

ROBERT LAGA
Chairman

NICHOLAS FANNIN
Vice Chairman

RICHARD FRANZETTI, P.E.
Wetland Inspector

ROSE TROMBETTA
Secretary

TOWN OF CARMEL
ENVIRONMENTAL CONSERVATION BOARD



60 McAlpin Avenue
Mahopac, New York 10541
Tel. (845) 628-1500 - Ext. 190
www.ci.carmel.ny.us

BOARD MEMBERS

Edward Barnett
Vincent Turano
Anthony Federice

ENVIRONMENTAL CONSERVATION BOARD AGENDA

AUGUST 6, 2020 – 7:30 P.M.

SUBMISSION OF AN APPLICATION OR LETTER OF PERMISSION

<u>APPLICANT</u>	<u>ADDRESS</u>	<u>TAX MAP #</u>	<u>COMMENTS</u>
1. New York City DEP - (Croton Falls Dam)	Near 16 Samantha Ln.	77.-2-7.-2	Drilling of Four (4) Boreholes
2. Panny, Michael (SMP Homes)	10 Lower Lake Road	43.17-1-47	Construction of a Single Family House
3. White Sail Condominiums c/o Lions Gate Property Mgmt	4 Marina Drive	76.5-1-52	Replace Existing Retaining Wall

MISCELLANEOUS

4. Minutes – 01/02/20, 06/04/20



Vincent Sapienza P.E.
Commissioner

Ana Barrio
Deputy Commissioner
Bureau of Engineering
Design and Construction

Sean McAndrew, P.E.
Executive Director
Water System Capital
Program

16 Little Hollow Road
P.O. Box 358
Grahamsville, NY 12740

T: (845) 334-7195
F: (845) 985-2282

mcandrews@dep.nyc.gov

July 15, 2020

Ms. Rose Trombetta, Secretary
Town of Carmel
Environmental Conservation Board
60 McAlpin Avenue
Mahopac, NY 10541

RE: Contract CRO-536: Cross River & Croton Falls Dam Refacing
Proposed Field Investigations - Supplemental Information

Dear Ms. Trombetta:

On February 20, 2020, the Town of Carmel Environmental Conservation Board (ECB) met with the DEP and its consultants to discuss proposed drilling activities at Croton Falls Dam. The ECB had questions and requested responses. The attached letter from HATCH Associates dated July 1, 2020 provides the responses and requested supplemental information.

Due to the onset of the Covid-19 pandemic and the closure of the Town of Carmel offices, we have been delayed in responding to the Board. If there is a need for further clarifications, we can be available to meet in-person or remotely, at your convenience.

Additionally, as it has been several months since we have presented the project, we have provided the following brief summary for your reference.

Proposed Investigation Summary

The New York City Department of Environmental Protection (NYCDEP) is developing a refacing project located at the Croton Falls Dam, near 16 Samantha Lane, Carmel Hamlet, New York.

NYCDEP is in the initial Facility Planning Phase of the project, and there is a need to investigate the subsurface materials located at the downstream face of the Croton Dam. As such, a drilling program has been identified that proposes to complete four (4) boreholes to a depth of approximately 10 ft. These borings will be located at a distance of approximately 10 ft from the downstream toe of the dam. The intent of the investigation is to confirm soil

conditions associated with a proposed shallow foundation for support of a dam face overlay. These boreholes are located so that they are a minimum of 100 ft away from any identified waterbody or wetland, thereby negating the need for a Town of Carmel (or other regulatory agency) wetland work permit or Joint Application Form.

In addition, we intend to collect samples from the dam face at four (4) different locations to confirm the existing dam's concrete strengths. These holes will be cored to a maximum 6 ft depth into the concrete dam face from a suspended platform. These four (4) cored holes will also be more than 100 ft from any identified wetland, although the reservoir is found on the opposite site of the dam face that is being investigated.

We have submitted a Permit Application and attached supplemental information, and are requesting a Letter of Permission to perform this limited investigation program. Any questions, please feel free to call or email DEP Accountable Manager, Mr. Edin Basic at edinb@dep.nyc.gov, phone (347)-578-3747.

Sincerely,



Paul Costa, P.E.
Portfolio Manager

C: Edin Basic, Accountable Manager, BEDC
Lorraine Farrell, P.E., Senior Permit Program Manager, BEDC
Larry Zamojski, P.E., Project Manager, HATCH

July 1, 2020

Mr. Edin Basic
NYC Dept. of Environmental Protection
10 Walker Road
Valhalla, NY 10595

Dear Mr. Basic:

Subject: CRO-536 Design Services and Design Services During Construction for the Refacing of Cross River and Croton Falls Dams - Responses to Town of Carmel Environmental Conservation Board (ECB) on NYCDEP Wetland Permit Application for Drilling at the Croton Falls Dam

1. ECB Comments: on Soil Borings

1.1 ECB Comment: Provide a Spill Response Plan

[Hatch Team Response:](#) See Attachment A for Spill Response Plan.

1.2 ECB Comment: Provide a Fueling Plan

[Hatch Team Response:](#) Refueling of the drill rig will occur on the access roads. Absorbent pads, socks, and absorbent material (cat litter) will be available in case of accidental overflow or spill. Also, a pan will be placed under the rig should a leak develop.

1.3 ECB Comment: Where will the Drilling Rig be Located and Parked?

[Hatch Team Response:](#) JBD will use existing access roads to get the drilling equipment as close as possible to the hole locations. From that point, the drilling equipment will take the most direct route to the exploration hole location, attempting to minimize damage to the existing grassed areas at each site.

Once the equipment is in place, protective measures as discussed in Item 1.4 will be implemented.

At the end of each workday, the drill rig will be parked on the access road a minimum of 100 ft from any waterbody, drainage feature, or wetland.

1.4 ECB Comment: Silt Fence / Hay Bales to be Installed Around the Truck / Borings

[Hatch Team Response:](#) For the subsurface drilling, once the drill rig is in position for that hole, silt fence, tubular silt socks and/or hay bales will be set up around the perimeter of the rig and support equipment.

These measures are to contain any drill fluid, soil or grout spills that may occur as part of the investigations

Oil-absorbent pads, socks, and material (cat litter) will be available at the work area at all times. A pan will be placed under the rig in case a leak develops.

1.5 ECB Comment: Fill Grout Holes with Non-Shrink Material, Provide MSDS for All Grout Materials

Hatch Team Response: All shallow boreholes will be tremie-grouted to the surface after individual borehole completion. In an effort to mitigate excess fluid drumming, the driller will use a portion of the excess drilling fluid to incorporate into the grout mixture. The cement/bentonite ratio will be based upon the manufacturer's guidelines. Specifically, neat cement grout will be mixed at a ratio of 5 to 7 gallons of potable water with low solids content and pH values not significantly different from neutral to one standard 94 lb bag of Type I/II Portland cement. Bentonite will be mixed with the neat cement mixture at a ratio of 2% to 5% by weight. Additional soil materials from the drilling may be added to the grout to further thicken it.

Grout will be placed from the bottom of the borehole upward, using standard tremie methods. Grout placement will be considered complete when the grout evacuating the borehole is of similar consistency to the grout being put into the borehole, as determined by the Onsite Professional Representative. The surface treatment at each boring location will be restored to match existing conditions (i.e., concrete, stone, grass), as best as possible.

Grout (cement and bentonite) SDS sheets for the subsurface holes are provided as Attachment B to these questions/comments.

1.6 ECB Comment: Provide a Copy of Drillers License, Driller Must Have NYSDEC License

Hatch Team Response: Attachment C provides information from the driller, Jersey Boring, regarding their credentials from the NYSDEC for drilling activities.

2. ECB Comments: on Concrete Coring

2.1 ECB Comments: When Coring the Dam, the Water Used to Lubricate the Drill Bit Needs to be Collected, Provide the Plan How

Hatch Team Response: For the coring operation, the manlift will be set in place and the drill placed into position.

There is a concrete gutter at the base of both dams. Prior to the coring, the nearest drain(s) in this gutter will be plugged with a mesh fabric. Also, hay bales or a tubular silt sock will be placed in/across the gutter.

These measures are to filter any drill water prior to it entering the environment.

Oil-absorbent pads, socks, and material (cat litter) will be available at the work area at all times. A pan will be placed under the rig in case a leak develops.

2.2 **ECB Comment: Collect All the Spoils; Provide the Plan**

Hatch Team Response: for Subsurface Borings - The driller will drum excess soil cuttings, although anticipated to be uncontaminated, and excess drilling fluid (which is not water) will be contained in 55-gallon drums for future testing and disposal to provide for the proper disposal of drilling spoils. Each 55-gallon drum will be placed within secondary containment to protect against release of drilling spoils back into the environment. If subsurface contamination is encountered or suspected during drilling operations, the borehole will be terminated at the depth of suspected contamination and will be grouted according to the plan for sealing a borehole. During the pre-drilling meeting and walk-through, DEP and the drilling contractor will confirm the appropriate onsite location for drum storage away from any drainage swales and waterbodies.

After each hole is completed, the drilling spoils will be shoveled into a container (drum). Care will be taken to ensure that no material is spilled in the process. This container (drum) will be placed inside secondary containment and surrounded by erosion control materials in a staging area as described below. The drum will be covered. Upon completion of subsurface drilling at each site, the contents of the drum/drums will be sampled and analyzed for disposal. Once the results are available, the drums will be removed and any ground disturbance repaired.

Hatch Team Response: for Concrete Coreholes - Erosion and sediment control measures will be put into place at each corehole location. Upon completion of each hole, any sediment/spoils in the gutter at the base of the dam will be shoveled into a container/drum. Care will be taken to ensure no material is spilled in the process. These spoils may be combined into drums containing soil spoils. The drum material will be placed inside a staging area with secondary containment and with erosion and sediment control measures surrounding it. The drum(s) will be sampled, analyzed, and disposed.

Hatch Team Response: for Staging Area with Cuttings Storage - The cuttings storage area at each site will be set at the base of the dam at a location furthest from the adjacent river.

- At Croton Falls, it will be along the toe of the dam and the toe of the slope at the right abutment (looking downstream).

The cuttings will be containerized in drums within secondary containment, and the drums will be surrounded by silt fence or tubular silt socks. The drums and erosion control materials will be removed once the contents have been tested for disposal and the drums removed.

2.3 **ECB Comment: Provide MSDS for Concrete Grout**

Hatch Team Response: Upon completion of the corehole, the hole will be hand packed with a thick concrete mix. The concrete mix would be a pre-bagged mix such as Quikcrete or equivalent.

See Attachment D for SDS sheet for the concrete.

3. **ECB Comment: Provide Sequence of Construction Work (Plan)**

Hatch Team Response: The boreholes will be performed first. Once they are completed, the drill rig will be demobilized and the coring equipment brought to site.

Hatch Team Response: for Boreholes - Drill four vertical geotechnical borings along the base of the Croton Falls Dam. The holes will be located prior to drilling and locations accepted by NYCDEP.

The holes will be located in grass or lightly vegetated areas where access is reasonable. Jersey Boring visited the two dam sites and is aware of conditions, indicating that a CME55 LC track mounted rig will be used for this work.

The boreholes have been located to avoid known utilities based on record drawings available to Hatch. The hole locations will be staked during a site walkover prior to drilling. Additionally, the holes will be hand augered to 5 ft for utility clearance, unless waived by NYCDEP. Erosion and sediment control measures will be placed around each hole location. Each hole will be continuously split-spoon sampled in general accordance with ASTM D1586 and to a depth of approximately 10 ft, with blow counts collected, materials identified, and representative samples collected and retained in glass jars. Casing will be advanced after each sampling interval.

The boreholes will be tremie grouted upon completion.

Packers and grout will be available onsite in case artesian conditions are encountered.

Hatch Team Response: for Coreholes in Dam - Prior to beginning coring of any location, erosion and sediment control measures will be placed at the toe of the dam around that specific location.

Drill and collect 3 or 4-inch diameter core samples from the downstream face of each dam. A total of four coreholes will be collected at Croton Falls. Each cored hole will be to a final depth of 4 to 6 ft behind face. The actual depth will be determined by the Onsite Professional Representative but will be no deeper than 6 ft. The holes will be perpendicular to the dam downstream face. The cores will be obtained from different heights in the dam face and will require access via a Skyjack SJ46AJ manlift.

The actual drill to be used will be an electric M-1 Portable Core Bore Drill.

No corehole location is anticipated to be more than 45 ft from the ground surface at the base of the dam. Approximate locations (to be accepted by NYCDEP) are shown on the drawing sketches provided.

Core samples will be collected in wooden core boxes for testing.

Holes will be hand packed with a non-shrink mortar grout or concrete upon completion, and volume of grout or concrete to fill the hole will be calculated, and the actual volume used to fill the hole will be recorded.

If you have any questions, please do not hesitate to contact me.

Respectfully,



Lawrence D. Zamojski, P.E.
Project Manager

cc: P. Costa, DEP
L. Farrell, DEP

LDZ:slb
Attachments

Attachment A – Spill Response Plan

10.3 Spill Plan

IN THE EVENT OF A CHEMICAL/PETROLEUM SPILL, SEE SECTION 10.3.4 OF THIS PLAN FOR SPECIFIC SPILL RESPONSE AND NOTIFICATION PROCEDURES.

10.3.1 Introduction

The purpose of this plan is to provide guidance to deal with a spill of materials should it occur during the Facility Planning Phase.

The only anticipated equipment that will be onsite during work activities includes:

- Drill rig for shallow subsurface investigation holes
- Coring machine for drilling holes in the downstream face of the dam
- Support vehicles (pickup trucks or vans) for drilling, survey and environmental assessment.

The drill rig will have non-petroleum (vegetable oil) based fluids except for gasoline and oil used to power the rig and vehicle.

Therefore, the petroleum-based products that may be in equipment onsite will be likely limited to gasoline, motor oil, and diesel fuel.

10.3.2 Description of Work Areas

The subsurface investigation holes will be drilled on grassed areas at the downstream toe of each dam. These hole locations will be placed on generally flat areas of each site away from drainage features and at least 100 ft away from the adjacent river or any wetlands.

The coring will be into the face of the dam at selected locations. Access to these locations will be by an articulating work platform.

Erosion and sediment control measures will be installed around each of the hole locations.

These measures should also assist in controlling the spread of any leaks or spills associated with the drilling operations.

The support vehicles for the drilling and other field activities (survey, environmental assessment, etc.) will be parked on paved or site roadways to the extent possible.

10.3.3 Spill Prevention

Any vehicle, piece of equipment, pails, drums, or other containers will be visually inspected as they arrive onsite. They will also be visually assessed on a daily basis to identify signs of deterioration and/or leaks.

10.3.4 Spill Response Procedures

10.3.4.1 Spill Discovery and Initial Response

This Plan includes procedures for the control of oil spills at either dam site.

In the event of an oil spill or leak, the person discovering the oil from a storage container, tank or equipment must immediately initiate the following actions:

1. If there is an immediate threat to human health, evacuate the immediate area.
2. Extinguish all sources of ignition and isolate incompatible or reactive chemical substances.
3. Attempt to stop or contain the spill/release at source (provided there are no health or safety hazards and there is a reasonable certainty of the origin of the leak). Examples of spill containment are constructing dikes of absorbent material (i.e., Speedy Dry, cat litter), absorbent pigs, absorbent booms, etc.
4. Isolate all potential environmental receptors such as floor drains, catch basins, sumps, exposed soil, and runoff areas.
5. Contact the people listed in the attached Table 10.1 to provide information regarding the spill event.

10.3.4.2 Response Equipment and Materials

Spill response may include digging up soil and placing it in berms around the spill and/or placing oil-absorbent pigs, booms, or other material around the spill to contain it. It may also include placing absorbent mats or absorbent material into the spill.

A spill kit should be available onsite and supplied by any subcontractor while working at either dam site.

10.3.4.3 Internal (Hatch and NYCDEP) Reporting Requirements

Report oil spills occurring on the property, onto land, or into or threatening to enter a waterway. Personnel detecting such a situation will notify the Site Safety Representative (SSR) who will contact Hatch's EHS Specialist and BEDC EHS Regional Manager during normal business hours. During after hours, personnel will contact NYCDEP Police who maintain an up-to-date emergency call list and who will contact the proper persons at their alternate emergency contact phone number.

In the event of an oil spill, personnel should document the facts regarding the spill incident (see list of information in Section 10.3.4.4.1) and then contact the SSR and report the collected information in writing.

Hatch's EHS Specialist or his designee will coordinate responses to oil spill incidents and will contact other NYCDEP personnel, as necessary. Hatch's EHS Specialist or his designee will also request NYCDEP Police to make contact with others listed on any NYCDEP internal emergency call list, as necessary.

10.3.4.4 External Reporting Requirements

Under the circumstances as outlined below, Hatch's EHS Specialist or designee will notify the appropriate regulatory authorities of spills and discharges of oil, as required. Subcontractor personnel are not to contact regulatory agencies in the event of a spill. Such personnel should only contact Hatch's EHS Specialist or designee (SSR), NYCDEP Police, and if necessary, the Croton Falls or Katonah Fire Departments.

10.3.4.4.1 Reportable Quantities

A spill event, as defined by 40 CFR 112.1, is a discharge (e.g., spill, leak, release, or discharge) of oil into or upon navigable waters of the United States or adjoining shorelines in harmful quantities, as described in 40 CFR 110.

Federal reportable quantities

Pursuant to 40 CFR 110, an **IMMEDIATE** call is to be made to the National Response Center (NRC) at **1-800-424-8802**, if one of the following occurs:

- The amount of oil violates applicable state water quality standards.
- The amount of oil causes a film or “sheen” upon or discoloration of the surface of the water or adjoining shorelines.
- The amount of oil causes a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

New York State reportable quantities

A variety of reporting obligations, some of them specifying different time periods for reporting, exist in New York State with respect to oil as summarized below.

In addition to any required federal reporting, the personnel will report oil spills to the NYSDEC as soon as possible, **but not later than two hours after discovery**, unless the spill meets **ALL** of the following criteria:

1. The spill is known to be less than 5 gallons.
2. The spill is contained and under control by onsite personnel.
3. The spill has not and will not reach the State’s water or any land.
4. The spill is cleaned up within two hours of discovery.

Note: For reportable and non-reportable spills, the facts concerning the incident and reporting must be documented. For a reportable spill, a Call Log will also be completed to log correspondence with any regulatory agency. These records will be maintained for a period of at least one year.

In the event an oil spill does not meet all of the above criteria, the Hatch EHS Specialist, in consultation with BEDC EHS Regional Manager, will notify the NYSDEC at the “Spill Hotline” (**1-800-457-7362**) within two hours of discovery. As appropriate, Hatch and NYCDEP may also choose to notify the NYSDEC Region 3 office in New Paltz, New York (845-256-3000).

Prior to calling a state or federal agency regarding a reportable oil spill, the following information should be collected and written down:

1. Address and telephone number of the facility
2. Spill date and time
3. Type of oil product spilled
4. Location of spill
5. Weather conditions at the spill location
6. Estimate of the total quantity spilled

7. Estimate of the quantity spilled into navigable water
8. Source of the spill
9. Description of the affected media (water, air, land)
10. Cause of the spill
11. Damages or injuries caused by the spill
12. Actions used to stop, remove and mitigate the effects of the spill
13. Whether an evacuation is needed
14. Names of individuals or agencies that have also been contacted.

10.3.4.4.2 Federal Written Notification Requirements

In accordance with 40 CFR Part 112.4, the facility will submit a written report to the USEPA Region 2 Administrator (290 Broadway, New York, NY 10007-1866) and the NYSDEC Region 3 office (21 South Putt Corners Road, New Paltz, NY 12561) **within sixty (60) days** in the event of a reportable spill or release of oil in the following quantities and frequencies:

- A single discharge of 1,000 or more gallons into or upon navigable waters of the U.S. or adjoining shorelines, or
- Discharged more than 42 U.S. gallons of oil in each of two discharges, occurring within any 12 month period.

This written report will include the following information:

1. Name of facility
2. Name of owner or operator of facility
3. Location of the facility
4. Date and year of initial facility operation
5. Maximum storage or handling capacity of the facility and normal daily throughput
6. Description of the facility, including maps, flow diagrams and topographical maps
7. Complete copy of this SPCC Plan with amendments
8. Cause(s) of the spill, including a failure analysis of the system or subsystem in which the failure occurred
9. Corrective actions and/or countermeasures taken, including an adequate description of equipment repairs and replacements
10. Additional preventive measures taken or contemplated to minimize the possibility of recurrence
11. Such other information as the USEPA Regional Administrator may reasonably require pertinent to the Plan or spill event.

10.3.4.4.3 Emergency Contacts

Table 10.1 presents the internal and external emergency contacts for any spill at Cross River or Croton Falls Dam sites.

Table 10.1: Contact Information

Emergency Phone Numbers		Office #	Cell #	Fax #	Email
NYCDEP BEDC Water System Capital Program					
Paul Costa	Portfolio Manager	(718) 595-5470	(917) 690-3039	(718) 595-5997	pcosta@dep.nyc.gov
Edin Basic	Accountable Manager		(347) 578-3747		ebasic@dep.nyc.gov
Chris Bucci	EHS Regional Manager	(914) 749-5452	(646) 257-0711		cbucci@dep.nyc.gov
NYCDEP – Bureau of Water Supply					
Tom Boland	Dam Safety Engineer	(914) 455-3256	(917) 682-4577		TBoland@dep.nyc.gov
Jaret Horn	Dam Safety Engineer	(914) 455-3241	(646) 300-5743		JHorn@dep.nyc.gov
James Fitzsimmons	Deputy Chief Dam Safety	(845) 657-5092	(646) 661-0700		JFitzsimmons@dep.nyc.gov
James Keesler	Highlands Regional Manager	(845) 808-1777	(347) 672-1046		jkeesler@dep.nyc.gov
Hatch					
Larry Zamojski	Project Manager	(716) 221-4827	(716) 207-4574	(716) 688-5767	lawrence.zamojski@hatch.com
Steve Perkins	Geotechnical Specialist	(716) 221-0354	(716) 474-4092	(716) 688-5767	steven.perkins@hatch.com
Tim McCue	H&S Specialist	(412) 497-2000			tim.mccue@hatch.com
Paul C. Rizzo Engineering – New York, PLLC					
Diego Rivera	Rizzo Project Manager	(914) 322-0037, Ext. 403			Diego.Rivera@rizzointl.com
Jersey Boring					
Dennis Spearnock	Drilling Manager	(973) 287-6857			dennis@jerseyboring.com
Frank Carrozza	Site Health & Safety				
TBD	Driller				
Watts Architecture & Engineering, DPC					
Andrew Klimek	Watts Project Manager	(716) 206-5100			aklimek@watts-ae.com
Mike Gerber	Professional Geologist for Drilling	(716) 206-5100			mgerber@watts-ae.com
NYS Dept. of Environmental Conservation					
Alon Dominitz	Dam Safety	(518) 402-8130			Alon.Dominitz@dec.ny.gov
DEP Police					
DEP Police – Main Number		(888) 426-7433			
NYCDEP Police Command Center (Eastview)		(914) 593-7500			
Miscellaneous Phone Numbers					
Fire Department		911			
Ambulance		911			
Local Hospital-Cross River Dam-Northern Westchester Hospital		(914) 666-1200			
Local Hospital-Croton Falls Dam-Putnam Hospital Center Emergency Room		(845) 279-5711			
NY Poison Control		(800) 252-5655			
NY State DEC Spill Hotline		(800) 457-7362			
National Response Center (Spills)		(800) 424-8802			

Attachment B - Grout (Cement and Bentonite) SDS Sheets



SAFETY DATA SHEET

MATERIAL: PORTLAND CEMENT

Section 1 – Product Identification

Product Identifier

Product Name: Portland Cement Type I, IA, II, IIA, III, IIIA, IV, IVA, V, VA, White Cement, CSA Type GU, MS, HE, LH, HS

Product Codes: Portland Cement Type I, IA, II, IIA, III, IIIA, IV, IVA, V, VA, White Cement, CSA Type GU, MS, HE, LH, HS.

This SDS covers many products. Individual constituents will vary.

Synonyms: Cement, cement powder, portland cement, hydraulic cement

Product Form: Solid / powder

Intended Use of Product: Portland cement is used as a binder in combination with water and aggregates to form concrete. It is also used as a component of masonry mortar and other building and construction materials.

Name, Address and Telephone of Responsible Party

Holcim (US) Inc., d/b/a LafargeHolcim US
8700 W. Bryn Mawr Ave., STE 300
Chicago, IL 60631
(773) 372-1000

Emergency Contact Information:

CHEMTREC: 1-800-424-9300

Section 2 – Hazards Identification

Classification of the Substance or Mixture

Classification (GHS-US)

Skin Corrosion 1B
Eye Damage 1
Skin Sensitizer 1B
Specific Target Organ Toxicity: Single Exposure (Lungs) 3

Label Elements

Hazard Pictograms



Signal Word

Danger

Hazard Statements

Causes severe skin burns and eye damage
May cause an allergic skin reaction
May cause respiratory irritation

Precautionary Statements

- Prevention** Do not breathe dust.
Wear protective gloves/protective clothing/eye protection/face protection
Wash thoroughly after handling.
Do not handle until all safety precautions have been read and understood.
- Response** **If inhaled:** Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor.
If on skin: Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse.
If swallowed: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center/doctor.
- Storage** Store locked up.
- Disposal** Dispose of contents/container in accordance with local/state/national regulations.
- Other Hazards** Exposure may aggravate those with pre-existing eye, skin or respiratory conditions or illness.

Section 3 – Composition/Information on Ingredients

Component/Ingredient	CAS #	Percent Present (Range)
Portland cement	65997-15-1	100
Tricalcium silicate	12168-85-3	20 - 70
Dicalcium silicate	10034-77-2	10 - 60
Tetracalcium aluminoferrite	12068-35-8	5 - 15
Gypsum (Calcium Sulfate)	13397-24-5	2 - 10
Tri-calcium Aluminate	12042-78-3	1 - 15
Limestone (Calcium Carbonate)	1317-65-3	0 - 20
Magnesium oxide	1309-48-4	< 1 - 4
Nuisance Dusts (Particulates not otherwise regulated)	None	< 1 - 5
Crystalline Silica (Quartz)	14808-60-7	0 - < 1

Other Components

Cement is made from materials mined from the earth and processed using energy provided by fuels. Additional materials, such as fly ash, kiln dust and slag may also be introduced into the cement manufacturing process. A chemical analysis of cement may reveal trace amounts of naturally occurring but potentially harmful chemical compounds such as free crystalline silica, organic compounds, potassium and sodium compounds, heavy metals including cadmium, chromium (including hexavalent chromium), nickel and lead. Other trace constituents may include calcium oxide (also known as free lime or quick lime) and organic compounds from grinding aids such as amine acetate salts, glycols and 1,2-ethanediol.

Section 4 – First Aid Measures

Description of First Aid Measures

- Eyes** Rinse eyes and under lids cautiously with clean water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
- Skin** Remove contaminated clothing. Remove dry material from skin, but avoid creating dust. Wash with plenty of water. If skin irritation occurs, get immediate medical advice/attention.
- Inhalation** Remove person to fresh air away from dust and keep comfortable for breathing. If coughing persists, obtain medical attention.
- Ingestion** Do not induce vomiting. If subject is conscious, rinse the mouth with water to remove any material and drink plenty of water to dilute any swallowed material. Do not give drink or attempt to force water to an unconscious person. Get medical advice/attention.

Important Symptoms and Effects (Acute and Delayed)

- Eyes** Causes serious eye irritation and may scratch eye surface due to particle abrasion. May cause chemical burns resulting in corneal damage.
- Skin** Causes skin irritation if exposed to moisture on skin creating redness, dryness and itching. Extended exposure to wet material will result in chemical burns to skin, possibly severe.
- Inhalation** May irritate nose and throat if dust is inhaled. Prolonged or repeated inhalation of respirable dust may lead to respiratory tract or lung damage.
- Ingestion** May cause irritation and burns of mouth, throat, stomach and digestive tract if swallowed.

Recommendations for Immediate Medical Care or Special Treatment

Seek immediate medical attention for inhalation of large quantities of dust or exposure of wet material over large areas of skin. Seek immediate medical attention if material comes into contact with eyes and cannot be immediately removed.

Section 5 – Fire Fighting Measures

- General Fire Hazards** None. Material is not considered flammable or combustible.
- Extinguishing Media** Use water or water spray to extinguish any fires involving this material.
- Extinguishing Media to Avoid** None.
- Hazards of Combustion** None.
- Fire Fighting Recommendations** Firefighters should always wear full protective gear to fight any fire. Refer to Section 9 for flammability information.

Section 6 – Accidental Release Measures

Precautions	Avoid creating dust. Prevent material from entering sewers, drains, ditches or waterways.
Personal Protection	Wear respiratory protection and protective eyewear/clothing to avoid eye or skin contact.
Emergency Procedures	Ventilate area and avoid creating dust. Remove unnecessary persons from area.
Containment Procedures	Barricade solid material to prevent additional spillage.
Clean Up Procedures	Scoop or vacuum up spilled material while avoiding dust creation. Scoop up wet material and place in approved container. Allow wet material to harden before disposal.

Section 7 – Handling and Storage

Safe Handling Practices	Avoid contact with skin or eyes. Avoid breathing dust. Use only in well ventilated areas. Wear appropriate personal protective equipment to prevent eye or skin contact and use respiratory protection equipment if dusty or in poorly ventilated areas.
Safe Storage Measures	Store in well-ventilated areas away from moisture and incompatible materials. If stored in containers, keep containers closed when not in use.
Incompatible Materials	Water/moisture exposure will cause material to generate heat. Keep away from fluoride compounds, strong acids, alkalines, and oxidizers. Cement dissolves in hydrofluoric acid, producing corrosive silicon tetrafluoride gas.

Section 8 – Exposure Controls & Personal Protection

Exposure Limits for Individual Components (T= Total Respirable [PNOC/PNOR], R=Respirable fraction, I=Inhalable-aerosol)

Component	OSHA PEL	ACGIH TLV	NIOSH REL
Portland cement	15 mg/m ³ (T); 5 mg/m ³ (R)	1 mg/m ³ (R)	10 mg/m ³ (T); 5 mg/m ³ (R)
Tricalcium silicate	15 mg/m ³ (T); 5 mg/m ³ (R)	Not listed	10 mg/m ³ (T); 5 mg/m ³ (R)
Dicalcium silicate	15 mg/m ³ (T); 5 mg/m ³ (R)	Not listed	10 mg/m ³ (T); 5 mg/m ³ (R)
Tetracalcium aluminoferrite	15 mg/m ³ (T); 5 mg/m ³ (R)	Not listed	10 mg/m ³ (T); 5 mg/m ³ (R)
Gypsum (Calcium Sulfate)	15 mg/m ³ (T); 5 mg/m ³ (R)	10 mg/m ³ (T)	10 mg/m ³ (T); 5 mg/m ³ (R)
Tri-calcium Aluminate	15 mg/m ³ (T); 5 mg/m ³ (R)	Not listed	10 mg/m ³ (T); 5 mg/m ³ (R)
Limestone (Calcium Carbonate)	15 mg/m ³ (T); 5 mg/m ³ (R)	10 mg/m ³	10 mg/m ³ (T); 5 mg/m ³ (R)
Magnesium oxide	15 mg/m ³	10 mg/m ³ (I)	Not established
Nuisance Dusts (PNOR)	15 mg/m ³ (T); 5 mg/m ³ (R)	10 mg/m ³	Not established
Crystalline Silica (Quartz)	0.05 mg/m ³ (R)	0.025 mg/m ³ (R)	0.05 mg/m ³ (R)

Exposure Controls

Engineering Controls

Use outdoors in well-ventilated areas; otherwise employ natural or mechanical ventilation to maintain exposure within applicable limits.

Personal Protection

Avoid contact with skin or eyes. Avoid creating or breathing dust.

Face and Eyes

Safety glasses with side shields or protective goggles should be worn while using this product. For extremely dusty conditions, non-vented goggles or goggles with indirect venting are recommended. Avoid contact lens wear when using this product.

Body

Long sleeved shirts and trousers should be worn while using this material. Wear water-proof boots. If working in dusty conditions, impervious over garments are recommended.

Respiratory

If exposure levels cannot be maintained below acceptable limits, suitable particulate-filtering facemasks or respirators approved by MSHA/NIOSH should be worn in accordance with the user's respiratory protection program and OSHA/MSHA guidelines.

Hands

Protective gloves with wrist/arm cuffs should be worn to avoid direct contact with skin.

Section 9 – Physical and Chemical Properties

Physical State	Solid, powder	Specific Gravity	3.1 – 3.2
Appearance & Color	Grey/off-white powder	Flash Point/Method	None. Not flammable.
Odor	None	Auto Ignition Temperature	Not determined
pH	>12 (in water)	Lower Flammability Limit	Not applicable
Boiling Point	Not applicable	Upper Flammability Limit	Not applicable
Solubility (Water)	Slight (<5%)	Octanol/H₂O Coefficient	Not determined
Evaporation Rate	Not applicable	Viscosity	Not applicable
Melting Point	Not determined	Freezing Point	Solid at room temperature
Vapor Density	Not applicable	Explosion Risk: Static	Not considered a hazard
Vapor Pressure	Not applicable	Explosion Risk: Shock	Not considered a hazard

Section 10 – Stability and Reactivity

Reactivity	Reacts with water creating heat and calcium hydroxide.
Chemical Stability	Stable at standard temperature and pressures.
Hazardous Reactions	None. Hazardous polymerization will not occur.
Conditions to Avoid	Moisture or wetting will cause exothermic heating as product cures.
Incompatible Materials	Avoid contact with strong acids, oxidizers, aluminum and ammonium salts.
Decomposition Hazards	Reacts with water to form calcium hydroxide which can irritate/damage skin. Cement dissolves in hydrofluoric acid, producing corrosive silicon tetrafluoride gas.

Section 11 – Toxicological Information

Product: Portland cement

Acute Toxicity	Not classified.
LD50/LC50 Data	Not classified.
Skin Corrosion/Irritation	Causes irritation or chemical burns if exposed to moisture on skin.
Critical Eye Damage/Irritation	Causes serious eye injury due to chemical burns or mechanical irritation.
Respiratory or Skin Sensitization	Not reported/no data available.
Germ Cell Mutagenicity	Not reported/no data available.
Teratogenicity	Not reported/no data available.
Carcinogenicity	Material contains trace amounts of crystalline silica, which may cause lung cancer through repeated or prolonged exposure to dust.
Specific Organ Toxicity (Single Exposure)	Not reported/no data available.
Specific Organ Toxicity (Repeated Exposure)	May cause damage/disease to lungs through repeated or prolonged exposure.
Reproductive Toxicity	Not reported/no data available.
Aspiration Respiratory Hazard	Not reported/no data available.
Symptoms: Inhalation	Coughing, sneezing, mucous discharge and dyspnea. Extended contact may lead to chemical burns.
Symptoms: Skin Contact	Redness and itching. Extended contact may lead to chemical burns.
Symptoms: Eye Contact	Redness and itching. Extended contact may lead to corneal abrasion/ulceration.
Symptoms: Ingestion	Irritation and chemical burns of mouth and throat.
Other Toxicological Information	No additional data available.

Components	Toxicity	Carc: IARC	Carc: NTP	Carc: OSHA
Portland cement (refer to Section 16 for more information)	No data	Not listed	Not listed	Not listed
Tricalcium silicate	No data	Not listed	Not listed	Not listed
Dicalcium silicate	No data	Not listed	Not listed	Not listed
Tetracalcium aluminoferrite	No data	Not listed	Not listed	Not listed
Gypsum (Calcium Sulfate)	Oral LD50 Rat >2000 mg/kg	Not listed	Not listed	Not listed
Tri-calcium Aluminate	No data	Not listed	Not listed	Not listed
Limestone (Calcium carbonate)	Oral LD50 Rat 6450 mg/kg	Not listed	Not listed	Not listed
Magnesium oxide	Oral LD50 Rat 810 mg/kg	Not listed	Not listed	Not listed
Nuisance Dusts (PNOR)	No data	Not listed	Not listed	Not listed
Crystalline Silica (Quartz) (refer to Section 16 for more information)	Oral LD50 Rat >22,500 mg/kg LC50 Carp >10,000 mg/L (72 hr)	Group 1	Known	Not listed

Section 12 – Ecological Information

General Ecotoxicity	Not classified.
Persistence and Degradability	Not reported/no data available.
Bioaccumulation Potential	Not reported/no data available.
Mobility in Soil to Groundwater	Not reported/no data available.
Environmental Fate	Not reported/no data available.
Other Environmental Precautions or Information	Avoid release to the environment. Prevent material from entering sewers, drains, ditches or waterways.

Section 13 – Disposal Considerations

Disposal Methods	Dispose as an inert, non-metallic mineral in accordance with applicable federal, state, and local regulations.
Special Considerations	Avoid creation or breathing dust during disposal. Avoid contact with skin and eyes. Refer to Section 8 for personal protection measures.
Other Disposal Information	Prevent material from entering sewers, drains, ditches or waterways.

Section 14 – Transport Information

Proper Shipping Name	N/A – not regulated.
Hazard Class	N/A – not regulated.
UN Shipping ID Number	N/A – not regulated.
Packing Group	N/A – not regulated.
Environmental/IMDG Codes	N/A – not regulated.

Section 15 – Regulatory Information

Federal

This product contains one or more chemical components or ingredients that may require identification and/or reporting under SARA Section 302, SARA Section 311/312/313, CERCLA and/or TSCA. An examination of the components of this product should be conducted by a qualified environmental professional to determine if such identification or reporting is required by federal law.

- Components: Portland cement, Silica (Crystalline)

State

This product contains one or more chemical components or ingredients that are included or listed on the hazardous substances lists for one or more of the following states: California, Maine, Minnesota, New Jersey, Pennsylvania and Rhode Island. An examination of the components of this product should be conducted by a qualified environmental or safety and health professional to determine the specific requirements for those states.

- Components: Portland cement, Limestone (calcium carbonate), Gypsum (calcium sulfate), Silica (Crystalline)

The state of California requires the following statement (Proposition 65) in regards to this material:

- WARNING! This product contains chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

Section 16 – Other Information

Date of last revision: October 23, 2018

Prepared and reviewed by: Holcim (US) Inc. Occupational Safety & Health

Additional information regarding portland cement:

Wet portland cement can cause caustic burns to unprotected skin, sometimes referred to as cement burns. Cement burns may result in blisters, dead or hardened skin, or black or green skin. In severe cases, these burns may extend to the bone and cause disfiguring scars or disability.

Employees cannot rely on pain or discomfort to alert them to cement burns because cement burns may not cause immediate pain or discomfort. By the time an employee becomes aware of a cement burn, much damage has already been done. Accordingly, the safest method to use portland cement is to avoid contact with exposed skin completely. Cement burns can get worse even after skin contact with cement has ended. Any employee experiencing a cement burn is advised to see a health care professional immediately.

Skin contact with wet portland cement can also cause inflammation of the skin, referred to as dermatitis. Signs and symptoms of dermatitis can include itching, redness, swelling, blisters, scaling, and other changes in the normal condition of the skin. Contact with wet portland cement can cause a non-allergic form of dermatitis (called irritant contact dermatitis) which is related to the caustic, abrasive, and drying properties of portland cement.

In addition, hexavalent chromium [Cr(VI)] which may be found in portland cement in trace amounts, can cause an allergic form of dermatitis (allergic contact dermatitis, or ACD) in sensitized employees who work with wet portland cement. When an employee is sensitized, that person's immune system overreacts to small amounts of Cr(VI), which can lead to severe inflammatory reactions upon subsequent exposures. Sensitization may result from a single Cr(VI) exposure, from repeated exposures over the course of

months or years, or it may not occur at all. After an employee becomes sensitized, brief skin contact with very small amounts of Cr(VI) can trigger ACD. ACD is long-lasting and employees can remain sensitized to Cr(VI) years after their exposure to portland cement has ended. Medical tests (e.g. skin patch tests) are available that can confirm whether an employee has become dermally sensitized to Cr(VI).

Employees who work with wet portland cement and experience skin problems, including seemingly minor ones, are advised to see a health care professional for evaluation and treatment. In cement-related dermatitis, early diagnosis and treatment can help prevent chronic skin problems.

Additional information regarding crystalline silica:

The major concern is silicosis, caused by the inhalation and retention of respirable (extremely small) crystalline silica dust particles. Silicosis can exist in several forms. Chronic or ordinary silicosis (often referred to as simple silicosis) is the most common form of silicosis, and can occur after many years of exposure to relatively low concentrations of airborne respirable crystalline silica dust. Complicated silicosis or progressive massive fibrosis (PMF) may be associated with decreased lung function and may be disabling. Advanced complicated silicosis or PMF may lead to death. Advanced complicated silicosis or PMF can result in heart disease secondary to the lung disease. Acute silicosis can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough and weight loss. Acute silicosis can be fatal.

IARC: The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1)." The IARC evaluation noted that "carcinogenicity was not detected in all industrial circumstances studies. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs."

NTP: The National Toxicology Program (NTP), in its Thirteenth Annual Report on Carcinogens, classified "silica, crystalline (respirable)" as a known human carcinogen.

OSHA: Crystalline silica (quartz) is not regulated as a human carcinogen by the Occupational Safety and Health Administration.

Other important information:

While the information provided in this document is believed to provide a useful summary of the hazards of portland cement, the information in this document cannot anticipate and provide all of the information that might be needed in every situation. Inexperienced product users should obtain proper training before using this product.

The data furnished in this document do not address hazards that may be posed by other materials when mixed with portland cement. Users should review other relevant safety data sheets before working with this product.

The information presented in the Safety Data Sheet is based on current knowledge and publications and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not be interpreted as guaranteeing any specific property of the product.

SELLER MAKES NO WARRANTY, EXPRESSED OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY HOLCIM (US) INC., EXCEPT THAT THE PRODUCT SHALL CONFORM TO CONTRACTED SPECIFICATIONS.

--END OF SAFETY DATA SHEET--



SAFETY DATA SHEET

Product Code: AB3A005 (BENTONITE)

Updated: 5/16/16

SECTION 1: IDENTIFICATION

PRODUCT NAME(s): Swell Gel

GENERIC NAME: Bentonite **MSDS CODE NO.** A202PABA005

SYNONYMS: Sodium Bentonite, Montmorillonite, Smectite Clay

CHEMICAL NAME: Sodium Aluminum Silicate **CASE REGISTRY NO.** 1302-78-9

MANUFACTURING ADDRESS: Western Clay Company
620 East SR 24
Aurora, UT 84620 **CONTACT NUMBERS:** Emergency: 435-657-3605
Redmond Minerals: 435-529-7402

RECOMMENDED USE: Bentonite has a variety of uses. It can be used as a rheology modifier, binding agent, absorbent, filler and other i.e. for applications like: foundry, iron ore agglomeration, drilling, construction - civil engineering, filtration (i.e. oil, wine, beer), pharmaceutical and cosmetics, cat litter, food processing aids and feed additives.

USE RESTRICTIONS: There are no identified uses advised against.

SECTION 2: HAZARD IDENTIFICATION

GHS CLASSIFICATION Signal: Danger
Causes damage to the lungs through prolonged or repeated exposure if inhaled



HEALTH/PHYSICAL HAZARDS: Material dusts containing less than 1% free crystalline silica (quartz) are classified as nuisance particulates. Exposure to these dusts may cause irritation to eyes, ears, throat, and upper respiratory tract. This materials dust may contain more than 1% free silica as Quartz. Chronic (long term) exposure to air born free silica at levels higher than TLV=s may lead to the development of silicosis or other respiratory problems. (See Section VI)

HAZARD LISTING: Nuisance Particles are listed by ACGIH. Free Crystalline Silica as Quartz is listed by OSHA and ACGIH as a Hazardous Material.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCES:	CAS #	Percent (w/w)
Bentonite	1302-78-9	80-100%
Crystalline silica, quartz	14808-60-7	0-5%
Crystalline silica, cristobalite	14464-46-1	0-1%
Crystalline silica, tridymite	15468-32-3	0-1%
Water	7732-18-5	8-12%
Acrylic Polymer* (Swell Gel)	9033-79-8	.15-.175%

*Acrylic Polymer has no known OSHA hazards and is not a dangerous substance according to GHS.

SECTION 4: FIRST AID MEASURES

INHALATION:	If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.
SKIN:	Wash with soap and water. Get medical attention if irritation persists.
EYES:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
INGESTION:	Under normal conditions, first aid procedures are not required.
NOTES TO PHYSICIAN:	Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

FLASH POINT RANGE:	Non-flammable Silicate Mineral	FLAMMABLE LIMITS:	LEL: NA UEL:NA
FIRE EXTINGUISHING MEDIA:	All standard firefighting media	SPECIAL EXPOSURE HAZARDS:	Not Applicable
NFPA RATINGS:	Health 0, Flammability 0, Reactivity 0	HMIS RATINGS:	Health 0*, Flammability 0, Reactivity 0, PPE: At
SPECIAL FIRE FIGHTING PROCEDURES:	Not applicable		

SECTION 6: ACCIDENTAL RELEASE MEASURES

MATERIAL SPILL OR RELEASE:	Avoid breathing dust; wear respirator approved for silica veering dust. Vacuum up to avoid generating airborne dust. Avoid using water. Product is slippery when wet.
WASTE DISPOSAL METHOD:	Product should be disposed of in accordance with applicable local, state, and federal regulations. There are no known environmental precautionary measures. Consider possible toxic or fire hazards associated with contaminating substances and use appropriate methods for collection, storage, and disposal.

SECTION 7: HANDLING AND STORAGE

HANDLING PRECAUTIONS:	This product may contain quartz, cristobalite, and/or tridymite which may become airborne without a visible cloud. Avoid breathing dust. Avoid creating dusty conditions. Use only with adequate ventilation to keep exposer limits below permissible limits. Material is slippery when wet.
STORAGE INFORMATION:	Do not reuse empty container. Use good housekeeping in storage and work areas to prevent accumulation of dust. Close container when not in use. Keep from excessive heat.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

VENTILATION REQUIREMENTS:	Use approved industrial ventilation and local exhaust as required to maintain exposures below applicable exposure limits listed in section VI.
RESPIRATOR:	Not normally needed, but in areas without adequate ventilation, use respirator approved by NIOSH/MSHA for silica bearing dust.
EYE PROTECTION:	Use safety glasses or goggles to protect against exposure.
HAND PROTECTION:	Normal work gloves.
SKIN PROTECTION:	Wear clothing appropriate for the work environment. Dusty clothing should be laundered before reuse. Use precautionary measures to avoid creating dust when removing or laundering clothing.
OTHER PPE:	None known.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	powder	COLOR:	Tan, Light Green, Red
BULKING VALUE:	90 lbs.	DENSITY:	70 lb/ft ³ powder or compact granular
MELTING POINT:	1450 °C	pH:	8-10
SOLUBILITY IN WATER:	Insoluble, Forms Colloidal Suspension	ODOR:	Mild earthy

SECTION 10: STABILITY AND REACTIVITY

STABILITY:	Stable	HAZARDOUS POLYMERIZATION:	None
INCOMPATIBILITY:	None	HAZARDOUS DECOMPOSITION PRODUCTS:	None

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICITY TESTS:	Oral	ND	Genotoxicity	ND
	Dermal	ND	Reproductive	ND
	Inhalation	ND	Primary Irritation Effect	ND

PRINCIPLE ROUTE OF EXPOSURE: Eye or skin contact, inhalation

SKIN: Possible dying resulting in dermatitis

EYES: Mechanical irritant

INGESTION: Accidentally this material will generally cause no adverse effects. Minor intestinal irritation is possible.

INHALATION: (Acute, Short Term) Exposure to excessive concentrations of dust may cause irritation of the Nose, Throat, and Upper Respiratory Tract. (Chronic, Long Term) Chronic exposure to crystalline silica such as quartz where levels exceed TLV=s can cause Silicosis and other respiratory problems. Short term exposure to very high concentrations may lead to increased risk and accelerated onset of silicosis and respiratory damage. Silicosis is a progressive, degenerative, disabling, and sometimes fatal lung disease characterized by coughing, shortness of breath, wheezing, and fibrotic changes in the lungs with scarring and nodular formation.

PERMISSIBLE EXPOSURE LIMITS: (For air contaminants 8 hour TWA)	Bentonite as Nuisance Dust	OSHA PEL	ACGIH TLV
	Total Dust	15mg/m ³	Not determined
	Respirable Dust	5mg/m ³	Not determined
	Crystalline Quartz (respirable)	0.1mg/m ³	0.1mg/m ³

CARCINOGENICITY: Bentonite is not listed by NTP, IARC, or OSHA. The International Agency for Research on Cancer (IARC) has determined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources can cause lung cancer in humans, and experimental evidence that tridymite as a carcinogen in animals. The National Toxicology Program (NTP) classifies respirable crystalline silica as "Known to be a human carcinogen".

SECTION 12: ECOLOGICAL INFORMATION

MOBILITY (water/soil/air):	ND	FISH TOXICITY:	TLM96: 10000 ppm (Oncorhynchus mykiss)
PERSISTENCE/DEGRADABILITY:	ND	CRUSTACEANS TOXICITY:	ND
BIO-ACCUMULATION:	ND	ALGAE TOXICITY:	ND
CHEMICAL FATE INFORMATION:	ND	OTHER INFORMATION:	ND

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Product should be disposed of in accordance with applicable local, state, and federal regulations. There are no known environmental precautionary measures. Consider possible toxic or fire hazards associated with contaminating substances and use appropriate methods for collection, storage, and disposal.

SECTION 14: TRANSPORTATION INFORMATION

SHIPPING NAME:	Common Ground Clay (NOIBN)	HAZZARD CLASS:	Not Hazardous	CAUTIONARY LABELING:	None required		
LAND TRANSPORTATION RESTRICTIONS:		DOT:	Not Restricted	CANADIAN TDG:	Not Restricted	ADR:	Not Restricted
AIR TRANSPORTATION RESTRICTIONS:				ICAO / IATA:	Not Restricted		
SEA TRANSPORTATION RESTRICTIONS:				IMDG:	Not Restricted		

SECTION 15: REGULATORY INFORMATION

U.S. REGULATIONS:

US TSCA Inventory	All components listed on inventory or are exempt.
EPA SARA Title III Extremely Hazardous Substances	Not applicable
EPA SARA (311, 312) Hazard Class	Acute Health Hazard, Chronic Health Hazard
EPA SARA (313) Chemicals	This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372)
EPA CERCLA/Superfund Reportable Spill Quantity	Not applicable
EPA RCRA Hazardous Waste Classification	If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA
California Proposition 65	The California Proposition 65 regulations apply to this product.
MA Right-to-Know Law	One or more components listed.
NJ Right-to-Know Law	One or more components listed.
PA Right-to-Know Law	One or more components listed.

CANADIAN REGULATIONS:

Canadian DSL Inventory	All components listed on inventory.
WHMIS Hazard Class	D2A Very Toxic Materials Crystalline Silica

SECTION 16: OTHER INFORMATION

ADDITIONAL INFORMATION: This SDS was updated on 5/16/16. For additional information on the use of this product, or for questions about the Safety Data Sheet for this or other Redmond Minerals, INC. products, please contact:



Redmond Minerals, INC.
Telephone 435 529-7402 Fax 435 529-7486
2725 North 100 West • Redmond, UT 84652

This information is taken from sources or based upon data believed to be reliable, however, Redmond Minerals, INC. makes no warranty as to the absolute correctness or sufficiency of any of the foregoing or that additional or other special protective measures may not be required under unusual or particular conditions which may be associated with normal use of this product. Since the use or misuse of this product is not within the control of Redmond Minerals, INC. it is the users' obligation to assure conditions of safe use and disposal of this product. Seller warrants that this product conforms to the specifications stated herein. Buyer assumes all risks associated with the possession, use, mixing, blending, treatment, storage, disposal, transportation, and handling of the product, whether alone or in combination with other substances. SELLER MAKES NO OTHER WARRANTY OF ANY KIND WHATSOEVER, EXPRESS OR IMPLIED AND ALL OTHER WARRANTIES, INCLUDING WARRANTIES OF QUALITY MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE DISCLAIMED. Seller's liability is limited to the product price.

Attachment C - Jersey Boring Drillers with NYSDEC Licenses

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water, Water Well Program
625 Broadway, Albany, New York 12233-3508
Toll Free: (877) 472-2619 | P: (518) 402-8291 | F: (518) 402-8290
www.dec.ny.gov

Registrant: Jersey Boring and Drilling Co., Inc.

2/20/2019

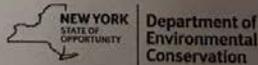
Registration #: NYRD10743

Below is the certification status we have on file for individuals listed as certified on your latest NYS Water Well Contractor Registration Application. As a reminder, by law, a certified driller must be on site supervising drilling activities. Also by law, a certified pump installer must be on site supervising pump installation or servicing activities.

Certification ID Number	Name	Certified for Drilling*	Certified for Pump Installation*
PSI1000075	Joseph Kurzynowski	Yes	No

If this information is not correct please provide our office a copy of proof of certification for each individual involved or contact our office at the address or numbers above for further information.

* P/C indicates this certification is partially complete



Pursuant to New York State
Environmental Conservation Law, Section 15-1525

Jersey Boring and Drilling Co., Inc.
NYRD10743

received a Certificate of Registration from the
Commissioner of the NYSDEC to conduct water well
contracting activities for the following period:

April 1, 2020 – March 31, 2021

Registration may be revoked
for noncompliance. For current
registration status, call 877-472-2619.



Department of
Environmental
Conservation



Department of
Environmental
Conservation

2020

April 1, 2020-March 31, 2021

**NEW YORK STATE
REGISTERED WATER WELL
CONTRACTOR**

NYRD# 10743

Attachment D – Concrete SDS Sheet



CEMENT & CONCRETE PRODUCTS™

C1: Portland Cement Based Concrete Products

SAFETY DATA SHEET

(Complies with OSHA 29 CFR 1910.1200)

SECTION I: PRODUCT IDENTIFICATION

The QUIKRETE® Companies
5 Concourse Parkway, Suite 1900
Atlanta, GA 30328

Emergency Telephone Number
INFOTRAC (800) 535-5053
Information Telephone Number
(800) 282-5828

SDS C1

Revision: Mar-19

QUIKRETE® Product Name	Item #(s)
Fence Post Mix	1005
Fiber-Reinforced Concrete Mix	1006
Crack Resistant Concrete Mix	1006-80
Pro-Finish Crack Resistant Concrete Mix	1006-68
QUIKRETE 5000 Concrete Mix	1007
QUIKRETE 6000 Concrete Mix	1007
Pro-Finish QUIKRETE 5000	1007-85
Lightweight Concrete Mix	1008
Basic Concrete Mix	1015
Maximum Yield Concrete Mix	1100-80
Concrete Mix	1101-10, -20, -40, -60, -80, -90
Green Concrete Mix	1101-63, -73
B-Crete	1101-81
Red-E-Crete Concrete mix	1101-91, -87; 1141-62, -63, -92, -93, Bulk NR810035
Countertop Mix	1106-80
Form & Pour Concrete Mix	1120-80/NR810065
Form & Pour Concrete Mix MS	1120-80/NR810065
All-Star Concrete Mix	1121
Rip Rap	1129
Rip Rap Scrim	1134-80
Handicrete Concrete Mix	1141-59, -60, -80
RiteMix Concrete	1171-60
Fiber Reinforced Deck Mix	1251-80, -81
All-Star Crack Resistant Concrete Mix	1470-03
All-Star 5000 Concrete Mix	1470-01
FlowCrete 5000 (Mix 801)	8080026/NR80026
Mix 801 Concrete Mix	NR81001

Product Use: Portland cement-based, aggregated products for general construction

SDS C1

QUIKRETE Companies, LLC

3/11/2019

QUIKRETE**CEMENT & CONCRETE PRODUCTS™**

See most current revision of this document at www.QUIKRETE.com.

SECTION II - HAZARD IDENTIFICATION

Hazard-determining components of labeling: Silica, Portland cement

2.1 Classification of the substance or mixture

Carcinogen – Category 1A

Skin Corrosion – Category 1B

Eye Damage – Category 1

Skin Sensitization – Category 1B

Specific Target Organ Toxicity Repeat Exposure – Category 1

Specific Target Organ Toxicity: Single Exposure – Category 3

2.2a Signal word DANGER!

2.2b Hazard Statements

May cause cancer through chronic inhalation

Causes severe skin burns and serious eye damage

May cause an allergic skin reaction

Causes damage to lungs through prolonged or repeated inhalation

May cause respiratory irritation

Harmful if swallowed.

2.2c Pictograms



2.2d Precautionary statements

Do not handle until all safety precautions have been read and understood.

Wear impervious gloves, such as nitrile. Wear eye protection, protective clothing and rubber boots.

Do not eat, drink or smoke when using this product.

Wash thoroughly after handling.

Use only in a well-ventilated area. Wear a NIOSH approved respirator (mask) such as N95 in poorly ventilated areas, when used for extended periods, when use is frequent, or when permissible exposure limits may be exceeded.

Do not breathe dust.

If swallowed: Rinse mouth. Do NOT induce vomiting.

**CEMENT & CONCRETE PRODUCTS™**

If inhaled: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If on skin (or hair): Remove immediately all contaminated clothing and wash before re-use. Rinse skin or hair with water.

If significant skin irritation or rash occurs: get medical attention.

Immediately seek medical attention if symptoms are significant or persist.

Store in a well-ventilated place. Keep container tightly closed.

Dispose of contents/containers in accordance with all regulations.

2.3 Additional Information

The Portland cement in this product can cause serious, potentially irreversible damage to skin, eye, respiratory and digestive tracts due to chemical (caustic) burns, including third degree burns. Burns from Portland cement may not cause immediate pain or discomfort. You cannot rely on pain to alert you to cement burns. Portland cement can cause dermatitis or sensitization. Therefore precautions must be taken to prevent all contact with Portland cement. Cement burns can become worse even after contact has ended. If there is contact with this product, immediately remove all product from body and thoroughly rinse with water. If you experience or suspect a cement burn or inflammation you should immediately see a health care professional.

Skin burns and irritation may be caused by brief exposure, though often are caused by extended exposure of 15 minutes, an hour, or longer. Interaction of Portland cement with water or sweat releases a caustic solution which produces the burns or irritation. Any extended exposure should be treated as though a burn has occurred until determined otherwise.

Skin contact with Portland cement can also cause inflammation of the skin, referred to as dermatitis. Signs and symptoms of dermatitis can include itching, redness, swelling, blisters, scaling, and other changes in the normal condition of the skin. Signs and symptoms of burns include the above and whitening, yellowing, blackening, peeling or cracking of skin.

The Portland cement in this product may cause allergic contact dermatitis in sensitized individuals. This overreaction of the immune system can lead to severe inflammation. Sensitization may result from a single exposure to the low levels of Cr (VI) in Portland cement or repeated exposures over months or years. Sensitization is long lasting and, after sensitization, even very small quantities can trigger the dermatitis. Sensitization is uncommon. Individuals who experience skin problems, including seemingly minor ones, are advised to seek medical attention.

2.3a HNOC – Hazards not otherwise classified: Not applicable

2.3b Unknown Acute Toxicity: None



CEMENT & CONCRETE PRODUCTS™

SECTION III - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

<u>Hazardous Components</u>	<u>CAS No.</u>	<u>% by Weight</u>
Sand, Silica, Quartz	14808-60-7	60-100*
Portland Cement	65997 15 1	10-30*
Fly Ash	68131-74-8	5-10*

*The concentrations ranges are provided due to batch-to-batch variability.
None of the constituents of this material are of unknown toxicity.

SECTION IV – FIRST AID MEASURES

4.1 Description of the first-aid measures**General information:**

After inhalation: Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. In case of unconsciousness, place patient stably in side position for transportation.

After skin contact: Wash skin with cool water and pH-neutral soap or a mild detergent. If significant skin irritation or rash occurs: get medical attention.

After eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

After swallowing: Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms/effects, acute and delayed

Inhalation: May cause respiratory tract irritation. Causes damage to organs through prolonged or repeated inhalation. This product contains crystalline silica. Prolonged or repeated inhalation of respirable silica from this product can cause silicosis.

Skin contact: Skin burns and irritation may be caused by brief exposure, though often are caused by extended exposure of 15 minutes, an hour, or longer.

Eye Contact: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Ingestion: May be harmful if swallowed. Ingestion may cause discomfort and/or distress, nausea or vomiting.

4.3 Indication of immediate medical attention and special treatment needed:

Immediately seek medical advice if symptoms are significant or persist.

SECTION V - FIRE FIGHTING MEASURES

5.1 Flammability of the Product: Non-flammable and non-combustible

5.2 Suitable extinguishing agents: Treat for surrounding material

5.3 Special hazards arising from the substance or mixture: None



CEMENT & CONCRETE PRODUCTS™

5.3a Products of Combustion: None

5.3b Explosion Hazards in Presence of Various Substances: Non-explosive in presence of shocks

SECTION VI – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Wear personal protective equipment (See section VIII). Keep unprotected persons away.

6.2 Methods and material for containment and cleaning up:

Do not allow to enter sewers/ surface or ground water. Dispose of unwanted materials and containers properly in accordance with all regulations.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND STORAGE

7.1 Handling

Precautions for safe handling: Ensure good ventilation/exhaustion at the workplace. **DO NOT BREATHE DUST.** In dusty environments, the use of an OSHA, MSHA or NIOSH approved respirator and tight fitting goggles is recommended. Wear appropriate PPE (See section 8). Do not mix with other chemical products, except as indicated by the manufacturer. Do not get in eyes, on skin or clothing. Good housekeeping is important to prevent accumulation of dust.

7.2 Storage

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

Further information about storage conditions: Keep out of the reach of children. Keep container tightly closed and prevent exposure to humidity. Do not allow water to contact the product until time of use to preserve product utility.

SECTION VIII – EXPOSURE CONTROL MEASURES / PERSONAL PROTECTION

8.1 Components with limit values that require monitoring at the workplace:

Hazardous Components	CAS No.	PEL (OSHA) mg/M ³	TLV (ACGIH) mg/M ³
Silica Sand, crystalline	14808-60-7	0.05	0.025 (resp)
Portland Cement	65997-15-1	5 (resp) 15 (total)	10 (resp)
Fly Ash	68131-74-8	N/A	N/A

8.2 Exposure Controls

Use ventilation adequate to keep exposures below recommended exposure limits.


CEMENT & CONCRETE PRODUCTS™
8.3 General protective and hygienic measures

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

8.3a Personal protective equipment
Protection of hands and feet:

Wear gloves of adequate length to offer appropriate skin protection from splashes. Nitrile, Butyl and PVC gloves have been found to offer adequate protection for incidental contact. Wear rubber boots when stepping in concrete. You cannot rely on pain to alert you to cement burns. Portland cement can cause dermatitis or sensitization.

Eye protection:

Wear approved eye protection (properly fitted dust- or splash-proof chemical safety glasses).

Respiratory protection:

Wear a NIOSH approved respirator (mask) such as N95 in poorly ventilated areas, when used for extended periods, when use is frequent, or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional, following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).

SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

General Information

Appearance	Form: Granular Solid Color: Gray to gray-brown colored Odor: None
pH-value at 20°C (68 °F):	13 (10%)
Boiling point/Boiling range:	Not applicable
Flash point:	Not applicable
Auto igniting:	Product is not self-igniting
Vapor pressure at 21°C (70°F)	Not available
Density at 25°C (77 °F):	2.6 to 3.15

Solubility in / Miscibility with

Water:	Insoluble
VOC content:	0 g/L VOC

SECTION X – STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability


CEMENT & CONCRETE PRODUCTS™

Stable under normal storage conditions. Keep in dry storage.

10.3 Possibility of hazardous reaction

No dangerous reaction known under conditions of normal use.

10.4 Thermal decomposition / conditions to be avoided

No decomposition if used according to specifications.

10.5 Incompatible materials

Contact of silica with powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, or oxygen difluoride may cause fires

10.6 Hazardous Decomposition or By-products

Silica will dissolve in Hydrofluoric Acid and produce a corrosive gas – silicon tetrafluoride.

SECTION XI – TOXICOLOGICAL INFORMATION

11.1 Exposure Routes: Skin contact, skin adsorption, eye contact, inhalation, or ingestion.

11.2 Symptoms related to physical/chemical/toxicological characteristics:

Inhalation: May cause respiratory tract irritation. Causes damage to organs through prolonged or repeated exposure. This product contains crystalline silica. Prolonged or repeated inhalation of respirable silica from this product can cause silicosis.

Skin contact: Causes severe skin burns. Handling can cause dry skin, discomfort, irritation, and dermatitis. May cause sensitization by skin contact. Product becomes extremely alkaline when exposed to moisture, and can cause alkali burns and affect the mucous membranes.

Eye Contact: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Ingestion: Harmful if swallowed. Ingestion may cause discomfort and/or distress, nausea or vomiting.

11.3 Delayed, immediate and chronic effects of short-term and long-term exposure
Short Term

Skin Corrosion/Irritation: Causes severe skin burns.

Serious Eye Damage/Irritation: Causes severe eye damage.

Respiratory Sensitization: Not available

Skin Sensitization: May cause an allergic skin reaction.

Specific Target Organ Toxicity-Single Exposure: (Category 3) May cause respiratory irritation.

Aspiration Hazard: Not available

Long Term

Carcinogenicity: May cause cancer through chronic inhalation.

Germ Cell Mutagenicity: Not available


CEMENT & CONCRETE PRODUCTS™

Reproductive Toxicity: Not available
 Specific Target Organ Toxicity- Repeated Exposure: (Category 1) Causes damage to lungs through prolonged/repeated exposure
 Synergistic/Antagonistic Effects: Not available.

SECTION XII – ECOLOGICAL INFORMATION

12.1 Ecotoxicity

May cause long-term adverse effects to the aquatic environment. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach bodies of water or drainage ditch undiluted or un-neutralized

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential:

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

12.5 Other Adverse Effects

No further relevant information available.

SECTION XIII – DISPOSAL CONSIDERATIONS

13.1 Waste Disposal Method

The packaging and material may be land filled; however, material should be covered to minimize generation of airborne dust. This product is not classified as a hazardous waste under the authority of the RCRA (40CFR 261) or CERCLA (40CFR 117&302). Disposal must be made in accordance with local, state and federal regulations.

13.2 Other disposal considerations
Uncleaned packaging

Recommendation: Disposal must be made in accordance with local, state and federal regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION XIV – TRANSPORT INFORMATION

	DOT (U.S.)	TDG (Canada)
UN-Number	Not Regulated	Not Regulated
UN proper shipping name	Not Regulated	Not Regulated
Transport Hazard Class(es)	Not Regulated	Not Regulated
Packing Group (if applicable)	Not Regulated	Not Regulated

SDS C1

QUIKRETE Companies, LLC

3/11/2019

**CEMENT & CONCRETE PRODUCTS™****14.1 Environmental hazards:**

Not Available

14.2 Transport in bulk according to Annex II of Marpol 73/78 and the IBC Code

Not available

14.3 Special precautions for user

Do not handle until all safety precautions have been read and understood.

SECTION XV – OTHER REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislations specific for the chemical**Canada**

WHMIS Classification: Considered to be a hazardous material under the Hazardous Products Act as defined by the Hazardous Products Regulations and subject to the requirements of Health Canada's Workplace Hazardous Material Information (WHMIS). This document complies with the WHMIS requirements of the Hazardous Products Act (HPA) and the HPR.

15.2 US Federal Information**SARA 302/311/312/313 Components**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302, 311, 312 or 313.

RCRA: Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.

CERCLA: Crystalline silica (quartz) is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR §302.

Emergency Planning and Community Right to Know Act (SARA Title III): Crystalline silica (quartz) is not an extremely hazardous substance under Section 302 and is not a toxic chemical subject to the requirements of Section 313.

FDA: Silica is included in the list of substances that may be included in coatings used in food contact surfaces, 21 CFR §175.300(b)(3)(xxvi).

NTP: Respirable crystalline silica, primarily quartz dusts occurring in industrial and occupational settings, is classified as Known to be a Human Carcinogen.

OSHA Carcinogen: Crystalline silica (quartz) is not listed.

**CEMENT & CONCRETE PRODUCTS™**

15.3 State Right to Know Laws

California Prop. 65 Components



WARNING: This product can expose you to chemicals including crystalline silica which is known to the State of California to cause cancer and hexavalent chromium compounds which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California Inhalation Reference Exposure Level (REL): California established a chronic REL of 3 µg for silica (crystalline, respirable). A chronic REL is an airborne level of a substance at or below which no adverse health effects are anticipated in individuals indefinitely exposed to the substance at that level.

Massachusetts Toxic Use Reduction Act: Silica, crystalline (respirable size, <10 microns) is "toxic" for purposes of the Massachusetts Toxic Use Reduction Act.

15.4 Global Inventories

DSL All components of this product are on the Canadian DSL list.

TSCA No.: Crystalline silica (quartz) appears on the EPA TSCA inventory under the CAS No. 14808-60-7. All constituents are listed in the TSCA inventory.

SECTION XVI – OTHER INFORMATION

Last Updated: March 11, 2019

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products.

Prepared by

The QUIKRETE Companies, LLC

End of SDS

JOHN KARELL, JR., P.E.
121 CUSHMAN ROAD
PATTERSON, NEW YORK, 12563
845-878-7894 FAX 845 878 4939
jack4911@yahoo.com

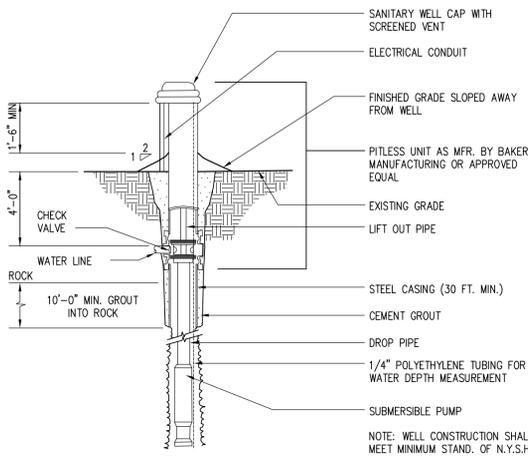
July 30, 2020

RESPONSE TO COMMENTS Town of Carmel ECB
SMP SSTS, Mike Panny
10 Lower Lake Road, Carmel (T), TM # 43.17-1-47

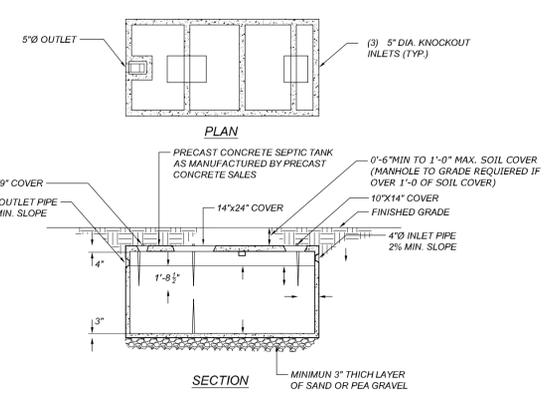
Attached herewith please find plans revised to reflect the comments at the ECB meeting as follows:

1. Mitigation plans are presented as notes on the plans. Mitigation includes plantings and relocation of the proposed well farther from the wetlands.
2. Notes have been provided on the plans regarding the spill kit, equipment fueling and concrete washout area.

John Karell, Jr., P.E.

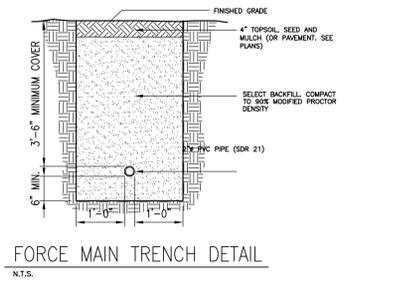


TYPICAL WELL DETAIL
N.T.S.

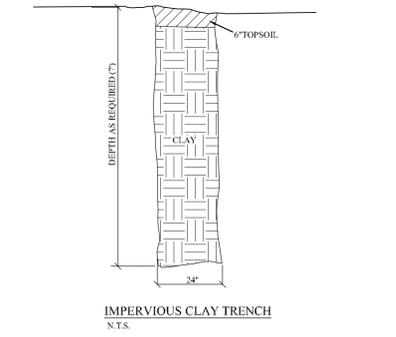


1,500 GALLON SEPTIC TANK DETAIL
(TO BE DESIGNED FOR H-20 LOADING WHEN IN PAVEMENT)
N.T.S.

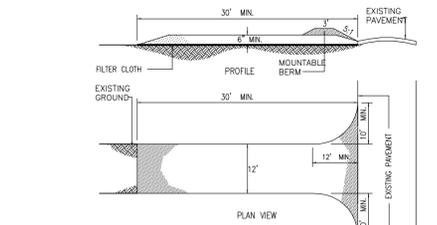
NOTES:
IF THE DIMENSIONS OF THE SEPTIC TANK CHANGE, THE SEPTIC TANK INSTALLED MUST BE A DUAL COMPARTMENT SEPTIC TANK.
MIN. FILL COVER IS 6" - 12" MAX. FILL COVER IS 24" AND IF FILL COVER IS GREATER THAN 24" MANHOLE RISERS TO GRADE MUST BE INSTALLED.
AN EFFLUENT FILTER WILL BE PROVIDED ON THE DISCHARGE OF THE SEPTIC TANK.



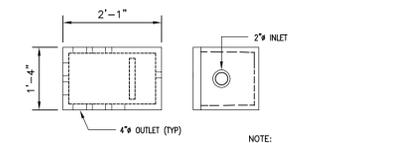
FORCE MAIN TRENCH DETAIL
N.T.S.



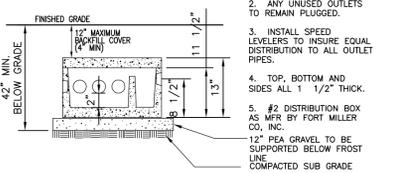
IMPERIOUS CLAY TRENCH
N.T.S.



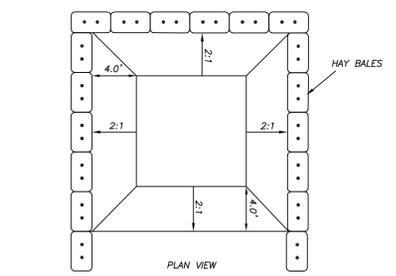
STABILIZED CONSTRUCTION ENTRANCE
N.T.S.



DISTRIBUTION BOX
WITH BAFFLE & SPEED LEVELERS (FIVE OUTLETS MINIMUM)
N.T.S.

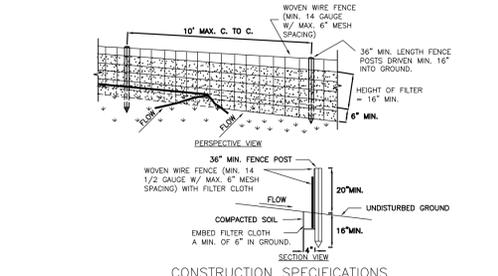


TYPICAL ABSORPTION TRENCH DETAIL
N.T.S. PIPE TO BE: HDPE SDR 38 ASTM 5810



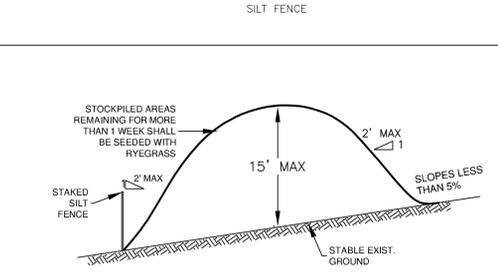
CONCRETE WASHOUT AREA
N.T.S.

1. CONCRETE WASHOUT AREA TO BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE. CONCRETE WASHOUT AREA TO BE ENTIRELY SELF CONTAINED.
2. HAY BALES SHALL BE PROVIDED AROUND THE PERIMETER OF CONCRETE WASHOUT AREA FOR CONTAINMENT.
3. WASHOUT AREA SHALL BE LINED WITH PLASTIC SHEETING NO THINNER THAN 1 MILS. SHEETING SHALL HAVE NO HOLES OR TEARS AND SHALL BE ANCHORED BY SAND BAGS ON ALL SIDES EXCEPT ACCESS SIDE. PLASTIC LINING TO BE REPLACED WITH EACH CLEANING.
4. SIGNS SHALL BE PROVIDED AT THE CONSTRUCTION ENTRANCE AND CONCRETE AREAS INDICATING LOCATION OF WASHOUT AREA.
5. WASHOUT AREA TO BE ENCLOSED IN CONSTRUCTION FENCE.
6. WASHOUT AREAS TO BE INSPECTED DAILY TO ENSURE LINER IS INTACT AND ADEQUATE CAPACITY IS AVAILABLE AT ALL TIMES. WASHOUT AREAS SHALL BE INSPECTED IMMEDIATELY AFTER HEAVY RAINS. DAMAGE OR LEAKING WASHOUT AREAS TO BE DEACTIVATED AND REPAIRED IMMEDIATELY.
7. CONCRETE WASTE SHALL BE REMOVED AND DISPOSED OF ONCE IT REACHES THREE-QUARTERS OF THE WASHOUT AREA'S HEIGHT. ALL WASTE SHALL BE DISPOSED OF IN A MFR CONSISTENT WITH APPLICABLE LAWS, REGULATIONS AND GUIDELINES OF MUNICIPALITY.

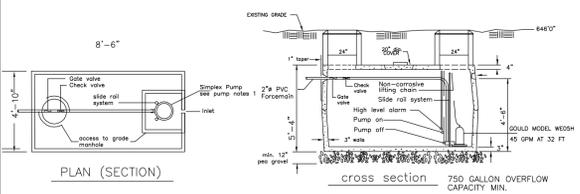


CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER C, MIRAFI 100X, STABILINKA 1142N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOTAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.



TYPICAL SOIL STOCKPILE DETAIL
N. T. S.



PUMP PIT/OVERFLOW TANK DETAIL
(USE 1000 GALLON SEPTIC TANK) N.T.S.

- Construction Notes for Subsurface Sewage Treatment Systems & Well Water Supplies Serving Single-Family Residences
- The following notes shall be provided on all plans for individual SSTS and well water supplies:
1. All trees within 10 feet of the proposed subsurface sewage treatment system (SSTS) shall be removed.
 2. SSTS to be inspected by the Licensed Design Professional and the Putnam County Health Department after construction and prior to backfill.
 3. The SSTS area shall be staked and roped off so that no trucks, machinery, building materials, nor excavated earth shall be allowed in the SSTS area.
 4. All erosion control measures shall be installed prior to the start of any construction and must be maintained until construction is complete and stabilization has occurred.
 5. Construction of SSTS to be in accordance with these plans, any revision thereto, and the rules and regulations of the permit issuing governmental agency.
 6. The well is to be a drilled well, constructed in accordance with New York State Health Department 10 NYCRR appendix 5B, standards for water wells, pump tested for a minimum of 6 hours and have a minimum safe yield of 5 gpm. Yields less than 5 gpm will be immediately reported to the Putnam County Department of Health.
 7. The SSTS design shown hereon does not provide for installation of a garbage grinder. Such installation requires additional design and the approval of the Putnam County Department of Health.
 8. Putnam County Health Department approval is based on the location of the SSTS, well, building, setbacks, and driveways as shown on the approved drawing. Modifications are to have prior Putnam County Health Department approval. Unauthorized modifications made to this drawing after the date of Putnam County Health Department approval voids said approval.
 9. All stone walls in and within 10 feet of the SSTS area shall be removed to their entire depth and the resulting void replaced with similar on site soil.
 10. Cut or fill is not permitted in the SSTS area, except if so specified on this plan.
 11. After backfilling the system, the SSTS area shall be covered with a minimum of 6 inches of top soil, seeded and mulched.
 12. Occupancy of this structure will not be permitted until the Construction Compliance Application is notified PCHD and NYCDP at least 24 hours prior to the commencement of the SSTS construction.
 13. This plan is approved for sewage treatment and/or water supply only, and all other required permits and/or approvals are the responsibility of the permittee.
 14. The Putnam County Health Department approval expires two (2) years from the date on the approval stamp and is required to be renewed on or before the expiration date. The approval is revocable for cause or may be amended or modified when considered necessary by the Department.
 15. A copy of the house plans submitted to the building inspector of the local municipality, when filing for a building permit, must be submitted to the Putnam County Health Department to verify bedroom count.
 16. The house, well and SSTS shall be surveyed located and staked by a NYS Licensed Land Surveyor prior to construction.
 17. For all SSTS's which are subject to Joint Review and approval with NYCDP the Design Professional is to notify PCHD and NYCDP at least 24 hours prior to the commencement of the SSTS construction.
 18. Datum based on NAVD 88.
 19. Property outside FEMA 100 year wetland.

- SOIL EROSION AND SEDIMENT CONTROL NOTES
1. ALL SOIL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE STALLED IN ACCORDANCE WITH THE NEW YORK GUIDELINES FOR EROSION AND SEDIMENT CONTROL (ENR) AS PUBLISHED BY THE NEW YORK STATE SOIL AND WATER CONSERVATION SOCIETY AND RECOMMENDED BY THE U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE. (REFERRED TO IN REMAINING TEXT AS "THE NEW YORK GUIDELINES").
 2. ANY DISTURBED AREA THAT WILL BE LEFT UNDISTURBED FOR MORE THAN 21 DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL BE SEED AND MULCHED WITHIN 14 DAYS OF THE LAST DISTURBANCE WITH TEMPORARY SEEDING. IF THE SEASON PERMITS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS SHALL BE MULCHED WITH STRAW OR EQUIVALENT MATERIAL. THE SEEDING SHALL BE DONE IN ACCORDANCE WITH THE NEW YORK GUIDELINES, AS FOLLOWS:
 - A) SEED: ANNUAL RYE GRASS APPLIED AT A RATE OF 30 LBS/ACRE OTHER SELECT MIXTURE AS DESCRIBED IN THE NEW YORK GUIDELINES.
 - B) MULCH: OLD HAY OR SMALL GRAIN STRAW APPLIED AT A RATE OF NINETY (90) POUNDS PER ONE THOUSAND SQUARE FT. OR TWO TONS PER ACRE. TO BE APPLIED AND ANCHORED ACCORDING TO THE NEW YORK GUIDELINES. MULCH FIBER HYDROLYSEY OR OTHER SPRAYABLE PRODUCTS APPROVED FOR EROSION CONTROL (NYON WEB OR MESH) MAY BE USED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 - C) IN AREAS OF SLOPES STEEPER THAN ONE ON TWO, JUTE MATTING SHALL BE USED TO STABILIZED SEEDED AND / OR PLANTED AREAS. JUTE MATTING SHALL BE INSTALLED AND ANCHORED IN ACCORDANCE WITH THE NEW YORK GUIDELINES.
 3. ANY GRADED AREAS NOT SUBJECT TO FURTHER DISTURBANCE OR CONSTRUCTION TRAFFIC SHALL, WITHIN FIVE (5) DAYS AFTER FINAL GRADING, RECEIVE PERMANENT VEGETATIVE COVER IN COMBINATION WITH A SUITABLE MULCH AS FOLLOWS:
 - A) STEEP SLOPES OR EROSION SLOPES GREATER THAN 2:1 (H:V) REFER TO PERMANENT CRITICAL AREA PLANTING NOTES.
 - B) RECREATIONAL AREAS AND LAWN REFER TO RECREATIONAL AREA IMPROVEMENT NOTES.
 4. SLOPES STEEPER THAN ONE ON THREE SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
 5. PAVED ROADWAYS SHALL BE KEPT CLEAR AT ALL TIMES.
 6. THE SITE SHALL AT ALL TIMES BE GRADE AND MAINTAIN SUCH THAT ALL STORM WATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES. EXCEPT FOR MINOR PERIMETER EMBANKMENT AREAS, ALL GRADE AREAS SHALL BE DIRECTED THROUGH ONE OF THE SEDIMENT BARRIERS. DIVERSION SWALES MAY BE USED TO DIRECT DRAINAGE RUNOFF UNTIL PERMANENT STORM DRAINAGE SYSTEM IS IN PLACE.
 7. DUST SHALL BE CONTROLLED BY SPRINKLING OR OTHER APPROVED METHODS.
 8. STOCKPILES SHALL NOT BE LOCATED WITHIN FIFTY FEET (50') OF ROADWAYS OR DRAINAGE FACILITIES. THE BASE OF ALL STOCKPILES SHALL BE PROTECTED BY A SILT FENCE, HAY BALES BARRIERS OR A COMBINATION OF BOTH.
 9. SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR ON A DAILY BASIS TO ENSURE THAT TEMPORARY AND PERMANENT DITCHES, PIPES AND STRUCTURES ARE CLEAR OF DEBRIS, THAT EMBANKMENTS AND BARRIERS ARE NOT BREACHED, AND THAT ALL BARRIERS ARE INTACT.
 10. MANDATORY STORMWATER INSPECTIONS SHALL BE PERFORMED WEEKLY AND WITHIN 24 HOURS OF ANY PRECIPITATION EVENT PRODUCING MORE THAN 1/2" OF PRECIPITATION OVER AND 24 HOUR PERIOD. INSPECTIONS ARE PERFORMED BY A LICENSED CERTIFIED PROFESSIONAL.
 11. ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL FINAL ACCEPTANCE OF THE SITE WORK BY THE OWNER. UPON CERTIFICATION OF FINAL ACCEPTANCE, THE OWNER WILL ASSUME RESPONSIBILITY FOR THE CONTINUED MAINTENANCE OR PERMANENT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES.
 12. ALL DRAINAGE OUTLETS AND INLETS SHALL BE LINED WITH RIP-RAP AS SPECIFIED ON THE PLANS AND/OR PER ENGINEER.
 13. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR IMPLEMENTATION OF ALL EROSION AND SEDIMENT CONTROL MEASURES.

- ALTERATION OF THIS DRAWING EXCEPT BY A LICENSED P.E. OR ARCHITECT OR LICENSED LAND SURVEYOR IS ILLEGAL. ANY ALTERATION BY A P.E. OR ARCHITECT OR SURVEYOR MUST BE INDICATED AND BEAR HIS SEAL SIGNATURE AND DATE OF ALTERATION.
- | | | |
|---|---------|---|
| 4 | 7-29-20 | CONCRETE WASHOUT AREA ADDED |
| 3 | 7-18-20 | REVISED FOR COMMENTS FROM PUTNAM COUNTY HEALTH DEPARTMENT |
| 2 | 6-18-20 | AREA OF DISTURBANCE IN WETLAND BUFFER CALCULATED |
| 1 | 5-29-20 | COMMENTS |

No. DATE

OWNER:	SMP HOMES 10 LOWER LAKE ROAD CARMEL (T)	SCALE:	1" = 20'	LATEST REVISION:	
		DATED:	MAY 16, 2019	SHEET No.	D-1
		TAX MAP No.	43.17-1-47		

JOHN KARELL, JR. P.E.
121 CUSHMAN ROAD
PATTERSON, NEW YORK 12563

OWNER: SMP HOMES
10 LOWER LAKE ROAD
CARMEL (T)

SCALE: 1" = 20'

DATED: MAY 16, 2019

TAX MAP No. 43.17-1-47

LATEST REVISION: SHEET No. D-1

DETAILS



845-876-7884 phone
845-876-4899 fax
jack@jkr11@yahoo.com

ROBERT LAGA
Chairman

NICHOLAS FANNIN
Vice Chairman

RICHARD FRANZETTI
Wetland Inspector

ROSE TROMBETTA
Secretary

TOWN OF CARMEL
ENVIRONMENTAL CONSERVATION BOARD



60 McAlpin Avenue
Mahopac, New York 10541
Tel. (845) 628-1500 - Ext. 190
www.ci.carmel.ny.us

BOARD MEMBERS

Edward Barnett
Vincent Turano
Anthony Federice

APPLICATION FOR WETLAND PERMIT OR LETTER OF PERMISSION

Name of Applicant: JUSTINE BRODERICK % LIONS GATE PROP MGMT

Address of Applicant: 37 FAIR ST, CARMEL, NY 10512 Email: JUSTINE@lionsgate.mgt.com

Telephone# 845-306-7604 Name and Address of Owner if different from Applicant:

WHITE SAIL CONDOMINIUMS

Property Address: 4 MARINA DRIVE Tax Map # 76.5 -1-52

Agency Submitting Application if Applicable: _____

Location of Wetland: _____

Size of Work Section & Specific Location: RETAINING WALL LOCATED ON WESTERN PROPERTY
Will Project Utilize State Owned Lands? If Yes, Specify: NO LINE

Type and extent of work (feet of new channel, yards of material to be removed, draining, dredging, filling, etc). A brief description of the regulated activity (attach supporting details).

REPLACE EXISTING WOOD/TIMBER RETAINING WALL WITH NEW

PRE-CAST CONCRETE BLOCK WALL IN SAME PLACE AS EXISTING

Proposed Start Date: 09/2020 Anticipated Completion Date: 10/2020 Fee Paid \$ _____

CERTIFICATION

I hereby affirm under penalty of perjury that information provided on this form is true to the best of my knowledge and belief, false statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law. As a condition to the issuance of a permit, the applicant accepts full legal responsibility for all damage, direct or indirect, or whatever nature, and by whomever suffered, arising out of the project described here-in and agrees to indemnify and save harmless the Town of Carmel from suits, actions, damages and costs of every name and description resulting from the said project.

Justine Broderick
SIGNATURE

7/31/20
DATE

Short Environmental Assessment Form

Part 1 - Project Information

Instructions for Completing

Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 – Project and Sponsor Information			
Name of Action or Project: RETAINING WALL REPLACEMENT			
Project Location (describe, and attach a location map): 4 MARINA DR, MAHOTAC, NY 10541			
Brief Description of Proposed Action: REPLACE EXISTING WOOD/TIMBER RETAINING WALL WITH NEW PRE-CAST CONCRETE BLOCK WALL IN SAME PLACE AS EXISTING ALONG WESTERN PROPERTY LINE (AND AS SHOWN ON PLANS)			
Name of Applicant or Sponsor: PAUL REVANS, PE		Telephone: 914-222-0397	
Address: 600 SOMERSTON RD		E-Mail: rdpepc@gmail.com	
City/PO: YORKTOWN		State: NY	Zip Code: 10598
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.		NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval:		NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
3. a. Total acreage of the site of the proposed action?		<u>N/A</u> acres	
b. Total acreage to be physically disturbed?		<u>N/A</u> acres	
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		<u>N/A</u> acres	
4. Check all land uses that occur on, are adjoining or near the proposed action:			
5. <input type="checkbox"/> Urban <input type="checkbox"/> Rural (non-agriculture) <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential (suburban)			
<input type="checkbox"/> Forest <input type="checkbox"/> Agriculture <input checked="" type="checkbox"/> Aquatic <input type="checkbox"/> Other(Specify):			
<input type="checkbox"/> Parkland			

5. Is the proposed action, a. A permitted use under the zoning regulations? b. Consistent with the adopted comprehensive plan?	NO	YES	N/A
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: _____	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8. a. Will the proposed action result in a substantial increase in traffic above present levels? b. Are public transportation services available at or near the site of the proposed action? c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies: N/A	NO	YES	
	<input type="checkbox"/>	<input type="checkbox"/>	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency? b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody? If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:		
<input checked="" type="checkbox"/> Shoreline <input type="checkbox"/> Forest <input type="checkbox"/> Agricultural/grasslands <input type="checkbox"/> Early mid-successional <input type="checkbox"/> Wetland <input type="checkbox"/> Urban <input type="checkbox"/> Suburban		
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
16. Is the project site located in the 100-year flood plan?	NO	YES
	<input type="checkbox"/>	<input type="checkbox"/>
17. Will the proposed action create storm water discharge, either from point or non-point sources?	NO	YES
If Yes,	<input type="checkbox"/>	<input type="checkbox"/>
a. Will storm water discharges flow to adjacent properties?	<input type="checkbox"/>	<input type="checkbox"/>
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?	<input type="checkbox"/>	<input type="checkbox"/>
If Yes, briefly describe:		

18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)?	NO	YES
If Yes, explain the purpose and size of the impoundment: _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>

19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?	NO	YES
If Yes, describe: _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>

20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?	NO	YES
If Yes, describe: _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>

I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE		
Applicant/sponsor/name: <u>PAUL REVANS, P.E.</u> Date: <u>7/28/2020</u>		
Signature: <u><i>Paul Revans</i></u> Title: <u>P.E.</u>		

WHITE SAIL CONDOMINIUMS
C/o Lions Gate Property Management
37 Fair Street
Carmel, NY 10598

May 19, 2020

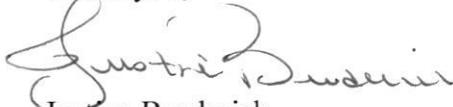
From: White Sail Condominiums
4 Marina Drive
Mahopac, NY 10541

Re: Letter of Authorization

To: Authority Having Jurisdiction

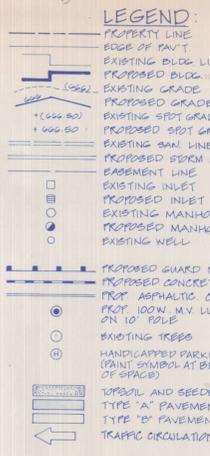
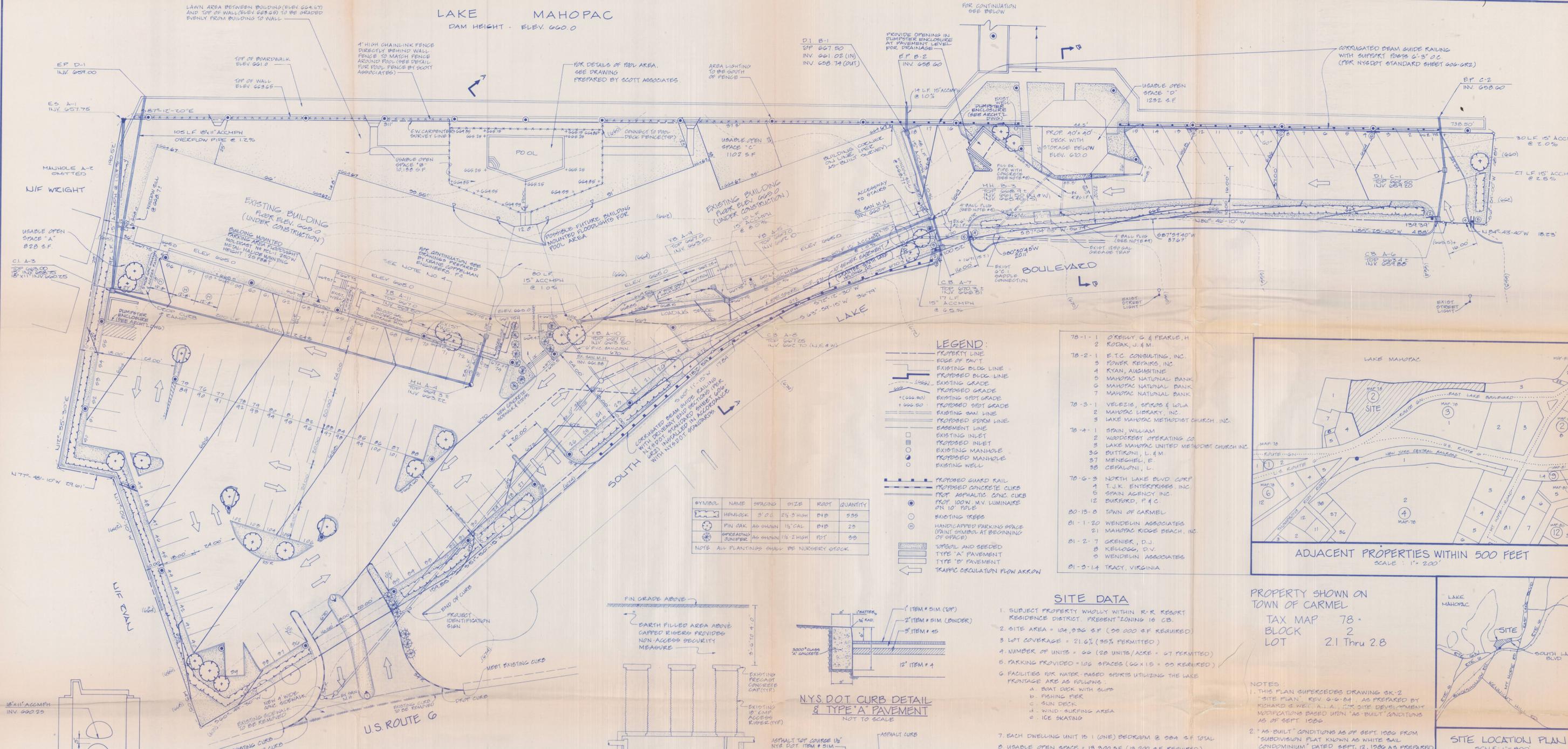
We hereby authorize Paul Revans, PE to file on behalf of White Sail Condominiums.

Thank you,



Justine Broderick
As Managing Agent for
White Sail Condominiums
845-306-7604

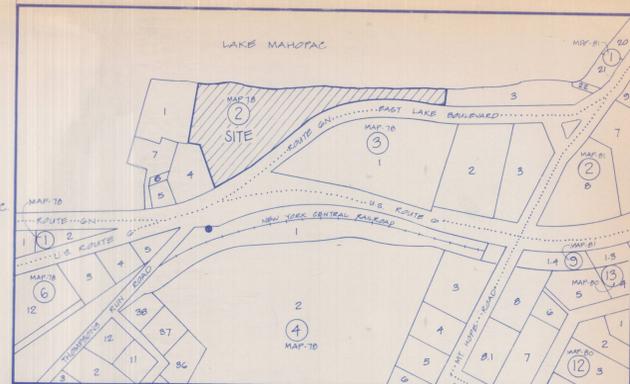
LAKE MAHOPAC
DAM HEIGHT - ELEV. 660.0



SYMBOL	NAME	SPACING	SIZE	ROOT	QUANTITY
(Symbol)	HENEGCK	3' O.C.	2 1/2" HIGH	D4P	555
(Symbol)	PIN OAK	AS SHOWN	1 1/2" CAL	D4P	25
(Symbol)	SPREADER JUNIPER	AS SHOWN	1 1/2" HIGH	ROT	35

NOTE: ALL PLANTINGS SHALL BE NURSERY STOCK.

- 78-1-1** O'REILLY, G & PEARLE, H
KODAK, J & M.
- 78-2-1** E.T.C. CONSULTING, INC.
POWER REPAIRS, INC.
RYAN, ANGELO/INE
MAHOPAC NATIONAL BANK
MAHOPAC NATIONAL BANK
MAHOPAC NATIONAL BANK
- 78-3-1** VELEZIC, SPIRO & LOLA
MAHOPAC LIBRARY, INC.
LAKE MAHOPAC METHODIST CHURCH, INC.
- 78-4-1** SPAIN, WILLIAM
WOODCREST OPERATING CO.
LAKE MAHOPAC UNITED METHODIST CHURCH, INC.
BUTTIKONI, L. & M.
MENSCHEL, E.
CEPALONI, L.
- 78-5-3** NORTH LAKE BLVD CORP
T.J.K. ENTERPRISES, INC.
SPAIN AGENCY, INC.
BURFORD, P & C
- 80-15-8** TOWN OF CARMEL
- 81-1-20** WENDELIN ASSOCIATES
21 MAHOPAC RIDGE BEACH, INC.
- 81-2-7** GRENIER, D.J.
8 KELLOGG, D.V.
9 WENDELIN ASSOCIATES
- 81-3-14** TRACY, VIRGINIA



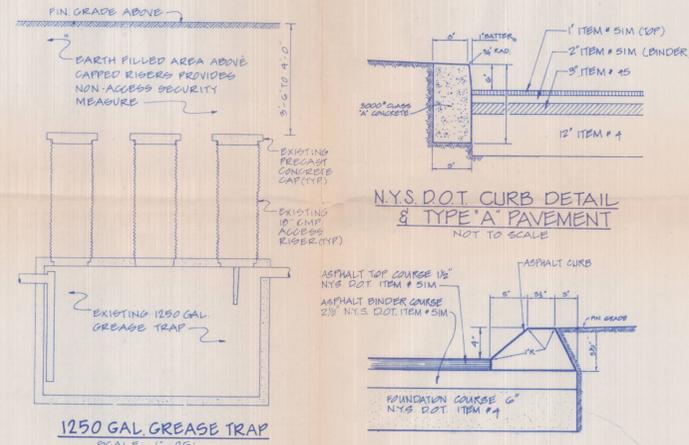
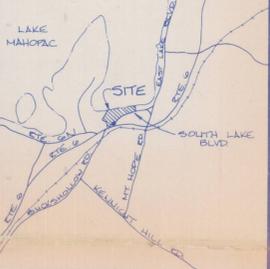
SITE DATA

- SUBJECT PROPERTY WHOLLY WITHIN R-R RESORT RESIDENCE DISTRICT. PRESENT ZONING IS CB.
- SITE AREA = 104,936 SF (20,000 SF REQUIRED)
- LOT COVERAGE = 21.6% (35% PERMITTED)
- NUMBER OF UNITS = 60 (20 UNITS/ACRE = 47 PERMITTED)
- PARKING PROVIDED = 126 SPACES (60 X 15 = 90 REQUIRED)
- FACILITIES FOR WATER-BASED SPORTS UTILIZING THE LAKE FRONTAGE ARE AS FOLLOWS:
 - A. BOAT DOCK WITH SLIPS
 - B. FISHING PIER
 - C. SUN DECK
 - D. WIND-SURFING AREA
 - E. ICE SKATING
- EACH DWELLING UNIT IS 1 (ONE) BEDROOM @ 984 SF TOTAL
- USABLE OPEN SPACE = 13,300 SF (13,200 SF REQUIRED)
 - AREA 'A' = 828 SF
 - AREA 'B' = 10,188 SF
 - AREA 'C' = 1,102 SF
 - AREA 'D' = 1,282 SF
 - 13,300 SF

PROPERTY SHOWN ON TOWN OF CARMEL TAX MAP 78-2 BLOCK 2 LOT 2.1 Thru 2.8

NOTES:

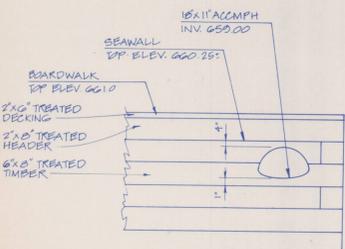
- THIS PLAN SUPERCEDES DRAWING SK-2 "SITE PLAN", REV. 6-6-84, AS PREPARED BY RICHARD S. WELBY, A.I.A., FOR THE SITE DEVELOPMENT MODIFICATIONS BASED UPON "AS-BUILT" CONDITIONS AS OF SEPT. 1986.
- "AS-BUILT" CONDITIONS AS OF SEPT. 1986 FROM "SUBDIVISION PLAT KNOWN AS WHITE SAIL CONDOMINIUM" DATED SEPT. 12, 1986 AS PREPARED BY RICHARD H. GORR, L.S.
- EXISTING TOPOGRAPHY FROM DRAWING SK-2 "SITE PLAN", REV. 6-6-84, AS PREPARED BY RICHARD S. WELBY, A.I.A.
- EXISTING UNDERGROUND WATER SEWERAGE TANK THIS AREA. SHAPE FINISHED GRADE TO DRAIN AS FOLLOWS:
 - A. EAST SECTION EASTERLY TO T.B. A-11.
 - B. WEST SECTION WESTERLY TO AND OVER CURB.
- WHEEL GUARDS (TYP) AT ANGLED PARKING (SPACES #1 THRU #10)
- ALL SLOPES SHALL NOT EXCEED 2 HORIZONTAL TO 1 VERTICAL.
- ACCEPTANCE OF RETAINING WALLS, SEAWALLS, BOARDWALK, DOCK, FISHING PIER, DOCK AND SWIMMING POOL AS SHOWN ON THE DRAWING DOES NOT IMPLY THE APPROVAL OF THEIR STRUCTURAL DESIGN.
- APPROVAL IS ONLY FOR THOSE ITEMS WITHIN THE BOUNDARY LINES OF THE PROPERTY.
- THE TOWN ENGINEER SHALL BE NOTIFIED 48 HOURS PRIOR TO THE INSTALLATION OF PLUGS AND CONCRETE BACKFILL. THE TOWN ENGINEER MUST BE PRESENT DURING THE INSTALLATION OF THE PLUGS AND CONCRETE BACKFILL.
- A MINIMUM OF TWO PICK-UPS PER WEEK WILL BE PROVIDED FOR SOLID WASTE DISPOSAL.
- AN "AS-BUILT" SURVEY WILL BE REV. 8-10-88 REV. 8-10-88 REV. 7-11-88 REV. 8-24-88 REV. 9-16-88 REV. 10-30-87 REV. 1-27-87 REV. 11-9-86 REV. 10-21-86 REV. 9-29-86



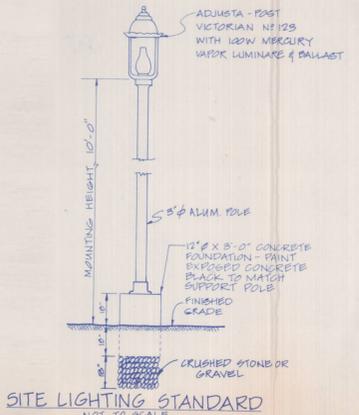
SIGN TABLE

DESIGNATION	SYMBOL	SIZE	M.T.H.C.	NYS DOT ROUND
1	(Symbol)	24"x36"	7'-0"	RA-66
2	(Symbol)	30"x36"	7'-0"	RB-15G
3	(Symbol)	30"x36"	7'-0"	RI-10
4	(Symbol)	36"x12"	7'-0"	RS-10G
5	(Symbol)	36"x12"	7'-0"	RS-11C
6	(Symbol)	18"x24"	7'-0"	RS-12G

INSTALLATION OF 18"x11" ACCMPH @ CATCH BASIN A-3



INSTALLATION OF 18"x11" ACCMPH @ SEAWALL



30° STRIPING ENLARGEMENT DETAIL
NOT TO SCALE

30° BAY PARKING STALL LAYOUT
NOT TO SCALE

30° PERIMETER PARKING STALL LAYOUT
NOT TO SCALE

PROJECT: WHITE SAIL CONDOMINIUM
SOUTH LAKE BLVD & CTE W MAHOPAC, NEW YORK

CLIENT: SOUTH LAKE HOLDING CO
BOX 766 NEW YORK

CONSULTING SITE ENGINEERS: RANDOLPH W. LAURENT ASSOCIATES, P.C.
73 FAIRFIELD DRIVE
PATTERSON, NEW YORK 12563
914-278-6108

DRAWING TITLE: AMENDED SITE PLAN

SCALE: 1" = 20'

DATE: 9-13-86

DRAWN BY: CCW

CHECKED BY: CWL

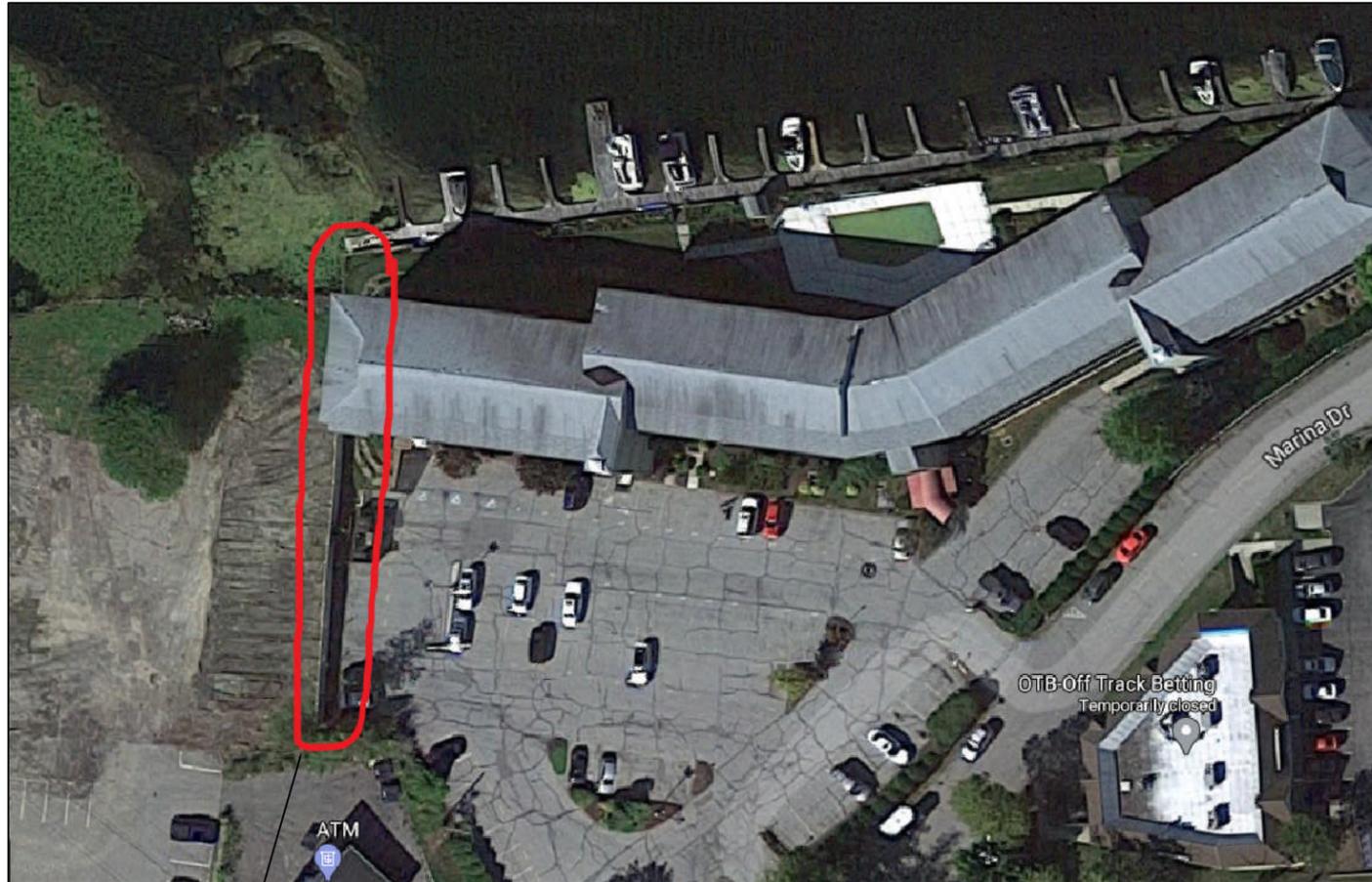
JOB NO.: 8659

DRAWING NO.: 5D-1

OWNER: SOUTH LAKE HOLDING COMPANY, INC.
BOX 766 MAHOPAC NEW YORK

APPROVED TOWN OF CARMEL ENGINEERING DEPARTMENT
APPROVED BY: [Signature]
TOWN ENGINEER
DATE: 9-23-86

"WHITE SAIL CONDOMINIUMS RETAINING WALL RESTORATION PROJECT"



AREA OF WORK

SATELLITE IMAGE
NOT TO SCALE

SECTION : 76.5
BLOCK : 1
LOT : 52

PLAN NOTE
THIS PLAN IS APPROVED ONLY FOR THE WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

TENANT PROTECTION PLAN

- 1> **EGRESS.** AT ALL TIMES IN THE COURSE OF CONSTRUCTION PROVISION SHALL BE MADE FOR ADEQUATE EGRESS AS REQUIRED BY THIS CODE AND THE TENANT PROTECTION PLAN SHALL IDENTIFY THE EGRESS THAT WILL BE PROVIDED. REQUIRED EGRESS SHALL NOT BE OBSTRUCTED AT ANY TIME EXCEPT WHERE APPROVED BY THE COMMISSIONER.
- 2> **FIRE SAFETY.** ALL NECESSARY LAWS AND CONTROLS, INCLUDING THOSE WITH RESPECT TO OCCUPIED DWELLINGS, AS WELL AS ADDITIONAL SAFETY MEASURES NECESSITATED BY THE CONSTRUCTION SHALL BE STRICTLY OBSERVED.
- 3> **HEALTH REQUIREMENTS.** SPECIFICATION OF METHODS TO BE USED FOR CONTROL OF DUST, DISPOSAL OF CONSTRUCTION DEBRIS, PEST CONTROL AND MAINTENANCE OF SANITARY FACILITIES, AND LIMITATION OF NOISE TO ACCEPTABLE LEVELS SHALL BE INCLUDED. 3.1. THERE SHALL BE INCLUDED A STATEMENT OF COMPLIANCE WITH APPLICABLE PROVISIONS OF LAW RELATING TO LEAD AND ASBESTOS.
- 4> **COMPLIANCE WITH HOUSING STANDARDS.** THE REQUIREMENTS OF THE NEW YORK CITY HOUSING MAINTENANCE CODE, AND, WHERE APPLICABLE, THE NEW YORK STATE MULTIPLE DWELLING LAW SHALL BE STRICTLY OBSERVED
- 5> **STRUCTURAL SAFETY.** NO STRUCTURAL WORK SHALL BE DONE THAT MAY ENDANGER THE OCCUPANTS.
- 6> **NOISE RESTRICTIONS.** WHERE HOURS OF THE DAY OR THE DAYS OF THE WEEK IN WHICH CONSTRUCTION WORK MAY BE UNDERTAKEN ARE LIMITED PURSUANT TO THE AGENCY HAVING JURISDICTION NOISE CONTROL CODE, SUCH LIMITATIONS SHALL BE STATED.
- 7> **MAINTAINING ESSENTIAL SERVICES.** DESCRIBE THE MEANS AND METHODS TO BE USED FOR MAINTAINING HEAT, HOT WATER, COLD WATER, GAS, ELECTRICITY, OR OTHER UTILITY SERVICES IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEW YORK STATE HOUSING MAINTENANCE CODE. SPECIFY IF A DISRUPTION OF ANY SUCH SERVICE IS ANTICIPATED DURING THE WORK, INCLUDING ANTICIPATED DURATION OF SUCH DISRUPTION AND THE MEANS AND METHODS TO BE EMPLOYED TO MINIMIZE SUCH DISRUPTION, INCLUDING THE PROVISION OF SUFFICIENT ALTERNATIVES FOR SUCH SERVICE DURING SUCH DISRUPTION.

WARNING - IT IS A VIOLATION OF STATE EDUCATION LAW FOR ANY REASON, UNLESS HE IS ACTING UNDER THE DIRECTION OF LICENSED PROFESSIONAL ENGINEER, TO ALTER ANY ITEM IN ANY WAY ON THESE PLANS.



DESCRIPTION:
DEMOLISH EXISTING TIMBER RETAINING WALL AND REPLACE WITH PRE-CAST CONCRETE BLOCK RETAINING WALL IN SAME PLACE AS PREVIOUSLY EXISTING

CONTRACTOR: TBD
OWNER: WHITE SAIL CONDOMINIUMS
C/O LINDS GATE PROPERTY MANAGEMENT
37 FAIR STREET
CARMEL, NY 10598

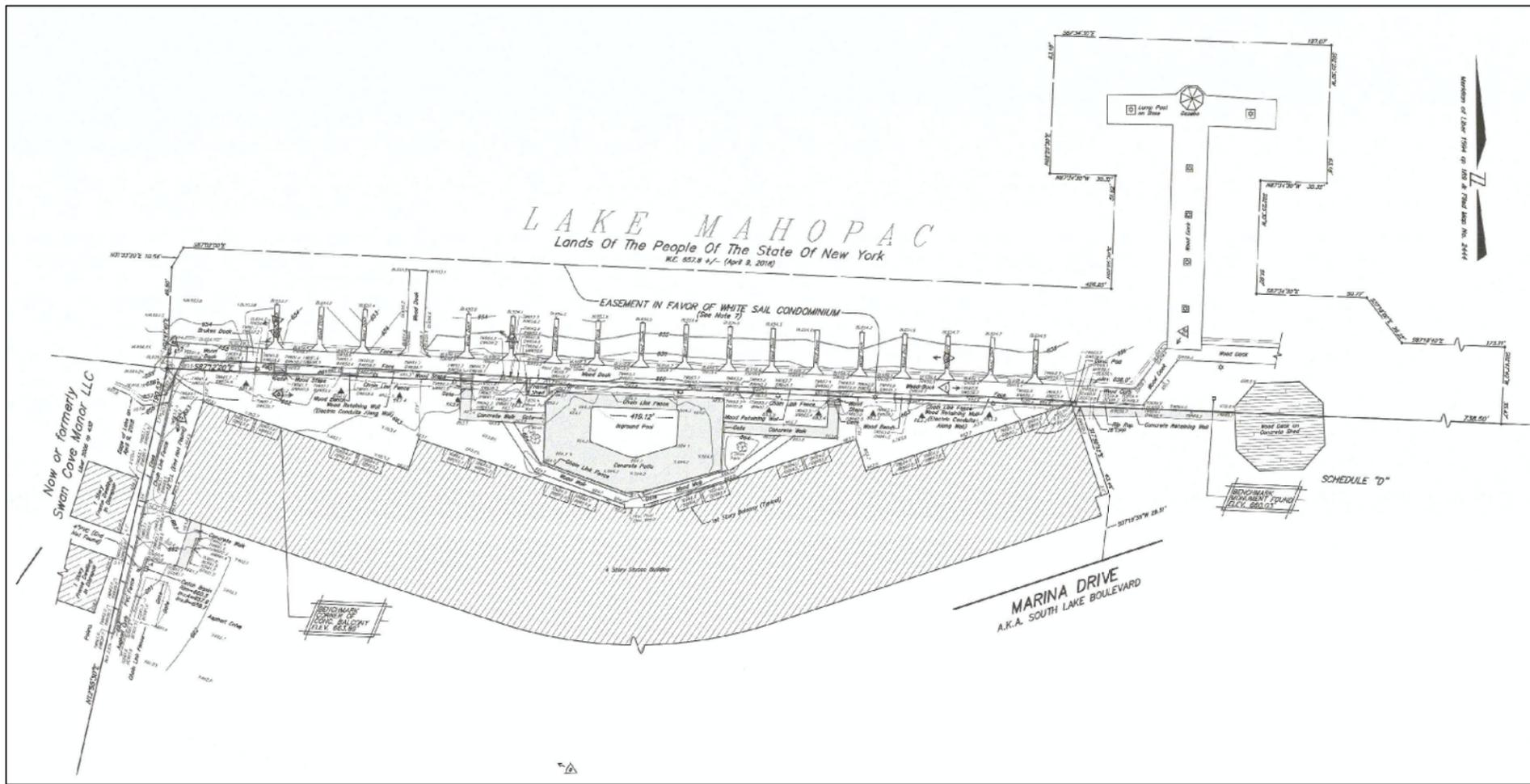
PROJECT LOCATION:
4 MARINA DRIVE
MAHOPAC, NY 10541

NOTES/SATELLITE VIEW

DATE: 6/12/2020
PROJECT REF#
DRAWN BY: P.R.
CHECKED BY: R.C.
N - 001 . 0 0

INDEX		
SHEET	NAME	DESCRIPTION
1	N-001.00	NOTES & SATELLITE VIEW
2	N-002.00	TAX MAP & SITE PLAN
3	N-003.00	EROSION CONTROL NOTES
4	DM-001.00	DEMOLITION PLAN
5	S-001.00	NEW WALL PLAN & DETAILS
6	S-002.00	DETAILS

SHEET
1 OF 6



SITE PLAN/LOT DIAGRAM
NOT TO SCALE



E-PARCEL TAX MAP
NOT TO SCALE

WARNING - IT IS A VIOLATION OF STATE EDUCATION LAW FOR ANY REASON, UNLESS HE IS ACTING UNDER THE DIRECTION OF LICENSED PROFESSIONAL ENGINEER, TO ALTER ANY ITEM IN ANY WAY ON THESE PLANS.



DESCRIPTION:
DEMOLISH EXISTING TIMBER RETAINING WALL AND REPLACE WITH PRE-CAST CONCRETE BLOCK RETAINING WALL IN SAME PLACE AS PREVIOUSLY EXISTING

CONTRACTOR: TBD
OWNER: WHITE SAIL CONDOMINIUMS
C/O LIONS GATE PROPERTY MANAGEMENT
37 FAIR STREET
CARMEL, NY 10598

PROJECT LOCATION:
4 MARINA DRIVE
MAHOPAC, NY 10541

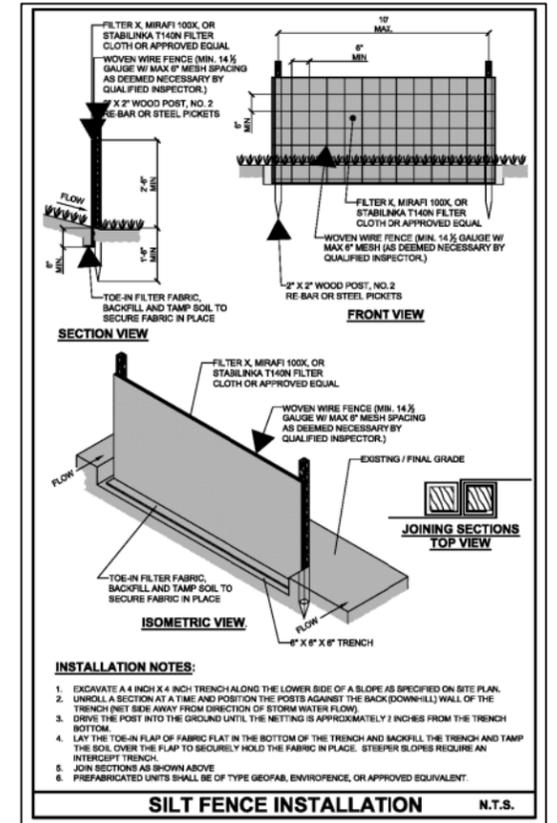
SITE PLAN/TAX MAP

DATE: 6/12/2020
PROJECT REF#:
DRAWN BY: P.R.
CHECKED BY: R.C.
N = 002.0 0

EROSION CONTROL NOTES

- The Applicant must obtain inspection and approval by the Carmel Environmental Control Board at the following points:
 - At the required preconstruction meetings.
 - Following installation of sediment control measures and prior to any other land disturbing activity.
 - Following installation of any booms and/or turbidity curtains.
 - Prior to removal or modification of any sediment control devices.
 - Prior to removal of any booms and/or turbidity curtains
 - Prior to final acceptance.
- All erosion control measures are to be constructed and maintained in accordance with applicable published standards and specifications and the most current "Standards and Specifications for Soil Erosion and Sediment Control."
- The Contractor shall construct all erosion and sediment control measures per the approved plan and construction sequence, shall have them inspected and approved by engineer prior to beginning any other land disturbances, shall ensure that all runoff from disturbed areas is directed to the sediment control devices and shall not remove any erosion or sediment control measures without prior permission from Town of Carmel ECB.
- Any request for changes to the approved sediment control plan or sequence of construction must be submitted to the town Wetlands Inspector and approved before implementing changes. Major changes will require a plan revision.
- The Contractor shall mark the limits of disturbance on-site with orange construction fence. Silt fence fence must be installed on-contour and shall not be used to delineate the limit of contract or property line.
- The Contractor shall protect all points of construction ingress and egress to prevent the deposition of materials onto traversed public thoroughfare(s). All materials deposited onto public thoroughfare(s) shall be removed immediately.
- The Contractor shall inspect daily and maintain continuously in effective operating condition all erosion and sediment control measures until such time as they are removed with prior permission from the town Wetlands Inspector.
- Mass clearings and grading must be avoided. Clear and grub only what is necessary for immediate construction activity.
- Wherever possible/feasible, natural vegetation is to be protected by limiting the clearing and grubbing operation, as well as restricting construction equipment to the work area. Large trees to be preserved shall be fenced off such that the root system and overhanging branches are protected from construction equipment.
- All sediment basins, trap embankments, swales, perimeter dikes and permanent slopes steeper or equal to 3H:1V shall be stabilized with sod, seed and anchored straw mulch or other approved stabilization measures, within seven calendar days of establishment. All areas disturbed outside of the perimeter sediment control system must be minimized and stabilized immediately. Maintenance must be performed as necessary to ensure continued stabilization. Restabilization or overseeding will be required, if necessary.
- The Contractor shall apply sod, seed and anchored straw mulch, or other approved stabilization measures to all disturbed areas within seven (7) calendar days after stripping and grading activities have ceased on that area. Maintenance shall be performed as necessary to ensure continued stabilization. Other active construction areas that are not being actively graded (i.e. routes for construction vehicles within a site) may be required to be stabilized at the direction of the Inspector. Stockpiles, which have not been used for seven (7) calendar days, shall be stabilized through the application of sod, seed, and anchored straw mulch, or other approved stabilization methods.
- Prior to removal of sediment control measures, the Applicant shall stabilize all contributory disturbed areas using sod or an approved permanent seed mixture with required soil amendments and an approved anchored mulch. Wood fiber mulch may only be used in seeding season to promote sheet flow drainage. Areas brought to finished grade during the seeding season shall be permanently stabilized within seven (7) calendar days of establishment. When property is brought to finished grade during the months of November through February, and permanent stabilization is found to be impractical, approved temporary seed and straw anchored mulch shall be applied to disturbed areas. The final permanent stabilization of such property shall be completed prior to the following April 15.
- Exposed soils anticipated to remain idle for more than fourteen (14) days shall be immediately stabilized with temporary seed and mulch.
- Off-site runoff should be diverted from highly erodible soils and steep slopes to stable areas with temporary dikes and/or swales.
- Permanent seeding should optimally be undertaken in the spring from March through Ma, and in late summer and early fall from September to October 15. Permanent seeding may be undertaken during the summer, providing an adequate watering schedule is maintained.
- During the peak summer months and in the fall after October 15, when seeding is otherwise found to be impracticable, an appropriate temporary mulch shall be applied. Temporary seeding with rye can be utilized through November.
- Seeding for temporary stabilization or in preparation of winter shutdown shall be applied at the following rate and schedule:
 - spring or summer or early fall: use rye grass at 30 lbs per acre
 - late fall or early winter: use winter rye at 100 lbs per acre
- Permanent seeding for final stabilization should be applied either from spring-thaw to mid-May or mid-August to early October with a 65/20/15 mix of Kentucky Bluegrass/perennial rye grass/fine fescue at 160 lbs per acre. If seeding is done between mid-May and mid-August, irrigation may be required to achieve final stabilization.
- Hay or straw mulch shall be applied to all seeded areas, temporary or permanent, at a rate of 2 tons per acre (or 3 bales per 1,000 sq ft).
- Areas where permanent vegetation is to be established shall be dressed with a minimum of 4" of top soil. Compacted sub-soils shall be tilled prior to placement of top soil. Surface shall be raked smooth, removing foreign matter and stones over 1" in diameter.
- Top soil shall have at least 6% by weight of fine textured stable organic material, and no greater than 20%. It shall have not less than 20% of material, passing the #200 sieve, and not more than 15% clay. It shall be relatively free of stones over 1-1/2" in diameter, trash, noxious weeds, and shall have less than 10% gravel.
- When specified, rolled erosion control blanket shall be straw bio-degradable double-net blanket and shall be provided on grades steeper than 3H:1V
- When specified, inlet protection shall be installed concurrently with catch basin installation. In the same manner, rock outlet protection shall be installed concurrently with pipe discharge installation.
- In areas where soil disturbance activity has temporarily ore permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the current soil disturbance activity ceased.
- Erosion and sediment control measures within the active work area shall be inspected daily to ensure that they are being maintained in effective operating condition at all times.
- Maintenance shall be performed as necessary to ensure continued stabilization. Areas outside of the perimeter sediment control system shall not be disturbed.
- The site work, materials, approved Sediment Control and Stormwater Management Plans, and any required test reports shall be available, at the site for inspection by duly authorized officials of the town of Carmel.
- Surface drainage flows over unstabilized cut and fill slopes shall be controlled by either preventing drainage flows from traversing the slopes or by installing mechanical devices to lower the water downslope without causing erosion. Dikes shall be installed and maintained at the top of cut or fill slopes until the slope and drainage area to it are fully stabilized, at which time they must be removed and final grading done to promote sheet flow drainage. Mechanical devices must be provided at points of concentrated flow where erosion is likely to occur.

- Permanent swales or other points of concentrated water flow shall be stabilized with sod or seed with approved erosion control matting or by other approved stabilization measures.
- Temporary sediment control devices shall be removed, with permission of town of Carmel, within 30 calendar days following establishment of permanent stabilization in all contributory drainage areas. If establishment is not full and uniform as determined by the town of Carmel Inspector, overseeding will be required. Stormwater management structures used temporarily for sediment control shall be converted to the permanent configuration within this time period as well.
- No permanent cut or fill slope with a gradient steeper than 3:1 will be permitted in lawn maintenance areas. A slope gradient of up to 2:1 will be permitted in areas that are not to be maintained provided that those areas are indicated on the erosion and sediment control plan with a low-maintenance ground cover specified for permanent stabilization. Slope gradient steeper than 2:1 will not be permitted with vegetative stabilization.
- The Contractor shall install a splash block at the bottom of each downspout unless the downspout is connected by a drain line to an acceptable outlet.
- All water pumped from an excavation during construction shall be pumped either to sediment tanks and/or sediment traps. No water will be pumped to the storm drain system or swale. De-watering shall be performed in accordance with the most current Standards and Specifications for Soil Erosion and Sediment Control.
- Stabilized construction entrance(s) shall be maintained so as to prevent the tracking of sediment off-site. Sediment tracked onto paved rights-of-way shall be swept clean at the end of each work day.
- Sediment shall be removed from silt fence when it becomes 6' deep at the fabric. Silt fence shall be replaced when fabric becomes ripped or frayed.
- Sediment shall be removed from sediment trapping devices when accumulation reaches 50% of design capacity. Stone shall be cleaned or replaced when sediment pool no longer drains properly.
- For finished grading, the Contractor shall provide adequate gradients so as to (1) prevent water from standing on the surface of lawns more than 24 hours after the end of a rainfall, except in designated drainage courses and swale flow areas which may drain as long as 48 hours after the end of a rainfall, and (2) provide positive drainage away from all building foundations or openings.
- Sediment traps or basins are not permitted within 20-feet of a building, which exists or is under construction. No building may be constructed within 20-feet of a sediment trap or basin.
- All inlets in non-sump areas shall have asphalt berms installed at the time of base paving to direct runoff to inlets.
- The town Wetlands Inspector has the option of requiring additional sediment control measures, if deemed necessary.
- All trap elevations are relative to the outlet elevation, which must be on existing undisturbed ground.
- Vegetative stabilization shall be performed in accordance with the most current Standards and Specifications for Soil Erosion and Sediment Control.
- Temporary sediment trap(s) shall be cleaned out and restored to the original dimensions when sediment has accumulated to a point one-half the depth between the outlet crest and the bottom of the trap.
- Sediment removed from traps shall be placed and stabilized in approved areas in such a manner that it does not foul existing or proposed storm drainage systems or areas already stabilized. Sediment shall not be placed within a flood plain or wetland.
- All sediment basins and traps must be surrounded with a welded wire safety fence. The fence must be at least 42-inches high, have posts spaced no farther apart than eight-feet, have mesh openings no greater than two-inches in width and four-inches in height with a minimum of 14 gauge wire. Safety fence must be maintained in good condition at all times.
- Off-site spoil or borrow areas must have approved sediment control plans.
- Protect all trees to be preserved during construction in accordance with the approved Forest Conservation Plan.
- The Applicant is responsible for all actions of contractor and subcontractors, including repairing damage to sediment control devices and existing infrastructure.



Simplex™ Boom

BOM107 For Strong Current, 100' x 18", 12" Draft Dimensions

Marine-grade aluminum connectors and a galvanized steel chain make this 5,000 lb. breaking strength non-absorbent floating boom great for containing oil spills and debris in strong currents.

- Round, closed-cell polyethylene foam flotation cylinders corral liquids and debris up to 6" above water line
- Skirting barrier hangs 12" below the water line to keep pollutants from creeping under;
- galvanized steel chain runs the length of the boom to add weight and rigidity
- Heavy-duty, 22-ounce vinyl-coated polyester is UV resistant for regular outdoor use; welded, reinforced seams help ensure long life
- Marine-grade aluminum universal siltco connectors and attached toggle pins permit linking of multiple units
- Quality construction provides 5,000-lb. actual breaking strength
- Polypropylene handle/anchor point eases handling and securing for easy deployment
- High-visibility yellow for instant recognition in emergencies
- Conforms to OPA-90 specifications
- Cleans easily using detergents, steam or power washing
- Light-weight and easy to move; ideal in marinas, inland waterways or along shorelines
- Add PIG Oil-Only Booms to absorb petroleum-based pollutants
- Need a custom boom? Call 1-800-HOT-HOGS (468-4647)

Specifications	
Style	Non-Absorbent Boom
Color	Yellow
Dimensions	100' L x 18" H
Current Type	Strong Current
Intended Use	On Water
Sold as	1 each
Weight	185 lbs.
Composition	Boom - PVC Chain - Galvanized Steel

BOOM DETAIL

PIG® Oil-Only Spill Kit in 95-Gallon Overpack Salvage Drum

KIT402 Absorbs up to 52 gal., Absorbs Oils, Fuels, Other Oil-Based Liquids Only, UN1H2/X295/S

Strong enough to earn a UN rating for shipping spill cleanup waste.

- Comply with Spill Plan regs, avoid fines and be ready to respond with the #1 kit for oil-based spills
- Overpack drum container is UN Rated for shipping waste after oil spill cleanup
- Lift-out, prepacked baskets speed access and guard contents from UV
- PIG Oil-Only Booms stop spreading spills; PIG Silt-Mat absorbs quickly
- Absorbents meet NFPA 99 standards for static decay to allow use with fuels and flammables
- Overpack is X-rated in Packing Groups I, II and III for shipping spill cleanup waste by land, sea or rail
- Lightweight, polyethylene container resists chemicals and keeps contents clean and dry
- Leakproof, twist-on lid is notched for easy removal or tightening with a 2x4 or pole
- Bold "Spill Kit" lettering for quick identification
- Ledges molded into container make kit easy to move by forklift
- Tamperproof seals help prevent pilfering of spill response supplies
- Note: A PIG Overpack Protection Cover (available separately) is suggested for outdoor storage to protect container from UV degradation and weathering
- Only PIG Spill Kits feature PIG Absorbents - the world's #1 selling brand
- For information on custom spill kits, just call 1-800-HOT-HOGS (468-4647)
- Spill Kit dimensions are approximate

Specifications	
Wheels Included	No
Container Type	Overpack
Fluid Absorbed	Oils, Fuels, Other Oil-Based Liquids Only

SPILL KIT DETAIL

REVANS DESIGN P.E. PC
#0308520107
YORKTOWN HEIGHTS, NY 10598

DESCRIPTION:
DEMOLISH EXISTING TIMBER RETAINING WALL AND REPLACE WITH PRE-CAST CONCRETE BLOCK RETAINING WALL IN SAME PLACE AS PREVIOUSLY EXISTING

CONTRACTOR: TBD

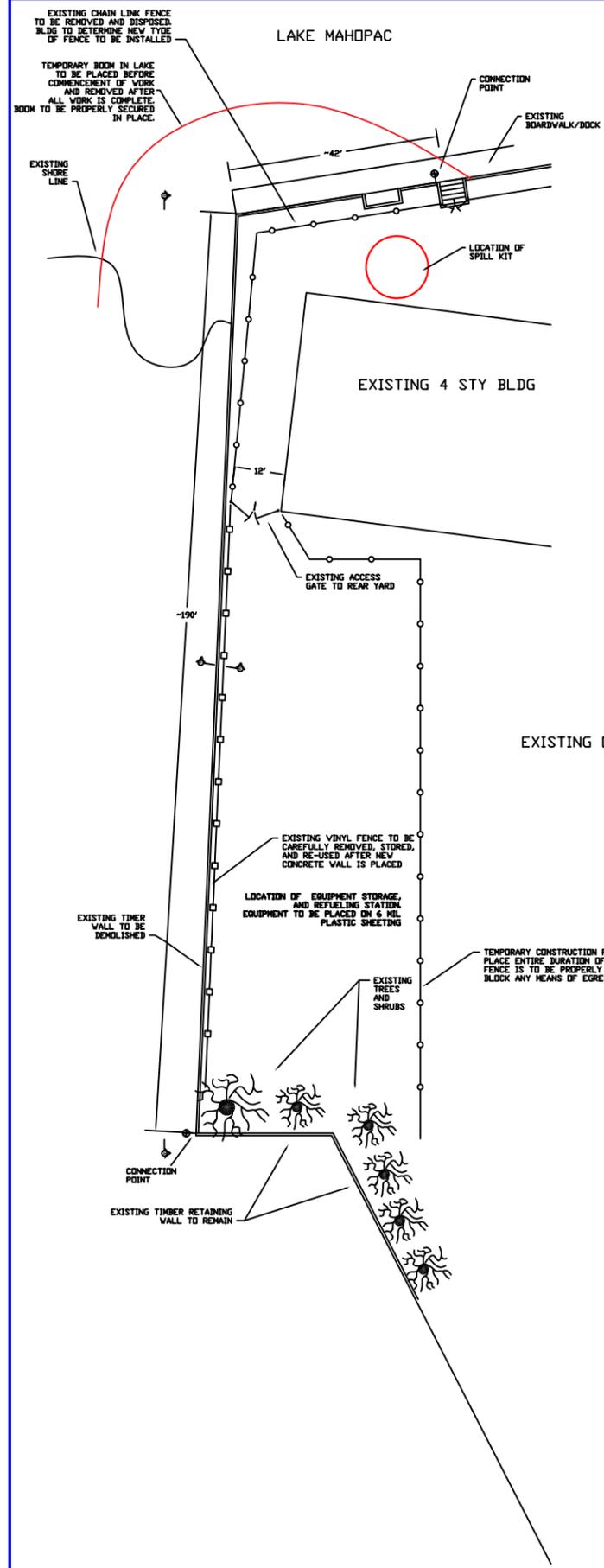
OWNER: WHITE SAIL CONDOMINIUMS
C/O LIDNS GATE PROPERTY MANAGEMENT
37 FAIR STREET
CARMEL, NY 10598

PROJECT LOCATION:
4 MARINA DRIVE
MAHOPAC, NY 10541

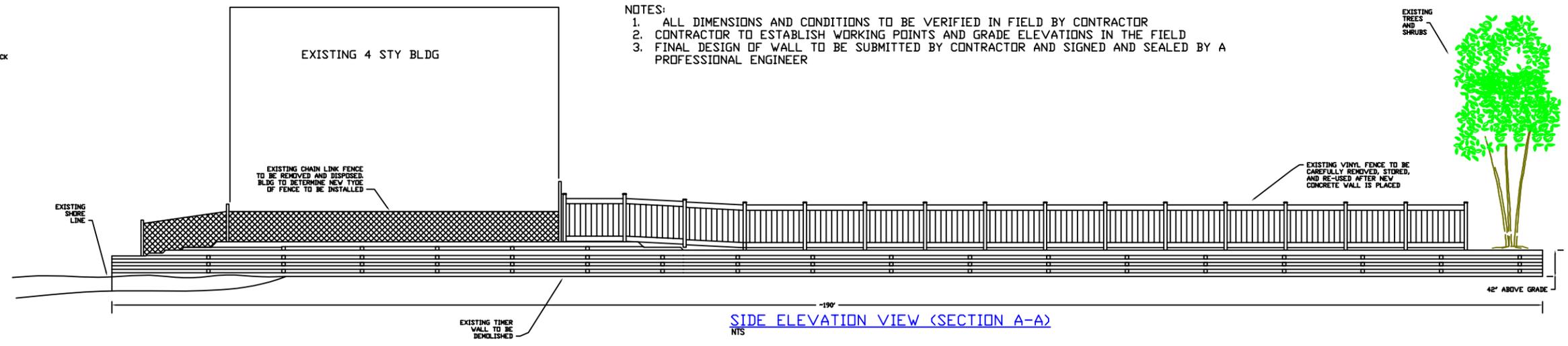
EROSION CONTROL NOTES

DATE	6/12/2020
PROJECT REF#	
DRAWN BY:	P.R.
CHECKED BY:	R.C.
N = 003.00	

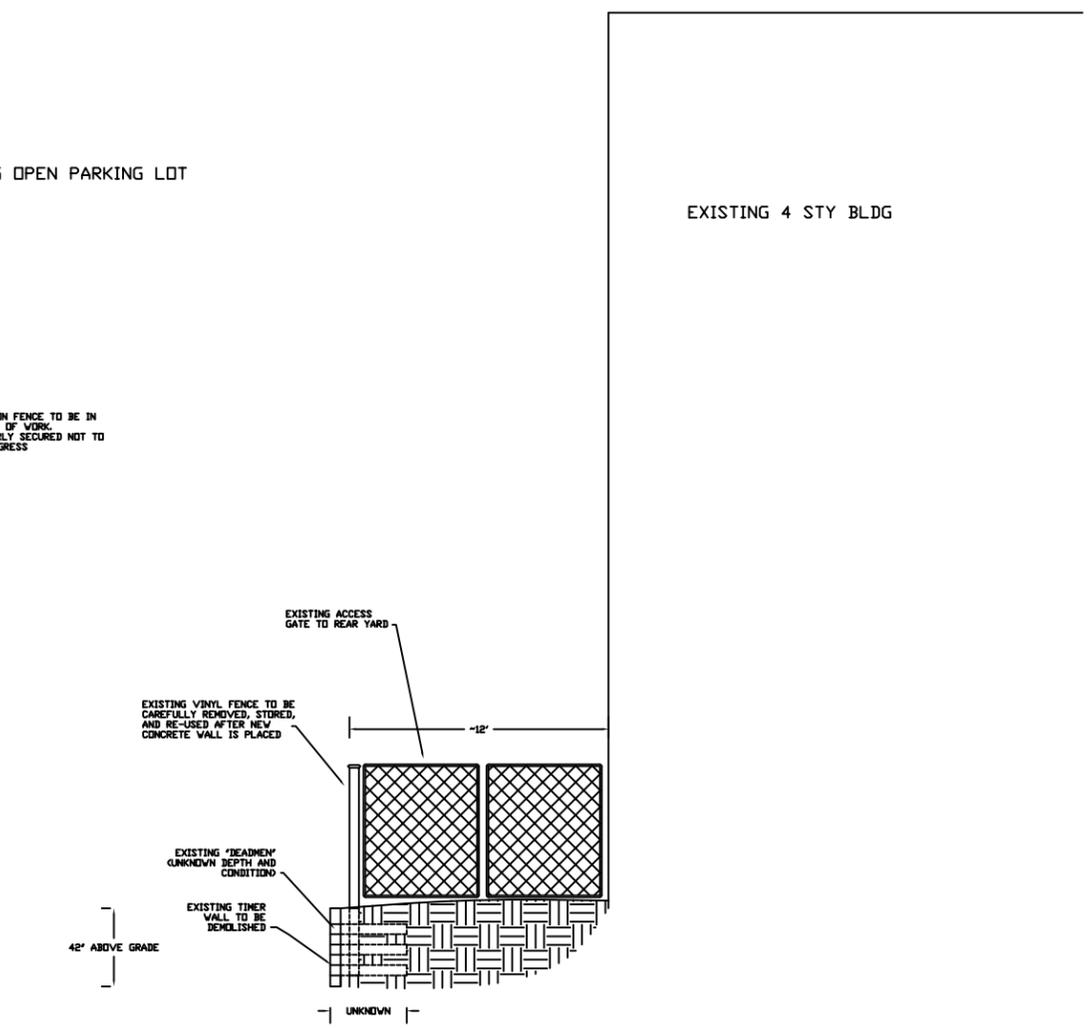
SHEET
3 OF 6



PARTIAL PLAN VIEW OF RETAINING WALL
NOT TO SCALE



SIDE ELEVATION VIEW (SECTION A-A)
NTS



CROSS-SECTION (SECTION B-B)
NTS



WARNING - IT IS A VIOLATION OF STATE EDUCATION LAW FOR ANY REASON, UNLESS HE IS ACTING UNDER THE DIRECTION OF LICENSED PROFESSIONAL ENGINEER, TO ALTER ANY ITEM IN ANY WAY ON THESE PLANS.

REVANS DESIGN PE PC
610 SOMERSET ST
YORKTOWN HEIGHTS, NY 10598

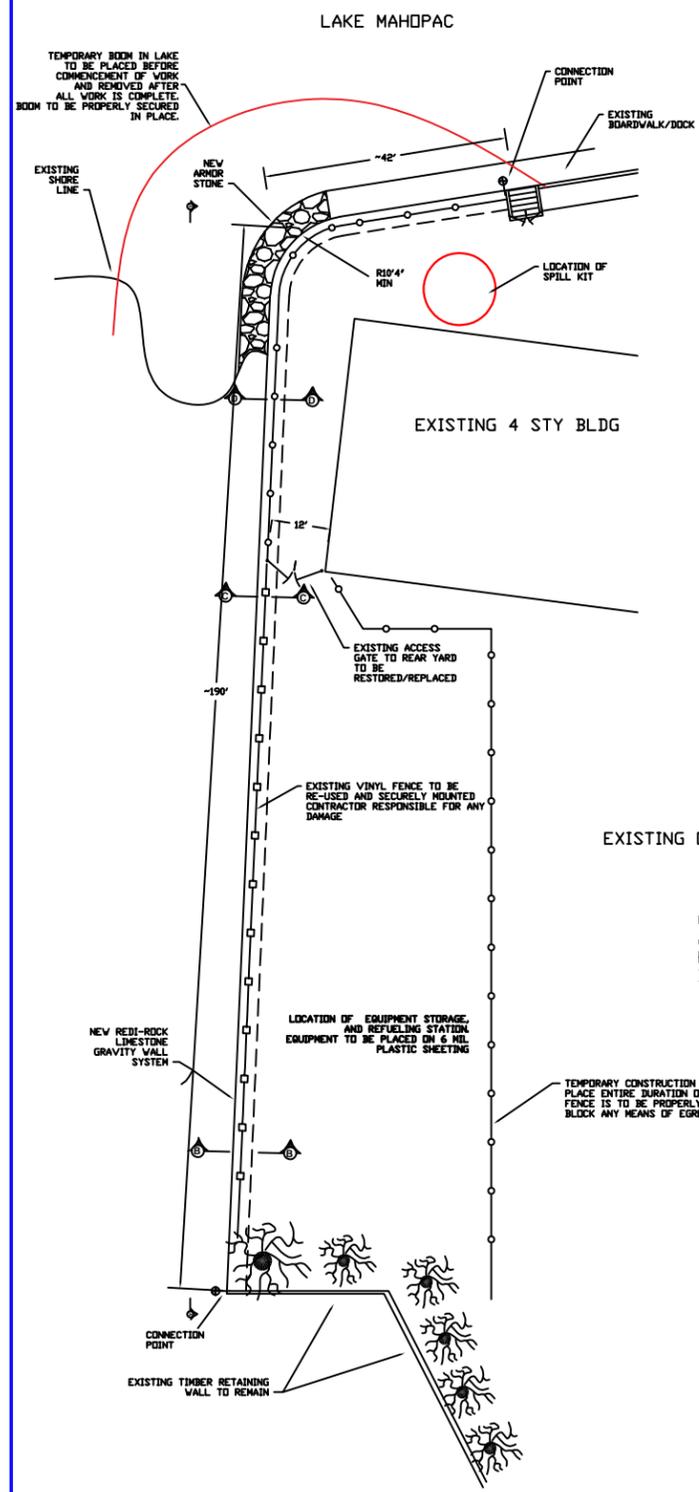
DESCRIPTION:
DEMOLISH EXISTING TIMBER RETAINING WALL AND REPLACE WITH PRE-CAST CONCRETE BLOCK RETAINING WALL IN SAME PLACE AS PREVIOUSLY EXISTING

CONTRACTOR: TBD
OWNER: WHITE SAIL CONDOMINIUMS
C/O LINDS GATE PROPERTY MANAGEMENT
37 FAIR STREET
CARMEL, NY 10598

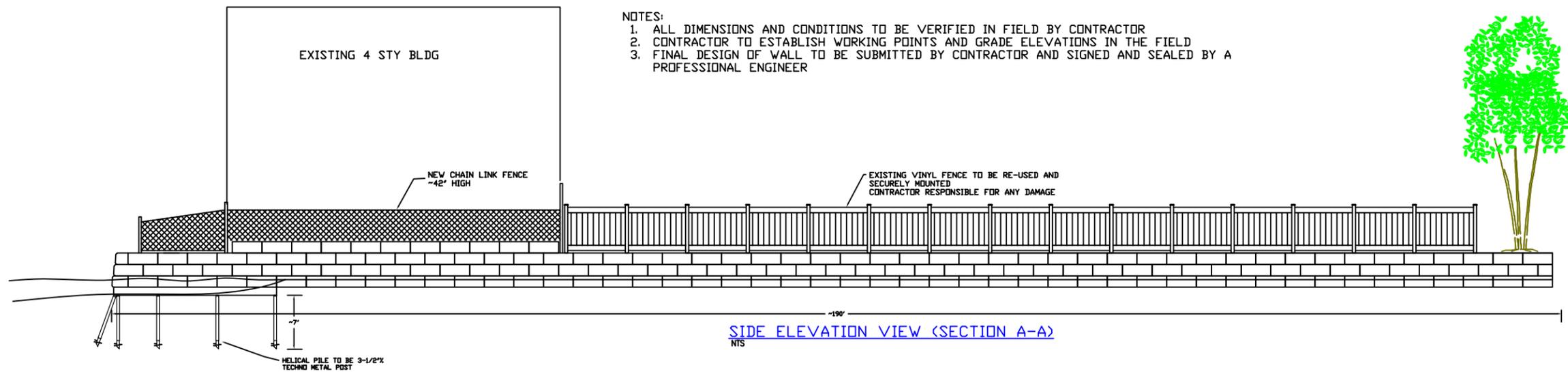
PROJECT LOCATION:
4 MARINA DRIVE
MAHOPAC, NY 10541

DEMOLITION PLAN

DATE:	6/12/2020
PROJECT REF#	
DRAWN BY:	P.R.
CHECKED BY:	R.C.
DM-001.00	



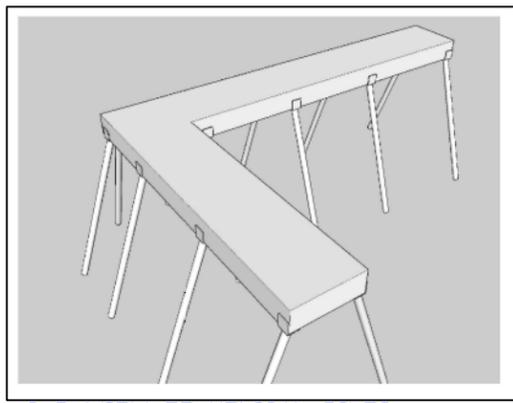
PARTIAL PLAN VIEW OF RETAINING WALL
NOT TO SCALE



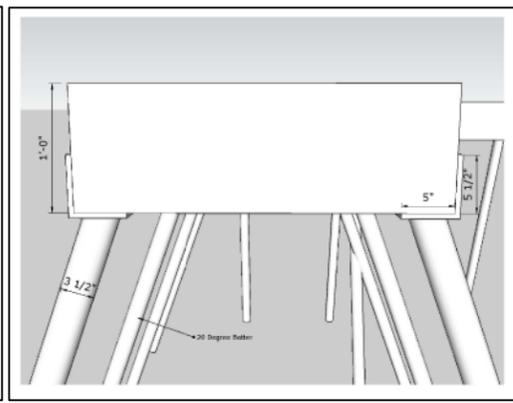
SIDE ELEVATION VIEW (SECTION A-A)
NTS

- NOTES:
1. ALL DIMENSIONS AND CONDITIONS TO BE VERIFIED IN FIELD BY CONTRACTOR
 2. CONTRACTOR TO ESTABLISH WORKING POINTS AND GRADE ELEVATIONS IN THE FIELD
 3. FINAL DESIGN OF WALL TO BE SUBMITTED BY CONTRACTOR AND SIGNED AND SEALED BY A PROFESSIONAL ENGINEER

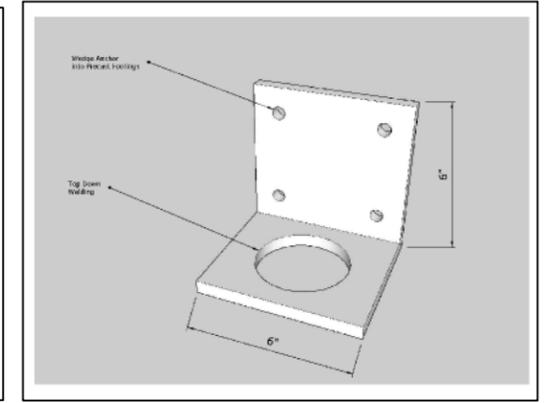
EXISTING OPEN PARKING LOT
CONTRACTOR TO RESTORE ASPHALT, CURBING, AND PLANTER BOXES DISTURBED DURING EXCAVATION



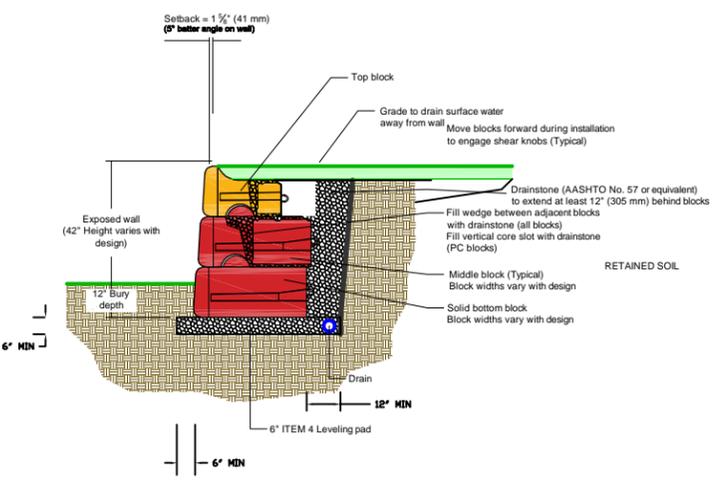
3-D VIEW OF HELICAL PILES WITH PRECAST CONCRETE 'SHELF'
NTS



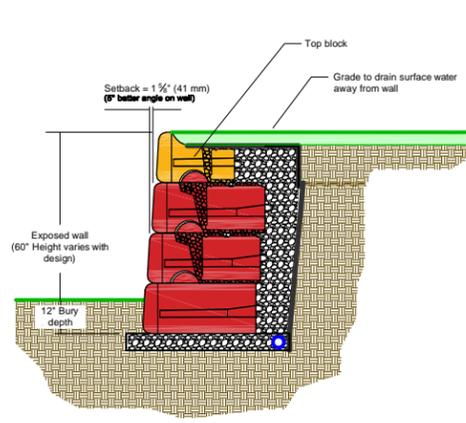
END VIEW OF HELICAL PILES WITH PRECAST CONCRETE 'SHELF'
NTS



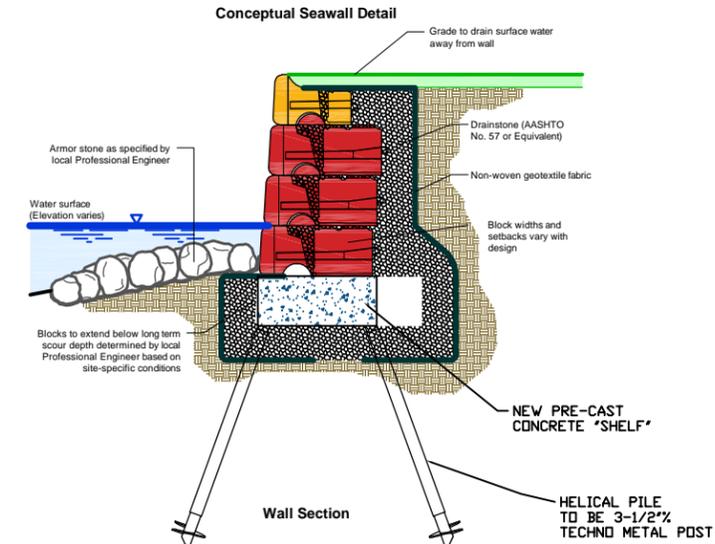
BRACKET CONNECTION DETAIL OF ANGLE TO HELICAL PILES
NTS



CROSS-SECTION (SECTION B-B)
NTS



CROSS-SECTION (SECTION C-C)
NTS



CROSS-SECTION (SECTION D-D)
NTS

WARNING - IT IS A VIOLATION OF STATE EDUCATION LAW FOR ANY REASON, UNLESS HE IS ACTING UNDER THE DIRECTION OF LICENSED PROFESSIONAL ENGINEER, TO ALTER ANY ITEM IN ANY WAY ON THESE PLANS.

REVANS DESIGN PE PC
60 SOMERSET ST
YORKTOWN HEIGHTS, NY 10598

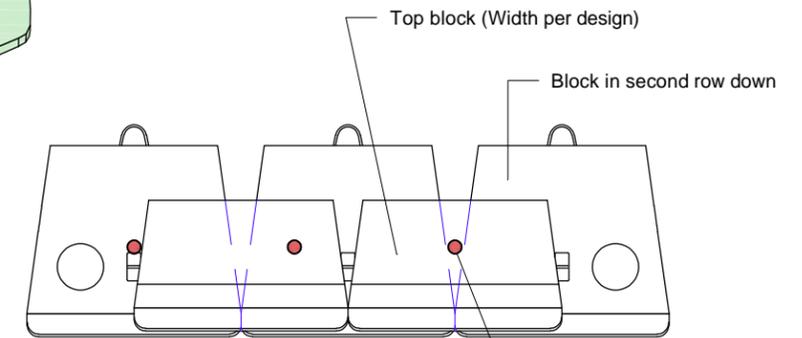
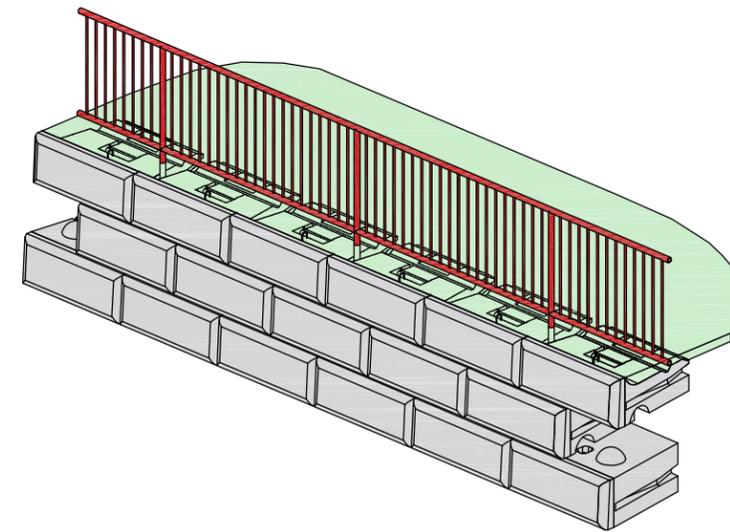
DESCRIPTION:
DEMOLISH EXISTING TIMBER RETAINING WALL AND REPLACE WITH PRE-CAST CONCRETE BLOCK RETAINING WALL IN SAME PLACE AS PREVIOUSLY EXISTING

CONTRACTOR: TBD
OWNER: WHITE SAIL CONDOMINIUMS
C/O LINDS GATE PROPERTY MANAGEMENT
37 FAIR STREET
CARMEL, NY 10598

PROJECT LOCATION:
4 MARINA DRIVE
MAHOPAC, NY 10541

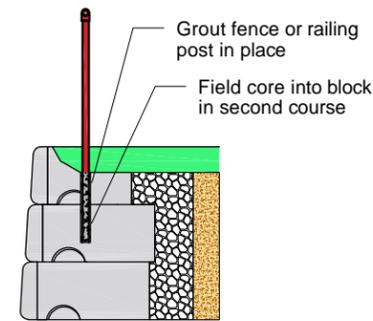
NEW WALL DETAILS

DATE:	6/12/2020
PROJECT REF#	
DRAWN BY:	P.R.
CHECKED BY:	R.C.
S - 001.00	

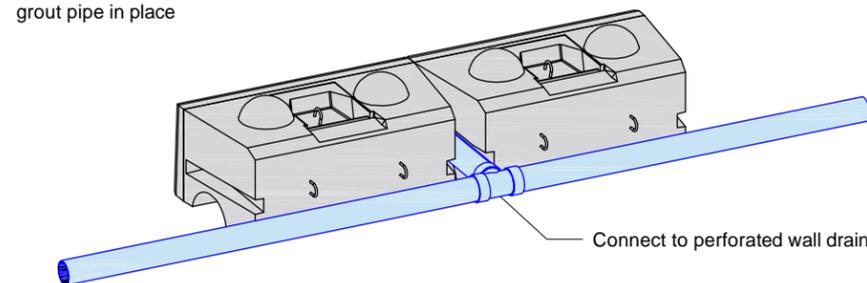
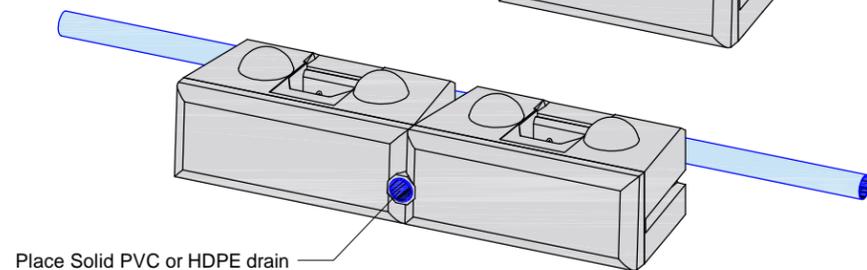
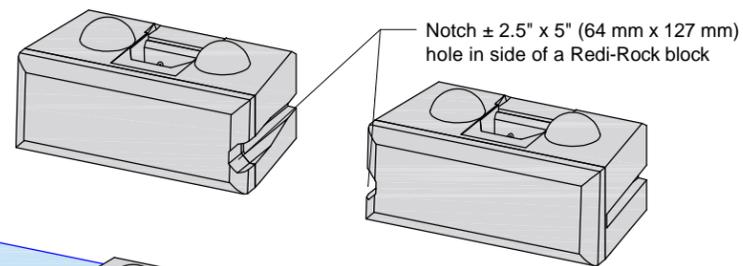


Top View

Connection Option #3
 Core through top block and grout posts in V-shaped opening between lower blocks
 • Spacing in multiples of 46 1/8" (1172 mm)
 • Weight of a 2 adjacent blocks on second level down and 3 top row blocks available to resist overturning forces



Grouted Connection (2 Blocks)



Field Installed Pipe

FENCE CONNECTION DETAIL
 NTS

This drawing is for reference only. Determination of the suitability and/or manner of use of any details contained in this document is the sole responsibility of the design engineer of record. Final project designs, including all construction details, shall be prepared by a licensed professional engineer using the actual conditions of the proposed site.

WEEP HOLE DETAIL
 NTS

WARNING - IT IS A VIOLATION OF STATE EDUCATION LAW FOR ANY REASON, UNLESS HE IS ACTING UNDER THE DIRECTION OF LICENSED PROFESSIONAL ENGINEER, TO ALTER ANY ITEM IN ANY WAY ON THESE PLANS.



DESCRIPTION:
 DEMOLISH EXISTING TIMBER RETAINING WALL AND REPLACE WITH PRE-CAST CONCRETE BLOCK RETAINING WALL IN SAME PLACE AS PREVIOUSLY EXISTING

CONTRACTOR: TBD
OWNER: WHITE SAIL CONDOMINIUMS
 C/O LINDS GATE PROPERTY MANAGEMENT
 37 FAIR STREET
 CARMEL, NY 10598

PROJECT LOCATION:
 4 MARINA DRIVE
 MAHOPAC, NY 10541

NEW WALL DETAILS

DATE:	6/12/2020
PROJECT REF#	
DRAWN BY:	P.R.
CHECKED BY:	R.C.
S - 002.0 0	

SHEET
 6 OF 6