



# SYRACUSE DIVISION BUNDLED BRIDGES

TAS 17-37B, Contract D800001

## DB CONTRACT DOCUMENTS

### PART 3

## PROJECT REQUIREMENTS

**Amendment #3, December 5, 2017**

Deleted: Amendment #1, November 8, 2017

**New York State Thruway Authority**

actions that deviate from the requirements of any acquired permit(s) (if any). For any such approvals required to be obtained by the Design-Builder that must formally be issued in the Authority's name, the Authority will cooperate with the Design-Builder as reasonably requested by the Design-Builder, including execution and delivery of appropriate applications and other documentation as prepared by the Design-Builder;

- C) The Design-Builder shall be solely responsible for compliance with and violations of any Environmental Requirements; and
- D) The Design-Builder is responsible for any fines, non-compliance, violations, or damages incurred by reason of failure of the Design-Builder to comply with Environmental Approvals. Resulting fines or damages shall be deducted from monies owed the Design-Builder.
- E) NYSDEC Article 15 – Streams

Although the Authority is exempt from obtaining Article 15 permits, all work in or within 50 feet of a stream must comply with the conditions of the Article 15 permitting

In-water work must occur between the allowable work periods listed in Table 3-1, NYSDEC Article 15 Stream Classifications and Allowable Work Periods, unless waived in writing by the NYSDEC.

**Table 3-1 – NYSDEC Article 15 Stream Classifications and Allowable Work Periods**

BIN	Road	Stream/Feature crossed	Classification	Allowable Work Period
1020079	I-90/Mohawk St.	Mohawk River (in project area)	Class B	July 16-February 28
5516072 & 5516071	I-90/Millers Grove Road	Bridenbecker Creek (in project area)	Class C	July 16-February 28
5512980	Judd Road/I-90	Oriskany Creek (in project area)	Class B9(t)	July 16 – February 28
5512790	N. Main St/I-90	Canastota Creek (in project area)	Class C	July 16-February 28
5510130*	I-90/Bear Trap Creek	Bear Trap Creek	Class C(t)	June 1-September 30

Deleted: June 1-September 30

Deleted: July 16-February 28

\*BIN 5510130 – Bear Trap Creek is regulated by the United States Army Corp., and authorization from the USACE may be required depending on the Design-Builders extent of work.

**3.3.2 Environmental Plans**

The Design-Builder shall be responsible for preparing the following documents in conformity with all Environmental Requirements:

- A) State Pollutant Discharge Elimination System (SPDES) Permit application; see Soil Erosion and Water Pollution Control;
- B) Stormwater Pollution Prevention Plan (SWPPP).

Deleted: Amendment #1, November 8, 2017

New York State Thruway Authority

**SECTION 16 PAVEMENT DESIGN AND CONSTRUCTION**

**16.1 SCOPE**

The Design-Builder shall perform all Work necessary to provide all pavement required for the Project. This includes design, furnishing of materials, fabrication and construction of all temporary and permanent pavement for roadways within the Project Limits.

The Design-Builder shall be responsible for the review and acceptance of all submittals needed for the scope of work. The review and acceptance process shall be in conformance with the Design-Builder's accepted Quality Control Plan.

**16.2 STANDARDS**

The Design-Builder shall perform the pavement activities in accordance with the Contract Requirements and the applicable Standards, Design Codes and Manuals listed in Section 1.6, unless otherwise stipulated in this Project Requirement, or otherwise applicable to the Project.

**16.3 REQUIREMENTS**

All pavement materials except as stated below and construction methods shall be in accordance with the requirements of the NYSDOT *Standard Specifications* and the NYSDOT materials and pavement installation methods.

All asphalt pavement on the Thruway mainline shall be the 50 Series utilizing PG64V22, with a F2 friction aggregate requirement.

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Limestone and/or dolomite, regardless of the acid insoluble residue content, shall not be allowed for Type 1 or F1 friction aggregate requirements.

If the existing roadway section at the limits of work varies from the standards applicable for new or resurfaced sections, the roadway features (lane & shoulder widths and cross slope) shall be transitioned to meet the existing conditions.

**16.3.1 Full Depth Reconstruction**

The Design-Builder shall develop and construct pavement section(s) for full depth reconstruction, including subbase, of the Project roadways in conformance with the Comprehensive Pavement Design Manual, using the ESAL-based pavement design method.

Full depth reconstruction is required within the limits of any horizontal alignment changes, or vertical alignment changes until such point as the revised alignment meets the existing alignment. However, increases in profile elevations, up to eight inches (8"), may be made through asphalt overlays without the requirement of full depth reconstruction. No partial-width full depth reconstruction will be permitted; any roadway requiring full depth reconstruction shall be reconstructed for its full width, including shoulders, curbs and/or sidewalks.

If any roadway is permanently widened for the purpose of providing additional travel and/or turning lanes, new full depth pavement need only be developed and constructed for the widened section, provided that no other portion of the pavement within the widened section requires full depth reconstruction for any other purpose. However, the existing pavement within the widened

Deleted: Amendment #1, November 8, 2017



**SYRACUSE DIVISION  
BUNDLED BRIDGES**

TAS 17-37B, Contract D800001

**DB CONTRACT DOCUMENTS**

**PART 6**

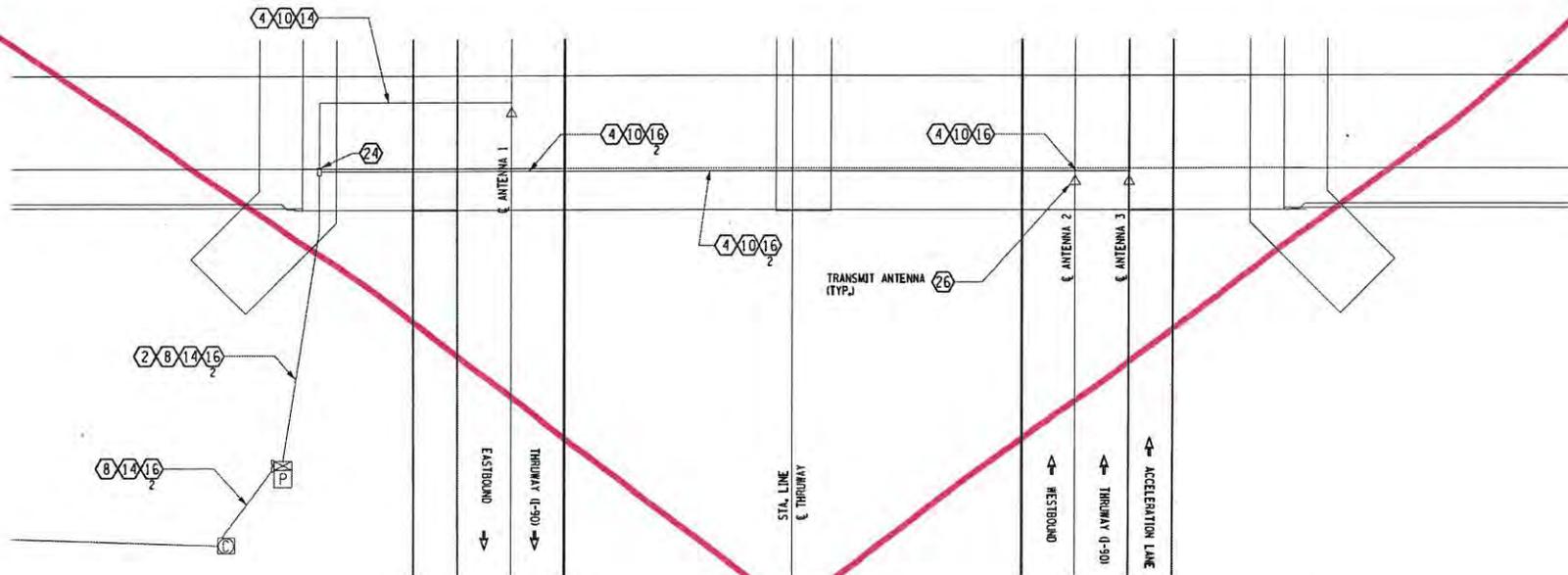
**RFP PLANS**

**Amendment #3, December 5, 2017**

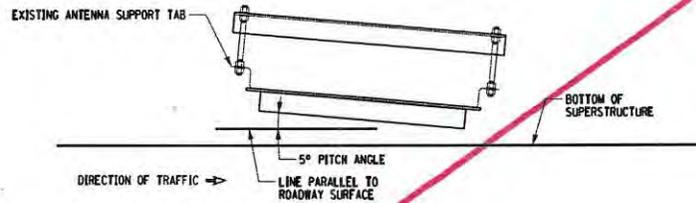
Deleted: Final, October 5, 2017

## DIRECTIVE PLANS

Deleted: Final, October 5, 2017



**ITS DIRECTIVE PLANS**



**NOTES:**

1. FOR VERTICAL RUNS FROM GROUND TO CABINET, RIGID PLASTIC CONDUIT SHALL TRANSITION TO STEEL.
2. ANY NEW HARDWARE THAT MAY BE REQUIRED FOR THE PROPOSED TRANSMIT SYSTEM RELOCATION, INCLUDING, BUT NOT LIMITED TO, CLAMPS, BOLTS, CABLES, BRACKETS, AND FASTENERS SHALL BE IN ACCORDANCE WITH ITEM 206.03120025.
3. ALL EXISTING EQUIPMENT WITHIN THE CABINET, INCLUDING THE TRANSMIT TAG READER, SHALL REMAIN AND BE PROTECTED BY THE CONTRACTOR THROUGHOUT THE DURATION OF THE CONTRACT.
4. ALL CHANGES IN CONDUIT DIRECTION SHALL BE DONE UTILIZING SWEEPS, TEES, LB TYPE FITTINGS, ETC. ARE ALLOWED ONLY WHERE ANTENNA WIRE EXITS THE MAIN CONDUIT RUN ON THE BRIDGE SUPERSTRUCTURE.
5. ALL CONDUIT, SUPPORTS AND ANTENNAE OVER THE THRUWAY MAINLINE SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 16.5' TO THE GROUND BELOW. IN ADDITION, NO FEATURE OF THE SYSTEM SHALL BE LOCATED BELOW THE BOTTOM FLANGE OF THE FASCIA GIRDER. FINAL VERTICAL POSITION SHALL BE APPROVED BY THE ENGINEER.
6. THE INTENDED POSITIONS FOR THE RELOCATED ANTENNAE ARE THE CENTERLINES OF THE THRUWAY TRAVEL LANES.

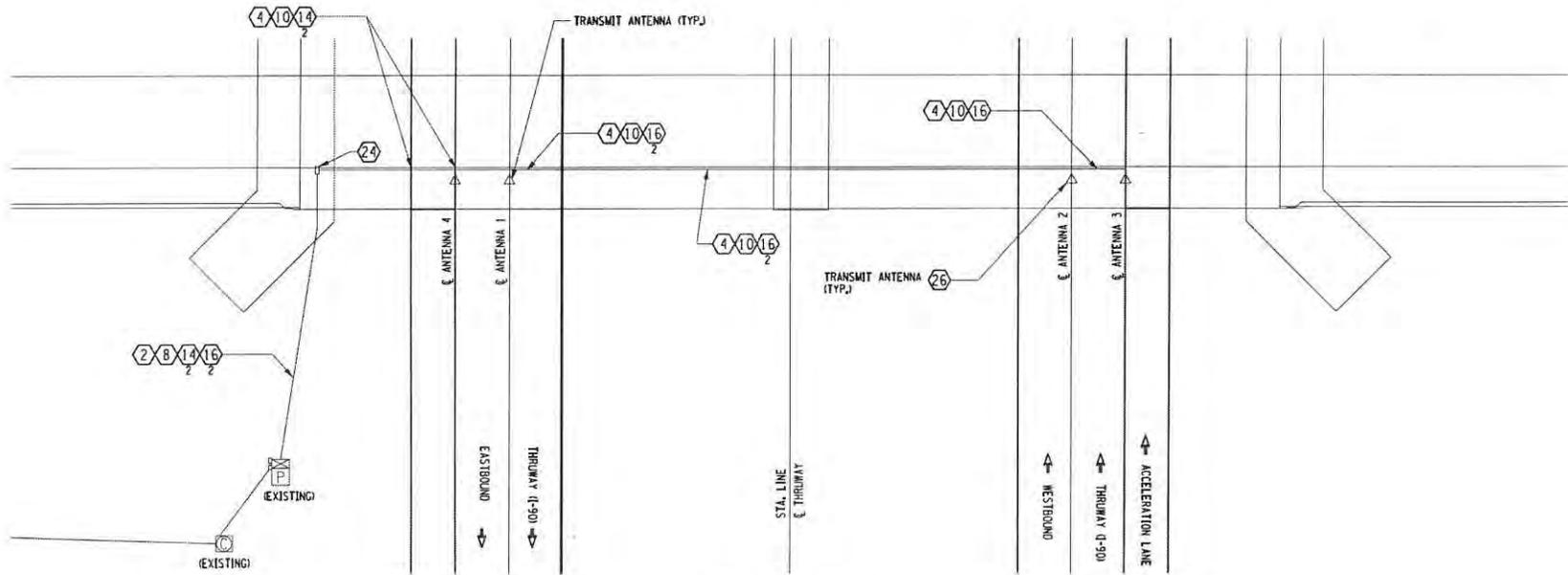
REF.	ITEM	DESCRIPTION
(2)	206.03	CONDUIT EXCAVATION, BACKFILL & SURFACE RESTORATION
(4)	206.03120025	CONDUIT INSTALLATION ON ABOVE GRADE STRUCTURES
(6)	680.520505	CONDUIT, RIGID PLASTIC, CLASS 1, 1 1/2" (NOTE 2)
(8)	680.520508	CONDUIT, RIGID PLASTIC, CLASS 1, 3" (NOTE 2)
(10)	680.520108	CONDUIT, METAL STEEL, ZINC COATED, 3"
(14)	680.77510025	TRANSMIT COAXIAL CABLE - TYPE A
(16)	680.77520025	TRANSMIT COAXIAL CABLE - TYPE B
(24)	683.50000025	NEMA 4X STAINLESS STEEL ENCLOSURE (16"x16"x8")
(26)	683.80700025	TRANSMIT ANTENNA



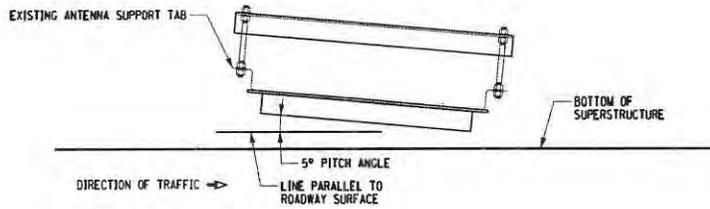
TAS 17-37B / D800001

TITLE:  
ITS DIRECTIVE PLANS

DRWN BY: JA.....	DATE: 9/27/17	SCALE: N.T.S.	DWG. NO. UT-1
CHKD BY: JA.....			



**ITS DIRECTIVE PLANS**



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 <b>NEW YORK</b> STATE OF OPPORTUNITY.		<b>Thruway</b> Authority	
TAS 17-37B / D800001			
TITLE: ITS DIRECTIVE PLANS			
DRWN BY: JA	DATE: 12/5/17	SCALE: N.T.S.	DWG. NO. UT-1
CHKD BY: JA			



**SYRACUSE DIVISION  
BUNDLED BRIDGES**

TAS 17-37B, Contract D800001

**DB CONTRACT DOCUMENTS  
PART 7  
ENGINEERING DATA**

**Amendment # 3, December 5, 2017**

**HAZARDOUS WASTE-CONTAMINATED MATERIALS  
TECHNICAL MEMORANDUM**

**for**

**NEW YORK STATE THRUWAY AUTHORITY**

**D214385      BIN 1020079  
I-90 OVER NY ROUTE 28  
TOWN OF HERKIMER  
HERKIMER COUNTY**

**Prepared by:**



**February 2017**

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**Appendices**

- Appendix A – Project Location Map
- Appendix B – Fisher Associates’ Certifications and Laboratory Accreditation
- Appendix C – Laboratory Analytical Data
- Appendix D – Sample Location Plans
- Appendix E – Hazardous Material Location Plans

## 1.0 INTRODUCTION

Fisher Associates P.E., L.S., L.A., D.P.C. (“Fisher Associates”) is working with Stantec Consulting Services, Inc. (Stantec), and the New York State Thruway Authority (NYSTA), to prepare this Hazardous Materials Technical Memorandum, here after referred to as HMTM, in technical support of the proposed replacement of the I-90 Thruway bridge over Mohawk Street (NY Route 28) in the Town of Herkimer, Herkimer County, New York. The project area was investigated on December 2, 2016 as part of the project. The project location is shown on the Project Location Map in Appendix A.

### 1.1 Purpose and Scope

The purpose of this HMTM is to identify asbestos-containing materials (ACMs), lead based paint (LBP), lead containing materials (LCMs), and polychlorinated biphenyls (PCBs), collectively known as Hazardous Waste Contaminated Materials (HWCM), within the bridge rehabilitation project corridor, and to develop quantity estimates for abatement of identified HWCMs.

### 1.2 Background

This HMTM is consistent with the requirements outlined in the NYSDOL Industrial Code Rule 56 (Code Rule 56), which requires an asbestos pre-demolition survey and asbestos abatement to be performed prior to any alterations, renovations or demolition.

### 1.3 Record Review Activities

Fisher Associates received no previous sampling reports to review. As-built drawings of the bridge were reviewed to identify potential ACM sample locations and for the presence of lead containing materials such as bearing pads or joint spacers.

### 1.4 Summary of Findings

Table 1.1 summarizes those materials found to be positive for ACM, LBP, and/or PCBs based on current sample analysis. Added detail is presented in the following sections.

**Table 1.1**  
**Summary of Findings**  
**I-90 Mainline over NYS Route 28**

<b>Sample Identification</b>	<b>Material</b>	<b>Sample Location</b>	<b>Approx. Quantity</b>
8-A	Black Bituminous Material	Patches Around Bearings	275 SF
N/A	Lead Bearing Pad	Under Bearings	88 SF

## 2.0 MATERIAL SAMPLING AND LABORATORY METHODOLOGY

A NYSDOL-certified asbestos inspector from Fisher Associates collected bulk samples of suspect asbestos-containing materials (ACMs) on December 2, 2016. Bulk samples were collected using hand tools from each matrix identified as a potential ACM. Additionally, paint samples were collected and analyzed for lead, and caulking/adhesive materials were collected and analyzed for PCBs. Upon completion of the sampling, a chain-of-custody form was completed for the materials sampled.

Samples were delivered under standard chain-of-custody protocol to Paradigm Environmental Services, Inc. (Paradigm), a New York State Department of Health (NYSDOH) certified laboratory. The procedures followed are in accordance with the NYSDOH Environmental Laboratory Approval Program (ELAP). New York State Department of Labor (NYSDOL) Code Rule 56 defines materials containing greater than one percent (1%) asbestos by weight as being Asbestos Containing Materials.

The paint samples were analyzed via SW846 Method 3050 /6010 to determine the lead content of the paints. Those materials having a concentration equal or greater than 0.5% by weight in lead are considered to be lead based.

The materials sampled for PCBs were analyzed by USEPA Method 8082. According to the USEPA, materials containing greater than fifty (50) parts per million (ppm) are considered PCB-containing.

Copies of Fisher Associates' Asbestos Handling License, the Asbestos Inspector's certification, and the Laboratory's Accreditation are in Appendix B. Copies of the laboratory's analytical results are included in Appendix C. The Sample Location Plans are included in Appendix D. The Hazardous Material Locations Plans are included in Appendix E.

## 3.0 SAMPLE RESULTS AND LOCATIONS

### 3.1 Asbestos Containing Materials

Table 3.1 provides a summary of the laboratory analytical results for the samples collected from the building materials identified on and around the bridge structure and nearby roadway that may be disturbed. Those samples identified as being ACMs (greater than one percent asbestos) are shaded in the table. Refer to the Sample Location Plans in Appendix D for locations of sample collection.

**Table 3.1**  
**Summary of Samples Collected and Results**  
**I-90 Mainline over NYS Route 28**

Sample Identification	Material	Sample Location	% Asbestos
1-A	Green Paint	Outside Bridge Girder	NAD
1-B	Green Paint	Outside Bridge Girder	NAD
2-A	Grey Paint	Underside of Bridge, Inside of Girder	NAD

Sample Identification	Material	Sample Location	% Asbestos
2-B	Grey Paint	Underside of Bridge, Inside of Girder	NAD
3-A	White Paint	Concrete Abutments	NAD
3-B	White Paint	Concrete Abutments	NAD
4-A	Green Paint	Guard Railings	NAD
4-B	Green Paint	Guard Railings	NAD
5-A	Black Packing Material	B/w Abutments	NAD
5-B	Black Packing Material	B/w Abutments	NAD
6-A	Black Tar	Base of Guard Railings	NAD
6-B	Black Tar	Base of Guard Railings	NAD
7-A	Black Bituminous Material	B/w Sidewalk and Abutments	NAD
7-B	Black Bituminous Material	B/w Sidewalk and Abutments	NAD
8-A	Black Bituminous Material	Patches Around Bearings	Chrysotile 2.9%
8-B	Black Bituminous Material	Patches Around Bearings	N/A

### 3.2 Lead Containing Materials (LCMs)

Table 3.2 below lists the sample identification, the type of material, the sample location, and the percent of lead for each sample. Those samples identified as being Lead Based Paint (LBP), having a concentration of 0.5% by weight or greater, are shaded in the table. Additionally, a review of the as-built drawings indicated the presence of lead bearing pads.

**Table 3.2**  
**Summary of Lead Based Paint Samples Collected and Results**  
**I-90 Mainline over NYS Route 28**

Sample Identification	Material	Sample Location	Lead (% by weight)
LBP-1	Green Paint	Outside Bridge Girder	0.0243
LBP-2	Grey Paint	Underside of Bridge, Inside of Girder	0.0243
LBP-3	White Paint	Concrete Abutments	0.0527
LBP-4	Green Paint	Guard Railings	0.0937
N/A	Rocker Bearing Pad	Under Bearings	Assumed

### 3.3 Polychlorinated Biphenyls (PCBs)

There were no potential PCB containing material observed during the inspection therefore no PCB samples were collected.

#### 4.0 QUANTITY ESTIMATES

This section summarizes estimated quantities of the positively identified ACMs, LBPs, and/or PCBs found in the various materials sampled during the assessment. The approximate locations and extent of the ACMs are shown on the Sample Location Plans shown in Appendix D.

##### 4.1 Asbestos

The materials listed in Table 4.1 were collected during the assessment conducted by Fisher Associates and identified via laboratory analysis as ACM.

**Table 4.1**  
**Summary Quantities of Asbestos-Containing Materials**  
**I-90 Mainline over NYS Route 28**

Sample Identification	Material	Location	Approximate Quantity
8-A	Black Bituminous Material	Patches Around Bearings	275 SF

##### 4.2 Lead

Samples were collected of potential lead-containing materials during the investigation conducted by Fisher Associates and tested via laboratory analysis. None of the paint samples analyzed are considered to be lead-based. However, a review of the as-built draws of the bridge indicated the presence of lead bearing pads under the expansion bearings and fixed bearings.

**Table 4.1**  
**Summary Quantities of Lead-Containing Materials**  
**I-90 Mainline over NYS Route 28**

Sample Identification	Material	Location	Approximate Quantity
N/A	Bearing Pad	Under Bearings	88 SF

##### 4.3 PCBs

The investigation conducted by Fisher Associates also included the testing for PCBs. Those materials tested included caulking and/or sealants. Materials are considered to be PCB-containing if the total concentration of the PCB compounds exceeds fifty (50) parts per million (ppm). Based on the laboratory results, none of the materials tested are considered PCB-containing.

## **5.0 CONCLUSIONS**

### **5.1 Asbestos**

Asbestos containing materials (ACMs) have been identified as part of this assessment. In accordance with 12 NYCRR 56, no demolition or renovation work shall be commenced by any owner or agent prior to completion of asbestos abatement performed by a licensed asbestos abatement contractor. If suspect asbestos containing materials not identified in this pre-demolition asbestos survey report are discovered during the demolition process, it is required that the presence, location and quantity of newly discovered material, be conveyed within twenty-four (24) hours of discovery to the owner or their representative. All activities must cease in the area where the presumed asbestos containing material or suspect miscellaneous ACM is found, until a licensed asbestos contractor appropriately assesses and manages the discovered materials.

### **5.2 Lead**

A review of the bridge drawings indicate the use of lead materials in the construction. It is recommended that a Lead Abatement and Handling of Lead Containing Materials specification section be developed. This section specifies the requirements for the detection and prevention of lead dust contamination in lead dust control work areas and areas adjacent to them, protection of workers, post-work cleaning, pre-disposal testing and appropriate disposal of removed material.

Finally, all trades must follow the Occupational Safety & Health Administration (OSHA) 29 CFR 1926.62 regulation, which considers any amount of Lead to be of concern. The regulation states that the employer shall assure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air ( $50 \mu\text{g}/\text{m}^3$ ) averaged over an 8-hour period.

### **5.3 PCBs**

The investigation conducted by Fisher Associates also included the testing for PCBs. Those materials tested included caulking and sealants. Materials are considered to be PCB-containing if the total concentration of the PCB compounds exceeds fifty (50) parts per million (ppm). Based on the laboratory results, none of the materials tested are considered PCB-containing.

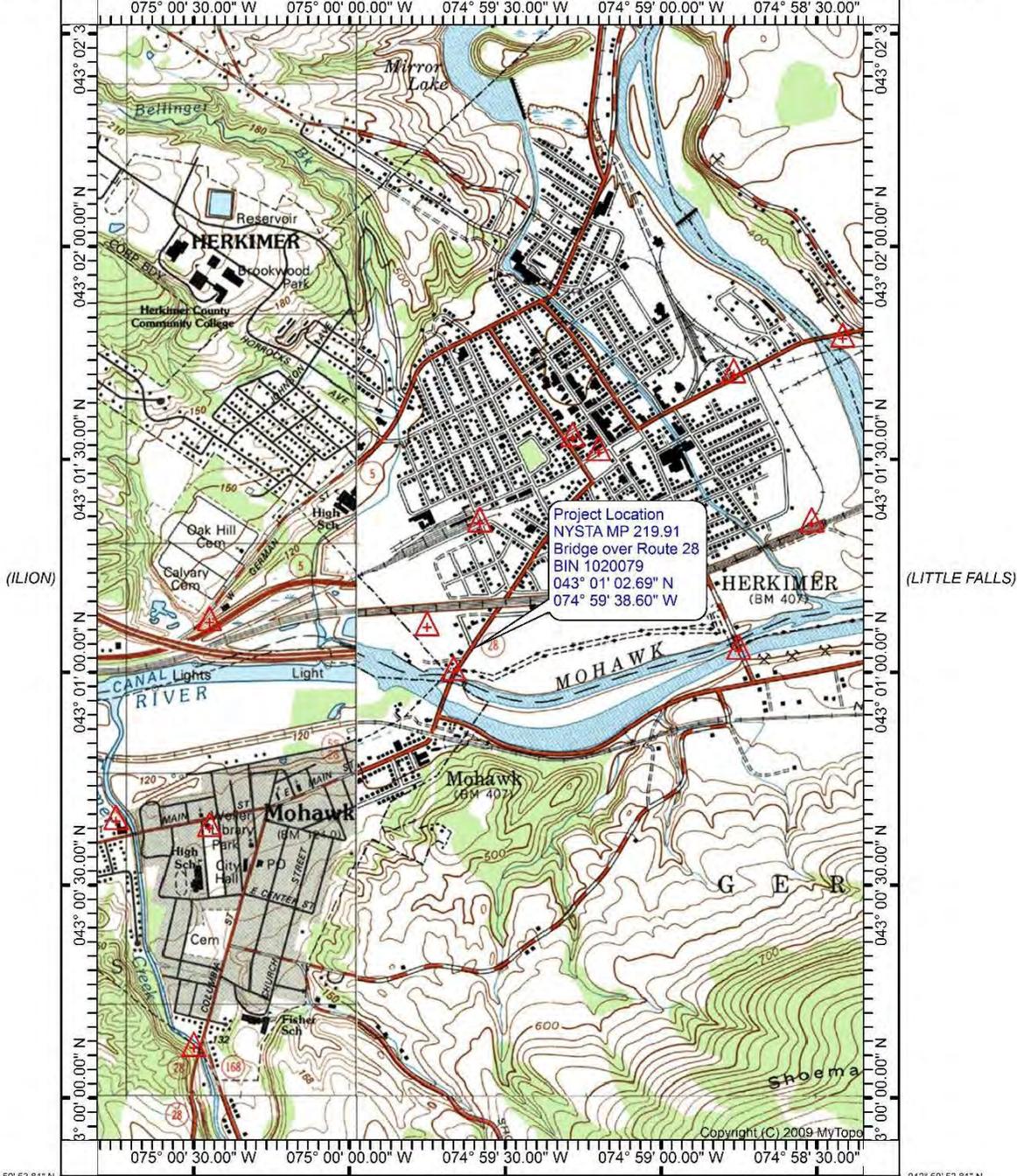
**APPENDIX A**  
**PROJECT LOCATION MAP**

(NEWPORT)



HERKIMER QUADRANGLE  
NEW YORK  
TOPOGRAPHIC SERIES (SALISBURY)

075° 00' 30.00" W 075° 00' 00.00" W 074° 59' 30.00" W 074° 59' 00.00" W 074° 58' 30.00" W  
043° 02' 31.53" N 043° 02' 00.00" N 043° 01' 30.00" N 043° 01' 00.00" N 043° 00' 30.00" N 043° 00' 00.00" N



042° 59' 53.81" N 075° 00' 49.06" W (MIDDLEVILLE) 074° 58' 20.76" W 043° 02' 31.53" N

(MILLERS MILLS)

Produced by MyTopo Terrain Navigator  
Topography based on USGS 1:24,000  
Maps

North American 1983 Datum (NAD83)  
Polyconic Projection

To place on the predicted North American  
1927 move the projection lines 8M N and  
33M E

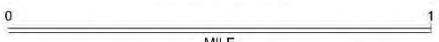
Declination



MN GN

GN 0.00° E  
MN 13.20° W

(JORDANVILLE)  
SCALE 1:24000



CONTOUR INTERVAL 20 FEET  
MEAN SEA LEVEL

(VAN HORNESVILLE)

HERKIMER, NY  
1943

Copyright (C) 2009 MyTopo

Printed: Tue Dec 06 2011

**APPENDIX B  
FISHER ASSOCIATES'  
CERTIFICATIONS LABORATORY  
ACCREDITATION**

**New York State – Department of Labor**

Division of Safety and  
Health License and  
Certificate Unit State  
Campus Building 12  
Albany, NY 12240

**ASBESTOS HANDLING LICENSE**

Fisher Associates, P.E., L.S., P.C.  
Suite A  
135 Calkins Road  
Rochester, NY 14623

FILE NUMBER: 99-0504  
LICENSE NUMBER: 29344  
LICENSE CLASS: RESTRICTED  
DATE OF ISSUE: 08/03/2016  
EXPIRATION DATE: 08/31/2017

Duly Authorized Representative – Robert W Goossen:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.



Eileen M. Franko, Director For  
the Commissioner of Labor

STATE OF NEW YORK - DEPARTMENT OF LABOR  
ASBESTOS CERTIFICATE



**MARK T STEIN**  
CLASS(EXPIRES)  
C ATEC(03/17) D INSP(03/17)  
H PM (03/17) I PD (03/17)

CERT# 00-07444  
DMV# 457924110

MUST BE CARRIED ON ASBESTOS PROJECTS



01213 000706159 17

EYES BLU  
HAIR BRO  
HGT 6' 03"

IF FOUND RETURN TO:  
NYS DOL - L&C UNIT  
ROOM 161A BUILDING 12  
STATE OFFICE CAMPUS  
ALBANY NY 12240

# United States Environmental Protection Agency This is to certify that

Mark T. Stein



has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Risk Assessor

## In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

---

This certification is valid from the date of issuance and expires August 25, 2019

---

John Gorman, Chief

Pesticides & Toxic Substances Branch

---

LBP-

---

R-36347-1

Certification #

---

June 27, 2016

Issued On



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

**DR. THOMAS R. MCKEE**  
**AMERISCI RICHMOND**  
**13635 GENITO RD**  
**MIDLOTHIAN, VA 23112**

**NY Lab Id No: 10984**

*is hereby APPROVED as an Environmental Laboratory for the category*  
**ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE**  
*All approved subcategories and/or analytes are listed below:*

**Miscellaneous**

Asbestos in Friable Material	Item 198.1 of Manual EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual



**Serial No.: 54118**

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. STEVE DEVITO  
PARADIGM ENVIRONMENTAL SERVICES INC  
179 LAKE AVENUE  
ROCHESTER, NY 14608

NY Lab Id No: 10958

*is hereby APPROVED as an Environmental Laboratory for the category  
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
All approved subcategories and/or analytes are listed below:*

**Miscellaneous**

Asbestos in Friable Material	Item 198.1 of Manual EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual
Lead in Dust Wipes	EPA 6010C
Lead in Paint	EPA 6010C

**Sample Preparation Methods**

EPA 3050B

NEW  
YORK  
STATE

Department  
of Health

Serial No.: 54682

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

**NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER**

Expires 12:01 AM April 01, 2017  
Issued April 01, 2016 Revised  
May 20, 2016



**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**  
*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

**MR. STEVE DEVITO**  
**PARADIGM ENVIRONMENTAL SERVICES INC**  
**179 LAKE AVENUE**  
**ROCHESTER, NY 14608**

**NY Lab Id No: 10958**

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards (2003) for the category  
ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

**Nitroaromatics and Isophorone**

2,4-Dinitrotoluene	EPA 625 EPA 8270D
2,6-Dinitrotoluene	EPA 625 EPA 8270D
Isophorone	EPA 625 EPA 8270D
Nitrobenzene	EPA 625 EPA 8270D

**Phthalate Esters**

Diethyl phthalate	EPA 625 EPA 8270D
Dimethyl phthalate	EPA 625 EPA 8270D
Di-n-butyl phthalate	EPA 625 EPA 8270D
Di-n-octyl phthalate	EPA 625 EPA 8270D

**Nitrosoamines**

N-Nitrosodimethylamine	EPA 625 EPA 8270D
N-Nitrosodi-n-propylamine	EPA 625 EPA 8270D
N-Nitrosodiphenylamine	EPA 625 EPA 8270D

**Polychlorinated Biphenyls**

PCB-1016	EPA 8082A EPA 608
PCB-1221	EPA 8082A EPA 608
PCB-1232	EPA 8082A EPA 608
PCB-1242	EPA 8082A EPA 608
PCB-1248	EPA 8082A EPA 608
PCB-1254	EPA 8082A EPA 608
PCB-1260	EPA 8082A EPA 608
PCB-1262	EPA 8082A
PCB-1268	EPA 8082A

**Organophosphate Pesticides**

Atrazine	EPA 8270D
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**Petroleum Hydrocarbons**

Diesel Range Organics	EPA 8015D
-----------------------	-----------

**Phthalate Esters**

Benzyl butyl phthalate	EPA 625 EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 625 EPA 8270D

**Serial No.: 54805**

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.



**APPENDIX C**  
**LABORATORY ANALYTICAL DATA**



**PLM & TEM BULK ASBESTOS ANALYSIS REPORT**  
**via NYSDOH ELAP Method 198.1, 198.4 and 198.6**

**Client:** Fisher Associates  
**Location:** BIN 1020079

**Job No:** 12197-16  
**Page:** 1 of 4

**Sample Date:** 12/2/2016

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
1A	101820 B	Outside Girder	Green Paint	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
1B	101821	Outside Girder	Green Paint	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
2A	101822	Inside Girder	Gray Paint	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
2B	101823	Inside Girder	Gray Paint	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
3A	101824	Concrete Surface	White Paint	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
3B	101825	Concrete Surface	White Paint	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
4A	101826	Guard Railings	Green Paint	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
4B	101827	Guard Railings	Green Paint	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
5A	101828	B/W Abutments	Black Packing Material	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
5B	101829	B/W Abutments	Black Packing Material	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%

**KEY TO NOB COLUMN SYMBOLS**  
 No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).  
 √ NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 √ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.  
 # denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 X denotes sample prepped only by ELAP Method 198.6.  
 \*\* Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.  
 Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1, 198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.") or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0).



Lab Code 200530-0 for PLM Analysis

PLM Date Analyzed: 12/12/2016  
 Microscope: Olympus BH-2 #232953  
 Analyst: T. Bush

TEM Date Analyzed: 12/12/2016  
 TEM Analyst: F. Weinman

**ELAP ID No.: 10958**

**Laboratory Results Approved By:**  
**Asbestos Operations Manager or Designee**

*[Signature]*  
Mary D. [Signature]

Paradigm Environmental Services, Inc. is not responsible for the data supplied by an independent inspector. National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the laboratory. This PLM report relates ONLY to the items tested. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Quality control data (including 95% confidence limits and laboratory and analysts' and precision) is available upon request.



**PLM & TEM BULK ASBESTOS ANALYSIS REPORT**  
**via NYSDOH ELAP Method 198.1, 198.4 and 198.6**

**GM**

Client: Fisher Associates  
Location: BIN 1020079

Job No: 12197-16  
Page: 2 of 4

Sample Date:

Client ID	Lab ID	12/2/2016 Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non- Fibrous Matrix Material %
6A	101830	Base of Guard Rail & Concrete	Black Tar	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
6B	101831	Base of Guard Rail & Concrete	Black Tar	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
7A	101832	B/W Sidewalk & Abutments	Black Bituminous Material	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	Fiberglass 1%	99%
7B	101833	B/W Sidewalk & Abutments	Black Bituminous Material	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	Fiberglass 2%	98%
8A	101834	Around Rocker Supports	Black Bituminous Material	Chrysotile 2.9%	2.9%	✓	Not Required	N/A	None Detected	97.1%
8B	101835	Around Rocker Supports	Black Fibrous Bituminous Material	STOP	POSITIVE	X	SAMPLE	NOT	ANALYZED	N/A

**KEY TO NOB COLUMN SYMBOLS**

No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).  
 ✓ NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 ✓̂ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.  
 # denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 X denotes sample prepped only by ELAP Method 198.6.  
 \* Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.  
 Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1, 198.4 and 198.6 (Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.) or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0).



Lab Code 200530-0 for PLM Analysis

PLM Date Analyzed: 12/12/2016

TEM Date Analyzed: 12/12/2016

Microscope: Olympus BH-2 #232953

TEM Analyst: F. Weinman

Analyst: T. Bush

ELAP ID No.: 10958

Laboratory Results Approved Asbestos

By: Mary Dohr

Paradigm Environmental Services, Inc. is not responsible for the data so long as the client is an Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the laboratory. This PLM report relates ONLY to the items tested. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Quality control data (including 95% confidence limits and laboratory and analysts' and precision) is available upon request.



**CHAIN OF CUSTODY FOR BULK ASBESTOS ANALYSIS**

179 Lake Avenue, Rochester, New York 14608 Office: 585-647-2530  
 1815 Love Road, Grand Island, New York 14072 Office: 716-775-5777

1041

**OFFICE USE ONLY**

Job #: 121 97-10

Page \_\_\_\_\_ of 4

Date Logged In: 12-6-16

<b>Client:</b> Fisher Associates	<b>Contact:</b> Mark Stein
<b>Phone Number:</b> (585) 334-1310	<b>Email Address for Data:</b> mstein@fisherassoc.com
<b>Client Mailing Address:</b> 135 Calkins Road Rochester, NY 14623	<b>Results To:</b> Mark Stein
<b>Date Sampled:</b>	<b>Turn Around Time:</b> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 5 <input checked="" type="checkbox"/> Other <input type="checkbox"/>
<b>Project Location:</b> BIN 102007A	<b>Material Type/Quantity:</b> Friable <input type="checkbox"/> NOB <input type="checkbox"/> TEM <input type="checkbox"/>

	Client ID	Lab ID	Sampling Location	Color	Material Type	Logged In By	Type of Material															
1	1A	101820B	Outside Girder	Green	NOB	VK	Paint															
2	2B	821	" "	<del>Grey</del> Green																		
3	2A	822	Inside Girder	<del>Grey</del>																		
4	2B	823	" "	Grey																		
5	3A	824	Concrete surface	White																		
6	3B	825	" "	wh.																		
7	4A	821D	Gourd railings	te																		
8	4B	827	" "	GREEN																		
9	5A	828	B/w abutments	Black																		Packing material
10	5B	829	" "	Black																		

<b>Sampled By:</b> <i>[Signature]</i>	<b>Date:</b> 12/02/16
<b>Transported to Paradigm By:</b> <i>[Signature]</i>	<b>Date:</b> 12/05/16
	<b>Date:</b> 12/5/16

All samples will be analyzed by the appropriate New York State Department of Health methods (198.1, 198.4 and 198.6) unless EPA 600/M4/82/020 per 40 CFR 763 and/or EPA 600/R-93/116 methods are requested.

**CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS**

or provide TEM contact name:

**TOTAL NUMBER OF SAMPLES ON ALL CHAINS OF CUSTODY:** 11

Received By: *[Signature]* VK 12-6-16

CUSTODY: *[Signature]*

2 of 2



**CHAIN OF CUSTODY FOR BULK ASBESTOS ANALYSIS**

179 Lake Avenue, Rochester, New York 14608 Office: 585-647-2530  
 1815 Love Road, Grand Island, New York 14072 Office: 716-775-5777

<b>Client:</b> Fisher Associates	<b>Contact:</b> Mark Stein
<b>Phone Number:</b> (585) 334-1310	<b>Email Address for Data:</b> mstein@fisherassoc.com
<b>Results To:</b> Mark Stein	<b>Turn Around Time:</b> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 5 <input checked="" type="checkbox"/> Other <input type="checkbox"/>
<b>Date Sampled:</b>	<b>Material Type/Quantity:</b> Friable NOB TEM
<b>Project Location:</b> BIN 1020079	

**Client Mailing Address:**  
135 Calkins Road  
Rochester, NY 14623

**OFFICE USE ONLY**

Job #: 12197-116

Page \_\_\_\_\_ of \_\_\_\_\_

Date Logged In: \_\_\_\_\_  
In By: \_\_\_\_\_

	Client ID	Lab ID	Sampling Location	Color	Material Size	Type of Material
1	6A	101830	Base of guard rail & concrete	Black	NOB	Tar
2	6B	831	" " "	"	↓	Tar
3	7A	832	Blw sidewalk & gutters	Black		Bituminous Mast
4	7B	833	" " "	"		" "
5	8A	834	Around rocker supports	Black		" "
6	8B	835	" " "	"		" "
7						
8						
9						
10						

<b>Sampled By:</b> [Signature]	<b>Date:</b>
<b>Transported to Paradigm By:</b> [Signature]	<b>Date:</b> 12/10/16
<b>Received By:</b> [Signature]	<b>Date:</b> 12/05/16
	<b>Date:</b> 12/15/16

All samples will be analyzed by the appropriate New York State Department of Health methods (198.1, 198.4 and 198.6) unless EPA 600/M4/82/020 per 40 CFR 763 and/or EPA 600/R-93/116 methods are requested.

**CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS**

Provide TEM contact name: \_\_\_\_\_

Number of samples: \_\_\_\_\_

Chain of Custody: [Signature]

VK 12.16.16



**PARADIGM**  
ENVIRONMENTAL SERVICES, INC.

*Analytical Report For*  
**Fisher Associates**

*For Lab Project ID*

**165269**

*Referencing*

**Bridge Haz Survey, 151021-09, BIN**

**1020079 Prepared**

**Monday, December 12, 2016**

Any noncompliant QC parameters or other notes impacting data interpretation are flagged or documented on the final report or are noted below.

---

**Certifies that this report has been approved by the Technical Director or Designee**

179 Lake Avenue • Rochester, NY 14608 • (585) 647-2530 • Fax (585) 647-3311 • ELAP ID# 10958 • PADEP ID# 68-02351

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

*Report Prepared Monday, December 12, 2016*

Page 1 of 9



**Lab Project ID: 165269**

**Client: Fisher Associates**

**Project Reference: Bridge Haz Survey, 151021-09, BIN 1020079**

**Sample Identifier: LBP-1**

**Lab Sample ID: 165269-01**

**Date Sampled: 12/2/2016**

**Matrix: Paint**

**Date Received: 12/6/2016**

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>0.0243</b>	%		12/8/2016 11:59

**Method Reference(s):** EPA 6010C

EPA 3050B

**Preparation Date:** 12/6/2016

**Data File:** 120816a



**Lab Project ID: 165269**

**Client: Fisher Associates**

**Project Reference: Bridge Haz Survey, 151021-09, BIN 1020079**

**Sample Identifier: LBP-2**

**Lab Sample ID: 165269-02**

**Date Sampled: 12/2/2016**

**Matrix: Paint**

**Date Received: 12/6/2016**

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>0.0243</b>	%		12/8/2016 12:03

**Method Reference(s):** EPA 6010C  
EPA 3050B  
**Preparation Date:** 12/6/2016  
**Data File:** 120816a



**Lab Project ID: 165269**

**Client:** Fisher Associates

**Project Reference:** Bridge Haz Survey, 151021-09, BIN 1020079

**Sample Identifier:** LBP-3

**Lab Sample ID:** 165269-03

**Date Sampled:** 12/2/2016

**Matrix:** Paint

**Date Received:** 12/6/2016

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>0.0527</b>	%		12/8/2016 12:07

**Method Reference(s):** EPA 6010C

EPA 3050B

**Preparation Date:** 12/6/2016

**Data File:** 120816a



**Lab Project ID: 165269**

**Client: Fisher Associates**

**Project Reference: Bridge Haz Survey, 151021-09, BIN 1020079**

**Sample Identifier: LBP-4**

**Lab Sample ID: 165269-04**

**Date Sampled: 12/2/2016**

**Matrix: Paint**

**Date Received: 12/6/2016**

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>0.0937</b>	%		12/8/2016 12:12

**Method Reference(s):** EPA 6010C

EPA 3050B

**Preparation Date:** 12/6/2016

**Data File:** 120816a



## Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

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All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

*"<" = Analyzed for but not detected at or above the quantitation limit.*

*"E" = Result has been estimated, calibration limit exceeded.*

*"Z" = See case narrative.*

*"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.*

*"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.*

*"B" = Method blank contained trace levels of analyte. Refer to included method blank report.*

*"J" = Result estimated between the quantitation limit and half the quantitation limit.*

*"L" = Laboratory Control Sample recovery outside accepted QC limits.*

*"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.*

*"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.*

*"\*" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.*

*"(1)" = Indicates data from primary column used for QC calculation.*

*"A" = denotes a parameter for which ELAP does not offer approval as part of their laboratory certification program.*

*"F" = denotes a parameter for which Paradigm does not carry certification, the results for which should therefore only be used where ELAP certification is not required, such as personal exposure assessment.*

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

# GENERAL TERMS AND CONDITIONS

## LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

### Warranty.

Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

### Scope and Compensation.

LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB will use LAB default method for all tests unless specified otherwise on the Work Order.

Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

### Prices.

Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

### Limitations of Liability.

In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.

LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.

All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.

Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

### Hazard Disclosure.

Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

### Sample Handling.

Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises. Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on the final report.

Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.

LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

### Legal Responsibility.

LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

### Assignment.

LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

### Force Majeure.

LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

### Law.

This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.





### Chain of Custody Supplement

Client: Fisher Associates

Completed by: Glenn Pezzulo

Lab Project ID: 165269

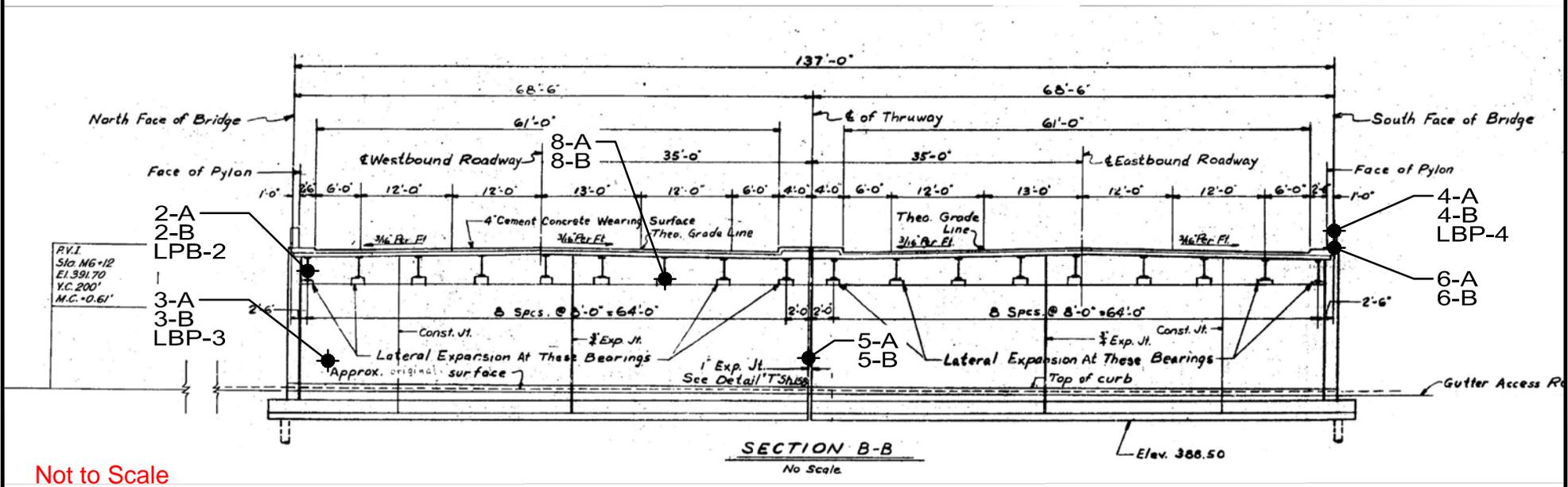
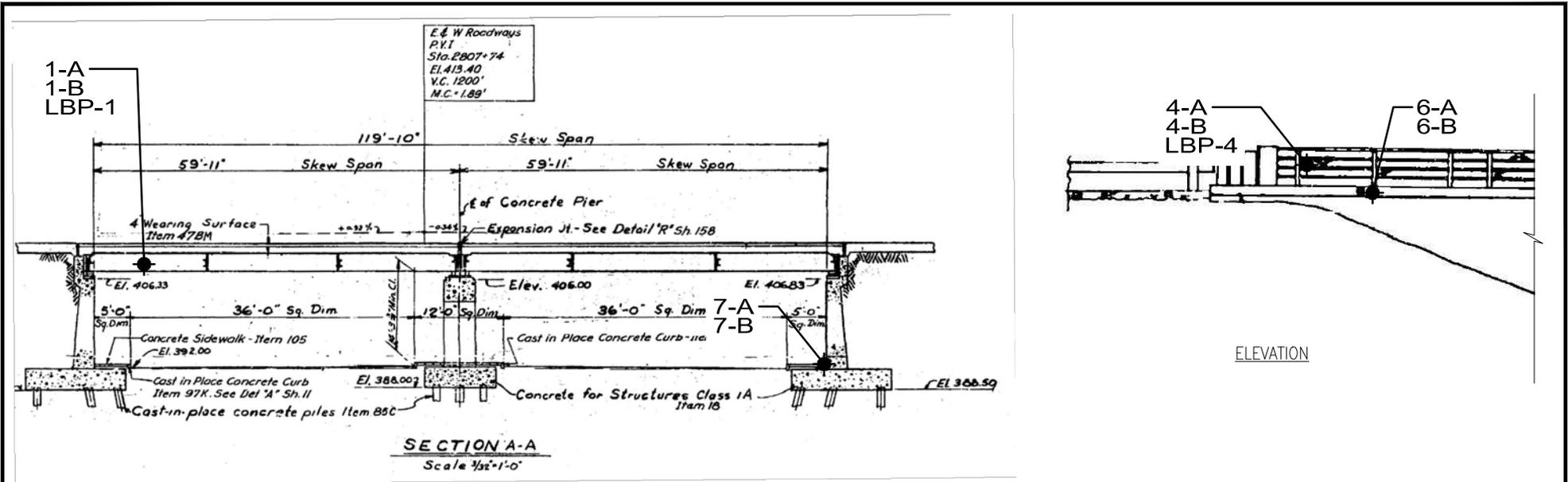
Date: 12/6/16

#### Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt		
	Yes	No	N/A
Container Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		
Transferred to method-compliant container	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Headspace (<1 mL)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Preservation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Chlorine Absent (<0.10 ppm per test strip)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Holding Time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		
Temperature	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Sufficient Sample Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		

**APPENDIX D**  
**SAMPLE LOCATION PLANS**



Not to Scale



WWW.FISHERASSOC.COM

LEGEND:

● 1-A SAMPLE LOCATION AND IDENTIFICATION

Figure No. H1.01

SAMPLE LOCATION PLAN  
D214385 B.I.N. 1020079

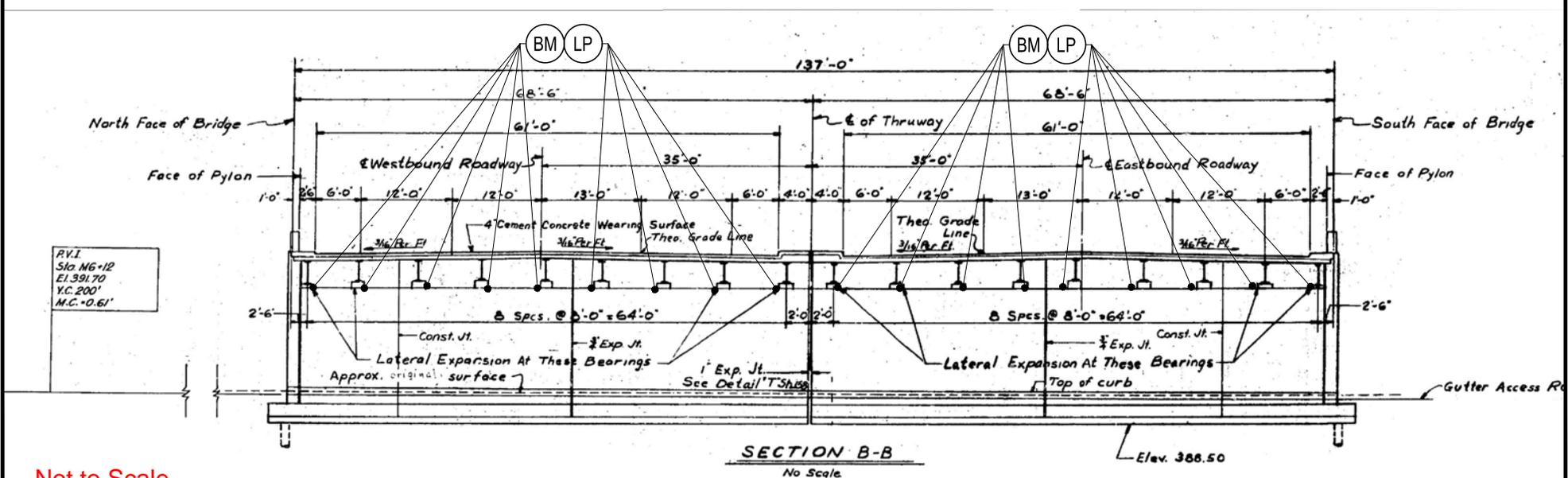
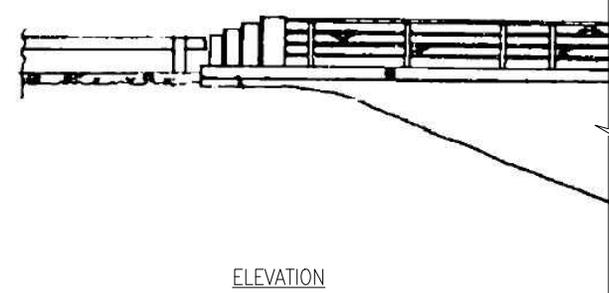
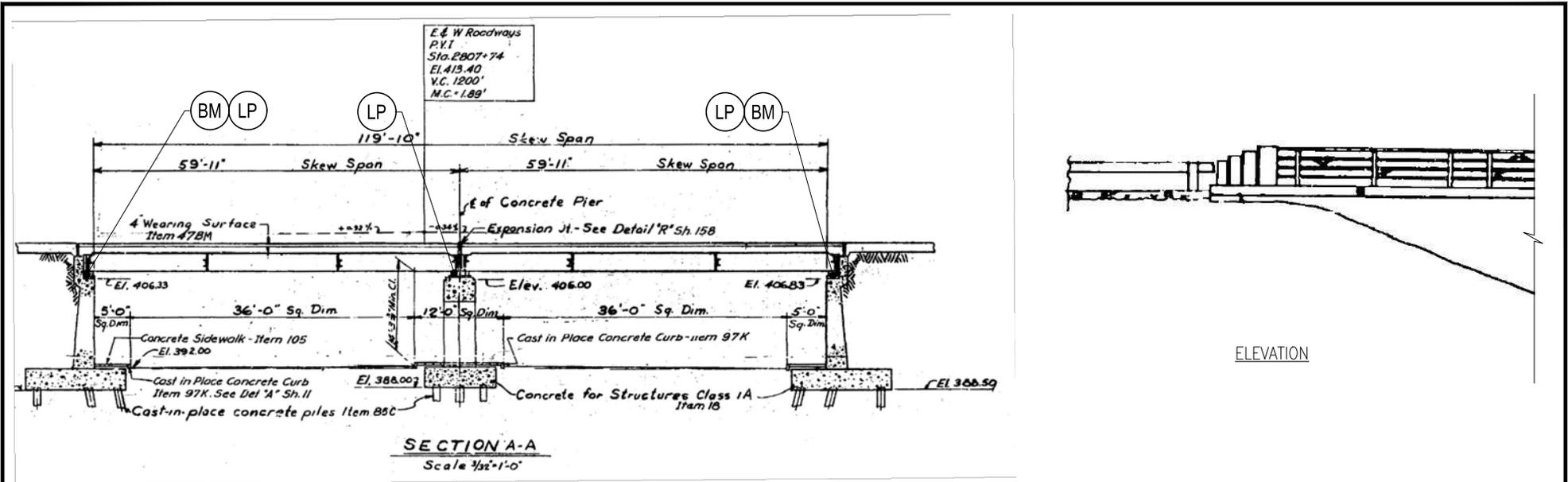
I-90 MAINLINE BRIDGE OVER ROUTE 28

TOWN OF HERKIMER  
HERKIMER COUNTY, NEW YORK

FA #151021.09

FEBRUARY 2017

**APPENDIX E**  
**HAZARDOUS MATERIAL LOCATION PLANS**



Not to Scale

**FISHER ASSOCIATES**

WWW.FISHERASSOC.COM

**LEGEND**

- AC ASBESTOS-CONTAINING
- PCB POLYCHLORINATED BIPHENYLS
- LF LINEAR FEET
- SF SQUARE FEET

- (BM) AC BITUMINOUS MATERIAL
- (LP) LEAD BEARING PAD ON ABUTMENTS

**APPROXIMATE QUANTITIES (ENTIRE STRUCTURE)**

- (BM) 275 SF
- (LP) 88 LF

**Figure No. H2.01**  
HAZARDOUS MATERIALS LOCATION PLAN  
D214385 B.I.N. 1020079  
I-90 MAINLINE BRIDGE OVER ROUTE 28  
TOWN OF HERKIMER  
HERKIMER COUNTY, NEW YORK  
FA #151021.09 FEBRUARY 2017

**HAZARDOUS WASTE-CONTAMINATED MATERIALS  
TECHNICAL MEMORANDUM**

**for**

**NEW YORK STATE THRUWAY AUTHORITY**

**D214386      BIN 5009929  
PIN S52886 B499.1  
I-90 OVER ORISKANY BLVD  
TOWN OF WHITESBORO  
ONEIDA COUNTY**

**Prepared by:**



**December 2017**

I-90 Mainline Bridge over Oriskany Blvd

D214386 BIN 5009929

PIN S52886 B499.1

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**Appendices**

Appendix A – Project Location Map

Appendix B – Fisher Associates’ Certifications and Laboratory

Accreditation Appendix C – Laboratory Analytical Data

Appendix D – Sample Location Plans

Appendix E – Hazardous Material Location Plans

## 1.0 INTRODUCTION

Fisher Associates P.E., L.S., L.A., D.P.C. (“Fisher Associates”) is working with Stantec Consulting Services, Inc. (Stantec), and the New York State Thruway Authority (NYSTA), to prepare this Hazardous Materials Technical Memorandum, here after referred to as HMTM, in technical support of the proposed replacement of the I-90 Thruway bridge over Oriskany Boulevard in the Town of Whitesboro, Oneida County, New York. The project area was investigated on December 1, 2016 as part of the project. The project location is shown on the Project Location Map in Appendix A.

### 1.1 Purpose and Scope

The purpose of this HMTM is to identify asbestos-containing materials (ACMs), lead based paint (LBP), lead containing materials (LCMs), and polychlorinated biphenyls (PCBs), collectively known as Hazardous Waste Contaminated Materials (HWCM), within the bridge rehabilitation project corridor, and to develop quantity estimates for abatement of identified HWCMs.

### 1.2 Background

This HMTM is consistent with the requirements outlined in the NYSDOL Industrial Code Rule 56 (Code Rule 56), which requires an asbestos pre-demolition survey and asbestos abatement to be performed prior to any alterations, renovations or demolition.

### 1.3 Records Review Activities

Fisher Associates received no previous sampling reports to review. As-built drawings of the bridge were reviewed to identify potential ACM sample locations and for the presence of lead containing materials such as bearing pads or joint spacers.

### 1.4 Summary of Findings

Table 1.1 summarizes those materials found to be positive for ACM, LBP, and/or PCBs based on current sample analysis. Added detail is presented in the following sections.

**Table 1.1**  
**Summary of Findings**  
**I-90 Mainline over Oriskany Blvd**

<b>Sample Identification</b>	<b>Material</b>	<b>Sample Location</b>	<b>Approx. Quantity</b>
LBP-2	Green Paint	Guard Railings	490 SF

## 2.0 MATERIAL SAMPLING AND LABORATORY METHODOLOGY

A NYSDOL-certified asbestos inspector from Fisher Associates collected bulk samples of suspect asbestos-containing materials (ACMs) on December 1, 2016. Bulk samples were collected using hand tools from each matrix identified as a potential ACM. Additionally, paint samples were collected and analyzed for lead, and caulking/adhesive materials were collected and analyzed for PCBs. Upon completion of the sampling, a chain-of-custody form was completed for the materials sampled.

Samples were delivered under standard chain-of-custody protocol to Paradigm Environmental Services, Inc. (Paradigm), a New York State Department of Health (NYSDOH) certified laboratory. The procedures followed are in accordance with the NYSDOH Environmental Laboratory Approval Program (ELAP). New York State Department of Labor (NYSDOL) Code Rule 56 defines materials containing greater than one percent (1%) asbestos by weight as being Asbestos Containing Materials.

The paint samples were analyzed via SW846 Method 3050 /6010 to determine the lead content of the paints. Those materials having a concentration equal or greater than 0.5% by weight in lead are considered to be lead based.

The materials sampled for PCBs were analyzed by USEPA Method 8082. According to the USEPA, materials containing greater than fifty (50) parts per million (ppm) are considered PCB-containing.

Copies of Fisher Associates' Asbestos Handling License, the Asbestos Inspector's certification, and the Laboratory's Accreditation are in Appendix B. Copies of the laboratory's analytical results are included in Appendix C. The Sample Location Plans are included in Appendix D. The Hazardous Material Locations Plans are included in Appendix E.

## 3.0 SAMPLE RESULTS AND LOCATIONS

### 3.1 Asbestos Containing Materials

Table 3.1 provides a summary of the laboratory analytical results for the samples collected from the building materials identified on and around the bridge structure and nearby roadway that may be disturbed. Those samples identified as being ACMs (greater than one percent asbestos) are shaded in the table. Refer to the Sample Location Plans in Appendix D for locations of sample collection.

**Table 3.1**  
**Summary of Samples Collected and Results**  
**I-90 Mainline over Oriskany Blvd**

<b>Sample Identification</b>	<b>Material</b>	<b>Sample Location</b>	<b>% Asbestos</b>
1-A	Green Paint	Outside Bridge Girder	NAD
1-B	Green Paint	Outside Bridge Girder	NAD

Sample Identification	Material	Sample Location	% Asbestos
2-A	Green Paint	Guard Railings	NAD
2-B	Green Paint	Guard Railings	NAD
3-A	Grey Paint	Underside of Bridge, Inside Girders	NAD
3-B	Grey Paint	Underside of Bridge, Inside Girders	NAD
4-A	White Paint	Concrete Abutments	NAD
4-B	White Paint	Concrete Abutments	NAD
5-A	Black Tar Paper	B/w Abutments	Wollastonite 45%
5-B	Black Tar Paper	B/w Abutments	Wollastonite 40%
7-A	Black Fibrous Material	B/w Abutments Joints and Wingwall Joints	NAD
7-B	Black Fibrous Material	B/w Abutments Joints and Wingwall Joints	NAD
8-A	Black Caulk	Top of Wingwall	NAD
8-B	Black Caulk	Top of Wingwall	NAD
9-A	Black Waterproofing	Base of Concrete Piers	N/A
9-B	Black Waterproofing	Base of Concrete Piers	NAD

### 3.2 Lead Containing Materials (LCMs)

Table 3.2 below lists the sample Identification, the type of material, the sample location, and the percent of lead for each sample. Those samples identified as being Lead Based Paint (LBP), having a concentration of 0.5% by weight or greater, are shaded in the table.

**Table 3.2**  
**Summary of Lead Based Paint Samples Collected and Results**  
**I-90 Mainline over Oriskany Blvd**

Sample Identification	Material	Sample Location	Lead (% by weight)
LBP-1	Green Paint	Outside of Bridge Girder	0.0101
LBP-2	Green Paint	Guard Railing	6.94
LBP-3	Grey Paint	Underside of Bridge, Inside of Girder	0.0136
LBP-4	White Paint	Concrete Abutments	0.00962

### 3.3 Polychlorinated Biphenyls (PCBs)

Fisher Associates collected samples of caulking materials from representative locations. The samples were collected from materials that typically would have had petroleum-like products intermixed to prevent the caulking materials from drying out.

**Table 3.3**  
**Summary of PCB Samples Collected and Results**  
**I-90 Mainline over Oriskany Blvd**

Sample Identification	Material	Sample Location	PCBs (mg/Kg=ppm)
PCB-8	Caulk	Top of Abutment/Wingwall Joint	< 4.95

### 4.0 QUANTITY ESTIMATES

This section summarizes estimated quantities of the positively identified ACMs, LBPs, and/or PCBs found in the various materials sampled during the assessment. The approximate locations and extent of the ACMs are shown on the Sample Location Plans shown in Appendix D.

#### 4.1 Asbestos

Potential ACMs were sampled by Fisher Associates and tested via laboratory analysis. None of the samples analyzed are considered to be ACMs.

#### 4.2 Lead

Samples were collected of potential lead-containing materials during the investigation conducted by Fisher Associates and tested via laboratory analysis. Samples of green paint from the bridge guard railings tested positive as LBP.

**Table 4.1**  
**Summary Quantities of Lead-Containing Materials**  
**I-90 Mainline over Oriskany Blvd**

Sample Identification	Material	Location	Approximate Quantity
LBP-2	Green Paint	Guard Railings	490 SF

### **4.3 PCBs**

The investigation conducted by Fisher Associates also included the testing for PCBs. Those materials tested included caulking and/or sealants. Materials are considered to be PCB-containing if the total concentration of the PCB compounds exceeds fifty (50) parts per million (ppm). Based on the laboratory results, none of the materials tested are considered PCB-containing.

## **5.0 CONCLUSIONS**

### **5.1 Asbestos**

Asbestos containing materials (ACMs) were not identified as part of this assessment. If suspect asbestos containing materials not identified in this pre-demolition asbestos survey report are discovered during the demolition process, it is required that the presence, location and quantity of newly discovered material, be conveyed within twenty-four (24) hours of discovery to the owner or their representative. All activities must cease in the area where the presumed asbestos containing material or suspect miscellaneous ACM is found, until a licensed asbestos contractor appropriately assesses and manages the discovered materials. In accordance with 12 NYCRR 56, no demolition or renovation work shall be commenced by any owner or agent prior to completion of asbestos abatement performed by a licensed asbestos abatement contractor.

### **5.2 Lead**

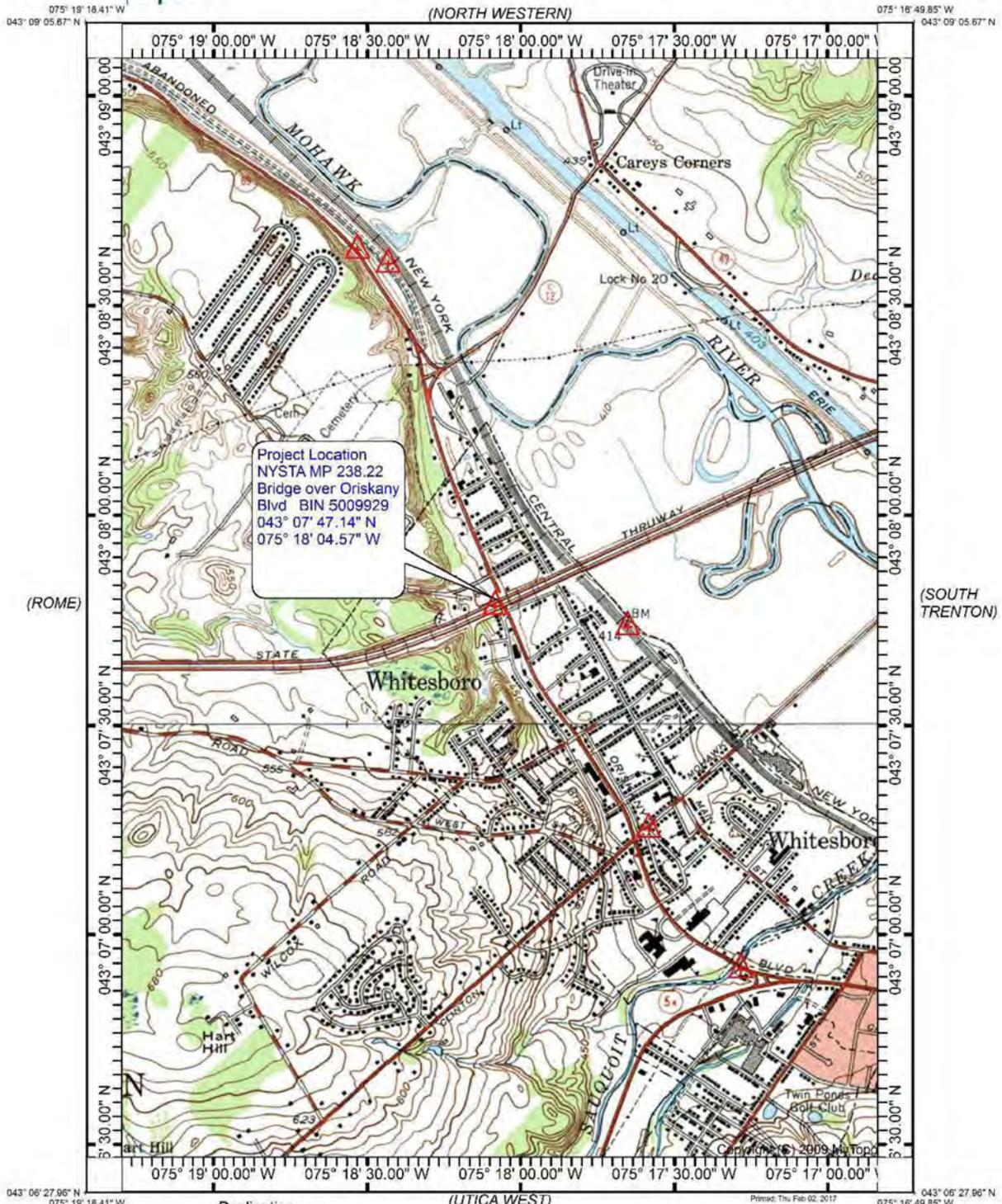
Lead based paint was identified as part of this assessment. It is recommended that a Lead Abatement and Handling of Lead Containing Materials specification section be developed. This section specifies the requirements for the detection and prevention of lead dust contamination in lead dust control work areas and areas adjacent to them, protection of workers, post-work cleaning, pre-disposal testing and appropriate disposal of removed material.

Finally, all trades must follow the Occupational Safety & Health Administration (OSHA) 29 CFR 1926.62 regulation, which considers any amount of Lead to be of concern. The regulation states that the employer shall assure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air ( $50 \mu\text{g}/\text{m}^3$ ) averaged over an 8-hour period.

### **5.3 PCBs**

The investigation conducted by Fisher Associates also included the testing for PCBs. Those materials tested included caulking and sealants. Materials are considered to be PCB-containing if the total concentration of the PCB compounds exceeds fifty (50) parts per million (ppm). Based on the laboratory results, none of the materials tested are considered PCB-containing.

**APPENDIX A  
PROJECT LOCATION MAP**

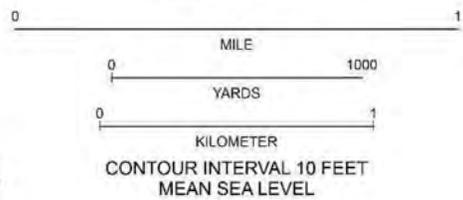


Project Location  
NYSTA MP 238.22  
Bridge over Oriskany  
Blvd BIN 5009929  
043° 07' 47.14" N  
075° 18' 04.57" W

(CLINTON)



(UTICA WEST) SCALE 1:24000



ORISKANY, NY  
1955

(UTICA EAST)

Produced by MyTopo Terrain Navigator  
Topography based on USGS 1:24,000  
Maps

North American 1983 Datum (NAD83)  
Polyconic Projection

To place on the predicted North American  
1927 move the projection lines 8M N and  
31M E

Printed: Thu Feb 02 2017

**APPENDIX B  
FISHER ASSOCIATES'  
CERTIFICATIONS LABORATORY  
ACCREDITATION**

**New York State – Department of Labor**

Division of Safety and  
Health License and Certificate  
Unit State Campus, Building 12  
Albany, NY 12240

**ASBESTOS HANDLING LICENSE**

Fisher Associates, P.E., L.S., P.C.  
Suite A  
135 Calkins Road  
Rochester, NY 14623

FILE NUMBER: 99-0504  
LICENSE NUMBER: 29344  
LICENSE CLASS: RESTRICTED  
DATE OF ISSUE: 08/03/2016  
EXPIRATION DATE: 08/31/2017

Duly Authorized Representative – Robert W Goossen:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.



Eileen M. Franko, Director For  
the Commissioner of Labor

STATE OF NEW YORK - DEPARTMENT OF LABOR  
ASBESTOS CERTIFICATE



**MARK T STEIN**  
CLASS(EXPIRES)  
C ATEC(03/17) D INSP(03/17)  
H PM (03/17) I PD (03/17)

CERT# 00-07444  
DMV# 457924110

MUST BE CARRIED ON ASBESTOS PROJECTS



EYES BLU  
HAIR BRO  
HGT 6' 03"

IF FOUND RETURN TO:  
NYS DOL - L&C UNIT  
ROOM 161A BUILDING 12  
STATE OFFICE CAMPUS  
ALBANY NY 12240

NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016  
Revised May 20, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. STEVE DEVITO  
PARADIGM ENVIRONMENTAL SERVICES INC  
179 LAKE AVENUE  
ROCHESTER, NY 14608

NY Lab Id No: 10958

is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards (2003) for the category  
**ENVIRONMENTAL ANALYSES NON POTABLE WATER**  
All approved analytes are listed below:

**Acrylates**

Acrylonitrile EPA 8260C

**Amines**

1,2-Diphenylhydrazine EPA 8270D

2-Nitroaniline EPA 8270D

3-Nitroaniline EPA 8270D

4-Chloroaniline EPA 8270D

4-Nitroaniline EPA 8270D

Aniline EPA 625

EPA 8270D

Carbazole EPA 8270D

Pyridine EPA 625

EPA 8270D

**Benzidines**

3,3'-Dichlorobenzidine EPA 625

EPA 8270D

Benzidine EPA 625

EPA 8270D

**Chlorinated Hydrocarbon Pesticides**

4,4'-DDD EPA 8081B

EPA 608

4,4'-DDE EPA 8081B

EPA 608

4,4'-DDT EPA 8081B

EPA 608

**Chlorinated Hydrocarbon Pesticides**

Aldrin EPA 8081B

EPA 608

alpha-BHC EPA 8081B

EPA 608

alpha-Chlordane EPA 8081B

beta-BHC EPA 8081B

EPA 608

Chlordane Total EPA 8081B

EPA 608

delta-BHC EPA 8081B

EPA 608

Dieldrin EPA 8081B

EPA 608

Endosulfan I EPA 8081B

EPA 608

Endosulfan II EPA 8081B

EPA 608

Endosulfan sulfate EPA 8081B

EPA 608

Endrin EPA 8081B

EPA 608

Endrin aldehyde EPA 8081B

EPA 608

Endrin Ketone EPA 8081B

gamma-Chlordane EPA 8081B

Heptachlor EPA 8081B

Serial No.: 54805

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**NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER**



Expires 12:01 AM April 01, 2017  
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**Chlorinated Hydrocarbon Pesticides**

Heptachlor	EPA 608
Heptachlor epoxide	EPA 8081B EPA 608
Lindane	EPA 8081B EPA 608
Methoxychlor	EPA 8081B EPA 608
Toxaphene	EPA 8081B EPA 608

**Chlorinated Hydrocarbons**

1,2,3-Trichlorobenzene	EPA 8260C
1,2,4,5-Tetrachlorobenzene	EPA 8270D
1,2,4-Trichlorobenzene	EPA 625 EPA 8270D
2-Chloronaphthalene	EPA 625 EPA 8270D
Hexachlorobenzene	EPA 625 EPA 8270D
Hexachlorobutadiene	EPA 625 EPA 8270D
Hexachlorocyclopentadiene	EPA 625 EPA 8270D
Hexachloroethane	EPA 625 EPA 8270D

**Fuel Oxygenates**

Methyl tert-butyl ether tert-butyl alcohol	EPA 8260C EPA 8260C
--	------------------------

**Haloethers**

2,2'-Oxybis(1-chloropropane)	EPA 625 EPA 8270D
4-Bromophenylphenyl ether	EPA 625 EPA 8270D
4-Chlorophenylphenyl ether	EPA 625 EPA 8270D
Bis(2-chloroethoxy)methane	EPA 625 EPA 8270D
Bis(2-chloroethyl)ether	EPA 625 EPA 8270D

**Metals I**

Barium, Total	EPA 200.7 Rev. 4.4 EPA 6010C
Cadmium, Total	EPA 200.7 Rev. 4.4 EPA 6010C
Calcium, Total	EPA 200.7 Rev. 4.4 EPA 6010C
Chromium, Total	EPA 200.7 Rev. 4.4 EPA 6010C
Copper, Total	EPA 200.7 Rev. 4.4 EPA 6010C
Iron, Total	EPA 200.7 Rev. 4.4

**Serial No.: 54805**

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All approved analytes are listed below:*

<b>Metals I</b>		<b>Metals II</b>	
Iron, Total	EPA 6010C	Mercury, Total	EPA 7470A
Lead, Total	EPA 200.7 Rev. 4.4	Selenium, Total	EPA 200.7 Rev. 4.4
	EPA 6010C		EPA 6010C
Magnesium, Total	EPA 200.7 Rev. 4.4	Vanadium, Total	EPA 200.7 Rev. 4.4
	EPA 6010C		EPA 6010C
Manganese, Total	EPA 200.7 Rev. 4.4	Zinc, Total	EPA 200.7 Rev. 4.4
	EPA 6010C		EPA 6010C
Nickel, Total	EPA 200.7 Rev. 4.4		
	EPA 6010C	<b>Metals III</b>	
Potassium, Total	EPA 200.7 Rev. 4.4	Cobalt, Total	EPA 200.7 Rev. 4.4
	EPA 6010C		EPA 6010C
Silver, Total	EPA 200.7 Rev. 4.4	Molybdenum, Total	EPA 200.7 Rev. 4.4
	EPA 6010C		EPA 6010C
Sodium, Total	EPA 200.7 Rev. 4.4	Thallium, Total	EPA 200.7 Rev. 4.4
	EPA 6010C		EPA 6010C
		<b>Mineral</b>	
<b>Metals II</b>		Hardness, Total	EPA 200.7 Rev. 4.4
Aluminum, Total	EPA 200.7 Rev. 4.4		
	EPA 6010C	<b>Miscellaneous</b>	
Antimony, Total	EPA 200.7 Rev. 4.4	Boron, Total	EPA 200.7 Rev. 4.4
	EPA 6010C		EPA 6010C
Arsenic, Total	EPA 200.7 Rev. 4.4	Cyanide, Total	EPA 9014
	EPA 6010C		SM 4500-CN E-99,-11
Beryllium, Total	EPA 200.7 Rev. 4.4	Oil and Grease Total Recoverable (HEM)	EPA 1664B
	EPA 6010C	Specific Conductance	SM 2510B-97,-11
Mercury, Total	EPA 245.1 Rev. 3.0	Total Petroleum Hydrocarbons	EPA 1664B

**Serial No.: 54805**

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ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

**Nitroaromatics and Isophorone**

2,4-Dinitrotoluene	EPA 625 EPA 8270D
2,6-Dinitrotoluene	EPA 625 EPA 8270D
Isophorone	EPA 625 EPA 8270D
Nitrobenzene	EPA 625 EPA 8270D

**Phthalate Esters**

Diethyl phthalate	EPA 625 EPA 8270D
Dimethyl phthalate	EPA 625 EPA 8270D
Di-n-butyl phthalate	EPA 625 EPA 8270D
Di-n-octyl phthalate	EPA 625 EPA 8270D

**Nitrosoamines**

N-Nitrosodimethylamine	EPA 625 EPA 8270D
N-Nitrosodi-n-propylamine	EPA 625 EPA 8270D
N-Nitrosodiphenylamine	EPA 625 EPA 8270D

**Polychlorinated Biphenyls**

PCB-1016	EPA 8082A EPA 608
PCB-1221	EPA 8082A EPA 608
PCB-1232	EPA 8082A EPA 608
PCB-1242	EPA 8082A EPA 608
PCB-1248	EPA 8082A EPA 608
PCB-1254	EPA 8082A EPA 608
PCB-1260	EPA 8082A EPA 608
PCB-1262	EPA 8082A
PCB-1268	EPA 8082A

**Organophosphate Pesticides**

Atrazine	EPA 8270D
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**Petroleum Hydrocarbons**

Diesel Range Organics	EPA 8015D
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**Phthalate Esters**

Benzyl butyl phthalate	EPA 625 EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 625 EPA 8270D

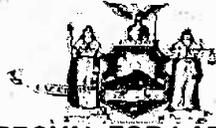
**Serial No.: 54805**

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**NEW YORK STATE DEPARTMENT OF  
HEALTH WADSWORTH CENTER**

Expires 12:01 AM April 01, 2017  
Issued April 01, 2016  
Revised May 20, 2016



**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

**MR. STEVE DEVITO**  
**PARADIGM ENVIRONMENTAL SERVICES INC**  
**179 LAKE AVENUE**  
**ROCHESTER, NY 14608**

**NY Lab Id No: 10958**

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards (2003) for the category  
ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

**Polynuclear Aromatics**

Acenaphthene	EPA 625
	EPA 8270D
Acenaphthylene	EPA 625
	EPA 8270D
Anthracene	EPA 625
	EPA 8270D
Benzo(a)anthracene	EPA 625
	EPA 8270D
Benzo(a)pyrene	EPA 625
	EPA 8270D
Benzo(b)fluoranthene	EPA 625
	EPA 8270D
Benzo(ghi)perylene	EPA 625
	EPA 8270D
Benzo(k)fluoranthene	EPA 625
	EPA 8270D
Chrysene	EPA 625
	EPA 8270D
Dibenzo(a,h)anthracene	EPA 625
	EPA 8270D
Fluoranthene	EPA 625
	EPA 8270D
Fluorene	EPA 625
	EPA 8270D
Indeno(1,2,3-cd)pyrene	EPA 625
	EPA 8270D

**Polynuclear Aromatics**

Naphthalene	EPA 625
	EPA 8270D
Phenanthrene	EPA 625
	EPA 8270D
Pyrene	EPA 625
	EPA 8270D

**Priority Pollutant Phenols**

2,3,4,6 Tetrachlorophenol	EPA 8270D
2,4,5-Trichlorophenol	EPA 8270D
2,4,6-Trichlorophenol	EPA 625
	EPA 8270D
2,4-Dichlorophenol	EPA 625
	EPA 8270D
2,4-Dimethylphenol	EPA 625
	EPA 8270D
2,4-Dinitrophenol	EPA 625
	EPA 8270D
2,6-Dichlorophenol	EPA 8270D
2-Chlorophenol	EPA 625
	EPA 8270D
2-Methyl-4,6-dinitrophenol	EPA 625
	EPA 8270D
2-Methylphenol	EPA 625
	EPA 8270D
2-Nitrophenol	EPA 625

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WADSWORTH CENTER**



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ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

**Priority Pollutant Phenols**

2-Nitrophenol	EPA 8270D
4-Chloro-3-methylphenol	EPA 625
	EPA 8270D
4-Methylphenol	EPA 625
	EPA 8270D
4-Nitrophenol	EPA 625
	EPA 8270D
Cresols, Total	EPA 8270D
Pentachlorophenol	EPA 625
	EPA 8270D
Phenol	EPA 625
	EPA 8270D

**Residue**

Settleable Solids	SM 2540 F-97,-11
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**Semi-Volatile Organics**

1,1'-Biphenyl	EPA 8270D
1,2-Dichlorobenzene, Semi-volatile	EPA 8270D
1,3-Dichlorobenzene, Semi-volatile	EPA 8270D
1,4-Dichlorobenzene, Semi-volatile	EPA 8270D
2-Methylnaphthalene	EPA 8270D
Acetophenone	EPA 8270D
Benzaldehyde	EPA 8270D
Benzoic Acid	EPA 8270D
Benzyl alcohol	EPA 8270D
Caprolactam	EPA 8270D

**Semi-Volatile Organics**

Dibenzofuran	EPA 8270D
<b>Volatile Aromatics</b>	
1,2,4-Trichlorobenzene, Volatile	EPA 8260C
1,2,4-Trimethylbenzene	EPA 8260C
1,2-Dichlorobenzene	EPA 8260C
	EPA 624
1,3,5-Trimethylbenzene	EPA 8260C
1,3-Dichlorobenzene	EPA 8260C
	EPA 624
1,4-Dichlorobenzene	EPA 8260C
	EPA 624
2-Chlorotoluene	EPA 8260C
4-Chlorotoluene	EPA 8260C
Benzene	EPA 8260C
	EPA 624
Bromobenzene	EPA 8260C
Chlorobenzene	EPA 8260C
	EPA 624
Ethyl benzene	EPA 8260C
	EPA 624
Isopropylbenzene	EPA 8260C
m/p-Xylenes	EPA 8260C
	EPA 624
Naphthalene, Volatile	EPA 8260C
n-Butylbenzene	EPA 8260C

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**ROCHESTER, NY 14608**

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category ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

**Volatile Aromatics**

n-Propylbenzene	EPA 8260C
o-Xylene	EPA 8260C
	EPA 624
p-Isopropyltoluene (P-Cymene)	EPA 8260C
sec-Butyl benzene	EPA 8260C
Styrene	EPA 8260C
tert-Butylbenzene	EPA 8260C
Toluene	EPA 8260C
	EPA 624
Total Xylenes	EPA 8260C
	EPA 624

**Volatile Halocarbons**

1, 1, 1,2-Tetrachloroethane	EPA 8260C
1, 1, 1-Trichloroethane	EPA 8260C
	EPA 624
1, 1,2,2-Tetrachloroethane	EPA 8260C
	EPA 624
1,	EPA 8260C
1,2-Trichloro-1,2,2-Trifluoroethane	EPA 8260C
1, 1,2-Trichloroethane	EPA 624
	EPA 8260C
1, 1-Dichloroethane	EPA 624
	EPA 8260C
1, 1-Dichloroethene	EPA 624
	EPA 8260C
1, 1-Dichloropropene	

**Volatile Halocarbons**

1,2,3-Trichloropropane	EPA 8260C
1,2-Dibromo-3-chloropropane	EPA 8260C
1,2-Dibromoethane	EPA 8260C
1,2-Dichloroethane	EPA 8260C
	EPA 624
1,2-Dichloropropane	EPA 8260C
	EPA 624
1,3-Dichloropropane	EPA 8260C
2,2-Dichloropropane	EPA 8260C
2-Chloroethylvinyl ether	EPA 624
Bromochloromethane	EPA 8260C
Bromodichloromethane	EPA 8260C
	EPA 624
Bromoform	EPA 8260C
	EPA 624
Bromomethane	EPA 8260C
	EPA 624
Carbon tetrachloride	EPA 8260C
	EPA 624
Chloroethane	EPA 8260C
	EPA 624
Chloroform	EPA 8260C
	EPA 624
Chloromethane	EPA 8260C
	EPA 624
cis-1,2-Dichloroethene	EPA 8260C

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NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



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MR. STEVE DEVITO  
PARADIGM ENVIRONMENTAL SERVICES INC  
179 LAKE AVENUE  
ROCHESTER, NY 14608

NY Lab Id No: 10958

is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards (2003) for the category  
ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:

**Volatile Halocarbons**

cis- 1,2-Dichloroethene	EPA 624
cis-1,3-Dichloropropene	EPA 8260C
	EPA 624
Dibromochloromethane	EPA 8260C
	EPA 624
Dibromomethane	EPA 8260C
Dichlorodifluoromethane	EPA 8260C
	EPA 624
Hexachlorobutadiene, Volatile	EPA 8260C
Methylene chloride	EPA 8260C
	EPA 624
Tetrachloroethene	EPA 8260C
	EPA 624
trans-1,2-Dichloroethene	EPA 8260C
	EPA 624
trans-1,3-Dichloropropene	EPA 8260C
	EPA 624
Trichloroethene	EPA 8260C
	EPA 624
Trichlorofluoromethane	EPA 8260C
	EPA 624
Vinyl chloride	EPA 8260C
	EPA 624

**Volatiles Organics**

2-Butanone (Methylethyl ketone)	EPA 8260C
2-Hexanone	EPA 8260C
4-Methyl-2-Pentanone	EPA 8260C
Acetone	EPA 8260C
Carbon Disulfide	EPA 8260C
Cyclohexane	EPA 8260C
Isopropanol	EPA 8260C
Methyl acetate	EPA 8260C
Methyl cyclohexane	EPA 8260C
Vinyl acetate	EPA 8260C

**Sample Preparation Methods**

EPA 5030C
SM 4500-CN B or C-99,-11
EPA 3005A
EPA 3510C
EPA 9010C

**Volatiles Organics**

1,4-Dioxane	EPA 8260C
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WADSWORTH CENTER**

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**MR. STEVE DEVITO**

**NY Lab Id No: 10958**

**PAPAIOANNO ENVIRONMENTAL SERVICES INC  
ROCHESTER, NY 14608**

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards (2003) for the category  
ENVIRONMENTAL ANALYSES: SOLID AND HAZARDOUS WASTE*

*All approved analytes are listed below:*

<b>Acrylates</b>	
Acrylonitrile	EPA 8260C
<b>Amines</b>	
1,2-Diphenylhydrazine	EPA 8270D
2-Nitroaniline	EPA
3-Nitroaniline	8270D
4-Chloroaniline	EPA 8270D
4-Nitroaniline	EPA 8270D
Aniline	EPA 8270D
Carbazole	EPA 8270D
<b>Benzidines</b>	
3,3'-Dichlorobenzidine	EPA 8270D
Benzidine	EPA 8270D
<b>Characteristic Testing</b>	
<b>Corrosivity</b>	
	EPA 9040C
	EPA 9045D
<b>Flammability</b>	
	EPA 9080B
	EPA 1010A
<b>Synthetic Precipitation Leaching Procedure</b>	EPA 1312
TCLP	EPA 1311

**Chlorinated Hydrocarbon Pesticides**

Aldrin	EPA 8081B
alpha-BHC	EPA 8081B
alpha-Chlordane	EPA 8081B
Atrazine	EPA 8270D
beta-BHC	EPA 8081B
Chlordane Total	EPA 8081B
delta-BHC	EPA 8081B
Dieldrin	EPA 8081B
Endosulfan I	EPA 8081B
Endosulfan II	EPA 8081B
Endosulfan sulfate	EPA 8081B
Endrin	EPA 8081B
Endrin aldehyde	EPA 8081B
Endrin Ketone	EPA 8081B
gamma-Chlordane	EPA 8081B
Heptachlor	EPA 8081B
Heptachlor epoxide	EPA 8081B
Lindane	EPA 8081B
Methoxychlor	EPA 8081B
Toxaphene	EPA 8081B

**Chlorinated Hydrocarbons**

1,2,3-Trichlorobenzene	EPA 8260C
Tetrachlorobenzene	EPA 8270D
1,2,4-Trichlorobenzene	EPA 8270D
	EPA 8270D

<b>Chlorinated Hydrocarbon Pesticides</b>	
4,4'-DDB	EPA 8081B
4,4'-DDT	EPA 8081B

Serial No.: 54681

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WADSWORTH CENTER



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PARADIGM ENVIRONMENTAL SERVICES INC  
179 LAKE AVENUE  
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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
All approved analytes are listed below:*

**Chlorinated Hydrocarbons**

Hexachlorobenzene	EPA 8270D
Hexachlorobutadiene	EPA 8270D
Hexachlorocyclopentadiene	EPA 8270D
Hexachloroethane	EPA 8270D

**Haloethers**

2,2'-Oxybis(1-chloropropane)	EPA 8270D
4-Bromophenylphenyl ether	EPA 8270D
4-Chlorophenylphenyl ether	EPA 8270D
Bis(2-chloroethoxy)methane	EPA 8270D
Bis(2-chloroethyl)ether	EPA 8270D

**Metals I**

Barium, Total	EPA 6010C
Cadmium, Total	EPA 6010C
Calcium, Total	EPA 6010C
Chromium, Total	EPA 6010C
Copper, Total	EPA 6010C
Iron, Total	EPA 6010C
Lead, Total	EPA 6010C
Magnesium, Total	EPA 6010C
Manganese, Total	EPA 6010C
Nickel, Total	EPA 6010C
Potassium, Total	EPA 6010C
Silver, Total	EPA 6010C
Sodium, Total	EPA 6010C

**Metals II**

Aluminum, Total	EPA 6010C
Antimony, Total	EPA 6010C
Arsenic, Total	EPA 6010C
Beryllium, Total	EPA 6010C
Mercury, Total	EPA 7471B
Selenium, Total	EPA 6010C
Vanadium, Total	EPA 6010C
Zinc, Total	EPA 6010C

**Metals III**

Cobalt, Total	EPA 6010C
Molybdenum, Total	EPA 6010C
Thallium, Total	EPA 6010C

**Miscellaneous**

Boron, Total	EPA 6010C
Cyanide, Total	EPA 9014

**Nitroaromatics and Isophorone**

2,4-Dinitrotoluene	EPA 8270D
2,6-Dinitrotoluene	EPA 8270D
Isophorone	EPA 8270D
Nitrobenzene	EPA 8270D
Pyridine	EPA 8270D

**Nitrosoamines**

N-Nitrosodimethylamine	EPA 8270D
N-Nitrosodi-n-propylamine	EPA 8270D

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
All approved analytes are listed below:

**Nitrosoamines**

N-Nitrosodiphenylamine EPA 8270D

**Petroleum Hydrocarbons**

Diesel Range Organics EPA 8015D

**Phthalate Esters**

Benzyl butyl phthalate EPA 8270D  
Bis(2-ethylhexyl) phthalate EPA 8270D  
Diethyl phthalate EPA 8270D  
Dimethyl phthalate EPA 8270D  
Di-n-butyl phthalate EPA 8270D  
Di-n-octyl phthalate EPA 8270D

**Polychlorinated Biphenyls**

PCB-1016 EPA 8082A  
PCB-1221 EPA 8082A  
PCB-1232 EPA 8082A  
PCB-1242 EPA 8082A  
PCB-1248 EPA 8082A  
PCB-1254 EPA 8082A  
PCB-1260 EPA 8082A  
PCB-1262 EPA 8082A  
PCB-1268 EPA 8082A  
PCBs in Oil EPA 8082A

**Polynuclear Aromatic Hydrocarbons**

Acenaphthene EPA 8270D  
Acenaphthylene EPA 8270D

**Polynuclear Aromatic Hydrocarbons**

Anthracene EPA 8270D  
Benzo(a)anthracene EPA 8270D  
Benzo(a)pyrene EPA 8270D  
Benzo(b)fluoranthene EPA 8270D  
Benzo(ghi)perylene EPA 8270D  
Benzo(k)fluoranthene EPA 8270D  
Chrysene EPA 8270D  
Dibenzo(a,h)anthracene EPA 8270D  
Fluoranthene EPA 8270D  
Fluorene EPA 8270D  
Indeno(1,2,3-cd)pyrene EPA 8270D  
Naphthalene EPA 8270D  
Phenanthrene EPA 8270D  
Pyrene EPA 8270D

**Priority Pollutant Phenols**

2,3,4,6 Tetrachlorophenol EPA 8270D  
2,4,5-Trichlorophenol EPA 8270D  
2,4,6-Trichlorophenol EPA 8270D  
2,4-Dichlorophenol EPA 8270D  
2,4-Dimethylphenol EPA 8270D  
2,4-Dinitrophenol EPA 8270D  
2,6-Dichlorophenol EPA 8270D  
2-Chlorophenol EPA 8270D  
2-Methyl-4,6-dinitrophenol EPA 8270D  
2-Methylphenol EPA 8270D

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
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**Priority Pollutant Phenols**

2-Nitrophenol	EPA 8270D
4-Chloro-3-methylphenol	EPA 8270D
4-Methylphenol	EPA 8270D
4-Nitrophenol	EPA 8270D
Pentachlorophenol	EPA 8270D
Phenol	EPA 8270D

**Semi-Volatile Organics**

1,1'-Biphenyl	EPA 8270D
1,2-Dichlorobenzene, Semi-volatile	EPA 8270D
1,3-Dichlorobenzene, Semi-volatile	EPA 8270D
1,4-Dichlorobenzene, Semi-volatile	EPA 8270D
2-Methylnaphthalene	EPA 8270D
Acetophenone	EPA 8270D
Benzaldehyde	EPA 8270D
Benzoic Acid	EPA 8270D
Benzyl alcohol	EPA 8270D
Caprolactam	EPA 8270D
Dibenzofuran	EPA 8270D

**Volatile Aromatics**

1,2,4-Trichlorobenzene, Volatile	EPA 8260C
1,2,4-Trimethylbenzene	EPA 8260C
1,2-Dichlorobenzene	EPA 8260C
1,3,5-Trimethylbenzene	EPA 8260C
1,3-Dichlorobenzene	EPA 8260C
1,4-Dichlorobenzene	EPA 8260C

**Volatile Aromatics**

2-Chlorotoluene	EPA 8260C
4-Chlorotoluene	EPA 8260C
Benzene	EPA 8260C
Bromobenzene	EPA 8260C
Chlorobenzene	EPA 8260C
Ethyl benzene	EPA 8260C
Isopropylbenzene	EPA 8260C
m/p-Xylenes	EPA 8260C
Naphthalene, Volatile	EPA 8260C
n-Butylbenzene	EPA 8260C
n-Propylbenzene	EPA 8260C
o-Xylene	EPA 8260C
p-Isopropyltoluene (P-Cymene)	EPA 8260C
sec-Butylbenzene	EPA 8260C
Styrene	EPA 8260C
tert-Butylbenzene	EPA 8260C
Toluene	EPA 8260C
Total Xylenes	EPA 8260C

**Volatile Halocarbons**

1,1,1,2-Tetrachloroethane	EPA 8260C
1,1,1-Trichloroethane	EPA 8260C
1,1,2,2-Tetrachloroethane	EPA 8260C
1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA 8260C
1,1,2-Trichloroethane	EPA 8260C
1,1-Dichloroethane	EPA 8260C

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

All approved analytes are listed below:

**Volatile Halocarbons**

1,1-Dichloroethene	EPA 8260C
1,1-Dichloropropene	EPA 8260C
1,2,3-Trichloropropane	EPA 8260C
1,2-Dibromo-3-chloropropane	EPA 8260C
1,2-Dibromoethane	EPA 8260C
1,2-Dichloroethane	EPA 8260C
1,2-Dichloropropane	EPA 8260C
1,3-Dichloropropane	EPA 8260C
2,2-Dichloropropane	EPA 8260C
Bromochloromethane	EPA 8260C
Bromodichloromethane	EPA 8260C
Bromoform	EPA 8260C
Bromomethane	EPA 8260C
Carbon tetrachloride	EPA 8260C
Chloroethane	EPA 8260C
Chloroform	EPA 8260C
Chloromethane	EPA 8260C
cis-1,2-Dichloroethene	EPA 8260C
cis-1,3-Dichloropropene	EPA 8260C
Dibromochloromethane	EPA 8260C
Dibromomethane	EPA 8260C
Dichlorodifluoromethane	EPA 8260C
Methylene chloride	EPA 8260C
Tetrachloroethene	EPA 8260C
trans-1,2-Dichloroethene	EPA 8260C
trans-1,3-Dichloropropene	EPA 8260C

**Volatile Halocarbons**

Trichloroethene	EPA 8260C
Trichlorofluoromethane	EPA 8260C
Vinyl chloride	EPA 8260C

**Volatile Organics**

1,4-Dioxane	EPA 8260C
2-Butanone (Methylethyl ketone)	EPA 8260C
2-Hexanone	EPA 8260C
4-Methyl-2-Pentanone	EPA 8260C
Acetone	EPA 8260C
Carbon Disulfide	EPA 8260C
Cyclohexane	EPA 8260C
Isopropanol	EPA 8260C
Methyl acetate	EPA 8260C
Methyl cyclohexane	EPA 8260C
Methyl tert-butyl ether	EPA 8260C
tert-butyl alcohol	EPA 8260C
Vinyl acetate	EPA 8260C

**Sample Preparation Methods**

EPA 5035A-L
EPA 5035A-H
EPA 3580A
EPA 3050B
EPA 3550C
EPA 9010C

Serial No.: 54681

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. STEVE DEVITO  
PARADIGM ENVIRONMENTAL SERVICES INC  
179 LAKE AVENUE  
ROCHESTER, NY 14608

NY Lab Id No: 10958

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards (2003) for the category  
ENVIRONMENTAL ANALYSES AIR AND EMISSIONS  
All approved analytes are listed below:*

**Metals II**

Beryllium, Total NIOSH 7303

**Metals III**

Chromium, Total NIOSH 7303



Serial No.: 54683

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH  
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PARADIGM ENVIRONMENTAL SERVICES INC  
179 LAKE AVENUE  
ROCHESTER, NY 14608

NY Lab Id No: 10958

*is hereby APPROVED as an Environmental Laboratory for the category  
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
All approved subcategories and/or analytes are listed below:*

**Miscellaneous**

Asbestos in Friable Material	Item 198.1 of Manual EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual
Lead in Dust Wipes	EPA 6010C
Lead in Paint	EPA 6010C

**Sample Preparation Methods**

EPA 3050B

NEW  
YORK  
STATE

Department  
of Health

Serial No.: 54682

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NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



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179 LAKE AVENUE  
ROCHESTER, NY 14608

NY Lab Id No: 10958

*is hereby APPROVED as an Environmental Laboratory for the category  
ENVIRONMENTAL ANALYSES AIR AND EMISSIONS  
All approved subcategories and/or analytes are listed below:*

**Metals I**

Lead, Total NIOSH 7303

**Miscellaneous**

Asbestos 40 CFR 763 APXA No. III

NIOSH 7402

**Fibers**

NIOSH 7400 A RULES

Serial No.: 54684

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

**APPENDIX C**  
**LABORATORY ANALYTICAL DATA**



**PLM & TEM BULK ASBESTOS ANALYSIS REPORT**  
**via NYSDOH ELAP Method 198.1, 198.4 and 198.6**

**Client:** Fisher Associates  
**Location:** BIN 5009929

**Job No:** 12198-16  
**Page:** 1 of 4

**Sample Date:** 12/1/2016

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
1A	101836	Outside of Girder	Green Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected 100%
1B	101837	Outside of Girder	Green Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected 100%
2A	101838	Guard Railing	Green Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected 100%
2B	101839	Guard Railing	Green Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected 100%
3A	101840	Inside Girder	Green Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected 100%
3B	101841	Inside Girder	Green Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected 100%
4A	101842	On Concrete	White Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected 100%
4B	101843	On Concrete	White Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected 100%
5A	101844	B/W Abutments	Black Fibrous Tar	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	Wollastonite 45% 55%
5B	101845	B/W Abutments	Black Fibrous Tar	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	Wollastonite 40% 60%

**KEY TO NOB COLUMN SYMBOLS**

No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).  
 ✓ NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 √ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.  
 # denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 X denotes sample prepped only by ELAP Method 198.6.  
 \* Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.  
 Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1, 198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.") or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0).



Lab Code 200530-0 for PLM Analysis

PLM Date Analyzed: 12/12/2016

TEM Date Analyzed: 12/12/2016

Microscope: Olympus BH-2 #221797

TEM Analyst: F. Weinman

Analyst: T. Ma

**ELAP ID No.: 10958**

**Laboratory Results Approved By:**  
**Asbestos Operations Manager or Designee**

Mary Dohr

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**PLM & TEM BULK ASBESTOS ANALYSIS REPORT**  
**via NYSDOH ELAP Method 198.1, 198.4 and 198.6**

**Client:** Fisher Associates  
**Location:** BIN 5009929

**Job No:** 12198-16  
**Page:** 2 of 4

**Sample Date:** 12/1/2016

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
7A	101846	B/W Abutments & Wing Wall	Black Fibrous Material	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
7B	101847	B/W Abutments & Wing Wall	Black Fibrous Material	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
8A	101848	Top of Wing Wall	Black Caulk	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
8B	101849	Top of Wing Wall	Black Caulk	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
9A	101850	Bottom of Concrete Piers	Black Waterproofing	<1.0% Residue Remaining. PLM and TEM Not Required.	N/A	X	N/A	N/A	N/A	N/A
9B	101851	Bottom of Concrete Piers	Black Waterproofing	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%

**KEY TO NOB COLUMN SYMBOLS**  
 No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).  
 V NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 ✓ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.  
 # denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 X denotes sample prepped only by ELAP Method 198.6.  
 \*\* Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1, 198.4 and 198.6 (Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantifying Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.) or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 150074-0)



**ELAP ID No.: 10958**

Lab Code 200530-0 for PLM Analysis  
**PLM Date Analyzed:** 12/12/2016  
**Microscope:** Olympus BH-2 #221797  
**Analyst:** T. Ma

**TEM Date Analyzed:** 12/12/2016  
**TEM Analyst:** F. Weinman

**Laboratory Results Approved By:**   
**Asbestos Operations Manager or Designee** Mary Mohr

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**CHAIN OF CUSTODY FOR BULK ASBESTOS ANALYSIS**

10 of 2  
2 of 2  
1 of 2

179 Lake Avenue, Rochester, New York 14608 Office: 585-647-2530  
 1815 Love Road, Grand Island, New York 14072 Office: 716-775-5777

**Client:** Fisher Associates **Contact:** Mark Stein

**Phone Number:** (585) 334-1310 **Email Address for Data:** mstein@fisherassoc.com

**Client Mailing Address:**  
135 Calkins Road  
Rochester, NY 14623

**Results To:** Mark Stein  
**Turn Around Time:** 1  2  3  5  Other

**Date Sampled:** 12/01/16  
**Material Type/Quantity:** Friable NOB TEM

**Project Location:** BIN 5009929

**OFFICE USE ONLY**  
**Job #:** 12198-16  
**Page** \_\_\_\_\_ **of** \_\_\_\_\_  
**Date Logged In:** 12-6-16  
**Logged In By:** VK

	Client ID	Lab ID	Sampling Location	Color	Material Size	Type of Material
1	1A	101830	Outside of girder	Green		Paint
2	1B	837	" " "			
3	2A	838	Guard <del>Gate</del> Railing			
4	2B	839	" "			
5	3A	840	Inside girder			
6	3B	841	" "			
7	4A	842	on concrete	white		
8	4B	843	" "	"		
9	5A	844	3/4 abutments	Black		Tar
10	5B	845	" "	"		"

**Sampled By:** [Signature] **Date:** 12/01/16  
**Transported to Paradigm By:** [Signature] **Date:** 12/05/16  
**Received By:** [Signature] **Date:** 12/5/16

All samples will be analyzed by the appropriate New York State Department of Health methods (198.1, 198.4 and 198.6) unless EPA 600/M4/82/020 per 40 CFR 763 and/or EPA 600/R-93/116 methods are requested.  
**CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS**   
 or provide TEM contact name: \_\_\_\_\_  
**TOTAL NUMBER OF SAMPLES ON ALL CHAINS OF CUSTODY:** 10 NOB

VK 12-6-16



**CHAIN OF CUSTODY FOR BULK ASBESTOS ANALYSIS**

top 2  
2 of 2

2 of 2

179 Lake Avenue, Rochester, New York 14608 Office: 585-647-2530  
 1815 Love Road, Grand Island, New York 14072 Office: 716-775-5777

<b>Client:</b> Fisher Associates	<b>Contact:</b> Mark Stein
<b>Phone Number:</b> (585) 334-1310	<b>Email Address for Data:</b> mstein@fisherassoc.com
<b>Results To:</b> Mark Stein	<b>Turn Around Time:</b> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 5 <input checked="" type="checkbox"/> Other <input type="checkbox"/>
<b>Date Sampled:</b> 12/01/16	<b>Material Type/Quantity:</b> Friable <input type="checkbox"/> NOB <input type="checkbox"/> TEM <input type="checkbox"/>
<b>Project Location:</b> BIN 5009929	<i>Note: No # 6 sample</i>

**OFFICE USE ONLY**

Job #: 12198-16

Page \_\_\_\_\_ of \_\_\_\_\_

Date Logged In: 12-12-16

Logged In By: VK

**Client Mailing Address:**  
135 Calkins Road  
Rochester, NY 14623

	Client ID	Lab ID	Sampling Location	Color	Material Size	Type of Material
1	7A	101846	Blw abutments & wingwall	Black	F	Fibrous Mat.
2	7B	847	" " "	↓	↓	" "
3	8A	848	Top of wingwall	↓	NOB	Caulk
4	8B	849	" " "	↓	↓	" "
5	9A	850	Bottom of concrete piers	↓	↓	Waterproofing
6	9B	851	" " "	↓	↓	" "
7						
8						
9						
10						

<b>Sampled By:</b> <i>[Signature]</i>	<b>Date:</b> 12/01/16
<b>Transported to Paradigm By:</b> <i>[Signature]</i>	<b>Date:</b> 12/05/16
<b>Received By:</b> <i>[Signature]</i>	<b>Date:</b> 12/5/16

All samples will be analyzed by the appropriate New York State Department of Health methods (198.1, 198.4 and 198.6) unless EPA 600/M4/82/020 per 40 CFR 763 and/or EPA 600/R-93/116 methods are requested.

**CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS**

or provide TEM contact name: \_\_\_\_\_

**TOTAL NUMBER OF SAMPLES ON ALL CHAINS OF CUSTODY:** 254NOB

VK 12-12-16



**PARADIGM**  
ENVIRONMENTAL SERVICES, INC.

*Analytical Report For*  
**Fisher Associates**

*For Lab Project ID*

**165260**

*Referencing*

**Bridge Haz Survey, 151021-09, BIN 5009929**

*Prepared*

**Monday, December 12, 2016**

Any noncompliant QC parameters or other notes impacting data interpretation are flagged or documented on the final report or are noted below:

***Reduced sample size used for Lead analysis due to limited sample volume. Kindly refer to the Chain of Custody Supplement for the affected sample(s).***

---

Certifies that this report has been approved by the Technical Director or Designee

179 Lake Avenue • Rochester, NY 14608 • (585) 647-2530 • Fax (585) 647-3311 • ELAP ID# 10958 • PADEP ID# 68-02351

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

*Report Prepared Monday, December 12, 2016*

Page 1 of 10



**Lab Project ID: 165260**

**Client: Fisher Associates**

**Project Reference: Bridge Haz Survey, 151021-09, BIN 5009929**

**Sample Identifier: LBP 1**

**Lab Sample ID: 165260-01**

**Date Sampled: 12/1/2016**

**Matrix: Paint**

**Date Received: 12/5/2016**

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>0.0101</b>	%		12/8/2016 10:25

**Method Reference(s):** EPA 6010C

EPA 3050B

**Preparation Date:** 12/6/2016

**Data File:** 120816a



**Lab Project ID: 165260**

**Client: Fisher Associates**

**Project Reference: Bridge Haz Survey, 151021-09, BIN 5009929**

**Sample Identifier: LBP 2**

**Lab Sample ID: 165260-02**

**Date Sampled: 12/1/2016**

**Matrix: Paint**

**Date Received: 12/5/2016**

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>6.94</b>	%		12/8/2016 10:30

**Method Reference(s):** EPA 6010C  
EPA 3050B  
**Preparation Date:** 12/6/2016  
**Data File:** 120816a



**Lab Project ID: 165260**

**Client: Fisher Associates**

**Project Reference: Bridge Haz Survey, 151021-09, BIN 5009929**

**Sample Identifier: LBP 3**

**Lab Sample ID: 165260-03**

**Date Sampled: 12/1/2016**

**Matrix: Paint**

**Date Received: 12/5/2016**

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>0.0136</b>	%		12/8/2016 10:34

**Method Reference(s):** EPA 6010C

EPA 3050B

**Preparation Date:** 12/6/2016

**Data File:** 120816a



**Lab Project ID: 165260**

**Client: Fisher Associates**

**Project Reference: Bridge Haz Survey, 151021-09, BIN 5009929**

**Sample Identifier: LBP 4**

**Lab Sample ID: 165260-04**

**Date Sampled: 12/1/2016**

**Matrix: Paint**

**Date Received: 12/5/2016**

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>0.00962</b>	%		12/8/2016 10:38

**Method Reference(s):** EPA 6010C

EPA 3050B

**Preparation Date:** 12/6/2016

**Data File:** 120816a



**Client:** Fisher Associates

**Project Reference:** Bridge Haz Survey, 151021-09, BIN 5009929

**Sample Identifier:** PCB 8

**Lab Sample ID:** 165260-05

**Date Sampled:** 12/1/2016

**Matrix:** Caulk

**Date Received:** 12/5/2016

**PCBs**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
PCB-1016	< 4.95	mg/Kg		12/9/2016 14:13
PCB-1221	< 4.95	mg/Kg		12/9/2016 14:13
PCB-1232	< 4.95	mg/Kg		12/9/2016 14:13
PCB-1242	< 4.95	mg/Kg		12/9/2016 14:13
PCB-1248	< 4.95	mg/Kg		12/9/2016 14:13
PCB-1254	< 4.95	mg/Kg		12/9/2016 14:13
PCB-1260	< 4.95	mg/Kg		12/9/2016 14:13
PCB-1262	< 4.95	mg/Kg		12/9/2016 14:13
PCB-1268	< 4.95	mg/Kg		12/9/2016 14:13

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Limits</u>	<u>Outliers</u>	<u>Date Analyzed</u>
Decachlorobiphenyl	<b>73.9</b>	10 - 144		12/9/2016 14:13
Tetrachloro-m-xylene	<b>72.2</b>	10 - 140		12/9/2016 14:13

**Method** EPA 8082A

EPA 3550C

**Reference(s):** 12/9/2016

**Preparation Date:**



## Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

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All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

*"<" = Analyzed for but not detected at or above the quantitation limit.*

*"E" = Result has been estimated, calibration limit exceeded.*

*"Z" = See case narrative.*

*"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.*

*"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.*

*"B" = Method blank contained trace levels of analyte. Refer to included method blank report.*

*"J" = Result estimated between the quantitation limit and half the quantitation limit.*

*"L" = Laboratory Control Sample recovery outside accepted QC limits.*

*"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.*

*"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.*

*"\*" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.*

*"(1)" = Indicates data from primary column used for QC calculation.*

*"A" = denotes a parameter for which ELAP does not offer approval as part of their laboratory certification program.*

*"F" = denotes a parameter for which Paradigm does not carry certification, the results for which should therefore only be used where ELAP certification is not required, such as personal exposure assessment.*

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

# GENERAL TERMS AND CONDITIONS

## LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

### Warranty.

Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

### Scope and Compensation.

LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB will use LAB default method for all tests unless specified otherwise on the Work Order.

Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

### Prices.

Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

### Limitations of Liability.

In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.

LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.

All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.

Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

### Hazard Disclosure.

Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

### Sample Handling.

Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises. Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on the final report.

Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.

LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

### Legal Responsibility.

LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

### Assignment.

LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

### Force Majeure.

LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

### Law.

This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.



# CHAIN OF CUSTODY

1 of 2

REPORT TO:		INVOICE TO:	
COMPANY: Fisher Associates		COMPANY: Same	
ADDRESS: 135 Calkins Road, Suite A		ADDRESS:	
CITY: Rochester	STATE: NY	ZIP: 14623	CITY: STATE: ZIP:
PHONE: (585) 334-1310 FAX:		PHONE: FAX:	
PROJECT NAME/SITE NAME: Bridge Haz Survey - 151021-09		ATTN: Mark Stein	
COMMENTS: <b>BIN 5009929</b>		ATTN:	
		LAB PROJECT #: 165260 CLIENT PROJECT #: TURNAROUND TIME: (WORKING DAYS) <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> 5 <input type="checkbox"/> OTHER	
		Quotation #	

### REQUESTED ANALYSIS

DATE	TIME	C O M P O S I T E	G R A B	SAMPLE LOCATION/FIELD ID	M A T R I X	C O N T A I N E R	L E A D	P C B										REMARKS	PARADIGM LAB SAMPLE NUMBER
1	12/01/16			LBP 1	Paint	1	X												01
2	↓			LBP 2	↓	1	X												02
3	↓			LBP 3	↓	1	X												03
4	↓			PCB 8	Caulk	1		X											04
5	↓			LBP 4	Paint	1	X												04
6				pic sample label / MS															
7				GP 12/5/16															
8																			
9																			
10																			

05  
GP  
12/5/16

**\*\*LAB USE ONLY BELOW THIS LINE\*\***

Sample Condition: Per NELAC/ELAP 210/241/242/243/244

Receipt Parameter	NELAC Compliance	
Container Type:	Y <input type="checkbox"/>	N <input type="checkbox"/>
Comments: _____		
Preservation:	Y <input type="checkbox"/>	N <input type="checkbox"/>
Comments: _____		
Holding Time:	Y <input type="checkbox"/>	N <input type="checkbox"/>
Comments: _____		
Temperature:	Y <input type="checkbox"/>	N <input type="checkbox"/>
Comments: 20°C 12/5/16 16:40		

[Signature] 12/01/16 15:30  
 Sampled By Date/Time  
 [Signature] 12/05/16 16:30  
 Relinquished By Date/Time  
 [Signature] 12/5/16 16:30  
 Received By Date/Time  
 [Signature] 12/5/16 16:43  
 Received @ Lab By Date/Time

Total Cost:

P.I.F.



### Chain of Custody Supplement

Client: Fisher Associates

Completed by: Glen Pezzulo

Lab Project ID: 165260

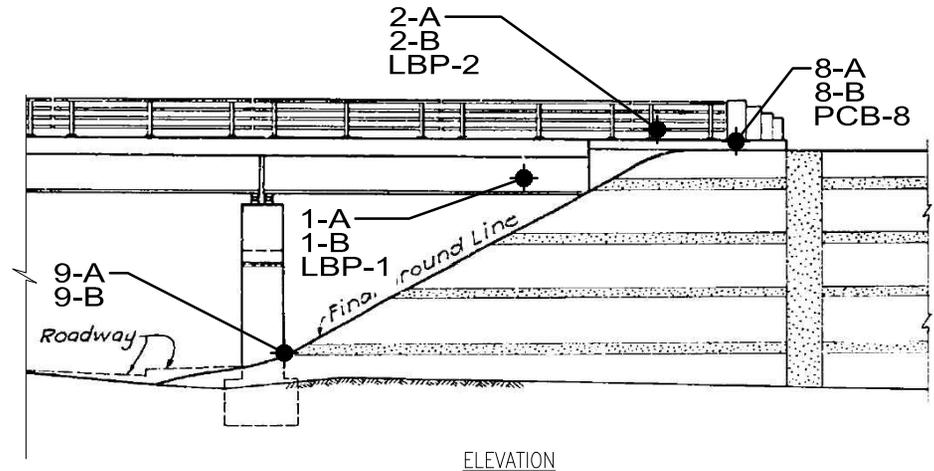
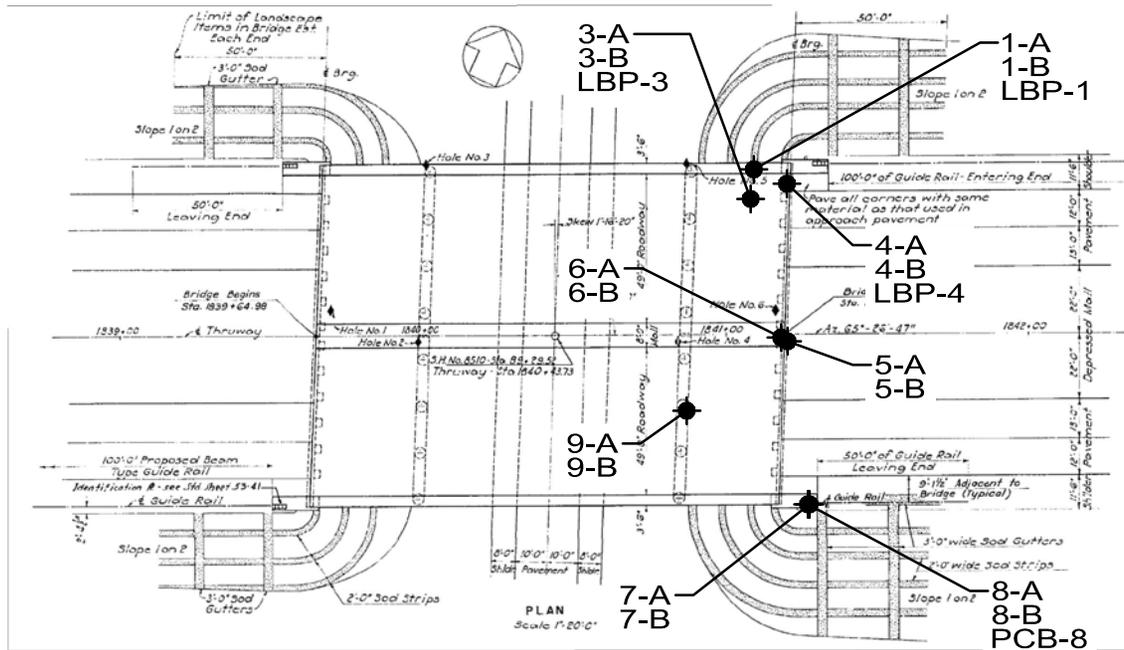
Date: 12/5/16

#### Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	<i>NELAC compliance with the sample condition requirements upon receipt</i>		
	Yes	No	N/A
Container Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		
Transferred to method-compliant container	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Headspace (<1 mL)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Preservation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Chlorine Absent (<0.10 ppm per test strip)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Holding Time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		
Temperature	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	<u>20°C</u> <span style="float: right;"><u>marks</u></span>		
Sufficient Sample Quantity	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Comments	<u>1.0 volume of MPBR</u>		

**APPENDIX D**  
**SAMPLE LOCATION PLANS**



Not to Scale



WWW.FISHERASSOC.COM

LEGEND:

● 1-A SAMPLE LOCATION AND IDENTIFICATION

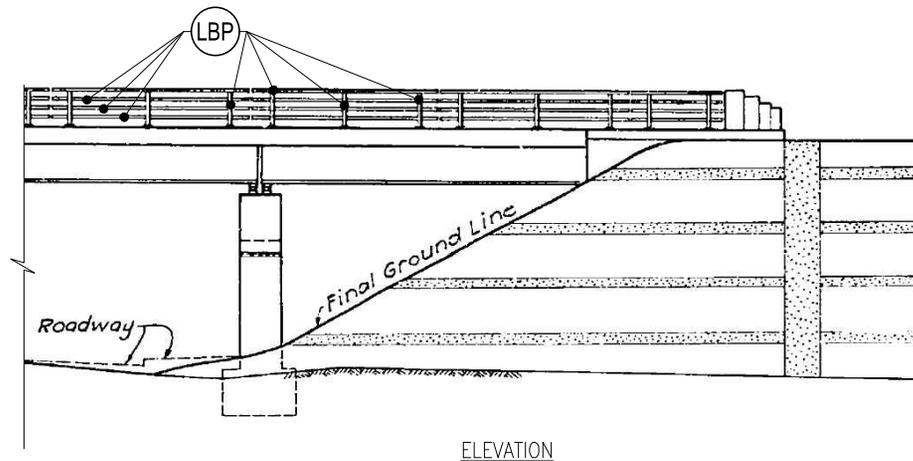
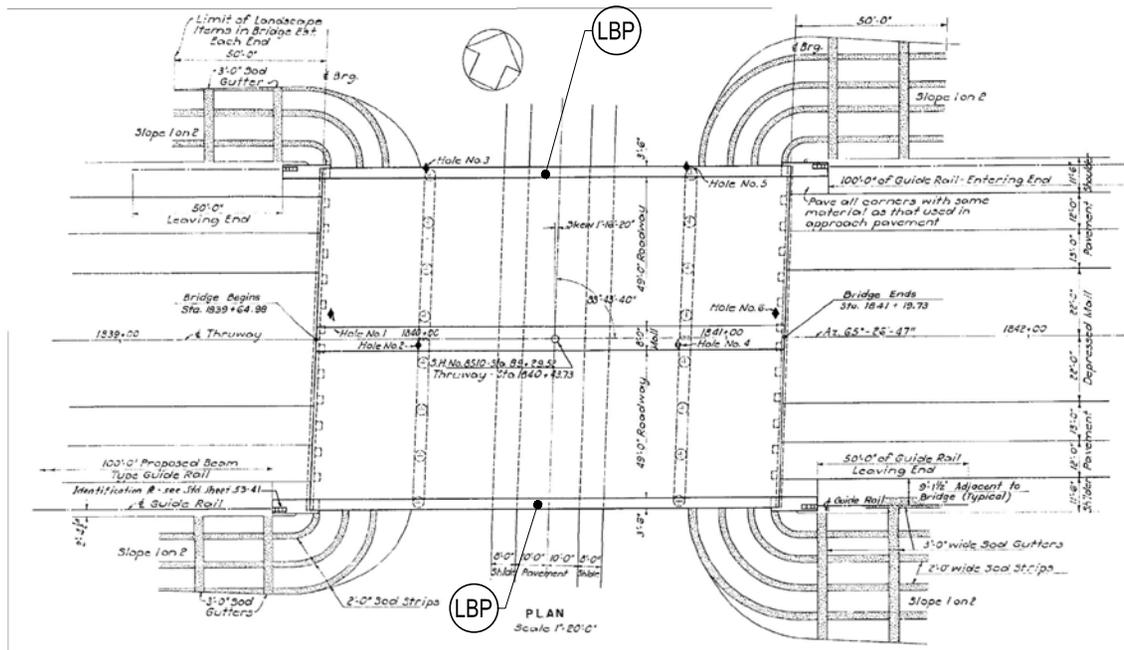
Figure No. H1.01  
SAMPLE LOCATION PLAN  
D214385 B.I.N. 5009929

I-90 MAINLIKE BRIDGE OVER ORISKANY BLVD.  
TOWN OF WHITESBORO  
ONEIDA COUNTY, NEW YORK

FA #151021.09

FEBRUARY 2017

**APPENDIX E**  
**HAZARDOUS MATERIAL LOCATION PLANS**



**NOTE:**

LEAD BASED PAINT IS ON GUIDERAILS, EITHER SIDE OF BRIDGE.

Not to Scale



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**LEGEND**

- AC ASBESTOS-CONTAINING
- PCB POLYCHLORINATED BIPHENYLS
- LF LINEAR FEET
- SF SQUARE FEET

(LBP) LEAD-BASED PAINT

**APPROXIMATE QUANTITIES (ENTIRE STRUCTURE)**

(LBP) 490 SF

**Figure No. H2.01**  
HAZARDOUS MATERIALS LOCATION PLAN  
D214385 B.I.N. 5009929

I-90 MAINLIKE BRIDGE OVER ORISKANY BLVD.  
TOWN OF WHITESBORO  
ONEIDA COUNTY, NEW YORK

FA #151021.09

FEBRUARY 2017

**HAZARDOUS WASTE-CONTAMINATED MATERIALS  
TECHNICAL MEMORANDUM**

**for**

**NEW YORK STATE THRUWAY AUTHORITY**

**D214385      BIN 5510090  
I-90 EXIT 35 OVER MAINLINE  
VILLAGE OF EAST SYRACUSE  
ONONDAGA COUNTY**

**Prepared by:**



**February 2017**

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**Appendices**

- Appendix A – Project Location Map
- Appendix B – Fisher Associates’ Certifications and Laboratory Accreditation
- Appendix C – Laboratory Analytical Data
- Appendix D – Sample Location Plans
- Appendix E – Hazardous Material Location Plans

## 1.0 INTRODUCTION

Fisher Associates P.E., L.S., L.A., D.P.C. (“Fisher Associates”) is working with Stantec Consulting Services, Inc. (Stantec), and the New York State Thruway Authority (NYSTA), to prepare this Hazardous Materials Technical Memorandum, here after referred to as HMTM, in technical support of the proposed replacement of the Exit 35 bridge over the I-90 Thruway Mainline in the Village of East Syracuse, Onondaga County, New York. The project area was investigated on December 1, 2016 as part of the project. The project location is shown on the Project Location Map in Appendix A.

### 1.1 Purpose and Scope

The purpose of this HMTM is to identify asbestos-containing materials (ACMs), lead based paint (LBP), and polychlorinated biphenyls (PCBs), collectively known as Hazardous Waste Contaminated Materials (HWCM), within the bridge rehabilitation project corridor, and to develop quantity estimates for abatement of identified HWCMs.

### 1.2 Background

This HMTM is consistent with the requirements outlined in the NYSDOL Industrial Code Rule 56 (Code Rule 56), which requires an asbestos pre-demolition survey and asbestos abatement to be performed prior to any alterations, renovations or demolition.

### 1.3 Previous Sampling Activities

Fisher Associates received no previous sampling reports to review. As-built drawings of the bridge were reviewed to identify potential ACM sample locations and for the presence of lead containing materials such as bearing pads or joint spacers.

### 1.4 Summary of Findings

The following table summarizes those materials found to be positive by current sample analysis or assumed to be positive based on as built drawings. Added detail is presented in the following sections.

**Table 1.1**  
**Summary of Findings**  
**I-90 Exist 35 over Mainline**

<b>Sample Identification</b>	<b>Material</b>	<b>Sample Location</b>	<b>Approx. Quantity</b>
N/A	Lead Bearing Pad	Top of Abutments	15 SF

SF – Square Foot

## 2.0 MATERIAL SAMPLING AND LABORATORY METHODOLOGY

A NYSDOL-certified asbestos inspector from Fisher Associates collected bulk samples of suspect asbestos-containing materials (ACMs) on December 1, 2016. Bulk samples were collected using hand tools from each matrix identified as a potential ACM. Additionally, paint samples were collected and analyzed for lead, and caulking/adhesive materials were collected and analyzed for PCBs. Upon completion of the sampling, a chain-of-custody form was completed for the materials sampled.

Samples were delivered under standard chain-of-custody protocol to Paradigm Environmental Services, Inc. (Paradigm), a New York State Department of Health (NYSDOH) certified laboratory. The procedures followed are in accordance with the NYSDOH Environmental Laboratory Approval Program (ELAP). New York State Department of Labor (NYSDOL) Code Rule 56 defines materials containing greater than one percent (1%) asbestos by weight as being Asbestos Containing Materials.

The paint samples were analyzed via SW846 Method 3050 /6010 to determine the lead content of the paints. Those materials having a concentration equal or greater than 0.5% by weight in lead are considered to be lead based.

Copies of Fisher Associates' Asbestos Handling License, the Asbestos Inspector's certification, and the Laboratory's Accreditation are in Appendix B. Copies of the laboratory's analytical results are included in Appendix C. The Sample Location Plans are included in Appendix D. The Hazardous Material Locations Plans are included in Appendix E.

## 3.0 SAMPLE RESULTS AND LOCATIONS

### 3.1 Asbestos Containing Materials

Table 3.1 provides a summary of the laboratory analytical results for the samples collected from the building materials identified on and around the bridge structure and nearby roadway that may be disturbed. Those samples identified as being ACMs (greater than one percent asbestos) are shaded in the table. Refer to the Sample Location Plans in Appendix D for locations of sample collection.

**Table 3.1**  
**Summary of Samples Collected and Results**  
**I-90 Exit 35 over Mainline**

<b>Sample Identification</b>	<b>Material</b>	<b>Sample Location</b>	<b>% Asbestos</b>
1-A	Joint Packing Material	Wingwall and Abutment	NAD
1-B	Joint Packing Material	Wingwall and Abutment	N/A
2-A	Green Paint	Guard Railings	NAD
2-B	Green Paint	Guard Railings	NAD
4-A	Green Paint	Girders	NAD
4-B	Green Paint	Girders	NAD

Sample Identification	Material	Sample Location	% Asbestos
5-A	Green Bearing Pad (Lead)	Top of Abutment	NAD
5-B	Green Bearing Pad (Lead)	Top of Abutment	NAD
6-A	Black Tar Paper	B/w Top of Abutment and Bridge	NAD
6-B	Black Tar Paper	B/w Top of Abutment and Bridge	NAD
8-A	Orange Bearing Pad	Center Column Bearings	NAD
8-B	Orange Bearing Pad	Center Column Bearings	NAD
9-A	Black Tar	Guard Railings	NAD
9-B	Black Tar	Guard Railings	NAD

### 3.2 Lead Containing Materials (LCMs)

Table 3.2 below lists the sample Identification, the type of material, the sample location, and the percent of lead for each sample. Those samples identified as being Lead Based Paint (LBP), having a concentration of 0.5% by weight or greater, are shaded in the table. Additionally, a review of the as-built drawings, as well as observation in the field, indicated the presence of lead bearing pads at the top of the concrete abutments wall only.

**Table 3.2**  
**Summary of Lead Based Paint Samples Collected and Results**  
**I-90 Exit 35 over Mainline**

Sample Identification	Material	Sample Location	Lead (% by weight)
LBP-1	Green Paint	Guard Railings	0.169
LBP-2	Green Paint	Girders	0.00490
N/A	Lead Bearing Pads	Top of Abutments	Assumed

### 3.3 Polychlorinated Biphenyls (PCBs)

Fisher Associates did not observe any caulking materials therefore no sample were collected during this investigation.

## 4.0 QUANTITY ESTIMATES

### 4.1 Asbestos

Potential ACMs were sampled by Fisher Associates and tested via laboratory analysis. None of the samples analyzed are considered to be ACMs.

## 4.2 Lead

Samples were collected of potential lead-containing materials during the investigation conducted by Fisher Associates. None of the paint samples analyzed are considered to be Lead-Based. However, lead containing bearing pads were observed under steel plates along the abutment wall only.

**Table 4.2**  
**Estimated Quantities of Lead-Containing**  
**Materials**  
**I-90 Exit 35 Bridge over Mainline**

Material	Sample Id	Sample Location	Quantity
N/A	Lead Bearing Pad	Top of Abutments	15 SF

SF – Square Foot

## 4.3 PCBs

The investigation conducted by Fisher Associates did not observe any PCB. Those materials tested included caulking and sealants. Materials are considered to be PCB-containing if the total concentration of the PCB compounds exceeds fifty (50) parts per million (ppm). Based on the laboratory results, none of the materials tested are considered PCB-containing.

## 5.0 CONCLUSIONS

### 5.1 Asbestos

Asbestos containing materials (ACMs) have been identified as part of this assessment. In accordance with 12 NYCRR 56, no demolition or renovation work shall be commenced by any owner or agent prior to completion of asbestos abatement performed by a licensed asbestos abatement contractor. If suspect asbestos containing materials not identified in this pre-demolition asbestos survey report are discovered during the demolition process, it is required that the presence, location and quantity of newly discovered material, be conveyed within twenty-four (24) hours of discovery to the owner or their representative. All activities must cease in the area where the presumed asbestos containing material or suspect miscellaneous ACM is found, until a licensed asbestos contractor appropriately assesses and manages the discovered materials.

### 5.2 Lead

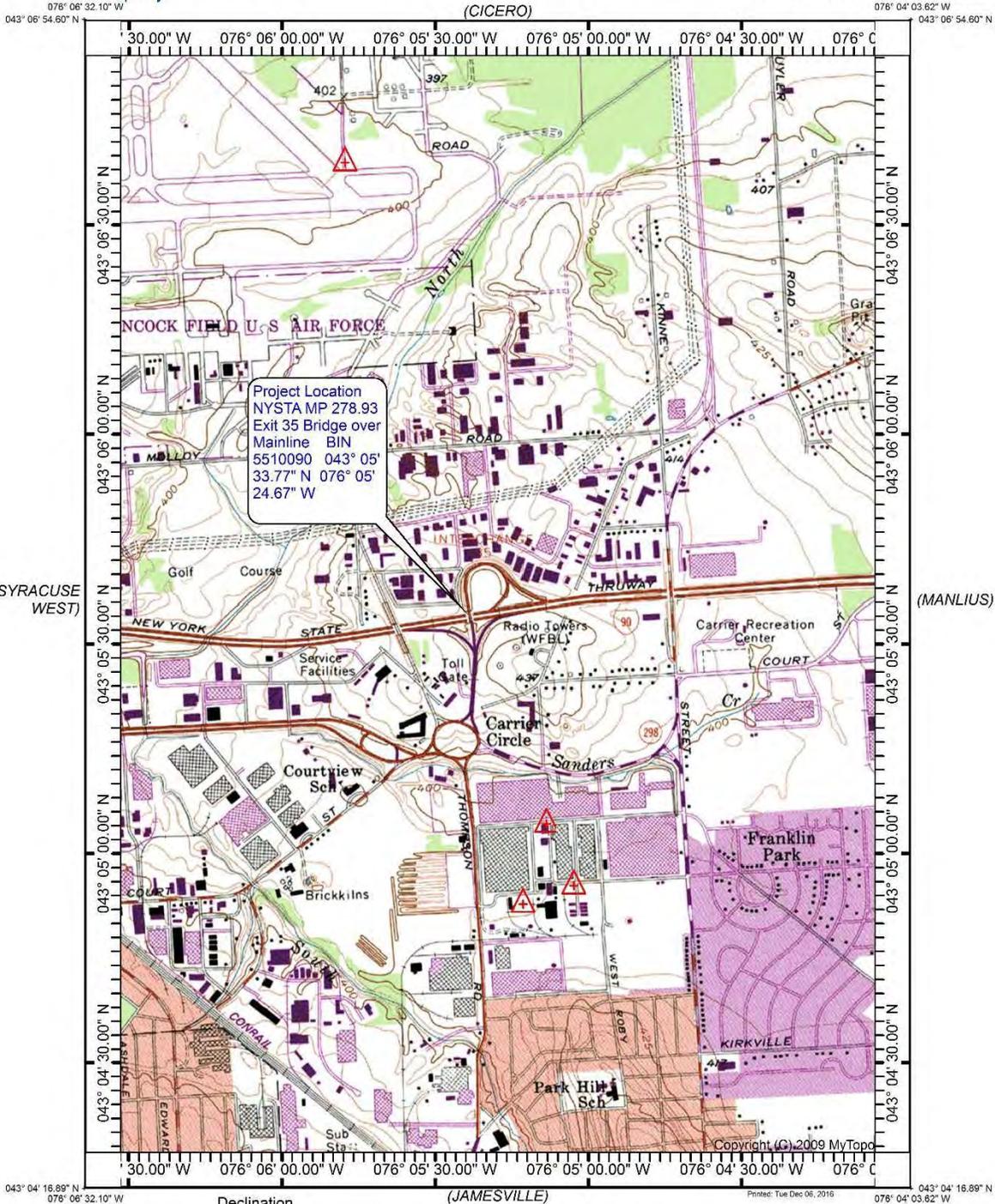
Lead containing materials have been identified as a part of this assessment. It is recommended that a Lead Abatement and Handling of Lead Containing Materials specification section be developed. This section specifies the requirements for the detection and prevention of lead dust contamination in lead dust control work areas and areas adjacent to them, protection of workers, post-work cleaning, pre-disposal testing and appropriate disposal of removed material.

Finally, all trades must follow the Occupational Safety & Health Administration (OSHA) 29 CFR 1926.62 regulation, which considers any amount of Lead to be of concern. The regulation states that the employer shall assure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air ( $50 \mu\text{g}/\text{m}^3$ ) averaged over an 8-hour period.

### **5.3 PCBs**

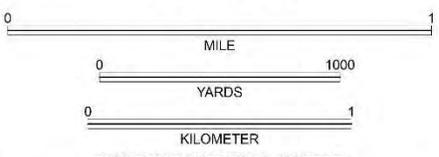
The investigation conducted by Fisher Associates also included the inspection for PCBs. Those materials tested included caulking and sealants. Materials are considered to be PCB-containing if the total concentration of the PCB compounds exceeds fifty (50) parts per million (ppm). No potential PCB-containing materials were observed during this investigation.

**APPENDIX A**  
**PROJECT LOCATION MAP**



Produced by MyTopo Terrain Navigator  
Topography based on USGS 1:24,000  
Maps  
North American 1983 Datum (NAD83)  
Polyconic Projection  
To place on the predicted North American  
1927 move the projection lines 7M N and  
29M E

Declination  
MGN  
GN 0.74° W  
MN 12.55° W



CONTOUR INTERVAL 10 FEET  
NATIONAL GEODETIC VERTICAL DATUM 1929

SYRACUSE EAST, NY  
1957

Printed: Tue Dec 06, 2016

Copyright (C) 2009 MyTopo

**APPENDIX B  
FISHER ASSOCIATES'  
CERTIFICATIONS LABORATORY  
ACCREDITATION**

**New York State – Department of Labor**

Division of Safety and Health  
License and Certificate Unit  
State Campus, Building 12  
Albany, NY 12240

**ASBESTOS HANDLING LICENSE**

Fisher Associates, P.E., L.S., P.C.  
Suite A  
135 Calkins Road  
Rochester, NY 14623

FILE NUMBER: 99-0504  
LICENSE NUMBER: 29344  
LICENSE CLASS: RESTRICTED  
DATE OF ISSUE: 08/03/2016  
EXPIRATION DATE: 08/31/2017

Duly Authorized Representative – Robert W Goossen:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.



Eileen M. Franko, Director  
For the Commissioner of Labor

STATE OF NEW YORK - DEPARTMENT OF LABOR  
ASBESTOS CERTIFICATE



**MARK T STEIN**

CLASS(EXPIRES)

C ATEC(03/17) D INSP(03/17)

H PM (03/17) I PD (03/17)

CERT# 00-07444

DMV# 457924110

MUST BE CARRIED ON ASBESTOS PROJECTS



01213 000706159 17

EYES BLU

HAIR BRO

HGT 6' 03"

IF FOUND RETURN TO:  
NYS DOL - L&C UNIT  
ROOM 161A BUILDING 12  
STATE OFFICE CAMPUS  
ALBANY NY 12240

# United States Environmental Protection Agency

This is to certify that

Mark T. Stein



has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Risk Assessor

## In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

---

This certification is valid from the date of issuance and expires August 25, 2019

LBP-R-36347-1

Certification #

June 27, 2016

Issued On



John Gorman, Chief

Pesticides & Toxic Substances Branch

NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

**DR. THOMAS R. MCKEE**  
**AMERISCI RICHMOND**  
**13635 GENITO RD**  
**MIDLOTHIAN, VA 23112**

**NY Lab Id No: 10984**

*is hereby APPROVED as an Environmental Laboratory for the category*  
**ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE**  
*All approved subcategories and/or analytes are listed below:*

**Miscellaneous**

Asbestos in Friable Material	Item 198.1 of Manual EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual



**Serial No.: 54118**

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. STEVE DEVITO  
PARADIGM ENVIRONMENTAL SERVICES INC  
179 LAKE AVENUE  
ROCHESTER, NY 14608

NY Lab Id No: 10958

*is hereby APPROVED as an Environmental Laboratory for the category  
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
All approved subcategories and/or analytes are listed below:*

**Miscellaneous**

Asbestos in Friable Material	Item 198.1 of Manual EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual
Lead in Dust Wipes	EPA 6010C
Lead in Paint	EPA 6010C

**Sample Preparation Methods**

EPA 3050B

NEW  
YORK  
STATE

Department  
of Health

Serial No.: 54682

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

**NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER**



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016  
Revised May 20, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

**MR. STEVE DEVITO**  
**PARADIGM ENVIRONMENTAL SERVICES INC**  
**179 LAKE AVENUE**  
**ROCHESTER, NY 14608**

**NY Lab Id No: 10958**

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards (2003) for the category  
ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

**Nitroaromatics and Isophorone**

2,4-Dinitrotoluene	EPA 625 EPA 8270D
2,6-Dinitrotoluene	EPA 625 EPA 8270D
Isophorone	EPA 625 EPA 8270D
Nitrobenzene	EPA 625 EPA 8270D

**Phthalate Esters**

Diethyl phthalate	EPA 625 EPA 8270D
Dimethyl phthalate	EPA 625 EPA 8270D
Di-n-butyl phthalate	EPA 625 EPA 8270D
Di-n-octyl phthalate	EPA 625 EPA 8270D

**Nitrosoamines**

N-Nitrosodimethylamine	EPA 625 EPA 8270D
N-Nitrosodi-n-propylamine	EPA 625 EPA 8270D
N-Nitrosodiphenylamine	EPA 625 EPA 8270D

**Polychlorinated Biphenyls**

PCB-1016	EPA 8082A EPA 608
PCB-1221	EPA 8082A EPA 608
PCB-1232	EPA 8082A EPA 608
PCB-1242	EPA 8082A EPA 608
PCB-1248	EPA 8082A EPA 608
PCB-1254	EPA 8082A EPA 608
PCB-1260	EPA 8082A EPA 608
PCB-1262	EPA 8082A
PCB-1268	EPA 8082A

**Organophosphate Pesticides**

Atrazine	EPA 8270D
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**Petroleum Hydrocarbons**

Diesel Range Organics	EPA 8015D
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**Phthalate Esters**

Benzyl butyl phthalate	EPA 625 EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 625 EPA 8270D

**Serial No.: 54805**

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.



**APPENDIX C**  
**LABORATORY ANALYTICAL DATA**



**PLM & TEM BULK ASBESTOS ANALYSIS REPORT**  
**via NYSDOH ELAP Method 198.1, 198.4 and 198.6**

Client: **Fisher Associates**  
Location: **BIN 5510090**

Job No: 12194-16  
Page: 1 of 4

Sample Date: 12/1/2016

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
1A	101781	B/W Girder & Rocker	Black Joint Material	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
1B	101782	B/W Girder & Rocker	Black Joint Material	<1.0% Residue Remaining. PLM and TEM Not Required.	N/A	X	N/A	N/A	N/A	N/A
2A	101783	Guard Rail	Green Paint	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
2B	101784	Guard Rail	Green Paint	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
4A	101785	Girders	Green Paint	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
4B	101786	Girders	Green Paint	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
5A	101787	Pad B/W Steel & Concrete	Green Paint	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
5B	101788	Pad B/W Steel & Concrete	Green Paint	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
6A	101789	B/W Concrete and Bridge	Black Tar	<1.0% Residue Remaining. PLM and TEM Not Required.	N/A	X	N/A	N/A	N/A	N/A
6B	101790	B/W Concrete and Bridge	Black Tar	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%

**KEY TO NOB COLUMN SYMBOLS**  
 No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).  
 √ NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 √ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.  
 # denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 X denotes sample prepped only by ELAP Method 198.6.  
 \*\* Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.  
 Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1, 198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.") or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0).



Lab Code 200530-0 for PLM Analysis

PLM Date Analyzed: 12/9/2016

Microscope: Olympus BH-2 #232953

Analyst: T. Bush

TEM Date Analyzed: 12/12/2016

TEM Analyst: A. Voldbakken

ELAP ID No.: 10958

**Laboratory Results Approved By:**  
**Asbestos Operations Manager or Designee**

Mary Dohr

Paradigm Environmental Services, Inc. is not responsible for the data supplied by an independent inspector. National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the laboratory. This PLM report relates ONLY to the items tested. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Quality control data (including 95% confidence limits and laboratory and analysts' and precision) is available upon request.



**PLM & TEM BULK ASBESTOS ANALYSIS REPORT**  
**via NYSDOH ELAP Method 198.1, 198.4 and 198.6**

**Client:** Fisher Associates  
**Location:** BIN 5510090

**Job No:** 12194-16  
**Page:** 2 of 4

**Sample Date:** 12/1/2016

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
8A	101791	B/W Concrete and Rocker	Orange Material	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
8B	101792	B/W Concrete and Rocker	Orange Material	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
9A	101793	Guard Rails	Black Tar	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
9B	101794	Guard Rails	Black Tar	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%

**KEY TO NOB COLUMN SYMBOLS**  
 No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).  
 ✓ NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 √ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.  
 # denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 X denotes sample prepped only by ELAP Method 198.6.  
 \*\* Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.  
 Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

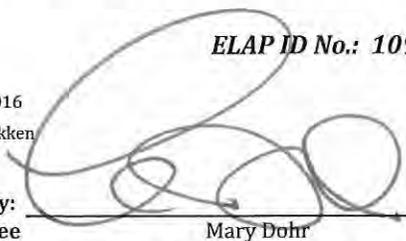
PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1, 198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and In Non-Friable Organically Bound Bulk Samples.") or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0).



Lab Code 200530-0 for PLM Analysis  
**PLM Date Analyzed:** 12/9/2016  
**Microscope:** Olympus BH-2 #232953  
**Analyst:** T. Bush

**TEM Date Analyzed:** 12/12/2016  
**TEM Analyst:** A. Voldbakken

**ELAP ID No.: 10958**



**Mary Dohr**

**Laboratory Results Approved By:**  
**Asbestos Operations Manager or Designee**

Paradigm Environmental Services, Inc. is not responsible for the data supplied by an independent inspector. National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the laboratory. This PLM report relates ONLY to the items tested. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Quality control data (including 95% confidence limits and laboratory and analysts' and precision) is available upon request.



**CHAIN OF CUSTODY FOR BULK ASBESTOS ANALYSIS**

<input type="checkbox"/> 179 Lake Avenue, Rochester, New York 14608	Office: 585-647-2530
<input type="checkbox"/> 1815 Love Road, Grand Island, New York 14072	Office: 716-775-5777
<b>Client:</b> Fisher Associates	<b>Contact:</b> Mark Stein
<b>Phone Number:</b> (585) 334-1310	<b>Email Address for Data:</b> mstein@fisherassoc.com
<b>Results To:</b> Mark Stein	<b>Turn Around Time:</b> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 5 <input checked="" type="checkbox"/> Other <input type="checkbox"/>
<b>Date Sampled:</b>	<b>Material Type/Quantity:</b> Friable      NOB      TEM
<b>Project Location:</b> BIN 5510090	

**Client Mailing Address:**  
135 Calkins Road  
  
Rochester, NY 14623

**OFFICE USE ONLY**

Job #: 12194-110

Page 3 of 20

Date Logged In: 12-10-16

Logged In By: VK

	Client ID	Lab ID	Sampling Location	Color	Material Size	Type of Material
1	2A	101781	Blw girder & rollers		NISB	Joint mat.
2	2B	782	" " "			" "
3	2A	783	Guard rail	Green		Paint
4	2B	784	" "	"		"
5	4A	785	Girders	"		"
6	4B	786	"	"		"
7	5A	787	Pad b/w steel & concrete	"		
8	5B	788	" " "	"		
9	6A	789	B/w concrete and bridge	Black		Tar
10	6B	790	" " "	"		"

<b>Sampled By:</b> [Signature]	<b>Date:</b> 12/10/16
<b>Transported to Paradigm By:</b> [Signature]	<b>Date:</b> 12/15/16
<b>Received By:</b> [Signature]	<b>Date:</b> 12/15/16

VK 12-10-16

All samples will be analyzed by the appropriate New York State Department of Health methods (198.1, 198.4 and 198.6) unless EPA 600/M4/82/020 per 40 CFR 763 and/or EPA 600/R-93/116 methods are requested.

**CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS**

or provide TEM contact name:

**TOTAL NUMBER OF SAMPLES ON ALL CHAINS OF CUSTODY:**



**CHAIN OF CUSTODY FOR BULK ASBESTOS ANALYSIS**

2012

179 Lake Avenue, Rochester, New York 14608 Office: 585-647-2530  
 1815 Love Road, Grand Island, New York 14072 Office: 716-775-5777

<b>Client:</b> Fisher Associates	<b>Contact:</b> Mark Stein
<b>Phone Number:</b> (585) 334-1310	<b>Email Address for Data:</b> mstein@fisherassoc.com
<b>Results To:</b> Mark Stein	<b>Turn Around Time:</b> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 5 <input checked="" type="checkbox"/> Other <input type="checkbox"/>
<b>Date Sampled:</b>	<b>Material Type/Quantity:</b> Friable      NOB      TEM
<b>Project Location:</b> BIN 5570090	

**Client Mailing Address:**  
135 Calkins Road  
  
Rochester, NY 14623

**OFFICE USE ONLY**

Job #: 12194-16

Page \_\_\_\_\_ of \_\_\_\_\_

Date Logged In: 12/6/16

Logged In By: VK

	Client ID	Lab ID	Sampling Location	Color	Material Size	Type of Material
1	8A	101791	Blw concrete and rocks		NOB	
2	8B	792	" " "		↓	
3	9A	793	Guard rails			Tar
4	9B	794	" "			"
5						
6						
7						
8						
9						
10						

<b>Sampled By:</b> [Signature]	<b>Date:</b> 12/6/16
<b>Transported to Paradigm By:</b> [Signature]	<b>Date:</b> 12/8/16
<b>Received By:</b> [Signature]	<b>Date:</b> 12/5/16

All samples will be analyzed by the appropriate New York State Department of Health methods (198.1, 198.4 and 198.6) unless EPA 600/M4/82/020 per 40 CFR 763 and/or EPA 600/R-93/116 methods are requested.

**CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS**

or provide TEM contact name: \_\_\_\_\_

**TOTAL NUMBER OF SAMPLES ON ALL CHAINS OF CUSTODY:**

VK 12/6/16



**PARADIGM**  
ENVIRONMENTAL SERVICES, INC.

*Analytical Report For*  
**Fisher Associates**

*For Lab Project ID*

**165267**

*Referencing*

**Bridge Haz Survey, 151021-09, BIN 5510090**

*Prepared*

**Monday, December 12, 2016**

Any noncompliant QC parameters or other notes impacting data interpretation are flagged or documented on the final report or are noted below.

A handwritten signature in black ink, appearing to read "R. G. ...", is written over a horizontal line.

Certifies that this report has been approved by the Technical Director or Designee

179 Lake Avenue • Rochester, NY 14608 • (585) 647-2530 • Fax (585) 647-3311 • ELAP ID# 10958 • PADEP ID# 68-02351

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

*Report Prepared Monday, December 12, 2016*

Page 1 of 7



**Lab Project ID: 165267**

**Client: Fisher Associates**

**Project Reference: Bridge Haz Survey, 151021-09, BIN 5510090**

**Sample Identifier: LBP 1**

**Lab Sample ID: 165267-01**

**Date Sampled: 12/1/2016**

**Matrix: Paint**

**Date Received: 12/6/2016**

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>0.169</b>	%		12/8/2016 11:29

**Method Reference(s):** EPA 6010C

EPA 3050B

**Preparation Date:** 12/6/2016

**Data File:** 120816a



**Lab Project ID: 165267**

**Client:** Fisher Associates

**Project Reference:** Bridge Haz Survey, 151021-09, BIN 5510090

**Sample Identifier:** LBP 2

**Lab Sample ID:** 165267-02

**Date Sampled:** 12/1/2016

**Matrix:** Paint

**Date Received:** 12/6/2016

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	< 0.00490	%		12/8/2016 11:33

**Method Reference(s):** EPA 6010C

EPA 3050B

**Preparation Date:** 12/6/2016

**Data File:** 120816a



## Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

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All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

*"<" = Analyzed for but not detected at or above the quantitation limit.*

*"E" = Result has been estimated, calibration limit exceeded.*

*"Z" = See case narrative.*

*"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.*

*"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.*

*"B" = Method blank contained trace levels of analyte. Refer to included method blank report.*

*"J" = Result estimated between the quantitation limit and half the quantitation limit.*

*"L" = Laboratory Control Sample recovery outside accepted QC limits.*

*"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.*

*"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.*

*"\*" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.*

*"(1)" = Indicates data from primary column used for QC calculation.*

*"A" = denotes a parameter for which ELAP does not offer approval as part of their laboratory certification program.*

*"F" = denotes a parameter for which Paradigm does not carry certification, the results for which should therefore only be used where ELAP certification is not required, such as personal exposure assessment.*

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

# GENERAL TERMS AND CONDITIONS

## LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

### **Warranty.**

Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

### **Scope and Compensation.**

LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB will use LAB default method for all tests unless specified otherwise on the Work Order.

Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

### **Prices.**

Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

### **Limitations of Liability.**

In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.

LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.

All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.

Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

### **Hazard Disclosure.**

Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

### **Sample Handling.**

Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises. Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on the final report.

Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.

LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

### **Legal Responsibility.**

LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

### **Assignment.**

LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

### **Force Majeure.**

LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

### **Law.**

This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

1 of 2



# CHAIN OF CUSTODY

REPORT TO:		INVOICE TO:	
COMPANY: Fisher Associates		COMPANY: Same	
ADDRESS: 135 Calkins Road, Suite A		ADDRESS:	
CITY: Rochester STATE: NY ZIP: 14623		CITY: STATE: ZIP:	
PHONE: (585) 334-1310 FAX:		PHONE: FAX:	
ATTN: Mark Stein		ATTN:	
COMMENTS: BIN 5510090		LAB PROJECT #: 165267	
		CLIENT PROJECT #:	
		TURNAROUND TIME: (WORKING DAYS)	
		<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> 5 <input type="checkbox"/> OTHER	
		Quotation #	

PROJECT NAME/SITE NAME:  
Bridge Haz Survey - 151021-09

REQUESTED ANALYSIS																	
DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	CONTAINER NUMBER	2	3	4	5	6	7	8	9	10	REMARKS	PARADIGM LAB SAMPLE NUMBER
12/16/16	10:00			LBP 1	Paint	1	X										01
"	10:00			LBP 2	"	2	X										02
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

**\*\*LAB USE ONLY BELOW THIS LINE\*\***

Sample Condition: Per NELAC/ELAP 210/241/242/243/244

Receipt Parameter	NELAC Compliance	
Container Type:	Y <input type="checkbox"/>	N <input type="checkbox"/>
Comments: _____		
Preservation:	Y <input type="checkbox"/>	N <input type="checkbox"/>
Comments: _____		
Holding Time:	Y <input type="checkbox"/>	N <input type="checkbox"/>
Comments: _____		
Temperature:	Y <input type="checkbox"/>	N <input type="checkbox"/>
Comments: _____		

<i>[Signature]</i>	12/01/16 10:00	
Sampled By	Date/Time	Total Cost: <input style="width: 50px; height: 30px;" type="text"/>
<i>[Signature]</i>	12/05/16 16:30	
Relinquished By	Date/Time	
<i>[Signature]</i>	12/5/16 16:30	
Received By	Date/Time	P.I.F. <input style="width: 50px; height: 30px;" type="text"/>
<i>[Signature]</i>	12/6/16 11:10	
Received @ Lab By	Date/Time	



### Chain of Custody Supplement

Client: Fisher Associates

Completed by: Glenn Pezzulo

Lab Project ID: 165267

Date: 12/6/16

#### Sample Condition Requirements Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt		
	Yes	No	N/A
Container Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		
Transferred to method-compliant container	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Headspace (<1 mL)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Preservation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Chlorine Absent (<0.10 ppm per test strip)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Holding Time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		
Temperature	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Sufficient Sample Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		

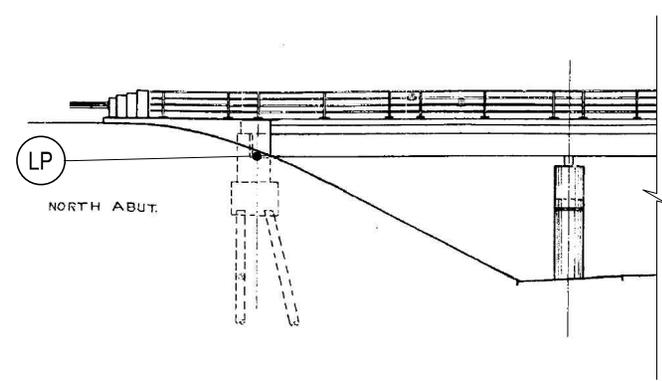
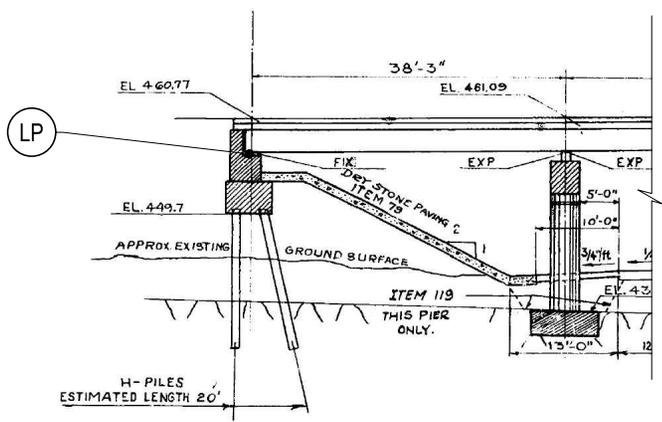
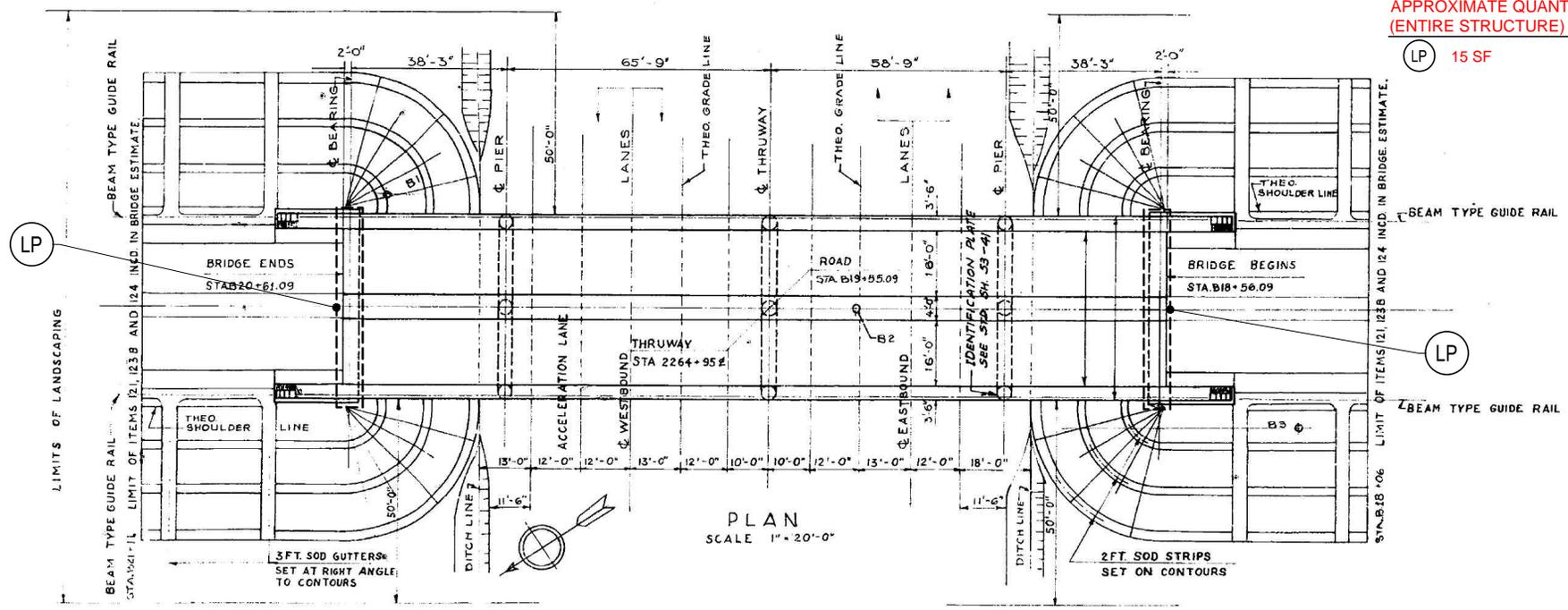
**APPENDIX D**  
**SAMPLE LOCATION PLANS**



**APPENDIX E**  
**HAZARDOUS MATERIAL LOCATION PLANS**

APPROXIMATE QUANTITIES  
(ENTIRE STRUCTURE)

LP 15 SF



Not to Scale



**LEGEND**

- AC ASBESTOS-CONTAINING
- PCB POLYCHLORINATED BIPHENYLS
- LF LINEAR FEET
- SF SQUARE FEET
- LP LEAD BEARING PAD ON ABUTMENTS

**Figure No. H2.01**  
**HAZARDOUS MATERIALS LOCATION PLAN**  
 D214385 B.I.N. 5510090  
 EXIT 35 BRIDGE OVER I-90 MAINLINE  
 VILLAGE OF EAST SYRACUSE  
 ONONDAGA COUNTY, NEW YORK  
 FA #151021.09 FEBRUARY 2017

**HAZARDOUS WASTE-CONTAMINATED MATERIALS  
TECHNICAL MEMORANDUM**

**for**

**NEW YORK STATE THRUWAY AUTHORITY**

**D214385      BIN 5510130  
BEAR TRAP CREEK CULVERT UNDER I-90 THRUWAY  
VILLAGE OF LIVERPOOL  
ONONDAGA COUNTY**

**Prepared by:**



**February 2017**

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1.3	Records Review Activities .....	1
1.4	Summary of Findings .....	1
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**Appendices**

- Appendix A – Project Location Map Appendix
- B – Fisher Associates’ Certifications  
Laboratory Accreditation

## **1.0 INTRODUCTION**

Fisher Associates P.E., L.S., L.A., D.P.C. (“Fisher Associates”) is working with Stantec Consulting Services, Inc. (Stantec), and the New York State Thruway Authority (NYSTA), to prepare this Hazardous Materials Technical Memorandum, here after referred to as HMTM, in technical support of the proposed replacement of the Bear Trap Creek Culvert under the I-90 Thruway Mainline in the Village of Liverpool, Onondaga County, New York. The project area was investigated on December 1, 2016 as part of the project. The project location is shown on the Project Location Map in Appendix A.

### **1.1 Purpose and Scope**

The purpose of this HMTM is to identify asbestos-containing materials (ACMs), lead based paint (LBP), lead containing materials (LCMs), and polychlorinated biphenyls (PCBs), collectively known as Hazardous Waste Contaminated Materials (HWCM), within the bridge rehabilitation project corridor, and to develop quantity estimates for abatement of identified HWCMs.

### **1.2 Background**

This HMTM is consistent with the requirements outlined in the NYSDOL Industrial Code Rule 56 (Code Rule 56), which requires an asbestos pre-demolition survey and asbestos abatement to be performed prior to any alterations, renovations or demolition.

### **1.3 Records Review Activities**

Fisher Associates received no previous sampling reports to review. As-built drawings of the bridge were reviewed to identify potential ACM sample locations and for the presence of lead containing materials such as bearing pads or joint spacers.

### **1.4 Summary of Findings**

No potential ACMs, LBPs, LCMs, or PCBs were observed during this assessment.

## **2.0 MATERIAL SAMPLING AND LABORATORY METHODOLOGY**

A NYSDOL-certified asbestos inspector from Fisher Associates inspected the project site on December 1, 2016 for suspect asbestos-containing materials (ACMs). No bulk samples were collected during the inspection as ACMs were not observed. Additionally, no paint and caulking material samples collected as these materials were also not observed during the inspection. Copies of Fisher Associates’ Asbestos Handling License, the Asbestos Inspector’s certification, and the Laboratory’s Accreditation are in Appendix B.

### **3.0 CONCLUSIONS**

#### **3.1 Asbestos**

Potential asbestos containing materials (ACMs) were not observed during this assessment. However, in accordance with 12 NYCRR 56, no demolition or renovation work shall be commenced by any owner or agent prior to completion of asbestos abatement performed by a licensed asbestos abatement contractor. If suspect asbestos containing materials not identified in this pre-demolition asbestos survey report are discovered during the demolition process, it is required that the presence, location and quantity of newly discovered material, be conveyed within twenty-four (24) hours of discovery to the owner or their representative. All activities must cease in the area where the presumed asbestos containing material or suspect miscellaneous ACM is found, until a licensed asbestos contractor appropriately assesses and manages the discovered materials.

#### **3.2 Lead**

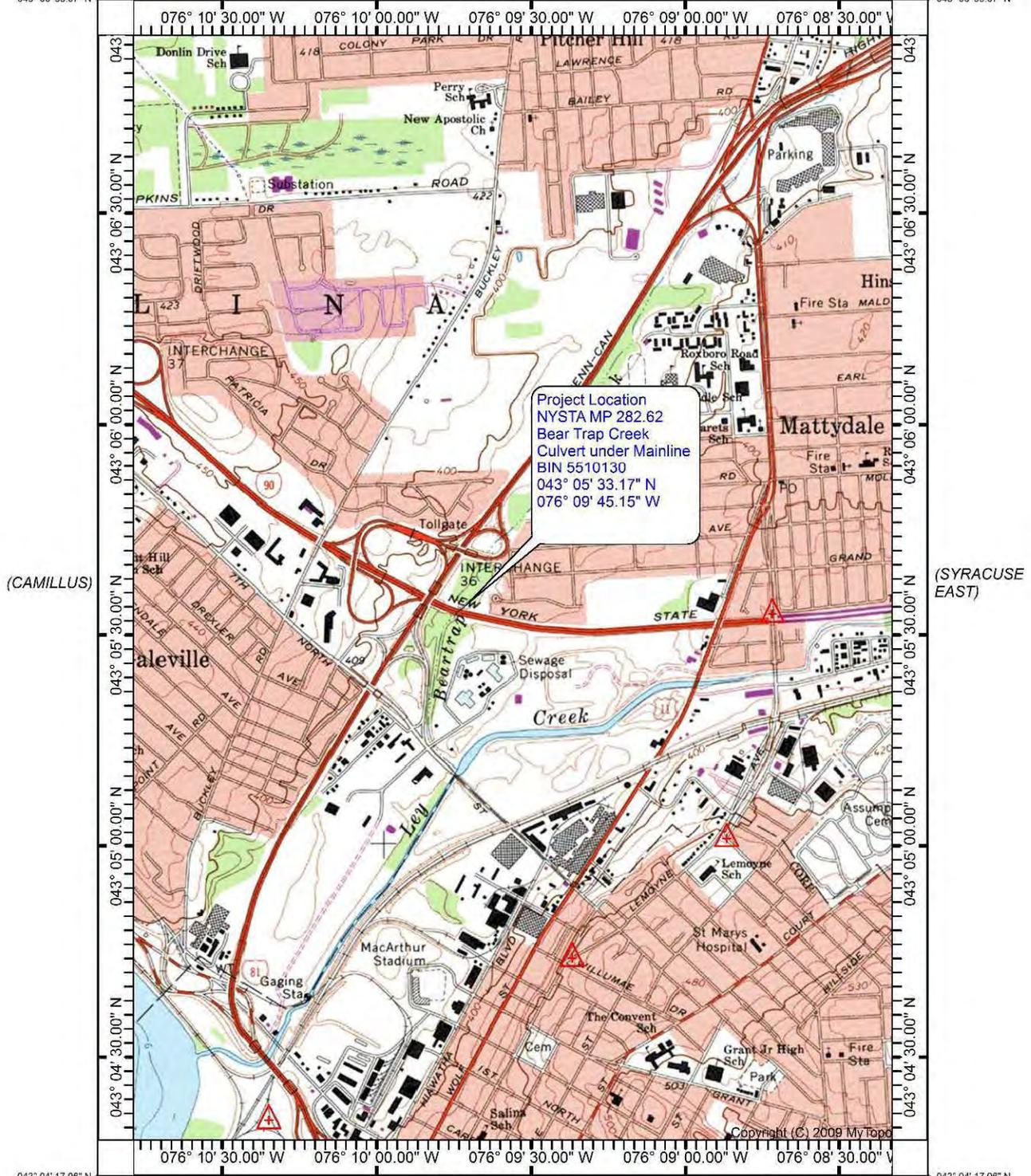
The investigation conducted by Fisher Associates also included the inspection for LCMs. No potentially lead containing materials were observed and therefore no samples were collected or analyzed.

#### **3.3 PCBs**

The investigation conducted by Fisher Associates also included the inspection for PCBs. No potentially PCB containing materials were observed and therefore no samples were collected or analyzed. Materials are considered to be PCB-containing if the total concentration of the PCB compounds exceeds fifty (50) parts per million (ppm).

**APPENDIX A**  
**PROJECT LOCATION MAP**

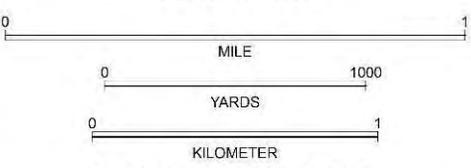
076° 10' 47.87" W (BREWERTON) 076° 08' 19.39" W 043° 06' 55.67" N



043° 04' 17.96" N (MARCELLUS) 076° 10' 47.87" W (SOUTH ONONDAGA) SCALE 1:24000 Printed: Tue Dec 06, 2016 076° 08' 19.39" W (JAMESVILLE) 043° 04' 17.96" N

(MARCELLUS)

Produced by MyTopo Terrain Navigator  
Topography based on USGS 1:24,000  
Maps  
North American 1983 Datum (NAD83)  
Transverse Mercator Projection  
To place on the predicted North American  
1927 move the projection lines 7M N and  
28M E



CONTOUR INTERVAL 10 FEET  
NATIONAL GEODETIC VERTICAL DATUM 1929

SYRACUSE WEST, NY  
1973

**APPENDIX B  
FISHER ASSOCIATES'  
CERTIFICATIONS LABORATORY  
ACCREDITATION**

**New York State – Department of Labor**

Division of Safety and Health  
License and Certificate Unit  
State Campus, Building 12  
Albany, NY 12240

**ASBESTOS HANDLING LICENSE**

Fisher Associates, P.E., L.S., P.C.  
Suite A  
135 Calkins Road  
Rochester, NY 14623

FILE NUMBER: 99-0504  
LICENSE NUMBER: 29344  
LICENSE CLASS: RESTRICTED  
DATE OF ISSUE: 08/03/2016  
EXPIRATION DATE: 08/31/2017

Duly Authorized Representative – Robert W Goossen:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.



Eileen M. Franko, Director  
For the Commissioner of Labor

STATE OF NEW YORK - DEPARTMENT OF LABOR  
ASBESTOS CERTIFICATE



**MARK T STEIN**  
CLASS(EXPIRES)  
C ATEC(03/17) D INSP(03/17)  
H PM (03/17) I PD (03/17)

CERT# 00-07444  
DMV# 457924110



MUST BE CARRIED ON ASBESTOS PROJECTS



EYES BLU  
HAIR BRO  
HGT 6' 03"

IF FOUND RETURN TO:  
NYS DOL - L&C UNIT  
ROOM 161A BUILDING 12  
STATE OFFICE CAMPUS  
ALBANY NY 12240

# United States Environmental Protection Agency

This is to certify that

Mark T. Stein



has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Risk Assessor

## In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

---

This certification is valid from the date of issuance and expires August 25, 2019

LBP-R-36347-1

Certification #

June 27, 2016

Issued On

John Gorman, Chief

Pesticides & Toxic Substances Branch

NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

**DR. THOMAS R. MCKEE**  
**AMERISCI RICHMOND**  
**13635 GENITO RD**  
**MIDLOTHIAN, VA 23112**

**NY Lab Id No: 10984**

*is hereby APPROVED as an Environmental Laboratory for the category*  
**ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE**  
*All approved subcategories and/or analytes are listed below:*

**Miscellaneous**

Asbestos in Friable Material	Item 198.1 of Manual EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual



**Serial No.: 54118**

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. STEVE DEVITO  
PARADIGM ENVIRONMENTAL SERVICES INC  
179 LAKE AVENUE  
ROCHESTER, NY 14608

NY Lab Id No: 10958

*is hereby APPROVED as an Environmental Laboratory for the category  
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
All approved subcategories and/or analytes are listed below:*

**Miscellaneous**

Asbestos in Friable Material	Item 198.1 of Manual EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual
Lead in Dust Wipes	EPA 6010C
Lead in Paint	EPA 6010C

**Sample Preparation Methods**

EPA 3050B

NEW  
YORK  
STATE

Department  
of Health

Serial No.: 54682

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

**NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER**



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016  
Revised May 20, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

**MR. STEVE DEVITO**  
**PARADIGM ENVIRONMENTAL SERVICES INC**  
**179 LAKE AVENUE**  
**ROCHESTER, NY 14608**

**NY Lab Id No: 10958**

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards (2003) for the category  
ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

**Nitroaromatics and Isophorone**

2,4-Dinitrotoluene	EPA 625 EPA 8270D
2,6-Dinitrotoluene	EPA 625 EPA 8270D
Isophorone	EPA 625 EPA 8270D
Nitrobenzene	EPA 625 EPA 8270D

**Phthalate Esters**

Diethyl phthalate	EPA 625 EPA 8270D
Dimethyl phthalate	EPA 625 EPA 8270D
Di-n-butyl phthalate	EPA 625 EPA 8270D
Di-n-octyl phthalate	EPA 625 EPA 8270D

**Nitrosoamines**

N-Nitrosodimethylamine	EPA 625 EPA 8270D
N-Nitrosodi-n-propylamine	EPA 625 EPA 8270D
N-Nitrosodiphenylamine	EPA 625 EPA 8270D

**Polychlorinated Biphenyls**

PCB-1016	EPA 8082A EPA 608
PCB-1221	EPA 8082A EPA 608
PCB-1232	EPA 8082A EPA 608
PCB-1242	EPA 8082A EPA 608
PCB-1248	EPA 8082A EPA 608
PCB-1254	EPA 8082A EPA 608
PCB-1260	EPA 8082A EPA 608
PCB-1262	EPA 8082A
PCB-1268	EPA 8082A

**Organophosphate Pesticides**

Atrazine	EPA 8270D
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**Petroleum Hydrocarbons**

Diesel Range Organics	EPA 8015D
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**Phthalate Esters**

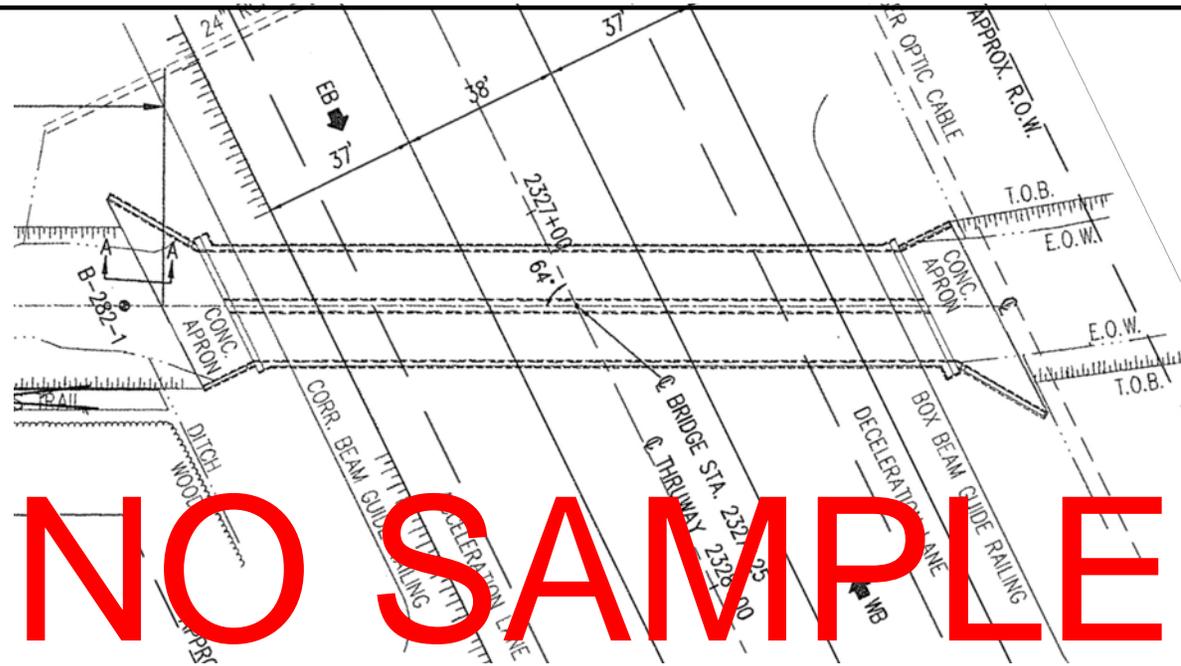
Benzyl butyl phthalate	EPA 625 EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 625 EPA 8270D

**Serial No.: 54805**

Property of the New York State Department of Health. Certificates are valid only at the address shown; must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

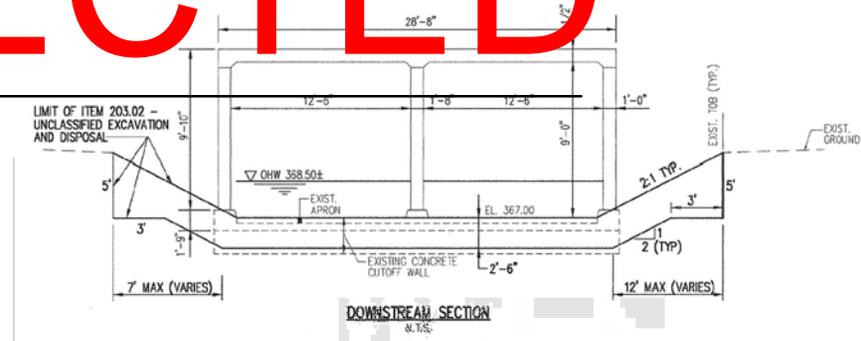
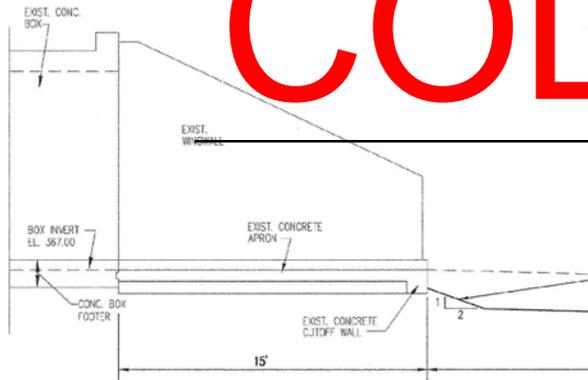


**APPENDIX D**  
**SAMPLE LOCATION PLANS**



**NO SAMPLES**

**COLLECTED**



Not to Scale



WWW.FISHERASSOC.COM

**LEGEND:**

- SAMPLE LOCATION AND IDENTIFICATION

**Figure No. H1.01**  
**SAMPLE LOCATION PLAN**  
 D----- B.I.N. 5510130

NYS THRUWAY OVER BEAR TRAP CREEK  
 CITY OF SALINA  
 ONONDAGA COUNTY, NEW YORK

FA #151021.09

FEBRUARY 2017

**HAZARDOUS WASTE-CONTAMINATED MATERIALS  
TECHNICAL MEMORANDUM**

**for**

**NEW YORK STATE THRUWAY AUTHORITY**

**D214385      BIN 5512790  
NORTH MAIN STREET OVER I-90 MAINLINE  
VILLAGE OF CANASTOTA  
MADISON COUNTY**

**Prepared by:**



**February 2017**

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    **1.2 Background ..... 1**  
**2.0 MATERIAL SAMPLING AND LABORATORY METHODOLOGY ..... 2**  
**3.0 SAMPLE RESULTS AND LOCATIONS..... 2**  
    **3.1 Asbestos Containing Materials ..... 2**  
    **3.2 Lead Containing Materials (LCMs)..... 3**  
    **3.3 Polychlorinated Biphenyls (PCBs) ..... 3**  
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    **4.1 Asbestos..... 4**  
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**Appendices**

- Appendix A – Project Location Map
- Appendix B – Fisher Associates’ Certifications and Laboratory Accreditation
- Appendix C – Laboratory Analytical Data
- Appendix D – Sample Location Plans
- Appendix E – Hazardous Material Location Plans

## 1.0 INTRODUCTION

Fisher Associates P.E., L.S., L.A., D.P.C. (“Fisher Associates”) is working with Stantec Consulting Services, Inc. (Stantec), and the New York State Thruway Authority (NYSTA), to prepare this Hazardous Materials Technical Memorandum, here after referred to as HMTM, in technical support of the proposed replacement of North Main Street bridge over the I-90 Thruway Mainline in the Village of Canastota, Madison County, New York. The project area was investigated on December 1, 2016 as part of the project. The project location is shown on the Project Location Map in Appendix A.

### 1.1 Purpose and Scope

The purpose of this HMTM is to identify asbestos-containing materials (ACMs), lead based paint (LBP), lead containing materials (LCMs), and polychlorinated biphenyls (PCBs), collectively known as Hazardous Waste Contaminated Materials (HWCM), within the bridge rehabilitation project corridor, and to develop quantity estimates for abatement of identified HWCMs.

### 1.2 Background

This HMTM is consistent with the requirements outlined in the NYSDOL Industrial Code Rule 56 (Code Rule 56), which requires an asbestos pre-demolition survey and asbestos abatement to be performed prior to any alterations, renovations or demolition.

### 1.3 Previous Sampling Activities

Fisher Associates received no previous sampling reports to review. As-built drawings of the bridge were reviewed to identify potential ACM sample locations and for the presence of lead containing materials such as bearing pads or joint spacers.

### 1.4 Summary of Findings

Table 1.1 summarizes those materials found to be positive for ACM, LBP, and/or PCBs based on current sample analysis. Added detail is presented in the following sections.

**Table 1.1**  
**Summary of Findings**  
**North Main Street Bridge of I-90 Mainline**

<b>Sample Identification</b>	<b>Material</b>	<b>Location</b>	<b>Approx. Quantity</b>
5-A	Brown Bearing Pad	Base of Guard Railing Anchors	375 SF
8-A	Black Waterproofing (Remnant)	Base of Concrete Piers	7 SF
LBP-1	Green Paint	Guard Railings	1153 SF
N/A	Lead Abutment Pad	Top of Back Wall / Abutment	120 SF
N/A	Lead Flashing	Top and Ends of Back Wall	4 SF

SF – Square Foot

## 2.0 MATERIAL SAMPLING AND LABORATORY METHODOLOGY

A NYSDOL-certified asbestos inspector from Fisher Associates collected bulk samples of suspect asbestos-containing materials (ACMs) on December 1, 2016. Bulk samples were collected using hand tools from each matrix identified as a potential ACM. Additionally, paint samples were collected and analyzed for lead, and caulking/adhesive materials were collected and analyzed for PCBs. Upon completion of the sampling, a chain-of-custody form was completed for the materials sampled.

Samples were delivered under standard chain-of-custody protocol to Paradigm Environmental Services, Inc. (Paradigm), a New York State Department of Health (NYSDOH) certified laboratory. The procedures followed are in accordance with the NYSDOH Environmental Laboratory Approval Program (ELAP). New York State Department of Labor (NYSDOL) Code Rule 56 defines materials containing greater than one percent (1%) asbestos by weight as being Asbestos Containing Materials.

The paint samples were analyzed via SW846 Method 3050/6010 to determine the lead content of the paints. Those materials having a concentration equal or greater than 0.5% by weight in lead are considered to be lead based.

The materials sampled for PCBs were analyzed by USEPA Method 8082. According to the USEPA, materials containing greater than fifty (50) parts per million (ppm) are considered PCB-containing.

Copies of Fisher Associates' Asbestos Handling License, the Asbestos Inspector's certification, and the Laboratory's Accreditation are in Appendix B. Copies of the laboratory's analytical results are included in Appendix C. The Sample Location Plans are included in Appendix D. The Hazardous Material Locations Plans are included in Appendix E.

## 3.0 SAMPLE RESULTS AND LOCATIONS

### 3.1 Asbestos Containing Materials

Table 3.1 provides a summary of the laboratory analytical results for the samples collected from the building materials identified on and around the bridge structure and nearby roadway that may be disturbed. Those samples identified as being ACMs (greater than one percent asbestos) are shaded in the table. Refer to the Sample Location Plans in Appendix D for locations of sample collection.

**Table 3.1**  
**Summary of Samples Collected and Results**  
**North Main Street Bridge over I-90 Mainline**

Sample Identification	Material	Sample Location	% Asbestos
1-A	Green Paint	Guard Railings	NAD
1-B	Green Paint	Guard Railings	NAD

Sample Identification	Material	Sample Location	% Asbestos
2-A	Green Paint	Outside of Girders	NAD
2-B	Green Paint	Outside of Girders	NAD
3-A	Grey Paint	Underside of Bridge, Inside of Girder	NAD
3-B	Grey Paint	Underside of Bridge, Inside of Girder	NAD
4-A	Black Rubber	Bridge Joint	NAD
4-B	Black Rubber	Bridge Joint	NAD
5-A	Brown Base Pad	Base of Guard Rail Anchor	Chrysotile 4.3%
5-B	Brown Base Pad	Base of Guard Rail Anchor	
6-A	Black Packing Material	B/w Girders and Rockers	NAD
6-B	Black Packing Material	B/w Girders and Rockers	NAD
8-A	Black Waterproofing	Base of Concrete Piers	Chrysotile 23.0%
8-B	Black Waterproofing	Base of Concrete Piers	

### 3.2 Lead Containing Materials (LCMs)

Table 3.2 below lists the sample Identification, the type of material, the sample location, and the percent of lead for each sample. Those samples identified as being LCM, having a concentration of 0.5% by weight or greater, are shaded in the table. Additionally, a review of the as-built drawings indicated the presence of lead pads at the top of the concrete abutment walls.

**Table 3.2  
 Summary of Lead Based Paint Samples Collected and  
 Results North Main Street Bridge over I-90 Mainline**

Sample Identification	Material	Sample Location	Lead (% by weight)
LBP-1	Green Paint	Guard Railings	6.59
LBP-2	Green Paint	Outside of Girders	0.430
LBP-3	Grey Paint	Underside of Bridge, Inside Girders	0.0155
N/A	Abutment Pad	Top of Backwall Abutments (Assumed)	Assumed Positive

### 3.3 Polychlorinated Biphenyls (PCBs)

There were no potential PCB containing material observed during the inspection therefore no PCB samples were collected.

## 4.0 QUANTITY ESTIMATES

This section summarizes estimated quantities of the positively identified ACMs, LBPs, and/or PCBs found in the various materials sampled during the assessment. The approximate locations and extent of the ACMs are shown on the Sample Location Plans shown in Appendix D.

### 4.1 Asbestos

The materials listed in Table 4.1 were collected during the assessment conducted by Fisher Associates and identified via laboratory analysis as ACM.

**Table 4.1  
Summary Quantities of Asbestos-Containing  
Materials North Main Street Bridge over I-90  
Mainline**

<b>Sample Identification</b>	<b>Material</b>	<b>Location</b>	<b>Approximate Quantity</b>
5-A	Brown Base Pad	Base of Guard Rail Anchor	375 SF
8-A	Black Waterproofing (Remnant)	Base of Concrete Piers	7.1 SF

### 4.2 Lead

Samples were collected of potential lead-containing materials during the investigation conducted by Fisher Associates and tested via laboratory analysis. None of the paint samples analyzed are considered to be lead-based. However, a review of the as-built draws of the bridge indicated the presence of lead pads on top of the abutment / Back wall.

**Table 4.2  
Estimated Quantities of Lead-Containing  
Materials North Main Street Bridge over I-90  
Mainline**

<b>Material</b>	<b>Sample Id</b>	<b>Location</b>	<b>Quantity</b>
Green Paint	LBP-1	Guard Railings	1153 SF
Abutment Pad	N/A	Top of Seat / Backwall (Assumed)	120 SF
N/A	Lead Flashing	Top and Ends of Back Wall	4 SF

### 4.3 PCBs

There were no potential PCB containing material observed during the inspection therefore no PCB samples were collected.

## **5.0 CONCLUSIONS**

### **5.1 Asbestos**

Asbestos containing materials (ACMs) have been identified as part of this assessment. In accordance with 12 NYCRR 56, no demolition or renovation work shall be commenced by any owner or agent prior to completion of asbestos abatement performed by a licensed asbestos abatement contractor. If suspect asbestos containing materials not identified in this pre-demolition asbestos survey report are discovered during the demolition process, it is required that the presence, location and quantity of newly discovered material, be conveyed within twenty-four (24) hours of discovery to the owner or their representative. All activities must cease in the area where the presumed asbestos containing material or suspect miscellaneous ACM is found, until a licensed asbestos contractor appropriately assesses and manages the discovered materials.

### **5.2 Lead**

Lead containing materials have been identified as a part of this assessment. It is recommended that a Lead Abatement and Handling of Lead Containing Materials specification section be developed. This section specifies the requirements for the detection and prevention of lead dust contamination in lead dust control work areas and areas adjacent to them, protection of workers, post-work cleaning, pre-disposal testing and appropriate disposal of removed material.

Finally, all trades must follow the Occupational Safety & Health Administration (OSHA) 29 CFR 1926.62 regulation, which considers any amount of Lead to be of concern. The regulation states that the employer shall assure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air ( $50 \mu\text{g}/\text{m}^3$ ) averaged over an 8-hour period.

### **5.3 PCBs**

The investigation conducted by Fisher Associates did not include the testing for PCBs, as no suspect materials were observed, such as caulking or sealants. Materials are considered to be PCB-containing if the total concentration of the PCB compounds exceeds fifty (50) parts per million (ppm).

**APPENDIX A**  
**PROJECT LOCATION MAP**



**APPENDIX B  
FISHER ASSOCIATES'  
CERTIFICATIONS LABORATORY  
ACCREDITATION**

**New York State – Department of Labor**

Division of Safety and Health  
License and Certificate Unit  
State Campus, Building 12  
Albany, NY 12240

**ASBESTOS HANDLING LICENSE**

Fisher Associates, P.E., L.S., P.C.  
Suite A  
135 Calkins Road  
Rochester, NY 14623

FILE NUMBER: 99-0504  
LICENSE NUMBER: 29344  
LICENSE CLASS: RESTRICTED  
DATE OF ISSUE: 08/03/2016  
EXPIRATION DATE: 08/31/2017

Duly Authorized Representative – Robert W Goossen:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.



Eileen M. Franko, Director  
For the Commissioner of Labor

STATE OF NEW YORK - DEPARTMENT OF LABOR  
ASBESTOS CERTIFICATE



**MARK T STEIN**

CLASS(EXPIRES)

C ATEC(03/17) D INSP(03/17)

H PM (03/17) I PD (03/17)

CERT# 00-07444

DMV# 457924110

MUST BE CARRIED ON ASBESTOS PROJECTS



01213 000706159 17

EYES BLU

HAIR BRO

HGT 6' 03"

IF FOUND RETURN TO:  
NYS DOL - L&C UNIT  
ROOM 161A BUILDING 12  
STATE OFFICE CAMPUS  
ALBANY NY 12240

# United States Environmental Protection Agency

This is to certify that

Mark T. Stein



has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Risk Assessor

## In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

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This certification is valid from the date of issuance and expires August 25, 2019

LBP-R-36347-1

Certification #

June 27, 2016

Issued On

John Gorman, Chief

Pesticides & Toxic Substances Branch

NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

**DR. THOMAS R. MCKEE**  
**AMERISCI RICHMOND**  
**13635 GENITO RD**  
**MIDLOTHIAN, VA 23112**

**NY Lab Id No: 10984**

*is hereby APPROVED as an Environmental Laboratory for the category*  
**ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE**  
*All approved subcategories and/or analytes are listed below:*

**Miscellaneous**

Asbestos in Friable Material	Item 198.1 of Manual EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual



**Serial No.: 54118**

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. STEVE DEVITO  
PARADIGM ENVIRONMENTAL SERVICES INC  
179 LAKE AVENUE  
ROCHESTER, NY 14608

NY Lab Id No: 10958

*is hereby APPROVED as an Environmental Laboratory for the category  
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
All approved subcategories and/or analytes are listed below:*

**Miscellaneous**

Asbestos in Friable Material	Item 198.1 of Manual EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual
Lead in Dust Wipes	EPA 6010C
Lead in Paint	EPA 6010C

**Sample Preparation Methods**

EPA 3050B

NEW  
YORK  
STATE

Department  
of Health

Serial No.: 54682

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

**NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER**



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016  
Revised May 20, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

**MR. STEVE DEVITO**  
**PARADIGM ENVIRONMENTAL SERVICES INC**  
**179 LAKE AVENUE**  
**ROCHESTER, NY 14608**

**NY Lab Id No: 10958**

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards (2003) for the category  
ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

**Nitroaromatics and Isophorone**

2,4-Dinitrotoluene	EPA 625 EPA 8270D
2,6-Dinitrotoluene	EPA 625 EPA 8270D
Isophorone	EPA 625 EPA 8270D
Nitrobenzene	EPA 625 EPA 8270D

**Phthalate Esters**

Diethyl phthalate	EPA 625 EPA 8270D
Dimethyl phthalate	EPA 625 EPA 8270D
Di-n-butyl phthalate	EPA 625 EPA 8270D
Di-n-octyl phthalate	EPA 625 EPA 8270D

**Nitrosoamines**

N-Nitrosodimethylamine	EPA 625 EPA 8270D
N-Nitrosodi-n-propylamine	EPA 625 EPA 8270D
N-Nitrosodiphenylamine	EPA 625 EPA 8270D

**Polychlorinated Biphenyls**

PCB-1016	EPA 8082A EPA 608
PCB-1221	EPA 8082A EPA 608
PCB-1232	EPA 8082A EPA 608
PCB-1242	EPA 8082A EPA 608
PCB-1248	EPA 8082A EPA 608
PCB-1254	EPA 8082A EPA 608
PCB-1260	EPA 8082A EPA 608
PCB-1262	EPA 8082A
PCB-1268	EPA 8082A

**Organophosphate Pesticides**

Atrazine	EPA 8270D
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**Petroleum Hydrocarbons**

Diesel Range Organics	EPA 8015D
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**Phthalate Esters**

Benzyl butyl phthalate	EPA 625 EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 625 EPA 8270D

**Serial No.: 54805**

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.



**APPENDIX C**  
**LABORATORY ANALYTICAL DATA**



PLM & TEM BULK ASBESTOS ANALYSIS REPORT
via NYSDOH ELAP Method 198.1, 198.4 and 198.6

Client: Fisher Associates BIN
Location: 5512790

Job No: 12192-16
Page: 1 of 4

Sample Date: 12/1/2016

Table with 11 columns: Client ID, Lab ID, Sampling Location, Description, PLM Asbestos Fibers Type & Percentage, PLM Asbestos, NOB, TEM Asbestos Fibers Type & Percentage, TEM Total Asbestos, PLM Non-Asbestos Fibers Type & Percentage, Non-Fibrous Matrix. Rows include samples 1A through 5C with various descriptions like Guard Rail, Outside Girder, Bridge Joint, and Bearing Pad of Guard Rail Anchor.

KEY TO NOB COLUMN SYMBOLS
No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).
v NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.
V denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
# denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.
X denotes sample prepped only by ELAP Method 198.6.
\* Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.
Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1, 198.4 and 198.6 (Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.) or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0).



Lab Code 2000530-0 for PLM Analysis

PLM Date Analyzed: 12/12/2016
Microscope: Olympus BH-2 #232953
Analyst: T. Bush

TEM Date Analyzed: 12/12/2016
TEM Analyst: F. Weinman

ELAP ID No.: 10958

Laboratory Results Approved By:
Asbestos Operations Manager or Designer

Signature of Mary Dohr

Mary Dohr

Paradigm Environmental Services, Inc. is not responsible for the data supplied by an independent institution. National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the laboratory. This PLM report relates ONLY to the items tested. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Quality control data (including 95% confidence limits and laboratory and analysts' and precision) is available upon request.



**PLM & TEM BULK ASBESTOS ANALYSIS REPORT**  
**via NYSDOH ELAP Method 198.1, 198.4 and 198.6**

**Client:** Fisher Associates  
**Location:** BIN 5512790

**Job No:** 12192-16  
**Page:** 2 of 4

**Sample Date:** 12/1/2016

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
6A	101767	B/W Girder & Steel Rockers	Black Material	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
6B	101768	B/W Girder & Steel Rockers	Black Material	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
8A	101769	Base of Concrete Piers	Black Fibrous Waterproofing	Chrysotile 23%	23%	√	Not Required	N/A	None Detected	77%
8B	101770	Base of Concrete Piers	Black Waterproofing	Inconclusive No Asbestos Detected	0%	√	Stop Positive ** No TEM	N/A	None Detected	100%

**KEY TO NOB COLUMN SYMBOLS**  
 No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).  
 √ NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 √ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.  
 # denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 X denotes sample prepped only by ELAP Method 198.6.  
 \*\* Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.  
 Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1, 198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.") or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0).



Lab Code 2000530-0 for PLM Analysis

**PLM Date Analyzed:** 12/12/2016  
**Microscope:** Olympus BH-2 #232953  
**Analyst:** T. Bush

**TEM Date Analyzed:** 12/12/2016  
**TEM Analyst:** F. Weinman

**ELAP ID No.:** 10958

**Laboratory Results Approved By:**  
**Asbestos Operations Manager or Designee**

Mary Dohr

Paradigm Environmental Services, Inc. is not responsible for the data supplied by an independent inspector. National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the laboratory. This PLM report relates ONLY to the items tested. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Quality control data (including 95% confidence limits and laboratory and analysts' and precision) is available upon request.



**CHAIN OF CUSTODY FOR BULK ASBESTOS ANALYSIS**

1 of 2

179 Lake Avenue, Rochester, New York 14608 Office: 585-647-2530  
 1815 Love Road, Grand Island, New York 14072 Office: 716-775-5777

<b>Client:</b> Fisher Associates	<b>Contact:</b> Mark Stein
<b>Phone Number:</b> (585) 334-1310	<b>Email Address for Data:</b> mstein@fisherassoc.com
<b>Results To:</b> Mark Stein	<b>Turn Around Time:</b> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 5 <input type="checkbox"/> Other <input type="checkbox"/>
<b>Date Sampled:</b>	<b>Material Type/Quantity:</b> Friable <input type="checkbox"/> NOB <input type="checkbox"/> TEM <input type="checkbox"/>
<b>Project Location:</b> BIN 5512790	

**Client Mailing Address:**  
135 Calkins Road  
Rochester, NY 14623

**OFFICE USE ONLY**

Job #: 12192-11e

Page \_\_\_\_\_ of \_\_\_\_\_

Date Logged In: 12-6-16

Logged In By: VK

	Client ID	Lab ID	Sampling Location	Color	Material Size	Type of Material	
1	2A	101757	Guard rail	Green	NOB	Paint	
2	2B	758	" "	"	↓	↓	
3	2A	759	Outside girder	"			
4	2B	760	" "	"			
5	3A	761	Inside girder	Grey			
6	3C	762	" "	"			
7	4A	763	Bridge joint	Black			Rubber
8	4B	764	" "	"			"
9	5A	765	Bearing pad of guard rail anchor	Brown			
10	5C	766	" " " "	"			

<b>Sampled By:</b> [Signature]	<b>Date:</b> 12/01/16
<b>Transported to Paradigm By:</b> [Signature]	<b>Date:</b> 12/05/16
<b>Received By:</b> [Signature] VK	<b>Date:</b> 12/15/16

All samples will be analyzed by the appropriate New York State Department of Health methods (198.1, 198.4 and 198.6) unless EPA 600/M4/82/020 per 40 CFR 763 and/or EPA 600/R-93/116 methods are requested.

**CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS**

or provide TEM contact name: \_\_\_\_\_

**TOTAL NUMBER OF SAMPLES ON ALL CHAINS OF CUSTODY:**



**CHAIN OF CUSTODY FOR BULK ASBESTOS ANALYSIS**

2 of 2

179 Lake Avenue, Rochester, New York 14608  
 1815 Love Road, Grand Island, New York 14072

Office: 585-647-2530  
 Office: 716-775-5777

<b>Client:</b> Fisher Associates	<b>Contact:</b> Mark Stein
<b>Phone Number:</b> (585) 334-1310	<b>Email Address for Data:</b> mstein@fisherassoc.com
<b>Results To:</b> Mark Stein	<b>Turn Around Time:</b> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 5 <input type="checkbox"/> Other <input type="checkbox"/>
<b>Date Sampled:</b> 12/01/16	<b>Material Type/Quantity:</b> Friable      NOB      TEM
<b>Project Location:</b> BIN 5512790	<i>Note: No #7 sample</i>

**Client Mailing Address:**  
 135 Calkins Road  
 Rochester, NY 14623

**OFFICE USE ONLY**

Job #: 12192-16

Page \_\_\_\_\_ of \_\_\_\_\_

Date Logged In: 12-10-16

Logged In By: VK

	Client ID	Lab ID	Sampling Location	Color	Material Size	Type of Material
1	6A	101767	B/w girder & steel rockers	Black	NOB	
2	6B	768	" " " "	↓	↓	
3	8A	769	Base of concrete piers	↓	↓	waterproofing
4	8B	770	" " "			"
5						
6						
7						
8						
9						
10						

<b>Sampled By:</b> <i>[Signature]</i>	<b>Date:</b> 12/01/16
<b>Transported to Paradigm By:</b> <i>[Signature]</i>	<b>Date:</b> 12/05/16
<b>Received By:</b> <i>[Signature] VK</i>	<b>Date:</b> 12/5/16 12-10-16

All samples will be analyzed by the appropriate New York State Department of Health methods (198.1, 198.4 and 198.6) unless EPA 600/M4/82/020 per 40 CFR 763 and/or EPA 600/R-93/116 methods are requested.

**CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS**

or provide TEM contact name: \_\_\_\_\_

**TOTAL NUMBER OF SAMPLES ON ALL CHAINS OF CUSTODY:**



**PARADIGM**  
ENVIRONMENTAL SERVICES, INC.

*Analytical Report For*  
**Fisher Associates**

*For Lab Project ID*

**165266**

*Referencing*

**Bridge Haz Survey, 151021-09, BIN 5512790**

*Prepared*

**Monday, December 12, 2016**

Any noncompliant QC parameters or other notes impacting data interpretation are flagged or documented on the final report or are noted below.

A handwritten signature in red ink, appearing to be "D. D. D.", is written over a horizontal line.

Certifies that this report has been approved by the Technical Director or Designee

179 Lake Avenue • Rochester, NY 14608 • (585) 647-2530 • Fax (585) 647-3311 • ELAP ID# 10958 • PADEP ID# 68-02351

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

*Report Prepared Monday, December 12, 2016*

Page 1 of 8



**Lab Project ID: 165266**

**Client: Fisher Associates**

**Project Reference: Bridge Haz Survey, 151021-09, BIN 5512790**

**Sample Identifier: LBP 1**

**Lab Sample ID: 165266-01**

**Date Sampled: 12/1/2016**

**Matrix: Paint**

**Date Received: 12/6/2016**

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>6.59</b>	%		12/8/2016 11:08

**Method Reference(s): EPA 6010C**

EPA 3050B

**Preparation Date: 12/6/2016**

**Data File: 120816a**



**Lab Project ID: 165266**

**Client:** Fisher Associates

**Project Reference:** Bridge Haz Survey, 151021-09, BIN 5512790

**Sample Identifier:** LBP 2

**Lab Sample ID:** 165266-02

**Date Sampled:** 12/1/2016

**Matrix:** Paint

**Date Received:** 12/6/2016

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>0.430</b>	%		12/8/2016 11:21

**Method Reference(s):** EPA 6010C

EPA 3050B

**Preparation Date:** 12/6/2016

**Data File:** 120816a



**Lab Project ID: 165266**

**Client: Fisher Associates**

**Project Reference: Bridge Haz Survey, 151021-09, BIN 5512790**

**Sample Identifier: LBP 3**

**Lab Sample ID: 165266-03**

**Date Sampled: 12/1/2016**

**Matrix: Paint**

**Date Received: 12/6/2016**

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>0.0155</b>	%		12/8/2016 11:25

**Method Reference(s):** EPA 6010C

EPA 3050B

**Preparation Date:** 12/6/2016

**Data File:** 120816a



## Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

Each page of this document is part of a multipage report. This document may not be reproduced except in its entirety, without the prior consent of Paradigm Environmental Services, Inc.

All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

*"<" = Analyzed for but not detected at or above the quantitation limit.*

*"E" = Result has been estimated, calibration limit exceeded.*

*"Z" = See case narrative.*

*"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.*

*"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.*

*"B" = Method blank contained trace levels of analyte. Refer to included method blank report.*

*"J" = Result estimated between the quantitation limit and half the quantitation limit.*

*"L" = Laboratory Control Sample recovery outside accepted QC limits.*

*"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.*

*"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.*

*"\*" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.*

*"(1)" = Indicates data from primary column used for QC calculation.*

*"A" = denotes a parameter for which ELAP does not offer approval as part of their laboratory certification program.*

*"F" = denotes a parameter for which Paradigm does not carry certification, the results for which should therefore only be used where ELAP certification is not required, such as personal exposure assessment.*

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

# GENERAL TERMS AND CONDITIONS

## LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

### Warranty.

Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

### Scope and Compensation.

LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB will use LAB default method for all tests unless specified otherwise on the Work Order.

Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

### Prices.

Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

### Limitations of Liability.

In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.

LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.

All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.

Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

### Hazard Disclosure.

Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

### Sample Handling.

Prior to LAB's acceptance of any sample (or after any revocation of acceptance) the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises. Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on the final report.

Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.

LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

### Legal Responsibility.

LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

### Assignment.

LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

### Force Majeure.

LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

### Law.

This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.



# CHAIN OF CUSTODY

1 of 2

REPORT TO:				INVOICE TO:			
COMPANY: Fisher Associates		ADDRESS: 135 Calkins Road, Suite A		COMPANY: Same		ADDRESS:	
CITY: Rochester STATE: NY ZIP: 14623		PHONE: (585) 334-1310 FAX:		CITY: STATE: ZIP:		PHONE: FAX:	
PROJECT NAME/SITE NAME: Bridge Haz Survey - 151021-09				ATTN: Mark Stein		ATTN:	
COMMENTS: BIN 5512790				Note: No # 57 sample			
				LAB PROJECT #: 165266		CLIENT PROJECT #:	
				TURNAROUND TIME: (WORKING DAYS)		<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> 5 <input type="checkbox"/> OTHER	
				Quotation #			

## REQUESTED ANALYSIS

DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	CONTAINER	LEAD	PCB	REMARKS	PARADIGM LAB SAMPLE NUMBER
1 12/01/16	11:00			LBP 1	Paint	1	X			01
2 ↓	↓			LBP 2	↓	1	X			02
3 ↓	↓			LBP 3	↓	1	X			03
4				PCB 4	Grub	1		X		
5										
6										
7										
8										
9										
10										

**\*\*LAB USE ONLY BELOW THIS LINE\*\***

Sample Condition: Per NELAC/ELAP 210/241/242/243/244

Receipt Parameter	NELAC Compliance	
Container Type:	Y <input type="checkbox"/>	N <input type="checkbox"/>
Comments: _____		
Preservation:	Y <input type="checkbox"/>	N <input type="checkbox"/>
Comments: _____		
Holding Time:	Y <input type="checkbox"/>	N <input type="checkbox"/>
Comments: _____		
Temperature:	Y <input type="checkbox"/>	N <input type="checkbox"/>
Comments: _____		

	12/01/16 11:00		
Sampled By	Date/Time	Total Cost:	<input style="width: 80px; height: 30px;" type="text"/>
	12/05/16 16:20		
Relinquished By	Date/Time		
	12/5/16 16:30		
Received By	Date/Time	P.I.F.:	<input style="width: 80px; height: 30px;" type="text"/>
	12/6/16 11:03		
Received @ Lab By	Date/Time		



### Chain of Custody Supplement

Client: Fisher Associates

Completed by: Glenn Pezzulo

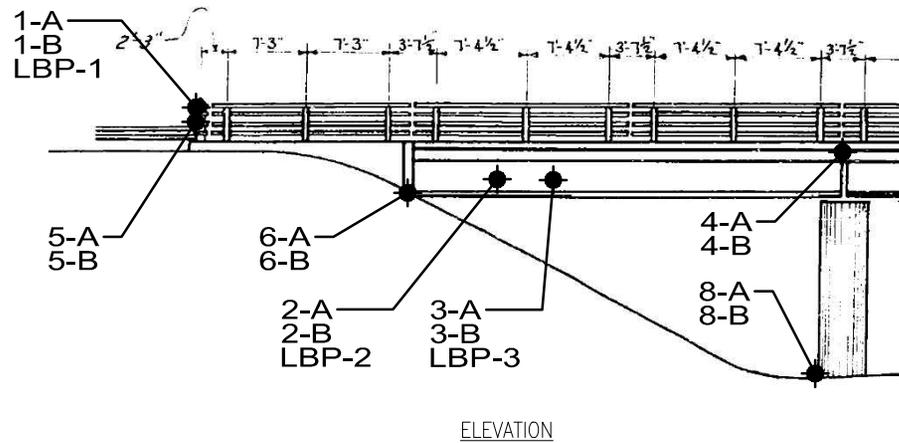
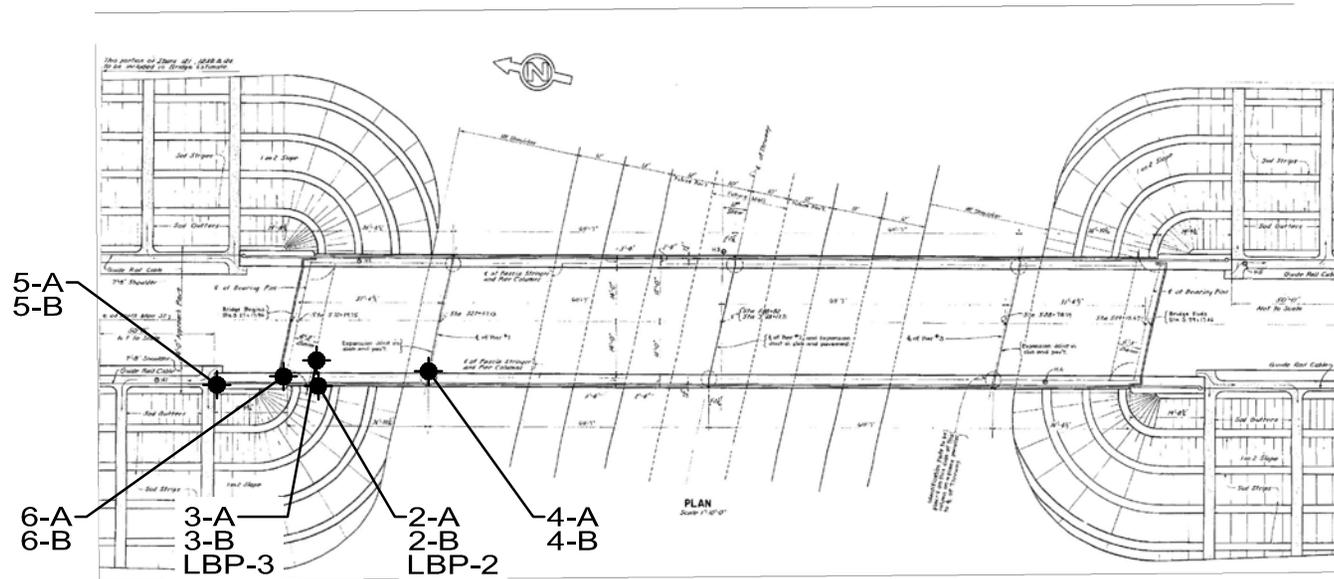
Lab Project ID: 165266

Date: 12/6/16

**Sample Condition Requirements**  
Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt		
	Yes	No	N/A
Container Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		
Transferred to method-compliant container	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Headspace (<1 mL)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Preservation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Chlorine Absent (<0.10 ppm per test strip)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Holding Time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		
Temperature	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Sufficient Sample Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		

**APPENDIX D**  
**SAMPLE LOCATION PLANS**



Not to Scale

**FISHER** ASSOCIATES

WWW.FISHERASSOC.COM

**LEGEND:**

● 1-A SAMPLE LOCATION AND IDENTIFICATION

**Figure No. H1.01**  
 SAMPLE LOCATION PLAN  
 D214385 B.I.N. 5512790

N. MAIN ST. BRIDGE OVER I-90 MAINLINE  
 VILLAGE OF CANASTOTA  
 MADISON COUNTY, NEW YORK

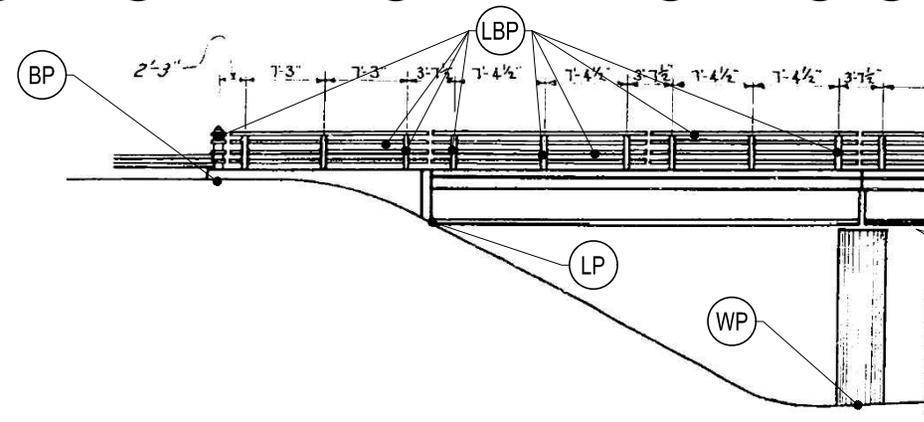
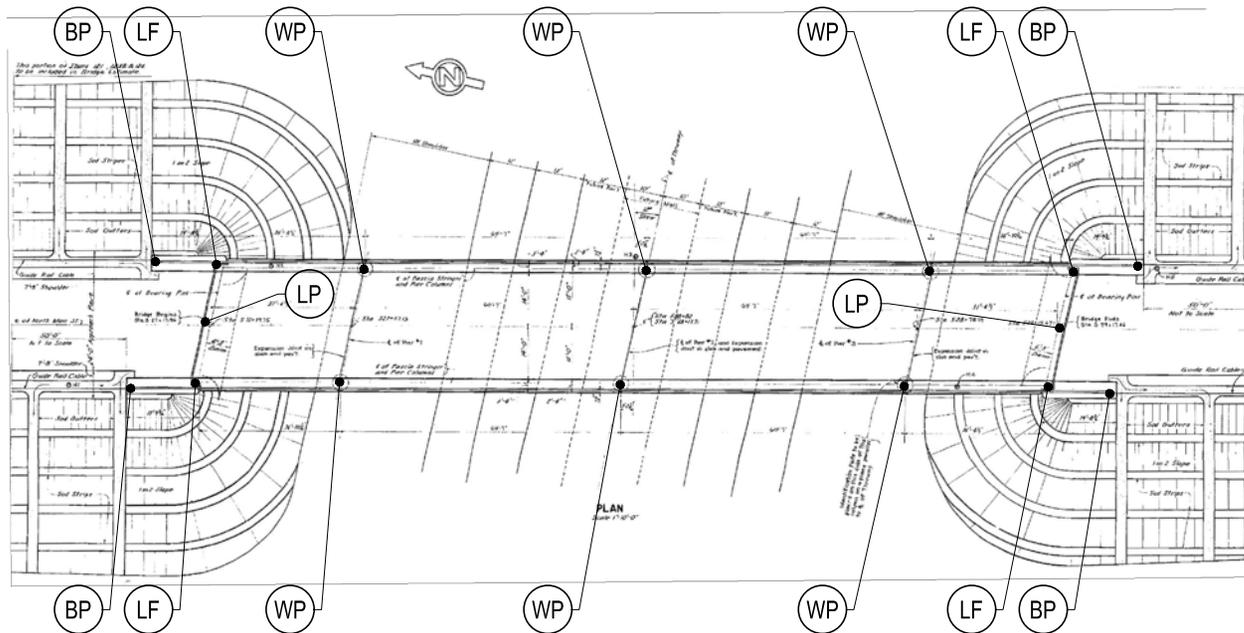
FA #151021.09

FEBRUARY 2017

**APPENDIX E**  
**HAZARDOUS MATERIAL LOCATION PLANS**

**APPROXIMATE QUANTITIES  
(ENTIRE STRUCTURE)**

- BP 375 SF
- LBP 1,153 SF
- LF 4 SF
- LP 120 SF
- WP 7 SF



ELEVATION

Not to Scale

**FISHER**   
ASSOCIATES  
WWW.FISHERASSOC.COM

**LEGEND**

- |                               |                      |                                    |
|-------------------------------|----------------------|------------------------------------|
| AC ASBESTOS-CONTAINING        | BP AC BEARING PAD    | LP LEAD BEARING PAD ON ABUTMENTS   |
| PCB POLYCHLORINATED BIPHENYLS | LF LEAD FLASHING     | WP AC WATERPROOFING AROUND COLUMNS |
| LF LINEAR FEET                | LBP LEAD BASED PAINT |                                    |
| SF SQUARE FEET                |                      |                                    |

**Figure No. H2.01**  
HAZARDOUS MATERIALS LOCATION PLAN  
D214385 B.I.N. 5512790  
N. MAIN ST. BRIDGE OVER I-90 MAINLINE  
VILLAGE OF CANASTOTA  
MADISON COUNTY, NEW YORK  
FA #151021.09 FEBRUARY 2017

**HAZARDOUS WASTE-CONTAMINATED MATERIALS  
TECHNICAL MEMORANDUM**

**for**

**NEW YORK STATE THRUWAY AUTHORITY**

**D214385      BIN 5512980  
JUDD ROAD BRIDGE OVER I-90 THRUWAY  
MAINLINE TOWN OF WHITESBORO  
ONEIDA COUNTY**

**Prepared by:**



**February 2017**

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**Appendices**

Appendix A – Project Location Map

Appendix B – Fisher Associates’ Certifications and Laboratory Accreditation

Appendix C – Laboratory Analytical Data

Appendix D – Sample Location Plans

Appendix E – Hazardous Material Location Plans

## 1.0 INTRODUCTION

Fisher Associates P.E., L.S., L.A., D.P.C. (“Fisher Associates”) is working with Stantec Consulting Services, Inc.(Stantec), and the New York State Thruway Authority (NYSTA), to prepare this Hazardous Materials Technical Memorandum, here after referred to as HMTM, in technical support of the proposed replacement Judd Road bridge over the I-90 Thruway Mainline in the Town of Whitesboro, Oneida County, New York. The project area was investigated on December 1, 2016 as part of the project. The project location is shown on the Project Location Map in Appendix A.

### 1.1 Purpose and Scope

The purpose of this HMTM is to identify asbestos-containing materials (ACMs), lead based paint (LBP), lead containing materials (LCMs), and polychlorinated biphenyls (PCBs), collectively known as Hazardous Waste Contaminated Materials (HWCM), within the bridge rehabilitation project corridor, and to develop quantity estimates for abatement of identified HWCMs.

### 1.2 Background

This HMTM is consistent with the requirements outlined in the NYSDOL Industrial Code Rule 56 (Code Rule 56), which requires an asbestos pre-demolition survey and asbestos abatement to be performed prior to any alterations, renovations or demolition.

### 1.3 Record Review Activities

Fisher Associates received no previous sampling reports to review. As-built drawings of the bridge were reviewed to identify potential ACM sample locations and for the presence of lead containing materials such as bearing pads or joint spacers.

### 1.4 Summary of Findings

This assessment conducted by Fisher Associates identified ACMs and LCMs.

**Table 1.1**  
**Summary of Findings**  
**Judd Road Bridge over the I-90 Thruway Mainline**

<b>Sample Identification</b>	<b>Material</b>	<b>Sample Location</b>	<b>Approx. Quantity</b>
9-A	White Paint (remnants)	Concrete Wingwalls and Abutments	325 SF
N/A	Lead Pad	Top of Abutment / Back Wall	63 SF

SF – Square Foot

## 2.0 MATERIAL SAMPLING AND LABORATORY METHODOLOGY

A NYSDOL-certified asbestos inspector from Fisher Associates collected bulk samples of suspect asbestos-containing materials (ACMs) on December 1, 2016. Bulk samples were collected using hand tools from each matrix identified as a potential ACM. Additionally, paint samples were collected and analyzed for lead, and caulking/adhesive materials were collected and analyzed for PCBs. Upon completion of the sampling, a chain-of-custody form was completed for the materials sampled.

Samples were delivered under standard chain-of-custody protocol to Paradigm Environmental Services, Inc. (Paradigm), a New York State Department of Health (NYSDOH) certified laboratory. The procedures followed are in accordance with the NYSDOH Environmental Laboratory Approval Program (ELAP). New York State Department of Labor (NYSDOL) Code Rule 56 defines materials containing greater than one percent (1%) asbestos by weight as being Asbestos Containing Materials.

The paint samples were analyzed via SW846 Method 3050/6010 to determine the lead content of the paints. Those materials having a concentration equal or greater than 0.5% by weight in lead are considered to be lead based.

The materials sampled for PCBs were analyzed by USEPA Method 8082. According to the USEPA, materials containing greater than fifty (50) parts per million (ppm) are considered PCB-containing.

Copies of Fisher Associates' Asbestos Handling License, the Asbestos Inspector's certification, and the Laboratory's Accreditation are in Appendix B. Copies of the laboratory's analytical results are included in Appendix C. The Sample Location Plans are included in Appendix D. The Hazardous Material Locations Plans are included in Appendix E.

## 3.0 SAMPLE RESULTS AND LOCATIONS

### 3.1 Asbestos Containing Materials

Table 3.1 provides a summary of the laboratory analytical results for the samples collected from the building materials identified on and around the bridge structure and nearby roadway that may be disturbed. Those samples identified as being ACMs (greater than one percent asbestos) are shaded in the table. Refer to the Sample Location Plans in Appendix D for locations of sample collection.

**Table 3.1**  
**Summary of Samples Collected and**  
**Results Judd Road Bridge over I-90**  
**Mainline**

<b>Sample Identification</b>	<b>Material</b>	<b>Sample Location</b>	<b>% Asbestos</b>
1-A	Green Paint	Guard Railings	NAD
1-B	Green Paint	Guard Railings	NAD
2-A	Green Paint	Outside Face of Girders	NAD

Sample Identification	Material	Sample Location	% Asbestos
2-B	Green Paint	Outside Face of Girders	NAD
3-A	Gray Paint	Underside of Bridge, Inside Face of Girder	NAD
3-C	Gray Paint	Underside of Bridge, Inside Face of Girder	NAD
4-A	Gray Caulk	B/w Wingwalls and Abutments	NAD
4-B	Gray Caulk	B/w Wingwalls and Abutments	NAD
5-A	Black Bituminous Material	B/w Wingwalls and Abutments	NAD
5-B	Black Bituminous Material	B/w Wingwalls and Abutments	NAD
7-A	Black Tar	Top of Abutment and Wingwall	NAD
7-B	Black Tar	Top of Abutment and Wingwall	NAD
8-A	White Caulk	Middle Bridge Joint	NAD
8-B	White Caulk	Middle Bridge Joint	NAD
9-A	White Paint	Concrete Wingwalls and Abutments	Chrysotile 4.2%
9-B	White Paint	Concrete Wingwalls and Abutments	
10-A	Black Rubber Sponge	Middle Bridge Joint	NAD
10-B	Black Rubber Sponge	Middle Bridge Joint	NAD
11-A	Black Tar	B/w Wear Surface and Curb	NAD
11-B	Black Tar	B/w Wear Surface and Curb	NAD

### 3.2 Lead Containing Materials (LCMs)

Table 3.2 below lists the sample Identification, the type of material, the sample location, and the percent of lead for each sample. Those samples identified as being Lead Based Paint (LBP), having a concentration of 0.5% by weight or greater, are shaded in the table. A review of the as-built drawings indicated the placement of lead bearing pads.

**Table 3.2  
 Summary of Lead Based Paint Samples Collected and  
 Results Judd Road Bridge over Mainline**

Sample Identification	Material	Sample Location	Lead (% by weight)
LBP-1	Green Paint	Outside of Girder	0.0157
LBP-2	Green Paint	Guard Railing	0.0930
LBP-3	Grey Paint	Underside of Bridge, Inside of Girder	<0.00463
LBP-9	White Paint	Concrete Wingwalls	0.127
N/A	Lead Pad	B/w Top of Abutment and Backwall	Assumed

### 3.3 Polychlorinated Biphenyls (PCBs)

Fisher Associates collected samples of caulking materials from representative locations. The samples were collected from materials that typically would have had petroleum-like products intermixed to prevent the caulking materials from drying out.

**Table 3.3**  
**Summary of PCB Samples Collected and**  
**Results Judd Road Bridge over I-90 Mainline**

Sample Identification	Material	Sample Location	PCBs (mg/Kg=ppm)
PCB-4	Caulk	Top of Abutment	< 5.00
PCB-8	White Caulk	Middle Bridge Joint	< 5.00

### 4.0 QUANTITY ESTIMATES

This section summarizes estimated quantities of the positively identified ACMs, LBPs, and/or PCBs found in the various materials sampled during the assessment. The approximate locations and extent of the ACMs are shown on the Sample Location Plans shown in Appendix D.

#### 4.1 Asbestos

The materials listed in Table 4.1 were collected during the assessment conducted by Fisher Associates and identified via laboratory analysis as ACM.

**Table 4.1**  
**Summary Quantities of Asbestos-Containing**  
**Materials North Main Street Bridge over I-90**  
**Mainline**

Material	Sample Id	Sample Location	Quantity
9-A	White Paint (remnant)	Concrete Wing Walls and Abutments	325 SF

SF – Square Foot

## 4.2 Lead

The investigation conducted by Fisher Associates did not identify and LBPs. However, observation in the field and review of available bridge plans did reveal potential LCMs used in the construction.

**Table 4.2**  
**Estimated Quantities of Lead-Containing Materials**  
**Judd Road Bridge over the I-90 Thruway Mainline**

Sample Identification	Material	Location	Approximate Quantity
N/A	Lead Pad	B/w Top of Abutment Back Wall	63 SF

SF – Square Foot

## 4.3 PCBs

The investigation conducted by Fisher Associates also included the testing for PCBs. Those materials tested included caulking and/or sealants. Materials are considered to be PCB-containing if the total concentration of the PCB compounds exceeds fifty (50) parts per million (ppm). Based on the laboratory results, none of the materials tested are considered PCB-containing.

## 5.0 CONCLUSIONS

### 5.1 Asbestos

Asbestos containing materials (ACMs) have been identified as part of this assessment. In accordance with 12 NYCRR 56, no demolition or renovation work shall be commenced by any owner or agent prior to completion of asbestos abatement performed by a licensed asbestos abatement contractor. If suspect asbestos containing materials not identified in this pre-demolition asbestos survey report are discovered during the demolition process, it is required that the presence, location and quantity of newly discovered material, be conveyed within twenty-four (24) hours of discovery to the owner or their representative. All activities must cease in the area where the presumed asbestos containing material or suspect miscellaneous ACM is found, until a licensed asbestos contractor appropriately assesses and manages the discovered materials.

### 5.2 Lead

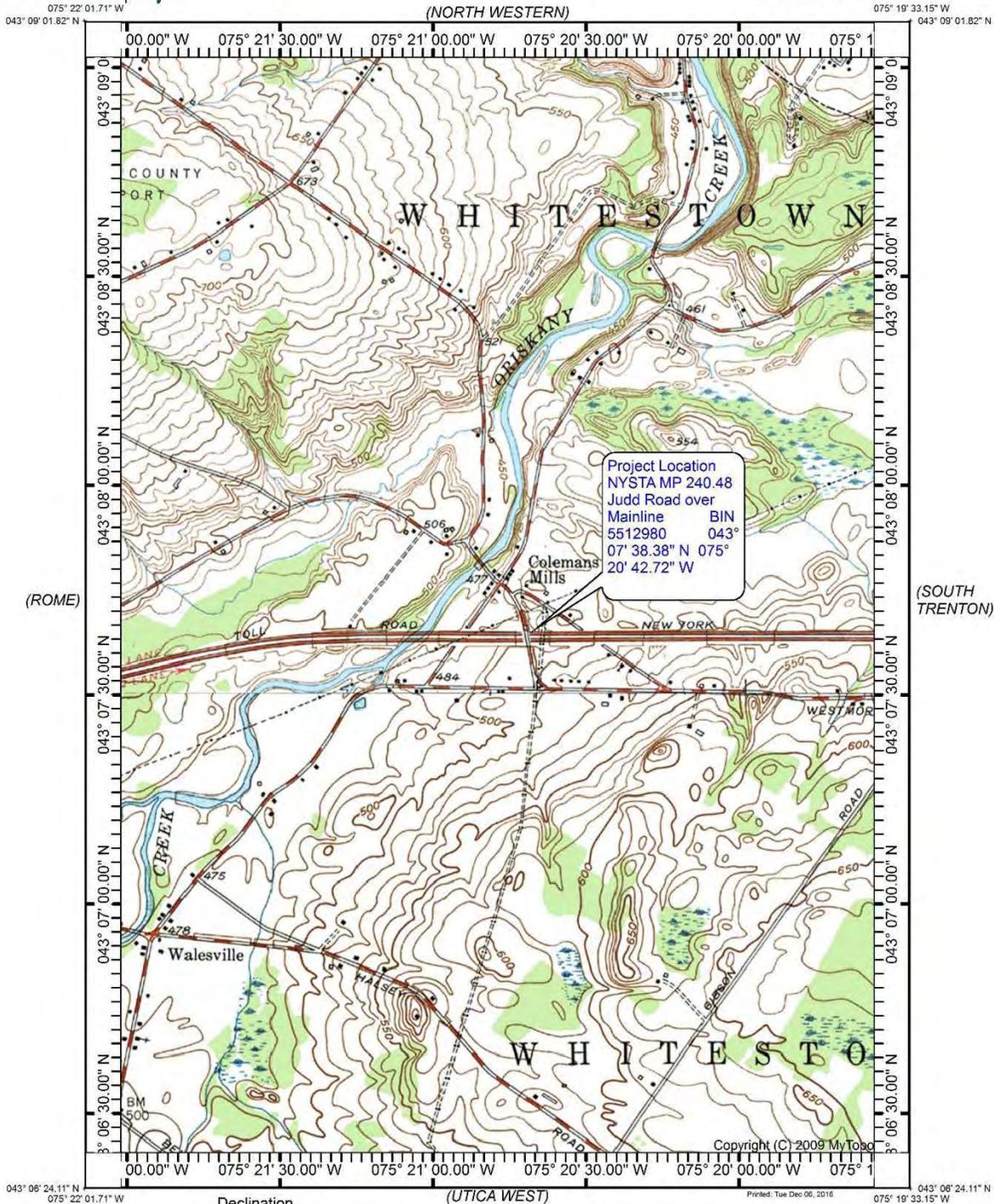
Lead containing materials have been identified as a part of this assessment. It is recommended that a Lead Abatement and Handling of Lead Containing Materials specification section be developed. This section specifies the requirements for the detection and prevention of lead dust contamination in lead dust control work areas and areas adjacent to them, protection of workers, post-work cleaning, pre-disposal testing and appropriate disposal of removed material.

Finally, all trades must follow the Occupational Safety & Health Administration (OSHA) 29 CFR 1926.62 regulation, which considers any amount of Lead to be of concern. The regulation states that the employer shall assure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air ( $50 \mu\text{g}/\text{m}^3$ ) averaged over an 8-hour period.

### **5.3 PCBs**

The investigation conducted by Fisher Associates also included the testing for PCBs. Those materials tested included caulking and sealants. Materials are considered to be PCB-containing if the total concentration of the PCB compounds exceeds fifty (50) parts per million (ppm). Based on the laboratory results, none of the materials tested are considered PCB-containing.

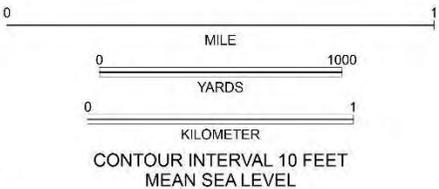
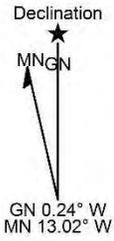
**APPENDIX A**  
**PROJECT LOCATION MAP**



Produced by MyTopo Terrain Navigator  
Topography based on USGS 1:24,000  
Maps

North American 1983 Datum (NAD83)  
Polyconic Projection

To place on the predicted North American  
1927 move the projection lines 8M N and  
31M E



ORISKANY, NY  
1955

**APPENDIX B  
FISHER ASSOCIATES'  
CERTIFICATIONS LABORATORY  
ACCREDITATION**

**New York State – Department of Labor**

Division of Safety and  
Health License and  
Certificate Unit State  
Campus, Building 12  
Albany, NY 12240

**ASBESTOS HANDLING LICENSE**

Fisher Associates, P.E., L.S., P.C.  
Suite A  
135 Calkins Road  
Rochester, NY 14623

FILE NUMBER: 99-0504  
LICENSE NUMBER: 29344  
LICENSE CLASS: RESTRICTED  
DATE OF ISSUE: 08/03/2016  
EXPIRATION DATE: 08/31/2017

Duly Authorized Representative – Robert W Goossen:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.



Eileen M. Franko, Director For  
the Commissioner of Labor

STATE OF NEW YORK - DEPARTMENT OF LABOR  
ASBESTOS CERTIFICATE



**MARK T STEIN**  
CLASS(EXPIRES)  
C ATEC(03/17) D INSP(03/17)  
H PM (03/17) I PD (03/17)

CERT# 00-07444  
DMV# 457924110



MUST BE CARRIED ON ASBESTOS PROJECTS



EYES BLU  
HAIR BRO  
HGT 6' 03"

IF FOUND RETURN TO:  
NYS DOL - L&C UNIT  
ROOM 161A BUILDING 12  
STATE OFFICE CAMPUS  
ALBANY NY 12240

# United States Environmental Protection Agency

This is to certify that

Mark T. Stein



has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Risk Assessor

## In the Jurisdiction of:

All <https://www.cs.ny.gov/jobseeker/public/stateexam.cfm> EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires August 25, 2019

LBP-

R-36347-1

Certification #

June 27, 2016

Issued On

John Gorman, Chief

Pesticides & Toxic Substances Branch

NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

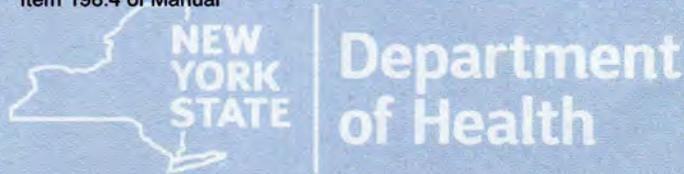
**DR. THOMAS R. MCKEE**  
**AMERISCI RICHMOND**  
**13635 GENITO RD**  
**MIDLOTHIAN, VA 23112**

**NY Lab Id No: 10984**

*is hereby APPROVED as an Environmental Laboratory for the category*  
**ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE**  
*All approved subcategories and/or analytes are listed below:*

**Miscellaneous**

Asbestos in Friable Material	Item 198.1 of Manual EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual



**Serial No.: 54118**

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. STEVE DEVITO  
PARADIGM ENVIRONMENTAL SERVICES INC  
179 LAKE AVENUE  
ROCHESTER, NY 14608

NY Lab Id No: 10958

*is hereby APPROVED as an Environmental Laboratory for the category  
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
All approved subcategories and/or analytes are listed below:*

**Miscellaneous**

Asbestos in Friable Material	Item 198.1 of Manual EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual
Lead in Dust Wipes	EPA 6010C
Lead in Paint	EPA 6010C

**Sample Preparation Methods**

EPA 3050B

NEW  
YORK  
STATE

Department  
of Health

Serial No.: 54682

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**NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER**



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016  
Revised May 20, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

**MR. STEVE DEVITO**  
**PARADIGM ENVIRONMENTAL SERVICES INC**  
**179 LAKE AVENUE**  
**ROCHESTER, NY 14608**

**NY Lab Id No: 10958**

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards (2003) for the category  
ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

**Nitroaromatics and Isophorone**

2,4-Dinitrotoluene	EPA 625 EPA 8270D
2,6-Dinitrotoluene	EPA 625 EPA 8270D
Isophorone	EPA 625 EPA 8270D
Nitrobenzene	EPA 625 EPA 8270D

**Phthalate Esters**

Diethyl phthalate	EPA 625 EPA 8270D
Dimethyl phthalate	EPA 625 EPA 8270D
Di-n-butyl phthalate	EPA 625 EPA 8270D
Di-n-octyl phthalate	EPA 625 EPA 8270D

**Nitrosoamines**

N-Nitrosodimethylamine	EPA 625 EPA 8270D
N-Nitrosodi-n-propylamine	EPA 625 EPA 8270D
N-Nitrosodiphenylamine	EPA 625 EPA 8270D

**Polychlorinated Biphenyls**

PCB-1016	EPA 8082A EPA 608
PCB-1221	EPA 8082A EPA 608
PCB-1232	EPA 8082A EPA 608
PCB-1242	EPA 8082A EPA 608
PCB-1248	EPA 8082A EPA 608
PCB-1254	EPA 8082A EPA 608
PCB-1260	EPA 8082A EPA 608
PCB-1262	EPA 8082A
PCB-1268	EPA 8082A

**Organophosphate Pesticides**

Atrazine	EPA 8270D
----------	-----------

**Petroleum Hydrocarbons**

Diesel Range Organics	EPA 8015D
-----------------------	-----------

**Phthalate Esters**

Benzyl butyl phthalate	EPA 625 EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 625 EPA 8270D

**Serial No.: 54805**

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**APPENDIX C**  
**LABORATORY ANALYTICAL DATA**



**PLM & TEM BULK ASBESTOS ANALYSIS REPORT**  
**via NYSDOH ELAP Method 198.1, 198.4 and 198.6**

**Client:** Fisher Associates  
**Location:** BIN 5512980

**Job No:** 12199-16  
**Page:** 1 of 4

**Sample Date:** 12/1/2016

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
1A	101852	Guard Rail	Green Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
1B	101853	Guard Rail	Green Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
2A	101854	Outside Girder	Green Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
2B	101855	Outside Girder	Green Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
3A	101856	inside Girder	Gray Paint	Inconclusive No Asbestos Detected	0%	✓	Trace Chrysotile <1.0%	<1.0%	None Detected	100%
3C	101857	inside Girder	Gray Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
4A	101858	B/W Wing Wall & Abutment	Gray Caulk	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
4B	101859	B/W Wing Wall & Abutment	Gray Caulk	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
5A	101860	B/W Wing Wall & Abutment	Black Bituminous Material	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
5C	101861	B/W Wing Wall & Abutment	Black Bituminous Material	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%

**KEY TO NOB COLUMN SYMBOLS**

No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).  
 ✓ NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 √ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.  
 # denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 X denotes sample prepped only by ELAP Method 198.6.  
 \*\* Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.  
 Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1, 198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.") or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0).



Lab Code 200530-0 for PLM Analysis

PLM Date Analyzed: 12/12/2016

Microscope: Olympus BH-2 #235757

Analyst: B. Weinman

TEM Date Analyzed: 12/13/2016

TEM Analyst: M. Lochner

**ELAP ID No.: 10958**

**Laboratory Results Approved By:**  
**Asbestos Operations Manager or Designee**

Mary Dohr

Paradigm Environmental Services, Inc. is not responsible for the data supplied by an independent inspector. National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the laboratory. This PLM report relates ONLY to the items tested. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Quality control data (including 95% confidence limits and laboratory and analysts' and precision) is available upon request.



**PLM & TEM BULK ASBESTOS ANALYSIS REPORT**  
**via NYSDOH ELAP Method 198.1, 198.4 and 198.6**

**Client:** Fisher Associates  
**Location:** BIN 5512980

**Job No:** 12199-16  
**Page:** 2 of 4

**Sample Date:** 12/1/2016

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
7A	101862	Top of Abutment & Wing Wall	Black Tar	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
7B	101863	Top of Abutment & Wing Wall	Black Tar	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
8A	101864	Middle of Bridge Joint	White Caulk	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
8B	101865	Middle of Bridge Joint	White Caulk	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
9A	101866	Concrete Wing Wall & Abutment	White Paint	Chrysotile 4.2%	4.2%	✓	Not Required	N/A	None Detected	95.8%
9B	101867	Concrete Wing Wall & Abutment	White Paint	STOP	POSITIVE	X	SAMPLE	NOT	ANALYZED	N/A
10A	101868	Middle of Bridge Joint	Black Rubber Sponge	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
10B	101869	Middle of Bridge Joint	Black Rubber Sponge	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
11A	101870	B/W Wear Surface & Curb	Black Tar	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
11B	101871	B/W Wear Surface & Curb	Black Tar	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%

**KEY TO NOB COLUMN SYMBOLS**

No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).  
 ✓ NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 √ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.  
 # denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
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 Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1, 198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.") or EPA 600/M4-B2-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0).



Lab Code 200530-0 for PLM Analysis

PLM Date Analyzed: 12/12/2016

Microscope: Olympus BH-2 #235757

Analyst: B. Weinman

TEM Date Analyzed: 12/13/2016

TEM Analyst: M. Lochner

ELAP ID No.: 10958

**Laboratory Results Approved By:**  
**Asbestos Operations Manager or Designee**

Mary Dohr

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**CHAIN OF CUSTODY FOR BULK ASBESTOS ANALYSIS**

179 Lake Avenue, Rochester, New York 14608      Office: 585-647-2530  
 1815 Love Road, Grand Island, New York 14072      Office: 716-775-5777

10f2

<b>Client:</b> Fisher Associates	<b>Contact:</b> Mark Stein
<b>Phone Number:</b> (585) 334-1310	<b>Email Address for Data:</b> mstein@fisherassoc.com
<b>Results To:</b> Mark Stein	<b>Turn Around Time:</b> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 5 <input type="checkbox"/> Other <input type="checkbox"/>
<b>Date Sampled:</b>	<b>Material Type/Quantity:</b> Friable      NOB      TEM
<b>Project Location:</b> BIN 5512980	

**Client Mailing Address:**  
135 Calkins Road  
  
Rochester, NY 14623

**OFFICE USE ONLY**

Job #: 12199-16

Page \_\_\_\_\_ of \_\_\_\_\_

Date Logged In: 12-6-16

Logged In By: VK

	Client ID	Lab ID	Sampling Location	Color	Material Size	Type of Material
1	1A	101852	Outside girder Guard rail	Green		Paint
2	1B	853	" "	"		↓
3	2A	854	Outside girder	Green		
4	2B	855		"		
5	3A	856	Inside girder	Grey		
6	3C	857	" "	"		
7	4A	858	<del>Entr</del> b/w wingwall & abutment	Grey		
8	4B	859	" " "	"		"
9	5A	860	<del>Entr</del> " " "	Black		Bituminous Mat,
10	5C	861	" " "	"		" "

<b>Sampled By:</b>	<b>Date:</b> 12/01/16
<b>Transported to Paradigm By:</b>	<b>Date:</b>
<b>Received By:</b>	<b>Date:</b> 12/5/16

All samples will be analyzed by the appropriate New York State Department of Health methods (198.1,198.4 and 198.6) unless EPA 600/M4/82/020 per 40 CFR 763 and/or EPA 600/R-93/116 methods are requested.

**CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS**

or provide TEM contact name: \_\_\_\_\_

**TOTAL NUMBER OF SAMPLES ON ALL CHAINS OF CUSTODY:**

VK 12-6-16



**CHAIN OF CUSTODY FOR BULK ASBESTOS ANALYSIS**

2 of 2

179 Lake Avenue, Rochester, New York 14608  
 1815 Love Road, Grand Island, New York 14072

Office: 585-647-2530  
 Office: 716-775-5777

**Client:** Fisher Associates  
**Contact:** Mark Stein

**Phone Number:** (585) 334-1310  
**Email Address for Data:** mstein@fisherassoc.com

**Results To:** Mark Stein  
**Turn Around Time:** 1  2  3  5  Other

**Date Sampled:**  
**Material Type/Quantity:** Friable NOB TEM

**Project Location:** BIN 5512980

**Client Mailing Address:**  
 135 Calkins Road  
 Rochester, NY 14623

**OFFICE USE ONLY**  
**Job #:** 12199-16  
**Page** \_\_\_\_\_ **of** \_\_\_\_\_  
**Date Logged In:** 12.16.16  
**Logged In By:** VK

	Client ID	Lab ID	Sampling Location	Color	Material Size	Type of Material
1	7A	1018162	Top of abutment & wingwall	Black		Tar
2	7B	8163	" " "	"		"
3	8A	8164	Middle of bridge joint	White		Caulk
4	8B	8165	" " " " "	"		"
5	9A	8166	Concrete wingwall & abutments	White		Paint
6	9B	8167	" " "	"		"
7	10A	8168	Middle of bridge joint	Black		Rubber sponge
8	10B	8169	" " "	"		" "
9	11A	8170	Blw near surface & curb	Black		Tar
10	11B	8171	" " " "	"		"

**Sampled By:** [Signature] **Date:** 12/16/16

**Transported to Paradigm By:** [Signature] **Date:**

**Received By:** [Signature] **Date:** 12/5/16

All samples will be analyzed by the appropriate New York State Department of Health methods (198.1, 198.4 and 198.6) unless EPA 600/M4/82/020 per 40 CFR 763 and/or EPA 600/R-93/116 methods are requested.

**CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS**   
 or provide TEM contact name:

**TOTAL NUMBER OF SAMPLES ON ALL CHAINS OF CUSTODY:**

VK 12.16.16

STOP positive per client 12/12/16



**PARADIGM**  
ENVIRONMENTAL SERVICES, INC.

*Analytical Report For*  
**Fisher Associates**

*For Lab Project ID*

**165264**

*Referencing*

**Bridge Haz Survey, 151021-09, BIN 5512980**

*Prepared*

**Monday, December 12, 2016**

Any noncompliant QC parameters or other notes impacting data interpretation are flagged or documented on the final report or are noted below.

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Certifies that this report has been approved by the Technical Director or Designee

179 Lake Avenue • Rochester, NY 14608 • (585) 647-2530 • Fax (585) 647-3311 • ELAP ID# 10958 • PADEP ID# 68-02351

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

Report Prepared Monday, December 12, 2016

Page 1 of 11



**Lab Project ID: 165264**

**Client:** Fisher Associates

**Project Reference:** Bridge Haz Survey, 151021-09, BIN 5512980

**Sample Identifier:** LBP 1

**Lab Sample ID:** 165264-01

**Date Sampled:** 12/1/2016

**Matrix:** Paint

**Date Received:** 12/6/2016

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>0.0157</b>	%		12/8/2016 10:42

**Method Reference(s):** EPA 6010C

EPA 3050B

**Preparation Date:** 12/6/2016

**Data File:** 120816a



**Lab Project ID: 165264**

**Client: Fisher Associates**

**Project Reference: Bridge Haz Survey, 151021-09, BIN 5512980**

**Sample Identifier: LBP 2**

**Lab Sample ID: 165264-02**

**Date Sampled: 12/1/2016**

**Matrix: Paint**

**Date Received: 12/6/2016**

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>0.0930</b>	%		12/8/2016 10:47

**Method Reference(s):** EPA 6010C

EPA 3050B

**Preparation Date:** 12/6/2016

**Data File:** 120816a



**Lab Project ID: 165264**

**Client: Fisher Associates**

**Project Reference: Bridge Haz Survey, 151021-09, BIN 5512980**

**Sample Identifier: LBP 3**

**Lab Sample ID: 165264-03**

**Date Sampled: 12/1/2016**

**Matrix: Paint**

**Date Received: 12/6/2016**

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	< 0.00463	%		12/8/2016 10:51

**Method Reference(s):** EPA 6010C

EPA 3050B

**Preparation Date:** 12/6/2016

**Data File:** 120816a



**Lab Project ID: 165264**

**Client: Fisher Associates**

**Project Reference: Bridge Haz Survey, 151021-09, BIN 5512980**

**Sample Identifier: LBP 9**

**Lab Sample ID: 165264-04**

**Date Sampled: 12/1/2016**

**Matrix: Paint**

**Date Received: 12/6/2016**

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>0.127</b>	%		12/8/2016 11:04

**Method Reference(s):** EPA 6010C

EPA 3050B

**Preparation Date:** 12/6/2016

**Data File:** 120816a



**Client:** Fisher Associates

**Project Reference:** Bridge Haz Survey, 151021-09, BIN 5512980

**Sample Identifier:** PCB 4

**Lab Sample ID:** 165264-05

**Date Sampled:** 12/1/2016

**Matrix:** Caulk

**Date Received:** 12/6/2016

**PCBs**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
PCB-1016	< 5.00	mg/Kg		12/12/2016 11:25
PCB-1221	< 5.00	mg/Kg		12/12/2016 11:25
PCB-1232	< 5.00	mg/Kg		12/12/2016 11:25
PCB-1242	< 5.00	mg/Kg		12/12/2016 11:25
PCB-1248	< 5.00	mg/Kg		12/12/2016 11:25
PCB-1254	< 5.00	mg/Kg		12/12/2016 11:25
PCB-1260	< 5.00	mg/Kg		12/12/2016 11:25
PCB-1262	< 5.00	mg/Kg		12/12/2016 11:25
PCB-1268	< 5.00	mg/Kg		12/12/2016 11:25

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Limits</u>	<u>Outliers</u>	<u>Date Analyzed</u>
Decachlorobiphenyl	<b>89.3</b>	10 - 144		12/12/2016 11:25
Tetrachloro-m-xylene	<b>83.7</b>	10 - 140		12/12/2016 11:25

**Method** EPA 8082A

EPA 3550C

**Reference(s):** 12/9/2016

**Preparation Date:**



**Client:** Fisher Associates

**Project Reference:** Bridge Haz Survey, 151021-09, BIN 5512980

**Sample Identifier:** PCB 8

**Lab Sample ID:** 165264-06

**Date Sampled:** 12/1/2016

**Matrix:** Caulk

**Date Received:** 12/6/2016

**PCBs**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
PCB-1016	< 5.00	mg/Kg		12/10/2016 14:48
PCB-1221	< 5.00	mg/Kg		12/10/2016 14:48
PCB-1232	< 5.00	mg/Kg		12/10/2016 14:48
PCB-1242	< 5.00	mg/Kg		12/10/2016 14:48
PCB-1248	< 5.00	mg/Kg		12/10/2016 14:48
PCB-1254	< 5.00	mg/Kg		12/10/2016 14:48
PCB-1260	< 5.00	mg/Kg		12/10/2016 14:48
PCB-1262	< 5.00	mg/Kg		12/10/2016 14:48
PCB-1268	< 5.00	mg/Kg		12/10/2016 14:48

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Limits</u>	<u>Outliers</u>	<u>Date Analyzed</u>
Decachlorobiphenyl	<b>131</b>	10 - 144		12/10/2016 14:48
Tetrachloro-m-xylene	<b>116</b>	10 - 140		12/10/2016 14:48

**Method** EPA 8082A

EPA 3550C

**Reference(s):** 12/9/2016

**Preparation Date:**



## Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

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All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

*"<" = Analyzed for but not detected at or above the quantitation limit.*

*"E" = Result has been estimated, calibration limit exceeded.*

*"Z" = See case narrative.*

*"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.*

*"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.*

*"B" = Method blank contained trace levels of analyte. Refer to included method blank report.*

*"J" = Result estimated between the quantitation limit and half the quantitation limit.*

*"L" = Laboratory Control Sample recovery outside accepted QC limits.*

*"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.*

*"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.*

*"\*" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.*

*"(1)" = Indicates data from primary column used for QC calculation.*

*"A" = denotes a parameter for which ELAP does not offer approval as part of their laboratory certification program.*

*"F" = denotes a parameter for which Paradigm does not carry certification, the results for which should therefore only be used where ELAP certification is not required, such as personal exposure assessment.*

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# GENERAL TERMS AND CONDITIONS

## LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

### Warranty.

Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

### Scope and Compensation.

LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB will use LAB default method for all tests unless specified otherwise on the Work Order.

Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

### Prices.

Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

### Limitations of Liability.

In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.

LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.

All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.

Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

### Hazard Disclosure.

Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

### Sample Handling.

Prior to LAB's acceptance of any sample (or after any revocation of acceptance) the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises. Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on the final report.

Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.

LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

### Legal Responsibility.

LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

### Assignment.

LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

### Force Majeure.

LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

### Law.

This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

1 of 2



# CHAIN OF CUSTODY

REPORT TO:		INVOICE TO:	
COMPANY: Fisher Associates		COMPANY: Same	
ADDRESS: 135 Calkins Road, Suite A		ADDRESS:	
CITY: Rochester STATE: NY ZIP: 14623		CITY: STATE: ZIP:	
PHONE: (585) 334-1310 FAX:		PHONE: FAX:	
ATTN: Mark Stein		ATTN:	
PROJECT NAME/SITE NAME: Bridge Haz Survey - 151021-09		LAB PROJECT #: 165264 CLIENT PROJECT #:	
COMMENTS: BIN 5512980		TURNAROUND TIME: (WORKING DAYS) <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> 5 <input type="checkbox"/> OTHER	
		Quotation #	

## REQUESTED ANALYSIS

DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	CONTAINER	LEAD	PCB	REMARKS	PARADIGM LAB SAMPLE NUMBER	
1	12/01/16			LBP 1	Paint	1	X				01
2	↓			LBP 2	↓	1	X				02
3	↓			LBP 3	↓	1	X				03
4	↓			LBP 9	↓	1	X				04
5	↓			PCB 4	Caulk	1		X			05
6	↓			PCB 8	↓	1		X			06
7											
8											
9											
10											

**\*\*LAB USE ONLY BELOW THIS LINE\*\***

Sample Condition: Per NELAC/ELAP 210/241/242/243/244

Receipt Parameter	NELAC Compliance	
Container Type:	Y <input type="checkbox"/>	N <input type="checkbox"/>
Comments: _____		
Preservation:	Y <input type="checkbox"/>	N <input type="checkbox"/>
Comments: _____		
Holding Time:	Y <input type="checkbox"/>	N <input type="checkbox"/>
Comments: _____		
Temperature:	Y <input type="checkbox"/>	N <input type="checkbox"/>
Comments: 20°C 12/5/16 16:40		

	12/01/16 13:00	
Sampled By	Date/Time	Total Cost: <input style="width: 80px; height: 30px;" type="text"/>
	12/05/16 16:30	
Relinquished By	Date/Time	P.I.F. <input style="width: 80px; height: 30px;" type="text"/>
	12/5/16 16:30	
Received By	Date/Time	
	12/6/16 10:47	
Received @ Lab By	Date/Time	



2 of 2

### Chain of Custody Supplement

Client: Fisher Associates

Completed by: G. Penn Pezzulo

Lab Project ID: 165264

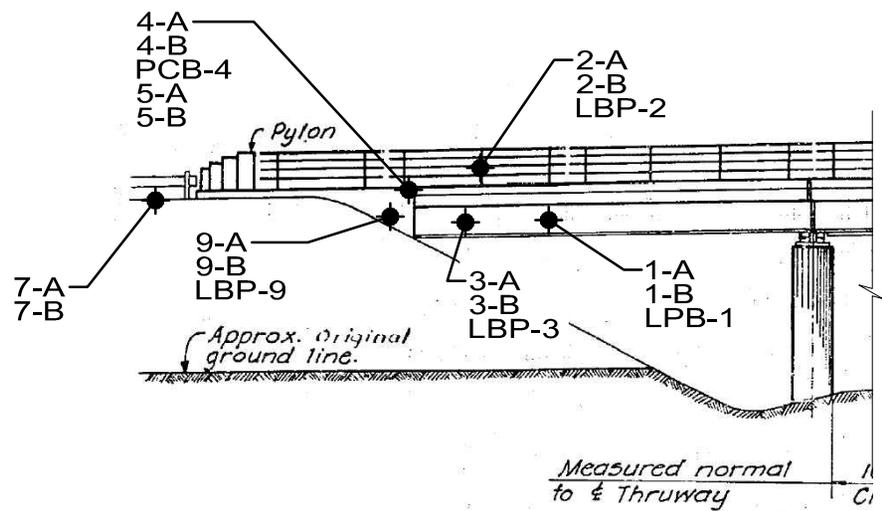
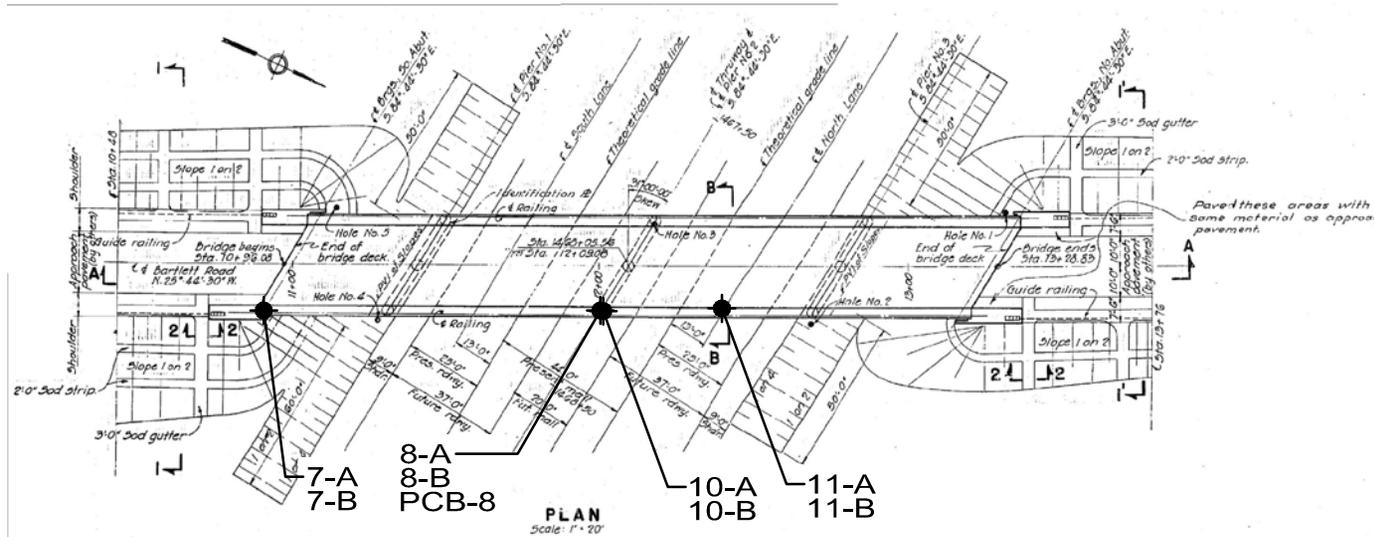
Date: 12/6/16

#### Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt		
	Yes	No	N/A
Container Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		
Transferred to method-compliant container	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Headspace (<1 mL)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Preservation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Chlorine Absent (<0.10 ppm per test strip)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Holding Time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		
Temperature	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> metals
Comments	<u>20 °C</u>		
Sufficient Sample Quantity	<input checked="" type="checkbox"/> MPDR	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		

**APPENDIX D**  
**SAMPLE LOCATION PLANS**



ELEVATION

Not to Scale



WWW.FISHERASSOC.COM

LEGEND:

- 1-A SAMPLE LOCATION AND IDENTIFICATION

Figure No. H1.01

SAMPLE LOCATION PLAN  
D214385 B.I.N. 5512980

JUDD ROAD BRIDGE OVER I-90 MAINLINE

TOWN OF WHITESBORO  
ONEIDA COUNTY, NEW YORK

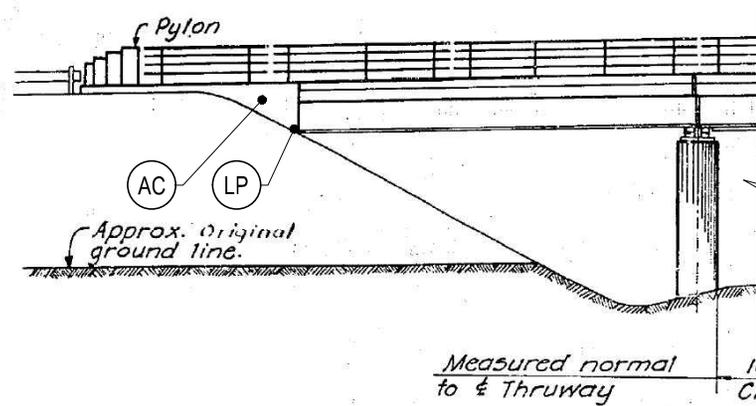
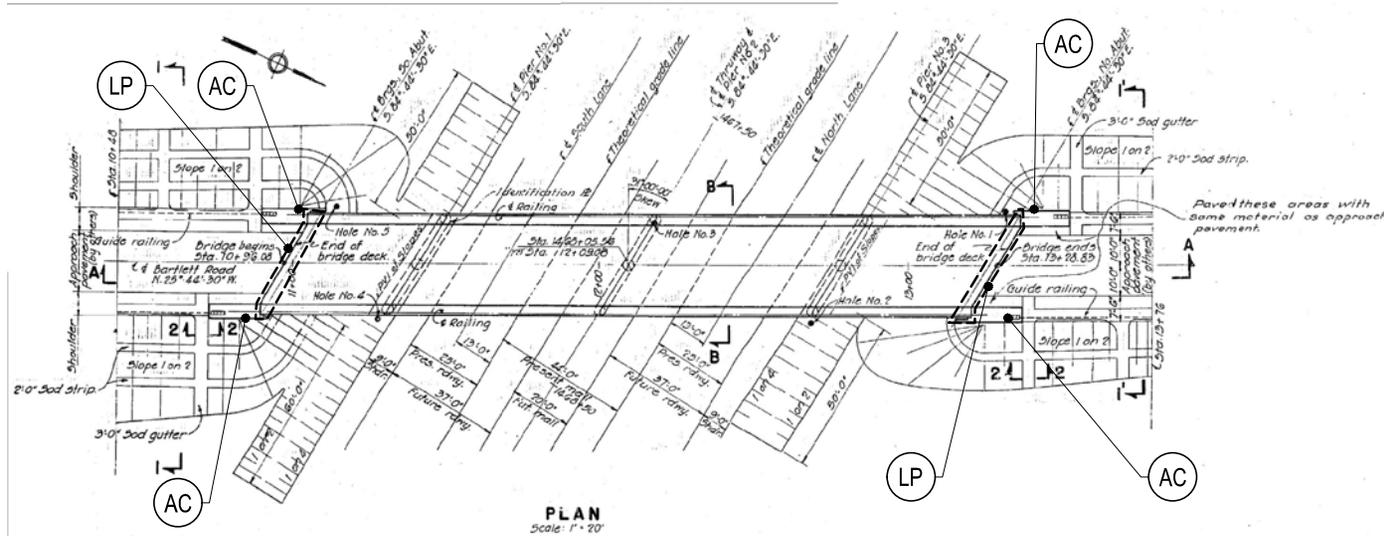
FA #151021.09

FEBRUARY 2017

**APPENDIX E**  
**HAZARDOUS MATERIAL LOCATION PLANS**

APPROXIMATE QUANTITIES  
(ENTIRE STRUCTURE)

- AC 325 SF
- LP 63 SF



ELEVATION

Not to Scale

**FISHER**   
ASSOCIATES  
[WWW.FISHERASSOC.COM](http://WWW.FISHERASSOC.COM)

**LEGEND**

- |                               |                                  |
|-------------------------------|----------------------------------|
| AC ASBESTOS-CONTAINING        | AC AC PAINT ON CONCRETE          |
| PCB POLYCHLORINATED BIPHENYLS | LP LEAD BEARING PAD ON ABUTMENTS |
| LF LINEAR FEET                |                                  |
| SF SQUARE FEET                |                                  |

**Figure No. H2.01**  
HAZARDOUS MATERIALS LOCATION PLAN  
D214385 B.I.N. 5512980  
JUDD ROAD BRIDGE OVER I-90 MAINLINE  
TOWN OF WHITESBORO  
ONEIDA COUNTY, NEW YORK  
FA #151021.09 FEBRUARY 2017

**HAZARDOUS WASTE-CONTAMINATED MATERIALS  
TECHNICAL MEMORANDUM**

**for**

**NEW YORK STATE THRUWAY AUTHORITY**

**D214385      BIN 5516071**

**I-90 BRIDGE OVER COUNTY ROUTE 53  
TOWN OF FRANKFORT  
HERKIMER COUNTY**

**Prepared by:**



**February 2017**

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**Appendices**

- Appendix A – Project Location Map
- Appendix B – Fisher Associates’ Certifications and Laboratory Accreditation
- Appendix C – Laboratory Analytical Data
- Appendix D – Sample Location Plans
- Appendix E – Hazardous Material Location Plans

## 1.0 INTRODUCTION

Fisher Associates P.E., L.S., L.A., D.P.C. (“Fisher Associates”) is working with Stantec Consulting Services, Inc. (Stantec), and the New York State Thruway Authority (NYSTA), to prepare this Hazardous Materials Technical Memorandum, here after referred to as HMTM, in technical support of the proposed replacement of the I-90 Thruway bridge (Westbound) over County Route 53 in the Town of Frankfort, Herkimer County, New York. The project area was investigated on December 2, 2016 as part of the project. The project location is shown on the Project Location Map in Appendix A.

### 1.1 Purpose and Scope

The purpose of this HMTM is to identify asbestos-containing materials (ACMs), lead based paint (LBP), lead containing materials (LCMs), and polychlorinated biphenyls (PCBs), collectively known as Hazardous Waste Contaminated Materials (HWCM), within the bridge rehabilitation project corridor, and to develop quantity estimates for abatement of identified HWCMs.

### 1.2 Background

This HMTM is consistent with the requirements outlined in the NYSDOL Industrial Code Rule 56 (Code Rule 56), which requires an asbestos pre-demolition survey and asbestos abatement to be performed prior to any alterations, renovations or demolition.

### 1.3 Record Review Activities

Fisher Associates received no previous sampling reports to review. As-built drawings of the bridge were reviewed to identify potential ACM sample locations and for the presence of lead containing materials such as bearing pads or joint spacers.

### 1.4 Summary of Findings

Table 1.1 summarizes those materials found to be positive for ACM, LBP, and/or PCBs based on current sample analysis. Added detail is presented in the following sections.

**Table 1.1**  
**Summary of Findings**  
**I-90 Mainline (Westbound) over County Route**  
**53**

<b>Sample Identification</b>	<b>Material</b>	<b>Sample Location</b>	<b>Approx. Quantity</b>
N/A	Lead Bearing Pad	Under Bridge Bearings	39 SF

## 2.0 MATERIAL SAMPLING AND LABORATORY METHODOLOGY

A NYSDOL-certified asbestos inspector from Fisher Associates collected bulk samples of suspect asbestos-containing materials (ACMs) on December 2, 2016. Bulk samples were collected using hand tools from each matrix identified as a potential ACM. Additionally, paint samples were collected and analyzed for lead, and caulking/adhesive materials were collected and analyzed for PCBs. Upon completion of the sampling, a chain-of-custody form was completed for the materials sampled.

Samples were delivered under standard chain-of-custody protocol to Paradigm Environmental Services, Inc. (Paradigm), a New York State Department of Health (NYSDOH) certified laboratory. The procedures followed are in accordance with the NYSDOH Environmental Laboratory Approval Program (ELAP). New York State Department of Labor (NYSDOL) Code Rule 56 defines materials containing greater than one percent (1%) asbestos by weight as being Asbestos Containing Materials.

The paint samples were analyzed via SW846 Method 3050 /6010 to determine the lead content of the paints. Those materials having a concentration equal or greater than 0.5% by weight in lead are considered to be lead based.

The materials sampled for PCBs were analyzed by USEPA Method 8082. According to the USEPA, materials containing greater than fifty (50) parts per million (ppm) are considered PCB-containing.

Copies of Fisher Associates' Asbestos Handling License, the Asbestos Inspector's certification, and the Laboratory's Accreditation are in Appendix B. Copies of the laboratory's analytical results are included in Appendix C. The Sample Location Plans are included in Appendix D. The Hazardous Material Locations Plans are included in Appendix E.

## 3.0 SAMPLE RESULTS AND LOCATIONS

### 3.1 Asbestos Containing Materials

Table 3.1 provides a summary of the laboratory analytical results for the samples collected from the building materials identified on and around the bridge structure and nearby roadway that may be disturbed. Those samples identified as being ACMs (greater than one percent asbestos) are shaded in the table. Refer to the Sample Location Plans in Appendix D for locations of sample collection.

**Table 3.1**  
**Summary of Samples Collected and Results**  
**I-90 Mainline Bridge (Westbound) over County Route**  
**53**

Sample Identification	Material	Sample Location	% Asbestos
1-A	Green Paint	Outside of Girder	NAD
1-B	Green Paint	Outside of Girder	NAD
2-A	Grey Paint	Underside of Bridge, Insider of Girder	NAD

Sample Identification	Material	Sample Location	% Asbestos
2-B	Grey Paint	Underside of Bridge, Insider of Girder	NAD
3-A	Green Paint	Guard Railing	NAD
3-B	Green Paint	Guard Railing	NAD
4-A	Yellow Epoxy Material	B/w NE Abutment and Wingwall	NAD
4-B	Yellow Epoxy Material	B/w NE Abutment and Wingwall	NAD
5-A	Black Tar	B/w NE Abutment and Wingwall	NAD
5-B	Black Tar	B/w NE Abutment and Wingwall	NAD
6-A	Black Fibrous Material	B/w Abutment and Wingwalls	NAD
6-B	Black Fibrous Material	B/w Abutment and Wingwalls	NAD
7-A	Black Caulk	Bridge Joint Material on Main Line WB	NAD
7-B	Black Caulk	Bridge Joint Material on Main Line WB	NAD

### 3.2 Lead Containing Materials (LCMs)

Table 3.2 below lists the sample Identification, the type of material, the sample location, and the percent of lead for each sample. Those samples identified as being Lead Based Paint (LBP), having a concentration of 0.5% by weight or greater, are shaded in the table.

Additionally, a review of the as-built drawings indicated the presence of lead bearing pads at the top of the concrete center piers. Well these bearing pads were not sampled during this investigation, they are called out in this report as lead containing due to their description in the draws as “lead”, as well as their common use in bridge construction.

**Table 3.2**  
**Summary of Lead Based Paint Samples Collected and Results**  
**I-90 Mainline Bridge (Westbound) over County Route 53**

Sample Identification	Material	Sample Location	Lead (% by weight)
LBP-1	Green Paint	Outside of Girder	0.0209
LBP-2	Grey Paint	Underside of Bridge, Inside of Girder	0.0307
LBP-3	Green Paint	Guarding Railing	0.334
N/A	Bear Pads	Under Bridge Bearings	Assumed Positive

### 3.3 Polychlorinated Biphenyls (PCBs)

Fisher Associates collected samples of caulking materials from representative locations. The samples were collected from materials that typically would have had petroleum-like products intermixed to prevent the caulking materials from drying out.

**Table 3.3**  
**Summary of PCB Samples Collected and Results**  
**I-90 Mainline Bridge (Westbound) over County Route**  
**53**

Sample Identification	Material	Sample Location	PCBs (mg/Kg=ppm)
PCB-7	Caulk	Bridge Joint Material on Main Line WB	< 4.98

## 4.0 QUANTITY ESTIMATES

### 4.1 Asbestos

Potential ACMs were sampled by Fisher Associates and tested via laboratory analysis. None of the samples analyzed are considered to be ACMs.

### 4.2 Lead

Samples were collected of potential lead-containing materials during the investigation conducted by Fisher Associates and tested via laboratory analysis. None of the paint samples analyzed are considered to be lead-based. However, observation in the field and review of available bridge plans did reveal potential LCMs used in the construction.

**Table 4.2**  
**Estimated Quantities of Lead-Containing Materials**  
**I-90 Mainline Bridge (Westbound) over County Route**  
**53**

Material	Sample Id	Sample Location	Quantity
Lead Bear Pad	N/A	Under Bridge Bearings	39 SF

### 4.3 PCBs

The investigation conducted by Fisher Associates also included the testing for PCBs. Those materials tested included caulking and sealants. Materials are considered to be PCB-containing if the total concentration of the PCB compounds exceeds fifty (50) parts per million (ppm). Based on the laboratory results, none of the materials tested are considered PCB-containing.

## **5.0 CONCLUSIONS**

### **5.1 Asbestos**

No asbestos containing materials (ACMs) have been identified as part of this assessment. In accordance with 12 NYCRR 56, no demolition or renovation work shall be commenced by any owner or agent prior to completion of asbestos abatement performed by a licensed asbestos abatement contractor. If suspect asbestos containing materials not identified in this pre-demolition asbestos survey report are discovered during the demolition process, it is required that the presence, location and quantity of newly discovered material, be conveyed within twenty-four (24) hours of discovery to the owner or their representative. All activities must cease in the area where the presumed asbestos containing material or suspect miscellaneous ACM is found, until a licensed asbestos contractor appropriately assesses and manages the discovered materials.

### **5.2 Lead**

Lead containing materials have been identified as a part of this assessment. It is recommended that a Lead Abatement and Handling of Lead Containing Materials specification section be developed. This section specifies the requirements for the detection and prevention of lead dust contamination in lead dust control work areas and areas adjacent to them, protection of workers, post-work cleaning, pre-disposal testing and appropriate disposal of removed material.

Finally, all trades must follow the Occupational Safety & Health Administration (OSHA) 29 CFR 1926.62 regulation, which considers any amount of Lead to be of concern. The regulation states that the employer shall assure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air ( $50 \mu\text{g}/\text{m}^3$ ) averaged over an 8-hour period.

### **5.3 PCBs**

The investigation conducted by Fisher Associates also included the testing for PCBs. Those materials tested included caulking and sealants. Materials are considered to be PCB-containing if the total concentration of the PCB compounds exceeds fifty (50) parts per million (ppm). Based on the laboratory results, none of the materials tested are considered PCB-containing.

**APPENDIX A  
PROJECT LOCATION MAP**

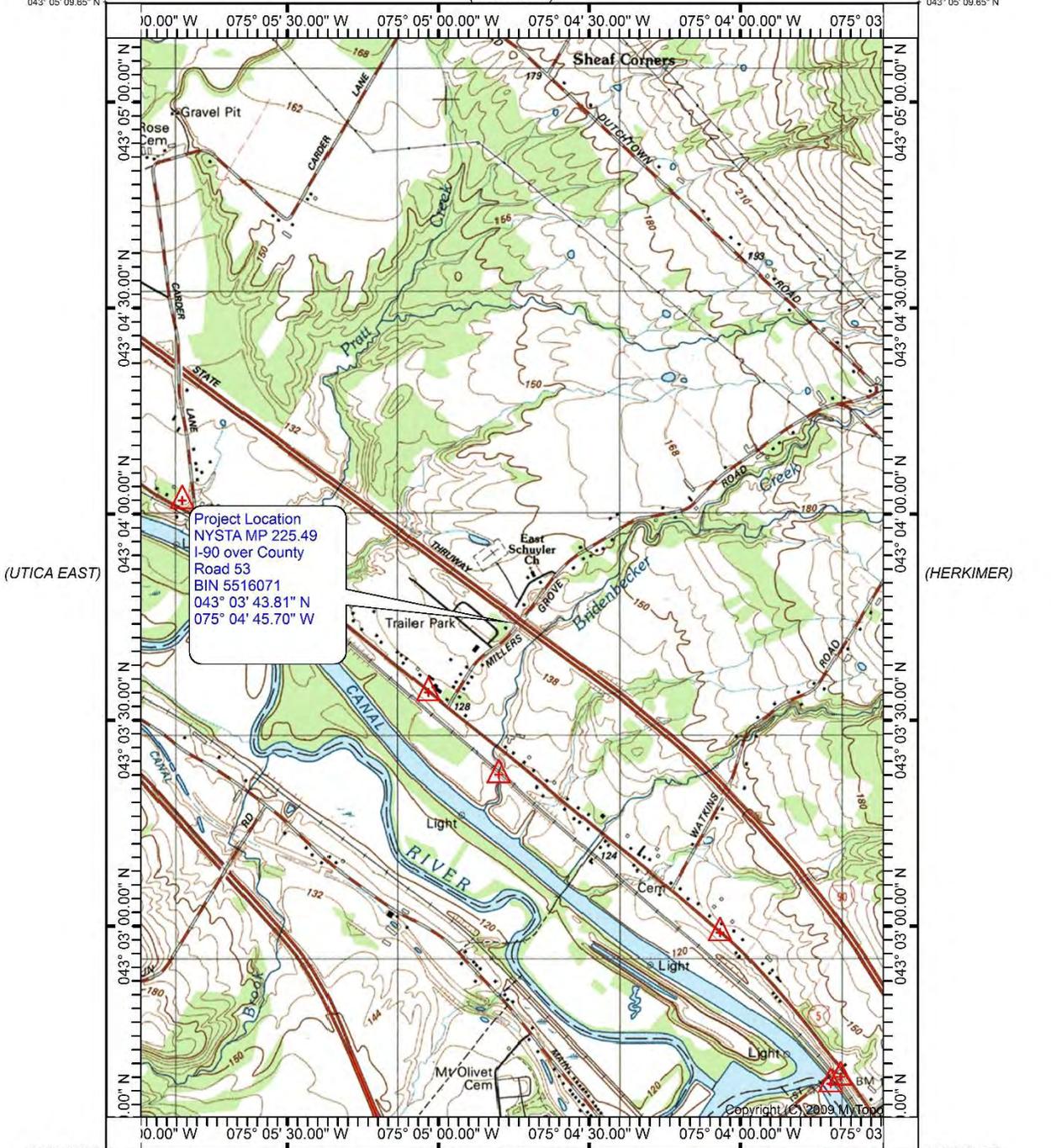
(SOUTH TRENTON)



ILION QUADRANGLE  
NEW YORK  
TOPOGRAPHIC SERIES (MIDDLEVILLE)

(NEWPORT)

075° 05' 59.61" W 043° 05' 09.65" N 075° 03' 31.20" W 043° 05' 09.65" N



(UTICA EAST)

(HERKIMER)

043° 02' 31.93" N 075° 05' 59.61" W (MILLERS MILLS) SCALE 1:24000 Printed: Tue Dec 06, 2016 075° 03' 31.20" W 043° 02' 31.93" N

(WEST WINFIELD)

(JORDANVILLE)

Produced by MyTopo Terrain Navigator  
Topography based on USGS 1:24,000  
Maps

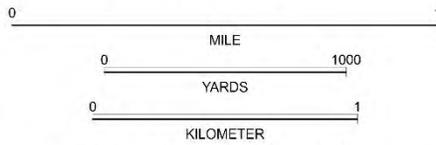
North American 1983 Datum (NAD83)  
Universal Transverse Mercator Projection

To place on the predicted North American  
1927 move the projection lines 8M N and  
32M E

Declination



GN 0.05° W  
MN 13.16° W



CONTOUR INTERVAL 6 METERS  
NATIONAL GEODETIC VERTICAL DATUM 1929

ILION, NY  
1982

**APPENDIX B  
FISHER ASSOCIATES'  
CERTIFICATIONS LABORATORY  
ACCREDITATION**

**New York State – Department of Labor**

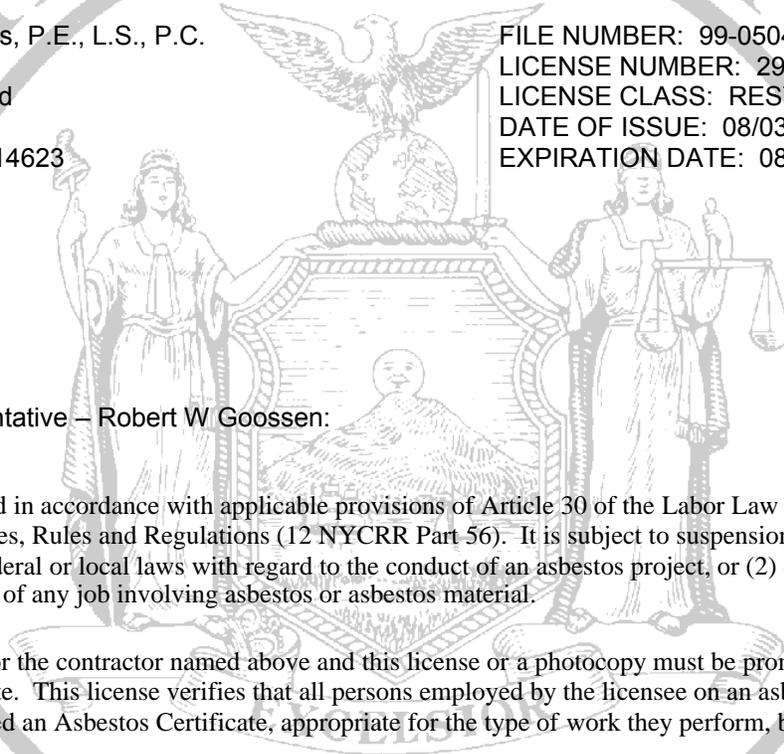
Division of Safety and Health License and  
Certificate Unit State Campus, Building 12

Albany, NY 12240

**ASBESTOS HANDLING LICENSE**

Fisher Associates, P.E., L.S., P.C.  
Suite A  
135 Calkins Road  
Rochester, NY 14623

FILE NUMBER: 99-0504  
LICENSE NUMBER: 29344  
LICENSE CLASS: RESTRICTED  
DATE OF ISSUE: 08/03/2016  
EXPIRATION DATE: 08/31/2017



Duly Authorized Representative – Robert W Goossen:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.

Eileen M. Franko, Director For  
the Commissioner of Labor

STATE OF NEW YORK - DEPARTMENT OF LABOR  
ASBESTOS CERTIFICATE



**MARK T STEIN**  
CLASS(EXPIRES)  
C ATEC(03/17) D INSP(03/17)  
H PM (03/17) I PD (03/17)



CERT# 00-07444  
DMV# 457924110

**MUST BE CARRIED ON ASBESTOS PROJECTS**



IF FOUND RETURN TO:  
NYS DOL - L&C UNIT  
ROOM 161A BUILDING 12  
STATE OFFICE CAMPUS  
ALBANY NY 12240



01213 000706159 17

EYES BLU  
HAIR BRO  
HGT 6' 03"

# United States Environmental Protection Agency

This is to certify that

Mark T. Stein



has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Risk Assessor

## In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires August 25, 2019

LBP-R-36347-1

Certification #

June 27, 2016

Issued On

John Gorman, Chief

Pesticides & Toxic Substances Branch



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

DR. THOMAS R. MCKEE  
AMERISCI RICHMOND  
13635 GENITO RD  
MIDLOTHIAN, VA 23112

NY Lab Id No: 10984

*is hereby APPROVED as an Environmental Laboratory for the category  
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
All approved subcategories and/or analytes are listed below:*

**Miscellaneous**

Asbestos in Friable Material	Item 198.1 of Manual EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual



**Serial No.: 54118**

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. STEVE DEVITO  
PARADIGM ENVIRONMENTAL SERVICES INC  
179 LAKE AVENUE  
ROCHESTER, NY 14608

NY Lab Id No: 10958

*is hereby APPROVED as an Environmental Laboratory for the category  
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
All approved subcategories and/or analytes are listed below:*

**Miscellaneous**

Asbestos in Friable Material	Item 198.1 of Manual EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual
Lead in Dust Wipes	EPA 6010C
Lead in Paint	EPA 6010C

**Sample Preparation Methods**

EPA 3050B

NEW  
YORK  
STATE

Department  
of Health

Serial No.: 54682

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

**NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER**



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016  
Revised May 20, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

**MR. STEVE DEVITO**  
**PARADIGM ENVIRONMENTAL SERVICES INC**  
**179 LAKE AVENUE**  
**ROCHESTER, NY 14608**

**NY Lab Id No: 10958**

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards (2003) for the category  
ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

**Nitroaromatics and Isophorone**

2,4-Dinitrotoluene	EPA 625
	EPA 8270D
2,6-Dinitrotoluene	EPA 625
	EPA 8270D
Isophorone	EPA 625
	EPA 8270D
Nitrobenzene	EPA 625
	EPA 8270D

**Phthalate Esters**

Diethyl phthalate	EPA 625
	EPA 8270D
Dimethyl phthalate	EPA 625
	EPA 8270D
Di-n-butyl phthalate	EPA 625
	EPA 8270D
Di-n-octyl phthalate	EPA 625
	EPA 8270D

**Nitrosoamines**

N-Nitrosodimethylamine	EPA 625
	EPA 8270D
N-Nitrosodi-n-propylamine	EPA 625
	EPA 8270D
N-Nitrosodiphenylamine	EPA 625
	EPA 8270D

**Polychlorinated Biphenyls**

PCB-1016	EPA 8082A
	EPA 608
PCB-1221	EPA 8082A
	EPA 608
PCB-1232	EPA 8082A
	EPA 608
PCB-1242	EPA 8082A
	EPA 608
PCB-1248	EPA 8082A
	EPA 608
PCB-1254	EPA 8082A
	EPA 608
PCB-1260	EPA 8082A
	EPA 608
PCB-1262	EPA 8082A
PCB-1268	EPA 8082A

**Organophosphate Pesticides**

Atrazine	EPA 8270D
----------	-----------

**Petroleum Hydrocarbons**

Diesel Range Organics	EPA 8015D
-----------------------	-----------

**Phthalate Esters**

Benzyl butyl phthalate	EPA 625
	EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 625
	EPA 8270D

**Serial No.: 54805**

Property of the New York State Department of Health. Certificates are valid only at the address shown; must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.



**APPENDIX C**  
**LABORATORY ANALYTICAL DATA**



**PLM & TEM BULK ASBESTOS ANALYSIS REPORT**  
**via NYSDOH ELAP Method 198.1, 198.4 and 198.6**

**Client:** Fisher Associates  
**Location:** BIN 5516071

**Job No:** 12196-16  
**Page:** 1 of 4

**Sample Date:** 12/2/2016

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
1A	101807	Outside Girder	Green Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
1B	101808	Outside Girder	Green Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
2A	101809	Inside Girder	Gray Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
2B	101810	WB Joint Caulk on Main Line	Gray Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
3A	101811	Guard Rail	Green Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
3B	101812	Guard Rail	Green Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
4A	101813	B/W NE Abutment & Wing Wall	Yellow Epoxy Floor	<1.0% Residue Remaining, PLM and TEM Not Required.	N/A	X	N/A	N/A	N/A	N/A
4B	101814	B/W NE Abutment & Wing Wall	Yellow Epoxy Floor	<1.0% Residue Remaining, PLM and TEM Not Required.	N/A	X	N/A	N/A	N/A	N/A
5A	101815	B/W NE Abutment & Wing Wall	Black Tar	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
5B	101816	B/W NE Abutment & Wing Wall	Black Tar	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%

**KEY TO NOB COLUMN SYMBOLS**  
 No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).  
 ✓ NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 √ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.  
 # denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 X denotes sample prepped only by ELAP Method 198.6.  
 \*\* Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.  
 Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1, 198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples." for EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0).



Lab Code 200530-0 for PLM Analysis

PLM Date Analyzed: 12/12/2016

Microscope: Olympus BH-2 #221797

Analyst: T. Ma

TEM Date Analyzed: 12/12/2016

TEM Analyst: F. Weinman

ELAP ID No.: 10958

**Laboratory Results Approved By:**  
**Asbestos Operations Manager or Designee**

Mary Dohr

Paradigm Environmental Services, Inc. is not responsible for the data supplied by an independent inspector. National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the laboratory. This PLM report relates ONLY to the items tested. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Quality control data (including 95% confidence limits and laboratory and analysts' and precision) is available upon request.



**PLM & TEM BULK ASBESTOS ANALYSIS REPORT**  
**via NYSDOH ELAP Method 198.1, 198.4 and 198.6**

**Client:** Fisher Associates  
**Location:** BIN 5516071

**Job No:** 12196-16  
**Page:** 2 of 4

**Sample Date:** 12/2/2016

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
6A	101817	B/W Abutment & Wing Walls	Black Fibrous Material	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
6B	101818	B/W Abutment & Wing Walls	Black Fibrous Material	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
7A	101819	WB Joint Caulk on Main Line	Black Caulk	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
7B	101820 A	WB Joint Caulk on Main Line	Black Caulk	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%

**KEY TO NOB COLUMN SYMBOLS**  
 No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).  
 ✓ NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 √ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.  
 # denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 X denotes sample prepped only by ELAP Method 198.6.  
 \*\* Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.  
 Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1, 198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.") or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0).



Lab Code 200530-0 for PLM Analysis

**PLM Date Analyzed:** 12/12/2016  
**Microscope:** Olympus BH-2 #221797  
**Analyst:** T. Ma

**TEM Date Analyzed:** 12/12/2016  
**TEM Analyst:** F. Weinman

**ELAP ID No.:** 10958

**Laboratory Results Approved By:**  
**Asbestos Operations Manager or Designee** Mary Dohr

Paradigm Environmental Services, Inc. is not responsible for the data supplied by an independent inspector. National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the laboratory. This PLM report relates ONLY to the items tested. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Quality control data (including 95% confidence limits and laboratory and analysts' and precision) is available upon request.



## CHAIN OF CUSTODY FOR BULK ASBESTOS ANALYSIS

10f2

179 Lake Avenue, Rochester, New York 14608      Office: 585-647-2530  
 1815 Love Road, Grand Island, New York 14072      Office: 716-775-5777

<b>Client:</b> Fisher Associates	<b>Contact:</b> Mark Stein
<b>Phone Number:</b> (585) 334-1310	<b>Email Address for Data:</b> mstein@fisherassoc.com
<b>Results To:</b> Mark Stein	<b>Turn Around Time:</b> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 5 <input checked="" type="checkbox"/> Other <input type="checkbox"/>
<b>Date Sampled:</b> 12/02/16	<b>Material Type/Quantity:</b> Friable      NOB      TEM
<b>Project Location:</b> BIN 5516071	

<b>Client Mailing Address:</b> 135 Calkins Road
Rochester, NY 14623

<b>OFFICE USE ONLY</b>	
<b>Job #:</b>	12196-16
<b>Page</b> _____ <b>of</b> _____	
<b>Date Logged In:</b>	12-6-16
<b>Logged In By:</b>	VK

	Client ID	Lab ID	Sampling Location	Color	Material Size	Type of Material	
1	2A	101807	Outside girder	Green	NDB ↓	Paint	
2	2B	808	" "	"			
3	2A	809	Inside girder	Grey			
4	2B	810	" "	"			
5	3A	811	Guard rail	Green			
6	3B	812	" "	"			
7	4A	813	B/w NE abutment & wingwall	Yellow			Epoxy
8	4B	814	" " "	"			"
9	5A	815	" " "	Black			TCF
10	5B	816	" " "	"			"

<b>Sampled By:</b> <i>[Signature]</i>	<b>Date:</b> 12/02/16
<b>Transported to Paradigm By:</b> <i>[Signature]</i>	<b>Date:</b> 12/02/16
<b>Received By:</b> <i>[Signature]</i>	<b>Date:</b> 12/15/16

All samples will be analyzed by the appropriate New York State Department of Health methods (198.1, 198.4 and 198.6) unless EPA 600/M4/82/020 per 40 CFR 763 and/or EPA 600/R-93/116 methods are requested.

**CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS**

**or provide TEM contact name:** \_\_\_\_\_

**TOTAL NUMBER OF SAMPLES ON ALL CHAINS OF CUSTODY:**

VK 12-6-16



**CHAIN OF CUSTODY FOR BULK ASBESTOS ANALYSIS**

2 of 2

179 Lake Avenue, Rochester, New York 14608 Office: 585-647-2530  
 1815 Love Road, Grand Island, New York 14072 Office: 716-775-5777

<b>Client:</b> Fisher Associates	<b>Contact:</b> Mark Stein
<b>Phone Number:</b> (585) 334-1310	<b>Email Address for Data:</b> mstein@fisherassoc.com
<b>Results To:</b> Mark Stein	<b>Turn Around Time:</b> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 5 <input checked="" type="checkbox"/> Other <input type="checkbox"/>
<b>Date Sampled:</b> 12/02/16	<b>Material Type/Quantity:</b> Friable NOB TEM
<b>Project Location:</b> BIN 5516071	

**Client Mailing Address:**  
135 Calkins Road  
Rochester, NY 14623

**OFFICE USE ONLY**

Job #: 12196-116

Page \_\_\_\_\_ of \_\_\_\_\_

Date Logged In: 12-16-16

Logged In By: VK

	Client ID	Lab ID	Sampling Location	Color	Material Size	Type of Material
1	6A	101817	B/w abutment & wing-walls	Black	F	Fibrous Mat.
2	6B	818	" " "	"	↓	" "
3	7A	819	WB Joint Caulk on Main Line	"	NOB	Caulk
4	7B	820A	" " "	"	↓	"
5						
6						
7						
8						
9						
10						

<b>Sampled By:</b> <i>[Signature]</i>	<b>Date:</b> 12/02/16
<b>Transported to Paradigm By:</b> <i>[Signature]</i>	<b>Date:</b> 12/05/16
<b>Received By:</b> VK	<b>Date:</b> 12-16-16

All samples will be analyzed by the appropriate New York State Department of Health methods (198.1, 198.4 and 198.6) unless EPA 600/M4/82/020 per 40 CFR 763 and/or EPA 600/R-93/116 methods are requested.

**CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS**

or provide TEM contact name: \_\_\_\_\_

**TOTAL NUMBER OF SAMPLES ON ALL CHAINS OF CUSTODY:**



**PARADIGM**  
ENVIRONMENTAL SERVICES, INC.

*Analytical Report For*  
**Fisher Associates**

*For Lab Project ID*

**165265**

*Referencing*

Bridge Haz Survey, 151021-09, BIN 5516071

*Prepared*

Tuesday, December 13, 2016

Any noncompliant QC parameters or other notes impacting data interpretation are flagged or documented on the final report or are noted below.

---

Certifies that this report has been approved by the Technical Director or Designee

179 Lake Avenue • Rochester, NY 14608 • (585) 647-2530 • Fax (585) 647-3311 • ELAP ID# 10958 • PADEP ID# 68-02351

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

*Report Prepared Tuesday, December 13, 2016*

Page 1 of 9

Page 22 of 34



**Lab Project ID: 165265**

**Client: Fisher Associates**

**Project Reference: Bridge Haz Survey, 151021-09, BIN 5516071**

**Sample Identifier: LBP 1**

**Lab Sample ID: 165265-01**

**Date Sampled: 12/2/2016**

**Matrix: Paint**

**Date Received: 12/6/2016**

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>0.0209</b>	%		12/9/2016 18:06

**Method Reference(s):** EPA 6010C

EPA 3050B

**Preparation Date:** 12/8/2016

**Data File:** 120916b



**Lab Project ID: 165265**

**Client: Fisher Associates**

**Project Reference: Bridge Haz Survey, 151021-09, BIN 5516071**

**Sample Identifier: LBP 2**

**Lab Sample ID: 165265-02**

**Date Sampled: 12/2/2016**

**Matrix: Paint**

**Date Received: 12/6/2016**

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>0.0307</b>	%		12/9/2016 18:10

**Method Reference(s):** EPA 6010C

EPA 3050B

**Preparation Date:** 12/8/2016

**Data File:** 120916b



**Lab Project ID: 165265**

**Client: Fisher Associates**

**Project Reference: Bridge Haz Survey, 151021-09, BIN 5516071**

**Sample Identifier: LBP3**

**Lab Sample ID: 165265-03**

**Date Sampled: 12/2/2016**

**Matrix: Paint**

**Date Received: 12/6/2016**

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>0.334</b>	%		12/9/2016 18:15

**Method Reference(s):** EPA 6010C

EPA 3050B

**Preparation Date:** 12/8/2016

**Data File:** 120916b



**Client:** Fisher Associates

**Project Reference:** Bridge Haz Survey, 151021-09, BIN 5516071

**Sample Identifier:** PCB 7

**Lab Sample ID:** 165265-04

**Date Sampled:** 12/2/2016

**Matrix:** Caulk

**Date Received:** 12/6/2016

**PCBs**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
PCB-1016	< 4.98	mg/Kg		12/10/2016 15:11
PCB-1221	< 4.98	mg/Kg		12/10/2016 15:11
PCB-1232	< 4.98	mg/Kg		12/10/2016 15:11
PCB-1242	< 4.98	mg/Kg		12/10/2016 15:11
PCB-1248	< 4.98	mg/Kg		12/10/2016 15:11
PCB-1254	< 4.98	mg/Kg		12/10/2016 15:11
PCB-1260	< 4.98	mg/Kg		12/10/2016 15:11
PCB-1262	< 4.98	mg/Kg		12/10/2016 15:11
PCB-1268	< 4.98	mg/Kg		12/10/2016 15:11

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Limits</u>	<u>Outliers</u>	<u>Date Analyzed</u>
Decachlorobiphenyl	<b>119</b>	10 - 144		12/10/2016 15:11
Tetrachloro-m-xylene	<b>109</b>	10 - 140		12/10/2016 15:11

**Method** EPA 8082A  
EPA 3550C  
**Reference(s):** 12/9/2016

**Preparation Date:**



## Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

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All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

*"<" = Analyzed for but not detected at or above the quantitation limit.*

*"E" = Result has been estimated, calibration limit exceeded.*

*"Z" = See case narrative.*

*"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.*

*"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.*

*"B" = Method blank contained trace levels of analyte. Refer to included method blank report.*

*"J" = Result estimated between the quantitation limit and half the quantitation limit.*

*"L" = Laboratory Control Sample recovery outside accepted QC limits.*

*"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.*

*"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.*

*"\*" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.*

*"(1)" = Indicates data from primary column used for QC calculation.*

*"A" = denotes a parameter for which ELAP does not offer approval as part of their laboratory certification program.*

*"F" = denotes a parameter for which Paradigm does not carry certification, the results for which should therefore only be used where ELAP certification is not required, such as personal exposure assessment.*

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# GENERAL TERMS AND CONDITIONS

## LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

### **Warranty.**

Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

### **Scope and Compensation.**

LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB will use LAB default method for all tests unless specified otherwise on the Work Order.

Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

### **Prices.**

Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

### **Limitations of Liability.**

In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.

LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.

All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.

Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

### **Hazard Disclosure.**

Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

### **Sample Handling.**

Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises. Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on the final report.

Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.

LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

### **Legal Responsibility.**

LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

### **Assignment.**

LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

### **Force Majeure.**

LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

### **Law.**

This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.



# CHAIN OF CUSTODY

1 of 2

REPORT TO:		INVOICE TO:	
COMPANY: Fisher Associates		COMPANY: Same	
ADDRESS: 135 Calkins Road, Suite A		ADDRESS:	
CITY: Rochester	STATE: NY	ZIP: 14623	LAB PROJECT #: 165265
PHONE: (585) 334-1310		FAX:	
ATTN: Mark Stein		ATTN:	
COMMENTS: BIN 55160 <del>71</del>		CLIENT PROJECT #: TURNAROUND TIME: (WORKING DAYS)	
		<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> 5 <input type="checkbox"/> OTHER	
PROJECT NAME/SITE NAME: Bridge Haz Survey - 151021-09		Quotation #	

REQUESTED ANALYSIS										
DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	CONTAINER	LEAD	PCB	REMARKS	PARADIGM LAB SAMPLE NUMBER
1 12/02/16	13:30			LBP 1	Paint	1	X			01
2 ↓	↓			LBP 2	↓	1	X			02
3 ↓	↓			LBP 3	↓	1	X			03
4 ↓	↓			PCB 7	Caulk	2	X	X		04
5										
6										
7										
8										
9										
10										

**\*\*LAB USE ONLY BELOW THIS LINE\*\***

Sample Condition: Per NELAC/ELAP 210/241/242/243/244

Receipt Parameter	NELAC Compliance
Container Type: _____ <small>Comments:</small>	Y <input type="checkbox"/> N <input type="checkbox"/>
Preservation: _____ <small>Comments:</small>	Y <input type="checkbox"/> N <input type="checkbox"/>
Holding Time: _____ <small>Comments:</small>	Y <input type="checkbox"/> N <input type="checkbox"/>
Temperature: 20°C 12/5/16 16:46 <small>Comments:</small>	Y <input type="checkbox"/> N <input type="checkbox"/>

	12/02/16	13:30	
Sampled By	Date/Time		
	12/05/16	16:30	
Relinquished By	Date/Time		
	12/5/16	1630	
Received By	Date/Time		
	12/16/16	10:55	
Received @ Lab By	Date/Time		

Total Cost:

P.I.F.



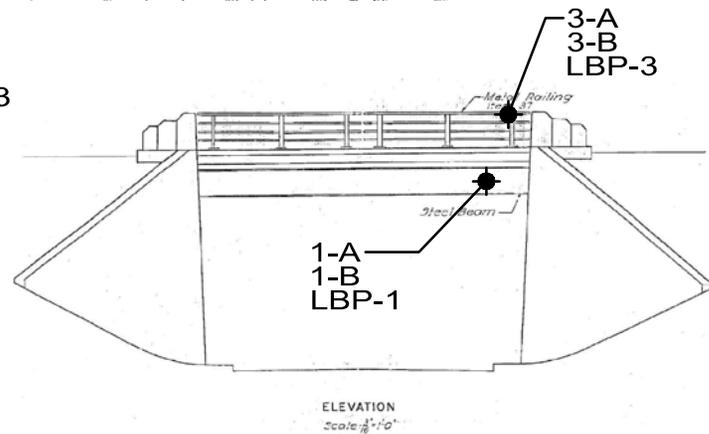
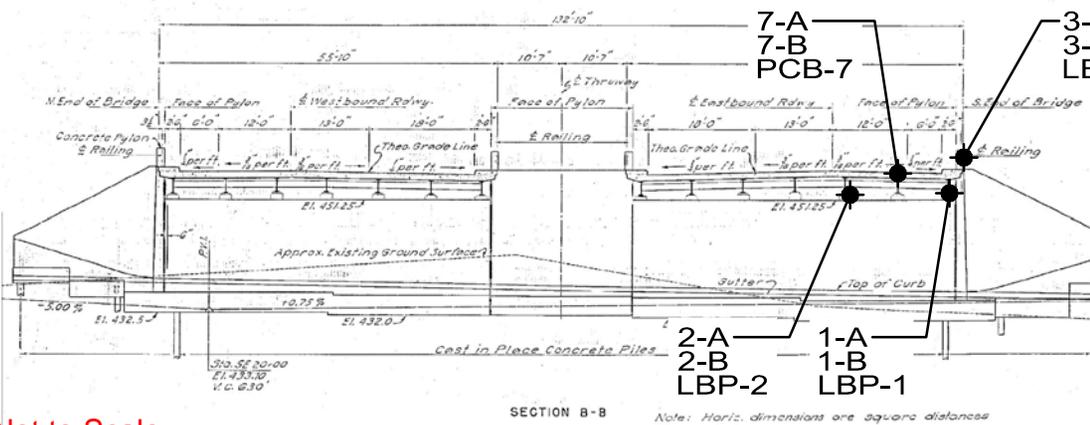
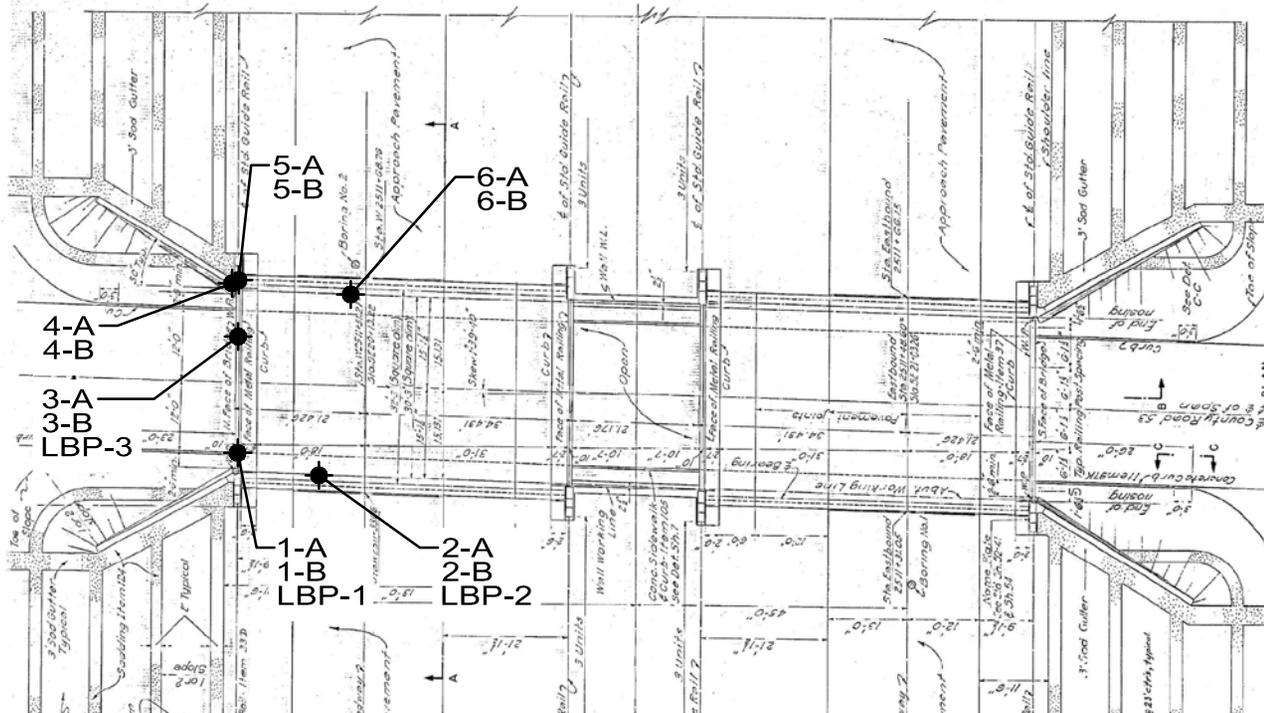
Chain of Custody Supplement

Client: Fisher Associates Completed by: Glenn Pezzulo  
 Lab Project ID: 165265 Date: 12/6/16

**Sample Condition Requirements**  
 Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt		
	Yes	No	N/A
Container Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		
Transferred to method-compliant container	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Headspace (<1 mL)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Preservation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Chlorine Absent (<0.10 ppm per test strip)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Holding Time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		
Temperature	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> mtr ls
Comments	<u>20°C</u>		
Sufficient Sample Quantity	<input checked="" type="checkbox"/> MPDL	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		

**APPENDIX D**  
**SAMPLE LOCATION PLANS**



Not to Scale

SECTION B-B

Note: Horiz. dimensions are square distances

ELEVATION  
Scale: 1/4" = 1'-0"

**FISHER**   
ASSOCIATES

WWW.FISHERASSOC.COM

**LEGEND:**

-  1-A SAMPLE LOCATION AND IDENTIFICATION

**Figure No. H1.01**  
SAMPLE LOCATION PLAN  
D214385 B.I.N. 5516071

I-90 MAINLINE (WESTBOUND) BRIDGE OVER COUNTY ROUTE 53  
TOWN OF FRANKFORT  
HERKIMER COUNTY, NEW YORK

FA #151021.09

FEBRUARY 2017

**APPENDIX E**  
**HAZARDOUS MATERIAL LOCATION PLANS**



**HAZARDOUS WASTE-CONTAMINATED MATERIALS  
TECHNICAL MEMORANDUM**

**for**

**NEW YORK STATE THRUWAY AUTHORITY**

**D214385      BIN 5516072  
I-90 BRIDGE OVER COUNTY ROUTE 53  
TOWN OF FRANKFORT  
HERKIMER COUNTY**

**Prepared by:**



**February 2017**

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    **1.4 Summary of Findings ..... 1**  
**2.0 MATERIAL SAMPLING AND LABORATORY METHODOLOGY ..... 2**  
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**Appendices**

- Appendix A – Project Location Map
- Appendix B – Fisher Associates’ Certifications and Laboratory Accreditation
- Appendix C – Laboratory Analytical Data
- Appendix D – Sample Location Plans
- Appendix E – Hazardous Material Location Plans

## 1.0 INTRODUCTION

Fisher Associates P.E., L.S., L.A., D.P.C. (“Fisher Associates”) is working with Stantec Consulting Services, Inc. (Stantec), and the New York State Thruway Authority (NYSTA), to prepare this Hazardous Materials Technical Memorandum, here after referred to as HMTM, in technical support of the proposed replacement of the I-90 Thruway bridge (Eastbound) over County Route 53 in the Town of Frankfort, Herkimer County, New York. The project area was investigated on December 2, 2016 as part of the project. The project location is shown on the Project Location Map in Appendix A.

### 1.1 Purpose and Scope

The purpose of this HMTM is to identify asbestos-containing materials (ACMs), lead based paint (LBP), lead containing materials (LCMs), and polychlorinated biphenyls (PCBs), collectively known as Hazardous Waste Contaminated Materials (HWCM), within the bridge rehabilitation project corridor, and to develop quantity estimates for abatement of identified HWCMs.

### 1.2 Background

This HMTM is consistent with the requirements outlined in the NYSDOL Industrial Code Rule 56 (Code Rule 56), which requires an asbestos pre-demolition survey and asbestos abatement to be performed prior to any alterations, renovations or demolition.

### 1.3 Record Review Activities

Fisher Associates received no previous sampling reports to review. As-built drawings of the bridge were reviewed to identify potential ACM sample locations and for the presence of lead containing materials such as bearing pads or joint spacers.

### 1.4 Summary of Findings

Table 1.1 summarizes those materials found to be positive for ACM, LBP, and/or PCBs based on current sample analysis. Added detail is presented in the following sections.

**Table 1.1**  
**Summary of Findings**  
**I-90 Mainline (Eastbound) over County Route 53**

<b>Sample Identification</b>	<b>Material</b>	<b>Sample Location</b>	<b>Approx. Quantity</b>
N/A	Lead Bearing Pad	Under Bridge Bearings	39 SF

## 2.0 MATERIAL SAMPLING AND LABORATORY METHODOLOGY

A NYSDOL-certified asbestos inspector from Fisher Associates collected bulk samples of suspect asbestos-containing materials (ACMs) on December 2, 2016. Bulk samples were collected using hand tools from each matrix identified as a potential ACM. Additionally, paint samples were collected and analyzed for lead, and caulking/adhesive materials were collected and analyzed for PCBs. Upon completion of the sampling, a chain-of-custody form was completed for the materials sampled.

Samples were delivered under standard chain-of-custody protocol to Paradigm Environmental Services, Inc. (Paradigm), a New York State Department of Health (NYSDOH) certified laboratory. The procedures followed are in accordance with the NYSDOH Environmental Laboratory Approval Program (ELAP). New York State Department of Labor (NYSDOL) Code Rule 56 defines materials containing greater than one percent (1%) asbestos by weight as being Asbestos Containing Materials.

The paint samples were analyzed via SW846 Method 3050 /6010 to determine the lead content of the paints. Those materials having a concentration equal or greater than 0.5% by weight in lead are considered to be lead based.

The materials sampled for PCBs were analyzed by USEPA Method 8082. According to the USEPA, materials containing greater than fifty (50) parts per million (ppm) are considered PCB-containing.

Copies of Fisher Associates' Asbestos Handling License, the Asbestos Inspector's certification, and the Laboratory's Accreditation are in Appendix B. Copies of the laboratory's analytical results are included in Appendix C. The Sample Location Plans are included in Appendix D. The Hazardous Material Locations Plans are included in Appendix E.

## 3.0 SAMPLE RESULTS AND LOCATIONS

### 3.1 Asbestos Containing Materials

Table 3.1 provides a summary of the laboratory analytical results for the samples collected from the building materials identified on and around the bridge structure and nearby roadway that may be disturbed. Those samples identified as being ACMs (greater than one percent asbestos) are shaded in the table. Refer to the Sample Location Plans in Appendix D for locations of sample collection.

**Table 3.1**  
**Summary of Samples Collected and Results**  
**I-90 Mainline Bridge (Eastbound) over County Route**  
**53**

Sample Identification	Material	Sample Location	% Asbestos
1-A	Green Paint	Outside of Girders	NAD
1-B	Green Paint	Outside of Girders	NAD
2-A	Grey Paint	Underside of Bridge, Inside of Girder	NAD

Sample Identification	Material	Sample Location	% Asbestos
2-B	Grey Paint	Underside of Bridge, Inside of Girder	NAD
3-A	Green Paint	Guard Railings	NAD
3-B	Green Paint	Guard Railings	NAD
4-A	Black Fibrous Material	B/w Abutment Joints and Wingwalls Joints	NAD
4-B	Black Fibrous Material	B/w Abutment Joints and Wingwalls Joints	NAD
5-A	Sheet Material	B/w Abutment and Wingwall Joint	NAD
5-B	Sheet Material	B/w Abutment and Wingwall Joint	NAD

### 3.2 Lead Containing Materials (LCMs)

Table 3.2 below lists the sample identification, the type of material, the sample location, and the percent of lead for each sample. Those samples identified as being Lead Based Paint (LBP), having a concentration of 0.5% by weight or greater, are shaded in the table. Additionally, a review of the as-built drawings indicated the presence of lead bearing pads at the top of the concrete center piers. Well these bearing pads were not sampled during this investigation, they are called out in this report as lead containing due to their description in the draws as “lead”, as well as their common use in bridge construction.

**Table 3.2**  
**Summary of Lead Based Paint Samples Collected and Results**  
**I-90 Mainline Bridge (Eastbound) over County Route 53**

Sample Identification	Material	Sample Location	Lead (% by weight)
LBP-1	Green Paint	Outside of Girders	0.147
LBP-2	Grey Paint	Underside of Bridge, Inside of Girder	0.00864
LBP-3	Green Paint	Guard Railings	0.117
N/A	Bearing Pads	Under Bridge Bearings	Assumed Positive

### 3.3 Polychlorinated Biphenyls (PCBs)

There were no potential PCB containing material observed during the inspection therefore no PCB samples were collected.

#### 4.0 QUANTITY ESTIMATES

This section summarizes estimated quantities of the positively identified ACMs, LBPs, and/or PCBs found in the various materials sampled during the assessment. The approximate locations and extent of the ACMs are shown on the Sample Location Plans shown in Appendix D.

##### 4.1 Asbestos

Potential ACMs were sampled by Fisher Associates and tested via laboratory analysis. None of the samples analyzed are considered to be ACMs.

##### 4.2 Lead

Samples were collected of potential lead-containing materials during the investigation conducted by Fisher Associates and tested via laboratory analysis. None of the paint samples analyzed are considered to be lead-based. However, a review of the as-built draws of the bridge indicated the presence of lead bearing pads under both the expansion bearings and fixed bearings.

**Table 4.2**  
**Estimated Quantities of Lead-Containing Materials**  
**I-90 Mainline Bridge (Eastbound) over County Route**  
**53**

Material	Sample Id	Sample Location	Quantity
Lead Bear Pad	N/A	Under Bridge Bearings	39 SF

##### 4.3 PCBs

Fisher Associates did not observe any caulking materials to sample during this investigation.

#### 5.0 CONCLUSIONS

##### 5.1 Asbestos

No asbestos containing materials (ACMs) have been identified as part of this assessment. In accordance with 12 NYCRR 56, no demolition or renovation work shall be commenced by any owner or agent prior to completion of asbestos abatement performed by a licensed asbestos abatement contractor. If suspect asbestos containing materials not identified in this pre-demolition asbestos survey report are discovered during the demolition process, it is required that the presence, location and quantity of newly discovered material, be conveyed within twenty-four (24) hours of discovery to the owner or their representative. All activities must cease in the area where the presumed asbestos containing material or suspect miscellaneous ACM is found, until a licensed asbestos contractor appropriately assesses and manages the discovered materials.

## **5.2 Lead**

Fisher Associates identified potential LCMs via a review of available bridge construction drawings. It is recommended that a Lead Abatement and Handling of Lead Containing Materials specification section be developed. This section specifies the requirements for the detection and prevention of lead dust contamination in lead dust control work areas and areas adjacent to them, protection of workers, post-work cleaning, pre-disposal testing and appropriate disposal of removed material.

Finally, all trades must follow the Occupational Safety & Health Administration (OSHA) 29 CFR 1926.62 regulation, which considers any amount of Lead to be of concern. The regulation states that the employer shall assure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air ( $50 \mu\text{g}/\text{m}^3$ ) averaged over an 8-hour period.

## **5.3 PCBs**

No potential PCB containing materials were found and analyzed as a part of this investigation conducted by Fisher Associates. Materials are considered to be PCB-containing if the total concentration of the PCB compounds exceeds fifty (50) parts per million (ppm). Based on the laboratory results, none of the materials tested are considered PCB-containing.

**APPENDIX A  
PROJECT LOCATION MAP**



**APPENDIX B  
FISHER ASSOCIATES' CERTIFICATIONS  
LABORATORY ACCREDITATION**

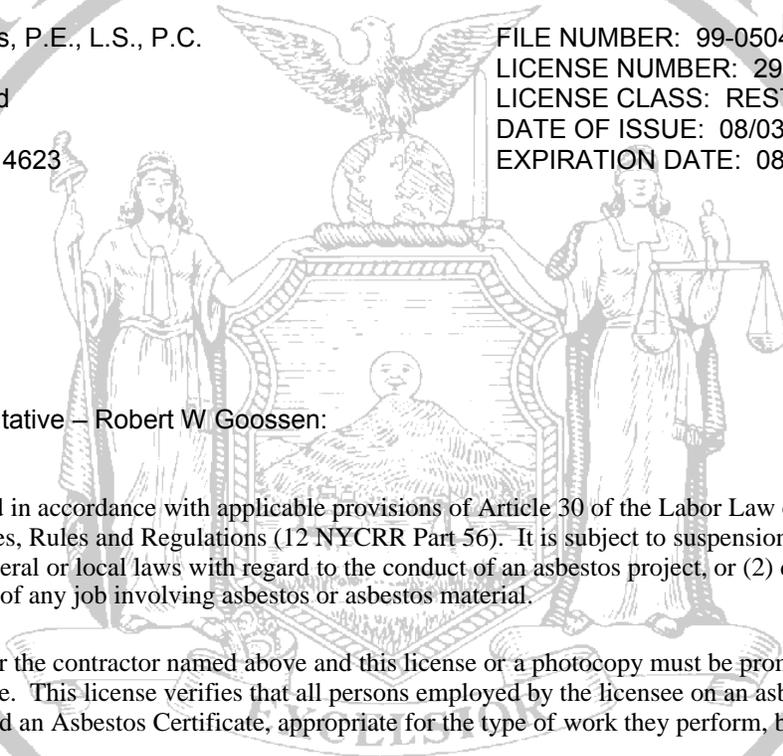
**New York State – Department of Labor**

Division of Safety  
and Health License  
and Certificate Unit State  
Campus Building 12  
Albany, NY 12240

**ASBESTOS HANDLING LICENSE**

Fisher Associates, P.E., L.S., P.C.  
Suite A  
135 Calkins Road  
Rochester, NY 14623

FILE NUMBER: 99-0504  
LICENSE NUMBER: 29344  
LICENSE CLASS: RESTRICTED  
DATE OF ISSUE: 08/03/2016  
EXPIRATION DATE: 08/31/2017



Duly Authorized Representative – Robert W Goossen:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.

*Eileen M. Franko*

Eileen M. Franko, Director For  
the Commissioner of Labor

STATE OF NEW YORK - DEPARTMENT OF LABOR  
ASBESTOS CERTIFICATE



**MARK T STEIN**  
CLASS(EXPIRES)  
C ATEC(03/17) D INSP(03/17)  
H PM (03/17) I PD (03/17)



CERT# 00-07444  
DMV# 457924110

**MUST BE CARRIED ON ASBESTOS PROJECTS**



IF FOUND RETURN TO:  
NYS DOL - L&C UNIT  
ROOM 161A BUILDING 12  
STATE OFFICE CAMPUS  
ALBANY NY 12240



01213 000706159 17  
EYES BLU  
HAIR BRO  
HGT 6' 03"

# United States Environmental Protection Agency

This is to certify that

Mark T. Stein



has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Risk Assessor

## In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires August 25, 2019

LBP-R-36347-1

Certification #

June 27, 2016

Issued On

John Gorman, Chief

Pesticides & Toxic Substances Branch



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

DR. THOMAS R. MCKEE  
AMERISCI RICHMOND  
13635 GENITO RD  
MIDLOTHIAN, VA 23112

NY Lab Id No: 10984

*is hereby APPROVED as an Environmental Laboratory for the category  
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
All approved subcategories and/or analytes are listed below:*

**Miscellaneous**

Asbestos in Friable Material	Item 198.1 of Manual EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual



**Serial No.: 54118**

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. STEVE DEVITO  
PARADIGM ENVIRONMENTAL SERVICES INC  
179 LAKE AVENUE  
ROCHESTER, NY 14608

NY Lab Id No: 10958

*is hereby APPROVED as an Environmental Laboratory for the category  
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
All approved subcategories and/or analytes are listed below:*

**Miscellaneous**

Asbestos in Friable Material	Item 198.1 of Manual EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual
Lead in Dust Wipes	EPA 6010C
Lead in Paint	EPA 6010C

**Sample Preparation Methods**

EPA 3050B

NEW  
YORK  
STATE

Department  
of Health

Serial No.: 54682

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

**NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER**



Expires 12:01 AM April 01, 2017  
Issued April 01, 2016  
Revised May 20, 2016

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

**MR. STEVE DEVITO**  
**PARADIGM ENVIRONMENTAL SERVICES INC**  
**179 LAKE AVENUE**  
**ROCHESTER, NY 14608**

**NY Lab Id No: 10958**

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards (2003) for the category  
ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

**Nitroaromatics and Isophorone**

2,4-Dinitrotoluene	EPA 625
	EPA 8270D
2,6-Dinitrotoluene	EPA 625
	EPA 8270D
Isophorone	EPA 625
	EPA 8270D
Nitrobenzene	EPA 625
	EPA 8270D

**Phthalate Esters**

Diethyl phthalate	EPA 625
	EPA 8270D
Dimethyl phthalate	EPA 625
	EPA 8270D
Di-n-butyl phthalate	EPA 625
	EPA 8270D
Di-n-octyl phthalate	EPA 625
	EPA 8270D

**Nitrosoamines**

N-Nitrosodimethylamine	EPA 625
	EPA 8270D
N-Nitrosodi-n-propylamine	EPA 625
	EPA 8270D
N-Nitrosodiphenylamine	EPA 625
	EPA 8270D

**Polychlorinated Biphenyls**

PCB-1016	EPA 8082A
	EPA 608
PCB-1221	EPA 8082A
	EPA 608
PCB-1232	EPA 8082A
	EPA 608
PCB-1242	EPA 8082A
	EPA 608
PCB-1248	EPA 8082A
	EPA 608
PCB-1254	EPA 8082A
	EPA 608
PCB-1260	EPA 8082A
	EPA 608
PCB-1262	EPA 8082A
PCB-1268	EPA 8082A

**Organophosphate Pesticides**

Atrazine	EPA 8270D
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**Petroleum Hydrocarbons**

Diesel Range Organics	EPA 8015D
-----------------------	-----------

**Phthalate Esters**

Benzyl butyl phthalate	EPA 625
	EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 625
	EPA 8270D

**Serial No.: 54805**

Property of the New York State Department of Health. Certificates are valid only at the address shown; must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.



**APPENDIX C**  
**LABORATORY ANALYTICAL DATA**



**PLM & TEM BULK ASBESTOS ANALYSIS REPORT**  
**via NYSDOH ELAP Method 198.1, 198.4 and 198.6**

**Client:** Fisher Associates  
**Location:** BIN 5516072

**Job No:** 12193-16  
**Page:** 1 of 2

**Sample Date:** 12/2/2016

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
1A	101771	Outside Girder	Green Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
1B	101772	Outside Girder	Green Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
2A	101773	Inside Girder	Gray Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
2B	101774	Inside Girder	Gray Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
3A	101775	Guard Rail	Green Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
3B	101776	Guard Rail	Green Paint	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
4A	101777	B/W Abutment & Wing Wall	Black Fibrous Material	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
4B	101778	B/W Abutment & Wing Wall	Black Fibrous Material	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
5A	101779	Sheet Material B/W Abutment & Wing Wall	Black Fibrous Material	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%
5B	101780	Sheet Material B/W Abutment & Wing Wall	Black Fibrous Material	Inconclusive No Asbestos Detected	0%	✓	None Detected	<1.0%	None Detected	100%

**KEY TO NOB COLUMN SYMBOLS**

No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).  
 ✓ NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 √ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.  
 # denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.  
 X denotes sample prepped only by ELAP Method 198.6.  
 \*\* Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.  
 Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1, 198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.") or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0).



Lab Code 200530-0 for PLM Analysis

**PLM Date Analyzed:** 12/12/2016  
**Microscope:** Olympus BH-2 #221797  
**Analyst:** T. Ma

**TEM Date Analyzed:** 12/12/2016  
**TEM Analyst:** F. Weinman

**ELAP ID No.: 10958**

**Laboratory Results Approved By:**  
**Asbestos Operations Manager or Designee**

Mary Dohr

Paradigm Environmental Services, Inc. is not responsible for the data supplied by an independent inspector. National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the laboratory. This PLM report relates ONLY to the items tested. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Quality control data (including 95% confidence limits and laboratory and analysts' and precision) is available upon request.



## CHAIN OF CUSTODY FOR BULK ASBESTOS ANALYSIS

10/1

179 Lake Avenue, Rochester, New York 14608      Office: 585-647-2530  
 1815 Love Road, Grand Island, New York 14072      Office: 716-775-5777

<b>Client:</b> Fisher Associates	<b>Contact:</b> Mark Stein
<b>Phone Number:</b> (585) 334-1310	<b>Email Address for Data:</b> mstein@fisherassoc.com
<b>Results To:</b> Mark Stein	<b>Turn Around Time:</b> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 5 <input checked="" type="checkbox"/> Other <input type="checkbox"/>
<b>Date Sampled:</b>	<b>Material Type/Quantity:</b> Friable      NOB      TEM
<b>Project Location:</b> BIN 5516072	

**Client Mailing Address:**  
135 Calkins Road  
  
Rochester, NY 14623

OFFICE USE ONLY	
Job #:	12193-110
Page _____ of _____	
Date Logged In:	12/16/16
Logged In By:	VK

	Client ID	Lab ID	Sampling Location	Color	Material Size	Type of Material
1	1A	10/771	Outside girder	Green	NOB	Paint
2	<del>2A</del> 2B	772	" "	"	↓	↓
3	<del>2A</del> 2A	773	Inside girder	Grey	↓	↓
4	2B	774		"	↓	↓
5	3A	775	Guard rail	green	↓	↓
6	3B	776	" "	"	↓	↓
7	4A	777	Blw abutment & wing wall	Black	F	Fibrous Mat.
8	4B	778	" " "	"	↓	" "
9	5A	779	Sheet material blw abutment & wing wall		↓	
10	5B	780	" " "		↓	

<b>Sampled By:</b> <i>[Signature]</i>	<b>Date:</b> 12/02/16
<b>Transported to Paradigm By:</b> <i>[Signature]</i>	<b>Date:</b> 12/05/16
<b>Received By:</b> <i>[Signature]</i>	<b>Date:</b> 12/15/16

All samples will be analyzed by the appropriate New York State Department of Health methods (198.1, 198.4 and 198.6) unless EPA 600/M4/82/020 per 40 CFR 763 and/or EPA 600/R-93/116 methods are requested.

**CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS**

or provide TEM contact name: \_\_\_\_\_

**TOTAL NUMBER OF SAMPLES ON ALL CHAINS OF CUSTODY:** 4 F 6 NOB

VK 12/16/16



*Analytical Report For*  
**Fisher Associates**

*For Lab Project ID*

**165268**

*Referencing*

Bridge Haz Survey, 151021-09, BIN 5516072

*Prepared*

Monday, December 12, 2016

Any noncompliant QC parameters or other notes impacting data interpretation are flagged or documented on the final report or are noted below:

***Reduced sample size used for Lead analysis due to limited sample volume. Kindly refer to the Chain of Custody Supplement for the affected sample(s).***

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Certifies that this report has been approved by the Technical Director or Designee

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This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.



**Lab Project ID: 165268**

**Client:** Fisher Associates

**Project Reference:** Bridge Haz Survey, 151021-09, BIN 5516072

**Sample Identifier:** LBP 1

**Lab Sample ID:** 165268-01

**Date Sampled:** 12/2/2016

**Matrix:** Paint

**Date Received:** 12/6/2016

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>0.147</b>	%		12/8/2016 11:38

**Method Reference(s):** EPA 6010C

EPA 3050B

**Preparation Date:** 12/6/2016

**Data File:** 120816a



**Lab Project ID: 165268**

**Client: Fisher Associates**

**Project Reference: Bridge Haz Survey, 151021-09, BIN 5516072**

**Sample Identifier: LBP 2**

**Lab Sample ID: 165268-02**

**Date Sampled: 12/2/2016**

**Matrix: Paint**

**Date Received: 12/6/2016**

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>0.00864</b>	%		12/8/2016 11:42

**Method Reference(s):** EPA 6010C

EPA 3050B

**Preparation Date:** 12/6/2016

**Data File:** 120816a



**Lab Project ID: 165268**

**Client:** Fisher Associates

**Project Reference:** Bridge Haz Survey, 151021-09, BIN 5516072

**Sample Identifier:** LBP 3

**Lab Sample ID:** 165268-03

**Date Sampled:** 12/2/2016

**Matrix:** Paint

**Date Received:** 12/6/2016

**Lead**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date Analyzed</u>
Lead	<b>0.117</b>	%		12/8/2016 11:55

**Method Reference(s):** EPA 6010C

EPA 3050B

**Preparation Date:** 12/6/2016

**Data File:** 120816a



## Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

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All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

*"<" = Analyzed for but not detected at or above the quantitation limit.*

*"E" = Result has been estimated, calibration limit exceeded.*

*"Z" = See case narrative.*

*"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.*

*"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.*

*"B" = Method blank contained trace levels of analyte. Refer to included method blank report.*

*"J" = Result estimated between the quantitation limit and half the quantitation limit.*

*"L" = Laboratory Control Sample recovery outside accepted QC limits.*

*"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.*

*"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.*

*"\*" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.*

*"(1)" = Indicates data from primary column used for QC calculation.*

*"A" = denotes a parameter for which ELAP does not offer approval as part of their laboratory certification program.*

*"F" = denotes a parameter for which Paradigm does not carry certification, the results for which should therefore only be used where ELAP certification is not required, such as personal exposure assessment.*

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# GENERAL TERMS AND CONDITIONS

## LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

### **Warranty.**

Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

### **Scope and Compensation.**

LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB will use LAB default method for all tests unless specified otherwise on the Work Order.

Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

### **Prices.**

Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

### **Limitations of Liability.**

In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.

LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.

All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.

Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

### **Hazard Disclosure.**

Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

### **Sample Handling.**

Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises. Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on the final report.

Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.

LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

### **Legal Responsibility.**

LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

### **Assignment.**

LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

### **Force Majeure.**

LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

### **Law.**

This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

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# CHAIN OF CUSTODY

REPORT TO:		INVOICE TO:	
COMPANY: Fisher Associates		COMPANY: Same	
ADDRESS: 135 Calkins Road, Suite A		ADDRESS:	
CITY: Rochester STATE: NY ZIP: 14623		CITY: STATE: ZIP:	
PHONE: (585) 334-1310 FAX:		PHONE: FAX:	
ATTN: Mark Stein		ATTN:	
COMMENTS: BIN 5516072		LAB PROJECT #: 165268 CLIENT PROJECT #: TURNAROUND TIME: (WORKING DAYS) 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input checked="" type="checkbox"/> 5 <input type="checkbox"/>	
PROJECT NAME/SITE NAME: Bridge Haz Survey - 151021-09		Quotation #	

## REQUESTED ANALYSIS

DATE	TIME	C O M P O S I T E	G R A B	SAMPLE LOCATION/FIELD ID	M A T R I X	C O N T A I N E R	L E A D												REMARKS	PARADIGM LAB SAMPLE NUMBER	
1 12/02/16	13:30			LBP 1	Paint	1	X														01
2	↓			LBP 2	↓	2	X														02
3	↓			LBP 3	↓	2	X														03
4																					
5																					
6																					
7																					
8																					
9																					
10																					

**\*\*LAB USE ONLY BELOW THIS LINE\*\***  
 Sample Condition: Per NELAC/ELAP 210/241/242/243/244

Receipt Parameter	NELAC Compliance	
Container Type:	Y <input type="checkbox"/>	N <input type="checkbox"/>
Comments: _____		
Preservation:	Y <input type="checkbox"/>	N <input type="checkbox"/>
Comments: _____		
Holding Time:	Y <input type="checkbox"/>	N <input type="checkbox"/>
Comments: _____		
Temperature:	Y <input type="checkbox"/>	N <input type="checkbox"/>
Comments: _____		

*[Signature]* 12/02/16 13:30  
 Sampled By Date/Time  
*[Signature]* 12/05/16 16:30  
 Relinquished By Date/Time  
*[Signature]* 12/5/16 16:30  
 Received By Date/Time  
*[Signature]* 12/6/16 11:20  
 Received @ Lab By Date/Time

Total Cost:

P.I.F.



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### Chain of Custody Supplement

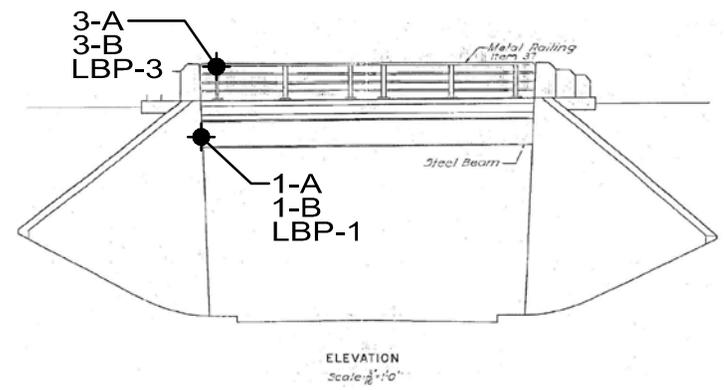
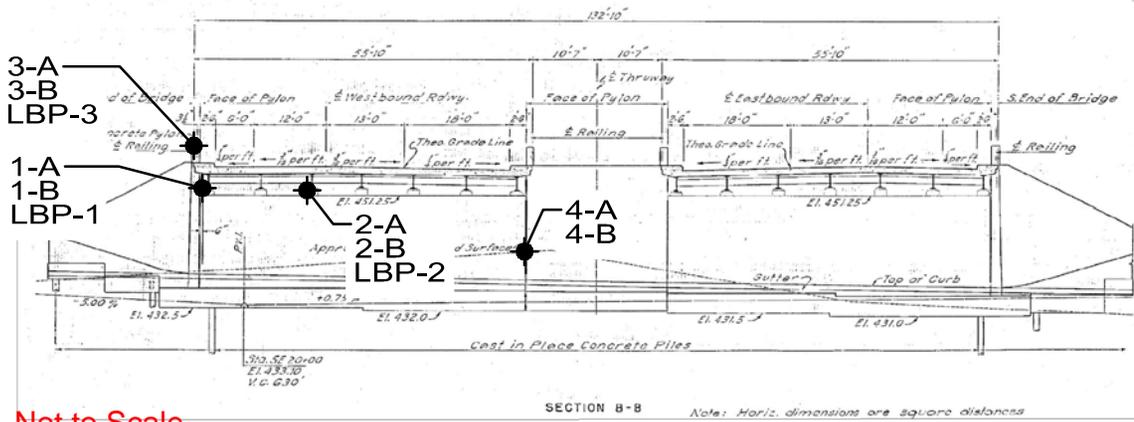
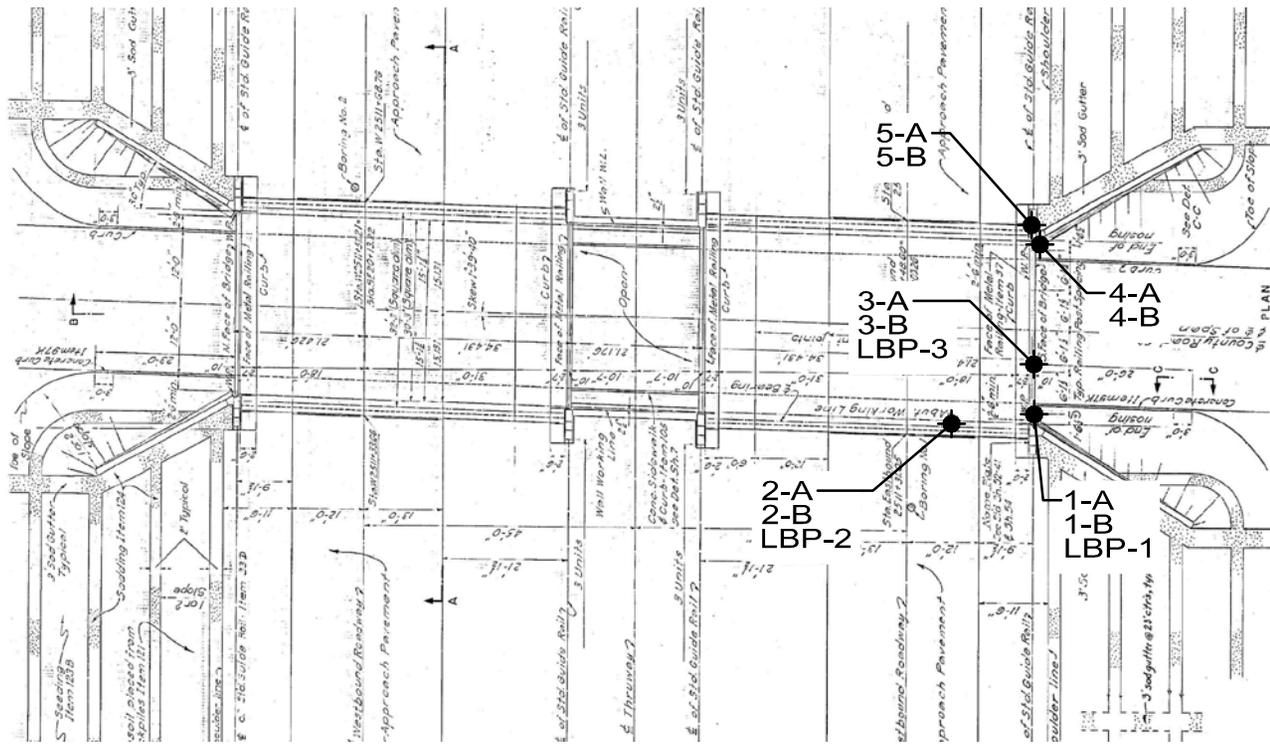
Client: Fisher Associates  
Lab Project ID: 165268

Completed by: Glenn Pezzullo  
Date: 12/6/16

#### Sample Condition Requirements Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt		
	Yes	No	N/A
Container Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		
Transferred to method-compliant container	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Headspace (<1 mL)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Preservation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Chlorine Absent (<0.10 ppm per test strip)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Holding Time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	_____		
Temperature	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	_____		
Sufficient Sample Quantity	<input checked="" type="checkbox"/> -01, -02	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Comments	<u>lim. volume -03</u>		

**APPENDIX D  
SAMPLE LOCATION PLANS**



Not to Scale



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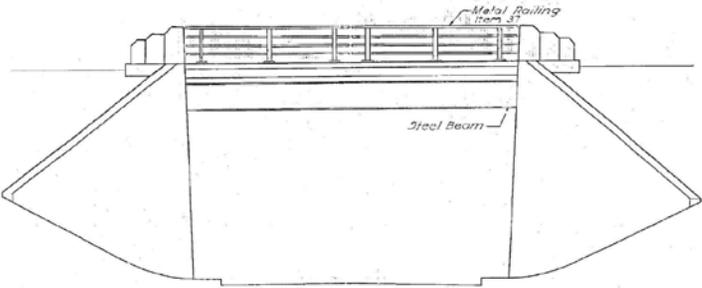
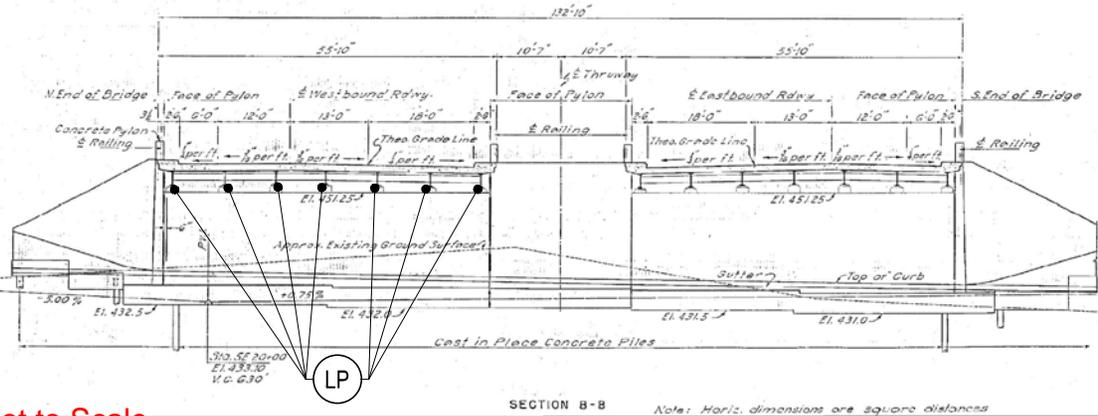
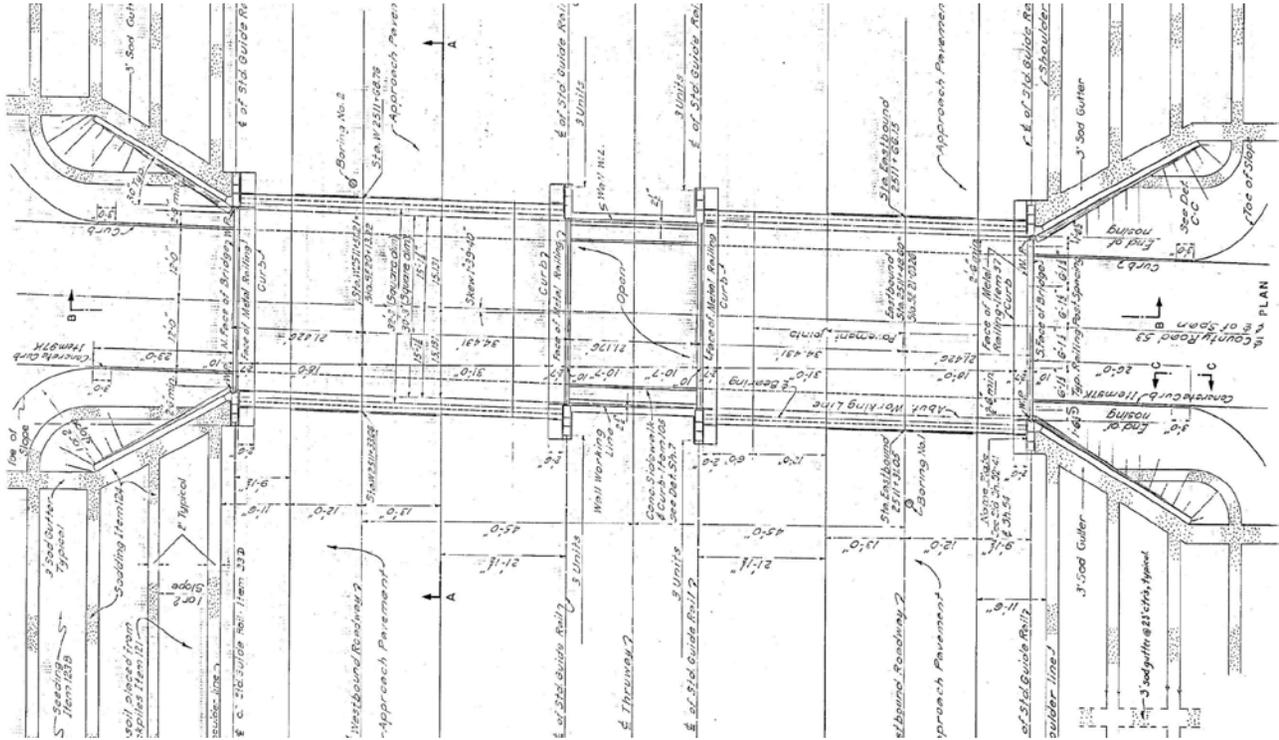
LEGEND:

- 1-A SAMPLE LOCATION AND IDENTIFICATION

Figure No. H1.01  
SAMPLE LOCATION PLAN  
D214385 B.I.N. 5516072

I-90 MAINLINE (EASTBOUND) BRIDGE OVER COUNTY ROUTE 53  
TOWN OF FRANKFORT  
HERKIMER COUNTY, NEW YORK  
FA #151021.09 FEBRUARY 2017

**APPENDIX E**  
**HAZARDOUS MATERIAL LOCATION PLANS**



Not to Scale



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LEGEND

- AC ASBESTOS-CONTAINING
- PCB POLYCHLORINATED BIPHENYLS
- LF LINEAR FEET
- SF SQUARE FEET

LP LEAD BEARING PAD

Figure No. H2.01  
HAZARDOUS MATERIALS LOCATION PLAN  
D214385 B.I.N. 5516072

I-90 MAINLINE (EASTBOUND) BRIDGE OVER COUNTY ROUTE 53  
TOWN OF FRANKFORT  
HERKIMER COUNTY, NEW YORK  
FA #151021.09 FEBRUARY 2017