



21 Griffin Rd. North
Windsor, CT 06095

T 860.298.9692
TRCcompanies.com

January 20, 2023

Mr. Jason Coite P.E.
Principal Engineer
Division of Environmental Compliance
Bureau of Engineering and Construction
State of Connecticut Department of Transportation
2800 Berlin Turnpike, P.O. Box 317546
Newington, CT 06131-7546

Attention: Michael Bedson, P.E. / Mandy Socolosky

Subject: On-Call Asbestos, Lead, Air Quality & Demolition Compliance
Agreement No. 8.07-01 (18)
HazMat Inspection – Rehabilitation of Bridge No. 05585, I-91 northbound over
Grape Brook, Enfield, CT
ConnDOT Assignment No. 519-6743
ConnDOT Project No. 48-200
TRC Project No. 289951.6743.0710

Dear Mr. Coite:

TRC performed a limited hazardous materials site investigation associated with the rehabilitation of Bridge No. 05585 Culvert, I-91 northbound over Grape Brook, Enfield, Connecticut. No painted surfaces were identified at the Bridge No. 05585; therefore, no lead paint was identified. Suspect asbestos containing black tar on the asphalt coated corrugated metal pipe and soft white drain packing were sampled and found to contain no detectable amounts of asbestos. No other hazmat/regulated items were identified at the Bridge No. 05585.

Laboratory results, TRC Mobile Data Solutions report, and project description/site map are attached.

If you have any questions, please call TRC at (860) 298-9692.

Very Truly Yours,

TRC

Stephen R. Arienti, CHMM
Senior Project Manager – Engineer in Charge

Erik R. Plimpton, P.E., CHMM, CMC
Vice President – Engineer in Charge



BULK ASBESTOS ANALYSIS REPORT

CLIENT: CT Department of Transportation

Lab Log #: 0059960

Project #: 289951.6743.0000

Date Received: 08/25/2022

Date Analyzed: 08/26/2022

Site: Bridge 05585 Culvert, I-91 over Grape Brook, Enfield, CT

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Sample Location	Homogeneous Material Description	Other Matrix Materials	Asbestos %	Asbestos Type
1	Culvert W	Black T 1 - Metal culvert tar	- - -	ND	None
2	Culvert E	Black T 1 - Metal culvert tar	- - -	ND	None
3	Culvert s interior, middle drain	White DP 1 - Culvert interior soft drain packing	20% cellulose	ND	None
4	Culvert interior drain N	White DP 1 - Culvert interior soft drain packing	20% cellulose	ND	None

ND - asbestos was not detected

Trace - asbestos was observed at level of 1% or less - This is the reporting limit

NA/PS - Not Analyzed / Positive Stop

SNA - Sample Not Analyzed- See Chain of Custody for details

Notes: Asbestos-Containing Material (ACM) is any material containing more than 1% asbestos

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, EPA recommends, and certain states (e.g. NY) require, that negative results be confirmed by quantitative transmission electron microscopy.

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation 1982 (EPA 600/M4-82-020) Bulk Analysis Code 18/A01 and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials July 1993, R.L. Perkins and B.W. Harvey, (EPA/600/R-93/116) Bulk Analysis Code 18/A03, which utilize polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 18/A01, effective through June 30, 2023. TRC is accredited by the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC in the Industrial Hygiene Program (IHLAP) for PLM effective through October 1, 2024. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and QC data related to the samples is available upon written request from client.

This report shall not be reproduced, except in full, without the written approval of TRC. This report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government. This report relates only to the items tested, as received by the laboratory.

Analyzed by:


Joel Corso, Laboratory Analyst

Reviewed by:


Kathleen Williamson, Laboratory Manager

Date Issued

08/29/2022

TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS

NVLAP Lab Code 101424-0
RI #PLM0007 TX #300354
CO# AL-15020

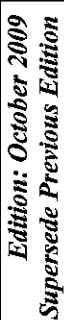
AIHA-LAP, LLC #100122 CT #PH-0426
VT #AL910359 LA#05011 VA #3333 000283
PHIL# 461 PA#68-03387

ME LA-0075, LB-0071
AZ #A20944

MA #AA000052
HI #L-09-004

NY #10980
NJ #CT004

WV #000622
CA #2907



ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

TURNAROUND TIME

TURNAROUND TIME

**ConnDOT – Bridge 0585 Culvert,
I-91 over Grape Brook, Enfield,
Connecticut**

INSPECTOR

FIELD SAMPLE NUMBER		DATE	TIME	Dennis Ryder, Tyler Noll		MATERIAL	PLM EPA 600/R93/116 (POSITIVE STOP)	PLM EPA 600/R93/116 (w/ gravimetric reduction (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)
				TYPE	GRAB						
01	8/25/2022	08:04		X	Culvert W	X					T 1 - Metal culvert tar
02	8/25/2022	08:04		X	Culvert E	X				X	T 1 - Metal culvert tar
03	8/25/2022	08:15		X	Culvert s interior, middle drain	X					DP 1 - Culvert interior soft drain packing
04	8/25/2022	08:18		X	Culvert interior drain N	X					DP 1 - Culvert interior soft drain packing

FIELD SAMPLE NUMBER	DATE	TIME	TYPE		SAMPLE LOCATION	PLM EPA 600/ (POSITIVE)	PLM EPA 600/ (w/ gravimetric r (POSITIVE)	ANALYZE BY	POINT CO (IF >1% & >	ITEM NY NO	MATERIAL
			COMP	GRAB							
01	8/25/2022	08:04		X	Culvert W	X					T 1 - Metal culvert tar
02	8/25/2022	08:04		X	Culvert E	X				X	T 1 - Metal culvert tar
03	8/25/2022	08:15		X	Culvert s interior, middle drain	X					DP 1 - Culvert interior soft drain packing
04	8/25/2022	08:18		X	Culvert interior drain N	X					DP 1 - Culvert interior soft drain packing

FIELD SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	PLM ELEM (POSITION)	PLM ELEM (W/ GRAVIM)	ANALYT	POID (IF > 1)	ITEM N (IF PLM)	
01	8/25/2022	08:04		X	Culvert W	X				T 1 - Metal culvert tar	
02	8/25/2022	08:04		X	Culvert E	X				T 1 - Metal culvert tar	X
03	8/25/2022	08:15		X	Culvert s interior, middle drain	X				DP 1 - Culvert interior soft drain packing	
04	8/25/2022	08:18		X	Culvert interior drain N	X				DP 1 - Culvert interior soft drain packing	

NUMBER		CON	GRA		PLM (Pc)	PLM (w/ gr)	ANA	P (D)	TE (IF P)	
01	8/25/2022	08:04	X	Culvert W	X					T 1 - Metal culvert tar
02	8/25/2022	08:04	X	Culvert E	X				X	T 1 - Metal culvert tar
03	8/25/2022	08:15	X	Culvert s interior, middle drain	X					DP 1 - Culvert interior soft drain packing
04	8/25/2022	08:18	X	Culvert interior drain N	X					DP 1 - Culvert interior soft drain packing

			C	O	H	F (w)	A	D
01	8/25/2022	08:04	X	Culvert W	X			T 1 - Metal culvert tar
02	8/25/2022	08:04	X	Culvert E	X			T 1 - Metal culvert tar
03	8/25/2022	08:15	X	Culvert s interior, middle drain	X			DP 1 - Culvert interior soft drain packing
04	8/25/2022	08:18	X	Culvert interior drain N	X			DP 1 - Culvert interior soft drain packing

[illegible]

01	8/25/2022	08:04	X	Culvert W	X			I 1 - Metal culvert tar
02	8/25/2022	08:04	X	Culvert E	X			T 1 - Metal culvert tar
03	8/25/2022	08:15	X	Culvert s interior, middle drain	X			DP 1 - Culvert interior soft drain packing
04	8/25/2022	08:18	X	Culvert interior drain N	X			DP 1 - Culvert interior soft drain packing

02	8/25/2022	08:04	X	Culvert E	X				T 1 - Metal culvert tar
03	8/25/2022	08:15	X	Culvert s interior, middle drain	X				DP 1 - Culvert interior soft drain packing
04	8/25/2022	08:18	X	Culvert interior drain N	X				DP 1 - Culvert interior soft drain packing

03	8/25/2022	08:15	X	Culvert s interior, middle drain	X				DP 1 - Culvert interior soft drain packing
04	8/25/2022	08:18	X	Culvert interior drain N	X				DP 1 - Culvert interior soft drain packing

03	8/25/2022	06:15	X	Culvert interior, midline drain	X	DP 1 - Culvert interior soft drain packing
04	8/25/2022	08:18	X	Culvert interior drain N	X	DP 1 - Culvert interior soft drain packing

			X	Culvert interior drain N				DP 1 - Culvert interior soft drain packing
04	8/25/2022	08:18	X	Culvert interior drain N				DP 1 - Culvert interior soft drain packing

Relinquished by: (Signature)	Date:	Received by: (Signature)	Date:	Received by: (Signature)
<i>[Signature]</i>	<i>[Date]</i>	<i>[Signature]</i>	<i>[Date]</i>	<i>[Signature]</i>

8/25/22

7710710	59	11	518
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	(Printed)	Time:	(Printed)	Time:	(Printed)
	/			12 20	

Tyler Noll	12:30	✓	✓	✓
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[illegible]

Remarks: _____

Condition of Samples: _____

Acceptable: Yes ☒ No ☐

Page 1 of 1

Results to S. Ariani / E. Plimpton please

EMSL

200 Route 130 North, Cinnaminson, NJ 08077 (800) 220-3675
TEM Bulk Chain of Custody Record

Date: 08/29/2022

PO#: C289951

Client: TRC

Client Job#: 289951.6743.0710

Client Job Ref./Loc.: CT DOT – Bridge 05585 Culvert, I-91 over Grape Brook, Enfield, CT

Relinquished by: J. Corso- JCorso@trccompanies.com

Received by:

Report to: S. Arienti – SArienti@trccompanies.com, EPlimpton@trccompanies.com, HCowles@trccompanies.com,
DCarillo@trccompanies.com

Samplers Name: D. Ryder & T. Noll

Analysis Type: Chatfield EPA N.O.B Qualitative

Turnaround Time: <12 Hour <24 Hour <48 Hour <3 Day 5 Day Other:

					For Lab Use Only	
Client ID #	Lab ID#	Description	Location		Acceptable on Receipt	Comments
02	59960	Tar	See COC			
For Lab Use Only	# Spies	Total	Client #	Batch #	Results Reported	Comments



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

<http://www.EMSL.com> / cinnaslab@EMSL.com

EMSL Order: 042221775

Customer ID: TRC51

Customer PO: C289951

Project ID:

Attention: Stephen Arienti
TRC Environmental Consultants
21 Griffin Road North
Windsor, CT 06095

Phone: (860) 298-9692

Fax: (860) 298-6399

Received Date: 08/30/2022 9:50 AM

Analysis Date: 09/01/2022

Collected Date: 08/25/2022

Project: 289951.6743.0710 / ConnDOT - Bridge 05585 Culvert - I-91 over Grape Brook, Enfield, Connecticut

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
02	Culvert E - T1 - Metal	Black	100.0 Other	None	No Asbestos Detected
042221775-0001	Culvert Tar	Non-Fibrous Homogeneous			

Analyst(s)

Debbie Little (1)

Samantha Rundstrom, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. EMSL recommends that samples reported as none detected or <1% undergo additional analysis via PLM to avoid the possibility of false negatives.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ PA ID# 68-00367

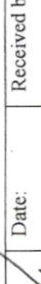
Initial report from: 09/01/2022 20:42:59

ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

*Edition: October 2009
Supersede Previous Edition*

LAB ID #. 59960

PROJECT NUMBER		PROJECT NAME		PARAMETERS		TURN AROUND TIME						
289951.6743.0710		ConnDOT — Bridge 05585 Culvert, I-91 over Grape Brook, Enfield, Connecticut				PLM:	8hr	24hr	48hr	3day		
SIGNATURE		INSPECTOR		PLM EPA 600/R93/116 (POSITIVE STOP)	PLM EPA 600/R93/116 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)	TEM:		5day	
[Signature]		Dennis Ryder, Tyler Noll							24hr	48hr	3day	
FIELD SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION		MATERIAL						
			COMP	GRAB								
01	8/25/2022	08:04		X	Culvert W	X					T 1 - Metal culvert tar	
02	8/25/2022	08:04		X	Culvert E	X			X		T 1 - Metal culvert tar	
03	8/25/2022	08:15		X	Culvert s interior, middle drain	X					DP 1 - Culvert interior soft drain packing	
04	8/25/2022	08:18		X	Culvert interior drain N	X					DP 1 - Culvert interior soft drain packing	

Relinquished by: (Signature) 	Date: 8/25/22	Received by: (Signature) 	Received by: (Signature) 
(Printed) Tyler Noll	Time: 12:30	(Printed) 1230 	(Printed) 
Remarks: Results to S. Arienti / E. Plimpton please		Condition of Samples: ☒ Yes ☐ No Acceptable: Yes ☒ No ☐ Comments:	
		Page 1 of 1	

200 Route 130 North, Cinnaminson, NJ 08077 (800) 220-3675
TEM Bulk Chain of Custody Record

Other:

[illegible]

1

WinBSI HBM Survey

ConnDOT, Bridge 05585 Culvert, I-91 NB over Grape Brook Enfield Connecticut 06082

1/20/2023, 12:50:18 PM EST

CREATED

🕒 8/25/2022, 7:43:36 AM EDT

👤 by Tyler Noll

UPDATED

🕒 1/20/2023, 12:50:18 PM EST

👤 by Stephen Arienti

STATUS

🟡 Report Written

ASSIGNED TO

👤 No Assignment



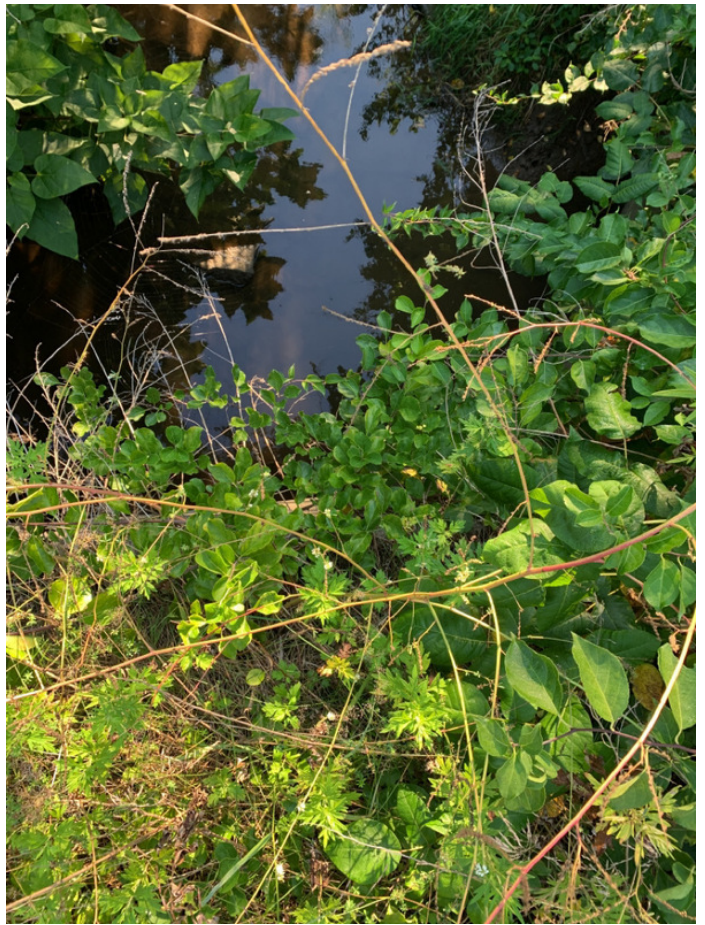
NOTE: No site sketch detected!
Please be sure to add at least one.

JOB INFORMATION

Site Name	Bridge 05585 Culvert
Address	I-91 NB over Grape Brook Enfield Connecticut 06082
TRC Project Number	289951.6743.0710
Project Manager	Erik Plimpton, Stephen Arienti
Inspector(s)	Tyler Noll, Dennis Ryder
Client	ConnDOT
Type of Asbestos Survey	Reno/Demo
Site Sketch Diagrams	
Additional Analysis for NOB Materials (Calc)	TEM NY NOB 198.4
PLM Turnaround Time (TAT)	3-day
TEM Turnaround Time (TAT)	3-day
Date	August 25, 2022
General Notes	



Overview Photo





Options & Other Settings

Use auto-numbering?	No
Auto-fill gaps?	Yes
Alert user about missing site sketch?	Yes

SURVEYS PERFORMED	XRF, Asbestos
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Asbestos Survey

Materials & Samples (2 Items)

Materials & Samples - 1. (2) Samples #01–02: T 1–Metal culvert tar

Sample Information

Asbestos Samples (2 Items)

Asbestos Samples - 1. Sample #01: T 1...Culvert W

Sample Number	01
Sample Location	Culvert W
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	August 25, 2022
Time	08:04



Sample Location Photo



Asbestos Samples - 2. Sample #02: T 1...Culvert E

Sample Number	02
Sample Location	Culvert E
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	August 25, 2022
Time	08:04

Sample Location Photo

Material Information

Sampled or Assumed?	Sampled
Material Acronym	T 1
Material Description	Metal culvert tar
Material Color	Black

Representative Photos



Analyze by layer?	No
Is material non-friable organically bound (NOB)?	Yes
Homogeneous Area	
Total Approximate Quantity	
Notes	

Materials & Samples - 2. (2) Samples #03–04: DP 1–Culvert interior soft drain packing

Sample Information

Asbestos Samples (2 Items)

Asbestos Samples - 1. Sample #03: DP 1...Culvert s interior, middle drain

Sample Number	03
Sample Location	Culvert s interior, middle drain
Asbestos Bulk Analysis	PLM EPA 600/R93/116



Grab or Composite	Grab
Date	August 25, 2022
Time	08:15
Sample Location Photo	

Asbestos Samples - 2. Sample #04: DP 1...Culvert interior drain N

Sample Number	04
Sample Location	Culvert interior drain N
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	August 25, 2022
Time	08:18
Sample Location Photo	

Material Information

Sampled or Assumed?	Sampled
Material Acronym	DP 1
Material Description	Culvert interior soft drain packing
Material Color	White



Representative Photos



Analyze by layer?	No
Is material non-friable organically bound (NOB)?	No
Homogeneous Area	
Total Approximate Quantity	
Notes	

XRF Survey

Niton XRF Model No.	24792
XRF Survey Completed	N/A
XRF Data Downloaded	N/A
XRF Shots >1.0 on non-metallic building materials	No
Date Data Downloaded	

LAB & SAMPLE SUBMISSION INFO

Signature	
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Asbestos Bulk Samples

Remarks to be added to the CoC

Asbestos samples submitted to TRC lab? Yes

Date Submitted to Lab August 29, 2022

Asbestos bulk sample CoC data electronically sent to lab yet? Yes

Asbestos bulk sample results reviewed? No

REPORT CREATION

Select one or more documents below to be generated. Once completed in the cloud, they will be sent to the listed email address.

NOTE: Asbestos bulk sample CoC data must now be sent electronically to the lab by selecting "Asbestos chain-of-custody - Send to Lab" from the list below.

What documents should be generated? Asbestos chain-of-custody - Send to Lab

Generate Documents

PROJECT STATUS TRACKING

Has this survey been completed? Yes

Has the report been written? Yes

Has the report been reviewed? No



PROJECT PURPOSE AND NEED

The purpose and need of the project is to correct the structural deficiency of the culvert.

DETAILED PROJECT DESCRIPTION

Project Location

Bridge No. 05585 is located approximately half a mile south of where Brainard Road passes under Interstate 91 (I-91). The structure presently carries three lanes of traffic in both the northbound and southbound directions (I-91 milepost 56.73). The Average Daily Traffic is 85,100 vehicles per day per the 2015 CTDOT Traffic Logs.

Existing Structure and Conditions

The existing structure, built in 1960, is a 112-foot long corrugated metal plate arch that is approximately 13 feet wide and 8 feet high. The corrugated metal plate arch shows signs of moderate to heavy rusting and perforations at various locations along the culvert. The culvert is in poor condition (Rating = 4) and the reinforced concrete headwalls and wingwalls are in good condition (Rating = 6). There is a noise abatement wall along the southbound side of I-91 that impedes access to the outlet.

Bridge No. 05578, a precast concrete box culvert built in 1987 is situated parallel Bridge No. 05585 and could possibly be utilized for water handling during construction.

There are no overhead utilities in the vicinity of the bridge project, and it is anticipated that requests for underground utility mapping will conclude that there are no underground utilities within the project area.

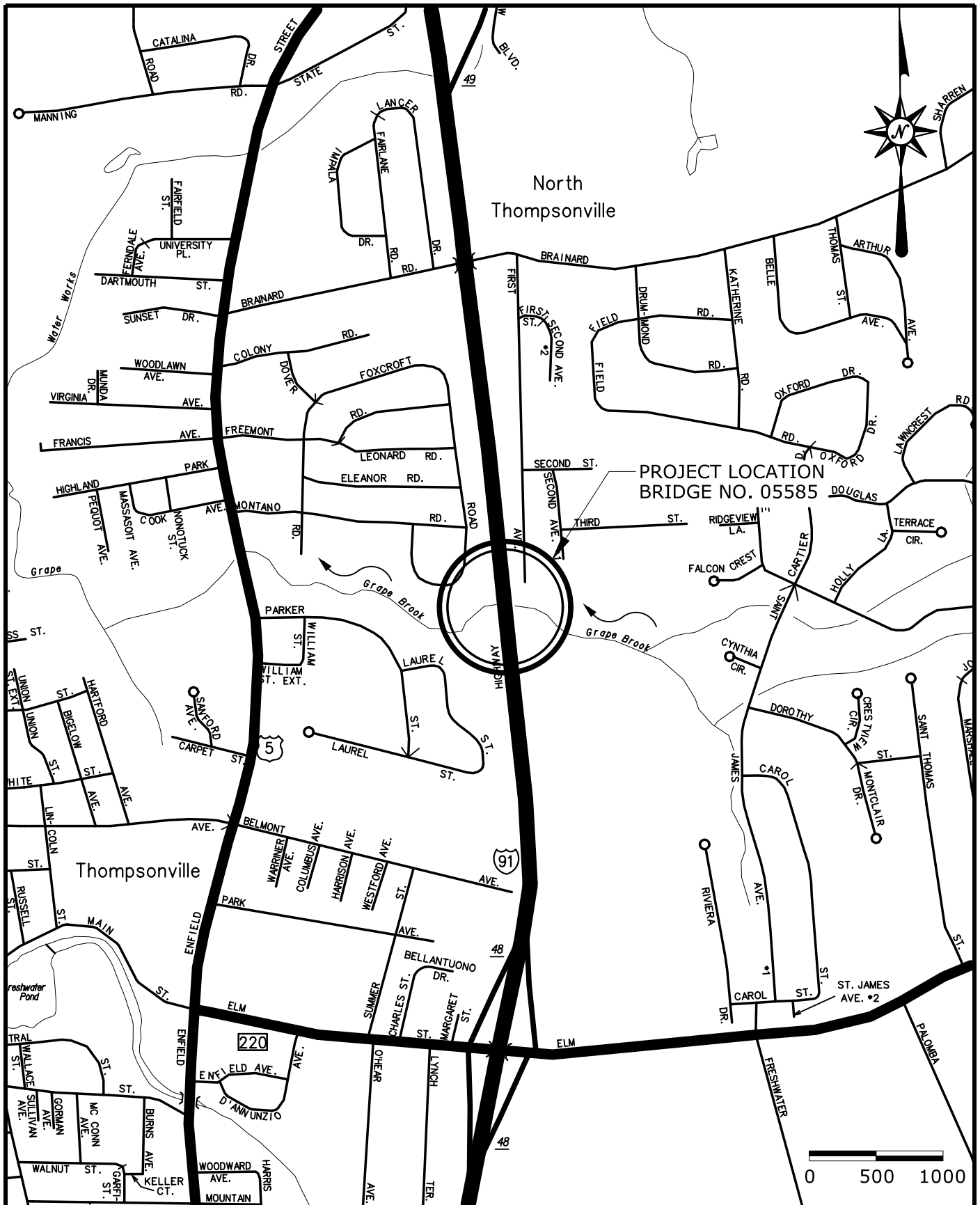
The Project Site is not within an Aquifer Protection Area but is within a FEMA Floodway (FEMA FIRMette 09003C0114F, effective 9/26/2008). A review of the CTDEEP Natural Diversity Database (NDDB) for indicates that the project area is not within an area identified as known habitat for endangered, threatened, or special concern species (map dated December 2019) or mapped critical habitat.

Proposed Project

The Rehabilitation Study Report is currently being developed; proposed Alternatives will likely consist of:

- Installing a concrete invert
- Relining the culvert
- Replacing the structure with a 3-sided rigid frame

Construction is anticipated to begin in 2023.



INTERSTATE 91
OVER GRAPE BROOK
ENFIELD, CONNECTICUT

LOCATION MAP
SCALE: 1" = 1,000'

BR. NO.: 05585

PROJ. NO.: 48-200

FIGURE NO.: 01