



LIN ASSOCIATES, INC.

CONSULTING ENGINEERS

2001 Beacon Street, Suite 310
Brighton, MA 02135



www.linboston.com



CORPORATE BACKGROUND

CONSULTING ENGINEERS

Since 1978, Lin Associates, Inc. (Lin) has been providing both structural design engineering and construction administration services to a diverse client base including municipal, state, and federal agencies as well as the private sector.

Our 6 structural engineers are all professionally licensed in most of New England states with 12 years of minimum design experience.

Lin Associates, Inc. is a privately owned, Mass Supplier Diversity Office (SDO) certified Minority Business Enterprise (MBE) and Massachusetts Unified Certification Program (UCP) Disadvantaged Business Enterprise (DBE).

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STRUCTURAL SERVICES

Structural Services

Lin's Structural Sector consists of two groups, the first of which focuses on design services for bridges, while the second provides design services for buildings. Our bridge design projects include new construction, replacement, or rehabilitation ranging from vehicular, railroad to pedestrian use, in addition to providing bridge inspection and live load rating services. In acknowledgement of the firm's expertise, MassDOT has prequalified Lin for Complex Bridge Design.



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Lin has an extensive history of bridge design with MassDOT and has been actively involved with the Accelerated Bridge Program (ABP) since its inception. The firm is currently, or has been, involved with multiple bridges which not only range in design complexity, but also incorporate various methods of Accelerated Bridge Construction (ABC) Techniques:



STRUCTURAL SERVICES

MassDOT Prequalification

- Basic Roadway Design
- Complex Bridge Design/Rating
- NBIS Bridge Inspection
- Geotechnical Engineering



Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Jamey Tesler, Secretary & CEO
Jonathan L. Gulliver, Highway Administrator



Effective: June 25, 2021

Expires: June 25, 2023

Lin Associates, Incorporated
2001 Beacon Street - #310
Brighton MA 02135

Your firm is Prequalified in the following Disciplines:

- | | |
|---|--|
| <input type="checkbox"/> Major Environmental Documentation | <input type="checkbox"/> Transportation Planning |
| <input checked="" type="checkbox"/> Basic Roadway Design | <input type="checkbox"/> Intelligent Transportation Systems |
| <input type="checkbox"/> Intermediate Roadway Design | <input type="checkbox"/> Transit and Rail Systems Design |
| <input type="checkbox"/> Complex Roadway Design | <input type="checkbox"/> Subsurface Utility Engineering |
| <input checked="" type="checkbox"/> Basic Bridge Design/Rating | <input type="checkbox"/> Value Engineering |
| <input checked="" type="checkbox"/> Intermediate Bridge Design/Rating | <input type="checkbox"/> Cultural Resources |
| <input checked="" type="checkbox"/> Complex Bridge Design/Rating | <input type="checkbox"/> Hazardous Waste - Site Investigation and Assessment |
| <input checked="" type="checkbox"/> NBIS Bridge Inspection | <input type="checkbox"/> Hazardous Waste - Remediation |
| <input type="checkbox"/> Moveable Bridge Design/Rating | <input type="checkbox"/> Wetlands - Delineation and Assessment |
| <input type="checkbox"/> Moveable Bridge Inspection | <input type="checkbox"/> Wetlands - Mitigation |
| <input type="checkbox"/> Traffic Operations Studies and Design | <input type="checkbox"/> Water Quality - Assessment |
| <input checked="" type="checkbox"/> Geotechnical Engineering Including Soils and Foundation Studies | <input type="checkbox"/> Water Quality - Mitigation |
| <input type="checkbox"/> Construction Oversight | <input type="checkbox"/> Air Quality |

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STRUCTURAL SERVICES

MassDOT - 2021 MSA Ranking (Lin ranked 32 of total 62 firms)

Reviewer totals/Avg. Ranking				Reviewer 1					Reviewer 2					Reviewer 3					Reviewer 4								
Consultant Team	Total Ranking Score	Avg. Ranking Score	Road, Bridge or Bot	Rvt 1 - FRvt 1 -	Rvt 1 -	Rvt 1 -	Rvt 1 - SRvt 1 -	Rvt 1 -	Rvt 2 - FRvt 2 -	Rvt 2 -	Rvt 2 -	Rvt 2 - SRvt 2 -	Rvt 2 -	Rvt 3 - FRvt 3 -	Rvt 3 -	Rvt 3 -	Rvt 3 - SRvt 3 -	Rvt 3 -	Rvt 4 - FRvt 4 -	Rvt 4 -	Rvt 4 -	Rvt 4 - SRvt 4 -	Rvt 4 -				
1 HNTB Corporation	381	95.25	Both	25	24	24	25	98	98	22	23	22	23	90	90	23	21	24	25	93	93	25	25	25	100	100	
2 AECOM	373	93.25	Both	25	24	25	24	98	98	22	23	21	21	87	87	21	20	22	25	88	88	25	25	25	100	100	
3 VHB	372	93	Both	24	25	25	24	98	98	23	23	23	22	91	91	23	23	22	25	93	93	15	25	25	90	90	
4 Greenman-Pedersen	346	86.5	Both	24	24	24	24	96	96	22	23	23	24	92	92	22	23	23	25	93	93	10	20	20	15	65	
5 WSP USA	345	86.25	Both	22	22	22	22	88	88	20	21	22	22	85	85	22	23	23	24	92	92	10	20	25	25	80	
6 CHA Companies	341	85.25	Both	23	22	23	23	91	91	20	22	21	20	83	83	17	17	18	25	77	77	15	25	25	25	90	
7 Gill Engineering	340	85	Both	24	24	23	23	94	94	20	20	20	20	80	80	16	15	15	25	71	71	20	25	25	25	95	
8 Howard Stein Hudson	338	84.5	Both	22	22	21	22	87	87	20	21	22	22	85	85	17	16	16	25	74	74	25	25	20	25	95	
9 Jacobs	338	84.5	Both	23	23	23	23	92	92	20	20	21	18	79	79	18	19	15	25	77	77	20	20	25	25	90	
10 TranSystems	336	84	Both	22	22	22	22	88	88	20	20	21	20	81	81	20	21	22	24	87	87	20	20	15	25	80	
11 Alfred Benesch & Company	331	82.75	Both	25	24	25	24	98	98	23	23	20	22	88	88	15	14	14	22	65	65	10	20	25	25	80	
12 Nitsch Engineering	326	81.5	Both	22	22	22	22	88	88	18	20	20	20	78	78	18	18	19	25	80	80	25	20	15	20	80	
13 Stantec	322	80.5	Both	22	22	22	22	88	88	20	21	22	20	83	83	21	20	23	17	81	81	10	20	20	20	70	
14 Chappell Engineering Associates	320	80	Both	23	23	23	23	92	92	21	21	21	18	81	81	16	16	16	25	73	73	20	15	15	25	75	
15 BETA Group	318	79.5	Both	22	20	22	22	86	86	22	22	21	22	87	87	16	15	16	25	72	72	15	20	20	25	80	
16 Tetra Tech	315	78.75	Both	20	20	20	20	80	80	20	19	20	20	79	79	18	18	19	21	76	76	10	20	25	25	80	
17 CDM Smith	313	78.25	Both	24	22	22	24	92	92	17	18	17	18	70	70	2	68	13	12	25	63	63	25	25	15	25	90
18 Fuss & O'Neill	313	78.25	Both	22	22	22	22	88	88	17	20	18	16	71	71	17	17	15	25	74	74	20	20	15	25	80	
19 Green International	311	77.75	Both	22	22	22	22	88	88	18	18	18	16	70	70	16	16	18	23	73	73	15	20	20	25	80	
20 Bayside Engineering	309	77.25	Both	22	23	24	22	91	91	21	20	18	18	77	77	5	72	16	18	17	25	76	76	10	15	20	70
21 Modjeski and Masters	309	77.25	Bridge	20	20	20	20	80	80	18	18	18	19	73	73	23	22	22	24	91	91	15	15	15	20	65	
22 Dewberry	307	76.75	Both	22	22	22	22	88	88	18	18	17	18	71	71	19	18	21	25	83	83	15	15	15	20	65	
23 HDR Engineering	305	76.25	Both	20	20	20	20	80	80	17	18	17	18	70	70	17	16	12	25	70	70	25	25	10	25	85	
24 BSC Group	303	75.75	Both	22	21	22	23	88	88	18	18	20	20	74	74	3	71	15	15	14	25	69	69	15	20	75	
25 Parsons Transportation Group	298	74.5	Both	20	20	20	20	80	80	17	17	18	18	70	70	17	16	16	24	73	73	15	20	20	20	75	
26 WorldTech Engineering	294	73.5	Road	20	20	22	22	84	84	20	21	20	21	82	82	14	15	14	25	68	68	20	15	15	10	60	
27 C&C Consulting Engineers	292	73	Both	22	22	22	22	88	88	18	17	17	18	71	71	2	69	14	16	15	25	70	70	15	15	65	
28 Michael Baker	291	72.75	Both	20	20	20	20	80	80	19	18	17	18	72	72	14	14	12	23	64	64	25	20	10	20	75	
29 Kittelson & Associates	289	72.25	Road	20	20	20	20	80	80	17	17	16	18	68	68	13	12	12	24	61	61	10	20	25	25	80	
30 Collins Engineers	288	72	Both	20	20	22	20	82	82	20	20	18	17	75	75	14	14	13	25	66	66	20	10	15	20	65	
31 Hardesty & Hanover	286	71.5	Both	20	20	20	20	80	80	16	17	17	17	67	67	16	15	15	23	69	69	15	15	20	20	70	
32 Lin Associates	285	71.25	Bridge	20	20	20	20	80	80	19	19	19	19	76	76	14	15	15	25	69	69	15	15	10	20	60	
33 GM2 Associates	282	70.5	Both	23	23	22	22	90	90	18	18	18	17	71	71	16	17	13	20	66	66	20	10	10	15	55	
34 Hoyle Tanner & Associates	282	70.5	Both	20	20	20	20	80	80	19	20	18	18	75	75	13	15	14	25	67	67	15	15	15	15	60	
35 Environmental Partners	280	70	Road	18	18	18	18	72	72	15	18	10	18	61	61	14	14	13	25	66	66	15	20	25	25	85	
36 STV	280	70	Both	20	20	18	18	76	76	19	18	18	17	72	72	16	16	15	25	72	72	20	15	15	10	60	
37 TEC	280	70	Both	22	22	22	22	88	88	20	19	19	20	78	78	12	13	15	24	64	64	15	15	10	10	50	
38 CDR Maguire	278	69.5	Both	20	18	18	18	74	74	16	17	16	17	66	66	3	63	16	14	25	71	71	25	20	5	20	70
39 BL Companies	277	69.25	Both	20	20	20	20	80	80	20	20	18	18	76	76	2	74	14	12	25	63	63	10	15	10	25	60
40 Gannett Fleming	277	69.25	Both	20	20	20	22	82	82	17	17	17	17	68	68	15	13	14	25	67	67	15	15	15	15	60	
41 Kleinfelder	277	69.25	Both	18	18	18	18	72	72	18	18	19	17	72	72	14	15	14	25	68	68	15	20	5	25	65	
42 Pare Corporation	274	68.5	Both	20	20	20	20	80	80	18	19	19	19	75	75	16	15	14	24	69	69	15	10	10	15	50	
43 Garofalo & Associates	271	67.75	Both	20	20	20	20	80	80	18	18	18	18	72	72	16	16	14	23	69	69	20	10	10	10	50	
44 T.Y. Lin	271	67.75	Both	20	18	20	18	76	76	19	17	18	18	73	73	12	11	11	23	57	57	15	15	15	20	65	
45 Mott MacDonald	270	67.5	Bridge	20	20	20	20	80	80	17	17	17	18	69	69	15	16	15	25	71	71	10	15	10	15	50	
46 McMahon Associates	267	66.75	Road	20	20	18	18	76	76	18	18	17	19	72	72	13	14	14	23	64	64	15	15	5	20	55	
47 Weston & Sampson	262	65.5	Both	20	20	18	18	78	78	18	18	18	17	71	71	12	13	13	20	58	58	20	15	15	5	55	
48 McFarland Johnson	260	65	Both	20	18	20	20	78	78	19	19	18	19	75	75	13	13	11	20	57	57	10	15	10	15	50	
49 Tighe & Bond	256	64	Road	18	18	18	18	72	72	18	19	19	19	75	75	13	10	11	25	59	59	10	15	5	20	50	
50 Commonwealth Engineers	255	63.75	Both	20	20	20	20	80	80	17	17	16	18	68	68	13	14	12	18	57	57	20	10	10	10	50	
51 PRIME AE Group	253	63.25	Both	18	18	18	18	72	72	15	15	15	12	57	57	12	11	11	25	59							



STRUCTURAL SERVICES

MassDOT - 2021 MSA Request for Responses

OSD
OPERATIONAL SERVICES DIVISION
SUPPLIER DIVERSITY OFFICE

8.3.7 SUPPLIER DIVERSITY PROGRAM (SDP)

September 30, 2019
Mr. Daniel Deng
Lin Associates, Inc.
2001 Beacon Street, Suite 310
Brighton, MA 02135

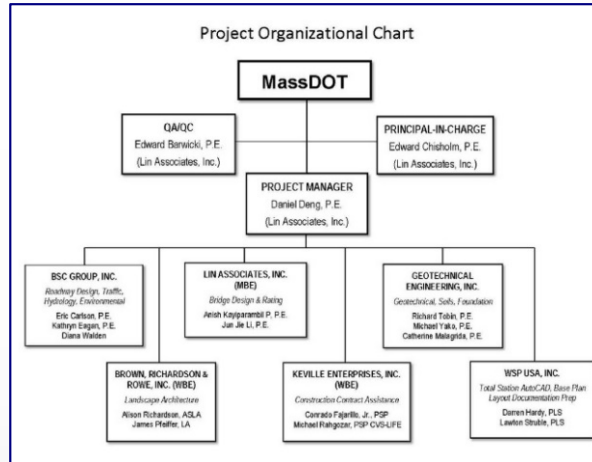
Dear Mr. Deng:

Congratulations! Your firm has been reviewed as a minority business enterprise (MBE) with the Supplier Diversity Office (SDO) under the business description of **STRUCTURAL AND CIVIL ENGINEERING, ARCHITECTURAL SUPPORT SERVICES**. Your firm will be listed in the SDO Certified Business Directory and the *Massachusetts Central Register* under this description. **This letter serves as the sole proof of your SDO certification.** Your designation as a MBE is valid for three (3) years unless renewed pursuant to 425 CMR 2.00.

Your firm's next renewal date is October 1st, 2022. SDO will send written renewal notices to your business and/or e-mail address on file approximately thirty (30) business days prior to your firm's three (3) years certification anniversary. Additionally, every six (6) years, certified companies that wish to remain certified may undergo a substantive review which will require certain updated supporting documentation.

SDO also reserves the right to monitor your firm and to perform random spot checks to ensure the firm continues to meet the certification criteria. Your firm is required to notify the SDO in writing of any material changes. Examples include but are not limited to changes in its business description, as well as business phone number, fax number, business physical location, webpage and e-mail addresses. Other reportable changes include business structure, ownership (the business is sold or transferred), control and outside employment. You also have a duty to report decertification and debarment notices from this or any other jurisdiction. Failure to abide by the continuing duty requirements shall constitute grounds for the firm's decertification.

Tel: (617) 720-3300 TDD: (617) 727-9716 Fax: (617) 727-4527
www.mass.gov/osd Follow us on Twitter: @Mass_OSD



MSA 2021 TEAM

WORK CATEGORIES	WORK PERFORMED BY	PREQUALIFIED
Bridge Design / Inspection / Rating	LIN (Prime MBE / DDE)	Yes
Highway Design	BSC	Yes
Traffic Operations & Studies	BSC	Yes
Hydraulics and Hydrology	BSC	Yes
Wetlands Delineation & Assessment	BSC	Yes
Geotechnical Engineering including soils and foundation studies	CEI	Yes
Landscape Architecture	Brown, Richardson & Rowe (WBE)	Yes
Construction Contract Assistance	Keville Enterprises (WBE)	Yes
Total Station AutoCAD Base Plan Services	WSP	Yes
Layout Documentation Preparation	WSP	Yes

Note: Keville & BRR will fulfill the M/WBE Participation as LIN cannot fulfill it as a Prime.

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Presented to:



Request for Responses (RFR)
Number 2021DOTMSA

BD-21-1030-OH100-OH001-59252

Statewide Engineering Design and Review Services

April 23, 2021

Submitted by:

Lin Associates, Inc.
2001 Beacon Street
Suite 310
Brighton, MA 02135

in association with:



Brown, Richardson + Rowe, Inc.
Landscape Architects and Planners



SDO Certified Minority Business Enterprise (MBE)
MassUCP Certified Disadvantaged Business Enterprise (DBE)



CONSTRUCTION ADMINISTRATION

Construction Administration

During the construction phase of a bridge project, Lin provides construction administration services to ensure construction is in conformance with project requirements and design criteria. These services include, but are not limited to:

- Review of shop drawings including erection/demo
- Respond to Request for Information (RFI)
- Conduct field observation & provide engineering advice
- Review of Value Engineering submittals
- Prepare drawing revisions for design changes
- Perform punch list and prepare as-built plans



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STRUCTURAL SERVICES

Representative Bridge Projects

1. Design-Build (Prime)

Route 3 NB & SB over Franklin Street, Bridge D-14-010, Duxbury

2. Major Highway (Prime)

Lowell Connector NB & SB over Industrial Avenue, Bridge L-15-068, Lowell

3. Stage Construction (Prime)

Roaring Brook Road over Roaring Brook, Bridge L-07-006, Lenox

4. Pedestrian Boardwalk (Sub)

DCR Neponset River Greenway Pedestrian Bridge, Bridge B-16-309

5. Shared Use Path (Sub)

DCR Hammond Pond Parkway Bridge Rehab, Bridge N-12-060, Newton

6. Rapid Construction (Sub)

Route 126 over CSX (Abandoned), Bridge B-06-011, Bellingham

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STRUCTURAL SERVICES

Representative Bridge Projects

7. Preservation (Prime)

Bridge Deck Joint Emergency Repairs, District 4, 33 Locations

8. Repair Assessment (Prime)

ST 213 EB over Methuen Rail Trail, Bridge M-17-026, Methuen

9. MassDOT Rating (Sub)

Statewide Bridge Ratings, Contract No. 97535 Assignment No. 4

10. MBTA Inspection / Rating (Sub)

Inspection / Rating Contracts - B92PS27; B92PS28; B92PS32; B92PS34

11. Massport Inspection (Sub)

MPA Contract No. A431-S1/M-00000270 FY22-26, Bridge Inspection

12. Structure Inspection (Prime)

Four Points by Sheraton Hotel Air Rights Structure Inspection, Newton

13. Geotechnical (Sub)

Lowell St. & Woburn St Intersection, Wilmington - Mast Arm Foundation

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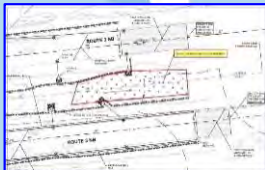
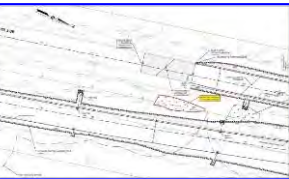
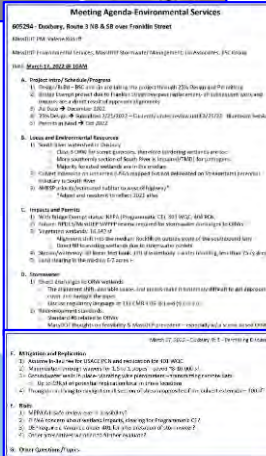
PORTFOLIO - BRIDGE (Design-Build)

Route 3 NB & SB over Franklin Street, Duxbury Bridge D-14-010, Bridge Replacement DB

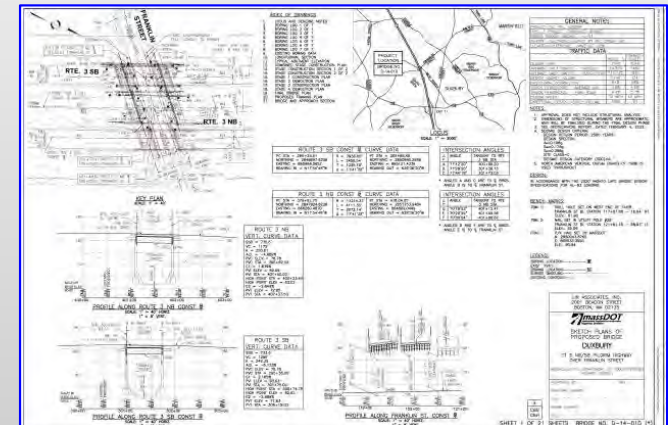
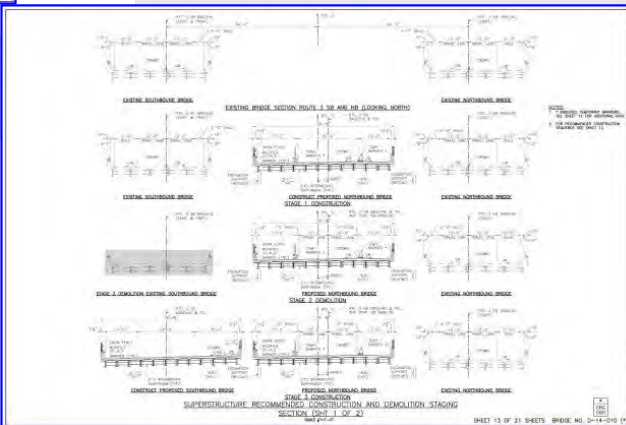
Firm's Role: Consultant - Structural Design
Owner: Massachusetts Department of Transportation

Project Description

- Prepare Preliminary Structural Report (PSR) and Bridge Type Selection Worksheet (BTSW)
- Increase bridge vertical clearance from 14'-6" to 16'-6"
- Provide cross-over in the median to keep both SB and NB traffic uninterrupted throughout the construction
- Prepare environmental permitting and wetland replication in the median area
- Prepare 25% Design and Bridge Sketch Plans submission
- Prepare Base Technical Concept (BTC) submission
- Provide Procurement and Construction Services for Design-Build

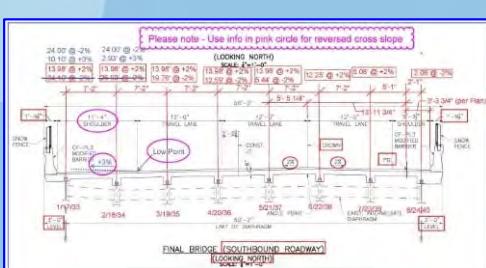


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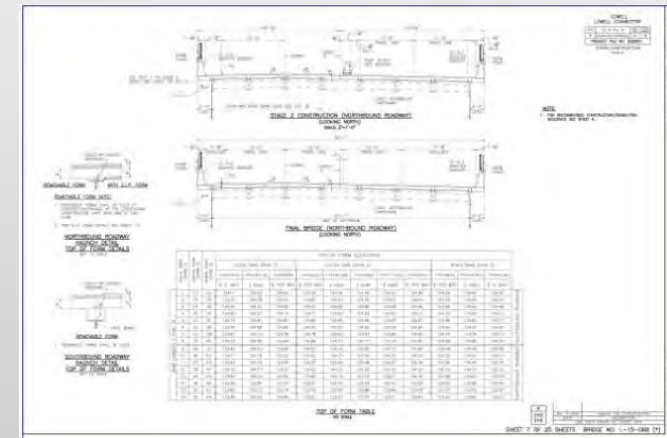
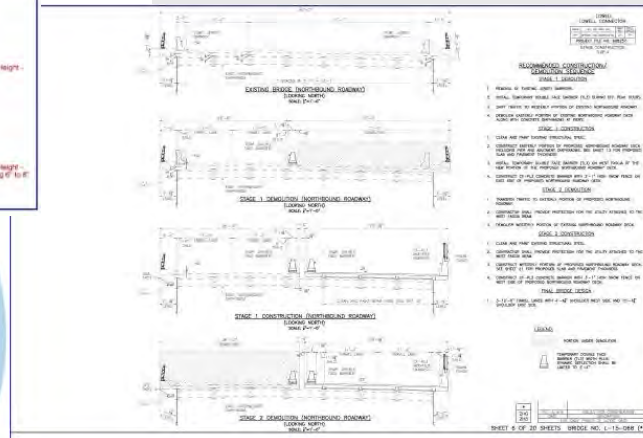




SECTION - LINK PLAN DETAILS OF EXISTING SOUTH RIVER 2
Scale: 1" = 10'

[illegible]

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PORTFOLIO - BRIDGE (Stage Construction)



Roaring Brook Road over Roaring Brook, Lenox Bridge L-07-006 Superstructure Replacement

Firm's Role: Consultant - Structural Design

Owner: Massachusetts Department of Transportation

Project Description

- Prepare Preliminary Structure Report (PSR) and Bridge Type Selection Worksheet (BTSW)
- Request a waiver for proprietary MDS-TL4 barrier (narrowest base) to allow for stage construction and avoid widening that would result in a Right of Way issue and costs increase
- Conduct virtual Design Public Hearing
- Prepare Bridge Sketch Plans
- Prepare 75% Design with 1st Bridge submission
- Prepare 100% Design with 2nd Bridge submission
- Prepare final PSE submission
- Perform Construction Phase Services

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
PROJECT INFORMATION
INTERFERENCE MEMORANDUM

TO: Patricia A. Longworth, P.E., Chief Engineer
FROM: Marc J. Hines, P.E., Director of Project Management
DATE: July 1, 2020
SUBJECT: LENOX SUPERSTRUCTURE REPLACEMENT & ROARING BROOK ROAD
OVER ROARING BROOK
Project File No. 606636

APPROVED

Justification Memorandum for Proprietary Products

The design consultant for our subject bridge project in Lenox, Massachusetts, Inc. has requested and MassDOT has approved the MDS-TL4 Barrier as the temporary traffic barrier to accommodate the stage construction for the subject project.

We believe the use of this product is in the public interest. Please note that the Town of Lenox has requested 11' 0" wide temporary lane when the typical T-4 Barrier can only provide 9' 0". For violations the MDS-TL4 Barrier with the narrowest base width among the MassDOT approved barriers, used proposed to provide 10' 0" lane width. Although a correspondence from the Town of Lenox approval of 10' 0" lane width using temporary MDS-TL4 Barrier which will be removed upon completion of the construction.

In accordance with the requirements of 23 CMR 4.01 (1)(c)(2), these proprietary items and in the public interest as the basis is essential for providing 10' 0" lane width to allow for emergency vehicles to cross the bridge with one lane alternating traffic throughout the staged construction as traffic demand is not feasible. Without using the MDS-TL4 temporary barriers, the bridge will need to be widened which will affect adjacent beam seats, wingwalls, roadway pavement, drainage and existing bridge and abutment. To conform with M.G.L. c. 89B, § 23C, please submit supporting justification to the Project Manager for the project records. Please having questions regarding this request, please contact William Brown, Project Manager, at (774) 344-1711.

MJH:wh
Enclosure
w/enclosure

cc: J. E. Hines, Acting Construction Contracts Engineer

MASSDOT
Massachusetts Department of Transportation
Highway Division

Welcome!

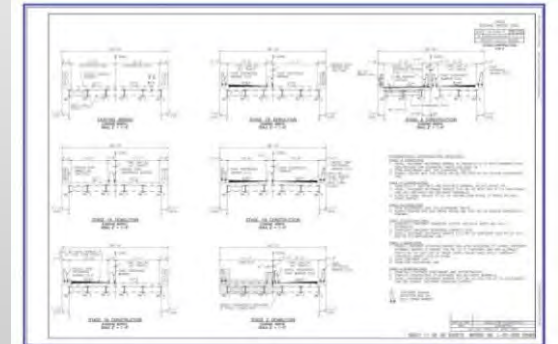
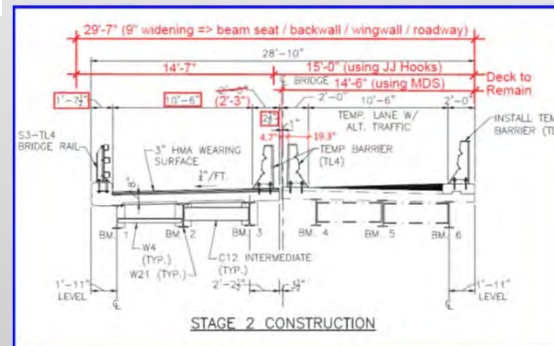
Bridge Superstructure Replacement
Lenox, Roaring Brook Road over Roaring Brook
Project File No. 606636

DESIGN PUBLIC HEARING
Roaring Brook Road over Roaring Brook
June 11, 2020

Item	Location	Project Name	Project Number	Project Status	Project Date	Project Type	Project Description	Project Notes
1	Lenox	Roaring Brook Road over Roaring Brook	606636	75% Design	2020	Bridge	Superstructure Replacement	Refer to Page 5 for details
2	Lenox	Roaring Brook Road over Roaring Brook	606636	100% Design	2020	Bridge	Superstructure Replacement	Refer to Page 5 for details
3	Lenox	Roaring Brook Road over Roaring Brook	606636	Final PSE	2020	Bridge	Superstructure Replacement	Refer to Page 5 for details

Chart Extracted from Page 5

Just trying to understand what exactly are limited deflection & TL3 vs. TL4 -
 (1) Refer to Page 5 below which has a clear description regarding limited deflection as the horizontal displacement of the barrier system defined as "Clear Zone" between "Traffic Side" and "Work Zone" as a free standing system without anchoring provided.
 (2) Refer to Page 5 below for the comparison of the impact load regarding TL3 and TL4. TL3 is for vehicle = 5,000 lb (pickup truck); speed = 62mph; angle = 25 degree. TL4 is for vehicle = 22,000 lb (truck); speed = 56 mph; angle = 35 degree.



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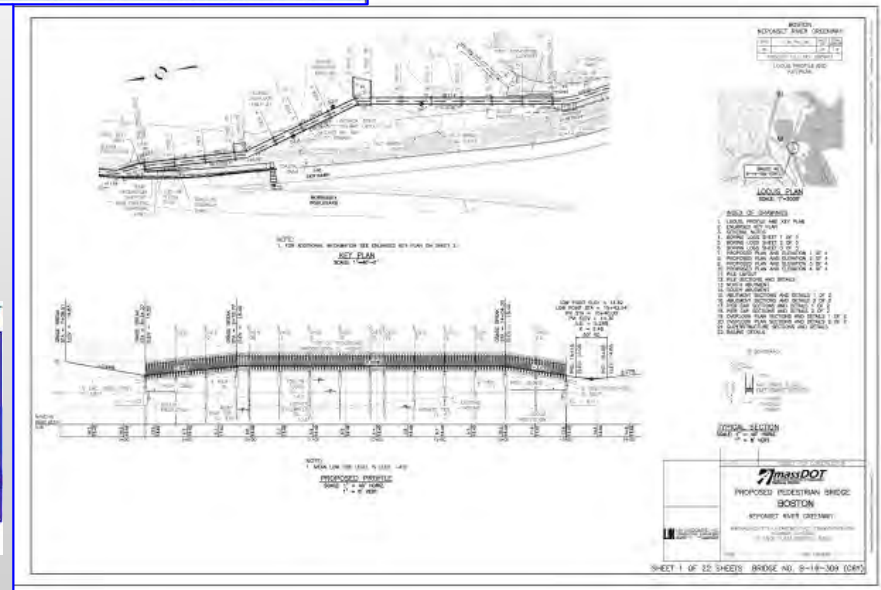
PORTFOLIO - BRIDGE (Ped. Boardwalk)

DCR Neponset River Greenway Pedestrian Bridge Boston, Bridge B-16-309

Firm's Role: Subconsultant - Structural Design
Owner: Mass Department of Conservation and Recreation

Project Description

- Prepare application for relevant environmental permits
- Prepare 75% Design with 1st Bridge submission
- Prepare 100% Design with 2nd Bridge submission
- Prepare final PSE submission



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PORTFOLIO - BRIDGE (Shared Use Path)

DCR Hammond Pond Parkway Bridge Rehabilitation Bridge N-12-060, Newton

Firm's Role: Subconsultant - Structural Design

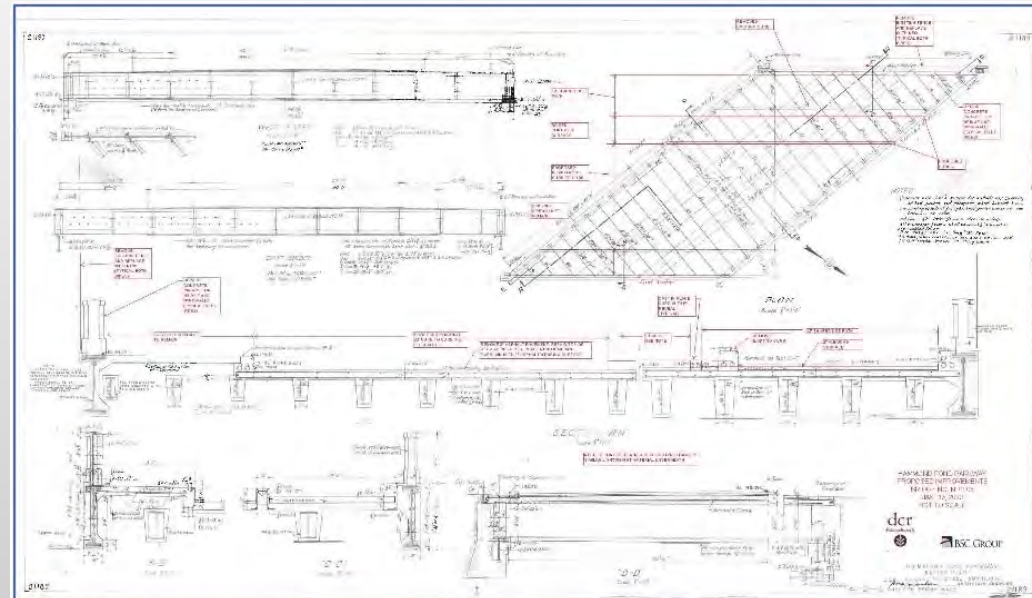
Owner: Mass Department of Conservation and Recreation

Project Description

- Perform visual observation of existing bridge consist of 2 steel fascia girders and 29 beams with a large skew angle near 50 degrees
- Prepare bridge sketch plans for a reconfigured roadway reducing from 4 to 2 (one each direction) traffic lanes with a median and shared use path
- Perform live load rating to account for a reconfigured roadway for all types vehicular loadings, including SU and EV, per MassDOT Bridge Manual
- Prepare final bridge plans, special provisions, and cost estimate



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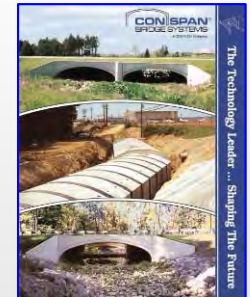
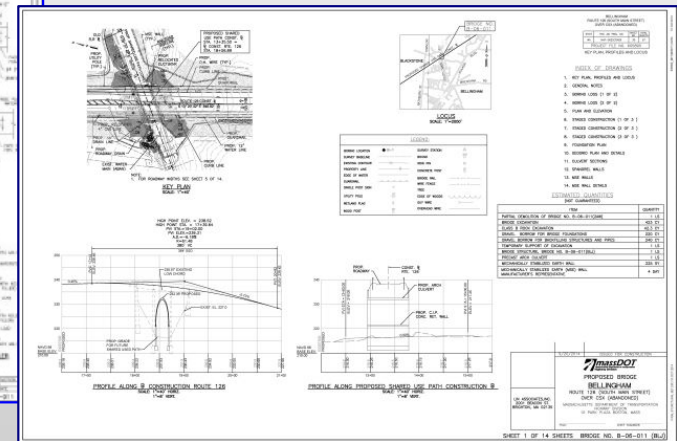
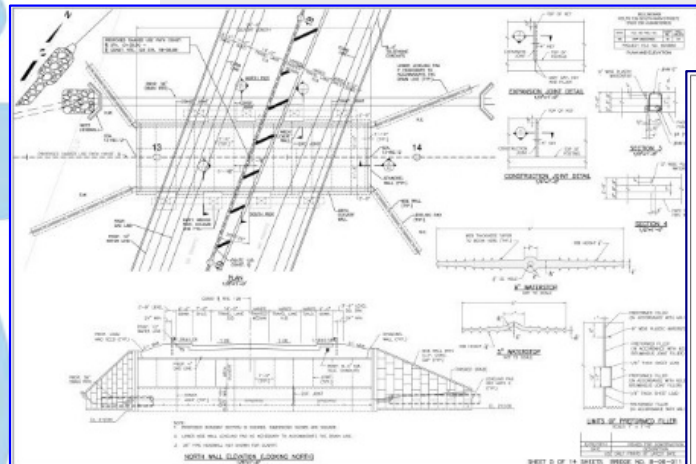
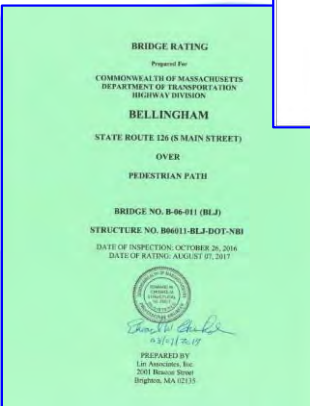
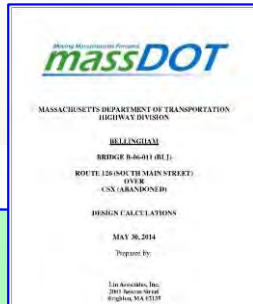
PORTFOLIO - BRIDGE (Rapid Construction)

Route 126 over CSX (Abandoned), Bridge B-06-011, Bellingham, Bridge Replacement - Concrete Arch

Firm's Role: Subconsultant - Structural Design
Owner: Massachusetts Department of Transportation

Project Description

- Evaluate 3-sided bridge vs. concrete arch bridge for rapid construction
- Construct new concrete arch bridge under existing bridge still opened to regular vehicular traffic
- Demolish existing bridge and backfill concrete arch as buried structure
- Prepare 75% Design with 1st Bridge submission
- Prepare 100% Design with 2nd Bridge submission
- Prepare final PSE submission
- Perform bridge live load rating on concrete arch



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PORTFOLIO - BRIDGE (Preservation)

Bridge Deck Joint Emergency Repairs, District 4, 33 Various Locations

Firm's Role: Consultant for District 4 - Structural Design
Owner: Massachusetts Department of Transportation

Project Description

Emergency repairs on deteriorated bridge deck joints include:

- Saw Cut and Seal
- Asphaltic Plug Joint
- Armored Joint
- Transflex Joint
- Strip Seal w/Plate
- Premoulded Joint Filler
- Concrete Header w/Seal

JOINT SELECTION TABLE

Table 1 - BEJS SYSTEM Sealing
See Technical Manual for material specifications & dimensions

Joint Type	Sealing Material	Depth of Seal	Min. Joint Width (inches)	Max. Joint Width (inches)
The following sizes are supplied from 1/2" (12.5mm) to 10" (254mm). See BEJS-01 for BEJS installation details.	1/2"	1.5" (38mm)	1/4"	1/2"
	3/4"	1.5" (38mm)	1/4"	1/2"
	1"	1.5" (38mm)	1/4"	1/2"
	1 1/2"	1.5" (38mm)	1/4"	1/2"
The following sizes are supplied from 1 1/2" (38mm) to 10" (254mm). See BEJS-01 for BEJS installation details.	1 1/2"	1.5" (38mm)	1/4"	1/2"
	2"	1.5" (38mm)	1/4"	1/2"
	3"	1.5" (38mm)	1/4"	1/2"
	4"	1.5" (38mm)	1/4"	1/2"

Not joint sizes larger than 4 inches consult EMMAL.

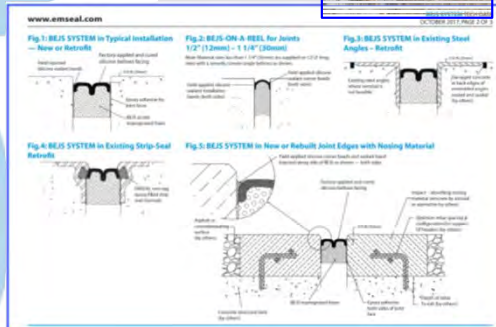
EMMAL 4-STEP BRIDGE CHECKLIST
COMPLETE (1) BRIDGE CHECKLIST PER JOINT

1. GENERAL INFO
Name: _____ Company/Agency: _____ Date: _____
Phone: _____ Fax: _____ Email: _____
Bridge Location: _____ Mile Marker: _____ Lane Direction: _____
Bridge Name: _____ Description: _____

2. BRIDGE MEASUREMENTS
A) Abutment Span "A": _____ LF
B) Pier Span "B": _____ LF
C) Joint Length: _____ LF
D) Ambient Temp: _____
Deck Temp: _____

3. JOINT GAP MEASUREMENTS
A) Joint Dimensions: _____
B) Ex Joint On A-Side: _____
C) Does Joint Width Vary: _____
D) Is Joint Subject to Freeze-Thaw: _____

4. TRANSITIONS
Select Joint Termination Condition:
A) Off Deck B) Through Curb C) Up Curb/Parapet D) Custom Trans



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Rev - February 15, 2018

Top 33 List of Bridges Needing Joint Repairs

1. Bridge B-29-010 (2EU) - I-95/ST128 NB over Route 3A/Cambridge Street in Burlington
2. Bridge B-29-010 (2EV) - I-95/ST128 SB over Route 3A/Cambridge Street in Burlington
3. Bridge L-15-081 (2H4) - Lowell Conn Ramp B-10 over Lowell Conn Ramp B8 in Lowell
4. Bridge W-43-036 (2J3) - I-93 over Montvale Ave. in Woburn
5. Bridge A-10-021 (2DM) - Route 2 over Lake Street in Arlington
6. Bridge M-12-038 (3F0) - ST16 Mystic Valley Parkway over ST38 Main Street in Medford
7. Bridge M-17-016 (31H) - Howe Street over ST 213 in Methuen
8. Bridge P-03-015 (2UE) - Route 128 over Lowell Street in Peabody
9. Bridge S-27-006 (2L2) - Route 28 Fellsway West over I-93 in Stoneham
10. Bridge N-15-018 (2XK) - I-495 RAMP N over combined Sutton Street & MBTA in North Andover
11. Bridge T-03-013 (2L5) - North Street over I-495 in Tewksbury
12. Bridge M-12-035 (SHH) - I-93 over Route 28 Fellsway West in Medford
13. Bridge M-12-044 (3FC) - I-93 Ramp to I-93 NB over I-93 (exit 30) in Medford
14. Bridge D-03-034 (2T8) - US1 NB Newbury Street over I-95 in Danvers
15. Bridge D-03-035 (2T9) - US1 SB Newbury Street over I-95 in Danvers
16. Bridge W-38-030 (2MB) - West Street over I-93 in Wilmington
17. Bridge M-17-032 (2YF) - ST 110 Merrimack Street over I-495 in Methuen
18. Bridge B-19-009 (2VC) - I-95 NB over Fish Brook in Boxford
19. Bridge B-19-009 (2VD) - I-95 SB over Fish Brook in Boxford
20. Bridge B-07-004 (2MP) - Trapelo Road over MBTA/BMRR in Belmont
21. Bridge A-09-032 (300) - Greenwood Road over I-495 NB in Andover
22. Bridge A-09-032 (301) - Greenwood Road over I-495 SB in Andover
23. Bridge A-10-020 (2LK) - Park Ave over Route 2 in Arlington
24. Bridge W-38-029 (2KV) - Route 129 Lowell Street over I-93 Wilmington
25. Bridge W-38-034 (2E8) - Route 125/Ballardvale Street over I-93 in Wilmington
26. Bridge W-04-032 (2E3) - US 20 WB/Weston Street over ST I-95/ST128 in Waltham
27. Bridge W-04-033 (2E4) - US 20 EB/Weston Street over ST I-95/ST128 in Waltham
28. Bridge W-04-024 (2LE) - Trapelo Road over I-95/Rt128 in Waltham
29. Bridge B-19-011 (2Y5) - Topsfield Road over I-95 in Boxford
30. Bridge B-19-014 (30D) - Route 97 Killam Hill Road over I-95 in Boxford
31. Bridge L-10-015 (2LW) - Grove St over I-95 in Lexington
32. Bridge H-12-056 (2RU) - ST125 Connector WB over I-495 in Haverhill
33. Bridge H-12-056 (2RV) - ST125 Connector EB over I-495 in Haverhill



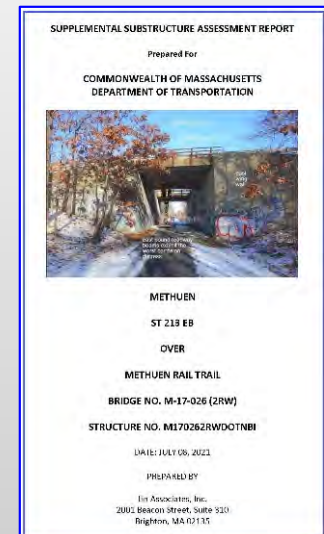
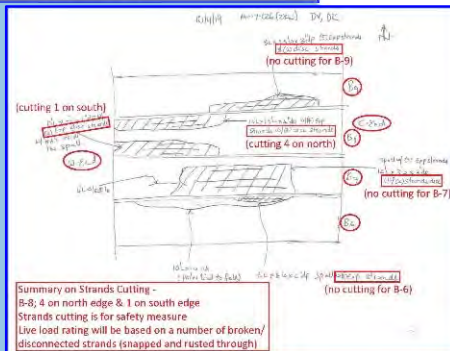
PORTFOLIO - BRIDGE (Repair Assessment)

ST 213 EB over Methuen Rail Trail, Bridge M-17-026, Methuen - Structural Assessment

Firm's Role: Consultant for District 4 - Structural Design
Owner: Massachusetts Department of Transportation

Project Description

- Conduct field evaluation on deck beams with the strands exposed and broken
- Prepare field report for strands cutting procedures done by contractor
- Perform load rating on the existing deck beams with broken strands
- Evaluate superstructure replacement alternatives
- Prepare preliminary cost estimates for comparison
- Prepare recommendation for the preferred superstructure type
- Prepare supplemental substructure assessment (precast CONSPAN arch)



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PORTFOLIO - BRIDGE (MassDOT Rating)

Statewide Bridge Ratings, Contract No. 97535 Assignment No. 4

Firm's Role: Subconsultant - Rating
Owner: Massachusetts Department of Transportation

Project Description

- Arrange for local police detail and inspection equipment rental
- Perform bridge observation to verify the deterioration noted per the latest routine/special member inspection
- Follow the protocol in notifying MassDOT of any Critical Findings
- Perform live load rating for all truck loadings per MassDOT criteria
- Prepare rating reports, preliminary and final



BRIDGE RATING

Prepared For:

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

GREENFIELD

ROUTE 58

OVER

PANAMA

BRIDGE NO. G-12-852 (0000)

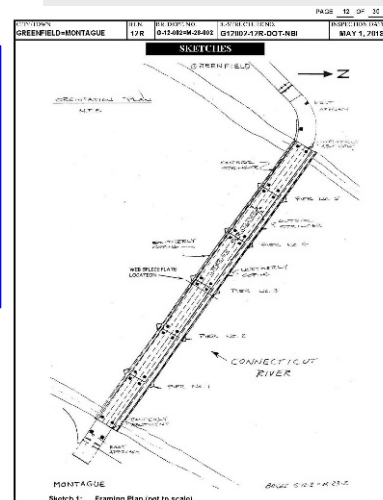
STRUCTURE NO. G12852-000-001-NB

DATE OF INSPECTION: APRIL 11, 2018
DATE OF RATING: AUGUST 14, 2018

PREPARED BY:



LIN ASSOCIATES, INC.
224 Franklin Street
Boston, MA 02110



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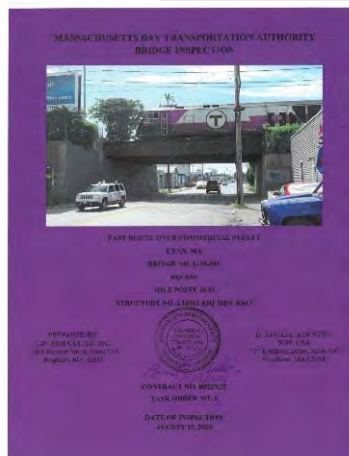
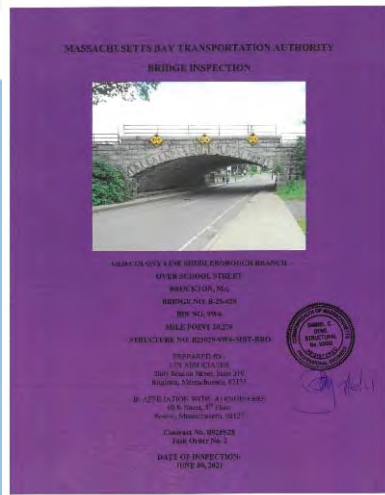
PORTFOLIO - BRIDGE (MBTA Inspection)

MBTA Systemwide Inspection / Rating Contracts - B92PS27; B92PS28; B92PS32; B92PS34

Firm's Role: Subconsultant - Inspection / Rating
Owner: Massachusetts Bay Transportation Authority

Project Description

- Coordinate with Keolis for flagman and track outage request
- Arrange for local police detail and inspection equipment rental
- Perform bridge inspection and rating for MBTA Systemwide
- Follow the protocol in notifying MBTA of any Critical Findings
- Prepare preliminary repair costs for future reference
- Perform live load rating for all train loadings per MBTA criteria
- Prepare inspection and rating reports, preliminary and final



BRIDGE INSPECTION & RATING									
LINE	BRIDGE	TYPE	SPAN	DATE	INSPECTOR	STATUS	REMARKS	REMARKS	REMARKS
1	FRANKLIN AVENUE	1	100	8/19/21
2	FRANKLIN AVENUE	1	100	8/19/21
3	FRANKLIN AVENUE	1	100	8/19/21
4	FRANKLIN AVENUE	1	100	8/19/21
5	FRANKLIN AVENUE	1	100	8/19/21
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97	FRANKLIN AVENUE	1	100	8/19/21
98	FRANKLIN AVENUE	1	100	8/19/21
99	FRANKLIN AVENUE	1	100	8/19/21
100	FRANKLIN AVENUE	1	100	8/19/21

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PORTFOLIO - BRIDGE (Massport Inspection)

Massport MPA Contract No. A431-S1/M-00000270 FY22-26, Bridge/Tunnel Inspection; NTP Pending

Firm's Role: Subconsultant - Inspection Owner: Massachusetts Port Authority

Project Description

- Provide bridge and tunnel inspection services
- Perform analysis of bridge components
- Perform reviews of bridge rating reports
- Perform analyses on overhead signs
- Provide recommendations for repairs
- Prepare engineering cost estimates
- Prepare written reports of findings
- Prepare work plans
- Coordination of traffic/police details

EXHIBIT A

SCOPE OF WORK

The Consultant shall provide professional bridge and tunnel inspection services on an as-needed basis as directed by the Authority. These services shall be performed at Logan and in South Boston, MA.

The Consultant's Scope of Work shall include, but not be limited to the following:

- (1) Perform bridge inspections for all current and future bridges owned and operated by Massport per the NTHS on bridge inspections as assigned.
- (2) Perform analysis of bridge components, including but not limited to decks, expansion joints, beams and columns if directed.
- (3) Perform tunnel inspections for all current and future tunnels owned and operated by Massport per the NTHS for tunnel inspections.
- (4) Perform reviews of Bridge Rating Reports for any new Massport Bridges that are constructed during this term contract as directed.
- (5) Perform analyses on overhead signs, sign foundations, and traffic signal foundations as assigned.
- (6) Provide recommendations for repairs based on the above analyses.
- (7) Prepare engineering cost estimates for proposed repair work as required.
- (8) Prepare written reports of findings as required and submit to the Authority and to the MassDOT 4D system as directed by Massport.
- (9) Prepare work plans in accordance with MP's direction.
- (10) Coordination of traffic/police details with MPA, MITA, State Police, and the Capital Programs Department.

EXHIBIT B

Guidelines for Preparation of Work Orders

Work Orders are intended to be discrete documents that will provide, in detail, the background and factual context within which a particular scope of work element or series of work elements will be completed by the Consultant. Work Orders shall be construed to be in addition to, supplementary to and consistent with the provisions of the contract. The following guidelines shall be followed in preparing Work Orders for review and approval by the Authority.

1 - SAMPLE FORMAT

Work Orders shall be prepared by the Consultant and submitted to the Authority for review and approval in strict accordance with the sample form provided by the Capital Programs and Environmental Department (in Excel format). Work Orders shall only be numbered sequentially and consultants shall not create their own work order format. The Work Order shall not include a description of the services not being provided by the Consultant.

2 - DETAILED COST BREAKDOWN

The Consultant shall attach a detailed cost breakdown in the form of a level of effort matrix which clearly identifies tasks, personnel, materials, rates and multipliers. Reimbursable expenses shall be described within the level of effort matrix. Furthermore, the level of effort matrix shall include a breakdown of costs for each and every subconsultant or vendor. Consultant shall not attach subconsultant or vendor agreements to the Work Order.

3 - WORK ORDER AMENDMENTS

Work Orders may be amended utilizing the same work order format. Each amendment shall operate as a separate document and shall not require a review of the original Work Order in order to understand the details of the amendment. Each amendment shall clearly identify what element of the original Work Order has been modified and what, if any, schedule or monetary impacts have resulted from such modifications. If the amendment will increase the overall amount of the Work Order, the Work Order amendment must include a level of effort matrix for the increased amount, as described above.

4 - WORK ORDER CLOSEOUT

Upon completion of work or completion of services for a particular Work Order, the Consultant is required to close out the Work Order by completing a Work Order Close-Out Form. The Consultant shall complete and sign the Work Order Close-Out Form and submit it to the Authority for its review and approval. The form identifies what work and monies have been authorized and paid to date including any amendments. Once a Work Order Close-Out Form is signed by the Authority, the Work Order shall be considered closed and no other services may be performed or billed against the particular Work Order. Work Order Close-Out Forms can be obtained from the Project Manager. Consultants should ensure that a separate Work Order Close-Out Form is completed for every work order executed under the Agreement.

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Daniel Deng

From: Daniel Deng
Sent: Wednesday, April 13, 2022 2:18 PM
To: Colleen Egan
Cc: Basil Bandimira; Gerri Naughton; Edward W. O'Connell
Subject: RE: FY22-26 Term Bridge & Tunnel Inspection Engineering Consultant MPA Contract No. A431-S1/M-00000270

Thank you Colleen,
We'll provide you with the requested information as soon as we can.
Regards,
Daniel

From: Colleen Egan <Cegan@linboston.com>
Sent: Wednesday, April 13, 2022 10:52 AM
To: Alex Terroult <ATerroult@cdlinc.org>; Gerri Naughton <gnaughton@linboston.com>; Daniel Deng <dldeng@linboston.com>
Cc: Basil Bandimira <bbandimira@linboston.com>
Subject: FY22-26 Term Bridge & Tunnel Inspection Engineering Consultant MPA Contract No. A431-S1/M-00000270

Good morning Team,

Please see attached and below and provide the requested information at your earliest convenience. Please let me know if you have any questions - 878-505-6135.

Required Documents

Exhibit A Examples and Templates Attached
Insurance Certificates - naming AEB and Massport (following the below designations)

5.11. Consultant shall maintain and keep in effect during the performance of services hereunder the following insurance coverages: (a) professional liability insurance for negligent errors and omissions with a minimum limit of \$1,000,000; (b) worker's compensation insurance as required under federal and Massachusetts law; (c) employer's liability insurance with a minimum limit per accident or disease of \$1,000,000; (d) commercial general liability insurance for bodily injury and property damage in the combined single limit of \$1,000,000, including blanket contractual liability insurance covering all liabilities assumed hereunder by Consultant; (e) comprehensive automobile liability insurance for bodily injury and property damage in the combined single limit of \$1,000,000 covering all owned, hired, and non-owned vehicles; and (f) valuable papers insurance for restoration of plans, drawings, field notes and other documents in the event of their loss or destruction while in the custody of Consultant. All policies of liability insurance described in (d) and (e), above, shall name the Authority as an additional insured, and shall be endorsed with a waiver of subrogation by the insurer as to the Authority. Consultant shall furnish a certificate of insurance for the above-mentioned insurance within ten (10) days of the date hereof, which shall provide that the insurance shall not be subject to cancellation, expiration without renewal, termination, or material change during the term hereof except upon thirty (30) days' prior written notice to the Authority.

Colleen Egan
Office Administrator



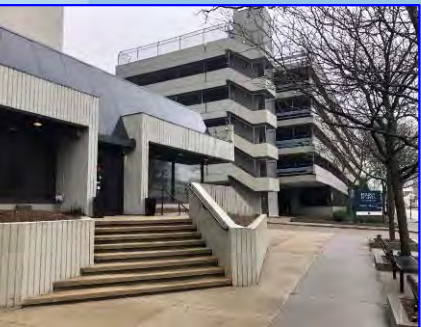
PORTFOLIO - BRIDGE (JF White Inspection)

Four Points by Sheraton Hotel Air Rights Structure, Newton Structure Inspection over I-90 EB/WB & MBTA Worcester Line

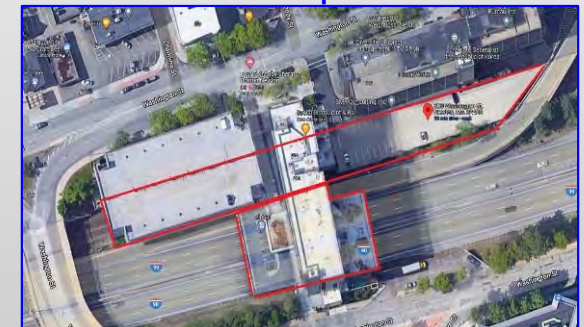
Firm's Role: Consultant - Inspection
Owner: JF White Properties (Private)

Project Description

- Perform inspection of structure underside for 3 locations
- Parking Garage on the west, Hotel and Open Deck Parking on the east
- Perform routine inspection for underside of structure over I-90 WB, Ramp C, and MBTA Worcester Line
- Perform routine inspection for substructure elements including abutments, piers and columns
- Utilize Hi-Rail bucket truck for the inspection over the railroad tracks
- Coordinate traffic control, police details with masonry repair contractor on board to minimize the impact on lane closure
- Coordinate with Keolis for flagman and the window for night work
- Prepare plans and elevations to identify deteriorations for future repairs
- Prepare inspection report in PDF format



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DESIGN AWARDS

- **CMAA - 2012 Infrastructure Project of the Year Award**
93 Fast 14 Rapid Bridge Replacement Project (< \$100M)
- **CMAA - 2012 Infrastructure Project of the Year Award**
'Heavy Lift' Bridge Replacement Project, Wellesley (< \$10M)
- **ACEC - 2019 Silver Award for Outstanding Design**
Longfellow Bridge Rehabilitation Design-Build



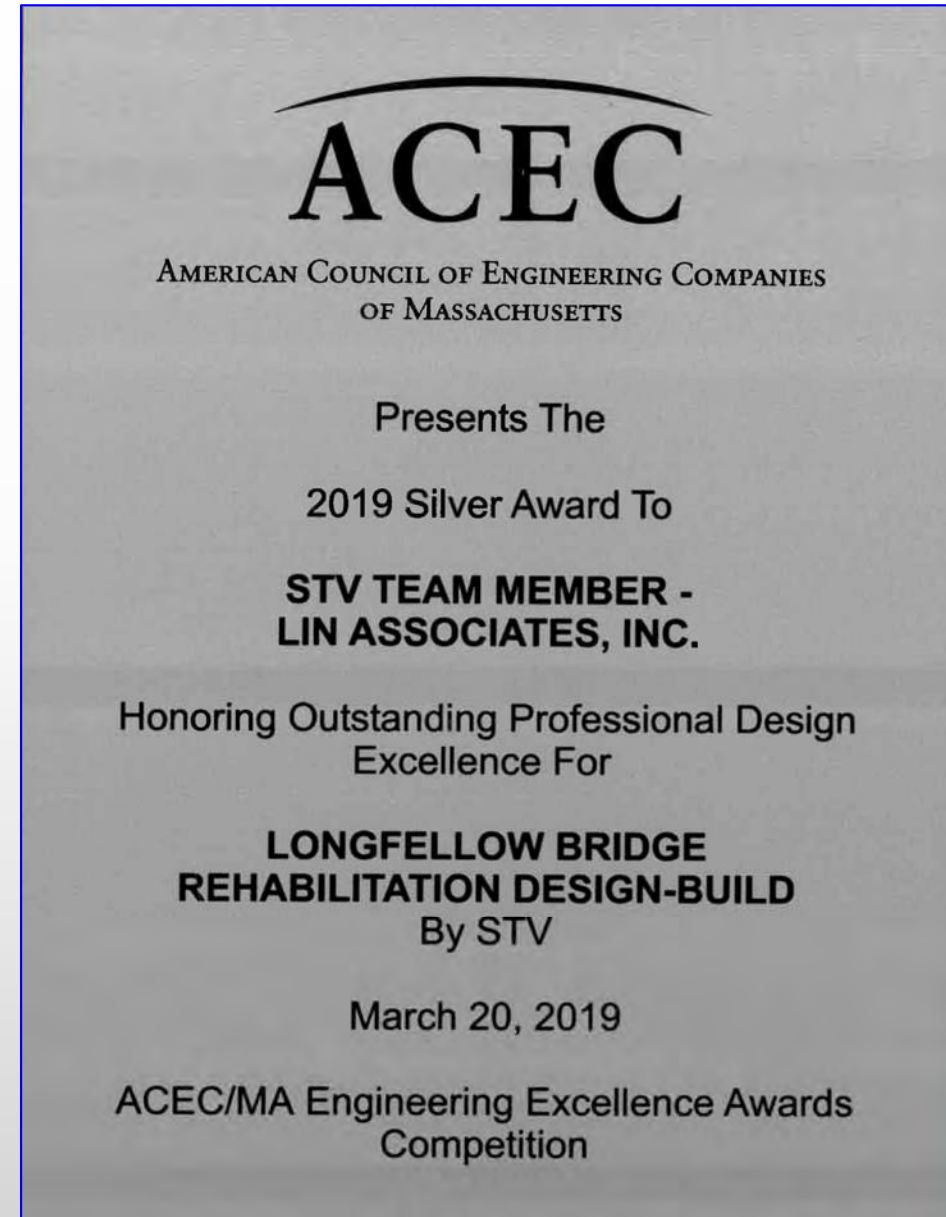
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DESIGN AWARDS



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LIN ASSOCIATES, INC.

CONSULTING ENGINEERS

2001 Beacon Street, Suite 310
Brighton, MA 02135



www.linboston.com



CORPORATE BACKGROUND

CONSULTING ENGINEERS

Since 1978, Lin Associates, Inc. has provided structural design and construction administration services to a diverse client base including municipal, state, and federal agencies as well as the private sector.

Our engineers are professionally licensed in most New England states .

Lin Associates, Inc. is a privately owned, Mass Supplier Diversity Office (SDO) certified Minority Business Enterprise (MBE) and Disadvantaged Business Enterprise (DBE).



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STRUCTURAL SERVICES - BUILDING

Structural Services



Lin Associates has been both a Prime and Subconsultant on numerous DCAMM projects over the past 30 years, many of which have involved aggressive design and construction schedules, including emergency evaluation and remediation of a wide spectrum of problems in both occupied and unoccupied buildings.



Our skilled engineers have performed services ranging from simple structural evaluations to the study, design and construction (\$302M) of a new 428,000 SF psychiatric hospital in Worcester, MA. We have designed renovations of existing buildings for numerous schools (both state and private), correctional facilities, courthouses, and hospitals.

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STRUCTURAL SERVICES - **BUILDING**



- Renovation & Addition to the Orleans Town Hall
- New Howe Manning Elementary School, Middleton
- New State Police Stations, Dartmouth & Millbury
- New Department of Public Works Facility Offices & Vehicle Maintenance, Sudbury
- Upgrade to Science & Academic Facilities at Hemenway Hall, Framingham State University
- Expansion of the Cape Cod Community Health Center, Mashpee
- New Health & Wellness Center, Bunker Hill Community College, Charlestown



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CONSTRUCTION ADMINISTRATION

Construction Administration

During the construction phase of a project, Lin Associates provides construction administration services to ensure construction is in conformance with project requirements and design criteria.

These services include, but are not limited to, review of shop drawings and materials, field observation, review of Value Engineering submittals, and coordination with regulatory agencies to assure compliance with applicable codes and regulations.





PORTFOLIO - EDUCATIONAL

Upgrade to Science & Academic Facilities at Hemenway Hall, Framingham State University, Framingham, MA



- 164,000 GSF renovation includes infrastructure upgrades, involving a total replacement of existing MEP/FP systems, as well as window replacement, envelope repairs and seismic upgrades.
- The new 60,800 GSF addition houses 16 chemistry and biology teaching labs and support spaces on four floors in an addition to the east of Hemenway Annex, connected to the existing building by a four story atrium.
- The atrium functions as a major social space for the science complex.
- LEED Silver

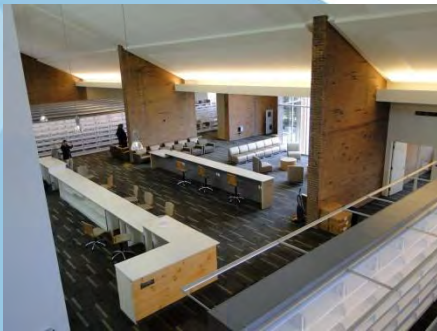




PORTFOLIO - EDUCATIONAL

Campus Core Modernization, Greenfield Community College, Greenfield, MA

- 96,000 GSF
- 16,000 SF addition has a cafeteria and an expanded library as well as a new accessible main entrance to the college.
- Renovated Core includes one stop enrollment center, a multicultural center, a cafeteria and a library/learning commons, and administrative spaces.
- LEED Gold



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PORTFOLIO - EDUCATIONAL

New Health & Wellness Center, Bunker Hill Community College, Charlestown, MA



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- 49,000 GSF
- Houses a gymnasium for its championship athletic teams and a fitness center to promote the general health and wellness of the entire college community.
- "Smart" classrooms, faculty offices and spacious state-of-the-art "sim"-labs with high-tech mannequins engineered to reflect various medical maladies for training students in a hospital setting.
- Assisted Construction Manager in developing REVIT model for "Clash Detection" of the building utilities and structure.
- LEED Gold



PORTFOLIO - RECREATIONAL

Blue Hills Boys & Girls Club, Boston, MA

- 19,000 SF addition to an existing facility housing a gymnasium, arts and learning facilities.
- A new teen center, education room and a performance center.
- The highlight of the new addition is a new swimming pool enclosed in an aluminum and glass atrium that has a retractable roof that allows for a year round aquatic program.



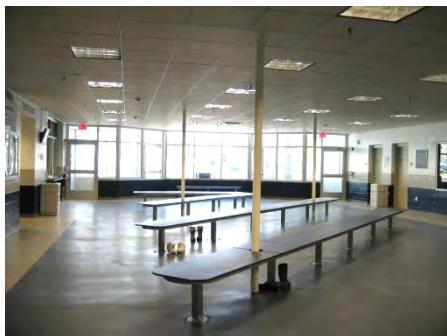
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PORTFOLIO - RECREATIONAL

Renovation of the Jim Roche Community Ice Rink, West Roxbury, MA

- Rehabilitation of the ice-skating facility by replacing the skating rink surface and modernizing the ancillary appurtenances and the exterior facade.



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PORTFOLIO - RECREATIONAL

Mildred Avenue Middle School Community Center, Boston, MA



- Mildred Avenue Community Center: Co-located with the Mildred Avenue Middle School, the Community Center features a six lane competitive swimming pool, balcony seating and a family viewing area, an oversized gymnasium, weight/exercise room, and locker areas.
- The center provides facilities for all ages from day care rooms to a senior lounge and a recording studio with an editing suite for teens.



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PORTFOLIO - **HEALTHCARE**

Worcester Recovery Center, Worcester, MA



- New 320-Bed, 428,000 SF Psychiatric Hospital
- Largest non-road, state-funded building project in the Commonwealth's history.
- 260-Bed Adult Hospital; 30-Bed Adolescent Inpatient Facility; 30-Bed Adolescent Intensive Residential Treatment Beds.
- Building plan reflects the various stages of recovery by using familiar environments such as “house”, “neighborhood” and “downtown”.
- The “downtown” area surrounds around a central “village green” that is shared by entire facility.
- Each living unit has a secure outdoor area with a basketball court and seating for patient's use as well as common space inside laid out like a living-room including TV's, couches and other seating arrangements.
- Each patient has a private room that enhances the staff's ability to provide individualized care.
- LEED Gold.

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PORTFOLIO - CONDOMINIUM / MIXED USE

Kasanof Residences, Dorchester, MA

Project Description

- 72,000 GSF
- Four story L-shape building with flat roof.
- First floor consists of 3,600 SF of retail space, community room and common indoor space.
- Multi-Unit rentals on the upper floors with 48 units set aside for affordable housing.
- Part of the City of Boston's Green Affordable Housing Program boasting LEED Silver status utilizing photovoltaic panels, green roof and solar thermal panels.



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PORTFOLIO – CORRECTIONAL FACILITIES

New DYS Facility Dorchester, MA

Project Description

- 42,000 SF on two floors providing 60 additional beds to the existing facility.
- The units, grouped in four residential pods each with 15 sleeping rooms, are organized around column-free day rooms.
- Separate from the living spaces, each pod has an education section with classrooms clustered in an academic setting and arranged for easy observation of the inmates by Staff.





PORTFOLIO - MUNICIPAL

New State Police Station, Dartmouth, MA

Project Description

- The 1.7-acre site is bound by Greenwood Street, the Mass Turnpike, and the Route 20 Connector.
- The building is 18,000 gross square feet on one floor.
- The building is arranged in a cross with each segment accommodating one of the major program components consisting of a public area; the control, operations and staff support areas; the detention area; and a four-bay garage.
- Vehicle impoundment area and parking for 28 cars.



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PORTFOLIO - MUNICIPAL

New Department of Public Works Facility, Sudbury, MA

Project Description

- This project involved the design and construction of a new maintenance garage facility and a new office building to house the operations of the Sudbury Department of Public Works.
- The garage contains vehicle wash bays that use recycled water.
- Site design included a septic system with underground tight tank for garage flows as mandated by Title 5 of the Massachusetts State Environmental Code, as well as a resized detention pond to accommodate increased runoff from added paved areas.





PORTFOLIO - HOUSING / RESIDENTIAL

Capitol Housing Improvements: Housing Modernization, Barton Road 200-1 & Morton Circle 667-1, 109 Barton Road, Wellesley, MA

Project Description

- Renovation of 96 units on 17-acre site.
- Site work consisted of the addition of five new parking lanes between the buildings and replacing the existing fire lanes.



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PORTFOLIO - HOUSING / RESIDENTIAL

Transitional Housing, Devens, MA

Project Description

- Newly constructed 15,678 SF wood framed building
- Home to twelve single mothers and their children in a safe and natural environment.
- While living here, they develop skills to help them become financially and socially independent.
- Building also includes one staff apartment, offices, a meeting room and a playroom.
- Gold level LEED for Homes



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PORTFOLIO - OFFICE

International Brotherhood of Electrical Workers (IBEW), Local Chapter 103 Training Center, Dorchester, MA

Project Description

- Building formerly owned by the MBTA as a materials testing laboratory is being renovated for use as a new Training Center for the IBEW Local Chapter 103.
- The building has 8,000 GSF of floor area on the first floor and 5,000 GSF in the basement.





PORTFOLIO - WATER / WASTEWATER

Tunnel Dewatering Pump Station & Enhanced Clarification Facility, Washington, D.C

Project Description

- DC Water, an independent water and wastewater Authority servicing the District of Columbia and its neighboring jurisdiction, is implementing its Long Term Control Plan (LTCP) which includes reducing combined sewer overflow (CSO) discharges to the Potomac and Anacostia Rivers.
- This 250 MGD facility is expandable to 500 MGD to collect and treat peak wet weather combined sewer overflow.
- The project involves the design & construction of 18 primary structures and site utilities at the northwest corner of the Blue Plains Advanced Wastewater Treatment Plant in Washington, D.C.



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PORTFOLIO - WATER / WASTEWATER

Ultraviolet Disinfection Facility, John J. Carroll Water Treatment Plant, Marlborough, MA

Project Description

- The plant serves 2.3 million MWRA customers in the Boston & MetroWest areas.
- The new facility was designed and constructed to meet present needs but also provides flexibility to meet any future changes in water quality or regulatory requirements.



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Project 1: Mast Arm Foundation Design

Location: Lowell Street (Route 129) & Woburn Street Transportation Improvements, Wilmington, Massachusetts

Type: 40' and 35' mast arms each supported by a 3'-6" ϕ drilled shaft rocketed into bedrock.

Year Completion: On-going

Owner: Mass. Department of Transportation

Design Engineer: Lin Associates, Inc. (Sub-consultant)

Responsibility: Mast Arm Foundation Design



Project 2: Headwall and Wingwall Design

Location: Almy Road Culvert Replacement, Somerset, Massachusetts

Type: Proposed precast concrete headwall and wingwalls with spread footing foundation
Proposed length of the wall: 42'-4"

Year Completion: On-going construction phase

Owner: Mass. Department of Transportation

Design Engineer: Lin Associates, Inc. (Sub-consultant)

Responsibility: Headwall Wall Design, Shallow Foundation Design, Response to RFI, Submittals Review.



Project 3: Pedestrian Bridge Substructure Design

Location: North Shore Road over Holbrook Dam, Holbrook, Massachusetts

Type: 45'-0" long x 6'-0" wide single span fiberglass pedestrian bridge supported by reinforced concrete stub abutments with spread footing foundation.

Year Completion: On-going construction phase

Owner: Mass. Department of Transportation

Design Engineer: Lin Associates, Inc. (Sub-consultant)

Responsibility: Reinforced Concrete Abutment Design, Shallow Foundation Design.



Project 4: Moment Slab Design for CM-TL3 Bridge Railing

Location: North Quincy Station – Sagamore Service Road, Quincy, Massachusetts

Type: Proposed CM-TL3 Bridge Railing with reinforced concrete moment slab

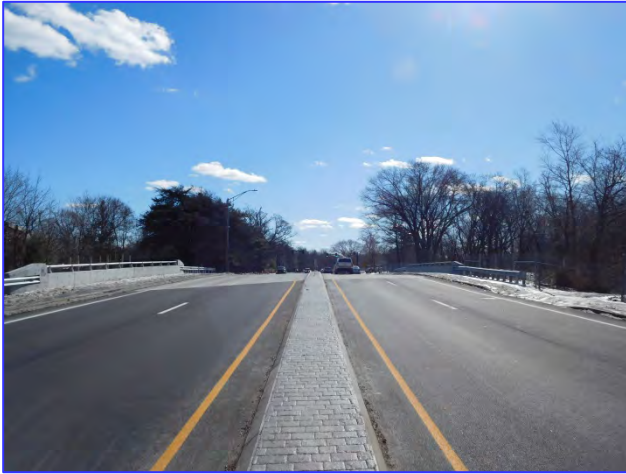
Proposed length of the railing: +/- 100'

Year Completion: On-going construction phase

Owner: Mass. Department of Transportation

Design Engineer: Lin Associates, Inc. (Sub-consultant)

Responsibility: Test Pits Monitoring, Existing Retaining Stability Checks, Moment Slab Design.



Project 5: Harbor Junction Bridge No. 131 Reconstruction

Location: Elmwood Avenue over Providence & Worcester Railroad, Providence, Rhode Island

Type: 56'-6" single span with fourteen (14) steel plate girders on concrete caps supported by existing stone masonry abutments and new single row of 9 $\frac{5}{8}$ " ϕ Micropiles.

Year Completion: 2019

Owner: Rhode Island Department of Transportation

Responsibility: Micropile Foundation Design, Micropile Construction Monitoring, Preparing PS&E Design Submission, Submittals Review.



Project 6: Conway Retaining Wall, Retaining No. C-20-W1

Location: Route 116 along South River, Conway, Massachusetts

Type: Proposed cantilever reinforced concrete retaining wall with spread footing foundation
Proposed length of the wall: +/- 300'

Year Completion: 2015

Owner: Mass. Department of Transportation

Responsibility: Boring Inspection, Retaining Wall Design, Shallow Foundation Design, Submittals Review.



Project 7: Bridge No. P-01-018, Bridge Replacement Project

Location: State Street over Ware River, Palmer, Massachusetts

Type: Two spans, prestressed concrete box beams supported by concrete abutments and pier on drilled shafts socketed into bedrock.

Year Completion: 2011

Owner: Mass. Department of Transportation

Responsibility: Drilled Shaft Foundation Design, Submittals Review.



Project 8: Bridge No. W-19-008, Bridge Replacement Project

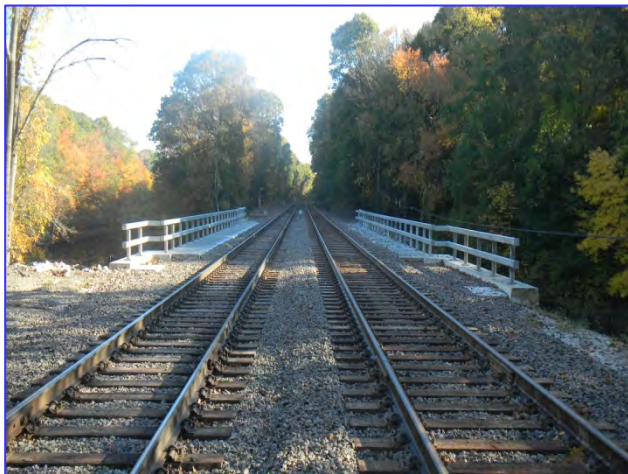
Location: Wickaboag Valley Road over Sucker Brook, West Brookfield, Massachusetts

Type: 42' single span with seven (7) -W18x143 steel beams supported on Integral abutment with one row of HP12x84 piles.

Year Completion: 2018

Owner: Mass. Department of Transportation

Responsibility: H-Pile Foundation Design, Bridge Superstructure Design, Submittals Review.



Project 9: Bridge No. B-16-472

Location: Dorchester Line over Neponset River, Boston, Massachusetts.

Type: Single span steel girders supported by concrete abutments on drilled shafts socketed into bedrock.

Year Completion: 2012

Owner: MBTA

Responsibility: Drilled Shaft Foundation Design, Drilled Shaft Construction Monitoring, Initial Inspection and Rating.



Project 10: Bridge No. M-16-017 & No. E-12-004 = M-12-018

Location: Revere Beach Parkway (Rt. 16) over MBTA Railroad, Medford, Massachusetts.

Revere Beach Parkway (Rt. 16) over Malden River, Everett-Medford, Massachusetts.

Type: Geotech Design - Secant pile abutment walls and micropile at pier for M-16-017
- Steel H-pile at abutments and drilled shafts at piers for E-12-004=M-12-018

Year Completion: 2020

Owner: Mass. Department of Transportation

Photos: in-water boring [see above photo on the top left] & environmental monitoring [see above photo on the top right]

Responsibility: Boring Inspection, Geotechnical Design (H-pile, Micropile, Drilled Shaft, and Secant pile wall), Submittals Review.



Project 11: Bridge No. D-05-038=N-04-030 & D-05-039=N-04-031

Location: I-95 (Rt. 128) NB over Charles River, Dedham-Needham, Massachusetts.

I-95 (Rt. 128) SB over Charles River, Dedham-Needham, Massachusetts.

Type: Geotech Design – Reinforced concrete drilled shafts for abutments and piers for both bridges with 20' of rock socket.

Year Completion: 2016

Owner: Mass. Department of Transportation

Photos: Concrete Placement for Drilled Shaft [see above photo on the left] and
CSL Testing on the drilled shafts [see above photo on the right]

Responsibility: Drilled Shaft Foundation Design, Drilled Shaft Construction Monitoring,
Submittals Review.



Project 12: Bridge No. R-12-009, Bridge Replacement Project with Temporary Bridge

Location: North Fitzwilliam Road over Lawrence Brook, Royalston, Massachusetts

Type: FRP Concrete Filled Tube supported on two rows of micropile piles socketed into bedrock.

Year Completion: 2020

Owner: Mass. Department of Transportation

Photos: Temporary Bridge is shown.

Responsibility: Micropile Foundation Design, Bridge Design Submission Preparation, Submittals Review.



Project 13: Bridge No. W-13-015

Location: Cedar Street over Route 9, Wellesley, Massachusetts.

Type: Geotech Design – reuse of existing spread footing abutment

Year Completion: 2011

Owner: Mass. Department of Transportation

Responsibility: Existing spread footing evaluation, Boring Inspection, Submittal Review.