Town No.	161
Project No.	0161-0142
FA# (Constr.):	6161(008)
Bid Opening Date:	December 21st, 2022
Specification Form:	818

CONTRACT AND SPECIAL PROVISIONS
FOR THE
REPLACEMENT OF BRIDGE NO. 04975
LOVERS LANE OVER COMSTOCK BROOK
IN THE TOWN OF
WILTON, CONNECTICUT

Contractor: Dayton Construction Company, Inc.
Contractor's Federal I.D. No.: 06-0744098
Awarded (Date Contract is Signed) _____

CONTRACT

This Agreement, concluded at Wilton, Connecticut this _____day of _____ 2023 between the Town of Wilton, acting herein by Lynn Vanderslice, First Selectwoman, duly authorized, and hereinafter referred to as the Municipality, and Dayton Construction Company, Inc. of Watertown, Connecticut his, her, their or its heirs, executors, administrators, successors and assigns, acting herein by Matthew C. Dayton its Vice President hereinafter referenced to as the Contractor.

WITNESSETH, THAT: pursuant to Section 7-148 of the General Statutes of Connecticut, as revised, the Municipality has the authority to call for bids necessary to lay out, construct, reconstruct, alter, maintain, repair, control, operate and assign numbers to streets, alleys, highways, boulevards, bridges, underpasses, sidewalks, curbs, gutters, public walks and parkways, and the Contractor for and in consideration of the payment or payments herein specified and agreed to by the Municipality, hereby covenants and agrees to furnish and deliver all materials and to do and perform all the work and labor necessary for the construction of the Replacement of Bridge No. 04975 - Lovers Lane over Comstock Brook in the Town(s) of Wilton, State of Connecticut, at the unit prices bid by said Contractor for the respective estimated quantities and such other items and Specifications as are contained in the original Bid Proposal issued by the Municipality which proposal together with the State Standard Specifications Form 818, Supplemental Specifications, Special Provisions and any project addendum/addenda issued, along with any and all attachments are hereby made a part of the original Contract and accepted as such and also the plans of the work, prepared or approved by the Municipality, which plans as verified by said Municipality, are also agreed by each party as being a part hereof; the said work being described as follows:

Replacement of Bridge No. 04975 Lovers Lane over Comstock Brook

The Contractor further covenants and agrees that all of said work shall be done and performed in the best and most workmanlike manner and that all and every of said material and labor shall be in strict and entire conformity, in every respect, with said specifications and plans and shall be subject to the inspection and approval of the Municipality or its duly authorized representative, and, in case any of said material or labor shall be rejected by said Municipality or its authorized representative, as defective or unsuitable, then the said materials shall be removed and replaced with other approved materials and the said labor shall be done anew to the satisfaction and approval of the said Municipality or its authorized representative, at the cost and expense of the Contractor.

The Contractor further covenants and agrees that all and every of the said materials shall be furnished and delivered and all and every of the said labor shall be done and performed, in every respect to the satisfaction and approval of the Municipality or its aforesaid authorized representative on or before the expiration of Three Hundred Sixty-Eight (368) calendar days after the date specified in the Notice to Proceed.

WE, Dayton Construction Company, Inc., HEREBY WAIVE ANY CLAIMS WE
(CONTRACTOR)

MAY HAVE BASED ON DELAY OF AWARD OF THIS CONTRACT. THESE DELAYS WERE ALL AUTHORIZED BY AN OFFICER OF THIS COMPANY AND OUR SURETY IN ACCORDANCE WITH SECTION 1.03.02 AND/OR SUPPLEMENTAL SPECIFICATIONS.

Project: Replacement of Bridge No. 04975 Lovers Lane over Comstock Brook

FOR: Dayton Construction Company, Inc. (L.S.)
(CONTRACTOR)

BY: MCD VP 1/30/23 DATE: January 30, 2023
Matthew C. Dayton, Vice President

FOR: Nationwide Mutual Insurance Company (L.S.)
(SURETY)

BY: Wendy Krystopa DATE: January 30, 2023
Wendy Krystopa, Attorney In Fact

PROJECT NO. 161-142

It is expressly understood and agreed that in case of the failure on the part of the Contractor for any reason, except with the written consent of the Municipality or its authorized representative, to complete the furnishing and delivery of said materials and the doing and performance of said work within the aforesaid Three Hundred Sixty-Eight (368) calendar days, the Municipality shall have the right to deduct from any monies due or which may become due the Contractor, or if no moneys shall be due, the Municipality shall have the right to recover the amount of One Thousand Two Hundred Dollars ($1,200.00) per day for each and every calendar day elapsing between the time stipulated for completion and the actual date of completion, in accordance with the terms hereof; said deduction to be made or said sum to be recovered, not as a penalty, but as liquidated damages. Provided, however, that upon receipt of written notice from the Contractor of the existence of causes over which said Contractor has no control and which may delay the completion of said work, the Municipality or its authorized representative may, at its discretion, extend the period hereinbefore specified for the completion of said work, and in such case the Contractor shall become liable for said liquidated damages for delays commencing from the date on which said extended period shall expire.

It is distinctly understood and agreed that no claim for extra work or materials, not specifically herein provided, done or furnished by the Contractor, will be allowed by the Municipality or its authorized representative nor shall the Contractor do any work or furnish any materials not covered by these Specifications and Contract unless such work is ordered in writing by the Municipality, or its authorized representative. In no event will the Municipality be liable for any materials furnished or used, or for any work or labor done, unless said materials, work or labor are required of said Contractor on written order furnished by the said Municipality or its authorized representative.

It shall be a condition precedent that the Contractor present a written order from the Municipality or his authorized representative in order to request payment for extra work or material and in the absence of such written order the Contractor agrees that he is estopped from making any claim of waiver and/or estoppel; further, any such work or materials which may be done or furnished by the Contractor without such written order first being given, shall be at said Contractor's own risk, cost and expense and he hereby covenants and agrees that without such written order, he shall make no claim for compensation for work done or materials so furnished.

The Contractor further agrees that he and his Subcontractors shall permit the State of Connecticut, Department of Transportation, the Municipality, or their duly authorized representatives, to examine and copy books and records of the Contractor as contained in Article 1.05.13 of Form 818.

The Contractor further agrees that he and his Subcontractors shall keep all their records relating to this contract until the expiration of three (3) years after final payment under this contract are made, or six (6) months after settlement of any disputes, whichever may be later.

The bond given by the Contractor, in a sum equal to the total contract price of the work to be done, to secure a proper compliance with the terms and provisions of this Contract, is hereby made a part hereof.

The Contractor further agrees to receive the prices set forth in the following SCHEDULE OF PRICES as full compensation for furnishing all materials and labor which may be required in the prosecution and completion of the whole of the work to be done under this Contract or agreement, and in all respects to complete said Contract to the satisfaction of the said Municipality.

TOWN OF WILTON, CT
SCHEDULE OF PRICES
FOR THE CONSTRUCTION OF

Dayton Construction Company, Inc.

STATE PROJECT NO. 0161-0142, FAP # 6161(008)CN
REPLACEMENT OF BRIDGE NO. 04975
LOVERS LANE OVER COMSTOCK BROOK
IN THE TOWN OF WILTON

DATE OF BID OPENING **December 21, 2022** TIME: **10:00 A.M.** **NO BIDS WILL BE ACCEPTED AFTER 10:00 A.M. "NO EXCEPTIONS"**

Note: The bidder shall fill in, under the column "Unit Prices Bid," the unit prices, written in words and in numbers, for which he proposes to perform the various items of work called for, and under the column headed "Amount," the amount of each of the items at the unit price bid. After the proposal is opened and read, the quantities will be extended and totaled in accordance with the written bid prices and the bid will be verified or corrected.

Item Number	Items	Unit	Approximate Quantities	Unit Prices Bid		Amount (Figures)
				Figures	Writing	
0020903A	LEAD COMPLIANCE FOR MISCELLANEOUS EXTERIOR TASKS	L.S.	1	1,000.00	One Thousand Dollars and Zero Cents	1,000.00
0202216A	EXCAVATION AND REUSE OF EXISTING CHANNEL BOTTOM MATERIAL	C.Y.	58	10.00	Ten Dollars and Zero Cents	580.00
0201001A	CLEARING AND GRUBBING	L.S.	1	65,000.00	Sixty Five Thousand Dollars and Zero Cents	65,000.00
0201501A	RESET MAILBOX	EA.	2	200.00	Two Hundred Dollars and Zero Cents	400.00
0202000	EARTH EXCAVATION	C.Y.	300	45.00	Forty Five Dollars and Zero Cents	13,500.00
0202100	ROCK EXCAVATION	C.Y.	14	250.00	Two Hundred Fifty Dollars and Zero Cents	3,500.00
0202529	CUT BITUMINOUS CONCRETE PAVEMENT	L.F.	70	8.00	Eight Dollars and Zero Cents	560.00
0203202	STRUCTURE EXCAVATION - EARTH (EXCLUDING COFFERDAM AND DEWATERING)	C.Y.	496	105.00	One Hundred Five Dollars and Zero Cents	52,080.00
0203304	STRUCTURE EXCAVATION - ROCK (EXCLUDING COFFERDAM AND DEWATERING)	C.Y.	95	300.00	Three Hundred Dollars and Zero Cents	28,500.00
0204001	COFFERDAM AND DEWATERING	L.F.	507	200.00	Two Hundred Dollars and Zero Cents	101,400.00
0209001	FORMATION OF SUBGRADE	S.Y.	630	8.00	Eight Dollars and Zero Cents	5,040.00
0211000	ANTI-TRACKING PAD	S.Y.	25	10.00	Ten Dollars and Zero Cents	250.00
0213100	GRANULAR FILL	C.Y.	16	85.00	Eighty Five Dollars and Zero Cents	1,360.00
0216000	PERVIOUS STRUCTURE BACKFILL	C.Y.	567	95.00	Ninety Five Dollars and Zero Cents	53,865.00
0216011A	FLOWABLE FILL	C.Y.	109	400.00	Four Hundred Dollars and Zero Cents	43,600.00
0219001	SEDIMENTATION CONTOL SYSTEM	L.F.	380	2.00	Two Dollars and Zero Cents	760.00
0219011A	SEDIMENT CONTROL SYSTEM AT CATCH BASIN	EA.	8	100.00	One Hundred Dollars and Zero Cents	800.00
0286001.10	ROCK IN DRAINAGE TRENCH EXCAVATION 0'-10' DEEP	C.Y.	23	300.00	Three Hundred Dollars and Zero Cents	6,900.00
0304002	PROCESSED AGGREGATE BASE	C.Y.	160	90.00	Ninety Dollars and Zero Cents	14,400.00
0305001	PROCESSED AGGREGATE	C.Y.	25	150.00	One Hundred Fifty Dollars and Zero Cents	3,750.00
0406171	HMA S0.5	TON	102	275.00	Two Hundred Seventy Five Dollars and Zero Cents	28,050.00
0406172	HMA S0.375	TON	110	200.00	Two Hundred Dollars and Zero Cents	22,000.00
0406173	HMA S0.25	TON	7	400.00	Four Hundred Dollars and Zero Cents	2,800.00
0406194A	JOINT AND CRACK SEALING OF BITUMINOUS CONCRETE PAVEMENT	L.F.	85	25.00	Twenty Five Dollars and Zero Cents	2,125.00
0406236	MATERIAL FOR TACK COAT	GAL	85	5.00	Five Dollars and Zero Cents	425.00
0406999A	ASPHALT ADJUSTMENT COST (ESTIMATED COST)	EST	1	$5,000.00	Five Thousand Dollars and Zero Cents	$5,000
0502195A	TEMPORARY BRIDGE	L.S.	1	250,000.00	Two Hundred Fifty Thousand Dollars and Zero Cents	250,000.00
0503001	REMOVAL OF SUPERSTRUCTURE	L.S.	1	115,000.00	One Hundred Fifteen Thousand Dollars and Zero Cents	115,000.00
0514202	PRESTRESSED DECK UNITS (3'-0" X 1'-3")	L.F.	134	600.00	Six Hundred Dollars and Zero Cents	80,400.00
0514222	PRESTRESSED DECK UNITS (4'-0" X 1'-3")	L.F.	179	650.00	Six Hundred Fifty Dollars and Zero Cents	116,350.00
0520036A	ASPHALTIC PLUG EXPANSION JOINT SYSTEM	C.F.	45	500.00	Five Hundred Dollars and Zero Cents	22,500.00
0520041A	PREFORMED JOINT SEAL	L.F.	142	115.00	One Hundred Fifteen Dollars and Zero Cents	16,330.00
0521021A	STEEL-LAMINATED ELASTOMERIC BEARINGS	C.I.	8,463	1.00	One Dollar and Zero Cents	8,463.00
0586002.10	TYPE 'C' CATCH BASIN (4' SUMP) - 0' - 10' DEEP	EA.	4	7,500.00	Seven Thousand Five Hundred Dollars and Zero Cents	30,000.00
0586041.10	TYPE 'C-L' CATCH BASIN (4' SUMP) - 0' - 10' DEEP	EA.	1	7,500.00	Seven Thousand Five Hundred Dollars and Zero Cents	7,500.00
0586041.10	TYPE 'C-L' CATCH BASIN (4' SUMP) - 0' - 10' DEEP	EA.	1	7,500.00	Seven Thousand Five Hundred Dollars and Zero Cents	7,500.00
0586051.10A	SPECIAL TYPE 'C-L' CATCH BASIN DOUBLE GRATE TYPE 2 (4' SUMP) – 0' – 10' DEEP	EA.	1	8,000.00	Eight Thousand Dollars and Zero Cents	8,000.00
0586790.10	REMOVE DRAINAGE STRUCTURE - 0' - 10' DEEP	EA.	1	1,200.00	One Thousand Two Hundred Dollars and Zero Cents	1,200.00
0601062	FOOTING CONCRETE	C.Y.	141	875.00	Eight Hundred Seventy Five Dollars and Zero Cents	123,375.00
0601064	ABUTMENT AND WALL CONCRETE	C.Y.	155	1,500.00	One Thousand Five Hundred Dollars and Zero Cents	232,500.00

Kindly insert here the total amount of your Bid $ 3,232,797.50
It is understood that the unit prices shall govern in case of discrepancy between the unit-prices and this amount.
This bid includes addenda no.: 2

TOWN OF WILTON, CT
STATE PROJECT NO. 0161-0142, FAP # 6161(008)CN
FOR THE CONSTRUCTION OF

STATE PROJECT NO. 0161-0142, FAP # 6161(008)CN
REPLACEMENT OF BRIDGE NO. 04975
LOVERS LANE OVER COMSTOCK BROOK
IN THE TOWN OF WILTON

DATE OF BID OPENING **December 21, 2022** TIME: **10:00 A.M.** **NO BIDS WILL BE ACCEPTED AFTER 10:00 A.M. "NO EXCEPTIONS"**

Note: The bidder shall fill in, under the column "Unit Prices Bid," the unit prices, written in words and in numbers, for which he proposes to perform the various items of work called for, and under the column headed "Amount," the amount of each of the items at the unit price bid. After the proposal is opened and read, the quantities will be extended and totaled in accordance with the written bid prices and the bid will be verified or corrected.

Item Number	Items	Unit	Approximate Quantities	Unit Prices Bid		Amount (Figures)
				Figures	Writing	
0601118	BRIDGE DECK CONCRETE	C.Y.	33	1,700.00	One Thousand Seven Hundred Dollars and Zero Cents	56,100.00
0601121	PARAPET CONCRETE	L.F.	88	450.00	Four Hundred Fifty Dollars and Zero Cents	39,600.00
0601123	APPROACH SLAB CONCRETE	C.Y.	37	850.00	Eight Hundred Fifty Dollars and Zero Cents	31,450.00
0601640	1" CLOSED CELL ELASTOMER	C.I.	1,300	1.00	One Dollar and Zero Cents	1,300.00
0610001	DRILLING HOLES AND BONDING ANCHORS	EA.	185	50.00	Fifty Dollars and Zero Cents	9,250.00
0602030	DEFORMED STEEL BARS - GALVANIZED	LB	79,639	2.00	Two Dollars and Zero Cents	159,278.00
0602889	DOWEL BAR SPLICER SYSTEM GALVANIZED	EA.	88	80.00	Eighty Dollars and Zero Cents	7,040.00
0603233A	GALVANIZING STRUCTURAL STEEL (SITE NO. 1)	L.S.	1	30,000.00	Thirty Thousand Dollars and Zero Cents	30,000.00
0603474A	METALLIZING STRUCTURAL STEEL (SITE NO. 1)	L.S.	1	22,000.00	Twenty Two Thousand Dollars and Zero Cents	22,000.00
0605003A	MASONRY FACING	S.F.	1,900	100.00	One Hundred Dollars and Zero Cents	190,000.00
0686000.15	15" R.C. PIPE - 0' - 10' DEEP	L.F.	160	85.00	Eighty Five Dollars and Zero Cents	13,600.00
0686230.15	15" HIGH DENSITY POLYETHYLENE PIPE - 0' - 10' DEEP	L.F.	56	70.00	Seventy Dollars and Zero Cents	3,920.00
0686715.15	15" HIGH DENSITY POLYETHYLENE PIPE END	EA.	2	750.00	Seven Hundred Fifty Dollars and Zero Cents	1,500.00
0686950.10	REMOVE EXISTING PIPE - 0' - 10' DEEP	L.F.	20	30.00	Thirty Dollars and Zero Cents	600.00
0702026	MICROPILES	EA.	12	6,000.00	Six Thousand Dollars and Zero Cents	72,000.00
0702027	VERIFICATION TEST FOR MICROPILES	EA.	1	12,000.00	Twelve Thousand Dollars and Zero Cents	12,000.00
0702028	PROOF TEST FOR MICROPILES	EA.	2	2,000.00	Two Thousand Dollars and Zero Cents	4,000.00
0702029	MICROPILE LENGTH ADJUSTMENT	L.F.	20	100.00	One Hundred Dollars and Zero Cents	2,000.00
0703012	MODIFIED RIPRAP	C.Y.	12	150.00	One Hundred Fifty Dollars and Zero Cents	1,800.00
0707009A	MEMBRANE WATERPROOFING (COLD LIQUID ELASTOMERIC)	S.Y.	187	110.00	One Hundred Ten Dollars and Zero Cents	20,570.00
0708001	DAMPPROOFING	S.Y.	427	12.00	Twelve Dollars and Zero Cents	5,124.00
0714999A	MONITORING STRUCTURES	L.S.	1	65,000.00	Sixty Five Thousand Dollars and Zero Cents	65,000.00
0728001	CRUSHED STONE FOR SLOPE PROTECTION	TON	11	100.00	One Hundred Dollars and Zero Cents	1,100.00
0755014	GEOTEXTILE (SEPARATION - HIGH SURVIVABILITY)	S.Y.	30	5.00	Five Dollars and Zero Cents	150.00
0815001	BITUMINOUS CONCRETE LIP CURBING	L.F.	260	15.00	Fifteen Dollars and Zero Cents	3,900.00
0819002A	PENETRATING SEALER PROTECTIVE COMPOUND	S.Y.	110	15.00	Fifteen Dollars and Zero Cents	1,650.00
0822100.01	TEMPORARY TRAFFIC BARRIER	L.F.	120	35.00	Thirty Five Dollars and Zero Cents	4,200.00
0822100.02	TEMPORARY TRAFFIC BARRIER (PINNED)	L.F.	100	30.00	Thirty Dollars and Zero Cents	3,000.00
0822101.01	RELOCATED TEMPORARY TRAFFIC BARRIER	L.F.	40	20.00	Twenty Dollars and Zero Cents	800.00
0904051A	3 TUBE CURB MOUNTED BRIDGE RAIL	L.F.	69	700.00	Seven Hundred Dollars and Zero Cents	48,300.00
0910090A	STEEL-BACKED TIMBER GUIDERAIL - TYPE A	L.F.	80	100.00	One Hundred Dollars and Zero Cents	8,000.00
0910091A	STEEL-BACKED TIMBER GUIDERAIL - TERMINAL SECTION	EA.	2	5,500.00	Five Thousand Five Hundred Dollars and Zero Cents	11,000.00
0910092A	STEEL-BACKED TIMBER GUIDERAIL - BRIDGE ATTACHMENT	EA.	2	7,000.00	Seven Thousand Dollars and Zero Cents	14,000.00
0912503	REMOVE METAL BEAM RAIL	L.F.	215	10.00	Ten Dollars and Zero Cents	2,150.00
0922501	BITUMINOUS CONCRETE DRIVEWAY	S.Y.	256	85.00	Eighty Five Dollars and Zero Cents	21,760.00
0922503A	GRAVEL DRIVEWAY	S.Y.	11	100.00	One Hundred Dollars and Zero Cents	1,100.00
0939001	SWEEPING FOR DUST CONTROL	HR.	10	50.00	Fifty Dollars and Zero Cents	500.00
0943001	WATER FOR DUST CONTROL	M.GA	65	10.00	Ten Dollars and Zero Cents	650.00

Kindly insert here the total amount of your Bid $ 3,232,797.50
It is understood that the unit prices shall govern in case of discrepancy between the unit-prices and this amount.
This bid includes addenda no.: 2

TOWN OF WILTON, CT
SCHEDULE OF PRICES
FOR THE CONSTRUCTION OF

STATE PROJECT NO. 0161-0142, FAP # 6161(008)CN
REPLACEMENT OF BRIDGE NO. 04975
LOVERS LANE OVER COMSTOCK BROOK
IN THE TOWN OF WILTON

DATE OF BID OPENING **December 21, 2022** TIME: **10:00 A.M.** **NO BIDS WILL BE ACCEPTED AFTER 10:00 A.M. "NO EXCEPTIONS"**

Note: The bidder shall fill in, under the column "Unit Prices Bid," the unit prices, written in words and in numbers, for which he proposes to perform the various items of work called for, and under the column headed "Amount," the amount of each of the items at the unit price bid. After the proposal is opened and read, the quantities will be extended and totaled in accordance with the written bid prices and the bid will be verified or corrected.

Item Number	Items	Unit	Approximate Quantities	Unit Prices Bid		Amount (Figures)
				Figures	Writing	
0944000	FURNISHING AND PLACING TOPSOIL	S.Y.	400	12.00	Twelve Dollars and Zero Cents	4,800.00
0949087	CLETHRA ALNIFOLIA SUMMERSWEET 3'-4' HT. B.B.	EA.	10	90.00	Ninety Dollars and Zero Cents	900.00
0949099	CORNUS AMOMUM, SILKY DOGWOOD 18"-24" HT. CONTAINER	EA.	10	85.00	Eighty Five Dollars and Zero Cents	850.00
0949226	ILEX VERTICILLATA COMMON WINTERBERRY 18"- 24" HT. B.B.	EA.	8	90.00	Ninety Dollars and Zero Cents	720.00
0949831	ACER RUBRUM RED MAPLE 1 3/4" - 2" CAL. B.B.	EA.	8	1,300.00	One Thousand Three Hundred Dollars Zero Cents	10,400.00
0950019A	TURF ESTABLISHMENT– LAWN	S.Y.	225	4.00	Four Dollars and Zero Cents	900.00
0950039	EROSION CONTROL MATTING TYPE D	S.Y.	130	7.25	Seven Dollars and Twenty Five Cents	942.50
0950040A	CONSERVATION SEEDING FOR SLOPES	S.Y.	180	5.00	Five Dollars and Zero Cents	900.00
0950043A	WETLAND GRASS ESTABLISHMENT	S.F.	100	2.50	Two Dollars and Fifty Cents	250.00
0952001	SELECTIVE CLEARING AND THINNING	L.S.	1	3,000.00	Three Thousand Dollars and Zero Cents	3,000.00
0952051A	CONTROL AND REMOVAL OF INVASIVE VEGETATION	S.Y.	470	10.00	Ten Dollars and Zero Cents	4,700.00
0969060A	CONSTRUCTION FIELD OFFICE, SMALL	MO.	16	4,000.00	Four Thousand Dollars and Zero Cents	64,000.00
0970006	TRAFFICPERSON (MUNICIPAL POLICE OFFICER) (ESTIMATED COST)	EST.	1	$72,000.00	Seventy Two Thousand Dollars and Zero Cents	$72,000
0970007	TRAFFICPERSON (UNIFORMED FLAGGER)	HR.	240	60.00	Sixty Dollars and Zero Cents	14,400.00
0971001A	MAINTENANCE AND PROTECTION OF TRAFFIC	L.S.	1	95,000.00	Ninety Five Thousand Dollars and Zero Cents	95,000.00
0974001A	REMOVAL OF EXISTING MASONRY	C.Y.	121	175.00	One Hundred Seventy Five Dollars and Zero Cents	21,175.00
0975004	MOBILIZATION AND PROJECT CLOSEOUT	L.S.	1	.332,350.00	Three Hundred Thirty Two Thousand Three Hundred Fifty Dollars and Zero Cents	332,350.00
0976002	BARRICADE WARNING LIGHTS - HIGH INTENSITY	DAY	7,300	1.00	One Dollar and Zero Cents	7,300.00
0978002	TRAFFIC DRUM	EA.	17	50.00	Fifty Dollars and Zero Cents	850.00
0979003	CONSTRUCTION BARRICADE TYPE III	EA.	2	200.00	Two Hundred Dollars and Zero Cents	400.00
0980020	CONSTRUCTION SURVEYING	L.S.	1	95,000.00	Ninety Five Thousand Dollars and Zero Cents	95,000.00
1020030A	TEMPORARY ILLUMINATION UNIT	EA.	6	1,000.00	One Thousand Dollars and Zero Cents	6,000.00
1106001	1 WAY PEDESTRIAN SIGNAL POLE MOUNTED	EA.	2	1,500.00	One Thousand Five Hundred Dollars and Zero Cents	3,000.00
1107007	PEDESTRIAN PUSH BUTTON AND SIGN (PIEZO)	EA.	2	400.00	Four Hundred Dollars and Zero Cents	800.00
1118101A	TEMPORARY SIGNALIZATION (SITE NO. 1)	L.S.	1	125,000.00	One Hundred Twenty Five Thousand Dollars and Zero Cents	125,000.00
1205217	TYPE DE-7D DELINEATOR	EA.	8	50.00	Fifty Dollars and Zero Cents	400.00
1206023A	REMOVAL AND RELOCATION OF EXISTING SIGNS	L.S.	1	1,500.00	One Thousand Five Hundred Dollars and Zero Cents	1,500.00
1209124	HOT-APPLIED PAINTED PAVEMENT MARKINGS 4" WHITE	L.F.	355	3.00	Three Dollars and Zero Cents	1,065.00
1209131	HOT-APPLIED PAINTED LEGEND, ARROWS AND MARKINGS	S.F.	20	11.00	Eleven Dollars and Zero Cents	220.00
1211001	REMOVAL OF PAVEMENT MARKINGS	S.F.	120	11.00	Eleven Dollars and Zero Cents	1,320.00
1220027	CONSTRUCTION SIGNS	S.F.	280	35.00	Thirty Five Dollars and Zero Cents	9,800.00
1802210.07	TEMPORARY SAND BARREL (700 lb.)	EA.	2	350.00	Three Hundred Fifty Dollars and Zero Cents	700.00
1802210.14	TEMPORARY SAND BARREL (1400 lb.)	EA.	8	400.00	Four Hundred Dollars and Zero Cents	3,200.00
1802210.21	TEMPORARY SAND BARREL (2100 lb.)	EA.	4	450.00	Four Hundred Fifty Dollars and Zero Cents	1,800.00

Kindly insert here the total amount of your Bid $ 3,232,797.50
It is understood that the unit prices shall govern in case of discrepancy between the unit-prices and this amount.
This bid includes addenda no.: 2

TOWN OF WILTON, CT
SCHEDULE OF PRICES
FOR THE CONSTRUCTION OF

STATE PROJECT NO. 0161-0142, FAP # 6161(008)CN
REPLACEMENT OF BRIDGE NO. 04975
LOVERS LANE OVER COMSTOCK BROOK
IN THE TOWN OF WILTON

DATE OF BID OPENING **December 21, 2022** TIME: **10:00 A.M.** **NO BIDS WILL BE ACCEPTED AFTER 10:00 A.M. "NO EXCEPTIONS"**

Note: The bidder shall fill in, under the column "Unit Prices Bid," the unit prices, written in words and in numbers, for which he proposes to perform the various items of work called for, and under the column headed "Amount," the amount of each of the items at the unit price bid. After the proposal is opened and read, the quantities will be extended and totaled in accordance with the written bid prices and the bid will be verified or corrected.

Kindly insert here the total amount of your Bid $ 3,232,797.50
It is understood that the unit prices shall govern in case of discrepancy between the unit-prices and this amount.
This bid includes addenda no.: 2

CONTRACT TIME AND LIQUIDATED DAMAGES

1. For this contract, an assessment per day for liquidated damages, at a rate of One Thousand Two Hundred Dollars ($1,200) per day shall be applied to each calendar day the work runs in excess of the Three Hundred Sixty Eight (368) allowed calendar days for the contract.

Note: PRIME CONTRACTOR'S REQUIREMENTS:

A. Proposal Guaranty (Bid Bond): Except when otherwise specified, no proposal will be considered unless accompanied by a proposal guaranty in the form of a bond furnished by a surety company, satisfactory to the Engineer, in an amount equal to at least 30% of the amount of the bid, or unless the bidder has on file in the Town, an annual bid bond in the proper amount.

The surety must be a corporate surety licensed to sign surety bonds in the State of Connecticut.

B. Not less than 7% of the total Contract value shall be subcontracted to, performed by, and paid to Disadvantaged Business Enterprise(s) DBE.

C. If the Contractor is unable to fulfill the DBE's percentage requirement, he may request an exception of the above percentage, by completing and submitting to the Town, the "Application for Review of Pre-award Good Faith Efforts", as contained in the General Provisions.

D. Contractors must make sure that at the time of bidding, their Firms have an approved Affirmative Action Plan with the State of Connecticut, Department of Transportation.

E. The low bidder is required to submit to the Town, both a Certificate of Insurance and a Workers' Compensation Certificate on or before the signing of the Contract.

F. Statement of Bidder's Qualifications: Each bidder is required to submit to the Town a recent sworn statement of the bidder's qualifications the form furnished by the Town for this purpose.

G. Contracts will not be awarded until the above requirements have been submitted and approved.

H. Please be aware that the Town, prior to the awarding of the Contract, may require further financial and other information from any applicant who becomes the low bidder for that Contract.

I. The apparent two lowest bidders, as determined by the Town of Wilton immediately after the bid opening, shall submit the Pre-award DBE Commitment Approval request form(s) to the Town of Wilton no later than five days after the bid opening. This is a requirement of Title 49, Code of Federal Regulations (CFR) Part 26, Participation of DBE's. Failure to comply with this requirement may be cause for rejection of the bid.

Response to Bidder Questions List #1

Replacement of Bridge No. 04975
Lovers Lane over Comstrock Brook
Wilton, CT
State Project No. 0161-0142
Town Project No. RFP 2022-09

BID OPENING 10:00 A.M. December 21, 2022

RESPONSE TO BIDDER QUESTIONS LIST #1

DATE OF RESPONSE: December 19, 2022

The following questions were received by the Engineer. Responses are provided directly below each question.

Bidder Question #1

We have received Addendum 2 for the above referenced project but we are confused as to what finish is required for the Bridge Rail. The specification for the bridge rail calls out both metalizing and galvanizing. The galvanizing specification states that the structural steel is galvanized while the metalizing specification is specific to the bridge rail. Just want to clarify prior to pricing out the item.

SMF Co recommends galvanizing with a painted finish applied over the galvanized finish (IE the Colorgalv System by Duncan Galvanizing or similar) as this will protect both the interior and exterior surfaces while the metalizing system will only protect the exterior surfaces. This will result in rust stains on the concrete from seepage of the moisture from the rail element internal surfaces.

Are there going to be addendums issued for the 0161-0142 project which has the same bridge rail system?

RESPONSE: All steel shapes, plates, and hollow structural sections of the 3 Tube Bridge Rail shall be fabricated in accordance with the special provision for Item #0904051A "3-Tube Curb Mounted Bridge Rail" and be shop metallized in accordance with the special provision for Item #0603474A – "Metallizing Structural Steel (Site No. 1)". All hardware for the bridge rail including bolts and anchor rods shall be fabricated and galvanized in accordance with the special provision for Item #0904051A "3-Tube Curb Mounted Bridge Rail". The exposed hardware after the installation of the bridge rail shall be field coated in accordance with the special provision for Item #0603474A – "Metallizing Structural Steel (Site No. 1)".

Structural steel support for masonry facing shall be fabricated and galvanized in accordance with the special provision for Item 0603233A – "Galvanizing Structural Steel (Site No. 1)".

There is no change to the Bid Opening Date and Time.

There is no change to the Schedule of Prices.

The foregoing is hereby made a part of the contract.

TOWN OF WILTON

ADDENDUM NO. 1

RFP #2022-09

ISSUE DATE: December 7, 2022

Request for Proposal to Replace Lovers Lane Bridge - Bridge #04975

This addendum is being issued to change the submission date for this Request for Proposals from the original due date of Wednesday, December 14, 2022 at 10:00 AM EST. The new due date for all submissions will be Wednesday, December 21, 2022 at 10:00 AM EST.

Addendum No. 1 is being issued to all potential bidders to provide the items and attachments set forth herein which shall act to qualify, clarify or otherwise modify the Documents previously issued regarding the above referenced project. These items, whether of omission, addition, substitution, or clarification, shall be incorporated into the proposals submitted by all proposers, and receipt of this document and its attachments must be acknowledged in the space provided on the Proposer's Schedule of Prices Form. Failure to do so may subject the Proposer to disqualification.

Frank Smeriglio, PE

Director of Public Works, Town Engineer

Town of Wilton

TOWN OF WILTON

ADDENDUM NO. 2

RFP #2022-09

ISSUE DATE: December 15, 2022

Request for Proposal to Replace Lovers Lane Bridge - Bridge #04975

This addendum is being issued to address plan revisions and clarify information associated with masonry facing, dimensions, stationing, elevations, notes and callouts. It also includes the Final Design Geotechnical Engineering Report for the project providing design recommendations for the temporary bridge foundations.

Addendum No. 2 is being issued to all potential bidders to provide the items and attachments set forth herein which shall act to qualify, clarify or otherwise modify the Documents previously issued regarding the above referenced project. These items, whether of omission, addition, substitution, or clarification, shall be incorporated into the proposals submitted by all proposers, and receipt of this document and its attachments must be acknowledged in the space provided on the Proposer's Schedule of Prices Form. Failure to do so may subject the Proposer to disqualification.

Frank Smeriglio, PE

Director of Public Works, Town Engineer

Town of Wilton

DECEMBER 15, 2022
REPLACEMENT OF BRIDGE NO. 04975
LOVERS LANE OVER COMSTOCK BROOK
STATE PROJECT NO. 0161-0142
TOWN PROJECT NO. RFP 2022-09
TOWN OF WILTON

ADDENDUM NO. 2

This addendum addresses plan revisions to clarify information associated with masonry facing, dimensions, stationing, elevations, notes and callouts. It also includes the Final Design Geotechnical Engineering Report for the project providing design recommendations for the temporary bridge foundations.

REPORTS

The following Report is hereby added to the contract.

- FINAL DESIGN GEOTECHNICAL ENGINEERING REPORT

SPECIAL PROVISIONS

NEW SPECIAL PROVISIONS

The following Special Provisions are hereby added to the contract.

- ITEM #0406194A – JOINT AND CRACK SEALING OF BITUMINOUS CONCRETE PAVEMENT

REVISED SPECIAL PROVISIONS

The following Special Provisions are hereby revised.

- NOTICE TO CONTRACTOR – ADHESIVE BONDED ANCHOR AND DOWEL INSTALLATION, INSPECTION AND TESTING REQUIREMENTS
- ITEM #0603233A – GALVANIZING STRUCTURAL STEEL (SITE NO. 1)
- ITEM #0910090A – STEEL BACKED TIMBER GUIDERAIL – TYPE A
- ITEM #0910091A – STEEL-BACKED TIMBER GUIDERAIL – TERMINAL SECTION
- ITEM #0910092A STEEL-BACKED TIMBER GUIDERAIL – BRIDGE ATTACHMENT

CONTRACT ITEMS

NEW CONTRACT ITEMS

The following Contract Items are hereby added to the contract.

ITEM NO.	DESCRIPTION	QUANTITY
0406194A	JOINT AND CRACK SEALING OF BITUMINOUS CONCRETE PAVEMENT	85 LF

PLANS

REVISED PLANS

The following Plan Sheets are hereby deleted and replaced with the like-numbered Plan Sheets:

- DRAWING NO. REV-01 (SHEET NO. 02.01.A2)
- DRAWING NO. S-02 (SHEET NO. 04.02.A2)
- DRAWING NO. S-03 (SHEET NO. 04.03.A2)
- DRAWING NO. S-09 (SHEET NO. 04.09.A2)
- DRAWING NO. S-10 (SHEET NO. 04.10.A2)
- DRAWING NO. S-11 (SHEET NO. 04.11.A2)
- DRAWING NO. S-12 (SHEET NO. 04.12.A2)
- DRAWING NO. S-13 (SHEET NO. 04.13.A2)
- DRAWING NO. S-14 (SHEET NO. 04.14.A2)
- DRAWING NO. S-15 (SHEET NO. 04.15.A2)
- DRAWING NO. S-16 (SHEET NO. 04.16.A2)
- DRAWING NO. S-18 (SHEET NO. 04.18.A2)
- DRAWING NO. S-19 (SHEET NO. 04.19.A2)
- DRAWING NO. S-21 (SHEET NO. 04.21.A2)
- DRAWING NO. S-23 (SHEET NO. 04.23.A2)
- DRAWING NO. S-24 (SHEET NO. 04.24.A2)

There is no change to the Bid Opening Date and Time.

The Schedule of Prices has been revised to reflect these changes.

The Detailed Estimate Sheets do not reflect these changes.

There will be no change in the number of calendar days due to this Addendum.

The foregoing is hereby made a part of the contract.

REV. No.	SHEET No.	DATE mm/dd/yy	NEW	REV.	DEL.	DESCRIPTION	BY
1	04.02.A2	12/15/22		✔		CALLOUT ADJUSTMENTS	F&O
1	04.03.A2	12/15/22		✔		UPDATED STA. LOCATION	F&O
1	04.09.A2	12/15/22		✔		REVISED STAGING PLAN	F&O
1	04.10.A2	12/15/22		✔		NOTE CHANGE & ADDED CALLOUTS	F&O
1	04.11.A2	12/15/22		✔		MOVED CALLOUT	F&O
1	04.12.A2	12/15/22		✔		ABUTMENT REVISIONS	F&O
1	04.13.A2	12/15/22		✔		REVISE ABUTMENT	F&O
1	04.14.A2	12/15/22		✔		REVISE WINGWALLS	F&O
1	04.15.A2	12/15/22		✔		WW 2B ROCK FACING THICKNESS	F&O
1	04.16.A2	12/15/22		✔		UPDATE FRAMING PLAN	F&O
1	04.18.A2	12/15/22		✔		UPDATE DETAILS	F&O
1	04.19.A2	12/15/22		✔		BARRIER WALL/WINGWALL REVISE	F&O
1	04.21.A2	12/15/22		✔		CONCRETE CAP MODIFICATION	F&O
1	04.23.A2	12/15/22		✔		ENDBLOCK MODIFIED	F&O
1	04.24.A2	12/15/22		✔		CONCRETE CAP MODIFICATION	F&O

REV. No.	SHEET No.	DATE mm/dd/yy	NEW	REV.	DEL.	DESCRIPTION	BY

REV. No.	SHEET No.	DATE mm/dd/yy	NEW	REV.	DEL.	DESCRIPTION	BY

ADDENDUM NO. 2

SIGNATURE/ BLOCK:

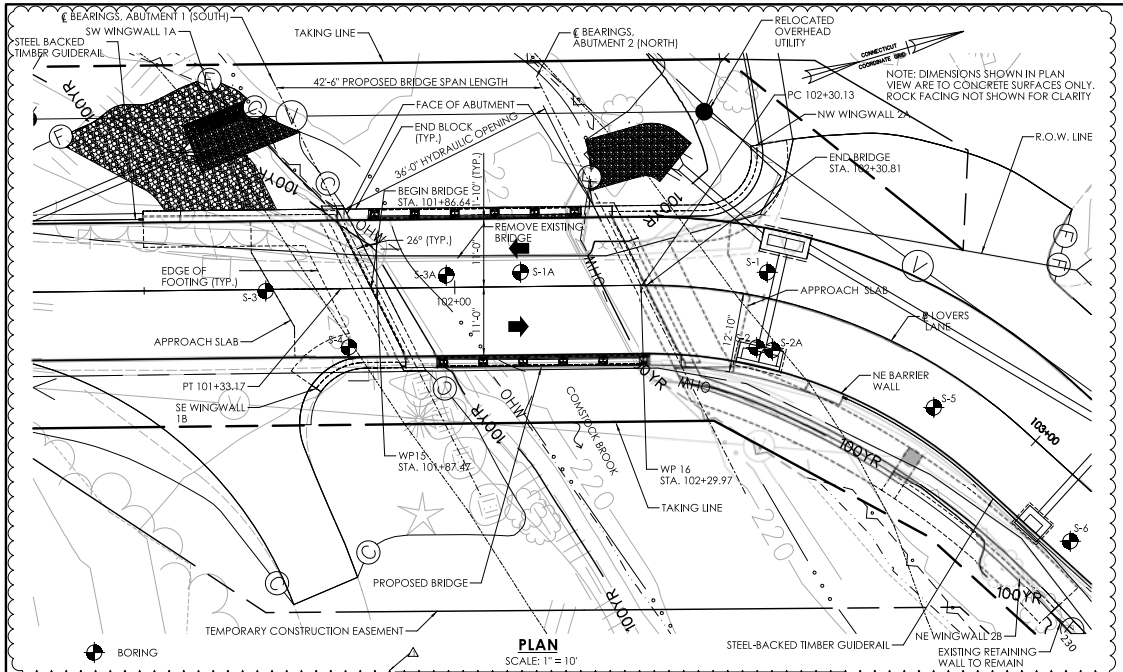
Stuart Harris
Fuss & O'Neill
2022.12.15 15:31:25-05'00'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: **20160182.D10**
PROJECT DESCRIPTION: **BRIDGE NO. 04975 LOVERS LANE OVER C**
TOWN(S): **WILTON**
DRAWING TITLE: **List of Revisions**

DRAWING NO. **REV-1**
SHEET NO. **02.01.A2**

LASTED SAVED BY: CollinsMJ **FILE NAME:** C:\Users\collinsmj\Desktop\CT_CGR_CPS__02-Revisions Sheet.dgn
PLOTTED DATE: 6/30/2021



GENERAL NOTES:

SPECIFICATIONS: CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 818 (2020), SUPPLEMENTAL SPECIFICATIONS DATED JANUARY 2022 AND SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS (9TH EDITION - 2020), AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL (2003) WITH REVISIONS DATED 2019.

MATERIAL STRENGTHS:
CONCRETE:
CLASS PCC 03340 ..... f'c = 3,000 PSI
CLASS PCC 04462 ..... f'c = 4,000 PSI
PRC08062 (PRECAST CONCRETE) ..... f'c = 8,000 PSI

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 SECTION 6.01 CONCRETE FOR STRUCTURES.

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

LIVE LOAD: HL-93, LEGAL AND PERMIT VEHICLES

FUTURE PAVING ALLOWANCE: NONE

BITUMINOUS CONCRETE OVERLAY: THIS SHALL CONSIST OF TWO COURSES OF TRAFFIC LEVEL 2 MIXES. THE BOTTOM COURSE SHALL BE 1" HMA S0.25 AND THE TOP COURSE SHALL BE 2" HMA S0.5.

DIMENSIONS: WHEN 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 ALSO BE SUBMITTED FOR REFERENCE BY THE REVIEWER.

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

CONCRETE NOTES:

FOUNDATION PRESSURE 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.

REMAIN-IN-PLACE FORMS: THE USE OF REMAIN-IN-PLACE FORMS ON THIS STRUCTURE IS NOT ALLOWED.

PENETRATING SEALER: PENETRATING SEALER PROTECTIVE COMPOUND SHALL BE APPLIED TO ALL EXPOSED SURFACES, INCLUDING CURBS AND END BLOCKS. SEE SPECIAL PROVISIONS.

EXPOSED EDGES: EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" x 1" UNLESS DIMENSIONED OTHERWISE.

CONCRETE COVER: ALL REINFORCEMENT IN CAST-IN-PLACE AND PRECAST CONCRETE SHALL HAVE TWO INCHES COVER UNLESS DIMENSIONED OTHERWISE.

REINFORCEMENT: ALL REINFORCEMENT SHALL BE ASTM A615 GRADE 60.

GALVANIZED REINFORCING BARS: 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."

CONSTRUCTION JOINTS: CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE PLANS WILL NOT BE PERMITTED WIHOUT THE PRIOR APPROVAL OF THE ENGINEER.

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

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

PRECAST CONCRETE NOTES:

THE CONTRACTOR SHALL MANUFACTURE AND CONSTRUCT PRESTRESSED DECK UNITS TO THE INSIDE DIMENSIONS, LENGTH AND DETAILS SHOWN ON THESE PLANS.

ALL INSERTS OR HOLES CAST INTO THE DECK UNITS FOR THE SOLE PURPOSE OF HANDLING AND SETTING THE UNITS SHALL BE SEALED WITH GROUT TO A SMOOTH FINISH UPON COMPLETION OF THE WORK.

THE COST OF FURNISHING AND INSTALLING THE INSERTS SHALL BE INCLUDED IN THE ITEM "PRESTRESSED DECK UNIT" CORRESPONDING TO EACH SIZE. ALL INSERTS SHALL HAVE A CORROSIVE RESISTANT COATING.

NOTICE TO BRIDGE INSPECTORS

THE DEPARTMENT'S BRIDGE SAFETY PROCEDURES REQUIRE THE 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 COMPONENETS 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
NONE	N/A

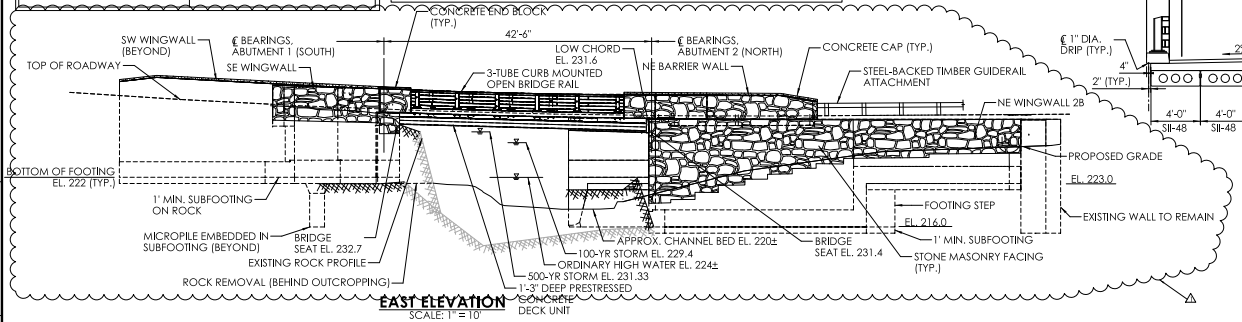
HYDRAULIC SUMMARY DATA

DRAINAGE AREA (MI^2)	7.36	
DESIGN FREQUENCY (YEAR)	100	
DESIGN DISCHARGE (CFS)	1865	
AVERAGE DAILY FLOW ELEVATION (FT)	221.9	
DESIGN WATER SURFACE ELEVATION (FT)	UPSTREAM	DOWNSTREAM
	229.8	229.4
MAXIMUM SCOUR ELEVATION (FT)	NOT CALCULATED*	
WORST CASE SCOUR SUBSTRUCTURE UNIT	ABUTMENT 2 (NORTH)	

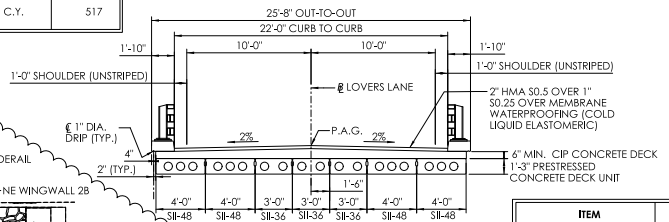
*SHALLOW BEDROCK PRESENT AT SITE (WITHIN 7 FEET OF CHANNEL BED) WHICH IS THE LIMIT OF POTENTIAL SCOUR. BRIDGE FOUNDATIONS WILL BE DESIGNED TO BE STABLE TO MAXIMUM POTENTIAL SCOUR TO TOP OF BEDROCK.

CONCRETE DISTRIBUTION

SUPERSTRUCTURE	C.Y.	56
SUBSTRUCTURE	C.Y.	147
APPROACH SLAB	C.Y.	128
FOOTINGS	C.Y.	186
TOTAL	C.Y.	517



EAST ELEVATION
SCALE: 1" = 10'



CROSS SECTION
SCALE: 1" = 5'

BRIDGE PLACARDS

BRIDGE NUMBER PLACARDS: THIS SIGN IS 4"x12" ALUMINUM SHEET METAL WITH WHITE REFLECTIVE LETTERS ON A GREEN REFLECTIVE BACKGROUND WITH 5 NUMERALS (04975). IT SHOULD BE LOCATED AT THE LEADING END OF EACH END BLOCK MOUNTED TO THE FRONT FACE OF THE END BLOCK WITH THE SIGN AND LEGEND READING HORIZONTALLY.

ITEM	BRIDGE COMPONENTS	PCC CLASS
FOOTING CONCRETE	ABUTMENT AND WINGWALL FOOTINGS	PCC03340
ABUTMENT AND WALL CONCRETE	ABUTMENT AND WINGWALL STEMS, BARRIER WALLS, CHEEKWALLS	PCC03340
BRIDGE DECK CONCRETE	BRIDGE DECK	PCC04462
PARAPET CONCRETE	END BLOCKS, CURBS, CAPS	PCC04462
APPROACH SLAB CONC.	APPROACH SLABS	PCC04462
FLOWABLE FILL	SUBFOOTING	PCC03340

ADDENDUM NO. 2

REV.	DATE	DESCRIPTION
1	12/7/22	CAULKING ADJUSTMENTS

DESIGNER/DRAFTER: JT CHECKED BY: DW

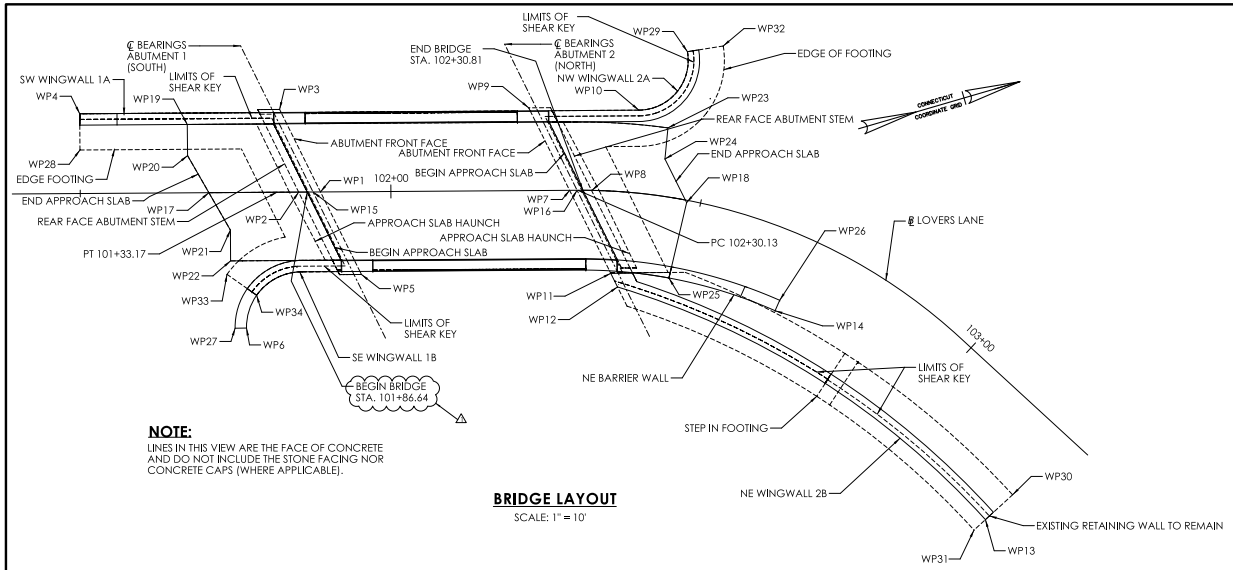
SIGNATURE/BLOCK: Stuart Harris, Fuss & O'Neill, 2022.12.15 15:40:03-05'00'

STATE OF CONNECTICUT
TOWN OF WILTON

PROJECT NUMBER: 0161-0142
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 04975 LOVERS LANE OVER COMSTOCK BROOK
TOWN(S): WILTON
DRAWING TITLE: GENERAL PLAN AND ELEVATION

DRAWING NO. S-02
SHEET NO. 04.02.A2

LASTED SAVED BY: JTator FILE NAME: J:\DWG\P2016\0182\D10\0161-0142\Bridge\Contract_Plans\2_SR_MSH_Br04975_0161_D142_GPE.dgn
PLOTTED DATE: 12/15/2022



NOTE:
LINES IN THIS VIEW ARE THE FACE OF CONCRETE AND DO NOT INCLUDE THE STONE FACING NOR CONCRETE CAPS (WHERE APPLICABLE).

BRIDGE LAYOUT
SCALE: 1" = 10'

WP #	COORDINATES		STATION	OFFSET
	NORTHING	EASTING		
WP1	632850.615	810786.419	101+88.68	0.000
WP2	632847.222	810785.469	101+85.15	0.000
WP3	632847.948	810771.835	101+82.18	-13.325
WP4	632816.831	810763.632	101+50.00	-12.837
WP5	632853.282	810801.002	101+95.18	13.325
WP6	632833.122	810804.187	101+76.75	20.297
WP7	632889.222	810797.226	102+28.77	0.000
WP8	632892.620	810798.203	102+32.30	0.000
WP9	632886.555	810782.643	102+22.27	-13.323
WP10	632903.491	810787.892	102+38.74	-13.305
WP11	632891.904	810811.894	102+36.20	13.229
WP12	632892.345	810814.302	102+37.67	15.342
WP13	632938.938	810866.633	103+20.43	18.798
WP14	632915.671	810824.973	102+68.08	12.833
WP15	632849.455	810786.094	101+87.47	0.000
WP16	632890.382	810797.549	102+29.97	0.000
WP17	632833.310	810781.575	101+70.71	0.000
WP18	632906.782	810804.319	102+47.78	0.383
WP19	632832.992	810770.063	101+67.30	-11.000
WP20	632831.658	810774.895	101+67.31	-5.987
WP21	632834.978	810788.323	101+74.13	6.049
WP22	632833.641	810793.090	101+74.13	11.000
WP23	632907.208	810791.931	102+43.12	11.000
WP24	632905.364	810796.612	102+43.32	-5.970
WP25	632900.699	810815.198	102+47.18	12.835
WP26	632916.843	810823.563	102+68.08	11.000
WP27	632831.352	810803.709	101+74.79	21.843
WP28	632815.259	810769.247	101+50.00	-7.006
WP29	632913.607	810781.006	102+44.25	-23.585
WP30	632944.244	810863.997	103+20.94	12.819
WP31	632936.705	810867.743	103+20.21	21.281
WP32	632919.396	810781.713	102+48.58	-25.489
WP33	632832.486	810795.021	101+73.54	13.171
WP34	632836.142	810799.563	101+78.28	16.559
WP35	632892.965	810817.695	102+39.89	18.284

SHIPPING DATA FOR PRESTRESSED DECK UNITS				
MEMBER	SHIPPING LENGTH	SHIPPING HEIGHT	SHIPPING WIDTH	SHIPPING WEIGHT
SII-48	46'-1"	1'-3"	4'-0"	25000 LBS
SII-36	46'-1"	1'-3"	3'-0"	19800 LBS

ADDENDUM NO. 2

DATE	REVISION DESCRIPTION
12/15/22	UPDATED FILE LOCATION

DESIGNER/DRAFTER: JT CHECKED BY: DW

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
TOWN OF WILTON

PROJECT NUMBER: 0161-0142
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 04975 LOVERS LANE OVER COMSTOCK BROOK
TOWN(S): WILTON
DRAWING TITLE: LAYOUT PLAN

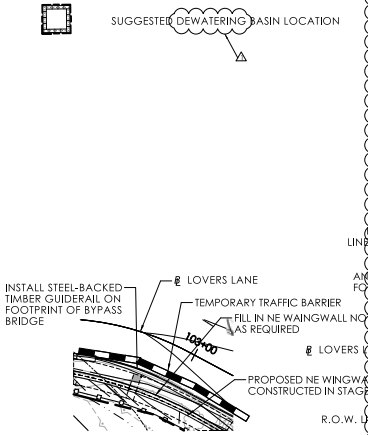
DRAWING NO. S-03
SHEET NO. 04.03.A3

LASTED SAVED BY: JTator FILE NAME: J:\DWG\P2016\0182\D10\0161-0142\Bridge\Contract_Plans\3_SR_MSH_Br04975_0161_0142_COORD.dgn
PLOTTED DATE: 12/15/2022

LEGEND

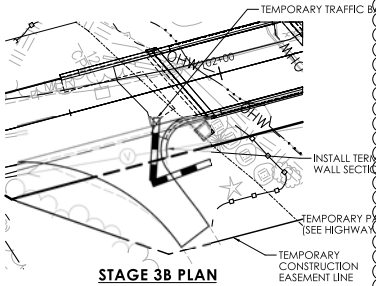
COFFERDAM

SUGGESTED DEWATERING BASIN LOCATION



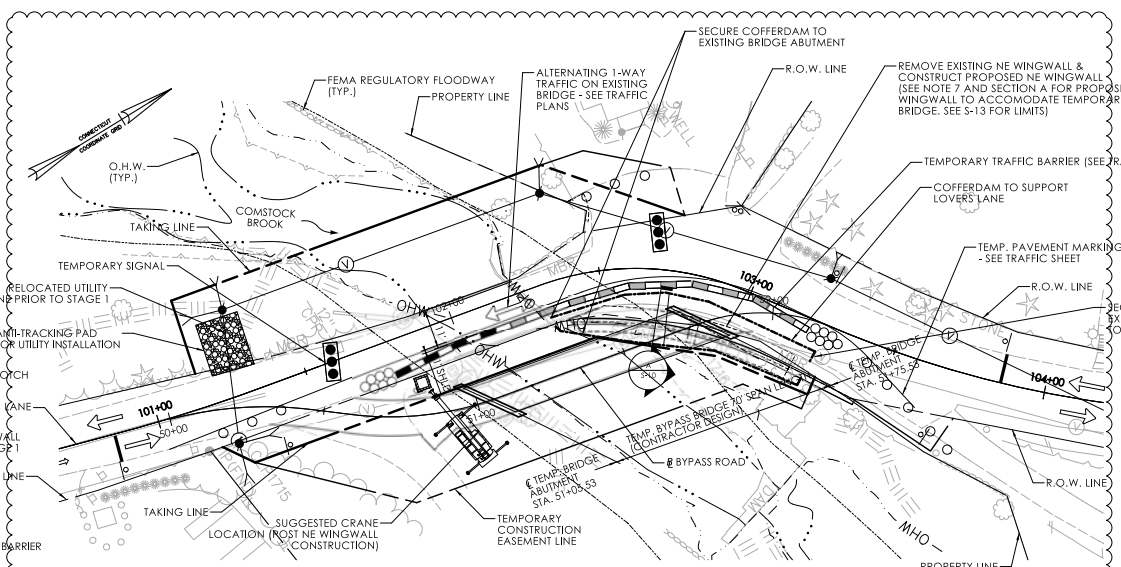
STAGE 3A PLAN

SCALE: 1" = 20'



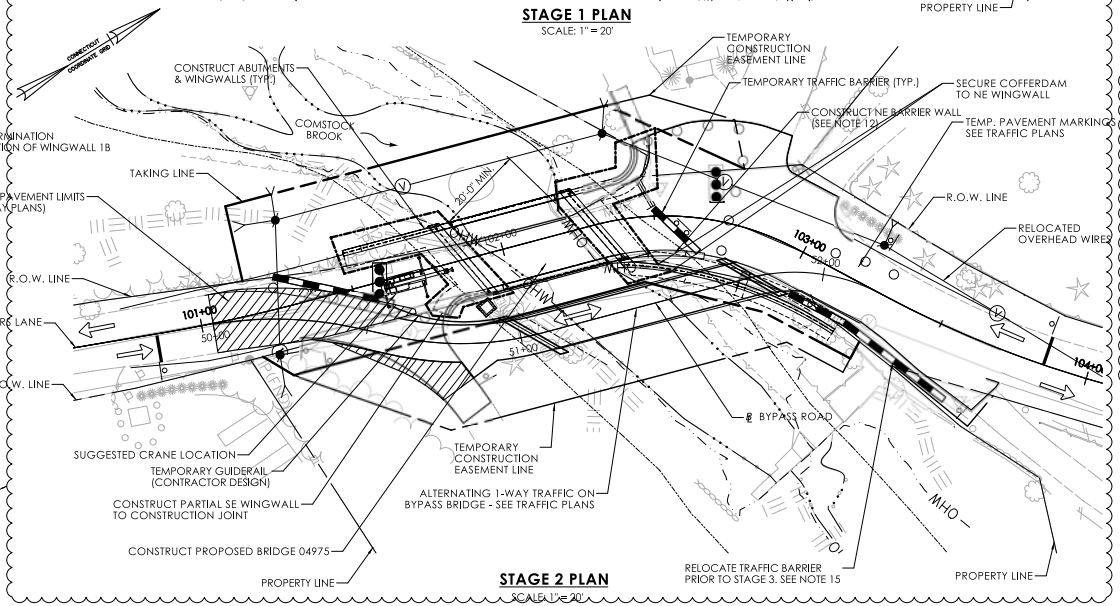
STAGE 3B PLAN

SCALE: 1" = 20'



STAGE 1 PLAN

SCALE: 1" = 20'



STAGE 2 PLAN

SCALE: 1" = 20'

SUGGESTED STAGE 1 CONSTRUCTION SEQUENCE

1. RELOCATE OVERHEAD UTILITY PRIOR TO STAGE 1.
2. PERFORM SITE CLEARING AND GRUBBING ACTIVITIES.
3. INSTALL SEDIMENTATION CONTROL SYSTEM.
4. IMPLEMENT STAGE 1 MPT PLAN AND SHIFT TRAFFIC TOWARD THE WEST CURB OF EXISTING BRIDGE.
5. INSTALL STAGE 1 TEMPORARY COFFERDAM.
6. DEMOLISH EXISTING NE WINGWALL (SEE DWG. S-10 FOR LIMITS AND SECTION)
7. CONSTRUCT PROPOSED NORTHEAST WINGWALL. (SEE DWG. S-14 FOR LIMITS AND SECTION). IF REQUIRED, ALLOW GAP IN NORTHEAST WINGWALL TO ACCOMODATE TEMPORARY BRIDGE SUPERSTRUCTURE.
8. BACKFILL BEHIND PROPOSED NE WINGWALL AND REMOVE STAGE 1 TEMPORARY COFFERDAM.
9. CONSTRUCT TEMPORARY BYPASS BRIDGE ABUTMENTS IN FILL BEHIND PROPOSED NE WINGWALL.
10. INSTALL TEMPORARY BYPASS BRIDGE (CONTRACTOR DESIGN) & CONSTRUCT TEMPORARY ROAD.
11. REMOVE STAGE 1 TRAFFIC CONTROL FEATURES.

SUGGESTED STAGE 2 CONSTRUCTION SEQUENCE

1. IMPLEMENT STAGE 2 MPT PLAN AND SHIFT TRAFFIC ONTO TEMPORARY ROAD AND BRIDGE.
2. INSTALL DEBRIS SHIELD ABOVE EL. 228 (MIN.) AND REMOVE EXISTING BRIDGE SUPERSTRUCTURE (SEE DWG. S-10 FOR DEMO LIMITS).
3. INSTALL STAGE 2 COFFERDAMS.
4. DEMOLISH EXISTING ABUTMENTS AND WINGWALLS, PERFORM STRUCTURE EXCAVATION.
5. PERFORM VERIFICATION TEST ON MICROPILES AND SUBMIT TEST RESULTS FOR APPROVAL.
6. INSTALL MICROPILES AS SHOWN IN PLANS.
7. PERFORM PROOF TEST ON MICROPILE AS SHOWN IN PLANS ON 5% OF PILES/
8. CONSTRUCT PROPOSED FOOTINGS FOR ABUTMENTS AND WINGWALLS.
9. CONSTRUCT PROPOSED ABUTMENTS & WINGWALLS.
10. BACKFILL BEHIND ABUTMENTS UP TO APPROACH SLAB ELEVATION.
11. REMOVE STAGE 2 COFFERDAMS.
12. INSTALL BEARINGS AND DECK UNITS, THEN, CONSTRUCT APPROACH SLABS, AND DECK. INSTALL NE BARRIER WALL INCLUDING TERMINATION SECTION IN TRENCH BOX (SECTION S-19)
13. INSTALL BRIDGE RAILING AND END BLOCKS.
14. COMPLETE APPROACH ROADWAY AND DRAINAGE WORK AND INSTALL SW APPROACH GUIDERAIL.
15. REMOVE STAGE 2 TEMPORARY TRAFFIC FEATURES NOT NECESSARY FOR STAGE 3 CONSTRUCTION. RELOCATE TEMPORARY BARRIERS AT NE APPROACH TO PROTECT TRAFFIC. SHIFT 2-WAY TRAFFIC TO NEW BRIDGE.

SUGGESTED STAGE 3 CONSTRUCTION SEQUENCE

1. STAGE 3A: UTILIZING TEMPORARY TRAFFIC CONTROL PROCEDURES AND RELOCATED TEMPORARY BARRIERS INSTALLED AT NE APPROACH, REMOVE TEMPORARY BYPASS BRIDGE AND ABUTMENTS. CONSTRUCT NE WINGWALL TO FINAL ELEVATION AT NOTCH LOCATION AS REQUIRED.
2. INSTALL TIMBER BACKED GUARDRAIL AT NE APPROACH
3. STAGE 3B: INSTALL TERMINAL SECTION OF WINGWALL 1B UTILIZING TEMPORARY TRAFFIC CONTROL PROCEDURES, RELOCATED TRAFFIC BARRIERS AND TRENCHBOX.
4. FINAL: RESTORE DISTURBED AREA WITH TURF ESTABLISHMENT AND PLANTINGS.

ADDENDUM NO. 2

NO.	DATE	REVISION DESCRIPTION
1	12/15/22	REVISED STAGING PLAN

DESIGNER/DRAFTER: JT CHECKED BY: DW

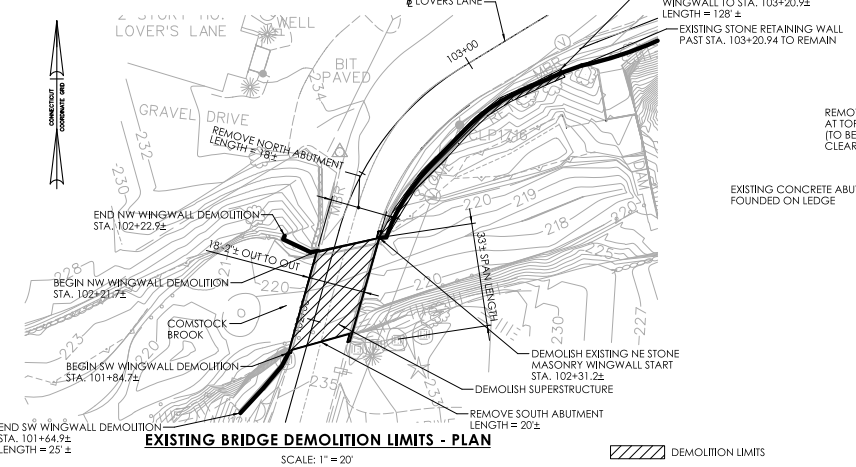
SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
TOWN OF WILTON

PROJECT NUMBER: 0161-0142
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 04875 LOVERS LANE OVER COMSTOCK BROOK
TOWN(S): WILTON
DRAWING TITLE: STAGING PLAN 1

DRAWING NO. S-09
SHEET NO. 04.09.A2

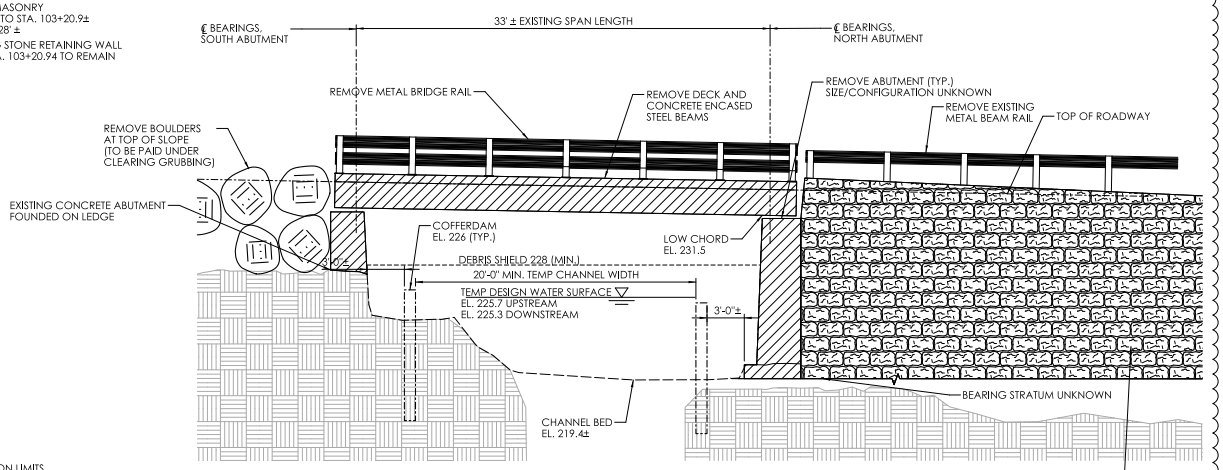
LASTED SAVED BY: JTator **FILE NAME:** J:\DWG\P2016\0182\D10\0161-0142\Bridge\Contract_Plans\9_SR_MSH_Br04975_0161_0142_STG1.dgn
PLOTTED DATE: 12/15/2022



EXISTING BRIDGE DEMOLITION LIMITS - PLAN

SCALE: 1" = 20'

DEMOLITION LIMITS



EXISTING BRIDGE DEMOLITION ELEVATION (DOWNSTREAM)

SCALE: 1" = 5'

DEMOLITION NOTES

1. REMOVAL OF EXISTING SUPERSTRUCTURE IN ITS ENTIRETY INCLUDING OVERLAY, BRIDGE RAIL, DECK, STEEL BEAMS ENCASED IN CONCRETE SHALL BE PAID UNDER ITEM "REMOVAL OF SUPERSTRUCTURE".

2. A DEBRIS SHIELD SHALL BE INSTALLED AT EL. 228 MIN. PRIOR TO REMOVAL OF SUPERSTRUCTURE.

3. REMOVAL OF EXISTING SUBSTRUCTURE INCLUDING ABUTMENTS, RETAINING WALLS AND WINGWALLS TO BE PAID UNDER THE ITEM "REMOVAL OF MASONRY". THE EXISTING STONE MASONRY FROM NE RETAINING WALL SHALL BE SAVAGED AND DELIVERED TO TOWN, TO BE PAID UNDER ITEM "REMOVAL OF MASONRY", SEE SPECIAL PROVISIONS.

4. PLANS FOR THE EXISTING BRIDGE ARE NOT AVAILABLE. THE CONTRACTOR IS ENCOURAGED TO VISIT THE BRIDGE SITE TO VERIFY AND CONFIRM THE DEMOLITION LIMITS.

COFFERDAM AND DEWATERING NOTES

1. THE CONTRACTOR SHALL MAINTAIN WATER FLOW AND FISH PASSAGE THROUGH SITE DURING CONSTRUCTION OF THE NEW STRUCTURE.

2. EQUIPMENT SHALL NOT BE PERMITTED IN THE WATERCOURSE WHEN COFFERDAM IS NOT IN PLACE.

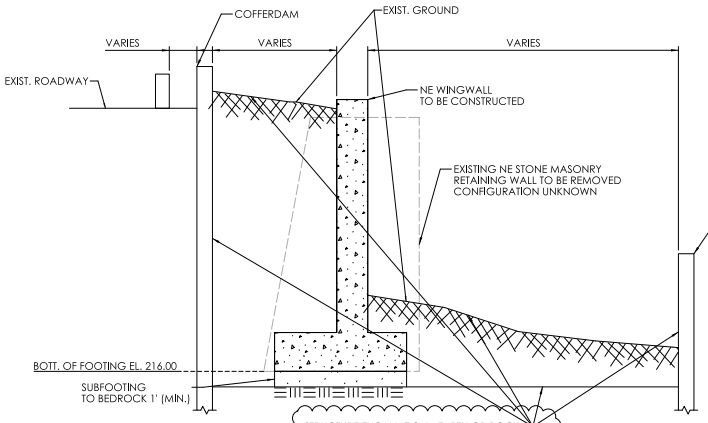
3. A PUMP DISCHARGE BASIN SHALL BE ESTABLISHED OUTSIDE OF THE WETLAND LIMITS AND WITHIN THE RIGHT OF WAY IF POSSIBLE. THE LOCATION OF THE DEWATERING BASIN SHOWN IN DWG. S-09 IS APPROXIMATE. THE EXACT POSITION MAY VARY BASED ON THE PUMPING DESIGN SUBMISSION AND APPROVED BY THE ENGINEER. DEWATER WORK AREAS BY PUMPING TO DEWATERING BASIN.

4. COFFERDAM SHALL CONSIST OF A SUITABLE 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 EXCAVATION, AND SHALL CONFORM TO PERMITS.

5. COFFERDAM AND DEWATERING SHALL BE PAID FOR UNDER THE ITEM "COFFERDAM AND DEWATERING".

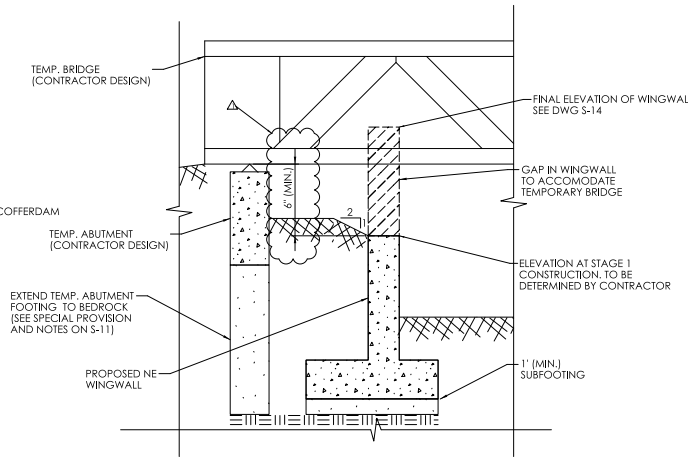
TEMPORARY HYDRAULICS SUMMARY DATA

AVERAGE DAILY FLOW (CFS)	13
AVERAGE SPRING FLOW (CFS)	26
2-YEAR FREQUENCY DISCHARGE (CFS)	500
TEMPORARY DESIGN DISCHARGE (CFS)	500
TEMPORARY DESIGN FREQUENCY	2 YEAR FLOW
TEMPORARY WATER SURFACE ELEVATION (FT)	225.7 UP STREAM, 225.3 DOWN STREAM



A S-9 **EXISTING NE WINGWALL DEMOLITION**

SCALE: N.T.S.



A S-9 **NE WINGWALL AND BYPASS BRIDGE DETAIL**

SCALE: N.T.S.

ADDENDUM NO. 2

DATE	REVISION & ADDED CAUTIONS	BY
12/7/22	NOTE CHANGE & ADDED CAUTIONS	JT

DESIGNER/DRAFTER: JT CHECKED BY: DW

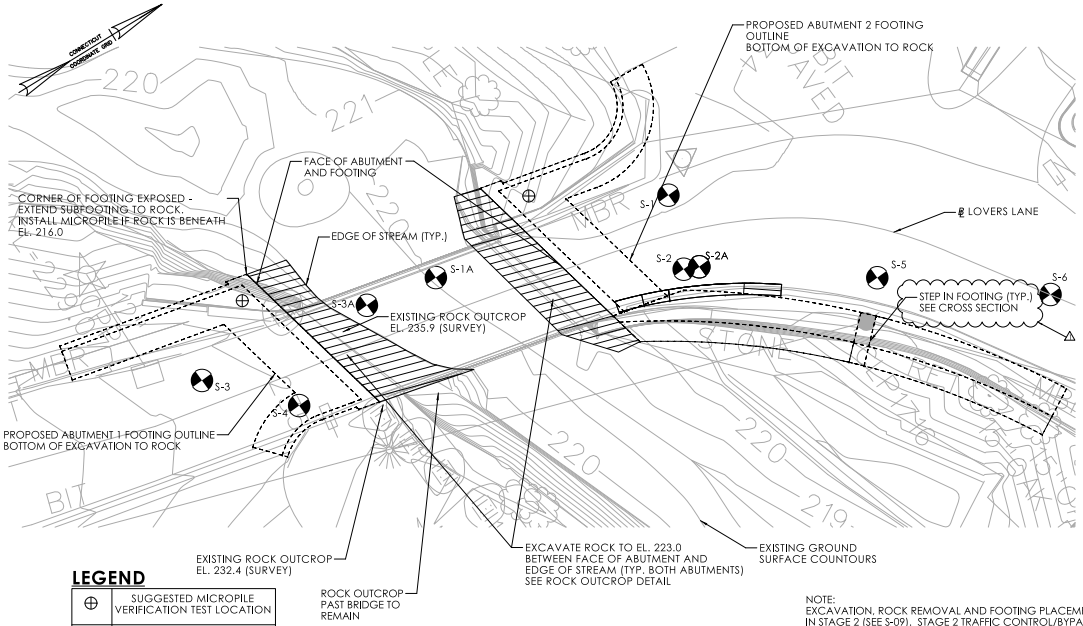
SIGNATURE/BLOCK:

STATE OF CONNECTICUT
TOWN OF WILTON

PROJECT NUMBER: 0161-0142
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 04875 LOVERS LANE OVER COMSTOCK BROOK
TOWN(S): WILTON
DRAWING TITLE: STAGING PLAN 2

DRAWING NO. S-10
SHEET NO. 04.10.A3

LASTED SAVED BY: JTator FILE NAME: J:\DWG\P2016\0182\D10\0161-0142\Bridge\Contract_Plans\10_SB_MSH_Br04975_0161_0142_STG2.dgn
PLOTTED DATE: 12/15/2022



EXISTING BEDROCK PROFILE

SCALE: 1" = 10'

LEGEND

⊕	SUGGESTED MICROPILE VERIFICATION TEST LOCATION
⊕	BORING LOCATION

NOTE:
ONLY ONE VERIFICATION TEST NEEDS TO BE PERFORMED

BEDROCK ELEVATIONS

BORING	ELEVATION
S-1	224
S-1A	213.2
S-2	N/A
S-2A	223.5
S-3	224.5
S-3A	216.9
S-4	229
S-5	224
S-6	228

NOTE:
EXCAVATION, ROCK REMOVAL AND FOOTING PLACEMENT SHALL BE COMPLETED IN STAGE 2 (SEE S-09). STAGE 2 TRAFFIC CONTROL/BYPASS BRIDGE NOT SHOWN FOR CLARITY.

*BEDROCK PROFILE NOTES AND EXCAVATION

1) WHERE THE ROCK OUTCROPPINGS WITHIN THE LIMITS OF THE PROPOSED ABUTMENT & WINGWALL FOOTINGS EXTEND ABOVE ELEVATION 223, ROCK SHALL BE EXCAVATED DOWN TO THIS ELEVATION.

2) FOR ROCK ENCOUNTERED BETWEEN ELEVATIONS 223 AND 216, THE CONTRACTOR SHALL EXCAVATE TO TOP OF BED ROCK. A CONCRETE SUBFOOTING SHALL BE CONSTRUCTED TO EL. 224.0 PRIOR TO THE CONSTRUCTION OF THE CONCRETE FOOTING. SEE DWG. S-12 FOR SUBFOOTING NOTE

3) FOR ROCK ELEVATIONS BELOW ELEVATION 216, THE CONTRACTOR SHALL EXCAVATE TO EL. 216 AND INSTALL MICROPILES AS DETAILED IN THE SUBSTRUCTURE PLANS. IT IS ANTICIPATED THAT MICROPILES WILL BE REQUIRED, AT THE NORTHWEST CORNER OF ABUTMENT 1 AND FOR ENTIRE LIMITS OF WINGWALL 2A.

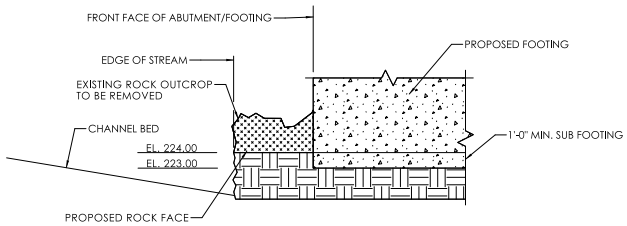
4) ROCK OUTCROP ENCOUNTERED BETWEEN THE PROPOSED ABUTMENT FACE AND THE STREAM SHALL BE EXCAVATED TO EL. 224. (SEE ROCK OUTCROP DETAIL)

5) CONCRETE SUBFOOTINGS SHALL BE CONSTRUCTED AFTER THE ROCK IS EXCAVATED, EXPOSED, OR MICROPILES ARE INSTALLED. TOP OF SUBFOOTING SHALL BE INSTALLED TO ELEVATION 224.0. ALL AREAS OF THE CONCRETE FOOTINGS SHALL BE SUPPORTED ON AT LEAST 1' OF SUBFOOTING CONCRETE MATERIAL.

6) THE VOLUME OF ROCK EXCAVATION IS UNKNOWN AS PRECISE ROCK PROFILE IS UNKNOWN, IT IS ESTIMATED TO BE 95 CY.

7) ROCK EXCAVATION SHALL BE PAID UNDER THE ITEM STRUCTURE EXCAVATION - ROCK (EXCLUDING COFFERDAM AND DEWATERING). EARTH EXCAVATION SHALL BE PAID UNDER THE ITEM STRUCTURE EXCAVATION - EARTH (EXCLUDING COFFERDAM AND DEWATERING).

*BEDROCK NOTES AND EXCAVATION APPLY TO BOTH NEW AND TEMPORARY BRIDGE ABUTMENT FOOTINGS



ROCK OUTCROP REMOVAL DETAIL

N.T.S.

ADDENDUM NO. 2

NO.	DATE	REVISION DESCRIPTION
2	12/15/22	ADDENDUM NO. 2
1	09/22/22	REVISED PER COMMENTS

DESIGNER/DRAFTER: JT CHECKED BY: DW

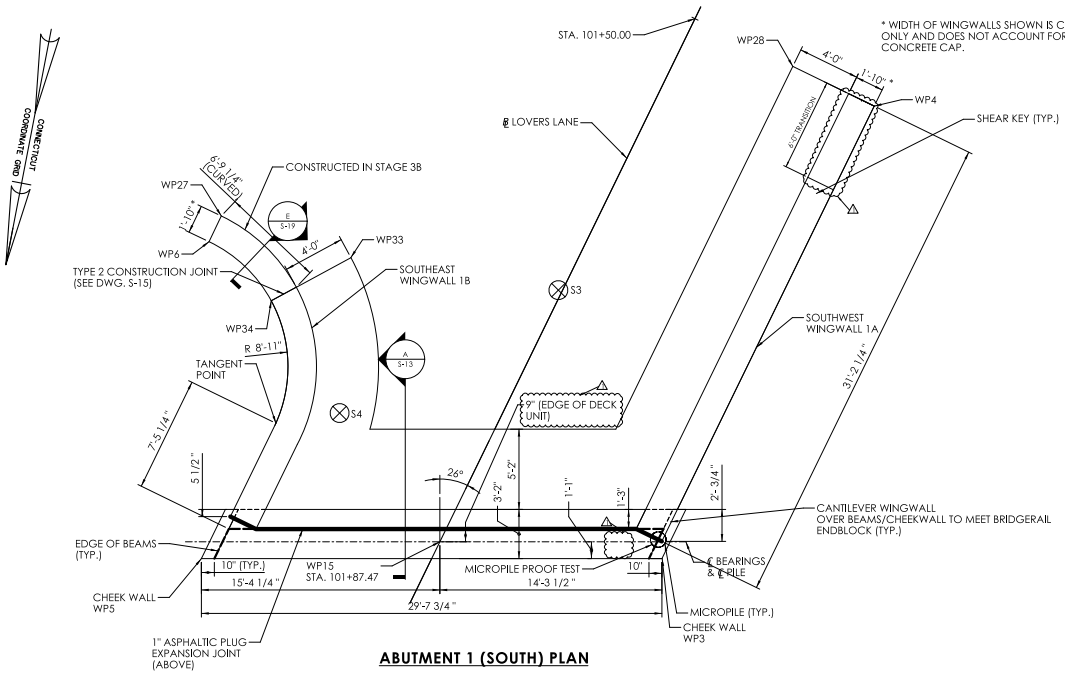
SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
TOWN OF WILTON

PROJECT NUMBER: 0161-0142
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 04875 LOVERS LANE OVER COMSTOCK BROOK
TOWN(S): WILTON
DRAWING TITLE: ROCK EXCAVATION PLAN

DRAWING NO. S-11
SHEET NO. 04.11.A2

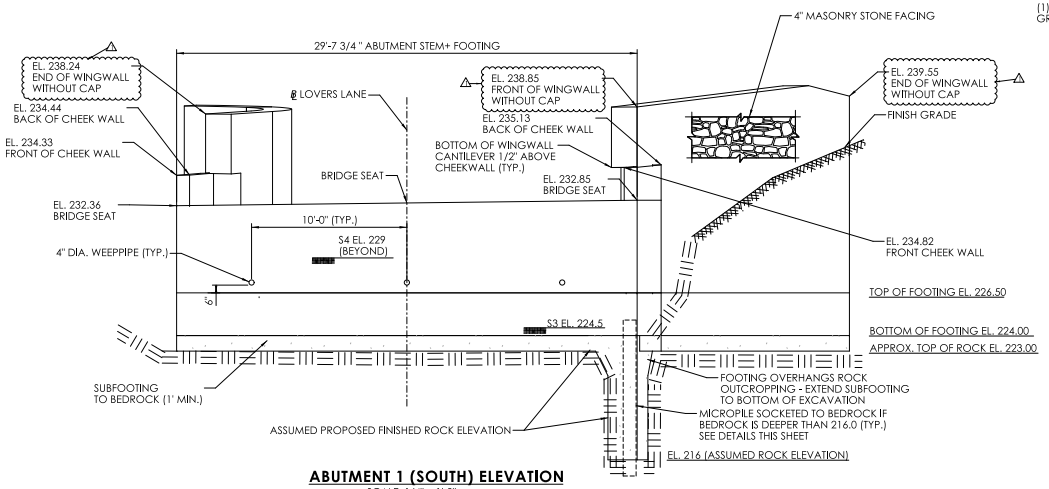
LASTED SAVED BY: JTator FILE NAME: J:\DWG\P2016\0182\D10\0161-0142\Bridge\Contract_Plans\11_SB_MSH_Br04975_0161_0142_DEMO.dgn
PLOTTED DATE: 12/15/2022



ABUTMENT 1 (SOUTH) PLAN

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

* WIDTH OF WINGWALLS SHOWN IS CONCRETE DIMENSION ONLY AND DOES NOT ACCOUNT FOR STONE FACING OR CONCRETE CAP.

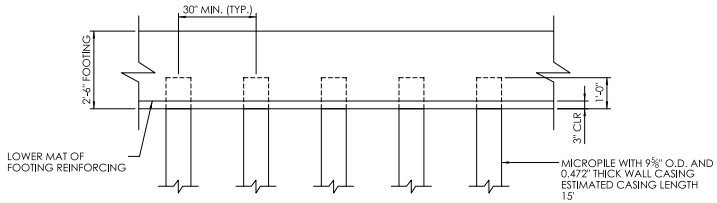


ABUTMENT 1 (SOUTH) ELEVATION

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

SUBFOOTING NOTES:

SUBFOOTING SHALL BE PAID UNDER THE ITEM "FLOWABLE FILL" - SEE SPECIAL PROVISIONS
SUBFOOTING SHALL BE PCC 03340 WITH MIN. 28-DAY STRENGTH OF 3,300 PSI



TYPICAL MICROPILE SPACING DETAIL

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

MICROPILE DESIGN TABLE	
SERVICE LIMIT STATE - SRV-I	100 KIPS
STRENGTH LIMIT STATE - STR-I	140 KIPS (0.7 FACTOR)
ULTIMATE PILE CAPACITY	200 KIPS

MICROPILE NOTES:

1. A MICROPILE SHALL BE INSTALLED AT ALL AREAS OF SUBSTRUCTURE WHERE BEDROCK IS BELOW ELEVATION 216.0.

2. THE MICROPILE DESIGN PROVIDED ON THESE DRAWINGS IS BASED ON THE LOADS AND RESISTANCES SHOWN IN THE TABLE ABOVE.

3. THE MICROPILES SHALL BE DESIGNED USING PERMANENT STEEL CASINGS. THE CASINGS SHALL EXTEND INTO BEDROCK.

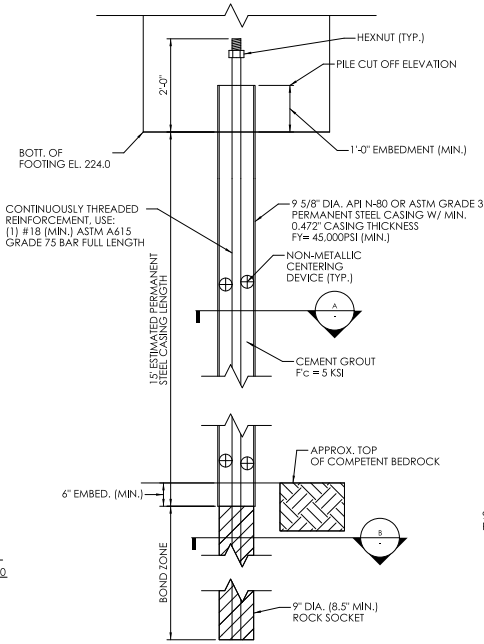
4. THE 9 5/8" CASING SHALL BE INSTALLED WITH NO CASING JOINTS WITHIN 10 FEET BELOW THE BOTTOM OF THE SUBFOOTING.

5. MICROPILES SHALL BE DRILLED THRU ALL MATERIALS ENCOUNTERED.

6. THE CONTRACTOR IS ADVISED TO THE POSSIBLE PRESENCE OF BOULDERS, RUBBLE AND OTHER MISCELLANEOUS MATERIALS. REFER TO SOIL BORING LOGS SHOWN ON DWG. NO. S-3 THROUGH DWG. NO. S-7.

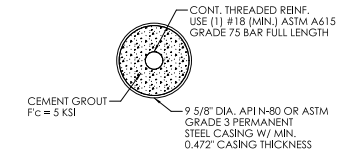
7. THE CONTRACTOR SHALL PROPERLY DISPOSE OF ALL MATERIALS (CUTTING, ETC.) RECOVERED FROM THE DRILLING OPERATIONS.

8. MICROPILE DETAILS SHOWN ARE BASED ON ASSUMPTIONS THAT WERE USED DURING DESIGN. THE CONTRACTOR SHALL DESIGN THE MICROPILES IN ACCORDANCE WITH THE SPECIFICATIONS FOR ITEM "MICROPILES."



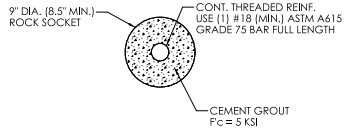
MICO-PILE ELEVATION

SCALE: 3/4" = 1'-0"



MICO-PILE SECTION A

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



MICO-PILE SECTION B

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

ADDENDUM NO. 2

NO.	DATE	REVISION DESCRIPTION
	12/15/22	ADDENDUM #2

DESIGNER/DRAFTER: JT CHECKED BY: DW

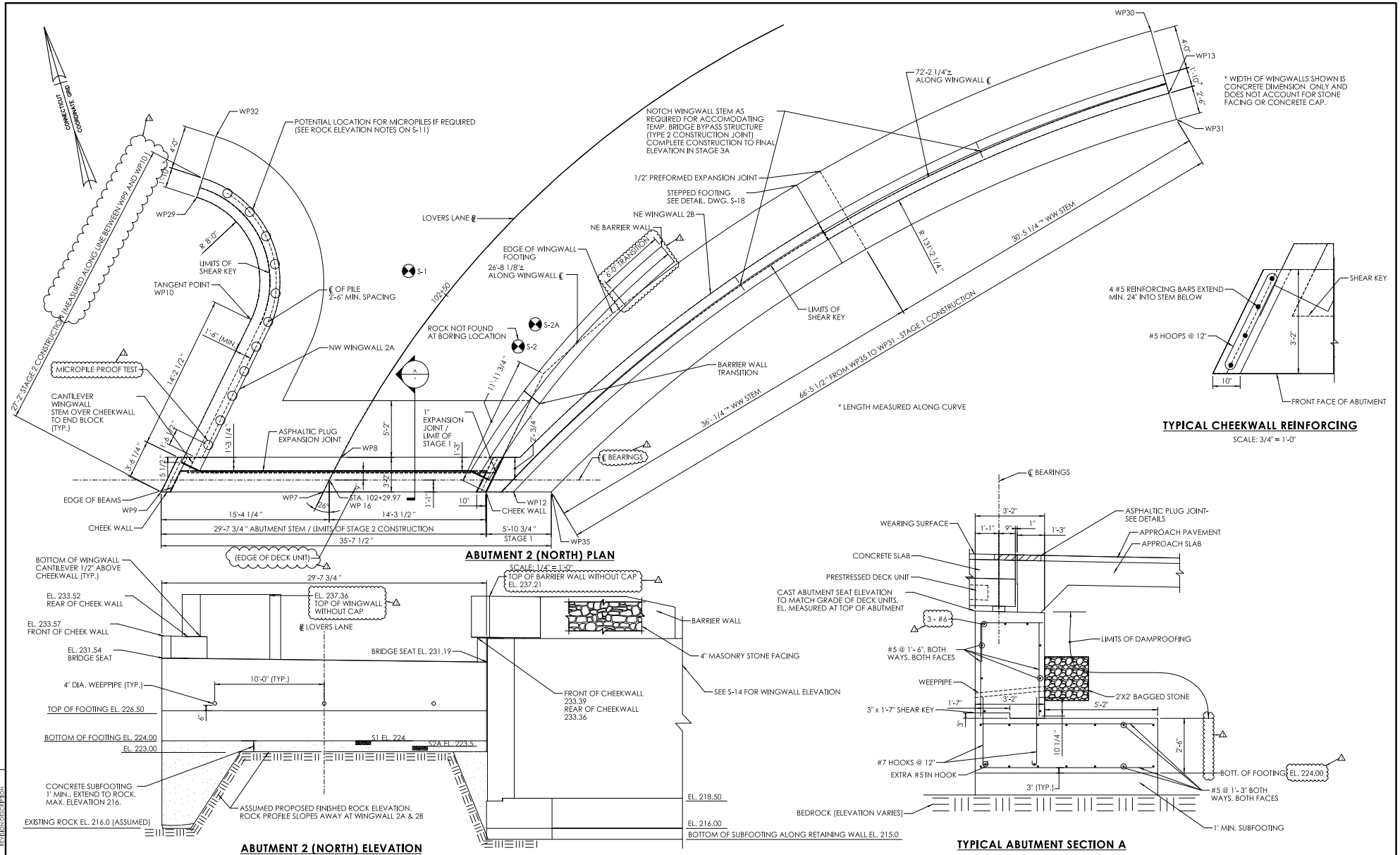
SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
TOWN OF WILTON

PROJECT NUMBER: 0161-0142
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 04975 LOVERS LANE OVER COMSTOCK BROOK
TOWN(S): WILTON
DRAWING TITLE: SOUTH ABUTMENT 1

DRAWING NO. S-12
SHEET NO. 04.12.A2

LASTED SAVED BY: DWhitemore **FILE NAME:** J:\DWG\P2016\0182\D10\0161-0142\Bridge\Contract_Plans\12_SB_MSH_BR04975_0161_0142_SABT.dgn
PLOTTED DATE: 12/15/2022



ADDENDUM NO. 2

REV	DATE	REVISION DESCRIPTION
	12/15/22	ADD ADDENDUM

DESIGNER/DRAFTER: JT CHECKED BY: DW

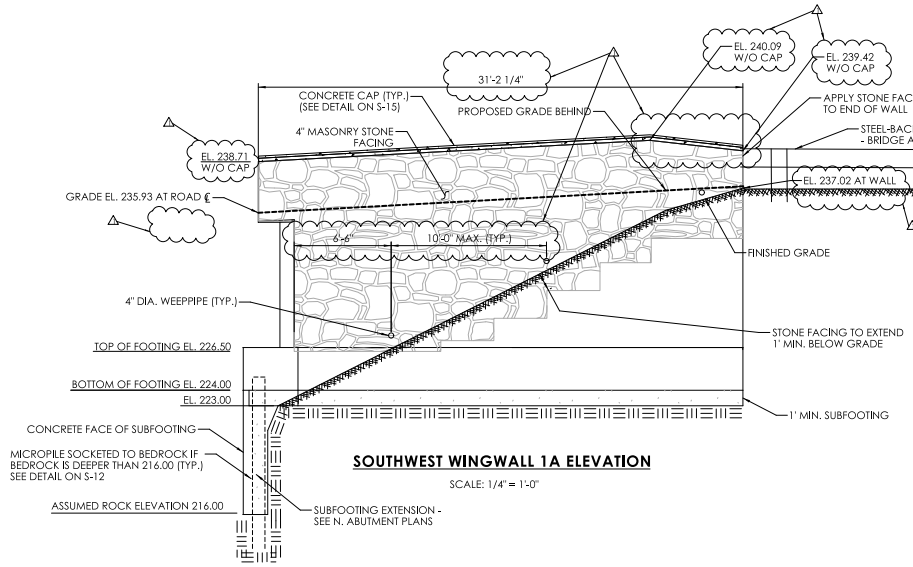
SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
TOWN OF WILTON

PROJECT NUMBER: 0161-0142
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 04975 LOVERS LANE OVER COMSTOCK BROOK
TOWN(S): WILTON
DRAWING TITLE: NORTH ABUTMENT 2

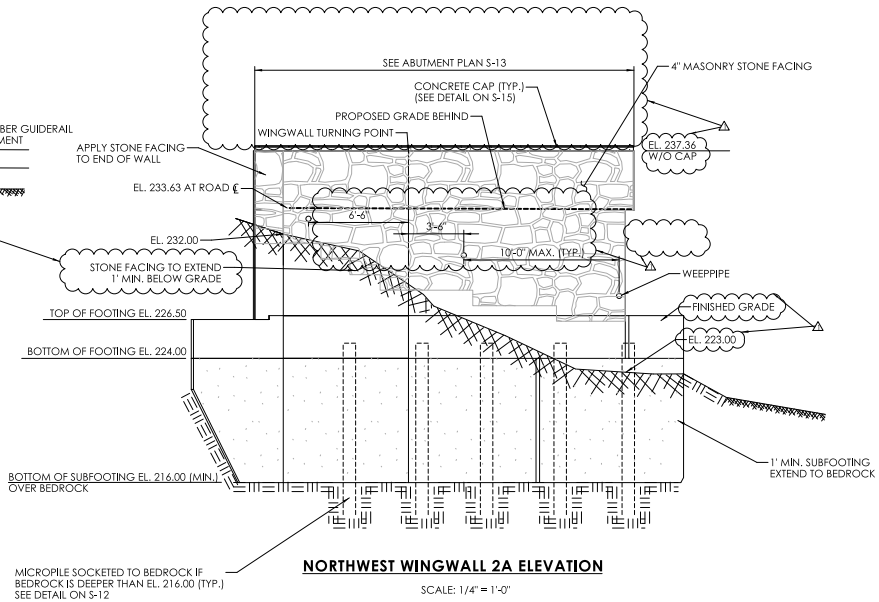
DRAWING NO. S-13
SHEET NO. 04.13.A2

LASTED SAVED BY: JTator FILE NAME: J:\DWG\P2016\0182\D10\0161-0142\Bridge\Contract_Plans\13_S8_MSH_BR04975_0161_0142_NABT.dgn
PLOTTED DATE: 12/15/2022



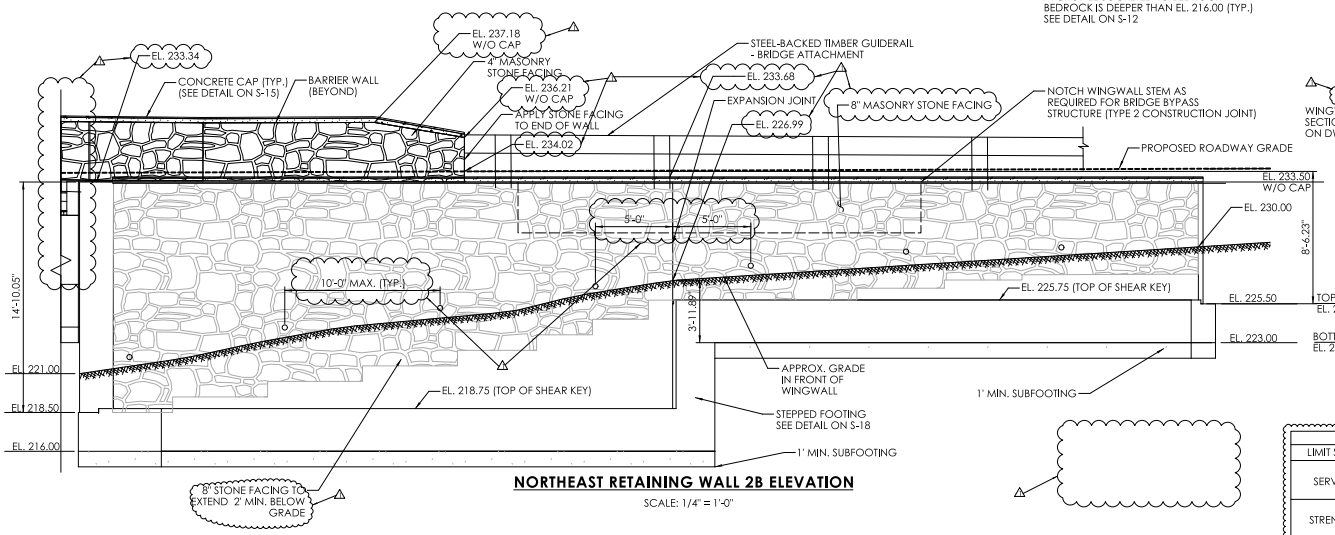
SOUTHWEST WINGWALL 1A ELEVATION

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



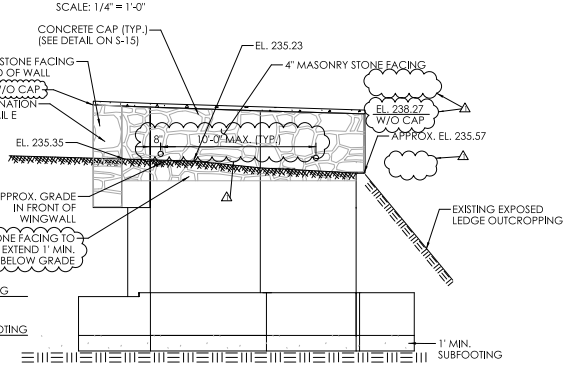
NORTHWEST WINGWALL 2A ELEVATION

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



NORTHEAST RETAINING WALL 2B ELEVATION

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



SOUTHEAST WINGWALL 1B ELEVATION

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

ALLOWABLE BEARING PREESURE			MAXIMUM APPLIED BEARING PRESSURE
LIMIT STATE	NOMINAL BEARING RESITANCE	FACTORED BEARING RESISTANCE	
SERVICE	5 TSF	5 TSF	3.3 TSF SERVICE I
STRENGTH	13.5 TSF	7.425 TSF	4.35 TSF STRENGTH I

ADDENDUM NO. 2

NO.	DATE	REVISION DESCRIPTION
1	12/15/22	ADD MICROPILES

DESIGNER/DRAFTER: JT CHECKED BY: DW

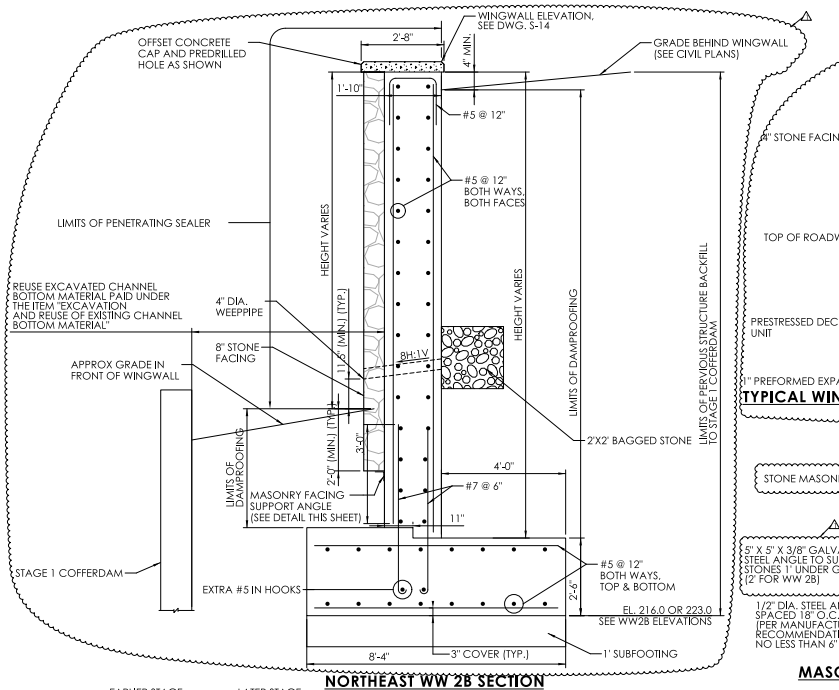
SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
TOWN OF WILTON

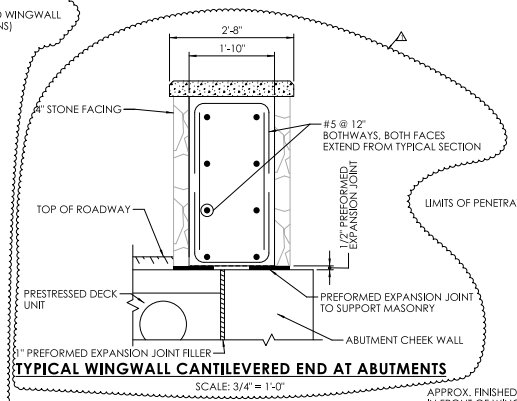
PROJECT NUMBER: 0161-0142
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 04975 LOVERS LANE OVER COMSTOCK BROOK
TOWN(S): WILTON
DRAWING TITLE: WINGWALL DETAILS

DRAWING NO. S-14
SHEET NO. 04.14.A2

LASTED SAVED BY: JTator FILE NAME: J:\DWG\P2016\0182\D10\0161-0142\Bridge\Contract_Plans\14_SB_MSH_BR04975_0161_0142_WW.dgn
PLOTTED DATE: 12/15/2022

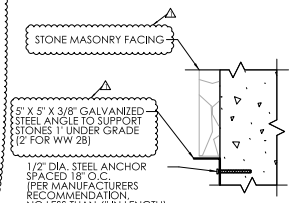


NORTHEAST WW 2B SECTION



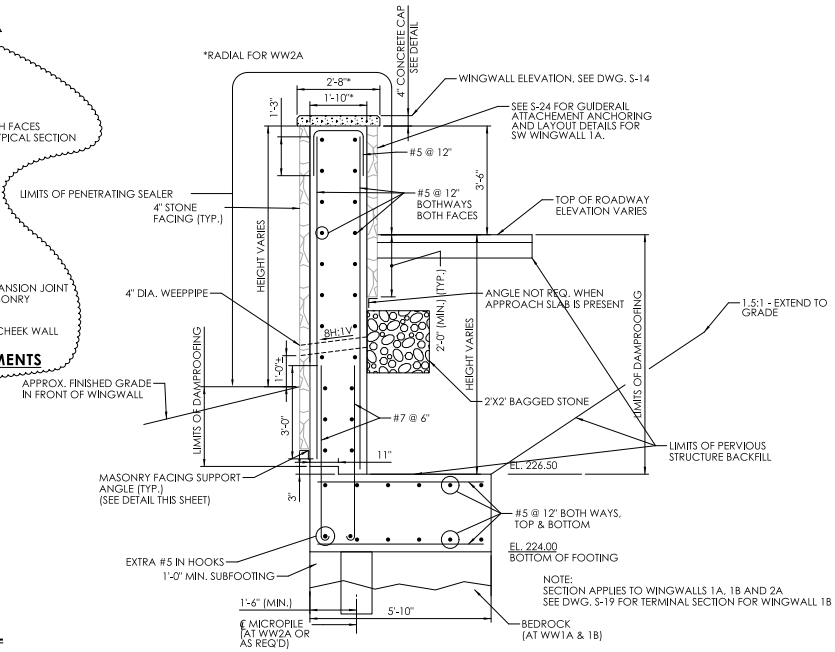
TYPICAL WINGWALL CANTILEVERED END AT ABUTMENTS

SCALE: 3/4" = 1'-0"



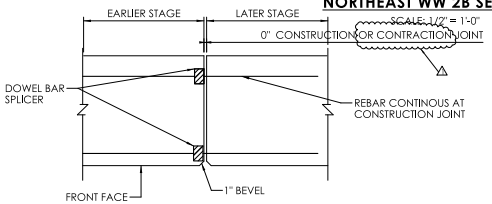
MASONRY FACING SUPPORT ANGLE DETAIL

SCALE: 1" = 1'-0"



TYPICAL WINGWALL SECTION

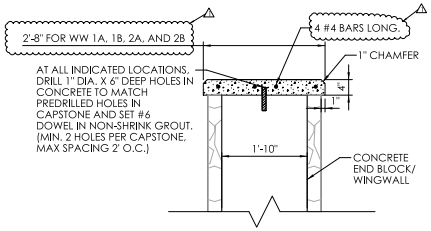
SCALE: 1/2" = 1'-0"



TYPE 2 CONSTRUCTION JOINT DETAIL*

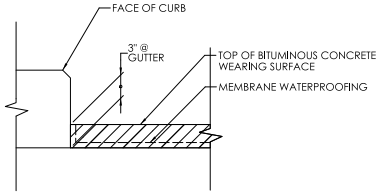
NOT TO SCALE

*USE WHERE INDICATED, TO BE PAID UNDER THE ITEM DOWEL BAR SPLICER SYSTEM GALVANIZED



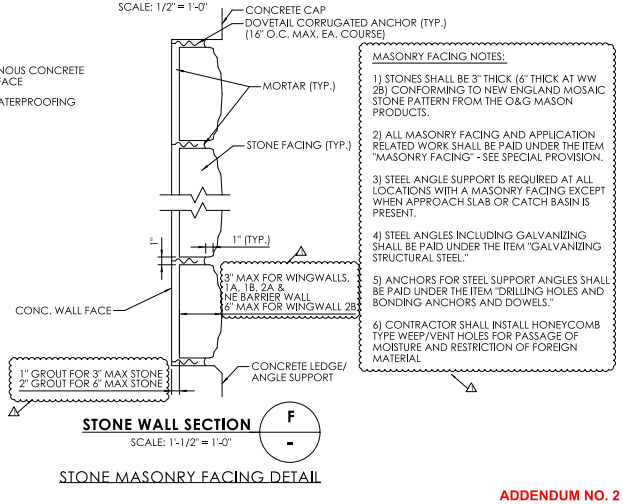
CONCRETE CAP DETAIL

SCALE: 3/4" = 1'-0"



TREATMENT OF MEMBRANE WATERPROOFING AT GUTTER

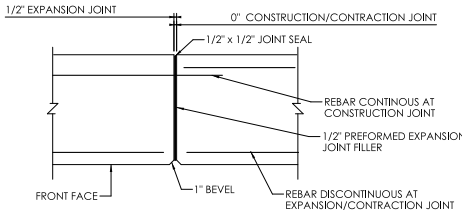
SCALE: 1 1/2" = 1'-0"



STONE WALL SECTION

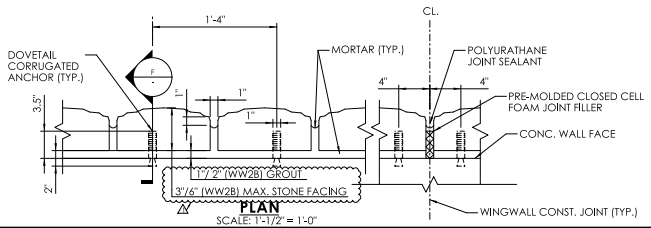
SCALE: 1'-1/2" = 1'-0"

STONE MASONRY FACING DETAIL



STEM JOINT DETAIL

NOT TO SCALE



PLAN

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

ADDENDUM NO. 2

NO.	DATE	REVISION DESCRIPTION
1	12/15/22	WW 2B ROCK CAVITY THICKNESS

DESIGNER/DRAFTER: JT CHECKED BY: DW

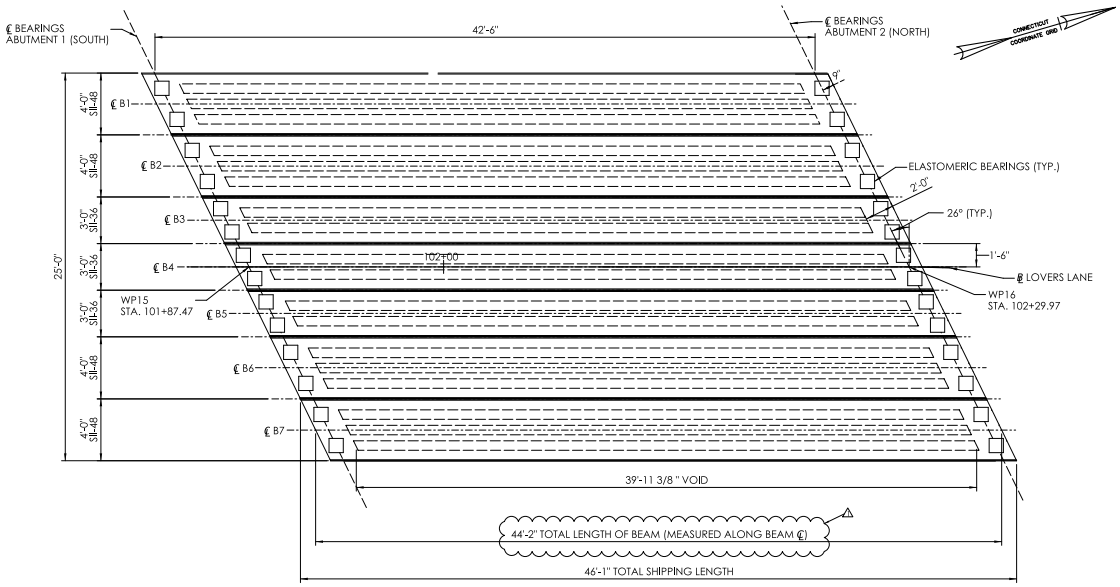
SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
TOWN OF WILTON

PROJECT NUMBER: 0161-0142
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 04975 LOVERS LANE OVER COMSTOCK BROOK
TOWN(S): WILTON
DRAWING TITLE: SUBSTRUCTURE DETAILS

DRAWING NO. S-15
SHEET NO. 04.15.A2

LASTED SAVED BY: DWhitemore FILE NAME: J:\DWG\P2016\0182\D10\0161-0142\Bridge\Contract_Plans\15_SB_MSH_BR04975_0161_0142_SUB.dgn
PLOTTED DATE: 12/15/2022



FRAMING PLAN

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

PRESTRESSED DECK UNIT NOTES:

1. PRESTRESSED DECK UNITS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
   f'ci = 6 KSI
   f'c = 8 KSI

2. PRESTRESSED STRANDS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS. 0.6" DIAMETER, UNLOCATED, 7 WIRE, LOW RELAXATION STRANDS CONFORMING TO THE REQUIREMENTS OF AASHTO M203, GRADE 270:
   ULTIMATE STRENGTH (f's) = 270,000 PSI
   JACKING TENSION (fj) = 43,940 LBS. PER STRAND

3. PRESTRESSED STRANDS SHALL BE PLACED 2" MINIMUM ON CENTER AND SHALL HAVE A MINIMUM COVER OF 2'.

4. ENDS OF THE DECK UNITS SHALL BE VERTICAL AFTER APPLICATION OF FULL DEAD LOAD.

5. THE DRILLING OF HOLES IN PRESTRESSED DECK UNITS, OR THE USE OF POWDER ACTUATED TOOLS ON PRESTRESSED DECK UNITS WILL NOT BE PERMITTED.

6. NO ADDITIONAL DEAD LOADS OR LIVE LOADS SHALL BE APPLIED TO THE PRESTRESSED DECK UNITS UNTIL GROUT KEYWAYS ARE FULLY FILLED AND GROUT IN THE LONGITUDINAL SHEAR KEYS HAVE REACHED A SEVEN-DAY COMPRESSIVE STRENGTH OF 4500 PSI.

7. THE DECK UNITS SHALL BE PLACED AT THE NOMINAL SPACING SHOWN ON THE PLANS WITH A 1/2" WIDE GAP BETWEEN THE BOTTOM OF THE UNITS. THE WIDTH OF THIS GAP CAN VARY DUE TO SWEEP OF THE BEAMS.

8. SHEAR KEY SHALL BE OMITTED ON OUTSIDE FACE OF FASCIA BEAMS.

9. MILD REINFORCING STEEL SHALL BE GALVANIZED ASTM A615 GRADE 60.

10. THE CONTRACTOR SHALL MANUFACTURE AND CONSTRUCT DECK UNITS IN ACCORDANCE WITH SPECIFICIATIONS FOR "PRESTRESSED DECK UNITS".

11. ALL INSERTS OF HOLES CAST INTO THE DECK UNITS FOR THE PURPOSE OF HANDLING AND SETTING THE UNITS SHALL BE SEALED WITH GROUT TO A SMOOTH FINISH UPON COMPLETION OF THE WORK.

12. THE COST OF FURNISHING INSERTS SHALL BE INCLUDED IN THE ITEMS #0514202. AND #0514222 "PRESTRESSED DECK UNITS".

13. LIFTING HOOKS SHALL BE PLACED IN LINE WITH THE CENTER OF THE BEARINGS AND SHALL BE INSTALLED PER THE FABRICATOR'S STANDARD DETAILS. THE FABRICATORS IS FULLY RESPONSIBLE FOR THE DESIGN OF THE LIFTING DEVICES WHICH SHALL BE ADEQUATE FOR THE FACTOR OF SAFETY REQUIRED BY THE ERECTION PROCEDURE.

STRANDS SUMMARY			
DECK UNIT TYPE	STRAND NUMBER	STRAND CG AT ENDS *	STRAND CG AT MIDSPAN *
SII-48 (B1, B2, B6, B7)	17	3.41 IN	2.00 IN
SII-36 (B3, B4, B5)	13	3.23 IN	2.00 IN

*CGS MEASURED FROM BOTTOM OF DECK UNIT AND BASED ON THE GROSS NON-COMPOSITE SECTION.

CAMBER TABLE			
MEMBER NUMBER	AT TRANSFER	AT ERECTION	FINAL
	CAMBER DUE TO PRETENSIONING FORCE AT TRANSFER MINUS THE DEFLECTION DUE TO THE DEAD LOAD OF THE MEMBER	CAMBER (DUE TO PRETENSIONING FORCE AT TRANSFER MINUS THE DEFLECTION DUE TO THE DEAD LOAD OF THE MEMBER) APPROXIMATELY 30 DAYS AFTER TRANSFER.	CAMBER AFTER ALL DEAD LOADS ARE APPLIED TO THE STRUCTURE.
SII-48 (B1, B2, B6, B7)	1.224 IN	1.636 IN	1.192 IN
SII-36 (B3, B4, B5)	1.249 IN	1.679 IN	1.236 IN

*POSITIVE VALUES IN THE CAMBER TABLE INDICATE UPWARD CAMBER.

BEAM DEAD LOAD DEFLECTION TABLE NOTES:

"SELF" IS THE DEFLECTION DUE TO THE GIRDER SELF-WEIGHT.

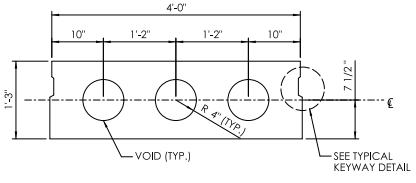
"PDL" IS PRE-COMPOSITE DEAD LOAD DEFLECTION DUE TO THE WEIGHT OF THE CONCRETE DECK.

"SDL" IS THE DEFLECTION DUE TO THE SUPERIMPOSED DEAD LOAD (CONCRETE CURB, RAILING, AND ASPHALT OVERLAY).

ALL DEFLECTIONS ARE IN INCHES AND ARE COMPUTED AT THE MIDSPAN OF THE GIRDER AT 30 DAYS.

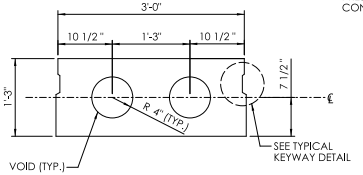
POSITIVE DEFLECTION VALUES INDICATE DOWNWARD DEFLECTION.

BEAM NO.	DEAD LOAD DEFLECTIONS AT MIDSPAN (INCHES)		
	SELF	PDL	SDL
B1, B2, B6 & B7	1.56	0.44	0.09
B3, B4 & B5	1.60	0.45	0.08



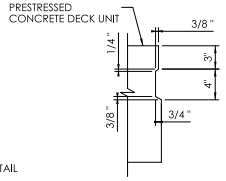
SII-48

SCALE: 1" = 1'-0"



SII-36

SCALE: 1" = 1'-0"



TYPICAL KEYWAY DETAIL

SCALE: 1½" = 1'-0"

PRESTRESSED CONCRETE DECK UNITS

ADDENDUM NO. 2

NO.	DATE	REVISION DESCRIPTION
1	12/15/22	UPDATE FRAMING PLAN

DESIGNER/DRAFTER: JT CHECKED BY: DW

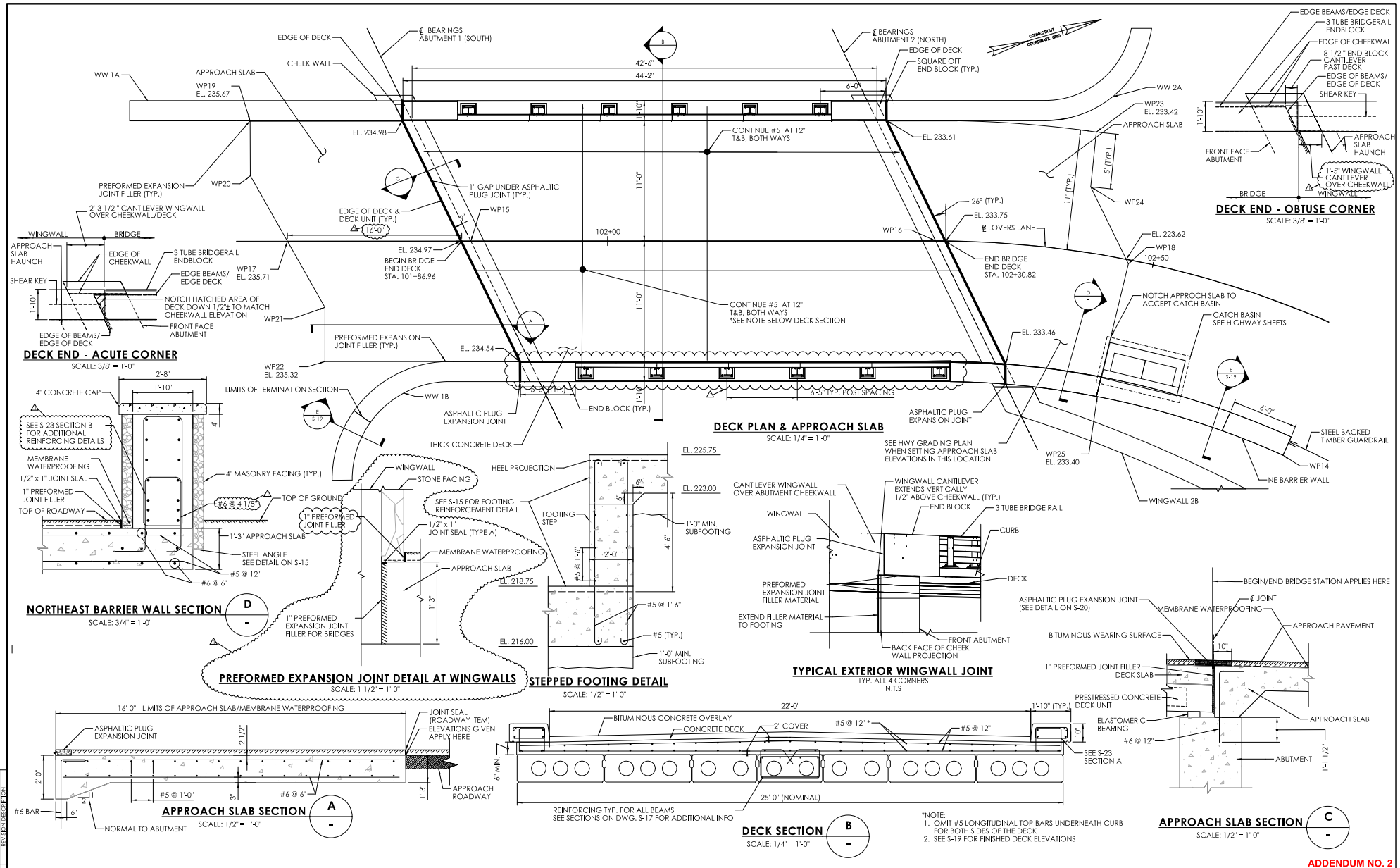
SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
TOWN OF WILTON

PROJECT NUMBER: 0161-0142
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 04975 LOVERS LANE OVER COMSTOCK BROOK
TOWN(S): WILTON
DRAWING TITLE: FRAMING PLAN

DRAWING NO. S-16
SHEET NO. 04.16.A2

LASTED SAVED BY: DWhitemore FILE NAME: J:\DWG\P2016\0182\D10\0161-0142\Bridge\Contract_Plans\16_SII_MSH_BR04975_D161_0142_FRM.dgn
PLOTTED DATE: 12/15/2022



ADDENDUM NO. 2

NO.	DATE	REVISION DESCRIPTION
1	12/15/22	ADDENDUM NO. 1

DESIGNER/DRAFTER: JT CHECKED BY: DW

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
TOWN OF WILTON

PROJECT NUMBER: 0161-0142
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 04975 LOVERS LANE OVER COMSTOCK BROOK
TOWN(S): WILTON
DRAWING TITLE: DECK AND MISCELLANEOUS SUBSTRUCTURE DETAILS

DRAWING NO. S-18
SHEET NO. 04.18.A2

LASTED SAVED BY: JTator FILE NAME: J:\DWG\P2016\0182\D10\0161-0142\Bridge\Contract_Plans\18_S8_MSH_BR04975_0161_0142_DCK.dgn
PLOTTED DATE: 12/15/2022

ELASTOMERIC BEARING NOTES:

1. THE ELASTOMERIC BEARINGS ARE DESIGNED USING METHOD A OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

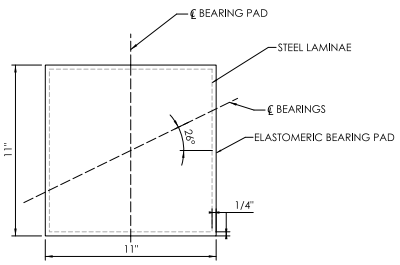
2. THE ELASTOMER SHALL BE TYPE CT, GRADE 3 AS DEFINED BY ASTM D4104 AND SHALL HAVE A SHORE S DUROMETER HARDNESS OF 50 +/- 5 POINTS AND A SHEAR MODULUS WITHIN LIMITS OF 200 TO 250 PSI. THE ELASTOMER SHALL CONTAIN ONLY VIRGIN POLYCHLOROPRENE (NEOPRENE) AS THE RAW POLYMER.

3. THE ELASTOMERIC BEARINGS SHALL BE INSTALLED WHEN THE AMBIENT TEMPERATURE IS BETWEEN 40°F AND 77°F AND HAS BEEN WITHIN THIS RANGE FOR MORE THAN TWO HOURS.

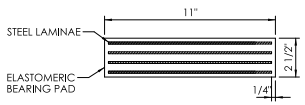
4. THE CONCRETE ABUTMENT SEATS SHALL BE CAREFULLY FINISHED SMOOTH TO AN EVEN, LEVEL SURFACE AND SHALL SHOW NO VARIATIONS FROM A TRUE PLANE GREATER THAN 1/16".

5. THE INTERNAL STEEL LAMINAE SHALL CONFORM TO ASTM A570, GRADE 36.

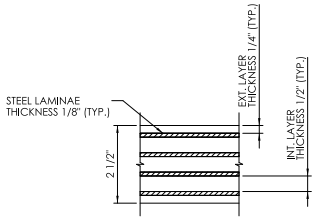
6. ELASTOMERIC BEARING PADS SHALL BE PAID UNDER THE ITEM "ELASTOMERIC BEARING PADS".



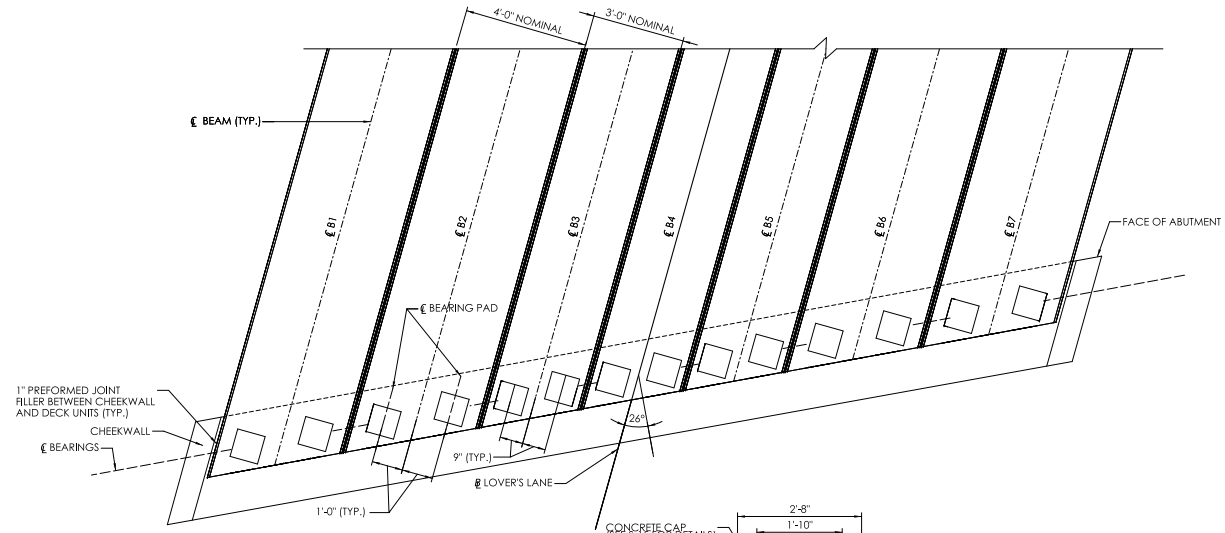
BEARING PLAN
SCALE: 3" = 1'-0"



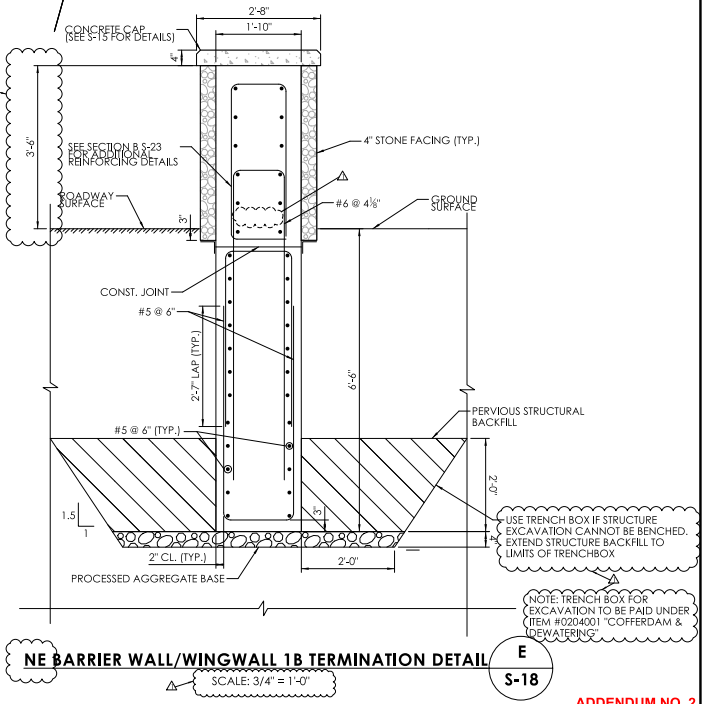
BEARING ELEVATION
SCALE: 3" = 1'-0"



BEARING SECTION
SCALE: 6" = 1'-0"



BEARING LOCATION PLAN
SCALE: 1/2" = 1'-0"



NE BARRIER WALL/WINGWALL 1B TERMINATION DETAIL
SCALE: 3/4" = 1'-0"

E
S-18

FINISHED DECK ELEVATIONS L=42'-6"					
℄ OF BEAM	BEARINGS SOUTH ABUTMENT 1	1/4L	2/4L	3/4L	BEARINGS NORTH ABUTMENT 2
B7	234.504	234.143	233.854	233.637	233.487
B6	234.658	234.284	233.982	233.751	233.591
B5	234.795	234.409	234.096	233.853	233.683
B4	234.913	234.518	234.195	233.943	233.762
B3	234.913	234.508	234.175	233.913	233.723
B2	234.915	234.499	234.154	233.880	233.678
B1	234.919	234.490	234.132	233.845	233.630

ELASTOMERIC BEARING DETAIL

*BEARING DESIGN LOAD TABLE		
	SOUTH ABUTMENT 1	NORTH ABUTMENT 2
SERVICE DEAD LOADS (KIPS)	25.55	25.55
SERVICE LIVE LOADS (KIPS)	34.9	34.9

*LOADS ARE PER BEARING, 2 BEARINGS PER BEAM

ADDENDUM NO. 2

DATE	REVISION DESCRIPTION
12/1/22	BARRIER WALL/WINGWALL 1B DETAIL

DESIGNER/DRAFTER: JT CHECKED BY: DW

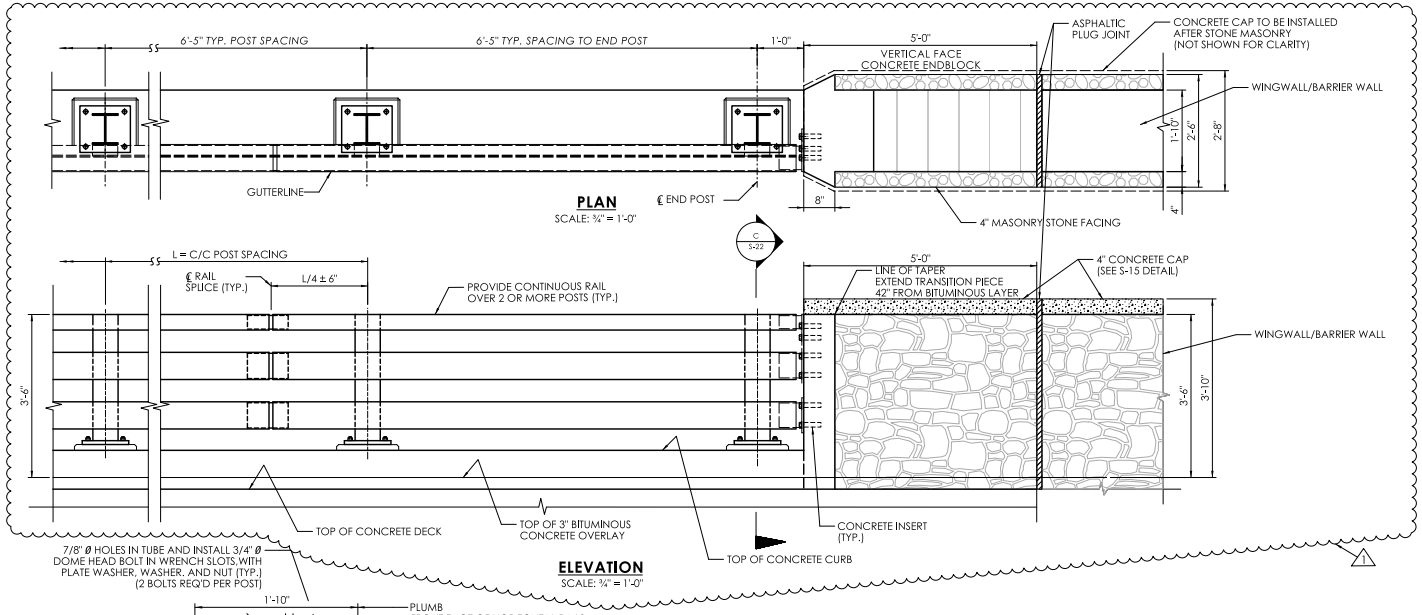
SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
TOWN OF WILTON

PROJECT NUMBER: 0161-0142
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 04975 LOVERS LANE OVER COMSTOCK BROOK
TOWN(S): WILTON
DRAWING TITLE: BEARING DETAILS

DRAWING NO. S-19
SHEET NO. 04.19.A2

LASTED SAVED BY: JTator FILE NAME: J:\DWG\P2016\0182\D10\0161-0142\Bridge\Contract_Plans\19_SB_MSH_BR04975_0161_0142_ITS.dgn
PLOTTED DATE: 12/15/2022



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 CURB AND ENDBLOCK SHALL BE CLASS PCC04462. THE COMPRESSIVE STRENGTH OF THE CONCRETE, BASED ON TEST CYCLINDERS, SHALL BE NO LESS THAN 4,000 PSI PRIOR TO INSTALLING THE EPOXY GROUT BELOW THE BASEPLATES. PRIOR TO ALLOWING THE RAIL, CURB AND ENDBLOCK 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.

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 0.4% 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)". THE COLOR OF THE TOP COAT MATERIAL ON THE STEEL SHALL CONFORM TO FEDERAL STANDARD NO. 17038.

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.

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".

1 BOLTS, NUTS, AND WASHERS SHALL BE COATED AFTER INSTALLATION TO MATCH THE FINISH COLOR OF THE SURROUNDING ELEMENTS. PROPER SURFACE PREPARATION OF THE FASTENERS IS REQUIRED FOR ADHESION OF THE PAINT IN ACCORDANCE WITH THE PAINT MANUFACTURER'S WRITTEN INSTRUCTIONS.

REV	DATE	DESCRIPTION
2	12/15/22	CONCRETE CAP ADDED, MINOR REVISIONS

ADDENDUM NO. 2

DESIGNER/DRAFTER: JT CHECKED BY: DW

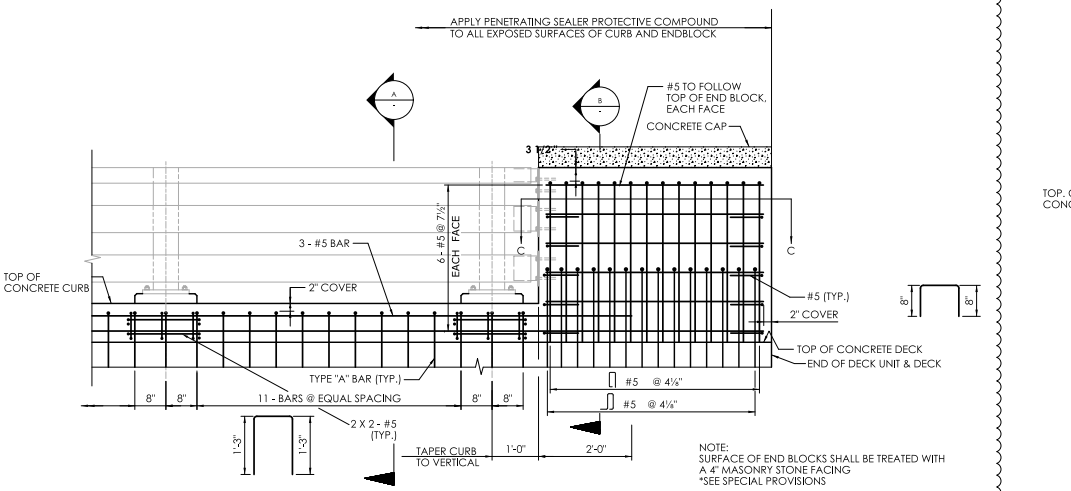
SIGNATURE/BLOCK:

STATE OF CONNECTICUT
TOWN OF WILTON

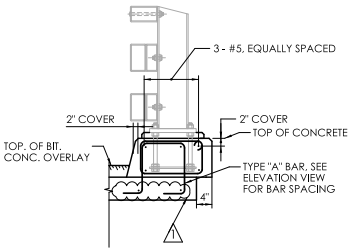
PROJECT NUMBER: 0161-0142
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 04975 LOVERS LANE OVER COMSTOCK BROOK
TOWN(S): WILTON
DRAWING TITLE: 3-TUBE CURB MOUNTED BRIDGE RAIL DETAILS - 1

DRAWING NO. S-21
SHEET NO. 04.21.A2

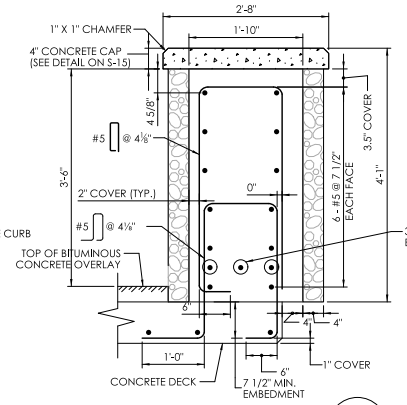
LASTED SAVED BY: JTator FILE NAME: J:\DWG\P2016\0182\D10\0161-0142\Bridge\Contract_Plans\21_SB_MSH_BR04975_0161_0142_RLD1.dgn
PLOTTED DATE: 12/15/2022



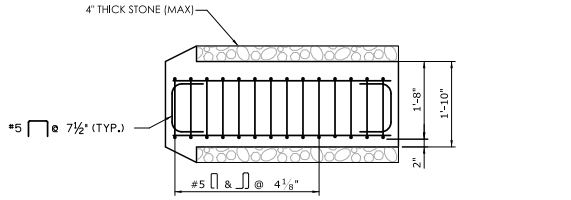
ELEVATION - CURB AND ENDBLOCK REINFORCEMENT
SCALE : ¾"=1'-0"



SECTION A
SCALE : ¾"=1'-0"



SECTION B
SCALE : 1"=1'-0"



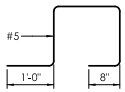
PLAN SECTION - ENDBLOCK REINFORCEMENT C
SCALE: ¾" = 1'-0"

REINFORCEMENT SPLICE NOTES:

1. THE SPLICE LENGTH FOR THE LONGITUDINAL REINFORCEMENT IN THE CURB AND ENDBLOCK 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.



TYPE "A" BAR

NO.	DATE	REVISION DESCRIPTION
1	12/1/22	ENDBLOCK ADJUSTED

ADDENDUM NO. 2

DESIGNER/DRAFTER: JT CHECKED BY: DW

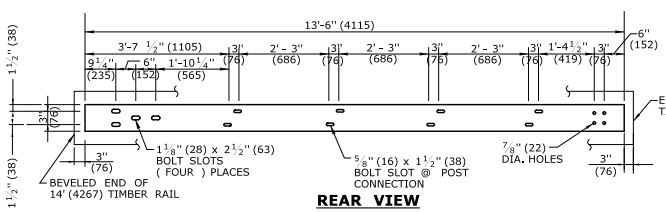
SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
TOWN OF WILTON

PROJECT NUMBER: 0161-0142
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 04975 LOVERS LANE OVER COMSTOCK BROOK
TOWN(S): WILTON
DRAWING TITLE: 3-TUBE CURB MOUNTED BRIDGE RAIL DETAILS - REINFORCEMENT

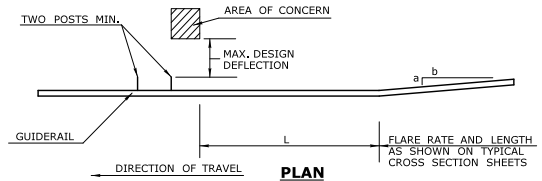
DRAWING NO. S-23
SHEET NO. 04.23.A2

LASTED SAVED BY: JTator FILE NAME: J:\DWG\P2016\0182\D10\0161-0142\Bridge\Contract_Plans\23_SB_MSH_BR04975_0161_0142_RLD3.dgn
PLOTTED DATE: 12/15/2022



REAR VIEW

STEEL TRANSITION RAIL 6'' x 3/8" x 13'-6" (152x9x4115) FOR LEADING END ATTACHMENT



PLAN

APPROACH TO FIXED OBJECTS SYSTEM 2 AND 3

GENERAL NOTES:

1. THIS DRAWING SHOWS LEADING END ATTACHMENT TO PROPOSED BARRIER/VERTICAL SHAPED WINGWALL PARAPET.
2. PRIOR TO GUIDERAIL POST INSTALLATION THE CONTRACTOR SHALL INVESTIGATE POST LOCATIONS FOR THE PRESENCE AND DEPTH OF LEDGE AND UNDERGROUND UTILITIES/PIPES.
3. 20" (507) DIA. EXCAVATED HOLE SHALL BE BACKFILLED WITH SUITABLE MATERIAL, OR GRANULAR FILL COMPACTED IN 6" (150) LIFTS BEFORE DRIVING POST OR POSTS MAY BE SET IN EXCAVATED HOLE AND BACKFILLED WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM).

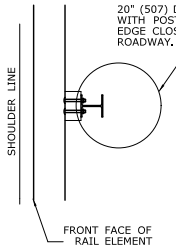
Maximum Design Deflection (ft) (mm)	Area Of Concern Plus 2 Posts (see sketch)	SYSTEM 3 W6x15 (W150x22) Posts Spaced at 2'- 6" (762)	SYSTEM 2 W6x15 (W150x22) Posts Spaced at 5' (1524)	Standard System W6x15 (W150x22) Posts Spaced at 10' (3048)	L Min. Length Needed
1' (305)	System 3	10' (3048)	10' (3048)	50' (16.40m)	70' (21.34m)
2' - 6" (762)	System 2	–	10' (3048)	60' (19.68m)	70' (21.34m)
4' (1219)	Standard System	–	–	70' (21.34m)	70' (21.34m)

STEEL-BACKED TIMBER GUIDERAIL DESIGN DEFLECTION CHART

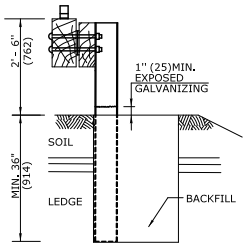
NOTE- THIS PROJECT SHALL UTILIZE STANDARD SYSTEM UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

CASE 1: IF LEDGE IS LOCATED WITHIN 36" (914) OF THE FINISHED GRADE AT THE POST LOCATION A 20" (507) DIAMETER HOLE SHALL BE DRILLED IN THE LEDGE TO THE MINIMUM EMBEDMENT DEPTH OF 36" (914) AND THE POST SHALL BE CUT AND DRIVEN TO ACHIEVE THIS DEPTH.

CASE 2: IF LEDGE IS LOCATED AT A DEPTH GREATER THAN 36" (914) BUT LESS THAN THE FULL EMBEDMENT DEPTH THE POST SHALL BE CUT AND DRIVEN TO ACHIEVE EMBEDMENT TO THE DEPTH OF THE TOP OF LEDGE.

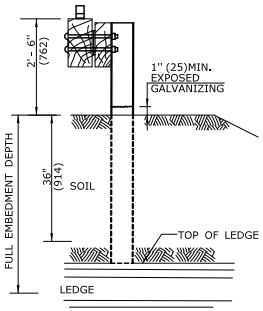


PLAN



CASE 1

(CURBLESS SECTION SHOWN)

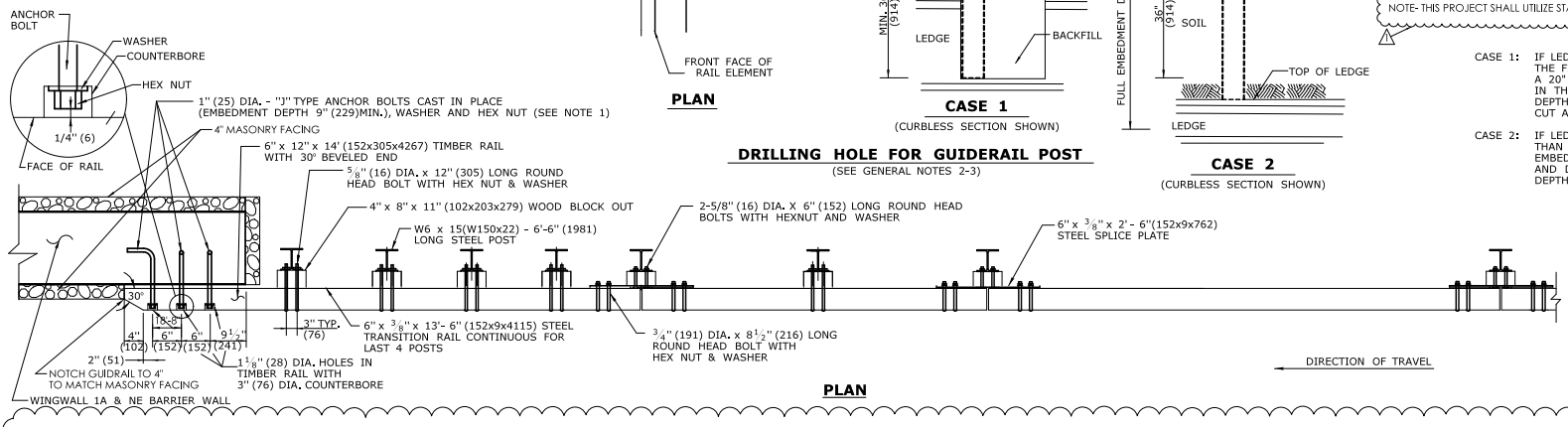


CASE 2

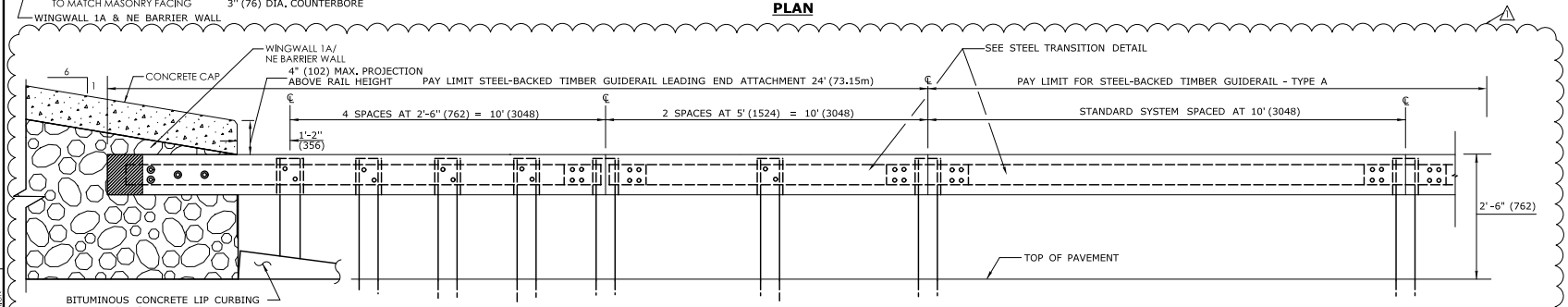
(CURBLESS SECTION SHOWN)

DRILLING HOLE FOR GUIDERAIL POST

(SEE GENERAL NOTES 2-3)



PLAN



ELEVATION

ATTACHMENT AT LEADING END (VERTICAL SHAPE BARRIER SHOWN) (FRONT VIEW)

(SEE GENERAL NOTES 1)

ADDENDUM NO. 2

ALL METRIC DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED.

REV	DATE	DESCRIPTION
1	12/15/22	CONCRETE CAP ANCHOR WIDTH

DESIGNER/DRAFTER: JT CHECKED BY: DW

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT TOWN OF WILTON

PROJECT NUMBER: 0161-0142
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 04975 LOVERS LANE OVER COMSTOCK BROOK
TOWN(S): WILTON
DRAWING TITLE: STEEL-BACKED TIMBER GUIDERAIL - BRIDGE ATTACHMENT

DRAWING NO. S-24
SHEET NO. 04.24.A2

LASTED SAVED BY: JTator FILE NAME: J:\DWG\P2016\0182\D10\0161-0142\Bridge\Contract_Plans\24_SB_WSH_BR04975_0161_0142_CTDOTStandard.dgn
PLOTTED DATE: 12/15/2022

FREEMAN
COMPANIES
LAND DEVELOPMENT | ENGINEERING DESIGN | CONSTRUCTION SERVICES

Geotechnical Engineering Report
Replacement of Bridge 04975 - Lovers Lane over Comstock Brook
State Project No. 161-142
Wilton, Connecticut

August 2, 2022

Freeman Project No.: 2017-0802.8

Prepared for:

Fuss & O'Neill, Inc.
46 Hartford Road, Manchester, Connecticut 06040

Prepared by:

Freeman Companies, LLC
36 John Street
Hartford, CT 06106

Nathan L. Whetten, D.GE., P.E.
Vice President of Geotechnical Services

TABLE OF CONTENTS

1.0 INTRODUCTION 1
1.1 Summary 1
1.2 Scope of Work 1
1.3 Authorization 1
1.4 Project Vertical Datum 1
2.0 SITE AND PROJECT DESCRIPTION 1
2.1 Site Description 1
2.2 Project Description 2
3.0 EXPLORATIONS 2
3.1 Subsurface Explorations 2
3.2 Laboratory Testing 2
4.0 SUBSURFACE CONDITIONS 3
4.1 Subsurface Conditions 3
5.0 GEOTECHNICAL ENGINEERING RECOMMENDATIONS 4
5.1 General 4
5.2 Spread Footing Design Criteria 5
5.3 Micropile Design 5
6.0 CONSTRUCTION CONSIDERATIONS 6
6.1 Excavation 6
6.2 Bearing Surface Preparation 6
6.3 Cofferdam and Dewatering 6
6.4 Temporary Earth Retaining Systems 6
6.5 Micropile Installation 6
6.6 Temporary Bridge 6
6.7 Preconstruction Survey and Monitoring 7
6.8 Reuse of Existing Soils 7
7.0 FUTURE SERVICES AND LIMITATIONS 7
7.1 Future Services 7
7.2 Limitations 7

ATTACHMENTS

Table

1. Subsurface Data

Figures

1. Site Location Map
2. Subsurface Exploration Location Plan
3. Subsurface Profile
4. Lateral Earth Pressures – Active Earth Pressures

Appendices

A. Test Boring Logs
B. Results of Laboratory Testing

1.0 INTRODUCTION

1.1 Summary

This report presents our evaluation of the subsurface conditions and geotechnical engineering recommendations for replacement of Bridge 04975, Lover's Lane over Comstock Brook, located in Wilton, Connecticut. This evaluation is based on recent subsurface explorations and laboratory test data.

Subsurface conditions generally consist of fill, silt, and glacial till overlying bedrock in abutment and retaining wall areas, and alluvium overlying bedrock within the brook. We recommend that the proposed abutments, wingwalls, and retaining wall be supported on spread footing foundations bearing on bedrock. At the westerly portions of the abutments and wingwalls a combination of spread footings and micropiles may be considered due to significant variations in the bedrock surface. Installing micropiles in areas where the bedrock surface is below brook level may be a practical alternative to excavating to bedrock below brook level and creating large steps in the footing subgrade.

1.2 Scope of Work

Freeman Companies, LLC performed the following tasks:

- Coordinated drilling of test borings at the site;
- Provided technical monitoring of the test borings, described soil and rock materials encountered, and prepared test boring logs;
- Arranged for a testing laboratory to conduct laboratory soil and rock tests; and
- Evaluated the subsurface conditions and prepared this report containing geotechnical design recommendations and construction considerations.

1.3 Authorization

The work was completed in accordance with our consultant-subconsultant agreement dated March 9, 2021.

1.4 Project Vertical Datum

Elevations in this report were taken from the topographic plan provided to Freeman Cos. and are referenced to NAVD-88.

2.0 SITE AND PROJECT DESCRIPTION

2.1 Site Description

Bridge 04975 carrying Lover's Lane over Comstock Brook is located approximately 300 feet north of the Lover's Lane intersection with Route 33 in Wilton, Connecticut, as shown on Figure 1, Site Location Map. It is a 33-foot-long single-span bridge with a 16.5-feet-wide roadway and was originally constructed in 1930. The bridge consists of a concrete deck with a bituminous wearing surface and concrete-encased steel girders which are supported on concrete abutments. Abutment 1 (south abutment) is supported on a bedrock outcrop above the brook bottom. The Abutment 2 (north abutment) is below brook level and the foundation subgrade material is not visible.

2.2 Project Description

We understand that the bridge will be replaced. The new bridge will be a 25-foot 8-inch-wide and 43-foot long, single-span structure, and will have a 22-foot-wide roadway. The bridge will be widened to the west, keeping the east curb of the new bridge at its current location. We understand that construction will include installing a temporary one-lane bridge on the east side of the existing bridge to facilitate construction. The new bridge is shown in plan on Figure 2, Subsurface Exploration Location Plan.

Abutment 1 (south) - The existing Abutment 1 is positioned on the edge of a bedrock outcrop which slopes steeply downward to the brook. The new Abutment 1 will be positioned further from the brook (to the south) and lower in the profile than the existing abutment, and will extend beyond the existing abutment footprint to the west as shown on Figure 3, Subsurface Profile.

Abutment 2 (north) - The existing Abutment 2 appears to be supported on a bedrock outcrop that is a few feet below brook level. The new Abutment 2 will be positioned further from the brook (to the north) at approximately the same level in the profile, and will extend beyond the existing abutment footprint to the west.

Northeast Retaining Wall – A new retaining wall will be constructed adjacent to the northeast corner of Abutment 2, and will extend approximately 70 feet north between Lover's Lane and Comstock Brook, as shown on Figure 2. We understand that the retaining wall will be a cast-in-place reinforced concrete structure.

3.0 EXPLORATIONS

3.1 Subsurface Explorations

Nine test borings (designated S-1 through S-6, S-1A, S-2A, S-3A) were drilled by New England Boring Contractors, Inc., of Glastonbury, Connecticut, during the periods June 3 to 4 and August 11 to 13, 2020, and on January 2, 2022. Test boring S-2 encountered refusal at 10.5 feet with no water return, so the drill rig moved 3 ft north and drilled boring S-2A. Test borings were drilled with 4-inch diameter flush-joint casing to depths ranging from 10.5 to 25.7 feet below ground surface. Standard Penetration Tests were conducted and soil samples were recovered at maximum 5-foot intervals. Borings were terminated within bedrock following retrieval of bedrock cores using an NX-size core barrel. Surveyed exploration locations are shown on Figure 2, Subsurface Exploration Location Plan. A Freeman Companies engineer observed the drilling, described the soil samples, and prepared the test boring logs included in Appendix A.

Test borings S-1, S-2, S-2A, S-3, S-4, S-5 and S-6 were drilled from the surface of the roadway, behind the abutments and along the northeast retaining wall. Test borings S-1A and S-3A were drilled through the bridge deck to provide additional information on the elevation of the bedrock surface beneath the brook.

3.2 Laboratory Testing

Grain size analyses (ASTM D422) were performed on seven representative soil samples to aid in determining engineering properties. Two unconfined compression tests were performed on representative bedrock core samples.

Laboratory testing was conducted by Geotesting Express, Inc., of Acton, Massachusetts. Results of laboratory testing are provided in Appendix B.

4.0 SUBSURFACE CONDITIONS

4.1 Subsurface Conditions

Subsurface conditions encountered in the explorations consist of fill, silt, and glacial till overlying bedrock in abutment and northeast retaining wall areas, and sand overlying bedrock within the brook, as described below. Subsurface soils are shown graphically on Figure 3, and data are summarized on Table I.

Generalized subsurface conditions are as follows:

THICKNESS (FT)	GENERALIZED DESCRIPTION
3.5 to 10.5	**Fill** – Descriptions range from brown to gray, coarse to fine SAND and medium to fine GRAVEL, trace to some silt, with cobbles, boulders, and concrete fragments; to brown coarse to fine SAND and SILT. SPT N-Values ranged from 17 to 61 blows per foot (bpf, medium dense to very dense), with refusals.
0.5 to 1.5	**Silt (Subsoil)** – A subsoil layer which likely reflects the former location of an original topsoil layer was encountered in borings S-3 and S-4 on the Abutment 1 (south) side of the bridge. Subsoil was described as yellow-brown SILT and fine SAND; or SILT, little fine sand.
1.8 to 5.0	**Sand (Alluvium)** – Gray coarse to fine SAND and coarse to fine GRAVEL, little silt, with cobbles. Alluvium was encountered in the two borings drilled within Comstock Brook
3.0 to 3.5	**Glacial Till** – Gray coarse to medium GRAVEL, little m-f sand. SPT N-Values were typically greater than 50 blows per 6 inches (very dense) with refusals, which reflects the probable presence of cobbles and boulders.

Bedrock - Bedrock encountered was GRANITE, gray, white and pink, medium grained, massive bedding, moderately fractured, fresh, very strong. Primary joints are low angle, planar, tight to open, slightly weathered, with sand filling. Several vertical joints were noted. Rock Quality Designation (RQD) ranged from 0 to 85 (very poor to good quality rock).

Results of two laboratory unconfined compression tests conducted on bedrock core samples recovered from the borings were 18,950 and 19,250 pounds per square inch.

Test boring S-6 was terminated at refusal which could represent bedrock, or it could represent a cobble or boulder in the glacial till stratum.

Weathered bedrock was encountered in test borings S-1A, S-3, S-3A, and S-4 in thicknesses ranging from 1 to 4.5-feet thick. Thicknesses of weathered bedrock encountered are listed in Table 1 and are shown on Figure 3. The depth to and elevation of bedrock, and the thickness of weathered rock encountered in the test borings varies; bedrock elevations are listed in Table 1 and are shown on Figure 3.

Groundwater – Groundwater was encountered about 12 to 13.5 feet below existing ground surface during drilling (corresponding to El. 221 to El. 223). However, these levels were measured during or immediately following drilling and may not represent stabilized groundwater. Water levels measured in the borings along with reported normal and flood stage water levels in the brook, are shown on Figure 3. Groundwater levels should be expected at or above

structure subgrade levels. Water levels are expected to be influenced primarily by water levels within Comstock Brook, but will vary with season, precipitation, temperature, construction activity in the area and other factors.

5.0 GEOTECHNICAL ENGINEERING RECOMMENDATIONS

The bedrock surface is variable at the site: the bedrock surface at Abutment 1 drops off steeply below water level in the brook on the left (west) side; the bedrock surface at Abutment 2 is unknown on the left side since borings could not be drilled from land due to tight site constraints. These variations in the bedrock surface complicate the selection and design of a foundation support system.

We recommend that the abutments and wingwalls be supported on a combination of spread footings and micropiles due to variations in the bedrock surface. Installing micropiles in areas where the bedrock surface is below brook level or where the bedrock surface is unknown allows for a more uniform bottom of footing/pile cap subgrade, and may be more practical than excavating to bedrock below brook and groundwater level and creating large steps in the footing.

Proposed bottom of structure abutment grades and recommended foundation systems are as follows:

Abutment 1		
Easterly Side and SE Wingwall	Spread Footing	Bottom of Footing El. 224
Westerly Side (where bedrock drops off)	Micropiles	Bottom of Concrete Fill El. 216; Bottom of Pile Cap El. 224
SW Wingwall	Spread Footing	Bottom of Footing El. 224
Abutment 2		
Easterly Side	Spread Footing	Bottom of Footing El. 224
NE Retaining Wall	Spread Footing	Bottom of Footing El. 216 and El. 223
Westerly Side and NW Wingwall	Micropiles	Bottom of Concrete Fill El. 216; Bottom of Pile Cap El. 224

On the west side of Abutment 1 where bedrock drops off, and along the west side of Abutment 2 and northwest wingwall, micropile support of foundations is envisioned. However, if bedrock is found in these areas to be at or higher than El. 216, the foundation may be changed to a spread footing over concrete fill.

Recommendations for spread footings and micropiles are provided below.

5.1 General

- **Seismic Design:** Soils are not susceptible to liquefaction. Seismic design is not required for simple-span bridges (AASHTO Article 4.7.4.2). Soil conditions at the site are defined as AASHTO Site Class C.
- **Backfill Material:** Place Pervious Structure Backfill (CTDOT Form 818 M.02.05) behind the abutments and abutment wingwalls above a line defined by a 1V:1.5H slope extending up from the heel of the footing to grade.
- **Weep Holes:** 4-inch-dia. weep holes at maximum 10-foot spacing, installed according to CTDOT specifications.
- **Lateral Earth Pressures:** Figure 4-Active Earth Pressures, which assumes abutments, wingwalls and the northeast retaining wall can deflect.

5.2 Spread Footing Design Criteria

- **Subgrade Preparation:** Design abutment and wingwall spread footing foundations to bear directly on a minimum 12-inch-thick layer of concrete fill (Form 818 M.03.02.1, nominal 3,000 lbs per square inch (psi) strength) placed over the sound bedrock surface after removal of weathered bedrock. The concrete fill layer is recommended to provide more uniform bearing due to the presence of fractured bedrock, and low RQD values near the bedrock surface.
- **Factored Bearing Resistance:**
  Service Limit State: Nominal Bearing Resistance = 10,000 pounds per square foot (psf); apply Resistance Factor of 1.0 (AASHTO 10.5.5.1), Factored Bearing Resistance = 10,000 psf;
  Strength Limit State: Nominal Bearing Resistance = 27,000 psf; apply Resistance Factor of 0.55; Factored Bearing Resistance = 14,850 psf (AASHTO Table 11.5.7-1).
- **Settlement at Recommended Bearing Pressure:** Estimated total settlement less than 1/2 inch; differential less than ¾- inch.
- **Coefficient of Friction (tan δ) Along Bottom:** 0.7 (AASHTO Table C3.11.5.3-1); Resistance factor 1.0 (AASHTO Table 11.5.7-1).

5.3 Micropile Design

- **Subgrade Preparation:** Pile caps should bear on a layer of concrete fill to provide a uniform bearing surface. If rock is found to be at or higher than El. 216, the foundation may be changed to a spread footing.
- **Micropile Design:** Design micropiles as Type A with the following elements:
  - 9-5/8 inch O.D., 0.472-inch thick wall permanent casing that extends to bedrock. Casing should not be relied upon for uplift resistance.
  - A minimum 8.5-inch diameter bonded zone socketed into bedrock. The top of the rock socket should be within sound rock below the decomposed bedrock. Evaluation of the required length of the rock socket should be designed by the Contractor per CTDOT procedures for micropile design.
  - A No. 18 central rebar core that extends the full length of the micropile from the pile head to the bottom of the rock socket.
  - A grout strength of 5,000 pounds per square inch (psi).
- **Factored Bearing Resistance:**
  - Service Limit State: Nominal Bearing Resistance = 100 kips; apply Resistance Factor of 1.0 (AASHTO 10.5.5.1); Factored Bearing Resistance = 100 kips
  - Strength Limit State: Nominal Bearing Resistance = 200 kips; apply Resistance Factor of 0.7; Factored Bearing Resistance = 140 kips (AASHTO Table 10.5.5.2.5-1).
- **Ultimate Axial Compression:** We recommend an ultimate axial capacity of 200 kips be provided to the Contractor for purposes of their micropile design and verification test.
- **Spacing:** Minimum 30 inches or 3 times the pile diameter, whichever is greater (AASHTO 10.9.1.2)
- **Settlement:** Maximum total settlement of micropiles is estimated at less than 1 inch. This settlement will occur as loads are applied.
- **Load Tests:** We recommend that load tests include a minimum of one verification test on a sacrificial pile, and proof tests on five percent of the production piles.
- **Lateral Resistance:** Lateral pile load analyses will be conducted, if required.
- **Drilling:** Use casing through soil. Anticipate difficult drilling conditions (i.e., cobbles, boulders, hard rock).

6.0 CONSTRUCTION CONSIDERATIONS

6.1 Excavation

Conventional heavy excavation equipment should be suitable for excavation in existing soil materials. Excavation should conform to OSHA excavation regulations contained in 29 CFR Part 1926, latest edition.

Results of unconfined compression tests indicate that bedrock is hard. We anticipate that controlled blasting will be necessary for removal of both sound and weathered bedrock. Sound and weathered bedrock removal will be required at Abutment 1; sound bedrock removal will likely be required at Abutment 2 and the Northeast Retaining Wall.

6.2 Bearing Surface Preparation

Place concrete fill per Section 5.2 directly over the sound bedrock surface after removal of weathered bedrock.

6.3 Cofferdam and Dewatering

We estimate that excavations for shallow foundations and pile caps may penetrate below groundwater, depending on the water level in the brook during construction. Construction should be performed in-the-dry, and a fully-enclosed cofferdam and dewatering will be required. Steel sheeting will likely not be feasible due to the shallow bedrock. A water-handling-cofferdam such as sandbags and plastic might be feasible. A drilled cofferdam system such as tangent or secant piles may be capable of penetrating the boulders, could provide a groundwater cutoff, and may be feasible. Other means may also be feasible and potentially cost-effective. Dewatering from sumps located in the bottom of excavations appears feasible. Surface water should be diverted away from excavations.

6.4 Temporary Earth Retaining Systems

Temporary earth retaining systems (TERS) will likely be required in some areas to accommodate the proposed construction. Steel sheeting may not be feasible due to shallow bedrock. Soldier piles and lagging appears feasible, however, soldier piles will likely need to be placed in predrilled rock sockets drilled into the bedrock and filled with grout. Micropiles and lagging, and other TERS systems may also be considered. One or more levels of bracing will likely be required. Drilled tiebacks or internal bracing appear feasible.

6.5 Micropile Installation

Micropiles should be drilled with a permanent casing. Micropile pile drilling equipment must be capable of drilling through the overburden which is anticipated to contain variable sized boulders and also be capable of penetrating through fractured and intact bedrock. Therefore, it should be assumed that drilling activities may be difficult and time consuming if boulders are encountered. Drilling techniques should limit loss of ground. The bonded zone should be entirely with bedrock below any decomposed bedrock.

6.6 Temporary Bridge

We understand that a one lane temporary bridge will be constructed on the east side of the existing bridge to provide traffic flow during construction and facilitate construction. The temporary bridge will be approximately 80-feet long, will carry one lane of traffic, and will extend from near test boring S-4 to near test boring S-5 (refer to Figure 2). We recommend that the temporary bridge be designed to bear on sound bedrock at a maximum allowable bearing pressure of 10,000 psf. Where foundations for the temporary bridge are located near abutment or wingwall foundations, they

should be placed at the same elevation as the abutment or wingwall foundations, and step up or down away from the abutment or wingwall foundations as necessary.

6.7 Preconstruction Survey and Monitoring

Vibrations from bedrock excavation, pile installation, cofferdam installation, and demolition are not expected to affect the structural integrity of nearby structures. However, vibration and noise will likely be noticeable inside nearby buildings, and may be disturbing to residents. A preconstruction survey of structures within 250 feet should be conducted in advance of construction, and vibration monitoring should be conducted. There appear to be several structures within this distance.

6.8 Reuse of Existing Soils

The existing soils to be excavated will consist primarily of existing Fill. These soils are not expected to be suitable for reuse as Pervious Structure Backfill or Granular Fill. Excavated soils may be suitable for reuse as embankment fill. However, the siltier soils may be difficult to properly compact when wet, and may need to be dried to achieve compaction. Drying the soils can be difficult and at times impractical, particularly during periods of cold and wet weather.

7.0 FUTURE SERVICES AND LIMITATIONS

7.1 Future Services

We recommend that Freeman Companies be engaged during construction to observe:

- Verify that soil conditions exposed in excavations are in general conformance with the design assumptions, and that the geotechnical aspects of construction are consistent with the project specifications.
- Review contractor submittals related to micropiles, and observe installation in accordance with Form 818.
- Observe preparation of bearing surfaces.

7.2 Limitations

This report was prepared for the exclusive use of Fuss & O'Neill, CHA, and the project design team. The recommendations provided herein are based on the project information provided at the time of this report and may require modification if there are any changes in the nature, design, or location of the bridge.

The recommendations in this report are based in part on the data obtained from the subsurface explorations. The nature and extent of variations between explorations may not become evident until construction. If variations from the anticipated conditions are encountered, it may be necessary to revise the recommendations in this report.

Our professional services for this project have been performed in accordance with generally accepted engineering practices; no warranty, express or implied, is made.

Bridge 04975
Lover's Lane over Comstock Brook
Wilton, Connecticut

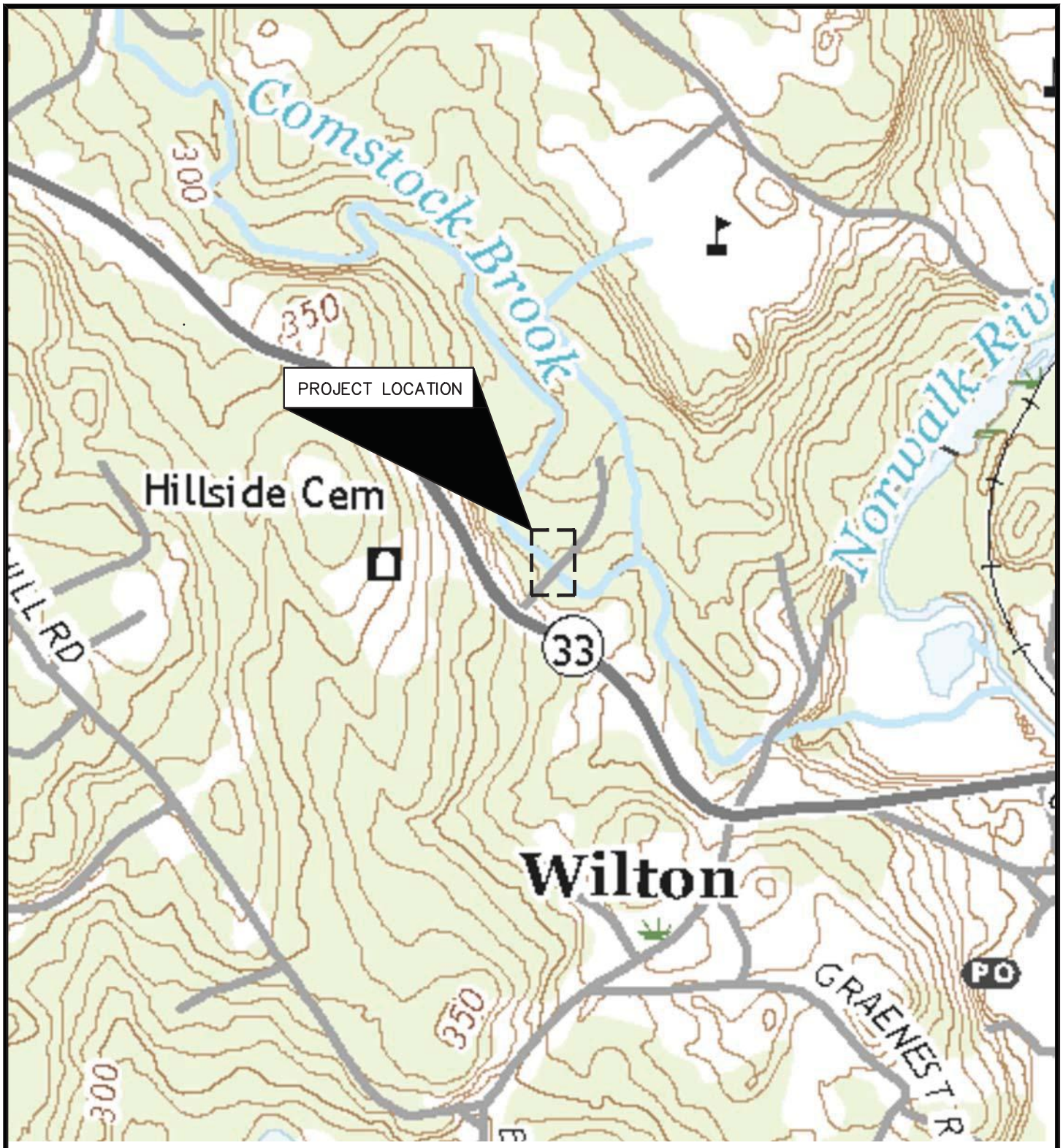
Table 1
Subsurface Data

Boring No.	Ground Surface El.[1]	Depth (ft.)	Thickness (ft.)						Groundwater[2]		Bedrock	
			Asphalt	Fill	Silt (Subsoil)	Sand (Alluvium)	Glacial Till	Weathered Bedrock	Depth (ft.)	Elevation	Depth (ft.)	Elevation
S-1	234	22.0 (C)	0.3	9.7	NE	NE	NE	NE	12.0	222	10.0	224
S-1A	234.2	25.7 (C)	NE	NE	NE	5.0	NE	1.0	13.5	220.7	21.0	213.2
S-2	234	10.5 (R)	0.3	10.2	NE	NE	NE	NE	NE	NE	NE	NE
S-2A	234	20.5 (C)	0.3	10.2	NE	NE	NE	NE	13.0	221	10.5	223.5
S-3	234.5	20.0 (C)	0.3	3.7	1.5	NE	NE	4.5	12.0	222.5	10.0	224.5
S-3A	234.4	23.0 (C)	NE	NE	NE	1.8	NE	1.7	13.5	220.9	17.5	216.9
S-4	235	16.0 (C)	0.3	3.2	0.5	NE	NE	2.0	12.0	223	6.0	229
S-5	234	21.0 (C)	0.4	6.1	NE	NE	3.5	NE	NE	NE	10.0	224
S-6	234	6.0 (R)	0.4	3.1	NE	NE	3.0	NE	NE	NE	Note 4	Note 4

Notes:

1. Ground surface elevations were estimated from topographic information shown on the site plan.
2. Groundwater levels were indicated on the test boring logs at time 0 hours.
3. ">" - Greater Than "≥" - Greater than or equal to "≤" - Less than or equal to "NE" - Stratum Not Encountered; "C" - Bedrock cored; "R" - Refusal encountered
4. Boring S-6 terminated at auger refusal at a depth of 6 feet, which could represent bedrock or a cobble or boulder in the glacial till stratum.
5. Refer to the text of the report for additional information.

FIGURES



USGS QUADRANGLE MAP
NORWALK, CONNECTICUT
DATE 2018

FREEMAN COMPANIES
LAND DEVELOPMENT | ENGINEERING DESIGN | CONSTRUCTION SERVICES
36 JOHN STREET
HARTFORD, CT 06106
WWW.FREEMANCOS.COM
TEL:(860)251-9550
FAX:(860)986-7161
ELEVATE YOUR EXPECTATIONS

SITE LOCATION MAP

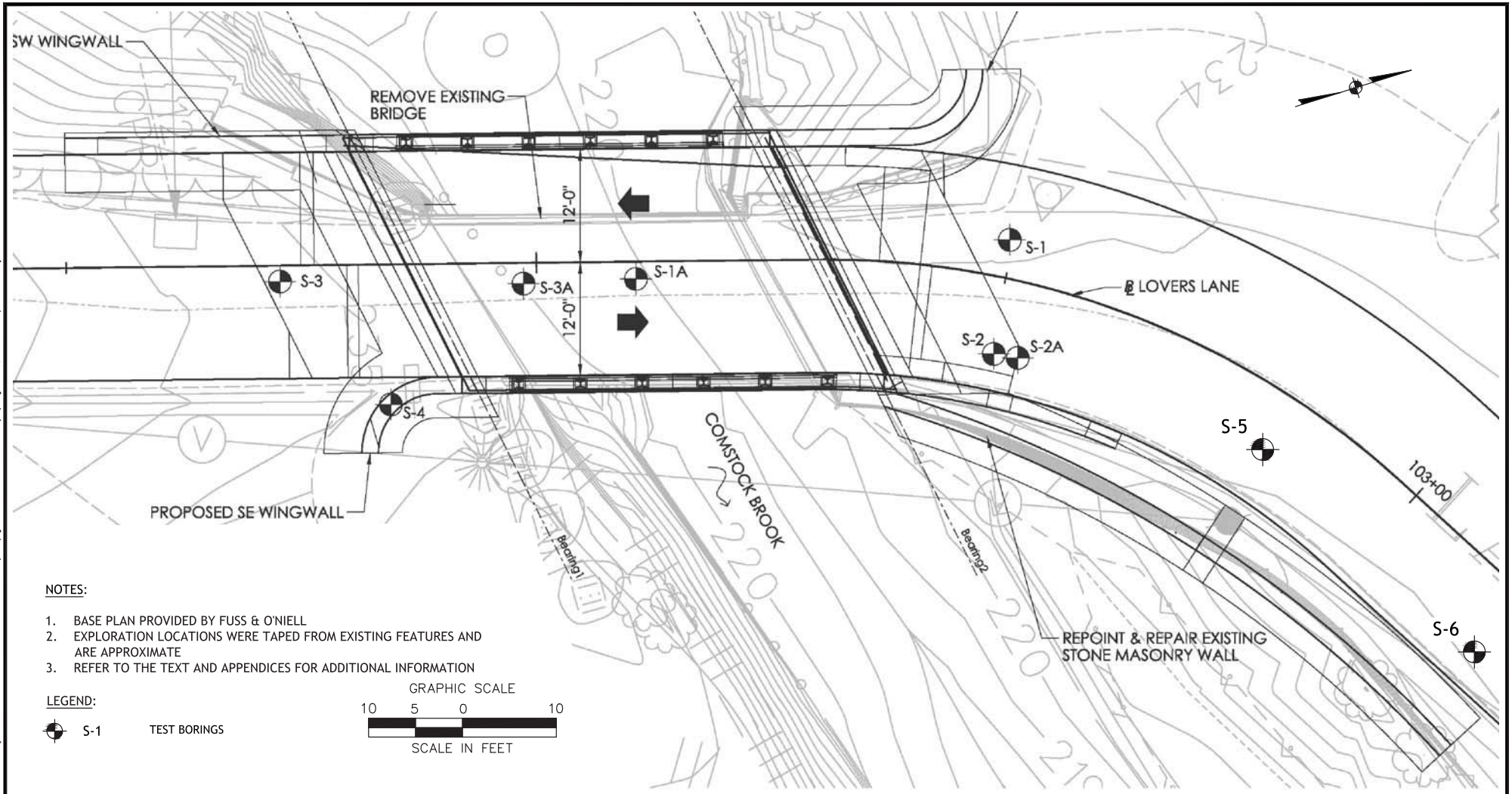
RECONSTRUCTION OF BRIDGE No. 04975
LOVER'S LANE OVER COMSTOCK BROOK
STATE PROJECT No. 161-142
WILTON, CONNECTICUT

DRAFTED:	T.T.
CHECKED:	N.W.
APPROVED:	N.W.
SCALED:	1"=1000'
PROJECT NO.:	2017-0802.8
DATE:	06/15/2020

SHEET NO.

FIGURE 1

Freeman Companies, LLC. R:\2017\2017-0802.8 Proj 161-142 Lovers La ov Comstock R Wilton_CME\DWG\Figure 1 - Lovers Lane_Wilton.dwg Jun 15, 2020-12:22pm Plotted By: tta



NOTES:

1. BASE PLAN PROVIDED BY FUSS & O'NIELL
2. EXPLORATION LOCATIONS WERE TAPED FROM EXISTING FEATURES AND ARE APPROXIMATE
3. REFER TO THE TEXT AND APPENDICES FOR ADDITIONAL INFORMATION

LEGEND:

S-1 TEST BORINGS

GRAPHIC SCALE
10 5 0 10
SCALE IN FEET

SUBSURFACE EXPLORATION LOCATION PLAN

RECONSTRUCTION OF BRIDGE No. 04975
LOVER'S LANE OVER COMSTOCK BROOK
STATE PROJECT No. 161-142
WILTON, CONNECTICUT

FREEMAN COMPANIES
LAND DEVELOPMENT · ENGINEERING DESIGN · CONSTRUCTION SERVICES
FREEMAN COMPANIES, LLC
36 JOHN STREET
HARTFORD, CT 06106
WWW.FREEMANCOS.COM
TEL:(860)251-9550
TOLL FREE:(800)604-5141
FAX:(860)986-7161
ELEVATE YOUR EXPECTATIONS

No.	Date	Description
–	–	–

REVISIONS

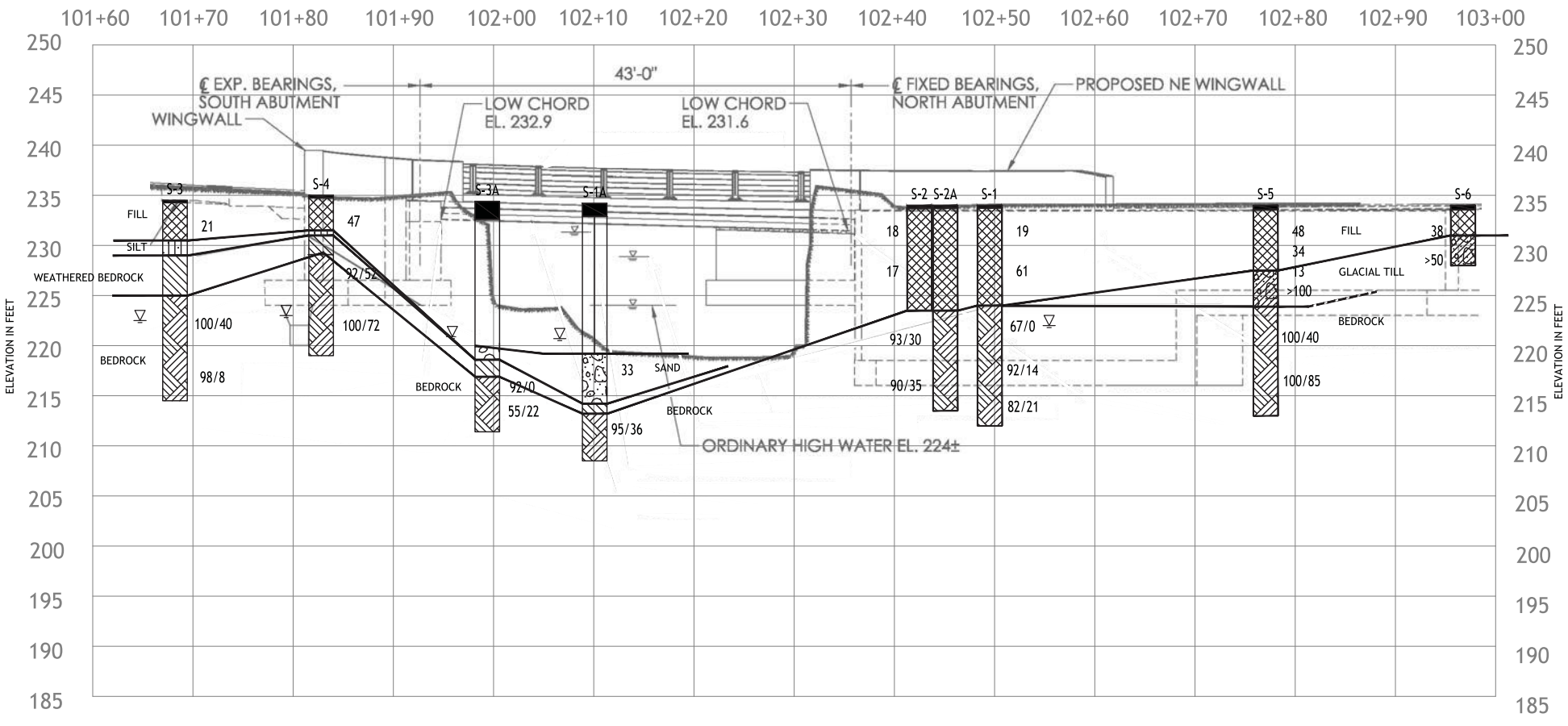
DRAWN:	T.T.
CHECKED:	N.W.
APPROVED:	N.W.
SCALE:	1"=10'
PROJECT NO.:	2017-0802.8-01
DATE:	01/18/2022

SHEET NO.

FIGURE 2

Freeman Companies, LLC - R:\2017\2017-0802.8 Proj\161-142 Lovers La ov Comstock R Wilton_CME\DWG\Figure 2 - Lovers Lane_wilton (KB).dwg Jan 18, 2022-12:02pm Plotted By: tta

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF FREEMAN COMPANIES, LLC



LEGEND
21 SPT N–VALUE
100/40 RECOVERY% / RQD%

NOTE:
THE INTERPRETED STRATA BOUNDARIES INDICATED ARE KNOWN ONLY AT THE BORING LOCATIONS AND WILL VARY BETWEEN LOCATIONS

SUBSURFACE PROFILE

RECONSTRUCTION OF BRIDGE No. 04975
LOVER'S LANE OVER COMSTOCK BROOK
STATE PROJECT No. 161-142
WILTON, CONNECTICUT

FREEMAN COMPANIES
LAND DEVELOPMENT · ENGINEERING DESIGN · CONSTRUCTION SERVICES
FREEMAN COMPANIES, LLC
36 JOHN STREET
HARTFORD, CT 06106
WWW.FREEMANCOS.COM
TEL:(860)251-9550
TOLL FREE:(800)604-5141
FAX:(860)986-7161
ELEVATE YOUR EXPECTATIONS

No.	Date	Description
–	–	–

REVISIONS

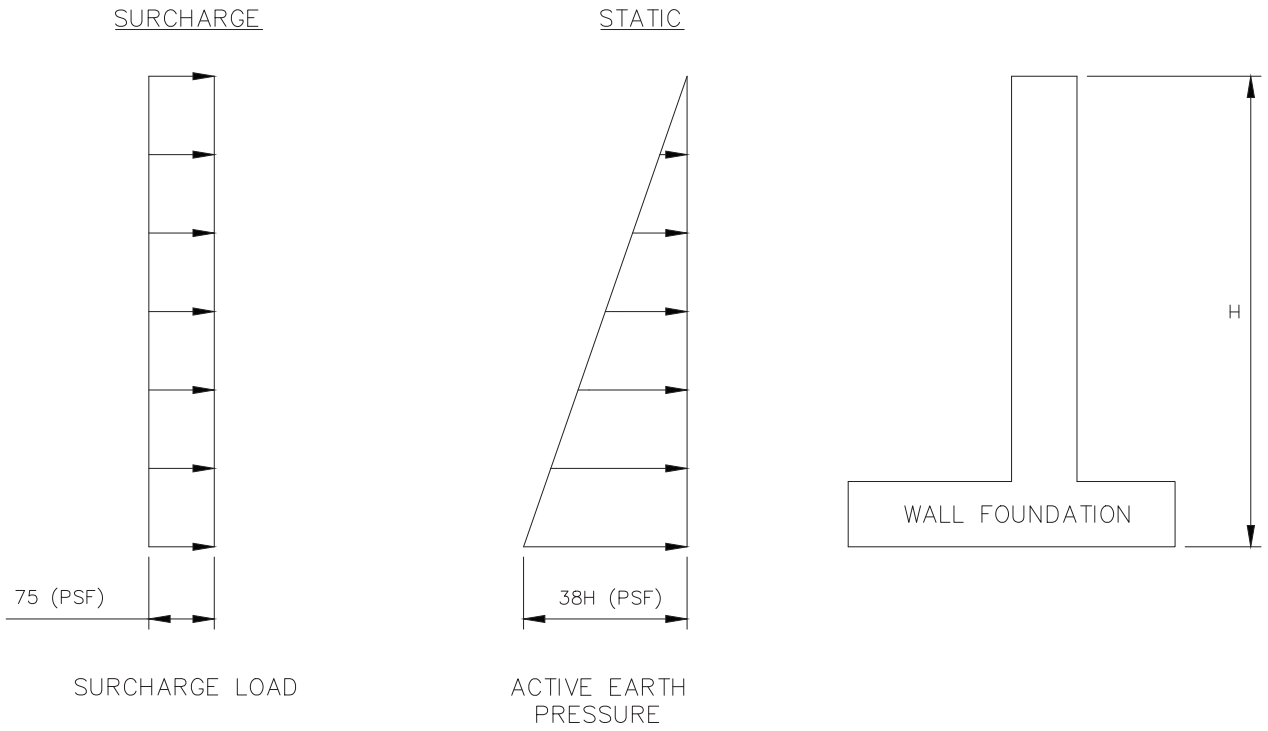
DRAWN:	T.T.
CHECKED:	N.W.
APPROVED:	N.W.
SCALE:	1"=10'
PROJECT NO.:	2017–0802.8–01
DATE:	01/18/2022

SHEET NO.

FIGURE 3

Freeman Companies, LLC. R:\2017\2017-0802.8 Proj 161-142 Lovers La ov Comstock R Wilton_CIVIL\DWG\Figure 2 - Lovers Lane_wilton (KB).dwg Jan 18, 2022-12:08pm Plotted By: tto

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF FREEMAN COMPANIES, LLC



NOTES:

1. APPLIES TO WALLS THAT CAN DEFLECT AT THE TOP AND ASSUMES ACTIVE EARTH PRESSURES.
2. H IS MEASURED IN FEET
3. THE WALL SHOULD BE DRAINED BY PERVIOUS STRUCTURE BACKFILL (FORM 818 M.02.05) WITH A UNIT WEIGHT OF 125 PCF AND WEEPHOLES THROUGH THE WALL. THEREFORE, HYDROSTATIC PRESSURE IS NOT INCLUDED.
4. THESE PRESSURE DISTRIBUTIONS ASSUME HORIZONTAL BACKFILL BEHIND THE WALL.
5. SLIDING:
   COEFFICIENT OF FRICTION BETWEEN FOOTING AND BASE= 0.7 (AASHTO TABLE 3.11.5.3–1) RESISTANCE FACTOR= 1.0 (AASHTO TABLE 11.5.7–1).
6. IGNORE PASSIVE RESISTANCE IN FRONT OF FOOTING.
7. SEISMIC LATERAL EARTH PRESSURES ARE NOT REQUIRED FOR SINGLE SPAN BRIDGES (AASHTO 4.7.4.2).

FREEMAN COMPANIES
LAND DEVELOPMENT | ENGINEERING DESIGN | CONSTRUCTION SERVICES
36 JOHN STREET
HARTFORD, CT 06106
WWW.FREEMANCOS.COM
TEL:(860)251-9550
FAX:(860)986-7161
ELEVATE YOUR EXPECTATIONS

LATERAL EARTH PRESSURES
ACTIVE EARTH PRESSURES

RECONSTRUCTION OF BRIDGE No. 04975
LOVER'S LANE OVER COMSTOCK BROOK
STATE PROJECT No. 161-142
WILTON, CONNECTICUT

DRAFTED:	T.T.
CHECKED:	N.W.
APPROVED:	N.W.
SCALED:	N.T.S.
PROJECT NO.:	2017–0802.8
DATE:	07/06/2020

FIG.

FIGURE 4

Freeman Companies, LLC . C:\Users\njohnson\AppData\Local\Temp\AcPublish_1052\Figure 4 – Lovers Lane_Wilton – Active.dwg Jan 07, 2021–11:03am Plotted By: njohnson

APPENDIX A

RECENT TEST BORING LOGS

Driller:	M. St. John	**Connecticut DOT Boring Report Format**		Hole No.:	S-1
Inspector:	G. Jacobsen	Town:	Wilton	Stat./Offset:	102+20/1 ft L
Engineer:	Nathan Whetten	Project No.:	161-142	Northing:	632910.5
Start Date:	6-3-20	Route No.:	Lovers Lane	Easting:	810801.3
Finish Date:	6-3-20	Bridge No.:	04975	Surface Elevation:	234
Project Description:	Replacement of Lover's Lane over Comstock Brook				
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:	12 ft 0 hrs				

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						ASPHALT	ASPHALT (3 in)	
						FILL		
	S-1	18 9 10 15	24	7			Brown to gray, c-f SAND and m-f GRAVEL, trace silt	
								230
5								
	S-2	25 41 20 50/5"	23	14			Brown to gray, c-f SAND, some m-f gravel, trace silt, with numerous concrete fragments	
								225
10	S-3	50/0"	0	0		BEDROCK	Refusal, no recovery	
	C-1		60	40	0		Moderately strong, moderately weathered, moderately to extremely fractured, gray graphitic SCHIST, with indistinct foliation. Primary joints low angle, planar, tight to open, weathered; several high angle joints. Coring times: 4-4-5-5-5 min/ft.	220
15	C-2		36	33	14		Moderately strong to weak, moderately weathered, moderately to intensely fractured, gray to light gray GNEISS with layers of graphitic SCHIST Coring times: 5-5-5 min/ft.	
20	C-3		48	44	21		Moderately strong to weak, moderately weathered, moderately to intensely fractured, gray to light gray GNEISS with layers of graphitic SCHIST. Intensely fractured zone from 19 to 22 ft. Coring times: 5-5-5-5 min/ft.	215
							END OF BORING 22ft	210
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: 10ft Rock: 12ft	NOTES: Used solid augers to refusal at 10 feet, then drove 4-inch casing to 10 feet.	Sheet 1 of 1
No. of Soil Samples: 3 No. of Core Runs: 3		SM-001-M REV. 1/02

Driller:	A. MacKernon	**Connecticut DOT Boring Report Format**		Hole No.:	S-1A
Inspector:	G. Jacobsen	Town:	Wilton	Stat./Offset:	102+10/1 ft R
Engineer:	Nathan Whetten	Project No.:	161-142	Northing:	632872.4
Start Date:	8-11-20	Route No.:	Lovers Lane	Easting:	810790.1
Finish Date:	8-12-20	Bridge No.:	04975	Surface Elevation:	234.2

Project Description: Replacement of Lover's Lane over Comstock Brook

Casing Size/Type: 4-in. Casing	Sampler Type/Size: 1-3/8 inch ID	Core Barrel Type: NX
Hammer Wt.: 300lb Fall: 24in.	Hammer Wt.: 140lb Fall: 30in.	

Groundwater Observations: 13.5 ft 0 hrs

Depth (ft)	SAMPLES: Sample Type/No.	SAMPLES: Blows on Sampler per 6 inches	SAMPLES: Pen. (in.)	SAMPLES: Rec. (in.)	SAMPLES: RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						Pavement Structure	Bridge Deck (16")	
						Under Bridge		
5								230
10								225
15	S-1	17 19 14 31 50/1"	25	10		Sand	Gray, c-f SAND and c-f GRAVEL, little silt (Alluvium)	220
20						Weathered Bedrock	Roller bit probable weathered bedrock 20' to 21'	215
	C-1		56	53	36	Bedrock	Strong, slightly weathered, light gray, medium grained GNEISS. Several highangle joints, tight, slightly weathered planar to curved, smooth. Coring times: 16-12-13-15-12 min/ft.	210
25							END OF BORING 25.7ft	
30								205

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: 21ft Rock: 4.7ft

No. of Soil Samples: 1 No. of Core Runs: 1

NOTES: Used solid augers through bridge deck. Left a rough opening which would not allow 4" drive shoe to pass. Lowered Split Spoon for S1, then lowered 3" casing, but would not seat, no consistent water return. Eventually spun 4" casing through deck, and roller bit and advanced 4" casing to 20'. Cored rock with slow hydraulic motor

Roller bit probable cobbles 17.1' to 20'

Driller:	M. St. John	**Connecticut DOT Boring Report Format**		Hole No.:	S-2
Inspector:	G. Jacobsen	Town:	Wilton	Stat./Offset:	102+20/10 ft R
Engineer:	Nathan Whetten	Project No.:	161-142	Northing:	632907.8
Start Date:	6-4-20	Route No.:	Lovers Lane	Easting:	810813.5
Finish Date:	6-4-20	Bridge No.:	04975	Surface Elevation:	234
Project Description:	Replacement of Lover's Lane over Comstock Brook				
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 encountered				

Depth (ft)	SAMPLES: Sample Type/No.	SAMPLES: Blows on Sampler per 6 inches	SAMPLES: Pen. (in.)	SAMPLES: Rec. (in.)	SAMPLES: RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						ASPHALT	ASPHALT (3 in)	
						FILL		
	S-1	20 12 6 4	24	12			Brown to gray, c-f SAND, some c-f gravel, little silt	
								230
5								
	S-2	6 3 14 3	24	14			Brown c-f GRAVEL, some c-f SAND, trace silt	
	S-3	50/3"	3	2			Brown c-f SAND and c-f GRAVEL, little silt	
								225
10								
							END OF BORING 10.5ft	
								220
15								
								215
20								
								210
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: 10.5ft Rock: 0ft No. of Soil Samples: 3 No. of Core Runs: 0	NOTES: Used solid augers to refusal at 8 feet, then drove 4-inch casing to 8 feet. Roller-bitted through boulders to 10.5 ft; no water return Offset 3 ft north of S-2, drilled S-2A Cobbles and boulders from 8 to 10.5 ft	Sheet 1 of 1 SM-001-M REV. 1/02

Driller:	M. St. John	**Connecticut DOT Boring Report Format**		Hole No.:	S-2A
Inspector:	G. Jacobsen	Town:	Wilton	Stat./Offset:	102+31/7 ft R
Engineer:	Nathan Whetten	Project No.:	161-142	Northing:	632905.5
Start Date:	6-4-20	Route No.:	Lovers Lane	Easting:	810812.3
Finish Date:	6-4-20	Bridge No.:	04975	Surface Elevation:	234
Project Description:	Replacement of Lover's Lane over Comstock Brook				
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:	13 ft 0 hrs				

Depth (ft)	SAMPLES: Sample Type/No.	SAMPLES: Blows on Sampler per 6 inches	SAMPLES: Pen. (in.)	SAMPLES: Rec. (in.)	SAMPLES: RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						ASPHALT	ASPHALT (3 in)	
						FILL	See boring S-2 for soil descriptions	
5								230
10						BEDROCK		225
	C-1		60	56	30		Moderately strong, moderately weathered, moderately to extremely fractured, gray medium grained GNEISS, with graphite schist layers. Foliation very thin, low angle. Primar joints shallow dipping, planar, tight to open, moderately to extremely weathered. Coring times: 4-4-4-4-4 min/ft.	220
15	C-2		60	54	35		Moderately strong, moderately weathered, moderately to extremely fractured, gray medium grained GNEISS, with graphite schist layers. Foliation very thin, low angle. Primar joints shallow dipping, planar, tight to open, moderately to extremely weathered. Coring times: 4-4-4-4-4 min/ft.	215
20							END OF BORING 20.5ft	210
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: 10.5ft Rock: 10ft No. of Soil Samples: 0 No. of Core Runs: 2	NOTES: Offset 3 ft north of S-2, drilled S-2A Used solid augers to refusal at 9 feet, then drove 4-inch casing to 9 feet. Roller-bitted and drove casing through cobbles and boulders to 10.5 ft. Roller bit through cobbles and boulders from 9 to 10.5 ft	Sheet 1 of 1 SM-001-M REV. 1/02

Driller:	R. Posa	**Connecticut DOT Boring Report Format**		Hole No.:	S-3
Inspector:	G. Jacobsen	Town:	Wilton	Stat./Offset:	101+68/2 ft R
Engineer:	Nathan Whetten	Project No.:	161-142	Northing:	632832.1
Start Date:	6-3-20	Route No.:	Lovers Lane	Easting:	810781.5
Finish Date:	6-3-20	Bridge No.:	04975	Surface Elevation:	234.5
Project Description:	Replacement of Lover's Lane over Comstock Brook				
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:	12 ft 0 hrs				

Depth (ft)	SAMPLES: Sample Type/No.	SAMPLES: Blows on Sampler per 6 inches	SAMPLES: Pen. (in.)	SAMPLES: Rec. (in.)	SAMPLES: RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						Asphalt	ASPHALT (3 in)	
						Fill		
	S-1	23 11 10 12	24	14			Brown to gray, c-f SAND, some silt	
						Silt		230
5	S-2	100/5"	5	3			Yellow-brown SILT, little f sand (Subsoil)	
						Weathered Bedrock		
								225
10						Bedrock		
	C-1		60	60	40		Moderately strong, moderately weathered, moderately to extremely fractured, pink and dark gray medium grained GNEISS. Foliation very thin, shallow dipping. Primary joints low angle, planar, tight to open, moderately weathered, with sand filling	
							Several vertical joints and cracks, some healed. Dark gray layer from 13.1 to 14 ft. Coring times: 7-7-7-7-7 min/ft.	220
15								
	C-2		60	59	8		Moderately strong, moderately weathered, moderately to extremely fractured, pink and dark gray medium grained GNEISS. Foliation very thin, shallow dipping. Primary joints low angle, planar, tight to open, moderately weathered, with sand filling	
							Coring times: 7-7-7-7-7 min/ft.	215
20							END OF BORING 20ft	
								210
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: 5.5ft Rock: 14.5ft No. of Soil Samples: 2 No. of Core Runs: 2	NOTES: Used solid augers to refusal at 9 feet, then drove 4-inch casing to 5.5 feet. Roller-bitted and drove casing through decomposed bedrock at 10 ft. Roller bit through decomposed bedrock from 5.5 to 10 ft, cuttings light brown	Sheet 1 of 1 SM-001-M REV. 1/02

Driller:	A. MacKernon	**Connecticut DOT Boring Report Format**		Hole No.:	S-3A
Inspector:	G. Jacobsen	Town:	Wilton	Stat./Offset:	101+99/1 ft R
Engineer:	Nathan Whetten	Project No.:	161-142	Northing:	632860.8
Start Date:	8-12-20	Route No.:	Lovers Lane	Easting:	810787.2
Finish Date:	8-13-20	Bridge No.:	04975	Surface Elevation:	234.4

Project Description: Replacement of Lover's Lane over Comstock Brook

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: 13.5 ft 0 hrs

Depth (ft)	SAMPLES: Sample Type/No.	SAMPLES: Blows on Sampler per 6 inches	SAMPLES: Pen. (in.)	SAMPLES: Rec. (in.)	SAMPLES: RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						Pavement Structure	Bridge Deck (22")	
						Under Bridge		
5								230
10								225
15						Sand	Cuttings shows c-f SAND.	220
	C-1		12	1	0	Weathered Bedrock	[C1] Core barrel jammed at 16.8'. Coring times: 7 min/ft.	
	C-2		24	22	0	Bedrock	[C2] Extremely fractured to 17.5', then: Strong, slightly weathered, pinkish gray, medium grained GNEISS. Primary joints high angle, planar, tight to open, weathered, rough to smooth. Coring times: 6-6 min/ft.	
20	C-3		51	28	22		[C3] Strong, slightly weathered, pinkish gray, medium grained GNEISS. Primary joints high angle, planar, tight to open, weathered, rough to smooth. Probably left core behind. Coring times: 6-7-7-8-5/4" min/ft.	215
25							END OF BORING 23ft	210

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: 15.8ft Rock: 7.2ft No. of Soil Samples: 0 No. of Core Runs: 3	NOTES: Augered to 1', then spun 4"" casing through deck. Dropped casing to bottom of stream. Initially spun 4" casing 14' to 14.5', then incrementally roller bit and drove casing. Roller bit to 15.8'. Cored rock with high speed motor	Sheet 1 of 1 SM-001-M REV. 1/02

Driller:	R. Posa	**Connecticut DOT Boring Report Format**		Hole No.:	S-4
Inspector:	G. Jacobsen	Town:	Wilton	Stat./Offset:	101+83/14 ft R
Engineer:	Nathan Whetten	Project No.:	161-142	Northing:	632842.5
Start Date:	6-4-20	Route No.:	Lovers Lane	Easting:	810793.9
Finish Date:	6-4-20	Bridge No.:	04975	Surface Elevation:	235
Project Description:	Replacement of Lover's Lane over Comstock Brook				
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:	12 ft 0 hrs				

Depth (ft)	SAMPLES: Sample Type/No.	SAMPLES: Blows on Sampler per 6 inches	SAMPLES: Pen. (in.)	SAMPLES: Rec. (in.)	SAMPLES: RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						Asphalt	ASPHALT (3 in)	235
						Fill		
	S-1	16 24 23 10	24	18			Brown, c-f SAND and SILT, little gravel	
	S-2	9 10 50/3"	15	14			3 to 3.5 ft: Brown m-f GRAVEL, some c-f sand, lttle silt. 3.5 to 4.2 ft.: Yellow-brown SILT and f SAND	
						Silt		
						Weathered Bedrock		
5							Probable decomposed bedrock from 4.0 to 6.0 ft	230
						Bedrock		
	C-1		60	55	52		Strong, fresh, moderately fractured, pink and dark gray medium grained GNEISS. Foliation very thin, shallow dipping. Primary joints low angle, planar, tight, slightly weathered. Several vertical joints and cracks, some healed	
10							Coring times: 6-6-6-6-6 min/ft.	225
	C-2		60	60	72		Strong, fresh, moderately fractured, pink and dark gray medium grained GNEISS. Foliation very thin, shallow dipping. Primary joints low angle, planar, tight, slightly weathered. Several vertical joints and cracks, some healed	
15							Dark gray layer 14.1 to 14.9 ft. Coring times: 6-7-7-7-7 min/ft.	220
							END OF BORING 16ft	
20								215
25								210

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: 4ft Rock: 12ft	NOTES: Used solid augers to 5 feet, then roller-bitted and drove casing to 6 ft.	Sheet 1 of 1
No. of Soil Samples: 2 No. of Core Runs: 2		SM-001-M REV. 1/02

Driller:	R. Posa	**Connecticut DOT Boring Report Format**		Hole No.:	S-5
Inspector:	J. Herpich	Town:	Wilton	Stat./Offset:	102+84/6.6 ft R
Engineer:	Nathan Whetten	Project No.:	161-142	Northing:	632935.1
Start Date:	1-5-22	Route No.:	Lovers Lane	Easting:	810826.3
Finish Date:	1-5-22	Bridge No.:	04975	Surface Elevation:	234
Project Description:	Replacement of Lover's Lane over Comstock Brook				
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 encountered				

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						Asphalt	ASPHALT (5 in)	
						Fill		
	S-1	17 29 19 12	24	18			Top 9": Dark brown c-f SAND, some silt, trace f gravel; Bottom 9": Gray-brown c-f SAND and m-f GRAVEL, little silt	
	S-2	11 13 21 16	24	12			Brown c-f SAND, little SILT, little m-f gravel	230
5	S-3	8 8 5 29	24	12			Top 6": Gray-brown clayey SILT, some m gravel, little c-f sand (moist); Bottom 6": Gray-brown c-m GRAVEL, some c-f sand, little silt	
	S-4	60 100/5"	11	8		Glacial Till	Grey c-m GRAVEL, little c-f sand	
								225
10	S-5	50/1"	1	1		Bedrock	Gray pulverized rock	
	C-1		60	60	40		GRANITE, gray, white, and pink, medium grained, massive bedding, moderately fractured, fresh, very strong. Penetration rate (ft/min): 2,3,3,3,7	220
15								
	C-2		60	60	85		GRANITE, gray, white, and pink, medium grained, massive bedding, moderately fractured, fresh, very strong. Penetration rate (ft/min): 9,3,3,3,5	215
20								
							END OF BORING 21ft	210
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: 11ft Rock: 10ft No. of Soil Samples: 5 No. of Core Runs: 2	NOTES: Used solid augers to refusal at 11 feet, then drove 4-inch casing ans cored. Auger grinding from 9 to 10 feet	Sheet 1 of 1 SM-001-M REV. 1/02

Driller:	R. Posa	**Connecticut DOT Boring Report Format**		Hole No.:	S-6
Inspector:	J. Herpich	Town:	Wilton	Stat./Offset:	103+12.7/8.9 ft R
Engineer:	Nathan Whetten	Project No.:	161-142	Northing:	632951
Start Date:	1-5-22	Route No.:	Lovers Lane	Easting:	810850.2
Finish Date:	1-5-22	Bridge No.:	04975	Surface Elevation:	234.2
Project Description:	Replacement of Lover's Lane over Comstock Brook				
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 encountered				

Depth (ft)	SAMPLES: Sample Type/No.	SAMPLES: Blows on Sampler per 6 inches	SAMPLES: Pen. (in.)	SAMPLES: Rec. (in.)	SAMPLES: RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)
0						Asphalt	ASPHALT (5 in)	
						Fill		
	S-1	16 23 15 15	24	16			Top 8": Brown c-f SAND, some silt, little m-f GRAVEL; Bottom 8": Brown c-f SAND, little f gravel, little silt	
						Glacial Till		230
5	S-2	50/1"	1	1			Gray pulverized rock	
							END OF BORING 6ft	
10								225
15								220
								215
20								
								210
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%

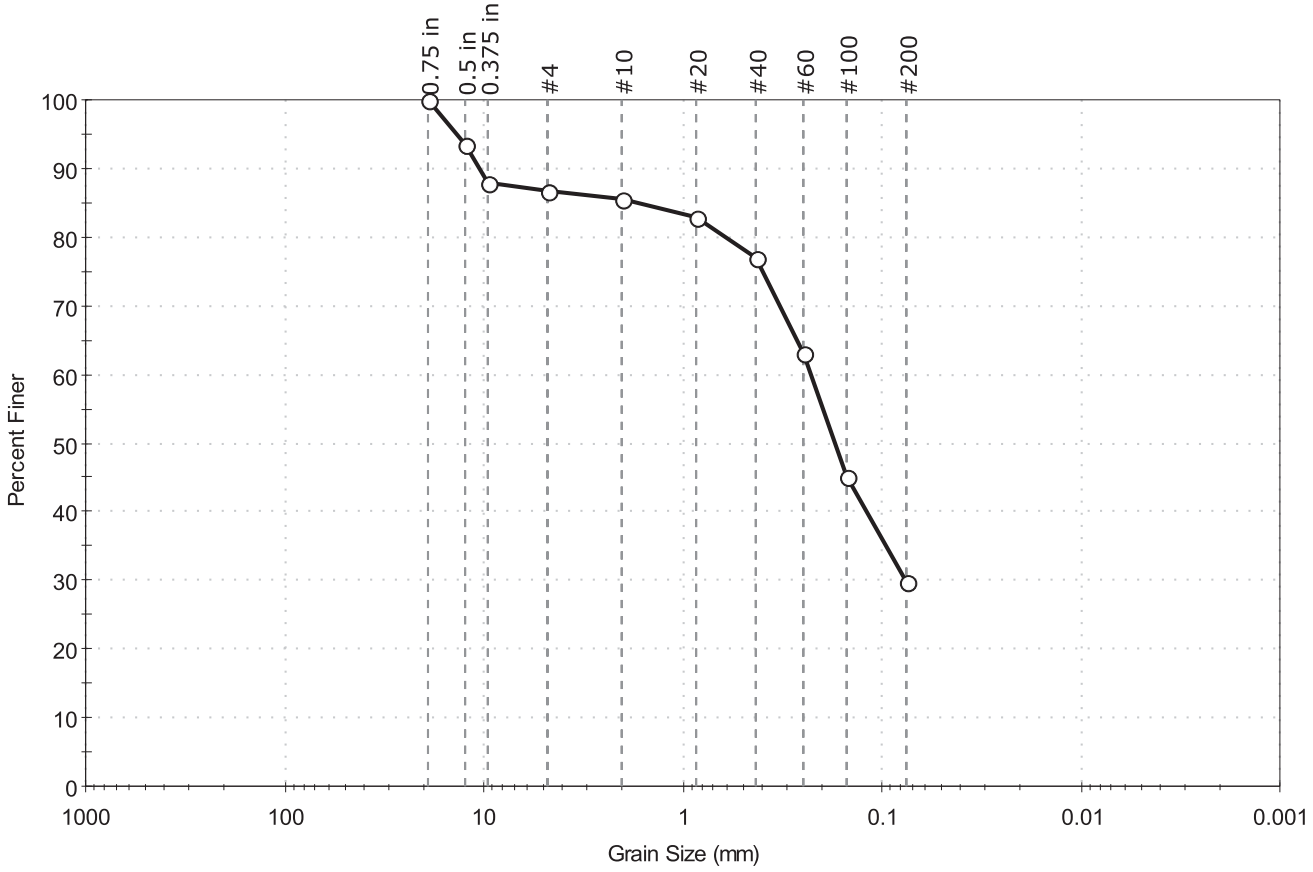
Total Penetration in Earth: 6ft Rock: 0ft	NOTES: Used solid augers to refusal at 6 feet Auger grinding from 3 to 6 feet	Sheet 1 of 1
No. of Soil Samples: 2 No. of Core Runs: 0		SM-001-M REV. 1/02

APPENDIX B

RESULTS OF LABORATORY TESTING

Client:	Freeman Companies, LLC				
Project:	Bridge 04975 Lover's Lane				
Location:	Wilton, CT			Project No:	GTX-311876
Boring ID:	---	Sample Type:	bag	Tested By:	ckg
Sample ID:	Grab-1	Test Date:	06/12/20	Checked By:	bfs
Depth :	U/S left Bank	Test Id:	559759		
Test Comment:	---				
Visual Description:	Moist, dark gray silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	13.5	56.9	29.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	93		
0.375 in	9.50	88		
#4	4.75	87		
#10	2.00	86		
#20	0.85	83		
#40	0.42	77		
#60	0.25	63		
#100	0.15	45		
#200	0.075	30		

Coefficients

D_{85} = 1.6599 mm D_{30} = 0.0762 mm

D_{60} = 0.2286 mm D_{15} = N/A

D_{50} = 0.1720 mm D_{10} = N/A

C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

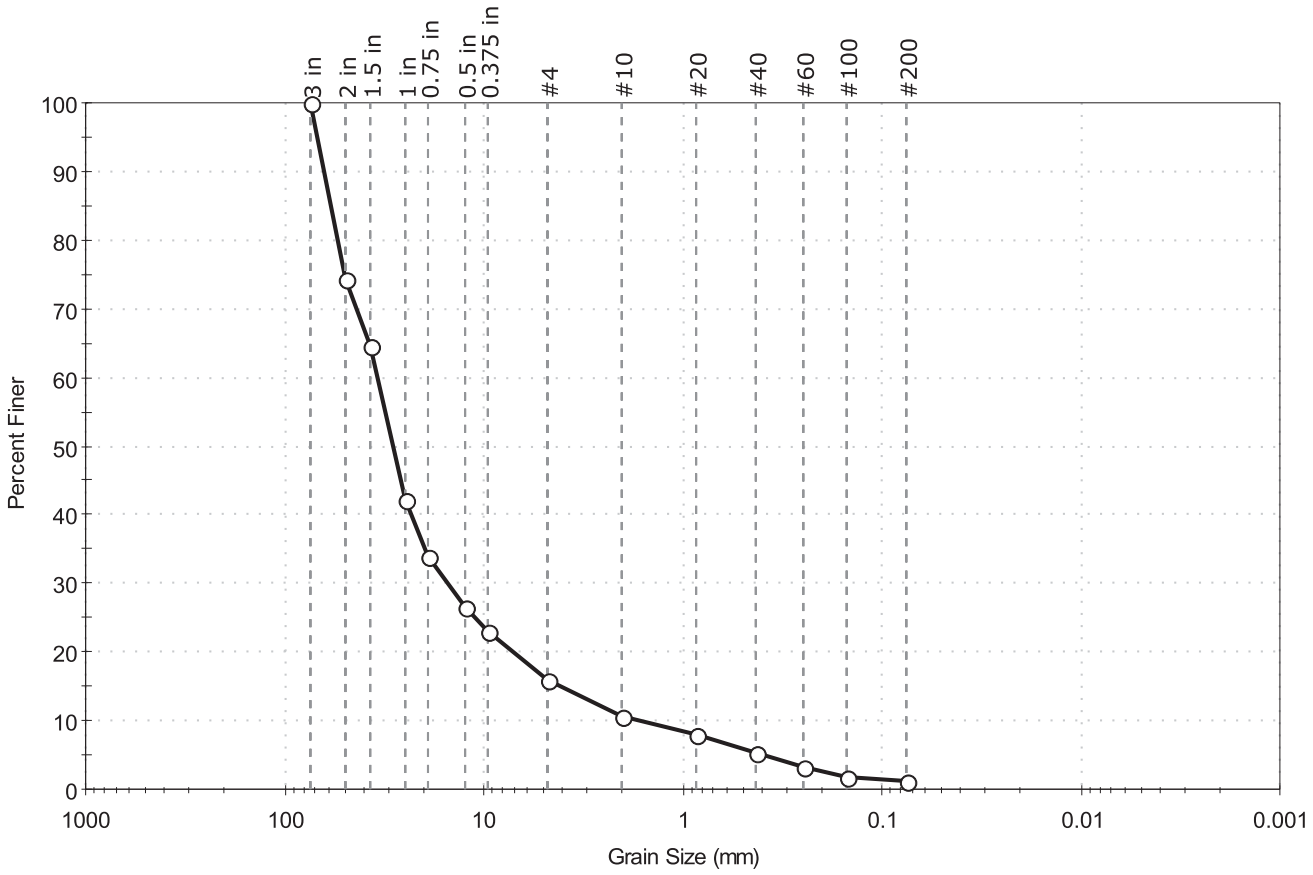
Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Client:	Freeman Companies, LLC				
Project:	Bridge 04975 Lover's Lane				
Location:	Wilton, CT			Project No:	GTX-311876
Boring ID:	---	Sample Type:	bag	Tested By:	ckg
Sample ID:	Grab-2	Test Date:	06/15/20	Checked By:	bfs
Depth :	U/S Island	Test Id:	559760		
Test Comment:	---				
Visual Description:	Moist, very dark gray gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	84.0	14.9	1.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
3 in	75.00	100		
2 in	50.00	74		
1.5 in	37.50	65		
1 in	25.00	42		
0.75 in	19.00	34		
0.5 in	12.50	27		
0.375 in	9.50	23		
#4	4.75	16		
#10	2.00	10		
#20	0.85	8		
#40	0.42	5		
#60	0.25	3		
#100	0.15	2		
#200	0.075	1.1		

Coefficients

D_{85} = 59.1150 mm	D_{30} = 15.1616 mm
D_{60} = 34.4878 mm	D_{15} = 4.0603 mm
D_{50} = 28.8127 mm	D_{10} = 1.7104 mm
C_u = 20.164	C_c = 3.897

Classification

ASTM — Poorly graded GRAVEL (GP)

AASHTO — Stone Fragments, Gravel and Sand (A-1-a (1))

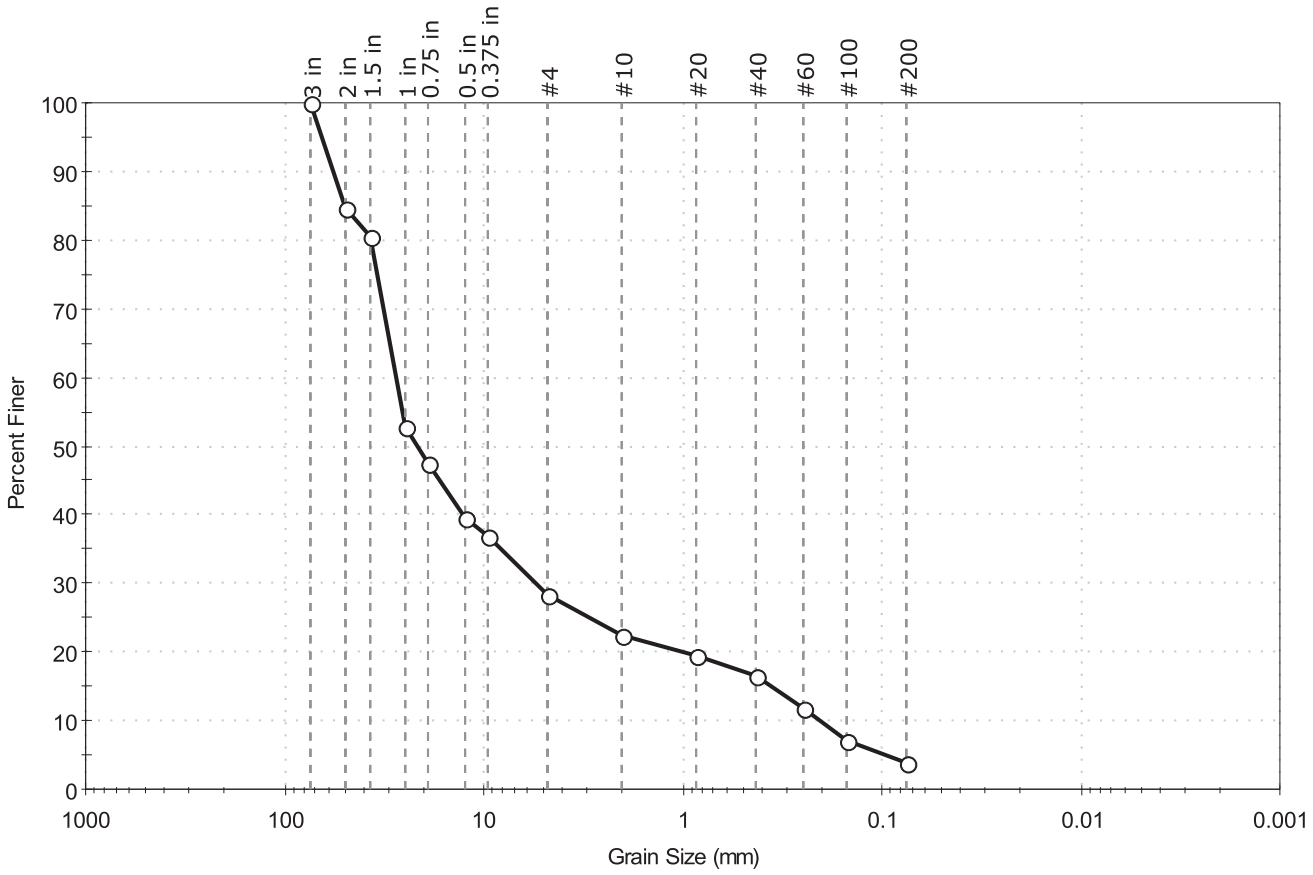
Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Client:	Freeman Companies, LLC				
Project:	Bridge 04975 Lover's Lane				
Location:	Wilton, CT			Project No:	GTX-311876
Boring ID:	---	Sample Type:	bag	Tested By:	ckg
Sample ID:	Grab-3	Test Date:	06/15/20	Checked By:	bfs
Depth :	U/S Right Bank	Test Id:	559761		
Test Comment:	---				
Visual Description:	Moist, very dark gray gravel with sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	71.7	24.5	3.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
3 in	75.00	100		
2 in	50.00	85		
1.5 in	37.50	81		
1 in	25.00	53		
0.75 in	19.00	48		
0.5 in	12.50	40		
0.375 in	9.50	37		
#4	4.75	28		
#10	2.00	22		
#20	0.85	20		
#40	0.42	16		
#60	0.25	12		
#100	0.15	7		
#200	0.075	3.8		

Coefficients

D_{85} = 50.4791 mm	D_{30} = 5.4438 mm
D_{60} = 27.7591 mm	D_{15} = 0.3630 mm
D_{50} = 21.5972 mm	D_{10} = 0.2083 mm
C_u = 133.265	C_c = 5.125

Classification

ASTM — Poorly graded GRAVEL with Sand (GP)

AASHTO — Stone Fragments, Gravel and Sand (A-1-a (1))

Sample/Test Description

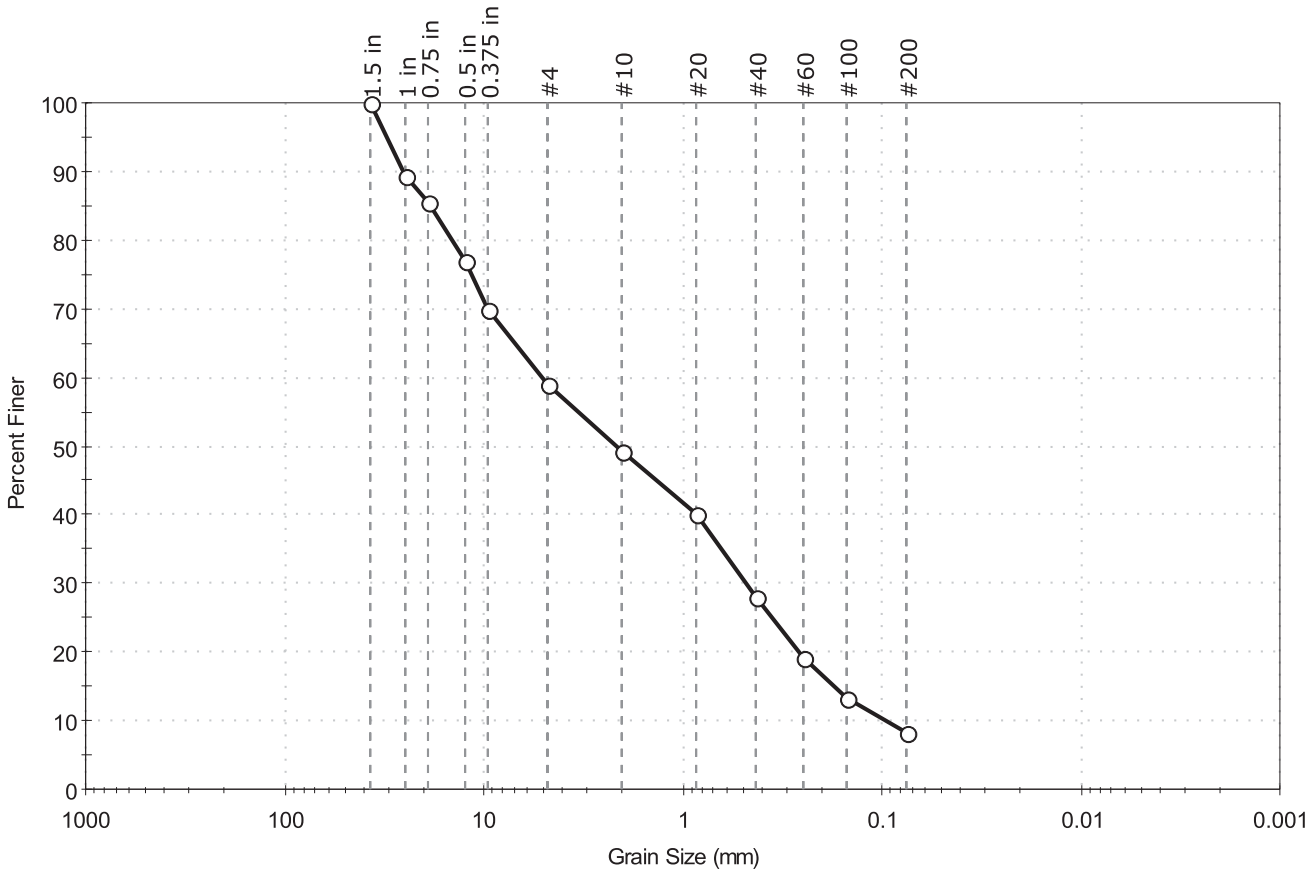
Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

printed 6/16/2020 10:54:05 AM

Client:	Freeman Companies, LLC				
Project:	Bridge 04975 Lover's Lane				
Location:	Wilton, CT			Project No:	GTX-311876
Boring ID:	S-1	Sample Type:	bag	Tested By:	ckg
Sample ID:	S-1	Test Date:	06/12/20	Checked By:	bfs
Depth :	1-3	Test Id:	559755		
Test Comment:	---				
Visual Description:	Moist, dark olive brown sand with silt and gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	40.9	50.8	8.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.5 in	37.50	100		
1 in	25.00	89		
0.75 in	19.00	85		
0.5 in	12.50	77		
0.375 in	9.50	70		
#4	4.75	59		
#10	2.00	49		
#20	0.85	40		
#40	0.42	28		
#60	0.25	19		
#100	0.15	13		
#200	0.075	8.3		

Coefficients

D_{85} = 18.5595 mm	D_{30} = 0.4777 mm
D_{60} = 5.0327 mm	D_{15} = 0.1726 mm
D_{50} = 2.1278 mm	D_{10} = 0.0944 mm
C_u = 53.312	C_c = 0.480

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-a (1))

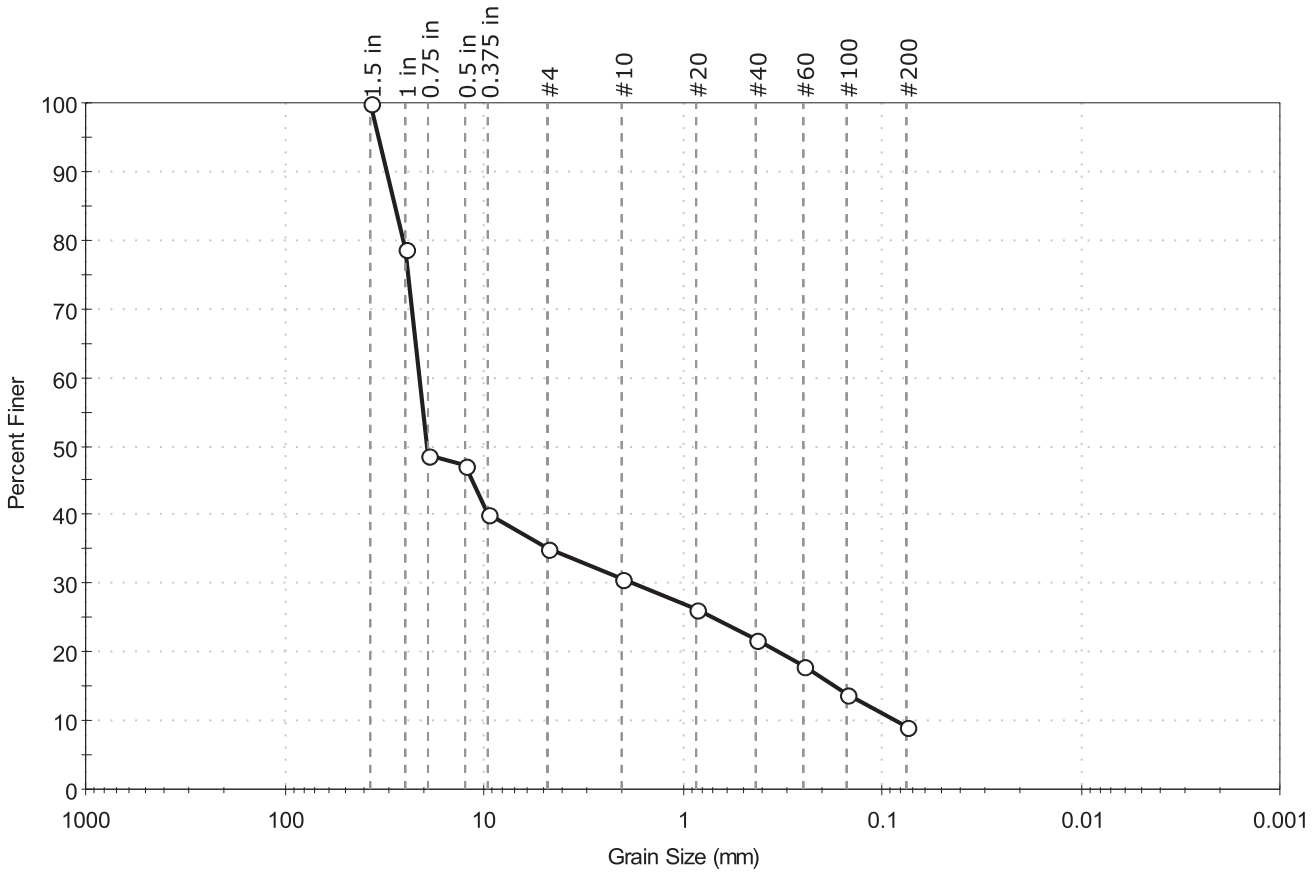
Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Client:	Freeman Companies, LLC				
Project:	Bridge 04975 Lover's Lane				
Location:	Wilton, CT			Project No:	GTX-311876
Boring ID:	S-2	Sample Type:	bag	Tested By:	ckg
Sample ID:	S-2	Test Date:	06/12/20	Checked By:	bfs
Depth :	5-7	Test Id:	559756		
Test Comment:	---				
Visual Description:	Moist, dark gray gravel with silt and sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	65.0	25.8	9.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.5 in	37.50	100		
1 in	25.00	79		
0.75 in	19.00	49		
0.5 in	12.50	47		
0.375 in	9.50	40		
#4	4.75	35		
#10	2.00	31		
#20	0.85	26		
#40	0.42	22		
#60	0.25	18		
#100	0.15	14		
#200	0.075	9.2		

Coefficients

D_{85} = 28.1196 mm	D_{30} = 1.7259 mm
D_{60} = 21.0423 mm	D_{15} = 0.1708 mm
D_{50} = 19.2075 mm	D_{10} = 0.0843 mm
C_u = 249.612	C_c = 1.679

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-a (1))

Sample/Test Description

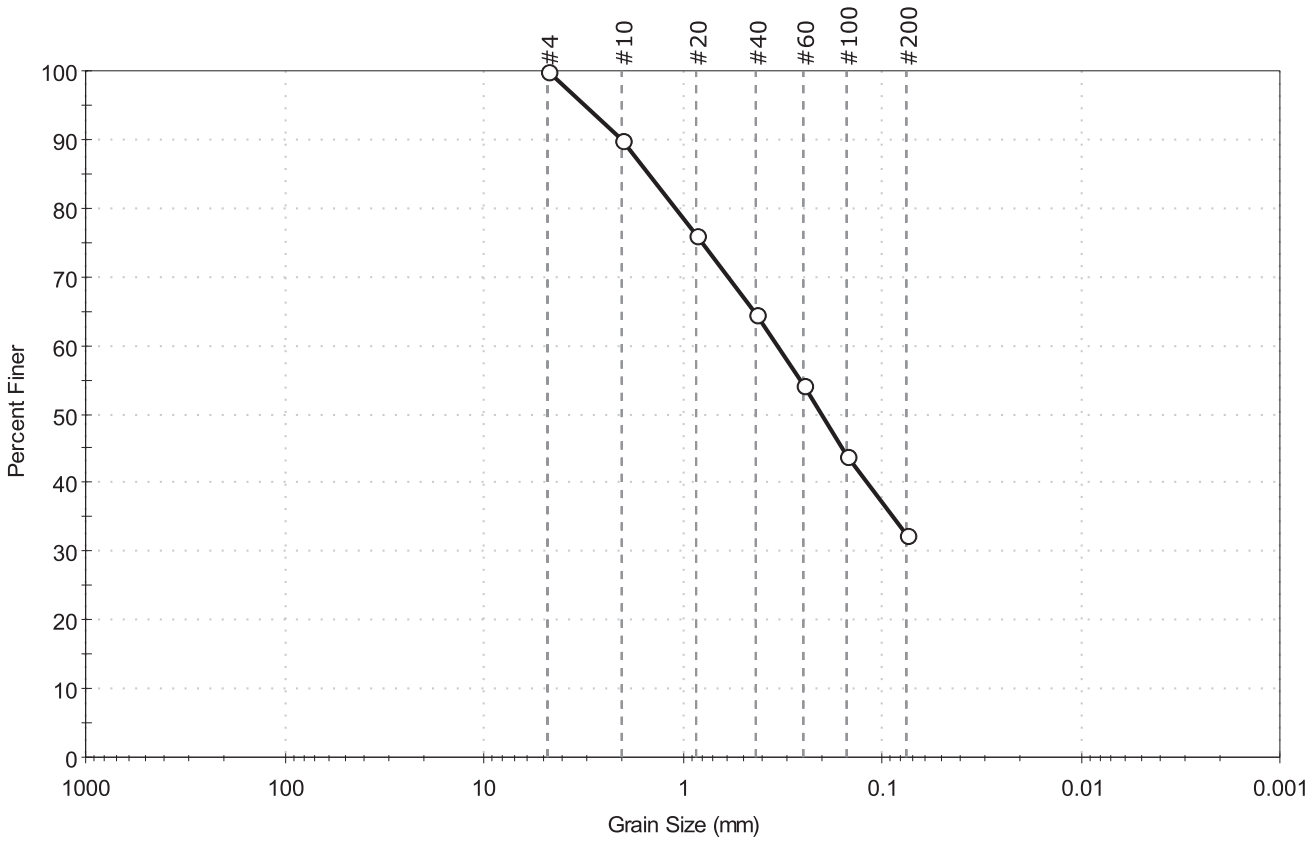
Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

printed 6/16/2020 10:54:38 AM

Client:	Freeman Companies, LLC				
Project:	Bridge 04975 Lover's Lane				
Location:	Wilton, CT			Project No:	GTX-311876
Boring ID:	S-3	Sample Type:	bag	Tested By:	ckg
Sample ID:	S-1	Test Date:	06/12/20	Checked By:	bfs
Depth :	1-3	Test Id:	559757		
Test Comment:	---				
Visual Description:	Moist, dark yellowish brown silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.1	67.4	32.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	90		
#20	0.85	76		
#40	0.42	65		
#60	0.25	54		
#100	0.15	44		
#200	0.075	33		

Coefficients

D_{85} = 1.4792 mm	D_{30} = N/A
D_{60} = 0.3349 mm	D_{15} = N/A
D_{50} = 0.2022 mm	D_{10} = N/A
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

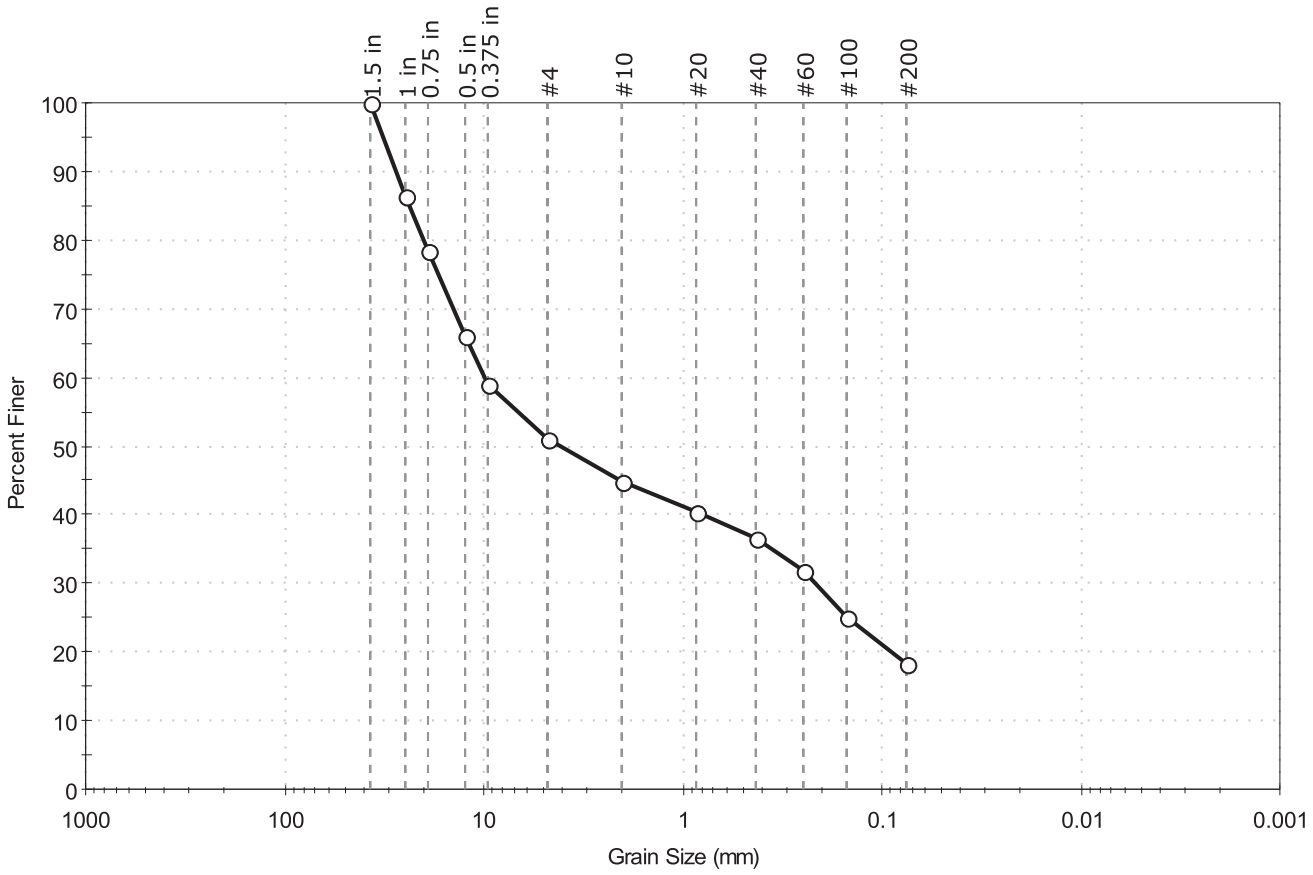
Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Client:	Freeman Companies, LLC				
Project:	Bridge 04975 Lover's Lane				
Location:	Wilton, CT			Project No:	GTX-311876
Boring ID:	S-4	Sample Type:	bag	Tested By:	ckg
Sample ID:	S-2	Test Date:	06/12/20	Checked By:	bfs
Depth :	3-4.2	Test Id:	559758		
Test Comment:	---				
Visual Description:	Moist, brown silty gravel with sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	49.0	32.7	18.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.5 in	37.50	100		
1 in	25.00	86		
0.75 in	19.00	79		
0.5 in	12.50	66		
0.375 in	9.50	59		
#4	4.75	51		
#10	2.00	45		
#20	0.85	41		
#40	0.42	37		
#60	0.25	32		
#100	0.15	25		
#200	0.075	18		

Coefficients

D_{85} =23.8266 mm	D_{30} =0.2196 mm
D_{60} =9.8738 mm	D_{15} =N/A
D_{50} =4.1490 mm	D_{10} =N/A
C_u =N/A	C_c =N/A

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Client:	Freeman Companies, LLC				
Project:	Bridge 04975 Lover's Lane				
Location:	Wilton, CT			Project No:	GTX-311876
Boring ID:	---	Sample Type:	---	Tested By:	tlm
Sample ID:	---	Test Date:	06/12/20	Checked By:	smd
Depth :	---	Test Id:	559763		

Bulk Density and Compressive Strength of Rock Core Specimens by ASTM D7012 Method C

Boring ID	Sample Number	Depth	Bulk Density, pcf	Compressive strength, psi	Failure Type	Meets ASTM D4543	Note(s)
S-2	C-2	17.13-17.50 ft	163	19253	1	Yes	---
S-4	C-2	13.19-13.59 ft	166	18956	1	Yes	---

Notes: Density determined on core samples by measuring dimensions and weight and then calculating.

All specimens tested at the approximate as-received moisture content and at standard laboratory temperature.

The axial load was applied continuously at a stress rate that produced failure in a test time between 2 and 15 minutes.

Failure Type: 1 = Intact Material Failure; 2 = Discontinuity Failure; 3 = Intact Material and Discontinuity Failure (See attached photographs)

Client:	Freeman Companies, LLC	Test Date:	6/12/2020
Project Name:	Bridge 04975 Lover's Lane	Tested By:	cmh
Project Location:	Wilton, CT	Checked By:	smd
GTX #:	311876		
Boring ID:	S-2		
Sample ID:	C-2		
Depth:	17.13-17.50 ft		
Visual Description:	See photographs		

UNIT WEIGHT DETERMINATION AND DIMENSIONAL AND SHAPE TOLERANCES OF ROCK CORE SPECIMENS BY ASTM D4543

BULK DENSITY

	1	2	Average
Specimen Length, in:	4.37	4.37	4.37
Specimen Diameter, in:	1.99	1.99	1.99
Specimen Mass, g:	581.7		
Bulk Density, lb/ft^3	163	**Minimum Diameter Tolerence Met?**	YES
Length to Diameter Ratio:	2.2	**Length to Diameter Ratio Tolerance Met?**	YES

DEVIATION FROM STRAIGHTNESS (Procedure S1)

Maximum gap between side of core and reference surface plate:

Is the maximum gap ≤ 0.02 in.? YES

Maximum difference must be < 0.020 in.

Straightness Tolerance Met? YES

END FLATNESS AND PARALLELISM (Procedure FP1)

END 1	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	-0.00030	-0.00030	-0.00020	-0.00020	-0.00020	-0.00020	-0.00010	0.00000	0.00000	-0.00010	-0.00010	-0.00010	-0.00010	-0.00010	-0.00020
Diameter 2, in (rotated 90°)	0.00060	0.00060	0.00030	0.00030	0.00020	0.00010	0.00000	0.00000	-0.00020	-0.00030	-0.00040	-0.00050	-0.00070	-0.00080	-0.00090

Difference between max and min readings, in:

0° = 0.00030 90° = 0.00150

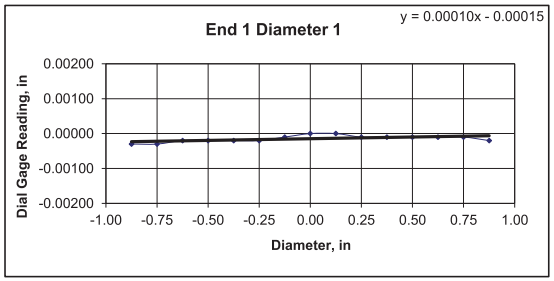
END 2	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	-0.00020	-0.00010	-0.00010	-0.00010	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-0.00010	-0.00010
Diameter 2, in (rotated 90°)	0.00140	0.00060	0.00050	0.00050	0.00040	0.00030	0.00010	0.00000	0.00000	-0.00010	-0.00030	-0.00030	-0.00040	-0.00040	-0.00050

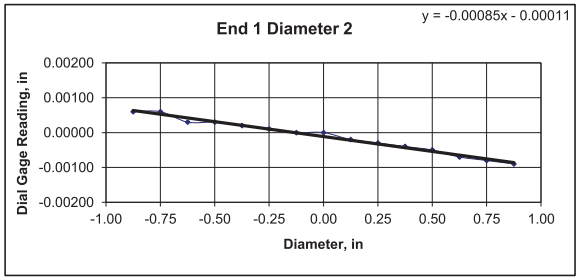
Difference between max and min readings, in:

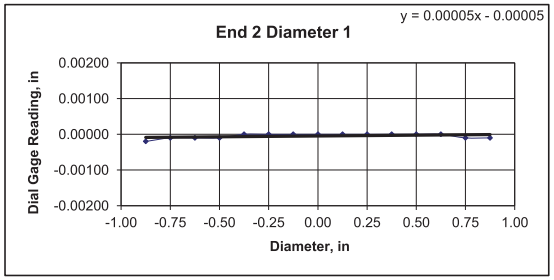
0° = 0.0002 90° = 0.0019

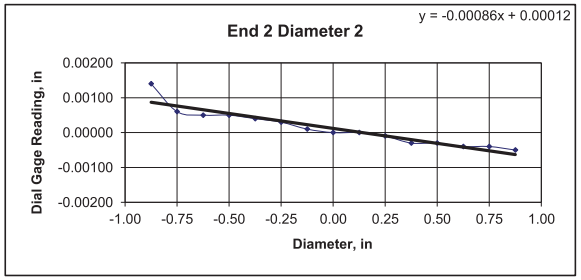
Maximum difference must be < 0.0020 in. Difference = ± 0.00095

Flatness Tolerance Met? YES









DIAMETER 1

End 1:

Slope of Best Fit Line 0.00010

Angle of Best Fit Line: 0.00557

End 2:

Slope of Best Fit Line 0.00005

Angle of Best Fit Line: 0.00262

Maximum Angular Difference: 0.00295

Parallelism Tolerance Met? YES

Spherically Seated

DIAMETER 2

End 1:

Slope of Best Fit Line 0.00085

Angle of Best Fit Line: 0.04895

End 2:

Slope of Best Fit Line 0.00086

Angle of Best Fit Line: 0.04911

Maximum Angular Difference: 0.00016

Parallelism Tolerance Met? YES

Spherically Seated

PERPENDICULARITY (Procedure P1) (Calculated from End Flatness and Parallelism measurements above)

END 1	Difference, Maximum and Minimum (in.)	Diameter (in.)	Slope	Angle°	Perpendicularity Tolerance Met?
Diameter 1, in	0.00030	1.990	0.00015	0.009	YES
Diameter 2, in (rotated 90°)	0.00150	1.990	0.00075	0.043	YES
END 2					
Diameter 1, in	0.00020	1.990	0.00010	0.006	YES
Diameter 2, in (rotated 90°)	0.00190	1.990	0.00095	0.055	YES

Maximum angle of departure must be ≤ 0.25°

Perpendicularity Tolerance Met? YES

Client:	Freeman Companies, LLC
Project Name:	Bridge 04975 Lover's Lane
Project Location:	Wilton, CT
GTX #:	311876
Test Date:	6/12/2020
Tested By:	cmh
Checked By:	smd
Boring ID:	S-2
Sample ID:	C-2
Depth, ft:	17.13-17.50

After cutting and grinding

After break

Client:	Freeman Companies, LLC	Test Date:	6/12/2020
Project Name:	Bridge 04975 Lover's Lane	Tested By:	cmh
Project Location:	Wilton, CT	Checked By:	smd
GTX #:	311876		
Boring ID:	S-4		
Sample ID:	C-2		
Depth:	13.19-13.59 ft		
Visual Description:	See photographs		

UNIT WEIGHT DETERMINATION AND DIMENSIONAL AND SHAPE TOLERANCES OF ROCK CORE SPECIMENS BY ASTM D4543

BULK DENSITY

	1	2	Average
Specimen Length, in:	4.69	4.69	4.69
Specimen Diameter, in:	1.98	1.98	1.98
Specimen Mass, g:	628.71		
Bulk Density, lb/ft^3	166	**Minimum Diameter Tolerence Met?**	YES
Length to Diameter Ratio:	2.4	**Length to Diameter Ratio Tolerance Met?**	YES

DEVIATION FROM STRAIGHTNESS (Procedure S1)

Maximum gap between side of core and reference surface plate:
Is the maximum gap ≤ 0.02 in.? YES

Maximum difference must be < 0.020 in.
Straightness Tolerance Met? YES

END FLATNESS AND PARALLELISM (Procedure FP1)

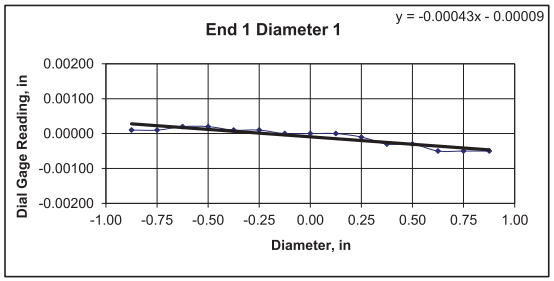
END 1	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	0.00010	0.00010	0.00020	0.00020	0.00010	0.00010	0.00000	0.00000	0.00000	-0.00010	-0.00030	-0.00030	-0.00050	-0.00050	-0.00050
Diameter 2, in (rotated 90°)	-0.00030	-0.00030	-0.00020	-0.00020	-0.00020	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

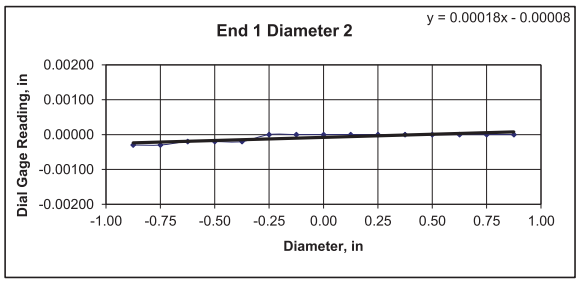
Difference between max and min readings, in:
0° = 0.00070 90° = 0.00030

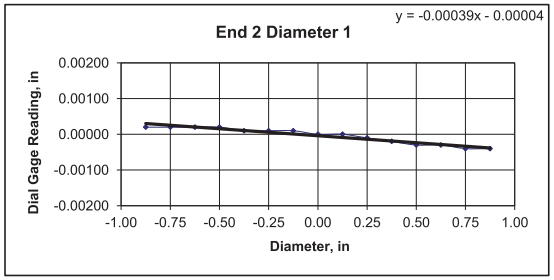
END 2	-0.875	-0.750	-0.625	-0.500	-0.375	-0.250	-0.125	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875
Diameter 1, in	0.00020	0.00020	0.00020	0.00020	0.00010	0.00010	0.00010	0.00000	0.00000	-0.00010	-0.00020	-0.00030	-0.00030	-0.00040	-0.00040
Diameter 2, in (rotated 90°)	-0.00020	-0.00020	-0.00010	-0.00010	-0.00010	-0.00010	-0.00010	0.00000	0.00000	0.00000	0.00010	0.00010	0.00010	0.00000	0.00000

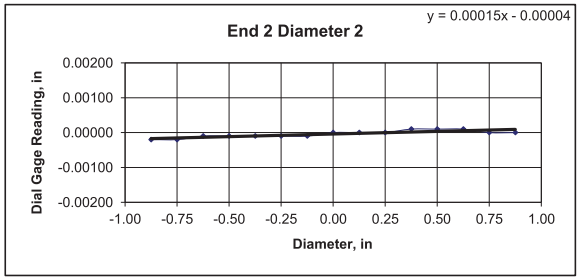
Difference between max and min readings, in:
0° = 0.0006 90° = 0.0003

Maximum difference must be < 0.0020 in. Difference = ± 0.00035
Flatness Tolerance Met? YES









DIAMETER 1

End 1:
Slope of Best Fit Line 0.00043
Angle of Best Fit Line: 0.02439

End 2:
Slope of Best Fit Line 0.00039
Angle of Best Fit Line: 0.02243

Maximum Angular Difference: 0.00196

Parallelism Tolerance Met? YES
Spherically Seated

DIAMETER 2

End 1:
Slope of Best Fit Line 0.00018
Angle of Best Fit Line: 0.01031

End 2:
Slope of Best Fit Line 0.00015
Angle of Best Fit Line: 0.00868

Maximum Angular Difference: 0.00164

Parallelism Tolerance Met? YES
Spherically Seated

PERPENDICULARITY (Procedure P1) (Calculated from End Flatness and Parallelism measurements above)

END 1	Difference, Maximum and Minimum (in.)	Diameter (in.)	Slope	Angle°	Perpendicularity Tolerance Met?
Diameter 1, in	0.00070	1.980	0.00035	0.020	YES
Diameter 2, in (rotated 90°)	0.00030	1.980	0.00015	0.009	YES
END 2					
Diameter 1, in	0.00060	1.980	0.00030	0.017	YES
Diameter 2, in (rotated 90°)	0.00030	1.980	0.00015	0.009	YES

Maximum angle of departure must be ≤ 0.25°
Perpendicularity Tolerance Met? YES

Client:	Freeman Companies, LLC
Project Name:	Bridge 04975 Lover's Lane
Project Location:	Wilton, CT
GTX #:	311876
Test Date:	6/12/2020
Tested By:	cmh
Checked By:	smd
Boring ID:	S-4
Sample ID:	C-2
Depth, ft:	13.19-13.59

After cutting and grinding

After break

NOTICE TO CONTRACTOR – ADHESIVE BONDED ANCHOR AND DOWEL INSTALLATION, INSPECTION AND TESTING REQUIREMENTS

The Contractor is hereby notified that all adhesive bonded anchors and dowels shall be installed by qualified installers. Personnel instructed and trained on the installation of the adhesive bonded anchors and dowels in accordance with the manufacturer's printed installation instructions (MPII) by the adhesive bonding material manufacturer shall be considered qualified installers.

Anchors and dowels that are installed in horizontally drilled holes subject to sustained tension shall be installed by personnel with current ACI Adhesive Anchor Installer Certification credentials.

The installation of all anchors and dowels with adhesive bonding material shall be inspected by a Contractor-hired inspector holding current ACI Post-Installed Anchor Inspector Certification credentials. The installation of any horizontally oriented anchors and dowels subject to sustained tension load shall be continuously inspected by a Contractor-hired inspector holding current ACI Post-Installed Anchor Inspector Certification credentials.

Anchors and dowels installed in this Contract shall be subject to field proof load testing by an independent third-party testing agency, as noted on the plans.

The characteristic bond strength of the adhesive bonding material shall meet or exceed the design characteristic bond stress value specified on the plans.

For complete requirements, see Section 6.10 "Drilling Holes and Bonding Anchors and Dowels" in Form 818.

ITEM #0406194A – JOINT AND CRACK SEALING OF BITUMINOUS CONCRETE PAVEMENT

Description: This work consists of furnishing and applying hot-applied asphalt crack sealer to bituminous concrete pavement joints and cracks. It shall be constructed in close conformity with the lines, grades, thicknesses, and typical cross sections shown on the plans or established by the Engineer. Joint and Crack Sealing of Bituminous Concrete Pavement may be used in conjunction with other repair treatments including joint and crack filling or patching, in which case the sequence of treatments will be provided in the Plans or directed by the Engineer.

For the purposes of this document, the word "crack" includes all longitudinal (along the direction of travel) and transverse (perpendicular to the direction of travel) cracks and joints. All work specified for "crack(s)" herein shall apply to all types of cracks and joints unless otherwise specified.

Materials:

1. Crack Seal: The crack seal material shall be composed of a hot-applied asphalt meeting ASTM D6690 Type II requirements. The Contractor must submit to the Engineer all Material Safety Data Sheet documents from the material manufacturer prior to the commencement of work. During work progress, the Contractor must submit to the Engineer the manufacturer's Material Certificate for compliance to ASTM D6690 Type II requirements for each batch or lot of material utilized on the Contract.

2. Optional Barrier Material – Backer Rod: The backer rod shall be a heat resistant material compatible with the crack sealant and acceptable to the manufacturer of the sealant. No bond or reaction shall occur between the sealant and the rod. It shall be of a non-water absorbent material and shall not melt or shrink when hot sealant is poured on it.

   The backer rod shall have a maximum of 5% absorption when immersed in water for 24 hours with the ends sealed. The backer rod shall be of such a size that compression is required for installation in the crack, so that it maintains its position during the sealing operation. Backer rod shall be dry.

3. Optional Barrier Material – Hot Mix Asphalt (HMA): Any HMA placed in the bottom of a crack between 1.5 and 2 inches wide shall be HMA S0.25 Traffic Level 2 and shall meet all requirements of Section 4.06 - Bituminous Concrete.

The Contractor must submit to the Engineer all Material Safety Data Sheet documents from the material manufacturer(s) prior to the commencement of work. During work progress, the Contractor must submit to the Engineer the manufacturer's Material Certificate for compliance to applicable specifications for each batch or lot of material utilized on the Contract.

Construction Methods: The crack sealing operation shall proceed in accordance with the requirements of the "Maintenance and Protection of Traffic" and "Prosecution and Progress" specifications.

1. Equipment: The equipment used by the Contractor shall include, but not be limited to, the following:

    a. Melter Applicator: The unit shall consist of a boiler kettle equipped with pressure pump, hose, and applicator wand; the boiler kettle may be a combination melter and pressurized applicator of a double-boiler type with space between the inner and outer shells filled with heat transfer oil. Heat transfer oil shall have a flash point of not less than 600°F. The kettle shall include a temperature control indicator. The kettle shall be capable of maintaining the crack seal material at the manufacturer's specified application temperature range. The kettle shall include an insulated applicator hose and application wand. The hose shall be equipped with a shutoff control. The kettle shall include a mechanical full sweep agitator to provide continuous blending. The unit shall be equipped with thermometers to monitor the material temperature and the heating oil temperature. The unit shall be equipped with thermostatic controls that allow the operator to regulate material temperature up to at least 425°F.

    b. Application Wand and Squeegee Applicator: The material shall be applied with a wand followed by a squeegee applicator. The squeegee applicator shall be of commercial/industrial quality designed with a "U" shaped configuration. It shall be of a size adequate to strike off, flush with the surrounding pavement surface and without overflow around the sides, all crack seal material placed. This tool shall be either attached to the applicator wand or used separately as its own long handled tool.

    c. Hot Air Lance: The unit shall be designed for cleaning and drying the pavement surface cracks. Minimum compressed air capacity shall be 100 psi. The compressed air emitted from the tip of the lance shall be capable of achieving a temperature of at least 1500°F.

    d. Vertically Mounted Power Driven Wire Brush: This tool shall be used to remove any dirt, debris, or vegetation to the depths specified that cannot be removed by the hot air lance. It shall be of adequate size and power to remove all material from cracks as specified.

2. Weather Requirements: Work shall not be performed unless the pavement is dry. No frost, snow, ice, or standing water may be present on the roadway surface or within the cracks. The ambient temperature must be 40ºF and rising during the field application operations for work to proceed.

3. Material Mixing Procedure: The prepackaged material shall be added to the melter applicator in the presence of the Engineer. It shall then be mixed and heated to the recommended application temperature. The crack seal material shall never exceed 400°F.

4. Determination of Cracks to be Sealed: The width and depth requirements for cracks to be sealed are as follows:

   All crack width determinations shall be made by measuring the crack width flush at the surface of the pavement prior to being sealed. A straightedge shall be used whenever necessary to establish the location or limits of the flush surface of the pavement.

   All cracks from $^{1}/_{8}$ inch up to 1.5 inches wide shall be prepared and sealed as stated below. Cracks that are between $^{1}/_{8}$ inch and 1.5 inches wide, but eventually taper in width below the minimum $^{1}/_{8}$ inch, shall also be prepared and sealed as stated below. Only cracks that are less than $^{1}/_{8}$ inch wide throughout their entire length shall be excluded.

   Transverse cracks, where a portion of the crack (50% or less) exceeds a width of 1.5 inches, up to 2 inches, shall also be prepared and sealed as stated below.

   All joints to be sealed that are raveled (loss of the pavement surface material) shall be at least ½ inch in depth at the joint's deepest point. The minimum width of a raveled joint must be ½ inch. The maximum width of a raveled joint to be sealed is 3 inches.

   Any cracks exceeding the width and depth requirements specified above shall be repaired using separate items.

5. Crack Preparation: Cracks to be sealed shall be treated with a hot air lance prior to application of the crack seal material. Two (2) passes minimum shall be made with the hot air lance. The hot air lance operation shall proceed at a rate no greater than 120 feet per minute. There shall be no more than 10 minutes between the second hot air lance treatment and the material application.

   The use of the hot air lance is not intended to heat the crack. It is to be used to blow all debris from the crack to the depths specified below and to remove any latent moisture from the crack until the inside of the crack is completely dry as determined by the Engineer. "Moisture" does not include standing water. The hot air lance is not to be used to boil off or blow standing water from the bottom of a crack. If standing water is present in the bottom of any crack, the sealing operation shall be postponed until such time that the standing water evaporates naturally. The Contractor may use compressed, oil-free air (not heated) to blow standing water from a crack to help accelerate the natural evaporation process. If standing water remains after using compressed air, the crack shall be allowed to dry naturally until remaining standing water evaporates. The hot air lance shall be used after visible water has evaporated. If a crack is already completely dry as determined by the Engineer, the hot air lance shall be operated at its lowest temperature possible.

   The hot air lance is to be used to blow all debris from cracks (not including raveled joints) to a depth of at least ¾ inch for cracks between $^{1}/_{8}$ inch and ¾ inch wide, and to a depth of 1.25 inches for cracks between ¾ inch and 2 inches wide. The hot air lance shall be used to blow

all debris from raveled joints to a depth of 1 inch or the full depth of the joint, whichever is smaller.

In the event that cracks are packed tightly with debris, dirt, vegetation, or other material, except previously placed sealant or filler, the Contractor shall use a vertically mounted power driven wire brush to remove all material and burnish the sides of the crack to the depths specified above. Cracks treated with the power driven wire brush shall subsequently be treated with a hot air lance as described in this section. The use of both the power driven wire brush and the hot air lance shall result in the complete removal of all material in the crack (except previously placed sealant or filler) to the depths specified above such that the sides of the crack are completely free and clean of any debris and moisture.

In the event that cracks have depths greater than 2 inches below the pavement surface, the Contractor may place a barrier composed of backer rod as specified herein. The backer rod shall be placed in a manner leaving 1.25 inches below the elevation of the pavement surface for crack seal material. Use of backer rod will not be allowed for cracks wider than 1.5 inches or less than ½ inch wide. For cracks between 1.5 and 2 inches wide, HMA S0.25 Traffic Level 2 may be placed in the bottom of the prepared crack. HMA shall be placed and compacted with a steel T-bar approved by the Engineer in a manner leaving 1.25 inches below the elevation of the pavement surface for crack seal material.

6. Crack Sealing: As soon as cracks have been prepared, they shall be filled to refusal along their entire length with the crack sealant material. The treatment material shall be maintained at the manufacturer's specified/recommended application temperature range at all times. The sealing operation shall be suspended if the temperature of the crack seal material falls outside the specified temperature range and shall remain suspended until the crack seal material is brought within the specified temperature range. Sealed cracks are to be squeegeed immediately following application of the crack seal material, striking excess sealer flat to the adjacent pavement surface. There shall be no build-up of treatment material above or adjacent to the crack at any time. If the initial application of crack sealant material fails to fill the crack or shrinks upon cooling such that there is a depression formed of at least ¼ inch or greater, a second application of sealant shall be placed over the first application.

7. Protection of Sealed Cracks: Traffic shall not be permitted on the pavement until the crack seal material is set so that the material does not track and is not deformed or pulled out by tires. If the work under this item is being performed prior to placing a hot mix overlay or other surface treatment, a detackifier or blotting agent will not be allowed. If work under this item is not followed by placement of an overlay of any kind, a detackifier or blotting agent may be used. If a detackifier or blotting agent is used, it shall be one recommended by the supplier of the crack seal material and shall be used as recommended by the supplier, except that no paper, cotton, or other organic materials shall be allowed. Information on the type and usage of a detackifier or blotting agent shall be presented to the Engineer for their written acceptance prior to use.

8. Removal and Disposal of Material: All debris generated from the operations described above shall be removed from the roadway by the Contractor.

   Treatment material remaining in the Contractor's kettle at the close of the daily work session shall be discarded. At no time shall treatment material be re-heated for use in subsequent crack sealing applications unless permitted by the Engineer following a review of specific circumstances.

   All debris and surplus treatment material shall be properly disposed in accordance with Article 1.10.03 and State of Connecticut law.

9. Acceptance of Work: When work is complete, an inspection shall be scheduled with the Engineer. The Engineer will note all deficiencies including, but not limited to, areas exhibiting adhesion failure, cohesion failure, tracking of sealant material, and missed cracks. Work identified by the Engineer as not acceptable shall be repaired at the Contractor's expense. The Contractor shall notify the Engineer upon completion of any corrective work performed.

Method of Measurement: This work will be measured by the total number of linear feet of cracks sealed as indicated in the Contract plans and as measured, verified, and accepted by the Engineer.

Basis of Payment: This work will be paid for at the Contract unit price per linear foot for "Joint and Crack Sealing of Bituminous Concrete Pavement" complete and accepted in place. The price shall include all submittals, materials, equipment, tools, and labor incidental thereto. No payment will be made to the Contractor prior to submittal of required documents.

Pay Item	Pay Unit
Joint and Crack Sealing of Bituminous Concrete Pavement	l.f.

ITEM #0603233A - GALVANIZING STRUCTURAL STEEL (SITE NO. 1)

Description: Work under this item shall consist of structural steel, the surface preparation, galvanizing, shipping and storage, and installation of structural steel members and components to support masonry facing as shown on the plans, as directed by the Engineer and in accordance with these specifications.

Materials: All new structural steel shall conform to M.06.02 and M.06.03 prior to galvanizing.

Certified Test Report and Materials Certificate: Submit a Certified Test Report for the molten zinc material composition used and a Materials Certificate to confirm that the hot-dip galvanized coating meets or exceeds the specified requirements of ASTM A123.

Construction Methods:

Submittals: A Quality Control Plan shall be submitted no later than 30 days prior to the start of work and shall outline procedures to assure compliance with ASTM A123.

Notification: Contact the Division of Materials Testing at DOT.Steel@ct.gov a minimum of 72 hours prior to the start of work. The notification shall include the name and location of the facility where galvanizing will be performed. No materials shall be galvanized prior to this notification, and any work performed prior to this notification will not be accepted.

Fabricator Responsibilities:

1. Where construction requires matching specific pieces, piece marks with metal tags shall be used to ensure identification of members after galvanizing.
2. The Contractor shall consult with the Galvanizer to ensure proper removal of grease, paint, and other deleterious materials prior to galvanizing.
3. Bolt holes for field splices shall be drilled full size or sub-drilled and reamed to size. Full sized punched bolt holes are not allowed.
4. When required, the Fabricator shall provide venting and drainage for galvanizing. The number, size and location of vent and drain holes shall be coordinated with the Galvanizer prior to the submission of the Structural Steel shop drawings. Edges of holes shall be deburred and uniform and all sharp edges shall be broken. Torch cutting of holes shall be strictly prohibited.

Structural Steel Preparation:

1. Prior to galvanizing, all holes shall be deburred and all fins, scabs, or other surface/edge anomalies shall be ground or repaired as specified in ASTM A6.
2. If rust, dirt, oil, grease, or other foreign substances have accumulated prior to galvanizing, steel surfaces shall be cleaned.
3. Special attention shall be given to the cleaning of corners and reentrant angles.
4. Any surfaces that will receive field-installed stud shear connectors shall not be galvanized.
5. The following surfaces of bearings shall not be galvanized: stainless steel surfaces, surfaces that will be machined, and surfaces that have PTFE, elastomer, or stainless steel bonded to

them.

Application of Hot Dip Galvanized Coating:

1. Before hot dip galvanizing, the galvanizing tanks shall be cleaned to remove surface and bottom contamination.
2. Steel members, fabrications, and assemblies shall be galvanized by the hot dip process in the shop in accordance with ASTM A123.
3. The structural steel members and components shall be single dip hot dip galvanized by completely submerging them in the galvanizing tank.
4. Double dipping of members or components shall not be permitted without approval from the Engineer.
5. All steel shall be safeguarded against embrittlement in accordance with ASTM A143.
6. All galvanized steel work shall be handled in such manner as to avoid any mechanical damage to minimize distortion in accordance with ASTM A384.
7. All bolt holes shall be reamed or drilled to their specific diameters after galvanizing. All bolts shall be installed after galvanizing.

Hot Dip Galvanizing Coating Requirements:

1. Coating weight, surface finish, appearance, and adhesion shall conform to the requirements of ASTM A385 and ASTM A123.
2. Any high spots of zinc coating left in the galvanizing process in areas that are to be field connected, such as metal drip lines or rough edges, shall be removed by cleaning as specified in SSPC-SP2 (Hand Tool Cleaning) or SSPC-SP3 (Power Tool Cleaning). The zinc shall be removed until it is level with the surrounding area, leaving at least the minimum required zinc thickness.
3. Any connection designated slip critical Class C, unless otherwise directed by the Engineer, shall have a maximum thickness of 15 mils per surface of each element incorporated into the faying surface area. If thickness readings above 15 mils are found in these areas, a written repair procedure shall be submitted and approved by the Engineer prior to any repair work being performed.
4. Galvanizing shall be free from uncoated areas, blisters, flux deposits, acid and black spots, and dross inclusions. Lumps, projections, globules, or heavy deposits of zinc will not be permitted. All holes shall be clean and free of excess zinc.
5. Galvanizing shall be uniform in thickness and appearance.

Testing and Inspection of Galvanized Coating:

1. Tests for coating thickness of the galvanized coating shall be performed by the methods in ASTM A123-8. The coating thickness shall meet the requirements outlined in ASTM A123-6 in the tables provided.
2. The material shall be inspected in accordance with ASTM A123-9.
3. The final acceptance of the galvanized coating shall be in accordance with the Connecticut Department of Transportation *Standard Specifications*.
4. The Department reserves the right to reject material based on aesthetics.

Repair of Hot Dip Galvanized Coating:

1. Surfaces with inadequate zinc thickness shall be repaired in the shop according to ASTM

A780 and ASTM A123, with the exception that only brush applied flat, light grey zinc rich coating shall be permitted. No aerosol products shall be permitted for use.

2. Surfaces of galvanized steel that are damaged after the galvanizing operation shall be repaired in accordance with ASTM A780 whenever damage exceeds 0.1875 inch in width and/or 4 inches in length.
3. Damage that occurs in the shop shall be repaired in the shop.
4. Damage that occurs during transport or in the field shall be submitted and reviewed by the Engineer to determine the repair requirements.

Construction Requirements: If white rust is visible on the contact surfaces for any field connection, the steel surface shall be hand wire brush or cleaned per SSPC-SP7 (Brush-Off Blast Cleaning). Power wire brushing is not allowed.

Shipping and Storage:

1. The members and components shall be handled so that after galvanizing they will not freeze together on cooling.
2. The galvanized members and components shall be stored, at the Fabricator, Galvanizer and at the construction Site, off the ground, with adequate spacers to promote ventilation between pieces and at a slight inclination to promote drainage to prevent wet storage stains. It shall be kept free from dirt, grease and other contaminants and shall be reasonably protected from corrosion.

Method of Measurement: This item, being paid for on a lump sum basis, will not be measured for payment.

Basis of Payment: This work will be paid for at the Contract lump sum price for "Galvanizing Structural Steel (Site No. 1)," complete and accepted, which price shall include structural steel, all materials, equipment, tools, and labor incidental thereto.

Pay Item	Pay Unit
Galvanizing Structural Steel (Site No. 1)	l.s.

ITEM #0910090A - STEEL-BACKED TIMBER GUIDERAIL – TYPE A

ITEM #0910091A – STEEL-BACKED TIMBER GUIDERAIL – TERMINAL SECTION

ITEM #0910092A – STEEL-BACKED TIMBER GUIDERAIL – BRIDGE ATTACHMENT

Description: Work under this item shall consist of a single steel-backed timber rail element fastened to steel posts and the appropriate attachment at bridge parapets, barrier walls, and terminal ends as shown on the plans**.** It shall be erected in the locations sited and fabricated in conformity with the designations, dimensions and details shown on the plans or as ordered by the engineer.

Materials:

1. **Steel:** All steel posts, back-up rails, splice plates and channel rub rails which are to be used as "Weathering Steel", shall meet the requirements of ASTM A588. The fabricator shall notify the manufacturer that it is "Weathering Steel" (structural steel for use in bare, unpainted applications) and that the steel shall not be marked with paint or steel die stamped, but identification shall be stenciled with permanent ink. The dimensions of each component shall conform to the plans and ASTM A6. All steel posts shall be galvanized after fabrication to meet the requirements of ASTM A123 and conform to the galvanizing limits and tolerances shown on the plans. A single ¾" diameter hole may be drilled 2" from the top of each post, in the center of the web, to facilitate the galvanizing process on the bottom of all posts. Any back-up rails, splice plates or structural tees that will come into contact with the ground shall be hot-dipped galvanized after fabrication in accordance with ASTM A123.

2. **Timber:** All timber rail and block-out components shall conform with the following:
   a) Commercial lumber grade No. 1 or better after treatment;
   b) AASHTO M 168;
   c) Minimum stress rating of 1350 psi
   d) Rough sawn (non-planed) or S4S (surface four side) Southern Yellow Pine or Douglas Fir- Larch with nominal dimensions as indicated on the plans. Variations in the size of any dimension shall not be more than ± ¼"
   e) All timber components shall be pressure treated with CCA or ACZA depending on species supplied conforming to AWPA Standard P5 to a minimum net retention of 0.60lb/cubic foot in the assay zone in accordance with AWPA Standard C14.
   f) All timber components shall be fabricated (including but not necessarily limited to cutting, drilling, dapping and chamfering) prior to treatment.
   g) All timber components shall be free of excess preservative and solvent at the conclusion of the treating process. Post treatment cleaning shall be by expansion bath or steaming in accordance with AWPA Standard C2;

h) Kiln or air dried to a maximum moisture content of 25% after treatment (KDAT - 25);
i) Grade-marked after treatment by an agency certified by the American Lumber Standard Committee (ALSC).

3. **Fasteners:**

Guiderail Type A and Bridge Attachment:

Round head bolts shall be manufactured in accordance with the sizes designated on the plans, the geometric specifications included in ANSI B18.5.1.2.2 and the material specifications for ASTM A588 steel. All round head bolts shall be marked with the manufactures symbol and A588. Hex Lag Screws shall be manufactured in accordance with ASTM A307 Grade A specifications. All Hex Lag Screws shall be hot-dipped galvanized in accordance with ASTM A153 Class C.

Terminal Section:

Anchor bolts shall conform to ASTM A449. The nuts and washers for anchor bolts shall conform to ASTM A563, Grade B. Round head bolts shall be manufactured in accordance with the sizes designated on the plans, the geometric specifications included in ANSI B18.5.1.2.2 and the material specifications for ASTM A307 steel. All round head bolts shall be marked with the manufactures symbol and A307. Rock anchors shall be manufactured in accordance with the sizes designated on the plans and the specifications for ASTM A307 steel. Hex lag screws shall be manufactured in accordance with the sizes designated on the plans and the specifications for ASTM A307, Grade-A steel. All anchor bolts, round head bolts, rock anchors and hex lag screws shall be hot-dipped galvanized in accordance with ASTM A 153 Class C. Unless otherwise noted on the plans, all other fasteners shall conform to the requirements of M.10.02.9.

4. Concrete for the concrete anchors shall be Class PCC03360 and shall conform to the requirements of Article M.03.01.

Construction Methods: The steel posts shall be driven. The Contractor shall use suitable caps and equipment to prevent damage to the posts during driving. Where rock or boulders are encountered in driving the posts, the material shall be removed so as to make a hole of sufficient size to permit the setting of the post. The hole shall then be backfilled and thoroughly compacted before the driving of the posts.

The Contractor is cautioned that buried underground utilities, which may be energized, may be present within the Project limits.

The posts shall be located as shown on the plans, set plumb and in alignment with the rail or rail treatments. Where required, the back-up rails, block-outs, and rail elements shall then be erected to produce a smooth, continuous rail as shown on the plans.

Whenever steel-backed timber guiderail or rail treatments are being constructed adjacent to areas open to traffic, the Contractor shall complete the installation to and including the designed terminal treatment at the close of each day's work.

On long runs or other locations when it is not practical to complete the installation up to and including the designed terminal treatment by the end of the workday, the Contractor shall use temporary methods for terminating the steel-backed timber so as to minimize any hazard caused by leaving the end of the beam rail exposed to traffic. Temporary methods for terminating the beam rail shall include lowering the rail end to the ground and providing adequate anchorage of the rail end by bolting, securing, burying, etc.

The Contractor shall submit to the Engineer for approval details of his proposed methods for the temporary terminal treatment of the end section. No work shall be performed adjacent to the areas open to traffic until approval is given.

The Contractor shall be required to furnish extra length posts at transition areas or where field conditions warrant. These posts shall be of such length that the minimum depth in the ground, as shown on the plans, is maintained.

Before final erection, all galvanized elements which have been cut or worked so as to destroy the zinc coating and cause the base metal to be exposed shall have the exposed base metal thoroughly cleaned and brush coated with zinc rich touch up material.

Method of Measurement:

1. Steel-Backed Timber Guiderail – Type A: The length of steel-backed timber guiderail measured for payment will be the number of linear feet of accepted rail installed, measured along the top of rail between centers of end posts in each continuous section.

2. Steel-Backed Timber Guiderail – Terminal Section: Terminal section will be measured for payment by the number of each Terminal Section installed and accepted in accordance with the "Pay Limit" shown on the plans.

3. Steel-Backed Timber Guiderail – Bridge Attachment: Bridge attachment will be measured for payment by the number of each installed and accepted in accordance with the "Pay Limit" shown on the plans.

Basis of Payment:

1. Steel-Backed Timber Guiderail – Type A: This work will be paid for at the Contract unit price per linear foot for "Steel-Backed Timber Guiderail – Type A", complete in place. Prices shall include all materials, posts of all lengths, fittings, back-up rail, posts, delineators, equipment, tools, removal and disposal of surplus material, and labor incidental to the installation of the rail.

2. Steel-Backed Timber Guiderail – Terminal Section: This work will be paid for at the Contract unit price for each "Steel-Backed Timber Guiderail – Terminal Section", complete in place including all materials equipment, fittings, back-up rails, posts, anchor bolts, attachment brackets, drilling and grouting, chemical anchoring material, delineators, equipment, removal

and disposal of surplus material, tools, incidental thereto.

3. Steel-Backed Timber Guiderail – Bridge Attachment: This work will be paid for at the Contract unit price for each bridge attachment furnished and installed. The prices shall include all materials, drilling for attachment to concrete, either preset anchor bolts, pipe sleeves and through bolts, or anchor bolts to be bonded into drilled holes, removal and disposal of surplus material, equipment, tools, and labor incidental to the installation of the bridge attachment.

4. General: Drilling or removal of rock or boulders and backfilling with suitable material when required for the installation of posts, and approved by the Engineer, will be paid for in accordance with Article 1.04.05, unless an item for the removal of rock appears in the contract.

Payment for temporary terminations for timber guiderail will not be made but will be included in the general cost of the work.

Pay Item:	Pay Unit:
Steel-Backed Timber Guiderail – Type A	l.f
Steel-Backed Timber Guiderail – Terminal Section	ea.
Steel-Backed Timber Guiderail – Bridge Attachment	ea.

TOWN OF WILTON, CT
SCHEDULE OF PRICES
FOR THE CONSTRUCTION OF

STATE PROJECT NO. 0161-0142, FAP # 6161(008)CN
REPLACEMENT OF BRIDGE NO. 04975
LOVERS LANE OVER COMSTOCK BROOK
IN THE TOWN OF WILTON

DATE OF BID OPENING **December 21, 2022** TIME: **10:00 A.M.** **NO BIDS WILL BE ACCEPTED AFTER 10:00 A.M. "NO EXCEPTIONS"**

Note: The bidder shall fill in, under the column "Unit Prices Bid," the unit prices, written in words and in numbers, for which he proposes to perform the various items of work called for, and under the column headed "Amount," the amount of each of the items at the unit price bid. After the proposal is opened and read, the quantities will be extended and totaled in accordance with the written bid prices and the bid will be verified or corrected.

Item Number	Items	Unit	Approximate Quantities	Unit Prices Bid		Amount (Figures)
				Figures	Writing	
0020903A	LEAD COMPLIANCE FOR MISCELLANEOUS EXTERIOR TASKS	L.S.	1			
0202216A	EXCAVATION AND REUSE OF EXISTING CHANNEL BOTTOM MATERIAL	C.Y.	58			
0201001A	CLEARING AND GRUBBING	L.S.	1			
0201501A	RESET MAILBOX	EA.	2			
0202000	EARTH EXCAVATION	C.Y.	300			
0202100	ROCK EXCAVATION	C.Y.	14			
0202529	CUT BITUMINOUS CONCRETE PAVEMENT	L.F.	70			
0203202	STRUCTURE EXCAVATION - EARTH (EXCLUDING COFFERDAM AND DEWATERING)	C.Y.	496			
0203304	STRUCTURE EXCAVATION - ROCK (EXCLUDING COFFERDAM AND DEWATERING)	C.Y.	95			
0204001	COFFERDAM AND DEWATERING	L.F.	507			
0209001	FORMATION OF SUBGRADE	S.Y.	630			
0211000	ANTI-TRACKING PAD	S.Y.	25			
0213100	GRANULAR FILL	C.Y.	16			
0216000	PERVIOUS STRUCTURE BACKFILL	C.Y.	567			
0216011A	FLOWABLE FILL	C.Y.	109			
0219001	SEDIMENTATION CONTOL SYSTEM	L.F.	380			
0219011A	SEDIMENT CONTROL SYSTEM AT CATCH BASIN	EA.	8			
0286001.10	ROCK IN DRAINAGE TRENCH EXCAVATION 0'-10' DEEP	C.Y.	23			
0304002	PROCESSED AGGREGATE BASE	C.Y.	160			
0305001	PROCESSED AGGREGATE	C.Y.	25			
0406171	HMA S0.5	TON	102			
0406172	HMA S0.375	TON	110			
0406173	HMA S0.25	TON	7			
0406194A	JOINT AND CRACK SEALING OF BITUMINOUS CONCRETE PAVEMENT	L.F.	85			
0406236	MATERIAL FOR TACK COAT	GAL	85			
0406999A	ASPHALT ADJUSTMENT COST (ESTIMATED COST)	EST	1	$5,000.00	Five Thousand Dollars and Zero Cents	$5,000
0502195A	TEMPORARY BRIDGE	L.S.	1			
0503001	REMOVAL OF SUPERSTRUCTURE	L.S.	1			
0514202	PRESTRESSED DECK UNITS (3'-0" X 1'-3")	L.F.	134			
0514222	PRESTRESSED DECK UNITS (4'-0" X 1'-3")	L.F.	179			
0520036A	ASPHALTIC PLUG EXPANSION JOINT SYSTEM	C.F.	45			
0520041A	PREFORMED JOINT SEAL	L.F.	142			
0521021A	STEEL-LAMINATED ELASTOMERIC BEARINGS	C.I.	8,463			
0586002.10	TYPE 'C' CATCH BASIN (4' SUMP) - 0' - 10' DEEP	EA.	4			
0586041.10	TYPE 'C-L' CATCH BASIN (4' SUMP) - 0' - 10' DEEP	EA.	1			
0586041.10	TYPE 'C-L' CATCH BASIN (4' SUMP) - 0' - 10' DEEP	EA.	1			
0586051.10A	SPECIAL TYPE 'C-L' CATCH BASIN DOUBLE GRATE TYPE 2 (4' SUMP) – 0' – 10' DEEP	EA.	1			
0586790.10	REMOVE DRAINAGE STRUCTURE - 0' - 10' DEEP	EA.	1			
0601062	FOOTING CONCRETE	C.Y.	141			
0601064	ABUTMENT AND WALL CONCRETE	C.Y.	155			

Kindly insert here the total amount of your Bid $ _ _ _ _ _ _ _ _ _ _ _ _ _
It is understood that the unit prices shall govern in case of discrepancy between the unit-prices and this amount.
This bid includes addenda no.: 2

TOWN OF WILTON, CT
STATE PROJECT NO. 0161-0142, FAP # 6161(008)CN
FOR THE CONSTRUCTION OF

STATE PROJECT NO. 0161-0142, FAP # 6161(008)CN
REPLACEMENT OF BRIDGE NO. 04975
LOVERS LANE OVER COMSTOCK BROOK
IN THE TOWN OF WILTON

DATE OF BID OPENING **December 21, 2022** TIME: **10:00 A.M.** **NO BIDS WILL BE ACCEPTED AFTER 10:00 A.M. "NO EXCEPTIONS"**

Note: The bidder shall fill in, under the column "Unit Prices Bid," the unit prices, written in words and in numbers, for which he proposes to perform the various items of work called for, and under the column headed "Amount," the amount of each of the items at the unit price bid. After the proposal is opened and read, the quantities will be extended and totaled in accordance with the written bid prices and the bid will be verified or corrected.

Item Number	Items	Unit	Approximate Quantities	Unit Prices Bid		Amount (Figures)
				Figures	Writing	
0601118	BRIDGE DECK CONCRETE	C.Y.	33			
0601121	PARAPET CONCRETE	L.F.	88			
0601123	APPROACH SLAB CONCRETE	C.Y.	37			
0601640	1" CLOSED CELL ELASTOMER	C.I.	1,300			
0610001	DRILLING HOLES AND BONDING ANCHORS	EA.	185			
0602030	DEFORMED STEEL BARS - GALVANIZED	LB	79,639			
0602889	DOWEL BAR SPLICER SYSTEM GALVANIZED	EA.	88			
0603233A	GALVANIZING STRUCTURAL STEEL (SITE NO. 1)	L.S.	1			
0603474A	METALLIZING STRUCTURAL STEEL (SITE NO. 1)	L.S.	1			
0605003A	MASONRY FACING	S.F.	1,900			
0686000.15	15" R.C. PIPE - 0' - 10' DEEP	L.F.	160			
0686230.15	15" HIGH DENSITY POLYETHYLENE PIPE - 0' - 10' DEEP	L.F.	56			
0686715.15	15" HIGH DENSITY POLYETHYLENE PIPE END	EA.	2			
0686950.10	REMOVE EXISTING PIPE - 0' - 10' DEEP	L.F.	20			
0702026	MICROPILES	EA.	12			
0702027	VERIFICATION TEST FOR MICROPILES	EA.	1			
0702028	PROOF TEST FOR MICROPILES	EA.	2			
0702029	MICROPILE LENGTH ADJUSTMENT	L.F.	20			
0703012	MODIFIED RIPRAP	C.Y.	12			
0707009A	MEMBRANE WATERPROOFING (COLD LIQUID ELASTOMERIC)	S.Y.	187			
0708001	DAMPPROOFING	S.Y.	427			
0714999A	MONITORING STRUCTURES	L.S.	1			
0728001	CRUSHED STONE FOR SLOPE PROTECTION	TON	11			
0755014	GEOTEXTILE (SEPARATION - HIGH SURVIVABILITY)	S.Y.	30			
0815001	BITUMINOUS CONCRETE LIP CURBING	L.F.	260			
0819002A	PENETRATING SEALER PROTECTIVE COMPOUND	S.Y.	110			
0822100.01	TEMPORARY TRAFFIC BARRIER	L.F.	120			
0822100.02	TEMPORARY TRAFFIC BARRIER (PINNED)	L.F.	100			
0822101.01	RELOCATED TEMPORARY TRAFFIC BARRIER	L.F.	40			
0904051A	3 TUBE CURB MOUNTED BRIDGE RAIL	L.F.	69			
0910090A	STEEL-BACKED TIMBER GUIDERAIL - TYPE A	L.F.	80			
0910091A	STEEL-BACKED TIMBER GUIDERAIL - TERMINAL SECTION	EA.	2			
0910092A	STEEL-BACKED TIMBER GUIDERAIL - BRIDGE ATTACHMENT	EA.	2			
0912503	REMOVE METAL BEAM RAIL	L.F.	215			
0922501	BITUMINOUS CONCRETE DRIVEWAY	S.Y.	256			
0922503A	GRAVEL DRIVEWAY	S.Y.	11			
0939001	SWEEPING FOR DUST CONTROL	HR.	10			
0943001	WATER FOR DUST CONTROL	M.GA	65			

Kindly insert here the total amount of your Bid $ _ _ _ _ _ _ _ _ _ _ _ _ _
It is understood that the unit prices shall govern in case of discrepancy between the unit-prices and this amount.
This bid includes addenda no.: 2

TOWN OF WILTON, CT
SCHEDULE OF PRICES
FOR THE CONSTRUCTION OF

STATE PROJECT NO. 0161-0142, FAP # 6161(008)CN
REPLACEMENT OF BRIDGE NO. 04975
LOVERS LANE OVER COMSTOCK BROOK
IN THE TOWN OF WILTON

DATE OF BID OPENING **December 21, 2022** TIME: **10:00 A.M.** **NO BIDS WILL BE ACCEPTED AFTER 10:00 A.M. "NO EXCEPTIONS"**

Note: The bidder shall fill in, under the column "Unit Prices Bid," the unit prices, written in words and in numbers, for which he proposes to perform the various items of work called for, and under the column headed "Amount," the amount of each of the items at the unit price bid. After the proposal is opened and read, the quantities will be extended and totaled in accordance with the written bid prices and the bid will be verified or corrected.

Item Number	Items	Unit	Approximate Quantities	Unit Prices Bid		Amount (Figures)
				Figures	Writing	
0944000	FURNISHING AND PLACING TOPSOIL	S.Y.	400			
0949087	CLETHRA ALNIFOLIA SUMMERSWEET 3'-4' HT. B.B.	EA.	10			
0949099	CORNUS AMOMUM, SILKY DOGWOOD 18"-24" HT. CONTAINER	EA.	10			
0949226	ILEX VERTICILLATA COMMON WINTERBERRY 18"- 24" HT. B.B.	EA.	8			
0949831	ACER RUBRUM RED MAPLE 1 3/4" - 2" CAL. B.B.	EA.	8			
0950019A	TURF ESTABLISHMENT– LAWN	S.Y.	225			
0950039	EROSION CONTROL MATTING TYPE D	S.Y.	130			
0950040A	CONSERVATION SEEDING FOR SLOPES	S.Y.	180			
0950043A	WETLAND GRASS ESTABLISHMENT	S.F.	100			
0952001	SELECTIVE CLEARING AND THINNING	L.S.	1			
0952051A	CONTROL AND REMOVAL OF INVASIVE VEGETATION	S.Y.	470			
0969060A	CONSTRUCTION FIELD OFFICE, SMALL	MO.	16			
0970006	TRAFFICPERSON (MUNICIPAL POLICE OFFICER) (ESTIMATED COST)	EST.	1	$72,000.00	Seventy Two Thousand Dollars and Zero Cents	$72,000
0970007	TRAFFICPERSON (UNIFORMED FLAGGER)	HR.	240			
0971001A	MAINTENANCE AND PROTECTION OF TRAFFIC	L.S.	1			
0974001A	REMOVAL OF EXISTING MASONRY	C.Y.	121			
0975004	MOBILIZATION AND PROJECT CLOSEOUT	L.S.	1			
0976002	BARRICADE WARNING LIGHTS - HIGH INTENSITY	DAY	7,300			
0978002	TRAFFIC DRUM	EA.	17			
0979003	CONSTRUCTION BARRICADE TYPE III	EA.	2			
0980020	CONSTRUCTION SURVEYING	L.S.	1			
1020030A	TEMPORARY ILLUMINATION UNIT	EA.	6			
1106001	1 WAY PEDESTRIAN SIGNAL POLE MOUNTED	EA.	2			
1107007	PEDESTRIAN PUSH BUTTON AND SIGN (PIEZO)	EA.	2			
1118101A	TEMPORARY SIGNALIZATION (SITE NO. 1)	L.S.	1			
1205217	TYPE DE-7D DELINEATOR	EA.	8			
1206023A	REMOVAL AND RELOCATION OF EXISTING SIGNS	L.S.	1			
1209124	HOT-APPLIED PAINTED PAVEMENT MARKINGS 4" WHITE	L.F.	355			
1209131	HOT-APPLIED PAINTED LEGEND, ARROWS AND MARKINGS	S.F.	20			
1211001	REMOVAL OF PAVEMENT MARKINGS	S.F.	120			
1220027	CONSTRUCTION SIGNS	S.F.	280			
1802210.07	TEMPORARY SAND BARREL (700 lb.)	EA.	2			
1802210.14	TEMPORARY SAND BARREL (1400 lb.)	EA.	8			
1802210.21	TEMPORARY SAND BARREL (2100 lb.)	EA.	4			

Kindly insert here the total amount of your Bid $ _ _ _ _ _ _ _ _ _ _ _ _ _
It is understood that the unit prices shall govern in case of discrepancy between the unit-prices and this amount.
This bid includes addenda no.: 2

TOWN OF WILTON, CT
SCHEDULE OF PRICES
FOR THE CONSTRUCTION OF

STATE PROJECT NO. 0161-0142, FAP # 6161(008)CN
REPLACEMENT OF BRIDGE NO. 04975
LOVERS LANE OVER COMSTOCK BROOK
IN THE TOWN OF WILTON

DATE OF
BID OPENING **December 21, 2022** TIME: **10:00 A.M.** **NO BIDS WILL BE ACCEPTED AFTER 10:00 A.M. "NO EXCEPTIONS"**

Note: The bidder shall fill in, under the column "Unit Prices Bid," the unit prices, written in words and in numbers, for which he proposes to perform the various items of work called for, and under the column headed "Amount," the amount of each of the items at the unit price bid. After the proposal is opened and read, the quantities will be extended and totaled in accordance with the written bid prices and the bid will be verified or corrected.

Kindly insert here the total amount of your Bid $ _ _ _ _ _ _ _ _ _ _ _ _ _
It is understood that the unit prices shall govern in case of discrepancy between the unit-prices and this amount.
This bid includes addenda no.: 2

CONTRACT TIME AND LIQUIDATED DAMAGES

1. For this contract, an assessment per day for liquidated damages, at a rate of One Thousand Two Hundred Dollars ($1,200) per day shall be applied to each calendar day the work runs in excess of the Three Hundred Sixty Eight (368) allowed calendar days for the contract.

Note: PRIME CONTRACTOR'S REQUIREMENTS:

A. Proposal Guaranty (Bid Bond): Except when otherwise specified, no proposal will be considered unless accompanied by a proposal guaranty in the form of a bond furnished by a surety company, satisfactory to the Engineer, in an amount equal to at least 30% of the amount of the bid, or unless the bidder has on file in the Town, an annual bid bond in the proper amount.

The surety must be a corporate surety licensed to sign surety bonds in the State of Connecticut.

B. Not less than 7% of the total Contract value shall be subcontracted to, performed by, and paid to Disadvantaged Business Enterprise(s) DBE.

C. If the Contractor is unable to fulfill the DBE's percentage requirement, he may request an exception of the above percentage, by completing and submitting to the Town, the "Application for Review of Pre-award Good Faith Efforts", as contained in the General Provisions.

D. Contractors must make sure that at the time of bidding, their Firms have an approved Affirmative Action Plan with the State of Connecticut, Department of Transportation.

E. The low bidder is required to submit to the Town, both a Certificate of Insurance and a Workers' Compensation Certificate on or before the signing of the Contract.

F. Statement of Bidder's Qualifications: Each bidder is required to submit to the Town a recent sworn statement of the bidder's qualifications the form furnished by the Town for this purpose.

G. Contracts will not be awarded until the above requirements have been submitted and approved.

H. Please be aware that the Town, prior to the awarding of the Contract, may require further financial and other information from any applicant who becomes the low bidder for that Contract.

I. The apparent two lowest bidders, as determined by the Town of Wilton immediately after the bid opening, shall submit the Pre-award DBE Commitment Approval request form(s) to the Town of Wilton no later than five days after the bid opening. This is a requirement of Title 49, Code of Federal Regulations (CFR) Part 26, Participation of DBE's. Failure to comply with this requirement may be cause for rejection of the bid.

Bid Documents
&
Specifications

Replacement of Bridge No. 04975
Lovers Lane over Comstock Brook
Town of Wilton, Connecticut

State Project No. **0161-0142**

Town Project No. **RFP 2022-09**

November 2022

Town of Wilton

Town Hall

238 Danbury Road

Wilton, CT 06897

Town of Wilton

LEGAL NOTICE

Notice to Contractors:

Sealed bids for the construction of Project No. 0161-0142 will be received by the Town of Wilton at the First Selectman's Office, Town Hall, 238 Danbury Road Wilton, CT 06897 until 10:00 A.M., December 14, 2022 after which time no further bids will be accepted. NO EXCEPTIONS. The bids will be publicly opened and read at the Town Hall, 238 Danbury Road, Wilton, CT 06897.

FEDERAL PROJECT

F.A.P. # 6161(008) CN
State Project No. 0161-0142
Replacement of Bridge No. 04975
Lovers Lane over Comstock Brook
Contract Goal: 7% Disadvantaged Business Enterprises (DBEs)

Town of Wilton
Town Project No. RFP 2022-09

The Town of Wilton (Municipality) hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, Disadvantaged Business Enterprises will be afforded full opportunity to submit bids in response to this invitation and that they will not be discriminated against on the grounds of race, color, national origin, sex, sexual orientation, mental retardation or physical disability, including but not limited to blindness, in consideration for an award.

"Bid Proposal Form", "Schedule of Prices", "Bid Bond", "Non-Collusion Affidavit" and "Bidder's Prequalification" approval letter signed by the CTDOT Contracts Manager must be completed and returned with the submitted bid. Failure to properly execute and include any one of these five documents in the bid submission will result in the bid not being read and the subsequent rejection of the bid.

Bid forms, Plans and Specifications (Bid Documents) for the above project may be examined by going to the Town of Wilton's website **https://www.wiltonct.org/bids**. Printed copies of Bid Documents will not be available for purchase. Bidders shall be responsible for all printing and shipping costs.

Form 818 Standard Specifications may be obtained via the Connecticut Department of Transportation's website: http://www.ct.gov/dot/cwp/view.asp?a=3609&q=430362. All Proposals must be on the form furnished by the Municipality and must be requested for the above-named project.

NOTE: Prospective bidders must have a current sworn Statement (CON-16) on file with the Connecticut Department of Transportation and be prequalified to perform Group No. 8 (Minor Bridges) work. The Bidder's Prequalification approval letter signed by the CTDOT Contracts Manager shall be included as part of the bid package submitted to the Municipality.

NOTE: Any Contractor or Subcontractor engaged in surface preparation and/or coating application must be certified by the Steel Structures Painting Council.

NOTE: A Surety Company Bond, on the form furnished by the Municipality, for at least 30 percent of the amount of the bid must accompany each proposal. A certified check will not be accepted. The Municipality reserves the right to reject any and all bids.

NOTE: The **two (2) lowest bidders**, as determined by the Municipality immediately after the bid opening, shall submit the Pre-award DBE Commitment Approval Request form(s) to the Municipality **NO LATER THAN FIVE (5) calendar days after the bid opening**. This is a requirement of Title 49, Code of Federal Regulations (CFR) Part 26, Participation of DBEs.

CONTRACTORS that find discrepancies and/or errors in or between plans, specifications, quantities, and other matters must immediately notify Frank Smeriglio, Director of Public Works, Wilton Town Hall, 238 Danbury Road, Wilton, CT 06897; Frank.Smeriglio@WILTONCT.ORG and Thomas.Reese@wiltonct.org in writing not less than ten days before the scheduled bid opening.

Date: November 9, 2022

Frank Smeriglio, PE

Director of Public Works/Town Engineer

Town of Wilton

BID PROPOSAL DOCUMENTS

CONTRACTOR'S FEDERAL
IDENTIFICATION NUMBER
06-0744098

TOWN/CITY OF Wilton

BID
PROPOSAL FORM

Proposal of Dayton Construction Company, Inc.
(Name)
146 Bunker Hill Road, Watertown, Connecticut 06795
(Address)

to furnish all labor, materials, tools and appliances, required to complete the construction of the Project described elsewhere herein.

Proposals will be received at the office of First Selectman

until the hour and date set in the "Advertisement for Proposals".

To the Town Hall
Wilton, Connecticut.

Sir:

In accordance with the advertisement of the City/Town of Wilton, inviting proposals for the construction of the Project hereinafter names, and in conformity with the plans and specifications on file in the office of Town of Wilton's website: https://www.wiltonct.org/bids

I/We certify that I am/we are the only person or persons interested in this proposal as principals, that it is made without collusion with any person, firm, or corporation; that an examination has been made of the Specifications and Contract Form, including the "Special Provisions" contained herein, also of the plans and of the Site of Work, and I/we propose to furnish all necessary machinery, equipment, tools, labor and other means of construction, and to furnish all materials specified in the manner and at the time prescribed, all in accordance with the Contract and Specifications and in conformity with Plans and the requirements of the City/Town of Wilton.

I/We agree to accept the prices set forth herein for any additions or deductions caused by variations in quantities due to more accurate measurements, or by any changes or alterations in the plans or specifications during the progress of the work.

I/We further proposed to execute the form of contract and begin work within ten days from the day of the "Notice to Proceed" and to prosecute said work so as to complete the project and its appurtenances within the time limit stipulated; and to furnish a Performance Contract Bond in the required amount as security for the construction and completion of the Project and its appurtenances in accordance with Plans, Specifications and Contract, and a Payment Bond for the payment for all materials or labor, used or employed in the execution of the Contract.

Accompanying this proposal is (Surety Co. Bond) in the amount of Thirty Percent of the Amount Bid ($ 30% of the Amount Bid), as a proposal guarantee which it is understood will be forfeited in the event the Form of Contract is not executed if awarded to the undersigned.

Signed Matthew C. Dayton, Vice President
(Legal name of person, firm or corporation)

Address 146 Bunker Hill Road, Watertown, Connecticut 06795
(Street, City State and Zip Code)

IMPORTANT – INSTRUCTIONS FOR SIGNATURE

1. If this BID PROPOSAL FORM is executed by an individual, it must be signed by the individual.
2. If executed by a Corporation, it must have the signature of a duly authorized officer or representative thereof, with his title, and the Corporate Seal, if any, must be affixed.
3. If executed by a partnership, the partnership name, if any, will be signed and each partner will sign as a co-partner, unless a power of attorney is attached authorizing one partner to execute the contract for all the partners.
4. If executed by an individual doing business under a trade name, it shall be signed by this individual doing a business as (as trade name)

TOWN OF WILTON, CT
SCHEDULE OF PRICES
FOR THE CONSTRUCTION OF

Dayton Construction Company, Inc.

STATE PROJECT NO. 0161-0142, FAP # 6161(008)CN
REPLACEMENT OF BRIDGE NO. 04975
LOVERS LANE OVER COMSTOCK BROOK
IN THE TOWN OF WILTON

DATE OF BID OPENING **December 21, 2022** TIME: **10:00 A.M.** **NO BIDS WILL BE ACCEPTED AFTER 10:00 A.M. "NO EXCEPTIONS"**

Note: The bidder shall fill in, under the column "Unit Prices Bid," the unit prices, written in words and in numbers, for which he proposes to perform the various items of work called for, and under the column headed "Amount," the amount of each of the items at the unit price bid. After the proposal is opened and read, the quantities will be extended and totaled in accordance with the written bid prices and the bid will be verified or corrected.

Item Number	Items	Unit	Approximate Quantities	Unit Prices Bid		Amount (Figures)
				Figures	Writing	
0020903A	LEAD COMPLIANCE FOR MISCELLANEOUS EXTERIOR TASKS	L.S.	1	1,000.00	One Thousand Dollars and Zero Cents	1,000.00
0202216A	EXCAVATION AND REUSE OF EXISTING CHANNEL BOTTOM MATERIAL	C.Y.	58	10.00	Ten Dollars and Zero Cents	580.00
0201001A	CLEARING AND GRUBBING	L.S.	1	65,000.00	Sixty Five Thousand Dollars and Zero Cents	65,000.00
0201501A	RESET MAILBOX	EA.	2	200.00	Two Hundred Dollars and Zero Cents	400.00
0202000	EARTH EXCAVATION	C.Y.	300	45.00	Forty Five Dollars and Zero Cents	13,500.00
0202100	ROCK EXCAVATION	C.Y.	14	250.00	Two Hundred Fifty Dollars and Zero Cents	3,500.00
0202529	CUT BITUMINOUS CONCRETE PAVEMENT	L.F.	70	8.00	Eight Dollars and Zero Cents	560.00
0203202	STRUCTURE EXCAVATION - EARTH (EXCLUDING COFFERDAM AND DEWATERING)	C.Y.	496	105.00	One Hundred Five Dollars and Zero Cents	52,080.00
0203304	STRUCTURE EXCAVATION - ROCK (EXCLUDING COFFERDAM AND DEWATERING)	C.Y.	95	300.00	Three Hundred Dollars and Zero Cents	28,500.00
0204001	COFFERDAM AND DEWATERING	L.F.	507	200.00	Two Hundred Dollars and Zero Cents	101,400.00
0209001	FORMATION OF SUBGRADE	S.Y.	630	8.00	Eight Dollars and Zero Cents	5,040.00
0211000	ANTI-TRACKING PAD	S.Y.	25	10.00	Ten Dollars and Zero Cents	250.00
0213100	GRANULAR FILL	C.Y.	16	85.00	Eighty Five Dollars and Zero Cents	1,360.00
0216000	PERVIOUS STRUCTURE BACKFILL	C.Y.	567	95.00	Ninety Five Dollars and Zero Cents	53,865.00
0216011A	FLOWABLE FILL	C.Y.	109	400.00	Four Hundred Dollars and Zero Cents	43,600.00
0219001	SEDIMENTATION CONTOL SYSTEM	L.F.	380	2.00	Two Dollars and Zero Cents	760.00
0219011A	SEDIMENT CONTROL SYSTEM AT CATCH BASIN	EA.	8	100.00	One Hundred Dollars and Zero Cents	800.00
0286001.10	ROCK IN DRAINAGE TRENCH EXCAVATION 0'-10' DEEP	C.Y.	23	300.00	Three Hundred Dollars and Zero Cents	6,900.00
0304002	PROCESSED AGGREGATE BASE	C.Y.	160	90.00	Ninety Dollars and Zero Cents	14,400.00
0305001	PROCESSED AGGREGATE	C.Y.	25	150.00	One Hundred Fifty Dollars and Zero Cents	3,750.00
0406171	HMA S0.5	TON	102	275.00	Two Hundred Seventy Five Dollars and Zero Cents	28,050.00
0406172	HMA S0.375	TON	110	200.00	Two Hundred Dollars and Zero Cents	22,000.00
0406173	HMA S0.25	TON	7	400.00	Four Hundred Dollars and Zero Cents	2,800.00
0406194A	JOINT AND CRACK SEALING OF BITUMINOUS CONCRETE PAVEMENT	L.F.	85	25.00	Twenty Five Dollars and Zero Cents	2,125.00
0406236	MATERIAL FOR TACK COAT	GAL	85	5.00	Five Dollars and Zero Cents	425.00
0406999A	ASPHALT ADJUSTMENT COST (ESTIMATED COST)	EST	1	$5,000.00	Five Thousand Dollars and Zero Cents	$5,000
0502195A	TEMPORARY BRIDGE	L.S.	1	250,000.00	Two Hundred Fifty Thousand Dollars and Zero Cents	250,000.00
0503001	REMOVAL OF SUPERSTRUCTURE	L.S.	1	115,000.00	One Hundred Fifteen Thousand Dollars and Zero Cents	115,000.00
0514202	PRESTRESSED DECK UNITS (3'-0" X 1'-3")	L.F.	134	600.00	Six Hundred Dollars and Zero Cents	80,400.00
0514222	PRESTRESSED DECK UNITS (4'-0" X 1'-3")	L.F.	179	650.00	Six Hundred Fifty Dollars and Zero Cents	116,350.00
0520036A	ASPHALTIC PLUG EXPANSION JOINT SYSTEM	C.F.	45	500.00	Five Hundred Dollars and Zero Cents	22,500.00
0520041A	PREFORMED JOINT SEAL	L.F.	142	115.00	One Hundred Fifteen Dollars and Zero Cents	16,330.00
0521021A	STEEL-LAMINATED ELASTOMERIC BEARINGS	C.I.	8,463	1.00	One Dollar and Zero Cents	8,463.00
0586002.10	TYPE 'C' CATCH BASIN (4' SUMP) - 0' - 10' DEEP	EA.	4	7,500.00	Seven Thousand Five Hundred Dollars and Zero Cents	30,000.00
0586041.10	TYPE 'C-L' CATCH BASIN (4' SUMP) - 0' - 10' DEEP	EA.	1	7,500.00	Seven Thousand Five Hundred Dollars and Zero Cents	7,500.00
0586041.10	TYPE 'C-L' CATCH BASIN (4' SUMP) - 0' - 10' DEEP	EA.	1	7,500.00	Seven Thousand Five Hundred Dollars and Zero Cents	7,500.00
0586051.10A	SPECIAL TYPE 'C-L' CATCH BASIN DOUBLE GRATE TYPE 2 (4' SUMP) – 0' – 10' DEEP	EA.	1	8,000.00	Eight Thousand Dollars and Zero Cents	8,000.00
0586790.10	REMOVE DRAINAGE STRUCTURE - 0' - 10' DEEP	EA.	1	1,200.00	One Thousand Two Hundred Dollars and Zero Cents	1,200.00
0601062	FOOTING CONCRETE	C.Y.	141	875.00	Eight Hundred Seventy Five Dollars and Zero Cents	123,375.00
0601064	ABUTMENT AND WALL CONCRETE	C.Y.	155	1,500.00	One Thousand Five Hundred Dollars and Zero Cents	232,500.00

Kindly insert here the total amount of your Bid $ 3,232,797.50
It is understood that the unit prices shall govern in case of discrepancy between the unit-prices and this amount.
This bid includes addenda no.: 2

TOWN OF WILTON, CT
STATE PROJECT NO. 0161-0142, FAP # 6161(008)CN
FOR THE CONSTRUCTION OF

STATE PROJECT NO. 0161-0142, FAP # 6161(008)CN
REPLACEMENT OF BRIDGE NO. 04975
LOVERS LANE OVER COMSTOCK BROOK
IN THE TOWN OF WILTON

DATE OF BID OPENING **December 21, 2022** TIME: **10:00 A.M.** **NO BIDS WILL BE ACCEPTED AFTER 10:00 A.M. "NO EXCEPTIONS"**

Note: The bidder shall fill in, under the column "Unit Prices Bid," the unit prices, written in words and in numbers, for which he proposes to perform the various items of work called for, and under the column headed "Amount," the amount of each of the items at the unit price bid. After the proposal is opened and read, the quantities will be extended and totaled in accordance with the written bid prices and the bid will be verified or corrected.

Item Number	Items	Unit	Approximate Quantities	Unit Prices Bid		Amount (Figures)
				Figures	Writing	
0601118	BRIDGE DECK CONCRETE	C.Y.	33	1,700.00	One Thousand Seven Hundred Dollars and Zero Cents	56,100.00
0601121	PARAPET CONCRETE	L.F.	88	450.00	Four Hundred Fifty Dollars and Zero Cents	39,600.00
0601123	APPROACH SLAB CONCRETE	C.Y.	37	850.00	Eight Hundred Fifty Dollars and Zero Cents	31,450.00
0601640	1" CLOSED CELL ELASTOMER	C.I.	1,300	1.00	One Dollar and Zero Cents	1,300.00
0610001	DRILLING HOLES AND BONDING ANCHORS	EA.	185	50.00	Fifty Dollars and Zero Cents	9,250.00
0602030	DEFORMED STEEL BARS - GALVANIZED	LB	79,639	2.00	Two Dollars and Zero Cents	159,278.00
0602889	DOWEL BAR SPLICER SYSTEM GALVANIZED	EA.	88	80.00	Eighty Dollars and Zero Cents	7,040.00
0603233A	GALVANIZING STRUCTURAL STEEL (SITE NO. 1)	L.S.	1	30,000.00	Thirty Thousand Dollars and Zero Cents	30,000.00
0603474A	METALLIZING STRUCTURAL STEEL (SITE NO. 1)	L.S.	1	22,000.00	Twenty Two Thousand Dollars and Zero Cents	22,000.00
0605003A	MASONRY FACING	S.F.	1,900	100.00	One Hundred Dollars and Zero Cents	190,000.00
0686000.15	15" R.C. PIPE - 0' - 10' DEEP	L.F.	160	85.00	Eighty Five Dollars and Zero Cents	13,600.00
0686230.15	15" HIGH DENSITY POLYETHYLENE PIPE - 0' - 10' DEEP	L.F.	56	70.00	Seventy Dollars and Zero Cents	3,920.00
0686715.15	15" HIGH DENSITY POLYETHYLENE PIPE END	EA.	2	750.00	Seven Hundred Fifty Dollars and Zero Cents	1,500.00
0686950.10	REMOVE EXISTING PIPE - 0' - 10' DEEP	L.F.	20	30.00	Thirty Dollars and Zero Cents	600.00
0702026	MICROPILES	EA.	12	6,000.00	Six Thousand Dollars and Zero Cents	72,000.00
0702027	VERIFICATION TEST FOR MICROPILES	EA.	1	12,000.00	Twelve Thousand Dollars and Zero Cents	12,000.00
0702028	PROOF TEST FOR MICROPILES	EA.	2	2,000.00	Two Thousand Dollars and Zero Cents	4,000.00
0702029	MICROPILE LENGTH ADJUSTMENT	L.F.	20	100.00	One Hundred Dollars and Zero Cents	2,000.00
0703012	MODIFIED RIPRAP	C.Y.	12	150.00	One Hundred Fifty Dollars and Zero Cents	1,800.00
0707009A	MEMBRANE WATERPROOFING (COLD LIQUID ELASTOMERIC)	S.Y.	187	110.00	One Hundred Ten Dollars and Zero Cents	20,570.00
0708001	DAMPPROOFING	S.Y.	427	12.00	Twelve Dollars and Zero Cents	5,124.00
0714999A	MONITORING STRUCTURES	L.S.	1	65,000.00	Sixty Five Thousand Dollars and Zero Cents	65,000.00
0728001	CRUSHED STONE FOR SLOPE PROTECTION	TON	11	100.00	One Hundred Dollars and Zero Cents	1,100.00
0755014	GEOTEXTILE (SEPARATION - HIGH SURVIVABILITY)	S.Y.	30	5.00	Five Dollars and Zero Cents	150.00
0815001	BITUMINOUS CONCRETE LIP CURBING	L.F.	260	15.00	Fifteen Dollars and Zero Cents	3,900.00
0819002A	PENETRATING SEALER PROTECTIVE COMPOUND	S.Y.	110	15.00	Fifteen Dollars and Zero Cents	1,650.00
0822100.01	TEMPORARY TRAFFIC BARRIER	L.F.	120	35.00	Thirty Five Dollars and Zero Cents	4,200.00
0822100.02	TEMPORARY TRAFFIC BARRIER (PINNED)	L.F.	100	30.00	Thirty Dollars and Zero Cents	3,000.00
0822101.01	RELOCATED TEMPORARY TRAFFIC BARRIER	L.F.	40	20.00	Twenty Dollars and Zero Cents	800.00
0904051A	3 TUBE CURB MOUNTED BRIDGE RAIL	L.F.	69	700.00	Seven Hundred Dollars and Zero Cents	48,300.00
0910090A	STEEL-BACKED TIMBER GUIDERAIL - TYPE A	L.F.	80	100.00	One Hundred Dollars and Zero Cents	8,000.00
0910091A	STEEL-BACKED TIMBER GUIDERAIL - TERMINAL SECTION	EA.	2	5,500.00	Five Thousand Five Hundred Dollars and Zero Cents	11,000.00
0910092A	STEEL-BACKED TIMBER GUIDERAIL - BRIDGE ATTACHMENT	EA.	2	7,000.00	Seven Thousand Dollars and Zero Cents	14,000.00
0912503	REMOVE METAL BEAM RAIL	L.F.	215	10.00	Ten Dollars and Zero Cents	2,150.00
0922501	BITUMINOUS CONCRETE DRIVEWAY	S.Y.	256	85.00	Eighty Five Dollars and Zero Cents	21,760.00
0922503A	GRAVEL DRIVEWAY	S.Y.	11	100.00	One Hundred Dollars and Zero Cents	1,100.00
0939001	SWEEPING FOR DUST CONTROL	HR.	10	50.00	Fifty Dollars and Zero Cents	500.00
0943001	WATER FOR DUST CONTROL	M.GA	65	10.00	Ten Dollars and Zero Cents	650.00

Kindly insert here the total amount of your Bid $ 3,232,797.50
It is understood that the unit prices shall govern in case of discrepancy between the unit-prices and this amount.
This bid includes addenda no.: 2

TOWN OF WILTON, CT
SCHEDULE OF PRICES
FOR THE CONSTRUCTION OF

STATE PROJECT NO. 0161-0142, FAP # 6161(008)CN
REPLACEMENT OF BRIDGE NO. 04975
LOVERS LANE OVER COMSTOCK BROOK
IN THE TOWN OF WILTON

DATE OF BID OPENING **December 21, 2022** TIME: **10:00 A.M.** **NO BIDS WILL BE ACCEPTED AFTER 10:00 A.M. "NO EXCEPTIONS"**

Note: The bidder shall fill in, under the column "Unit Prices Bid," the unit prices, written in words and in numbers, for which he proposes to perform the various items of work called for, and under the column headed "Amount," the amount of each of the items at the unit price bid. After the proposal is opened and read, the quantities will be extended and totaled in accordance with the written bid prices and the bid will be verified or corrected.

Item Number	Items	Unit	Approximate Quantities	Unit Prices Bid		Amount (Figures)
				Figures	Writing	
0944000	FURNISHING AND PLACING TOPSOIL	S.Y.	400	12.00	Twelve Dollars and Zero Cents	4,800.00
0949087	CLETHRA ALNIFOLIA SUMMERSWEET 3'-4' HT. B.B.	EA.	10	90.00	Ninety Dollars and Zero Cents	900.00
0949099	CORNUS AMOMUM, SILKY DOGWOOD 18"-24" HT. CONTAINER	EA.	10	85.00	Eighty Five Dollars and Zero Cents	850.00
0949226	ILEX VERTICILLATA COMMON WINTERBERRY 18"- 24" HT. B.B.	EA.	8	90.00	Ninety Dollars and Zero Cents	720.00
0949831	ACER RUBRUM RED MAPLE 1 3/4" - 2" CAL. B.B.	EA.	8	1,300.00	One Thousand Three Hundred Dollars Zero Cents	10,400.00
0950019A	TURF ESTABLISHMENT– LAWN	S.Y.	225	4.00	Four Dollars and Zero Cents	900.00
0950039	EROSION CONTROL MATTING TYPE D	S.Y.	130	7.25	Seven Dollars and Twenty Five Cents	942.50
0950040A	CONSERVATION SEEDING FOR SLOPES	S.Y.	180	5.00	Five Dollars and Zero Cents	900.00
0950043A	WETLAND GRASS ESTABLISHMENT	S.F.	100	2.50	Two Dollars and Fifty Cents	250.00
0952001	SELECTIVE CLEARING AND THINNING	L.S.	1	3,000.00	Three Thousand Dollars and Zero Cents	3,000.00
0952051A	CONTROL AND REMOVAL OF INVASIVE VEGETATION	S.Y.	470	10.00	Ten Dollars and Zero Cents	4,700.00
0969060A	CONSTRUCTION FIELD OFFICE, SMALL	MO.	16	4,000.00	Four Thousand Dollars and Zero Cents	64,000.00
0970006	TRAFFICPERSON (MUNICIPAL POLICE OFFICER) (ESTIMATED COST)	EST.	1	$72,000.00	Seventy Two Thousand Dollars and Zero Cents	$72,000
0970007	TRAFFICPERSON (UNIFORMED FLAGGER)	HR.	240	60.00	Sixty Dollars and Zero Cents	14,400.00
0971001A	MAINTENANCE AND PROTECTION OF TRAFFIC	L.S.	1	95,000.00	Ninety Five Thousand Dollars and Zero Cents	95,000.00
0974001A	REMOVAL OF EXISTING MASONRY	C.Y.	121	175.00	One Hundred Seventy Five Dollars and Zero Cents	21,175.00
0975004	MOBILIZATION AND PROJECT CLOSEOUT	L.S.	1	.332,350.00	Three Hundred Thirty Two Thousand Three Hundred Fifty Dollars and Zero Cents	332,350.00
0976002	BARRICADE WARNING LIGHTS - HIGH INTENSITY	DAY	7,300	1.00	One Dollar and Zero Cents	7,300.00
0978002	TRAFFIC DRUM	EA.	17	50.00	Fifty Dollars and Zero Cents	850.00
0979003	CONSTRUCTION BARRICADE TYPE III	EA.	2	200.00	Two Hundred Dollars and Zero Cents	400.00
0980020	CONSTRUCTION SURVEYING	L.S.	1	95,000.00	Ninety Five Thousand Dollars and Zero Cents	95,000.00
1020030A	TEMPORARY ILLUMINATION UNIT	EA.	6	1,000.00	One Thousand Dollars and Zero Cents	6,000.00
1106001	1 WAY PEDESTRIAN SIGNAL POLE MOUNTED	EA.	2	1,500.00	One Thousand Five Hundred Dollars and Zero Cents	3,000.00
1107007	PEDESTRIAN PUSH BUTTON AND SIGN (PIEZO)	EA.	2	400.00	Four Hundred Dollars and Zero Cents	800.00
1118101A	TEMPORARY SIGNALIZATION (SITE NO. 1)	L.S.	1	125,000.00	One Hundred Twenty Five Thousand Dollars and Zero Cents	125,000.00
1205217	TYPE DE-7D DELINEATOR	EA.	8	50.00	Fifty Dollars and Zero Cents	400.00
1206023A	REMOVAL AND RELOCATION OF EXISTING SIGNS	L.S.	1	1,500.00	One Thousand Five Hundred Dollars and Zero Cents	1,500.00
1209124	HOT-APPLIED PAINTED PAVEMENT MARKINGS 4" WHITE	L.F.	355	3.00	Three Dollars and Zero Cents	1,065.00
1209131	HOT-APPLIED PAINTED LEGEND, ARROWS AND MARKINGS	S.F.	20	11.00	Eleven Dollars and Zero Cents	220.00
1211001	REMOVAL OF PAVEMENT MARKINGS	S.F.	120	11.00	Eleven Dollars and Zero Cents	1,320.00
1220027	CONSTRUCTION SIGNS	S.F.	280	35.00	Thirty Five Dollars and Zero Cents	9,800.00
1802210.07	TEMPORARY SAND BARREL (700 lb.)	EA.	2	350.00	Three Hundred Fifty Dollars and Zero Cents	700.00
1802210.14	TEMPORARY SAND BARREL (1400 lb.)	EA.	8	400.00	Four Hundred Dollars and Zero Cents	3,200.00
1802210.21	TEMPORARY SAND BARREL (2100 lb.)	EA.	4	450.00	Four Hundred Fifty Dollars and Zero Cents	1,800.00

Kindly insert here the total amount of your Bid $ 3,232,797.50
It is understood that the unit prices shall govern in case of discrepancy between the unit-prices and this amount.
This bid includes addenda no.: 2

TOWN OF WILTON, CT
SCHEDULE OF PRICES
FOR THE CONSTRUCTION OF

STATE PROJECT NO. 0161-0142, FAP # 6161(008)CN
REPLACEMENT OF BRIDGE NO. 04975
LOVERS LANE OVER COMSTOCK BROOK
IN THE TOWN OF WILTON

DATE OF BID OPENING **December 21, 2022** TIME: **10:00 A.M.** **NO BIDS WILL BE ACCEPTED AFTER 10:00 A.M. "NO EXCEPTIONS"**

Note: The bidder shall fill in, under the column "Unit Prices Bid," the unit prices, written in words and in numbers, for which he proposes to perform the various items of work called for, and under the column headed "Amount," the amount of each of the items at the unit price bid. After the proposal is opened and read, the quantities will be extended and totaled in accordance with the written bid prices and the bid will be verified or corrected.

Kindly insert here the total amount of your Bid $ 3,232,797.50
It is understood that the unit prices shall govern in case of discrepancy between the unit-prices and this amount.
This bid includes addenda no.: 2

CONTRACT TIME AND LIQUIDATED DAMAGES

1. For this contract, an assessment per day for liquidated damages, at a rate of One Thousand Two Hundred Dollars ($1,200) per day shall be applied to each calendar day the work runs in excess of the Three Hundred Sixty Eight (368) allowed calendar days for the contract.

Note: PRIME CONTRACTOR'S REQUIREMENTS:

A. Proposal Guaranty (Bid Bond): Except when otherwise specified, no proposal will be considered unless accompanied by a proposal guaranty in the form of a bond furnished by a surety company, satisfactory to the Engineer, in an amount equal to at least 30% of the amount of the bid, or unless the bidder has on file in the Town, an annual bid bond in the proper amount.

The surety must be a corporate surety licensed to sign surety bonds in the State of Connecticut.

B. Not less than 7% of the total Contract value shall be subcontracted to, performed by, and paid to Disadvantaged Business Enterprise(s) DBE.

C. If the Contractor is unable to fulfill the DBE's percentage requirement, he may request an exception of the above percentage, by completing and submitting to the Town, the "Application for Review of Pre-award Good Faith Efforts", as contained in the General Provisions.

D. Contractors must make sure that at the time of bidding, their Firms have an approved Affirmative Action Plan with the State of Connecticut, Department of Transportation.

E. The low bidder is required to submit to the Town, both a Certificate of Insurance and a Workers' Compensation Certificate on or before the signing of the Contract.

F. Statement of Bidder's Qualifications: Each bidder is required to submit to the Town a recent sworn statement of the bidder's qualifications the form furnished by the Town for this purpose.

G. Contracts will not be awarded until the above requirements have been submitted and approved.

H. Please be aware that the Town, prior to the awarding of the Contract, may require further financial and other information from any applicant who becomes the low bidder for that Contract.

I. The apparent two lowest bidders, as determined by the Town of Wilton immediately after the bid opening, shall submit the Pre-award DBE Commitment Approval request form(s) to the Town of Wilton no later than five days after the bid opening. This is a requirement of Title 49, Code of Federal Regulations (CFR) Part 26, Participation of DBE's. Failure to comply with this requirement may be cause for rejection of the bid.

NAME OF PRINCIPAL

Dayton Construction Company, Inc.
(Contractor, Second Party, Etc.):

State Project No. 0161-0142
Project or Contract Identification

TOWN/CITY OF Wilton

STANDARD BID BOND

KNOW ALL PERSONS BY THESE PRESENTS:

That We, Dayton Construction Company, Inc.,
of 146 Bunker Hill Road, Watertown, CT 06795,
hereinafter called the "Principal", as Principal, and Nationwide Mutual Insurance Company
a corporation organized and existing under the laws of the State of Ohio,
and duly authorized to transact a surety business in the State of Connecticut, hereinafter called the "Surety," as Surety, are held and firmly bound unto the Town/City of Wilton, as "Obligee," in the penal sum of **THIRTY PERCENT (30%) OF THE AMOUNT OF THE ATTACHED BID** in lawful money of the United States of America, for the payment of which, well and truly to be made to the Obligee, we bind ourselves, our heirs, successors, and assigns, jointly and severally, firmly by these presents.

Signed, sealed and delivered this 9th day of December, 2022

THE CONDITION OF THIS OBLIGATION is such, that whereas the said Principal has herewith submitted, his bid dated December 21, 2022, for
Replacement of Bridge No. 04975 Lovers Lane over Comstock Brook
Town of Project No. RFP 2022-09

NOW, THEREFORE, if the Principal shall not withdraw its bid within sixty (60) days after the opening of the same, and if said bid shall be accepted and the contract awarded to said Principal, and the Principal shall, when required by the Town of Wilton, or his authorized agent, execute and agreement in writing for the work bid upon, and deliver such surety bonds as shall be acceptable to said Town of Wilton for the performance of the work according to said written agreement and for the protection of person supplying labor or materials in the prosecution of said work, and shall in all other respects perform the agreement created by the acceptance of said bid, then this obligation shall be void; otherwise the Principal and Surety hereto agree to pay unto the Obligee the difference between the amount of the bid of said Principal, submitted herewith, and the amount for which the Obligee may contract with another party to perform the work covered by the said bid of the Principal.

The Surety executing this Instrument hereby agrees that its obligation shall not be impaired by any extension(s) of the time for acceptance of the bid that the Principal may grant to the Obligee, notice of which extension(s) the Surety being hereby waived; provided that such waiver of notice shall apply only with respect to extensions aggregating not more than sixty (60) calendar days in addition to the period originally allowed for acceptance of the bid.

IN TESTIMONY WHEREOF, the said Principal and Surety
have caused these presents to be signed by their duly authorized representatives and their name and corporate seal to be hereunto affixed, the day and year first written.

SURETY

Nationwide Mutual Insurance Company
Print Name

12/9/22
Agent's Signature and date
enclose valid Power of Attorney
Wendy Krystopa, Attorney In Fact

PRINCIPAL Dayton Construction Company, Inc.

Matthew C. Dayton, Vice President
Print Name

VP
Signature and date of Authorized Representative

Power of Attorney

KNOW ALL MEN BY THESE PRESENTS THAT:

Nationwide Mutual Insurance Company, an Ohio corporation

hereinafter referred to severally as the "Company" and collectively as "the Companies" does hereby make, constitute and appoint:
CHRISTOPHER KOMANETSKY; ERIK PARTRIDGE; JAMES NELSON; JOSEPH SMITH; KIMBERLEY CONNOLLY; MATTHEW COCCO; TIMOTHY DEFFLEY; WENDY KRYSTOPA;

each in their individual capacity, its true and lawful attorney-in-fact, with full power and authority to sign, seal, and execute on its behalf any and all bonds and undertakings, and other obligatory instruments of similar nature, in penalties not exceeding the sum of

UNLIMITED

and to bind the Company thereby, as fully and to the same extent as if such instruments were signed by the duly authorized officers of the Company; and all acts of said Attorney pursuant to the authority given are hereby ratified and confirmed.

This power of attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the board of directors of the Company:

"RESOLVED, that the president, or any vice president be, and each hereby is, authorized and empowered to appoint attorneys-in-fact of the Company, and to authorize them to execute and deliver on behalf of the Company any and all bonds, forms, applications, memorandums, undertakings, recognizances, transfers, contracts of indemnity, policies, contracts guaranteeing the fidelity of persons holding positions of public or private trust, and other writings obligatory in nature that the business of the Company may require; and to modify or revoke, with or without cause, any such appointment or authority; provided, however, that the authority granted hereby shall in no way limit the authority of other duly authorized agents to sign and countersign any of said documents on behalf of the Company."

"RESOLVED FURTHER, that such attorneys-in-fact shall have full power and authority to execute and deliver any and all such documents and to bind the Company subject to the terms and limitations of the power of attorney issued to them, and to affix the seal of the Company thereto; provided, however, that said seal shall not be necessary for the validity of any such documents."

This power of attorney is signed and sealed under and by the following bylaws duly adopted by the board of directors of the Company.

Execution of Instruments. Any vice president, any assistant secretary or any assistant treasurer shall have the power and authority to sign or attest all approved documents, instruments, contracts, or other papers in connection with the operation of the business of the company in addition to the chairman of the board, the chief executive officer, president, treasurer or secretary; provided, however, the signature of any of them may be printed, engraved, or stamped on any approved document, contract, instrument, or other papers of the Company.

IN WITNESS WHEREOF, the Company has caused this instrument to be sealed and duly attested by the signature of its officer the 20th day of August, 2021.

Antonio C. Albanese, **Vice President** of Nationwide Mutual Insurance Company

ACKNOWLEDGMENT

STATE OF NEW YORK COUNTY OF NEW YORK: ss
On this 20th day of August, 2021, before me came the above-named officer for the Company aforesaid, to me personally known to be the officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, deposes and says, that he is the officer of the Company aforesaid, that the seal affixed hereto is the corporate seal of said Company, and the said corporate seal and his signature were duly affixed and subscribed to said instrument by the authority and direction of said Company.

Stephanie Rubino McArthur
Notary Public, State of New York
No. 02MC6270117
Qualified in New York County
Commission Expires October 19, 2024

Notary Public
My Commission Expires
October 19, 2024

CERTIFICATE

I, Laura B. Guy, Assistant Secretary of the Company, do hereby certify that the foregoing is a full, true and correct copy of the original power of attorney issued by the Company; that the resolution included therein is a true and correct transcript from the minutes of the meetings of the boards of directors and the same has not been revoked or amended in any manner; that said Antonio C. Albanese was on the date of the execution of the foregoing power of attorney the duly elected officer of the Company, and the corporate seal and his signature as officer were duly affixed and subscribed to the said instrument by the authority of said board of directors; and the foregoing power of attorney is still in full force and effect.

IN WITNESS WHEREOF, I have hereunto subscribed my name as Assistant Secretary, and affixed the corporate seal of said Company this 9th day of December, 2022.

Assistant Secretary

BDJ 1(08-21)00

NON COLLUSION AFFIDAVIT

This Affidavit must be completed, notarized and attached to your Bid Proposal. Failure to do so will result in the rejection of your Bid. A separate Affidavit must be submitted by each principal of a Joint Venture.

State Project No. 0161-0142
F.A. # 6161(008) CN
City/Town Wilton
Description of Project Replacement of Bridge No. 04975 Lovers Lane over Comstock Brook

I, Matthew C. Dayton, acting in behalf of
(Name of Party Signing Affidavit)

Dayton Construction Company, Inc. of which
(person, firm, association, corporation or organization)
I am the Vice President, submitting a bid for the above project, certify
(Title of Person)
and affirm in accordance with Section 112(c) of Title 23, U.S. Code Highways that the Dayton Construction Company, Inc.
(person, firm, association, corporation or organization)
has neither directly or indirectly entered into any agreements, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with such bid. False statements made herein may be the subject of criminal prosecution.

Dayton Construction Company, Inc.
Name of Corporation or Firm

Matthew C. Dayton, Vice President
Signature and Title of Official
Making the Affidavit

Subscribed and sworn to before me, this 21st day of December 2022

Notary Public/Commissioner of the Superior Court Katie Nordland
My Commission Expires 28 February 2027

CERTIFICATE OF CORPORATION

I, Sandra Sakl, certify that I am the Secretary/Treasurer of the Corporation named in the foregoing instrument: that I have been duly authorized to affix the seal of the Corporation to such papers as require the seal; that Matthew C. Dayton, who signed said instrument on behalf of the Corporation, was then Vice President of said Corporation; that said instrument was duly signed for and in behalf of said Corporation by authority of its governing body and is within the scope of its corporate powers.

(Corporate Seal)

Signature of Person Certifying
Sandra Sakl, Secretary/Treasurer

Department _____

_____

_____Compliance Officer

Date_____

☐ APPROVED

☐ DISAPPROVED

☐ PENDING INVESTIGATION

☐ INVESTIGATION REQUESTED

STATE OF CONNECTICUT LABOR DEPARTMENT

EMPLOYER REPORT OF PERMANENT COMPLIANCE STAFFING

The following report is submitted as part consideration of the proposed contract dated December 21, 2022 between the undersigned and the City/Town of Wilton

Name of Contracting Firm

Dayton Construction Company, Inc.

Address (No. and Street) (City) (State)

146 Bunker Hill Road, Watertown, Connecticut 06795

Type of Report

Prime Contractor

Subcontractor

EMPLOYEE INFORMATION

Total Employed	White	Black	Spanish Surname	Other (specify)
38	33	1	4	

Does your firm have a collective bargaining agreement or other Contract or understanding with a labor organization or employment agency for the recruitment of labor?

YES ☐

If yes, list the name and address of the agency or organization.

Name Address (No. and Street, City, State)

NO ☒

If no, indicate the usual methods of recruitment.

- ☒ Connecticut State Employment Service
- ☒ Private Employment Agency
- ☒ Newspaper Advertisement
- ☒ Walk-in
- ☐ Other (specify)

The signer certifies that its practices and policies, including but not limited to matters concerning personnel, training, apprenticeship, membership, grievance and representation, and upgrading, do not discriminate on grounds of race, color, religious creed, age, sex, or national origin, or ancestry of any individual, and that the signer agrees it will affirmatively cooperate in the implementation of the policy and provisions of Executive Order Number Three, and consent and agreement is made that recruitment, employment and the terms and conditions of employment under the contract shall be in accordance with the purposes and provisions of Executive Order Number Three.

☐ Yes ☒ No Is firm in minority ownership? (51% of assets in control of minorities)

I certify that the above is correct to the best of my knowledge.

Employer Dayton Construction Company, Inc. Date December 21, 2022

Business Name

By _____

Signature Title

Matthew C. Dayton, Vice President

AFFIRMATIVE ACTION PROGRAM CERTIFICATION

City/Town of Wilton

FIRM NAME: Dayton Construction Company, Inc.

ADDRESS: 146 Bunker Hill Road, Watertown, Connecticut 06795

DESCRIPTION OF PROJECT Replacement of Bridge No. 04975 Lovers Lane over Comstock Brook

BID AMOUNT: $ 3,232,797.50

DATE: December 21, 2022

I (Name of Person) Sandra Sakl, Secretary/Treasurer/E.E.O. Officer of

the (Name of Firm) Dayton Construction Company, Inc. intend

to honor our Affirmative Action Program on file with the Connecticut Department of Transportation, Office of Contract Compliance. I further certify that our Affirmative Action Program is current and that the last approval was on June 28, 2022 and it expires on April 30, 2024

SIGNED BY: Sandra Sakl, Secretary/Treasurer/E.E.O. Officer

TITLE: Sandra Sakl, Secretary/Treasurer/E.E.O. Officer
EEO OFFICER

DISADVANTAGED BUSINESS ENTERPRISES

Each Contractor submitting a bid proposal for any Highway or Bridge construction work with the City/Town of Wilton, must complete this and the attached forms for the project(s) which he intends to bid.

PROJECT: F.A.P. # 6161(008) CN, State Project No. 0161-0142
Replacement of Bridge No. 04975, Lovers Lane over Comstock Brook

SUBCONTRACT CERTIFICATION

Bids will not be read or accepted unless the following certification has been submitted; prime contractors will not be granted permission to subcontract work unless the following certification has been submitted.

The Dayton Construction Company, Inc. certifies
Firm Name (Bidder, Contractor)

(a) X that they intend

(b) _____ that they do not intend to subcontract a portion of the work.

The Firm that subcontracts a portion of the work, shall refer for guidelines to the Special Provisions for "Disadvantaged Business Enterprises", and the "Required Contract Provisions" of the Special Provisions for Affirmative Action Requirements.

The above firm also certifies that all interested prospective subcontractors solicited have been or will be provided with the same information concerning the item(s) to be sublet.

Please note that whenever the Special Provisions call for DBE's Set Aside percent of work to be subcontracted, you shall check conditions (a).

Dayton Construction Company, Inc.
(Company or Firm)

By: _____
Matthew C. Dayton, Vice President
(Title)

December 21, 2022
(Date)

STATEMENT OF BIDDER'S QUALIFICATIONS

F.A.P. # 6161(008) CN

CITY/TOWN Wilton PROJECT NO. State Project No. 0161-0142

Replacement of Bridge No. 04975, Lovers Lane over Comstock Brook

All bidders are required to file this form, properly completed, WITH THEIR PROPOSAL. Failure of a bidder to answer any question or provide required information may be grounds for the awarding authority to disqualify and reject their bid. If a question or request for information does not pertain to your organization in any way, use the symbol "NA" (Not Applicable). Use additional 8½" x 11" sheets with your letterhead as necessary.

1. Indicate exactly the name by which this organization is known:

   Name Dayton Construction Company, Inc.

2. How many years has this organization been in business under its present business name?

   Years 63

3. How many years has this organization been in business as a General Contractor?

   Years 63

4. If this organization has not always been a General Contractor, list the trade(s) that your firm customarily performed prior to the time that you became a General Contractor:

   1. N/A

   2. _____

   3. _____

5. Indicate all other names by which this organization has been known and the length of time known by each name:

   1. N/A

   2. _____

   3. _____

6. This firm is a __X__ Corporation _____ Partnership _____ Sole Proprietorship

   _____ Joint Venture _____ Other.

7. Attach resumes of all supervisory personnel, such as Principals, Project Managers, and Superintendents, who will be directly involved with projects on which you are now a bidder. Indicate the number of years of construction experience and number of years of which they were in a supervisory capacity.

   Please refer to attached Exhibit "A".

8. List all sub-trades which your firm customarily performs with own employees.

   1. Please refer to attached Exhibit "B".
   2. _____
   3. _____

9. Trade References: Names, addresses and telephone numbers of several firms with whom your organization has regular business dealings.

   Please refer to attached Exhibit "C".

(Attach separate sheet)

Exhibit "A"

Dayton Construction Company, Inc.
146 Bunker Hill Road
Watertown, Connecticut 06795

Principal Officers & Supervisory Personnel

ALAN P. DAYTON

731 Flanders Road, Woodbury, CT 06798
Degrees: Associates in Civil Engineering
Licenses: PC 7, Hoisting Equipment Operator

Alan Dayton is Vice President of Dayton Construction Company, Inc. He has served the company since 1973 in the capacity of foreman, equipment operator, laborer, truck driver and chief estimator.

LYNN C. DAYTON

249 Old Farms Road, Watertown, CT 06795
Licenses: PC 7, Hoisting Equipment Operator

Lynn Dayton is President of Dayton Construction Company, Inc. He has served the company since 1972 in the capacity of foreman, equipment operator, laborer and truck driver.

SANDRA DAYTON SAKL

34 Deer Island Trail, Morris, CT 06763

Sandra Sakl is Secretary/Treasurer of Dayton Construction Company, Inc. She has served the company since 1975 in various capacities in the office and is currently Comptroller and Office Manager.

MATTHEW C. DAYTON

Dayton Construction Company, Inc.
146 Bunker Hill Road
Watertown, CT 06795
(203) 597-7471
Matt@dayton-construction.com

Work Experience:

Dayton Construction Company, Inc. **2003 – Present**
Superintendent / Estimator

- Manage roadway reconstruction / bridge projects from start to finish. Proven track record of providing a safe and quality product completed on time.
- Experienced laborer, working foreman, and operator
- Completed projects include roadway reconstruction, parking lots, box culverts, pre-stressed decks, dam rehabilitation, utility improvements, pedestrian improvements, accelerated bridge, and wetland restoration
- Project Scheduling
- Responsible for company resource allocation
- Responsible for company bituminous paving projects

Education:

Babson College, Babson Park, MA **08/1999 – 05/2003**
Bachelor of Science in Business Administration

Certifications & Licenses:

Supervisory Training Program (AGC/CCSU)
Project Management in Primavera 6
Connecticut P6/P7 plumbing license
CPR and First Aid
Hazwoper
OSHA 10
CDL Class A

PROJECT EXPERIENCE

- CTDOT 15-0335 Bridgeport: Safety Improvements on Route 127 ($5,316,700)
- Town of Watertown, Reconstruction of Sylvan Lake Road ($2,525,278)
- Town of Trumbull, Reconstruction of Moose Hill Road. (3,609,395)
- Town of Southbury: State project 130-165, Replacement of Bridge No. 05032 Spruce Brook Rd over Transylvania Brook. ($1,807,314)
- CTDOT 34-309 Danbury. Intersection Improvements on SR 806 at Old Shelter Rock Road ($1,549,521)
- CTDOT 0096-0197, Newtown Route 302 Bridge ($1,923,757)
- Town of East Windsor. Broad Brook Pond Dam ($584,675)
- City of Waterbury. Improvements of Freight St. ($4,761,951)

MATTHEW C. DAYTON

Dayton Construction Company, Inc.
146 Bunker Hill Road
Watertown, CT 06795
(203) 597-7471
Matt@dayton-construction.com

PROJECT EXPERIENCE (CONTINUED)

- Town of New Milford, State Project 95-245, Rehabilitation of Bridge 05655 Aspetuck Ridge Road over West Aspetuck River ($1,615,770)
- CTDOT 106-121 Orange. Replacement of Bridge No. 02637, Route 114 over Race Brook ($1,440,987)
- City of Danbury. Project No. 04-042, Rehabilitation of Bridge 04125 Crosby St. over Padanaram Brook ($1,515,900)
- CTDOT 310-065 Old Saybrook. Railroad Station Parking Lot Expansion ($2,423,247)

PROJECT REFERENCES

- Roy Cavanaugh, PE City of Waterbury, Engineer. 203-574-6851
- Sal Porzio, City of Waterbury, Project Engineer. 203-574-6851
- Keegan Elder, PE. WMC Engineers. 860-667-9624
- Andrew Millivitsch, Project Engineer. CTDOT 860-823-3258
- Bart Clark, PE. Project Administrator, Town of Winchester 860-379-4070
- Leonard Norton, P.E. DOPW/Town Engineer. East Windsor. 860-292-7073
- Paul Bunevich, PE. Town Engineer. Town of Watertown.860-645-5240
- Tony Ciriello, PE. Infrastructure Sector Leader, SLR. 203-271-1773
- Edward Scoville, PE. Resident Engineer, SLR. 203-271-1773
- Gary Giroux, PE. Cardinal Engineering, Senior Project Manager. 203-238-1969
- William Maurer, PE. Town Engineer, Town of Trumbull. 203-452-5050

RYAN M. DAYTON

Dayton Construction Company, Inc.
146 Bunker Hill Road
Watertown, CT 06795
(203) 509-9341
ryan@dayton-construction.com

Work Experience:

Dayton Construction Company, Inc. **05/2009 – Present**

Bridge Supervisor/Concrete Foreman

- Manage all components of concrete work to ensure timely and cost effective completion of jobs
- Working foreman with extensive experience in bridge construction, bridge rehabilitation, structural concrete, steel reinforcement, formwork, steel sheet piling, culvert and precast installation, concrete flat work, granite curbing and masonry.
- Also experienced in caissons, micropiles, bridge rail installation, rigging, operation of trucks and equipment, earth excavation, water mains, drainage, sewer and general road construction.
- Assist in Project Scheduling
- See attached experience and references

Certifications & Licenses:

ACI Concrete Field Testing Technician – Grade I
Connecticut P6 Plumbing License
CDL – Class A
Forklift Certification
OSHA 10 Certification
CPR & First Aid Certifications

References: See attached

PROJECT EXPERIENCE

Complete Replacement/Rehabilitation of 34 bridges between 2010 – 2018 (most recent listed below)

Town of Stratford – Widening of Tanners Brook $ 980,000.00
Replacement of concrete spillway and retaining walls

Town of Glastonbury (State Project No. 53-188) – Replacement of Bridge No. 05608 $ 1.75 Million
Eastern Blvd over Salmon Brook
Complete bridge replacement on drilled shafts, including cast in place concrete abutments, walls, and slabs, precast deck units, decorative simulated stone masonry, granite curbing, water main and drainage.

Town of Washington – Replacement of Bridge No. 1500-009 Spring Hill Road over Kirby Brook $ 292,000.00
Installation of concrete box culverts, cast in place walls and decorative simulated stone masonry.

CTDOT 310-065 Old Saybrook – Railroad Station Parking Lot Expansion $ 2.50 Million
Precast concrete ramp for pedestrian traffic and extensive concrete curbing and sidewalk

CTDOT 106-121 Orange – Replacement of Bridge No. 02637, Route 114 over Race Brook $ 1.50 Million
Complete bridge replacement including dewatering of work area, cast in place concrete abutments, walls and parapets.

Town of New Milford (State Project No. 95-245) Rehabilitation of Bridge No. 05655 $ 1.60 Million
Aspetuck Ridge Road over West Aspetuck River
Bridge deck replacement utilizing existing concrete abutments