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New York, NY 10017-3739
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Howard Permut
President



September 22, 2008

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233

Att: Gerard Burke

**Subject: Metro-North Railroad, Harmon Yard,
Operable Unit I – Operations & Maintenance Status Report,
Report Period June 15, 2007 through December 31, 2007.**

Dear Mr. Burke;

Enclosed please find a copy of Metro-North Railroad's Harmon Yard Operable Unit I, Operations & Maintenance Status Report for the period of January 1, 2008 through July 31, 2008. This document describes the inspection and maintenance work completed during the monitoring period to evaluate and maintain features at OU-I.

If you require additional information or have any questions, please feel free to contact me at 212-340-3322.

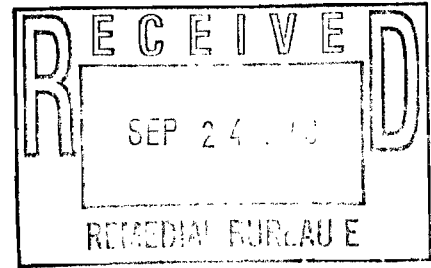
Very truly yours,
Metro-North Railroad

A handwritten signature in blue ink that reads "Joanne Reilly".

Joanne Reilly, Manager
Director of Environmental Compliance and Services

Enc.

CC: K. Timko – MNR w/ attachment
R. Kampff – Day Engineers



**OPERATIONS & MAINTENANCE STATUS REPORT
PERIOD: JANUARY 1, 2008 THROUGH JULY 31, 2008**

**OPERABLE UNIT I
FORMER WASTEWATER TREATMENT AREA
METRO NORTH RAILROAD HARMON YARD
CROTON-ON-HUDSON, NEW YORK**

Prepared for: Metro-North Railroad
347 Madison Avenue
New York, New York 10017

Prepared by: Day Engineering, P.C.
40 Commercial Street
Rochester, New York 14614

Date: August 2008

Project No.: 04-3135I (46)

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ATTACHMENTS

Attachment A	OU-I Remedy Inspection Form: June 26, 2008 Site Inspection Photographs
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1.0 INTRODUCTION

The operation and maintenance requirements for the remedial construction completed to address the former Harmon Railroad Yard Wastewater Treatment Area [i.e., identified as Operable Unit-I (OU-I)] are described in a document titled, *Operable Unit I, Operations and Maintenance Plan, Harmon Railroad Yard, Croton-On-Hudson, New York* dated July 7, 1999 as revised August 1999 (O & M Plan). A project locus map showing the location of OU-I (the "Site") is included as Figure 1 and a Site Plan depicting OU-I features is included as Figure 2.

As described in the O & M Plan, as amended by actions described in previous status reports, the following features of the OU-I remedy are evaluated/maintained on a routine basis as part of the remedial program:

- asphalt cover over the geocomposite cap;
- slopes around the asphalt cover;
- drainage modification system; and
- perimeter fencing.

This document describes the work completed during the monitoring period between January 1, 2008 and July 31, 2008 to evaluate and maintain the above features. Specific inspection and maintenance procedures conducted during the monitoring period to address these components are discussed in Section 3.0.

2.0 BACKGROUND

The Harmon Railroad Yard (i.e., the "Yard") is located in the Village of Croton-on-Hudson, New York, and is bound by Route 9 on the east and Croton Point Park to the west. The Yard is approximately 100 acres in size, and has been in operation for over 100 years. Currently, Metro North Railroad (MNR) operates the Yard.

The OU-I remedial action was completed in September 1996 and it addressed remediation and closure of the former wastewater treatment plant lagoon and excavation of surface soil from specific areas around the lagoon. Remediation and closure of the lagoon and the areas surrounding the lagoon entailed the following key items:

- excavation of soil surrounding the wastewater treatment plant lagoon (i.e., identified as Zone A);
- installation of permanent sheeting around the lagoon perimeter;
- water removal from the wastewater treatment plant lagoon;
- removal of sludge from within the lagoon;
- placement of a lower backfill layer, consisting of 3.5 feet of clean backfill, over the native soil at the bottom of the lagoon;
- installation of a high density polyethylene (HDPE) geomembrane liner over the lower backfill layer;
- placement of a middle backfill layer, consisting of a one foot layer of clean fill overlain by a 10-inch layer of Zone A soil having polychlorinated biphenyl (PCB) concentrations up to 10 parts per million (ppm), overlain by a two to five foot thick layer of clean backfill, over the HDPE liner;
- installation of an HDPE geomembrane cap over the middle backfill layer;
- installation of a geocomposite drainage net over the HDPE geomembrane cap;
- placement of a top backfill layer, consisting of a one foot thick sand drainage layer and one foot of clean backfill, over the drainage net;
- installation of a reinforcement geotextile, overlain by a 6.5-inch thick asphalt cover at the final surface;
- installation of a riprap-lined drainage channel along the northern edge of the asphalt cover;
- installation of a system of manholes and pipes to carry storm water from the drainage channel to the existing Harmon Yard storm sewer system;
- transport and off-site disposal of all excavated sludge, and Zone A soil containing PCBs at concentrations greater than 10 ppm (i.e., Zone A1 soil); and
- decontamination and demolition of the Old Wastewater Treatment Plant.

Due to the settlement over time, a pronounced depression occurred near the center of the asphalt cap. Water from snowmelt and rainfall events collected within this depression. A drainage modification was installed to correct the effects that this depression had on the drainage of the asphalt cap. This drainage modification system was installed in November-December 2005 to continuously drain water away from the depression in the asphalt cover. This system consists of a sump box installed within the depression that is connected to 4-inch diameter PVC piping, installed within the asphalt cover and above

the HDPE liner, this piping drains via gravity into the existing Harmon Yard storm sewer system. As a result, surface water from the asphalt cap does not discharge into the surrounding drainage channel. The location of the drainage modification is shown on Figure 2 and a sheet depicting the profile, section and detail of the drainage modification is presented as Figure 3. [Note: This drainage system was installed as an alternative to repaving the asphalt cap, which was deemed to be an excessive cost that would not serve to eliminate future settlement or degradation of the OU-I cover system.]

Piping and wells for an air sparge/soil vapor extraction system were installed into and below the lower backfill soil layer to address petroleum related compounds in soil beneath the lower backfill layer. Prior to implementation of the OU-I remedy, regulation of this soil (i.e., soil located beneath the lower backfill soil layer containing petroleum related compounds) was transferred by NYSDEC, from the Division of Inactive Hazardous Waste Disposal Sites to the Bureau of Spill Prevention and Response. As such, operation and maintenance of the air sparge/soil vapor extraction system, if required, is not a component of the OU-I remedy and, therefore, is not included in the O&M plan.

3.0 OPERATION AND MAINTENANCE

This section presents a summary of observations of the OU-I remedy, and maintenance work conducted during the January 1, 2008 through the July 31, 2008 monitoring period. Representatives of the MNR Structures Department are at the Site daily Monday through Friday to complete field measurements and to undertake oil removal activities associated with Operable Unit-II of the former Harmon Railroad Yard Wastewater Treatment Area. In conjunction with this work, the condition of the elements of the OU-I remedy are routinely observed and cleaning/repairs are completed as deemed necessary. During the monitoring period, one detailed inspection of the OU-I remedial elements was conducted by DAY on June 26, 2008 and the results of this inspection is discussed below. Copies of the completed OU-I Remedy Inspection Form and site photographs for the June 26, 2008 inspection are included in Attachment A.

3.1 Asphalt Cover

Based upon observations made on June 26, 2008, there is minor cracking in the asphalt cover and a corrective action (i.e., future filling and asphalt sealing of the cracks) should be considered. The area of settling observed on the June 26, 2008 inspection appeared similar to that observed during previous inspections. During the June 26, 2006 inspection, there was no surface water ponding observed on the asphalt cover (i.e., the drainage modification system was functioning as designed) and there were no differences in elevation observed around the grouted manhole covers within the asphalt cover during this time period.

3.2 Slopes Around the Asphalt Cover

The slopes that surround the lagoon cap system and asphalt cover provide erosion protection for the portion of the asphalt cover that is not located over the sheeting wall that was left in place around the former lagoon area. These slopes are routinely observed by MNR Structures Department representatives for evidence of erosion and accumulated debris. [Note: When the OU-I remedy was implemented in 1996, it was anticipated that the slopes would be covered with vegetation to reduce erosion. Due to the presence of deer ticks in the Yard, herbicide was routinely applied to the slopes around the asphalt cover to keep the area free of vegetation and some areas of erosion resulted (e.g., in proximity to the L4 shed as noted in previous status report.) Herbicide is no longer applied to the slopes around the asphalt cover, which has resulted in the re-growth of vegetation in this area. This vegetative cover has resulted in better erosion control on the slopes and areas of erosion noted during previous monitoring events are no longer evident.

During the June 26, 2008 inspection, no evidence of washouts, soil slides, or erosion rivulets was observed on the side slopes. A small amount of debris (i.e., miscellaneous solid waste) was observed on the slopes along the perimeter of the fence during the inspection. Such material should be routinely removed.

3.3 Drainage Modification System

The drainage channel that traverses the northern edge of the asphalt cover and connects to the Harmon Yard storm sewer system was originally constructed to divert water away from the lagoon. Due to the settlement and changes in the topography of the center of the asphalt cap, the water flow patterns exiting the asphalt cover have changed and water from the asphalt cap no longer flows through the drainage channel. The new drainage modification system now handles drainage off the asphalt cover (refer to Section 2.0 and Figure 3). Therefore, the drainage modification system will be monitored as the replacement to the drainage channel. During the June 26, 2008 inspection significant sedimentation and ponded water was not observed in the area of the drainage modification system. Therefore, corrective actions are not recommended to the drainage modification system at this time.

3.4 Perimeter Fencing

Access to the former Harmon Railroad Yard Wastewater Treatment Area is controlled by perimeter fencing with locked gates to prevent unauthorized entry into the OU-I area. MNR Structures Department personnel observe the perimeter fencing on a daily basis (i.e., Monday through Friday). During the June 26, 2008 inspection, there was no damage to the fence noted and the gate locks were present and in good condition. Scrub trees were observed along various portions of the fence; however, since the scrub trees have not caused a breach in the perimeter fencing a corrective action (i.e., trimming of scrub trees or removal) does not appear needed at this time.

4.0 SUMMARY AND CONCLUSION

This section presents a summary of observations of the OU-I remedy made during the January 1, 2008 through July 31, 2008 monitoring period and recommendations for maintenance work to be conducted during the next monitoring period (i.e., August 1, 2008 through December 31, 2008).

4.1 Asphalt Cover

- Based upon observations made through July 31, 2008, there is evident cracking in the asphalt cover and visual monitoring of these cracks should continue throughout the next monitoring period. As weather permits, the cracks should be filled with joint sealer and spot sealing should be conducted along the cracks with an asphalt sealant.
- The area of settling observed north of the catch basin should be monitored for continued settlement and if this settlement appears to affect the OU-I remedy, additional corrective actions should be considered.

4.2 Slopes Around the Asphalt Cover

- Miscellaneous solid waste was observed on the slopes along the perimeter of the fence during the inspection. This material and other similar debris should be routinely removed from this area.

4.3 Drainage Modification System

- There was no significant sedimentation or ponded water observed in the drainage modification system at the time of the June 26, 2008 inspection. Therefore, a corrective action is not needed to the drainage system at this time.

4.4 Perimeter Fencing

- During the June 26, 2008 inspection, there was no damage to the fence noted and the gate locks were present and in good condition. Scrub trees were observed along various portions of the fence; however, since the scrub trees have not caused a breach in the perimeter fencing a corrective action (i.e., trimming of scrub trees or removal) does not appear needed at this time.

5.0 SCHEDULE

The periodic observation and maintenance of the asphalt cover; slopes surrounding the asphalt cover; the drainage channel; and the perimeter fencing will continue to be conducted on a routine basis. As part of this work, the inspection form included in Attachment A will be completed to document the condition of the OU-I remedial system. A report summarizing the operation and maintenance activities conducted at OU-I from July 31, 2008 through December 31, 2008 will be submitted on or before March 1, 2009. It is anticipated that site inspections will be completed on/or about September 15, 2008 and November 15, 2008 during this time period.


FIGURES



SITE:
 Harmon Yard (OU-I)
 Croton-on-Hudson, NY

3-D TopoQuads Copyright © 1999 DeLorme Vermont, DEE 0-006 Source Data: USGS 1" = 500 ft Scale: 1: 10,200 Detail: 14:0 Datum: WGS84

Drawing Produced From: 3-D TopoQuads, DeLorme Map Co., referencing USGS quad maps Haverstraw (NY) 1979 and Ossining (NY) 1979. Site Lat/Long: N41d-11.46' - W73d-53.33'

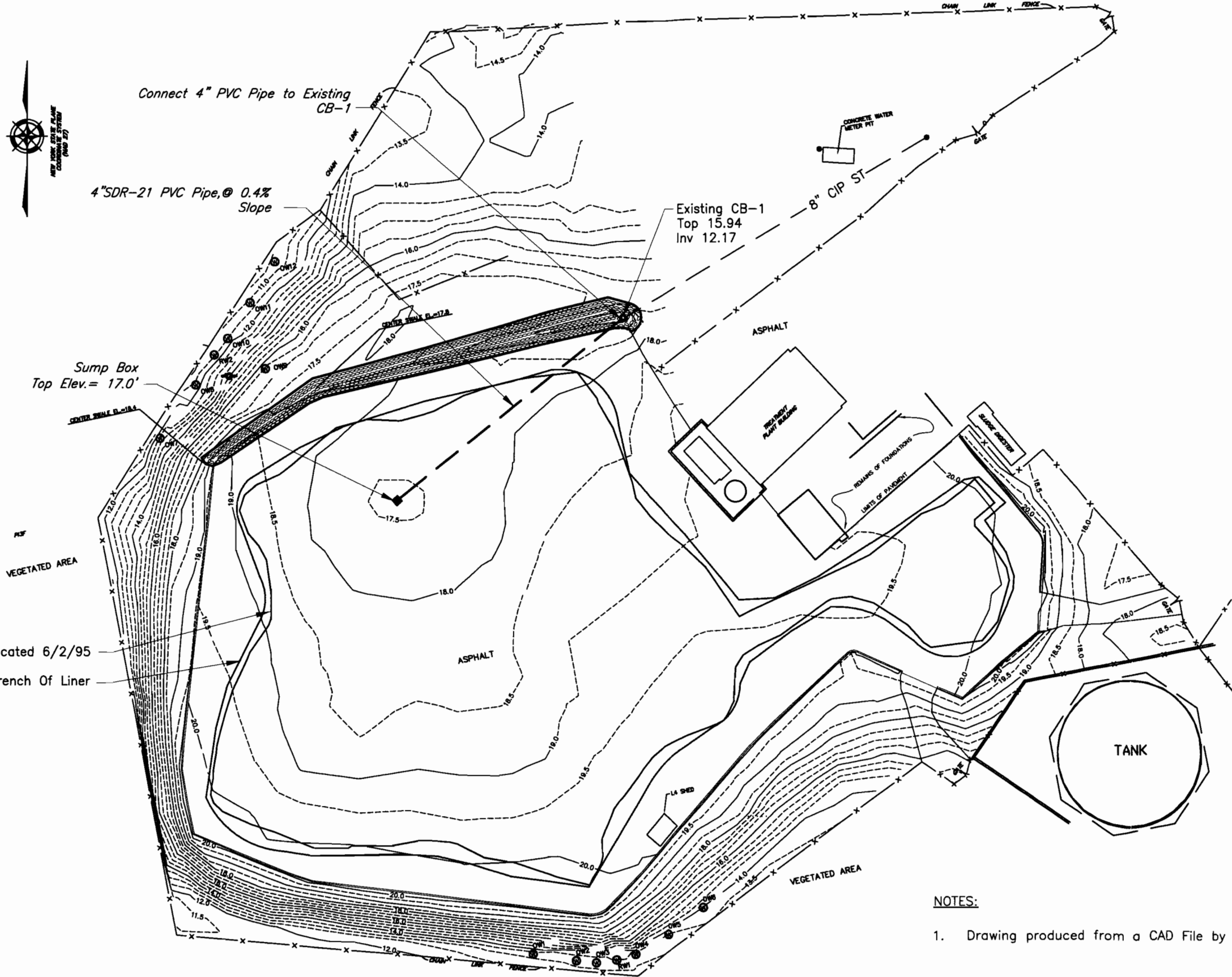
DATE 02-27-2006	 DAY ENGINEERING, P.C. ENVIRONMENTAL ENGINEERING CONSULTANTS ROCHESTER, NEW YORK 14614-1008	PROJECT TITLE METRO-NORTH RAILROAD HARMON YARD (OU-I) CROTON-ON-HUDSON, NEW YORK PROGRESS REPORT	PROJECT NO. 04-3135I (46)
DRAWN BY RJM		DRAWING TITLE PROJECT LOCUS MAP	FIGURE 1 SHEET 1 OF 1
SCALE 1" = 2000'			

Ref4:
Ref5:
Ref6:

Ref1: Base-1.dwg
Ref2:
Ref3:

Xerox432AnsiB-2; 11 x 17
Layout Name: Layout 1

Time Plotted: Tues Mar 4 14:20 2008
File Name: Harmon\CB Lagoon-Ref66\Figure-1.dwg



Top Of Sheet Pile As Located 6/2/95
Anchor Trench Of Liner

NOTES:
1. Drawing produced from a CAD File by ERM.

1 SITE PLAN
FIG-1 1" = 60'

Design/Tag	TKH	DATE	10-2004
DRAWN BY	LRP/TW	DATE DRAWN	10-25-2004
SCALE	As Noted	DATE ISSUED	03-04-2008

day
 DAY ENGINEERING, P.C.
 ENVIRONMENTAL ENGINEERING CONSULTANTS
 ROCHESTER, NEW YORK 14614-1008
 NEW YORK, NEW YORK 10165-1617

PROJECT TITLE
**METRO-NORTH RAILROAD
 HARMON YARD
 CROTON-ON-HUDSON
 OU-J SITE DRAINAGE PLAN**
 DRAWING TITLE
Partial Site Plan

PROJECT NO.
04-3135I (46)

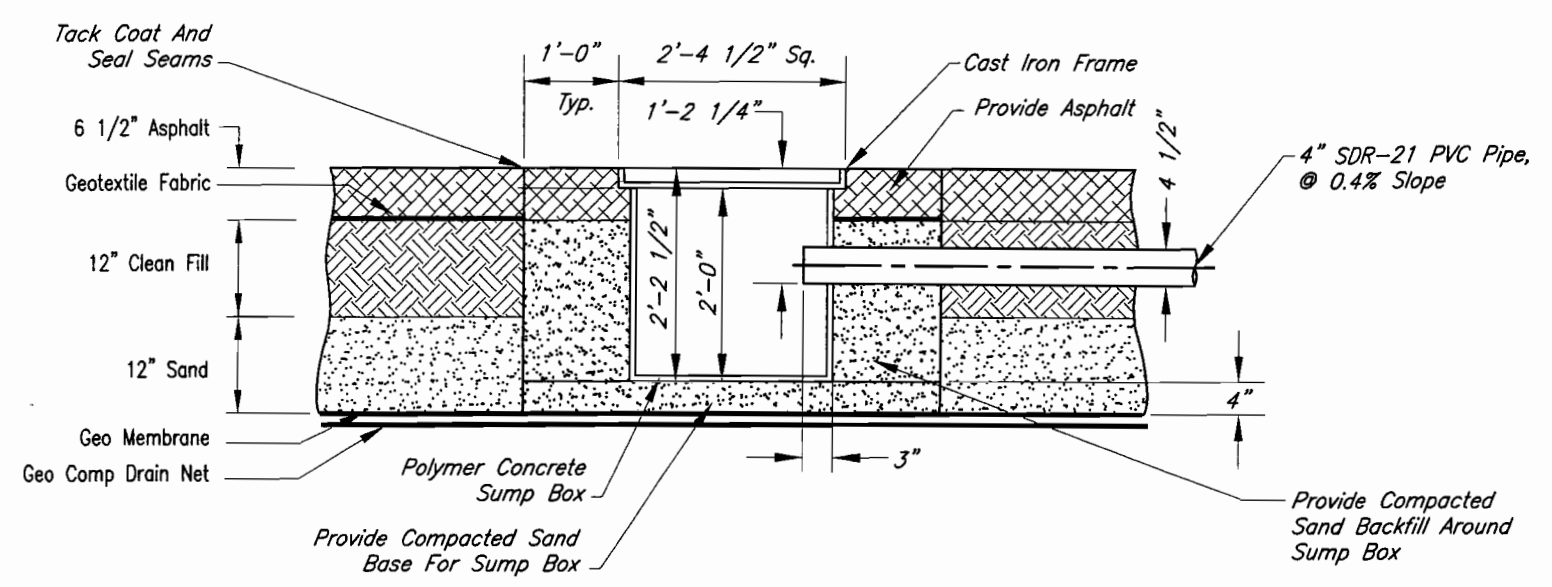
FIGURE 2

Ref4:
Ref5:
Ref6:

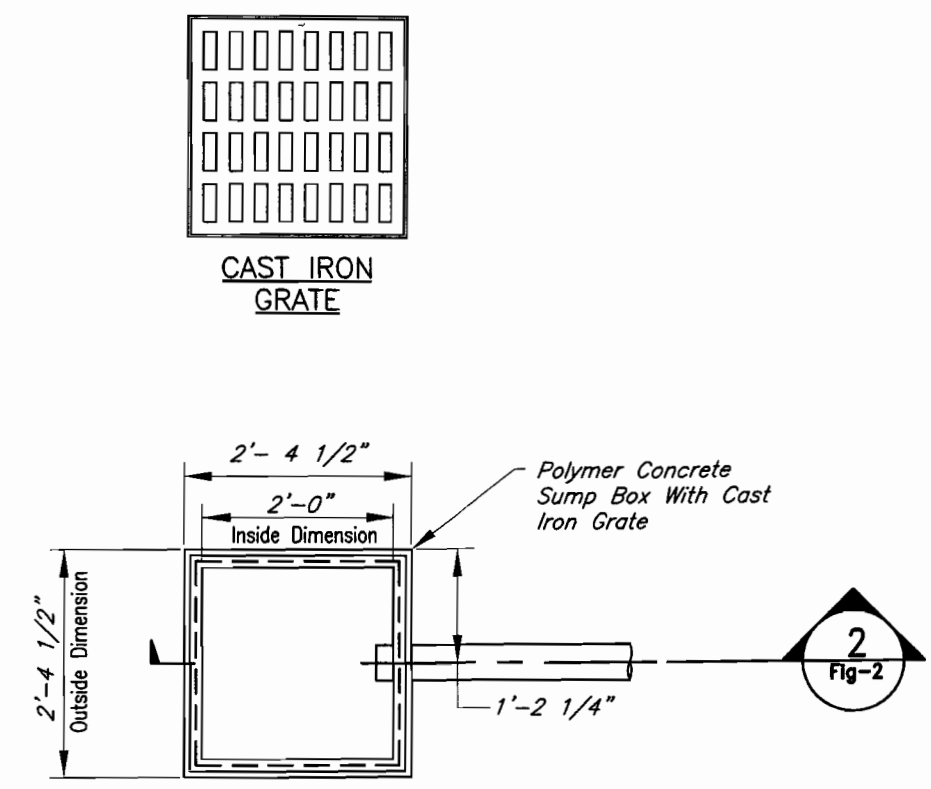
Ref1: Base-1.dwg
Ref2:
Ref3:

Xerox432AnsiB-2; 11 x 17
Layout Name: Layout2

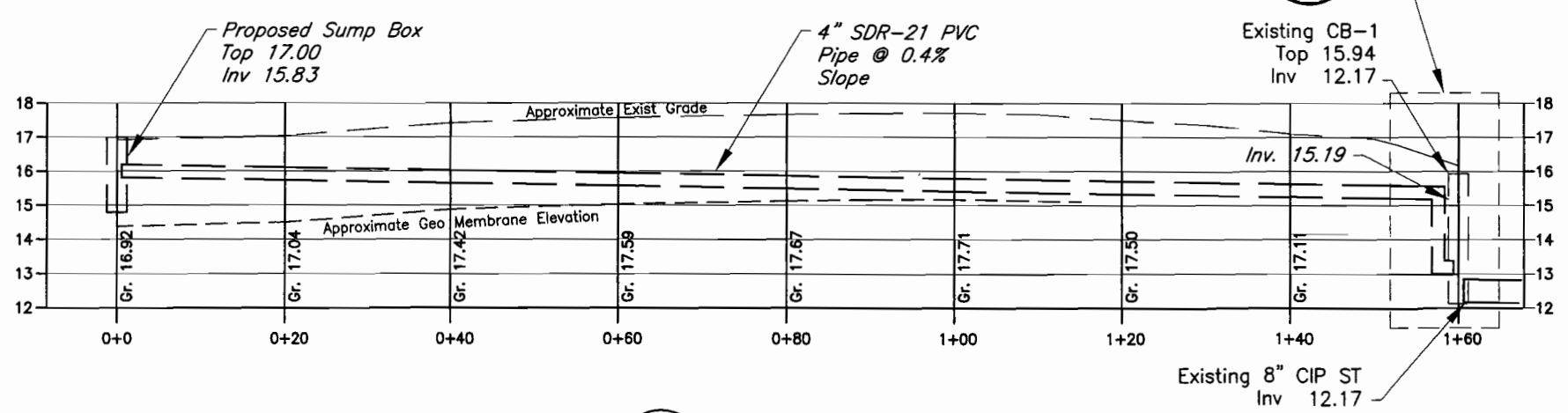
Time Plotted: Tue Mar 7 16:20 2006
File Name: Harmon\CB Lagoon-Ref66\Figure-1.dwg



2 SECTION VIEW
FIG-2 1/2" = 1'-0"



1 SUMP BOX PLAN VIEW
FIG-2 1/2" = 1'-0"

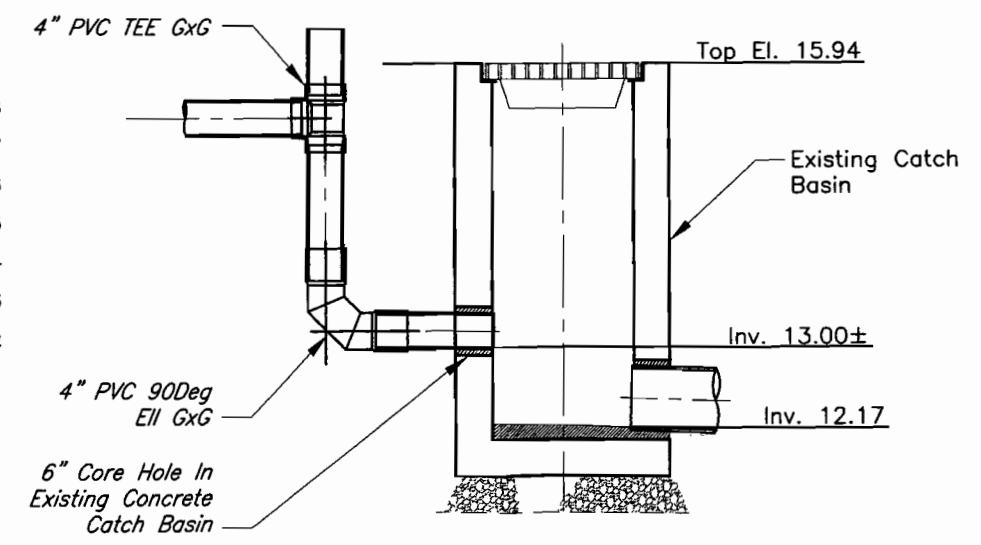


3 PROFILE
FIG-2 1" = 20' Horizontal
1" = 5' Vertical

NOTES:

1. Polymer Concrete Sump Box: Jay R. Smith Mfg. Co., Smith ACO Trench Drain Series, Model 9846 Sump Box, or approved equal.

DETAIL 4
FIG-2



4 EXISTING CONCRETE CATCH BASIN
FIG-2 1/2" = 1'-0"

DATE	10-2004
Designing	TKH
DRAWN BY	LRP/TW
DATE DRAWN	10-25-2004
SCALE	As Noted
DATE ISSUED	3-2006

day
DAY ENGINEERING, P.C.
ENVIRONMENTAL ENGINEERING CONSULTANTS
ROCHESTER, NEW YORK 14614-1008
NEW YORK, NEW YORK 10165-1617

PROJECT TITLE
**METRO-NORTH RAILROAD
HARMON YARD
CROTON-ON-HUDSON
OU-1 SITE DRAINAGE MODIFICATION**

DRAWING TITLE
Profile, Section, and Details

PROJECT NO.
04-3135I (46)

FIGURE 3

ATTACHMENT A

**OU-I Remedy Inspection Form completed on June 26, 2008
Site Inspection Photographs**

OU-I Remedy Inspection Form
Harmon Railroad Yard, Croton-On-Hudson, NY

Note the location(s) of any of the inspection findings described below on the attached site sketch. Also attain copies of photographs to document conditions observed at the time of this inspection.

Yes No Corrective Action Needed?

Asphalt Cover

- Are there any cracks in the asphalt cover?
- Is there any surface water ponding on the asphalt cover?
- Is there any evidence of settlement?
- Is there any elevation difference at the grouted manhole covers?

X		X
	X	
X		
	X	

Specify Correction Actions Needed:

Minor cracking throughout
Low spot equipped with catch basin

Slopes Around the Asphalt Cover

- Are there any erosion rivulets?
- Is there evidence of any washouts or soil slides?
- Is there debris or other material on the slopes?

	X	
	X	
X		X

Specify Correction Actions Needed:

small amounts of debris

Drainage Channels

- Is there any exposed geotextile in the drainage channel?
- If so, is the exposed geotextile damaged?
- Is there significant sedimentation in the drainage channel?

	X	
	X	
X		

[Given the arrangement of the riprap channel adjacent to the asphalt cover, there should be minimal sedimentation occurring in the channel, and any significant sedimentation should be investigated to determine its source and cause.]

Specify Correction Actions Needed:

stockpiled sand next to drainage channel has gotten into channel. However, channel is not being used as intended, drainage is being handled by new catch basin.

Perimeter Fencing

- Is there any damaged fencing?
- Is there any vegetation close to the exterior of the fence that should be removed to eliminate a means for access to the Site over the fence?
- Are the gate locks present and in good working condition?

	X	
X		
X		

Specify Correction Actions Needed:

scrub trees along various portions of fence

Cc: Metro-North Department of Environmental Compliance and Services

Date of Inspection: 6/26/08

Inspection Form Completed By: TOM ROSZAK



Surficial cracking observed throughout asphalt cover.



Scrub trees observed along various portions of perimeter fencing.