Letter of Transmittal

HOLT CONSULTING
P.O. BOX 660
VALATIE, NEW YORK 12184

PHONE : (518) 784-9021
FAX : (518) 784-9023

TO: Kathy Eastman
NYSDEC - DER
625 BROADWAY
ALBANY NY
12233-7016

Date: 1/30/09 Proj. No.:
Attention:
RE: LIBERTY MOVING & STORAGE
(COSIDA - LOT 6)

We are Sending: ☒ Attached ☐ Separate Cover, via:

☐ Shop Drawings ☐ Prints ☐ Samples ☐ Specifications
☐ Addenda ☒ Copy of Letter ☐ Other:

RECEIVED
FEB 03 2009
Division of Environmental Remediation

Copies	Date	No.	Description
1	1/18/09		LETTER REPORT - ENVIR. SMP COMPLIANCE LOT-6

Transmitted as Checked Below:

☐ For Approval ☐ Approved as Submitted ☐ Resubmit ____ copies for Approval
☒ For Your Use ☐ Approved as Noted ☐ Submit ____ copies for Distribution
☒ As Requested ☐ Returned for Corrections ☐ Return ____ copies with Corrections
☐ For Review & Comment ☐ Other:

Comments:

CC:

Signed: Jeff Holt

(If enclosures are not as noted, please notify us at once)

Holt Consulting

Engineering & Geoenvironmental Sciences

January 18, 2009

Mr. Tom Tama, Vice President, Operations
Liedkie Moving and Storage
2696 Curry Road
Rotterdam, New York 12303

Re: Lot 6 Construction - Environmental SMP Compliance
Lot 6, Riverside Technology Park, Schenectady, NY
Holt File 08-264.01.

Dear Tom:

This letter serves to report and document the measures taken as part of building construction at the Lot 6 site in compliance with the site SMP. These measures are required by an environmental easement that is filed with the property deed, are due to past conditions and practices on the property, and are described in the site SMP

This Report describes the requirements of the SMP, inspection of site excavations and construction in accordance with the SMP, and an assessment of the appropriateness and anticipated effectiveness of the implemented measures.

Site SMP Requirements and Description of Development and Construction

The relevant and applicable SMP requirements regarding site disturbance and building construction are:

General Property Use Restrictions, Sections GU-2, GU-3, and GU-4.

General Soil Management Restrictions, Sections SMR-1, SMR-2, SMR-3, and SMR-4.

Soil Disturbance In Soil Management Plan Areas A & B, Section SDMA-1.

These are repeated below with a description of the development and construction practices employed to achieve compliance with the requirements.

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Fax : (518) 784-9023
e-mail: contact@holtconsulting.net

66 Blossom Lane
P.O. Box 660
Valatie, New York 12184

The anticipated site development and construction was reported and described to the NYSDEC, as required by the SMP (GU-2), in correspondence dated October 9, 2008, as repeated below:

> *"Liedkie is constructing a 12,000 square foot storage building on the property, generally over the area of completed remedial soil excavation and clean soil backfill. A portion of the property site plan indicating the building location and the limit of remedial excavation/backfill is attached.*
>
> *The building includes a concrete slab-on-grade floor and cast concrete sidewalls with spread footing foundation. There is no basement. The building is to be constructed upon additional clean earth fill imported to the site and placed above the pre-existing site grades. A demarcation layer of non-degradable synthetic material (construction "filter fabric") was placed on the pre-existing grades before placement of this additional fill.*
>
> *Excavation for sidewall footings will be advanced through the newly imported earth fill, with the rear (westerly) half of the building requiring the bottom of footing excavation elevations at about elevation 228 feet, and the front (easterly) half of the building requiring bottom of footing excavation elevations at about elevation 232 feet.*
>
> *The footing excavations planned for the front half of the building will require excavation below the demarcation layer of less than 1-foot, if any at all. The footing excavations planned for the rear half of the building will require excavation below the demarcation layer of up to about 4 feet. It is noted that most of the anticipated excavation greater than 1-foot below the demarcation layer will take place within the clean soils placed as backfill during the site remediation activities, and no contaminated soils will be encountered in these areas.*
>
> *During excavation activities at a depth greater than 1-foot below the demarcation layer, the progress of excavation will be monitored for VOCs by Holt Consulting utilizing a PID instrument. Excavated materials will be examined for visual, odor, or PID-screening indications of petroleum contamination, with PID indications of greater than 10-ppm above background considered to be indicative of potentially contaminated soil. Any soil indicating contaminated conditions will be segregated for proper handling and disposition."*

Site Development and Construction Compliance with the Site SMP

Inspection of Site development and construction activities and conditions were provided during the construction period, including:

- Inspection of the site on October 6, 14, and 20, 2008 and inspection of the site accompanied by NYSDEC personnel on October 21, 2008,
- Inspection and VOC screening by PID of soil excavations,
- Review and inspection of SVI prevention measures,
- Review and assessment of encountered conditions and construction relative to requirements of the SMP.

A sketch of the SVI prevention system piping layout, limit of remediation activity backfill soils and building footprint, and SVI prevention membrane material specification are attached.

Regarding SMP Requirement GU-2

The Site SMP requires:

> *"GU-2. Any proposed excavation deeper than either one foot below existing grade in areas that do not receive any new construction or grading fill, or beneath existing grade that is defined by a demarcation layer of permeable non-degradable synthetic material in areas that receive new construction or grading fill, or any erection of a structure or roadway that exposes subsurface soil below existing grade on the Controlled Property, requires prior notification of and approval by, the NYSDEC and compliance with the approved Site Management Plan. The owner of the Controlled Property must submit a written description of any future, proposed actions to the NYSDEC (at least 60 days) in advance of anticipated implementation, if such notification is required pursuant to this § GU-2.*

The site development required excavation greater than 1 foot into pre-development soils in a portion of the building perimeter wall foundation, and in trenches required for utility services, specifically water, electric, and sanitary sewer.

Notification was provided to NYSDEC on October 9, 2008, and was noted and accepted by NYSDEC, describing the development and construction to be implemented, and implementation of SMP compliance measures.

Regarding SMP Requirement GU-3

The Site SMP requires:

> *GU-3. Any future construction of buildings on the property should include preventative measures to address the potential for soil vapor intrusion and include confirmation that those measures are effective and remain effective as needed to eliminate the potential for exposures that may result from contaminated soil vapor.*

The completed building is constructed with provision to prevent soil vapor intrusion (SVI). The SVI prevention provisions include a continuous concrete floor beneath occupied building areas, an impermeable synthetic membrane installed beneath the concrete floor slab, and a soil vapor collection and venting piping system installed beneath the synthetic impermeable layer.

The impermeable membrane is installed beneath the entire building area, and is comprised of polyolefin-based sheet, "Perminator," manufactured by W.R. Meadows company, 15 mil thickness, installed from 15-foot wide rolls, with a minimum of 12-iches of installed material overlap. Perimeter edges of the membrane were secured to the perimeter foundation wall system utilizing tape specifically provided by the membrane manufacturer for this purpose.

Soil vapor venting pipe is installed along the inside building perimeter and in an array above the Soil Management Plan Area A. The pipe is 4-inch diameter slotted HDPE, and is installed surrounded with stone bedding and backfill along pipe runs. The soil venting piping system is vented to the outside through the west foundation wall, at the southern and northern ends of that wall, about 3to 4 feet above surrounding finished exterior grades. This soil venting system will function utilizing passive venting of sub-slab/membrane soils, and can be adapted to active venting in the future if future conditions warrant such a change.

Regarding SMP Requirement SMR-1

The Site SMP requires:

> *"SMR-1. Soil disturbance, grading or excavation greater than one foot will proceed under an appropriate Site Management Plan (Plan), as per § GW-2 which shall include provisions for appropriate screening for the contaminants of record performed by an environmental professional during soil disturbance activities, and shall define threshold conditions that will require implementation of additional levels of monitoring, testing or site security to protect worker and community health and shall describe contingency activities in the event that currently unknown contaminated conditions should be discovered.*

As described in the notification provided to NYSDEC excavation greater than 1 foot into pre-construction soils was required in the western half of the perimeter wall footing. In all but a very limited area in the southwest building corner this excavation was advanced into soils brought to the site as clean backfill during previous site remediation activities.

In addition, excavation into pre-development soils was necessary for utility service trenches, specifically sanitary sewer pipe from the southeast building corner to an existing manhole along the City of Schenectady sewer in the southwest portion of the site, and for electric and water from the southeast building corner to Technology Drive to the southeast.

In each of these areas, where excavation exceeded 1 foot below the pre-construction ground surface, the excavation walls and bottom were screened for VOCs. Soil samples were taken at a frequency of approximately each 20 feet of trench or wall, placed into plastic bags and the bag headspace screened by PID. A PID-determined VOC concentration of 10 ppm was determined during pre-construction planning as the threshold for additional excavation screening and scrutiny. There was no instance where there was any indication that VOCs determined by the PID exceeded 1 ppm VOCs.

Regarding SMP Requirement SMR-2

The Site SMP requires:

> *SMR.-2. This Plan shall include provisions for an environmental professional to perform appropriate screening for petroleum constituents. VOCs, and SVOCs during all soil excavation or soil disturbance activities, and shall define threshold conditions that will require implementation of additional levels of monitoring, testing, odor controls, site security to protect worker and community health and shall describe contingency activities in the event currently unknown contaminated conditions are discovered.*

As noted under the discussion regarding SMR-1, PID VOC screening and monitoring was provided by Holt Consulting with 10 ppm determined as the threshold for additional excavation soil scrutiny. At no time did the PID screening provided exceed 1.0 ppm, and no additional scrutiny was called for.

Regarding SMP Requirement SMR-3 & SDMA-1

The Site SMP requires:

> *SMR-3. The HASP (§ SDMA-1) must include and refer to the NYSDOH Generic Community Air Monitoring Plan. If contaminated soil or groundwater is encountered during future excavation work, the GCAMP must be followed to limit the off-site migration of VOCs in air, dust, or odors that might affect nearby workers or community.*

"SDMA-1. Soil Disturbance shall proceed only in accordance with the above general site management restrictions, SMR-1, SMR-2, SMR-3 and SMR-4. In addition, any soil disturbance occurring in the defined Soil Management Plan Area A or Area B shall proceed only in accordance with a Health and Safety Plan (HASP) specifically prepared for the nature and depth of excavation anticipated and specifically cognizant of site history and conditions described in the ERP documents prepared by Holt Consulting: the Site Investigation/Remedial Alternatives Report and the Engineering Certification Report."

There were no contaminated soil or groundwater conditions encountered, therefore there was no need or occasion to implement the NYSDOH GCAMP.

There was no excavation of soil in Soil Management Plan Area A, and there was no activity of any nature in Soil Management Plan Area B.

Regarding SMP Requirement SMR-4

The Site SMP requires:

SMR-4. All wastes generated by actions regulated under this Site Management Plan will be properly characterized, managed, reused or disposed of as per applicable state and federal requirements."

There were no excavated or on-site materials identified as wastes (other than normal and customary waste associated with new construction activity) therefore no such wastes were disposed of.

Regarding SMP Requirement GU-4

The Site SMP requires:

GU-4. Periodic certification by the owner of the Controlled Property or City of Schenectady Industrial Development Agency (COSIDA), be prepared and submitted to the NYSDEC by a professional engineer or an environmental professional acceptable to the NYSDEC, certifying that the institutional controls and engineering controls installed on the Controlled Property pursuant to the SAC #C302580 are unchanged from the previous certification, are being operated and maintained in conformance with the provisions of the NYSDEC-approved Site Management Plan for the Controlled Property and all NYSDEC-approved amendments to that Site Management Plan, and have not been impaired."

This Report provides professional engineer certification that the site disturbance and construction related to the described development conforms to the provisions of the SMP developed pursuant to NYSDEC SAC C302580.

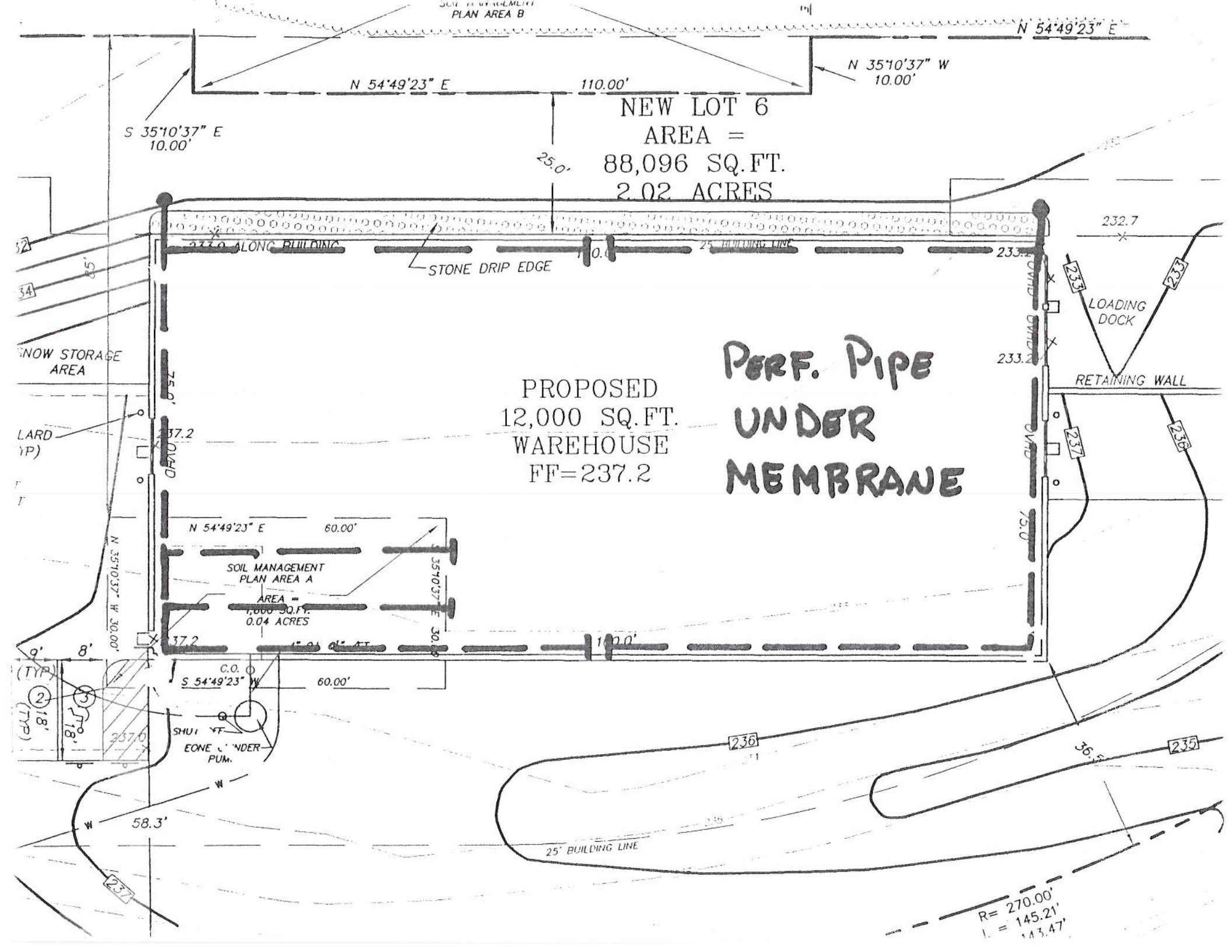
Thank you for the opportunity to assist you. If you have any questions, please do not hesitate to call me at (518) 784-9021.

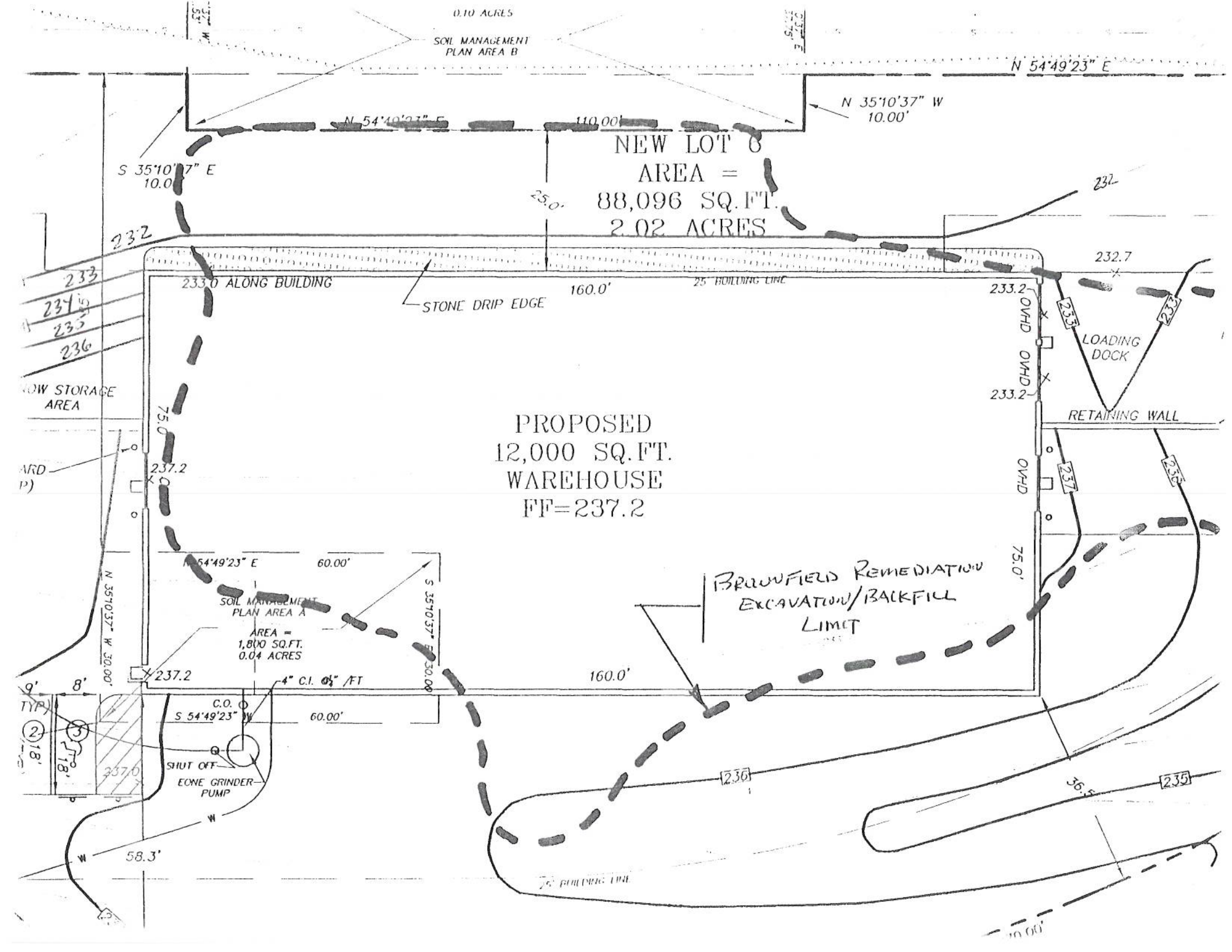
1/20/09

Very truly yours,
HOLT CONSULTING

Jeffrey R. Holt, P.E., C.P.G.
Principal
NYS PE No 57039

Attachments


SOIL MANAGEMENT PLAN AREA B
N 54°49'23" E
N 35°10'37" W 10.00'
N 54°49'23" E 110.00'
S 35°10'37" E 10.00'
NEW LOT 6
AREA =
88,096 SQ.FT.
2.02 ACRES
25.0'
237.0 ALONG BUILDING
STONE DRIP EDGE
25' BUILDING LINE
232.7
233
LOADING DOCK
RETAINING WALL
SNOW STORAGE AREA
PROPOSED
12,000 SQ.FT.
WAREHOUSE
FF=237.2
PERF. PIPE UNDER MEMBRANE
75.0'
237.2
OHD
N 54°49'23" E 60.00'
SOIL MANAGEMENT PLAN AREA A
AREA = 1,600 SQ.FT. 0.04 ACRES
S 35°10'37" E 30.00'
N 35°10'37" W 30.00'
C.O.
S 54°49'23" W 60.00'
9' (TYP)
8'
18' (TYP)
237.0
SHUT OFF
STONE UNDER PUMP
W
58.3'
236
235
237
R= 270.00'
L = 145.21'
143.47'


0.10 ACRES
SOIL MANAGEMENT PLAN AREA B
N 54°49'23" E
N 35°10'37" W 10.00'
N 54°49'23" E 110.00'
S 35°10'37" E 10.0
NEW LOT 6
AREA =
88,096 SQ.FT.
2.02 ACRES
25.0'
232
233
234
235
236
233.0 ALONG BUILDING
160.0'
25' BUILDING LINE
STONE DRIP EDGE
232.7
233.2
OHD
LOADING DOCK
RETAINING WALL
OW STORAGE AREA
PROPOSED
12,000 SQ.FT.
WAREHOUSE
FF=237.2
75.0'
237.2
N 54°49'23" E 60.00'
SOIL MANAGEMENT PLAN AREA A
AREA =
1,800 SQ.FT.
0.04 ACRES
S 35°10'37" E 30.00'
N 35°10'37" W 30.00'
BROWNFIELD REMEDIATION EXCAVATION/BACKFILL LIMIT
160.0'
4" C.I. @ 1/4" /FT
C.O.
S 54°49'23" W 60.00'
9'
8'
TYP.
18'
337.0
SHUT OFF
ECONE GRINDER PUMP
W
58.3'
236
235
36.5'
25' BUILDING LINE

3769 Ridge Road
Scotia, NY 12302
Phone: 518-372-0784
Fax: 518-382-7571

BELLAMY & SONS CONSTRUCTION COMPANY, INC.

Fax

To:	Holt Consulting, Attn: Jeff Holt	From:	David Paolelli
Fax:	784-9023	Date:	October 24, 2008
Phone:	784-9021	Pages:	Cover +5
Re:	Liedtke Lot - 6 Soil Vapor	CC:	

☐ Urgent ☒ For Review ☐ Please Comment ☒ Please Reply ☐ Please Recycle

•Comments: Attached are specification on a 15mil Perminator under slab vapor barrier for your review & consideration. I have looked into geo-membrane liners & have found the cost to be 4 to 5 times the cost, a overkill to what is needed to be achieved in this warehouse construction project. . Thank you

Attn DAVE

www. JC SMITH INC .com
WARE
Tel: 438 6171
Fax: 438 6895
ALBANY NY

PRODUCT DATA

W. R. MEADOWS, SEALTIGHT

07 26 16 No. 723

Material Content

Specification - 10 mil	Project Profile	Brochure Request
Specification - 15 mil		
Canada Spec - 10 mil		
Canada Spec - 15 mil		

1 - 15' X 200' Roll 400.00 EA
2 - 4" X 18' Tape 37.40
CPU 30 DAYS

PERMINATOR® Until Sold Tony

10 and 15 Mil Underslab Vapor Barrier

DESCRIPTION

PERMINATOR underslab vapor barrier is a new generation of polyolefin-based resin/chemical technology. PERMINATOR provides the vapor barrier industry with a highly effective, economical choice for helping to reduce the penetration of moisture and water vapor through the slab into the structure, thereby helping to reduce fungus, mildew and mold growth. PERMINATOR also helps reduce radon gas from entering the structure.

PERMINATOR is tough enough to withstand normal construction jobsite conditions and traffic. It will not crack, puncture, snag, split, or tear easily.

PERMINATOR helps meet and maintain the maximum slab moisture transfer rate of 3 lb./1000 ft.²/24 hours, as allowed by the flooring industry's specifications.

PERMINATOR is available in 10 mil and 15 mil thicknesses. Both versions are furnished in 200' (61 m) long rolls.

PERMINATOR's 12' wide (15 mil) and 15' wide (10 mil) rolls require fewer seams in application. Installation is quick and easy. All joints/seams, both lateral and butt, should be overlapped 6" and taped using 4" wide PERMINATOR TAPE. PERMINATOR rolls fast and smoothly over level tamped soil or compacted fill.

SPECIFICATIONS

Meets or exceeds all requirements of ASTM E 1745 Class A, B & C.

USES

PERMINATOR underslab vapor barrier is primarily designed for underslab construction, where the soil has been tamped and leveled or compacted fill has been applied. The 200' (61m) long sheets are unrolled as is or cut to size and installed using the overlapping method. Overlaps are

6" wide and these seams are sealed using 4" wide PERMINATOR TAPE.

PERMINATOR can also be used as a protection course for waterproofing membranes. The desired sheet lengths are cut to size and retained at the top of the waterproofing membranes by PERMINATOR TAPE or TERMINATION BAR. PERMINATOR 10 mil is also ideal for use over horizontal applications of MEL-ROL® LM.

FEATURES/BENEFITS

- Available in 10 mil and 15 mil thicknessess, in 200' (61m) long rolls.
- Helps reduce the penetration of moisture and water vapor through the slab into the structure.
- Helps reduce fungus, mildew and mold.
- Helps reduce radon gas from entering a structure.
- Tough enough to withstand normal construction jobsite conditions and traffic... will not crack, puncture, snag, split, or tear easily.
- Installs quickly and easily over tamped grade ... no gravel, fill or sand needed.
- 12' (15 mil) and 15' (10 mil) wide rolls require fewer seams in application.
- Helps meet and maintain the maximum slab moisture transfer rate of 3 lb./1000 ft.²/24 hours, as allowed by the flooring industry's specifications.
- 10 or 15 mil thickness clearly marked on membrane for easy visual identification on jobsite.

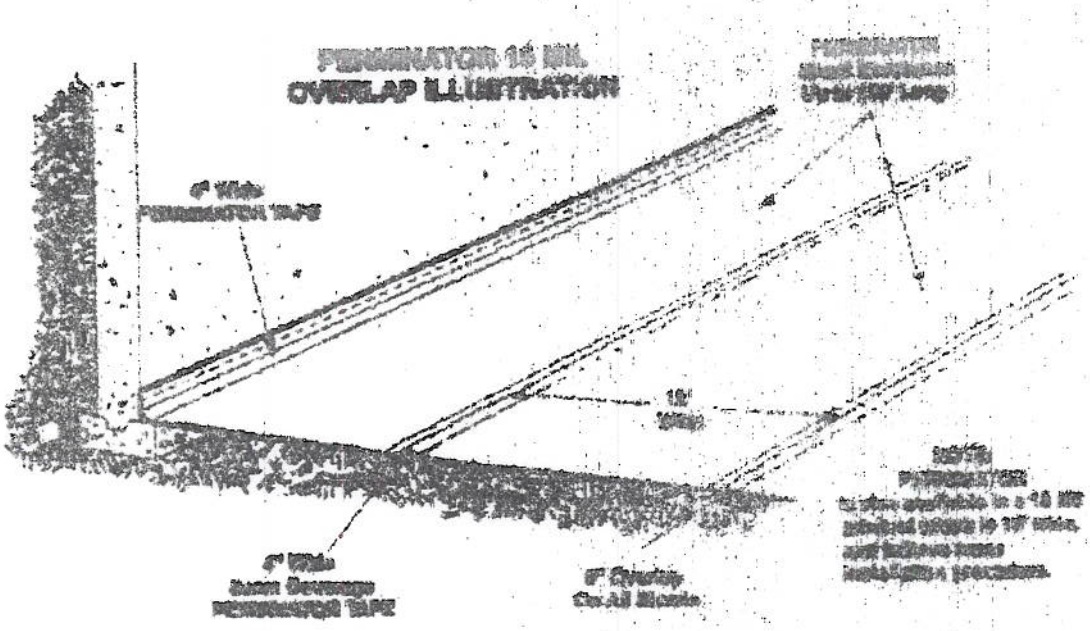
PACKAGING

10 mil: 15' wide (4.57 m), 200' long (60.96 m) or 54" wide (1.37 m), 400' long (121.92 m) by special order only.
15 mil: 12' wide (3.66 m), 200' long (60.96 m)

PHYSICAL PROPERTIES

PRODUCT	WATER VAPOR PERMEANCE RATING ASTM F 1249 ASTM E 96, Water Method		TENSILE STRENGTH ASTM E 154, Section 9	PUNCTURE RESISTANCE ASTM D 1709, Method B
	Perms	WVT* Grains/Ft.²/Hr.	Lb. Force/Inch	Grams
PERMINATOR 10 MIL	0.024	0.012	52	2655
PERMINATOR 15 MIL	0.018	0.007	64	4135

* Tested by ASTM F 1249, calibrated to ASTM E 96, Water Method



APPLICATION

Surface Preparation...Level, tamp or roll earth or granular material beneath the slab base as specified by supplied architectural drawings. Follow ASTM E-1643-94. (Standard practice and procedure for installation of vapor retarder used in contact with earth or fill under concrete slabs.)

Horizontal Application...Unroll 200' (61 m) PERMINATOR over the area where the slab is to be poured. Cut to size if necessary. PERMINATOR should completely cover the pour area. All joints/seams, both lateral and butt, should be overlapped 6" and taped using 4" wide PERMINATOR TAPE. (Note: The PERMINATOR TAPE area of adhesion should be free from dust, dirt and moisture to allow maximum adhesion of the pressure-sensitive tape.)

The most efficient installation method includes placing PERMINATOR on top of the footing and against the vertical wall. This will sandwich PERMINATOR between the footing, vertical wall and poured concrete floor. (See illustration on page 2.) This will help protect the concrete slab from external moisture sources once the slab has been placed.

Before placing concrete slab, make sure all penetrations, blockouts and damaged areas are repaired/addressed.

Numerous municipal building codes do not allow the placement of vapor barriers over the footing, due to breaking of the bond between the wall and footing. Although this is not an optimal application method, W. R. MEADOWS approves this alternate method when required by building code.

SEAL ALL PROTRUSIONS...Cut a slit around pipes, ductwork, rebar, and wire penetrations to place the initial layer of PERMINATOR. To further protect the concrete slab from external moisture sources, use a piece of PERMINATOR and place a collar around this as well.

1. Cut a piece of PERMINATOR a minimum width of 12". The length should be 1 1/2 times the pipe circumference. With a roofer's knife or scissors, cut "fingers" half the width of the film. See Figure 1.

2. Wrap around and tape the collar onto the pipe and completely tape fingers to the bottom layer of PERMINATOR, as shown in Figure 2.

Figure 1 COLLAR

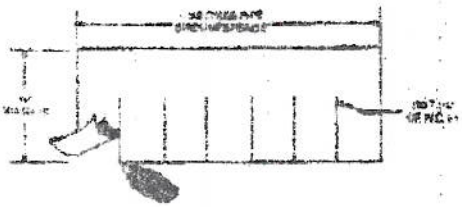
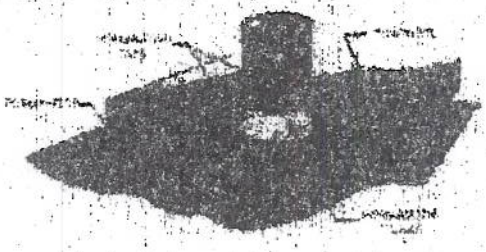


Figure 2 PERMINATOR COLLAR INSTALLATION



In the event that PERMINATOR is damaged during or after installation, repairs must be made. Cut a piece of PERMINATOR large enough to cover any damage by a minimum overlap of 6" in all directions. Clean all adhesion areas of dust, dirt and moisture. Tape down all edges using PERMINATOR TAPE.

NOTE: It is not necessary to overlay PERMINATOR with gravel or sand. PERMINATOR is tough enough to withstand normal construction abuse and traffic. Most flooring companies recommend the placement of the concrete slab directly on the vapor barrier. We agree, since this eliminates the potential for trapping moisture in a blotter effect, causing it to resurface through the slab into the flooring systems. Consult local building codes and regulations, plus architectural and design firm guidelines, prior to application.

Vertical Wall Application - Install MEL-ROL waterproofing membrane or MEL-ROL LM liquid waterproofing membrane according to installation instructions. While the membrane is still tacky, install PERMINATOR as a protective course over the applied waterproofing membrane using TERMINATION BAR with concrete nails or PERMINATOR TAPE at the termination of the waterproofing membrane is advisable in some applications. Supervised care must be taken during backfilling against the material so that it is not damaged or punctured. If damage occurs, patch using the techniques outlined previously.

ACCESSORIES

MEL-DRAIN® rolled matrix drainage system is designed to remove moisture from around footings and to relieve hydrostatic head pressures. Eight versions are available.

PERMINATOR TAPE is a self-adhesive tape for use in sealing vapor barrier seams and attachment to footings, protrusions, etc. It is offered in 4" (10 cm) widths and roll lengths of 180' (55 m)/roll. It is packaged twelve rolls per carton. Coverage: One box of tape will adhere approximately 10 rolls of PERMINATOR.

TERMINATION BAR is provided in 10' (3 m) lengths to attach PERMINATOR to vertical walls as a protection course for vertical wall waterproofing applications.

PRECAUTIONS

PERMINATOR underslab vapor barrier does not negate the need for relief of hydrostatic heads. A complete drain tile system should be placed on the exterior of the footing and, in severe cases, on the interior of the footing as well. For maximum concrete performance and durability, the concrete floor slab design should provide for the lowest possible slump, yet assure complete hydration of the concrete. Refer to Material Safety Data Sheet for complete health and

safety information.

This material last updated May 2008.

Top

W. R. MEADOWS, INC.
P.O. Box 338 • HAMPSHIRE, IL 60140-0338
Phone: 847/214-2100 • Fax: 847/683-4544
1-800-342-5976
www.wrmeadows.com

HAMPSHIRE, IL / CARTERSVILLE, GA / YORK, PA
FORT WORTH, TX / BENICIA, CA / POMONA, CA
GOODYEAR, AZ / MILTON, ON / ST. ALBERT, AB

LIMITED WARRANTY

"W. R. MEADOWS, INC. warrants at the time and place of make delivery, our material will be of good quality and will conform with our published specifications in force at the date of acceptance of the order." Read complete warranty. Copy furnished upon request.

Disclaimer

The information contained herein is included for illustrative purposes only, and to the best of our knowledge, is accurate and reliable. W. R. MEADOWS, INC. cannot however under any circumstances make any guarantee of results or assume any obligation or liability in connection with the use of this information. As W. R. MEADOWS, INC. has no control over the use to which others may put its product, it is recommended that the product be tested to determine if suitable for specific application and/or that information is valid in a particular circumstance. Responsibility remains with the architect or engineer, contractor and owner for the design, application and proper installation of each product. Specifier and user shall determine the suitability of products for specific applications and assume all responsibilities in connection therewith.