

July 16, 2021

MEMORANDUM

**FORMAL ACTIONS & RECOMMENDATIONS #1
MEETING OF 07-22-21**

To: Conservation Commission/Inland Wetlands and Watercourses Agency

From: Tom Mocko, Environmental Planner

Re: **Application of Carrier Construction, LLC** (c/o Gino Carrier, President) for: **an inland wetlands and watercourses permit; and a recommendation to the Town Plan & Zoning Commission concerning final subdivision approval** – proposed 7-lot **Subdivision of 1040 Main Street** – 7 frontage lots and some 650 feet of road construction on 9.3 acres – Residence AA Zone and Groundwater Protection (overlay) Zone 1 – Alter & Pearson, LLC – Davison Environmental, Soil and Wetland Scientist and Wildlife Biologist – Wolff Engineering, C.E. – GEI Consultants, Inc.

LOCATION: Please see the location map provided on the cover sheet of the site plans within your packet.

UPDATE: Please refer to the previous staff memorandum distributed for the June 24, 2021 meeting in which this item was postponed.

Additional soils sampling and testing occurred to determine if the residual lead has any mobility concerns as questioned by Vice Chairman Temple. The results follow this memorandum and present no concerns when the excavated soils are used as clean fill elsewhere.

The project's nitrogen loading calculations were submitted and reviewed by staff. They are found to be acceptable and are below the regulatory threshold of 10mg/L or ppm; the nitrogen loading concentration was computed to be 4.1mg/L or ppm.

The most recent draft motions also follow this memorandum.

TM:gfm

REVISED DRAFT MOTION FOR A WETLANDS PERMIT 07/16/21

MOVE, that the Inland Wetlands and Watercourses Agency issues an inland wetlands and watercourses permit to Carrier Construction, LLC for culvert replacement between two wetland areas, a stormwater management structure within the upland review area and its subsequent discharges into the wetlands, and portions of road construction and house lot development within the upland review area for the proposed 7-lot subdivision at 1040 Main Street, in accordance with plans on file in the Office of Community Development, and in compliance with the following conditions:

1. Adherence to the Town Engineer's memorandum, dated June 15, 2021.
2. The optimal seeding dates (from whenever the snow melts until May 15) and optimal seeding depth (between 1 to 1.5 inches) shall be added to the subdivision site plans where the warm season grass mix appears within the submitted plans.
3. The subdivision's site plans shall be revised prior to any filing on the land records to indicate and require three-foot deep catch basin sumps in order to provide enhanced sediment removal.
4. A private conservation easement shall be established as generally depicted on the site plans and this area shall henceforth not be disturbed from its present condition until the conservation easement is in force. The precise delineation shall be recorded by bearings and distances. The easement shall be recorded on the land records. The conservation easement shall be marked with oak stakes labeled "Conservation Easement" with waterproof ink and tied with red flags. These stakes are to be located at each change of boundary direction and at every 100 foot interval on straightaways. All conservation easement corners shall be permanently marked with iron pins. In addition, numbered "Glastonbury Conservation Easement" signs, available from the Town's Office of Community Development, shall be nailed to trees that are within two feet of the easement area's boundary line, at approximately 100 foot intervals. The sign shall be installed facing outwards at about 7 feet above grade, using two 3 inch or greater aluminum or galvanized nails, with the nails left protruding from tree trunks about 1-1/2". Where no trees are suitable 7 foot metal or long-lived wood posts with easement signs attached shall be used. Such placement of signs shall be performed under the supervision of a Licensed Land Surveyor prior to land-clearing or earth-moving activities and notice shall be provided to the Town's Office of Community Development upon its completion.
5. In order to protect the physical, chemical and biological characteristics of the wetlands and watercourses and water quality, the following conditions shall apply:
 - a. Pesticides and herbicides shall not be disposed of within the designated conservation easement areas;

- b. Pesticides and herbicides shall only be applied utilizing best management practices for integrated pest management; and
 - c. The developer agrees to recite these conditions in the deed to the individual property(ies).
6. Healthy mature trees shall be preserved and saved when possible. Said trees shall be protected with the use of high visibility construction fence during construction or otherwise protected as required by staff.
 7. Installation of soil erosion and sedimentation control and stabilization measures shall be the Permittee's responsibility. Once installed these measures shall then be inspected by the Environmental Planner prior to land disturbance activities. Afterwards it then shall be the Permittee's responsibility to inspect these control measures during, and immediately following, substantial storm events and maintain and/or replace the control measures, when needed, on a regular basis until the site is vegetatively stabilized. Hay bales shall be replaced every 60 days. The Environmental Planner is hereby authorized to require additional soil erosion and sediment controls and stabilization measures to address situations that arise on the site.
 8. Except for the construction activities of the detention ponds and storm drainage system, earthen material shall not be stockpiled in regulated areas. Stockpiles shall be mulched, temporarily seeded or otherwise protected.
 9. Plot plans developed for building permits shall not exceed encroachment into the regulated areas beyond that indicated on the previously cited plans.
 10. The Permittee shall be fully responsible for damages caused by all activities undertaken pursuant to this permit that may have a detrimental effect on wetlands and/or watercourses, and all such activities that cause erosion and sedimentation problems. If the Permittee sells individual building lots to other builders, the Permittee shall thoroughly review all conditions of this permit with the buyer, and the buyer shall consult with the Environmental Planner before the buyer commences any work on the site.
 11. Prior to the issuance of a Certificate of Occupancy, certification from a professional engineer shall be required confirming that the stormwater management system was constructed in conformance with the approved design.

----- Forwarded message -----

From: **Brink, Doug** <cbrink@geiconsultants.com>
Date: Tue, Jul 13, 2021 at 4:46 PM
Subject: SPLP Testing Results
To: Meghan Hope <mhope@alterpearson.com>
Cc: Gino Carrier <ginoc@bycarrier.com>

Good afternoon Meghan,

Attached are the soil results from the composite sampling that was conducted on the 1040 Main Street parcel by GEI on July 8, 2021.

Sampling was overseen by myself and Emily Perko a GEI Project Scientist. Carrier Construction provided the excavator and operator to conduct the advancement of the test pits.

As provided on the attached figure, a total of five test pits, two within the sand hill and three within the proposed detention pond, were advanced under the direction of GEI. Discrete soil samples were collected within each of the test pits at the depth intervals of 0-1', 5' and 10'. The discrete soil samples from each test pit were then composited into one soil sample that represented the soil within the test pit (for a total of five soil samples). The soil samples were submitted to Phoenix Environmental laboratory for the analysis of leachable lead via the synthetic precipitation leaching procedure (SPLP).

Analytical results from the sampling conducted did not detect the presence of SPLP lead in four of the five samples. SPLP lead was detected at a concentration of 0.011 mg/L within the sample collected from TP-3, which is below the GA pollutant mobility criteria of 0.015 mg/L. The surficial soils at test pit TP-3 contained some minor debris believed to be associated with the former roadway.

Please let me know if you have any questions or comments.

Thank you

Charles D. Brink, LEP

Senior Project Manager



GEI Consultants
Consulting Engineers & Scientists

GEI Consultants, Inc.

455 Winding Brook Drive, Suite 201 | Glastonbury, CT 06033

T: 860.368.5410 | M: 860.918.2654

www.geiconsultants.com | [vCard](#) | [map](#) | [LinkedIn](#) | [Twitter](#) | [Facebook](#)

**Table 1. Summary of Soil Analytical Results
1040 Main Street
Glastonbury, CT**

	Sample ID	TP-1	TP-2	TP-3	TP-4	TP-5
	Sample Date	7/8/2021	7/8/2021	7/8/2021	7/8/2021	7/8/2021
Units	GA PMC					
Metals, SPLP						
SPLP Lead	0.015	< 0.01	< 0.01	0.011	< 0.01	< 0.01

Notes:

GA PMC - Pollutant Mobility Criteria for a GA Classified Groundwater Area
ug/L - micrograms per Liter



Tuesday, July 13, 2021

Attn: Doug Brink
GEI Consultants
455 Winding Brook Drive
Suite 201
Glastonbury, CT 06033

Project ID: 1040 MAIN ST-GLASTONBURY
SDG ID: GCI69836
Sample ID#s: CI69836 - CI69840

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in cursive script that reads "Phyllis Shiller".

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

July 13, 2021

SDG I.D.: GCI69836

Project ID: 1040 MAIN ST-GLASTONBURY

Client Id	Lab Id	Matrix
TP 1 COMPOSITE	CI69836	SOIL
TP 2 COMPOSITE	CI69837	SOIL
TP 3 COMPOSITE	CI69838	SOIL
TP 4 COMPOSITE	CI69839	SOIL
TP 5 COMPOSITE	CI69840	SOIL



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Analysis Report
 July 13, 2021

FOR: Attn: Doug Brink
 GEI Consultants
 455 Winding Brook Drive
 Suite 201
 Glastonbury, CT 06033

Sample Information

Matrix: SOIL
 Location Code: GEI
 Rush Request: Standard
 P.O.#: 219248

Custody Information

Collected by:
 Received by: SW
 Analyzed by: see "By" below

Date Time
 07/08/21 8:45
 07/08/21 11:48

Laboratory Data

SDG ID: GCI69836
 Phoenix ID: CI69836

Project ID: 1040 MAIN ST-GLASTONBURY
 Client ID: TP 1 COMPOSITE

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
SPLP Lead	< 0.010	0.010	mg/L	1	07/10/21	CPP	SW6010D
SPLP Metals Digestion	Completed				07/09/21	AB/AB	SW3010A
SPLP Extraction for Metals	Completed				07/08/21	AB	SW1312

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director

July 13, 2021

Reviewed and Released by: Rashmi Makol, Project Manager



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Analysis Report

July 13, 2021

FOR: Attn: Doug Brink
 GEI Consultants
 455 Winding Brook Drive
 Suite 201
 Glastonbury, CT 06033

Sample Information

Matrix: SOIL
 Location Code: GEI
 Rush Request: Standard
 P.O.#: 219248

Custody Information

Collected by:
 Received by: SW
 Analyzed by: see "By" below

Date Time

07/08/21 9:00
 07/08/21 11:48

Laboratory Data

SDG ID: GCI69836
 Phoenix ID: CI69837

Project ID: 1040 MAIN ST-GLASTONBURY
 Client ID: TP 2 COMPOSITE

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
SPLP Lead	< 0.010	0.010	mg/L	1	07/10/21	CPP	SW6010D
SPLP Metals Digestion	Completed				07/09/21	AB/AB	SW3010A
SPLP Extraction for Metals	Completed				07/08/21	AB	SW1312

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director

July 13, 2021

Reviewed and Released by: Rashmi Makol, Project Manager



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 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

July 13, 2021

FOR: Attn: Doug Brink
 GEI Consultants
 455 Winding Brook Drive
 Suite 201
 Glastonbury, CT 06033

Sample Information

Matrix: SOIL
 Location Code: GEI
 Rush Request: Standard
 P.O.#: 219248

Custody Information

Collected by:
 Received by: SW
 Analyzed by: see "By" below

Date

07/08/21
 07/08/21

Time

9:20
 11:48

Laboratory Data

SDG ID: GCI69836
 Phoenix ID: CI69838

Project ID: 1040 MAIN ST-GLASTONBURY
 Client ID: TP 3 COMPOSITE

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
SPLP Lead	0.011	0.010	mg/L	1	07/10/21	CPP	SW6010D
SPLP Metals Digestion	Completed				07/09/21	AB/AB	SW3010A
SPLP Extraction for Metals	Completed				07/08/21	AB	SW1312

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director

July 13, 2021

Reviewed and Released by: Rashmi Makol, Project Manager



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 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

July 13, 2021

FOR: Attn: Doug Brink
 GEI Consultants
 455 Winding Brook Drive
 Suite 201
 Glastonbury, CT 06033

Sample Information

Matrix: SOIL
 Location Code: GEI
 Rush Request: Standard
 P.O.#: 219248

Custody Information

Collected by:
 Received by: SW
 Analyzed by: see "By" below

Date

07/08/21
 07/08/21

Time

10:00
 11:48

Laboratory Data

SDG ID: GCI69836
 Phoenix ID: CI69839

Project ID: 1040 MAIN ST-GLASTONBURY
 Client ID: TP 4 COMPOSITE

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
SPLP Lead	< 0.010	0.010	mg/L	1	07/10/21	CPP	SW6010D
SPLP Metals Digestion	Completed				07/09/21	AB/AB	SW3010A
SPLP Extraction for Metals	Completed				07/08/21	AB	SW1312

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director

July 13, 2021

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

July 13, 2021

FOR: Attn: Doug Brink
GEI Consultants
455 Winding Brook Drive
Suite 201
Glastonbury, CT 06033

Sample Information

Matrix: SOIL
Location Code: GEI
Rush Request: Standard
P.O.#: 219248

Custody Information

Collected by:
Received by: SW
Analyzed by: see "By" below

Date

07/08/21
07/08/21

Time

9:40
11:48

Laboratory Data

SDG ID: GCI69836
Phoenix ID: CI69840

Project ID: 1040 MAIN ST-GLASTONBURY
Client ID: TP 5 COMPOSITE

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
SPLP Lead	< 0.010	0.010	mg/L	1	07/10/21	CPP	SW6010D
SPLP Metals Digestion	Completed				07/09/21	AB/AB	SW3010A
SPLP Extraction for Metals	Completed				07/08/21	AB	SW1312

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director

July 13, 2021

Reviewed and Released by: Rashmi Makol, Project Manager



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 Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report
 July 13, 2021

QA/QC Data

SDG I.D.: GCI69836

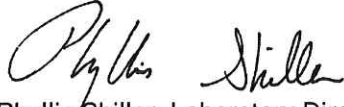
Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 582885 (mg/L), QC Sample No: CI62804 (CI69836, CI69837, CI69838, CI69839, CI69840)													
<u>ICP Metals - SPLP Extraction</u>													
Lead	BRL	0.010	<0.010	<0.010	NC	87.8	85.9	2.2	87.5			80 - 120	20

Comment:

Additional Criteria: LCS acceptance range is 80-120% MS acceptance range 75-125%.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

- RPD - Relative Percent Difference
- LCS - Laboratory Control Sample
- LCSD - Laboratory Control Sample Duplicate
- MS - Matrix Spike
- MS Dup - Matrix Spike Duplicate
- NC - No Criteria
- Intf - Interference


 Phyllis Shiller, Laboratory Director
 July 13, 2021

Tuesday, July 13, 2021
Criteria: CT: GAM, RC
State: CT

Sample Criteria Exceedances Report

GCI69836 - GEI

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL	Analysis Units
--------	-------	-----------------	----------	--------	----	----------	----	----------------

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedances. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedance information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Laboratory Name: Phoenix Environmental Labs, Inc.

Client: GEI Consultants

Project Location: 1040 MAIN ST-GLASTONBURY

Project Number:

Laboratory Sample ID(s): CI69836-CI69840

Sampling Date(s): 7/8/2021

List RCP Methods Used (e.g., 8260, 8270, et cetera) 1311/1312, 6010

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1A	Were the method specified preservation and holding time requirements met?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1B	<u>VPH and EPH methods only:</u> Was the VPH or EPH method conducted without significant modifications (see section 11.3 of respective RCP methods)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
2	Were all samples received by the laboratory in a condition consistent with that described on the associated Chain-of-Custody document(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3	Were samples received at an appropriate temperature (< 6 Degrees C)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5	a) Were reporting limits specified or referenced on the chain-of-custody? b) Were these reporting limits met?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
7	Are project-specific matrix spikes and laboratory duplicates included in the data set?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or 1B is "No", the data package does not meet the requirements for "Reasonable Confidence". This form may not be altered and all questions must be answered.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.

Authorized Signature: Rashmi Makol **Position:** Project Manager

Printed Name: Rashmi Makol **Date:** Tuesday, July 13, 2021

Name of Laboratory Phoenix Environmental Labs, Inc.

This certification form is to be used for RCP methods only.



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



RCP Certification Report

July 13, 2021

SDG I.D.: GCI69836

SDG Comments

Metals Analysis:

The client requested a shorter list of elements than the 6010 RCP list. Only Lead is reported as requested on the chain of custody.

Temperature above 6C:

The samples were received in a cooler with ice packs. The samples were delivered to the Laboratory within a short period of time after sample collection. Therefore no significant bias is suspected.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

BLUE 07/10/21 08:24 Cindy Pearce, Chemist 07/10/21

CI69836, CI69837, CI69838, CI69839, CI69840

The initial calibration met criteria.

The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.

The continuing calibration blanks were less than the reporting level for the elements reported.

The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria. The linear range is defined daily by the calibration range.

The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.

The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.

The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 582885 (CI62804)

CI69836, CI69837, CI69838, CI69839, CI69840

All LCS recoveries were within 80 - 120 with the following exceptions: None.

All LCSD recoveries were within 80 - 120 with the following exceptions: None.

All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

Additional Criteria: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Temperature Narration

The samples were received at 6.3C with cooling initiated.

(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

CHAIN OF CUSTODY RECORD

Temp 6.3 °C Pg of

Data Delivery/Contact Options:

Fax: Phone: Email:

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
 Email: info@phoenixlabs.com Fax (860) 645-0823
 Client Services (860) 645-8726



Project: 1040 Main St - Granbury
 Report to: Day Drink
 Invoice to: GET PAY CDE
 QUOTE #

Customer: GET Consultants Inc
 Address: 455 Winding Brook Dr. Suite 20
Granbury, CT 06033
(860) 368-5300

Project P.O.: 210248
 This section MUST be completed with Bottle Quantities.

Sampler's Signature: [Signature] Date: 7/8/21
 Client-Sample - Information - Identification
 Matrix Code: DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
 RW=Raw Water SE=Sludge S=Soil SD=Solid W=Wipe Oil=Oil
 B=Bulk L=Liquid X=(Other)

Analysis Request

MS/MSD	GL Amber 8 oz. WH3PO4	GL Soil container () oz	GL Amber 100ml () HCL	PL H2SO4 () 250ml () 500ml () 1000ml	PL HNO3 250ml	Bacteria bottle with
	GL Amber 100ml () HCL	GL Amber 100ml () HCL	PL H2SO4 () 250ml () 500ml () 1000ml	PL HNO3 250ml	Bacteria bottle with	

PHOENIX USE ONLY	CUSTOMER USE ONLY	DATE SAMPLED	TIME SAMPLED	RI	CT	MA	Data Format
69836	TP1 Composite	7/8/21	8:45	X	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
69837	TP2 Composite	7/8/21	9:00	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
69838	TP3 Composite	7/8/21	9:20	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
69839	TP4 Composite	7/8/21	10:00	X	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
69840	TP5 Composite	7/8/21	9:40	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Relinquished by: [Signature] Date: 7/9/21 Time: 11:13
 Accepted by: [Signature] Date: 11/8 Time:

Comments, Special Requirements or Regulations:
Send data to:
cbinkegeiconsultants.com

Turnaround Time:
 1 Day*
 2 Days*
 3 Days*
 Standard
 Other

RI: (Residential) Direct Exposure
 (Comm/Industrial) Direct Exposure
 GA Leachability
 GB Leachability
 GA-GW Objectives
 GB-GW Objectives

CT: RCP Cert
 GW Protection
 SW Protection
 GA Mobility
 GB Mobility
 Residential DEC
 I/C DEC
 Other

MA: MCP Certification
 GW-1
 GW-2
 GW-3
 S-1 GW-1
 S-2 GW-1
 S-3 GW-1
 SW Protection

Data Format: Excel
 PDF
 GIS/Key
 EQUIS/equus
 Other

Data Package: Tier II Checklist
 Full Data Package*
 Phoenix Std Report
 Other

* SURCHARGE APPLIES

State where samples were collected: CT

MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.

RONALD WOLFF DESIGN COMPUTATION SHEET

Page 1 of 1

Made by RPN Date 7.14.21

Subject 1040 MAIN ST GLASBORO NJ

Checked by _____ Date _____

NITROGEN LOADING CALCULATIONS

SITE AREA = 406,987 SF

IMPERVIOUS SURFACES:

ROOFS: 7 @ 2100 = 14,700 SF

DRIVEWAYS: 15,200 SF

LAWN AREAS: 17 @ 21,800 = 152,600 SF

NATURAL AREAS: 406,987 - 14,700 - 15,200 = 377,087 SF

IMPERVIOUS SURFACES:

$$\text{ROOFS: } 14,700 \text{ SF} \times \left[\frac{46 \text{ IN}}{\text{YR}} \right] \times \left[\frac{1 \text{ FT}}{12 \text{ IN}} \right] \times \left[\frac{28.32 \text{ L}}{\text{FT}^3} \right] \times \left[\frac{1 \text{ YR}}{365 \text{ DAYS}} \right] = 4372 \text{ L DAY}^{-1}$$

NITROGEN CONC @ 0.75 MG/L

$$\left[\frac{4372 \text{ L}}{\text{DAY}} \right] \times \left[\frac{0.75 \text{ MG}}{\text{L}} \right] = 3279 \text{ MG DAY}^{-1}$$

$$\text{DRIVEWAYS: } 15,200 \text{ SF} \times \left[\frac{46 \text{ IN}}{\text{YR}} \right] \times \left[\frac{1 \text{ FT}}{12 \text{ IN}} \right] \times \left[\frac{28.32 \text{ L}}{\text{FT}^3} \right] \times \left[\frac{1 \text{ YR}}{365 \text{ DAYS}} \right] = 4520 \text{ L DAY}^{-1}$$

NITROGEN CONC @ 1.5 MG/L

$$\left[\frac{4520 \text{ L}}{\text{DAY}} \right] \times \left[\frac{1.5 \text{ MG}}{\text{L}} \right] = 6780 \text{ MG DAY}^{-1}$$

$$\text{LAWN: } 152,600 \text{ SF} \times \left[\frac{3 \text{ LBS}}{1,000 \text{ SF}} \right] \times \left[\frac{1 \text{ YR}}{365 \text{ DAYS}} \right] \times \left[\frac{454,000 \text{ MG}}{\text{LB}} \right] \times [0.25] = 192,357 \text{ MG DAY}^{-1}$$

INFILTRATION RATE = 0.25

$$\text{NATURAL: } 377,087 \text{ SF} \times \left[\frac{46 \text{ IN}}{12 \text{ IN/FT}} \right] \times \left[\frac{28.32 \text{ L}}{\text{FT}^3} \right] \times \left[\frac{1 \text{ YR}}{365 \text{ DAYS}} \right] \times [0.25] = 280,388 \text{ L DAY}^{-1}$$

MGY DRAINAGE EQN:

$$\frac{(3279 + 6780 + 192,357)}{(4372 + 4520 + 280,388)} = 4.12 \frac{\text{MG}}{\text{L}} \text{ OR PPM}$$

$$4.12 \frac{\text{MG}}{\text{L}} < 5.0 \frac{\text{MG}}{\text{L}} \text{ FOR GW-1 ZONE } \Rightarrow \text{OK}$$

**REVISED DRAFT MOTION FOR A SUBDIVISION APPROVAL
RECOMMENDATION TO
THE TOWN PLAN & ZONING COMMISSION**

MOVED, that the Conservation Commission recommends to the Town Plan & Zoning Commission subdivision approval of Carrier Construction, LLC's proposed 7-lot subdivision of 1040 Main Street, in accordance with plans on file in the Office of Community Development, and in compliance with the following conditions:

1. Adherence to the Town Engineer's memorandum, dated June 15, 2021.
2. The optimal seeding dates (from whenever the snow melts until May 15) and optimal seeding depth (between 1 to 1.5 inches) shall be added to the subdivision site plans where the warm season grass mix appears within the submitted plans.
3. The subdivision's site plans shall be revised prior to any filing on the land records to indicate and require three-foot deep catch basin sumps in order to provide enhanced sediment removal.
4. A private conservation easement shall be established as generally depicted on the site plans and this area shall henceforth not be disturbed from its present condition until the conservation easement is in force. The precise delineation shall be recorded by bearings and distances. The easement shall be recorded on the land records. The conservation easement shall be marked with oak stakes labeled "Conservation Easement" with waterproof ink and tied with red flags. These stakes are to be located at each change of boundary direction and at every 100 foot interval on straightaways. All conservation easement corners shall be permanently marked with iron pins. In addition, numbered "Glastonbury Conservation Easement" signs, available from the Town's Office of Community Development, shall be nailed to trees that are within two feet of the easement area's boundary line, at approximately 100 foot intervals. The sign shall be installed facing outwards at about 7 feet above grade, using two 3 inch or greater aluminum or galvanized nails, with the nails left protruding from tree trunks about 1-1/2". Where no trees are suitable 7 foot metal or long-lived wood posts with easement signs attached shall be used. Such placement of signs shall be performed under the supervision of a Licensed Land Surveyor prior to land-clearing or earth-moving activities and notice shall be provided to the Town's Office of Community Development upon its completion.
5. In order to protect the physical, chemical and biological characteristics of the wetlands and watercourses and water quality, the following conditions shall apply:
 - a. Pesticides and herbicides shall not be disposed of within the designated conservation easement areas;

- b. Pesticides and herbicides shall only be applied utilizing best management practices for integrated pest management; and
 - c. The developer agrees to recite these conditions in the deed to the individual property(ies).
6. Healthy mature trees shall be preserved and saved when possible. Said trees shall be protected with the use of high visibility construction fence during construction or otherwise protected as required by staff.
 7. Installation of soil erosion and sedimentation control and stabilization measures shall be the Permittee's responsibility. Once installed these measures shall then be inspected by the Environmental Planner prior to land disturbance activities. Afterwards it then shall be the Permittee's responsibility to inspect these control measures during, and immediately following, substantial storm events and maintain and/or replace the control measures, when needed, on a regular basis until the site is vegetatively stabilized. Hay bales shall be replaced every 60 days. The Environmental Planner is hereby authorized to require additional soil erosion and sediment controls and stabilization measures to address situations that arise on the site.
 8. Tree stumps and blasted rock material shall not be buried at the site.
 9. The plot plan required for building permit application shall contain and comply with these conditions of approval. If construction including limits of clearing is proposed in areas other than the indicated locations on these plans, the Office of Community Development shall be notified and the Office of Community Development and the Chairman of the Town Plan and Zoning Commission are hereby authorized to approve or deny the alternative. Each plot plan shall indicate the limits of vegetative clearing, existing and proposed contours, soil erosion and sediment controls, all subsurface drainage, all stockpile areas, and temporary and permanent vegetative stabilization measures, including details of seedbed preparation, seed mix selection, application rates, seeding dates and mulching requirements. Vegetative clearing for stockpiling shall be minimized and subject to the approval of the Environmental Planner.
 10. Metal waste containers shall be provided at the site to facilitate the collection of refuse material generated from construction activities. Such material shall not be buried or burned at the site.
 11. Underground fuel storage tanks shall be prohibited to reduce the potential of contamination to wetlands, watercourses, and groundwater resources.
 12. Prior to the issuance of a Certificate of Occupancy, certification from a professional engineer shall be required confirming that the stormwater management system was constructed in conformance with the approved design.
