1430 Broadway
10th Floor
New York, NY 10018

212.221.7822 PHONE
212.221.7840 FAX

www.TRCsolutions.com

June 18, 2010

Janet E. Brown, P.E.
NYSDEC Region 3
Division of Environmental Remediation
21 South Putt Corners Road
New Paltz, New York 12561

Re: Vapor Intrusion Mitigation Work Plan
Stewart EFI Facility
630 Central Park Avenue
Yonkers, New York
NYSDEC VCP Site No. V00691

Dear Ms. Brown:

The sub-slab depressurization system ("SSDS") pilot study (the "Pilot Study") at the above-referenced facility (the "Facility") has been completed in accordance with Stewart EFI New York LLC's work plan dated February 19, 2010 and the New York State Departments of Environmental Conservation and Health ("NYSDEC/NYSDOH") approval letter dated March 5, 2010. This Vapor Intrusion Mitigation ("VIM") Work Plan presents a summary of the results of the Pilot Study and the proposed work plan for the installation of a full-scale, permanent SSDS at the Facility. The intent of this work plan is to satisfy the NYSDEC/NYSDOH requirements for vapor intrusion mitigation pursuant to the Voluntary Cleanup Program and the Voluntary Cleanup Agreement entered into by the NYSDEC and Stewart EFI July 6, 2004, as amended.

Site Description and Background

The former manufacturing Facility is a two-story building (with partial cellar areas) which encompasses an approximately 100,000 square-foot footprint and consists of an original building constructed prior to 1953 and four additions constructed circa 1958, 1974 and 1984.

In 2008 sub-slab vapor sampling was performed inside the Facility at nine (9) locations. Tetrachloroethene ("PCE") was detected at concentrations ranging from 5.2 micrograms per cubic meter (ug/m^3) to 11,000 ug/m^3; 1,1,1-trichloroethane ("1,1,1-TCA") was detected at concentrations ranging from 7 to 16,000 ug/m^3; and trichloroethene ("TCE") was detected at concentrations ranging from 100 to 43,000 ug/m^3. As reported in a February 2010 Project Progress Report submitted by Stewart EFI to the NYSDOH and NYSDEC, indoor air samples collected in December 2009 exhibited TCE concentrations between 3.3 ug/m^3 and 35 ug/m^3.

Under the Voluntary Cleanup Program the NYSDEC requires the installation of an approved vapor intrusion mitigation system.

SSDS Pilot Study Summary

As stated above, the Pilot Study was implemented in accordance with the SSDS Pilot Study Work Plan, dated February 19, 2010, which was approved by the NYSDEC/NYSDOH in correspondence dated March 5, 2010. The field testing was conducted between Monday, March 15 and Tuesday, March 23, 2010.

Prior to commencement of the Pilot Study, visible, large cracks and penetrations in the lowest level concrete floor slabs were patched/repaired. Large cracks in floor slabs were filled with expanding spray applied foam. Large penetrations through floor slabs were filled with gravel and grouted to slab grade. During the Pilot Study, a smoke pen was used to determine if smaller cracks or joints in the floor slabs were acting as a pathway between the sub-slab and indoor areas. There were no pathways detected between the sub-slab and indoor areas.

A total of 28 suction points and 77 monitoring points were installed for the Pilot Study. Figure 1 shows the locations of the suction and monitoring points installed for the Pilot Study. Monitoring point locations as shown in the SSDS Pilot Study Work Plan were moderately adjusted during installation in instances where it was found to be not feasible to penetrate the floor slab and in instances where utilities or sub-slab obstructions are present. The soils encountered below the floor slabs varied, from highly compacted sand to gravel.

To determine the area of influence of each suction point, a vacuum was applied individually to each suction point and at the same time vacuum in the sub-slab monitoring points was measured. Table 1 summarizes the vacuums and flow rates applied at the suction points and the vacuum readings recorded at each suction point.

The zones of influence created by the suction points during the Pilot Study varied widely. The maximum extent of influence in any one direction was recorded in Area 3. A maximum distance of influence of approximately 85 feet was measured in Area 3 at Monitoring Point MP-3B when a vacuum of 8 inches of water column (in. w.c.) was applied at Suction Point SP3.

A vacuum was not measured in the area of Monitoring Point MP5-C, located in the former waste water treatment area near several tanks and pits. The slab could not be penetrated (i.e., soil was not encountered after coring was completed to approximately 18 inches below the top of the slab). Several attempts were made to install a monitoring point in this area that penetrated the slab; however, soil was not encountered.

Following completion of the pilot field testing activities, penetrations created during the Pilot Study (i.e., suction points and sub-slab monitoring points) were temporarily sealed with expanding spray applied foam.

Full-Scale Sub-Slab Depressurization System

Based on the results of the Pilot Study a plan for full-scale sub-slab depressurization of the Facility was developed. The objective of the permanent, full-scale SSDS is to create a vacuum below (i.e., depressurize) the lowest level floor slabs throughout the Facility, thereby minimizing the potential for vapor intrusion.

The full-scale permanent SSDS VIM work plan was prepared in accordance with the NYSDOH *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, October 2006 ("NYSDOH Guidance"). The quantity and locations of permanent SSDS suction points were determined based on NYSDOH Guidance, the results of the Pilot Study and in consideration of the potential future use of the building.

In order to satisfy the objectives of the NYSDOH Guidance, the SSDS will consist of a total of 29 suction points and 41 monitoring points. Figure 2 illustrates the proposed approximate locations of the suction and monitoring points. The proposed number and locations of the suction points were determined based on the results of the Pilot Study (i.e., the zones of influence indicated for suction points during testing). Where practical, penetrations through the slab installed during the Pilot Study will be used for permanent SSDS monitoring points. Slab penetrations installed during the Pilot Study that will not be used for the permanent SSDS will be grouted.

Piping from suction points will be manifolded together at several locations and vertical risers connecting the manifolded piping to suction fans will be routed either through the building or alongside the exterior of the building. Final pipe routing will be determined during construction of the SSDS. Suction fans will be installed above the building roof. The suction fan exhausts will be a minimum of ten feet from any building opening or air intake.

In order to provide a means to confirm the SSDS is operating properly, a flow switch and pressure (vacuum) gauge will be installed near the inlet of each suction fan. Each flow switch will activate a remote visual alarm inside the Facility on low flow. Also, valves will be installed to adjust the vacuum applied at each suction point and a volume controlling damper will be installed at the outlet of each fan. The proposed construction of the suction and monitoring points and a suction fan schematic are shown on Figure 3.

Following completion of construction of the permanent SSDS, performance tests will be conducted. Vacuum in the sub-slab relative to the indoor air will be measured at each sub-slab monitoring point, using a magnehelic differential pressure gauge (or similar device). In addition, a minimum of 30 days after start-up of the permanent SSDS, indoor air sampling will be conducted. The sampling will be consistent with indoor air sampling performed in December 2009, the results of which were submitted to the NYSDEC in the *Project Progress Report – Activities through January 2010* dated February 3, 2010. A Final Mitigation System Completion Report that will include a description of the SSDS installation, manufacturer cut sheets for the various system components, and system as-built plans and present the findings of the

performance tests and an interim Site Management Plan (SMP), which will include the Operations, Maintenance and Monitoring (OM&M) Plan for the SSDS, will be submitted to the NYSDEC/NYSDOH after completion of the installation and performance testing of the SSDS.

Project Schedule

A proposed project schedule is presented below.

Major Schedule Milestone[1]	Date of Completion
Submit SSDS Pilot Study Work Plan to NYSDEC[2]	February 19, 2010
Receive NYSDEC Approval of Pilot Study Work Plan[2]	March 5, 2010
Start Pilot Study Field Activities[2]	March 15, 2010
Complete Pilot Study Field Activities[2]	March 23, 2010
Submit Pilot Study Results and VIM Work Plan to NYSDEC	April 8, 2010
Receive NYSDEC Approval of VIM Work Plan	April 26, 2010
Start Construction of Full-Scale VIM System (SSDS)	June 24, 2010
Complete Construction and Vacuum Testing of Full-Scale VIM System	July 23, 2010
Conduct Indoor Air Testing	August 24, 2010
Submit Final Mitigation System Completion Report and Site Management Plan	September 28, 2010

[1]Intermediate Department comments and Stewart EFI response submittals are not shown.
[2]Activity completed.

We look forward to receiving any comments you may have regarding this VIM Work Plan. Consistent with the email dated June 10, 2010, construction of the SSDS is scheduled to commence on June 21, 2010.

Please do not hesitate to contact me at (212) 221-7822 x120 if you have any questions.

Certification

I, Jennifer DiPilato, certify that I am currently a NYS registered professional engineer and that this Vapor Intrusion Mitigation Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.

Very truly yours,
TRC Engineers, Inc.

Jennifer DiPilato, P.E.
Project Manager

Attachments
Table 1 – Summary of the Results of the Sub-Slab Depressurization System Pilot Study
Figure 1 – Sub-Slab Depressurization System Pilot Study Plan
Figure 2 – Sub-Slab Depressurization System Plan
Figure 3 – Sub-Slab Depressurization System Details

cc: R. Rusinko, Esq., NYSDEC
A. Perretta, NYSDOH
D. Stokes, Stewart EFI
R. Celone, Stewart EFI
D. Mettler, Esq., Hiscock & Barclay
K. Silliman, TRC
D. Glass, TRC

Summary of the Results of the SSDS Pilot Study, Stewart EFI Facility

Area Identification Number	Suction Point Identification Number	Vacuum at Suction Point Used to Measure ZOI (in. w.c.)	Flow Used to Measure ZOI (cfm)	Monitoring Point Identification Number	Vacuum at Monitoring Point (in. w.c.)
1	SP-1	80	45	MP1-A	0.03
		80	45	MP1-B	0.03
		80	45	MP1-D	0.005
		80	45	MP1-E	0.17
		80	45	MP1-F	0.01
		80	45	MP2-C	0.025
		80	45	MP2-D	0.025
	SP-1A	2	5	MP1-C	0.06
2	SP-2	116	< 10	MP2-A	0.01
		116	< 10	MP2-B	0.01
		116	< 10	MP2-C	0.1
		116	< 10	MP2-D	0.1
3	SP-3	109	< 10	MP3-B	0.015
		109	< 10	MP3-E	0.13
		109	< 10	MP3-F	0.015
		109	< 10	MP3-G	0.0075
		109	< 10	MP3-H	0.04
		109	< 10	MP3-I	0.04
	SP-3B	95	10	MP3-A	0.03
	SP-3C	68	30	MP3-D	0.015
4	SP-4	11	145	MP4-A	0.03
		11	145	MP4-B	0.005
		11	145	MP4-C	0.1
		11	145	MP4-D	0.005
5	SP-5	100	<10	MP5-F	0.01
		100	<10	MP5-G	0.045
		100	<10	MP5-H	0.01
		300	< 10	MP5-A	0.01
		300	< 10	MP5-F	0.03
		300	< 10	MP5-H	0.02
	SP-5A	122	< 10	MP5-B	0.0075
		122	< 10	MP5-D	0.005
		122	< 10	MP5-H	0.01
	SP-5B	109	< 10	MP5-A	0.075
	SP-5C	41	<10	MP5-G	0.01
		41	< 10	MP5-J	0.2
		41	< 10	MP5-I	0.2
		41	< 10	MP5-K	0.32
6	SP-6A	122	< 10	MP6-B	0.025
		122	< 10	MP6-D	0.12
		122	< 10	MP6-E	0.12
		122	< 10	MP5-F	0.12
	SP-6B	116	< 10	MP6-A	0.015
		116	< 10	MP6-C	0.05
		116	< 10	MP6-E	0.01

Summary of the Results of the SSDS Pilot Study, Stewart EFI Facility

Area Identification Number	Suction Point Identification Number	Vacuum at Suction Point Used to Measure ZOI (in. w.c.)	Flow Used to Measure ZOI (cfm)	Monitoring Point Identification Number	Vacuum at Monitoring Point (in. w.c.)
7	SP-7	57	25	MP7-B	0.005
		57	25	MP7-E	0.005
	SP-7A	78	10	MP7-B	0.005
		78	10	MP7-C	0.12
	SP-7B	50	< 10	MP7-A	0.06
	SP-7C	76	30	MP7-E	0.055
		76	30	MP3-C	0.01
	SP-7D	80	<10	MP7-D	0.01
8	SP-8	6	125	MP8-A	0.01
		6	125	MP8-B	0.04
		6	125	MP8-C	0.01
		6	125	MP8-E	0.035
		6	125	MP8-H	0.01
	SP-8A	40	155	MP8-F	0.015
		40	155	MP8-I	0.005
		40	155	MP8-J	0.005
		40	155	MP8-K	0.005
		40	155	MP8-P	0.025
	SP-8B	4	155	MP8-I	0.01
		4	155	MP8-J	0.03
		4	155	MP8-K	0.02
		4	155	MP8-L	0.06
		4	155	MP8-M	0.06
	SP-8C	60	25	MP8-D	0.02
		60	25	MP8-G	0.3
		60	25	MP8-N	0.14
		60	25	MP8-O	0.04
9	SP-9	2	50	MP9-A	0.86
		2	50	MP9-C	0.9
		2	50	MP9-D	0.94
		2	50	MP2-C	0.075
		2	50	MP2-D	0.01
		2	50	MP5-B	0.075
10	SP-10	24	25	MP10-A	0.015
		24	25	MP10-B	0.015
		24	25	MP10-C	0.18
		24	25	MP10-D	0.02
		24	25	MP10-E	0.12
		24	25	MPP8-E	0.02
11	SP-11	4	50	MP11-A	0.4
		4	50	MP11-B	1.62
		4	50	MP11-C	0.4
		4	50	MP11-D	1.62
		4	50	MP7-B	0.02
		4	50	MP12-A	0.005

Summary of the Results of the SSDS Pilot Study, Stewart EFI Facility

Area Identification Number	Suction Point Identification Number	Vacuum at Suction Point Used to Measure ZOI (in. w.c.)	Flow Used to Measure ZOI (cfm)	Monitoring Point Identification Number	Vacuum at Monitoring Point (in. w.c.)
12	SP-12	42	50	MP12-A	0.35
		42	50	MP12-B	0.04
		42	50	MP7-B	0.38
		42	50	MP11-A	0.05
		42	50	MP11-B	0.03
		42	50	MP11-C	0.05
		42	50	MP11-D	0.04
	SP-12A	55	25	MP12-C	0.15

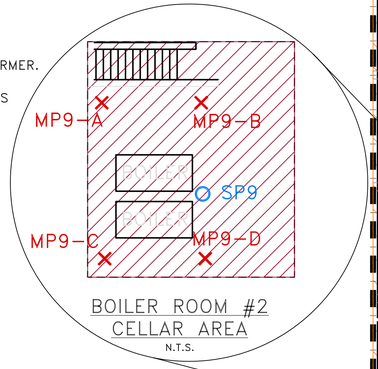
in. w.c. - Inches of water column
cfm - Cubic feet per minute
ZOI - Zone of influence
NM - Not measured

LEGEND:

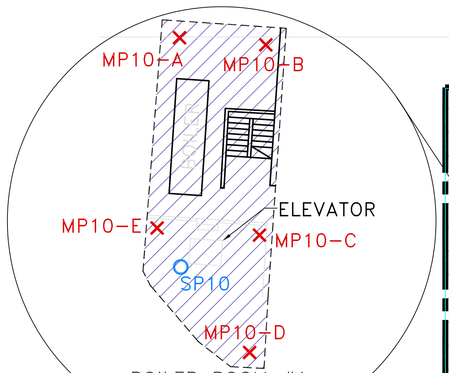
- APPROXIMATE EXTENT OF ORIGINAL BUILDING (BUILT BEFORE 1953)
- APPROXIMATE EXTENT OF SECOND ADDITION (BUILT c.1958)
- APPROXIMATE EXTENT OF THIRD ADDITION (BUILT c.1974)
- APPROXIMATE EXTENT OF FOURTH ADDITION (BUILT c.1984)
- APPROXIMATE EXTENT OF BASEMENT LEVEL
- SPX — PILOT STUDY SUCTION POINT APPROXIMATE LOCATION AND IDENTIFICATION NUMBER (SYMBOL NOT TO SCALE)
- MPX–X — PILOT STUDY SUB–SLAB MONITORING POINT APPROXIMATE LOCATION AND IDENTIFICATION NUMBER (SYMBOL NOT TO SCALE)

NOTES:

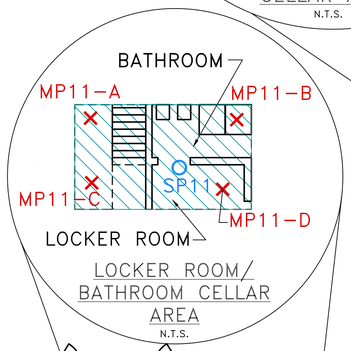
1. ROOM AND SERVICE DESCRIPTIONS ARE FORMER.
2. LOCATIONS AND EXTENTS OF CELLAR AREAS ARE APPROXIMATE.



BOILER ROOM #2 CELLAR AREA
N.T.S.



BOILER ROOM #1 CELLAR AREA
N.T.S.



LOCKER ROOM/ BATHROOM CELLAR AREA
N.T.S.

PROJECT NORTH

KETTEL AVE

CENTRAL PARK AVENUE

WHITTIER AVE

AREA 1 · AREA 2 · AREA 3 · AREA 4 · AREA 5 · AREA 6 · AREA 7 · AREA 8 · AREA 9 · AREA 10 · AREA 11 · AREA 12

PIT 1 · PIT 2

LOADING DOCK AREA NO DEPRESSURIZATION

TRASH CONTAINER AREA NO DEPRESSURIZATION

REVISIONS			
NO.	DESCRIPTION	BY	DATE

SCALE: 1"=16'-0"
PAPER SIZE: 24" x 36"

TRC
1430 BROADWAY, 10TH FLOOR
NEW YORK, NEW YORK 10018
212-221-7822

DESIGNED BY:	DS/JD
DRAWNED BY:	HD
CHECKED BY:	DSG
DATE:	APRIL 2010
SCALE:	AS SHOWN
PROJECT NUMBER:	174586.0000.0000

PROJECT NAME:
STEWART EFI FACILITY
YONKERS, NEW YORK

DRAWING TITLE:
SUB-SLAB DEPRESSURIZATION SYSTEM
PILOT STUDY PLAN

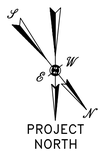
FIGURE
1

LEGEND:

- APPROXIMATE EXTENT OF ORIGINAL BUILDING (BUILT BEFORE 1953)
- APPROXIMATE EXTENT OF SECOND ADDITION (BUILT c.1958)
- APPROXIMATE EXTENT OF THIRD ADDITION (BUILT c.1974)
- APPROXIMATE EXTENT OF FOURTH ADDITION (BUILT c.1984)
- APPROXIMATE EXTENT OF BASEMENT LEVEL
- SPX — PROPOSED PERMANENT SUCTION POINT LOCATION AND IDENTIFICATION NUMBER (SYMBOL NOT TO SCALE)
- MPX-X — PROPOSED PERMANENT SUB-SLAB MONITORING POINT LOCATION AND IDENTIFICATION NUMBER (SYMBOL NOT TO SCALE)

NOTES:

1. ROOM AND SERVICE DESCRIPTIONS ARE FORMER.
2. LOCATIONS MAY BE ADJUSTED AT THE TIME OF CONSTRUCTION.
3. LOCATIONS AND EXTENTS OF CELLAR AREAS ARE APPROXIMATE.
4. SLOPE HORIZONTAL PIPE A MINIMUM OF 1% UNIFORMLY TOWARDS SUB-SLAB DEPRESSURIZATION SYSTEM SUCTION POINTS



REVISIONS			
NO.	DESCRIPTION	BY	DATE

SCALE: 1"=16'-0"
PAPER SIZE: 24" x 36"

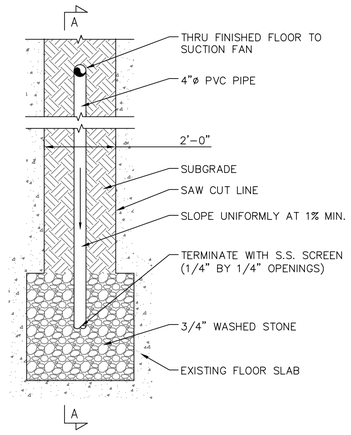
TRC
1430 BROADWAY, 10TH FLOOR
NEW YORK, NEW YORK 10018
212-221-7822

DESIGNED BY:	DS/JD
DRAWNED BY:	HD
CHECKED BY:	DSG
DATE:	APRIL 2010
SCALE:	AS SHOWN
PROJECT NUMBER:	174586.0000.0000

PROJECT NAME:
STEWART EFI FACILITY
YONKERS, NEW YORK

DRAWING TITLE:
SUB-SLAB DEPRESSURIZATION SYSTEM PLAN

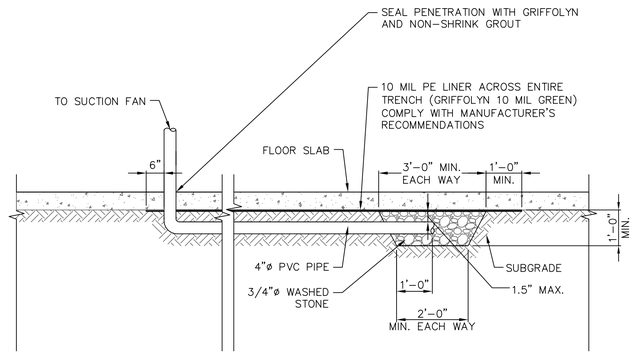
FIGURE
2



SUB-SLAB DEPRESSURIZATION SYSTEM
SUCTION POINT PLAN (TYPICAL)

NTS

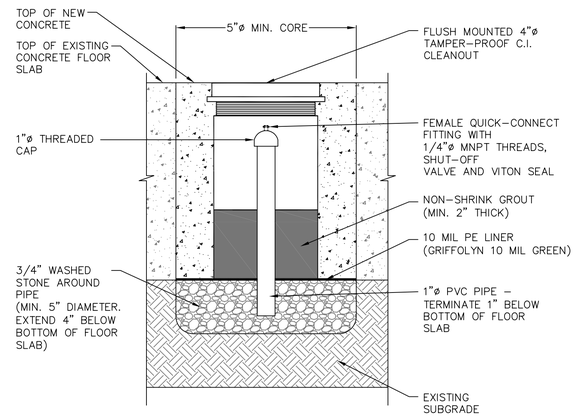
1



SUB-SLAB DEPRESSURIZATION SYSTEM
SUCTION POINT SECTION A-A'

NTS

2



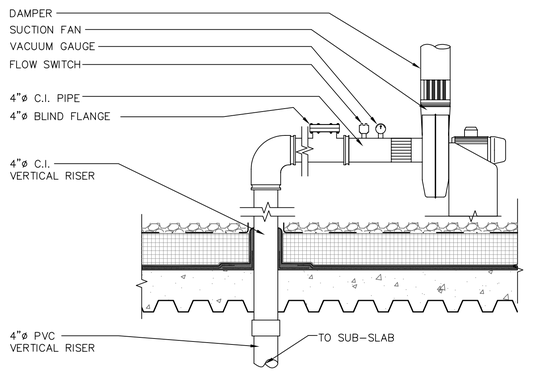
TYPICAL MONITORING POINT DETAIL

NTS

3

NOTES:

1. NOT ALL REQUIRED ACCESSORIES ARE SHOWN.
2. ELECTRICAL WIRING AND EQUIPMENT NOT SHOWN.
3. PIPE AND EQUIPMENT ARRANGEMENT SHOWN FOR SCHEMATIC PURPOSES ONLY.
4. AS AN ALTERNATE TO PENETRATING ROOF, SUCTION FAN VERTICAL RISERS MAY BE ROUTED ALONG BUILDING EXTERIOR.



TYPICAL ROOF TOP
SUCTION FAN SCHEMATIC

NTS

4

GENERAL NOTES:

1. DRAWING NOT TO BE USED FOR STRUCTURAL, ARCHITECTURAL OR OTHER REFERENCE EXCEPT FOR SUB-SLAB DEPRESSURIZATION SYSTEM.

REVISIONS				
NO.	DESCRIPTION	BY	DATE	

NOT TO SCALE
PAPER SIZE: 24" x 36"

TRC
1430 BROADWAY, 10TH FLOOR
NEW YORK, NEW YORK 10018
212-221-7822

DESIGNED BY: DS/JD
DRAWNED BY: HD
CHECKED BY: DSG
DATE: APRIL 2010
SCALE: NOT TO SCALE
PROJECT NUMBER: 174586.0000.0000

PROJECT NAME:
STEWART EFI FACILITY
YONKERS, NEW YORK

DRAWING TITLE:
SUB-SLAB DEPRESSURIZATION SYSTEM DETAILS

FIGURE
3