

Geotechnical Consultants, Inc.

(508)229-0900

FAX: (508)229-2279



21 April 2010

City of Somerville Department of Public Works
Office of Engineering
1 Franey Road
Somerville, MA 02145

Attention: Assistant Commissioner for Engineering and City Engineer

RE: City of Somerville Permit to Dewater Application
377 Summer Street
Somerville, Massachusetts
GCI Reference No. 2103075

APR 28 2010

Ladies and Gentlemen:

On behalf of our client, Polo Constructors, Geotechnical Consultants, Inc. is requesting your approval of a City of Somerville Permit to Dewater. The permit would be for the discharge of groundwater due to temporary construction dewatering for proposed footings within the existing buildings. A completed original application for a permit to dewater is provided at the end of this report.

SITE LOCATION AND EXISTING CONDITIONS

The site is located at 377 Summer Street in Somerville, Massachusetts and is located at the intersection of Summer Street and Cutter Avenue (Davis Square). The site is presently vacant and was formerly a gasoline service station from 1930's to 1980's, with gasoline dispenser pumps and an automotive shop. Most recently, before the site was vacant, it contained a single story building that was occupied by Enterprise rent-a-car. This building has been removed but the foundation remains. Site grades are relatively level and there are existing buildings abutting the northern and eastern sides of the site. A report from Loitherstein Environmental Engineering summarizing the findings from soil and groundwater sampling and analyses provided in Appendix A.

PROPOSED CONSTRUCTION

The proposed development will be a mix-used, four-story building with underground parking. The building will occupy a footprint area of approximately 5,000 square feet. The building will include a basement level parking about 10-11 feet below grade. It is expected that excavations about 13-14 feet are necessary to complete the basement construction. A temporary earth support plan has been put together to protect the adjacent buildings, roadways, utilities and general public. The groundwater level is approximately 3 to 4 feet below the estimated bottom of excavation and some limited localized pumping will be required to construct the new footings in-the-dry.

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It is requested the groundwater be allowed to discharge through the combined sewer system after passing through a settling tank that will be on-site. We believe the lot is too small for the pumped groundwater to be recharged by infiltration. We estimate the quantity of water will be relatively small and should not exceed approximately 2,300 gallons per day.

Enclosed are permit applications for the referenced project, substantiating information and required permit filing fee.

CONTACT INFORMATION

Applicant:

Christos Poutahidis
147 Willow Avenue
Somerville, Massachusetts 02144
Attention: Christos Poutahidis
Telephone: (617)666-1366

Representative preparing this application:

Geotechnical Consultants, Inc.
201 Boston Post Road West
Marlborough, Massachusetts 01752
Attention: Daniel Kenneally
Telephone: (508)229-0900
Fax: (508)229-2279

DISCHARGE START DATE AND LENGTH OF DISCHARGE

Construction activities are anticipated to begin in May 2010. Dewatering will continue for approximately five months.

MANAGEMENT OF DEWATERING EFFLUENT

The contractor will operate, and maintain dewatering and sedimentation control systems. The systems will be designed to meet the permit requirements for suspended solids in the effluent stream prior to discharge into the nearby combined sewer system. Geotechnical Consultants, Inc. will perform the required sampling and testing of the dewatering effluent and will submit the results as described in the permit. The sedimentation system or dewatering procedure will be modified as necessary to comply with the permit.

FLOW RATE

It is anticipated that the flow rate discharged of 3.7 gpm with an estimated daily flow of 2,200



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gallons per day generated from the construction dewatering activities. Greater discharge rates may occur as a result of rainfall or other factors.

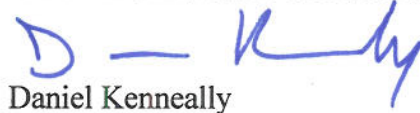
RECEIVING WATERS

Effluent, if required, is to be discharged into the existing City of Somerville combined sewer drain which flows to Deer Island. If required, treated discharge water will be discharged into a catch basin located as shown on Figure 2. The combined sewer drain discharges into the Massachusetts Bay after passing through the Deer Island Treatment Plant.

A request for General Permit coverage of the National Pollutant Discharge Elimination System (NPDES) is being applied for concurrently with this application. A copy of the application is provided at the end of this report.

We trust the foregoing and attached information is sufficient for obtaining the Permit to Dewater for this project. Should additional information be requested, please call Mr. Daniel Kenneally at Geotechnical Consultants, Inc. at 508-229-0900. Thank you for your assistance in this matter.

Sincerely Yours,
GEOTECHNICAL CONSULTANTS, INC.


Daniel Kenneally

Attachments:

- Notice of Intent Submittal Form
- Transmittal Form for Permit Application and Payment - X232873
- Figure 1- Project Locus Plan
- Figure 2- Combined Sewer Drain Connection Plan
- Figure 3- Construction Dewatering Schematic
- Appendix A- Laboratory Data Package
- Appendix B- Areas of Critical Environmental Concern Documentation
- Appendix C- Remediation Activities in Vicinity of Site
- Appendix D- Endangered and Threatened Species Documentation
- Appendix E- National Register of Historic Places Documentation

cc: POLO Constructors: Attn: John Aucello
Massachusetts Department of Environmental Protection: Attn: Robert Kubit
EPA New England: Attn: Olga Vergara
MWRA (besides the NOI, Transmittal and Payment, and Appendices B-E)



II. Suggested Notice of Intent (NOD) Form

1. General facility information. Please provide the following information about the facility.

a) Name of facility: <u>377 Summer Street</u>	Mailing Address for the Facility: <u>377 Summer Street</u> <u>Somerville, MA 02144</u>	
b) Location Address of the Facility (if different from mailing address):	Facility Location longitude: <u>-71° 7' 10"</u> latitude: <u>42° 23' 37"</u>	Type of Business: <u>operators of apartment Bldgs.</u>
	Facility SIC codes: <u>6513</u>	
c) Name of facility owner: <u>Christos Pentabdis</u>		
Owner's Tel #: <u>(617) 666-1366</u>	Owner's email: _____	
Address of owner (if different from facility address) <u>147 Willow Avenue</u> <u>Somerville, MA 02144</u>		
Owner is (check one): 1. Federal _____ 2. State _____ 3. Tribal _____ 4. Private ☒ 4. Other _____ (Describe)		
Legal name of Operator, if not owner: _____		
Operator Contact Name: _____		
Operator Tel Number: _____ Fax Number: _____		
Operator's email: _____		
Operator Address (if different from owner) _____		
d) Attach a topographic map indicating the location of the facility and the outfall(s) to the receiving water. Map attached? ☒		
e) Check Yes or No for the following:		
1. Has a prior NPDES permit been granted for the discharge? Yes ☒ No ☒ If Yes, Permit Number: _____		
2. Is the discharge a "new discharge" as defined by 40 CFR Section 122.22? Yes ☒ No ☒		
3. Is the facility covered by an individual NPDES permit? Yes ☒ No ☒ If Yes, Permit Number _____		
4. Is there a pending application on file with EPA for this discharge? Yes ☒ No ☒ If Yes, date of submittal: _____		

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2. Discharge information. Please provide information about the discharge, (attaching additional sheets as needed)

a) Name of receiving water into which discharge will occur: SA MASSACHUSETTS BAY (PASSES DEER ISLAND TREATMENT PLANT)
 State Water Quality Classification: SA Freshwater: X Marine Water: X

b) Describe the discharge activities for which the owner/applicant is seeking coverage:

1. Construction dewatering of groundwater intrusion and/or storm water accumulation. # 1 SEE COVER LETTER FOR DETAILS
2. Short-term or long-term dewatering of foundation sumps.
3. Other.

c) Number of outfalls 1

For each outfall:

d) Estimate the maximum daily and average monthly flow of the discharge (in gallons per day - GPD). Max Daily Flow 2300 GPD
 Average Monthly Flow 1800 GPD

e) What is the maximum and minimum monthly pH of the discharge (in s.u.)? Max pH 6.5 Min pH 8.5

f) Identify the source of the discharge (i.e. potable water, surface water, or groundwater). If groundwater, the facility shall submit effluent test results, as required in Section 4.4.5 of the General Permit. GROUNDWATER - SEE ATTACHMENT FOR RESULTS

g) What treatment does the wastewater receive prior to discharge? SETTLING TANK

h) Is the discharge continuous? Yes ☒ No ☐ If no, is the discharge periodic (P) (occurs regularly, i.e., monthly or seasonally, but is not continuous all year) or intermittent (I) (occurs sometimes but not regularly) or both (B) ☐
 If (P), number of days or months per year of the discharge ☐ and the specific months of discharge ☐
 If (I), number of days/year there is a discharge ☐
 Is the discharge temporary? Yes ☒ No ☐
 If yes, approximate start date of dewatering MAY 2010 approximate end date of dewatering SEPTEMBER 2010

i) Latitude and longitude of each discharge within 100 feet (See http://www.epa.gov/tri/report/siting_tool): Outfall 1: long. 70° 57' 26" lat. 42° 21' 01"
 Outfall 2: long. ☐ lat. ☐; Outfall 3: long. ☐ lat. ☐

j) If the source of the discharge is potable water, please provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water and attach any calculation sheets used to support stream flow and dilution calculations ☐ cfs
 (See Appendix VII for equations and additional information)

MASSACHUSETTS FACILITIES: See Section 3.4 and Appendix 1 of the General Permit for more information on Areas of Critical Environmental Concern (ACEC):

k) Does the discharge occur in an ACEC? Yes _____ No ✓
If yes, provide the name of the ACEC:

3. Contaminant Information

- a) Are any pH neutralization and/or dechlorination chemicals used in the discharge? If so, include the chemical name and manufacturer; maximum and average daily quantity used as well as the maximum and average daily expected concentrations (mg/l) in the discharge, and the vendor's reported aquatic toxicity (NOAEL and/or LC₅₀ in percent for aquatic organism(s)).
- b) Please report any known remediation activities or water-quality issues in the vicinity of the discharge.

4. Determination of Endangered Species Act Eligibility: Provide documentation of ESA eligibility as required at Part 3.4 and Appendices III and IV. In addition, respond to the following questions.

- a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes _____ No ✓
- b) Has any consultation with the federal services been completed? Yes _____ No ✓
- c) Is consultation underway? Yes _____ No ✓
- d) What were the results of the consultation with the U.S. Fish and Wildlife Service and/or NOAA Fisheries Service (check one): a "no jeopardy" opinion _____ or written concurrence _____ on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat.
- e) Which of the five eligibility criteria listed in Appendix 2, Section B (A,B,C,D,or E) have you met? A
- f) Please attach a copy of the most current federal listing of endangered and threatened species, found at USF&W website.

5. Documentation of National Historic Preservation Act requirements: Please respond to the following questions:

- a) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility site or in proximity to the discharge? Yes _____ No ✓
- b) Have any State or Tribal historic preservation officers been consulted in this determination? Yes _____ or No ✓ If yes, attach the results of the consultation(s).
- c) Which of the three National Historic Preservation Act requirements listed in Appendix 3, Section C (1,2 or 3) have you met? _____

6. Supplemental Information: Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit

7. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22 (see below) including the following certification:

I certify under penalty of law that (1) no biocides or other chemical additives except for those used for pH adjustment and/or dechlorination are used in the dewatering system; (2) the discharge consists solely of dewatering and authorized pH adjustment and/or

dechlorination chemicals; (3) the discharge does not come in contact with any raw materials, intermediate product, water product or finished product; (4) if the discharge of dewatering subsequently mixes with other permitted wastewater (i.e. stormwater) prior to discharging to the receiving water, any monitoring provided under this permit will be only for dewatering discharge; (5) where applicable, the facility has complied with the requirements of this permit specific to the Endangered Species Act and National Historic Preservation Act; and (6) this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility Name: 377 Summer St Somerville, MA 02144

Operator signature: *Owner*

Title: OWNER

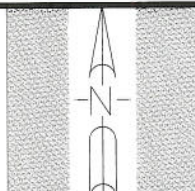
Date: 4.20.10

Federal regulations require this application to be signed as follows:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For partnership or sole proprietorship, by a general partner or the proprietor, respectively, or,
3. For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.



377 Summer Street
Somerville, Massachusetts



LOCUS PLAN
U.S.G.S. QUADRANGLE
Boston North
APPROX. SCALE 1:25 000

**Geotechnical
Consultants, Inc.**

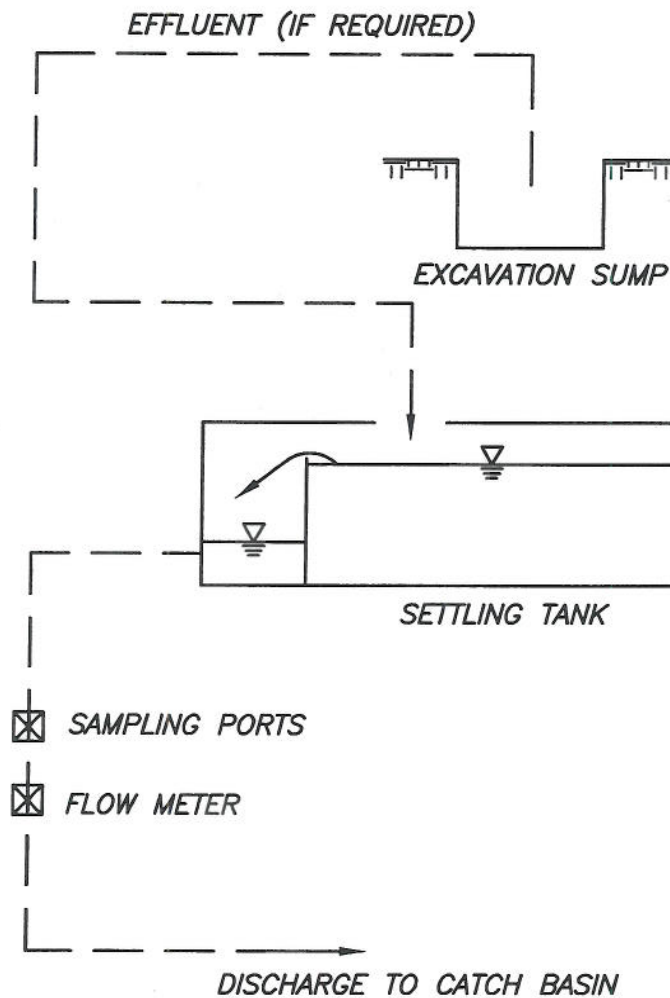
201 Boston Post Road West
Marlborough, MA 01752
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GCI Project # 2103075

Figure 1.





GCI Proj. No. 2103075

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Marlborough, MA 01752
(508)229-0900 FAX (508)229-2279



Rev.	Date
0	21 APRIL 2010

377 SUMMER STREET
Somerville, MA

CONSTRUCTION
DEWATERING
SCHEMATIC

FIG. 3

APPENDIX A
LABORATORY DATA PACKAGE

Loitherstein

ENVIRONMENTAL
ENGINEERING

**Subsurface Evaluation
For
377 Summer Street and
8 Cutter Avenue
Somerville, Massachusetts**

Prepared for:
Mr. John Macomber
East Cambridge Savings Bank
344 Cambridge Street
Cambridge, MA 02141

Project No. 28106

January 15, 2009