

TOWN OF SOUTHBURY

PLAN
FOR THE
REPLACEMENT OF
OLD FIELD ROAD OVER
BULLET HILL BROOK
STATE PROJECT NO. 9130-009

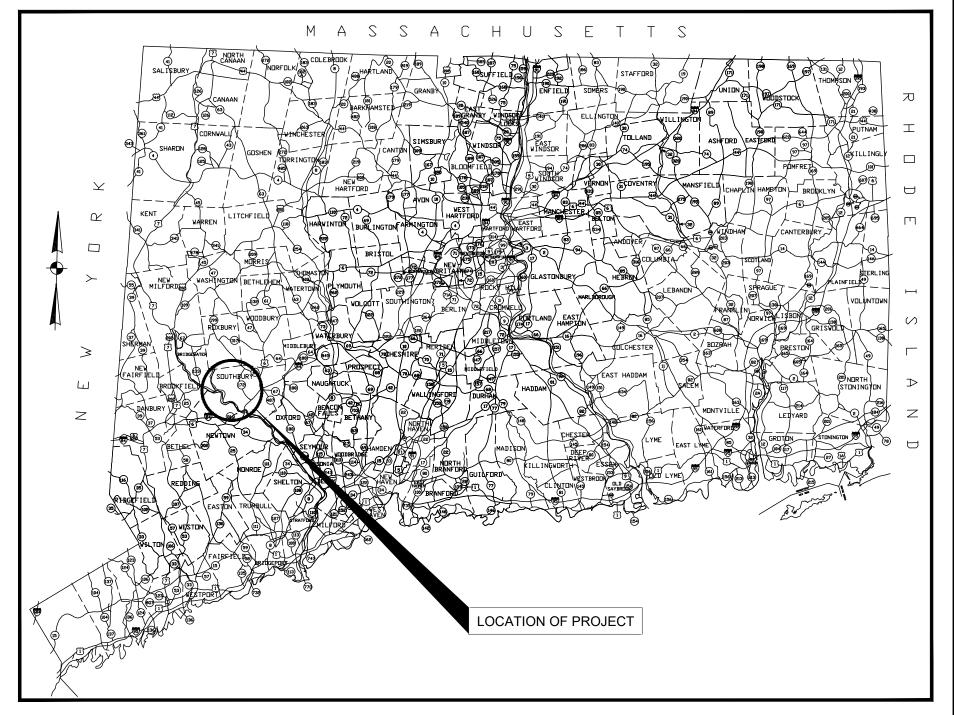
FROM STATION 1+50 TO STATION 4+50

LENGTH = 300'

SCALES: AS NOTED

TO BE MAINTAINED BY THE TOWN OF SOUTHBURY

Jeff Manville
DIRECTOR OF PUBLIC WORKS
Blake Leonard



PROJECT VICINITY MAP

NOT TO SCALE

DESIGN DATA
FUNCTIONAL CLASSIFICATION: RURAL LOCAL ROAD
DESIGN SPEED: 25 mph
ADT (FST.): 100

CONSTRUCTION SPECIFICATIONS: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIAL PROVISIONS

February 24, 2025

	LIST OF DRAWING REVISION	NS	
SHEET NO.	DESCRIPTION	DATE	BY

SHEET NO.	TITLE	DRAWING	SHEET NO.	STANDARD DRAWINGS	FHWA APPROVAL DAT
1	TITLE SHEET	TITLE	HW-286_01	DRAINAGE TRENCH EXCAVATION	11-09-22
2	GENERAL NOTES AND TYPICAL SECTION	GEN-01	HW-586_01	CATCH BASIN AND DROP INLET TYPES "C" AND "C-L" STRUCTURES	01-05-24
3	EXISTING CONDITIONS PLAN	EXC-01	HW-586_07a	CATCH BASIN TYPE "C" AND "C-L" TOPS	01-05-24
4	ROADWAY PLAN & PROFILE	PLA-01	HW-586_08	CATCH BASIN FRAMES AND GRATES	11-09-22
5 - 12	CROSS SECTIONS	XSC-01 - XSC-08	HW-586_10a	MANHOLE FRAME AND COVER	11-08-22
13	CULVERT GENERAL PLAN	STR-01	HW-586_10c	REINFORCED PRECAST CONCRETE MANHOLE	11-08-22
14	CULVERT PROFILE	STR-02	HW-815_01	BITUMINOUS CONCRETE CURBING	11-08-22
15	BORING LOGS	STR-03	HW-822_01	TEMPORARY PRECAST CONCRETE BARRIER CURB	11-09-22
16	CULVERT ELEVATION & SECTIONS	STR-04	HW-921_01	CONCRETE SIDEWALKS	11-08-22
17	CULVERT LAYOUT PLAN	STR-05	TR-1220_01	SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS	8/2018
18 - 19	PRECAST CONCRETE BOX CULVERT DETAILS	STR-06 - STR-07	TR-1220_02	CONSTRUCTION SIGN SUPPORTS AND CHANNELIZING DEVICES	8/2018
20 - 22	CULVERT MISCELLANEOUS DETAILS	STR-08 - STR-10			
23	ENDWALL DETAILS	STR-11			
24	BRIDGE RAIL DETAILS	STR-12			
25	ROCK WEIR DETAIL	STR-13			
26	WATER HANDLING PLAN	WTH-01			
27	SEDIMENT & EROSION CONTROL NOTES	SED-01			
28 - 29	SEDIMENT & EROSION CONTROL DETAILS	SED-02 - SED-03			



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TITLE 1



GENERAL NOTES

- 1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE CONNECTICUT 18. THE INFORMATION SHOWN ON THESE PLANS IS BASED ON LIMITED INVESTIGATIONS AND IS IN NO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, FACILITIES AND INCIDENTAL CONSTRUCTION, FORM 819 (2024), SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.
- 2. THE PROJECT SITE SHALL CONSIST OF THE AREA WITHIN THE MUNICIPALLY-OWNED RIGHT OF WAY BETWEEN THE DESIGNATED BEGINNING AND END STATIONS FOR THE PROJECT AS SHOWN ON THE PLANS. IT SHALL ALSO INCLUDE ANY EASEMENTS TO PERFORM WORK ON PRIVATELY-OWNED PROPERTY AS DEPICTED ON THE PLANS. THE CONTRACTOR SHALL LIMIT HIS CONSTRUCTION ACTIVITIES TO THE AREA WITHIN THE PROJECT SITE.
- EROSION AND SEDIMENT CONTROL MEASURES WILL BE CONSTRUCTED IN ACCORDANCE WITH THE TOWN REGULATIONS, THE CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION, FORM 819, WITH LATEST REVISIONS, AND THE LATEST VERSION OF THE CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, UNLESS OTHERWISE SPECIFIED IN THE SPECIAL PROVISIONS.
- 4. ALL UNCONFINED IN-STREAM WORK SHALL BE PERFORMED BETWEEN JUNE 1 AND SEPTEMBER 30.
- 5. WORK SHALL COMPLY WITH THE REQUIREMENTS OF ARMY CORPS OF ENGINEERS CONNECTICUT GENERAL PERMIT 19 - "STREAM, RIVER AND BROOK CROSSINGS".
- 6. ALL DIMENSIONS ARE FEET UNLESS OTHERWISE NOTED.
- 7. THE CONTRACTOR SHALL WALK THE PROJECT PRIOR TO CONSTRUCTION WITH A REPRESENTATIVE FROM THE TOWN AND THE ENGINEER. TREES TO BE REMOVED SHALL BE MARKED IN THE FIELD. NO TREES 3" IN DIAMETER OR GREATER SHALL BE CUT DOWN FROM APRIL 15 TO AUGUST 31. EXTREME CARE SHALL BE EXERCISED TO PROTECT ALL TREES NOT DESIGNATED FOR REMOVAL NO TREES SHALL BE REMOVED UNTIL AUTHORIZATION IS GIVEN BY THE TOWN. COST IS INCLUDED IN THE ITEM "CLEARING AND GRUBBING".
- 8. ANY PHYSICAL FEATURES DISTURBED BY THE CONTRACTOR SHALL BE REPLACED OR RECONSTRUCTED AS DIRECTED BY THE ENGINEER TO A CONDITION EQUAL TO OR BETTER THAN PRIOR TO CONSTRUCTION AT THE CONTRACTORS EXPENSE.
- 9. ALL DIMENSIONS AND ELEVATIONS MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF MANUFACTURING AND CONSTRUCTION, AND NECESSARY ADJUSTMENTS MADE AS ORDERED BY THE ENGINEER.
- 10. WORKING HOURS SHALL BE LIMITED TO THE HOURS BETWEEN 7:00 A.M. AND 5:00 P.M., MONDAY THRU FRIDAY. NO WORK WILL BE PERFORMED ON WEEKENDS, HOLIDAYS, OR SPECIAL DAYS AS DIRECTED BY THE ENGINEER. THE ONLY EXCEPTIONS TO THESE LIMITATIONS WILL BE AS 24. EXISTING PAVEMENT SHALL BE REMOVED IN FILL AREAS PRIOR TO PLACING FILL. EXISTING DIRECTED BY THE ENGINEER TO CORRECT OR HANDLE EMERGENCY CONDITIONS, OR IF APPROVED BY THE ENGINEER IN WRITING.
- 11. THE CONTRACTOR SHALL SUBMIT A DETAILED SCHEDULE FOR APPROVAL PRIOR TO COMMENCING CONSTRUCTION.
- 12. THE CONTRACTOR SHALL PROVIDE ACCESS TO ALL PROPERTIES AT ALL TIMES DURING CONSTRUCTION. COORDINATE ACCESS WITH PAVING OPERATIONS SO THAT JOINTS ARE MINIMIZED (SEE MAINTENANCE AND PROTECTION OF TRAFFIC SPECIFICATIONS). NO TRANSVERSE
- 13. ALL DISTURBED AREAS THAT WILL NOT BE PAVED SHALL RECEIVE 4" OF TOPSOIL AND TURF ESTABLISHMENT UNLESS OTHERWISE NOTED.

JOINTS SHALL BE ALLOWED DURING THE PAVING OF THE WEARING COURSE.

- 14. RCP SHALL BE CLASS IV UNLESS NOTED OTHERWISE
- 15. ALL SWALES AND DITCHES WILL HAVE TEMPORARY "U" SHAPED STONE DIKES PLACED PERPENDICULAR TO FLOW AT 30' SPACING DURING CONSTRUCTION TO PREVENT EROSION
- 16. ALL REQUIRED UTILITY RELOCATIONS SHALL BE PERFORMED BY THE RESPECTIVE UTILITY COMPANY UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES PRIOR TO ANY WORK AND COORDINATE HIS WORK WITH THE UTILITY COMPANY WORK. THE CONTRACTOR SHALL COORDINATE WITH THE RESPECTIVE UTILITY COMPANY FOR THE UTILITY COMPANY TO HOLD ANY POLES THAT NEED TO BE SUPPORTED DURING THE CONTRACTOR'S TRENCHING OPERATIONS. THE COST TO COORDINATE THIS WORK WITH THE UTILITY COMPANIES SHALL BE INCIDENTAL TO THE PROJECT UNLESS A SPECIFIC PAY ITEM IS INCLUDED.
- 17. THE CONTRACTOR WILL BE REQUIRED TO WORK IN PROXIMITY OF AND BENEATH OVERHEAD POWER LINES AS WELL AS TELEPHONE, CABLE TV AND TELECOMMUNICATION LINES. THE OVERHEAD LINES ARE NOT ANTICIPATED TO BE DE-ENERGIZED DURING THE PROSECUTION OF THIS WORK. THE CONTRACTOR SHALL SPECIFICALLY COMPLY WITH THE REQUIREMENTS DETAILED IN OSHA REGULATIONS (STANDARDS 29 CFR) CRANES AND DERRICKS - 1926.550 AS WELL AS OTHER APPLICABLE OSHA STANDARDS. THE CONTRACTOR SHALL MAINTAIN A SAFE DISTANCE FROM ALL UTILITY POLES DURING CONSTRUCTION ACTIVITIES.

- WAY WARRANTED TO INDICATE THE TRUE CONDITIONS OR ACTUAL QUANTITIES OF WORK REQUIRED. LOCATIONS OF EXISTING UTILITIES AND UNDERGROUND STRUCTURES HAVE BEEN COMPILED FROM THE BEST AVAILABLE INFORMATION. THIS INFORMATION WAS COMPILED UTILIZING UTILITY COMPANY & TOWN RECORD MAPS AND FIELD SURVEY AND THEREFORE, IS CONSIDERED TO BE APPROXIMATE. ALL UTILITIES AND UNDERGROUND STRUCTURES MAY NOT BE SHOWN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING THE ACTUAL LOCATION OF ALL UTILITIES AND TO NOTIFY UTILITY COMPANIES OF NECESSARY RELOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK WITH THAT OF THE UTILITY COMPANIES. UTILITY LINES DAMAGED BY THE CONTRACTOR SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND THE UTILITY COMPANY AND THE COST OF REPAIR WORK SHALL BE BORNE BY THE CONTRACTOR. THE CONTRACTOR SHALL CONTACT CALL BEFORE-U-DIG AT 1-800-922-4455 FOR MARKING OF EXISTING UTILITIES AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF EXCAVATION (MONDAY THROUGH FRIDAY, EXCLUDING HOLIDAYS).
- 19. THERE SHALL BE NO DIRECT PAYMENT FOR TEMPORARY SUPPORT OR PROTECTION OF EXISTING OR RELOCATED UTILITIES DURING CONSTRUCTION UNLESS OTHERWISE SPECIFICALLY INCLUDED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL COORDINATE SUPPORT AND PROTECTION REQUIREMENTS WITH THE RESPECTIVE UTILITY COMPANY. THE COST OF THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- 20. CONTRACTOR TO SUPPLY UTILITY COMPANIES WITH SUFFICIENT VERTICAL AND HORIZONTAL STAKEOUT OF PROPOSED STORM DRAINAGE, PROPOSED ROADWAY, AND OTHER PROPOSED IMPROVEMENTS TO PERFORM UTILITY RELOCATIONS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE ITEM "CONSTRUCTION STAKING."
- 21. ANTICIPATED UTILITY POLE RELOCATIONS, IF ANY, ARE SHOWN ON THE PLANS. ADDITIONAL POLE RELOCATIONS MAY BE REQUIRED. CONTRACTOR TO PROVIDE STAKEOUT OF PROPOSED IMPROVEMENTS PRIOR TO COMMENCEMENT OF WORK TO DETERMINE IF ADDITIONAL POLE RELOCATIONS ARE REQUIRED. POLE RELOCATIONS MAY NOT BE COMPLETED PRIOR TO THE INSTALLATION OF STORM DRAINAGE AND ROADWAY IMPROVEMENTS. THE COST OF THIS WORK SHALL BE INCIDENTAL TO THE PROJECT.
- 22. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH THE UTILITY COMPANIES TO RESET ALL UTILITY BOXES TO FINISHED GRADE. THERE WILL BE NO SEPARATE PAYMENT TO COORDINATE THIS WORK OR CLAIM FOR TIME EXTENSION.
- 23. THE CONTRACTOR SHALL RESET ALL WATER AND GAS CURB STOPS BOXES AND WATER AND GAS GATE VALVE BOXES TO FINISHED GRADE. THERE SHALL BE NO SEPARATE MEASUREMENT OR PAYMENT FOR THIS WORK AS IT IS INCIDENTAL TO CONSTRUCTION.
- PAVEMENT OUTSIDE OF THE CUT AND FILL LIMITS THAT WILL NOT BE USED IN THE PROPOSED CONDITIONS SHALL BE REMOVED. PAYMENT SHALL BE MADE UNDER THE ITEM "EARTH EXCAVATION."
- 25. ALL EXISTING DRAINAGE PIPES AND CULVERTS WITHIN THE PROJECT SLOPE LIMITS THAT ARE DESIGNATED TO BE REMOVED SHALL BE REMOVED AND BACKFILLED AS SPECIFIED IN SECTION 2.05 "TRENCH EXCAVATION" UNLESS OTHERWISE SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. COORDINATE THIS WORK WITH THE RECONNECTION OF ANY EXISTING FOUNDATION AND OTHER DRAINS TO THE PROPOSED DRAINAGE SYSTEM
- 26. ALL TYPE 'C' CATCH BASIN TOP OF FRAME ELEVATIONS SHALL BE MEASURED IN THE CENTER OF THE GRATE AT THE GUTTER LINE AND REFLECT THE ELEVATION WITH THE STANDARD DEPRESSION AS SHOWN ON "DETAILS OF DEPRESSED GUTTER STRIP FOR TYPE 'C' CATCH BASIN" (SEE CTDOT STANDARD DETAIL SHEET NO. HW-507 01). ALL TYPE 'C-L' CATCH BASIN TOP OF FRAME ELEVATIONS SHALL BE MEASURED IN THE CENTER OF THE GRATE.
- 27. THE CONTRACTOR SHALL MAINTAIN ALL ROAD NAME SIGNS AS INDICATED ON THE PLANS AND SHALL MAINTAIN ALL TRAFFIC CONTROL SIGNS AS NEEDED DURING CONSTRUCTION AND AS DIRECTED BY THE ENGINEER. COST IS INCLUDED IN THE ITEM "MAINTENANCE AND PROTECTION OF TRAFFIC".
- 28. PLANIMETRIC AND TOPOGRAPHIC FEATURES ARE BASED ON FIELD SURVEY PERFORMED BY CARDINAL ENGINEERING ASSOCIATES, IN SEPTEMBER 2024. SURVEY BASELINE CONFORMS TO CLASS A-2 HORIZONTAL ACCURACY. STREETLINE AND PROPERTY LINE INFORMATION (IF SHOWN) ARE APPROXIMATE AND BASED ON LIMITED FIELD SURVEY. ALL ELEVATIONS ARE BASED ON NAVD 88. HORIZONTAL COORDINATES ARE BASED ON CONNECTICUT STATE PLANE COORDINATE SYSTEM (NAD 83). VERTICAL ACCURACY IS CLASS T-2.

LIST OF ABBREVIATIONS

AGGR	AGGREGATE	NOM	NOMINAL
λH	AHEAD	NO	NUMBER
4	ALGEBRAIC DIFFERENCE IN GRADES	PERF	PERFORATED
APPROX	APPROXIMATE	POB	POINT OF BEGINNING
ASPH	ASPHALT	PCC	POINT OF COMPOUND CURVATURE
3K	BACK	PC	POINT OF CURVATURE
<u> </u>	BASELINE	POE	POINT OF ENDING
BM	BENCHMARK	PGA	POINT OF GRADE APPLICATION
BIT	BITUMINOUS	PI	POINT OF INTERSECTION
BCLC	BITUMINOUS CONCRETE LIP CURBING	PRC	POINT OF REVERSE CURVE
CGR	CABLE GUIDERAIL	PT	POINT OF TANGENCY
CI / CIP	CAST IRON PIPE	PVC	POINT OF VERTICAL CURVATURE
CB	CATCH BASIN	PVCC	POINT OF VERTICAL COMPOUND CURVATURE
2	CENTERLINE	PVI	POINT OF VERTICAL INTERSECTION
CC	CONCRETE CURBING	PVRC	POINT OF VERTICAL REVERSE CURVE
CL	CLASS	PVT	POINT OF VERTICAL TANGENCY
CONC	CONCRETE	POC	POINT ON CURVATURE
CP	CONTROL POINT	POT	POINT ON TANGENT
COR	CORNER	PVC	POLYVINYL CHLORIDE PIPE
CMP	CORRUGATED METAL PIPE	P	PROPERTY LINE
CPFE	CORRUGATED POLYETHYLENE FLARED END	R	RADIUS
CPP	CORRUGATED POLYETHYLENE PIPE	RR	RAILROAD
CY	CUBIC YARD	K	RATE OF VERTICAL CURVATURE
DIA	DIAMETER	REINF	REINFORCED
DBL	DOUBLE	RCCE	REINFORCED CONCRETE CULVERT END
DRIVE	DRIVEWAY	RCP	REINFORCED CONCRETE PIPE
DI / DIP	DUCTILE IRON PIPE	REQD	REQUIRED
ΕA	EACH	RT	RIGHT
P	EDGE OF PAVEMENT	ROW	RIGHT OF WAY
L / ELEV	ELEVATION	RSC	RIGID STEEL CONDUIT
X / EXIST	EXISTING	RD	ROAD
G	FINISHED GRADE	SAN	SANITARY
P	FLAGPOLE	SS	SANITARY SEWER
E	FLARED END	SED	SEDIMENTATION
:L	FLOW LINE	SCB	SEDIMENT CONTROL BALES
T	FOOT	SCS	SEDIMENT CONTROL SYSTEM
ND	FOUND	SHLD	SHOULDER
OUND	FOUNDATION	SF	SQUARE FOOT
3	GAS	SY	SQUARE YARD
SV	GAS VALVE	STD	STANDARD
GSC / GC	GRANITE STONE CURBING	STA	STATION
I P	HIGH POINT	SSD	STOPPING SIGHT DISTANCE
IORIZ	HORIZONTAL	ST	STREET
IRS	HOURS	ફ	STREET LINE
HYD	HYDRANT	TBD	TO BE DETERMINED
NV	INVERT	TF	TOP OF FRAME
E	INVERT ELEVATION	TYP	TYPICAL
P	IRON PIN	UD	UNDERDRAIN
.T	LEFT	VERT	VERTICAL
	LENGTH	VC	VERTICAL CURVE
.VC	LENGTH OF VERTICAL CURVE	VF	VERTICAL FEET
.TP	LIGHT POLE	VCP	VITRIFIED CLAY PIPE
.F	LINEAR FEET	W	WATER
.P	LOW POINT	WV	WATER VALVE
^	LUNAD OUNA		

STANDARD CONVENTIONS

PROPOSED

EXISTING

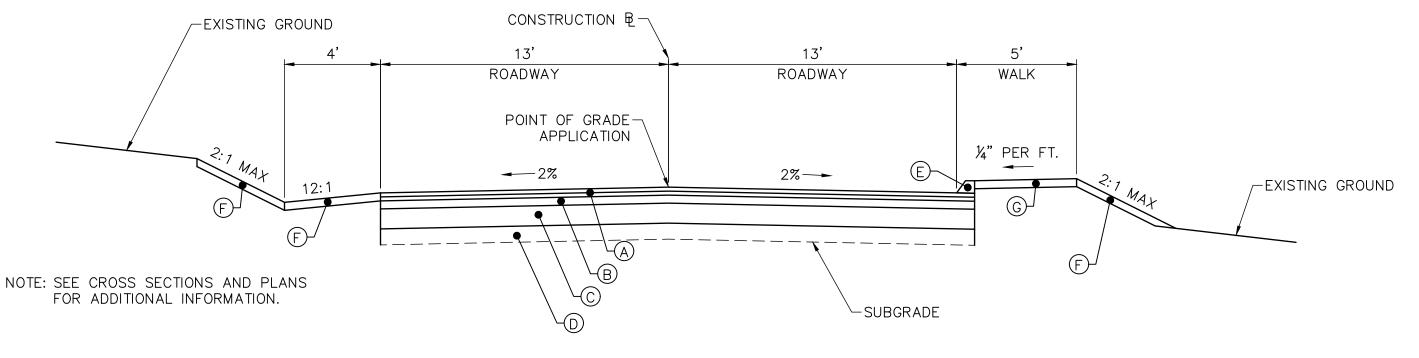
<u> </u>		11101 0028
	APPROXIMATE LIMIT OF CUT SLOPE	
	APPROXIMATE LIMIT OF FILL SLOPE	
	APPROXIMATE PROPERTY LINE	
	APPROXIMATE STREET LINE	
	BASELINE STATION	0+00
Bit	BITUMINOUS CONCRETE DRIVEWAY	
	BORING NUMBER B10 (SEE BORING LOG SHEET)	B10 🛣
	CATCH BASIN	
\triangle	CONTROL POINT	A
Conc	CONCRETE DRIVEWAY/ CONCRETE DRIVEWAY RAMP	
	CULVERT END	
	DRAINAGE DITCH	
Size & Type	DRAINAGE PIPE	SIZE & TYPE
======		
	EASEMENT LINE (PERMANENT)	
	EASEMENT LINE (TEMPORARY)	
E ——	ELECTRIC LINE (OVERHEAD OR UNDERGROUND)	
G	GAS LINE	
OV. NAV	GAS TEST PIT	TP G1 -
GV WV	GAS VALVE or WATER VALVE	
	GUIDE RAIL	-1 1 1
(HV)	HIGH VOLTAGE OVERHEAD LINE	
Number or Name	HOUSE/ STRUCTURE	
×	HYDRANT	**
^	INLAND WETLAND LIMITS (STATE)	
	INLAND WETLAND LIMITS (FEDERAL)	
	MAILBOX	
(D)	MANHOLE (STORM)	0
(\$)	MANHOLE (SANITARY)	0
□ Mon	MONUMENT	■ MON
	NORTH ARROW	
OHW	ORDINARY HIGH WATER	
——————————————————————————————————————	OVERHEAD UTILITY WIRES	
	RIPRAP APRON	
	SANITARY SERVICE CONNECTION	
	SANITARY SEWER	SIZE & TYPE
=	SEDIMENTATION CONTROL SYSTEM	-00
	SIGN	
0		00.0
x 33.2	SPOT ELEVATION	x 33.2
00000000	STONE WALL	
	TELEPHONE LINE (OVERHEAD OR UNDERGROUND)	
	TEST HOLE NUMBER 5 (SEE CONTRACT DOCUMENTS)	TH-5
	TREE	
	TREE LINE	
Size & Type	UNDERDRAIN	SIZE & TYPE
	"U" SHAPED STONE DIKE	
Number & Owner	UTILITY POLE	
		·

WATER COURSE

WATER TEST PIT

WATER LINE

WIRE FENCE



(E) BUTUMINOUS CONCRETE LIP CURBING

G 4" - CONCRETE SIDEWALK

(F) 4" - TOPSOIL AND TURF ESTABLISHMENT

<u>LEGEND</u>

ROADWAY

TYPICAL SECTION

NOT TO SCALE

- 2" HMA SO.375 WEARING SURFACE & 2" HMA SO.5 BINDER COURSE, TRAFFIC LEVEL 2 HMA
- 4" PROCESSED AGGREGATE BASE
- 10" SUBBASE ON EARTH, 18" ON ROCK
- ADDITIONAL SUBBASE AS NEEDED

-SAWCUT, CLEAN AND APPLY TACK COAT (SEE NOTE 5 BELOW) PROPOSED PAVEMENT -EXISTING BITUMINOUS PAVEMENT SEE TYPICAL SECTION -SEE NOTE 2 PROCESSED-AGGREGATE BASE **SUBBASE**

NOTES:

LS

MAX

MBR

MIN

NTS

LUMP SUM

MANHOLE

MAXIMUM

MINIMUM

MONUMENT

NOT TO SCALE

METAL BEAM RAIL

METAL CULVERT END

- 1) THIS DETAIL IS TO BE USED WHERE "SAWCUT & MATCH EXISTING PAVEMENT" IS CALLED
- 2) OVERLAP BOTH BITUMINOUS CONCRETE COURSES OVER EXISTING SUBBASE.
- 3) MINIMUM THICKNESS TO BE SAME AS PROPOSED BITUMINOUS OR MATCH THICKNESS OF EXISTING PAVEMENT, WHICHEVER IS GREATER.
- 4) PAVEMENT MATCH TREATMENT WILL BE INCIDENTAL TO THE WORK.
- 5) TO BE PAID FOR UNDER THE ITEM "CUT BITUMINOUS CONCRETE PAVEMENT".

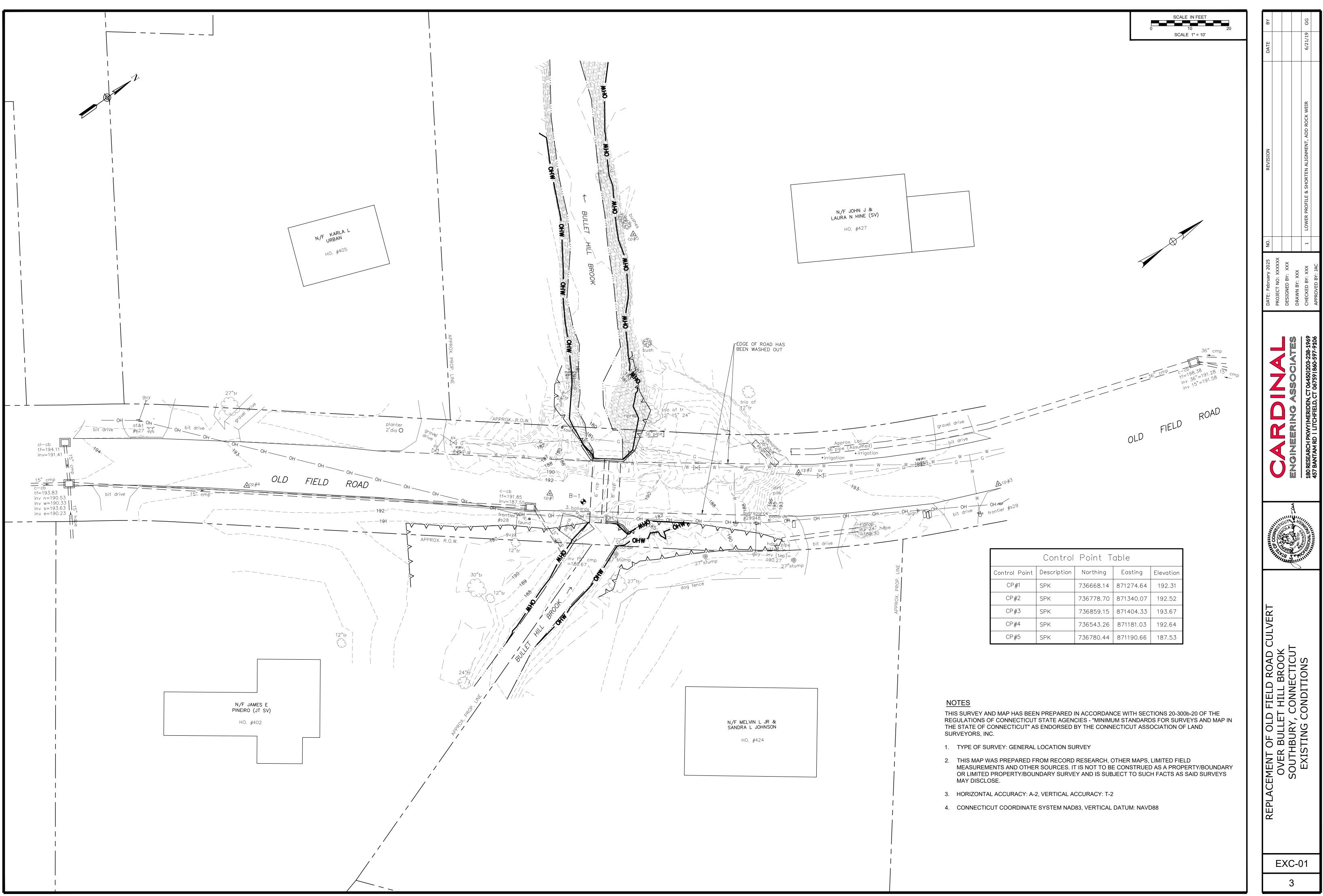
PAVEMENT TRANSITION DETAIL

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GEN-01

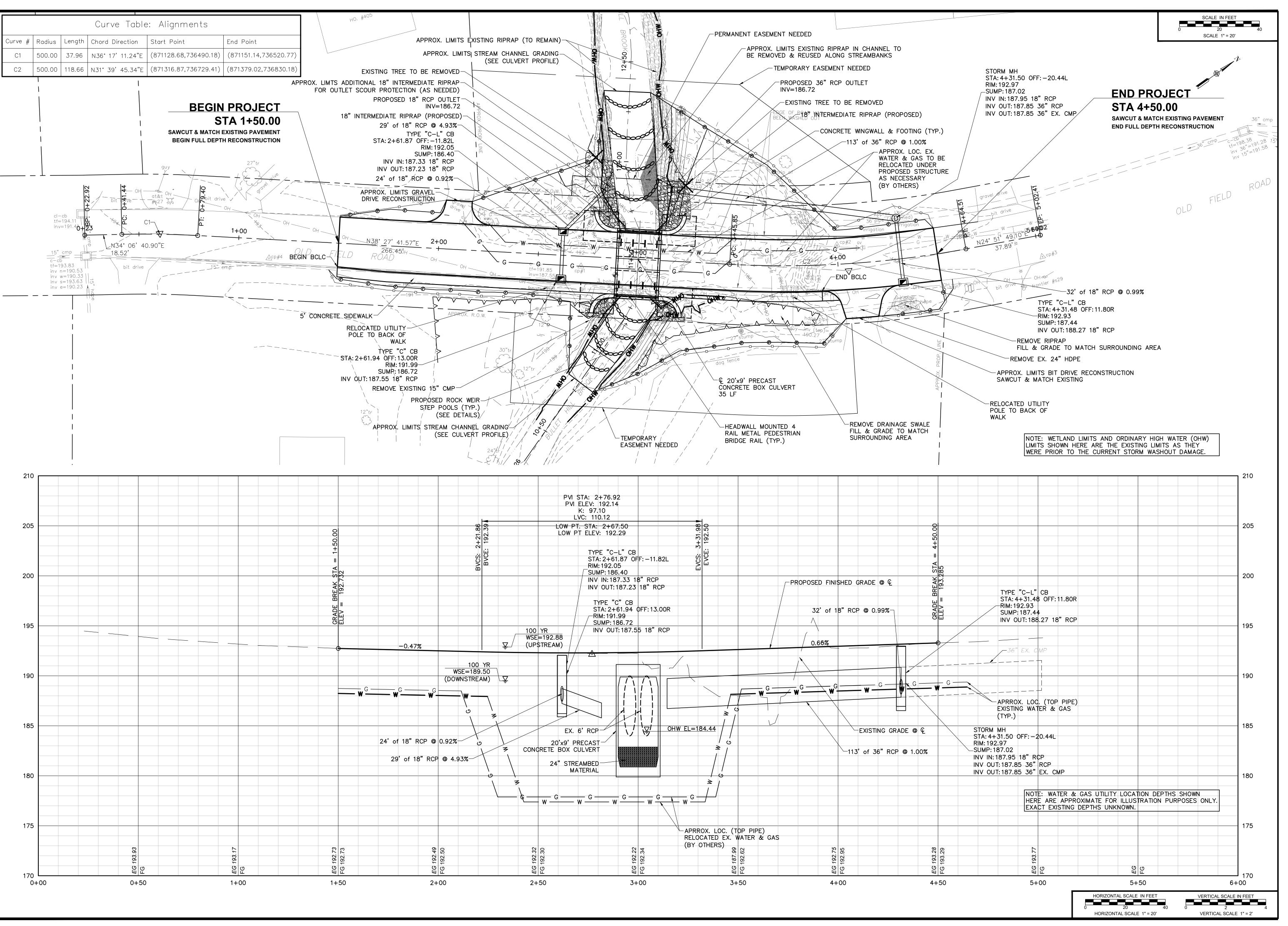
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DRAWN BY: XXX
CHECKED BY: XXX
APPROVED BY: JAC

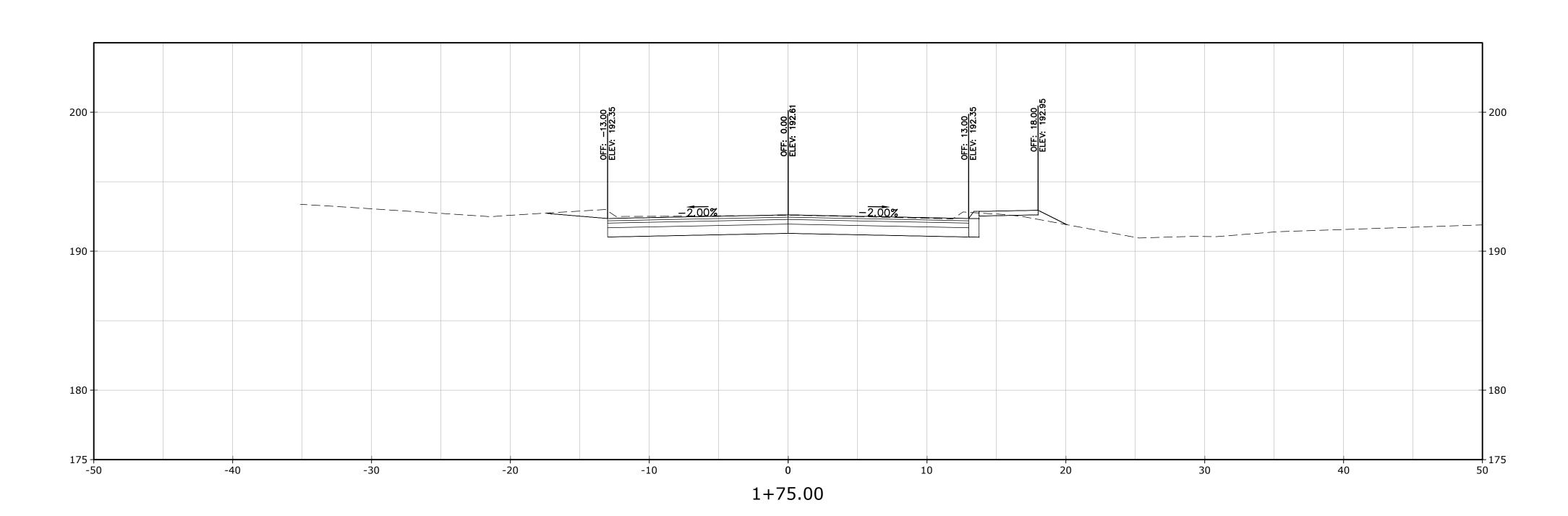
CARPORANCE SOCIATES

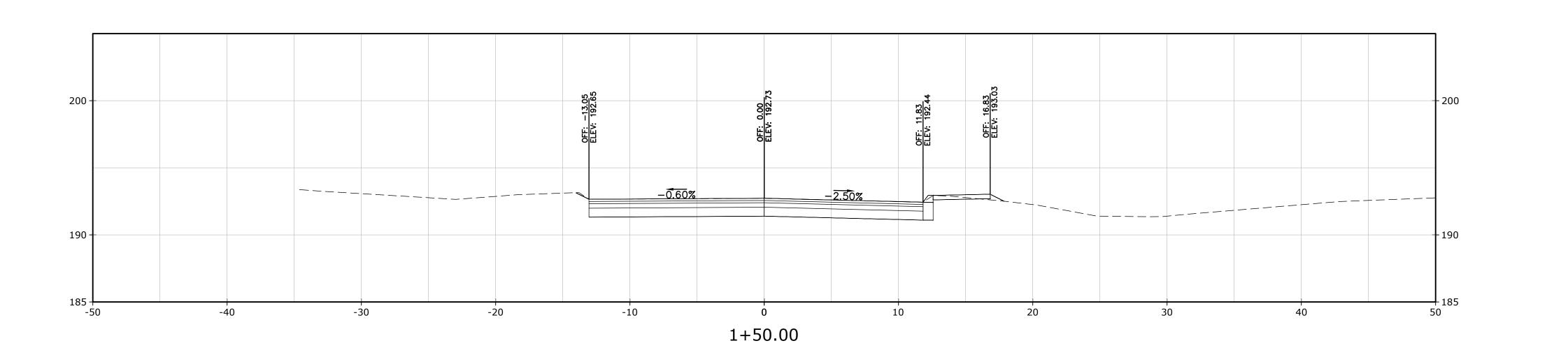
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CEMENT OF OLD FIELD ROAD CULVE OVER BULLET HILL BROOK SOUTHBURY, CONNECTICUT ROADWAY PLAN & PROFILE

PLA-01





DATE: Februa PROJECT NO:

JEERING ASSOCIATES

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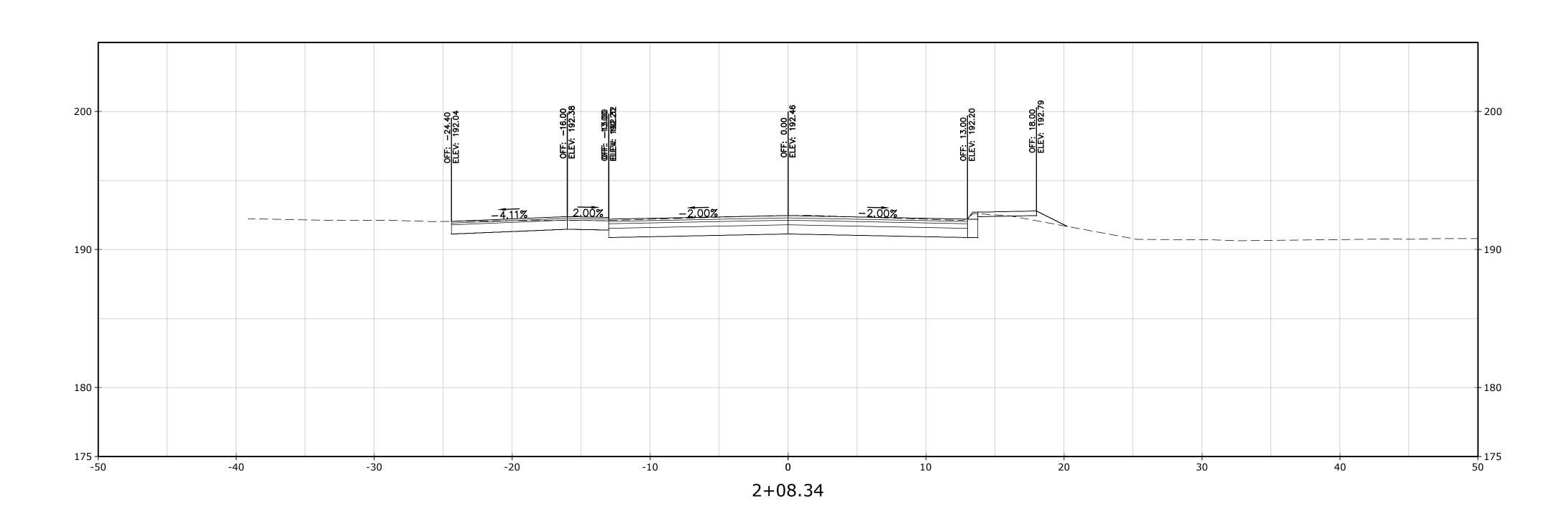
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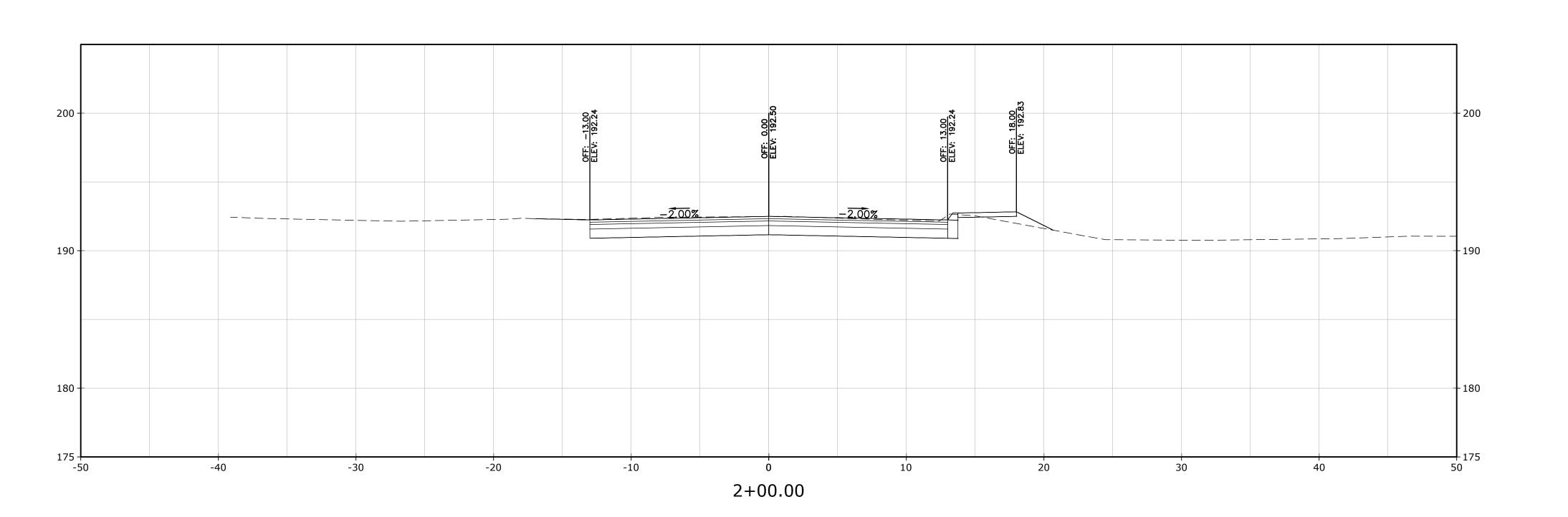
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ACEMENT OF OLD FIELD ROAD CULVERT OVER BULLET HILL BROOK SOUTHBURY, CONNECTICUT CROSS SECTIONS

XSC-1





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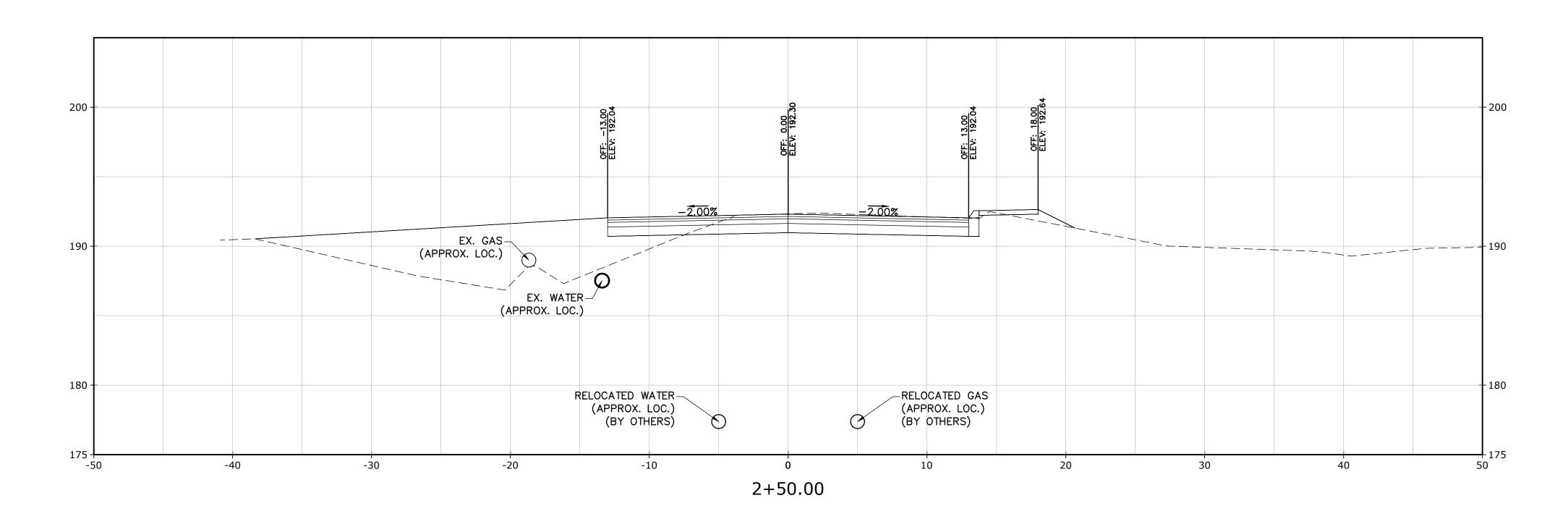
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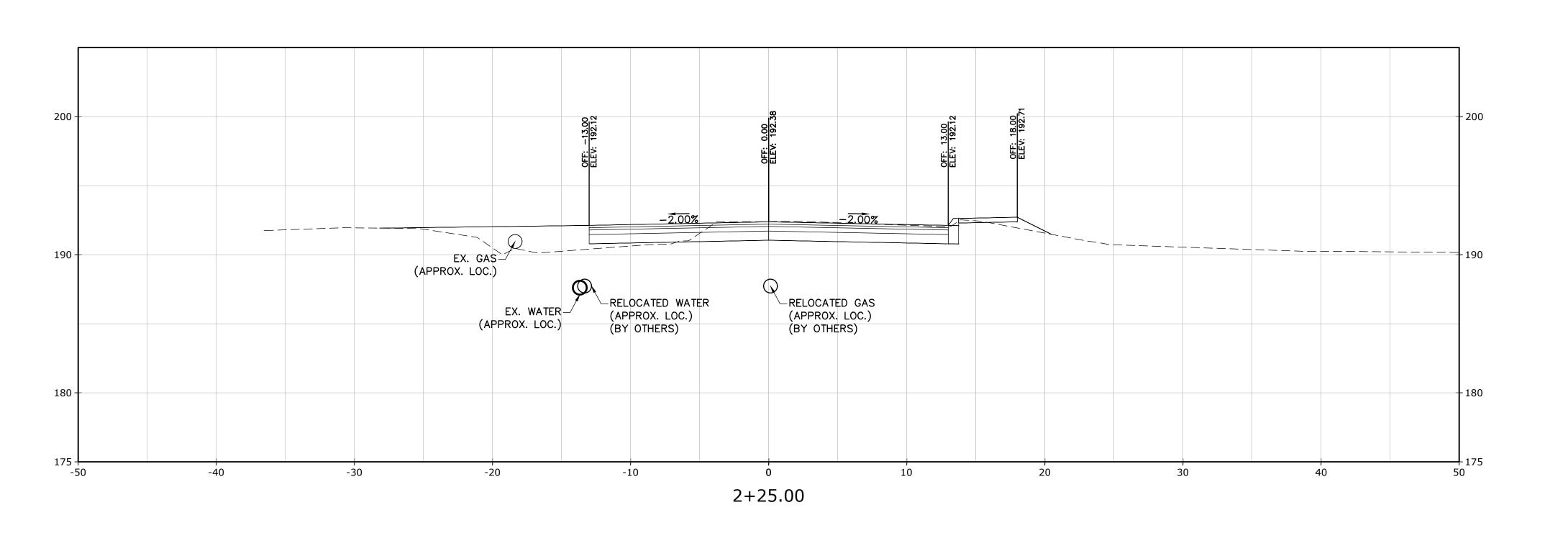
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LACEMENT OF OLD FIELD ROAD CULVERT OVER BULLET HILL BROOK SOUTHBURY, CONNECTICUT CROSS SECTIONS

XSC-2





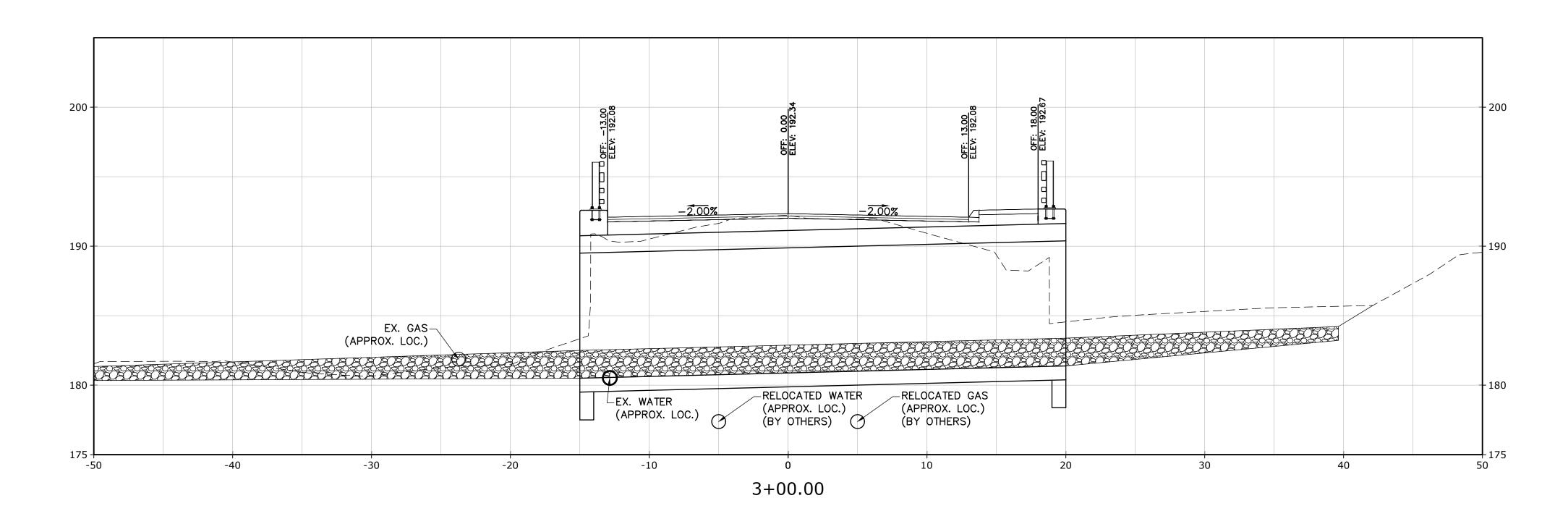
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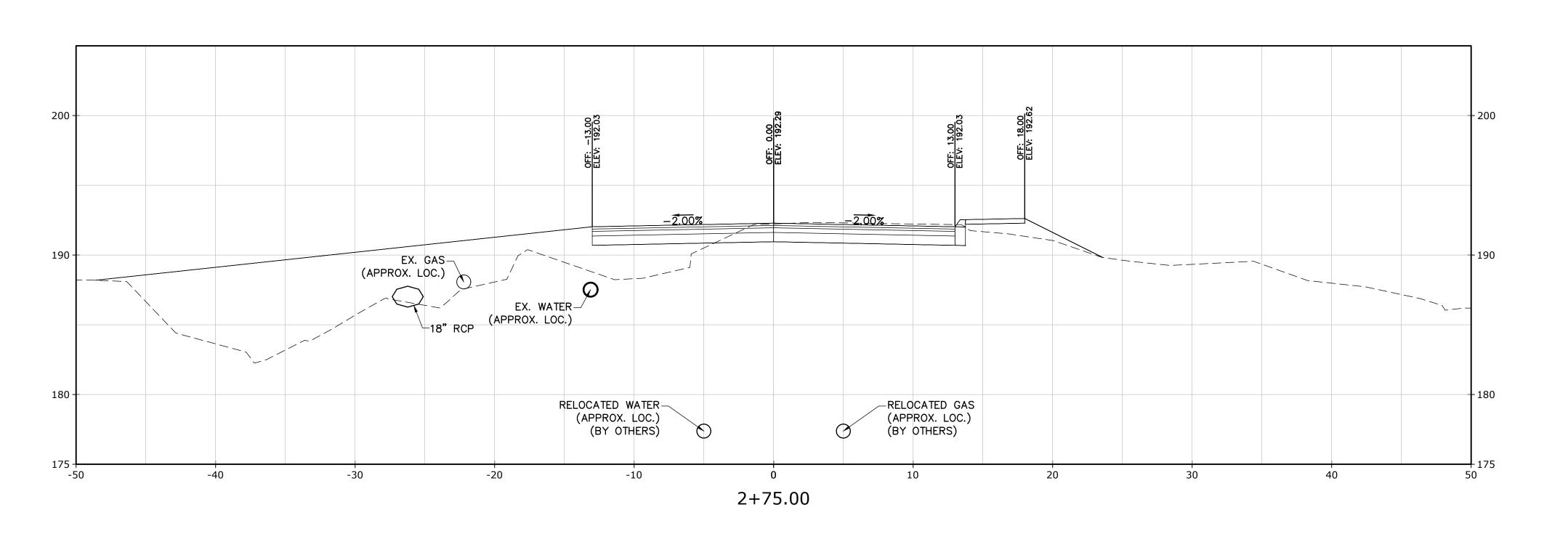
ENGINEERING ASSOCIATES

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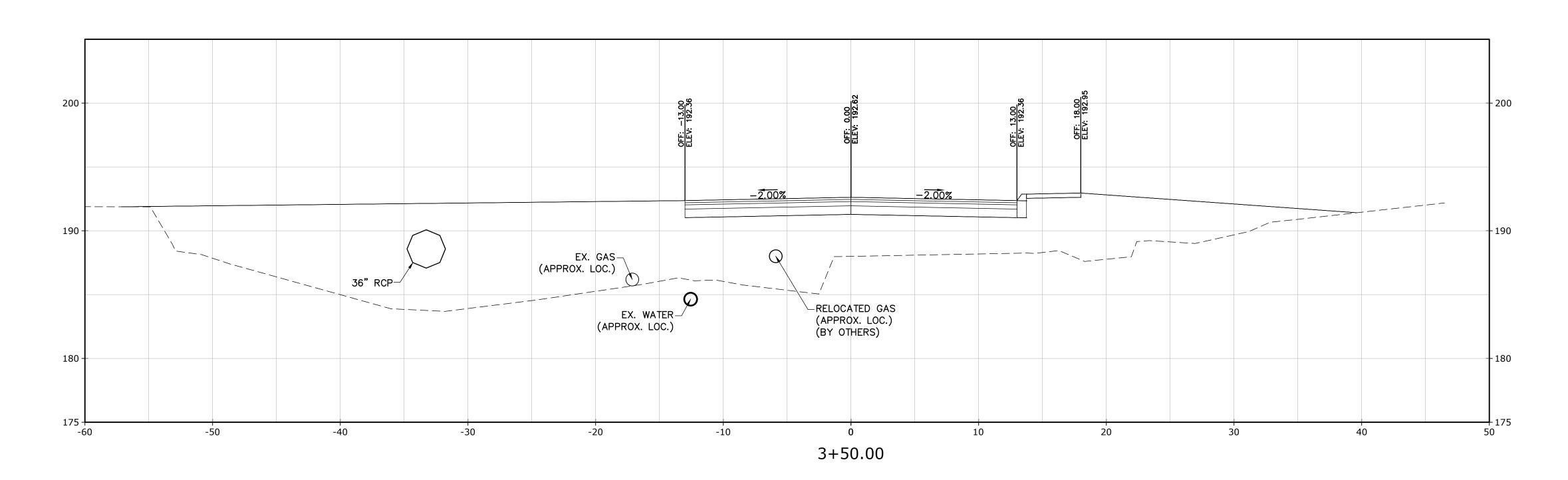
LACEMENT OF OLD FIELD ROAD CULVERT OVER BULLET HILL BROOK SOUTHBURY, CONNECTICUT CROSS SECTIONS

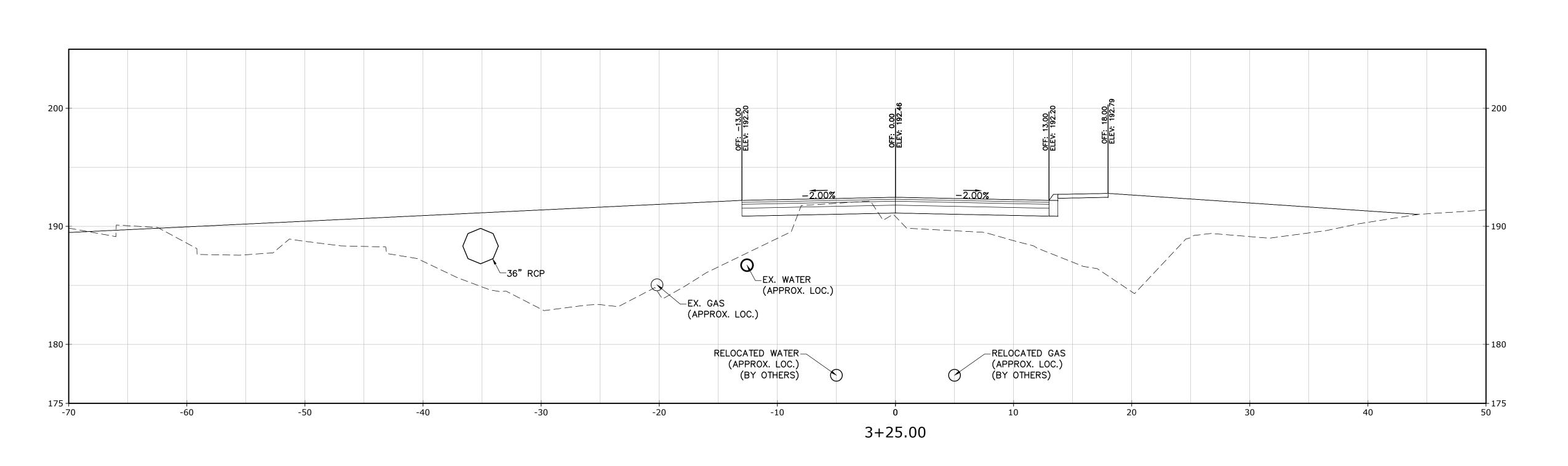




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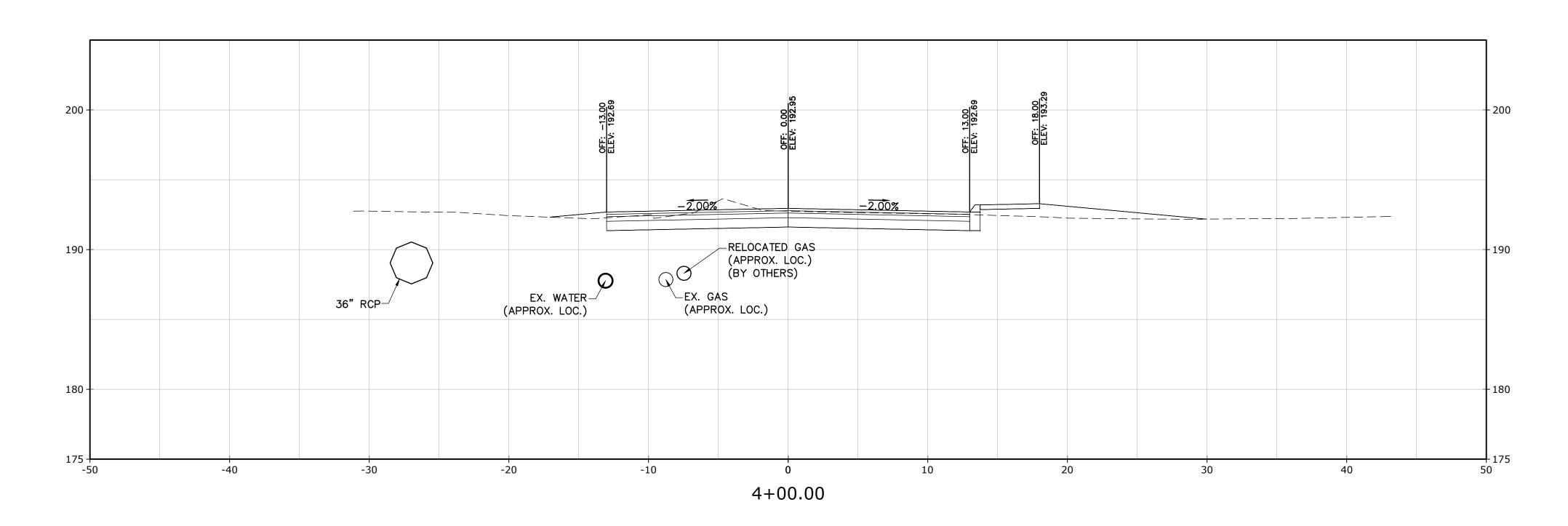


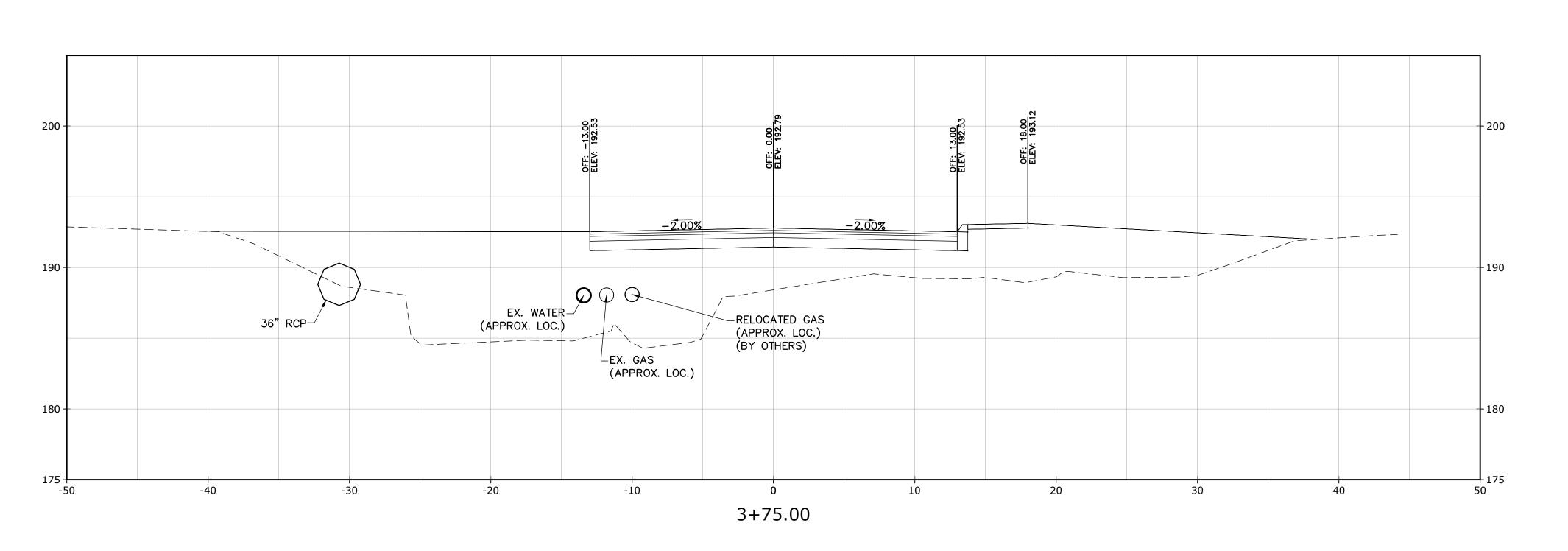
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ACEMENT OF OLD FIELD ROAD CULVEROVER BULLET HILL BROOK SOUTHBURY, CONNECTICUT CROSS SECTIONS



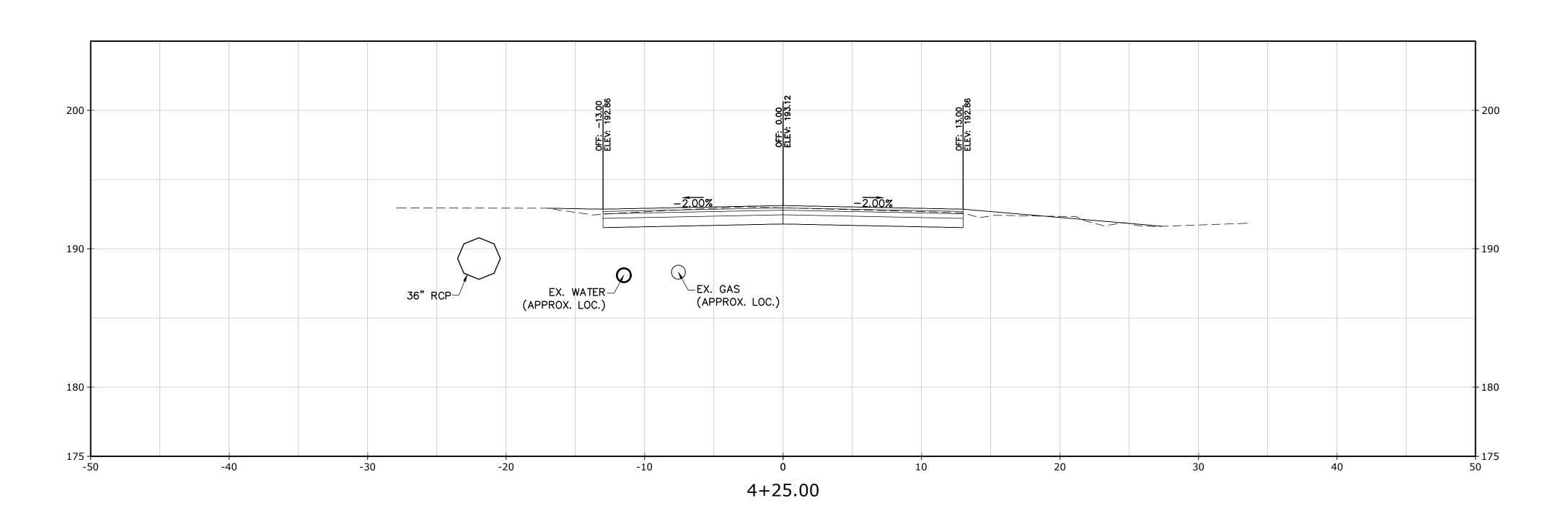


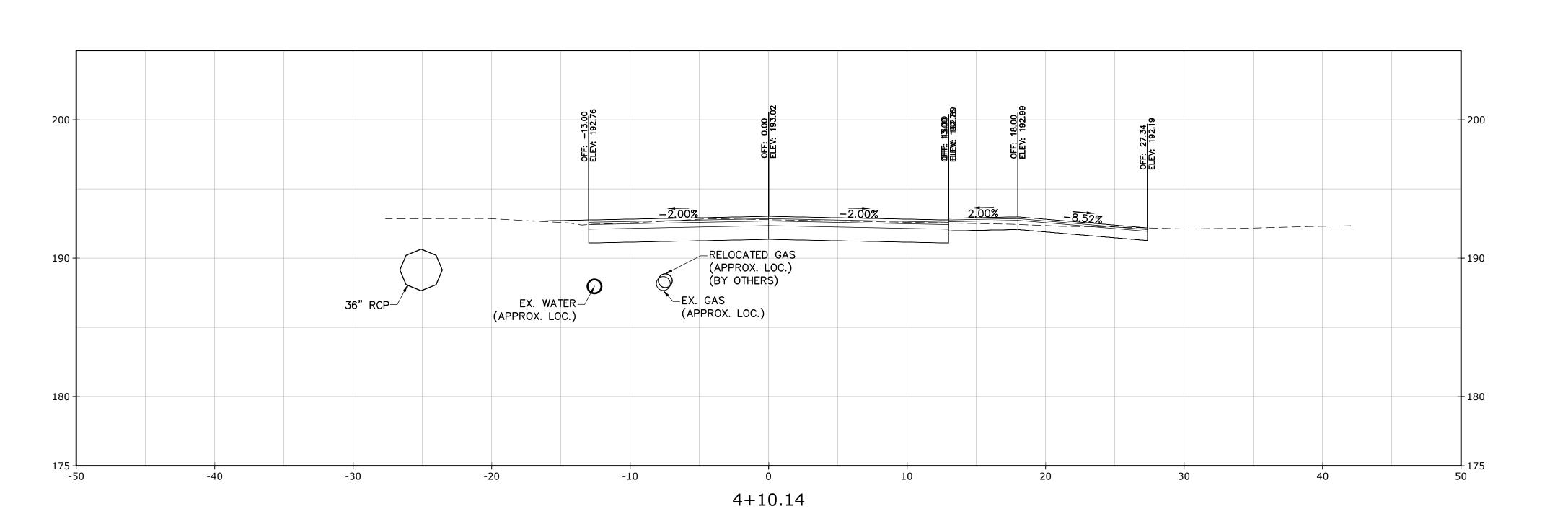
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LACEMENT OF OLD FIELD ROAD CULVERT OVER BULLET HILL BROOK SOUTHBURY, CONNECTICUT CROSS SECTIONS





REVISION DATE BY

DESIGNED BY: XXX
DRAWN BY: XXX
CHECKED BY: XXX
APPROVED BY: JAC





LACEMENT OF OLD FIELD ROAD CULVER OVER BULLET HILL BROOK SOUTHBURY, CONNECTICUT CROSS SECTIONS

200 -3.90% -5.60% 190 180 EX. WATER EX. GAS (APPROX. LOC.) 175 | -50 -30 -20 -10 10 20 -40 4+50.00

REVISION DA

FRING ASSOCIATES

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ID I LITCHFIELD, CT 06759|860-597-9106



180

ACEMENT OF OLD FIELD ROAD CULVERT OVER BULLET HILL BROOK SOUTHBURY, CONNECTICUT CROSS SECTIONS

XSC-8

GENERAL NOTES:

SPECIFICATIONS: CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 819 (2024) AND SPECIAL PROVISIONS.

<u>DESIGN SPECIFICATIONS</u>: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS EIGHTH EDITION, INCLUDING 2018 INTERIM REVISIONS AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL (2003 EDITION), UP TO AND INCLUDING 2019 REVISIONS.

MATERIAL STRENGTHS:

CONCRETE: CLASS PCC03340 f'c = 3,000 PSI

CLASS PCC04462 f'c = 4,000 PSI

CLASS PCC05562 f'c = 5,000 PSITHE CONCRETE STRENGTH, I'C, USED IN DESIGN OF THE CONCRETE COMPONENTS IS NOTED ABOVE. THE COMPRESSIVE STRENGTH OF THE CONCRETE IN THE CONSTRUCTED COMPONENTS SHALL CONFORM TO THE REQUIREMENTS OF 6.01 - CONCRETE FOR STRUCTURES, AND M.03 - PORTLAND CEMENT CONCRETE.

REINFORCEMENT (ASTM A615 GRADE 60): Fy = 60 KSI

LIVE LOAD: HL-93, LEGAL AND PERMIT VEHICLES

FUTURE PAVING ALLOWANCE: NONE

<u>DIMENSIONS:</u> WHEN DECIMAL DIMENSIONS ARE GIVEN TO LESS THAN THREE DECIMAL PLACES, THE OMITTED DIGITS SHALL BE ASSUMED TO BE ZEROS.

EXISTING DIMENSIONS: DIMENSIONS AND LOCATIONS OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY. THE CONTRACTOR SHALL TAKE ALL FIELD MEASUREMENTS NECESSARY TO ASSURE PROPER FIT OF THE FINISHED WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR APPROVAL, THE FIELD MEASUREMENTS SHALL ALSO BE SUBMITTED FOR REFERENCE BY THE REVIEWER.

UTILITIES:
THE FOLLOWING UTILITIES ARE LOCATED WITHIN THE PROJECT LIMITS AND SHALL BE PROTECTED DURING

CONSTRUCTION: ELECTRIC DISTRIBUTION

EVERSOURCE ENERGY FRONTIER COMMUNICATIONS OF CONNECTICUT

COMMUNICATION CABLE TV CHARTER COMMUNICATIONS

CONTRACTOR SHALL COORDINATE ALL WORK RELATED TO UTILITY RELOCATION WITH THE RESPECTIVE UTILITY COMPANIES.

JOINT SEAL: SEE SPECIAL PROVISIONS.

EXPOSED EDGES: EXPOSED EDGES OF CONCRETE SHALL BE BEVELED 1" X 1" UNLESS DIMENSIONED OTHERWISE.

CONCRETE COVER: ALL REINFORCEMENT SHALL HAVE TWO INCHES OF COVER UNLESS DIMENSIONED OTHERWISE.

REINFORCEMENT: ALL REINFORCEMENT SHALL BE GALVANIZED AFTER FABRICATION UNLESS NOTED OTHERWISE. ALL REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF ASTM A767, CLASS 1, INCLUDING SUPPLEMENTAL REQUIREMENTS. THE COST OF FURNISHING AND PLACING THIS REINFORCEMENT SHALL BE INCLUDED IN THE ITEM "DEFORMED STEEL BARS - GALVANIZED."

PREFORMED EXPANSION JOINT FILLER: THE COST OF FURNISHING AND INSTALLING PREFORMED EXPANSION JOINT FILLER IS PAID FOR AS "(THICKNESS AND TYPE) JOINT FILLER FOR BRIDGES."

CONSTRUCTION JOINTS: CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE PLANS WILL NOT BE PERMITTED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

PRECAST CONCRETE BOX CULVERT: SEE SPECIAL PROVISIONS.

СО		
ITEM NAME	COMPONENT	MIX CLASSIFICATION
FOOTING CONCRETE	CUTOFF AND RETURN WALLS, WINGWALL FOOTINGS	PCC03340
ABUTMENT AND WALL CONCRETE	WINGWALL STEMS	PCC03340
HEADWALL CONCRETE	HEADWALLS	PCC04462
PRECAST CONCRETE BOX CULVERT	PRECAST CONCRETE BOX CULVERT	PCC05562

PRECAST CONCRETE BOX CULVERT										
UNIT	SHIPPING LENGTH	SHIPPING HEIGHT	SHIPPING WIDTH	ESTIMATED SHIPPING WEIGHT						
CELL TYPE "A"	22'-0"	11'-3"	7'-0"	37.95 TONS						
CELL TYPE "B"	22'-0"	11'-3"	7'-0"	37.95 TONS						

HYDRAULIC DATA					
DRAINAGE AREA	3.53 SQ. MILES				
DESIGN FREQUENCY	100 YEARS				
DESIGN DISCHARGE	1640 C.F.S.				
*AVERAGE DAILY FLOW ELEVATION	184.44				
UPSTREAM DESIGN WATER SURFACE ELEVATION	193.22				
DOWNSTREAM DESIGN WATER SURFACE ELEVATION	188.26				
MAXIMUM SCOUR ELEVATION	NA				
FREQUENCY	NA				
DISCHARGE	NA				
WORST CASE SCOUR SUB-STRUCTURE UNIT	NA				
	•				

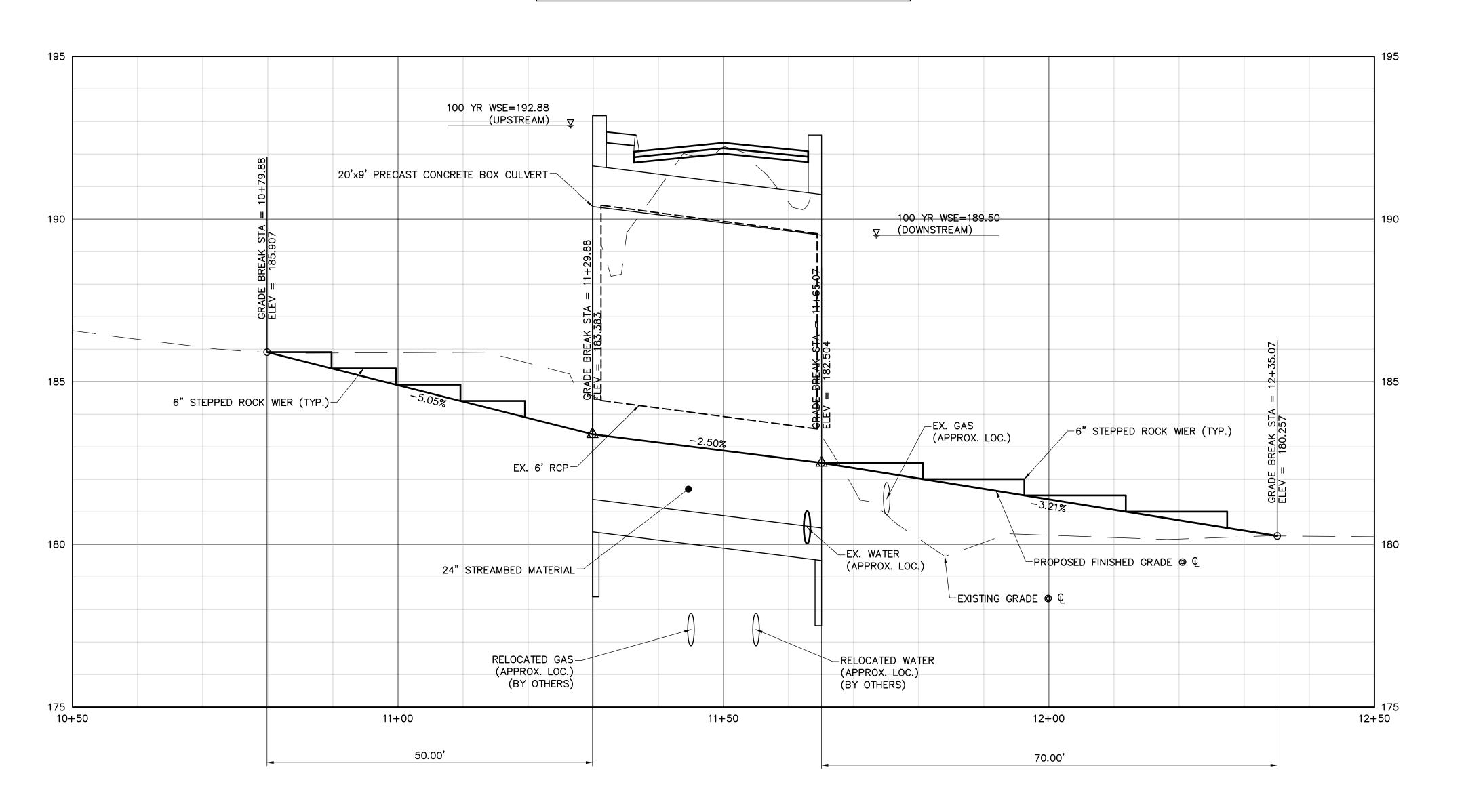
^{*}OBSERVED SEPTEMBER 2024

180



STR-01

Bullet Hill Brook CL PROFILE



HORIZONTAL SCALE IN FEET

VERTICAL SCALE IN FEET

O 15 30 0 3 6

HORIZONTAL SCALE 1" = 15'

VERTICAL SCALE 1" = 3'

STR-02

180

Jects 2021\2545 (

N	180 R	TEST BORING RESEARCH PARKWAY N, CONNECTICUT 06450				ORT	BORING NO	O. B-1		
PRO.	JECT	Old Field Ro	oad over Bu	llet Hill Broo	k	GR	OUNDWATER READIN	IGS	FILE NO.	2545
LOC	ATION	Southbury,	СТ			DATE	TIME	DEPTH	SHEET NO.	1 OF 2
CLIE		Town of So				10/25/24	0930	8.5′	LOCATION	SEE PLAN
CON	TRACTOR	Hardiman C	ompany & /			<u> </u>			ELEVATION	
	ITEM		CASING	DRIVE SAMPLER	CORE BARREL	DRILLING	G EQUIPMENT & PROC	CEDURES	DATUM	NAVD 1988
TYP	E		HSA	SS			ich D25		DATE START	10/25/24 TO 10/25/24 0745 FINISH 1300
l	IDE DIAME		3-1/4	1-3/8		BIT TYPE DRILL HEAD			DRILLER	Tony Scaife
l	1MER WEI(1MER FALL	` ′		140 30		HAMMER TYPE Safet	y, Rope and Cathead		CEA REP	Patrick Crowell
D E P T H	CASING BLOWS PER FT	SAMPLER BLOWS PER 6 IN	SAMPLE TYPE NO. & REC.	SAMPLE DEPTH (FT)		VISUAL DESC	RIPTION AND REMARKS	;	ELEV./ DEPTH (FT)	STRATUM DESCRIPTION
0										ASPHALT
		8 8	SS1 16"	1.0 3.0		rown, fine to medium SAN Orange brown, fine to coa			0.7′	
		7								
		7	SS2 4"	3.0 5.0	Medium dei	nse, orange brown, fine to	coarse SAND, some Sil	t little fine Gravel (Fill).		
		6		"						FILL
5		5 3	SS3	5.0	Medium dei	nse, brown, fine to coarse	SAND, little fine Gravel	, little Silt (Fill).		TALL
		5	10"	7.0		,,		,		
		10 7								
		7	SS4 10"	7.0 9.0		d brown, fine to coarse SA Dark brown, black, fine to				
		7	10	"	BOLLOIII 4.	Dark brown, black, fille to	mediam sand and siit	, dace veg (wei).		
		6							8.5′	SAND AND SILT
10				10.0			C1115	G 1 1911 GU	9.5′	
		7 8	SS5 12"	10.0 12.0	Medium dei	nse, orange brown, fine to	coarse SAND, some fin	e Gravei, little Silt.		
		9								
1.										SILTY GRAVELLY SAND
15		7 14	SS6 9"	15.0 17.0	Medium dei	nse, brown, fine to coarse	SAND, little fine Gravel	, little Silt.		
		11								
		13								
20		5	SS7	20.0	Medium de	nse, red brown, fine to me	edium SAND, little Silt.		20.0′	
		6 7	12″	22.0						
		8								
										SILTY SAND
25		5	SS8	25.0	Medium dei	nse, red brown, fine to coa	arse SAND, little Silt, tra	ce coarse Gravel.		
		9	12"	27.0			,		25.5′	
		9 10								
										SILTY GRAVELLY SAND
										SELL SIGNELLI SIND
				I I	l				ı l	

180 I	CARDINAL ENGINEERING 180 RESEARCH PARKWAY ERIDEN, CONNECTICUT 06450 TEST BORING REPORT						PORT	BORING NO). B-1	
PROJECT	Old Field R	oad over Bu	ıllet Hill Brod	ok	GROUNDWATER READINGS			FILE NO.	2545	
LOCATION	Southbury,						DEPTH	SHEET NO. 2 OF		
CLIENT	Town of So				10/25/24	0930	8.5′			
CONTRACTOR			Associates,	Inc.				LOCATION	•	
			DRIVE	CORE		1		ELEVATION		
ITEN	1	CASING	SAMPLER		DRILLIN	NG EQUIPMENT & PRO	CEDURES	DATUM	NAVD 1988	
TYPE		HSA	SS		RIG TYPE Died	drich D25		DATE	10/25/24 TO 10/25/24	
INSIDE DIAM	ETER (IN)	3-1/4	1-3/8		BIT TYPE			START	0745 FINISH 1300	
HAMMER WEI	GHT (LB)		140		DRILL HEAD			DRILLER	Tony Scaife	
HAMMER FALI	(IN)		30		HAMMER TYPE Safe	ety, Rope and Cathead		CEA REP	Patrick Crowell	
D CASING	SAMPLER	SAMPLE	CAMPLE							
BLOWS	BLOWS	TYPE	SAMPLE DEPTH		VISUAL DESC	CRIPTION AND REMARKS	S	ELEV./ DEPTH	STRATUM DESCRIPTION	
T PER H FT	PER 6 IN	NO. & REC.	(FT)					(FT)		
30	6	SS9	30.0	Top 10": R	ed brown, fine to coarse	SAND, little Silt, trace co	arse Gravel.	+ +		
	7	16"	32.0		Brown, fine to medium S				SILTY GRAVELLY SAND	
	8	1								
	12	-	-	1				31.5′ 32.0′	SILTY SAND E.O.B.	
		1						32.0	L.O.D.	
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REVISION DATE BY

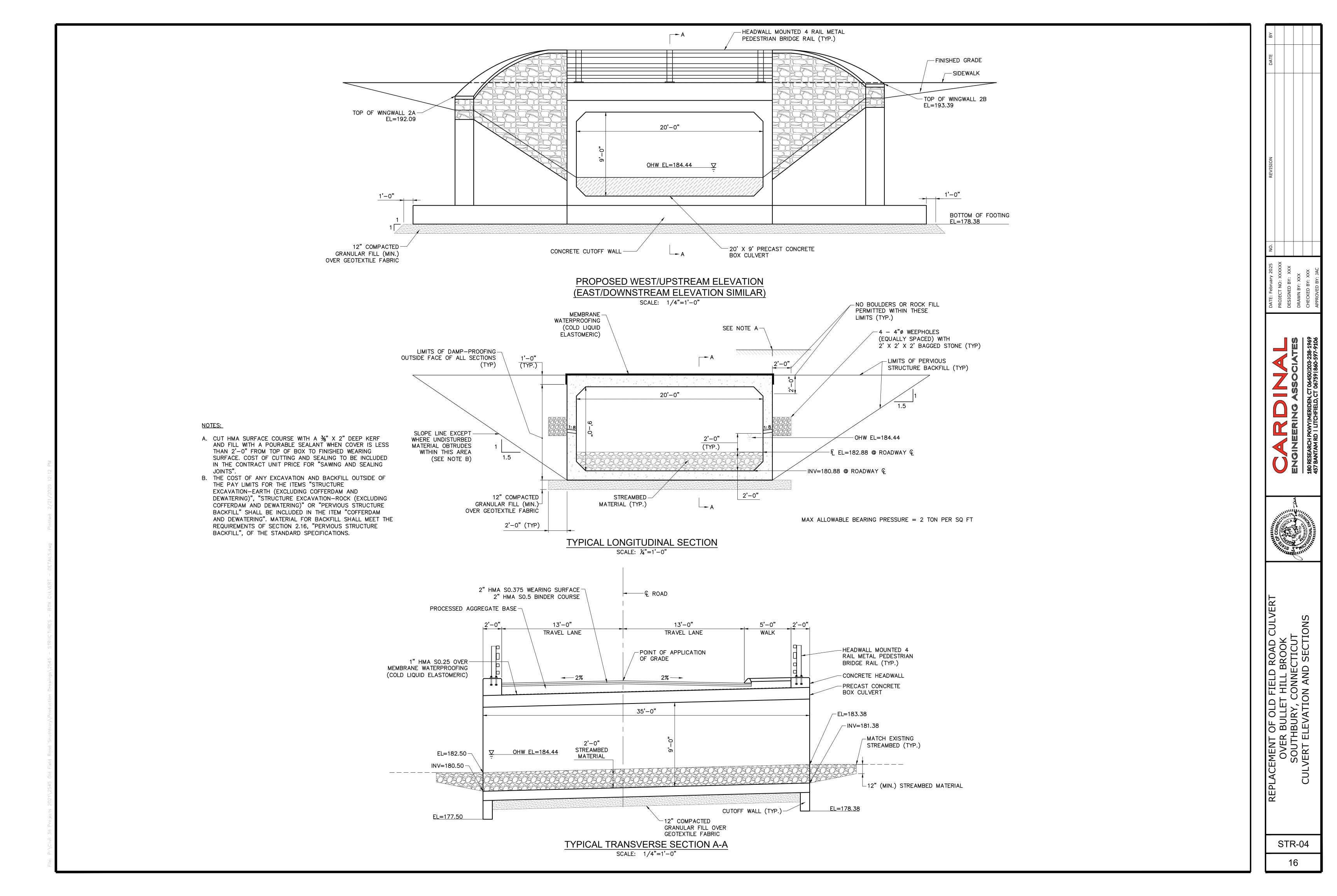
DESIGNED BY: XXX
DRAWN BY: XXX
CHECKED BY: XXX
APPROVED BY: JAC

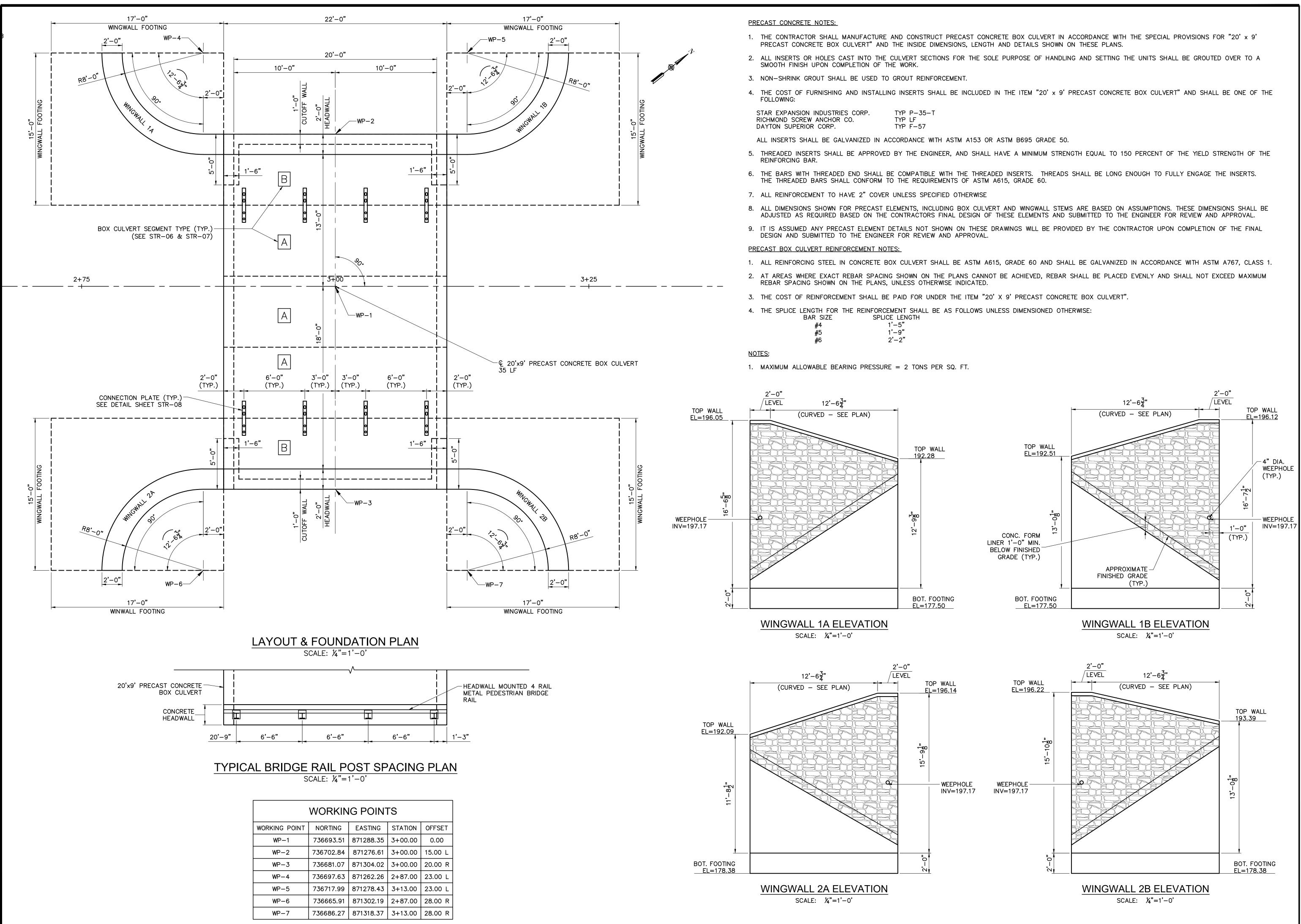




REPLACEMENT OF OLD FIELD ROAD CULVERT
OVER BULLET HILL BROOK
SOUTHBURY, CONNECTICUT
BORING LOGS

STR-03





NO. REVISION DATE BY

DESIGNED BY: XXX
DRAWN BY: XXX
CHECKED BY: XXX
APPROVED BY: JAC

ENGINEERING ASSOCIAT

180 RESEARCH PKWYIMERIDEN, CT 06/450|203-238
457 BANTAM RD I LITCHFIELD, CT 06/759|860-597

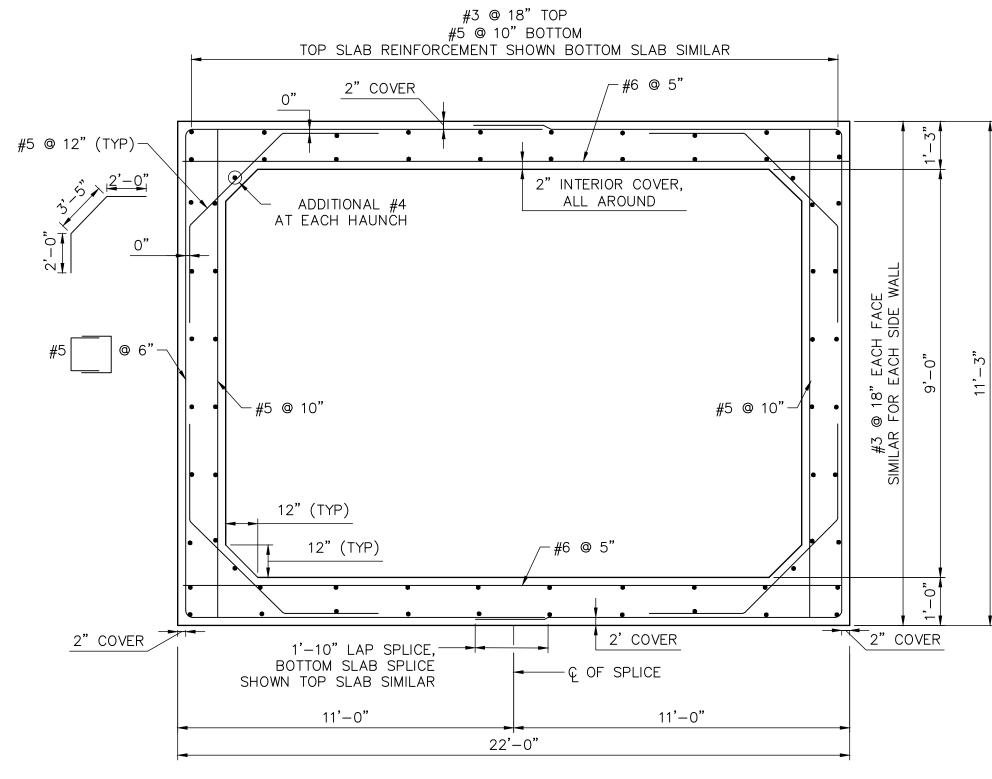


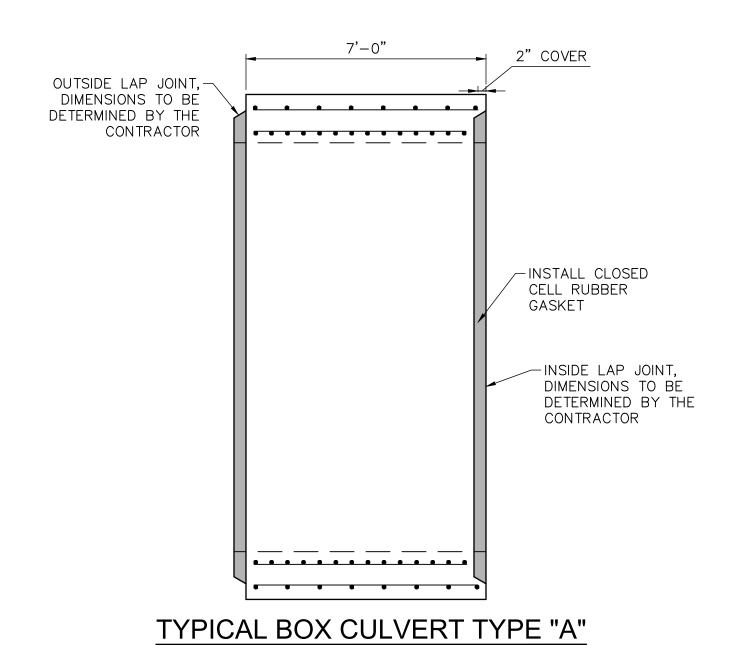
NT OF OLD FIELD ROAD CULY FER BULLET HILL BROOK UTHBURY, CONNECTICUT

STR-05

TYPICAL BOX CULVERT TYPE "A" TOP & BOTTOM SLAB REINFORCEMENT - PLAN VIEW

NOT TO SCALE





LONGITUDINAL SECTION

NOT TO SCALE

TYPICAL BOX CULVERT TYPE "A" - SECTION

NOT TO SCALE

CULVERT
CULVERT
T
DETAILS

180

LACEMENT OF OLD FIELD ROAD CULVER OVER BULLET HILL BROOK SOUTHBURY, CONNECTICUT CAST CONCRETE BOX CULVERT DETAILS

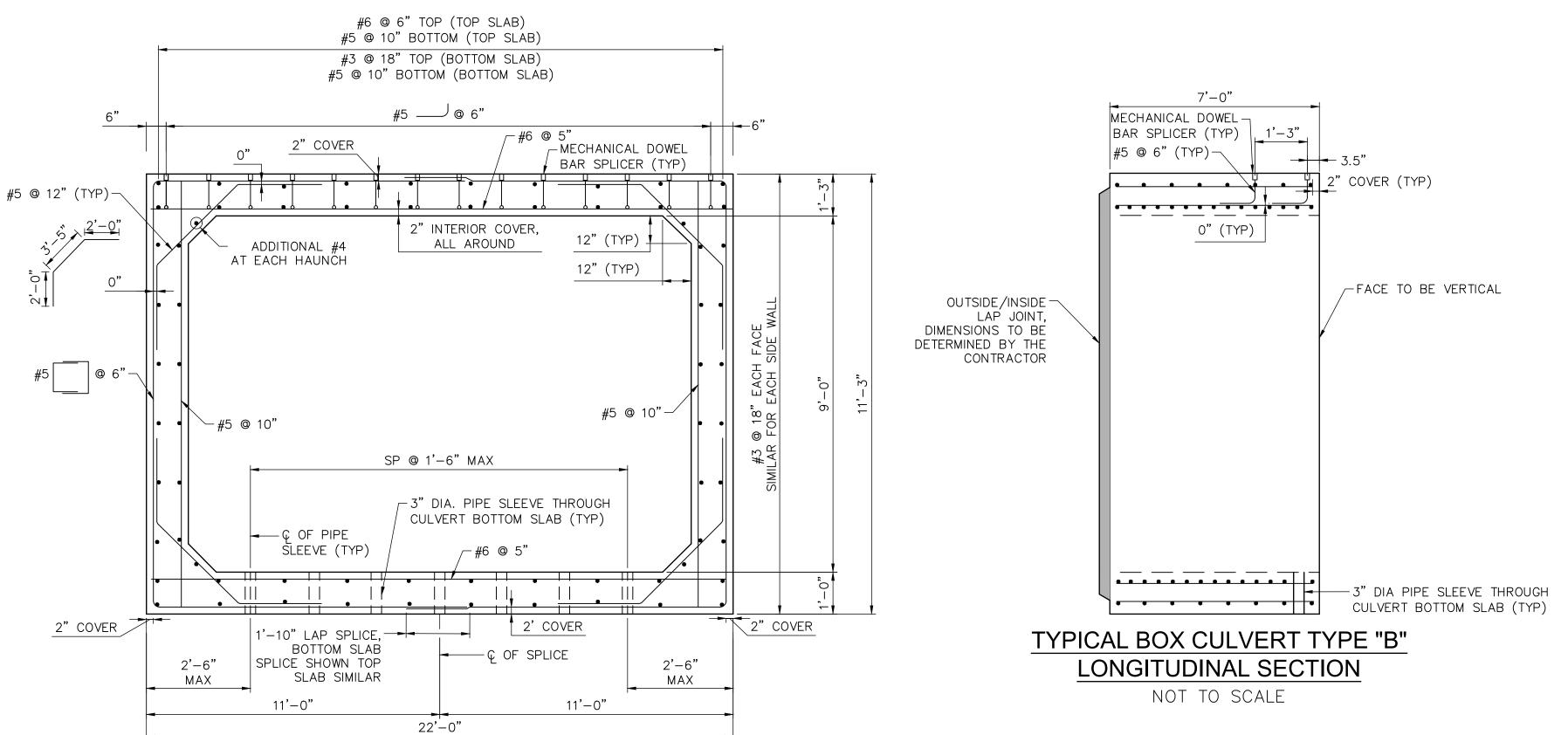
STR-06

20'-0" - MECHANICAL DOWEL BAR SPLICER (TYP) TYPICAL BOX CULVERT TYPE "B" TOP & BOTTOM SLAB REINFORCEMENT - PLAN VIEW NOT TO SCALE

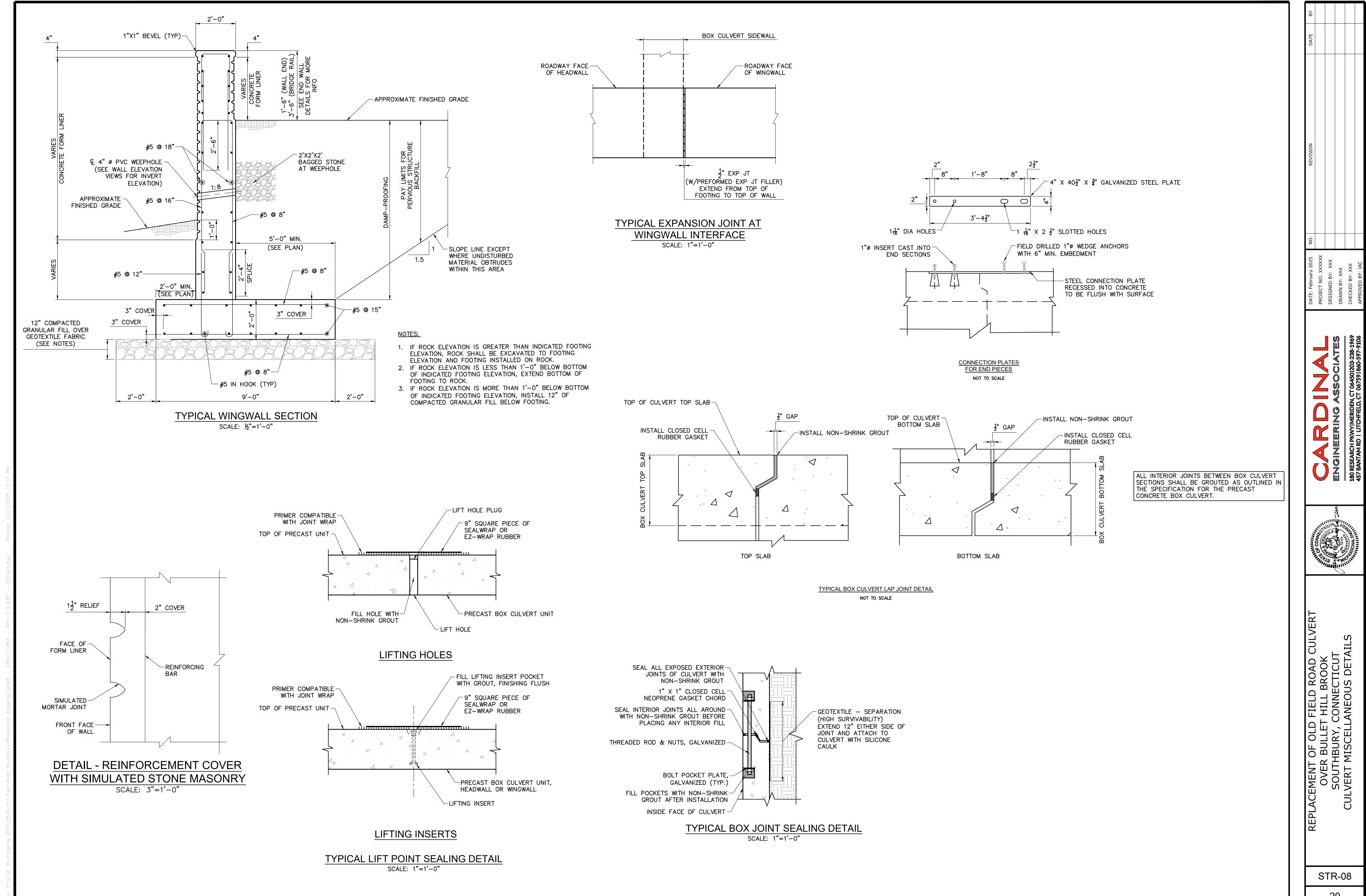
∕−#5 @ 12**"**

2" (TYP)

_LAP JOINT (TYP)



TYPICAL BOX CULVERT TYPE "B" - SECTION NOT TO SCALE

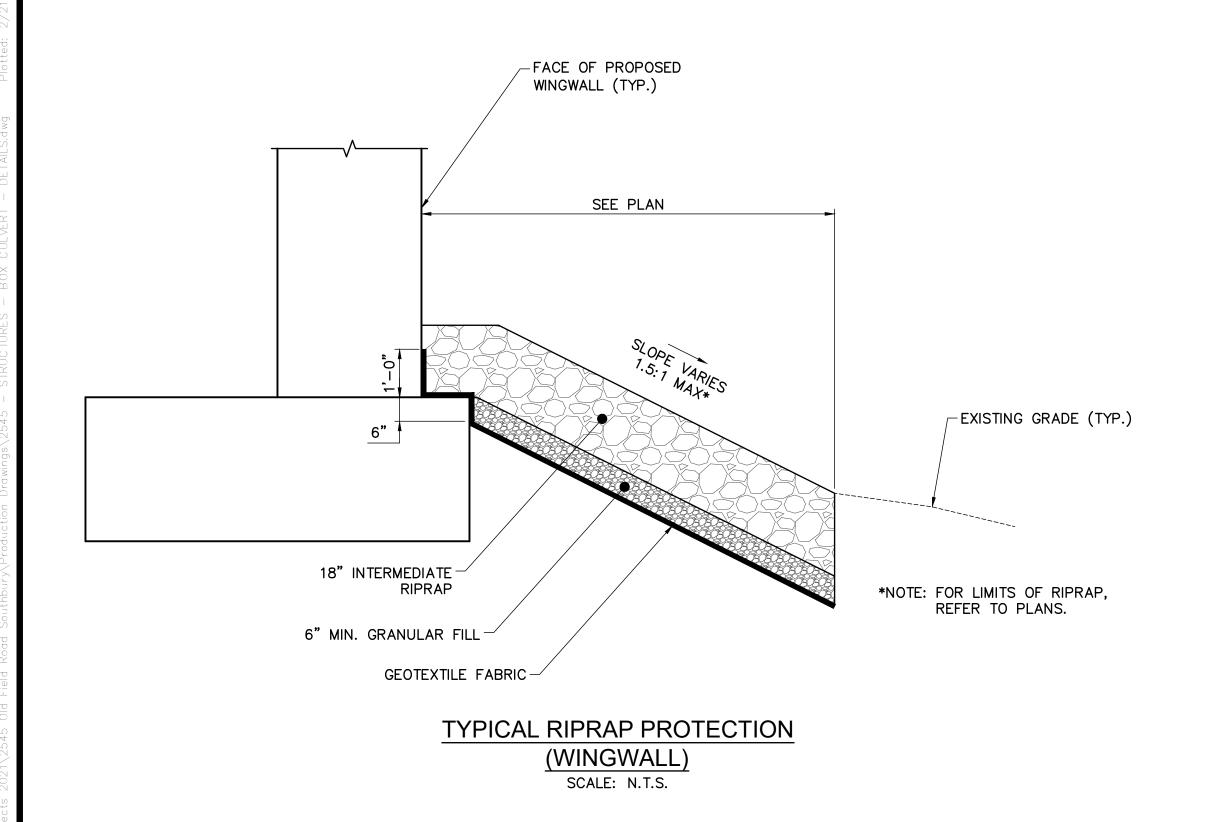


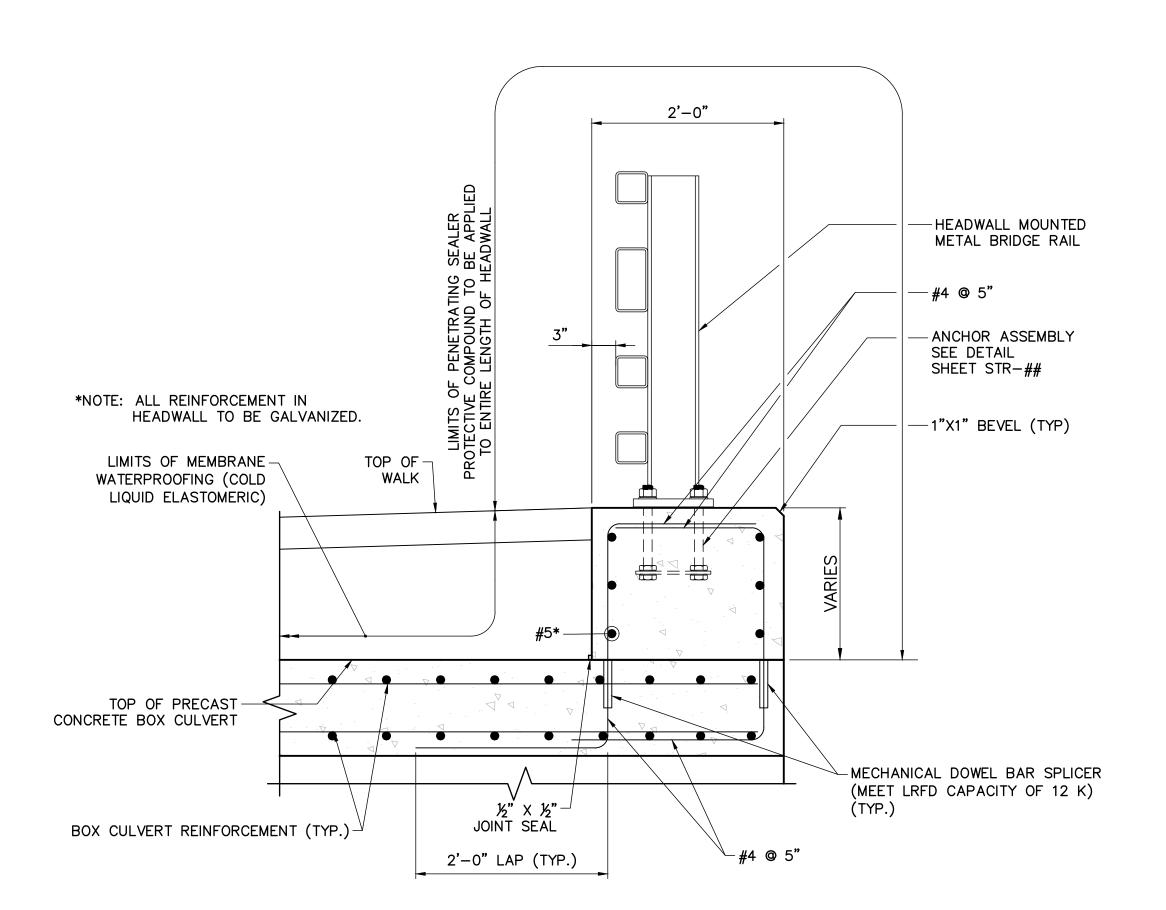


STR-08

TYPICAL HEADWALL - SECTION

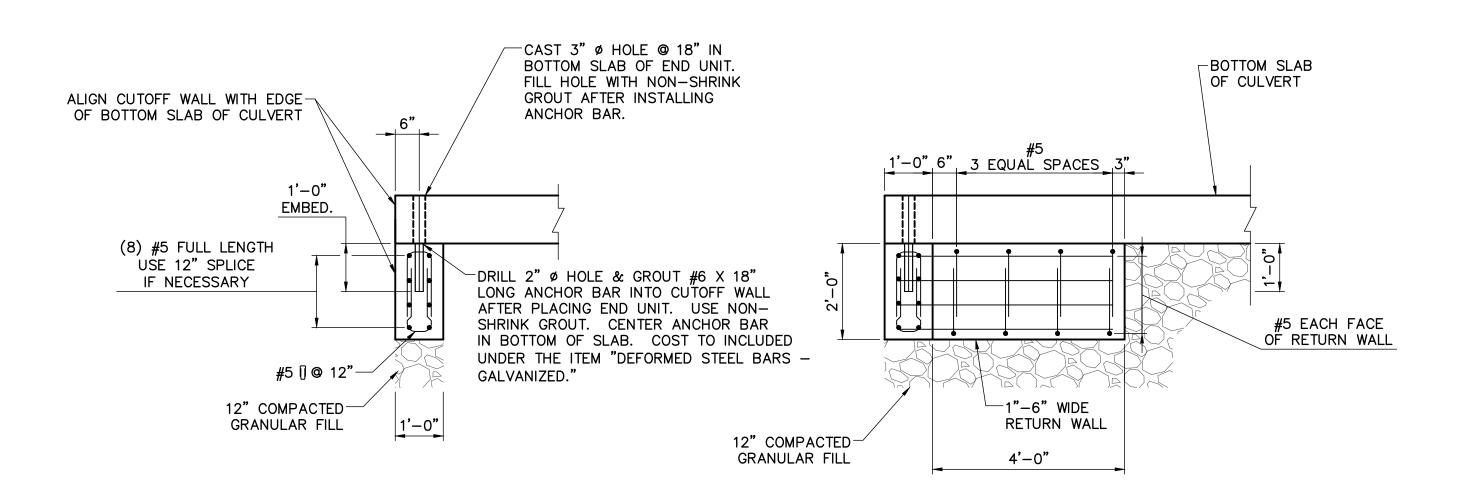
SCALE: 1"=1'-0"





TYPICAL HEADWALL (SIDEWALK) - SECTION

SCALE: 1"=1'-0"



SECTION THROUGH CUTOFF WALL (RETURN WALL SIMILAR)

SCALE: ½"=1'-0"

RETURN WALL ELEVATION

(CUTOFF WALL SIMILAR)

SCALE: ½"=1'-0"

O. REVISION DATE BY

PROJECT NO: XXXXXX
DESIGNED BY: XXX
DRAWN BY: XXX
CHECKED BY: XXX

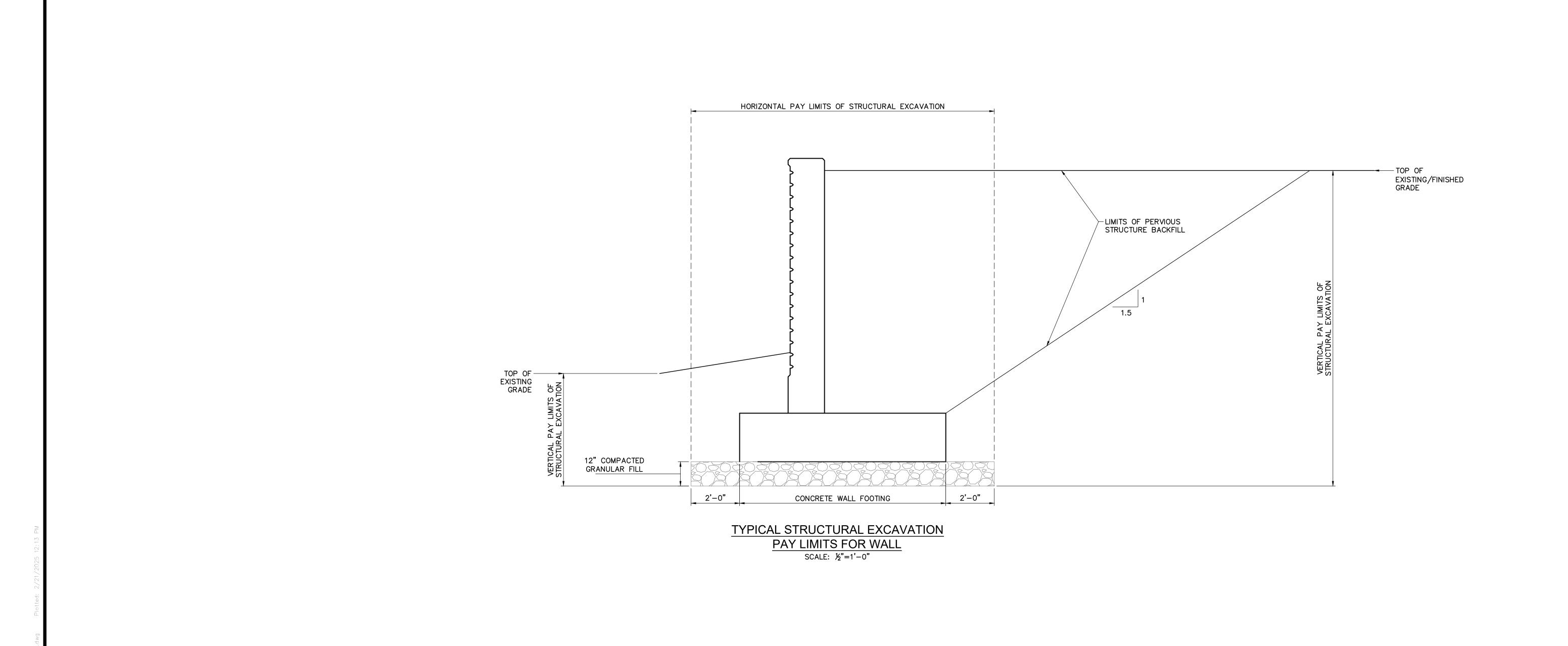
ENGINEERING ASSOCIATES

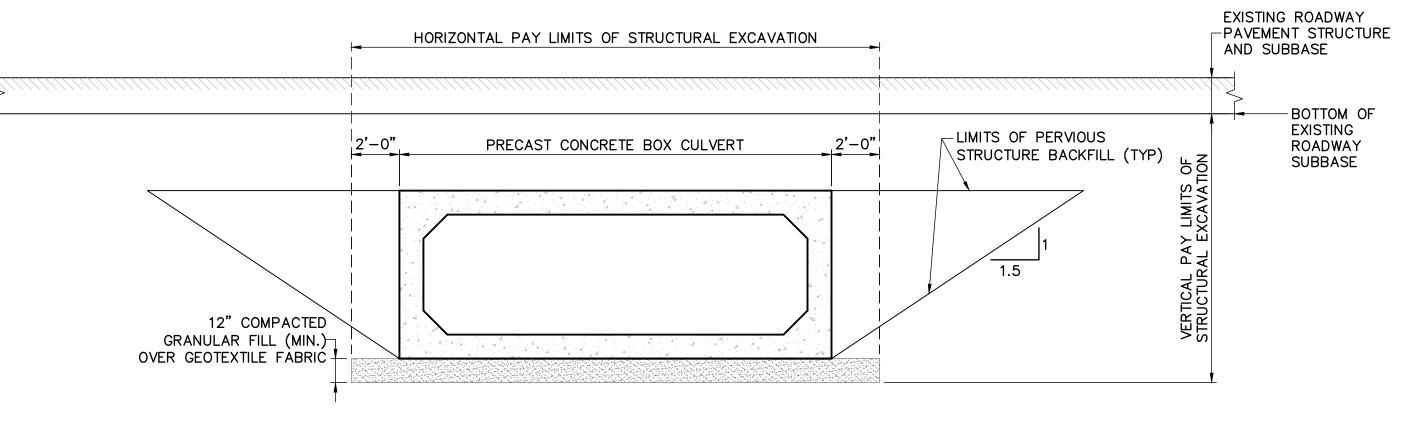
180 RESEARCH PKWYIMERIDEN, CT 064501203-238-1969
457 BANTAM RD I LITCHFIELD, CT 067591860-597-9106



PLACEMENT OF OLD FIELD ROAD CUI OVER BULLET HILL BROOK SOUTHBURY, CONNECTICUT CULVERT MISCELLANEOUS DETAILS

STR-09





TYPICAL STRUCTURAL EXCAVATION

PAY LIMITS FOR BOX CULVERT

SCALE: 1/4"=1'-0"

REVISION DATE BY

DESIGNED BY: XXX

DRAWN BY: XXX

CHECKED BY: XXX

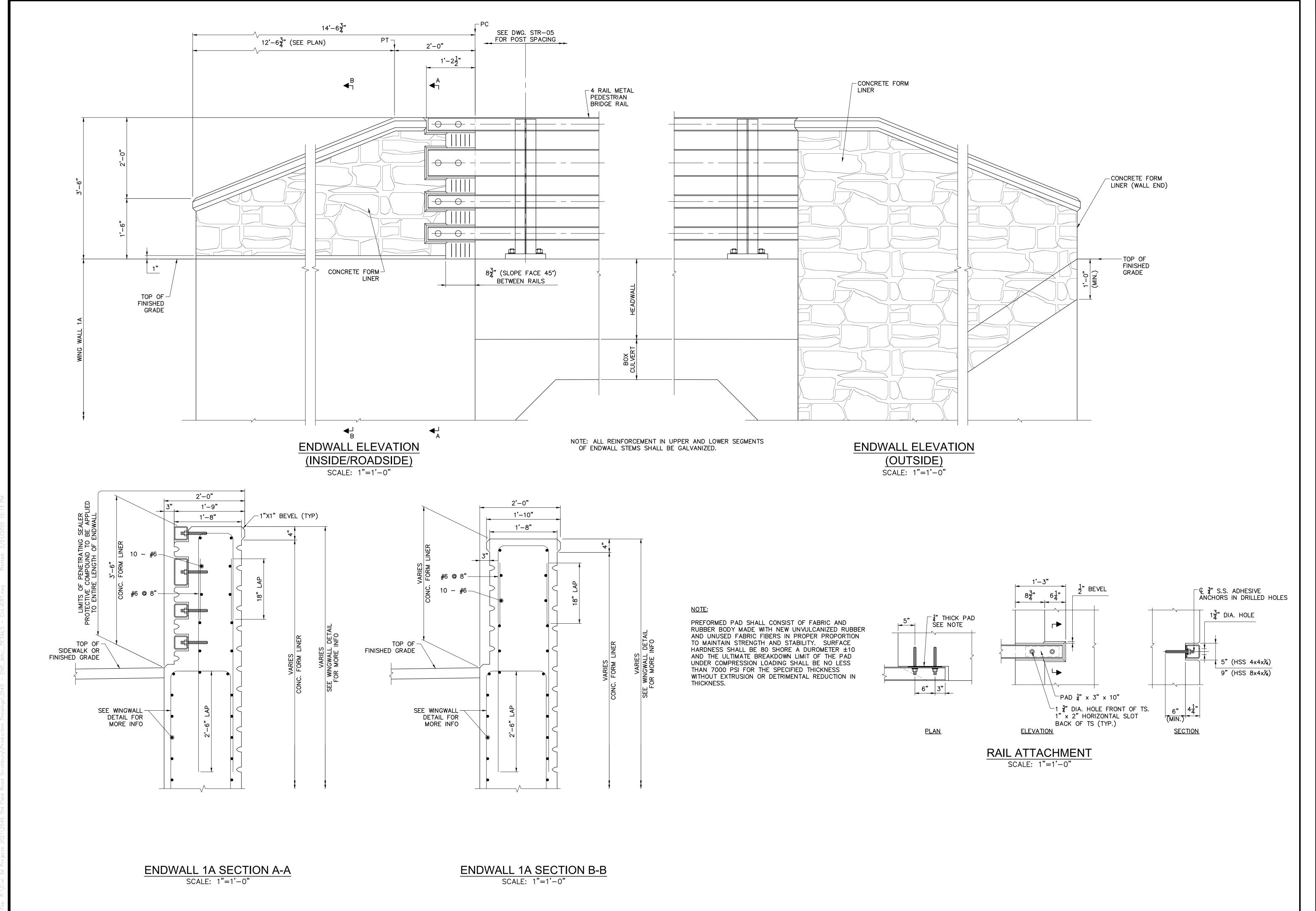
APPROVED BY: JAC





PLACEMENT OF OLD FIELD ROAD CULVEF OVER BULLET HILL BROOK SOUTHBURY, CONNECTICUT CULVERT MISCELLANEOUS DETAILS

STR-10



A REVISION DATE BY

PROJECT NO: XXXXXX
DESIGNED BY: XXX
DRAWN BY: XXX
CHECKED BY: XXX

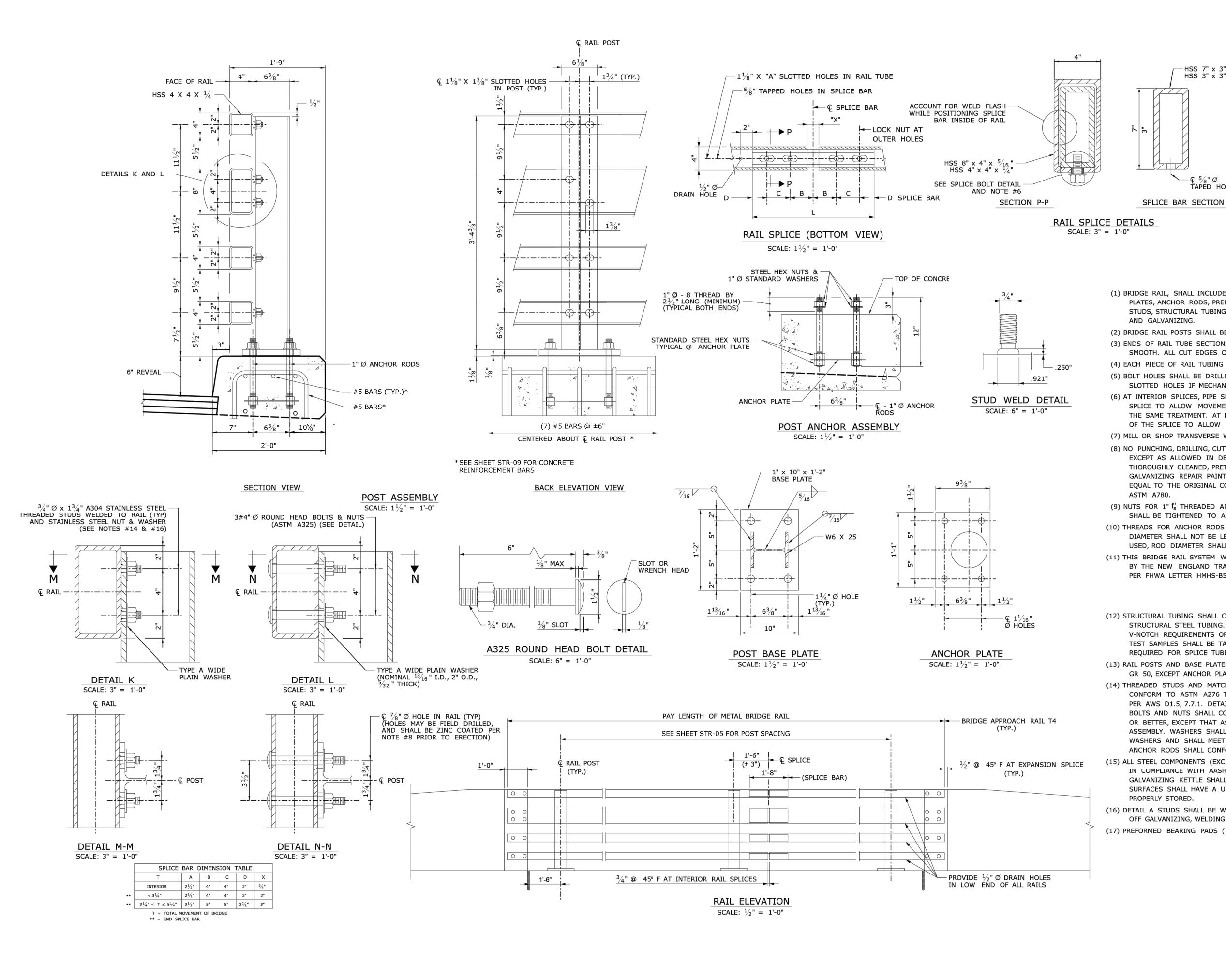
ENGINEERING ASSOCIATES

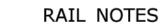
180 RESEARCH PKWYIMERIDEN, CT 06450|203-238-19457 BANTAM RD | LITCHFIELD, CT 06759|860-597-910



ACEMENT OF OLD FIELD ROAD CUL OVER BULLET HILL BROOK SOUTHBURY, CONNECTICUT ENDWALL DETAILS

STR-11





⁻⁵/₈" X 1³/₄" A307 CAP SCREW

SPLICE BOLT DETAIL

SCALE: 6'' = 1'-0''

LOCK NUT (OUTER HOLES ONLY)

4" PIPE SPACER

TACK WELD

SCH. 40 X 1/2"LONG (GALV.)

(1.050" O.D., 0.824 I.D.)

(1) BRIDGE RAIL, SHALL INCLUDE POSTS, BASE PLATES, ANCHOR PLATES, ANCHOR RODS, PREFORMED PADS, RAIL ASSEMBLY BOLTS, NUTS, WASHERS, STUDS, STRUCTURAL TUBING, SPLICE BARS, PIPE SPACERS, ALL APPURTENANCES, AND GALVANIZING.

-HSS 7" x 3" x 3#8" HSS 3" x 3" x 5#16"

TAPED HOLE STANDARD

WASHER

- (2) BRIDGE RAIL POSTS SHALL BE SET NORMAL (90 DEGREES) TO THE PROFILE GRADE.
- (3) ENDS OF RAIL TUBE SECTIONS SHALL BE SAWED OR MILLED AND SHALL BE TRUE AND SMOOTH. ALL CUT EDGES OF ALL MATERIAL SHALL BE GROUND SMOOTH.
- (4) EACH PIECE OF RAIL TUBING SHALL BE ATTACHED TO A MINIMUM OF THREE (3) POSTS, U.N.O.
- (5) BOLT HOLES SHALL BE DRILLED OR PUNCHED. FLAME CUTTING MAY BE USED TO FINISH SLOTTED HOLES IF MECHANICALLY GUIDED.
- (6) AT INTERIOR SPLICES, PIPE SPACERS SHALL BE USED ON ONLY ONE SIDE OF THE SPLICE TO ALLOW MOVEMENT ON THAT SIDE. ALL RAILS IN A SPLICE SHALL RECEIVE THE SAME TREATMENT. AT END SPLICES PIPE SPACERS SHALL BE USED ON BOTH SIDES OF THE SPLICE TO ALLOW MOVEMENT ON EACH SIDE.
- (7) MILL OR SHOP TRANSVERSE WELDS SHALL NOT BE PERMITTED ON ANY RAIL ELEMENT.
- (8) NO PUNCHING, DRILLING, CUTTING OR WELDING SHALL BE PERMITTED AFTER GALVANIZING EXCEPT AS ALLOWED IN DETAILS A AND B. DAMAGED AREAS OF GALVANIZING SHALL BE THOROUGHLY CLEANED, PRETREATED, AND PAINTED WITH TWO COATS OF ORGANIC ZINC-RICH GALVANIZING REPAIR PAINT, HAVING A MINIMUM 94% ZINC BY WEIGHT, TO A THICKNESS EQUAL TO THE ORIGINAL COATING ACCORDING TO THE STANDARD SPECIFICATIONS AND ASTM A780.
- (9) NUTS FOR 1" fs' THREADED ANCHOR RODS CONNECTING THE BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL $\frac{1}{8}$ TURN.
- (10) THREADS FOR ANCHOR RODS MAY BE ROLLED OR CUT. IF CUT THREADS ARE USED, BOLT DIAMETER SHALL NOT BE LESS THAN NOMINAL DIAMETER. IF ROLLED THREADS ARE USED, ROD DIAMETER SHALL NOT BE LESS THAN ROOT DIAMETER OF THREADS.
- (11) THIS BRIDGE RAIL SYSTEM WAS SUCCESSFULLY CRASH TESTED FOR AASHTO PL2 IN 1994 BY THE NEW ENGLAND TRANSPORTATION CONSORTIUM AND ACCEPTED AS NCHRP 350 TL-4 PER FHWA LETTER HMHS-B50, MARCH 11, 1999.

MATERIAL NOTES

- (12) STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500, GRADE B, STRUCTURAL STEEL TUBING. RAIL TUBING SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH REQUIREMENTS OF 15 FT. LBS. AT 0° F. FOR ASTM A500, GRADE B, THE TEST SAMPLES SHALL BE TAKEN AFTER FORMING THE TUBES. CHARPY V-NOTCH IS NOT REQUIRED FOR SPLICE TUBES.
- (13) RAIL POSTS AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A572 GR 50, EXCEPT ANCHOR PLATES MAY BE ASTM A36.
- (14) THREADED STUDS AND MATCHING NUTS FOR RAIL-TO-POST ATTACHMENT (DETAIL A) SHALL CONFORM TO ASTM A276 TYPE 304, STAINLESS STEEL, AND SHALL BE TOROUE TESTED PER AWS D1.5, 7.7.1. DETAIL B BOLTS SHALL BE ASTM A325 OR A449. ALL OTHER BOLTS AND NUTS SHALL CONFORM TO ASTM A307 AND ASTM 563 GRADE A RESPECTIVELY OR BETTER, EXCEPT THAT ASTM A307 NUTS MAY BE USED ON THE BOTTOM OF ANCHOR ASSEMBLY. WASHERS SHALL BE HARDENED STEEL COMMERCIAL TYPE A PLAIN WIDE WASHERS AND SHALL MEET THE DIMENSIONAL REQUIREMENTS OF A.N.S.I. B18.22. ANCHOR RODS SHALL CONFORM TO ASTM A449.
- (15) ALL STEEL COMPONENTS (EXCEPT STAINLESS) SHALL BE GALVANIZED AFTER FABRICATION IN COMPLIANCE WITH AASHTO M232 (ASTM A153) AND AASHTO M111 (ASTM A123). THE GALVANIZING KETTLE SHALL HAVE 0.05 TO 0.09 PERCENT NICKEL. GALVANIZED SURFACES SHALL HAVE A UNIFORM APPEARANCE AND GALVANIZED MATERIAL SHALL BE PROPERLY STORED.
- (16) DETAIL A STUDS SHALL BE WELDED ON AFTER TUBES ARE GALVANIZED BY SPOT GRINDING OFF GALVANIZING, WELDING ON STUDS, THEN TOUCH UP GALVANING PER NOTE #8 ABOVE.
- (17) PREFORMED BEARING PADS (1/8" THICK) SHALL CONFORM TO AASHTO M251.

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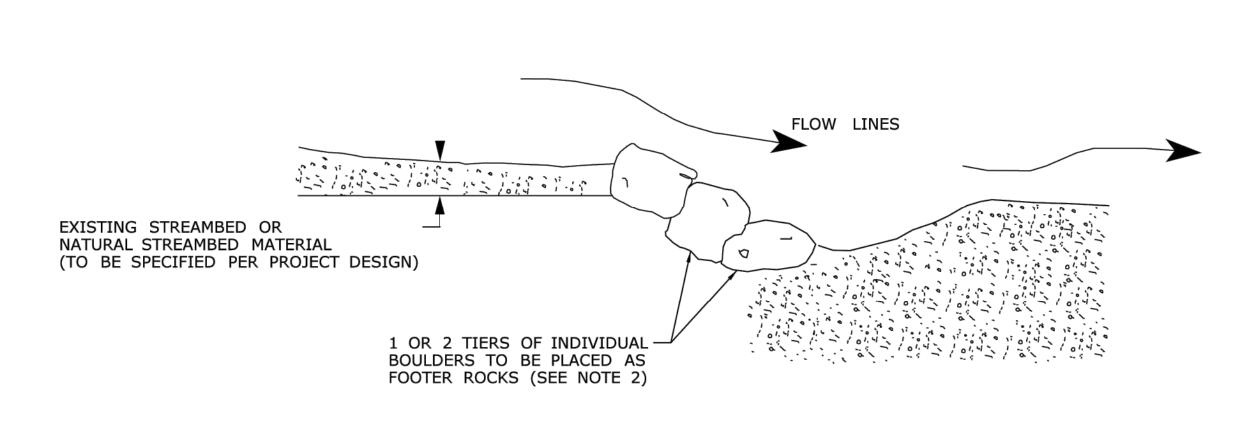
STR-12

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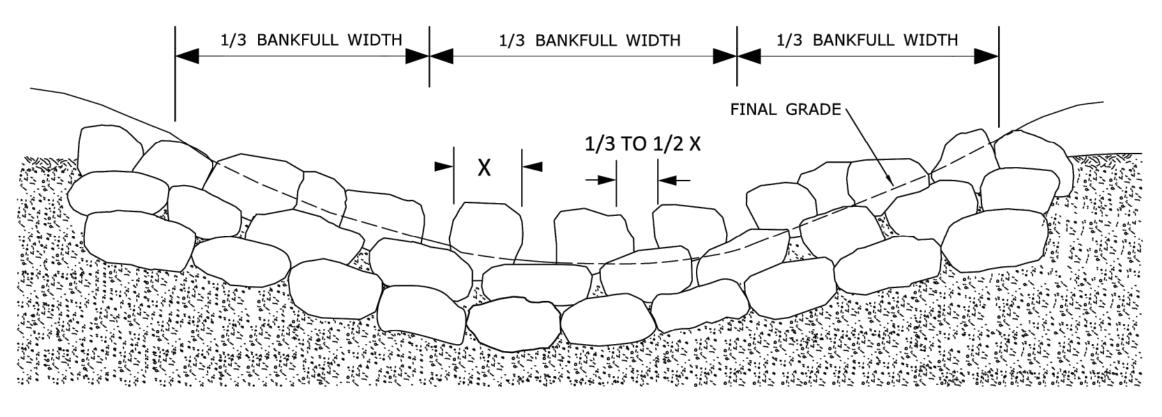
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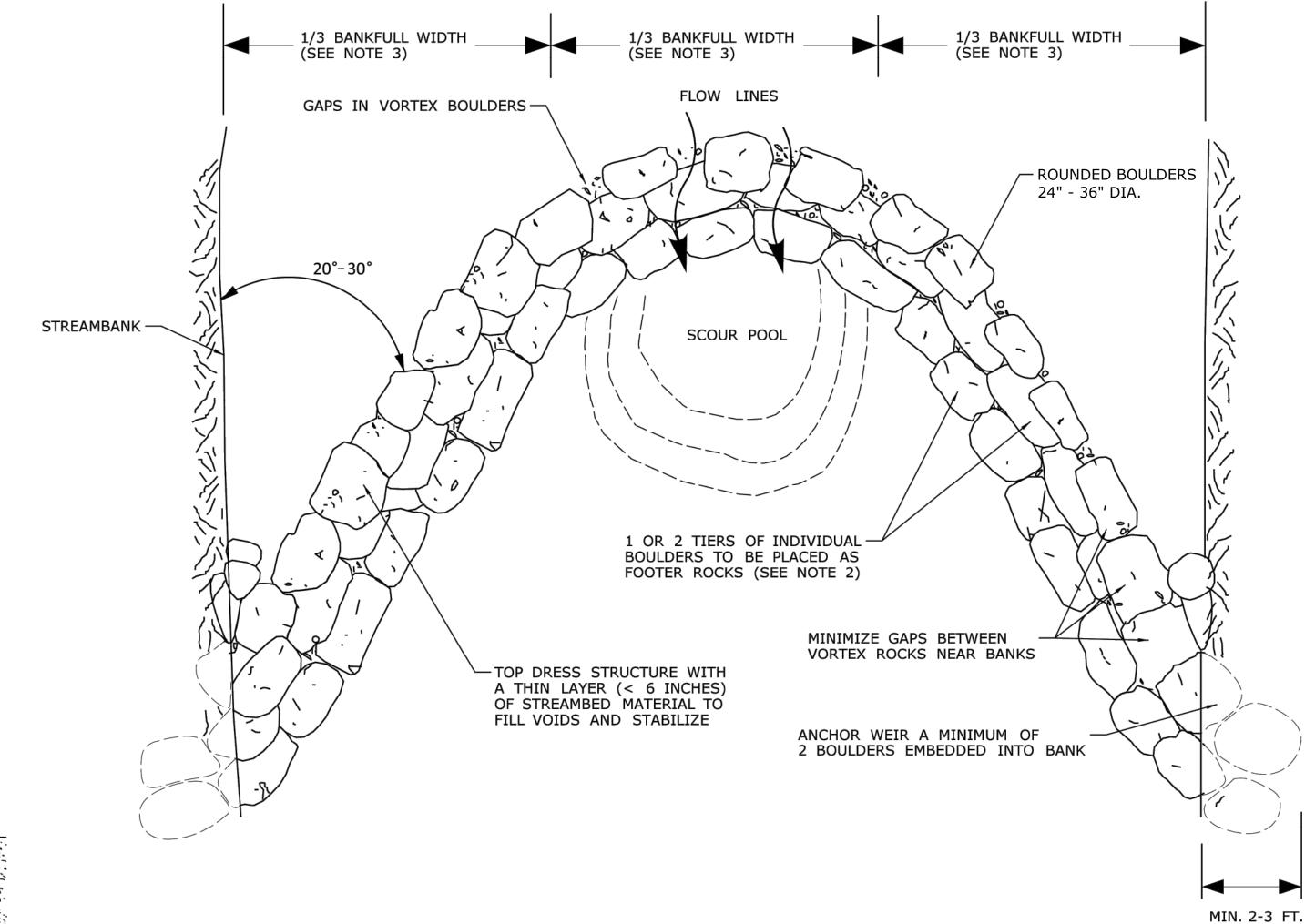
ROCK WEIR - PROFILE VIEW

N.T.S.



ROCK WEIR - SECTION VIEW (UPSTREAM)

N.T.S.



ROCK WEIR - PLAN VIEW

N.T.S.

NOTE:

- 1. CT DEEP FISHERIES DIVISION SHALL BE CONTACTED AT LEAST 10 DAYS PRIOR TO INSTALLATION OF ROCK WEIRS.
- 2. PLACEMENT OF THE ROCK WEIR SHALL BE DIRECTED IN THE FIELD BY THE ENGINEER OR THEIR AUTHORIZED DELEGATE. SEE SPECIAL PROVISION "ROCK WEIR".
- 3. FOOTER ROCKS SHALL SERVE AS THE FOUNDATION FOR THE TOP LAYER OF THE WEIR. FOOTER ROCKS SHALL HAVE REASONABLE FLAT TOPS AND BOTTOMS TO ENABLE BETTER PLACEMENT OF THE TOP LAYER OF THE WEIR.
- 4. BANKFULL WIDTH DISTANCE IS MEASURED AT THE LOCATION OF THE PROPOSED WEIR.

SUGGESTED CONSTRUCTION SEQUENCE NOTES

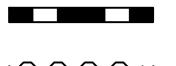
- 1. INSTALL EROSION & SEDIMENT CONTROL SYSTEM.
- 2. INSTALL TWIN 48" BY-PASS PIPES.
- 3. CONSTRUCT COFFERDAM AND DIVERT FLOW TO BY-PASS PIPE.
- 4. REMOVE THE EXISTING CULVERTS AND HEADWALLS.
- 5. INSTALL WINGWALL FOOTINGS, RETURN WALLS AND CUTOFF WALLS.
- 6. INSTALL PRECAST CONCRETE BOX CULVERT.
- 7. INSTALL WINGWALLS.
- 8. BACKFILL BOX CULVERT AND WINGWALLS, GRADE CHANNEL, REMOVE BY-PASS PIPE, COFFERDAMS AND DIRECT FLOW INTO NEW CULVERT.
- 9. PLACE BARRICADES, SAND BARREL ARRAY AND TRAFFIC DRUMS AS NECESSARY TO PROTECT THE REMAINING WORK AREAS ON THE BRIDGE AND REDIRECT TRAFFIC.
- 10. OPEN ROADWAY, CONSTRUCT REMAINING BRIDGE ELEMENTS (ALTERNATING ONE-WAY TRAFFIC IF REQUIRED).
- 11. CONSTRUCT THE REMAINING ROADWAY AND CULVERT IMPROVEMENTS UTILIZING ALTERNATING ONE—WAY TRAFFIC AS REQUIRED.

TEMPORARY HYDRA	AULIC DATA
AVERAGE DAILY FLOW	6.43 CFS
AVERAGE SPRING FLOW	12.6 CFS
1-YEAR FREQUENCY DISCHARGE	185 CFS
TEMPORARY DESIGN DISCHARGE	185 CFS
TEMPORARY DESIGN FREQUENCY	1 YEAR
TEMPORARY WATER SURFACE ELEVATION UPSTREAM	190.7
TEMPORARY WATER SURFACE ELEVATION DOWNSTREAM	182.0

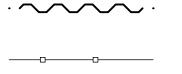
CONSTRUCTION GENERAL NOTES

- 1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES.
- 2. ANY UNCONFINED IN STREAM WORK WITHIN BULLET HILL BROOK SHOULD BE RESTRICTED TO THE PERIOD FROM JUNE 1 TO SEPTEMBER 30, INCLUSIVE.
- 3. SEQUENCE OF CONSTRUCTION NOTES SHALL BE USED IN CONJUNCTION WITH THE HIGHWAY CONSTRUCTION, MAINTENANCE AND PROTECTION OF TRAFFIC PLANS.
- 4. THE SUGGESTED STEPS ILLUSTRATE A SEQUENCE OF CONSTRUCTION THAT CONFORMS TO STAGING REQUIREMENTS. THE SEQUENCE MAY BE ALTERED, SUBJECT TO THE APPROVAL OF THE ENGINEER SO LONG AS THE OPERATION OF VEHICULAR TRAFFIC IS MAINTAINED.
- 5. NEITHER THE WORK NOR STEPS LISTED IN THE CONSTRUCTION SEQUENCE ARE INTENDED TO COVER ALL DETAILS OF THE WORK. THE CONTRACTOR SHALL PREPARE A DETAILED CONSTRUCTION SEQUENCE AND SCHEDULE FOR REVIEW AND APPROVAL BY THE ENGINEER.
- 6. THE TEMPORARY COFFERDAM SHALL CONSIST OF SHEETS OR ANY OTHER APPROVED SYSTEM THAT THE CONTRACTOR ELECTS TO USE WHICH WILL SAFELY CONVEY WATER FLOWS THROUGH THE CONSTRUCTION AREA, BE ABLE TO SUPPORT CONSTRUCTION ACTIVITY AND EXCAVATION AND SHALL CONFORM TO PERMITS.
- 7. THE CONTRACTOR IS HEREIN NOTIFIED THAT THE OVERHEAD ELECTRICAL FACILITIES WILL REMAIN LIVE THROUGHOUT THE DURATION OF CONSTRUCTION.

LEGEND

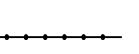


TEMPORARY PRECAST CONCRETE BARRIER CURB (TPCBC)

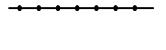


EROSION AND SEDIMENT

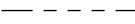
COFFERDAM



CONTROL SYSTEM



TURBIDITY CONTROL CURTAIN



TEMPORARY EASEMENT

WTH-01

ACEMENT OF OLD FIELD ROAD COVER BULLET HILL BROOK SOUTHBURY, CONNECTICUT WATER HANDLING PLAN

RESPONSIBILITY AND AUTHORITY

THE CITY/TOWN, OR ITS AUTHORIZED REPRESENTATIVE, HAS THE RESPONSIBILITY AND AUTHORITY FOR THE IMPLEMENTATION, OPERATION, MONITORING, AND MAINTENANCE OF THE SEDIMENT AND EROSION CONTROL MEASURES.

GENERAL

- EROSION AND SEDIMENT CONTROL MEASURES WILL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY/TOWN STANDARDS, THE CONNECTICUT DOT SPECIFICATIONS FOR ROADS, BRIDGES, FACILITIES AND INCIDENTAL CONSTRUCTION, FORM 819 (2024), 2002 CONNECTICUT GUIDELINES FOR EROSION AND SEDIMENT CONTROL, DEEP BULLETIN 34, AND THE PROJECT SPECIFICATIONS.
- 2. THESE GUIDELINES SHALL APPLY TO ALL WORK CONSISTING OF ANY AND ALL TEMPORARY AND/OR PERMANENT MEASURES TO CONTROL WATER POLLUTION AND SOIL EROSION, AS MAY BE REQUIRED, DURING THE CONSTRUCTION OF THE PROJECT.
- 3. IN GENERAL, ALL CONSTRUCTION ACTIVITIES SHALL PROCEED IN SUCH A MANNER SO AS NOT TO POLLUTE ANY WETLANDS, WATERCOURSE, WATERBODY, AND CONDUIT CARRYING WATER, ETC. THE CONTRACTOR SHALL LIMIT, INSOFAR AS POSSIBLE, THE SURFACE AREA OF EARTH MATERIALS EXPOSED BY CONSTRUCTION METHODS AND IMMEDIATELY PROVIDE PERMANENT AND TEMPORARY POLLUTION CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT WETLANDS, WATERCOURSES, AND WATERBODIES, AND TO PREVENT, INSOFAR AS POSSIBLE, EROSION ON THE SITE
- 4. ALL EROSION CONTROL MATTING SHALL BE AS SPECIFIED ON THE PLANS OR AN APPROVED EQUAL. ALL EROSION CONTROL MATTING SHALL BE LISTED ON THE QUALIFIED PRODUCT LIST FOR CONNECTICUT DEPARTMENT OF TRANSPORTATION PROJECTS (REPORT NUMBER 211-12-04-4), DATED APRIL 2004 OR LATEST REVISION. THIS REPORT IS POSTED ON THE CONNECTICUT DEPARTMENT OF TRANSPORTATION WEB SITE. INSTALLATION SHALL CONFORM TO CONNECTICUT DOT FORM 819, SECTION 7.55, GEOTEXTILE.
- 5. THE EROSION CONTROL PLAN PROPOSES EROSION CONTROL MEASURES TO HELP CONTROL ACCELERATED EROSION AND SEDIMENTATION AND THE DANGER FROM STORM WATER RUNOFF AT THE SITE. THE RUNOFF SHALL BE CONTROLLED BY THE INTERCEPTION, DIVERSION AND SAFE DISPOSAL OF PRECIPITATION. RUNOFF SHALL ALSO BE CONTROLLED BY STAGING CONSTRUCTION ACTIVITY AND PRESERVING NATURAL VEGETATION WHENEVER POSSIBLE.
- 6. EXISTING VEGETATION SHALL BE PROTECTED AND ONLY THAT CLEARING AND GRUBBING ABSOLUTELY NECESSARY FOR THE PROPOSED CONSTRUCTION SHALL BE PERFORMED. ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND CONTOUR UNLESS OTHERWISE INDICATED ON THE PLANS. THE CONTRACTOR SHALL TAKE SPECIAL CARE WITH HIS CONSTRUCTION METHODS AND SHALL COMPLY WITH THE FOLLOWING GUIDELINES:
- 7. ALL AREAS SHALL BE PROTECTED FROM SEDIMENTATION DURING AND AFTER CONSTRUCTION, PARTICULARLY THE STORAGE OF EXCAVATED OR STOCKPILED MATERIAL. THE CONTRACTOR SHALL CAREFULLY STRIP ALL TOPSOIL, LOAM OR ORGANIC MATTER PRIOR TO TRENCHING OR OTHER OPERATIONS AND SHALL STORE THEM SEPARATELY FROM ALL OTHER MATERIALS DURING EXCAVATION. EACH STOCKPILE MUST BE ADEQUATELY RINGED WITH SEDIMENT CONTROL MATERIAL (I.E. HAY BALES AND/OR GEOTEXTILE FENCE).
- 8. THE EXISTING NATURAL DRAINAGE PATTERNS AND VEGETATIVE COVER SHALL BE PRESERVED TO THE MAXIMUM POSSIBLE EXTENT.
- 9. CONSTRUCTION EQUIPMENT SHALL BE A TYPE THAT DOES NOT DAMAGE ADJACENT AREAS AND MINIMIZES THE NEED FOR AND SIZE OF ACCESS ROADWAYS.
- 10. CONSTRUCTION SHALL BE PERFORMED IN SUCH A MANNER SO AS TO KEEP LAND GRADING AND DISTURBANCES TO A MINIMUM.
- 11. WATERCOURSE ELEVATIONS WITHIN THE CONSTRUCTION SITE SHALL BE RESTORED. CHANNELS SHALL BE CLEANED AND CLEARED OF SEDIMENT AND DEBRIS.
- 12. EXCESS EXCAVATED MATERIAL AND OTHER DEBRIS SHALL NOT BE STORED OR DISPOSED OF WITHIN THE ADJACENT WATERCOURSES OR WETLAND AREAS.
- 13. ANY CONSTRUCTION ROADS BUILT DURING CONSTRUCTION SHALL BE REMOVED AND ALL GRADE ELEVATIONS SHALL BE RESTORED TO ORIGINAL CONDITION
- 14. DEBRIS AND OTHER WASTE RESULTING FROM EQUIPMENT MAINTENANCE AND CONSTRUCTION SHALL NOT BE DISCARDED ON SITE.

LAND GRADING

GENERAL:

THE RESHAPING OF THE GROUND SURFACE BY EXCAVATION AND FILLING OR A COMBINATION OF BOTH, TO OBTAIN PLANNED GRADES, SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING CRITERIA:

- A. THE CUT FACE OF EARTH EXCAVATION SHALL NOT BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2:1).
- B. THE PERMANENT EXPOSED FACES OF FILLS SHALL NOT BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2:1).
- C. THE CUT FACE OF ROCK EXCAVATION SHALL NOT BE STEEPER THAN ONE HORIZONTAL TO FOUR VERTICAL (1:4).

D. PROVISION SHOULD BE MADE TO CONDUCT SURFACE WATER SAFELY TO

- STORM DRAINS TO PREVENT SURFACE RUNOFF FROM DAMAGING CUT FACES AND FILL SLOPES.

 E. EXCAVATIONS SHOULD NOT BE MADE SO CLOSE TO PROPERTY LINES AS TO
- FROM EROSION, SLIDING, SETTLING, OR CRACKING.

 F. NO FILL SHOULD BE PLACED WHERE IT WILL SLIDE OR WASH UPON THE

WATERCOURSES, OR WATERBODIES.

ENDANGER ADJOINING PROPERTY WITHOUT PROTECTING SUCH PROPERTY

PREMISES OF ANOTHER OWNER OR UPON ADJACENT WETLANDS,

G. PRIOR TO ANY REGRADING, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PLACED AT THE ENTRANCE TO THE WORK AREA IN ORDER TO REDUCE MUD AND OTHER SEDIMENTS FROM LEAVING THE SITE.

TOPSOILING

GENERAL

- 1. TOPSOIL SHALL BE SPREAD OVER ALL EXPOSED AREAS IN ORDER TO PROVIDE A SOIL MEDIUM HAVING FAVORABLE CHARACTERISTICS FOR THE ESTABLISHMENT. GROWTH, AND MAINTENANCE OF VEGETATION.
- 2. UPON ATTAINING FINAL SUBGRADES, SCARIFY SURFACE TO PROVIDE A GOOD BOND WITH TOPSOIL.
- 3. REMOVE ALL LARGE STONES, TREE LIMBS, ROOTS AND CONSTRUCTION DEBRIS.
- 4. APPLY LIME ACCORDING TO SOIL TEST OR AT THE RATE OF 2 TON PER ACRE.

MATERIAL

- 1. TOPSOIL SHOULD HAVE PHYSICAL, CHEMICAL, AND BIOLOGICAL CHARACTERISTICS FAVORABLE TO THE GROWTH OF PLANTS.
- 2. TOPSOIL SHOULD HAVE A SANDY OR LOAMY TEXTURE.
- 3. TOPSOIL SHOULD BE RELATIVELY FREE OF SUBSOIL MATERIAL AND MUST BE FREE OF STONES (OVER 1" IN DIAMETER), LUMPS OF SOIL, ROOTS, TREE LIMBS, TRASH, OR CONSTRUCTION DEBRIS. IT SHOULD BE FREE OF ROOTS OR RHIZOMES SUCH AS THISTLE, NUTGRASS, AND QUACKGRASS.
- 4. AN ORGANIC MATTER CONTENT OF SIX PERCENT (6%) IS REQUIRED. AVOID LIGHT COLORED SUBSOIL MATERIAL.
- 5. SOLUBLE SALT CONTENT OF OVER 500 PARTS PER MILLION (PPM) IS LESS SUITABLE. AVOID TIDAL MARSH SOILS BECAUSE OF HIGH SALT CONTENT AND SULFUR ACIDITY.
- 6. THE pH SHOULD BE MORE THAN 6.0. IF LESS, ADD LIME TO INCREASE pH TO AN ACCEPTABLE LEVEL.

APPLICATION:

- 1. AVOID SPREADING WHEN TOPSOIL IS WET OR FROZEN.
- 2. SPREAD TOPSOIL UNIFORMLY TO A DEPTH OF AT LEAST FOUR INCHES, OR TO THE DEPTH SHOWN ON THE PLANS.

TEMPORARY VEGETATIVE COVER

CENEDAL

1. TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED ON ALL UNPROTECTED AREAS THAT PRODUCE SEDIMENT, AREAS WHERE FINAL GRADING HAS BEEN COMPLETED, AND AREAS WHERE THE ESTIMATED PERIOD OF BARE SOIL EXPOSURE IS LESS THAN 12 MONTHS. TEMPORARY VEGETATIVE COVER SHALL BE APPLIED IF AREAS WILL NOT BE PERMANENTLY SEEDED BY OCTOBER 15.

SITE PREPARATION:

- 1. INSTALL REQUIRED SURFACE WATER CONTROL MEASURES.
- 2. REMOVE LOOSE ROCK, STONE, AND CONSTRUCTION DEBRIS FROM AREA.
- 3. APPLY LIME ACCORDING TO SOIL TEST OR AT A RATE OF 1 TON OF GROUND DOLOMITIC LIMESTONE PER ACRE.
- 4. APPLY FERTILIZER ACCORDING TO SOIL TEST OR AT THE RATE OF 330 LB OF 10-10-10 PER ACRE (7.5 LB PER 1000 SF) AND SECOND APPLICATION OF 240 LB OF 10-10-10- (5.5 LB PER 1000 SF) WHEN GRASS IS 4" TO 6" HIGH. APPLY ONLY
- 5. UNLESS HYDROSEEDED, WORK IN LIME AND FERTILIZER TO A DEPTH OF 4" USING A DISK OR ANY SUITABLE EQUIPMENT.
- 6. TILLAGE SHOULD ACHIEVE A REASONABLY UNIFORM LOOSE SEEDBED. WORK

ESTABLISHMENT:

- 1. SELECT APPROPRIATE SPECIES FOR THE SITUATION. NOTE RATES AND SEEDING DATES (SEE VEGETATIVE COVER SELECTION & MULCHING SPECIFICATION BELOW).
- 2. APPLY SEED UNIFORMLY ACCORDING TO THE RATE INDICATED BY BROADCASTING, DRILLING, OR HYDRAULIC APPLICATION.
- 3. UNLESS HYDROSEEDED, COVER RYEGRASS SEEDS WITH NOT MORE THAN 2" OF SOIL USING SUITABLE EQUIPMENT.
- 4. MULCH IMMEDIATELY AFTER SEEDING IF REQUIRED. (SEE VEGETATIVE COVER SELECTION & MULCHING SPECIFICATION BELOW.) APPLY STRAW OR HAY MULCH AND ANCHOR TO SLOPES GREATER THAN 3% OR WHERE CONCENTRATED FLOW WILL OCCUR.

PERMANENT VEGETATIVE COVER

ON CONTOUR IF SITE IS SLOPING.

GENERAL:

1. PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED AS VARIOUS SECTIONS OF THE PROJECT ARE COMPLETED IN ORDER TO STABILIZE THE SOIL, REDUCE DOWNSTREAM DAMAGE FROM SEDIMENT AND RUNOFF, AND TO ENHANCE THE AESTHETIC NATURE OF THE SITE. IT WILL BE APPLIED TO ALL CONSTRUCTION AREAS SUBJECT TO EROSION WHERE FINAL GRADING HAS BEEN COMPLETED AND A PERMANENT COVER IS NEEDED.

SITE PREPARATION:

- 1. INSTALL REQUIRED SURFACE WATER CONTROL MEASURES.
- 2. REMOVE LOOSE ROCK, STONE. AND CONSTRUCTION DEBRIS FROM AREA.
- 3. PERFORM ALL PLANTING OPERATIONS PARALLEL TO THE CONTOURS OF THE SLOPE.
- 4. APPLY TOPSOIL AS INDICATED ELSEWHERE HEREIN.
- 5. APPLY FERTILIZER ACCORDING TO SOIL TEST OR SPREAD SEEDING: WORK DEEPLY IN SOIL, BEFORE SEEDING, 330 LB OF 10-10-10 FERTILIZER PER ACRE (7.5 LB PER 1000 SF); THEN SIX (6) TO EIGHT (8) WEEKS LATER, APPLY ON THE SURFACE AN ADDITIONAL 30 LB OF 10-10-10 FERTILIZER PER ACRE. AFTER SEPTEMBER 1, TEMPORARY VEGETATIVE COVER SHALL BE APPLIED, FALL SEEDING: WORK DEEPLY IN SOIL, BEFORE SEEDING. 240 LB OF 10-10-10 FERTILIZER PER ACRE (5.5 LB PER 1000 SF)

VEGETATIVE COVER SELECTION &; MULCHING

TEMPORARY VEGETATIVE COVER:

PERENNIAL RYEGRASS 3 LB/1000 SF (IOLUIUM PERENNE)

PERMANENT VEGETATIVE COVER:

CREEPING RED FESCUE 2 LB/1000 SF (FESTUCA RUBRA)

REDTOP 1 LB/1000 SF (AGROSTIS ALBA)

TALL FESCUE 2 LB/1000 SF

(FESTUCA ARUNDINACEA) TEMPORARY MULCHING:

STRAY OR HAY 60-90 LB/1000 SF (TEMPORARY VEGETATIVE AREAS)

WOOD FIBER IN HYDROMULCH SLURRY 25-50 LB/1000 SF

ESTABLISHMENT:

SPEC).

- 1. SMOOTH AND FIRM SEEDBED WITH CULTIPACKER OR OTHER SIMILAR EQUIPMENT PRIOR TO SEEDING (EXCEPT WHEN HYDROSEEDING).
- SELECT ADAPTED SEED MIXTURE FOR THE SPECIFIC SITUATION. NOTE RATES AND THE SEEDING DATES (SEE VEGETATIVE COVER SELECTION & MULCHING).
- 3. APPLY SEED UNIFORMLY ACCORDING TO RATE INDICATED, BY BROADCASTING, DRILLING, OR HYDRAULIC APPLICATION.
- 4. COVER GRASS AND LEGUME SEED WITH NOT MORE THAN 1/4" OF SOIL WITH SUITABLE EQUIPMENT (EXCEPT WHEN HYDROSEEDING).
- 5. MULCH IMMEDIATELY AFTER SEEDING, IF REQUIRED, ACCORDING TO TEMPORARY MULCHING SPECIFICATIONS. (SEE VEGETATIVE COVER SELECTION & MULCHING SPECIFICATION).
- 6. USE PROPER INOCULANT ON ALL LEGUME SEEDINGS. USE FOUR (4) TIMES NORMAL RATES WHEN HYDROSEEDING.
- 7. USE SOD WHERE THERE IS A HEAVY CONCENTRATION OF WATER AND IN CRITICAL AREAS WHERE IT IS IMPORTANT TO GET A QUICK VEGETATIVE COVER TO PREVENT EROSION.

TEMPORARY EROSION / SEDIMENTATION CONTROL DEVICES

THE FOLLOWING EROSION/SEDIMENTATION CONTROL DEVICES ARE PLANNED FOR THE SITE DURING THE CONSTRUCTION PERIOD. THESE DEVICES SHALL BE INSTALLED AS INDICATED ON THE PLANS OR AS DESCRIBED HEREWITHIN.

- 1. SYNTHETIC FILTER BARRIERS AND HAY BALES WILL BE INSTALLED DOWNGRADIENT OF DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL THE SITE IS REVEGETATED. INSTALLATION DETAILS ARE PROVIDED IN THE PLAN SET ON THE EROSION CONTROL DETAIL SHEETS.
- 2. STRAW OR HAY MULCH IS INTENDED TO PROVIDE COVER FOR DENUDED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED. MULCH PLACED ON SLOPES OF LESS THAN 3 PERCENT SHALL BE ANCHORED BY APPLYING WATER; MULCH PLACED IN AREAS OF CONCENTRATED FLOW OR ON SLOPES STEEPER THAN 3 PERCENT SHALL BE COVERED WITH FABRIC NETTING OR EQUAL AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SLOPES STEEPER THAN 4:1 AND WHERE SHOWN ON THE PLANS, WHICH ARE TO BE REVEGETATED, SHALL RECEIVE CURLEX BLANKETS BY AMERICAN EXCELSIOR.
- 3. CONSTRUCTION ENTRANCES WILL BE INSTALLED AT ALL ACCESS POINTS OF THE SITE TO PREVENT THE TRACKING OF SOIL ONTO CITY STREETS AND STATE ROADS.
- 4. IF REQUIRED TEMPORARY SEDIMENTATION BASINS AND OR SEDIMENT TRAPS SHALL BE CONSTRUCTED IN THE LOCATIONS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN OR AT LOCATIONS SPECIFIED BY THE ENGINEER DURING CONSTRUCTION TO ALLOW SETTLEMENT OF FINE GRAIN PARTICLES FROM DEWATERING OPERATIONS AND SURFACE RUNOFF. THE REQUIRED VOLUME OF STORAGE IS 134 CUBIC YARDS FOR EVERY ACRE OF DISTURBED SITE ENTERING THE BASIN. A SEDIMENTATION BASIN WILL BE REQUIRED WHEN TWO ACRES ARE DISTURBED THAT DISCHARGE TO ANY POINT.
- 5. TEMPORARY STORAGE AND STOCKPILE AREAS SHALL BE SURROUNDED BY A SYNTHETIC FILTER BARRIER. TEMPORARY DRAINAGE SWALES SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS OR AS NECESSARY TO DIVERT RUNOFF INTO THE SEDIMENTATION BASINS.
- 6. SEDIMENT TRAPS WILL BE INSTALLED AROUND ALL CATCH BASINS. THE SEDIMENT TRAPS SHALL BE LEFT IN PLACE UNTIL THE TRIBUTARY AREA IS PAVED OR REVEGETATED.
- 7. WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED OR HAVE TEMPORARILY BEEN SUSPENDED FOR MORE THAN SEVEN DAYS, OR WHEN FINAL GRADES ARE REACHED IN ANY PORTION OF THE SITE, STABILIZATION PRACTICES SHALL BE IMPLEMENTED WITHIN THREE DAYS. AREAS THAT WILL REMAIN DISTURBED BUT INACTIVE FOR AT LEAST THIRTY DAYS SHALL RECEIVE TEMPORARY SEEDING IN ACCORDANCE WITH THE GUIDELINES. AREAS THAT WILL REMAIN DISTURBED BEYOND THE PLANTING SEASON, SHALL RECEIVE LONG-TERM, NON-VEGETATIVE STABILIZATION SUFFICIENT TO PROTECT THE SITE THROUGH THE WINTER. IN ALL CASES, STABILIZATION MEASURES SHALL BE BE IMPLEMENTED AS SOON AS POSSIBLE IN ACCORDANCE WITH THE GUIDELINES.
- 8. IF WORK IS CONDUCTED BETWEEN SEPTEMBER 15TH AND APRIL 15TH OF ANY CALENDAR YEAR, ALL DENUDED AREAS WILL BE COVERED WITH HAY MULCH, APPLIED AT TWICE THE NORMAL APPLICATION RATE AND ANCHORED WITH FABRIC NETTING. THE PERIOD BETWEEN FINAL GRADING AND MULCHING SHALL BE REDUCED TO A 15 DAY MAXIMUM.
- 9. ALL STREETS SHALL BE SWEPT OR WASHED TO CONTROL MUD AND DUST AS NECESSARY AS DETERMINED BY THE TOWN AND/OR THE ENGINEER.
- 10. DURING GRUBBING OPERATIONS, CHECK DAMS WILL BE INSTALLED AT ANY EVIDENT CONCENTRATED FLOW DISCHARGE POINTS.
- 11. EFFLUENT FROM DEWATERED WORK AREAS SHALL NOT BE DISCHARGED DIRECTLY TO THE WATERCOURSE BUT BE PROCESSED THROUGH TREATMENT STRUCTURES. SUCH STRUCTURES ARE NOT TO BE LOCATED WITHIN THE WATERCOURSE CHANNEL OR ADJACENT WETLANDS.

PERMANENT EROSION CONTROL MEASURES:

- THE FOLLOWING PERMANENT EROSION CONTROL MEASURES HAVE BEEN DESIGNED AS PART OF THE EROSION/SEDIMENTATION CONTROL PLAN:
- 1. ALL AREAS DISTURBED DURING CONSTRUCTION, BUT NOT SUBJECT TO OTHER RESTORATION (PAVING, RIP RAP, ETC.) WILL BE LOAMED, LIMED, FERTILIZED, MULCHED AND SEEDED. FABRIC NETTING ANCHORED WITH STAPLES SHALL BE PLACED OVER THE MULCH IN AREAS WHERE THE FINISH GRADE SLOPE IS GREATER THAN 3H:1V. ALL AREAS SHALL RECEIVE PROTECTION WITHIN 30 DAYS. NATIVE TOPSOIL SHALL BE STOCKPILED AND REUSED FOR FINAL RESTORATION WHEN IT IS OF SUFFICIENT QUALITY.
- 2. CATCH BASINS WILL BE PROVIDED WITH SEDIMENT SUMPS.

GENERAL PHASING OF EROSION AND SEDIMENTATION CONTROL MEASURES:

THE CONSTRUCTION OF THE TEMPORARY SEDIMENTATION BASINS, IF REQUIRED MUST BE COMPLETED BEFORE OTHER WORK BEGINS AT THE SITE. EXTREME CAUTION MUST BE TAKEN TO LIMIT THE EXTENT OF DISTURBED AREAS. WORK SHALL BE CONDUCTED IN THE FOLLOWING ORDER (FOR ADDITIONAL INFORMATION SEE SEQUENCE OF CONSTRUCTION):

- A. INSTALL CRUSHED STONE CONSTRUCTION ENTRANCES AND STORAGE AREAS AND IN OTHER AREAS AS INDICATED ON THE PLANS OR DIRECTED BY THE ENGINEER. INSTALL HAY BALE SEDIMENT TRAPS AT ALL EXISTING CATCH BASINS AND DRAINS.
- B. CONSTRUCT TEMPORARY SEDIMENTATION BASINS AND, IF REQUIRED, TEMPORARY SWALES TO DIRECT RUNOFF TO BASINS. INSTALL CHECK DAMS IN SWALES AND OTHER AREAS OF CONCENTRATED FLOW.
- C. DISPOSE OF ANY UNUSABLE FILL MATERIAL OFF SITE. DISPOSAL OF MATERIALS SHALL BE CONDUCTED IN A MANNER CONSISTENT WITH THIS PLAN WHICH WILL AVOID EROSION AND SEDIMENTATION OFF SITE. PLACE FILL MATERIAL WHICH IS SUITABLE FOR REUSE WITHIN DESIGNATED STOCKPILE AREAS
- D. DURING GRUBBING OPERATIONS, INSTALL CHECK DAMS AT ANY EVIDENT CONCENTRATED FLOW DISCHARGE POINTS.
- E. INSTALL PROPOSED STORM SEWER SYSTEM AND CATCH BASINS. PROTECT CATCH BASINS FROM SILTING WITH APPROPRIATE CONTROLS AS SHOWN ON THE DETAIL SHEETS.
- F. G. STABILIZE DISTURBED AREAS WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS.
- G. RECONSTRUCT ROADWAYS.
- H. RESTORE DISTURBED AREAS, COMPLETE SEEDING AND LANDSCAPING AND REMOVE EROSION CONTROL DEVICES.

ADDITIONAL REQUIREMENTS

IN ADDITION TO THE MEASURES LISTED ABOVE, THE FOLLOWING WORK WILL BE PERFORMED AS REQUIRED:

- 1. REMOVE ACCUMULATED SEDIMENT AHEAD OF ANY SILT BARRIERS (AS NECESSARY) AND DISPOSE OFF SITE.
- DUST AND WIND EROSION SHALL BE CONTROLLED THROUGHOUT THE LIFE OF THE CONTRACT. DUST CONTROL SHALL INCLUDE, BUT IS NOT LIMITED TO, SPRINKLING OF WATER ON EXPOSED SOILS AND HAUL ROADS.
- 3. IF EXCAVATION IS INTERRUPTED BY HEAVY RAINS, ADDITIONAL MULCHING OR GRAVEL WORK MATS MAY BE REQUIRED ON AREAS OF EXPOSED SOILS. SOILS WHICH HAVE BECOME UNSUITABLE FOR USE DUE TO EXPOSURE TO HEAVY RAINS SHALL BE REMOVED FROM THE WORK AREA AND DRIED OR DISPOSED OF
- 4. CLEAN OUT ALL CULVERTS, CATCH BASINS AND STORM SEWERS IN STREETS ADJACENT TO THE PROJECT AREA AFTER COMPLETION OF THE PROJECT.
- 5. CONSTRUCTION EQUIPMENT IS NOT TO ENTER ANY WATERCOURSE OR WETLAND.
- 6. EQUIPMENT IS NOT TO BE WASHED IN OR NEAR WETLANDS OR WATERCOURSES.
- 7. EQUIPMENT MAINTENANCE SHALL NOT BE CARRIED OUT WITHIN THE PROJECT SITE UNLESS APPROVED IN WRITING BY THE ENGINEER.
- 8. TRASH RECEPTACLES SHALL BE REQUIRED ON THE JOB SITE.

OFF SITE IN A MANNER CONSISTENT WITH THIS PLAN.

9. DUMPING OF OIL, CHEMICALS OR OTHER DELETERIOUS MATERIALS ON THE GROUND IS FORBIDDEN. THE CONTRACTOR SHALL PROVIDE A MEANS OF CATCHING, RETAINING AND PROPERLY DISPOSING OF DRAINED OIL, REMOVED OIL FILTERS OR OTHER DELETERIOUS MATERIAL. ALL SPILLS OF SUCH MATERIAL SHALL BE REPORTED IMMEDIATELY BY THE CONTRACTOR TO DEP. THE CONTRACTOR SHALL STORE OIL ABSORBENT MATERIALS ON SITE FOR THE CLEANUP OF SPILLS.

<u>SEDIMENTATION AND EROSION CONTROL MAINTENANCE PROCEDURES DURING CONSTRUCTION:</u>

ALL SEDIMENTATION AND EROSION CONTROL DEVICES SHALL BE INSPECTED DURING CONSTRUCTION BY THE CONTRACTOR ON A DAILY BASIS AND FOLLOWING ALL STORMS. THE CONTRACTOR SHALL MAINTAIN AND MAKE REPAIRS AND REMOVE SEDIMENT AS REQUIRED. THIS WORK SHALL BE PERFORMED WITHIN 24 HOURS FOLLOWING ALL STORM EVENTS. THERE SHALL BE NO SEPARATE PAYMENT FOR THIS WORK.

THE CONTRACTOR SHALL CLEAN SEDIMENT AND DEBRIS FROM ALL DRAINAGE STRUCTURES AND PIPES AT THE COMPLETION OF CONSTRUCTION AND AS REQUIRED TO KEEP THE SYSTEM FUNCTIONING PROPERLY DURING CONSTRUCTION.

FOLLOWING COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL REPAIR ALL ERODED AREAS AND ENSURE A GOOD STAND OF TURF IS ESTABLISHED THROUGHOUT. THE CONTRACTOR SHALL REPAIR ALL ERODED OR DISPLACED RIPRAP AND CLEAN SEDIMENT COVERED STONES.

THE CONTRACTOR SHALL REPAIR AND ADD STONE TO THE CONSTRUCTION

ENTRANCES AS THEY BECOME SATURATED WITH MUD TO INSURE THAT THEY

SILT FENCES SHALL BE INSPECTED, REPAIRED AND CLEANED AS REQUIRED AND AS DIRECTED BY THE ENGINEER.

WORK AS PLANNED DURING THE CONSTRUCTION.

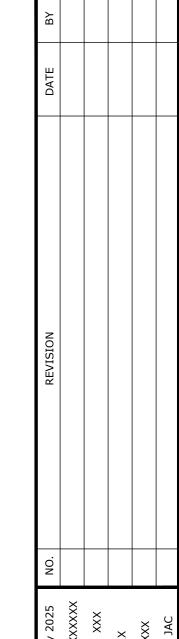
POST CONSTRUCTION:

- 1. THE MAINTENANCE SCHEDULE FOR THE CATCH BASIN SEDIMENT SUMPS IS AS FOLLOWS: THESE DEVICES SHALL BE INSPECTED IN APRIL OF EACH YEAR AT A MINIMUM. ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE CATCH BASINS WHEN THE DEPTH OF THE SEDIMENT IS WITHIN ONE FOOT OF THE OUTLET PIPE INVERT. THE SEDIMENT WILL BE REMOVED FROM THE SITE BY THE TOWN OR THE CATCH BASIN CLEANING CONTRACTOR AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
- 2. STREETS ARE TO BE CLEANED WITH STREET SWEEPERS ANNUALLY AT A MINIMUM.
- 3. THE SITE SHALL BE INSPECTED EVERY 6 MONTHS AND AFTER MAJOR STORMS FOR EVIDENCE OF EROSION ALL ERODED SURFACES ARE TO BE REPAIRED AND PERMANENTLY STABILIZED.

INSPECTION:

QUALIFIED PERSONNEL (PROVIDED BY THE CONTRACTOR) SHALL INSPECT DISTURBED AREAS OF THE CONSTRUCTION ACTIVITY THAT HAVE NOT BEEN FINALLY STABILIZED, STRUCTURAL CONTROL MEASURES AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE AT LEAST ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.1 INCHES OR GREATER. WHERE SITES HAVE BEEN TEMPORARILY OR FINALLY STABILIZED, SUCH INSPECTION SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH FOR 3 MONTHS. FULL TIME CONSTRUCTION INSPECTION WILL BE PROVIDED BY THE ENGINEER.

- 1. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ASSESSABLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF SITE SEDIMENT TRACKING.
- 2. BASED ON THE RESULTS OF THE INSPECTION, THE DESCRIPTION OF POTENTIAL SOURCES AND POLLUTION PREVENTION MEASURES IDENTIFIED IN THE PLAN SHALL BE REVISED AS APPROPRIATE AS SOON AS PRACTICABLE AFTER SUCH INSPECTION. SUCH MODIFICATIONS SHALL PROVIDE FOR TIMELY IMPLEMENTATION OF ANY CHANGES TO THE SITE WITHIN 24 HOURS AND IMPLEMENTATION OF ANY CHANGES TO THE PLAN WITHIN 3 CALENDAR DAYS FOLLOWING THE INSPECTION. THE PLAN SHALL BE REVISED AND THE SITE CONTROLS UPDATED IN ACCORDANCE WITH SOUND ENGINEERING PRACTICES AND GUIDELINES. A REPORT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE STORM WATER POLLUTION CONTROL PLAN AND ACTIONS TAKEN SHALL BE MADE AND RETAINED AS PART OF THE PLAN FOR AT LEAST 3 YEARS AFTER THE DATE OF INSPECTION. THE REPORT SHALL BE SIGNED BY THE PERMITTED OR HIS AUTHORIZED REPRESENTATIVE.



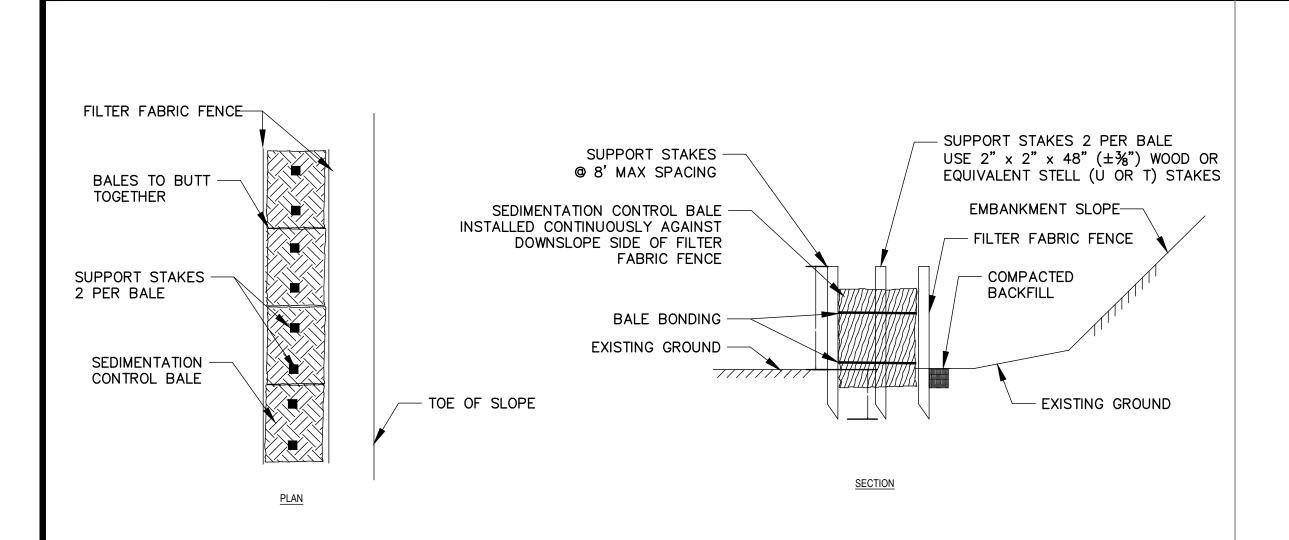
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LACEMENT OF OLD FIELD ROAD CUI OVER BULLET HILL BROOK SOUTHBURY, CONNECTICUT EDIMENT & EROSION CONTROL NOT

SED-01



SEDIMENTATION CONTROL SYSTEM DOUBLE SILT FENCE WITH HAYBALES

NOT TO SCALE

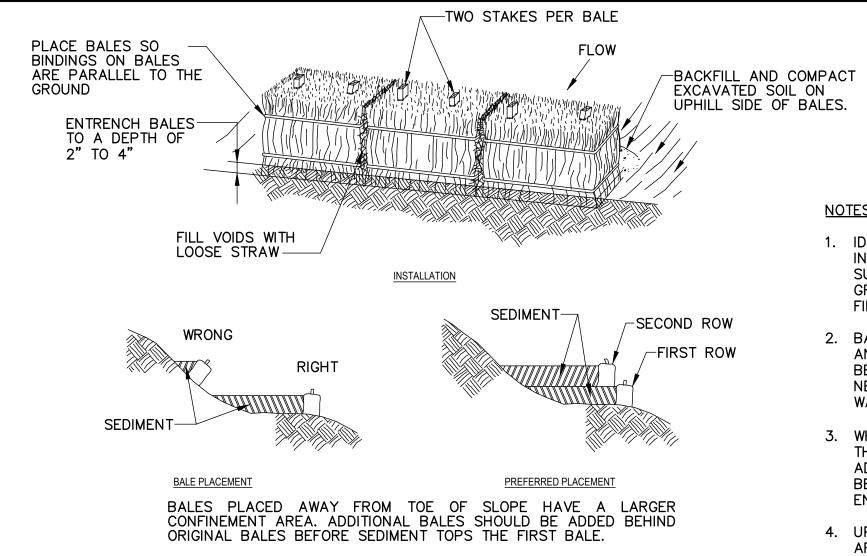
SLOPE ENGINEERING FABRIC OR HAY BALE SILT **FENCE** WINGS-(WHERE DIRECTED BY ENGINEER)

1. WHEN USING SILT FENCE ALONG TOE OF SLOPE, ADD WINGS TO PREVENT SEDIMENT FROM MOVING ALONG THE FENCE AND OFF THE SITE.

2. SILT FENCE SHOULD BE LOCATED 10' FROM TOE OF SLOPE.

SEDIMENTATION CONTROL SYSTEM **TOE OF SLOPE**

NOT TO SCALE



ANCHOR TO SHORE

NOTES:

- IDEALLY, BALES SHOULD BE ENTRENCHED 2 TO 4 INCHES AND TIGHTLY BUTTED TOGETHER. BALES CAN BE SUCCESSFULLY PLACED WITHOUT A TRENCH IF GOOD GROUND CONTACT IS MADE. REMOVE HEAVY BRUSH AND FILL IN ALL VOIDS WITH LOOSE STRAW.
- BALES SHALL BE ONLY USED AS A TEMPORARY BARRIEF AND FOR NO LONGER THAN 60 DAYS. THEY SHALL NOT BE USED ON A JOB ADJACENT TO A RESIDENTIAL NEIGHBORHOOD, RESIDENCES OR ADJACENT TO OR IN A WATERCOURSE.
- WHEN SEDIMENTATION DEPOSITS REACH WITHIN 3" OF THE TOP OF THE BALES, REMOVE SEDIMENTATION OR ADD ADDITIONAL BALES ON SEDIMENTATION DIRECTLY BEHIND THE FIRST ROW OF BALES AS DIRECTED BY THE ENGINEER.
- 4. UPON ESTABLISHMENT OF GROUND COVER ON DISTURBED AREAS AND WHEN DIRECTED BY THE THE ENGINEER, HAY BALES WILL BE REMOVED AND USED AS MULCH. ANY SEDIMENTATION WILL BE THINLY SPREAD UPON ESTABLISHED GROUND COVER.

TURBID WATER

FLOATING SECTION

ANCHOR

FABRIC

CLEAR WATER

HAY/STRAW BALE DIKES NOT TO SCALE

— FABRIC (TYP)

ANCHOR TO SHORE

ANCHOR LINES USE ANY SUITABLE

ANCHOR (TYP)



- A. MINIMUM LENGTH OF SILT FENCE IS 15 L.F.
- B. MAXIMUM POST SPACING IS 10 L.F.

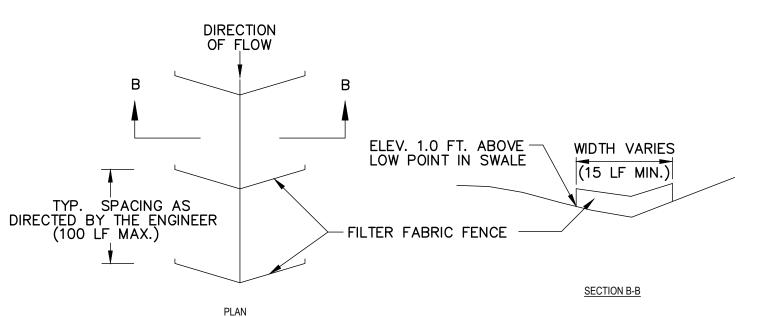
FILTER FABRIC-

FLOW

STAKE —

BACKFILL-

- C. JOINTS ONLY AT SUPPORT POST WITH MINIMUM 6" OVERLAP, SECURELY SEALED.
- D. SEDIMENTATION DEPOSITS SHALL BE REMOVED WHEN THEY REACH 1/2 THE HEIGHT OF THE SILT FENCE.
- E. SILT FENCE SHALL NOT BE USED IN A WATER COURSE.
- F. UPON ESTABLISHMENT OF GROUND COVER ON DISTURBED AREAS, AND WHEN DIRECTED BY THE ENGINEER, FENCE WILL BE REMOVED AND ANY SEDIMENTATION WILL BE THINLY SPREAD UPON EXISTING GROUND COVER.



SEE PLANS AND SPECIAL PROVISIONS FOR **TURBIDITY CONTROL CURTAIN** LOCATION OF AND ADDITIONAL INFORMATION REGARDING TURBIDITY CONTROL CURTAIN. NOT TO SCALE

BOTTOM

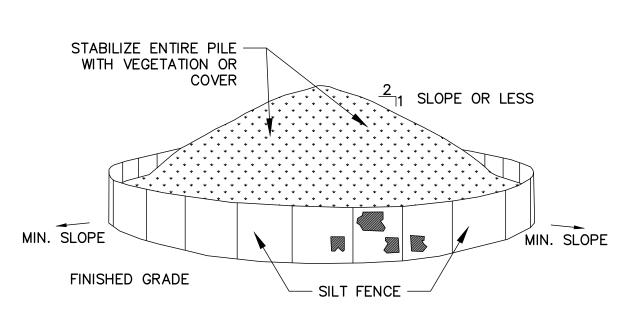
FLOATING TURBIDITY CONTROL

FLOAT

FILTER FABRIC CHECK DAM

NOT TO SCALE

SILT FENCE INSTALLATION NOT TO SCALE

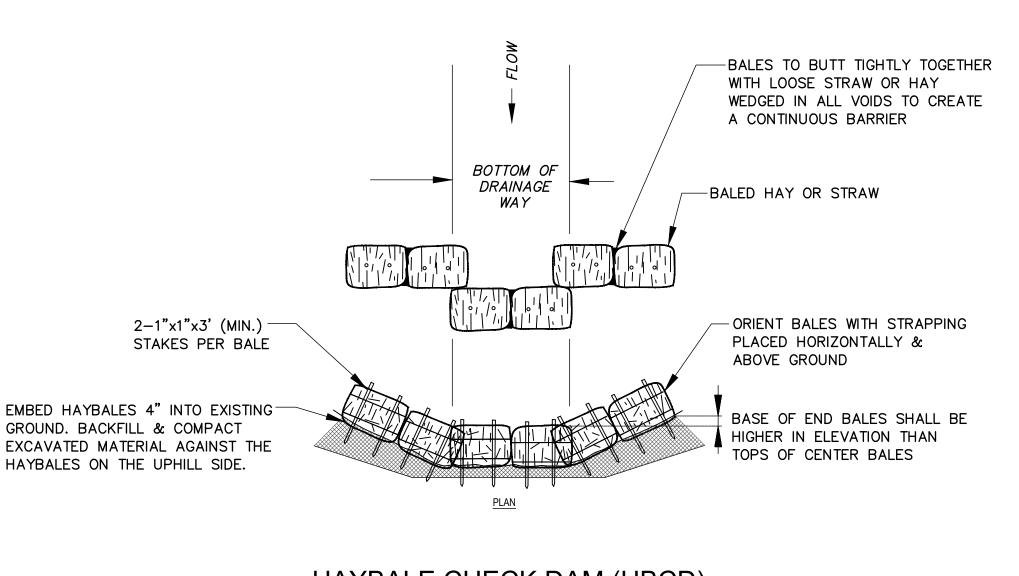


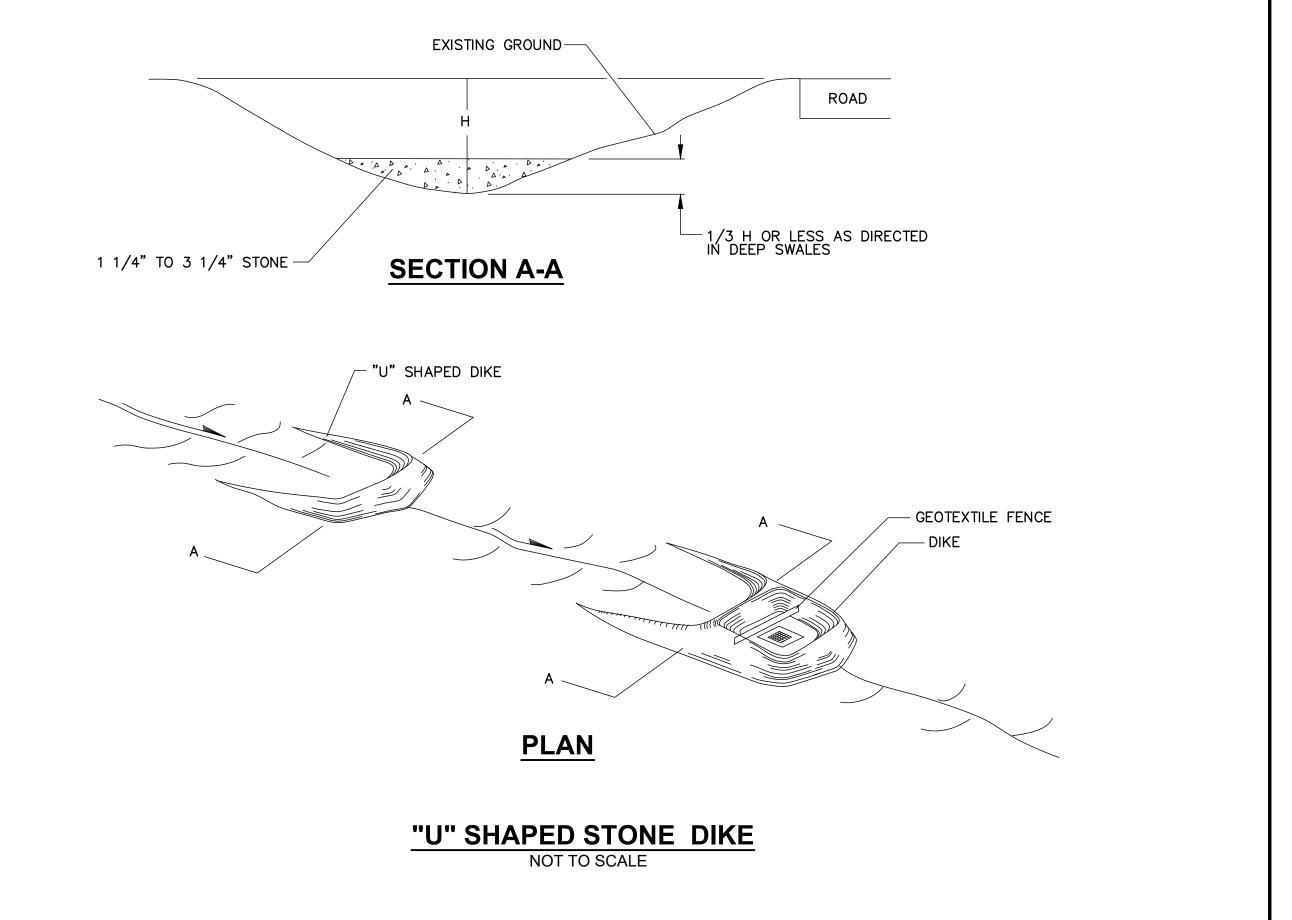
INSTALLATION NOTES:

- 1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
- 2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1.
- 3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH REINFORCED SILT FENCING, THEN STABILIZED WITH VEGETATION OR COVERED.

TOPSOIL AND SOIL STOCKPILE AREA

NOT TO SCALE





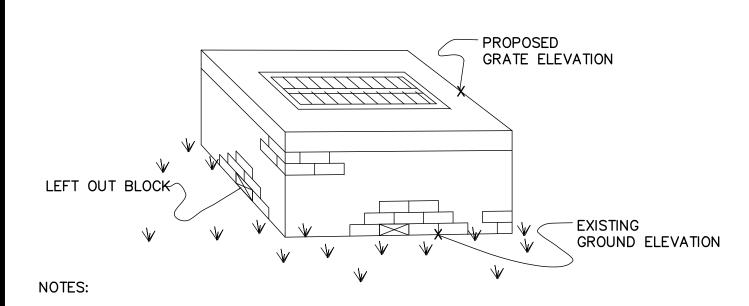
HAYBALE CHECK DAM (HBCD)

NOT TO SCALE

180

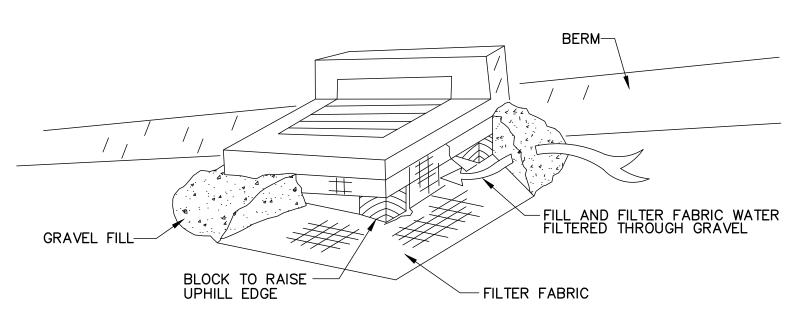


SED-02



- 1. ALL DIMENSIONS ARE IN INCHES (") EXCEPT AS NOTED.
- 2. CONSTRUCT CATCH BASINS LEAVING ONE (1) BLOCK OUT PER SIDE AT EXISTING GROUND ELEVATION TO ALLOW WATER TO ENTER.
- 3. IF GROUND WITHIN A CATCH BASIN'S WATERSHED BECOMES DISTURBED AND THE CATCH BASIN WILL NOT BE BACKFILLED TO TOP OF GRATE ELEVATION FOR AT LEAST EIGHT (8) HOURS, INSTALL SEDIMENTATION CONTROL SYSTEM FOR CATCH BASIN.
- 4. INSTALL LEFT OUT BLOCKS NOT SOONER THAN TWO (2) HOURS PRIOR TO BACKFILLING AROUND CATCH BASIN.
- 5. IMMEDIATELY AFTER PLACING FILL, INSTALL SEDIMENTATION CONTROL SYSTEMS.
- 6. THE ENDS OF THE DIKE SHALL BE THE SAME ELEVATION AS THE SPILLWAY OR GREATER.
- 7. MAXIMUM HEIGHT OF DIKE SHOULD NOT EXCEED 1/3 HEIGHT OF THE CHANNEL.
- 8. STONE DIKES SHALL BE PLACED AT 50' INTERVALS IN ALL TEMPORARY DITCHES AND CHANNELS.

SHORT TERM ALTERNATE (SEE NOTES 2 THRU 5)

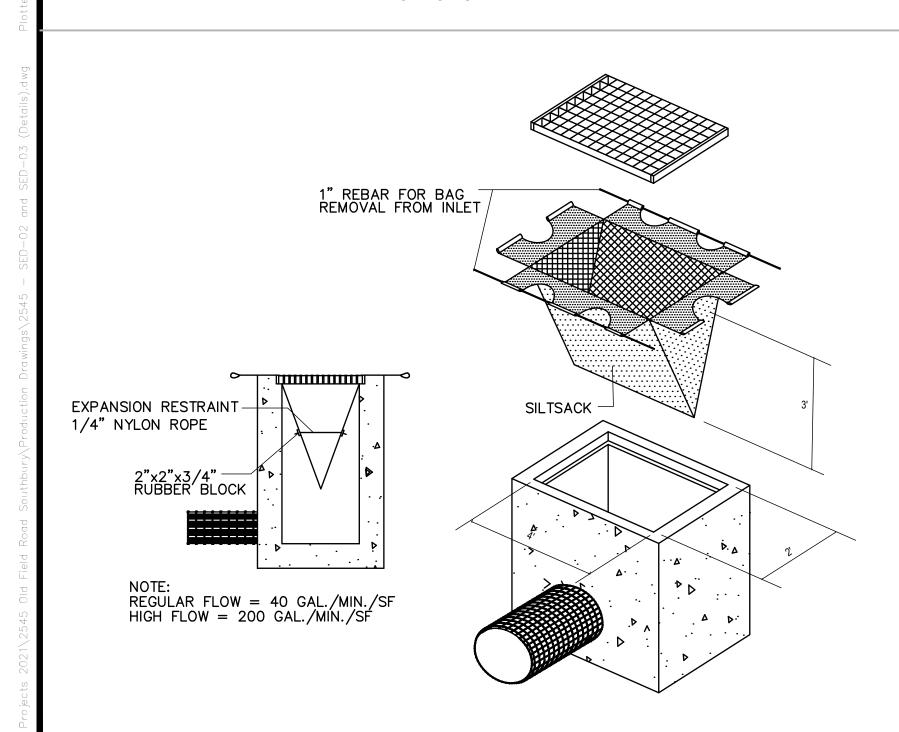


WHERE DIRECTED BY ENGINEER, CONTRACTOR SHALL CONSTRUCT A STONE DIKE IN LIEU OF THE FILTER FABRIC CHECK DAM.

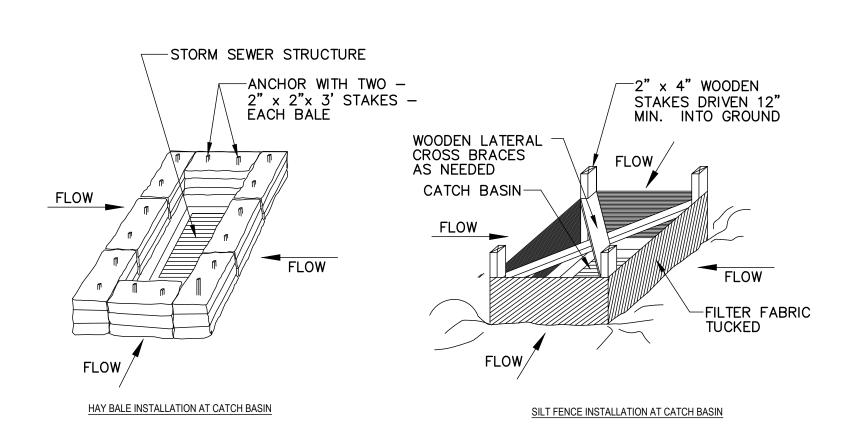
RAISE AND PROTECT CATCH BASIN TOPS WITH CRUSHED STONE AS SOON AS POSSIBLE TO PERMIT DRAINAGE TO ENTER STORM SYSTEMS, WHEN ROADWAY IS BROUGHT UP TO SUBBASE BEFORE PAVING.

SEDIMENTATION CONTROL SYSTEM FOR CATCH BASINS

NOT TO SCALE

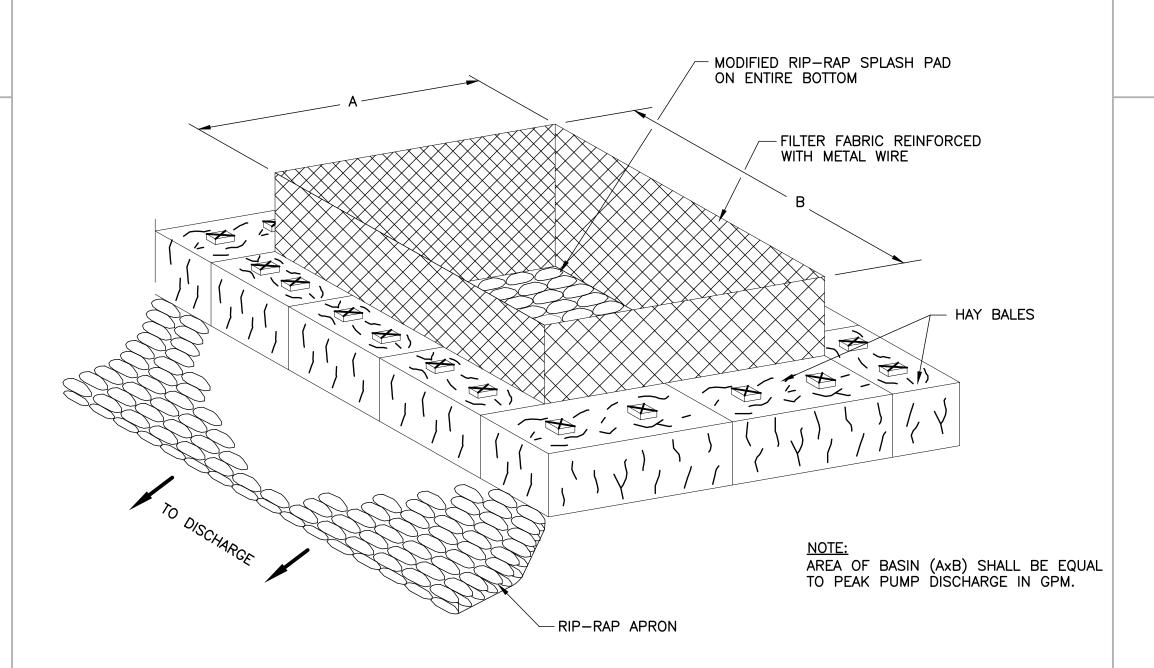


SILT SACK DETAIL

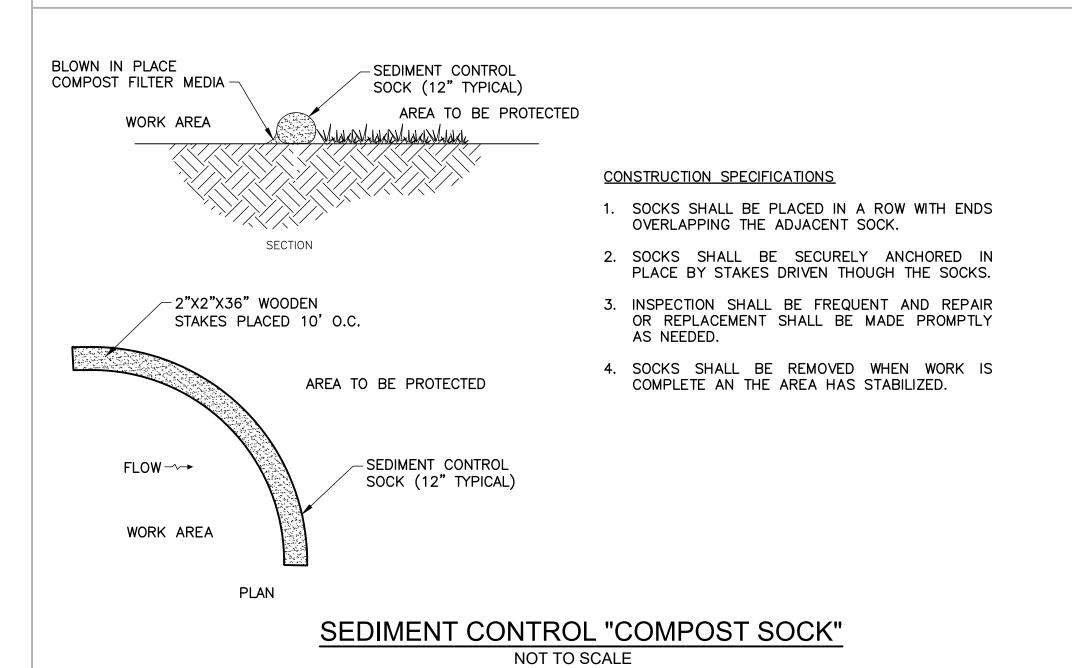


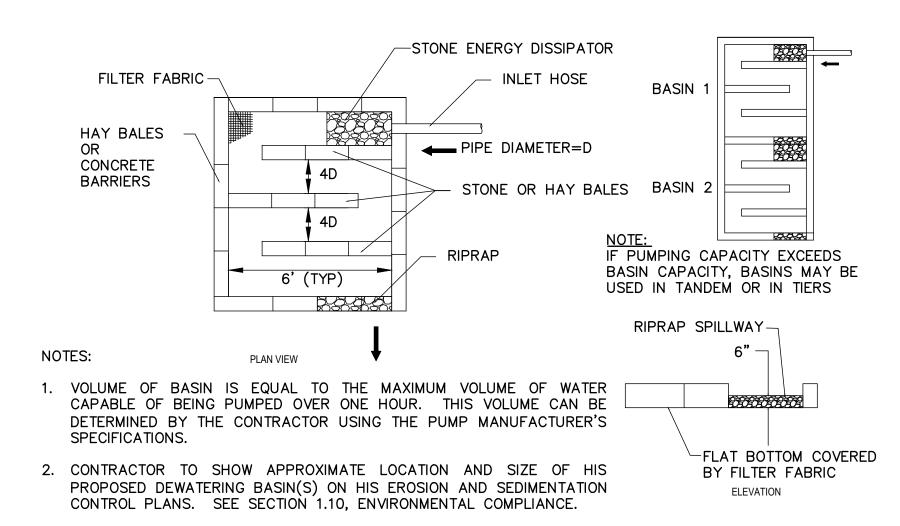
CATCH BASIN IN A DEPRESSION

NOT TO SCALE



TEMPORARY SEDIMENT BASIN FOR DEWATERING DISCHARGE NOT TO SCALE



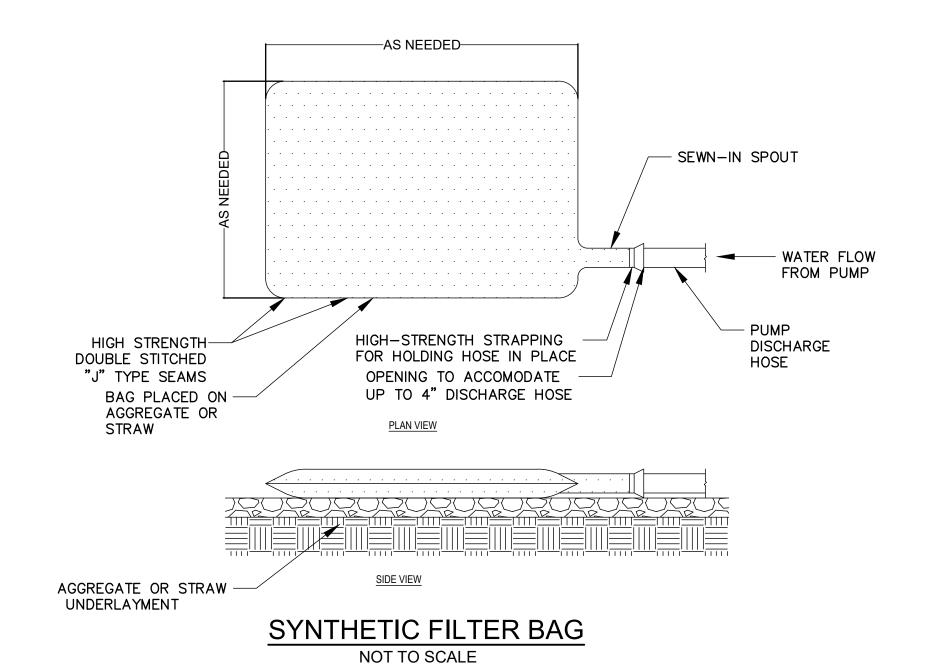


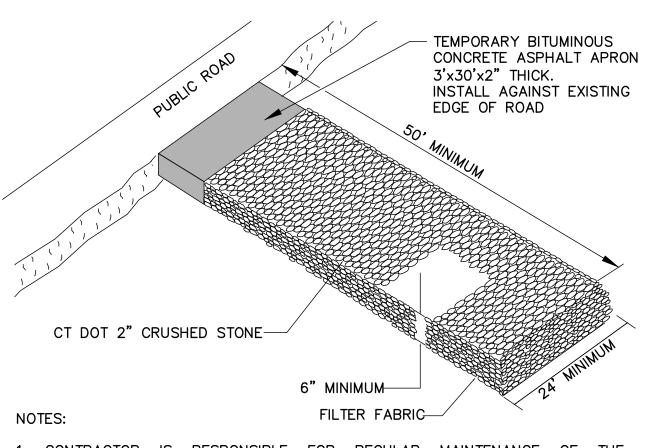
3. DEWATERING BASIN(S) NOT TO BE LOCATED IN ANY WETLAND AREA.

4. THERE WILL BE NO SEPARATE PAYMENT FOR THE DEWATERING BASINS. BUT IT WILL BE INCLUDED IN THE COST OF THE RESPECTIVE ITEMS "COFFERDAM AND DEWATERING" AND SEDIMENT AND EROSION CONTROL.

DEWATERING BASIN

NOT TO SCALE





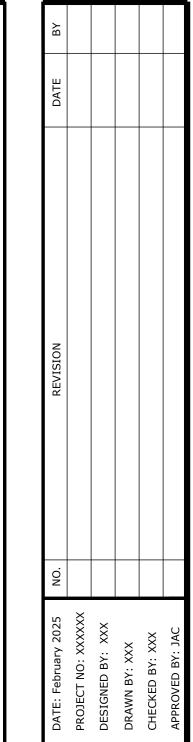
1. CONTRACTOR IS RESPONSIBLE FOR REGULAR MAINTENANCE OF THE ANTI-TRACKING PAD THROUGHOUT CONSTRUCTION. ROADS ARE TO BE FREE OF TRACKED DIRT, MUD AND DEBRIS.

2. THE LENGTH OF THE ANTI-TRACKING PAD SHALL BE INCREASED AS DIRECTED FOR SITES COMPOSED OF CLAYS OR SILTS.

EXISTING EDGE OF ROAD SHALL BE PRESERVED - CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING ROAD SURFACE.

ANTI-TRACKING PAD CONSTRUCTION ENTRANCE

NOT TO SCALE



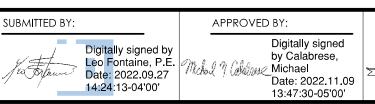
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SED-03

SIGNATURE BLOCK:

OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111







CTDOT STANDARD SHEET

HW-286_01



NOT TO SCALE

SUITABLE BACKFILL

BEDDING MATERIAL 0.25H ——

BEDDING MATERIAL -4" IN EARTH OR 12" IN

ROCK LEDGE

MATERIAL

SUBMITTED BY:

DRAINAGE TRENCH EXCAVATION

PIPE TRENCH FOR PIPES LESS THAN 48"

TRENCH WIDTH (TW)
HORIZONTAL LIMIT FOR DRAINAGE TRENCH
EXCAVATION AND BEDDING MATERIAL

D=DIAMETER

EQUIVALENT

CIRCULAR PIPE OR PIPE ARCH OF

HORIZONTAL SPAN

PRESHAPE BEDDING MATERIAL

TO 0.10H PRIOR TO INSTALLING PIPE

PIPE TRENCH FOR PIPES GREATER THAN OR EQUAL TO 48"

TRENCH WIDTH (TW) HORIZONTAL LIMIT FOR DRAINAGE TRENCH EXCAVATION AND BEDDING MATERIAL

D=DIAMETER

CIRCULAR PIPE

OR PIPE ARCH OF EQUIVALENT

HORIZONTAL SPAN

PRESHAPE BEDDING

MATERIAL TO 0.10H PRIOR TO INSTALLING PIPE

BEDDING MATERIAL

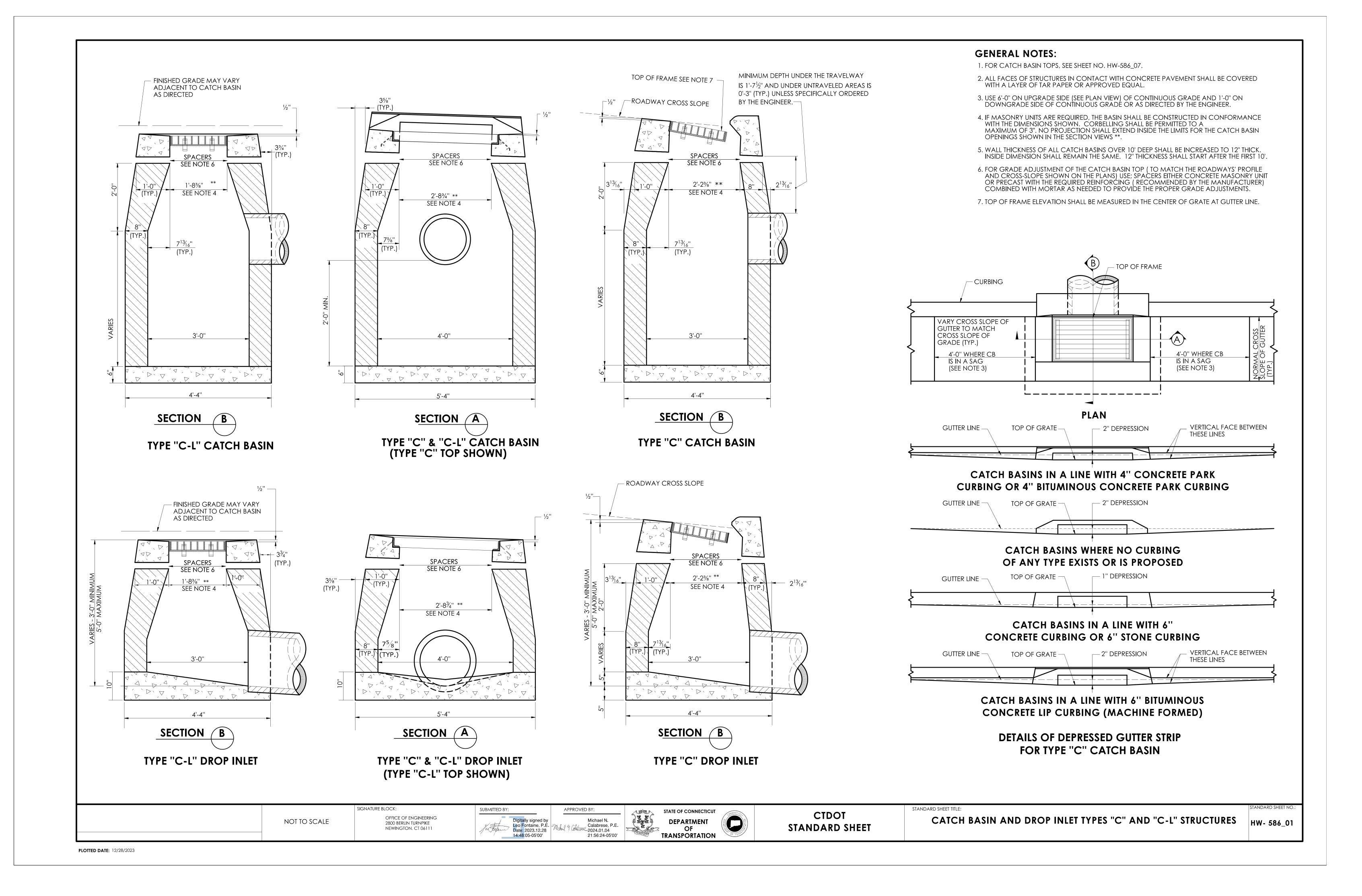
H+12"

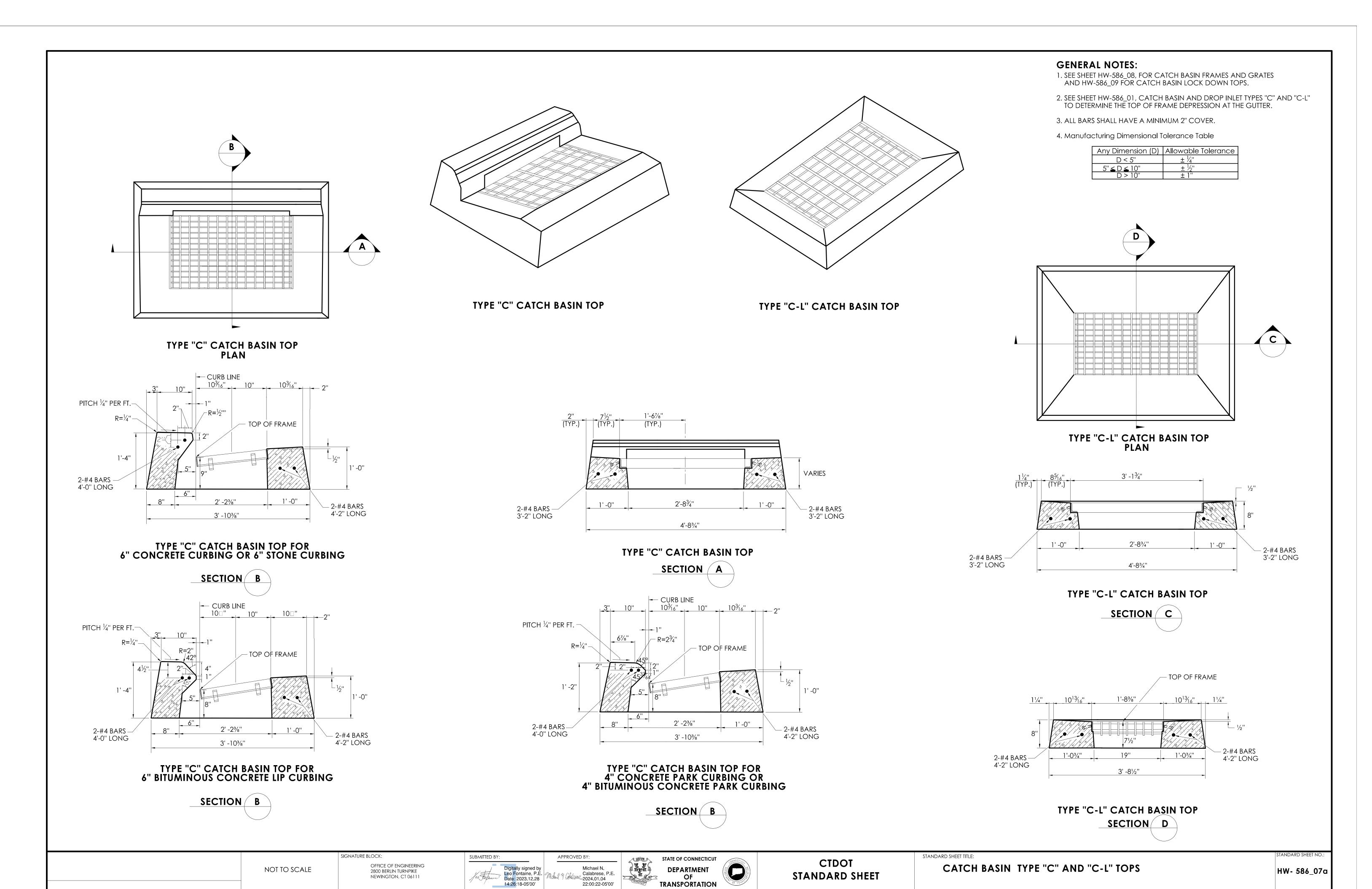
BEDDING MATERIAL

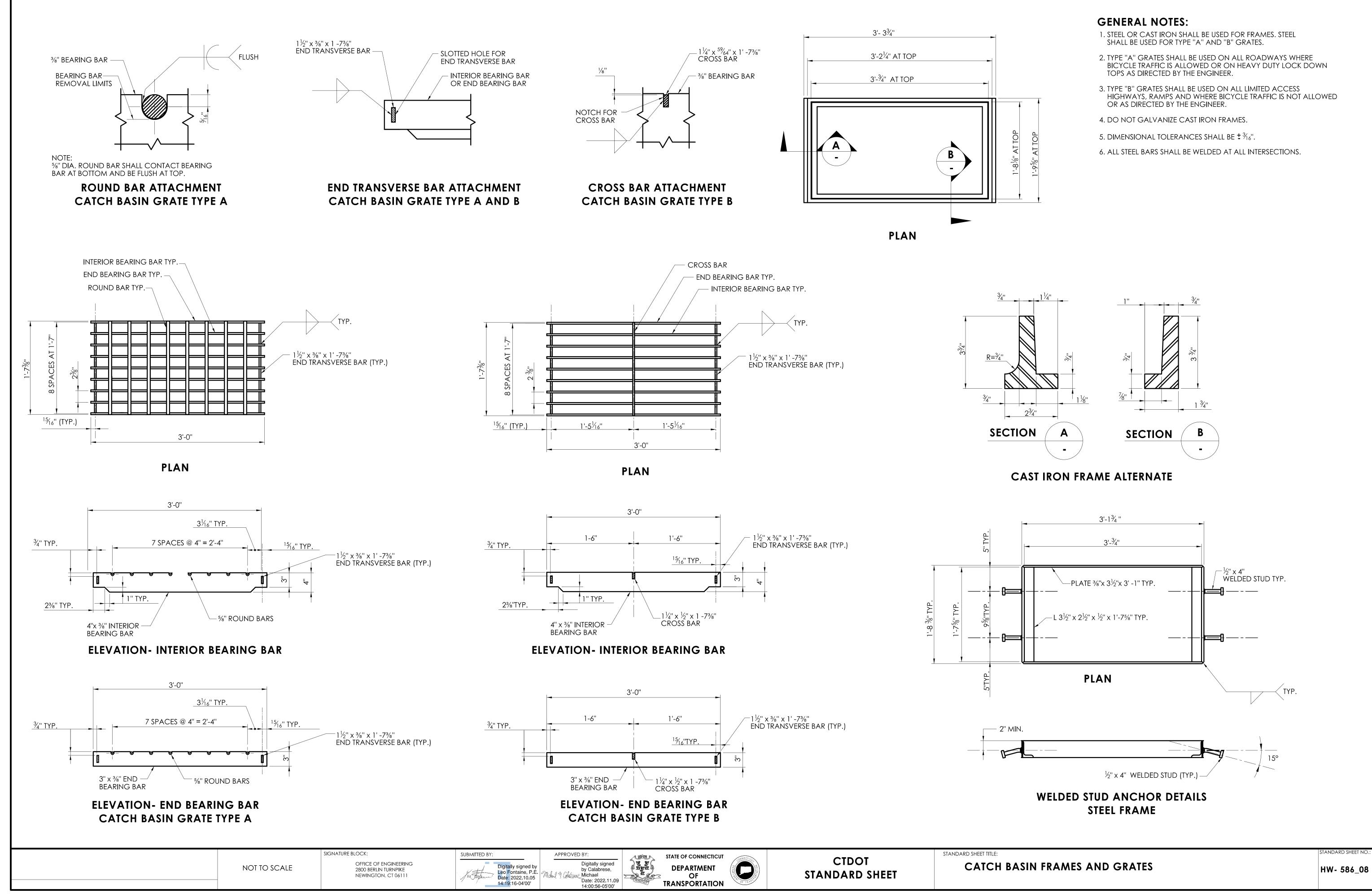
4" IN EARTH OR 12" IN

ROCK LEDGE

TRENCH WIDTH (TW) CHART						
PIPE, PIPE-ARCH, OR DRAINAGE STRUCTURE	TRENCH WIDTH					
PIPE OR PIPE-ARCH WITH NOMINAL INSIDE HORIZONTAL SPAN LESS THAN 30"	2' GREATER THAN NOMINAL INSIDE HORIZONTAL SPAN					
PIPE OR PIPE-ARCH WITH NOMINAL INSIDE HORIZONTAL SPAN GREATER THAN OR EQUAL TO 30"	3' GREATER THAN NOMINAL INSIDE HORIZONTAL SPAN					
PIPE OR PIPE-ARCH FABRICATED FROM STRUCTURAL PLATES	4' GREATER THAN NOMINAL INSIDE HORIZONTAL SPAN					
DRAINAGE STRUCTURES	2' BEYOND ALL EXTERIOR OR FOUNDATION WALLS					







GENERAL NOTES: 1. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES. CASTING DATE SHALL BE INDICATED ON EACH; FRAME (SEE DETAIL A) AND COVER (PLACED ON UNDERSIDE). CASTING DATE IMPRINT MM/DD/YY NON-SKID (DIAMOND PATTERN) -SEE DETAIL %" NUMBERS CASTING DATE: MM/DD/YY— (OPTIONAL) CTDOT IMPRINT **DETAIL "A"** PICK HOLE (TYP.) —SEE DETAIL "A" 2" IMPRINT —/ LETTERS CTDOT (TYP.) ¹³/₁₆" TYP. −½" LETTERS MANHOLE FRAME AND COVER PLAN DIAMOND PATTERN PLAN 38 ¼'' 36" CLEAR OPENING DIAMOND TREAD PATTERN 38" DIA. CTDOT STORM 46" MIN. —PICK HOLE (TYP.) $R = \frac{1}{8}$ " TYP.-MANHOLE COVER WITH MANHOLE FRAME AND COVER DIAMOND PATTERN MANHOLE COVER PLAN

STATE OF CONNECTICUT

DEPARTMENT

OF

TRANSPORTATION

CTDOT

STANDARD SHEET

MANHOLE FRAME AND COVER

HW-586_10a

APPROVED BY:

Digitally signed by Leo Fontaine, P.E. Date: 2023.12.28 14:47:18-05'00'

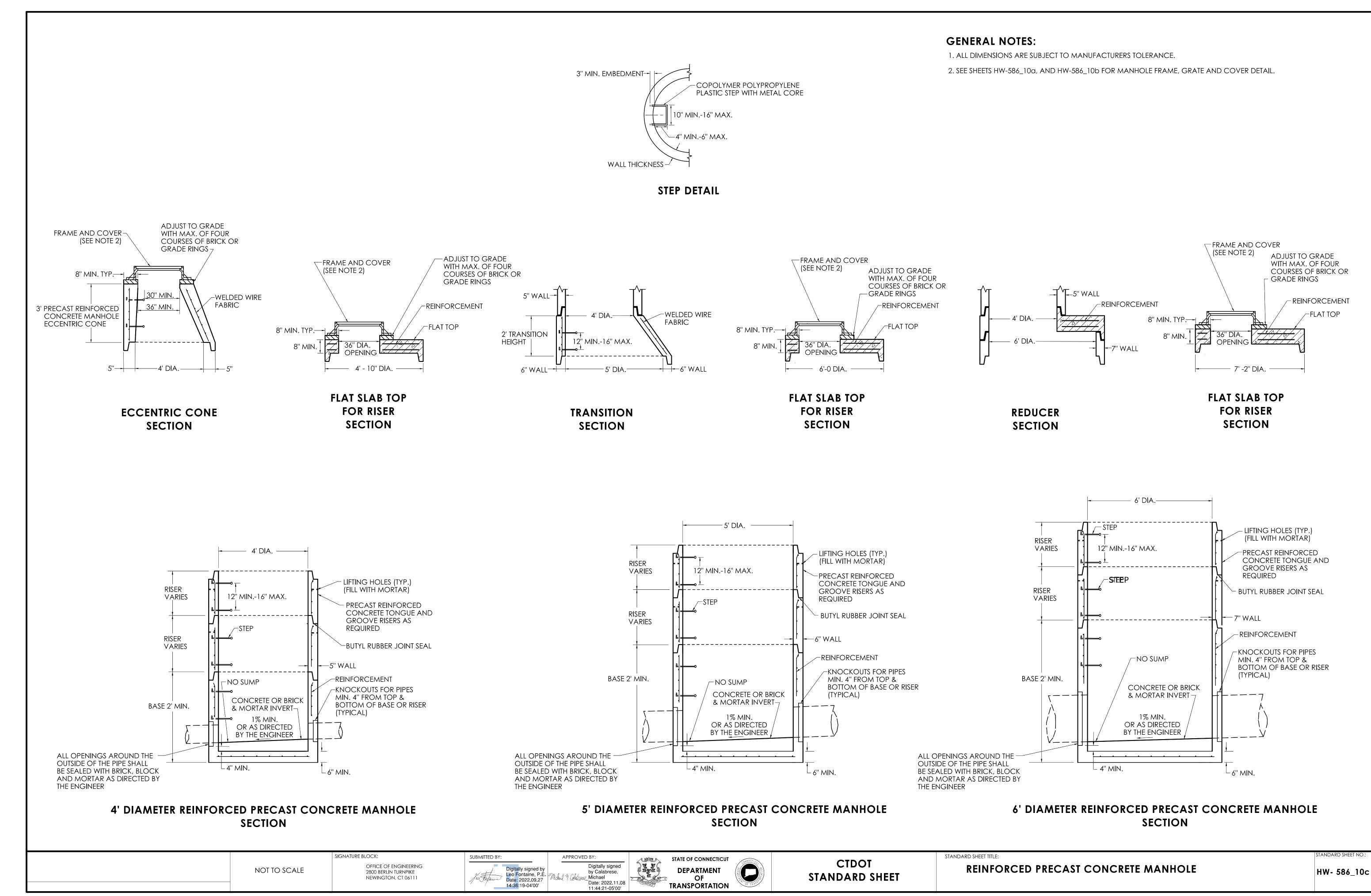
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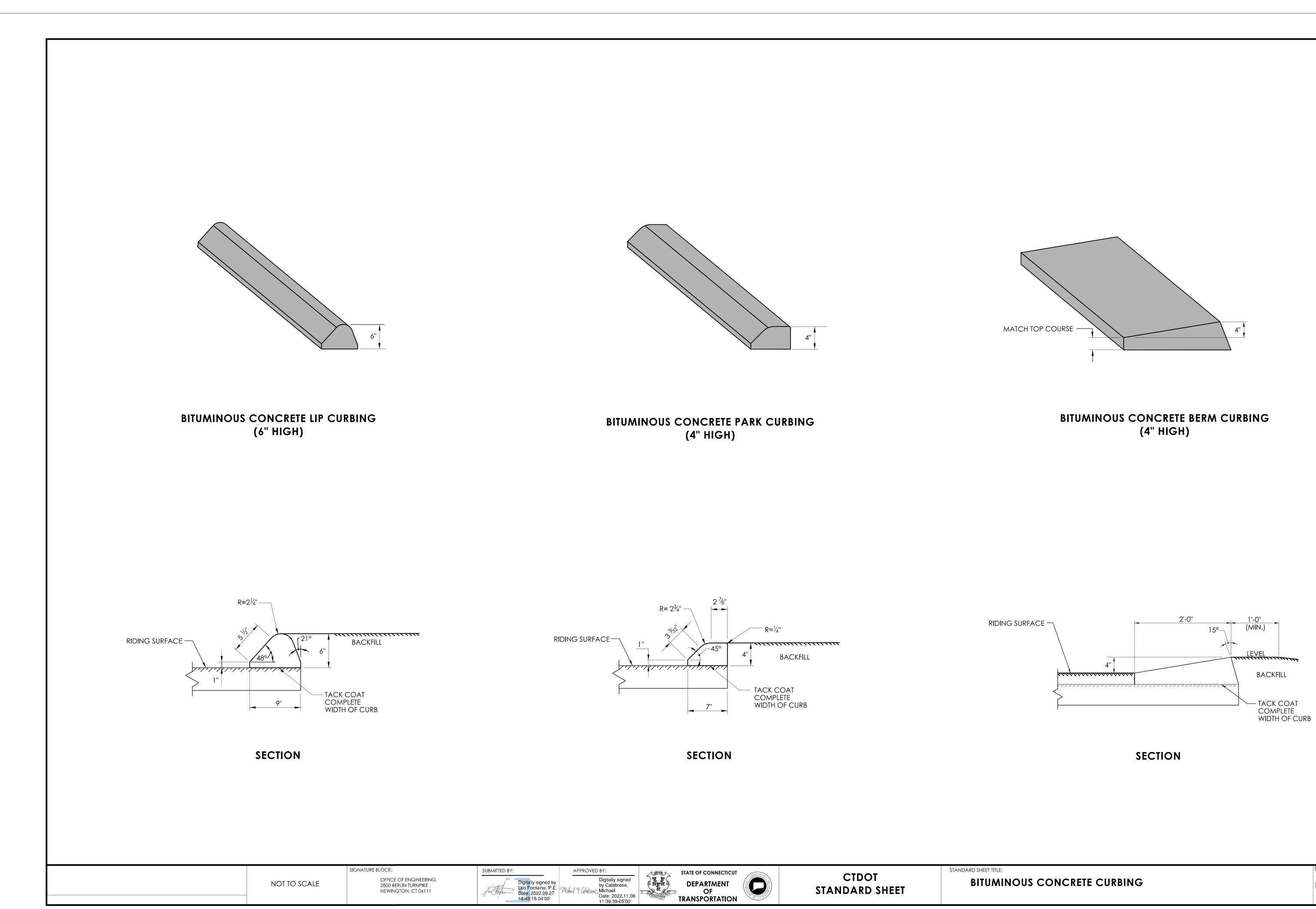
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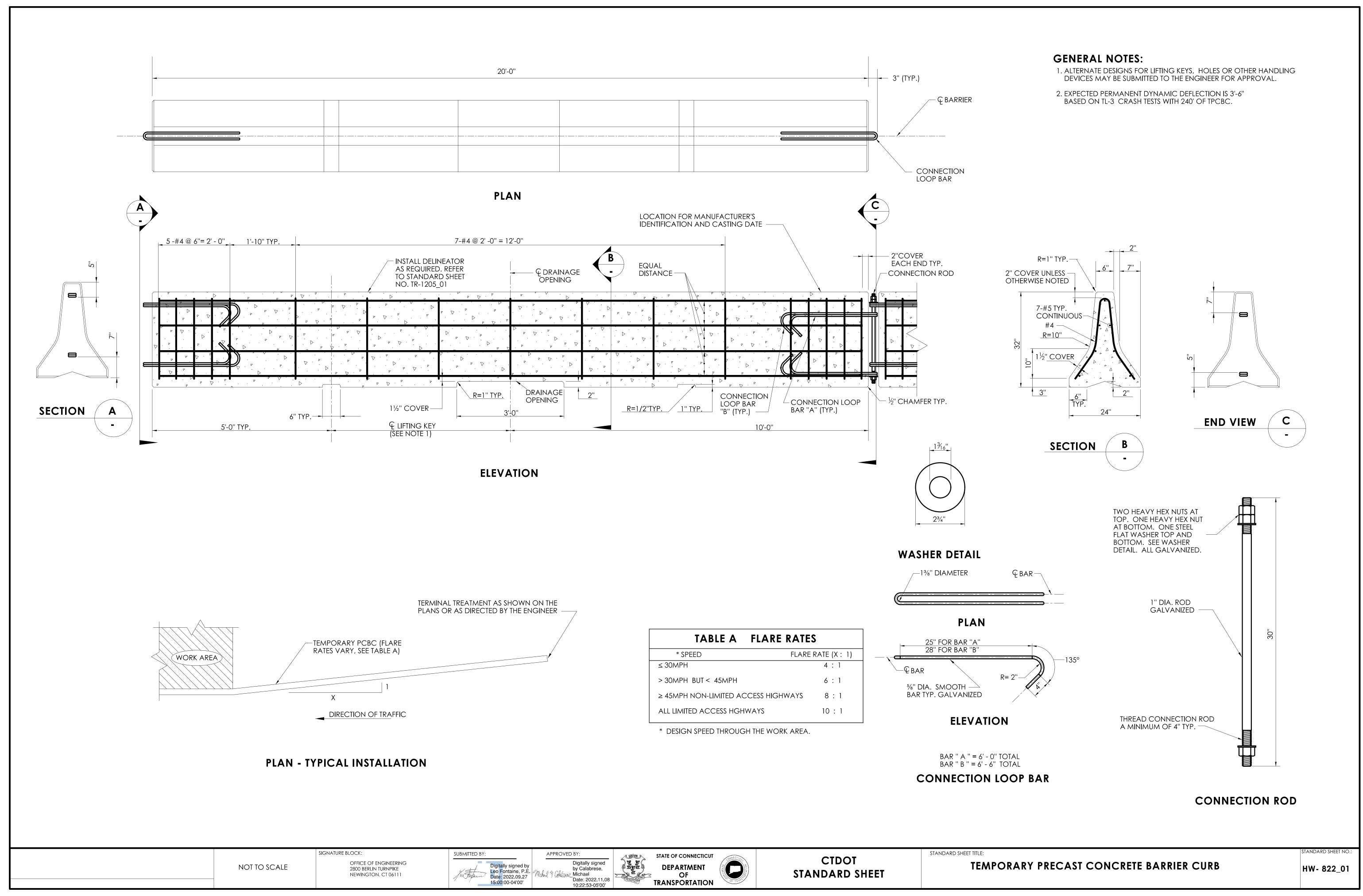
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OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111



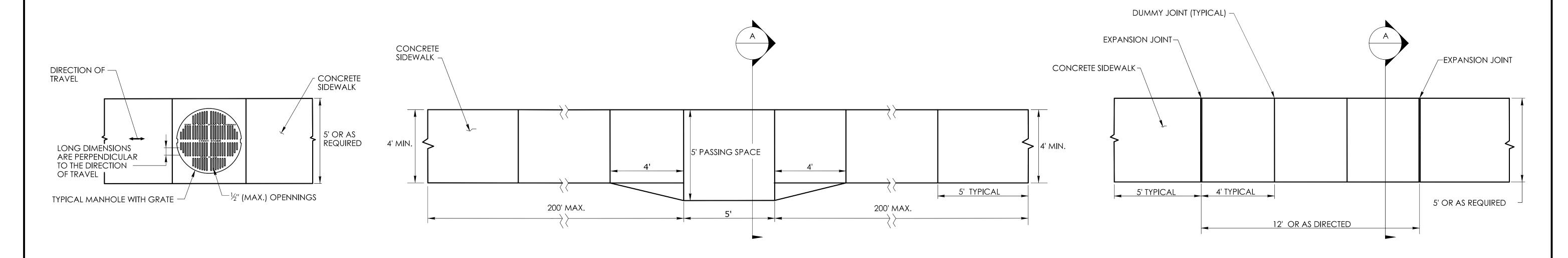


HW-815_01



GENERAL NOTES:

- SEE CONCRETE SIDEWALK RAMPS GUIDE SHEETS FOR PEDESTRIAN RAMP TYPES.
- ALL CURBING SHALL BE INSTALLED AS EITHER PRECAST OR CAST IN PLACE AS DIRECTED.

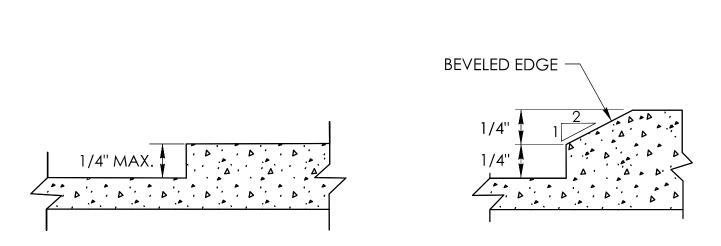


PEDESTRIAN ACCESS ROUTE OVER A MANHOLE WITH GRATE

- 1. HORIZONTAL OPENINGS IN GRATES AND JOINTS MUST NOT BE MORE THAN ½ INCH
- 2. ELONGATED OPENINGS IN GRATES MUST BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DIRECTION OF TRAVEL

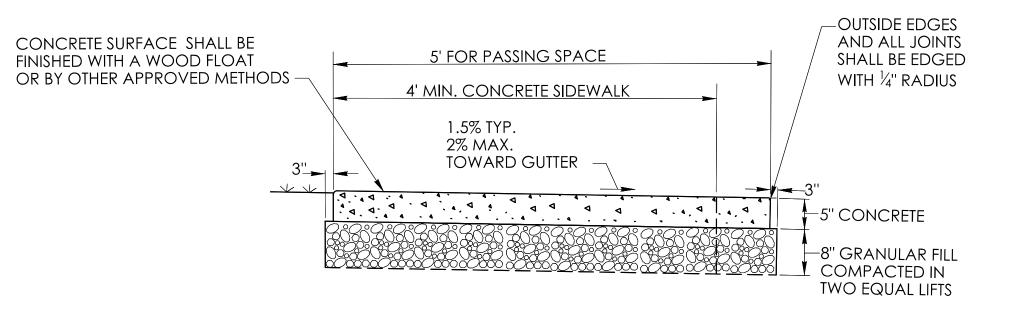
5' PASSING SPACE FOR 4' WIDE SIDEWALK PLAN

PASSING SPACES SHALL BE PROVIDED AT INTERVALS OF 200' MAXIMUM FOR SIDEWALKS LESS THAN 5' IN WIDTH 5' WIDE SIDEWALK PLAN



VERTICAL SURFACE DISCONTINUITIES

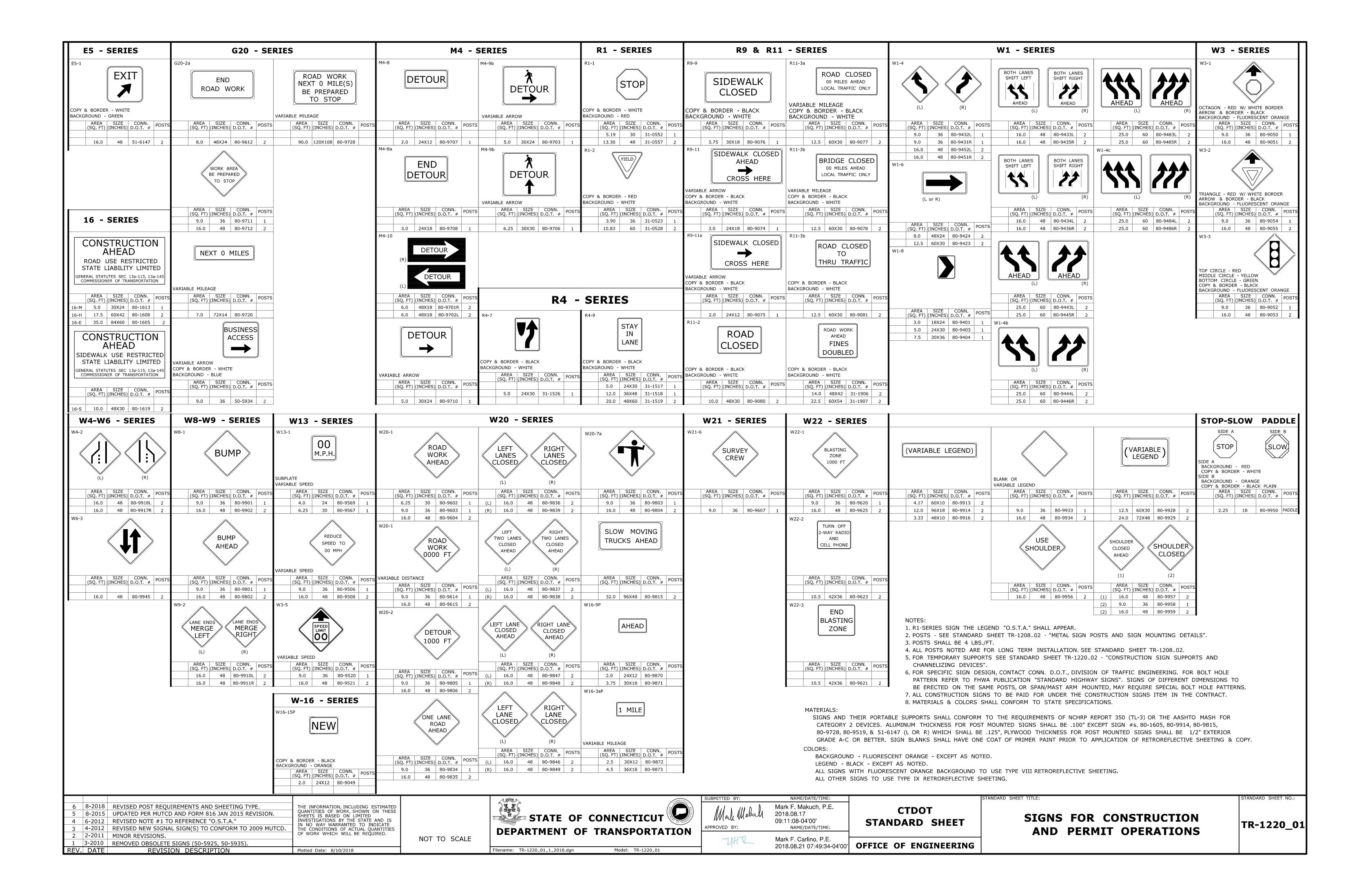
VERTICAL SURFACE DISCONTINUITIES MUST BE BEVELED TO A HEIGHT NOT GREATER THAN 1/4 INCH. THE BEVEL MUST BE THE ENTIRE WIDTH OF THE DISCONTINUITY

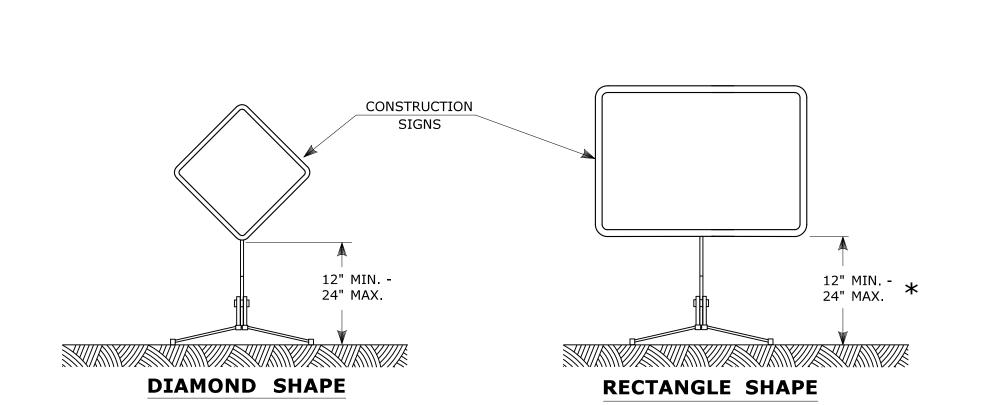


5' PASSING SPACE FOR 4' WIDE SIDEWALK



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NOT TO SCALE	OFFICE OF ENGINEERING 2800 BERLIN TURNPIKE NEWINGTON, CT 06111	Digitally signed by Leo Fontaine, P.E. Date: 2022.09.27 15:15:58-04'00'	Digitally signed by Calabrese, Michael Michael Date: 2022 11 08	DEPARTMENT OF TRANSPORTATION	CTDOT STANDARD SHEET	CONCRETE SIDEWALKS	HW-921_01

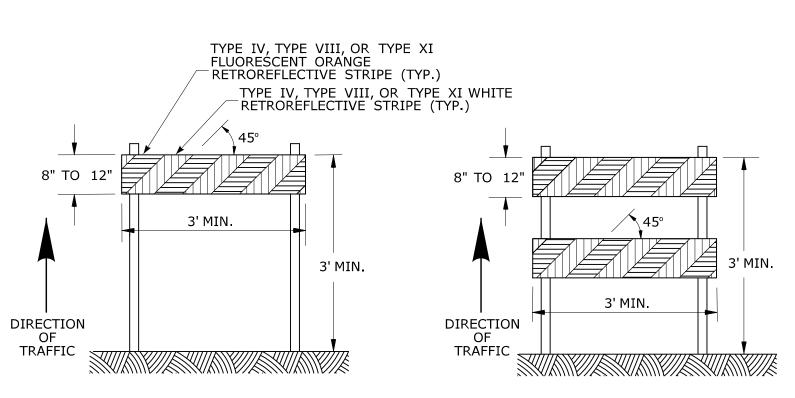




PORTABLE CONSTRUCTION SIGNS

NOTES FOR PORTABLE SIGN SUPPORTS:

- 1. SIGNS AND THEIR PORTABLE SUPPORTS SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 2 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- 2. MOUNTING HEIGHT OF SIGNS SHALL BE A MINIMUM OF 12" AND A MAXIMUM OF 24". SIGNS SHALL BE MOUNTED HIGHER AS NEEDED TO MEET FIELD CONDITIONS OR AS DIRECTED BY THE ENGINEER
- 3. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY SUPPORT DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- 4. PORTABLE SIGN SUPPORTS SHALL BE STABILIZED IN A MANNER THAT WILL NOT AFFECT THEIR COMPLIANCE WITH NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 2 DEVICES.
- 5. PORTABLE CONSTRUCTION SIGN SUPPORTS SHOULD NOT BE USED FOR DURATION OF MORE THAN 3 DAYS EXCEPT FOR R9-8 THROUGH R9-11a SERIES, R11 SERIES, W1-6 THROUGH W1-8 SERIES, M4-10, AND E5-1. SEE STANDARD SHEET TR-1220_01 - "SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS" FOR SIGN DETAILS.
- * FOR E5-1 (EXIT SIGNS) USE MIN 48".



TYPE I BARRICADE

5' MIN. DIRECTION TRAFFIC 4' MIN.

TYPE III BARRICADE

CONSTRUCTION BARRICADES

TYPE II BARRICADE

NOTES:

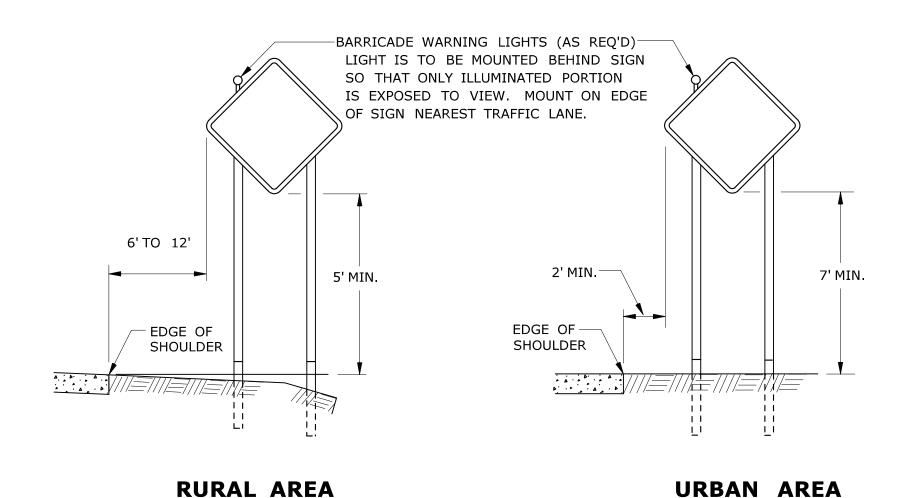
- 1. CONSTRUCTION BARRICADES SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH AND THE LATEST EDITION OF THE MUTCD.
- 2. MARKINGS FOR BARRICADE RAILS SHALL BE ALTERNATE FLUORESCENT ORANGE AND WHITE STRIPES SLOPING DOWNWARD IN THE DIRECTION TRAFFIC IS TO PASS. 6" WIDE STRIPES SHALL BE USED.
- 3. THE ENTIRE AREA OF FLUORESCENT ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS. THE SIDES OF BARRICADES FACING TRAFFIC SHALL HAVE RETROREFLECTIVE RAIL FACES.
- 4. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY BARRICADE DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- 5. CORNERS OF BARRICADE RAILS SHALL BE ROUNDED.
- 6. SIGNS MAY ONLY BE INSTALLED ON TYPE III BARRICADES AND SHALL BE PLACED SO AS TO COVER NO MORE THAN ONE BARRICADE RAIL.

TYPE IV OR TYPE VIII FLUORESCENT ORANGE RETROREFLECTIVE STRIPE TYPE IV OR TYPE VIII WHITE RETROREFLECTIVE STRIPE --CENTERED ON TYPE IV OR TYPE VIII FLUORESCENT ORANGE SECTION (TYP.) RETROREFLECTIVE STRIPE TYPE IV OR TYPE VIII WHITE RETROREFLECTIVE STRIPE -

42" TRAFFIC CONE

NOTES:

- 1. TRAFFIC CONES SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 1 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- 2. IF RUBBER CONES ARE USED, THEY SHALL HAVE INTERIOR RIBS FOR RIGIDITY.
- 3. IF PLASTIC CONES ARE USED, THEY SHALL BE COLOR IMPREGNATED.
- 4. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY CONE DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- 5. THE ENTIRE AREA OF FLUORESCENT ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS.
- 6. THE SECTIONS OF CONES NOT COVERED WITH RETROREFLECTIVE STRIPES SHALL BE ORANGE.



PLACEMENT OF CONSTRUCTION SIGNS

TYPICAL LONG TERM INSTALLATION

NOTES:

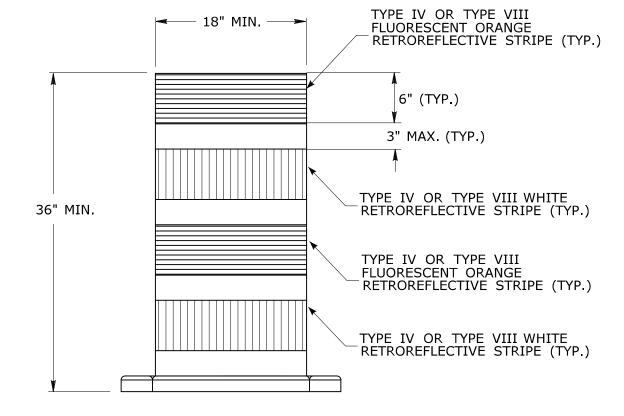
SUPPORTS SHALL BE METAL SIGN POSTS AND HAVE BREAK-AWAY FEATURES. REFER TO STANDARD SHEETS:

TR-1208_01 - "SIGN PLACEMENT AND RETROREFLECTIVE STRIP DETAILS." TR-1208_02 - "METAL SIGN POSTS AND SIGN MOUNTING DETAILS."

WHITE RETROREFLECTIVE STRIPE 3" TO 4 TYPE VI WHITE RETROREFLECTIVE STRIPE 28" MIN.

TRAFFIC CONE

- 1. TRAFFIC CONES SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 1 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- 2. IF RUBBER CONES ARE USED, THEY SHALL HAVE INTERIOR RIBS FOR RIGIDITY.
- 3. IF PLASTIC CONES ARE USED, THEY SHALL BE COLOR IMPREGNATED.
- 4. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY CONE DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- 5. THE ENTIRE AREA OF WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS.
- 6. TRAFFIC CONES NOT USED AT NIGHT MAY UTILIZE TYPE III SHEETING.
- 7. THE SECTIONS OF CONES NOT COVERED WITH RETROREFLECTIVE STRIPES SHALL BE ORANGE.



TRAFFIC DRUM **FRONT VIEW**

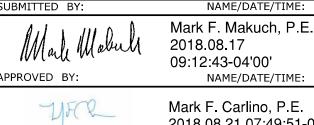
NOTES:

- 1. TRAFFIC DRUM SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 1 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- 2. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY DRUM DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- 3. THE ENTIRE AREA OF FLUORESCENT ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS.
- 4. THE SECTIONS OF DRUMS NOT COVERED WITH RETROREFLECTIVE STRIPES SHALL BE ORANGE.

3 2 1	8-2018 8-2015 2-2011	UPDATED PER MUTCD AND FORM 816 JAN 2015 REVISION.	THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.	
RF\/	DATE	REVISION DESCRIPTION	Plotted Date: 8/10/2018	i

NOT TO SCALE





Mark F. Makuch, P.E. 2018.08.17 09:12:43-04'00' NAME/DATE/TIME: Mark F. Carlino, P.E. 2018.08.21 07:49:51-04'00'

CTDOT STANDARD SHEET

OFFICE OF ENGINEERING

CONSTRUCTION SIGN SUPPORTS AND CHANNELIZING DEVICES

TR-1220_02

FANDARD SHEET NO.: