04 - STRUCTURE
INDEX OF DRAWINGS

DRAWING NUMBER	DRAWING TITLE	DRAWING NUMBER	DRAWING TITLE
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S-02	GENERAL PLAN AND ELEVATION		
S-03	CROSS SECTIONS		
S-04	BORING LOGS - 1		
S-05	BORING LOGS - 2		
S-06	ABUTMENT, FOUNDATION, AND PILE LAYOUT PLAN		
S-07	MICROPILE DETAILS		
S-08	ABUTMENT ELEVATIONS		
S-09	ABUTMENT DETAILS		
S-10	WINGWALL DETAILS - 1		
S-11	WINGWALL DETAILS - 2		
S-12	FRAMING PLAN		
S-13	PRESTRESSED DECK UNIT DETAILS - 1		
S-14	PRESTRESSED DECK UNIT DETAILS - 2		
S-15	DECK SLAB PLAN		
S-16	MISCELLANEOUS DETAILS		
S-17	3-TUBE CURB MOUNTED BRIDGE RAIL DETAILS - 1		
S-18	3-TUBE CURB MOUNTED BRIDGE RAIL DETAILS - 2		
S-19	3-TUBE CURB MOUNTED BRIDGE RAIL - REINFORCEMENT		
S-20	WATER HANDLING PLAN		

DESIGNED BY: **BENESCH**

STATE OF CONNECTICUT · STEVEN J. DRECHSLER · No. 23441 · LICENSED PROFESSIONAL ENGINEER

Steven Drechsler
2025.09.23
16:17:40-04'00'

REV. | DATE | REVISION DESCRIPTION

SIGNATURE BLOCK: benesch — Alfred Benesch & Company, 120 Hebron Avenue 2nd Floor, Glastonbury, CT

DESIGNER/DRAFTER: A. BISI CHECKED BY: M. HABEK

CTDOT **CONNECTICUT DEPARTMENT OF TRANSPORTATION**

PROJECT TITLE: **REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK**

TOWN(S): TOWN OF POMFRET · 1713 — **POMFRET**

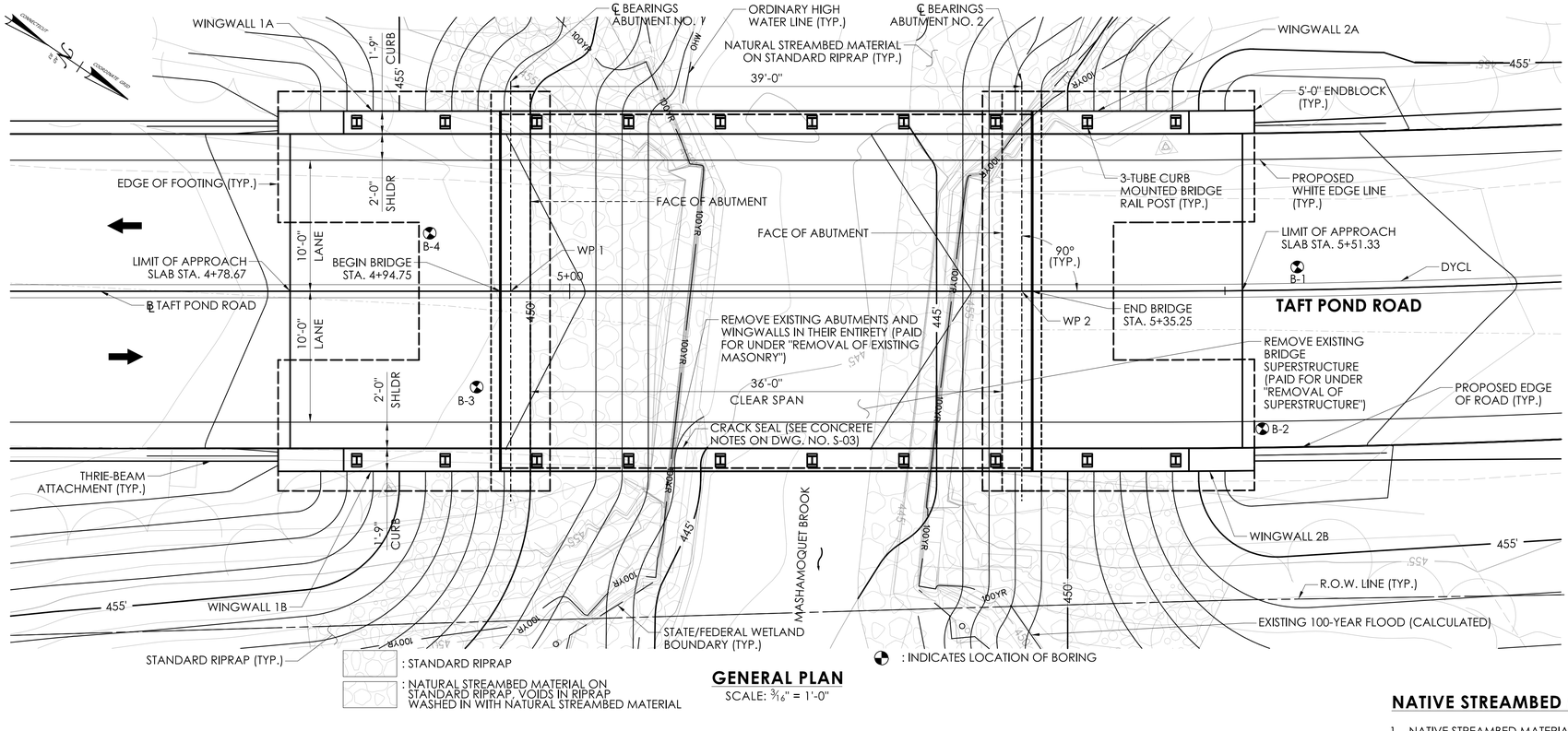
DRAWING TITLE: **INDEX OF STRUCTURE DRAWINGS**

PROJECT NO.: **0111-0125**

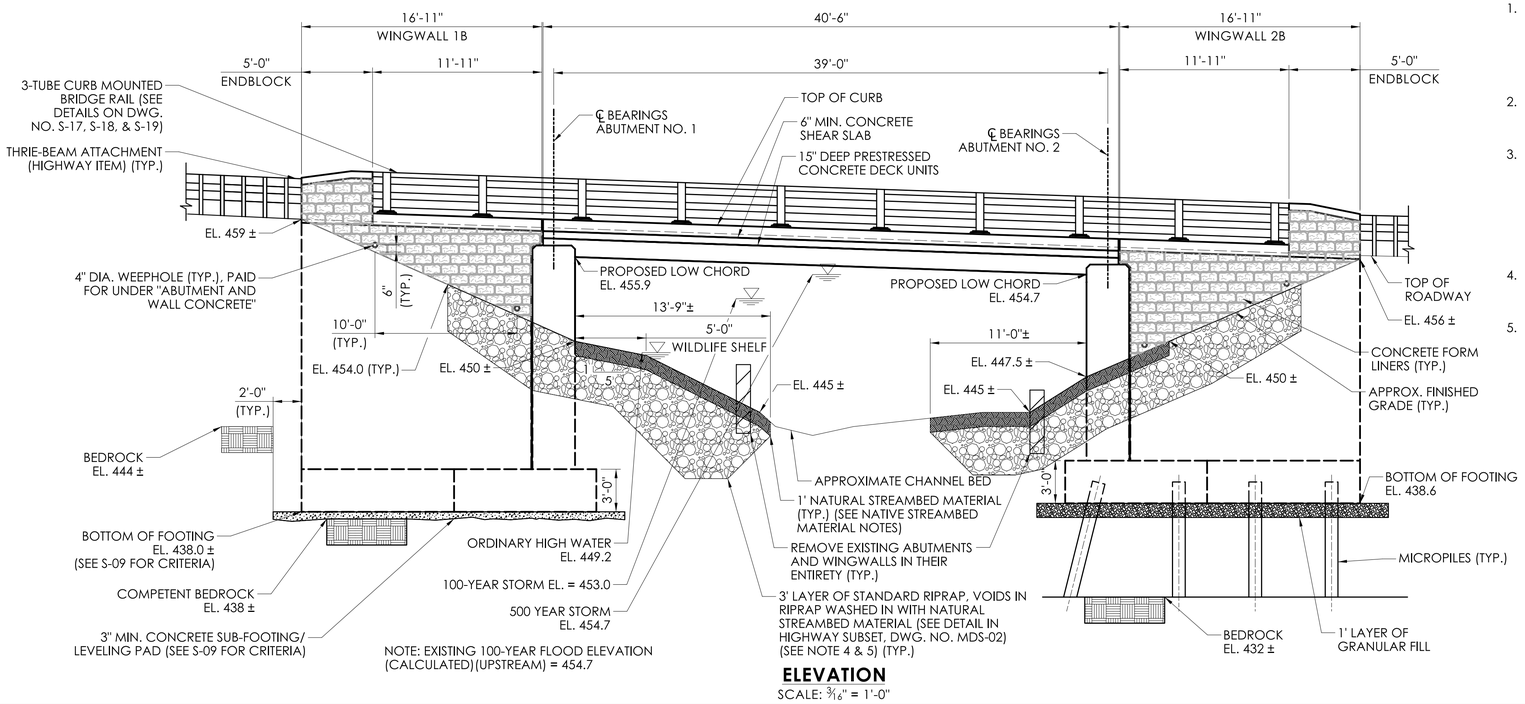
DRAWING NO.: **S-01**

SHEET NO.: **04.01**

LASTED SAVED BY: abisi **FILE NAME:** c:\pwwordir\benesch projects\projects\d0208193\SB_CP_0111_0125_INDEX.dgn
PLOTTED DATE: 9/19/2025



GENERAL PLAN
SCALE: 3/16" = 1'-0"



ELEVATION
SCALE: 3/16" = 1'-0"

GENERAL NOTES

SPECIFICATIONS: CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 819 (2024), SUPPLEMENTAL SPECIFICATIONS DATED JANUARY 2025 AND SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: ALL ELEMENTS TO BE DESIGNED ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2020, 9TH EDITION, AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL (2003).

MATERIAL STRENGTHS:

CONCRETE:	
CLASS PCC 03340	f'c = 3,000 PSI
CLASS PCC 04460	f'c = 4,000 PSI
CLASS PCC 04462	f'c = 4,000 PSI
PRESTRESSED DECK UNITS (4'-0" X 1'-3" AND 3'-0" X 1'-3")CLASS PRC 08062	f'c = 8,000 PSI

THE CONCRETE STRENGTH, f'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 = 60,000 PSI (GALVANIZED, SEE DWG. NO. S-03 FOR MORE INFORMATION)

LIVE LOAD: HL-93, LEGAL AND PERMIT VEHICLES

FUTURE PAVING ALLOWANCE: NONE

BITUMINOUS CONCRETE OVERLAY: THE 3" LAYER OF HMA SHALL CONSIST OF TWO LIFTS. THE FIRST SHALL BE HMA S 0.25 (1 INCH THICK). THE SECOND SHALL BE HMA S 0.50 (2 INCHES THICK). MIXES SHALL BE TRAFFIC LEVEL 2.

FOUNDATION PRESSURES AND PILE LOADS: THE VARIOUS GROUP LOADINGS NOTED ON THE SUBSTRUCTURE PLAN SHEETS REFER TO THE GROUP LOADS AS GIVEN IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

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

EXISTING DIMENSIONS: DIMENSIONS OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY. THEY HAVE BEEN TAKEN FROM THE ORIGINAL DESIGN DRAWINGS 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 REVIEW, THE FIELD MEASUREMENTS SHALL BE SUBMITTED FOR REFERENCE BY THE REVIEWER.

BRIDGE IDENTIFICATION PLACARDS: THE CONTRACTOR SHALL PROVIDE AND INSTALL A NEW BRIDGE IDENTIFICATION SIGN AT THE LEADING END OF EACH BRIDGE PARAPET ON THE TRAFFIC SIDE. THE SIGNS SHALL BE FABRICATED WITH 40 GAUGE ALUMINUM SHEET METAL. THE SIGNS SHALL BE 4" BY 12" WITH 3" WHITE REFLECTIVE BLOCK LETTERS ON GREEN REFLECTIVE SHEETING. EACH SIGN SHALL READ: 05664. THE FINAL LOCATION AND ATTACHMENT METHOD FOR THE SIGNS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. THE BRIDGE SIGNS SHALL BE PAID FOR UNDER ITEM "SIGN FACE SHEET ALUMINUM (TYPE IX RETROREFLECTIVE SHEETING)."

MASH TEST LEVEL: THE 3-TUBE CURB MOUNTED BRIDGE RAIL MEETS THE TL-4 CRITERIA FOR MASH 2016.

NATIVE STREAMBED MATERIAL NOTES:

1. NATIVE STREAMBED MATERIAL EXCAVATED DURING CONSTRUCTION SHALL BE STOCKPILED AND THEN REPLACED AS DIRECTED BY THE ENGINEER, AND IN ACCORDANCE WITH THE PERMIT DOCUMENTS (PAID FOR UNDER "EXCAVATION AND REUSE OF EXISTING CHANNEL BOTTOM MATERIAL").
2. THE STOCKPILE SHALL BE LOCATED OUTSIDE THE WETLAND LIMITS AND PROTECTED WITH SEDIMENTATION CONTROL SYSTEM.
3. IF A SUFFICIENT QUANTITY OF MATERIAL IS NOT AVAILABLE FROM THE EXISTING STREAMBED CHANNEL WITHIN THE PERMITTED FOOTPRINT OF THE SITE, THE CONTRACTOR SHALL FURNISH VISUALLY INSPECTED AND ACCEPTED (BY DEEP FISHERIES OR OEP) SUPPLEMENTAL STREAMBED CHANNEL MATERIAL FROM AN OFF-SITE SOURCE (PAID FOR UNDER THE ITEM "SUPPLEMENTAL STREAMBED CHANNEL MATERIAL").
4. ELEVATION OF THE BASE OF RIPRAP SHALL MATCH THE ELEVATION OF THE TOP OF THE FOOTING/PILE CAP OR SHALL BE 3 FEET THICK MINIMUM.
5. WASHING-IN OF THE INSTALLED SUPPLEMENTAL STREAMBED CHANNEL MATERIAL SHALL BE PAID FOR UNDER ITEM NO. 0202218 - "WASHING-IN SUPPLEMENTAL STREAMBED MATERIAL."

HYDRAULIC SUMMARY TABLE

DRAINAGE AREA [SQ. MI.]	11.0
DESIGN FREQUENCY [YEAR]	100
DESIGN DISCHARGE [CFS]	1690
AVERAGE DAILY FLOW ELEVATION [FT]	447.8 (CALCULATED)
100-YR UPSTREAM DESIGN WATER SURFACE ELEVATION	453.0
100-YR DOWNSTREAM DESIGN WATER SURFACE ELEVATION	450.6
MAXIMUM SCOUR ELEVATION [FT]	434.3
FREQUENCY [YEAR]	500
DISCHARGE [CFS]	2450
WORST CASE SCOUR SUBSTRUCTURE UNIT	ABUTMENT NO. 2

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	STRUCTURE SHEET REFERENCE
N/A	N/A

ESTIMATED TRANSPORTATION DIMENSIONS AND WEIGHTS

MEMBER	LENGTH (FT)	HEIGHT (FT)	WIDTH (FT)	WEIGHT (LBS)
PRESTRESSED DECK UNIT (4'-0" X 1'-3") (EXTERIOR)	40'-6"	2'-5"	4'-0"	26,000
PRESTRESSED DECK UNIT (4'-0" X 1'-3") (INTERIOR)	40'-6"	1'-6"	4'-0"	24,000
PRESTRESSED DECK UNIT (3'-0" X 1'-3")	40'-6"	1'-6"	3'-0"	19,000

REV. | DATE | REVISION DESCRIPTION

SIGNATURE BLOCK: benesch — Alfred Benesch & Company, 120 Hebron Avenue 2nd Floor Glastonbury, CT
DESIGNER/DRAFTER: A. BISI CHECKED BY: M. HABEK

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK

TOWN(S): POMFRET

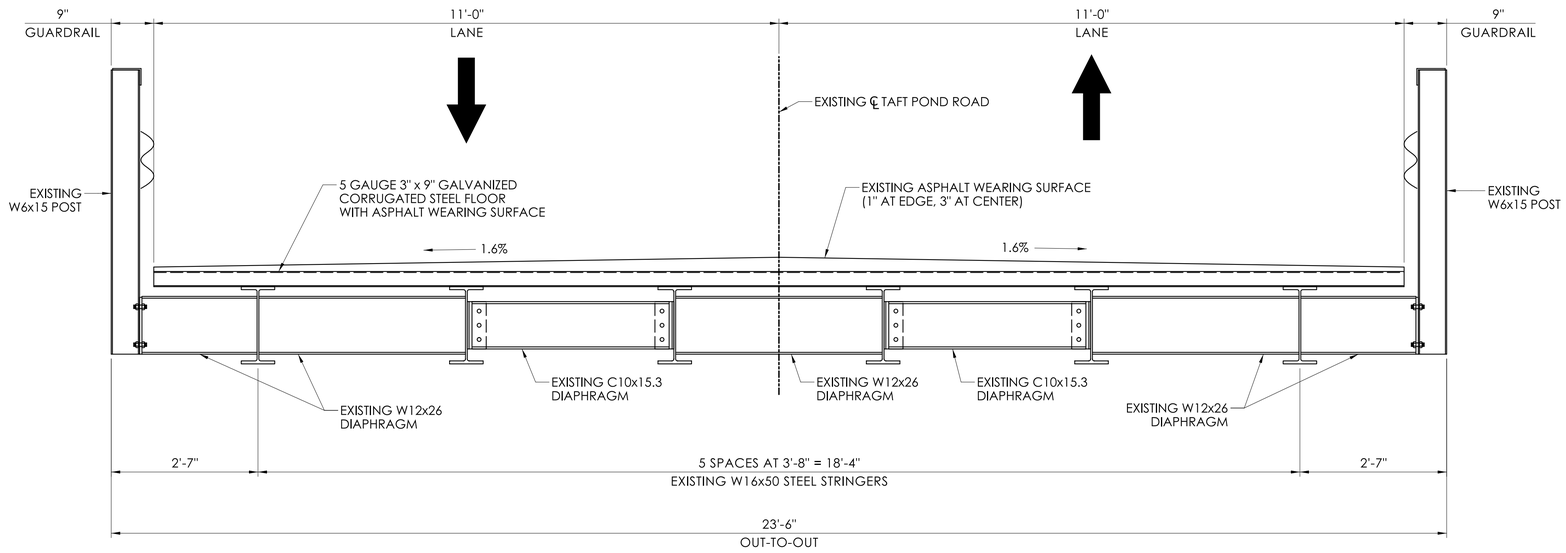
DRAWING TITLE: GENERAL PLAN AND ELEVATION

PROJECT NO.: 0111-0125

DRAWING NO.: S-02

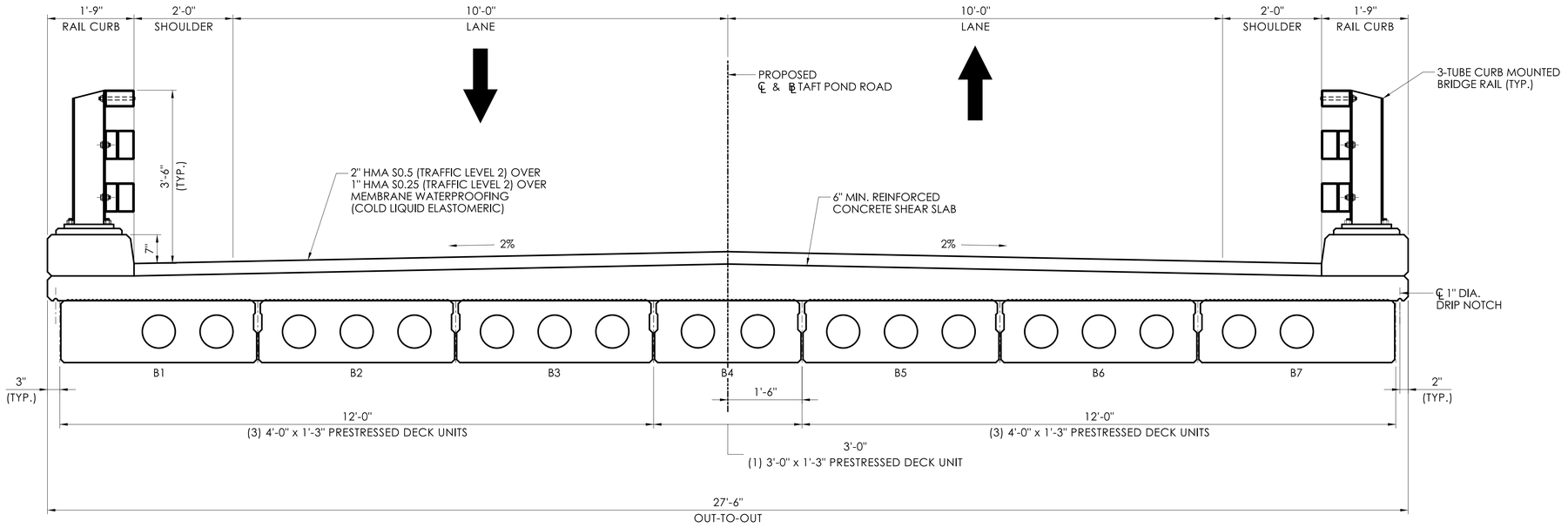
SHEET NO.: 04.02

LASTED SAVED BY: abisi FILE NAME: c:\pwwordir\benesch projects\projects\d0208193\SB_CP_0111_0125_GPN.dgn
PLOTTED DATE: 9/23/2025



EXISTING CROSS SECTION

SCALE: ¾" =1'-0"



PROPOSED CROSS SECTION

SCALE: ¾" =1'-0"

CONCRETE NOTES:

COMPOSITE CONSTRUCTION: NO TEMPORARY INTERMEDIATE SUPPORTS SHALL BE USED PRIOR TO AND DURING THE PLACING AND SETTING OF THE CONCRETE DECK SLAB. CONSTRUCTION LOADS AND DEAD LOADS WILL BE PERMITTED WHEN DIRECTED BY THE ENGINEER BUT ONLY WHEN THE CONCRETE HAS REACHED A STRENGTH OF f'c = 3,500 PSI. LIVE LOADS (TRAFFIC) WILL BE PERMITTED ON THE STRUCTURE AFTER THE CONCRETE HAS REACHED A STRENGTH OF f'c = 4,000 PSI.

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

ITEM	BRIDGE COMPONENTS	PCC CLASS
FOOTING CONCRETE	ABUTMENT AND WINGWALL FOOTINGS, SUB-FOOTING/LEVELING PAD	PCC03340
ABUTMENT AND WALL CONCRETE	CHEEKWALLS, ABUTMENT AND WINGWALL STEMS	PCC03340
BRIDGE DECK CONCRETE	SHEAR SLAB AND CURBS ON BRIDGE	PCC04462
APPROACH SLAB CONCRETE	APPROACH SLABS	PCC04460
PARAPET CONCRETE	WINGWALL END BLOCKS AND CURBS ON WINGWALLS	PCC04462

EXPOSED EDGES: EXPOSED EDGES OF CONCRETE SHALL BE BEVELED 1"X1" 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 ITEM "DEFORMED STEEL BARS - GALVANIZED"

PREFORMED EXPANSION JOINT FILLER: THE COST OF FURNISHING AND INSTALLING PREFORMED EXPANSION JOINT FILLER IS PAID FOR AS "1" PREFORMED EXPANSION 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.

PENETRATING SEALER PROTECTIVE COMPOUND SHALL BE APPLIED TO THE FOLLOWING CONCRETE SURFACES EXPOSED TO SALT SPRAY: CURBS AND WINGWALLS. THE FRONT FACE AND TOP FACE OF THE CONCRETE SURFACES SHALL BE SEALED, EXCLUDING FORMLINED SURFACES. THE COST SHALL BE INCLUDED IN THE ITEM "PENETRATING SEALER PROTECTIVE COMPOUND".

CRACK SEAL SHALL BE INSTALLED AT THE CURB LINE ALONG THE LENGTH OF THE BRIDGE AND WINGWALLS, BOTH SIDES. CRACK SEALING SHALL BE INCLUDED FOR PAYMENT UNDER THE ITEM, "GUTTER LINE SEALING FOR BRIDGES". SEE SPECIAL PROVISIONS.

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK:
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Alfred Benesch & Company
120 Hebron Avenue
2nd Floor
Glastonbury, CT
DESIGNER/DRAFTER: A. BISI
CHECKED BY: M. HABEK

CTDOT
CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE:
REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK

TOWN(S):
POMFRET

DRAWING TITLE:
CROSS SECTIONS

PROJECT NO.: **0111-0125**

DRAWING NO.: **S-03**

SHEET NO.: **04.03**

LASTED SAVED BY: abisi **FILE NAME:** c:\pwwordir\benesch projects\projects\d0208193\SB_CP_0111_0125_SEC.dgn
PLOTTED DATE: 9/19/2025

Driller:	M. Dambrosio	**Connecticut DOT Boring Log Format**		Hole No.:	B-1 (OW)
Inspector:	M. Cyr	Town:	Pomfret	Stat./Offset:	5+55.556/-1.755
Engineer:	A. McCauliffe	Project No.:	111-125	Northing:	880175
Start Date:	5-16-23	Route No.:		Easting:	1201729
Finish Date:	5-16-23	Bridge No.:	05664	Surface Elevation:	456.4
Project Description:	Taft Pond Road - Bridge 05664				
Casing Size/Type:	4-in. Casing	Sampler Type/Size:	1-3/8 inch ID	Core Barrel Type:	NX
Hammer Wt.:	300lb Fall: 30in.	Hammer Wt.:	140lb Fall: 30in.		
Groundwater Observations:	9.0 24 hours				

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						Pavement Structure	ASPHALT (6-inches)	
	1	10 13 10 7	24	12		Misc. Fill	Brown and tan c-f SAND, little f-m gravel, little silt	455
	2	12 10 8 8	24	16			Brown and tan c-f SAND, little f-m gravel, little silt	
5	3	9 6 4 3	24	14			Brown and tan c-f SAND, little f-m gravel, trace silt	450
	4	4 6 50.0/5.0"	17	6		Silty Sand	Brown c-f SAND, little f-m gravel, little silt BOULDERS	
10	5	22 18 8 7	24	0			No Recovery	445
	6	15 12 10 12	24	0			No Recovery	440
20	7	10 23 33 28	24	14		Glacial Till	Gray c-f SAND, some silt, little f-c gravel	435
25								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 24ft Rock: 10ft No. of Soil Samples: 7 No. of Core Runs: 1	NOTES: Screen from 10-20 feet, Riser from 0-10 feet, sand froom 8-20 feet, betonite from 5-8 feet, spoils from 1-5 feet, roadbox and concrete from 0-1 feet	Sheet 1 of 2 SM-001-M REV. 1/02

BORING B-1

Driller:	M. Dambrosio	**Connecticut DOT Boring Log Format**		Hole No.:	B-1 (OW)
Inspector:	M. Cyr	Town:	Pomfret	Stat./Offset:	5+55.556/-1.755
Engineer:	A. McCauliffe	Project No.:	111-125	Northing:	880175
Start Date:	5-16-23	Route No.:		Easting:	1201729
Finish Date:	5-16-23	Bridge No.:	05664	Surface Elevation:	456.4
Project Description:	Taft Pond Road - Bridge 05664				
Casing Size/Type:	4-in. Casing	Sampler Type/Size:	1-3/8 inch ID	Core Barrel Type:	NX
Hammer Wt.:	300lb Fall: 30in.	Hammer Wt.:	140lb Fall: 30in.		
Groundwater Observations:	9.0 24 hours				

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
25	8	25 50/3.0"	9	3		Weathered Bedrock (con't)	Gray WEATHERED BEDROCK. Gray bedrock in tip	
	C-1		60	60	65	Bedrock	Gray, GNEISS, fine grained, intensely fractured to highly fractured, fresh to slightly weathered, medium strong, 0° to 15° bedding angle, Min/ft - 3/3/3/3	430
30								
	C-2		60	54	88		Gray, GNEISS, fine grained, highly fractured to moderately fractured, fresh to slightly weathered, medium strong, 0° to 15° bedding angle, Min/ft - 3/4/5/5/4	425
35								
							END OF BORING 36ft	420
40								
								415
45								
								410
50								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 24ft Rock: 10ft No. of Soil Samples: 7 No. of Core Runs: 1	NOTES: Screen from 10-20 feet, Riser from 0-10 feet, sand froom 8-20 feet, betonite from 5-8 feet, spoils from 1-5 feet, roadbox and concrete from 0-1 feet	Sheet 2 of 2 SM-001-M REV. 1/02

BORING B-1 (CONT.)

Driller:	M. Dambrosio	**Connecticut DOT Boring Log Format**		Hole No.:	B-2
Inspector:	M. Cyr	Town:	Pomfret	Stat./Offset:	5+52.728/10.555
Engineer:	A. McCauliffe	Project No.:	111-125	Northing:	880176
Start Date:	5-17-23	Route No.:		Easting:	1201748
Finish Date:	5-17-23	Bridge No.:	05664	Surface Elevation:	456.4
Project Description:	Taft Pond Road - Bridge 05664				
Casing Size/Type:	4-in. Casing	Sampler Type/Size:	1-3/8 inch ID	Core Barrel Type:	NX
Hammer Wt.:	300lb Fall: 30in.	Hammer Wt.:	140lb Fall: 30in.		
Groundwater Observations:	Not Recorded				

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						Pavement Structure	ASPHALT (12-inches)	
	1	7 7 6 7	24	12		Misc. Fill	Tan c-f SAND, little f-m gravel, little silt	455
	2	4 7 7 8	24	11			Tan f SAND, some silt, little c-f gravel	
5	3	4 7 5 4	24	8			Tan and brown c-f SAND, little f-m gravel, trace silt	450
	4	7 5 5 5	24	12		Silty Sand	Brown c-f SAND, little f-m gravel, little silt	
10	5	17 19 8 16	24	14			White and brown weathered cobble, little f sand, trace silt	445
	6	7 7 10 12	24	2		Glacial Till	Gray Clayey SILT, little f snad, trace f gravel	440
20	7	14 15 16 18	24	14			Gray Clayey SILT, come f-c sand, little f-c grave	435
25						Bedrock		

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 25ft Rock: 10ft No. of Soil Samples: 7 No. of Core Runs: 2	NOTES: Rollerbit to 25 ft before coring	Sheet 1 of 2 SM-001-M REV. 1/02

BORING B-2

Driller:	M. Dambrosio	**Connecticut DOT Boring Log Format**		Hole No.:	B-2
Inspector:	M. Cyr	Town:	Pomfret	Stat./Offset:	5+52.728/10.555
Engineer:	A. McCauliffe	Project No.:	111-125	Northing:	880176
Start Date:	5-17-23	Route No.:		Easting:	1201748
Finish Date:	5-17-23	Bridge No.:	05664	Surface Elevation:	456.4
Project Description:	Taft Pond Road - Bridge 05664				
Casing Size/Type:	4-in. Casing	Sampler Type/Size:	1-3/8 inch ID	Core Barrel Type:	NX
Hammer Wt.:	300lb Fall: 30in.	Hammer Wt.:	140lb Fall: 30in.		
Groundwater Observations:	Not Recorded				

Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
25	C-1		60	60	83	Bedrock (con't)	Gray, GNEISS, fine grained, intensely fractured to highly fractured, slightly weathered, medium strong, 0° to 15° bedding angle, min/ft. 1.5-1.5-1.5-1.5-1.5	430
30								
	C-2		60	60	72		Gray, GNEISS, fine grained, intensely fractured to moderately fractured, slightly weathered, medium strong, 0° to 75° bedding angle, min/ft. 2-2-2-2-2	425
35								
							END OF BORING 35ft	420
40								
								415
45								
								410
50								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 25ft Rock: 10ft No. of Soil Samples: 7 No. of Core Runs: 2	NOTES: Rollerbit to 25 ft before coring	Sheet 2 of 2 SM-001-M REV. 1/02

BORING B-2 (CONT.)

NOTE: SEE DWG. NO. S-02 FOR BORING LOCATIONS

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK:
benesch
Alfred Benesch & Company, 120 Hebron Avenue, 2nd Floor, Glastonbury, CT
DESIGNER/DRAFTER: A. BISI CHECKED BY: M. HABEK

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE:
REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK

TOWN(S): **POMFRET**

DRAWING TITLE: **BORING LOGS - 1**

PROJECT NO.: **0111-0125**

DRAWING NO.: **S-04**
SHEET NO.: **04.04**

LASTED SAVED BY: abisi **FILE NAME:** c:\pwwordir\benesch projects\projects\d0208193\SB_CP_0053_0196_BORING LOG 1.dgn
PLOTTED DATE: 9/19/2025

Driller: M. St. John	**Connecticut DOT Boring Log Format**		Hole No.: B-3
Inspector: M. Cyr	Town: Pomfret		Stat./Offset: 4+92.907/7.316
Engineer: A. McCauliffe	Project No.: 111-125		Northing: 880134
Start Date: 5-17-23	Route No.:		Easting: 1201776
Finish Date: 5-17-23	Bridge No.: 05664		Surface Elevation: 458.1
Project Description: Taft Pond Road - Bridge 05664			
Casing Size/Type: 4-in. Casing	Sampler Type/Size: 1-3/8 inch ID		Core Barrel Type: NX
Hammer Wt.: 300lb Fall: 30in.	Hammer Wt.: 140lb Fall: 30in.		
Groundwater Observations: Not Recorded			

Depth (ft)	SAMPLES: Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						Pavement Structure	ASPHALT (12-inches)	
	1	10 7 6 5	24	13		Misc. Fill	Tan c-f SAND, little m-f gravel, little silt	455
	2	5 4 4 5	24	10			Tan f SAND, little silt, trace f gravel	
5	3	6 5 6 5	24	16			Tan f SAND, some silt, little f gravel	
	4	11 7 6 4	24	5		Silty Sand	Brown, f SAND, some silt, trace f gravel	450
10	5	2 1 2 13	24	8			Brown c-f SAND, little silt. trace f gravel	
								445
15	6	20 50.0/1.0"	7	0		Bedrock	Gray rock fragments in tip	
								440
20	C-1		60	55	50		Gray, GNEISS, fine grained, intensely fractured to highly fractured, fresh to slightly weathered, medium strong, 0° to 15° bedding angle, min/ft. 3-3-3-3-3	
25								435

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 20ft Rock: 10ft No. of Soil Samples: 6 No. of Core Runs: 2	NOTES: Rollerbit thru rock to 20 ft before coring	Sheet 1 of 2 SM-001-M REV. 1/02

BORING B-3

Driller: M. St. John	**Connecticut DOT Boring Log Format**		Hole No.: B-3
Inspector: M. Cyr	Town: Pomfret		Stat./Offset: 4+92.907/7.316
Engineer: A. McCauliffe	Project No.: 111-125		Northing: 880134
Start Date: 5-17-23	Route No.:		Easting: 1201776
Finish Date: 5-17-23	Bridge No.: 05664		Surface Elevation: 458.1
Project Description: Taft Pond Road - Bridge 05664			
Casing Size/Type: 4-in. Casing	Sampler Type/Size: 1-3/8 inch ID		Core Barrel Type: NX
Hammer Wt.: 300lb Fall: 30in.	Hammer Wt.: 140lb Fall: 30in.		
Groundwater Observations: Not Recorded			

Depth (ft)	SAMPLES: Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
25	C-2		60	43	22		Gray, GNEISS, fine grained, intensely fractured to highly fractured, fresh to slightly weathered, medium strong, 0° to 45° bedding angle, min/ft. 3-2-3-2-2	430
30							END OF BORING 30ft	
35								425
								420
40								
45								415
								410
50								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 20ft Rock: 10ft No. of Soil Samples: 6 No. of Core Runs: 2	NOTES: Rollerbit thru rock to 20 ft before coring	Sheet 2 of 2 SM-001-M REV. 1/02

BORING B-3 (CONT.)

Driller: D. DeAngelas	**Connecticut DOT Boring Log Format**		Hole No.: B-4
Inspector: M. Cyr	Town: Pomfret		Stat./Offset: 4+89.323/-4.432
Engineer: A. McCauliffe	Project No.: 111-125		Northing: 880118
Start Date: 5-16-23	Route No.:		Easting: 1201763
Finish Date: 5-16-23	Bridge No.: 05664		Surface Elevation: 458.3
Project Description: Taft Pond Road - Bridge 05664			
Casing Size/Type: 4-in. Casing	Sampler Type/Size: 1-3/8 inch ID		Core Barrel Type: NX
Hammer Wt.: 300lb Fall: 30in.	Hammer Wt.: 140lb Fall: 30in.		
Groundwater Observations: Not Recorded			

Depth (ft)	SAMPLES: Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						Pavement Structure	ASPHALT (6-inches)	
	1	13 13 12 10	24	14		Misc. Fill	Brown and tan f SAND, little f-m gravel, trace silt	455
	2	6 5 3 3	24	14			Top 7 inches, Brown and tan f SAND, little f-m gravel, trace silt bottom 7 inches, Tan f SAND, trace f gravel, trace silt.	
5	3	5 8 5 4	24	13		Silty Sand	Olive f SAND, some silt, little c-f gravel	
	4	3 3 2 6	24	6			Olive f SAND, some silt, little c-f gravel	450
10	5	3 2 11 16	24	8		Gravel	Brown f-c GRAVEL, little f sand, little silt	
								445
15						Bedrock	Roller bit through rock from 14-20 feet.	
								440
20	C-1		60	53	50		Gray, GNEISS, fine grained, intensely fractured, fresh to slightly weathered, medium strong, 0° to 15° bedding angle, Min/ft - 3-10-5.5-5.5-2.25	
25								435

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 20ft Rock: 10ft No. of Soil Samples: 5 No. of Core Runs: 2	NOTES: Rollerbit thru rock to 20 ft before coring	Sheet 1 of 2 SM-001-M REV. 1/02

BORING B-4

Driller: D. DeAngelas	**Connecticut DOT Boring Log Format**		Hole No.: B-4
Inspector: M. Cyr	Town: Pomfret		Stat./Offset: 4+89.323/-4.432
Engineer: A. McCauliffe	Project No.: 111-125		Northing: 880118
Start Date: 5-16-23	Route No.:		Easting: 1201763
Finish Date: 5-16-23	Bridge No.: 05664		Surface Elevation: 458.3
Project Description: Taft Pond Road - Bridge 05664			
Casing Size/Type: 4-in. Casing	Sampler Type/Size: 1-3/8 inch ID		Core Barrel Type: NX
Hammer Wt.: 300lb Fall: 30in.	Hammer Wt.: 140lb Fall: 30in.		
Groundwater Observations: Not Recorded			

Depth (ft)	SAMPLES: Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
25	C-2		60	59	60	Bedrock *(con't)*	Gray, GNEISS, fine grained, intensely fractured, fresh to slightly weathered medium strong, 0° to 90° bedding angle, Min/ft - 6.5-3.5-6.5-6-5.5	430
30							END OF BORING 30ft	
35								425
								420
40								
45								415
								410
50								

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in Earth: 20ft Rock: 10ft No. of Soil Samples: 5 No. of Core Runs: 2	NOTES: Rollerbit thru rock to 20 ft before coring	Sheet 2 of 2 SM-001-M REV. 1/02

BORING B-4 (CONT.)

NOTE: SEE DWG. NO. S-02 FOR BORING LOCATIONS

REVISION DESCRIPTION

DATE

REV.

SIGNATURE BLOCK:

benesch

Alfred Benesch & Company
120 Hebron Avenue
2nd Floor
Glastonbury, CT

DESIGNER/DRAFTER: A. BISI CHECKED BY: M. HABEK

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE:
REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK

TOWN(S):
POMFRET

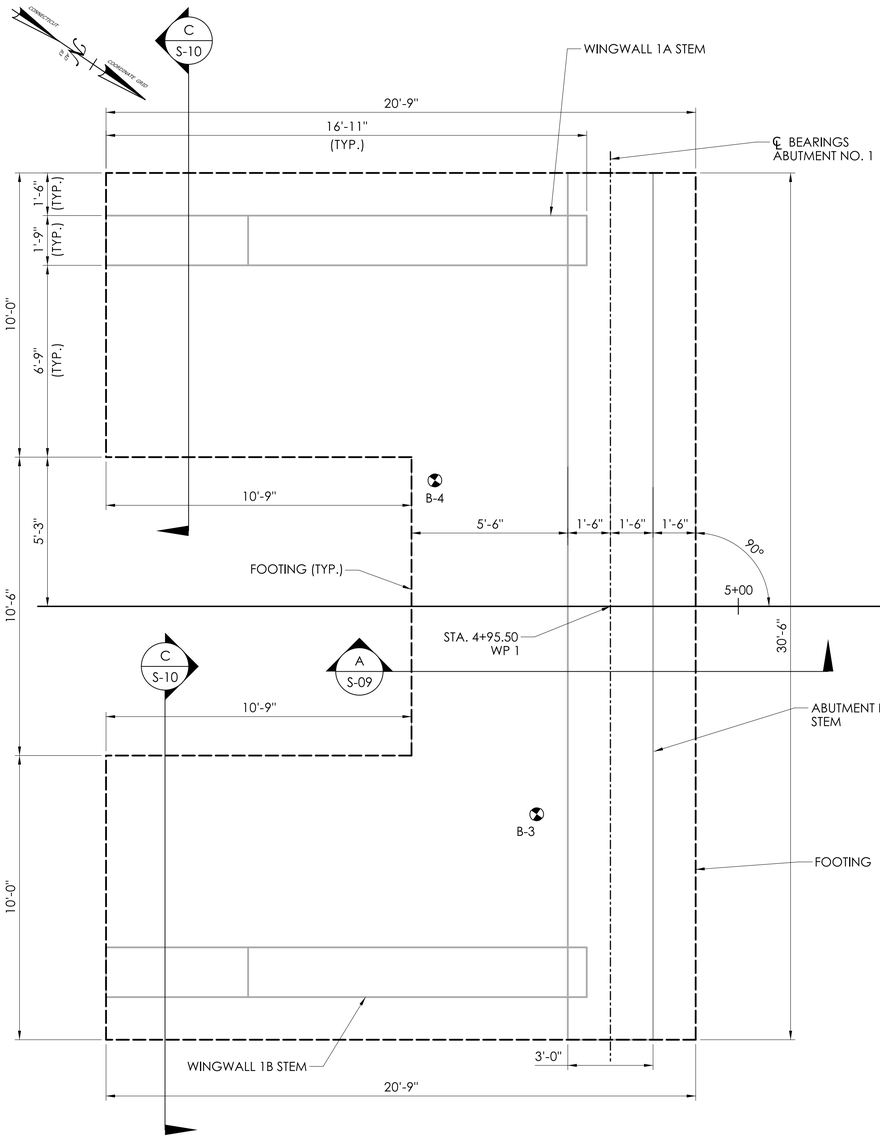
DRAWING TITLE:
BORING LOGS - 2

PROJECT NO.:
0111-0125

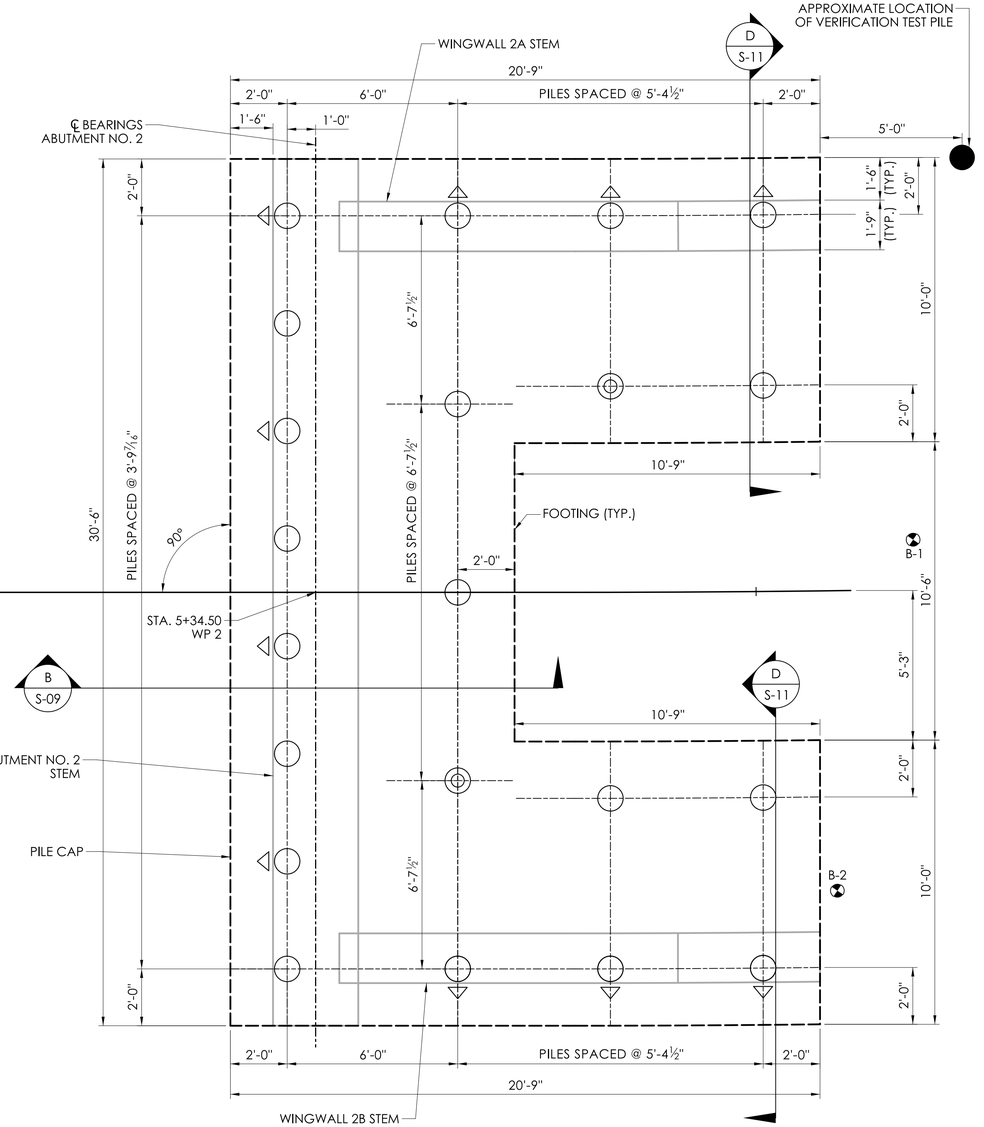
DRAWING NO.:
S-05

SHEET NO.:
04.05

LASTED SAVED BY: abisi **FILE NAME:** c:\pwwordir\benesch projects\projects\d0208193\SB_CP_0053_0196_BORING LOG 2.dgn
PLOTTED DATE: 9/19/2025



FINAL MICROPILE LAYOUT IS TO BE PROVIDED BY THE CONTRACTOR.



ABUTMENT, FOUNDATION, AND PILE LAYOUT PLAN

SCALE: ⅜" =1'-0"

KEY:

- : LOCATION OF BORING
- : MICROPILE (VERTICAL)
- : MICROPILE WITH 1:4 BATTER (IN DIRECTION OF ARROW)
- : LOCATION OF VERIFICATION TEST FOR MICROPILES
- : LOCATION OF PROOF TEST FOR MICROPILES
- : CENTERLINE OF PILE ROW

MAXIMUM FOUNDATION PRESSURES:

ABUTMENT NO. 1:
STRENGTH (I): 10.44 KSF
SERVICE (I): 7.17 KSF

WINGWALLS 1A & 1B:
STRENGTH (I): 7.41 KSF
SERVICE (I): 5.11 KSF

MAXIMUM DESIGN PILE LOADS:

STRENGTH (I): 158 KIPS
SERVICE (I): 106 KIPS

ULTIMATE MICROPILE CAPACITY = 226 KIPS
(BASED ON 0.70 RESISTANCE FACTOR)

ABUTMENT 2 DESIGN LOADS

	SERVICE I	STRENGTH I	EXTREME II
MAXIMUM DESIGN VERTICAL LOADS (KIPS/FT)	35.17	48.77	32.97
MAXIMUM DESIGN LATERAL LOADS (KIPS/FT)	7.47	11.52	7.47
MAXIMUM DESIGN MOMENT (KIP-FT/FT)	43.80	67.55	43.80

WINGWALL DESIGN LOADS

	SERVICE I	STRENGTH I	EXTREME II
MAXIMUM DESIGN VERTICAL LOADS (KIPS/FT)	25.17	34.30	25.17
MAXIMUM DESIGN LATERAL LOADS (KIPS/FT)	7.26	11.35	7.26
MAXIMUM DESIGN MOMENT (KIP-FT/FT)	42.57	66.55	42.57

REV. | DATE | REVISION DESCRIPTION

SIGNATURE BLOCK: benesch — Alfred Benesch & Company, 120 Hebron Avenue 2nd Floor Glastonbury, CT
DESIGNER/DRAFTER: A. BISI CHECKED BY: M. HABEK

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK

TOWN(S): POMFRET

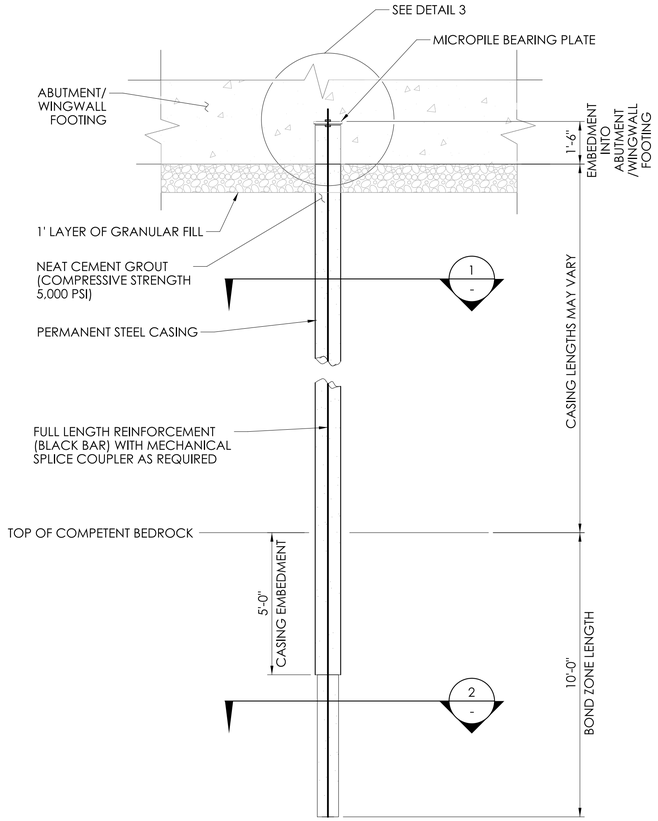
DRAWING TITLE: ABUTMENT, FOUNDATION, AND PILE LAYOUT PLAN

PROJECT NO.: 0111-0125

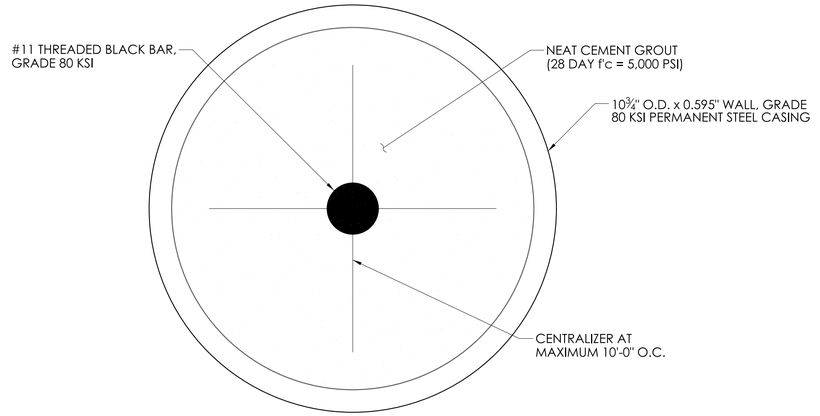
DRAWING NO.: S-06

SHEET NO.: 04.06

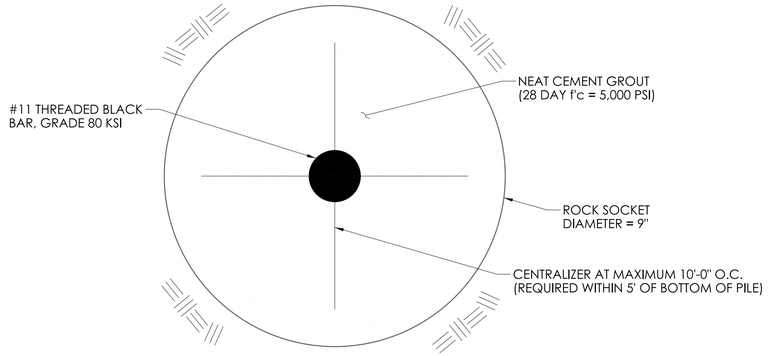
LASTED SAVED BY: abisi **FILE NAME:** c:\pwwordir\benesch projects\projects\d0208193\SB_CP_0111_0125_FNDN PILE LAYOUT.dgn
PLOTTED DATE: 9/19/2025



MICROPILE ELEVATION
SCALE: ⅜" = 1'-0"

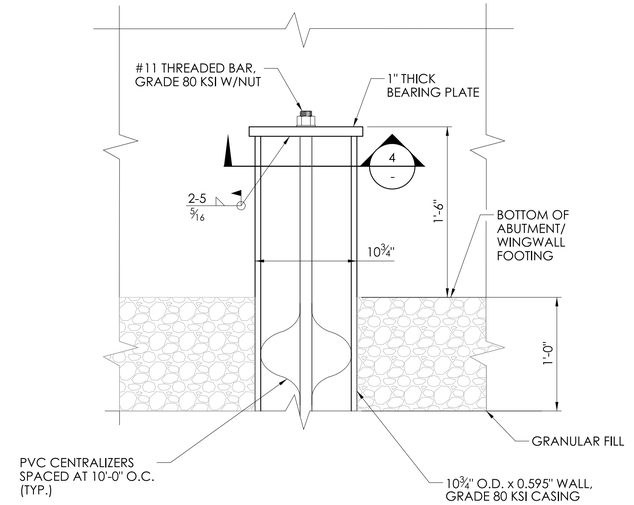


1 - CASED MICROPILE
SCALE: 6" = 1'-0"

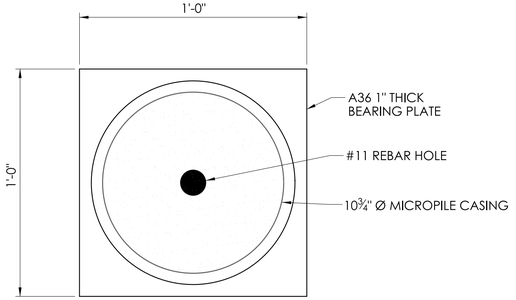


2 - UNCASED MICROPILE
SCALE: 6" = 1'-0"

FINAL MICROPILE DESIGN IS TO BE PROVIDED BY THE CONTRACTOR.



3 - MICROPILE DETAIL
SCALE: 1½" = 1'-0"



4 - MICROPILE BEARING PLATE DETAIL
SCALE: 3" = 1'-0"

MICROPILE NOTES:

1. CONTRACTOR RESPONSIBLE FOR SIZE AND GRADE OF CONTINUOUSLY THREADED REINFORCEMENT (ASTM A615) WHICH SHALL BE PAID FOR UNDER THE ITEM "MICROPILES". IF MULTIPLE REINFORCEMENT RODS ARE USED, INCLUDE SPACERS TO ASSURE BOND STRENGTH IS MAINTAINED (REQUIRED) WITHIN 3 FEET OF BOTTOM AND TOP OF PILE).
2. NO SPLICING OF THE CASING OR CENTRAL REINFORCING WILL BE ALLOWED WITHIN THE TOP 10 FEET OF MICROPILE.
3. THE MECHANICAL SPLICE COUPLERS ON THE REINFORCEMENT SHALL DEVELOP 125% IN TENSION AND COMPRESSION OF THE SPECIFIED YIELD STRENGTH OF THE BAR BEING SPLICED.
4. FOR ADDITIONAL REQUIREMENTS AND INFORMATION REFER TO THE GEOTECHNICAL REPORT.
5. PILE INSTALLATION TOLERANCES APPLY TO THE LEVEL OF FINAL PILE CUT-OFF.
6. MICROPILES SHALL BE PAID FOR UNDER THE ITEM "MICROPILES".
7. MICROPILE BOND ZONE AND LATERAL SUPPORT ZONE SHALL BE COMPLETELY BELOW THE MAXIMUM DESIGN SCOUR ELEVATION. PILE UNSUPPORTED LENGTH SHALL BE CHECKED FOR BUCKLING IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
8. SPLICES FOR THE OUTER CASINGS WITHIN THE SAME MICROPILE SHALL BE STAGGERED VERTICALLY A MINIMUM OF 2'-0" FROM THE THREADED BAR MECHANICAL SPLICER SYSTEM.

MICROPILE DETAILS

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK: benesch — Alfred Benesch & Company, 120 Hebron Avenue 2nd Floor, Glastonbury, CT
DESIGNER/DRAFTER: S. LACHCIK CHECKED BY: M. HABEK

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK

TOWN(S): POMFRET

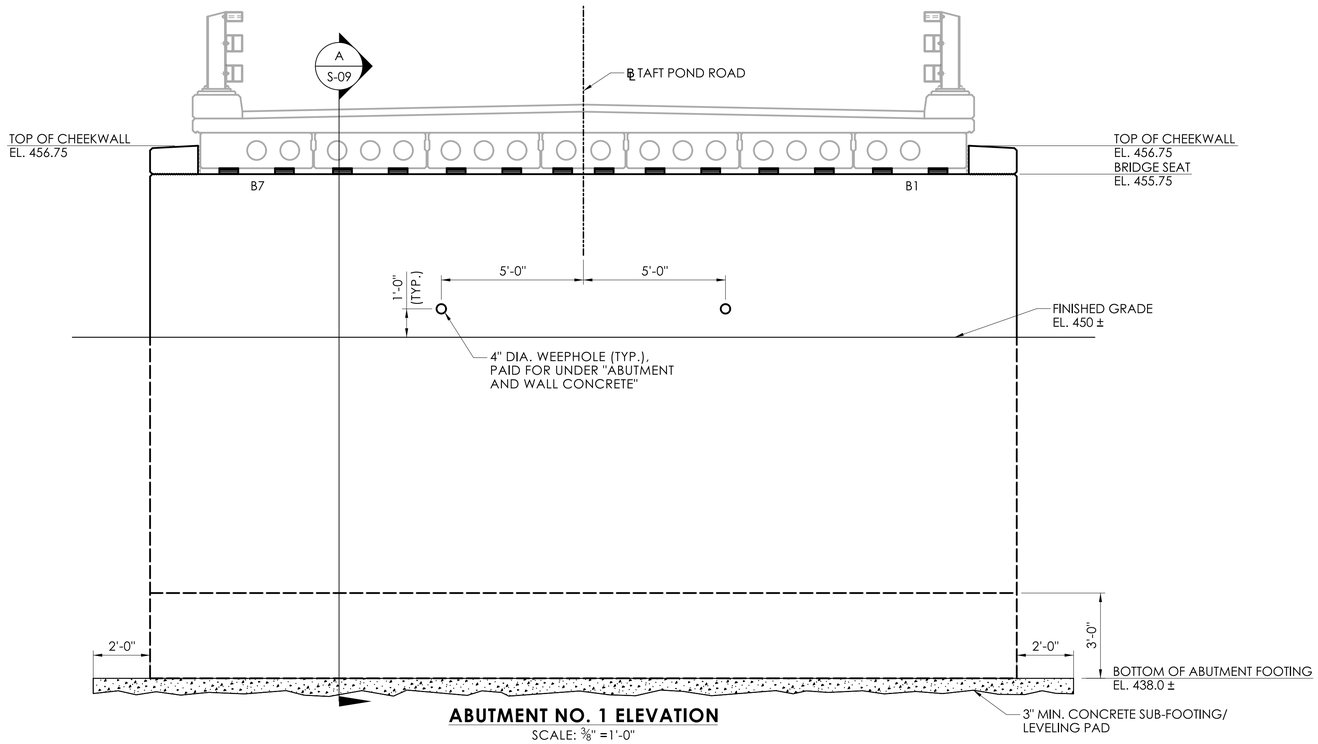
DRAWING TITLE: MICROPILE DETAILS

PROJECT NO.: 0111-0125

DRAWING NO.: S-07

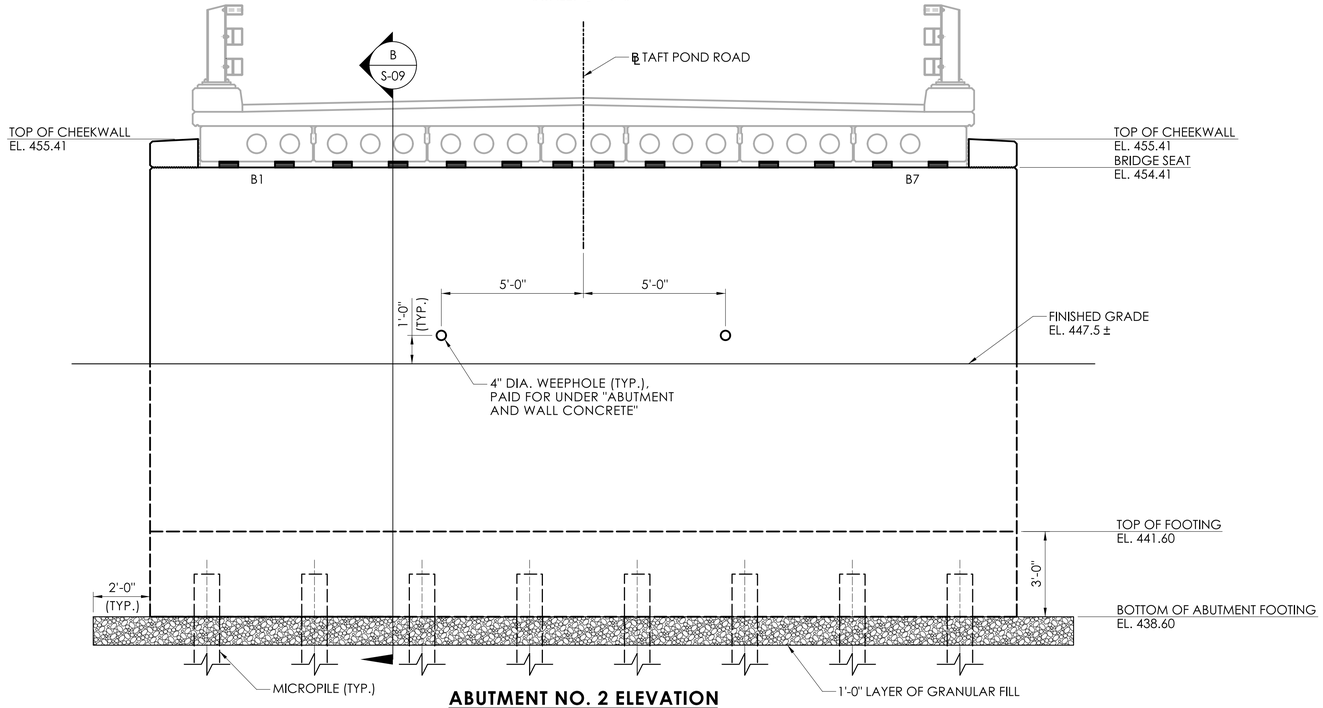
SHEET NO.: 04.07

LASTED SAVED BY: abisi **FILE NAME:** c:\pwwordir\benesch projects\projects\d0208193\SB_CP_0111-0125_PILE DETAILS.dgn
PLOTTED DATE: 9/19/2025



ABUTMENT NO. 1 ELEVATION

SCALE: ⅜" =1'-0"



ABUTMENT NO. 2 ELEVATION

SCALE: ⅜" =1'-0"

NOTE: PILES SHOWN SCHEMATICALLY, SEE DWG. NO. S-06 FOR MORE INFORMATION.

REVISION DESCRIPTION | DATE | REV.

SIGNATURE BLOCK:
benesch
Alfred Benesch & Company
120 Hebron Avenue
2nd Floor
Glastonbury, CT
DESIGNER/DRAFTER: A. BISI CHECKED BY: M. HABEK

CTDOT
CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE:
REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK

TOWN(S):
POMFRET

DRAWING TITLE:
ABUTMENT ELEVATIONS

PROJECT NO.: **0111-0125**

DRAWING NO.: **S-08**

SHEET NO.: **04.08**

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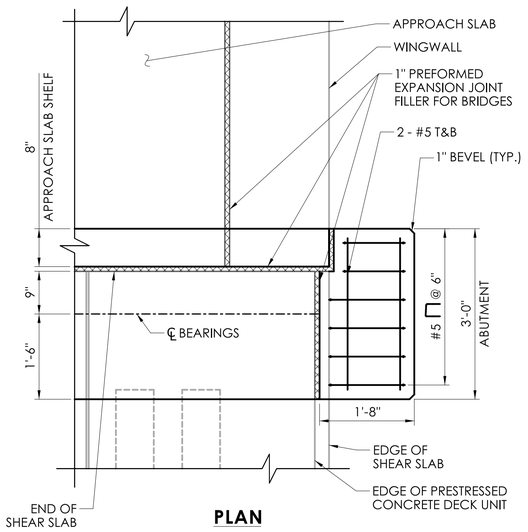
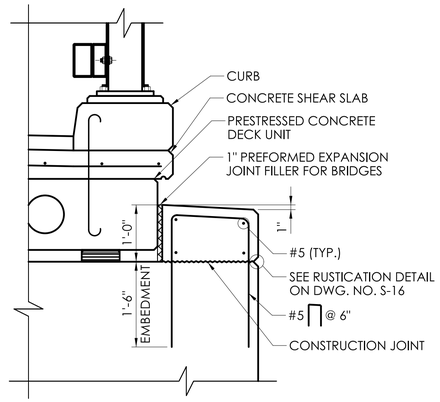
PLOTTED DATE: 9/19/2025



PLAN



ELEVATION

NOTES:
1. CHEEKWALL AT WINGWALL 1A SHOWN. OTHERS SIMILAR.
2. CURB NOT SHOWN FOR CLARITY.

CHEEKWALL DETAILS

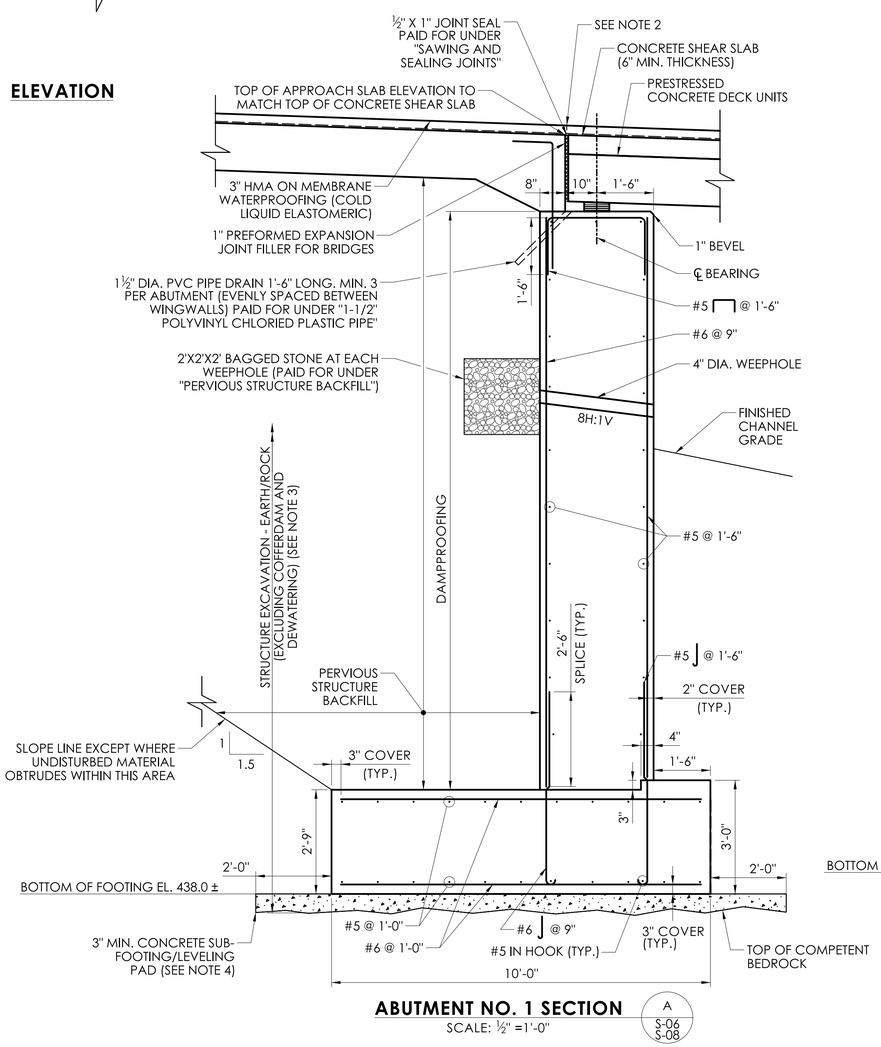
SCALE: ¾" =1'-0"

NOTES:

1. ABUTMENT CROSS SECTION IS TAKEN PERPENDICULAR TO ABUTMENT FACE.
2. CUT BITUMINOUS OVERLAY WITH ⅜" WIDE X 1¾" DEEP KERF AND FILL WITH POURABLE SEALANT. TO BE PAID FOR UNDER THE ITEM "SAWING AND SEALING JOINTS."
3. VERTICAL LIMITS OF "STRUCTURE EXCAVATION - EARTH (EXCLUDING COFFERDAM AND DEWATERING)" AND "STRUCTURE EXCAVATION - ROCK (EXCLUDING COFFERDAM AND DEWATERING)" SHALL EXTEND TO EXISTING GRADE.
4. AT ABUTMENT NO. 1, THE FOUNDATION SHALL BEAR DIRECTLY OVER COMPETENT BEDROCK. THE CONTRACTOR SHALL EXCAVATE DOWN TO COMPETENT BEDROCK (ESTIMATED ELEVATION 438.0, TO BE VERIFIED IN FIELD). IF COMPETENT BEDROCK IS SLOPED OR ABOVE EL. 438.0, THE BOTTOM OF THE FOOTING SHALL BE ESTABLISHED UPON LEVELING THE TOP OF COMPETENT BEDROCK SURFACE (BOTTOM OF FOOTING SHALL BE A MINIMUM OF 4 FEET BELOW PROPOSED GRADE). IF COMPETENT BEDROCK IS BELOW EL. 438.0, A 3" MINIMUM CAST-IN-PLACE CONCRETE SUB-FOOTING/LEVELING PAD WILL BE REQUIRED BETWEEN THE TOP OF COMPETENT BEDROCK AND BOTTOM OF PROPOSED FOOTING TO PROVIDE A LEVEL BEARING SURFACE (PAID FOR UNDER "FOOTING CONCRETE").

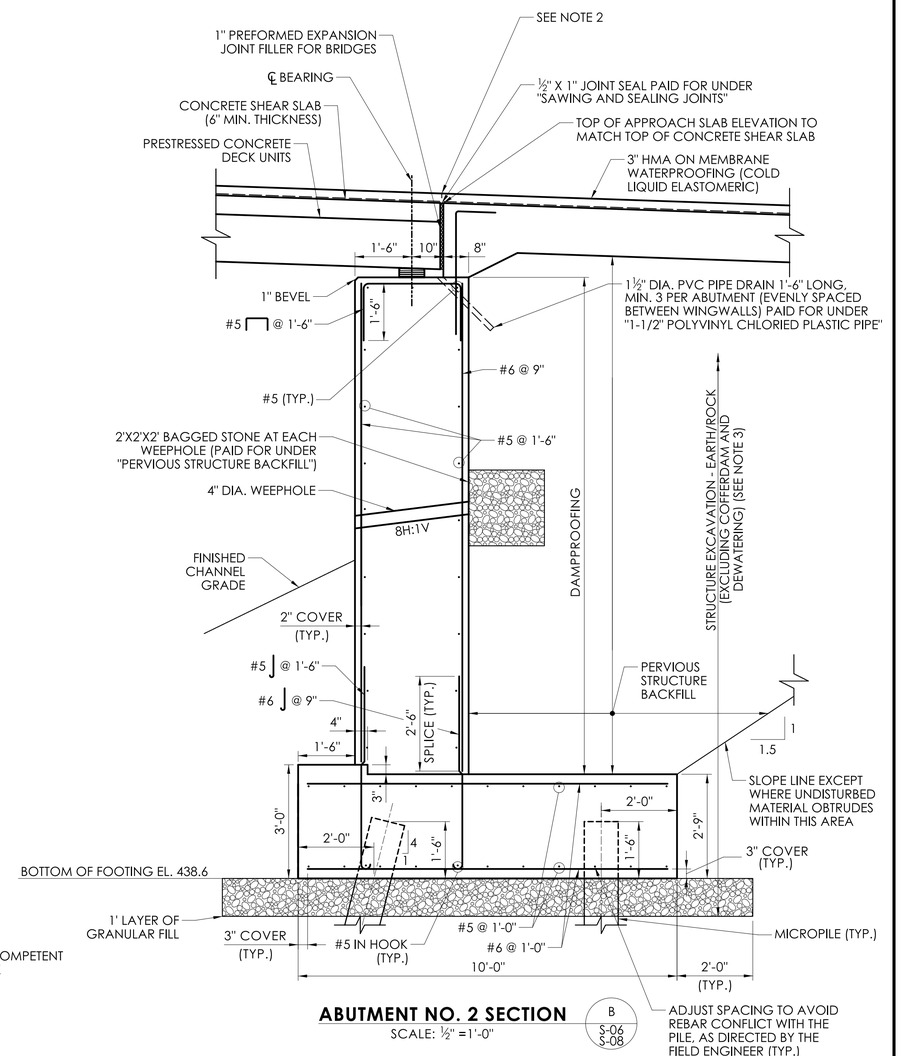
EXCAVATION NOTES:

1. EXCAVATION WITHIN 2 FEET, HORIZONTALLY, OF ANY PROPOSED SUBSTRUCTURE FOOTING SHALL BE PAID FOR UNDER THE ITEMS "STRUCTURE EXCAVATION - EARTH (EXCLUDING COFFERDAM AND DEWATERING)" AND "STRUCTURE EXCAVATION - ROCK (EXCLUDING COFFERDAM AND DEWATERING)". EXCAVATION BETWEEN EXISTING ABUTMENTS AND 2 FEET IN FRONT OF PROPOSED ABUTMENTS SHALL BE PAID FOR UNDER THE ITEM "CHANNEL EXCAVATION - EARTH." EXCAVATION IN FRONT OF EXISTING ABUTMENTS, WITHIN THE RIVER CHANNEL, SHALL BE PAID FOR UNDER THE ITEM "EXCAVATION AND REUSE OF EXISTING CHANNEL BOTTOM MATERIAL". ANY EXCAVATION OUTSIDE THESE LIMITS SHALL BE PAID FOR UNDER "EARTH EXCAVATION."



ABUTMENT NO. 1 SECTION (A, S-06, S-08)

SCALE: ½" =1'-0"



ABUTMENT NO. 2 SECTION (B, S-06, S-08)

SCALE: ½" =1'-0"

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK: benesch — Alfred Benesch & Company, 120 Hebron Avenue 2nd Floor, Glastonbury, CT
DESIGNER/DRAFTER: A. BISI CHECKED BY: M. HABEK

CTDOT — CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: **REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK**

TOWN(S): **POMFRET**

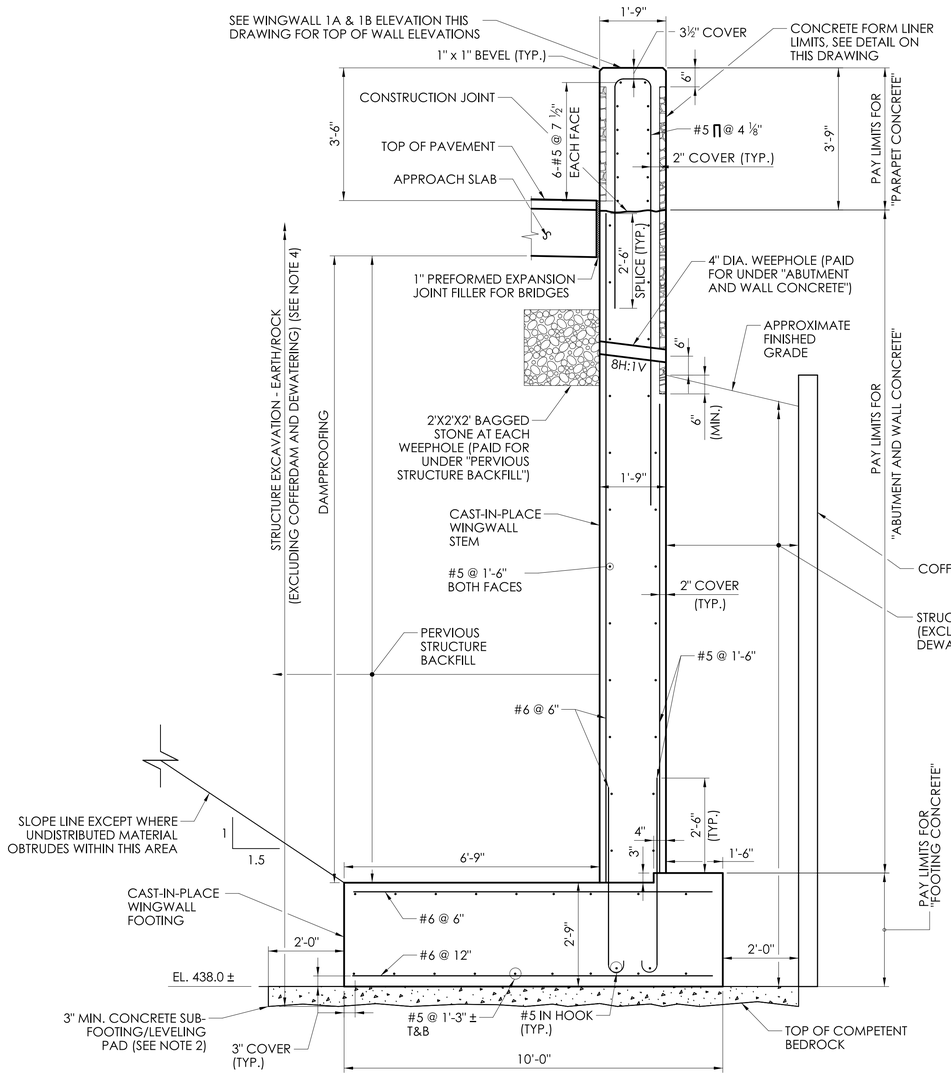
DRAWING TITLE: **ABUTMENT DETAILS**

PROJECT NO.: **0111-0125**

DRAWING NO.: **S-09**

SHEET NO.: **04.09**

LASTED SAVED BY: abisi **FILE NAME:** c:\pwwordir\benesch projects\projects\d0208193\SB_CP_0111_0125_ABUT.dgn
PLOTTED DATE: 9/19/2025

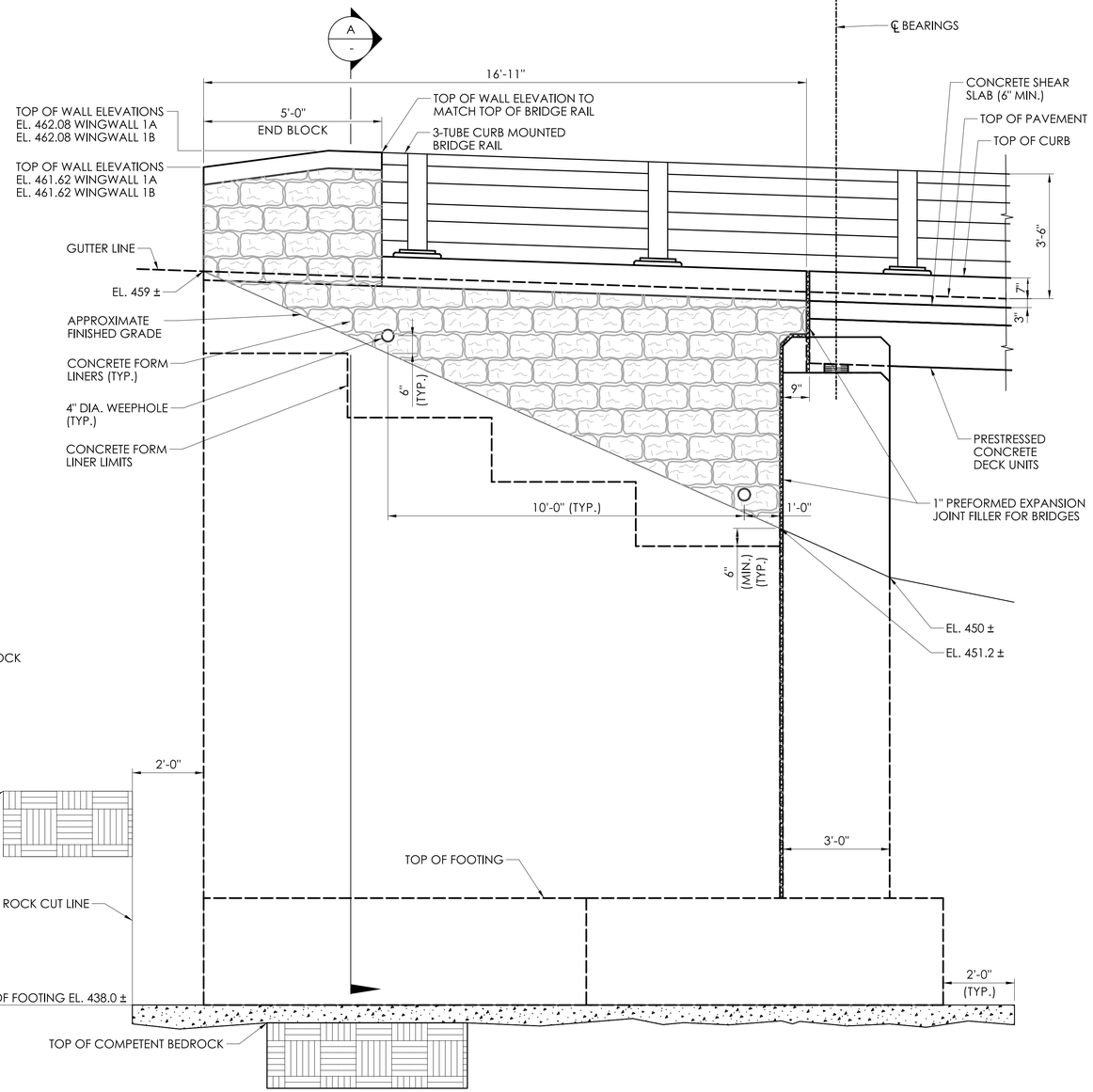


WINGWALL 1A & 1B TYPICAL SECTION

SCALE: ½" =1'-0"

(WINGWALL 1B SHOWN, WINGWALL 1A SIMILAR)

A - C S-06



WINGWALL 1A & 1B ELEVATION

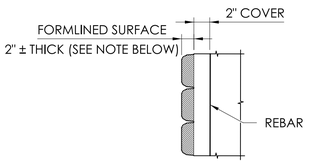
SCALE: ½" =1'-0"

(WINGWALL 1B SHOWN, WINGWALL 1A SIMILAR)

NOTES:
1. SEE DWG NO. S-19 FOR ADDITIONAL REINFORCEMENT IN WINGWALLS.
2. THE FOUNDATION SHALL BEAR DIRECTLY OVER COMPETENT BEDROCK. THE CONTRACTOR SHALL EXCAVATE DOWN TO COMPETENT BEDROCK (ESTIMATED ELEVATION 438.0, TO BE VERIFIED IN FIELD). IF COMPETENT BEDROCK IS SLOPED OR ABOVE EL. 438.0, THE BOTTOM OF THE FOOTING SHALL BE ESTABLSIHED UPON LEVELING THE TOP OF COMPETENT BEDROCK SURFACE (BOTTOM OF FOOTING SHALL BE A MINIMUM OF 4 FEET BELOW PROPOSED GRADE). IF COMPETENT BEDROCK IS BELOW EL. 438.0, A 3" MINIMUM CAST-IN-PLACE CONCRETE SUB-FOOTING/LEVELING PAD WILL BE REQUIRED BETWEEN THE TOP OF COMPETENT BEDROCK AND BOTTOM OF PROPOSED FOOTING TO PROVIDE A LEVEL BEARING SURFACE.
3. VERTICAL LIMITS OF "STRUCTURE EXCAVATION - EARTH (EXCLUDING COFFERDAM AND DEWATERING)" AND "STRUCTURE - ROCK (EXCLUDING COFFERDAM AND DEWATERING)" SHALL EXTEND TO EXISTING GRADE.

EXCAVATION NOTES:

EXCAVATION WITHIN 2 FEET, HORIZONTALLY, OF ANY PROPOSED SUBSTRUCTURE FOOTING SHALL BE PAID FOR UNDER THE ITEMS "STRUCTURE EXCAVATION - EARTH (EXCLUDING COFFERDAM AND DEWATERING)" AND "STRUCTURE EXCAVATION - ROCK (EXCLUDING COFFERDAM AND DEWATERING)". EXCAVATION BETWEEN EXISTING ABUTMENTS AND 2 FEET IN FRONT OF PROPOSED ABUTMENTS SHALL BE PAID FOR UNDER THE ITEM "CHANNEL EXCAVATION - EARTH". EXCAVATION IN FRONT OF EXISTING ABUTMENTS, WITHIN THE RIVER CHANNEL, SHALL BE PAID FOR UNDER THE ITEM "EXCAVATION AND REUSE OF EXISTING CHANNEL BOTTOM MATERIAL." ANY EXCAVATION OUTSIDE THESE LIMITS SHALL BE PAID FOR UNDER "EARTH EXCAVATION".



NOTE:
FOR ACCEPTABLE CONCRETE FORMLINER MANUFACTURERS AND PATTERNS SEE SPECIAL PROVISION "CONCRETE FORM LINERS".

CONCRETE FORMLINER DETAIL

NTS

REVISION DESCRIPTION | DATE | REV.

SIGNATURE BLOCK: benesch — Alfred Benesch & Company, 120 Hebron Avenue 2nd Floor Glastonbury, CT
DESIGNER/DRAFTER: H. COOPER CHECKED BY: M. HABEK

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK

TOWN(S): POMFRET

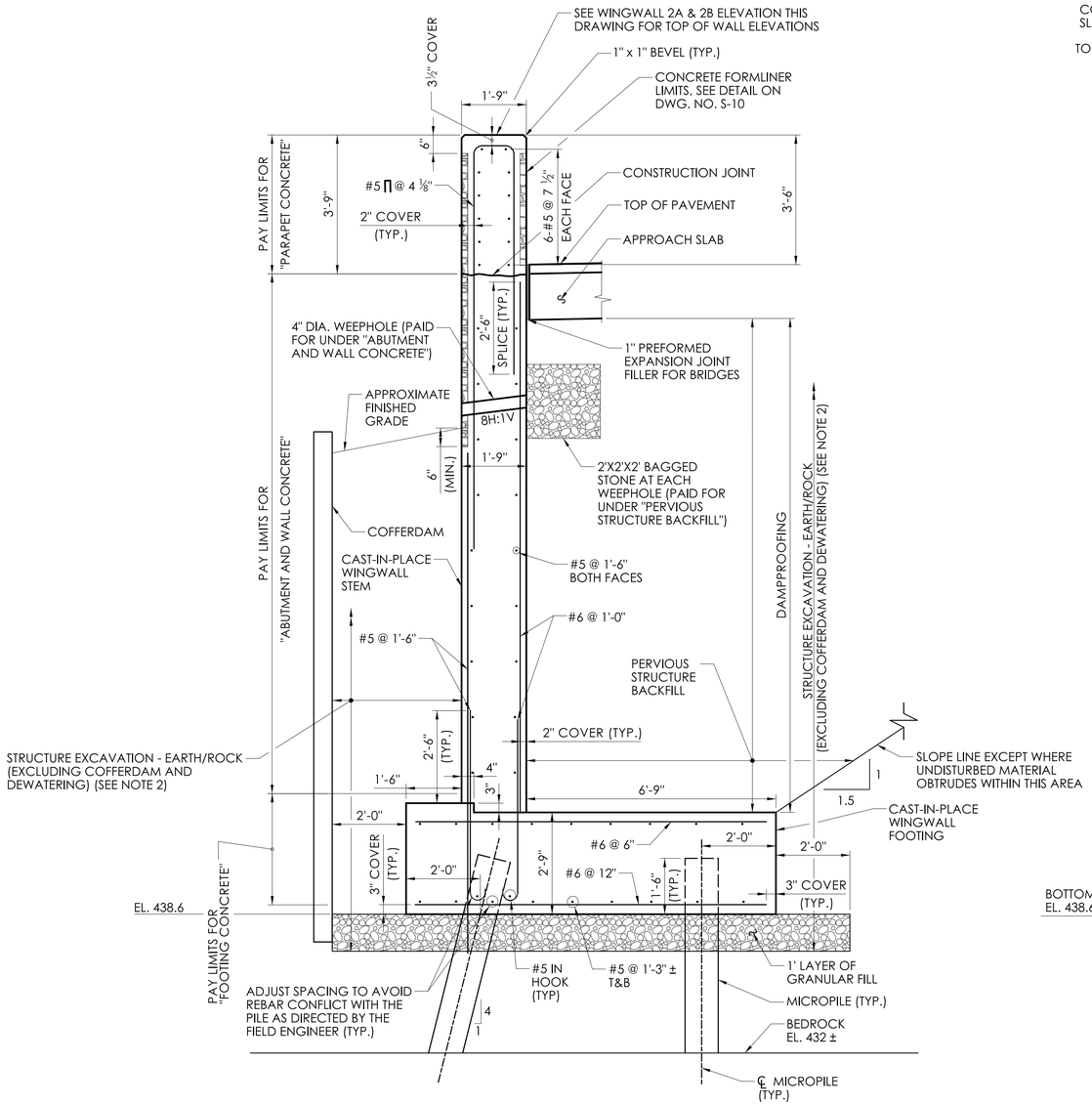
DRAWING TITLE: WINGWALL DETAILS - 1

PROJECT NO.: 0111-0125

DRAWING NO.: S-10

SHEET NO.: 04.10

LASTED SAVED BY: abisi **FILE NAME:** c:\pwwordir\benesch projects\projects\d0208193\SB_CP_0111_0125_WINGWALL.dgn
PLOTTED DATE: 9/19/2025

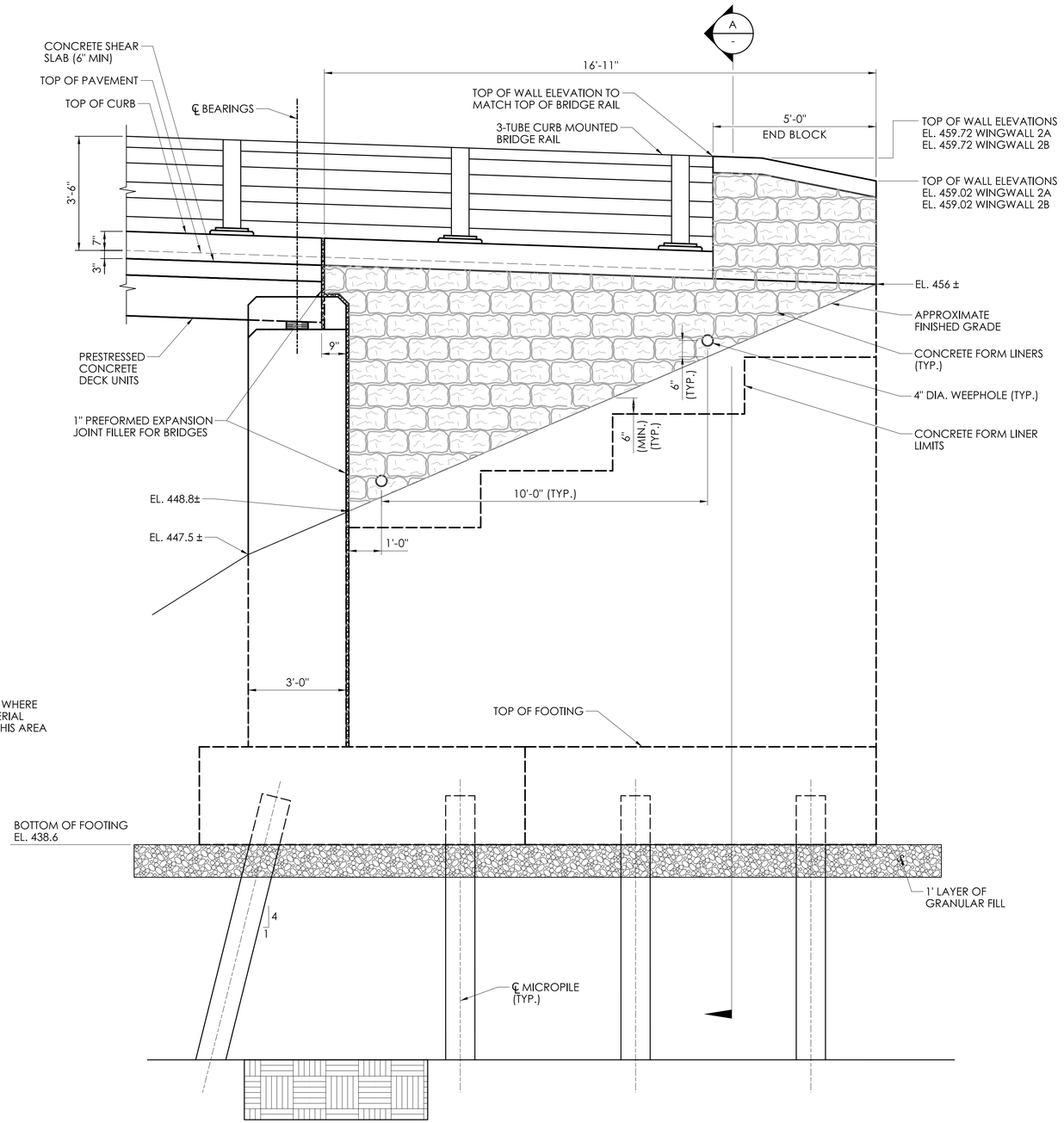


WINGWALLS 2A & 2B TYPICAL SECTION

SCALE: ½" =1'-0"

(WINGWALL 2B SHOWN, WINGWALL 2A SIMILAR)

A - D S-06



WINGWALLS 2A & 2B ELEVATION

SCALE: ½" =1'-0"

(WINGWALL 2B SHOWN, WINGWALL 2A SIMILAR)

NOTES:
1. SEE DWG NO. S-19 FOR ADDITIONAL REINFORCEMENT IN WINGWALLS.
2. VERTICAL LIMITS OF "STRUCTURE EXCAVATION - EARTH (EXCLUDING COFFERDAM AND DEWATERING)" AND "STRUCTURE EXCAVATION - ROCK (EXCLUDING COFFERDAM AND DEWATERING)" SHALL EXTEND TO EXISTING GRADE.

EXCAVATION NOTES:

EXCAVATION WITHIN 2 FEET, HORIZONTALLY, OF ANY PROPOSED SUBSTRUCTURE FOOTING SHALL BE PAID FOR UNDER THE ITEMS "STRUCTURE EXCAVATION - EARTH (EXCLUDING COFFERDAM AND DEWATERING)" AND "STRUCTURE EXCAVATION - ROCK (EXCLUDING COFFERDAM AND DEWATERING)". EXCAVATION BETWEEN EXISTING ABUTMENTS AND 2 FEET IN FRONT OF PROPOSED ABUTMENTS SHALL BE PAID FOR UNDER THE ITEM "CHANNEL EXCAVATION - EARTH". EXCAVATION IN FRONT OF EXISTING ABUTMENTS AND WITHIN THE RIVER CHANNEL SHALL BE PAID FOR UNDER THE ITEM "EXCAVATION AND REUSE OF EXISTING CHANNEL BOTTOM MATERIAL." ANY EXCAVATION OUTSIDE THESE LIMITS SHALL BE PAID FOR UNDER "EARTH EXCAVATION".

REV. | DATE | REVISION DESCRIPTION

SIGNATURE BLOCK: benesch — Alfred Benesch & Company, 120 Hebron Avenue 2nd Floor, Glastonbury, CT

DESIGNER/DRAFTER: H. COOPER CHECKED BY: M. HABEK

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK

TOWN(S): POMFRET

DRAWING TITLE: WINGWALL DETAILS - 2

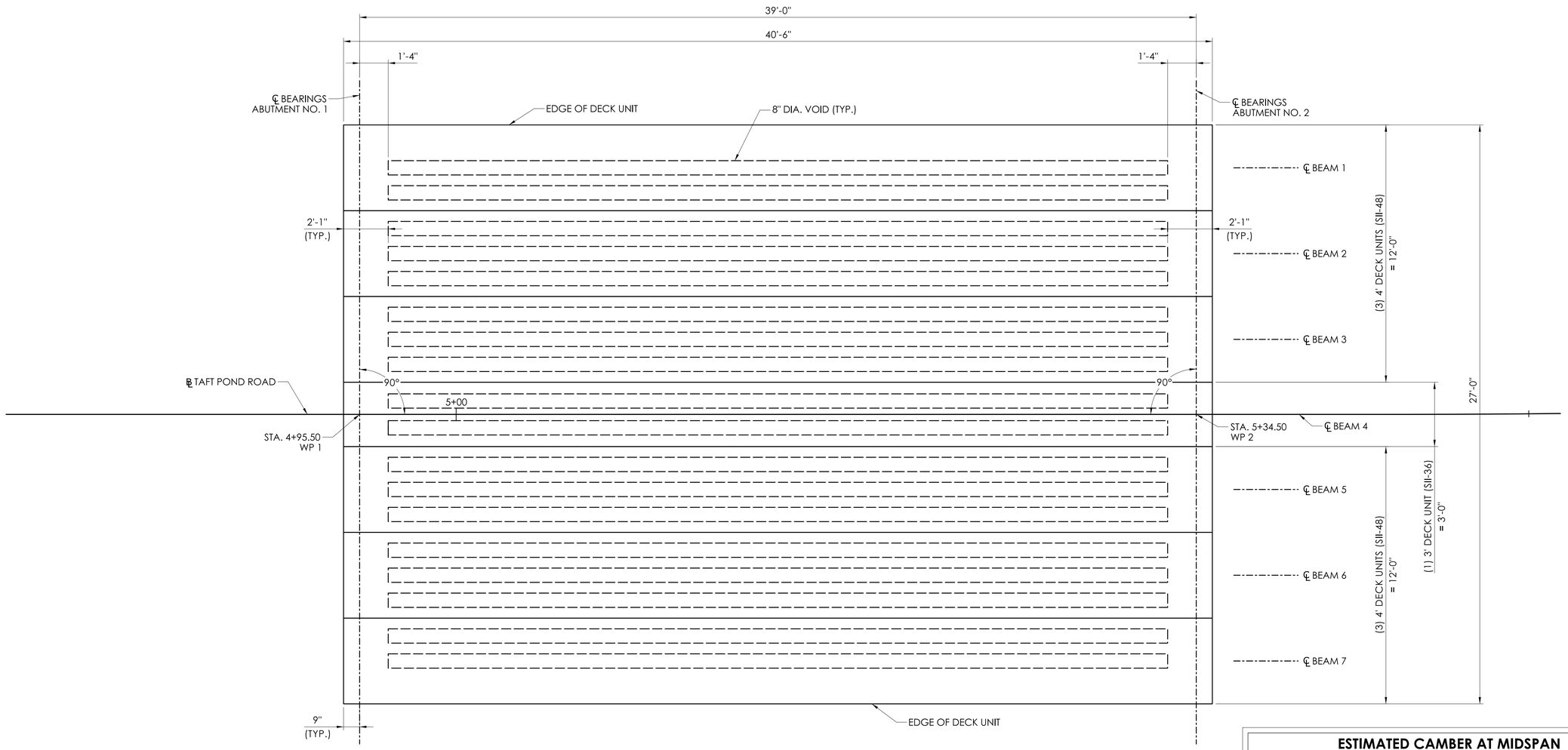
PROJECT NO.: 0111-0125

DRAWING NO.: S-11

SHEET NO.: 04.11

LASTED SAVED BY: abisi **FILE NAME:** c:\pwwordir\benesch projects\projects\d0208193\SB_CP_0111_0125_WINGWALL 2.dgn
PLOTTED DATE: 9/19/2025

WORKING POINT COORDINATES			
WP	LOCATION	NORTHING	EASTING
1	℄ BEARINGS ABUTMENT NO. 1 AT ℄	880126.31	1201775.03
2	℄ BEARINGS ABUTMENT NO. 2 AT ℄	880158.59	1201753.14



FRAMING PLAN

SCALE: ⅜" =1'-0"

ESTIMATED CAMBER AT MIDSPAN			
BEAM LOCATION	AT TRANSFER (INCHES)	AT ERECTION (INCHES)	FINAL (INCHES)
BEAMS 1 & 7	0.891	1.089	0.545
BEAMS 2, 3, 5 & 6	0.891	1.200	0.868
BEAM 4	0.804	1.023	0.615

CAMBER NOTES:

AT TRANSFER: CAMBER DUE TO PRESTRESS FORCE AT TRANSFER MINUS THE DEFLECTION DUE TO BEAM WEIGHT.

AT ERECTION: CAMBER (DUE TO PRESTRESS FORCE AT TRANSFER MINUS DEFLECTION DUE TO BEAM WEIGHT) THAT IS PRESENT AT APPROXIMATELY 30-60 DAYS AFTER TRANSFER.

FINAL: LONG-TERM CAMBER THAT IS PRESENT AFTER ALL DEAD LOADS ARE APPLIED TO THE STRUCTURE AND AFTER LONG TERM CREEP AND RELAXATION HAVE TAKEN PLACE.

CAMBER TABLE NOTES:

1. CAMBER DATA GIVEN IS POSITIVE (+) FOR UPWARD CAMBER.
2. PRESTRESS CAMBER CALCULATED BASED ON "PCI-DESIGN HANDBOOK - PRECAST AND PRESTRESSED CONCRETE" MULTIPLIERS BY BENTLEY LEAP BRIDGE CONCRETE SOFTWARE.

REV. | DATE | REVISION DESCRIPTION

SIGNATURE BLOCK: benesch — Alfred Benesch & Company, 120 Hebron Avenue 2nd Floor, Glastonbury, CT
DESIGNER/DRAFTER: A. BISI CHECKED BY: M. HABEK

CTDOT CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK

TOWN(S): POMFRET

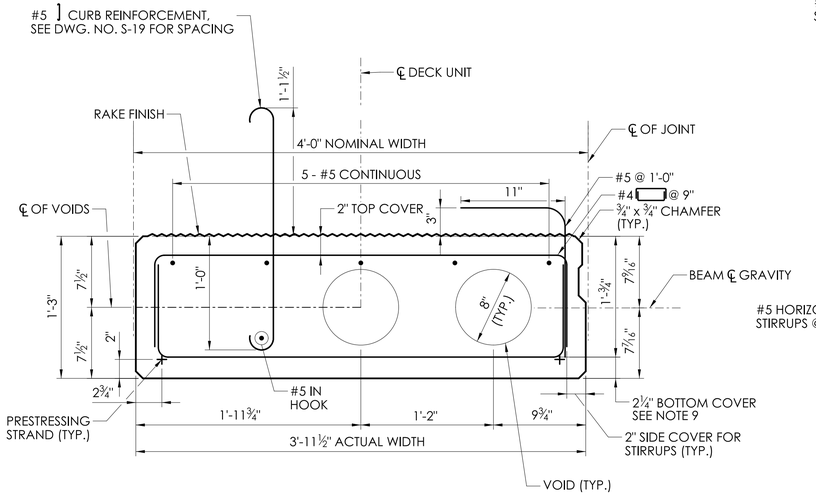
DRAWING TITLE: FRAMING PLAN

PROJECT NO.: 0111-0125

DRAWING NO.: S-12

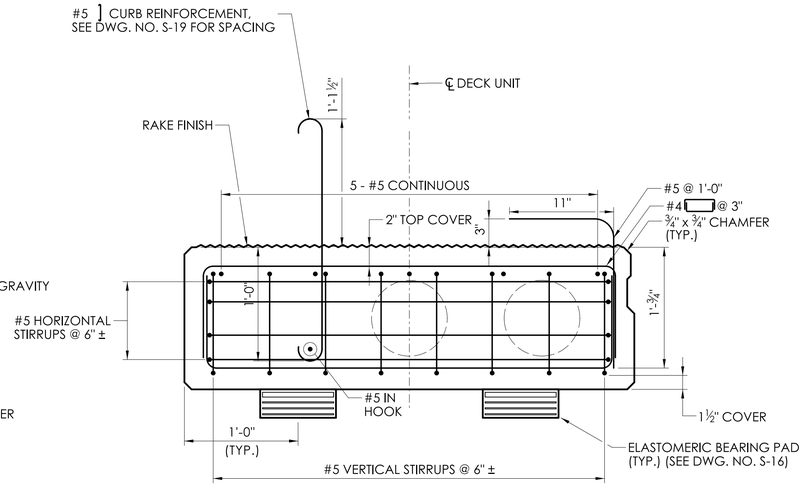
SHEET NO.: 04.12

LASTED SAVED BY: abisi **FILE NAME:** c:\pwwordir\benesch projects\projects\d0208193\SB_CP_0111_0125_FRAME.dgn
PLOTTED DATE: 9/19/2025



MIDSPAN SECTION

TOTAL NUMBER OF STRANDS AT MIDSPAN = 14
PRESTRESSING STRANDS CENTER OF GRAVITY AT MIDSPAN: 2.00" (FROM BOTTOM OF BEAM)



SECTION AT BEARING

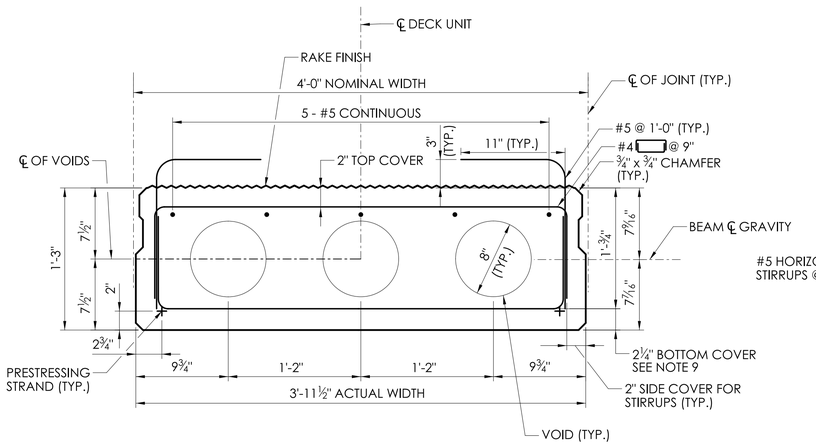
TOTAL NUMBER OF STRANDS AT MIDSPAN = 14
PRESTRESSING STRANDS CENTER OF GRAVITY AT MIDSPAN: 2.00" (FROM BOTTOM OF BEAM INCLUDING EFFECTS OF DEBONDING)
DEBOND 2 SRANDS FOR 3'-0"

BEAMS 1 & 7 (SII-48)

SCALE: 1½" = 1'-0"

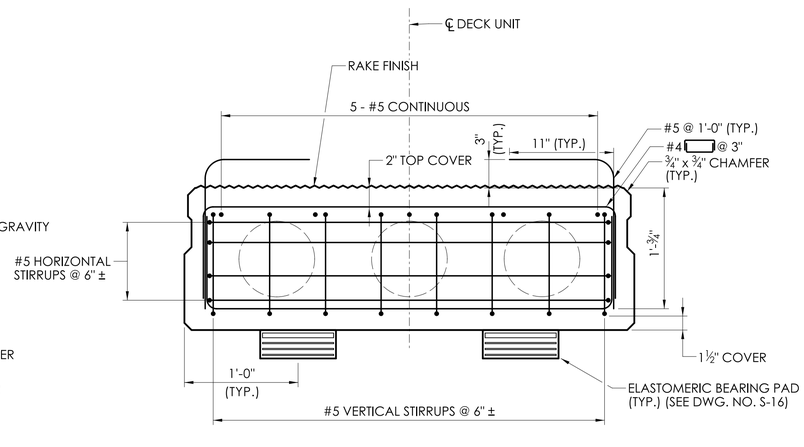
PRESTRESSED DECK UNIT NOTES:

1. PRESTRESSED DECK UNITS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
   28 DAY COMPRESSIVE STRENGTH: f'c = 8,000 PSI
   COMPRESSIVE STRENGTH AT TRANSFER: f'ci = 6,800 PSI
2. PRESTRESSED STRANDS SHALL BE 0.6" DIAMETER, UNCOATED, LOW RELAXATION STRANDS CONFORMING TO THE REQUIREMENTS OF AASHTO M203, GRADE 270 AND SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
   ULTIMATE STRENGTH f's = 270 KSI
   JACKING TENSION fsi = 44 KIPS PER STRAND
3. PRESTRESSED STRANDS SHALL BE PLACED 2" (MIN.) ON CENTER AND SHALL HAVE A MINIMUM COVER OF 2".
4. ENDS OF DECK UNITS SHALL BE VERTICAL AFTER APPLICATION OF FULL DEAD LOAD.
5. THE DRILLING OF HOLES IN PRESTRESSED DECK UNITS, OR USE OF POWDER ACTUATED TOOLS ON PRESTRESSED DECK UNITS WILL NOT BE PERMITTED.
6. THE DECK UNITS SHALL BE PLACED AT THE NOMINAL SPACING SHOWN ON THE PLANS WITH A ½" WIDE GAP BETWEEN THE UNITS. THE WIDTH OF THIS GAP CAN VARY DUE TO THE SWEEP OF THE UNITS.
7. GROUT FOR SHEAR KEYS SHALL BE RODDED OR VIBRATED TO ENSURE THAT ALL VOIDS IN THE SHEAR KEY ARE FILLED.
8. THE FABRICATOR IS FULLY RESPONSIBLE FOR THE DESIGN OF THE LIFTING DEVICE WHICH SHALL BE ADEQUATE FOR THE SAFETY FACTOR REQUIRED BY THE ERECTION PROCEDURE.
9. 2¼" COVER SHOWN IS REQUIRED TO FACILITATE THE PLACEMENT OF THE BOTTOM PRESTRESSING STRANDS. THE FABRICATOR MAY MODIFY COVER (1½" MIN.) IF NO CONFLICTS EXIST WITH THE PRESTRESSING STRANDS.



MIDSPAN SECTION

TOTAL NUMBER OF STRANDS AT MIDSPAN = 14
PRESTRESSING STRANDS CENTER OF GRAVITY AT MIDSPAN: 2.00" (FROM BOTTOM OF BEAM)



SECTION AT BEARING

TOTAL NUMBER OF STRANDS AT MIDSPAN = 14
PRESTRESSING STRANDS CENTER OF GRAVITY AT MIDSPAN: 2.00" (FROM BOTTOM OF BEAM INCLUDING EFFECTS OF DEBONDING)
DEBOND 2 SRANDS FOR 3'-0"

BEAMS 2, 3, 5 & 6 (SII-48)

SCALE: 1½" = 1'-0"

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK: benesch — Alfred Benesch & Company, 120 Hebron Avenue, 2nd Floor, Glastonbury, CT
DESIGNER/DRAFTER: C. SORENSEN CHECKED BY: M. HABEK

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK

TOWN(S): POMFRET

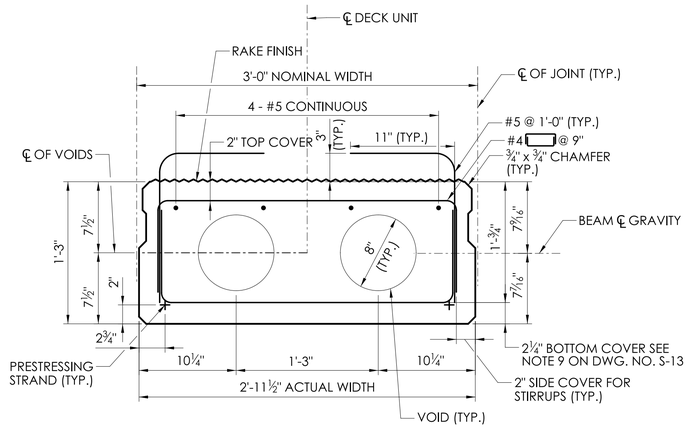
DRAWING TITLE: PRESTRESSED DECK UNIT DETAILS - 1

PROJECT NO.: 0111-0125

DRAWING NO.: S-13

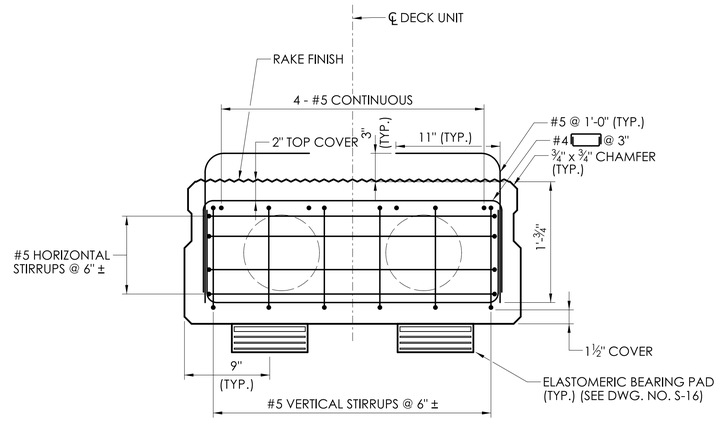
SHEET NO.: 04.13

LASTED SAVED BY: abisi **FILE NAME:** c:\pwwordir\benesch projects\projects\d0208193\SB_CP_0111_0125_DECK UNIT DETAIL 1.dgn
PLOTTED DATE: 9/19/2025



MIDSPAN SECTION

TOTAL NUMBER OF STRANDS AT MIDSPAN = 10
PRESTRESSING STRANDS CENTER OF GRAVITY AT MIDSPAN: 2.00" (FROM BOTTOM OF BEAM)



SECTION AT BEARING

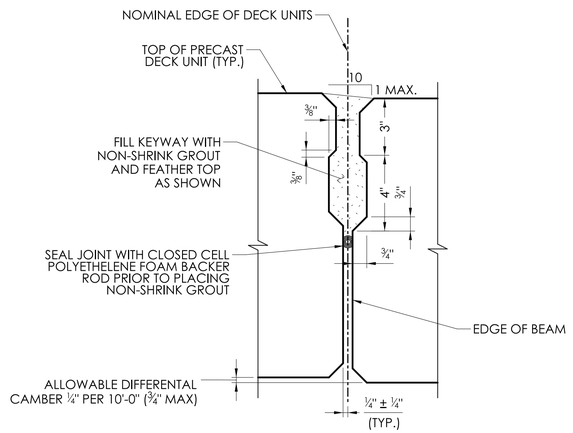
TOTAL NUMBER OF STRANDS AT MIDSPAN = 10
PRESTRESSING STRANDS CENTER OF GRAVITY AT MIDSPAN: 2.00" (FROM BOTTOM OF BEAM INCLUDING EFFECTS OF DEBONDING)
DEBOND 2 SRANDS FOR 3'-0"

BEAM 4 (SII-36)

SCALE: 1½" = 1'-0"

TYPICAL DECK UNIT PLAN

SCALE: 1½" = 1'-0"
NOTE: BEAMS 2, 3, 5 & 6 SHOWN. BEAMS 1, 4 & 7 SIMILAR.



TYPICAL SECTION THRU LONGITUDINAL JOINT

SCALE: 3"=1'-0"

REV. | DATE | REVISION DESCRIPTION

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DESIGNER/DRAFTER: C. SORENSEN CHECKED BY: M. HABEK

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK

TOWN(S): POMFRET

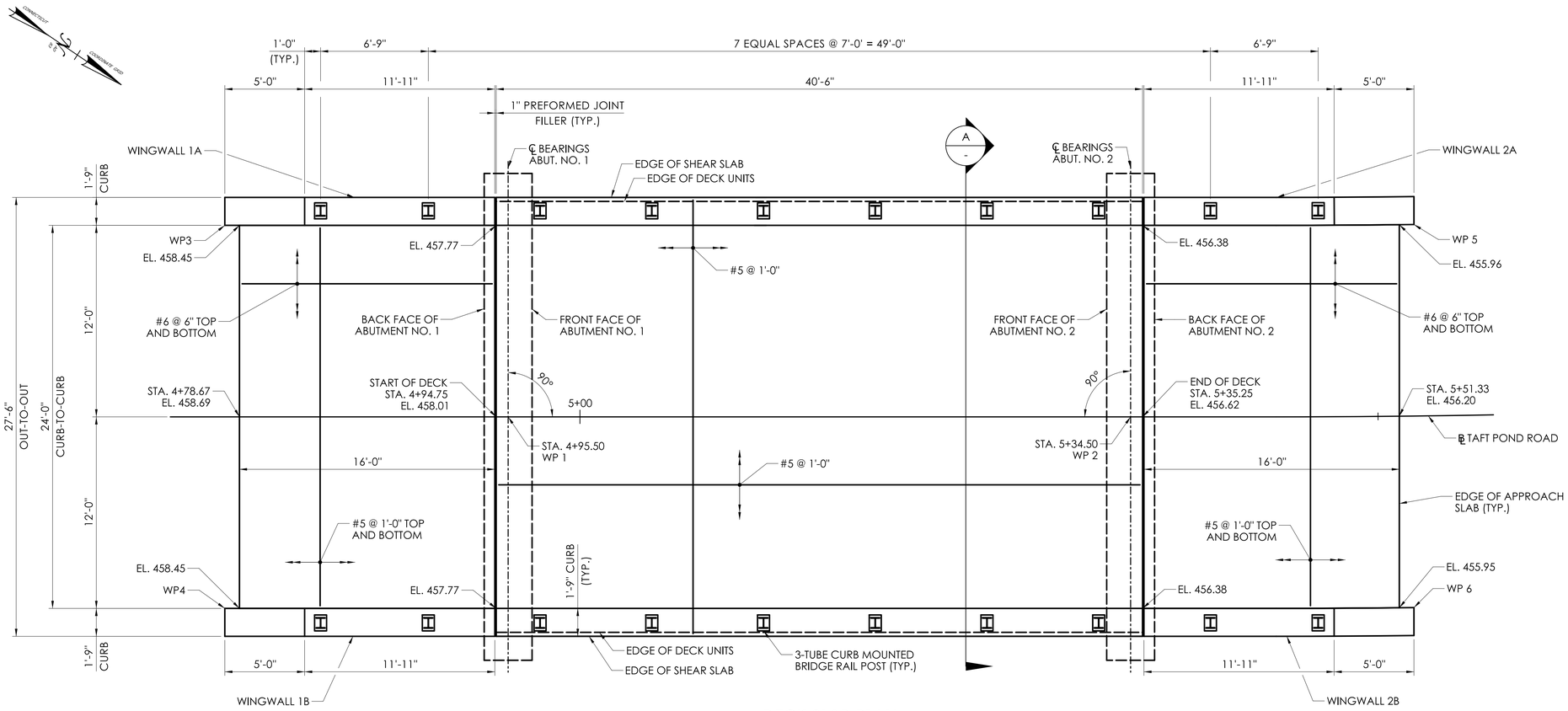
DRAWING TITLE: PRESTRESSED DECK UNIT DETAILS - 2

PROJECT NO.: 0111-0125

DRAWING NO.: S-14

SHEET NO.: 04.14

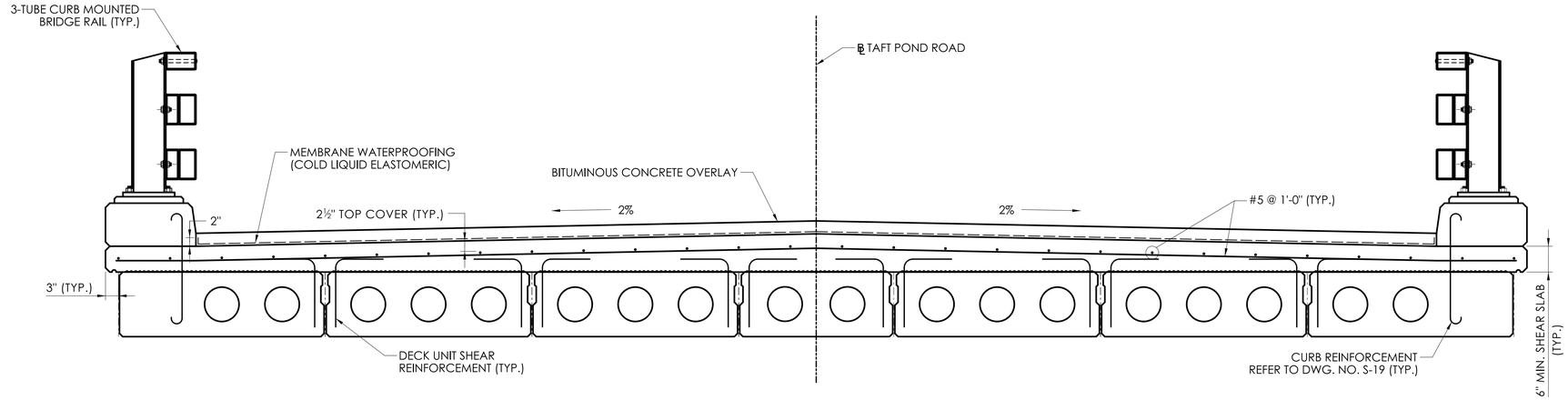
LASTED SAVED BY: abisi **FILE NAME:** c:\pwwordir\benesch projects\projects\d0208193\SB_CP_0111_0125_DECK UNIT DETAIL 2.dgn
PLOTTED DATE: 9/19/2025



DECK SLAB PLAN

SCALE: ¼"=1'-0"

NOTES:
1. PRESTRESSED DECK UNIT VOIDS NOT SHOWN FOR CLARITY.
2. ALL ELEVATIONS SHOWN REFER TO TOP OF CONCRETE SHEAR SLAB/APPROACH SLAB, UNLESS NOTED OTHERWISE.



SHEAR SLAB REINFORCEMENT

A
-

SCALE: ¾" = 1'-0"

TOP OF DECK ELEVATIONS AND DEAD LOAD DELFECTIONS

BEAM NO.		℄ BRG ABUT. 1	0.25L	0.5L	0.75L	℄ BRG ABUT. 2
1	TOP OF DECK ELEVATION	457.75	457.37	457.02	456.70	456.41
	DEAD LOAD DEFLECTION	0.00	0.02	0.03	0.02	0.00
2	TOP OF DECK ELEVATION	457.83	457.45	457.10	456.78	456.49
	DEAD LOAD DEFLECTION	0.00	0.02	0.03	0.02	0.00
3	TOP OF DECK ELEVATION	457.91	457.53	457.18	456.86	456.57
	DEAD LOAD DEFLECTION	0.00	0.02	0.03	0.02	0.00
4	TOP OF DECK ELEVATION	457.98	457.60	457.25	456.93	456.64
	DEAD LOAD DEFLECTION	0.00	0.02	0.03	0.02	0.00
5	TOP OF DECK ELEVATION	457.91	457.53	457.18	456.86	456.57
	DEAD LOAD DEFLECTION	0.00	0.02	0.03	0.02	0.00
6	TOP OF DECK ELEVATION	457.83	457.45	457.10	456.78	456.49
	DEAD LOAD DEFLECTION	0.00	0.02	0.03	0.02	0.00
7	TOP OF DECK ELEVATION	457.75	457.37	457.02	456.70	456.41
	DEAD LOAD DEFLECTION	0.00	0.02	0.03	0.02	0.00

ELEVATION AND DEFLECTION TABLE NOTES:

1. L IS SPAN LENGTH BETWEEN ℄ OF BEARINGS.
2. DATA IS GIVEN IN FEET AT THE CENTERLINE OF EACH BEAM.
3. DEAD LOAD DEFLECTION IS TOTAL DEFLECTION DUE TO SHEAR SLAB, RAIL CURBS, RAILINGS AND WEARING SURFACE.

WORKING POINT COORDINATES

WP	LOCATION	NORTHING	EASTING
1	℄ BEARINGS ABUT NO. 1 AT ℄	880126.31	1201775.03
2	℄ BEARINGS ABUT NO. 2 AT ℄	880158.59	1201753.14
3	END OF WW1A STREETSIDE	880104.88	1201775.06
4	END OF WW1B STREETSIDE	880118.36	1201794.92
5	END OF WW2A STREETSIDE	880166.51	1201733.20
6	END OF WW2B STREETSIDE	880179.99	1201753.06

REVISION DESCRIPTION | DATE | REV.

SIGNATURE BLOCK: benesch — Allfred Benesch & Company, 120 Hebron Avenue 2nd Floor Glastonbury, CT
DESIGNER/DRAFTER: A. BISI CHECKED BY: M. HABEK

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK

TOWN(S): POMFRET

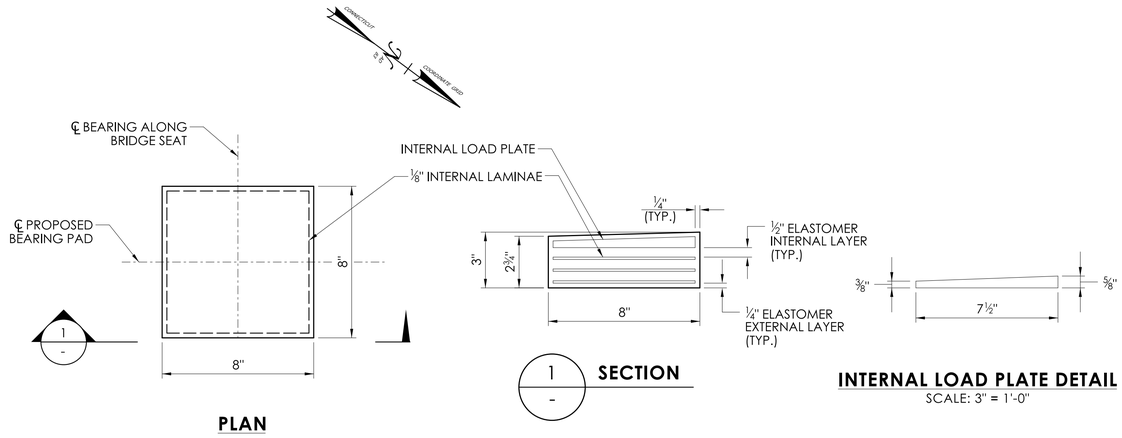
DRAWING TITLE: DECK SLAB PLAN

PROJECT NO.: 0111-0125

DRAWING NO.: S-15

SHEET NO.: 04.15

LASTED SAVED BY: abisi **FILE NAME:** c:\pwwordir\benesch projects\projects\d0208193\SB_CP_0111_0125_DECK SLAB.dgn
PLOTTED DATE: 9/19/2025



PLAN

ELASTOMERIC BEARING PAD

SCALE: 3" = 1'-0"

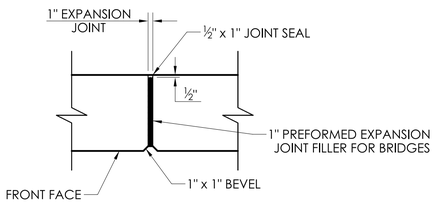
INTERNAL LOAD PLATE DETAIL

SCALE: 3" = 1'-0"

STEEL-LAMINATED ELASTOMERIC BEARING NOTES:

1. METHOD A WAS USED TO DESIGN STEEL REINFORCED RECTANGUALR ELASTOMERIC BEARING PADS.
2. ELASTOMER SHALL HAVE A HARDNESS (SHORE 'A') 60 DUROMETER AND A SHEAR MODULUS WITHIN THE RANGE OF 0.13 KSI TO 0.20 KSI AT 73°F.
3. STEEL LAMINAE SHALL CONFORM TO ASTM A1011, GRADE 36.
4. TAPERED INTERNAL LOAD PLATE SHALL CONFORM TO AASHTO M 270 GRADE 36.
5. ELASTOMERIC BEARING PADS SHALL BE INSTALLED AT AN AMBIENT TEMPERATURE BETWEEN 50°F AND 80°F.

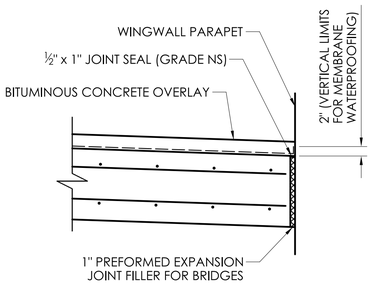
ELASTOMERIC BEARING DESIGN LOADS:	
DL (KIPS)	LL+I (KIPS)
12.1	16.0



VERTICAL STEM JOINT DETAILS AT ABUTMENT/WINGWALL INTERFACE

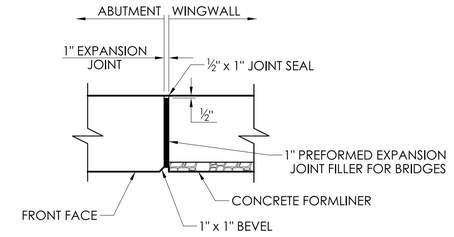
SCALE: ¾" = 1'-0"

1. NO REINFORCEMENT SHALL PASS THROUGH EXPANSION JOINTS OR CONTRACTION JOINTS. REINFORCEMENT SHALL PASS THROUGH CONSTRUCTION JOINTS.
2. JOINT SEAL TO EXTEND FROM TOP OF FOOTING TO TOP OF WALL.



APPROACH SLAB AT WINGWALL DETAIL

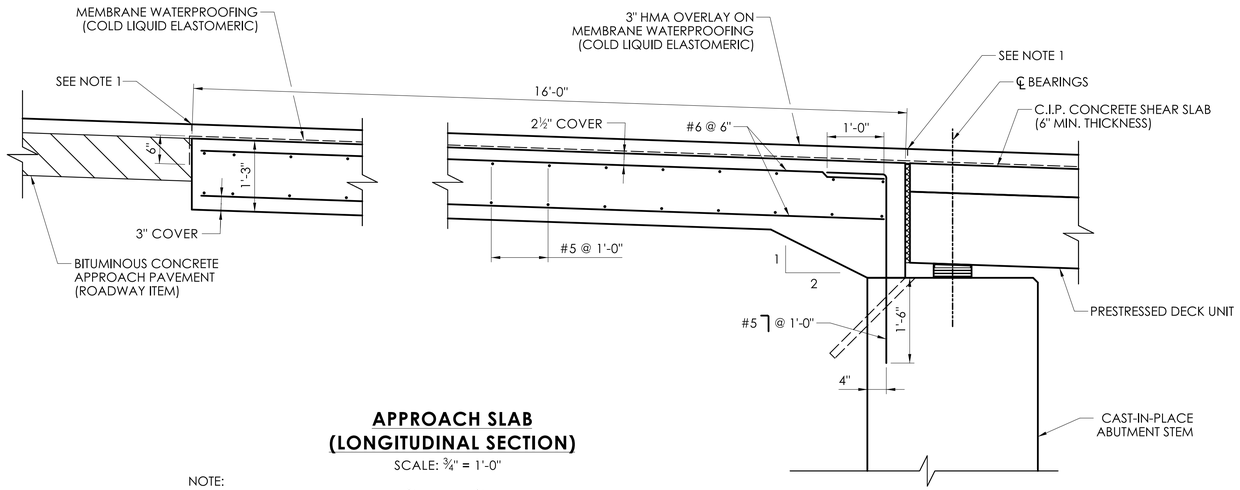
SCALE: ¾" = 1'-0"



VERTICAL STEM JOINT DETAILS AT ABUTMENT/WINGWALL INTERFACE WITH FORMLINER

SCALE: ¾" = 1'-0"

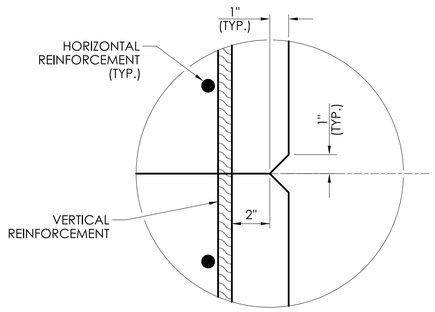
1. NO REINFORCEMENT SHALL PASS THROUGH EXPANSION JOINTS OR CONTRACTION JOINTS. REINFORCEMENT SHALL PASS THROUGH CONSTRUCTION JOINTS.
2. JOINT SEAL TO EXTEND FROM TOP OF FOOTING TO TOP OF WALL.



APPROACH SLAB (LONGITUDINAL SECTION)

SCALE: ¾" = 1'-0"

NOTE:
1. CUT BITUMINOUS OVERLAY WITH ⅜" WIDE x 1¾" DEEP KERF AND FILL WITH POURABLE SEALANT. TO BE PAID FOR UNDER THE ITEM "SAWING AND SEALING JOINTS".



TYPICAL RUSTICATION DETAIL

SCALE: 3" = 1'-0"

NOTE: NO RUSTICATION AT CONSTRUCTION JOINT BETWEEN BOTTOM OF CONCRETE CURB AND TOP OF WINGWALL STEM

REVISION DESCRIPTION | DATE | REV.

SIGNATURE BLOCK: benesch — Alfred Benesch & Company, 120 Hebron Avenue 2nd Floor Glastonbury, CT
DESIGNER/DRAFTER: H. DREW CHECKED BY: M. HABEK

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK

TOWN(S): POMFRET

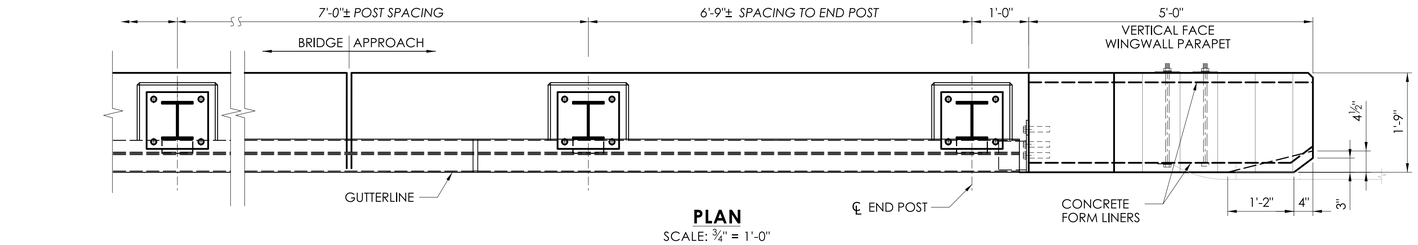
DRAWING TITLE: MISCELLANEOUS DETAILS

PROJECT NO.: 0111-0125

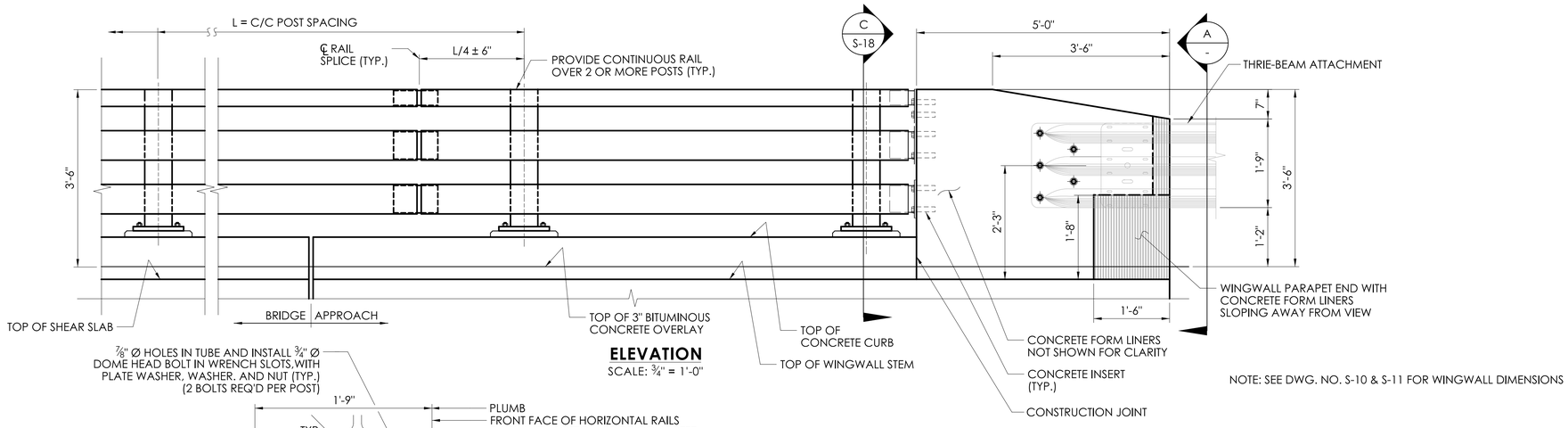
DRAWING NO.: S-16

SHEET NO.: 04.16

LASTED SAVED BY: abisi **FILE NAME:** c:\pwwordir\benesch projects\projects\d0208193\SB_CP_0111_0125_MISC DETAILS.dgn
PLOTTED DATE: 9/19/2025

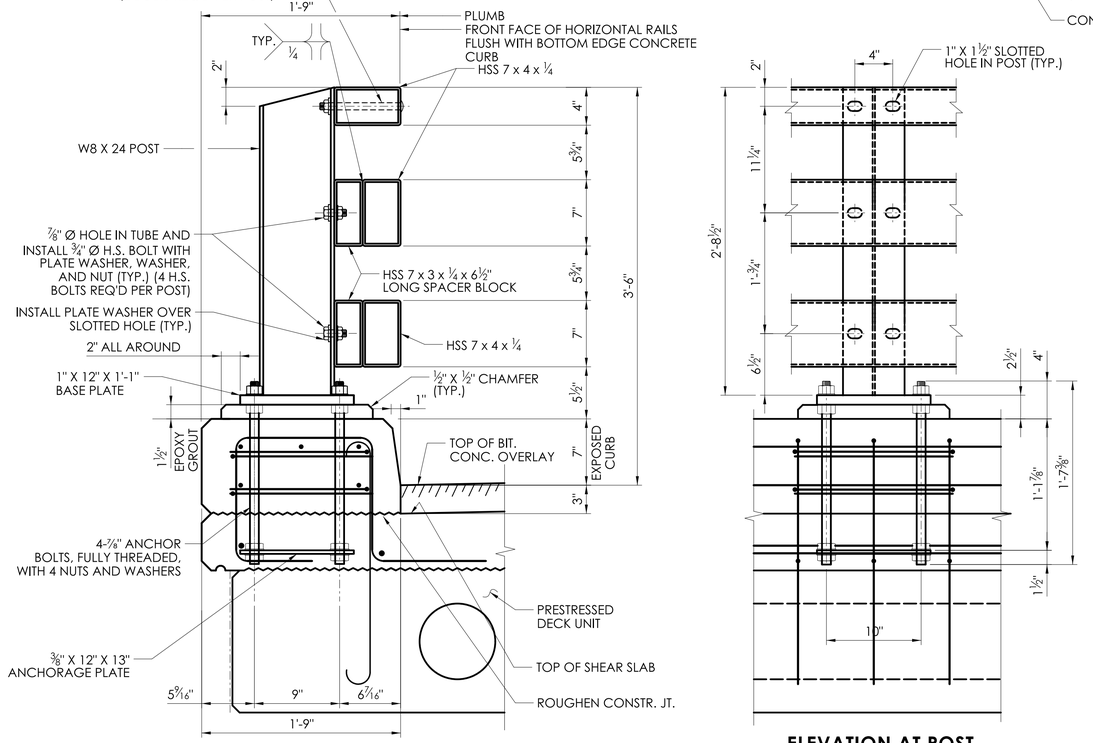


PLAN
SCALE: ¾" = 1'-0"



ELEVATION
SCALE: ¾" = 1'-0"

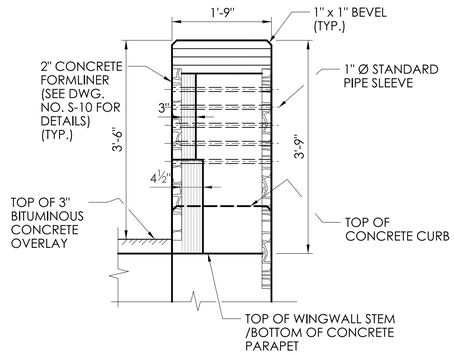
NOTE: SEE DWG. NO. S-10 & S-11 FOR WINGWALL DIMENSIONS



TYPICAL SECTION AT POST

ELEVATION AT POST

CURB AND POST DETAILS
SCALE: 1½" = 1'-0"



SECTION A-
SCALE: ¾" = 1'-0"

BRIDGE RAIL NOTES

THE 3-TUBE CURB MOUNTED BRIDGE RAIL HAS BEEN EVALUATED AT TEST LEVEL 4 (TL-4) AND COMPLIES WITH MASH 2016.

CONCRETE FOR THE RAIL CURB SHALL BE CLASS PCC04462. THE COMPRESSIVE STRENGTH OF THE CONCRETE, BASED ON TEST CYLINDERS, SHALL BE NO LESS THAN 4,000 PSI PRIOR INSTALLING THE EPOXY GROUT BELOW THE BASEPLATES. PRIOR TO ALLOWING THE RAIL, CURB AND PARAPETS TO BE PLACED IN SERVICE FOR THE PROTECTION OF VEHICULAR TRAFFIC, THE COMPRESSIVE STRENGTH OF THE GROUT, BASED ON STRENGTH GAIN OVER TIME LISTED IN THE GROUT MANUFACTURER'S DATA SHEET, SHALL BE NO LESS THAN 5,000 PSI.

THE REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 AND BE HOT-DIP GALVANIZED.

THE 1 IN. DIAMETER PIPE SHALL CONFORM TO ASTM A53, GRADE B OR ASTM A501 AND SHALL BE GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A123.

HOLLOW STRUCTURAL SHAPES SHALL CONFORM TO ASTM A500 GRADE C OR ASTM A501, GRADE B.

ALL OTHER STEEL SHALL CONFORM TO ASTM A572, GRADE 50 UNLESS NOTED OTHERWISE.

THE SILICON CONTENT OF THE STEEL USED FOR THE EXPOSED MEMBERS AND PLATE COMPONENTS SHALL FALL WITHIN THE RANGE OF 0 TO 0.04% OR 0.15% TO 0.25%.

ALL STEEL SHAPES, PLATES AND HOLLOW STRUCTURAL SECTIONS SHALL BE SHOP METALLIZED IN ACCORDANCE WITH THE SPECIAL PROVISION "METALLIZING STRUCTURAL STEEL (SITE NO. 1)." ALL STEEL SHALL BE TOPCOATED. THE COLOR OF THE TOPCOAT SHALL BE DETERMINED BY THE TOWN OF POMFRET. THE CONTRACTOR SHALL PROVIDE SAMPLES FOR FEDERAL STANDARD COLORS NOS. 20040, 10032, AND 10049 FOR THE TOWN TO MAKE A SELECTION. THE APPLICATION OF THE TOPCOAT SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISION "METALLIZING STRUCTURAL STEEL (SITE NO. 1)".

THE ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GRADE 105. THE NUTS SHALL CONFORM TO ASTM A563, GRADE DH. THE WASHERS SHALL CONFORM TO ASTM F436. THE BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM F2329 OR ASTM B695, CLASS 55.

ALL HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM F3125 GRADE A325, TYPE 1. NUTS SHALL CONFORM TO ASTM A563, GRADE DH. CIRCULAR, FLAT, HARDENED STEEL WASHERS SHALL CONFORM TO ASTM F436. THE BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM F2329 OR ASTM B695, CLASS 55.

DOME HEAD BOLTS WITH WRENCH SLOTS USED FOR THE TOP RAIL SHALL CONFORM TO ASTM F3125 GRADE A325, TYPE 1 OR ASTM A449, GRADE 1. SUBSTITUTION OF DOME HEAD BOLTS WITH BOLTS MEETING DIFFERENT MATERIAL REQUIREMENTS IS NOT PERMITTED. NUTS SHALL CONFORM TO ASTM A563, GRADE DH. CIRCULAR, FLAT, HARDENED STEEL WASHERS SHALL CONFORM TO ASTM F436. THE BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM F2329 OR ASTM B695, CLASS 55.

RAIL ELEMENTS SHALL BE FABRICATED TO THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE STRUCTURE. POSTS SHALL BE INSTALLED NORMAL TO GRADE IN THE LONGITUDINAL DIRECTION AND VERTICAL IN THE TRANSVERSE DIRECTION.

ALL BRIDGE RAIL MATERIALS, INCLUDING ANCHOR PLATES, ANCHOR BOLTS, CONCRETE INSERTS, HARDWARE AND EPOXY GROUT, SHALL BE PAID FOR UNDER THE ITEM "3-TUBE CURB MOUNTED BRIDGE RAIL".

ALL EXPOSED GALVANIZED BOLT HEADS, WASHERS AND NUTS SHALL BE HAND TOOL CLEANED TO THE SATISFACTION OF THE ENGINEER, PRIOR TO THE FIELD COLOR TOPCOAT APPLICATION.

THE COLORED TOPCOAT USED TO PAINT THE EXPOSED GALVANIZED BOLT HEADS, WASHERS AND NUTS SHALL BE FROM THE SAME MANUFACTURER AND LOT OF COLORED TOPCOAT THAT WAS SHOP APPLIED TO THE METALLIZED STEEL POSTS, TUBES AND PLATES.

THE METALLIZING ALONG WITH THE FIELD TOUCH UP AND SEALING OF THE STEEL PLATES, POSTS AND RAILS ARE INCLUDED FOR PAYMENT UNDER THE ITEM "METALLIZING STRUCTURAL STEEL (SITE NO. 1)".

THE FIELD TOUCH UP PAINTING OF THE GALVANIZED FASTENERS IS INCLUDED FOR PAYMENT UNDER THE ITEM "METALLIZING STRUCTURAL STEEL (SITE NO. 1)".

A SILICONE SEALANT SHALL BE APPLIED AT RAIL SPLICE LOCATIONS AND END BLOCK CONNECTIONS TO PREVENT MOISTURE INFILTRATION. SILICONE SEALANT SHALL BE PAID FOR UNDER THE ITEM "3-TUBE CURB MOUNTED BRIDGE RAIL."

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK: benesch — Alfred Benesch & Company, 120 Hebron Avenue, 2nd Floor, Glastonbury, CT

DESIGNER/DRAFTER: A. BISI CHECKED BY: M. HABEK

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK

TOWN(S): POMFRET

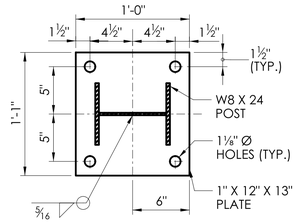
DRAWING TITLE: 3-TUBE CURB MOUNTED BRIDGE RAIL DETAILS - 1

PROJECT NO.: 0111-0125

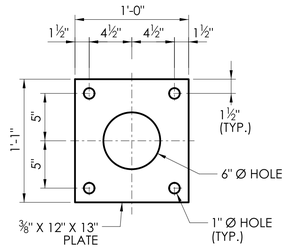
DRAWING NO.: S-17

SHEET NO.: 04.17

LASTED SAVED BY: abisi **FILE NAME:** c:\pwwordir\benesch projects\projects\d0208193\SB_CP_0111_0125_BRIDGE RAIL DETAILS 1.dgn
PLOTTED DATE: 9/19/2025



BASE PLATE DETAIL
SCALE: 1½" = 1'-0"



ANCHOR PLATE DETAIL
SCALE: 1½" = 1'-0"

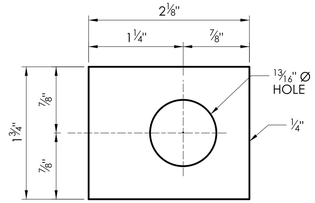
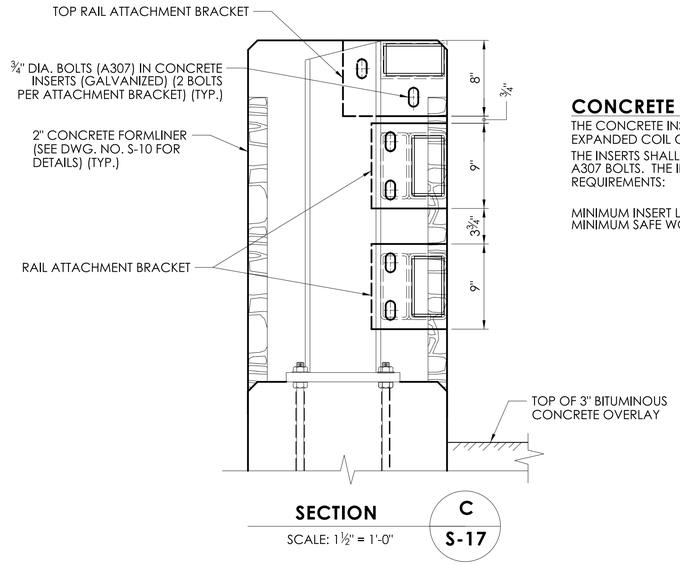


PLATE WASHER "C"
SCALE: FULL SCALE



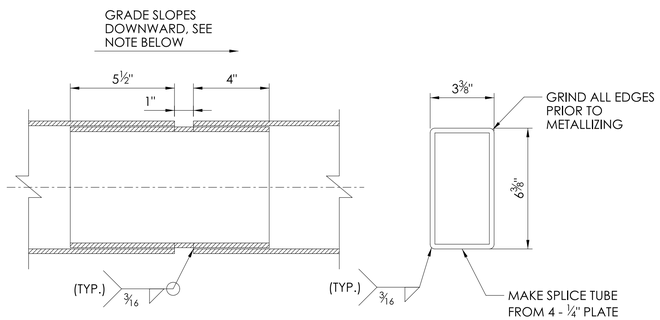
SECTION C
SCALE: 1½" = 1'-0"
S-17

CONCRETE INSERT NOTES

THE CONCRETE INSERTS SHALL BE HOT-DIP GALVANIZED, EXPANDED COIL CONCRETE INSERTS WITH A CLOSED-BACK.

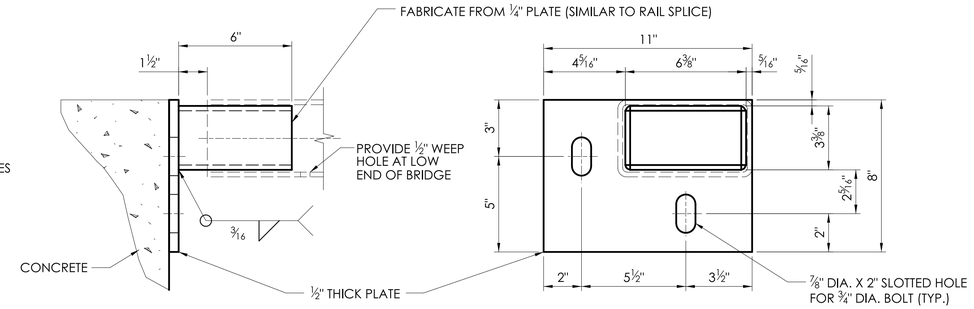
THE INSERTS SHALL BE THREADED TO RECEIVE ¾" DIA. ASTM A307 BOLTS. THE INSERTS SHALL MEET THE FOLLOWING REQUIREMENTS:

MINIMUM INSERT LENGTH = 4½"
MINIMUM SAFE WORKING LOAD IN TENSION = 4000 LBS.

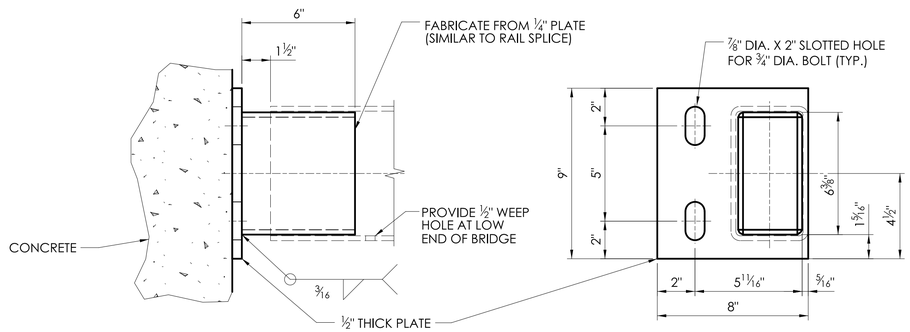


RAIL SPLICE DETAILS
SCALE: 3" = 1'-0"

NOTE: MALE END OF SPLICE SHALL BE AT THE LOW END.



TOP RAIL ATTACHMENT BRACKET
SCALE: 3" = 1'-0"



RAIL ATTACHMENT BRACKET
SCALE: 3" = 1'-0"

REV	DATE	REVISION DESCRIPTION

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DESIGNER/DRAFTER: A. BISI CHECKED BY: M. HABEK

CTDOT — CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK

TOWN(S): POMFRET

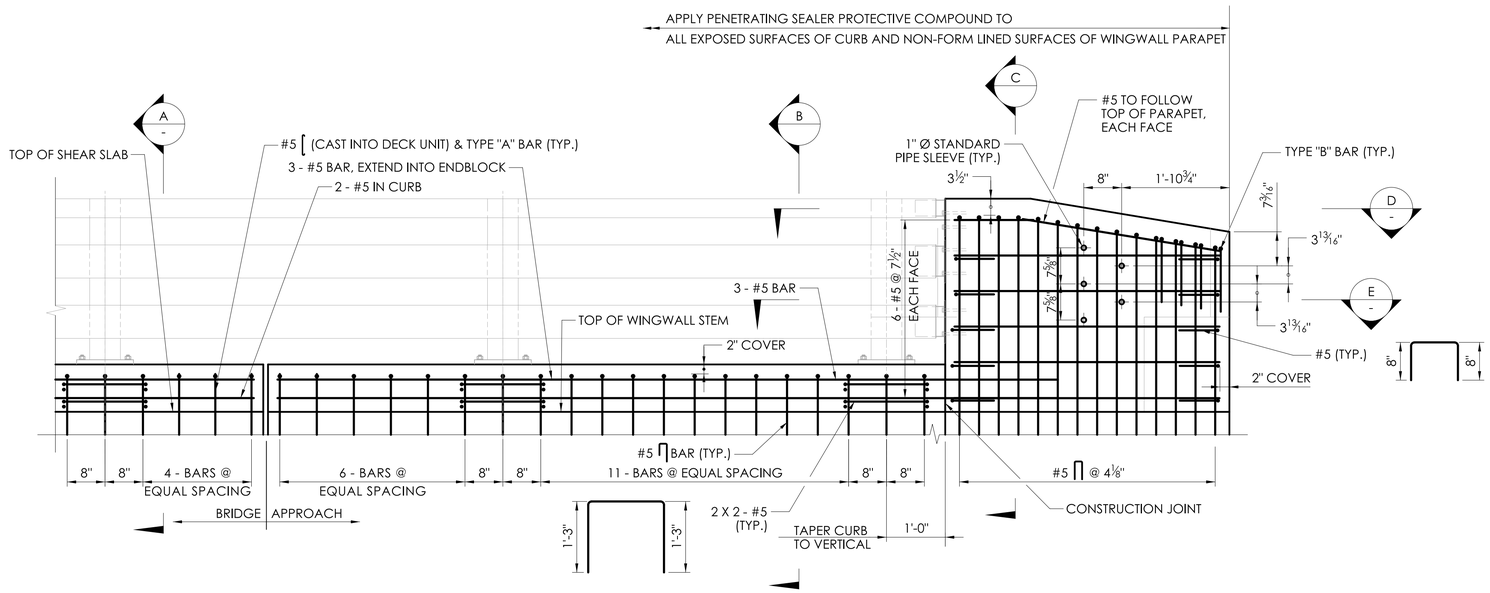
DRAWING TITLE: 3-TUBE CURB MOUNTED BRIDGE RAIL DETAILS - 2

PROJECT NO.: 0111-0125

DRAWING NO.: S-18

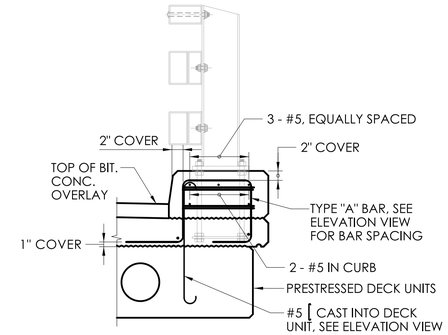
SHEET NO.: 04.18

LASTED SAVED BY: abisi **FILE NAME:** c:\pwwordir\benesch projects\projects\d0208193\SB_CP_0111_0125_BRIDGE RAIL DETAILS 2.dgn
PLOTTED DATE: 9/19/2025



ELEVATION - CURB AND WINGWALL PARAPET REINFORCEMENT

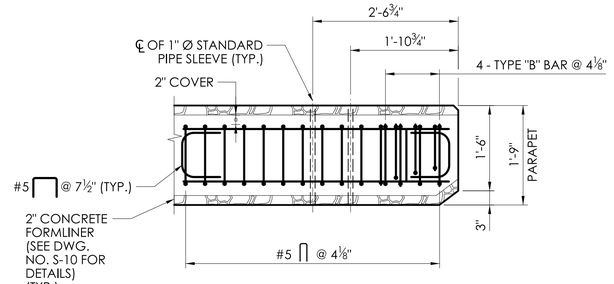
SCALE: ¾" = 1'-0"



SECTION A -

SCALE: ¾" = 1'-0"

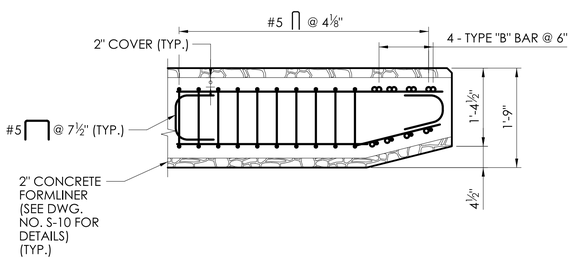
NOTE: REINFORCEMENT IN SHEAR SLAB AND PRESTRESSED DECK UNITS NOT SHOWN FOR CLARITY.



PLAN SECTION - WINGWALL PARAPET REINFORCEMENT

SCALE: ¾" = 1'-0"

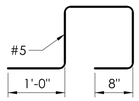
D -



PLAN SECTION - WINGWALL PARAPET REINFORCEMENT

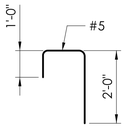
SCALE: ¾" = 1'-0"

E -



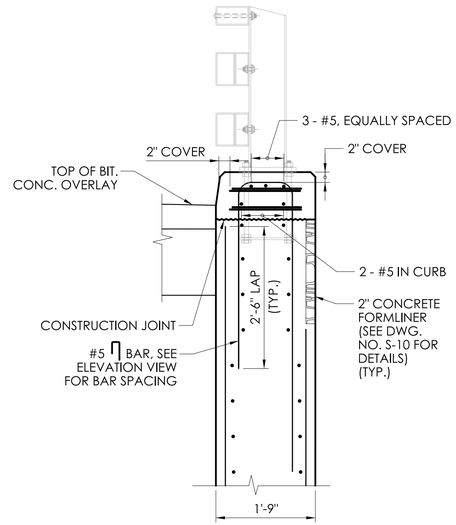
TYPE "A" BAR

SCALE: N.T.S.



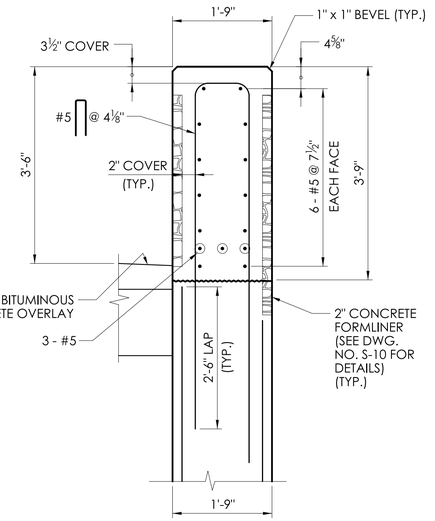
TYPE "B" BAR

SCALE: N.T.S.



SECTION B -

SCALE: ¾" = 1'-0"



SECTION C -

SCALE: ¾" = 1'-0"

REINFORCEMENT SPLICE NOTES:

1. THE SPLICE LENGTH FOR THE LONGITUDINAL REINFORCEMENT IN THE CURB AND WINGWALL PARAPET SHALL BE AS FOLLOWS UNLESS DIMENSIONED OTHERWISE:

BAR SIZE	SPLICE LENGTH
#5	2'-4"

2. THE SPLICES SHALL BE ALTERNATED SO THAT 50% OR LESS OF THE LONGITUDINAL BARS ARE SPLICED AT THE SAME LOCATION.

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CTDOT — CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK

TOWN(S): POMFRET

DRAWING TITLE: 3-TUBE CURB MOUNTED BRIDGE RAIL - REINFORCEMENT

PROJECT NO.: 0111-0125

DRAWING NO.: S-19

SHEET NO.: 04.19

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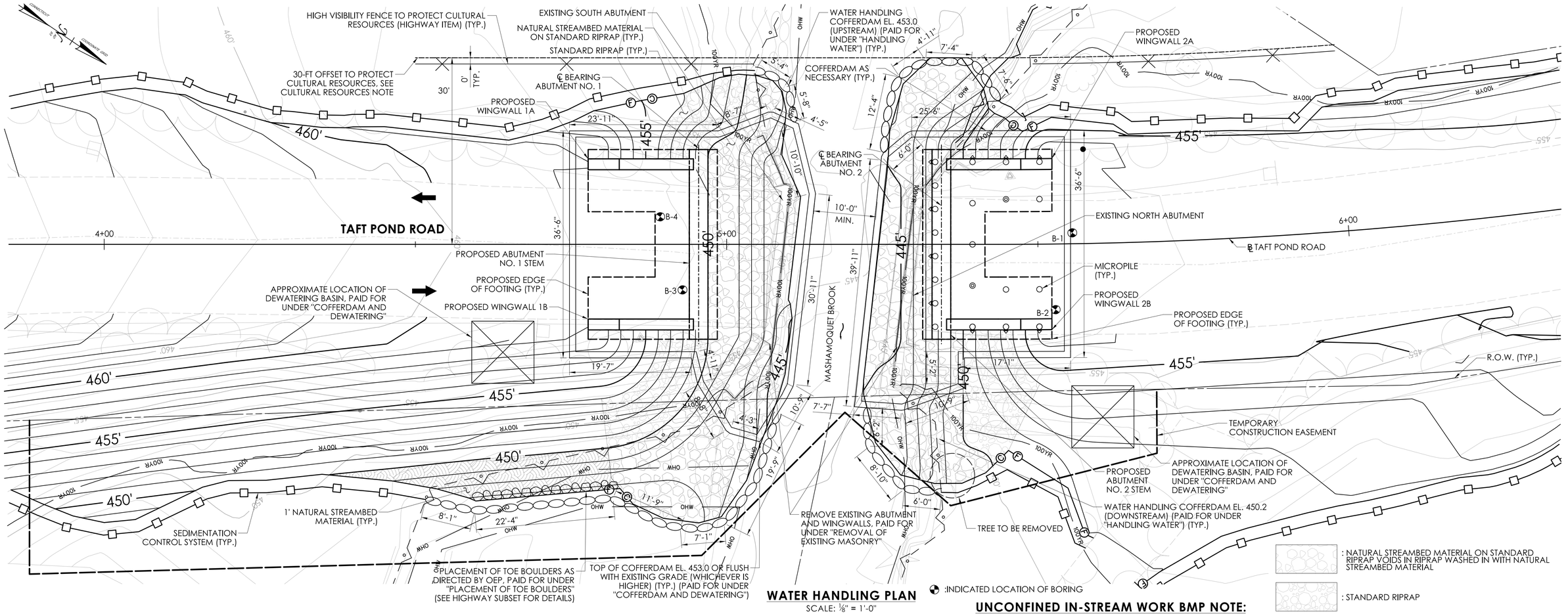


WATER HANDLING PLAN

SCALE: ⅛" = 1'-0"

SUGGESTED SEQUENCE OF CONTRUCTION:

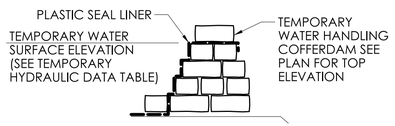
1. CLEAR AND GRUB AND INSTALL SEDIMENTATION CONTROL SYSTEMS.
2. INSTALL DETOUR SIGNAGE AND CLOSE ROADWAY.
3. INSTALL TEMPORARY DEBRIS SHIELD (PAID FOR UNDER "REMOVAL OF SUPERSTRUCTURE"). MINIMUM ELEVATION OF TEMPORARY DEBRIS SHIELD EL. 453.0.
4. REMOVE EXISTING SUPERSTRUCTURE. REMOVE TEMPORARY DEBRIS SHIELD.
5. INSTALL COFFERDAM, WATER HANDLING COFFERDAM AND DEWATERING BASIN ON THE SOUTH AND NORTH SIDE OF THE BRIDGE AS SHOWN.
6. REMOVE EXISTING ABUTMENTS AND WINGWALLS.
7. EXCAVATE INSIDE COFFERDAM TO APPROXIMATE BOTTOM OF FOOTING OF NEW SUBSTRUCTURES.
8. INSTALL MICROPILES AT NORTH ABUTMENT.
9. INSTALL CAST-IN-PLACE ABUTMENTS AND WINGWALLS.
10. REGRADE CHANNEL WITHIN COFFERDAMS. INSTALL RIPRAP AND NATURAL STREAMBED MATERIAL.
11. BACKFILL AND GRADE SLOPES AROUND ABUTMENTS AND WINGWALLS.
12. REMOVE WATER HANDLING COFFERDAM, COFFERDAM AND DEWATERING BASIN.
13. INSTALL PRECAST CONCRETE DECK UNITS.
14. TIE REBAR, FORM AND POUR CAST-IN-PLACE CONCRETE SHEAR SLAB AND CONCRETE CURBS.
15. CONSTRUCT APPROACH SLABS.
16. INSTALL MEMBRANE WATERPROOFING AND HMA 0.25.

SEQUENCE OF CONSTRUCTION (CONTINUED)

17. INSTALL 3-TUBE CURB MOUNTED BRIDGE RAIL.
18. INSTALL ROADWAY GUIDERAILS.
19. PAVE ROADWAY AND COMPLETE ROADWAY WORK.
20. REMOVE DETOUR SIGNS AND DEMOBILIZE.
21. INSTALL PLANTINGS, SEEDING, AND TURF ESTABLISHMENT.
22. REMOVE SEDIMENTATION CONTROL SYSTEMS UPON PERMANENT STABILIZATION.

CULTURAL RESOURCES NOTE:

EXISTING STONE STRUCTURE IS ASSUMED TO BE REMNANTS OF A HISTORICAL CROSSING REQUIRING CULTURAL RESOURCE PROTECTION. CONTRACTOR ACTIVITIES SHALL NOT DISTURB THESE CULTURAL RESOURCES. WORK IS NOT PERMITTED WEST OF THE 30-FT OFFSET LINE.



WATER HANDLING COFFERDAM SANDBAGS

NOT TO SCALE

WATER HANDLING NOTES:

1. THE CONTRACTOR SHALL MAINTAIN WATER THROUGH THE TEMPORARY WATER HANDLING SYSTEM AS REQUIRED DURING CONSTRUCTION OF THE NEW STRUCTURE.
2. A DEWATERING BASIN SHALL BE ESTABLISHED OUTSIDE OF THE WETLAND LIMITS.
3. TEMPORARY WATER HANDLING SYSTEM SHALL CONSIST OF AN APPROVED SYSTEM THAT THE CONTRACTOR ELECTS TO USE WHICH WILL SAFELY CONVEY WATER FLOWS THROUGH THE CONSTRUCTION AREA, SHALL BE ABLE TO SUPPORT CONSTRUCTION ACTIVITY AND SHALL CONFORM TO PERMITS.

   ANY WATER HANDLING SCHEME DEPICTED WITHIN THE DEPARTMENT'S 'HANDLING WATER TYPICAL SCHEMATICS' MAY BE UTILIZED UNLESS SPECIFICALLY PROHIBITED. A MEANS AND METHOD FOR WATER HANDLING SYSTEM SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL (PAID FOR UNDER "HANDLING WATER," SEE SPECIAL PROVISIONS).
4. WATER HANDLING SYSTEM SHALL NOT EXCEED IMPACT AREAS SHOWN ON THE WETLAND AND FLOODPLAIN IMPACT SHEETS OF THE PERMIT PLANS.
5. ANY STORM DRAINAGE DISCHARGING INTO A CONFINED WORK AREA FROM EXISTING OR PROPOSED STORM DRAINAGE PIPES 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.
6. GROUND DISTURBANCE IS LIMITED TO AREAS WITHIN 30 FEET OF THE PROPOSED BASELINE. THE CONTRACTOR SHALL NOT EXCAVATE, OR IN ANY WAY DISTURB, THE EXISTING STONE STRUCTURES WEST OF THIS BOUNDARY.

UNCONFINED IN-STREAM WORK BMP NOTE:

ANY UNCONFINED IN-STREAM WORK WITHIN THE WATERCOURSE SHALL BE RESTRICTED TO THE PERIOD FROM JUNE 1 TO SEPTEMBER 30, INCLUSIVE.

THE DEPARTMENT WILL REVIEW AND MAY APPROVE THE METHODS OF UNCONFINED IN-WATER WORK WITH CONSIDERATION OF THE FOLLOWING:

* PROPOSED SCHEDULE FOR WORK OPERATIONS
* ALL UNCONFINED IN-WATER WORK SHALL BE MINOR IN NATURE
* DISTURBANCE SHALL BE LIMITED TO AREAS THAT HAVE BEEN APPROVED FOR TEMPORARY AND PERMANENT IMPACT
* BEST MANAGEMENT PRACTICE SHALL BE UTILIZED WHEREVER POSSIBLE TO MINIMIZE TURBIDITY/SEDIMENT TRANSPORT DOWNSTREAM
* DISTURBED AREAS AND THE DURATION OF DISTURBANCE SHALL BE MINIMIZED TO THE EXTENT POSSIBLE
* IN-STREAM WORK SHALL BE DONE DURING PERIODS OF LOW FLOW

COFFERDAM NOTE:

COFFERDAM SHALL CONSIST OF A SUITABLE SYSTEM THAT THE CONTRACTOR ELECTS TO USE WHICH WILL SAFELY CONVEY WATER FLOW THROUGH THE CONSTRUCTION AREA, SHALL BE ABLE TO SUPPORT CONSTRUCTION ACTIVITY AND EXCAVATION, AND SHALL CONFORM TO PERMITS (PAID FOR UNDER "COFFERDAM AND DEWATERING").

DUE TO SHALLOW BEDROCK UNDER THE PROPOSED ABUTMENTS/WINGWALLS, IT IS ANTICIPATED THAT SHEET PILES WILL NOT BE THE PREFERRED COFFERDAM TYPE. SOLDIER PILES AND TIMBER LAGGING MAY BE THE PREFERRED OPTION. ULTIMATELY, THE CONTRACTOR SHALL ELECT THE COFFERDAM TYPE, WHICH MUST MEET THE REQUIREMENTS OF THE COFFERDAM AND DEWATERING SPECIFICATIONS.

TIME-OF-YEAR RESTRICTION NOTE:

ANY TREE CLEARING WORK SHOULD BE RESTRICTED TO THE PERIOD FROM NOVEMBER 1 TO APRIL 14.

TEMPORARY HYDRAULIC DATA

AVERAGE DAILY FLOW (ADF) [CFS]	20
AVERAGE SPRING FLOW (ASF) [CFS]	39
2 YEAR FREQUENCY DISCHARGE [CFS]	530
TEMPORARY DESIGN DISCHARGE [CFS]	530
TEMPORARY DESIGN FREQUENCY	2-YEAR
TEMPORARY WATER SURFACE EL. - UPSTREAM	452.0 FEET
TEMPORARY WATER SURFACE EL. - DOWNSTREAM	449.2 FEET

LEGEND

WETLAND LIMIT (STATE & FEDERAL)
ORDINARY HIGH WATER (OHW)
COFFERDAM
SEDIMENTATION CONTROL SYSTEM
WATER HANDLING COFFERDAM
TREE TO BE REMOVED

REV.	DATE	REVISION DESCRIPTION

SIGNATURE BLOCK: benesch — Alfred Benesch & Company, 120 Hebron Avenue 2nd Floor, Glastonbury, CT
DESIGNER/DRAFTER: C. SORENSEN CHECKED BY: M. HABEK

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK

TOWN(S): POMFRET

DRAWING TITLE: WATER HANDLING PLAN

PROJECT NO.: 0111-0125

DRAWING NO.: S-20

SHEET NO.: 04.20

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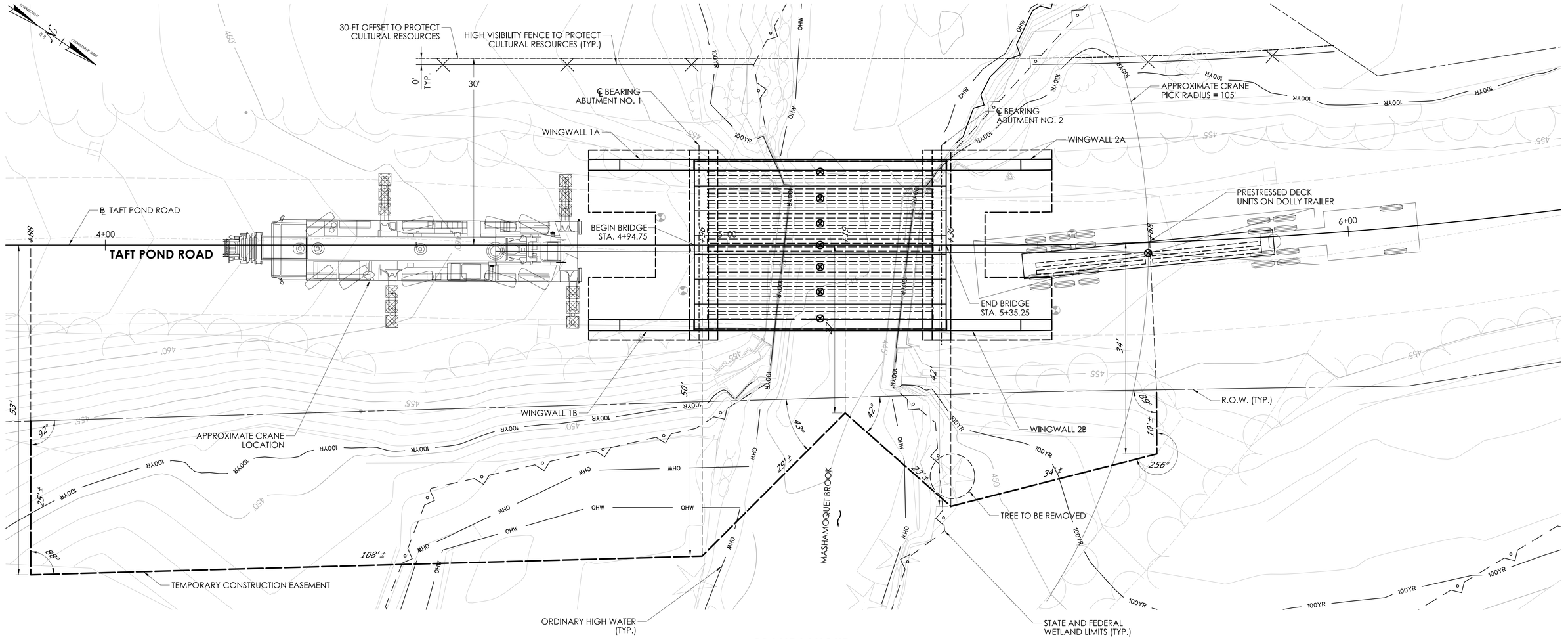
PLOTTED DATE: 9/23/2025



CRANE LAYOUT

SCALE: ⅛" = 1'-0"

CRANE AND ERECTION NOTES:

1. THE CONTRACTOR SHALL EVALUATE ANY CRANE SURCHARGE ON COFFERDAMS AND RECONSTRUCTED SUBSTRUCTURE ELEMENTS.
2. THE SUGGESTED SEQUENCE OF CONSTRUCTION DEPICTED ON THE WATER HANDLING PLAN REPRESENTS ONE POTENTIAL SCHEME. ALTERNATE CONSTRUCTION SCHEMES MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
3. THE COST OF THE CRANE, FOR ERECTION OF THE SUPERSTRUCTURE, SHALL BE INCLUDED UNDER THE ITEMS "PRESTRESSED DECK UNITS (4'-0" X 1'-3")" AND "PRESTRESSED DECK UNITS (3'-0" X 1'-3")."
4. TREE REMOVAL OR TRIMMING TO ACCOMMODATE CRANE MOVEMENTS SHALL BE KEPT TO A MINIMUM (SEE HIGHWAY DWG. NO. PLN-01) AND AS DIRECTED BY THE ENGINEER, PAID FOR UNDER THE ITEM, "CLEARING AND GRUBBING."

PIECE	PIECE WT. (KIPS)	RIG WT. (KIPS)	SAFETY FACTOR	PICK WT. (KIPS)	CRANE		
					PICK WT. (KIPS)	PICK RAD (FT)	CAPACITY (KIPS)
PRESTRESSED DECK UNITS (4'-0" X 1'-3") (EXTERIOR)	26	2.5	1.5	43	43	105	50

NOTE: CRANE CAPACITIES ARE BASED ON GROVE GMK 6400. OTHER CRANES MAY VARY.

LEGEND	
TREE TO BE REMOVED	◯

REV.	DATE	REVISION DESCRIPTION

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DESIGNER/DRAFTER: S. LACHCIK CHECKED BY: M. HABEK

CONNECTICUT DEPARTMENT OF TRANSPORTATION

PROJECT TITLE: **REPLACEMENT OF BRIDGE NO. 05664; TAFT POND ROAD OVER MASHAMOQUET BROOK**

TOWN(S): **POMFRET**

DRAWING TITLE: **CRANE LAYOUT AND ERECTION PLAN**

PROJECT NO.: **0111-0125**

DRAWING NO.: **S-21**

SHEET NO.: **04.21**

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