D010319, P.I.N. X731.45
Rehabilitation of the Bruckner Expressway Viaduct
BRONX COUNTY, NEW YORK

Technical Memorandum
and
Preliminary Findings Draft Asbestos Sampling and Analysis Plan
AKRF Project Number: 20521

Prepared for:
New York State Department of Transportation, Region 11
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Appendix A – Company Certification
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1.0 INTRODUCTION

An asbestos assessment (preliminary investigation) is required to be performed as part of the New York State Department of Transportation (NYSDOT) Rehabilitation of the Bruckner Expressway Viaduct in Bronx County, New York (PIN X731.45, D010319).

The project proposes to rehabilitate an approximately 2 mile portion of the Bruckner Expressway in the Bronx, New York starting at the interchange with the Major Deegan Expressway and ending just beyond the interchange with the Sheridan Expressway. Rehabilitation may include replacing the decks and/or superstructures and repair of other deteriorated elements such as the concrete substructure and bearings to assure continued safe operations.

The following expressway structures are affected by this project:

- BIN 1066669: Southern End to Westchester Avenue, Bronx County
- BIN 106666 A through H : Southern End to the Sheridan Expressway Interchange, Bronx County
- BIN 1075310: Lafayette Street to the Sheridan Expressway Interchange, Bronx County
- BIN 1075819: Sheridan Expressway Interchange to Wheeler Avenue, Bronx County

AKRF, Inc. (AKRF) conducted a preliminary asbestos assessment of the project area to identify any suspect asbestos containing materials (SACM) that may be disturbed or affected by construction/rehabilitation activities. Areas to be inspected for SACM included the areas associated with the structures above within the project limits that will be impacted as detailed below in Section 2.0 - Site Description.

The preliminary asbestos assessment was conducted on April 15, 2016 by Gregory Baird and Steve Schmid, New York State-certified Asbestos Inspectors. Copies of company and personnel certifications are included in Appendix A.

As part of the assessment, AKRF reviewed available documents including record plans and as-built drawings. Details of reviewed documents are provided in Section 2.0. A comprehensive asbestos survey must still be conducted by a NYSDOL-certified asbestos inspector prior to disturbing any SACM.

2.0 SITE DESCRIPTION

This project includes bridge/highway/ramp structures designated for rehabilitation primarily consisting of deck replacement with superstructure and substructure repairs along the Bruckner Expressway. The project area consists of an approximately 2 mile portion of the Bruckner Expressway in the Bronx, starting at the interchange with the Major Deegan Expressway and ending just beyond the interchange with the Sheridan Expressway.

A preliminary site survey was conducted in order to determine which areas might have SACM and to compare the field observations with the record plans. The following site descriptions are as a result of a review of record plans, as built drawings, and field observations.

2.1 Document Review

2.1.1 Record Plan Review

Any ACMs and/or SACMs identified from the record plan review may or may not be impacted depending on the final scope of work.

St. Ann’s Avenue to E 141st Street (BIN 1066669 and 106666A through E):
AKRF reviewed drawings from the State of New York, Department of Public Works, Division of Construction, Interstate Route Connection 516, Bruckner Expressway (St. Ann’s Avenue to E 141st Street), Bronx County, Section 1 Contract 1, Contract Number F.I.B.E. 58-4 approved/dated 1957. These drawings indicated the following ACMs/SACMs:

- Anchor bolt detail – 3 x 1/4” transite washers.
- Conduit housing/cabinet – Ebony asbestos board with beveled edges.
- Expansion joint detail “A” – 3 x 1/8” transite board.
- Alignment Shoe – 2 x 1-2” transite pipe, 1/4” transite for full width of flange, all reinforced bars within 5” of alignment shoe are to be insulated with transite.

Lafayette Avenue to Lowell Street Ramps F, G and H (BIN 1075819 and 1066669):

AKRF reviewed drawings from the State of New York, Contract 3, Contract Number F.I.B.E 60-1, Bruckner Expressway Ramps F, G and H, dated 1960. These drawings indicated the following ACMs/SACMs:

- Anchor bolt detail – 3 x 1/4” transite washers.
- Detail “A” – 3 x 1/8” transite board.

Bryant Avenue to White Plains Road (BIN 1075819 and 1066669):

AKRF reviewed drawings from the State of New York, Department of Public Works, Division of Construction, Interstate Route Connection 516, Bruckner Expressway (Bryant Avenue to White Plains Road), Bronx County, Section 2 Contract 6, Contract Number F.I.B.E. 66-1 approved/dated 1966. These drawings indicated the following ACMs/SACMs:

- Bronx River Avenue Overpass Unit A – Compressed asbestos sheet packing graphited both sides 1/16” thick.
- Bronx River Avenue Overpass Units B and C – Compressed asbestos sheet packing graphited both sides 1/16” thick to be placed full length on top of pile cap and draped 1” over ends.
- Rosedale Avenue Overpass Units D and E – Compressed asbestos sheet packing 1/16” thick to be placed full length on top of pier back wall and pile cap and draped over ends.
- Bronx River Avenue Overpass Ramp “Y” – Compressed asbestos sheet packing graphited both sides 1/16” thick.

Triborough Interchange (BIN 1066669 and 106666A through E):

AKRF reviewed record plans from the State of New York, Department of Transportation, Office of Engineering, I-278 Bruckner Expressway and Ramps, Rehabilitation at Triborough Interchange, State Highway 171 in New York City, Bronx County, Contract 3A, Contract number D254956 approved/dated 1993. These drawings indicated the following ACMs/SACM:

- 1 line steel railing – Rubber impregnated random fiber pads composed of high quality elastomer with a random distribution of fabric or asbestos fiber.

E 141st Street to Lafayette Avenue (BIN 1066669 and 106666E):
AKRF reviewed drawings from the State of New York, Department of Public Works, Division of Construction, Bruckner Expressway (E 141st Street to Lafayette Avenue), Bronx County, Section 1 Contract 2, Contract Number F.I.B.E. 57-3 approved/dated 1957. These drawings indicated the following ACMs/SACMs:

- Piers 2-25 through 35 and 2-56 through 59 – All reinforcing bars within 5” of alignment shoe are to be insulated with transite, 1” transite for full width flange.
- Detail “A” – 3” x 1/3” transite board

2.1.2 Utility Drawing Review

No utility drawings were provided for review.

2.1.3 Previous Asbestos Survey Reports Review

No previous asbestos survey reports were provided for review.

2.2 Field Survey Observations

2.2.1 Southern End to Westchester Avenue (BIN 1066669)

AKRF performed a visual survey of this structure and the following SACMs were observed:

- Black light post base plates and washers
- Black gaskets beneath side railings
- Concrete skim and/or patching on vertical columns and/or underneath the structure
- Penetration packing/coating by drainage pipes
- Black expansion joint filler and/or tar
- Gaskets/caulking between jersey barriers
- Grey caulking between parapet wall segments
- Caulking between parapets and curbs

2.2.2 Southern End to the Sheridan Expressway Interchange (BIN 106666A through H)

AKRF performed a visual survey of these structures and the following SACMs were observed:

- Black expansion joint filler and/or tar
- Concrete skim and/or patching on vertical columns and/or underneath the structure
- Penetration packing/coating by drainage pipes
- Grey caulking between parapet wall segments
- Caulking between parapet and curbs

2.2.3 Lafayette Street to the Sheridan Expressway Interchange (BIN 1075310)

AKRF performed a visual survey of this structure and the following SACMs were observed:

- Black tar between side rail and walkway
- Black expansion joint filler and/or tar
• Black light post base plates and washers
• Parapet wall caulking
• Concrete skim and/or patching on vertical columns and/or underneath the structure

2.2.4 Sheridan Expressway Interchange to Wheeler Avenue (BIN 1075819)
AKRF performed a visual survey of this structure and the following SACMs were observed:
• Black light post base plates and washers
• Gaskets underneath side railing
• Caulking underneath washers for fencing
• Concrete skim and patching on vertical columns and/or underneath the structure
• Penetration packing/coating by drainage pipes
• Black expansion joint filler and/or tar
• Brick mortar
• Pad/support between brick and concrete parapets
• Grey caulking by curbs

2.2.5 Other Observations
Lane closures were not provided at the time of the site visit. Additional SACMs may be present between layers of roadway surfacing material and in other inaccessible locations. If any SACM is encountered, the contractor must stop work and contact a certified NYSDOL-certified asbestos inspector to confirm the presence or absence of asbestos.

Electrical conduits, boxes and wiring were live at the time of inspection and therefore could not be safely inspected. These items may contain additional SACMs such as wiring, insulation, piping and transite board. Any such SACM expected to be impacted by the work should be sampled and analyzed in accordance with NYSDOT guidelines and federal, state, and local regulations. Materials that cannot be sampled due to safety or other concerns should either be sampled at a later date or presumed to contain asbestos.

3.0 RECOMMENDED SAMPLE COLLECTION
Based on the above preliminary assessment. The following sampling must be performed by a NYSDOL-certified asbestos inspector.

3.1 Identification of Sampling Areas
Table I contains a list of SACMs identified by the document review and/or field observations. A minimum of three bulk samples of each homogeneous material (as determined by the inspector) must be collected for laboratory analysis. The number of samples collected must accurately represent all materials and/or components that may be affected or disturbed by the construction project.
### Table I
Suspect Asbestos-Containing Materials
Proposed Sample Collection Plan

<table>
<thead>
<tr>
<th>Structure</th>
<th>Area</th>
<th>Suspect ACM</th>
<th>Number of Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIN 1066669: Southern End to Westchester Avenue</td>
<td>Between light post bottom and concrete</td>
<td>Light post base plate (black)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Beneath light post nut affixing structure in place</td>
<td>Light post washers (black)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Between side railing and concrete</td>
<td>Gasket (black)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>On vertical columns and/or underside of structure</td>
<td>Concrete skim</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>On vertical columns and/or underside of structure</td>
<td>Concrete patch</td>
<td>3 per homogenous patched area</td>
</tr>
<tr>
<td></td>
<td>Around drainage pipe penetrations</td>
<td>Penetration packing/coating</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Expansion joint</td>
<td>Expansion joint filler (black)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Expansion joint</td>
<td>Expansion Joint tar (if present)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Between jersey barriers</td>
<td>Gasket/Caulking</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Between parapet wall segments</td>
<td>Caulking (Grey)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Between parapet and curb</td>
<td>Caulking</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Anchor bolt</td>
<td>3 x 1/4” transite washers</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Conduit housing/cabinet</td>
<td>Asbestos board</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Expansion joint</td>
<td>3 x 1/8” transite board</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Alignment shoe</td>
<td>2 x 1-2” transite pipe</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Alignment shoe</td>
<td>1/4” transite for width of flange</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Alignment shoe</td>
<td>Transite insulation on reinforced bars within 5” of shoe</td>
<td>*</td>
</tr>
<tr>
<td>BIN 106666 A though H**: Southern end to Sheridan Expressway Interchange</td>
<td>On vertical columns and/or underside of structure</td>
<td>Concrete skim</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Expansion joint</td>
<td>Expansion joint filler (black)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Expansion joint</td>
<td>Expansion Joint tar (if present)</td>
<td>3</td>
</tr>
<tr>
<td>BIN 1075310: Lafayette Street to Sheridan Expressway Interchange</td>
<td>Present</td>
<td>3 per homogenous patched area</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>On vertical columns and/or underside of structure</td>
<td>Concrete patch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Around drainage pipe penetrations</td>
<td>Penetration packing/coating</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Between parapet wall segments</td>
<td>Caulking (Grey)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Between parapet and curb</td>
<td>Caulking</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Between side railing and concrete</td>
<td>Gasket (black)/Caulking</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Anchor bolt</td>
<td>3 x 1/4” transite washers *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expansion joint</td>
<td>3 x 1/8” transite board *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conduit housing/cabinet</td>
<td>Asbestos board *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expansion joint</td>
<td>Expansion joint filler (black)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Expansion joint</td>
<td>Expansion Joint tar (if present)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Beneath light post nut affixing structure in place</td>
<td>Light post base plate (black)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Between parapet segments</td>
<td>Caulking</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>On vertical columns and/or underside of structure</td>
<td>Concrete skim</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>On vertical columns and/or underside of structure</td>
<td>Concrete patch</td>
<td>3 per homogenous patched area</td>
<td></td>
</tr>
<tr>
<td>Expansion joint</td>
<td>Expansion joint filler (black)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Expansion joint</td>
<td>Expansion Joint tar (if present)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Between light post bottom and concrete</td>
<td>Light post base plate (black)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Beneath light post nut affixing structure in place</td>
<td>Light post washers (black)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BIN 1075819: Sheridan Expressway Interchange to Wheeler Avenue</th>
<th>Present</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Between side railing and concrete</td>
<td>Gasket (black)</td>
<td>3</td>
</tr>
<tr>
<td>Beneath fencing washers</td>
<td>Caulk (Grey)</td>
<td>3</td>
</tr>
<tr>
<td>On vertical columns and/or</td>
<td>Concrete skim</td>
<td>7</td>
</tr>
</tbody>
</table>
## Laboratory Analysis

4.0 LABORATORY ANALYSIS

The laboratory must analyze bulk samples by Polarized Light Microscopy (PLM) methodology for asbestos content. If PLM results for samples of non-friable organically bound (NOB) materials are negative or less than or equal to one percent asbestos, the laboratory must analyze these samples by Transmission Electron Microscopy (TEM) methodology, per New York State Department of Health guidelines. For all materials, the laboratory should be instructed to analyze by layers, to first positive result.

The laboratory selected to analyze the samples must be accredited for asbestos analyses by the New York State Department of Health Environmental Laboratory Accreditation Program (ELAP).
5.0 LIMITATIONS

Results of this investigation are valid as of the dates on which the investigation was performed. Lane closures were not provided at the time of the site visit. Additional SACMs may be present between layers of roadway surfacing material and in other inaccessible locations. Electrical conduits, boxes and wiring were live at the time of inspection and therefore could not safely be inspected. These areas may contain additional SACMs. This preliminary assessment and sample collection plan is not an asbestos survey report or an abatement specification and cannot be used to meet pre-construction asbestos survey requirements or for specifying removal quantities, methods or techniques.

The required asbestos survey must be performed in accordance with the findings of the sample collection plan; however, any additional SACM observed by the inspector should be sampled and analyzed in accordance with NYSDOT guidelines and applicable regulations. The inspector should determine homogeneity and friability of samples based on physical characteristics of the SACM.

The findings set forth in this report are strictly limited in scope of the evaluation described herein. The conclusions and recommendations presented in the report are based solely on the services and any limitations described in this report. This report may be based solely or partially on data collected, conducted, and provided by AKRF and/or others. No warranty is expressed or implied by usage of such data. Such data may be included in other investigation reports or documentation. This report is intended for the use solely for The New York State Department of Transportation. Reliance by third parties on the information and opinions contained herein is strictly prohibited and requires the written consent of AKRF. AKRF accepts no responsibility for damages incurred by third parties for any decisions or actions taken based on this report. This report must be used, interpreted, and presented in its entirety.
Duly Authorized Representative – Michelle Lapin PE:

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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
APPENDIX B
PERSONNEL CERTIFICATIONS
STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE

STEPHEN P SCHMID
CLASS (EXPIRES)
CATEC (05/16) D INSPI (05/16)
HPM (05/16)

CERT # L-13059
DMV 6443-552293

MUST BE CARRIED ON ASBESTOS PROJECTS

IF FOUND RETURN TO:
EYES BLU
NYSDOL - L6C UNIT
HAIR BRO
ROOM 161A BUILDING 12
HT 5' 11"
STATE OFFICE CAMPUS
ALBANY NY 12240