PROPOSED COMMERCIAL BUILDING
PHILLIPS ROAD
NEW BEDFORD, MA

PROJECT NARRATIVE

PROJECT NARRATIVE
MAY 10, 2021

Project:	Proposed Commercial Building Phillips Road New Bedford, MA Assessors Map 136 – Lot 468
Property Owner:	Michael Panagakos 133 Faunce Corner Road Dartmouth, MA 02747
Applicant:	Panagakos Development 133 Faunce Corner Road Dartmouth, MA 02747
Zoning District:	Industrial C

EXISTING SITE CONDITIONS

The Phillips Road site is a 1.9-acre parcel of land situated in New Bedford, on the west side of Phillips Road. The project site currently is a wooded vacant lot. The topography of the site is fairly consistent, generally sloping from east to west. Stormwater runoff generated on site flows to the west to a bordering vegetated wetland system.

PROPOSED DEVELOPMENT

The Applicant is proposing the construction of a commercial Building.

Exterior site improvements will consist of the following:

1. Three curb cuts on Phillips Road, meeting minimum City Standards;
2. Construct a 3500 SF commercial building;
3. Construct new parking facility to service the proposed commercial building;
4. Add a new stormwater collection and recharge system for onsite stormwater treatment and flow mitigation;
5. Site landscape improvements will be completed.

APPLICATIONS/CHECKLIST

PLANNING BOARD

CITY OF NEW BEDFORD
JONATHAN F. MITCHELL, MAYOR

SUBMIT TO:
Planning Department
133 William Street
Room 303
New Bedford, MA 0274

SITE PLAN REVIEW APPLICATION

The undersigned, being the Applicant, seeks Site Plan Approval for property depicted on a plan entitled: Proposed Commercial Building by: SITEC/CEC, Inc. dated: 3/26/21

1. Application Information

Street Address: Phillips Road

Assessor's Map(s): 136 Lot(s) 468

Registry of Deeds Book: 13336 Page: 226

Zoning District: Industrial C

Applicant's Name (printed): Michael Panagakos

Mailing Address: 133 Faunce Corner Road (Street) Dartmouth (City) MA (State) 02747 (Zip)

Contact Information: SITEC/CEC, Inc.-Daniel Gioiosa, Project Manager
Telephone Number Email Address

Applicant's Relationship to Property: ☐ Owner ☐ Contract Vendee ☐ Other Engineer

List all submitted materials (include document titles & volume numbers where applicable) below:

Site Plan Set
Floor Plan and Elevations
Site Summary
Drainage Report

By signing below, I/we acknowledge that all information presented herein is true to the best of my/our knowledge. I/we further understand that any false information intentionally provided or omitted is grounds for the revocation of the approval (s). I/we also give Planning Department staff and Planning Board Members the right to access the premises (both interior and exterior) at reasonable times and upon reasonable notice for the purpose of taking photographs and conducting other visual inspections.

May 10, 2021 — Date

Michael Panagakos — Signature of Applicant

2. **Review Applicability** (Check All That Apply to Your Proposal)

Category

- [ ] Residential
- [x] Commercial
- [ ] Industrial
- [ ] Mixed (Check all categories that apply)

Construction

- [x] New Construction
- [ ] Expansion of Existing
- [ ] Conversion
- [ ] Rehabilitation

Scale

- [ ] < 2,000 gross sq feet
- [x] > 2,000 gross sq feet
- [ ] 3 or more new residential units
- [ ] 1 or more new units in existing res. multi-unit
- [ ] Drive Thru Proposed
- [ ] Ground Sign Proposed
- [ ] Residential Driveway With > 1 curbcut

3. Zoning Classifications

Present Use of Premises: Vacant Land

Proposed Use of Premises: Commercial

Zoning Relief Previously Granted (Variances, Special Permits, with Dates Granted):
NONE

4. Briefly Describe the Proposed Project:

The applicant is propsing to construct the 3,500 SF commercial building with the associated parking lot and grading and utilities as depicted on the site plans filed with this application.

5. Please complete the following:

	Existing	Allowed/Required	Proposed
Lot Area (sq ft)	82,428 SF	--	82,428 SF
Lot Width (ft)			
Number of Dwelling Units	--	--	--
Total Gross Floor Area (sq ft)	--	--	3,500 SF
Residential Gross Floor Area (sq ft)	--	--	--
Non-Residential Gross Floor Area (sq ft)	--	--	3,500 SF
Building Height (ft)	--	100 FT	< 100 FT
Front Setback (ft)	--	25 FT	26 FT
Side Setback (ft)	--	25 FT	72 FT
Side Setback (ft)	--	25 FT	391 FT

Rear Setback (ft)	--	25 FT	60 FT
Lot Coverage by Buildings (% of Lot Area)	--	50%	21%
Permeable Open Space (% of Lot Area)			
Green Space (% of Lot Area)	100	20%	79%
Off-Street Parking Spaces	--	1 PER 200 SF=18	34
Long-Term Bicycle Parking Spaces	--	--	--
Short-Term Bicycle Parking Spaces	--	--	--
Loading Bays	--	1	1

6. Please complete the following:

	Existing	Proposed
a) Number of customers per day:		10
b) Number of employees:		10
c) Hours of operation:		8 - 6
d) Days of operation:		M-F
e) Hours of deliveries:		8-6

f) Frequency of deliveries: ☐ Daily ☑ Weekly ☐ Monthly ☐ Other: _____

7. Planning Board Special Permits:

☐ The applicant is also requesting a Special Permit from the Planning Board.

Specify the requested Special Permit(s) below, and set forth within attached Development Impact Statement how the request meets approval criteria listed in §5320 of the zoning code.

_____

_____

_____

8. ZBA Variances and Special Permits:

NOTICE: Checking below does not constitute application for a special permit or a variance. The applicant must also file the proper application form and fee with the Zoning Board of Appeals.

☐ The applicant is also requesting a special permit from the ZBA:

Specify zoning code section & title

_____ _____

_____ _____

☐ The applicant is also requesting a variance from the ZBA:

Specify zoning code section & title

_____ _____

_____ _____

9. OWNERSHIP VERIFICATION

This section is to be completed & signed by the property owner:

I hereby authorize the following Applicant: Panagakos Development

at the following address: 133 Faunce Corner Road Dartmoth, MA 02747

to apply for: Site Plan Review

on premises located at: Phillips Road

in current ownership since: August 7, 2020

whose address is: 133 Faunce Corner Road Dartmouth, MA 02747

for which the record title stands in the name of: Michael Panagakos

whose address is: 133 Faunce Corner Road Dartmouth, MA 02747

by a deed duly recorded in the:

Registry of Deeds of County: Bristol Book: 13336 Page: 226

OR Registry District of the Land Court, Certificate No.: _____ Book: _____ Page: _____

I/we acknowledge that all information presented herein is true to the best of my/our knowledge. I/we further understand that any false information intentionally provided or omitted is grounds for the revocation of the approval(s). I/we also give Planning Department staff and Planning Board Members the right to access the premises (both interior and exterior) at reasonable times and upon reasonable notice for the purpose of taking photographs and conducting other visual inspections.

May 10, 2021 — Michael Panagakos

Date — Signature of Land Owner (If authorized Trustee, Officer or Agent, so identify)

NOTICE BY PUBLICATION & ABUTTERS NOTIFICATION

(Follow Massachusetts General Laws, Chapter 40A, Section 5)

1) The applicant shall be responsible for paying for the legal advertisements in the New Bedford Standard-Times once in each of two (2) successive weeks, the first publication to be not less than fourteen (14) days prior to the date of said hearing. This cost is included in the Application Fee. The City of New Bedford Planning Division shall be responsible for placing the legal ad in the New Bedford Standard-Times.

2) The applicant shall be responsible for certifying the abutters list and mailing, by Certified Mail, with Return Receipt Requested, a copy of the notice to each affected abutter.

3) A Legal Advertisement will be drafted by Planning Staff, including the date, time and location of the public hearing, and provided to the Applicant upon submittal of a complete application. This Legal Advertisement may not be altered or amended by the Applicant prior to use in notifying Abutters.

Site Plan Review Application Checklist

In order for the City of New Bedford Planning Board to accurately review your project in a timely manner, plan sets submitted with applications must be complete and thorough. A comprehensive understanding of this handout and submittal of all required documents and plans ensures an efficient review of your project.

Unless otherwise noted or determined by Planning Division Staff to not be required, the following information and drawings must be included in the submittal package for your application. For an application to be accepted, each and every item is required at the time of application submittal.

In certain instances, plans, or portions of plans, may be waived when not applicable for the review of a particular type of development, at the discretion of the City Planner. Requests for any such waiver(s) must be submitted, in writing, to Planning Division for consideration prior to application submittal.

All submitted materials must be legible, organized & bound (where appropriate) in a manner that allows for distribution of all proposal materials as 1 package. Please utilize double-sided printing for submitted reports, studies and statements when possible.

Initials Indicate Item Submitted.

For subparts of the required plans, please mark as follows:

[X] = Shown on Plans [W] = Waiver Requested [NA] = Not Applicable

Staff	Applicant	
____	X	1. **Completed Application Form** (with all required signatures; 16 Copies)
____	X	2. **Completed Site Plan Review Application Checklist** (1 original & 15 copies)
____	____	3. **Plans**
	X	Four (4) stapled and folded sets of full-sized plans (24" x 36") and Twelve (12) sets of reduced plans (11" x 17") are required for all applications. Staff reserves the right to require additional copies.
	X	One (1) electronic copy (PDF & CAD) of all proposed activity plans (See Section 10 of Checklist for Requirements)
	X	All plans oriented so that north arrow points to top of sheet
	X	Plans shall be drawn at a minimum scale of 1"= 40' or less
	X	All plans shall be stamped by Commonwealth of Massachusetts-registered Professional Engineer, Professional Land Surveyor, and/or Professional Landscape Architect, as appropriate
	X	Plan sets shall be comprised of separate sheets as listed below unless otherwise approved by the City Planner
	X	All plans shall have a title block comprised of the following: Project Title, Sheet Title, Sheet Number; Registrant Stamp (i.e. PE, PLS, LA); Registrant's name and address; Street addresses of the project area parcels; Scale at which the plan is drawn; Plan Issue Date; and all plan revision dates (with corresponding revision descriptions).

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3a. Cover Sheet, to include the following information:

- [x] **Title Block**
  - [x] Project name/title
  - [x] Assessor's map and parcel number(s)
  - [x] Registry Book and Page
  - [x] Name and address of property owner
  - [x] Name and address of Engineer / Architect / Landscape Architect
  - [x] Name and address of developer
  - [x] Revision Date Block
  - [x] Street Number and/or Lot Number
- [x] **Zoning Requirements Table (Indicate Required vs. Provided)**
  - [x] Zoning District
  - [x] Lot Area
  - [x] Lot Frontage
  - [x] Front, Side & Rear Setbacks of Buildings and Parking Areas
  - [x] Building Height
  - [x] Lot Coverage
  - [x] Green Space
  - [x] Off-Street Parking Spaces
  - [ ] NA Compact Parking Spaces
  - [ ] NA Accessible Parking Spaces
  - [ ] NA Van Accessible Parking Spaces
  - [x] Screening Buffers
  - [x] Percentage of Lot that is Upland
  - [x] Total Square Footage of Upland
- [x] **Locus Map** (At a scale of 1 inch = 100 feet, showing the entire project and its relation to existing areas, buildings and roads within a distance of 1,000 feet from the project boundaries or such other distances as may be approved or required by the Planning Board.)
- [x] **Plan Index** with latest revision date of each individual plan

3b. Existing Conditions Plan

- [x] Name of Surveyor or Surveyor Firm
- [ ] MULTIPLE Date of survey
- [x] Property lines with bearings and distances
- [x] Monuments set/found at all lot corners
- [ ] NA Easements with bearings and distances suitable for registry filing
- [x] Names of all abutters
- [x] Street names
- [x] Benchmark locations (Based on USGS NGVD – show year)
- [ ] NA NHESP mapped areas (Areas of Estimated and Priority Habitats)
- [ ] NA Existing 21E Contaminated Site Information
- [ ] NA Existing Buildings and Structures
  - [ ] Area of building
  - [ ] Number of stories
  - [ ] Principal use
  - [ ] Setbacks from property lines
  - [ ] Floor elevations
  - [ ] Door locations with sill elevations

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- [x] Existing Topography:
  - [x] Contours at 2' intervals (1' contours or additional spot grades if site is flat)
  - [x] Overhead and underground utilities including but not limited to water, sewer, drainage, electric, telephone, cable TV, gas, septic systems, detention structures, wells
  - [x] Existing parking/paved areas including pavement type (parking, walkways, etc.)
  - [x] All Existing Curbcuts
  - [x] Listing of all existing utility owners and contact info located within the project limits
  - [x] Adequate utility information outside the site to verify proposed utility connections
  - [x] All utility pipe types, sizes, lengths, and slopes
  - [x] All utility structure information including rim and invert elevations
  - [x] All existing easements within 50 feet of property line-Identify any utility within the easement
  - [x] All existing utility easements with bearings and distances
  - [x] Existing pavement markings within site and on connecting roads
  - [x] Existing features such as walls, curbing, landscaping, trees, walks, fences, trees over 12" caliper, lighting, poles, guys, signs, loading areas, fire hydrants, dumpster locations, known buried slabs, etc...
  - [x] Wetlands, floodplain, water protection district delineation including offsets and buffer zones
  - [x] Streams, water courses, swales and all flood hazard areas
  - [x] Rock Outcroppings
  - [x] Test pit locations including groundwater depths when encountered
- NA [ ] Historic buildings within 250 feet of the subject property

NA 3c. Demolition Plan

- [ ] **Existing Conditions Plan plus:**
- [ ] Existing Buildings and Structures to be removed/demolished
- [ ] Existing parking/paved areas to be removed/demolished
- [ ] Existing utilities to be removed/demolished
- [ ] Existing hydrants to be removed
- [ ] Existing features to be removed/ demolished such as walls, curbing, landscaping trees, walks, fences, trees over 6" caliper, lighting, poles, guys, signs, etc.
- [ ] Dust Control Measures
- [ ] Proposed construction phase drainage infrastructure plan including (but not limited to) piping and natural watercourse profiles & cross-sections, retention/detention structures, drain manholes, catch basins, gutter inlets, headwalls, water quality BMPs, and erosion & sedimentation control features, etc.

X 3d. Construction/Layout Plan

- [x] Proposed Buildings and Structures

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- [ ] Area of building or additions
- [ ] Number of stories
- [ ] Principal use
- [ ] Floor elevations
- [ ] Door locations with sill elevations
- [ ] Setback dimensions from property lines
- [ ] Out-buildings, detached garages, temp. construction trailers, etc.
- [ ] Proposed Topography, including but not limited to:
  - [ ] Proposed contours at 2'intervals
  - [ ] Parking lot setbacks to property line
  - [ ] Parking lot grades (not to exceed 5% or be less than 0.5%)
  - [ ] Walls
  - [ ] Parking spaces (delineated and dimensioned)
  - [ ] Accessible parking spaces & aisles
  - [ ] Wheelchair ramps
  - [ ] Sidewalks
  - [ ] Pavement type(s)
  - [ ] Curb type(s) and limits
  - [ ] Lighting / Poles / Guys
  - [ ] Signs (include sign schedule)
  - [ ] Pavement markings
  - [ ] Loading areas / Loading Docks / Platforms
  - [ ] Fences
  - [ ] Landscape areas
  - [ ] Dumpster(s), Compactor(s) & Pads
  - [ ] Spot Grades at 4 Building Corners
  - [ ] Overall Plan Showing Areas of Cut & Fill
- [ ] Critical dimensions including aisle widths, parking stall dimensions, curb radius, driveway openings, etc.
- [ ] Grading at entrance-show spot grades if required
- [ ] Emergency Vehicle Access
- [ ] Truck Access (WB-50 unless otherwise approved by City Engineer)
- [ ] Snow Storage Areas, with limits of any fence protection (if applicable)
- [ ] Construction notes, including the following notes:
  - Any minor modifications (as determined by the City Engineer) to the information shown on the approved site plans shall be submitted to the City Engineer as a Minor Plan Revision for approval prior to the work being performed.
  - Any work and material within the City right-of-way shall conform to the City of New Bedford requirements
  - All handicap parking, ramps, and access shall conform to AAB & MAAB requirements
  - All erosion control measures shall be in place prior to construction. Erosion Control shall conform to the City of New Bedford Conservation Commission requirements as stated in the Order of Conditions. (Refer to Erosion Control Plan if part of submission)
  - All pavement markings and signs shall conform to MUTCD requirements

2e. Grading and Drainage Plan

- [ ] **Existing Conditions Plan and Construction/ Layout Plan plus:**
- [ ] Existing and proposed site grading/ topography-Contours at 2' intervals (1'contours or additional spot grades if site is flat)

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- [x] Proposed parking lots, sidewalks, islands, etc.
  - Parking lot grades shall not exceed 5% or be less than 0.5 %
- [x] Floor elevations & door locations
- [x] Proposed drainage infrastructure plan including but not limited to piping and natural watercourse profiles & cross-sections, infiltration/ retention / detention structures, drain manholes, headwalls, roof recharge systems, flow direction, water quality BMPs, etc.
- [x] Adequate information off site to verify proposed drain connections
- [x] Drainage system profiles including rim and invert elevations, material, types, sizes, lengths, utility crossings and slopes
- [ ] N/A Utility easements with bearings and distances suitable for registry filing
- [x] Delineation of all stockpile areas
- [x] Provide safety fencing around stockpiles over 10' in height or otherwise restrict site access
- [x] For applications associated with residential or commercial/industrial subdivisions, include an overall development plan showing all construction activity and proposed grading for all project phases, and show the proposed building envelope within each house lot and the proposed grading, drainage, and storm water disposal for each lot.
- [x] A design for the stormwater drainage systems prepared by a Registered Professional Engineer demonstrating that proposed development rates of runoff do not exceed pre-development rates, as required under Massachusetts Stormwater Management Standards.

3f. Utility and Grading Plan (Show appropriate info from Existing Conditions & Construction/Layout Plan)

- [x] Include all proposed utilities, including, but not limited to, Water, Sewer, Drainage, Electric, Telephone, Cable TV, Gas, Lighting, Title V Septic Systems & Detention and Retention Structures
  - Adequate utility information outside the site to verify proposed utility connections
  - All utility pipe types, sizes, lengths, and slopes
  - All utility structure information including rim and invert elevations
  - Any utility access vaults
  - All utility access handholes
  - All water services, hydrants, gates, shutoffs, tees
  - Utilities shall be underground if possible
  - All transformer locations
  - Required utility easements with dimensional bearings and distances
- [ ] N/A Force main, if required, conforming to City of New Bedford requirements
- [ ] N/A Water main loop
- [ ] N/A Sewer profile showing all utility crossings
- [ ] N/A Sections through detention basin(s)
- [x] Include the following notes:
  - The contractor shall obtain a Street Disturbance & Obstruction Permit prior to any construction within the right-of-way
  - All water and sewer material and construction shall conform to the City of New Bedford requirements

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- All water and sewer construction shall be inspected by the City Of New Bedford before being backfilled
- The City shall be notified at least 24 hours prior to the required inspections

☒ Detention basin, retention basin or other stormwater mechanisms (such as infiltration devices), if proposed.

3g. Landscape Plan

☒ Location, species & size of all proposed plantings
☒ All existing landscaping to be removed or retained
☒ Plant and tree legend
☒ Delineate & label all existing and proposed groundcovers, lawn areas, driveways, walkways, patios and other surface treatments
☒ Snow storage areas
☒ Proposed irrigation methods (on-site wells to be used unless otherwise approved)
☒ Verify sight distances at entrances

3h. Erosion Control Plan (show appropriate information from Existing Conditions and Construction/Layout Plans)

☒ Straw bales or straw bale/silt fence combination and compost filter tubes
☒ Anti-tracking BMP area at all construction entrances
☒ Dust Control (Methods of)
☐ Protection of existing and proposed drainage structures with straw bales and/or silt sacks
☒ Delineation of all temporary stockpile areas
☒ Safety fencing around stockpiles over 10' in height or otherwise restricted site access
☒ Straw bales or straw bale/silt fence combination around all stockpiles
☒ Include the following notes:
- All BMP erosion control measures shall be in place prior to demolition or any site work.
- Erosion Control BMPs shall conform to US EPA, NPDES, MA DEP and Massachusetts Erosion and Sedimentation Control Guidelines for Urban and Suburban Areas.
- Maintenance specifications for all proposed erosion and sedimentation controls.

3i. Floor Plan

☒ Include complete floor plan of all floors (entire building), including existing & proposed work
☒ Label all rooms (e.g., bedroom, kitchen, bathroom), and include dimensions of room sizes
☒ Show the location of all existing and proposed doors, windows, and walls
☒ For non-residential projects: show all existing and proposed seating areas, mechanical/kitchen equipment, backup generators and/or other major functional components of the proposed project

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☒ Identify waste storage and disposal area(s), including detail(s) for dumpster(s) and dumpster pick-up and trash & garbage compaction areas (if any)

3j. Building Elevations

☐ Show all structural building elevations (front, sides and rear façades) that will be affected by the proposed project

☒ NA For additions/alterations: label existing and new construction, as well as items to be removed

☐ Identify all existing and proposed exterior materials, treatments and colors- including roofing, roof eaves, eave brackets, siding, doors, trim, sills, windows, fences, and railings. Show details of proposed new exterior elements

☒ Show any exterior mechanical, duct work, and/or utility boxes

☒ Include dimensions for building height, wall length and identify existing and proposed floor elevations

3k. Sign Plan

☐ Fully-dimensioned color elevations for all proposed signs

☐ Total square footage of existing signs and total square footage of proposed signs

☐ Existing and proposed sign locations on site plan

☐ Existing and proposed materials and methods of lighting for all signs

3l. Lighting Plan

☒ Location and orientation of all existing and proposed exterior lighting, including building and ground lighting and emergency spot lighting (if any)

☒ Height and initial foot-candle readings on the ground and the types of fixtures to be used

☒ Plan Must Show Illumination Patterns On-Site and Areas Off-Site

☒ New Bedford Washingtonian Type Fixtures Should Be Used, Where Applicable

☐ Provide Cut Sheet for All Lighting Fixtures

3m. Detail Sheets (Typical Details)

☒ Pavement Section Detail

☐ Sidewalk Detail

☒ Curb Detail

☒ Driveway Detail

☒ Wheel Chair Ramp Detail

☒ Concrete Pad Detail

☒ Catch Basin Detail

☐ Drainage Manhole Detail

☒ Water/Sewer Trench Details (12" envelope)

☐ Sewer Manhole Detail (26" cover)

☐ Detention / Retention Basin Sections (from plan)

☐ Detention Basin Outlet Structure Detail

☐ Miscellaneous Detention / Retention Basin Details

☒ Infiltration Device Details

☒ Stormwater BMPs (Water Quality Structure Details, etc.)

☐ Bollards

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- ☐ Water and Sewer Trench Sections
- ☐ Anti-Seepage Collar Detail
- ☐ Flared End Detail
- ☒ Rip Rap Detail
- ☒ Straw bales/Silt Fence Detail
- ☐ Silt Sac Detail
- ☐ Compost Filter Tube Detail
- ☒ Light Pole Foundation Detail
- ☐ Retaining Wall Details
- ☐ Tree/Shrub Planting Detail
- ☐ Sign Detail
- ☐ Fence Detail
- ☐ Flowable Fill Trench
- ☐ Pavement Marking Details
- ☐ Handicap Parking/Compact Parking Signs
- ☐ Hydrant Detail (American –Darling B-62-B (Open Right) or Mueller Super Centurion Hydrant (Open Right)
- ☐ Thrust Block Detail

___ X 4. **Project Narrative** (16 Copies), to include adequate summary & description of the proposed project and indicating, where appropriate:

- The number of dwelling units to be built and the acreage in residential use
- Evidence of compliance with parking and off-street loading requirements
- The forms of ownership contemplated for the property and a summary of the provisions of any ownership or maintenance thereof
- Identification of all land that will become common or public land
- Any other evidence necessary to indicate compliance with the zoning ordinance
- A written statement indicating the estimated time required to complete the proposed project and any and all phases thereof
- A written estimate showing, in detail, the projected costs of all site improvements (and off-site improvement) planned
- Drainage calculations by a registered professional engineer, with storm drainage design conforming to City of New Bedford subdivision regulations, as well as wetland delineations determined by a certified wetland scientist if applicable, for 1, 10, 25 & 100 year storm events

___ X 5. **Certified Abutters List** (16 copies)

___ X 6. **Proof of Ownership** (Copy of Deed(s) for All Involved Parcels; 16 Copies)

___ ___ 7. **Development Impact Statement (DIS),** completed per §5350 of Zoning Code, (16 Copies), if required by Board

___ ___ 8. **Traffic Impact & Access Study (TIAS)** (16 Copies), if required by Board

___ X 9. **Stormwater Management Report** (9 Copies), if required, comprised of the following:

- ☒ MADEP Stormwater Standards Compliance Checklist (signed & stamped)
- ☒ Overall Project Description
- ☒ Existing Conditions

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- [x] Proposed Improvements
- [x] Proposed Conditions
- [x] Hydrologic Analysis for Existing & Proposed Conditions for Milestone Storm Event Intensities
- [x] Stormwater Management Regulations
- [x] Summary
- [x] Appendix - Existing/Proposed Conditions Plans showing the following:
  - [x] Overall Existing Subcatchment Area Table
    - Subcatchment Labeled, Design Point, Area, Curve number, Tc (min.)
  - [x] Soil Classifications Table (Existing Soils)
    - Map Unit Symbol, Map Unit Name, Hydrologic Soil Code
  - [x] Overall Proposed Subcatchment Area Table
    - Subcatchment Labeled, Design Point, Area, Curve number, Tc (min.)
  - [x] Soil Classifications Table (Including Proposed Boron Soils, Etc., if applicable)
    - Map Unit Symbol, Map Unit Name, Hydrologic Soil Code
- [x] Appendix - Hydrologic Analyses
  - [ ] HydroCAD Software Analyses (or equivalent software) Analyses (Existing & Proposed Conditions)
- [x] Appendix - Illicit Discharge Certification (signed & dated)

[x] 10. Electronic PDF and AutoCAD Files

- [ ] Shall consist of a CD with a printed CD Label in a CD case
- [ ] CAD files shall be 2010 format or the latest revision of AutoCAD Civil 3D
- [ ] All project submissions shall include the following file types. All project related Drawing Files shall be provided in all 2 supported formats, listed below.
  - AutoCAD Drawing format (.dwg)
  - Adobe Portable Document Format (.pdf)
- [ ] PDF files shall be created from within the AutoCAD environment and contain Layer information.
- [ ] It is a requirement that each project drawing/sheet created for a project shall be published/plotted to DWG and PDF, and placed in the appropriate folder in the CD submission. All external references (DWG, DWF, DGN, PDF, TIFF, MrSID, JPG, etc.) which are used in support of the creation of these project sheets shall be stored within the XREF folder only (Subfolder of DWG) on the CD. Also the AutoCAD support files (fonts, plot style, etc.) should be supplied on the CD.
- [ ] **File Naming:**

  The following file naming standard for all CAD related files created, used, or submitted to the Planning Department shall be followed. This applies to all CAD drawings, DWF's, PDF's used in support of, or used in conjunction with this CAD Standard.

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File names shall begin with their project Planning Board Case number assigned (available through the Planning Department), followed by an underscore and the appropriate discipline code. In the instance where there is more than one file, assign an appropriate sequential number to the end (ex. 1,2,3). Special characters are not permitted except for the following; hyphens [-], underscores [_], and/or parenthesis [( )].

Example 1.
A set of engineering design plans and documents were prepared for project file number 12-34; acceptable filenames would be as follows:
12-34_Existing Conditions1.dwg
12-34_Existing Conditions2.dwg
12-34_General1.dwg
12-34_Generale.dwg

___ X **11. Application Fee** (All fees are due at time of application submission)

Official Use Only:

For the Planning Board, this application has been received by the Planning Division of the Department of Planning, Housing & Community Development on the date specified below:

Review date: _____ All materials submitted: Yes No

Signature: _____ Fee: _____

CERTIFIED ABUTTERS LIST

City of New Bedford

REQUEST *for a* CERTIFIED ABUTTERS LIST

This information is needed so that an official abutters list as required by MA General Law may be created and used in notifying abutters. You, as applicant, are responsible for picking up and paying for the certified abutters list from the assessor's office (city hall, room #109).

SUBJECT PROPERTY			
MAP #	136	LOT(S)#	468
ADDRESS:	WS Phillips Road		

OWNER INFORMATION	
NAME:	Michael Panagakos
MAILING ADDRESS:	133 Faunce Corner Road Dartmouth, MA 02747

APPLICANT/CONTACT PERSON INFORMATION	
NAME (IF DIFFERENT):	SITEC, Inc-Kory Medeiros
MAILING ADDRESS (IF DIFFERENT):	449 Faunce Corner Road Dartmouth, MA 02747
TELEPHONE #	(508)998-2125
EMAIL ADDRESS:	kmedeiros@cecinc.com

REASON FOR THIS REQUEST: *Check appropriate*	
☐	ZONING BOARD OF APPEALS APPLICATION
☒	PLANNING BOARD APPLICATION
☐	CONSERVATION COMMISSION APPLICATION
☐	LICENSING BOARD APPLICATION
☐	OTHER (*Please explain*):

Once obtained, the Certified List of Abutters must be attached to this Certification Letter.

Submit this form to the Planning Division Room 303 in City Hall, 133 William Street. You, as applicant, are responsible for picking up and paying for the certified abutters list from the assessor's office (city hall, room #109).

Official Use Only:

As Administrative Assistant to the City of New Bedford's Board of Assessors, I do hereby certify that the names and addresses as identified on the attached "abutters list" are duly recorded and appear on the most recent tax.

Michael J. Motta	Michael Motta Digitally signed by Michael Motta Date: 2021.04.14 09:44:02 -04'00'	04/14/2021
Printed Name	Signature	Date

Amount Due	$5.00
Date Paid	4/13/2021
Confirmation Number	1304605

Account Information

Payment Type: Licenses
Reference Number: 136-468 WS PHILLIPS RD
Phone Number: 5089982125

Payment Information

Payment Date: 4/13/2021
Payment Amount: $5.00
Convenience Fee: $1.95
Total Payment: $6.95

Payment Method: VISA
Card Number: XXXXXXXXXXXX7058
Expiration Date: 0724
KORY MEDEIROS
Billing Zip Code: 02740

Your confirmation numer is: **1304605**

Your payment will post to the account listed below. It takes approximately two business days to post your payment to the account. Your payment date and time are equal to the time you completed this transaction as indicated by the Digital Time Stamp below.

Digital Time Stamp: 04/13/2021 14:07:13 [EST]

If an email address was provided, your confirmation email will be sent from marketingcloud@valuepaymentsystems.com. Please have payer sign below and retain merchant copy for your records

Signature X

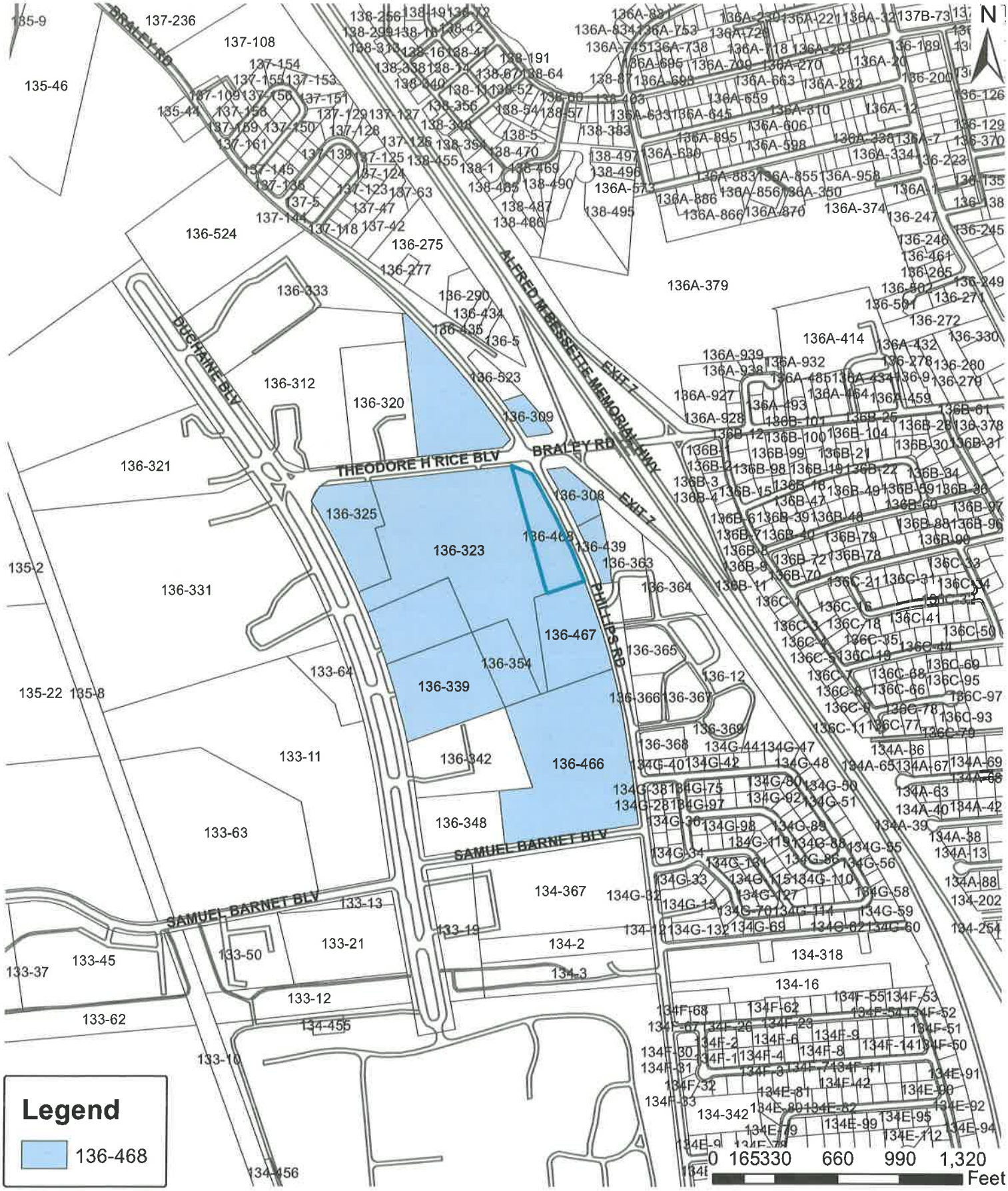
April 13, 2021
Dear Applicant,

Please find below the List of Abutters within 300 feet of the property known as WS Phillips Road (Map: 136, Lot: 468).The current ownership listed herein must be checked and verified by the City of New Bedford Assessor's Office. Following said verification, the list shall be considered a Certified List of Abutters.

Please note that multiple listed properties with identical owner name and mailing address shall be considered duplicates and shall require only 1 mailing. Additionally, City of New Bedford-Owned properties shall not require mailed notice.

Parcel	Location	Owner and Mailing Address
136-439	PHILLIPS RD	ADAMOWSKI MICHAEL F "TRUSTEE", BRALEY NORTH REALTY TRUST (THE) 70 LAMBETH STREET NEW BEDFORD, MA 02745
136-339	174 DUCHAINE BLVD	EPEC PMD LLC, ATTN: PETER DEWALT P O BOX 963 MARION, MA 02738
136-325	220 THEODORE RICE BLVD	THEODORE RICE BOULEVARD LLC, 220 THEODORE RICE BLVD NEW BEDFORD, MA 02745
136-354	DUCHAINE BLVD	HIGHLAND NEW BEDFORD ASSOCIATES LIMITED, PARTNERSHIP 65 SPRAGUE STREET HYDE PARK, MA 02136-2061
136-308	1230 BRALEY RD	COMPASS BANK FOR SAVINGS, C/O TRAMMELL CROW SOVEREIGN BANK P O BOX 14115 READING, PA 19612-4115
136-323	200 THEODORE RICE BLVD	HIGHLAND NEW BEDFORD ASSOCIATES LIMITED, PARTNERSHIP 65 SPRAGUE STREET HYDE PARK, MA 02136-2061
136-468	PHILLIPS RD	PANAGAKOS MICHAEL 133 FAUNCE CORNER ROAD DARTMOUTH, MA 02747
136-466	PHILLIPS RD	HIGHLAND NEW BEDFORD ASSOCIATES LIMITED, PARTNERSHIP 65 SPRAGUE STREET HYDE PARK, MA 02136-2061
136-467	PHILLIPS RD	PHILLIPS ROAD BUSINESS PARK LLC 128 BRALEY ROAD E FREETOWN, MA 02717
136-309	BRALEY RD	ADAMOWSKI MICHAEL F "TRUSTEE", BRALEY NORTH REALTY TRUST (THE) 70 LAMBETH STREET NEW BEDFORD, MA 02745
136-336	186 DUCHAINE BLVD	186 DUCHAINE BOULEVARD LLC 186 DUCHAINE BOULEVARD NEW BEDFORD, MA 02745
136-322	NS THEODORE RICE BLVD	BETA REALTY LLC 280 AYER ROAD HARVARD, MA 01451

Note: This map was developed using the best available data and serves a guide rather than a determination. Data should be confirmed in the field to ensure accuracy.



City of New Bedford, Massachusetts
Department of City Planning

Parcel within 300FT

April 2021

SITE PHOTOGRAPHS


Braley Rd
Theodore Rice Blvd
140
Phillips Rd
Google Earth
© 2021 Google
300 ft
N


Google Earth
© 2021 Google
N
6.31 ft

PROPERTY DEEDS

2020 00018588
Bk: 13336 Pg: 226 Pg: 1 of 2 BS
Doc: DEED 08/07/2020 01:52 PM

MASSACHUSETTS EXCISE TAX
Bristol ROD South 001
Date: 08/07/2020 01:52 PM
Ctrl# 031208 06927 Doc# 00018588
Fee: $558.60 Cons: $122,200.00

QUITCLAIM DEED

Phillips Rd. North LLC, a Massachusetts limited liability company, having a mailing address of 5 Vineyard Lane, Dartmouth, Massachusetts 02748, for consideration paid, and in full consideration of One Hundred Twenty-Two Thousand Two Hundred and 00/100 ($122,200.00) Dollars paid, hereby grants to Michael Panagakos a Massachusetts resident, with a mailing address of 133 Faunce Corner Road, Dartmouth, Massachusetts 02747 with QUITCLAIM COVENANTS, that certain parcel of land situated on the west side of Phillips Road, New Bedford, Bristol County, Massachusetts, and being Lot 3 on a plan entitled "Plan of Land in New Bedford, Massachusetts", prepared for Regal-Beloit Corporation, dated December 15, 2005, scale: 1" = 100'; prepared by Hayward-Boynton and Williams, Inc., and recorded with the Bristol Southern District Registry in Plan Book 157, Page 75.

EXECUTED as a sealed instrument this 5th day of August, 2020.

This conveyance does not constitute a conveyance of all or substantially all of the assets of the Grantor in Massachusetts and Grantor has not elected to be taxed as a corporation.

Property address:
Vacant Land, Phillips Rd. North, West Side, New Bedford, MA 02740

After recording please mail to:
Michael A. Kehoe, Esq.
128 Union Street, Suite 500
New Bedford, MA 02740

P#105020S - Phillips Rd

GRANTOR:

PHILLIPS RD. NORTH LLC

Scott W. Costa, Manager

PHILLIPS RD. NORTH LLC

Andrew B. Tillett, Manager

Commonwealth of Massachusetts
Bristol, ss.

August 5, 2020

Before me personally appeared Scott W. Costa, as an authorized signatory of Phillips Rd. North LLC, who proved to me through satisfactory evidence of identification, which was personal knowledge, to be the person whose name is signed on the preceding or attached document and acknowledged to me that he signed it voluntarily for its stated purpose.

MARY J. CANASTRA
MY COMMISSION EXPIRES APRIL 23, 2021
MASSACHUSETTS
NOTARY PUBLIC

Notary Public
Commission Expires:

Commonwealth of Massachusetts
Bristol, ss

August 5, 2020

Before me personally appeared Andrew B. Tillett, as an authorized signatory of Phillips Rd. North LLC, who proved to me through satisfactory evidence of identification, which was personal knowledge to be the person whose name is signed on the preceding or attached document and acknowledged to me that he signed it voluntarily for its stated purpose.

Notary Public
Commission Expires: 4.23.2021

MARY J. CANASTRA
MY COMMISSION EXPIRES APRIL 23, 2021
MASSACHUSETTS
NOTARY PUBLIC

3883915.1/16032-2

STORMWATER MANAGEMENT REPORT

DRAINAGE REPORT

PROPOSED COMMERCIAL BUILDING
PHILLIPS ROAD
NEW BEDFORD, MA

Prepared For:

PANAGAKOS DEVELOPMENT

Prepared By:

SITEC, INC. - CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
DARTMOUTH, MA

CEC Project 304-118

MARCH 2021

SITEC CEC
Part of Civil & Environmental Consultants, Inc.
Boston 449 Faunce Corner Road | Dartmouth, MA 02747 | p: 508-998-2125 f: 508-998-7554 | www.cecinc.com

The Phillips Road site is a 1.9-acre parcel of land situated in New Bedford, on the west side of Phillips Road. The project site will consist of a 3500 square foot commercial building, along with associated parking facilities, utilities and drainage improvements.

EXISTING CONDITIONS

The project site currently is a wooded vacant lot. The topography of the site is fairly consistent, generally sloping from east to west. Stormwater runoff generated on site flows to the west to a bordering vegetated wetland system.

A review of the soils survey map of Bristol County prepared by the U.S.D.A. Natural Resources Conservation Service indicates that the following soil classifications exist within the area of the site being developed:

242A Hinckley Loamy Sand
260A Sudbury fine Sandy Loam

The Hinckley soil series is a Hydrologic Group A soil that is found over eastern portion of the proposed site development. The Sudbury soil series is a Hydrologic Group B soil found on the western portion of the proposed site development.

For the purpose of these calculations a single design point will be analyzed for the existing conditions. Design Point No. 1 (DP-1) is the edge of the bordering vegetated wetland. Existing condition runoff hydrographs for the 2, 10, 25 and 100-year storm events have been computed using the SCS TR20 methodology and the results as measured at each design point are summarized below:

	Design Point No. 1
Storm Frequency	**Peak Rate of Runoff**
2 yr.	0.1 CFS
10 yr.	0.6 CFS
100 yr.	2.2 CFS

DEVELOPED CONDITIONS

The applicant is proposing the construction of a 3500 commercial building with associated parking facility, utilities, and drainage improvements, There will be 31 parking spaces added to the property with three access points off of an existing access road.

The improvements being proposed as part of this development will add impervious surfaces to the project site. As a result of these improvements, without proper site design the development of this project would result in an increase in the rate of runoff from the project site. The flow of runoff through the watershed will follow the same general pattern as existing conditions. The majority of the site (PC-1) will drain to an onsite water treatment unit that will overflow into a subsurface detention/recharge system. The overflow from this system will be directed to the east side of the site, matching the existing conditions flow path. A small portion of the site (PC-2) will by-pass the drainage systems and the runoff will be directed to the bordering vegetated wetland that borders the site in the east.

The developed condition runoff hydrographs for the 2-, 10-, and 100-year storm events as measured at the design point have been computed using the SCS TR20 methodology and are summarized below:

	Design Point No. 1
Storm Frequency	**Peak Rate of Runoff**
2 yr.	0.1 CFS
10 yr.	0.6 CFS
100 yr.	2.2 CFS

STORMWATER STANDARD NO. 2 – PEAK RATE MITIGATION

The comparison of the pre- and post-development runoff rates summarized below illustrates the proper mitigation of post-development stormwater runoff.

Design Point No. 1

Storm Frequency	Existing Conditions Peak Rate of Runoff	Developed Conditions Peak Rate Runoff
2 yr.	0.1 CFS	0.1 CFS
10 yr.	0.6 CFS	0.6 CFS
100 yr.	2.2 CFS	2.2 CFS

STORMWATER STANDARD NO. 3 - GROUNDWATER RECHARGE

Groundwater recharge will take place in the proposed infiltration system consisting of 35 Cultec 330XLHD units. Supporting calculations are included within the Hydrocad drainage report attached.

STORMWATER STANDARD NO. 4 - WATER QUALITY VOLUME

Total Suspended Solid Removal:

The proposed development will result in an increase of impervious area being added to the project site. Therefore, the TSS removal calculation for each watershed is as follows:

Design Point No. 1 (TSS Removal = 89%)

BMP	TSS Removal Rate	Starting TSS Load	Amount Removed	Remaining Load
Stormceptor	0.86	1.00	0.86	0.14
Deep Sump Catchbasin	0.25	0.86	0.03	0.11

Water Quality Volume:

The required water quality volume has been converted to a water quality flow rate per the Massachusetts standard method for proprietary stormwater treatment practices. The calculations for the Stormceptor unit are attached to this report.

STORMWATER STANDARD NO. 5 – Land with Higher Potential Pollutant Loads

Does not apply to this project.

STORMWATER STANDARD NO. 6 – CRITICAL AREAS

Does not apply to this project.

STORMWATER STANDARD NO. 7 – REDEVELOPMENT PROJECTS

Does not apply to this project.

STORMWATER STANDARD NO. 8 – Construction Impact Control Plan

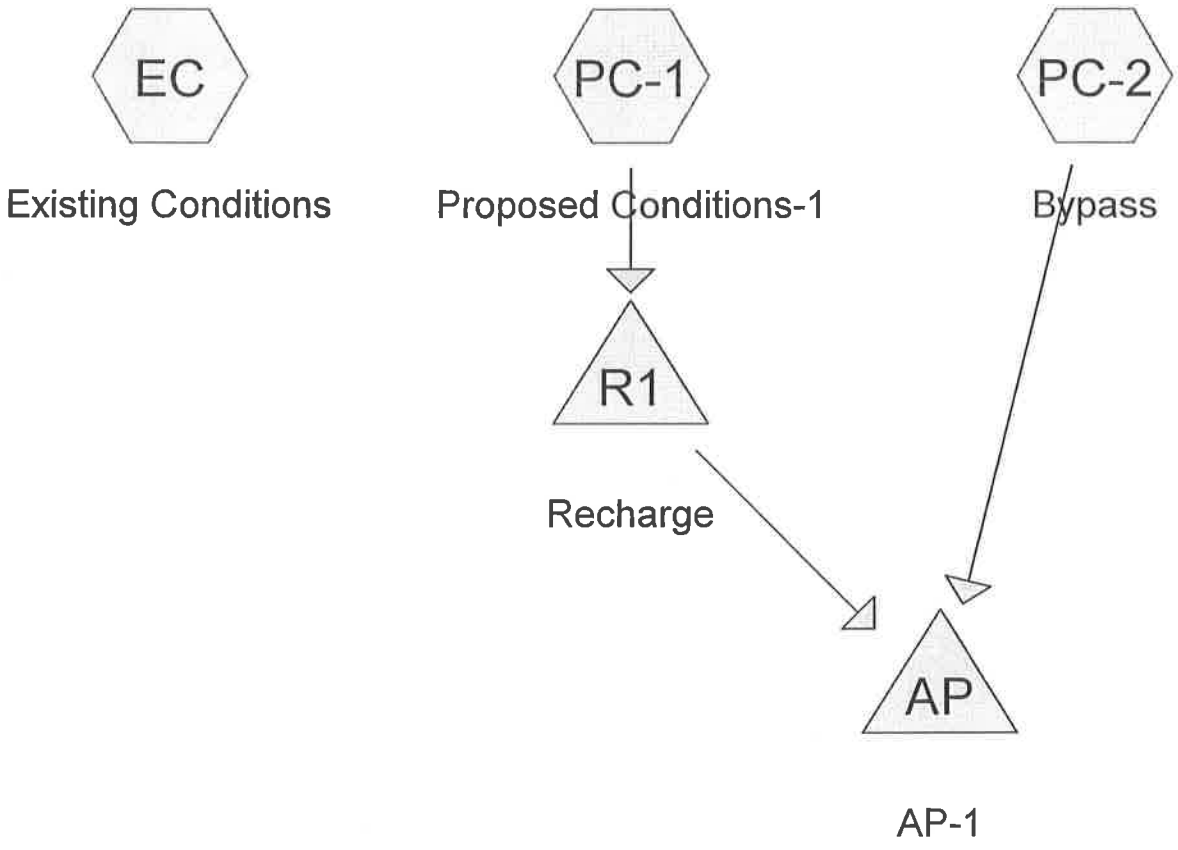
See the Erosion and Sediment Control Plan on Sheet 9 of 9 of the plan set.

STORMWATER STANDARD NO. 9 – OPERATION AND MAINTENANCE PLAN

Refer to the Operation and Maintenance Plan on Sheet 9 of 9 of the plan set.

STORMWATER STANDARD NO. 10 – ILLICIT DISCHARGES

There are no existing or proposed illicit discharges located on the site.



Subcat Reach Pond Link

Routing Diagram for Panagakos-Phillips-Rd-current
Prepared by CEC, Inc., Printed 4/20/2021

Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EC: Existing Conditions Runoff Area=1.420 ac 0.00% Impervious Runoff Depth=0.17"
Flow Length=146' Tc=7.8 min CN=50 Runoff=0.06 cfs 0.020 af

Subcatchment PC-1: Proposed Runoff Area=0.590 ac 66.10% Impervious Runoff Depth=1.70"
Tc=6.0 min CN=82 Runoff=1.15 cfs 0.084 af

Subcatchment PC-2: Bypass Runoff Area=0.830 ac 6.02% Impervious Runoff Depth=0.31"
Flow Length=110' Tc=7.8 min CN=55 Runoff=0.12 cfs 0.022 af

Pond AP: AP-1 Inflow=0.12 cfs 0.022 af
Primary=0.12 cfs 0.022 af

Pond R1: Recharge Peak Elev=89.51' Storage=0.019 af Inflow=1.15 cfs 0.084 af
Discarded=0.26 cfs 0.084 af Primary=0.00 cfs 0.000 af Outflow=0.26 cfs 0.084 af

Total Runoff Area = 2.840 ac Runoff Volume = 0.126 af Average Runoff Depth = 0.53"
84.51% Pervious = 2.400 ac 15.49% Impervious = 0.440 ac

Summary for Subcatchment EC: Existing Conditions

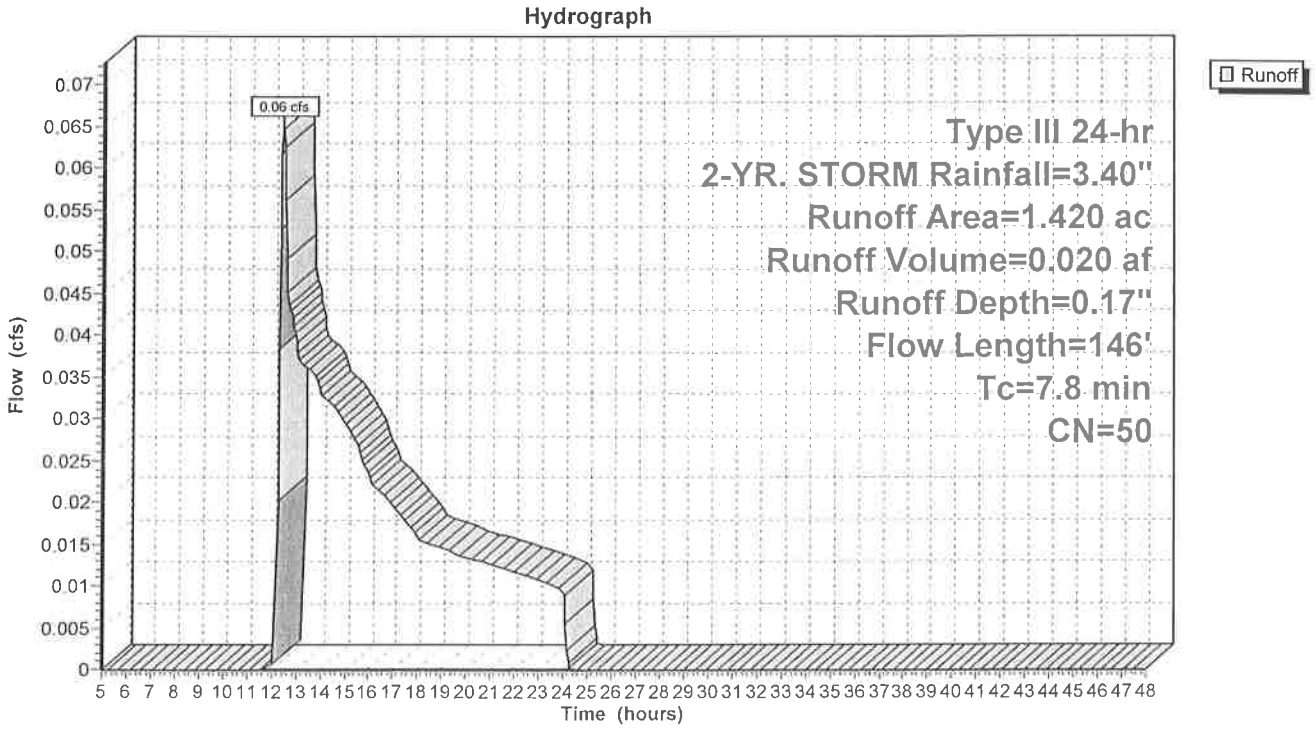
Runoff = 0.06 cfs @ 12.45 hrs, Volume= 0.020 af, Depth= 0.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YR. STORM Rainfall=3.40"

Area (ac)	CN	Description
0.600	36	Woods, Fair, HSG A
0.820	60	Woods, Fair, HSG B
1.420	50	Weighted Average
1.420		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	50	0.1080	0.14		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.40"
1.7	96	0.0360	0.95		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
7.8	146	Total			

Subcatchment EC: Existing Conditions



Summary for Subcatchment PC-1: Proposed Conditions-1

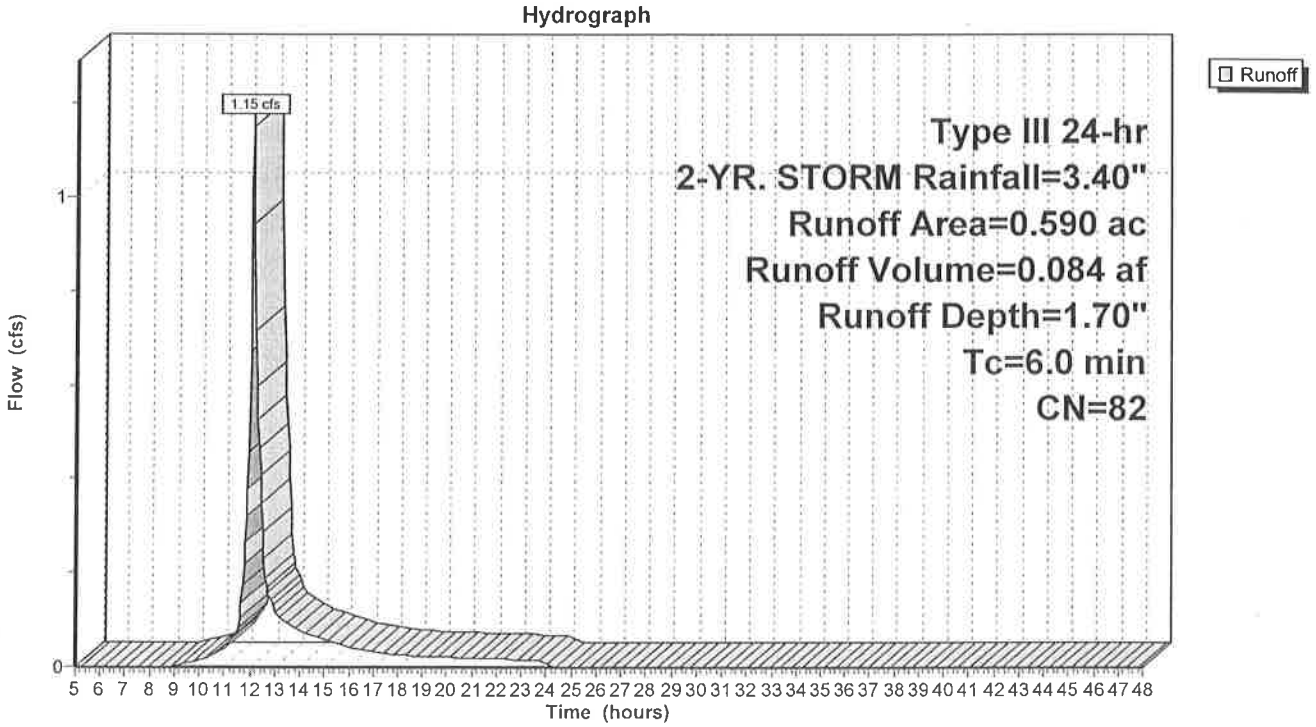
Runoff = 1.15 cfs @ 12.09 hrs, Volume= 0.084 af, Depth= 1.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YR. STORM Rainfall=3.40"

Area (ac)	CN	Description
0.090	39	>75% Grass cover, Good, HSG A
0.110	61	>75% Grass cover, Good, HSG B
0.180	98	Paved parking, HSG A
0.210	98	Paved parking, HSG B
0.590	82	Weighted Average
0.200		33.90% Pervious Area
0.390		66.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PC-1: Proposed Conditions-1



Summary for Subcatchment PC-2: Bypass

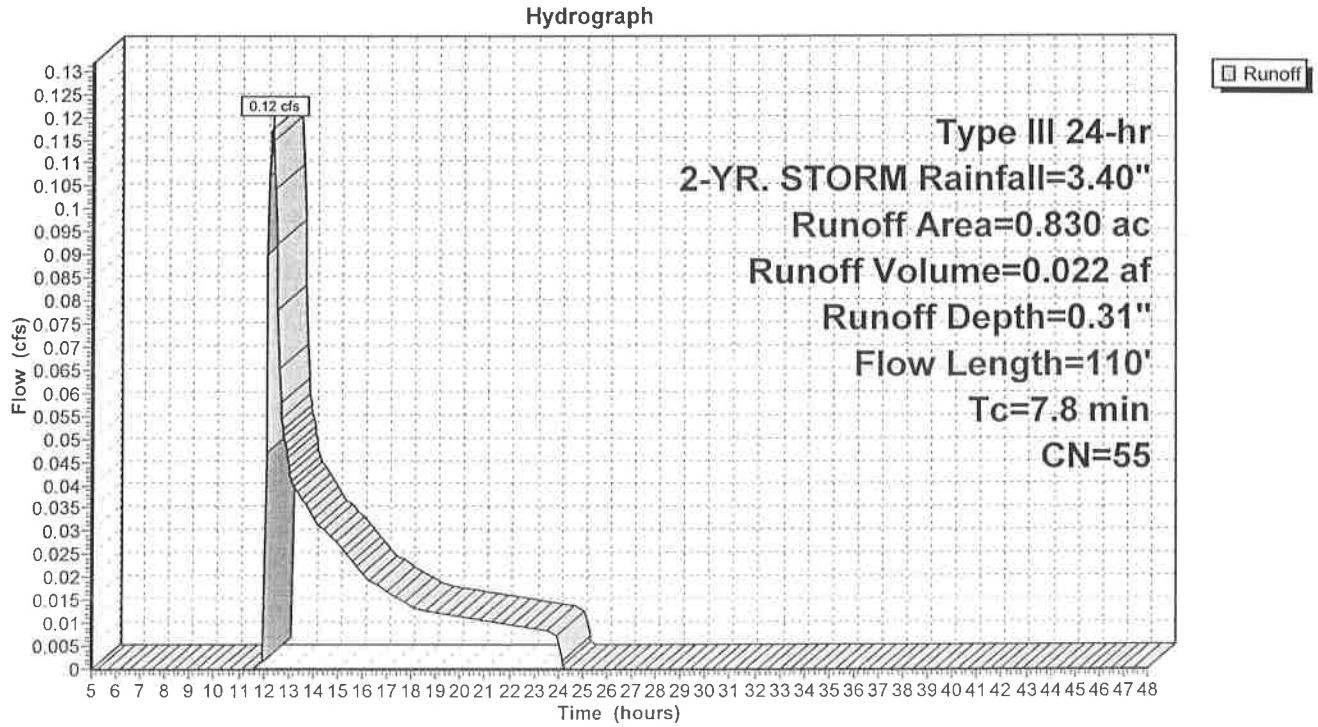
Runoff = 0.12 cfs @ 12.32 hrs, Volume= 0.022 af, Depth= 0.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YR. STORM Rainfall=3.40"

Area (ac)	CN	Description
0.220	36	Woods, Fair, HSG A
0.510	60	Woods, Fair, HSG B
0.050	98	Paved parking, HSG A
0.050	39	>75% Grass cover, Good, HSG A
0.830	55	Weighted Average
0.780		93.98% Pervious Area
0.050		6.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	50	0.0740	0.12		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.40"
0.7	60	0.0920	1.52		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
7.8	110	Total			

Subcatchment PC-2: Bypass

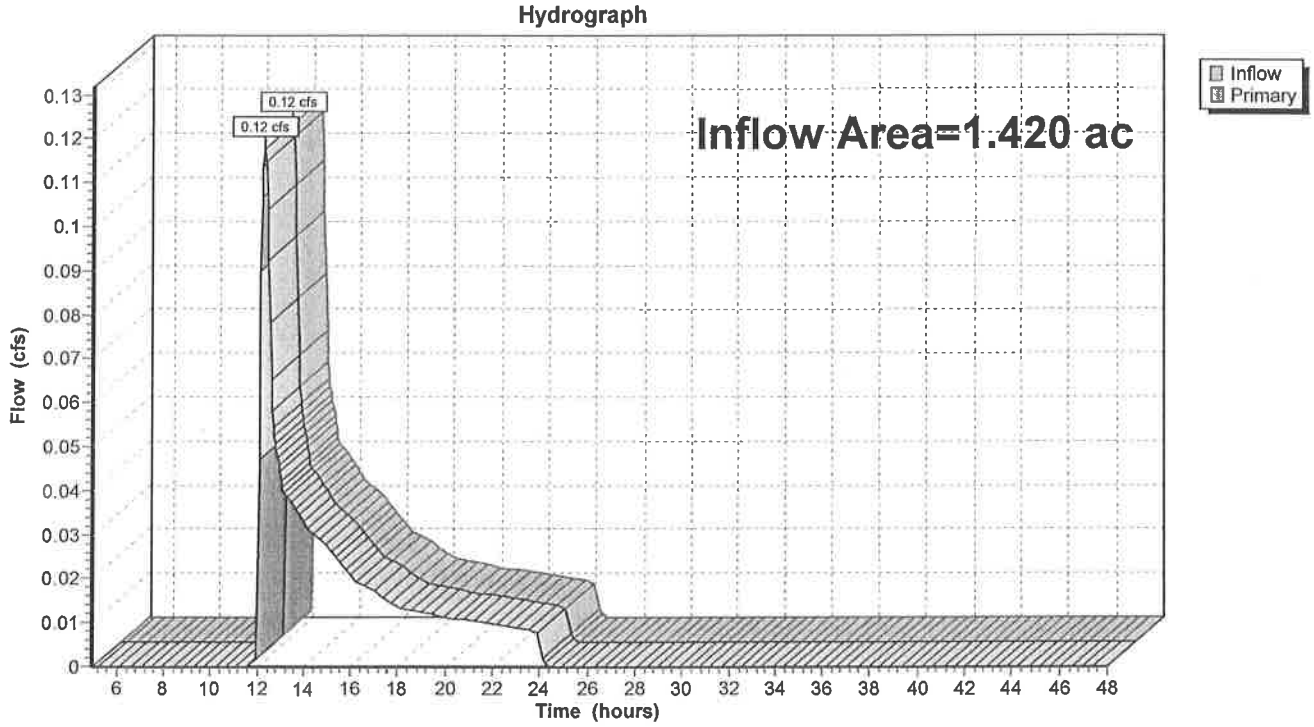


Summary for Pond AP: AP-1

Inflow Area = 1.420 ac, 30.99% Impervious, Inflow Depth = 0.18" for 2-YR. STORM event
Inflow = 0.12 cfs @ 12.32 hrs, Volume= 0.022 af
Primary = 0.12 cfs @ 12.32 hrs, Volume= 0.022 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs / 2

Pond AP: AP-1



Summary for Pond R1: Recharge

Inflow Area = 0.590 ac, 66.10% Impervious, Inflow Depth = 1.70" for 2-YR. STORM event
Inflow = 1.15 cfs @ 12.09 hrs, Volume= 0.084 af
Outflow = 0.26 cfs @ 11.90 hrs, Volume= 0.084 af, Atten= 78%, Lag= 0.0 min
Discarded = 0.26 cfs @ 11.90 hrs, Volume= 0.084 af
Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 89.51' @ 12.53 hrs Surf.Area= 0.031 ac Storage= 0.019 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 18.4 min (851.8 - 833.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	88.50'	0.027 af	**25.67'W x 52.50'L x 3.54'H Field A** 0.110 af Overall - 0.043 af Embedded = 0.066 af x 40.0% Voids
#2A	89.00'	0.043 af	**Cultec R-330XLHD** x 35 Inside #1 Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 5 rows
		0.070 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	88.50'	**8.270 in/hr Exfiltration over Surface area** Phase-In= 0.01'
#2	Primary	91.20'	**8.0" Round Culvert** L= 30.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 91.20' / 90.90' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Discarded OutFlow Max=0.26 cfs @ 11.90 hrs HW=88.55' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.26 cfs)

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=88.50' TW=0.00' (Dynamic Tailwater)
↑—**2=Culvert** (Controls 0.00 cfs)

Pond R1: Recharge - Chamber Wizard Field A

Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)
Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf
Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
Row Length Adjustment= +1.50' x 7.45 sf x 5 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

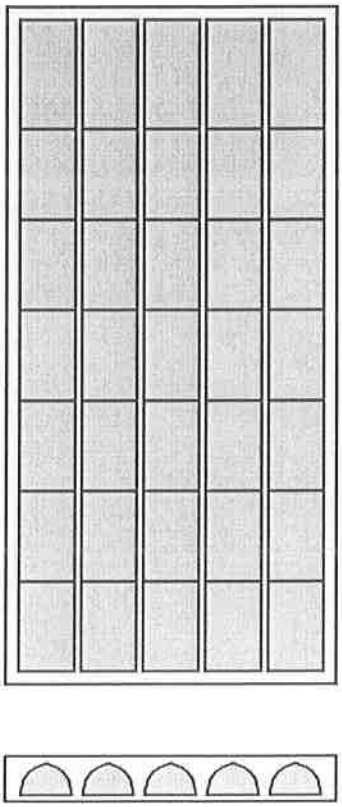
7 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 50.50' Row Length +12.0" End Stone x 2 = 52.50' Base Length
5 Rows x 52.0" Wide + 6.0" Spacing x 4 + 12.0" Side Stone x 2 = 25.67' Base Width
6.0" Stone Base + 30.5" Chamber Height + 6.0" Stone Cover = 3.54' Field Height

35 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 5 Rows = 1,881.4 cf Chamber Storage

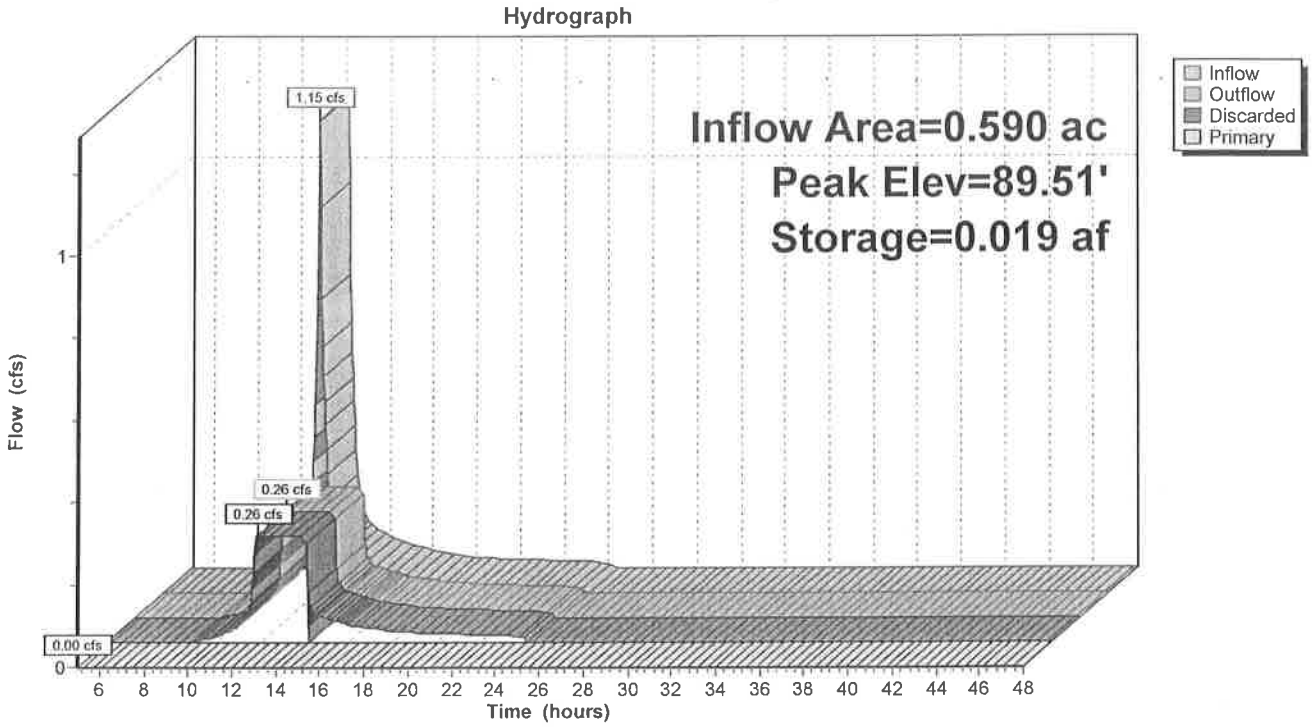
4,772.4 cf Field - 1,881.4 cf Chambers = 2,891.0 cf Stone x 40.0% Voids = 1,156.4 cf Stone Storage

Chamber Storage + Stone Storage = 3,037.8 cf = 0.070 af
Overall Storage Efficiency = 63.7%
Overall System Size = 52.50' x 25.67' x 3.54'

35 Chambers
176.8 cy Field
107.1 cy Stone



Pond R1: Recharge



Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EC: Existing Conditions Runoff Area=1.420 ac 0.00% Impervious Runoff Depth=0.61"
Flow Length=146' Tc=7.8 min CN=50 Runoff=0.55 cfs 0.072 af

Subcatchment PC-1: Proposed Runoff Area=0.590 ac 66.10% Impervious Runoff Depth=2.90"
Tc=6.0 min CN=82 Runoff=1.96 cfs 0.143 af

Subcatchment PC-2: Bypass Runoff Area=0.830 ac 6.02% Impervious Runoff Depth=0.88"
Flow Length=110' Tc=7.8 min CN=55 Runoff=0.61 cfs 0.061 af

Pond AP: AP-1 Inflow=0.61 cfs 0.061 af
Primary=0.61 cfs 0.061 af

Pond R1: Recharge Peak Elev=90.60' Storage=0.046 af Inflow=1.96 cfs 0.143 af
Discarded=0.26 cfs 0.143 af Primary=0.00 cfs 0.000 af Outflow=0.26 cfs 0.143 af

Total Runoff Area = 2.840 ac Runoff Volume = 0.276 af Average Runoff Depth = 1.17"
84.51% Pervious = 2.400 ac 15.49% Impervious = 0.440 ac

Summary for Subcatchment EC: Existing Conditions

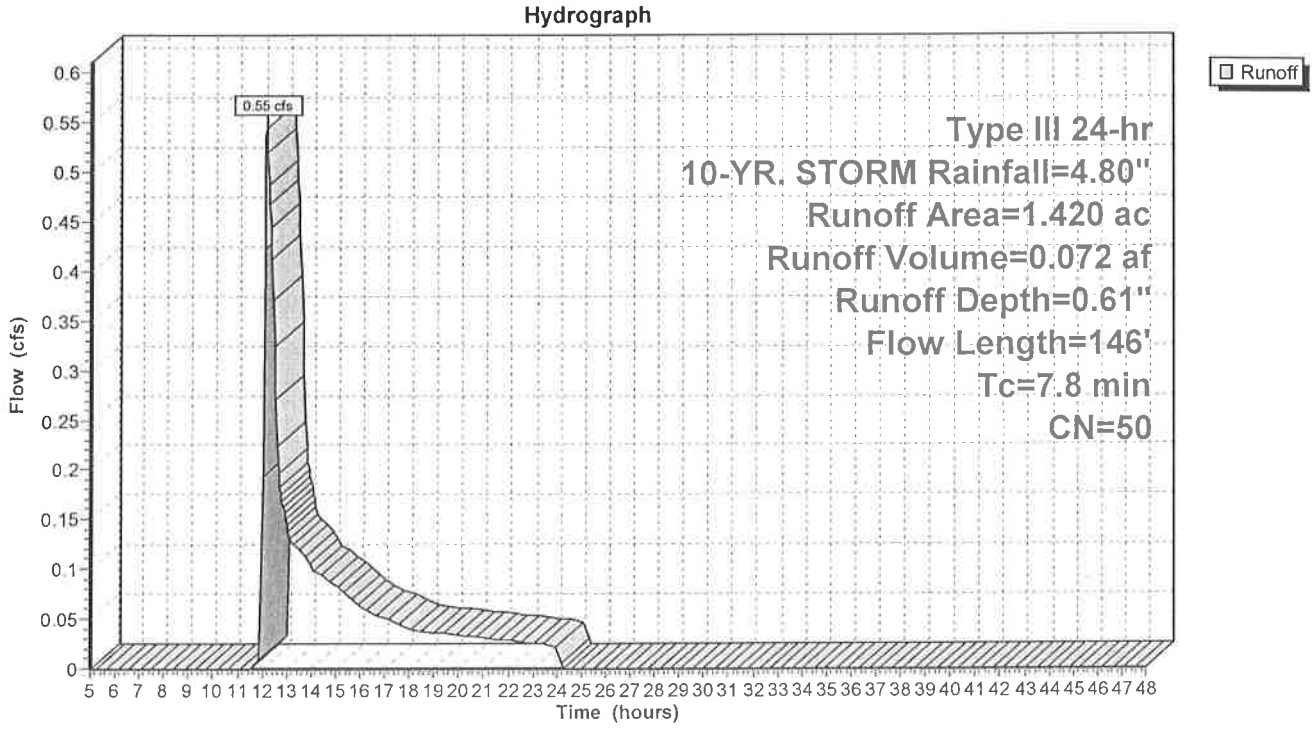
Runoff = 0.55 cfs @ 12.17 hrs, Volume= 0.072 af, Depth= 0.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR. STORM Rainfall=4.80"

Area (ac)	CN	Description
0.600	36	Woods, Fair, HSG A
0.820	60	Woods, Fair, HSG B
1.420	50	Weighted Average
1.420		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	50	0.1080	0.14		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.40"
1.7	96	0.0360	0.95		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
7.8	146	Total			

Subcatchment EC: Existing Conditions



Summary for Subcatchment PC-1: Proposed Conditions-1

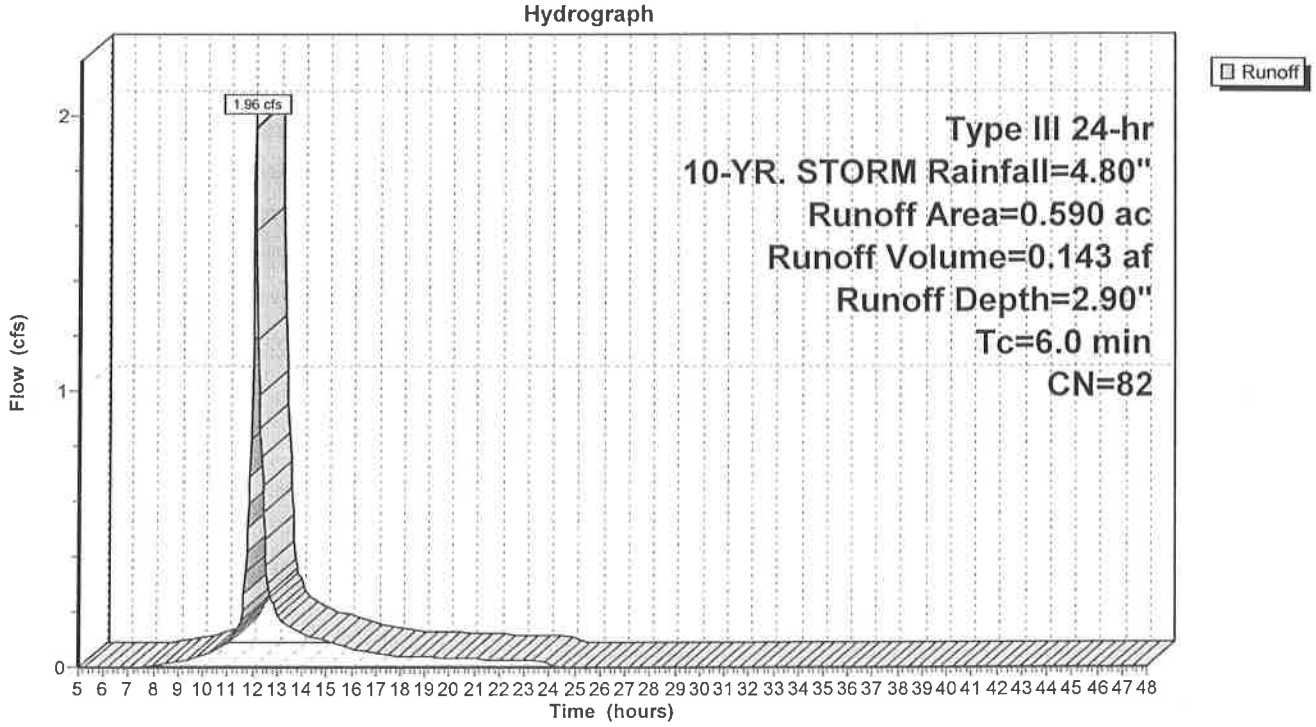
Runoff = 1.96 cfs @ 12.09 hrs, Volume= 0.143 af, Depth= 2.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR. STORM Rainfall=4.80"

Area (ac)	CN	Description
0.090	39	>75% Grass cover, Good, HSG A
0.110	61	>75% Grass cover, Good, HSG B
0.180	98	Paved parking, HSG A
0.210	98	Paved parking, HSG B
0.590	82	Weighted Average
0.200		33.90% Pervious Area
0.390		66.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PC-1: Proposed Conditions-1



Summary for Subcatchment PC-2: Bypass

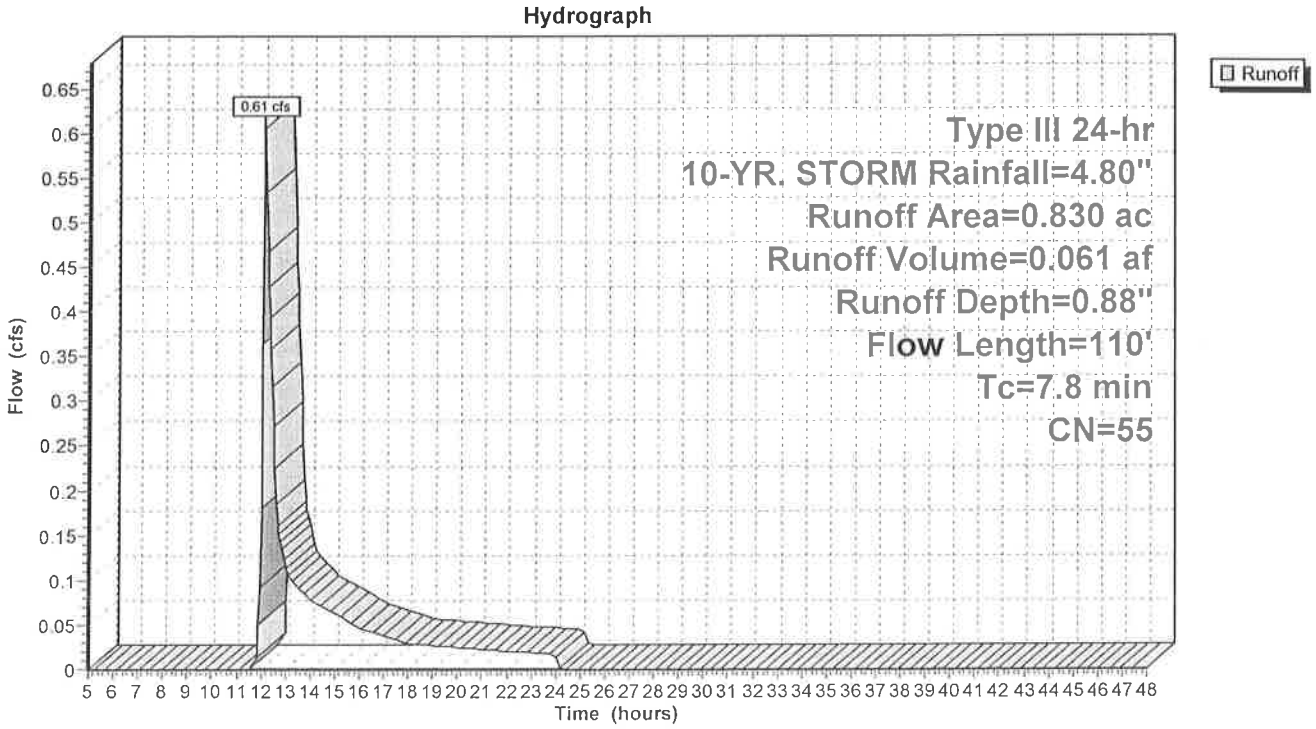
Runoff = 0.61 cfs @ 12.14 hrs, Volume= 0.061 af, Depth= 0.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR. STORM Rainfall=4.80"

Area (ac)	CN	Description
0.220	36	Woods, Fair, HSG A
0.510	60	Woods, Fair, HSG B
0.050	98	Paved parking, HSG A
0.050	39	>75% Grass cover, Good, HSG A
0.830	55	Weighted Average
0.780		93.98% Pervious Area
0.050		6.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	50	0.0740	0.12		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.40"
0.7	60	0.0920	1.52		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
7.8	110	Total			

Subcatchment PC-2: Bypass

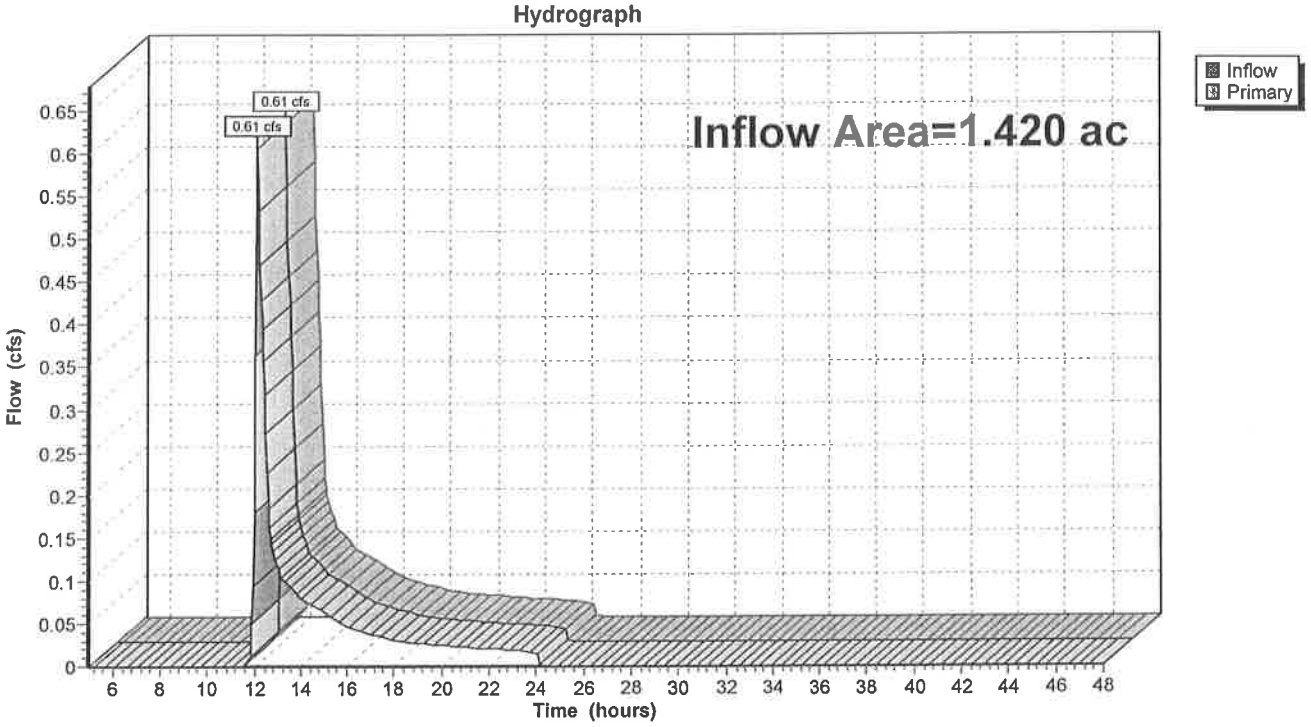


Summary for Pond AP: AP-1

Inflow Area = 1.420 ac, 30.99% Impervious, Inflow Depth = 0.52" for 10-YR. STORM event
Inflow = 0.61 cfs @ 12.14 hrs, Volume= 0.061 af
Primary = 0.61 cfs @ 12.14 hrs, Volume= 0.061 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs / 2

Pond AP: AP-1



Summary for Pond R1: Recharge

Inflow Area = 0.590 ac, 66.10% Impervious, Inflow Depth = 2.90" for 10-YR. STORM event
Inflow = 1.96 cfs @ 12.09 hrs, Volume= 0.143 af
Outflow = 0.26 cfs @ 11.75 hrs, Volume= 0.143 af, Atten= 87%, Lag= 0.0 min
Discarded = 0.26 cfs @ 11.75 hrs, Volume= 0.143 af
Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 90.60' @ 12.70 hrs Surf.Area= 0.031 ac Storage= 0.046 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 55.6 min (873.6 - 818.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	88.50'	0.027 af	**25.67'W x 52.50'L x 3.54'H Field A** 0.110 af Overall - 0.043 af Embedded = 0.066 af x 40.0% Voids
#2A	89.00'	0.043 af	**Cultec R-330XLHD** x 35 Inside #1 Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 5 rows
		0.070 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	88.50'	**8.270 in/hr Exfiltration over Surface area** Phase-In= 0.01'
#2	Primary	91.20'	**8.0" Round Culvert** L= 30.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 91.20' / 90.90' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Discarded OutFlow Max=0.26 cfs @ 11.75 hrs HW=88.57' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.26 cfs)

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=88.50' TW=0.00' (Dynamic Tailwater)
↑—**2=Culvert** (Controls 0.00 cfs)

Pond R1: Recharge - Chamber Wizard Field A

Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)
Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf
Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
Row Length Adjustment= +1.50' x 7.45 sf x 5 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

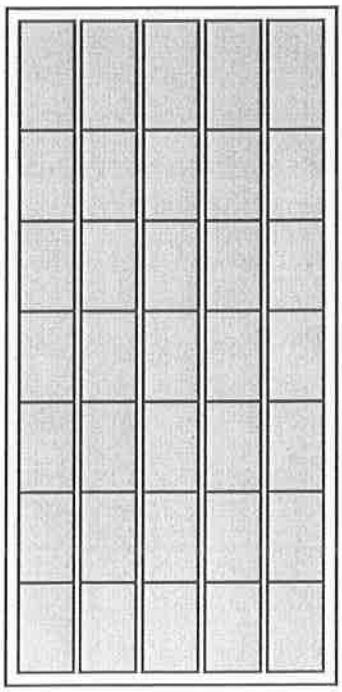
7 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 50.50' Row Length +12.0" End Stone x 2 = 52.50' Base Length
5 Rows x 52.0" Wide + 6.0" Spacing x 4 + 12.0" Side Stone x 2 = 25.67' Base Width
6.0" Stone Base + 30.5" Chamber Height + 6.0" Stone Cover = 3.54' Field Height

35 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 5 Rows = 1,881.4 cf Chamber Storage

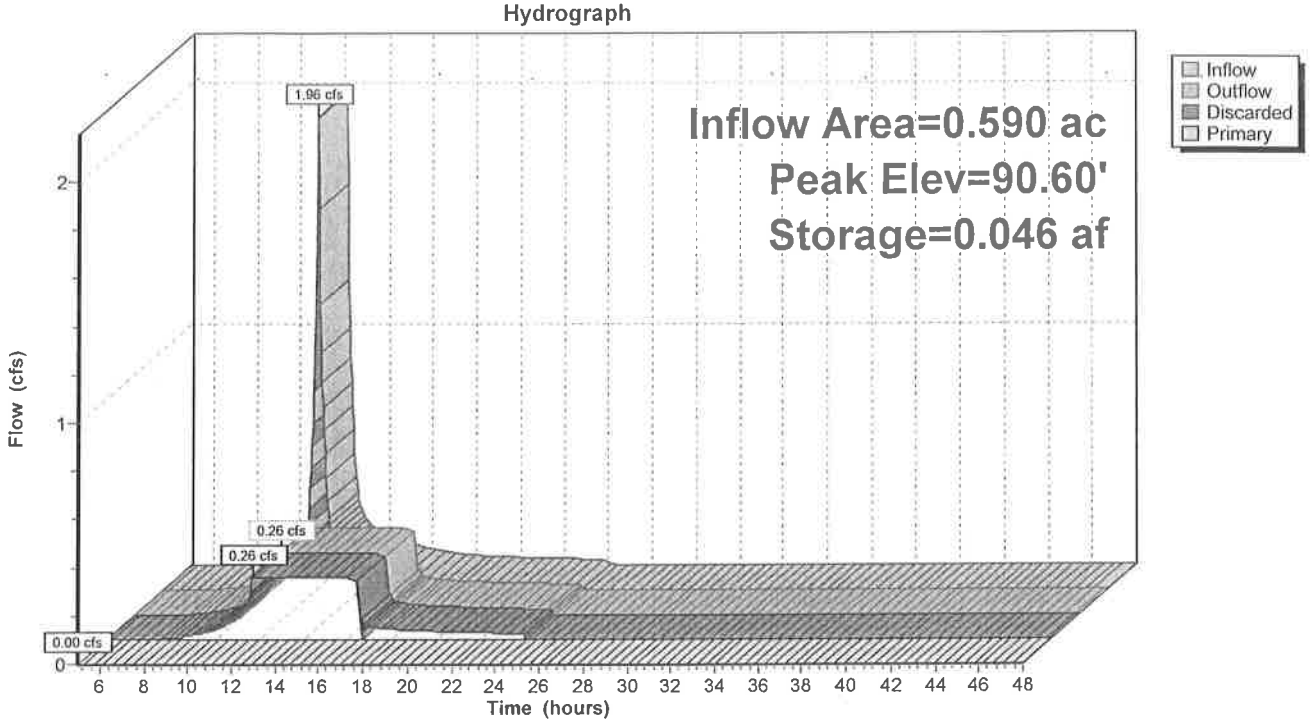
4,772.4 cf Field - 1,881.4 cf Chambers = 2,891.0 cf Stone x 40.0% Voids = 1,156.4 cf Stone Storage

Chamber Storage + Stone Storage = 3,037.8 cf = 0.070 af
Overall Storage Efficiency = 63.7%
Overall System Size = 52.50' x 25.67' x 3.54'

35 Chambers
176.8 cy Field
107.1 cy Stone



Pond R1: Recharge



Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EC: Existing Conditions Runoff Area=1.420 ac 0.00% Impervious Runoff Depth=1.67"
Flow Length=146' Tc=7.8 min CN=50 Runoff=2.20 cfs 0.197 af

Subcatchment PC-1: Proposed Runoff Area=0.590 ac 66.10% Impervious Runoff Depth=4.92"
Tc=6.0 min CN=82 Runoff=3.27 cfs 0.242 af

Subcatchment PC-2: Bypass Runoff Area=0.830 ac 6.02% Impervious Runoff Depth=2.12"
Flow Length=110' Tc=7.8 min CN=55 Runoff=1.78 cfs 0.147 af

Pond AP: AP-1 Inflow=2.16 cfs 0.184 af
Primary=2.16 cfs 0.184 af

Pond R1: Recharge Peak Elev=91.96' Storage=0.069 af Inflow=3.27 cfs 0.242 af
Discarded=0.26 cfs 0.205 af Primary=1.07 cfs 0.037 af Outflow=1.33 cfs 0.242 af

Total Runoff Area = 2.840 ac Runoff Volume = 0.586 af Average Runoff Depth = 2.48"
84.51% Pervious = 2.400 ac 15.49% Impervious = 0.440 ac

Summary for Subcatchment EC: Existing Conditions

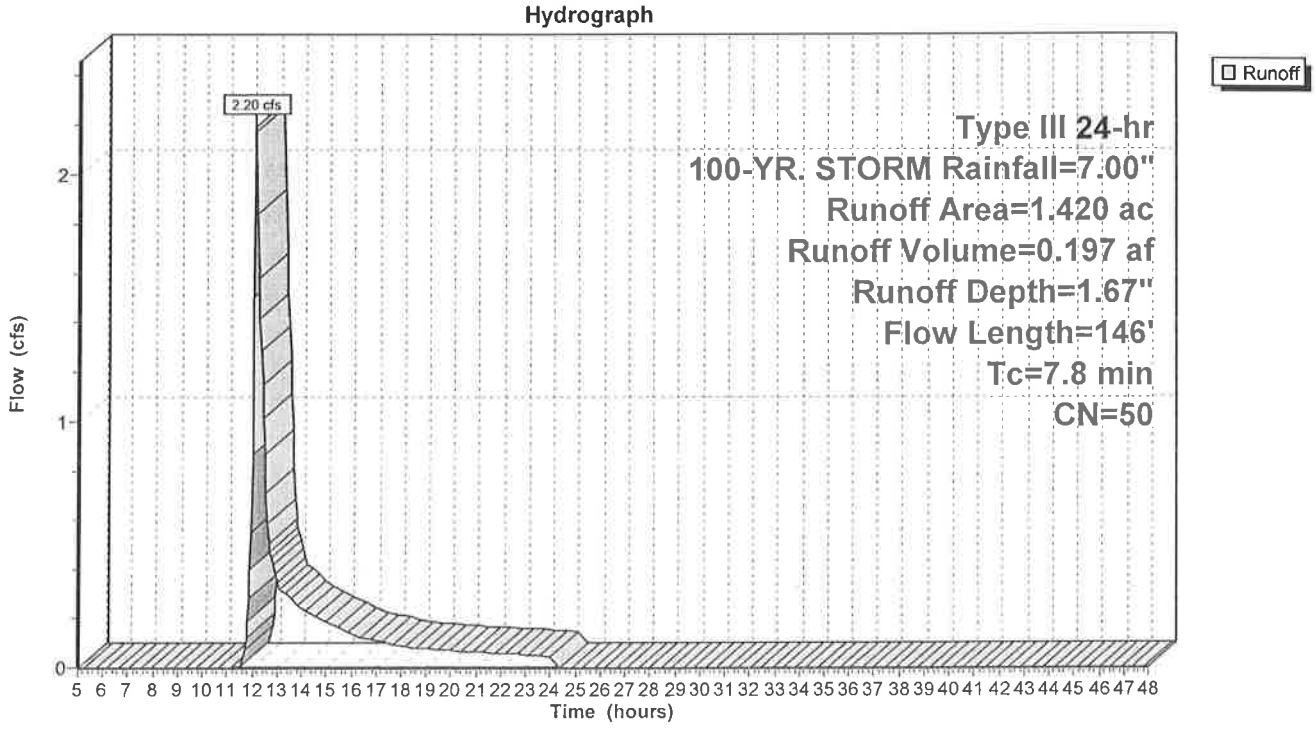
Runoff = 2.20 cfs @ 12.13 hrs, Volume= 0.197 af, Depth= 1.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-YR. STORM Rainfall=7.00"

Area (ac)	CN	Description
0.600	36	Woods, Fair, HSG A
0.820	60	Woods, Fair, HSG B
1.420	50	Weighted Average
1.420		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	50	0.1080	0.14		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.40"
1.7	96	0.0360	0.95		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
7.8	146	Total			

Subcatchment EC: Existing Conditions



Summary for Subcatchment PC-1: Proposed Conditions-1

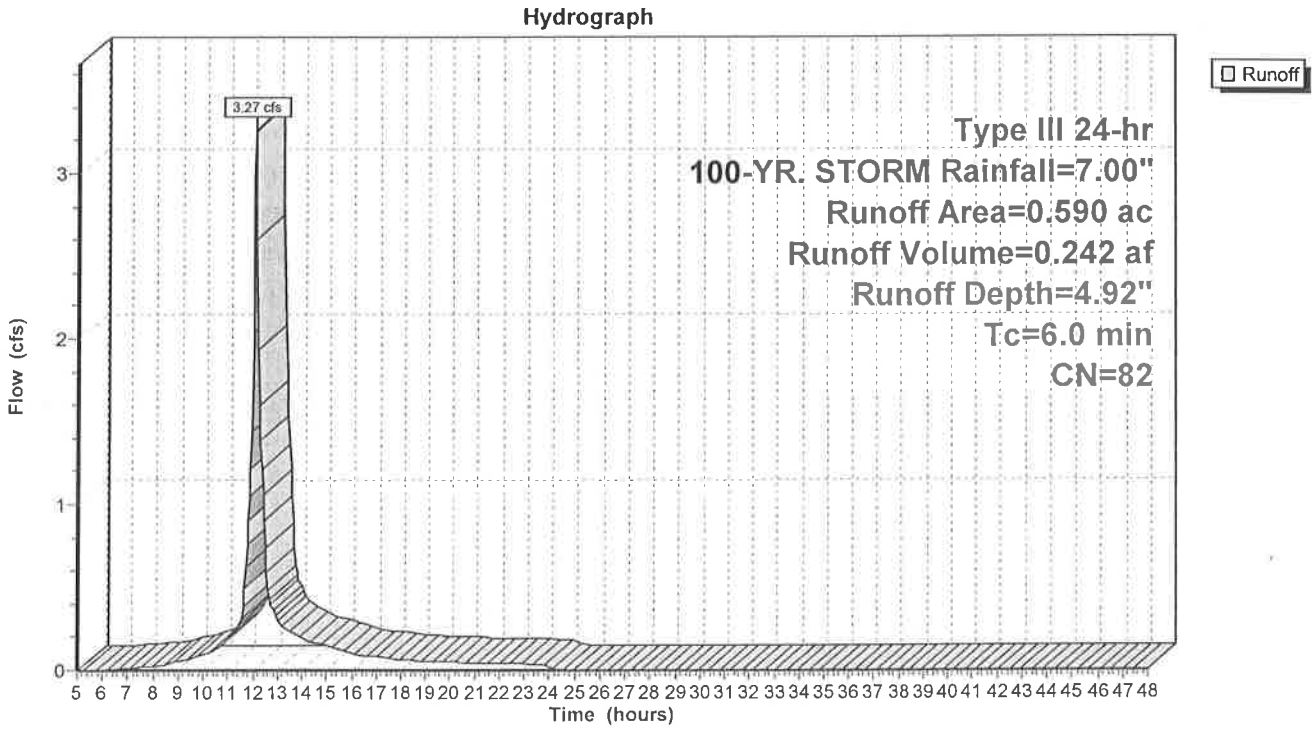
Runoff = 3.27 cfs @ 12.09 hrs, Volume= 0.242 af, Depth= 4.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-YR. STORM Rainfall=7.00"

Area (ac)	CN	Description
0.090	39	>75% Grass cover, Good, HSG A
0.110	61	>75% Grass cover, Good, HSG B
0.180	98	Paved parking, HSG A
0.210	98	Paved parking, HSG B
0.590	82	Weighted Average
0.200		33.90% Pervious Area
0.390		66.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment PC-1: Proposed Conditions-1



Summary for Subcatchment PC-2: Bypass

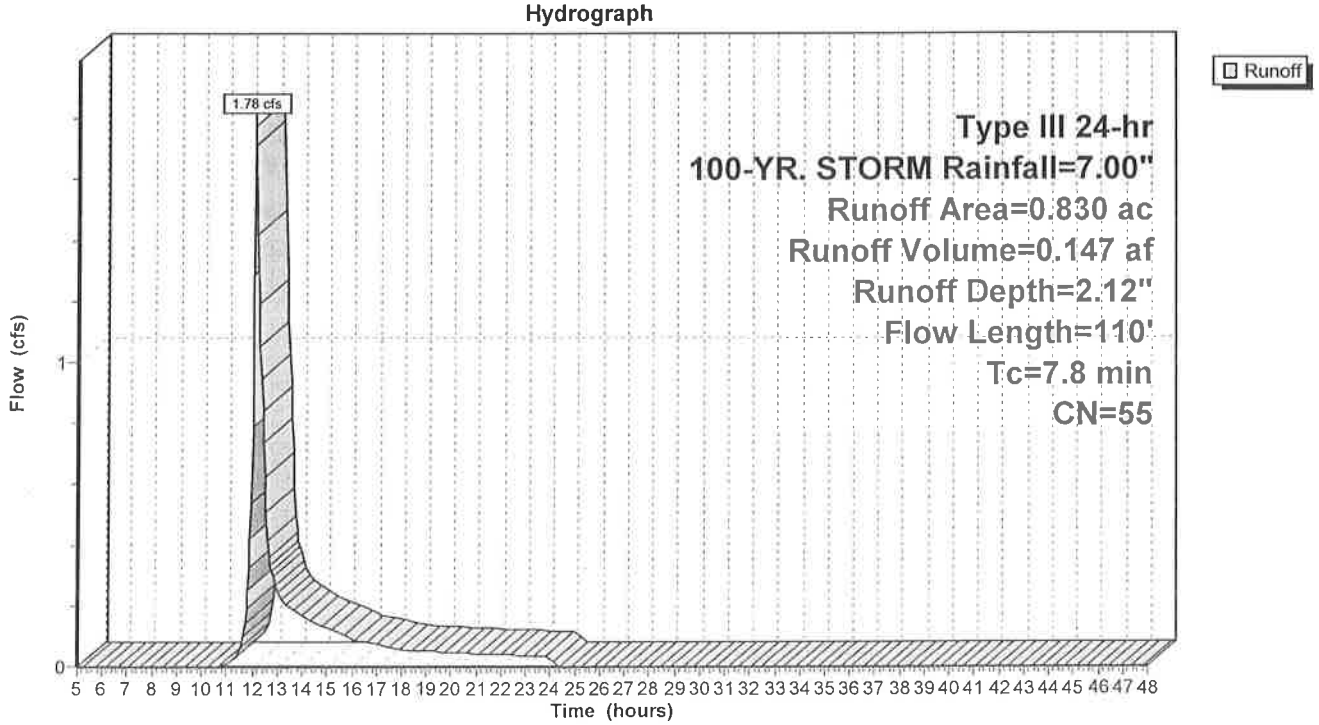
Runoff = 1.78 cfs @ 12.12 hrs, Volume= 0.147 af, Depth= 2.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-YR. STORM Rainfall=7.00"

Area (ac)	CN	Description
0.220	36	Woods, Fair, HSG A
0.510	60	Woods, Fair, HSG B
0.050	98	Paved parking, HSG A
0.050	39	>75% Grass cover, Good, HSG A
0.830	55	Weighted Average
0.780		93.98% Pervious Area
0.050		6.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	50	0.0740	0.12		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.40"
0.7	60	0.0920	1.52		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
7.8	110	Total			

Subcatchment PC-2: Bypass

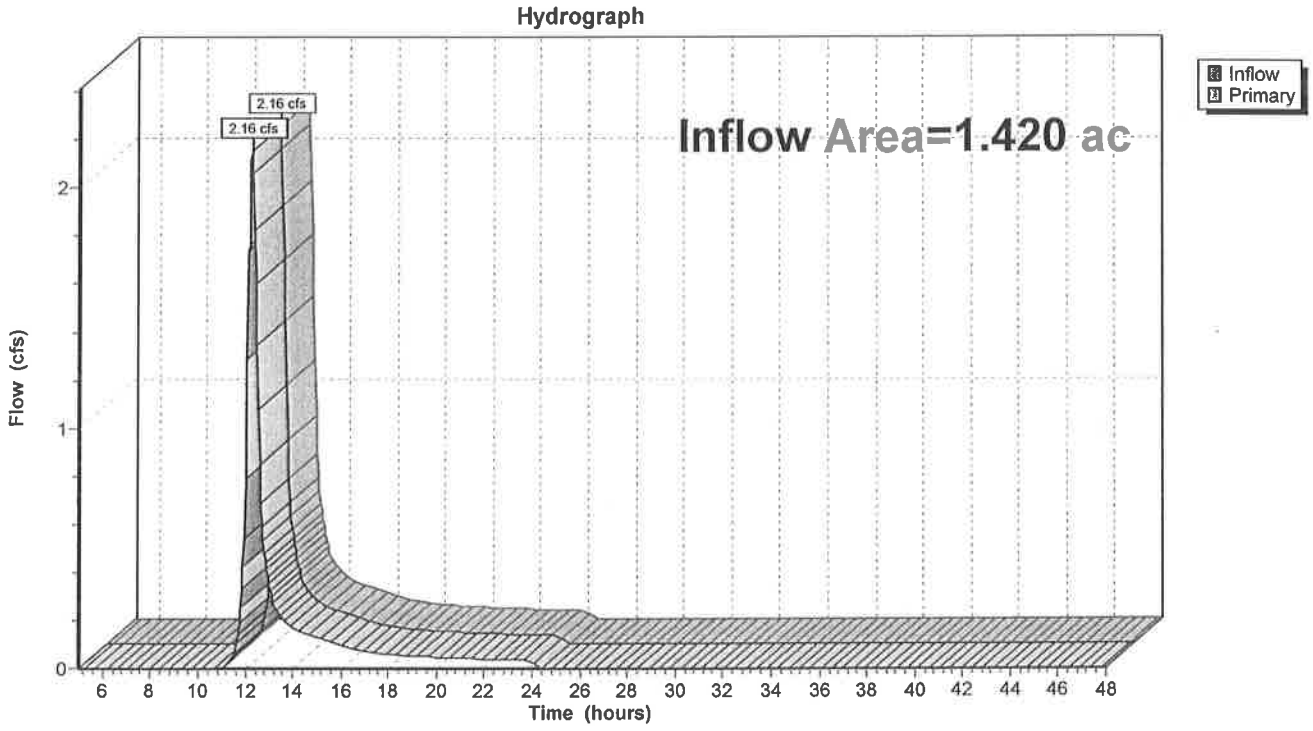


Summary for Pond AP: AP-1

Inflow Area = 1.420 ac, 30.99% Impervious, Inflow Depth = 1.55" for 100-YR. STORM event
Inflow = 2.16 cfs @ 12.27 hrs, Volume= 0.184 af
Primary = 2.16 cfs @ 12.27 hrs, Volume= 0.184 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs / 2

Pond AP: AP-1



Summary for Pond R1: Recharge

Inflow Area = 0.590 ac, 66.10% Impervious, Inflow Depth = 4.92" for 100-YR. STORM event
Inflow = 3.27 cfs @ 12.09 hrs, Volume= 0.242 af
Outflow = 1.33 cfs @ 12.32 hrs, Volume= 0.242 af, Atten= 59%, Lag= 14.0 min
Discarded = 0.26 cfs @ 11.55 hrs, Volume= 0.205 af
Primary = 1.07 cfs @ 12.32 hrs, Volume= 0.037 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 91.96' @ 12.32 hrs Surf.Area= 0.031 ac Storage= 0.069 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 69.5 min (872.5 - 803.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	88.50'	0.027 af	**25.67'W x 52.50'L x 3.54'H Field A** 0.110 af Overall - 0.043 af Embedded = 0.066 af x 40.0% Voids
#2A	89.00'	0.043 af	**Cultec R-330XLHD** x 35 Inside #1 Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 5 rows
		0.070 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	88.50'	**8.270 in/hr Exfiltration over Surface area** Phase-In= 0.01'
#2	Primary	91.20'	**8.0" Round Culvert** L= 30.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 91.20' / 90.90' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Discarded OutFlow Max=0.26 cfs @ 11.55 hrs HW=88.55' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.26 cfs)

Primary OutFlow Max=1.06 cfs @ 12.32 hrs HW=91.95' TW=0.00' (Dynamic Tailwater)
↑—**2=Culvert** (Barrel Controls 1.06 cfs @ 3.38 fps)

Pond R1: Recharge - Chamber Wizard Field A

Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)
Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf
Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap
Row Length Adjustment= +1.50' x 7.45 sf x 5 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

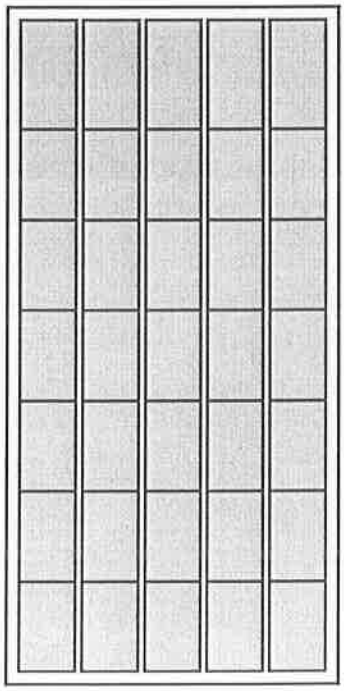
7 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 50.50' Row Length +12.0" End Stone x 2 = 52.50' Base Length
5 Rows x 52.0" Wide + 6.0" Spacing x 4 + 12.0" Side Stone x 2 = 25.67' Base Width
6.0" Stone Base + 30.5" Chamber Height + 6.0" Stone Cover = 3.54' Field Height

35 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 5 Rows = 1,881.4 cf Chamber Storage

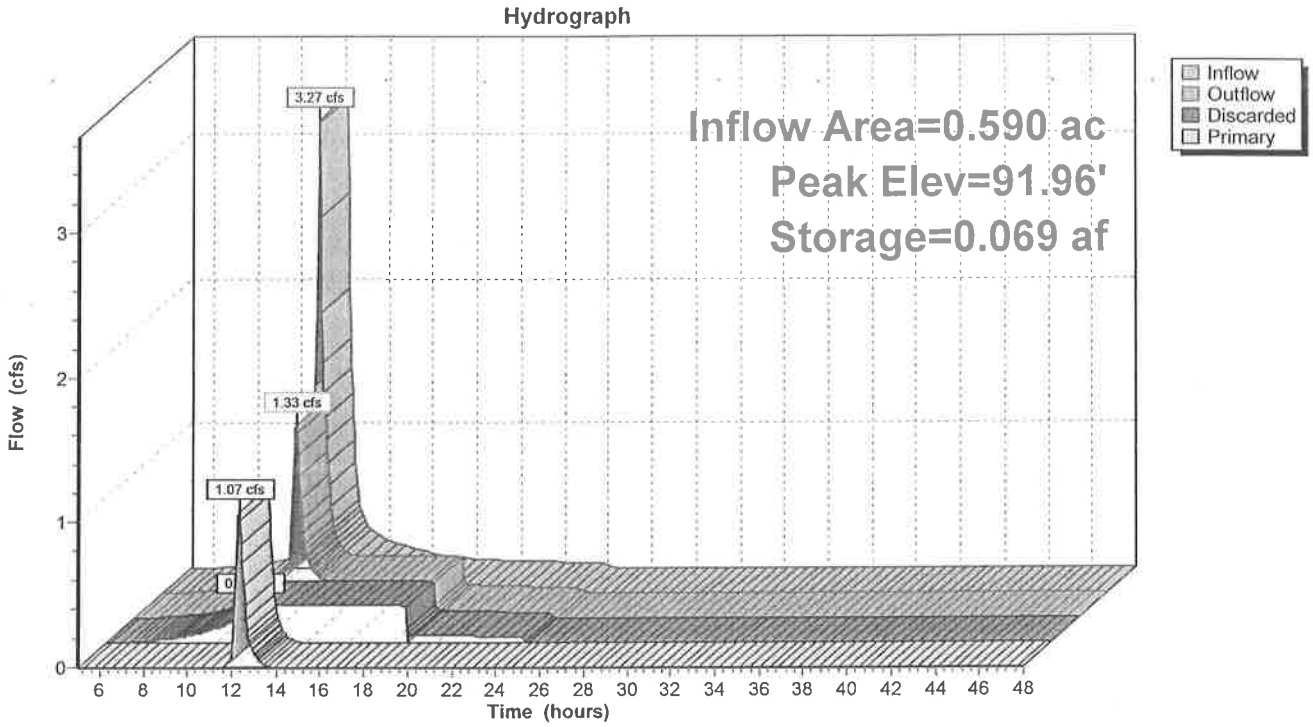
4,772.4 cf Field - 1,881.4 cf Chambers = 2,891.0 cf Stone x 40.0% Voids = 1,156.4 cf Stone Storage

Chamber Storage + Stone Storage = 3,037.8 cf = 0.070 af
Overall Storage Efficiency = 63.7%
Overall System Size = 52.50' x 25.67' x 3.54'

35 Chambers
176.8 cy Field
107.1 cy Stone



Pond R1: Recharge



Map Scale: 1:2,530 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 35 70 140 210

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bristol County, Massachusetts, Southern Part
Survey Area Data: Version 14, Jun 9, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Jul 3, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
39A	Scarboro mucky fine sandy loam, 0 to 3 percent slopes	2.6	9.1%
242A	Hinckley loamy sand, 0 to 3 percent slopes	4.9	17.1%
260A	Sudbury fine sandy loam, 0 to 3 percent slopes	8.2	28.4%
602	Urban land	7.5	26.3%
656	Udorthents - Urban land complex	5.4	18.9%
Totals for Area of Interest		**28.7**	**100.0%**

Bristol County, Massachusetts, Southern Part

242A—Hinckley loamy sand, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2svm7
Elevation: 0 to 1,420 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Hinckley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash deltas, kame terraces, outwash plains, outwash terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex, linear, concave
Across-slope shape: Convex, linear, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Merrimac

Percent of map unit: 5 percent
Landform: Outwash deltas, kame terraces, outwash terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex, linear, concave
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Windsor

Percent of map unit: 5 percent
Landform: Outwash terraces, kame terraces, outwash deltas
Landform position (three-dimensional): Tread
Down-slope shape: Concave, linear, convex
Across-slope shape: Linear, convex, concave
Hydric soil rating: No

Sudbury

Percent of map unit: 5 percent
Landform: Outwash deltas, kame terraces, outwash terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex, concave, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Data Source Information

Soil Survey Area: Bristol County, Massachusetts, Southern Part
Survey Area Data: Version 14, Jun 9, 2020

Bristol County, Massachusetts, Southern Part

260A—Sudbury fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: v5rh
Elevation: 0 to 2,100 feet
Mean annual precipitation: 45 to 54 inches
Mean annual air temperature: 43 to 54 degrees F
Frost-free period: 145 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Sudbury and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sudbury

Setting

Landform: Outwash plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Friable coarse-loamy eolian deposits over loose sandy glaciofluvial deposits derived from granite and gneiss

Typical profile

H1 - 0 to 4 inches: fine sandy loam
H2 - 4 to 18 inches: fine sandy loam
H3 - 18 to 28 inches: gravelly coarse sandy loam
H4 - 28 to 60 inches: gravelly coarse sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B
Ecological site: F144AY027MA - Moist Sandy Outwash
Hydric soil rating: No

Minor Components

Deerfield
Percent of map unit: 5 percent
Hydric soil rating: No

Walpole
Percent of map unit: 5 percent
Landform: Terraces
Hydric soil rating: Yes

Merrimac
Percent of map unit: 5 percent
Hydric soil rating: No

Ninigret
Percent of map unit: 5 percent
Hydric soil rating: No

Data Source Information

Soil Survey Area: Bristol County, Massachusetts, Southern Part
Survey Area Data: Version 14, Jun 9, 2020

Bristol County, Massachusetts, Southern Part

39A—Scarboro mucky fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2svky
Elevation: 0 to 1,320 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Scarboro and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Scarboro

Setting

Landform: Depressions, outwash terraces, outwash deltas, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Sandy glaciofluvial deposits derived from schist and/or sandy glaciofluvial deposits derived from gneiss and/or sandy glaciofluvial deposits derived from granite

Typical profile

Oe - 0 to 3 inches: mucky peat
A - 3 to 11 inches: mucky fine sandy loam
Cg1 - 11 to 21 inches: sand
Cg2 - 21 to 65 inches: gravelly coarse sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (1.42 to 14.17 in/hr)
Depth to water table: About 0 to 2 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Ecological site: F144AY031MA - Very Wet Outwash
Hydric soil rating: Yes

Minor Components

Swansea

Percent of map unit: 10 percent
Landform: Bogs, swamps
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Walpole

Percent of map unit: 5 percent
Landform: Outwash plains, depressions, outwash terraces, depressions, deltas
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Wareham

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Bristol County, Massachusetts, Southern Part
Survey Area Data: Version 14, Jun 9, 2020

WATER QUALITY FLOWRATE CALCULATION
PHILLIPS ROAD, NEW BEDFORD
STORMCEPTOR IN Catch Basins #1&#2

Purpose: Calculate the first flush runoff flowrate/Water Quality Flowrate (WQF) over the given site area entering the proposed water quality inlet. In this case, the Water Quality Volume (WQV) to be analyzed is the runoff produced by the first half inch (0.5") of rainfall.

Reference: USDA NRCS TR-55 Manual

Given:
- A = Watershed Area = 0.59-acres [0.39-acres impervious] = 0.002 square miles
- I = Percentage of Impervious Cover = 0.39/0.59 = 66
- t_c = 6 minutes = 0.10 hours
- P = Design Precipitation = 0.5"

Procedure: The WQF is calculated using the WQV. This WQV, converted to watershed inches, is substituted for the runoff depth (Q) in the NRCS TR-55 Graphical Peak Discharge Method.

1. Read the Unit Peak Discharge (q_u) from Figure 2.

   From Figure 2, q_u = 752 csm/in (for a t_c=0.10 hours and an I_a/P =0.058)

2. Compute the WQF from the following equation:

   $WQF = q_u * A * WQV$

Where:
- WQF = Water Quality Flowrate (cfs)
- q_u = Unit Peak Discharge (cfs/mi^2/inch)
- A = Drainage Area (mi^2)
- WQV = Water Quality Volume (watershed inches)

WQF = 752 * 0.002 *0.50 = 0.59 cfs

Use a Stormceptor STC450i or approved equal

Stormceptor®

CONTECH ENGINEERED SOLUTIONS
A COMPANY

Brief Stormceptor Sizing Report - Phillips Road

Project Information & Location			
Project Name	Phillips Road	Project Number	38992
City	New Bedford	State/ Province	Massachusetts
Country	United States of America	Date	3/23/2021
Designer Information		**EOR Information (optional)**	
Name	Daniel Gioiosa	Name	
Company	Sitec, Inc.	Company	
Phone #	508-998-2125	Phone #	
Email	dgioiosa@sitec-engineering.com	Email	

Stormwater Treatment Recommendation
The recommended Stormceptor Model(s) which achieve or exceed the user defined water quality objective for each site within the project are listed in the below Sizing Summary table.

Site Name	Phillips Road
Target TSS Removal (%)	80
TSS Removal (%) Provided	86
Recommended Stormceptor Model	STC 450i

The recommended Stormceptor Model achieves the water quality objectives based on the selected inputs, historical rainfall records and selected particle size distribution.

Stormceptor Sizing Summary	
Stormceptor Model	**% TSS Removal Provided**
STC 450i	86
STC 900	91
STC 1200	91
STC 1800	91
STC 2400	93
STC 3600	94
STC 4800	95
STC 6000	95
STC 7200	96
STC 11000	98
STC 13000	98
STC 16000	98

Sizing Details

Drainage Area	
Total Area (acres)	0.59
Imperviousness %	66.0

Rainfall	
Station Name	BLUE HILL
State/Province	Massachusetts
Station ID #	0736
Years of Records	58
Latitude	42°12'44"N
Longitude	71°6'53"W

Water Quality Objective	
TSS Removal (%)	80.0
Runoff Volume Capture (%)	
Oil Spill Capture Volume (Gal)	
Peak Conveyed Flow Rate (CFS)	3.27
Water Quality Flow Rate (CFS)	0.59

Up Stream Storage	
Storage (ac-ft)	Discharge (cfs)
0.000	0.000

Up Stream Flow Diversion	
Max. Flow to Stormceptor (cfs)	

Particle Size Distribution (PSD)
The selected PSD defines TSS removal

Fine Distribution		
Particle Diameter (microns)	Distribution %	Specific Gravity
20.0	20.0	1.30
60.0	20.0	1.80
150.0	20.0	2.20
400.0	20.0	2.65
2000.0	20.0	2.65

Notes

- Stormceptor performance estimates are based on simulations using PCSWMM for Stormceptor, which uses the EPA Rainfall and Runoff modules.
- Design estimates listed are only representative of specific project requirements based on total suspended solids (TSS) removal defined by the selected PSD, and based on stable site conditions only, after construction is completed.
- For submerged applications or sites specific to spill control, please contact your local Stormceptor representative for further design assistance.

For Stormceptor Specifications and Drawings Please Visit:
https://www.conteches.com/technical-guides/search?filter=1WBC0O5EYX

Figure 2: For First ½-inch of Runoff, Table of qu values for Ia/P Curve = 0.0.058, listed by tc, for Type III Storm Distribution

Tc (Hours)	qu (csm/in)
0.01	821
0.03	821
0.05	813
0.067	794
0.083	773
0.1	752
0.116	733
0.133	713
0.15	694
0.167	677
0.183	662
0.2	646
0.217	632
0.233	619
0.25	606
0.3	572
0.333	552
0.35	542
0.4	516
0.416	508
0.5	472
0.583	443
0.6	437
0.667	417
0.7	408
0.8	383
0.9	361
1	342
1.1	325
1.2	311
1.3	297
1.4	285
1.5	274
1.6	264
1.7	254

Tc (Hours)	qu (csm/in)
1.8	246
1.9	238
2	230
2.1	223
2.2	217
2.3	211
2.4	205
2.5	200
2.6	194
2.7	190
2.8	185
2.9	181
3	176
3.1	173
3.2	169
3.3	165
3.4	162
3.5	158
3.6	155
3.7	152
3.8	149
3.9	147
4	144
4.1	141
4.2	139
4.3	136
4.4	134
4.5	132
4.6	130
4.7	128
4.8	126
4.9	124
5	122
5.1	120
5.2	118

Tc (Hours)	qu (csm/in)
5.3	116
5.4	115
5.5	113
5.6	112
5.7	110
5.8	109
5.9	107
6	106
6.1	104
6.2	103
6.3	102
6.4	100
6.5	99
6.6	98
6.7	97
6.8	96
6.9	94
7	93
7.1	92
7.2	91
7.3	90
7.4	89
7.5	88
7.6	87
7.7	86
7.8	85
7.9	84
8	84
8.1	83
8.2	82
8.3	81
8.4	80
8.5	79
8.6	79
8.7	78

Tc (Hours)	qu (csm/in)
8.8	77
8.9	76
9	76
9.1	75
9.2	74
9.3	74
9.4	73
9.5	72
9.6	72
9.7	71
9.8	70
9.9	70
10	69

Figure 4: for First 1-inch Runoff, Table of qu values for Ia/P Curve = 0.034, listed by tc, for Type III Storm Distribution

Tc (Hours)	qu (csm/in)
0.01	835
0.03	835
0.05	831
0.067	814
0.083	795
0.1	774
0.116	755
0.133	736
0.15	717
0.167	700
0.183	685
0.2	669
0.217	654
0.233	641
0.25	628
0.3	593
0.333	572
0.35	563
0.4	536
0.416	528
0.5	491
0.583	460
0.6	454
0.667	433
0.7	424
0.8	398
0.9	376
1	356
1.1	339
1.2	323
1.3	309
1.4	296
1.5	285
1.6	274
1.7	264
1.8	255
1.9	247
2	239
2.1	232
2.2	225
2.3	219
2.4	213
2.5	207
2.6	202

Tc (Hours)	qu (csm/in)
2.7	197
2.8	192
2.9	187
3	183
3.1	179
3.2	175
3.3	171
3.4	168
3.5	164
3.6	161
3.7	158
3.8	155
3.9	152
4	149
4.1	146
4.2	144
4.3	141
4.4	139
4.5	137
4.6	134
4.7	132
4.8	130
4.9	128
5	126
5.1	124
5.2	122
5.3	120
5.4	119
5.5	117
5.6	115
5.7	114
5.8	112
5.9	111
6	109
6.1	108
6.2	106
6.3	105
6.4	104
6.5	102
6.6	101
6.7	100
6.8	99
6.9	98
7	96

Tc (Hours)	qu (csm/in)
7.1	95
7.2	94
7.3	93
7.4	92
7.5	91
7.6	90
7.7	89
7.8	88
7.9	87
8	86
8.1	85
8.2	84
8.3	84
8.4	83
8.5	82
8.6	81
8.7	80
8.8	79
8.9	79
9	78
9.1	77
9.2	76
9.3	76
9.4	75
9.5	74
9.6	74
9.7	73
9.8	72
9.9	72
10	71

CULTEC Recharger® 330XLHD Stormwater Chamber

The Recharger® 330XLHD is a 30.5" (775 mm) tall, high capacity chamber. Typically when using this model, fewer chambers are required resulting in less labor and a smaller installation area. The Recharger® 330XLHD has the side portal internal manifold feature. HVLV® FC-24 Feed Connectors are inserted into the side portals to create the internal manifold.

Size (L x W x H)	8.5' x 52" x 30.5"
	2.59 m x 1321 mm x 775 mm
Installed Length	7'
	2.13 m
Length Adjustment per Run	1.50'
	0.46 m
Chamber Storage	7.46 ft³/ft
	0.69 m³/m
	52.21 ft³/unit
	1.48 m³/unit
Min. Installed Storage	11.32 ft³/ft
	1.05 m³/m
	79.26 ft³/unit
	2.24 m³/unit
Min. Area Required	33.83 ft²
	3.14 m²
Chamber Weight	73.0 lbs
	33.11 kg
Shipping	30 chambers/skid
	2,335 lbs/skid
	10 skids/48' flatbed
Min. Center-to-Center Spacing	4.83'
	1.47 m
Max. Allowable Cover	12'
	3.66 m
Max. Inlet Opening in End Wall	24" HDPE, PVC
	600 mm HDPE, PVC
Max. Allowable O.D. in Side Portal	10" HDPE, 12" PVC
	250 mm HDPE, 300 mm PVC
Compatible Feed Connector	HVLV FC-24 Feed Connector

Calculations are based on installed chamber length.
All above values are nominal.
Min. installed storage includes 6" (152 mm) stone base, 6" (152 mm) stone above crown of chamber and typical stone surround at 58" (1473 mm) center-to-center spacing.

	Stone Foundation Depth		
	6"	12"	18"
	152 mm	305 mm	457 mm
Chamber and Stone Storage Per Chamber	79.26 ft³	86.03 ft³	92.79 ft³
	2.24 m³	2.44 m³	2.63 m³
Min. Effective Depth	3.54'	4.04'	4.54'
	1.08 m	1.23 m	1.38 m
Stone Required Per Chamber	2.50 yd³	3.13 yd³	3.76 yd³
	1.91 m³	2.39 m³	2.87 m³

Calculations are based on installed chamber length.
Includes 6" (305 mm) stone above crown of chamber and typical stone surround at 58"(1473 mm) center-to-center spacing and stone foundation as listed in table.
Stone void calculated at 40%.

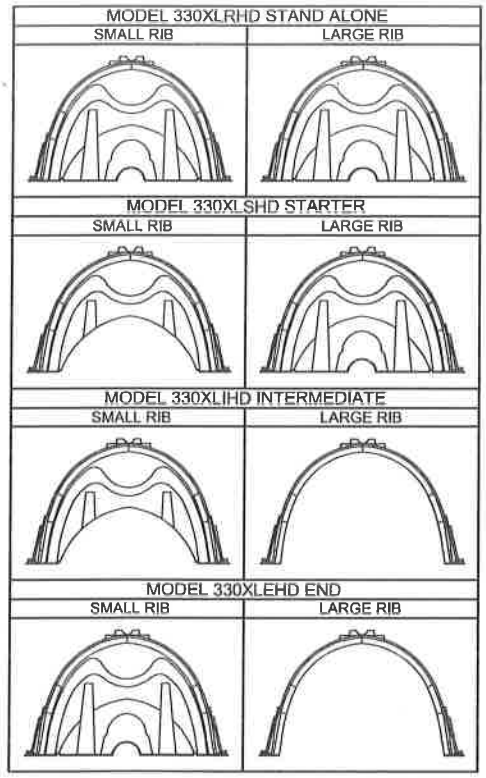
Recharger® 330XLHD Bare Chamber Storage Volumes

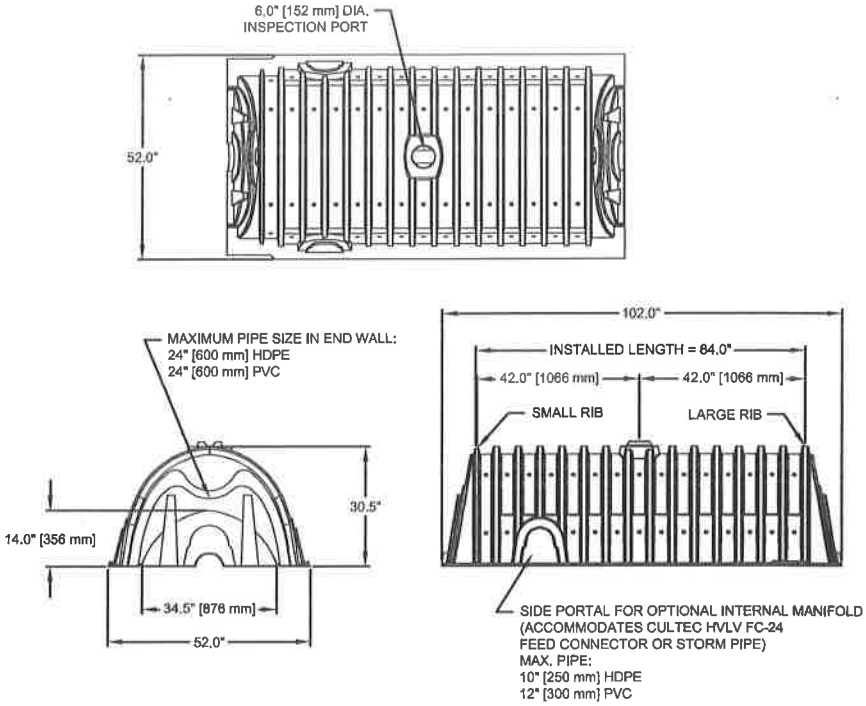
Elevation		Incremental Storage Volume				Cumulative Storage	
in.	mm	ft³/ft	m³/m	ft³	m³	ft³	m³
30.5	775	0.000	0.000	0.000	0.000	52.213	1.479
30	762	0.019	0.002	0.133	0.004	52.213	1.479
29	737	0.051	0.005	0.357	0.010	52.080	1.475
28	711	0.084	0.008	0.588	0.017	51.723	1.465
27	686	0.124	0.012	0.868	0.025	51.135	1.448
26	660	0.150	0.014	1.05	0.030	50.267	1.424
25	635	0.173	0.016	1.211	0.034	49.217	1.394
24	609	0.191	0.018	1.337	0.038	48.006	1.360
23	584	0.207	0.019	1.449	0.041	46.669	1.322
22	559	0.221	0.021	1.547	0.044	45.220	1.281
21	533	0.233	0.022	1.631	0.046	43.673	1.237
20	508	0.244	0.023	1.708	0.048	42.042	1.191
19	483	0.254	0.024	1.778	0.050	40.334	1.142
18	457	0.264	0.025	1.848	0.052	38.556	1.092
17	432	0.271	0.025	1.897	0.054	36.708	1.040
16	406	0.283	0.026	1.981	0.056	34.811	0.986
15	381	0.294	0.027	2.058	0.058	32.830	0.930
14	356	0.296	0.027	2.072	0.059	30.772	0.871
13	330	0.299	0.028	2.093	0.059	28.700	0.813
12	305	0.301	0.028	2.107	0.060	26.607	0.754
11	279	0.303	0.028	2.121	0.060	24.500	0.694
10	254	0.304	0.028	2.128	0.060	22.379	0.634
9	229	0.306	0.028	2.142	0.061	20.251	0.574
8	203	0.313	0.029	2.191	0.062	18.109	0.513
7	178	0.321	0.030	2.247	0.064	15.918	0.451
6	152	0.322	0.030	2.254	0.064	13.671	0.387
5	127	0.323	0.030	2.261	0.064	11.417	0.323
4	102	0.324	0.030	2.268	0.064	9.156	0.259
3	76	0.325	0.030	2.275	0.064	6.888	0.195
2	51	0.327	0.030	2.289	0.065	4.613	0.131
1	25	0.332	0.031	2.324	0.066	2.324	0.066
Total		**7.459**	**0.693**	**52.213**	**1.479**	**52.213**	**1.479**

Calculations are based on installed chamber length.

Visit http://cultec.com/downloads/
for Product Downloads and CAD details.

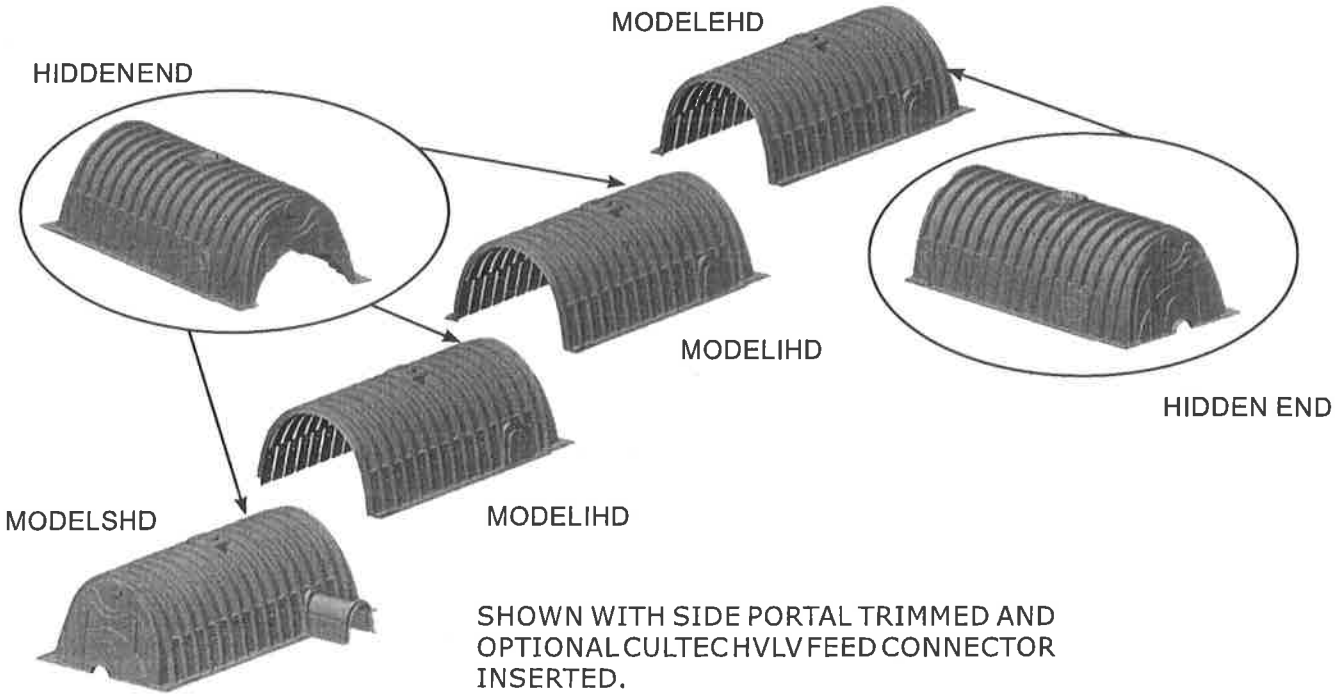
Three View Drawing





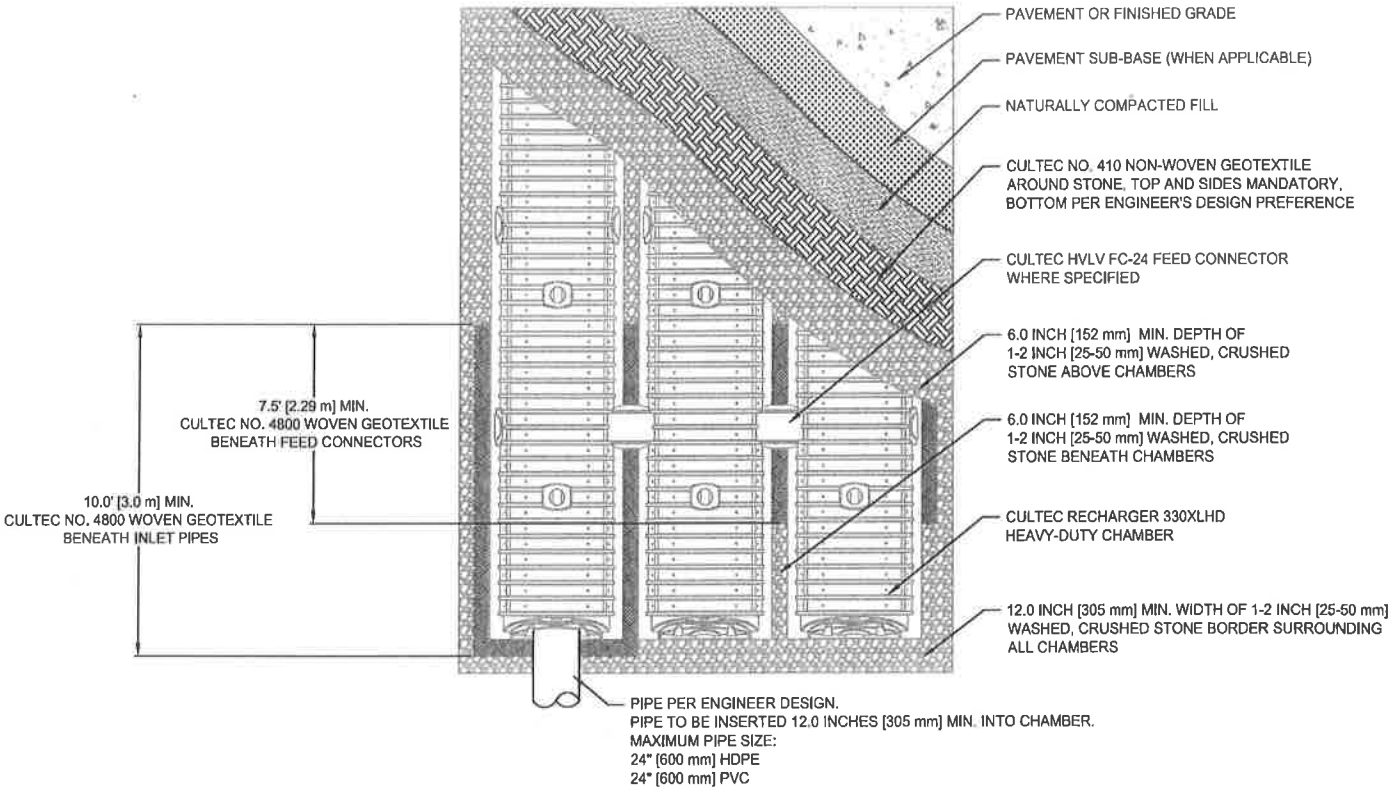
CULTEC RECHARGER 330XLHD CHAMBER STORAGE = 7.459 CF/FT [0.693 m³/m]
INSTALLED LENGTH ADJUSTMENT = 1.5' [0.46 m]
SIDE PORTAL ACCEPTS CULTEC HVLV FC-24 FEED CONNECTOR

Typical Interlock Installation

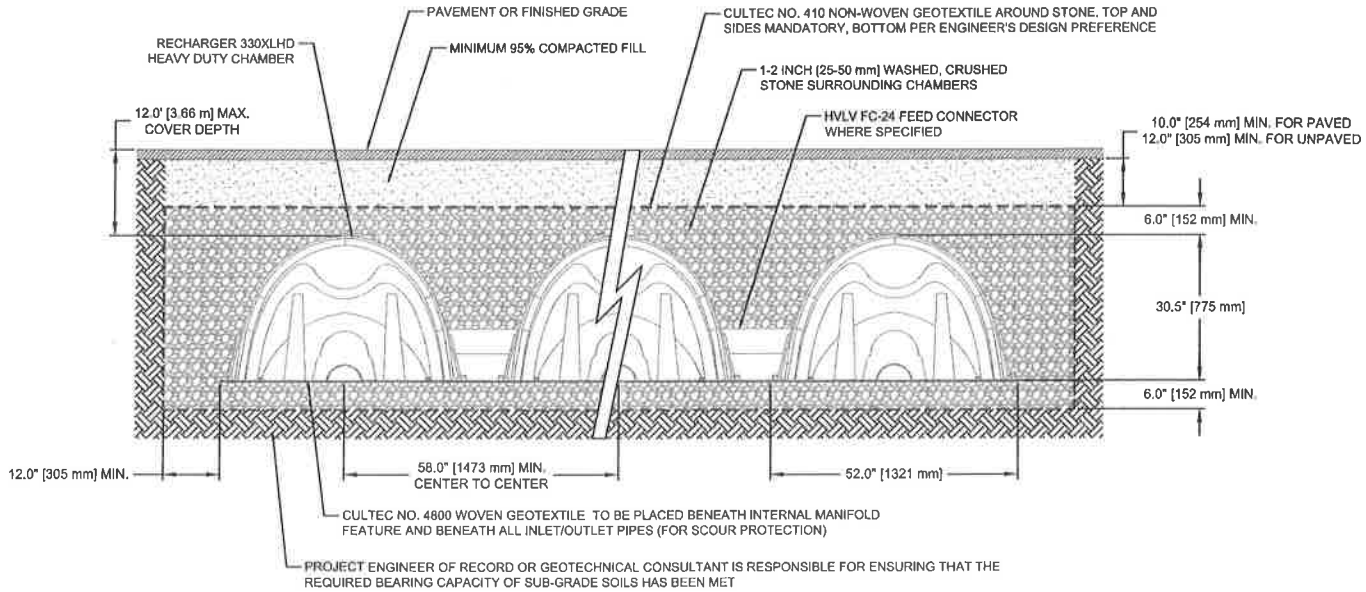


SHOWN WITH SIDE PORTAL TRIMMED AND OPTIONAL CULTEC HVLV FEED CONNECTOR INSERTED.

Plan View Drawing



Typical Cross Section for Traffic Application



CULTEC Recharger® 330XLHD Specifications

GENERAL

CULTEC Recharger® 330XLHD chambers are designed for underground stormwater management. The chambers may be used for retention, recharging, detention or controlling the flow of on-site stormwater runoff.

CHAMBER PARAMETERS

1. The chambers shall be manufactured in the U.S.A. by CULTEC, Inc. of Brookfield, CT (cultec.com, 203-775-4416).
2. The chamber shall be vacuum thermoformed of polyethylene with a black interior and blue exterior.
3. The chamber shall be arched in shape.
4. The chamber shall be open-bottomed.
5. The chamber shall be joined using an interlocking overlapping rib method. Connections must be fully shouldered overlapping ribs, having no separate couplings or separate end walls.
6. The nominal chamber dimensions of the CULTEC Recharger® 330XLHD shall be 30.5 inches (775 mm) tall, 52 inches (1321 mm) wide and 8.5 feet (2.59 m) long. The installed length of a joined Recharger® 330XLHD shall be 7 feet (2.13 m).
7. Maximum inlet opening on the chamber end wall is 24 inches (600 mm) HDPE, PVC.
8. The chamber shall have two side portals to accept CULTEC HVLV® FC-24 Feed Connectors to create an internal manifold. Maximum allowable O.D. in the side portal is 10 inches (250 mm) HDPE and 12 inches (300 mm) PVC.
9. The nominal chamber dimensions of the CULTEC HVLV® FC-24 Feed Connector shall be 12 inches (305 mm) tall, 16 inches (406 mm) wide and 24.2 inches (614 mm) long.
10. The nominal storage volume of the Recharger® 330XLHD chamber shall be 7.459 ft^3 / ft (0.693 m^3 / m) - without stone. The nominal storage volume of a single Recharger® 330XLRHD Stand Alone unit shall be 63.40 ft^3 (1.80 m^3) - without stone. The nominal storage volume of a joined Recharger® 330XLIHD Intermediate unit shall be 52.213 ft^3 (1.478 m^3) - without stone. The nominal storage volume of the length adjustment amount per run shall be 11.19 ft^3 (1.04 m^3) - without stone.
11. The nominal storage volume of the HVLV® FC-24 Feed Connector shall be 0.913 ft^3 / ft (0.026 m^3 / m) - without stone.
12. The Recharger® 330XLHD chamber shall have fifty-six discharge holes bored into the sidewalls of the unit's core to promote lateral conveyance of water.
13. The Recharger® 330XLHD chamber shall have 16 corrugations.
14. The end wall of the chamber, when present, shall be an integral part of the continuously formed unit. Separate end plates cannot be used with this unit.
15. The Recharger® 330XLRHD Stand Alone unit must be formed as a whole chamber having two fully formed integral end walls and having no separate end plates or separate end walls.
16. The Recharger® 330XLSHD Starter unit must be formed as a whole chamber having one fully formed integral end wall and one partially formed integral end wall with a lower transfer opening of 14 inches (356 mm) high x 34.5 inches (876 mm) wide.
17. The Recharger® 330XLIHD Intermediate unit must be formed as a whole chamber having one fully open end wall and one partially formed integral end wall with a lower transfer opening of 14 inches (356 mm) high x 34.5 inches (876 mm) wide.
18. The Recharger® 330XLEHD End unit must be formed as a whole chamber having one fully formed integral end wall and one fully open end wall and having no separate end plates or end walls.
19. The HVLV® FC-24 Feed Connector must be formed as a whole chamber having two open end walls and having no separate end plates or separate end walls. The unit shall fit into the side portals of the Recharger® 330XLHD and act as cross feed connections.
20. Chambers must have horizontal stiffening flex reduction steps between the ribs.
21. The chamber shall have a raised integral cap at the top of the arch in the center of each unit to be used as an optional inspection port or clean-out.
22. The units may be trimmed to custom lengths by cutting back to any corrugation on the large rib end.
23. The chamber shall be manufactured in an ISO 9001:2015 certified facility.
24. The chamber shall be designed and manufactured to meet the material and structural requirements of IAPMO PS 63-2019, including resistance to AASHTO H-10 and H-20 highway live loads, when installed in accordance with CULTEC's installation instructions.
25. The chamber shall be designed and manufactured in accordance with the specifications of NSAI Irish Agrement Board Certificate for Cultec Attenuation and Infiltration.
26. Maximum allowable cover over the top of the chamber shall be 12' (3.66 m).
27. The chamber shall be designed to withstand traffic loads when installed according to CULTEC's recommended installation instructions.

INSTRUCTIONS:

1. Sheet is nonautomated. Print sheet and complete using hand calculations. Column A and B: See MassDEP Structural BMP Table
2. The calculations must be completed using the Column Headings specified in Chart and Not the Excel Column Headings
3. To complete Chart Column D, multiple Column B value within Row x Column C value within Row
4. To complete Chart Column E value, subtract Column D value within Row from Column C within Row
5. Total TSS Removal = Sum All Values in Column D

Non-automated: Mar. 4, 2008

Location: PHILLIPS RD - PANAGAKOS DEVELOPMENT

TSS Removal Calculation Worksheet

A BMP[1]	B TSS Removal Rate[1]	C Starting TSS Load*	D Amount Removed (B*C)	E Remaining Load (C-D)
STORMCEPTOR STC 450i	0.86	1.00	.86	.14
DEEP SUMP CATCHBASIN	0.25	.14	.03	.11

Total TSS Removal = 89%

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project:

Prepared By:

Date:

*Equals remaining load from previous BMP (E) which enters the BMP

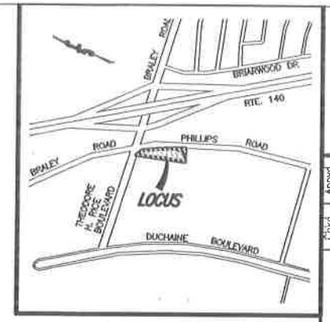
Non-automated TSS Calculation Sheet must be used if Proprietary BMP Proposed

1. From MassDEP Stormwater Handbook Vol. 1

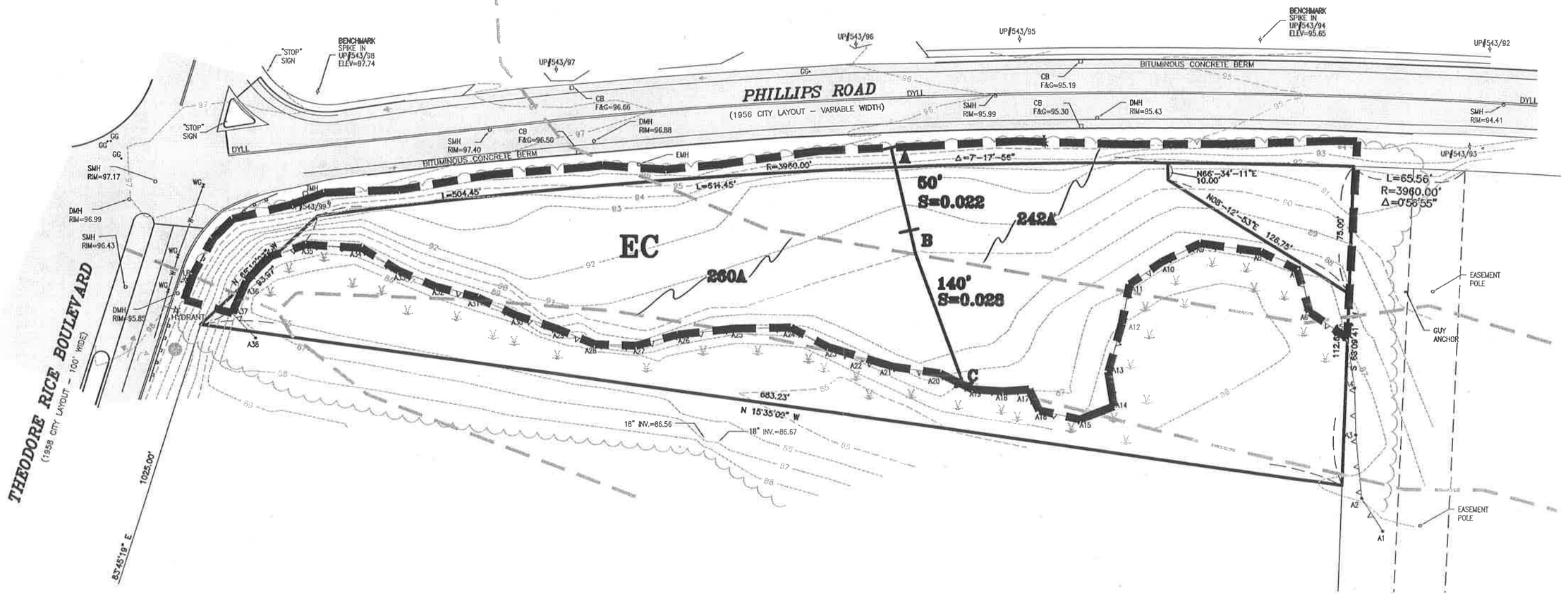
Mass. Dept. of Environmental Protection

LEGEND

- PROPERTY LINE
- EXISTING CONTOUR
- GUARDRAIL
- OHW — OVERHEAD WIRES
- G — GAS MAIN
- W — WATER MAIN
- S — SEWER LINE
- D — DRAINAGE LINE
- CB — CATCH BASIN
- DMH — DRAIN MANHOLE
- SMH — SEWER MANHOLE
- HYD — FIRE HYDRANT
- WG — WATER GATE VALVE
- GG — GAS GATE VALVE
- GS — GAS SERVICE
- LP — LIGHT POLE
- UP — UTILITY POLE
- MW — MONITORING WELL
- TREE LINE
- EMH — ELECTRICAL MANHOLE
- 2–17 2–18 — EDGE OF BORDERING VEGETATED WETLANDS
- DYLL — DOUBLE YELLOW LANE LINE



LOCUS MAP
SCALE: 1"=1,000'±



No.	Date	Revision Description	Chkd. by	Apprd. by

project: ASSESSOR'S MAP 136 – LOT 468
PHILLIPS ROAD
NEW BEDFORD, MASSACHUSETTS

client: PANAGAKOS DEVELOPMENT

drawing title: EXISTING CONDITIONS DRAINAGE PLAN

scale: 1"=30'
date: MAR. 26, 2021
drawn: KJ
checked: SDG
approved: SDG

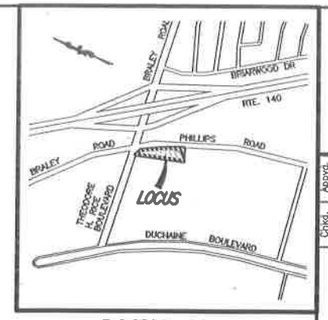
sheet 1 of 1
drawing number: ECD-1

SITEC
Civil and Environmental Engineering
Land Use Planning
SITEC, Inc.
449 Faunce Corner Road
Dartmouth, MA 02747
(508) 998-1135
FAX (508) 998-7354
WWW.SITEC-ENGINEERING.COM

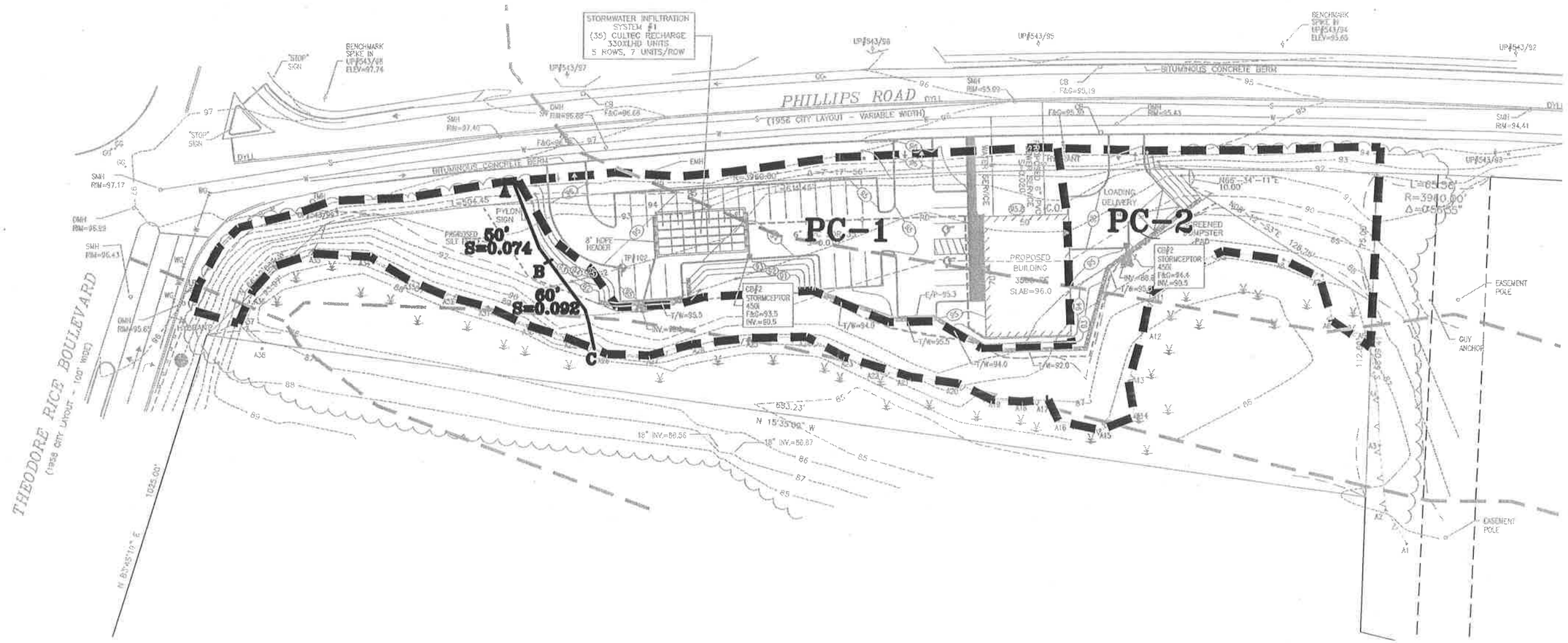
Acad No. NB 20-7638 EC.DWG
File No. 20-7638

LEGEND

- PROPERTY LINE
- EXISTING CONTOUR
- GUARDRAIL
- OHW — OVERHEAD WIRES
- G — GAS MAIN
- W — WATER MAIN
- S — SEWER LINE
- D — DRAINAGE LINE
- CB — CATCH BASIN
- DMH — DRAIN MANHOLE
- SMH — SEWER MANHOLE
- HYD — FIRE HYDRANT
- WG — WATER GATE VALVE
- GG — GAS GATE VALVE
- GS — GAS SERVICE
- LP — LIGHT POLE
- UP — UTILITY POLE
- MW — MONITORING WELL
- TREE LINE
- EMH — ELECTRICAL MANHOLE
- 2–17 2–18 — EDGE OF BORDERING VEGETATED WETLANDS
- DYLL — DOUBLE YELLOW LANE LINE
- 95 — PROPOSED CONTOUR
- 95.8 — PROPOSED SPOT GRADE
- CB — PROPOSED CATCH BASIN
- RD — PROPOSED ROOF DRAIN



LOCUS MAP
SCALE: 1"=1,000'±



No.	Date	Revision Description	Chkd. by	Apprvd. by

project: ASSESSOR'S MAP 136 – LOT 468
PHILLIPS ROAD
NEW BEDFORD, MASSACHUSETTS

client: PANAGAKOS DEVELOPMENT

drawing title: PROPOSED CONDITIONS DRAINAGE PLAN

scale: 1"=30'
date: MARCH 26, 2021
drawn: KJ
checked: SDG
approved: SDG
sheet 1 of 1
drawing number: PCD–1

SITEC
Civil & Environmental Consultants, Inc.
480 Pleasant Street, Suite B204, Lee, MA 01238
Ph: 508.982.2113 Fax: 508.999.7554
www.sitecinc.com

Acad No. NB 20–7638 PL.DWG
File No. 20–7638

BUILDING DEPARTMENT
REJECTION LETTER

IX. HOMEOWNER LICENSE EXEMPTION

Supplement #1
The current exemption for "homeowner" was extended to include **owner-occupied dwellings** of two units or less and to allow such homeowners to engage an individual for hire who does not possess a license, **provided that the owner acts as supervisor.** (State Building Code Section 110.5)

DEFINITION OF HOMEOWNER:
Person(s) who own a parcel of land on which he/she resides or intends to reside, on which there is, or is intended to be, a one to two family dwelling, attached or detached structures accessory to such use and /or farm structures. A person who constructs more than one home in a two-year period shall not be considered a homeowner. Such "homeowner shall submit to the Building Official, on a form acceptable to the Building Official, that **he/she shall be responsible for all such work performed under the building permit.** (Section 110.5)

The undersigned "homeowner assumes responsibility for compliance with the State Building Code and other applicable codes, ordinance, rules and regulations, and will comply with the City of New Bedford Building Department minimum inspection procedures and requirements.

HOMEOWNERS SIGNATURE _____

X. CONSTRUCTION DEBRIS DISPOSAL

Supplement #2
In accordance with provisions of Massachusetts General Law C40, S54, debris resulting form this work shall be disposed of in a properly licensed solid waste disposal facility as defined by Massachusetts General Law C111, S150A

The debris will be disposed of in: _____
(Location of Facility)

_____ _____
Signature of Permit Applicant Date

XI. HOME IMPROVEMENT CONTRACTOR LAW AFFIDAVIT

(Residential Use Only) Supplement to Permit Application
Supplement #3
MGLc. 142 A requires that the **"reconstruction, alteration, renovation, repair, modernization, conversion, improvement, removal, demolition, or construction of an addition to any pre-existing owner-occupied building containing at least one but not more than four dwelling units... or to structures which are adjacent to such residence of building"** be conducted by registered contractors, with certain exceptions, along with other requirements.

Type of Work: Construct a 50' x 70' Structure Est Cost _____

Address of Work W S Phillips Road p/ot 136 lot 468

Owner Name: _____ Date of Permit Application _____

I hereby certify that: Registration is not required for the following reason(s):

_____ Work excluded by law _____ Job under $1,000 _____ Building not owner-occupied _____ Owner obtaining own permit

Other (specify) _____

Notice is hereby given that:
OWNERS OBTAINING THEIR OWN PERMIT OR EMPLOYING UNREGISTERED CONTRACTORS FOR APPLICABLE HOME IMPROVEMENT WORK DO NOT HAVE ACCESS TO THE ARBITRATION PROGRAM OF GUARANTY FUND UNDER MGLC. 142A.

signed under penalties of perjury
I hereby apply for a permit as the agent of the owner:

_____ _____ _____
Date Contractor Signature Registration No.

OR:
Notwithstanding the above notice, I hereby apply for a permit as the owner of the above property:

_____ _____
Date Owner Signature

XII. BUILDING COMMISSIONERS REVIEW COMMENTS AND CONDITIONS

C Building Permit Rejected ☑ Planning Board - Site Plan Review

Fee

B-21-904

Reason For Rejection:

"See Attachments"

Comments and Conditions:

Signed Danny L Romanowicz

Date: 5-4- 2021

Title Building Commissioner

Not valid unless signed (not stamped) by Building Commissioner

CITY OF NEW BEDFORD
JONATHAN F. MITCHELL, MAYOR

DEPARTMENT OF INSPECTIONAL SERVICES
133 WILLIAM STREET – ROOM 308
NEW BEDFORD, MA 02740

New Bedford Comprehensive Zoning Code Review
Code of Ordinances – Chapter-9

WS Phillips Road – PLOT: 136 – LOT: 468 – ZONED DISTRICT: IC
Site Plan Review is Required is from the Planning Board

Zoning Code Review as follows:

Site Plan Review — **Planning Board**

- **SECTIONS**
  - **5400 – Site Plan Review**
  - **5410 – Purpose**
  - **5420 – Applicability**
    - **5421. Any new industrial or commercial construction or expansion over two thousand (2,000) gross square feet or any new industrial or commercial construction or expansion requiring more than five (5) additional parking spaces.**
  - **5430-5490B**

***** Proposed property is required to in front of the traffic commission for the number of curb cuts on the property**

5400. - SITE PLAN REVIEW.

5410. Purpose. The purpose of this Section is to provide for individual detailed review of development proposals which have an impact on the natural or built environment of the City in order to promote the health, safety and general welfare of the community; to ensure adequate parking, safe and accessible pedestrian and vehicular circulation; and to minimize traffic impact on City streets.

(Ord. of 12-23-03, § 1)

5420. Applicability. The following types of activities and uses require site plan review by the Planning Board:

5421. Any new industrial or commercial construction or expansion over two thousand (2,000) gross square feet or any new industrial or commercial construction or expansion requiring more than five (5) additional parking spaces;

5422. New multiple-family residential construction of three (3) or more units or expansion of existing multifamily residential structures resulting in the creation of one or more additional units.

5423. Any new construction or expansion of existing construction where a drive-thru window for any service including self-service is proposed; and any expansion of a structure presently containing a drive-thru; or any facility currently containing a drive-thru, at which the owner or operator of the drive-thru is altered or changed; or at which the drive-thru is closed for a period of 10 days or more and to be reopened.

5424. Any residential subdivision which is submitted under the subdivision control process;

5425. New industrial or commercial construction or additions less than two thousand (2,000) square feet if requiring a new curb cut or driveway or if substantially affecting existing internal circulation.

5426. Driveways in residential areas which require more than one new curb cut.

5427. Commercial or industrial ground signs.

(Ord. of 12-23-03, § 1; Ord. of 12-31-08, § 1)

5430. Procedures. Applicants for site plan approval shall submit seventeen (17) copies of the site plan to the Planning Board for distribution to City departments and commissions for their review. The Planning Board shall review and act upon the site plan, with such conditions as may be deemed appropriate and notify the applicant of its decision. In the event two (2) meetings have lapsed after the application for site plan approval is filed, without the Planning Board taking action on said site plan said Applicant may file a statement with the Board that the Board has received complete information in accordance with this Ordinance and has had adequate time to consider the Site Plan. Upon receiving said statement, the Planning Board shall act on said Site Plan at its next meeting, if said Board determines that the Board has, in fact, received complete information in accordance with this Ordinance. The decision of the Planning Board shall be a vote of a majority of the members of the Planning Board and shall be in writing. No building permit, for activities requiring site plan approval, shall be issued by the Inspector of Buildings without the written approval of the site plan by the Planning Board.

5431. Application for Building Permit. An application for a building permit to perform work as set forth in Section 5410 available as of right shall be accompanied by an approved site plan.

5432. Application for Special Permit or Variance. An application for a special permit or a variance to perform work as set forth in Section 5420 shall be accompanied by an approved site plan; in the alternative, any special permit or variance granted for work set forth in Section 5420 shall contain the following condition and cause the same to be written on such special permit or variance:

> The work described herein requires the approval of a site plan by the New Bedford Planning Board pursuant to Section 5400 of the Zoning Ordinance. Any conditions imposed in such site plan approval shall also be conditions of this special permit/variance.

5433. Where the Planning Board approves a site plan "with conditions", and said approved site plan accompanies a special permit or variance application to the Board of Appeals, the conditions imposed by the Planning Board shall be incorporated into the issuance, if any, of a special permit or variance by the Board of Appeals.

5434. Where the Planning Board serves as the special permit granting authority for proposed work, it shall consolidate its site plan review and special permit procedures.

5435. The applicant may request, and the Planning Board may grant by majority vote of its' membership, an extension of the time limits set forth herein.

5436. No deviation from an approved site plan shall be permitted without modification thereof.

5437. Site plan approval does not constitute a certification that the proposed plan conforms to applicable zoning regulations, wetland regulations and/or any other City, state or federal requirements that must be obtained prior to implementation the of elements of the site plan.

(Ord. of 12-23-03, § 1)

5440. Preparation of Plans. Applicants are invited to submit a pre-application sketch of the proposed project to the Planning Department and are encouraged to schedule a pre-submission meeting with the Planning Department. Site Plans shall be submitted on 24-inch by 36-inch sheets. Plans shall be prepared by a Registered Professional Engineer, Registered Land Surveyor, Architect, or Landscape Architect, as appropriate. Dimensions and scales shall be adequate to determine that all requirements are met and to make a complete analysis and evaluation of the proposal. All plans shall have a minimum scale of 1" = 40'.

(Ord. of 12-23-03, § 1)

5450. Contents of Plan. The contents of the site plan are as follows:

5451. Plan sheets prepared at a scale of one inch equals forty (40) feet or such other scale as may be approved by the Planning Board. The plans are as follows:

5451.a. Site layout, which shall contain the boundaries of the lot(s) in the proposed development, proposed structures, general circulation plan for vehicles and pedestrians, drive-thru windows, curb cut locations, parking, fences, walls, walks, outdoor lighting including proposed fixtures, loading facilities, solid waste storage locations, and areas for snow storage after plowing. The first sheet in this plan shall be a locus plan, at a scale of one inch

equals one hundred (100) feet, showing the entire project and its relation to existing areas, buildings and roads for a distance of one thousand (1,000) feet from the project boundaries or such other distance as may be approved or required by the Planning Board.

5451.b. Topography and drainage plan, which shall contain the existing and proposed final topography at two-foot intervals and plans for handling stormwater runoff drainage.

5451.c. Utility plan, which shall include all facilities for refuse and sewerage disposal or storage of all these wastes, the location of all hydrants, fire alarm and firefighting facilities on and adjacent to the site, all proposed recreational facilities and open space areas, and all wetlands including floodplain areas.

5451.d. Architectural plan, which shall include the ground floor plan, proposed exterior building materials, treatments and colors and architectural elevations of all proposed buildings and a color rendering where necessary to determine the proposal's affect on the visual environment.

5451.e. Landscaping plan, showing the limits of work, existing tree lines as well as those tree lines to remain, and all proposed landscape features and improvements including screening, planting areas with size and type of stock for each shrub or tree, and including proposed erosion control measures during construction.

5451.f. Lighting plan showing the location and orientation of all existing and proposed exterior lighting, including building and ground lighting. The plan shall note the height, initial foot-candle readings on the ground and the types of fixtures to be used.

5452. The site plan shall be accompanied by a written statement indicating the estimated time required to complete the proposed project and any and all phases thereof. There shall be submitted a written estimate, showing in detail the costs of all site improvements planned.

5453. A written summary of the contemplated project shall be submitted with the site plan indicating, where appropriate, the number of dwelling units to be built and the acreage in residential use, the evidence of compliance with parking and

off-street loading requirements, the forms of ownership contemplated for the property and a summary of the provisions of any ownership or maintenance thereof, identification of all land that will become common or public land, and any other evidence necessary to indicate compliance with this Ordinance.

5454. The site plan shall be accompanied by drainage calculations by a registered professional engineer as well as wetland delineations, if applicable. Storm drainage design must conform to City of New Bedford subdivision regulations.

5455. The Planning Board may require a DIS as set forth in Section 5300, above.

5456. Certification that the proposal is in compliance with the provisions, if applicable, of the Americans with Disabilities Act and the Massachusetts Architectural Barriers Board.

(Ord. of 12-23-03, § 1)

5460. **Waivers.** The Planning Board may, upon written request of the applicant, waive any of the submittal or technical requirements of Section 5430 and 5440 where the project involves relatively simple development plans.

(Ord. of 12-23-03, § 1)

5470. **Approval.** Site Plan approval shall be granted upon determination by the Planning Board that the plan meets the following objectives: The Planning Board may impose reasonable conditions at the expense of the applicant, including performance guarantees, to promote these objectives. Any new building construction or other site alteration shall provide adequate access to each structure for fire and service equipment and adequate provision for utilities and stormwater drainage consistent with the functional requirements of the Planning Board's Subdivision Rules and Regulations. New building construction or other site alteration shall be designed in the Site Plan, after considering the qualities of the specific location, the proposed land use, the design of building form, grading, egress points, and other aspects of the development, so as to:

5471. Minimize: the volume of cut and fill, the number of removed trees six-inch caliper or larger, the length of removed stone walls, the area of wetland vegetation displaced, the extent of stormwater flow increase from the site, soil erosion, and the threat of air and water pollution;

5472. Maximize: pedestrian and vehicular safety to and from the site;

5473. Minimize obstruction of scenic views from publicly accessible locations;

5474. Minimize visual intrusion by controlling the layout and visibility of parking, storage, or other outdoor service areas viewed from public ways or premises which are residentially used or zoned;

5475. Minimize glare from vehicle headlights and lighting fixtures;

5476. Minimize unreasonable departure from the character, materials, and scale of buildings in the vicinity, as viewed from public ways and places.

5477. Minimize contamination of groundwater from on-site wastewater disposal systems or operations on the premises involving the use, storage, handling, or containment of solid and liquid wastes and hazardous substances;

5478. Ensure compliance with the provisions of this Zoning Ordinance.

5479. Minimize damage to existing adjacent public ways.

5479A. Promote orderly and reasonable internal circulation within the site so as to protect public safety and not unreasonably interfere with access to a public way or circulation of traffic on a public way in general.

(Ord. of 12-23-03, § 1)

5480. Lapse. Site plan approval shall lapse after one year from the final approval if a substantial use in accordance with such approved plans has not commenced except for good cause. Such approval may, for good cause, be extended in writing by the Planning Board upon the written request of the applicant, within this one-year period.

(Ord. of 12-23-03, § 1)

5490. Regulations. The Planning Board may adopt and from time to time amend reasonable regulations for the administration of these Site Plan guidelines.

(Ord. of 12-23-03, § 1)

5490A. Fee. The Planning Board may, from time to time, adopt reasonable administrative fees and technical review fees for site plan review.

(Ord. of 12-23-03, § 1)

5490B. **Appeal.** Any person aggrieved by a decision of the Planning Board rendered pursuant to Section 5400 may appeal such decision to the Zoning Board of Appeals as provided in M.G.L.A. c. 40A, § 8.

(Ord. of 12-23-03, § 1)

City of New Bedford, Massachusetts

Building Department
Application for Plan Examination and Building Permit

FOR BUILDING DEPT. USE
DATE RECEIVED
RECEIVED BY:
ISSUED BY:

Permit No. Completion Date

IMPORTANT — COMPLETE ALL ITEMS — MARK BOXES WHERE APPLICABLE — PRINT

(AT LOCATION) (NO.) WS Phillips Road (STREET)

BETWEEN Braley Road (CROSS STREET) AND Heritage Drive (CROSS STREET)

PLOT 136 LOT 468 DISTRICT Industrial C ACCEPTED STREET

PLANS FILED ☑ YES ☐ NO

II. TYPE AND COST OF BUILDING – all applicants complete parts A through D – PRINT

A TYPE OF IMPROVEMENT

1 ☑ New Building
2 ☐ Addition (If residential, enter number of new housing units added, if any, in Part D, 14)
3 ☐ Alteration (If residential, enter number of new housing units added, if any, in Part D, 14)
4 ☐ Repair, replacement
5 ☐ Demolition (If multifamily residential, enter number of units in building in Part D, 14; if non-residential, indicate most recent use checking D-18 – D-32)
6 ☐ Moving (relocation)
7 ☐ Foundation only

B OWNERSHIP

8 ☑ Private (individual, corporation, nonprofit institution, etc.)
9 ☐ Public (Federal, State, or local government)

C COST (Omit cents)

10 Cost of construction $
To be installed but not included in the above cost
a Electrical
b Plumbing
c Heating, air conditioning
d Other (elevator, etc.)
11 TOTAL VALUE OF CONSTRUCTION
12 TOTAL ASSESSED BLDG. VALUE

D1 PROPOSED USE — For demolition most recent use

Residential
13 ☐ One family
14 ☐ Two or more family — Enter number of units
15 ☐ Transient hotel, motel, or dormitory — Enter number of units
16 ☐ Garage
17 ☐ Carport
18 ☐ Other — Specify

Nonresidential
19 ☐ Amusement, recreational
20 ☐ Church, other religious
21 ☐ Industrial
22 ☐ Parking garage
23 ☐ Service station, repair garage
24 ☐ Hospital, institutional
25 ☐ Office, bank, professional
26 ☐ Public utility
27 ☐ School, library, other educational
28 ☐ Stores, mercantile
29 ☐ Tanks, towers
30 ☐ Funeral homes
31 ☐ Food establishments
32 ☑ Other — Specify General business

D2 Does this building contain asbestos?
☐ YES ☑ NO If yes complete the following
Name & Address of Asbestos Removal Firm:

Submit copy of notification sent to DEQE and the State Dept. of Labor & Industries and results of air sample analysis after asbestos removal is completed

D3 Non-residential — Describe in detail proposed use of buildings, e.g., food processing plant, machine shop, laundry building at hospital, elementary school, secondary school, college, parochial school, parking garage for department store, rental office building, office building at industrial plant. If use of existing building is being changed, enter proposed use

The Applicant proposes to construct a general business building

No prospective use has been provided at this time.

III. SELECTED CHARACTERISTICS OF BUILDING — For new buildings complete part E through L. For demolition, complete only parts G, H & I. For all others, (additions, alterations, repair, moving, foundation), complete E through L.

E PRINCIPAL TYPE OF FRAME

33 ☐ Masonry (wall bearing)
34 ☑ Wood frame
35 ☐ Structural steel
36 ☐ Reinforced concrete
37 ☐ Other — Specify

F PRINCIPAL TYPE OF HEATING FUEL

38 ☑ Gas
39 ☐ Oil
40 ☐ Electricity
41 ☐ Coal
42 ☐ Other — Specify

G TYPE OF SEWAGE DISPOSAL

43 ☑ Public or private company
44 ☐ Private (septic tank, etc.)

H TYPE OF WATER SUPPLY

45 ☑ Public or private company
46 ☐ Private (well, cistern)

I TYPE OF MECHANICAL

Is there a fire sprinkler system?
47 ☐ YES 48 ☐ NO
Will there be central air conditioning?
49 ☑ Yes 50 ☐ No
Will there be an elevator?
51 ☐ Yes 52 ☑ No

J DIMENSIONS

53 Number of stories	1
54 Height	<35'
55 Total square feet of floor area, all floors based on exterior dimensions	3,500 SF
56 Building length	70'
57 Building width	50'
58 Total sq. ft. of bldg. footprint	3,500 SF
59 Front lot line width	504.45'
60 Rear lot line width	683.23'
61 Depth of lot	112.69
62 Total sq. ft. of lot size	82,440 SF±
63 % of lot occupied by bldg. (58÷62)	4% ±
64 Distance from lot line (front)	26'±
65 Distance from lot line (rear)	60'±
66 Distance from lot line (left)	72'±
67 Distance from lot line (right)	391'±

OTHER APPLICABLE REVIEWS

K. FLOODPLAIN

Is location within flood hazard area? yes (no)

If yes, zone : _____ and base elevation _____

L. WETLANDS PROTECTION

Is location subject to flooding? No

Is location part of a known wetland? Yes

Has local conservation commission reviewed this site? Wetland line is approved

IV IDENTIFICATION – ALL APPLICANTS – PLEASE PRINT			
OWNER OR LESSEE NAME	MAILING ADDRESS	ZIP CODE	TELEPHONE NO.
Michael Panagakos	133 Faunce Corner Road, Dartmouth, MA 02747		508-998-3911
CONTRACTOR NAME	MAILING ADDRESS	ZIP CODE	TELEPHONE NO.
	LICENSE #		
	HOME IMP #		
ARCHITECT NAME	MAILING ADDRESS	ZIP CODE	TELEPHONE NO.
	LICENSE #		
SIGNATURE OF OWNER	APPLICANT SIGNATURE		DATE

Omission of reference to any provision shall not nullify any requirement of this code nor exempt any structure from such requirement.

The applicants understands and warrant that they will comply with all pertinent federal and state statutes, local ordinances and all federal, state, and local regulations, including those of the Architectural Barriers board, Department of Environmental Protection Agency and may be forwarded for review to all pertinent local city agencies which may express specific concerns. It is understood that the issuance of a permit shall not serve as an acceptance or acknowledgment of compliance nor exempt any structure from such requirement. The permit shall be a license to proceed with the work and shall not be construed as authority to violate, cancel, or set aside any of the provisions of the State Building Code or local code of ordinances, except as specifically stipulated by modification or legally granted variation in accordance with Section 122.0 of State Building Code or local code of ordinances.

I have read the above and sign under pain and penalty of perjury as to the truth of all of the information and statements contained in sections I through IV of this application.

Michael Panagakos

Applicant's Signature Address City

V. OTHER JURISDICTION APPROVALS AND NOTIFICATION

APPROVAL	CHECK	DATE OBTAINED	BY
Electrical			
Plumbing			
Fire Department			
Water			
Planning			
Conservation			
Public Works			
Health			
Licensing			
Other			

VI. ZONING REVIEW

DISTRICT: Industrial C ' SF General business

FRONTAGE: 504.45' LOT SIZE: 82,440 SF±

SETBACKS:

FRONT: 26'± LEFT SIDE: 60'± RIGHT SIDE: 72'± REAR: 391'±

PERCENTAGE OF LOT COVERAGE PRIMARY BUILDING 4% ±

VARIANCE HISTORY

VII. WORKER'S COMPENSATION INSURANCE AFFIDAVIT

I, _____

(licensee/permittee) with a principal place of business/residence at

_____

(City/State/Zip) do hereby certify, under the pains and penalties of perjury, that:

[ ] I am an employer providing worker's compensation coverage for my employees working on this job.

_____ _____

Insurance Company Policy Number

[ ] I am a sole proprietor and have no one working for me.

[ ] I am a sole proprietor, general contractor, or homeowner and have hired the contractors listed below who have the following worker's compensation insurance policies:

_____ _____

Name of contractor Insurance Company/policy number

_____ _____

Name of contractor Insurance Company/policy number

[ ] I am a homeowner performing all the work myself.

NOTE: Please be aware that while homeowners who employ persons to do maintenance, construction or repair work on a dwelling of not more than three units in which the homeowner also resides or on the grounds appurtenant thereto are not generally considered to be employers under the Workers' Compensation Act (GL. C. 152, sect. 1(5)), application by a homeowner for a license or permit may evidence the legal status of an employer under the Workers' Compensation Act.

I understand that a copy of this statement will be forwarded to the Department of Industrial Accidents' Office of Insurance for coverage verification and that failure to secure coverage as required under Section 25A of MGL 152 can lead to the imposition of criminal penalties consisting of a fine of up to $1500.00 and/or imprisonment of up to one year and civil penalties in the form of a Stop Work Order and a fine of $100.00 a day against me.

Signed this _____ day of _____, 20 ____

_____ _____

Location: WS PHILLIPS RD **Parcel ID:** 136 468 **Zoning:** IC **Fiscal Year:** 2021

Current Owner Information:
PANAGAKOS MICHAEL

133 FAUNCE CORNER ROAD

DARTMOUTH , MA 02747

Current Sales Information:
Sale Date:
08/07/2020
Sale Price:
$122,200.00
Legal Reference:
13336-226
Grantor:
PHILLIPS RD. NORTH LLC,

Card No. 1 of 1

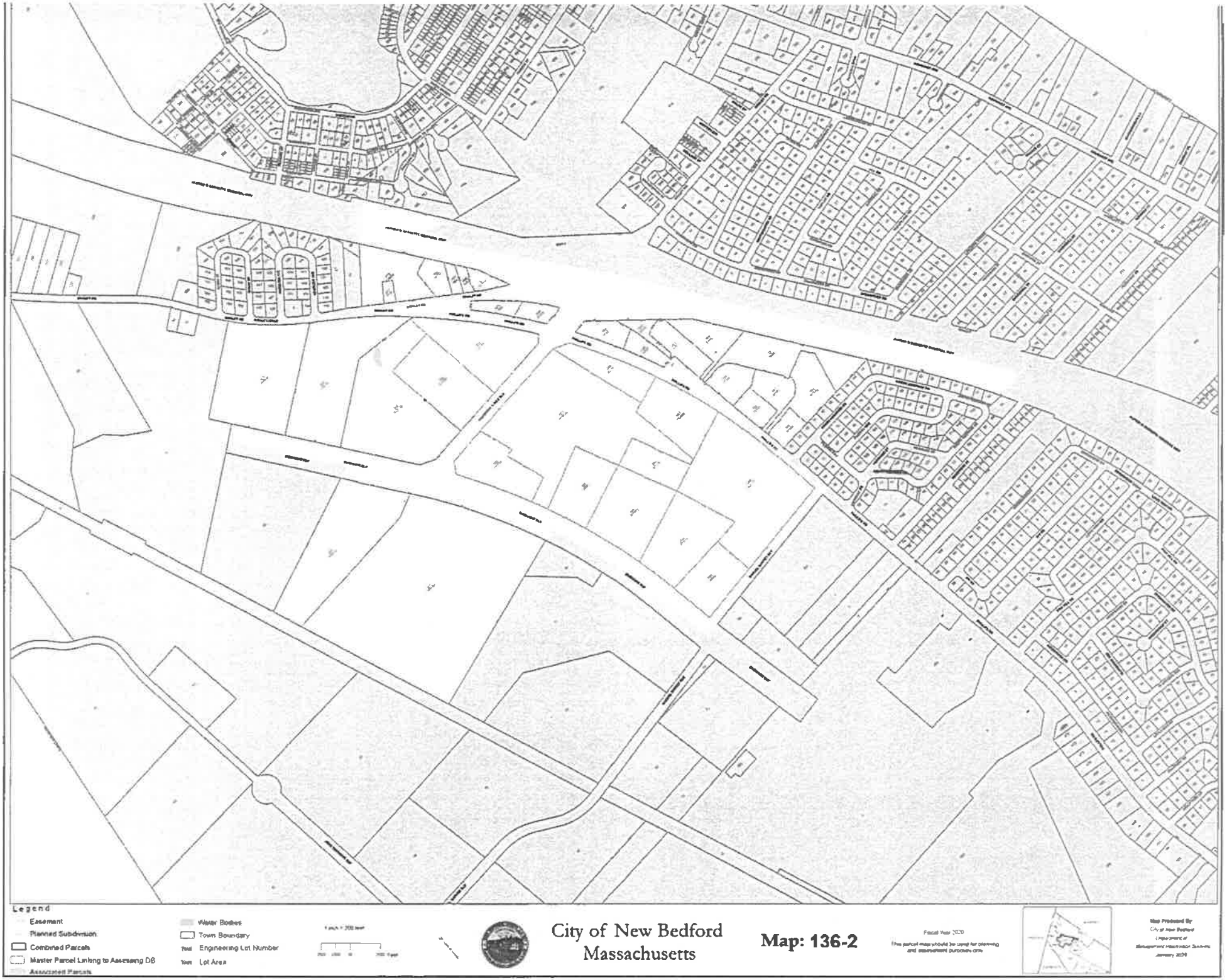
This Property contains 2 acres of land mainly classified for assessment purposes as LAND-I

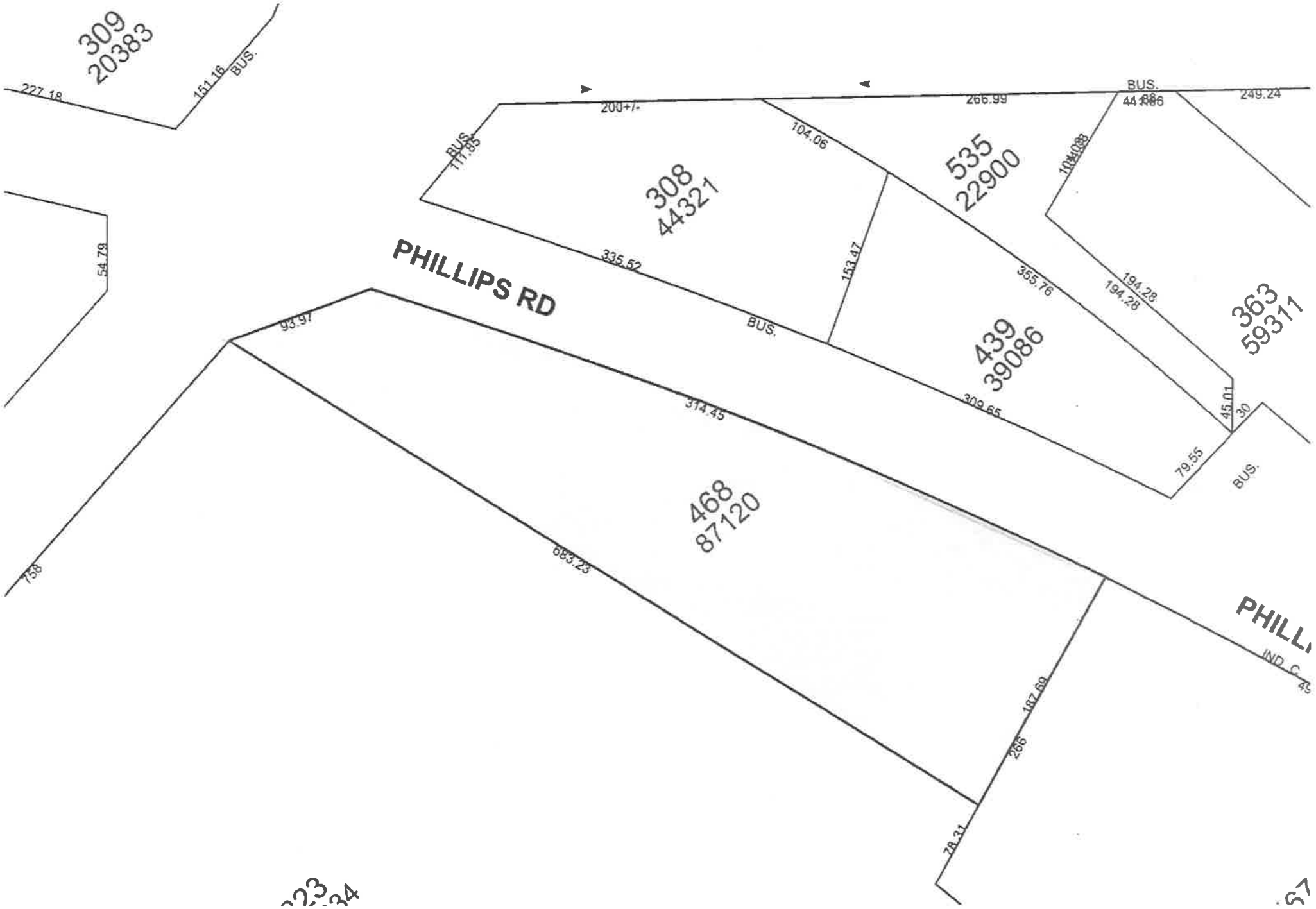
Building Value:	Land Value:	Yard Items Value:	Total Value:
0	235200	0	235200

No Sketch Available

NO IMAGE AVAILABLE

Fiscal Year 2021		Fiscal Year 2020		Fiscal Year 2019	
Tax Rate Res.:	15.59	Tax Rate Res.:	16.16	Tax Rate Res.:	16.47
Tax Rate Com.:	32.76	Tax Rate Com.:	33.59	Tax Rate Com.:	34.84
Property Code:	440	Property Code:	440	Property Code:	440
Total Bldg Value:	0	Total Bldg Value:	0	Total Bldg Value:	0
Total Yard Value:	0	Total Yard Value:	0	Total Yard Value:	0
Total Land Value:	235200	Total Land Value:	216000	Total Land Value:	216000
Total Value:	235200	**Total Value:**	216000	**Total Value:**	216000
Tax:	$7,705.15	**Tax:**	$7,255.44	**Tax:**	$7,525.44


Legend
Easement
Planned Subdivision
Combined Parcels
Master Parcel Linking to Assessing DB
Water Bodies
Town Boundary
Engineering Lot Number
Lot Area
City of New Bedford
Massachusetts
Map: 136-2


309
20383
227.18
151.16
BUS.
54.79
PHILLIPS RD
308
44321
200+/-
104.06
111.85
BUS.
335.52
153.47
535
22900
266.99
BUS.
249.24
355.76
194.28
194.28
363
59311
439
39086
309.65
45.01
30
79.55
BUS.
93.97
314.45
468
87120
683.23
758
187.69
266
78.31
PHILL
IND. C

Google Maps Phillips Rd

Imagery ©2021 Google, Map data ©2021 100 ft

Google Maps Theodore Rice Blvd

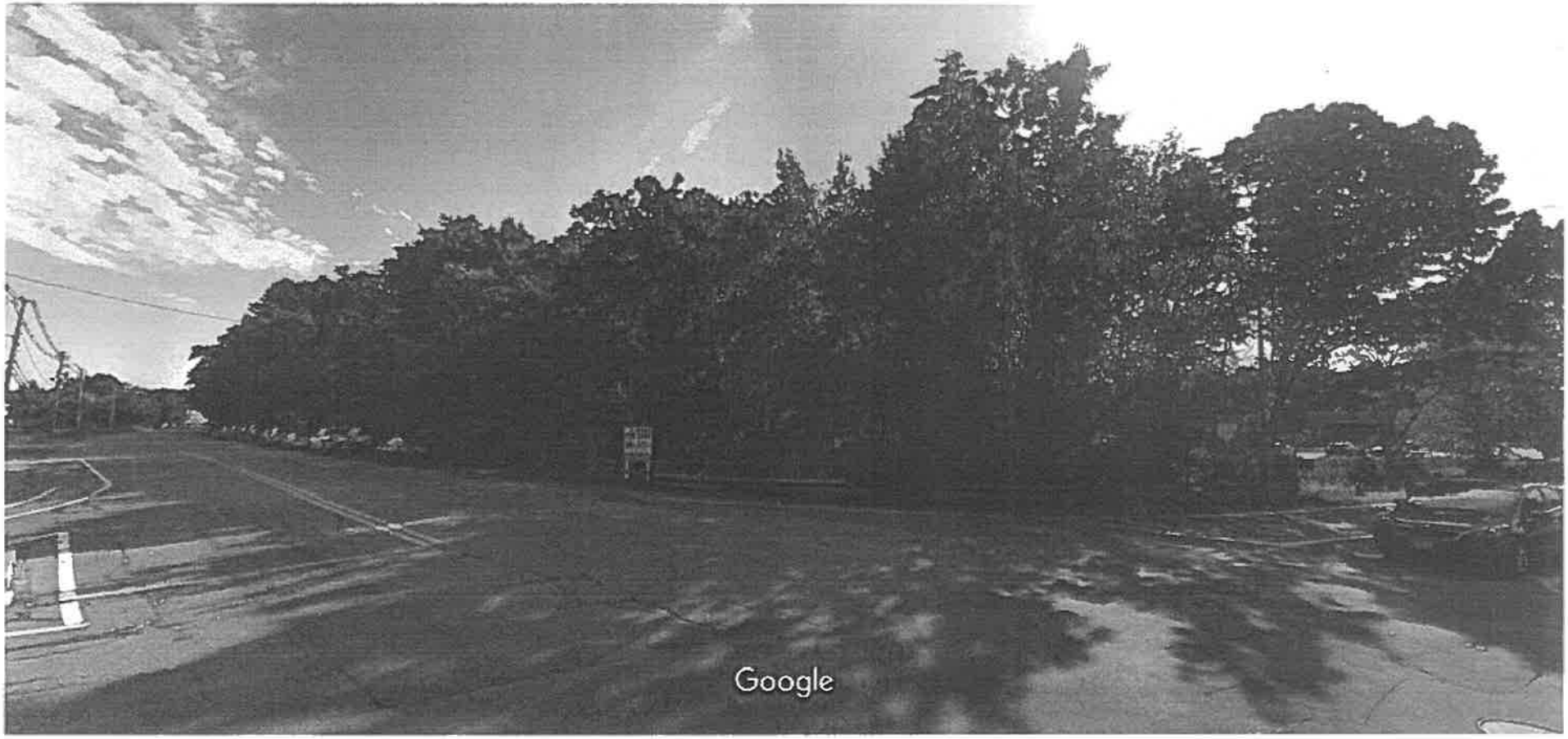
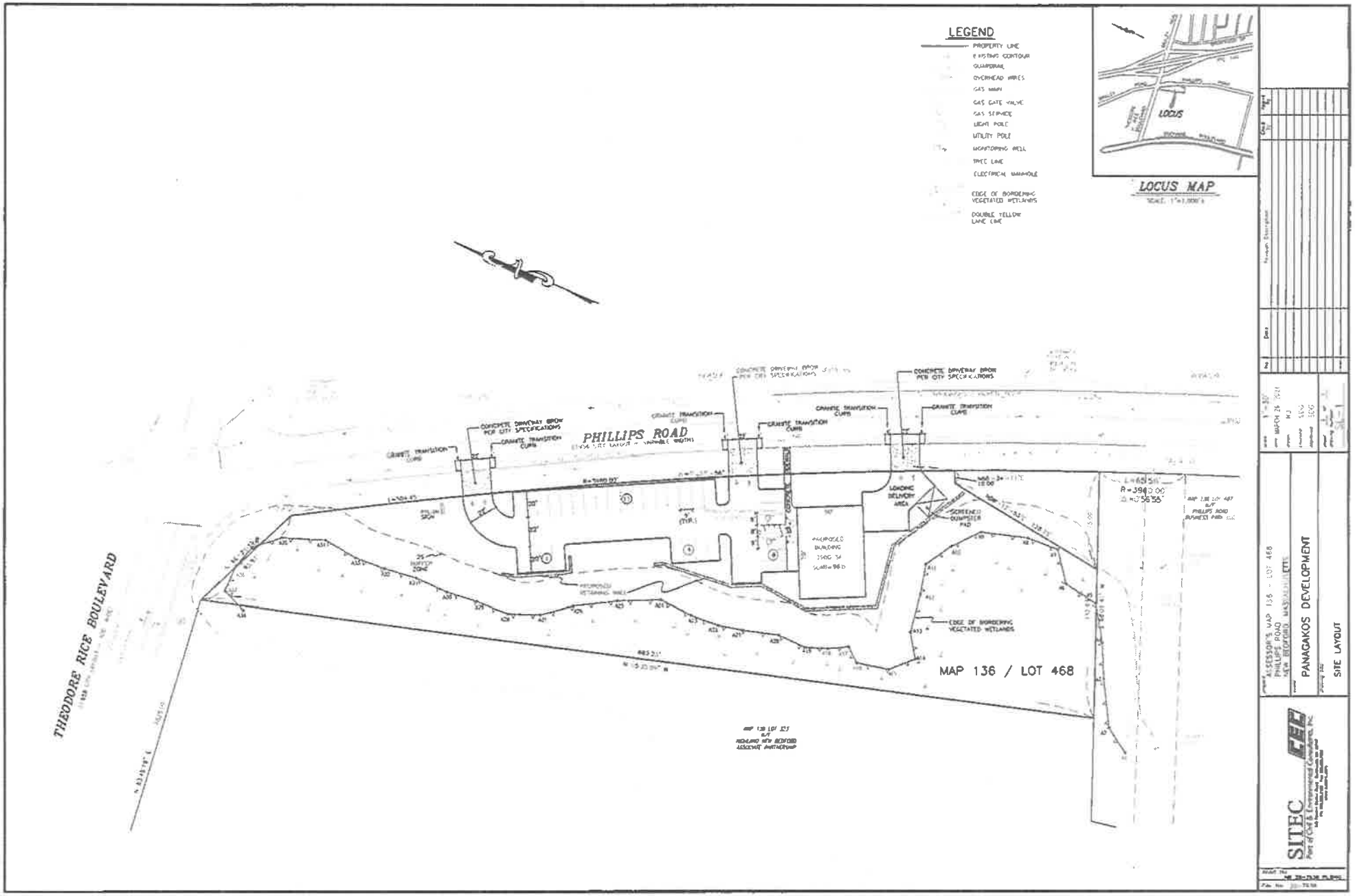


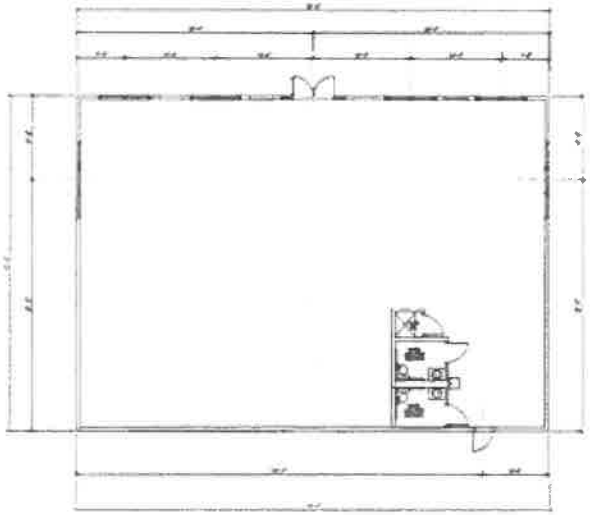
Image capture: Sep 2019 © 2021 Google

New Bedford, Massachusetts

Google

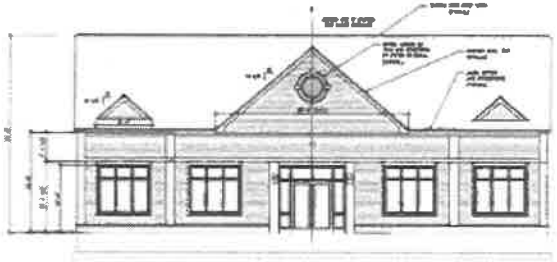
Street View


LEGEND
PROPERTY LINE
EXISTING CONTOUR
GUARDRAIL
OVERHEAD WIRES
GAS MAIN
GAS GATE VALVE
GAS FENCE
LIGHT POLE
UTILITY POLE
MONITORING WELL
TREE LINE
ELECTRICAL MANHOLE
EDGE OF BORDERING VEGETATED WETLANDS
DOUBLE YELLOW LANE LINE
LOCUS
LOCUS MAP
PHILLIPS ROAD
THEODORE RICE BOULEVARD
CONCRETE DRIVEWAY APRON PER CITY SPECIFICATIONS
GRANITE TRANSITION CURB
LOADING DELIVERY AREA
SCREENED DUMPSTER PAD
EDGE OF BORDERING VEGETATED WETLANDS
MAP 136 / LOT 468
ASSESSOR'S MAP 136 - LOT 468
PHILLIPS ROAD
NEW BEDFORD MASSACHUSETTS
PANAGAKOS DEVELOPMENT
SITE LAYOUT
SITEC



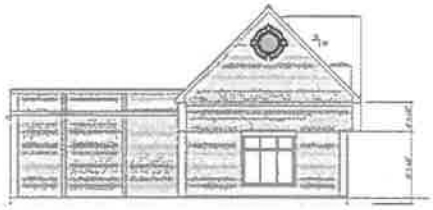
PROPOSED FLOOR PLAN

SCALE 1/8" = 1'-0" 50'-0" X 70'-0" = 3500 S/F



FRONT ELEVATION - FACING PARKING LOT

SCALE 1/8" = 1'-0"



SIDE LEFT ELEVATION - FACING PHILLPS ROAD

SCALE 1/8" = 1'-0"

SIDE RIGHT ELEVATION - FACING BACK OF THE LOT

SCALE 1/8" = 1'-0"

DESIGN CONCEPTS OF NEW ENGLAND
997 HIGH STREET
BRIDGEWATER, MA 02324
508-378-1855 fax

PROPOSED NEW BUILDING
PHILLIPS ROAD
NEW BEDFORD, MASSACHUSETTS