

TOWN OF PUTNAM, CONNECTICUT

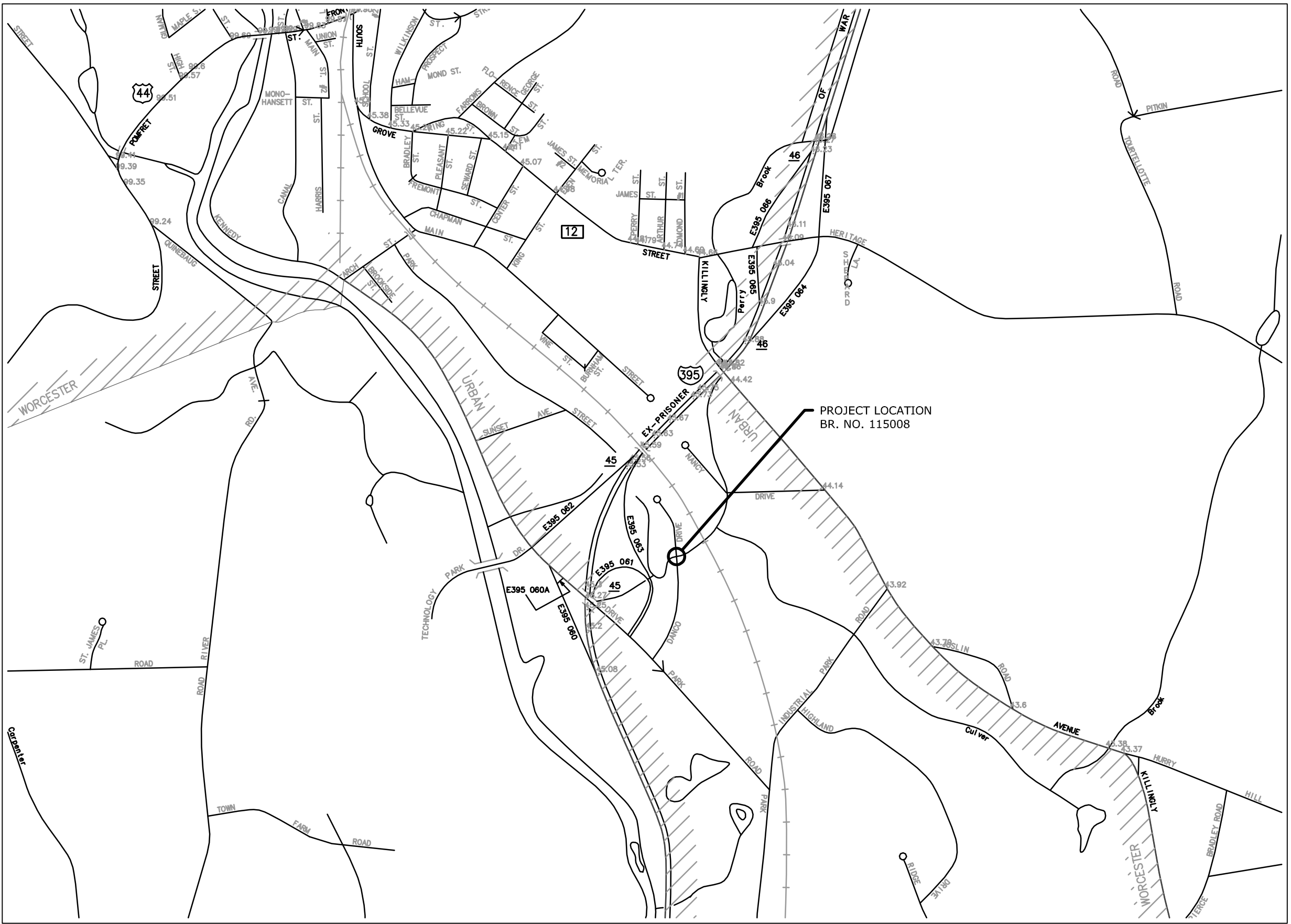
DANCO DRIVE  
BRIDGE REPLACEMENT

PROJECT NO. 9115-00008

CONTRACT NO. 263189 TASK ORDER NO. 5

TOWN OF PUTNAM HIGHWAY DEPT.

NORMAN B. SENEY JR., MAYOR  
TRAVIS SIRRINE, SUPERINTENDENT  
ELAINE SISTARE, TOWN ADMINISTRATOR



LOCATION PLAN

LIST OF DRAWINGS

SHEET	TITLE
TYP-01	TYPICAL SECTION
RPP-01	ROADWAY PLAN AND PROFILE
RCS-01	ROADWAY CROSS-SECTIONS
TTM-01 TO TTM-02	TEMPORARY TRAFFIC MANAGEMENT PLANS
ROW-01	RIGHT-OF-WAY PLAN
MDS-01	MISCELLANEOUS DETAILS
S-01	GENERAL PLAN
S-02	GENERAL NOTES
S-03	BORING LOGS
S-04 TO S-05	STAGE CONSTRUCTION
S-06 TO S-07	WATER HANDLING PLANS
S-08	CULVERT SECTIONS
S-09	CULVERT ELEVATION
S-10 TO S-11	CULVERT DETAILS
S-12	HEADWALL/CUTOFF WALL DETAILS
S-13 to S-14	WINGWALL DETAILS
S-15	PROTECTIVE FENCE (5' HIGH) DETAILS
S-16 TO S-19	TPCB DETAILS

APRIL 2024

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101 E. RIVER DR. | SUITE 1A  
EAST HARTFORD, CT

Water

Environment

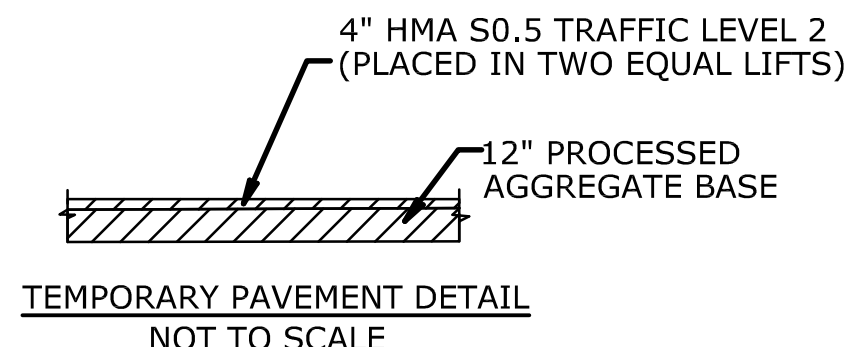
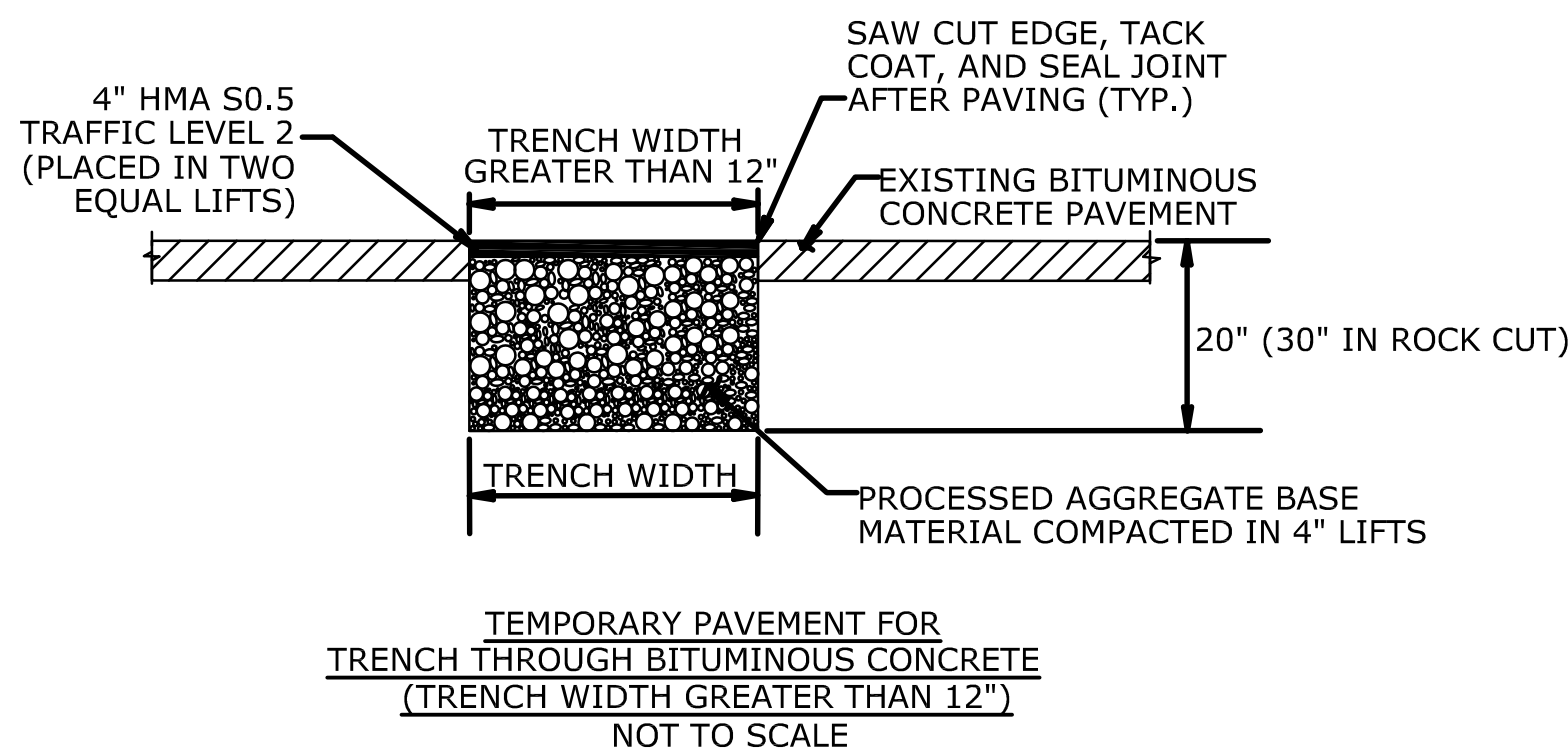
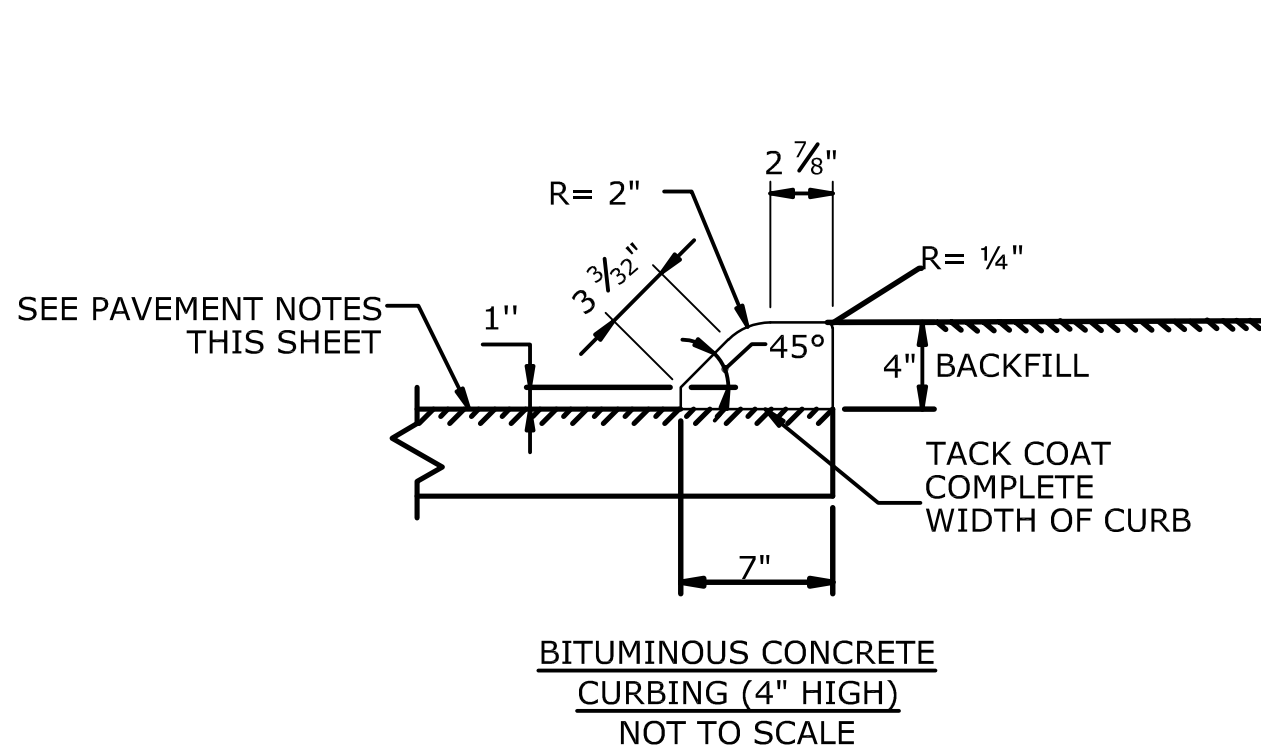
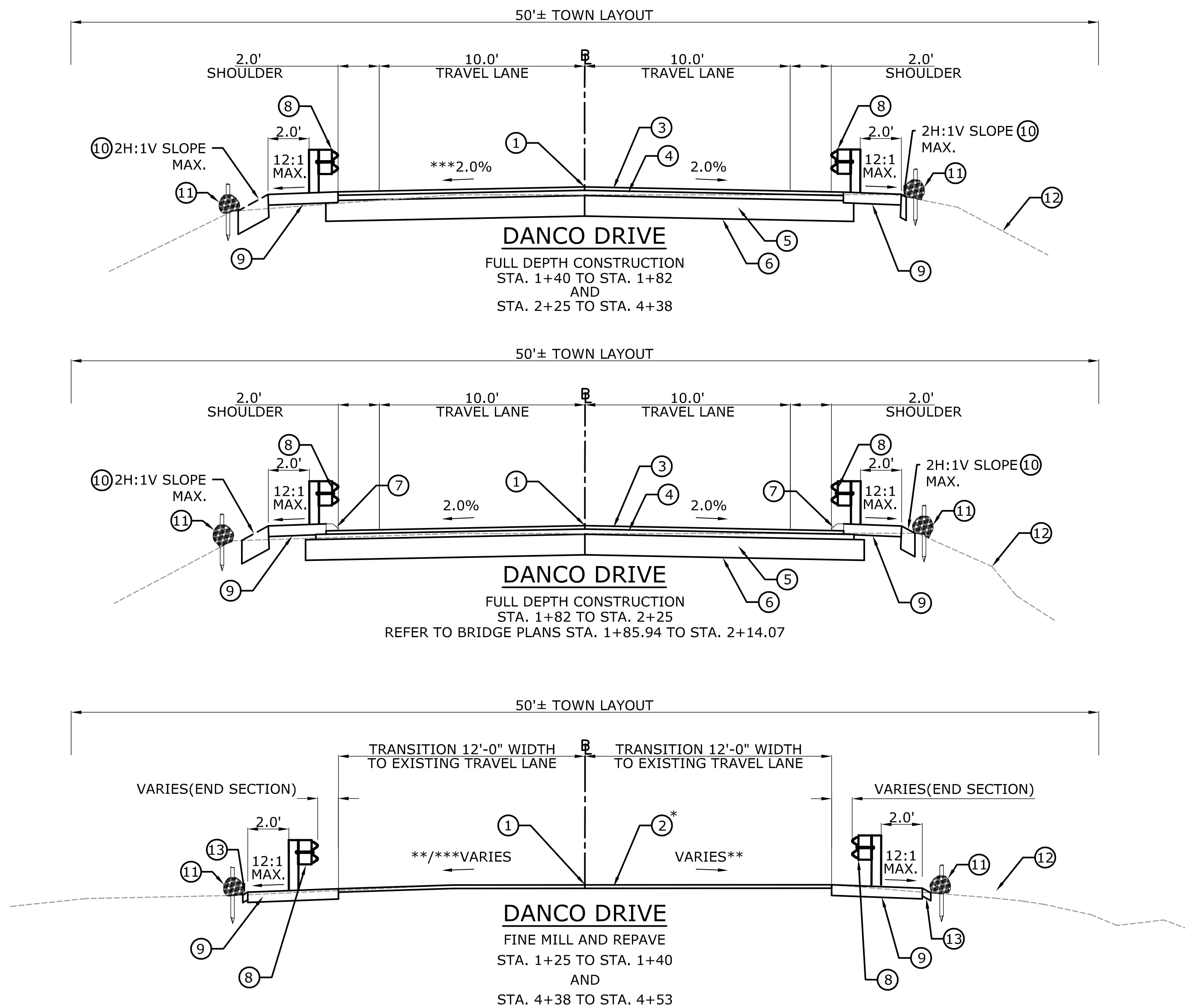
Transportation

Energy

Facilities



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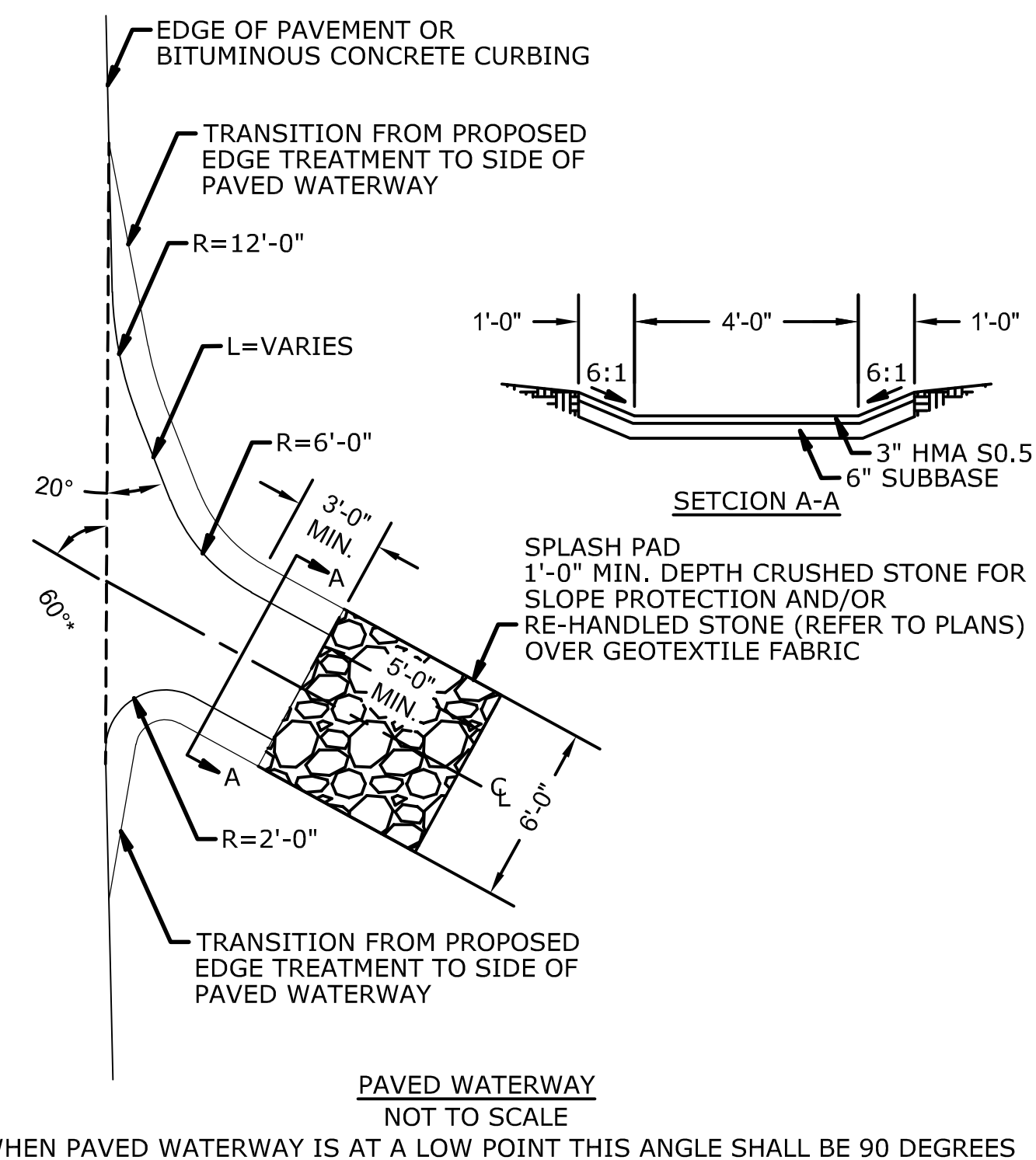


## PAVEMENT LEGEND:

- 1 POINT OF APPLICATION
- 2 FINE MILL AND REPAVE 2" HMA S0.5 TRAFFIC LEVEL 2
- 3 2" HMA S0.5 TRAFFIC LEVEL 2
- 4 3" HMA S1.0 TRAFFIC LEVEL 2
- 5 12" SUBBASE
- 6 FORMATION OF SUBGRADE
- 7 BITUMINOUS CONCRETE CURBING (4" HIGH) (AS SHOWN ON PLANS)
- 8 METAL BEAM RAIL (R-B MASH) (AS SHOWN ON PLANS)
- 9 6" PROCESSED AGGREGATE
- 10 1'-0" MIN. DEPTH CRUSHED STONE FOR SLOPE PROTECTION
- 11 SEDIMENT CONTROL SYSTEM
- 12 EXISTING GRADE
- 13 4" TOPSOIL AND SEEDING

### NOTES:

- \* LEVELING COURSE AS REQUIRED TO ESTABLISH 2% CROSS SLOPE AND MEET GRADES AS REQUIRED BY ENGINEER. LEVELING COURSES SHALL BE KEYEIN AND NOT FEATHERED TO A 0" DEPTH.
- \*\* TRANSITION CROSS SLOPE FROM EXISTING AT LIMIT OF WORK TO 2% AT LIMIT OF FULL DEPTH CONSTRUCTION.
- \*\*\* STA 1+25 LT TO 1+58 LT TRANSITION FROM EXISTING CROSS SLOPE TO 3% AND STA 1+58 LT TO 2+00 LT TRANSITION FROM 3% CROSS SLOPE TO 2% AS TO PROMOTE POSITIVE DRAINAGE TO PAVED WATERWAY.
- TACK COAT: TACK COAT SHALL BE APPLIED AT AN APPLICATION RATE OF 0.03 TO 0.05 GAL/SY FOR A NON-MILLED SURFACE AND AN APPLICATION RATE OF 0.05 TO 0.07 GAL/SY FOR A MILLED SURFACE. FOR AREAS WHERE BOTH MILLED AN UN-MILLED SURFACES OCCUR, THE TACK COAT SHALL BE AN APPLICATION RATE OF 0.03 TO 0.05 GAL/SY.
- HMA JOINT SEALANT TO BE USED BETWEEN ALL JOINTS BETWEEN EXISTING AND PROPOSED BITUMINOUS PAVEMENT.
- EXISTING SUBGRADE SHALL BE FORMED AND COMPACTED PER SPECIFICATIONS.
- BITUMINOUS CONCRETE CURBING TO BE INSTALLED ON HMA S1.0



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	A.HEALEY
DRAWN BY:	A.HEALEY
SHEET CHK'D BY:	W.STERRITT
CROSS CHK'D BY:	J.FLIETSTRA
APPROVED BY:	M.EGAN
DATE:	APRIL 2024

**CDM Smith**  
101 E. River Dr. | Suite 1A  
East Hartford, CT 06108  
Tel: (860) 525-7615



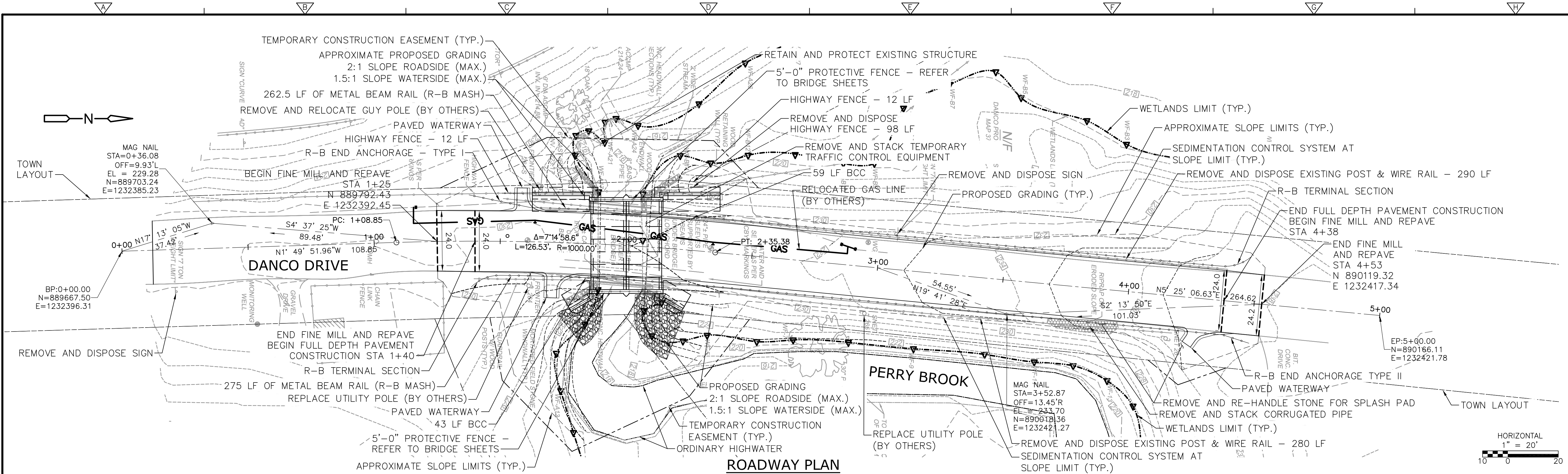
TOWN OF PUTNAM, CONNECTICUT  
**DANCO DRIVE BRIDGE REPLACEMENT**

**TYPICAL SECTION**

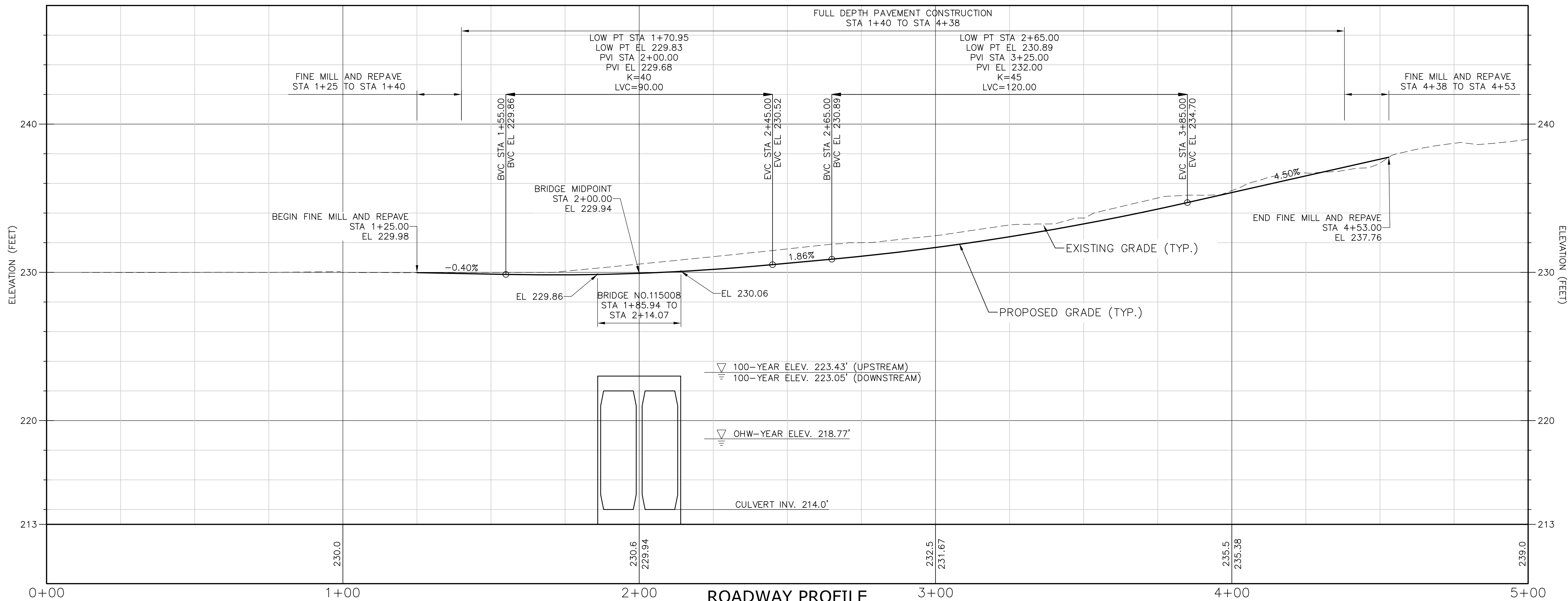
PROJECT NO.	262470-263189
FILE NAME:	TSTS001.DWG
SHEET NO.	TYP-01
ACC_NO	



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ROADWAY PLAN



ROADWAY PROFILE

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	A. HEALEY
DRAWN BY:	A. HEALEY
SHEET CHK'D BY:	W. STERRITT
CROSS CHK'D BY:	J. FLIETSTRA
APPROVED BY:	M. EGAN
DATE:	APRIL 2024



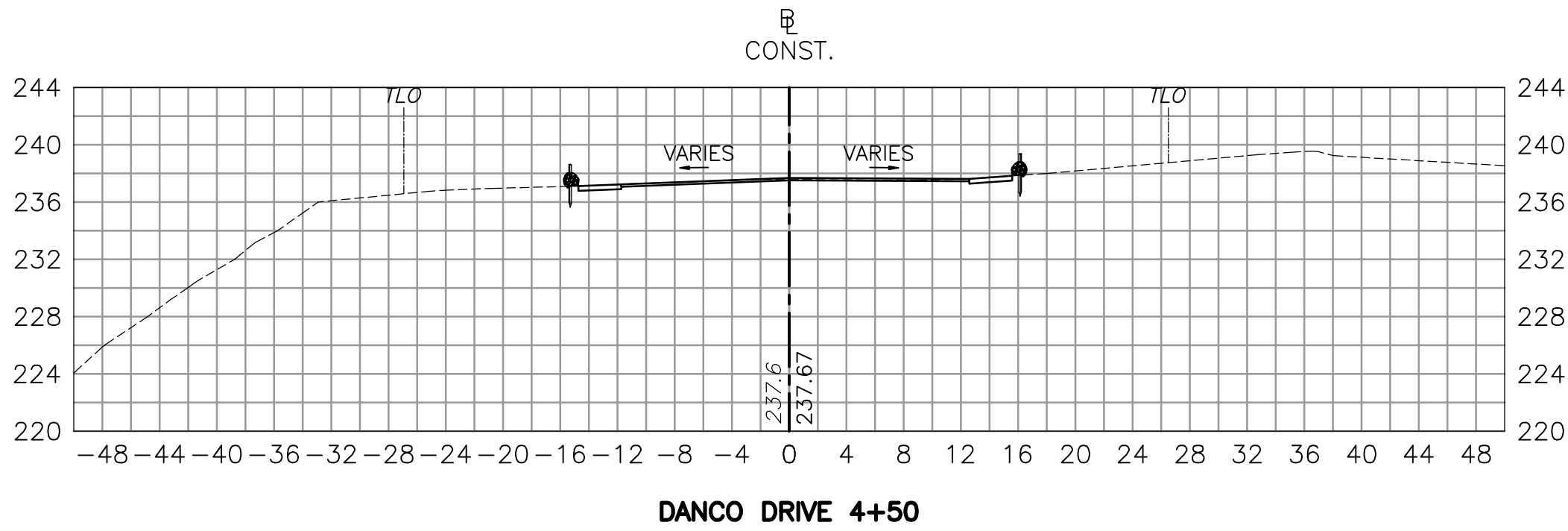
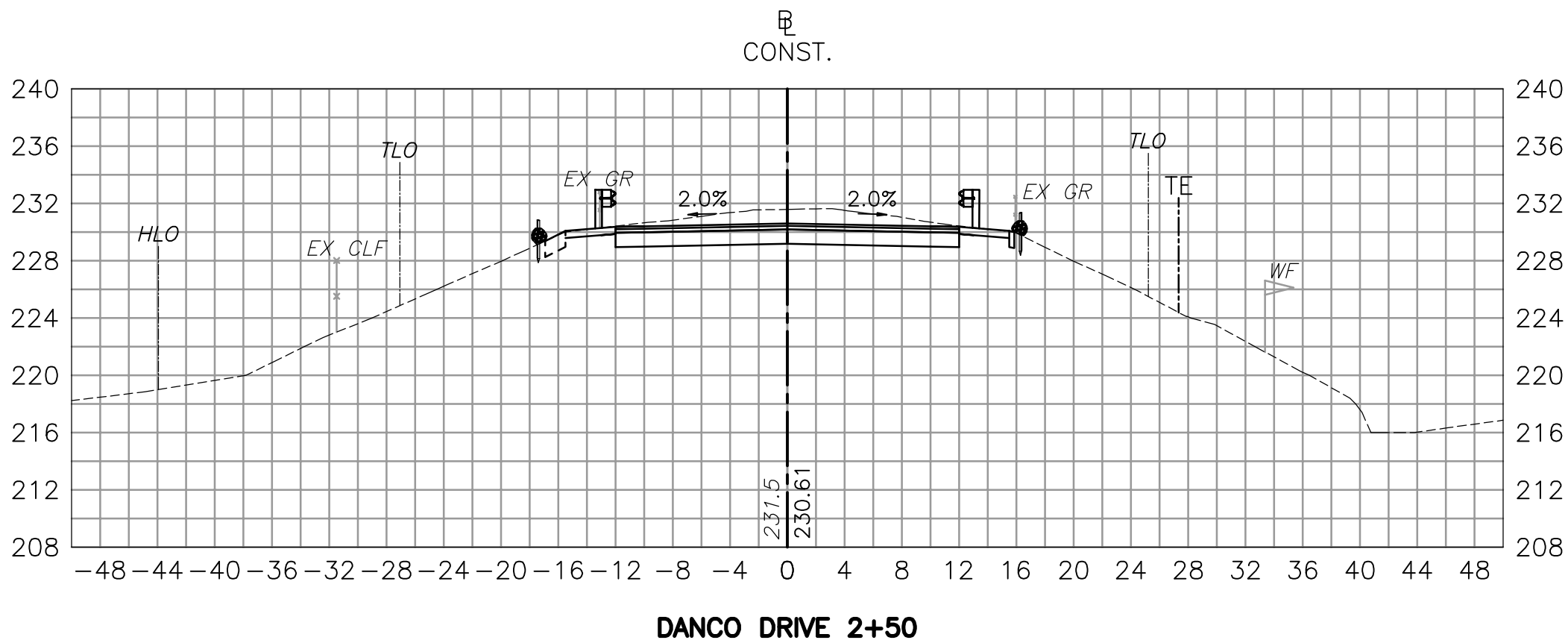
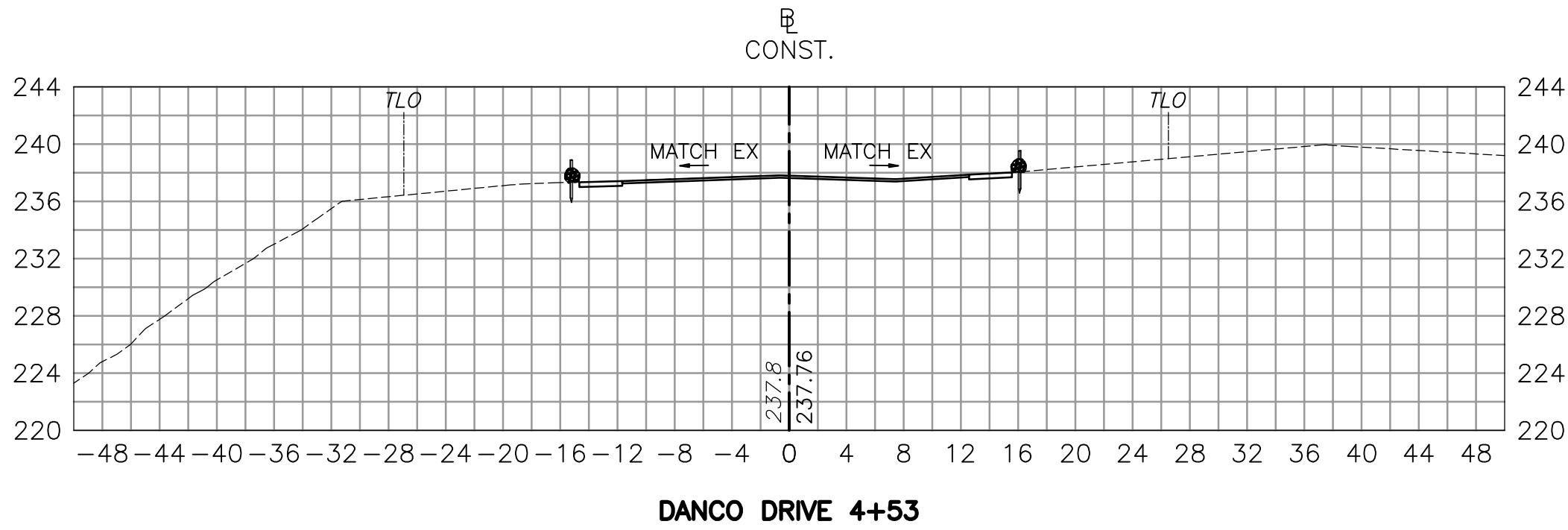
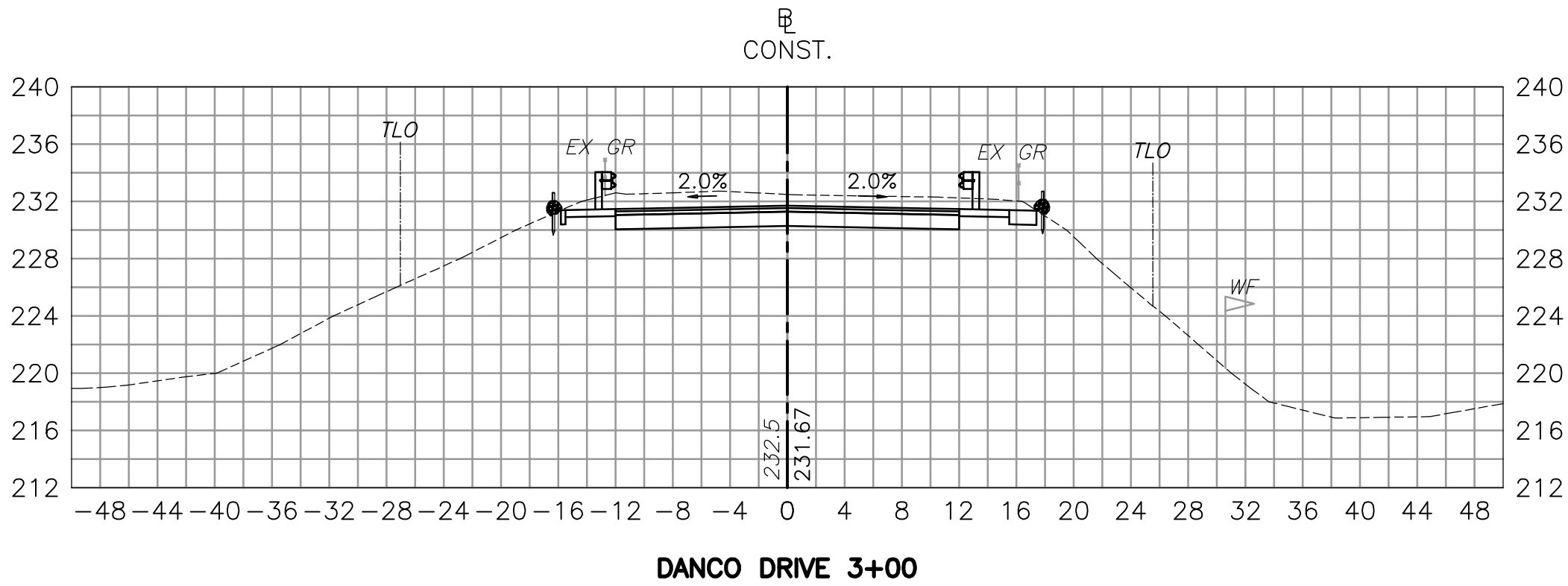
TOWN OF PUTNAM, CONNECTICUT  
DANCO DRIVE BRIDGE REPLACEMENT

ROADWAY PLAN AND PROFILE

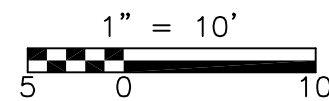
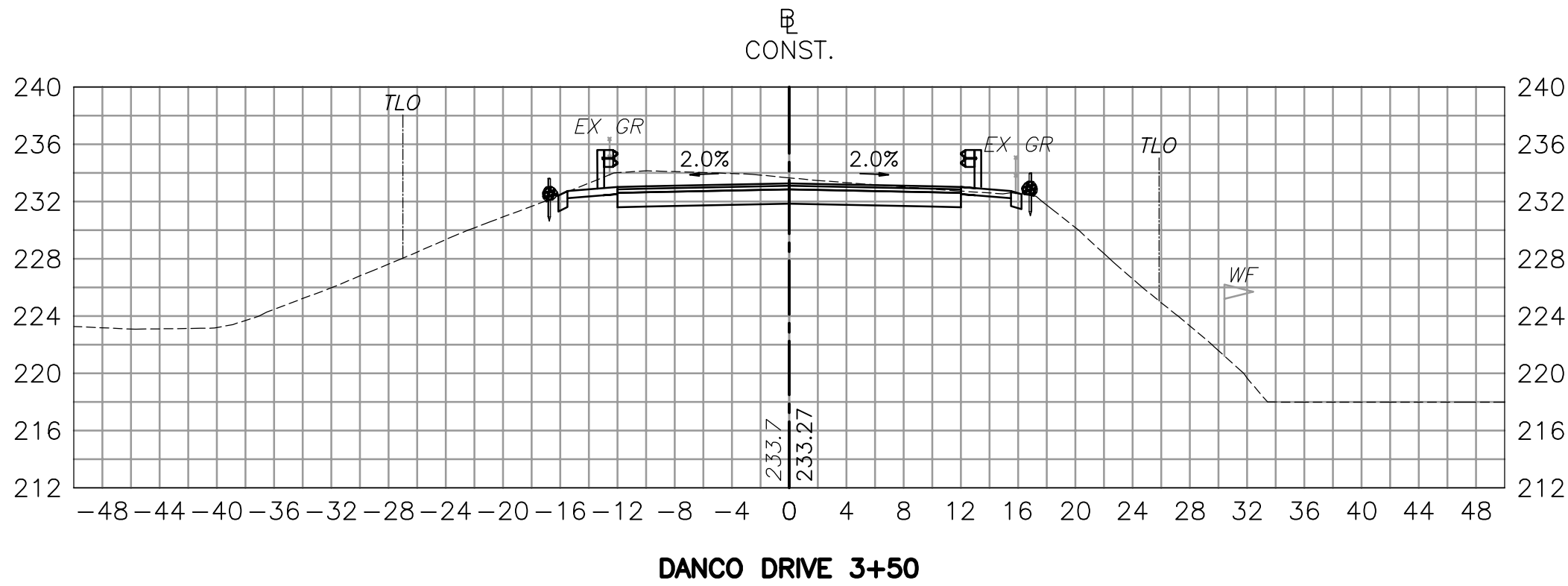
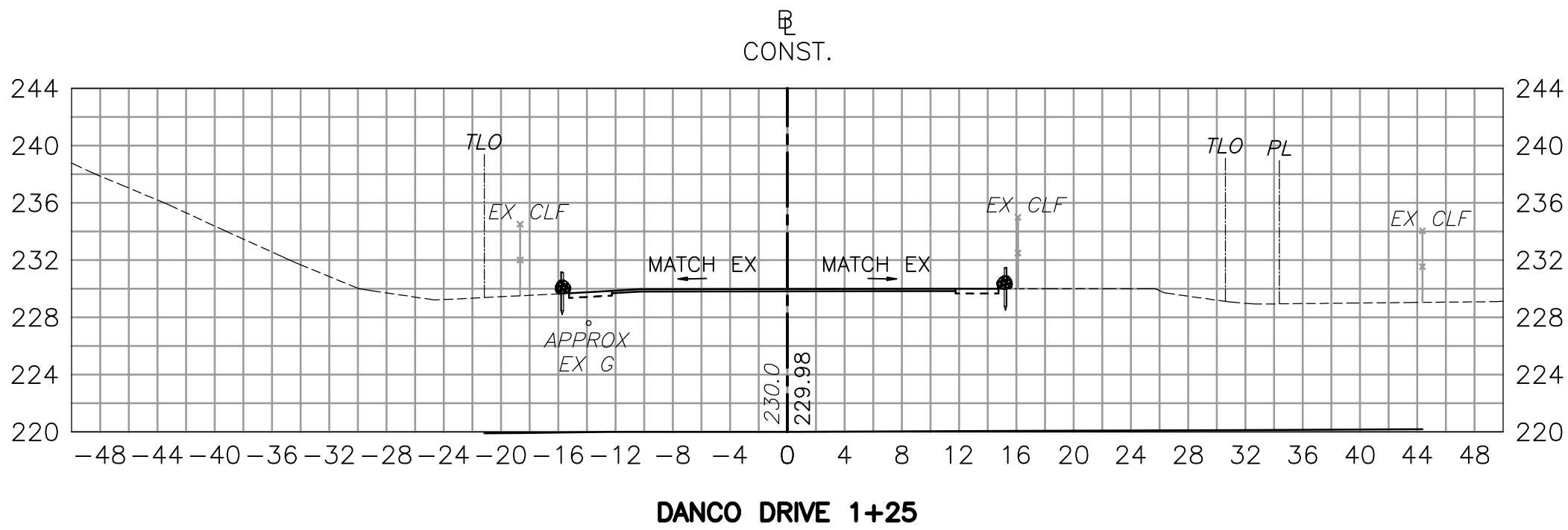
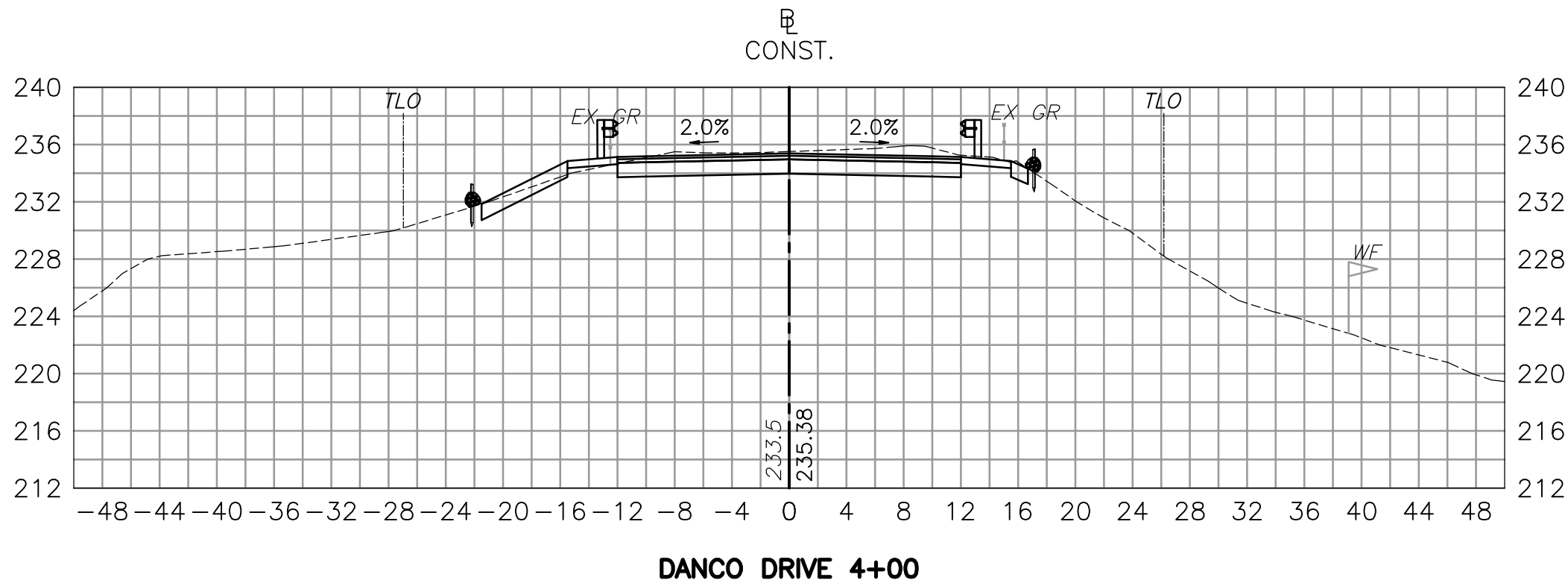
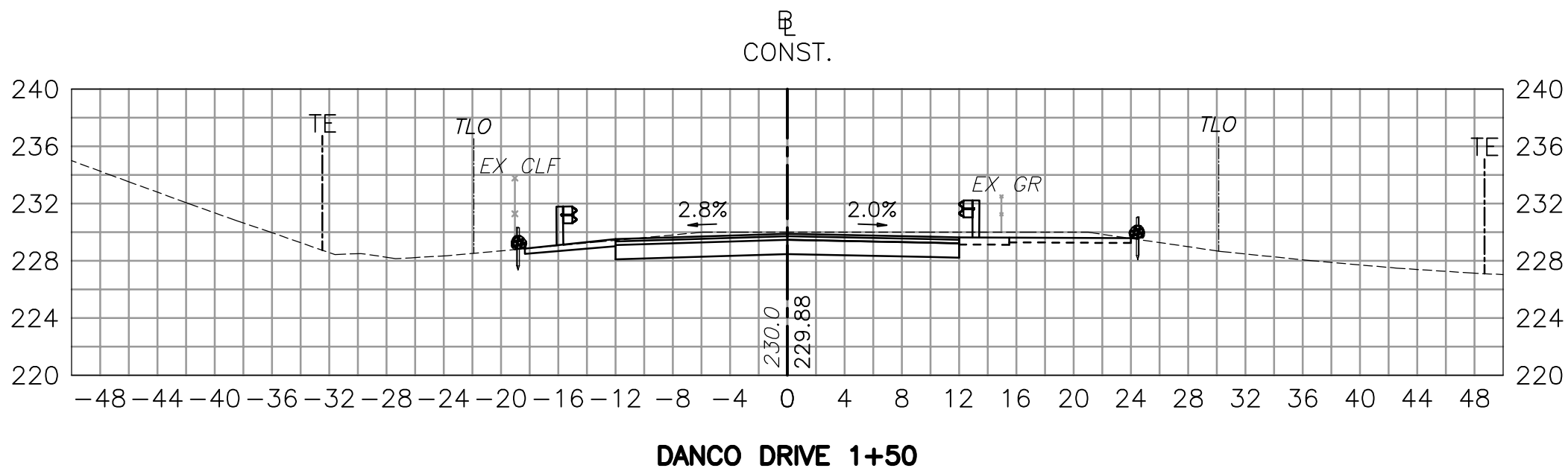
PROJECT NO.	262470-263189
FILE NAME:	TSTPP001.DWG
SHEET NO.	RPP-01
ACC_NO	



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DANCO DRIVE 2+00  
BRIDGE MIDPOINT REFER TO CULVERT SECTION SHEET 2-08



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DESIGNED BY: A.HEALEY  
DRAWN BY: A.HEALEY  
SHEET CHK'D BY: W.STERRITT  
CROSS CHK'D BY: J.FLIETSTRA  
APPROVED BY: M.EGAN  
DATE: APRIL 2024

**CDM Smith**  
101 E. River Dr. | Suite 1A  
East Hartford, CT 06108  
Tel: (860) 525-7615



TOWN OF PUTNAM, CONNECTICUT  
DANCO DRIVE BRIDGE REPLACEMENT

ROADWAY CROSS-SECTIONS

PROJECT NO. 262470-263189  
FILE NAME: TSTXS001.DWG

SHEET NO.

RCS-01

ACC\_NO



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NOTES:

- ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, UNLESS SUPERCEDED BY THESE PLANS.
- ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
- TEMPORARY CONSTRUCTION SIGNING, BARRICADES, AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
- SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
- CONTRACTORS SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT, AND SIMILAR OPERATIONS.
- THE FIRST TEN PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH SEQUENTIAL FLASHING LIGHTS.
- THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
- DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
- MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
- MINIMUM LANE WIDTH IS TO BE 11 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
- ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
- THE TRAFFIC MANAGEMENT PLANS CONTAINED HEREIN ARE GIVEN AS A GUIDE FOR TYPICAL WORK ZONE TRAFFIC CONTROL APPLICATIONS FOR THE TYPES OF WORK ANTICIPATED FOR THIS PROJECT. THEY ARE NOT INTENDED TO COVER ALL POSSIBLE CONSTRUCTION OPERATIONS WHICH THE CONTRACTOR MAY CHOOSE TO EMPLOY. WORK ZONE TRAFFIC CONTROL FOR OTHER CONSTRUCTION OPERATIONS OR OTHER TRAFFIC SITUATIONS IF APPLICABLE SHALL BE IN ACCORDANCE WITH THE MUTCD. ALL TRAFFIC CONTROL SETUPS MUST HAVE APPROVAL OF RESIDENT ENGINEER AND THE CITY OF BROCKTON PRIOR TO IMPLEMENTATION.

LEGEND:

- REFLECTORIZED PLASTIC DRUM OR 36" CONE

P/F

POLICE/FLAGGER DETAIL

TYPE III BARRICADE

CHANGEABLE MESSAGE SIGN

ARROW BOARD
- WORK ZONE
- DIRECTION OF TRAFFIC
- IMPACT ATTENUATOR
- MEDIAN BARRIER
- MEDIAN BARRIER WITH WARNING LIGHTS

WORK VEHICLETRUCK MOUNTED ATTENUATORTRAFFIC OR PEDESTRIAN SIGNALSIGN

THE IDEAL CAPACITY OF A MAJOR HIGHWAY IS GENERALLY CONSIDERED TO BE 1900 PASSENGER CARS PER HOUR PER LANE (PCPHPL). IN WORK ZONES ON A MULTI-LANE DIVIDED HIGHWAY, THE FOLLOWING VOLUME GUIDELINES HAVE BEEN SUGGESTED:

MEASURED AVERAGE WORK ZONE CAPACITIES

NUMBER OF LANES		NUMBER OF STUDIES	AVERAGE CAPACITY	
NORMAL (EXISTING)	OPEN (TO TRAFFIC)		VPH	VPHPL
3	1	7	1,170	1,170
2	1	8	1,340	1,340
5	2	4	2,740	1,370
4	2	4	2,960	1,480
3	2	9	2,980	1,490
4	3	4	4,560	1,520

Source: Dudek, C., *Notes on Work Zone Capacity and Level of Service*, Texas Transportation Institute, Texas A&M University, College Station, Texas (1984)

BY OBTAINING HOURLY TRAFFIC COUNTS FOR A PARTICULAR ROADWAY (WITH A MINIMUM OF A 48-HOUR AUTOMATIC TRAFFIC RECORDER (ATR) COUNT), THIS WILL HELP TO DETERMINE AT WHAT TIMES OF THE DAY OR NIGHT A CERTAIN NUMBER OF LANES MAY BE CLOSED.

TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES

TYPE OF TAPER	TAPER LENGTH (L)*
MERGING TAPER	AT LEAST L
SHIFTING TAPER	AT LEAST 0.5L
SHOULDER TAPER	AT LEAST 0.33L
ONE-LANE, TWO-WAY TRAFFIC TAPER	50 FT MIN. 100 FT MAX.
DOWNSTREAM TAPER	50 FT MIN. 100 FT MAX. PER LANE

Source: Table 6C-3 MUTCD LATEST EDITION

FORMULAS FOR DETERMINING TAPER LENGTHS

SPEED LIMIT (S)	TAPER LENGTH (L) FEET
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR MORE	$L = WS$

WHERE: L = TAPER LENGTH IN FEET

W = WIDTH OF OFFSET IN FEET

S = POSTED SPEED LIMIT, OR OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED IN MPH

Source: Table 6C-4 MUTCD LATEST EDITION

SUGGESTED WORK ZONE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS **		
	A	B	C
LOCAL OR LOW VOLUME ROADWAYS*	350	350	350
MOST OTHER ROADWAYS*	500	500	500
FREEWAYS AND EXPRESSWAYS*	1,000	1,500	2,640

\* ROAD TYPE TO BE DETERMINED BY CTDOT DEPARTMENT OF TRANSPORTATION.

\*\* DISTANCES ARE SHOWN IN FEET. THE COLUMN HEADINGS A, B, AND C ARE THE DIMENSIONS SHOWN IN THE DETAIL/ TYPICAL SETUP FIGURES. THE A DIMENSION IS THE DISTANCE FROM THE TRANSITION OR POINT OF RESTRICTION TO THE FIRST SIGN. THE B DIMENSION IS THE DISTANCE BETWEEN THE FIRST AND SECOND SIGNS. THE C DIMENSION IS THE DISTANCE BETWEEN THE SECOND AND THIRD SIGNS. (THE "THIRD" SIGN IS THE FIRST ONE TYPICALLY ENCOUNTERED BY A DRIVER APPROACHING A TEMPORARY TRAFFIC CONTROL (TTC) ZONE.)

THE "THIRD" SIGN ABOVE IS TYPICALLY REFERRED TO AS AN "ADVANCE WARNING" SIGN ON THE TTCP SETUPS. THESE ADVANCE WARNING SIGNS ARE LOCATED PRIOR TO THE PROJECT LIMITS ON ALL APPROACHES (I.e. THE W20-1 SERIES (ROAD WORK XX FT) SIGNS), AND USUALLY REMAIN FOR THE DURATION OF THE PROJECT. ADDITIONAL SIGNS (I.e. "RIGHT LANE CLOSED 1 MILE" AND "LEFT LANE CLOSED 1 MILE") HAVE BEEN SHOWN IN SOME FIGURES AS EXAMPLES OF REINFORCEMENT SIGN PLACEMENT BUT ARE USED IN RARE OCCASIONS.

THE FIRST AND SECOND WARNING SIGNS ABOVE ARE REFERRED TO AS THE OPERATIONAL (DAY-TO-DAY) WORK ZONE SIGNS AND MAY BE MOVED DEPENDING ON WHERE THE SPECIFIC ROADWAY WORK FOR THAT DAY IS LOCATED.

R2-10a SIGNS SHALL BE PLACED BETWEEN THE SECOND AND THIRD SIGNS AS DESCRIBED ABOVE.

R2-10a, R2-10e, AND W20-1 SERIES SIGNS ARE TO BE INCLUDED ON ALL DETAILS/TYPICAL SETUPS.

Based on: Table 6C-1 MUTCD LATEST EDITION

STOPPING SIGHT DISTANCE AS A FUNCTION OF SPEED

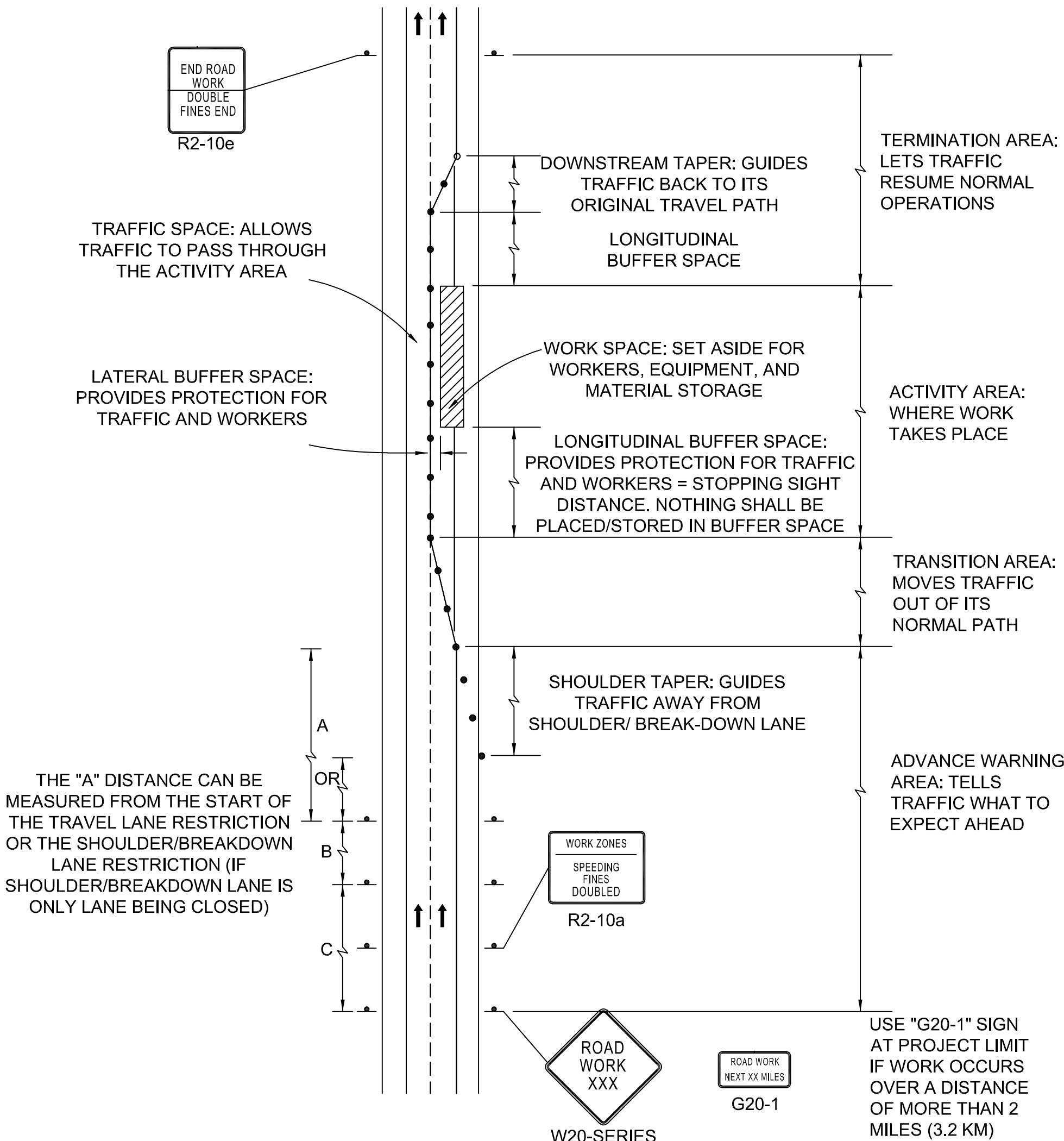
SPEED* (mph)	DISTANCE (ft)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820

\*POSTED SPEED, OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED

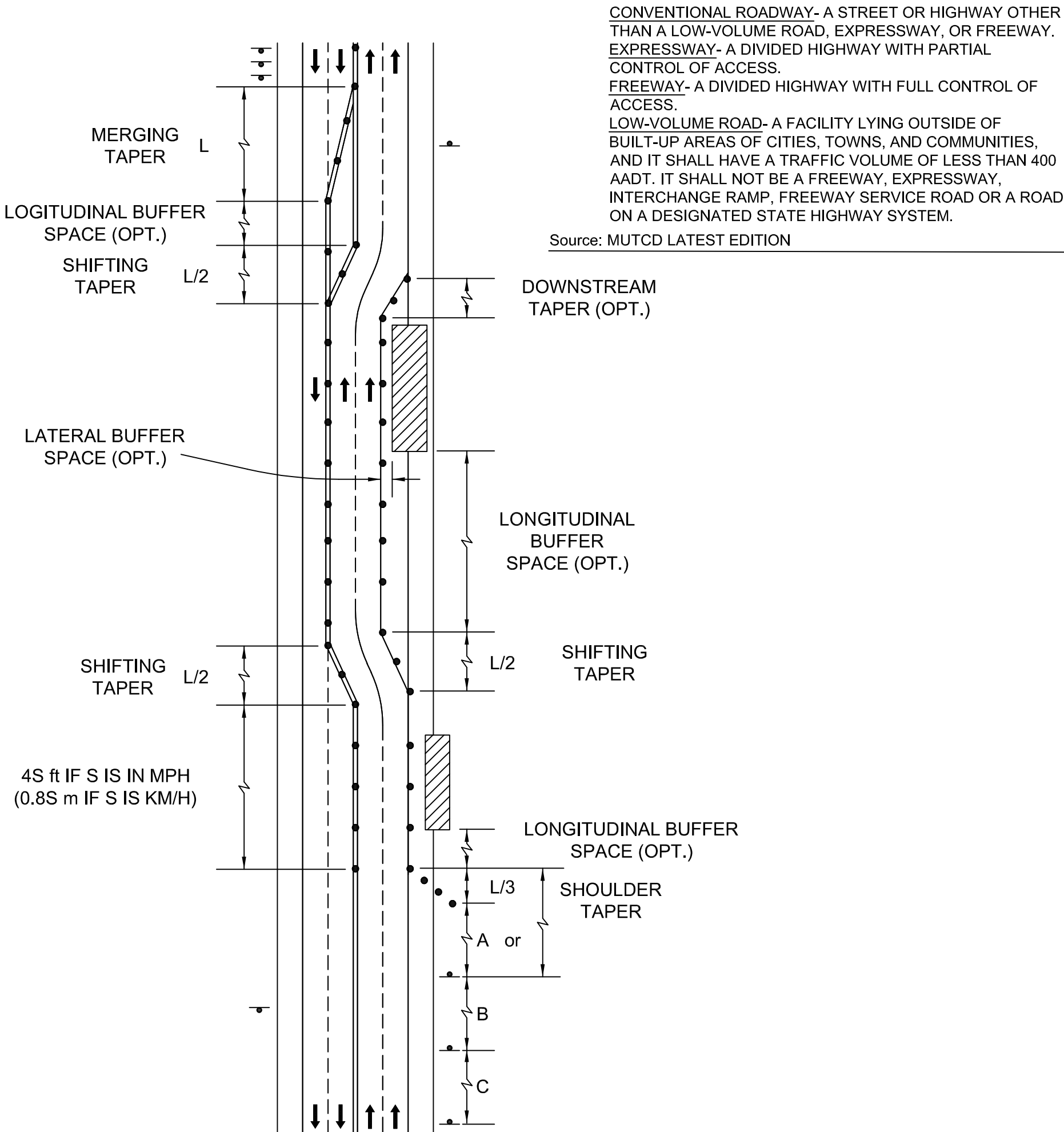
THESE VALUES MAY BE USED TO DETERMINE THE LENGTH OF LONGITUDINAL BUFFER SPACES.

THE DISTANCES IN THE ABOVE CHART REPRESENT THE MINIMAL VALUES FOR BUFFER SPACING.

Source: Table 6C-2 MUTCD LATEST EDITION



COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL (TTC) ZONE  
NOT TO SCALE



TYPES OF TAPERS AND BUFFER SPACES  
NOT TO SCALE

					DESIGNED BY: A.HEALEY
					DRAWN BY: A.HEALEY
					SHEET CHK'D BY: W.STERRITT
					CROSS CHK'D BY: J.FLIETSTRA
					APPROVED BY: M.EGAN
REV. NO.	DATE	DRWN	CHKD	REMARKS	DATE: APRIL 2024

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TOWN OF PUTNAM, CONNECTICUT  
DANCO DRIVE BRIDGE REPLACEMENT

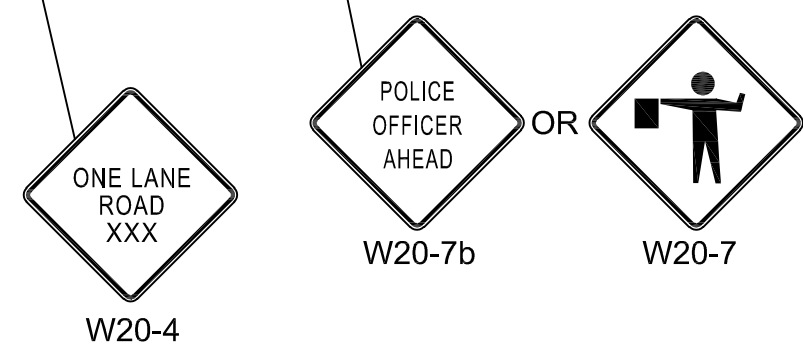
TEMPORARY TRAFFIC  
MANAGEMENT PLAN 1 OF 2

PROJECT NO. 262470-263189  
FILE NAME: TSTTM001.DWG

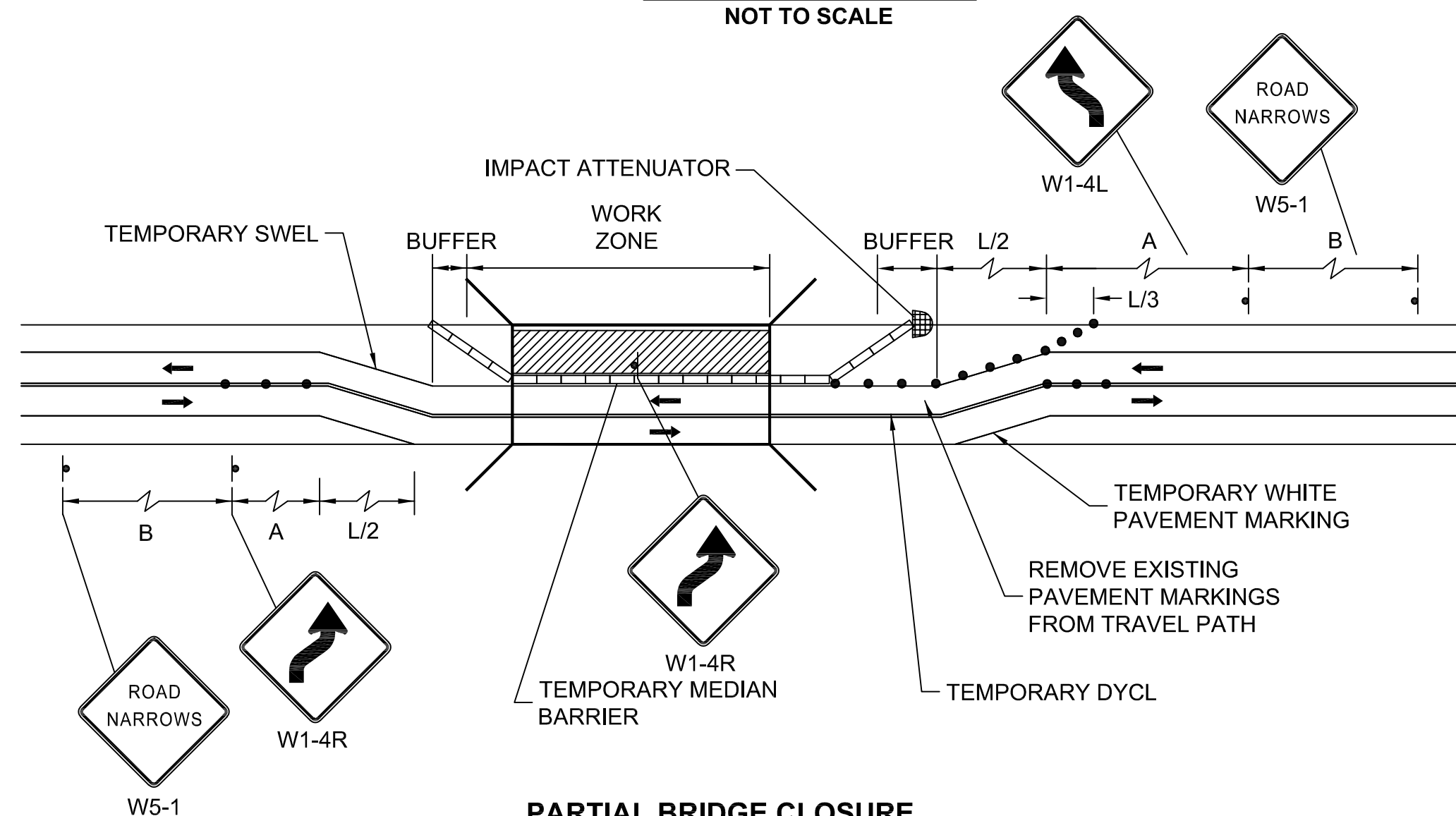
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TTM-01

ACC\_NO

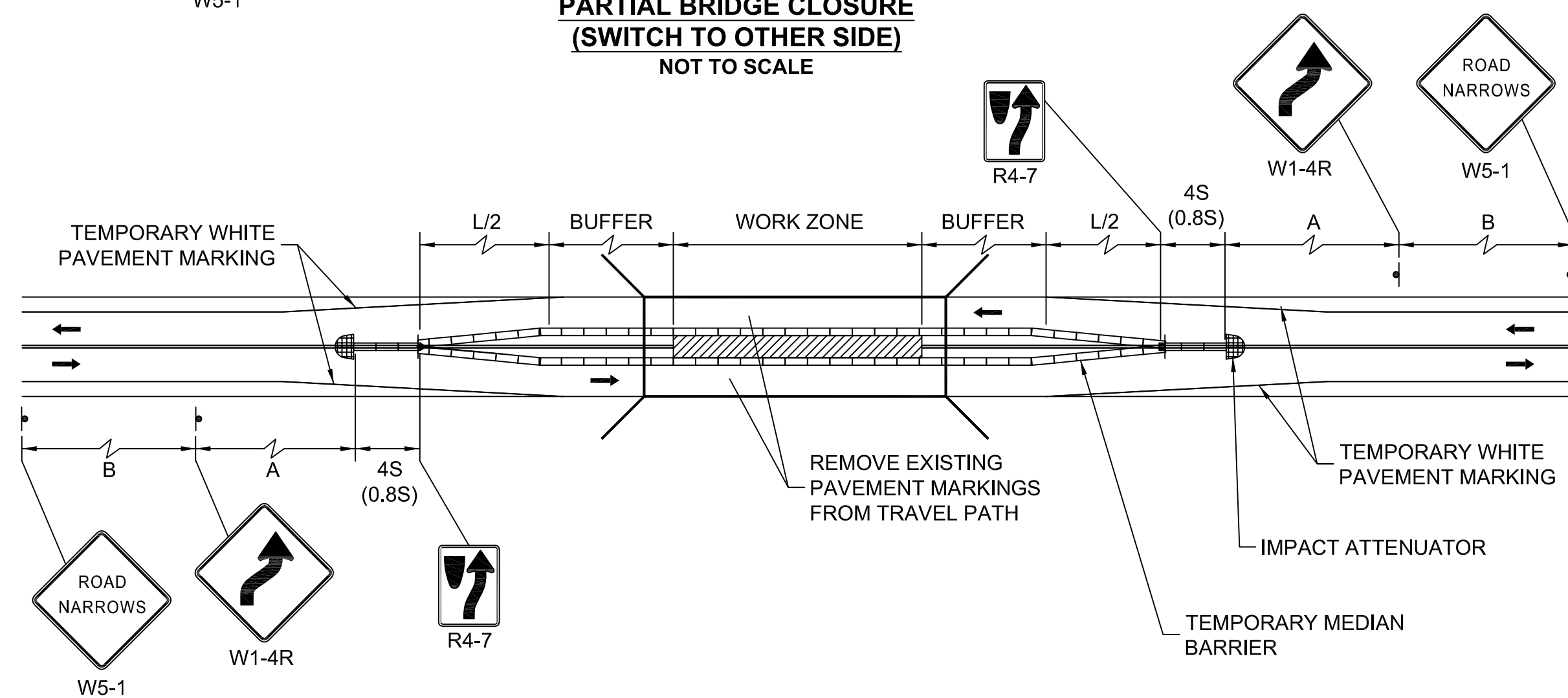




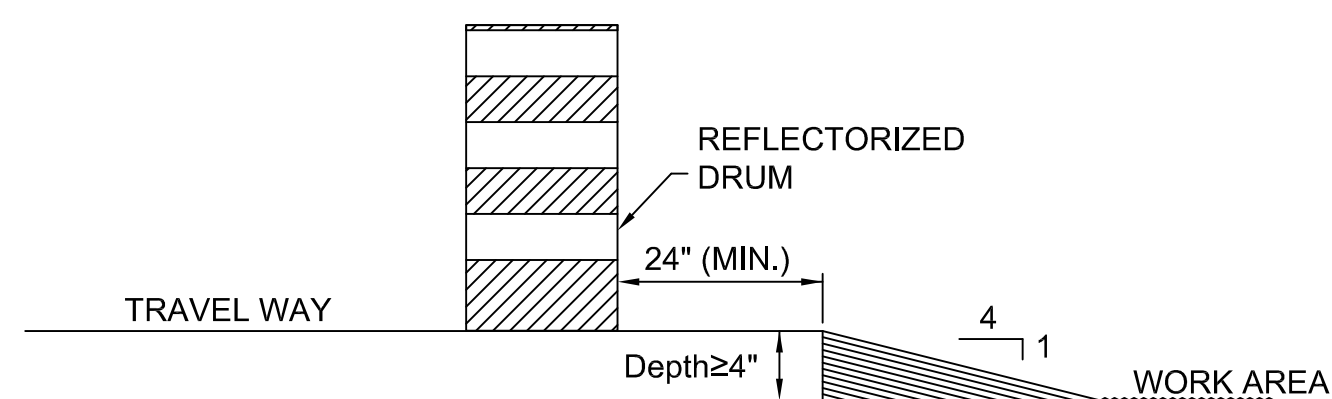
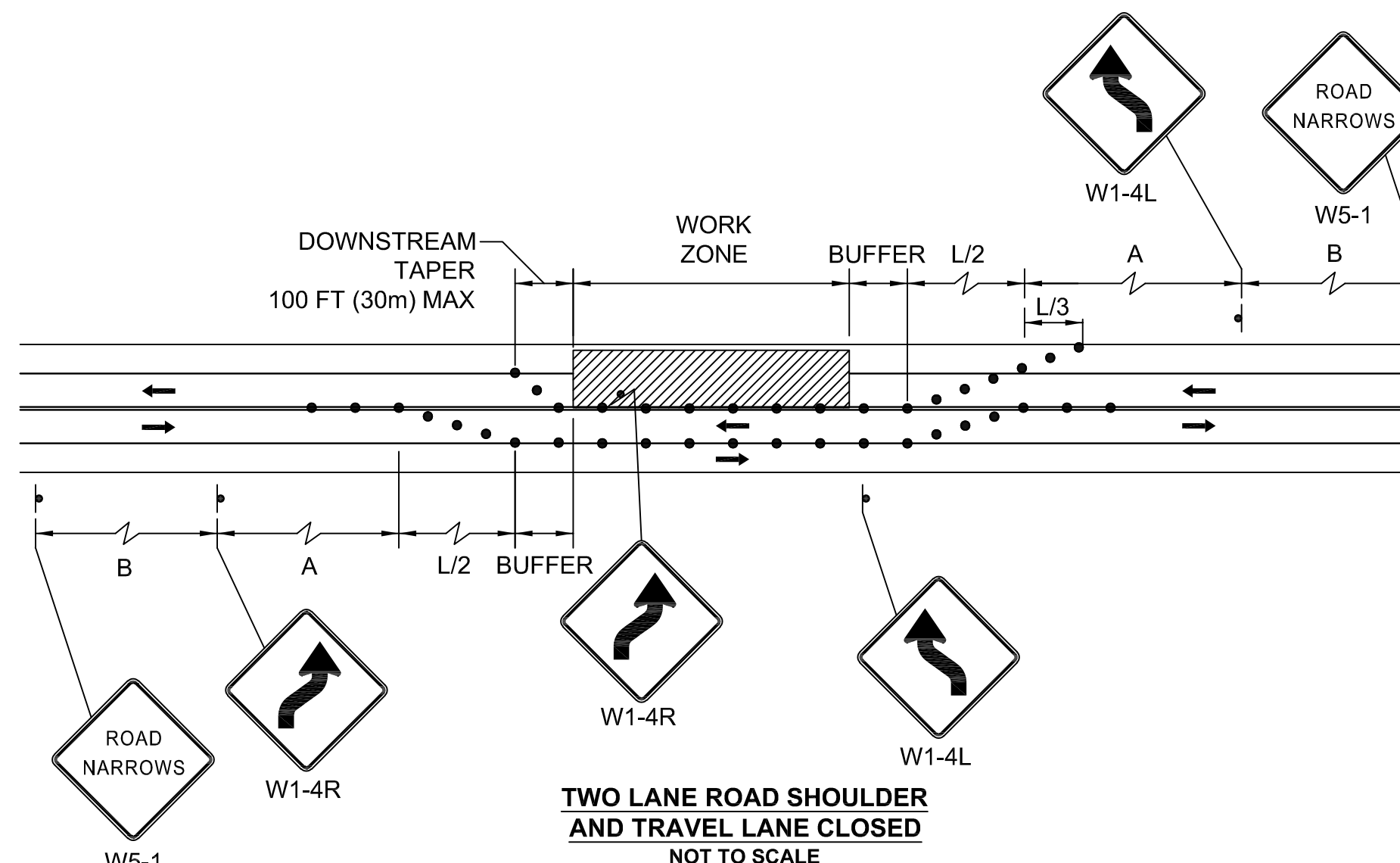
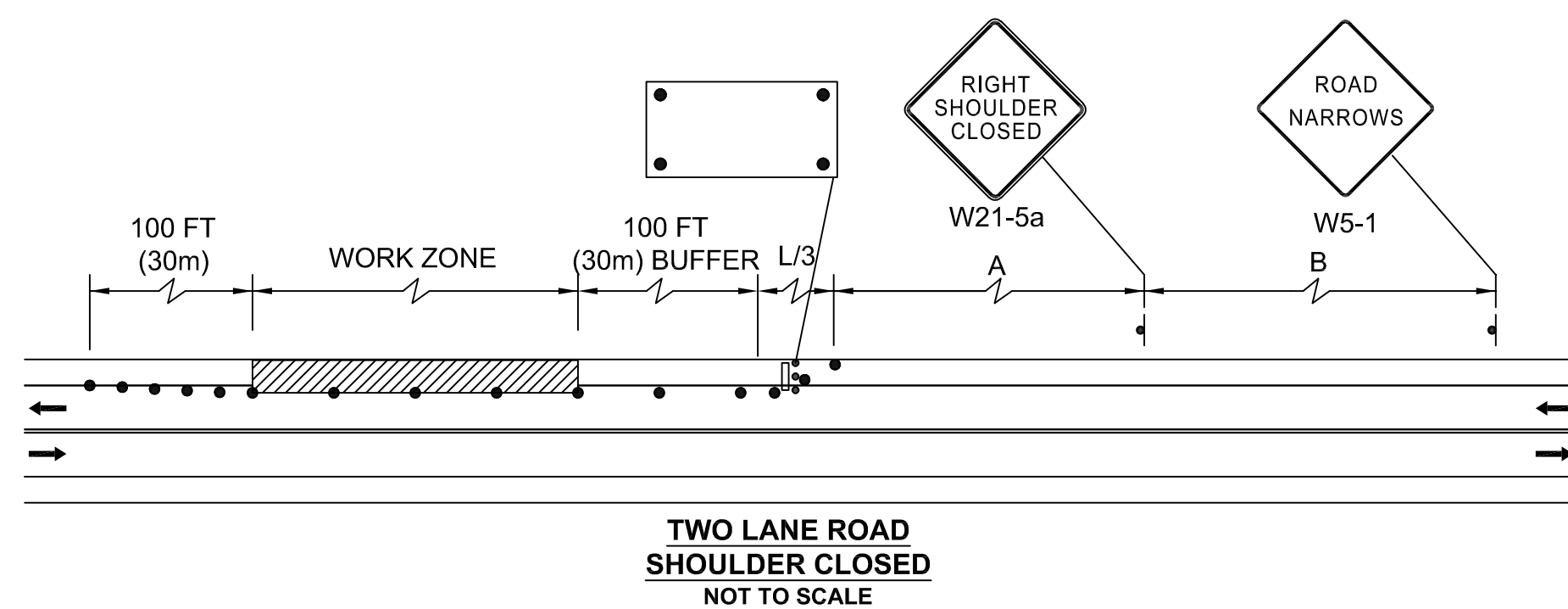
**BRIDGE CLOSURE ONE LANE  
ALTERNATING TRAFFIC  
NOT TO SCALE**



**PARTIAL BRIDGE CLOSURE**  
**(SWITCH TO OTHER SIDE)**  
**NOT TO SCALE**

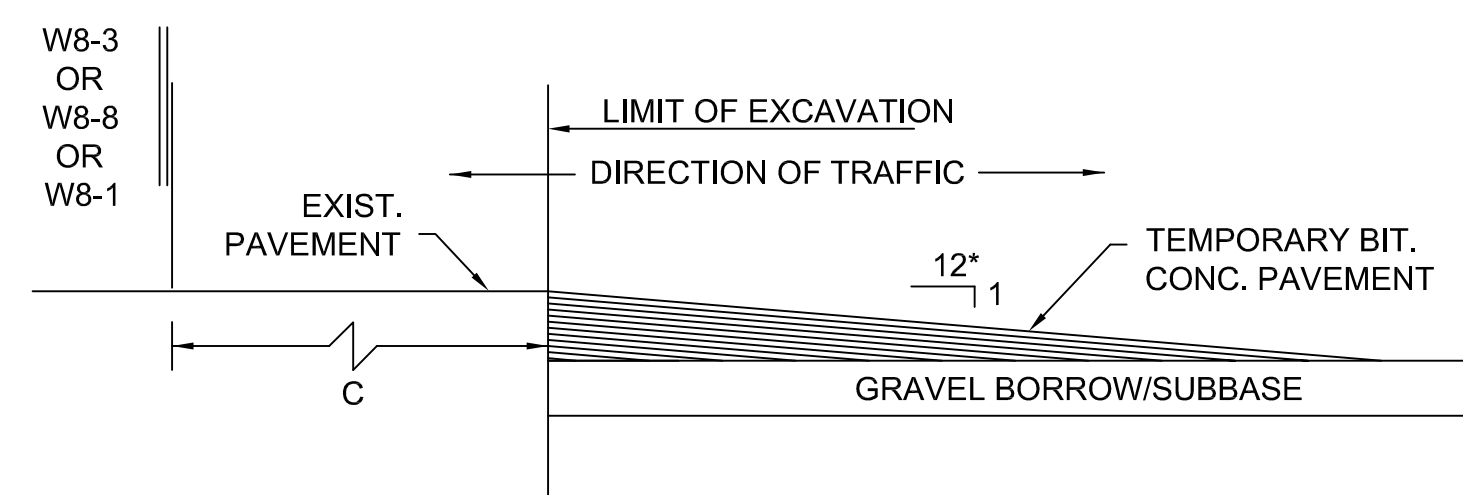


**PARTIAL BRIDGE CLOSURE CENTER**  
**NOT TO SCALE**



### LATERAL DROP-OFF DETAIL

NOT TO SCALE



**LONGITUDINAL DROP-OFF DETAIL**

NOT TO SCALE

\* - INCREASE SLOPE RATIO  
FOR HIGHER SPEEDS

1. WHERE THERE IS A LONGITUDINAL DIFFERENCE IN ELEVATION BETWEEN THE EXISTING PAVEMENT AND MILLED OR NEW PAVEMENT, THE CONTRACTOR SHALL PATCH A TEMPORARY HOT MIX ASPHALT WEDGE WITH A 12:1 (OR FLATTER) SLOPE FOR SMOOTH TRANSITION.
2. CROSS-SECTIONAL GRADE DIFFERENCES IN EXCESS OF 2" DURING NON-WORKING HOURS SHALL REQUIRE DELINEATION BY USE OF REFLECTORIZED DRUMS.
3. CROSS-SECTIONAL GRADE DIFFERENCES IN EXCESS OF 4" DURING NON-WORKING HOURS SHALL BE PROTECTED BY BACKFILLING WITH A WEDGE OF EARTHWORK TO BE COMPACTED AT 4:1 SLOPE AND SHALL ALSO REQUIRE DELINEATION BY USE OF DRUMS.
4. A MINIMUM SLOPE OF 4:1 MUST BE MAINTAINED AFTER WORKING HOURS DURING SUBBASE AND BASE COURSE INSTALLATION ALONG EDGE OF THE TRAVEL WAY (SEE DETAIL, NEXT SHEET). A MINIMUM SLOPE OF 8:1 MUST BE MAINTAINED ON ALL ABUTTED ACCESS DRIVES AND A MINIMUM SLOPE OF 12:1 MUST BE MAINTAINED ON ALL SIDEWALKS.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: \_\_\_\_\_ A.HEALEY  
DRAWN BY: \_\_\_\_\_ A.HEALEY  
SHEET CHK'D BY: \_\_\_\_\_ W.STERRITT  
CROSS CHK'D BY: \_\_\_\_\_ J.FLIETSTR  
APPROVED BY: \_\_\_\_\_ M.EGAN  
DATE: \_\_\_\_\_ APRIL 2024



TOWN OF PUTNAM, CONNECTICUT

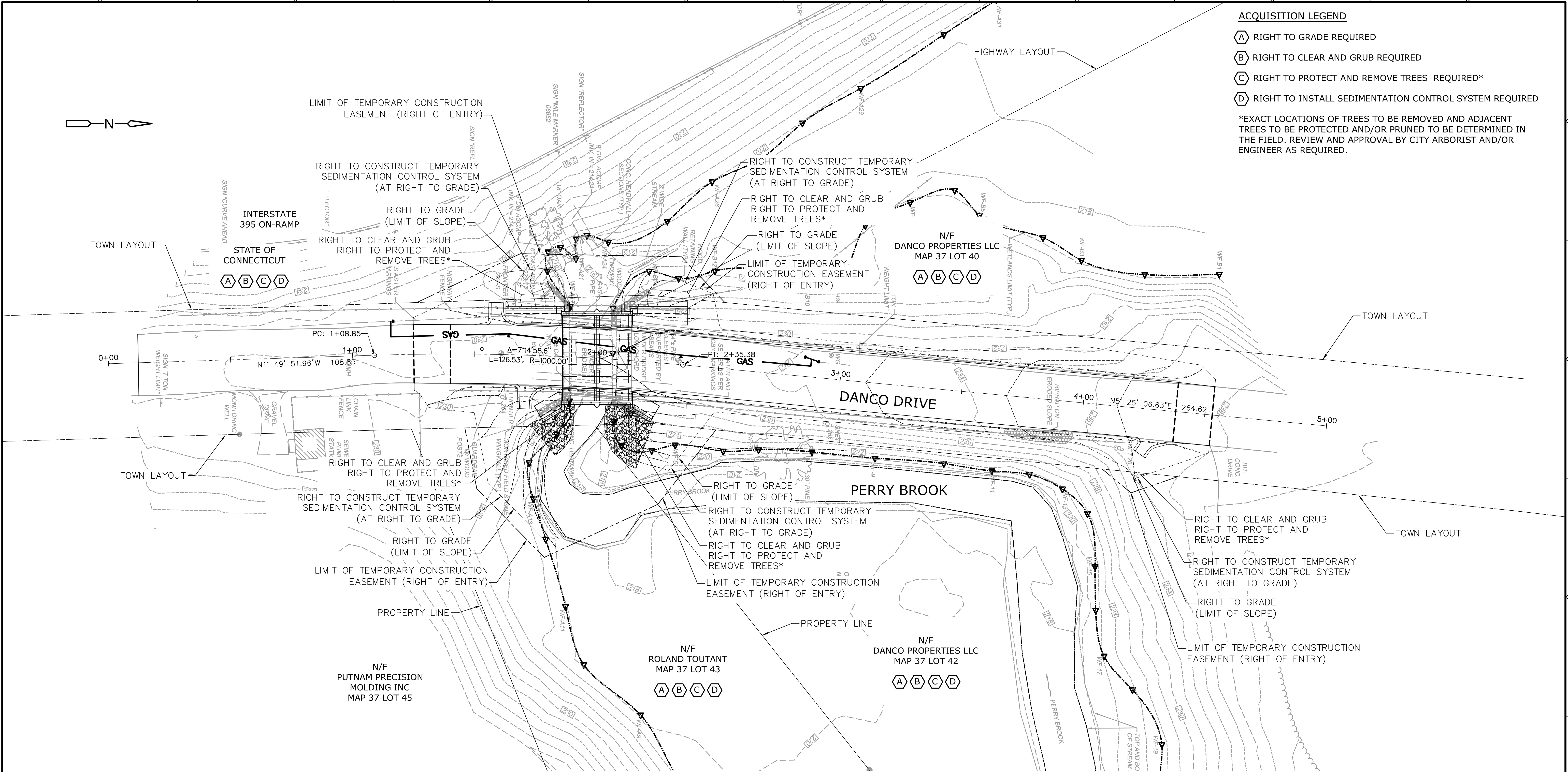
DANCO DRIVE BRIDGE REPLACEMENT

TEMPORARY TRAFFIC  
MANAGEMENT PLAN 2 OF 2

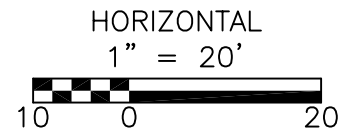
PROJECT NO. 262470-263189
FILE NAME: TSTTM001.DWG
SHEET NO.
TTM-02



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SCHEDULE OF PROPERTY OWNERS									
SERIAL NO.	OWNER	MAP/LOT	TAKING AREA		EXCESS AREA	BUILDING PART	TYPE OF SEARCH	TYPE OF TAKE	REMARKS
			SQ. FT	ACRES					
1	STATE OF CONNECTICUT	--	1,551	0.0356				RIGHT	REFER TO ACQUISITION LEGEND A, B, C, D
2	DANCO PROPERTIES LLC	37 / 40	125	0.0029				RIGHT	A, B, C, D
3	ROLAND TOUTANT	37 / 43	2,740	0.0629				RIGHT	A, B, C, D
4	DANCO PROPERTIES LLC	37 / 42	820	0.0188				RIGHT	A, B, C, D
5	DANCO PROPERTIES LLC	37 / 42	133	0.0031				RIGHT	A, B, C, D



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	A.HEALEY
DRAWN BY:	A.HEALEY
SHEET CHK'D BY:	W.STERRITT
CROSS CHK'D BY:	J.FLIETSTRA
APPROVED BY:	M.EGAN
DATE:	APRIL 2024

**CDM Smith**

101 E. River Dr. | Suite 1A  
East Hartford, CT 06108  
Tel: (860) 525-7615



TOWN OF PUTNAM, CONNECTICUT

DANCO DRIVE BRIDGE REPLACEMENT

RIGHT-OF-WAY PLAN

ROW-01

PROJECT NO.	262470-263189
FILE NAME:	TSTRW001.DWG
SHEET NO.	
ACC_NO	

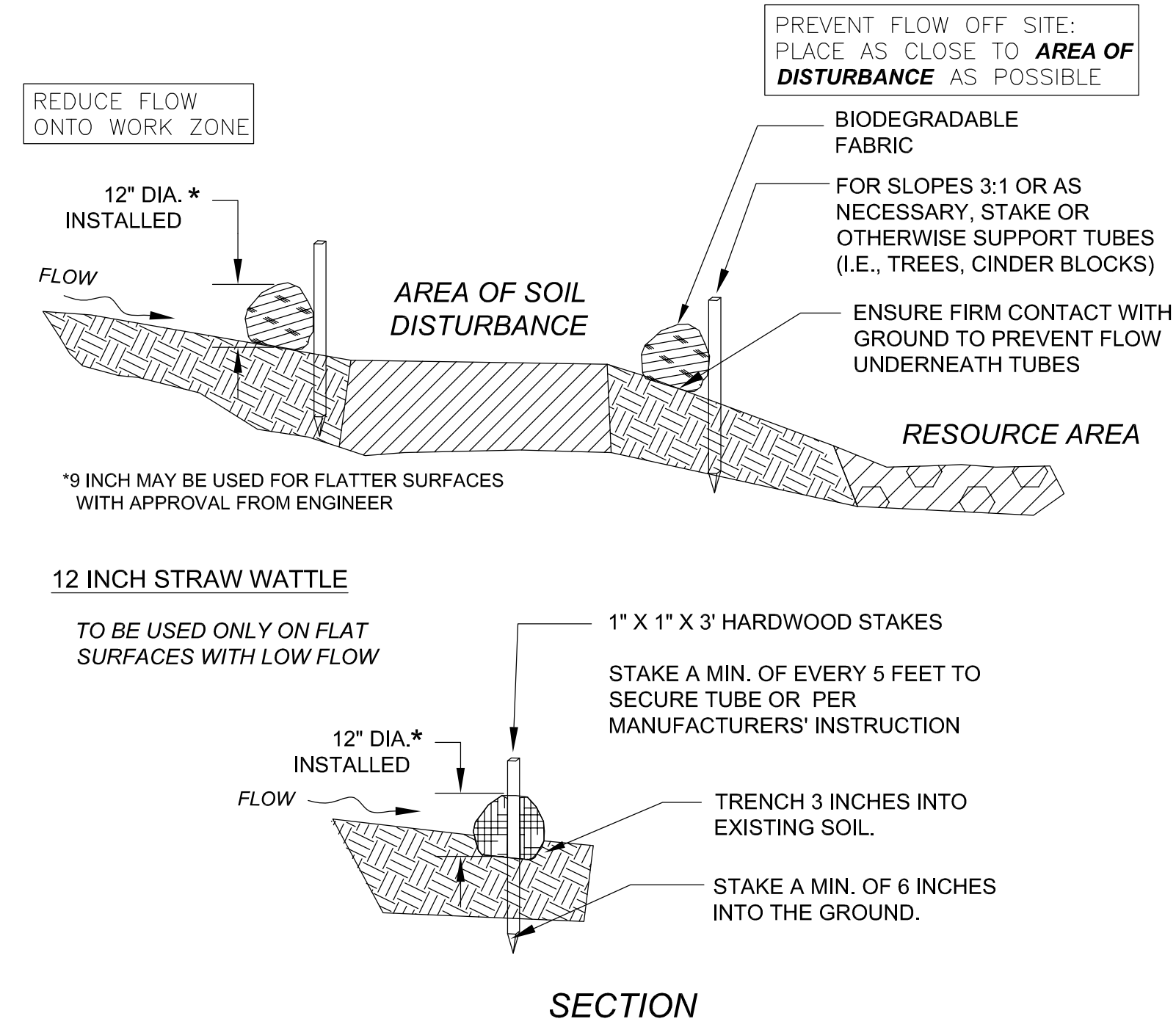


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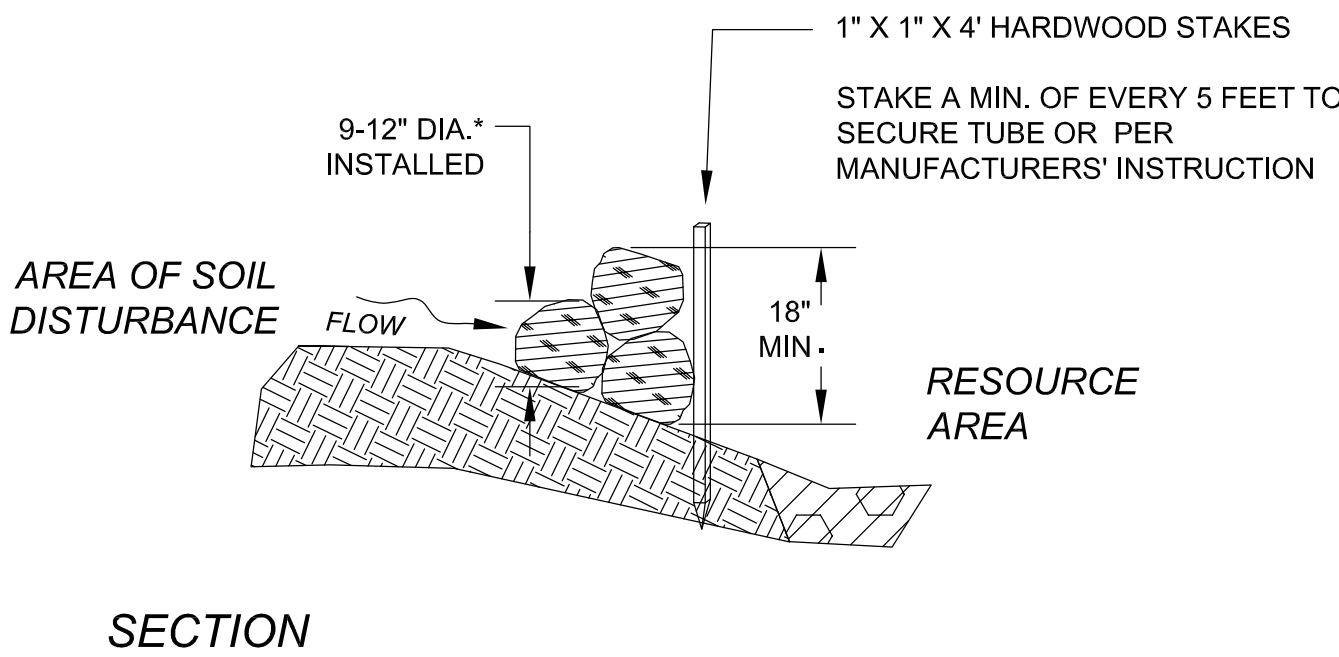
CT DEEP BUREAU OF NATURAL RESOURCES REQUIREMENTS  
FOR CONSTRUCTION ACTIVITIES, BETWEEN APRIL 1 - OCTOBER 31:

- EXCLUSIONARY PRACTICES WILL BE USED TO PREVENT ANY TURTLE ACCESS INTO DISTURBANCE AREAS. THESE MEASURES WILL NEED TO BE INSTALLED AT THE LIMITS OF DISTURBANCE AS SHOWN ON THE PLANS.
- EXCLUSIONARY FENCING MUST BE AT LEAST 20" TALL AND MUST BE SECURED TO AND REMAIN IN CONTACT WITH THE GROUND AND BE REGULARLY MAINTAINED (AT LEAST BI-WEEKLY AND AFTER MAJOR WEATHER EVENTS) TO SECURE ANY GAPS OR OPENINGS AT GROUND LEVEL THAT MAY LET ANIMALS PASS THROUGH.
- ALL STAGING AND STORAGE AREAS, OUTSIDE OF PREVIOUSLY PAVED LOCATIONS, REGARDLESS OF THE DURATION OF TIME THEY WILL BE UTILIZED, MUST BE REVIEWED TO REMOVE INDIVIDUALS AND EXCLUDE THEM FROM RE-ENTRY.
- ALL CONSTRUCTION PERSONNEL WORKING WITHIN THE TURTLE HABITAT MUST BE APPRISED OF THE SPECIES DESCRIPTION AND THE POSSIBLE PRESENCE OF A LISTED SPECIES.
- THE CONTRACTOR WILL SEARCH THE WORK AREA EACH MORNING PRIOR TO ANY WORK BEING DONE.
- ANY TURTLES ENCOUNTERED WITHIN THE IMMEDIATE WORK AREA SHALL BE CAREFULLY MOVED TO AN ADJACENT AREA OUTSIDE OF THE EXCLUDED AREA AND FENCING SHOULD BE INSPECTED TO IDENTIFY AND REMOVE POTENTIAL ACCESS POINTS. THIS ANIMAL IS PROTECTED BY LAW AND SHOULD NOT BE RE-LOCATED OFF-SITE.
- IN AREAS WHERE SILT FENCE IS USED FOR EXCLUSION, IT SHALL BE REMOVED AS SOON AS THE AREA IS STABLE AND DISTURBANCE IS FINISHED TO ALLOW FOR REPTILE AND AMPHIBIAN PASSAGE TO RESUME.

COMPOST FILTER TUBE



PLAN VIEW

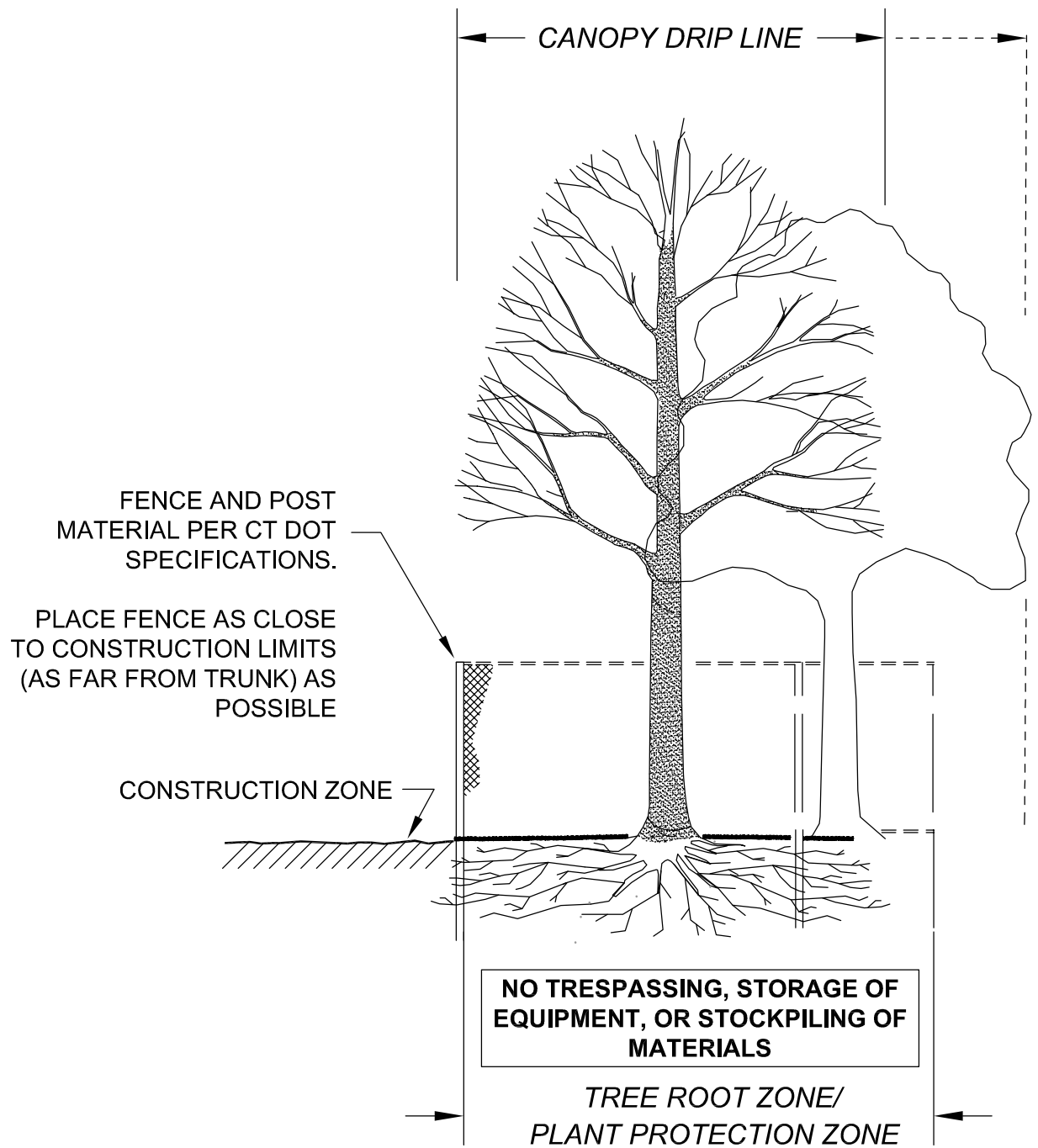


SEDIMENT BARRIERS - COMPOST FILTER TUBES & STRAW WATTLES

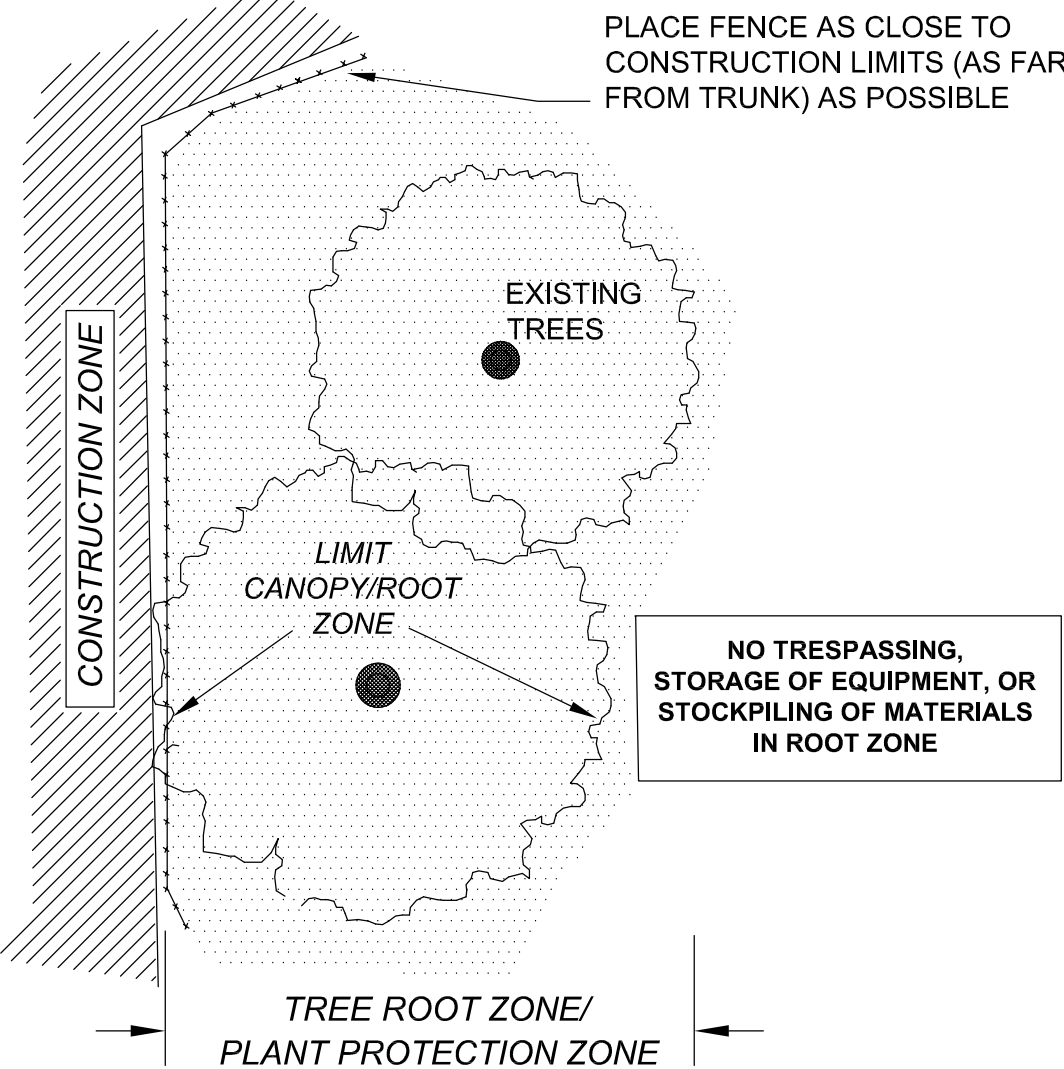
NOT TO SCALE

COMPOST FILTER TUBE BERM (SLOPES 2:1 OR STEEPER)

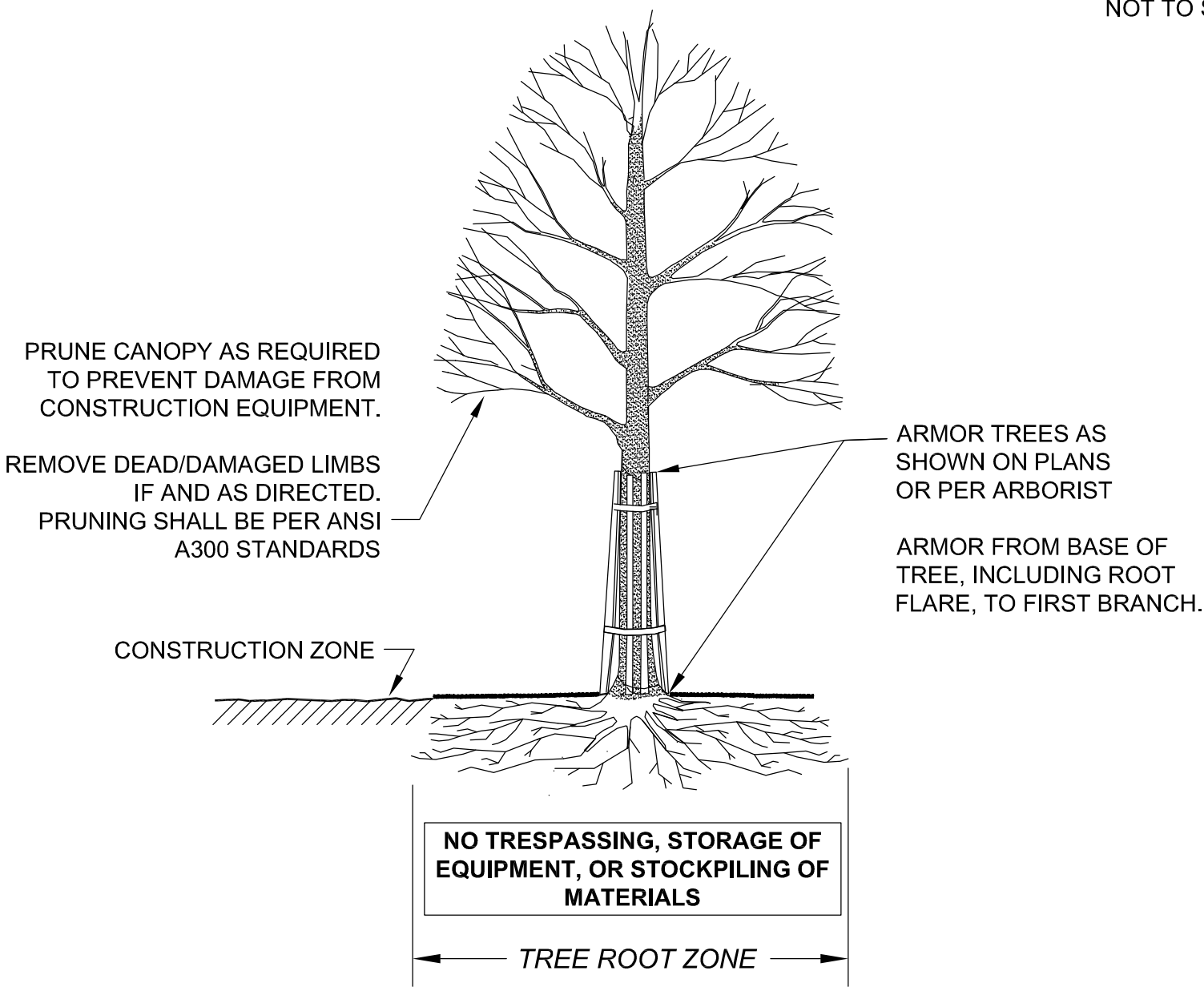
NOT TO SCALE



SECTION - FENCE PROTECTION OF ROOT ZONE



PLAN VIEW - FENCE PROTECTION OF ROOT ZONE



SECTION - TRUNK ARMORING & PRUNING

TREE PROTECTION DETAILS

NOT TO SCALE

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A.HEALEY  
DRAWN BY: A.HEALEY  
SHEET CHK'D BY: W.STERRITT  
CROSS CHK'D BY: J.FLIETSTRA  
APPROVED BY: M.EGAN  
DATE: APRIL 2024

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101 E. River Dr. | Suite 1A  
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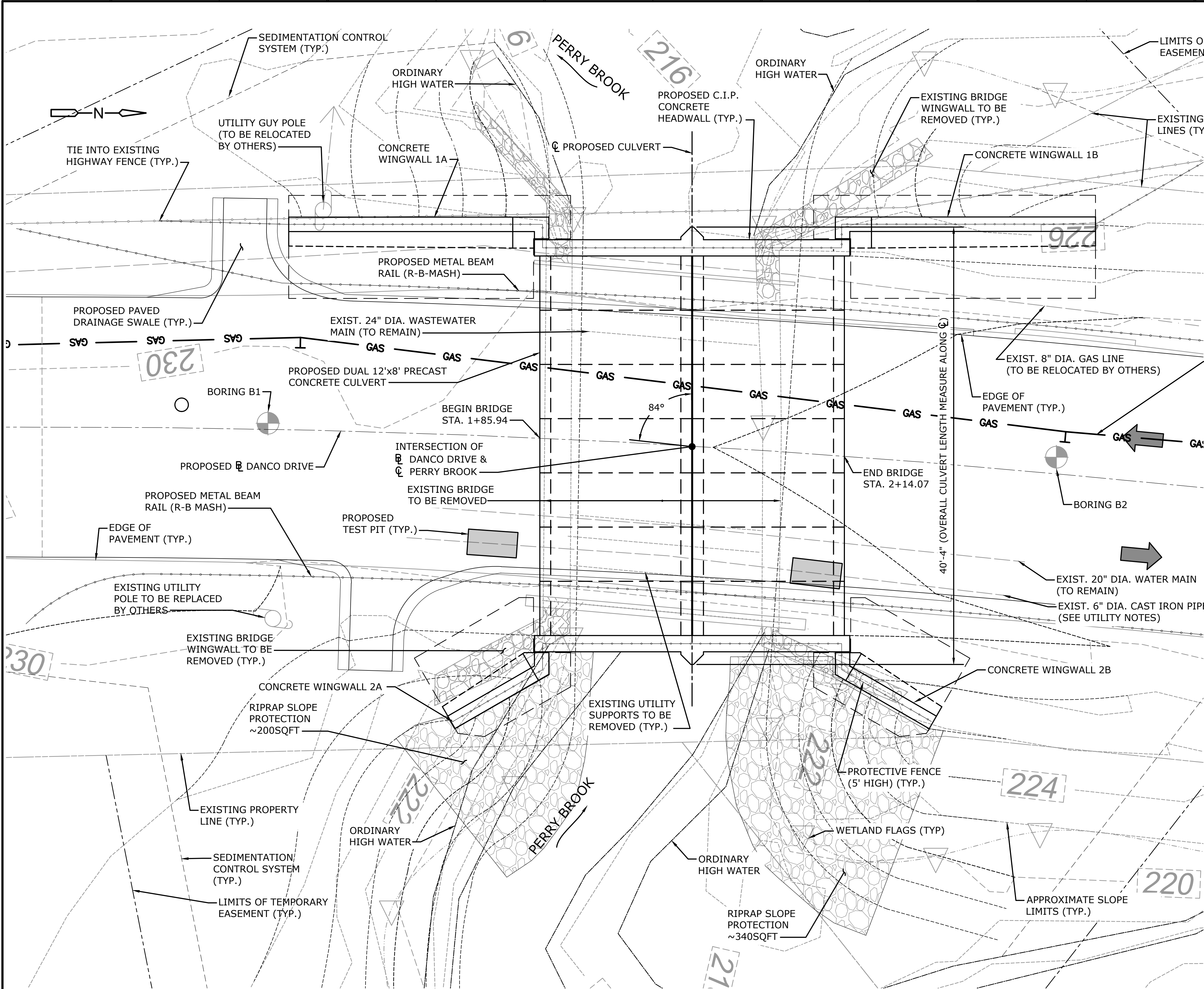
TOWN OF PUTNAM, CONNECTICUT  
DANCO DRIVE BRIDGE REPLACEMENT

MISCELLANEOUS DETAILS

PROJECT NO. 262470-263189 FILE NAME: TSTTS001.DWG
SHEET NO. <b>MDS-01</b>
ACC_NO



XREFS: [BR15008, 21176 Exist. cond. plan 2021-09-14, TSTBP001, CDMG\_2234] Images: []  
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pw:\\cdm-smith-0202-pw.bentley.com\\pw\_p1\\262470\\263189\_04 Design Services NM\_302\\04 Structural\\10 BIM/CADD\\STR001.dwg  
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GENERAL PLAN  
SCALE: 1" = 5'

UTILITY NOTES:

- LOCATIONS OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE CONFIRMED WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES OR EXCAVATION.
- PROPOSED TEST PITS FOR THE EXISTING 6-IN DIAMETER CAST IRON PIPE ARE TO VERIFY ITS ABANDONMENT AND/OR OWNERSHIP. IF THE UTILITY IS ABANDONED THE EXISTING PIPE SHALL BE CUT AND CAPPED AT STATIONS 1+66 AND 2+34. IF THE UTILITY IS STILL IN USE THE ENGINEER SHALL BE NOTIFIED. THE UTILITY OWNER MUST BE IDENTIFIED AND ARRANGEMENTS MADE TO RELOCATE OR TEMPORALLY PROTECT AND SUPPORT THE UTILITY DURING CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO ANY EXISTING UTILITIES DURING CONSTRUCTION.

ESTIMATED SHIPPING DATA

MEMBER	SHIPPING HEIGHT	SHIPPING LENGTH	SHIPPING WEIGHT
TYPICAL CULVERT SEGMENT	10'-0"	14'-0"	34.0 KIP
TYPICAL HEADWALL MEMBER	N/A	N/A	N/A
TRYTICAL WINGWALL MEMBER	N/A	N/A	N/A
TYPICAL FOOTING MEMBER	N/A	N/A	N/A

NOTICE TO BRIDGE INSPECTORS

THE DEPARTMENT'S BRIDGE SAFETY PROCEDURES REQUIRE THIS BRIDGE TO BE INSPECTED FOR, BUT NOT LIMITED TO, ALL APPROPRIATE COMPONENTS INDICATED IN THE GOVERNING MANUALS FOR BRIDGE INSPECTION. ATTENTION MUST BE GIVEN TO INSPECTING THE FOLLOWING SPECIAL COMPONENTS AND DETAILS. (THE LISTING FOR COMPONENTS FOR SPECIFIC ATTENTION SHALL NOT BE CONSTRUED TO REDUCE THE IMPORTANCE OF INSPECTION OF ANY OTHER COMPONENT OF THE STRUCTURE). THE FREQUENCY OF INSPECTION OF THIS STRUCTURE SHALL BE IN ACCORDANCE WITH THE GOVERNING MANUALS FOR BRIDGE INSPECTION, UNLESS OTHERWISE DIRECTED BY THE MANAGER OF BRIDGE SAFETY AND EVALUATION.

COMPONENT OR DETAIL	STRUCTURAL SHEET REFERENCE

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. FLUETSTRA  
DRAWN BY: J. FLUETSTRA  
SHEET CHK'D BY: M. EGAN  
CROSS CHK'D BY: A. HEALEY  
APPROVED BY: M. EGAN  
DATE: APRIL 2024

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TOWN OF PUTNAM, CONNECTICUT  
DANCO DRIVE BRIDGE REPLACEMENT

GENERAL PLAN

PROJECT NO. 262470-263189  
FILE NAME: STR001.DWG  
SHEET NO.  
S-01



XREFs: [BR115008, 21176 Exst. cond. plan 2021-09-14, TSTBP001, CDMS\_2234] Images: []  
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GENERAL NOTES:

SPECIFICATIONS: CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES FACILITIES, AND INCIDENTAL CONSTRUCTION, FORM 818, DATED 2023 WITH SUPPLEMENTAL SPECIFICATIONS DATED JANUARY 2023, AND THE SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR HIGHWAY BRIDGES (NINTH EDITION, 2020) AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL (2003), INCLUDING CURRENT CHANGES DATED (12/2022)

MATERIAL STRENGTHS:

CONCRETE:  
CLASS PCC03541 CONCRETE      f'c = 3,000 PSI (MIN.)  
CLASS PCC04462 CONCRETE      f'c = 4,000 PSI (MIN.)

THE SPECIFIED CONCRETE STRENGTH USED IN DESIGN, f'c, OF THE CONCRETE COMPONENTS IS NOTED ABOVE. THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE IN THE CONSTRUCTED COMPONENTS SHALL CONFORM TO THE REQUIREMENTS OF SECTIONS 6.01 - "CONCRETE FOR STRUCTURES" AND M.03 - "PORTLAND CEMENT CONCRETE".

REINFORCEMENT:  
(ASTM A615 GRADE 60)                      Fy = 60,000 PSI

LIVE LOAD: HL-93

FUTURE PAVING ALLOWANCE: NONE

DIMENSIONS: ALL DIMENSIONS SHOWN ON THE PLANS ARE IN FEET AND INCHES EXCEPT IF NOTED OTHERWISE. ALL ELEVATIONS ARE GIVEN IN FEET.

EXISTING DIMENSIONS: DIMENSIONS OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY. THEY HAVE BEEN TAKEN FROM THE FIELD MEASUREMENTS AND ARE NOT GUARANTEED. 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 ADDRESSED OR PROTECTED DURING CONSTRUCTION:

24" DIAMETER GRAVITY SEWER	TOWN OF PUTNAM WATER CONTROL AUTHORITY
20" DIAMETER WATER MAIN	TOWN OF PUTNAM WATER CONTROL AUTHORITY
8" DIAMETER GAS LINE	YANKEE GAS SERVICES COMPANY DBA EVERSOURCE ENERGY
6" DIAMETER UNKNOWN CAST IRON LINE	FIELD TEST PITS TO CONFIRM ABANDONEDMENT/OWNERSHIP
OVERHEAD ELECTRIC LINES	SOUTHERN NEW ENGLAND TELEPHONE COMPANY DBA FRONTIER COMMUNICATIONS OF CONNECTICUT

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

MASH TEST LEVEL: THE METAL BEAM RAIL (RB-MASH) MEETS THE TL-3 CRITERIA FOR MASH 2016.

DEWATERING: BEFORE INITIATING CONSTRUCTION THE CONTRACTOR SHALL SUBMIT A PLAN FOR APPROVAL THAT DEFINES THE METHODS FOR MATERIALS FOR CONTROLLING STREAM WATER, DEWATERING AND PROTECTING THE STREAM DURING CONSTRUCTION. THE COST OF THIS WORK ITEM SHALL BE INCLUDED IN THE COST OF "HANDLING WATER."

TRAFFIC: ALL WORK SHALL BE DONE IN THE ACCORDANCE WITH THE SPECIAL PROVISIONS FOR "MAINTENANCE AND PROTECTION OF TRAFFIC" AND FOR 181 SECTION 1.08 "PROSECUTION AND PROGRESS."

CONCRETE NOTES:

CONCRETE:  
THE FOLLOWING PAY ITEMS AND CONCRETE CLASSES ARE REQUIRED FOR CAST-IN-PLACE BRIDGE COMPONENTS:

ITEM	STRUCTURE COMPONENTS	PCC CLASS
FOOTING CONCRETE	WINGWALL FOOTINGS	PCC03541
ABUTMENT AND WALL CONCRETE	HEADWALLS, CUTOFF WALLS, WINGWALLS, NOSE SECTION	PCC04462

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

CONCRETE COVER: ALL REINFORCEMENT SHALL HAVE TWO INCHES 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 PAY ITEM FOR "DEFORMED STEEL BARS - GALVANIZED".

CLOSED CELL NOEPRENE GASKET: THE COST OF FURNISHING AND INSTALLING CLOSED CELL NEOPRENE GASKET SHALL BE INCLUDED IN THE COST OF THE ITEM "12' x 8' PRECAST CONCRETE BOX CULVERT" WHERE APPLICABLE.

CLOSED CELL ELASTOMER: FURNISHING AND INSTALLING CLOSED CELL ELASTOMER SHALL BE INCLUDED IN THE ITEM "1" CLOSED CELL ELASTOMER."

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

NOTICE TO BRIDGE INSPECTORS

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COMPONENT OR DETAIL	DRAWING NUMBER REFERENCE
NONE	

CONCRETE DISTRIBUTION

SUPERSTRUCTURE	C.Y.	0.0
SUBSTRUCTURE	C.Y.	72.0
FOOTINGS	C.Y.	23.0
TOTAL	C.Y.	95.0

NOTE:  
CONTRACTOR MAY PLACE WINGWALL FOOTINGS AND WINGWALLS AS PRECAST CONCRETE ELEMENTS.

REV. NO.	DATE	DRWN	CHKD	REMARKS	

DESIGNED BY: **J. FLUETSTRA**  
DRAWN BY: **J. FLUETSTRA**  
SHEET CHK'D BY: **M. EGAN**  
CROSS CHK'D BY: **A. HEALEY**  
APPROVED BY: **M. EGAN**  
DATE: **APRIL 2024**

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East Hartford, CT 06108  
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TOWN OF PUTNAM, CONNECTICUT

DANCO DRIVE BRIDGE REPLACEMENT

GENERAL NOTES

PROJECT NO. 262470-263189  
FILE NAME: **STR001.DWG**

SHEET NO.

S-02



THE MAXIMUM DESIGN FOUNDATION PRESSURE = 7.2 TSF (STRENGTH I)  
= 2.5 TSF (SERVICE I)

DESIGNED BY: J. FLIJTSTRA  
DRAWN BY: J. FLIJTSTRA  
SHEET CHK'D BY: M. EGAN  
CROSS CHK'D BY: A. HEALEY  
APPROVED BY: M. EGAN  
DATE: APRIL 2024



# BORING LOGS

PROJECT NO. 262470-263189  
FILE NAME: STR001.DWG

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SHEET NO.  
**S-03**

## BORING B1

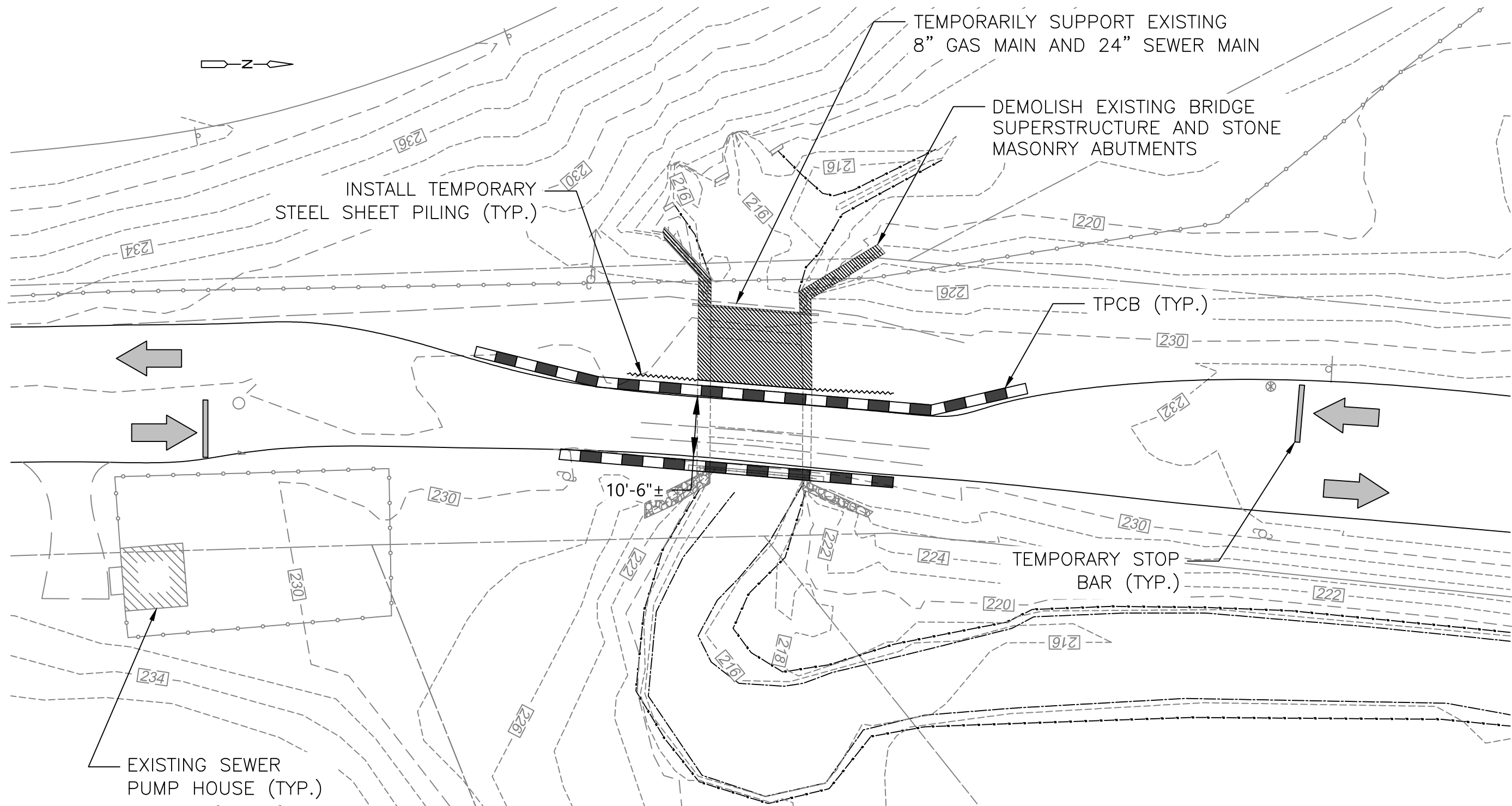
## BORING B1

## BORING B2

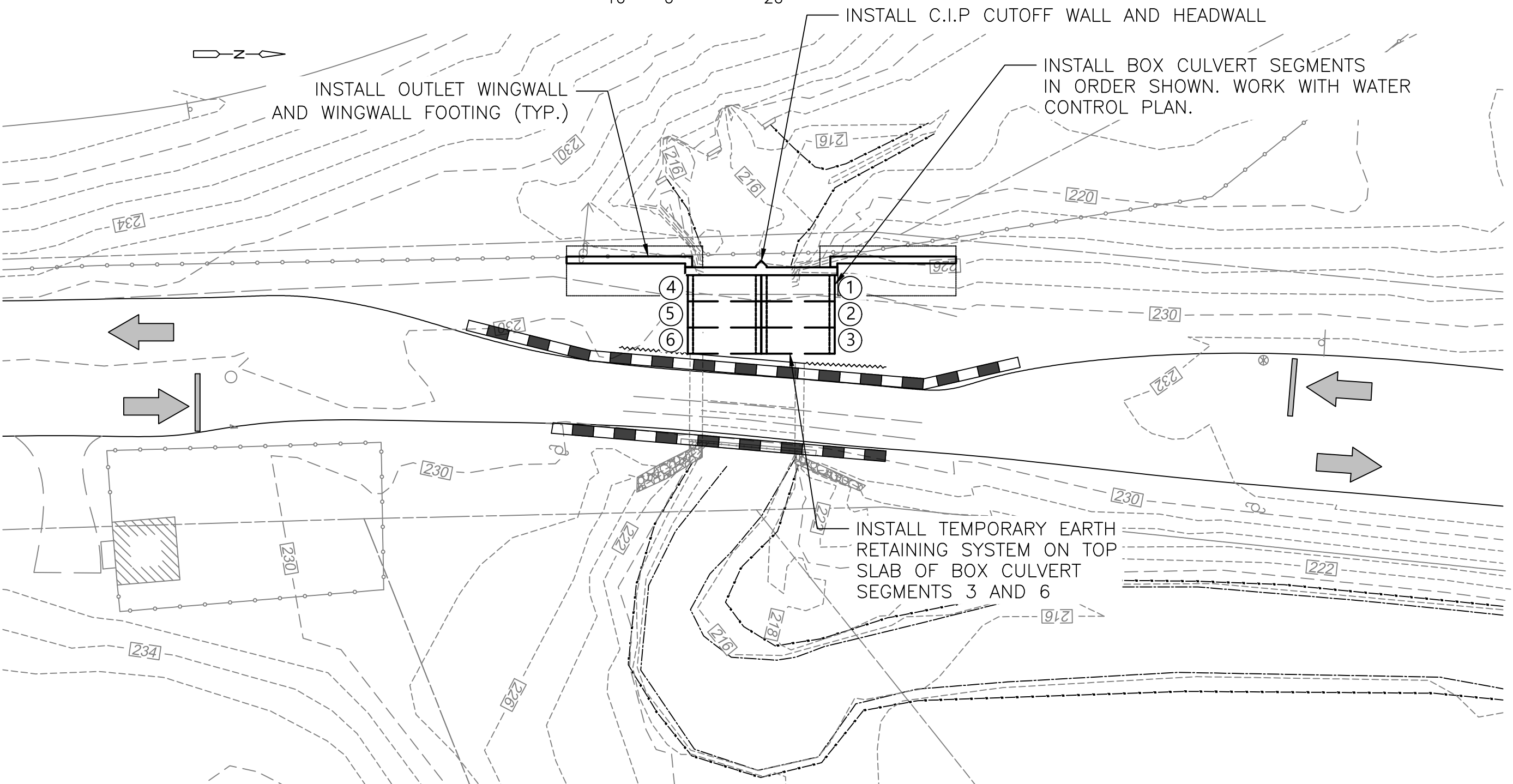
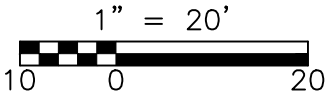
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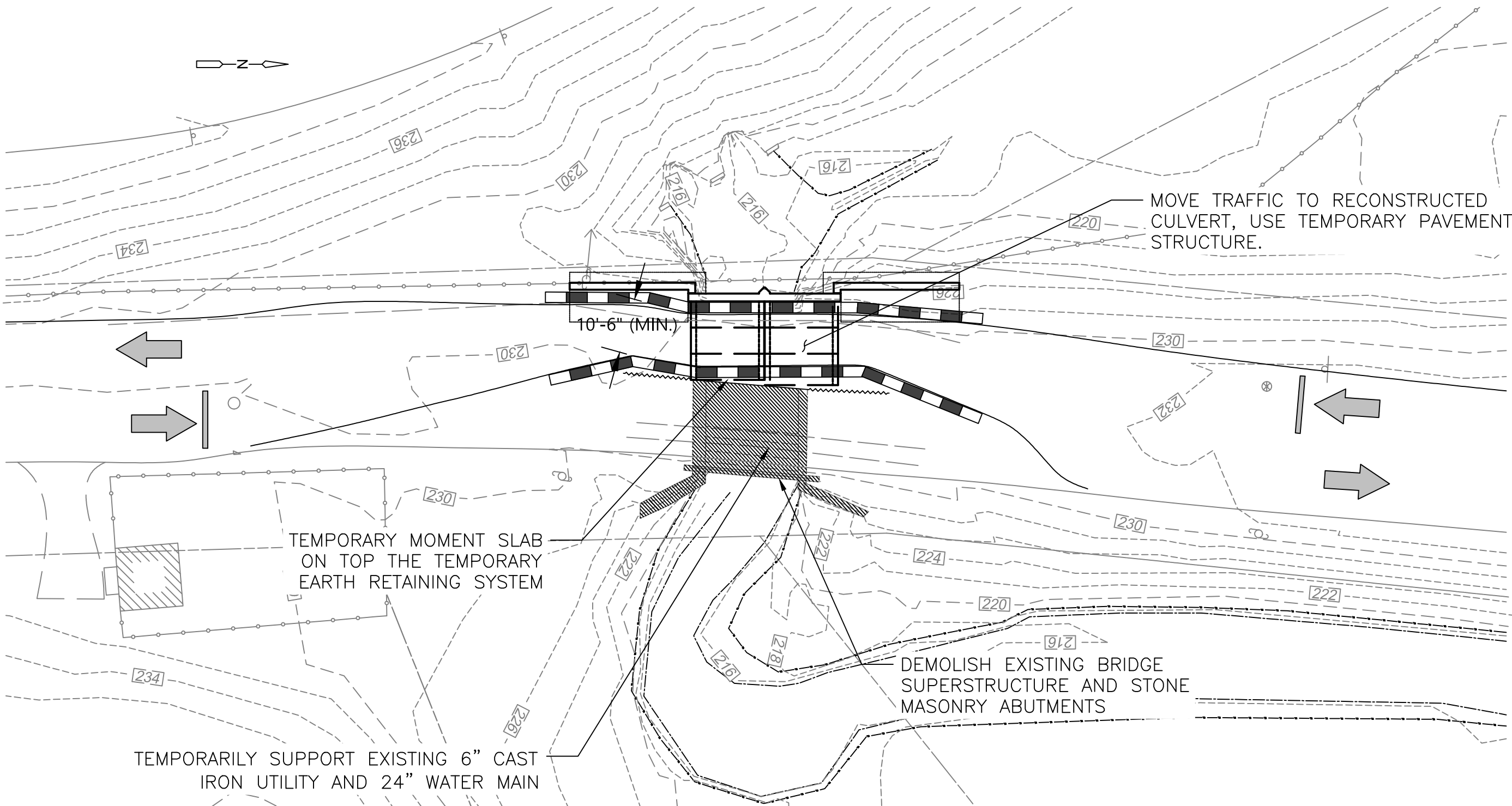
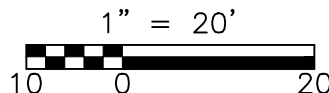
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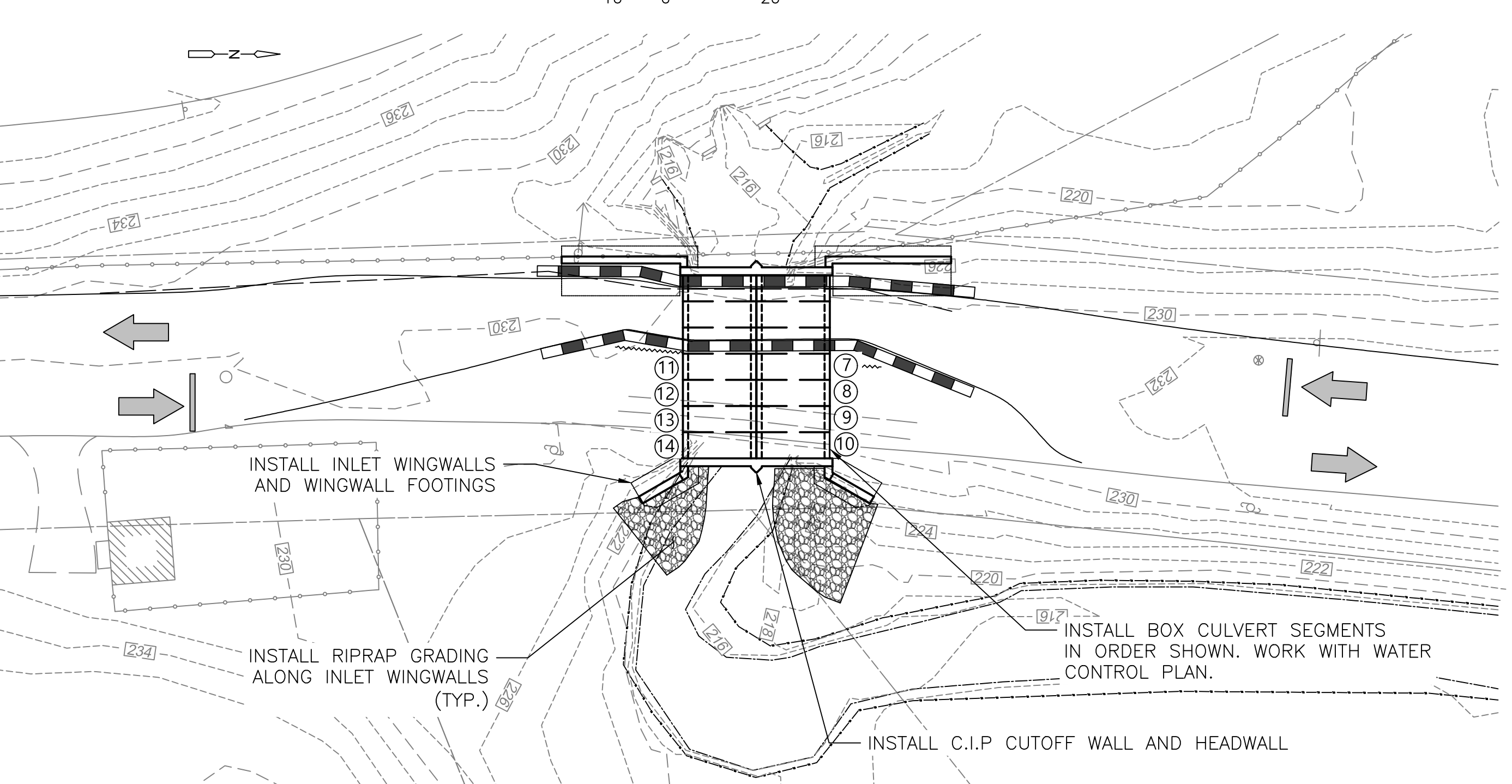
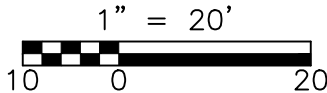
STAGE 1 - DEMOLITION SEQUENCE



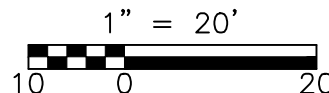
STAGE 1 - CONSTRUCTION SEQUENCE



STAGE 2 - DEMOLITION SEQUENCE



STAGE 2 - CONSTRUCTION SEQUENCE



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. FLUETSTRA  
DRAWN BY: J. FLUETSTRA  
SHEET CHK'D BY: M. EGAN  
CROSS CHK'D BY: A. HEALEY  
APPROVED BY: M. EGAN  
DATE: APRIL 2024

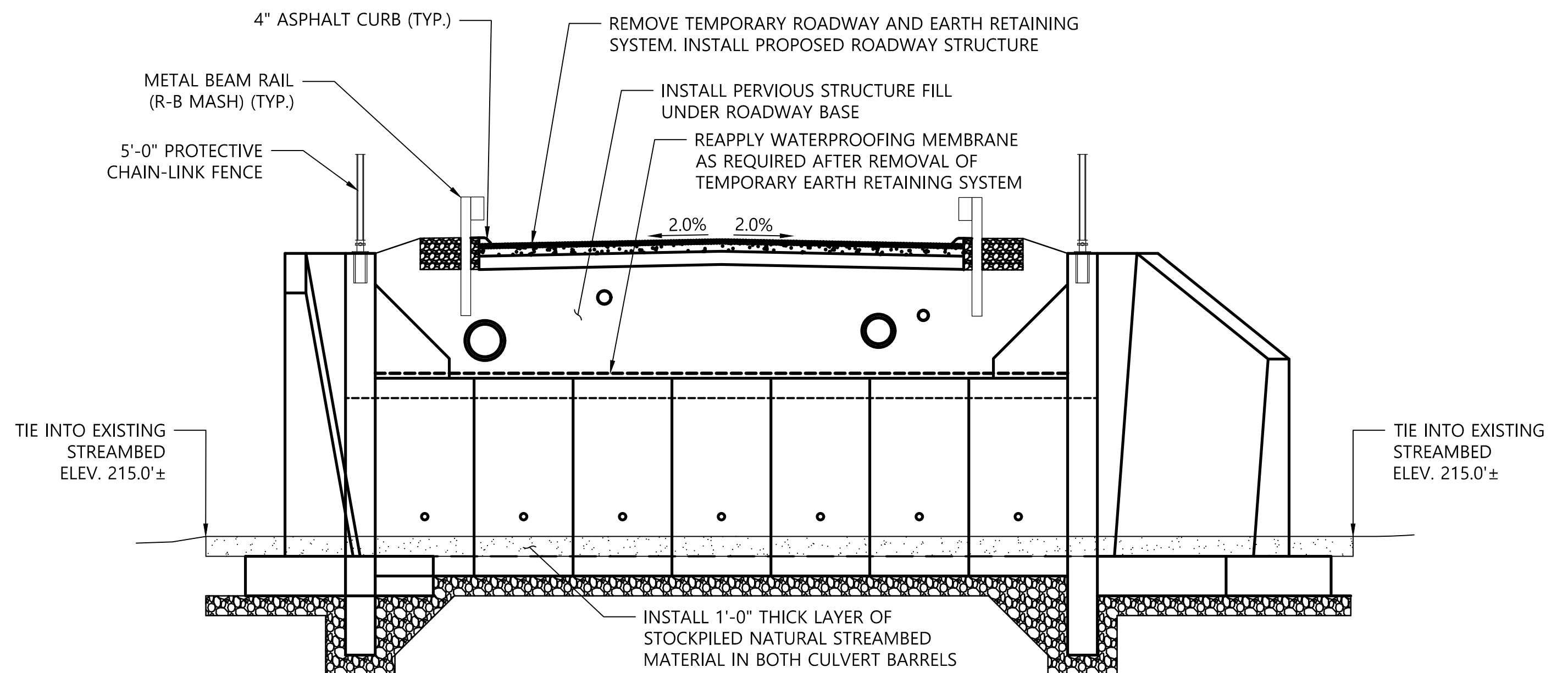
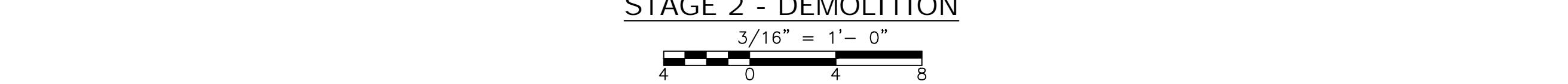


TOWN OF PUTNAM, CONNECTICUT  
DANCO DRIVE BRIDGE REPLACEMENT

STAGE CONSTRUCTION  
1 OF 2

PROJECT NO. 262470-263189  
FILE NAME: STRO04\_7.DWG  
SHEET NO.  
S-04





1. WORK WITH DRAWINGS S-04 AND S-06-S-07 FOR TRAFFIC PHASING AND WATER CONTROL HANDLING, RESPECTIVELY.
2. UTILITIES SHALL BE SUPPORTED DURING DEMOLITION OF EXISTING STRUCTURE AND INSTALLATION OF THE PRECAST BOX CULVERT SEGMENTS. BOX SEGMENTS SHALL BE PLACED ON THE CRUSHED STONE AND PUSHED INTO PLACE UNDER THE UTILITIES. SACRIFICIAL STEEL BEAMS MAY BE USED TO ASSIST WITH INSTALLATION OF THE BOX CULVERT, AND TO ASSIST IN DIFFERENTIAL SETTLEMENT BETWEEN THE BOX CULVERT SEGMENTS.
3. TEMPORARY EARTH RETAINING SYSTEM INSTALLED ALONG THE TOP OF THE PRECAST BOX CULVERT MUST BE REMOVED TO A DEPTH OF AT LEAST 3'-0" BELOW THE PROPOSED ROADWAY ELEVATION IN STAGE 3. STAGE 3 WILL REQUIRE A COMPLETE ROAD CLOSURE TO REMOVE THE TEMPORARY EARTH RETAINING SYSTEM AND CONSTRUCT THE FINAL ROADWAY STRUCTURE.
4. THE TWO TPCB MOUNTED TO THE TEMPORARY MOMENT SLAB SHALL BE PAID UNDER THE ITEM "TEMPORARY EARTH RETAINING SYSTEM," SEE SPECIAL PROVISIONS.

DESIGNED BY: J. FLIETSTRA  
DRAWN BY: J. FLIETSTRA  
SHEET CHK'D BY: M. EGAN  
CROSS CHK'D BY: A. HEALEY  
APPROVED BY: M. EGAN  
DATE: APRIL 2024



STAGE CONSTRUCTION  
2 OF 2

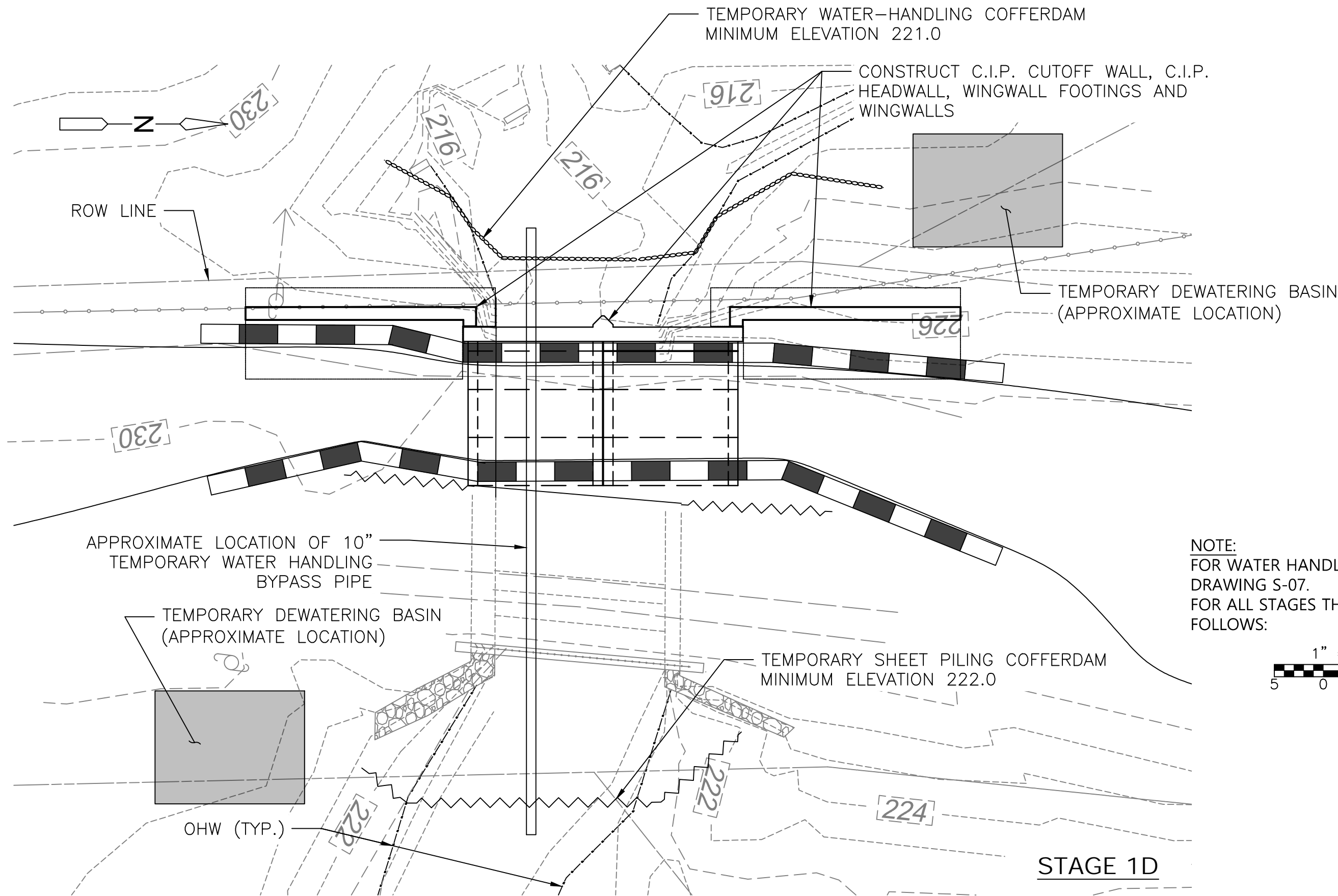
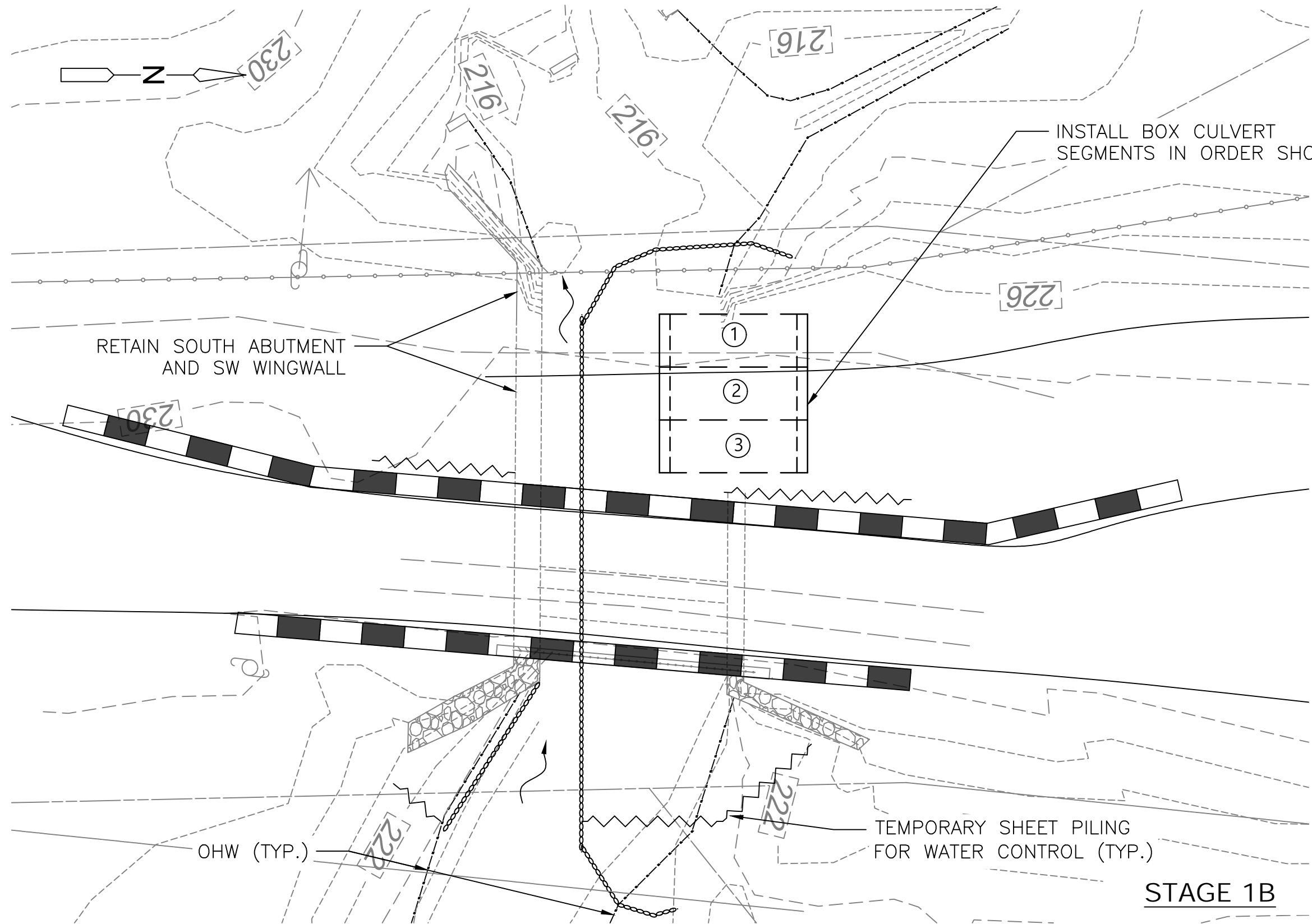
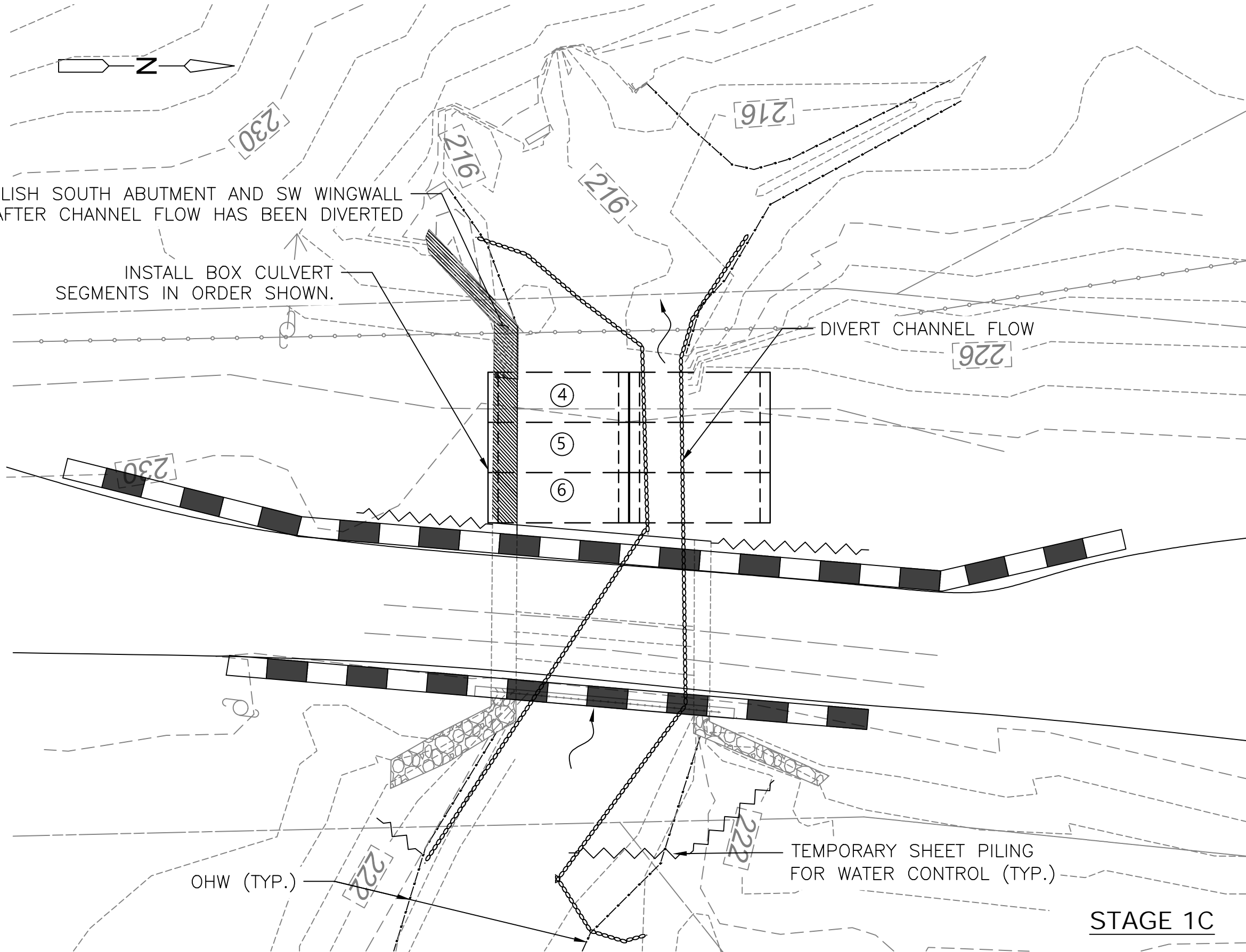
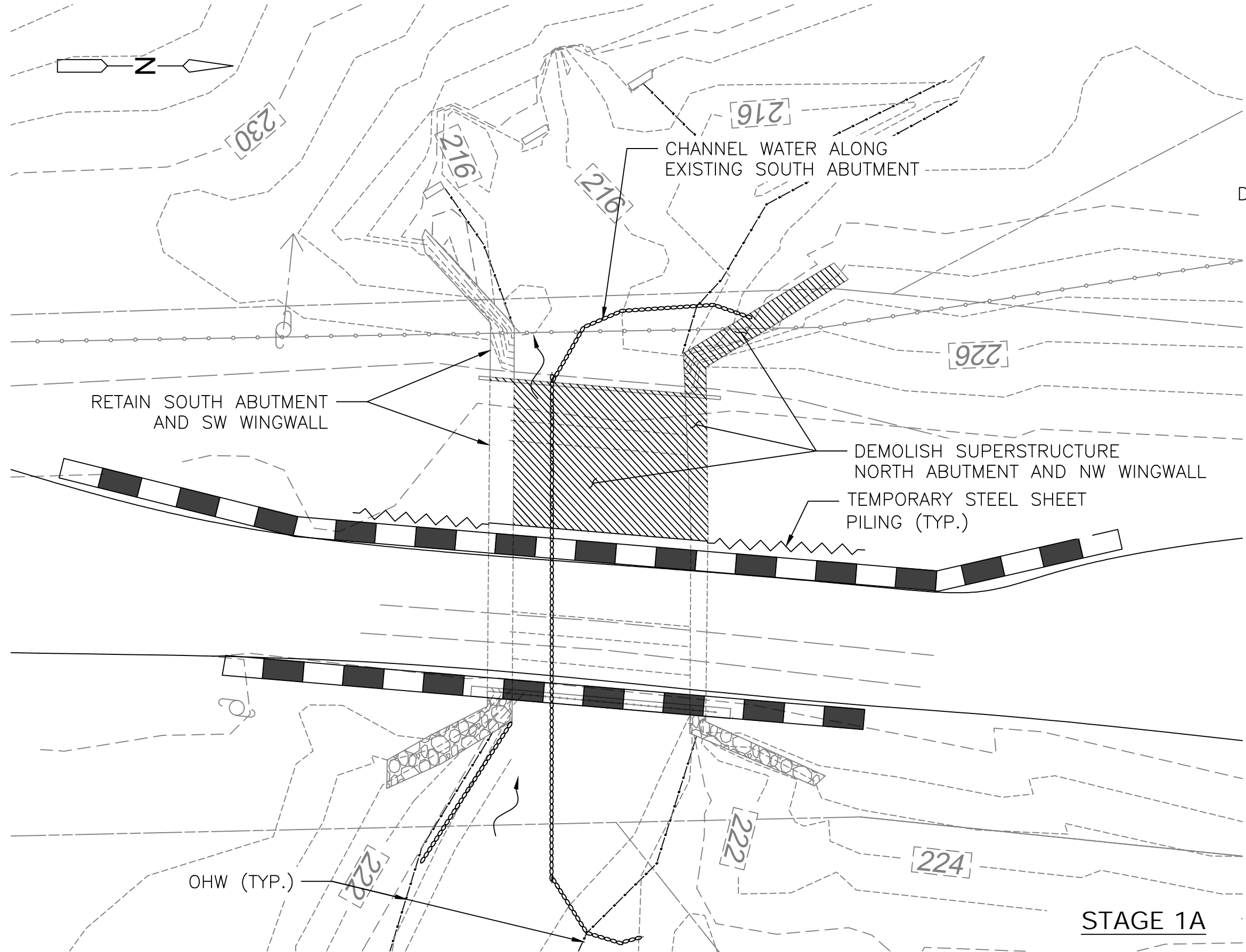
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FILE NAME: STR004\_7.DWG

SHEET NO.

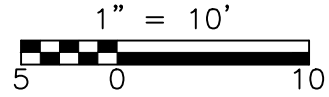
**S-05**



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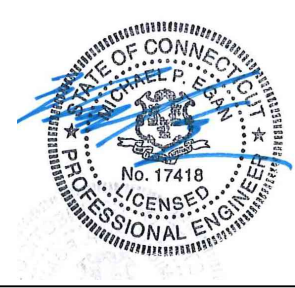
NOTE:  
FOR WATER HANDLING PLAN NOTES SEE  
DRAWING S-07.  
FOR ALL STAGES THE DEPICTED SCALE IS AS  
FOLLOWS:



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. FLUETSTRA  
DRAWN BY: J. FLUETSTRA  
SHEET CHK'D BY: M. EGAN  
CROSS CHK'D BY: A. HEALEY  
APPROVED BY: M. EGAN  
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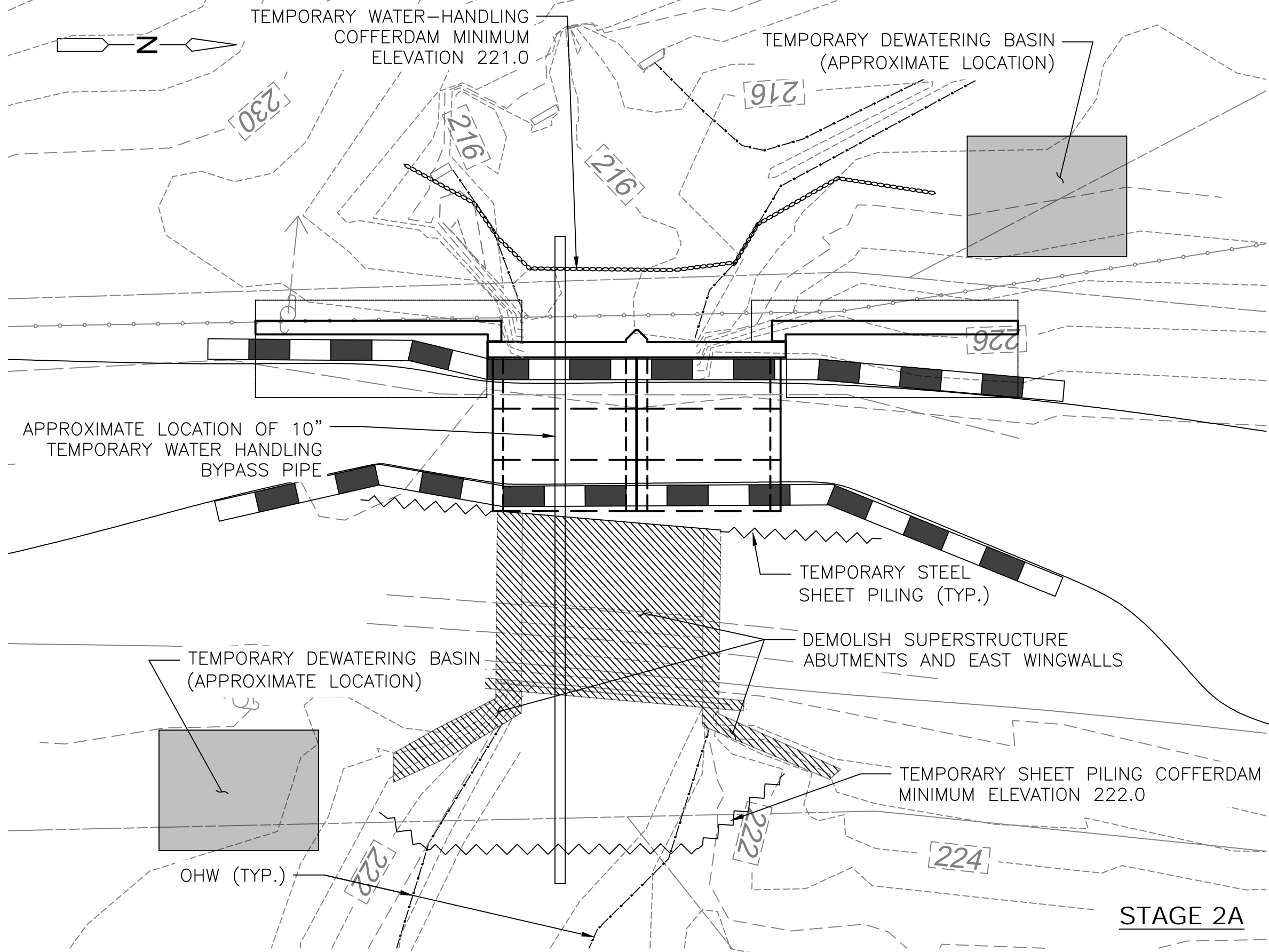
TOWN OF PUTNAM, CONNECTICUT  
DANCO DRIVE BRIDGE REPLACEMENT

WATER HANDLING PLAN  
1 OF 2

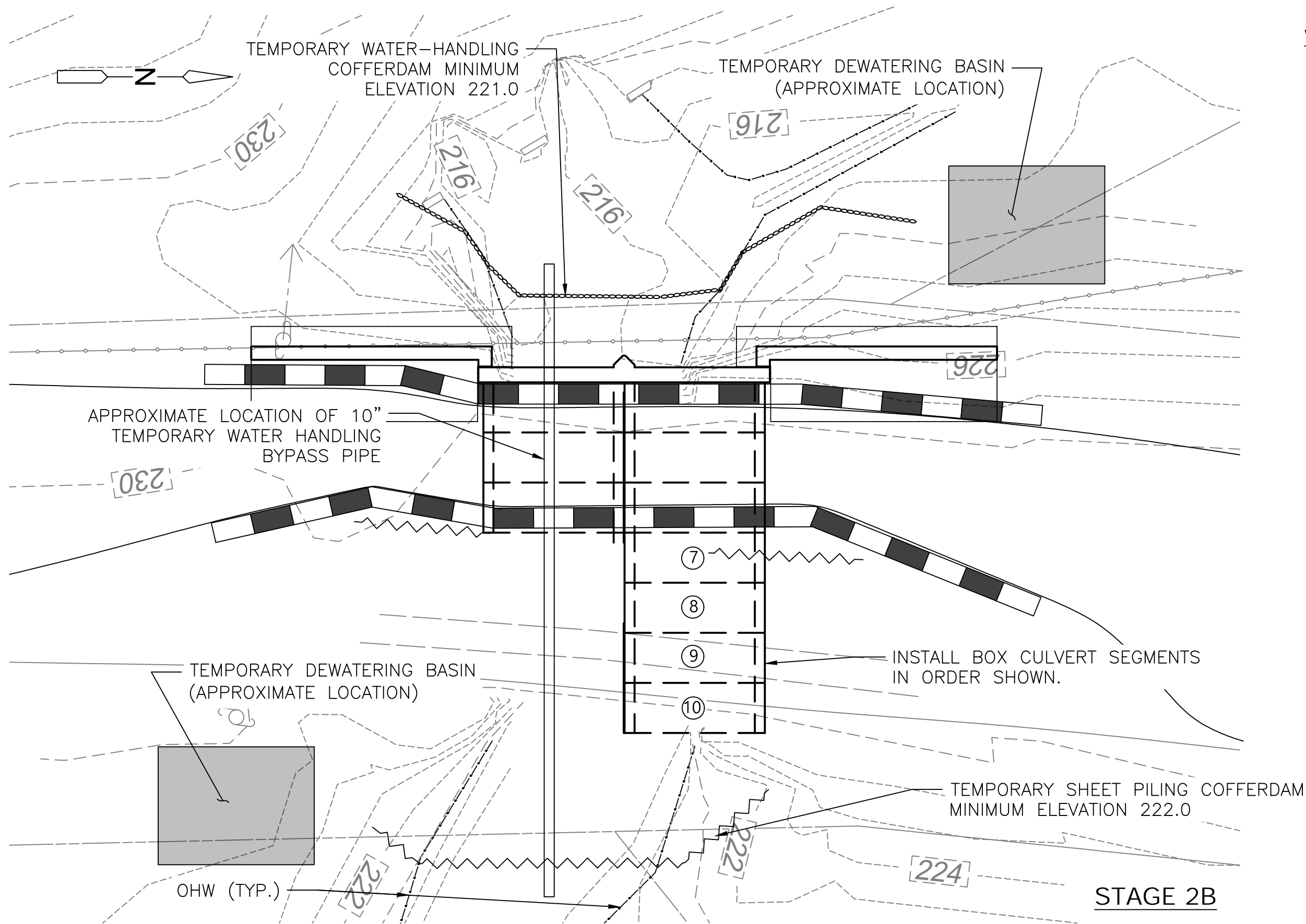
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FILE NAME: STR004\_7.DWG  
SHEET NO.  
S-06



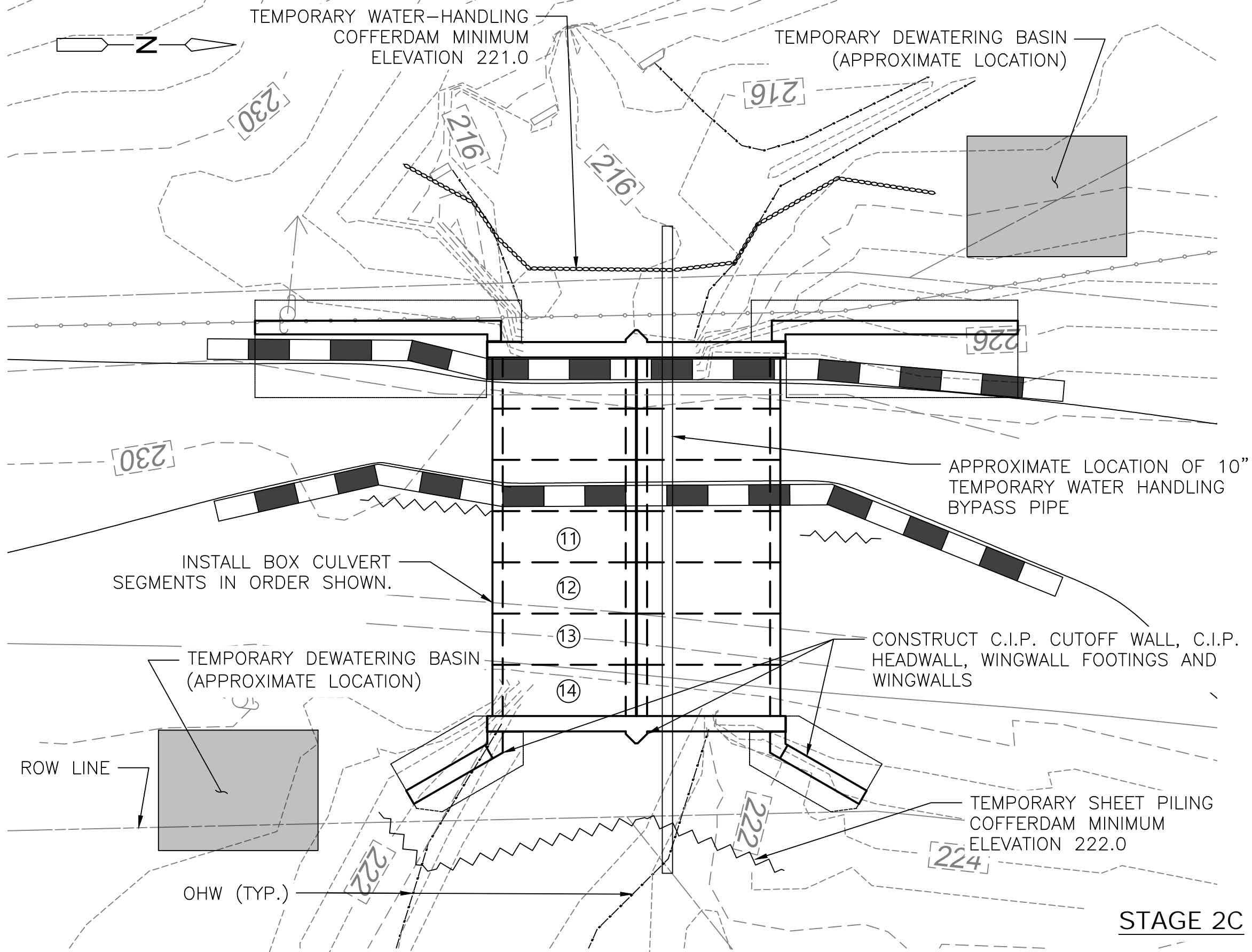
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STAGE 2A



STAGE 2B



STAGE 2C

WATER HANDLING NOTES:

1. THE CONTRACTOR SHALL MAINTAIN WATER THROUGH THE TEMPORARY WATER HANDLING SYSTEM AS REQUIRED DURING CONSTRUCTION OF THE NEW BOX CULVERT.
2. EQUIPMENT SHALL NOT BE PERMITTED IN THE STREAM WHEN TEMPORARY WATER HANDLING SYSTEM IS NOT IN PLACE WITHOUT APPROVAL FROM THE ENGINEER.
3. A DEWATERING BASIN SHALL BE ESTABLISHED OUTSIDE THE WETLAND LIMITS.
4. TEMPORARY WATER HANDLING COFFERDAM SHALL CONSIST OF AN APPROVED SYSTEM THAT THE CONTRACTOR ELECTS TO USE WHICH SAFELY CONVEYS WATER FLOWS THROUGH THE CONSTRUCTION AREA, SHALL BE ABLE TO SUPPORT CONSTRUCTION ACTIVITY AND SHALL CONFORM TO PERMITS.
5. WATER HANDLING MEASURES SHALL NOT EXCEED IMPACT AREAS SHOWN ON THE WETLAND AND FLOODPLAIN IMPACT SHEETS OF THE PERMIT PLANS.
6. ANY STORM DRAINAGE DISCHARGING INTO A CONFINED WORK AREA FROM EXISTING DRAINAGE SHALL BE DIVERTED OR PUMPED OUTSIDE THE CONFINED AREAS. PUMPS/PIPES SHALL BE SIZED BY THE CONTRACTOR TO HANDLE THE EXPECTED FLOWS AND BE DISCHARGED TO A STABLE LOCATION. THE CONTRACTOR SHALL SUBMIT THE MEANS AND METHODS OF HANDLING STORM DRAINAGE TO THE ENGINEER FOR APPROVAL AND IS INCLUDED AS PART OF WATER HANDLING.
7. IF A SHORT DURATION PUMP SYSTEM IS PROPOSED DURING LOW FLOW CONDITIONS, THE SYSTEM SHALL BE DESIGNED BY THE CONTRACTOR TO HAVE A MINIMUM CAPACITY AS SHOWN IN THE TEMPORARY HYDRAULIC TABLE. PUMP SYSTEM PLAN SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
8. TIMBER MATTING IS REQUIRED WHEN USING MACHINERY WITHIN THE WATERCOURSE, LIMITS MUST BE WITHIN THE PERMITTED IMPACT AREAS.

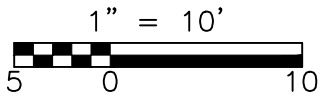
ANY WATER HANDLING SCHEME DEPICTED WITHIN THE DEPARTMENTS 'HANDLING WATER TYPICAL SCHEMATICS' MAY BE USED UNLESS SPECIFICALLY PROHIBITED. A MEANS AND METHOD FOR WATER HANDLING SYSTEM SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL.

THE INSTALLATION AND REMOVAL OF THE TEMPORARY WATER HANDLING COFFERDAM CAN OCCUR AT ANY TIME OF THE YEAR.

TEMPORARY HYDRAULIC DATA	
AVERAGE DAILY FLOW	161 CFS
TEMPORARY DESIGN FREQUENCY	2 YR
TEMPORARY DESIGN DISCHARGE	161 CFS
TEMPORARY WATER SURFACE ELEVATION UPSTREAM	218.77 FT
TEMPORARY WATER SURFACE ELEVATION DOWNSTREAM	218.72 FT

BASED UPON FIELD CONDITIONS, WORK DURATION, AND EXPECTED WEATHER CONDITIONS, THE ENGINEER MAY APPROVE A CONSTRUCTION WATER HANDLING PLAN WITH LOWER PUMPING FLOWS, PROVIDED THAT THIS INCLUDES A CONTINGENCY PLAN, WHICH MINIMIZES NEGATIVE IMPACTS AND SAFELY CONVEYS LARGER FLOWS THROUGH THE WORK AREA.

NOTE: FOR ALL STAGES THE DEPICTED SCALE IS AS FOLLOWS:



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. FLIETSTRA  
DRAWN BY: J. FLIETSTRA  
SHEET CHK'D BY: M. EGAN  
CROSS CHK'D BY: A. HEALEY  
APPROVED BY: M. EGAN  
DATE: APRIL 2024

**CDM Smith**  
101 E. River Dr. | Suite 1A  
East Hartford, CT 06108  
Tel: (860) 525-7615



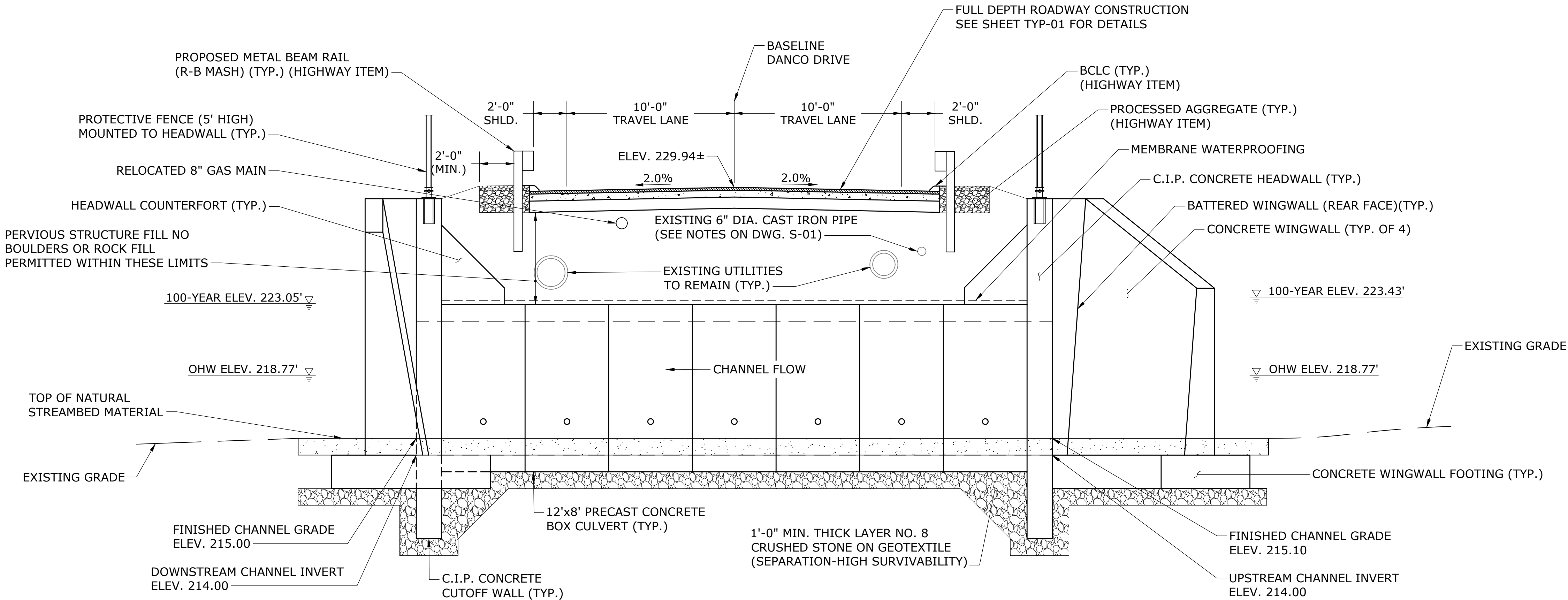
TOWN OF PUTNAM, CONNECTICUT  
DANCO DRIVE BRIDGE REPLACEMENT

WATER HANDLING PLAN  
2 OF 2

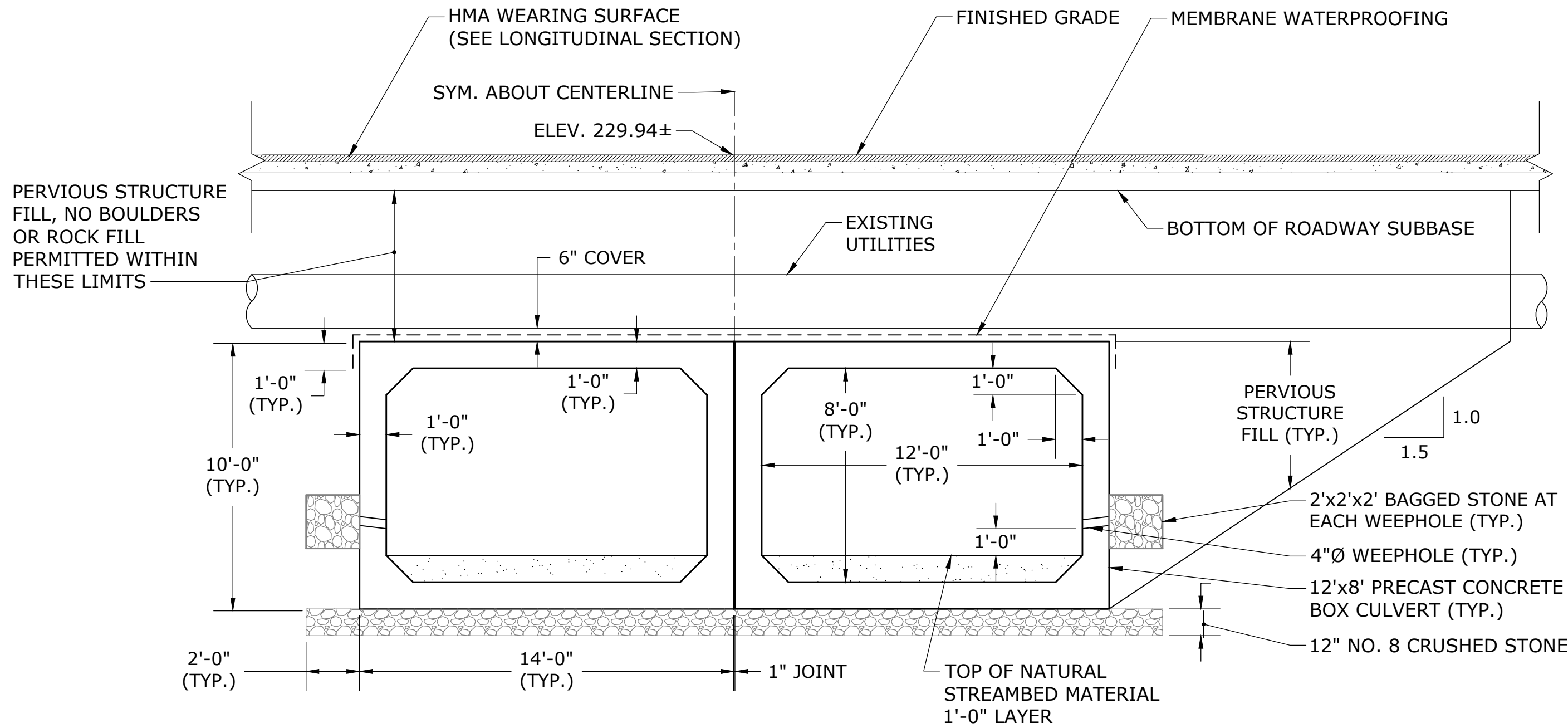
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SHEET NO.  
**S-07**



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LONGITUDINAL SECTION @ STA. 2+00.00  
SCALE: 1/4" = 1'-0"



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

**OPENNESS RATIO (OR):**

OR = OPEN AREA / CULVERT LENGTH  
OR = 83 SF / 38 FT = 2.18 FT (EACH CULVERT)  
2.18 FT > 0.82 FT (RECOMMENDED MINIMUM)

**BANKFULL WIDTH (BFW):**

BFW = 18.0 FT EXISTING UPSTREAM (OHV)  
1.2 BFW = 21.6 FT  
26.08 FT > 21.6 FT PROPOSED BRIDGE DESIGN

**NATURAL STREAMBED MATERIAL NOTES:**

- NATURAL STREAMBED MATERIAL EXCAVATED DURING THE PRECAST CONCRETE BOX CULVERT INSTALLATION SHALL BE STOCKPILED AND THEN REPLACED WITHIN THE PRECAST CONCRETE BOX CULVERT TO THE DEPTH SHOWN ON THE PLANS, AS DIRECTED BY THE ENGINEER AND IN ACCORDANCE WITH THE SPECIAL PROVISION "EXCAVATION AND REUSE OF EXISTING CHANNEL BOTTOM MATERIAL."
- THE STOCKPILED MATERIAL SHALL BE PROTECTED WITH A SEDIMENTATION CONTROL SYSTEM.
- ADDITIONAL STREAMBED MATERIAL, IF REQUIRED, SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISION "SUPPLEMENTAL STREAMBED CHANNEL MATERIAL".

**HYDRAULIC DATA**

DRAINAGE AREA	3.27 SQ. MI.
DESIGN FREQUENCY	100-YEAR
DESIGN DISCHARGE	794 CFS
AVERAGE DAILY FLOW ELEV.	218.77'
UPSTREAM DESIGN WSE	223.43'
DOWNSTREAM DESIGN WSE	223.05'

REV. NO.	DATE	DRWN	CHKD	REMARKS

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DRAWN BY: **J. FLUETSTRA**  
SHEET CHK'D BY: **M. EGAN**  
CROSS CHK'D BY: **A. HEALEY**  
APPROVED BY: **M. EGAN**  
DATE: **APRIL 2024**

**CDM Smith**  
101 E. River Dr. | Suite 1A  
East Hartford, CT 06108  
Tel: (860) 523-7615



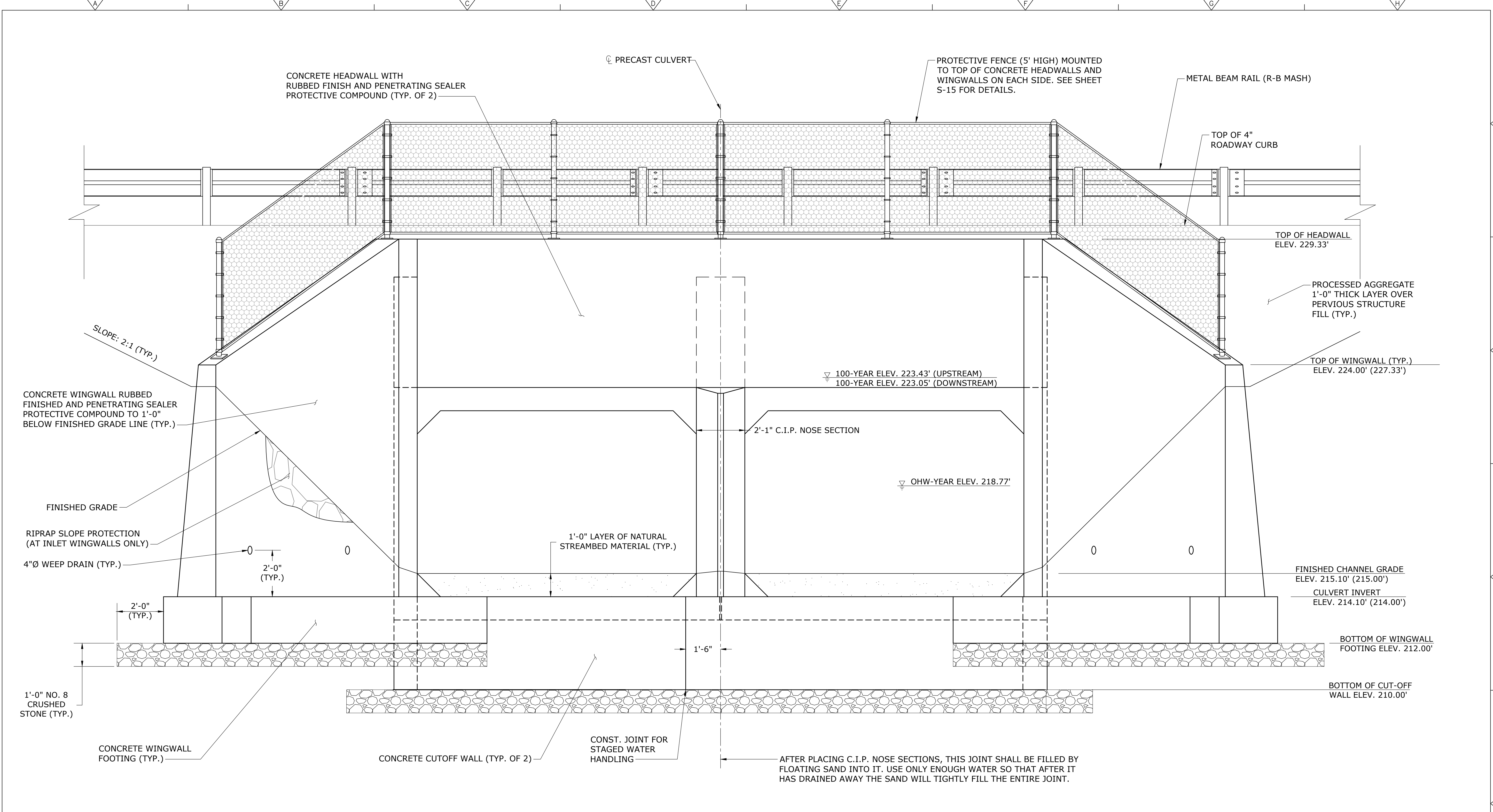
TOWN OF PUTNAM, CONNECTICUT  
**DANCO DRIVE BRIDGE REPLACEMENT**

**CULVERT SECTIONS**

PROJECT NO. 262470-263189  
FILE NAME: **STR001.DWG**  
SHEET NO.  
**S-08**



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EAST ELEVATION

SCALE: 1/2" = 1'-0"  
(WEST ELEVATION SIMILAR WITH 24'-0" LONG U-WINGWALLS  
IN PARENTHESIS WHEN DIFFERENT)

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	J. FLIETSTRA
DRAWN BY:	J. FLIETSTRA
SHEET CHK'D BY:	M. EGAN
CROSS CHK'D BY:	A. HEALEY
APPROVED BY:	M. EGAN
DATE:	APRIL 2024



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East Hartford, CT 06108  
Tel: (860) 523-7615



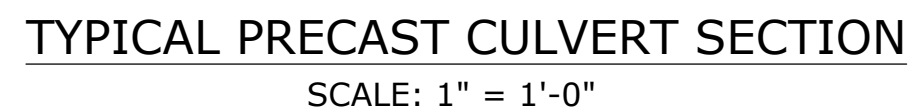
TOWN OF PUTNAM, CONNECTICUT  
DANCO DRIVE BRIDGE REPLACEMENT

CULVERT ELEVATION

PROJECT NO.	262470-263189
FILE NAME:	STR001.DWG
SHEET NO.	S-09



1. PRECAST CONCRETE BOX CULVERTS SHALL BE MANUFACTURED AND CONSTRUCTED IN ACCORDANCE WITH THE SPECIAL PROVISION FOR "12' x 8' PRECAST CONCRETE BOX CULVERT" AND TO THE DIMENSIONS SHOWN ON THESE PLANS.
2. ALL INSERT OR HOLES INTO THE CULVERT SECTIONS FOR SOLE PURPOSE OF HANDLING AND SETTING THE UNITS SHALL BE GROUTED OVER TO A SMOOTH FINISH UPON COMPLETION OF THE WORK.
3. NON-SHRINK GROUT SHALL BE USED TO GROUT THE REINFORCEMENT.
4. THE COST OF FURNISHING AND INSTALLING THE INSERTS SHALL BE INCLUDED IN THE ITEM "12' x 8' PRECAST CONCRETE BOX CULVERT." ALL INSERTS SHALL HAVE A CORROSIVE RESISTANT COATING.
5. ALL REINFORCEMENT IS TO HAVE 2" COVER EXCEPT AT BOTTOM OF LOWER SLAB WHERE COVER SHALL BE 3 INCHES.



SCALE: 1" = 1'-0"

					DESIGNED BY: <u>          J. FLIETSTRA          </u>
					DRAWN BY: <u>          J. FLIETSTRA          </u>
					SHEET CHK'D BY: <u>          M. EGAN          </u>
					CROSS CHK'D BY: <u>          A. HEALEY          </u>
REV. NO.	DATE	DRWN	CHKD	REMARKS	APPROVED BY: <u>          M. EGAN          </u>
					DATE: <u>          APRIL 2024          </u>

DESIGNED BY: J. FLIETSTRA  
DRAWN BY: J. FLIETSTRA  
SHEET CHK'D BY: M. EGAN  
CROSS CHK'D BY: A. HEALEY  
APPROVED BY: M. EGAN  
DATE: APRIL 2024



TOWN OF PUTNAM, CONNECTICUT

DANCO DRIVE BRIDGE REPLACEMENT

CULVERT DETAILS  
1 OF 2

PROJECT NO.	262470-263189
FILE NAME:	STR001.DWG
SHEET NO.	S-10

Images: ☐

REFERENCES: [BR15008, 21176 Exist cond plan 2021-09-14, TSBP001, CIMS\_2234]

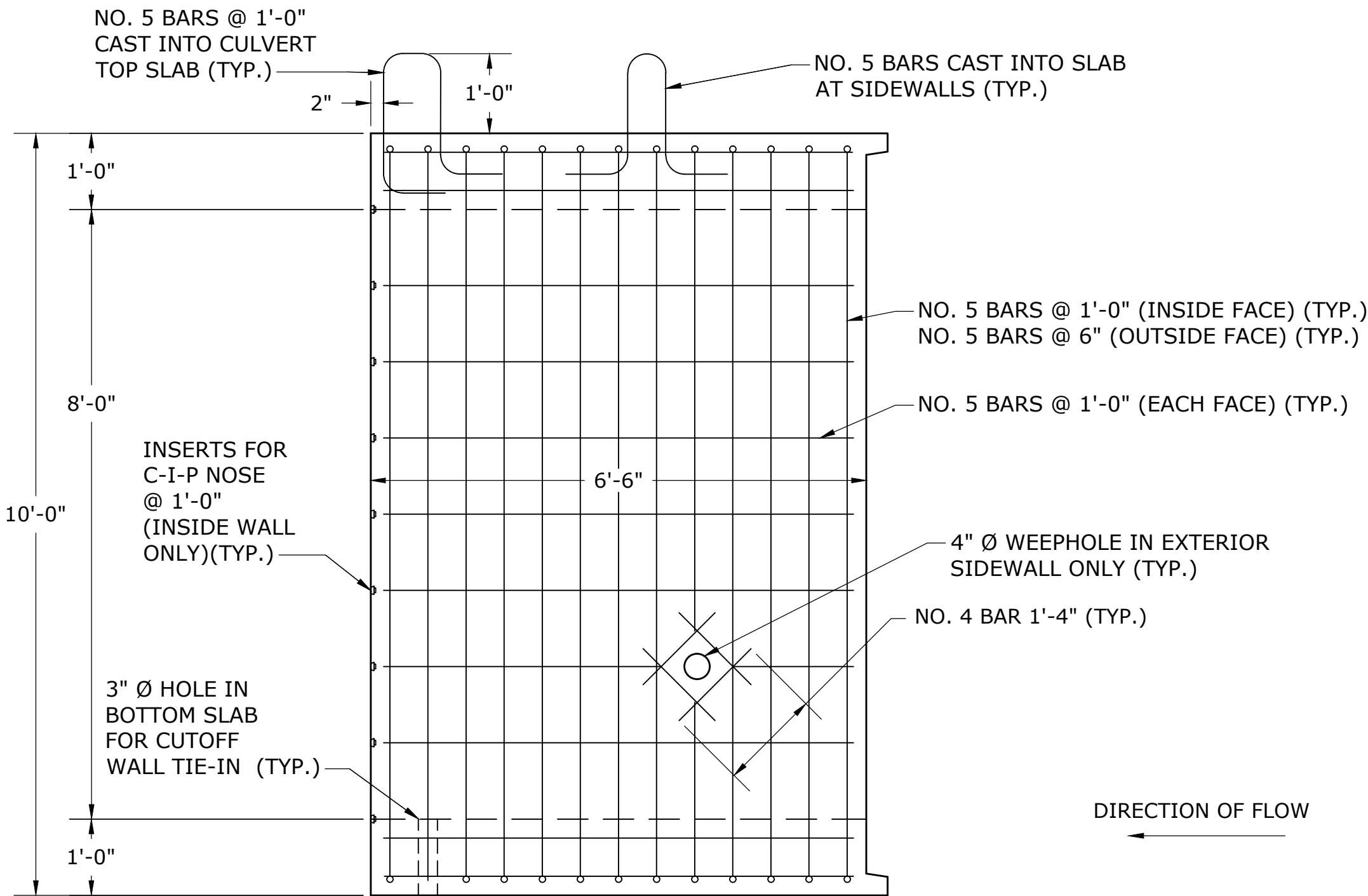
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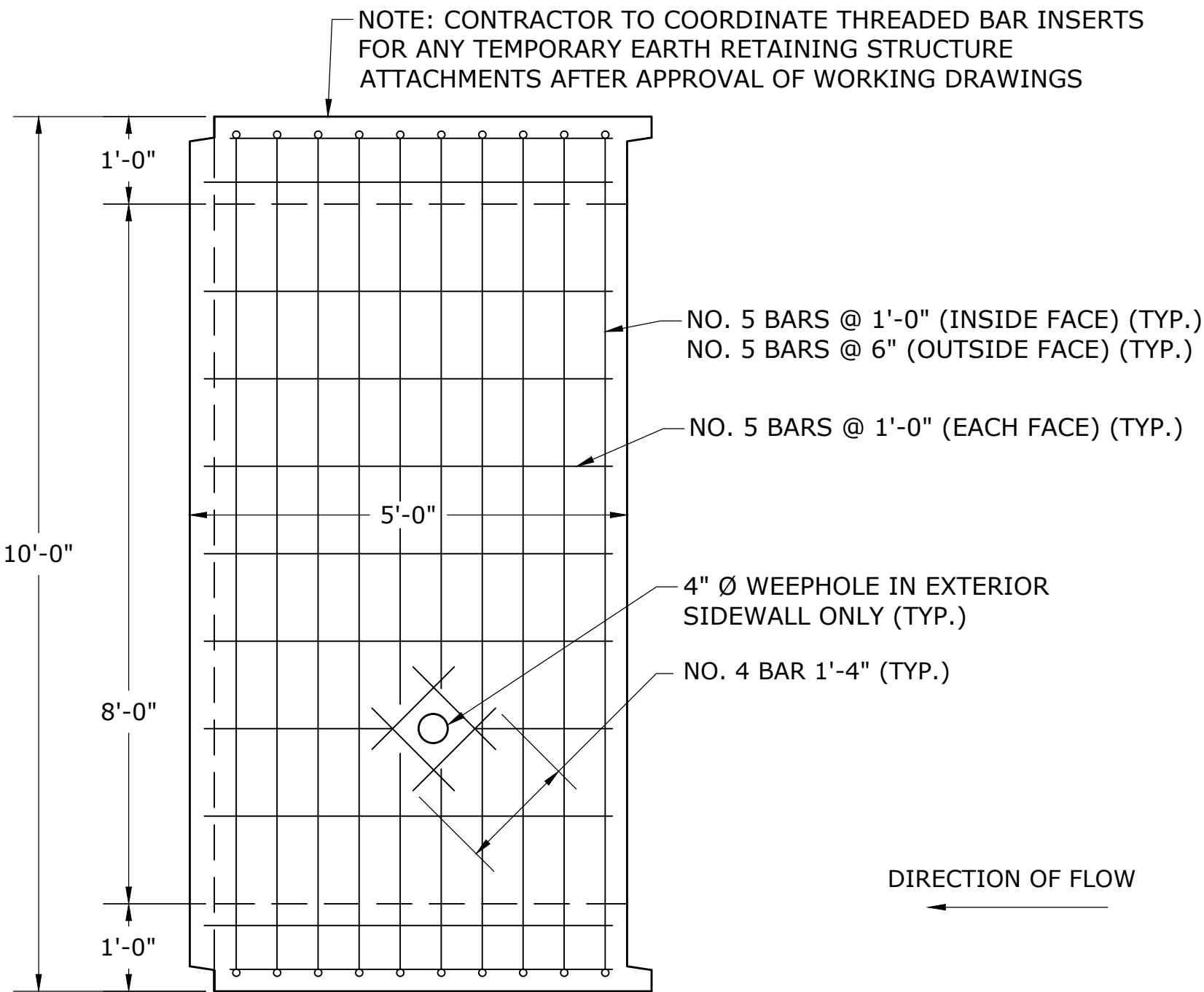
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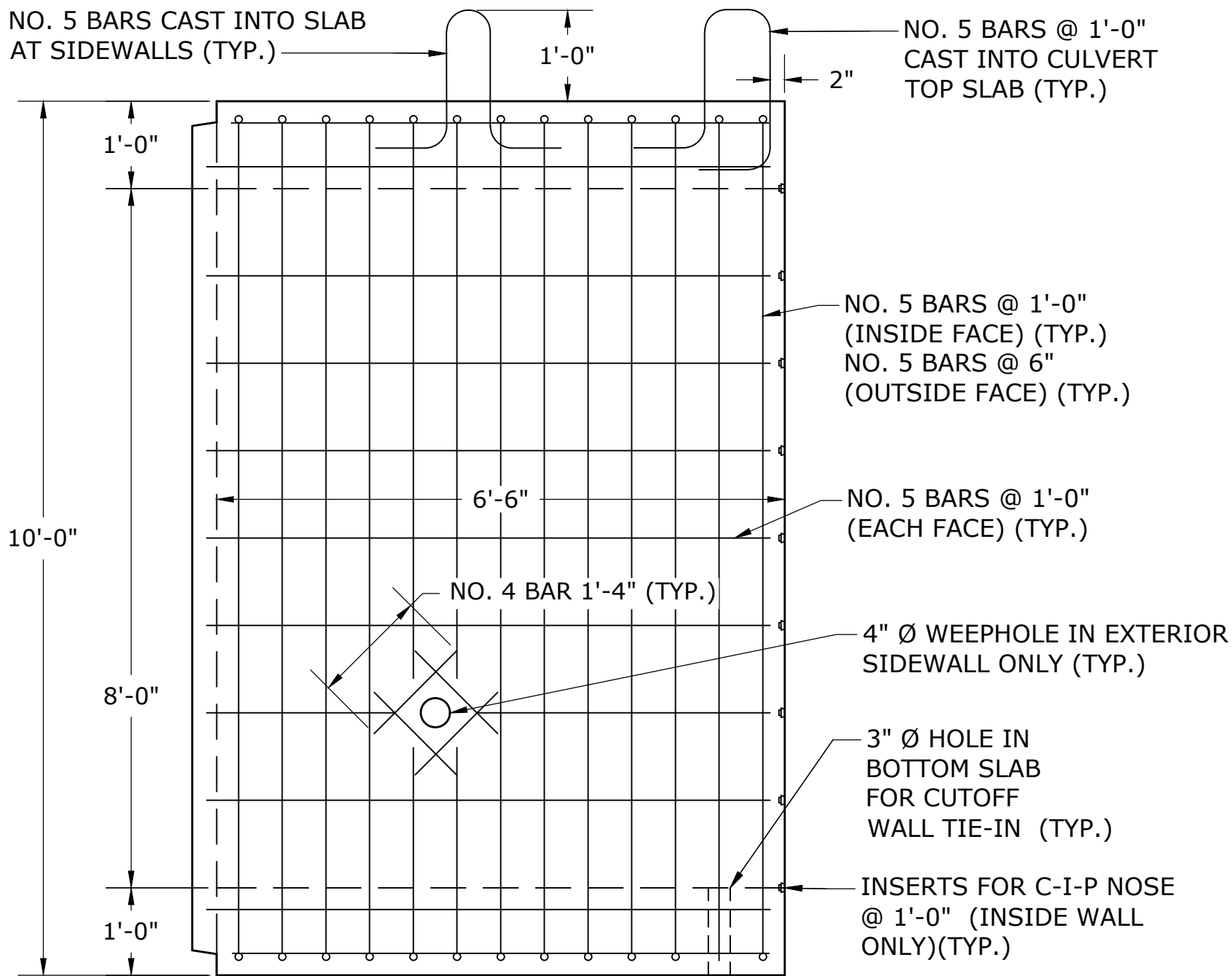
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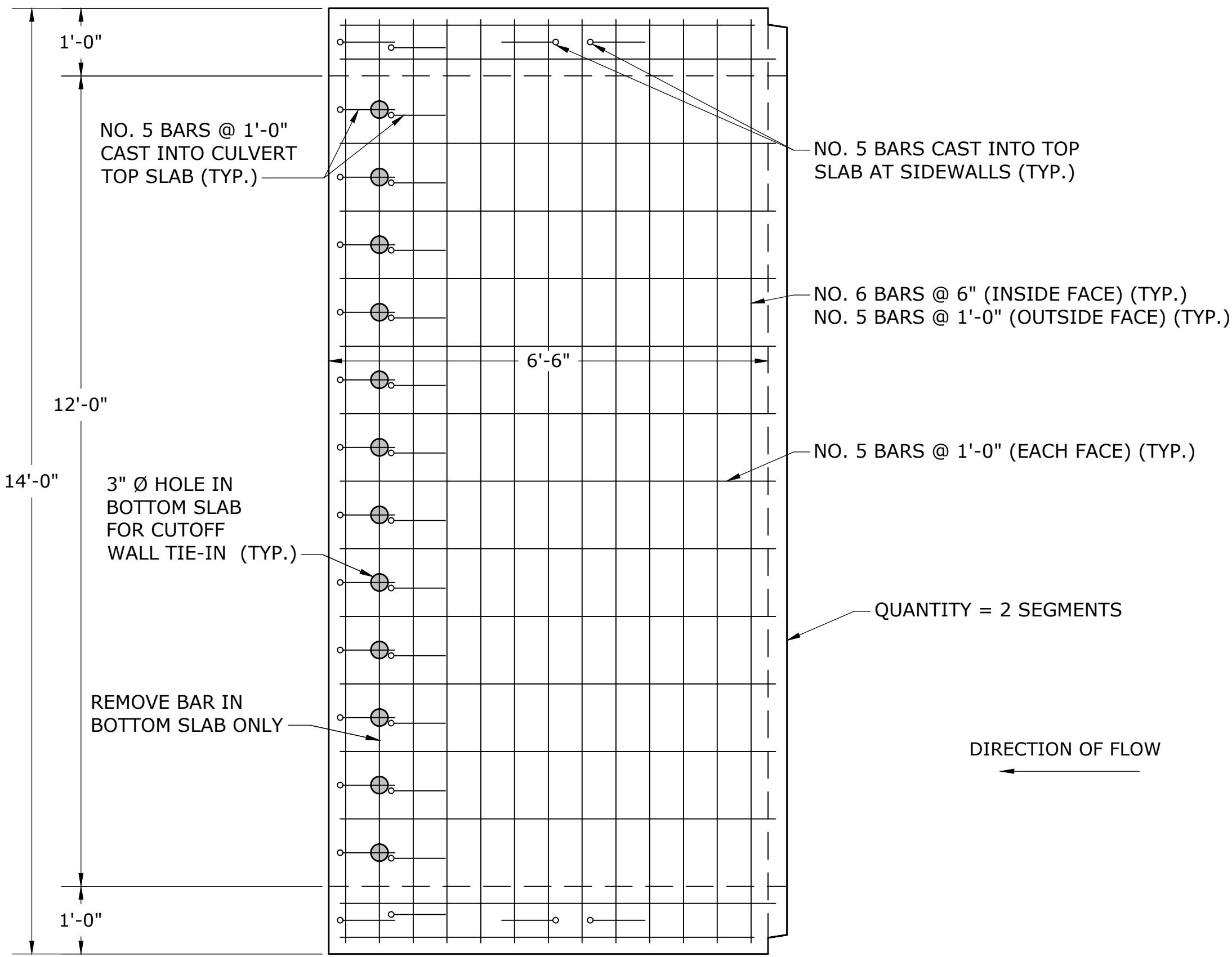
WEST END CULVERT SIDEWALL  
SCALE: 5/8" = 1'-0"



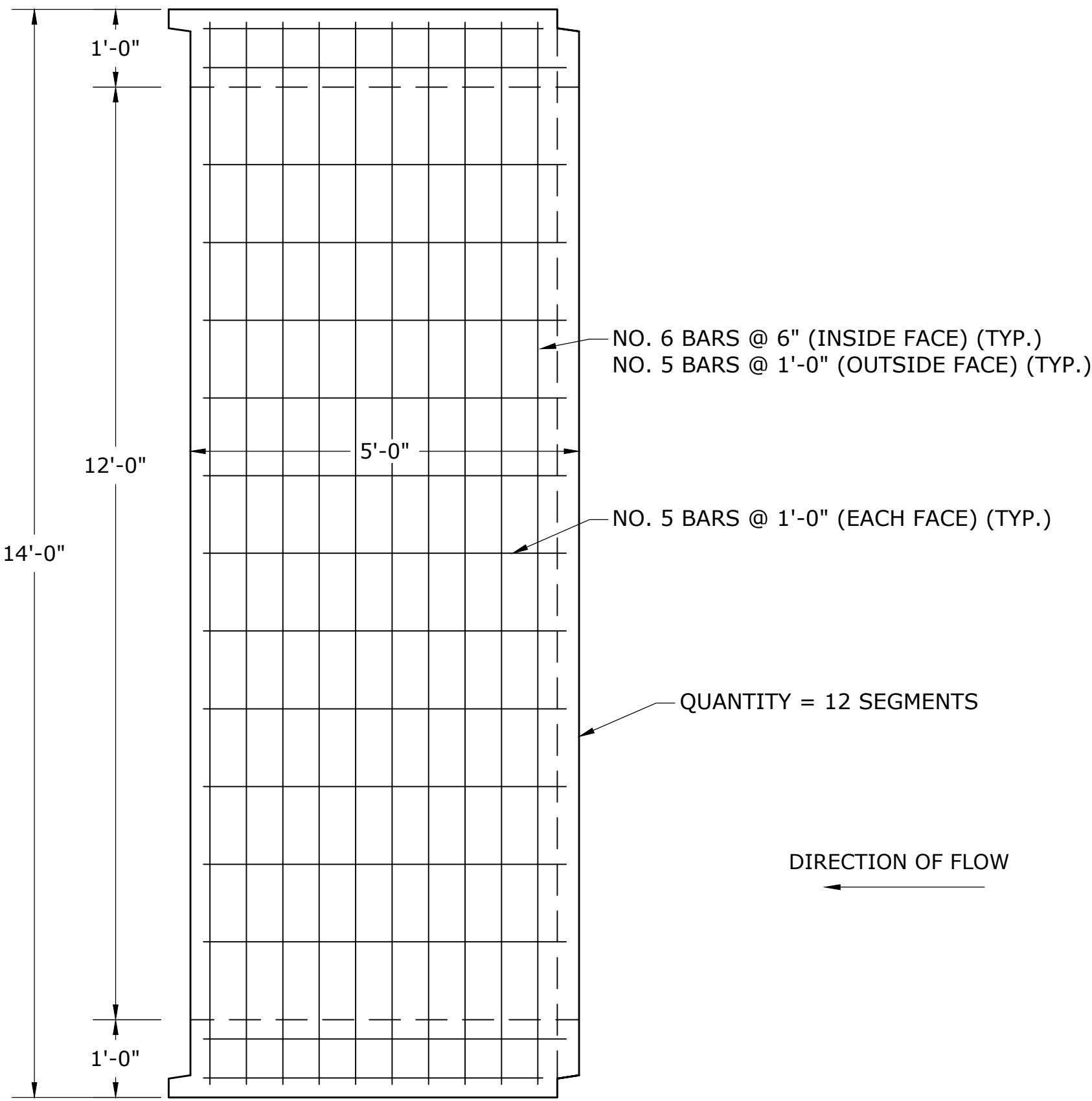
TYPICAL CULVERT SIDEWALL  
SCALE: 5/8" = 1'-0"



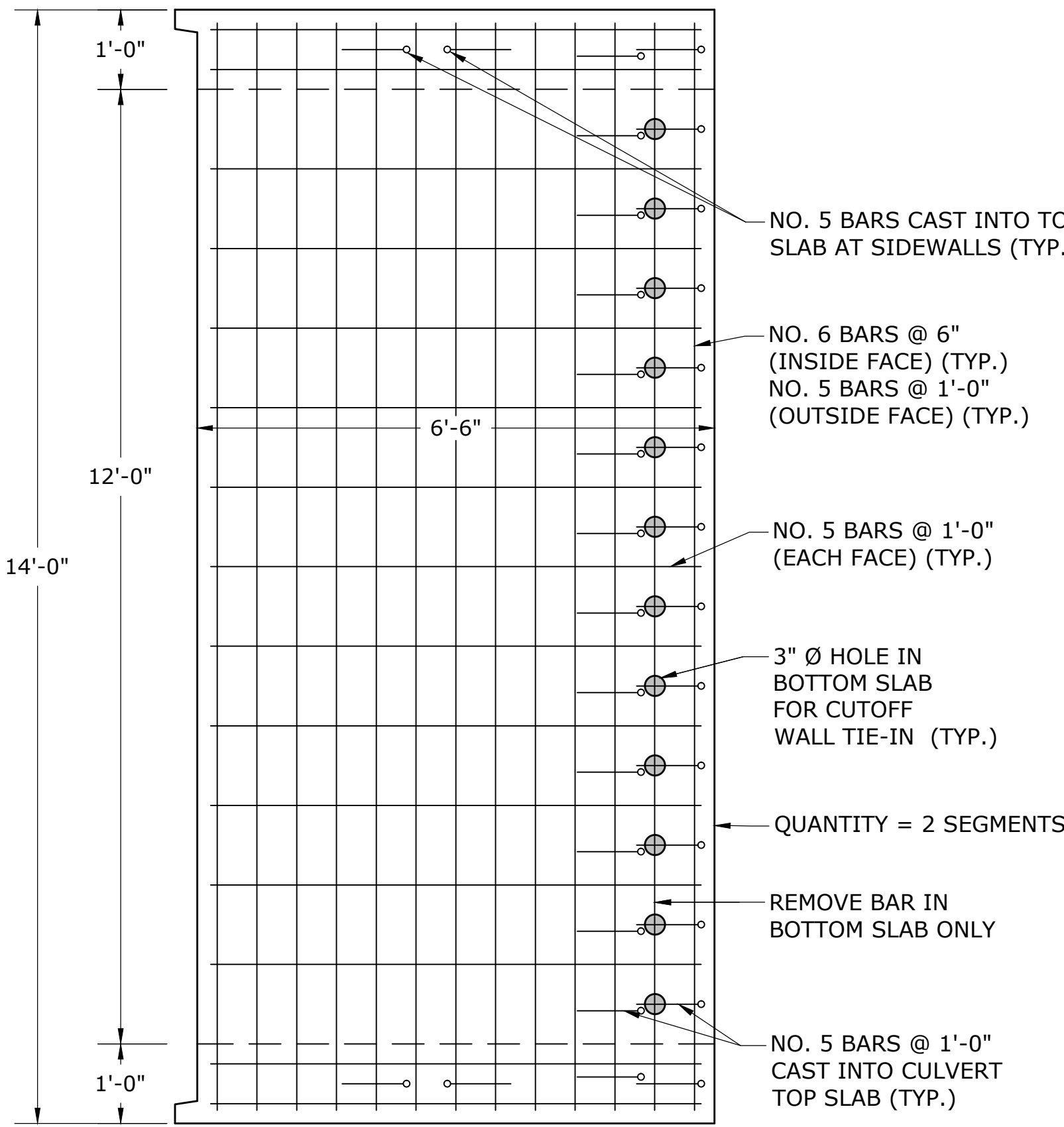
EAST END CULVERT SIDEWALL  
SCALE: 5/8" = 1'-0"



WEST END TOP/BOTTOM CULVERT SLAB  
SCALE: 5/8" = 1'-0"



TYPICAL TOP/BOTTOM CULVERT SLAB  
SCALE: 5/8" = 1'-0"



EAST END TOP/BOTTOM CULVERT SLAB  
SCALE: 5/8" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS

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TOWN OF PUTNAM, CONNECTICUT  
DANCO DRIVE BRIDGE REPLACEMENT

CULVERT DETAILS  
2 OF 2

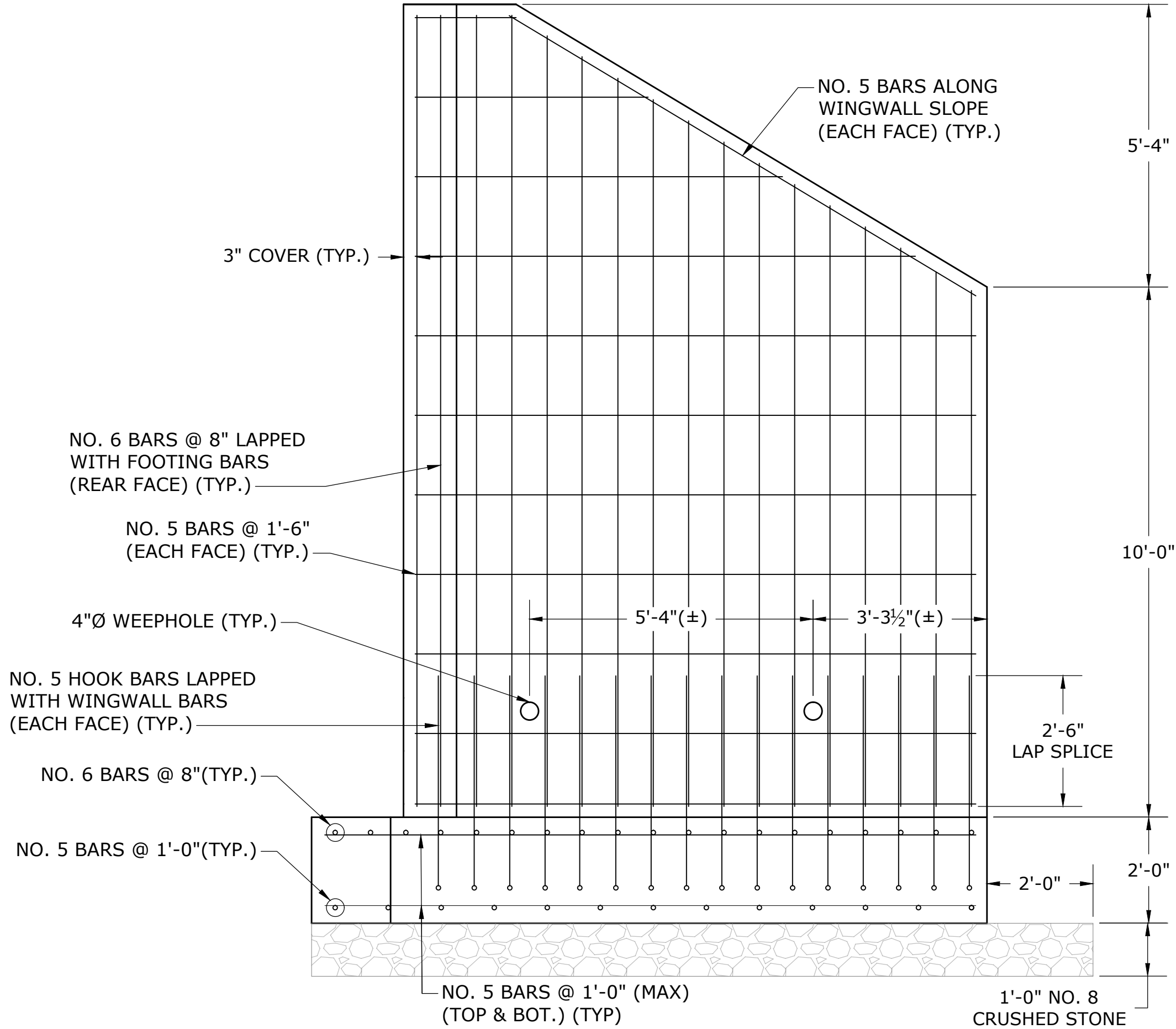
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FILE NAME: STR001.DWG  
SHEET NO.  
S-11





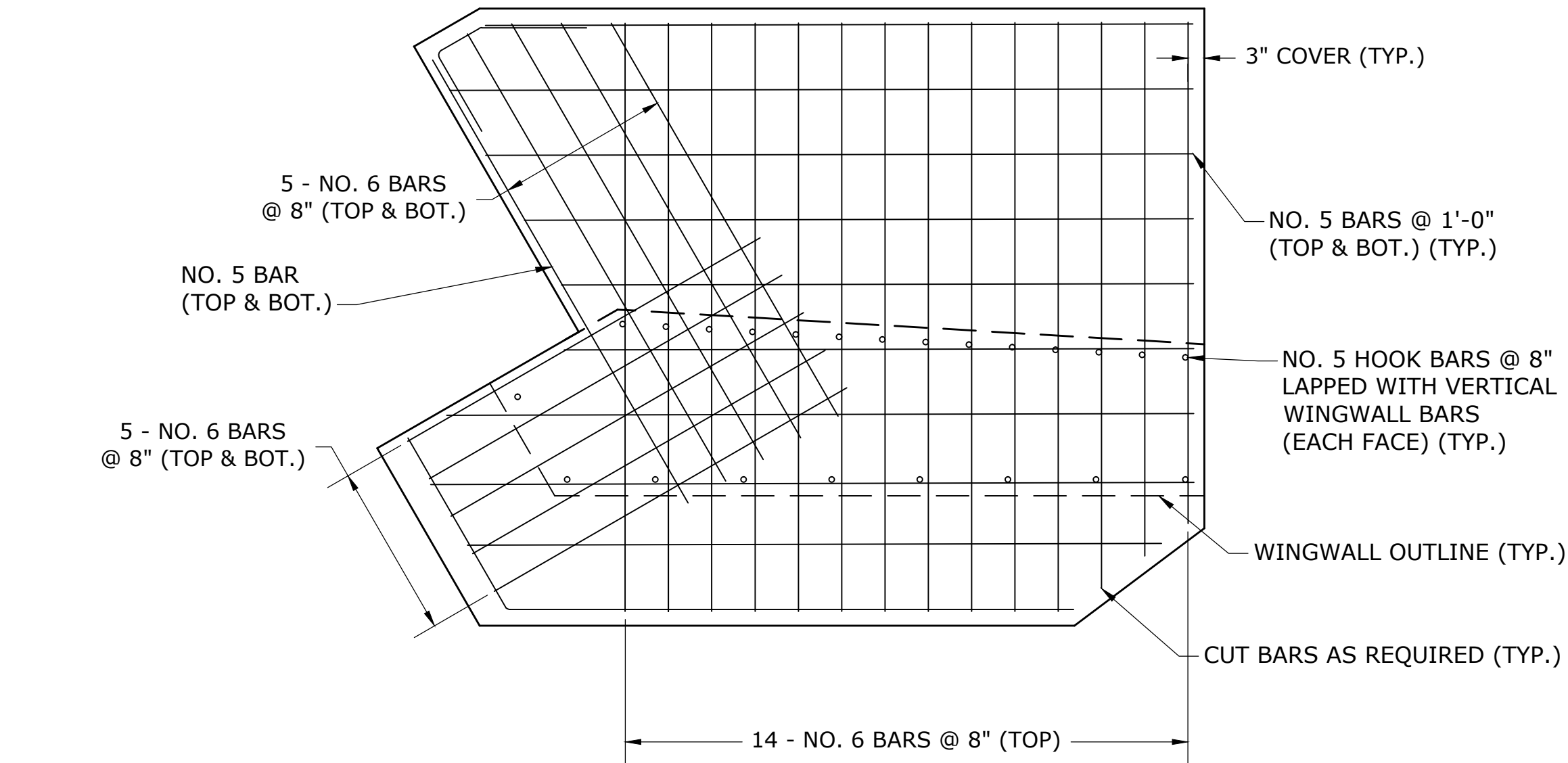


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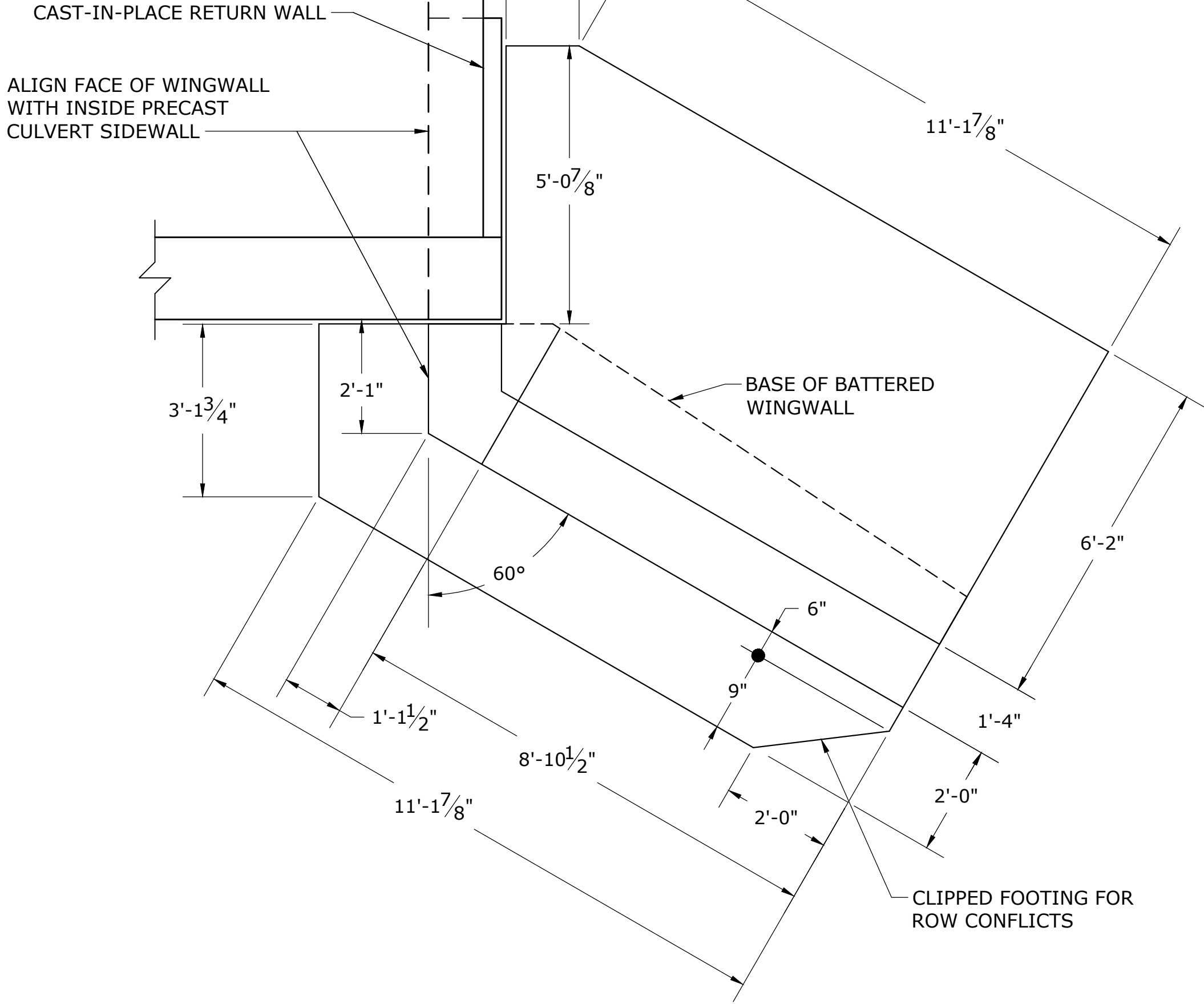
INLET WINGWALL ELEVATION

SCALE: 1/2" = 1'-0"



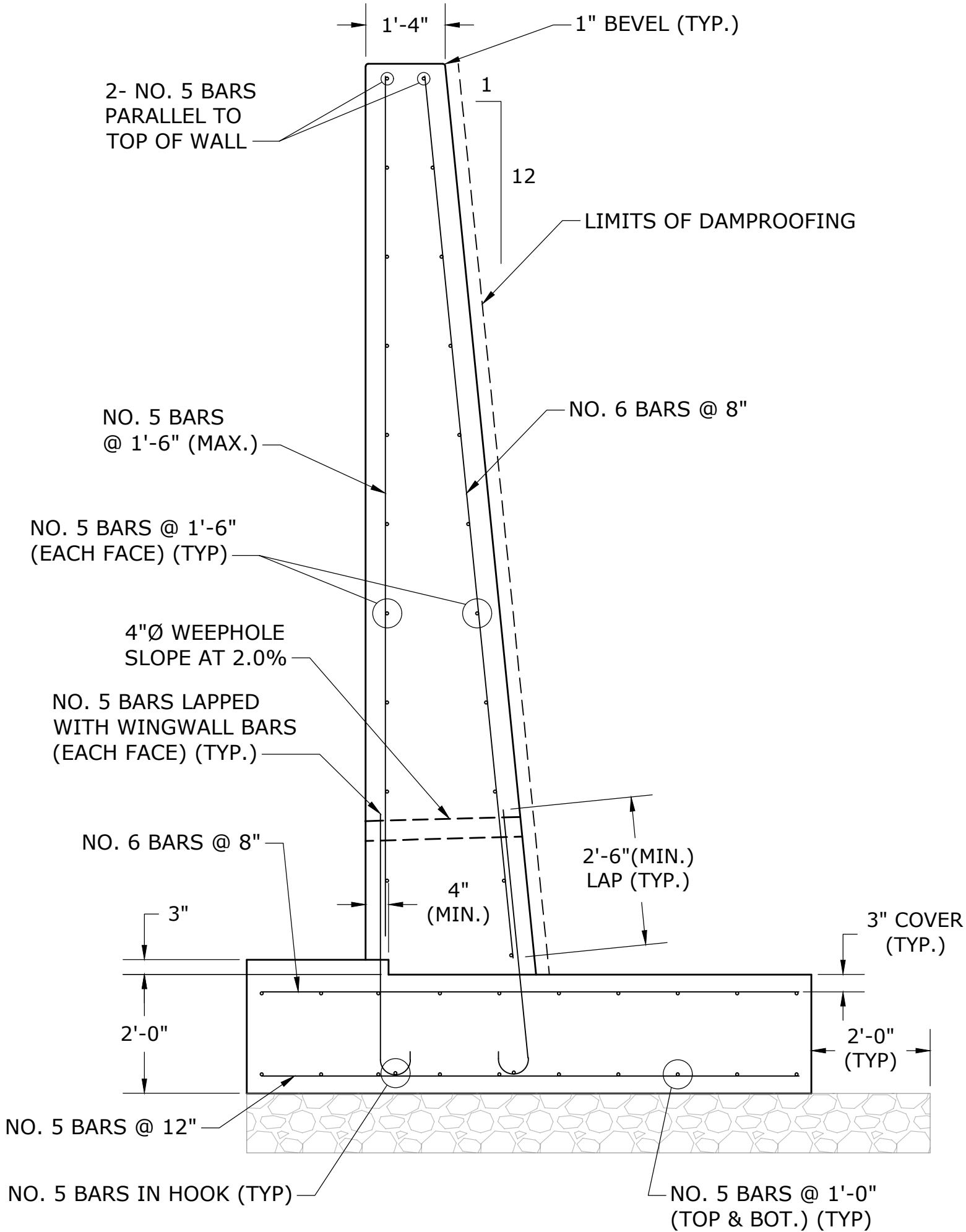
INLET WINGWALL FOOTING PLAN

SCALE: 1/2" = 1'-0"



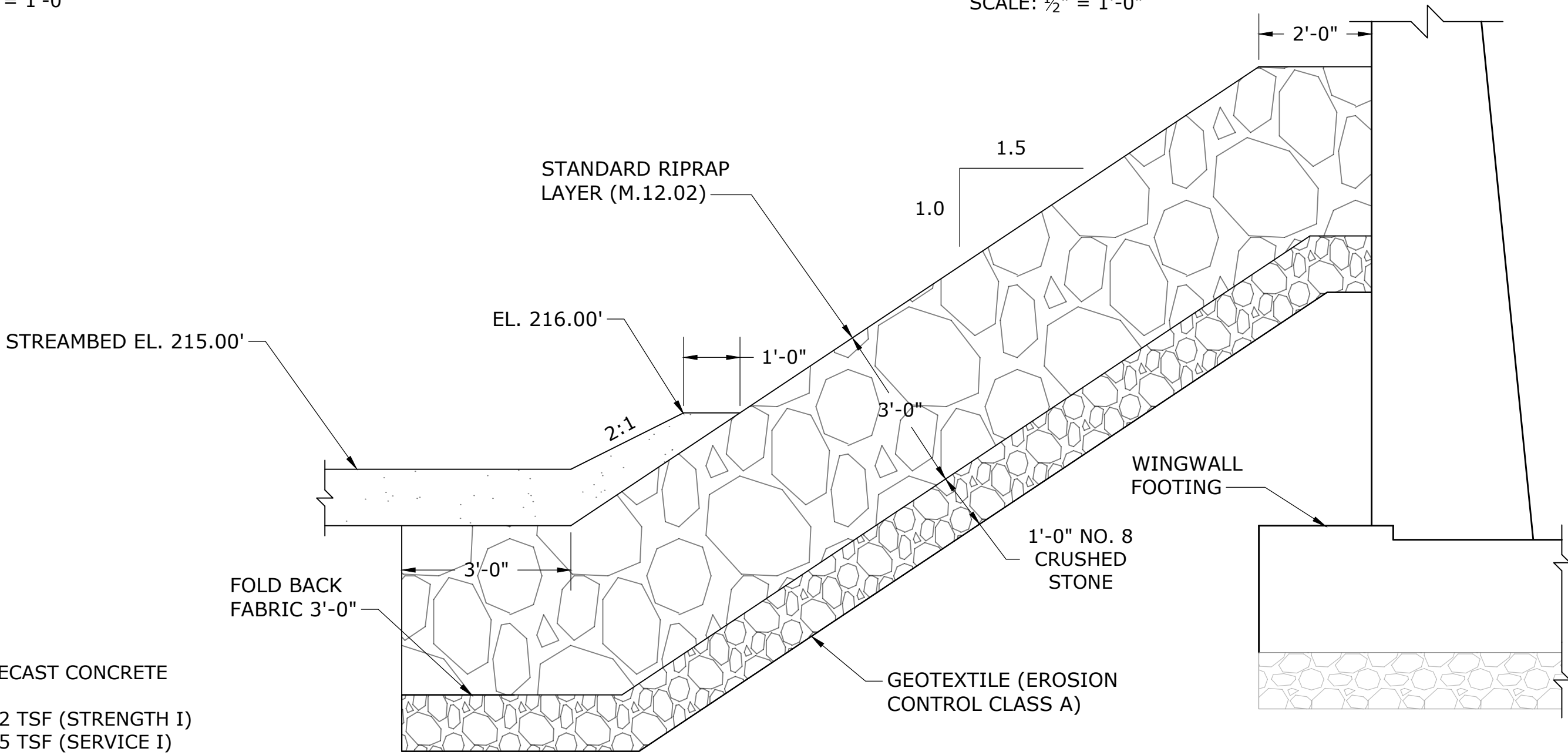
PRECAST BOX CULVERT INLET WINGWALL LAYOUT

SCALE: 1/2" = 1'-0"



PRECAST BOX CULVERT TYPICAL WINGWALL SECTION

SCALE: 1/2" = 1'-0"



RIPRAP SLOPE PROTECTION DETAIL

SCALE: 1/2" = 1'-0"

- NOTES:
1. THE CONTRACTOR HAS THE OPTION OF USING PRECAST CONCRETE WINGWALLS AND WINGWALL FOOTINGS.
  2. MAXIMUM DESIGN FOUNDATION PRESSURE = 7.2 TSF (STRENGTH I)  
= 2.5 TSF (SERVICE I)
  3. LIMITS OF DAMPROOFING SHALL BE PAID TO THE TOP ELEVATION OF THE WINGWALL.

REV. NO.	DATE	DRWN	CHKD	REMARKS

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DRAWN BY: **J. FLUETSTRA**  
SHEET CHK'D BY: **M. EGAN**  
CROSS CHK'D BY: **A. HEALEY**  
APPROVED BY: **M. EGAN**  
DATE: **APRIL 2024**

**CDM Smith**  
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East Hartford, CT 06108  
Tel: (860) 523-7615



TOWN OF PUTNAM, CONNECTICUT  
**DANCO DRIVE BRIDGE REPLACEMENT**

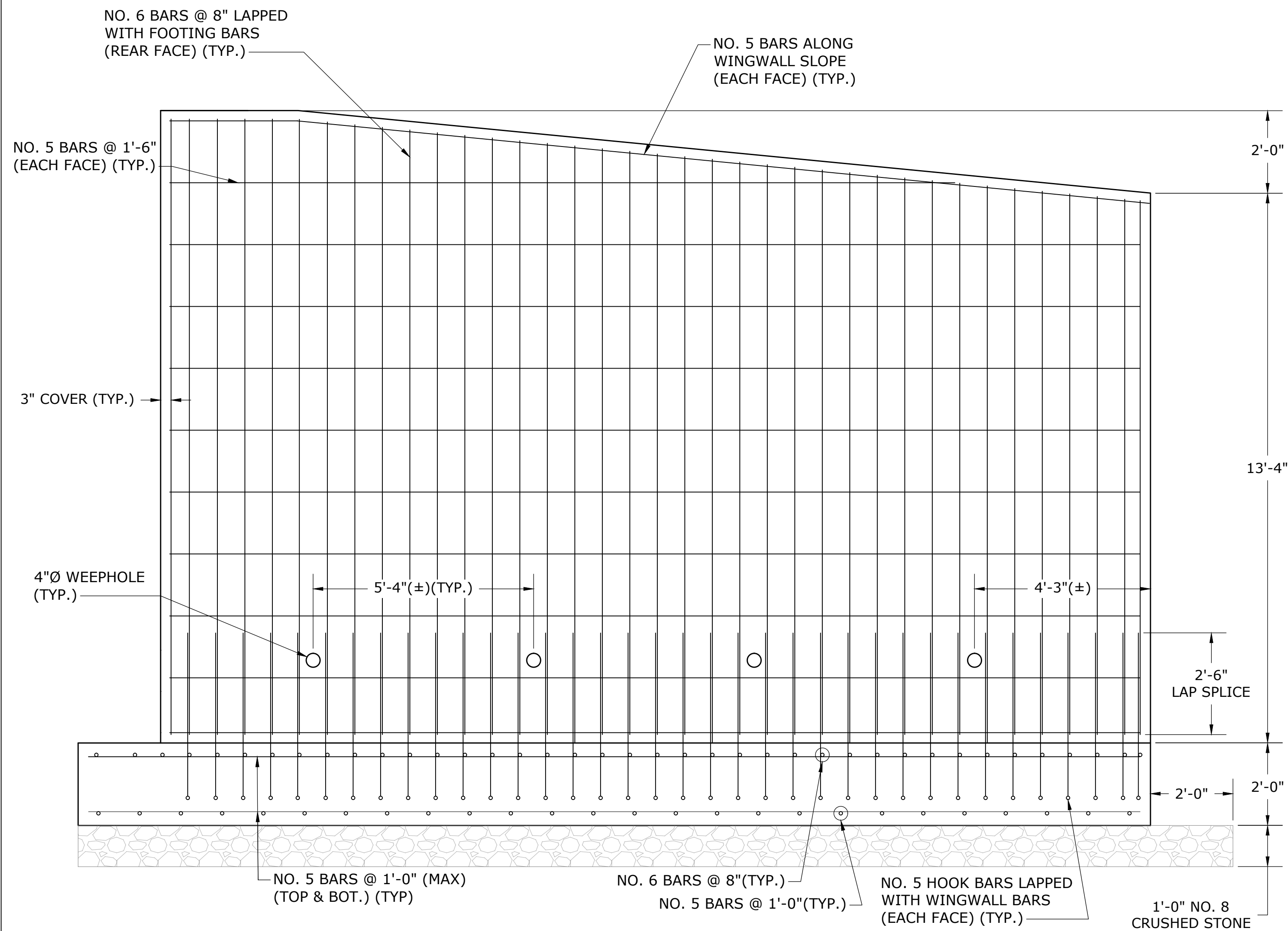
**INLET WINGWALL DETAILS**

PROJECT NO. 262470-263189  
FILE NAME: **STR001.DWG**  
SHEET NO.  
**S-13**



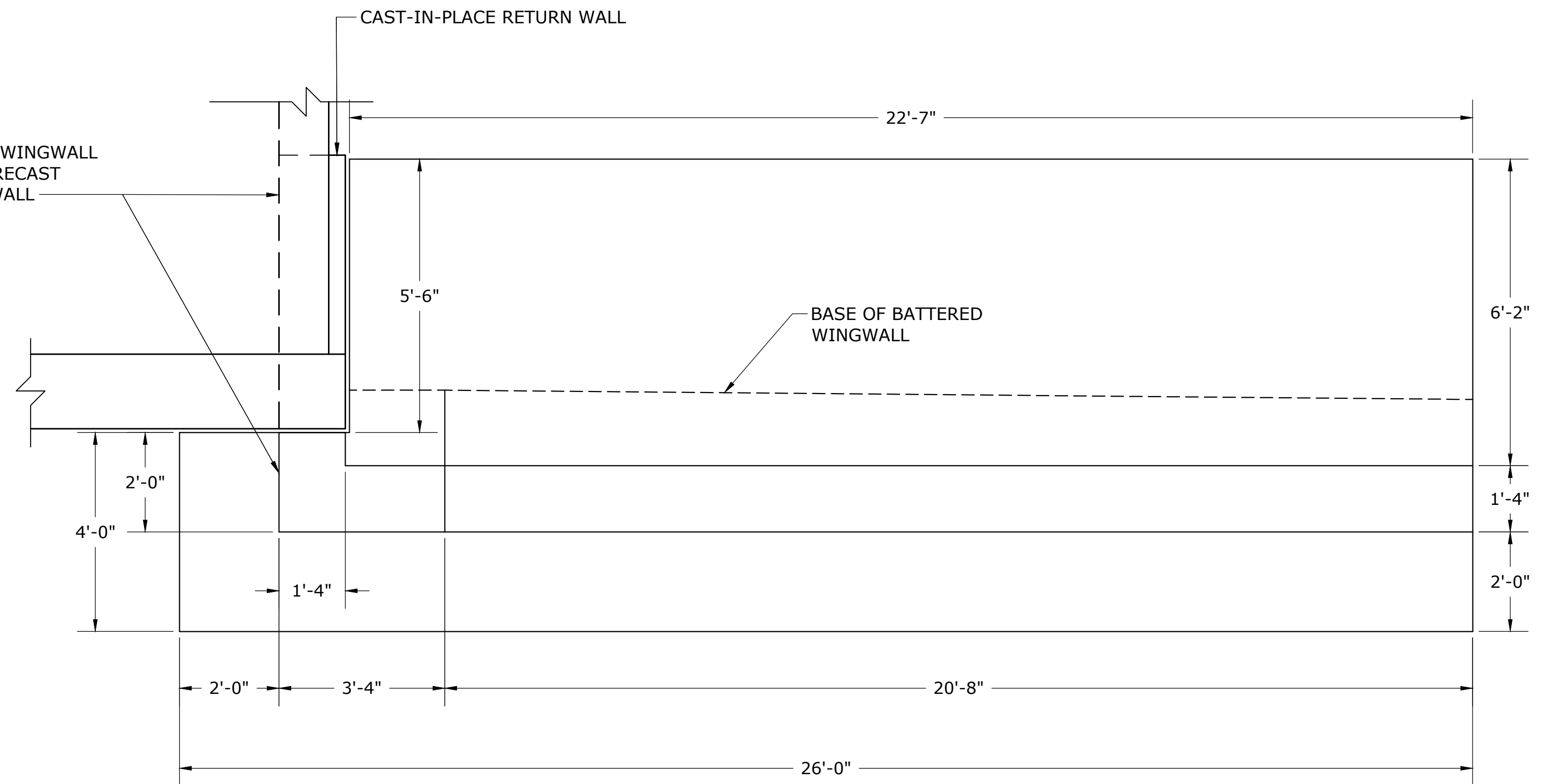
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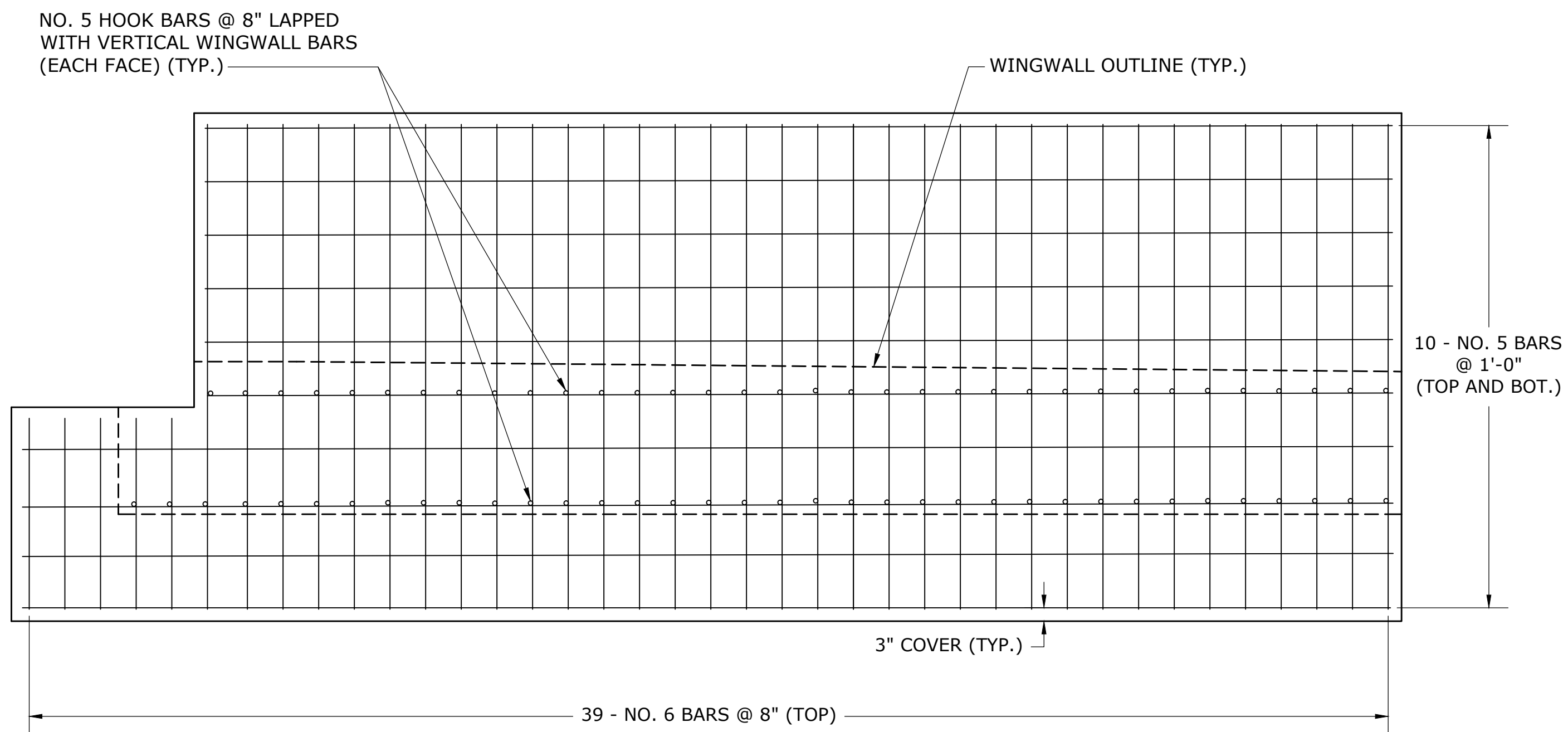


OUTLET WINGWALL ELEVATION

SCALE:  $\frac{1}{2}" = 1'-0"$



PRECAST BOX CULVERT OUTLET  
WINGWALL LAYOUT  
SCALE:  $\frac{1}{2}" = 1'-0"$



OUTLET WINGWALL FOOTING PLAN

SCALE:  $\frac{1}{2}" = 1'-0"$

- NOTES:
1. FOR PRECAST BOX CULVERT WINGWALL NOTES, SEE SHEET S-13.
  2. FOR PRECAST BOX CULVERT TYPICAL WINGWALL SECTION, SEE SHEET S-13.

REV. NO.	DATE	DRWN	CHKD	REMARKS

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TOWN OF PUTNAM, CONNECTICUT

DANCO DRIVE BRIDGE REPLACEMENT

## OUTLET WINGWALL DETAILS

PROJECT NO. 262470-263189
FILE NAME: STR001.DWG
SHEET NO.
S-14



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BACKFACE OF INLET  
WINGWALL AT TOP

FRONT FACE OF INLET  
WINGWALL

PROTECTIVE FENCE  
(5' HIGH)(TYP.)

SYMMETRIC ABOUT  
CENTERLINE CULVERT

2'-2<sup>3</sup>/<sub>8</sub>"

8"

8'-11<sup>1</sup>/<sub>2</sub>"

CENTERLINE  
OF POST

ANCHORAGE DETAIL

SCALE: 1" = 1'-0"

HEX NUT AND WASHER (TYP.)

8"x8"x<sup>1</sup>/<sub>8</sub>" ELASTOMER PAD

3" CVR.

8" ADHESIVE  
ANCHOR (TYP.)

3/4" ANCHOR ROD  
DRILLED AND BONDED  
WITH ADHESIVE (TYP.)

PL 8"x8"x1"

1/4" DIAMETER DRAIN  
HOLE ON LOW SIDE  
OF POST

4

5'-0"

SEE ANCHORAGE  
DETAIL

FRONT FACE OF  
HEADWALL/WINGWALL

SECTION A

SCALE: 1" = 1'-0"

PROTECTIVE FENCE  
(5' HIGH)

ONE-WAY BRACE BAND  
(TOP AND BOTTOM, TYP.)

2 1/2" DIAMETER POST  
(ENDS OF HEADWALL  
AND ALONG WINGWALLS)

1/8"x1" STRETCHER BAR  
CLAMP @ 12" O.C. (TYP.)

1/4" x 3/4" STRETCHER BAR  
AS REQUIRED, TYP.

2" DIAMETER POSTS  
(INTERIOR HEADWALL, TYP.)

DOMED END CAP (TYP.)

#6 GAGE GALVANIZED TIE  
WIRES @ 12" O.C., TYPICAL  
FOR ALL LINE POSTS

1 1/4" DIAMETER RAILING  
(TOP AND BOTTOM, TYP.)

CHAIN LINK FENCE  
FABRIC

3"(TYP.)

FRONT FACE OF WINGWALL

HEADWALL

PROTECTIVE FENCE DETAIL

SCALE: 1/2" = 1'-0"

2 EQUAL SPACES @ 6'-10 1/4" = 13'-8 1/2"

INSIDE WALL OF  
BOX CULVERT (TYP.)

FRONT FACE OF  
HEADWALL

3" OVERHANG

C-I-P NOSE  
AT INLET

SYMMETRIC ABOUT  
CENTERLINE CULVERT

2 EQUAL SPACES @ 6'-10 1/4" = 13'-8 1/2"

3" OVERHANG

C-I-P NOSE  
AT OUTLET

FRONT FACE OF  
HEADWALL

PROTECTIVE FENCE  
(5' HIGH)(TYP.)

FRONT FACE  
OF OUTLET WINGWALL

3 EQUAL SPACES @ 7'-6 5/8"(±) = 22'-8"

BACKFACE OF OUTLET  
WINGWALL AT TOP

8"

8"

8"

PLAN VIEW - PROTECTIVE FENCE (5' HIGH)

SCALE: 1/2" = 1'-0"

PLAN - BASEPLATE

SCALE: 1" = 1'-0"

(HEADWALL SHOWN, WINGWALL  
DIMENSIONS IN PARENTHESES WHEN  
DIFFERENT)

TOP OF WALL

2" OR 2 1/2" DIAMETER  
POST

1 3/16" DIAMETER STANDARD  
SIZE HOLE (TYP.)

PL 8"x8"x1"

1/4" (TYP.)

5 1/2" (TYP.)

1/4" (TYP.)

8" (TYP.)

1'-6" (1'-4")

DESIGNED BY: J. FLUETSTRA

DRAWN BY: J. FLUETSTRA

SHEET CHK'D BY: M. EGAN

CROSS CHK'D BY: A. HEALEY

APPROVED BY: M. EGAN

DATE: APRIL 2024

CDM Smith

101 E. River Dr. | Suite 1A  
East Hartford, CT 06108  
Tel: (860) 523-7615

TOWN OF PUTNAM, CONNECTICUT

DANCO DRIVE BRIDGE REPLACEMENT

PROJECT NO. 262470-263189

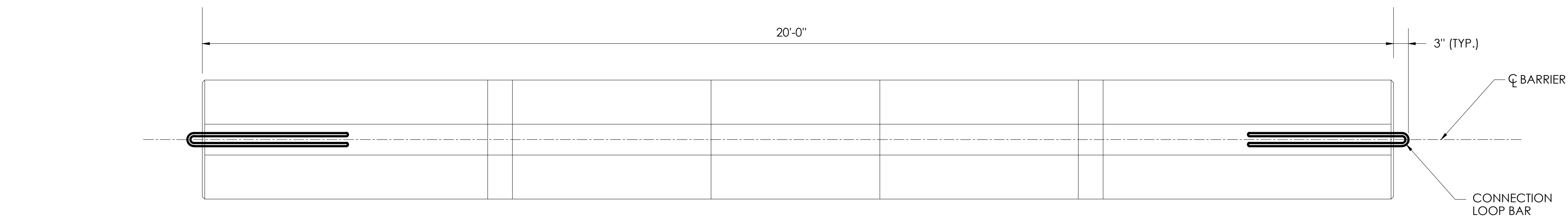
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SHEET NO.

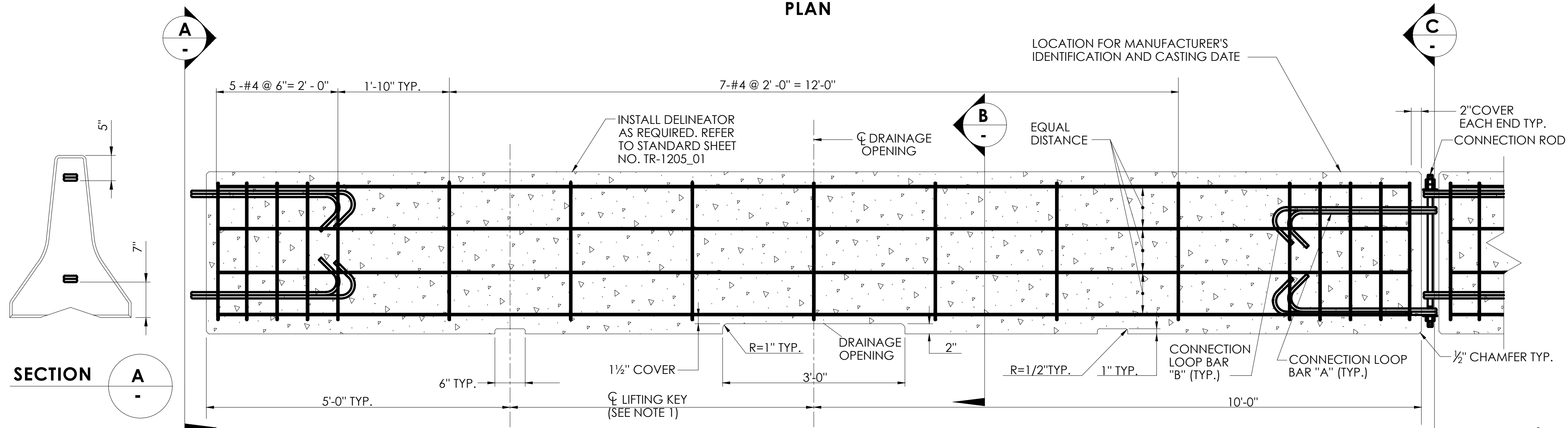
S-15

PROTECTIVE FENCE (5' HIGH)  
DETAILS



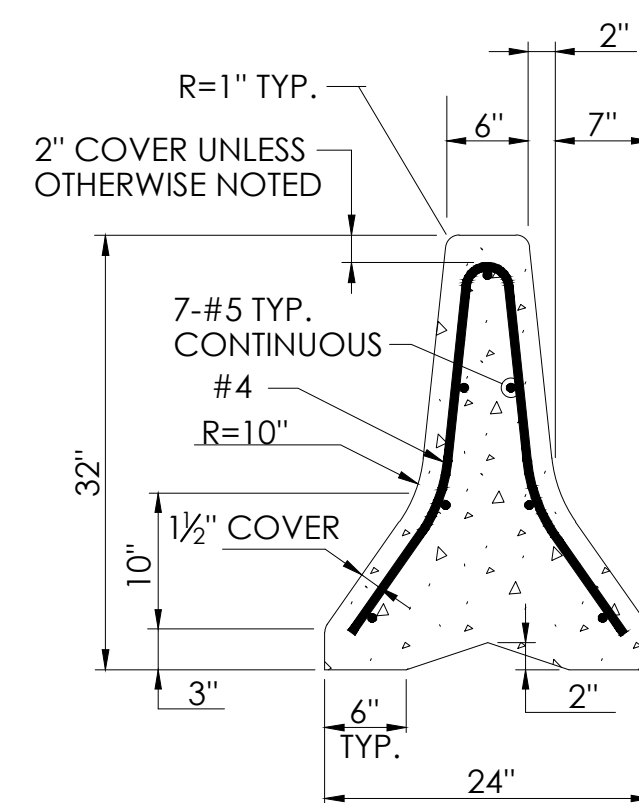


## PLAN

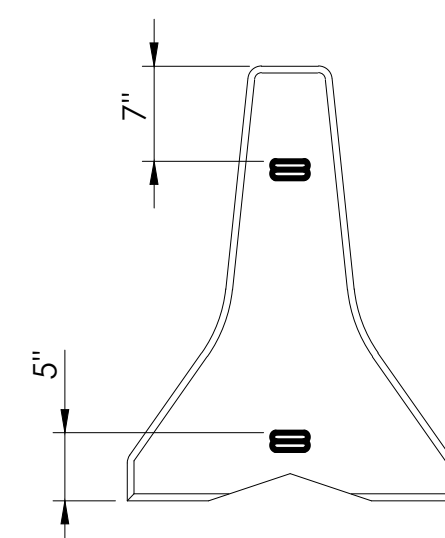


## ELEVATION

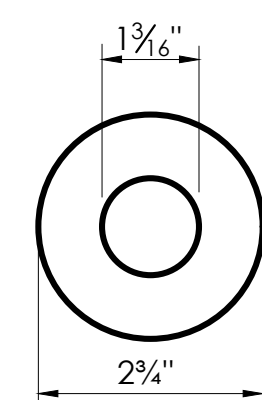
- GENERAL NOTES:**
1. ALTERNATE DESIGNS FOR LIFTING KEYS, HOLES OR OTHER HANDLING DEVICES MAY BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
  2. EXPECTED PERMANENT DYNAMIC DEFLECTION IS 3'-6" BASED ON TL-3 CRASH TESTS WITH 240' OF TPCBC.



## SECTION



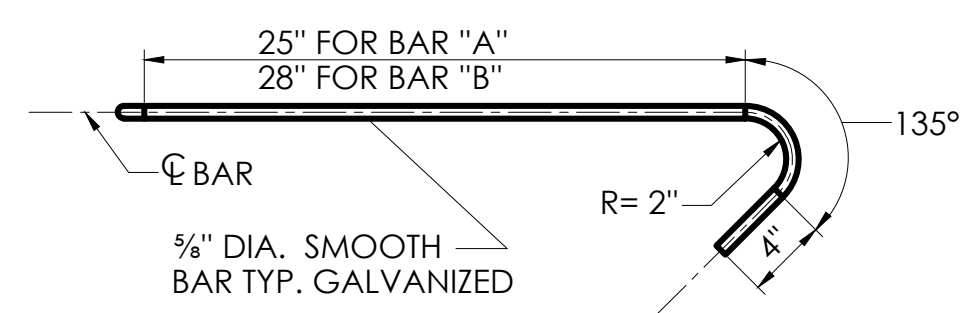
## END VIEW



## WASHER DETAIL



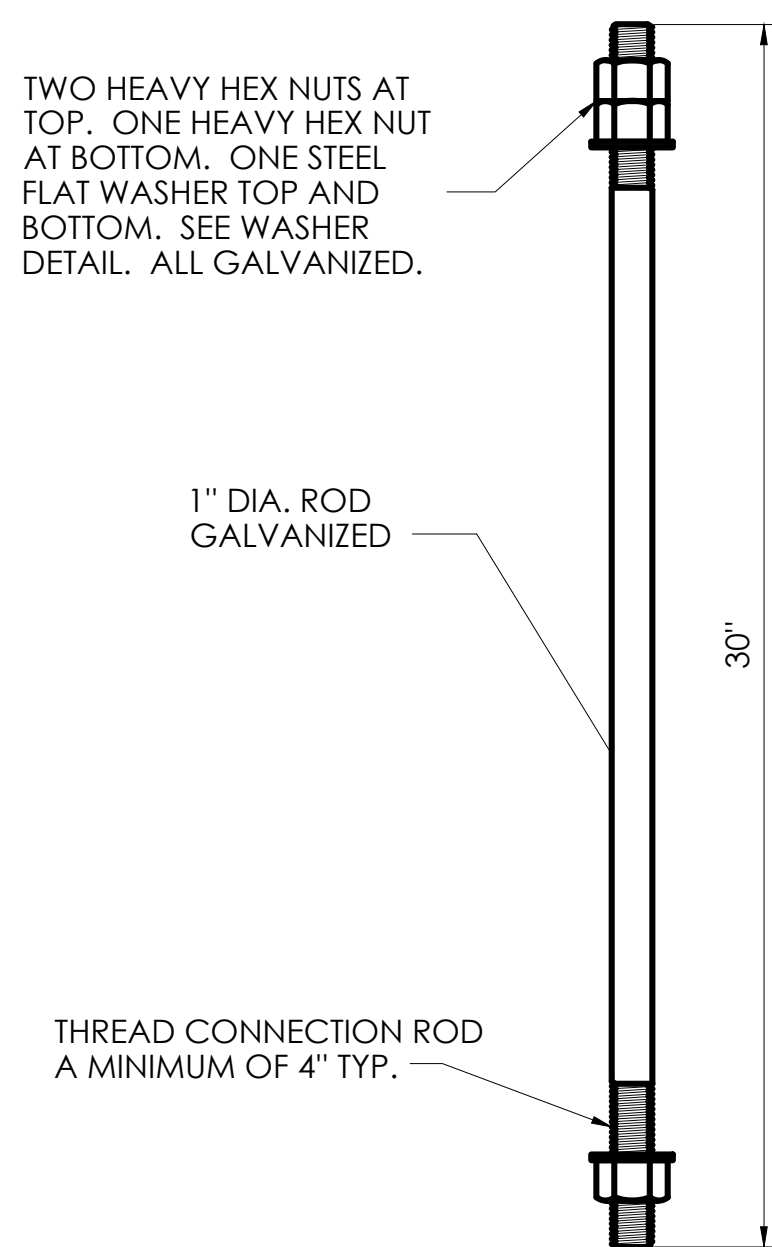
## PLAN



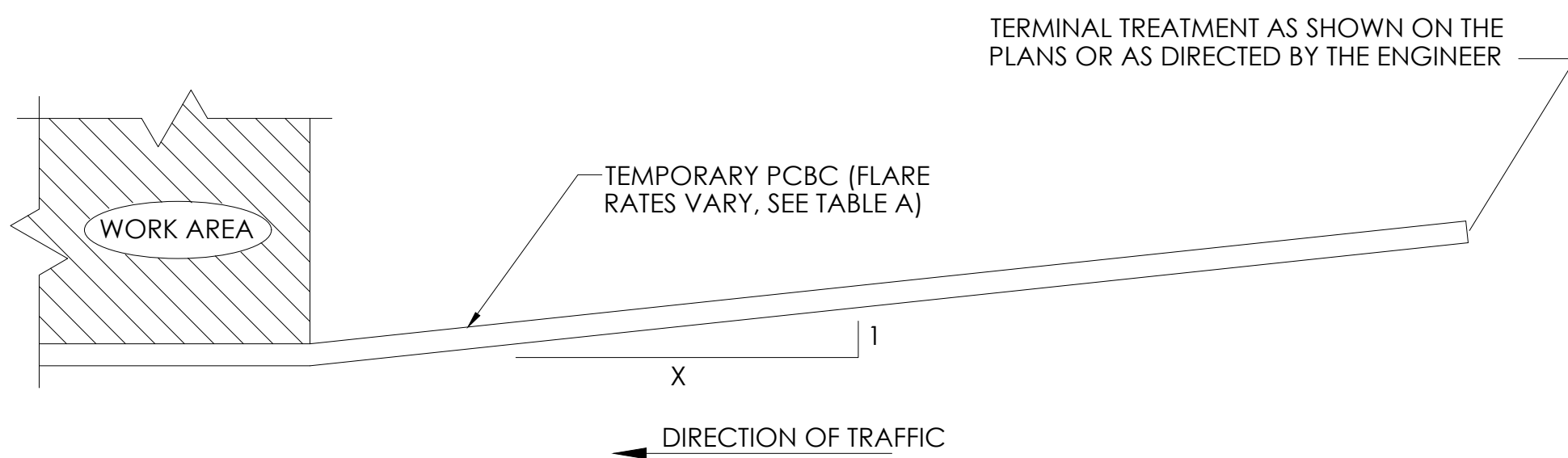
### ELEVATION

BAR " A " = 6' - 0" TOTAL  
BAR " B " = 6' - 6" TOTAL

## CONNECTION LOOP BAR



## CONNECTION ROD



## PLAN - TYPICAL INSTALLATION

TABLE A FLARE RATES	
* SPEED	FLARE RATE (X : 1)
≤ 30MPH	4 : 1
> 30MPH BUT < 45MPH	6 : 1
≥ 45MPH NON-LIMITED ACCESS HIGHWAYS	8 : 1
ALL LIMITED ACCESS HGHWAYS	10 : 1

\* DESIGN SPEED THROUGH THE WORK AREA.

					DESIGNED BY: <u>J. FLIJTSTRA</u>
					DRAWN BY: <u>J. FLIJTSTRA</u>
					SHEET CHK'D BY: <u>M. EGAN</u>
					CROSS CHK'D BY: <u>A. HEALEY</u>
REV. NO.	DATE	DRWN	CHKD	REMARKS	APPROVED BY: <u>M. EGAN</u>
					DATE: <u>APRIL 2024</u>

DESIGNED BY: J. FLIETSTRA  
 DRAWN BY: J. FLIETSTRA  
 SHEET CHK'D BY: M. EGAN  
 CROSS CHK'D BY: A. HEALEY  
 APPROVED BY: M. EGAN  
 DATE: APRIL 2024



TOWN OF PUTNAM, CONNECTICUT

DANCO DRIVE BRIDGE REPLACEMENT

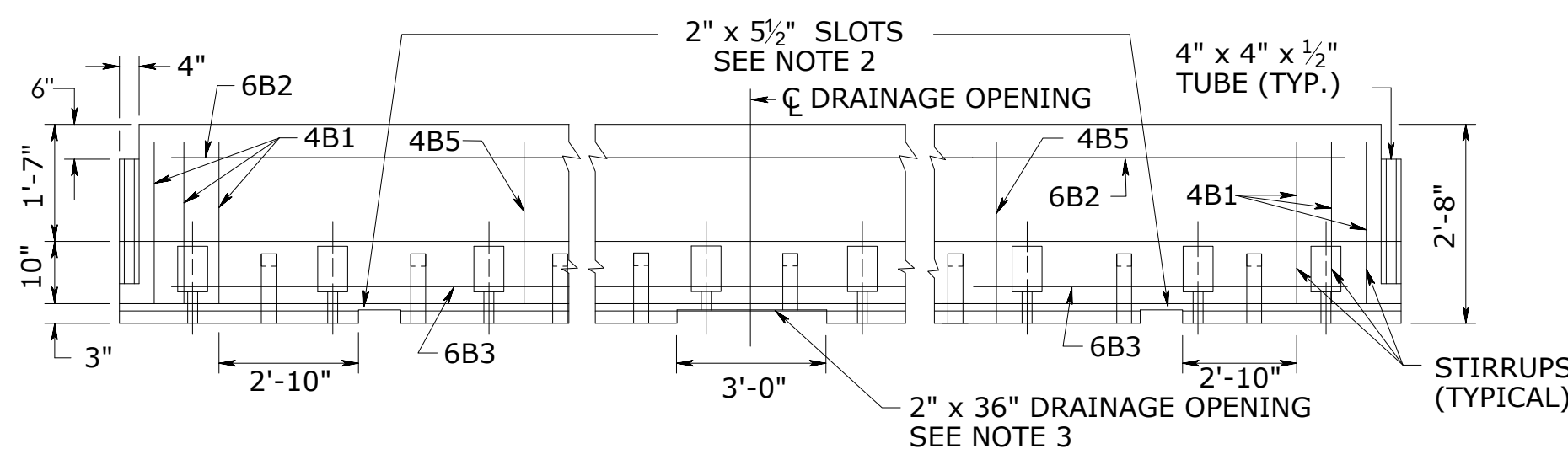
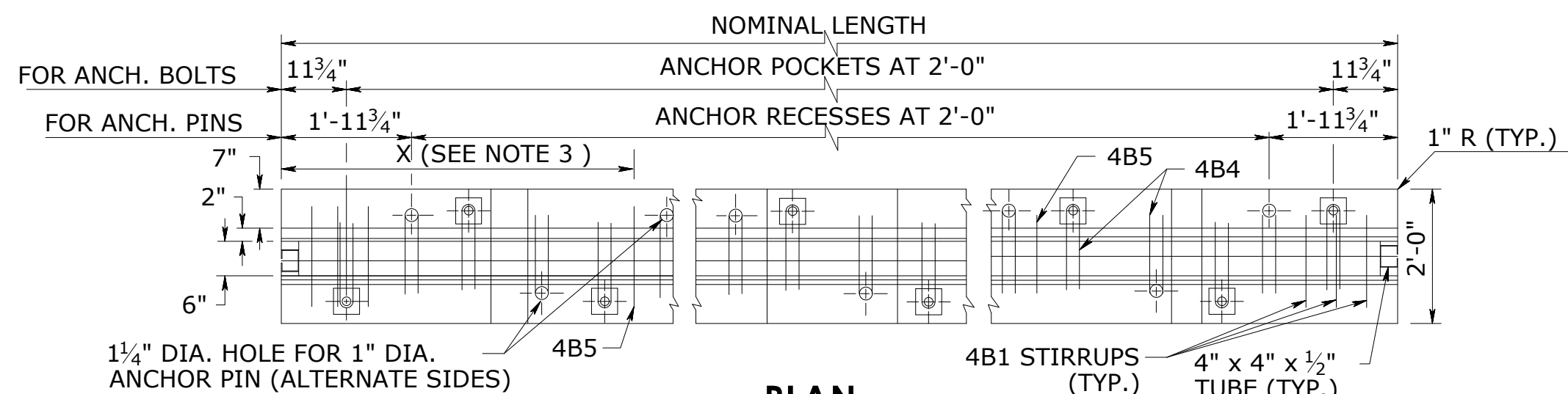
TEMPORARY PRECAST  
CONCRETE BARRIER (TPCB)  
(1 of 4)

PROJECT NO. 262470-263189  
FILE NAME: STR001.DWG

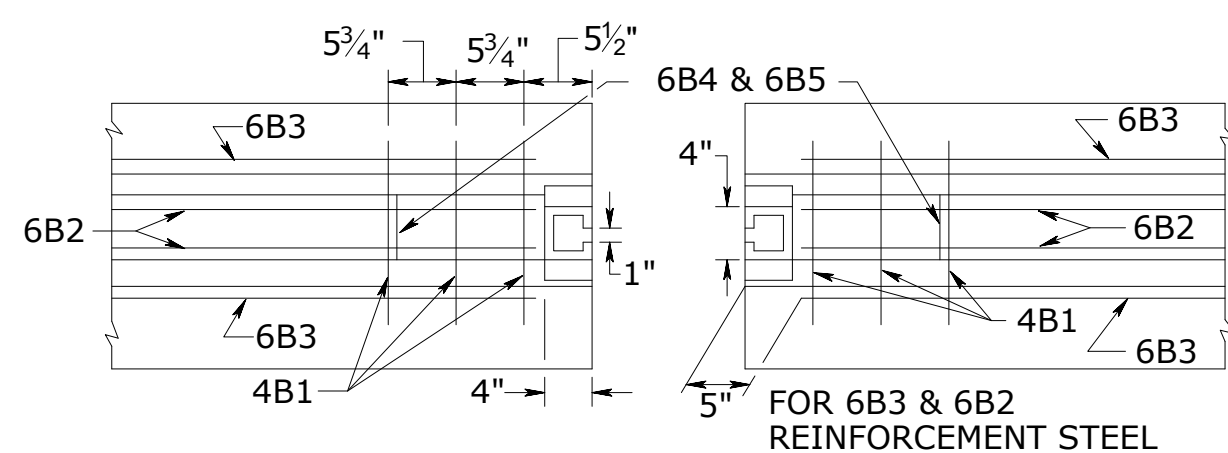
SHEET NO.

S-16



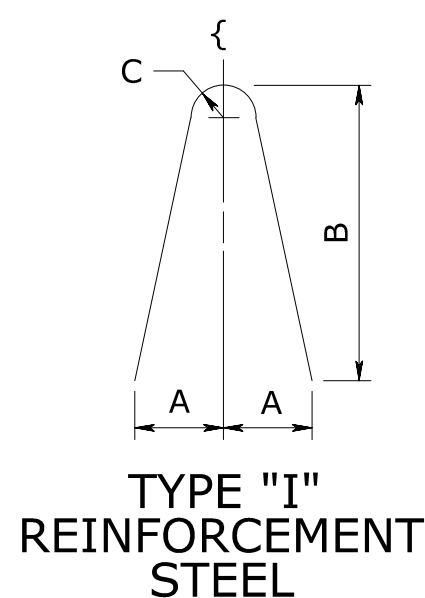


## ELEVATION

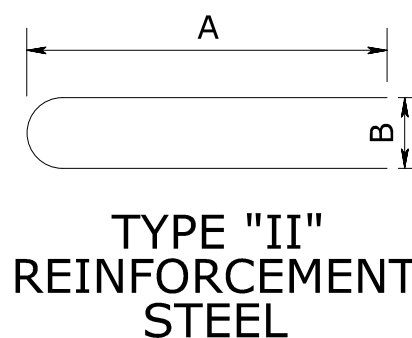


## PLAN - BARRIER END

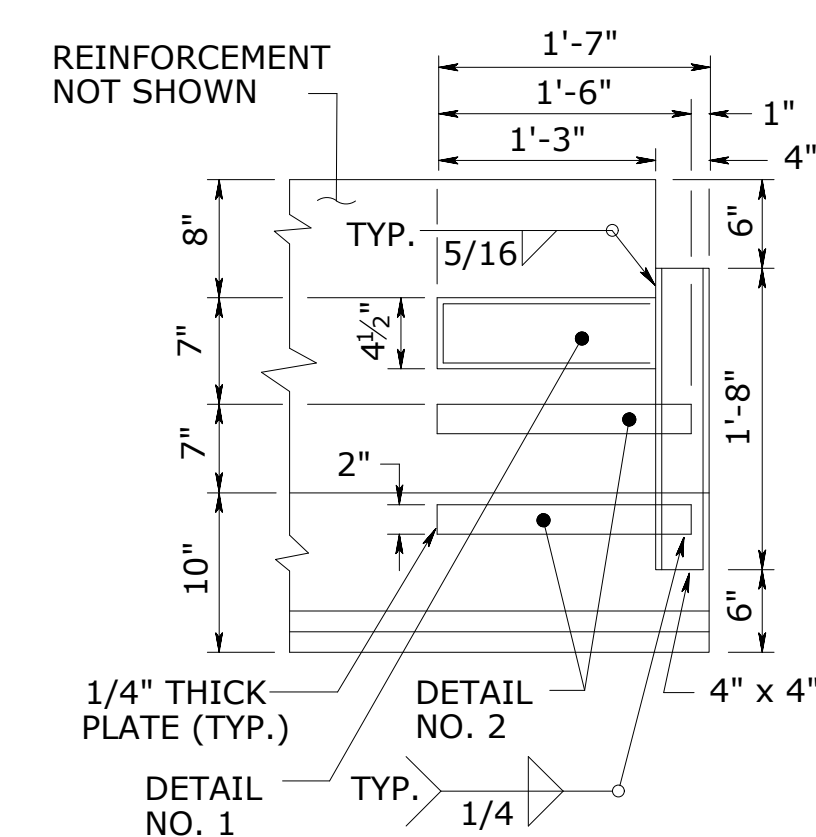
TABLE OF VARIABLE REINFORCEMENT STEEL			
NOMINAL LENGTH OF BARRIER UNIT	MARK	"X"	NO. EACH SECTION
20'	4B4	N.A.	19
20'	4B5	6'-11"	2
18'	4B4	N.A.	17
18'	4B5	6'-5"	2
16'	4B4	N.A.	15
16'	4B5	5'-11"	2
14'	4B4	N.A.	13
14'	4B5	7'-0"	1
12'	4B4	N.A.	11
12'	4B5	6'-0"	1
10'	4B4	N.A.	9
10'	4B5	5'-0"	1
8'	4B4	N.A.	7
8'	4B5	-	0
"X" DISTANCE FROM END OF BARRIER TO 4B5 REINFORCEMENT STEEL			



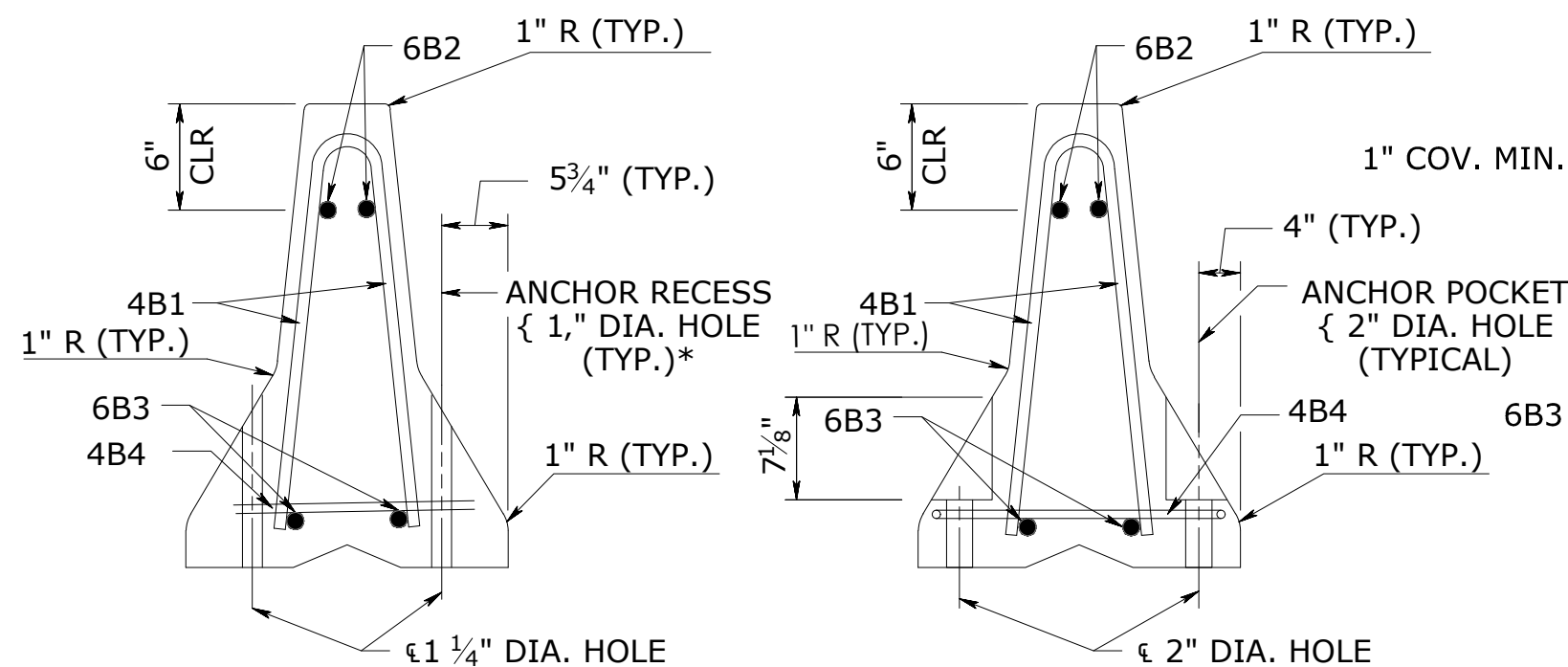
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STEEL



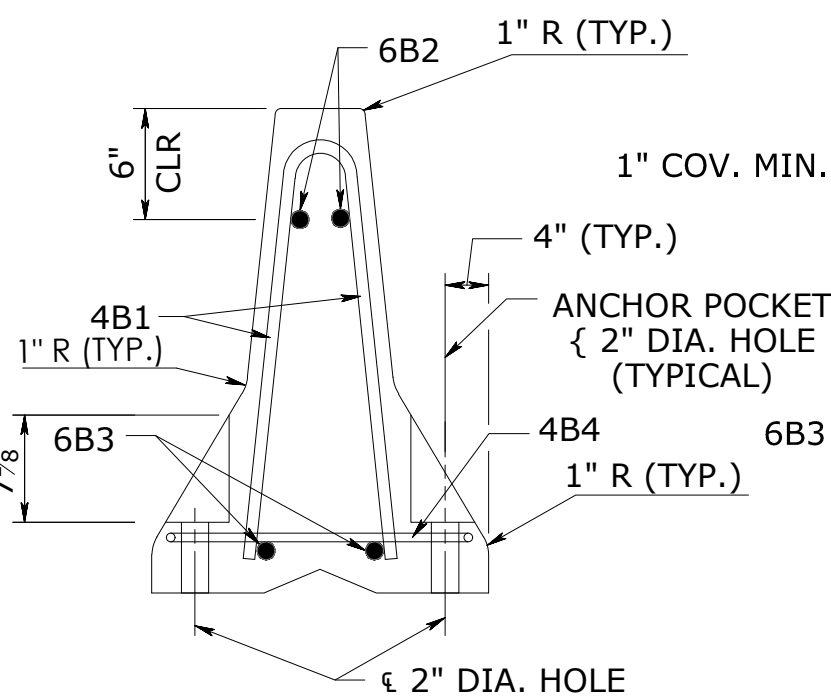
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REINFORCEMENT  
STEEL



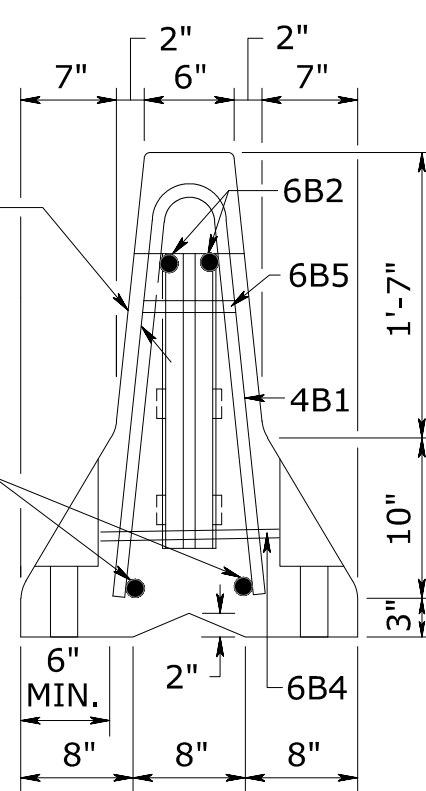
## ELEVATION



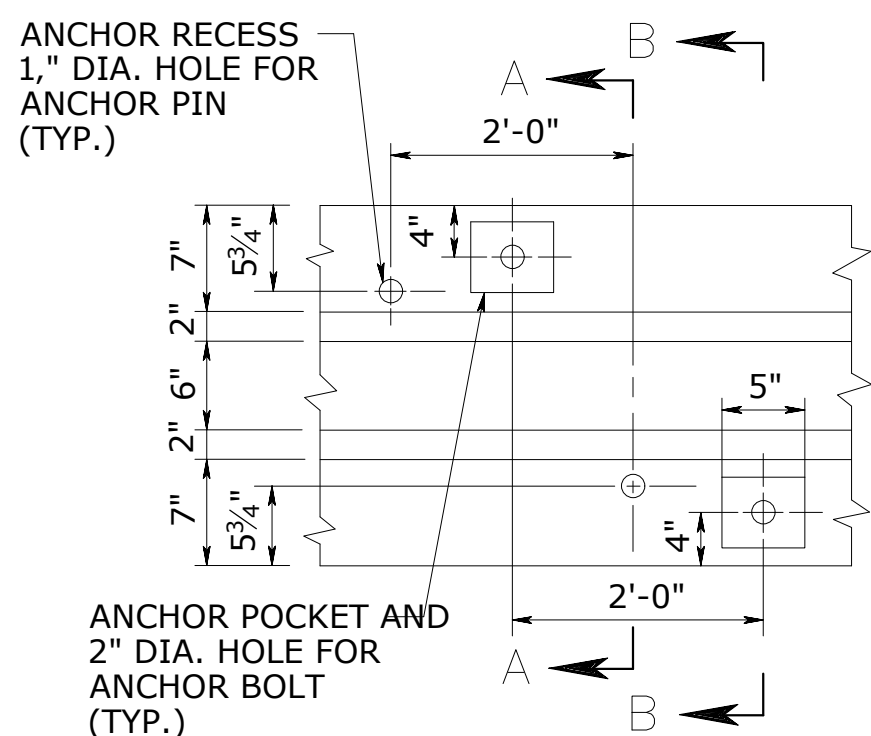
## SECTION A-A



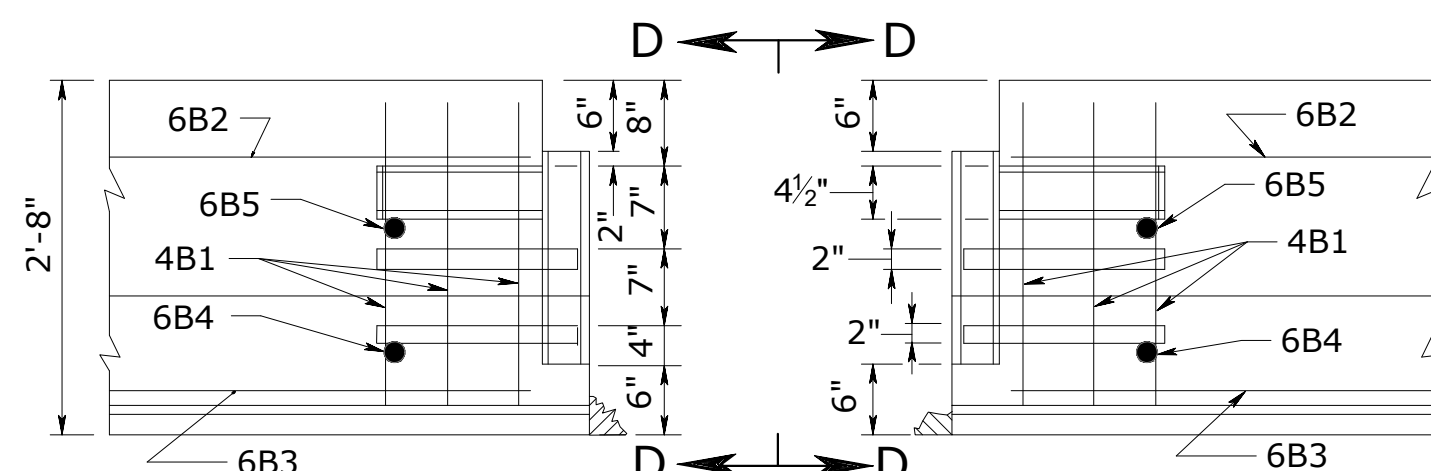
## SECTION B-B



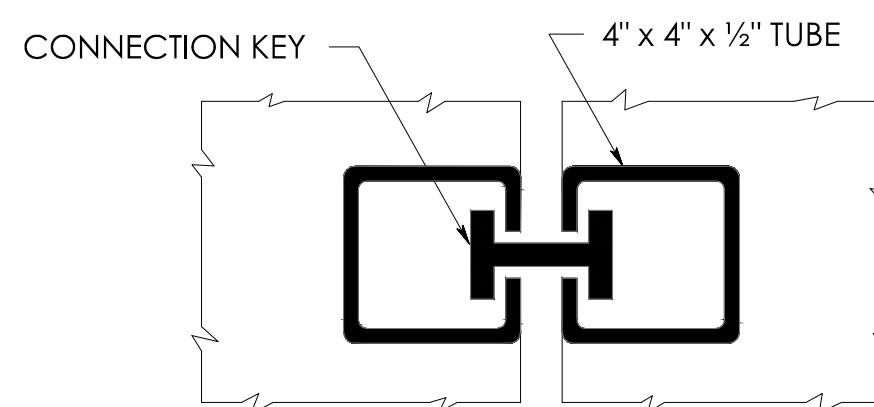
### SECTION D-D



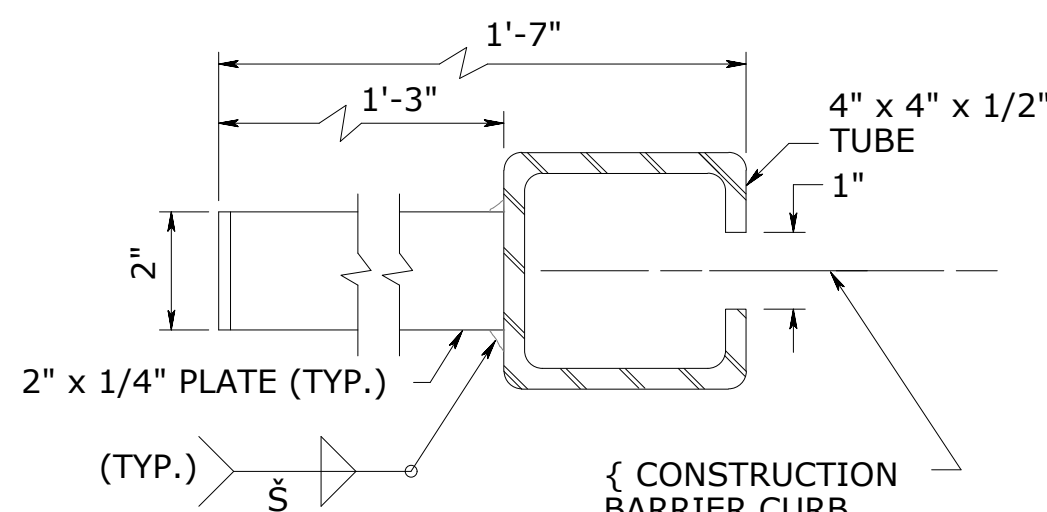
**PLAN - ANCHOR RECESS/POCKET**  
SEE NOTE 5



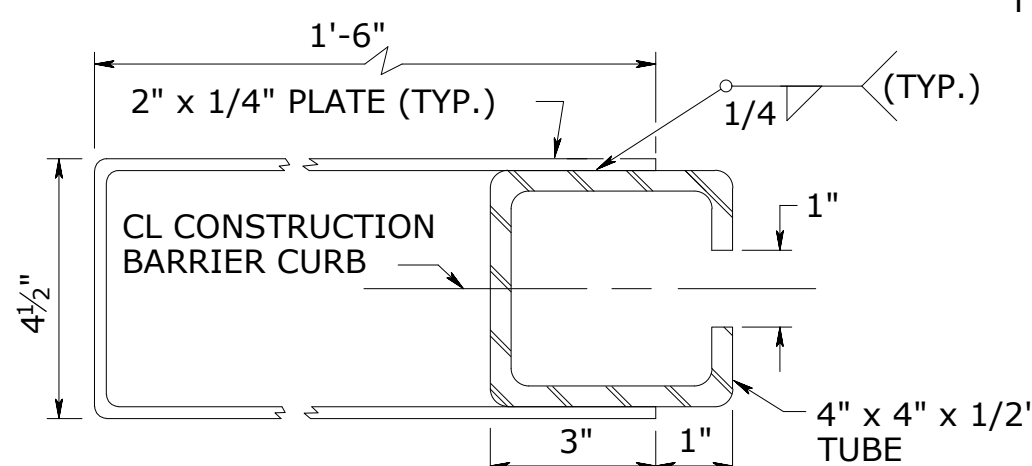
## ELEVATION



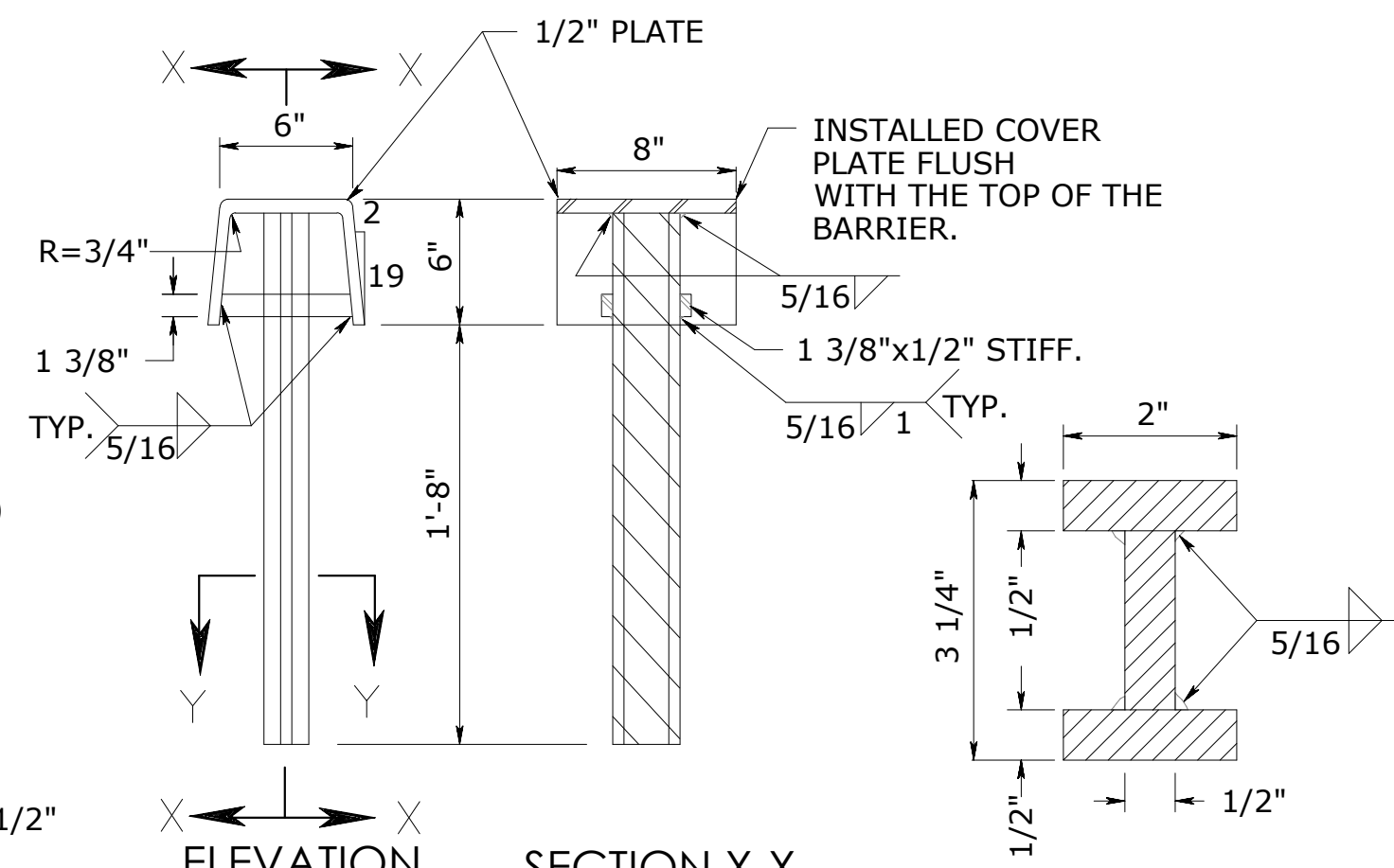
## KEY IN PLACE



**PLAN VIEW  
DETAIL NO. 1**



**PLAN VIEW**  
**DETAIL NO. 2**  
**TEMPORARY TRAFFIC BARRIER CONNECTION DETAILS**



SECTION X-X

**CONNECTION KEY**

**GENERAL NOTES:**

1. CONCRETE CLEAR COVER FOR REINFORCEMENT STEEL IS 1½" (MIN.).
2. 2" x 5½" SLOTS - TWO REQUIRED IN SECTIONS 12 FEET AND GREATER. ONE REQUIRED IN 8 FOOT AND 10 FOOT SECTIONS.
3. 2" x 36" DRAINAGE OPENING IS ONLY REQUIRED FOR TEMPORARY TRAFFIC BARRIER UNITS OF 20 FEET IN LENGTH, LOCATED IN MIDDLE OF THE BARRIER UNIT.
4. A TEMPORARY TRAFFIC BARRIER UNIT IS 20 FEET IN LENGTH; HOWEVER OTHER LENGTHS MAY BE USED TO MEET FIELD CONDITIONS. THE NUMBER AND PLACEMENT OF THE 4B4 AND 4B5 REINFORCEMENT STEEL WILL VARY WITH THE LENGTH OF THE BARRIER UNIT AS SHOWN ON THE TABLE OF VARIABLE REINFORCEMENT STEEL. THE 6B2 AND 6B3 REINFORCEMENT STEEL TO BE PLACED 10 INCHES SHORTER THAN THE NOMINAL LENGTH OF THE BARRIER UNITS.
5. ANCHOR RECESS HOLES OR ANCHOR POCKETS WITH ASSOCIATED REINFORCEMENT STEEL ARE ONLY REQUIRED FOR THE ASSOCIATED TEMPORARY TRAFFIC BARRIER (PINNED) OR TEMPORARY TRAFFIC BARRIER (BOLTED).

REINFORCEMENT STEEL LIST (EACH BARRIER SECTION)								
MARK	SIZE	NUMBER IN EACH SECTION	LENGTH	TYPE	A	B	C	LOCATION
4B1	#4	6	4'-11"	I	5"	26"	2"	STIRRUPS
4B4	#4	SEE NOTE 4	3'-1"	II	15"	4"		STIRRUPS
4B5	#4	SEE NOTE 4	4'-11"	I	5"	26"	2"	STIRRUPS
6B2	#6	2	SEE NOTE 4	STR.				LONGITUDINAL (TOP) NORMAL SECTION
6B3	#6	2	SEE NOTE 4	STR.				LONGITUDINAL (BOTTOM) NORMAL SECTION
6B4	#6	2	1'-2"	STR.				TRANSVERSE (BOTTOM) NORMAL SECTION
6B5	#6	2	0'-6"	STR.				TRANSVERSE (TOP) NORMAL SECTION

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. FLIETSTRA  
DRAWN BY: J. FLIETSTRA  
SHEET CHK'D BY: M. EGAN  
CROSS CHK'D BY: A. HEALEY  
APPROVED BY: M. EGAN  
DATE: APRIL 2024



TOWN OF PUTNAM, CONNECTICUT

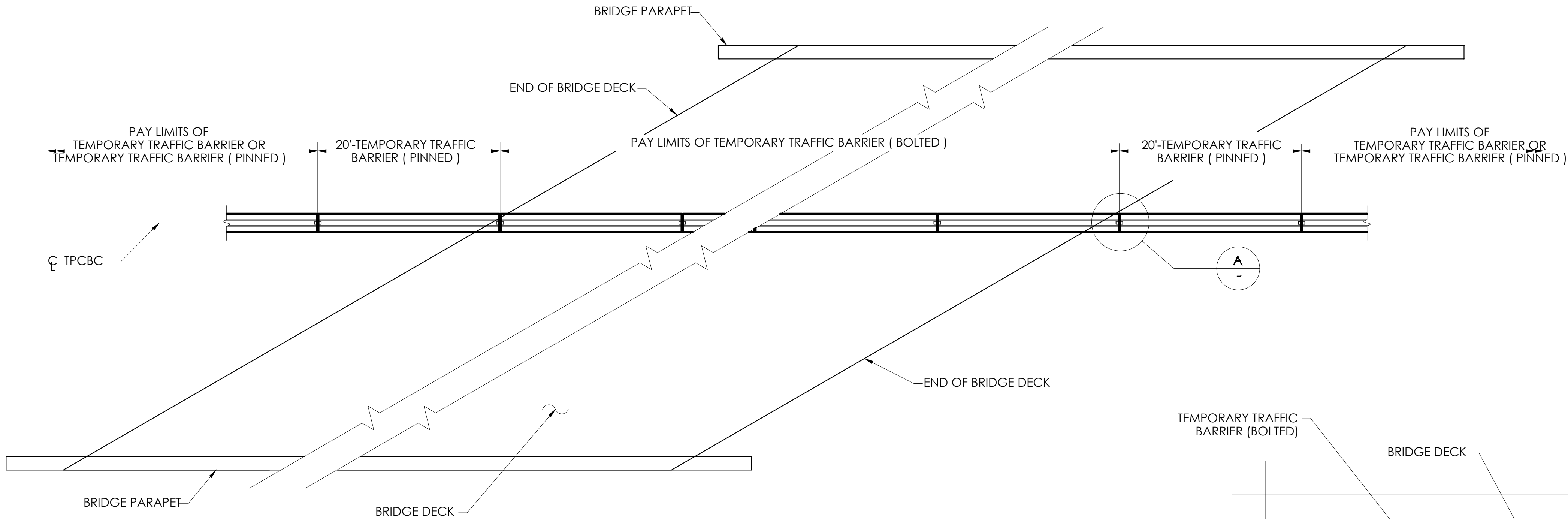
DANCO DRIVE BRIDGE REPLACEMENT

TEMPORARY PRECAST  
CONCRETE BARRIER (TPCB)  
(2 of 4)

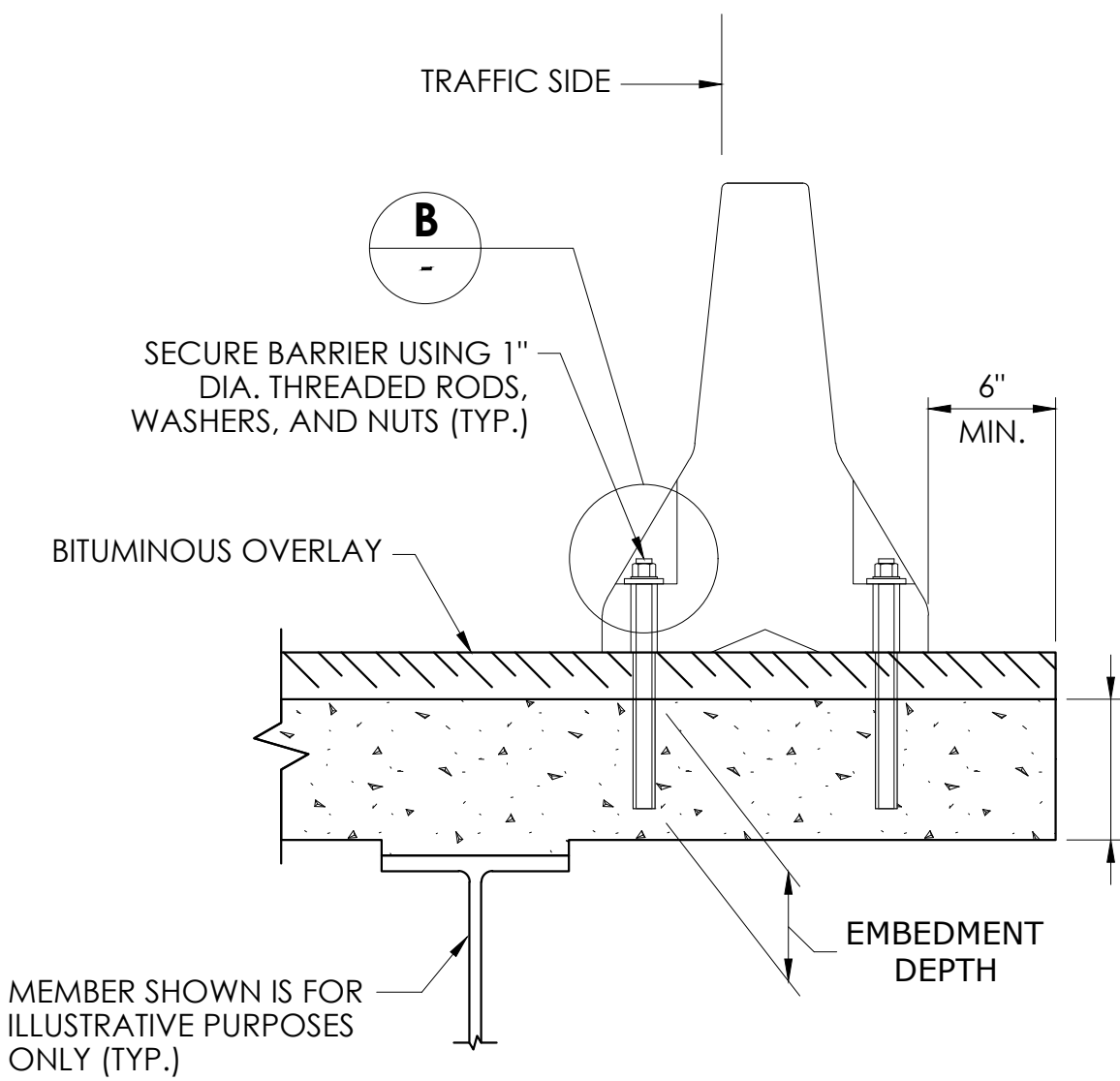
PROJECT NO. 262470-263189
FILE NAME: STR001.DWG
SHEET NO.
S-17



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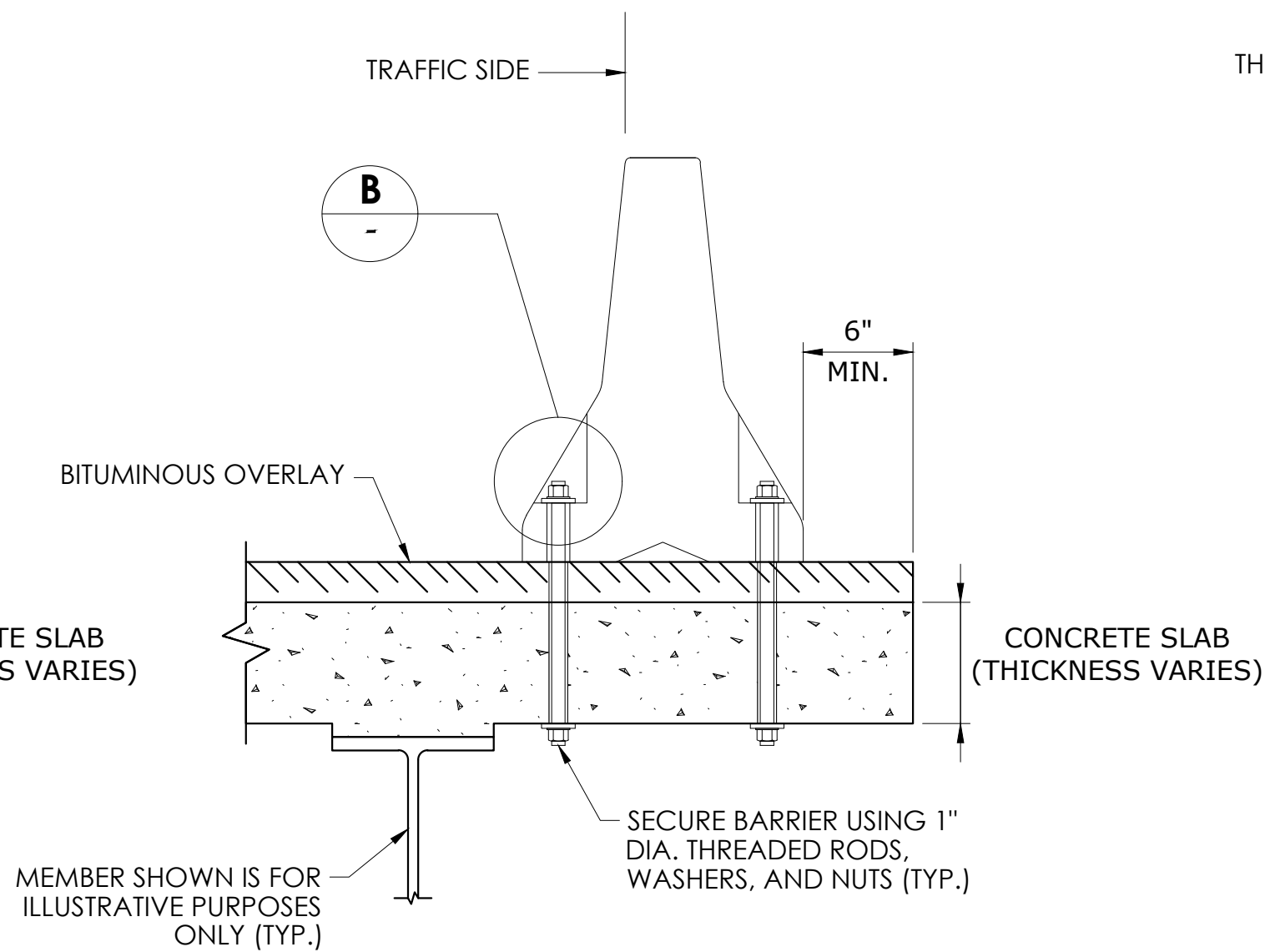


LAYOUT PLAN



ANCHOR PIN

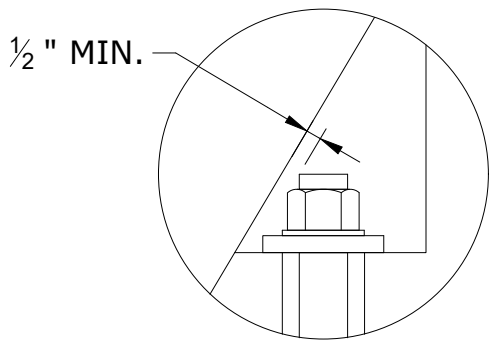
(SEE NOTE 1B)



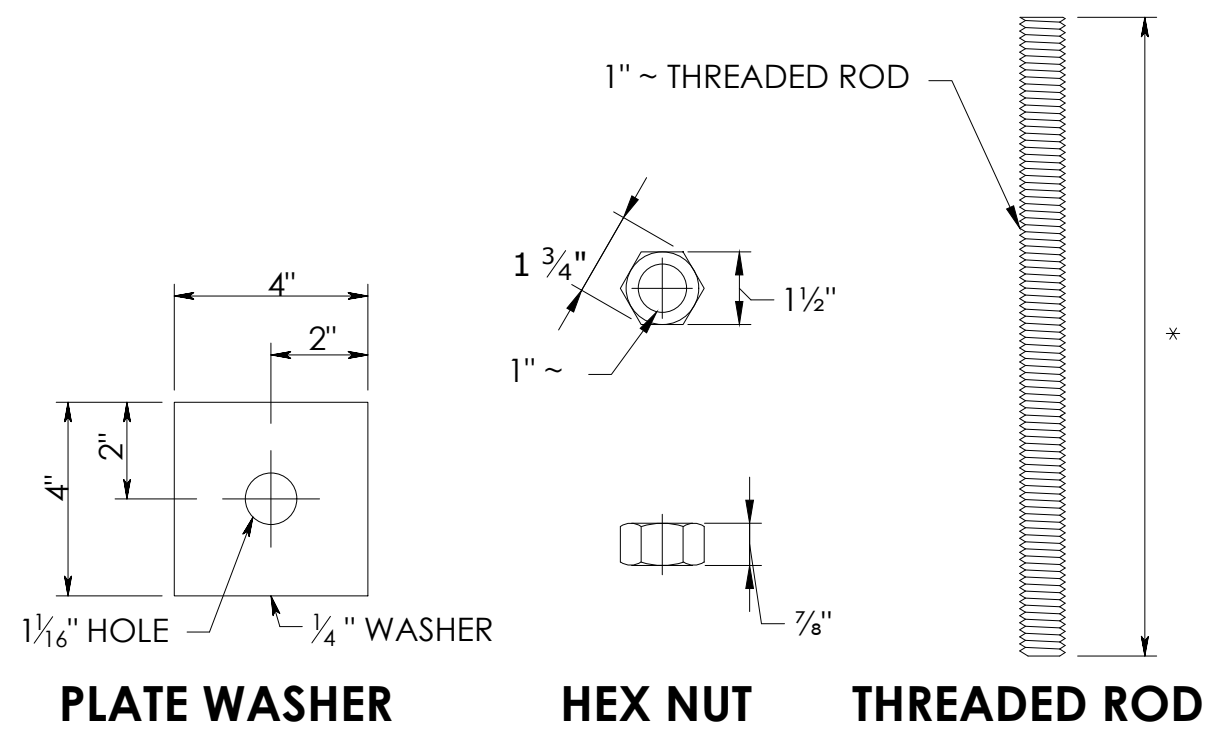
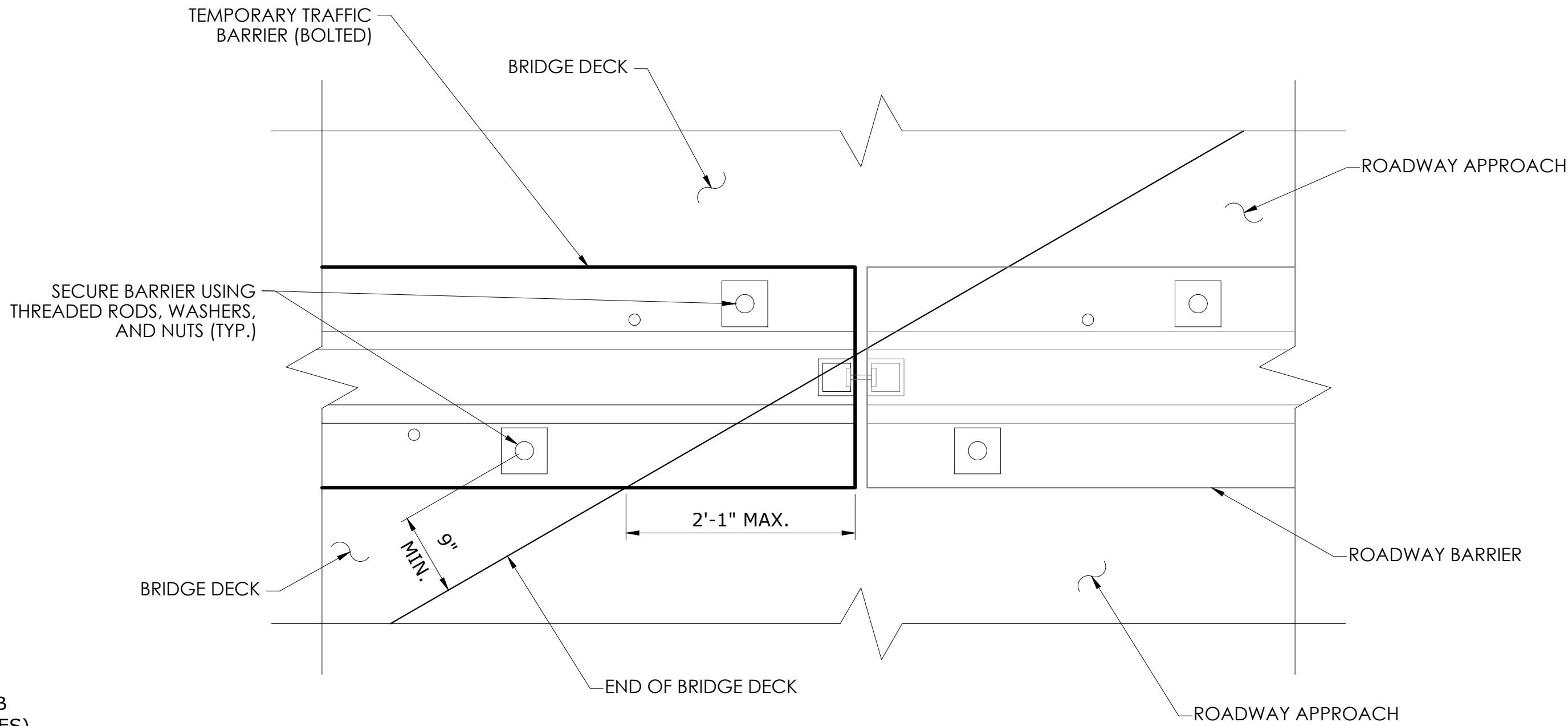
THRU-BOLTING OPTION

(SEE NOTE 1C)

TEMPORARY TRAFFIC BARRIER (BOLTED)



ANCHOR BOLT CLEARANCE



ANCHOR BOLT DETAILS

\*ENSURE THAT THE LENGTH OF THE ANCHOR BOLT IS SUCH THAT THE MINIMUM EMBEDMENT LENGTH IS OBTAINED.

WHEN ANCHOR BOLTS ARE IN PLACE, THEY SHALL NOT PROJECT ABOVE THE PLANE OF THE CONCRETE SURFACE OF THE BARRIER.

HOLES IN BRIDGE DECKS TO BE MADE WITH A CORE DRILL OR ANY OTHER APPROVED ROTARY DRILLING DEVICE THAT DOES NOT IMPART AN IMPACT FORCE.

GENERAL NOTES:

1. THE TEMPORARY TRAFFIC BARRIER (BOLTED) SHOWN ON THIS SHEET SHALL BE ANCHORED INTO BRIDGE DECKS WHEN IT IS USED TO PROTECT A VERTICAL DROP-OFF. THE TEMPORARY ANCHORAGE SYSTEM SHALL CONFORM TO THE FOLLOWING:
  - A) FOR NEW PRESTRESSED DECK UNITS: THREADED INSERTS SHALL BE USED FOR SECURING THE THREADED INSERTS SHALL BE CAST INTO THE DECK UNITS DURING FABRICATION, AND SHALL BE LOCATED AS REQUIRED TO ACCOMMODATE THE STAGE CONSTRUCTION. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
  - B) ADHESIVE ANCHORING OPTION: THIS CONSISTS OF DRILLING HOLES IN NEW OR EXISTING CONCRETE, PLACING THREADED RODS IN THE HOLES, AND SECURING THE RODS WITH A PRE-APPROVED ADHESIVE BONDING MATERIAL WHICH CONFORMS TO M.03.07 OF THE STANDARD SPECIFICATIONS. HOLE DIAMETER SHALL BE DETERMINED BY THE MANUFACTURER OF THE ADHESIVE BONDING MATERIAL.
  - C) THRU-BOLTING OPTION: THIS CONSISTS OF DRILLING THROUGH DECK SLABS AND SECURING 1" THREADED RODS ON THE UNDERSIDE WITH PLATE WASHERS AND NUTS. THROUGH-BOLTING IS NOT PERMITTED ON NEW CONSTRUCTION OR PRESTRESSED CONCRETE. MAXIMUM HOLE SIZE IN SLAB = 1 1/4".
- 2) INSTALL DELINATORS AS REQUIRED, REFER TO TRAFFIC STANDARD SHEET NO. TR-1205\_01.
- 3) TEMPORARY TRAFFIC BARRIER (BOLTED) DESIGN DEFLECTION IS 6 INCHES. THE MASH STANDARD DEFLECTION CAUSED BY 5,000 LB VEHICLE TRAVELING 62 MPH IMPACTING THE BARRIER AT 25 DEGREE ANGLE.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: **J. FLUETSTRA**  
DRAWN BY: **J. FLUETSTRA**  
SHEET CHK'D BY: **M. EGAN**  
CROSS CHK'D BY: **A. HEALEY**  
APPROVED BY: **M. EGAN**  
DATE: **APRIL 2024**

**CDM Smith**  
101 E. River Dr. | Suite 1A  
East Hartford, CT 06108  
Tel: (860) 523-7615



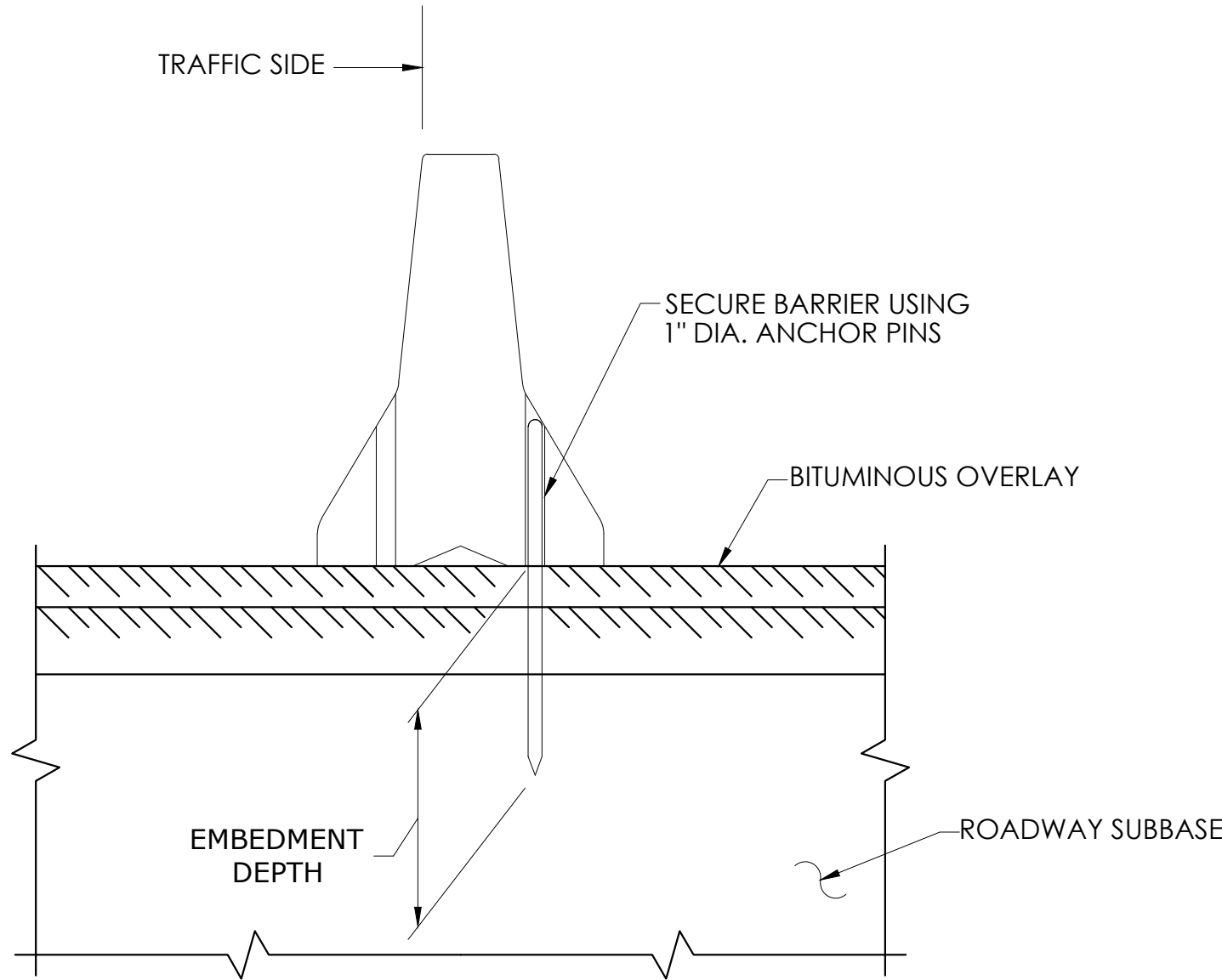
TOWN OF PUTNAM, CONNECTICUT  
DANCO DRIVE BRIDGE REPLACEMENT

TEMPORARY PRECAST  
CONCRETE BARRIER (TPCB)  
(3 of 4)

PROJECT NO. 262470-263189  
FILE NAME: **STR001.DWG**  
SHEET NO.  
**S-18**

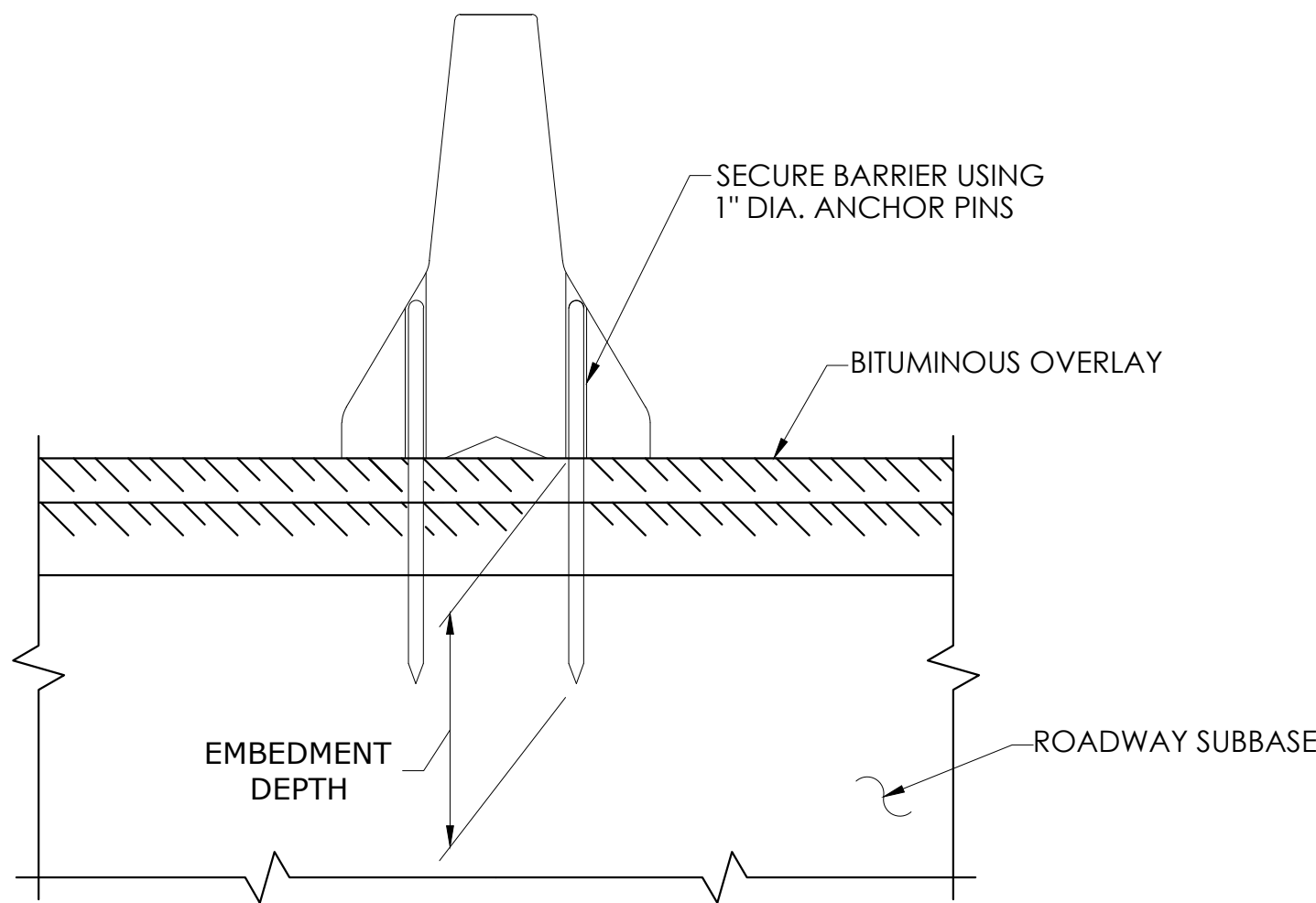


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END VIEW - TEMPORARY TRAFFIC BARRIER (PINNED)

SEE NOTES 2 & 3 FOR PIN OPTIONS  
ROADSIDE APPLICATION SHOWN

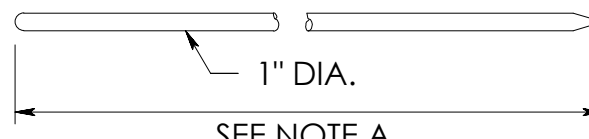


END VIEW - TERMINAL UNIT

NOTE A

ENSURE THAT THE LENGTH OF THE ANCHOR PIN IS SUCH THAT THE FOLLOWING  
MINIMUM EMBEDMENT LENGTH IS OBTAINED:

- (A) INTO CONCRETE PAVEMENT 0'-5"
- (B) INTO FLEXIBLE PAVEMENT 1'-6"
- (C) INTO UNPAVED AREA 2'-6"



ANCHOR PIN

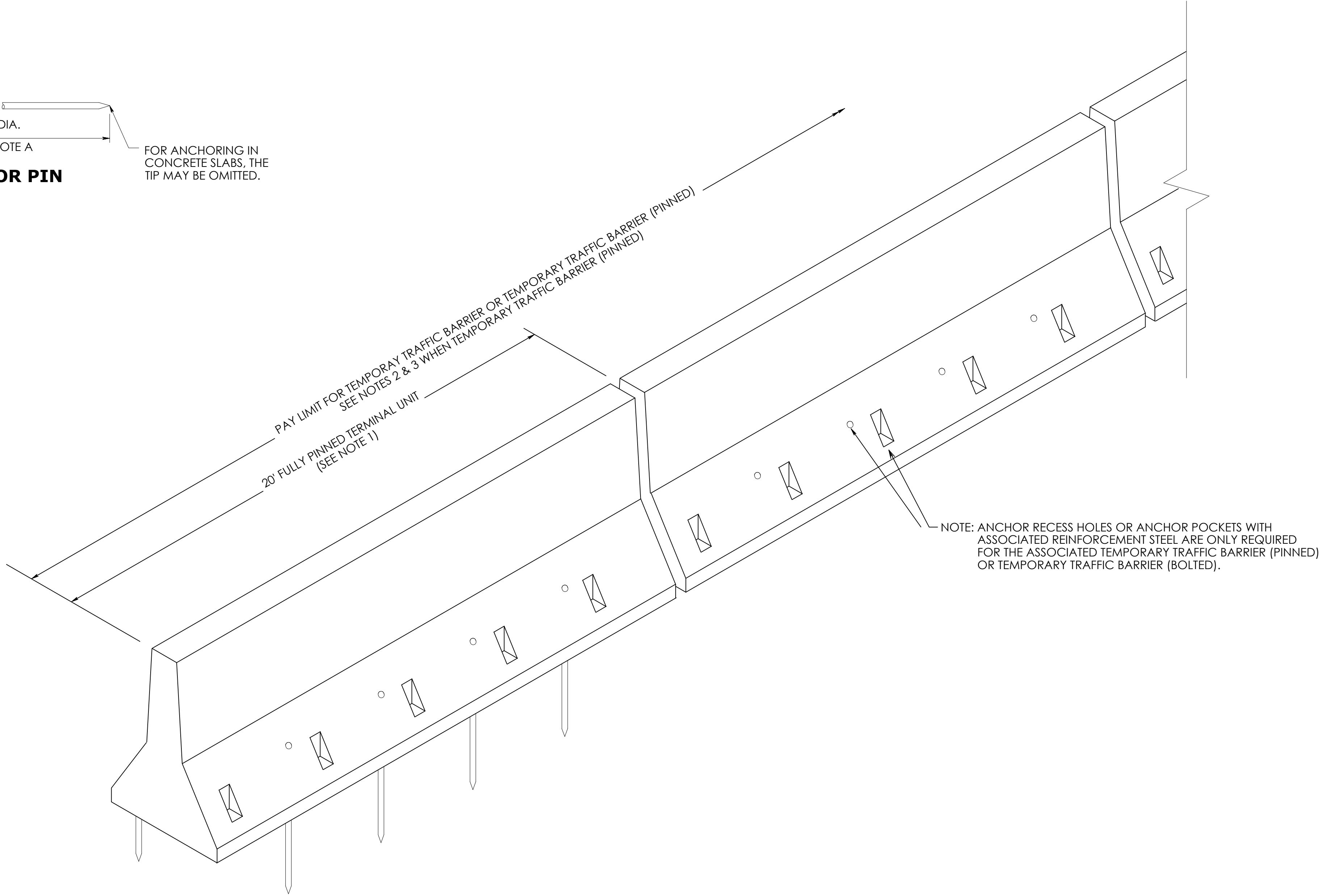
FOR ANCHORING IN  
CONCRETE SLABS, THE  
TIP MAY BE OMITTED.

GENERAL NOTES:

1. THE FIRST AND LAST UNIT OF A TEMPORARY TRAFFIC BARRIER LAYOUT SHALL BE 20 FOOT IN LENGTH AND FULLY PINNED ( 9 PINS ) ON BOTH SIDES.
2. TEMPORARY TRAFFIC BARRIER ( PINNED ) SHALL ONLY BE PINNED ON THE WORK AREA SIDE OF THE BARRIER AFTER THE REQUIRED LENGTH OF BARRIER IS PLACED.
3. TEMPORARY TRAFFIC BARRIER ( PINNED ) SHALL BE FULLY PINNED ( 9 PINS ) IN LOCATIONS WHERE THE BARRIERS ARE DIVIDING OPPOSING TRAFFIC.
4. ALL ANCHOR PINS INSTALLED SHALL NOT PROJECT BEYOND THE TEMPORARY TRAFFIC BARRIER'S SURFACE.
5. TEMPORARY TRAFFIC BARRIER DESIGN DEFLECTION DISTANCES BY TYPE:

BARRIER TYPE	**DEFLECTION
UNPINNED	40"
PINNED	20"

\*\* MASH STANDARD DEFLECTION CAUSED BY 5,000 LB VEHICLE TRAVELING 62 MPH IMPACTING THE BARRIER AT 25 DEGREE ANGLE.



TEMPORARY TRAFFIC BARRIER

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. FLUETSTRA  
DRAWN BY: J. FLUETSTRA  
SHEET CHK'D BY: M. EGAN  
CROSS CHK'D BY: A. HEALEY  
APPROVED BY: M. EGAN  
DATE: APRIL 2024

**CDM Smith**  
101 E. River Dr. | Suite 1A  
East Hartford, CT 06108  
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TOWN OF PUTNAM, CONNECTICUT  
DANCO DRIVE BRIDGE REPLACEMENT

TEMPORARY PRECAST  
CONCRETE BARRIER (TPCB)  
(4 of 4)

PROJECT NO. 262470-263189  
FILE NAME: **STR001.DWG**  
SHEET NO.  
**S-19**