



March 28, 2017

Mr. Adam Fox, P.E.  
Principal Engineer  
Environmental Compliance Section  
Bureau of Engineering and Highway Operations  
State of Connecticut Department of Transportation  
2800 Berlin Turnpike, P.O. Box 317546  
Newington, CT 06131-7546

Attention: Judith Nemecek, P.E. / Stephen Clout

Subject: On-Call Asbestos, Lead, Air Quality & Demolition Compliance  
Agreement No. 04.27-01(15)  
HazMat Inspection – District IV, Bridge Nos. 01154, 01161 & 00468 in Southbury,  
Middlebury & Thomaston, CT  
ConnDOT Assignment No. 514-5450  
ConnDOT Project No. 174-402  
TRC Project No. 222165.5450.0710

Dear Mr. Fox:

TRC performed a limited survey for hazardous building materials associated with the rehabilitations of District IV Bridge Nos. 01154, 01161 & 00468 in Southbury, Middlebury & Thomaston, Connecticut. Results of the survey identified lead paint to be present on the structural steel/metal bridge components of Bridge Nos. 01154, 01161 & 00468. Results obtained from TCLP waste stream sampling and analysis for leachable lead from the paint on the structural steel/metal bridge components characterized the paint waste streams at Bridge Nos. 01154, 01161 & 00468 as CTDEEP/RCRA hazardous waste. Tan/grey crumbly caulking at base of the bridge railing at Bridge No. 01154 was sampled and found to contain asbestos. Other various caulking, patching tars, bearing gaskets, sealants, foundation tars and pipe wraps at the 3 bridges were sampled and found to contain no detectable levels of asbestos. No bird/pigeon guano accumulations were observed in accessible areas of Bridge Nos. 01154, 01161 & 00468. Associated laboratory data, project descriptions, inspector notes and site maps are attached.

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

Very Truly Yours,

**TRC**

A handwritten signature in black ink, appearing to read "Stephen R. Arienti".

Stephen R. Arienti, CHMM  
Senior Project Scientist – Project Manager

A handwritten signature in black ink, appearing to read "Erik R. Plimpton".

Erik R. Plimpton, P.E., CHMM, CMC  
Vice President - Program Manager



### Lead Based Paint Measurement Summary Table

Device(s): Niton XLP301-A (Serial #24792) X Ray Fluorescence (XRF) Spectrum Analyzer  
 Site: 3 Bridges, District 4, Southbury, Middlebury & Thomaston  
 Project #: 222165.5450.0710  
 Date(s): 11/3/2016  
 Inspector: Michael Stewart (Lead Inspector/RA #002115)

Number	Interior/ Exterior	Location	Bridge No.	Structure	Feature	Material	Color	Condition	Reading (mg/cm2)	Precision (mg/cm2)	Depth Index	Duration (sec)	Date/Time
1			<b>Self-Calibration</b>									44.0	11/3/2016 9:54
2			<b>0.7 calibration</b>						0.7	0.1	1.0	4.4	11/3/2016 10:05
3			<b>0.7 calibration</b>						0.8	0.1	1.2	11.0	11/3/2016 10:06
4			<b>1.6 calibration</b>						1.5	0.1	1.1	11.6	11/3/2016 10:06
5			<b>3.5 calibration</b>						3.4	0.2	1.3	10.5	11/3/2016 10:06
6	Exterior	Southbury	Bridge 1154	Exterior Beam		Metal	Green	Defective	9.3	1.3	1.9	6.6	11/3/2016 10:13
7	Exterior	Southbury	Bridge 1154	Interior Beam		Metal	Green	Defective	2.9	0.2	1.4	6.6	11/3/2016 10:15
8	Exterior	Southbury	Bridge 1154	Exterior Beam		Metal	Green	Defective	3.4	0.3	1.4	4.4	11/3/2016 10:16
9	Exterior	Southbury	Bridge 1154	Bracing Beam		Metal	Green	Defective	21.4	2.0	2.2	6.0	11/3/2016 10:17
10					<b>VOID</b>								
11	Exterior	Southbury	Bridge 1154	Railing		Metal	Grey	Defective	10.0	1.4	2.0	6.1	11/3/2016 10:49
12	Exterior	Southbury	Bridge 1154	Railing		Metal	Grey	Defective	8.2	1.5	1.7	4.9	11/3/2016 10:51
13	Exterior	Southbury	Bridge 1154	Railing		Metal	Grey	Defective	7.9	1.3	1.7	6.1	11/3/2016 10:51
14	Exterior	Southbury	Bridge 1154	Railing	Support	Metal	Grey	Defective	10.1	23.6	2.3	0.6	11/3/2016 10:52
15	Exterior	Southbury	Bridge 1154	Railing	Support	Metal	Grey	Defective	13.4	1.5	1.9	7.2	11/3/2016 10:52
16	Exterior	Southbury	Bridge 1161	Beam		Metal	Tan/Beige	Defective	12.5	1.6	2.1	5.5	11/3/2016 11:39
17	Exterior	Southbury	Bridge 1161	Beam		Metal	Tan/Beige	Defective	19.1	1.5	2.1	8.8	11/3/2016 11:40
18	Exterior	Southbury	Bridge 1161	Beam		Metal	Tan/Beige	Defective	17.0	1.6	2.1	7.2	11/3/2016 11:40
19	Exterior	Southbury	Bridge 1161	Brace		Metal	Tan/Beige	Defective	21.0	1.6	2.2	8.3	11/3/2016 11:41
20	Exterior	Middlebury	Bridge 1161	Brace		Metal	Tan/Beige	Defective	31.1	1.6	2.4	12.1	11/3/2016 11:43
21	Exterior	Middlebury	Bridge 1161	Bearing		Metal	Tan/Beige	Defective	0.0	0.0	1.3	9.3	11/3/2016 11:44
22	Exterior	Middlebury	Bridge 1161	Bearing		Metal	Tan/Beige	Defective	0.0	0.0	1.7	11.6	11/3/2016 11:44
23	Exterior	Thomaston	Bridge 468	Beam		Metal	Blue	Defective	13.7	1.3	2.0	8.3	11/3/2016 12:59
24	Exterior	Thomaston	Bridge 468	Beam		Metal	Blue	Defective	16.7	1.3	2.1	10.0	11/3/2016 12:59
25	Exterior	Thomaston	Bridge 468	Beam		Metal	Blue	Defective	14.9	4.5	1.9	2.2	11/3/2016 12:59
26					<b>VOID</b>								
27	Exterior	Thomaston	Bridge 468	Bearing		Metal	Blue	Defective	0.0	0.0	3.0	8.3	11/3/2016 13:05
28	Exterior	Thomaston	Bridge 468	Bearing		Metal	Blue	Defective	0.0	0.0	2.5	9.3	11/3/2016 13:06
29			<b>0.7 calibration</b>						0.8	0.1	1.2	11.0	11/3/2016 13:34
30			<b>1.6 calibration</b>						1.6	0.1	1.2	11.0	11/3/2016 13:34
31			<b>3.5 calibration</b>						3.8	0.2	1.3	11.0	11/3/2016 13:34

Lead paint includes paint found to contain any detectable amount of lead by Atomic Absorption Spectrophotometry (AAS) or X-Ray Fluorescence (XRF).

80 Lupes Drive  
Stratford, CT 06615



Tel: (203) 377-9984  
Fax: (203) 377-9952  
e-mail: cet1@cetlabs.com

Client: Mr. Michael Stewart  
TRC Environmental Consultants  
21 Griffin Rd., North  
Windsor, CT 06095

# Analytical Report

## CET# 6110184

Report Date: November 10, 2016  
Project: CTDOT  
Project Number: District 4 Bridges  
PO Number: 222165.5450.0710

Connecticut Laboratory Certificate: PH 0116  
Massachusetts laboratory Certificate: M-CT903



New York Certification: 11982  
Rhode Island Certification: 199

CET # : 6110184

Project: CTDOT

Project Number: District 4 Bridges

**SAMPLE SUMMARY**

The sample(s) were received at 22.6°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
01 Bridge 1154 I Beams	6110184-01	Paint Chip	11/03/2016 10:30	11/07/2016
02 Bridge 1154 Railing	6110184-02	Paint Chip	11/03/2016 10:40	11/07/2016
03 Bridge 1161 I Beams	6110184-03	Paint Chip	11/03/2016 11:30	11/07/2016
04 Bridge 1161 Bearings	6110184-04	Paint Chip	11/03/2016 11:35	11/07/2016
05 Bridge 468 Bearings	6110184-05	Paint Chip	11/03/2016 13:00	11/07/2016
06 Bridge 468 I Beams	6110184-06	Paint Chip	11/03/2016 13:10	11/07/2016

**Analyte: Total Lead [EPA 6010C]**

**Analyst: SS**

**Prep: EPA 3050B**

**Matrix: Paint Chip**

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
6110184-04	04 Bridge 1161 Bearings	0.32	0.10	%	1	B6K0803	11/08/2016	11/08/2016 14:26	
6110184-05	05 Bridge 468 Bearings	0.13	0.10	%	1	B6K0803	11/08/2016	11/08/2016 14:30	

**Analyte: TCLP Lead [EPA 6010C]**

**Analyst: SS**

**Prep: EPA 3005A-1311**

**Matrix: Extract**

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
6110184-01	01 Bridge 1154 I Beams	500	0.013	mg/L	1	B6K0822	11/08/2016	11/10/2016 09:58	
6110184-02	02 Bridge 1154 Railing	220	0.013	mg/L	1	B6K0822	11/08/2016	11/10/2016 10:03	
6110184-03	03 Bridge 1161 I Beams	240	0.013	mg/L	1	B6K0822	11/08/2016	11/10/2016 10:07	
6110184-06	06 Bridge 468 I Beams	160	0.013	mg/L	1	B6K0822	11/08/2016	11/10/2016 10:11	

CET # : 6110184

Project: CTDOT

Project Number: District 4 Bridges

Questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,



David Ditta  
Laboratory Director

Report Comments:

Sample Result Flags:

- E- The result is estimated, above the calibration range.
- H- The surrogate recovery is above the control limits.
- L- The surrogate recovery is below the control limits.
- B- The compound was detected in the laboratory blank.
- P- The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
- D- The RPD between the sample and the sample duplicate is high. Sample Homogeneity may be a problem.
- + - The Surrogate was diluted out.
- \*C1- The Continuing Calibration did not meet method specifications and was biased low for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased low.
- \*C2- The Continuing Calibration did not meet method specifications and was biased high for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased high.
- \*F1- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the low side.
- \*F2- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the high side.
- I- The Analyte exceeds %RSD limits for the Initial Calibration. This is a non-directional bias.

All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

Complete Environmental Testing is only responsible for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt.

ND is None Detected at the specified detection limit

All analyses were performed in house unless a Reference Laboratory is listed.

Samples will be disposed of 30 days after the report date.

CET # : 6110184  
Project: CTDOT  
Project Number: District 4 Bridges

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 6010C in Solid</i>	
Lead	CT

Complete Environmental Testing operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Public Health	PH0116	09/30/2016



6110184

Edition: November 2013  
Supersede Previous Edition

21 GRIFFIN ROAD NORTH  
WINDSOR, CONNECTICUT 06095  
TELEPHONE (860) 298-9692  
FAX (860) 298-6380

### TCLP CHAIN OF CUSTODY

LAB ID #

PROJECT NUMBER		PROJECT NAME		PARAMETERS					TURNAROUND TIME				
222165.5450.0710		CT DOT District 4 Bridges		Total Pb (AAS)	RCRA Pb, AS, CR, CD	8 RCRA Metals	TCLP Pb	SPLP Pb	X	24hr	48hr	3day	5day
										24hr	48hr	3day	5day
INSPECTOR: (SIGNATURE)			(PRINTED)			MATERIAL							
			M. Stewart/J. Gentile										
FIELD SAMPLE NUMBER	DATE	TIME	TYPE		SAMPLE LOCATION	Total Pb (AAS)	RCRA Pb, AS, CR, CD	8 RCRA Metals	TCLP Pb	SPLP Pb			
			COMP	GRAB									
01	11/3/16	1030		X	Bridge 1154 I Beams				X		Grey/Orange Paint		
02	11/3/16	1040		X	Bridge 1154 Railing				X		Grey Paint		
03	11/3/16	1130		X	Bridge 1161 I Beams				X		Tan/Orange Paint		
04	11/3/16	1135		X	Bridge 1161 Bearings	X					Grey Paint		
05	11/3/16	1300		X	Bridge 468 Bearings	X					Grey Paint		
06	11/3/16	1310		X	Bridge 468 I Beams				X		Tan/Orange Paint		

Relinquished by: (Signature) 	Date: 11/4/16	Received by: (Signature) 	Date: 11-7-16 1510	Relinquished by: (Signature) 	Date: 11-7-16	Received by: (Signature) 
(Printed) Jonathan Gentile	Time:	(Printed) ROBERT PERGAMAN	(Printed) ROBERT PERGAMAN	(Printed) ROBERT PERGAMAN	Time: 1500	(Printed)
TEMP N 22 60						Page 1 of 1



21 GRIFFIN ROAD NORTH  
WINDSOR, CONNECTICUT 06095  
TELEPHONE (860) 298-9692  
FAX (860) 298-6380

## ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

LAB ID #. 49395

PROJECT NUMBER <b>222165.5450.0710</b>			PROJECT NAME <b>CT DOT Dist 4 - 3 Bridges</b>			PARAMETERS			TURNAROUND TIME							
									PLM:	8hr		24hr	X	48hr		3day
SIGNATURE 			INSPECTOR <b>J. Gentile/M. Stewart</b>						TEM:	24hr	X	48hr		3day		5day
									MATERIAL							
FIELD SAMPLE NUMBER	DATE	TIME	TYPE		SAMPLE LOCATION	PLMEPA 600/R93/I16 (POSITIVE STOP)	PLMEPA 600/R93/I16 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)						
			COMP	GRAB												

**BRIDGE 1154 BULLETT Hill RD SOUTHURY, CT**

FIELD SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	PLMEPA 600/R93/I16 (POSITIVE STOP)	PLMEPA 600/R93/I16 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)	MATERIAL
01	11/3/16	1000		X	Railing Support	X					Tan/Grey Crumbly Railing Support Caulk (C1)
02	11/3/16	1001		X	Railing Support	X				X	Tan/Grey Crumbly Railing Support Caulk (C1)
03	11/3/16	1003		X	Below Railing on Side wall	X					Grey Stiff Seam Caulk (C2)
04	11/3/16	1004		X	Below Railing on Side wall	X				X	Grey Stiff Seam Caulk (C2)
05	11/3/16	1007		X	Side Wall Jt	X					Tan/Grey Rubbery Jt Caulk (C3)
06	11/3/16	1008		X	Side Wall Jt	X				X	Tan/Grey Rubbery Jt Caulk (C3)
07	11/3/16	1011		X	Bridge Deck (Roadway)	X					Asphalt Patching Tar (PT1)
08	11/3/16	1012		X	Bridge Deck (Roadway)	X				X	Asphalt Patching Tar (PT1)
09	11/3/16	1039		X	Below Bridge	X					Black Rubbery Pipe Wrap (PW1)
10	11/3/16	1040		X	Below Bridge	X				X	Black Rubbery Pipe Wrap (PW1)

Relinquished by: (Signature) 	Date: 11/4/16	Received by: (Signature) 	Relinquished by: (Signature)	Date:	Received by: (Signature)
(Printed) Jonathan Gentile	Time:	(Printed) Cathryn Comire	(Printed)	Time:	(Printed)
Remarks:			Condition of Samples: _____ Acceptable: Yes <input checked="" type="checkbox"/> No _____		Page 1 of 4





21 GRIFFIN ROAD NORTH  
WINDSOR, CONNECTICUT 06095  
TELEPHONE (860) 298-9692  
FAX (860) 298-6380

## ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

LAB ID #. **49395**

PROJECT NUMBER		PROJECT NAME		PARAMETERS				TURNAROUND TIME					
								PLM:	8hr	24hr	X	48hr	3day
222165.5450.0710		CT DOT Dist 4 - 3 Bridges						TEM:	24hr	X	48hr	3day	5day
SIGNATURE			INSPECTOR			MATERIAL							
			J. Gentile/M. Stewart										
FIELD SAMPLE NUMBER	DATE	TIME	TYPE		SAMPLE LOCATION	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)			
			COMP	GRAB									
11	11/3/16	1035		X	Below Bridge under Bearing	X					Cloth Bearing Gasket (BG1)		
12	11/3/16	1037		X	Below Bridge under Bearing	X					Cloth Bearing Gasket (BG1)		
<b>BRIDGE 1161 CHRISTIAN RD MIDDLEBURY, CT</b>													
13	11/3/16	1130		X	Side Wall	X					Tan/Grey Rubbery Jt Caulk (C1)		
14	11/3/16	1131		X	Side Wall	X			X		Tan/Grey Rubbery Jt Caulk (C1)		
15	11/3/16	1134		X	Bridge Deck (Roadway)	X					Asphalt Patching Tar (PT1)		
16	11/3/16	1135		X	Bridge Deck (Roadway)	X			X		Asphalt Patching Tar (PT1)		
17	11/3/16	1150		X	Below Bridge	X					Black Tar Sealant on Pipe Endcaps (TS1)		
18	11/3/16	1152		X	Below Bridge	X			X		Black Tar Sealant on Pipe Endcaps (TS1)		
<b>BRIDGE 468 RT 222/6 THOMASTON, CT</b>													
19	11/3/16	1235		X	Side Wall	X					Tan/Grey Rubbery Jt Caulk (C1)		

Relinquished by: (Signature) 	Date: 11/4/16	Received by: (Signature) 	Date: 11/4/16	Relinquished by: (Signature)	Date:	Received by: (Signature)	
(Printed) Jonathan Gentile	Time:	(Printed) Cathryn Umire	Time: 11:53	(Printed)	Time:	(Printed)	
Remarks:				Condition of Samples: _____ Acceptable: Yes <input checked="" type="checkbox"/> No _____		Page 2 of 4	



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WINDSOR, CONNECTICUT 06095  
TELEPHONE (860) 298-9692  
FAX (860) 298-6380

## ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

LAB ID #. 49395

PROJECT NUMBER		PROJECT NAME		PARAMETERS						TURNAROUND TIME				
										PLM:	8hr	24hr	X	48hr
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)	MATERIAL					
222165.5450.0710		CT DOT Dist 4 - 3 Bridges												J. Gentile/M. Stewart
FIELD SAMPLE NUMBER	DATE	TIME	TYPE		SAMPLE LOCATION									
			COMP	GRAB										
20	11/3/16	1237		X	Side Wall	X				X	Tan/Grey Rubbery Jt Caulk (C1)			
21	11/3/16	1330		X	Below Bridge on FG Pipes	X					Black Caulk on Pipes (C2)			
22	11/3/16	1330		X	Below Bridge on FG Pipes	X				X	Black Caulk on Pipes (C2)			
23	11/3/16	1246		X	Bridge Deck (Roadway)	X					Asphalt Patching Tar (PT1)			
24	11/3/16	1244		X	Bridge Deck (Roadway)	X				X	Asphalt Patching Tar (PT1)			
25	11/3/16	1240		X	Railing Support	X					Black Gasket (G1)			
26	11/3/16	1238		X	Railing Support	X				X	Black Gasket (G1)			
27	11/3/16	1315		X	Abutment Base	X					Black thin Foundation Tar (FT1)			
28	11/3/16	1318		X	Abutment Base	X				X	Black thin Foundation Tar (FT1)			
29	11/3/16	1300		X	Below Bridge	X					Dk Brown Gummy/Sticky Pipe Wrap (PW1)			
30	11/3/16	1301		X	Below Bridge	X				X	Dk Brown Gummy/Sticky Pipe Wrap (PW1)			

Relinquished by: (Signature) 	Date: 11/4/16	Received by: (Signature) 	Date: 11/4/16	Relinquished by: (Signature)	Date:	Received by: (Signature)
(Printed) Jonathan Gentile	Time:	(Printed) Cathryn Lemire	Time: 11:53	(Printed)	Time:	(Printed)
Remarks:				Condition of Samples: Acceptable: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Page 3 of 4

**BULK ASBESTOS ANALYSIS REPORT**

CLIENT: CT Department of Transportation

Lab Log #: 0049395  
 Project #: 222165.5450.0710  
 Date Received: 11/04/2016  
 Date Analyzed: 11/07/2016

Site: 3 Bridges, Southbury, Middlebury & Thomaston, CT

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

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type
01	Tan/Grey (caulk)	Yes	No	--	---	3%	Chrysotile
02	--	--	--	--	--	NA/PS	--
03	Grey (caulk)	Yes	No	--	---	ND	None
04	Grey (caulk)	Yes	No	--	---	ND	None
05	Tan/Grey (caulk)	Yes	No	--	---	ND	None
06	Tan/Grey (caulk)	Yes	No	--	---	ND	None
07	Black (patching tar)	Yes	No	--	---	ND	None
08	Black (patching tar)	Yes	No	--	---	ND	None
09	Black (pipe wrap)	Yes	No	--	---	ND	None
10	Black (pipe wrap)	Yes	No	--	---	ND	None
11	Orange/Brown (gasket)	Yes	No	--	80% cellulose	ND	None
12	Orange/Brown (gasket)	Yes	No	--	80% cellulose	ND	None
13	Tan/Grey (caulk)	Yes	No	--	---	ND	None
14	Tan/Grey (caulk)	Yes	No	--	---	ND	None
15	Black (patching tar)	Yes	No	--	10% synthetic fiber	ND	None
16	Black (patching tar)	Yes	No	--	10% synthetic fiber	ND	None
17	Black (sealant)	Yes	No	--	10% cellulose	ND	None

**TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS**

NVLAP Lab Code 101424-0 AIHA-LAP, LLC #100122 CT #PH-0426 ME LA-0075, LB-0071 MA #AA000052 NY #10980 WV# LT000411  
 RI #AAL-007 TX #300354 VT #AL014538 LA#05011 VA #3333 000283 AZ #A20944 HI #L-09-004 NJ #CT004 CA #2907  
 CO# AL-15020 PHIL# 461 PA#68-03387



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

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type
18	Black (sealant)	Yes	No	--	10% cellulose	ND	None
19	Tan/Grey (caulk)	Yes	No	--	---	ND	None
20	Tan/Grey (caulk)	Yes	No	--	---	ND	None
21	Black (caulk)	Yes	No	--	---	ND	None
22	Black (caulk)	Yes	No	--	---	ND	None
23	Black (patching tar)	Yes	No	--	---	ND	None
24	Black (patching tar)	Yes	No	--	---	ND	None
25	Black (gasket)	Yes	No	--	10% cellulose	ND	None
26	Black (gasket)	Yes	No	--	10% cellulose	ND	None
27	Black (foundation tar)	Yes	No	--	---	ND	None
28	Black (foundation tar)	Yes	No	--	---	ND	None
29	Dark Brown (pipe wrap)	Yes	No	--	---	ND	None
30	Dark Brown (pipe wrap)	Yes	No	--	---	ND	None

Reporting limit- asbestos present at 1%  
 ND - asbestos was not detected  
 Trace - asbestos was observed at level of less than 1%  
 NA/PS - Not Analyzed / Positive Stop  
 SNA- Sample Not Analyzed- See Chain of Custody for details

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, 2017. TRC is accredited by the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC in the Industrial Hygiene Program (IHLAP) for PLM effective through October 1, 2018. 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.

Analyzed by: K. Williamson Reviewed by: Cathryn Lemire Date Issued: 11/09/2016  
 Kathleen Williamson, Laboratory Manager Cathryn Lemire, Approved Signatory

**TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS**

NVLAP Lab Code 101424-0 AIHA-LAP, LLC #100122 CT #PH-0426 ME LA-0075, LB-0071 MA #AA000052 NY #10980 WV# LT000411  
 RI #AAL-007 TX #300354 VT #AL014538 LA#05011 VA #3333 000283 AZ #A20944 HI #L-09-004 NJ #CT004 CA #2907  
 CO# AL-15020 PHIL# 461 PA#68-03387



# ProScience Analytical Services, Inc.

22 Cummings Park, Woburn, Massachusetts 01801  
 781-935-3212 ~ Fax: 781-932-4857 ~ E-Mail general@proscience.net

## Laboratory Report

Client Project #: 222165.5450.0710  
 Client Reference: CT DOT - District 4- 3 Bridges  
 PO #: C222165  
 Client #: 297  
 Client Name: TRC Environmental Corp. (CT)

Batch: **NT 16183**  
 Method: NOB  
 Date Received: 11/9/2016  
 Date Analyzed: 11/11/2016  
 Date of Report: 11/11/2016

LAB ID	Field ID	Description:	Color	Initial Weight	% Asbestos Types						% Other Non-asb.	% Organic	% Carb.	Total % Asbestos	Analyzed / Charged	Preped / Charged
					CHR	AMO	ACT	CRO	ANT	TRE						
NT122594	04	Grey Stiff Seam Caulk		.3314	.00	.00	.00	.00	.00	.00	15.48	78.55	5.97	ND	Yes	No
NT122595	06	Tan/ Grey Rubber Jt Caulk		.9012	.00	.00	.00	.00	.00	.00	35.57	38.09	26.34	ND	Yes	No
NT122596	08	Asphalt Ptching Tar		.8279	.00	.00	.00	.00	.00	.00	19.56	57.51	22.93	ND	Yes	No
NT122597	10	Black Rubbery Pipe Wrap		.3374	.00	.00	.00	.00	.00	.00	15.12	83.46	1.42	ND	Yes	No
NT122598	14	Tan/ Grey Rubbery Jt Caulk		.5600	.00	.00	.00	.00	.00	.00	20.56	37.48	41.96	ND	Yes	No
NT122599	16	Asphalt Patching Tar		.7534	.00	.00	.00	.00	.00	.00	65.07	30.95	3.98	ND	Yes	No
NT122600	18	Black Tar Sealant		.1807	.00	.00	.00	.00	.00	.00	8.41	76.65	14.94	ND	Yes	No
NT122601	20	Tan/ Grey Rubbery Jt Caulk		.8924	.00	.00	.00	.00	.00	.00	22.04	33.51	44.45	ND	Yes	No
NT122602	22	Black Caulk		.1810	.00	.00	.00	.00	.00	.00	3.93	93.92	2.15	ND	Yes	No
NT122603	24	Asphalt Patching Tar		.5107	.00	.00	.00	.00	.00	.00	20.66	61.07	18.27	ND	Yes	No
NT122604	26	Black Gasket		.1275	.00	.00	.00	.00	.00	.00	12.86	84.63	2.51	ND	Yes	No
NT122605	28	Black Thin Foundation Tar		.1739	.00	.00	.00	.00	.00	.00	38.75	7.94	53.31	ND	Yes	No
NT122606	30	Dk Brown Gummy/ Sticky Pipe Wrap		.0481	.00	.00	.00	.00	.00	.00	.00	99.38	.62	ND	Yes	No

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PO #: C222165  
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Method: NOB  
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Date of Report: 11/11/2016

LAB ID	Field ID	Description:	Color	Initial Weight	% Asbestos Types						% Other Non-asb.	% Organic	% Carb.	Total % Asbestos	Analyzed / Charged	Preped / Charged
					CHR	AMO	ACT	CRO	ANT	TRE						

### Comments:

Key: CHR = Chrysotile AMO = Amosite CRO = Crocidolite ACT = Actinolite TRE = Tremolite ANT = Anthophyllite TR = Trace = < 1% ND = None Detected

  
Mark Derosier, Analyst



SUBJECT CT DOT Dist 4 3 Bridges

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_

PROJECT NO. \_\_\_\_\_

DATE 11/3/16

BY JG/MS

CHK'D \_\_\_\_\_

### BRIDGE # 1154 BULLET HILL RD SOUTH BURY

#### ACM

- ① C<sub>1</sub> = Tan/Grey Railing support caulk (~2 LF x 84)
- ① C<sub>2</sub> = Grey Stiff Seam Caulk (below Railings ~644 LF)
- ① C<sub>3</sub> = Tan/Rubbery JT Caulk (10 jts @ ~4 LF ea)
- ① PT<sub>1</sub> = Asphalt Patching Tar (~1000 SF)
- ① BG<sub>1</sub> = Bearing Gasket (~40 @ 1 SF ea)
- ① PW<sub>1</sub> = Black Pipe Wrap (~350 LF @ .12" Dia)

2 TCLP  
I-beams + railing

### BRIDGE # 1161 CHRISTIAN RD MIDDLEBURY

#### ACM

- ① C<sub>1</sub> = Tan/Grey Rubbery JT caulk (10 @ 4 LF ea)
  - ① PT = Asphalt Patching Tar (~700 SF)
  - ① TS<sub>1</sub> = Black Tar Sealant On Pipe Endcaps (~200 SF) (pipes insul. w/ foam covered by metal)
- \* NOTE \* Rubber Gaskets under bearings + under fence post bases)

TCLP + chip  
I-beams (post bearing)

### BRIDGE # 468 RT 322/6 THOMASTON

#### ACM

- ① C<sub>1</sub> = Tan/Grey Rubbery JT caulk (8 @ ~6 LF ea)
- ① G<sub>1</sub> = Black Gasket under Railing Support (~72 @ 1 SF ea)
- ① PT<sub>1</sub> = Asphalt Patch Tar (~100 SF)
- ① PW<sub>1</sub> = Dk. Brown Pipe Wrap (~250 LF @ 8" dia)
- ① FT<sub>1</sub> = Black Foundation Tar (Unknown depth)
- ① C<sub>2</sub> = Black Caulk on FG Tubes (~6 SF)



# Project Description

Applicant: State of Connecticut, Department of Transportation  
Project No. 174-402  
Preservation Projects

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This project involves the rehabilitation of the following bridges:

<u>Bridge No.</u>	<u>Town</u>	<u>Crossing</u>
00468	Thomaston	Route 222 and 6 over Naugatuck River overflow
01154	Southbury	Bullet Hill Road over I-84 and Ramp 40
01161	Middlebury	Christian Road over I-84

Bridge No. 00468 is a two-span bridge consisting of a steel multi-girder superstructure with a reinforced concrete deck supported by reinforced concrete abutments and pier.

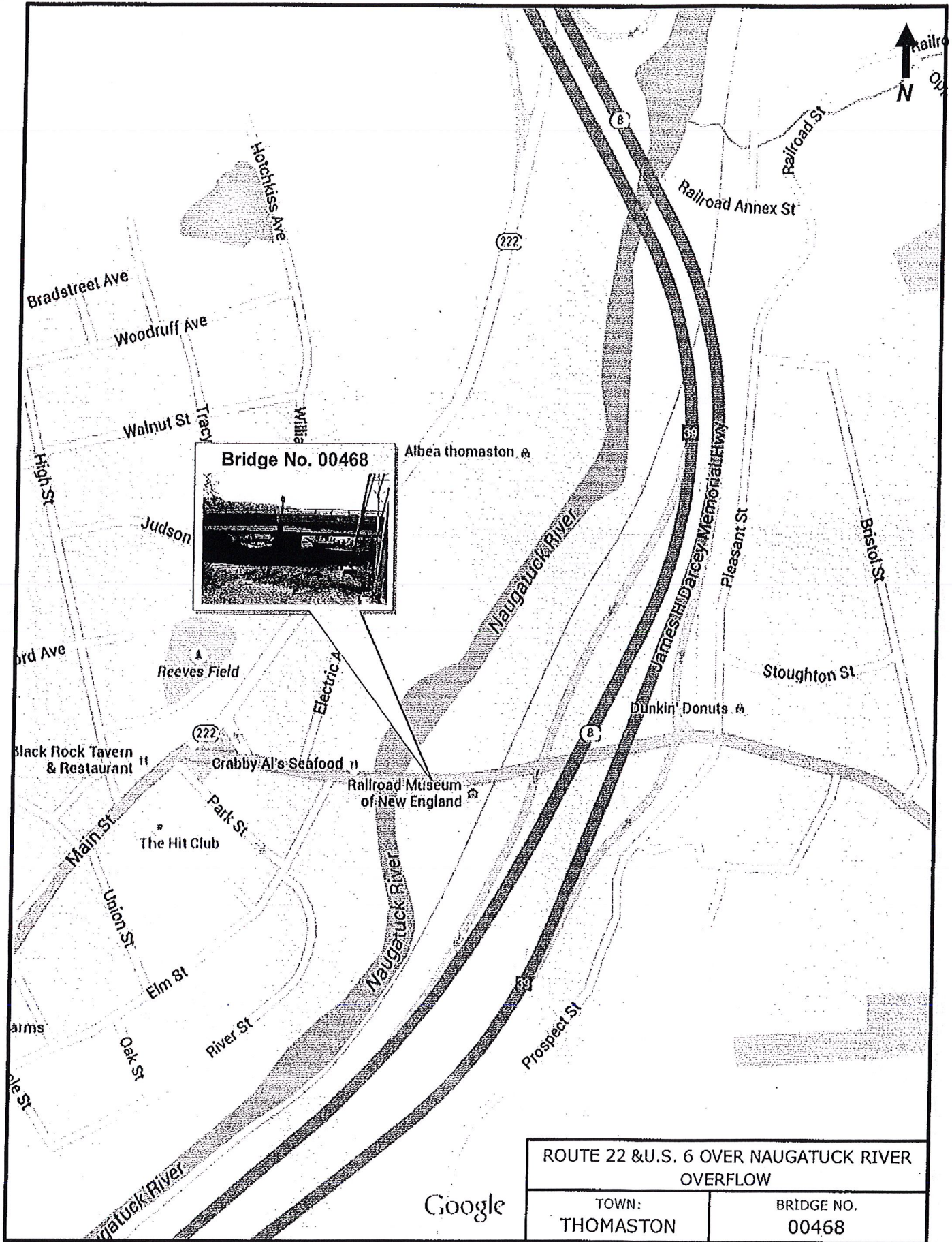
Bridge Nos. 01154 and 01161 are both four-span bridges consisting of a steel multi-girder superstructure with a reinforced concrete deck supported by reinforced concrete abutments and piers.

The bridge geometry and Average Daily Traffic (ADT) are listed below:

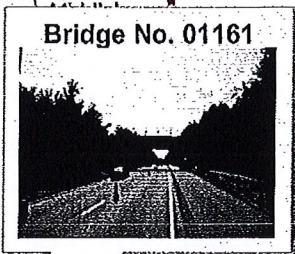
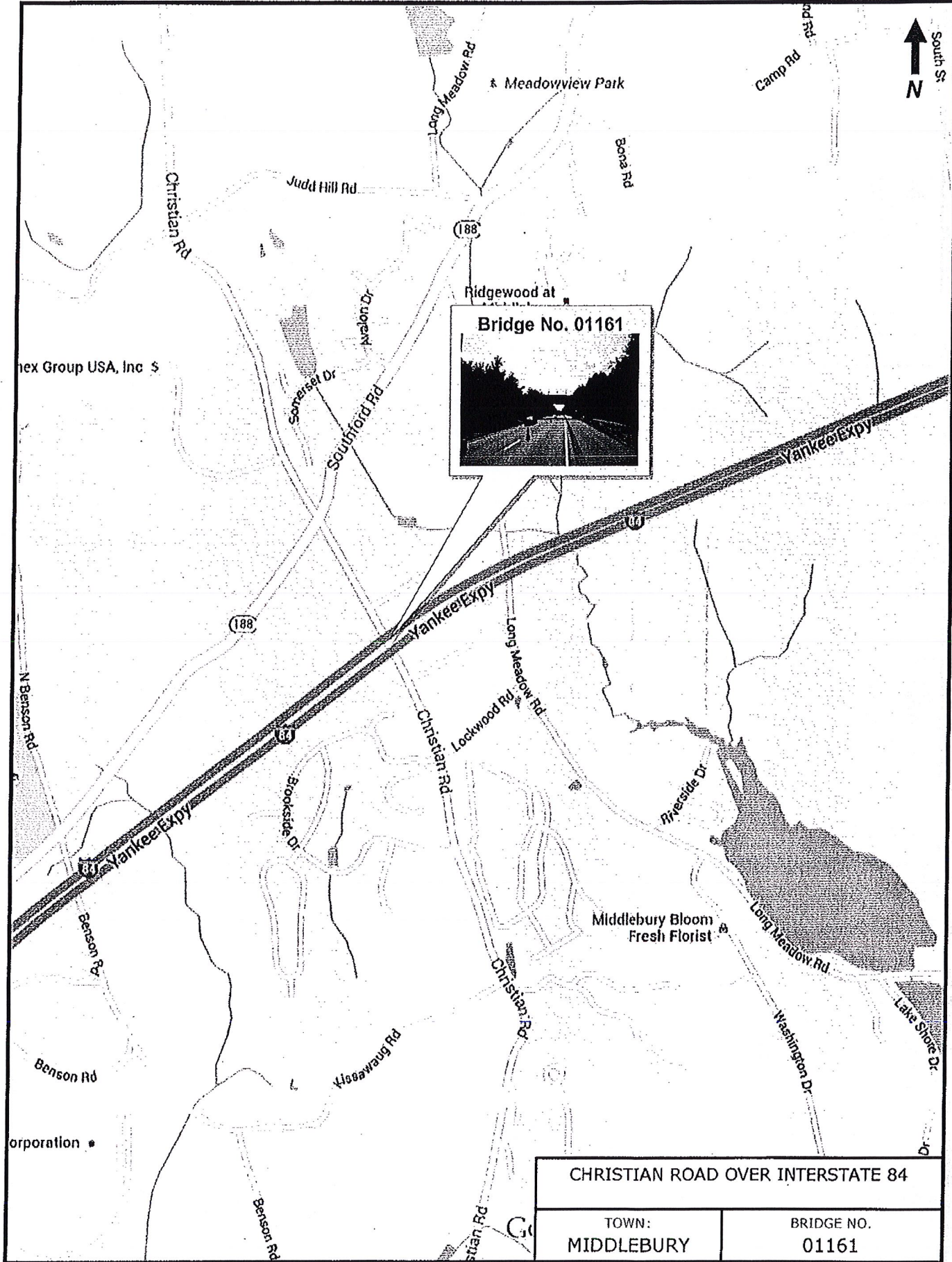
<u>Bridge No.</u>	<u>Curb-to-Curb Width</u>	<u>Out-to-Out Width</u>	<u>Number of Spans</u>	<u>Max Span Length</u>	<u>Total Structure Length</u>	<u>ADT</u>
00468	30'	71.1'	2	67'	140'	8,100 (2016)
01154	30'	35.5'	4	116'	322'	4,900 (2014)
01161	36'	39.9'	4	107'	324'	4,400 (2014)

These bridges are on the list program due to varying structural deficiencies primarily related to structural steel components, as well as the concrete substructure and deck for Bridge Nos. 00468 and 01154. The overall scope tasks for rehabilitation for these bridges are listed below:

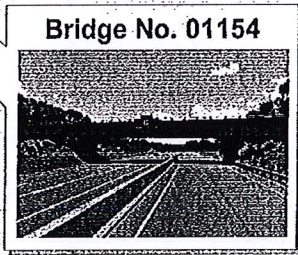
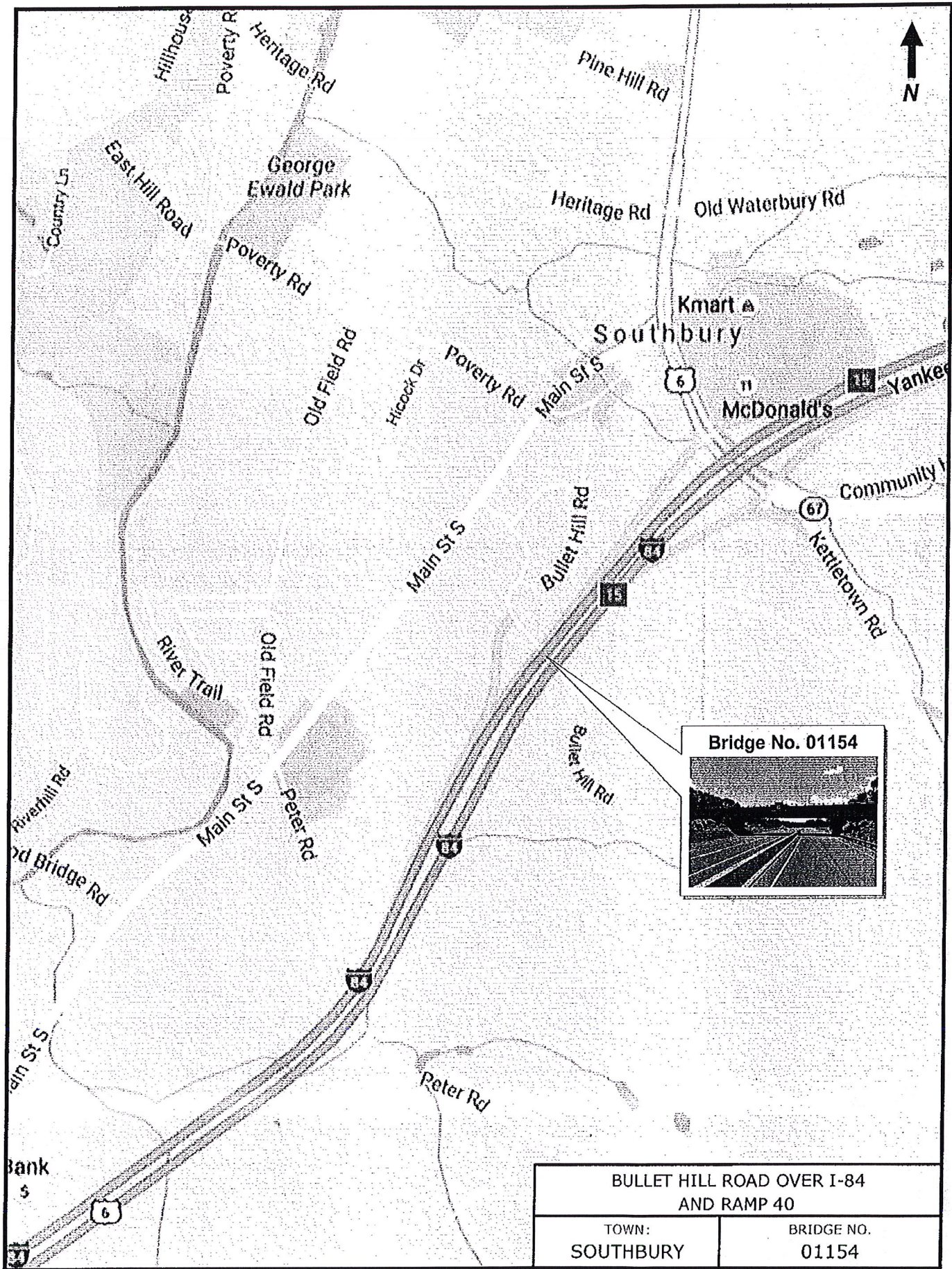
Repair Item	00468	01161	01154
Clean and paint beam ends, diaphragms, and bearings	X	X (full paint)	X
Steel repairs and spot paint	X	X	X
Replace expansion bearings			
Construct concrete keeper blocks			
Repair railing system	X		X
Repair spalls	X		
Concrete substructure repair	X		
Repair scupper drain	X		
Clean existing bearings		X	
Repair deck ends			X
Mill and patch deck and replace bituminous overlay			X
Repair deck hollow areas			X
Remove concrete haunches			X
Remove vines from wingwalls			X
Replace asphaltic plug joints	X	X	X
Add repair plates to web & flanges			X



Google



CHRISTIAN ROAD OVER INTERSTATE 84	
TOWN: MIDDLEBURY	BRIDGE NO. 01161



BULLET HILL ROAD OVER I-84 AND RAMP 40	
TOWN: SOUTHURY	BRIDGE NO. 01154