

Harwich Planning Board Agenda
Griffin Room, Town Hall, 732 Main Street, Harwich
Tuesday, January 28, 2020 – 6:30 PM

I. Call to Order - Recording & Taping Notification – *As required by law, the Town may audio or video record this meeting. Any person intending to either audio or video record this open session is required to inform the chair.*

II. Public Hearing

- A. **PB2019-49 Kyle Douglas**, as owner, seeks approval of a Use Special Permit for Alternative Access pursuant to the Code of the Town Harwich §325-18.P and -51. The proposal seeks access via a private driveway easement over 344 Oak St (Lot 2 shown on Plan Book 591 Page 64). The property is located at 334 Oak Street, Map 82, Parcel T1-3, in the R-L and Six Ponds Zoning Districts.
- B. **Continued PB2019-45 Royal Apartments LLC**, as owner, Alex Bardin, Representative, seeks approval of a Multi-Family Use Special Permits in the Harwich Center Overlay District and a Site Plan Review Special Permit for the proposed use and additional parking and other appurtenances pursuant to the Code of the Town of Harwich §§325-51.D and -51.O and 325-55. The property is located at 328 Bank Street, Map 41, Parcel N4 in the M-R-L, Harwich Center Overlay and Historic Districts. *Hearing continued from January 14, 2020.*
- C. **Continued PB2019-46 Greenskies Renewable Energy**, as applicant, All-Points Technology Corporation PC, as representative, seeks approval of a Site Plan Review Special Permit pursuant to the Code of the Town of Harwich §325-55, in conjunction with §325, Article XXIII to establish a Large Scale Photovoltaic Array at Cranberry Valley Golf Course, owned by the Town of Harwich. The proposal consists of both a ground-mounted array and a rooftop array on the cart barn building. The property is located at 183 Oak Street, Map 61, Parcel H1 in the R-R and W-R zoning districts. *Hearing continued from January 14, 2020.*
- D. **Continued PB2019-27 Wychmere Harbor Real Estate LLC**, applicant & owner, c/o Attorney Andrew Signer, representative, seeks to amend a Site Plan Review Special Permit granted in Case PB2010-26 by making improvements to the existing beach club; including replacing the existing restaurant/pool equipment building, two swimming pools, the pool decking and other site improvements with a new restaurant building, a small restroom and retail building, a pavilion expansion, two smaller swimming pools and a new concrete pool deck, and various beach amenities. The applicant is pursuant to the Code of the Town of Harwich §325-55 (Site Plan Review), §325-51 (structure greater than 7500 s.f.) and Chapter 400. The property is located in the RH-3 and R-L zoning districts at 23 Snow Inn Road, Map 8, Parcel P2-12. *Hearing continued from January 14, 2020.*
- E. **PB2019-47 525 Camelot, LLC** as owner, c/o Andrew Singer, Esq., representative, seeks approval of a Modification of a Site Plan Review Special Permit (PB2016-20 & 17-13) and a Restaurant / Fast Food Takeout Use Special Permit pursuant to the Code of the Town Harwich §§325-9, -14.O, -51 and 55. The use will be in association with a retail use and 24 seats (including 5 outdoor seats) are proposed. The property is located at 557 Route 28 (aka Harwich Port Commons), Map 14 Parcel V9 in the C-V and RH-1 zoning districts.

III. Public Meeting*

- A. New Business:
 - 1. Advisory Opinions: Zoning Board of Appeals
- B. Meeting Minutes: January 14, 2020
- C. Old Business:
 - 1. Continued Zoning Discussion:
 - A. IL Zoning District Expansion – Queen Anne Road
 - 2. PB2018-05 Cranberry Valley Golf Course Minor Site Plan changes discussion and possible vote
- D. Briefings and Reports by Board Members

IV. Adjourn

*Per the Attorney General’s Office – Boards/Commissions may hold an open session for topics not reasonably anticipated by the Chair 48 hours in advance of the meeting following “New Business”.

Next Planning Board Meeting (Subject to Change) – Tuesday, February 11, 2020.

Requests for accommodations for any person having a disability can be made by contacting the Administration Office at 508-430-7513.

Authorized Posting Officer: Elaine Banta, ebanta@town.harwich.ma.us or 508-430-7511



AGENDA ITEM #II.A

To: Planning Board
From: Charleen Greenhalgh, Town Planner
Date: January 17, 2020
Re: Use Special Permit Staff Report

PB2019-49 Kyle Douglas, as owner, seeks approval of a Use Special Permit for Alternative Access pursuant to the Code of the Town Harwich §325-18.P and -51. The proposal seeks access via a private driveway easement over 344 Oak St (Lot 2 shown on Plan Book 591 Page 64). The property is located at 334 Oak Street, Map 82, Parcel T1-3, in the R-L and Six Ponds Zoning Districts.

The Planning Board ("Board") will hold a public hearing on this matter on Tuesday, January 28, 2020 not sooner than 6:30 P.M.

Description

The applicant seeks approval for an alternative access for Lot 3, via access over Lot 2. The application and plans were submitted to the Town Clerk on December 23, 2019 and includes the following:

1. Form A Planning Board Application.
2. Brief narrative dated December 23, 2019.
3. Recorded Driveway Easement: Book 29514 Page 206, March 16, 2016
4. Plan prepared by Coastal Engineering, Inc., Kyle Douglas, dated 12-13-2019, scale 1" = 40'

MGL Reference and Planning Board Jurisdiction

Pursuant to MGL c.40 A, §9 the Planning Board must, within 65 days of submission of application for a special permit, hold a public hearing, and render a decision within 90-days of the close of the hearing.

The Planning Board has jurisdiction to review this application pursuant to the Code of Town of Harwich §325-18 P Special Permits and M.G.L. c.40A §9.

Waivers: No waivers have been requested.

Fee: A filing fee of \$525.00 was paid on December 23, 2019

Comments from Other Boards/Committee/Departments:

Fire: No concerns

Police: No concerns

Highway: No concerns

Engineering: No concerns

Conservation: Received Conservation approval 10/23/2019, RDA 2019-19.

Planning Staff Comments:

1. The reasons and explanations provided for this request are valid and a shared driveway does appear to be superior to access from the lot frontage.
2. Standard conditions are recommended.

VOTES

Continuance

If the Board will require additional information or wants to take the matter under advisement the following motion is recommended:

Move to continue the hearing for PB2019-49, Kyle Douglas, to no earlier than 6:30 pm on _____ (*Feb. 11, Feb. 25*) for the following reasons: (*need to state reason or purpose*).

IF BOARD IS READY TO RENDER A DECISION, THE FOLLOWING MOTIONS ARE PROVIDED:

Proposed Findings (Vote to Adopt):

1. The alternative access proposed is necessary to lessen any impact the wetlands in the area and therefore it creates a superior access way.
2. The use is consistent with the Zoning Code and will not adversely affect the neighborhood.
3. The specific site is an appropriate location for such a shared driveway.
4. There will be no nuisance or serious hazard to vehicles or pedestrians.

PB Vote - Review Special Permit: A vote of at least five Planning Board members, voting in the affirmative, is required for approval.

- A. To *approve with conditions* the Use Special Permit for Alternative Access pursuant to the Code of the Town Harwich §325-18.P and -51. The proposal seeks access via a private driveway easement over 344 Oak St (Lot 2 shown on Plan Book 591 Page 64). The property is located at 334 Oak Street, Map 82, Parcel T1-3, in the R-L and Six Ponds Zoning Districts; based on the fact that the application meets the necessary requirements and criteria for approval pursuant to the Code of Town of Harwich with the above findings and following conditions.
 1. The special permit decision shall be recorded at the Registry of Deeds.
 2. Any changes to the site plan shall be subject to further Planning Board review.
- B. To *deny* the Use Special Permit for Alternative Access pursuant to the Code of the Town Harwich §325-18.P and §325-51 via the pan-handle portion of Lot 2, for property located off Orleans Road (just west of #1051 Orleans Road), Map 52 and 62 (there is currently no parcel ID associated with this parcel) in the R-R & W-R Zoning Districts; based on the fact that the application does not meet the necessary requirements and criteria for approval pursuant to the Code of Town of Harwich, specifically... (*need to state specific reason(s)*).

DEEP OBSERVATION HOLE LOGS

NO SCALE

DEEP OBSERVATION HOLE 1

DEPTH FROM SURFACE	SOIL HORIZON	SOIL TEXTURE	SOIL COLOR (MUNSELL)	SOIL MOTTLING	OTHER
0" - 12"	FILL	---	---	---	
12" - 18"	A	LOAMY SAND	10 YR 3/1	---	
18" - 32"	B	LOAMY SAND	10 YR 4/4	---	
32" - 126"	C	MEDIUM SAND	2.5Y 4/4	---	GROUND WATER @ 78"

DEEP OBSERVATION HOLE

DEPTH FROM SURFACE	SOIL HORIZON	SOIL TEXTURE	SOIL COLOR (MUNSELL)	SOIL MOTTLING	OTHER
0" - 14"	FILL	---	---	---	
14" - 24"	A	LOAMY SAND	10 YR 3/1	---	
24" - 36"	B	LOAMY SAND	10 YR 4/4	---	
36" - 132"	C	MEDIUM SAND	2.5YR 6/4	---	GROUND WATER @ 78"

DEEP OBSERVATION HOLE 3

DEPTH FROM SURFACE	SOIL HORIZON	SOIL TEXTURE	SOIL COLOR (MUNSELL)	SOIL MOTTLING	OTHER
0" - 10"	FILL	---	---	---	
10" - 16"	A	LOAMY SAND	10 YR 2/1	---	
16" - 34"	B	LOAMY SAND	10 YR 5/8	---	
34" - 120"	C	MEDIUM SAND	2.5Y 4/4	---	GROUND WATER @ 78"

DEEP OBSERVATION HOLE 4

DEPTH FROM SURFACE	SOIL HORIZON	SOIL TEXTURE	SOIL COLOR (MUNSELL)	SOIL MOTTLING	OTHER
0" - 13"	FILL	---	---	---	
13" - 22"	A	LOAMY SAND	10 YR 4/2	---	
22" - 36"	B	LOAMY SAND	10 YR 5/6	---	
36" - 120"	C	MEDIUM SAND	2.5Y 6/4	---	GROUND WATER @ 78"

DATE OF TESTS: 2/3/2016
 PERCOLATION RATE: LESS THAN 2 MINUTES PER INCH DROP IN THE C HORIZON IN DOH #1 AND DOH #2
 WITNESSED BY: DAN CONVALDES, DOWN CAPE ENGINEERING, INC #13587
 PAULA CHAMPAGNE, HEALTH AGENT

DESIGN CALCULATIONS

DESIGN FLOW: 3 BEDROOMS AT 110 GAL. PER DAY PER BEDROOM = 330 GPD
 330 GPD X 200K = 660 GALLONS - USE 1,500 GALLON SEPTIC TANK, MIN. ALLOWED

A 38'L x 20'W x 0.5'D. LEACHING FIELD CAN LEACH:
 $V_L = (38 \times 20) \times 0.5 = 380 \text{ GPD} > 330 \text{ GPD}$ REQUIRED

INSTALL:
 ONE (1) - 38'L x 20'W x 0.5'D. LEACHING FIELD (H-20)
 $V_L = 380 \text{ GPD} > 330 \text{ GPD}$ REQ'D.
 ONE (1) - 1,500 GAL. SEPTIC TANK (H-10)
 ONE (1) - DISTRIBUTION BOX (9 OUTLETS) (H-20)

NOTES:

- GARBAGE GRINDERS ARE NOT ALLOWED WITH THIS DESIGN.
- ALL WATER FIXTURES TO BE WATER TESTED BY CONTRACTOR TO VERIFY ALL SEWER EXIT LOCATIONS PRIOR TO INSTALLATION OF ANY SYSTEM COMPONENTS.
- THE INSTALLER IS RESPONSIBLE FOR ASSURING THAT COMPONENTS OF THE SEWAGE DISPOSAL SYSTEM ARE DESIGNED WITH SUFFICIENT STRENGTH TO SUSTAIN ALL LOADS TO BE IMPOSED ON THEM. ANY COMPONENT OF THE SYSTEM SUBJECT TO VEHICULAR TRAFFIC SHALL COMPLY WITH A MINIMUM STANDARD OF A.A.S.H.T.O. H-20 WHEEL LOADS.
- PRIOR TO SETTING ANY SEWAGE DISPOSAL SYSTEM COMPONENT, INSTALLER SHALL VERIFY EXISTING CONDITIONS, INCLUDING ELEVATIONS OF EXIT INVERTS, AND REPORT ANY DISCREPANCIES TO THE DESIGN ENGINEER. THE INSTALLER SHALL COORDINATE WITH THE PLUMBING SUBCONTRACTOR TO VERIFY THE COMPATIBILITY OF THE PROPOSED BUILDING SEWER EXIT ELEVATION WITH THE BUILDING'S EXISTING PLUMBING PRIOR TO CONSTRUCTION. ANY CONFLICTS SHALL BE REPORTED TO THE DESIGN ENGINEER.
- ALL GRABBY SEWER PIPES SHALL BE 4" DIA. SCH 40 PVC UNLESS OTHERWISE NOTED. THE MINIMUM SLOPE OF 4" DIA. SCH 40 PVC SHALL BE 0.01 FT/FT.
- NO PART OF THIS DESIGN SHALL BE ALTERED WITHOUT PRIOR APPROVAL FROM THE DESIGN ENGINEER AND THE AGENT OF THE LOCAL BOARD OF HEALTH. ALL REQUESTS FOR CHANGES SHALL BE MADE IN WRITING PRIOR TO CONSTRUCTION.
- THE USE OF ALTERNATE MANUFACTURERS FOR SYSTEM COMPONENTS SHALL NOT BE APPROVED IF THE USE OF THEIR EQUIPMENT REQUIRES CHANGES IN DESIGN.
- THE INSTALLER SHALL ASCERTAIN THE LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATION, AND SHALL PROJECT UTILITIES WITHIN THE WORK AREA DURING CONSTRUCTION.
- ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED.

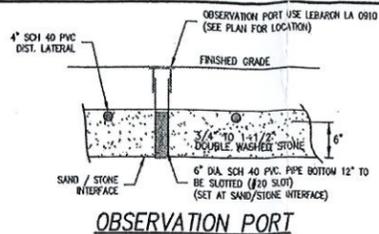
IF APPLICABLE:
 10. FILL MATERIAL FOR SYSTEMS CONSTRUCTED IN FILL SHALL BE CLEAN GRANULAR SAND, FREE OF ORGANIC MATTER AND OTHER DELETERIOUS MATERIALS. THE SAND SHALL BE GRADED SUCH THAT NOT MORE THAN 45% OF THE SAMPLE, BY WEIGHT, SHALL BE RETAINED ON THE #4 SIEVE. THE FILL SHALL NOT CONTAIN ANY MATERIAL LARGER THAN 2 INCHES. THE MATERIAL THAT PASSES THE #4 SIEVE SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

SEIVE SIZE	PERCENT PASSING
4	100%
50	100-100%
100	0%-20%
200	0%-5%

ESTIMATED HIGH GROUNDWATER CALCULATION (USGS/OCC METHOD)

INDEX WELL: # CGW-138 ZONE: D
 DATE OF READING: MAY 2018 DEPTH TO GROUNDWATER: 21.8
 GROUNDWATER LEVEL ADJUSTMENT: 1.5'
 ACTUAL GROUNDWATER LEVEL @ SITE: EL= 32.97
 ESTIMATED (MAX.) HIGH GROUNDWATER LEVEL: EL= 34.5

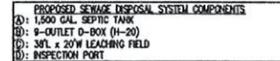
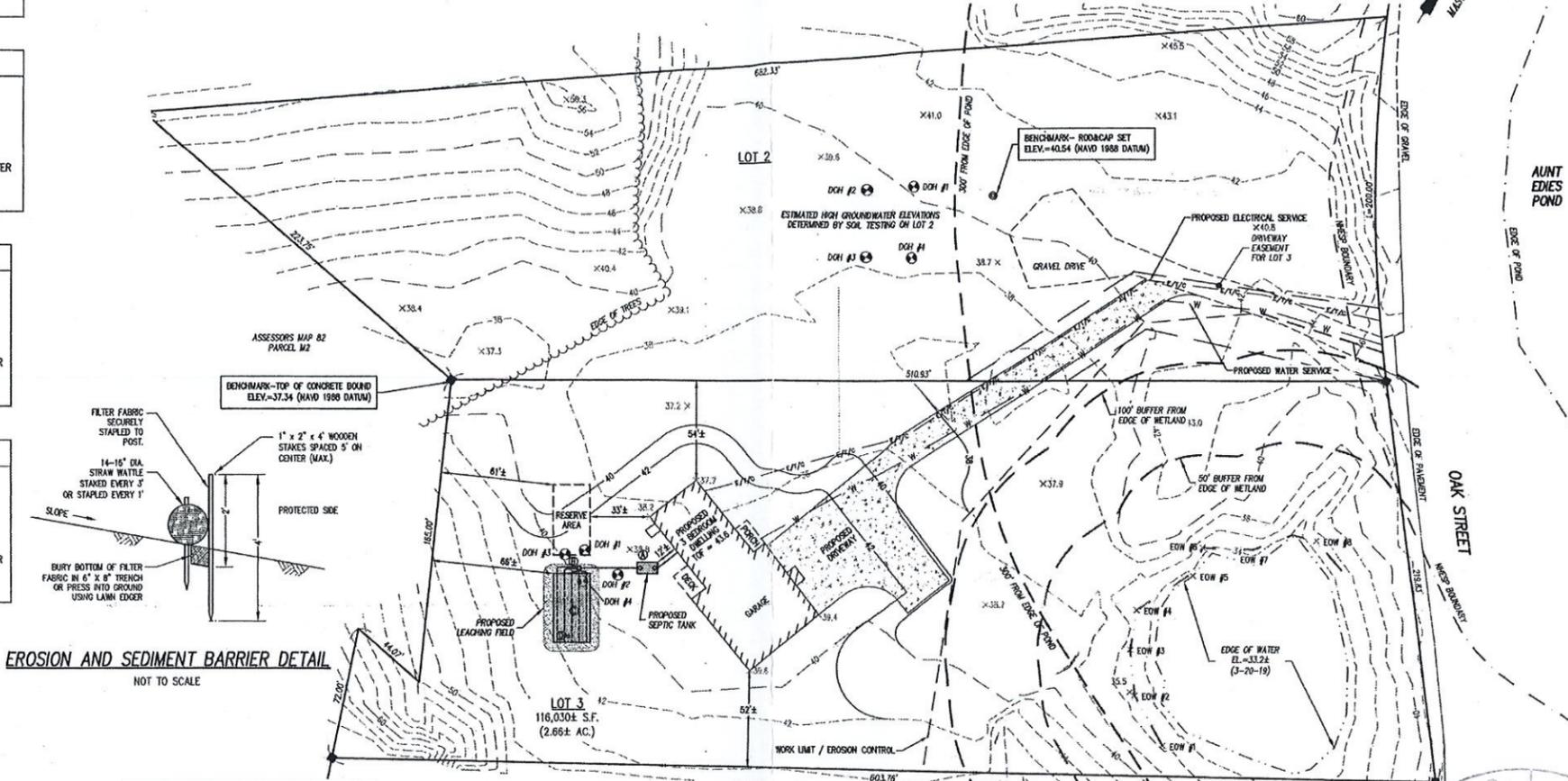
BASED ON LOT 2 DOH #3



INSPECTION NOTE

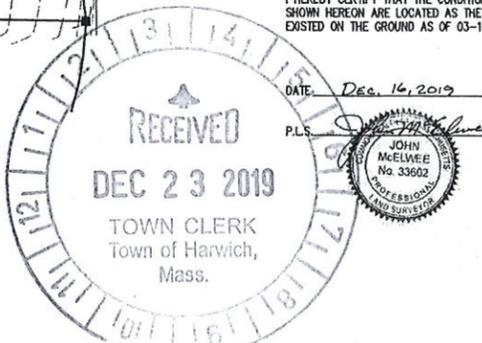
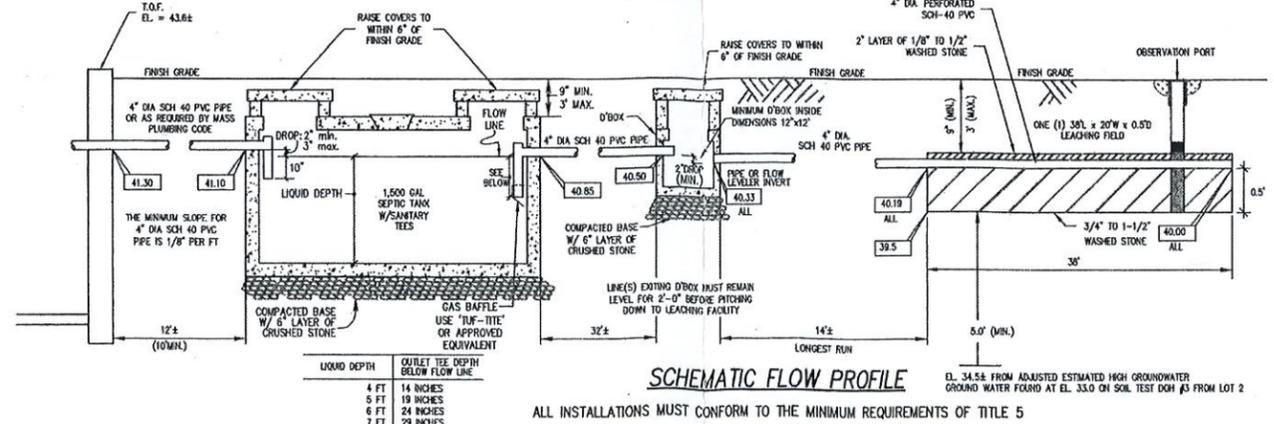
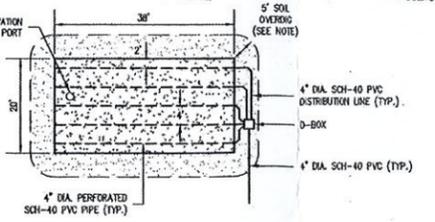
THE STATE ENVIRONMENTAL CODE, TITLE 5, REQUIRES INSPECTION(S) OF THE SEWAGE DISPOSAL SYSTEM BY THE DESIGN ENGINEER. INSTALLATION CONTRACTOR MUST NOTIFY THE DESIGN ENGINEER PRIOR TO THE START OF INSTALLATION FOR DISCUSSION ON REQUIRED INSPECTIONS.

NOTE: THE INFORMATION HEREON HAS BEEN PREPARED ACCORDING TO THE REQUIREMENTS OF TITLE 5 OF THE STATE ENVIRONMENTAL CODE FOR SUBSURFACE DISPOSAL OF SANITARY SEWAGE AND LOCAL BOARD OF HEALTH REGULATIONS.



SOIL REMOVAL NOTE

REMOVE TOPSOIL AND UNSUITABLE MATERIAL WITHIN 5' OF LEACHING FIELD DOWN TO "C" HORIZON (BELOW EL= 34.2± - SEE DOH #2) AND REPLACE WITH SAND FILL IN ACCORDANCE WITH NOTE #10.



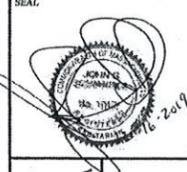
ZONING COMPLIANCE TABLE

ZONING DISTRICT: SIX PONDS OVERLAY

SUBJECT	REQ./ALLOWED	PROPOSED
LOT AREA	100,000 S.F.	116,030 S.F.
LOT FRONTAGE (CONTIGUOUS FEET)	200 FEET	219.83 FEET
FRONT YARD	80 FEET	303 FEET
SIDE YARD (NORTHWEST)	40 FEET	54 FEET
SIDE YARD (SOUTHWEST)	40 FEET	52 FEET
REAR YARD	40 FEET	118 FEET
MAX. BUILDING HEIGHT	30 FEET	28.4 FEET
MAX. BUILDING COVERAGE (% OF TOTAL LOT AREA)	10%	4.3% (4,452± S.F.)
MAX. SITE COVERAGE (% OF TOTAL SITE AREA)*	15%	8.2% (9,601± S.F.)



NO.	DATE	REVISION
1	12/13/19	ADD NOTES - LOWER TOP OF FOUNDATION ELEVATION



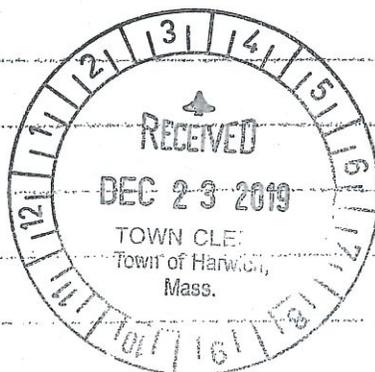
KYLE DOUGLAS
 334 OAK STREET
 SHEET TITLE
PLAN SHOWING PROPOSED SITE IMPROVEMENTS
 PROJECT NO. C18947-01
 SCALE 1" = 40'
 DRAWING FILE C18947-01-C.dwg
 DATE 12/13/2019
 DRAWN BY TRG/CPM/DAV/CEM
 CHECKED BY JGS
C2.11
 1 OF 1 SHEETS
 PROJECT NO. C18947-01

December 23, 2019

Dear Planning Board,

I am asking for a special permit to allow for alternative access for my property at 334 Oak Street due to wetland and topographical issues and fixtures of the lot.

Respectfully,
Kyle Douglas ^{MAD}





AGENDA ITEM # II.B.

To: Planning Board
From: Charleen Greenhalgh, Town Planner
Date: January 16, 2020
Re: Staff Report #2 – Site Plan Review Special Permit & Use Special Permit

PB2019-45 Royal Apartments LLC, as owner, Alex Bardin, Representative, seeks approval of a Multi-Family Use Special Permit in the Harwich Center Overlay District and a Site Plan Review Special Permit for the proposed use and additional parking and other appurtenances pursuant to the Code of the Town of Harwich §§325-51.D and -51.O and 325-55. The property is located at 328 Bank Street, Map 41, Parcel N4 in the M-R-L, Harwich Center Overlay and Historic Districts.

The Planning Board hearing was opened on January 14, 2020, with no testimony taken, as abutters had not been properly notified. The hearing was continued to Tuesday, January 28, 2020 meeting no earlier than at 6:30 p.m. **Please note that confirmation of the certified mailings will need to be submitted.**

Description

The applicant seeks approval for a Site Plan Review Special Permit and a Special Permit for Multi-Family for the two existing buildings on the site. The property had previously be used as an Assisted Living Facility and the new owner seek approval for 26 apartments. Additional parking and an accessible front entrance will be added. The application was filed with the Town Clerk on December 10, 2019 and revised plans submitted on January 7, 2020 and include the following:

1. Form A – Special Permits & Site Plan Review
2. Municipal Lien Certificate
3. A project narrative, date stamped received December 10, 2019
4. The following Plans were included:
 - Plans prepared by Coastal Engineering Co., for Royal Apartments, LLC, 328 Bank Street, Harwich, MA, stamped by David J. Michniewicz, P.E. (unless otherwise noted), dated 12-5-19 and revised 1-6-20 (unless otherwise noted), as follows:
 1. Sheet C1.1.1 – Plan Showing Existing Conditions, stamped by John McElwee, P.L.S., dated 10-31-19, revised 1-6-20
 2. Sheet C2.1.1 – Plan Showing Proposed Site Layout and Materials
 3. Sheet C2.2.1 – Plan Showing Proposed Grading and Drainage
 4. Sheet C.2.4.1 – Site Details
 5. Sheet C.2.4.2 – Utility Details
 - Plans prepared by David H. Dunlap Associates, Inc. for Royal Apartments, Harwich, MA:

1. Sheet SP-1, Landscape Plan, dated 12/6/19, scale 1" = 20'
 2. Sheet SP-2, Parking Lot Lighting and Photometric Plan, dated 9/24/19, scale 1" = 20'
 3. Sheet SP-3 Site Electrical Plan, dated 1/3/20, scale 1" = 20'
 4. Sheet A-1, Ground Floor Plan dated 9/24/19, scale 1" = 20'
 5. Sheet A-2, First Floor Plan dated 9/24/19, scale 1/8" = 1'-0"
 6. Sheet A-3, Second Floor Plan dated 9/24/19, scale 1/8" = 1'-0"
 7. Sheet A-4, Third Floor Plan dated 9/24/19, scale 1/8" = 1'-0"
 8. Sheet A-5, Accessory Building Floor Plan dated 9/24/19, 1/8" = 1'-0"
 9. Sheet A-6, Exterior Elevations dated 9/24/19, scale 1/8" = 1'-0"
 - Sketch Plan Showing Location of Fire Hydrants in the Vicinity of Royal Apartments LLC
5. Stormwater Management Report for 328 Bank Street, Harwich, MA dated December 6, 2019, prepared for Royal Apartments LLC, Prepared by Coastal Engineering Co., Inc. and corresponding plan entitled "Royal Apartments, LLC, Plan Showing Pre-Development Drainage Areas", dated 12-05-19, Scale 1" = 30'.
 6. Lighting Cut Sheets – Hubbell Lighting:
 - Types SL4, SL4 BC, SL5 Beacon SSA B 16 40B VM2S16
 - Type SL4 BC Beacon VP-5-24L-55-3K7-4BC-UNV BL SWP
 - Type SL4 Beacon VP-S-24L-55-3K7-4W-BC-UNV BL SWP
 - Type SL5 Beacon VP-S-24L-55-3K7-5R-UNV BL SWP

MGL Reference and Planning Board Jurisdiction

Pursuant to MGL c.40 A, §9 the Planning Board must, within 65 days of submission of application for a special permit hold a public hearing. The decision of the Planning Board shall take place within 90 days following the close of the public hearing. Further, a special permit issued shall require a two-thirds vote of the Board.

The Planning Board has jurisdiction to review this application pursuant to the Code of Town of Harwich:

§325-55 for Site Plan Review Special Permit for the reconfiguration of an existing parking lot. Further, pursuant to §325-55.E.(1) *"If the site plan meets the requirements of this By-law and the Planning Board Rules and Regulations Governing Subdivision of Land and Site Plan Review, as amended, the Planning Board shall approve it"*. However, **the Board cannot deny approval of a site plan for a use which is allowed by right** (not by special permit) in the district, but may impose reasonable conditions on the proposed use. Please refer to §325-55.E. for specific allowable conditions.

§325-51.D Special permit to construct multifamily dwellings, hotels or motels.

- (1) The Planning Board, in acting upon an application for special permit to construct multifamily dwellings, hotels or motels, shall have the authority, pursuant to MGL c. 40A, § 9, to include in the grant of permission authorization to increase the permissible density of population or intensity of a particular use in a proposed development, provided that the petitioner or applicant shall, as a condition for the grant of authority to increase permissible density, provide certain open space or some or all of the amenities hereafter listed, but the Board shall not have the authority to

increase the density of population or intensity of uses beyond the maximums hereafter specified.

Amenity	Maximum Density Increase
Swimming pool	8%
Tennis courts	4%
Golf course	16%
Community building or recreation building	2%

- (2) For the purpose of ensuring that an applicant or petitioner constructs the proposed amenities in accordance with the plans and specifications submitted to the Planning Board, the Planning Board shall require, as a condition to the granting of the permit, that the applicant or petitioner execute a covenant on such reasonable terms and conditions as the Planning Board may specify and wherein the petitioner or applicant shall agree to construct the amenities as proposed in accordance with a timetable approved by the Planning Board, and the Planning Board may require that the amenity or amenities, once constructed, shall be under the control or jurisdiction of a nonprofit organization, the principal purpose of which is the maintenance and management of said amenities, or that control of said amenities be conveyed to a corporation or trust owned or to be owned by the owners of lots or residential units within the development. The covenant required hereunder shall be recorded at the Barnstable County Registry of Deeds before any work authorized by the special permit is begun, and no lot, dwelling or multifamily dwelling unit shall be conveyed (except as provided in MGL c. 41, § 81U, Clause 2) until said covenant has been released in whole or as it relates to the portion of the premises to be conveyed by duly executed instrument or release by the Planning Board.

§325-51.O Harwich Center Overlay District.

- (1) Purpose. The Harwich Center Overlay District enables the development and redevelopment of Harwich Center to be in keeping with its historic development patterns, including the size and spacing of structures and provision of open space. The redevelopment of existing structures will encourage them to come into compliance with current plumbing, electric and building codes, as well as the latest fire and handicapped access regulations. Agencies involved with historic preservation will be encouraged to make recommendations on proposed development or redevelopment.
- (2) Scope.
- a) Within the Harwich Center Overlay District, only property that is currently within the Commercial - Village (CV) Zoning District in Harwich Center is permitted to utilize this section, with the following two exceptions: property located on the southeast corner of the intersection of Sisson Road and Parallel Street just east of Forest Street, currently shown on Assessor's Map 40 as Parcel Z5, and the parcel located at the southwest corner of the intersection of Bank Street and Parallel Street, currently shown on Assessor's Map 41 as Parcel N4, are also permitted to utilize this section. All property owners, including the Town of Harwich, are required to locate the majority of structures on the street frontage portion of the property and to locate parking, septic and open space to the rear of the property.

- b) The dimensional requirements, including building setbacks, maximum site coverage and heights of these structures, are outlined in Subsection O(5) of this section.
 - c) This bylaw is intended to be used in conjunction with other regulations of the Town, including site plan review and other bylaws designed to encourage appropriate and consistent patterns of village development.
 - d) Applicants, with the approval of the Board of Health, and other agencies as required are encouraged to utilize new and improved technologies for septic treatment and stormwater drainage purposes.
- (3) Location. The Harwich Center Overlay District is shown on the following map: Harwich Center Overlay District, October 2003, prepared by the Town of Harwich Planning Department. The Harwich Center Overlay District is bounded on the south by Parallel Street from Bank Street to Sisson Road, but including the parcel on the south side of Parallel Street at Bank Street (also shown on Harwich Assessor's Map 41 as Parcel N4) and the parcel on the south side of Parallel Street at Sisson Road (also shown on Harwich Assessor's Map 40 as Parcel Z5); the district is bounded on the west by Sisson Road, Route 39 (Main Street) and Route 124 (Pleasant Lake Avenue); the district is bounded on the north by Old Colony Way to the west boundary line of Parcel C4-B, on Assessor's Map 41; the district is bound on the east by the west boundary line of Parcel C4-B, on Assessor's Map 41, and the east boundary line of the Town of Harwich owned land (Parcel C302 and C5, on Assessor's Map 41) and Bank Street to the southeast corner of Parcel N4 at Bank Street.
- (4) Procedure.
- a) The Planning Board shall serve as the special permit granting authority for developments within the Harwich Center Overlay District.
 - b) Prior to the submission of an application for special permit under this bylaw, the applicant may meet with the Planning Board at a public meeting for a preapplication conference to discuss the proposed development in general terms and establish the plan filing requirements. The Planning Board shall schedule a meeting for a preapplication conference following a written request from the applicant, inviting preliminary comments from the Board of Health, Conservation Commission, and any other interested officials or agencies. The purpose of this preapplication conference is to inform the Planning Board as to the nature of the proposed project. As such, no formal filings are required for the preapplication conference. However, the applicant is encouraged to prepare sufficient preliminary architectural and/or engineering drawings to inform the Planning Board of the scale and overall concept of the proposed project and its relationship to abutting properties.
 - c) Special permit applications shall comply with and be subject to the requirements of § 325-55, Site plan approval.
- (5) Dimensional requirements.
- a) Setback requirements:
 1. Front setback requirements shall be determined at the time of site plan review based on existing development patterns and the elements of the proposed project.
 2. Side lot line setback shall be 10 feet.

3. Rear lot line setback shall be 10 feet.
 - b) Parking shall be permitted at the side or rear of the property.
 - c) Maximum site coverage shall not exceed 80%.
 - d) The maximum permitted height for new constructions shall not exceed 30 feet or 2 1/2 stories.
 - e) Minimum lot size shall be 15,000 square feet.
 - f) The Board may waive or modify these dimensional requirements if it finds that such waiver or modification will not substantially derogate from the purpose and intent of this bylaw and that such waiver or modification may be granted without substantial detriment to the neighborhood or overall public good.
- (6) Uses. Uses permitted by right or special permit for the underlying zoning district remain. However, the following additional uses are allowable by special permit in the Harwich Center Overlay District, provided that all other zoning requirements herein are met:
- a) Inn.
 - b) Bed-and-breakfast.

Waivers At this time no waivers have been requested.

Comments from other Boards, Departments, Committees

Health: The Health Department requires that a passing Title 5 inspection be submitted prior to any building permit approval.

Fire Chief: No concerns, but he does fully endorse this project.

Police & Highway: No concerns.

Conservation: As proposed all work is outside the 100' buffer zone. Erosion control shall be install on the 100' line to ensure work stays out of conservation jurisdiction. Permits required if work will enter conservation jurisdiction.

Engineering: The Town Engineer reviewed the plans with the Town Planner; comments are noted below. Additionally, he will be reviewing in detail the Stormwater Report and provide comments as needed.

Planning Staff Comments

1. As noted, the Town Engineer and Town Planner met to review the plans and application as submitted on December 23, 2019. At that time comments were sent to the applicant. We reviewed the revised plans on January 9, 2020. Many of the items raised were addressed with the revised plans. The few items that we had questions/comments on were shared with the applicant's engineer. Here are our comments, with the Applicant's Engineer's responses in italics:
 - a. Will traffic arrows be painted on the pavement? *No. The legend in the bottom right corner of Drawing C2.1.1, revision 1 dated 1-6-2020, so notes.*
 - b. With regard to hydrant(s), it would be helpful to show any hydrants near to the site. *The nearest hydrants are not within the limits of the plan view. A sketch plan showing the hydrants near the site was submitted by hand delivery on 1-8-2020. Additionally, will or is there a Fire Department connection at the building? A Fire Department connection exists on the west-facing wall of the main building where the existing sprinkler line enters the building.*

- c. We did see an overhead utility line to the accessory building; but did not see where the electricity comes into the main building. How will this be connected? *Drawing C1.1.1, revision 1 dated 1-6-2020, shows the existing underground electric line to the main building.* Additionally, will each unit require its own meter and if so, where will the meters be located? *It is my understanding that the metering has not been designed yet, but the architect has stated the meter(s) will be located in the vicinity of where the existing electric line enters the building.*
 - d. Are there gas or cable lines to the structures? *Drawing C1.1.1, revision 1 dated 1-6-2020, shows the gas and cable lines to both buildings.*
 - e. Specifications, details, cross sections are required for: lighting, curbing and parking (striping detail) *A call-out on Drawing C2.1.1, revision 1 dated 1-6-2020, in the parking lot behind the small building, indicates that the parking stripes are to be 4 inches wide and painted white. The striping for the accessible parking spaces is shown on Drawing C2.4.1. A bituminous concrete berm detail was added to Drawing 2.4.1, revision 1 dated 1-6-2020. We will add a detail for the precast concrete curb.* The light should be showing the schematic wiring and the other electrical components on a utility plan. The SP-3 plan is not an electrical plan; it is a Lighting Plan. *An electrical engineer has not yet been hired. Electrical plans will be prepared prior to applying for building, plumbing, and electrical permits. The site electrical plan can be provided to the Planning Board once it's completed.*
2. To clarify, Sheet SP-3 should be titled “Lighting Plan”
 3. The Town Engineer did meet with the Applicant’s Engineer for the purposes of review the stormwater management on the site.
 4. In addition to the sections of the zoning code already referenced the following subparagraphs (I – L) pursuant to §325-18 – Additional Regulations, provide for the following:
 - I. All ways intended for use by vehicular traffic within the perimeter of a multifamily dwelling project shall be installed and constructed in accordance with the requirements governing road construction set forth in the Subdivision Rules and Regulations, as adopted from time to time by the Harwich Planning Board.
 - J. All multifamily dwellings must be connected to a municipal water system.
 - K. A habitable room in a multifamily dwelling unit shall not have a minimum floor area of less than 120 square feet and shall have no major width or length dimension less than 10 feet. Closets, storage spaces, bathrooms and kitchens are not habitable rooms for the purpose of these minimum area and dimension requirements.
 - (1) All outside entrances to multifamily dwellings shall be designed in such manner as to provide protection to the immediate area in front of said entrance from the weather.
 - (2) No outside staircase shall be used to furnish primary access to any of the units in a multifamily dwelling, hotel or motel.
 - L. No multifamily dwellings may be erected on any lot in the MRL or MRL-1 District the geographical center of which is closer than 1,500 feet to the geographical center of any lot upon which multifamily dwellings with more than four dwelling units

are constructed, provided that, for the purpose of this subsection, contiguous lots in common ownership may be considered as a single parcel and developed for multifamily use, provided further that lots separated by a road, street or way will be considered contiguous for the purpose of this subsection and, if commonly owned, may be treated as one parcel for the purpose of multifamily construction.

5. This property was been used as an Assisted Living Facility for a number of years. The number of total bedrooms within the structures is not increasing and other then the additional parking being added and the accessible entrance, the exterior of the buildings is not changing.
6. Relief from the Zoning Board of Appeals will be needed for the land area.
7. Reasonable conditions are recommended including:
 - a. Erosion control shall be install and maintain during construction on the 100' conservation buffer line to ensure work stays out of conservation jurisdiction. Permits from Conservation shall be required if work will enter conservation jurisdiction.
 - b. A passing Title 5 inspection be submitted to the Health Department prior to any building permit approval.
 - c. All signage shall comply with the Sign Code, Historic District & Historical Commission and Building Department Requirements.
 - d. All lighting shall comply with the Lighting Code and Historic District & Historical Commission Requirements.
 - e. Appropriate relief from the Harwich Zoning Board of Appeals shall be required.
 - f. Appropriate approvals from the Historic District & Historical Commission shall be required.
 - g. All drainage and storm water requirements, local, state and federal, shall be met and approved by the Harwich Town Engineer prior to the commencement of construction operations.
 - h. This decision shall be recorded at the Barnstable Registry of Deeds.
 - i. Conformance with all review procedure requirements outlined pursuant to §400-18.G Inspection, certificate of completion and as-built plan, of the Code of the Town of Harwich shall be met.

VOTES

Continuance

If the Board will require additional information or wants to take the matter under advisement the following motion is recommended:

Move to continue the hearing for **PB2019-45 Royal Apartments LLC**, to no earlier than 6:30 pm on _____ (Next Meeting Dates: *Feb. 11, Feb. 25, March 10*) for the following reason(s): *Need to provide reasons for the continuance...additional information.*

I. Vote to Close the Public Hearing

II. Vote to Adopt Proposed Findings:

To adopt the following finding of fact (*the Board may wish to add or change findings*):

The property is located within the MR-L zoning district and the Harwich Center Overlay district.

1. The existing structure has been used as an assisted living facility containing 31 units.
2. 26 apartment units are proposed.
3. Appropriate and adequate parking shall be provided on the subject site.
4. Multi-family Use is allowable within the MR-L zoning district with a Special Permit.
5. The use as developed will not adversely affect the neighborhood.
6. The specific site is an appropriate location for such a use.
7. Relief will be required from the Zoning Board of Appeals relative to the land area requirement.
8. There will be no nuisance or serious hazard to vehicles or pedestrians.
9. Adequate and appropriate facilities will be provided for the proper operation of the proposed use, including appropriate sewage treatment.

Vote on Use Special Permit (*Please Note: An affirmative vote by at least five Planning Board members is required.*)

1. To **approve** case number PB2019-45 Royal Apartments LLC for a Multi-Family Use Special Permit, 26 units in two buildings, within the Harwich Center Overlay District pursuant to the Code of the Town of Harwich §§325-51.D and 51.O for property located at 328 Bank Street, Map 41, Parcel N4 in the M-R-L and Harwich Center Overlay, based on the aforementioned findings of fact and the fact that the application meets the necessary requirements and criteria for approval pursuant to the Code of Town of Harwich.
2. To **approve with conditions** case PB2019-45 Royal Apartments LLC for a Multi-Family Use Special Permit, 26 units in two buildings, within the Harwich Center Overlay District pursuant to the Code of the Town of Harwich §§325-51.D and 51.O for property located at 328 Bank Street, Map 41, Parcel N4 in the M-R-L and Harwich Center Overlay, based on the aforementioned findings of fact and the fact that the application meets the necessary requirements and criteria for approval pursuant to the Code of Town of Harwich. The following condition is imposed: (*Note need to determine and outline the conditions.*)
 1. A passing Title 5 inspection be submitted to the Health Department prior to any building permit approval.
 2. All signage shall comply with the Sign Code, Historic District & Historical Commission and Building Department Requirements.
 3. Appropriate relief from the Harwich Zoning Board of Appeals shall be required.
 4. This decision shall be recorded at the Barnstable Registry of Deeds.
3. To **deny** case number case number PB2019-45 Royal Apartments LLC for a Multi-Family Use Special Permit pursuant to the Code of the Town of Harwich §§325-51.D and 51.O for property located at 328 Bank Street, Map 41, Parcel N4 in the M-R-L and Harwich Center Overlay, based on the fact that the application does not meet the necessary requirements and criteria for approval pursuant to the Code of Town of Harwich, specifically... (*Note: need to list the specific requirements that have not been satisfied.*)

Vote on Site Plan Review Special Permit: (*Please Note:* An affirmative vote by at least five Planning Board members is required.)

To approve with *conditions* case number **PB2019-45 Royal Apartments LLC** for a Site Plan Review Special Permit for the proposed use and additional parking and other appurtenances pursuant to the Code of the Town of Harwich §325-55 for property located at 328 Bank Street, Map 41, Parcel N4 I n the M-R-L, Harwich Center Overlay and Historic Districts. The decision is based on the aforementioned findings of fact, the fact that the application meets the necessary requirements and criteria for approval pursuant to the Code of Town of Harwich and the fact that the Multi-Family Use is permitted by Special Permit in the zoning district. The following conditions are imposed:

1. Erosion control shall be install and maintain during construction on the 100' conservation buffer line to ensure work stays out of conservation jurisdiction. Permits from Conservation shall be required if work will enter conservation jurisdiction.
2. A passing Title 5 inspection be submitted to the Health Department prior to any building permit approval.
3. All signage shall comply with the Sign Code, Historic District & Historical Commission and Building Department Requirements.
4. All lighting shall comply with the Lighting Code and Historic District & Historical Commission Requirements.
5. Appropriate relief from the Harwich Zoning Board of Appeals shall be required.
6. Appropriate approvals from the Historic District & Historical Commission shall be required.
7. All drainage and storm water requirements, local, state and federal, shall be met and approved by the Harwich Town Engineer prior to the commencement of construction operations.
8. Any changes to the approved site may require additional review and approvals from the Planning Board and the Historic District & Historical Commission.
9. This decision shall be recorded at the Barnstable Registry of Deeds.
10. Conformance with all review procedure requirements outlined pursuant to §400-18.G Inspection, certificate of completion and as-built plan, of the Code of the Town of Harwich shall be met.

Alternatively, the Planning Board may approve the site plan special permit with or without additional conditions.

Project Narrative

328 Bank Street
Assessor's Parcel ID 41-N4
Royal Apartments LLC
Application for Site Plan Approval

December 10, 2019

Applicant Royal Apartments LLC ("Royal Apartments") owns the land at 328 Bank Street, Assessor's Parcel ID 41-N4, which is a developed 82,443 sq. ft. parcel of land in Harwich's MR-L (Multifamily Residential - Low Density) zoning district and the Harwich Center Overlay District and the Harwich Center Historic District. The property has 424.3' of frontage along Parallel Street and Bank Street and is improved with two existing buildings, a 15,239 sq. ft. structure originally built in 1900 and later increased to its current size, and a 1,118 sq. ft. structure built in 1985. Locus is currently used as the location of a nursing home / assisted living facility and a senior day care facility, which are allowed uses by special permit in the district under Bylaws §325, Attachment 1 (Use Regulations).

The applicant proposes converting the use of the property from the current nursing home / assisted living uses to multifamily dwelling residential use. This use is allowable in the MR-L district by special permit under the Table of Use Regulations, however, a variance from the Bylaw lot area and density requirements (minimum 10 contiguous acres lot area; maximum density of 8 bedrooms per acre [§ 325, Attachment 2 (Area Regulations)]) is required, pursuant to Bylaw § 325-52 and General Laws, c. 40A, § 10. In addition, the applicant has applied for Site Plan Approval pursuant to Bylaw § 325-55, as required by subsection (C)(2) [expansion or reconfiguration of an existing parking lot and/or driveway(s) in connection with a multifamily use.]

The property is otherwise conforming in the Harwich Center Overlay District, having more than the required minimum 15,000 sq. ft. of lot area, 10' side and rear setback distances, 5' side and rear setback distances, 150' frontage, and less than the 15% maximum building coverage and 80% maximum site coverage.

The applicant wishes to convert the existing use to the proposed multifamily use. Specifically, Royal Apartments proposes no exterior changes to the building and minimal reconfiguration of the existing structure inside the property. The applicant will do exterior maintenance and painting to the structure and will reconfigure the parking areas to make 41 parking spaces to accommodate the 26 new apartments. These will be a mix of studio and 1- and 2-bedroom apartments in the two existing buildings, for a total of 33 bedrooms





260 Cranberry Highway
 Orleans, MA 02653
 508.255.6511 P 508.255.6700 F
 Orleans | Sandwich | Nantucket
 coastalengineeringcompany.com

TRANSMITTAL

To: Harwich Planning Board
 Attn: Charleen Greenhalgh
 732 Main St.
 Harwich, MA 02645

Date: 1/7/2020 **Project No.** C16014.04

Via: 1st Class Mail Pick up Delivery Fed Ex

Phone:

Fax:

Subject: Royal Apartments LLC
 328 Bank Street
 Harwich, MA
 Map: 41 Parcel: N4

No. of pages to follow:

Plans Copy of Letter Specifications Other

We are sending the following items:

Copies	Date	No.	Description
			Lighting Cut Sheets
(6) Full & (11) 11x17	1/3/20	SP-3	David H. Dunlap Associates, Inc., Site Electrical Plan
(6) Full & (11) 11x17	Rev. 1/6/20	C1.1.1	Coastal Engineering Co., Inc., Plan Showing Existing Site Conditions
(6) Full & (11) 11x17	Rev. 1/6/20	C2.1.1	Coastal Engineering Co., Inc., Plan Showing Proposed Site Layout & Materials
(6) Full & (11) 11x17	Rev. 1/6/20	C2.2.1	Coastal Engineering Co., Inc., Plan Showing Proposed Grading & Drainage
(6) Full & (11) 11x17	Rev. 1/6/20	C2.4.1	Coastal Engineering Co., Inc., Site Details
(6) Full & (11) 11x17	Rev. 1/6/20	C2.4.2	Coastal Engineering Co., Inc., Utility Details

These are transmitted as checked below:

for approval for your use as requested for review & comment

Remarks: The enclosed plans and documents address the review comments you provided to Alex Bardin in your email to him on December 23, 2019, for the referenced project.

If you have any questions, please contact our office.

cc: Royal Apartments, LLC
 David J. Michniewicz, Project Manager

By: Sarah Cole

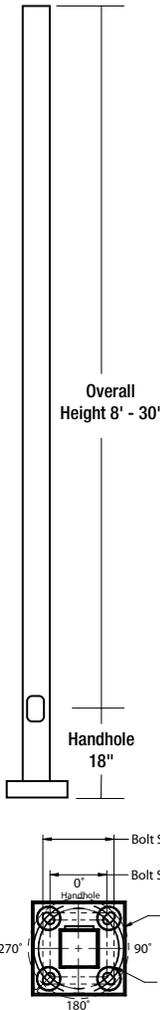
F:\SDSKPROJ\C16000\C16014\C16014-04\Doc-Out\2020-01-07 to Planning Board\Transmittal Template.doc

NOTE: If enclosures are not as noted, please contact us at (508) 255-6511

SSA-B SERIES POLES

SQUARE STRAIGHT ALUMINUM

Cat.#	
Job	Type
Approvals	



APPLICATIONS

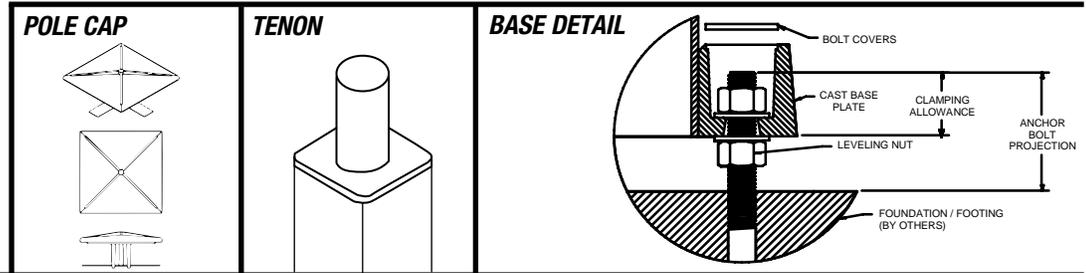
- Lighting installations for side and top mounting of luminaires with effective projected area (EPA) not exceeding maximum allowable loading of the specified pole in its installed geographic location

CONSTRUCTION

- SHAFT: One-piece straight aluminum with square cross section, flat sides and minimum radius on all corners; Extruded shafts of 6061-T6 aluminum in 1/8", 3/16", or 1/4" thickness. Base plate of 356 cast aluminum.
- BASE COVER: Four (4) individual bolt covers provided, painted to match pole and base finish.
- POLE CAP: Pole shaft supplied with removable cover when applicable; Tenon and post-top configurations also available
- HAND HOLE: Rectangular 3x5 aluminum hand hole frame (2.38" x 4.38" opening); Mounting provisions for grounding lug located behind gasketed cover
- ANCHOR BOLTS: Four galvanized anchor bolts provided per pole with minimum yield of 55,000 psi (ASTM F1554). Galvanized hardware with two washers and two nuts per bolt for leveling

FINISH

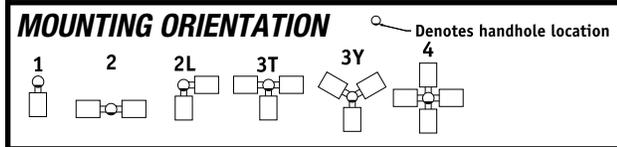
- Durable thermoset polyester powder coat paint finish with nominal 3.0 mil thickness
- Powder paint finish coat available in 12 standard colors; Custom colors available; RAL number preferable.



ORDERING EXAMPLE:

SSA-B - **20** - **40** - **A/B/C** - **2L** - **B3** - **DB** - **VM2**

SERIES	HEIGHT	SHAFT	THICKNESS	MOUNTING	FINISH	OPTIONS
SSA-B Square Straight Aluminum Pole Beacon	Reference page 2 Ordering matrix	Reference page 2 Ordering matrix	Reference page 2 Ordering matrix	1 Single arm mount 2 Two fixtures at 180° 2L Two fixtures at 90° 3T Three fixtures at 90° 4 Four fixtures at 90° TA Tenon (2.375" OD) TB Tenon (2.875" OD) OT Open top (includes pole cap)	BL Black Textured DB Dark Bronze Textured GT Graphite Textured GYS Lt. Gray Smooth PS Platinum Silver Smooth WH White Textured BBT Basic Black Textured BZT Bronze Textured CC Custom Color	GFI ¹ 20 Amp GFCI Receptacle and Cover EHH ¹ Extra Handhole C05 ¹ .5" Coupling C07 ¹ .75" Coupling C20 ¹ 2" Coupling VM1 ² Mode vibration damper VM2 2nd mode vibration damper LAB Less Anchor Bolts



DRILL PATTERN

B1	CRUZER, "AM" arm
B3	2 bolt (2-1/2" spacing) Viper 'A' arm
S2	2 bolt (3-1/2" spacing) Viper 'AD' arm

ACCESSORIES- Order Separately

Catalog Number	Description
VM1 ²	1st mode vibration damper
VM2SXX	2nd mode vibration damper

¹ Specify option location using logic found on page 2 (**Option Orientation**)
² VM1 recommended on poles 20' and taller with EPA of less than 1.



DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

VIPER S

SMALL VIPER LUMINAIRE

FEATURES

- Small size companion to Viper Large
- Wide choice of different LED wattage configurations
- Nine optical distributions
- Designed to replace HID lighting up to 400W MH or HPS
- Suitable for wet locations



*3000K and warmer CCTs only

CONTROL TECHNOLOGY



OPTICS STRIKE



RELATED PRODUCTS

[Viper Large](#)

SPECIFICATIONS

CONSTRUCTION

- Manufactured with die cast aluminum
- Coated with a polyester finish that meets ASTM B117 corrosion test requirements and ASTM D522 cracking and loss of adhesion test requirements
- IFS polyester powder-coat electrostatically applied and thermocured. IFS finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermoset super TGIC polyester powder coat finish
- The finish meets the AAMA 2604 performance specification which includes passing a 3,000-hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds
- External hardware is corrosion resistant

OPTICS

- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one-piece optical system
- One-piece silicone gasket ensures a weatherproof seal around each individual optic
- One-piece optical cartridge system consisting of an LED engine, optics, gasket and stainless steel bezel

INSTALLATION

- Mounting options for horizontal arm, vertical tenon or traditional arm mounting available. Mounting hardware included

ELECTRICAL

- Luminaire accepts 100V through 277V, 347V or 480V input 50 Hz to 60 Hz (UNV)
- Power factor is $\geq .90$ at full load
- Dimming drivers are standard, but must contact factory to request wiring leads for purpose of external dimming controls
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is certified by UL for use at 600VAC at 90°C or higher
- Plug disconnects are certified by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only
- Fixture electrical compartment contains all LED driver components and a push-button terminal block for AC power connections
- Optional 7-pin ANSI C136.41-2013 Twist-Lock® photo control receptacle available. Compatible with ANSI C136.41 external wireless control devices
- Ambient operating temperature -40°C to 25°C
- Surge protection: 20kA
- Lifeshield™ Circuit ([see Electrical Data](#))

CONTROLS

- Available with an optional passive infrared (PIR) motion sensor capable of detecting motion 360° around the luminaire. When no motion is detected for the specified time, the motion response system reduces the wattage to factory preset level, reducing the light level accordingly. When motion is detected by the PIR sensor, the luminaire returns to full wattage and full light output. Please contact Beacon Products if

project requirements vary from standard configuration

- Available with [Energeni](#) for optional set dimming, timed dimming with simple delay, or timed dimming based on time of night
- In addition, Viper can be specified with [SiteSync™ wireless control system](#) for reduction in energy and maintenance costs while optimizing light quality 24/7

CERTIFICATIONS

- DLC® (DesignLights Consortium) Qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org
- Certified to UL 1598 and UL 8750
- 3G rated for ANSI C136.31 high vibration applications with MAF mounting
- IDA approved
- This product is approved by the Florida Fish and Wildlife Conservation Commission. [Separate spec available online](#)

WARRANTY

- 5 year warranty
- See [HLI Commercial and Industrial Outdoor Lighting Warranty](#) for additional information

KEY DATA	
Lumen Range	5400–16,216
Wattage Range	55–136
Efficacy Range (LPW)	100–124
Reported Life (Hours)	L70>377,000
Input Current Range (Amps)	0.1–1.1

VIPER S

SMALL VIPER LUMINAIRE

ORDERING GUIDE

Example: VPS-24L-55-4K7-4W-UNV-A-DB-TL-GENI-04-BC

CATALOG #

VPS Series	LED Engine	CCT/CRI ⁷	Distribution	Rotation	Voltage
VPS Viper Small	24L-55 55W, LED array	3K7 3000K, 70 CRI	FR Type 1/Front Row	Blank No rotation	UNV 120-277V
	36L-65 65W, LED array	4K7 4000K, 70 CRI	2 Type 2	L Optic rotation left ⁵	347 347V
	36L-80 80W, LED array	5K7 5000K, 70 CRI	3 Type 3	R Optic rotation right ⁵	480 480V
	48L-110 110W, LED array		4 Type 4		
	60L-136 136W, LED array		4W Type 4 Wide		
			5QM Type 5QM		
			5R Type 5R (rectangular)		
			5W Type 5W (round wide)		
			TC Tennis Court		

Mounting	Color	Control Options	Options
A Rectangular Arm (formerly RA) for square or round pole	BL Black textured	7PR 7-Pin Receptacle only (shorting cap, photo control, or wireless control provided by others)	F Fusing
MAF Mast Arm Fitter (formerly SF2) for 2 3/8" OD horizontal arm	DB Dark Bronze Textured	7PR-SC 7-Pin Receptacle w/Shorting Cap	BSP Bird Spikes
K Knuckle (formerly PK2) limit to 30° tilt or 2 3/8" OD horizontal arm or vertical tenon	GYS Light Gray Smooth	7PR-TL 7-Pin Receptacle w/Twist-Lock® photo control	BC Backshield (available for FR, 2, 3, 4, 4W Optics)
WB Wall Bracket	PS Platinum Silver Smooth	SCP/_F Programmable Occupancy Sensor w/ daylight control ^{1,2,6}	
AD Universal Arm for square pole	WH White Textured	GENI-XX ENERGENI ³	
AD3 Adapter for 2.4"-4.1" round pole	CC Custom Color	SWP SiteSync Pre-Commission ^{1,4}	
AD4 Adapter for 4.2"-5.3" round pole		SWPM_F SiteSync Pre-Commission w/ Sensor ^{1,2,4}	
AD5 Adapter for 5.5"-5.9" round pole			
AD6 Adapter for 6.0"-6.5" round pole			

House Side Shield Accessories

- HSS/VP-S/90-FB/XXX** 90° shield front or back
- HSS/VP-S/90-LR/XXX** 90° shield left or right
- HSS/VP-S/270-FB/XXX** 270° shield front or back
- HSS/VP-S/270-LR/XXX** 270° shield left or right
- HSS/VP-S/360/XXX** Full shield

Replace XXX with notation for desired finish color. Refer to page 8 for shield images.

Mounting Accessories

- VPL-AD-RPA3** 2.4"-4.1" Round Pole Adapter for AD arm
- VPL-AD-RPA4** 4.2"-5.3" Round Pole Adapter for AD arm
- VPL-AD-RPA5** 5.5"-5.9" Round Pole Adapter for AD arm
- VPL-AD-RPA6** 6.0"-6.5" Round Pole Adapter for AD arm

Notes:

- 1 Not available with other wireless control or sensor options
- 2 Specify mounting height; 8 = 8' or less, 40 = 9' to 40'
- 3 Specify routine setting code (example GENI-04). See [ENERGENI brochure](#) and [instructions](#) for setting table and options. Not available with sensor or SiteSync options
- 4 Specify group and zone at time of order. See www.hubbellighting.com/sitesync for further details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node
- 5 Only available with FR, 2, 3, 4, 4W and 5R distributions
- 6 Order at least one SCP-REMOTE per project location to program and control the occupancy sensor

Accessories and Services (Ordered Separately)

- SCP-REMOTE** Remote Control for SCP/_F option. Order at least one per project to program and control the occupancy sensor
- SWUSB*** SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node
- SWTAB*** Windows tablet and SiteSync interface software. Includes tablet with preloaded software, SiteSync license and USB radio bridge node
- SWBRG** SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested
- SW7PR+** SiteSync 7-Pin on fixture module On/Off/Dim, Daylight Sensor 120-480VAC

* When ordering SiteSync at least one of these two interface options must be ordered per project.
 + Available as a SiteSync retrofit solution for fixtures with an existing 7-pin receptacle.

Hubbell Control Solutions — Accessories (Sold Separately)

NX Distributed Intelligence™

- NXOFM-1R1D-UNV** On-fixture Module (7-pin), On / Off / Dim, Daylight Sensor with HubbNET Radio and Bluetooth® Radio, 120-480VAC

wiSCAPE® Lighting Control

- WIR-RME-L** On-fixture Module (7-pin or 5-pin), On / Off / Dim, Daylight Sensor with wiSCAPE Radio, 110-480VAC

For additional information related to these accessories please visit www.hubbellcontrolsolutions.com. Options provided for use with integrated sensor, please view specification sheet ordering information table for details.



DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

VIPER S

SMALL VIPER LUMINAIRE

FEATURES

- Small size companion to Viper Large
- Wide choice of different LED wattage configurations
- Nine optical distributions
- Designed to replace HID lighting up to 400W MH or HPS
- Suitable for wet locations



*3000K and warmer CCTs only

CONTROL TECHNOLOGY



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- Manufactured with die cast aluminum
- Coated with a polyester finish that meets ASTM B117 corrosion test requirements and ASTM D522 cracking and loss of adhesion test requirements
- IFS polyester powder-coat electrostatically applied and thermocured. IFS finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermoset super TGIC polyester powder coat finish
- The finish meets the AAMA 2604 performance specification which includes passing a 3,000-hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds
- External hardware is corrosion resistant

OPTICS

- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one-piece optical system
- One-piece silicone gasket ensures a weatherproof seal around each individual optic
- One-piece optical cartridge system consisting of an LED engine, optics, gasket and stainless steel bezel

INSTALLATION

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ELECTRICAL

- Luminaire accepts 100V through 277V, 347V or 480V input 50 Hz to 60 Hz (UNV)
- Power factor is $\geq .90$ at full load
- Dimming drivers are standard, but must contact factory to request wiring leads for purpose of external dimming controls
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is certified by UL for use at 600VAC at 90°C or higher
- Plug disconnects are certified by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only
- Fixture electrical compartment contains all LED driver components and a push-button terminal block for AC power connections
- Optional 7-pin ANSI C136.41-2013 Twist-Lock® photo control receptacle available. Compatible with ANSI C136.41 external wireless control devices
- Ambient operating temperature -40°C to 25°C
- Surge protection: 20kA
- Lifeshield™ Circuit ([see Electrical Data](#))

CONTROLS

- Available with an optional passive infrared (PIR) motion sensor capable of detecting motion 360° around the luminaire. When no motion is detected for the specified time, the motion response system reduces the wattage to factory preset level, reducing the light level accordingly. When motion is detected by the PIR sensor, the luminaire returns to full wattage and full light output. Please contact Beacon Products if

OPTICS
STRIKE



RELATED PRODUCTS

[Viper Large](#)

project requirements vary from standard configuration

- Available with [Energeni](#) for optional set dimming, timed dimming with simple delay, or timed dimming based on time of night
- In addition, Viper can be specified with [SiteSync™ wireless control system](#) for reduction in energy and maintenance costs while optimizing light quality 24/7

CERTIFICATIONS

- DLC® (DesignLights Consortium) Qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org
- Certified to UL 1598 and UL 8750
- 3G rated for ANSI C136.31 high vibration applications with MAF mounting
- IDA approved
- This product is approved by the Florida Fish and Wildlife Conservation Commission. [Separate spec available online](#)

WARRANTY

- 5 year warranty
- See [HLI Commercial and Industrial Outdoor Lighting Warranty](#) for additional information

KEY DATA	
Lumen Range	5400–16,216
Wattage Range	55–136
Efficacy Range (LPW)	100–124
Reported Life (Hours)	L70>377,000
Input Current Range (Amps)	0.1–1.1

VIPER S

SMALL VIPER LUMINAIRE

ORDERING GUIDE

Example: VPS-24L-55-4K7-4W-UNV-A-DB-TL-GENI-04-BC

CATALOG # _____

VPS Series	LED Engine	CCT/CRI ⁷	Distribution	Rotation	Voltage
VPS Viper Small	24L-55 55W, LED array	3K7 3000K, 70 CRI	FR Type 1/Front Row	Blank No rotation	UNV 120-277V
	36L-65 65W, LED array	4K7 4000K, 70 CRI	2 Type 2	L Optic rotation left ⁵	347 347V
	36L-80 80W, LED array	5K7 5000K, 70 CRI	3 Type 3	R Optic rotation right ⁵	480 480V
	48L-110 110W, LED array		4 Type 4		
	60L-136 136W, LED array		4W Type 4 Wide		
			5QM Type 5QM		
			5R Type 5R (rectangular)		
			5W Type 5W (round wide)		
			TC Tennis Court		

Mounting	Color	Control Options	Options
A Rectangular Arm (formerly RA) for square or round pole	BL Black textured	7PR 7-Pin Receptacle only (shorting cap, photo control, or wireless control provided by others)	F Fusing
MAF Mast Arm Fitter (formerly SF2) for 2 3/8" OD horizontal arm	DB Dark Bronze Textured	7PR-SC 7-Pin Receptacle w/Shorting Cap	BSP Bird Spikes
K Knuckle (formerly PK2) limit to 30° tilt or 2 3/8" OD horizontal arm or vertical tenon	GYS Light Gray Smooth	7PR-TL 7-Pin Receptacle w/Twist-Lock® photo control	BC Backshield (available for FR, 2, 3, 4, 4W Optics)
WB Wall Bracket	PS Platinum Silver Smooth	SCP/_F Programmable Occupancy Sensor w/ daylight control ^{1,2,6}	
AD Universal Arm for square pole	WH White Textured	GENI-XX ENERGENI ³	
AD3 Adapter for 2.4"-4.1" round pole	CC Custom Color	SWP SiteSync Pre-Commission ^{1,4}	
AD4 Adapter for 4.2"-5.3" round pole		SWPM_F SiteSync Pre-Commission w/ Sensor ^{1,2,4}	
AD5 Adapter for 5.5"-5.9" round pole			
AD6 Adapter for 6.0"-6.5" round pole			

House Side Shield Accessories

- HSS/VP-S/90-FB/XXX** 90° shield front or back
- HSS/VP-S/90-LR/XXX** 90° shield left or right
- HSS/VP-S/270-FB/XXX** 270° shield front or back
- HSS/VP-S/270-LR/XXX** 270° shield left or right
- HSS/VP-S/360/XXX** Full shield

Replace XXX with notation for desired finish color. Refer to page 8 for shield images.

Mounting Accessories

- VPL-AD-RPA3** 2.4"-4.1" Round Pole Adapter for AD arm
- VPL-AD-RPA4** 4.2"-5.3" Round Pole Adapter for AD arm
- VPL-AD-RPA5** 5.5"-5.9" Round Pole Adapter for AD arm
- VPL-AD-RPA6** 6.0"-6.5" Round Pole Adapter for AD arm

Notes:

- 1 Not available with other wireless control or sensor options
- 2 Specify mounting height; 8 = 8' or less, 40 = 9' to 40'
- 3 Specify routine setting code (example GENI-04). See [ENERGENI brochure](#) and [instructions](#) for setting table and options. Not available with sensor or SiteSync options
- 4 Specify group and zone at time of order. See www.hubbellighting.com/sitesync for further details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node
- 5 Only available with FR, 2, 3, 4, 4W and 5R distributions
- 6 Order at least one SCP-REMOTE per project location to program and control the occupancy sensor

Accessories and Services (Ordered Separately)

- SCP-REMOTE** Remote Control for SCP/_F option. Order at least one per project to program and control the occupancy sensor
- SWUSB*** SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node
- SWTAB*** Windows tablet and SiteSync interface software. Includes tablet with preloaded software, SiteSync license and USB radio bridge node
- SWBRG** SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested
- SW7PR+** SiteSync 7-Pin on fixture module On/Off/Dim, Daylight Sensor 120-480VAC

* When ordering SiteSync at least one of these two interface options must be ordered per project.
 + Available as a SiteSync retrofit solution for fixtures with an existing 7-pin receptacle.

Hubbell Control Solutions — Accessories (Sold Separately)

NX Distributed Intelligence™

- NXOFM-1R1D-UNV** On-fixture Module (7-pin), On / Off / Dim, Daylight Sensor with HubbNET Radio and Bluetooth® Radio, 120-480VAC

wISCAPE® Lighting Control

- WIR-RME-L** On-fixture Module (7-pin or 5-pin), On / Off / Dim, Daylight Sensor with wISCAPE Radio, 110-480VAC

For additional information related to these accessories please visit www.hubbellcontrolsolutions.com. Options provided for use with integrated sensor, please view specification sheet ordering information table for details.



DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

VIPER S

SMALL VIPER LUMINAIRE

FEATURES

- Small size companion to Viper Large
- Wide choice of different LED wattage configurations
- Nine optical distributions
- Designed to replace HID lighting up to 400W MH or HPS
- Suitable for wet locations



*3000K and warmer CCTs only

CONTROL TECHNOLOGY



OPTICS STRIKE



RELATED PRODUCTS

[Viper Large](#)

SPECIFICATIONS

CONSTRUCTION

- Manufactured with die cast aluminum
- Coated with a polyester finish that meets ASTM B117 corrosion test requirements and ASTM D522 cracking and loss of adhesion test requirements
- IFS polyester powder-coat electrostatically applied and thermocured. IFS finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermoset super TGIC polyester powder coat finish
- The finish meets the AAMA 2604 performance specification which includes passing a 3,000-hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds
- External hardware is corrosion resistant

OPTICS

- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one-piece optical system
- One-piece silicone gasket ensures a weatherproof seal around each individual optic
- One-piece optical cartridge system consisting of an LED engine, optics, gasket and stainless steel bezel

INSTALLATION

- Mounting options for horizontal arm, vertical tenon or traditional arm mounting available. Mounting hardware included

ELECTRICAL

- Luminaire accepts 100V through 277V, 347V or 480V input 50 Hz to 60 Hz (UNV)
- Power factor is $\geq .90$ at full load
- Dimming drivers are standard, but must contact factory to request wiring leads for purpose of external dimming controls
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is certified by UL for use at 600VAC at 90°C or higher
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CONTROLS

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project requirements vary from standard configuration

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- In addition, Viper can be specified with [SiteSync™ wireless control system](#) for reduction in energy and maintenance costs while optimizing light quality 24/7

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- DLC® (DesignLights Consortium) Qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org
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KEY DATA	
Lumen Range	5400–16,216
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Efficacy Range (LPW)	100–124
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VIPER S

SMALL VIPER LUMINAIRE

ORDERING GUIDE

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			5QM Type 5QM		
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			TC Tennis Court		

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AD3 Adapter for 2.4"-4.1" round pole	CC Custom Color	SWP SiteSync Pre-Commission ^{1,4}	
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- 4 Specify group and zone at time of order. See www.hubbellighting.com/sitesync for further details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node
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Hubbell Control Solutions — Accessories (Sold Separately)

NX Distributed Intelligence™

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wISCAPE® Lighting Control

- WIR-RME-L** On-fixture Module (7-pin or 5-pin), On / Off / Dim, Daylight Sensor with wISCAPE Radio, 110-480VAC

For additional information related to these accessories please visit www.hubbellcontrolsolutions.com. Options provided for use with integrated sensor, please view specification sheet ordering information table for details.



David H. Dunlap Associates Inc.
 ARCHITECTS * ENGINEERS * PLANNERS
 105 WEBSTER STREET UNIT 2
 HANOVER, MASSACHUSETTS 02339
 PHONE: (781) 878-0066 FAX: (781) 878-7060
 email: David@DHDunlap.com



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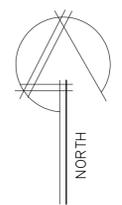
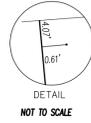
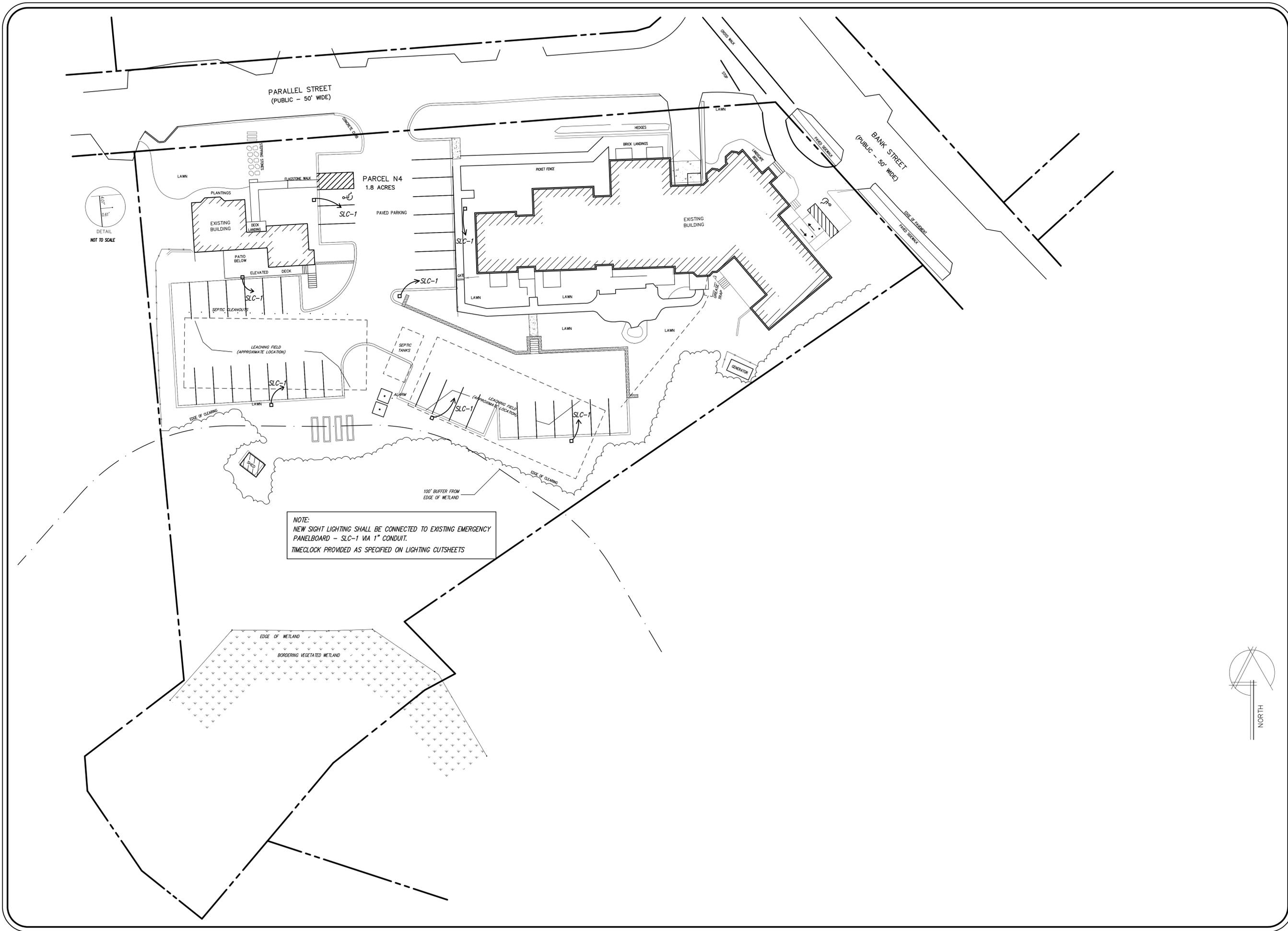
Site Electrical Plan

Royal Apartments

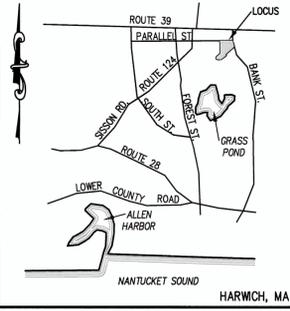
SCALE: 1" = 20'
 DATE: 1/3/20 DR. BY: MCN

50 - 3

DRAWN BY: P. VANDERBEEK; CHECKED BY: J. SPENCER; DATE: 1/27/2020; PLOT TIME: 2:41 PM



NOTE:
 NEW SIGHT LIGHTING SHALL BE CONNECTED TO EXISTING EMERGENCY
 PANELBOARD - SLC-1 VIA 1" CONDUIT.
 TIMECLOCK PROVIDED AS SPECIFIED ON LIGHTING CUTSHEETS



KEY MAP
NO SCALE

REFERENCES:

ASSESSORS MAP 41, PARCEL N4
DEED BOOK 32263, PAGE 179
PLAN BOOK 389, PAGE 98

ZONING CLASSIFICATION:
MULTI FAMILY RESIDENTIAL LOW DENSITY (MR-L)
HARWICH CENTER OVERLAY DISTRICT
HARWICH CENTER HISTORIC DISTRICT

DATUM NOTE:

ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 1988)

NOTES

1. EXISTING SEWAGE DISPOSAL SYSTEM COMPONENTS SHOWN HEREON ARE FROM ON THE GROUND "AS-BUILT" LOCATION PERFORMED BY COASTAL ENGINEERING COMPANY, INC (DEC. 2003).

UTILITY NOTES:

1. EXISTING UTILITIES, INCLUDING DRAINAGE FACILITIES, HAVE BEEN SHOWN WHENEVER POSSIBLE AND ARE SHOWN AS APPROXIMATE FROM EXISTING RECORDS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES PRIOR TO COMMENCEMENT OF ANY WORK. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND ANY EXPENSE BORNE BY THE CONTRACTOR.
2. EXISTING UTILITIES, UNDERGROUND AND OVERHEAD, MAY EXIST IN ADDITION TO THE UTILITY INFORMATION SHOWN ON THESE PLANS.
3. CONTRACTOR SHALL NOTIFY ALL UTILITIES PRIOR TO EXCAVATION.
4. CONTRACTOR SHALL NOTIFY "DIG-SAFE" AT 1-800-344-7233 PRIOR TO ANY EXCAVATION. LOCATIONS OF WATER, SEWER, ELECTRIC AND GAS ARE APPROXIMATE AND FOR REFERENCE ONLY. CONTRACTOR SHALL INSPECT SITE AND FOLLOW ALL DIG-SAFE MARKINGS.

I HEREBY CERTIFY THAT THE CONDITIONS SHOWN HEREON ARE LOCATED AS THEY EXISTED ON THE GROUND AS OF 10-24-19.

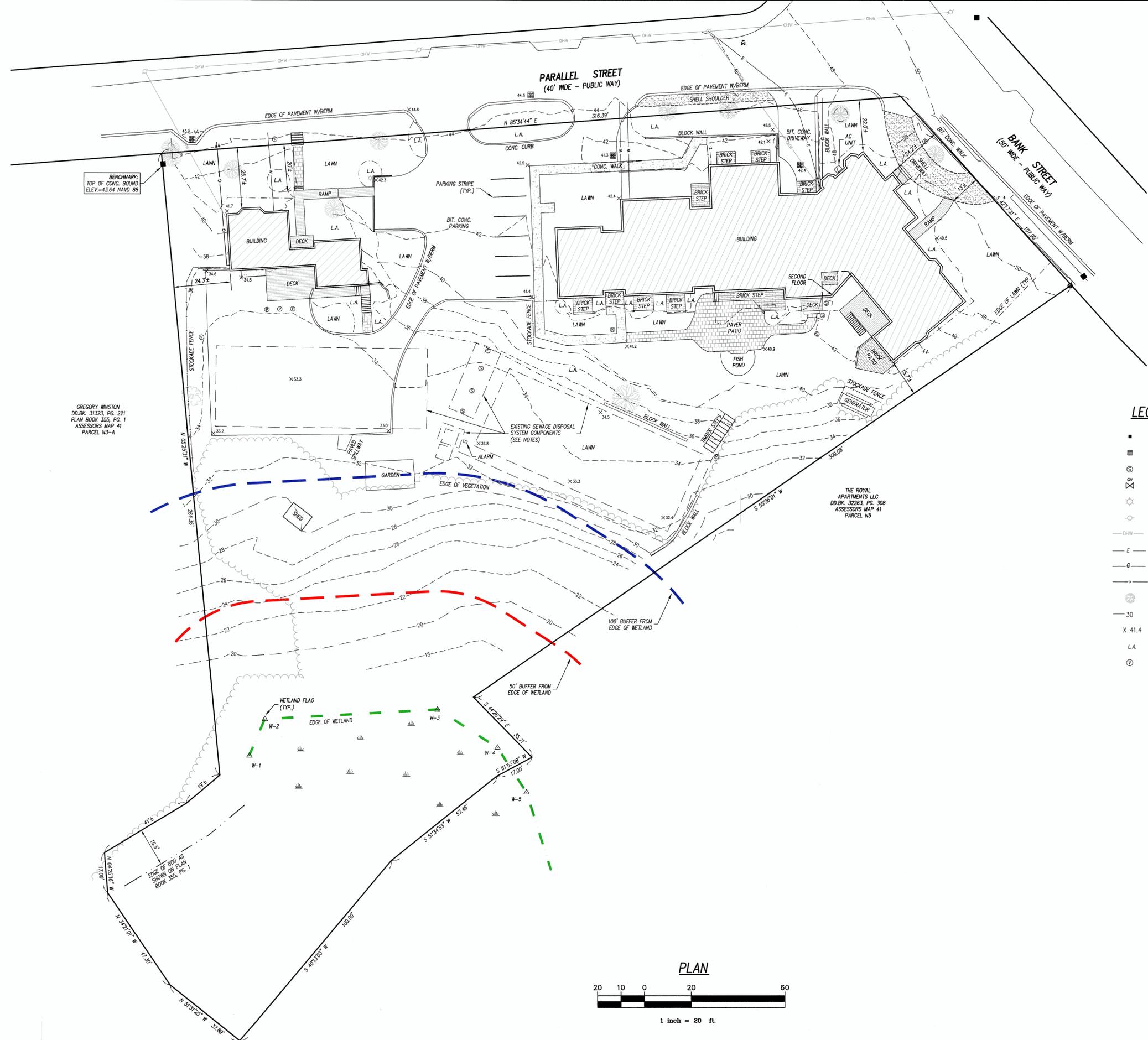
DATE Jan 6, 2020

P.L.S. 

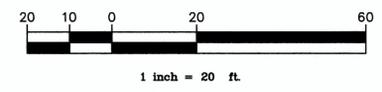


LEGEND

- BOUND
- CATCH BASIN
- ⊗ SEWER MANHOLE
- ⊗ GAS VALVE
- ⊗ LIGHTPOST
- ⊗ UTILITY POLE
- OVERHEAD UTILITY LINE
- UNDERGROUND ELECTRIC LINE
- GAS LINE
- FENCE
- ⊗ TREE
- 30 CONTOUR
- X 41.4 SPOT GRADE
- L.A. LANDSCAPED AREA
- ⊗ SEPTIC VENT



PLAN



GREGORY WINSTON
D.D.BK. 31323, PG. 221
PLAN BOOK 355, PG. 1
ASSESSORS MAP 41
PARCEL N3-A

THE ROYAL APARTMENTS LLC
D.D.BK. 32263, PG. 308
ASSESSORS MAP 41
PARCEL N5

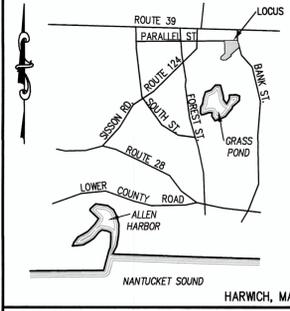
NO.	DATE	REVISION
1	1-6-2020	ADD SUPPLEMENTARY UTILITY LOCATIONS

SEAL

ROYAL APARTMENTS, LLC
328 BANK STREET
HARWICH, MA
SHEET TITLE
PLAN SHOWING EXISTING SITE CONDITIONS

SCALE	AS NOTED
DRAWING FILE	C16014-V.dwg
DATE	10-31-19
DRAWN BY	JLH
CHECKED BY	JDM

C1.11
1 OF 1 SHEETS
PROJECT NO. C16014.04



REFERENCES:
 ASSESSORS MAP 41, PARCEL N4
 DEED BOOK 32263, PAGE 179
 PLAN BOOK 389, PAGE 98

OWNER:
 ROYAL APARTMENTS LLC
 8 ALTON PLACE
 BROOKLINE, MA 02446

APPLICANT:
 ROYAL APARTMENTS LLC
 8 ALTON PLACE
 BROOKLINE, MA 02446

DATUM NOTE:
 ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 1988)

- NOTES**
- EXISTING SEWAGE DISPOSAL SYSTEM COMPONENTS SHOWN HEREON ARE FROM ON THE GROUND "AS-BUILT" LOCATION PERFORMED BY COASTAL ENGINEERING COMPANY, INC. (DEC. 2003).
 - THE EXISTING SEWAGE DISPOSAL SYSTEM HAS A PERMITTED DESIGN FLOW OF 4,773 GPD WHICH IS GREATER THAN THE PROPOSED DESIGN FLOW OF 4,730 GPD (43 BEDROOMS AT 110 GPD).
 - THE EXISTING SEWAGE DISPOSAL SYSTEM COMPONENTS BENEATH PARKING AREAS ARE DESIGNED FOR VEHICLE LOADS.

NO.	DATE	REVISION
1	1-6-2020	EDITS TO ADDRESS TOWN PLANNERS COMMENTS



ROYAL APARTMENTS, LLC
 328 BANK STREET
 HARWICH, MA

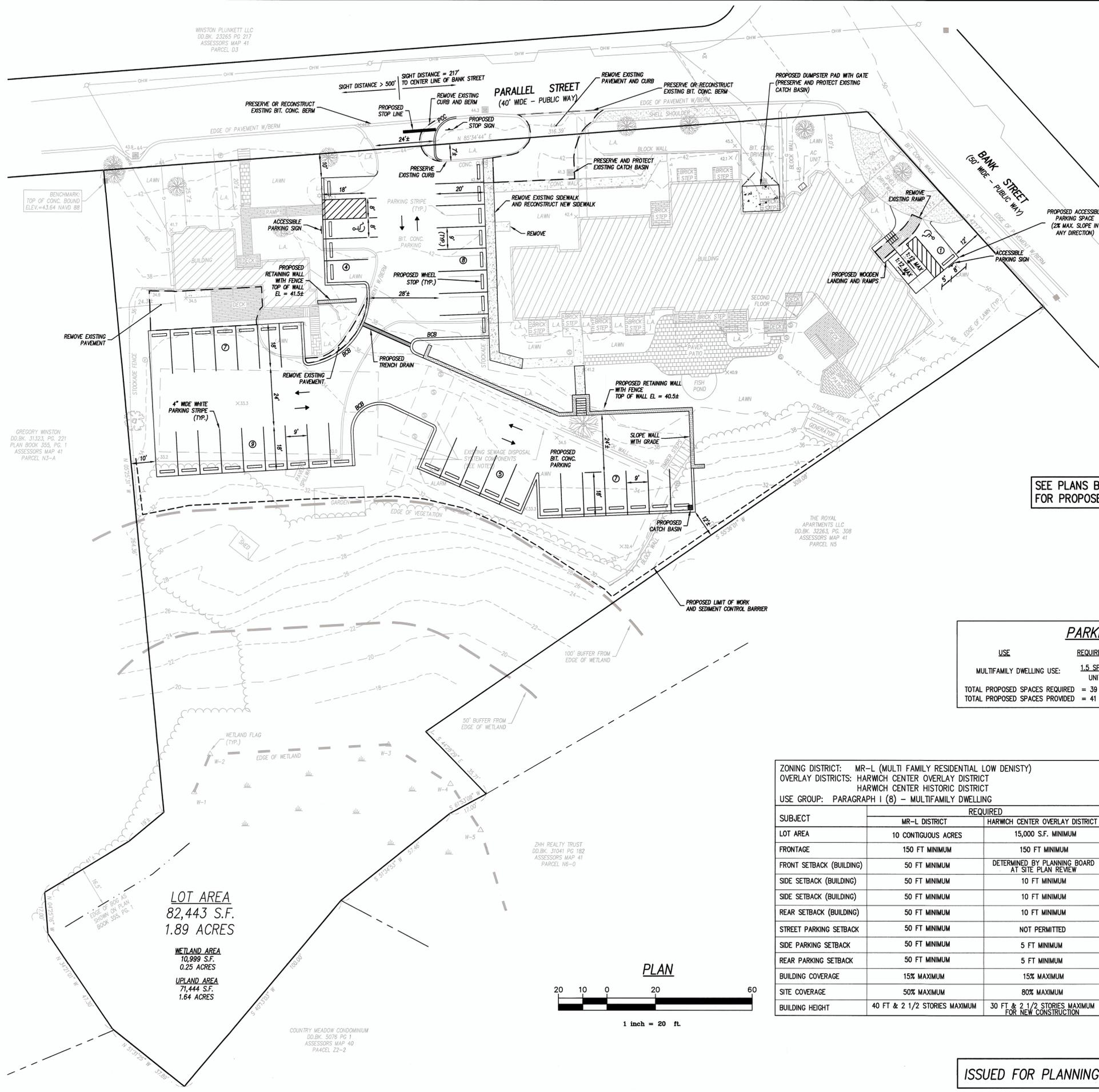
PLAN SHOWING PROPOSED SITE LAYOUT AND MATERIALS

PROJECT: ROYAL APARTMENTS, LLC
 SHEET TITLE: PLAN SHOWING PROPOSED SITE LAYOUT AND MATERIALS

SCALE: AS NOTED
 DRAWING FILE: C16014.04-C.dwg
 DATE: 1-6-20
 DRAWN BY: CEM
 CHECKED BY: DJM

C2.11

OF SHEETS
 PROJECT NO. C16014.04



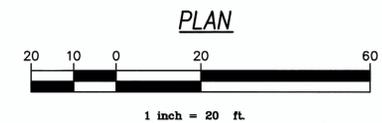
SEE PLANS BY D.H. DUNLAP ASSOCIATES, INC. FOR PROPOSED LIGHTING AND LANDSCAPING

PARKING TABLE

USE	REQUIREMENT
MULTIFAMILY DWELLING USE:	1.5 SPACE x (26 UNITS) = 39 SPACES
TOTAL PROPOSED SPACES REQUIRED	= 39 SPACES
TOTAL PROPOSED SPACES PROVIDED	= 41 SPACES (INCLUDING 2 ACCESSIBLE SPACES)

ZONING DISTRICT: MR-L (MULTI FAMILY RESIDENTIAL LOW DENISY)
 OVERLAY DISTRICTS: HARWICH CENTER OVERLAY DISTRICT
 HARWICH CENTER HISTORIC DISTRICT
 USE GROUP: PARAGRAPH 1 (B) - MULTIFAMILY DWELLING

SUBJECT	REQUIRED		EXISTING	PROPOSED
	MR-L DISTRICT	HARWICH CENTER OVERLAY DISTRICT		
LOT AREA	10 CONTIGUOUS ACRES	15,000 S.F. MINIMUM	82,443 S.F.	NO CHANGE
FRONTAGE	150 FT MINIMUM	150 FT MINIMUM	424.3 FT	NO CHANGE
FRONT SETBACK (BUILDING)	50 FT MINIMUM	DETERMINED BY PLANNING BOARD AT SITE PLAN REVIEW	22.0 FT	NO CHANGE
SIDE SETBACK (BUILDING)	50 FT MINIMUM	10 FT MINIMUM	15.7 FT (EAST)	NO CHANGE
SIDE SETBACK (BUILDING)	50 FT MINIMUM	10 FT MINIMUM	24.3 FT (WEST)	NO CHANGE
REAR SETBACK (BUILDING)	50 FT MINIMUM	10 FT MINIMUM	>250 FT	NO CHANGE
STREET PARKING SETBACK	50 FT MINIMUM	NOT PERMITTED	7.0 FT	NO CHANGE
SIDE PARKING SETBACK	50 FT MINIMUM	5 FT MINIMUM	10.0 FT	NO CHANGE
REAR PARKING SETBACK	50 FT MINIMUM	5 FT MINIMUM	182.0± FT	175.0± FT
BUILDING COVERAGE	15% MAXIMUM	15% MAXIMUM	10.7% (8,834 S.F.)	NO CHANGE
SITE COVERAGE	50% MAXIMUM	80% MAXIMUM	25.8% (21,318 S.F.)	35.6% (29,412± S.F.)
BUILDING HEIGHT	40 FT & 2 1/2 STORIES MAXIMUM	30 FT & 2 1/2 STORIES MAXIMUM FOR NEW CONSTRUCTION	EXISTING	NO CHANGE



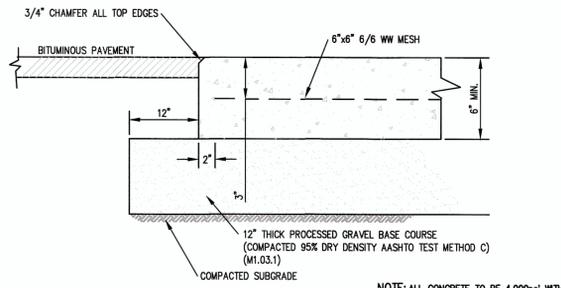
LOT AREA
 82,443 S.F.
 1.89 ACRES

WETLAND AREA
 10,989 S.F.
 0.25 ACRES

UPLAND AREA
 71,444 S.F.
 1.64 ACRES

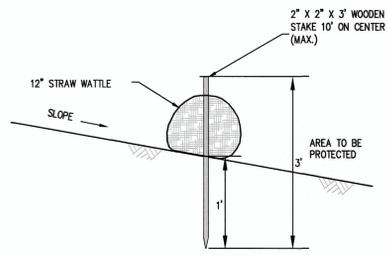
P:\S\2020\PROJECTS\16014\16014-04-C.dwg Jan 07, 2020 - 1:12pm

ISSUED FOR PLANNING BOARD AND ZBA REVIEW

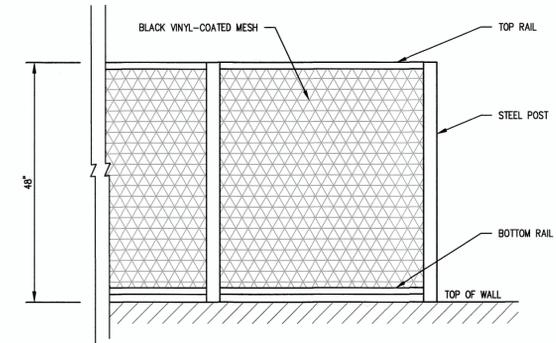


NOTE: ALL CONCRETE TO BE 4,000psi WITH MAXIMUM WATER CEMENT RATIO OF 0.45 AND AIR ENTRAINMENT.

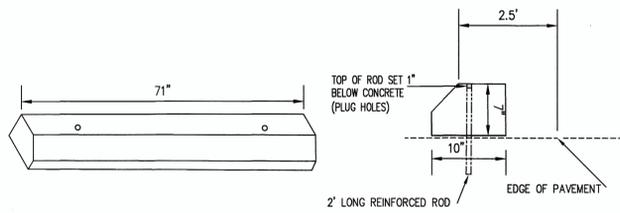
DUMPSTER PAD
NOT TO SCALE



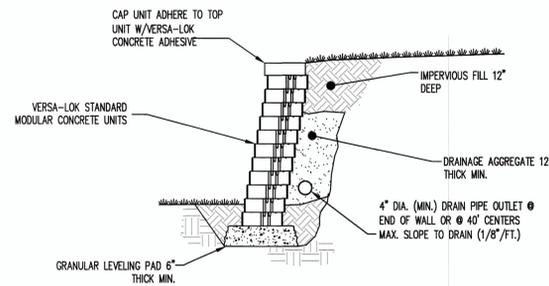
EROSION CONTROL SEDIMENT BARRIER DETAIL
NOT TO SCALE



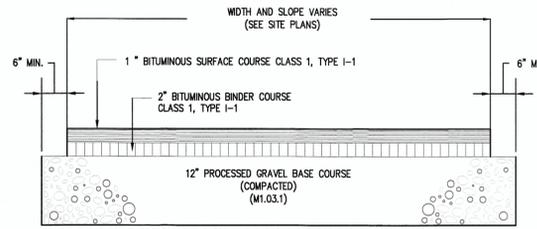
CHAIN LINK FENCE DETAIL
NOT TO SCALE



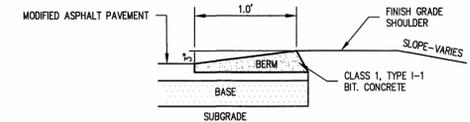
CONCRETE WHEEL STOP DETAIL
NOT TO SCALE



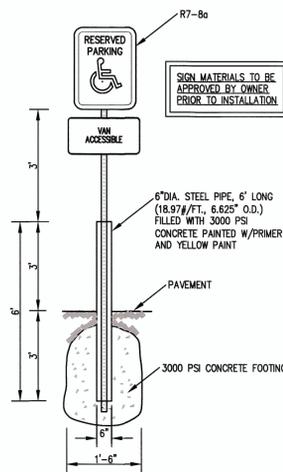
SEGMENTED BLOCK RETAINING WALL DETAIL
NOT TO SCALE



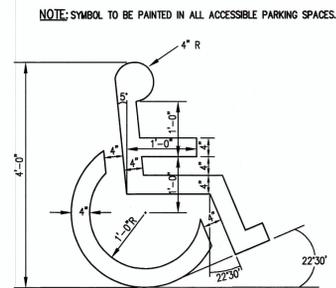
STANDARD BITUMINOUS CONCRETE PAVEMENT
NOT TO SCALE



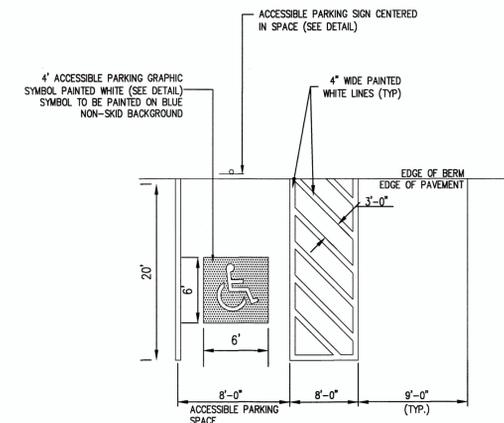
BITUMINOUS CONCRETE BERM
NOT TO SCALE



ACCESSIBLE PARKING SIGN
NOT TO SCALE



PAINTED ACCESSIBLE PARKING SYMBOL
NOT TO SCALE



ACCESSIBLE PARKING SPACE STRIPING
NOT TO SCALE

NO.	DATE	REVISION	BY
1	1-6-2020	ADDED BITUMINOUS CONCRETE BERM DETAIL	CEM



PROJECT	ROYAL APARTMENTS, LLC
LOCATION	328 BANK STREET HARWICH, MA
SHEET TITLE	SITE DETAILS
SCALE	AS NOTED
DRAWING FILE	C16014.04-C.dwg
DATE	1-2-5-19
DRAWN BY	CEM
CHECKED BY	DJM
PROJECT NO.	C16014.04

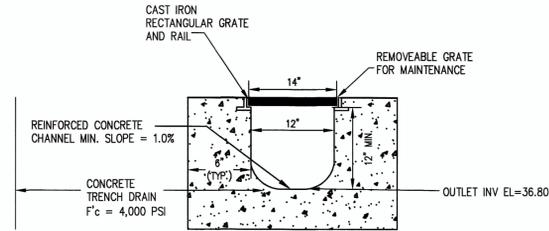
ISSUED FOR PLANNING BOARD AND ZBA REVIEW

C2.4.1

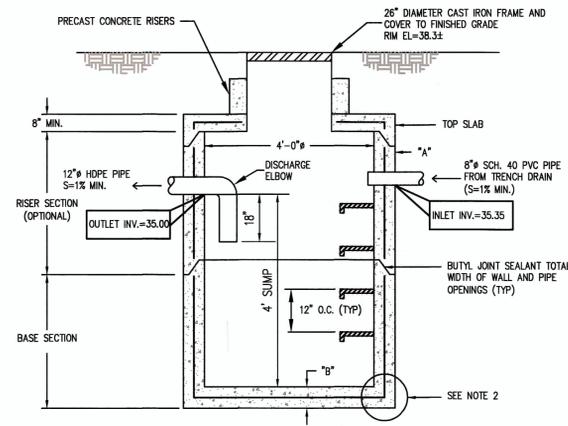
OF SHEETS

P:\DISK\PROJECTS\C16014\C16014-04-C.dwg, Jan 07, 2020 - 10:49am

Coastal Engineering Co., Inc. © 2020

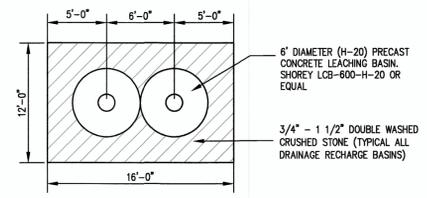


TRENCH DRAIN DETAIL
(NOT TO SCALE)



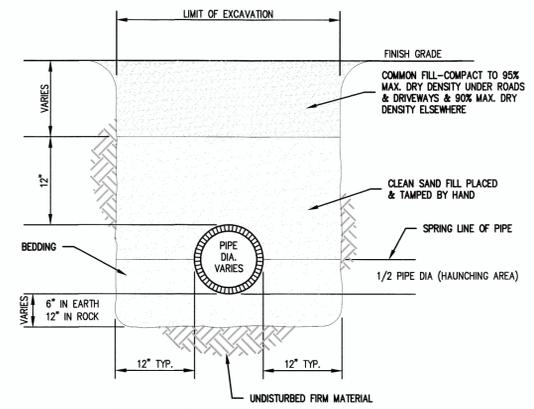
PRECAST CONCRETE DRAINAGE MANHOLE
NOT TO SCALE

- GENERAL NOTES:**
- ALL REINFORCING STEEL MUST CONFORM TO THE LATEST ASTM A185 AND/OR A615 GRADE 60. SEE TABLE 1 FOR STEEL REINFORCEMENT REQUIREMENT.
 - STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MIN. OF 0.12 SQ. IN./LINEAL FT. (BOTH WAYS).
 - CATCH BASIN SPECS. CONFORM TO THE LATEST ASTM C478 SPEC. FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS".
 - MORTAR SHALL CONFORM TO SECTION M4.02.15 OF THE MASSACHUSETTS D.P.W. STANDARD SPECS. FOR HIGHWAYS AND BRIDGES.
 - STEPS SHALL BE M.A. INDUSTRIES TYPE, STEEL REINFORCED COPOLYMER POLYPROPYLENE PLASTIC.
 - ONE POUR MONOLITHIC BASE SECTION.
 - ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS, CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
 - RED CLAY BRICK SHALL CONFORM WITH SECTION M4.05.2 CLAY BRICK OF MASSACHUSETTS D.P.W. STANDARD SPECS. FOR HIGHWAY AND BRIDGES.



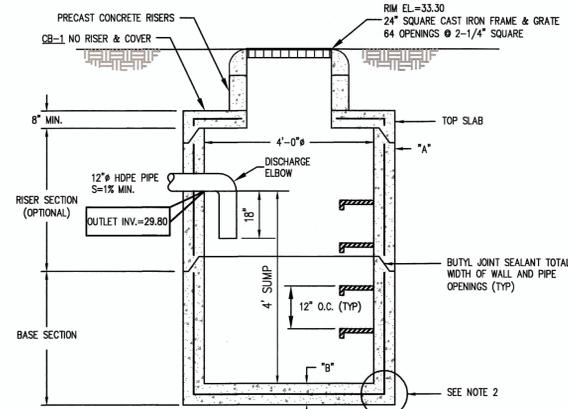
- NOTES:**
- FILTER FABRIC & TURF REINFORCEMENT SHALL BE INSTALLED IN STRICT CONFORMANCE WITH MANUFACTURERS SPECIFICATIONS.
 - THE INSTALLER SHALL ASCERTAIN THE LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATION, AND SHALL PROTECT UTILITIES WITHIN THE WORK AREA DURING CONSTRUCTION.
 - LEACHING RECHARGE BASINS SHALL REMAIN OFFLINE UNTIL THE SITE AND ALL VEGETATION HAS BEEN STABILIZED.

TYPICAL DETAILS OF STORMWATER RECHARGE BASINS
NOT TO SCALE



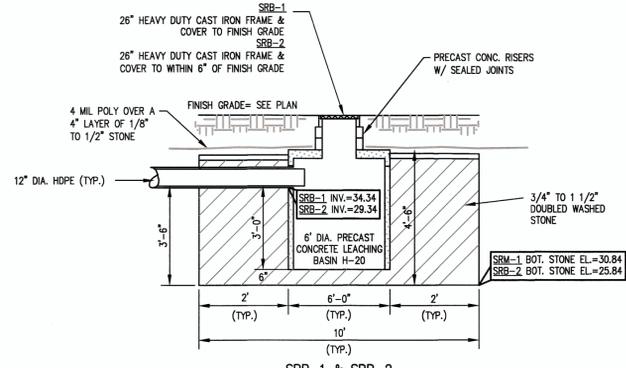
- GENERAL NOTES:**
- FINISH GRADE MATERIAL VARIES (SEE SITE PLAN)
 - COMPACT SOIL IN HAUNCHING ZONE TO 85% MAX DRY DENSITY.

UTILITY TRENCH
NOT TO SCALE



PRECAST CONCRETE CATCH BASIN
NOT TO SCALE

- GENERAL NOTES:**
- ALL REINFORCING STEEL MUST CONFORM TO THE LATEST ASTM A185 AND/OR A615 GRADE 60. SEE TABLE 1 FOR STEEL REINFORCEMENT REQUIREMENT.
 - STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MIN. OF 0.12 SQ. IN./LINEAL FT. (BOTH WAYS).
 - CATCH BASIN SPECS. CONFORM TO THE LATEST ASTM C478 SPEC. FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS".
 - MORTAR SHALL CONFORM TO SECTION M4.02.15 OF THE MASSACHUSETTS D.P.W. STANDARD SPECS. FOR HIGHWAYS AND BRIDGES.
 - STEPS SHALL BE M.A. INDUSTRIES TYPE, STEEL REINFORCED COPOLYMER POLYPROPYLENE PLASTIC.
 - ONE POUR MONOLITHIC BASE SECTION.
 - ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS, CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
 - RED CLAY BRICK SHALL CONFORM WITH SECTION M4.05.2 CLAY BRICK OF MASSACHUSETTS D.P.W. STANDARD SPECS. FOR HIGHWAY AND BRIDGES.



- NOTES:**
- DRAINAGE RECHARGE STRUCTURES TO BE PLACED IN CLEAN COARSE SAND. CONTRACTOR TO PERFORM A SOIL TEST AND NOTIFY ENGINEER FOR ON SITE INSPECTION OF SOILS PRIOR TO INSTALLATION OF ANY DRAINAGE SYSTEM COMPONENTS. STRUCTURE MAY BE PLACED ABOVE COARSE SAND LAYER PROVIDED CONTRACTOR PERFORMS A 5" SOIL REMOVAL AROUND BASIN DOWN TO THE COARSE SAND HORIZON. REMOVAL TO BE FILLED IN ACCORDANCE WITH NOTE #2 TO TOP OF STRUCTURE. (CONTRACTOR SHALL INCLUDE A UNIT COST FOR REMOVAL AND REPLACEMENT IN THE BID PRICE).
 - FILL MATERIAL FOR SYSTEMS CONSTRUCTED IN FILL SHALL BE CLEAN GRANULAR SAND, FREE OF ORGANIC MATTER AND OTHER DELETERIOUS MATERIALS. THE SAND SHALL BE GRADED SUCH THAT NOT MORE THAN 45% OF THE SAMPLE, BY WEIGHT, SHALL BE RETAINED ON THE #4 SEIVE. THE FILL SHALL NOT CONTAIN ANY MATERIAL LARGER THAN 2 INCHES. THE MATERIAL THAT PASSES THE #4 SEIVE SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

SEIVE SIZE	PERCENT PASSING
# 4	100%
# 50	10%-100%
# 100	0%-20%
# 200	0%-5%

TYPICAL END VIEW OF STORMWATER RECHARGE BASIN
NOT TO SCALE

NO.	DATE	REVISION
1	1-6-2020	NO CHANGES TO THIS SHEET



ROYAL APARTMENTS, LLC
HARWICH, MA
328 BANK STREET
UTILITY DETAILS

PROJECT: 328 BANK STREET
SHEET TITLE: UTILITY DETAILS

SCALE: AS NOTED
DRAWING FILE: C16014.04-C.dwg
DATE: 1-2-2020
DRAWN BY: CEM
CHECKED BY: DJM

C2.4.2
PROJECT NO. C16014.04

ISSUED FOR PLANNING BOARD AND ZBA REVIEW



260 Cranberry Highway
Orleans, MA 02653
508.255.6511 P 508.255.6700 F
Orleans | Sandwich | Nantucket
coastalengineeringcompany.com

TRANSMITTAL

To: Harwich Planning Board
Attn: Charleen Greenhalgh
732 Main St.
Harwich, MA 02645

Date: 1/8/2020

Project No. C16014.04

Via: 1st Class Mail Pick up Delivery Fed Ex

Phone:

Fax:

Subject: Royal Apartments LLC
328 Bank Street
Harwich, MA
Map: 41 Parcel: N4

No. of pages to follow:

Plans Copy of Letter Specifications Other

We are sending the following items:

Copies	Date	No.	Description
17		Sketch	Sketch Plan Showing Hydrant Locations

These are transmitted as checked below:

for approval for your use as requested for review & comment

Remarks: The enclosed sketch plan showing hydrant locations for the referenced project.

If you have any questions, please contact our office.

cc: Royal Apartments, LLC
David J. Michniewicz, Project Manager

By: Sarah Cole

F:\SDSKPROJ\C16000\C16014\C16014-04\Doc-Out\2020-01-07 to Planning Board\Transmittal Template-Hydrant Location.doc

NOTE: If enclosures are not as noted, please contact us at (508) 255-6511



AGENDA ITEM # II.C

To: Planning Board
From: Charleen Greenhalgh, Town Planner
Date: January 21, 2020
Re: Staff Report – Site Plan Review Special Permit

PB2019-46 Greenskies Renewable Energy, as applicant, All-Points Technology Corporation PC, as representative, seeks approval of a Site Plan Review Special Permit pursuant to the Code of the Town of Harwich §325-55, in conjunction with §325, Article XXIII to establish a Large Scale Photovoltaic Array at Cranberry Valley Golf Course, owned by the Town of Harwich. The proposal consists of both a ground-mounted array and a rooftop array on the cart barn building. The property is located at 183 Oak Street, Map 61, Parcel H1 in the R-R and W-R zoning districts.

The Planning Board opened a public hearing on this matter at the Tuesday, January 14, 2020 meeting; the hearing was immediately continued, with no testimony taken, and the hearing was continued to January 28, 2020 no earlier than at 6:30 p.m. **Certified Mail Receipts need to be submitted prior to the continuation of the hearing.**

Description

The applicant responded to a bid solicitation and was awarded the project for Photovoltaic Arrays (PV) through Cape & Vineyard Electrical Company, Inc. (CVEC) on behalf of the Town of Harwich. The applicant is now before the Planning Board for Site Plan Review. Because the standard Site Plan Review does not address the specifics of a PV development, the applicant was advised by Town Staff to utilize the requirements of §325, Article XXIII Large-Scale Ground-Mounted Photovoltaic Arrays, and more specifically §§325-140 through 148. The application was filed with the Town Clerk on December 10, 2019 with subsequent information filed on January 14, 2020 and included the following:

1. Form A – Special Permits & Site Plan Review
2. A Greenskies Renewable Energy, Cranberry Valley GC Solar, 183 Oak Street, Harwich, Massachusetts Town of Harwich Site Plan Approval Application Packet, December 2019, containing the following:
 - a. Permit Application Narrative, including: Introduction; Waiver Requests; Location Description; Proposed Work Description; and, Summary
 - b. Attachments:
 - i. A – Town of Harwich Planning Board Application Special Permit & Site Plan Review, Form A
 - ii. B – Cranberry Valley Golf Course Site plans, by All-Points Technology Corporation, dated 12/05/19
 - iii. C – Cranberry Valley Golf Course Electrical Site Plan and One-Line, by Pure Power Engineering, Inc., dated 11/04/19

- iv. D – Product Cut Sheets
 - v. E – Eversource Interconnection Application
 - vi. F – Stormwater Memorandum, by All-Points Technology Corporation, dated 12/05/19
 - vii. G – Greenskies Renewable Energy O&M Services Summary and Certificate of Insurance.
3. A set of plans entitled “Cranberry Valley Solar”, for Town of Harwich – Golf, prepared by All-Points Technology Corporation, Bradley J. Parsons, PE, dated 12/05/2019, except as noted:
- a. Sheet No. T1 - Title Sheet & Index
 - b. Sheet No. 1 of 1 - Topography Survey, prepared by WSP USA Inc., dated August 19, 2019
 - c. Sheet No. OP-1 - Overall Locus Map
 - d. Sheet No. OP-2 - Overall Locus Map Abutters List
 - e. Sheet No. SP-1 - Site and Utility Plan, revision date 01/05/20
 - f. Sheet No. GP-1 - Grading Plan
 - g. Sheet No. EC-1 - Sediment and Erosion Control Plan
 - h. Sheet No. EC-2 - Sediment and Erosion Control Plan Notes & Details
 - i. Sheet No. DN-1 - Site Details
 - j. Sheet No. DN-2 - Site Notes
4. Letter stamp dated received January 14, 2020 from Bradley J. Parsons, PE, PMP, All-Points Technology Corporation.

MGL Reference and Planning Board Jurisdiction

Pursuant to MGL c.40 A, §9 the Planning Board must, within 65 days of submission of application for a special permit hold a public hearing. The decision of the Planning Board shall take place within 90 days following the close of the public hearing. Further, a special permit issued shall require a two-thirds vote of the Board. The Planning Board has jurisdiction to the review the Restaurant, Fast Food/Take Out pursuant to the Code of the Town of Harwich §§ 325-13 (Use Table) Paragraph IV. 32A and 325-51 and the Site Plan Review Special Permit pursuant to §325-55.

The Planning Board has jurisdiction to review this application pursuant to the Code of Town of Harwich §325-55 for Site Plan Review Special Permit for the reconfiguration of an existing parking lot. Further, pursuant to §325-55.E.(1) ***“If the site plan meets the requirements of this By-law and the Planning Board Rules and Regulations Governing Subdivision of Land and Site Plan Review, as amended, the Planning Board shall approve it”***. However, **the Board cannot deny approval of a site plan for a use which is allowed by right** (not by special permit) in the district, but may impose reasonable conditions on the proposed use. Please refer to §325-55.E. for specific allowable conditions.

As noted previously, Staff recommended that the applicant utilize the provision of §§325-140 thru 148, as follows:

§325-140 Large Scale Solar Review. Prior to construction, installation or modification, Large-Scale Ground Mounted Solar Photovoltaic Installations with 250 kW or larger nameplate capacity shall undergo Large Scale Solar Review by the Planning Board as provided below. In accordance with Section 22(c) of the Massachusetts Green Communities Act, Large Scale Solar

Review shall be expedited and no decision shall be rendered more than one (1) year after the date of the application.

A. Compliance with Laws, Ordinances and Regulations.

The construction and operation of all Large-Scale Ground-Mounted Solar Photovoltaic Installations shall be consistent with all applicable local, state and federal requirements, including but not limited to all applicable safety, construction, electrical, and communications requirements. All buildings and fixtures forming part of the installation shall be constructed in accordance with the State Building Code.

No Large-Scale Ground Mounted Solar Photovoltaic Installation shall be constructed, installed or modified without first obtaining a building permit.

B. Large Scale Solar Review Application and Plan Requirements.

All applications and plans shall be filed with the Planning Board.

- 1. Two (2) copies of a properly executed application for Large Scale Solar Review, along with a filing fee of \$525.00.*
- 2. Twelve (12) copies of site plan(s), prepared by a Registered Land Surveyor licensed in the Commonwealth of Massachusetts, at a scale of one inch equals forty feet (1" = 40'), including:*
 - a. North arrow and locus map;*
 - b. Property boundaries;*
 - c. Name/Description of project;*
 - d. Topography, both existing and proposed, including proposed drainage;*
 - e. Zoning designation;*
 - f. Location of proposed structures, drives, etc., including setbacks;*
 - g. Sign(s) location(s);*
 - h. Landscaping, both existing and proposed;*
 - i. Lighting, including locations, type and wattage.*
- 3. Twelve (12) copies each of the following:*
 - a. Plans or drawings of the Large-Scale Ground-Mounted Solar Photovoltaic Installation prepared by a Registered Professional Engineer licensed in the Commonwealth of Massachusetts, showing the proposed layout of the system and any potential shading from nearby structures;*
 - b. One or three line electrical diagram detailing the Large-Scale Ground Mounted Solar Photovoltaic Installation, associated components, and electrical interconnection methods, with all National Electrical Code compliant disconnects and overcurrent devices;*
 - c. Documentation of the major system components to be used, including the PV panels, mounting system, and inverter(s);*
 - d. Documentation of actual or prospective access and control of the project site sufficient to allow for construction and operation of the proposed solar photovoltaic installation;*
 - e. An operation and maintenance plan (see also §325-141);*
 - f. Proof of liability insurance;*
 - g. Description of financial surety that satisfies §325-148;*

- h. *A public outreach plan, including project development timeline, which indicates how the project proponent will meet the required site plan review notification procedures and other wise inform abutters and the community.*

C. *Waiver of Requirements: Upon written request submitted as part of the application, the Planning Board may waive any requirements.*

§325-141 Operation & Maintenance Plan. *The project proponent shall submit a plan for the operation and maintenance of the Large-Scale Ground-Mounted Solar Photovoltaic Installation, which shall include measures for maintaining safe access to the installation, storm water controls, as well as general procedures for operational maintenance of the installation.*

§325-142 Utility Notification *No Large-Scale Ground –Mounted Solar Photovoltaic Installation shall be constructed until evidence has been given to the Planning Board that the utility company that operates the electrical grid where the installation is to be located has been informed of the installation owner or operator’s intent to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.*

§325-143. Dimension and Density Requirements.

- A. *Setbacks. Setbacks from all boundary lines shall be a minimum of fifty feet (50').*
- B. *Appurtenant Structures. All appurtenant structures to Large-Scale Ground-Mounted Solar Photovoltaic Installations shall be subject to reasonable regulations concerning the bulk and height of structures, lot area, setbacks, open space, parking and building coverage requirements. All such appurtenant structures, including but not limited to, equipment shelters, storage facilities, transformers, and substations, shall be architecturally compatible with each other. Whenever reasonable, structures should be shaded from view by vegetation and/or joined or clustered to avoid adverse visual impacts.*

§325-144. Design Standards.

- A. *Lighting. Lighting of Large-Scale Ground-Mounted Solar Photovoltaic Installations shall be consistent with local, state and federal law. Lighting of other parts of the installation, such as appurtenant structures, shall be limited to that required for safety and operational purposes, and shall be reasonably shielded from abutting properties. Where feasible, lighting of the Large-Scale Ground-Mounted Solar Photovoltaic Installation shall be directed downward and shall incorporate full cut-off fixtures to reduce light pollution.*
- B. *Signage. Signs on Large-Scale Ground-Mounted Solar Photovoltaic Installations shall comply with a Harwich Sign Code. A sign that identifies the owner and provides a 24-hour emergency contact phone number shall be required.*

Large-Scale Ground-Mounted Solar Photovoltaic Installations shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the installation.

- C. *Utility Connections. Reasonable efforts, as determined by the Planning Board, shall be made to place all utility connections for the Large-Scale Ground-Mounted Solar Photovoltaic Installation underground, depending on appropriate soil conditions, shape, and topography of the site*

and any requirements of the utility provider. Electrical transformers for utility interconnections may be above ground if required by the utility provider.

§325-145 Safety and Environmental Standards.

- A. *Emergency Services. The Large-Scale Ground-Mounted Solar Photovoltaic Installation owner or operator shall provide a copy of the project summary, electrical schematic, and site plan to the Harwich Fire Chief. Upon request, the owner or operator shall cooperate with local emergency services in developing an emergency response plan. All means of shutting down the installation shall be clearly marked. The owner or operator shall identify a responsible person for public inquiries throughout the life of the installation.*
- B. *Land Clearing, Soil Erosion and Habitat Impacts. Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the Large-Scale Ground-Mounted Solar Photovoltaic Installation or otherwise prescribed by applicable laws, regulations, and bylaws.*

§325-146 Monitoring and Maintenance.

- A. *Large-Scale Ground-Mounted Solar Photovoltaic Installation Conditions. The Large-Scale Ground Mounted Solar Photovoltaic Installation owner or operator shall maintain the facility in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures. Site access shall be maintained to a level acceptable to the Harwich Fire Chief and Emergency Medical Services. The owner or operator shall be responsible for the cost of maintaining the installation and any access road(s), unless accepted as a public way.*
- B. *Modifications. All material modifications to a Large-Scale Ground-Mounted Solar Photovoltaic Installation made after issuance of the required building permit shall require approval by the Planning Board.*

§325-147 Abandonment and Decommissioning.

- A. *Removal Requirements. Any Large-Scale Ground-Mounted Solar Photovoltaic Installation which has reached the end of its useful life or has been abandoned consistent with §325-147.B shall be removed. The owner or operator shall physically remove the installation no more than 150 days after the date of discontinued operations. The owner or operator shall notify the Large Scale Solar Review Authority by certified mail of the proposed date of discontinued operations and plans for removal. Decommissioning shall consist of:*
 - 1. *Physical removal of all Large-Scale Ground-Mounted Solar Photovoltaic Installations, structures, equipment, security barriers and transmission lines from the site.*
 - 2. *Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations.*
 - 3. *Stabilization or re-vegetation of the site as necessary to minimize erosion. The Large Scale Solar Review Authority may allow the owner or operator to leave landscaping or designated below-grade foundations in order to minimize erosion and disruption to vegetation.*
- B. *Abandonment. Absent notice of a proposed date of decommissioning or written notice of extenuating circumstances, the Large-Scale Ground-Mounted Solar Photovoltaic Installation*

shall be considered abandoned when it fails to operate for more than one (1) year without the written consent of the Planning Board. If the owner or operator of the large-Scale Ground-Mounted Solar Photovoltaic Installation fails to remove the installation in accordance with the requirements of this section within 150 days of abandonment or the proposed date of decommissioning, the town may enter the property and physically remove the installation.

§325-148 Financial Surety. *Proponents of Large-Scale Ground-Mounted Solar Photovoltaic projects shall provide a form of surety, either through escrow account, bond or otherwise, to cover the cost of removal in the event the town must remove the installation and remediate the landscape, in an amount and form determined to be reasonable by Planning Board, but in no event to exceed more than 125 percent of the cost of removal and compliance with the additional requirements set forth herein, as determined by the project proponent. Such surety will not be required for municipally- or state-owned facilities. The project proponent shall submit a fully inclusive estimate of the costs associated with removal, prepared by a qualified engineer. The amount shall include a mechanism for calculating increased removal costs due to inflation.*

Waivers: Several Waivers have been requested as follows:

1. Chapter 400, Article III Special Permits, including Site Plans, Section 400-16B. The applicant intends to follow the requirements imposed by Chapter 325, Article XXIII Large-Scale Ground-Mounted Photovoltaic Arrays, Section 325-140 Large-scale Solar Review.
2. Chapter 325, Article XXIII Large-Scale Ground-Mounted Photovoltaic Array, Section 325-140B (2)(b) with respect to the boundary survey prepared by a Registered Land Surveyor. The Facility is located over 500 feet from the nearest property line to the west, per the Town GIS. A topographic survey in the location of the Facility has been provided.
3. Chapter 325, Article XXIII Large-Scale Ground-Mounted Photovoltaic Array, Section 325-140B (3)(h) as Section 400-18 Review Procedure will still apply.
4. Chapter 325, Article XXIII Large-Scale Ground-Mounted Photovoltaic Array, Section 325-140B (3)(g) with respect to the required description of financial surety and ask that the Town approves the project under a condition that a description of financial surety that satisfies Section 325-148 will be provide prior to the submission of a building permit.

Comments from other Boards, Departments, Committees

Health, Golf, Fire and Police: No concerns.

Conservation: The applicants filed for an Administrative Review for work in the 100' buffer zone to pond and it was approved 12/12/19. Permit is good for 1 year.

Building: Building Permit Required.

Engineering: See Planning Staff Comments

Planning Staff Comments

1. The Town Engineer and Town Planner reviewed this application on December 19th, with comments sent to the application on December 23rd. All comments and questions raised at that time have been addressed.
2. As previously noted, Town Staff recommended that the applicant utilize the requirements of Chapter 325, Article XXIII Large-Scale Ground-Mounted Photovoltaic Array for their submittal. This section of the bylaw lends itself much more closely with the needs and review demanded by this type of development.
3. At the May 2019 Annual Town Meeting, the Town voted to approve Article 33:

ARTICLE 33: To see if the Town will authorize the Board of Selectmen to enter into long term leases, licenses, agreements, or other contractual agreements on behalf of the Town, subject to such terms and conditions as the Board of Selectmen shall deem to be in the best interest of the Town, for all or part of any of the following Town-owned properties including: Cranberry Valley Golf Course (grounds and cart barn), for the purposes of developing, sponsoring, administering, installing, operating, and maintaining solar photovoltaic energy systems and supplying solar energy, and further to authorize the Board of Selectmen and Town Administrator to take such actions as may be necessary under Massachusetts law to effectuate said agreements; and to act fully thereon.

4. The site went through a full site plan review in 2018 and at that time solar was anticipated on the roof of the cart barn.
5. The requested waivers are appropriate.
6. Standard conditions are recommended.

BOARD VOTE

Continuance

If the Board will require additional information or wants to take the matter under advisement the following motion is recommended:

Move to continue the hearing for **PB2019-46 Greenskies Renewable Energy**, to no earlier than 6:30 pm on _____ (*Feb. 11, Feb. 25, March 10*) for the following reason(s): *Need to provide reasons for the continuance...additional information.*

IF BOARD IS READY TO RENDER A DECISION, THE FOLLOWING MOTIONS ARE PROVIDED:

I. Vote to Close the Public Hearing

Vote to Approve Waivers

To approve the following waivers:

1. Waiver from provision of §400-16B, and in the alternative to allow the plan to follow requirements of Chapter 325, Article XXIII Large-Scale Ground-Mounted Photovoltaic Arrays, §325-140 Large-scale Solar Review.
2. Waiver from provision of §325-140B (2)(b) with respect to the boundary survey prepared by a Registered Land Surveyor as the Facility is located over 500 feet from the nearest property line to the west, per the Town GIS.
3. Waiver from §325-140B (3)(h) as §400-18 Review Procedure was followed.
4. Waiver from §325-140B (3)(g) with respect to the required description of financial surety, which will become a condition of approval to satisfy the requirements of §325-148.

Vote to Adopt Proposed Findings for the Site Plan Special Permit:

To adopt the following finding of fact:

1. The parcel is located within the RR zoning district and is within the boundaries of the Cranberry Valley Golf Course.
2. The nearest home is over 1,000 feet away and would not be affected by the proposal.
3. The 2019 Annual Town Meeting approved the use of the land and the cart barn for this purpose.

4. This area of the golf course went through a full site plan review in 2018, which anticipated solar on the roof of the cart barn.

Vote on Site Plan Review Special Permit: (*Please Note:* An affirmative vote by at least five Planning Board members is required.)

To **approve with conditions and waivers** case number PB2019-46 Greenskies Renewable Energy for a Site Plan Review Special Permit pursuant to the Code of the Town of Harwich §325-55, in conjunction with §325, Article XXIII to establish a Large Scale Photovoltaic Array at Cranberry Valley Golf Course consisting of both a ground-mounted array and a rooftop array on the cart barn building for property located at 183 Oak Street, Map 61, Parcel H1 in the R-R and W-R zoning districts. The decision is based on the aforementioned findings of fact, the fact that the application meets the necessary requirements and criteria for approval pursuant to the Code of Town of Harwich. The following conditions are imposed:

1. Prior to the issuance of a Building Permit, the applicant shall submit to the Planning Board for review and approval the necessary documentation to satisfy the requirements of §325-148 Financial Surety.
2. This decision shall be recorded at the Barnstable Registry of Deeds.
3. Conformance with all review procedure requirements outlined pursuant to §400-18.G Inspection, certificate of completion and as-built plan, of the Code of the Town of Harwich shall be met.

Alternatively, the Planning Board may approve the site plan special permit with or without additional conditions.



Via Hand and Electronic Delivery

**Town of Harwich
Planning Board
Town Hall
732 Main Street
Harwich, MA 02645**

APT Project No.: MA599120

**Attn: Charleen Greenhalgh
Town Planner**

**Re: Site Plan Approval
Proposed Solar Facility
183 Oak Street
Harwich, Massachusetts**

Dear Ms. Greenhalgh:

On behalf of the Applicant, Greenskies Renewable Energy, All-Points Technology Corporation, P.C. ("APT") is pleased to submit the following responses to the comments provided via email from the Town Engineer and Town Planner on behalf of the Town of Harwich on December 23, 2019.

Town Comments:

1. The Topography Survey plan needs to be stamped by a Registered Land Surveyor.

Response: The Topography Survey plan has been stamped by a Registered Land Surveyor, a copy of which is attached.

2. We did not see any proposed lighting for these facilities. We just wanted to clarify that no lighting is proposed.

Response: No lighting is proposed for these facilities.

3. On the Site & Utility Plan (Sheet SP-1), there is a note stating "Exist. Lighting Protection to Remain", should this read "Lighting" rather than "Lighting"?

Response: The note callout on Sheet SP-1 has been updated to read "Exist. Vent Pipe to Remain (Lightning protection for irrigation system)". The existing vent pipes are associated with lightning protection for the irrigation line. An updated SP-1 reflecting the change has been attached.

4. With regard to §325-148 – Financial Surety, how did we leave this? If you are not going to provide the information now, a waiver should be submitted indicating that it will be filed prior to the submission of a building permit (or similar language) and then this can be a condition of approval by the Planning Board.

Response: Greenskies Renewable Energy ("GRE" or the "Applicant") respectfully requests a waiver from Chapter 325, Article XXIII Large-Scale Ground-Mounted Photovoltaic Arrays, Section 325-140B (3)(g) with respect to the required description of financial surety and ask that the Town approves the project under a condition that a description of financial surety that satisfies Section 325-148 will be provided prior to the submission of a building permit.

In addition to the above provided responses to the Town comments, APT asks for a continuance for the January 14, 2020 meeting for the said project, as the abutter notifications were not delivered, to the next meeting to be held on January 28, 2020.

Thank you for your consideration of this application and if you have any questions or require further information, please contact me by telephone at (860) 663-1697 ext. 208 or via email at bparsons@allpointstech.com.

ALL-POINTS TECHNOLOGY CORPORATION, P.C.

567 VAUXHALL STREET EXTENSION · SUITE 311 · WATERFORD, CT 06385 · PHONE 860-663-1697

Sincerely,

A handwritten signature in blue ink, appearing to read 'BJP', with a long horizontal line extending to the right.

Bradley J. Parsons, PE, PMP
Manager Civil Engineering

cc: Siva Thashnath, Greenskies Renewable Energy

Enclosures:

Signed Topographic Survey for Cranberry Valley Golf Course
Cranberry Valley Solar Site & Utility Plan SP-1 Rev1

Town of Harwich Site Plan Approval Application

Greenskies Renewable Energy

Cranberry Valley GC Solar

***183 Oak Street
Harwich, Massachusetts***

Prepared for: **Greenskies Renewable Energy**
180 Johnson Street
Middletown, CT 06457

Prepared by: **All-Points Technology Corp., P.C.**
3 Saddlebrook Drive
Killingworth, Connecticut 06419

December 2019

Table of Contents

Permit Application Narrative.....1

- Introduction.....1
- Waiver Requests.....1
- Location Description.....2
- Proposed Work Description.....2
- Summary.....3

Attachments

Attachment	Description
A	Town of Harwich Planning Board Application Special Permit & Site Plan Review, Form A
B	Cranberry Valley Golf Course Site Plans, by All-Points Technology Corporation, dated 12/05/19
C	Cranberry Valley Golf Course Electrical Site Plan and One-Line, by Pure Power Engineering, Inc., dated 11/04/19
D	Product Cut Sheets
E	Eversource Interconnection Application
F	Stormwater Memorandum, by All-Points Technology Corporation, dated 12/05/19
G	Greenskies Renewable Energy O&M Services Summary and Certificate of Insurance

Permit Application Narrative

This document is submitted in accordance with the Town of Harwich Zoning Ordinance, as amended.

Introduction

Greenskies Renewable Energy (“GRE” or the “Applicant”) proposes construction of a large-scale solar facility at the Cranberry Valley Golf Course, located at 183 Oak Street, Harwich, Massachusetts (the “Subject Property”). The Subject Property is a ±182.48-acre parcel owned by the Town of Harwich (“Town”). The proposed solar facility (“Facility”) includes the installation of ground and rooftop-mounted photovoltaic solar arrays that would generate 252.73kW DC and 29.63 kW DC, respectively of renewable clean power. The Facility would be installed on and to the north of the recently installed golf cart barn. Access to the Facility will be over the existing golf course driveway from Oak Street. Eversource will perform utility upgrades from Oak Street to the electrical interconnection point west of the maintenance building near the irrigation pond.

The Town has for several years supported the development of solar facilities. At the Annual Town Meeting on May 6, 2019, the Board of Selectmen was authorized to enter into agreements for the development of solar facilities at several Town-owned properties, including the grounds and cart barn of Cranberry Valley Golf Course.

The following sections of this narrative and the Site Plan Review application, Attachment A, describe the Site and proposed work.

Waiver Requests

GRE respectfully requests the following waivers from the Planning Board:

Waiver from Chapter 400, Article III Special Permits, including Site Plans, Section 400-16B. The applicant intends to follow the requirements imposed by Chapter 325, Article XXIII Large-Scale Ground-Mounted Photovoltaic Arrays, Section 325-140 Large-scale Solar Review.

Waiver from Chapter 325, Article XXIII Large-Scale Ground-Mounted Photovoltaic Arrays, Section 325-140B (2)(b) with respect to the boundary survey prepared by a Registered Land Surveyor. The Facility is located over 500 feet from the nearest property line to the west, per the Town GIS. A topographic survey in the location of the Facility has been provided.

Waiver from Chapter 325, Article XXIII Large-Scale Ground-Mounted Photovoltaic Arrays, Section 325-140B (3)(h) as Section 400-18 Review Procedure will still apply.

Location Description

The Subject Property, owned by the Town, is located at 183 Oak Street in Harwich, Massachusetts. The ±182.48-acre parcel, designated as parcel 61/H1-0-E by the Harwich Assessor's Office, is zoned Residential Rural Estate.

District	Min Lot Area (SF)	Min. Lot Width (FT)	Min. Yards front/side/rear (FT)	Max. Coverage by Bldgs.	Max. Height of Buildings (FT)
RR	40,000	150	25/20/20	25%	30

Access to the proposed Facility would be from Oak Street along the existing paved driveway to the south of the existing maintenance building.

Wetlands are located near the Facility, there is a vernal pool to the east and the irrigation pond to the west. The Facility will be constructed beyond the 100' buffer of the vernal pool to the east but will be within the 100' buffer of the irrigation pond to the west. As such, an Administrative Review Application will be submitted to the Town Conservation Department.

Proposed Work Description

The Facility includes the installation of photo voltaic solar arrays that would generate 282.36 kW DC (210 kW AC) of renewable clean power. The ground mounted portion of the Facility is 252.73kW DC (648 panels) and the roof mounted portion is 29.63 kW DC (76 panels). See Attachments B & C, Site Plans by All-Points Technology Corporation, P.C. and Electrical Site Plan and One-line by Pure Power Engineering, Inc. The Facility will utilize RBI Solar Fixed Tilt Ground Mounted Systems, 390 Watt panels by United Renewable Energy Co., and 3-Phase transformerless commercial string inverters by Yaskawa Solectria Solar. See Attachment D.

GRE has submitted the electrical plans and interconnection application to Eversource and required system upgrades will be coordinated with Eversource. See Attachment E, Eversource Interconnection Application.

The Facility will be constructed within an area of the golf course that has been previously cleared. There will be some minor clearing and grading along the northern portion of the Facility for the installation of fencing and modules. Associated work activities are anticipated to occupy ±1.26 acres, as generally defined by the limit of the proposed 6-foot high security fence.

The proposed solar panels will be installed on a ground mounted racking system on posts driven into the ground. Limited clearing and grading will be required for development of the Facility. Any areas of soil disturbance will be seeded with a native wildflower and grass mix. Post-development runoff conditions and drainage patterns will mimic pre-development conditions. As a result, no stormwater analysis or management was deemed to be required for the Project. See Stormwater Memorandum, Attachment F.

An erosion and sedimentation control plan will be implemented to prevent the release of sediments during construction activities. The plan will incorporate Best Management Practices (“BMPs”) specified by the MADEP¹ and the U.S. Environmental Protection Agency² and comply with the requirements of the NPDES General Permit for Storm Water Discharges for Construction Activities. The program Areas of exposed soil will be kept to a minimum and a permanent vegetative cover or other forms of stabilization will be established as soon as practicable. Erosion and sedimentation controls will be maintained until areas of exposed soil are permanently stabilized. Additional details of the proposed Project are depicted on Project Site Plans.

Work proposed includes the following:

- ▶ Installing erosion control barriers;
- ▶ Minor grading and vegetation clearing for proposed solar facility;
- ▶ Installation of post driven ground mounted solar panel foundations and racking system;
- ▶ Excavating for underground utility installation; and
- ▶ Establishment of permanent vegetation with seeding and mulching of all disturbed areas.

GRE will be the owner and operator of the Facility. The GRE Operations & Maintenance team monitors and maintains all GRE facilities 24/7. Preventative maintenance is performed twice each year. GRE will coordinate with the Town Fire Department prior to the Facility being operational to ensure that they have the information required in case of an emergency. GRE is also providing the Town with proof of insurance. See Attachment G, O&M Services & Certificate of Insurance.

GRE will commit to providing the financial surety required by Article XXIII, Large-Scale Ground-Mounted Photovoltaic Arrays Section 325-148.

Summary

The Applicant is proposing to construct a solar photovoltaic Facility providing a total of 282.36 kW DC (210 kW AC) on the Cranberry Valley Golf Course at 183 Oak Street in Harwich, Massachusetts. The Town has supported the development of solar renewable energy within the Town, and specifically identified the proposed Facility location for consideration. The proposed design, construction, operation and maintenance plans are consistent with local, state and federal requirements. The Facility will benefit the Town and its residents. Therefore, the Applicant respectfully requests that the Planning Board approve the proposed Facility.

◆
¹ MADEP, 1993. *Massachusetts Nonpoint Source Management Manual, The Manual: A Guidance Document for Municipal Officials.*

² United States Environmental Protection Agency, 1992. *Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices.*

Attachment A

Town of Harwich Planning Board Application Special Permit & Site Plan Review, Form A

TOWN OF HARWICH PLANNING DEPARTMENT



**PLANNING BOARD APPLICATION
SPECIAL PERMITS & SITE PLAN REVIEW FORM A**

TO THE TOWN CLERK, HARWICH, MA DATE _____

PART A – APPLICANT INFORMATION/AUTHORIZATION

Applicant Name(s)	Greenskies Renewable Energy
Representative/Organization (Who will serve as the primary contact responsible for facilitating this application?)	All-Points Technology Corporation, P.C. Bradley J. Parsons, P.E. bparsons@allpointstech.com 860-552-2046
Mailing address	c/o Siva Thashnath, 180 Johnson Street
Town, ST, Zip	Middletown, CT 06457
Phone	860-398-5408 x313
Fax	
E-mail	sthashnath@greenskies.com

The applicant is one of the following: *(please check appropriate box)*

- Owner
 Prospective Buyer*
 Representative for Owner/Tenant/Buyer*
 Tenant*
 Other* Solar Developer/Owner

***Written permission of the owner(s) and a municipal lien certificate (where applicable) is required.**

All other forms and information as required in the Harwich Code Chapter 400, Rules and Regulations, shall be submitted as part of this application.

Authorization

Your signature hereby asserts, to the best of your knowledge, that the information submitted in this application is true and accurate; that you agree to fully comply with the Town of Harwich Zoning By-laws and the terms and conditions of any approval of this application by the Planning Board; and authorizes the Members of the Planning Board and/or Town Staff to visit and enter upon the subject property for the duration of the consideration of this application.

Applicant _____

Owner(s) – Authorization must accompany application if the owner is not the applicant.

Official use only:

PLANNING DEPARTMENT	TOWN CLERK
---------------------	------------

Case # _____

PART B – PROJECT LOCATION

Legal Street Address	183 Oak Street	Village/Zip Code	02645
Title Book/Page or L.C.C. #	2251-157		
Map(s) / Parcel(s)	61/H1-0E		
Zoning & Overlay Districts	RR & WR	*Historic?	N/A
Frontage (linear feet)	± 77 feet		
Total land area (s.f.)	+/-7,948,830 (182.48ac)		
Upland (s.f.)	Request Waiver	Wetlands (s.f.)	Request Waiver

PART C – PROJECT DESCRIPTION

Existing Floor Area in Sq. Ft	Gross: No Change	Net:
Proposed Floor Area in Sq. Ft	Gross: None	Net:
Change in Sq. Ft + / -	Gross: No Change	Net:
Existing # of parking spaces	No Change	Proposed # of parking spaces: No Change
Existing Use(s)	Golf Course	
Proposed Use(s) <i>Attach a separate narrative if necessary.</i>	±43,233 s.f. of ground solar proposed ±1,676 s.f. of rooftop solar on existing cart building	

The undersign hereby files an application with the Harwich Planning Board for the following special permits as proposed under the provisions of the Harwich Zoning Code: **(check all that apply)**

Site Plan Review § 325-55:

- Any floor area expansion of any structure or expansion of exterior space, other than parking, serving any of the following: commercial, industrial, multi-family or educational use or personal wireless service facility or the creation of a drive-up or drive-through window
- Expansion or reconfiguration of an existing parking lot and/or driveway(s) serving said parking lot.
- Establishment of any new commercial, industrial, multi-family, educational, fast food/take out restaurant or personal wireless service facility.
- Establishment of any new retail use(s) in the Industrial (IL) Zone.
- Waiver of Site Plan § 325-55.F

Article V, Use Regulations:

- Paragraph____, sub-paragraph #____
- Paragraph____, sub-paragraph #____
- Paragraph____, sub-paragraph #____, supplemental regulation #____ § 325-14

Article X, Special Permits:

- Structures w/ gross floor area of 7,500+ s.f. § 325-51
- Structures requiring 20 or more new parking spaces § 325-51
- Accessory Apt./Shared Elderly Housing § 325-51.H
- Mixed Use § 325-51.M
- Drinking Water Resource Protection § 325-51.C
- Two Family § 325-51.N
- Village Commercial, Harwich Port § 325-51.L
- *Harwich Center Overlay § 325-51.O
- Signage § 325-27.F Additional Cluster, Excess SF, Non-entry Facades

Other Special Permits:

- Six Ponds Special District - Article XVI
- Wind Energy Systems - Article XVIII
- Large Scale Wind Generation – Article XIX
- Other (i.e. Alternate Access § 325-18.P, Special Cases § 325-44.B) Large-Scale Ground Mounted Photovoltaic Arrays (325-140)
- Repetitive Petition (MGL Ch 40A, §16): Proposed project evolved from a previously denied plan submitted to the Planning Board on _____ Year/Case # _____

**Note: Projects within the Harwich Center Overlay District may also be within the Harwich Center Historic District. This requires separate filing with the Historic District and Historical Commission. Please inquire for forms and instructions.*

Attachment B

Cranberry Valley Golf Course Site Plans, by All-Points Technology Corporation, dated 12/05/19

GREENSKIES RENEWABLE ENERGY, LLC

"CRANBERRY VALLEY SOLAR"

**183 OAK STREET
HARWICH, MA 06245**



180 JOHNSON STREET
MIDDLETOWN, CT 06457



3 SADDLEBROOK DRIVE PHONE: (860)-463-1697
KILLINGWORTH, CT 06419 FAX: (860)-663-0935
WWW.ALLPOINTSTECH.COM



5 MARINE VIEW PLAZA, SUITE 301
HOBOKEN, NJ 07030
(201) 687-9975 x102
www.PurePower.com

PERMIT SET

NO	DATE	REVISION
0	12/05/19	FOR REVIEW: BJP
1		
2		
3		
4		
5		
6		

DESIGN PROFESSIONAL OF RECORD

PROF: BRADLEY J. PARSONS, P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 3 SADDLEBROOK DRIVE
KILLINGWORTH, CT 06419

OWNER: TOWN OF HARWICH - GOLF
ADDRESS: 732 MAIN STREET
HARWICH, MA 02645

CRANBERRY VALLEY SOLAR

SITE 183 OAK STREET
ADDRESS: HARWICH, MA 06245

APT FILING NUMBER: CT599120

DRAWN BY: JT
DATE: 12/05/19 CHECKED BY: BJP

SHEET TITLE:

TITLE SHEET & INDEX

SHEET NUMBER:

T-1



LIST OF DRAWINGS

- T-1 TITLE SHEET & INDEX
- 1 OF 1 EXISTING CONDITIONS PLAN PROVIDED BY WSP USA INC.
- OP-1 OVERALL LOCUS MAP
- OP-2 OVERALL LOCUS MAP ABUTTERS LIST
- SP-1 SITE & UTILITY PLAN
- GP-1 GRADING PLAN
- EC-1 SEDIMENTATION & EROSION CONTROL PLAN
- EC-2 SEDIMENTATION & EROSION CONTROL NOTES & DETAILS
- DN-1 SITE DETAILS
- DN-2 SITE NOTES

SITE INFORMATION

SITE NAME: "CRANBERRY VALLEY SOLAR"
LOCATION: 183 OAK STREET
HARWICH, MA 06245

SITE TYPE/DESCRIPTION: ADD (1) GROUND MOUNTED SOLAR PANEL ARRAY W/ ASSOCIATED EQUIPMENT.

PROPERTY OWNER: TOWN OF HARWICH - GOLF
732 MAIN STREET
HARWICH, MA 02645

DEVELOPER: GREENSKIES RENEWABLE ENERGY, LLC
180 JOHNSON STREET
MIDDLETOWN, CT 06457

ELECTRICAL ENGINEER: PURE POWER ENGINEERING
5 MARINE VIEW PLAZA, SUITE 301
HOBOKEN, NJ 07030

CIVIL ENGINEER CONTACT: BRADLEY J. PARSONS, P.E.
(860) 663-1697 x208

MBLU: 61/H1-0-E
ZONE: RESIDENTIAL - RURAL ESTATE
EXISTING LAND USE: GOLF COURSE
PROPOSED LAND USE: GOLF COURSE

TOTAL SITE ACERAGE: 182.48± AC.
TOTAL DISTURBED AREA: 1.26± AC.

APPROX. VOLUME OF CUT: 214± CY
APPROX. VOLUME OF FILL: 212± CY
APPROX. NET VOLUME: 2± CY OF CUT

USGS TOPOGRAPHIC MAP



SCALE: 1" = 2000± SOURCE: USGS 7.5 HARWICH QUADRANGLE, MA 2018



LEGEND

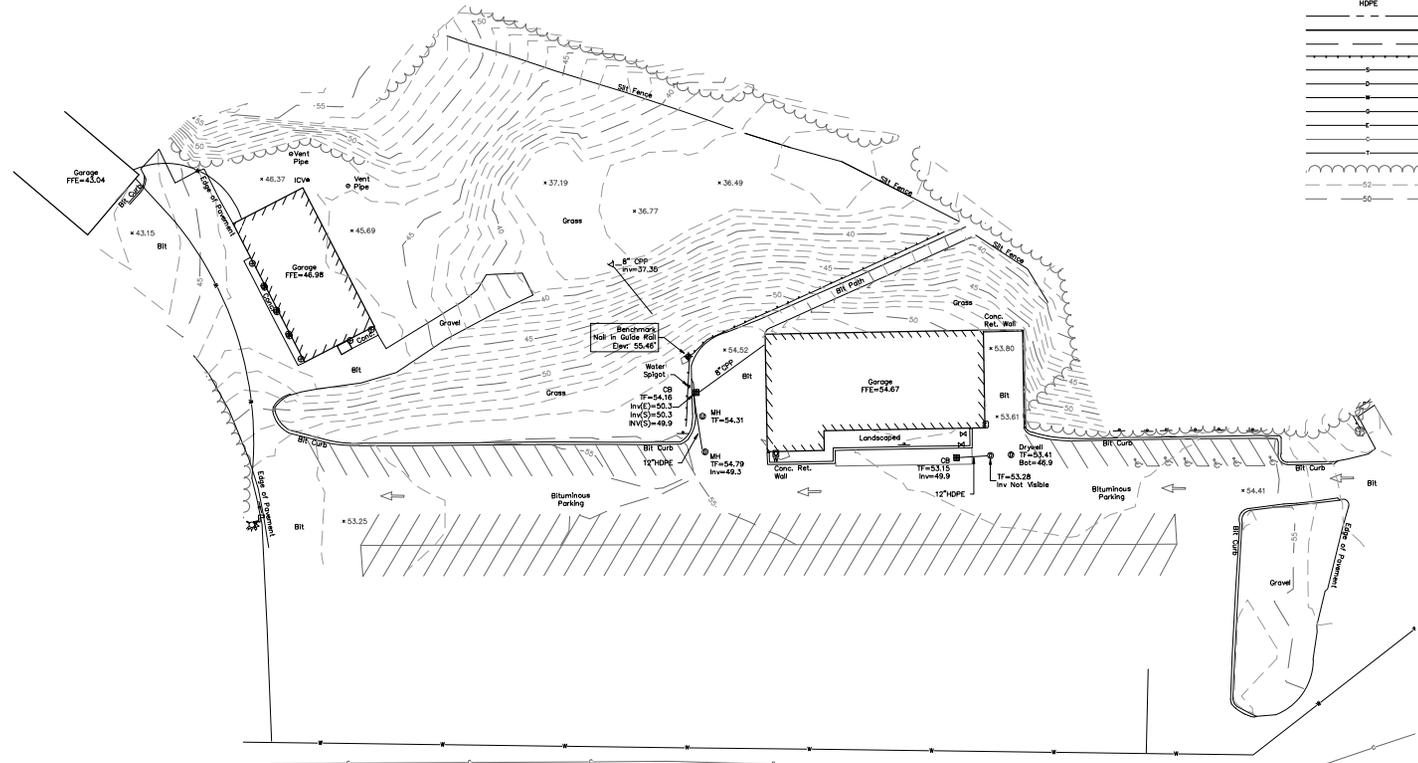
- ROUND CATCH BASIN
- CATCH BASIN
- < CULVERT
- ⊙ DRAIN MANHOLE
- ⊙ ELECTRIC METER
- ⊙ WATER HANDHOLE
- ⊙ WATER GATE
- ⊙ FIRE HYDRANT
- ⊙ IRRIGATION CONTROL VALVE
- ⊙ SHRUB
- ⊙ SIGN (SINGLE POSTED)
- ⊙ MAILBOX
- ⊙ BOLLARD
- ⊙ HANDICAP PARKING
- ⊙ BENCHMARK
- ⊙ TOP OF FRAME
- TF CORRUGATED PLASTIC PIPE
- HDPE HIGH DENSITY POLYETHYLENE
- ABUTTERS LOT LINE
- PROPERTY LINE
- EASEMENT
- WOOD GUARDRAIL
- SEWER LINE
- DRAIN LINE
- WATER LINE
- GAS LINE
- UNDERGROUND ELECTRIC
- UNDERGROUND CABLE
- TELEPHONE LINE
- TREE LINE
- INTERMEDIATE CONTOURS
- INDEX CONTOURS



LOCUS MAP (N.T.S.)

NOTES

1. THIS PLAN WAS PREPARED FROM AN ON THE GROUND SURVEY CONDUCTED BY WSP IN AUGUST OF 2019.
2. THE HORIZONTAL DATUM SHOWN HEREON REFERENCE THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM 1983 AND WAS ESTABLISHED UTILIZING RTK GPS SURVEY TECHNIQUES REFERENCE THE MACTORS GPS NETWORK.
3. THE VERTICAL DATUM SHOWN HEREON REFERENCE NAVD83 AND WAS ESTABLISHED UTILIZING RTK GPS SURVEY TECHNIQUES REFERENCE THE MACTORS GPS NETWORK.
4. THE LOCATION OF THE UTILITIES AS SHOWN HEREON HAVE BEEN COMPILED FROM VISIBLE STRUCTURES AND INFORMATION OBTAINED FROM VARIOUS SOURCES. THE ACTUAL LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES SHALL BE CONSIDERED APPROXIMATE AND SHALL BE VERIFIED BY THE OWNER PRIOR TO ANY CONSTRUCTION. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED.

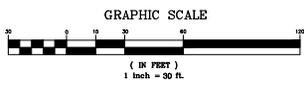


REVISION	DATE	DESCRIPTION

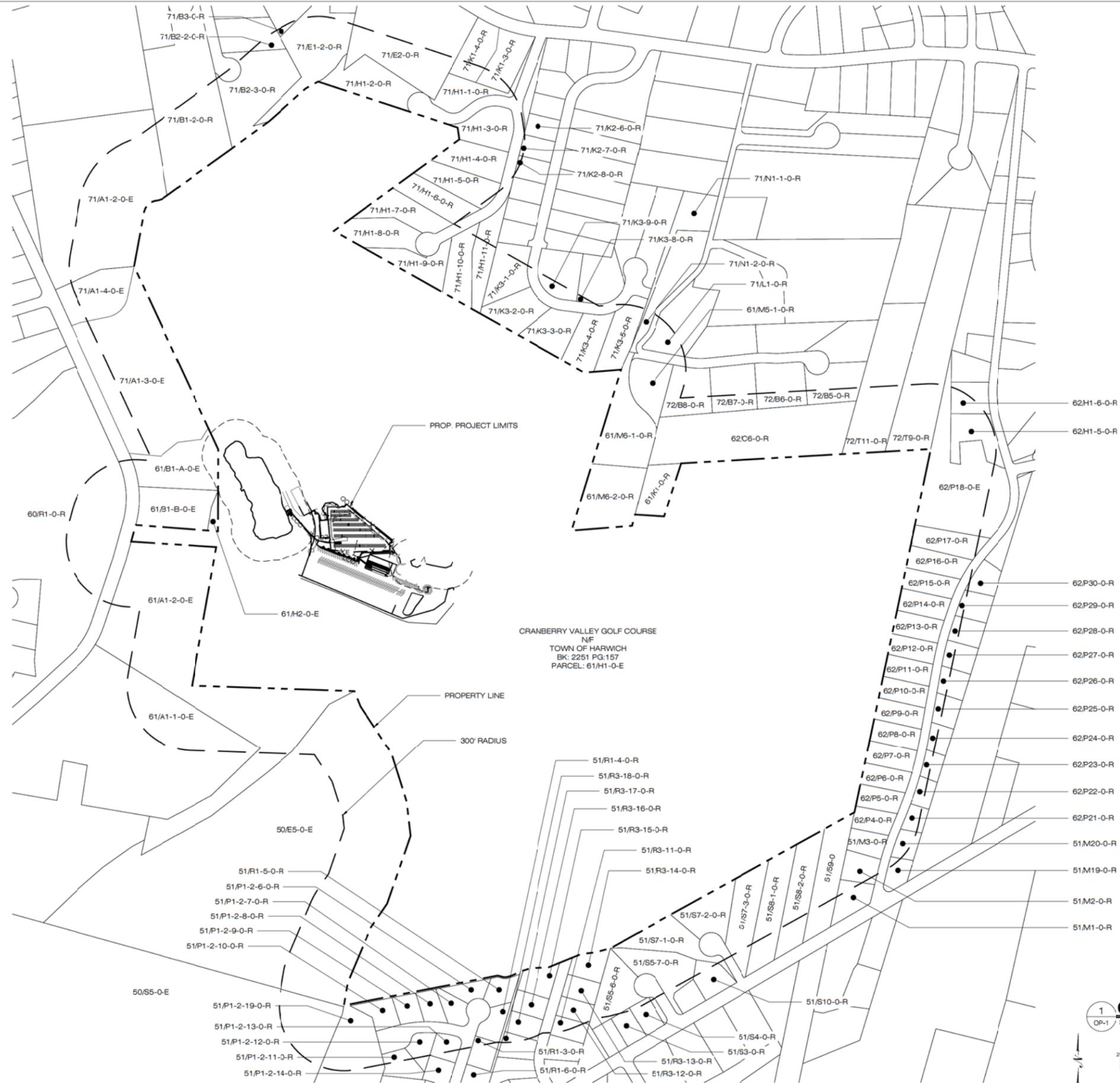
TOPOGRAPHIC SURVEY
CRANBERRY VALLEY GOLF COURSE
HARWICH, MASSACHUSETTS
 PREPARED FOR
ALL POINTS TECHNOLOGY



Drawn By	ZM	Date	AUGUST 19, 2019	Job No.	190228D
Surveyed By	NV/EC	Scale	1" = 30'	Sheet No.	1 OF 1
Checked By	MG/DP	Book No.	N/A		



DAVID P. PRINCE, P.L.S.
 REG. NO. 62308
 WSP USA, INC.



PARCEL DATA PROVIDED BY:
TOWN OF HARWICH, MA
BOARD OF ASSESSORS

1 OVERALL LOCUS MAP
SCALE: 1" = 250'-0"

(IN FEET) 1 inch = 250 ft.

Greenskies
a Clean Focus company

180 JOHNSON STREET
MIDDLETOWN, CT 06457

ALL-POINTS
TECHNOLOGY CORPORATION

3 SADDLEBROOK DRIVE PHONE: (860)-463-1697
KILLINGWORTH, CT 06419 FAX: (860)-663-0935
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PERMIT SET

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CRANBERRY VALLEY SOLAR

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DATE: 12/05/19

DRAWN BY: JT
CHECKED BY: BJP

SHEET TITLE:
OVERALL LOCUS MAP

SHEET NUMBER:
OP-1

50-E5-0-E	HARWICH TOWN OF - SCHOOL	50-S5-0-E	51-MI-0-R	KUSHNER JOSEPH E TRS	51-S7-1-0-R	51-S7-2-0-R	51-S7-3-0-R	62-P17-0-R	62-P18-0-E	62-P21-0-R			
HARWICH TOWN OF - PARK AND REC WHITEHOUSE FIELD 732 MAIN ST HARWICH, MA 02645	JR-SR HIGH SCHOOL MONOMOY SCHOOL DISTRICT 425 CROWELL RD CHATHAM, MA 02933	DECOTEAU STEPHEN J 962 ORLEANS RD HARWICH, MA 02645	51-MI-0-R	KUSHNER JOSEPH E TRS KUSHNER BERNADETTE TRS 14811 HOLE IN ONE CIR 209 FORT MYERS, FL 33919	51-S7-1-0-R	CLAFFEY WILLIAM P TRS ET AL CLAFFEY CHRISTINE P TRS 23 JENNIFERS WAY ROCKY HILL, CT 06067	51-S7-2-0-R	FULLER CAROL ET AL MEAD CAROL A PO BOX 1578 E ORLEANS, MA 02643	62-P17-0-R	HARWICH TOWN OF - CONSERVATION AND RECREATION PURPOSES 732 MAIN ST HARWICH, MA 02645	62-P18-0-E	BROWN JEAN E 16 JOHN JOSEPH RD HARWICH, MA 02645	62-P21-0-R
51-M2-0-R	51-M3-0-R	51-M19-0-R	51-S8-1-0-R	51-S8-2-0-R	51-S13-0-R	62-P22-0-R	62-P23-0-R	62-P25-0-R	62-P26-0-R	62-P27-0-R			
SERLIAN CHERYL TR CHERYL L PAVLAKIS FAMILY TRUST 5 JOHN JOSEPH RD HARWICH, MA 02645	HART THOMAS G TRS ET AL HART CHRISTINE A TRS 300 LYNBROOK CIR UNIT 102 VENICE, FL 34292	PIPER JOSHUA D & PIPER ALLYSON C 6 JOHN JOSEPH RD HARWICH, MA 02645	51-M19-0-R	51-S8-1-0-R	51-S13-0-R	62-P22-0-R	62-P23-0-R	62-P25-0-R	62-P26-0-R	62-P27-0-R			
51-M20-0-R	51-P1-2-6-0-R	51-P1-2-7-0-R	60-R1-0-R	61-A1-1-0-E	61-A1-2-0-E	62-P25-0-R	62-P26-0-R	62-P28-0-R	62-P29-0-R	62-P30-0-R			
SOUZA RANDOLPH T & SOUZA JANET L 12 JOHN JOSEPH RD HARWICH, MA 02645	LORDAN DENNIS F & LORDAN SUZANNE M 14 ABIGAIL AV HARWICH, MA 02645	AUSSERLECHNER KARL & AUSSERLECHNER LISA 12 ABIGAIL AV HARWICH, MA 02645	60-R1-0-R	61-A1-1-0-E	61-A1-2-0-E	62-P25-0-R	62-P26-0-R	62-P28-0-R	62-P29-0-R	62-P30-0-R			
51-P1-2-8-0-R	51-P1-2-9-0-R	51-P1-2-10-0-R	61-B1-A-0-E	61-B1-B-0-E	61-H1-0-E	62-P28-0-R	62-P29-0-R	62-P28-0-R	62-P29-0-R	62-P30-0-R			
FOLLETT ANNE F TR ESTATE OF C/O MANN GARY A TRS ET AL 5 HOPE LN HARWICH, MA 02645	BLISS DAVID R TRS ET AL BLISS CAROL A TRS 7 HOPE LN HARWICH, MA 02645	ROGERS PATRICIA L TR THE PATRICIA L ROGERS REVOCABL 9 HOPE LN HARWICH, MA 02645	51-P1-2-10-0-R	61-B1-B-0-E	61-H1-0-E	62-P28-0-R	62-P29-0-R	62-P28-0-R	62-P29-0-R	62-P30-0-R			
51-P1-2-11-0-R	51-P1-2-12-0-R	51-P1-2-13-0-R	61-H2-0-E	61-K1-0-R	61-M5-1-0-R	71-A1-2-0-E	71-A1-3-0-E	71-A1-2-0-E	71-A1-3-0-E	71-A1-4-0-E			
MCDONALD ROBERT J & MCDONALD MARY L 50 WALTHAM ST UNIT 106 LEXINGTON, MA 02421	ROTH BARBARA J 4 HOPE LN HARWICH, MA 02645	SULLIVAN JOHN F TRS ET AL SULLIVAN VIRGINIA A TRS 2 HOPE LN HARWICH, MA 02645	51-P1-2-13-0-R	61-K1-0-R	61-M5-1-0-R	71-A1-2-0-E	71-A1-3-0-E	71-A1-2-0-E	71-A1-3-0-E	71-A1-4-0-E			
51-P1-2-14-0-R	51-P1-2-19-0-R	51-R1-3-0-R	61-M6-1-0-R	61-M6-2-0-R	62-C3-0-R	71-B1-2-0-R	71-B2-3-0-R	71-B1-2-0-R	71-B2-3-0-R	71-B2-3-0-R			
STOUT MARVIN JR ET AL NOLAN RUTHANN 8 ABIGAIL AV HARWICH, MA 02645	HARWICH GREENS CORP HARWICH GREENS TRUST 27 CHEROKEE RD HARWICH, MA 02645	HIGGINS LINDA M TRS ET AL HIGGINS EDWARD J TRS 9 ABIGAIL AVE HARWICH, MA 02645	51-R1-3-0-R	61-M6-2-0-R	62-C3-0-R	71-B1-2-0-R	71-B2-3-0-R	71-B1-2-0-R	71-B2-3-0-R	71-B2-3-0-R			
51-R1-4-0-R	51-R1-5-0-R	51-R1-4-0-R	62-H1-5-0-R	62-H1-6-0-R	62-P4-0-R	71-B3-0-R	71-E1-2-0-R	71-E1-2-0-R	71-E1-2-0-R	71-E2-0-R			
MCELANEY MICHAEL & MCELANEY LORNA 11 ABIGAIL AV HARWICH, MA 02645	QUINN EDWARD M & QUINN BARBARA A 13 ABIGAIL AV HARWICH, MA 02645	HARWICH GREENS CORP 27 CHEROKEE RD HARWICH, MA 02645	51-R1-4-0-R	62-H1-6-0-R	62-P4-0-R	71-B3-0-R	71-E1-2-0-R	71-E1-2-0-R	71-E1-2-0-R	71-E2-0-R			
51-R3-11-0-R	51-R3-12-0-R	51-R3-13-0-R	62-P5-0-R	62-P6-0-R	62-P7-0-R	71-H1-1-0-R	71-H1-2-0-R	71-H1-1-0-R	71-H1-2-0-R	71-H1-3-0-R			
HARLOR WILLIAM M & HARLOR ANNAMARIE 8 HASTINGS WAY NORTON, MA 02786	CHABOT CRISTIN LIFE ESTATE CONROY STEPHEN L LIFE ESTATE 15 RUSSELL DR HARWICH, MA 02645	NICHOLAS DAVID S TRS & NICHOLAS MARILYN J TRS 19 RUSSELL DR HARWICH, MA 02645	51-R3-13-0-R	62-P5-0-R	62-P6-0-R	71-H1-1-0-R	71-H1-2-0-R	71-H1-1-0-R	71-H1-2-0-R	71-H1-3-0-R			
51-R3-14-0-R	51-R3-15-0-R	51-R3-13-0-R	62-P8-0-R	62-P9-0-R	62-P10-0-R	71-H1-4-0-R	71-H1-5-0-R	71-H1-4-0-R	71-H1-5-0-R	71-H1-5-0-R			
REDMOND KEVIN J & REDMOND JOSEPHINE L 23 RUSSELL DR HARWICH, MA 02645	ROGERS JEANMARIE TRS THE JEANMARIE ROGERS TRUST 1158 S BRISTOL DR LITITZ, PA 17543	GREENE JILL E ET AL GREENE JEFFREY 14 RUSSELL DR HARWICH, MA 02645-2823	51-R3-15-0-R	62-P8-0-R	62-P9-0-R	71-H1-4-0-R	71-H1-5-0-R	71-H1-4-0-R	71-H1-5-0-R	71-H1-5-0-R			
51-R3-17-0-R	51-R3-18-0-R	51-S3-0-R	62-P11-0-R	62-P12-0-R	62-P13-0-R	71-H1-7-0-R	71-H1-8-0-R	71-H1-7-0-R	71-H1-8-0-R	71-H1-9-0-R			
FINCH JOHN E JR & FINCH MALREEN PO BOX 655 PORT EWEN, NY 12466	MCGREEVY THOMAS E C/O HENRY PATRICK K 1293 WOOD AVE BRIDGEPORT, CT 06604	GUEVARA JONATHAN A & GUEVARA KARINA M PO BOX 584 PROVINCETOWN, MA 02657	51-S3-0-R	62-P11-0-R	62-P12-0-R	71-H1-7-0-R	71-H1-8-0-R	71-H1-7-0-R	71-H1-8-0-R	71-H1-9-0-R			
51-S4-0-R	51-S5-6-0-R	51-S5-7-0-R	62-P14-0-R	62-P15-0-R	62-P15-0-R	71-H1-10-0-R	71-H1-11-0-R	71-H1-10-0-R	71-H1-11-0-R	71-H1-A-0-R			
BACHERT BRUCE A & BACHERT CATHELEN 910 ORLEANS RD HARWICH, MA 02645	MONTIERO ERIC R & MONTIERO ELIZABETH J 2 TANGLEWOOD CIR HARWICH, MA 02645	DORAN JOSEPH E & DORAN AGNES M 4 TANGLEWOOD CIR HARWICH, MA 02645	62-P14-0-R	62-P15-0-R	62-P15-0-R	71-H1-10-0-R	71-H1-11-0-R	71-H1-10-0-R	71-H1-11-0-R	71-H1-A-0-R			
71-K1-3-0-R	71-K1-4-0-R	71-K2-3-0-R	71-K2-8-0-R	71-K3-1-0-R	71-K3-4-0-R	71-K3-3-0-R	71-K3-4-0-R	71-K1-3-0-R	71-K1-4-0-R	71-K2-3-0-R			
KEENEY JEFFREY D & KEENEY MICHELE G 615 QUEEN ANNE RD HARWICH, MA 02645	SILVA ROBERT M & SILVA PAULA L 1 FRANCIS DR UNIT 408 ANDOVER, MA 01810	DOUGLASS JOHN S JR & DOUGLASS MELVINA J 11 COMMON ST HINGHAM, MA 02043	71-K2-3-0-R	71-K2-8-0-R	71-K3-1-0-R	71-K3-3-0-R	71-K3-4-0-R	71-K1-3-0-R	71-K1-4-0-R	71-K2-3-0-R			
71-K2-7-0-R	71-K2-8-0-R	71-K3-3-0-R	71-K3-3-0-R	71-K3-4-0-R	71-K3-4-0-R	71-K3-3-0-R	71-K3-4-0-R	71-K2-7-0-R	71-K2-8-0-R	71-K3-3-0-R			
MURPHY KEVIN C & MURPHY PATRICIA E 2895 LAUREL GREEN CT ROSWELL, GA 30076	HOLMES RYAN C 31 HILLCREST DR HARWICH, MA 02645	MELLETT LAURA ET AL C/O MELLETT LAURA 47 HILLCREST DR HARWICH, MA 02645	71-K2-7-0-R	71-K2-8-0-R	71-K3-1-0-R	71-K3-3-0-R	71-K3-4-0-R	71-K2-7-0-R	71-K2-8-0-R	71-K3-3-0-R			
71-K3-2-0-R	71-K3-3-0-R	71-K3-3-0-R	71-K3-3-0-R	71-K3-4-0-R	71-K3-4-0-R	71-K3-3-0-R	71-K3-4-0-R	71-K3-2-0-R	71-K3-3-0-R	71-K3-3-0-R			
WIDEGREN BRIAN D & WIDEGREN KAREN 51 HILLCREST DR HARWICH, MA 02645	CANE RICHARD A JR & SULLIVAN JEAN C 3 CHRISTOPHER ST STONEHAM, MA 02180	59 HILLCREST DRIVE REALTY LLC 4 PICKWICK RD MARBLEHEAD, MA 01945	71-K3-2-0-R	71-K3-3-0-R	71-K3-4-0-R	71-K3-3-0-R	71-K3-4-0-R	71-K3-2-0-R	71-K3-3-0-R	71-K3-3-0-R			
71-K3-5-0-R	71-K3-8-0-R	71-K3-8-0-R	71-K3-8-0-R	71-K3-8-0-R	71-K3-8-0-R	71-K3-8-0-R	71-K3-8-0-R	71-K3-5-0-R	71-K3-8-0-R	71-K3-8-0-R			
BEDNAREK SHARON M C/O BEDNAREK SHARON M TR 123 TIMBER LN HOLDEN, MA 01520	PICHEL CHERYL A 64 PINE ISLAND RD HOPKINTON, MA 01748	CASBARRO STEVE A & CASBARRO NANCY K 48 HILLCREST DR HARWICH, MA 02645	71-K3-5-0-R	71-K3-8-0-R	71-K3-8-0-R	71-K3-8-0-R	71-K3-8-0-R	71-K3-5-0-R	71-K3-8-0-R	71-K3-8-0-R			
71-L1-0-R	71-N1-1-0-R	71-N1-1-0-R	71-N1-1-0-R	71-N1-2-0-R	71-N1-2-0-R	71-N1-1-0-R	71-N1-2-0-R	71-L1-0-R	71-N1-1-0-R	71-N1-2-0-R			
CAPISTROI MICHAEL R & CAPISTROI PATRICIA S 41 OBED BROOKS RD HARWICH, MA 02645	JOHNSON GLENN & JOHNSON SUSAN 7 RIDGEVIEW CT RINGOES, NJ 08551	KEYES LARRY P 26 OBED BROOKS RD HARWICH, MA 02645	71-N1-1-0-R	71-N1-2-0-R	71-N1-2-0-R	71-N1-1-0-R	71-N1-2-0-R	71-N1-1-0-R	71-N1-2-0-R	71-N1-2-0-R			
72-B5-0-R	72-B6-0-R	72-B7-0-R	72-B5-0-R	72-B6-0-R	72-B7-0-R	72-B5-0-R	72-B6-0-R	72-B5-0-R	72-B6-0-R	72-B7-0-R			
CAPE COASTAL BUILDERS INC C/O SIDORUK STEPHEN F & 10 SUODOL CT CHESHIRE, CT 06410	SULLIVAN STEPHEN F ET AL SANBORN KIMBERLY J 9 TUCKERS WAY HARWICH, MA 02645	RICE FREDERICK A TR FREDERICK A RICE LIVING TRUST 5 TUCKERS WAY HARWICH, MA 02645	72-B5-0-R	72-B6-0-R	72-B7-0-R	72-B5-0-R	72-B6-0-R	72-B5-0-R	72-B6-0-R	72-B7-0-R			
72-B8-0-R	72-T9-0-R	72-T11-0-R	72-B8-0-R	72-T9-0-R	72-T11-0-R	72-B8-0-R	72-T9-0-R	72-B8-0-R	72-T9-0-R	72-T11-0-R			
YOUNG JAMES A & YOUNG AMY C 3 TUCKERS WAY HARWICH, MA 02645	PINA JOHN E 1 J/S PTH HARWICH, MA 02645	TAYLOR CHARLES A EST OF C/O PRISCILLA MARTIN 23 HOYT RD HARWICH PORT, MA 02646	72-B8-0-R	72-T9-0-R	72-T11-0-R	72-B8-0-R	72-T9-0-R	72-B8-0-R	72-T9-0-R	72-T11-0-R			

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DESIGN PROFESSIONAL OF RECORD

PROF: BRADLEY J. PARSONS, P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 3 SADDLEBROOK DRIVE
KILLINGWORTH, CT 06419

OWNER: TOWN OF HARWICH - GOLF

ADDRESS: 732 MAIN STREET
HARWICH, MA 02645

CRANBERRY VALLEY SOLAR

SITE 183 OAK STREET
ADDRESS: HARWICH, MA 02645

APT FILING NUMBER: CT599120

DRAWN BY: JT

DATE: 12/05/19 CHECKED BY: BJP

SHEET TITLE:

OVERALL LOCUS MAP
ABUTTERS LIST

SHEET NUMBER:

OP-2

BRADLEY J. PARSONS, P.E.
REGISTERED PROFESSIONAL ENGINEER
NO. 51076
STATE OF CONNECTICUT

PERMIT SET

NO	DATE	REVISION
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1	01/06/20	FOR REVIEW: BJP
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PROF: BRADLEY J. PARSONS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 3 SADDLEBROOK DRIVE
KILLINGWORTH, CT 06419

OWNER: TOWN OF HARWICH - GOLF

ADDRESS: 732 MAIN STREET
HARWICH, MA 02645

CRANBERRY VALLEY SOLAR

SITE: 183 OAK STREET
ADDRESS: HARWICH, MA 02645

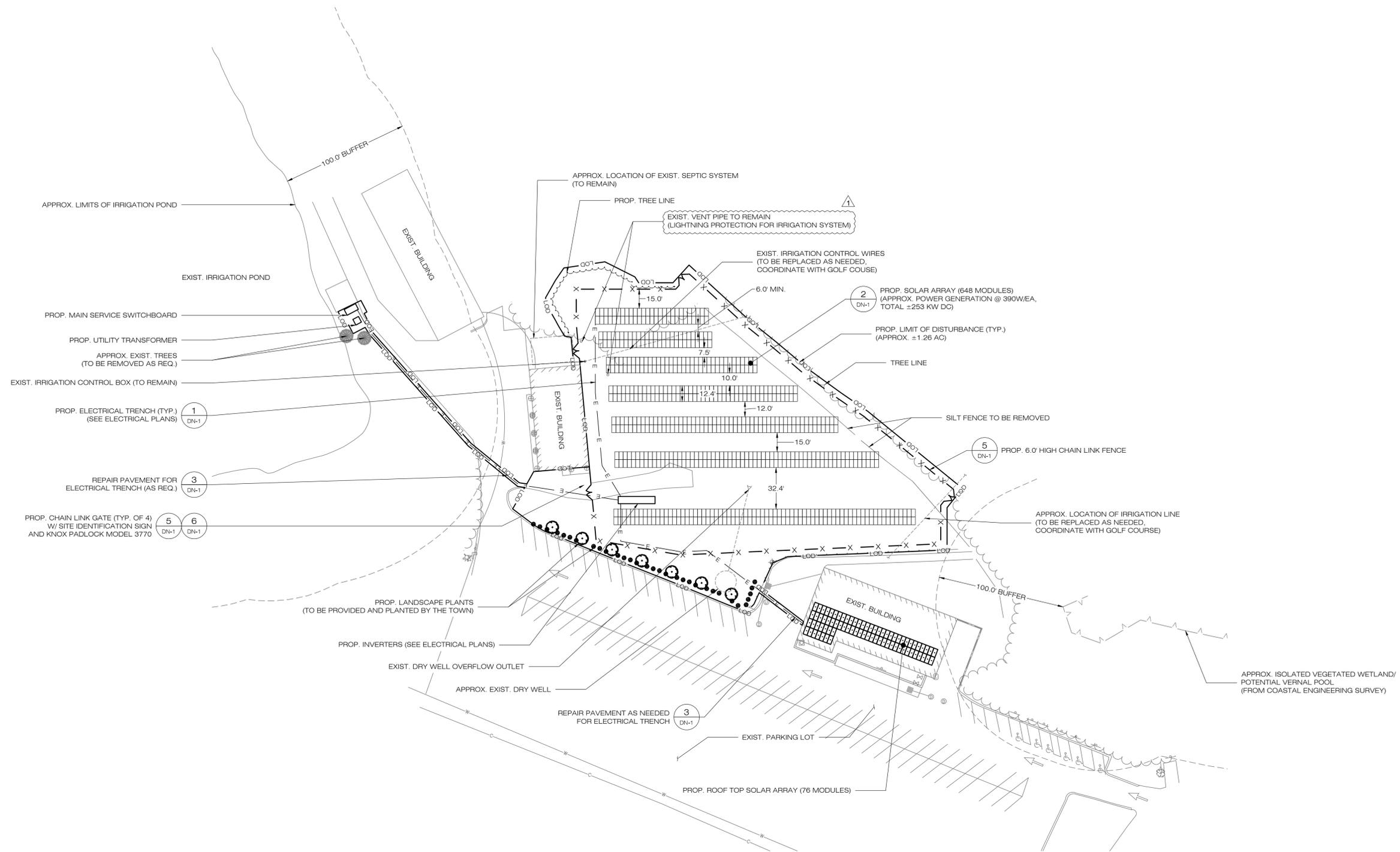
APT FILING NUMBER: CT599120

DATE: 12/05/19
DRAWN BY: JT
CHECKED BY: BJP

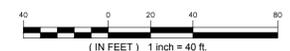
SHEET TITLE:
SITE & UTILITY PLAN

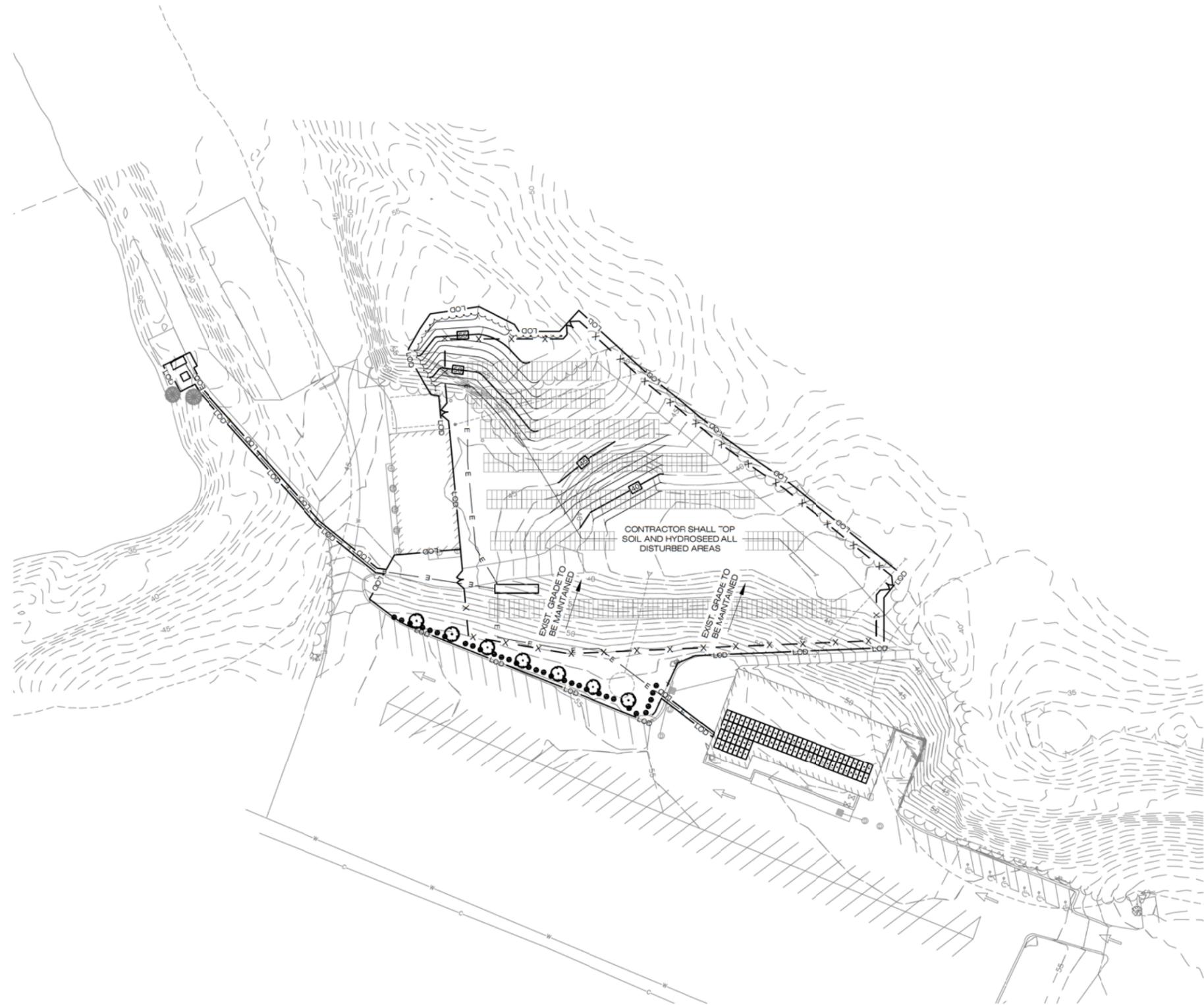
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SP-1

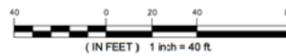


1 **SITE & UTILITY PLAN**
SCALE: 1" = 40'-0"





1 GRADING PLAN
GP-1 SCALE: 1" = 40'-0"



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3 SADDLEBROOK DRIVE PHONE: (860)-463-1697
KILLINGWORTH, CT 06419 FAX: (860)-663-0935
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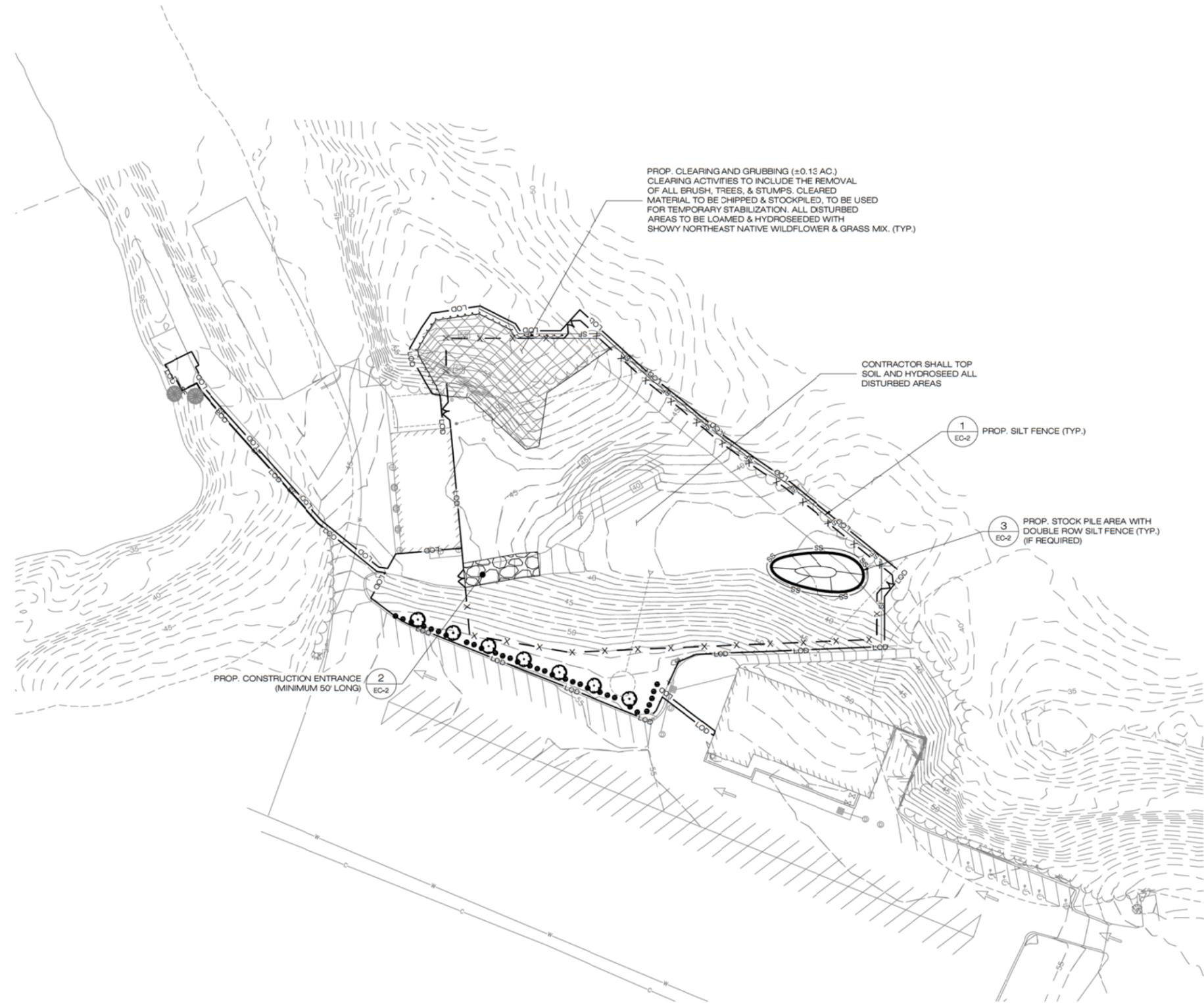
APT FILING NUMBER: CT599120

DATE: 12/05/19 DRAWN BY: JT
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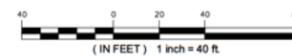
SHEET TITLE:
GRADING PLAN

SHEET NUMBER:
GP-1





1 SEDIMENTATION & EROSION CONTROL PLAN
 EC-1 SCALE: 1" = 40'-0"



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SHEET TITLE:
SEDIMENTATION & EROSION CONTROL PLAN

SHEET NUMBER:
EC-1

EROSION CONTROL NOTES

EROSION AND SEDIMENT CONTROL PLAN NOTES

- THE CONTRACTOR SHALL CONSTRUCT ALL SEDIMENT AND EROSION CONTROLS IN ACCORDANCE WITH THE ENVIRONMENTAL PROTECTION AGENCIES CONSTRUCTION GENERAL PERMIT UNDER THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM ("GENERAL PERMIT"), MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS, LATEST EDITION ("THE GUIDELINES"), THE CONTRACT DOCUMENTS, AND AS DIRECTED BY THE TOWN OF HARWICH. ALL PERIMETER SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CLEARING AND GRUBBING AND DEMOLITION OPERATIONS.
- THESE DRAWINGS ARE ONLY INTENDED TO DESCRIBE THE SEDIMENT AND EROSION CONTROL MEASURES FOR THIS SITE. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE EROSION & SEDIMENT CONTROL PLAN ARE SHOWN IN A GENERAL SIZE AND LOCATION ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL EROSION CONTROL MEASURES ARE CONFIGURED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION OF SOILS AND PREVENT THE TRANSPORT OF SEDIMENTS AND OTHER POLLUTANTS TO STORM DRAINAGE SYSTEMS AND/OR WATERCOURSES. ACTUAL SITE CONDITIONS OR SEASONAL AND CLIMATIC CONDITIONS MAY WARRANT ADDITIONAL CONTROLS OR CONFIGURATIONS, AS REQUIRED, AND AS DIRECTED BY THE PERMITTEE AND/OR THE TOWN OF HARWICH. SEE SEDIMENT AND EROSION CONTROL DETAILS AND SUGGESTED CONSTRUCTION SEQUENCE FOR MORE INFORMATION. REFER TO SITE PLAN FOR GENERAL INFORMATION AND OTHER CONTRACT PLANS FOR APPROPRIATE INFORMATION.
- A BOND MAY BE REQUIRED TO BE POSTED WITH THE GOVERNING AUTHORITY FOR THE EROSION CONTROL INSTALLATION AND MAINTENANCE.
- THE CONTRACTOR SHALL APPLY THE MINIMUM EROSION & SEDIMENT CONTROL MEASURES SHOWN ON THE PLAN IN CONJUNCTION WITH CONSTRUCTION SEQUENCING, SUCH THAT ALL ACTIVE WORK ZONES ARE PROTECTED. ADDITIONAL AND/OR ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES MAY BE INSTALLED DURING THE CONSTRUCTION PERIOD IF FOUND NECESSARY BY THE CONTRACTOR, OWNER, SITE ENGINEER, MUNICIPAL OFFICIALS, OR ANY GOVERNING AGENCY. THE CONTRACTOR SHALL CONTACT THE OWNER AND APPROPRIATE GOVERNING AGENCIES FOR APPROVAL IF ALTERNATIVE CONTROLS OTHER THAN THOSE SHOWN ON THE PLANS ARE PROPOSED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL TAKE EXTREME CARE DURING CONSTRUCTION SO AS NOT TO DISTURB UNPROTECTED WETLAND AREAS OR INSTALLED SEDIMENTATION AND EROSION CONTROL MEASURES. THE CONTRACTOR SHALL INSPECT ALL SEDIMENT AND EROSION CONTROLS WEEKLY AND WITHIN 24 HOURS OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCHES OR GREATER TO VERIFY THAT THE CONTROLS ARE OPERATING PROPERLY AND MAKE REPAIRS AS NECESSARY IN A TIMELY MANNER.
- THE CONTRACTOR SHALL KEEP A SUPPLY OF EROSION CONTROL MATERIAL (SILT FENCE, COMPOST FILTER SOCK, EROSION CONTROL BLANKET, ETC.) ON-SITE FOR PERIODIC MAINTENANCE AND EMERGENCY REPAIRS.
- ALL FILL MATERIAL PLACED ADJACENT TO ANY WETLAND AREA SHALL BE GOOD QUALITY, WITH LESS THAN 5% FINES PASSING THROUGH A #200 SIEVE (BANK RUN), SHALL BE PLACED IN MAXIMUM ONE FOOT LIFTS, AND SHALL BE COMPACTED TO 95% MAX. DRY DENSITY MODIFIED PROCTOR OR AS SPECIFIED IN THE CONTRACT SPECIFICATIONS.
- PROTECT EXISTING TREES THAT ARE TO BE SAVED BY FENCING, ORANGE SAFETY FENCE, CONSTRUCTION TAPE, OR EQUIVALENT FENCING/TAPE. ANY LIMB TRIMMING SHOULD BE DONE AFTER CONSULTATION WITH AN ARBORIST AND BEFORE CONSTRUCTION BEGINS IN THAT AREA; FENCING SHALL BE MAINTAINED AND REPAIRED DURING CONSTRUCTION.
- CONSTRUCTION ENTRANCES (ANTI-TRACKING PADS) SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR CONSTRUCTION ACTIVITY AND SHALL BE MAINTAINED THROUGHOUT THE DURATION OF ALL CONSTRUCTION IF REQUIRED. THE LOCATION OF THE TRACKING PADS MAY CHANGE AS VARIOUS PHASES OF CONSTRUCTION ARE COMPLETED. CONTRACTOR SHALL ENSURE THAT ALL VEHICLES EXITING THE SITE ARE PASSING OVER THE ANTI-TRACKING PADS PRIOR TO EXISTING.
- ALL CONSTRUCTION SHALL BE CONTAINED WITHIN THE LIMIT OF DISTURBANCE, WHICH SHALL BE MARKED WITH SILT FENCE, SAFETY FENCE, HAY BALES, RIBBONS, OR OTHER MEANS PRIOR TO CLEARING. CONSTRUCTION ACTIVITY SHALL REMAIN ON THE UPHILL SIDE OF THE SEDIMENT BARRIER UNLESS WORK IS SPECIFICALLY CALLED FOR ON THE DOWNHILL SIDE OF THE BARRIER.
- NO CUT OR FILL SLOPES SHALL EXCEED 2:1 EXCEPT WHERE STABILIZED BY ROCK FACED EMBANKMENTS OR EROSION CONTROL BLANKETS. ALL SLOPES SHALL BE SEEDED AND BANKS WILL BE STABILIZED IMMEDIATELY UPON COMPLETION OF FINAL GRADING UNTIL TURF IS ESTABLISHED.
- DIRECT ALL DEWATERING PUMP DISCHARGE TO A SEDIMENT CONTROL DEVICE THE GUIDELINES WITHIN THE APPROVED LIMIT OF DISTURBANCE IF REQUIRED. DISCHARGE TO STORM DRAINS OR SURFACE WATERS FROM SEDIMENT CONTROLS SHALL BE CLEAR AND APPROVED BY THE PERMITTEE OR MUNICIPALITY.
- THE CONTRACTOR SHALL MAINTAIN A CLEAN CONSTRUCTION SITE AND SHALL NOT ALLOW THE ACCUMULATION OF RUBBISH OF CONSTRUCTION DEBRIS ON THE SITE. PROPER SANITARY DEVICES SHALL BE MAINTAINED ON-SITE AT ALL TIMES AND SECURED APPROPRIATELY. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID THE SPILLAGE OF FUEL OR OTHER POLLUTANTS ON THE CONSTRUCTION SITE AND SHALL ADHERE TO ALL APPLICABLE POLICIES AND REGULATIONS RELATED TO SPILL PREVENTION AND RESPONSE/CONTAINMENT.
- MINIMIZE LAND DISTURBANCES. SEED AND MULCH DISTURBED AREAS WITH TEMPORARY MIX AS SOON AS PRACTICABLE (2 WEEK MAXIMUM UNSTABILIZED PERIOD) USING PERENNIAL RYEGRASS AT 40 LBS PER ACRE. MULCH ALL CUT AND FILL SLOPES AND SWALES WITH LOOSE HAY AT A RATE OF 2 TONS PER ACRE. IF NECESSARY, REPLACE LOOSE HAY ON SLOPES WITH EROSION CONTROL BLANKETS OR JUTE CLOTH. MODERATELY GRADED AREAS, ISLANDS, AND TEMPORARY CONSTRUCTION STAGING AREAS MAY BE HYDROSEEDED WITH TACKIFIER.
- SWEEP AFFECTED PORTIONS OF OFF SITE ROADS ONE OR MORE TIMES A DAY OR LESS FREQUENTLY IF TRACKING IS NOT A PROBLEM. DURING CONSTRUCTION. FOR DUST CONTROL, PERIODICALLY MOISTEN EXPOSED SOIL SURFACES WITH WATER ON UNPAVED TRAVELWAYS TO KEEP THE TRAVELWAYS DAMP. CALCIUM CHLORIDE MAY ALSO BE APPLIED TO ACCESS ROADS. DUMP TRUCK LOADS EXITING THE SITE SHALL BE COVERED.
- TURF ESTABLISHMENT SHALL BE PERFORMED OVER ALL DISTURBED SOIL, UNLESS THE AREA IS UNDER ACTIVE CONSTRUCTION. IT IS COVERED IN STONE OR SCHEDULED FOR PAVING WITHIN 30 DAYS. TEMPORARY SEEDING OR NON-LIVING SOIL PROTECTION OF ALL EXPOSED SOILS AND SLOPES SHALL BE INITIATED WITHIN THE FIRST 7 DAYS OF SUSPENDING WORK IN AREAS TO BE LEFT LONGER THAN 30 DAYS.
- MAINTAIN ALL PERMANENT AND TEMPORARY SEDIMENT CONTROL DEVICES IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. UPON COMPLETION OF WORK SWEEP CONCRETE PADS, CLEAN THE STORMWATER MANAGEMENT SYSTEMS AND REMOVE ALL TEMPORARY SEDIMENT CONTROL DEVICES ONCE THE SITE IS FULLY STABILIZED AND APPROVAL HAS BEEN RECEIVED FROM PERMITTEE OR THE MUNICIPALITY.
- SEEDING MIXTURES, IF REQUIRED, SHALL BE SHOWY NORTHEAST NATIVE WILDFLOWER & GRASS MIX (SEE SITE DETAILS SHEET DN-1), OR APPROVED EQUAL BY OWNER.

SEDIMENT & EROSION CONTROL NARRATIVE

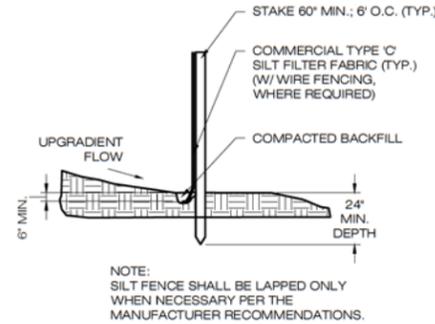
- THE PROJECT INVOLVES THE CONSTRUCTION OF A GROUND MOUNTED SOLAR PANEL FACILITY WITH ASSOCIATED EQUIPMENT, INCLUDING THE CLEARING, GRUBBING AND GRADING OF APPROXIMATELY ±1.26 ACRES OF EXISTING LOT.
- THE PROPOSED PROJECT INVOLVES THE FOLLOWING CONSTRUCTION:
 - CLEARING, GRUBBING, AND GRADING OF EXISTING LOT.
 - CONSTRUCTION OF 648 GROUND MOUNTED SOLAR PANELS AND ASSOCIATED EQUIPMENT.
 - THE STABILIZATION OF DISTURBED AREAS WITH PERMANENT GRASS TREATMENTS.
- FOR THIS PROJECT, THERE ARE APPROXIMATELY ±1.26 ACRE OF THE SITE BEING DISTURBED WITH NEGLIGIBLE INCREASE IN THE IMPERVIOUS AREA OF THE SITE, AS ALL ACCESS THROUGH THE SITE WILL BE GRAVEL. IMPERVIOUS AREAS ARE LIMITED TO THE CONCRETE PADS FOR ELECTRICAL EQUIPMENT.
- THE PROJECT SITE, AS MAPPED IN THE SOIL SURVEY OF BARNSTABLE COUNTY (NRCS, MA615, 1968), CONTAINS TYPE 252C SOIL. A GEOTECHNICAL ENGINEERING REPORT FOR "PROPOSED SOLAR ARRAY CRANBERRY VALLEY GOLF COURSE," DATED SEPTEMBER 2019, HAS BEEN COMPLETED BY DOWN TO EARTH CONSULTING, LLC.
- IT IS ANTICIPATED THAT CONSTRUCTION WILL BE COMPLETED IN APPROXIMATELY 3-4 MONTHS.
- REFER TO THE CONSTRUCTION SEQUENCING AND EROSION AND SEDIMENTATION NOTES FOR INFORMATION REGARDING SEQUENCING OF MAJOR OPERATIONS IN THE ON-SITE CONSTRUCTION PHASES.
- STORMWATER MANAGEMENT DESIGN CRITERIA UTILIZES THE APPLICABLE SECTIONS OF THE MASSACHUSETTS STORMWATER HANDBOOK, UPDATED FEB. 2008, TO THE EXTENT POSSIBLE AND PRACTICABLE FOR THIS PROJECT ON THIS SITE. EROSION AND SEDIMENTATION MEASURES ARE BASED UPON ENGINEERING PRACTICE, JUDGEMENT AND THE APPLICABLE SECTIONS OF THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS, LATEST EDITION.
- DETAILS FOR THE TYPICAL STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION MEASURES ARE SHOWN ON THE PLAN SHEETS OR PROVIDED AS SEPARATE SUPPORT DOCUMENTATION FOR REVIEW IN THIS PLAN.
- CONSERVATION PRACTICES TO BE USED DURING CONSTRUCTION AREA:
 - STAGED CONSTRUCTION;
 - MINIMIZE THE DISTURBED AREAS TO THE EXTENT PRACTICABLE DURING CONSTRUCTION;
 - STABILIZE DISTURBED AREAS AS SOON AS POSSIBLE WITH TEMPORARY OR PERMANENT MEASURES;
 - MINIMIZE IMPERVIOUS AREAS;
 - UTILIZE APPROPRIATE CONSTRUCTION EROSION AND SEDIMENTATION MEASURES.
- THE FOLLOWING SEPARATE DOCUMENTS ARE TO BE CONSIDERED A PART OF THE EROSION AND SEDIMENTATION PLAN:
 - STORMWATER MANAGEMENT MEMO FOR EXISTING AND PROPOSED PEAK FLOWS.

SUGGESTED CONSTRUCTION SEQUENCE

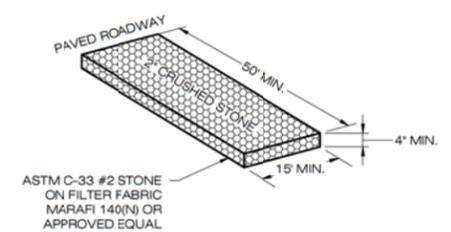
THE FOLLOWING SUGGESTED SEQUENCE OF CONSTRUCTION ACTIVITIES IS PROJECTED BASED UPON ENGINEERING JUDGEMENT AND BEST MANAGEMENT PRACTICES. THE CONTRACTOR MAY ELECT TO ALTER THE SEQUENCING TO BEST MEET THE CONSTRUCTION SCHEDULE, THE EXISTING SITE ACTIVITIES AND WEATHER CONDITIONS. SHOULD THE CONTRACTOR ALTER THE CONSTRUCTION SEQUENCE OR ANY EROSION AND SEDIMENTATION CONTROL MEASURES THEY SHALL MODIFY THE STORMWATER POLLUTION PREVENTION PLAN ("SWPPP") AS REQUIRED BY THE GENERAL PERMIT.

- THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING. PHYSICALLY FLAG THE LIMITS OF DISTURBANCE IN THE FIELD AS NECESSARY TO FACILITATE THE PRE-CONSTRUCTION MEETING.
- CONDUCT A PRE-CONSTRUCTION MEETING TO DISCUSS THE PROPOSED WORK AND EROSION AND SEDIMENTATION CONTROL MEASURES. THE MEETING SHOULD BE ATTENDED BY THE OWNER, THE OWNER REPRESENTATIVE(S), THE MUNICIPALITY, THE GENERAL CONTRACTOR, DESIGNATED SUB-CONTRACTORS AND THE PERSON, OR PERSONS, RESPONSIBLE FOR THE IMPLEMENTATION, OPERATION, MONITORING AND MAINTENANCE OF THE EROSION AND SEDIMENTATION MEASURES. THE CONSTRUCTION PROCEDURES FOR THE ENTIRE PROJECT SHALL BE REVIEWED AT THIS MEETING.
- NOTIFY TOWN OF HARWICH AGENT AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO COMMENCEMENT OF ANY DEMOLITION, CONSTRUCTION OR REGULATED ACTIVITY ON THIS PROJECT.
- NOTIFY DIG SAFE AT 811, AS REQUIRED, PRIOR TO THE START OF CONSTRUCTION.
- REMOVE EXISTING IMPEDIMENTS AS NECESSARY AND PROVIDE MINIMAL CLEARING AND GRUBBING TO INSTALL THE REQUIRED CONSTRUCTION ENTRANCES.
- CLEAR ONLY AS NEEDED TO INSTALL THE PERIMETER EROSION AND SEDIMENTATION CONTROL MEASURES AND, IF APPLICABLE, TREE PROTECTION. ALL WETLAND AREAS SHALL BE PROTECTED BEFORE MAJOR CONSTRUCTION BEGINS.
- INSTALL REMAINING PERIMETER EROSION AND SEDIMENTATION CONTROL MEASURES.
- PERFORM THE REMAINING CLEARING AND GRUBBING AS NECESSARY. REMOVE CUT WOOD AND STOCKPILE FOR FUTURE USE OR REMOVE OFF-SITE. REMOVE AND DISPOSE OF DEMOLITION DEBRIS OFF-SITE IN ACCORDANCE WITH APPLICABLE LAWS.
- TEMPORARILY SEED DISTURBED AREAS NOT UNDER CONSTRUCTION FOR THIRTY (30) DAYS OR MORE.
- INSTALL ELECTRICAL CONDUIT AND CONCRETE PADS.
- INSTALL RACKING POSTS FOR GROUND MOUNTED SOLAR PANELS
- INSTALL GROUND MOUNTED SOLAR PANELS AND COMPLETE ELECTRICAL INSTALLATION.
- AFTER SUBSTANTIAL COMPLETION OF THE INSTALLATION OF THE SOLAR PANELS, COMPLETE REMAINING SITE WORK AND STABILIZE ALL DISTURBED AREAS.
- FINE GRADE, RAKE, SEED AND MULCH ALL REMAINING DISTURBED AREAS.
- AFTER THE SITE IS STABILIZED AND WITH THE APPROVAL OF THE PERMITTEE AND TOWN OF HARWICH AGENT, REMOVE PERIMETER EROSION AND SEDIMENTATION CONTROLS.

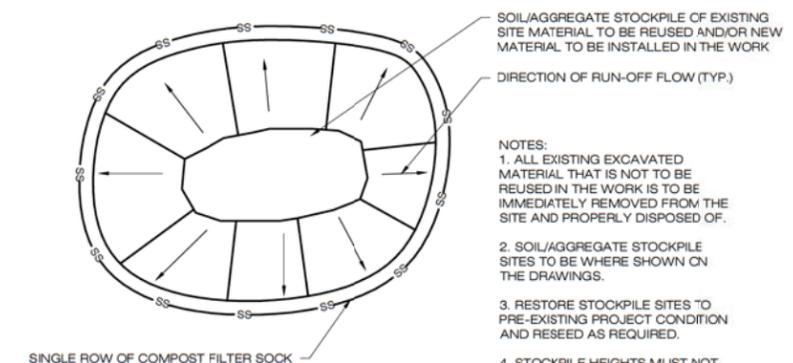
CONSTRUCTION OPERATION AND MAINTENANCE PLAN - BY CONTRACTOR		
E&S MEASURE	INSPECTION SCHEDULE	MAINTENANCE REQUIRED
CONSTRUCTION ENTRANCE	DAILY	PLACE ADDITIONAL STONE, EXTEND THE LENGTH OR REMOVE AND REPLACE THE STONE. CLEAN PAVED SURFACES OF TRACKED SEDIMENT.
SILT FENCE	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 2"	REPAIR/REPLACE WHEN FAILURE OR DETERIORATION IS OBSERVED. REMOVE SILT WHEN IT REACHES 1/2 THE HEIGHT OF THE FENCE.
TOPSOIL/BORROW STOCKPILES	DAILY	REPAIR/REPLACE SEDIMENT BARRIERS AS NECESSARY.
TEMPORARY SOIL PROTECTION	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 2"	REPAIR ERODED OR BARE AREAS IMMEDIATELY. RESEED AND MULCH.



1 SILT FENCE DETAIL
SCALE : N.T.S.



2 CONSTRUCTION ENTRANCE DETAIL
SCALE : N.T.S.



3 MATERIALS STOCKPILE DETAIL
SCALE : N.T.S.

- NOTES:
- ALL EXISTING EXCAVATED MATERIAL THAT IS NOT TO BE REUSED IN THE WORK IS TO BE IMMEDIATELY REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.
 - SOIL/AGGREGATE STOCKPILE SITES TO BE WHERE SHOWN ON THE DRAWINGS.
 - RESTORE STOCKPILE SITES TO PRE-EXISTING PROJECT CONDITION AND RESEED AS REQUIRED.
 - STOCKPILE HEIGHTS MUST NOT EXCEED 35'. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.

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a Clean Focus company

180 JOHNSON STREET
MIDDLETOWN, CT 06457

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PROF: BRADLEY J. PARSONS P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 3 SADDLEBROOK DRIVE
KILLINGWORTH, CT 06419

OWNER: TOWN OF HARWICH - GOLF

ADDRESS: 732 MAIN STREET
HARWICH, MA 02645

CRANBERRY VALLEY SOLAR

SITE 183 OAK STREET
ADDRESS: HARWICH, MA 02645

APT FILING NUMBER: CT599120

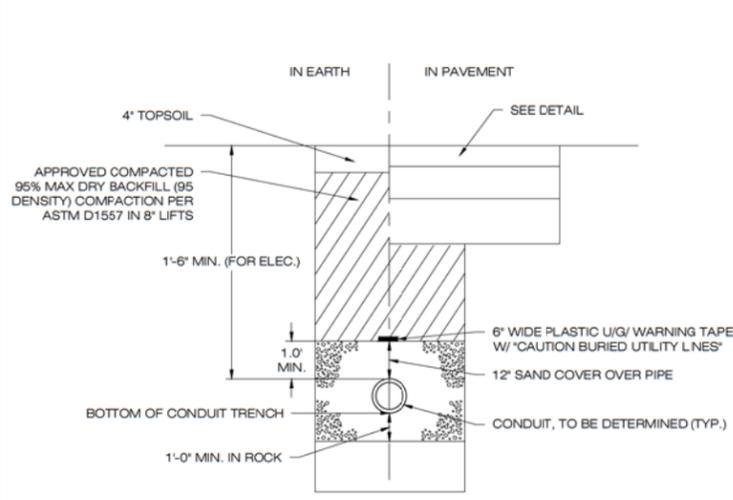
DRAWN BY: JT

DATE: 12/05/19 CHECKED BY: BJP

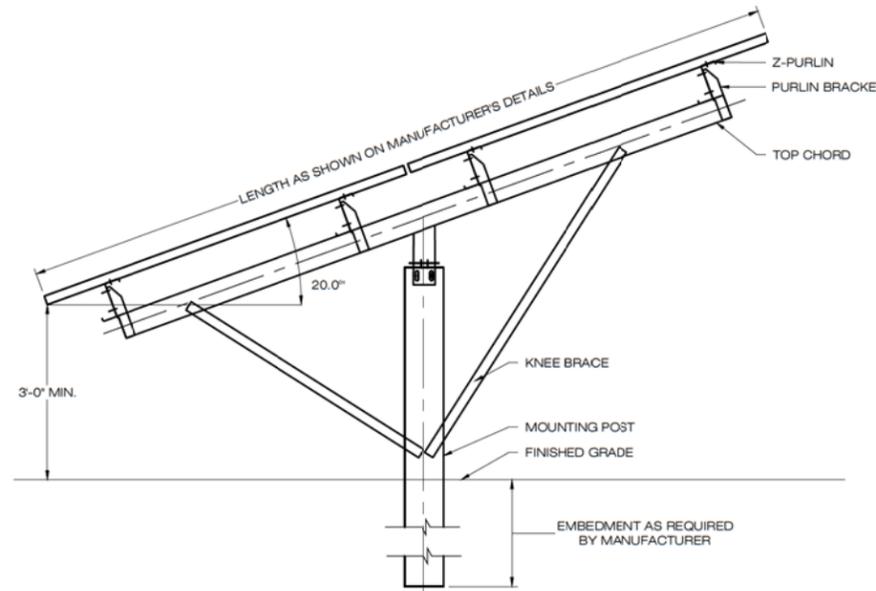
SHEET TITLE: SEDIMENTATION & EROSION CONTROL NOTES & DETAILS

SHEET NUMBER:
EC-2

BRADLEY J. PARSONS
CIVIL ENGINEER
NO. 51076
REGISTERED PROFESSIONAL ENGINEER

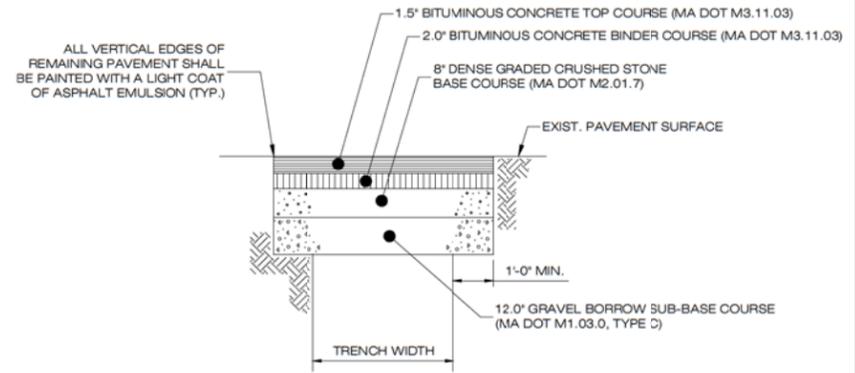


1 ELECTRICAL TRENCH DETAIL
DN-1 SCALE: N.T.S.



NOTES:
SEE MANUFACTURERS DETAIL SHEETS FOR ADDITIONAL INFORMATION REGARDING RACKING SYSTEM REQUIREMENTS AND INSTALLATION PROCEDURES. RACKING SYSTEM TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS.

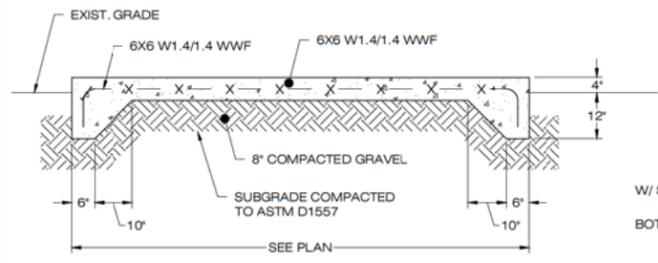
2 TYPICAL POST MOUNTED RACKING SYSTEM
DN-1 SCALE: N.T.S.



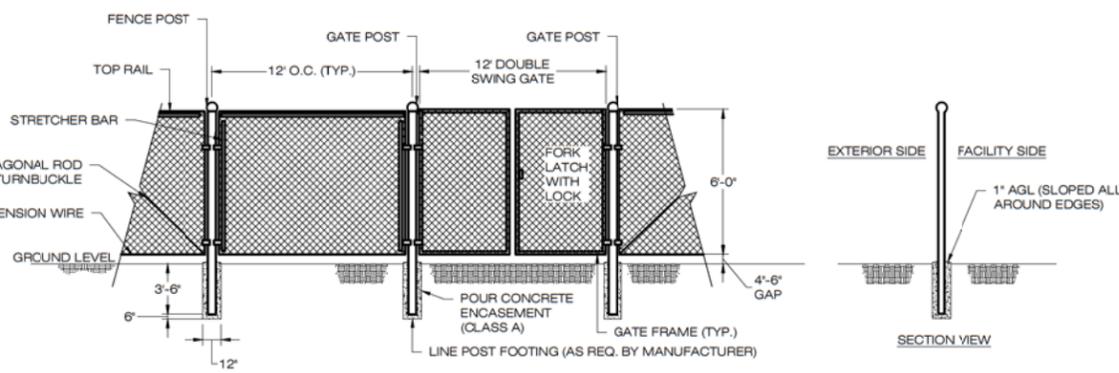
ALL VERTICAL EDGES OF REMAINING PAVEMENT SHALL BE PAINTED WITH A LIGHT COAT OF ASPHALT EMULSION (TYP.)

NOTE:
1. PAVEMENT BASE AND SUBBASE COURSES TO CONFORM TO ALL MASSDOT HIGHWAY DIVISION SPECIFICATIONS.
2. IF SUBGRADES ARE WET, AN ADDITIONAL 6.0\"/>

3 PAVEMENT REPAIR OVER TRENCH
DN-1 SCALE: N.T.S.



4 CONCRETE EQUIPMENT PAD
DN-1 SCALE: N.T.S.



5 CHAIN-LINK FENCE & GATE DETAIL
DN-1 SCALE: N.T.S.



Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: October 24, 2019

Showy Northeast Native Wildflower & Grass Mix - ERNMX-153

Botanical Name	Common Name	Price/lb
35.00 % <i>Schizanthium scarparium</i> , Fort. Indiantown Gap-PA Ecotype	Little Bluestem, Fort. Indiantown Gap-PA Ecotype	15.13
29.20 % <i>Bootteloua curtipendula</i> , Bette	Sideoats Grama, Bette	8.45
14.00 % <i>Elymus virginicus</i> , PA Ecotype	Virginia Wildrye, PA Ecotype	6.32
4.00 % <i>Echinacea purpurea</i>	Purple Coneflower	39.60
3.00 % <i>Chamaecrista fasciculata</i> , PA Ecotype	Partridge Pea, PA Ecotype	6.60
3.00 % <i>Coreopsis lanceolata</i>	Lanceleaf Coreopsis	26.40
3.00 % <i>Rutbeckia hirta</i> , Coastal Plain NC Ecotype	Blackeyed Susan, Coastal Plain NC Ecotype	22.00
2.10 % <i>Liatris spicata</i> , PA Ecotype	Marsh Blazing Star, PA Ecotype	231.00
2.00 % <i>Helopsis helianthoides</i> , PA Ecotype	Owey Spillflower, PA Ecotype	39.60
1.20 % <i>Zizia aurea</i>	Golden Alexander	264.00
1.00 % <i>Aster laevis</i> , NY Ecotype	Smooth Blue Aster, NY Ecotype	396.00
1.00 % <i>Monarda fistulosa</i> , Fort. Indiantown Gap-PA Ecotype	Wild Bergamot, Fort. Indiantown Gap-PA Ecotype	132.00
0.40 % <i>Aster oblongifolius</i> , PA Ecotype	Aromatic Aster, PA Ecotype	396.00
0.30 % <i>Geum canadense</i> , PA Ecotype	White Avens, PA Ecotype	176.00
0.30 % <i>Rutbeckia fistulosa</i> var. <i>fulgida</i> , Northern VA Ecotype	Orange Coneflower, Northern VA Ecotype	330.00
0.30 % <i>Senna mianiankica</i>	Maryland Senna	26.40
0.10 % <i>Pentstemon hispidus</i>	Hairy Beardtongue	440.00
0.10 % <i>Solidago juncea</i> , PA Ecotype	Early Goldenrod, PA Ecotype	308.00

100.00 % Mix Price/lb Bulk: **\$29.49**
Seeding Rate: 20 lb per acre, or 1/2 lb per 1,000 sq ft
Pollinator Favorites; Uplands & Meadows

The native wildflowers and some grasses provide a gorgeous display of color from spring to fall. Designed for upland sites with well-drained soils and full sun to semi-shaded areas; ideal for attracting butterflies and hummingbirds. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

8 ERNST SEED MIX
DN-1

CRANBERRY VALLEY SOLAR FARM
IN CASE OF EMERGENCY
CALL 860-368-5408 EXT 323
OR 860-598-4890
OM_office@greenskies.com

NOTES:
EMERGENCY CALL NUMBER TO BE PROVIDED ONCE DETERMINED.

6 NOTIFICATION SIGN DETAIL
DN-1 SCALE: N.T.S.

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HARWICH, MA 02645

CRANBERRY VALLEY SOLAR

SITE 183 OAK STREET
ADDRESS: HARWICH, MA 02645
APT FILING NUMBER: CT599120
DRAWN BY: JT
DATE: 12/05/19 **CHECKED BY:** BJP

SHEET TITLE:
SITE DETAILS

SHEET NUMBER:
DN-1



GENERAL NOTES

- ALL CONSTRUCTION SHALL COMPLY WITH PROJECT DEVELOPER STANDARDS, TOWN OF HARWICH STANDARDS, MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS IN THE ABOVE REFERENCED INCREASING HIERARCHY. IF SPECIFICATIONS ARE IN CONFLICT, THE MORE STRINGENT SPECIFICATION SHALL APPLY.
- IF NO PROJECT CONSTRUCTION SPECIFICATION PACKAGE IS PROVIDED BY THE PROJECT DEVELOPER OR THEIR REPRESENTATIVE, THE CONTRACTOR SHALL COMPLY WITH THE MANUFACTURE, TOWN OF HARWICH, OR MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, AND BE IN ACCORDANCE WITH ALL APPLICABLE OSHA, FEDERAL, STATE AND LOCAL REGULATIONS.
- THE PROJECT DEVELOPER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY ZONING AND STORMWATER PERMITS REQUIRED BY GOVERNMENT AGENCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ALL TOWN OF HARWICH CONSTRUCTION PERMITS. THE CONTRACTOR SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.
- REFER TO PLANS, DETAILS AND REPORTS PREPARED BY ALL-POINTS TECHNOLOGY CORPORATION FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS IN THE FIELD AND CONTACT THE PROJECT DEVELOPER IF THERE ARE ANY QUESTIONS OR CONFLICTS REGARDING THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS SO THAT APPROPRIATE REVISIONS CAN BE MADE PRIOR TO BIDDING/CONSTRUCTION. ANY CONFLICT BETWEEN THE DRAWINGS AND SPECIFICATIONS SHALL BE CONFIRMED WITH THE PROJECT DEVELOPERS CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PRODUCTS, MATERIALS PER PLANS AND SPECIFICATIONS TO THE PROJECT DEVELOPER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY TO THE SITE. ALLOW A MINIMUM OF 14 WORKING DAYS FOR REVIEW.
- SHOULD ANY UNKNOWN OR INCORRECTLY LOCATED EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE PROJECT DEVELOPER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.
- DO NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE PROJECT DEVELOPER OR OTHERS DURING OCCUPIED HOURS, EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE PROJECT DEVELOPER AND THE LOCAL MUNICIPALITY. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.
- THE CONTRACT LIMIT IS THE PROPERTY LINE UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE CONTRACT DRAWINGS.
- THE CONTRACTOR SHALL ABIDE BY ALL OSHA, FEDERAL, STATE AND LOCAL REGULATIONS WHEN OPERATING CRANES, BOOMS, HOISTS, ETC. IN CLOSE PROXIMITY TO OVERHEAD ELECTRIC LINES. IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES, CONTACT POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS. ANY UTILITY COMPANY FEES SHALL BE PAID FOR BY THE CONTRACTOR.
- THE CONTRACTOR SHALL COMPLY WITH OSHA CFR 29 PART 1926 FOR EXCAVATION TRENCHING AND TRENCH PROTECTION REQUIREMENTS.
- THE ENGINEER IS NOT RESPONSIBLE FOR SITE SAFETY MEASURES TO BE EMPLOYED DURING CONSTRUCTION. THE ENGINEER HAS NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK, JOB SITE RESPONSIBILITIES, SUPERVISION OF PERSONNEL OR TO SUPERVISE SAFETY AND DO NOT VOLUNTARILY ASSUME ANY SUCH DUTY OR RESPONSIBILITY.
- THE CONTRACTOR SHALL RESTORE ANY DRAINAGE STRUCTURE, PIPE, CONDUIT, PAVEMENT, CURBING, SIDEWALKS, LANDSCAPED AREAS OR SIGNAGE DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION OR BETTER, AS APPROVED BY THE PROJECT DEVELOPER OR TOWN OF HARWICH.
- THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES) TO THE PROJECT DEVELOPER AT THE END OF CONSTRUCTION.
- ALTERNATIVE METHODS AND PRODUCTS, OTHER THAN THOSE SPECIFIED, MAY BE USED IF REVIEWED AND APPROVED BY THE PROJECT DEVELOPER, ENGINEER, AND APPROPRIATE REGULATORY AGENCY PRIOR TO INSTALLATION DURING THE BIDDING/CONSTRUCTION PROCESS.
- INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "DIG SAFE" 72 HOURS BEFORE COMMENCEMENT OF WORK AT "811" AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
- NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS IS GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES.

SITE PLAN NOTES

- THE SURVEY WAS PROVIDED BY WSP USA INC., DATED AUGUST 19, 2019.
- THERE ARE WETLANDS LOCATED ON THE SITE AS INDICATED ON THE PLANS. ORIGINAL WETLANDS BOUNDARIES WERE FLAGGED AND LOCATED BY COASTAL ENGINEERING AND DIGITIZED OFF OF PLANS PROVIDED BY THE TOWN OF HARWICH DATED FEBRUARY 5, 2018.
- THERE WILL BE MINIMAL GRADING ON SITE IN THE AREAS OF THE MINOR CLEARING, TO ENSURE THAT PROPER DRAINAGE IS MAINTAINED.
- THE CONTRACTOR SHALL FOLLOW THE RECOMMENDED SEQUENCE OF CONSTRUCTION NOTES PROVIDED ON THE EROSION CONTROL PLAN OR SUBMIT AN ALTERNATE PLAN FOR APPROVAL BY THE PROJECT DEVELOPER AND THE ENGINEER AND/OR PERMITTING AGENCIES PRIOR TO THE START CONSTRUCTION. ALLOW A MINIMUM OF 14 WORKING DAYS FOR REVIEW.
- PROPER CONSTRUCTION PROCEDURES SHALL BE FOLLOWED ON ALL IMPROVEMENTS WITHIN THIS PARCEL SO AS TO PREVENT THE SILTING OF ANY WATERCOURSE OR BYWAS IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. IN ADDITION, THE CONTRACTOR SHALL ADHERE TO "EROSION CONTROL PLAN" CONTAINED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE TO POST ALL BONDS AS REQUIRED BY GOVERNMENT AGENCIES WHICH WOULD GUARANTEE THE PROPER IMPLEMENTATION OF THE PLAN.
- ALL SITE WORK, MATERIALS OF CONSTRUCTION, AND CONSTRUCTION METHODS FOR EARTHWORK AND STORM DRAINAGE WORK, SHALL CONFORM TO THE SPECIFICATIONS AND DETAILS AND APPLICABLE SECTIONS OF THE PROJECT SPECIFICATIONS MANUAL. OTHERWISE THIS WORK SHALL CONFORM TO THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION AND PROJECT GEOTECHNICAL REPORT IF THERE IS NO PROJECT SPECIFICATIONS MANUAL. ALL FILL MATERIAL UNDER STRUCTURES AND PAVED AREAS SHALL BE PER THE ABOVE STATED APPLICABLE SPECIFICATIONS, AND/OR PROJECT GEOTECHNICAL REPORT, AND SHALL BE PLACED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL ENGINEER. MATERIAL SHALL BE COMPACTED IN 8" LIFTS TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 1557 AT 95% PERCENT OF OPTIMUM MOISTURE CONTENT.
- ALL DISTURBANCE INCURRED TO PUBLIC, MUNICIPAL, COUNTY, STATE PROPERTY DUE TO CONSTRUCTION SHALL BE RESTORED TO ITS PREVIOUS CONDITION OR BETTER, TO THE SATISFACTION OF THE TOWN OF HARWICH AND COMMONWEALTH OF MASSACHUSETTS.
- IF IMPACTED OR CONTAMINATED SOIL IS ENCOUNTERED BY THE CONTRACTOR, THE CONTRACTOR SHALL SUSPEND EXCAVATION WORK OF IMPACTED SOIL AND NOTIFY THE PROJECT DEVELOPER AND/OR PROJECT DEVELOPER'S ENVIRONMENTAL CONSULTANT PRIOR TO PROCEEDING WITH FURTHER WORK IN THE IMPACTED SOIL LOCATION UNTIL FURTHER INSTRUCTED BY THE PROJECT DEVELOPER AND/OR PROJECT DEVELOPER'S ENVIRONMENTAL CONSULTANT.

UTILITY NOTES

- CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE TOWN OF HARWICH TO SECURE CONSTRUCTION PERMITS AND FOR PAYMENT OF FEES FOR STREET CUTS AND CONNECTIONS TO EXISTING UTILITIES.
- REFER TO DRAWINGS BY PROJECT DEVELOPER FOR THE ONSITE ELECTRICAL DRAWINGS AND INTERCONNECTION TO EXISTING ELECTRICAL GRID. SITE CONTRACTOR SHALL SUPPLY AND INSTALL PIPE ADAPTERS AS NECESSARY AT BUILDING CONNECTION POINT OR AT EXISTING UTILITY OR PIPE CONNECTION POINT. THESE DETAILS ARE NOT INCLUDED IN THESE PLANS.
- UTILITY LOCATIONS AND PENETRATIONS ARE SHOWN FOR THE CONTRACTOR'S INFORMATION AND SHALL BE VERIFIED WITH THE ELECTRICAL ENGINEER AND THE PROJECT DEVELOPERS CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. TEST PTS SHALL BE DUG AT ALL LOCATIONS WHERE PROP. SANITARY SEWERS AND WHERE PROP. STORM PIPING WILL CROSS EXISTING UTILITIES, AND THE HORIZONTAL AND VERTICAL LOCATIONS OF THE UTILITIES SHALL BE DETERMINED. THE CONTRACTOR SHALL CONTACT THE PROJECT DEVELOPER IN THE EVENT OF ANY DISCOVERED OR UNFORESEEN CONFLICTS BETWEEN EXISTING AND PROPOSED SANITARY SEWERS, STORM PIPING AND UTILITIES SO THAT AN APPROPRIATE MODIFICATION MAY BE MADE.
- UTILITY CONNECTION DESIGN AS REFLECTED ON THE PLAN MAY CHANGE SUBJECT TO UTILITY PROVIDER AND GOVERNING AUTHORITY STAFF REVIEW.
- THE CONTRACTOR SHALL ENSURE THAT ALL UTILITY PROVIDERS AND GOVERNING AUTHORITY STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET. THE CONTRACTOR SHALL PERFORM PROPER COORDINATION WITH THE RESPECTIVE UTILITY PROVIDER.
- THE CONTRACTOR SHALL ARRANGE FOR AND COORDINATE WITH THE RESPECTIVE UTILITY PROVIDERS FOR SERVICE INSTALLATIONS AND CONNECTIONS. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY PROVIDERS AND SHALL PAY ALL FEES FOR CONNECTIONS, DISCONNECTIONS, RELOCATIONS, INSPECTIONS, AND DEMOLITION UNLESS OTHERWISE STATED IN THE PROJECT SPECIFICATIONS MANUAL AND/OR GENERAL CONDITIONS OF THE CONTRACT.
- ALL EXISTING PAVEMENT WHERE UTILITY PIPING IS TO BE INSTALLED SHALL BE SAW CUT. AFTER UTILITY INSTALLATION IS COMPLETED, THE CONTRACTOR SHALL INSTALL TEMPORARY AND/OR PERMANENT PAVEMENT REPAIR AS DETAILED ON THE DRAWINGS OR AS REQUIRED BY THE TOWN OF HARWICH.
- ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHOD.
- RELOCATION OF UTILITY PROVIDER FACILITIES, SUCH AS POLES, SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY PROVIDER.
- THE CONTRACTOR SHALL COMPACT PIPE BACKFILL IN 8" LIFTS ACCORDING TO THE PIPE BEDDING DETAILS. TRENCH BOTTOM SHALL BE STABLE IN HIGH GROUNDWATER AREAS. A PIPE FOUNDATION SHALL BE USED PER THE TRENCH DETAILS AND IN AREAS OF ROCK EXCAVATION.
- CONTRACTOR TO PROVIDE STEEL SLEEVES AND ANNULAR SPACE SAND FILL FOR UTILITY PIPE AND CONDUIT CONNECTIONS UNDER FOOTINGS.
- ALL UTILITY CONSTRUCTION IS SUBJECT TO INSPECTION FOR APPROVAL PRIOR TO BACKFILLING, IN ACCORDANCE WITH THE APPROPRIATE UTILITY PROVIDER REQUIREMENTS.
- A ONE-FOOT MINIMUM VERTICAL CLEARANCE BETWEEN WATER, GAS, ELECTRICAL, AND TELEPHONE LINES AND STORM PIPING SHALL BE PROVIDED. A SIX-INCH MINIMUM CLEARANCE SHALL BE MAINTAINED BETWEEN STORM PIPING AND SANITARY SEWER. A 6-INCH TO 18-INCH VERTICAL CLEARANCE BETWEEN SANITARY SEWER PIPING AND STORM PIPING SHALL REQUIRE CONCRETE ENCASEMENT OF THE PROP. SANITARY PIPING.
- THE CONTRACTOR SHALL RESTORE ANY UTILITY STRUCTURE, PIPE, CONDUIT, PAVEMENT, CURBING, SIDEWALKS, DRAINAGE STRUCTURE, SWALE OR LANDSCAPED AREAS DISTURBED DURING CONSTRUCTION, TO THEIR ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE PROJECT DEVELOPER AND TOWN OF HARWICH.
- INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY, AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE INCLUDING SERVICES. CONTACT "DIG SAFE" AT 811 72 HOURS PRIOR TO CONSTRUCTION AND VERIFY ALL UNDERGROUND AND OVERHEAD UTILITY AND STORM DRAINAGE LOCATIONS. THE CONTRACTOR SHALL EMPLOY THE USE OF A UTILITY LOCATING COMPANY TO PROVIDE SUBSURFACE UTILITY ENGINEERING CONSISTING OF DESIGNATING UTILITIES AND STORM PIPING ON PRIVATE PROPERTY WITHIN THE CONTRACT LIMIT AND CONSISTING OF DESIGNATING AND LOCATING WHERE PROP. UTILITIES AND STORM PIPING CROSS EXISTING UTILITIES AND STORM PIPING WITHIN THE CONTRACT LIMITS.
- THE CONTRACTOR SHALL ARRANGE AND COORDINATE WITH UTILITY PROVIDERS FOR WORK TO BE PERFORMED BY UTILITY PROVIDERS. THE CONTRACTOR SHALL PAY ALL UTILITY FEES UNLESS OTHERWISE STATED IN THE PROJECT SPECIFICATION MANUAL AND GENERAL CONDITIONS, AND REPAIR PAVEMENTS AS NECESSARY.
- ELECTRIC DRAWINGS AND REQUIREMENTS ARE NOT INCLUDED AS PART OF THIS DRAWING SET AND SHOULD BE OBTAINED FROM THE PROJECT DEVELOPER.
- ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED BY THE PROJECT DEVELOPER, ENGINEER, AND APPROPRIATE REGULATORY AGENCIES PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL MAINTAIN ALL FLOWS AND UTILITY CONNECTIONS TO EXISTING BUILDINGS WITHOUT INTERRUPTION UNLESS/UNTIL AUTHORIZED TO DISCONNECT BY THE PROJECT DEVELOPER, TOWN OF HARWICH, UTILITY PROVIDERS AND GOVERNING AUTHORITIES.



180 JOHNSON STREET
MIDDLETOWN, CT 06457



3 SADDLEBROOK DRIVE PHONE: (860)-463-1697
KILLINGWORTH, CT 06419 FAX: (860)-663-0935
WWW.ALLPOINTSTECH.COM



5 MARINE VIEW PLAZA, SUITE 301
HOBOKEN, NJ 07030
(201) 687-9975 x102
www.PurePower.com

PERMIT SET

NO	DATE	REVISION
0	12/05/19	FOR REVIEW: BJP
1		
2		
3		
4		
5		
6		

DESIGN PROFESSIONAL OF RECORD

PROF: BRADLEY J. PARSONS, P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION
ADD: 3 SADDLEBROOK DRIVE
KILLINGWORTH, CT 06419

OWNER: TOWN OF HARWICH - GOLF

ADDRESS: 732 MAIN STREET
HARWICH, MA 02645

CRANBERRY VALLEY SOLAR

SITE 183 OAK STREET
ADDRESS: HARWICH, MA 02645

APT FILING NUMBER: CT599120

DATE: 12/05/19
DRAWN BY: JT
CHECKED BY: BJP

SHEET TITLE:

SITE NOTES

SHEET NUMBER:

DN-2



Attachment C

**Cranberry Valley Golf Course Electrical Site
Plan and One-Line, by Pure Power
Engineering, Inc., dated 11/04/19**

RULER IN INCHES: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18



EXISTING 400A DISCONNECT SWITCH
 EXISTING UTILITY METER #2510115
 NEW SOLAR PRODUCTION METER & CT CABINET
 SOLAR AC DISCONNECT SWITCH 1
 POINT OF INTERCONNECTION (IN NEW MAIN SERVICE SWITCHBOARD)
 NEW MAIN SERVICE SWITCHBOARD
 NEW UTILITY TRANSFORMER

GROUND MOUNT ARRAY (TYPICAL)
 INVERTERS 1-3 RACK MOUNTED BEHIND GROUND MOUNT ARRAY (TYPICAL)
 SOLAR AC PANELBOARD RACK MOUNTED BEHIND GROUND MOUNT ARRAY

SECURITY FENCE

3FT SETBACK FROM ROOF EDGE
 ROOF MOUNT ARRAY (TYPICAL)
 NEW GOLF CART BUILDING DISTRIBUTION TRANSFORMER (IN NEW ELECTRICAL ROOM)
 NEW GOLF CART BUILDING MAIN PANELBOARD (IN NEW ELECTRICAL ROOM)

SOLAR AC DISCONNECT SWITCH 2 (AT GROUND LEVEL)
 INVERTER 4 (AT GROUND LEVEL)

NEW 100A SUBPANEL
 EXISTING UTILITY METER TO BE REMOVED

1 SITE PLAN
 G100 SCALE: 1" = 20'-0"



PROJECT	282.360 KW SOLAR PV SYSTEM AT CRANBERRY VALLEY GOLF COURSE 183 OAK STREET HARWICH, MA 02645	DEVELOPER	GREENSKIES 180 JOHANSON STREET MIDDLETOWN, CT 06457 WWW.GREENSKIES.COM	ENGINEER	PUREPOWER ENGINEERING 5 MAIN STREET WWW.PUREPOWER.COM RICHARD A. IVINS MA LICENSE NO. 49915
DATE	11/24/2019	PERMIT SET		DATE	11/24/2019
REVISION DESCRIPTION		DATE		REVISION DESCRIPTION	
PROJECT #	PPE 19.0926	PROJECT #		PROJECT #	
DC SYSTEM SIZE	282.360 kW	DC SYSTEM SIZE		DC SYSTEM SIZE	
AC SYSTEM SIZE	210,000 kW	AC SYSTEM SIZE		AC SYSTEM SIZE	
MODULE QUANTITY	724	MODULE QUANTITY		MODULE QUANTITY	
STRING QUANTITY	38	STRING QUANTITY		STRING QUANTITY	
ORIENTATION	35/5° TILT, 0/22° AZIMUTH	ORIENTATION		ORIENTATION	
PAGE SIZE	36" x 24"	PAGE SIZE		PAGE SIZE	

DRAWING TITLE	SITE PLAN	DRAWING #	G100
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Attachment D

Product Cut Sheets




PEACH

D7M_H8A / 144 cells (IEC 1000 V)

D7K_H8A / 144 cells (UL 1500V)

365W - 390 W

Mono-Crystalline PV Module

URE Peach module uses URE state-of-the-art cell cutting technology, and advanced module manufacturing experiences.



Key Features



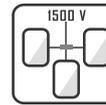
Positive power tolerance
+0 ~ +4.99 watt



100% EL inline inspection
Better module reliability



Withstand heavy loading
front load 5400 Pa & rear load 2400 Pa



Design for 1500 VDC
Reduce the system BOS effectively



Excellent low light performance
3.5% relative eff. Reduction at low-irradiance (200W/m²)



Electrical Data

Model - STC		D7M365H8A D7K365H8A	D7M370H8A D7K370H8A	D7M375H8A D7K375H8A	D7M380H8A D7K380H8A	D7M385H8A D7K385H8A	D7M390H8A D7K390H8A
Maximum Rating Power (Pmax)	[W]	365	370	375	380	385	390
Module Efficiency	[%]	18.4	18.7	19.0	19.3	19.6	19.9
Open Circuit Voltage (Voc)	[V]	47.59	47.77	47.96	48.15	48.34	48.53
Maximum Power Voltage	[V]	38.58	39.02	39.37	39.71	40.05	40.39
Short Circuit Current (Isc)	[A]	10.02	10.05	10.08	10.10	10.13	10.16
Maximum Power Current	[A]	9.44	9.48	9.53	9.57	9.61	9.66

*Standard Test Condition (STC): Cell Temperature 25 °C, Irradiance 1000 W/m², AM 1.5

*Values without tolerance are typical numbers.

Mechanical Data

Item	Specification
Dimensions	2000 mm (L) ¹ x 992 mm (W) ¹ x 35 mm (D) ² / 78.74" (L) ¹ x 39.1" (W) ¹ x 1.38" (D) ²
Weight	23 kg / 50.7 lbs
Solar Cell	144 half-cut monocrystalline 6" silicon cells
Front Glass	Anti-reflective tempered solar glass, 3.2mm thickness
Cell Encapsulation	EVA (Ethylene-Vinyl-Acetate)
Back Cover	Composite film, white
Junction Box	IP 68 rated
Frame	Anodized aluminum frame, original or black
Packaging Configuration	30 pcs Per Pallet, 704 pcs per 40' HQ container

¹ : With assembly tolerance of ± 2 mm [± 0.08"]

² : With assembly tolerance of ± 0.8 mm [± 0.03"]

Operating Conditions

Item	Specification
Mechanical Load (Test Load)	5400 Pa acc. to IEC 61215
Maximum System Voltage	IEC 1000 VDC / UL 1500 VDC
Series Fuse Rating	18 A
Operating Temperature	-40 to 85 °C

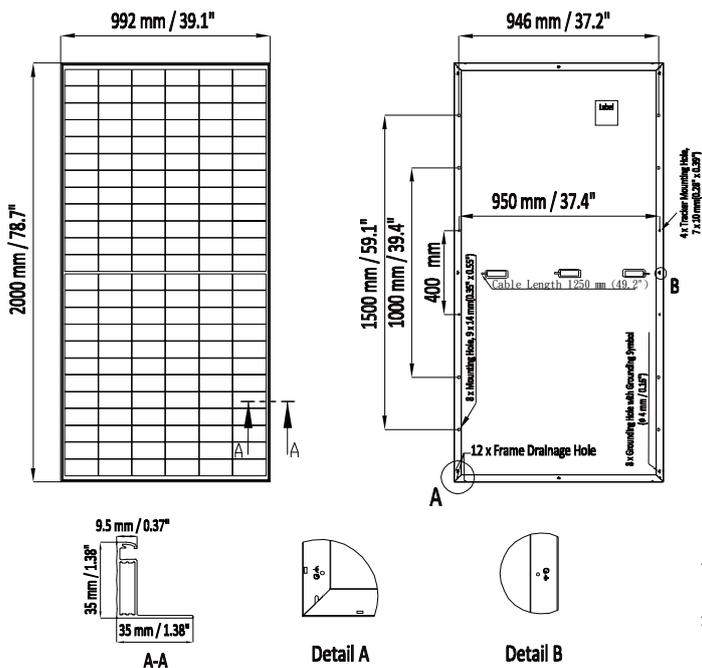
Temperature Characteristics

Item	Specification
Nominal Module Operating Temperature	42°C ± 2°C
Temperature Coefficient of Isc	0.107 % / °C
Temperature Coefficient of Voc	-0.320 % / °C
Temperature Coefficient of Pmax	-0.367 % / °C

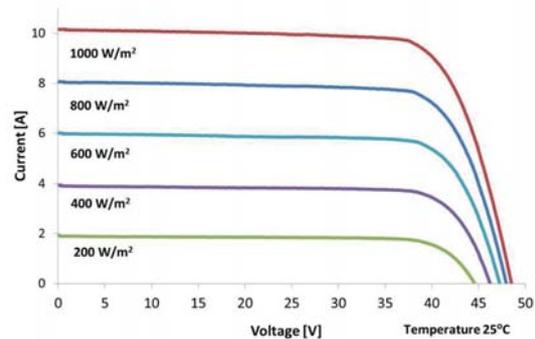
*Nominal module operating temperature (NMOT): Air mass AM 1.5, irradiance 800W/m², temperature 20°C, windspeed 1 m/s.

*Reduction in efficiency from 1000W/m² to 200W/m² at 25°C: 3 ± 2%.

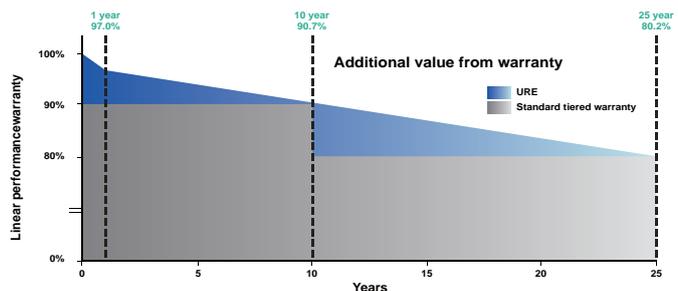
Engineering Drawing (mm)



Dependence on Irradiance



Reliability with Warranty



Output warranty
25
Years

Product Guarantee
10
Years

For more information, please visit us at www.urecorp.com

PVI 50TL & PVI 60TL

3-Ph Transformerless Commercial String Inverters

Features

- Integrated arc fault protection
- Compliant with UL 1741SA
- 3 MPPTs with 5 inputs each
- Integrated DC and AC disconnects
- AC terminals compatible with copper and aluminum conductors
- Modbus communications
- Internal data logger
- 0 - 90° installation orientation
- Remote firmware upgrades
- Remote diagnostics
- Compatible with certain MLPE for module-level rapid shutdown*

Options

- H4 wiring box
- Shade cover
- DC fuse bypass
- Web-based monitoring



Yaskawa Solectria Solar's PVI 50TL and PVI 60TL are grid-tied, transformerless three-phase inverters designed for ground mount, rooftop and carport arrays and can be installed from 0 - 90 degrees. The PVI 50/60TL inverters are the most reliable, efficient and cost effective in their class. They come standard with AC and DC disconnects, three MPPTs, a 15-position string combiner, remote diagnostics, remote firmware upgrades and various protection features. Options include H4 wiring box, shade cover, DC combiner fuse bypass, and web-based monitoring.

PVI 50TL & PVI 60TL

Specifications

	PVI 50TL	PVI 60TL
DC Input		
Absolute Maximum Input Voltage	1000 VDC	1000 VDC
Maximum Power Input Voltage Range (MPPT)	480-850 VDC	540-850 VDC
Operating Voltage Range (MPPT)	200-950 VDC	200-950 VDC
Maximum Operating Input Current	108 A (36 A per MPPT)	114 A (38 A per MPPT)
Number of MPP Trackers	3	3
Maximum Available PV Current (Isc x 1.25)	204 A (68 A per MPPT)	204 A (68 A per MPPT)
Maximum PV Power	75 kW (30 kW per MPPT)	90 kW (33 kW per MPPT)
Start Voltage	330 V	330 V
AC Output		
Nominal Output Voltage	480 VAC, 3-Ph/PE/N	480 VAC, 3-Ph/PE/N
AC Voltage Range (Standard)	-12/+10%	-12/+10%
PF=1.00 - Real/Apparent Power/Output Current	50 kW / 50 kVA / 60.2 A	60 kW / 60 kVA / 72.3 A
PF=±0.91 - Real/Apparent Power/Output Current	50 kW / 55 kVA / 66.2 A	60 kW / 66 kVA / 79.4 A
Nominal Output Frequency	60 Hz	60 Hz
Output Frequency Range	57-63 Hz	57-63 Hz
Power Factor	Unity, >0.99 (Adjustable 0.8 leading to 0.8 lagging)	Unity, >0.99 (Adjustable 0.8 leading to 0.8 lagging)
Fault Current Contribution (1 Cycle RMS)	55 A	55 A
Total Harmonic Distortion (THD) @ Rated Load	<3%	<3%
Recommended OCPD Device	90 A	100 A
AC Surge Protection	Type II MOV, 1240Vc, 15kA I _{tm} (8/20μ)	
Efficiency		
Peak Efficiency	99.0%	99.0%
CEC Efficiency	98.5%	98.5%
Tare Loss	< 2 W	< 2 W
Integrated String Combiner		
Fused Inputs	15 Fused Positions (5 Positions per MPPT) 15 A Standard (20, 25, 30 A accepted)**	
Temperature		
Ambient Temperature Range	-22°F to +140°F (-30°C to +60°C); Derating occurs over +122°F (+50°C)	
Storage Temperature Range	No low temp minimum to +158°F (+70°C)	
Relative Humidity (non-condensing)	0-95%	
Operating Altitude	13,123 ft (4,000 m) Derating occurs from 9,842.5 ft (3,000 m)	
Communications		
Data Logger Hardware	Standard, Internal	
SolrenView Web-Based Monitoring Service	Optional	
Revenue Grade Metering	Optional, External	
Communication Interface	RS-485 Modbus RTU	
Remote Firmware Upgrades	Standard	
Remote Diagnostics	Standard	
Features & Protections		
Arc-Fault	Standard	
Smart Grid Features	L/HVRT, L/HFRT, Volt-Var, Frequency-Watt and Volt-Watt, Soft-Start, Soft-Step	
Testing & Certifications		
Safety Listings & Certifications	UL 1741SA-2016, UL1699B, CSA-C22.2 #107.1, IEEE1547a-2014	
Advanced Grid Support Functionality	Rule 21, UL 1741SA	
Testing Agency	ETL	
FCC Compliance	FCC Part 15	
Warranty		
Standard Limited Warranty	10 Years	
Enclosure		
Acoustic Noise Rating	< 60 dBA @ 1 m at room temperature	
AC/DC Disconnect	Standard, fully-integrated	
Mounting Angle***	0-90° from horizontal (vertical, angled, flat)	
Dimensions (H x W x D)	39.4 in. x 23.6 in. x 10.2 in (1,000 mm x 600 mm x 260 mm)	
Weight	Inverter: 123.5 lbs (56 kg); Wiring Box: 33 lbs (15 kg)	
Enclosure Rating and Finish	Type 4X; Polyester Powder Coated Aluminum	

*Please inquire about compatible Module-Level Power Electronics (MLPE)

**Yaskawa Solectria Solar does not supply optional fuses sizes

***Shade cover accessory required for installation of 75° or less

SOLECTRIA SOLAR

Yaskawa Solectria Solar

360 Merrimack Street
Lawrence, MA 01843
solectria.com

1-978-683-9700
inverters@solectria.com

DOCR-070642-P | November 2018
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YASKAWA



Fixed-Tilt Ground Mount Solution | GM-2

When EPCs and project developers across the USA need dependable, low-maintenance ground mount racking, they turn to RBI Solar. As a single-source provider, we take responsibility for the Design, Engineering, Manufacturing, and Installation of PV mounting solutions. When you choose RBI Solar for your next ground mount, you're choosing peace of mind that your project is in the hands of the most trusted solar racking team in the industry.

Why choose RBI Solar?

- Professional Engineers licensed in all 50 states
- Quick response & efficient communication
- National installation capabilities
- Our in-house team members are an extension of your staff
- 85+ years manufacturing experience
- Complete turn-key process, reduction in your vendor coordination
- Company owned post driving equipment
- National project management capabilities with roaming site service personnel
- More time to focus on your business





GM-2 Solution Features

Foundation and racking design	Site wind speeds 170+ mph and ground snow loads 90+ psf
Signed and sealed drawings	Available in all 50 states
Proprietary on-site testing	Pull testing & corrosion testing - no geotechnical report required
Pre-assembled parts	Reduction in installation time
Variable slope	Accommodates slopes up to 30% (with topographic site map)
20-yr standard warranty	Proven rack reliability and bankability
G115 minimum galvanized coating	Exceeds ASTM and UL standards for 30% extended life
Driven posts	Cost-effective cee channel or I-beam post options available
Up to 24' long post driving	Ability to address challenging soils or elevate array structure
Module configurations	Portrait, landscape (all module types)
Raised purlins	Integrated bonding and grounding to UL 2703
Corrosion class	System available for all corrosion classes
Wire management and electrical	Integrated wire management solution and inverter mounting

Contact us at info@rbisolar.com or (513) 242-2051

DESIGN • ENGINEERING • MANUFACTURING • INSTALLATION

6715 Steger Drive, Cincinnati, OH 45237 | 513-242-2051 | info@rbisolar.com | www.rbisolar.com



Attachment E

Eversource Interconnection Application



**Generating Facility Expedited/Standard Process
Interconnection Application**

Contact Information:

Date Prepared: 2019.09.11

Legal Name and address of Interconnecting Customer

Interconnecting Customer (print): Cranberry Valley Golf Contact Person: Roman Greer

Mailing Address: 183 Oak Street

City: Harwich State: MA Zip Code: 02645

Telephone (Daytime): 508-430-5234, ex 3 (Evening): _____

Facsimile Number: _____ E-Mail Address: rgreer@town.harwich.ma.us

Customer name (if Customer is not Interconnecting Customer) Town of Harwich

Customer email: _____ Customer telephone: _____

Customer Mailing Address:

City: _____ State: _____ Zip Code: _____

Landowner name (if neither Interconnecting Customer nor Customer)

Town of Harwich - Chris Clark

Landowner email: cclark@town.harwich.ma.us Landowner telephone: 508-430-7514, ex 2

Landowner Mailing Address:

732 Main Street

City: Harwich State: MA Zip Code: 02645



Alternative Contact Information

(e.g., system installation contractor or coordinating company, if appropriate):

Name: Scott Kronberger

Mailing Address: 5 Marine View Plaza, Suite 301

City: Hoboken State: NJ Zip Code: 07030

Telephone (Daytime): 856-404-4715 (Evening): 856-404-4715

Facsimile Number: _____ E-Mail Address: skronberger@purepower.com

Ownership (include % ownership by any electric utility):

Customer Owned

Site Control? (Y/N) Y

Will Facility be constructed on a single parcel of land? (Y/N) Y

Authorized/Proposed generation capacity already exists (check all that apply):

On Current Account On Same Legal Parcel of Land In Same Building/Structure

If any apply, include existing generation capacity on design diagrams, and provide

Application Number(s): _____

Confidentiality Statement: "I agree to allow information regarding the processing of my application (without my name and address) to be reviewed by the Massachusetts DG Working Group that is exploring ways to further expedite future interconnections." Yes X No _____

Group Study Agreement: "I understand and agree if my project becomes part of a Group Study, the Company is authorized to share my contact information and project details with other parties that are also involved in the Group Study."

Generating Facility Information

Please provide all Pre-Application Reports (either mandatory or optional) as attachments. This is mandatory for systems greater than or equal to 500 kW.

Address of Facility: 183 Oak Street

City: Harwich State: MA Zip Code: 06245

Electric Distribution Company:

Eversource - Eastern MA (NSTAR)

Account Number: 14181170011

Meter Number: 2510115

EVERSOURCE

System Design Capacity: Nominal 210 (kW) 210 (kVA)
Maximum 210 (kW) 210 (kVA)

For Solar PV provide the DC-STC rating: 275.12 (kW_{DC})

Type of Generating Unit: Synchronous _____ Induction _____ Inverter X

Manufacturer: Solectria & SolarEdge Model:
Solectria PVI60TL, SolarEdge SE30.0KUS

Prime Mover: Fuel Cell Reciprocating Engine Gas Turbine Steam Turbine
 Microturbine Photovoltaic Other _____

Energy Source: Solar Wind Hydro Diesel Natural Gas Fuel Oil
Other _____ (Please Specify)

For Solar PV provide the DC-STC rating: 275.12 (kW)

IEEE 1547.1 (UL 1741) Listed? Yes X, both Inverters are UL1741-SA No _____

1) Generating Unit Type 1

Manufacturer: Solectria Model Name and Number: PVI60TL

Quantity: 3

Single _____ or Three X Phase

AC Rating: Nominal: 60 (kW) 60 (kVA) 480 (AC Volts)

Maximum: 60 (kW) 60 (kVA) 480 (AC Volts)

2) Generating Unit Type 2 (if applicable)

Manufacturer: SolarEdge Model Name and Number: SE30.0KUS

Quantity: 1

Single _____ or Three X Phase

AC Rating: Nominal: 30 (kW) 30 (kVA) 480 (AC Volts)

Maximum: 30 (kW) 30 (kVA) 480 (AC Volts)



3) Generating Unit Type 3 (if applicable)

Manufacturer: N/A Model Name and Number: _____

Quantity: _____

Single or Three Phase

AC Rating: Nominal: _____ (kW) _____ (kVA) _____ (AC Volts)

Maximum: _____ (kW) _____ (kVA) _____ (AC Volts)

Need an air quality permit from DEP? Yes No Not Sure

If "yes", have you applied for it? Yes No

Planning to Export Power? Yes No A Cogeneration Facility? Yes No

Anticipated Export Power Purchaser:

Net Metering

Export Form? Simultaneous Purchase/Sale Net Purchase/Sale Net Metering

Other (Specify)

If net metering, please refer to Schedule Z of the Standards for Interconnection of Distributed Generation. Please note that if under the public cap, all off-takers must be a Municipality or Other Governmental Entity (as defined in 220 C.M.R. 18.02) and therefore be certified by the DPU.

Est. Install Date: 11/1/2019 Est. In-Service Date: 12/1/2019 Agreement Needed By: 10/1/2019

Application Process

I am opting to forego the Expedited Process. Please review this application under the Standard Process. Yes ___ No x

I hereby certify that, to the best of my knowledge, all of the information provided in this application is true:

Interconnecting Customer Signature:  Title: Town Admin Date: 9/12/2019

The information provided in this application is complete:
Company Signature: _____ Title: _____ Date: _____



Generating Facility Technical Detail

Information on components of the generating facility that are currently Listed

	Equipment Type	Manufacturer	Model	National Standard
1.	Solar PV Module	URE	D7K380H8A	UL1703
2.	Solar Inverter	SolarEdge	SE30KUS	UL1741SA
3.	Solar Inverter	Solectria	PVI60TL	UL1741SA
4.				
5.				
6.				

Total Number of Generating Units in Facility?
(4) Solar Inverters

Generator Unit Power Factor Rating:
>0.99

Max Adjustable Leading Power Factor? 0.8 Max Adjustable Lagging Power Factor? 0.8

Generator Characteristic Data (for all inverter-based machines)

Max Design Fault Contribution Current? 253A Instantaneous or RMS? X

Harmonics Characteristics:
<3%

Start-up power requirements:
N/A, ~300VDC

Generator Characteristic Data (for all rotating machines)

Rotating Frequency: N/A (rpm) Neutral Grounding Resistor (If Applicable): _____

Additional Information for Synchronous Generating Units

Synchronous Reactance, Xd: N/A (PU) Transient Reactance, X'd: _____ (PU)
Subtransient Reactance, X'd: _____ (PU) Neg Sequence Reactance, X2: _____ (PU)
Zero Sequence Reactance, Xo: _____ (PU) kVA Base: _____
Field Voltage: _____ (Volts) Field Current: _____
(Amps)

•

Additional information for Induction Generating Units

Rotor Resistance, Rr: N/A Stator Resistance, Rs: _____
Rotor Reactance, Xr: _____ Stator Reactance, Xs: _____
Magnetizing Reactance, Xm: _____ Short Circuit Reactance, Xd'': _____
Exciting Current: _____ Temperature Rise: _____
Frame Size: _____
Total Rotating Inertia, H: _____ Per Unit on kVA Base: _____
Reactive Power Required In Vars (No Load): _____
Reactive Power Required In Vars (Full Load): _____

Additional information for Induction Generating Units that are started by motoring

Motoring Power: N/A (kW) Design Letter: _____

Interconnection Equipment Technical Detail

Date: _____

Will a transformer be used between the generator and the point of interconnection?
Yes _____ No X

Will the transformer be provided by Interconnecting Customer? Yes _____ No _____

Transformer Data (if applicable, for Interconnecting Customer-Owned Transformer):

Nameplate Rating: N/A (kVA) Single _____ or Three _____ Phase

Transformer Impedance: _____ (%) on a _____ kVA Base

If Three Phase:

Transformer Primary: _____ (Volts) _____ Delta _____ Wye _____ WyeGrounded _____ Other
Transformer Secondary: _____ (Volts) _____ Delta _____ Wye _____ WyeGrounded _____ Other



Transformer Fuse Data (if applicable, for Interconnecting Customer-Owned Fuse):
(Attach copy of fuse manufacturer's Minimum Melt & Total Clearing Time-Current Curves)

Manufacturer: N/A Type: _____ Size: _____ Speed: _____

Interconnecting Circuit Breaker (if applicable):

Manufacturer: Eaton Type: Pow-R-Line Load Rating: 350A (Amps)
Interrupting Rating: 65k (Amps) Trip Speed: 5 (Cycles)

Interconnection Protective Relays (if applicable):

(If microprocessor-controlled)

List of Functions and Adjustable Setpoints for the protective equipment or software:

	Setpoint Function	Minimum	Maximum
1.	<u>N/A</u>	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____

(If discrete components)

(Enclose copy of any proposed Time-Overcurrent Coordination Curves)

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting:

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting:

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting:

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting:

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting:



General Technical Detail

Date: 2019.09.11

Enclose 3 copies, or send 1 electronic copy, of site electrical One-Line Diagram showing the configuration of all generating facility equipment, current and potential circuits, and protection and control schemes with a Massachusetts registered professional engineer (PE) stamp. Enclose 3 copies, or send 1 electronic copy, of any applicable site documentation that indicates the precise physical location of the proposed generating facility (e.g., USGS topographic map or other diagram or documentation).

Proposed Location of Protective Interface Equipment on Property:
(Include Address if Different from Application Address)

At new service switchboard as shown on the site plan G200.

Enclose copy of any applicable site documentation that describes and details the operation of the protection and control schemes.

Enclose copies of applicable schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable).

When mailing application fee checks, please enclose a copy of this signed interconnection application form with the payment. Please enclose any other information pertinent to this Facility.

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting:

Current Transformer Data (if applicable):

(Enclose copy of Manufacturer's Excitation & Ratio Correction Curves)

Manufacturer: N/A Type: _____ Accuracy Class: _____ Proposed Ratio Connection:

Manufacturer: _____ Type: _____ Accuracy Class: _____ Proposed Ratio Connection:

Potential Transformer Data (if applicable):

Manufacturer: N/A Type: _____ Accuracy Class: _____ Proposed Ratio Connection:

Manufacturer: _____ Type: _____ Accuracy Class: _____ Proposed Ratio Connection:

Attachment F

**Stormwater Memorandum, by All-Points
Technology Corporation, dated 12/05/19**



November 08, 2019

Carson Mislick
Walter Kerrigan
Greenskies Renewable Energy, LLC
180 Johnson Street
Middletown, CT 06457

Scott Kronberger
Pure Power Engineering
5 Marine View Plaza, Suite 301
Hoboken, NJ 07030

RE: Cranberry Valley Solar
183 Oak Street
Harwich, Massachusetts

Dear Messrs. Mislick, Kerrigan, & Kronberger:

We are pleased to submit this letter report related to stormwater drainage associated with the proposed Cranberry Valley Solar project (the "Project"). The Project is proposed at the Cranberry Valley Golf Course, located at 183 Oak Street in Harwich, Massachusetts (the "Site").

Introduction

The Site is a ± 182.48 acre property developed as the Cranberry Valley Golf Course. The Project includes the installation of two systems comprised of a ground-mounted solar array and a rooftop-mounted solar array, to be installed in the west central portion of the Site. The ground-mounted system will consist of 648 solar panels, to be installed in an existing disturbed depression east of the maintenance building and north of the golf cart building. The rooftop system will consist of 76 rooftop solar panels on the southern portion of the golf cart building. The power generated from this site will serve the Cranberry Valley Golf Course.

Site Conditions and Stormwater Patterns

The Project Area for the ground-mounted array is ± 1.26 acre. It is anticipated that minor clearing in the northern portion of the Project Area will be required. The existing Site drains mainly from northwest to southeast towards a wooded area adjacent to a fairway, and the existing drainage patterns will be maintained throughout the site after construction.

The proposed ground-mounted solar array will be constructed on a post mounted racking system. Minor grading to shape the existing topography to facilitate the installation of the ground-mounted solar panels will be required. The proposed grading is designed to maintain both an earthwork

balance within the limits of disturbance and the existing drainage patterns on-site. Any disturbed areas will be planted with a wildflower and grass mix, which, when established, is intended to have a lower curve number in comparison to the existing mixed exposed dirt and grass condition.

An existing wetland/vernal pool system is located within the existing wooded area to the east of the Site. The Project limits will be outside of the 100' buffer to the wetland and vernal pool system.

The proposed rooftop solar array will be constructed on top of the golf cart building. The required trenching for the electrical conduit that will connect the proposed arrays with the new equipment is proposed within existing paved access roads or lawn area and will be repaired in kind.

Conclusion

The proposed improvement to the Site cover type along with no additional proposed impervious areas results in a decrease in curve number. The existing Site drainage patterns will be maintained after construction and will function in the same manner as it does in its current condition. Therefore, no stormwater analysis or management was deemed to be required for the Project.

Should you have any questions, please contact me.

Very truly yours,

All-Points Technology Corporation, P.C.



Bradley Parsons, PE, PMP
Manager Civil Engineering

Attachment G

Greenskies Renewable Energy O&M Services Summary and Certificate of Insurance

Greenskies

a Clean Focus company



Operations and Maintenance Services

Table of Contents



I. Operations and Maintenance

I. O&M Services

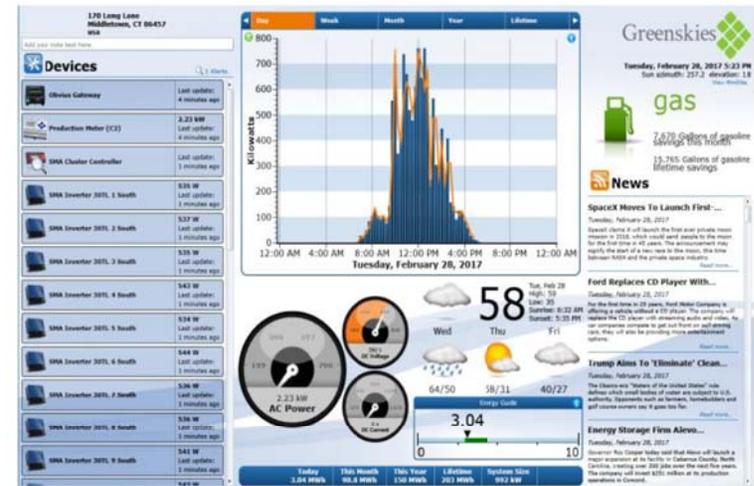
II. Proactive Maintenance Strategy

III. Reporting



GRE Monitoring

- ❖ Greenskies O&M currently monitors and maintains all of our operational assets in-house, along with third party clients
- ❖ A team of individuals including the system analysts and field operations coordinator monitor our systems 24 hours a day, 7 days a week
- ❖ The NOC utilizes Also Energy's platform for site monitoring and generation reporting, along with a custom built in-house platform designed specifically for improved site analytics and site issue prioritization.
- ❖ Custom alarm management provides instantaneous notifications to our Network Operating Center
 - ❖ These alarms are verified by our analyst and put into the site issue docket. There our custom algorithms determine each issue's prioritization score based off of type of issue, kW impacted, and duration of the issue.
- ❖ System performance analytics are completed weekly to better understand the health of each asset, and find trends in under producing systems



GRE Field Operations

- ❖ Each O&M field team consists of a certified electrician and a solar technician
- ❖ GRE field crews perform two Preventative Maintenances per system each year
- ❖ Crew structure by region allows for a quicker response time to corrective maintenance tasks
- ❖ O&M technicians are efficient in identifying and correcting any site issues that may arise
- ❖ Working relationships with manufacturers to provide warranty work services
- ❖ GRE field crews utilize the most advanced technology for PV testing and diagnostics of site issues

Proactive Maintenance Strategy



Scheduled Maintenance Plan

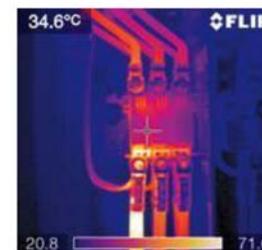
- ❖ Greenskies utilizes a semi-annual scheduled maintenance plan to identify and correct any issues that have or have the potential of arising on its operating assets. Reports are generated after each visit and performance data is analyzed and saved so that historical data can be used to track module performance vs. warranted output
- ❖ Spring Visits – allow teams to visually inspect the array and its components after they have been put through the physical rigors of the winter season and allow any issues to be corrected before the system enters into its most productive season
- ❖ Fall Visits – allow teams to inspect the array and components after they have been through the most electrically demanding season and correct any issues that may have resulted during peak performance over this extended period

Emergency Maintenance Visits

- ❖ When a system is not producing or is under producing the Data Acquisition System will create an alarm. Once an alarm is created the production analyst will analyze the data. Subsequently, O&M trucks are dispatched to investigate and correct any issues
- ❖ Greenskies O&M has a close working relationship with our major system component manufacturers, including modules, racking and electrical components/enclosures. We are able to perform warranty work with our in house technicians. We have centrally located warehouses which store spare modules, inverters, wire and other components that can be used for on-site replacements.



- ❖ Deck Monitoring provides Greenskies with real-time production data and alarms to help manage system uptime. This is another process being migrated into the HANA environment. Automated dispatch to projects dependent on generation loss and location make our solar techs more efficient in correcting site issues



- ❖ Greenskies O&M teams utilize cutting edge technology to test and inspect all major system components and connections on its arrays

Operations and Maintenance Report Sample



- ❖ These reports are used to track reoccurring issues. This helps Greenskies identify any design improvements that may prevent such issues in the future
- ❖ GRE can then use this information to better understand regional trends and predict future issues.

EMERGENCY MAINTENANCE REPORT

SITE INFORMATION

Site Name: Walpole	Problem Code: E
Address: 550 Providence Hwy	Equipment Failure - E
Date: 5/14/2013	Installation Failure - I
Time: 8:39am	
Tech Name: Steve DeNino/Larry Mason	Company: Greenskies
Tech Name: Liam Breslin	Company: Solectria Renewables

Emergency Trigger:

We arrived on site to perform annual O&M scheduled maintenance visit, and noticed the LCD display on the inverter was reading asleep. At the time we arrived the inverter was not operating. We reset the AC disconnect and the inverter connected to the grid. At this time the LCD screen still indicated inverter asleep while the inverter was producing power. We called Solectria's tech support and they dispatched a Technician.

Downtime Summary

The inverter was not operating between 7:00 and 7:45am and 8:45 and 10:00am on May 14th. Total downtime was 2 hours.

Corrective Action

Solectria Technician: (See attached Solectria FSR)

- Reloaded software token and verified correct programming
- Corrected EE3 Power Levels from 500 to 300.
- Verified Normal Pre-Meg angles
- Measured Power Factor of 1 @ 297 kw output
- Completed field mechanical and functional checks

Power yourself.

Preventative Maintenance Report

String Inverter Combiner Box Test Information

Inverter Make	Solectria	Inverter #	7
Inverter Model	PVI 100-480	Inverter Serial #	W1301051051

Notes:

Solmetric String Test Data

String #	Vmp (Volts)	Imp (Amps)	Power (Watts)	Voc (Volts)	Isc (Amps)	Imp/Is	Vmp/Voc	FF %	FF %	Irradiance (W/m ²)	Temp (deg C)	Time
1	607.7	7.23	4,391	752.1	7.63	0.923	0.800	87.38	99.3	0	0.0	15:25:02
2	604.3	6.80	4,120	750.8	7.52	0.934	0.805	87.27	99.1	0	0.0	15:25:05
3	595.8	7.23	4,307	751.7	8.00	0.739	0.726	88.2	0	0.0	0.0	15:25:32
4	597.7	7.37	4,407	751.4	8.96	0.663	0.795	87.9	99.1	0	0.0	15:25:45
5	598.1	5.51	3,294	739.6	6.95	0.866	0.800	87.4	95.6	0	0.0	15:26:03
6	595.7	7.42	4,419	750.0	8.96	0.769	0.722	87.3	0	0.0	0.0	15:26:05
7												
8												
9												
10												

IV Curve Graph

I-V Curves for 20161019 Hanover System Inv7
System: Inv7

Exterior of Combiner

Interior of Combiner

Thermal of DC Feeders

- ❖ Maintenance reports are created after every maintenance visit
- ❖ Utilizes the Solmetric PV analyzer to better understand IV curves and panel output compared to manufacturer standards
- ❖ This helps Greenskies track module degradation and soiling, which is vital information for identifying potential warranty claims



Greenskies 



AGENDA ITEM # II.E

To: Planning Board
From: Charleen Greenhalgh, Town Planner
Date: January 17, 2020
Re: Staff Report – Site Plan Review Special Permit & Use Special Permit

PB2019-47 525 Camelot, LLC as owner, c/o Andrew Singer, Esq., representative, seeks approval of a Modification of a Site Plan Review Special Permit (PB2016-20 & 17-13) and a Restaurant / Fast Food Takeout Use Special Permit pursuant to the Code of the Town Harwich §§325-9, -14.O, -51 and 55. The use will be in association with a retail use and 24 seats (including 5 outdoor seats) are proposed. The property is located at 557 Route 28 (aka Harwich Port Commons), Map 14 Parcel V9 in the C-V and RH-1 zoning districts.

The Planning Board will hold a public hearing at the Tuesday, January 28, 2020 meeting not earlier than at 6:30 p.m. Certified Mail Receipts were received and the mailing took place January 10, 2020.

Description

The applicant has approved site plans pursuant to Cases PB2016-20 and PB2017-13 for a mix-use development. A minor change to the site plan is proposed for minimal outdoor seating at the street front. A retail market is proposed on the first floor of the existing building and this use is allowable by right and requires no further approvals from the Planning Board. In conjunction with the retail market use, the applicant seeks a Use Special Permit for “Restaurant, Fast Food/Take Out” to allow for “take-out” foods, including but not limited to ice cream, deli sandwiches, coffee, etc. The application was filed with the Town Clerk on December 18, 2019 with subsequent information filed on January 17, 2020 and include the following:

1. Form A – Special Permits & Site Plan Review
2. Municipal Lien Certificate
3. A brief written narrative, date stamped received December 18, 2019
4. A more detail written narrative, date stamped received January 17, 2020
5. Reduced Plan Showing Proposed Site Layout & Materials, dated 4-08-2016 with a latest revision date of 5-24-17, prepared for 525 Camelot LLC, prepared by Coastal Engineering, Co., Sheet C2.1.1
6. Set of Floor Plans prepared for Harwich Port Commons, Farmer’s Market, dated 11-25-19, scale 1/8” = 1’-0”, prepared by dBF Associates Architects:
 - a. Drawing No. 1 – Use Diagram
 - b. Drawing No. A1 – Floor Plans

MGL Reference and Planning Board Jurisdiction

Pursuant to MGL c.40 A, §9 the Planning Board must, within 65 days of submission of application for a special permit hold a public hearing. The decision of the Planning Board shall take place within 90 days following the close of the public hearing. Further, a special permit issued shall require a two-thirds vote of the Board. The Planning Board has jurisdiction to the review the Restaurant, Fast Food/Take Out pursuant to the Code of the Town of Harwich §§ 325-13 (Use Table) Paragraph IV. 32A and 325-51 and the Site Plan Review Special Permit pursuant to §325-55.

The Planning Board has jurisdiction to review this application pursuant to the Code of Town of Harwich §325-55 for Site Plan Review Special Permit for the reconfiguration of an existing parking lot. Further, pursuant to §325-55.E.(1) ***“If the site plan meets the requirements of this By-law and the Planning Board Rules and Regulations Governing Subdivision of Land and Site Plan Review, as amended, the Planning Board shall approve it”***. However, **the Board cannot deny approval of a site plan for a use which is allowed by right** (not by special permit) in the district, but may impose reasonable conditions on the proposed use. Please refer to §325-55.E. for specific allowable conditions.

Waivers: No waivers requested at this time.

Comments from other Boards, Departments, Committees

Health: The Board of Health approved this proposal on July 11, 2017 with the following conditions: **1)** Construction and operation of the facility shall be as per the Environmental Impact Report dated May 31, 2017 – currently 4 retail spaces and 4 3-bedroom apartments. Potential uses outlined provide for a nitrogen loading capacity of 22.62 mg/l utilizing 12 bedrooms and a 57 seat food service facility. **2)** Septic decision capacity allows for up to 3315 gallons per day although current proposal is for 1520 gallons per day. Applicant is aware that any change use must be pre-approved by applicant review boards. **3)** Septic system use is for non-industrial waste only.

Building: Building Permit Required. Questioned the parking for off-loading delivery trucks.

Engineering, Fire and Police: No concerns.

Planning Staff Comments

1. The application before the Planning Board is for a minor change to the Site Plan and for a Use Special Permit relative to the Restaurant, Fast Food/Take out. The proposed retail market is an allowable use by right and requires no approvals from the Planning Board.
2. The proposed use is allowable in the C-V zoning district through the special permit process.
3. The commercial use is restricted to the C-V zoning district.
4. No significant changes are proposed for the site plan; however a condition to the total number of outdoor is recommended, as is a condition that the outdoor seats not restrict sidewalk use or impede accessibility.
5. The parking as provided as adequate for the proposed uses.
6. Standard conditions are recommended.
7. Any signage will require a Sign Permit from the Building Department.

BOARD VOTE

Continuance

If the Board will require additional information or wants to take the matter under advisement the following motion is recommended:

Move to continue the hearing for **PB2019-47 525 Camelot, LLC**, to no earlier than 6:30 pm on _____ (*Feb. 11, Feb. 25, March 10*) for the following reason(s): *Need to provide reasons for the continuance...additional information.*

IF BOARD IS READY TO RENDER A DECISION, THE FOLLOWING MOTIONS ARE PROVIDED:

I. Vote to Close the Public Hearing

II. Vote on Finding of Facts for the Use Special Permit – Restaurant, Fast Food/Take Out

Motion to adopt the following findings of fact:

1. Said parcel for the proposed use is primarily in the C-V Zoning District and the Village Commercial Overlay District. A small portion of the rear of the parcel is in the RH-1 zoning district.
2. The Restaurant, Fast Food/Take-out Use will be in conjunction with the Retail Market.
3. The Restaurant, Fast Food/Take-out Use is a ‘permitted use’ by the Planning Board as the Special Permit Granting Authority in the C-V zoning district.
4. The proposed use will not adversely impact traffic flow and safety.
5. The proposed use will be compatible with surrounding land uses.

Vote on the Use Special Permit – Restaurant, Fast Food/Take Out

1. Motion to ***approve*** the Use Special Permit for PB2019-47 525 Camelot, LLC, for a Restaurant, Fast Food/Takeout pursuant to the Code of the Town Harwich §§325-9, -14.O, and -51, in association with a retail use, with 24 seats (including 5 outdoor seats) for property located at 557 Route 28 (aka Harwich Port Commons), Map 14 Parcel V9 in the C-V and RH-1 zoning districts. The decision is based on the above findings and the fact that the application meets the necessary requirements and criteria for approval pursuant to the Code of Town of Harwich
2. Motion to ***approve with conditions*** the Use Special Permit for PB2019-47 525 Camelot, LLC, for a Restaurant, Fast Food/Takeout pursuant to the Code of the Town Harwich §§325 9, -14.O, and -51, in association with a retail use, with 24 seats (including 5 outdoor seats) for property located at 557 Route 28 (aka Harwich Port Commons), Map 14 Parcel V9 in the C-V and RH-1 zoning districts. The decision is based on the above findings and the fact that the application meets the necessary requirements and criteria for approval pursuant to the Code of Town of Harwich with the following conditions:
 - (1) The total number of seats shall not exceed twenty-four (24).
 - (2) No more than five (5) outdoor seats are allowable at the street side of the building and said seat shall not restrict sidewalk use or impede accessibility.

(3) All signage is subject to all Town of Harwich Code regulations and specifically Article VII.

3. Motion to *deny* the Use Special Permit for PB2019-47 525 Camelot, LLC, for a Restaurant, Fast Food/Takeout pursuant to the Code of the Town Harwich §§325 9, -14.O, and -51, in association with a retail use, with 24 seats (including 5 outdoor seats) for property located at 557 Route 28 (aka Harwich Port Commons), Map 14 Parcel V9 in the C-V and RH-1 zoning districts. The decision is based on the fact that the application does not meet the necessary requirements and criteria for approval pursuant to the Code of Town of Harwich, specifically (*need to provide the specifics as to why this does not comply*).

Vote to Adopt Proposed Findings for the Site Plan Special Permit:

To adopt the following finding of fact:

1. The parcel is primarily in the C-V Zoning District and the Village Commercial Overlay District. A small portion of the rear of the parcel is in the RH-1 zoning district.
2. The Site Plan was scrutinized during the previous reviews pursuant to PB2016-20 and PB2017-13.
3. No significant changes are proposed from the previously approved site plans.
4. The only change to the site plan are the inclusion of five (5) outdoor seats are the front on the building.

Vote on Site Plan Review Special Permit: (*Please Note:* An affirmative vote by at least five Planning Board members is required.)

To approve with conditions case number **PB2019-47 525 Camelot, LLC** for a Modification of a Site Plan Review Special Permit (PB2016-20 & 17-13) pursuant to the Code of the Town Harwich §325-55 for a retail use and a 24 seats (including 5 outdoor seats) Restaurant, Fast Food/Take-out for the property located at 557 Route 28 (aka Harwich Port Commons), Map 14 Parcel V9 in the C-V and RH-1 zoning districts. The decision is based on the aforementioned findings of fact, the fact that the application meets the necessary requirements and criteria for approval pursuant to the Code of Town of Harwich and the fact that the retail use is permitted in the zoning district and the Restaurant, Fast Food/Take out Use Special Permit has been approved. The following conditions are imposed:

1. The total number of seats shall not exceed twenty-four (24).
2. No more than five (5) outdoor seats are allowable at the street side of the building and said seats shall not restrict sidewalk use or impede accessibility.
3. Signage shall comply with the requirements of the Code of the Town of Harwich and the Building Department.
4. This decision shall be recorded at the Barnstable Registry of Deeds.
5. Conformance with all review procedure requirements outlined pursuant to §400-18.G Inspection, certificate of completion and as-built plan, of the Code of the Town of Harwich shall be met.

Alternatively, the Planning Board may approve the site plan special permit with or without additional conditions.

Law Office of Singer & Singer, LLC

26 Upper County Road
P. O. Box 67
Dennisport, Massachusetts 02639

Andrew L. Singer
Marian S. Rose

Myer R. Singer
of counsel

Tel: (508) 398-2221
Fax: (508) 398-1568
www.singer-law.com

Harwich Planning Board

557 Route 28, Harwichport

SUMMARY OF REASONING

525 Camelot LLC [“Applicant”], owns the property at 557 Route 28 in Harwichport [“Property”]. The Property, which is shown as Parcel V9 on Harwich Assessor’s Map 14, is located in the C-V and RH-1 Zoning Districts and is improved with a recently-constructed, mixed-use building containing four dwelling units on the second floor and commercial space on the first floor. The Applicant previously sought and received a Site Plan Approval Special Permit and Use Special Permits from the Planning Board (PB2016-20, as modified in PB2017-13). The first-floor commercial space was discussed to be used for between one to four commercial tenants. At this time, the Applicant is proposing to have one commercial tenant in the entire space. There will be no change to the four residential units on the second floor.

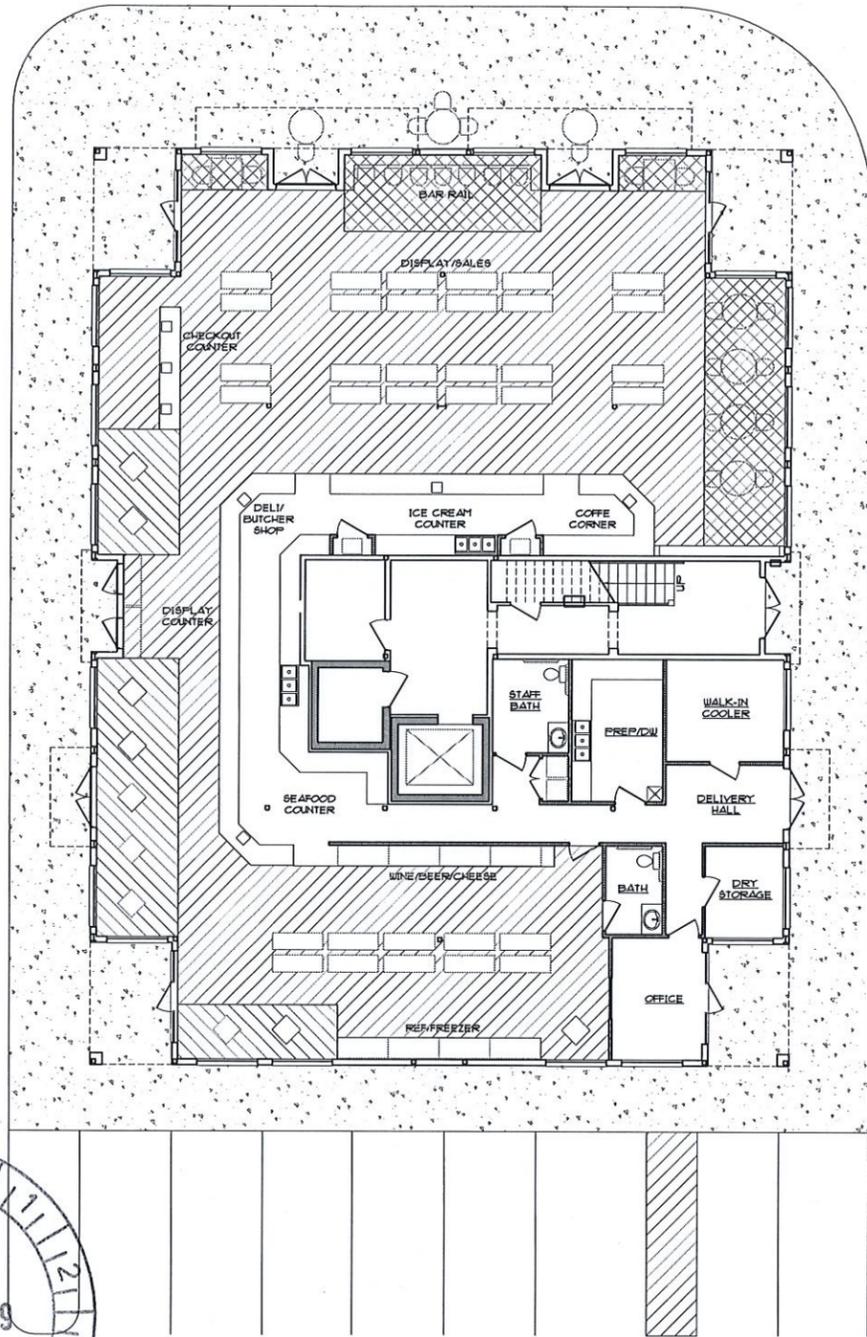
The primary use of the commercial space will be a retail market, which is allowed by right and requires no further regulatory review. A component of the market, a deli with ice cream and coffee service, requires an additional Use Special Permit as a fast food/takeout restaurant business. Twenty-four (24) seats are proposed for this use (nineteen {19} inside and five {5} outside on the front sidewalk adjacent to the building). Although the commercial use of the inside space on the first floor of the building does not require additional site plan review, the outside seats do require review.

Based on all of the above, the Applicant is respectfully requesting an additional Use Special Permit in accordance with Sections 325-9, 325-13 (Table 1), 325-14.O, and 325-51 of the Harwich Zoning By-Law ["Zoning By-Law"], as well as a further Modification of Site Plan Review in accordance with Section 325-55, as necessary, to allow the proposed use in a portion of the retail business and seating. The Board is authorized to grant the requested relief if certain findings are made. The Applicant respectfully submits that the findings can be made in this instance because:

1. The proposed use will be compatible with surrounding land uses in this commercial downtown area of Harwichport Center and will not adversely affect the neighborhood;
2. The Property remains an appropriate location for the proposed use, including outside seating, and will enhance the commercial downtown of Harwichport Center;
3. There will be no nuisance or serious hazard to vehicles or pedestrians. The existing parking (62 spaces) located to the rear of the building will remain conforming for the proposal. In addition, all commitments made in the agreements and easements with the abutting neighbors concerning access to and use of the shared parking area will be met, and the Applicant suggests that this be a condition of approval. Based on the foregoing, the proposed use will not adversely impact traffic flow and safety;
4. Adequate and appropriate facilities are provided for the proper operation of the proposed site. All of the activity, with the exception of the outside seats, will be located within the approved building. An enclosed trash area is provided in the rear of the Property. The loading facility originally approved by the Planning Board has been constructed and will not change. The septic system for the Property has been installed and has sufficient design and capacity to handle the proposed use in accordance with the health regulations.
5. Lighting complies with the Harwich lighting regulations;

6. All necessary facilities and utilities are and will continue to be adequately and appropriately provided for the proper operation of the use. This includes water, electricity, heat, air conditioning, site drainage and landscaping to maintain the visual appearance of the site;
7. The proposal remains in compliance with (a) the Planning Board's Rules and Regulations governing Site Plan Review and (b) the Zoning By-Law; and
8. The Applicant agrees that Conditions 2 and 3 contained in the prior relief issued by the Board (PB2016-20, as modified in PB2017-13) be re-incorporated in this Application.

For all of the above reasons, the Applicant respectfully requests that the Board make findings that the criteria set forth in the Zoning By-Law have been met and grant approval of the Modification of Site Plan Review as necessary and a Use Special Permit for a fast food takeout restaurant business, to allow the proposal to be completed as shown on the plans.



	FOOD STORES/ SUPERMARKET- 2,400 SF -300 SF (DISPLAY CASES) -14 SF (DISPLAY STAND) 2,104 SF TOTAL	1 / 700 SF + EMPLOYEE AT MAX SHIFT	• 11 • 5	• 16 CARS
	GEN MERCHANDISE- 402 SF -36 SF (DISPLAY STANDS) 366 SF TOTAL	1 / 150 SF		• 3 CARS
	LUNCH ROOM/ RESTAURANT- 19 SEATS INDOOR 5 OUTDOOR SEATS	1 / 4 SEATS, INCL. OUTDOOR SEATS + EMPLOYEE AT MAX SHIFT	• 6 • 2	• 8 CARS
				27 CARS

dbf
Associates
Architects

P.O. Box 78
Charlottesville, VA 22902
(434) 977-2791
(434) 977-0593 (FAX)

HARWICH PORT COMMONS -
FARMER'S MARKET
HARWICH, MASSACHUSETTS

NO	DESCRIPTION	DATE
REVISIONS		
USE DIAGRAM		

USE DIAGRAM



SCALE
1/8" = 1'-0"
0 1 5 10

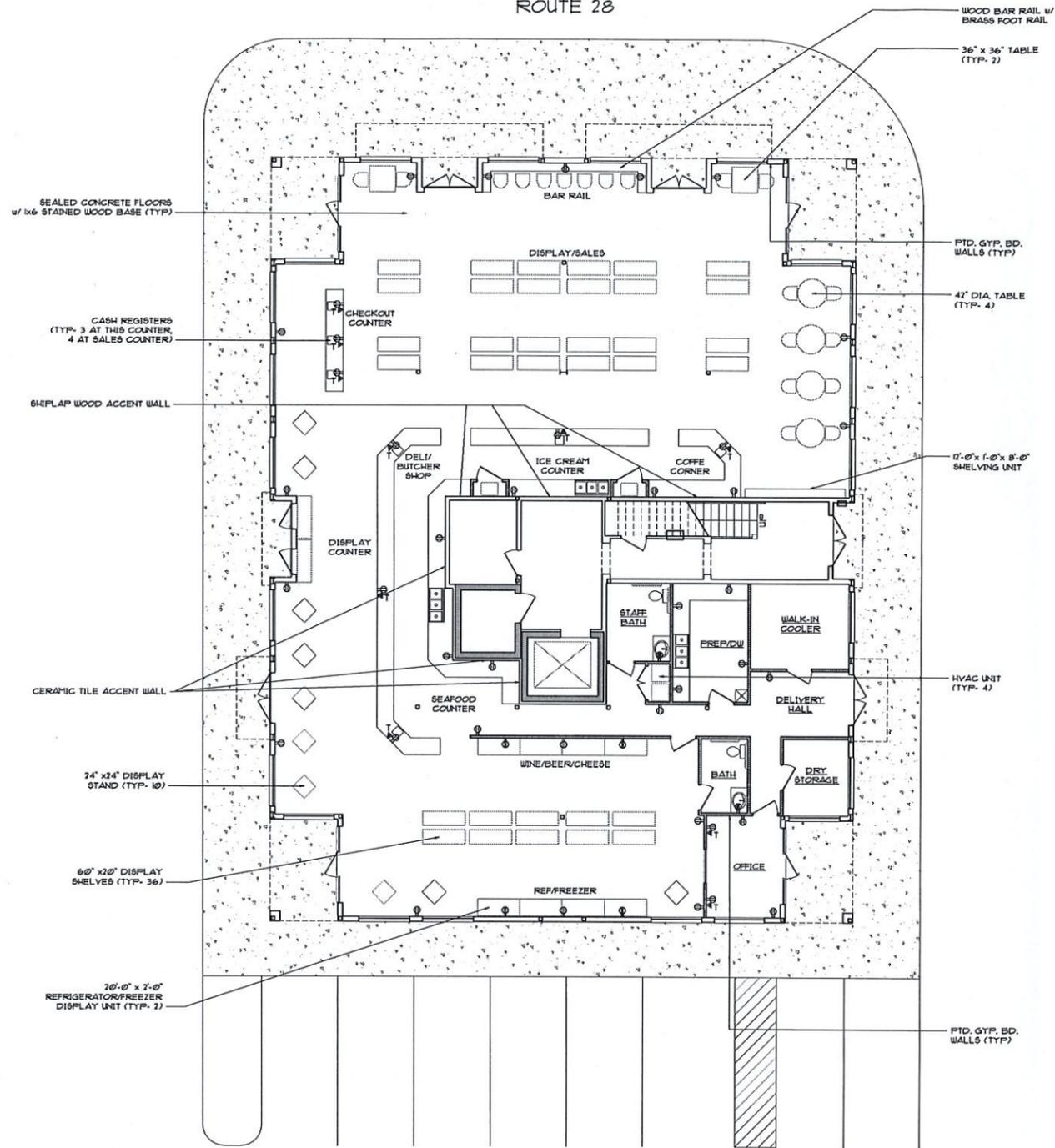
DATE 11-25-19
DWN BY JDB
CHECKED BY RJFJR

PROJECT NO
V1925

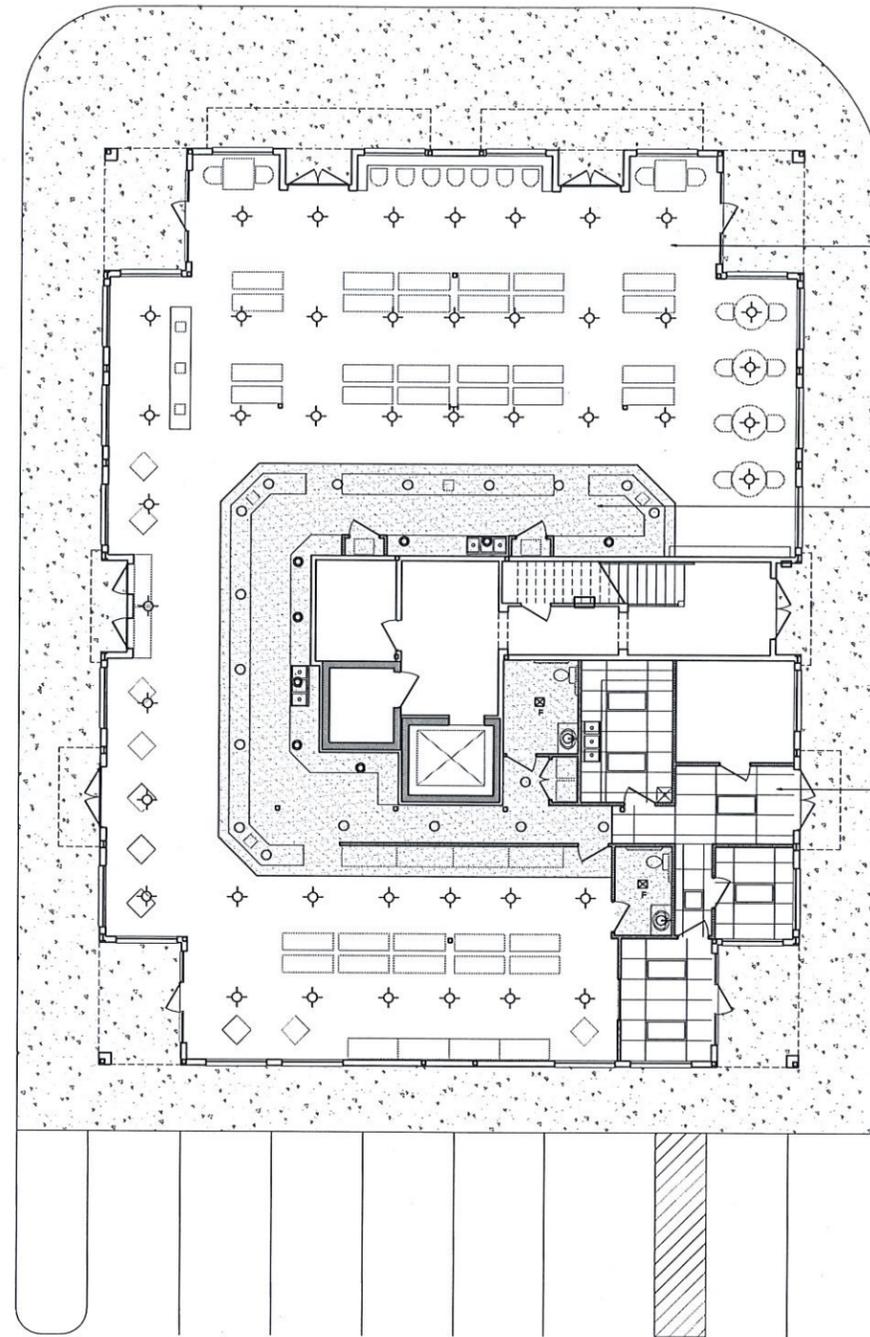
DRAWING NO
1

OF 1

ROUTE 28



① MAIN FLOOR PLAN
9736 GROSS SF.



② REFLECTED CEILING PLAN

ELECTRICAL LEGEND

- 2x2 LED LIGHTING FIXTURE
- 2x4 LED LIGHTING FIXTURE
- H WALL MOUNTED LED FIXTURE
- ◇ LED PENDANT FIXTURE
- LED RECESSED WALL-WASHER CAN LIGHT
- LED RECESSED CAN LIGHT
- ⊕ GENERAL PURPOSE DUPLEX RECEPTACLE
- ⊖ 220V OUTLET
- ⊕ GFI OUTLET
- ⤴ TELEPHONE AND/OR DATA
- ⊠ EXHAUST FAN

dbf
Associates
Architects

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HARWICH PORT COMMONS -
FARMER'S MARKET
HARWICH, MASSACHUSETTS

NO	DESCRIPTION	DATE
REVISIONS		
FLOOR PLANS		

FLOOR PLANS



SCALE
1/8" = 1'-0"
0 5 10

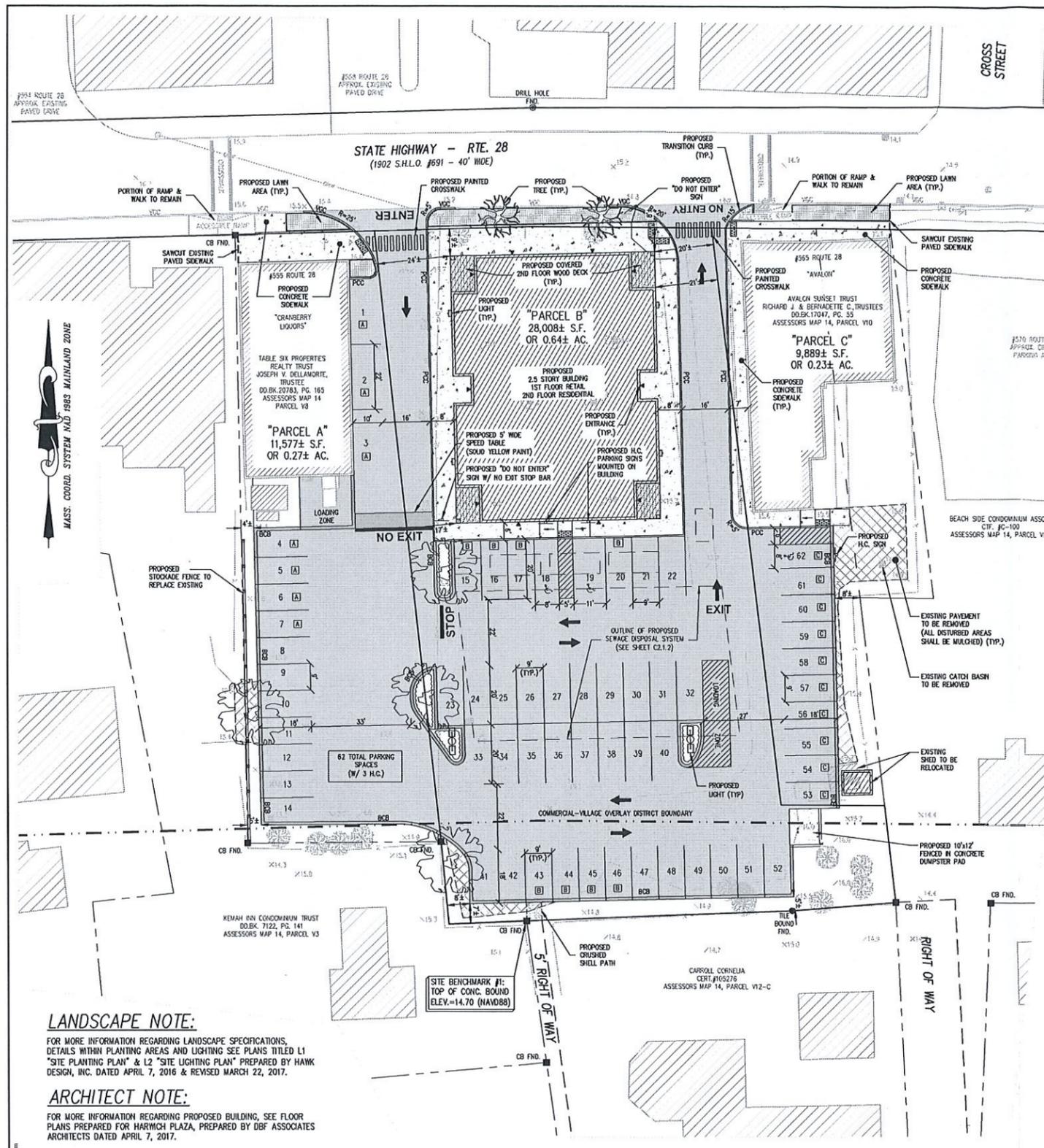
DATE 11-18-19
DWN BY JDB
CHECKED BY RJFJR

PROJECT NO
V1925

DRAWING NO

A1

OF 1



ZONING COMPLIANCE TABLE - PARCEL "B"

ZONING DISTRICT: CV (COMMERCIAL VILLAGE) & (RH-1 RESIDENTIAL HIGH DENSITY AT REAR OF PROPERTY)
USE GROUP: MIXED USE

SUBJECT	REQUIRED	EXISTING	PROPOSED
LOT AREA	40,000 S.F.	28,008± S.F.	28,008± S.F.
FRONTAGE	150 FT.	114± FT.	114± FT.
FRONT SETBACK (BUILDING)	25 FT.	118± FT.	8± FT.
SIDE SETBACK (BUILDING)	20 FT.	10± FT. (EAST) 12± FT. (WEST)	17± FT. (WEST) 20± FT. (EAST)
REAR SETBACK (BUILDING)	20 FT.	47± FT.	135± FT.
STREET PARKING SETBACK	20 FT.	5± FT.	16± FT.
SIDE PARKING SETBACK	10 FT.	0± FT.	0 FT.
REAR PARKING SETBACK	10 FT.	2± FT.	5± FT.
BUILDING COVERAGE	50% MAX. (14,004± S.F.)	17.7% (4,959± S.F.)	20.4% (5,718± S.F.)
SITE COVERAGE	80% MAX. (22,406± S.F.)	91.2% (25,808± S.F.)	92.5% (25,898± S.F.)
BUILDING HEIGHT	30 FT. & 2 1/2 STORIES	< 30 FT.	SEE ARCHITECTURALS

* SITE COVERAGE INCLUDES GRAVEL PARKING AREAS
** REFER TO EXISTING CONDITIONS PLAN DATED 5/29/2013 FOR ADDITIONAL INFORMATION
*** BUILDING EAVES AND OVERHANGS NOT INCLUDED

EXISTING PARKING SCHEDULE

PARKING REQUIREMENTS GENERATOR	QUANTITY OR RATED CAPACITY	BASIS FOR PARKING CALCULATION PER ZONING BY LAW	NUMBER OF SPACES
PARCEL "A" - WEST ABUTTER: EXISTING BUILDING #555 "CRANBERRY LIQUORS"			
RETAIL	1,865± S.F.	1 SPACE PER EACH 150 S.F. OF FLOOR AREA DEVOTED TO CUSTOMER USE (NOT LESS THAN 20% OF TOTAL AREA)	13
PARCEL "B" - PROJECT SITE: EXISTING BUILDINGS #557, 559, 561 & 563 (TO BE DEMOLISHED)			
RETAIL	1,159± S.F.	1 SPACE PER EACH 150 S.F. OF FLOOR AREA DEVOTED TO CUSTOMER USE	8
OFFICE	1,575± S.F.	1 SPACE PER EMPLOYEE MAX. SHIFT, PLUS 1 PER 250 S.F. OF FLOOR AREA	11
RESTAURANT	35 SEATS + EMPLOYEES	1 PER 4 SEATS PLUS 1 PER EMPLOYEE MAX. SHIFT	10
TOTAL REQUIRED PARKING SPACES - PARCEL "B"			34
PARCEL "C" - EAST ABUTTER: EXISTING BUILDING #565 "TEAM WAYSTACK REALTY & BY&D INSURANCE"			
OFFICE	3,347± S.F.	1 SPACE PER EMPLOYEE MAX. SHIFT, PLUS 1 PER 250 S.F. OF FLOOR AREA	20 (ASSUMING 6 EMPLOYEES)
TOTAL EXISTING PARKING SPACES - PARCELS "A", "B" & "C" COMBINED			67 SPACES
			42 SPACES (WITH 2 H.C.)
			REQUIRED
			EXISTING

PROPOSED PARKING SCHEDULE

PARKING REQUIREMENTS GENERATOR	QUANTITY OR RATED CAPACITY	BASIS FOR PARKING CALCULATION PER ZONING BY LAW	NUMBER OF SPACES
PARCEL "A" - WEST ABUTTER: EXISTING BUILDING #555 "CRANBERRY LIQUORS"			
RETAIL	1,865± S.F.	1 SPACE PER EACH 150 S.F. OF FLOOR AREA DEVOTED TO CUSTOMER USE (NOT LESS THAN 70% OF LOT AREA)	13
PARCEL "B" - PROJECT SITE: PROPOSED 2 STORY BUILDING			
RETAIL	4,002± S.F.	1 SPACE PER EACH 150 S.F. OF FLOOR AREA DEVOTED TO CUSTOMER USE	27
3 BEDROOM UNITS	4	1.5 PER UNIT	6
TOTAL PARKING - PARCEL "B"			33 SPACES
PARCEL "C" - EAST ABUTTER: EXISTING BUILDING #565 "TEAM WAYSTACK REALTY & BY&D INSURANCE"			
OFFICE	3,347± S.F.	1 SPACE PER EMPLOYEE MAX. SHIFT, PLUS 1 PER 250 S.F. OF FLOOR AREA	20 (ASSUMING 6 EMPLOYEES)
TOTAL PARKING SPACES - PARCELS "A", "B" & "C" COMBINED			66 SPACES
			62 SPACES (WITH 3 H.C.)
			REQUIRED
			PROPOSED

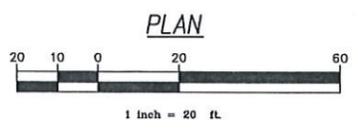
- ### LEGEND
- | EXISTING | PROPOSED |
|-------------------------|------------------------------|
| □ BOUND | — STOCKADE FENCE |
| ⊕ CATCH BASIN | BCB BITUMINOUS CONCRETE BERM |
| ⊕ DRAIN MANHOLE | PCC PRECAST CONCRETE CURB |
| ⊕ SEWER MANHOLE | VCC VERTICAL GRANITE CURB |
| ⊕ MANHOLE | □ UNIT DESIGNATED SPACE |
| ⊕ HYDRANT | □ LIGHTS |
| ⊕ GAS VALVE | ⊕ CHANTICLEER PEAR TREE |
| ⊕ WATER VALVE | ⊕ RED SUNSET MAPLE TREE |
| ⊕ ELECTRIC METER | ▽ BUILDING ENTRANCE |
| ⊕ GAS METER | |
| ⊕ MISC. SIGN | |
| ⊕ POST | |
| ⊕ UTILITY POLE | |
| ⊕ TREE | |
| — FENCE | |
| — OVERHEAD UTILITY LINE | |
| — CONTOUR | |
| ⊕ SPOT GRADE | |
| ⊕ VERTICAL GRANITE CURB | |

LANDSCAPE NOTE:
FOR MORE INFORMATION REGARDING LANDSCAPE SPECIFICATIONS, DETAILS WITHIN PLANTING AREAS AND LIGHTING SEE PLANS TITLED L1 "SITE PLANTING PLAN" & L2 "SITE LIGHTING PLAN" PREPARED BY HAWK DESIGN, INC. DATED APRIL 7, 2016 & REVISED MARCH 22, 2017.

ARCHITECT NOTE:
FOR MORE INFORMATION REGARDING PROPOSED BUILDING, SEE FLOOR PLANS PREPARED FOR HARMICH PLAZA, PREPARED BY DBF ASSOCIATES ARCHITECTS DATED APRIL 7, 2017.

SITE COVERAGE TABLE

SITE COVERAGE	PARCEL "A"	PARCEL "B" (PROJECT SITE)	PARCEL "C"	TOTAL ("A", "B" & "C")
EXISTING	10,403± S.F.	25,808± S.F.	7,401± S.F.	43,612± S.F.
PROPOSED	10,478± S.F.	25,898± S.F.	6,544± S.F.	42,920± S.F.
CHANGE	75± S.F. INCREASE	90± S.F. INCREASE	857± S.F. REDUCTION	692± S.F. REDUCTION



PLAN REFERENCES:
ASSESSORS MAP 14, PARCEL V9
DEED BOOK 127767, PAGE 21
DEED BOOK 20783, PAGE 165
C.I.F. #169418
PLAN BOOK 123, PAGE 15
PLAN BOOK 470, PAGE 50
L.C.P.L. 23643

"PARCEL A"
#555 ROUTE 28
ASSESSORS MAP 14 PARCEL V8
TABLE SIX PROPERTIES
REALTY TRUST
JOSEPH Y. DELLAMORTE, TRUSTEE
D.B.K. 20783, PG. 165

"PARCEL B"
#557 ROUTE 28
ASSESSORS MAP 14 PARCEL V9
525 CAMELOT LLC
D.B.K. 27767, PG. 21
D.B.K. 20783, PG. 165
C.I.F. #169418
PLAN BOOK 123, PAGE 15
PLAN BOOK 470, PAGE 50
L.C.P.L. 23643

"PARCEL C"
#565 ROUTE 28
AVALON SUNSET TRUST
RICHARD J. & BERNADETTE C. TRUSTEES
D.B.K. 17047, PG. 55
ASSESSORS MAP 14, PARCEL V10

DATUM NOTE:
ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 1988)

COASTAL engineering co.
260 Cranberry Hwy, Orleans, MA 02653
508.255.6011 P 508.255.6700 F

525 CAMELOT LLC
557, 559, 561, 563 ROUTE 28
SHEET TITLE

PLAN SHOWING PROPOSED SITE LAYOUT & MATERIALS

PROJECT: 525 CAMELOT LLC
SCALE: AS NOTED
DRAWING FILE: C17990-C3D.dwg
DATE: 04-08-2016
DRAWN BY: JLH/MJB
CHECKED BY:

ISSUED FOR REGULATORY REVIEW 05-24-2017

2 OF 11 SHEETS
PROJECT NO. C17990.00

HARWICH ZONING BOARD of APPEALS PUBLIC HEARING
Wednesday, January 29, 2020 at 7:00 p.m.
Griffin Meeting Room, Harwich Town Hall
AGENDA

On Wednesday, January 29, 2020 at 7:00 PM, the Harwich Zoning Board of Appeals will hold a Public Hearing in the Griffin Meeting Room at the Harwich Town Hall, 732 Main Street to hear the following cases. Any member of the public having interest in these applications is invited to attend and provide information and comment relevant to these matters or may submit the same in writing by noon on Monday, January 27, 2020.

Case #2019-28 (Continued from 7/31/19 and 10/30/19)

Wychmere Harbor Real Estate, LLC, a/k/a Wychmere Beach Resort, through its agent, Attorney Andrew Singer has applied for an Amendment to Special Permit No. 10-39 or in the alternative, a new Special Permit to alter, extend or change a pre-existing, non-conforming recreation or amusement services and restaurant facility. The application is pursuant to the Code of the Town of Harwich, §325-54(B) as set forth in MGL Chapter 40A §6. The property is located at **23 Snow Inn Rd, Unit 12** Map 8, Parcel P2-12 in the RH-3 and RL Zoning Districts.

Case #2019-38 (Continued from 12/4/19)

John Matthews of West Newbury Development Corporation, through his agent, Abigail Rose of Robert B. Our Co. has applied for a Special Permit for a Temporary Change of Use in order to store materials and construction equipment associated with Town of Harwich Sewer Project. The application is pursuant to the Code of the Town of Harwich, §325-54 and Table 1, Use Regulations, PP II, Line 3 "Essential Services" as set forth in MGL Chapter 40A §6. The property is located at **160 Route 137**, Map 86, Parcel M12-2 in the CH-2 Zoning District.

Case #2020-01

Timothy M. Blanchard and Kerry A. Blanchard, Trustees of the KNT Realty Trust, through their agent, Attorney Paul Tardif have applied for a Variance to allow for a 24' wide newly created panhandle lot where 35' is required. The application is pursuant to the Code of the Town of Harwich §325-18Q as set forth in MGL Chapter 40A §10. The property is located at **2 Saltwater Lane, a/k/a 14 Saltwater Lane, a/k/a 123 Riverside Dr.**, Map 4, Parcels A1-A5, A1-A6, A1-A7, A1-A8 and A1-A9 in the RL Zoning District.

Case #2020-02

The Royal Apartments LLC, through its agent, Alex Burdin, has applied for a Variance, to convert the use of the property from a nursing home/assisted living use to multi-family dwelling residential use. The application is pursuant to the Code of the Town of Harwich, §325-52 and Table 1, Use Regulations as set forth in MGL Chapter 40A §10. The property is located at **328 Bank Street**, Map 41, Parcel N4 in the MRL Zoning District.

Case #2020-03

Andrew Hall, Successor Trustee of the Emulous Hall Realty Trust through his agent, Attorney Andrew L. Singer, has applied for a Variance, to redevelop a previously disturbed and commercially-used portion of property located in 2 zoning districts in connection with a seasonal, miniature golf course. The application is pursuant to the Code of the Town of Harwich, §325-52 and Table 1, Use Regulations as set forth in MGL Chapter 40A §10. The property is located at **346 Route 28 and 0 Sisson Road**, Map 21, Parcels N2-0 and N1-0 in the CH-1 and RM Zoning Districts.

Case #2020-04

Kevin M. Blute and Lorraine M. Blute have applied for a Special Permit to build a 3-season porch onto a pre-existing, non-conforming single family dwelling. The application is pursuant to the Code of the Town of Harwich, §325-54 and Table 2, Area Regulations as set forth in MGL Chapter 40A §6. The property is located at **9 Idle Way**, Map 62, Parcel K33 in the RR Zoning District.

Case #2020-05

David Radlo and Irene Radlo, through their agent, Jeffrey Hennemuth have applied for a Special Permit to replace an existing deck of a pre-existing, non-conforming single family dwelling. The application is pursuant to the Code of the Town of Harwich, §325-54 and Table 2, Area Regulations as set forth in MGL Chapter 40A §6. The property is located at **7 Ginger Plum Lane**, Map 5, Parcel G4-53 in the RH-1 Zoning District.

Case #2020-06

Ronald A. Emler and Diane D. Bouffard, Trustees of the Ronald A. Emler and Diane D. Bouffard Revocable Living Trust Agreement, through their agent, Attorney William Crowell, have applied for a Special Permit, or in the alternative, a Variance, to construct a porch onto a pre-existing non-conforming single family dwelling. The application is pursuant to the Code of the Town of Harwich, §325-54 and Table 2, Area Regulations as set forth in MGL Chapter 40A §6 and if necessary Chapter 40A §10. The property is located at **12 Park St**, Map 50, Parcel P1-3 in the RM Zoning District.

Case #2020-07

David C. Fogaren, and Lisa M. Fogaren, Trustees of the Fogaren Family Revocable Trust, through their agent, Attorney Jeffrey Ford, have applied for a Special Permit to demolish and replace a pre-existing, non-conforming single family dwelling. The application is pursuant to the Code of the Town of Harwich, §325-54 and Table 2, Area Regulations as set forth in MGL Chapter 40A §6. The property is located at 12 Hiawatha Road, Map 6, Parcel F-3-5 in the RH-1 Zoning District.

In other business, the Board will address the following:

- * Approval of minutes from the December 4, 2019 meeting.
- * New Business per the Board's discretion.

Documents related to the above cases are on file with the Building Department and the Office of the Town Clerk located at 732 Main Street, Harwich.

In accordance with State Law, this legal notice will also be available electronically at www.masspublicnotices.org. The Town is not responsible for any errors in the electronic posting of this notice.

*Per the Attorney General's Office: The **Board** may hold an open session for topics not reasonably anticipated by the Chair 48 hours in advance of the meeting following "New Business." If you are deaf or hard of hearing or a person with a disability who requires an accommodation, contact the Selectmen's Office at [508-430-7513](tel:508-430-7513)*

This Agenda may change at the discretion of the Board.

Recording & Taping Notification: As required by law, the Town may audio or video record this meeting. Any person intending to either audio or video record this open session is required to inform the chair.

Authorized Posting Officer: Shelagh Delaney, sdelaney@town.harwich.ma.us
Board of Appeals Recording Clerk

The Cape Cod Chronicle **Print dates: January 9th and 16th, 2020.**

**HARWICH PLANNING BOARD
HARWICH TOWN HALL - 732 MAIN STREET- GRIFFIN ROOM
TUESDAY, January 14, 2020 – 6:30 PM
MEETING MINUTES**

BOARD MEMBERS PRESENT: Chairman Joseph McParland; Mary Maslowski; Duncan Berry; William Stoltz; Craig Chadwick; and Arthur Rouse. David Harris was present via remote participation. Vice-Chairman Alan Peterson arrived at 7:04 PM.

BOARD MEMBERS ABSENT: None.

OTHERS PRESENT: Town Planner, Charleen Greenhalgh; Ben Zehnder; Alex Bardin; Paul Sweetser; Alan Hall; Edward Hall; Cyndi Williams; and others.

CALL TO ORDER - 6:30 PM by Mr. McParland with a quorum present.

Chairman McParland announced the Recording & Taping Notification: As required by law, the Town may audio or video record the meeting. Any person intending to either audio or video record this open session is required to inform the chair.

PB2019-27 Wychmere Harbor Real Estate LLC, 23 Snow Inn Road, Amend Site Plan Review Special Permit

Chairman McParland re-opened the hearing at 6:30 PM. Applicant seeks to amend a Site Plan Review Special Permit granted in Case PB2010-26 by making improvements to the existing beach club; including replacing the existing restaurant/pool equipment building, two swimming pools, the pool decking and other site improvements with a new restaurant building, a small restroom and retail building, a pavilion expansion, two smaller swimming pools and a new concrete pool deck, and various beach amenities. The applicant is pursuant to the Code of the Town of Harwich §325-55 (Site Plan Review), §325-51 (structure greater than 7500 s.f.) and Chapter 400. The property is located in the RH-3 and R-L zoning districts at 23 Snow Inn Road, Map 8, Parcel P2-12. Hearing continued from 11/7/19. The Board received a letter from Attorney Andrew Signer requesting a continuance to January 28, 2020.

Ms. Maslowski made the motion to continue the hearing to January 28, 2020 no later than 6:30 PM, seconded by Mr. Berry, unanimously so voted via roll call.

PB2019-45 Royal Apartments LLC, 328 Bank Street, Multi-Use Special Permits and Site Plan Review Special Permit

Representative: Attorney Ben Zehnder and Alex Bardin

Chairman McParland opened the hearing at 6:31 PM by reading the legal notice into the record. Applicant seeks approval of a Multi-Family Use Special Permits in the Harwich Center Overlay District and a Site Plan Review Special Permit for the proposed use and additional parking and other appurtenances pursuant to the Code of the Town of Harwich §§325-51.D and -51.O and

325-55. The property is located at 328 Bank Street, Map 41, Parcel N4 in the M-R-L, Harwich Center Overlay and Historic Districts.

The hearing opened with Mr. Bardin and Mr. Zehnder stating that they did not notify abutters as required, and they would like to request a continuance to January 28, 2020.

Ms. Maslowski made the motion to continue the hearing to January 28, 2020 no later than 6:30 PM, seconded by Mr. Berry, unanimously so voted via roll call.

PB2019-46 Greenskies Renewable Energy, 183 Oak Street, Site Plan Review Special Permit

Chairman McParland opened the hearing at 6:33 PM by reading the legal notice into the record. Applicants seek approval of a Site Plan Review Special Permit pursuant to the Code of the Town of Harwich §325-55, in conjunction with §325, Article XXIII to establish a Large Scale Photovoltaic Array at Cranberry Valley Golf Course, owned by the Town of Harwich. The proposal consists of both a ground-mounted array and a rooftop array on the cart barn building. The property is located at 183 Oak Street, Map 61, Parcel H1 in the R-R and W-R zoning districts. The applicant requested a continuance to January 28, 2020.

Ms. Maslowski made the motion to continue the hearing to January 28, 2020 no later than 6:30 PM, seconded by Mr. Berry, unanimously so voted via roll call.

PB2019-50 Davenport Realty Trust, as prospective buyer, 424 Queen Anne Road, Approval Not Required

Representative: Paul E. Sweetser, PLS

Chairman McParland called the matter. The Estate of Elizabeth M. Marceline, owner, seeks endorsement of a two (2) lot Approval Not Required (ANR) plan entitled “Plan of Land in Harwich, Mass” prepared for Davenport Realty Trust, dated December 10, 2019, pursuant to M.G.L. c. §81 P and §400-9 of the Codes of the Town of Harwich for property located at 424 Queen Anne Road Map 70, Parcel B1. The parcel is in the R-M zoning district.

Mr. Sweetser explained that the two proposed lots meet all requirements. Mrs. Greenhalgh read staff and planning comments into the record. Planning: 1) This proposal meets the minimum criteria for endorsement of an ANR plan pursuant to §400-9 of the Harwich Town Code and Massachusetts General Law Chapter 41 §81 P (adequate frontage for the zoning district – 150 feet, with adequate access – Great Western Road). 2) Each lot does contain a minimum of 40,000 s.f.; however, as the Board is aware, lot size is not a consideration for endorsement of an ANR Plan. Health: This property is not located within a water recharge area. Fully compliant septic systems will be required prior to any building permit issuance. No variances from State or Local Regulations will be granted for new construction. If private drinking water wells are to be used, water quality testing is necessary before any permits can be issued. It is also important to note that these properties are tentatively scheduled in Phase 4 of the sewer project. Conservation: Not within jurisdiction.

Ms. Maslowski made the motion that said plan does not constitute a subdivision as the way shown on a plan, a Town Road, provides safe and adequate access, seconded by Mr. Stoltz, unanimously so voted via roll call with the exception of Mr. Rouse who could not vote on this matter.

Ms. Maslowski made the motion to endorse the ANR plan entitled “Plan of Land in Harwich Massachusetts as Prepared for Davenport Realty Trust, prepared by Paul E. Sweetser, P.L.S., dated December 10, 2019, Scale 1” = 40’, seconded by Mr. Stoltz, unanimously so voted via roll call with the exception of Mr. Rouse who could not vote on this matter.

COVENANT RELEASE- 1993 Tompkins Subdivision – Novotny Road

Mrs. Greenhalgh explained that in 1993 the Planning Board approved a three (3) Lot subdivision plan which created Novotny Road. The applicants were Mr. and Mrs. Tompkins. In 1995, following the completion of the all the required road work, the Planning Board released the lots from the covenant; unfortunately two things did not happen, first, the plan referenced in the original covenant releases was wrong; and, second, the covenant releases were never recorded.

One of the lots, which has a house on it, is now being sold. In the title search process the buyer’s attorney discovered that there was no release of covenant recorded and in order to have a clean sale and transfer of title, the covenant release is needed.

Ms. Maslowski made the motion to approve the covenant release for lots 1, 2 and 3 of the Novotny Road subdivision, seconded by Mr. Berry, unanimously so voted via roll call with the exception of Mr. Rouse, who could not vote on this matter.

REVIEW AND APPROVE ANNUAL REPORT 2019

Mrs. Greenhalgh read the proposed annual report to the Board. Mr. Chadwick made the motion to accept the annual report, seconded by Mr. Berry, unanimously so voted via roll call.

Mr. Harris’ call was dropped at 6:50 PM. The meeting continued without him.

MEETING MINUTES

Ms. Maslowski noted two typos in the December 17, 2019 minutes. She made the motion to approve the minutes for December 17, 2019 with amendments, seconded by Mr. Berry, so voted (5-0-1, with Mr. Chadwick abstaining).

CONTINUED REVIEW, DISCUSSION, & POSSIBLE VOTE- ZONING AMENDMENTS FOR 2020 ANNUAL TOWN MEETING

Essential Services: Mrs. Greenhalgh presented the proposed zoning amendments.

Article ____: To see if the Town will vote to amend the Code of the Town of Harwich – Zoning by deleting the definition of “Essential Services” within §325-2 – Definitions and by deleting within §325-13 – Table 1, Paragraph II – Public and Quasi Public Uses, Item 3 – Essential services; facility, utilities.

Explanation:

The existing definition of ESSENTIAL SERVICES: “Services and appurtenant structures, facilities, uses or equipment provided by governmental agencies, including the Town of Harwich, or provided by public utility or public service companies, including but not limited to water distribution systems, Town-owned marinas, docking areas, fish piers, off-loading facilities, retaining walls, jetties and similar structures, gas and electric distribution, systems for telecommunications and sewerage systems.” and the definitions of MUNICIPAL USE: “A use, whether in a structure and/or on a parcel of land, owned and/or operated by the Town of Harwich.” are in conflict with one another. All Municipal Uses are allowable by right, as are public utility uses (i.e. gas, electric, cable, cell). By deleting the definition of Essential Services it would eliminate this unnecessary conflict.

A brief discussion ensued.

Ms. Maslowski made the motion to send the proposed zoning change for essential services to the Board of Selectmen for their referral back to the Planning Board for the public hearing process and for the amendments for the Town Meeting, seconded by Mr. Stoltz, unanimously so voted.

EXPANSION OF IL DISTRICT QUEEN ANNE ROAD

Mrs. Greenhalgh explained that she is working with the Town Engineer on the necessary amendments to the zoning map to show the expanded IL district. There is one correction on the Assessors Map that needs to be corrected by the Town Engineer. The expansion will be brought before the Board once the map has been completed.

BRIEFINGS AND REPORTS BY BOARD MEMBERS

Ms. Maslowski stated that the CPC meeting will be 6:00 PM Thursday night. Fourteen articles that will be voted on.

Mrs. Greenhalgh stated that the town has received a \$20,000 MVP grant. A stakeholder’s workshop, also known as the Municipal Vulnerability Plan (MVP), will be held on January 31, 2020. Invitation were sent out to specific stakeholders. The town website has a link to a survey related to the MVP, and asked that everyone please fill out the survey. It is necessary to receive as much input as possible. She also stated that there are still some available slots, so please let her know if anyone would like to attend.

Vice-Chairman Peterson arrived at 7:04 PM.

Alan Hall and Edward Hall apologized for their late arrival, but wanted to ask about the Queen Anne Road Map amendment. Mrs. Greenhalgh explained to the Board that the Hall’s own property in this area and that Mr. Alan Hall’s parcel is incorrectly shown on the Assessors Map, it needs to be corrected before the Board can Vote on the matter.

Ms. Maslowski stated that the Historic meeting is tomorrow night, they are seeing lots of applications.

Mr. Chadwick asked if anyone wants to make a comment on Mr. Harris' remote participation, as discussed at the Board of Selectmen's meeting. Mrs. Greenhalgh stated that the Board of Selectmen approved his remote participation for 5 months.

ADJOURNMENT: The motion to adjourn was made by Ms. Maslowski at 7:10 PM, seconded by Vice Chairman Peterson, unanimously so voted.

Respectfully submitted,

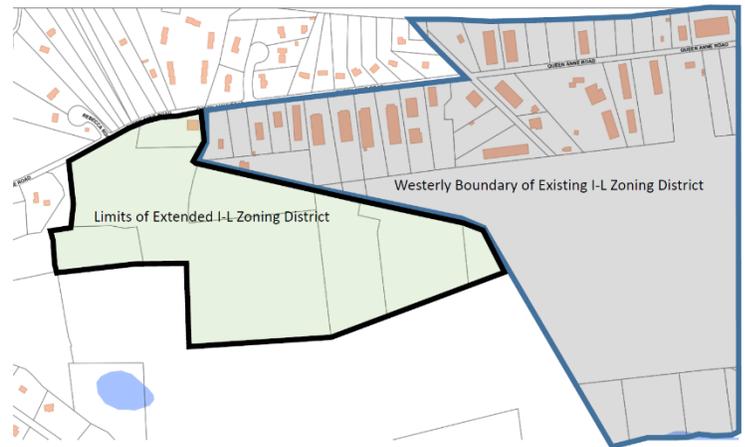
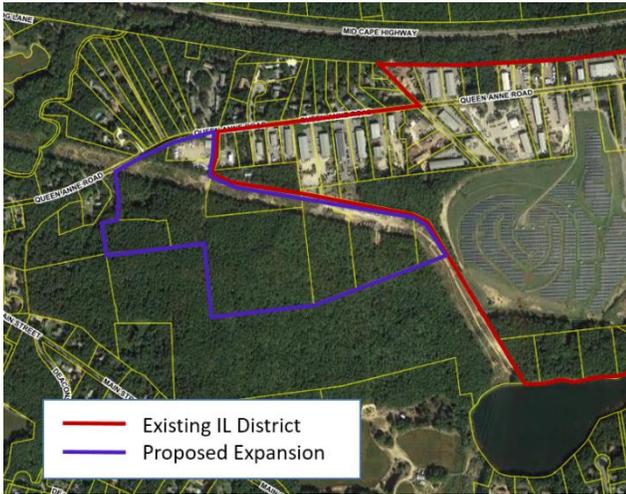
Kathleen A. Tenaglia, Board Secretary

Adopted:

DRAFT

Article ____: To amend the Code of the Town of Harwich, §325-4 and Attachment 4 – The Zoning Map, by extending the Industrial (I-L) Zoning District westerly along Queen Anne Road and the existing I-L zoning district as shown on the amended Zoning Map, dated _____, XX, 2020.

Here is a close up of the area:



*Memorandum from
Charleen Greenhalgh, Town Planner
Town of Harwich*

AGENDA ITEM III.C.2

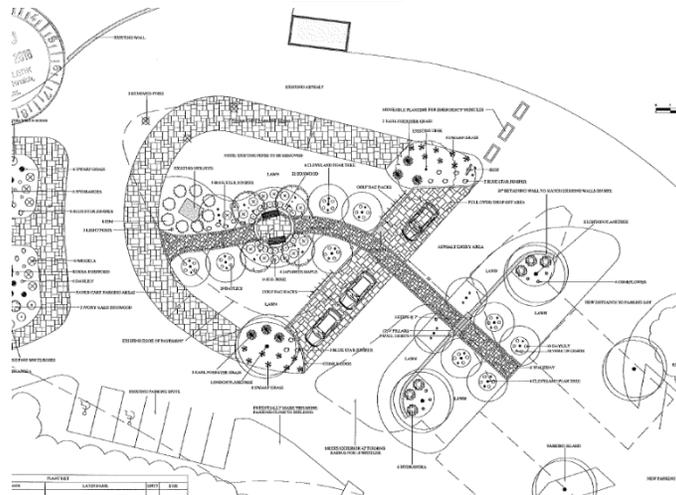
January 21, 2020

To: Planning Board
From: Charleen Greenhalgh, Town Planner
Re: PB2018-05 Cranberry Valley Golf Course Minor Site Plan Changes

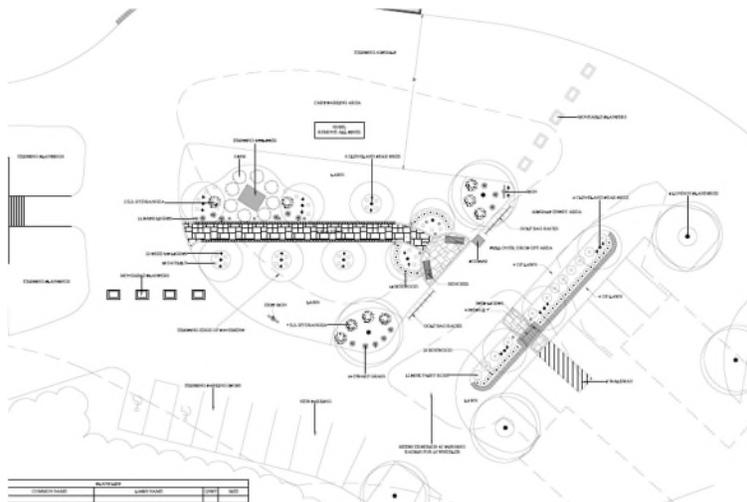
In early 2018 the Planning Board approved the site plan for the cart barn and for a reconfiguration of the parking area and landscaping nearest the pro-shop/restaurant building.

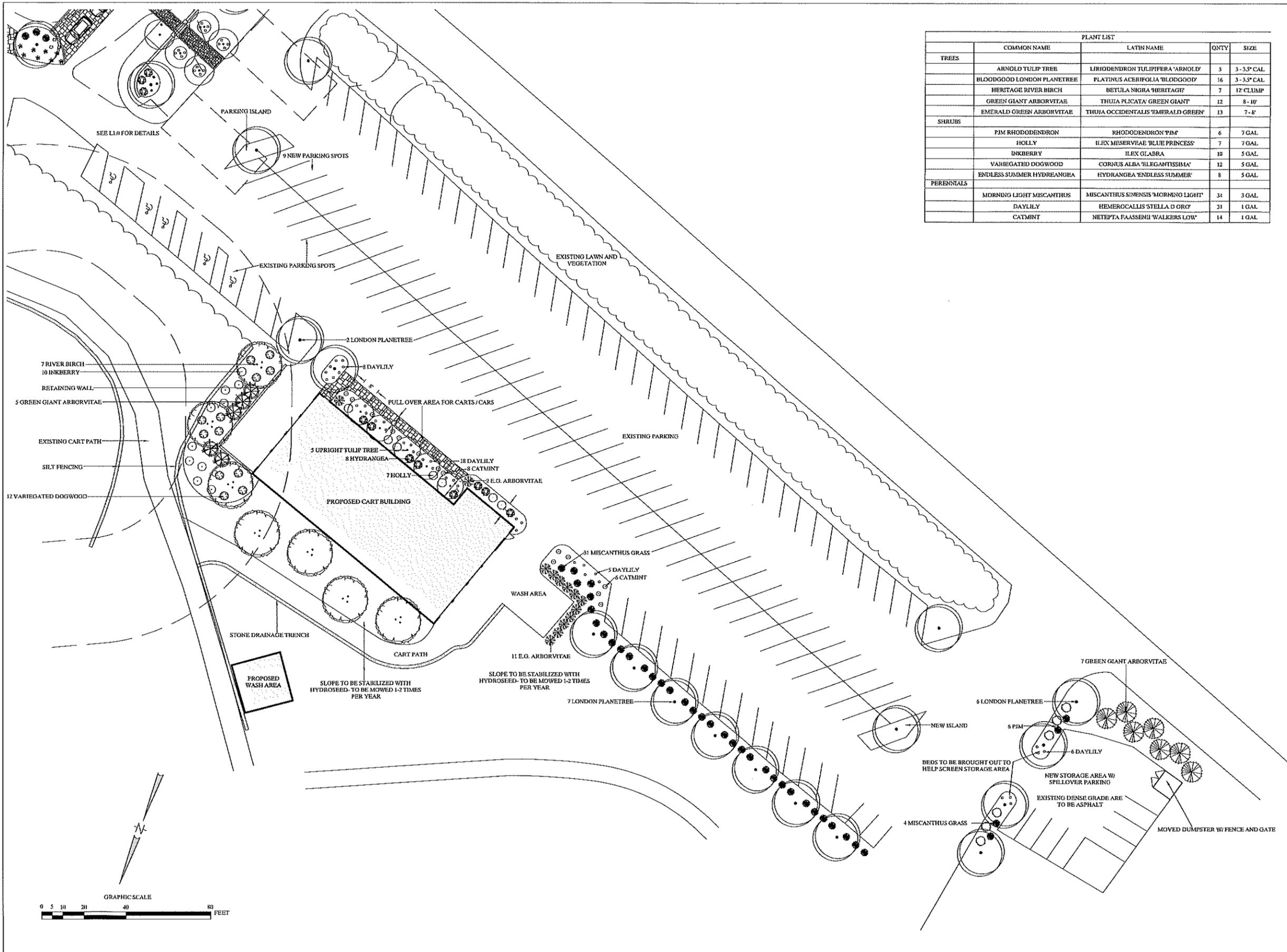
At this time and after operating for a season with the approved layout nearest the pro-shop/restaurant building. This new configuration would allow for 10 more parking spaces and a better configuration and traffic flow. Below are reductions of the existing and proposed configurations. The question to the Board: does this need to come back for full review.

Existing



Proposed





PLANT LIST				
	COMMON NAME	LATIN NAME	QNTY	SIZE
TREES	ARNOLD TULIP TREE	LIRIODENDRON TULIPIFERA 'ARNOLD'	5	3'-3.5" CAL
	BLOODGOOD LONDON PLANETREE	PLATANUS ACERIFOLIA 'BLOODGOOD'	16	3'-3.5" CAL
	HERITAGE RIVER BIRCH	BETULA NIGRA 'HERITAGE'	7	12' CLUMP
	GREEN GIANT ARBORVITAE	THUJA PLICATA 'GREEN GIANT'	12	8'-10'
	EMERALD GREEN ARBORVITAE	THUJA OCCIDENTALIS 'EMERALD GREEN'	13	7'-8'
SHRUBS	PJM RHODODENDRON	RHODODENDRON 'PJM'	6	7 GAL
	HOLLY	ILEX MESERVPAE 'BLUE PRINCESS'	7	7 GAL
	INKBERRY	ILEX GLABRA	10	5 GAL
	VARIEGATED DOGWOOD	CORNUS ALBA 'ELEGANTISSIMA'	12	5 GAL
	ENDLESS SUMMER HYDRANGEA	HYDRANGEA 'ENDLESS SUMMER'	8	5 GAL
PERENNIALS	MORNING LIGHT MISCANTHUS	MISCANTHUS SINENSIS 'MORNING LIGHT'	31	3 GAL
	DAYLILY	HEMEROCALLIS 'STELLA D'ORC'	31	1 GAL
	CATMINT	NETEPTA FAASSENII 'WALKERS LOW'	14	1 GAL



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Plymouth, MA
02360MLCuradossi@GMail.com
508 360 5857
www.MLCuradossi.com

**CRANBERRY
VALLEY GOLF
COURSE**
Harwich, MA

Drafted By:
Michael Curadossi

Original: 10/11/17
Last Modified: 01/23/18

Scale 1"=20'-0"

L2.0

**CART BARN
SITE PLAN**



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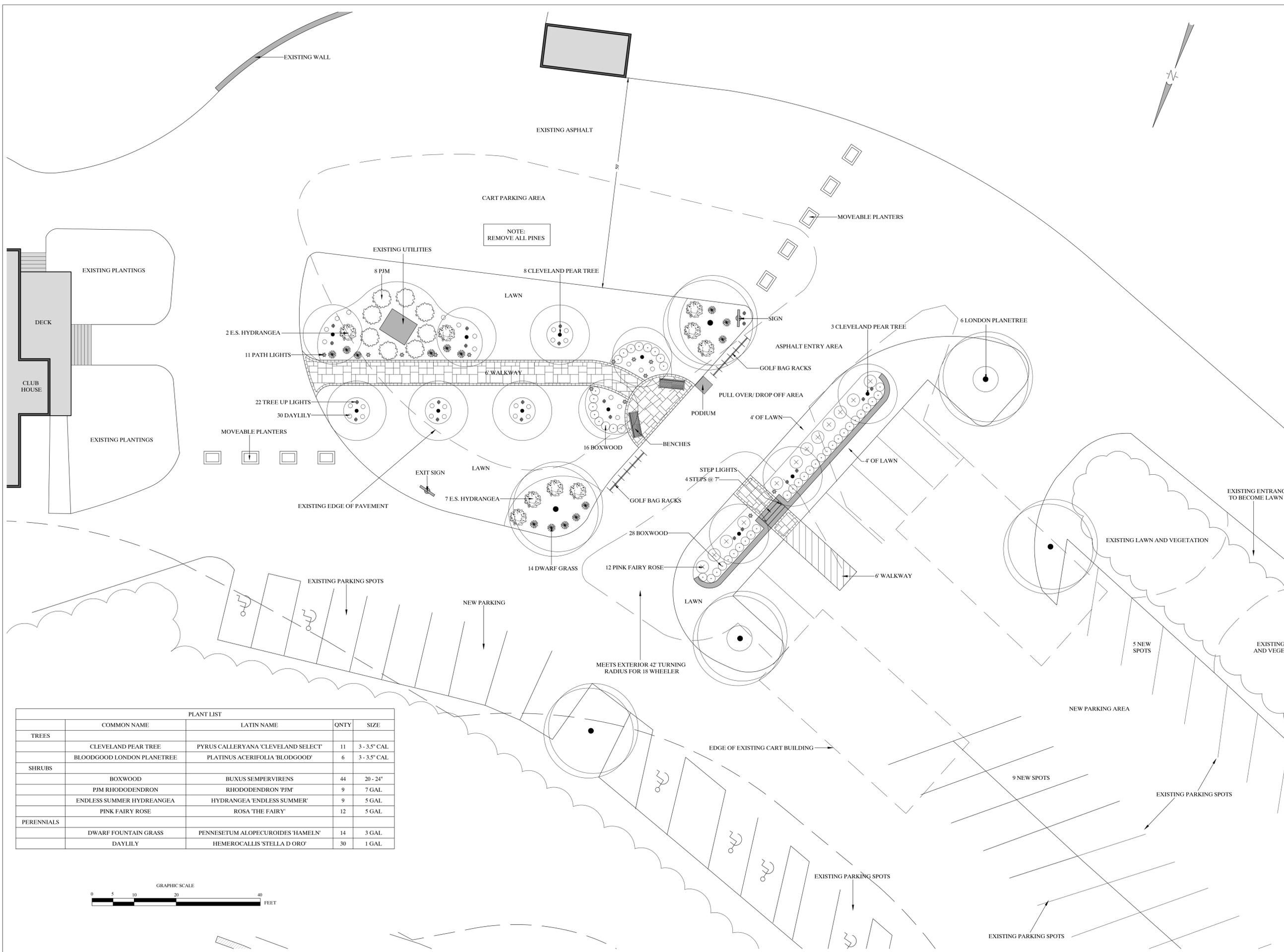
CRANBERRY VALLEY GOLF COURSE
Harwich, MA

Drafted By:
Michael Curadossi

Original: 10/11/17
Last Modified: 01/15/20

Scale 1"=10'-0"

L1.0
CLUB HOUSE
SITE PLAN



PLANT LIST				
	COMMON NAME	LATIN NAME	QNTY	SIZE
TREES	CLEVELAND PEAR TREE	PYRUS CALLERYANA 'CLEVELAND SELECT'	11	3 - 3.5" CAL
	BLOODGOOD LONDON PLANETREE	PLATINUS ACERIFOLIA 'BLOODGOOD'	6	3 - 3.5" CAL
SHRUBS	BOXWOOD	BUXUS SEMPERVIRENS	44	20 - 24"
	P.J.M. RHODODENDRON	RHODODENDRON 'PJM'	9	7 GAL
	ENDLESS SUMMER HYDRANGEA	HYDRANGEA 'ENDLESS SUMMER'	9	5 GAL
	PINK FAIRY ROSE	ROSA 'THE FAIRY'	12	5 GAL
PERENNIALS	DWARF FOUNTAIN GRASS	PENNESETUM ALOPECUROIDES 'HAMELN'	14	3 GAL
	DAYLILY	HEMEROCALLIS 'STELLA D'ORO'	30	1 GAL

