

**ARAMARK Uniform Services (Syracuse) LLC
Former Christopher Service Company Site
3009 and 3117 Milton Avenue
Village of Solvay, New York**

**Voluntary Cleanup Project
VCP Site #V00665-7**

**Engineering Certification Report
Sub-Slab Depressurization
System Installation**



July 2011

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Former Christopher Service Company Site
Village of Solvay

Voluntary Cleanup Project
VCP Site #V00665-7

Engineering Certification Report
Sub-Slab Depressurization System Installation

July 2011

Prepared for:

The Wetlands Company
1040 East 86th Street
Suite 46C
Indianapolis, Indiana 46240

Aramark Uniform Services
(Syracuse) LLC
115 North First Street
Burbank, California 91502

and:

Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-7016

Prepared by:

Barton & Loguidice, Inc.
290 Elwood Davis Road
P. O. Box 3107
Syracuse, New York 13220

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1.0 Introduction

ARAMARK Uniform Services (Syracuse) LLC (“ARAMARK”) installed a sub-slab depressurization system (SSDS) at its 3009 and 3117 Milton Avenue facility located in the Village of Solvay, Onondaga County, New York (see Figure 1). The SSDS was installed in accordance with the New York State Department of Environmental Conservation (NYSDEC) approved November 2009 Remedial Action Work Plan. The project was conducted as part of the Voluntary Cleanup Program (VCP), registry #V00665-7, under the oversight of The Wetlands Company, Barton & Loguidice, Inc. (B&L), NYSDEC, and the New York State Department of Health (NYSDOH). This document summarizes the installation of the engineering controls, including the SSDS and associated sub-slab vapor and groundwater monitoring locations, that will be operated in accordance with the NYSDEC approved January 2011 Site Management Plan.

2.0 Background

The results of the VCP investigation indicated the presence of chlorinated solvents, trichloroethene (TCE), and tetrachloroethene (PCE), above concentrations identified in the NYSDOH's Final Guidance for Evaluating Soil Vapor in the State of New York that warranted mitigation efforts. The elevated chlorinated solvent concentrations were limited to the western portion of the building near the former dry cleaning area. Construction Documents were developed and approved by the NYSDEC prior to bidding the project. The SSDS was designed in accordance with the United States Environmental Protection Agency's Radon Prevention in the Design and Construction of Schools and Other Large Buildings.

A depressurization diagnostic test was conducted as part of the final design on August 19, 2010. A core drill was utilized to insert a 2" diameter hole near the impacted area and suction was applied to determine a representative radius of influence. Additional holes were inserted around the suction hole and a micromanometer was utilized to quantify sub-slab air flow. Based on this information it was determined that there was a 15-foot radius of influence within the impacted area at a vacuum rate of 180 cfm.

3.0 SSDS Construction

Trec Environmental, Inc. of Spencerport, New York installed the SSDS in November, 2010. The construction notes and layout are depicted on Figure 2. Prior to construction, the slab above the area of impact was inspected for cracks and penetrations. Minimal penetrations were noted. Elastomeric joint sealant was utilized to seal the limited locations.

The suction pit was installed east of the active washing conveyor and the exhaust piping extended vertically directly above the suction pit to penetrate the ceiling deck. The roof-top riser extends above vents and windows and is greater than 25-feet from any building air intakes. An in-line Fantech HP Series active fan was installed for the building depressurization. All piping and system components were labeled as depicted on Figure 2. An audible and visual warning device was installed on the riser pipe above the suction pit. Additional construction document notes and details are provided in Appendix A. General construction photographs are provided in Appendix B.

4.0 Groundwater Monitoring Well Installation

Two (2) groundwater monitoring wells, MW-A and MW-B, were installed as depicted on the ALTA/ACSM Land Title Survey provided as Appendix C. Both locations were constructed with 2-inch diameter PVC casing with continuous wrap 0.010-inch PVC screen set across the groundwater table. MW-A was screened from 5' to 12' below grade and MW-B was screened from 5' to 11'8" below grade. The well construction logs are provided in Appendix D. The monitoring wells were completed with locking flush-mount covers.

5.0 Sub-Slab Vapor Probe Installation

Two (2) vapor points, VP-A and VP-B, were installed within the western portion of the building as depicted on the ALTA/ACSM Land Title Survey provided as Appendix C. Approximately 6" of sub-base material was removed and a dedicated vapor point screen was placed into the sub-base. The annulus space was filled with glass beads and a 3" bentonite seal was placed below the bottom of the sub-slab. Portland cement was used to seal above the Bentonite within 2" of the top of the sub-slab creating an air tight seal from the vapor point screen. The vapor points were completed with locking flush-mount covers. The vapor monitoring construction logs are provided in Appendix D.

6.0 Spoils Disposal

Spoils were generated as part of the suction pit excavation, monitoring well and soil vapor point installations. The spoils were placed in four (4) 55-gallon drums. The drums were transported by New York Environmental Technologies, Inc. to Cycle Chem, Inc. on February 22, 2011. The Non-Hazardous Waste Manifest documentation is provided in Appendix E.

7.0 Institutional Controls

The January 2011 Site Management Plan was reviewed and approved by the NYSDEC and was incorporated into the Environmental Easement that was recorded with the Onondaga County Clerk on July 12, 2011. The January 2011 Site Management Plan should be referenced for the detailed operation, maintenance and monitoring requirements associated with the SSDS.

Figure 1
Site Location Map



Project No. 909.001.003

Figure 1- Project Location Map
ARAMARK Uniform Services (Syracuse) LLC
Voluntary Cleanup Project

Village of Solvay

Onondaga Co., NY



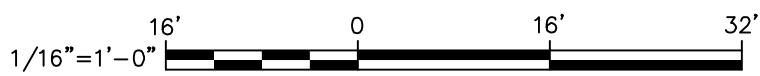
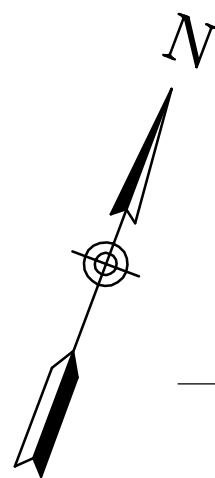
Barton
& Loguidice, P.C.

Engineers • Environmental Scientists • Planners • Landscape Architects

Base Map: USGS 7.5' Topographic Quadrangle Syracuse West, N.Y. (1978)

Figure 2

Sub-Slab Depressurization System Field Construction Layout Plan



NO ALTERATION PERMITTED
HEREON EXCEPT AS PROVIDED
UNDER SECTION 7209
SUBDIVISION 2 OF THE NEW
YORK STATE EDUCATION LAW.

COMPLETED CONSTRUCTION

Significant Construction
Changes Are Shown

By _____ Date _____
Ck'd _____ Date _____

REVISIONS

ARAMARK UNIFORM SERVICES

SUB-SLAB DEPRESSURIZATION SYSTEM
FIELD CONSTRUCTION LAYOUT PLAN

VILLAGE OF SOLVAY

ONONDAGA COUNTY, NEW YORK

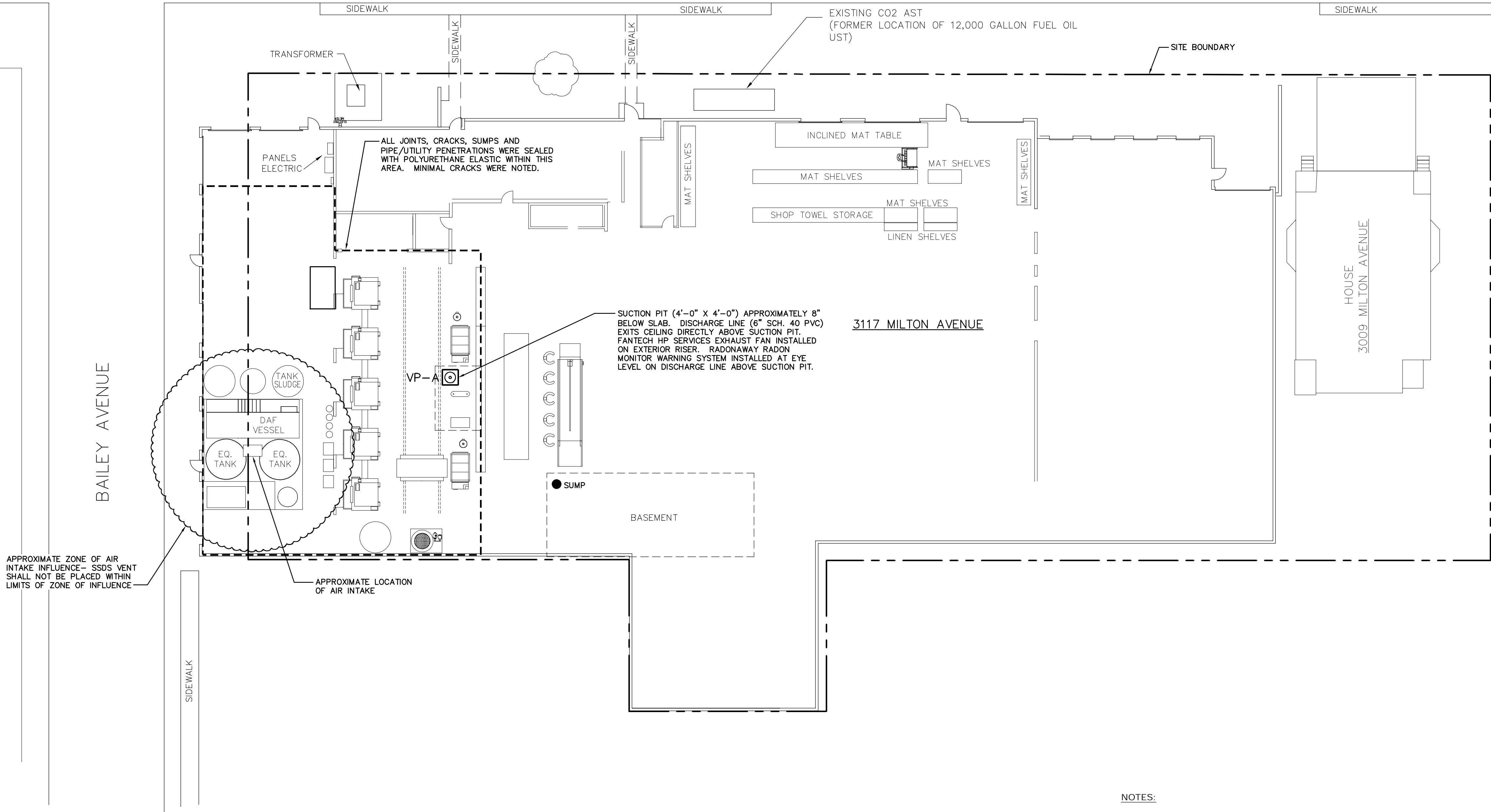


Date
NOVEMBER, 2010

Scale
1/16" = 1'-0"

Sheet Number
2

File Number
909.001.003



NOTES:

1. SUCTION PIT MEETS THE FOLLOWING SPECIFICATIONS:

- REINFORCED DIAMOND PLATE STEEL COVERS WITH H-20 TRUCKLOAD RATING.
- 1/8" BUNA-N GASKET AND STAINLESS STEEL SET BOLTS.
- 14 GAUGE SKIRTS.
- RECESSED WATER-TIGHT PICKING EYE(S) FOR COVER REMOVAL.
- WELDED STEEL CONSTRUCTION.
- STEEL COATED WITH RUST PREVENTATIVE PAINT.

2. LABELING:

- EXHAUST FAN: "VAPOR REDUCTION DEVICE. DO NOT REMOVE".
- PIPING: "SSD SYSTEM - MAY CONTAIN VAPORS".
- FAN PENETRATION: "SOIL GAS VENT STACK MAY CONTAIN HIGH LEVELS OF VAPORS: DO NOT PLACE AIR INTAKE WITHIN 25 FT".
- ROOF PENETRATION: "GAS VENT STACK MAY CONTAIN HIGH LEVELS OF VAPORS: DO NOT PLACE AIR INTAKE WITHIN 25 FT".

3. REFER TO NOVEMBER 30, 2010 ALTA/ACSM LAND TITLE SURVEY FOR GROUNDWATER MONITORING WELL AND SOIL VAPOR MONITORING LOCATIONS.

Appendix A

Construction Document Notes and Details

Plotted: Sep 22, 2010 - 5:06PM
I:\Shared\900\909001\SI\REPORT\909001_02.dwg
By: jgs
Drawn by: JCS
Designed by: NRM
In charge of: SDN

EXHAUST FAN:

- EXHAUST FAN SHALL BE SUITABLE FOR CONTINUOUS OPERATION AND SHALL OPERATE AT AT THE EQUIVALENT OF 500 CFM AT 0" OF STATIC PRESSURE. FAN SHALL BE MANUFACTURED SPECIFICALLY FOR OUTDOOR USE. FAN SHALL BE FANTECH MODEL FR 250 OR APPROVED EQUAL, AND SHALL PROVIDE GREATER THAN 300 cfm AT A STATIC HEAD OF 1".
- PROVIDE A WATERPROOF LABEL TO READ AS FOLLOWS: "VAPOR REDUCTION DEVICE. DO NOT REMOVE."

SEALING POTENTIAL RADON ENTRY ROUTES:

- ALL JOINTS, CRACKS, SUMPS, AND PIPE/UTILITY PENETRATIONS SHALL BE PROPERLY SEALED TO PREVENT INTRUSION OF ADDITIONAL SOIL VAPORS AND INTERNAL PRESSURE VARIANCES.
- SEALANT SHALL BE POLYURETHANE, AIRTIGHT, AND ELASTIC FORMING GOOD ADHERENCE TO CONCRETE. SILICONE CAULKS SHALL NOT BE PERMITTED.
- SURFACE TO SEAL SHALL BE CLEAN, DRY, AND FREE OF GRIT. THE SURFACE TEMPERATURE SHALL BE ABOVE FREEZING.
- APPLY SEALANTS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- TYPICAL DIMENSIONS FOR CAULK BEADS ARE 1/2 IN. DEEP BY 1/4 IN. TO 1/2 IN. WIDE.
- IT MAY BE NECESSARY TO USE BACKER ROD WHEN APPLYING SEALANT IN WIDE GAPS.
- ALL SUMPS SHALL BE SEALED WITH A GASKETED LID. FOR SEALING OF SUMPS, UTILIZE A SILICONE RATHER THAN POLYURETHANE CAULK FOR SEALING SUMP LIDS AND ACCESS PORTS TO ENSURE A TIGHT FITTING GASKET THAT CAN BE REMOVED AT A FUTURE DATE. THIS IS ONLY SATISFACTORY IF THE SUMP COVER IS BOLTED DOWN AND THE SEAL IS AIRTIGHT. ADDITIONALLY, A POLYETHYLENE SHEETING SHALL BE INSTALLED AS A VAPOR RETARDER. ALTERNATELY (FOR CIRCULAR SUMPS) A PLASTIC MEMBRANE MAY BE UTILIZED. ALL CRACKS WITHIN SUMPS SHALL BE SEALED.

PIPING:

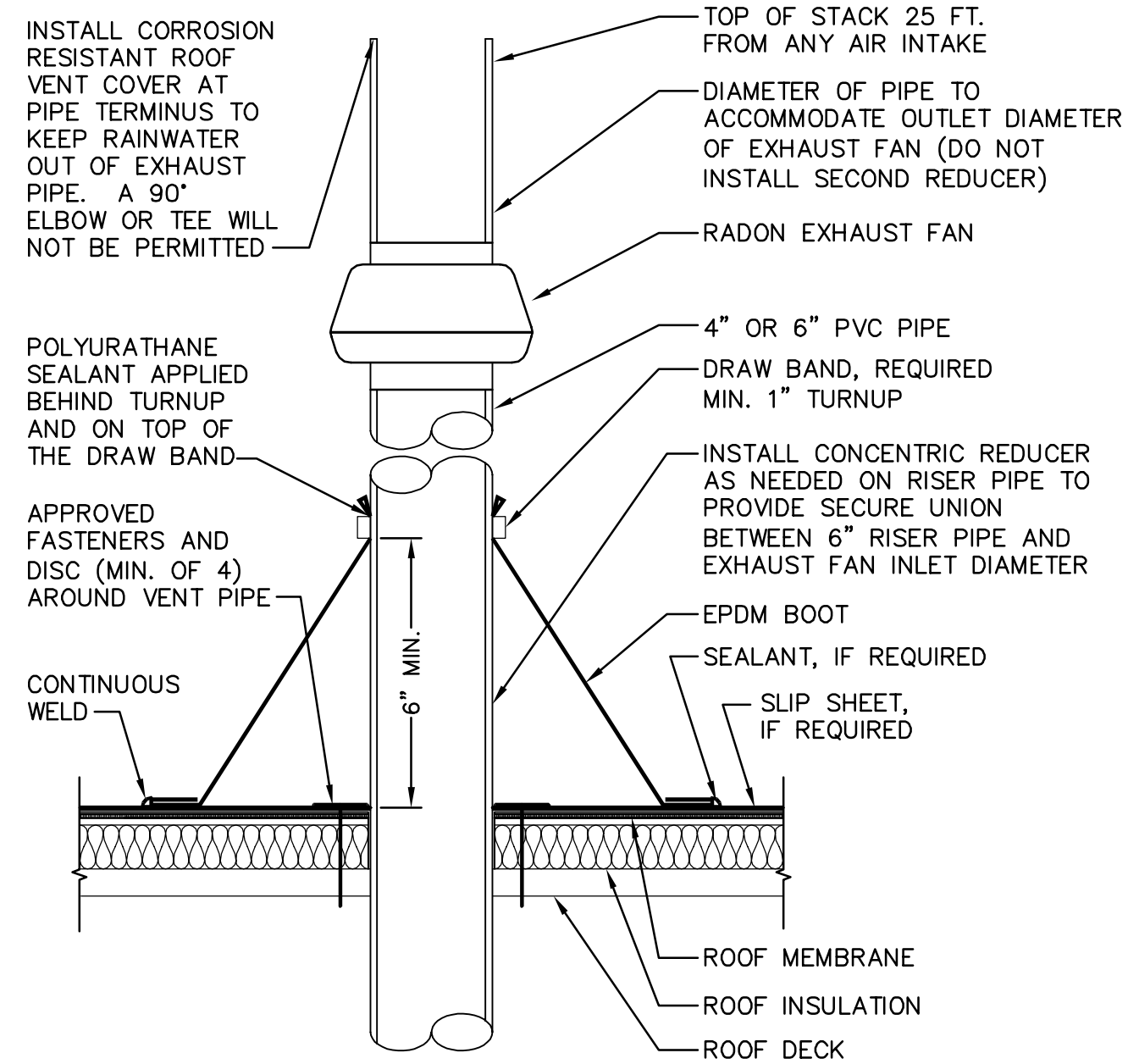
- ALL SUBSURFACE PIPING SHALL BE LABELED "SSD SYSTEM". ALL EXPOSED PIPING AND SYSTEM COMPONENTS SHALL BE LABELED "SSD SYSTEM - MAY CONTAIN VAPORS". THE FAN PENETRATION SHALL BE LABELED "SOIL GAS VENT STACK MAY CONTAIN HIGH LEVELS OF VAPOR: DO NOT PLACE AIR INTAKE WITHIN 25 FT". LABELS SHALL BE PLACED AT INTERVALS OF NOT MORE THAN EVERY 10 FEET.
- PIPE LABELS SHALL BE PLACED AT LEAST EVERY 10 FEET ALONG THE ENTIRE PIPE RUN.
- AT THE ROOF EXIT, AFFIX A PERMANENT LABEL TO THE VENT WITH A WARNING THAT READS "GAS VENT STACK MAY CONTAIN HIGH LEVELS OF VAPORS; DO NOT PLACE AIR INTAKE WITHIN 25 FEET."
- THE SSDS EXHAUST FAN SHALL NOT BE PLACED WITHIN 25 FEET OF ANY OUTDOOR AIR INTAKES. THE SSDS SHALL EXHAUST AT A HIGHER ELEVATION THAN ALL VENTS, DOORS, AND WINDOWS.
- PIPING TO BE ADEQUATELY SECURED TO WALL SO AS NOT TO SHIFT AFTER INSTALLATION.
- THE BUILDING INCLUDES LAUNDRY RELATED EQUIPMENT AND TRENCHES, AND A SANITARY SEWER LINE EXTENDS THROUGH THE BUILDING PERPENDICULAR TO THE PROPOSED VAPOR SUCTION PIT DISCHARGE LINE. ITS EXACT LOCATION AND DEPTH WILL REQUIRE ONSITE VERIFICATION AGAINST EXISTING COMPLETED CONSTRUCTION DRAWINGS AND INSTALLATION OF THE VAPOR SUCTION PIT DISCHARGE LINE WILL NEED TO PROCEED WITH CAUTION IN THIS LOCATION.

WARNING SYSTEM:

- THE SYSTEM SHALL INCLUDE A VISIBLE WARNING DEVICE TO INDICATE LOSS OF NEGATIVE PRESSURE. THIS DEVICE MAY BE AN ELECTRONIC PRESSURE SENSING DEVICE THAT ACTIVATES A WARNING LIGHT OR AN AUDIBLE ALARM WHEN A SYSTEM PRESSURE DROP OCCURS (NOT SOLELY WHEN THE FAN HAS CEASED PROPER OPERATION). INSTALL WARNING DEVICE IN AN AREA FREQUENTLY VISITED BY RESPONSIBLE STAFF. WARNING SYSTEM SHALL BE INSTALLED WITHIN THE BUILDING INTERIOR ON THE RISER PIPE, AND SHALL BE AT A HEIGHT SUCH THAT IT IS EASILY OBSERVABLE AND ACCESSIBLE FROM FLOOR LEVEL.

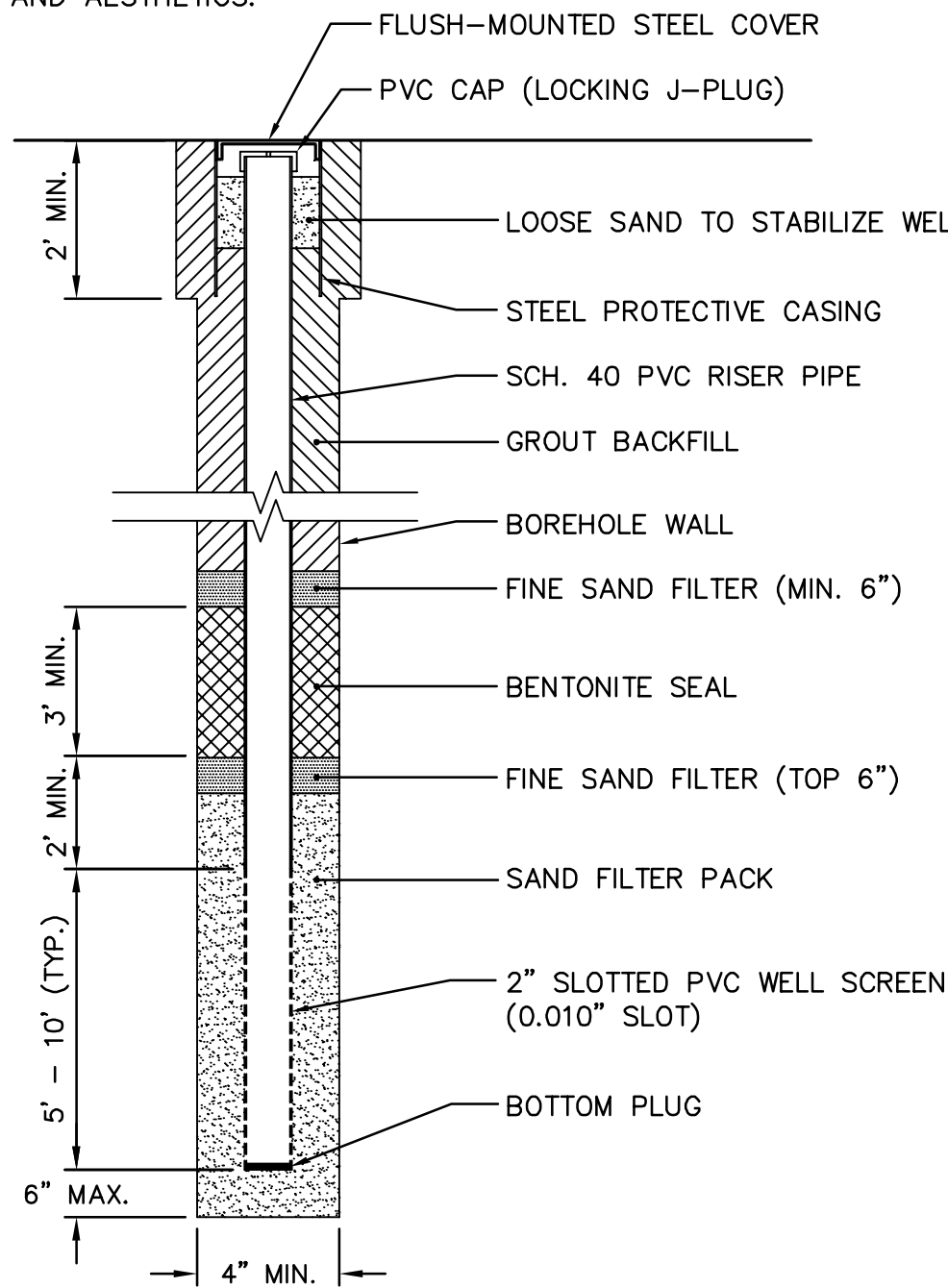
SITE RESTORATION:

- THE SITE SHALL BE RESTORED IN A MANNER CONSISTENT WITH EXISTING BUILDING USE AND AESTHETICS.



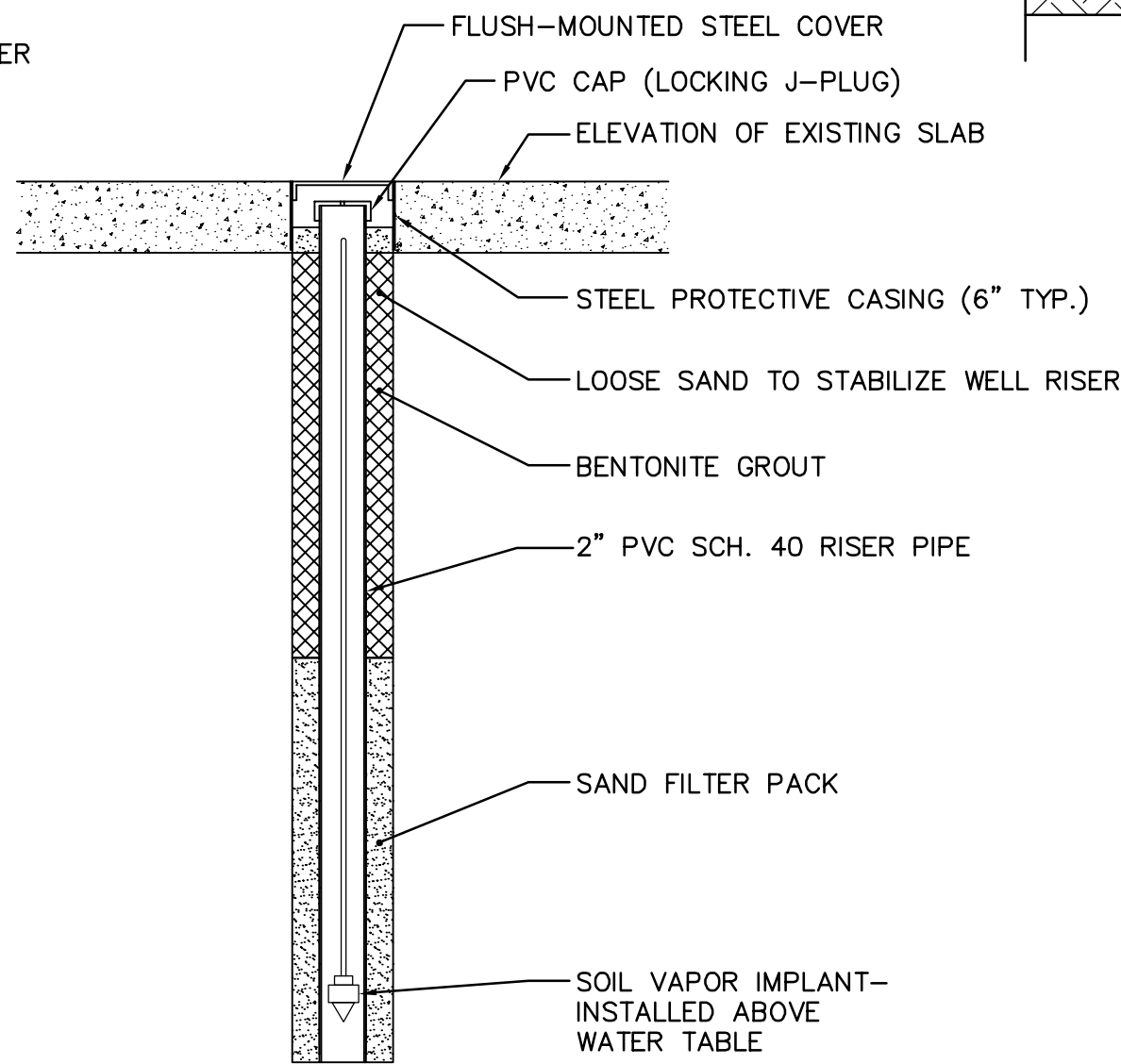
VAPOR EXHAUST PIPE
PENETRATION DETAIL

NOT TO SCALE



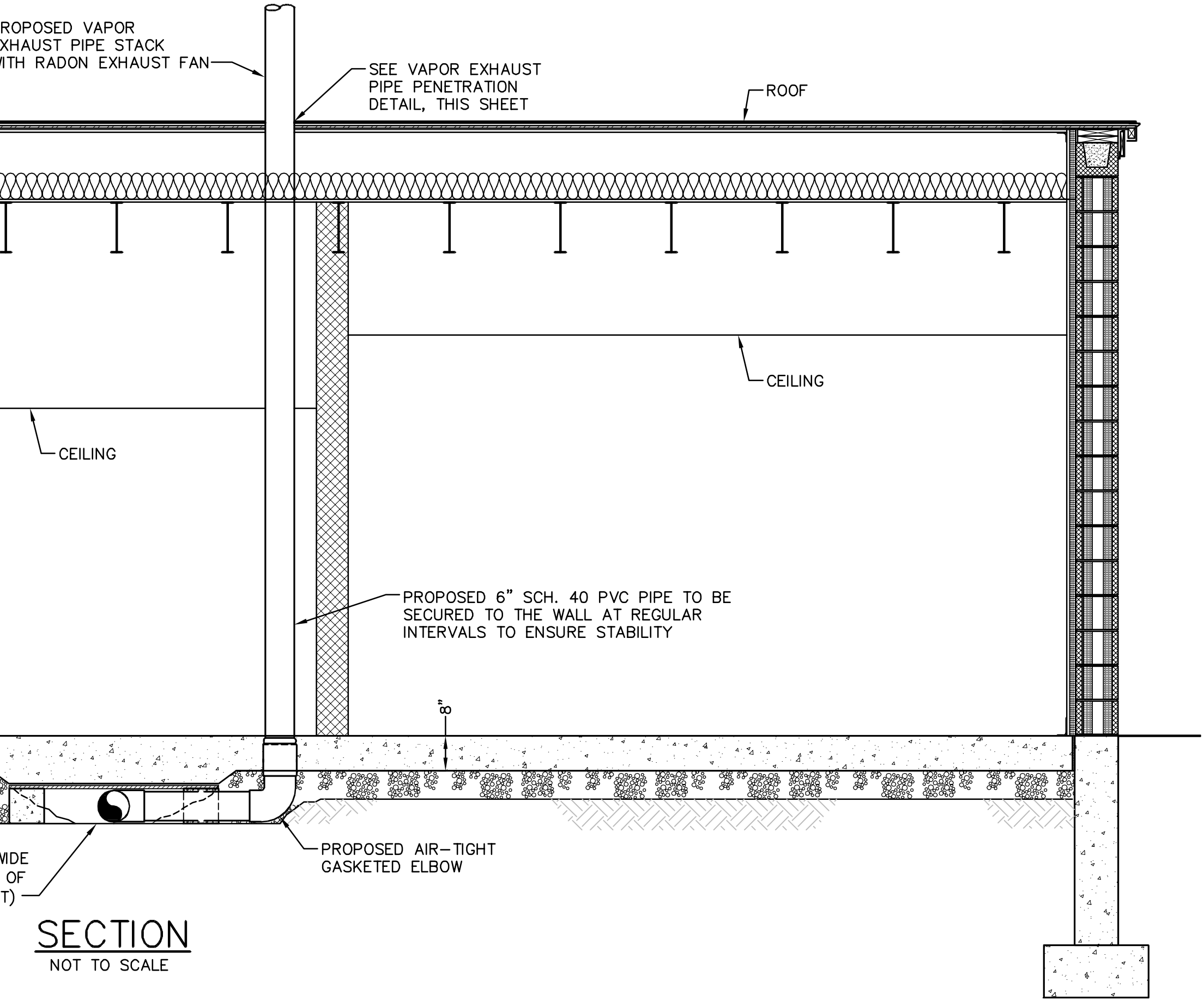
TYPICAL MONITORING
WELL DETAIL

NOT TO SCALE

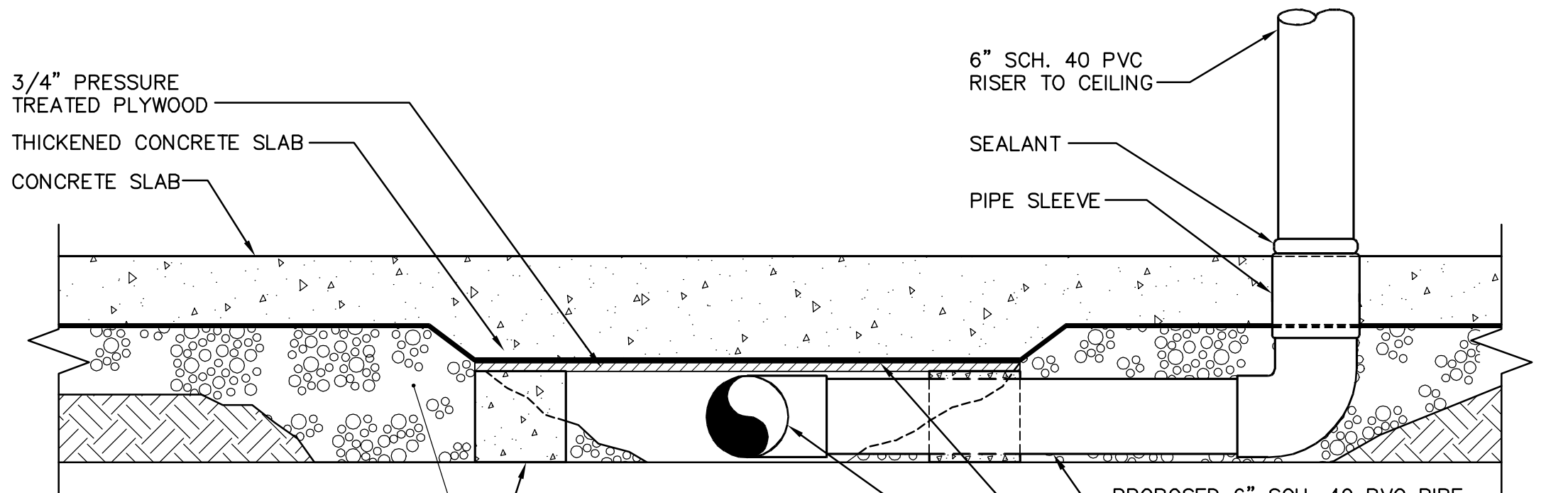


PERMANENT SOIL VAPOR
PROBE IMPLANT DETAIL

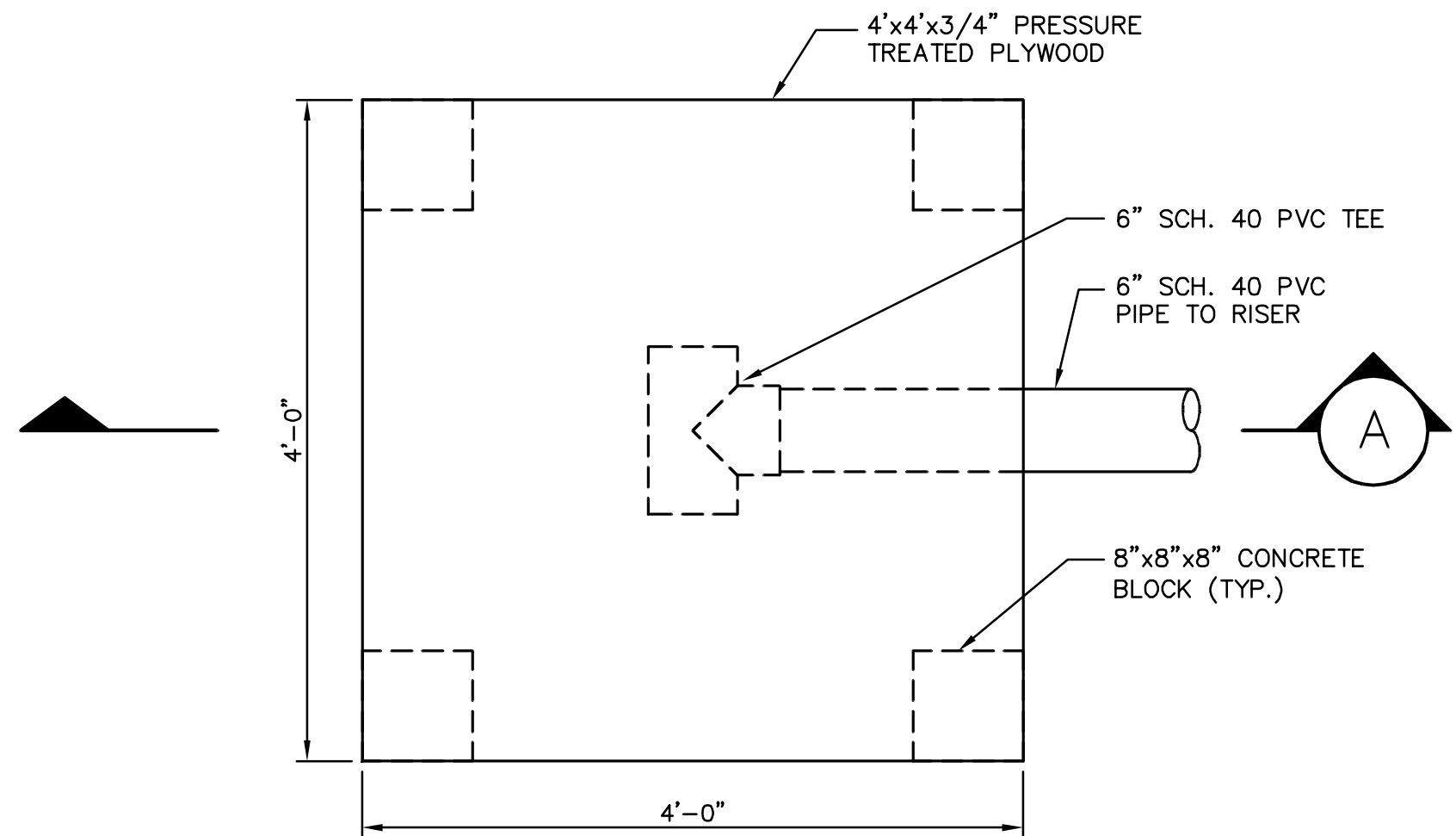
NOT TO SCALE



SECTION
NOT TO SCALE



SECTION A
NOT TO SCALE



TYPICAL RADON SUCTION PIT DETAIL

NOT TO SCALE

NO ALTERATION PERMITTED
HEREON EXCEPT AS PROVIDED
UNDER SECTION 7209
SUBDIVISION 2 OF THE NEW
YORK STATE EDUCATION LAW.

COMPLETED CONSTRUCTION

Significant Construction
Changes Are Shown

By _____ Date _____
Ck'd _____ Date _____

REVISIONS

ARAMARK UNIFORM SERVICES

NOTES AND DETAILS

ONONDAGA COUNTY, NEW YORK

VILLAGE OF SOLVAY

Barton
Loguidice, P.C.

Date
AUGUST, 2010

Scale
AS SHOWN

Sheet Number

2

File Number

909.001

Appendix B

Construction Photographs

PROJECT PHOTOGRAPHS



Photograph Number: 1

Photograph Description: Saw Cut Concrete Pad for vapor suction pit.



Photograph Number: 2

Photograph Description: Newly Installed vapor sump and concrete

PROJECT PHOTOGRAPHS



Photograph Number: 3
Photograph Description:
Depressurization system riser



Photograph Number: 4
Photograph Description: **Depressurization system riser and**
audible and visual alarm system.

PROJECT PHOTOGRAPHS



Photograph Number: 5

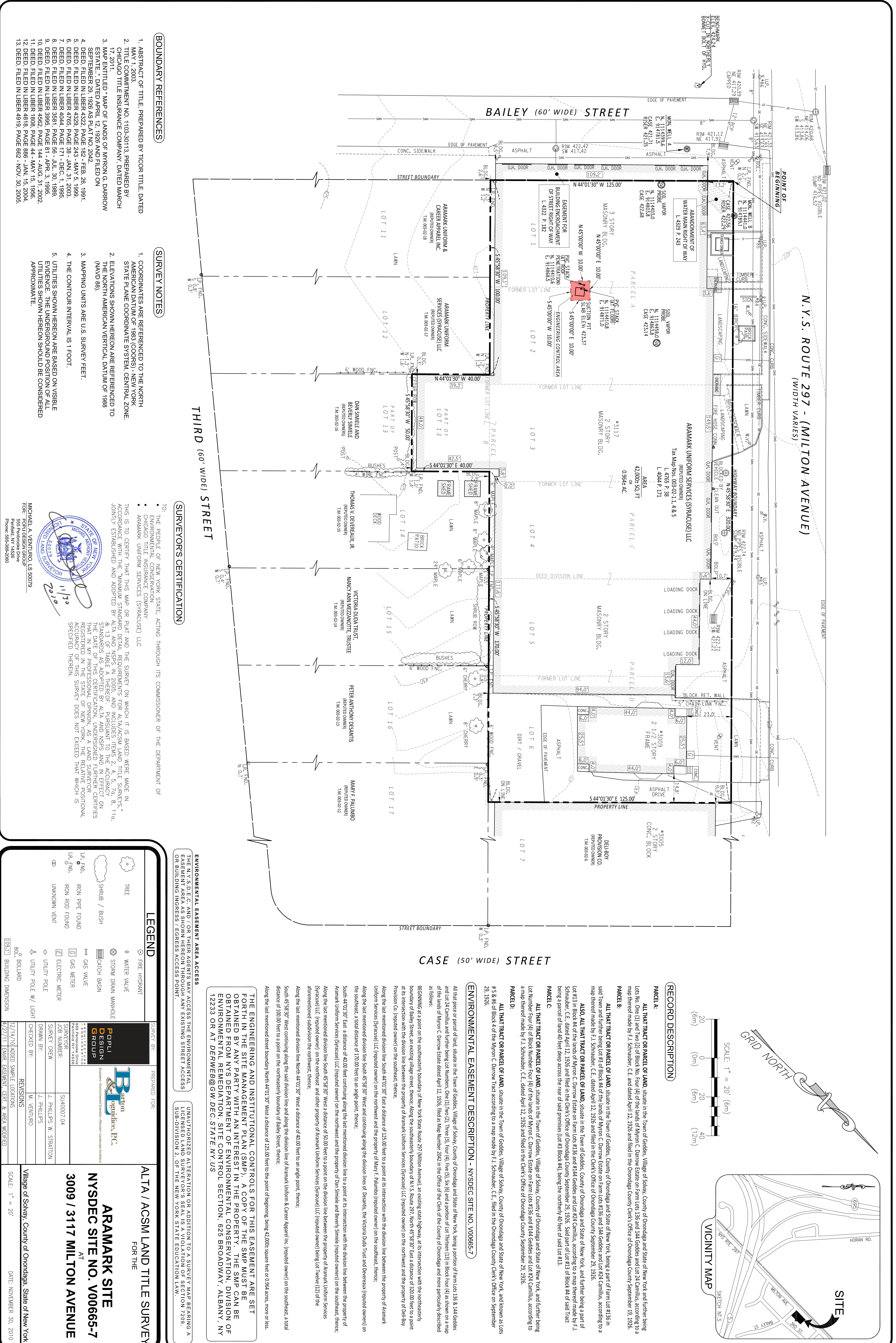
Photograph Description: Depressurization system riser as it penetrates ceiling deck.



Photograph Number: 6

Photograph Description:
Roof mounted exhaust riser and fan

Appendix C
ALTA/ACSM Land Title Survey



Appendix D

Groundwater Monitoring Well and Soil Vapor Point Construction Logs

SUBSURFACE INVESTIGATION LOG

BORING NO. MW-A
B & L Project No. 909.001

Project: ARAMARK Solvay
Client: The Wetlands Company
Project Location: 3009 and 3117 Milton Avenue, Solvay, New York

Drill Rig: GeoProbe 6620 Elevation: Datum:
Casing: Northing: Easting:
Soil Sampler: Start Date: 11/24/2010 Finish Date: 11/24/2010
Sample Hammer Wt. -- Fall: -- inches Contractor: Trec Environmental
Rock Sampler: -- Driller:
Other: Geologist: B. McGrath

Depth	Sample Type	Blows per 6"	N or RQD %	Recovery (ft)	PID (PPM)	Headspace	Material Description	Well Completion Details
				22"	0	3.2	ARTIFICIAL FILL: Gravel and rock fragments, sand, silt, brown, dry 0-3 ft 3-4 ft no odor	
5				20"	0	110	SC: Sand, fine to coarse-grained, silts, slightly gravelly, brown and moist saturated at 7 ft Stained black at 7.5 ft. Slight petroleum odor at 7.5ft	
10				17"	0	6.4	CL: Clay; low plasticity, silty to very silty, slightly sandy, fine grained, dark brown to brown-gray, moist to very moist No odor	
15								Grout 0-1' Bentonite 1-4' Choke sand 4-4.5' flush-mount well completion with locking j-plug cap. Threaded end cap at bottom of casing. PVC screen is 0.010 continuous wrap.

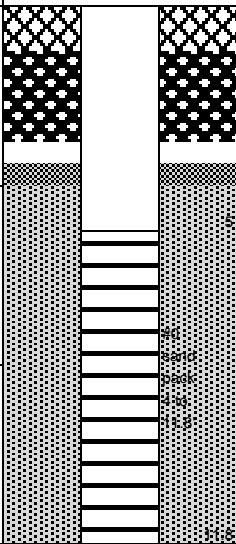
Notes:

SUBSURFACE INVESTIGATION LOG

BORING NO. MW-B
 B & L Project No. 909.001

Project: ARAMARK Solvay
 Client: The Wetlands Company
 Project Location: 3009 and 3117 Milton Avenue, Solvay, New York

Drill Rig: GeoProbe 6620 Elevation: Datum:
 Casing: Northing: Easting:
 Soil Sampler: Start Date: 11/24/2010 Finish Date: 11/24/2010
 Sample Hammer Wt. -- Fall: -- inches Contractor: Trec Environmental
 Rock Sampler: -- Driller:
 Other: Geologist: B. McGrath

Depth	Sample Type	Blows per 6"	N or RQD %	Recovery (ft)	PID (PPM)	Headspace	Material Description	Well Completion Details
				22"	0	0.5	ARTIFICIAL FILL: Gravel and rock fragments, sand, silt, gray to olive, dry to slightly moist. 0-3 ft 3-4 ft slightly moist to moist black - no odor	
5				20"	0	1.5	SC: Sand, fine to coarse-grained, silts, slightly gravelly, reddish brown and moist No odor saturated at 7 ft	
10				17"	0	1.7	CL: Clay; low plasticity, silty to very silty, slightly sandy, fine grained, dark brown to brown-gray, moist to very moist No odor	
15				3"	0	5	very little recovery - same as above	
								Grout 0-1' Bentonite 1-3.5' Choke sand 3.5-4' flush-mount well completion with locking j-plug cap. Threaded end cap at bottom of casing. PVC screen is 0.010 continuous wrap.

Notes:

Page

Page

Appendix E

Non-Hazardous Waste Manifests

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator ID Number

2. Page 1 of

1

3. Emergency Response Phone

585.436.5660

4. Waste Tracking Number

11-0077

5. Generator's Name and Mailing Address

ARAMARK
3117 MILTON AVE.
SOLVAY NY 13209

Generator's Site Address (if different than mailing address)

Generator's Phone: 585 594.5545

6. Transporter 1 Company Name

NEW YORK ENVIRONMENTAL TECHNOLOGIES, INC.

U.S. EPA ID Number

NYD986983229

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

CYCLE CHEM, INC.
550 INDUSTRIAL DR.
LEWISBERRY PA 17339

U.S. EPA ID Number

Facility's Phone: 717 938-4700

PAD087098822

9. Waste Shipping Name and Description

10. Containers

No.

Type

11. Total
Quantity

12. Unit
Wt./Vol.

1. NON RCRA NON DOT SOLIDS, NOS (OIL SOAKED DEBRIS)

004

DM

01000

P

2.

3.

4.

13. Special Handling Instructions and Additional Information

a.

Job #R4696 / PO#35076

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Officer's Printed/Typed Name

Signature

Month Day Year
2 22 11

15. International Shipments

☐ Import to U.S.

☐ Export from U.S.

Port of entry/exit:
Date leaving U.S.

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year
2 22 11

Transporter 2 Printed/Typed Name

Signature

Month Day Year
2 22 11

17. Discrepancy

17a. Discrepancy Indication Space

☐ Quantity

☐ Type

☐ Residue

☐ Partial Rejection

☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year
10 23 11