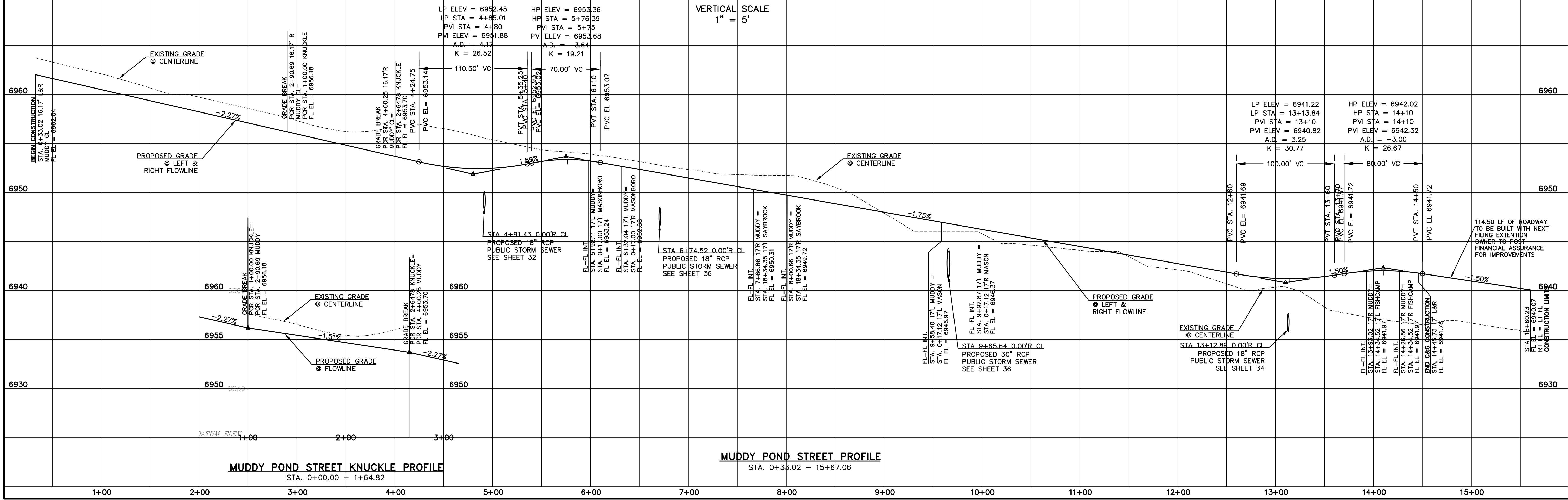


THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

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

37170
 10/13/24

6970



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

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

NO.	REVISIONS	DATE	DESCRIPTION

UNPL. SUCH TIME AS THESE DRAWINGS ARE APPROVED FOR RECORD BY THE LOCAL JURISDICTION. THIS PROJECT IS THE PROPERTY OF TERRA NOVA ENGINEERING, INC. AND SURVEYING, INC. APPROVED FOR USE ONLY AS DESIGNATED BY WRITTEN AUTHORIZATION.

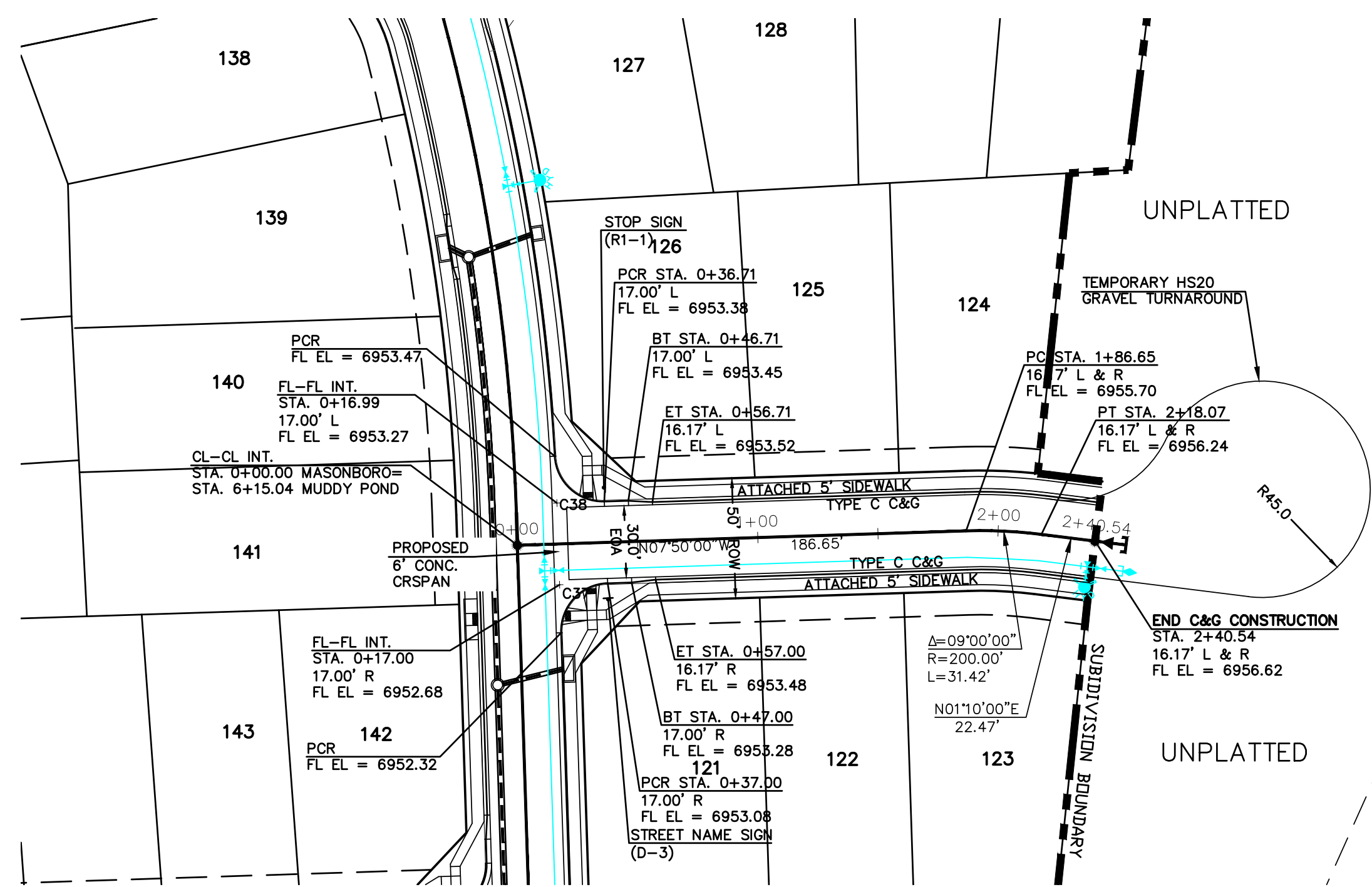
PREPARED FOR:
 ACM ALF VIII JV SUB II LLC
 JASON POKK
 100 E. MISSISSIPPI AVE., STE. 500
 DENVER, CO 80246
 303-984-9800

DESIGNED BY QNA
 DRAWN BY QNA
 CHECKED BY JS

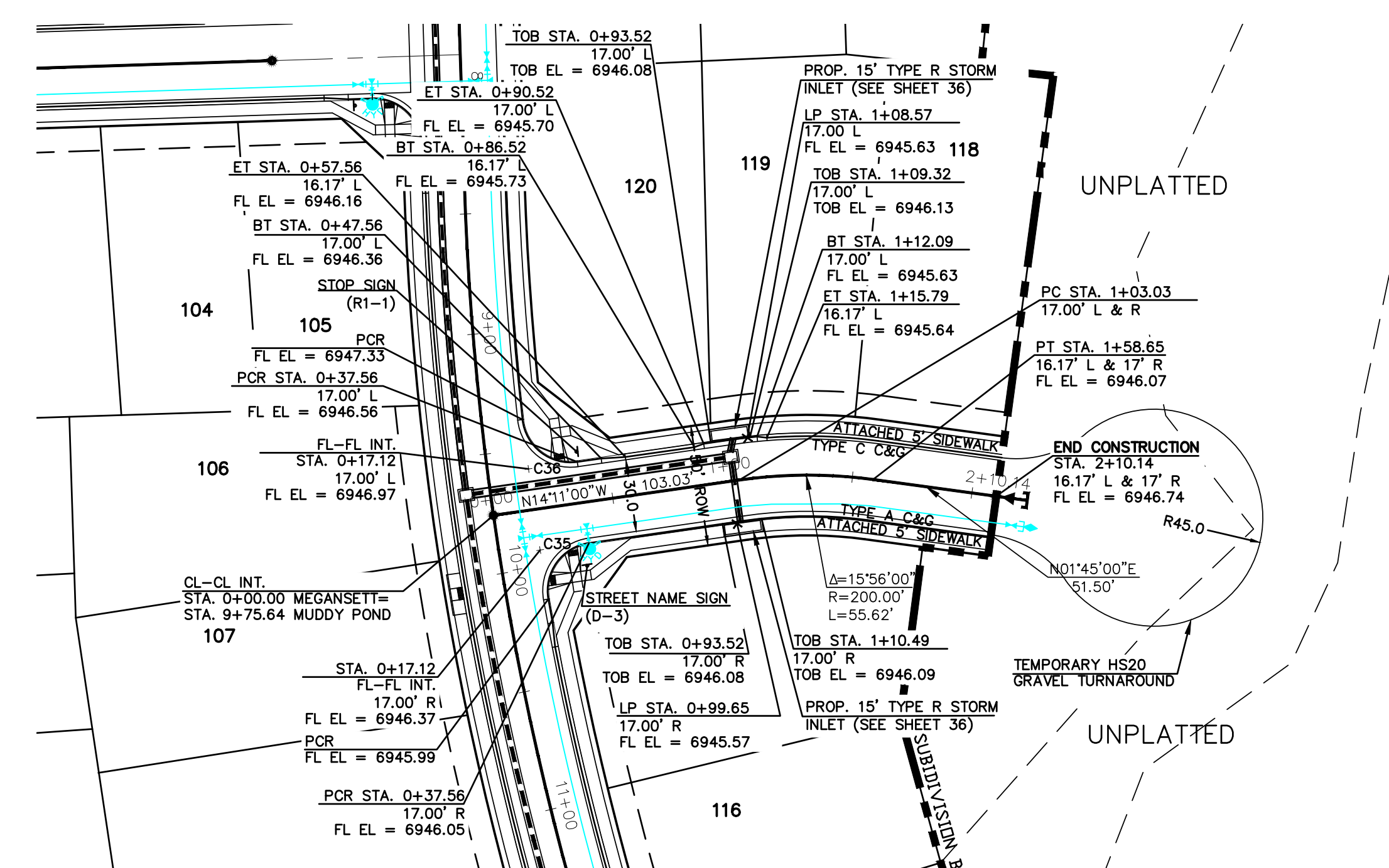
H-SCALE 1"=50'
 V-SCALE 1"=5'

JOB NO. 2356.00
 DATE ISSUED 12/22/24
 SHEET NO. 20 OF 54

WATERBURY FILING NO. 1
 CONSTRUCTION SET
 STREET PLAN AND PROFILE
 MUDDY POND ST.



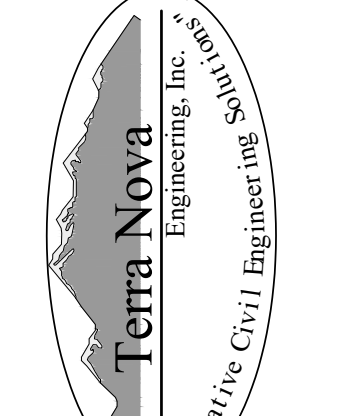
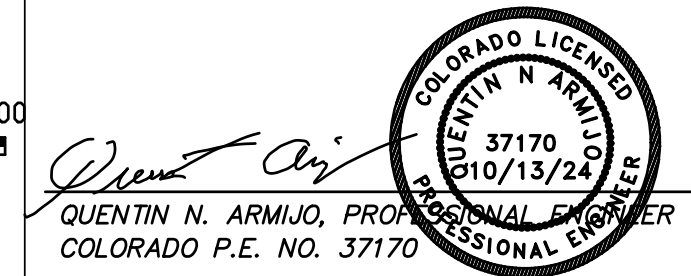
CURB RETURN CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C35	32.03'	20.00'	91°44'53"
C36	32.03'	20.00'	91°44'53"
C37	31.42'	20.00'	90°00'00"
C38	30.92'	20.00'	88°34'27"



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

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

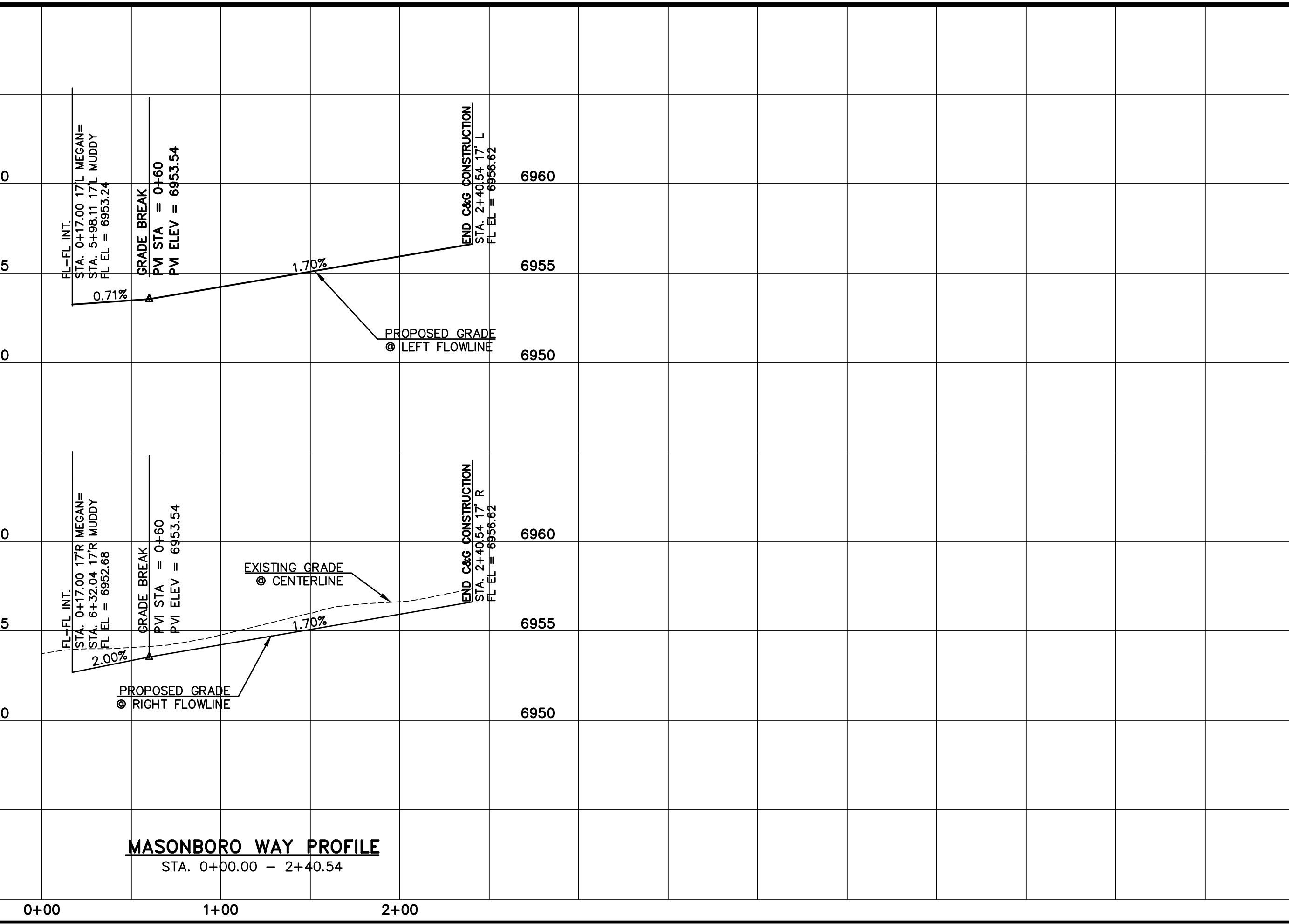
THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION
 FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.



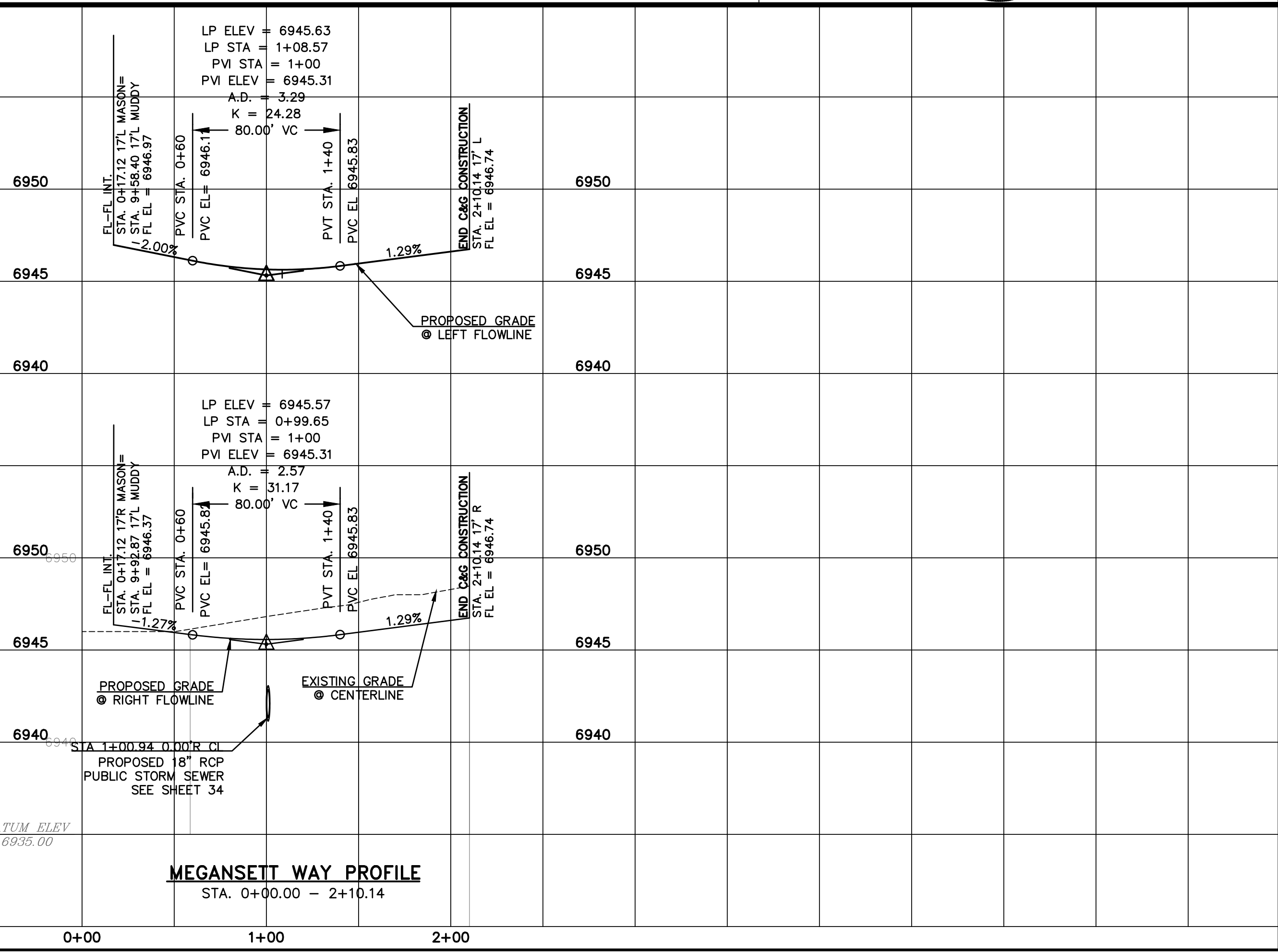
PREPARED FOR:
ACM ALF VIII JV SUB II LLC
JASON POKK
 00 E. MISSISSIPPI AVE., STE 500
 DENVER, CO 80246
 303-984-9800

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

NO.	DESCRIPTION	DATE



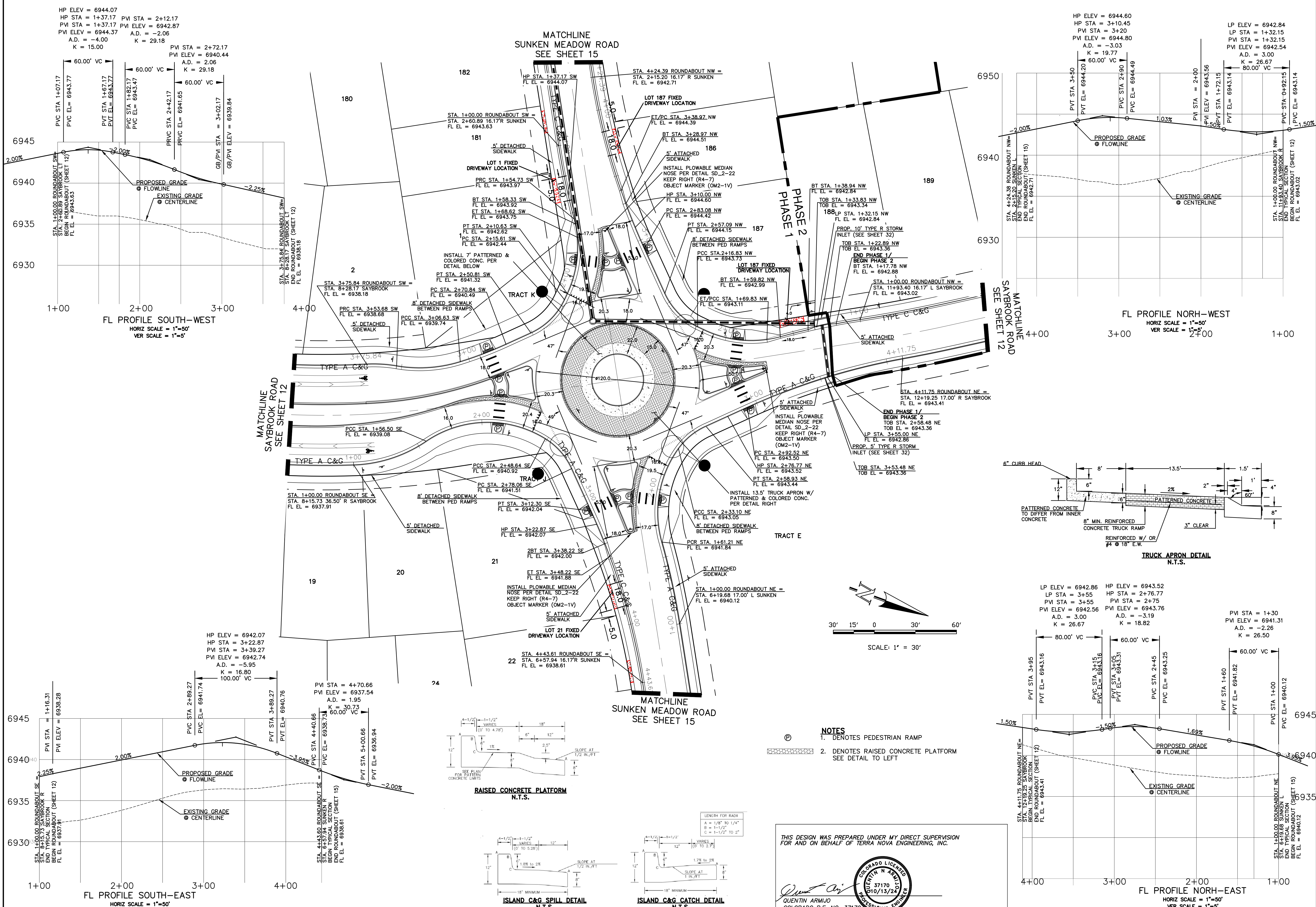
MASONBORO WAY PROFILE
 STA. 0+00.00 - 2+40.54



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

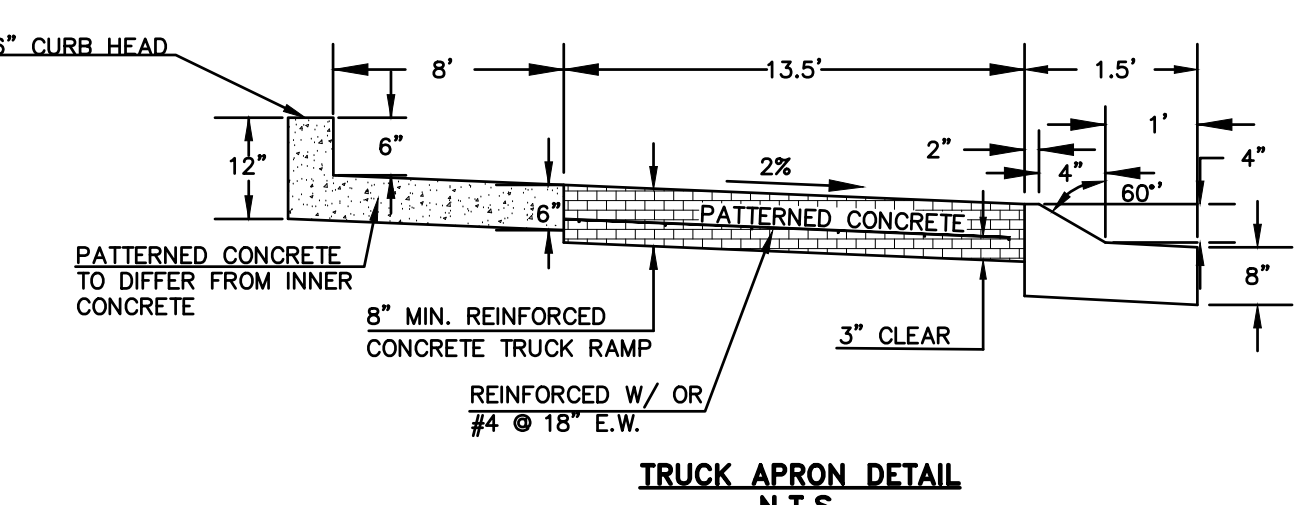
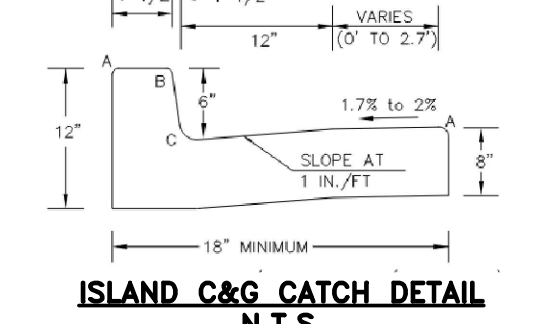
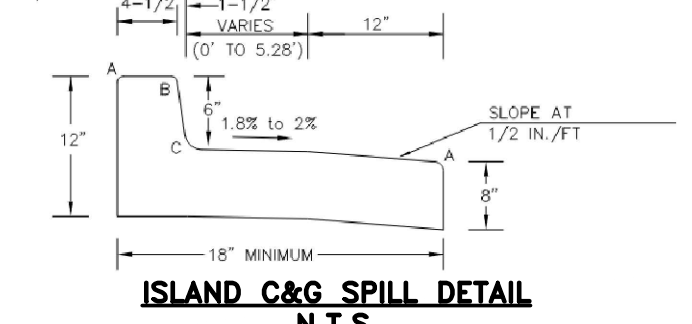
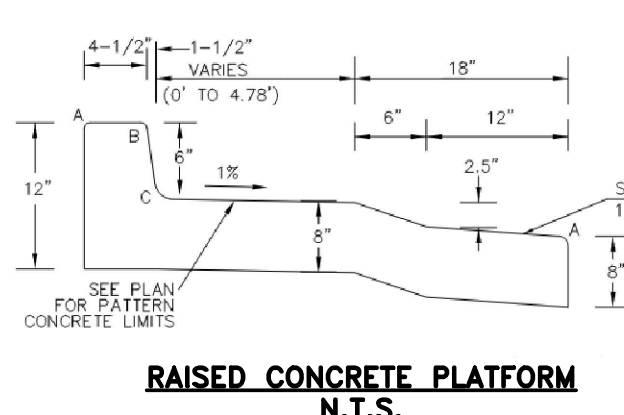
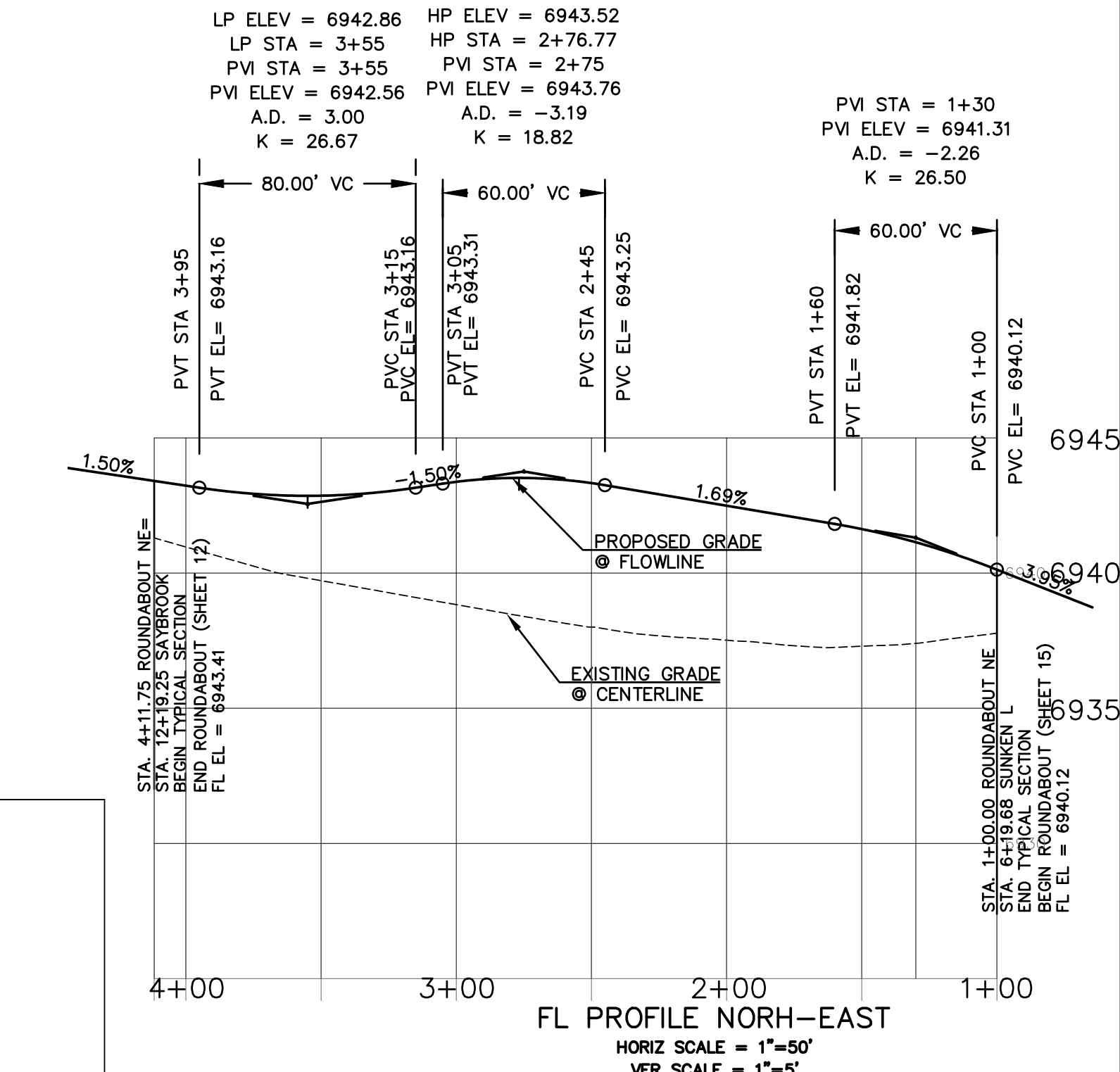
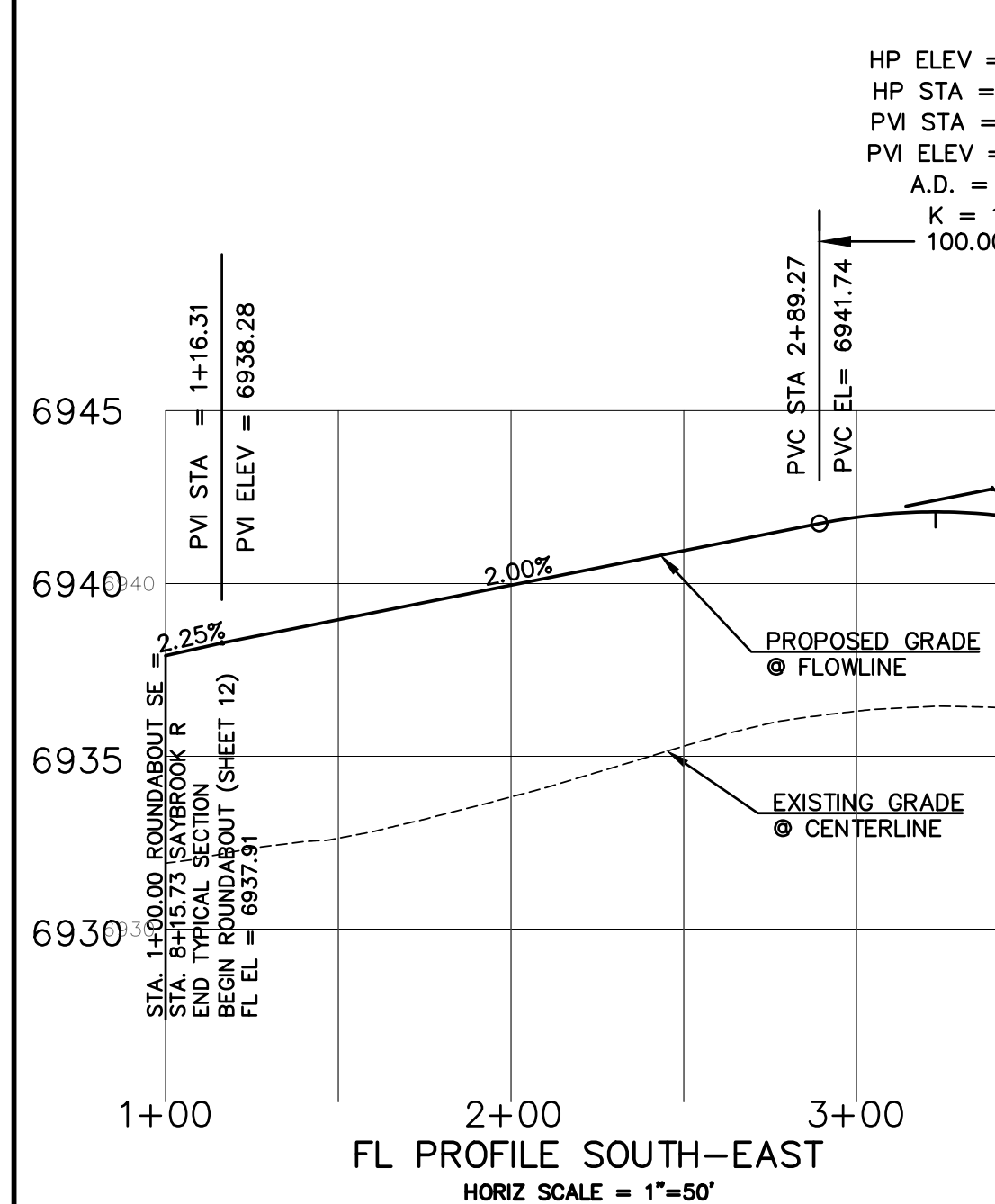
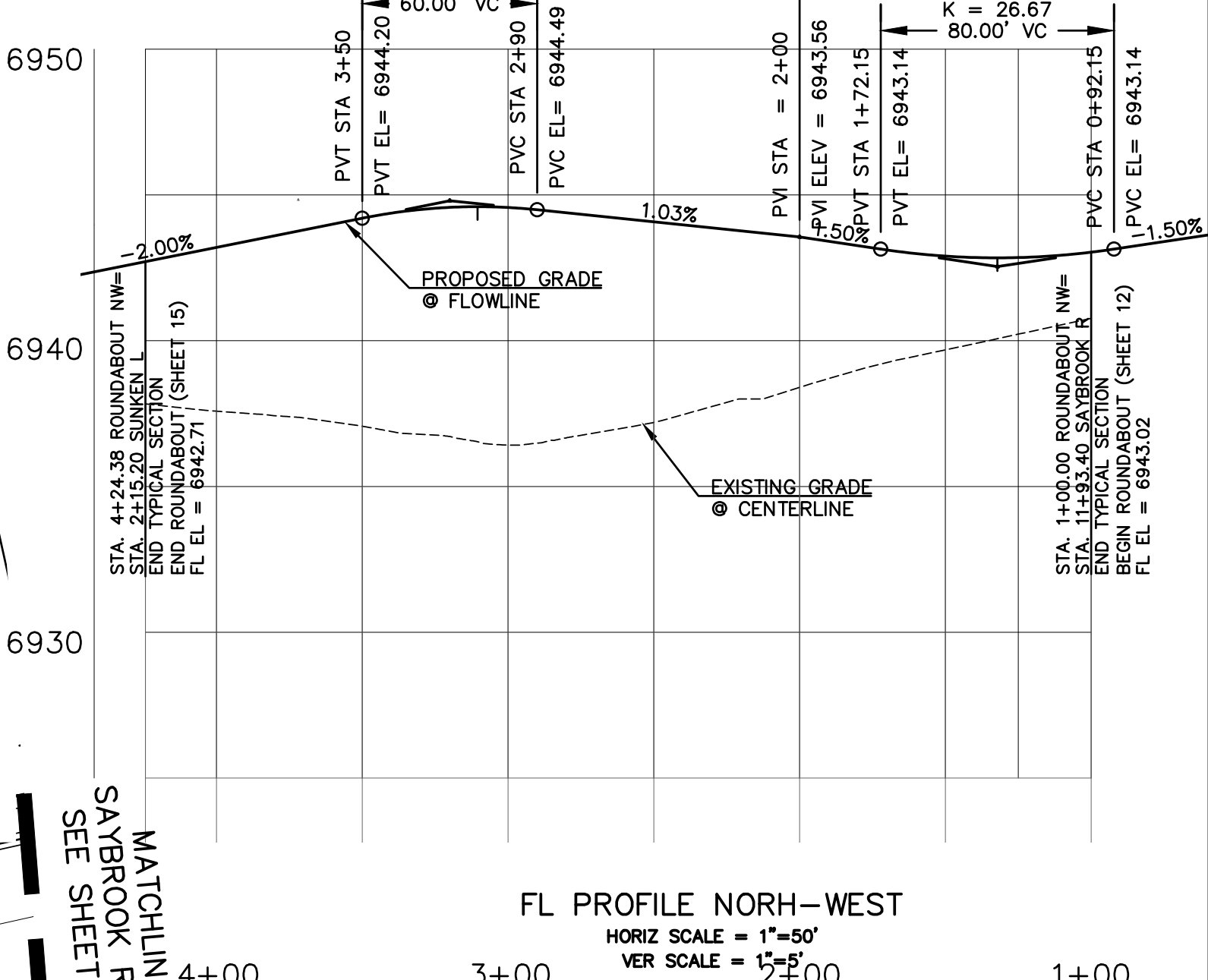
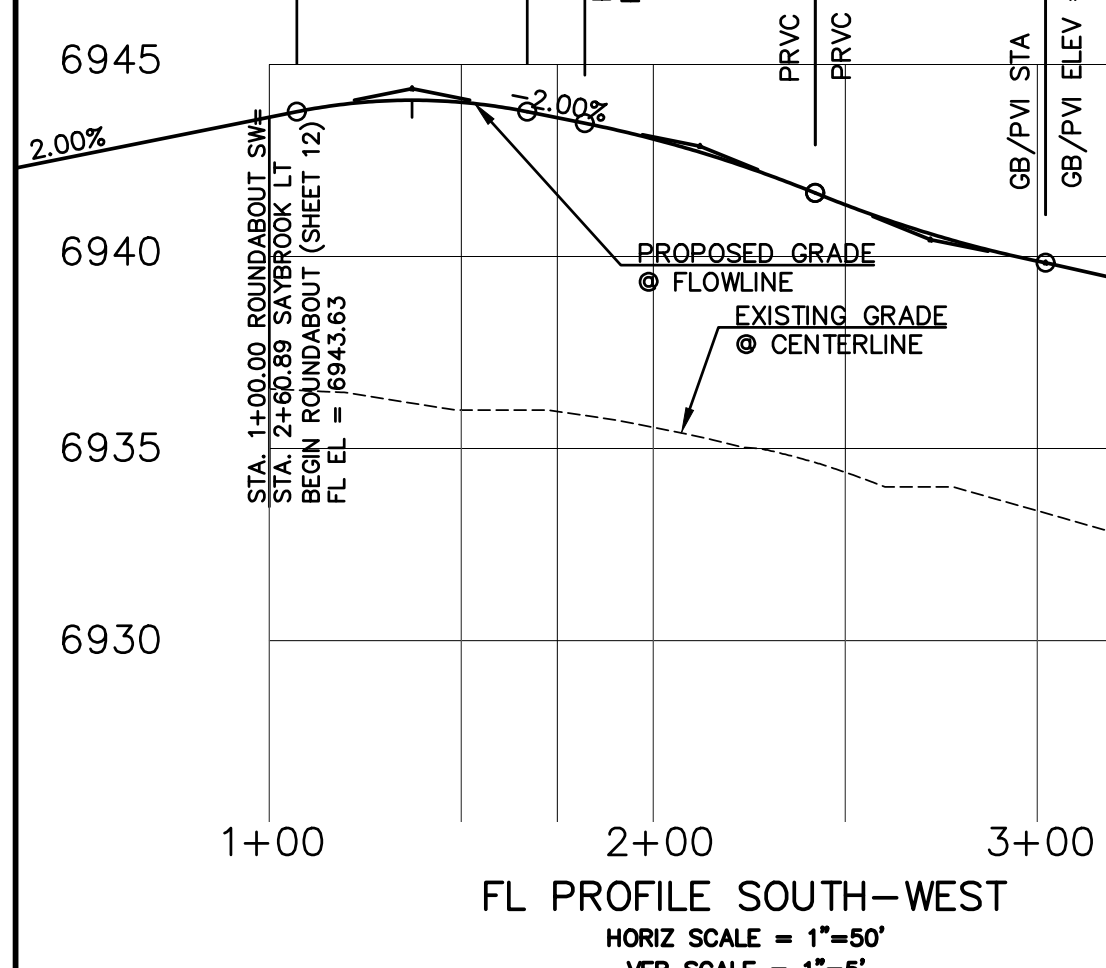
WATERBURY FILING NO. 1
 CONSTRUCTION SET
 STREET PLAN AND PROFILE
 MASONBORO WAY & MEGANSETT WAY

DESIGNED BY QNA
 DRAWN BY QNA
 CHECKED BY JS
 H-SCALE 1"=50'
 V-SCALE 1"=5'
 JOB NO. 2356.00
 DATE ISSUED 12/22/24
 SHEET NO. 21 OF 54



HP ELEV = 6944.07
 HP STA = 1+37.17 PVI STA = 2+12.17
 PVI STA = 1+37.17 PVI ELEV = 6942.87
 PVI ELEV = 6944.37 A.D. = -2.06
 A.D. = -4.00 K = 29.18
 K = 15.00

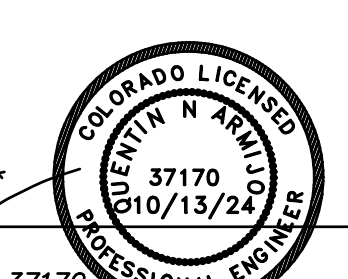
HP ELEV = 6944.60
 HP STA = 3+10.45
 PVI STA = 3+20
 PVI ELEV = 6944.80
 A.D. = -3.03
 K = 19.77
 K = 26.67



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

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

QUENTIN ARMIJO
 COLORADO P.E. NO. 37170

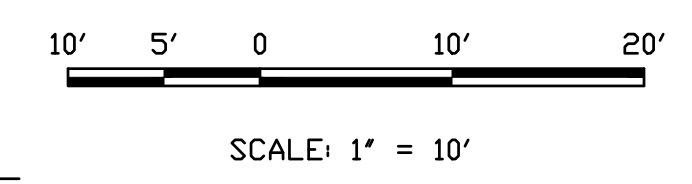
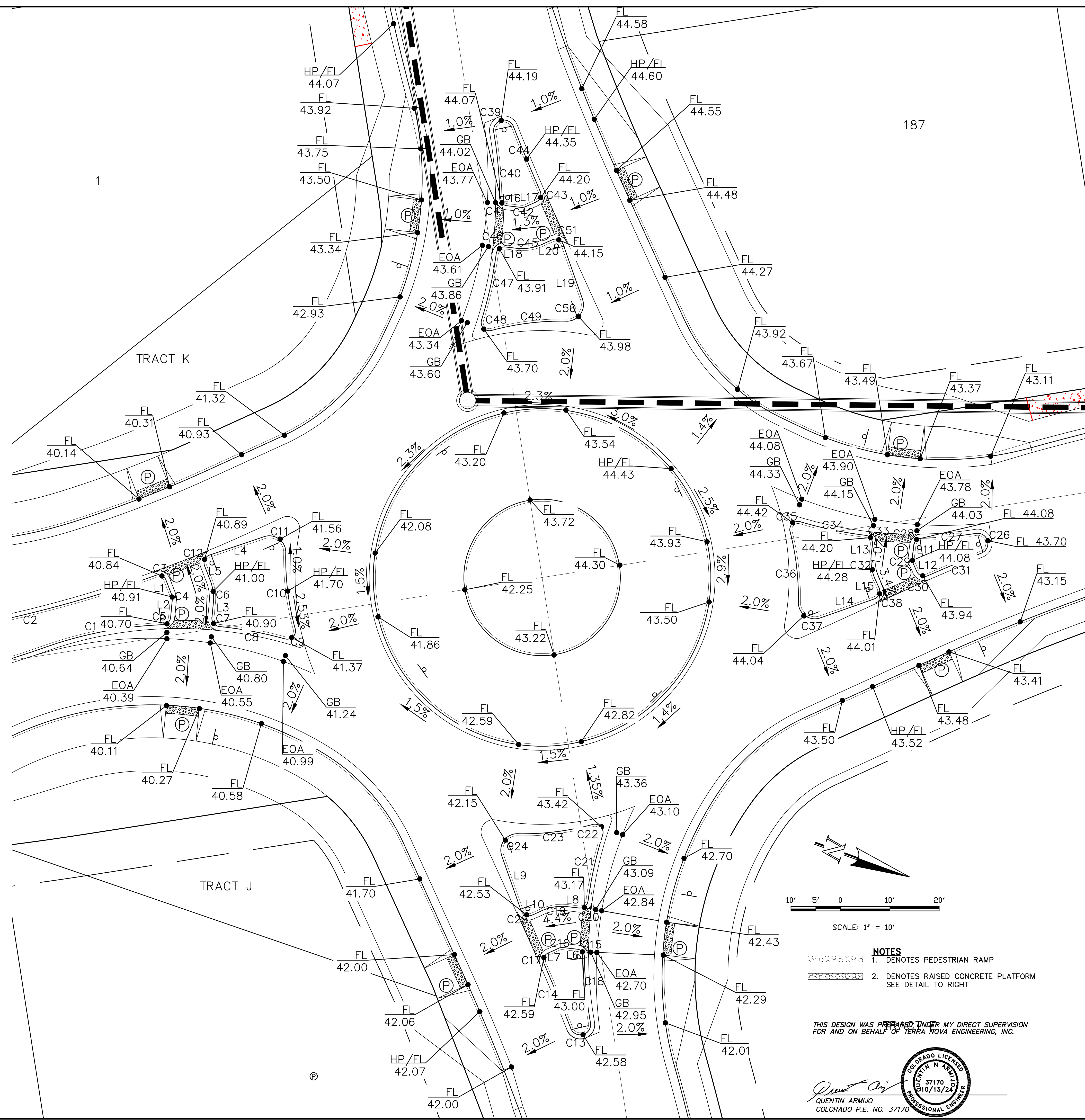
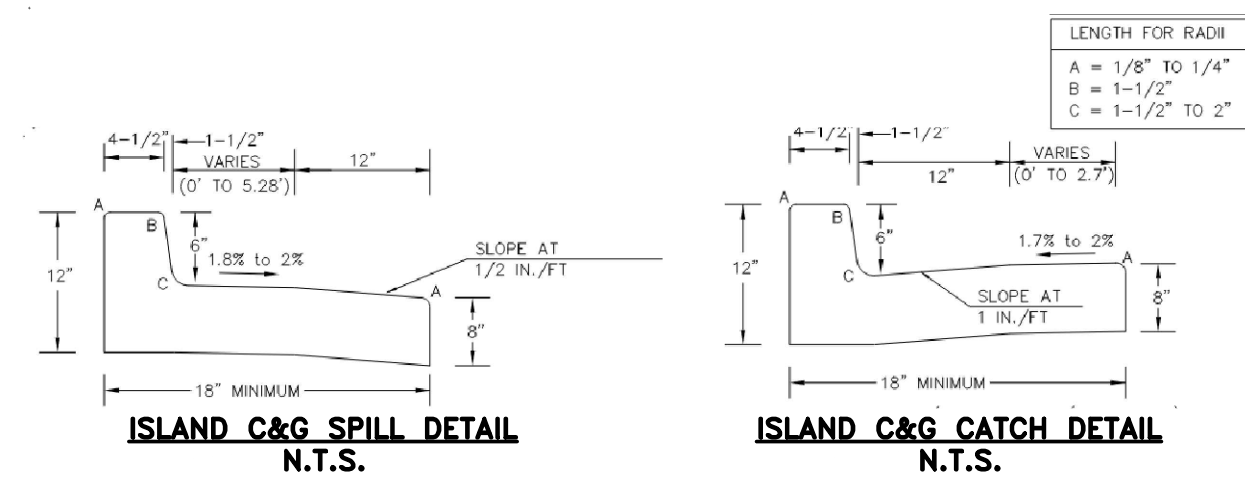
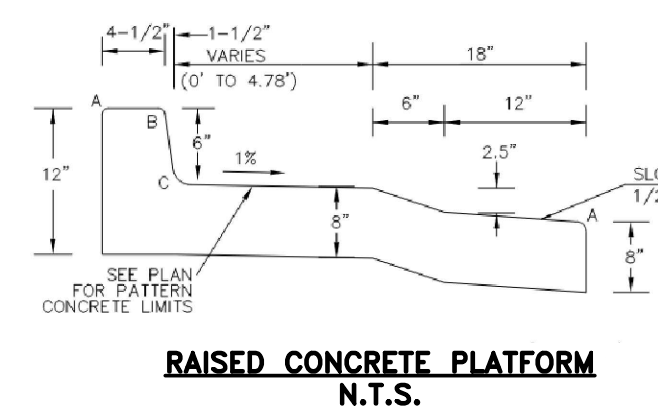


DATE	
DESCRIPTION	
REVISIONS	
NO.	
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE ENGINEER OF RECORD, TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECT AND ONLY AS AUTHORIZED BY WRITTEN AUTHORIZATION.	
PREPARED FOR: SUB	
ACM ALF VIII JV SUB II LLC	
ATTN: JASON POCK	
100 E. MISSISSIPPI AVE., STE 150	
DENVER, CO 80246	
303-984-9800	
721 S. 23RD STREET COLORADO SPRINGS, CO 80904 OFFICE: 719-635-6422 FAX: 719-635-6426 www.tneng.com	
WATERBURY FILING NO. 1	
CONSTRUCTION SET	
ROUNDABOUT DETAILED GRADING	
DESIGNED BY DLF	
DRAWN BY QNA	
CHECKED BY QNA	
H-SCALE AS SHOWN	
V-SCALE AS SHOWN	
JOB NO. 2356.00	
DATE ISSUED 12/22/12	
SHEET NO. 22 OF 54	

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'	936'56"	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'	92'6'59"	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'	92'6'59"	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

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	N44°13'45"W	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

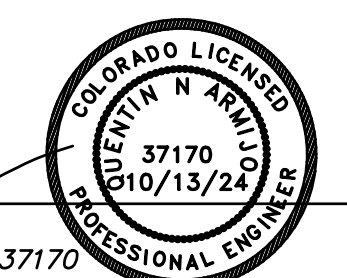
NOTE
LINE AND CURVE TABLES REFER TO THE
FLOWLINE OF THE C&G



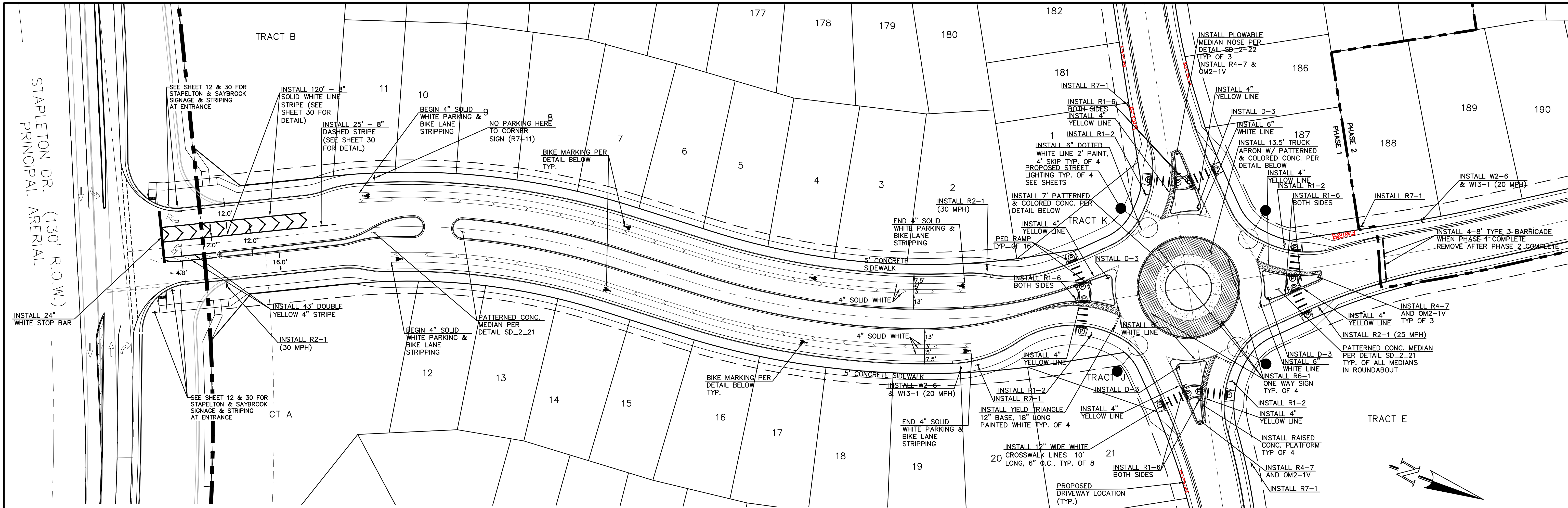
- NOTES
1. DENOTES PEDESTRIAN RAMP
 2. DENOTES RAISED CONCRETE PLATFORM
SEE DETAIL TO RIGHT

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

QUENTIN ARMIJO
COLORADO P.E. NO. 37170



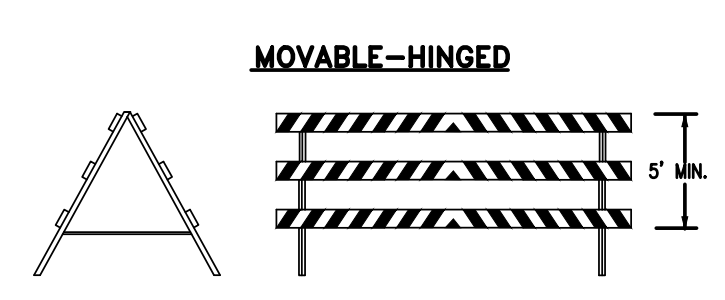
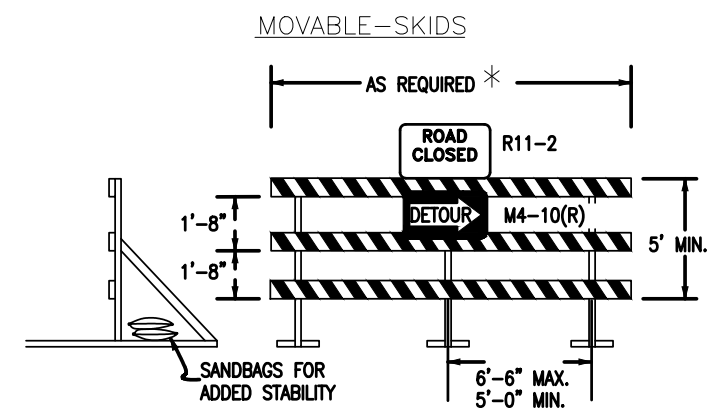
DATE	
DESCRIPTION	
REVISIONS	
NO.	
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE REVIEWING AGENCIES TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECTS AUTHORIZED BY WRITTEN AUTHORIZATION.	
PREPARED FOR:	ACM ALF VIII JV SUB II LLC
ATTN:	JASON POCK
ADDRESS:	100 E. MISSISSIPPI AVE., STE 500 DENVER, CO 80246
PHONE:	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	
CONSTRUCTION SET	
ROUNDABOUT DETAILED GRADING	
DESIGNED BY	DLF
DRAWN BY	QNA
CHECKED BY	QNA
H-SCALE	AS SHOWN
V-SCALE	N/A
JOB NO.	2356.00
DATE ISSUED	12/22/20
SHEET NO.	23 OF 54



SAYBROOK AND ROUNDABOUT SIGNING & STRIPING

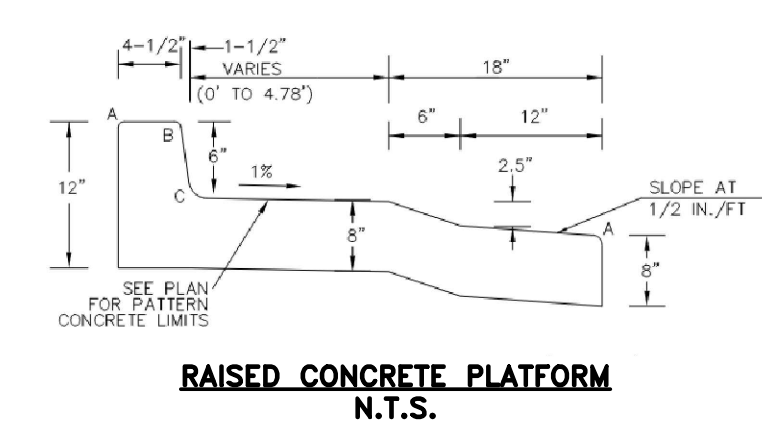
RAIL LENGTH TABLE *

TYPE 3 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'



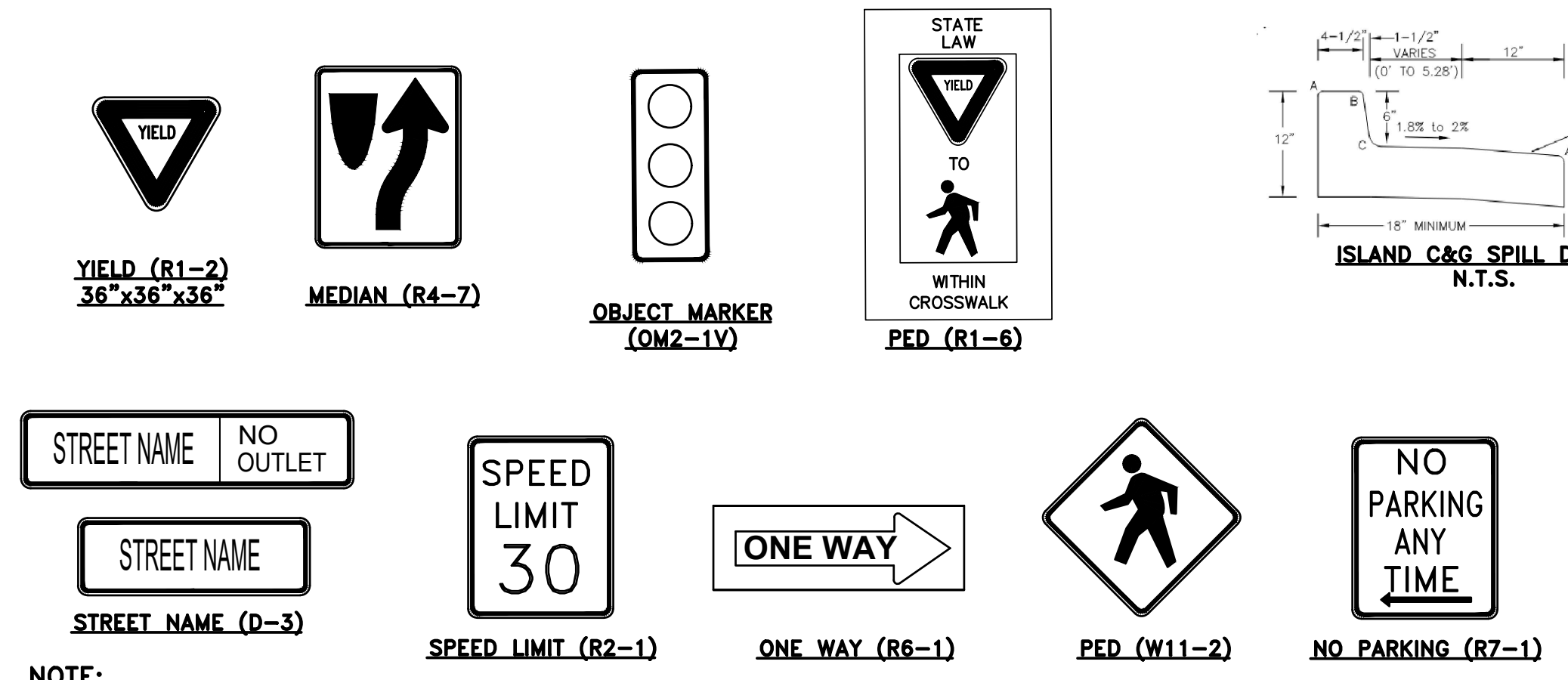
- BARRICADE NOTES**
- TYPE 3 BARRICADES HAVE 3 REFLECTORIZED RAIL FACES IF FACING TRAFFIC IN ONE DIRECTION AND 6 IF FACING TRAFFIC IN TWO DIRECTIONS.
 - THE PORTION OF THE POST ABOVE THE GROUND LINE SHALL BE PAINTED IN ACCORDANCE WITH THE APPROPRIATE GENERAL NOTE.
 - DETACHABLE EXTENSION WING RAILS FOR 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

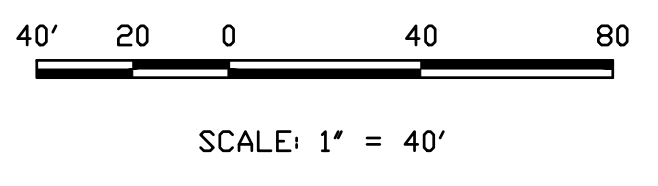
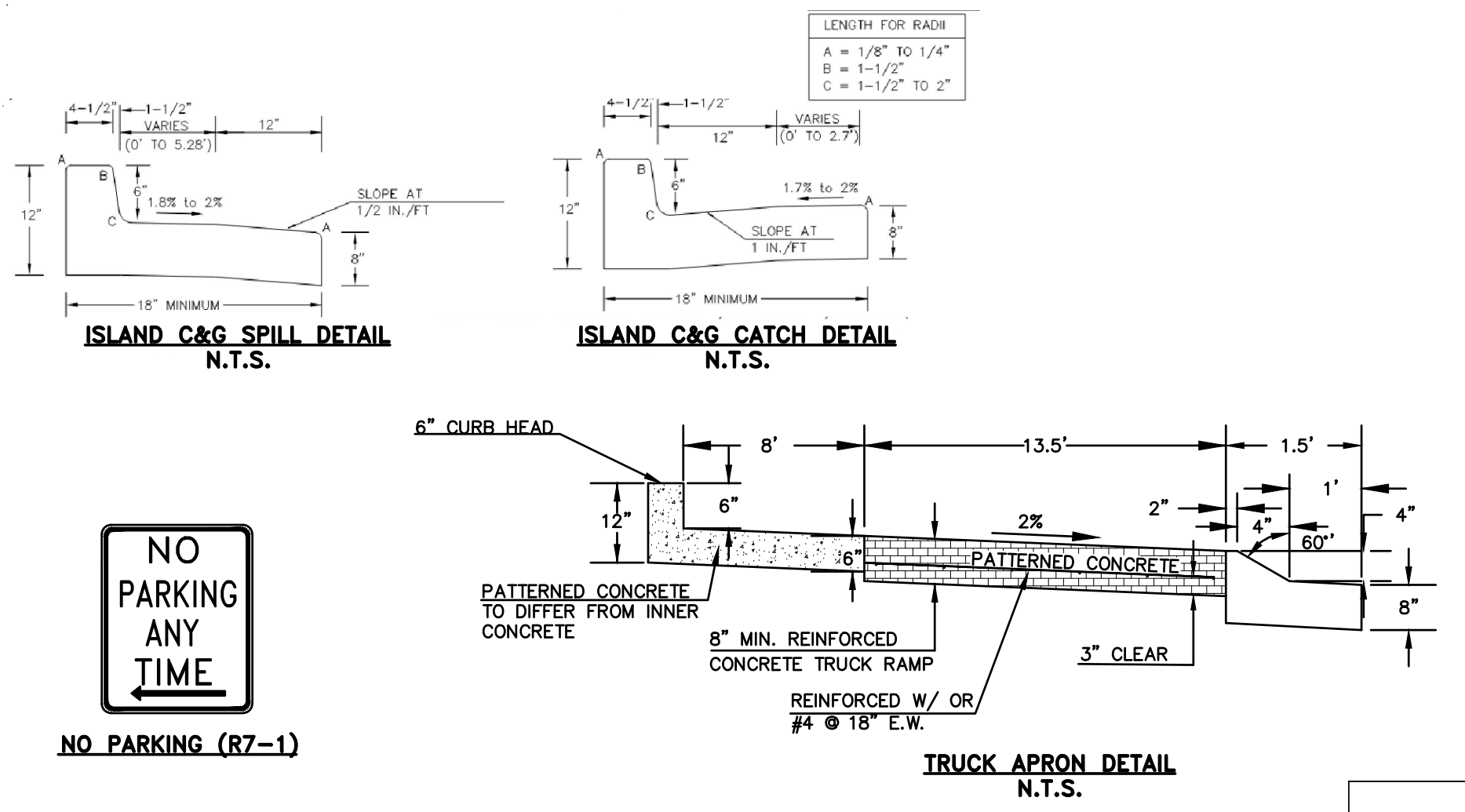


- NOTES**
- ⊙ DENOTES PEDESTRIAN RAMP
 - ▨ DENOTES RAISED CONCRETE PLATFORM SEE DETAIL TO LEFT
 - DENOTES A PROPOSED DRIVEWAY LOCATION

Missing or invalid reference
File: N:\Jobs\1715.00\PDFs\BIKE MARKINGS 1.pdf
Sheet: 1



NOTE:
ALL INTERNAL SIGNS SHALL BE 4" FONT LETTER SIZE.
STAPLETON ROAD INTERSECTION SIGNS SHALL BE 6" FONT LETTER SIZE



REVISIONS

NO.	DESCRIPTION	DATE

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

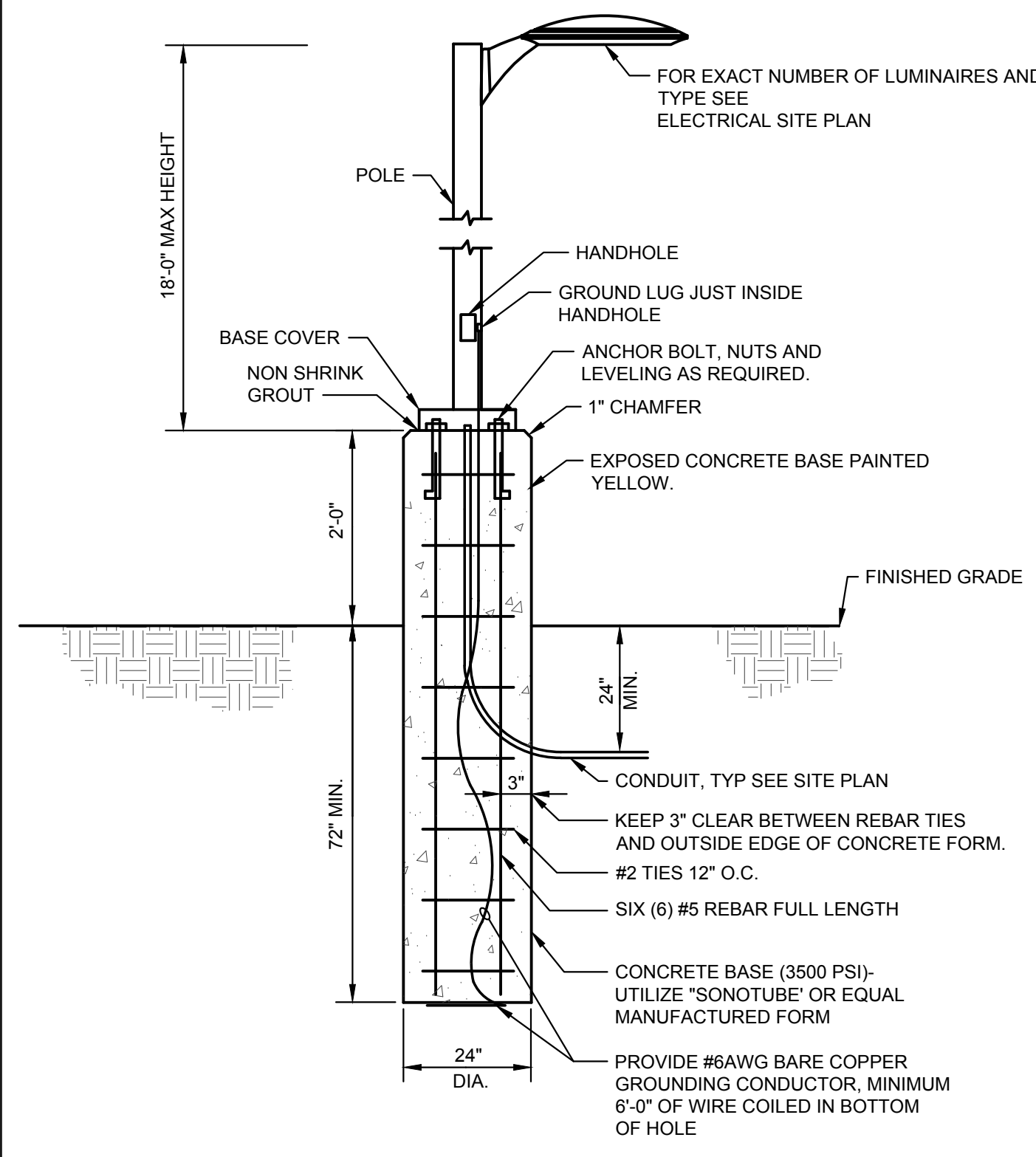
Terra Nova
Engineering, Inc.
Civil Engineer
721 S. 23RD STREET
COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6422
FAX: 719-635-6426
www.tnna.com

WATERBURY FILING NO. 1
CONSTRUCTION SET
SIGNING & STRIPING
SAYBROOK & ROUNDABOUT

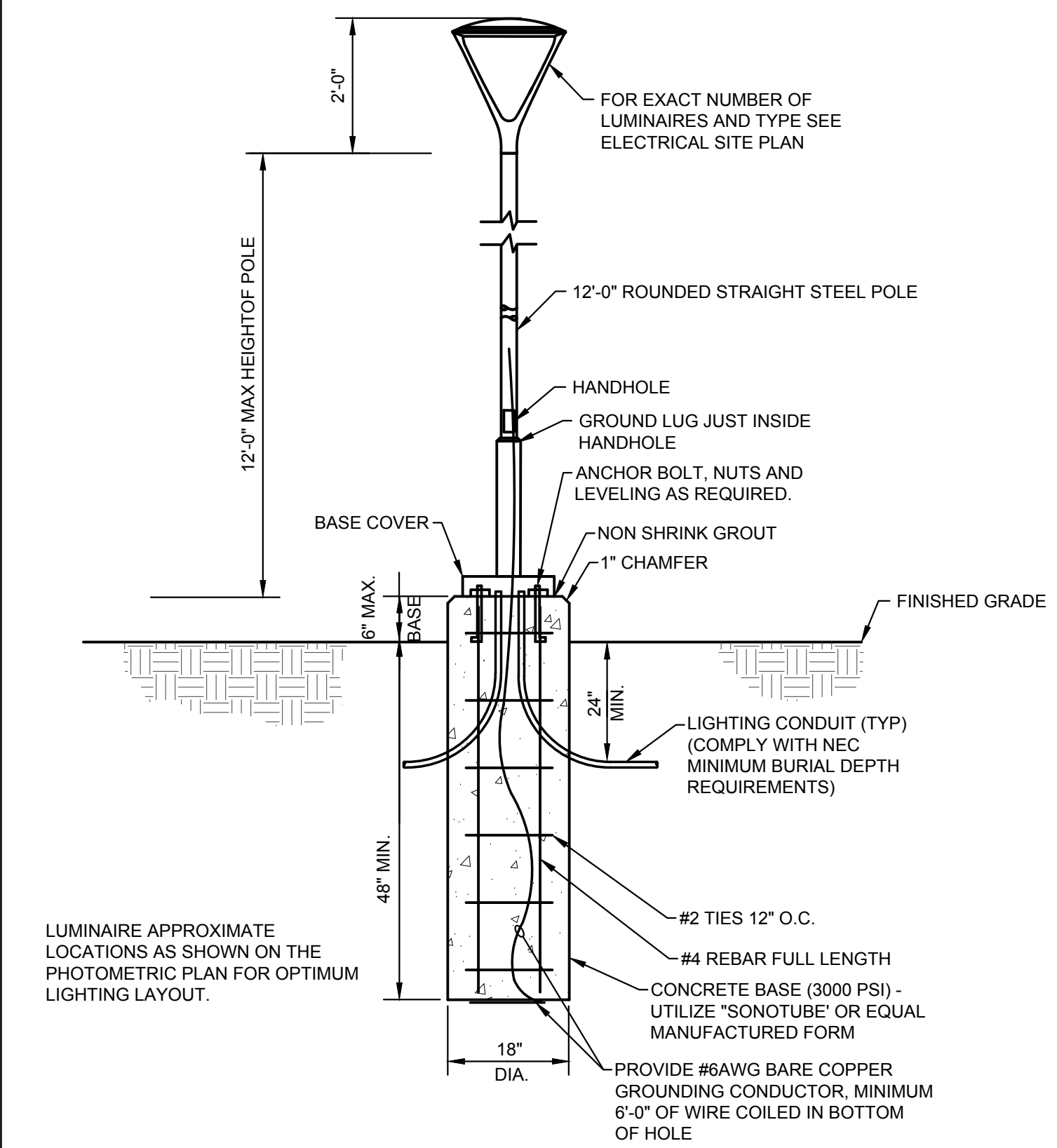
DESIGNED BY	DLF
DRAWN BY	QNA
CHECKED BY	QNA
H-SCALE	AS SHOWN
V-SCALE	N/A
JOB NO.	2356.00
DATE ISSUED	12/22/20
SHEET NO.	24 OF 54

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

Quentin Armojo
QUENTIN ARMOJO
COLORADO P.E. NO. 37170



1 LIGHT POLE DETAIL - P3, P4
NOT TO SCALE



2 LIGHT POLE DETAIL - P5
NOT TO SCALE

WATERBURY SITE LIGHTING FIXTURE SCHEDULE												
LUMINAIRE			LAMP									
ID	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	DISTRIBUTION	VOLTAGE	DIMMING	MOUNTING	QTY.	TYPE	WATTS	LUMENS	COLOR TEMP-CRI
P3	KIM LIGHTING	UR20-56L-75-4K7-3-UNV-A34-BLT-7PR-TL-CLR POLE: R55-H-18-40-B-1-K2-BLT	20\"/>									



GENERAL NOTES
A. FIXTURES SIZES SHOWN ARE DIAGRAMMATICAL AND ARE LOCATED TO STAY OUTSIDE MVEA EASEMENTS.

REVISIONS NO.	DESCRIPTION	DATE

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

PREPARED FOR:
WATERBURY SITE DEVELOPMENT
STAPLETON ROAD AND
EASTONVILLE ROAD
FALCON

721 S. ZIBRO STREET
COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6422
FAX: 719-635-6428
www.tnove.com

Terra Nova Engineering, Inc.
Civil Engineering
Serving the City of Falcon

ELECTRICAL SITE DEVELOPMENT PLAN

ELECTRICAL SITE DEVELOPMENT PLAN
SCALE: 1" = 100'-0"

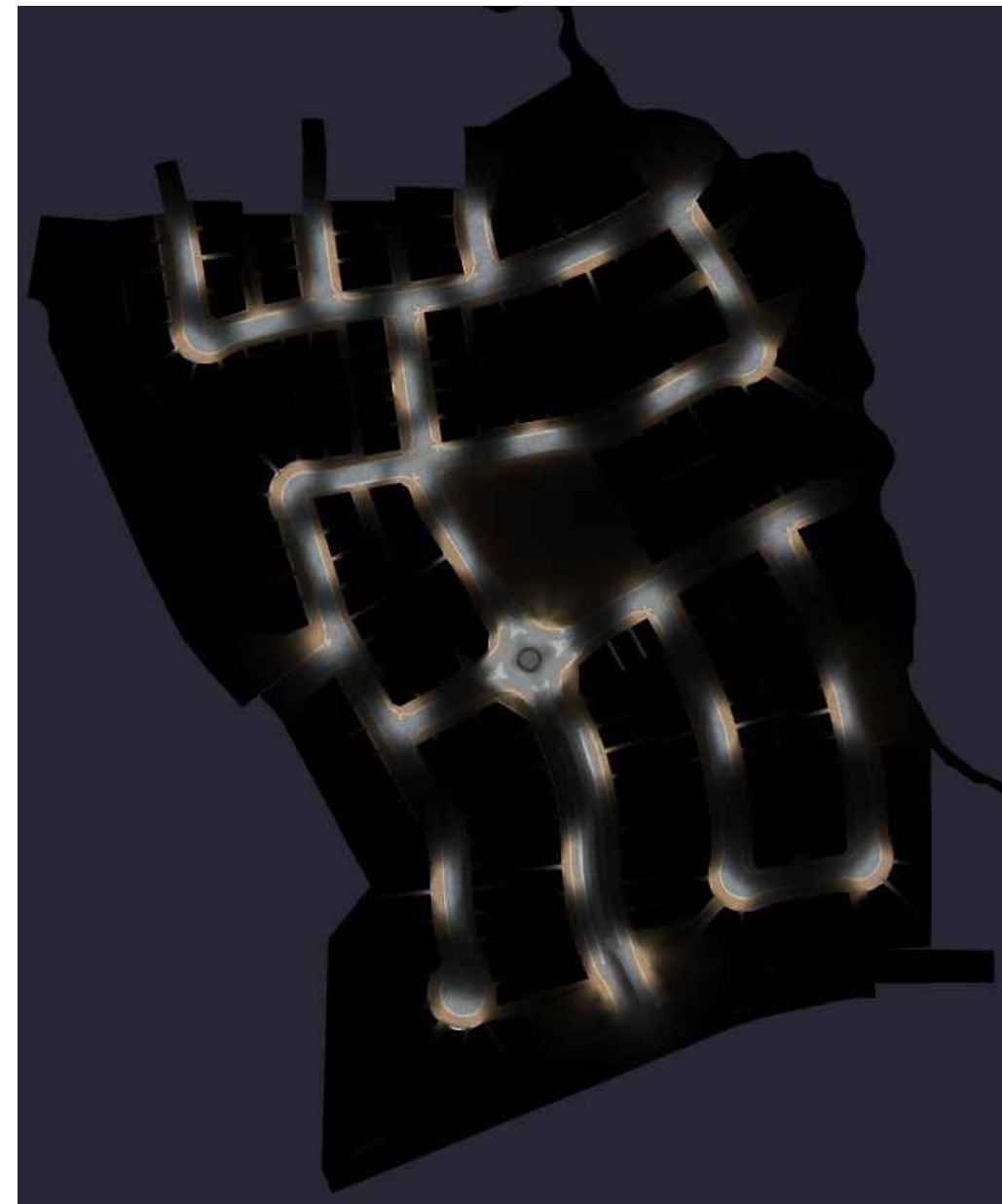


PLANT
ENGINEERING CONSULTANTS
320 WEST FILLMORE STREET COLORADO SPRINGS CO 80907
719.473.7077 www.planteci.com

DESIGNED BY CAO
DRAWN BY PJN/CAO
CHECKED BY MPP
H-SCALE AS NOTED
V-SCALE AS NOTED
JOB NO. 24086
DATE ISSUED 10/04/24
SHEET NO. 25 OF 54

GENERAL NOTES

- A. CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO ANY EXCAVATION. NOT ALL EXISTING CONDITIONS ARE SHOWN FOR CLARITY.
- B. CONTRACTOR SHALL PROVIDE ALL REQUIRED CUTTING, TRENCHING, BACKFILLING, AND RESTORATION.
- C. THESE PHOTOMETRIC CALCULATIONS ARE BASED ON MANUFACTURER'S IES FILES AND 0.95 LIGHT DEPRECIATION FACTOR.
- D. ACTUAL ILLUMINANCE LEVELS MAY DIFFER FROM THE FOOT CANDLE LEVELS SHOWN DUE TO VARIABLE FIELD CONDITIONS, SUCH AS NEARBY EXISTING LUMINAIRES, LUMINAIRE DIRT DEPRECIATION, LANDSCAPING, AND FUTURE DEVELOPMENTS.

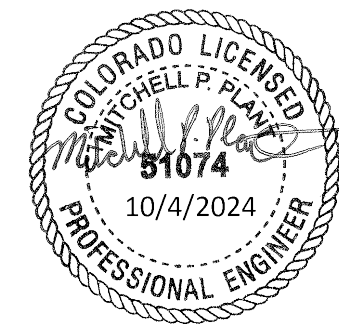


1 WATERBURY SITE DEVELOPMENT RENDERING - TOP VIEW
SCALE: NO SCALE

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
10' Property Line	Illuminance	Fc	0.00	0.0	0.0	N.A.	N.A.
Property Line	Illuminance	Fc	0.00	0.1	0.0	N.A.	N.A.
Site	Illuminance	Fc	0.20	4.3	0.0	N.A.	N.A.



DEVELOPMENTAL SITE PHOTOMETRIC PLAN
SCALE: 1" = 100'-0"

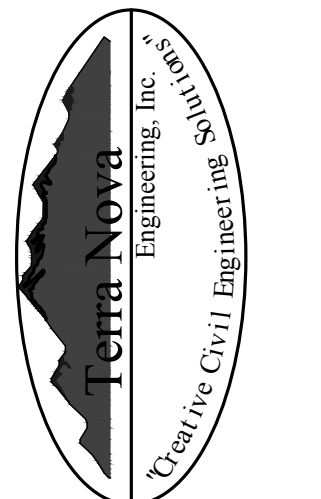


PLANT
ENGINEERING CONSULTANTS
320 WEST FILLMORE STREET COLORADO SPRINGS CO 80907
719 473 7077 www.planteci.com

REVISIONS	NO.	DESCRIPTION	DATE

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PREPARED FOR:
WATERBURY SITE DEVELOPMENT
STAPLETON ROAD AND
EASTONVILLE ROAD
FALCON



721 S. ZIBRO STREET
COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6422
FAX: 719-635-6428
www.terra-nova.com

DESIGNED BY CAO
DRAWN BY PJN/CAO
CHECKED BY MPP
H-SCALE AS NOTED
V-SCALE AS NOTED
JOB NO. 24086
DATE ISSUED 10/04/24
SHEET NO. 26 OF 54

DEVELOPMENTAL SITE
PHOTOMETRIC PLAN

KIMLIGHTING®

UR20-Arm Mount ARCHITECTURAL AREA/SITE

FEATURES

- 20" size in post top, pole and wall mount
• High performance optics up to 17,000 delivered lumens
• Elegant form factor
• Diffusion lens option
• UL/ULX listed for wet locations, IP66 and 4G/1.5G vibration rated



CONTROL TECHNOLOGY



SPECIFICATIONS

CONSTRUCTION

- Low copper aluminum alloy die-casting is designed as one-piece with internal cooling fins.
• Solid, cast aluminum wall creates a thermal barrier between the optical and electrical compartments.
• Molded silicone gasket throughout insures the sealing between the two compartments and provides ingress protection.
• Housing is designed with integral LED heat sink utilized for thermal transfer and for securing the location of each LED module.
• All external fasteners are stainless steel.
• One-piece low copper aluminum alloy die-cast lens frame is secured to housing with 6 screws.

OPTICS

- LEDs mount to a metal printed circuit board designed as one-piece with internal cooling fins.
• Optical lenses are clear injection molded PMMA acrylic.
• Optional Backlight Control on each LED module to completely control unwanted backlight.

LENS

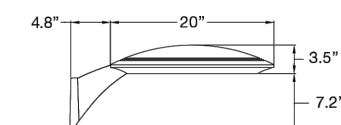
- Standard lens (CLR) IK08
• Clear Polycarbonate Lens (CP) IK10

INSTALLATION

- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

DATE: LOCATION: TYPE: PROJECT: CATALOG #:

P3,P4 ouro



Weight and EPA table for UR20 fixture.

ELECTRICAL

- Universal voltage, 120 through 277V with a ±10% tolerance. Driver is Underwriters Laboratories listed.
• High voltage configurations, 347/480. Driver has a 0-10V dimming interface for multi-level illumination options. Driver is Underwriters Laboratories listed.
• "Thermal Shield", secondary side, thermistor provides protection for the sustainable life of LED module and electronic components.
• Drivers shall have greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments.
• Luminaire shall be capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C.
• Surge protection: 10,000k in parallel, 20,000k in series.
• Wiring: No. 18AWM rated 105°C, wet rating.

CONTROLS

- Fully gasketed and wired 7-pin receptacle option. Easy access location above the electrical compartment. 7-pin construction allows for a user-defined interface and provides a controlled definition of operational performance. ANSI twist-lock control module by others.
Standard customer operation modes:
• Traditional on/off photoelectric control.
• 5-pin wireless photoelectric control for added dimming feature.
• 7-pin wireless photoelectric control for dimming and additional I/O connections for customer use.

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(Specifications continued on page 5)

Current® currentlighting.com/kimlighting Page 1 of 16 Rev. 10/23/24 M_ur20arm_spec_807

KIMLIGHTING®

UR20-Arm Mount ARCHITECTURAL AREA/SITE

ORDERING GUIDE

Example: UR20-24L-25-3K8-3-L-UNV-ASO-BLT7PR-BC

HOUSING

Table with columns: Model, LED Engine, CCT/CRI, Distribution, Rotation, Voltage. Lists various configurations for the UR20 fixture.

Table with columns: Mounting, Fixture Finish, Control Options, Options, Control Accessories. Lists various accessories and options for the UR20 fixture.

- 1 Not available with SQM, SQN, and SW distributions.
2 Not available with other sensor or wireless control options
3 Not available with 347V and 480V.
4, 24, and 56L only
6 Not available with HDL option
7 Consult factory for custom color, marine and convolve finish options.
8 Turb Friendly
9 Please see Delivered Lumens chart on Page 5 for Lumens
10 Not available with 24L, 45L and the 56L, 140 configuration of the LED Engine
11 IK10 rated. Consult factory for details.
12 IK08 rated. Consult factory for details.

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KIMLIGHTING®

UR20 - Post Top ARCHITECTURAL AREA/SITE

FEATURES

- 20" size in single/dual arm post top, pole and wall mount
• High performance optics up to 16,874 delivered lumens
• Elegant form factor
• Diffusion lens option
• UL/ULX listed for wet locations, IP66 and 4G/1.5G vibration rated



CONTROL TECHNOLOGY



SPECIFICATIONS

CONSTRUCTION

- Low copper aluminum alloy die-casting is designed as one-piece.
• Molded silicone gasket throughout insures the sealing between the two compartments and provides ingress protection.
• Cover is secured to lens frame by the latch and hinge.
• All external fasteners are stainless steel.
• LEDs mount to a metal printed circuit board designed as one-piece with internal cooling fins.
• Optical lenses are clear injection molded PMMA acrylic.
• Optional Backlight Control on each LED module to completely control unwanted backlight.
• Optional fixture finish optical surfaces will not exceed BUG ratings of the standard white finish.

LENS

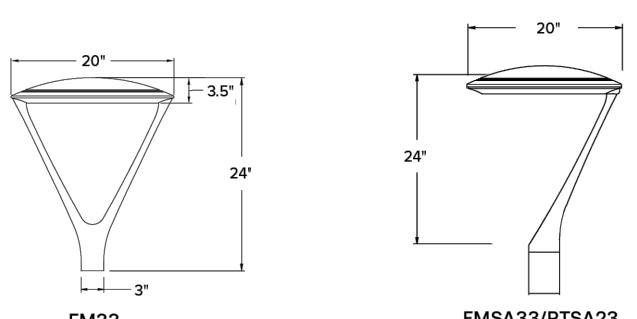
- Standard lens (CLR) IK08
• Clear Polycarbonate Lens (CP) IK10

INSTALLATION

- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

DATE: LOCATION: TYPE: PROJECT: CATALOG #:

P5 ouro



Weight and EPA table for UR20 fixture.

ELECTRICAL

- Universal voltage, 120 through 277V with a ±10% tolerance. Driver is Underwriters Laboratories listed.
• High voltage configurations, 347/480. Driver has a 0-10V dimming interface for multi-level illumination options. Driver is Underwriters Laboratories listed.
• "Thermal Shield", secondary side, thermistor provides protection for the sustainable life of LED module and electronic components.
• Drivers shall have greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments.
• Luminaire shall be capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C.
• Surge protection: 10,000k in parallel, 20,000k in series.
• Wiring: No. 18AWM rated 105°C, wet rating.

CONTROLS

- Fully gasketed and wired 7-pin receptacle option. Easy access location above the electrical compartment. 7-pin construction allows for a user-defined interface and provides a controlled definition of operational performance. ANSI twist-lock control module by others.
Standard customer operation modes:
• Traditional on/off photoelectric control.
• 5-pin wireless photoelectric control for added dimming feature.
• 7-pin wireless photoelectric control for dimming and additional I/O connections for customer use.

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(Specifications continued on page 5)

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KIMLIGHTING®

UR20 - Post Top ARCHITECTURAL AREA/SITE

ORDERING GUIDE

Example: UR20-24L-25-3K8-3-L-UNV-FMSA33-BLT7PR-BC

HOUSING

Table with columns: Model, LED Engine, CCT/CRI, Distribution, Rotation, Voltage. Lists various configurations for the UR20 - Post Top fixture.

Table with columns: Mounting, Fixture Finish, Control Options, Options, Control Accessories. Lists various accessories and options for the UR20 - Post Top fixture.

- 1 Turb Friendly
2 Not available with 24L, 45L and the 56L, 140 configuration of the LED Engine
3 Not available with IC option
4 Not available with SQM, SQN, and SW distributions.
5 Not available with custom color, marine and convolve finish options.
6 Not available with other sensor or wireless control options.
7 Not available with 56L Arm Post Top (FMSA33)
8 24L and 56L only
9 Not available with HDL option
10 Not available with IC option
11 3000 mcd. Consult factory for details
12 3000 mcd. Consult factory for details
13 3000 mcd. 2.38" x 4" Long and 13 Order one for each pair of fixtures per pole.

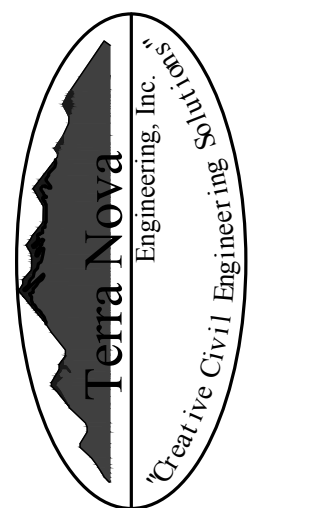
Current® currentlighting.com/kimlighting Page 2 of 16 Rev. 03/24/24 M_ur20post_spec_807

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Table with columns: NO., DESCRIPTION, DATE. For tracking revisions.

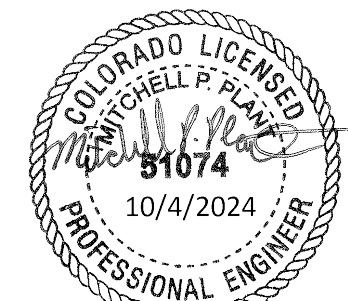
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PREPARED FOR: WATERBURY SITE DEVELOPMENT STAPLETON ROAD AND EASTONVILLE ROAD FALCON



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

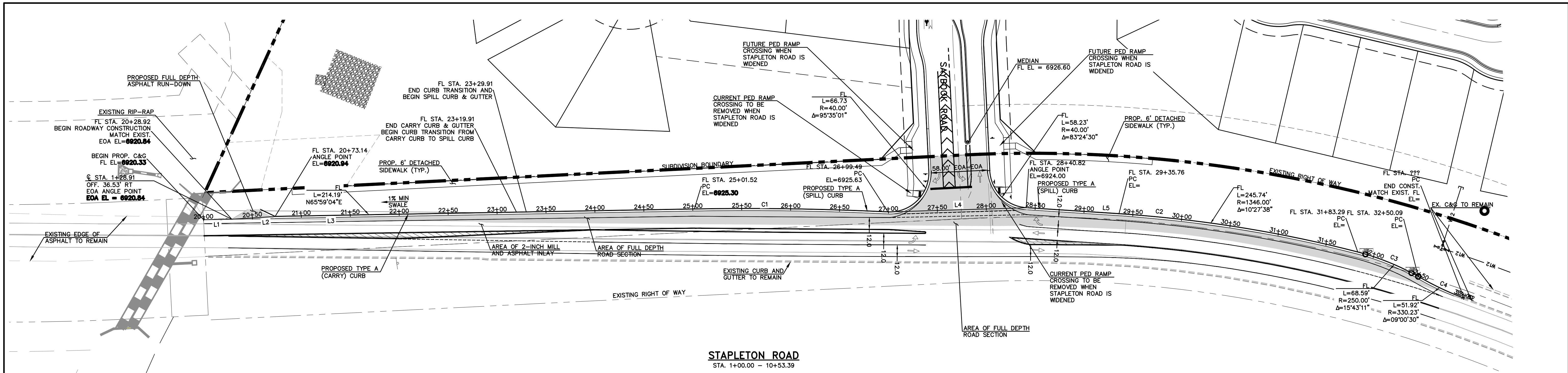
CUT SHEETS



PLANT ENGINEERING CONSULTANTS

320 WEST FILLMORE STREET COLORADO SPRINGS CO 80907 719.473.7077 www.planteci.com

DESIGNED BY CAO DRAWN BY PJJ/CAO CHECKED BY MPP H-SCALE AS NOTED V-SCALE AS NOTED JOB NO. 24086 DATE ISSUED 10/04/24 SHEET NO. 27 OF 54



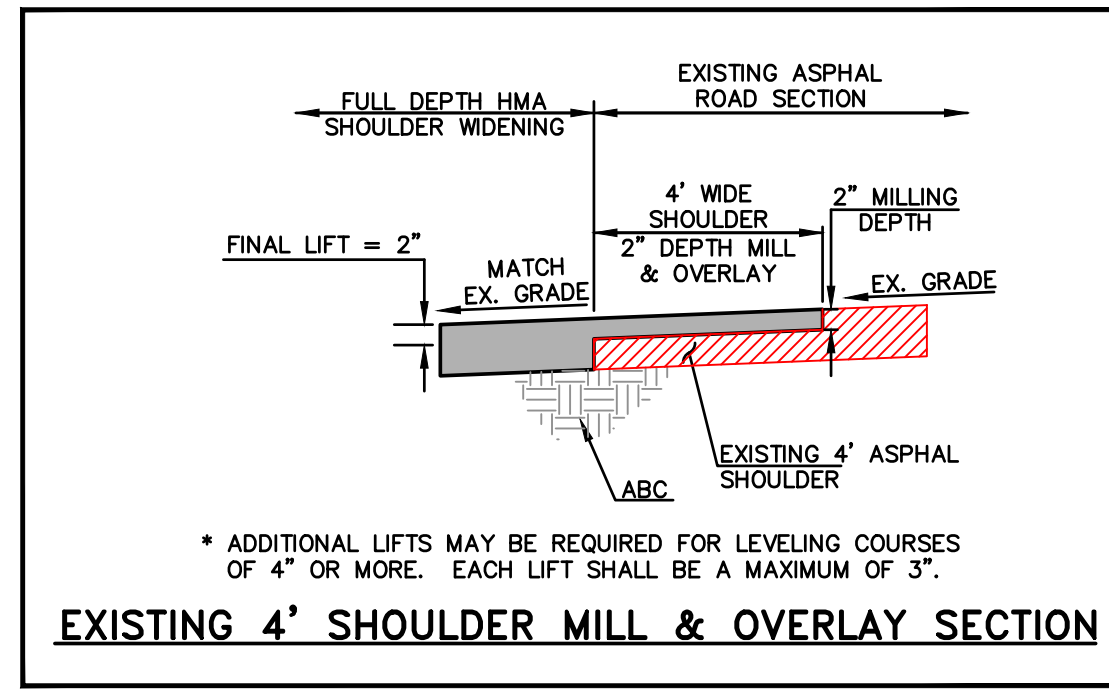
STAPLETON ROAD
STA. 1+00.00 - 10+53.39

FLOWLINE LINE TABLE

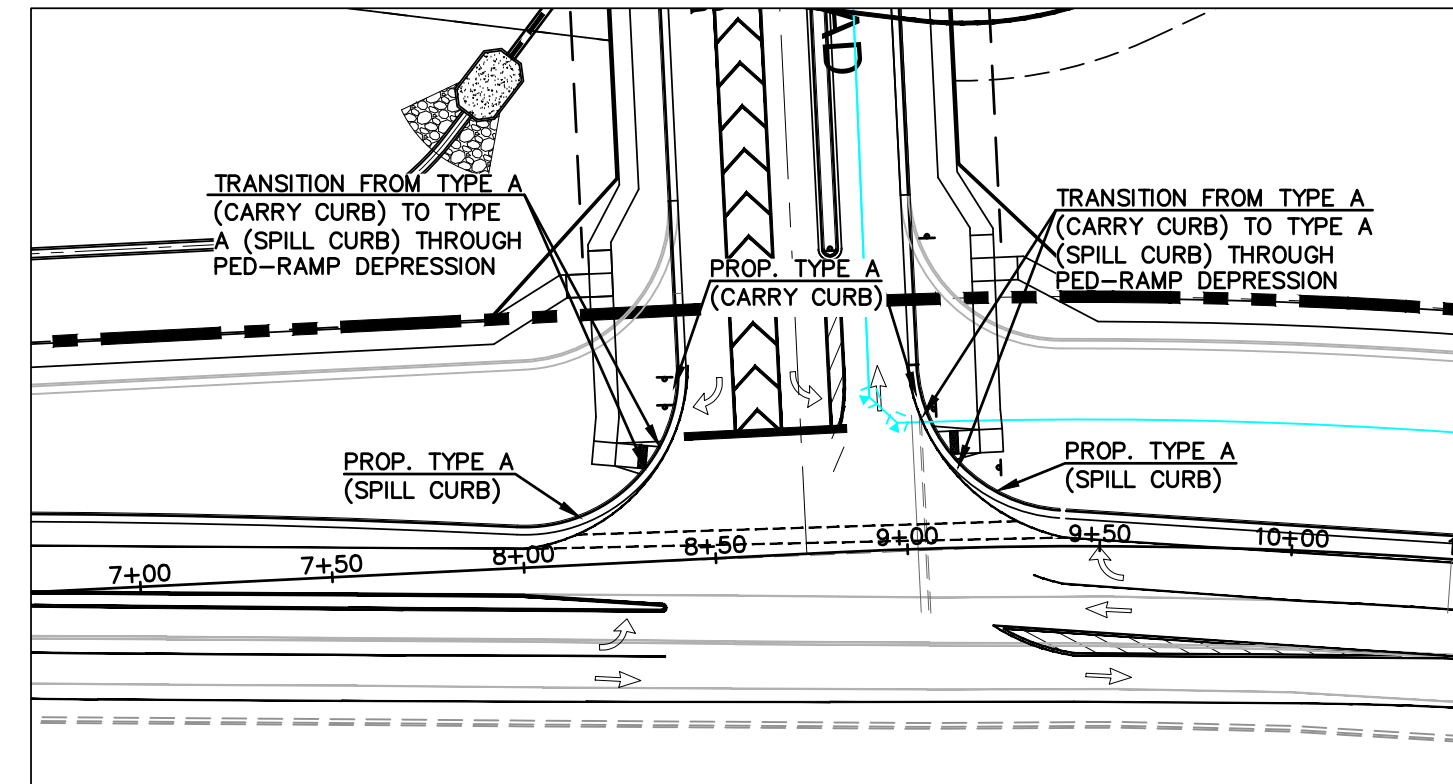
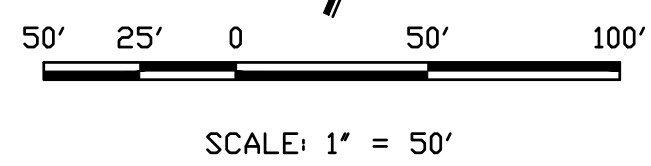
LINE	LENGTH (LF)	BEARING
L1	28.92	N65°59'04"E
L2	44.22	N63°23'32"E
L3	214.19	N65°59'04"E
L4	141.33	N65°14'44"E
L5	94.94	N70°45'02"E

FLOWLINE CURVE TABLE

CURVE	LENGTH (LF)	RADIUS (LF)	Δ
C1	197.97	3018	03°45'30"
C2	245.74	1346	10°27'38"
C3	68.59	250	15°43'11"
C4	51.92	330.23	09°00'30"



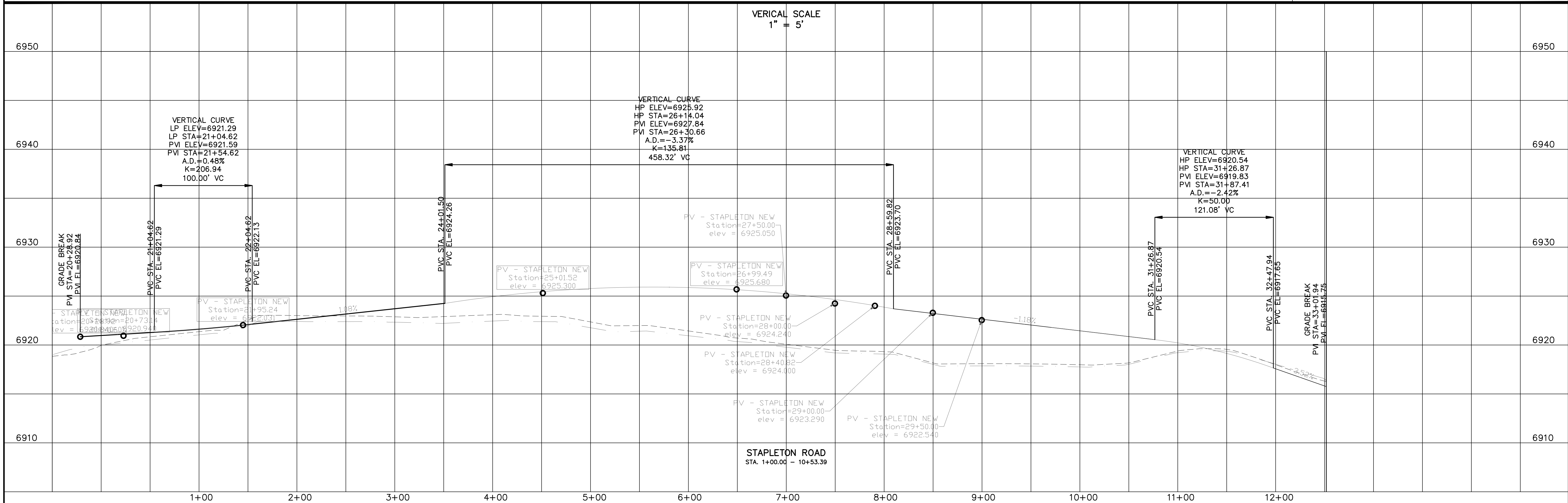
DESIGN SPEED IS 50 M.P.H.



STAPLETON ROAD/SAYBOOK ROAD
CURB TRANSITION DETAIL

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



DATE: _____

DESCRIPTION: _____

REVISIONS:

NO.	DESCRIPTION

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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.tneng.com

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

DESIGNED BY QNA
DRAWN BY QNA
CHECKED BY JS
H-SCALE 1"=50'
V-SCALE 1"=5'
JOB NO. 2356.00
DATE ISSUED 12/22/24
SHEET NO. 28 OF 54

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

STAPLETON DRIVE
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'

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

STAPLETON DRIVE
SECTION 3+00.00
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'

STAPLETON DRIVE
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'

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

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

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

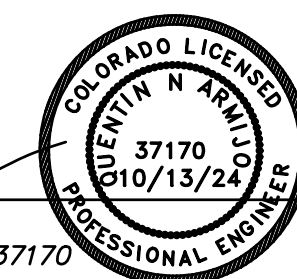
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SECTION 9+41.64
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1"=5'

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'

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FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

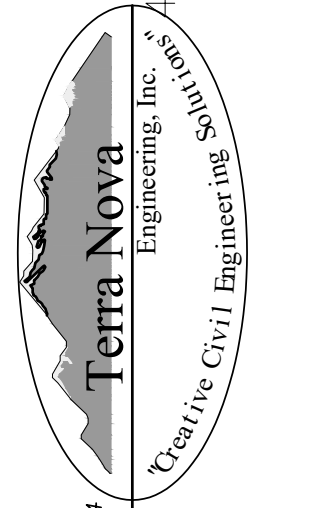
Quentin Armijo
QUENTIN ARMIJO
COLORADO P.E. NO. 37170



REVISIONS	NO.	DESCRIPTION	DATE

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REVIEWING AGENCIES
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SPECIFICALLY AUTHORIZED BY
WRITTEN AUTHORIZATION.

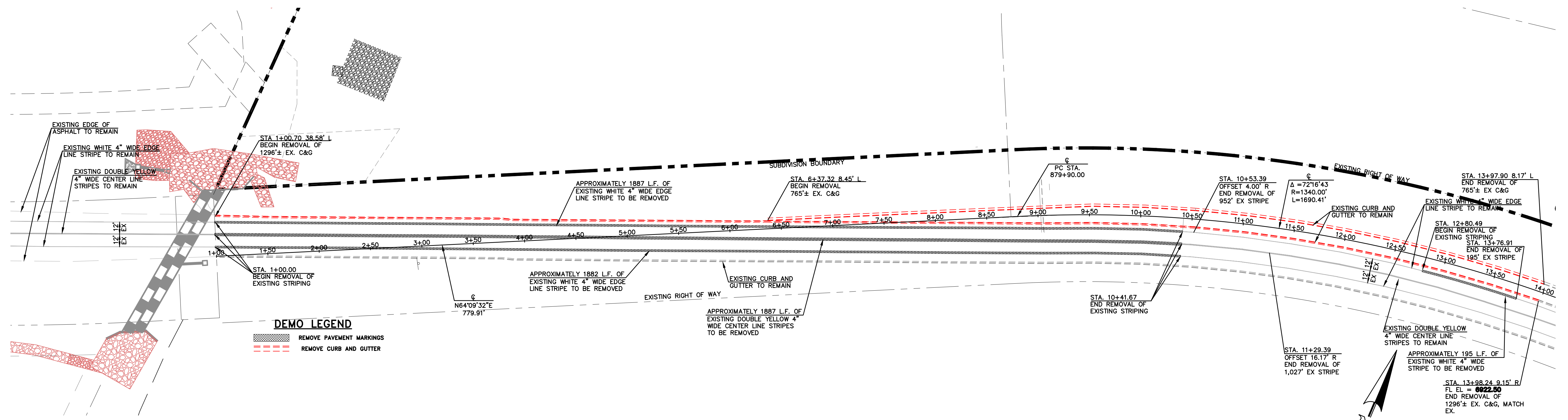
PREPARED FOR:
ACM ALF VIII JV SUB II LLC
ATTN: JASON POCK
100 E. MISSISSIPPI AVE., STE 500
DENVER, CO 80246
303-984-9800



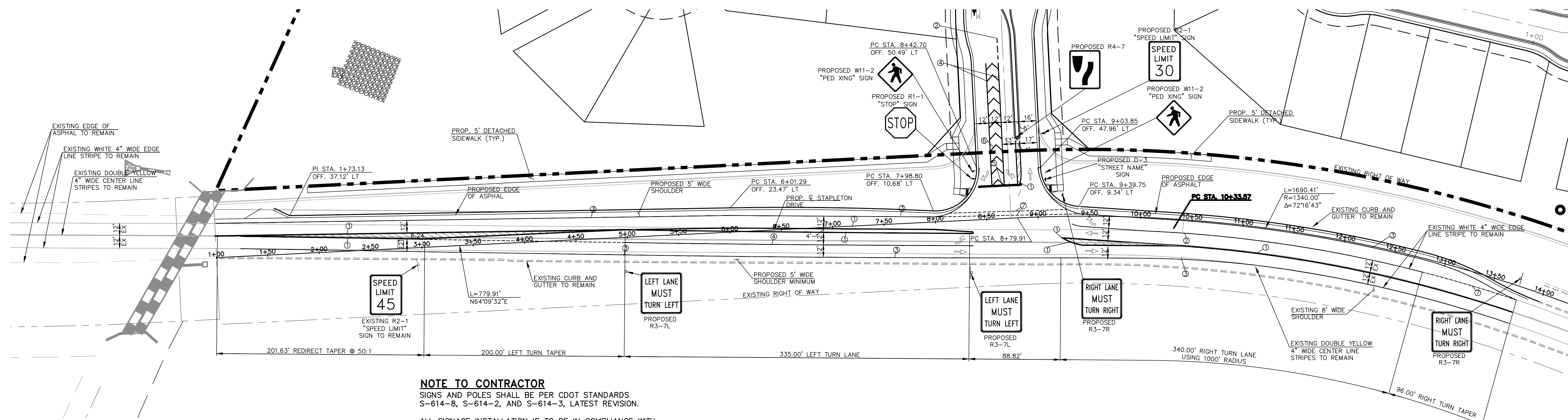
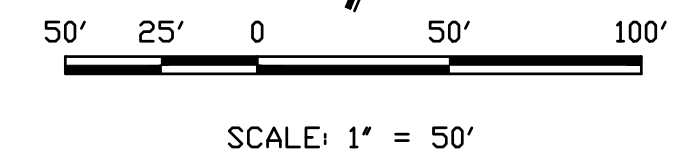
721 S. 23RD STREET
COLORADO SPRINGS, CO 80904
OFFICE: 719-635-6422
FAX: 719-635-6426
www.tnva.com

WATERBURY FILING NO. 1
CONSTRUCTION SET
STAPLETON DRIVE
CROSS SECTIONS

DESIGNED BY	DLF
DRAWN BY	QNA
CHECKED BY	QNA
H-SCALE	NA
V-SCALE	N/A
JOB NO.	2356.00
DATE ISSUED	12/22/24
SHEET NO.	29 OF 54



**STAPLETON DRIVE
C&G AND STRIPING REMOVAL PLAN**



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.

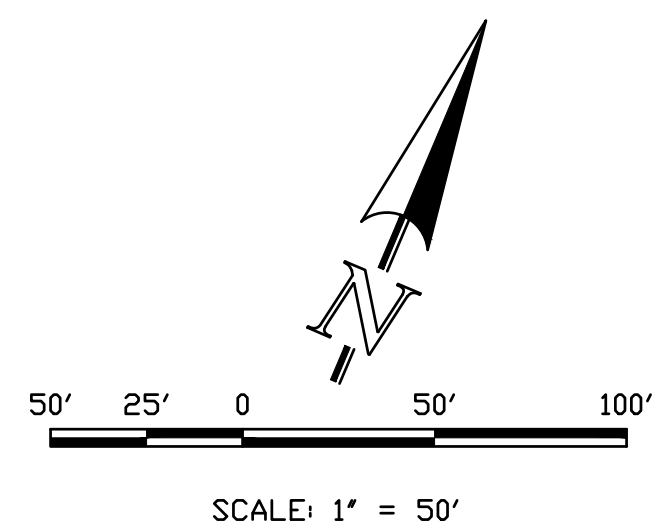
STOP BARS ARE TO BE 90 MIL PREFORMED THERMOPLASTIC PAVEMENT MARKING TYPE B. (INLAYED)

**STAPLETON DRIVE
SIGNAGE AND STRIPING PLAN**

DESIGN SPEED IS 50 M.P.H.

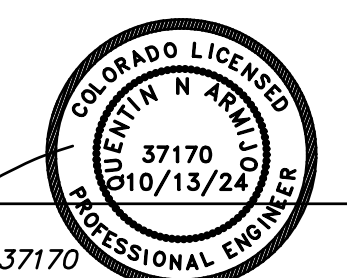
STRIPING LEGEND		
STRIPE	PAVEMENT MARKINGS	MARKING DESCRIPTION
1	CENTER LINES (EPOXY)	DOUBLE SOLID YELLOW, 4" WIDE-SPACED 3" APART
2	LANE LINES (EPOXY)	BROKEN WHITE, 4" WIDE-10' SEGMENTS WITH 30' GAPS
3	EDGE LINES (EPOXY)	SOLID WHITE, 4" WIDE
4	CHANNELIZING LINES (EPOXY)	SOLID WHITE, 8" WIDE
5	STOP LINES (THERMO PLASTIC)	SOLID WHITE, 24" WIDE
6	CHEVRON LINES (THERMO PLASTIC)	SOLID WHITE, 8" WIDE, 8" C-C, 45° ANGLE
7	SKIP CHANNELIZING LINES (EPOXY)	SOLID WHITE, 4" WIDE, 2'-4" SKIP

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



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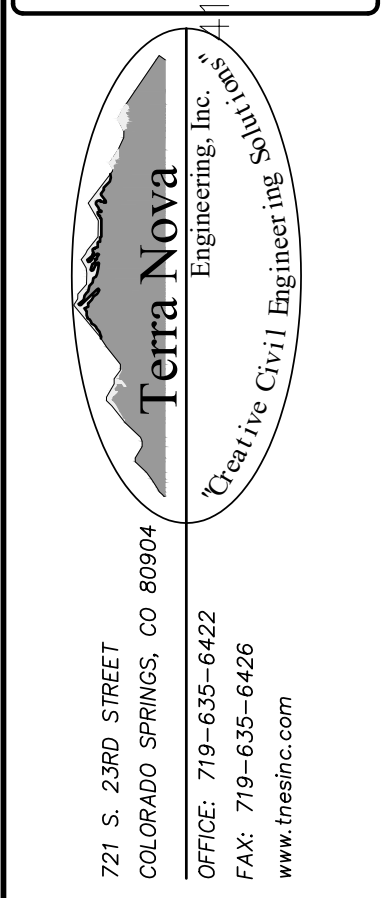
DESIGNED BY DLF
DRAWN BY QNA
CHECKED BY QNA
H-SCALE AS SHOWN
V-SCALE N/A
JOB NO. 2356.00
DATE ISSUED 12/22/24
SHEET NO. 30 OF 54



REVISIONS	NO.	DESCRIPTION	DATE

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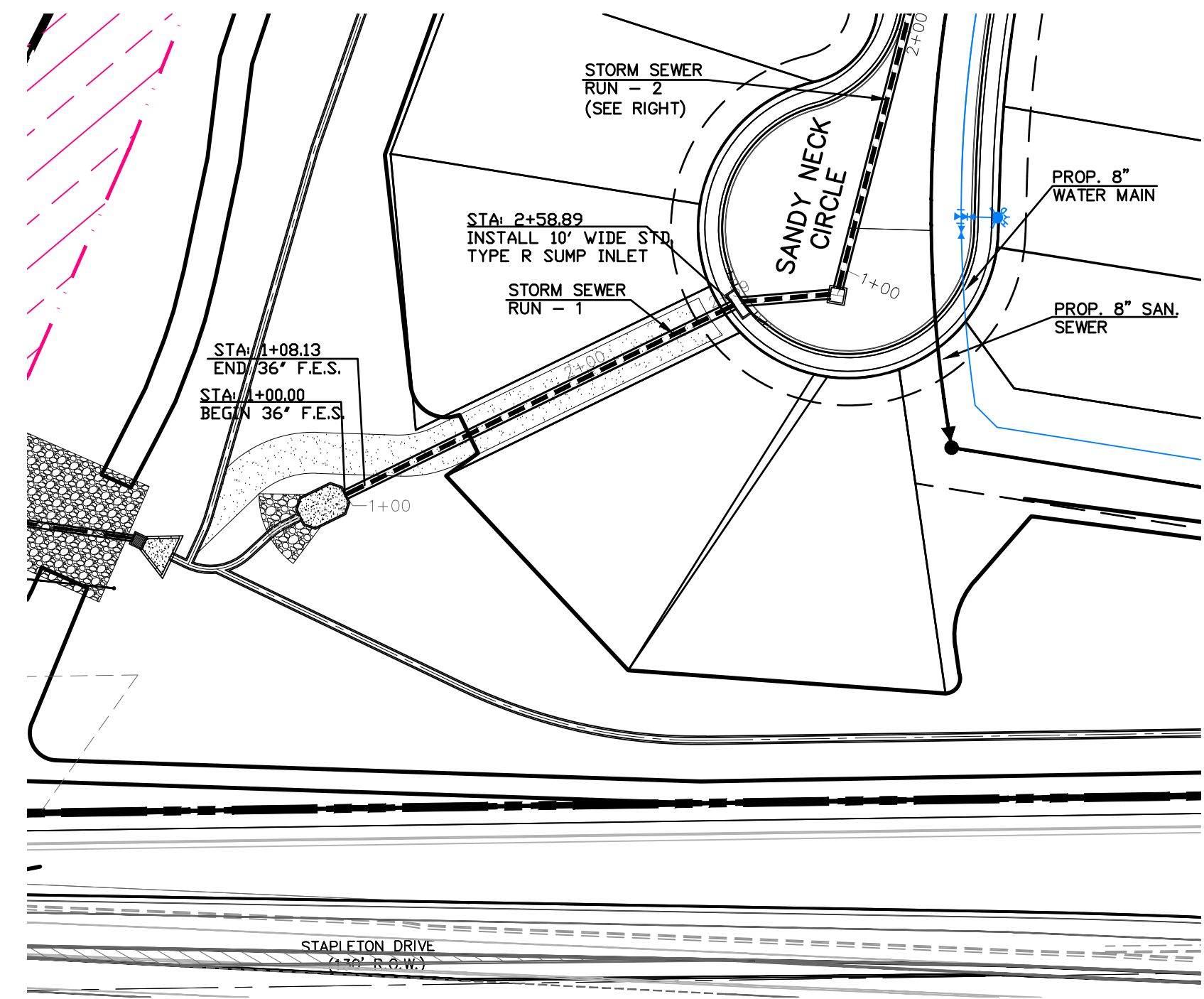
PREPARED FOR:
ACM ALF VIII JV SUB II LLC
ATTN: JASON POKK
100 E. MISSISSIPPI AVE., STE 500
DENVER, CO 80246
303-984-9800



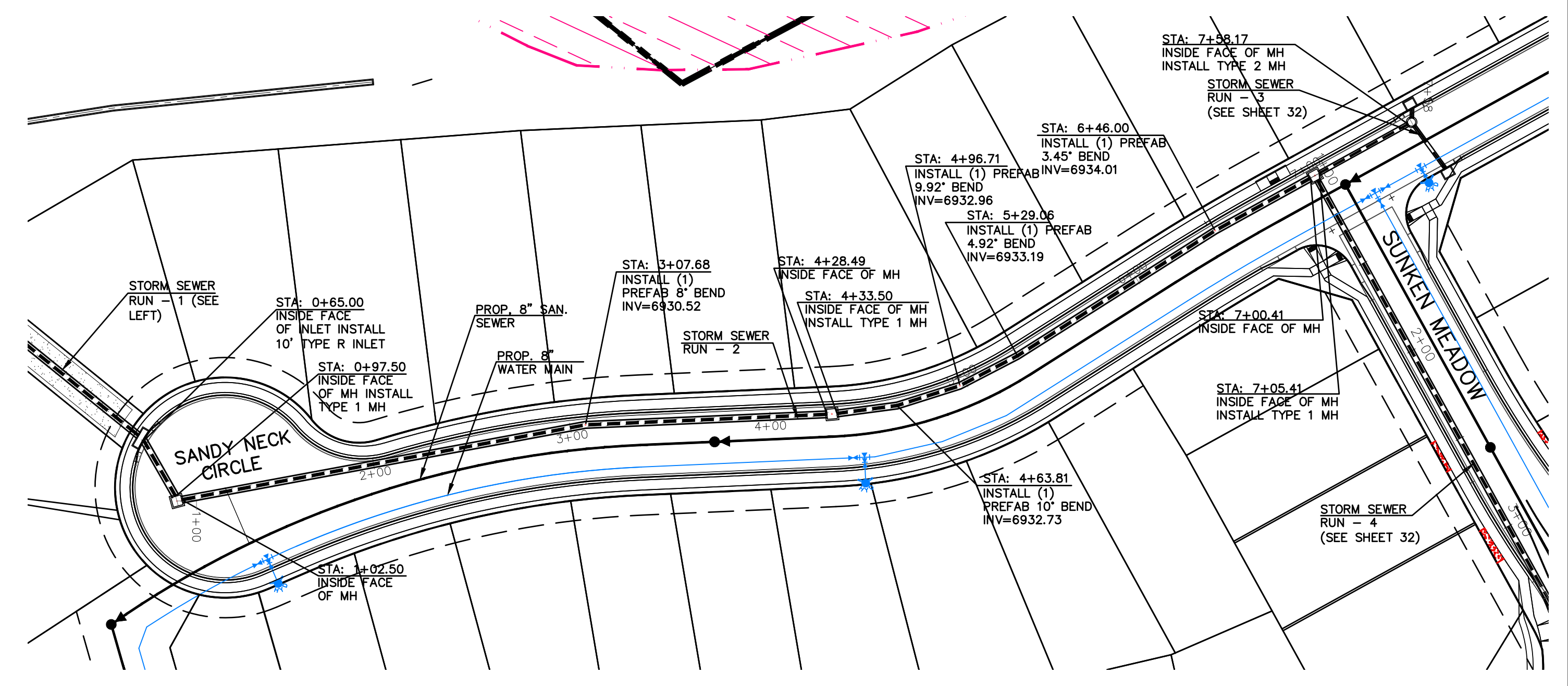
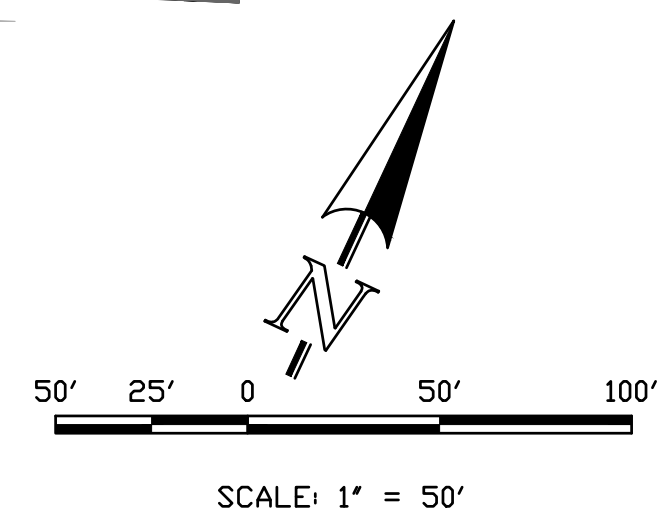
WATERBURY FILING NO. 1

SIGNING & STRIPING
C&G AND STRIPING REMOVAL
STAPLETON DRIVE

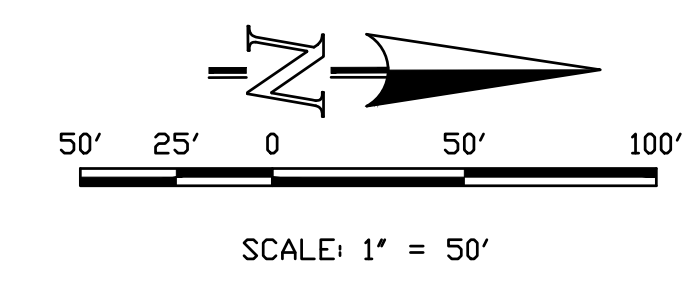
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DRAWN BY QNA
CHECKED BY QNA
H-SCALE AS SHOWN
V-SCALE N/A
JOB NO. 2356.00
DATE ISSUED 12/22/24
SHEET NO. 30 OF 54



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

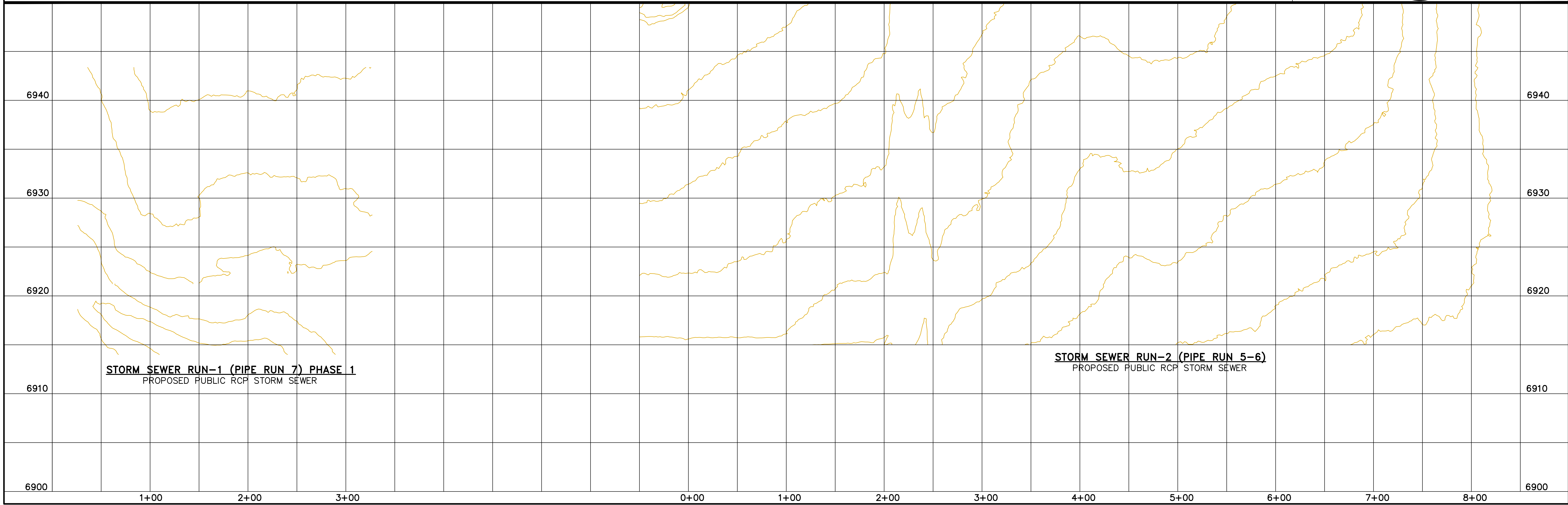


STORM SEWER RUN-2 (PIPE RUN 5-6) PHASE 1
 PROPOSED PUBLIC RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.



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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

REVISIONS	NO.	DESCRIPTION	DATE

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JASON POCK
 100 E. MISSISSIPPI AVE., STE 500
 DENVER, CO 80246
 303-984-9800

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 Engineering, Inc.
 Professional Engineer

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 COLORADO SPRINGS, CO 80904
 OFFICE: 719-635-6422
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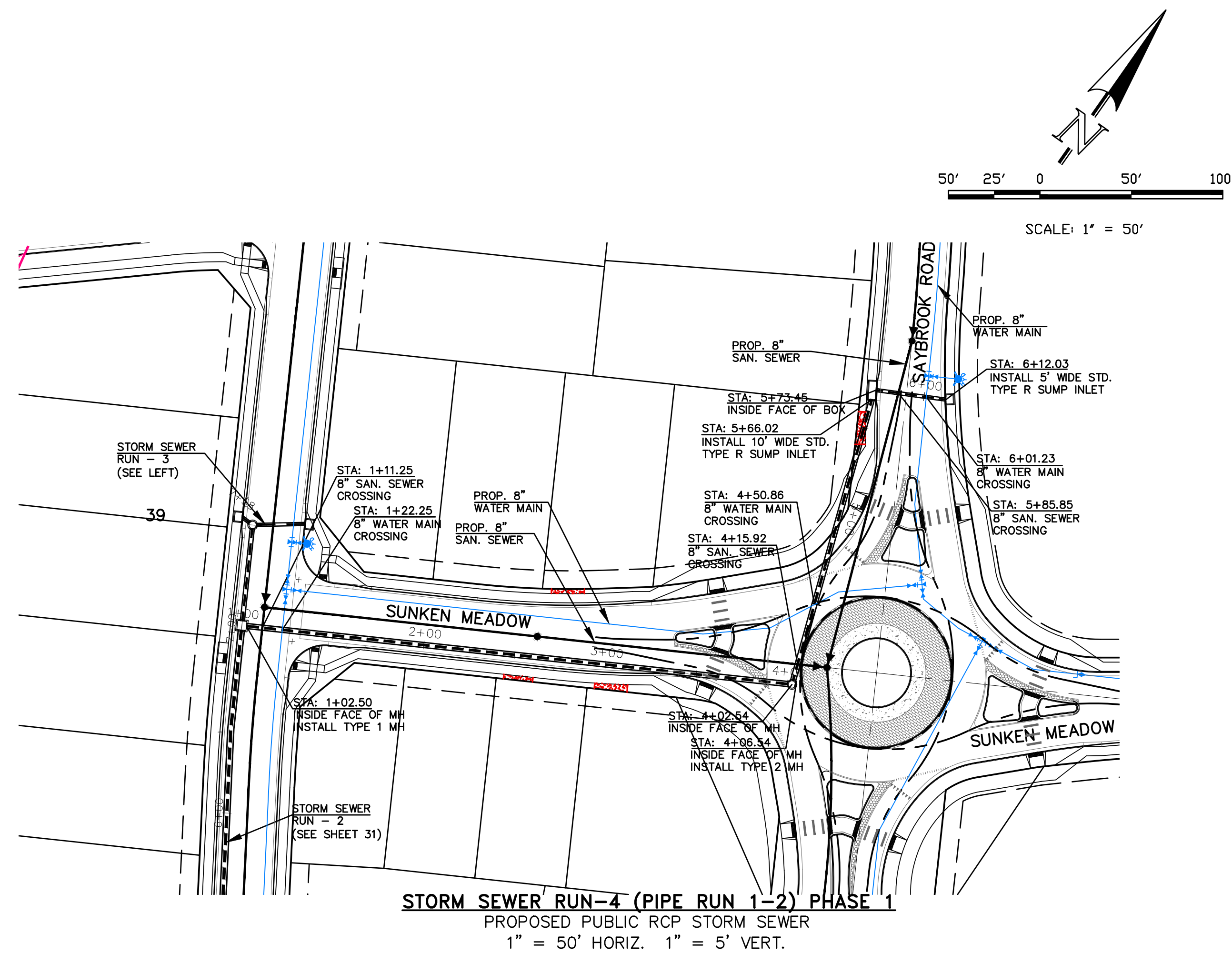
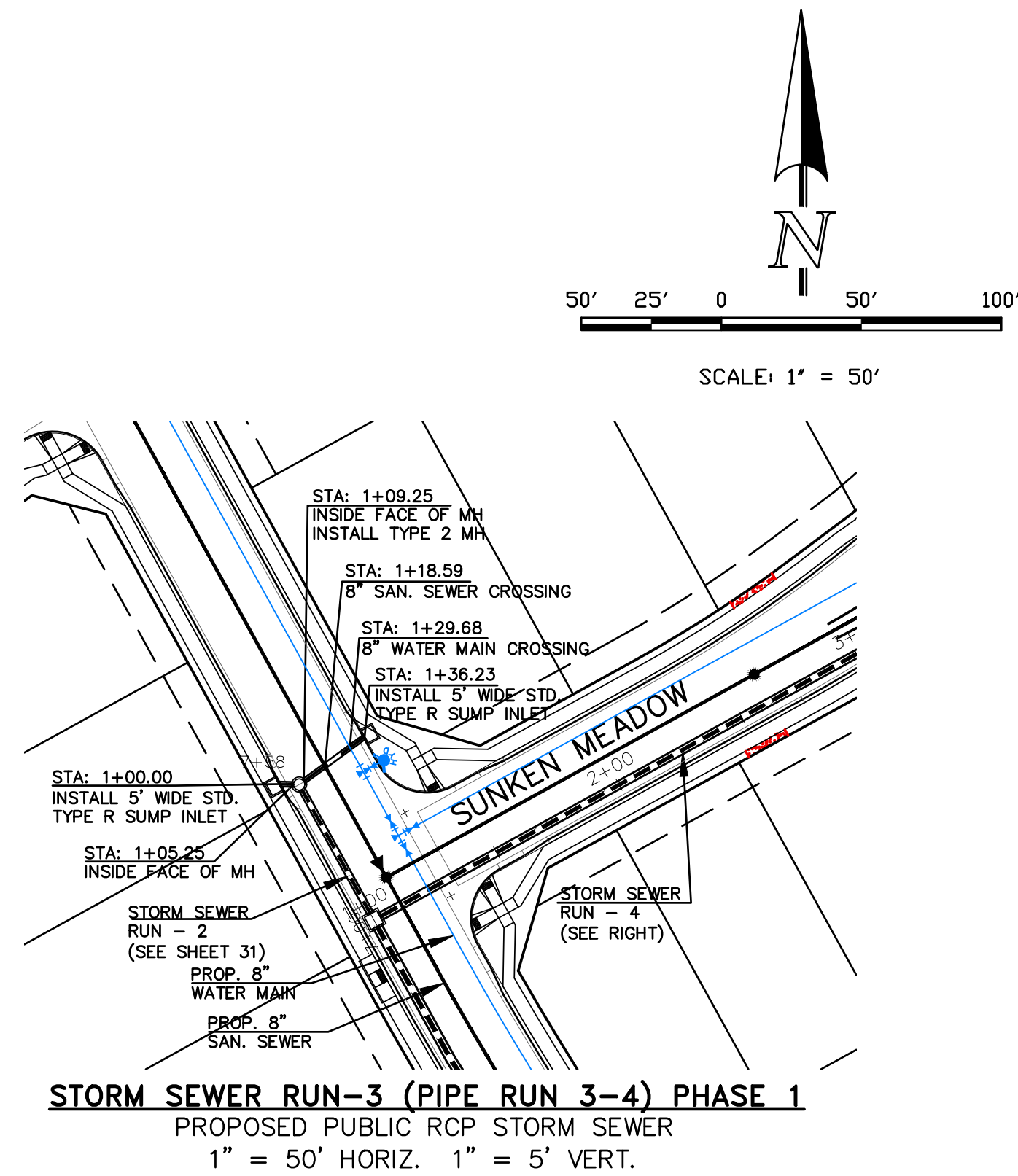
WATERBURY FILING NO. 1

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

DESIGNED BY QNA
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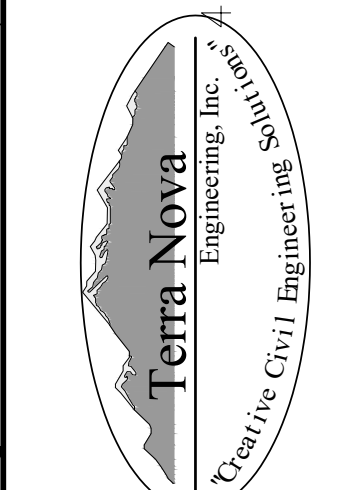
H-SCALE 1"=50'
 V-SCALE 1"=5'

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 QUENTIN N. ARMILJO, PROFESSIONAL ENGINEER
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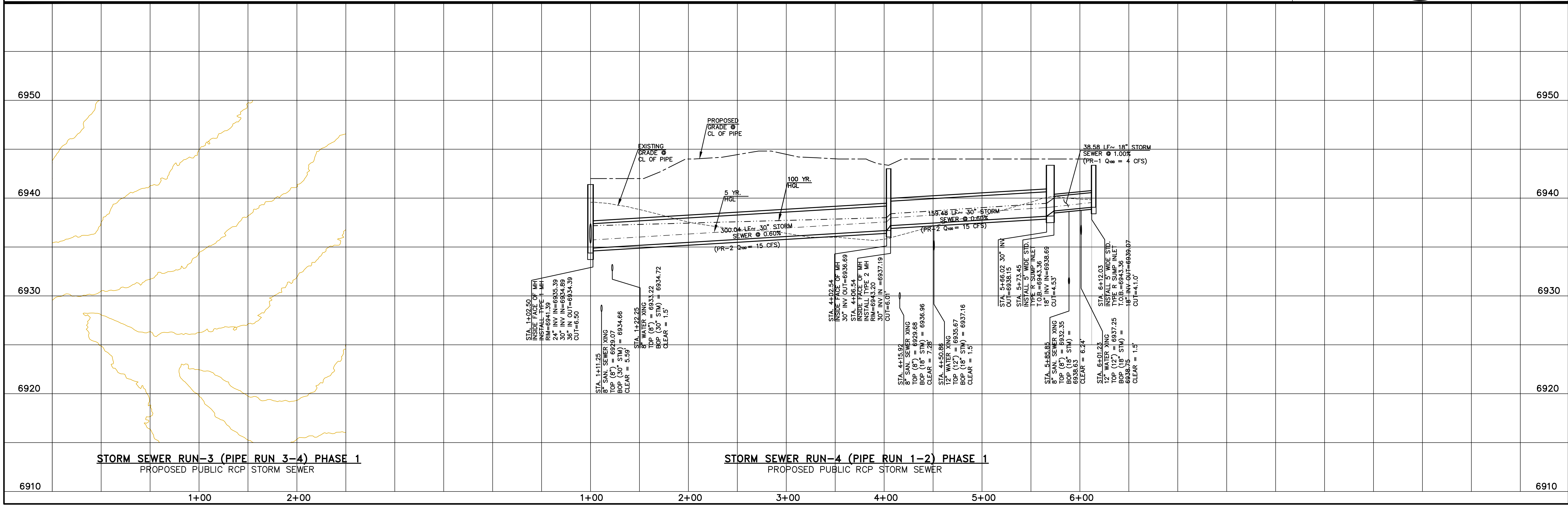
WATERBURY FILING NO. 1
 CONSTRUCTION SET
 STORM SEWER PLAN AND PROFILE
 STORM RUNS 3 & 4

DESIGNED BY QNA
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 CHECKED BY JS
 H-SCALE 1"=50'
 V-SCALE 1"=5'
 JOB NO. 2356.00
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NO.	DESCRIPTION	DATE

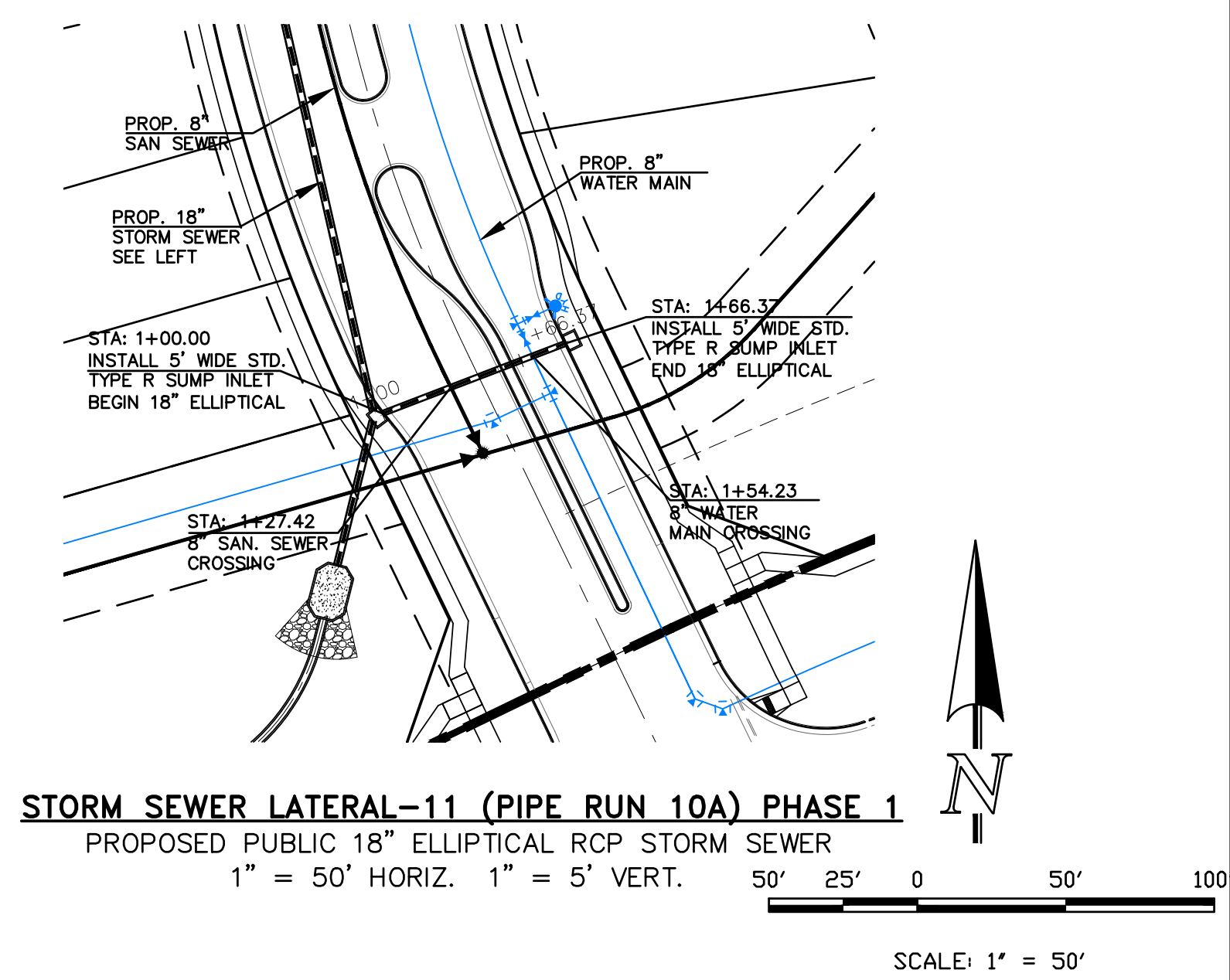
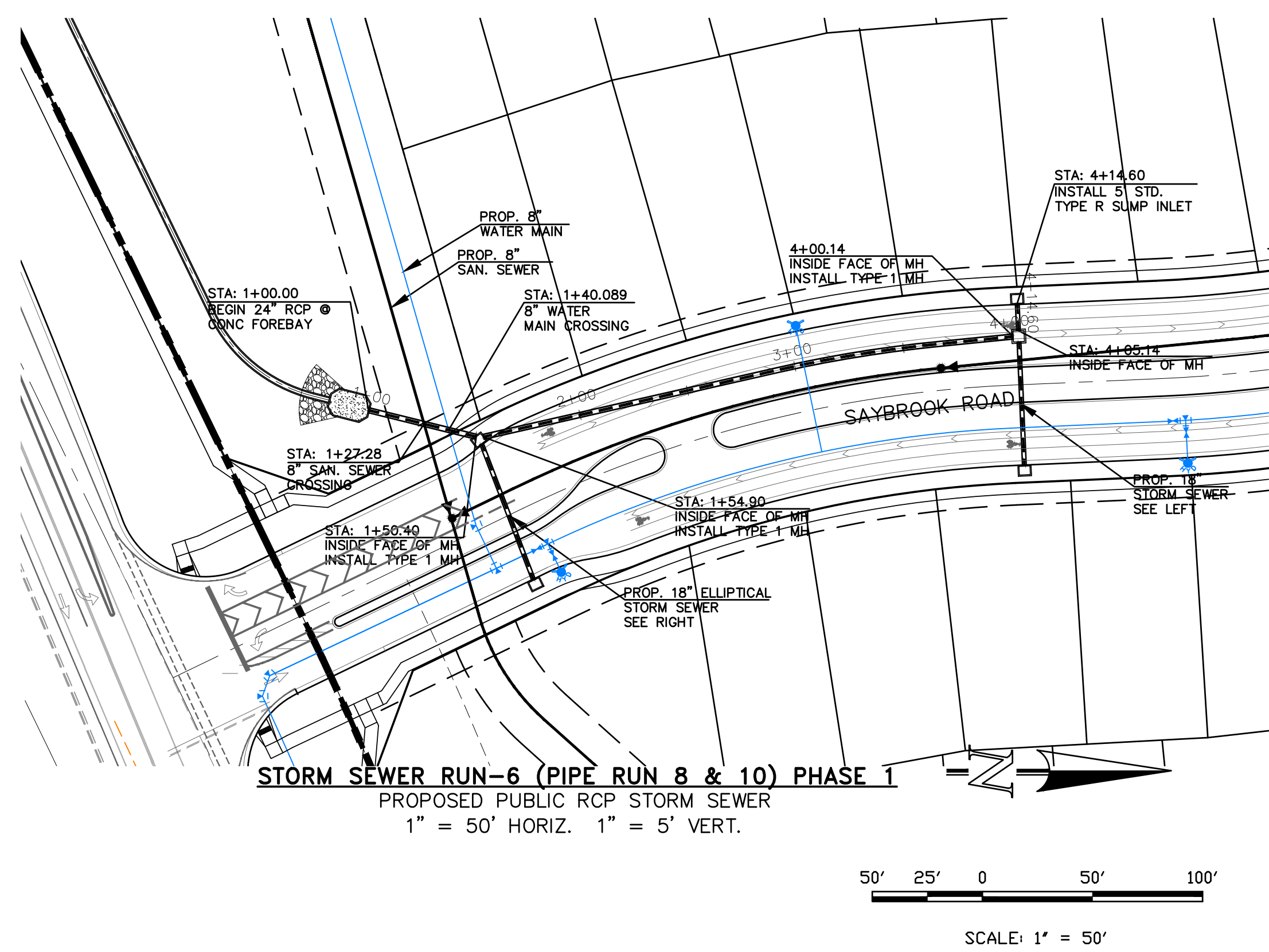
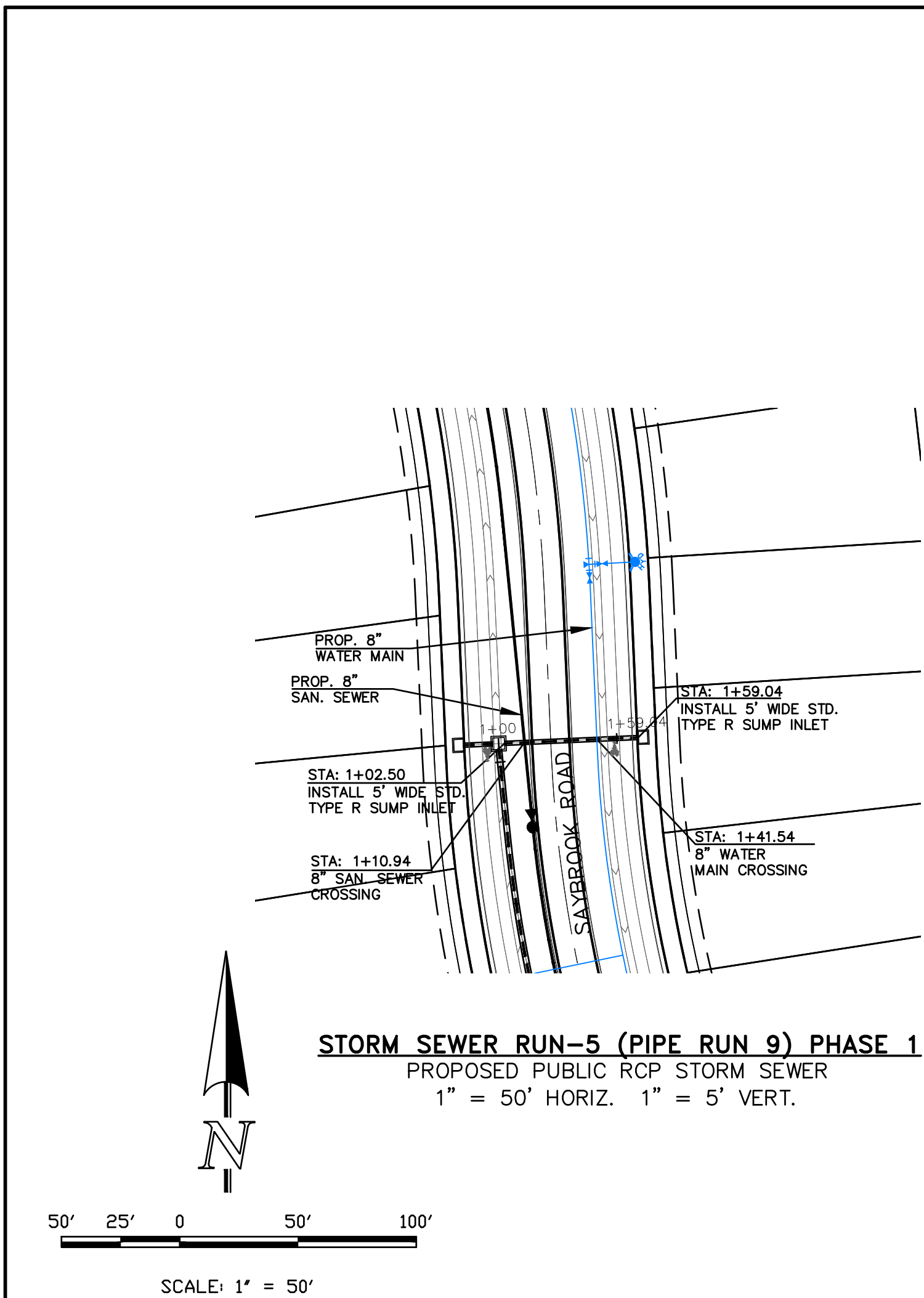
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 DENVER, CO 80246
 303-984-9800



STORM SEWER RUN-3 (PIPE RUN 3-4) PHASE 1
 PROPOSED PUBLIC RCP STORM SEWER

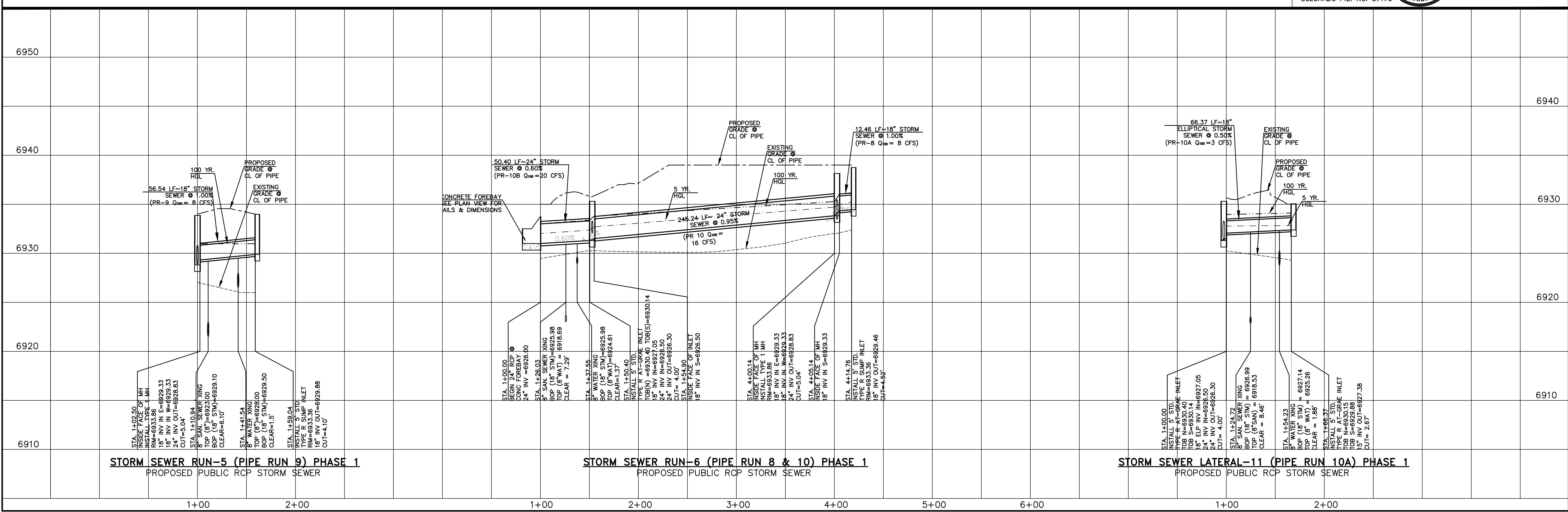
STORM SEWER RUN-4 (PIPE RUN 1-2) PHASE 1
 PROPOSED PUBLIC RCP STORM SEWER



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

COLOrado LICENSED
37170
01/13/24



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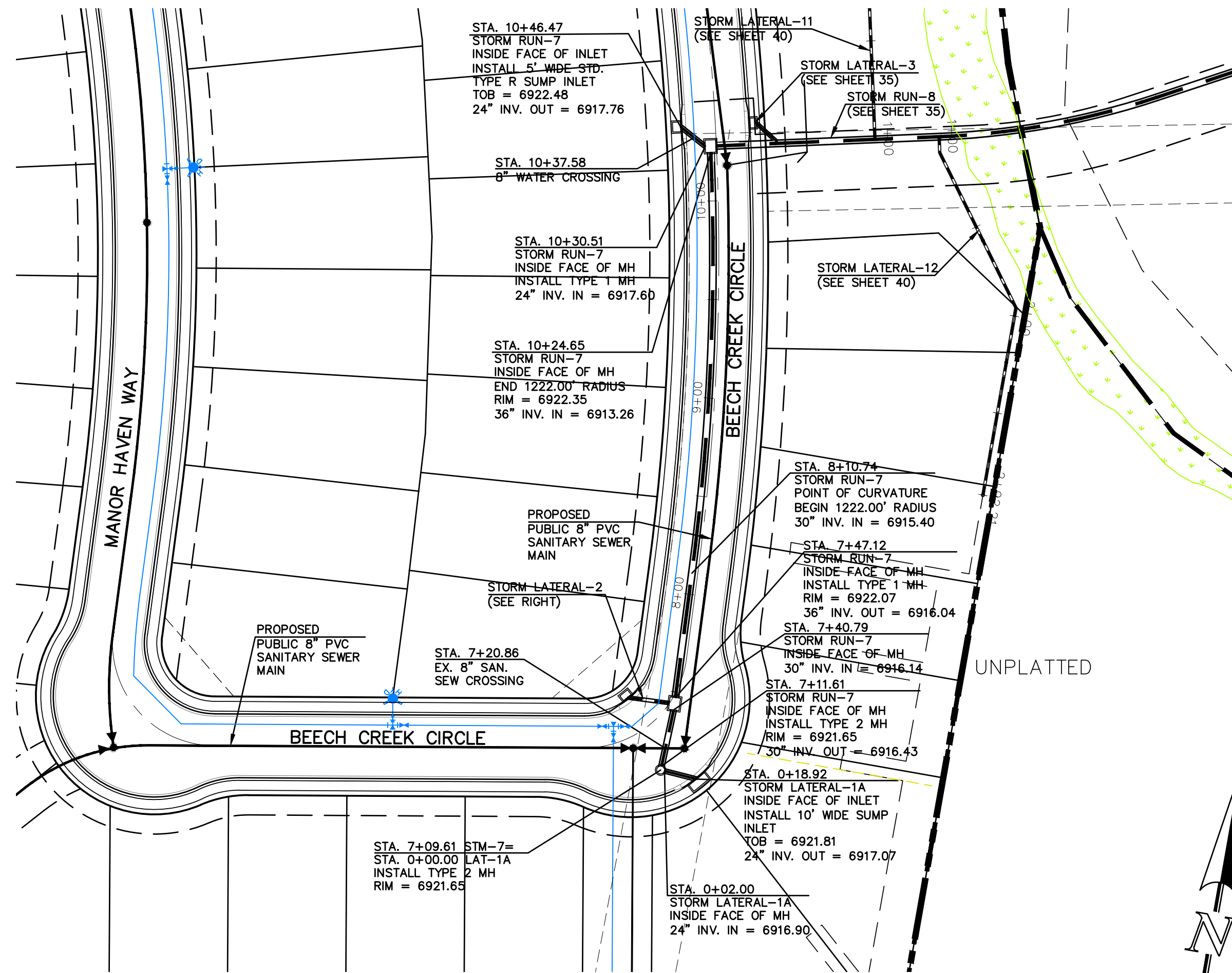
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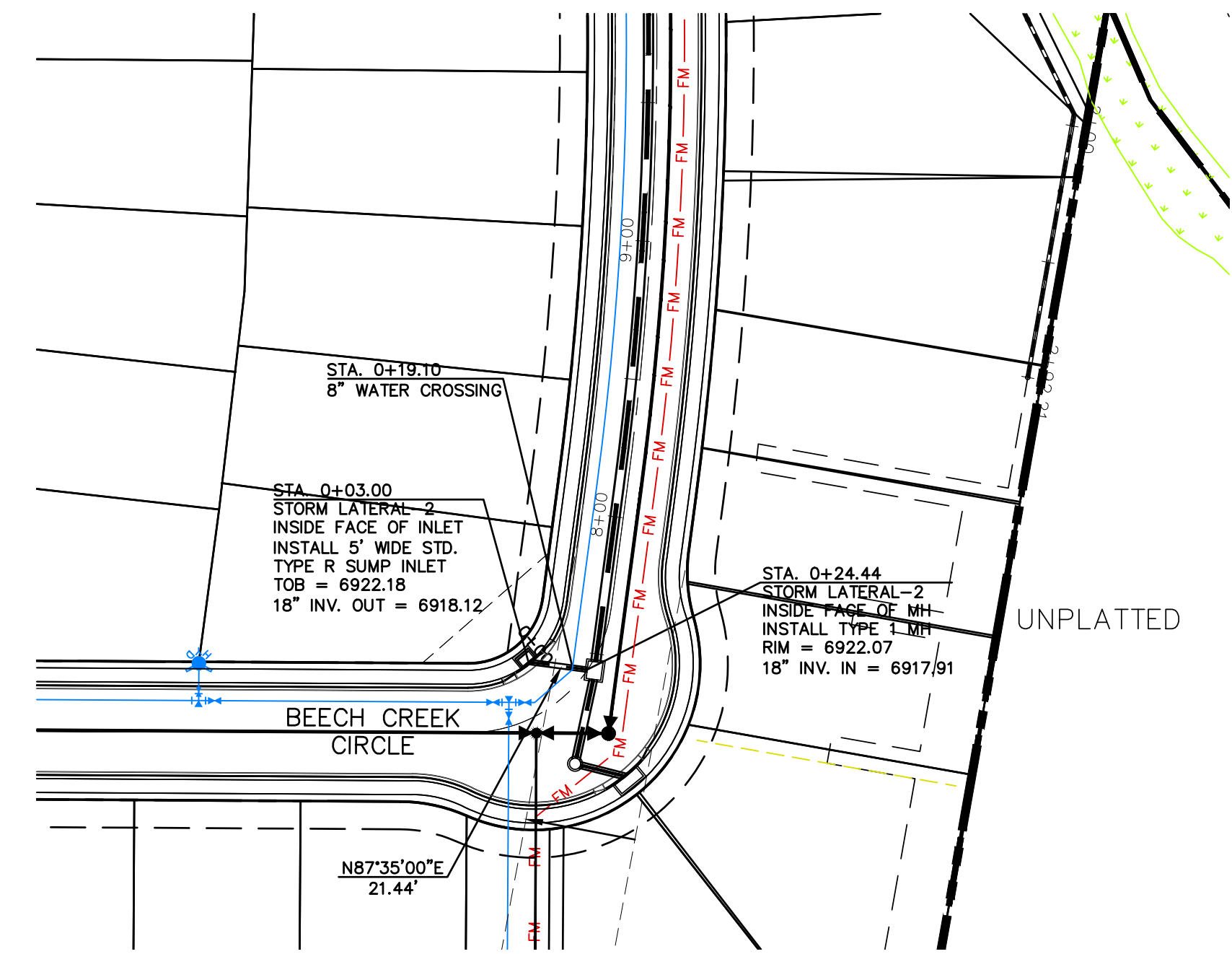
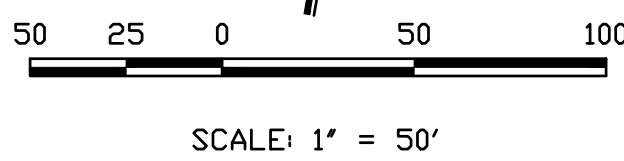
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V-SCALE 1"=5'
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SHEET NO. 33 OF 54

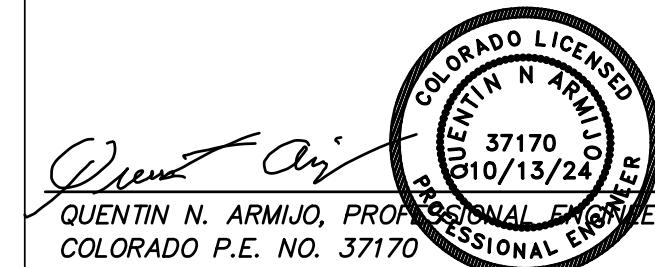


STORM SEWER RUN-7 & LATERAL-1 (PIPE RUN 11, 13 & 14) PHASE 1
 PROPOSED PUBLIC RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.

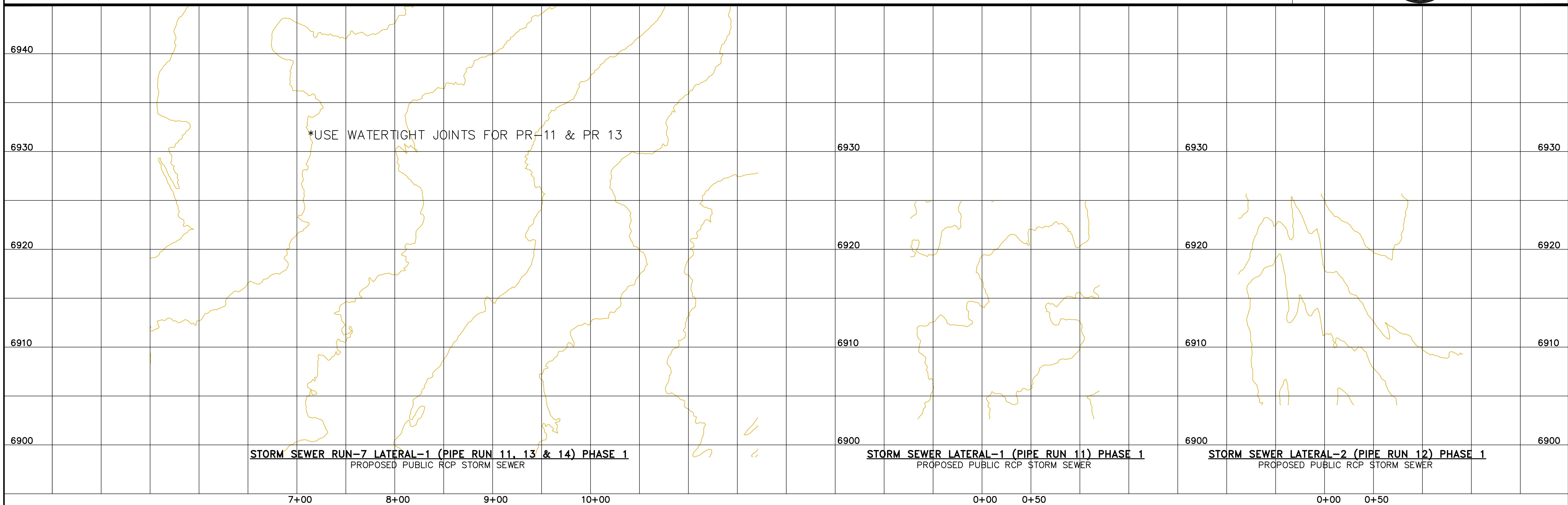


STORM SEWER LATERAL-2 (PIPE RUN 12) PHASE 1
 PROPOSED PUBLIC RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.

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Quentin N. Armijo, Professional Engineer
 COLORADO P.E. NO. 37170



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

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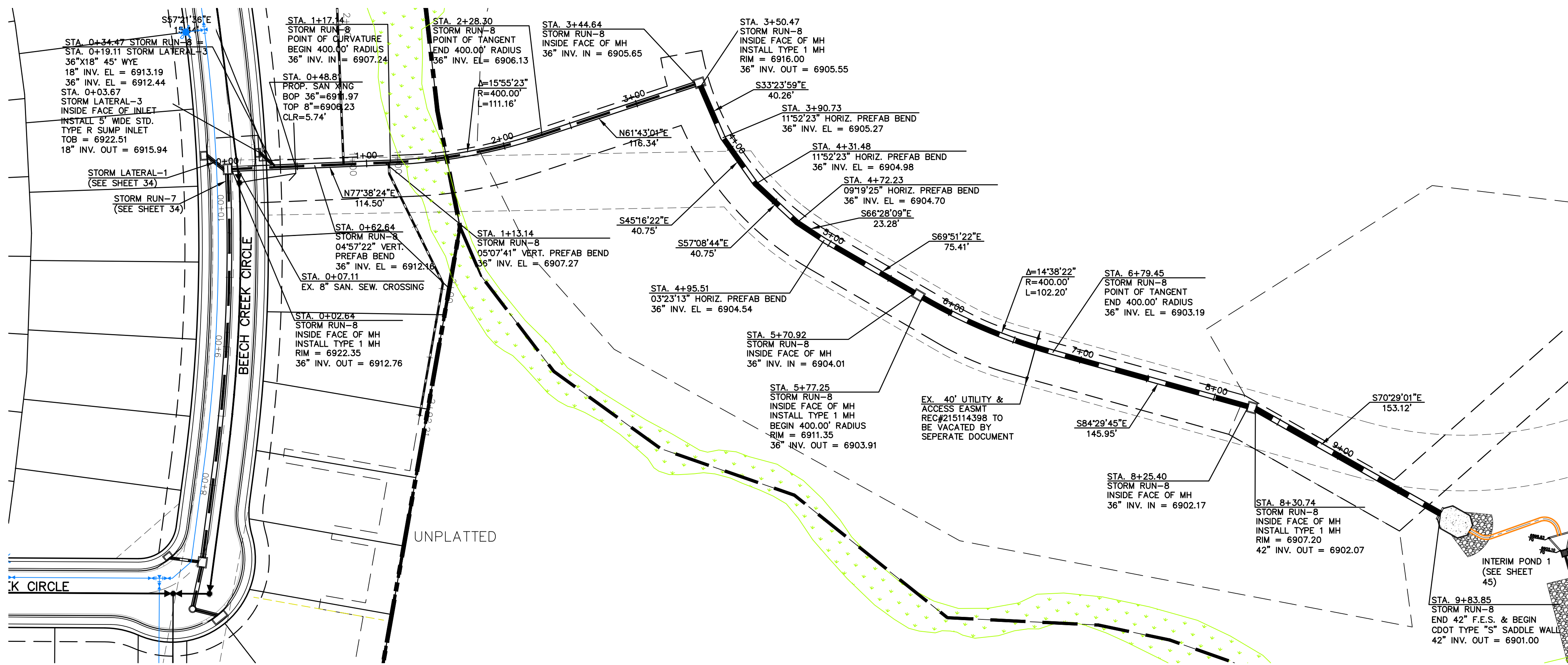
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 Professional Engineer

WATERBURY FILING NO. 1

CONSTRUCTION SET
 STORM SEWER PLAN AND PROFILE
 STORM RUN-7 & LATERALS 1-2

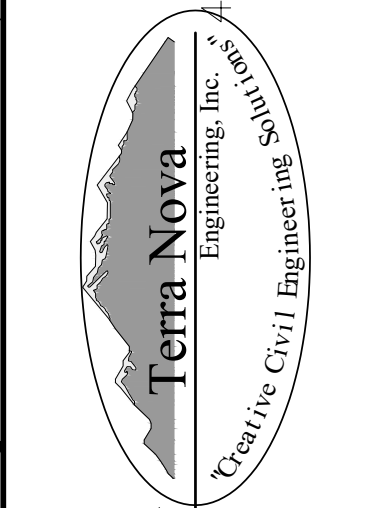
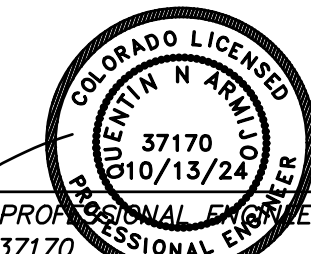
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H-SCALE 1"=50'
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SHEET NO. 34 OF 54



STORM SEWER LATERAL-3 & RUN-8 (PIPE RUN 16 & 17) PHASE 1
 PROPOSED PUBLIC RCP STORM SEWER
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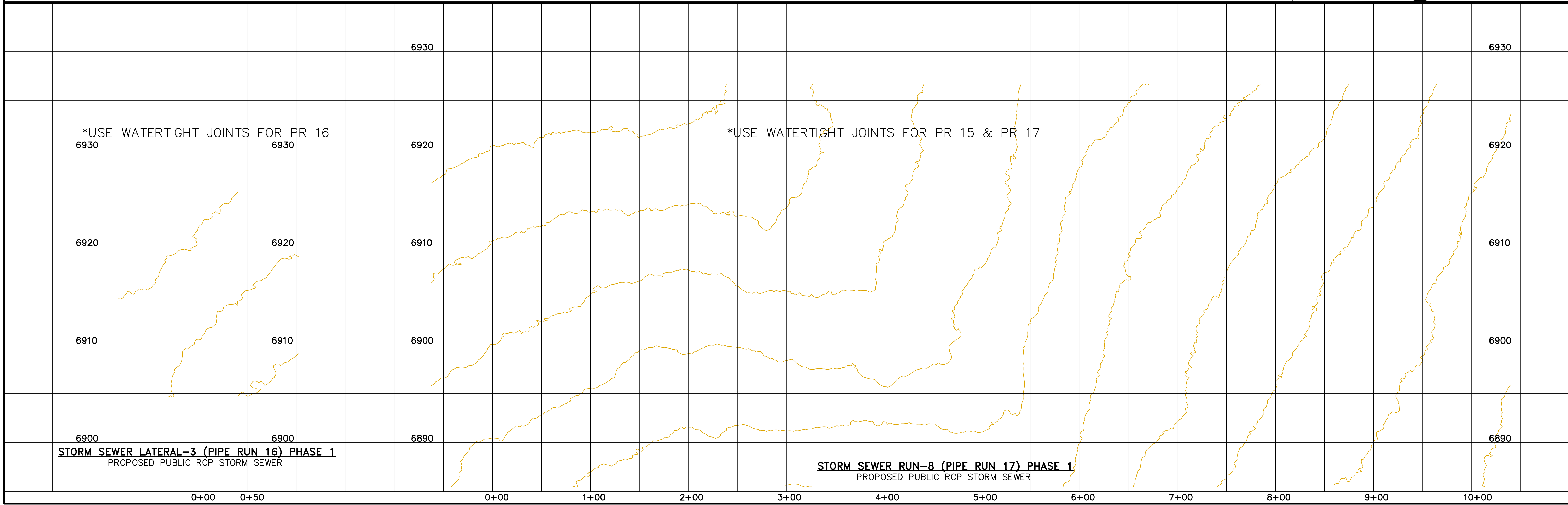
Quentin N. Armijo
 QUENTIN N. ARMIJO, PROFESSIONAL ENGINEER
 COLORADO P.E. NO. 37170



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JASON POKK
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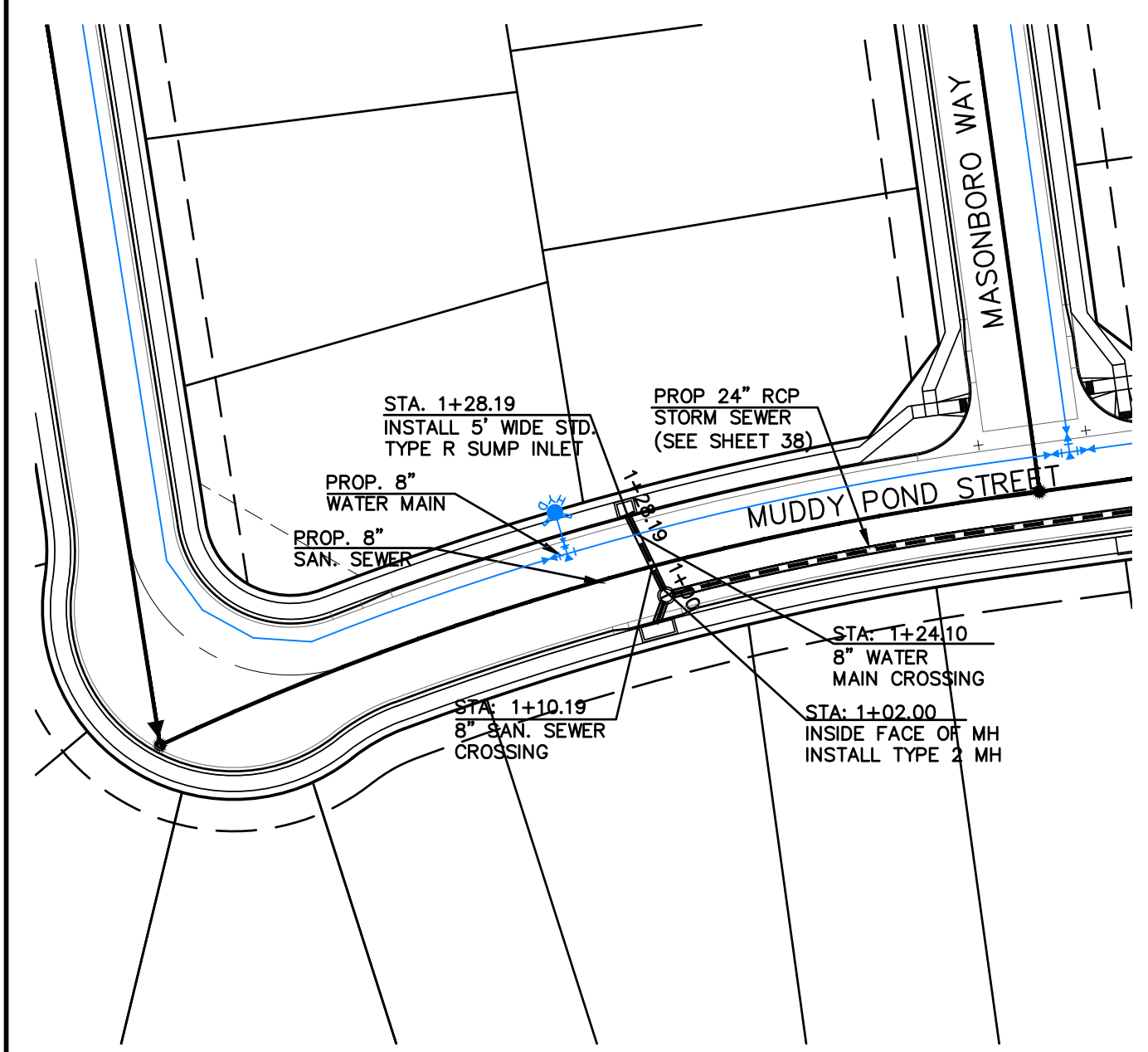
WATERBURY FILING NO. 1

CONSTRUCTION SET
 STORM SEWER PLAN AND PROFILE
 LATERAL 3 & STORM RUN-8

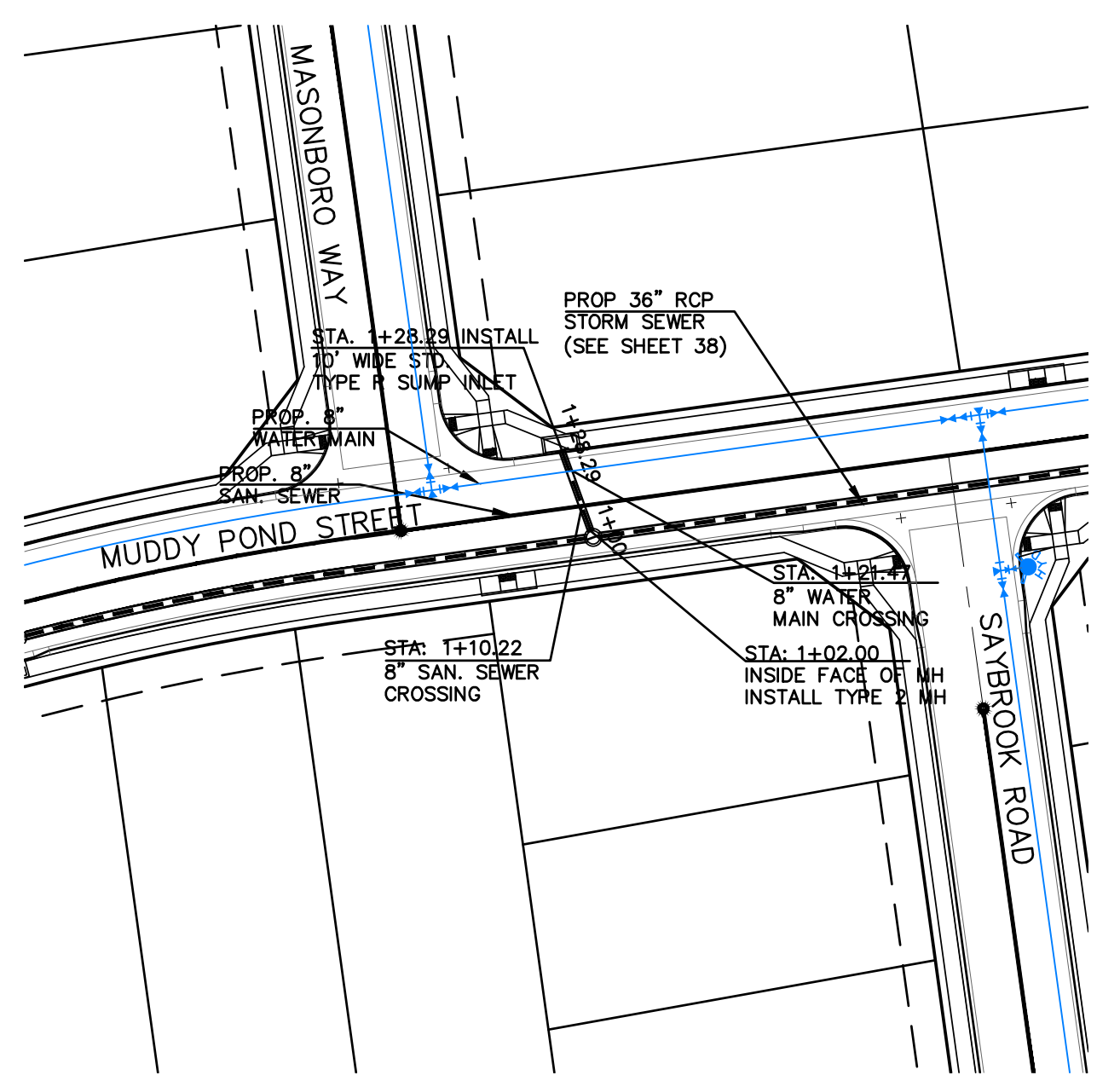
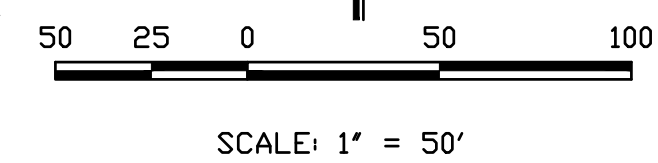
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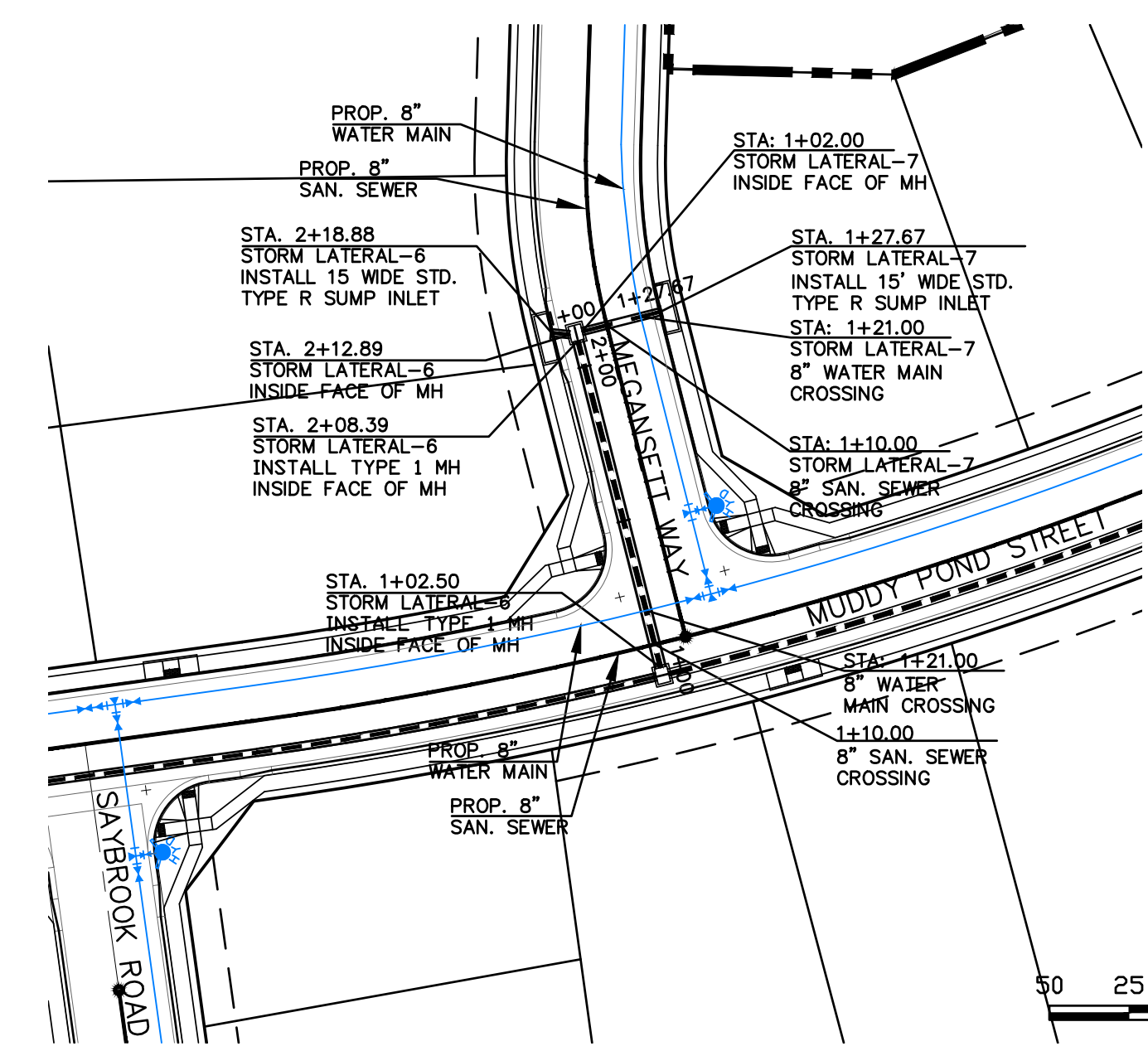
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 SHEET NO. 35 OF 54



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



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



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



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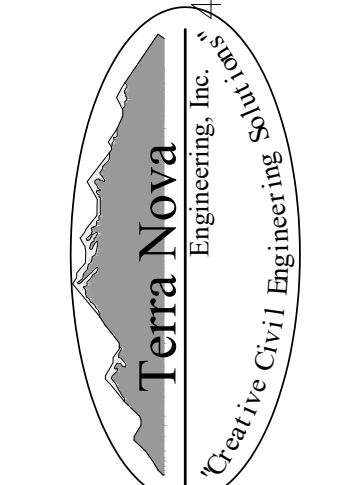
Quentin N. Armiyo
 QUENTIN N. ARMIYO, PROFESSIONAL ENGINEER
 COLORADO P.E. NO. 37170

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JASON POCK
 100 E. MISSISSIPPI AVE., STE. 500
 DENVER, CO 80246
 303-984-9800



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6960	*USE WATERTIGHT JOINTS FOR PR 19	6960	*USE WATERTIGHT JOINTS FOR PR 21	6960	*USE WATERTIGHT JOINTS FOR PR 23 & PR 25	6960	*USE WATERTIGHT JOINTS FOR PR 24	6960
6950		6950		6950		6950		6950
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6930		6930		6930		6930		6930
1+50	STORM SEWER LATERAL - 4 (PIPE RUN 19) PHASE 2 PROPOSED PUBLIC RCP STORM SEWER	1+00	STORM SEWER LATERAL - 5 (PIPE RUN 21) PHASE 2 PROPOSED PUBLIC RCP STORM SEWER	1+50	STORM SEWER LATERAL - 6 (PIPE RUN 23 & 25) PHASE 2 PROPOSED PUBLIC RCP STORM SEWER	3+00	STORM SEWER LATERAL - 7 (PIPE RUN 24) PHASE 2 PROPOSED PUBLIC RCP STORM SEWER	1+00

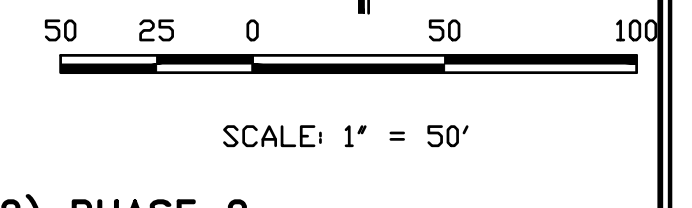
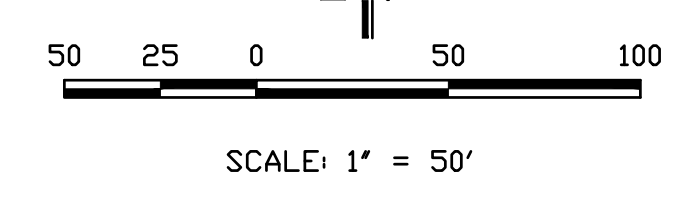
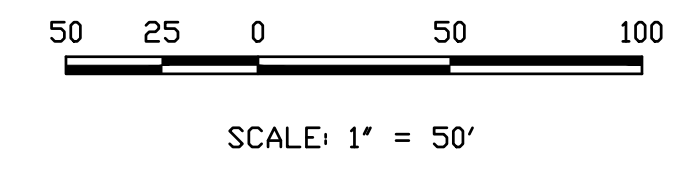
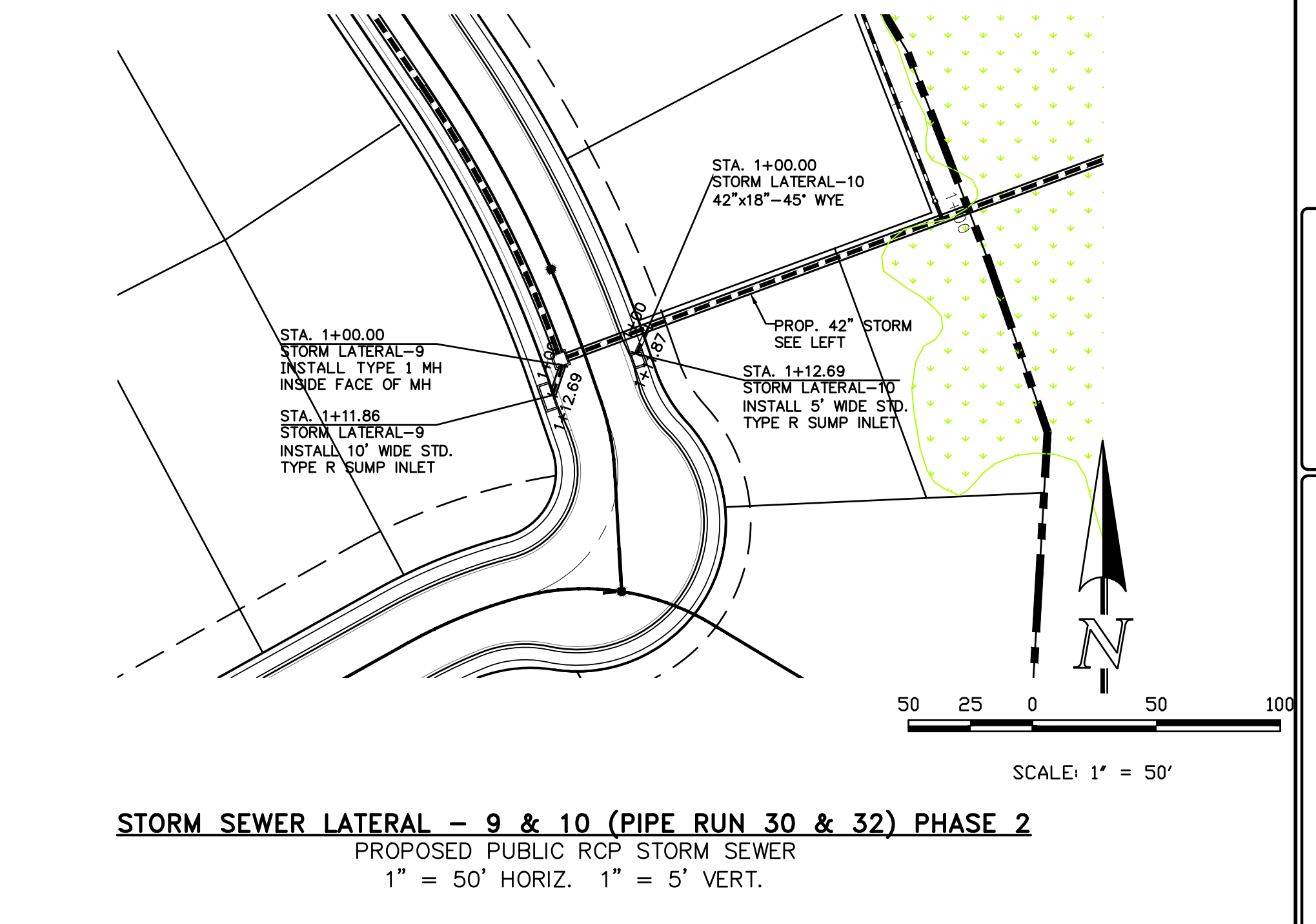
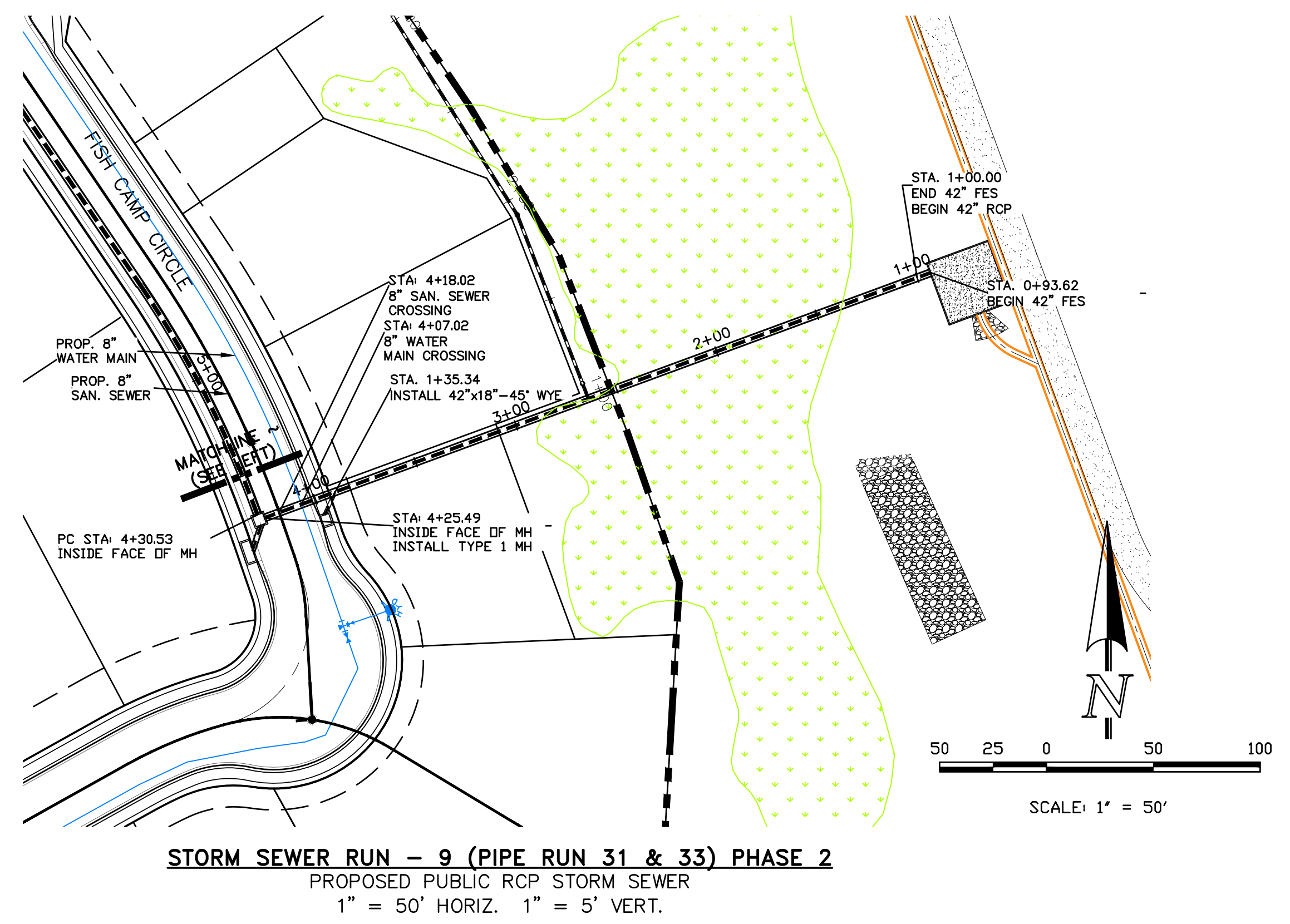
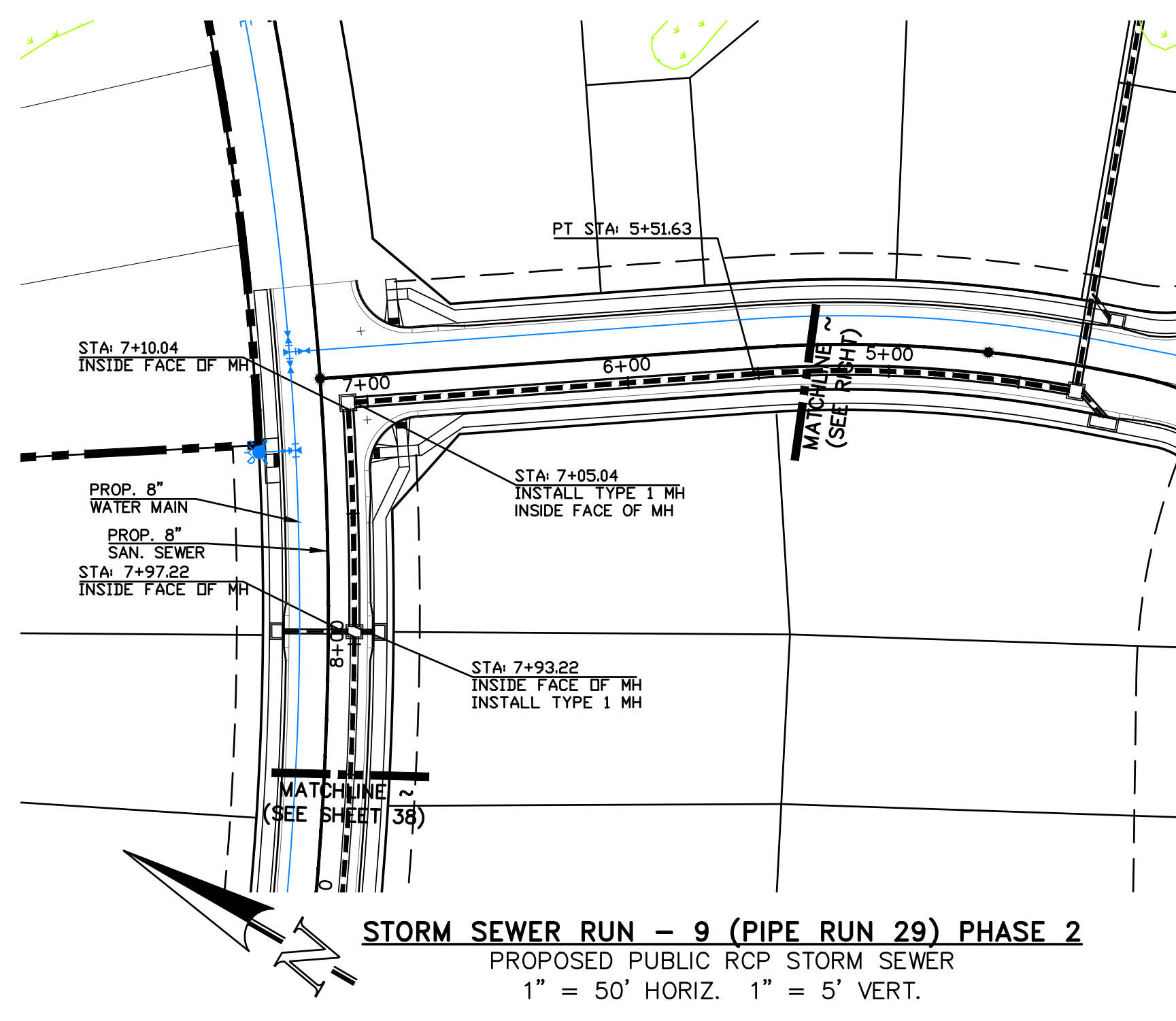
WATERBURY FILING NO. 1

CONSTRUCTION SET
 STORM SEWER PLAN AND PROFILE
 LATERALS 4-6

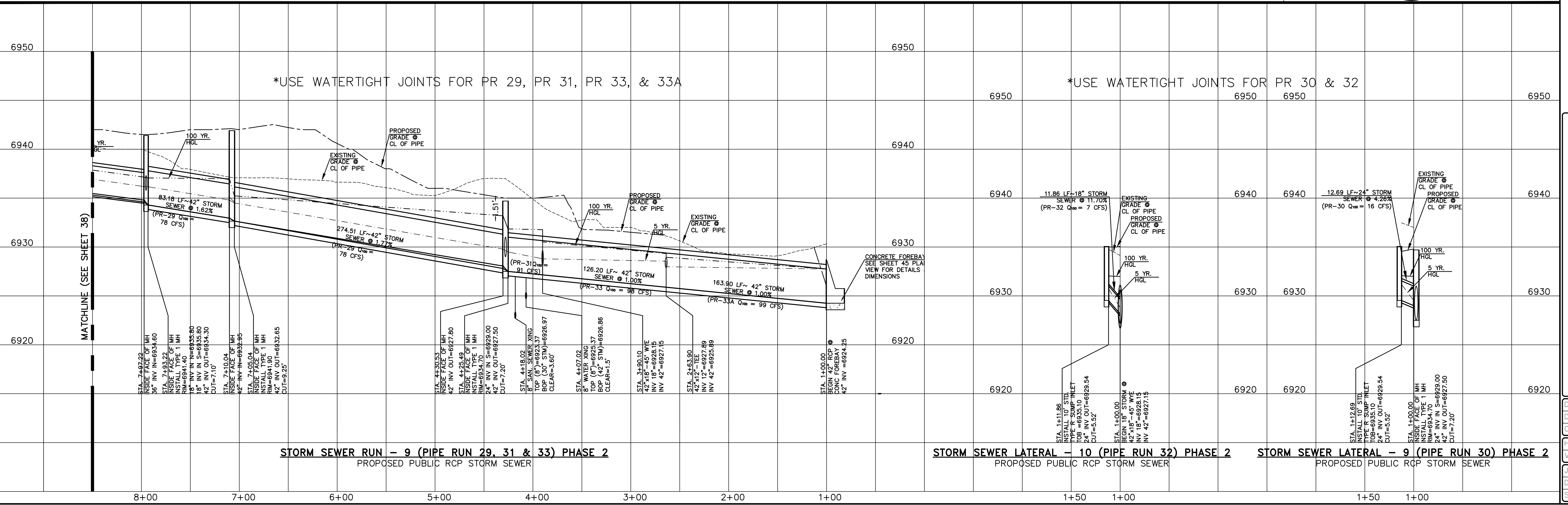
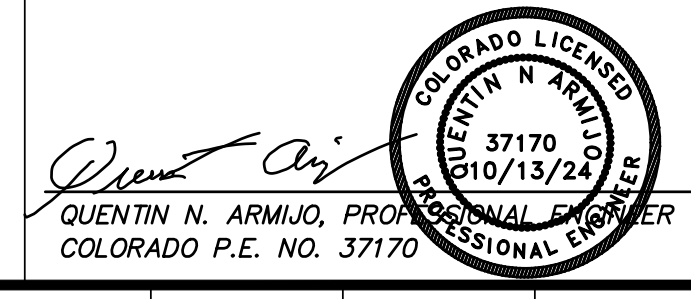
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 V-SCALE 1"=5'

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*USE WATERTIGHT JOINTS FOR PR 29, PR 31, PR 33, & 33A

*USE WATERTIGHT JOINTS FOR PR 30 & 32

DATE: _____

REVISIONS:

NO.	DESCRIPTION

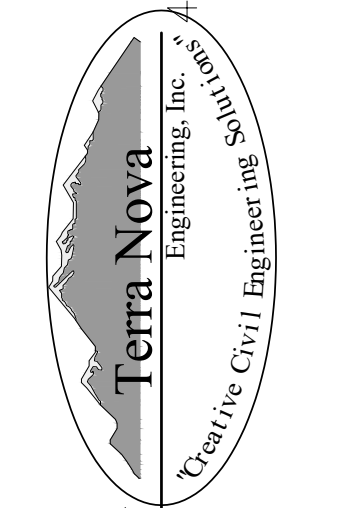
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00 E. MISSISSIPPI AVE., STE 500
DENVER, CO 80246
303-984-9800

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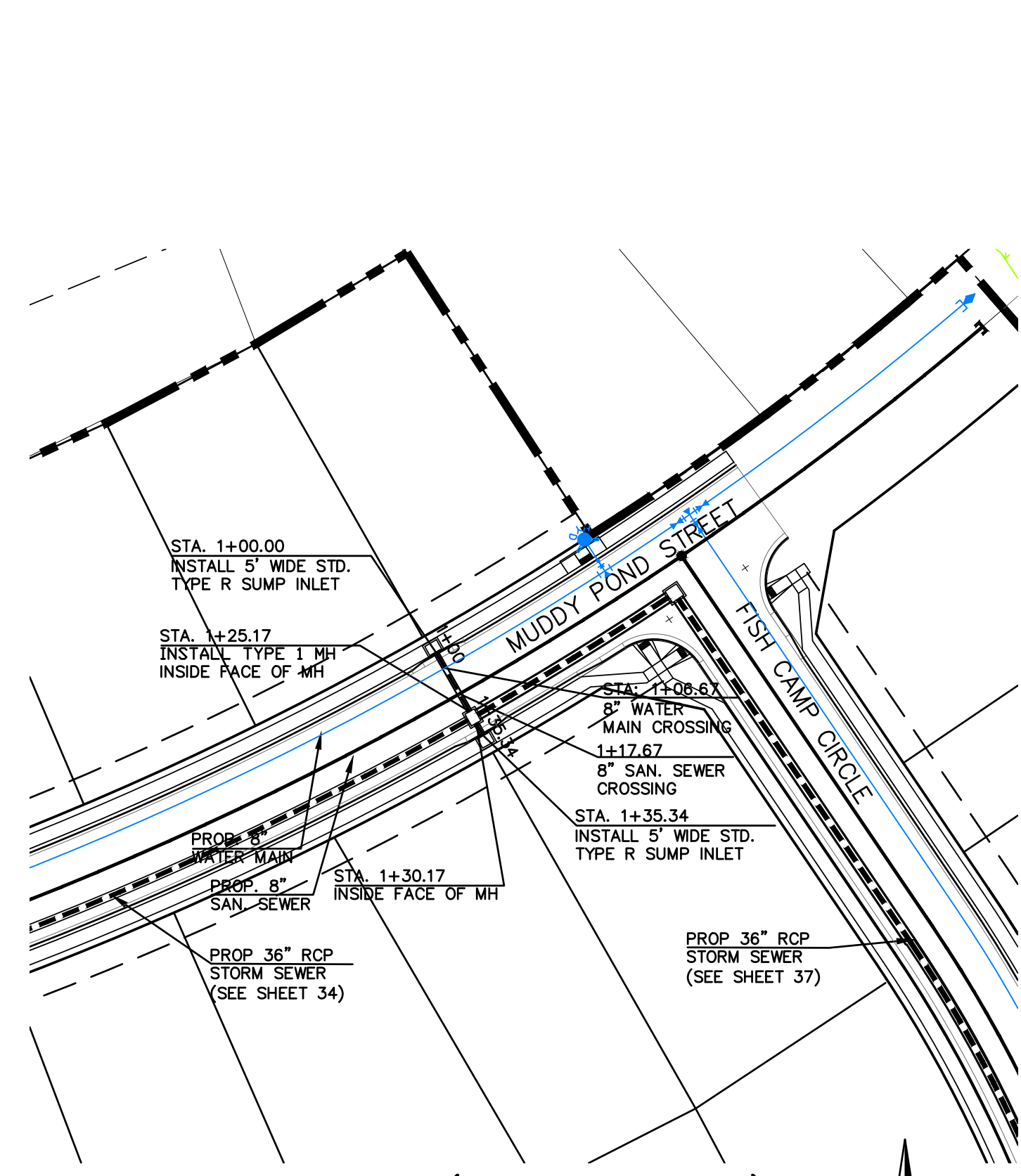
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V-SCALE 1"=5'

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SHEET NO. 37 OF 54

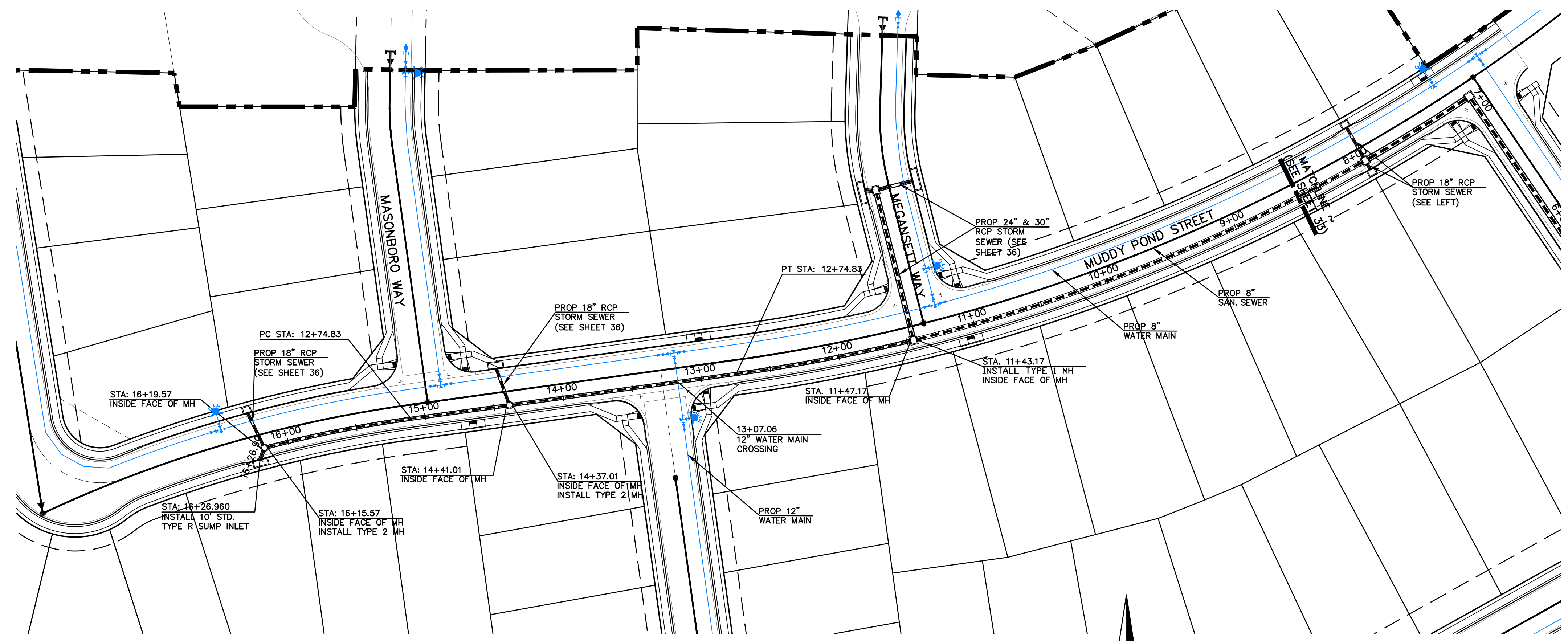
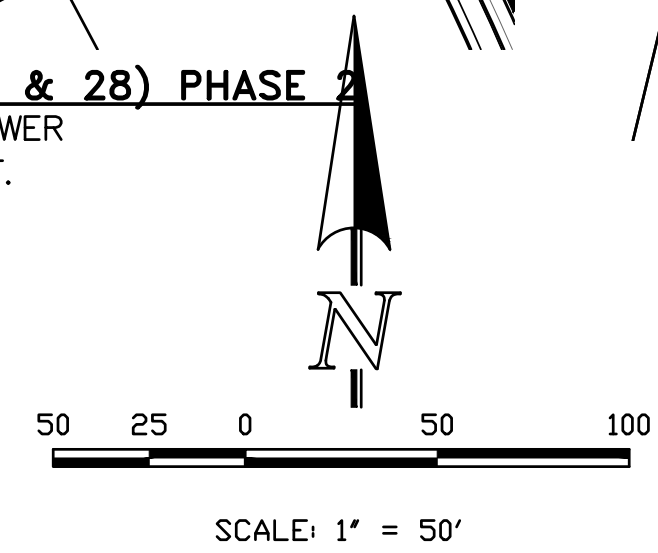


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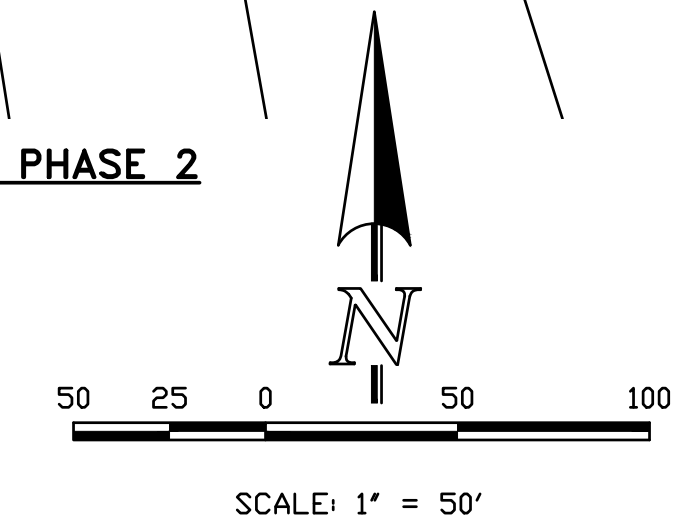
WATERBURY FILING NO. 1
CONSTRUCTION SET
STORM SEWER PLAN AND PROFILE
RUNS 9 & 10 AND LATERAL 9 & 10



STORM SEWER LATERAL - 8 (PIPE RUN 27 & 28) PHASE 2
 PROPOSED PUBLIC RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.

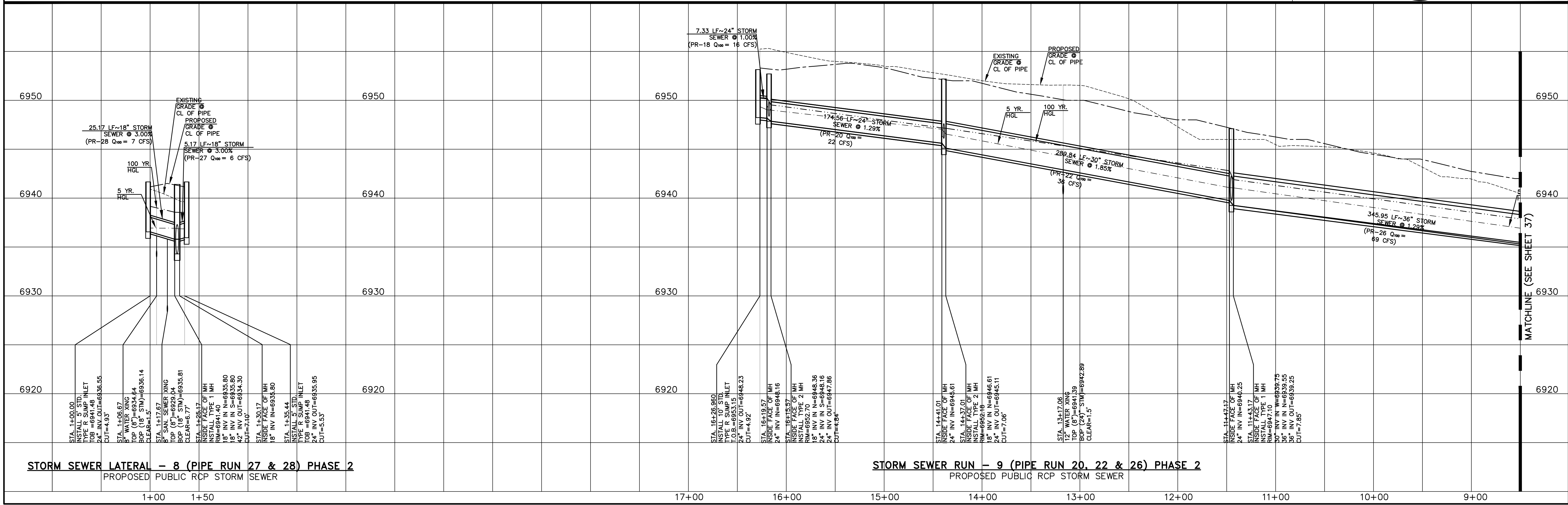


STORM SEWER RUN - 9 (PIPE RUN 20, 22 & 26) PHASE 2
 PROPOSED PUBLIC RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.



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Quentin N. 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

NO.	DESCRIPTION	DATE

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 JASON POKK
 00 E. MISSISSIPPI AVE., STE 500
 DENVER, CO 80246
 303-984-9800

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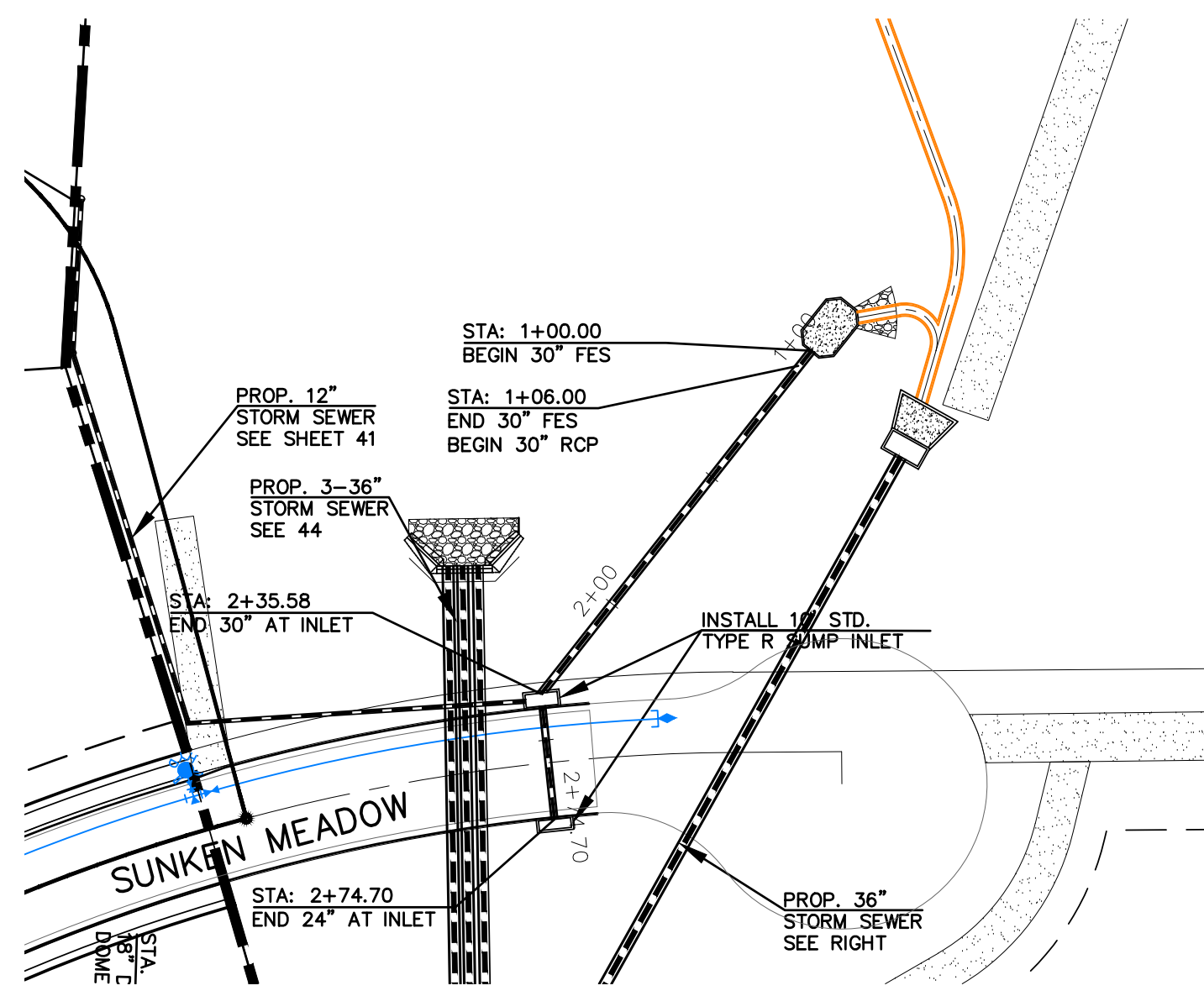
WATERBURY FILING NO. 1

CONSTRUCTION SET
 STORM SEWER RUN 9 & LATERAL 8

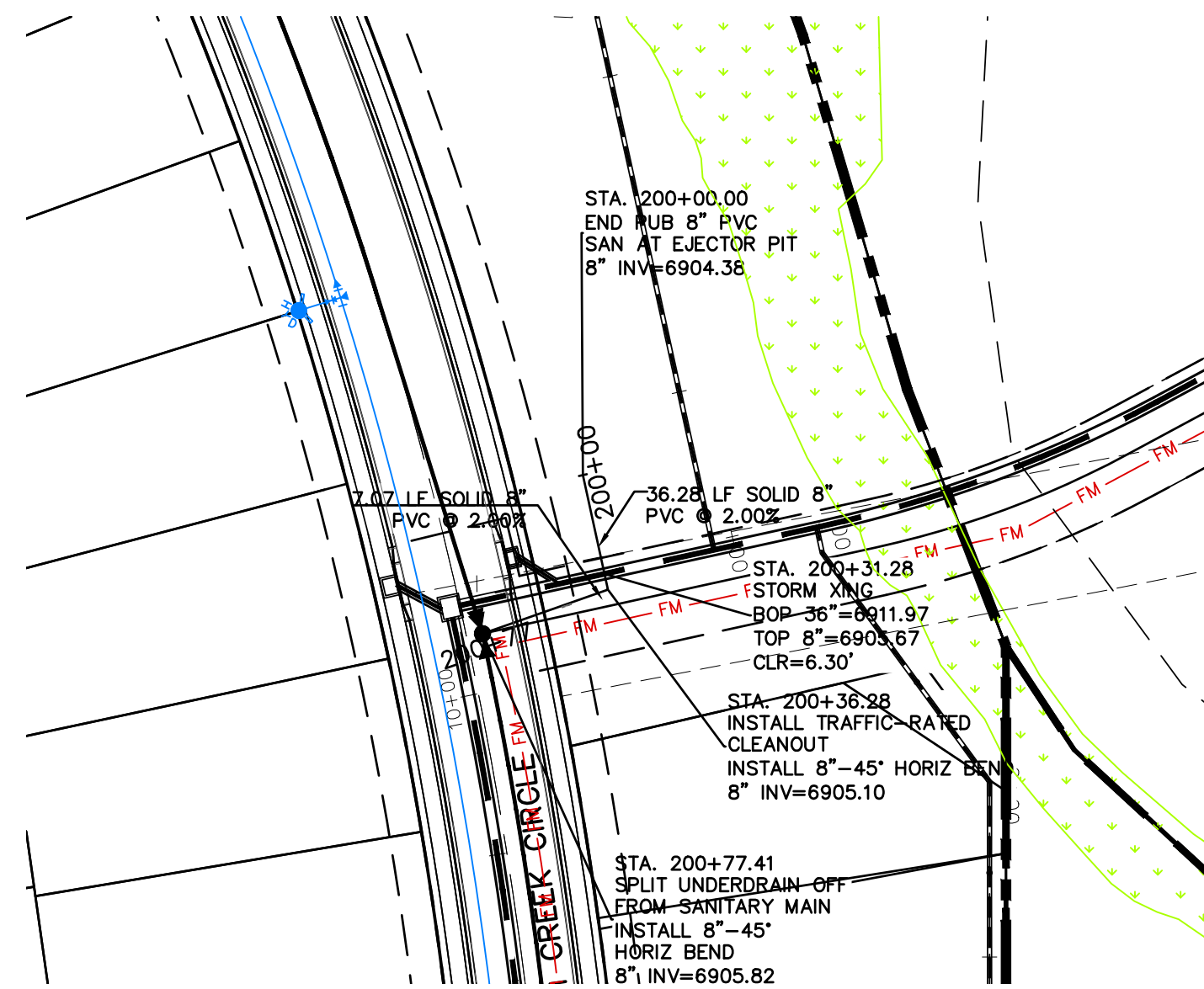
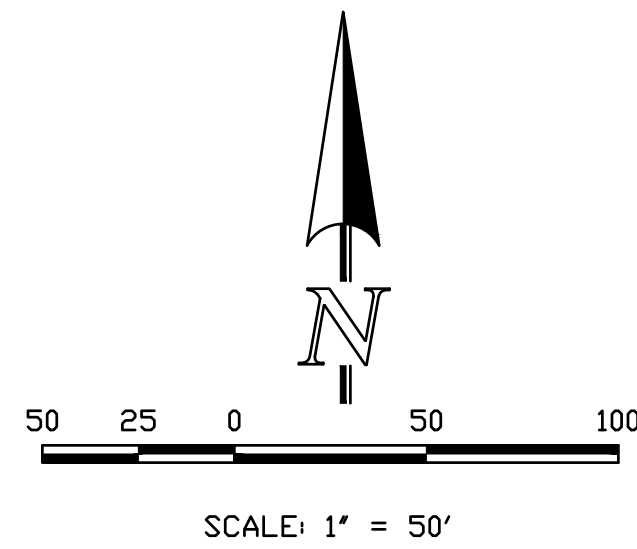
DESIGNED BY QNA
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 V-SCALE 1"=5'

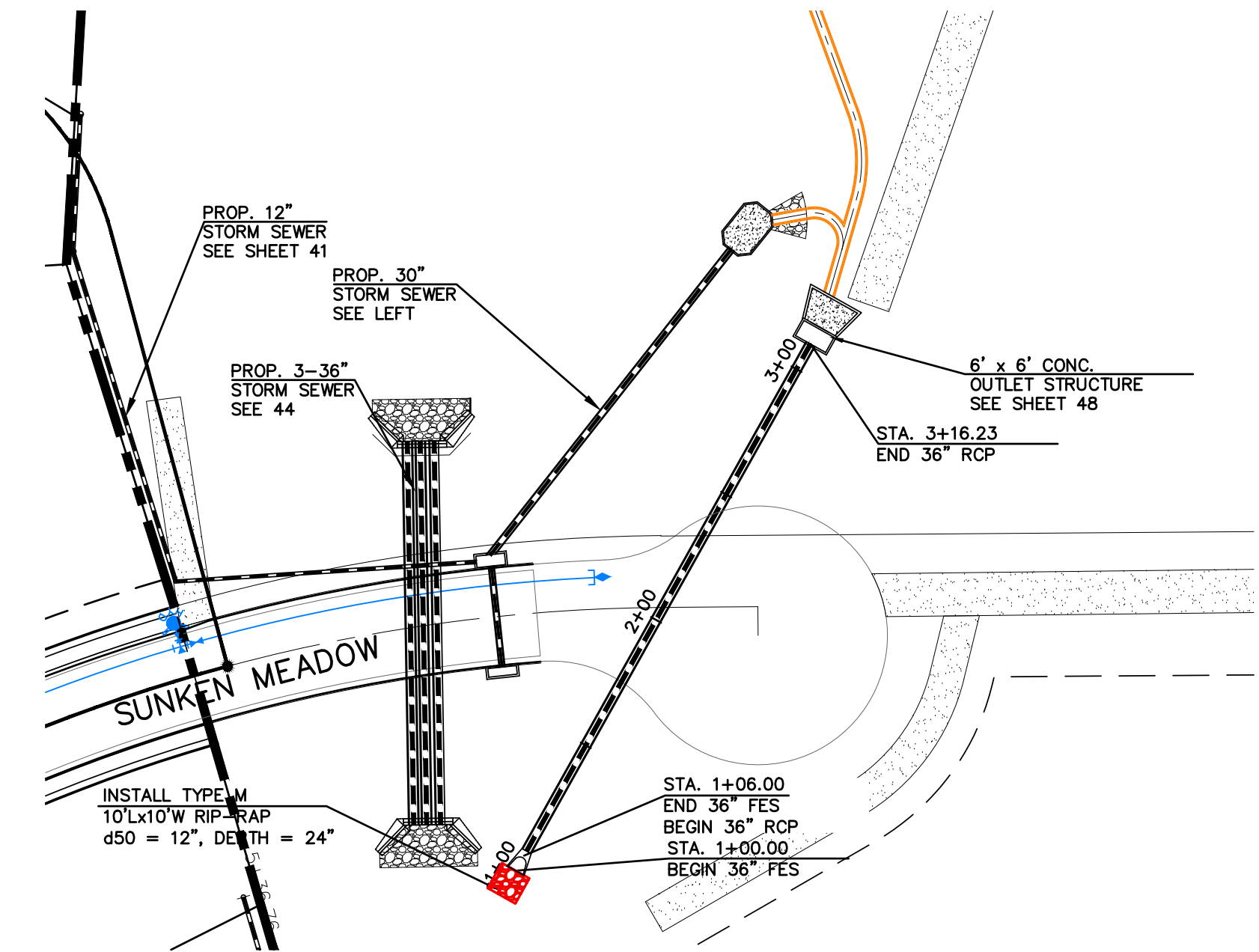
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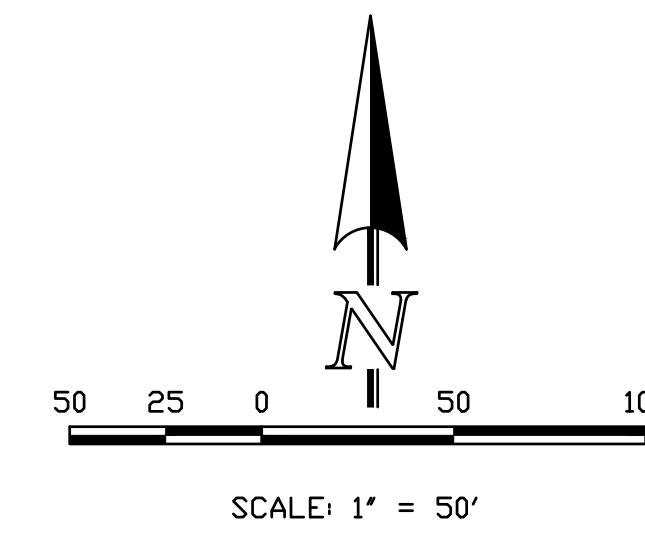
STORM SEWER LATERAL - 10 (PIPE RUN 34) PHASE 1
 PROPOSED PRIVATE RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.



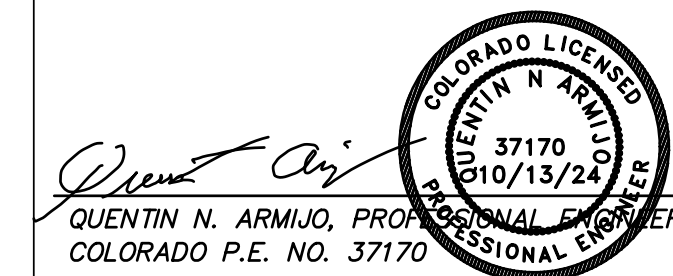
SANITARY SEWER UNDERDRAIN OUTFALL TO EJECTOR PIT - PHASE 1
 PROPOSED PUBLIC 8" PVC
 1" = 50' HORIZ. 1" = 5' VERT.



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



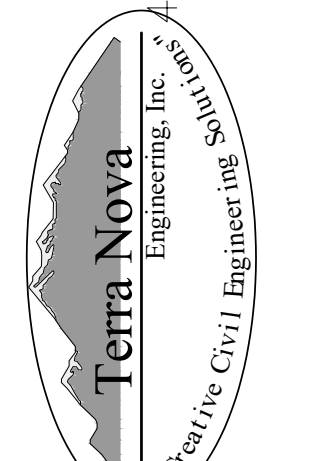
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JASON POKK
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6940		6940		6940		6940		6940
6930	35.34 LF ~ 24" STORM SEWER @ 1.35% (PR-34 Q ₁₀₀ = 11 CFS)	6930		6930		6930		6930
6920	105.58 LF ~ 30" STORM SEWER @ 0.50% (PR-34 Q ₁₀₀ = 24 CFS)	6920		6920		6920		6920
6910	7.07 LF SOLID 8" PVC	6910		6910		6910		6910
6900	56.28 LF SOLID 8" PVC	6900		6900		6900		6900
3+00		2+00		1+00		200+50		200+00

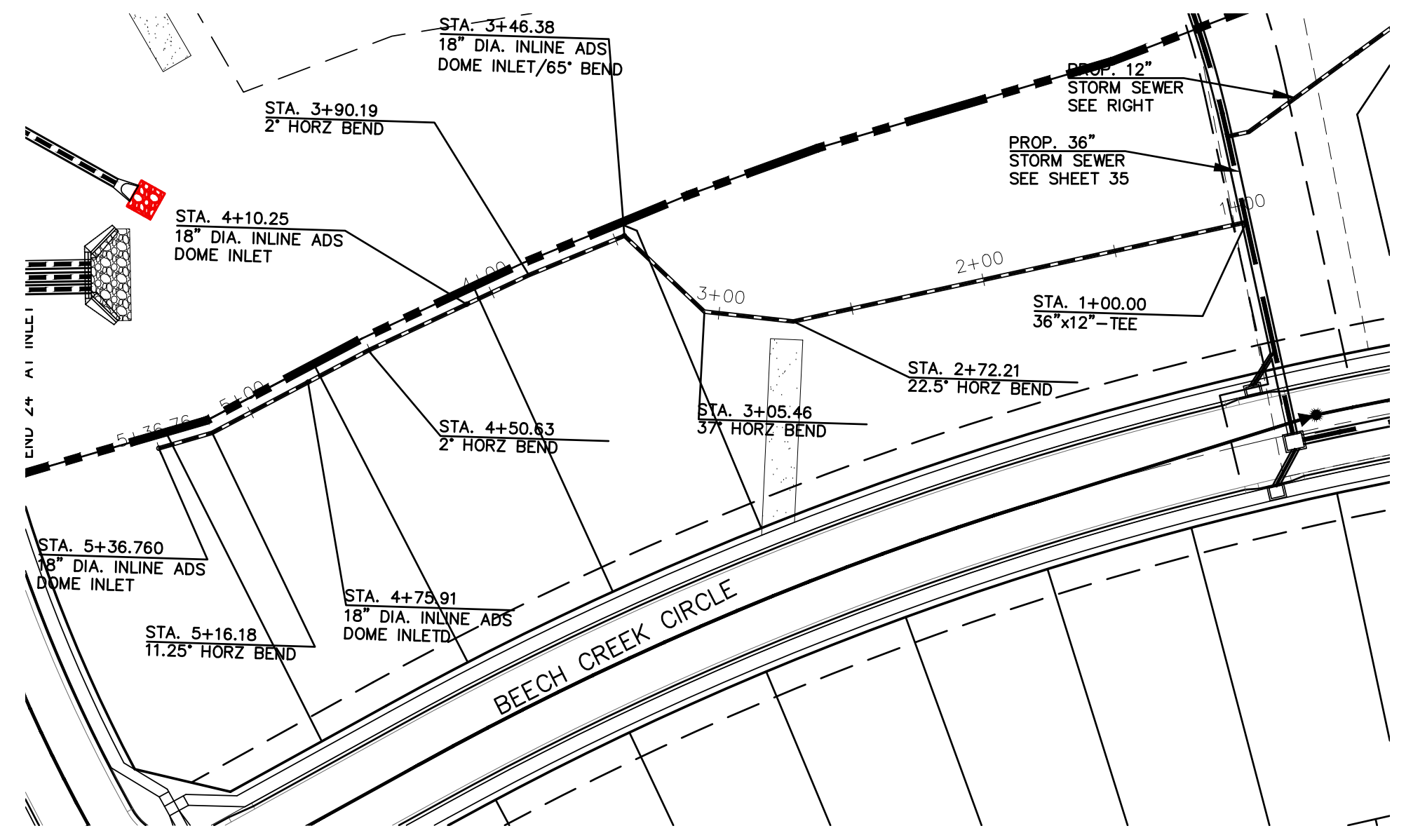
STORM SEWER RUN - 10 (PIPE RUN 34) PHASE 1
 PROPOSED PUBLIC RCP STORM SEWER

SANITARY SEWER UNDERDRAIN OUTFALL TO EJECTOR PIT - PHASE 1
 PROPOSED PUBLIC 8" PVC

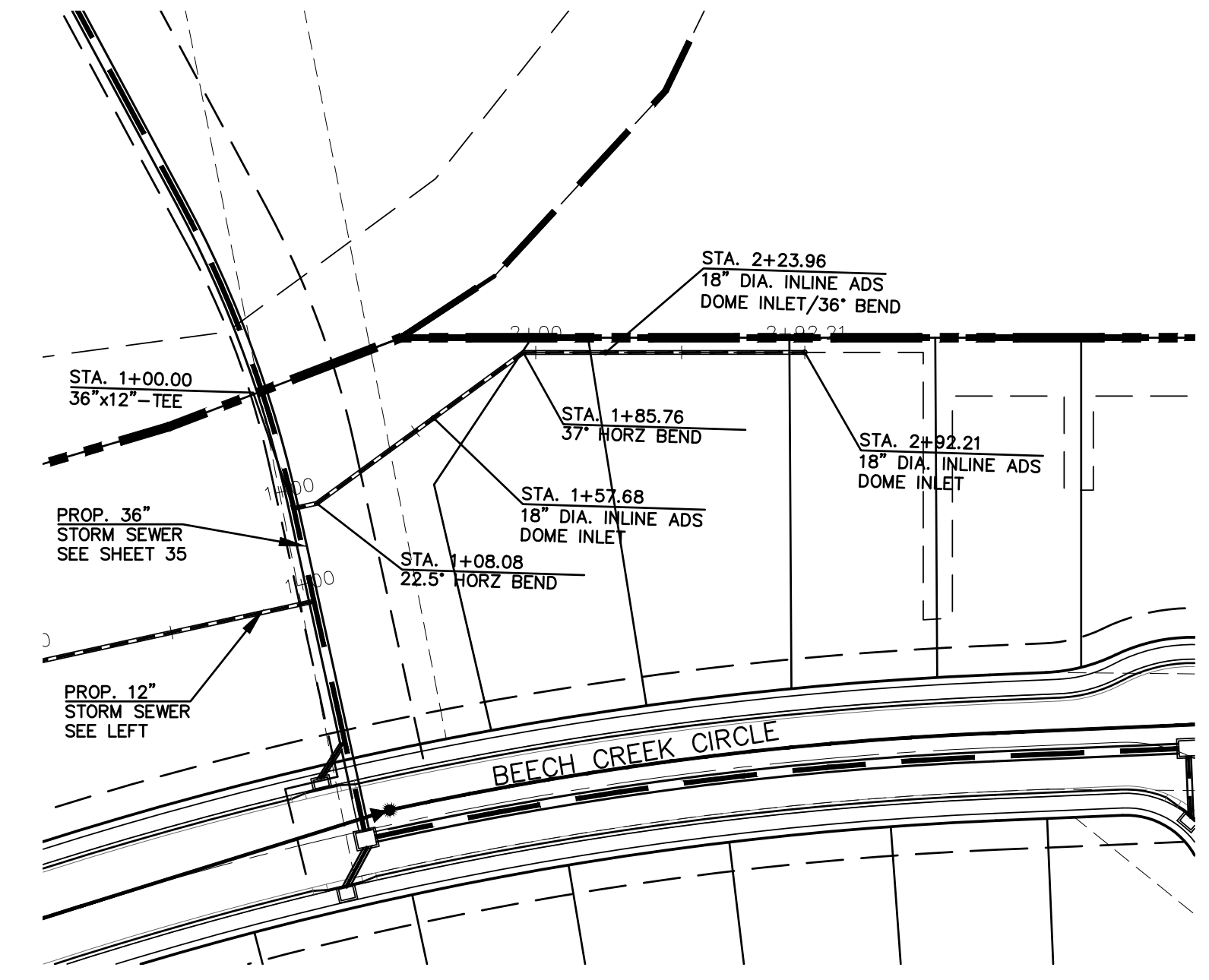
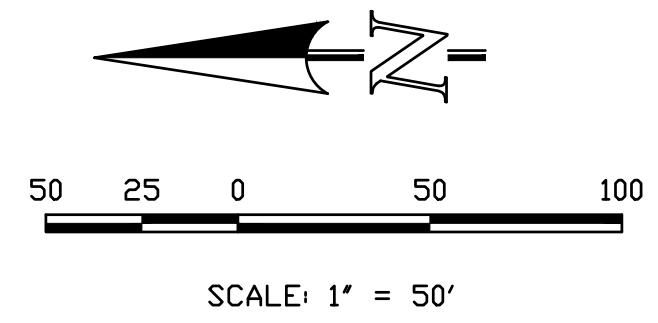
STORM SEWER RUN - 12 (PIPE RUN 35) PHASE 1
 PROPOSED PRIVATE RCP STORM SEWER

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

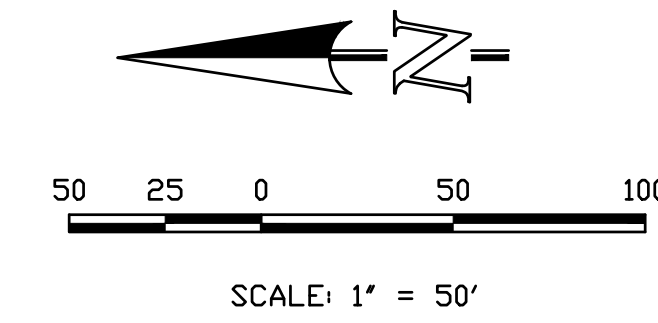
DESIGNED BY QNA
 DRAWN BY QNA
 CHECKED BY JS
 H-SCALE 1"=50'
 V-SCALE 1"=5'
 JOB NO. 2356.00
 DATE ISSUED 12/22/24
 SHEET NO. 39 OF 54



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

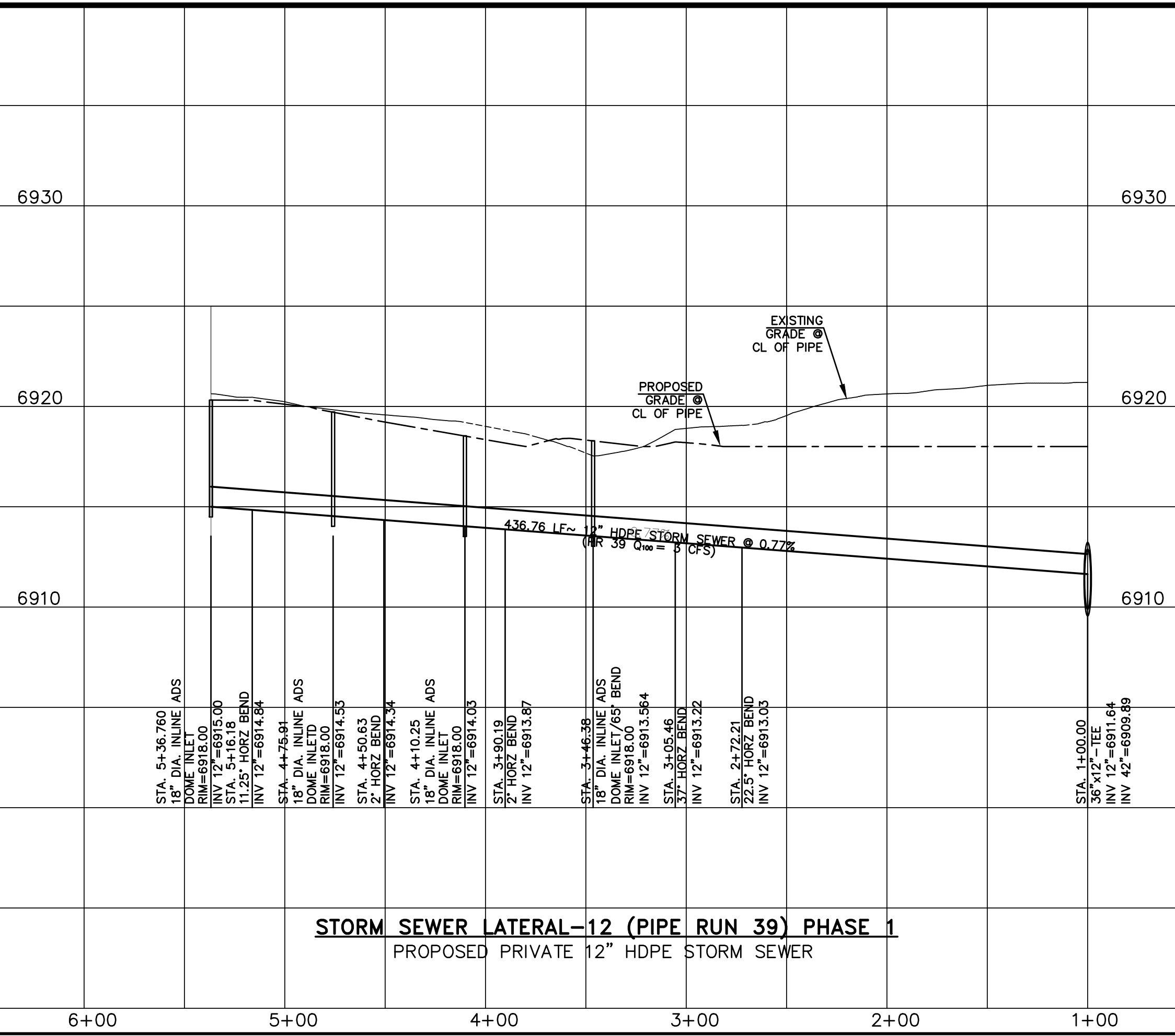


STORM SEWER LATERAL-13 (PIPE RUN 40) PHASE 1
 PROPOSED PRIVATE 12" HDPE STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.

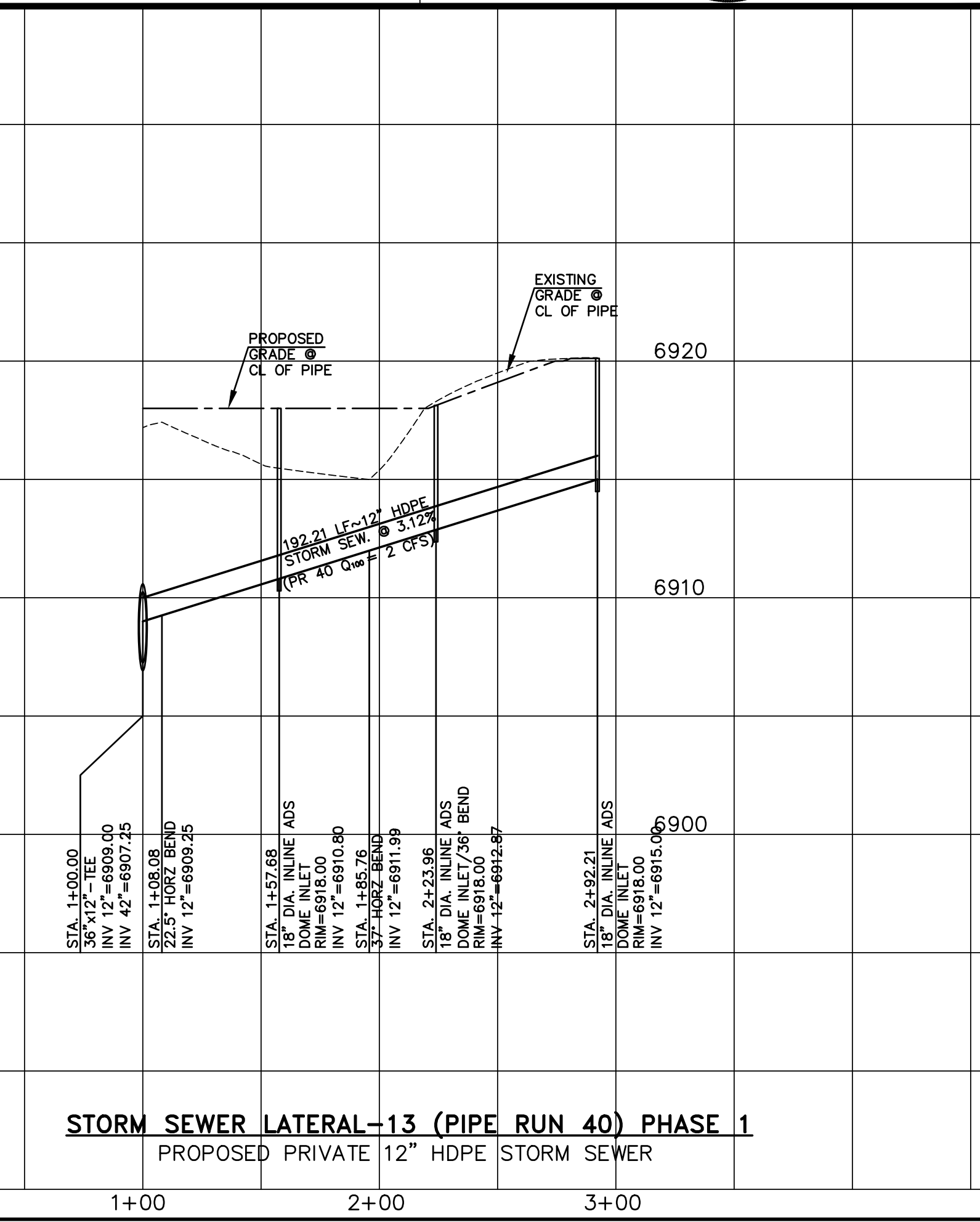


THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION
 FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

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

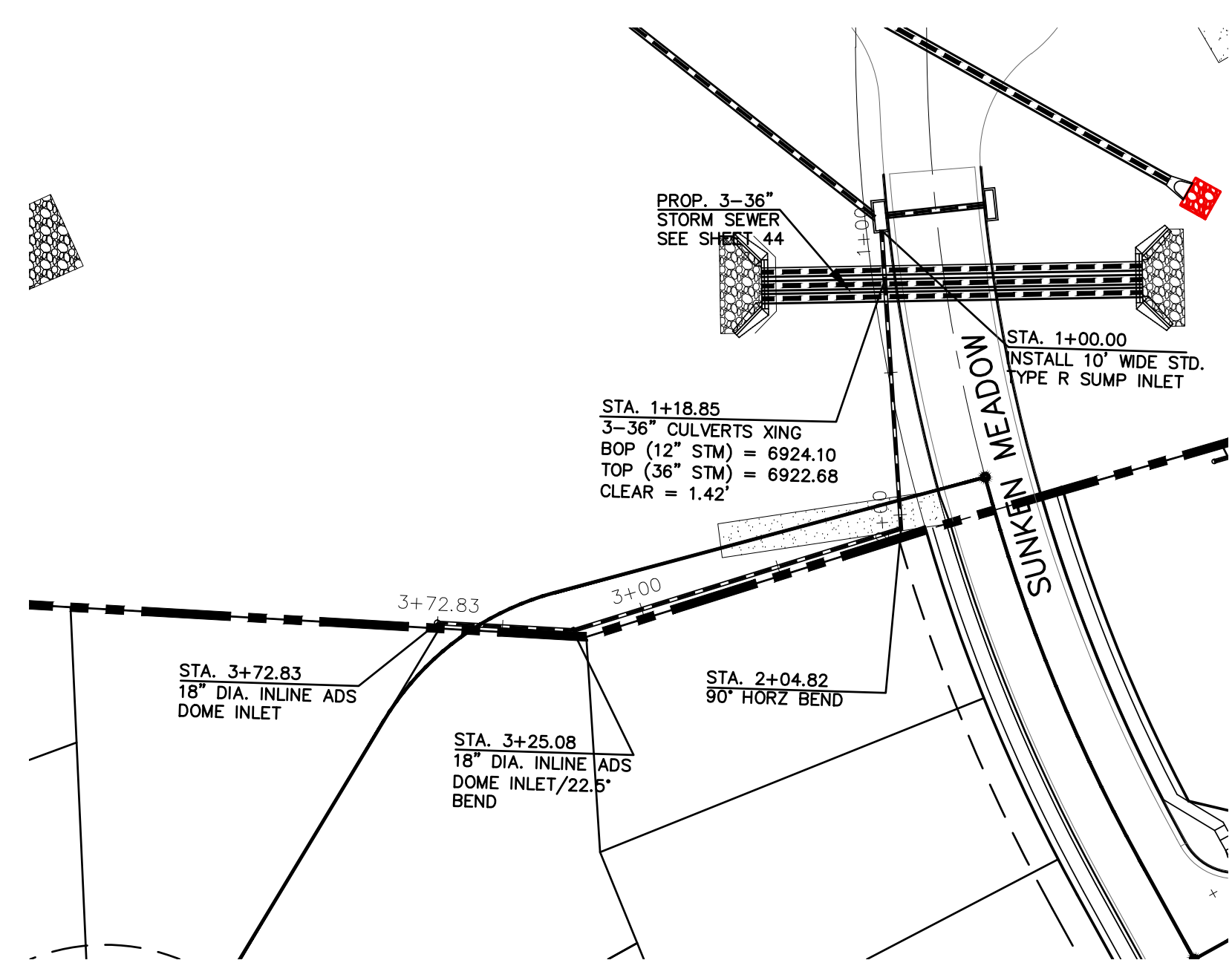


STORM SEWER LATERAL-12 (PIPE RUN 39) PHASE 1
 PROPOSED PRIVATE 12" HDPE STORM SEWER

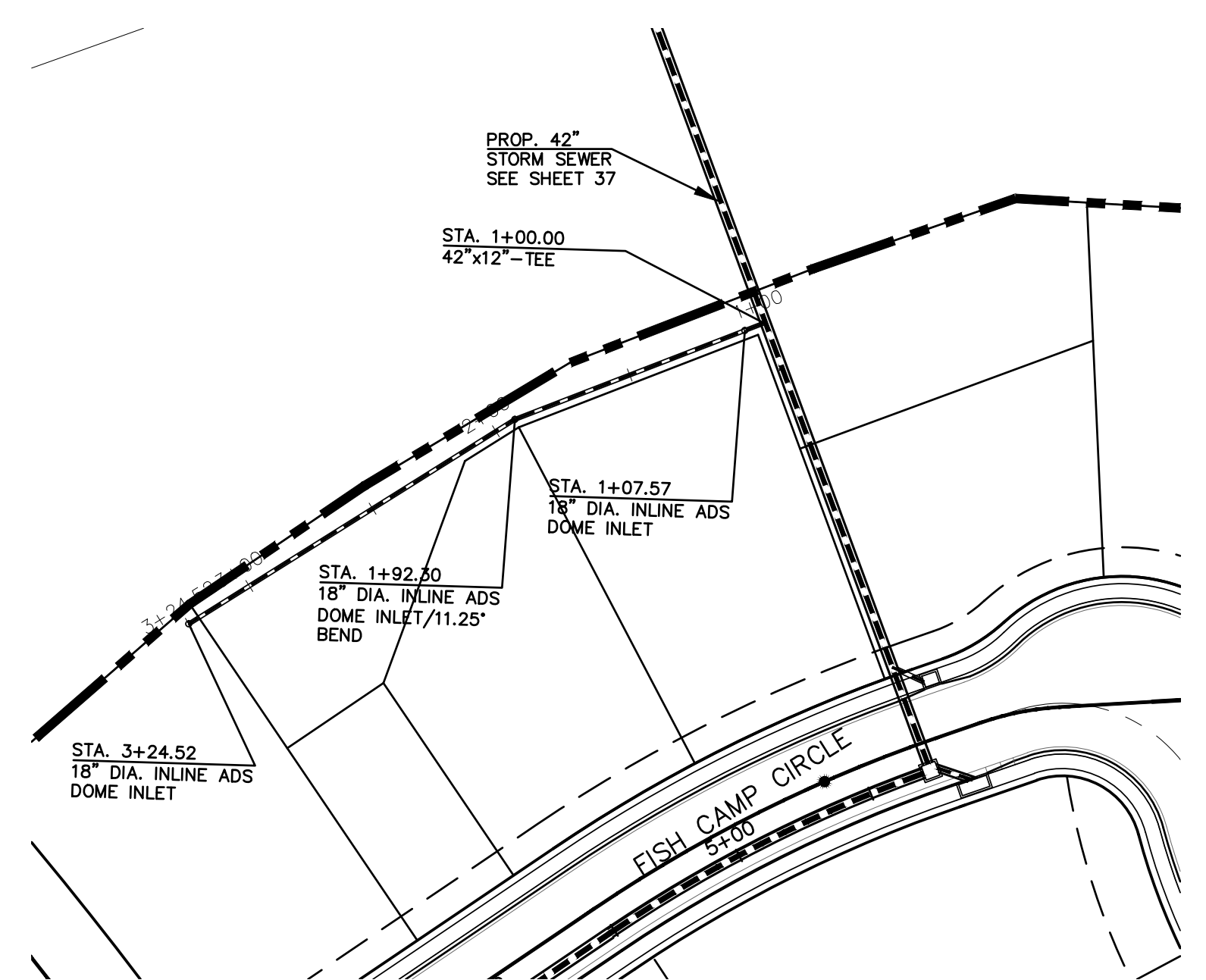
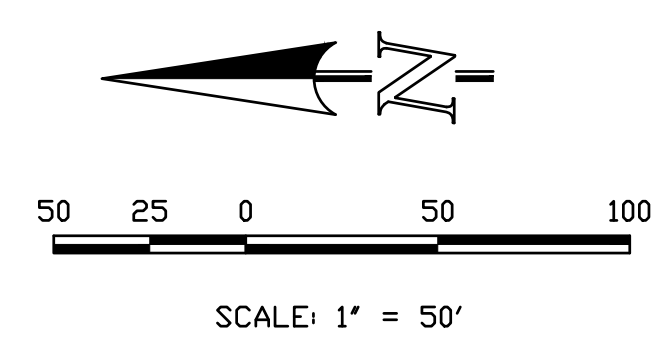


STORM SEWER LATERAL-13 (PIPE RUN 40) PHASE 1
 PROPOSED PRIVATE 12" HDPE STORM SEWER

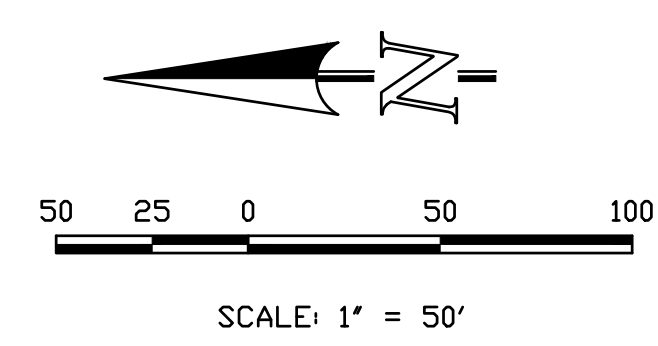
DATE	
DESCRIPTION	
REVISIONS	
NO.	
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE BOARD OF ARCHITECTS, ENGINEERS AND SURVEYORS, INC. APPROVES THEIR USE ONLY DESIGNATED BY WRITTEN AUTHORIZATION.	
PREPARED FOR:	ACM ALF VIII JV SUB II LLC
	JASON POCK
	00 E. MISSISSIPPI AVE., STE 500
	DENVER, CO 80246
	303-984-9800
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 STORM SEWER LATERAL 13, 14	
DESIGNED BY	QNA
DRAWN BY	QNA
CHECKED BY	JS
H-SCALE	1"=50'
V-SCALE	1"=5'
JOB NO.	2356.00
DATE ISSUED	12/22/24
SHEET NO.	40 OF 54



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

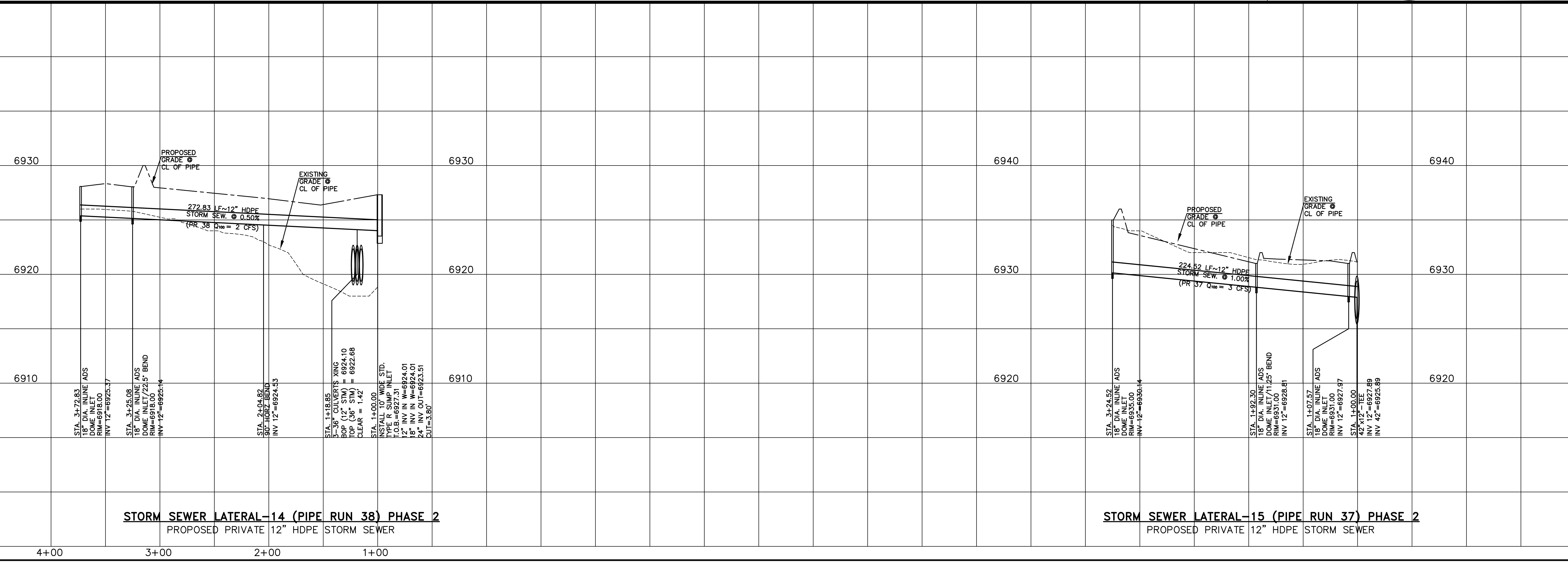


STORM SEWER LATERAL-15 (PIPE RUN 37) PHASE 2
 PROPOSED PRIVATE 12" HDPE STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.



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 FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

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



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

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 VIII 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.tnva.com

Terra Nova
 Engineering, Inc.
 Creative Civil Engineer Inc.

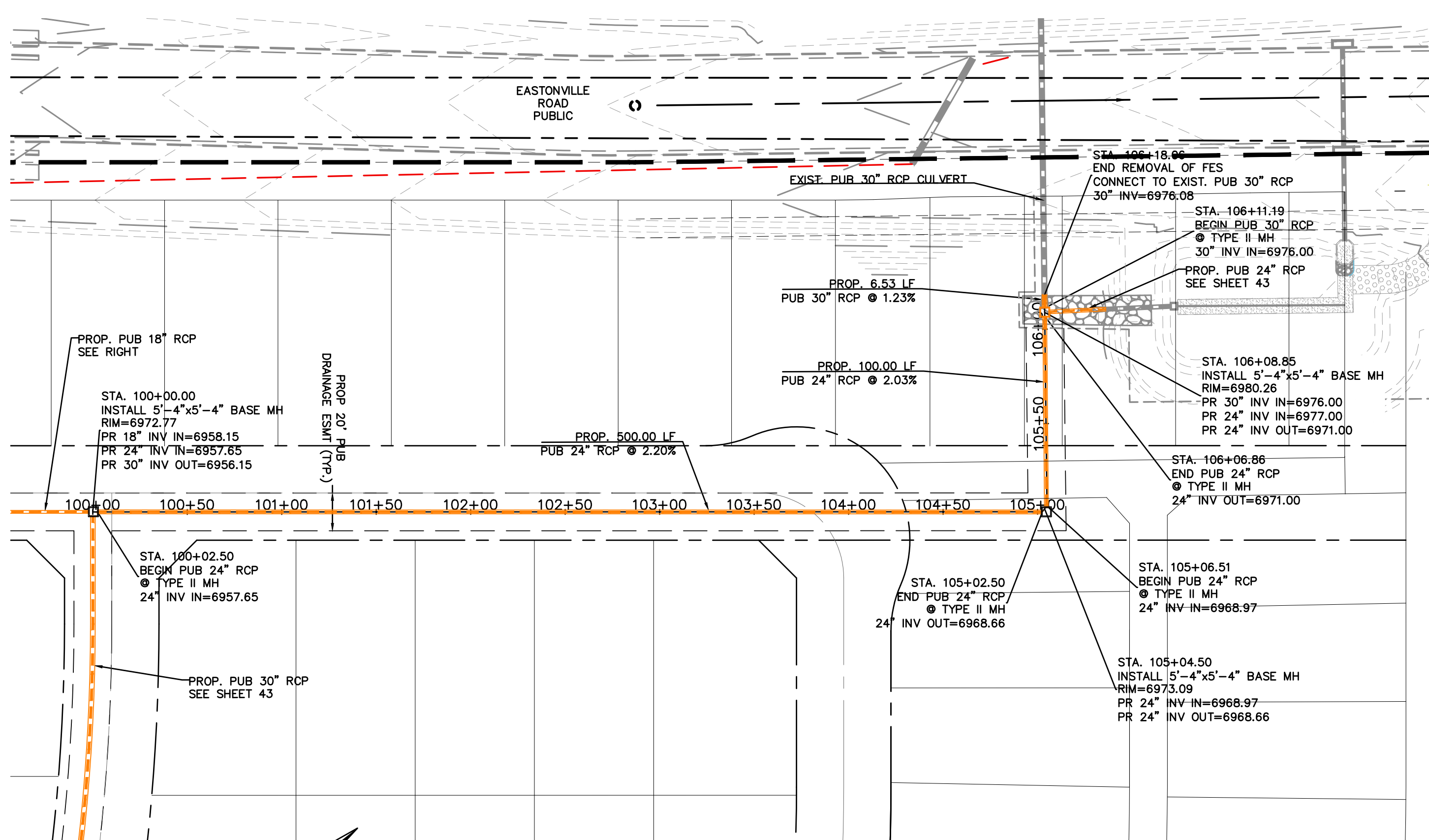
WATERBURY FILING NO. 1

CONSTRUCTION SET
 STORM SEWER LATERAL 11, 12

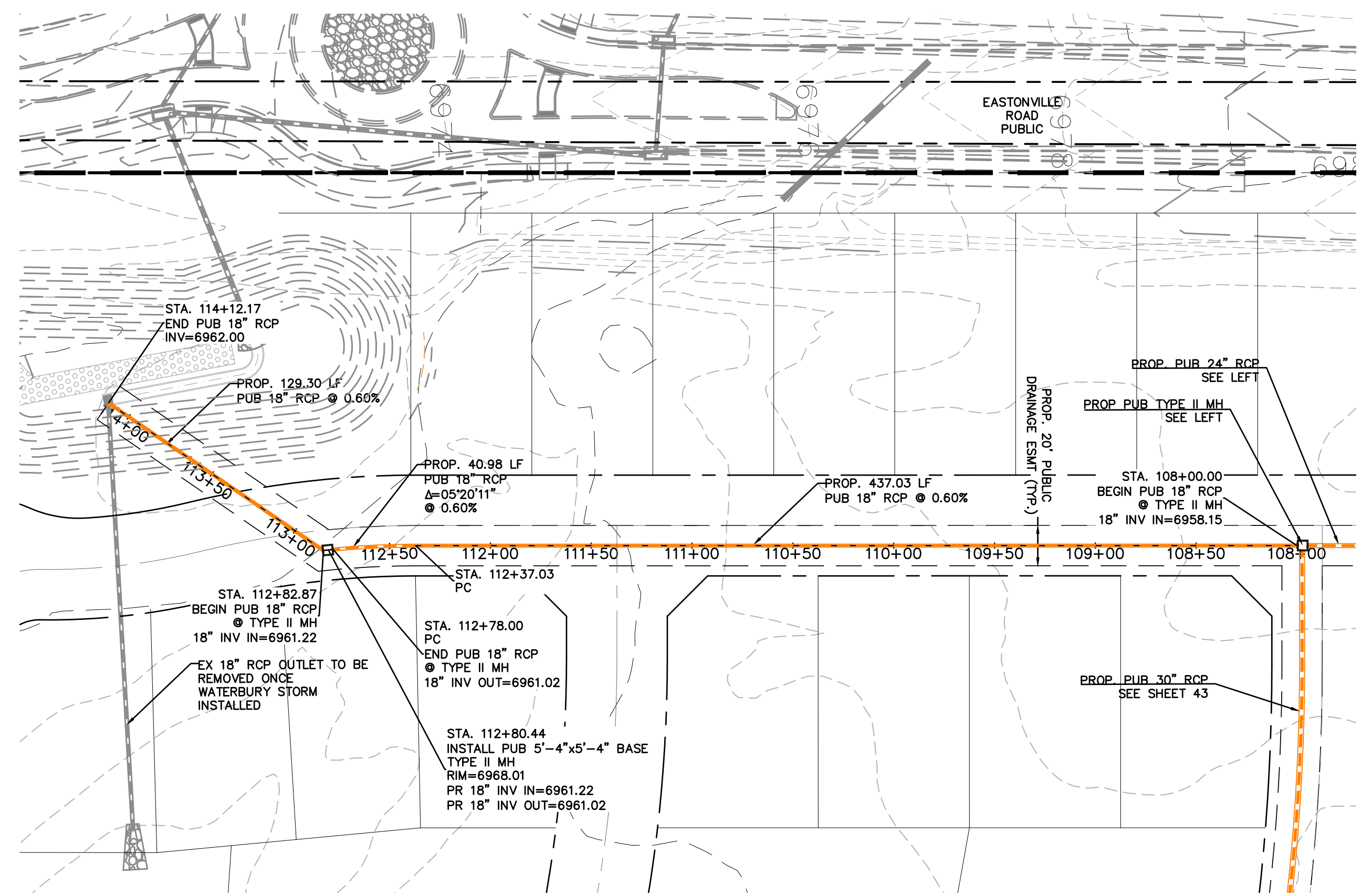
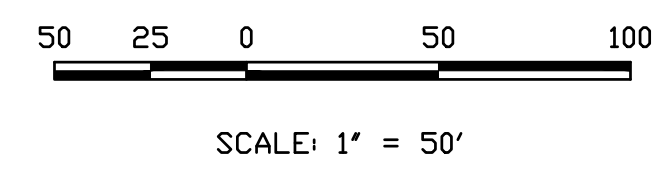
DESIGNED BY QNA
 DRAWN BY QNA
 CHECKED BY JS

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

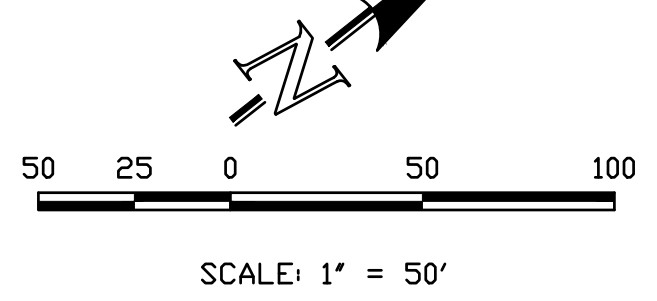
JOB NO. 2356.00
 DATE ISSUED 12/22/24
 SHEET NO. 41 OF 54



STORM SEWER RUN-16 (PIPE RUN 41 & 43) PHASE 1
 PROPOSED PUBLIC 24" RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.

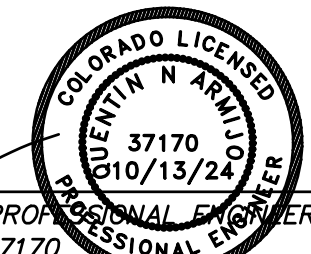


STORM SEWER RUN-17 (PIPE RUN 44) PHASE 1
 PROPOSED PRIVATE 18" RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.



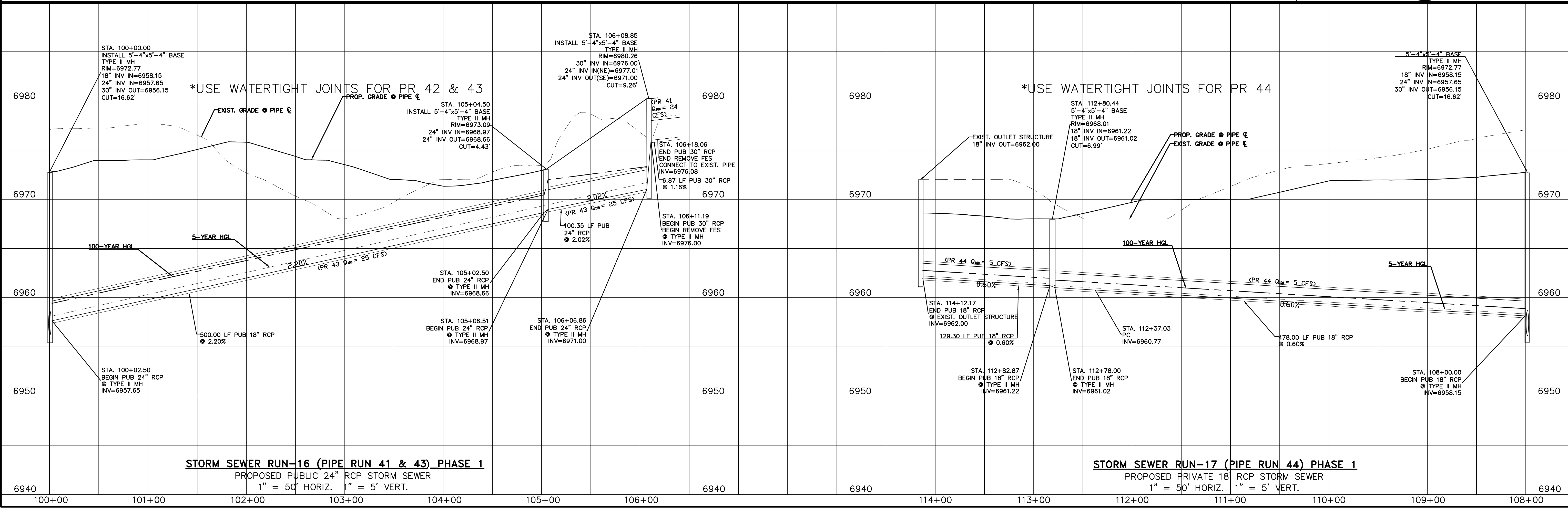
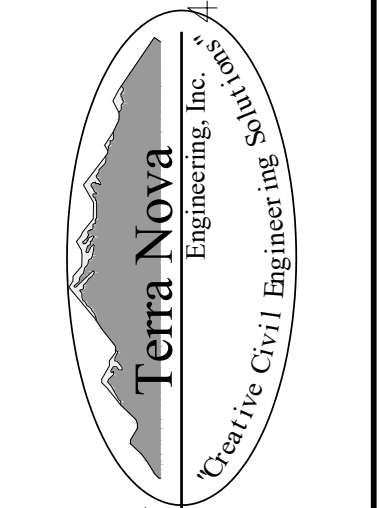
THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

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



NO.	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

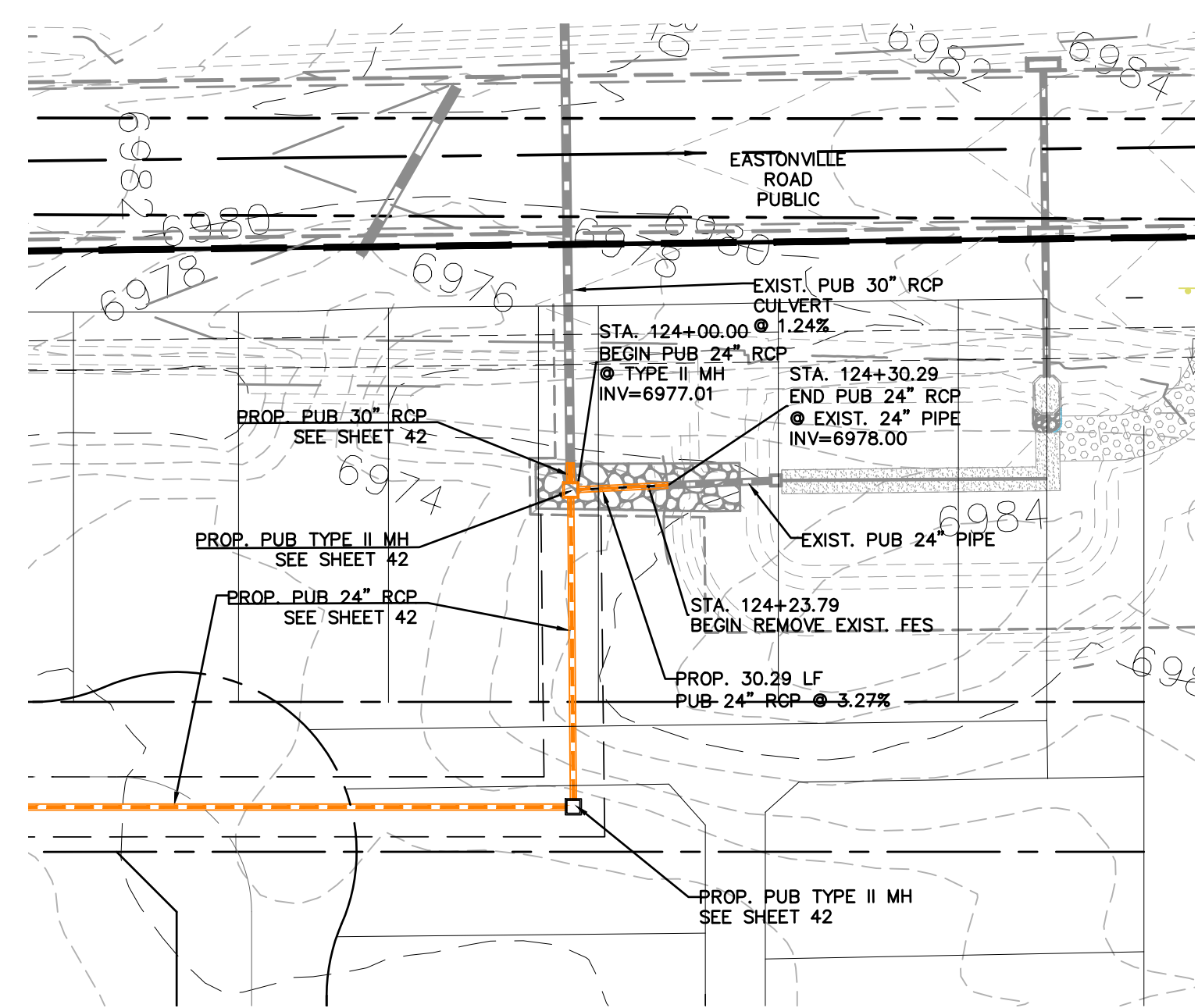


STORM SEWER RUN-16 (PIPE RUN 41 & 43) PHASE 1
 PROPOSED PUBLIC 24" RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.

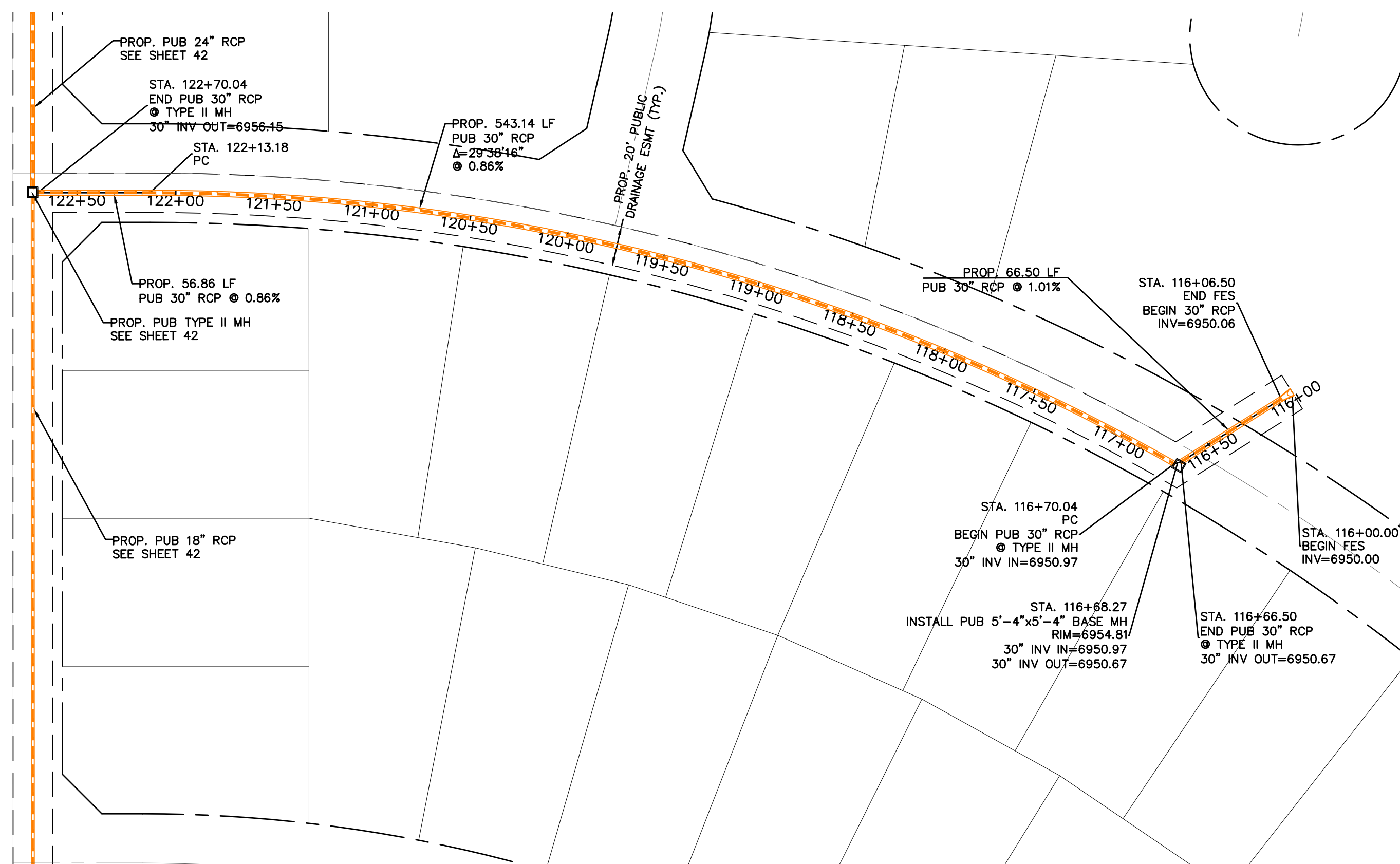
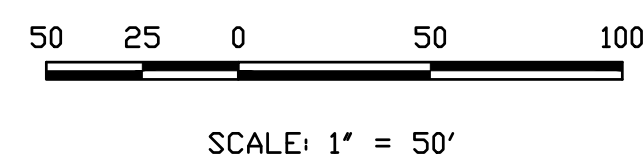
STORM SEWER RUN-17 (PIPE RUN 44) PHASE 1
 PROPOSED PRIVATE 18" RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.

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

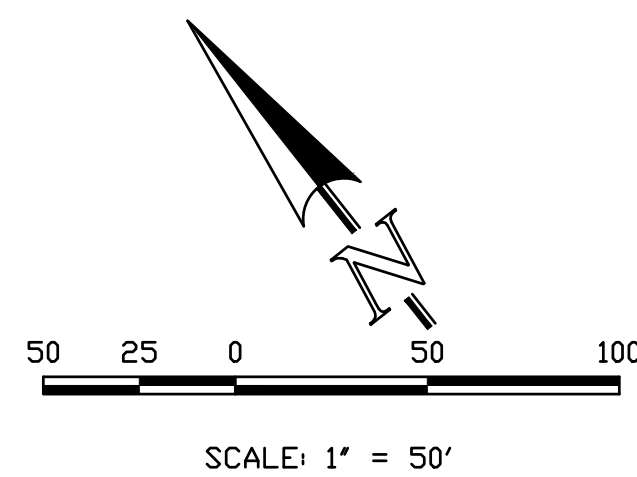
DESIGNED BY QNA
DRAWN BY JS
CHECKED BY JS
H-SCALE 1"=50'
V-SCALE 1"=5'
JOB NO. 2356.00
DATE ISSUED 12/22/23
SHEET NO. 42 OF 54



STORM SEWER RUN-15 (PIPE RUN 42) PHASE 1
 PROPOSED PUBLIC 18" RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.

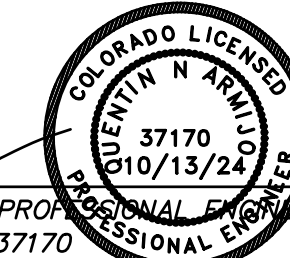


STORM SEWER RUN-18 (PIPE RUN 45) PHASE 1
 PROPOSED PUBLIC 30" RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.



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 FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

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



NO.	DESCRIPTION	DATE

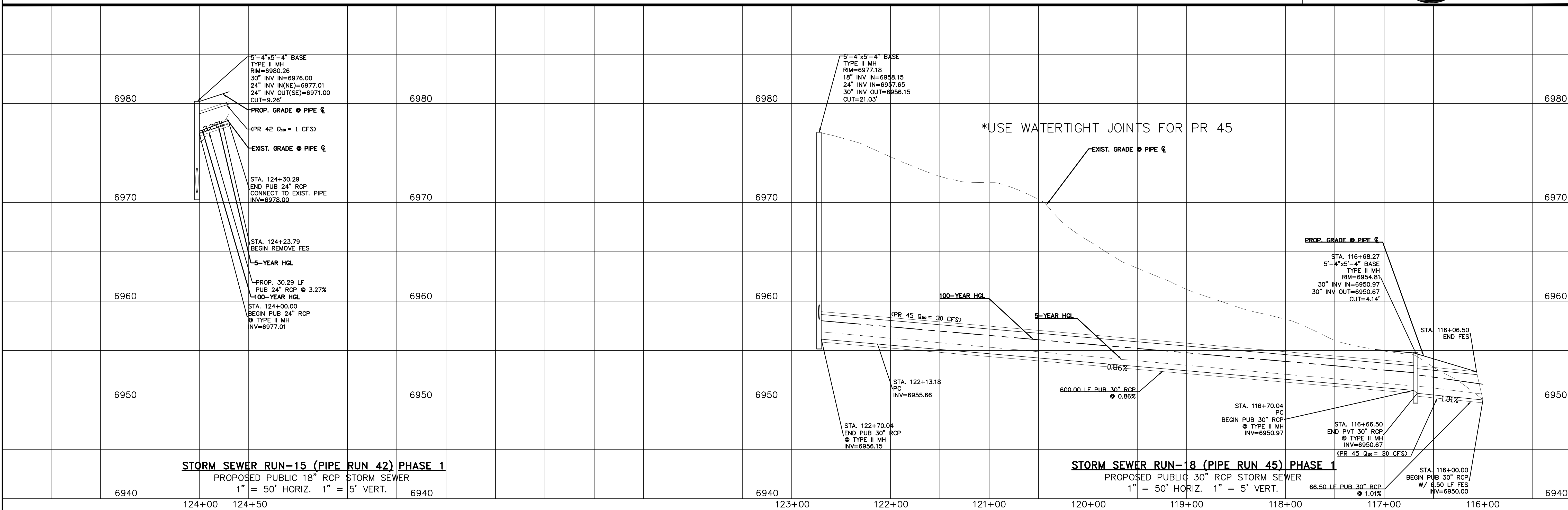
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 THIS SUBMITTAL IS FOR
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 APPROVE THEIR USE ONLY
 FOR THE PURPOSES
 DESIGNATED BY WRITTEN
 AUTHORIZATION.

PREPARED FOR:
ACM ALF VII JV SUB
JASON POCK
 00 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.tneng.com

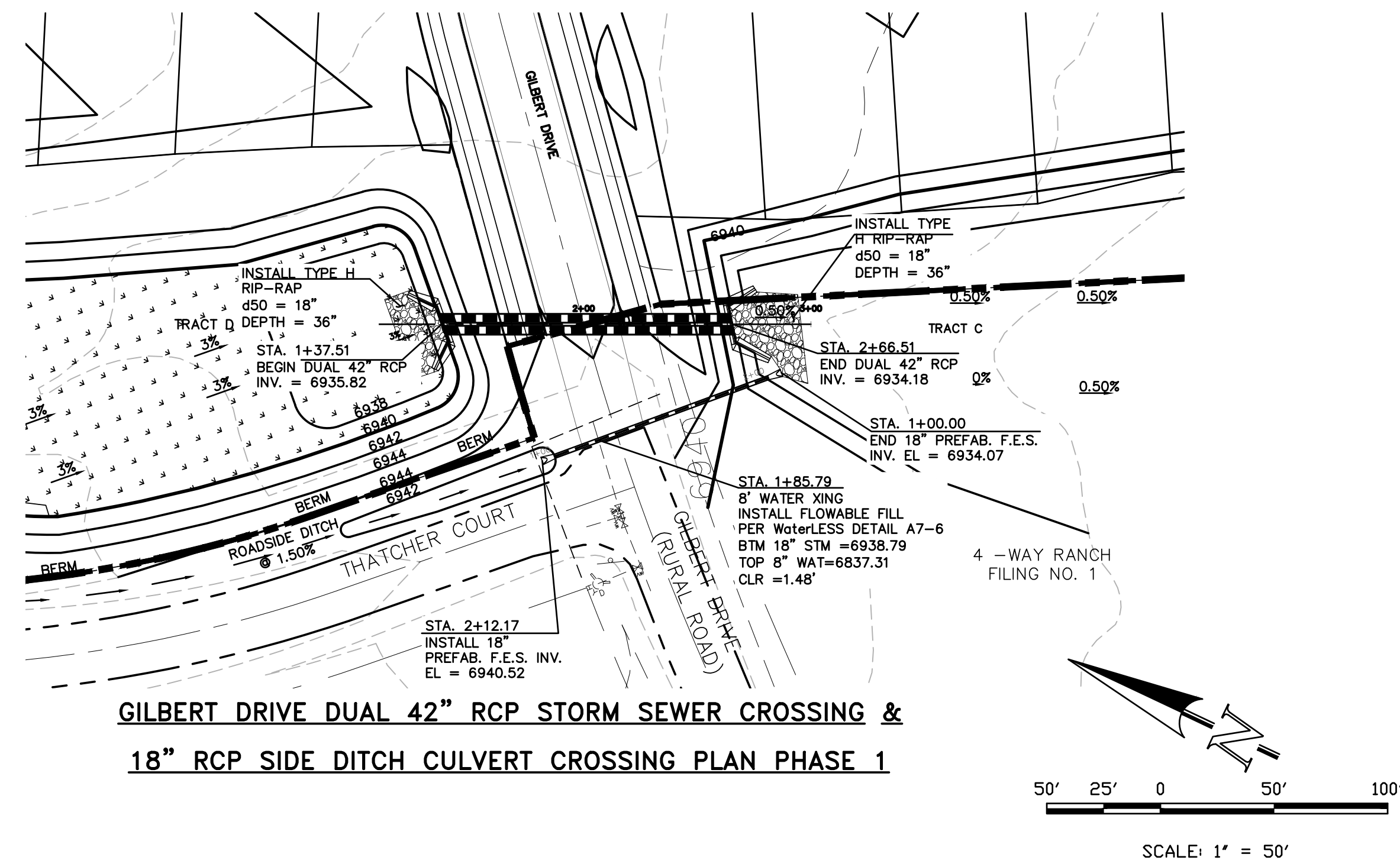
WATERBURY FILING NO. 1
 CONSTRUCTION SET
 STORM SEWER RUNS 15 & 18

DESIGNED BY QNA
 DRAWN BY JS
 CHECKED BY JS
 H-SCALE 1"=50'
 V-SCALE 1"=5'
 JOB NO. 2356.00
 DATE ISSUED 12/22/24
 SHEET NO. 43 OF 54

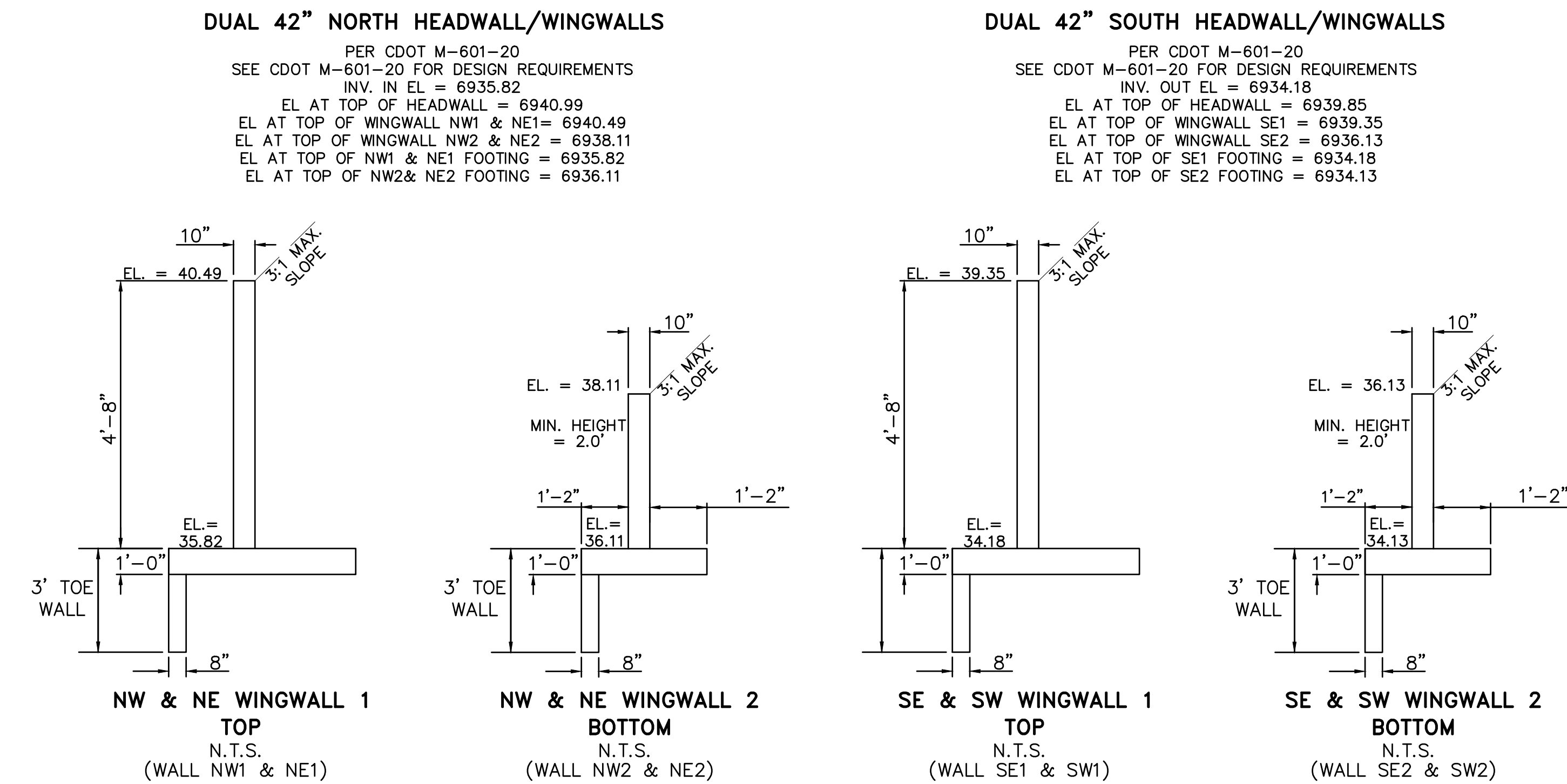


STORM SEWER RUN-15 (PIPE RUN 42) PHASE 1
 PROPOSED PUBLIC 18" RCP STORM SEWER
 1" = 50' HORIZ. 1" = 5' VERT.

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



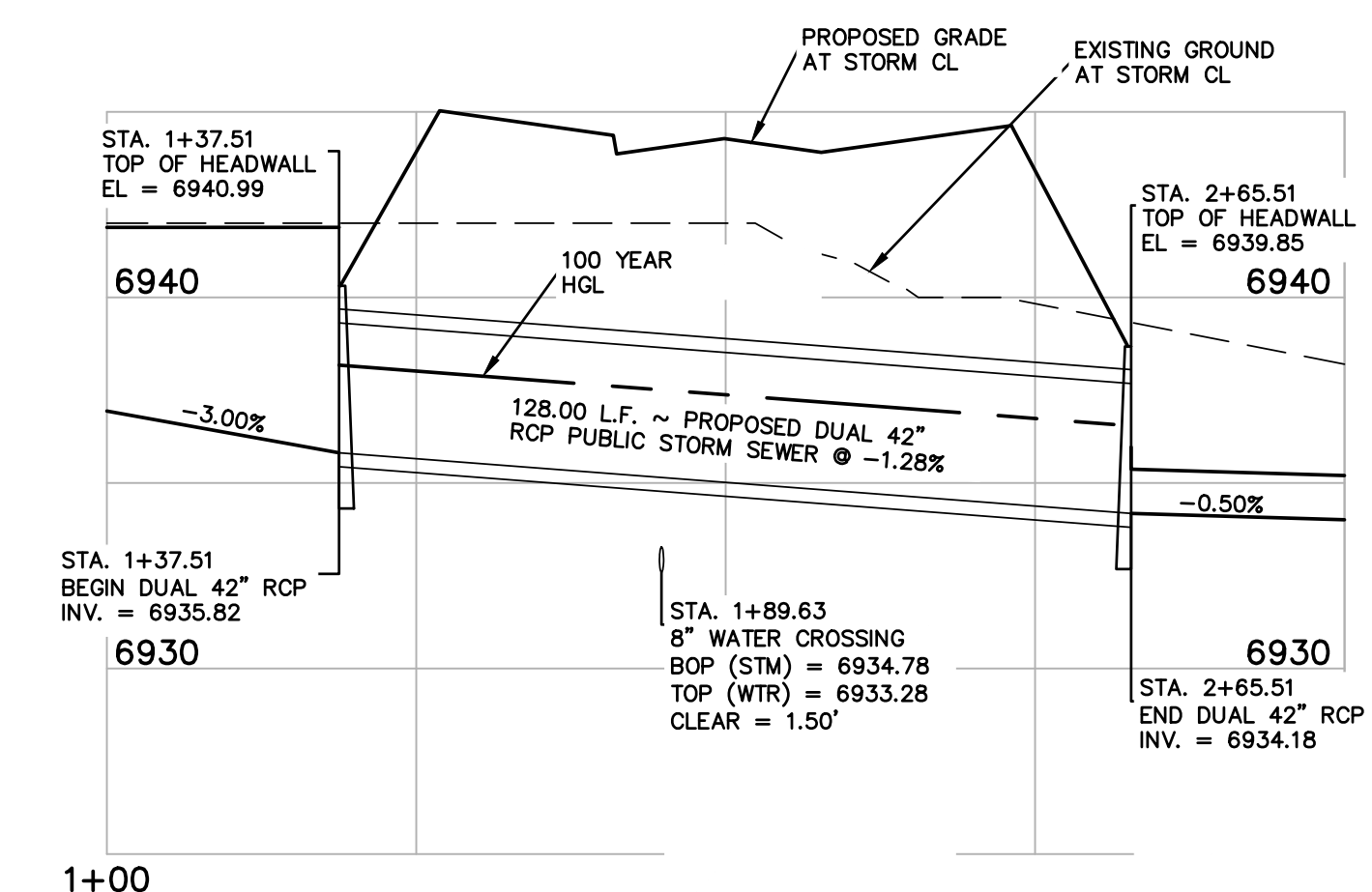
GILBERT DRIVE DUAL 42" RCP STORM SEWER CROSSING & 18" RCP SIDE DITCH CULVERT CROSSING PLAN PHASE 1



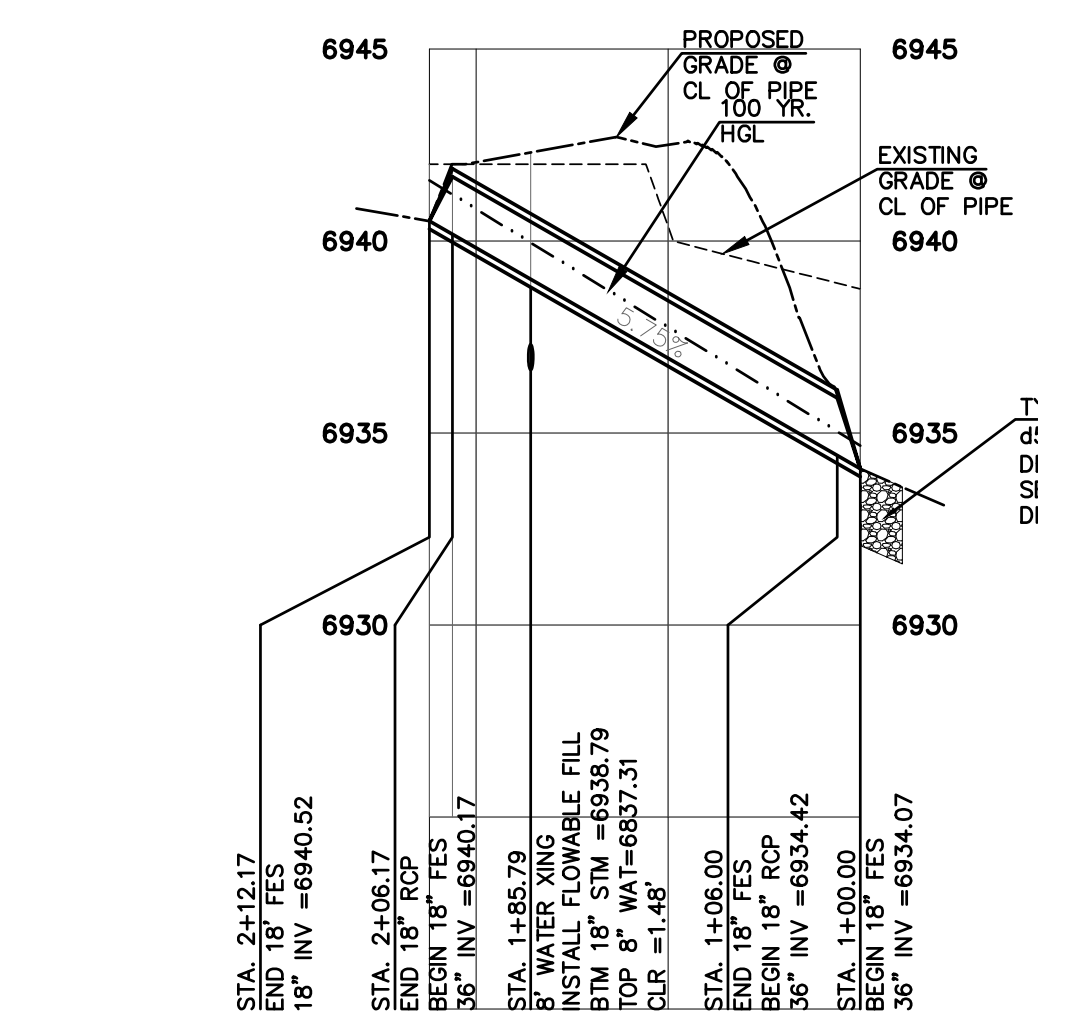
DUAL 42" NORTH HEADWALL/WINGWALLS

DUAL 42" SOUTH HEADWALL/WINGWALLS

NW & NE WINGWALL 1 TOP (WALL NW1 & NE1)
NW & NE WINGWALL 2 BOTTOM (WALL NW2 & NE2)
SE & SW WINGWALL 1 TOP (WALL SE1 & SW1)
SE & SW WINGWALL 2 BOTTOM (WALL SE2 & SW2)



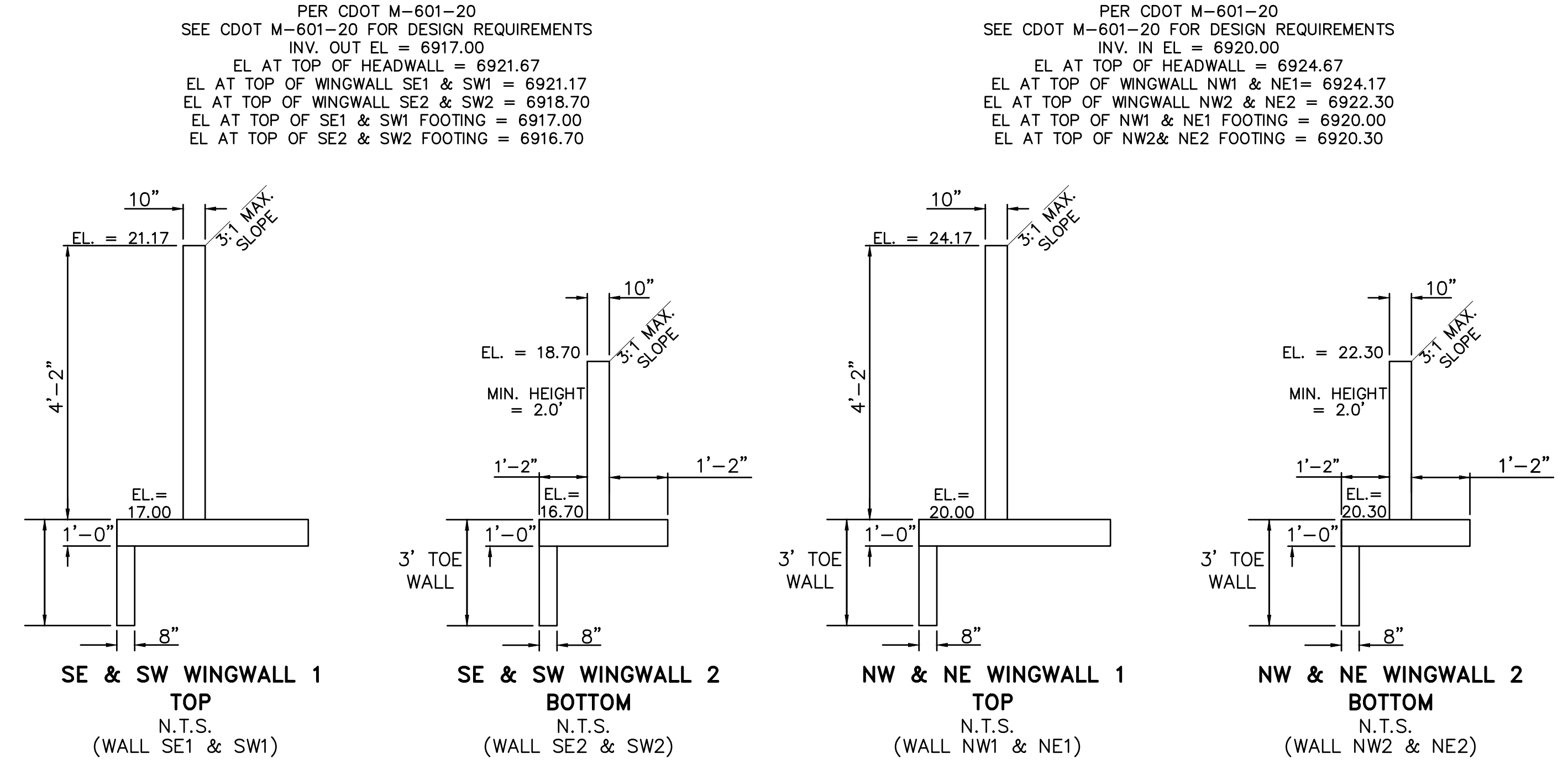
DUAL 42" RCP STORM SEWER CULVERT PROFILE PHASE 1
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 5'



18" RCP STORM SEWER CULVERT PROFILE PHASE 1
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

TRIPLE 36" SOUTH HEADWALL/WINGWALLS

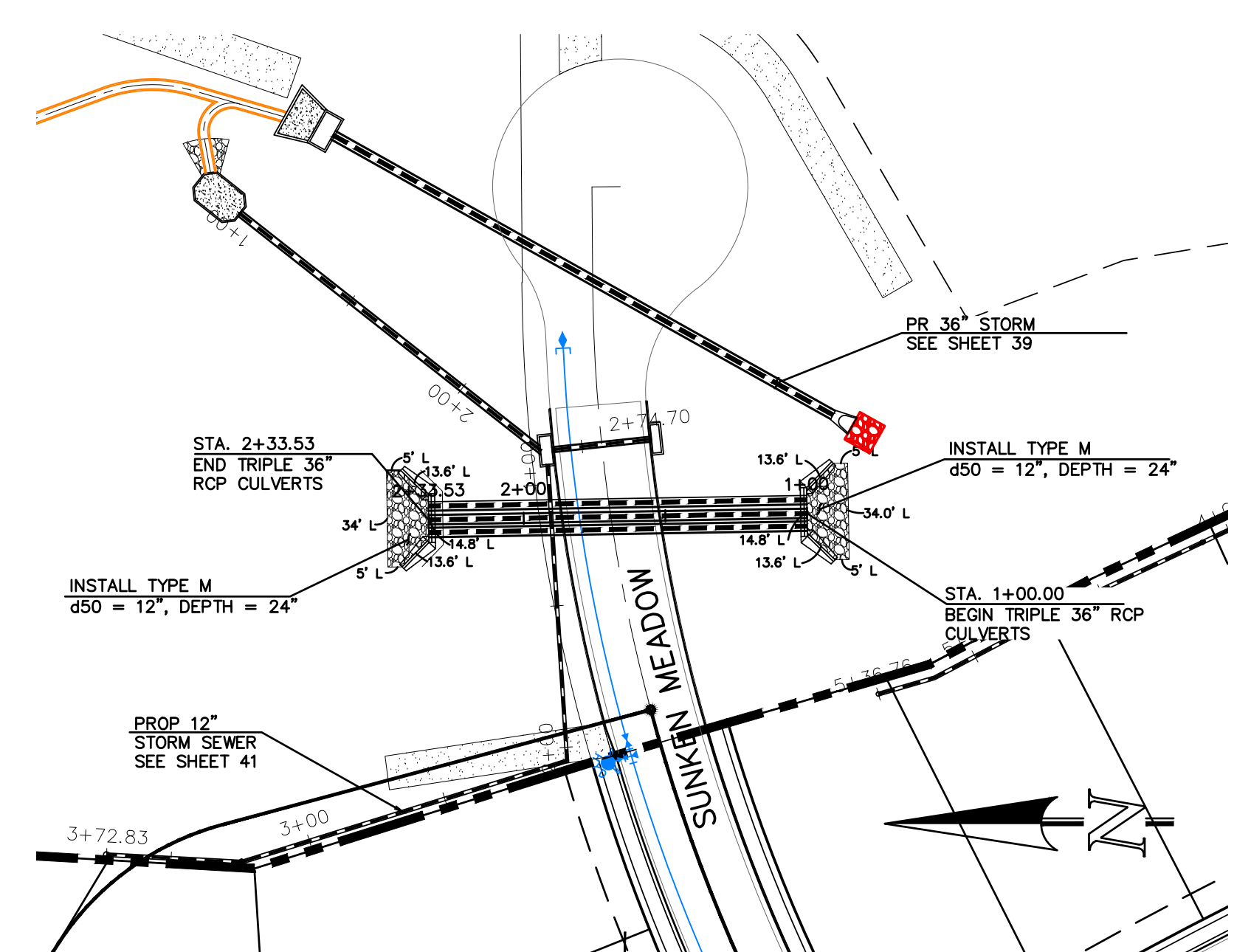
TRIPLE 36" NORTH HEADWALL/WINGWALLS



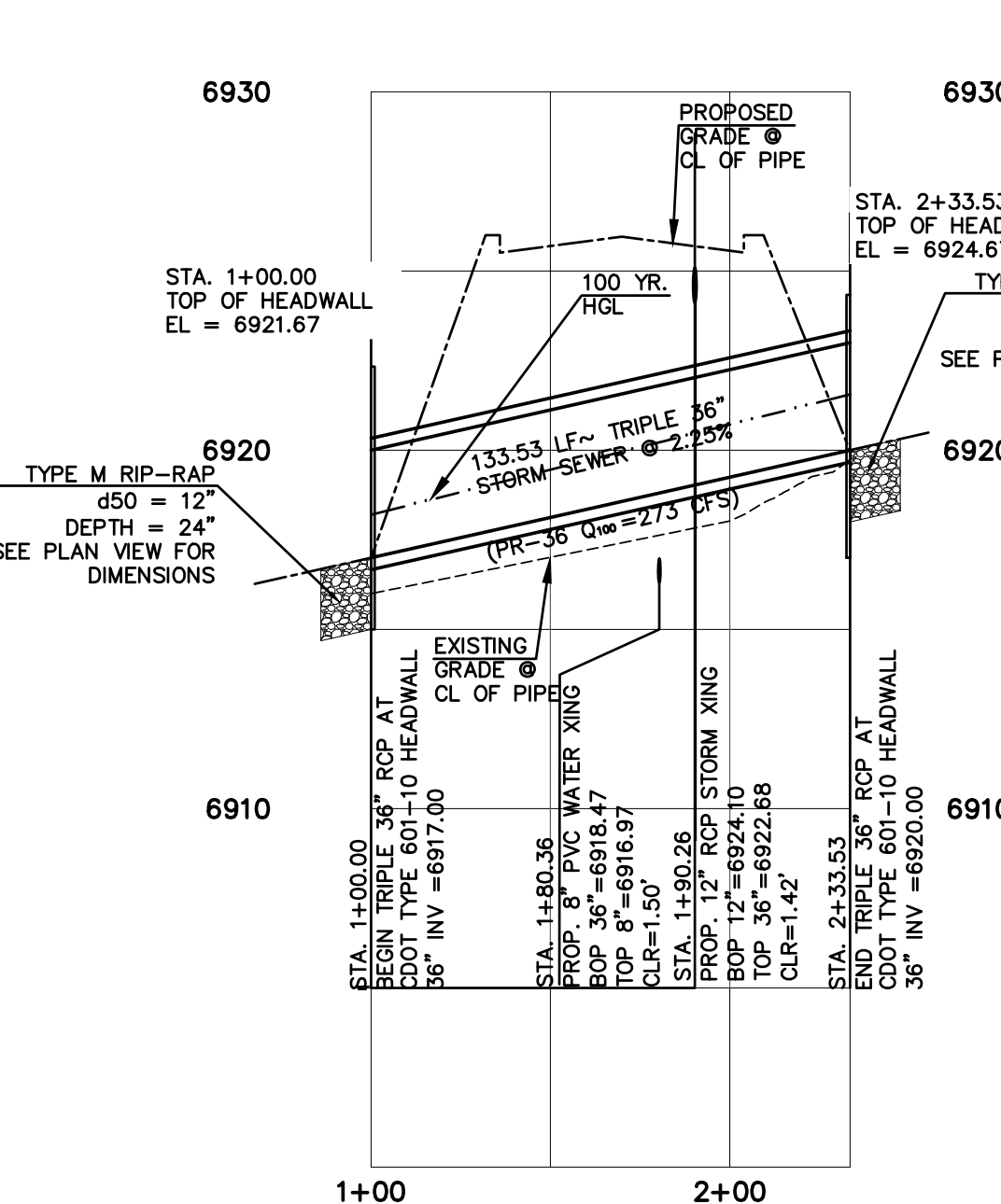
PER CDOT M-601-20 FOR DESIGN REQUIREMENTS

PER CDOT M-601-20 FOR DESIGN REQUIREMENTS

SE & SW WINGWALL 1 TOP (WALL SE1 & SW1)
SE & SW WINGWALL 2 BOTTOM (WALL SE2 & SW2)
NW & NE WINGWALL 1 TOP (WALL NW1 & NE1)
NW & NE WINGWALL 2 BOTTOM (WALL NW2 & NE2)



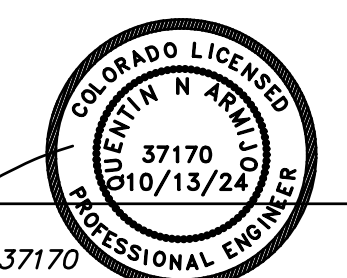
SUNKEN MEADOW TRIPLE 36" CULVERT PROFILE (PIPE RUN 36) PHASE 1
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



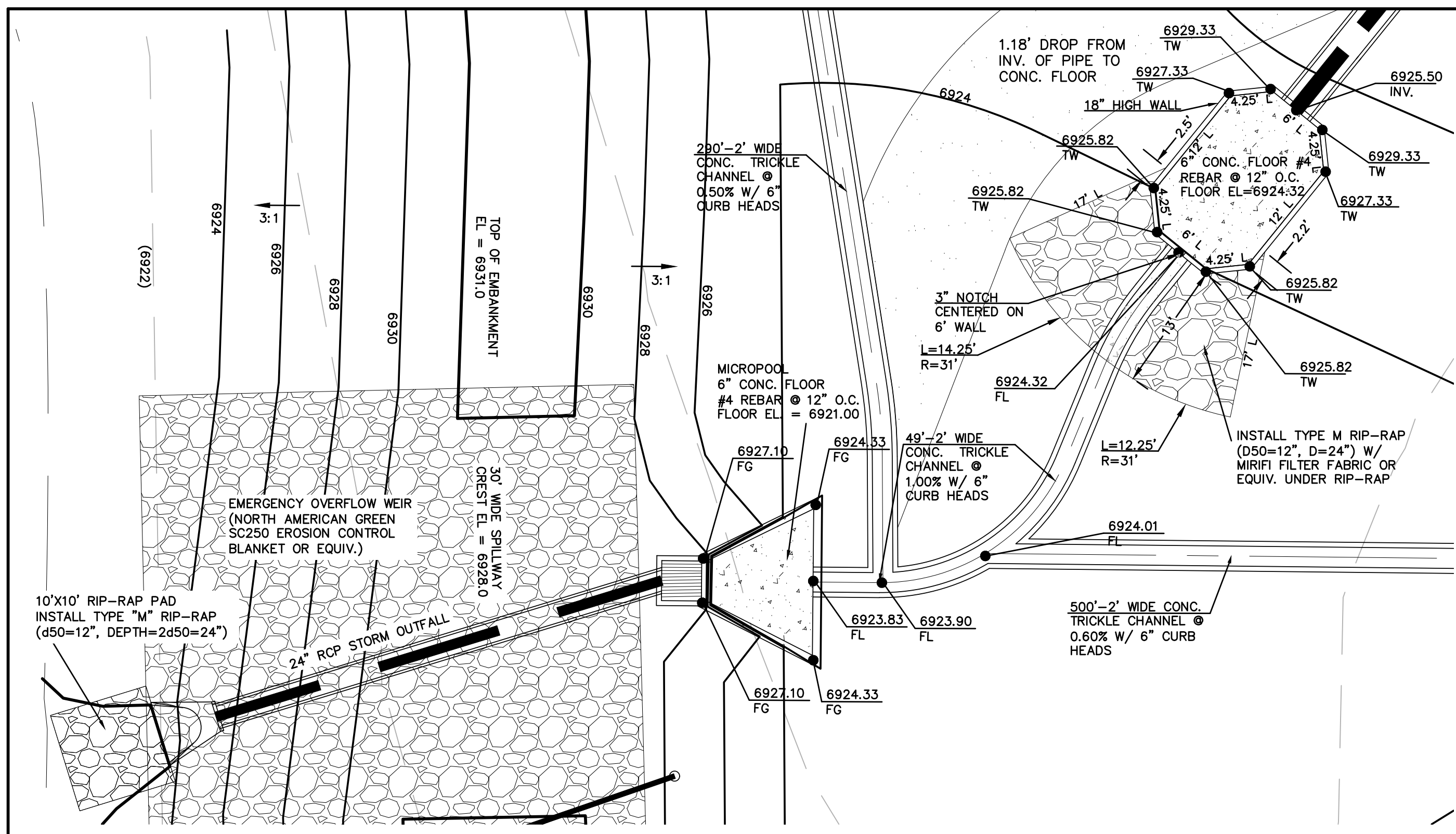
SUNKEN MEADOW TRIPLE 36" CULVERT PROFILE (PIPE RUN 36) PHASE 1
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

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

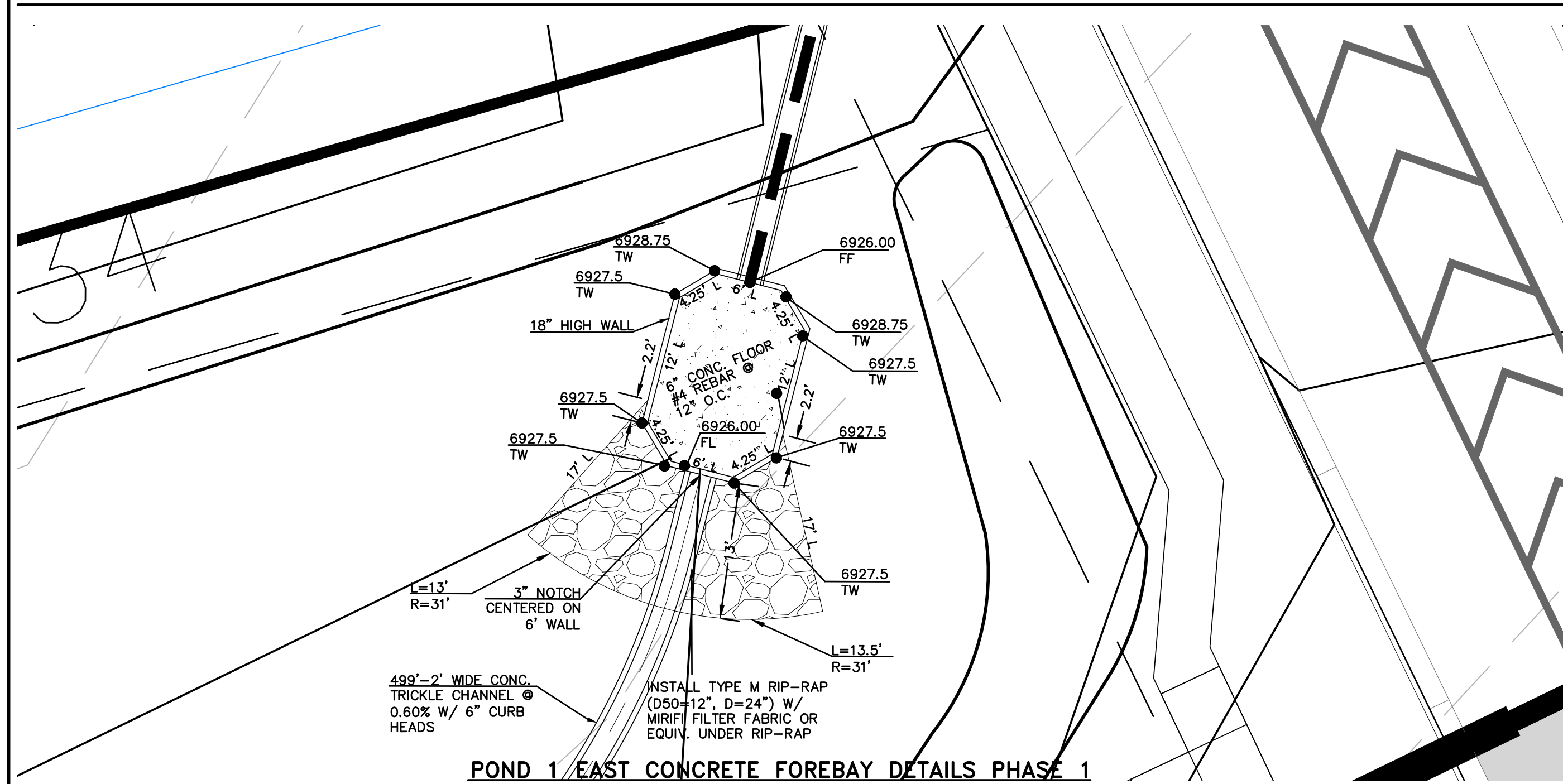
DESIGNED BY DLF
 DRAWN BY QNA
 CHECKED BY QNA
 H-SCALE AS SHOWN
 V-SCALE AS SHOWN
 JOB NO. 2356.00
 DATE ISSUED 12/22/20
 SHEET NO. 44 OF 54



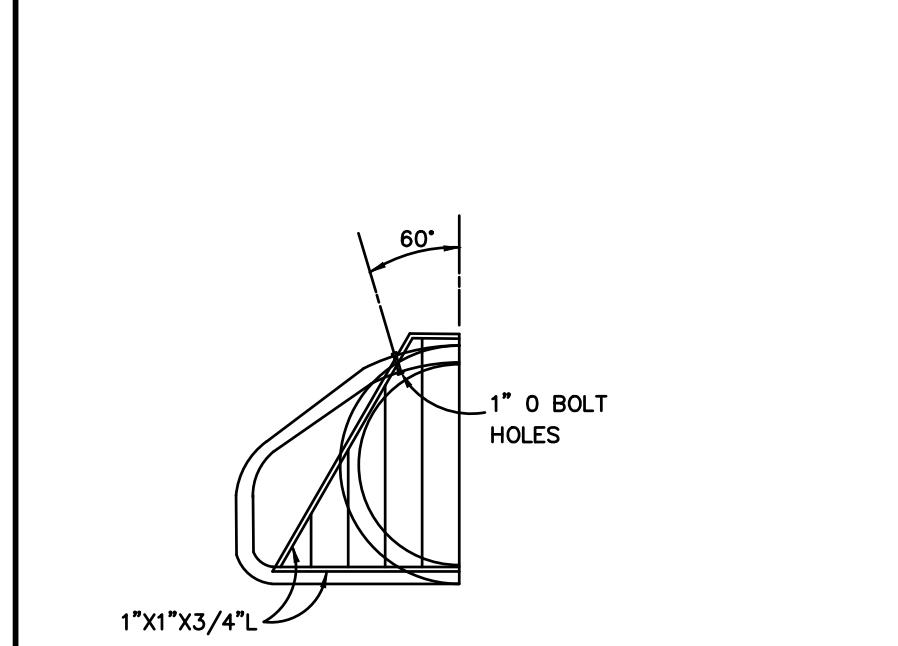
DATE	
REVISIONS	
NO.	
DESCRIPTION	
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE BOARD OF ARCHITECTS, ENGINEERS, PROFESSIONAL LAND SURVEYORS, AND PROFESSIONAL ENGINEERS, TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECT AND ONLY AS AUTHORIZED BY WRITTEN AUTHORIZATION.	
PREPARED FOR: ACM ALF VIII JV SUB II LLC ATTN: JASON POKK 1000 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 AS SHOWN V-SCALE AS SHOWN JOB NO. 2356.00 DATE ISSUED 12/22/20 SHEET NO. 44 OF 54	



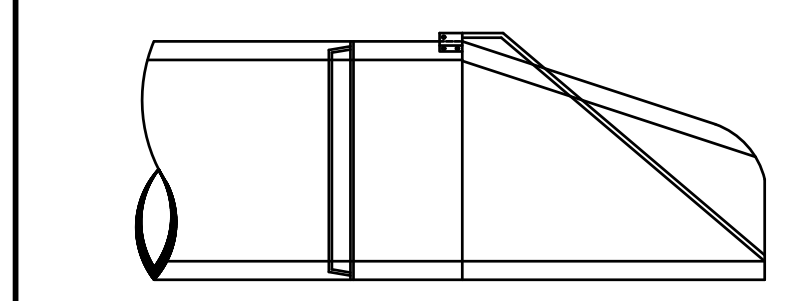
POND 1 WEST CONCRETE FOREBAY/MICROPOOL DETAILS PHASE 1



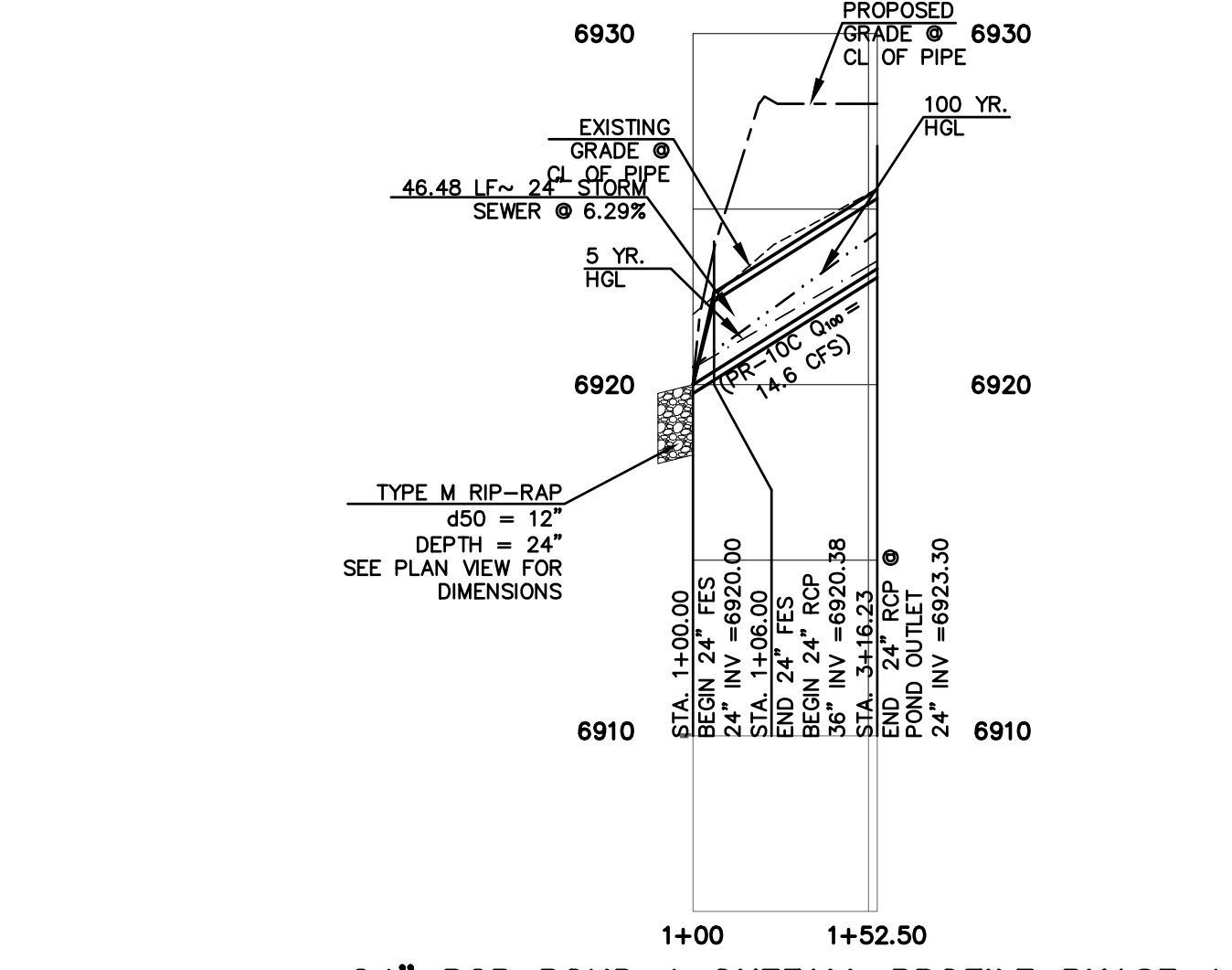
POND 1 EAST CONCRETE FOREBAY DETAILS PHASE 1



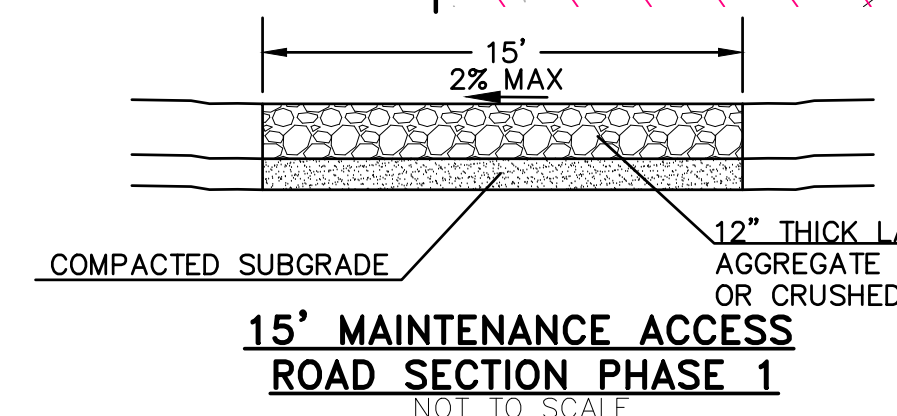
POND 1 FLARED END SECTION PHASE 1
SCALE: N.T.S.



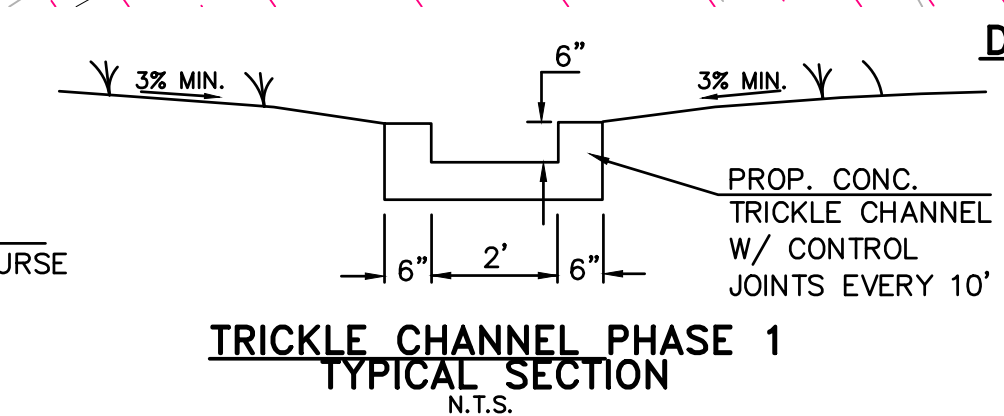
POND 1 TRASH RACK PHASE 1
F.E.S. DETAIL
SCALE: N.T.S.



24\"/>



15\"/>

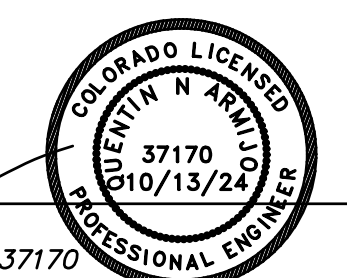


TRICKLE CHANNEL PHASE 1
TYPICAL SECTION
N.T.S.



DETENTION POND 1 PHASE 1

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

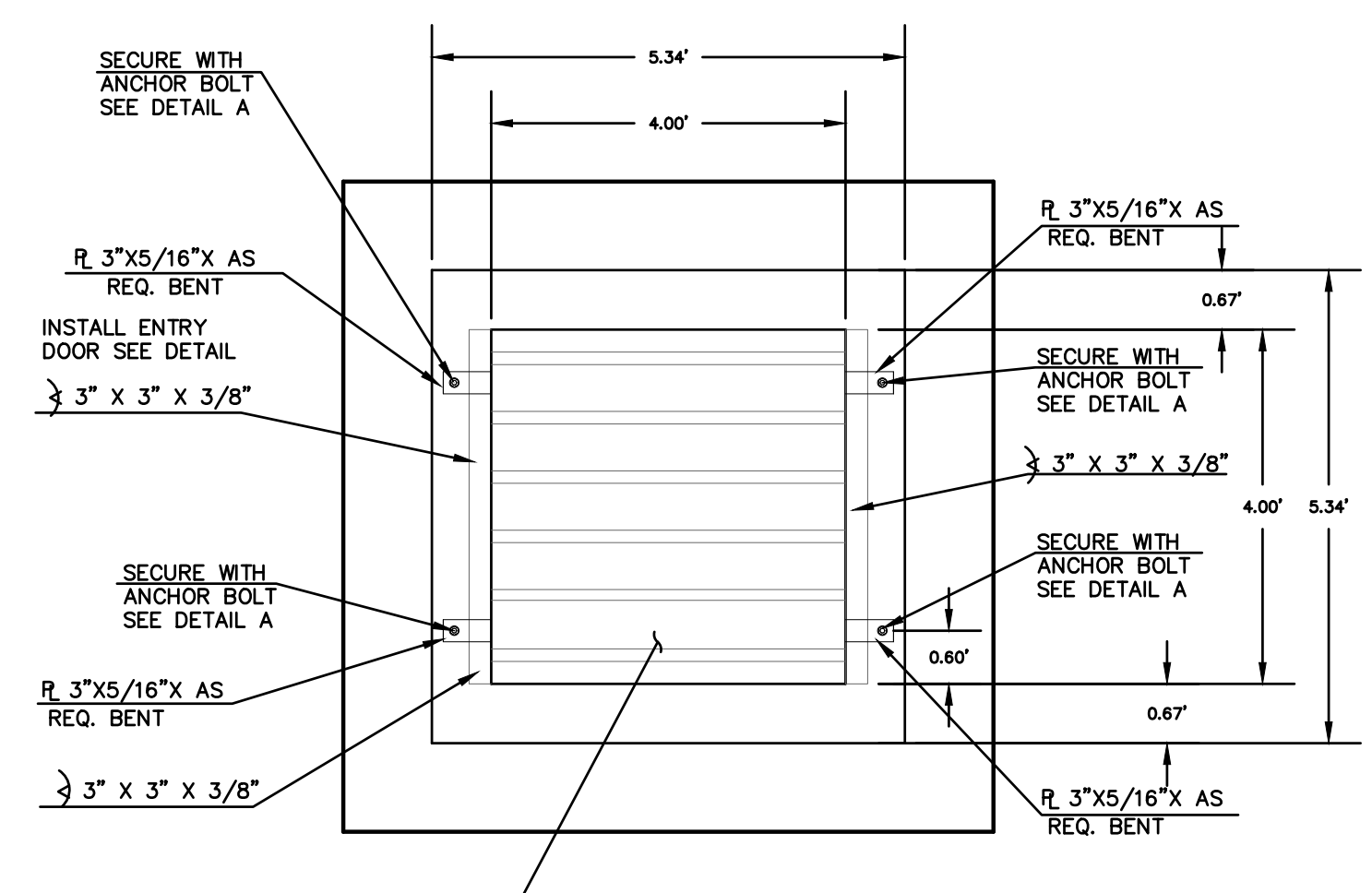
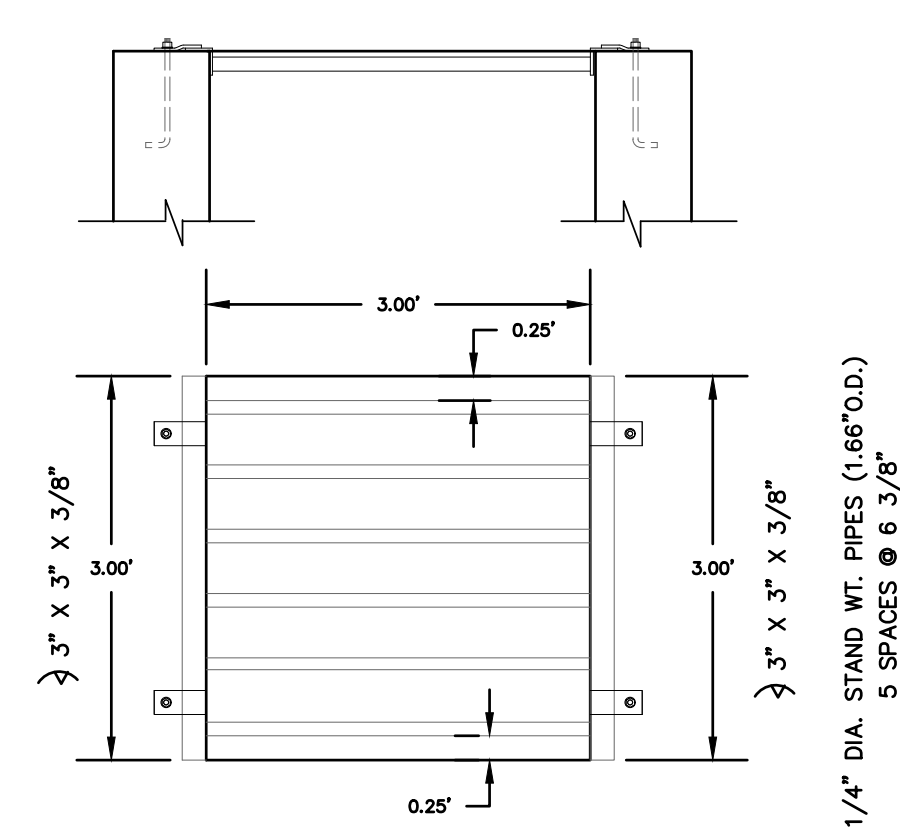
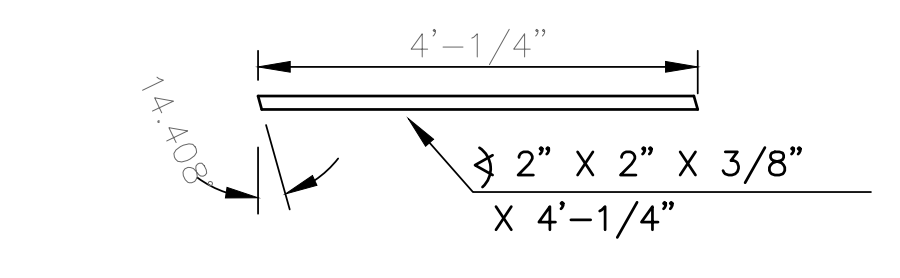


DESIGNED BY DLF	
DRAWN BY QNA	
CHECKED BY QNA	
H-SCALE AS SHOWN	
V-SCALE AS SHOWN	
JOB NO. 2356.00	
DATE ISSUED 12/22/24	
SHEET NO. 45 OF 54	

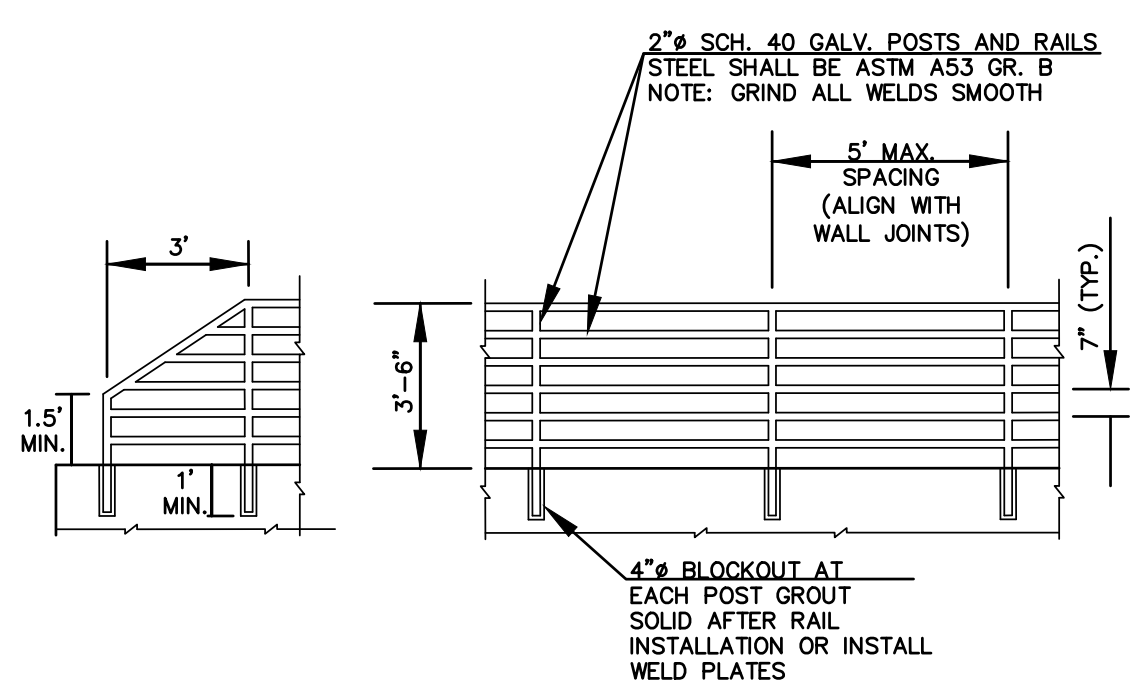
WATERBURY FILING NO. 1	CONSTRUCTION SET
POND 1 DETAILS	

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.tnainc.com
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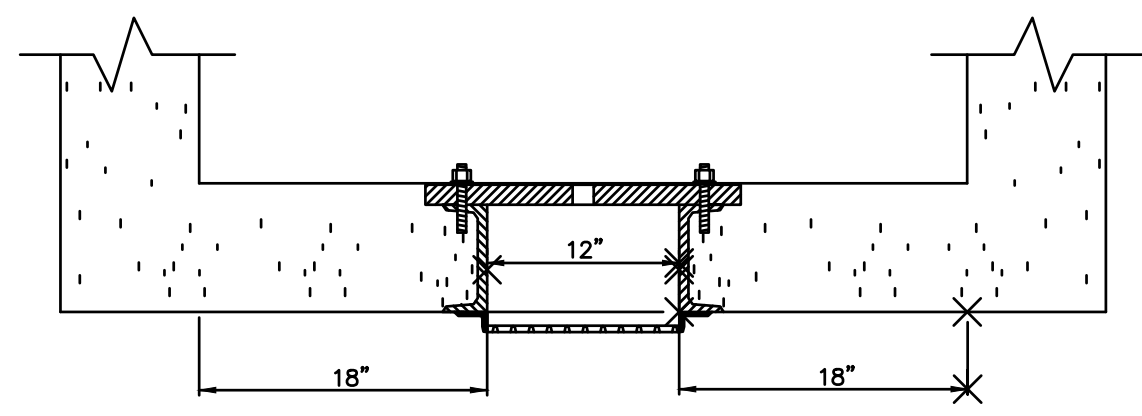
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--	---



**GRATE POND 1 & 2
PHASE 1 CONSTRUCTION**
ALL WELDED CONSTRUCTION
SCALE: N.T.S.



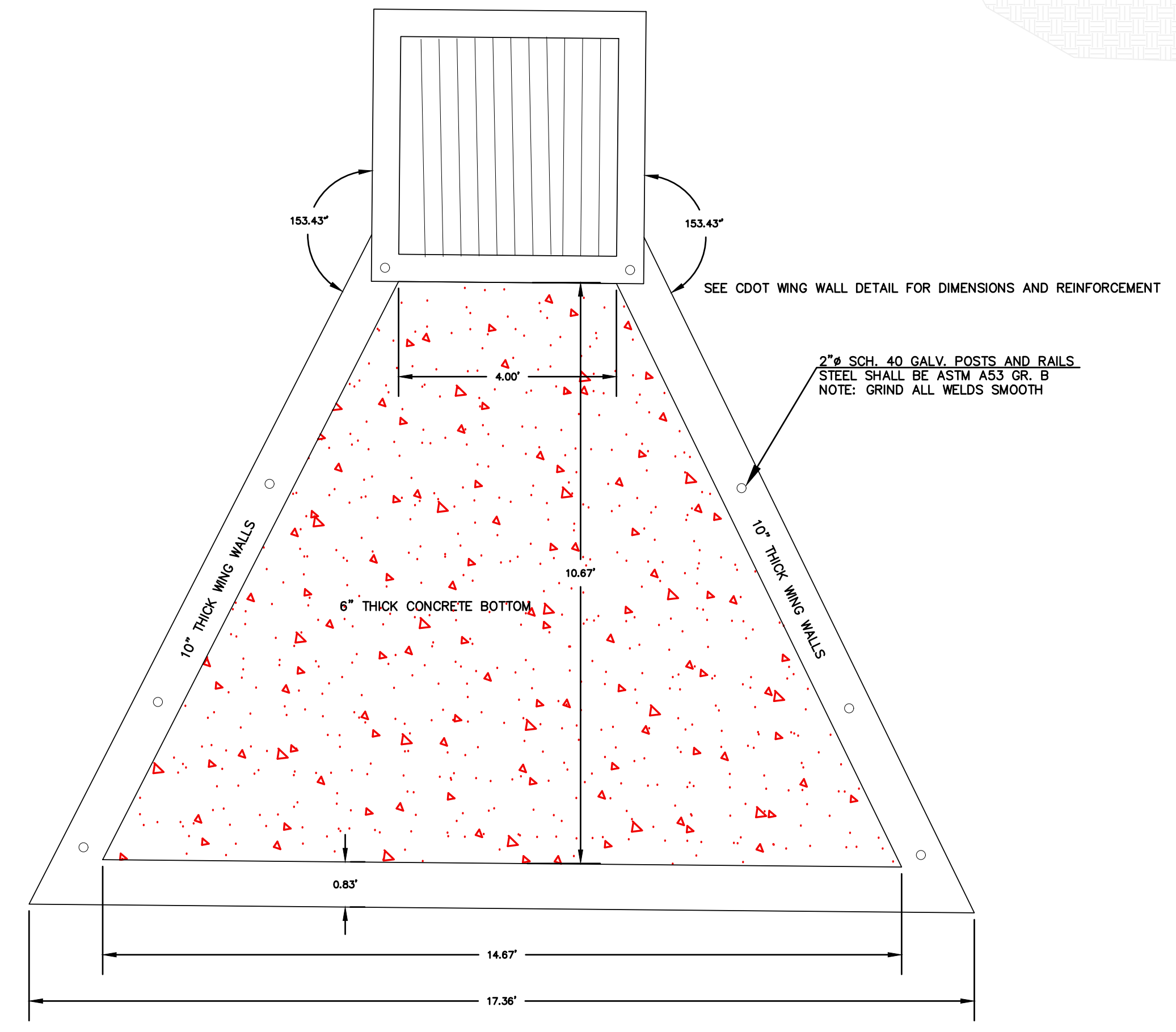
- NOTES:
1. WELD PLATES MAY BE SUBSTITUTED FOR PIPE EMBEDMENT.
 2. CONTRACTOR SHALL SUBMIT HANDRAIL SHOP DRAWINGS TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION.
 3. DESIGN CRITERIA SHALL BE IN ACCORDANCE WITH AASHTO STANDARDS. HANDRAIL DESIGN SHALL BE COMPATIBLE WITH THE DESIGN OF THE WINGWALLS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



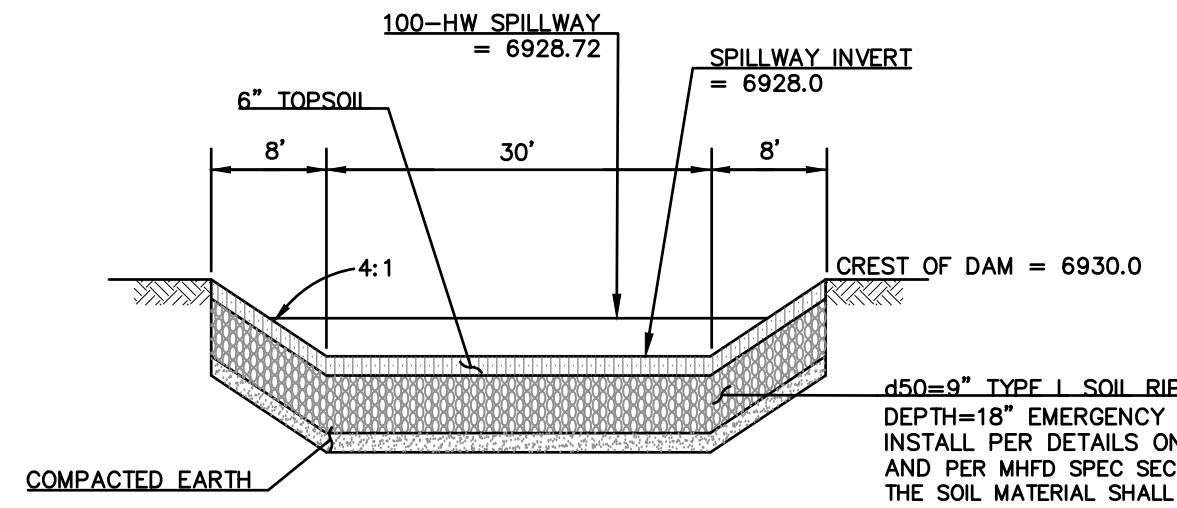
**SECTION
B-B**
SCALE: N.T.S.

STEEL FABRICATION NOTES:

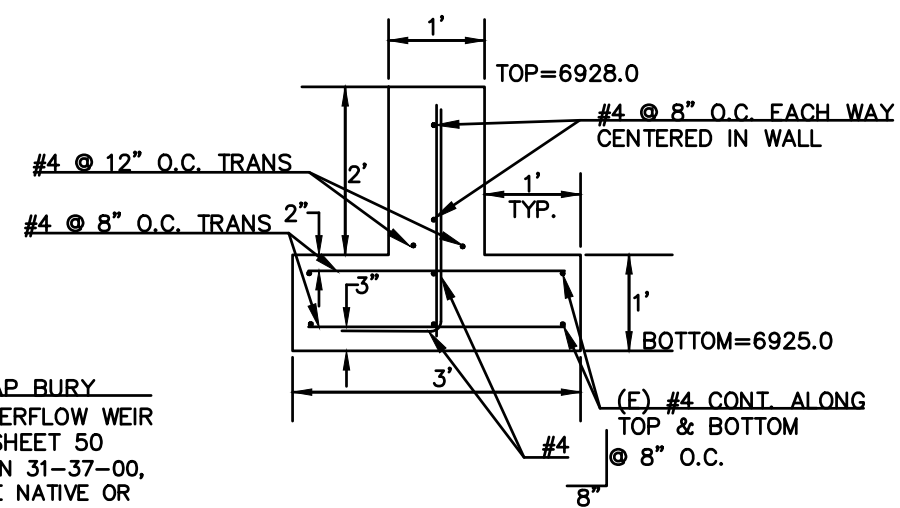
1. FABRICATED STEEL STRUCTURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AISC AND AWS SPECIFICATIONS.
2. THE OUTLET STRUCTURE BARGRATE IS DESIGNED FOR A VERTICAL LOAD OF 300 LBS./SQ. FT.
3. ALL STRUCTURAL STEEL SHAPES TO INCLUDE: ANGLE, PLATE, AND BAR SHALL MEET ASTM A36 SPECIFICATIONS, FY = 36 KSI MINIMUM.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



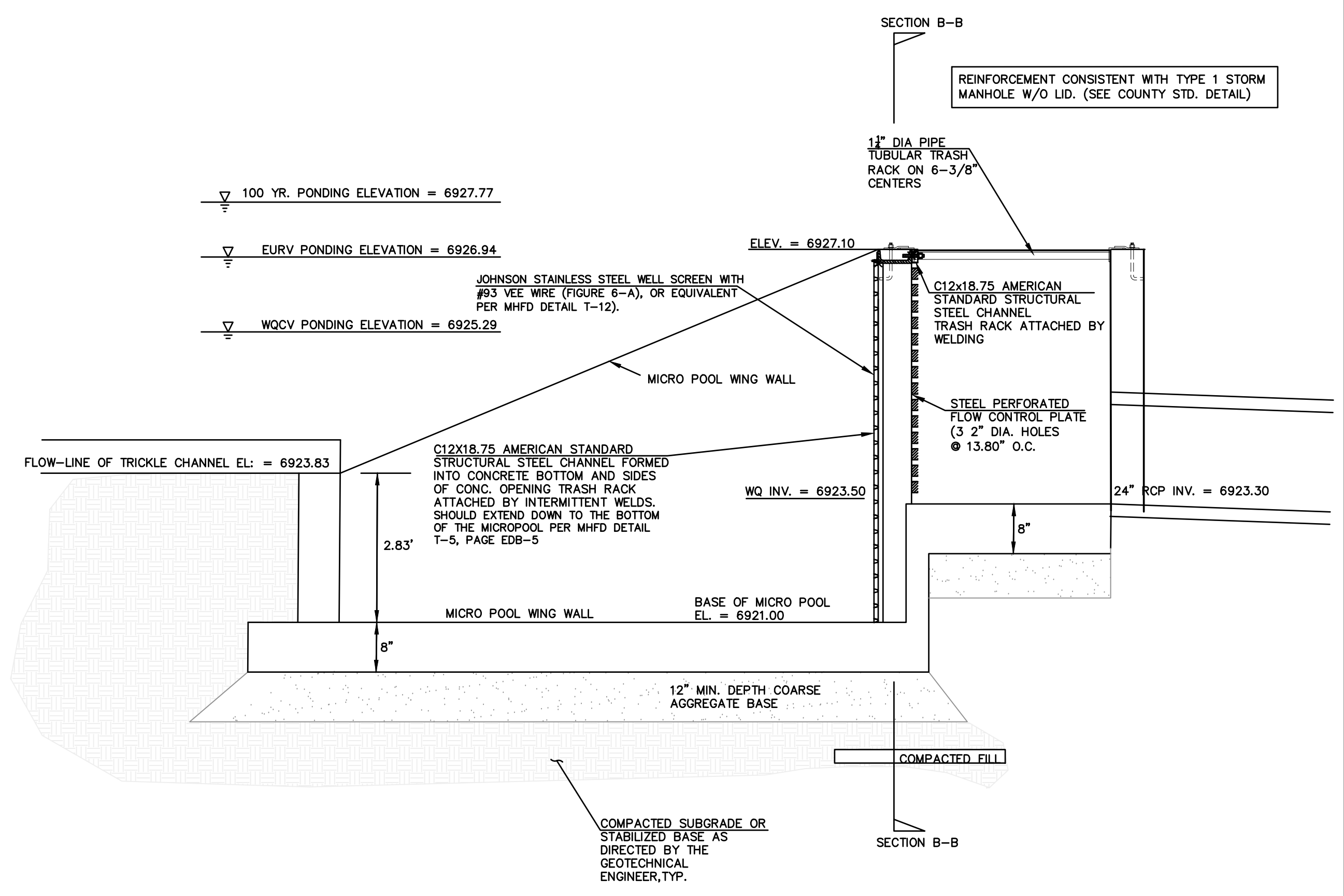
POND 1 & 2 CONCRETE MICROPOOL PHASE 1
SCALE: N.T.S.



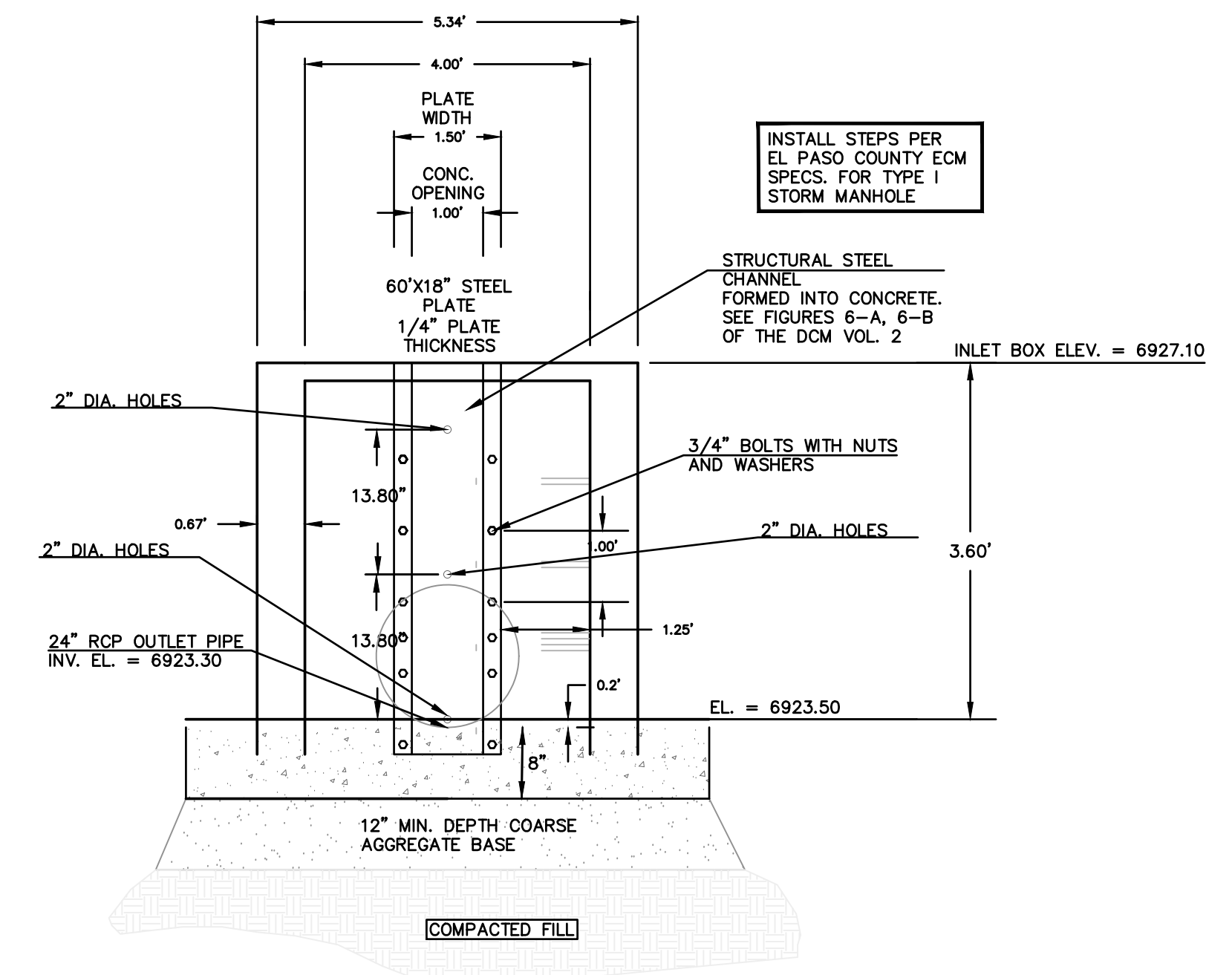
**POND 1 EMERGENCY SPILLWAY
CROSS SECTION PHASE 1**
SCALE: N.T.S.



**POND 1 CUTOFF WALL
CROSS SECTION PHASE 1**



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



**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

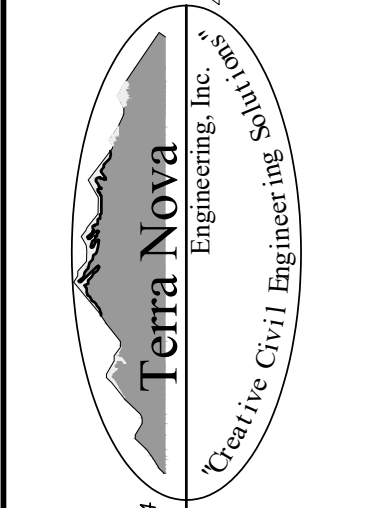
THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.



REVISIONS	NO.	DESCRIPTION	DATE

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PREPARED FOR:
ACM ALF VIII JV SUB II LLC
ATTN: JASON POKK
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.tnecinc.com

WATERBURY FILING NO. 1
CONSTRUCTION SET
POND 1 DETAILS

DESIGNED BY	DLF
DRAWN BY	QNA
CHECKED BY	QNA
H-SCALE	NA
V-SCALE	N/A
JOB NO.	2356.00
DATE ISSUED	12/22/24
SHEET NO.	46 OF 54

REVISIONS	NO.	DESCRIPTION	DATE

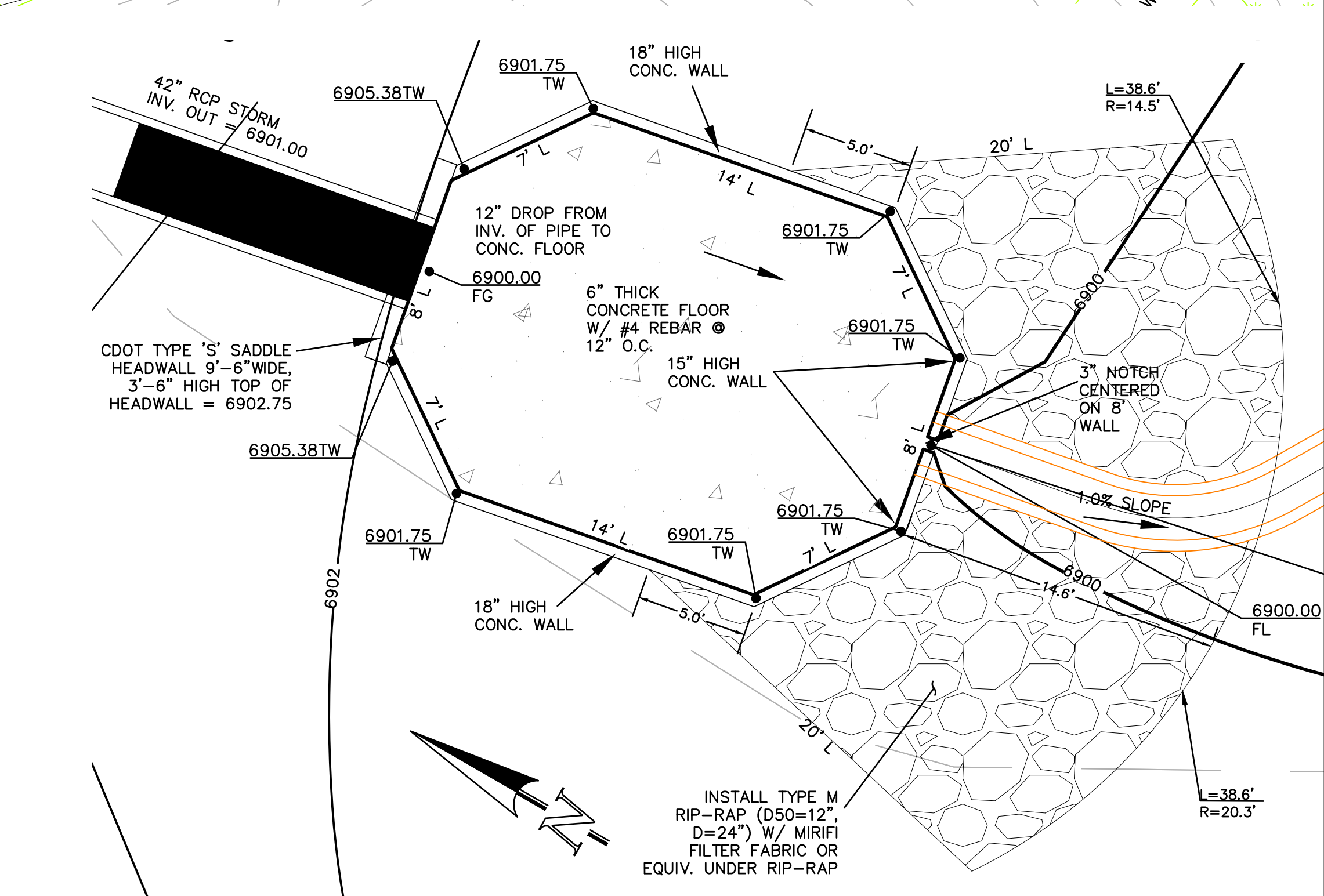
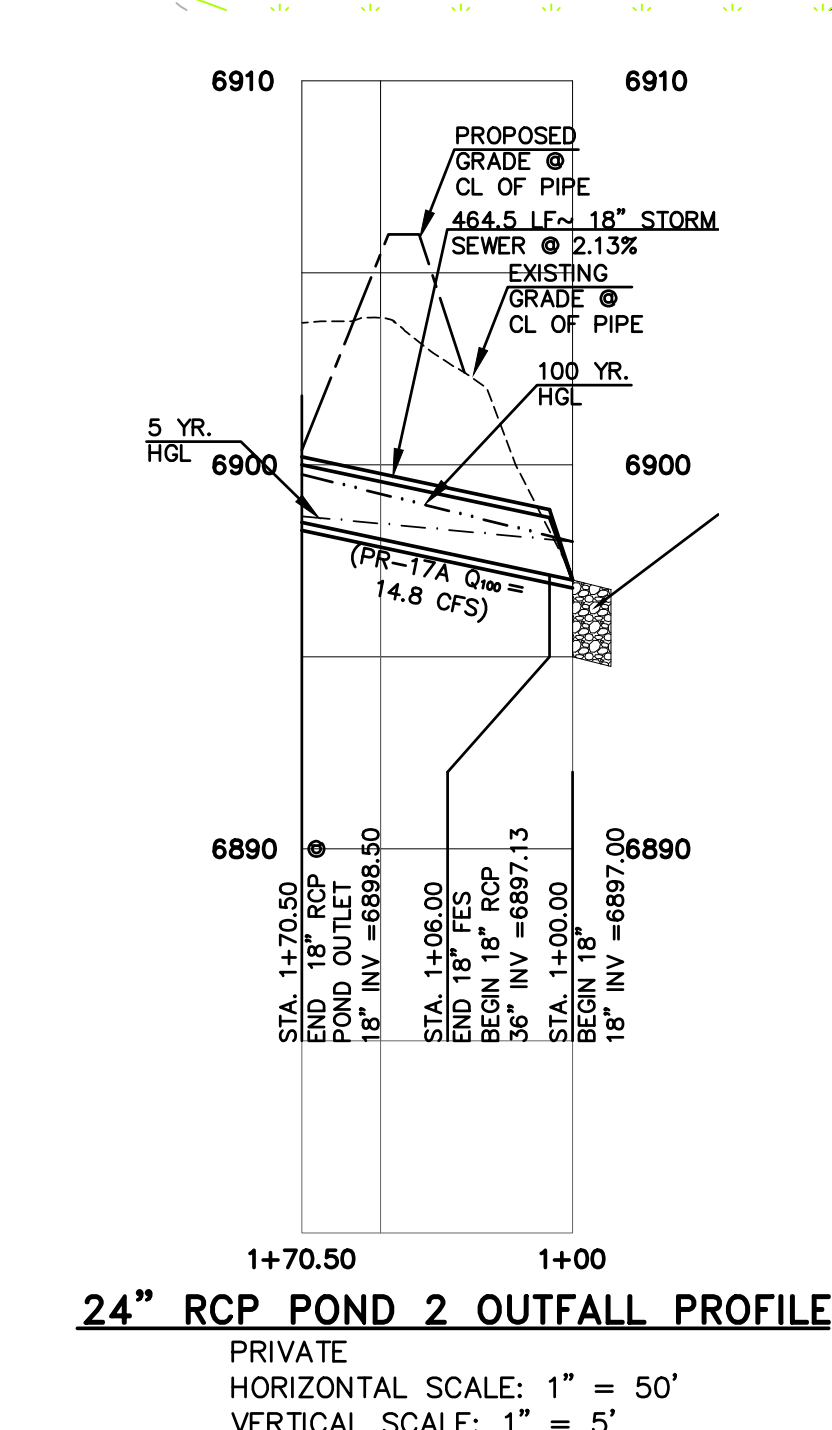
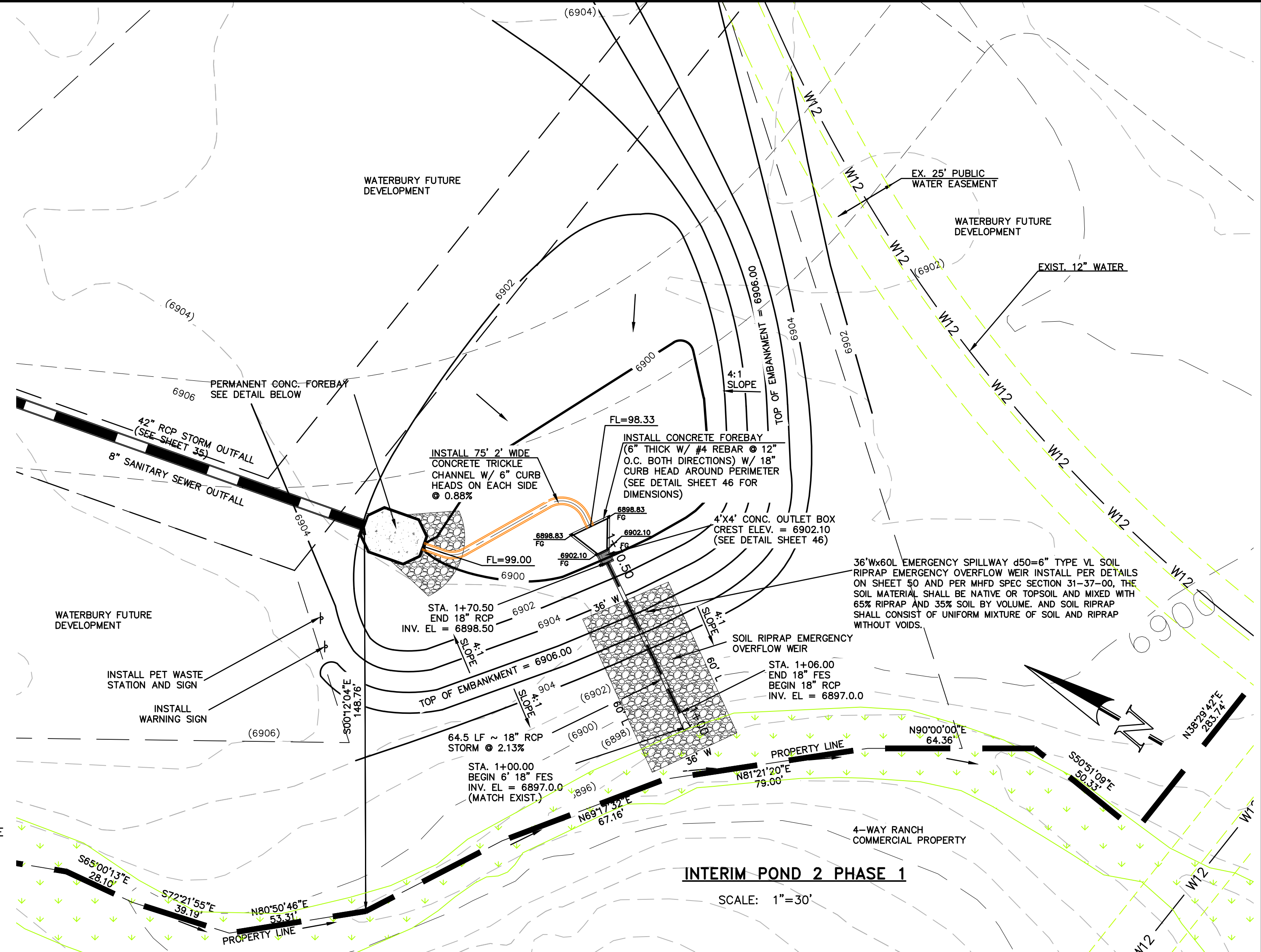
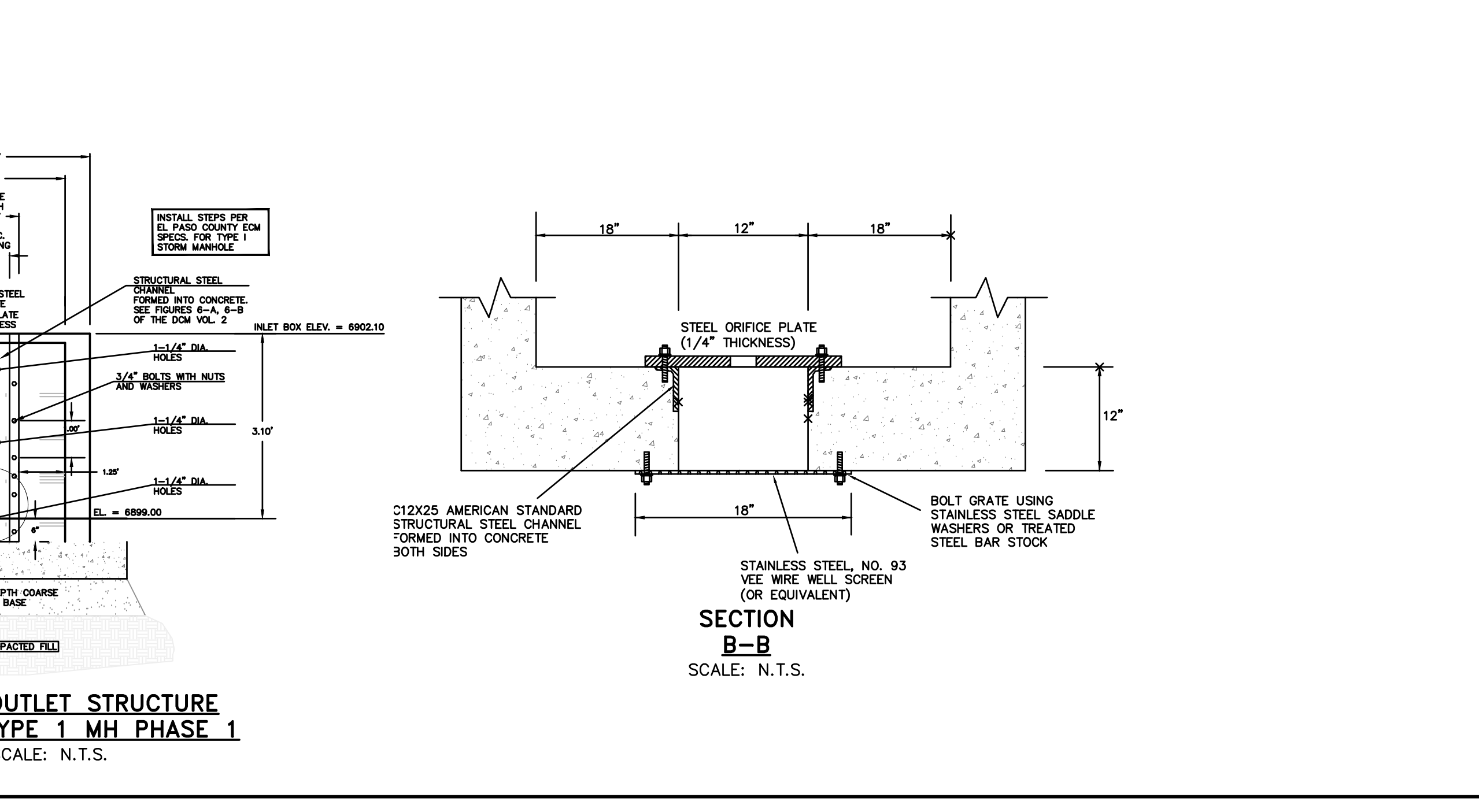
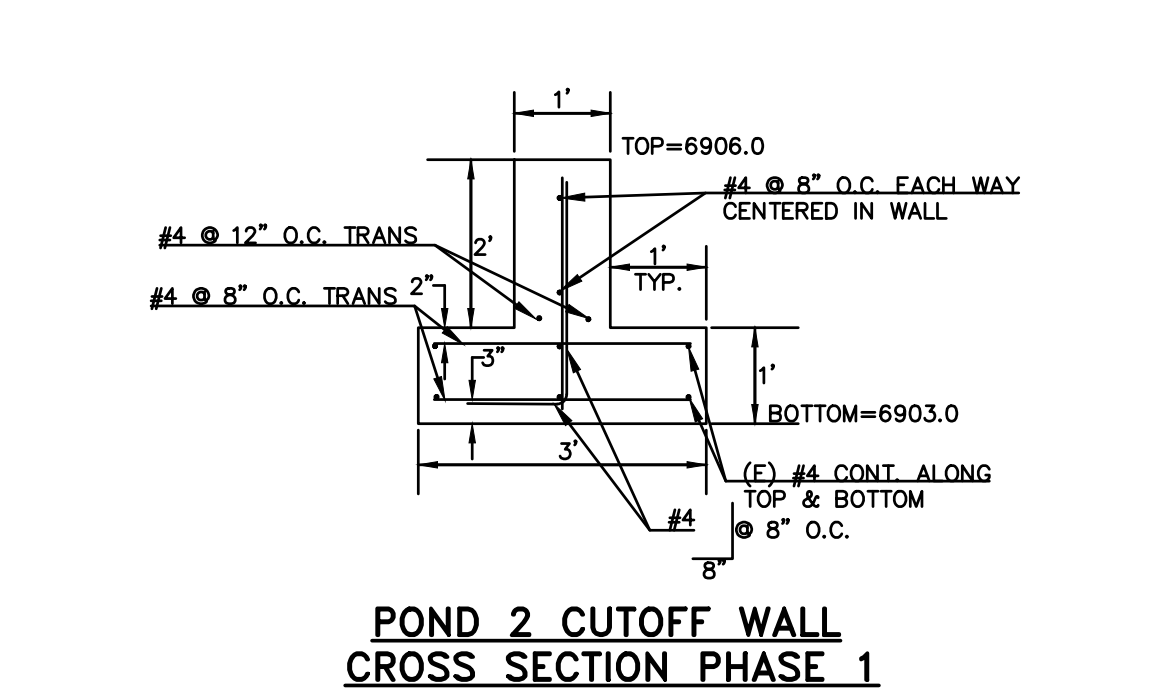
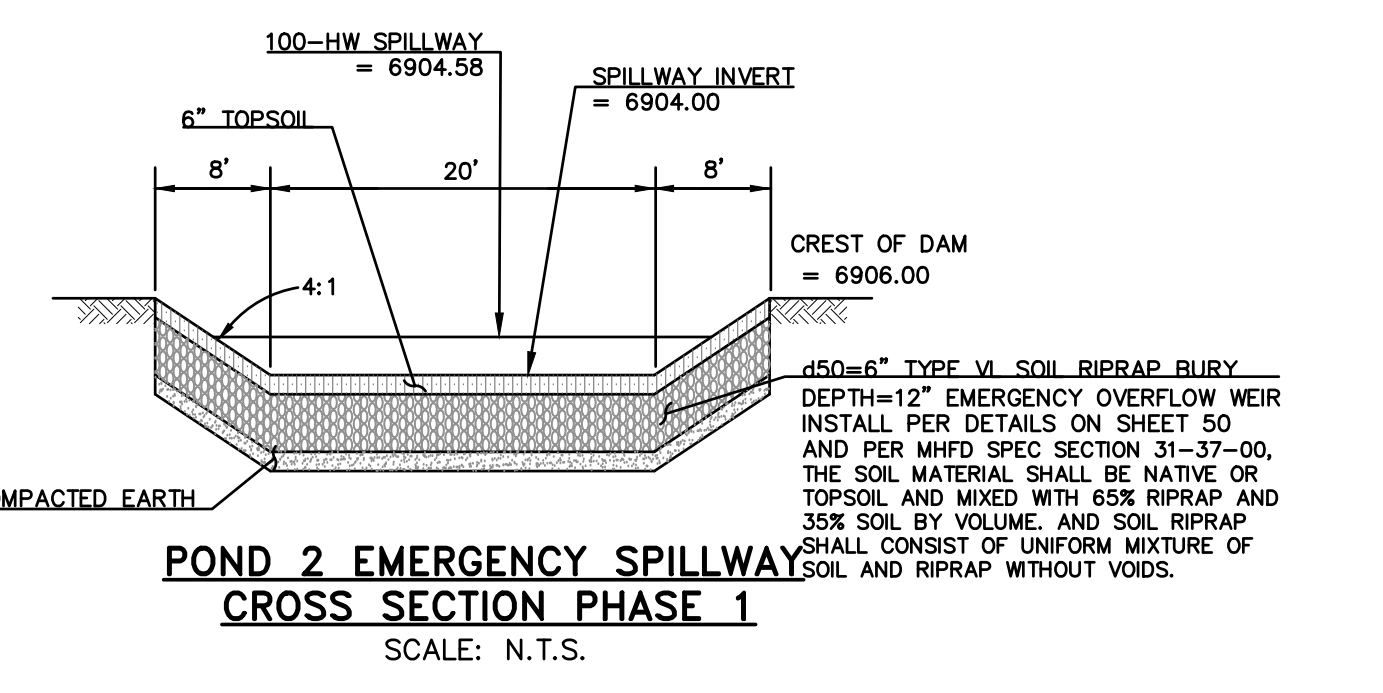
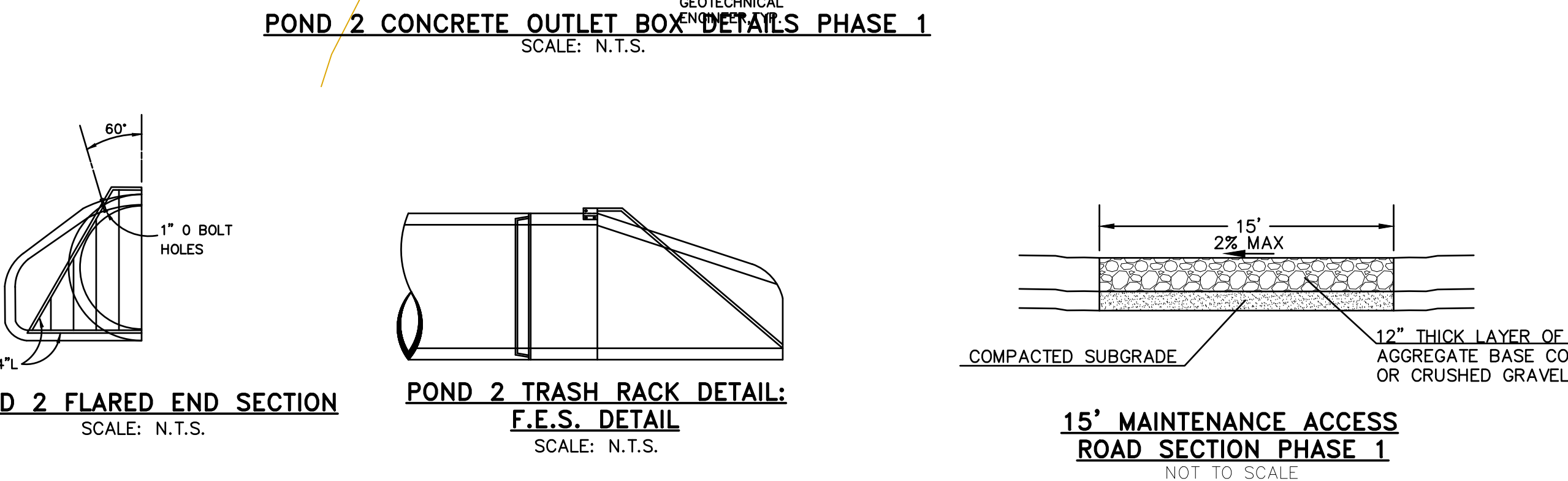
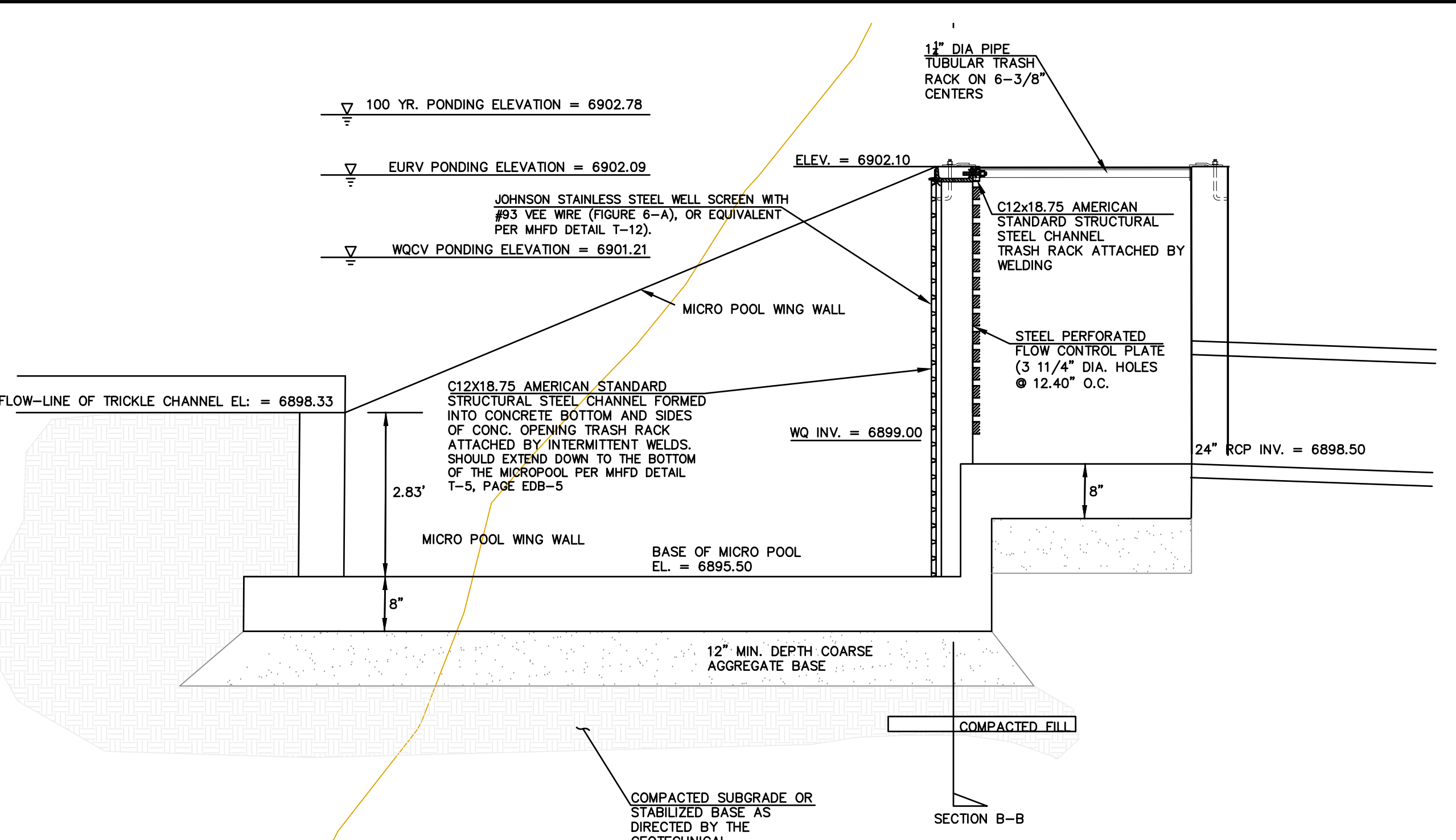
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE LOCAL JURISDICTIONAL REVIEWING AGENCIES, TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECT AND FOR THE PURPOSES AUTHORIZED BY WRITTEN AUTHORIZATION.

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

Terra Nova
 Engineering, Inc.
 A Division of Terra Nova Group, 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
 POND 2 DETAILS

DESIGNED BY DLF
 DRAWN BY QNA
 CHECKED BY QNA
 H-SCALE AS SHOWN
 V-SCALE AS SHOWN
 JOB NO. 2356.00
 DATE ISSUED 12/22/24
 SHEET NO. 47 OF 54



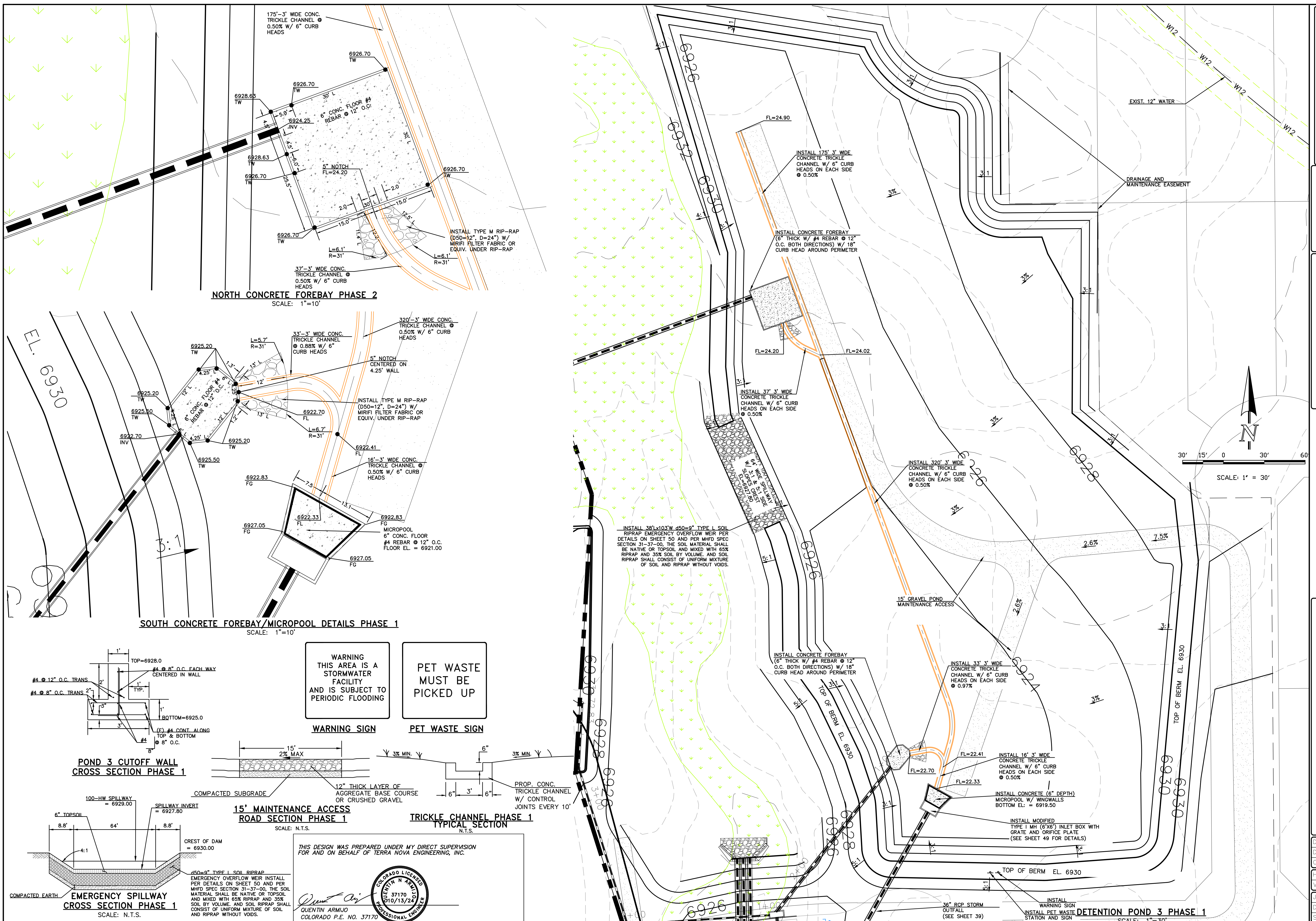
WARNING
 THIS AREA IS A
 STORMWATER
 FACILITY
 AND IS SUBJECT TO
 PERIODIC FLOODING

PET WASTE
 MUST BE
 PICKED UP

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

Quentin Arujo
 QUENTIN ARUJO
 COLORADO P.E. NO. 37170

PROFESSIONAL ENGINEER
 LICENSE NO. 37170
 EXPIRES 10/13/2025



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

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

POND 3 CUTOFF WALL CROSS SECTION PHASE 1

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

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

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

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

WARNING SIGN

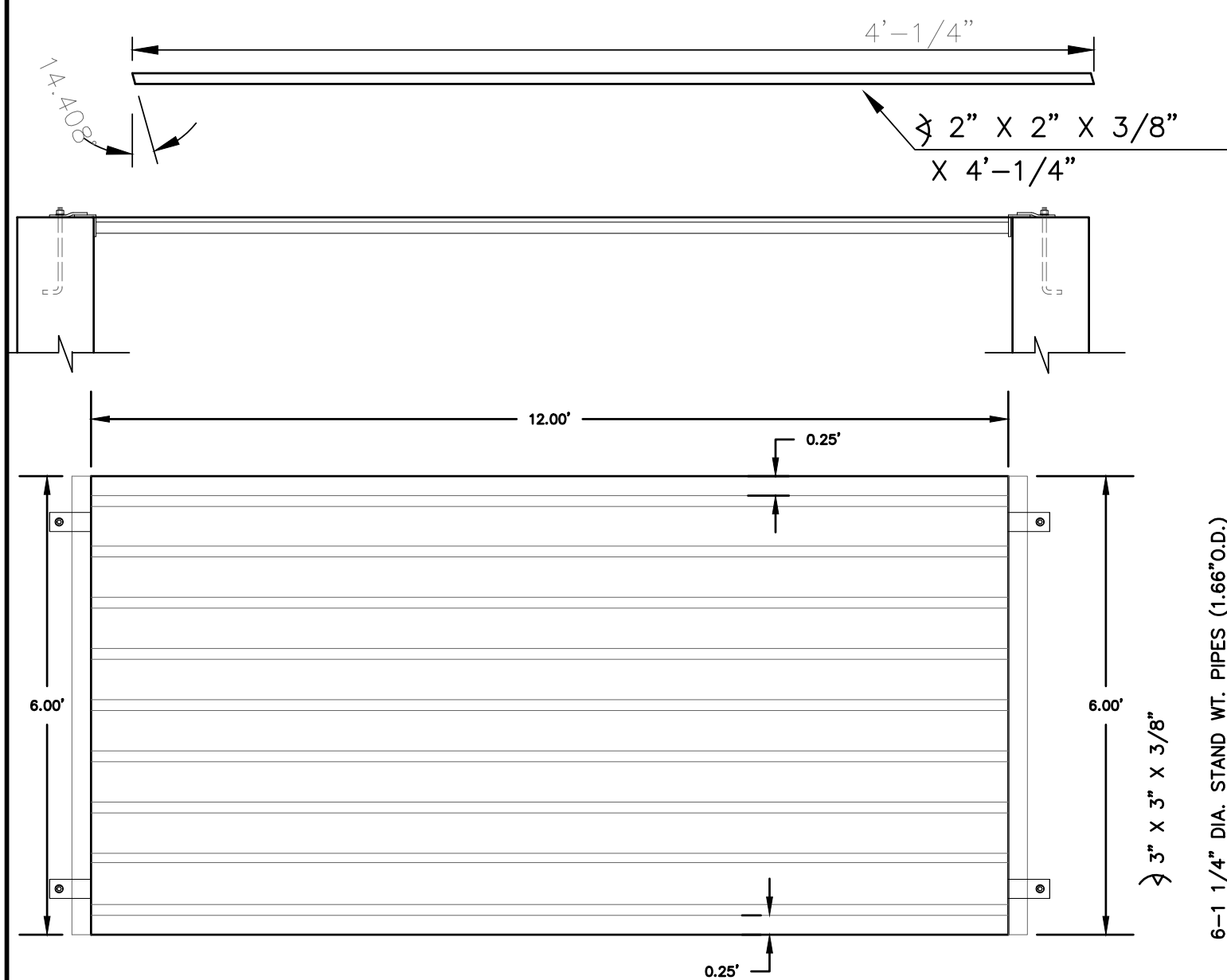
PET WASTE MUST BE PICKED UP

PET WASTE SIGN

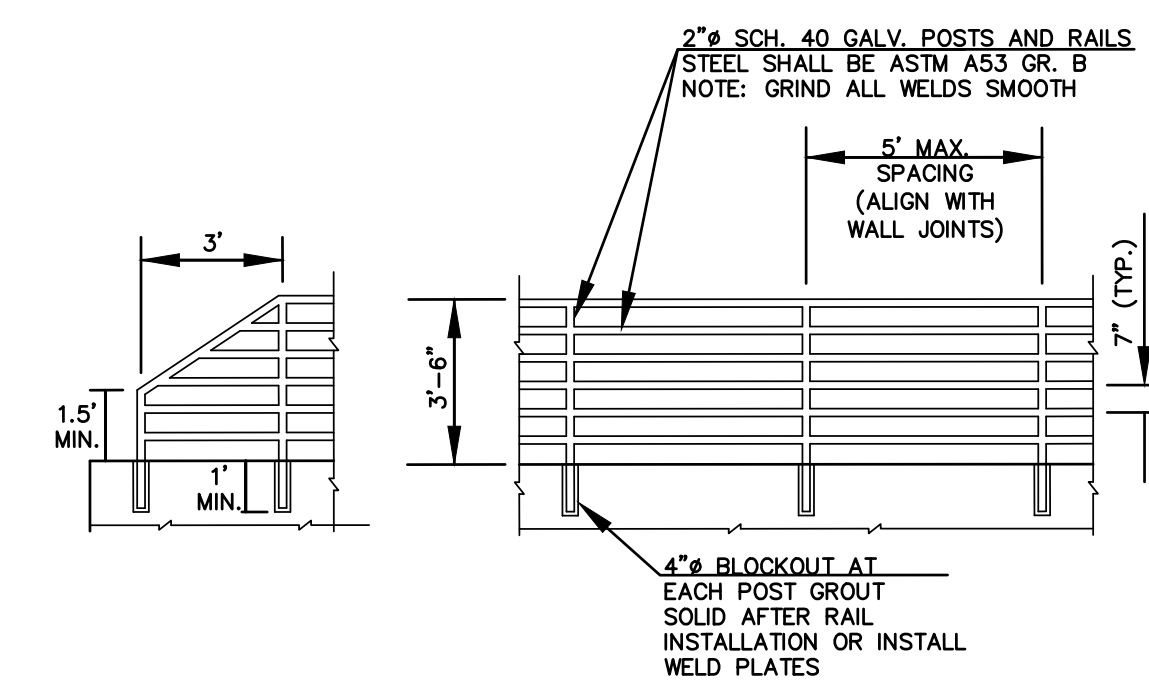
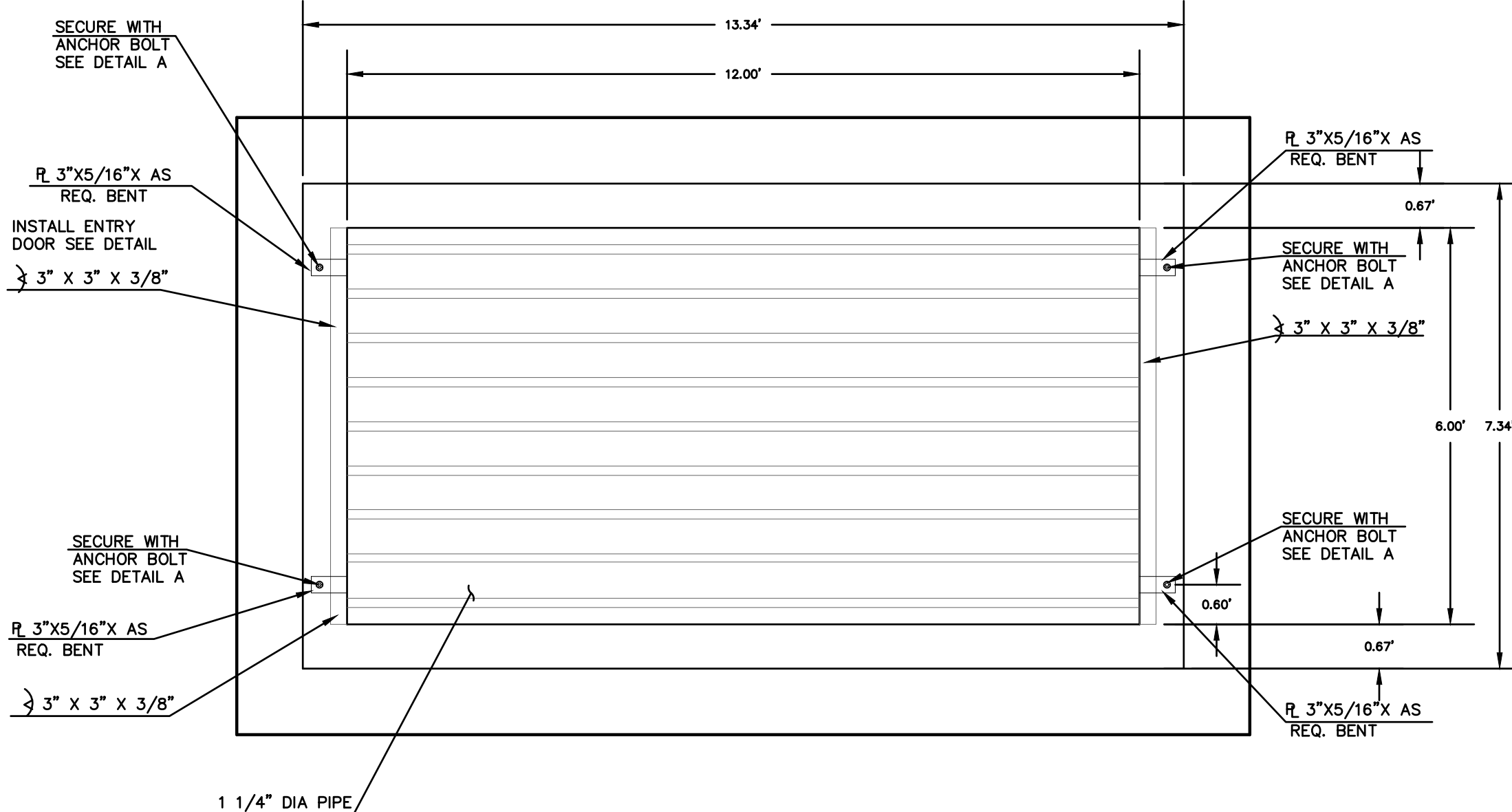
THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

Quentin Armiolo
QUENTIN ARMILO
COLORADO P.E. NO. 37170

<p>UNTL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE BOARD OF ARCHITECTS AND ENGINEERS OF TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECT AND ONLY AS AUTHORIZED BY WRITTEN AUTHORIZATION.</p> <p>PREPARED FOR: ACM ALF VIII JV SUB II LLC ATTN: JASON POCK 100 E. MISSISSIPPI AVE., STE 500 DENVER, CO 80246 303-984-9800</p>	<p>REVISIONS</p> <table style="width: 100%;"> <thead> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	DESCRIPTION	DATE												
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<p>Terra Nova Engineering, Inc. Civil Engineering</p> <p>721 S. 23RD STREET COLORADO SPRINGS, CO 80904 OFFICE: 719-635-6422 FAX: 719-635-6426 www.tnengine.com</p>																
<p>WATERBURY FILING NO. 1</p> <p>CONSTRUCTION SET POND 3 DETAILS</p>																
<p>DESIGNED BY DLF DRAWN BY QNA CHECKED BY QNA H-SCALE AS SHOWN V-SCALE N/A JOB NO. 2356.00 DATE ISSUED 12/22/24 SHEET NO. 48 OF 54</p>																

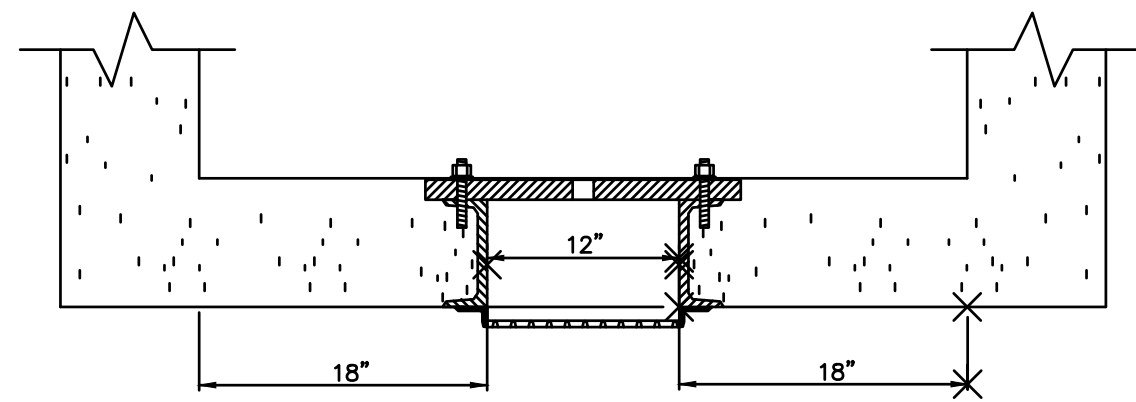


POND 3 GRATE PHASE 1 CONSTRUCTION
ALL WELDED CONSTRUCTION
SCALE: N.T.S.



NOTES:

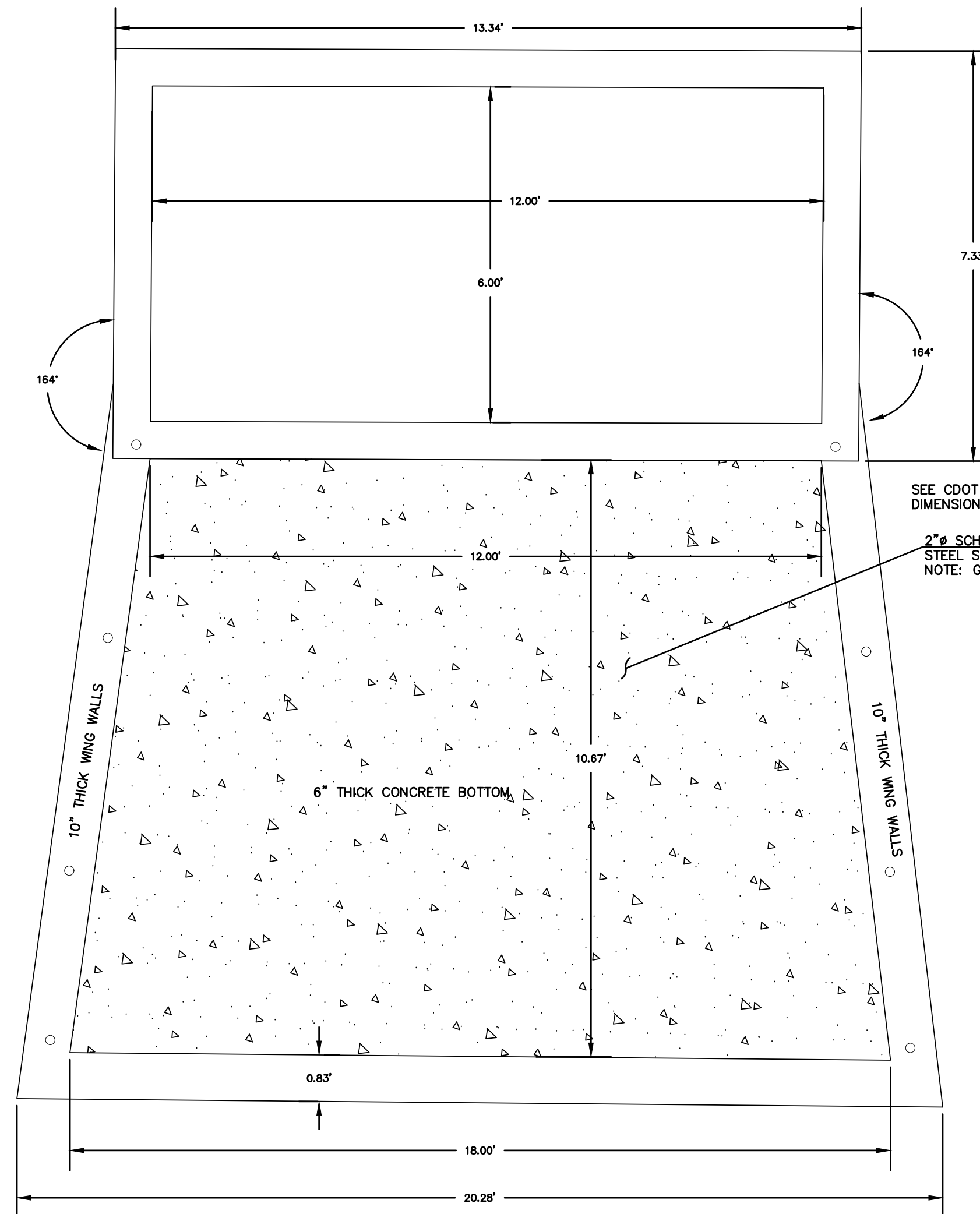
1. WELD PLATES MAY BE SUBSTITUTED FOR PIPE EMBEDMENT.
2. CONTRACTOR SHALL SUBMIT HANDRAIL SHOP DRAWINGS TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION.
3. DESIGN CRITERIA SHALL BE IN ACCORDANCE WITH AASHTO STANDARDS.
4. HANDRAIL DESIGN SHALL BE COMPATIBLE WITH THE DESIGN OF THE WINGWALLS AND HEADWALLS.
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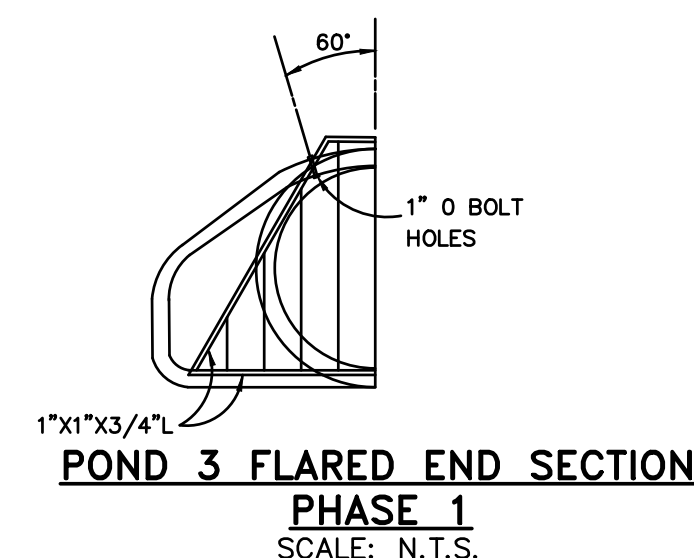
SECTION B-B
SCALE: 1"=1'

STEEL FABRICATION NOTES:

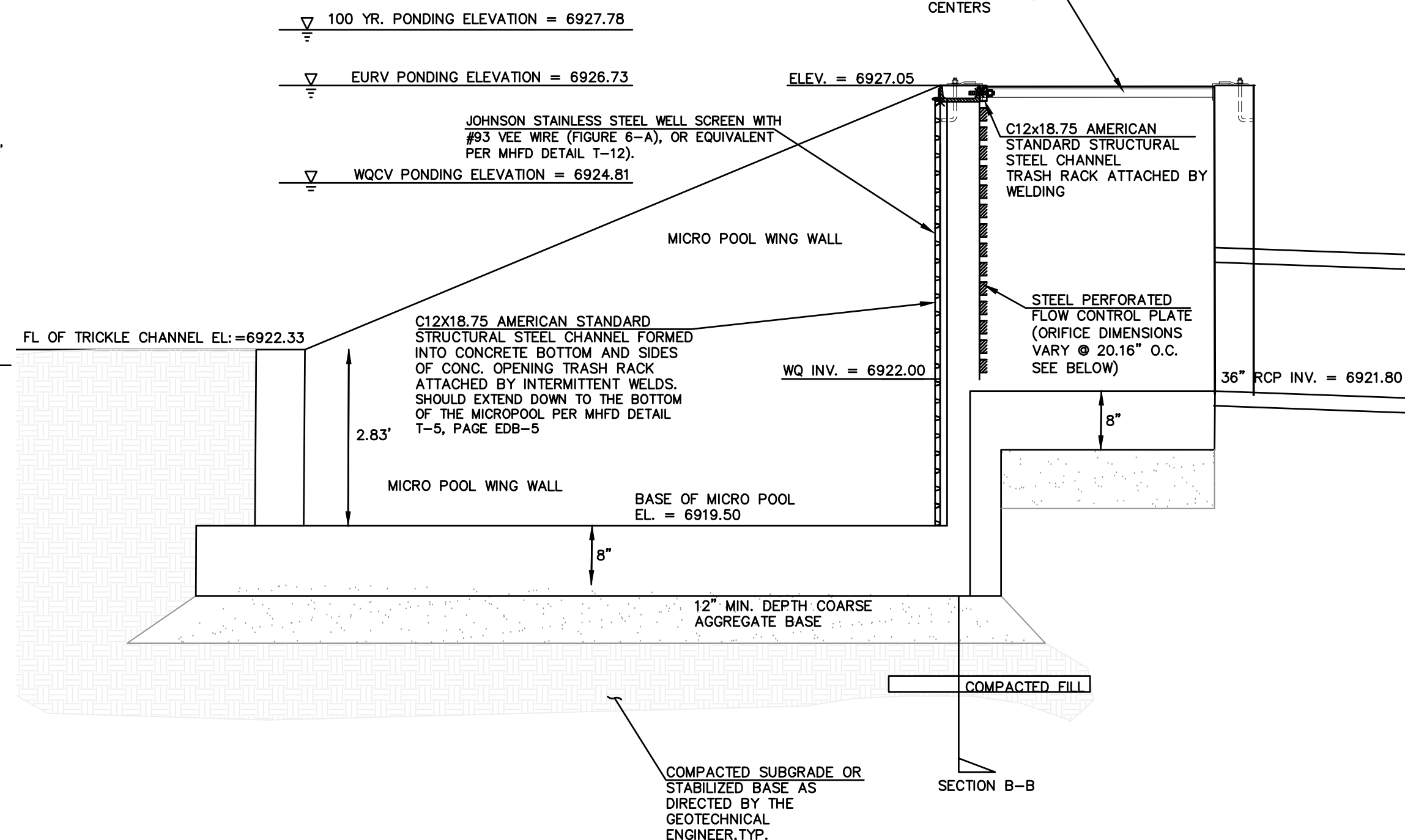
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5. PRIOR TO PAINTING REMOVE ALL OIL, SCALE, AND SLAG, GRIND OFF BURRS AND SHARP EDGES.



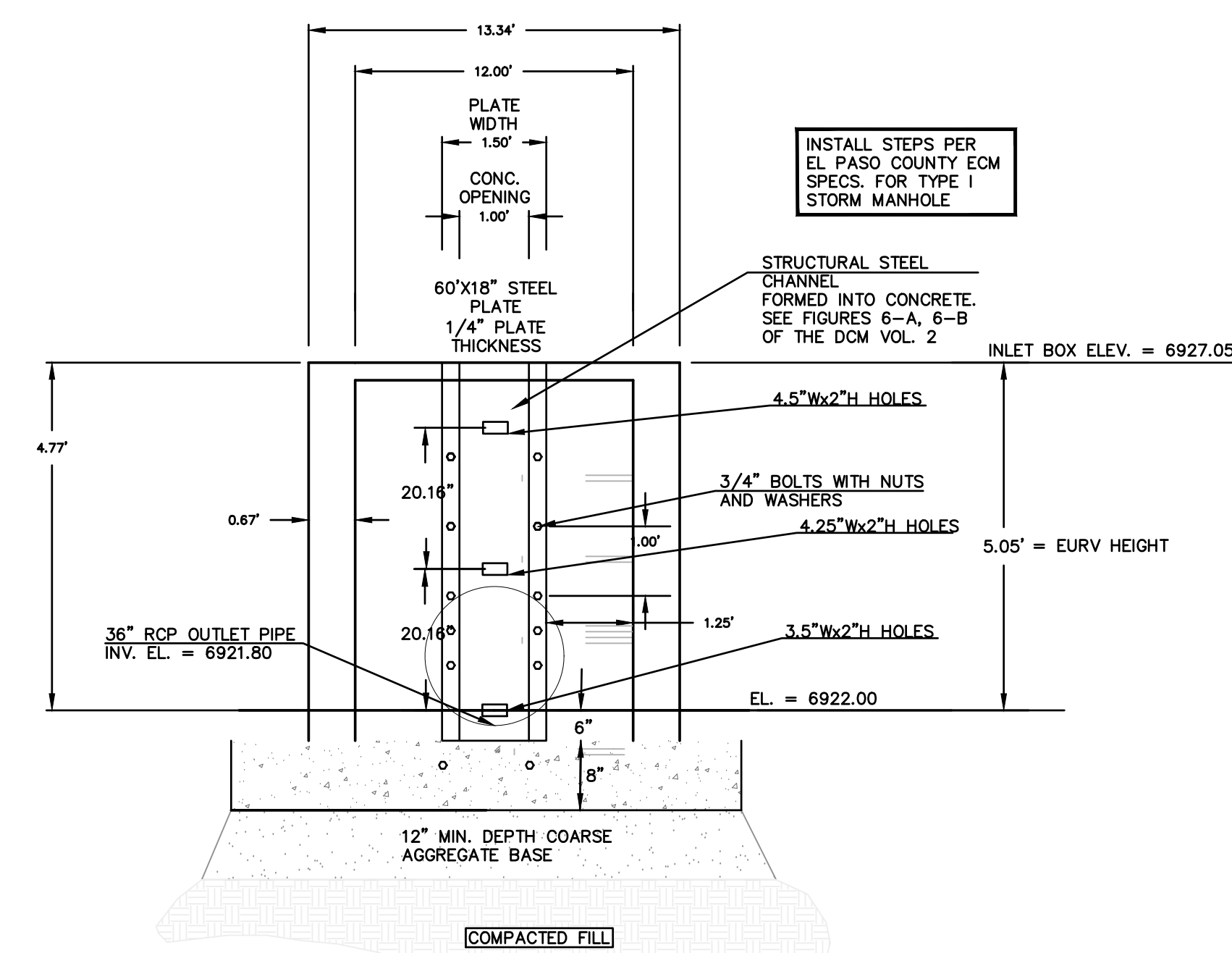
POND 3 CONCRETE MICROPOOL PHASE 1
SCALE: N.T.S.



POND 3 TRASH RACK PHASE 1 F.E.S. DETAIL
SCALE: N.T.S.



POND 3 OUTLET STRUCTURE MODIFIED TYPE 1 MH PHASE 1
SCALE: N.T.S.



POND 3 OUTLET STRUCTURE MODIFIED TYPE 1 MH PHASE 1
SCALE: N.T.S.

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



DATE	
DESCRIPTION	
REVISIONS	
NO.	
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PREPARED FOR:	ACM ALF VIII JV SUB II LLC
ATTN:	JASON POCK
ADDRESS:	100 E. MISSISSIPPI AVE., STE 500 DENVER, CO 80246
PHONE:	303-984-9800
ENGINEER:	Terra Nova Engineering, Inc. (Professional Engineer Seal)
ADDRESS:	721 S. 23RD STREET, COLORADO SPRINGS, CO 80904
PHONE:	719-635-6422
FAX:	719-635-6426
WWW:	www.tnec.com
WATERBURY FILING NO. 1	
CONSTRUCTION SET	
POND 3 DETAILS	
DESIGNED BY	DLF
DRAWN BY	QNA
CHECKED BY	QNA
H-SCALE	AS SHOWN
V-SCALE	N/A
JOB NO.	2356.00
DATE ISSUED	12/22/20
SHEET NO.	49 OF 54

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	
Type L	70 - 100	15	9
	50 - 70	12	
	35 - 50	9	
Type M	70 - 100	21	12
	50 - 70	18	
	35 - 50	12	
Type H	70 - 100	30	18
	50 - 70	24	
	35 - 50	18	
Type VH	70 - 100	41	24
	50 - 70	33	
	35 - 50	24	

* d_{50} - Mean Particle Size

Conventional and Soil Riprap Construction Guidance Checklist

6

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

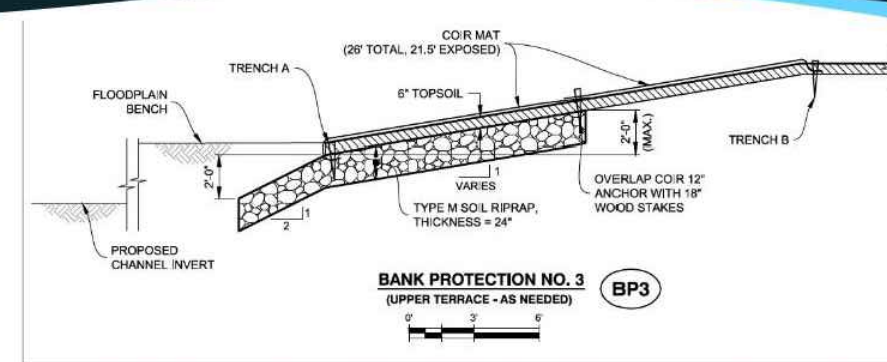
7

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

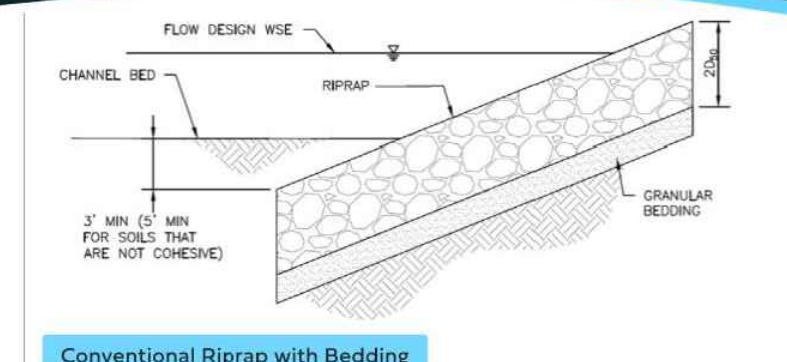
8

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.



Granular Bedding

Conventional and Soil Riprap Construction Guidance Checklist

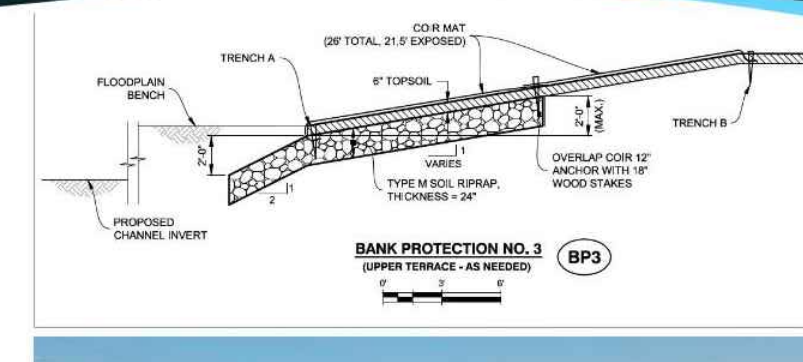
9

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.



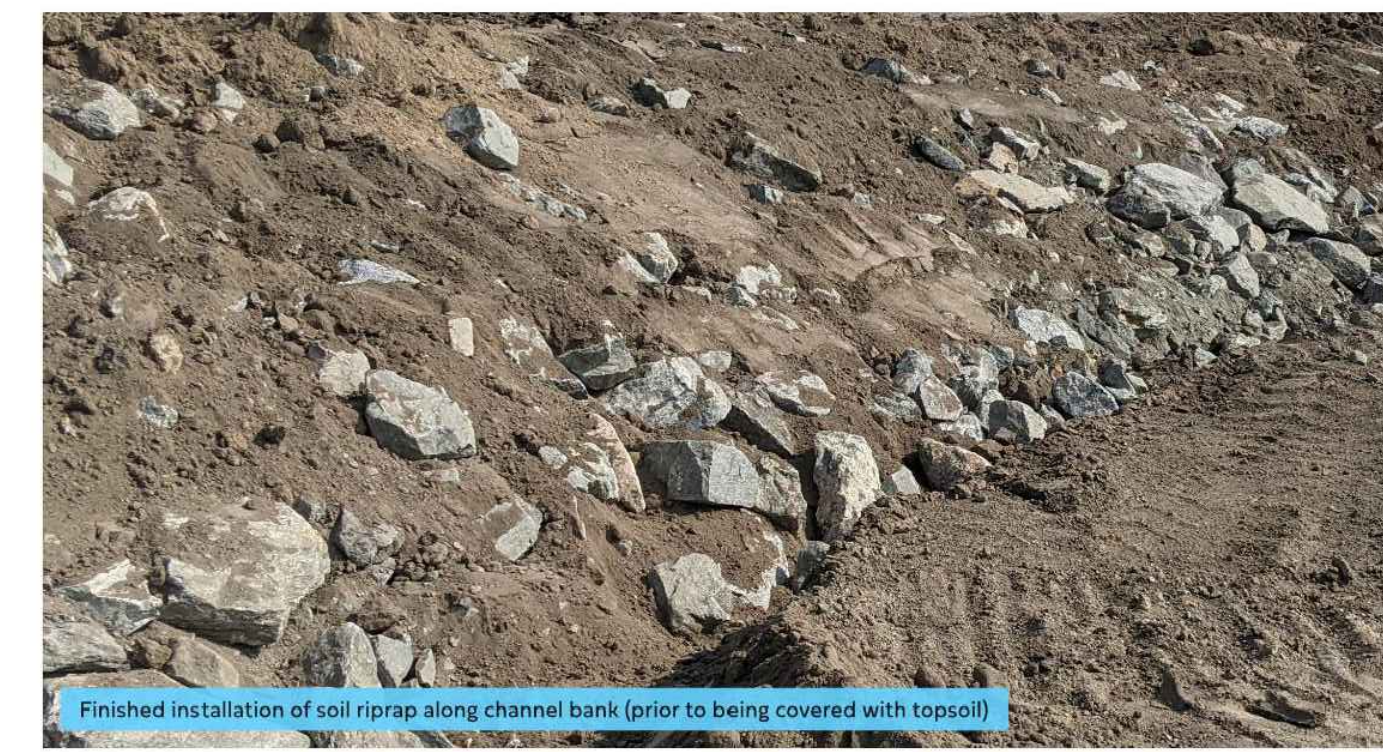
Soil riprap installed and ready to be covered with topsoil

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)

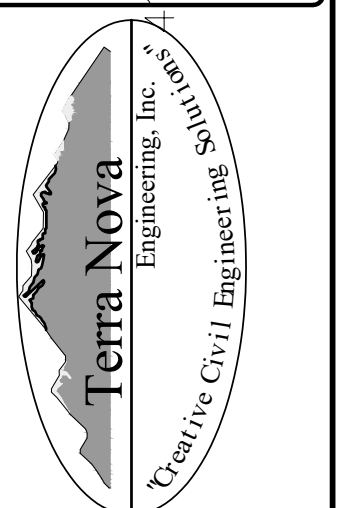
Conventional and Soil Riprap Construction Guidance Checklist

14

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



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

WATERBURY FILING NO. 1

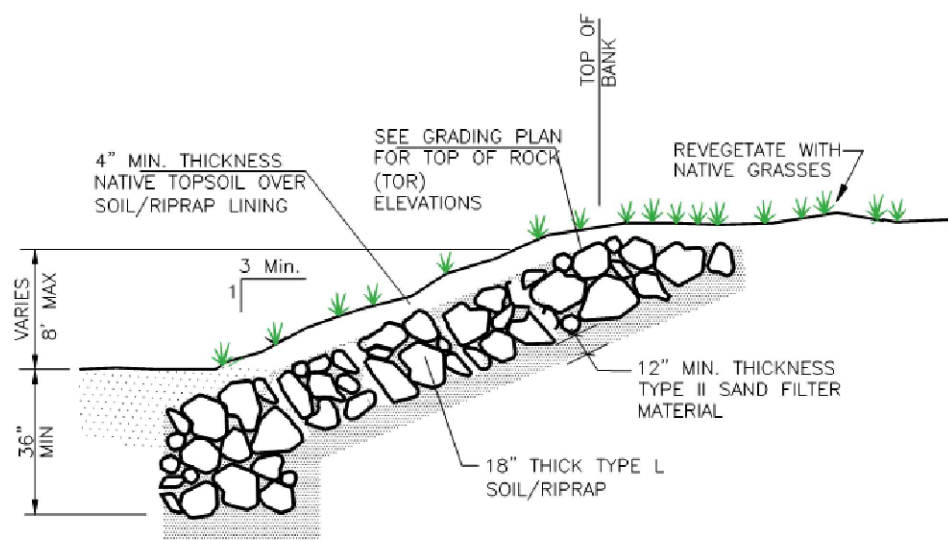
CONSTRUCTION SET
SOIL RIPRAP DETAILS

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

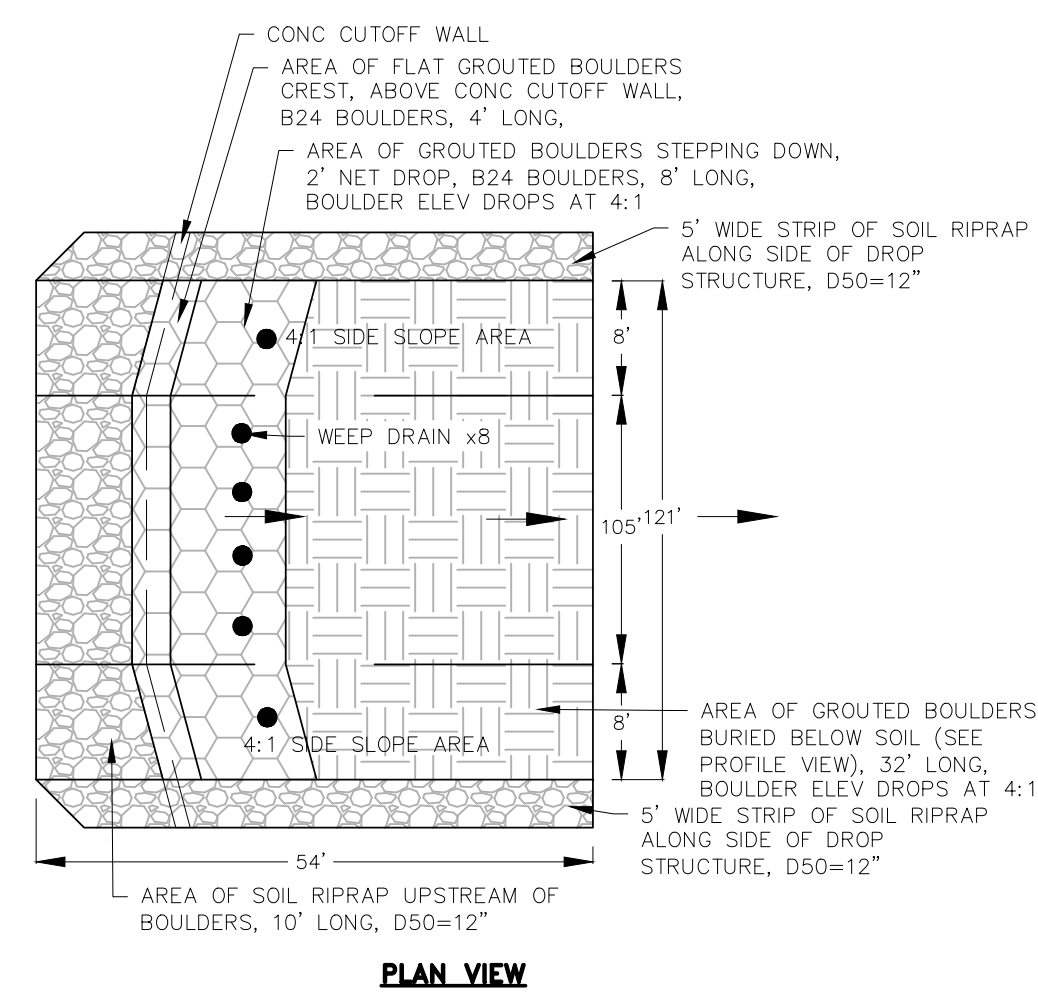
DESIGNED BY DLF
DRAWN BY QNA
CHECKED BY QNA
H-SCALE NA
V-SCALE N/A
JOB NO. 2356.00
DATE ISSUED 12/22/24
SHEET NO. 50 OF 54

QUENTIN ARMUJO
COLORADO P.E. NO. 37170

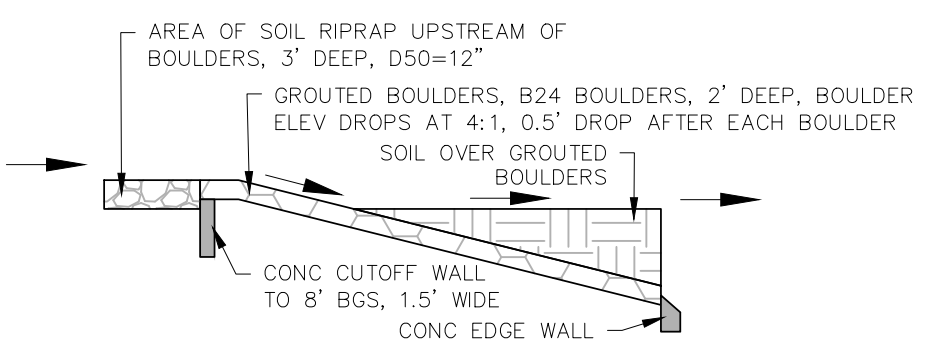
DESIGNED BY DLF
DRAWN BY QNA
CHECKED BY QNA
H-SCALE NA
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JOB NO. 2356.00
DATE ISSUED 12/22/24
SHEET NO. 50 OF 54



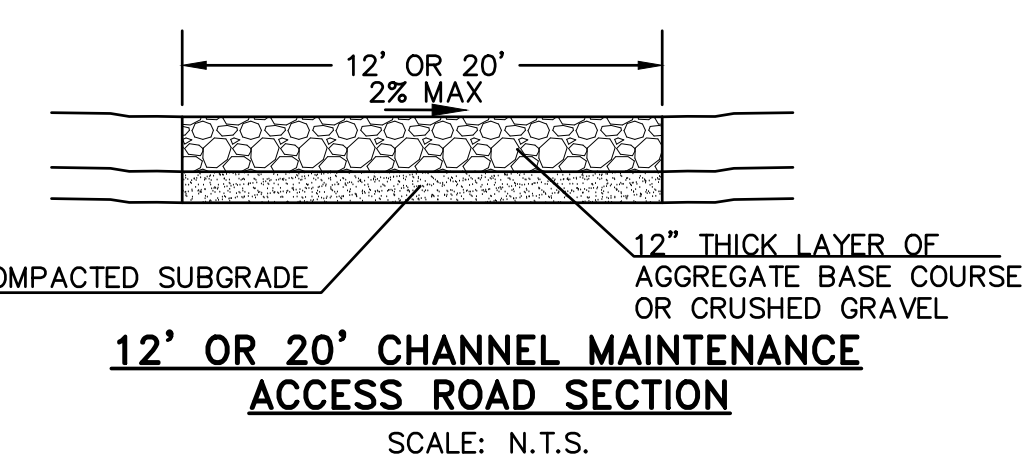
TYPICAL SOIL/RIPRAP BANK LINING
SCALE: N.T.S.



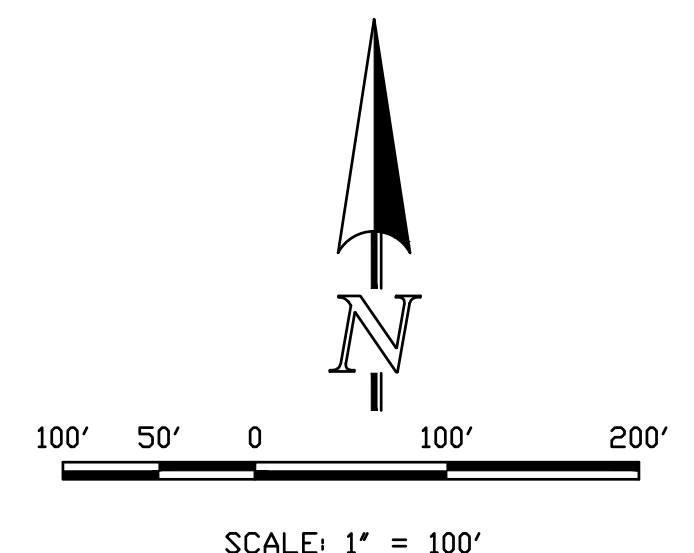
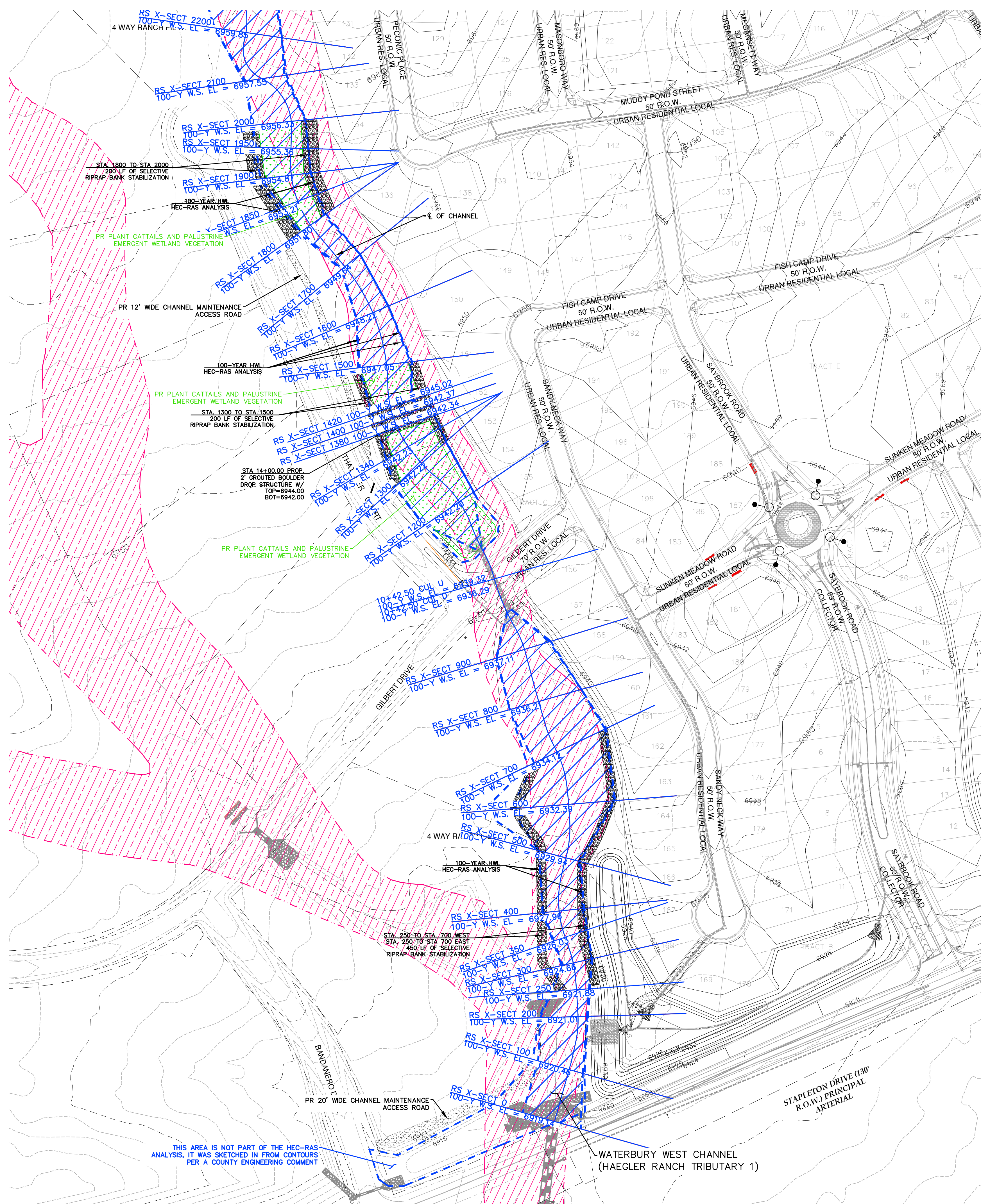
PLAN VIEW



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

- B24 BOULDERS ARE 24" MIN.

CONSTRUCTION REQUIREMENT NOTES

- GROUT DEPTH RANGES FROM HALF TO FULL BOULDER HEIGHT. ALL GROUT SHALL BE A MINIMUM HALF BOULDER HEIGHT.
- AN EDGE WALL IS REQUIRED AROUND THE ENTIRE DROP STRUCTURE.
- 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.

LEGEND

- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED CONTOUR
- SUBDIVISION BOUNDARY
- CHANNEL FLOW LINE
- 100-Y FEMA FLOODPLAIN
- EXISTING 100-Y HWL PER HECRAS ANALYSIS
- PROPOSED 100-Y HWL PER HECRAS ANALYSIS
- PROPOSED RIPRAP
- PROPOSED PLANTING AREA

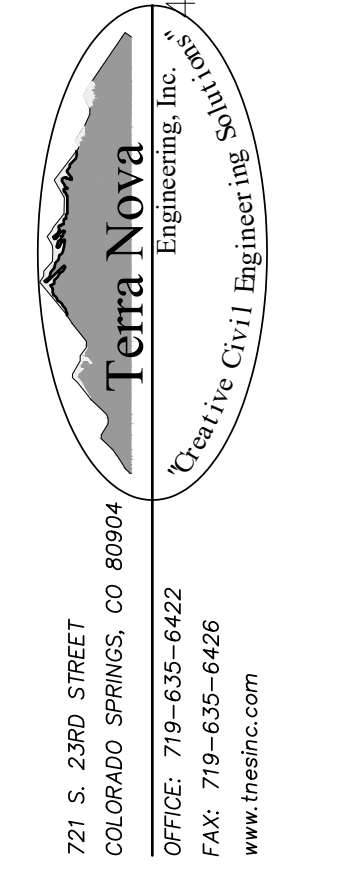
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REVISIONS	NO.	DESCRIPTION	DATE

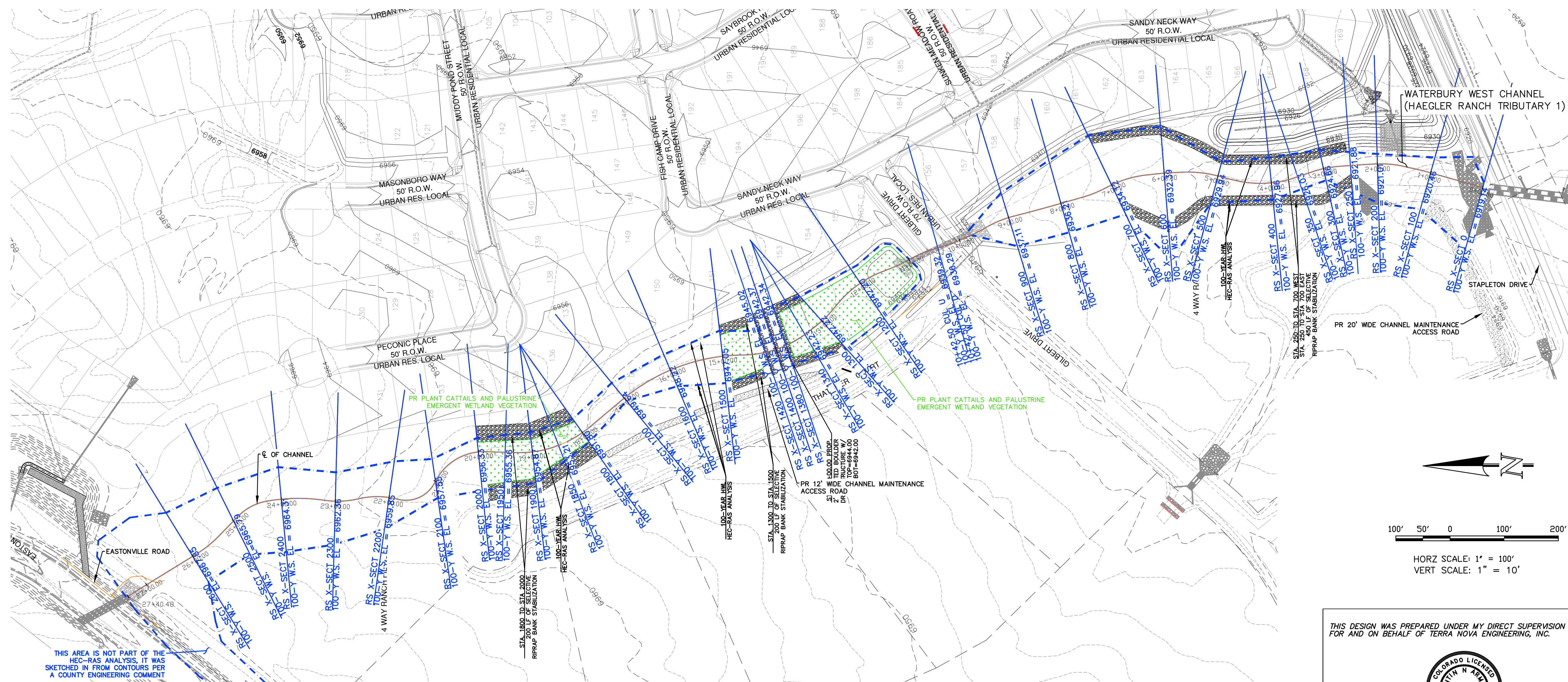
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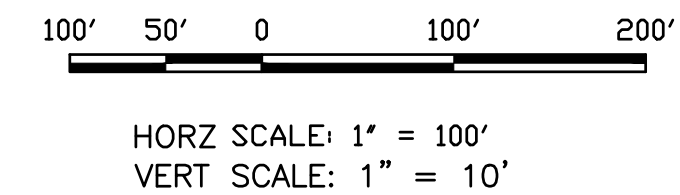


WATERBURY FILING NO. 1
CONSTRUCTION SET
WEST CHANNEL - CHANNEL IMPROVEMENTS PLAN

DESIGNED BY DLF
DRAWN BY QNA
CHECKED BY QNA
H-SCALE AS SHOWN
V-SCALE N/A
JOB NO. 2356.00
DATE ISSUED 12/22/20
SHEET NO. 51 OF 54

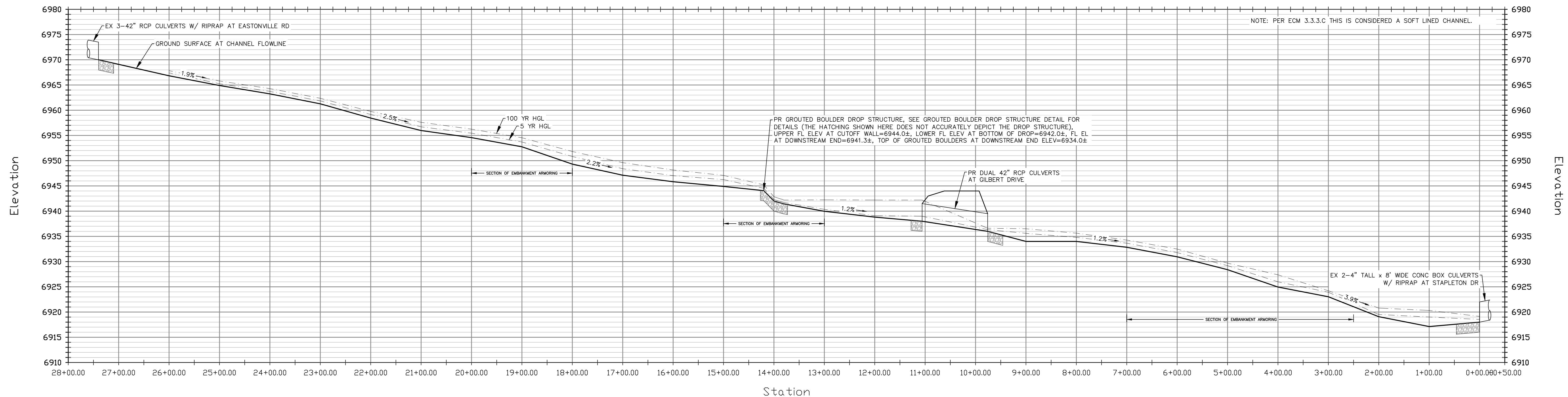


WATERBURY WEST CHANNEL (HAEGLER RANCH TRIBUTARY 1) PLAN & PROFILE VIEW
 HORZ SCALE: 1"=100' - VERT SCALE: 1"=10'



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QUENTIN ARMIJO
 COLORADO P.E. NO. 37170



REVISIONS	NO.	DESCRIPTION	DATE

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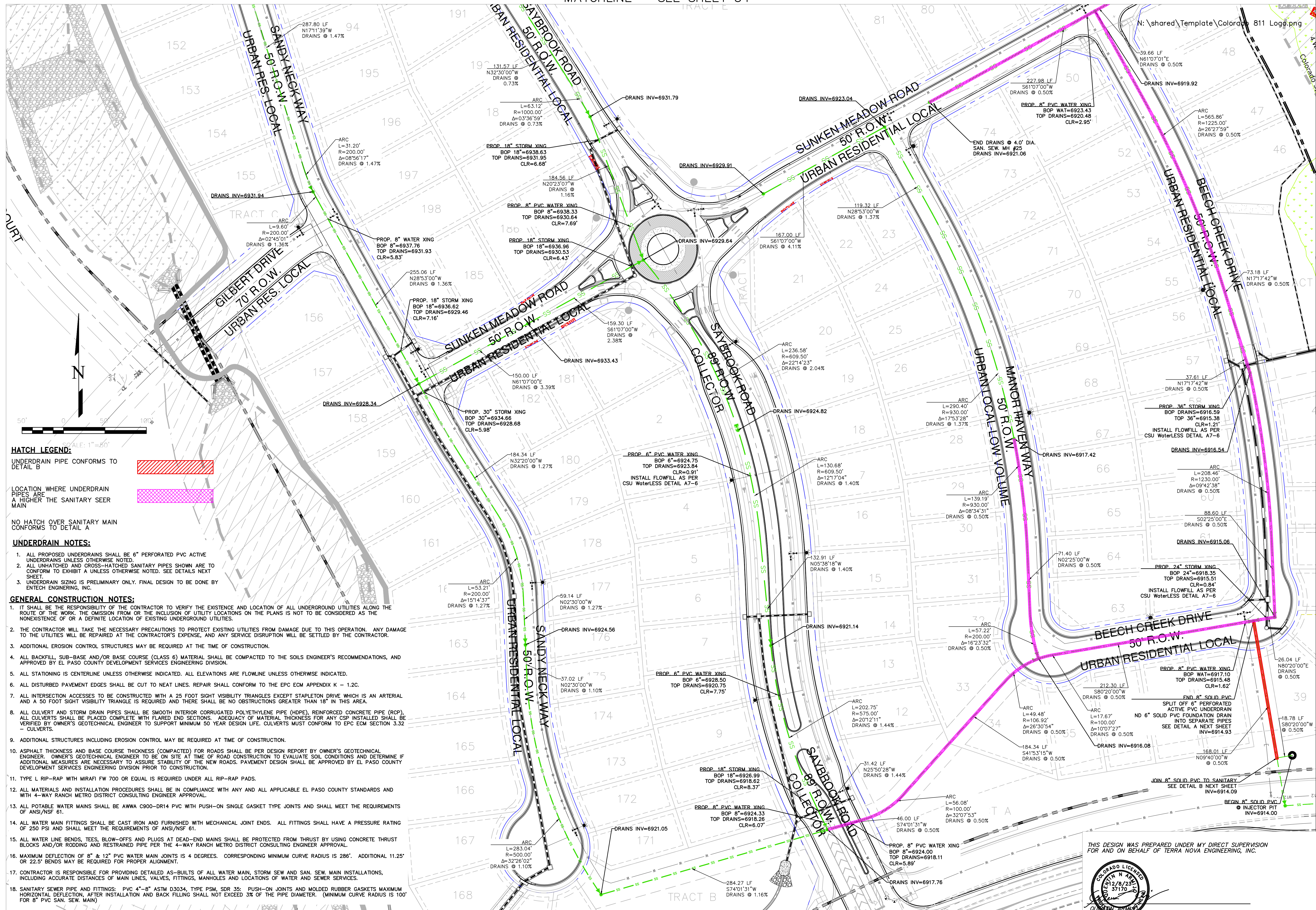
WATERBURY FILING NO. 1

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 12/22/24
 SHEET NO. 52 OF 54



HATCH LEGEND:

UNDERDRAIN PIPE CONFORMS TO DETAIL B

LOCATION WHERE UNDERDRAIN PIPES ARE A HIGHER THE SANITARY SEWER MAIN

NO HATCH OVER SANITARY MAIN CONFORMS TO DETAIL A

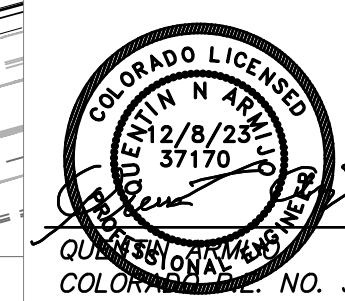
UNDERDRAIN NOTES:

1. ALL PROPOSED UNDERDRAINS SHALL BE 6" PERFORATED PVC ACTIVE UNDERDRAINS UNLESS OTHERWISE NOTED.
2. ALL UNHATCHED AND CROSS-HATCHED SANITARY PIPES SHOWN ARE TO CONFORM TO EXHIBIT A UNLESS OTHERWISE NOTED. SEE DETAILS NEXT SHEET.
3. UNDERDRAIN SIZING IS PRELIMINARY ONLY. FINAL DESIGN TO BE DONE BY ENTECH ENGINEERING, INC.

GENERAL CONSTRUCTION NOTES:

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK. THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
2. THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE UTILITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
3. ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
4. ALL BACKFILL, SUB-BASE AND/OR BASE COURSE (CLASS 6) MATERIAL SHALL BE COMPACTED TO THE SOILS ENGINEER'S RECOMMENDATIONS, AND APPROVED BY EL PASO COUNTY DEVELOPMENT SERVICES ENGINEERING DIVISION.
5. ALL STATIONING IS CENTERLINE UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE FLOWLINE UNLESS OTHERWISE INDICATED.
6. ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAT LINES. REPAIR SHALL CONFORM TO THE EPC ECM APPENDIX K - 1.2C.
7. ALL INTERSECTION ACCESSES TO BE CONSTRUCTED WITH A 25 FOOT SIGHT VISIBILITY TRIANGLES EXCEPT STAPLETON DRIVE WHICH IS AN ARTERIAL AND A 50 FOOT SIGHT VISIBILITY TRIANGLE IS REQUIRED AND THERE SHALL BE NO OBSTRUCTIONS GREATER THAN 18" IN THIS AREA.
8. ALL CULVERT AND STORM DRAIN PIPES SHALL BE SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE (HDPE), REINFORCED CONCRETE PIPE (RCP). ALL CULVERTS SHALL BE PLACED COMPLETE WITH FLARED END SECTIONS. ADEQUACY OF MATERIAL THICKNESS FOR ANY CSP INSTALLED SHALL BE VERIFIED BY OWNER'S GEOTECHNICAL ENGINEER TO SUPPORT MINIMUM 50 YEAR DESIGN LIFE. CULVERTS MUST CONFORM TO EPC ECM SECTION 3.32 - CULVERTS.
9. ADDITIONAL STRUCTURES INCLUDING EROSION CONTROL MAY BE REQUIRED AT TIME OF CONSTRUCTION.
10. ASPHALT THICKNESS AND BASE COURSE THICKNESS (COMPACTED) FOR ROADS SHALL BE PER DESIGN REPORT BY OWNER'S GEOTECHNICAL ENGINEER. OWNER'S GEOTECHNICAL ENGINEER TO BE ON SITE AT TIME OF ROAD CONSTRUCTION TO EVALUATE SOIL CONDITIONS AND DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY TO ASSURE STABILITY OF THE NEW ROADS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY DEVELOPMENT SERVICES ENGINEERING DIVISION PRIOR TO CONSTRUCTION.
11. TYPE L RIP-RAP WITH MIRAFI W 700 OR EQUAL IS REQUIRED UNDER ALL RIP-RAP PADS.
12. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN COMPLIANCE WITH ANY AND ALL APPLICABLE EL PASO COUNTY STANDARDS AND WITH 4-WAY RANCH METRO DISTRICT CONSULTING ENGINEER APPROVAL.
13. ALL POTABLE WATER MAINS SHALL BE AWWA C900-D14 PVC WITH PUSH-ON SINGLE GASKET TYPE JOINTS AND SHALL MEET THE REQUIREMENTS OF ANSI/NSF 61.
14. 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.
15. ALL WATER LINE BENDS, TEES, BLOW-OFFS AND PLUGS AT DEAD-END MAINS SHALL BE PROTECTED FROM THRUST BY USING CONCRETE THRUST BLOCKS AND/OR RODDING AND RESTRAINED PIPE PER THE 4-WAY RANCH METRO DISTRICT CONSULTING ENGINEER APPROVAL.
16. MAXIMUM DEFLECTION OF 8" & 12" PVC WATER MAIN JOINTS IS 4 DEGREES. CORRESPONDING MINIMUM CURVE RADIUS IS 286'. ADDITIONAL 11.25" OR 22.5" BENDS MAY BE REQUIRED FOR PROPER ALIGNMENT.
17. CONTRACTOR IS RESPONSIBLE FOR PROVIDING DETAILED AS-BUILTS OF ALL WATER MAIN, STORM SEW AND SAN. SEW. MAIN INSTALLATIONS, INCLUDING ACCURATE DISTANCES OF MAIN LINES, VALVES, FITTINGS, MANHOLES AND LOCATIONS OF WATER AND SEWER SERVICES.
18. SANITARY SEWER PIPE AND FITTINGS: PVC 4"-8" ASTM D3034, TYPE PSM, SDR 35; PUSH-ON JOINTS AND MOLDED RUBBER GASKETS MAXIMUM HORIZONTAL DEFLECTION AFTER INSTALLATION AND BACK FILLING SHALL NOT EXCEED 3% OF THE PIPE DIAMETER. (MINIMUM CURVE RADIUS IS 100' FOR 8" PVC SAN. SEW. MAIN)

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DATE	
DESCRIPTION	
REVISIONS	
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Terra Nova
 Engineering, Inc.

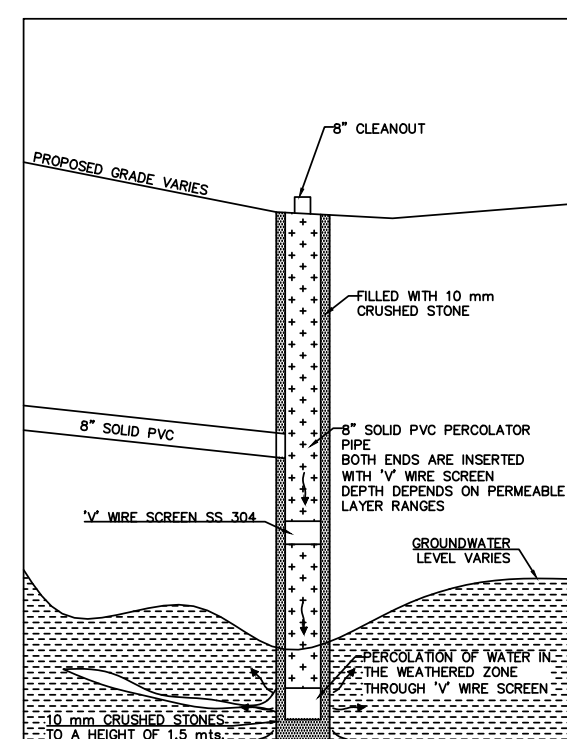
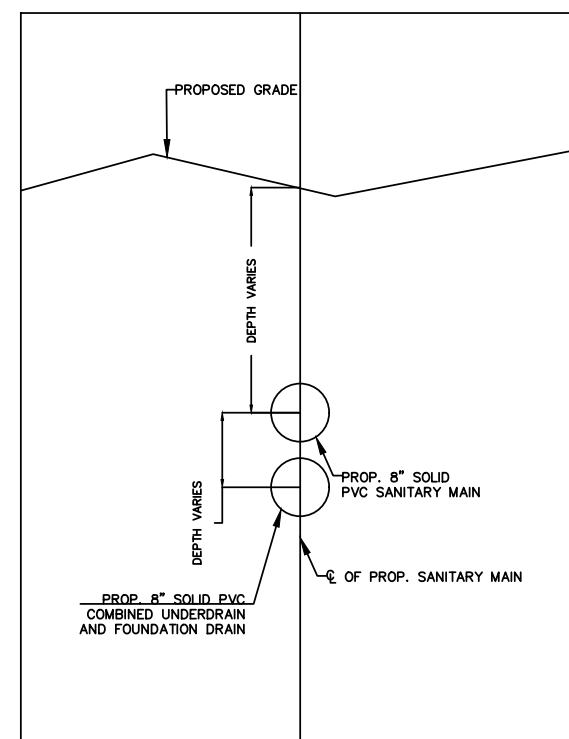
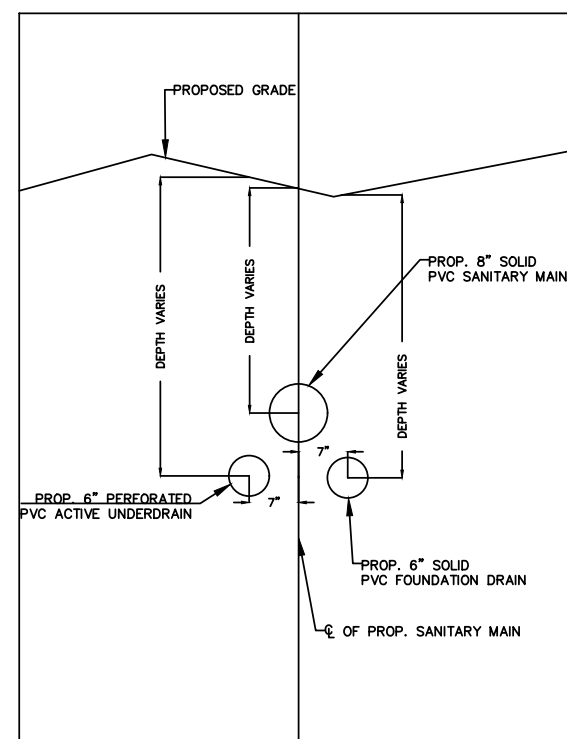
WATERBURY FILING NO. 1

CONSTRUCTION SET
 UNDERDRAIN PLAN
 SOUTH

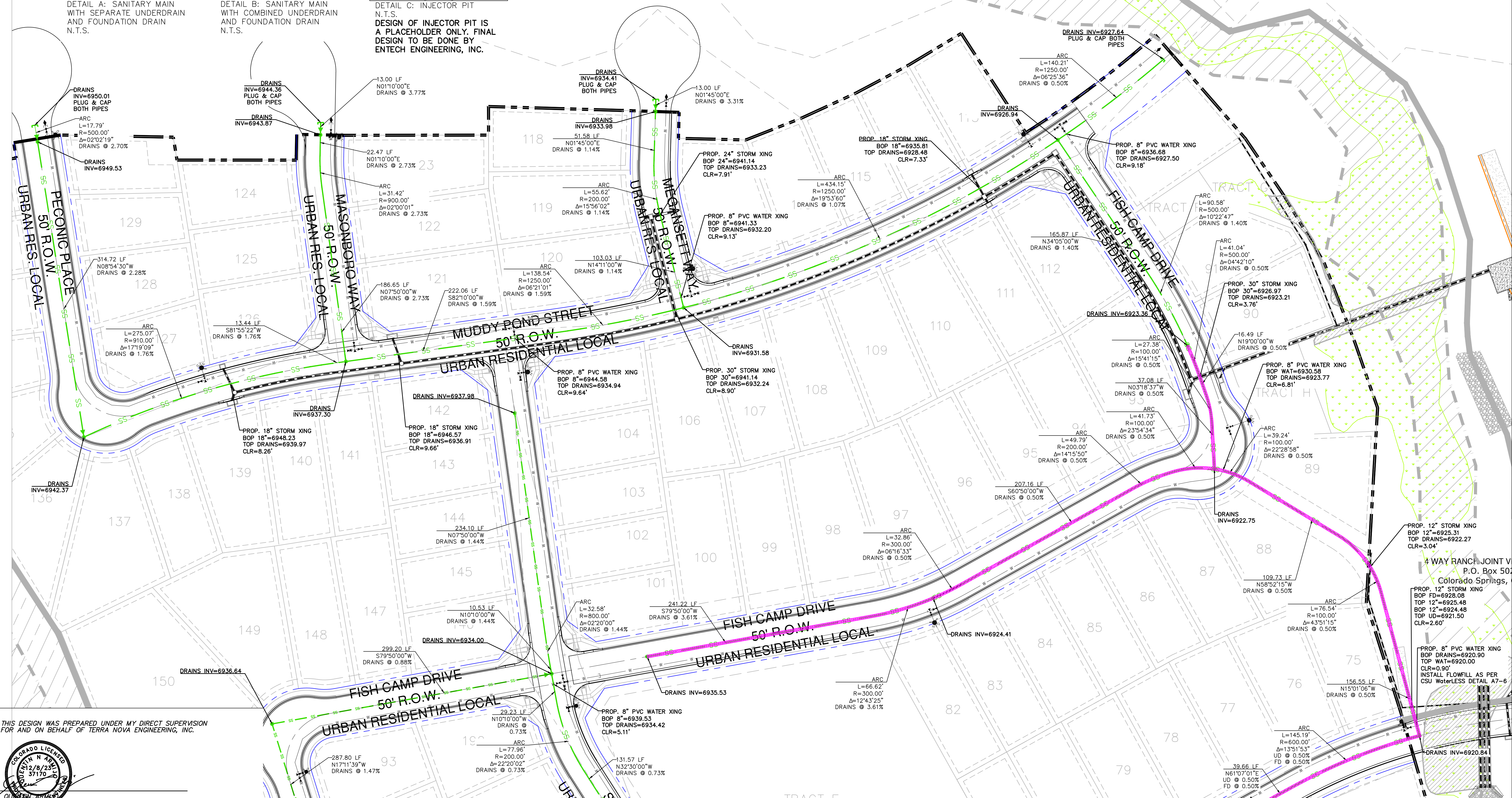
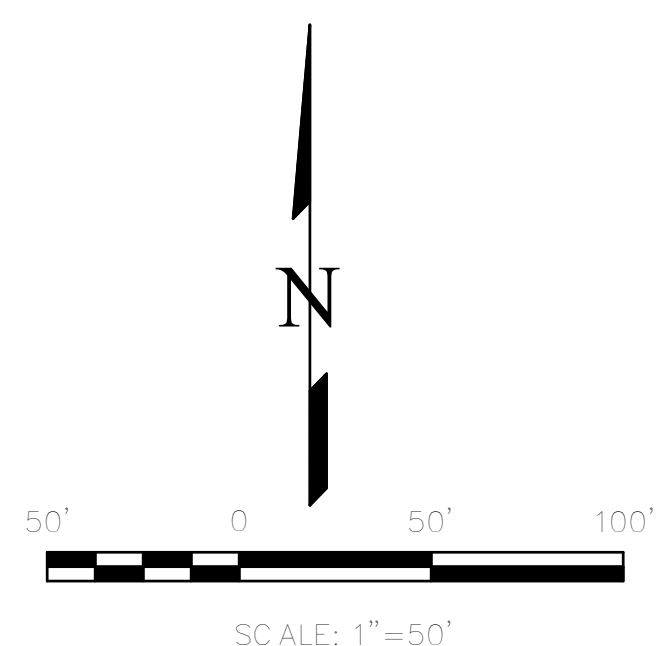
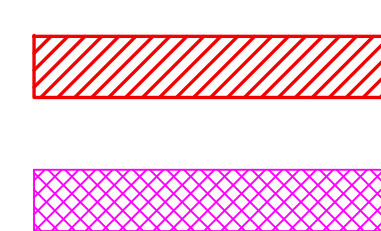
DESIGNED BY QNA
 DRAWN BY JS
 CHECKED BY QNA

H-SCALE 1"=50'
 V-SCALE N/A

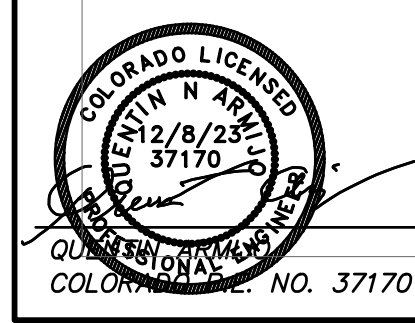
JOB NO. 2356.00
 DATE ISSUED 12/22/24
 SHEET NO. 53 OF 54



HATCH LEGEND:
 UNDERDRAIN PIPE CONFORMS TO DETAIL B
 LOCATION WHERE UNDERDRAIN PIPES ARE A HIGHER THE SANITARY SEER MAIN
 NO HATCH OVER SANITARY MAIN CONFORMS TO DETAIL A



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MATCHLINE - SEE SHEET 53

NO.	DESCRIPTION	DATE

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 CHECKED BY QNA

WATERBURY FILING NO. 1
 CONSTRUCTION SET
 UNDERDRAIN PLAN
 NORTH

H-SCALE 1"=50'
 V-SCALE N/A

JOB NO. 2356.00
 DATE ISSUED 12/22/24
 SHEET NO. 54 OF 54