

BLOCK 1170.01 LOT 4,5,6 QUALIFICATION CODE _____ADDRESS (SITE) HESS STATION
1672 ROUTE 88PERMIT NO. 13-1659

Building



CONSTRUCTION PERMIT APPLICATION

C12-004465

Applicant Completes: Sections I, II, III (optional), IV, VI, and VII

I. IDENTIFICATION

1. Proposed Work Site at: 1672 ROUTE 88
2. Name of Owner in Fee: HESS CORPORATION
Tel. (732) 750-6192 e-mail _____
Address 1 HESS PLAZA, WOODBRIDGE NJ 07095
street municipality zip code
3. Ownership in Fee: Public _____ Private X
4. Principal Contractor: H.A. FERNOT CO. INC. Tel. (973) 575 8376
Address 32 KULICK ROAD, FAIRFIELD NJ 07004 e-mail _____
License No. OR, if new home, Builder Reg. No. _____ Exp. Date _____
Home Improvement Contractor Registration No. or Exemption Reason (if applicable): _____
Federal Emp. ID No. 22-2282264 FAX: (973) 575 7704
5. Architect or Engineer: BOHLER ENGINEERING Contact BRUCE BOYER
Address 35 TECHNOLOGY DR. WARREN NJ 07095 e-mail _____
Tel. (908) 668-8300 FAX: (908) 754-4401
6. Responsible Person in Charge once Work has Begun: RANDY MITCHELL
Tel. (973) 575 8376 FAX: (973) 575 7704

V. FEE SUMMARY (for office use only)

		Update	Update
1. Building	\$ <u>567</u>	✓	✓
2. Electrical	\$ <u>965</u>	✓	✓
3. Plumbing			
4. Fire Protection	\$ <u>125</u>	✓	✓
5. Elevator Devices			
6. Subtotal	\$		
7. Less 20% for State Plan Review			
8. Subtotal	\$		
9. State Permit Surcharge Fee	\$ <u>70</u>		
10. Subtotal	\$		
11. Cert. of Occupancy	\$ <u>320</u>		
12. Other	\$ <u>150</u>		
13. TOTAL	\$ <u>2097</u>		

VI. BUILDING/SITE CHARACTERISTICS

1. Number of Stories 1
2. Height of Structure 18' ± ft.
3. Area — Largest Floor 1680 sq. ft.
4. New Building Area 1680 sq. ft.
5. Volume of New Structure 21,000 cu. ft.
6. Construction Classification II-B
7. Total Land Area Disturbed 2000 ± sq. ft.
8. Flood Hazard Zone C
9. Base Flood Elevation N/A ft.
10. Wetlands yes _____ no ✓
11. Max. Live Load 40 PSF
12. Max. Occupancy Load 37

(office use only)

II. PROPOSED WORK

1. ☐ Minor Work
2. ☒ New Building
3. ☐ Addition
4. ☐ a. Repair
☐ b. Alteration
☐ c. Renovation
☐ d. Reconstruction
5. ☒ Fire Protection
6. ☒ Plumbing
7. ☒ Electrical
8. ☐ Elevator Devices
9. ☐ Asbestos Abat. Subch. 8
10. ☐ Lead Hazard Abatement
11. ☐ Demolition

Est. Cost	Plans Rec'd	Date Rec'd	Rejection Date	Approval Date	Reviewer	Resubmission Dates	Re-viewer
<u>215,000</u>	<u>11/16/12</u>	<u>11/16/12</u>	<u>3/7/13</u>	<u>3/7/13</u>	<u>RV</u>		
<u>3,200</u>							
<u>28,000</u>							
<u>65,000</u>							
<u>315,450</u>							

VII. DESCRIPTION OF BUILDING USE

A. RESIDENTIAL

1. State Specific Use: _____
2. Use Group: _____
3. Change in Use Group, Indicate Former: _____

4. No. of dwelling units: All Units Income-restricted
Before Construction _____
After Construction _____
Net Gain or Loss _____

B. NON-RESIDENTIAL

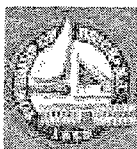
1. State Specific Use: RETAIL/GASOLINE
2. Use Group: M
3. Change in Use Group, Indicate Former: _____

III. DO YOU WANT: (optional)

1. ☐ Partial Releases
2. ☐ Prototype Processing

IV. DOES OR WILL YOUR BUILDING CONTAIN ANY OF THE FOLLOWING?

1. ☐ Elevators/Escalators/Lifts/
Dumbwaiters/Moving Walks
2. ☐ High Pressure Boilers
3. ☐ Pressure Vessels
4. ☐ Refrigeration Systems
5. ☐ Cross-Connections/Backflow Preventers
6. ☐ Hazardous Uses/Places of Assembly
7. ☐ Sprinklers
8. ☐ Smoke Control Systems in Open Wells
9. ☐ Underground Storage Tanks
10. ☐ Swimming Pools, Spas and Hot Tubs



Brick Township
401 Chambersbridge Rd
Brick, NJ 08723

Date Issued 9/27/2013
Control Number C-12-004465
Permit Number 13-1659
Permit Issue Date 4/18/2013
Certificate Number 13-1659

Certificate

Construction Code Division

(Certificate of Occupancy)

Identification

Work Site Location: 1672 ROUTE 88 Brick Township, NJ Block: 1170.01 Lot: 4 Qual: _____
Owner in Fee: HESS REALTY CORPORATION
Owner Address: PO BOX 696419 SAN ANTONIO NJ 78269
Telephone: (732) 750-6192
Contractor H. A. Fernot Company, Inc.
Address 32 Kulick Road Fairfield NJ 07004
Telephone: (973) 575-8376 Fax: (973) 575-7704
License Number or Builders Registration Number: 4497 Federal Emp. Number: 22-228224

Home Warranty Number: _____

Type of Warranty Plan: ☐ State ☐ Private

Use Group: M Construction Classification: _____

Maximum Live Load: 0 Maximum Occupancy Load: 0

Description of Work/Use: NEW COMMERCIAL STRUCTURE Modular
Hess Express

Certificate Comments:

☒ **Certificate of Occupancy**

This serves notice that said building or structure has been constructed in accordance with the New Jersey Uniform Construction Code and is approved for occupancy.

☐ **Certificate of Approval**

This serves notice that the work completed has been constructed or installed in accordance with the New Jersey Uniform Construction Code and is approved. If the permit was issued for minor work, this certificate was based upon what was visible at the time of inspection.

☐ **Certificate of Continued Occupancy**

This serves notice that based on a general inspection of the visible parts of the building there are no imminent hazards and the building is approved for continued occupancy.

☐ **Temporary Certificate of Compliance**

The following conditions must be met no later than or the owner will be subject to fine or order to vacate:

This certificate has an expiration date of:

Conditions to be met:

☐ **Certificate of Clearance - Lead Abatement 5:17**

This serves notice that based on written certification, lead abatement was performed as per NJAC5:17 to the following extent.

- ☐ Total removal of lead-based paint hazards in scope of work
☐ Partial or limited time period (years); see file

☐ **Certificate of Clearance - Asbestos Abatement**

This serves notice that based on written certification, asbestos abatement was performed to the following extent.

- ☐ Total removal of asbestos hazards in scope of work
☐ Partial or limited time period (years); see file

☐ **Certificate of Compliance**

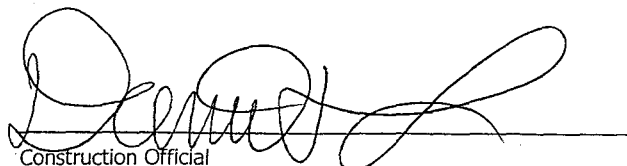
This serves notice that said potentially hazardous equipment has been installed and/or maintained in accordance with the New Jersey Uniform Construction Code and is approved for use until

☐ **Temporary Certificate of Occupancy**

The following conditions must be met no later than: or the owner will be subject to fine or order to vacate:

This certificate has an expiration date of:

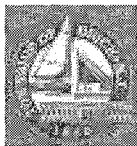
Conditions to be met:


Construction Official

Fee: \$220.00

Check Number: 605

Collected By: Lisa Rose Tavalaiaccio



Brick Township
401 Chambersbridge Rd
Brick, NJ 08723

Date Issued 9/25/2013
Control Number C-12-004465
Permit Number 13-1659
Permit Issue Date 4/18/2013
Certificate Number 13-1659

Certificate

Construction Code Division

(Temporary Certificate of Occupancy)

Identification

Work Site Location: 1672 ROUTE 88 Brick Township, NJ Block: 1170.01 Lot: 4 Qual: _____
Owner in Fee: HESS REALTY CORPORATION
Owner Address: PO BOX 696419 SAN ANTONIO NJ 78269
Telephone: (732) 750-6192
Contractor H. A. Fernot Company, Inc.
Address 32 Kulick Road Fairfield NJ 07004
Telephone: (973) 575-8376 Fax: (973) 575-7704
License Number or Builders Registration Number: 4497 Federal Emp. Number: 22-228224

Home Warranty Number: _____

Type of Warranty Plan: ☐ State ☐ Private

Use Group: M Construction Classification: _____

Maximum Live Load: 0 Maximum Occupancy Load: 0

Description of Work/Use: NEW COMMERCIAL STRUCTURE Modular
Hess Express

Certificate Comments:

☐ **Certificate of Occupancy**

This serves notice that said building or structure has been constructed in accordance with the New Jersey Uniform Construction Code and is approved for occupancy.

☐ **Certificate of Approval**

This serves notice that the work completed has been constructed or installed in accordance with the New Jersey Uniform Construction Code and is approved. If the permit was issued for minor work, this certificate was based upon what was visible at the time of inspection.

☐ **Certificate of Continued Occupancy**

This serves notice that based on a general inspection of the visible parts of the building there are no imminent hazards and the building is approved for continued occupancy.

☐ **Temporary Certificate of Compliance**

The following conditions must be met no later than or the owner will be subject to fine or order to vacate:

This certificate has an expiration date of:

Conditions to be met:

☐ **Certificate of Clearance - Lead Abatement 5:17**

This serves notice that based on written certification, lead abatement was performed as per NJAC5:17 to the following extent.

- ☐ Total removal of lead-based paint hazards in scope of work
☐ Partial or limited time period (_____ years); see file

☐ **Certificate of Clearance - Asbestos Abatement**

This serves notice that based on written certification, asbestos abatement was performed to the following extent.

- ☐ Total removal of asbestos hazards in scope of work
☐ Partial or limited time period (_____ years); see file

☐ **Certificate of Compliance**

This serves notice that said potentially hazardous equipment has been installed and/or maintained in accordance with the New Jersey Uniform Construction Code and is approved for use until

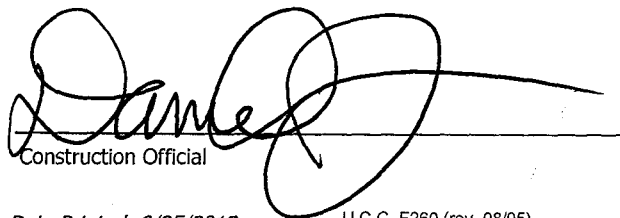
☒ **Temporary Certificate of Occupancy**

The following conditions must be met no later than: 10/2/2013 or the owner will be subject to fine or order to vacate:

This certificate has an expiration date of: 10/2/2013

Conditions to be met:

Final approval of Building Subcode Official


Construction Official

Fee: \$0.00

Check Number: _____

Collected By: _____

RANDY MITCHELL
VICE PRESIDENT

(973) 574-8376
Fax (973) 574-7704
hafermot@aol.com



H.A. Hafermot Co., Inc.

Service Station Construction

TANK INSTALLATION
SERVICE STATION EQUIPMENT
MAINTENANCE
ELECT. LIC #4476

32 KULICK ROAD
FAIRFIELD, NJ 07004

New Commercial Structure

Certificate Requirements

Hess Express

1672 Route 88 B:1170.01 L:4

13-1659

[print](#)[reset defaults](#)[check all](#)[complete](#)**Certificate of Occupancy for New Commercial Structure****Prior Approvals**

Proof of final payment to Affordable Housing (mandatory development fee)

[comment](#)

Engineering Final Approval

[comment](#)

Certificate of Compliance from the BTMUA

[comment](#)

Ocean County Soil Conservation District final approval

[comment](#)**Code Requirements**

Final Building inspection - including original permit and all updates

[comment](#)

Final Plumbing inspection - including original permit and all updates

[comment](#)

Final Fire inspection - including original permit and all updates

[comment](#)

Final Electrical inspection - including original permit and all updates

[comment](#)If applicable Final Elevator inspection - including original permit and all updates *NA*[comment](#)

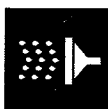
CO application

[comment](#)This checklist has been given to: [\(edit\)](#)

*Needs
Botl
approval
11/22/13*



PLUMBING SUBCODE TECHNICAL SECTION



Update

Date Received
Control #

5-31-13

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION, WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 1170.01 Lot 4.5.6 Qualification Code

Work Site Location 1672 Route 88

Owner in Fee: HESS CORPORATION

Tel. (732) 750 6192 e-mail

Address 1 Hess Plaza Woodbridge NJ 07095

Contractor: D. Lorenzo Plumbing, Inc. Tel. 908 488-4883 zip code

Address 171 Lexington Ave e-mail lenzo@plumbing.com

Contractor License No. 80069 Exp. Date

Home Improvement Contractor Registration No. or Exemption Reason (if applicable): 13VHD06767600

Federal Emp. ID No. 21-3378015 FAX: (201) 488-2270

B. PLUMBING CHARACTERISTICS

Use Group Present M Proposed M

Building Sewer Size 4" Public Sewer ✓ Private Septic

Water Service Size 1 1/2" Public Water ✓ Private Well

Est. Cost of Plumbing Work \$ 28,000.00

JOB SUMMARY (Office Use Only)

PLAN REVIEW

☐ No Plans Required

☐ Partial - Under-slab Utilities Approved

Date: 08-28-13 Approved by: PA

Joint Plan Review Required:

☐ Bldg. ☐ Elec. ☐ Fire. ☐ Elev.

SUBCODE APPROVAL FOR PERMIT

Date: 9-24-13 TCO ✓ Final ✓

Approved by: PA

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK

1800 SQ. FT. PRE-FAB BUILDING.

FIXTURE/EQUIPMENT

Water Closet

Urinal/Bidet

Bath Tub

Lavatory

Shower

Floor Drain

Sink

Dishwasher

Drinking Fountain

Washing Machine

Hose Bibb

Water Heater

Fuel Oil Piping

Gas Piping

LP Gas Tank

Steam Boiler

Hot Water Boiler

Sewer Pump

Interceptor/Separator

Backflow Preventer

Greasetrapp

Sewer Connection 4"

Water Service Connection 1.5"

Stacks

Other condensate

FEE (Office Use Only)

COMMERCIAL

Administrative Surcharge \$

Minimum Fee \$

State Permit Surcharge Fee \$

TOTAL FEE \$

☒ Licensed Plumbing Contractor

☐ Exempt Applicant

Applicant's Signature

Contractor's Seal and Signature



ELECTRICAL SUBCODE TECHNICAL SECTION



321-019-226

Date Received
Control #
Date Issued
Permit #
4/18/13
13-1654

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000
Block 1170.01 Lot 4,56 Qualification Code 1672 1672 1672

Owner In Fee: Hess Corporation

Tel. (732) 750-6192 e-mail

Address 1 Hess Plaza Madison NJ 07095

Contractor: H.A. FERNOT CO., INC. Madison NJ 07095 Tel. (973) 575 8376

Address 32 Kulick Road Fairfield NJ 07004

Contractor License No. 4476 Exp. Date

Home Improvement Contractor Registration No. or Exemption Reason (if applicable):

Federal Emp. ID No. 22-2282264 FAX: (973) 575 7704

B. ELECTRICAL CHARACTERISTICS

Use Group Present M Proposed M

☐ Pole/Pad # 1 ☐ Temporary ☐ Other

Building Occupied as Residential Utility Co. NY&NJ

Est. Cost of Elec. Work \$ 65,000.00

JOB SUMMARY (Office Use Only)

PLAN REVIEW	Date	Initial	INSPECTIONS	Dates (Month/Day)
☐ No Plans Required				
Joint Plan Review Required:				
☐ Building ☐ Plumbing				
☐ Fire ☐ Elevator				
☒ Elec. Plans Approved				
Date: <u>1/10/13</u>				
Approved by: <u>[Signature]</u>				

PLAN REVIEW	Date	Initial	INSPECTIONS	Dates (Month/Day)
☐ No Plans Required				
Joint Plan Review Required:				
☐ Building ☐ Plumbing				
☐ Fire ☐ Elevator				
☒ Elec. Plans Approved				
Date: <u>1/10/13</u>				
Approved by: <u>[Signature]</u>				

PLAN REVIEW	Date	Initial	INSPECTIONS	Dates (Month/Day)
☐ No Plans Required				
Joint Plan Review Required:				
☐ Building ☐ Plumbing				
☐ Fire ☐ Elevator				
☒ Elec. Plans Approved				
Date: <u>1/10/13</u>				
Approved by: <u>[Signature]</u>				

PLAN REVIEW	Date	Initial	INSPECTIONS	Dates (Month/Day)
☐ No Plans Required				
Joint Plan Review Required:				
☐ Building ☐ Plumbing				
☐ Fire ☐ Elevator				
☒ Elec. Plans Approved				
Date: <u>1/10/13</u>				
Approved by: <u>[Signature]</u>				

PLAN REVIEW	Date	Initial	INSPECTIONS	Dates (Month/Day)
☐ No Plans Required				
Joint Plan Review Required:				
☐ Building ☐ Plumbing				
☐ Fire ☐ Elevator				
☒ Elec. Plans Approved				
Date: <u>1/10/13</u>				
Approved by: <u>[Signature]</u>				

PLAN REVIEW	Date	Initial	INSPECTIONS	Dates (Month/Day)
☐ No Plans Required				
Joint Plan Review Required:				
☐ Building ☐ Plumbing				
☐ Fire ☐ Elevator				
☒ Elec. Plans Approved				
Date: <u>1/10/13</u>				
Approved by: <u>[Signature]</u>				

PLAN REVIEW	Date	Initial	INSPECTIONS	Dates (Month/Day)
☐ No Plans Required				
Joint Plan Review Required:				
☐ Building ☐ Plumbing				
☐ Fire ☐ Elevator				
☒ Elec. Plans Approved				
Date: <u>1/10/13</u>				
Approved by: <u>[Signature]</u>				

PLAN REVIEW	Date	Initial	INSPECTIONS	Dates (Month/Day)
☐ No Plans Required				
Joint Plan Review Required:				
☐ Building ☐ Plumbing				
☐ Fire ☐ Elevator				
☒ Elec. Plans Approved				
Date: <u>1/10/13</u>				
Approved by: <u>[Signature]</u>				

PLAN REVIEW	Date	Initial	INSPECTIONS	Dates (Month/Day)
☐ No Plans Required				
Joint Plan Review Required:				
☐ Building ☐ Plumbing				
☐ Fire ☐ Elevator				
☒ Elec. Plans Approved				
Date: <u>1/10/13</u>				
Approved by: <u>[Signature]</u>				

PLAN REVIEW	Date	Initial	INSPECTIONS	Dates (Month/Day)
☐ No Plans Required				
Joint Plan Review Required:				
☐ Building ☐ Plumbing				
☐ Fire ☐ Elevator				
☒ Elec. Plans Approved				
Date: <u>1/10/13</u>				
Approved by: <u>[Signature]</u>				

PLAN REVIEW	Date	Initial	INSPECTIONS	Dates (Month/Day)
☐ No Plans Required				
Joint Plan Review Required:				
☐ Building ☐ Plumbing				
☐ Fire ☐ Elevator				
☒ Elec. Plans Approved				
Date: <u>1/10/13</u>				
Approved by: <u>[Signature]</u>				

PLAN REVIEW	Date	Initial	INSPECTIONS	Dates (Month/Day)
☐ No Plans Required				
Joint Plan Review Required:				
☐ Building ☐ Plumbing				
☐ Fire ☐ Elevator				
☒ Elec. Plans Approved				
Date: <u>1/10/13</u>				
Approved by: <u>[Signature]</u>				

PLAN REVIEW	Date	Initial	INSPECTIONS	Dates (Month/Day)
☐ No Plans Required				
Joint Plan Review Required:				
☐ Building ☐ Plumbing				
☐ Fire ☐ Elevator				
☒ Elec. Plans Approved				
Date: <u>1/10/13</u>				
Approved by: <u>[Signature]</u>				

PLAN REVIEW	Date	Initial	INSPECTIONS	Dates (Month/Day)
☐ No Plans Required				
Joint Plan Review Required:				
☐ Building ☐ Plumbing				
☐ Fire ☐ Elevator				
☒ Elec. Plans Approved				
Date: <u>1/10/13</u>				
Approved by: <u>[Signature]</u>				

C. CERTIFICATION AND AFFIDAVIT OF OATH
I hereby certify that I am a duly licensed electrician and am authorized to make this application and perform the work specified on this application.

Applicant's Signature (Printed Name and Signature)

☒ Licensed Elec. Contractor ☐ General Landscape Irrigation Contr ☐ Exempt Applicant

D. TECHNICAL SPECIFICATIONS

QTY

55

66

16

2

3

6

12

2

3

165

4

2

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

FEES (Office Use Only)

COMMERCIAL

Administrative Surcharge \$
Minimum Fee \$
State Permit Surcharge Fee \$
TOTAL FEE \$

Journal



APPLICATION FOR CERTIFICATE

Date Received 12/5/2012
Date Permit Issued 4/18/2013
Control # C-12-004465
Permit # 13-1659
Date Issued 9/27/2013

IDENTIFICATION

Block 1170.01 Lot 4 Qualifier _____
Work Site Location 1672 ROUTE 88 Brick Township, NJ Contractor H. A. Fernot Company, Inc.
Address 32 Kulick Road Fairfield NJ 07004
Owner in Fee HESS REALTY CORPORATION Telephone (973) 575-8376
PO BOX 696419 SAN ANTONIO NJ 78269 Lic. No. or Bldrs. Reg. No. 4497
Telephone (732) 750-6192 Federal Employee. No. 22-228224

ACTION

- ☒ CERTIFICATE OF OCCUPANCY
☐ CERTIFICATE OF CONTINUED OCCUPANCY
☐ LEAD HAZARD ABATEMENT CERTIFICATE OF CLEARANCE
☐ TEMPORARY CERTIFICATE OF OCCUPANCY

USE GROUP _____ Previous _____ M _____ Current _____

FINAL COST OF CONSTRUCTION: \$ 283200

(Include value of any new structure, all on-site improvements, built-in furnishings and fixtures and all the integral equipment exclusive of process or manufacturing equipment.)

A set of "As Built" or amended drawings is required if the building or structure deviates from the approved plans filed with the construction permit. Use space below to describe any deviations from approved plans:

If you are requesting a Temporary Certificate of Occupancy, please explain why in the space below.

DESCRIPTION OF WORK/USE:
New NEW COMMERCIAL STRUCTURE Modular
Hess Express

I hereby attest, that to the best of my knowledge, all work has been completed in accordance with the approved plans, permit, and regulations. Incomplete items listed on a Temporary Certificate of Occupancy will be completed by the date on the Certificate.

SIGNED: _____

Owner/Agent

☐ OWNER

☒ AGENT



BUILDING SUBCODE TECHNICAL SECTION



A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 1170.01 Lot 4, 5, 6 Qualification Code _____
Work Site Location 1672 Route 88

Owner in Fee: Hess Corporation

Tel. (732) 750-6192 e-mail _____

Address 1 Hess Plaza Woodbridge NJ 07095

Contractor: H.A. FERNOT CO. INC. Tel. (973) 575 8376

Address 32 Kulick Road Fairfield NJ 07004

Contractor License No. or Builder Registration No. _____ Exp. Date _____

Home Improvement Contractor Registration No. or Exemption Reason (if applicable): _____

Federal Emp. ID No. 22-2282264 FAX: (973) 575 7704

JOB SUMMARY (Office Use Only)

PLAN REVIEW	Date	Initial	INSPECTIONS	Dates (Month/Day)
☐ No Plans Required			Type:	Failure
☒ All <u>3/7/13</u>	<u>W</u>		Footings <u>4/25/13 W</u>	Approval <u>4/25/13 W</u>
☐ Footing			Foundation <u>4/25/13 W</u>	Initial <u>W</u>
☐ Foundation			Footings <u>5/10/13 W</u>	
☐ Frame			Truss Sys./Bracing	
☐ Other			Barrier-Free	
Joint Plan Review Required:			Insulation	
☐ Elec.	☐ Plumb.	☐ Fire	Finishes - Base Layer	
SUBCODE APPROVAL <u>3/7/13</u>			Finishes - Final	
☒ CO	☐ CCO	☐ CA	Energy	
Date: <u>09/22/13</u>			Mechanical	
Approved by: <u>Kell</u>			TCO <u>Merchandising Only</u>	
			Other	
			Final <u>4/25/13 W</u>	
			Barrier-Free	

B. BUILDING CHARACTERISTICS

Use Group	Present	Proposed	Est. Cost of Bldg. Work:
Const. Class	<u>M</u>	<u>11-B</u>	1. New Bldg. \$ <u>215,000.00</u>
No. of Stories	<u>1</u>	<u>1</u>	2. Rehabilitation \$ _____
Height of Structure	<u>18' ±</u>	<u>18' ±</u>	3. Total (1 + 2) \$ <u>215,000.00</u>
Area — Largest Floor	<u>1680</u>	<u>1680</u>	
New Bldg. Area/All Floors	<u>1680</u>	<u>1680</u>	
Volume of New Structure	<u>21,000</u>	<u>21,000</u>	
Total Land Area Disturbed	<u>28,691</u>	<u>28,691</u>	

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application.

Signature [Signature]

Date Received
Control #
Date Issued
Permit #

4/18/13
13-1659

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK
<u>Construction of 28'x60' modular building</u>

CONFIDENTIAL

TYPE OF WORK:	Height (exceeds 6')	Sq. Ft.	FEE (Office Use Only)
☒ New Building			
☐ Addition			
☐ Rehabilitation			
☐ Roofing			
☐ Siding			
☐ Fence			
☒ Sign <u>36.0</u>			
☐ Pool			
☐ Retaining Wall			
☐ Asbestos Abatement Subchapter 8			
☐ Lead Haz. Abatement NJAC 5.17			
☐ Radon Remediation			
☐ Other			
☐ Demolition			

Administrative Surcharge \$ _____
Minimum Fee \$ _____
State Permit Surcharge Fee \$ _____
TOTAL FEE \$ _____

REPORT OF SITE INSPECTION

Client: Hess Corporation

Project: Proposed Hess Site #30279 Improvements
1672 N.J.S.H. Route 88 and John Street
Brick, Ocean Township, New Jersey

Insp. Date: April 19, 2013 **WAI No.:** GJ1312560.000 **Page:** 1 of 1

Weather: Overcast **Temperature Range:** 70° - 75° F **Inspector:** S. Pearce

Present at Site: Mike, H.A. Fernot Co., Inc.
Mike Vecchio, Township of Brick

As requested, Whitestone performed the following testing and inspection services at the above-referenced site:

Upon arrival, Whitestone observed that the entire building pad subgrade had been re-compacted with a double drum paving roller.

Footing Subgrade Re-Inspection: A footing subgrade inspection was performed at the proposed building pad. Testing and inspection procedures included visual inspection of the subgrade materials in comparison to the soil conditions presented in Whitestone's October 23, 2012 *Report of Geotechnical Investigation* and performing Dynamic Cone Penetrometer (DCP) tests to compare with SPT N-values obtained from Whitestone's subsurface exploration.

Except as noted below, the results of the inspection revealed soil consisting of natural poorly graded sand with silt which are consistent with the findings encountered during Whitestone's subsurface investigation. Results obtained from DCP tests were compared with SPT N-values obtained from Whitestone's subsurface investigation and indicate adequate soil bearing conditions for a maximum allowable net bearing pressure of 2,000 psf as per project plans.

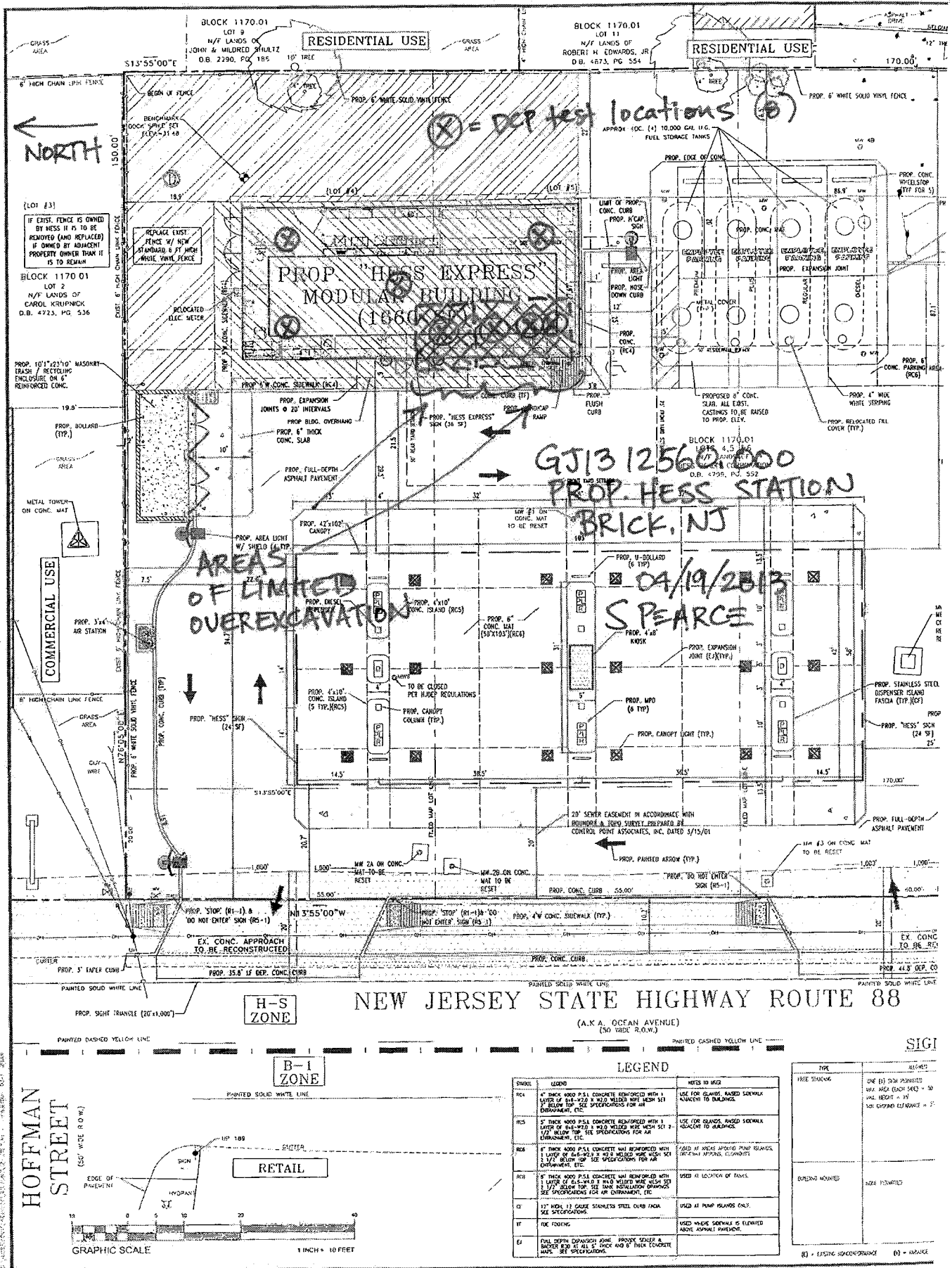
An area approximately 20 feet by 10 feet in the southwestern quadrant of the proposed building footprint exhibited signs of pumping and excessive moisture following recompaction with the double drum paving roller. Approximately 12 inches of soft, excessively moist soils were removed from this area. A pocket of debris consisting of cinder block and apparent tiles was encountered in an approximately 15 feet by 10 feet area immediately north of the area described above. Debris and soft soil were overexcavated approximately 3.5 feet within this area. The attached sketch indicates the location of both areas of overexcavation.

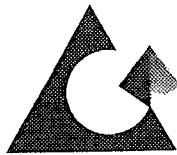
Following overexcavation, the underlying soils in both areas consisted of natural poorly graded sand in a relatively dense condition. Grades in both areas were restored with imported structural fill placed in controlled lifts and compacted with both a vibratory plate and the double drum roller (in static mode).

Subsequent DCP testing, both throughout fill placement and after placement of the final lift, indicated adequate soil bearing conditions for a maximum allowable net bearing pressure of 2,000 psf.

Whitestone also inspected the steel reinforcing cages for the building footings for conformance to the *Foundation Plan* prepared by Bertin Engineering. Whitestone discussed some recurring discrepancies with H.A. Fernot. H.A. Fernot indicated that the discrepancies would be improved and a re-inspection was scheduled for Tuesday, April 23, 2012 prior to concrete placement.

kd L:\Job Folders\2013\1312560GJ\Reports and Submittals\Site Inspections\4-19-13.wpd





**WHITESTONE
ASSOCIATES, INC.**

ENVIRONMENTAL & GEOTECHNICAL ENGINEERS & CONSULTANTS

July 3, 2013

via email

HESS CORPORATION
395 South Sherman Street
Wilkes-Barre, Pennsylvania 18702

Attention: Mr. Patrick Henry
Divisional Manager Retail Construction & Maintenance

Regarding: **CONSTRUCTION PHASE TESTING & INSPECTION**
PROPOSED SITE #30279 IMPROVEMENTS
1672 NEW JERSEY STATE HIGHWAY ROUTE 88 AND JOHN STREET
BLOCK 1170.01, LOTS 4, 5 AND 6
BRICK TOWNSHIP, OCEAN COUNTY, NEW JERSEY
WHITESTONE PROJECT NO.: GJ1312560.000

Dear Mr. Henry:

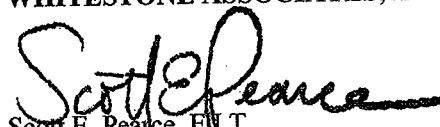
Whitestone Associates, Inc. (Whitestone) has performed the requested construction phase testing and inspection services at the above-referenced project. Please accept this correspondence and the attached reports as a summary of services provided during earthwork operations and structural steel installation within the proposed Hess Service Station site development between the dates of April 18, 2013 and May 20, 2013.

Whitestone monitored and inspected the following for compliance to project specifications: footing subgrade for the proposed Hess Service Station building pier footings, canopy footings, and identification sign footings, including limited overexcavation (ranging from 12 inches to 3.5 feet) of unsuitable existing fill materials encountered below the proposed building footprint and replacement with on-site structural backfill soils; steel reinforcement within the proposed Hess Service Station building isolated pier footings; and structural steel and welding inspection of the building perimeter floor beam to foundation plate connections for the Hess Service Station building.

Whitestone appreciates the opportunity to provide construction phase testing and inspections services for this project. Please contact us at (908) 668-7777 with any questions pertaining to this project.

Sincerely,

WHITESTONE ASSOCIATES, INC.


Scott E. Pearce, E.I.T.
Geotechnical Engineer


Laurence W. Keller, P.E.
Director, Geotechnical Services

SEP/pwd L:\Job Folders\2013\1312560GJ\Reports and Submittals\Site Inspections\CPTI-Summary 1.wpd
Enclosures
Copy: Randy Mitchell, H.A. Fernot Co., Inc.

Other Office Locations:

■ CHALFONT, PA
215.712.2700

■ STERLING, VA
703.464.5858

■ EVERGREEN, CO
303.670.6905

35 TECHNOLOGY DRIVE
WARREN, NJ 07059
908.668.7777
FAX 908.754.5936
www.whitestoneassoc.com

APPENDIX A
Site Inspection Reports

REPORT OF SITE INSPECTION

Client: Hess Corporation

Project: Proposed Hess Site #30279 Improvements
1672 NJSH Route 88 and John Street
Brick, Ocean Township, New Jersey

Insp. Date: April 18, 2013 **WAI No.:** GJ1312560.000 **Page:** 1 of 1

Weather: Partly Cloudy **Temperature Range:** 50° - 60° F **Inspector:** M. Khantamr

Present at Site: Mike, H.A. Fernot

As requested, Whitestone performed the following testing and inspection services at the above-referenced site:

Footing Subgrade Inspection: A footing subgrade inspection was performed at the proposed building piers. Testing and inspection procedures included visual inspection of the subgrade materials in comparison to the soil conditions presented in Whitestone's October 23, 2012 *Report of Geotechnical Investigation* and performing Dynamic Cone Penetrometer (DCP) tests to compare with SPT N-values obtained from Whitestone's subsurface exploration.

The results of the inspection revealed soil consisting of poorly graded sand with silt which are consistent with the findings encountered during Whitestone's subsurface investigation. Results obtained from DCP tests were compared with SPT N-values obtained from Whitestone's subsurface investigation and indicate inadequate soil bearing conditions at this time.

Note 1: Test results within the upper 1.0 foot to 1.25 feet of the entire building subgrade indicated soil bearing conditions less than the required 2,000 psf. The site contractor attempted to re-compact the subgrade with two small plate tampers but conditions did not improve. Therefore, Whitestone recommended using a larger compactor to improve the subgrade conditions. Mike with H.A. Fernot informed Whitestone that a roller would be brought in on the following day (4/19/2103) and requested Whitestone be on site to re-inspect the subgrade following re-compaction.

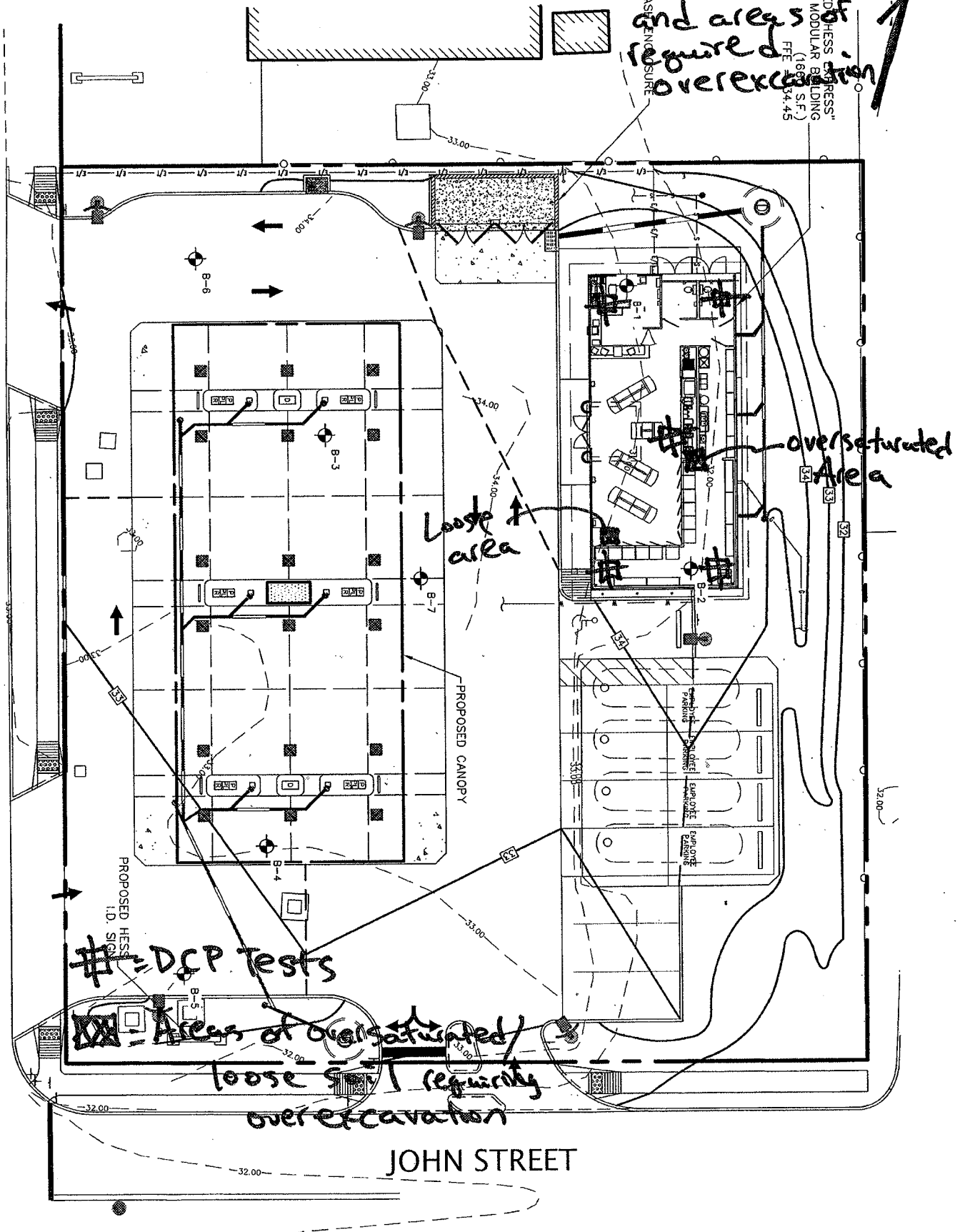
Note 2: Two areas, approximately two feet by two feet in size, exhibited minor soil pumping due to oversaturation and/or loose soil conditions (see attached sketch dated April 18, 2013 for locations). Whitestone recommended overexcavating the areas to firm underlying soils and replacing the unsuitable soils with suitable material. Mike with H.A. Fernot informed Whitestone that the areas would be overexcavated on the following day prior to re-compaction of the subgrade.

kd L:\Job Folders\2013\1312560GJ\Reports and Submittals\Site Inspections\4-18-13.wpd

4/18/13

GJ1312560.000
DCP Test Locations
and areas of
required
overexcavation

PROPOSED EXPRESS
MODULAR BUILDING
(1669 S.F.)
FFE = 334.45



REPORT OF SITE INSPECTION

Client: Hess Corporation

Project: Proposed Hess Site #30279 Improvements
1672 N.J.S.H. Route 88 and John Street
Brick, Ocean Township, New Jersey

Insp. Date: April 19, 2013 **WAI No.:** GJ1312560.000 **Page:** 1 of 1

Weather: Overcast **Temperature Range:** 70° - 75° F **Inspector:** S. Pearce

Present at Site: Mike, H.A. Fernot Co., Inc.
Mike Vecchio, Township of Brick

As requested, Whitestone performed the following testing and inspection services at the above-referenced site:

Upon arrival, Whitestone observed that the entire building pad subgrade had been re-compacted with a double drum paving roller.

Footing Subgrade Re-Inspection: A footing subgrade inspection was performed at the proposed building pad. Testing and inspection procedures included visual inspection of the subgrade materials in comparison to the soil conditions presented in Whitestone's October 23, 2012 *Report of Geotechnical Investigation* and performing Dynamic Cone Penetrometer (DCP) tests to compare with SPT N-values obtained from Whitestone's subsurface exploration.

Except as noted below, the results of the inspection revealed soil consisting of natural poorly graded sand with silt which are consistent with the findings encountered during Whitestone's subsurface investigation. Results obtained from DCP tests were compared with SPT N-values obtained from Whitestone's subsurface investigation and indicate adequate soil bearing conditions for a maximum allowable net bearing pressure of 2,000 psf as per project plans.

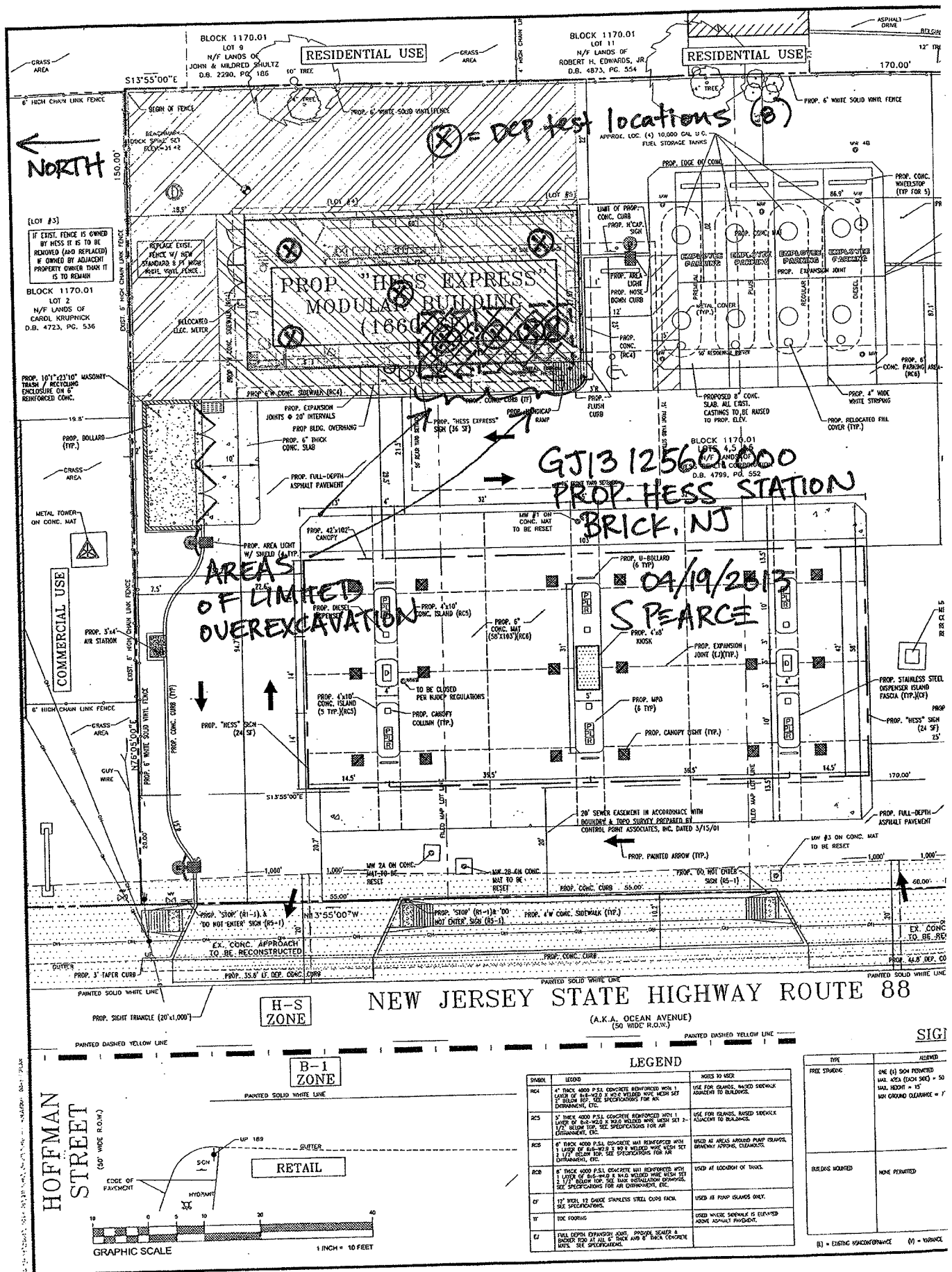
An area approximately 20 feet by 10 feet in the southwestern quadrant of the proposed building footprint exhibited signs of pumping and excessive moisture following recompaction with the double drum paving roller. Approximately 12 inches of soft, excessively moist soils were removed from this area. A pocket of debris consisting of cinder block and apparent tiles was encountered in an approximately 15 feet by 10 feet area immediately north of the area described above. Debris and soft soil were overexcavated approximately 3.5 feet within this area. The attached sketch indicates the location of both areas of overexcavation.

Following overexcavation, the underlying soils in both areas consisted of natural poorly graded sand in a relatively dense condition. Grades in both areas were restored with imported structural fill placed in controlled lifts and compacted with both a vibratory plate and the double drum roller (in static mode).

Subsequent DCP testing, both throughout fill placement and after placement of the final lift, indicated adequate soil bearing conditions where concrete footings will be placed for a maximum allowable net bearing pressure of 2,000 psf as per project plans.

Whitestone also inspected the steel reinforcing cages for the proposed building footings for conformance to the *Foundation Plan* prepared by Bertin Engineering. Whitestone discussed some recurring discrepancies with H.A. Fernot. H.A. Fernot indicated that the discrepancies would be improved and a re-inspection was scheduled for Tuesday, April 23, 2012 prior to concrete placement.

kd L:\Job Folders\2013\1312560GJ\Reports and Submittals\Site Inspections\4-19-13.wpd



REPORT OF SITE INSPECTION

Client: Hess Corporation

Project: Proposed Hess Site #30279 Improvements
1672 N.J.S.H. Route 88 and John Street
Brick, Ocean Township, New Jersey

Insp. Date: April 23, 2013 **WAI No.:** GJ1312560.000 **Page:** 1 of 1

Weather: Overcast **Temperature Range:** 50° - 55° F **Inspector:** K. O'Sullivan

Present at Site: Mike, H.A. Fernot Co., Inc.

As requested, Whitestone performed the following testing and inspection services at the above-referenced site:

Steel Reinforcing Re-Inspection: In place reinforcing steel at all footings identified as footing "A" or "B" on Column Lines A and B, from Column Line 1 to Column Line 6, as shown on the August 14, 2012 (last revised January 3, 2013) *(A-1.1) Foundation Plan*, prepared by Bertin Engineering was inspected for size, type, splice lengths and clearance. Results of the inspection indicate compliance with details and specifications provided on the above referenced plan. This area will be reinspected prior to concrete placement.

Upon arrival to the site, the contractor informed Whitestone that the remaining reinforcing steel would not be installed on this date. Whitestone had previously been scheduled for a final reinforcing steel inspection on this date. A final inspection was scheduled for Thursday, April 25, 2013, immediately prior to concrete placement.

Note: Per an April 24, 2013 email from H.A. Fernot, no further reinforcing steel inspections were requested. Also, concrete sampling during the placement of the building piers was declined by Hess in an April 24, 2013 email.

kd L:\Job Folders\2013\1312560GJ\Reports and Submittals\Site Inspections\4-23-13.wpd

REPORT OF SITE INSPECTION

Client: Hess Corporation

Project: Proposed Hess Site #30279 Improvements
1672 N.J.S.H. Route 88 and John Street
Brick, Ocean Township, New Jersey

Insp. Date: May 2, 2013 **WAI No.:** GJ1312560.000 **Page:** 1 of 1

Weather: Overcast **Temperature Range:** 50° - 55° F **Inspector:** D. Shah

Present at Site: H.A. Fernot Co., Inc.

As requested, Whitestone performed the following testing and inspection services at the above-referenced site:

Whitestone arrived on site as scheduled to perform structural steel inspection and testing. Upon arrival to the site, the required work had not been completed. The contractor informed Whitestone that the inspection would be rescheduled for a future date.

REPORT OF SITE INSPECTION

Client: Hess Corporation

Project: Proposed Hess Site #30279 Improvements
1672 N.J.S.H. Route 88 and John Street
Brick, Ocean Township, New Jersey

Insp. Date: May 10, 2013 **WAI No.:** GJ1312560,000 **Page:** 1 of 1

Weather: Clear **Temperature Range:** 65° - 75° F **Inspector:** A. Piccoline

Present at Site: Randy Mitchell, H.A. Fernot Co., Inc.

As requested, Whitestone performed the following testing and inspection services at the above-referenced site:

Footing Subgrade Inspection: A footing subgrade inspection was performed at the proposed identification sign footings. Testing and inspection procedures included visual inspection of the subgrade materials in comparison to the soil conditions presented in Whitestone's October 23, 2012 *Report of Geotechnical Investigation* and performing Dynamic Cone Penetrometer (DCP) tests to compare with SPT N-values obtained from Whitestone's subsurface exploration.

The results of the inspection revealed soil consisting of natural coastal plain deposits which are consistent with the findings encountered during Whitestone's subsurface investigation. Results obtained from DCP tests were compared with SPT N-values obtained from Whitestone's subsurface investigation and indicate adequate soil bearing conditions for a maximum allowable net bearing pressure of 2,500 psf as per project plans.

Note: While on site, Whitestone also witnessed a portion of the excavation for the proposed canopy footings. Although Whitestone was not able to enter the deep excavation due to safety concerns, Whitestone was able to visually confirm that the materials present at the proposed canopy footing subgrade elevation were consistent with the natural coastal plain deposit materials encountered in the aforementioned footing subgrade inspection.

kd L:\Job Folders\2013\1312560GJ\Reports and Submittals\Site Inspections\5-10-13.wpd

REPORT OF SITE INSPECTION

Client: Hess Corporation

Project: Proposed Hess Site #30279 Improvements
1672 N.J.S.H. Route 88 and John Street
Brick, Ocean Township, New Jersey

Insp. Date: May 20, 2013 **WAI No.:** GJ1312560.000 **Page:** 1 of 1

Weather: Overcast **Temperature Range:** 65° - 75° F **Inspector:** V. Gupta

Present at Site: H.A. Fernot Co., Inc.

As requested, Whitestone performed the following testing and inspection services at the above-referenced site:

Structural Steel Inspection and Testing: Structural steel testing and inspection was performed at the proposed modular building for compliance with structural details and specifications. The testing and inspection procedures included performing visual inspections at field welded connections.

The results of the testing and inspection revealed adequate conditions per details and specifications provided on the August 14, 2012 (last revised January 3, 2013) *(A-1.1) Foundation Plan*, prepared by Bertin Engineering.



MADISON

www.madisonind.com

"ENGINEERED PRODUCTS FOR THE WORLD"

The Symbol of Quality

August 21, 2013

1170.01/4

RE: Hess Corporation
42' x102' (6) Column Canopy – 30279
1672 State Hwy. 88
Laurelton, NJ
Madison Job No. WGA06793-2

To Whom It May Concern,

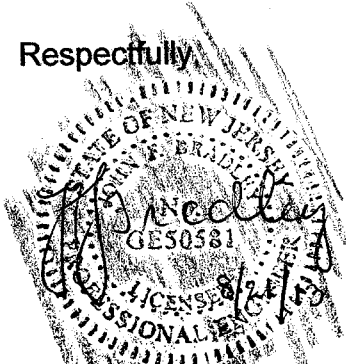
Nuts for anchor bolts on above canopy were properly installed per Madison normal installation procedures and requirements under the supervision of the Madison foreman Tim Gillespie.

Madison's installation procedure is as follows:

1. Leveling nuts are threaded onto the anchor bolts and leveled.
2. Columns are placed on leveling nuts and plumbed.
3. Heavy hex nuts are snugged down wrench tight (or "snug tight") which is defined by AISC as "the full effort of an ironworker using an ordinary spud wrench to bring the connected plies into firm contact" (reference AISC Specification for Structural Joints Section 8.1).
4. Column base plate is then grouted by others.

Anchor nuts have been properly installed and tightened for this canopy. No additional torque or testing is required.

Respectfully,



John Bradley, P.E.
New Jersey PE No. 24GE05058100

CALIFORNIA
1900 East 64th Street
Los Angeles, CA 90001
(323) 583-4061
Fax (323) 582-1015

GEORGIA
1035 Iris Drive
Conyers, GA 30094
(770) 483-4401
Fax (770) 785-7967

OKLAHOMA
8500 New Sapulpa Road
Tulsa, OK 74131
(918) 224-6990
Fax (918) 224-8830

ARCHITECTURAL PRODUCTS, BUILDINGS, CANOPIES and CARWASHES



The Symbol of Quality

MADISON

www.madisonind.com

"ENGINEERED PRODUCTS FOR THE WORLD"

August 21, 2013

RE: Hess Corporation
42' x102' (6) Column Canopy – 30279
1672 State Hwy. 88
Laurelton, NJ
Madison Job No. WGA06793-2

To Whom It May Concern,

Nuts for anchor bolts on above canopy were properly installed per Madison normal installation procedures and requirements under the supervision of the Madison foreman Tim Gillespie.

Madison's installation procedure is as follows:

1. Leveling nuts are threaded onto the anchor bolts and leveled.
2. Columns are placed on leveling nuts and plumbed.
3. Heavy hex nuts are snugged down wrench tight (or "snug tight") which is defined by AISC as "the full effort of an ironworker using an ordinary spud wrench to bring the connected plies into firm contact" (reference AISC Specification for Structural Joints Section 8.1).
4. Column base plate is then grouted by others.

Anchor nuts have been properly installed and tightened for this canopy. No additional torque or testing is required.

Respectfully,

John Bradley, P.E.
New Jersey PE No. 24GE05058100

CALIFORNIA
1900 East 64th Street
Los Angeles, CA 90001
(323) 583-4061
Fax (323) 582-1015

GEORGIA
1035 Iris Drive
Conyers, GA 30094
(770) 483-4401
Fax (770) 785-7967

OKLAHOMA
8500 New Sapulpa Road
Tulsa, OK 74131
(918) 224-6990
Fax (918) 224-8830

ARCHITECTURAL PRODUCTS, BUILDINGS, CANOPIES and CARWASHES



BUILDING SUBCODE TECHNICAL SECTION



Date Received 11/21/2012
Control # C-12-004249
Date Issued 4/18/2013
Permit # 13-1657

A. IDENTIFICATION - APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000
Block 1170.01 Lot 4 Qualification Code
Work Site Location: 1672 ROUTE 88 Canopy and 3 gas islands (Hess station) Brick Township, NJ

Owner in Fee: HESS REALTY CORPORATION

Address PO BOX 696419 SAN ANTONIO NJ 78269

Tel. Email

Contractor: H. A. Fernot Company, Inc.

Address 32 Kulick Road Fairfield NJ 07004

Email

Tel. (973) 575-8376 Fax (973) 575-7704

Contractor License No. or, if new home, Bids Reg. No. Exp.

Home improvement Contractor Registration No. or Exemption Reason(s) (if applicable):

Federal Emp. ID No. 22-228224

JOB SUMMARY (Office Use Only)

PLAN REVIEW Date Initial

☐ No Plan Required

☐ All

☐ Footing/Foundation

☐ Struct/Framework

☐ Exterior

☐ Interior

☐ Joint Plan Review Required

☐ Elec. ☐ Plumb. ☐ Fire ☐ Elevator

SUBCODE APPROVAL for PERMIT

Date:

Approved by:

☐ CO ☐ CCO ☐ CA

Date:

Approved by:

INSPECTIONS

Dates (Month/Day)

Type: 3rd Failure Failure Approval Initial

Footing Bonding Canopy 5/31/13

Foundation Slab 6/19/13

Frame Truss Sys./Bracing

Barrier-Free Insulation

Finishes-Base Layer

Finishes-Final

Energy Mechanical

TCO

Other

Final

Barrier-Free

B. BUILDING CHARACTERISTICS

Use Group Present Proposed M

Constr. Class Present Proposed

Number of Stories 1

Height of Structure 19 Ft.

Area - Largest Floor 4284 Sq. Ft.

New Bldg. Area / All Floors 4284 Sq. Ft.

Volume of New Structure 81396 Cu. Ft.

Total Land Area Disturbed Sq. Ft.

If Industrial Building:

State Approved

HUD

Est. Cost of Bldg. Work:

1. New Bldg. \$75,000

2. Rehabilitation

3. Total (1+2) \$75,000

U.C.C.F110 (rev. 11/09)

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of the record and am authorized to make this application.

Signature

Print Name Here:

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK

NEW COMMERCIAL STRUCTURE, 3 Gas Islands with kiosks and canopy

COPY*

SEE ORIG. FOR SIG-U-OFFS

TYPE OF WORK

☒ New Building

☐ Addition

☐ Rehabilitation

☐ Roofing

☐ Siding

☐ Fence Height (exceeds 6')

☐ Sign Sq. Ft.

☐ Pool

☐ Retaining Wall Sq. Ft.

☐ Asbestos Abatement Subchapter 8

☐ Lead Haz Abatement NJAC 5:17

☐ Other

☐ Demolition

FEE (Office Use Only)

\$2,198

Administrative Surcharge

Minimum Fee

State Permit Surcharge Fee \$272

TOTAL FEE \$2,470



APPLICATION FOR CERTIFICATE

Date Received 12/5/2012
Date Permit Issued 4/18/2013
Control # C-12-004465
Permit # 13-1659
Date Issued 9/25/2013

IDENTIFICATION

Block 1170.01 Lot 4 Qualifier _____
Work Site Location 1672 ROUTE 88 Brick Township, NJ Contractor H. A. Fernot Company, Inc.
Address 32 Kulick Road Fairfield NJ 07004
Owner in Fee HESS REALTY CORPORATION Telephone (973) 575-8376
PO BOX 696419 SAN ANTONIO NJ 78269 Lic. No. or Bldrs. Reg. No. 4497
Telephone (732) 750-6192 Federal Employee No. 22-228224

ACTION

- ☐ CERTIFICATE OF OCCUPANCY
☐ CERTIFICATE OF CONTINUED OCCUPANCY
☐ LEAD HAZARD ABATEMENT CERTIFICATE OF CLEARANCE
☒ TEMPORARY CERTIFICATE OF OCCUPANCY

USE GROUP _____ Previous _____ M _____ Current _____

FINAL COST OF CONSTRUCTION: \$ 283200

(Include value of any new structure, all on-site improvements, built-in furnishings and fixtures and all the integral equipment exclusive of process or manufacturing equipment.)

A set of "As Built" or amended drawings is required if the building or structure deviates from the approved plans filed with the construction permit. Use space below to describe any deviations from approved plans:

If you are requesting a Temporary Certificate of Occupancy, please explain why in the space below.

SO THAT STORE CAN OPEN FOR BUSSINESS UNTIL BUILDING
SUB-CODE OFFICIAL GIVES FINAL SIGN-OFF.

DESCRIPTION OF WORK/USE:

New NEW COMMERCIAL STRUCTURE Modular
Hess Express

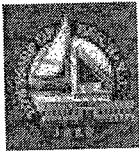
I hereby attest, that to the best of my knowledge, all work has been completed in accordance with the approved plans, permit, and regulations. Incomplete items listed on a Temporary Certificate of Occupancy will be completed by the date on the Certificate.

SIGNED: _____

Owner/Agent

☐ OWNER

☒ AGENT



Brick Township
401 Chambersbridge Rd
Brick, NJ 08723

Date Issued 9/23/2013
Control Number C-12-004465
Permit Number 13-1659
Permit Issue Date 4/18/2013
Certificate Number 13-1659

Certificate

Construction Code Division
(Temporary Certificate of Occupancy)

Identification

Work Site Location: 1672 ROUTE 88 Brick Township, NJ Block: 1170.01 Lot: 4 Qual: _____
Owner in Fee: HESS REALTY CORPORATION
Owner Address: PO BOX 696419 SAN ANTONIO NJ 78269
Telephone: (732) 750-6192
Contractor: H. A. Fernot Company, Inc.
Address: 32 Kulick Road Fairfield NJ 07004
Telephone: (973) 575-8376 Fax: (973) 575-7704
License Number or Builders Registration Number: 4497 Federal Emp. Number: 22-228224

Home Warranty Number: _____

Type of Warranty Plan: ☐ State ☐ Private

Use Group: M Construction Classification: _____

Maximum Live Load: 0 Maximum Occupancy Load: 0

Description of Work/Use: NEW COMMERCIAL STRUCTURE Modular
Hess Express

Certificate Comments: MERCHANDISING ONLY CAN NOT OPEN FOR BUSINESS!!!!

☐ **Certificate of Occupancy**

This serves notice that said building or structure has been constructed in accordance with the New Jersey Uniform Construction Code and is approved for occupancy.

☐ **Certificate of Approval**

This serves notice that the work completed has been constructed or installed in accordance with the New Jersey Uniform Construction Code and is approved. If the permit was issued for minor work, this certificate was based upon what was visible at the time of inspection.

☐ **Certificate of Continued Occupancy**

This serves notice that based on a general inspection of the visible parts of the building there are no imminent hazards and the building is approved for continued occupancy.

☐ **Temporary Certificate of Compliance**

The following conditions must be met no later than or the owner will be subject to fine or order to vacate:
This certificate has an expiration date of:
Conditions to be met:

☐ **Certificate of Clearance - Lead Abatement 5:17**

This serves notice that based on written certification, lead abatement was performed as per NJAC5:17 to the following extent.

- ☐ Total removal of lead-based paint hazards in scope of work
☐ Partial or limited time period (years); see file

☐ **Certificate of Clearance - Asbestos Abatement**

This serves notice that based on written certification, asbestos abatement was performed to the following extent.

- ☐ Total removal of asbestos hazards in scope of work
☐ Partial or limited time period (years); see file

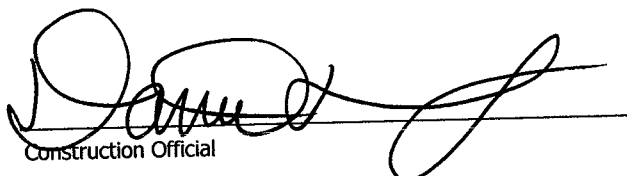
☐ **Certificate of Compliance**

This serves notice that said potentially hazardous equipment has been installed and/or maintained in accordance with the New Jersey Uniform Construction Code and is approved for use until

☒ **Temporary Certificate of Occupancy**

The following conditions must be met no later than: 10/23/2013
or the owner will be subject to fine or order to vacate:
This certificate has an expiration date of: 10/23/2013
Conditions to be met:

ALL FINAL INSPECTIONS AND UPDATE FOR PLUMBING


Construction Official

Fee: \$0.00
Check Number: _____
Collected By: _____

Date Printed: 9/23/2013

U.C.C. F260 (rev. 08/05)

Page 1



PLUMBING SUBCODE
TECHNICAL SECTION



update

Date Received
Control #

9-24-13

Date Issued
Permit #

13-1659+B

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION, WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO. 1-800-272-1000.

Block 1170.01 Lot 4, 5, 6 Qualification Code (Hess Station)
Work Site Location 1672 Route 88

Owner in Fee: HESS CORPORATION

Tel. (732) 750 6192 e-mail _____

Address 1 Hess Plaza Woodbridge NJ 07095

Contractor: D. Lanzo Plumbing & Sewer Steel municipality zip code
Tel. 801 488-4383

Address 11 Lexington Ave e-mail lanzo@plumbing@aol.com

Contractor License No. 8D609 Exp. Date _____

Home Improvement Contractor Registration No. or Exemption Reason (if applicable): 1314406767600
Federal Emp. ID No. 27-3378015 FAX: 801 488-2270

B. PLUMBING CHARACTERISTICS
Use Group Present M Proposed M

Building Sewer Size 4" Public Sewer 1/2" Private Septic _____

Water Service Size 1/2" Public Water 1/2" Private Well _____

Est. Cost of Plumbing Work \$ 300.00

JOB SUMMARY (Office Use Only)

PLAN REVIEW		INSPECTIONS		Dates (Month/Day)	
Type	Failure	Failure	Approval	Initial	
☒ No Plans Required					
☐ Partial-Under-slab Utilities Approved					
Date <u>10-23-13</u> Approved by: <u>PA</u>					
☐ Plumbing Plans Approved					
Date _____ Approved by: _____					
Joint Plan Review Required:					
☐ Bldg. ☐ Elec. ☐ Fire. ☐ Elev.					
SUBCODE APPROVAL FOR PERMIT					
Date: <u>9-24-13</u>					
Approved by: <u>2</u>					
SUBCODE APPROVAL FOR CERTIFICATE					
☐ CO ☐ CCCO ☐ CA					
Date: <u>9-24-13</u>					
Approved by: <u>2</u>					

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and I am authorized to execute this application and perform the work listed on this application.

☒ Licensed Plumbing Contractor ☐ Exempt Applicant

Applicant's Signature (Contractor, Agent and Signature)

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK

UPDATE TO PERMIT # 13-1659+A FOR
ADDITIONAL BACKFLOW PREVENTOR.

QTY. FIXTURE/EQUIPMENT

Water Closet	
Urinal/Bidet	
Bath Tub	
Lavatory	
Shower	
Floor Drain	
Sink	
Dishwasher	
Drinking Fountain	
Washing Machine	
Hose Bibb	
Water Heater	
Fuel Oil Piping	
Gas Piping	
LPGas Tank	
Steam Boiler	
Hot Water Boiler	
Sewer Pump	
Interceptor/Separator	
Backflow Preventer	
Greasetrap	
Sewer-Connection	
Water Service Connection	
Stacks	
Other	
Other	

Administrative Surcharge	\$
Minimum Fee	\$
State Permit Surcharge Fee	\$
TOTAL FEE	\$

INSPECTOR: Russell Harris

DATE: Tues. 9/24/13

JOB: Hess Station SECTION:
(Route 88)

TYPE OF WORK: Final CO

WEATHER: Clear

LOCATION: 1672 Rt. 88

TEMPERATURE: 70's

BLOCK: 1170.01

LOT: 4

**ENGINEERING RECOMMENDATIONS FOR
CERTIFICATE OF OCCUPANCY
INSPECTION CHECK LIST**

ITEMS TO BE COMPLETED	COMPLETED	DEFICIENT
1. Driveway	✓	
2. Grading	✓	
3. Sidewalk	✓	
4. Road Pavement	✓	
5. Landscaping & Sodding	✓	
6. Clean-up Procedures	✓	
7. Note on going construction in immediate area	✓	
8. Safety	✓	

COMMENTS REFERENCING ITEM NUMBER:

RECOMMENDATIONS:

☐ TEMP. C.O.

☒ FINAL C.O.

☐ DETAILED REINSPECTION

☐ HOLD INSPECTION UNTIL LOT ELEVATION FIELD VERIFIED

PLANNING BOARD ENGINEER

EC

MUNICIPAL ENGINEER

I _____, Authorized representative of
_____, hereby acknowledge the
above deficiencies, and further realize that the Certificate of Occupancy will be conditioned upon the acceptable resolution
thereof within _____ days of the issuance of Certificate of Occupancy.



PERMIT UPDATE

Date Update Issued 9/24/2013
Control # C-13-005364
Permit # 13-1659+B

IDENTIFICATION Block: 1170.01 Lot: 4 Qualifier _____
Work Site Location: 1672 ROUTE 88 Brick Township, NJ Contractor H. A. Fernot Company, Inc.
Address 32 Kulick Road Fairfield NJ 07004
Owner in Fee HESS REALTY CORPORATION Telephone: (973) 575-8376
PO BOX 696419 SAN ANTONIO NJ 78269 Lic. No. or Bldrs. Reg. No. 4497
Telephone: (732) 750-6192 Federal Employee No. 22-228224

Is hereby granted permission to perform the following work:

- ☐ BUILDING ☒ PLUMBING ☐ LEAD HAZARD ABATEMENT
☐ ELECTRICAL ☐ FIRE PROTECTION ☐ DEMOLITION
☐ ELEVATOR DEVICES ☐ ASBESTOS ABATEMENT (Subchapter 8 only) ☐ OTHER

DESCRIPTION OF WORK:

BACKFLOW PREVENTER Modular
Hess Express

Note: If construction does not commence within one (1) year of date of issuance, or if construction ceases for a period of six (6) months, this permit is void.

Estimated Cost of Work \$300

Daniel Newman Jr.
Construction Official

9/24/13
Date

U.C.C. F170
equiv (rev 1/04)

1 WHITE - INSPECTOR

2 CANARY - OFFICE

3 PINK - TAX ASSESSOR

4 GOLD - APPLICANT

PAYMENTS (Office Use Only)

Building	\$0
Electrical	\$0
Plumbing	\$60
Fire Protection	\$0
Elevator Devices	\$0
Other	\$0.00
DCA Training Fee	\$1
CO Fee	
Other	\$0
Total	\$61
Check No. <u>1433</u>	999
Cash	\$0
Credit	\$0
Collected By <u>Mary Jane Rinaldi</u>	

REQUIRED INSPECTIONS

Construction work must be inspected in accordance with the State Uniform Construction Code Regulations N.J.A.C. 5:23-2.18. This agency will carry out such periodic inspections during the progress of work as are necessary to insure that the work installed conforms with the requirements of the Uniform Construction Code.

The owner or other responsible person in charge of work must notify this agency when work is ready for any required inspections specified below. Requests for inspections must be made at least 24 hours prior to the time the inspection is desired. Inspections will be performed within three business days of the time for which they are requested. The work must not proceed in a manner which will preclude the inspection until it has been made and approval granted.

- ☒ Required inspections for all subcodes for one- and two-family dwellings are as follows:

1. The bottom of footing trenches before placement of footings, except that in cases of pile foundations, inspections shall be made in accordance with the requirements of the building subcode.
2. Foundations and all walls up to grade level prior to back filling.
3. All structural framing, connections, wall and roof sheathing and insulation; electrical rough wiring, panel and service installation; rough plumbing. The framing inspection shall take place after the rough electrical and plumbing inspections and after the installation of the heating, ventilation and/or air conditioning duct system. The insulation inspection shall be performed after all other subcode rough inspections and prior to the installation of any interior finish material.
4. Installation of all finished materials, sealings of exterior joints, plumbing piping, trim and fixtures; electrical wiring, devices and fixtures; mechanical systems equipment.

Additional required inspections for all subcodes of construction, for other than one- and two-family dwellings, are fire suppression systems, heat producing devices and Barrier Free subcode accessibility, if applicable.

- ☐ Required special inspections. The applicant by accepting the permit will be deemed to have consented to these requirements:

- ☒ A final inspection is required for each applicable subcode area before a final Certificate of Occupancy or Approval may be issued. The final inspections include the installation of all interior and exterior finish materials, sealing of exterior joints, mechanical system and other required equipment; electrical wiring, devices and fixtures; plumbing pipes, trim and fixtures; tests required by any provision of the adopted subcodes, Barrier Free accessibility, if applicable; and verification of compliance with NJAC 5:23-3.5, "Posting structures".

- ☒ A complete copy of released plans must be kept on the job site.

If you do not understand any of this information, please ask.



FIRE PROTECTION SUBCODE TECHNICAL SECTION



A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 1120.01 Lot 45.6 Qualification Code 1672
Work Site Location 1672 Route 88

Owner in Fee: Hess Corporation

Tel. (732) 750-6192 e-mail Hess

Address 1 Hess Plaza Woodbridge NJ 07095

Contractor: H.A. FERNST CO., INC. Tel. (973) 575 8376

Address 32 Kulick Road Fairfield NJ 07004

Fire Protection Equipment, NJ Div of Fire Safety Permit No. _____

Fire Alarm Contractor No. _____ Exp. Date _____

Home Improvement Contractor Registration No. or Exemption Reason (if applicable): _____

Federal Emp. ID No. 22-2282264 FAX: (973) 575 7704

B. FIRE PROTECTION CHARACTERISTICS

Use Group: Present M Proposed M Fire Alarm System: [] New or [] Existing

Const. Class: Present _____ Proposed 11-B Location of Panel: _____

Heating System: [] New or [] Existing [] HVAC Fire Suppression/Standpipe System: _____

Type: [] Gas [] Oil [] Electric [] Solar [] New or [] Existing

Location: [] Other _____ Location of Main Control Valve: _____

Fuel Storage Tank: _____ Capacity _____

Fuel Type: [] Flammable or [] Combustible

Total Cost of Fire Protection Work \$ 3200.00

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application. _____

Applicant's Signature/Contractor's Signature _____

[] Certified Contractor [] Exempt Applicant

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK: 1800 PRE FAB BUILDING

Water Supply Source _____

Date Received 4/18/13
Control # 13-1659
Date Issued _____
Permit # _____

NUMBER	FEE (Office Use Only)
Flammable/Combustible Tanks	
Alarm Systems	
[] System	
[] 110V Interconnected	
[] CO Detectors/110V	
Alarm Devices (i.e., smoke, heat, pull, water/flow)	
Supervisory Devices (i.e., tamper, low/high air)	
Signaling Devices (i.e., horn/strobes, bells)	
Other Devices <u>Emergency Shut-off</u>	
TOTAL	
Suppression Systems	
Fire Pump _____ GPM Type _____	
Dry Pipe/Alarm Valves	
Pre-action Valves	
Sprinkler Heads (Dry and Wet)	
Standpipes	
Pre-engineered Systems	
Wet Chemical	
Dry Chemical	
CO ₂ Suppression	
Foam Suppression	
FM200 Suppression	
Other <u>Fire Extinguishers</u>	
Other Systems	
Kitchen Hood Exhaust System	
Smoke Control System	
Fired Appliances [] Gas or [] Oil	
Fireplace Venting/Metal Chimney	
Other _____	

COMMERCIAL

NUMBER	FEE (Office Use Only)
Administrative Surcharge \$	
Minimum Fee \$	
State Permit Surcharge Fee \$	
TOTAL FEE \$	

**THE BRICK TOWNSHIP
MUNICIPAL UTILITIES AUTHORITY**

1551 HIGHWAY 88 WEST
BRICK, NEW JERSEY 08724
(732) 458-7000

CERTIFICATE OF COMPLIANCE

Date 9-20-13

NAME Hess Realty Corporation

ADDRESS 1 Hess Plaza Woodbridge NJ 07095

PROPERTY LOCATION 1672 Rte 88 W Hess Gas

Account No 17328006-0 Block 1170.01 Lot 4

I hereby certify that the above applicant has complied with all Rules and Regulations of this Authority and has paid all required fees and charges.

For the Authority

Caryl Gurdel

INSPECTOR: Russell Harris

DATE: Tues. 9/17/13

JOB: Hess Station SECTION: N/A
(Route 88)

TYPE OF WORK: Temp Merchandising CO

WEATHER: Clear

LOCATION: 1672 Rt. 88

TEMPERATURE: 70's

BLOCK: 1170.01

LOT: 4

**ENGINEERING RECOMMENDATIONS FOR
CERTIFICATE OF OCCUPANCY
INSPECTION CHECK LIST**

ITEMS TO BE COMPLETED	COMPLETED	DEFICIENT
1. Driveway	✓	
2. Grading	✓	
3. Sidewalk	✓	
4. Road Pavement	Rt. 88 Repairs in Progress	
5. Landscaping & Sodding	✓	
6. Clean-up Procedures	✓	
7. Note on going construction in immediate area	Route 88 Pavement Repairs	
8. Safety	Maintain @ All Times	

COMMENTS REFERENCING ITEM NUMBER:

* John Street entrance & exit completed & accessible

RECOMMENDATIONS:

☒ TEMP. C.O. - Expire 10/17/13

☐ FINAL C.O.

☐ DETAILED REINSPECTION

☐ HOLD INSPECTION UNTIL LOT ELEVATION FIELD VERIFIED

PLANNING BOARD ENGINEER

ECCO

MUNICIPAL ENGINEER

I _____, Authorized representative of _____, hereby acknowledge the above deficiencies, and further realize that the Certificate of Occupancy will be conditioned upon the acceptable resolution thereof within _____ days of the issuance of Certificate of Occupancy.



PERMIT UPDATE

Date Update Issued _____
Control # C-12-004465+A
Permit # 13-1659+A

5-31-13

IDENTIFICATION Block: 1170.01 Lot: 4 Qualifier _____
Work Site Location: 1672 ROUTE 88 Brick Township, NJ Contractor: H. A. Fernot Company, Inc.
Address: 32 Kulick Road Fairfield NJ 07004
Owner in Fee: HESS REALTY CORPORATION
PO BOX 696419 SAN ANTONIO NJ 78269 Telephone: (973) 575-8376
Lic. No. or Bldrs. Reg. No. 4497
Telephone: (732) 750-6192 Federal Employee No. 22-228224

Is hereby granted permission to perform the following work:

- ☐ BUILDING ☒ PLUMBING ☐ LEAD HAZARD ABATEMENT
☐ ELECTRICAL ☐ FIRE PROTECTION ☐ DEMOLITION
☐ ELEVATOR DEVICES ☐ ASBESTOS ABATEMENT (Subchapter 8 only) ☐ OTHER

DESCRIPTION OF WORK:

PLUMBING ALTERATIONS
Hess Express

Note: If construction does not commence within one (1) year of date of issuance, or if construction ceases for a period of six (6) months, this permit is void.

Estimated Cost of Work \$28,000

Construction Official

Date

U.C.C. F170
equiv (rev 1/04)

1 WHITE - INSPECTOR

2 CANARY - OFFICE

3 PINK - TAX ASSESSOR

4 GOLD - APPLICANT

PAYMENTS (Office Use Only)

Building	\$0
Electrical	\$0
Plumbing	\$560
Fire Protection	\$0
Elevator Devices	\$0
Other	\$0.00
DCA Training Fee	\$48
CO Fee	
Other	\$0
Total	\$608
Check No. 1434	
Cash	\$0
Credit	\$0
Collected By	

REQUIRED INSPECTIONS

Construction work must be inspected in accordance with the State Uniform Construction Code Regulations NJAC 5:23-2.18. This agency will carry out such periodic inspections during the progress of work as are necessary to insure that the work installed conforms with the requirements of the Uniform Construction Code.

The owner or other responsible person in charge of work must notify this agency when work is ready for any required inspections specified below. Requests for inspections must be made at least 24 hours prior to the time the inspection is desired. Inspections will be performed within three business days of the time for which they are requested. The work must not proceed in a manner which will preclude the inspection until it has been made and approval granted.

☒ Required inspections for all subcodes for one- and two-family dwellings are as follows:

1. The bottom of footing trenches before placement of footings, except that in cases of pile foundations, inspections shall be made in accordance with the requirements of the building subcode.
2. Foundations and all walls up to grade level prior to back filling.
3. All structural framing, connections, wall and roof sheathing and insulation; electrical rough wiring, panel and service installation; rough plumbing. The framing inspection shall take place after the rough electrical and plumbing inspections and after the installation of the heating, ventilation and /or air conditioning duct system. The insulation inspection shall be performed after all other subcode rough inspections and prior to the installation of any interior finish material.
4. Installation of all finished materials, sealings of exterior joints, plumbing piping, trim and fixtures; electrical wiring, devices and fixtures; mechanical systems equipment.

Additional required inspections for all subcodes of construction, for other than one- and two-family dwellings, are fire suppression systems, heat producing devices and Barrier Free subcode accessibility, if applicable.

☐ Required special inspections. The applicant by accepting the permit will be deemed to have consented to these requirements:

☒ A final inspection is required for each applicable subcode area before a final Certificate of Occupancy or Approval may be issued. The final inspections include the installation of all interior and exterior finish materials, sealing of exterior joints, mechanical system and other required equipment; electrical wiring, devices and fixtures; plumbing pipes, trim and fixtures; tests required by any provision of the adopted subcodes, Barrier Free accessibility, if applicable; and verification of compliance with NJAC 5:23-3.5, "Posting structures".

☒ A complete copy of released plans must be kept on the job site.

If you do not understand any of this information, please ask.

called cont.
4/11/13



CONSTRUCTION PERMIT

Date Issued 4/18/13
Control # C-12-004465
Permit # 13-1659

IDENTIFICATION Block: 1170.01 Lot: 4 Qualifier _____
Work Site Location: 1672 ROUTE 88 Brick Township, NJ Contractor: H. A. Fernot Company, Inc.
Address: 32 Kulick Road Fairfield NJ 07004
Owner in Fee: HESS REALTY CORPORATION Telephone: (973) 575-8376
PO BOX 696419 SAN ANTONIO NJ 78269 Lic. No. or Bldrs. Reg. No. 4497
Telephone: (732) 750-6192 Federal Employee No. 22-228224

Is hereby granted permission to perform the following work:

- | | | |
|--|--|--|
| ☒ BUILDING | ☐ PLUMBING | ☐ LEAD HAZARD ABATEMENT |
| ☒ ELECTRICAL | ☒ FIRE PROTECTION | ☐ DEMOLITION |
| ☐ ELEVATOR DEVICES | ☐ ASBESTOS ABATEMENT
(Subchapter 8 only) | ☐ OTHER |

DESCRIPTION OF WORK:

NEW COMMERCIAL STRUCTURE Modular
Hess Express

Note: If construction does not commence within one (1) year of date of issuance, or if construction ceases for a period of six (6) months, this permit is void.
Estimated Cost of Work \$283,200

PAYMENTS (Office Use Only)

Building	\$567
Electrical	\$965
Plumbing	\$0
Fire Protection	\$125
Elevator Devices	\$0
Other	\$0.00
DCA Training Fee	\$70
CO Fee	\$220.00
Other	\$150
Total	\$2,097
Check No. <u>605</u>	
Cash	\$0
Credit	\$0
Collected By	

150
2147

Construction Official _____

Date _____

U.C.C. F170
equiv (rev 1/04)

1 WHITE - INSPECTOR

2 CANARY - OFFICE

3 PINK - TAX ASSESSOR

4 GOLD - APPLICANT

REQUIRED INSPECTIONS

Construction work must be inspected in accordance with the State Uniform Construction Code Regulations N.J.A.C. 5:23-2.18. This agency will carry out such periodic inspections during the progress of work as are necessary to insure that the work installed conforms with the requirements of the Uniform Construction Code.

The owner or other responsible person in charge of work must notify this agency when work is ready for any required inspections specified below. Requests for inspections must be made at least 24 hours prior to the time the inspection is desired. Inspections will be performed within three business days of the time for which they are requested. The work must not proceed in a manner which will preclude the inspection until it has been made and approval granted.

☐ Required inspections for all subcodes for one- and two-family dwellings are as follows:

- | | | |
|---|----------|-----------|
| 1. The bottom of footing trenches before placement of footings, except that in cases of pile foundations, inspections shall be made in accordance with the requirements of the building subcode. | BUILDING | \$567.00 |
| 2. Foundations and all walls up to grade level prior to back filling. | ELECTRIC | \$965.00 |
| 3. All structural framing, connections, wall and roof sheathing and insulation; electrical rough wiring, panel and service installation; rough plumbing. The framing inspection shall take place after the rough electrical and plumbing inspections and after the installation of the heating, ventilation and /or air conditioning duct system. The insulation inspection shall be performed after all other subcode rough inspections and prior to the installation of any interior finish material. | PLUMBING | \$125.00 |
| 4. Installation of all finished materials, sealings of exterior joints, plumbing piping, trim and fixtures; electrical wiring, devices and fixtures; mechanical systems equipment. | DCA | \$70.00 |
| | C/O | \$220.00 |
| | OTHER | \$150.00 |
| | TOTAL | \$2147.00 |
| | CHECK | \$2147.00 |
| | CHANGE | \$0.00 |

Additional required inspections for all subcodes of construction, for other than one- and two-family dwellings, are fire suppression systems, heat producing devices and Barrier Free subcode accessibility, if applicable.

☐ Required special inspections. The applicant by accepting the permit will be deemed to have consented to these requirements:

☒ A final inspection is required for each applicable subcode area before a final Certificate of Occupancy or Approval may be issued. The final inspections include the installation of all interior and exterior finish materials, sealing of exterior joints, mechanical system and other required equipment; electrical wiring, devices and fixtures; plumbing pipes, trim and fixtures; tests required by any provision of the adopted subcodes, Barrier Free accessibility, if applicable; and verification of compliance with NJAC 5:23-3.5, "Posting structures".

☒ A complete copy of released plans must be kept on the job site.

If you do not understand any of this information, please ask.

SIZING FOR WATER AND SEWER SERVICES

PROPERTY OWNER WASS CORPORATION DATE 4/9/13

PROPERTY ADDRESS 1672 ROUTE 88 BLOCK 1170.01 LOT 4,5,6

ZONING _____ USE GROUP _____

CONTRACTOR _____ LICENSE # REGISTRATION _____

WATER MAIN SIZE _____ WATER PRESSURE _____ SEWER MAIN SIZE _____

PLUMING FIXTURES	NUMBER	(sfu)	WATER UNITS	(dfu)	DRANAGE
1. BATHROOM GROUP	_____	()	_____	()	_____
2. KITCHEN GROUP	_____	()	_____	()	_____
3. WATER CLOSETS	<u>2</u>	(5.0)	<u>10.0</u>	()	_____
4. LAVATORY	<u>2</u>	()	<u>2.0</u>	()	_____
5. BATH TUB	_____	()	_____	()	_____
6. SHOWER STALL	_____	()	_____	()	_____
7. KITCHEN SINK	<u>2</u>	(1.5)	<u>1.5</u>	()	_____
8. SERVICE SINK	<u>1</u>	()	<u>3.0</u>	()	_____
9. LAUNDRY TRAY	<u>1</u>	()	<u>1.5</u>	()	_____
10. DISHWASHER	_____	()	_____	()	_____
11. WASHING MACHINE	_____	()	_____	()	_____
12. URINAL	_____	()	_____	()	_____
13. FLOOR DRAIN	_____	()	_____	()	_____
14. DRINK FOUNTAIN	_____	()	_____	()	_____
15. AIR CONDITION	_____	()	_____	()	_____
WATER COOLED	_____	()	_____	()	_____
16. DENTAL UNIT	_____	()	_____	()	_____
17. LAWN SPRINKLE	_____	()	_____	()	_____
18. FIRE SPRINKLE	_____	()	_____	()	_____
19. HOSE BIBS	<u>2</u>	()	<u>3.5</u>	()	_____

TOTALS 20.5

GALLONS PER MINUTE 35

SIZE of SERVICE 1 1/2" AS PER PLAN

DATE: 4/9/13

APPROVED BY: MARK HIBBARD

2. KITCHEN GROUP		()		()	
3. WATER CLOSETS	2	(5.0)	10.0	()	
4. LAVATORY	2	()	2.0	()	
5. BATH TUB		()		()	
6. SHOWER STALL		()		()	
Hand 7. KITCHEN SINK	2	(1.5)	1.5	()	
8. SERVICE SINK	1	()	3.0	()	
3 Bay Sink 9. LAUNDRY TRAY	1	()	1.5	()	
10. DISHWASHER		()		()	
11. WASHING MACHINE		()		()	
12. URINAL		()		()	
13. FLOOR DRAIN		()		()	
14. DRINK FOUNTAIN		()		()	
15. AIR CONDITION		()		()	
WATER COOLED		()		()	
16. DENTAL UNIT		()		()	
17. LAWN SPRINKLE		()		()	
18. FIRE SPRINKLE		()		()	
19. HOSE BIBS	2	()	3.5	()	

TOTALS

20.5

GALLONS PER MINUTE

35

SIZE of SERVICE

1 1/2" AS PER PLAN

DATE: 4/9/13

APPROVED BY:

MARK HIGDON

7324585378	NORMAL	9, 7:55	0'30"	1	* O K	
Telephone Number	Mode	Start	Time	Page	Result	Note

Apr 9 2013 7:56

P.1

** Transmit Conf. Report **

Land Use/ Bldg Dept Fax: 732-262-8954



MADISON

www.madisonind.com

"ENGINEERED PRODUCTS FOR THE WORLD"

The Symbol of Quality

January 03, 2013

RE: Brick Township Subcode Official Review
Block: 1170.01 Lot: 4 Qual:
1672 ROUTE 88
Permit Number: Control Number: C-12-004465

Project: Hess Modular Building

Model Number: AH1800-01-12

Madison Project Number: WGA06793-1

Fire Subcode – Dated: December 14, 2012

- 1 Comment: Same as building, Factory vs non-factory Inspected.
Response: An Inspection summary has been added to the plans. Please see Page A-0.1
- 2 Comment: Tech shows gas fired appliances and fire alarm. Will need specifications/install guides on types.
Response: Fire Alarm system is not required per IFC section 907.2. This building does not have a Fire alarm system. The building does have a Smoke Detection system as per IMC Section 606.2.1. This system does not require Fire Alarm supervision per IMC Section 606.4.1. Smoke detection system is Factory installed and is inspected By a New Jersey State approved 3rd party service. Information on system can be found in the drawings on Page E-1.1 Key C, C1, and D, and Page M-1.1 Key C, C1, and D. Please see attached specs on system.
- 3 Comment: Need fire alarm plan and specifications of appliances by NJ certified fire alarm installer.
Response: This building does not have a Fire alarm system. (Please see response No.2)

Building Subcode – Dated: December 11, 2012

- 1 Comment: Floor loads spec'd do not meet the min. required
Response: Floor load spec added to plans. The modular building is designed with a floor live load of 100 psf as per Table 1607.1 (retail) of the 2009 IBC with New Jersey amendments. Please see structural calculations, and Revised Page A-0.1
- 2 Comment: Indicate what not factory inspected to facilitate our departments necessary inspections.
Response: An Inspection summary has been added to the plans. Please see Page A-0.1

CALIFORNIA
1900 East 64th Street
Los Angeles, CA 90001
(323) 583-4061
Fax (323) 582-1015

GEORGIA
1035 Iris Drive
Conyers, GA 30094
(770) 483-4401
Fax (770) 785-7967

OKLAHOMA
8500 New Sapulpa Road
Tulsa, OK 74131
(918) 224-6990
Fax (918) 224-8830

ARCHITECTURAL PRODUCTS, BUILDINGS, CANOPIES and CARWASHES

3 Comment: Foundation plans must be independent of Modular plans and be designed with the local geographic design requirements.

Response: This item to be addressed by others.

4. Comment: Metal framing details are missing fastening details for some of its components.

Response: Additional fastening details have been added to plans. Please see page A-7.1, A-7.2, A-7.3, and A-7.4.

Plumbing Subcode – Dated: December 21, 2012

1 Comment: Grease interceptor connection to be installed as per n.s.p.c. 2009 section 9.1.5. exception #1, #2, #3

Response: Plumbing Plan has been revised to comply with requirements of N.S.P.C 2009 Section 9.1.5. exception 1,2 & 3. Please see page A-1.1, P-1.1, and P-1.2

2 Comment: Shown Pitch on roof drain piping and sq/ft of roof area each serves

Response: Additional information on roof drainage added to plans, including drain pipe pitch and sq/ft of roof each drain serves. Please see page P-1.1.

Respectfully Submitted
Brian Bodziony

CALIFORNIA
1900 East 64th Street
Los Angeles, CA 90001
(323) 583-4061
Fax (323) 582-1015

GEORGIA
1035 Iris Drive
Conyers, GA 30094
(770) 483-4401
Fax (770) 785-7967

OKLAHOMA
8500 New Sapulpa Road
Tulsa, OK 74131
(918) 224-6990
Fax (918) 224-8830



BOHLER

ENGINEERING

35 Technology Drive
Warren, NJ 07059
PHONE 908.668.8300
FAX 908.754.4401

March 1, 2013

Via Hand Delivery

Township of Brick
401 Chambersbridge Road
Brick, New Jersey 08723

Attention: Construction Official

**RE: Hess Corporation
Proposed Site Reconstruction
1672 Route 88
Block 1170.01; Lots 4, 5 & 6
Township of Brick
Ocean County, NJ
BENJ No. 010390.01
Permit Control No. C-12-004465**

To Whom It May Concern:

Our office is in receipt of a comment letter dated 12/11/12, prepared by the Building Subcode.

In response to the above referenced letter, our office offers the following itemized responses to each comment:

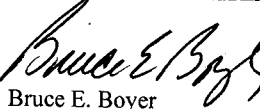
Building Subcode Comment Letter, dated 12/11/12:

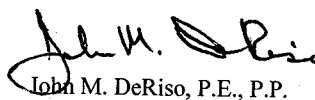
3. Comment: Foundation plans must be independent of Modular plans and be designed with the local geographic design requirements.
Response: The Geotechnical Report dated 10/23/12, prepared by Whitestone Associates indicates that foundation can be designed using a maximum allowable net bearing pressure of 3,000 pounds per square foot. Refer to Page 3 of the report. The foundation on which the modular structure will be supported, as shown on plans prepared by Bertin Engineering on Drawings A-1.1, Sheet 2 of 32, indicates the basis of design is a soil bearing capacity of 2,000 pound per square foot. This design is independent of the modular structure.

Should you have any questions or require any additional information, please do not hesitate to contact our office at your convenience.

Sincerely,

BOHLER ENGINEERING


Bruce E. Boyer


John M. DeRiso, P.E., P.P.

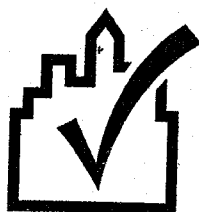
BEB/nlg J:\Hess\2001\010390.01\Letters-OUT\Construction Official (Brick Twp)-02-28-13.doc

cc (via email): Andrew Lautenbacher, Amerada Hess Corporation
Robert Doyle, Amerada Hess Corporation
Patrick Henry, Amerada Hess Corporation
Donna M. Jennings, Esq., Wilentz, Goldman & Spitzer
David F Owen, P.E., P.P., C.M.E., FASCE, Owen, Little & Associates, Inc. (w/ 1 set of plans)

OTHER OFFICE LOCATIONS:

- | | | | | | |
|------------------------------------|------------------------------|----------------------------------|-------------------------------------|---------------------------------------|------------------------------------|
| • Southborough, MA
508.480.9900 | • Albany, NY
518.438.9900 | • Ronkonkoma, NY
631.738.1200 | • Center Valley, PA
610.709.9971 | • Chalfont, PA
215.996.9100 | • Philadelphia, PA
267.402.3400 |
| • Towson, MD
410.821.7900 | • Bowie, MD
301.809.4500 | • Sterling, VA
703.709.9500 | • Warrenton, VA
540.349.4500 | • Fort Lauderdale, FL
954.202.7000 | • Tampa, FL
813.379.4100 |

CIVIL AND CONSULTING ENGINEERS • PROJECT MANAGERS • SURVEYORS • ENVIRONMENTAL CONSULTANTS • LANDSCAPE ARCHITECTS
www.BohlerEngineering.com



COMcheck Software Version 3.9.0 Envelope Compliance Certificate

90.1 (2007) Standard

Section 1: Project Information

Project Type: **New Construction**
Project Title : Hess 1800 Building

Construction Site:
Laurelton, NJ

Owner/Agent:
AMERADA HESS CORPORATION
1 HESS PLAZA
WOODBIDGE, NJ 07095-0961

Designer/Contractor:
MADISON INC.
Conyers, GA 30094
770-483-4401

Section 2: General Information

Building Location (for weather data):
Climate Zone:
Building Type for Envelope Requirements:
Vertical Glazing / Wall Area Pct.:

Point Pleasant (Ocean), New Jersey
4a
Non-Residential
31%

Activity Type(s)

Retail/Sales Area

Floor Area
1680

PFS Corporation
Northeast Region
APPROVED
B Willis - 4
9/14/12
Approval limited to
Factory Built Portion

Section 3: Requirements Checklist

Envelope PASSES: Design 5% better than code.

Climate-Specific Requirements:

Component Name/Description	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Roof 1: Insulation Entirely Above Deck Comments: 3" RMAX MULTIMAX	1680	---	21.7	0.044	0.048
Exterior Wall 1: Metal Building Wall Comments: F.G. BATTS	1111	13.0	0.0	0.113	0.113
Window 1: Metal Frame with Thermal Break:Double Pane, Clear, SHGC 0.62, PF 0.40 Comments: G1(A)	52	---	---	0.350	0.550
Window 2: Metal Frame with Thermal Break, Double Pane, Clear, SHGC 0.62, PF 0.40 Comments: G1(B)	44	---	---	0.350	0.550
Window 3: Metal Frame with Thermal Break, Double Pane, Clear, SHGC 0.62, PF 0.40 Comments: G2	125	---	---	0.350	0.550
Window 4: Metal Frame with Thermal Break:Double Pane, Clear, SHGC 0.62, PF 0.40 Comments: G3 HALF CIRCLE SECTION	35	---	---	0.350	0.550
Window 5: Metal Frame with Thermal Break:Double Pane, Clear, SHGC 0.62, PF 0.40 Comments: GLASS AROUND DF1	41	---	---	0.350	0.550
Door 1: Glass (> 50% glazing):Metal Frame, Clear, Entrance Door, SHGC 0.62, PF 0.40 Comments: DOOR DF1	44	---	---	0.350	0.850
Floor 1: Steel Joist Comments: F.G. BATTS	1680	19.0	0.0	0.052	0.038

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.

Insulation:

- ☐ 1. Open-blown or poured loose-fill insulation has not been used in attic roof spaces with ceiling slope greater than 3 in 12.
- ☐ 2. Wherever vents occur, they are baffled to deflect incoming air above the insulation.
- ☐ 3. Recessed lights, equipment and ducts are not affecting insulation thickness.
- ☐ 4. No roof insulation is installed on a suspended ceiling with removable ceiling panels.
- ☐ 5. All exterior insulation is covered with protective material.
- ☐ 6. Cargo and loading dock doors are equipped with weather seals.

Fenestration and Doors:

- ☐ 7. Windows and skylights are labeled and certified by the manufacturer for U-factor and SHGC.
- ☐ 8. Fixed windows and skylights unlabeled by the manufacturer have been labeled using the default U-factor and SHGC.
- ☐ 9. Other unlabeled vertical fenestration, operable and fixed, that are unlabeled by the manufacturer have been site labeled using the default U-factor and SHGC. No credit has been given for metal frames with thermal breaks, low-emissivity coatings, gas fillings, or insulating spacers.

Air Leakage and Component Certification:

- ☐ 10. All joints and penetrations are caulked, gasketed, weather-stripped, or otherwise sealed.
- ☐ 11. Windows, doors, and skylights certified as meeting leakage requirements.
- ☐ 12. Component R-values & U-factors labeled as certified.
- ☐ 13. 'Other' components have supporting documentation for proposed U-Factors.
- ☐ 14. Building entrances that separate conditioned space from the exterior have an enclosed vestibule with all doors equipped with self-closing devices. Interior and exterior doors in the closed position are no less than 7 ft apart. Conditioned vestibules comply with the requirements for a conditioned space. Unconditioned vestibules comply with the requirements of a semiheated space.

Exceptions:

- ☐ Building entrances with revolving doors.
- ☐ Doors not intended to be used as a building entrance.
- ☐ Doors opening directly from a dwelling unit.
- ☐ Buildings less than four stories above grade and less than 10,000 ft² in area.
- ☐ Doors that open directly from a space less than 3000 sq. ft. in area and is separate from the building entrance.

Section 4: Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed envelope system has been designed to meet the 2009 International Energy Conservation Code (IECC) Standard requirements in COMcheck Version 3.9.0 and to comply with the mandatory requirements in the Requirements Checklist.

Brian Shortino
Name - Title
N.J.P.A.

[Signature]
Signature

9/14/12
Date





COMcheck Software Version 3.9.0

Interior Lighting and Power Compliance Certificate

90.1 (2007) Standard

Section 1: Project Information

Project Type: New Construction
Project Title: Hess 1800 Building

Construction Site:
Laurelton, NJ

Owner/Agent:
AMERADA HESS CORPORATION
1 HESS PLAZA
WOODBIDGE, NJ 07095-0961

Designer/Contractor:
MADISON INC.
Conyers, GA 30094
770-483-4401

PFS Corporation
Northeast Region
APPROVED

B Willis - 4

9/14/12

Approval limited to
Factory Built Portion

Section 2: Interior Lighting and Power Calculation

A Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts (B x C)
Retail/Sales Area	1680	1.7	2856
Total Allowed Watts =			2856

Section 3: Interior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Retail (1680 sq.ft.)				
T8 / T12 Fluorescent 1: LA: 2' X 4' FLOURESCENT / 48" T8 32W / Electronic	3	12	89	1068
T8 / T12 Fluorescent 2: LAE: 2' X 4' FLOURESCENT / 48" T8 32W / Electronic	3	2	89	178
T8 / T12 Fluorescent 1 copy 1: LB: 2' X 4' FLOURESCENT / 48" T8 32W / Electronic	3	4	89	356
T8 / T12 Fluorescent 1 copy 2: LEE: 2' X 4' FLOURESCENT / 48" T8 32W / Electronic	3	2	89	178
T8 / T12 Fluorescent 3: LG: WALL MOUNT FLOURESCENT / 48" T8 32W / Electronic	4	2	110	220
T8 / T12 Fluorescent 4: LD: WALL WASH TROFFER / 24" T8 17W / Electronic	1	11	18	198
Incandescent 2: LC: COOLER LIGHT / Incandescent 60W	1	4	40	160
Compact Fluorescent 1: LE: EXIT SIGN / Twin Tube 8/9W / Electronic	2	1	8	8
Compact Fluorescent 1 copy 1: LF: EXIT SIGN / Twin Tube 8/9W / Electronic	2	1	8	8
Total Proposed Watts =				2374

Section 4: Requirements Checklist

Lighting Wattage:

- ☐ 1. Total proposed watts must be less than or equal to total allowed watts.

Allowed Watts	Proposed Watts	Complies
2856	2374	YES

- ☐ 2. Exit signs 5 Watts or less per sign.

Controls, Switching, and Wiring:

- ☐ 3. Independent manual or occupancy sensing controls for each space (remote switch with indicator allowed for safety or security).
☐ 4. Occupant sensing control in class rooms, conference/meeting rooms, and employee lunch and break rooms.

Exceptions:

- ☐ Spaces with multi-scene control; shop classrooms, laboratory classrooms, and preschool through 12th grade classrooms.

Project Title: Hess 1800 Building

Data filename: C:\Users\ggable\Desktop\GG PROJECTS\BUILDINGS\12 Hess\HESS 1800 BLDG_28x60\20120829_06793-1_Laurelton
NJ\20120829_06793-1.cck

Report date: 08/29/12

Page 3 of 10

- ☐ 5. Automatic shutoff control for lighting in >5000 sq.ft buildings by time-of-day device, occupant sensor, or other automatic control.

Exceptions:

- ☐ 24 hour operation lighting; patient care areas; where auto shutoff would endanger safety or security.
- ☐ 6. Master switch at entry to hotel/motel guest room.
- ☐ 7. Separate control device for display/accent lighting, case lighting, task lighting, nonvisual lighting, lighting for sale, and demonstration lighting.
- ☐ 8. Tandem wired one-lamp and three-lamp ballasted luminaires (No single-lamp ballasts).

Exceptions:

- ☐ Electronic high-frequency ballasts.
- ☐ Luminaires not on same switch.
- ☐ Recessed luminaires 10 ft. apart or surface/pendant not continuous.
- ☐ Luminaires on emergency circuits.

Voltage Drop:

- ☐ 9. Feeder conductors have been designed for a maximum voltage drop of 2 percent.
- ☐ 10. Branch circuit conductors have been designed for a maximum voltage drop of 3 percent.

Interior Lighting PASSES: Design 17% better than code.

Section 5: Compliance Statement

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 90.1 (2007) Standard requirements in COMcheck Version 3.9.0 and to comply with the mandatory requirements in the Requirements Checklist.

Brian Shortino
Name - Title NJPA

[Signature]
Signature

9/14/12
Date

Section 5: Post Construction Compliance Statement

Record Drawings and Operating and Maintenance Manuals:

- ☐ 1. Construction documents with record drawings and operating and maintenance manuals provided to the owner.

Lighting Designer or Contractor Name

Signature

Date

PFS Corporation
Northeast Region
APPROVED
B Willis - 4
9/14/12
Approval limited to
Factory Built Portion



COMcheck Software Version 3.9.0
Mechanical Compliance Certificate

90.1 (2007) Standard

Section 1: Project Information

Project Type: **New Construction**

Project Title: **Hess 1800 Building**

Construction Site:
Laurelton, NJ

Owner/Agent:
AMERADA HESS CORPORATION
1 HESS PLAZA
WOODBIDGE, NJ 07095-0961

Designer/Contractor:
MADISON INC.
Conyers, GA 30094
770-483-4401

Section 2: General Information

Building Location (for weather data):
Climate Zone:

**Point Pleasant (Ocean), New Jersey
4a**

**PFS Corporation
Northeast Region
APPROVED
B Willis - 4
9/14/12
Approval limited to
Factory Built Portion**

Section 3: Mechanical Systems List

Quantity System Type & Description

- 1 HVAC System 1 (Single Zone) :
Heating: 1 each - Central Furnace, Gas, Capacity = 160 kBtu/h, Efficiency = 80.00% Et
Cooling: 1 each - Rooftop Package Unit, Capacity = 94 kBtu/h, Efficiency = 11.20 EER, Air-Cooled Condenser

Section 4: Requirements Checklist

Requirements Specific To: HVAC System 1 :

- ☐ 1. Equipment minimum efficiency: Central Furnace (Gas): 80.00 % Et (or 78% AFUE)
- ☐ 2. Equipment minimum efficiency: Rooftop Package Unit: 11.00 EER
- ☐ 3. Hot gas bypass prohibited unless system has multiple steps of unloading or continuous capacity modulation
- ☐ 4. Hot gas bypass limited to 50% of total cooling capacity
- ☐ 5. VAV fans with static pressure sensors are placed in a position such that the controller setpoint is no greater than one-third the total design fan static pressure. If placement results in the sensor being located downstream of major duct splits, multiple sensors are installed in each major branch.
Exception(s):
 - ☐ Systems with DDC of individual zone boxes reporting to the central control panel and reset of static pressure setpoint based on the zone requiring the most pressure.
- ☐ 6. Systems with DDC of individual zone boxes reporting to the central control panel has static pressure setpoint reset based on the zone requiring the most pressure.

Generic Requirements: Must be met by all systems to which the requirement is applicable:

- ☐ 1. Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup
Exception(s):
 - ☐ Continuously operating zones
- ☐ 2. Hot water pipe insulation: 1 in. for pipes ≤ 1.5 in. and 2 in. for pipes > 1.5 in.
Chilled water/refrigerant/brine pipe insulation: 1 in. for pipes ≤ 1.5 in. and 1.5 in. for pipes > 1.5 in.
Steam pipe insulation: 1.5 in. for pipes ≤ 1.5 in. and 3 in. for pipes > 1.5 in.
Exception(s):
 - ☐ Piping within HVAC equipment.
 - ☐ Fluid temperatures between 60 and 105°F.
 - ☐ Fluid not heated or cooled.

- ☐ Runouts <4 ft in length.
- ☐ Pipe unions in heating systems.
- ☐ 3. Load calculations per acceptable engineering standards and handbooks
- ☐ 4. Thermostatic controls have 5°F deadband
Exception(s):
 - ☐ Thermostats requiring manual changeover between heating and cooling
 - ☐ Special occupancy or special applications where wide temperature ranges are not acceptable and are approved by the authority having jurisdiction.
- ☐ 5. Demand control ventilation (DCV) present for high design occupancy areas (>40 person/1000 ft² in spaces >500 ft²) and served by systems with any one of 1) an air-side economizer, 2) automatic modulating control of the outdoor air damper, or 3) a design outdoor airflow greater than 3000 cfm.
Exception(s):
 - ☐ Systems with heat recovery.
 - ☐ Multiple-zone systems without DDC of individual zones communicating with a central control panel.
 - ☐ Systems with a design outdoor airflow less than 1200 cfm.
 - ☐ Spaces where the supply airflow rate minus any makeup or outgoing transfer air requirement is less than 1200 cfm.
- ☐ 6. Where separate thermostats are used for heating and cooling, acceptable measures are used to prevent simultaneous heating and cooling
- ☐ 7. Stair and elevator shaft vents are equipped with motorized dampers
Exception(s):
 - ☐ Ventilation systems serving unconditioned spaces.
 - ☐ Gravity (non-motorized) dampers are acceptable in buildings less than three stories in height above grade.
- ☐ 8. Acceptable measures used to prevent simultaneous humidification and dehumidification
Exception(s):
 - ☐ Desiccant systems and systems for uses requiring specific humidity levels (approval required)
- ☐ 9. Automatic controls for freeze protection systems present
- ☐ 10. Duct, plenum, and piping insulation surfaces suitably protected from weather, moisture, or likely damage
- ☐ 11. Duct Sealing:
 - a) Pressure sensitive tape used as the primary sealant is certified to comply with UL-181A or UL-181B,
 - b) longitudinal and transverse seams for ducts in unconditioned spaces,
 - c) longitudinal and transverse seams and duct wall penetrations for ducts outside the building,
 - d) transverse seams on buried ducts
- ☐ 12. Motorized, automatic shutoff dampers required on exhaust and outdoor air supply openings
Exception(s):
 - ☐ Gravity dampers acceptable in buildings <3 stories
 - ☐ Gravity dampers acceptable in systems with outside or exhaust air flow rates less than 300 cfm where dampers are interlocked with fan
- ☐ 13. R-6 for supply air ducts located outside the building, in ventilated attics and in unvented attic above insulated ceiling
R-3.5 for supply air ducts in unvented attic with roof insulation, unconditioned and underground spaces
R-3.5 for return air ducts located outside the building, in ventilated attics and in unvented attic above insulated ceiling
- ☐ 14. Humidistat controls prevent reheating, recooling, and mixing of mechanically heated air with mechanically cooled air
Exception(s):
 - ☐ Capability of first reducing supply air volume 50% or less of the design rate or minimum outdoor air ventilation, or per regulatory standard, whichever is larger, before combined heating/cooling occurs.
 - ☐ Cooling capacity <80 kBtu/h and capability to unload cooling equipment.
 - ☐ Cooling capacity <40 kBtu/h.
 - ☐ Rigid humidity requirements.
 - ☐ Site-recovered or site-solar energy sources or.
 - ☐ Use of a desiccant systems.
- ☐ 15. Kitchen hoods >5,000 cfm provided with 50% makeup air that is uncooled and heated to no more than 60°F unless specifically exempted
Exception(s):
 - ☐ Where hoods are used to exhaust ventilation air that would otherwise exfiltrate or be exhausted by other fan systems.
 - ☐ Certified grease extractor hoods that require a face velocity no >60 fpm.
- ☐ 16. Buildings with fume hood systems having an exhaust rate > 15,000 cfm has at least one of the following features:
 - a) VAV hood exhaust and room supply systems capable of reducing exhaust and makeup air volume to 50% or less of design values.
 - b) Direct makeup air supply equal to at least 75% of the exhaust rate, heated no warmer than 2°F below room setpoint, cooled to no cooler than 3°F above room setpoint, no humidification added, and no simultaneous heating and cooling used for dehumidification control.

PFS Corporation
Northeast Region
APPROVED
B Willis - 4
9/14/12
Approval limited to
Factory Built Portion

- c) Heat recovery systems to precondition makeup air from fume hood exhaust.
- ☐ 17. Exhaust air heat recovery included for systems 5,000 cfm or greater with more than 70% outside air fraction or specifically exempted.
- Exception(s):
- ☐ Laboratory fume hood systems with a total exhaust rate ≤ 5000 cfm.
 - ☐ Systems serving spaces that are not cooled and heated to $<60^{\circ}\text{F}$.
 - ☐ Systems with more than 60% of the outdoor heating energy is provided from site-recovered or site solar energy.
 - ☐ Systems exhausting toxic, flammable, paint, or corrosive fumes or dust.
 - ☐ Commercial kitchen hoods.
 - ☐ Systems requiring dehumidification with cooling coil energy recovery in series with the cooling coil.
 - ☐ Where the largest exhaust source is less than 75% of the design outdoor airflow.

Section 5: Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 90.1 (2007) Standard requirements in COMcheck Version 3.9.0 and to comply with the mandatory requirements in the Requirements Checklist.

Brian Shortino
Name - Title
WPA

Signature

Date

Section 6: Post Construction Compliance Statement

- ☐ HVAC record drawings of the actual installation and performance data for each equipment provided to the owner within 90 days after system acceptance.
- ☐ HVAC O&M documents for all mechanical equipment and system provided to the owner within 90 days after system acceptance.
- ☐ Written HVAC balancing report provided to the owner.

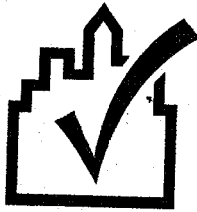
The above post construction requirements have been completed.

Principal Mechanical Designer-Name

Signature

Date

PFS Corporation
Northeast Region
APPROVED
B Willis - 4
9/14/12
Approval limited to
Factory Built Portion



COMcheck Software Version 3.9.0

Mechanical Requirements Description

90.1 (2007) Standard

The following list provides more detailed descriptions of the requirements in Section 4 of the Mechanical Compliance Certificate.

Requirements Specific To: HVAC System 1 :

1. The specified heating and/or cooling equipment is covered by the ASHRAE 90.1 Code and must meet the following minimum efficiency:
Central Furnace (Gas): 80.00 % Et (or 78% AFUE)
2. The specified heating and/or cooling equipment is covered by the ASHRAE 90.1 Code and must meet the following minimum efficiency:
Rooftop Package Unit: 11.00 EER
3. Cooling systems must not use hot gas bypass or other evaporator pressure control unless the equipment is designed with multiple steps (or continuous) capacity modulation.
4. For cooling systems ≤ 240 kBtu/h, maximum hot gas bypass capacity must be no more than 50% total cooling capacity.
5. VAV fans with static pressure sensors are placed in a position such that the controller setpoint is no greater than one-third the total design fan static pressure. If placement results in the sensor being located downstream of major duct splits, multiple sensors are installed in each major branch.
Exception(s):
 - Systems with DDC of individual zone boxes reporting to the central control panel and reset of static pressure setpoint based on the zone requiring the most pressure.
6. Systems with DDC of individual zone boxes reporting to the central control panel has static pressure setpoint reset based on the zone requiring the most pressure.

Generic Requirements: Must be met by all systems to which the requirement is applicable:

1. The system or zone control must be a programmable thermostat or other automatic control meeting the following criteria:
 - a) capable of setting back temperature to 55°F during heating and setting up to 85°F during cooling,
 - b) capable of automatically setting back or shutting down systems during unoccupied hours using 7 different day schedules,
 - c) have an accessible 2-hour occupant override,
 - d) have a battery back-up capable of maintaining programmed settings for at least 10 hours without power.Exception(s):
 - A setback or shutoff control is not required on thermostats that control systems serving areas that operate continuously.
2. All pipes serving space-conditioning systems must be insulated as follows:
 - Hot water piping for heating systems:
 - 1 in. for pipes ≤ 1 1/2-in. nominal diameter,
 - 2 in. for pipes > 1 1/2-in. nominal diameter.
 - Chilled water, refrigerant, and brine piping systems:
 - 1 in. insulation for pipes ≤ 1 1/2-in. nominal diameter,
 - 1 1/2 in. insulation for pipes > 1 1/2-in. nominal diameter.
 - Steam piping:
 - 1 1/2 in. insulation for pipes ≤ 1 1/2-in. nominal diameter,
 - 3 in. insulation for pipes > 1 1/2-in. nominal diameter.Exception(s):
 - Factory-installed piping within HVAC equipment.
 - Piping that conveys fluids having a design operating temperature range between 60°F and 105°F.
 - Piping that conveys fluids that have not been heated or cooled through the use of nonrenewable energy.
 - Runout piping not exceeding 4 ft in length between shutoff valve and coil and 1 in. in diameter between the control valve and HVAC coil.
 - Pipe unions in heating systems.
3. Heating and cooling system design loads for sizing systems and equipment must be determined using generally accepted engineering standards and handbooks acceptable to the adopting authority (for example, ASHRAE Handbook of Fundamentals).
4. Thermostats controlling both heating and cooling must be capable of maintaining a 5°F deadband (a range of temperature where no heating or cooling is provided).
Exception(s):
 - Deadband capability is not required if the thermostat does not have automatic changeover capability between heating and cooling.

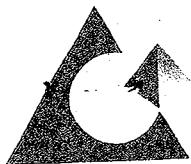
PFS Corporation
Northeast Region
APPROVED
B Willis - 4
9/14/12
Approval limited to
Factory Built Portion

- Special occupancy or special applications where wide temperature ranges are not acceptable and are approved by the authority having jurisdiction.
5. Demand control ventilation (DCV) required for high design occupancy areas (>40 person/1000 ft² in spaces >500 ft²) and served by systems with any one of 1) an air-side economizer, 2) automatic modulating control of the outdoor air damper, or 3) a design outdoor airflow greater than 3000 cfm.
- Exception(s):
- Systems with heat recovery.
 - Multiple-zone systems without DDC of individual zones communicating with a central control panel.
 - Systems with a design outdoor airflow less than 1200 cfm.
 - Spaces where the supply airflow rate minus any makeup or outgoing transfer air requirement is less than 1200 cfm.
6. Where zone heating and cooling are controlled by separate zone thermostats, means (such as limit switches, mechanical stops, or, for DDC systems, software programming) must be provided to prevent simultaneous heating and cooling to the zone.
7. Stair and elevator shaft vents must be equipped with motorized dampers capable of being automatically closed during normal building operation and interlocked to open as required by fire and smoke detection systems. All gravity outdoor air supply and exhaust hoods, vents, and ventilators must be equipped with motorized dampers that will automatically shut when the spaces served are not in use.
- Exception(s):
- Ventilation systems serving unconditioned spaces.
 - Gravity (non-motorized) dampers are acceptable in buildings less than three stories in height above grade.
8. Where a zone is served by a system(s) with both humidification and dehumidification capability, means (such as limit switches, mechanical stops, or software programming) must be provided to prevent simultaneous operation of humidification and dehumidification equipment.
- Exception(s):
- Zones served by desiccant systems, used with direct evaporative cooling in series; Systems serving zones where specific humidity levels are required.
9. All freeze protection systems, including self-regulating heat tracing, must include automatic controls capable of shutting off the systems when outside air temperatures are above 40°F or when the conditions of the protected fluid will prevent freezing. Snow- and ice-melting systems must include automatic controls capable of shutting off the systems when the pavement temperature is above 50°F and no precipitation is falling, and an automatic or manual control that will allow shutoff when the outdoor temperature is above 40°F.
10. Duct and pipe insulation exposed to weather must be suitable for outdoor service; e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation that can cause degradation of the material. Insulation covering chilled water piping, refrigerant suction piping, or cooling ducts located outside the conditioned space must include a vapor retardant located outside the insulation (unless the insulation is inherently vapor retardant), all penetrations and joints of which must be sealed.
11. Duct Sealing Requirements:
- a) Pressure sensitive tape used as the primary sealant is certified to comply with UL-181A or UL-181B,
 - b) Longitudinal and transverse seams for ducts in unconditioned spaces,
 - c) Longitudinal and transverse seams and duct wall penetrations for ducts outside the building,
 - d) Transverse seams on buried ducts
12. Outdoor air supply and exhaust systems must have motorized dampers that automatically shut when the systems or spaces served are not in use. Dampers must be capable of automatically shutting off during preoccupancy building warm-up, cool-down, and setback, except when ventilation reduces energy costs (e.g., night purge) or when ventilation must be supplied to meet code requirements. Both outdoor air supply and exhaust air dampers must have a maximum leakage rate of 3 cfm/ft² at 1.0 in w.g. when tested in accordance with AMCA Standard 500.
- Exception(s):
- Gravity (non-motorized) dampers are acceptable in buildings less than three stories in height.
 - Systems with a design outside air intake or exhaust capacity of 300 cfm (140 L/s) or less.
13. All supply and return ducts and plenum installed as part of an HVAC air distribution system must be thermally insulated: R-6 for supply air ducts located outside the building, in ventilated attics and in unvented attic above insulated ceiling, R-3.5 for supply air duct insulation in unvented attic with roof insulation, unconditioned and underground spaces, R-3.5 for return air ducts located outside the building, in ventilated attics and in unvented attic above insulated ceiling.
14. Where humidistatic controls are provided, such controls must prevent reheating, mixing of hot and cold air streams, or other means of simultaneous heating and cooling of the same air stream.
- Exception(s):
- Capability of first reducing supply air volume 50% or less of the design rate or minimum outdoor air ventilation, or per regulatory standard, whichever is larger, before combined heating/cooling occurs.
 - Cooling capacity <80 kBtu/h and capability to unload cooling equipment.
 - Cooling capacity <40 kBtu/h.
 - Systems serving spaces where rigid humidity requirements exist. See code language for qualifying spaces.

PFS Corporation
Northeast Region
APPROVED
B Willis - 4
9/14/12
Approval limited to
Factory Built Portion

- Site-recovered or site-solar energy sources or.
 - Use of a desiccant systems.
15. Individual kitchen exhaust hoods larger than 5000 cfm must be provided with make-up air sized for at least 50% of exhaust air volume that is uncooled and either unheated or heated to no more than 60°F
Exception(s):
- Where hoods are used to exhaust ventilation air that would otherwise exfiltrate or be exhausted by other fan systems.
 - Certified grease extractor hoods that require a face velocity no >60 fpm.
16. Buildings with fume hood systems having an exhaust rate > 15,000 cfm has at least one of the following features:
- a) VAV hood exhaust and room supply systems capable of reducing exhaust and makeup air volume to 50% or less of design values.
 - b) Direct makeup (auxiliary) air supply equal to at least 75% of the exhaust rate, heated no warmer than 2°F below room setpoint, cooled to no cooler than 3°F above room setpoint, no humidification added, and no simultaneous heating and cooling used for dehumidification control.
 - c) Heat recovery systems to precondition makeup air from fume hood exhaust in accordance with Section 6.5.6.1, Exhaust Air Energy Recovery, without using any exception.
17. Individual fan systems with a design supply air capacity of 5000 cfm or greater and minimum outside air supply of 70% or greater of the supply air capacity must have an energy recovery system with at least a 50% effectiveness. If an air economizer is also required, heat recovery must be bypassed or controlled to permit air economizer operation.
Exception(s):
- Laboratory fume hood systems with a total exhaust rate <= 5000 cfm.
 - Systems serving spaces that are not cooled and heated to <60°F.
 - Systems with more than 60% of the outdoor heating energy is provided from site-recovered or site solar energy.
 - Systems exhausting toxic, flammable, paint, or corrosive fumes or dust.
 - Commercial kitchen hoods used for collecting and removing grease vapors and smoke.
 - Systems requiring dehumidification that employ energy recovery in series with the cooling coil.
 - Where the largest exhaust source is less than 75% of the design outdoor airflow.

PFS Corporation
Northeast Region
APPROVED
B Willis - 4
9/14/12
 Approval limited to
 Factory Built Portion



**WHITESTONE
ASSOCIATES, INC.**

ENVIRONMENTAL & GEOTECHNICAL ENGINEERS & CONSULTANTS

35 TECHNOLOGY DRIVE

WARREN, NJ 07059

908.668.7777

FAX 908.754.5936

www.whitestoneassoc.com

REPORT OF GEOTECHNICAL INVESTIGATION

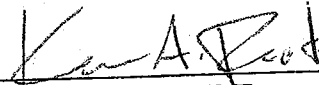
**PROPOSED HESS SERVICE STATION #30279
1672 NEW JERSEY STATE HIGHWAY ROUTE 88
AND JOHN STREET
BLOCK 1170.01, LOTS 4, 5 AND 6
BRICK TOWNSHIP, OCEAN COUNTY, NEW JERSEY**

Prepared for:

**BOHLER ENGINEERING NJ, LLC
35 Technology Drive
Warren, New Jersey 07059**

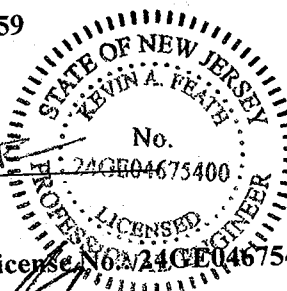
Prepared by:

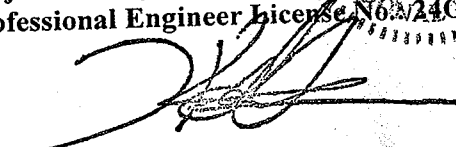
**WHITESTONE ASSOCIATES, INC.
35 Technology Drive
Warren, New Jersey 07059**


Kevin A. Feath, P.E.

Project Manager

Professional Engineer License No. 24CE04675400




**Laurence W. Keller, P.E.
Director, Geotechnical Services**

**Whitestone Project #GJ1212265.000
October 23, 2012**

Other Office Locations:

■ CHALFONT, PA
215.712.2700

■ STERLING, VA
703.464.5858

■ EVERGREEN, CO
303.670.6905



35 TECHNOLOGY DRIVE
WARREN, NJ 07059
908.668.7777
FAX 908.754.5936
www.whitestoneassoc.com

October 23, 2012

via email

BOHLER ENGINEERING NJ, LLC
35 Technology Drive
Warren, New Jersey 07059

Attention: Brian McMorrow, P.E.
Senior Project Manager

Regarding: **REPORT OF GEOTECHNICAL INVESTIGATION
PROPOSED HESS SERVICE STATION #30279
1672 NEW JERSEY STATE HIGHWAY ROUTE 88 AND JOHN STREET
BLOCK 1170.01, LOTS 4, 5 AND 6
BRICK TOWNSHIP, OCEAN COUNTY, NEW JERSEY
WHITESTONE PROJECT NO.: GJ1212265.000**

Dear Mr. McMorrow:

Whitestone Associates, Inc. (Whitestone) is pleased to submit the attached *Report of Geotechnical Investigation* for the above-referenced project. The attached report presents the results of Whitestone's soils exploration efforts and recommendations for design of the proposed structural foundations, floor slabs, pavements, and related earthwork associated with the proposed Hess Service Station site development.

FOUNDATIONS: The results of the exploration indicate that the structures may be supported on conventional shallow foundations bearing on improved and approved existing fill materials (if encountered at foundation bearing elevations), the underlying natural soils, and/or properly placed structural fill following supplemental evaluation as described herein.

SUPPLEMENTAL EVALUATION OF EXISTING FILL AND INACCESSIBLE AREAS: Whitestone preliminarily anticipates that the existing fill material encountered to the maximum depth of approximately five feet within the proposed canopy area will be suitable for foundation, floor slab and pavement support contingent upon supplemental evaluation by means of construction phase test pit excavations and subgrade improvement as recommended herein. Due to the inherent variability that exists within existing fill, evidenced by the debris encountered, Whitestone anticipates that limited portions of the existing fill materials may require overexcavation and recompaction/replacement or subgrade stabilization within proposed foundation, floor slab and pavement areas. Whitestone also anticipates that a majority of the existing fill materials will be suitable for re-use as structural fill following segregation of any objectionable debris encountered and proper moisture control. The central portion of the proposed canopy footprint and north central portion of proposed pavement area were not accessible at the time of Whitestone's field investigation due to the presence of existing structures. As such, soil conditions in presently inaccessible areas below the existing structures also should be evaluated during the early stages of construction following demolition to verify that the underlying soil conditions are consistent with those encountered during this subsurface exploration.

Other Office Locations:

■ CHALFONT, PA
215.712.2700

■ STERLING, VA
703.464.5858

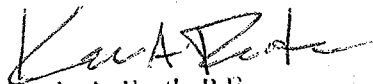
■ EVERGREEN, CO
303.670.6905



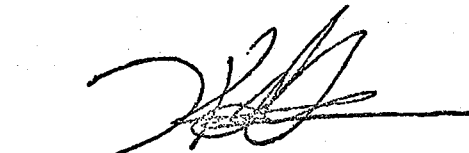
Whitestone's geotechnical division appreciates the opportunity to be of continued service to Bohler Engineering NJ, LLC. Please note that Whitestone has the capability to perform the additional geotechnical engineering services recommended herein. Please contact us at (908) 668-7777 with any questions regarding the enclosed report.

Sincerely,

WHITESTONE ASSOCIATES, INC.



Kevin A. Feath, P.E.
Project Manager



Laurence W. Keller, P.E.
Director, Geotechnical Services

KAF/pwd L:\Job Folders\2012\1212265GJ\Reports and Submittals\12265ROGI.wpd
Enclosures
Copy: John DeRiso, Bohler Engineering NJ, LLC

REPORT OF GEOTECHNICAL INVESTIGATION
Proposed Hess Service Station #30279
1672 New Jersey State Highway Route 88 and John Street
Block 1170.01, Lots 4, 5 and 6
Brick Township, Ocean County, New Jersey

TABLE OF CONTENTS

1.0	SUMMARY OF FINDINGS	1
2.0	INTRODUCTION	4
2.1	Authorization	4
2.2	Purpose	4
2.3	Scope	4
2.3.1	Field Exploration	4
2.3.2	Laboratory Testing Program	5
3.0	SITE DESCRIPTION	7
3.1	Location and Description	7
3.2	Existing Conditions	7
3.3	Site Geology	8
3.4	Proposed Construction	8
4.0	SUBSURFACE CONDITIONS	9
4.1	Subsurface Soil Conditions	9
4.2	Groundwater	9
5.0	CONCLUSIONS AND RECOMMENDATIONS	10
5.1	General	10
5.2	Site Preparation and Earthwork	10
5.3	Structural Fill and Backfill	11
5.4	Groundwater Control	12
5.5	Foundations	13

REPORT OF GEOTECHNICAL INVESTIGATION
Proposed Hess Service Station #30279
1672 New Jersey State Highway Route 88 and John Street
Block 1170.01, Lots 4, 5 and 6
Brick Township, Ocean County, New Jersey

TABLE OF CONTENTS
(Continued)

5.6	Floor Slab	14
5.7	Pavement Design Criteria	14
5.8	Retaining Wall/Lateral Earth Pressures	16
5.9	Seismic and Liquefaction Considerations	16
5.10	Excavations	16
5.11	Supplemental Post Investigation Services	16
5.12	UST Tie-Downs and Embedment	17
6.0	GENERAL COMMENTS	18

FIGURES

FIGURE 1 Boring Location Plan

APPENDICES

APPENDIX A Records of Subsurface Exploration
APPENDIX B Laboratory Test Results
APPENDIX C Supplemental Information (USCS, Terms & Symbols)

SECTION 1.0

Summary of Findings

Whitestone Associates, Inc. (Whitestone) has completed an exploration and evaluation of the subsurface conditions for the proposed Hess Service Station #30279 development located at 1672 New Jersey State Highway (N.J.S.H.) Route 88 at the northern intersection with John Street in Brick Township, Ocean County, New Jersey. The site is identified further as Block 1170.01, Lots 4, 5 and 6 the *Official Tax Map* of the Township of Brick, Ocean County, New Jersey. The site of the proposed construction is shown on the *Boring Location Plan* included as Figure 1.

At the time of Whitestone's exploration, the site consisted of an existing Hess Service Station including a single-story block building, frame shed, two fueling islands, four gasoline and diesel fuel underground storage tanks (USTs), one 550-gallon heating oil UST, identification sign, and associated pavement, landscaped areas and utilities. Based on the August 24, 2012 *Grading, Drainage & Utilities Plan* prepared by Bohler Engineering NJ, LLC (Bohler), the site is relatively flatlying with a slight slope downward in the easterly direction with a topographic high elevation of approximately 34.0 feet above mean sea level (msl) in the north central portion of the property and a topographic low elevation of approximately 31.5 feet above msl along the eastern border of the property.

Based on the August 24, 2012 *Site Plan* prepared by Bohler, the proposed site redevelopment will include demolition of the existing structures, with the exception of the USTs that will remain, and the construction of an approximately 1,660 square foot footprint, pre-fabricated, modular Hess Express building with a finished floor elevation (FFE) of 34.45 feet above msl, canopy over six fueling islands and a four feet by eight feet kiosk, identification sign, trash enclosure, two stormwater management (SWM) drywells, and associated new pavement, utilities and landscaped areas. The proposed building is anticipated to be a single-story with a structural reinforced concrete floor slab and no basement or crawl space.

Based on existing and proposed grades provided on the *Grading, Drainage & Utilities Plan* and *Site Plan* prepared by Bohler, the proposed building will require one foot to three feet of fill placement to achieve FFE. With the exception of the eastern portion of the site, proposed pavement areas will be redeveloped at or near existing site grades with maximum cut and fill on the order of less than one foot. The eastern portion of proposed pavement currently is grass-covered and will require up to two feet of fill placement to achieve design grades. The bottom elevation of the proposed southern SWM drywell will be approximately 24.03 feet above msl. The bottom elevation of the proposed northern SWM drywell is not known at this time. No new retaining walls currently are planned for the site redevelopment.

The subsurface exploration included performing a reconnaissance of the project site, drilling soil borings, and collecting soil samples for laboratory analyses. The data from this exploration were analyzed by Whitestone in light of the project information provided by Bohler.

A summary of Whitestone's findings and recommendations is presented in the following:

- ▶ **Subsurface Conditions:** The soil borings were performed within either existing paved or grass covered areas. Borings performed within existing paved areas encountered approximately three inches to seven inches of asphaltic concrete pavement at the surface underlain by approximately three inches to six inches of silty sand and gravel subbase materials. Subbase materials were observed below the pavement in four of the five borings performed within existing paved areas. Borings performed within existing grass covered areas encountered two inches to three inches of topsoil at the surface. Beneath the surface cover within the borings performed in the northwestern portion of the site (B-3, B-6 and B-7), existing fill materials (Stratum 1) were encountered that generally consisted of silty sand with gravel, a variable amount of debris and an occasional trace amount of fine roots. The debris observed within the existing fill materials consisted of asphalt fragments and pieces of concrete with a maximum diameter of four inches. When encountered, existing fill materials extended to depths that ranged from approximately two feet below existing ground surface (fbgs) to five fbgs. Below the surface cover or existing fill materials, the borings encountered natural coastal plain deposited soils (Stratum 2). The coastal plain deposits generally consisted of either poorly graded sand (USCS: SP-SM and SP) with variable amounts of gravel and silt or silty sand (USCS: SM) with a variable amount of gravel. The borings were terminated within this stratum at depths that ranged between approximately six fbgs and 20.0 fbgs. Static groundwater was not encountered within any of the borings performed as part of this investigation with the deepest depth and shallowest elevation explored of approximately 20.0 fbgs and 12.0 feet above msl, respectively. Static groundwater conditions likely will fluctuate seasonally and following periods of precipitation.

Recommendations developed upon consideration of these results are summarized below and presented in greater detail in the following report.

- ▶ **Supplemental Evaluation of Existing Fill Materials and Inaccessible Areas:** Based on the conditions disclosed by the soil borings, Whitestone anticipates that the existing fill material will be suitable for foundation (when encountered within the northern portion of the proposed canopy area), floor slab and pavement support following subgrade inspection and improvement as provided herein with some anticipated overexcavation, due to possible variability within existing fill materials, and with increased risk of future maintenance within proposed pavement areas where unimproved existing fill remains. Whitestone also anticipates that the majority of the existing fill materials will be suitable for reuse as structural fill with segregation of any objectionable debris encountered and proper moisture control. Whitestone recommends confirming further the condition of the existing fill for foundation, floor slab and pavement support and/or re-use as structural fill by means of supplemental evaluation either prior to or during the early stages of construction to identify areas requiring removal and possible uncontrolled conditions or deleterious materials not disclosed by the soil borings conducted during this exploration. The central portion of the proposed canopy footprint

and north central portion of proposed pavement area were not accessible at the time of Whitestone's field investigation due to the presence of existing structures. As such, soil conditions in presently inaccessible areas below the existing structures also should be evaluated during the early stages of construction following demolition to verify that the underlying soil conditions are consistent with those encountered during this subsurface exploration.

- ▶ **Foundations:** Following supplemental evaluation and improvement of existing fill materials, Whitestone recommends that the proposed structures be supported on conventional shallow spread and continuous wall footings designed to bear either within approved, existing fill materials, the underlying coastal plain deposits, and/or on controlled structural fill materials provided they are properly placed and compacted as described herein. Foundations bearing within firm, approved existing fill materials, natural soils, and/or properly placed controlled structural fill materials may be designed using a maximum allowable net bearing pressure of 3,000 pounds per square foot (psf). Due to anticipated disturbance of upper portions of the subgrade soils during footing excavations, all footing bottoms should be improved by in-trench compaction in the presence of the geotechnical engineer. Localized areas may require overexcavation and replacement of approved on-site soils in controlled lifts.
- ▶ **Pavements:** Contingent upon supplemental evaluation and compaction improvement, Whitestone anticipates that approved, existing fill materials, the underlying natural soils, and/or newly placed structural fill will be suitable for support of the proposed pavements, provided these materials are properly prepared during favorable weather and proofrolled as recommended herein. Due to the presence of existing fill materials, all subgrades should be improved by vibratory roller compaction efforts and approved by proofroll tests in the presence of the geotechnical engineer. Due to potential variability that exists within existing fill materials, areas of overexcavation, subgrade stabilization and recompaction may be anticipated within proposed floor slab and pavement areas. Localized areas may require overexcavation and recompaction of on-site soils in controlled lifts. Any areas that become softened or disturbed as a result of wetting and/or repeated exposure to construction traffic should be removed and replaced with compacted structural fill.
- ▶ **Soil Reusability:** Whitestone anticipates that the existing fill materials and underlying natural materials may be reusable as structural fill and/or backfill below proposed foundations, and pavements provided that they are free of deleterious materials and moisture contents are controlled within two percent of the optimum moisture content. Reuse of the existing fill materials will be contingent on careful inspection in the field by the owner's geotechnical engineer by visual observation and/or test pit excavations during construction as recommended herein. The on-site finer-grained silty sand soils are moderately moisture sensitive and re-use will require drying where wetted beyond the optimum. Imported materials may be required to expedite earthwork operations, especially if the construction schedule or the site area restricts moisture control operations, such as air drying the soil. Immediate re-use of on-site soil should not be expected.

Detailed design criteria and construction recommendations for proposed foundations, slabs, pavements, and earthwork are discussed in the following report.

SECTION 2.0

Introduction

2.1 AUTHORIZATION

Mr. Brian McMorrow, P.E. of Bohler issued authorization to Whitestone Associates, Inc. (Whitestone) to perform a geotechnical investigation on this site relevant to the construction of a proposed Hess Service Station #30279 redevelopment. The geotechnical investigation was performed in general accordance with Whitestone's September 25, 2012 proposal to Bohler.

2.2 PURPOSE

The purpose of this subsurface exploration and analysis was to:

- ▶ ascertain the various soil profile components at test locations;
- ▶ estimate the engineering characteristics of the proposed foundation bearing and subgrade materials;
- ▶ provide geotechnical criteria for use by the design engineers in preparing the foundation, slab, and pavement design;
- ▶ provide recommendations for required earthwork and subgrade preparation;
- ▶ record groundwater levels (if encountered) at the time of the investigation and discuss the potential impact on the proposed construction; and
- ▶ recommend additional investigation and/or analysis (if warranted).

2.3 SCOPE

The scope of the exploration and analysis included the subsurface exploration, field testing and sampling, laboratory analyses, and a geotechnical engineering analysis and evaluation of the subsurface materials. This *Report of Geotechnical Investigation* is limited to addressing the site conditions as they relate to the physical support of the proposed construction. Any references to suspicious odors, materials, or conditions are provided strictly for the client's information.

2.3.1 Field Exploration

Field exploration of the project site was conducted by means of seven soil borings (identified as B-1 through B-7) performed with a truck-mounted drill rig equipped with hollow stem augers. Borings B-1 and B-2 were

drilled within the proposed building footprint and were terminated at the depth of approximately 20.0 fbgs. Borings B-3 and B-4 were performed within the proposed canopy area and extended to the depths of approximately 18.8 fbgs and 20.0 fbgs, respectively. Borings B-5 through B-7 were drilled within proposed pavement areas and extended to a depth of approximately six fbgs. Prior to mechanical auger ground penetration, the soil borings performed within the vicinity of the existing gasoline service station were hand excavated with the help of a high powered vacuum truck to the depth of approximately four fbgs. Soil borings were backfilled to the surface with soils derived from the investigation and surficially patch with asphaltic concrete cold patch, as appropriate and necessary. The locations of the soil borings are shown on the accompanying *Boring Location Plan* included as Figure 1. *Records of Subsurface Exploration* are provided in Appendix A.

The soil borings were conducted in the presence of a Whitestone engineer who performed field tests, recorded visual classifications, and collected samples of the various strata encountered. The borings were located in the field using normal taping procedures and estimated right angles. These locations are presumed to be accurate within a few feet.

Soil borings and Standard Penetration Tests (SPTs) were conducted in general accordance with American Society for Testing and Materials (ASTM) designation D 1586. The SPT resistance value (N) can be used as an indicator of the consistency of fine-grained soils and the relative density of coarse-grained soils. The N-value for various soil types can be correlated with the engineering behavior of earthworks and foundations.

Groundwater level observations, although not encountered, were measured during and immediately after the completion of field operations prior to backfilling the borings. Seasonal variations, temperature effects, man-made effects, and recent rainfall conditions may influence the levels of the groundwater, and the observed levels will depend on the permeability of the soils. Groundwater elevations derived from sources other than seasonally observed groundwater monitor wells may not be representative of true groundwater levels.

2.3.2 Laboratory Testing Program

In addition to the field investigation, a supplemental laboratory testing program was conducted to determine additional, pertinent engineering characteristics of representative samples of on-site soils. The laboratory testing program was performed in general accordance with applicable ASTM standard test methods and included physical testing of proposed building foundation, floor slab and pavement bearing stratum.

Physical/Textural Analyses: Representative samples of selected strata encountered were subjected to a laboratory testing program that included moisture content determinations (ASTM D-2216) and washed gradation analyses (ASTM D-422) in order to perform supplementary engineering soil classifications in general accordance with ASTM D-2487. The soil strata tested were classified by the Unified Soil Classification System (USCS) and results of the laboratory testing are summarized in the following table. Quantitative test results are provided in Appendix B.

PHYSICAL/TEXTURAL ANALYSES SUMMARY							
Boring	Sample	Depth (fbgs)	% Passing No. 200 Sieve	Moisture Content (%)	Liquid Limit (%)	Plastic Index (%)	USCS Classification
B-1	S-3	4.0 - 6.0	20.0	9.0	Non Plastic		SM
B-4	S-1	4.0 - 6.0	8.1	6.2	Non Plastic		SP-SM

The engineering classifications are useful when considered in conjunction with the additional site data to estimate properties of the soil types encountered and to predict the soil's behavior under construction and service loads.

SECTION 3.0

Site Description

3.1 LOCATION AND DESCRIPTION

The subject site is located at 1672 N.J.S.H. Route 88 at the northern intersection with John Street in Brick Township, Ocean County, New Jersey. The site is identified further as Block 1170.01, Lots 4, 5 and 6 on the *Official Tax Map* of the Township of Brick, Ocean County, New Jersey. The site is bound to the north a single-story building; to the south by John Street followed by a 1.5-story business building; to the east by residential structures; and to the west by N.J.S.H. Route 88 followed by a single-story business building and a 1.5-story business building. The site of the proposed construction is shown on the *Boring Location Plan* included as Figure 1.

3.2 EXISTING CONDITIONS

Surface Cover/Development: At the time of Whitestone's field investigation, the subject site consisted of an existing Hess Service Station including a single-story block building, frame shed, two fueling islands, four gasoline and diesel fuel USTs, one 550-gallon heating oil UST, identification sign, and associated pavement, landscaped areas and utilities.

Topography: Topographically, the site is relatively flatlying with a slight slope downward in the easterly direction including a high elevation of approximately 34.0 feet above msl in the north central portion of the property and a low elevation of approximately 31.5 feet above msl along the eastern border of the property. Topographic information was provided on the aforementioned *Grading, Drainage & Utilities Plan* prepared by Bohler.

Utilities: At the time of Whitestone's subsurface field investigation, the subject site was serviced by public utilities including above ground electric and telephone, and underground electric, water, gasoline product, heating oil, sanitary sewer and stormwater sewer lines. Other utilities were not observed at the subject site by Whitestone but may be present. The utility information contained in this report is presented for general discussion only and is not intended for construction purposes.

Site Drainage: Surface run-off for the site generally follows existing topography draining in the vertical direction through exposed soil areas of the site and in the horizontal direction easterly towards inlets located within the surrounding roadways right-of-ways. The termini of these inlets is unknown.

3.3 SITE GEOLOGY

The subject site is situated within the Coastal Plain Physiographic Province of New Jersey. Specifically, the subject site is located within the Lower Member of the Kirkwood Formation. The Lower Member of the Kirkwood Formation generally consists of sand and clay that is massive to thick bedded and locally cross bedded. Overburden materials also include man-made fill associated with previous development of the subject site.

3.4 PROPOSED CONSTRUCTION

Based on the aforementioned *Site Plan* prepared by Bohler, the proposed site redevelopment will include demolition of the existing structures, with the exception of the USTs which will remain, and the construction of an approximately 1,660 square feet footprint Hess Express building with a FFE of 34.45 feet above msl, canopy over six fueling islands and a four feet by eight feet kiosk, identification sign, trash enclosure, two SWM drywells, and associated new pavement, utilities and landscaped areas. The proposed building is anticipated to be a single-story, modular building with a structural floor slab and no basement or crawl space.

Based on existing and proposed grades provided on the *Grading, Drainage & Utilities Plan* and *Site Plan* prepared by Bohler, the proposed building will require one foot to three feet of fill placement to achieve FFE. With the exception of the eastern portion of the site, proposed pavement areas will be redeveloped at or near existing site grades with maximum cut and fill on the order of less than one foot. The eastern portion of proposed pavement currently is grass-covered and will require up to two feet of fill placement to achieve design grades. The bottom elevation of the proposed southern SWM drywell will be approximately 24.03 feet above msl. The bottom elevation of the proposed northern SWM drywell is not known at this time. No new retaining walls currently are planned for the site redevelopment. Maximum design loads are assumed to be less than the following:

Proposed Convenience Store

- ▶ column loads - 40 kips;
- ▶ lateral earth pressure - 250 pounds per square foot per foot of depth.

Proposed Fuel Island Canopy

- ▶ column overturning moment - 50 foot-kips
- ▶ column vertical downward load - 25 kips
- ▶ column vertical uplift load - 25 kips
- ▶ column horizontal load - 2.5 kips

The scope of Whitestone's investigation and the professional advice contained in this report were generated based on the project details and loading noted herein. Any revisions or additions to the design details enumerated in this report should be brought to the attention of Whitestone for additional evaluation as warranted.

SECTION 4.0

Subsurface Conditions

Details of the subsurface materials encountered are presented on the *Records of Subsurface Exploration* presented in Appendix A of this report. The subsurface soil conditions encountered in the soil test borings consisted of the following generalized strata in order of increasing depth.

4.1 SUBSURFACE SOIL CONDITIONS

Surface Cover Materials: The soil borings were performed within either existing paved or grass covered areas. Borings performed within existing paved areas encountered approximately three inches to seven inches of asphaltic concrete pavement at the surface underlain by approximately three inches to six inches of silty sand and gravel subbase materials. Subbase materials were observed below the pavement in four of the five borings performed within existing paved areas. Borings performed within existing grass covered areas encountered two inches to three inches of topsoil at the surface.

Existing Fill Materials (Stratum 1): Beneath the surface cover within the borings performed in the northwestern portion of the site (B-3, B-6 and B-7), existing fill materials were encountered that generally consisted of silty sand with gravel, a variable amount of debris and an occasional trace amount of fine roots. The debris observed within the existing fill materials consisted of asphalt fragments and pieces of concrete with a maximum diameter of four inches. When encountered, existing fill materials extended to depths that ranged from approximately two fbgs to five fbgs. SPT N-values encountered within the existing fill materials were five blows per foot (bpf) and 14 bpf.

Coastal Plain Deposits (Stratum 2): Below the surface cover or existing fill materials, the borings encountered natural coastal plain deposited soils. The coastal plain deposits generally consisted of either poorly graded sand (USCS: SP-SM and SP) with variable amounts of gravel and silt or silty sand (USCS: SM) with a variable amount of gravel. The borings were terminated within this stratum at depths that ranged between approximately six fbgs and 20.0 fbgs. SPT N-values within the coastal plain deposits ranged between eight bpf and refusal (refusal defined as greater than 50 blows per six inches of penetration), generally indicating loose to very dense relative densities and averaging approximately 27 bpf.

4.2 GROUNDWATER

Static groundwater was not encountered within any of the borings performed as part of this investigation with the deepest depth and shallowest elevation explored of approximately 20.0 fbgs and 12.0 feet above msl, respectively. Static groundwater conditions likely will fluctuate seasonally and following periods of precipitation.

SECTION 5.0

Conclusions and Recommendations

5.1 GENERAL

Based on the conditions disclosed by the soil borings performed as part of this investigation and contingent on improvement and supplemental evaluation of the existing fill materials, Whitestone anticipates that the proposed foundations and pavements may be supported on properly evaluated and approved existing fill materials (when encountered within the northern portion of the proposed canopy area), the underlying natural materials, and/or properly placed structural fill and backfill provided these materials are properly compacted and proofrolled as recommended herein. Subgrade evaluation by construction phase test pits and proofrolling, careful inspection by the owner's geotechnical engineer, and overexcavation and replacement of excessively unsuitable materials will be required in structural areas.

5.2 SITE PREPARATION AND EARTHWORK

Surface Cover Stripping and Demolition: Prior to stripping operations, all utilities should be identified and secured. The existing building and pavements to be demolished and stripped should be removed from within and at least five feet beyond the limits of the proposed building, canopy and pavement areas. Existing structural elements, such as foundation walls, or any concrete foundations, walls or slabs encountered during excavations, should be removed entirely from below proposed foundations and their zones of influence (as determined by lines extending at least one foot laterally beyond footing edges for each vertical foot of depth) and excavated to at least two feet below proposed construction subgrade levels elsewhere. Foundations and slabs may remain in place below these depths below proposed ground-supported slabs, pavements and landscaped areas, provided they do not interfere with future construction; however, any existing slab to remain should be thoroughly broken to allow vertical drainage of infiltrating water. The resulting excavations should be backfilled to elevations consistent with proposed construction subgrades in accordance with the recommendations of Section 5.3. The demolition contractor should be required to perform all earthwork in accordance with the recommendations in this report, including placement of structural fill following foundation removal of the existing building in accordance with Sections 5.2, 5.3, and 5.1.1 of this report. Stripped asphaltic concrete and topsoil should not be used as general structural fill materials.

Surface Preparation/Proofrolling: Prior to placing any fill or subbase materials to raise grades to the desired building pad or pavement subgrade elevations, the existing exposed soils should be compacted to a firm and unyielding surface with several passes in two perpendicular directions of a minimum 10 ton, vibratory drum roller. The surface should be proofrolled with a loaded tandem axle truck in the presence of the geotechnical engineer to help identify loose pockets which may require removal and replacement or further investigation. Fill and backfill should be placed and compacted in accordance with Section 5.3.

Weather Performance Criteria: Because the site soils may soften when exposed to water, every effort must be made to maintain drainage of surface water runoff away from construction areas by grading and limiting the exposure of excavations and prepared subgrades to rainfall. Accordingly, excavation and fill placement procedures should be performed during favorable weather conditions. Overexcavation of saturated soils and replacement with controlled structural fill per Section 5.3 of this report may be required prior to resuming work on disturbed subgrade soils.

Subgrade/Stockpile Protection and Inspection: Every effort should be made to minimize disturbance of the on-site soils by construction traffic and surface runoff. The on-site soils will deteriorate when subjected to repeated construction traffic and may require removal and replacement. These materials also will require wetting and recompaction during dry periods or discing, drying and aeration during wet periods. The contractor should be responsible for protection of subgrades and minimizing of exposure of the site soils to precipitation by covering stockpiles and subgrades with plastic and preventing ponding of water by sealing subgrades before precipitation events and grading the site to allow proper drainage. The services of the geotechnical engineer should be retained to inspect soils conditions during construction and verify the suitability of prepared foundation, floor slab and pavement subgrades for support of design loads.

5.3 STRUCTURAL FILL AND BACKFILL

Imported Fill Material: Any imported material placed as structural fill or backfill to raise elevations or restore design grades should consist of clean, relatively well graded sand or gravel with a maximum particle size of three inches and five percent to 15 percent of material finer than a #200 sieve. Silts, clays, and silty or clayey sands and gravels with higher percentage of fines and with a liquid limit less than 40 and a plasticity index less than 20 may be considered subject to the owner's approval, provided that the required moisture content and compaction controls are met during favorable weather conditions. The material should be free of clay lumps, organics, and deleterious material. Imported structural fill material should be approved by a qualified geotechnical engineer prior to delivery to the site.

On-site Material: Based on the conditions exposed by the soil borings, Whitestone preliminarily anticipates that a majority of the existing fill materials (Stratum 1) and the underlying natural soils (Stratum 2) will be reusable as structural fill and/or backfill below proposed foundations and pavements provided that they are free of deleterious materials and moisture contents are controlled within two percent of the optimum moisture content. Reuse of the existing fill will be contingent on careful inspection in the field by the owner's geotechnical engineer by visual observation and/or test pit excavations during construction in accordance with Section 5.11 of this report. The upper silty sand existing fill materials and natural soils are moderately to highly moisture sensitive. The reuse of these materials typically is possible only during ideal weather conditions and may require mixing with a more granular material, moisture conditioning, and/or drying to facilitate their reuse, workability, and compaction in fill areas. These materials will become increasingly difficult to reuse and compact where they are wetted beyond the optimum moisture content and immediate re-use may not always be practical. Materials that become exceedingly wet will likely require discing and

aerating. As such, construction schedules, budget, and sequences should include site area, time, and similar provisions to allow moisture control operations. Alternatively, imported fill materials may be used to attain the desired grades and expedite earthwork operations during wet weather periods.

Demolition Material: Demolition material may be used as fill material provided the material is properly segregated and processed as recommended herein. Concrete masonry materials should be crushed to a well graded blend with a maximum size of three inches in diameter. The asphaltic materials and deleterious building materials such as wood, insulation, metal, shingles, etc. should not be used as general structural fill material. Milled or recycled asphalt pavement (RAP) may be re-used as granular base for pavements provided that the RAP particle size meets New Jersey Department of Transportation (NJDOT) standard specifications for granular base and no more than 50% of the pavement granular base contains RAP.

Compaction and Placement Requirements: All fill and backfill should be placed in maximum nine-inch loose lifts and compacted to 95 percent of the maximum dry density within two percent of the optimum moisture content as determined by ASTM D 1557 (Modified Proctor). Whitestone recommends using a vibratory drum roller to compact the on-site soils or a small hand-held vibratory compactor within excavations.

Structural Fill Testing: A sample of the imported fill material or any on-site material proposed for reuse as structural fill or backfill should be submitted to the geotechnical engineer for analysis and approval at least one week prior to its use. The placement of all fill and backfill should be monitored by a qualified engineering technician to ensure that the specified material and lift thicknesses are properly installed. A sufficient number of in-place density tests should be performed to ensure that the specified compaction is achieved throughout the height of the fill or backfill. Particular attention should be brought to backfilling efforts following removal of any underground structures encountered during demolition of the current site building.

5.4 GROUNDWATER CONTROL

Static groundwater and/or indications of seasonal high groundwater elevations were not encountered during this exploration with the deepest depth and shallowest elevation explored of approximately 20.0 fbs and 12.0 feet above msl, respectively. Therefore, Whitestone anticipates that static groundwater will be deeper than proposed foundation and utility excavations and does not anticipate the need for extensive dewatering or permanent groundwater control. However, trapped water may be encountered within the existing fill materials or at the existing fill materials/natural soil interface during proposed excavations following wet weather periods. As such, construction phase dewatering of surface runoff, trapped, or perched water should be anticipated for this site that may be controlled through the use of gravity fed sump pumps. Every effort must be made to maintain drainage of surface water runoff away from construction areas by grading and limiting the exposure of excavations to precipitation.

5.5 * FOUNDATIONS

Shallow Foundation Design Criteria: Contingent upon supplemental evaluation of the existing fill materials as described herein, Whitestone recommends supporting the proposed structures on conventional spread and continuous wall footings designed to bear within improved and approved portions of existing fill materials, the underlying natural soils, and/or controlled structural fill provided these materials are properly evaluated, placed and compacted in accordance with Sections 5.2, 5.3, and 5.11 of this report. Foundations bearing within these materials may be designed to impart a maximum allowable net bearing pressure of 3,000 psf. Based on the conditions encountered within the soil borings performed as part of this investigation, Whitestone anticipates encountering existing fill materials below proposed foundation influence zones requiring improvement and supplemental evaluation within the northern portion of the proposed canopy area.

Due to variability within existing fill materials, evidenced by the debris encountered, localized areas of existing fill materials or soft soils may require overexcavation and replacement in controlled lifts. Reuse of the existing fill materials for foundation support will be contingent upon supplemental evaluation, as described in Section 5.11. All footing bottoms should be improved by in-trench compaction in the presence of the geotechnical engineer. Regardless of loading conditions, proposed foundations should be sized no less than minimum dimensions of 24 inches for continuous wall footings and 36 inches for isolated column footings.

Canopy and sign footings should be designed so that the maximum toe pressure due to the combined effect of vertical loads and overturning moment does not exceed the recommended maximum allowable net bearing pressure. In addition, positive contact pressure should be maintained throughout the base of the footings such that no uplift or tension exists between the base of the footings and the supporting soil. Uplift loads should be resisted by the weight of the concrete. Side friction should be neglected when proportioning the footings so that lateral resistance should be provided by friction resistance at the base of the footings. A coefficient of friction against sliding of 0.40 is recommended for use in the design of the foundations bearing within the existing site soils or imported structural fill soils.

Inspection/Overexcavation Criteria: Whitestone recommends that the suitability of the bearing soils along the footing bottoms be verified by a geotechnical engineer prior to placing concrete for the footings. In the event that isolated areas of unsuitable materials are encountered in footing excavations, overexcavation and replacement of the materials or deeper foundation embedment may be necessary to provide a suitable footing subgrade. Any overexcavation to be restored with structural fill will need to extend at least one foot laterally beyond footing edges for each vertical foot of overexcavation. Lateral overexcavation may be eliminated if grade is restored with lean concrete. The bottoms of overexcavated areas should be compacted with static smooth drum rollers, walk-behind compactors, vibrating plates or plate tampers ("jumping jacks") to compact locally disturbed materials and densify any underlying loose zones.

- **Settlement:** Whitestone estimates post construction settlements of proposed building foundations on the order of less than one inch if the recommendations outlined in this report are properly implemented. Differential settlements of building foundations should be less than one-half inch.

Frost Coverage: Footings subject to frost action should be placed at least 36 inches below adjacent exterior grades or the depth required by local building codes to provide protection from frost penetration. Interior footings not subject to frost action may be placed at a minimum depth of 18 inches below the slab subgrade.

5.6 FLOOR SLAB

Whitestone understands that the proposed building is a pre-fabricated, modular type building with a structurally reinforced floor slab which will be supported by the building foundations; as such, the subgrade soils are not expected to provide direct support for the slab. Therefore, subgrade improvement beneath the floor slab is not recommended.

5.7 PAVEMENT DESIGN CRITERIA

General: Following surficial compaction and proofrolling to densify upper loose zones and supplemental evaluation of existing fill materials as described in this report, Whitestone anticipates that approved and improved existing fill materials, the underlying natural coastal plain deposited soils, and/or compacted structural fill and/or backfill placed to raise or restore design elevations are expected to be suitable for support of the proposed pavements provided these materials are properly evaluated, compacted, and proofrolled in accordance with Sections 5.2, 5.3, and 5.11 of this report during favorable weather conditions. Localized overexcavation of unsuitable fill materials may be anticipated due to moderately to highly moisture sensitive, relatively loose existing fill materials containing debris that were encountered within proposed pavement areas. If the unimproved existing fill materials remain below proposed subgrades, increased maintenance, possibly including crack sealing, patching or more frequent re-paving, may be necessary. If the risk of increased maintenance is not acceptable, more extensive subgrade preparation recommendations can be developed. The following pavement section recommendations are based on the assumption that such an increased risk is acceptable. Whitestone would be pleased to prepare alternative recommendations for more substantial subgrade improvements.

Design Criteria: A California Bearing Ratio (CBR) value of five has been assigned to the properly prepared subgrade soils for pavement design purposes. This value was correlated with pertinent soil support values and assumed traffic loads to prepare flexible and rigid pavement designs per the AASHTO *Guide for the Design of Pavement Structures*.

Design traffic loads were assumed based on typical volumes for similar facilities and correlated with 18-kip equivalent single axle loads (ESAL) for a 20 year life. An estimated maximum load of 25,000 ESAL was used for all pavement areas assuming the pavement primarily will accommodate both automobile and limited heavier truck traffic. Actual pavement loads should be less than this value.

Pavement Sections: The recommended flexible pavement section is presented below in tabular format:

FLEXIBLE PAVEMENT SECTION DESIGN		
Layer	Material	Standard Pavement Thickness (Inches)
Asphalt Surface	NJDOT I-5 Surface	1.5
Asphalt Base	NJDOT I-2 Base	2.5
Granular Subbase	NJDOT DGA Subbase	6.0

A rigid concrete pavement should be used to provide suitable support at areas of high traffic or severe turns (such as at fueling island areas). The recommended rigid pavement section is presented below in tabular format:

RIGID PAVEMENT SECTION		
Layer	Material	Thickness (Inches)
Surface	4000 psi air-entrained concrete	6.0
Subbase	NJDOT DGA Subbase	6.0

Additional Design Considerations: The pavement section thickness designs presented in this report are based on the design parameters detailed herein and are contingent on proper construction, inspection, and maintenance. The designs are contingent on achieving the minimum soil support value in the field. To accomplish this requirement, all subgrade soil and supporting fill or backfill must be placed, compacted, and evaluated in accordance with Sections 5.2, 5.3, and 5.11 of this report. Proper drainage must be provided for the pavement structure including appropriate grading and surface water control.

The performance of the pavement also will depend on the quality of materials and workmanship. Whitestone recommends that NJDOT standards for materials, workmanship, and maintenance be applied to this site. Project specifications should include verifying that the installed asphaltic concrete material composition is within tolerance for the specified materials and that the percentage of air voids of the installed pavement is within specified ranges for the respective materials. All rigid concrete pavements should be suitably air-entrained, jointed, and reinforced.

5.8 * RETAINING WALLS/LATERAL EARTH PRESSURES

Whitestone understands that the proposed building foundations are designed assuming that lateral forces will be partially resisted by passive earth pressure against the side of the foundation (as defined by the area projected onto a vertical plane). An assumed passive earth pressure of 250 psf per foot of depth will be used in design. Lateral forces also may be resisted by frictional forces developed at the bottom of the footing using the coefficient of friction described in Section 5.5.

5.9 SEISMIC AND LIQUEFACTION CONSIDERATIONS

Based subsurface profile encountered at the subject site, a site class D is assigned as defined by the *International Building Code 2009 - New Jersey Edition*. Based on the seismic zone and soil profile, liquefaction considerations are considered unlikely and not expected to have a substantial impact on design.

5.10 EXCAVATIONS

The existing site soils, fill materials and natural soils, encountered during this investigation typically are consistent with Type C Soil Conditions as defined by 29 CFR Part 1926 (OSHA) which require a maximum unbraced excavation angle of 1.5:1 (horizontal:vertical). Actual conditions encountered during construction should be evaluated by a competent person (as defined by OSHA) to ensure that safe excavation methods and/or shoring and bracing requirements are implemented.

5.11 SUPPLEMENTAL POST INVESTIGATION SERVICES

Supplemental Evaluation of Existing Fill Materials and Inaccessible Areas: The conditions disclosed by the soil borings preliminarily indicate that the existing fill materials will be suitable for foundation, floor slab and pavement support with some anticipated overexcavation, due to possible variability within existing fill materials evidenced by the debris encountered, and with increased risk of future maintenance within proposed pavement areas where unimproved existing fill remains. Whitestone also anticipates that the majority of the existing fill materials will be suitable for reuse as structural fill with segregation of any objectionable debris encountered and proper moisture control. However, there is a potential risk of variability in existing fill, which may not be disclosed by soils borings performed throughout the site due to the limited sample size exposed by conventional drilling and sampling methods. Whitestone recommends confirming further the condition of the existing fill for foundation, floor slab and pavement support and/or re-use as structural fill by means of supplemental evaluation either prior to or during the early stages of construction to identify areas requiring removal and possible uncontrolled conditions or deleterious materials not disclosed by the soil borings conducted during this exploration. Whitestone recommends confirming further the condition of the existing fill by means of supplemental test pit excavations either prior to or in the early stages of construction to enable an assessment for the depths, areal extent, presence of voids,

uncontrolled conditions, or additional deleterious materials. If unsuitable conditions are encountered, alternative recommendations, such as overexcavation and replacement, or deeper foundation embedment may be required. The central portion of the proposed canopy footprint and north central portion of proposed pavement area were not accessible at the time of Whitestone's field investigation due to the presence of existing structures. As such, soil conditions in presently inaccessible areas below the existing structures also should be evaluated during the early stages of construction following demolition to verify that the underlying soil conditions are consistent with those encountered during this subsurface exploration.

Construction Inspection and Monitoring: The owner's geotechnical engineer should perform inspection, testing, and consultation during construction as described in previous sections of this report. Monitoring and testing should also be performed to verify that the building is properly demolished and backfilled properly, any existing surface cover materials encountered at the site are properly removed, suitable materials are used for controlled fill, and that they are properly placed and compacted over suitable subgrade soils. The services of the geotechnical engineer should be retained to inspect soil conditions during construction and verify the suitability of prepared foundation, floor slab, and pavement subgrades for support of design loads. The owner's geotechnical engineer should be present to witness the proofrolling of all subgrades prior to foundation, floor slab and pavement support and verify any necessary overexcavation and adequacy of structural backfill placement.

5.12 UST TIE-DOWNS AND EMBEDMENT

No new UST construction is proposed. Whitestone should be notified if new USTs are proposed.

SECTION 6.0

General Comments

Supplemental recommendations may be required upon finalization of construction plans or if significant changes are made in the characteristics or location of the proposed structure. Soil bearing conditions should be checked at the appropriate time for consistency with those conditions encountered during Whitestone's geotechnical investigation.

The recommendations presented herein should be utilized by a qualified engineer in preparing the project plans and specifications. The engineer should consider these recommendations as minimum physical standards which may be superseded by local and regional building codes and structural considerations. These recommendations are prepared for the sole use of Bohler Engineering NJ, LLC for the specific project detailed and should not be used by any third party. These recommendations are relevant to the design phase and should not be substituted for construction specifications.

The possibility exists that conditions between borings may differ from those at specific boring locations, and conditions may not be as anticipated by the designers or contractors. In addition, the construction process may alter soil and rock conditions. Therefore, experienced geotechnical personnel should observe and document the construction procedures used and the conditions encountered.

Whitestone assumes that a qualified contractor will be employed to perform the construction work, and that the contractor will be required to exercise care to ensure all excavations are performed in accordance with applicable regulations and good practice. Particular attention should be paid to avoiding damaging or undermining adjacent properties and maintaining slope stability.

Whitestone recommends that the services of the geotechnical engineer be engaged to test and evaluate the soils in the footing excavations prior to concreting in order to determine that the soils will support the bearing capacities. Monitoring and testing also should be performed to verify that suitable materials are used for controlled fills and that they are properly placed and compacted over suitable subgrade soils.

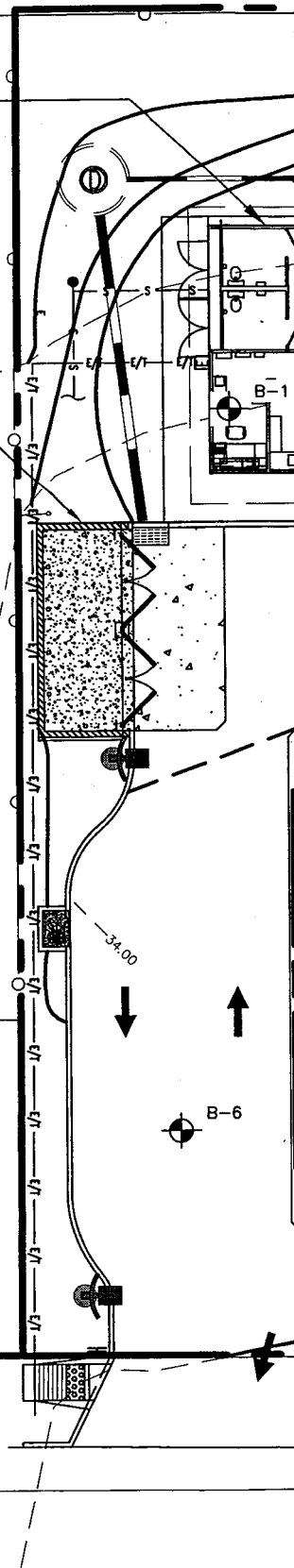
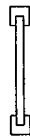
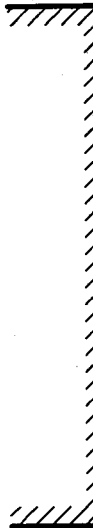
The exploration and analysis of the foundation conditions reported herein are considered sufficient in detail and scope to form a reasonable basis for the foundation design. The recommendations submitted for the proposed construction are based on the available soil information and the design details furnished by Bohler Engineering NJ, LLC. Deviations from the noted subsurface conditions encountered during construction should be brought to the attention of the geotechnical engineer.

The geotechnical engineer warrants that the findings, recommendations, specifications, or professional advice contained herein have been promulgated after being prepared in accordance with generally accepted professional engineering practice in the fields of foundation engineering, soil mechanics, and engineering geology. No other warranties are implied or expressed.

FIGURE 1
Boring Location Plan

PROPOSED "HESS EXPRESS"
MODULAR BUILDING
(1660 S.F.)
FFE = 34.45

TRASH ENCLOSURE



ND

BORING LOCATION (APPROX.)

SUBJECT PROPERTY BOUNDARY

NCE

4, 2012 GRADING, DRAINAGE &
ENGINEERING NJ, LLC.



WHITESTONE ASSOCIATES, INC.

35 TECHNOLOGY DRIVE
WARREN, NEW JERSEY 07059
908.668.7777 • 908.754.5936 FAX

BORING LOCATION PLAN

TITLE:

CLIENT: BOHLER ENGINEERING NJ, LLC

PROJECT: PROPOSED HESS SERVICE STATION #30279
1672 N.J.S.H. ROUTE 88 AND JOHN STREET
BRICK TOWNSHIP, OCEAN COUNTY, NEW JERSEY

PROJECT #:
GJ1212265.000

BY: KR

PROJ. MGR.:
LWK

DATE:
10/16/12

SCALE:
1"=30'

FIGURE:
1

APPENDIX A
Records of Subsurface
Exploration



RECORD OF SUBSURFACE EXPLORATION

Boring No.: B-1

(Page 1 of 1)

Project: Proposed Hess Service Station #30279		WAI Project No.: GJ1212265.000	
Location: 1672 N.J.S.H. Route 88 and John Street; Brick Twp., Ocean County, NJ		Client: Bohler Engineering NJ, LLC	
Surface Elevation: ±33.0 ft above msl	Date Started: 10/10/2012	Water Depths/Elevations (feet / feet msl)	Cave-in Depths/Elevations (feet / feet msl)
Termination Depth: 20.0 feet bgs	Date Completed: 10/10/2012		
Proposed Location: Building	Logged By: J. Capozzolo	While Drilling: NE ☒	
Drilling/Test Method: HSA / SPT	Contractor: Beechwood	At Completion: NE ☒	At Completion: 11.0 ☒
	Equipment: CME-55	24 Hours: --- ☒	24 Hours: ---

Sample Information					Depth (feet)	Strata	DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (feet)	Number	Type	Blows Per 6" Recovery	N				
					0.0	TS	2" Dark Brown Topsoil	
0.0 - 2.0	S-1	X	4-5-6-7 (18 in.)	11	0.2	Coastal Plain Deposits	Very Dark Yellowish-Brown Poorly Graded Sand with Silt, Moist, Medium Dense (SP-SM)	
2.0 - 4.0	S-2	X	5-5-6-6 (20 in.)	11			As Above, Dark Yellowish-Brown (SP-SM)	
4.0 - 6.0	S-3	X	4-4-4-4 (19 in.)	8	4.0			
6.0 - 8.0	S-4	X	4-7-8-13 (17 in.)	15	5.0		Strong Brown Silty Sand, Moist, Loose (SM)	
8.0 - 10.0	S-5	X	13-18-24-33 (8 in.)	42	6.0			
					10.0		Yellowish-Brown Poorly Graded Sand, Moist, Medium Dense (SP)	
							As Above, Dense (SP)	
13.0 - 15.0	S-6	X	8-10-10-11 (13 in.)	20	15.0		As Above, Medium Dense (SP)	
18.0 - 20.0	S-7	X	17-16-18-18 (20 in.)	34	19.5		As Above, with Gravel, Dense (SP)	4" Zone of Rounded Gravel @ Approximately 19.1 fbs to 19.5 fbs
					20.0		Brown and Gray Mottled Poorly Graded Sand, Moist, Dense (SP)	
							Boring B-1 Terminated at a Depth of 20.0 Feet Below Ground Surface	
					25.0			

NOTES: NE = Not Encountered. NR = No Recovery

RECORD OF SUBSURFACE EXPLORATION 12265legs.wpd 10/11



RECORD OF SUBSURFACE EXPLORATION

Boring No.: B-2

(Page 1 of 1)

Project: Proposed Hess Service Station #30279		WAI Project No.: GJ1212265.000	
Location: 1672 N.J.S.H. Route 88 and John Street; Brick Twp., Ocean County, NJ		Client: Bohler Engineering NJ, LLC	
Surface Elevation: ±32.0 ft above msl	Date Started: 10/10/2012	Water Depths/Elevations (feet / feet msl)	Cave-in Depths/Elevations (feet / feet msl)
Termination Depth: 20.0 feet bgs	Date Completed: 10/10/2012		
Proposed Location: Building	Logged By: J. Capozzolo	While Drilling: NE ▼	
Drilling/Test Method: HSA / SPT	Contractor: Beechwood	At Completion: NE ▼	At Completion: 7.0
	Equipment: CME-55	24 Hours: --- ▼	24 Hours: ---

Sample Information					Depth (feet)	Strata	DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (feet)	Number	Type	Blows Per 6" Recovery	N				
					0.0	TS	3" Dark Brown Topsoil	
					0.3	Coastal Plain Deposits	Dark Yellowish-Brown Poorly Graded Sand with Silt, Moist (SP-SM)	
			Vacuum-Cleared to 4.0 fbg					
4.0 - 6.0	S-1	X	3-4-6-10 (18 in.)	10	5.0		Strong Brown Poorly Graded Sand with Silt and Gravel, Moist, Medium Dense (SP-SM)	
6.0 - 8.0	S-2	X	10-15-20-22 (12 in.)	35	6.0		Yellowish-Brown Poorly Graded Sand with Gravel, Moist, Dense (SP)	
8.0 - 9.3	S-3	X	22-35-50/3" (7 in.)	85/9"			As Above, No Gravel, Very Dense (SP)	
					10.0			
13.0 - 15.0	S-4	X	16-20-25-34 (8 in.)	45	15.0		As Above, Dense (SP)	
18.0 - 20.0	S-5	X	15-21-23-26 (12 in.)	44	20.0		As Above, with Gravel (SP)	
					25.0		Boring B-2 Terminated at a Depth of 20.0 Feet Below Ground Surface	

NOTES: NE = Not Encountered, NR = No Recovery



RECORD OF SUBSURFACE EXPLORATION

Boring No.: B-3

(Page 1 of 1)

Project: Proposed Hess Service Station #30279		WAI Project No.: GJ1212265.000	
Location: 1672 N.J.S.H. Route 88 and John Street; Brick Twp., Ocean County, NJ		Client: Bohler Engineering NJ, LLC	
Surface Elevation: ±33.5 ft above msl	Date Started: 10/10/2012	Water Depths/Elevations (feet / feet msl)	Cave-in Depths/Elevations (feet / feet msl)
Termination Depth: 18.8 feet bgs	Date Completed: 10/10/2012		
Proposed Location: Canopy	Logged By: J. Capozzolo	While Drilling: NE ▼	At Completion: --- ▼
Drilling/Test Method: HSA / SPT	Contractor: Beechwood	At Completion: NE ▼	At Completion: --- ▼
	Equipment: CME-55	24 Hours: --- ▼	24 Hours: --- ▼

Sample Information					Depth (feet)	Strata	DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (feet)	Number	Type	Blows Per 6" Recovery	N				
					0.0	P	7" Asphaltic Concrete Pavement, No Apparent Subbase	
					0.6	FILL	Strong Brown Silty Sand with Gravel, Trace Asphalt Fragments, Moist (FILL)	
			Vacuum-Cleared to 4.0 fbs					
4.0 - 6.0	S-1	X	1-2-3-4 (18 in.)	5	5.0		As Above (FILL)	
					6.0	Coastal Plain Deposits	Strong Brown Poorly Graded Sand with Silt and Gravel, Moist, Loose (SP-SM)	
6.0 - 8.0	S-2	X	11-16-24-40 (15 in.)	40			Strong Brown Poorly Graded Sand, Moist, Dense (SP)	
8.0 - 10.0	S-3	X	14-21-28-33 (7 in.)	49	10.0		As Above, Dark Yellowish-Brown (SP)	
13.0 - 14.3	S-4	X	17-32-50/3" (14 in.)	82/9"	15.0		As Above, Yellowish-Brown, Very Dense (SP)	
18.0 - 18.8	S-5	X	33-50/4" (6 in.)	50/4"	20.0		As Above (SP)	
					25.0		Boring B-3 Terminated at a Depth of 18.8 Feet Below Ground Surface Due to Spoon Refusal on Very Dense Coastal Plain Deposits	

NOTES: NE = Not Encountered, NR = No Recovery



RECORD OF SUBSURFACE EXPLORATION

Boring No.: B-4

(Page 1 of 1)

Project: Proposed Hess Service Station #30279		WAI Project No.: GJ1212265.000	
Location: 1672 N.J.S.H. Route 88 and John Street; Brick Twp., Ocean County, NJ		Client: Bohler Engineering NJ, LLC	
Surface Elevation: ±33.0 ft above msl	Date Started: 10/10/2012	Water Depths/Elevations (feet / feet msl)	Cave-in Depths/Elevations (feet / feet msl)
Termination Depth: 20.0 feet bgs	Date Completed: 10/10/2012		
Proposed Location: Canopy	Logged By: J. Capozzolo	While Drilling: NE	At Completion: ---
Drilling/Test Method: HSA / SPT	Contractor: Beechwood	At Completion: NE	At Completion: ---
	Equipment: CME-55	24 Hours: ---	24 Hours: ---

Sample Information					Depth (feet)	Strata	DESCRIPTION OF MATERIALS (Classification)	REMARKS	
Depth (feet)	Number	Type	Blows Per 6" Recovery	N					
					0.0	P	3" Asphaltic Concrete Pavement 6" Silty Sand and Gravel Subbase		
			Vacuum-Cleared to 4.0 fbgs		0.8	Coastal Plain Deposits	Strong Brown Poorly Graded Sand with Silt and Gravel, Moist (SP-SM)		
4.0 - 6.0	S-1	X	2-3-5-5 (9 in.)	8	5.0		Strong Brown and Light Brown Poorly Graded Sand with Silt, Moist, Loose (SP-SM)	Faint Mottling Observed	
6.0 - 8.0	S-2	X	9-17-22-36 (12 in.)	39	6.0		Strong Brown Poorly Graded Sand with Gravel, Moist, Dense (SP)		
8.0 - 10.0	S-3	X	17-25-32-33 (10 in.)	57	10.0			As Above, Yellowish-Brown, Very Dense (SP)	3" Layer of Rounded Gravel @ 9.2fbgs to 9.5 fbgs
13.0- 15.0	S-4	X	8-8-9-9 (17 in.)	17	15.0			As Above, Strong Brown to Yellowish-Brown, Medium Dense (SP)	
18.0 - 20.0	S-5	X	15-22-30-31 (8 in.)	52	20.0			As Above, Strong Brown, Very Dense (SP)	
					25.0		Boring B-4 Terminated at a Depth of 20.0 Feet Below Ground Surface		

NOTES: NE = Not Encountered, NR = No Recovery



RECORD OF SUBSURFACE EXPLORATION

Boring No.: B-5

(Page 1 of 1)

Project: Proposed Hess Service Station #30279					WAI Project No.: GJ1212265.000				
Location: 1672 N.J.S.H. Route 88 and John Street; Brick Twp., Ocean County, NJ					Client: Bohler Engineering NJ, LLC				
Surface Elevation: ±33.0 ft above msl		Date Started: 10/10/2012		Water Depths/Elevations (feet / feet msl)		Cave-in Depths/Elevations (feet / feet msl)			
Termination Depth: 6.0 feet bgs		Date Completed: 10/10/2012							
Proposed Location: Pavement		Logged By: J. Capozzolo		While Drilling: NE ▼		At Completion: DNC			
Drilling/Test Method: HSA / SPT		Contractor: Beechwood		At Completion: NE ▼		24 Hours: --- ▼			
		Equipment: CME-55		24 Hours: --- ▼					
Sample Information					Depth (feet)	Strata	DESCRIPTION OF MATERIALS (Classification)	REMARKS	
Depth (feet)	Number	Type	Blows Per 6" Recovery	N					
					0.0	P	3" Asphaltic Concrete Pavement		
					0.5		3" Silty Sand and Gravel Subbase		
			Vacuum-Cleared to 4.0 fbg			Coastal Plain Deposits	Strong Brown Silty Sand with Gravel, Moist (SM)		
					4.0				
4.0 - 6.0	S-1	X	2-3-7-10 (23 in.)	10	5.0		Strong Brown Poorly Graded Sand with Silt, Moist, Medium Dense (SP-SM)		
					6.0				
							Boring B-5 Terminated at a Depth of 6.0 Feet Below Ground Surface		
					10.0				
					15.0				
					20.0				
					25.0				

NOTES: DNC = Did Not Cave, NE = Not Encountered, NR = No Recovery

RECORD OF SUBSURFACE EXPLORATION 12265logs.wpd 10-11



RECORD OF SUBSURFACE EXPLORATION

Boring No.: B-6

(Page 1 of 1)

Project: Proposed Hess Service Station #30279		WAI Project No.: GJ1212265.000	
Location: 1672 N.J.S.H. Route 88 and John Street; Brick Twp., Ocean County, NJ		Client: Bohler Engineering NJ, LLC	
Surface Elevation: ±33.5 ft above msl	Date Started: 10/10/2012	Water Depths/Elevations (feet / feet msl)	Cave-in Depths/Elevations (feet / feet msl)
Termination Depth: 6.0 feet bgs	Date Completed: 10/10/2012		
Proposed Location: Pavement	Logged By: J. Capozzolo	While Drilling: NE ☒	At Completion: DNC ☒
Drilling/Test Method: HSA / SPT	Contractor: Beechwood	At Completion: NE ☒	24 Hours: --- ☒
	Equipment: CME-55	24 Hours: --- ☒	

Sample Information					Depth (feet)	Strata	DESCRIPTION OF MATERIALS (Classification)	REMARKS
Depth (feet)	Number	Type	Blows Per 6" Recovery	N				
					0.0	P	3" Asphaltic Concrete Pavement	
					0.5	FILL	3" Silty Sand and Gravel Subbase	
			Vacuum-Cleared to 4.0 fbgs				Strong Brown Silty Sand with Gravel, Trace Fine Roots, Moist (FILL)	
4.0 - 6.0	S-1	X	3-7-7-12 (22 in.)	14	5.0		As Above, No Roots (FILL)	
					6.0	CPD	Strong Brown Poorly Graded Sand with Gravel, Moist. Medium Dense (SP)	
							Boring B-6 Terminated at a Depth of 6.0 Feet Below Ground Surface	
					10.0			
					15.0			
					20.0			
					25.0			

Piece of Mulch Observed in Hand Excavated Hole @ Approximately 2.5 fbgs

NOTES: DNC = Did Not Cave, NE = Not Encountered, NR = No Recovery

RECORD OF SUBSURFACE EXPLORATION 12265logs.wpd 10/11