SURVEY REPORT

PRE-RENOVATION INVESTIGATIVE SURVEY FOR HAZARDOUS BUILDING MATERIALS

NOROTON HEIGHTS RAILROAD STATION – PLATFORM REPLACEMENT DARIEN, CONNECTICUT

Project No. 301-170

Prepared for

State of Connecticut
Department of Transportation
Newington, Connecticut

Prepared by

TRC
Windsor, Connecticut

Issued
January 2016

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Issued-January 2016

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PROJECT OUTLINE

DOT Project No.:	301-170
Assignment No.:	514-5202
DOT Project Manager:	Roger Levesque, P.E.
Site Address:	Noroton Heights Railroad Station – Platform Replacement, Darien, CT
TRC Project No.:	222165.5202.0710
Asbestos Inspector:	Hilton Hernandez (LIC #000424) David Heelon (LIC #000635) Bryce Aston (LIC #000161)
Lead Inspector:	David Heelon (LIC #002188)
Date(s) of Inspection:	1/19/16
Asbestos Identified:	Yes
Lead Paint Identified:	Yes, however all XRF readings tested <1.0 mg/cm^2
Gen. Bldg. Mat. Haz Waste:	No, per EPA/CTDEEP memo dated January 26, 2004
Add'l Haz./Reg. Mat./Waste/Items:	Yes (See Table 6)

Additional Notes:

The property consists of a railroad station with two platforms (eastbound and westbound) that are scheduled to be replaced. Platforms, landings, ramps, stairways and pedestrian shelter, guardrails/handrails, benches, signage and lighting are all to be removed and potentially replaced. The eastbound platform pedestrian shelter and support are included in the renovation; however, the westbound platform station building, canopy structure and overhead pedestrian bridge will not be impacted and will remain in use following renovation activities. A new doorway will be installed into the westbound platform station building. ACM advertisement billboards reportedly to be removed by MNRR.

TABLES

TABLE 1 BULK SAMPLE SUMMARY OF SUSPECT ASBESTOS CONTAINING MATERIALS NOROTON HEIGHTS RAILROAD STATION – PLATFORM REPLACEMENT METRO-NORTH RAILROAD – NEW HAVEN MAIN LINE DARIEN, CONNECTICUT			
Sample No.	**Sample Location**	**Type of Homogeneous Material**	**% and Type Asbestos**
1	Westbound advertisement board	T1 – gray transite board	10% chrysotile
2	Eastbound advertisement board	T1 – gray transite board	NA/PS
3	Westbound Platform	EJ1 – light gray expansion joint caulk	ND[1]
4	Eastbound Platform	EJ1 – light gray expansion joint caulk	ND
5	Westbound Platform	EJ2 – black tar expansion joint material	ND[1]
6	Eastbound Platform	EJ2 – black tar expansion joint material	ND
7	Westbound Platform	EJ3 – black brittle expansion joint material	ND[1]
8	Eastbound Platform	EJ3 – black brittle expansion joint material	ND
9	Westbound Platform	EJ4 – black fiber expansion joint material	ND[1]
10	Eastbound Platform	EJ4 – black fiber expansion joint material	ND

NA/PVA Not analyzed/positive via inseparable association with a confirmed positive ACM
NA/PS Not analyzed/positive stop, homogeneous to sample proven to contain asbestos
ND<1% Non-detected, less than 1%
NAD No asbestos detected
\+ Although found to be negative by analysis, material is homogeneous to a determined ACM and therefore must be considered positive
1 Result confirmed by TEM analyses
* Quantified by PLM Point Counting techniques

TABLE 2 IDENTIFIED ASBESTOS CONTAINING MATERIALS (>1%) NOROTON HEIGHTS RAILROAD STATION – PLATFORM REPLACEMENT METRO-NORTH RAILROAD – NEW HAVEN MAIN LINE DARIEN, CONNECTICUT					
Material	**Sampled/ Assumed (mo/yr)**	**General Location**	**NESHAP Category**	**AHERA Category**	**Estimated Quantity**
T1 – gray transite board	Sampled 1/16	Eastbound & Westbound platform advertisement boards	Category II Non-friable	Miscellaneous	1,050 SF (14 signs eastbound 15 signs westbound)

AHERA Categories = thermal system insulation (TSI), surfacing material or miscellaneous
NESHAP Categories = friable, category I non-friable or category II non-friable
Friable = crumbled, pulverized or reduced to powder by hand pressure when dry
Category I Non-friable = packings, gaskets, resilient floor covering and asphalt roofing
Category II Non-friable = all non-friable that is not Category I

TABLE 3 CONFIRMED NON-ASBESTOS CONTAINING MATERIALS (<1%) NOROTON HEIGHTS RAILROAD STATION – PLATFORM REPLACEMENT METRO-NORTH RAILROAD – NEW HAVEN MAIN LINE DARIEN, CONNECTICUT	
Material	**General Location**
EJ1 – light gray expansion joint caulk	Eastbound & westbound platforms
EJ2 – black tar expansion joint material	Eastbound & westbound platforms
EJ3 – black brittle expansion joint material	Eastbound & westbound platforms
EJ4 – black fiber expansion joint material	Eastbound & westbound platforms

**** However, associated layers are positive.***

TABLE 4 SUMMARY OF LEAD PAINT XRF MEASUREMENTS NOROTON HEIGHTS RAILROAD STATION – PLATFORM REPLACEMENT METRO-NORTH RAILROAD – NEW HAVEN MAIN LINE DARIEN, CONNECTICUT					
Structure	**No. of Measurements**	**Calibrations**	**Void**	**Lead Detected**	**No Lead Detected**
Railroad platform replacement areas	35	9	2	5	19

See Lead Paint XRF Measurement Table in Appendix H.

TABLE 5 SUMMARY OF COMPOSITE BUILDING MATERIAL WASTE CHARACTERIZATION NOROTON HEIGHTS RAILROAD STATION – PLATFORM REPLACEMENT METRO-NORTH RAILROAD – NEW HAVEN MAIN LINE DARIEN, CONNECTICUT			
Waste Stream	**Metal**	**mg/L Leachate**	**Hazardous/Non-Hazardous**
Eastbound/ Westbound Platform Replacement Bldg. Material Composite (Excluding metal substrates)	**No TCLP sample for Lead warranted as XRF readings on non-metallic components were all below 1.0 mg/cm^2 and therefore the debris is presumed as non-hazardous per CTDEEP/USEPA clarification memo of January 26, 2004.**		

Note: Any metal components should be recycled to promote waste minimization efforts, rather than disposed of, and the recycling operation is exempt from the USEPA RCRA and CTDEP Hazardous Waste regulations.

See Appendix I for CTDEEP/USEPA clarification memo of January 26, 2004.

BDL - Below Detection Limit
ND - Not Detected

TABLE 6 INVENTORY OF ADDITIONAL HAZARDOUS/REGULATED MATERIALS, WASTES AND ITEMS IDENTIFIED NOROTON HEIGHTS RAILROAD STATION – PLATFORM REPLACEMENT METRO-NORTH RAILROAD – NEW HAVEN MAIN LINE DARIEN, CONNECTICUT				
Quantity	**Size**	**Material/Item**	**General Location**	**Potential Hazard**
Forty three (43)		Sulfide bulbs	Westbound side	UW – Hg lamps
Six (6)		LED direction signs	Westbound side	UW – used electronics (printed circuit boards) UW – Hg lamps
Forty three (43)		Sulfide bulbs	Eastbound side	UW – Hg lamps

CRW- Connecticut Regulated Waste – PCBs (CR01), Oils (CR02/CR03), waste chemical liquids - antifreeze, latex & solvent paints, sludges, etc. (CR04), waste chemical solids (CR05)

UW- Universal Waste (batteries, thermostat ampoules, fluorescent lamps, used electronics)

IH- Inhalation hazard (silicas, etc.)

I- Ignitable - may contain ingredients which are ignitable (materials which have a flashpoint <140°F) (D001)

C- Corrosive - may contain ingredients which are alkaline or acidic (materials with a PH<2 or >12.5) (D002)

T- Toxic - may contain ingredients which are harmful if swallowed or which release vapors that can cause irritation

R- Reactive – may contain ingredients which are unstable, react violently with water or are explosive (D003)

APPENDIX A

SITE PHOTOS

PHOTO 1. 5202 Eastbound Pedestrian Shelter.

PHOTO 2. 5202 Eastbound Platform looking East.

PHOTO 3. 5202 Eastbound Platform looking NE.

PHOTO 4. 5202 Westbound Platform looking SW.

PHOTO 5. 5202 Eastbound Pedestrian Shelter underside.

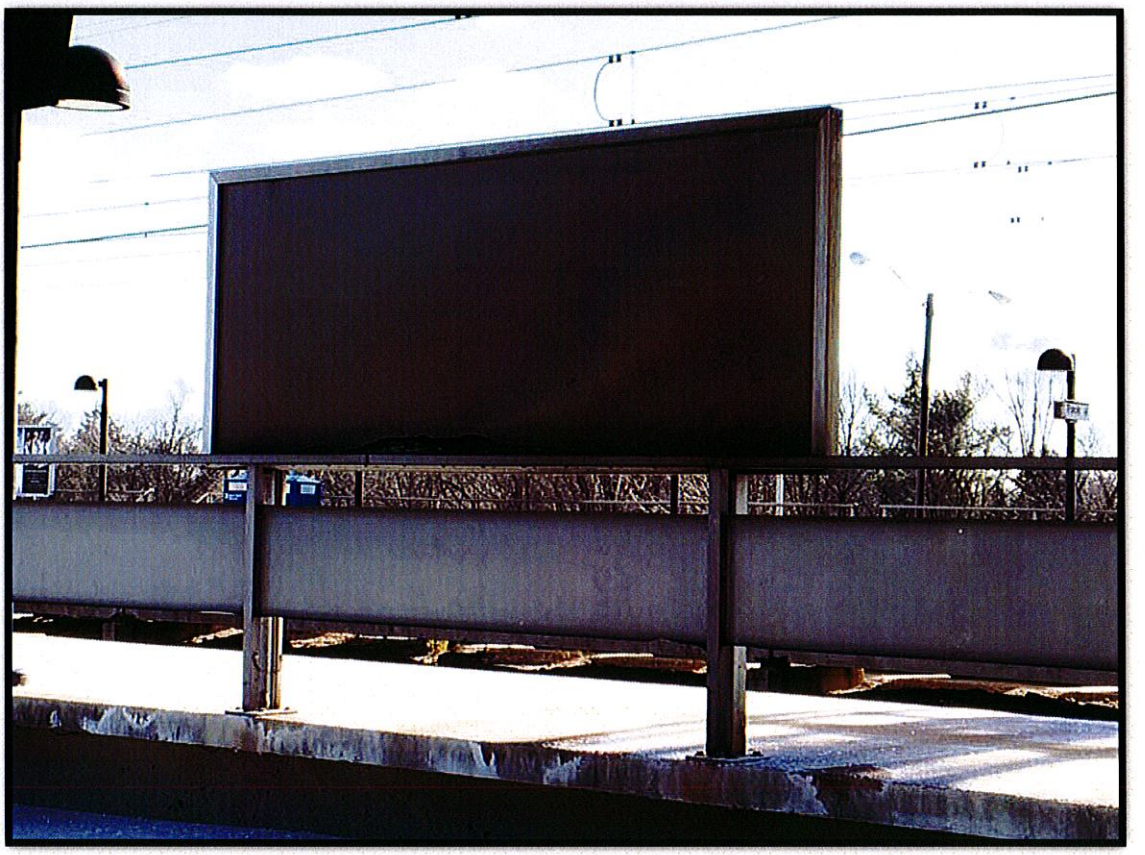


PHOTO 6. 5202 Westbound Platform Transite Advertisement Board.

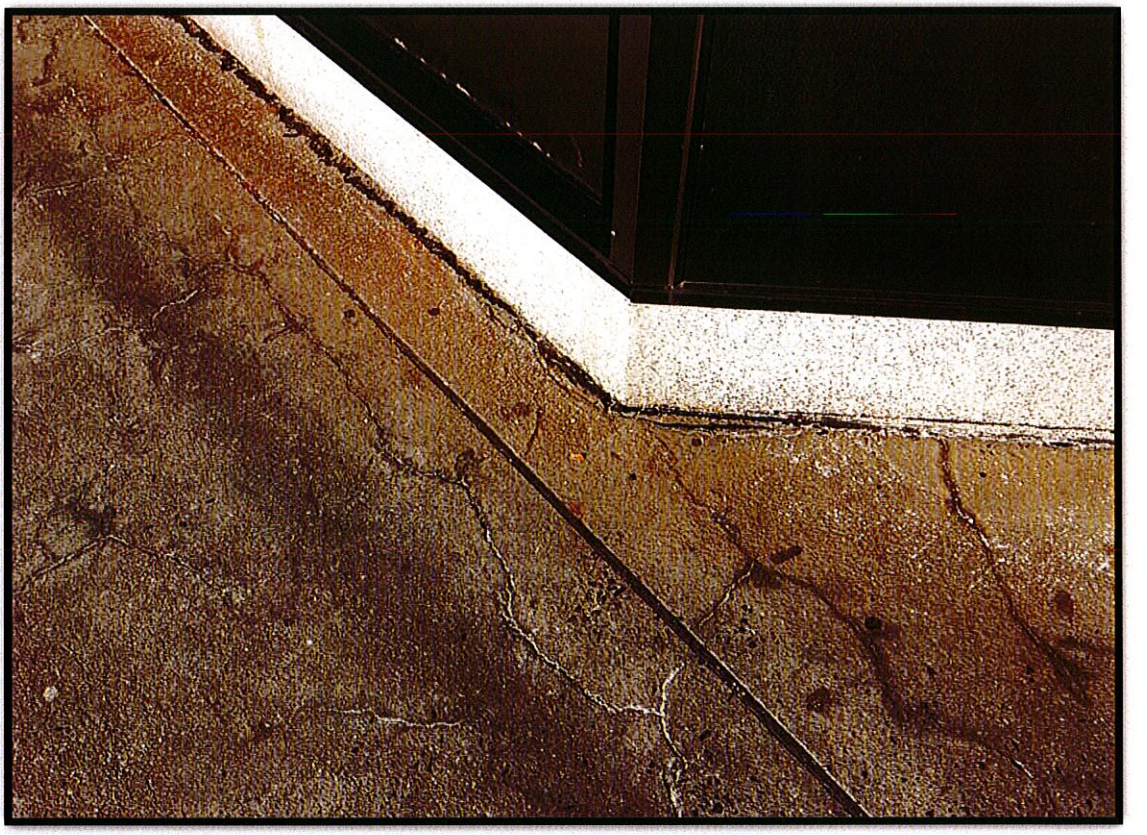


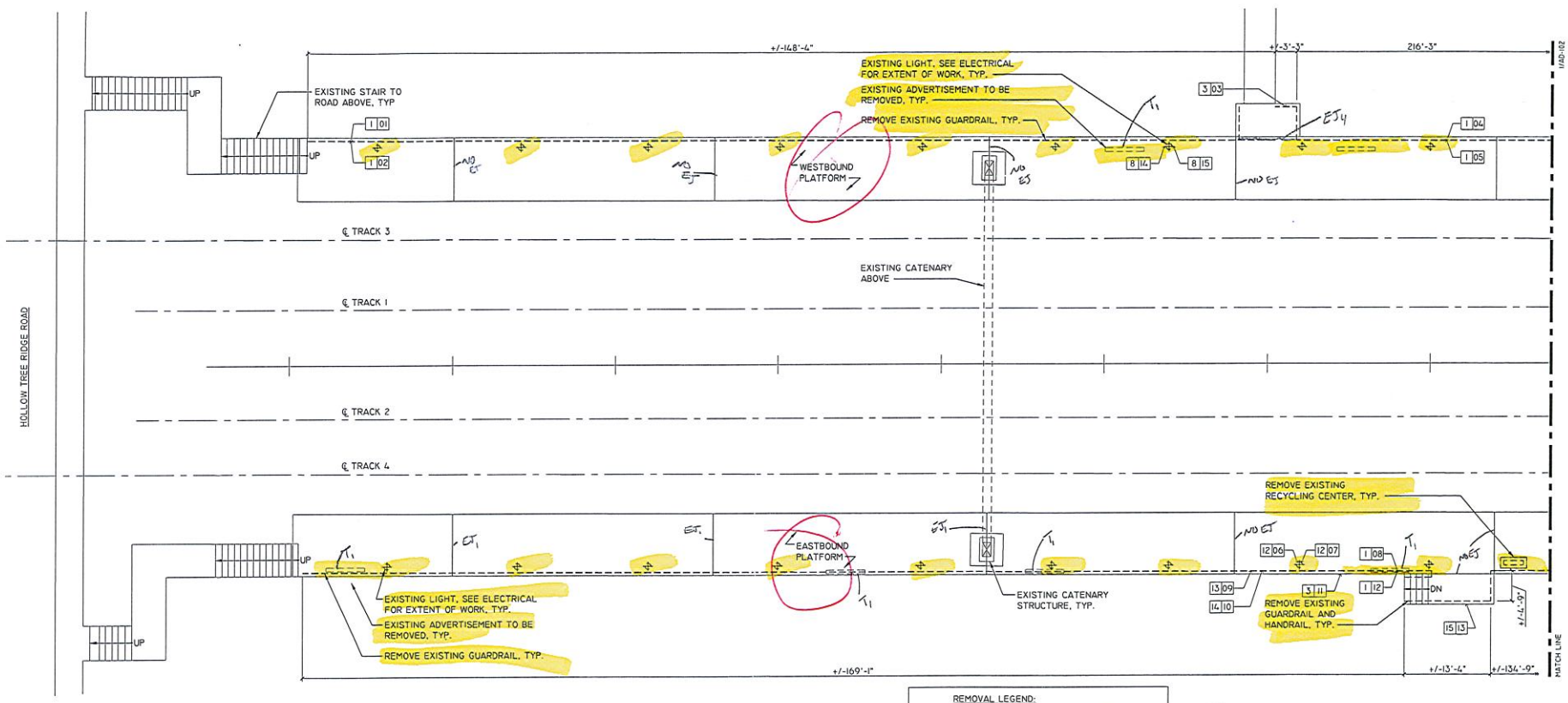
PHOTO 7. 5202 Westbound Station Building Platform expansion Joints.

PHOTO 8.
5202 Westbound Station Building Future Door Location Exterior.

PHOTO 9. 5202 Westbound Station Building Future Door Location Interior.

APPENDIX B

SITE SKETCHES



1 AD-101 PLATFORM REMOVAL PLAN I

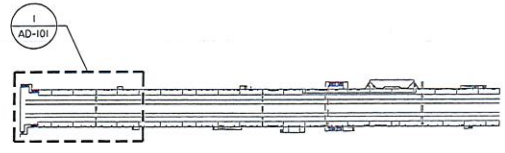
1' 0 4' 8' 16'
1/8" = 1'-0"

REMOVAL LEGEND:

- BENCH (SALVAGE)
- RECYCLING CENTER
- LIGHT
- ADVERTISEMENT (BY OTHERS)
- BRIDGE PLATE (SALVAGE)
- REMOVE EXISTING SIGN (SALVAGE & STORE, U.N.O.)
  - SIGN NUMBER
  - SIGN TYPE

NOTES:

1. SEE STRUCTURAL DRAWINGS FOR EXTENT OF PLATFORM REPAIR/REMOVAL WORK.
2. SEE ELECTRICAL DRAWINGS FOR EXTENT OF ELECTRICAL WORK.
3. EXISTING ADVERTISEMENT SHALL BE REMOVED BY CBS ADVERTISEMENT.



KEY PLAN
NTS

SEMI FINAL DESIGN REVIEW

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 8/3/2015

DESIGNER/DRAFTER: K.S.
CHECKED BY: R.W.
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: AD-101.dwg

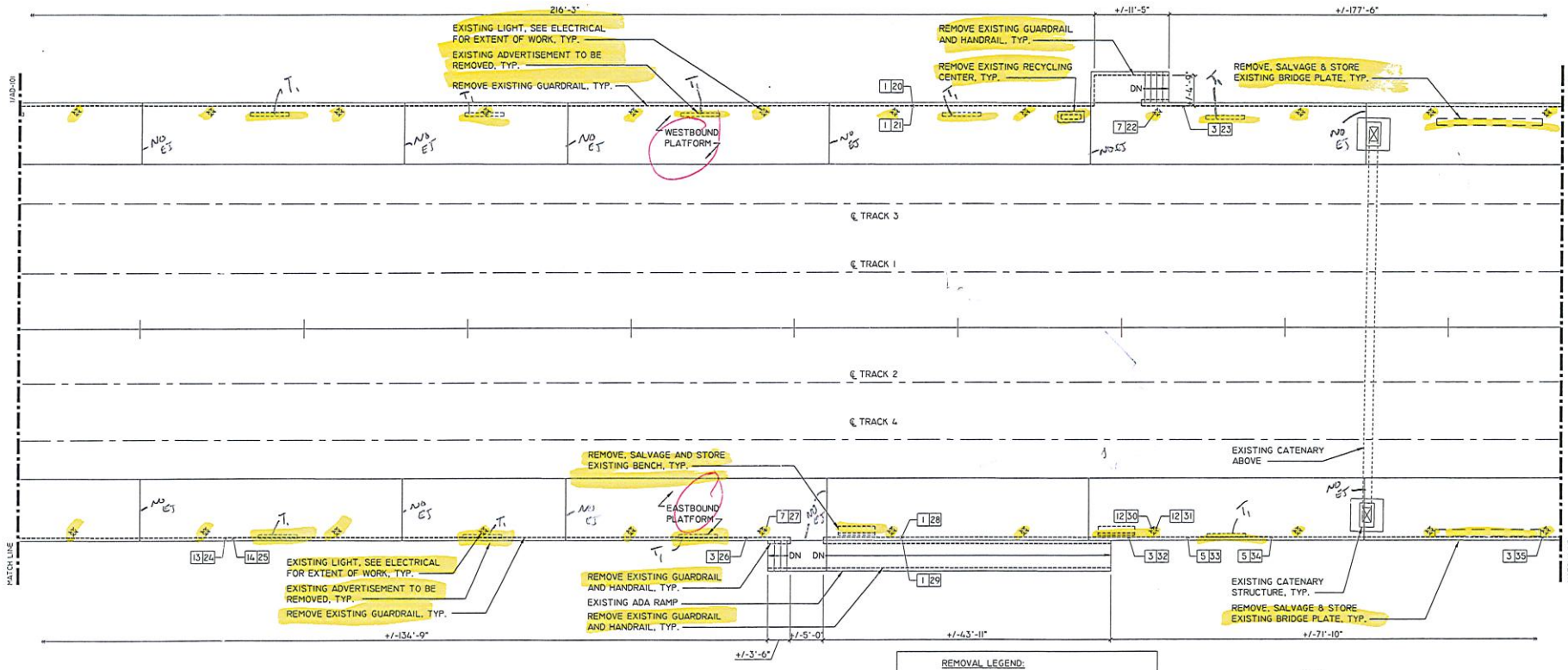
SIGNATURE/ BLOCK:

PROJECT TITLE: NOROTON HEIGHTS RAILROAD STATION PLATFORM REPLACEMENT

TOWN: DARIEN

DRAWING TITLE: PLATFORM REMOVAL PLAN I

PROJECT NO. 301-0170
DRAWING NO. AD-101
SHEET NO. 04.05



1 AD-102 PLATFORM REMOVAL PLAN II

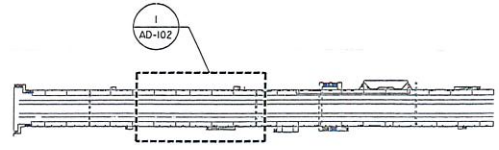
1" 0 4' 8' 16'
1/8" = 1'-0"

NOTES:

1. SEE STRUCTURAL DRAWINGS FOR EXTENT OF PLATFORM REPAIR/REMOVAL WORK.
2. SEE ELECTRICAL DRAWINGS FOR EXTENT OF ELECTRICAL WORK.
3. EXISTING ADVERTISEMENT SHALL BE REMOVED BY CBS ADVERTISEMENT.

REMOVAL LEGEND:

- BENCH (SALVAGE)
- RECYCLING CENTER
- LIGHT
- ADVERTISEMENT (BY OTHERS)
- BRIDGE PLATE (SALVAGE)
- REMOVE EXISTING SIGN (SALVAGE & STORE, U.N.O.)
  - SIGN NUMBER
  - SIGN TYPE



KEY PLAN
NTS

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Plotted Date: 8/3/2015

DESIGNER/DRAFTER: K.S.
CHECKED BY: R.W.
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: AD-102.dwg

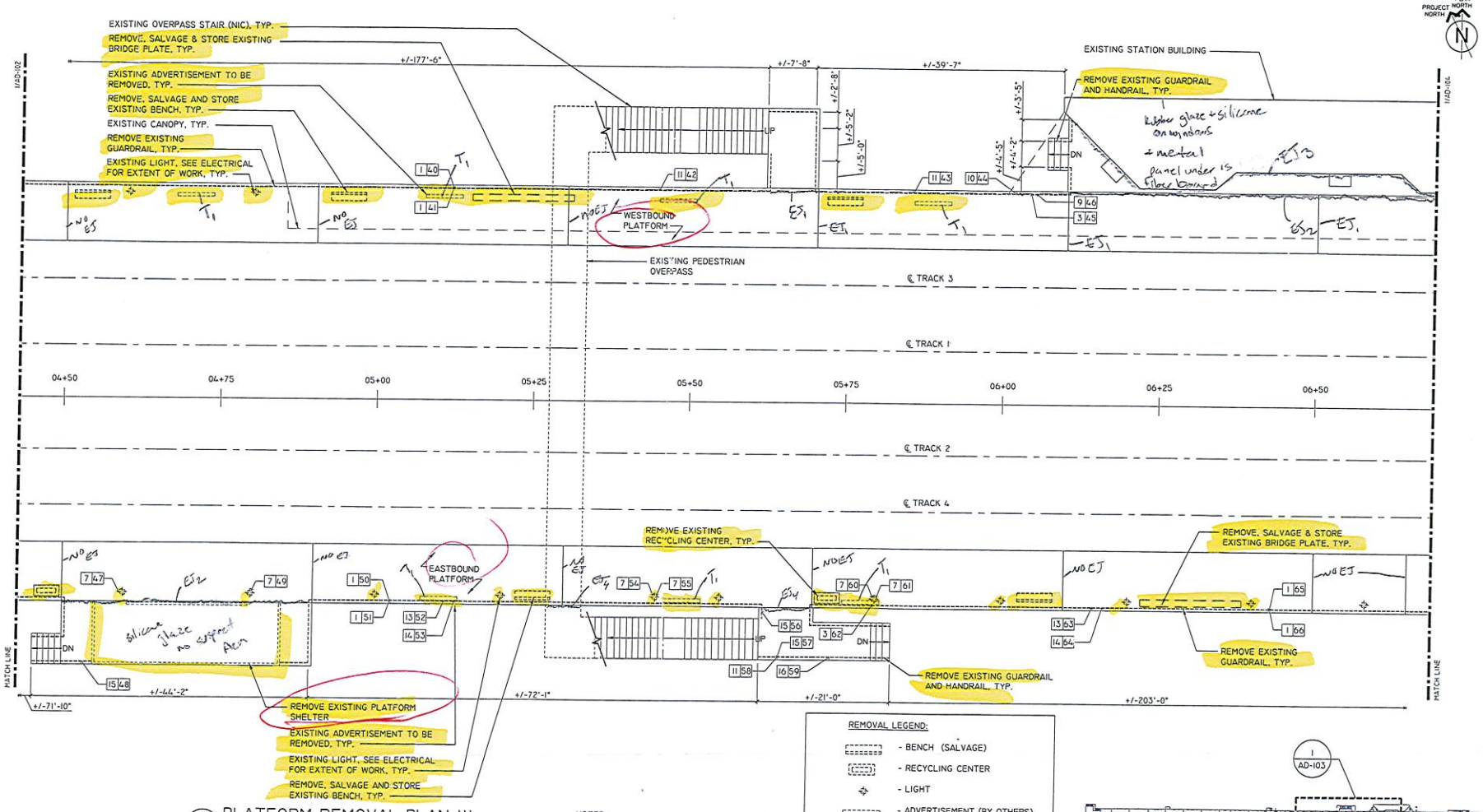
SIGNATURE/BLOCK:

PROJECT TITLE: NOROTON HEIGHTS RAILROAD STATION PLATFORM REPLACEMENT

TOWN: DARIEN

DRAWING TITLE: PLATFORM REMOVAL PLAN II

PROJECT NO. 301-0170
DRAWING NO. AD-102
SHEET NO. 04.06



1 AD-103 PLATFORM REMOVAL PLAN III

1' 0 4' 8' 16'
1/8" = 1'-0"

NOTES:

1. SEE STRUCTURAL DRAWINGS FOR EXTENT OF PLATFORM REPAIR/REMOVAL WORK.
2. SEE ELECTRICAL DRAWINGS FOR EXTENT OF ELECTRICAL WORK.
3. EXISTING ADVERTISEMENT SHALL BE REMOVED BY CBS ADVERTISEMENT.

REMOVAL LEGEND:

- BENCH (SALVAGE)
- RECYCLING CENTER
- LIGHT
- ADVERTISEMENT (BY OTHERS)
- BRIDGE PLATE (SALVAGE)
- REMOVE EXISTING SIGN (SALVAGE & STORE, U.N.O.)
  - SIGN NUMBER
  - SIGN TYPE

KEY PLAN
NTS

SEMI FINAL DESIGN REVIEW

REV.	DATE	REVISION DESCRIPTION	SHEET NO

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Plotted Date: 8/3/2015

DESIGNER/DRAFTER: K.S.
CHECKED BY: R.W.
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: AD-103.dwg

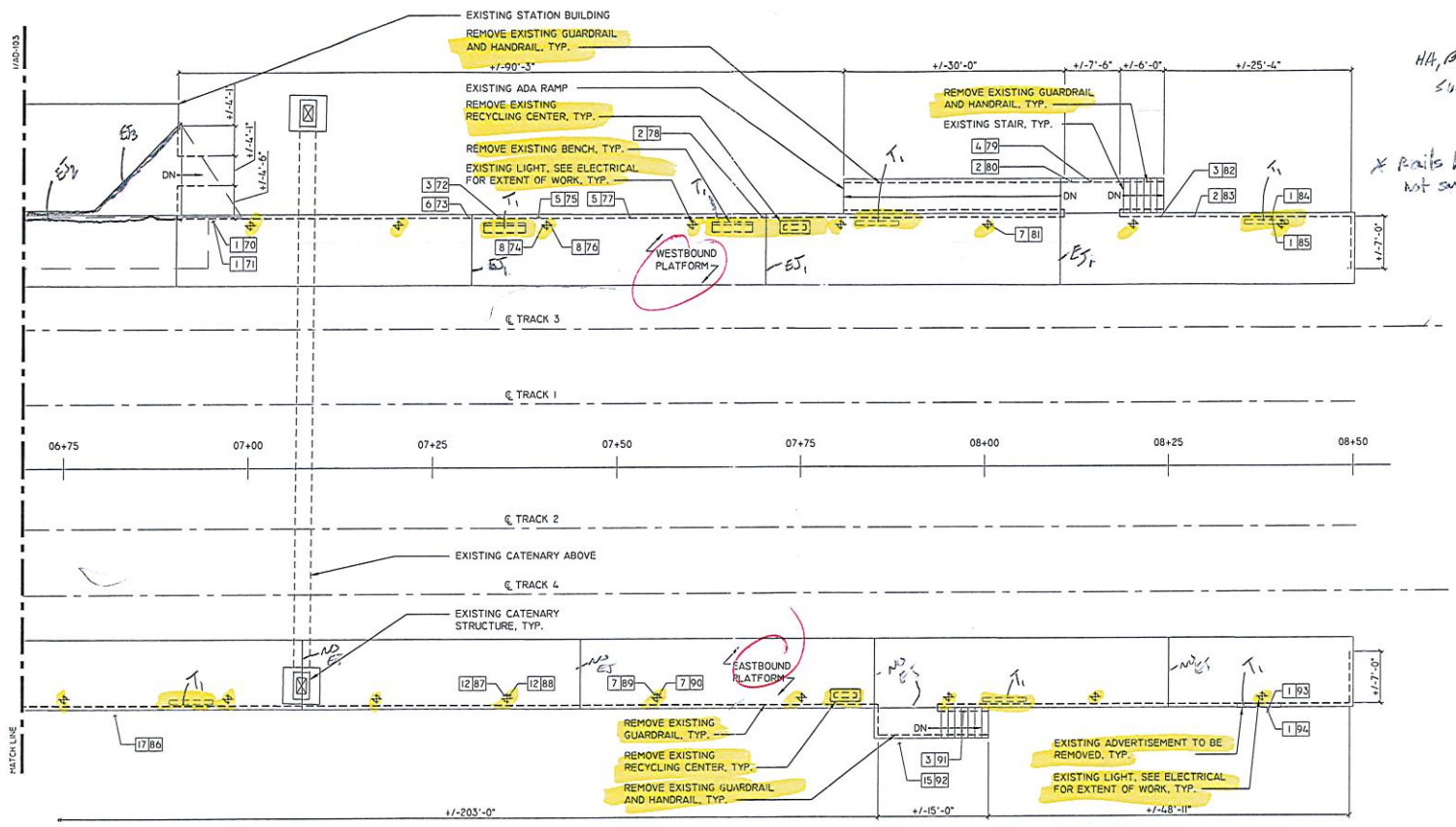
SIGNATURE/BLOCK:

PROJECT TITLE: NOROTON HEIGHTS RAILROAD STATION PLATFORM REPLACEMENT

TOWN: DARIEN

DRAWING TITLE: PLATFORM REMOVAL PLAN III

PROJECT NO. 301-0170
DRAWING NO. AD-103
SHEET NO. 04.07



HA, BA, DH
survey
1/19/12

* Rails have rubber base (Black) not sample

1 AD-104 PLATFORM REMOVAL PLAN IV

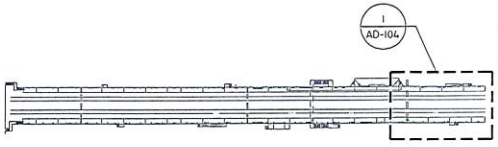
1" 0 4' 8' 16'
1/8" = 1'-0"

NOTES:

1. SEE STRUCTURAL DRAWINGS FOR EXTENT OF PLATFORM REPAIR/REMOVAL WORK.
2. SEE ELECTRICAL DRAWINGS FOR EXTENT OF ELECTRICAL WORK.
3. EXISTING ADVERTISEMENT SHALL BE REMOVED BY CBS ADVERTISEMENT.

REMOVAL LEGEND:

- BENCH (SALVAGE)
- RECYCLING CENTER
- LIGHT
- ADVERTISEMENT (BY OTHERS)
- BRIDGE PLATE (SALVAGE)
- REMOVE EXISTING SIGN (SALVAGE & STORE, U.N.O.)
  - SIGN NUMBER
  - SIGN TYPE



KEY PLAN
NTS

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Plotted Date: 8/3/2015

DESIGNER/DRAFTER: K.S.
CHECKED BY: R.W.
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: AD-104.dwg

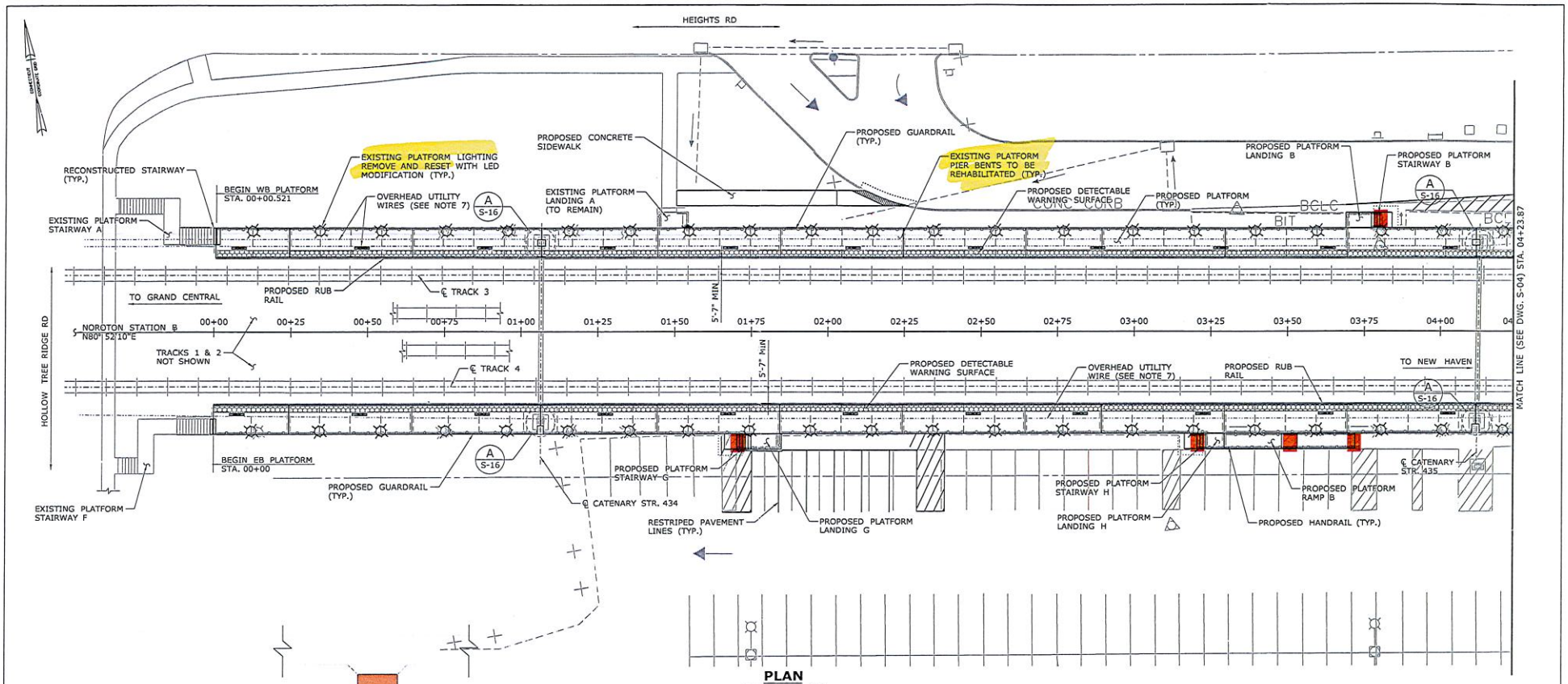
SIGNATURE/BLOCK:

PROJECT TITLE: NOROTON HEIGHTS RAILROAD STATION PLATFORM REPLACEMENT

TOWN: DARIEN

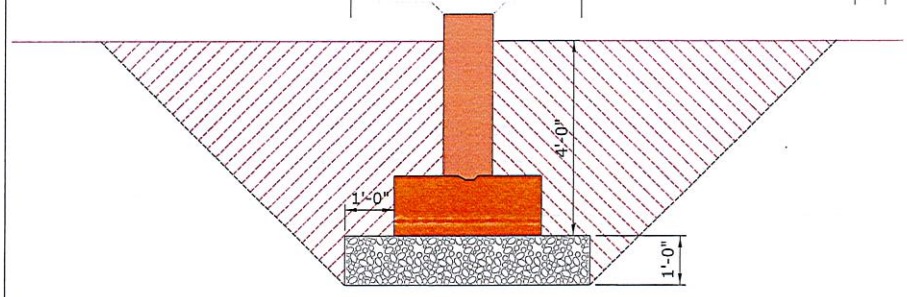
DRAWING TITLE: PLATFORM REMOVAL PLAN IV

PROJECT NO. 301-0170
DRAWING NO. AD-104
SHEET NO. 04.08



PLAN

SCALE: 1/16" = 1'-0"



TYPICAL EXCAVATION

- AREA OF EXCAVATION

NOTES:

1. FOR GENERAL NOTES, SEE DWGS. S-01 AND S-02.
2. FOR DETAIL A, SEE DWG. S-16.
3. FOR PLATFORM ID LOCATIONS, SEE DWGS. S-05 AND S-06.
4. FOR FURTHER DETAILS OF GUARDRAIL/HANDRAIL AND OTHER MISCELLANEOUS ACHITECTURAL DETAILS, SEE ACHITECTURAL SUBSET.
5. FOR FURTHER INFORMATION OF PLATFORM SECTIONS, SEE DWG. S-14.
6. FOR DETAILS OF DETECTABLE WARNING SURFACE AND RUB RAIL, SEE DWG. S-21.
7. ALL OVERHEAD WIRES NOT SHOWN FOR CLARITY.
8. FOR DETAILS OF PROPOSED RAMPS, STAIRWAYS, AND LANDINGS SEE DWGS. S-18, S-19, AND S-20.
9. FOR DETAILS OF ELECTRICAL, COMMUNICATION AND LIGHTING SEE BUILDING SYSTEMS SUBSET.

FINAL DESIGN REVIEW

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 1/13/2016

DESIGNER/DRAFTER: G.T.G/C.Y.L
CHECKED BY: T.R.L
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STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: SB_MSH_0301-0170_S_03_GPN1.dgn

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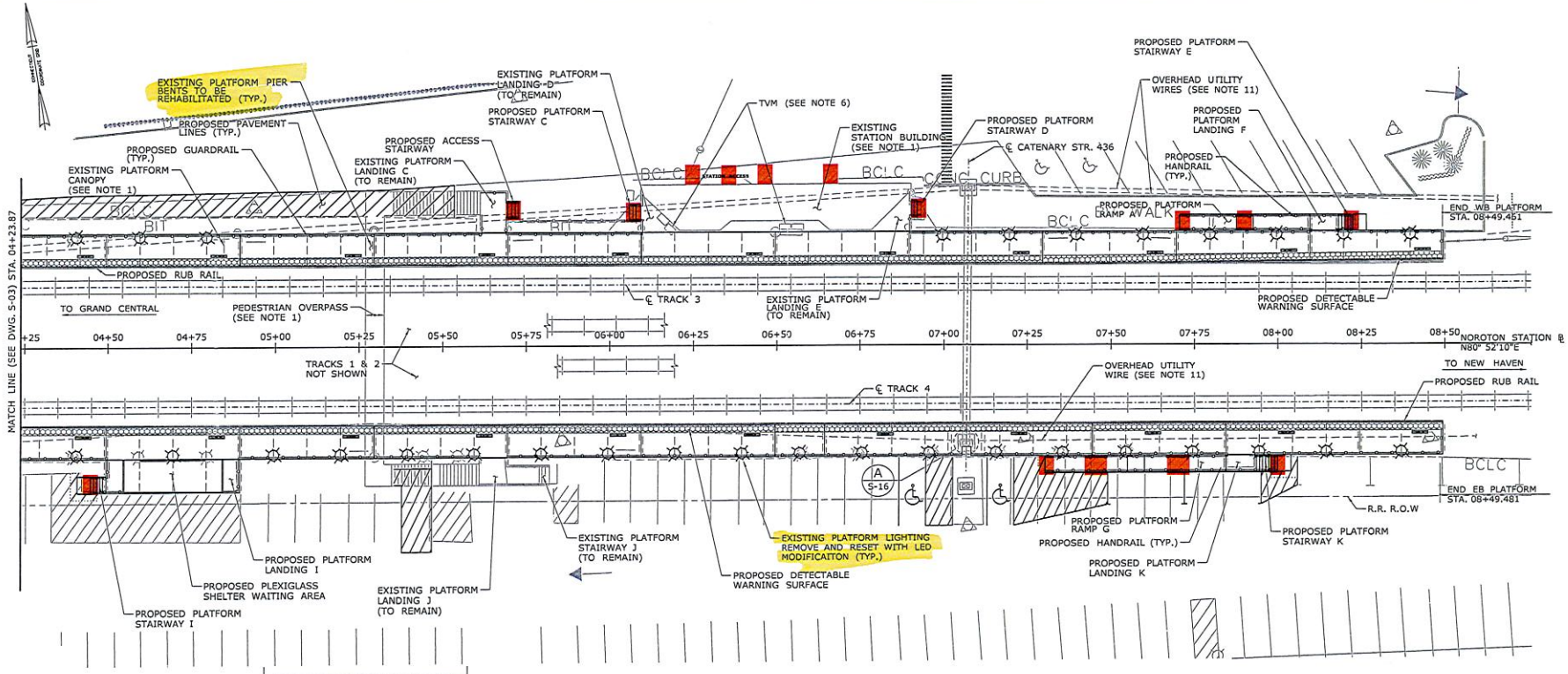
PROJECT TITLE: NOROTON HEIGHTS RAILROAD STATION PLATFORM REPLACEMENT

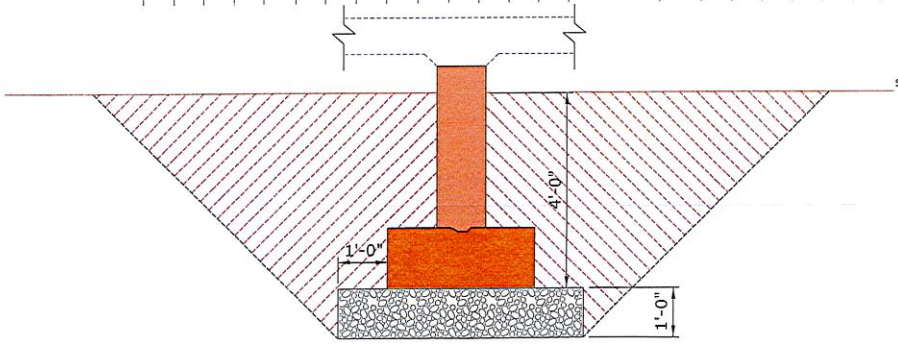
TOWN: DARIEN

DRAWING TITLE: GENERAL PLAN SHEET 1 OF 2

PROJECT NO. 301-0170
DRAWING NO. S-03
SHEET NO.



PLAN
SCALE: 1/16" = 1'-0"



TYPICAL EXCAVATION

- AREA OF EXCAVATION

NOTES:

1. CONDITION AND REHABILITATION NEEDS OF PLATFORM CANOPY, STATION BUILDING, AND PEDESTRIAN OVERPASS ARE NOT PART OF THIS PROJECT. PLATFORM CANOPY WILL REMAIN IN PLACE DURING CONSTRUCTION.
2. FOR GENERAL NOTES, SEE DWGS. S-01 AND S-02.
3. FOR DETAIL A, SEE DWG. S-16.
4. FOR PLATFORM ID LOCATIONS, SEE DWGS. S-05 AND S-06.
5. FOR PLATFORM SHIPPING DATA, SEE DWG S-03.
6. FOR DETAILS OF ELECTRICAL, COMMUNICATION AND LIGHTING, SEE BUILDING SYSTEMS SUBSET.
7. FOR FURTHER DETAILS OF GUARDRAIL AS WELL AS OTHER MISCELLANEOUS ARCHITECTURAL DETAILS, SEE ARCHITECTURAL SUBSET.
8. FOR FURTHER INFORMATION OF PLATFORM SECTIONS, SEE DWG. S-14.
9. FOR DETAILS OF DETECTABLE WARNING SURFACE AND RUB RAIL, SEE DWG. S-21.
10. FOR DETAILS OF PROPOSED SHELTER, SEE ARCHITECTURAL SUBSET.
11. ALL OVERHEAD WIRES NOT SHOWN FOR CLARITY.
12. FOR DETAILS OF PROPOSED PLATFORM APPURTENANCES, SEE ARCHITECTURAL SUBSET.

FINAL DESIGN REVIEW

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 1/13/2016

DESIGNER/DRAFTER: G.T.G
CHECKED BY: T.R.L
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: SB_MSH_0301-0170_S_04_GPN2.dgn

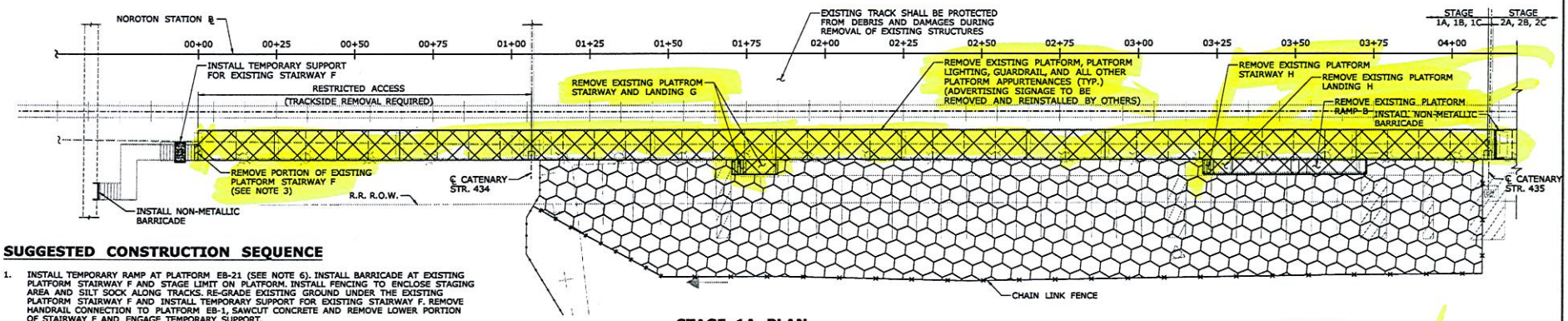
SIGNATURE/BLOCK:

PROJECT TITLE: NOROTON HEIGHTS RAILROAD STATION PLATFORM REPLACEMENT

TOWN: DARIEN

DRAWING TITLE: GENERAL PLAN SHEET 2 OF 2

PROJECT NO. 301-0170
DRAWING NO. S-04
SHEET NO.



SUGGESTED CONSTRUCTION SEQUENCE

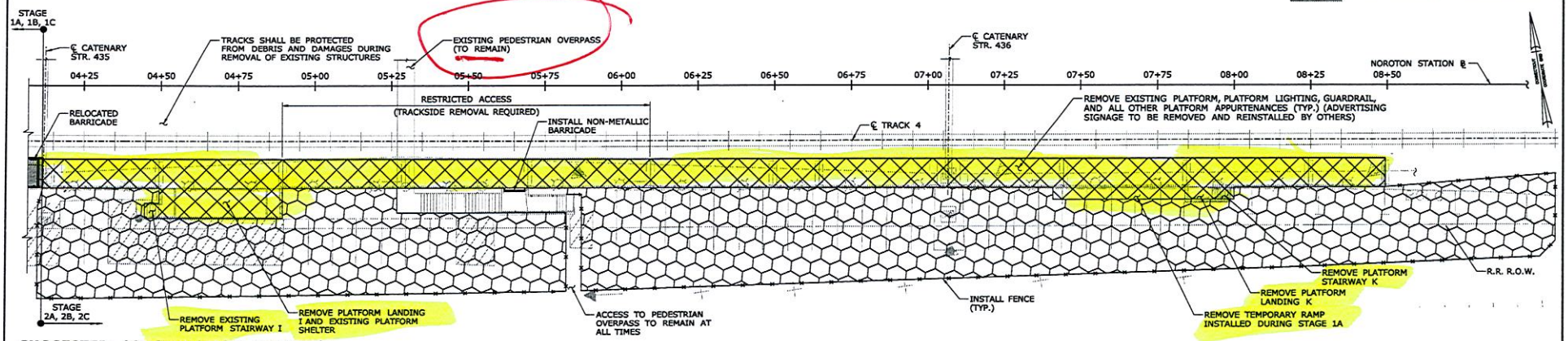
1. INSTALL TEMPORARY RAMP AT PLATFORM EB-21 (SEE NOTE 6). INSTALL BARRICADE AT EXISTING PLATFORM STAIRWAY F AND STAGE LIMIT ON PLATFORM. INSTALL FENCING TO ENCLOSE STAGING AREA AND SILT SOCK ALONG TRACKS. RE-GRADE EXISTING GROUND UNDER THE EXISTING PLATFORM STAIRWAY F AND INSTALL TEMPORARY SUPPORT FOR EXISTING STAIRWAY F. REMOVE HANDRAIL CONNECTION TO PLATFORM EB-1, SAWCUT CONCRETE AND REMOVE LOWER PORTION OF STAIRWAY F AND ENGAGE TEMPORARY SUPPORT.
2. REMOVE EXISTING GUARDRAIL, PLATFORM LIGHTING WITH CORRESPONDING CONDUITS AND CONDUIT RUNS, AND ALL OTHER APPURTENANCES LOCATED ON THE PLATFORM AND ACCESS STRUCTURES.
3. REMOVE EXISTING ACCESS STRUCTURES; LANDING G AND H, STAIRWAY G AND H, AND RAMP B.
4. CUT EXISTING ANCHOR BOLTS OF PLATFORM SECTIONS AND REMOVE EXISTING PLATFORM DOUBLE TEE SECTIONS EB-1 TO EB-11.

STAGE 1A PLAN

(OFF-PEAK NIGHT CLOSURES)
SCALE: 1/16" = 1'-0"

LEGEND:

- STRUCTURE REMOVAL
- WORK COMPLETED WITHIN STAGE
- STAGE LAYDOWN AREA
- WORK COMPLETED IN PREVIOUS STAGE



SUGGESTED CONSTRUCTION SEQUENCE

1. INSTALL NON-METALLIC BARRICADE ON EXISTING PLATFORM LANDING J, FENCING TO ENCLOSE STAGING AREA AND SILT SOCK ALONG TRACKS.
2. REMOVE EXISTING GUARDRAIL AND PEDESTRIAN RAILING, PLATFORM LIGHTING WITH CORRESPONDING CONDUITS AND CONDUIT RUNS, AND ALL OTHER APPURTENANCES LOCATED ON THE PLATFORM AND ACCESS STRUCTURES.
3. REMOVE EXISTING ACCESS STRUCTURES; LANDING K AND I, STAIRWAY I AND K, TEMPORARY RAMP, AND EXISTING SHELTER.
4. CUT EXISTING ANCHOR BOLTS OF PLATFORM SECTIONS AND REMOVE EXISTING PLATFORM DOUBLE TEE SECTIONS EB-12 TO EB-23. PLATFORM SECTIONS EB-14 TO EB-16 WILL REQUIRE TRACKSIDE REMOVAL.

STAGE 2A PLAN

(OFF-PEAK NIGHT CLOSURES)
SCALE: 1/16" = 1'-0"

FINAL DESIGN REVIEW

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 12/30/2015

DESIGNER/DRAFTER: G.T.G/C.Y.L
CHECKED BY: T.R.L
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: SB_MSN.0301-0170.S.08_STAG1A8.dgn

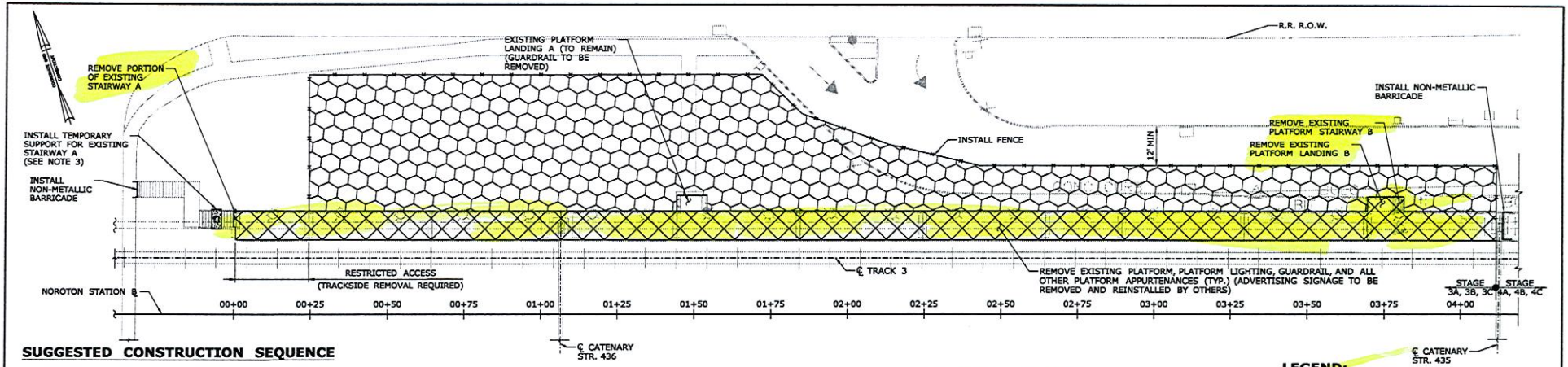
SIGNATURE/ BLOCK:

PROJECT TITLE: NOROTON HEIGHTS RAILROAD STATION PLATFORM REPLACEMENT

TOWN: DARIEN

DRAWING TITLE: CONSTRUCTION STAGING SHEET 1 OF 6

PROJECT NO. 301-0170
DRAWING NO. S-08
SHEET NO.



SUGGESTED CONSTRUCTION SEQUENCE

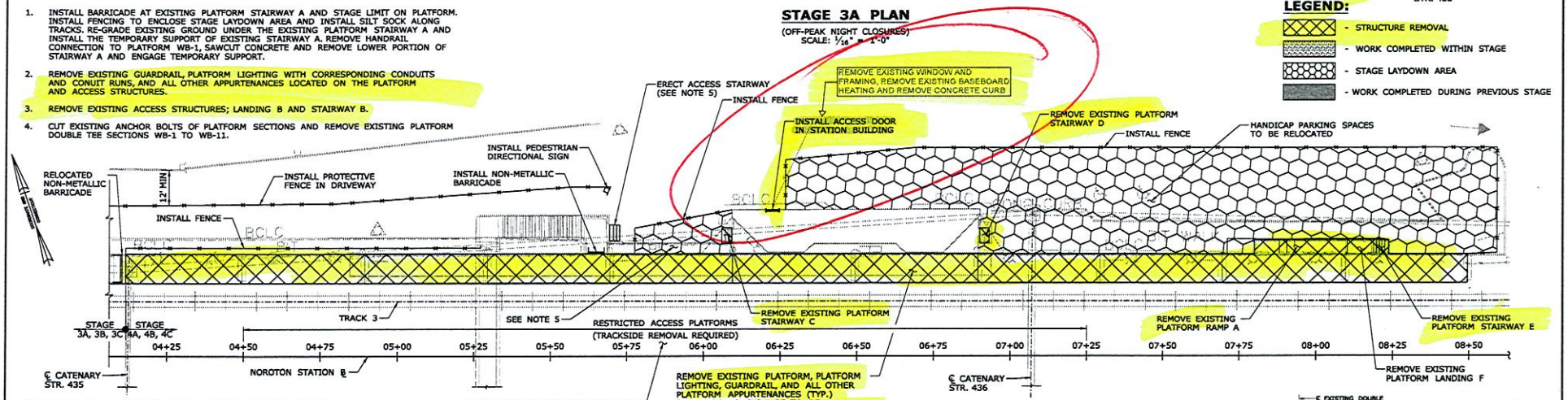
1. INSTALL BARRICADE AT EXISTING PLATFORM STAIRWAY A AND STAGE LIMIT ON PLATFORM. INSTALL FENCING TO ENCLOSE STAGE LAYDOWN AREA AND INSTALL SILT SOCK ALONG TRACKS. RE-GRADE EXISTING GROUND UNDER THE EXISTING PLATFORM STAIRWAY A AND INSTALL THE TEMPORARY SUPPORT OF EXISTING STAIRWAY A. REMOVE HANDRAIL CONNECTION TO PLATFORM WB-1, SAWCUT CONCRETE AND REMOVE LOWER PORTION OF STAIRWAY A AND ENGAGE TEMPORARY SUPPORT.
2. REMOVE EXISTING GUARDRAIL, PLATFORM LIGHTING WITH CORRESPONDING CONDUITS AND CONDUIT RUNS, AND ALL OTHER APPURTENANCES LOCATED ON THE PLATFORM AND ACCESS STRUCTURES.
3. REMOVE EXISTING ACCESS STRUCTURES; LANDING B AND STAIRWAY B.
4. CUT EXISTING ANCHOR BOLTS OF PLATFORM SECTIONS AND REMOVE EXISTING PLATFORM DOUBLE TEE SECTIONS WB-1 TO WB-11.

STAGE 3A PLAN

(OFF-PEAK NIGHT CLOSURES)
SCALE: 1/16" = 1'-0"

LEGEND:

- STRUCTURE REMOVAL
- WORK COMPLETED WITHIN STAGE
- STAGE LAYDOWN AREA
- WORK COMPLETED DURING PREVIOUS STAGE

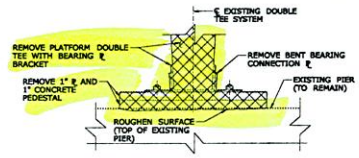


SUGGESTED CONSTRUCTION SEQUENCE

1. INSTALL ACCESS STAIRWAY AT PLATFORM LANDING C (PEDESTRIAN OVERPASS) AND REMOVE PORTION EXISTING GUARDRAIL. INSTALL ACCESS DOOR IN STATION BUILDING. INSTALL NON-METALLIC BARRICADE AT EXISTING PLATFORM LANDING C AND ON PLATFORM AT STAGE LIMITS.
2. PLACE FENCE ENCLOSING STAGE LAYDOWN AREA AND FORMING PROTECTED TRAVEL PATH FOR PEDESTRIAN TO WESTERN LIMITS OF PLATFORM.
3. REMOVE EXISTING GUARDRAIL, HANDRAIL, PLATFORM LIGHTING WITH CORRESPONDING CONDUITS AND CONDUIT RUNS, AND ALL OTHER APPURTENANCES LOCATED ON THE PLATFORM AND ACCESS STRUCTURES.
4. REMOVE EXISTING PLATFORM RAMP A, LANDING F, AND STAIRWAY C, D AND E.
5. CUT EXISTING ANCHOR BOLTS OF PLATFORM SECTIONS AND REMOVE EXISTING PLATFORM SECTIONS WB-12 TO WB-22. PLATFORM SECTIONS WB-14 TO WB-19 REQUIRE TRACKSIDE REMOVAL.

STAGE 4A PLAN

(OFF-PEAK NIGHT CLOSURES)
SCALE: 1/16" = 1'-0"



EXISTING BEARING REMOVAL DETAIL
SCALE: 2" = 1'-0"

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 11/1/2015

DESIGNER/DRAFTER: G.T.G
CHECKED BY: T.R.L
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: S8_MSM_0301-0170_S_11_STAG3A8.dgn

SIGNATURE/ BLOCK:

PROJECT TITLE: NOROTON HEIGHTS RAILROAD STATION PLATFORM REPLACEMENT

TOWN: DARIEN

DRAWING TITLE: CONSTRUCTION STAGING SHEET 4 OF 6

PROJECT NO. 301-0170
DRAWING NO. S-11
SHEET NO.

Noroton Heights Railroad Station
Platform Replacement Project

Station Building Access

- **Install Door/Ramp & Stairway –**
  - Remove existing window and install doorway. Install landing with ramp and stairway.

Existing Station window

Station Door/Landing/Ramp/Stairway Illustration

PARSONS BRINCKERHOFF

SHEET NO. _____ OF _____

PROJECT NO. _____

DATE 01/19/16

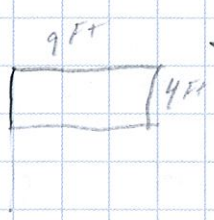
BY HH, BA + DH

CHK'D _____

SUBJECT Noroton Heights Train Station

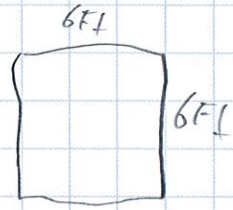
Advertisement signs

Sign #1



* Translite backing *

Sign #2



Eastbound side - 14 signs #1's

Westbound side - 10 #1 signs

5 #2 signs

A

APPENDIX C

TRC INSPECTORS LICENSES/CERTIFICATIONS

State of Connecticut

Lookup Detail View

Name

Name
HILTON HERNANDEZ

License Information
lookup

License Type	License Number	Expiration Date	Granted Date	License Name	License Status	Licensure Actions or Pending Charges
Asbestos Consultant-Inspector	424	01/31/2016	05/12/2000	Hilton Hernandez	ACTIVE	None

Generated on: 1/28/2016 8:56:24 AM

CERTIFICATE OF ACHIEVEMENT

This certifies that

Hilton Hernandez

has successfully completed the

Asbestos Site Inspector Refresher Training
Asbestos Accreditation Under TSCA Title II
40 CFR Part 763

conducted by

ATC Group Services, LLC
73 William Franks Drive
West Springfield, MA 01089
(413) 781-0070

Marc Soutra

Principal Instructor: Marcus Soutra

December 17, 2015
Date of Course

December 17, 2016
Expiration Date

Gregory Morsch

Regional Training Manager: Gregory Morsch

SIAR-5314
Certificate Number

December 17, 2015
Examination Date

DAVID M HEELON
18 HALE ST
WEST SPRINGFIELD, MA
01089-1507

Dear Licensed/Certified Professional,
Attached you will find your validated license/certification for the coming year. Should you have any questions about your license/certificate renewal, please do not hesitate to write or call:

Department of Public Health
P.O. Box 340308
M.S.#12MQA
Hartford, CT 06134-0308

(860) 509-7603
http://www.ct.gov/dph/license

Sincerely,

RAUL PINO, MD, MPH, ACTING COMMISSIONER
DEPARTMENT OF PUBLIC HEALTH

INSTRUCTIONS:

1. Detach and sign each of the cards on this form.
2. Display the large card in a prominent place in your office or place of business.
3. The wallet card is for you to carry on your person. If you do not wish to carry the wallet card, place it in a secure place.
4. The employer's copy is for persons who must demonstrate current licensure/certification in order to retain employment or privileges. The employer's card is to be presented to the employer and kept by them as a part of your personnel file. Only one copy of this card can be supplied to you.

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH
PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTICUT

THE INDIVIDUAL NAMED BELOW IS CERTIFIED BY THIS DEPARTMENT AS A
Asbestos Consultant-Inspector

David M. Heelon

CERTIFICATE NO. 635
CURRENT THROUGH 10/31/2016
VALIDATION NO. 10099585

SIGNATURE
COMMISSIONER

EMPLOYER'S COPY

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

NAME
David M. Heelon

VALIDATION NO. 10099585
CERTIFICATE NO. 635
CURRENT THROUGH 10/31/2016
PROFESSION

SIGNATURE
COMMISSIONER

WALLET CARD

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

NAME
David M. Heelon

VALIDATION NO. 10099585
CERTIFICATE NO. 635
CURRENT THROUGH 10/31/2016
PROFESSION

SIGNATURE
COMMISSIONER

CERTIFICATE OF ACHIEVEMENT

This certifies that

Dave Heelon

has successfully completed the

Asbestos Site Inspector Refresher Training
Asbestos Accreditation Under TSCA Title II
40 CFR Part 763

conducted by

ATC Group Services, LLC
73 William Franks Drive
West Springfield, MA 01089
(413) 781-0070

Marc Soutra

Principal Instructor: Marcus Soutra

December 17, 2015
Date of Course

December 17, 2016
Expiration Date

Gregory Morsch

Regional Training Manager: Gregory Morsch

SIAR-5304
Certificate Number

December 17, 2015
Examination Date

State of Connecticut

Lookup Detail View

Name

Name
BRYCE A ASTON

License Information
lookup

License Type	License Number	Expiration Date	Granted Date	License Name	License Status	Licensure Actions or Pending Charges
Asbestos Consultant-Insp/Mgmt Planner	161	10/31/2016	12/19/1997	BRYCE A. ASTON	ACTIVE	None

Generated on: 10/14/2015 9:36:17 AM

Certificate of Training

Awarded to

BRYCE ASTON

For successful completion of an 8 Hour, 1 Day

Asbestos Inspector & Management Planner

Annual Refresher Training

March 6, 2015

This training was approved and given in accordance with Regulations for Connecticut State Agencies RCSA 20-440 - 1-9 and RCSA 20-441 and meets the requirements of the EPA Revised MAP under TSCA Title II of 4/4/94

Presented by

Mystic Air Quality Consultants, Inc.

1204 North Road, Groton, CT 06340 (800) 247-7746

Certificate Number: IMPR23821

Exam Grade: 100

Exam Date: 03/06/2015

Expiration Date: 03/06/2016

Christopher J. Eident, CIH, CSP, RS

George Williamson, Training Director

Richard Haffey, Training Director

State of Connecticut

Lookup Detail View

Name

Name
DAVID M HEELON

License Information
lookup

License Type	License Number	Expiration Date	Granted Date	License Name	License Status	Licensure Actions or Pending Charges
Lead Inspector Risk Assessor	2188	10/31/2016	02/08/2007	David M. Heelon	ACTIVE	None

Generated on: 1/28/2016 8:57:01 AM

CERTIFICATE OF ACHIEVEMENT

This certifies that

David Heelon

18 Hale Street, West Springfield, MA 01089
000-00-9220

has successfully completed the

INSPECTOR RISK ASSESSOR REFRESHER

Training Course
conducted by
ATC Group Services, LLC
73 William Franks Drive
West Springfield, MA 01089
(413) 781-0070

Edward Kolodziej

Principal Instructor:

Gregory Mosch

Regional Training Director

December 3, 2015	*December 3, 2015*
Date of Course	*Exam Date*
CTLIRAR-405	*December 3, 2016*
Certificate Number	*Expiration Date*

Training received complies with the requirements of the Connecticut Department of Public Health pursuant to Section 20 477 of the Connecticut General Statutes.

APPENDIX D

LABORATORY ACCREDITATIONS

State of Connecticut, Department of Public Health

Approved Environmental Laboratory

THIS IS TO CERTIFY THAT THE LABORATORY DESCRIBED BELOW HAS BEEN APPROVED BY THE STATE DEPARTMENT OF PUBLIC HEALTH PURSUANT TO APPLICABLE PROVISIONS OF THE PUBLIC HEALTH CODE AND GENERAL STATUTES OF CONNECTICUT, FOR MAKING THE EXAMINATIONS, DETERMINATIONS OR TESTS SPECIFIED BELOW WHICH HAVE BEEN AUTHORIZED IN WRITING BY THAT DEPARTMENT.

TRC ENVIRONMENTAL CORPORATION

LOCATED AT 21 Griffin Road North IN Windsor, CT 06095

AND REGISTERED IN THE NAME OF Erik Plimpton

THIS CERTIFICATE IS ISSUED IN THE NAME OF Kathleen Williamson WHO HAS BEEN DESIGNATED BY THE REGISTERED OWNER/AUTHORIZED AGENT TO BE IN CHARGE OF THE LABORATORY WORK COVERED BY THIS CERTIFICATE OF APPROVAL AS FOLLOWS:

BUILDING MATERIALS
ASBESTOS FIBERS – PCM
BULK IDENTIFICATION – PLM

SEE COMPUTER PRINT-OUT FOR SPECIFIC TESTS APPROVED

THIS CERTIFICATE EXPIRES DECEMBER 31, 2017 AND IS REVOCABLE FOR CAUSE BY THE STATE DEPARTMENT OF PUBLIC HEALTH

DATED AT HARTFORD, CONNECTICUT, THIS 7th DAY OF December 2015

QUI TRANSTULIT SUSTINET

Registration No.

PH- 0426

SUZANNE BLANCAFLOR, MS
CHIEF, ENVIRONMENTAL HEALTH SECTION

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101424-0

TRC Environmental Corporation

Windsor, CT

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2015-06-22 through 2016-06-30

Effective Dates

DEPARTMENT OF COMMERCE · UNITED STATES OF AMERICA

For the National Voluntary Laboratory Accreditation Program

National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

TRC Environmental Corporation
21 Griffin Road North
Windsor, CT 06095
Ms. Kathleen Williamson
Phone: 860-298-6392 Fax: 860-298-6214
Email: kwilliamson@trcsolutions.com
http://www.trcsolutions.com

ASBESTOS FIBER ANALYSIS **NVLAP LAB CODE 101424-0**

Bulk Asbestos Analysis

Code	*Description*
18/A01	EPA 600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

For the National Voluntary Laboratory Accreditation Program

State of Connecticut, Department of Public Health

Approved Environmental Laboratory

THIS IS TO CERTIFY THAT THE LABORATORY DESCRIBED BELOW HAS BEEN APPROVED BY THE STATE DEPARTMENT OF PUBLIC HEALTH PURSUANT TO APPLICABLE PROVISIONS OF THE PUBLIC HEALTH CODE AND GENERAL STATUTES OF CONNECTICUT, FOR MAKING THE EXAMINATIONS, DETERMINATIONS OR TESTS SPECIFIED BELOW WHICH HAVE BEEN AUTHORIZED IN WRITING BY THAT DEPARTMENT.

PROSCIENCE ANALYTICAL SERVICES, INC.

LOCATED AT 22 Cummings Park IN Woburn, MA 01801

AND REGISTERED IN THE NAME OF Harvey Yee

THIS CERTIFICATE IS ISSUED IN THE NAME OF Aimee Cormier WHO HAS BEEN DESIGNATED BY THE REGISTERED OWNER/AUTHORIZED AGENT TO BE IN CHARGE OF THE LABORATORY WORK COVERED BY THIS CERTIFICATE OF APPROVAL AS FOLLOWS:

SOLID WASTE/SOIL
Examination for:
Total Metals

ASBESTOS
Bulk Identification (PLM + TEM)
Air-Fiber Counting (PCM + TEM)

ENVIRONMENTAL HEALTH & HOUSING
Lead In Paint
Lead (Paint) in Soil
Lead in Dust Wipes

SEE COMPUTER PRINT-OUT FOR SPECIFIC TESTS APPROVED

THIS CERTIFICATE EXPIRES December 31, 2016 AND IS REVOCABLE FOR CAUSE BY THE STATE DEPARTMENT OF PUBLIC HEALTH

DATED AT HARTFORD, CONNECTICUT, THIS 8th DAY OF December, 2014

Registration #
PH-0209

SUZANNE BLANCAFLOR, MS
CHIEF, ENVIRONMENTAL HEALTH SECTION

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 200090-0

ProScience Analytical Services, Inc.

Woburn, MA

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2016-01-01 through 2016-12-31

Effective Dates

DEPARTMENT OF COMMERCE · UNITED STATES OF AMERICA

For the National Voluntary Laboratory Accreditation Program

National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

ProScience Analytical Services, Inc.
22 Cummings Park
Woburn, MA 01801-2122
Ms. Aimee Cormier
Phone: 781-935-3212 Fax: 781-932-4857
Email: aimee.cormier@proscience.net
http://www.proscience.net

ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 200090-0

Bulk Asbestos Analysis

Code	*Description*
18/A01	EPA 600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

Airborne Asbestos Analysis

Code	*Description*
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

For the National Voluntary Laboratory Accreditation Program

Effective 2016-01-01 through 2016-12-31

APPENDIX E

ASBESTOS BULK SAMPLE CHAIN OF CUSTODY FORMS

TRC

Edition: October 2009
Supersede Previous Edition

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

ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

LAB ID #. 47464

PROJECT NUMBER	PROJECT NAME CT DOT	PARAMETERS	TURNAROUND TIME							
222165.5202.0710	Metro North – Noroton Heights Station		PLM:		8hr	X	24hr		48hr		3day
			TEM:	X	24hr		48hr		3day		5day
SIGNATURE	INSPECTOR Hilton Hernandez									

FIELD SAMPLE NUMBER	DATE	TIME	TYPE COMP	TYPE GRAB	SAMPLE LOCATION	PLM EPA 600/R93/116 (POSITIVE STOP)	PLM EPA 600/R93/116 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)	MATERIAL
01	01/19/16	1142		X	Westbound advertisement board	X					T1 – gray transite board
02	01/19/16	1239		X	Eastbound advertisement board	X					T1 – gray transite board
03	01/19/16	1136		X	Westbound Platform	X				X	EJ1 – light gray expansion joint caulk
04	01/19/16	1140		X	Eastbound Platform	X					EJ1 – light gray expansion joint caulk
05	01/19/16	1202		X	Westbound Platform	X				X	EJ2 – black tar expansion joint material
06	01/19/16	1145		X	Eastbound Platform	X					EJ2 – black tar expansion joint material
07	01/19/16	1210		X	Westbound Platform	X				X	EJ3 – black brittle expansion joint material
08	01/19/16	1230		X	Eastbound Platform	X					EJ3 – black brittle expansion joint material
09	01/19/16	1213		X	Westbound Platform	X				X	EJ4 – black fiber expansion joint material
10	01/19/16	1240		X	Eastbound Platform	X					EJ4 – black fiber expansion joint material

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
	01/19/16	1/20/16			
(Printed) Hilton Hernandez	Time: 15:15	(Printed) 0900 Williamson	(Printed)	Time:	(Printed)

Remarks: Results to Erik Plimpton and Hilton Hernandez

Condition of Samples:
Acceptable: Yes ✓ No
Comments:

NT 15582

Proscience Analytical Services, Inc.

22 Cummings Park, Woburn, MA 01801 Ph. 781-935-3212 Fax 781-932-4857

TEM Bulk Chain of Custody Record

Date: 01/20/16

PO#: **C222165**

Analysis Type: Chatfield **EPA N.O.B** Qualitative

Client: TRC

Client Job#: 222165.5202.0710

Client Job Ref./Loc.: CT DOT- Metro North, Noroton Heights Station

Relinquished by: K. Williamson – KWilliamson@trcsolutions.com

Received by: Margaret Valerio 1/21/16 9:40 am

Report to: E. Plimpton – EPlimpton@trcsolutions.com & SArienti@trcsolutions.com

Samplers Name: H. Hernandez- HHernandez@trcsolutions.com

Turn Around Time: <12 Hour <24 Hour <48 Hour **<3 Day** 5 Day Other:

				For Lab Use Only	
Client ID #	**Lab ID#**	**Description**	**Location**	**Acceptable on Receipt**	**Comments**
03	47464	Caulk	See COC		
05	47464	Expansion Joint			
07	47464	Expansion Joint			
09	47464	Expansion Joint			

For Lab Use Only	# Spies	Total	Client #	Batch #	Results Reported	Comments

APPENDIX F

PLM LABORATORY ANALYSIS DATA

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

TRC
Results you can rely on

BULK ASBESTOS ANALYSIS REPORT

CLIENT: CT Department of Transportation

Lab Log #: 0047464
Project #: 222165.5202.0710
Date Received: 01/20/2016
Date Analyzed: 01/20/2016

Site: Metro North, Noroton Heights Station

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

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type
01	Grey	Yes	No	- -	- - -	10%	Chrysotile
02	- -	- -	- -	- -	- -	NA/PS	- -
03	Light Grey	Yes	No	- -	- - -	ND	None
04	Light Grey	Yes	No	- -	- - -	ND	None
05	Black	Yes	No	- -	- - -	ND	None
06	Black	Yes	No	- -	- - -	ND	None
07	Black	Yes	No	- -	- - -	ND	None
08	Black	Yes	No	- -	- - -	ND	None
09	Black	Yes	No	- -	20% cellulose	ND	None
10	Black	Yes	No	- -	20% cellulose	ND	None

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

TRC
Results you can rely on

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

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type

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

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

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation (1982), and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey which utilizes polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 18/A01, effective through June 30, 2016. TRC is an American Industrial Hygiene Association (AIHA) accredited lab for PLM effective through October 1, 2016. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and the QC data related to the samples is available upon written request from the client.

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

Analyzed by: K. Williamson — Kathleen Williamson, Laboratory Manager

Reviewed by: Amanda Parkins — Amanda Parkins, Approved Signatory

Date Issued
01/20/2016

APPENDIX G

TEM LABORATORY ANALYSIS DATA

ProScience Analytical Services, Inc.

22 Cummings Park, Woburn, Massachusetts 01801
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Laboratory Report

Client Project #: 222165.5202.0710
Client Reference: CT DOT - Metro North, Noroton Heights Station
PO #: C222165
Client #: 297
Client Name: TRC Environmental Corp. (CT)

Batch: **NT 15582**
Method: NOB
Date Received: 1/21/2016
Date Analyzed: 1/25/2016
Date of Report: 1/25/2016

LAB ID	Field ID	Description:	Color	Initial Weight	% Asbestos Types						% Other Non-asb.	% Organic	% Carb.	Total % Asbestos	Analyzed / Charged	Preped / Charged
					CHR	AMO	ACT	CRO	ANT	TRE						
NT118915	03	Light Gray Expansion Joint Caulk		.3639	.00	.00	.00	.00	.00	.00	6.48	50.54	42.98	**ND**	Yes	No
NT118916	05	Black Tar Expansion Joint Material		.1263	.00	.00	.00	.00	.00	.00	7.60	86.38	6.02	**ND**	Yes	No
NT118917	07	Black Brittle Expansion Joint Material		.4731	.00	.00	.00	.00	.00	.00	35.97	55.00	9.03	**ND**	Yes	No
NT118918	09	Black Fiber Expansion Joint Material		.1922	.00	.00	.00	.00	.00	.00	4.37	80.80	14.83	**ND**	Yes	No

Comments:

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

Mark Derosier, Analyst

APPENDIX H

LEAD PAINT XRF MEASUREMENT TABLE

TRC

Lead Based Paint Measurement Summary Table

Device(s): Niton XLP301-A (Serial #24792) X Ray Fluorescence (XRF) Spectrum Analyzer
Site: Metro North Railroad Noroton Heights Railroad Station - Platform Replacement Project, Darien, Connecticut
Project # : 222165-5202-0710
Date(s): 1/19/2016
Inspector: David Heelon (CT Lead Inspector Risk Assessor License #002188)

Number	Room	Side	Structure	Feature	Material	Color	Condition	Reading (mg/cm2)	Precision (mg/cm2)	Depth Index	Duration (sec)	Date/Time
1	**Shutter calibration**										208.52	1/19/2016 11:01
2	**Filter**										2.63	1/19/2016 11:46
3	**Filter**										1.32	1/19/2016 11:47
4	**0.3 calibration**							0.4	0.1	1.31	4.33	1/19/2016 11:49
5	**1.6 calibration**							1.5	0.4	1.15	2.45	1/19/2016 11:49
6	**3.5 calibration**							3.6	0.7	1.31	3.2	1/19/2016 11:49
7	Exterior	Westbound	Yellow line	Platform	Concrete	Yellow	Defective	0.0	0.0	1	3.56	1/19/2016 11:55
8	Exterior	Westbound	Sign	Handrail	Metal	Red	Intact	**0.6**	0.2	1.3	2.81	1/19/2016 11:58
9	Exterior	Westbound	Sign	Handrail	Metal	White	Intact	**0.1**	0.1	1.61	2.64	1/19/2016 11:59
10	Exterior	Westbound	Sign	Next to handrail	Wood	Grey	Defective	0.0	0.0	1.44	2.63	1/19/2016 12:00
11	Exterior	Westbound	Light post		Metal	Brown	Intact	0.0	0.0	1.39	4.12	1/19/2016 12:03
12	Exterior	Westbound	Light post	Base	Metal	Brown	Intact	0.0	0.0	1	3.18	1/19/2016 12:04
13	Exterior	Westbound	Trash & Bottles bin	--	Metal	Blue	Intact	0.0	0.0	1	3.94	1/19/2016 12:08
14	Interior	Westbound	Panel below window	--	Metal	Brown	Intact	0.0	0.1	3.67	2.63	1/19/2016 12:18
15	Exterior	Westbound	Yellow line	Platform	Concrete	Yellow	Defective	0.0	0.0	2.5	5.43	1/19/2016 12:23
16	Exterior	Westbound	Curb where door will replace window		Asphalt	Yellow	Intact	0.0	0.0	1	5.63	1/19/2016 12:26
17	Exterior	Westbound	Handrail	By stairs	Metal	Grey	Defective	0.0	0.0	1.46	5.27	1/19/2016 12:30
18	Exterior	Westbound	Trash & Bottles bin	--	Metal	Blue	Intact	0.0	0.0	1	3.96	1/19/2016 12:34
19	Exterior	Westbound	Light post	--	Metal	Brown	Intact	0.0	0.0	1.23	4.87	1/19/2016 12:36
20	***VOID***	***VOID***	***VOID***	***VOID***			***VOID***					***VOID***
21	Exterior	Eastbound	Light post	--	Metal	Brown	Intact	0.0	0.0	1.18	8.26	1/19/2016 12:41
22	Exterior	Eastbound	Light post	Base	Metal	Brown	Intact	0.0	0.0	4.7	18.02	1/19/2016 12:43
23	Exterior	Eastbound	Yellow line	Platform	Concrete	Yellow	Intact	0.0	0.0	1	6.56	1/19/2016 12:45
24	Exterior	Eastbound	Yellow line	Platform	Concrete	Yellow	Intact	0.0	0.0	1.32	6.76	1/19/2016 12:46
25	Exterior	Eastbound	Trash & Bottles bin	--	Metal	Blue	Intact	0.0	0.0	1	5.27	1/19/2016 12:48
26	Exterior	Eastbound	Light post	--	Metal	Brown	Intact	0.0	0.0	1.3	4.67	1/19/2016 12:50
27	***VOID***	***VOID***	***VOID***	***VOID***			***VOID***					***VOID***
28	Exterior	Eastbound	Sign	Handrail	Metal	Red	Intact	**0.8**	0.1	1.6	5.44	1/19/2016 12:53
29	Exterior	Eastbound	Sign	Handrail	Metal	White	Intact	**0.1**	0.0	1.72	5.27	1/19/2016 12:54
30	Exterior	Eastbound	Handrail	By stairs	Metal	Grey	Defective	**0.1**	0.0	1.81	5.25	1/19/2016 12:58
31	Exterior	Eastbound	Yellow line	Platform	Concrete	Yellow	Defective	0.0	0.0	1.94	6.76	1/19/2016 13:01
32	Interior	Westbound	Radiator baseboard heater	--	Metal	Brown	Defective	0.0	0.0	1	6.38	1/19/2016 13:21
33	**0.3 calibration**			--	--			0.3	0.1	1.01	2.65	1/19/2016 13:26
34	**1.6 calibration**			--	--			1.3	0.1	1.03	6	1/19/2016 13:26
35	**3.5 calibration**			--	--			3.5	0.7	1.25	3	1/19/2016 13:26

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

Side A = Street side; Sides B,C,D follow clockwise

APPENDIX I

COMPOSITE BUILDING MATERIAL WASTE CHARACTERIZATION DATA

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

January 26, 2004

Mr. Erik R. Plimpton, P.E., CHMM, Senior Consulting Engineer
TRC Environmental Corporation
5 Waterside Crossing
Windsor, CT 06095

RE: Characterization of lead-based paint debris.

Dear Mr. Plimpton:

Pursuant to our recent discussions by email, I am writing to confirm that the policy elaborated in my July 22, 1997 letter to Steven Murdzia of ATC Associates concerning the use of XRF testing to characterize lead-based paint debris is still in effect. In particular, my statement in that letter that obtaining an XRF reading less than 1.0 mg/cm^2 is sufficient to demonstrate that a given debris is not a hazardous waste is still our current policy.

As noted in my July 22, 1997 letter, this policy is subject to the following limitations:

1.) The material being sampled consists only of building debris (such as painted wood or masonry). Non-debris materials (such as concentrated paint chips, sand blasting debris, or paint stripping wastes) may not be characterized in this manner.

2.) The material being sampled has only surficial lead contamination (i.e. lead-based paint). Materials which have more than just surficial contamination (such as floor boards soaked with lead plating solutions) may not be characterized in this manner.

3.) The material is sampled in accordance with appropriate protocols regarding sampling frequency and location, to ensure that the reading of 1.0 mg/cm^2 or less is truly representative of the material as a whole.

I should also note that this approach is only useful in situations in which all of a particular debris stream does not exceed 1.0 mg/cm^2. If portions of the debris stream exceed 1.0 mg/cm^2, you cannot use this standard to characterize the debris, and must resort to another method (such as composite sampling). In addition, in employing this method to characterize the debris, the areas which had XRF readings under the 1.0 mg/cm^2 limit must not be ignored (since falling below the standard only means they are not hazardous, not that they are lead-free).

My July 22, 1997 letter also addressed the use of the Connecticut Department of Public Health's 0.5 weight percent limit for a "toxic" level of lead under its lead abatement regulations in order to determine whether or not lead-based paint debris is hazardous. Unlike the 1.0 mg/cm^2 XRF standard, the weight percent number is not appropriate for waste characterization purposes, due to a lack of relevant data. The 1.0 mg/cm^2 XRF policy discussed above was based on certain data generated by EPA correlating XRF readings to TCLP sampling of architectural debris.[1] While EPA's data did not show a predictable relationship between these two measures, it did indicate that there was an XRF threshold below which such debris did not contain sufficient lead to fail TCLP. However, there is no similar data establishing a similar threshold for weight percent lead in lead-based paint below which debris does not fail TCLP.

I should also note that we intend to include the above policy in the next revision of our lead-based paint guidance document, Guidance for the Management and Disposal of Lead-Contaminated Materials Generated in the Lead Abatement, Renovation, and Demolition Industries, which was last revised in 1996, prior to the letter to Mr. Murdzia.

Sincerely,

Ross Q. Bunnell, Sanitary Engineer 3
Bureau of Waste Management
Engineering & Enforcement Division

RQB:rqb
Attachment: March, 1993 EPA Guidance Document

1 See in particular the March 1993 EPA guidance document entitled "Applicability of RCRA Disposal Requirements to Lead-Based Paint Abatement Wastes," Page 16, Table II. A copy of this guidance document is attached.

APPENDIX J

RELATED CORRESPONDENCE

Plimpton, Erik

From: Levesque, Roger J <Roger.Levesque@ct.gov>
Sent: Friday, December 4, 2015 1:59 PM
To: Burke, Ed; Plimpton, Erik
Cc: Fox, Adam G.
Subject: PROJECT #301-0170, NORTON HEIGHTS RAILROAD PLATFORM IMPROVEMENTS, DARIEN

Gentlemen, as with the Bridgeport Platform project, Metro North will be responsible for the removal of the Advisement Billboards. As part of your assignment the Department would like to have TRC inventory these signs.

5202

4 TRS