MINUTES

Present: Jim Fox, Chairman, Pat Kerfoot, Vice Chairman, Paul Dreyer, Clerk/Secretary, John Druley, Robert Leary, Pamela Harting-Barrat, Charlotte Harris
Also Present: Tom Bott, Town Planner, Corey Pacheco, Assistant Town Planner

Chairman Jim Fox called the meeting to order at 6:30 PM.

MINUTES: January 22, 2019
MOTION by P.Dreyer/P.Harting-Barrat to approve the minutes of January 22, 2019 as corrected.
Voted 7-0-0

PUBLIC COMMENT
Grant Walker - I read about the Lawrence Lynch company putting solar panels in the overlay district. I think the people of Falmouth should commend this board for the existence of that and I encourage you to do more of that.

APPROVAL NOT REQUIRED PLANS:

Applicant: Richard Shiff Irrevocable Trust - Plan of Land to combine three lots into one located at 102 Nashawena Street
MOTION by P.Kerfoot/R.Leary that the Planning Board vote to endorse “Approval under the Subdivision Control Law not required”. The plan does not depict a subdivision by definition. This endorsement is without regard to zoning or buildability and should not be construed as an approval that the lots shown are entitled to a building permit.
Voted 7-0-0

Applicant: Buzzards Bay Coalition, Inc. - Plan of Land to create a new lot located on Quissett Avenue, Map No. 50 02 000 000F
MOTION by P.Kerfoot/R.Leary that the Planning Board vote to endorse “Approval under the Subdivision Control Law not required”. The plan does not depict a subdivision by definition. This endorsement is without regard to zoning or buildability and should not be construed as an approval that the lots shown are entitled to a building permit.
Voted 7-0-0

PUBLIC DISCUSSION:

Applicant: Christopher Ellis – Site Plan Review application for an accessory apartment addition located at 263 West Falmouth Highway (Warwick & Associates)
Letter from applicant requesting to withdraw without prejudice.
MOTION by P.Kerfoot/R.Leary to accept the withdrawal without prejudice.
Voted 7-0-0

Applicant: Jason Sullivan – Site Plan Review application for an accessory apartment in the basement located at 64 Fresh Pond Road
P. Kerfoot - Board of Health says the property needs a larger septic system because the apartment makes a fourth bedroom; or they could remove a bedroom to keep the current system. The exterior door sizes are different. I am concerned about the width of the door and moving in appliances. The plan shows no closet space. I know it’s not in our purview, but these are my concerns.

J. Fox - I have concerns about the drainage, there is some erosion going on. The house is already there.

P. Kerfoot - I think we should require it be sloped so that the drainage goes away from those doors. The drainage has not been addressed.

J. Druley - They do show the retaining wall. The door is 3 feet, not 30 feet.

R. Leary - I would like to see a landscape plan. I am assuming all vehicles will be in that single driveway.

P. Dreyer - There is quite a difference in elevation on the south side of the building. I’d like some more information on what is proposed in that area.

Jason Sullivan, Contractor - The house has been slowly renovated, there were no gutters before. We are putting in a patio.

J. Fox - If you could illustrate the drainage, landscaping and parking for us.

J. Druley - A little description on the retaining wall also.

Applicant: LaFrance Hospitality Corporation – Site Plan Review application to construct a 64,379 gross square foot hotel and restaurant at the property located at 763 Main Street and 24 Scranton Avenue to consist of one building with 79 hotel rooms, a 36 seat restaurant with increased and enhanced landscaping, newly consolidated access and egress, underground parking and other associated site and aesthetic improvements. (Cape and Islands Engineering)

Letter from Attorney Kevin Lauer requesting to withdraw without prejudice.

MOTION by P. Kerfoot/C. Harris to accept the withdrawal without prejudice and to waive the application fee at the time of re-application.

Voted 7-0-0

PUBLIC HEARING (cont.):

Applicant: Woods Hole Partners, LLC – Site Plan Review to construct a forty-three (43) unit residential complex at the property located at 533 Woods Hole Road, to consist of thirty-nine (39) market rate swelling units in five (5) buildings (three duplex buildings, on twenty (20) unit building, and one thirteen (13) unit building), and four (4) affordable rental units in two duplex buildings.

Chairman Jim Fox recused himself.

Jonathan Goldman, 12 Sidney Street - Submitted deficiencies and reasons why this permit cannot be granted. There has been no engineering study of the Dome.

Becky Connors, Manager of the Sands of Time - I am in support of this project. This parcel of land has been an eyesore and a nightmare. The density hasn’t increased from what it was when the Dome was an operating restaurant.
Sean Callahan, Walker Street - I am in favor of this project.

Grant Walker - What designs will ensure energy efficiency or renewable energy?

Attorney Kevin Klauer - Building E has been reduced somewhat in size by shrinking the floor plans and moving it 8 feet from the Dome. The setback has also increased. We have also prepared view angles and cross-sections. Building E will come no closer to the street than the existing hotel does. The view is not impacted by Building E. There is a slight impact because of Building C which is lower than the Dome. Building D is significantly lower. The buildings we are proposing are not going to have significant impacts on the views from the Dome. Our engineers have been working with the Town Engineer on the issues that were raised.

Doug Kelleher, Historic Preservation Consultant - We have engaged a structural engineering firm, Structures North, that has given us a stabilization report. The engineering of the Dome is truly significant here. The long term plan to stabilize and preserve the Dome is being worked on.

P.Dreyer - Would you indicate what you’re considering of for the full restoration of the dome based on the state historical requirements?

D.Kelleher - We plan to remove the two appendages which were later additions to the Dome. Those portions will be restored and a relatively small addition for accessibility to the Dome. The appendage is a code requirement for mechanicals. A structural analysis will be spelled out in the full restoration plan.

Mark Bogosian - There is going to be a lengthy process and large investment to hire the right people to make this engineering happen.

Attorney Robert Ament - The covenant was filed with the Planning Board and Board of Appeals months ago. It was entered into in 2007 initially with the Planning Board. It was entered into before Town Meeting changed the zoning. The covenant does refer to the Dome. The Planning Board released its interest in the covenant early last spring.

M.Bogosian - It’s not going to be all windows, it will have some white covering. We understand the style of the windows. The next step is getting all the details, what type of wood, etc.

K.Klauer - This will be subject to historic review as well.

Matt Costa - The Engineering Department is ok with the drainage calculations. It is actually a major improvement. There are no pending significant changes to the drainage.

J.Druley - On the siding you’re showing shingles. Are they going to be pre-stained or weathered?

M.Bogosian - We’d like to have all the shingles be treated with something that will allow them to have a longer lifespan. We want to keep all of the architecture at the same level.

J.Doyle - Have you thought about mixing up the buildings?

M.Bogosian - Whatever the final outcome of the historic process will be used on all of the buildings. We have added some nice architectural details on the buildings. We are trying to give the units as much
space as possible without compromising the size. A rough ballpark between the buildings of market rate verses affordable is a few hundred feet. This is meant so that they have their own space.

C.Harris - I am comfortable with the change in design.

R.Leary - Falmouth and Woods Hole is more of an eclectic mix of buildings. I’m wondering if you can’t vary the look of the smaller structures to reflect that. I like the location.

M.Bogosian - I am very open to the idea.

P.Harting-Barrat - Even if it were off several shades of each other so that it’s more interesting.

J.Druley - I’d just like to reiterate that the affordable units be not so simple and have the same pride in their look as these other buildings.

M.Bogosian - We can look at some modifications to those to give them some character and add some details.

MOTION by R.Leary/P.Dreyer to close the hearing and taken under advisement subject to engineering and design changes.

Voted 6-0-1
P.Kerfoot - I think we will still need an extension.
K.Klauer - The applicant is happy to grant an extension to March 18th.

PLANNING BOARD DISCUSSION:

Planning Board Appointment to Recodification Working Group
Committee Reports: P.Dreyer - Water Quality Meetings
Davis Straits Multi-family District: T.Bott - Cape Cod Commission’s grant announcement is in February.
Accessory Apartment Brochure - Working draft next meeting, a separate one for detached
Developing Design Standards: J.Fox - We should have some standard design review guidelines in our business zoned areas.
Grant Opportunity – Real Estate Technical Assistance Services: T.Bott - great opportunity to build on the Davis Straits project.

GENERAL CORRESPONDENCE: January 23, 2019 thru February 12, 2019
Housing Production Plan is approved
Zoning Board site visit for 836 Palmer Avenue

FUTURE AGENDA ITEMS:
Zoning Night
Review Explanations
NEXT MEETING: February 26, 2019

MOTION by P.Kerfoot to adjourn at 9:05

Respectfully Submitted,
Paul Dreyer, Clerk/Secretary
Site Plan Review: Section 240-191
64 Fresh pond Road
Map# 29 02 020 000
Agricultural A (AGA)

Applicant:
Jason Sullivan

Owner:
Michael D Carotenuto

Applicant’s Agent:
Jason Sullivan (contractor)

Decision Deadline:
90 day April 10, 2019

Overview
The parcel is located in an Agricultural A (AGA A) zoning district located on Fresh Pond Road. The lot size is 43,513 sf; the residence contains 3 bedrooms – according to assessor records and floor plan submitted by the applicant. Applicant is proposing an accessory apartment within the basement of the primary residence. The parcel is located in a Coastal Pond district but does not exceed the 1 bedroom per 10,000 sf of lot area that would trigger onsite septic with enhanced nitrogen removal. The apartment will be 468 square feet (18 x 26). The primary residence square footage is 1,196, according to drawings provided – first floor living space is 1,196 square feet (46 x 26) resulting in a 39% relation to principle structure floor area ratio.

Existing Conditions
Single family Ranch style house with 3 bedrooms.
**Proposed Conditions**
The applicant proposes to build a one bedroom accessory apartment, bringing the total number of bedrooms to 4.

**Demolition and Site Preparation**
The applicant is proposing to convert two existing windows into two doors for egress into the proposed apartment. There will be some alteration to the exterior to accommodate the height of the doors. Staff is unaware of site grading to accommodate egress or pitch drainage way from the proposed apartment entryway.

**Parking and Loading**
Residence having 2 or more bedrooms are required to have 2 parking spaces. As proposed 4 spaces are provided on site.

**Circulation**
The Fire Department had no comment on emergency access and circulation to and around the site.

**Operations**
Single family home.

**Traffic Generation**
N/A

**Landscaping**
N/A

**Water and Wastewater**
See Board of Health Staff referral attached.

Need to upgrade water service. See Town Water Department referral attached.

**Storm water**
N/A

**Signage**
N/A

**Lighting**
N/A

**Review Comments**
As required under the zoning bylaw, the application was distributed to the Tax Collector Board of Health, Inspectional Services, Engineering, Water, DPW, Conservation Commission and Fire. Comments are distributed throughout staff report as needed. Engineering and Board of Health have not responded as of January 16, 2019.

**Local Comprehensive Plan Goal**

**Housing Element**
Policy #1: Falmouth will allow for greater infill residential density where appropriate.

Policy #2: Falmouth will allow and encourage the market to create multiple housing opportunities that allow for more choices.
Materials Submitted for Consideration

The following plans and materials were submitted to the Planning Department for the Planning Board to consider:

1. Site Plan Review Application

Planning Board Criteria for Site Plan Review Chapter 240-191

The purpose of site plan review is to ensure the design and layout of certain developments permitted as a matter of right or by special permit will constitute suitable development and will not result in a detriment to the neighborhood or the environment. The site plan must consider all performance requirements under Articles 22, Parking Requirements, Article 23, Performance Requirements, and Article 24.

The applicant shall submit such material as may be required regarding design features intended to integrate the proposed new development into the existing landscape, to enhance aesthetic assets and to screen objectionable features from neighbors. Design features shall include but not be limited to site planning, building placement, building size, design compatibility, exterior appearance, construction materials and finishes, parking and roadways, landscaping and site grading, building entrance and exit placement.

The applicant shall submit such materials as may be required regarding the projected traffic flow patterns into and upon the site for both vehicles and pedestrians and an estimate of the projected number of motor vehicle trips to and from the site for an average day and for peak hours.

§ 240-108. Table of Minimum Requirements.

Residential

2 spaces per for 2 or more bedrooms

§ 240-111. Performance Requirements.

A. Improve pedestrian or vehicular safety and convenience within the site, egressing from it and in relation to adjacent areas; provide better access to each structure for fire and service equipment;

B. Reduce detrimental impact on neighborhood visual character including views and vistas, intrusion of parking areas viewed from public ways and abutting premises and glare from headlights or area lighting; improve landscaping and buffering;

C. Reduce the extent of storm water flow increase from the site and reduce the hazard and inconvenience to pedestrians from storm water flow and ponding; increase protection of adjacent areas including wetlands from detrimental effects by providing adequate surface water drainage;

D. Improve adequacy of water supply, sewage disposal, disposal of refuse and byproducts, lighting and other public services;

E. Reduce removal of trees with four-inch trunk diameter or larger and reduce the area of wetland vegetation displaced;

F. Reduce the volume of cut or fill;

G. Reduce soil erosion; and

H. Assure protection of environmental features on site and in adjacent areas.

§ 240-115. Landscape Requirements.

See Section 240-115 for requirements.

Provisions shall be made for vehicular access to the lot and circulation upon the lot in such a manner as to safeguard against hazards to traffic and pedestrians in the street and upon the lot, to avoid traffic congestion on any street and to provide safe and convenient circulation in the street and upon the lot. Access and circulation shall also conform to the following:

A. Where reasonable alternate access is available, the vehicular access to the lot shall be arranged to avoid traffic use of the local residential streets situated in or bordered by residential districts;

B. Where a lot has frontage on two or more streets, the Planning Board may require that the access to the lot be provided across the frontage and to the street where there is lesser potential for traffic congestion and for hazards to traffic and pedestrians;

C. Where necessary to safeguard against hazards to traffic and pedestrians and/or to avoid traffic congestion, provision shall be made for turning lanes, traffic directional islands, driveways and traffic controls within the streets;

D. Access driveways shall be of a design and have sufficient capacity to avoid queuing and entering vehicles on any street;

E. Driveways into the lot shall have proper grade and alignment as well as transition grades and sight distances, for safe, convenient and efficient access and shall meet the street right-of-way line and travel way of the street in such a manner as to conform to the standard cross section for the street as determined by the Director of the Department of Public Works and the Planning Board;

F. Where topographic and other conditions are reasonably usable, provision shall be made for circulation driveway connections to adjoining lots of similar existing or potential use. When such driveway connection will facilitate fire protection services and/or when such driveway shall enable the public to travel between two existing or potential uses, open to the public generally, without need to travel upon a street; and

G. There shall be no more than one driveway connection from any lot to any street, except that separate entrance and exit driveways may be provided where necessary to safeguard against hazards and to avoid congestion and additional driveway connections may be provided, particularly for but not limited to large tracks and uses of extensive scope, if traffic flow in the street will be facilitated by the additional connection. Driveways shall not exceed 24 feet in width at the street line, or such lesser width as will be sufficient to accommodate the traffic to be generated unless a greater width is required by Town bylaw or the Commonwealth of Massachusetts.

Conditions:

1. The plan shall be constructed as approved. Any changes shall be reviewed by the Planning board to determine if a modification of this decision is necessary. Pursuant to 240-183.B. of the Zoning Bylaw, no permit for occupancy of the new construction shall be issued until the Planning board is satisfied that the conditions of this approval have been met.
February 5, 2019

Thomas Bott  
Town of Falmouth  
Planning Board  
59 Town Hall Square  
Falmouth, MA 02540

RE: Site Plan Review Application of LaFrance Hospitality Corporation – 763 Main Street & 24 Scranton Avenue, Falmouth, MA

Dear Mr. Bott:

Please allow the applicant, LaFrance Hospitality Corporation, to withdraw the Site Plan Review application without prejudice. As we have discussed, we intend to reapply shortly in order to accommodate the updated Regional Policy Plan of the Cape Cod Commission, as such we would also request that the application fee be waived at the time of reapplication.

Thank you. Please contact me if there are any questions.

Very truly yours,

Kevin P. Klauer II, Esq.
Planning Board Review

To: Thomas Bott, Town Planner  
From: Scott Schluter, P.E., Staff Engineer  
CC: File  
Date: 2/8/2019

Re: 533 Woods Hole Road

The Engineering Division reviewed a letter from Cape & Islands Engineering, dated January 30, 2019 to Town of Falmouth Planning Board; the revised sheets G-101, E-101, C-101, C-111, C-121, C-212, C-213, C-502, and C-505 from the “Proposed Site Development Plans at 533-539 Woods Hole Road”, dated October 5, 2018 and revised 1/31/19, by Cape & Islands Engineering; “Site Lithing (sic) Spec/Cut Sheets”; and “Revised - 6.0 Stormwater Design Calculations.”

Below are our original comments in *italics*, followed by new information in **bold** text.


Some of the plans are indicated to be 90%, are there 100% plans? Since this set is what the Applicant submitted for permitting, we are reviewing these plans and calculations as if they are the final set.

90% has been removed from the plans and the Engineer indicates that these are 100% plans. Comment addressed.

The following is a list of our comments regarding this project:

**Sewage**

- Four subsurface sewage disposal system are proposed for this project; adequacy of these systems are is subject to Board of Health approval.

No new or further comments.

**Water**

- A looped 8 inch water main is proposed with separate services for domestic and fire to the buildings on the site; adequacy of this system is subject to Water Department approval.

- One fire hydrant appears to be proposed in front of building A, and there is a fire hydrant on Woods Hole road at each entrance for a total of 3 on or adjacent to the site. Location and number of hydrants is subject to Falmouth Fire Rescue Department and Water Department approval.

No new or further comments.

**Parking and Access**

- Woods Hole Road is a State right of way in this area; no permits for a street opening will be required from Falmouth DPW Engineering Division. The Applicant will be responsible for any State permits from MassDOT if required.

No new or further comments.
Sheet G-101 provides a parking analysis with a total of 86 spaces. Sheet E-A100 shows 20 spaces instead of 14, there appears to be 35 spaces shown on Sheet C101 instead of 34, and there are 7 gravel spaces shown on Sheet C101. The total would be 93 paved or garage spaces and 7 gravel spaces.

The total number of parking spaces required, 86, is provided. The counts reported in the analysis appears to be off. There are 27 spaces shown for Building A, and 13 spaces shown for Building E. There appears to be 8 additional parking spaces associated with the dome.

- With either 86 spaces, 93 spaces, or 100 spaces for parking, 4 accessible spaces would be required and 4 are provided.
- With 4 accessible spaces provided, 1 van accessible space would be required and 1 space is designated van accessible.

No new or further comments.

- §240 108.1 requires 24 foot aisle widths in parking lots with two way travel.
  - The parking area in front of buildings F and G is 20 feet wide.

No change.
- §240 108.1 requires parallel spaces to be 23 feet long; the parallel spaces in the underground garage within building A are not labeled but scale to approximately 18 feet long.

The civil drawings show the parallel spaces as 23 feet long. Comment addressed.
- The driveway width at the grass aisle in front of building C narrows down to 15 feet then expands back out to 18 feet in front of building D. We defer to Falmouth Fire Rescue Department as to the adequacy of the driveways to access all areas of the site they would require access to.

No change.
- The sidewalk across the driveway was removed and a crosswalk has replaced it. Comment addressed.
- The sidewalk appears to go across the driveway for Buildings C and D.

The sidewalk was revised to be 18 feet wide minimum and the Engineer indicates that FFRD is satisfied with access around the property. Comment addressed.
- The eastern entrance would appear to receive the bulk of the entrance/exit traffic and is this one appears to be the proposed construction access. Sight distance to the West appears to be limited by an existing hill, curve, and vegetation. We recommend a sight distance sketch be produced. Has the Applicant explored improvements to improve sight distance with MassDOT? We recommend that a police detail or flagger be required for the entire construction period for construction vehicle entrance/exit. If not physical improvements can be made we recommend meeting with MassDOT to explore other options such as signage.

No change.

- The sidewalk extends down to Woods Hole Road and tactile strips in the sidewalk at both entrances.
- We recommend adding a sidewalk on the east entrance to connect to the sidewalk in Woods Hole Road.

The sidewalk now will extend down to the sidewalk in Woods Hole Road. The East sidewalk now will extend down to the sidewalk in Woods Hole Road. The west sidewalk terminates at an existing wide curb cut in Woods Hole Road. If this were a Town right of way, we would request that the existing opening be closed down to the proposed driveway entrance. The existing granite curbing would be extended down to the proposed driveway opening and the sidewalk would be reconstructed behind it. Town policy is to close unused openings to protect pedestrians and avoid vehicles turning off the road into dead end openings in inclement weather. Has this area been discussed with MassDOT?

- Note: There is a continuous sidewalk across the front of this property that is not shown on the plans.

The sidewalk is shown on the revised plans. Comment addressed.
Grading and Drainage

- There are many inconsistencies in designations between the calculations and the plans which makes it very difficult to follow the plans and calculations. We assume the following is correct:

The table was removed from original comments to streamline the document.

The Engineer has revised the drainage areas and designations across the various portions of the drainage report. The HydroCAD model was totally revised. Comment addressed.

- Many elevations in HydroCAD do not match the plans, some structures are modeled in the 10s, some structures are modeled in the 100s, some structures correlate with the plans and others do not; there should be some consistency for a reviewer to follow.

The elevations used in the calculations appear to match the plans. Comment addressed.

- Pond DW1 in HydroCAD is modeled as two 14’ diameter 6’ high drywells with 48% voids. The plans indicate two 6’ diameter leaching pits each surrounded by a 3’ bed of stone 6’ deep. The Town calculations match these dimensions. The “Leaching Pit & Drywell System – Cross Section” detail indicates 4’ wide and 4’ high pit with a 13’ effective bottom width and 5’ effective sidewall height.

The Engineer has revised the stormwater management system to use 6’ diameter, 6’ high drywells in a 3’ stone envelope set on a 1’ stone bed throughout the site wherever drywells are proposed. Comment addressed.

- Pond DW2 in HydroCAD is modeled as four 14’ diameter 5.5’ high drywells with 48% voids. The plans indicate four 6’ diameter leaching pits each surrounded by a 3’ bed of stone 4’ deep. The “Leaching Pit & Drywell System – Cross Section” detail indicates 4’ wide and 4’ high pit with a 13’ effective bottom width and 5’ effective sidewall height.

Plans and calculations were revised and now match. Comment addressed.

- Pond 5 in HydroCAD is a collection of two bioretention areas and two underground infiltration systems all modeled as one unit; these appear to be two separate systems interconnected and would normally be modeled as such.
- Pond 5 in HydroCAD uses the same bottom elevation for the surface bioretention areas and the underground infiltration areas.
- Pond 5 in HydroCAD has a 50’ long, 12” diameter culvert modeled as an outfall and for the 100 year storm it discharges 2.91 cfs; this pipe does not appear to be on the plans.

Pond 5 has been split into LS4 and LS5 in the new calculations. Comments no longer applicable.

- Pond 6 in HydroCAD is a collection of two bioretention areas, two underground infiltration systems, and a drywell all modeled as one unit; these appear to be three separate systems interconnected and would normally be modeled as such.
- Pond 6 in HydroCAD uses the same bottom elevation for the surface bioretention areas and the underground infiltration areas.
- Pond 6 in HydroCAD has two infiltration systems consisting of galleys installed in 56’ long stone beds while the plans indicate 57’ long stone beds.
- Pond 6 in HydroCAD has a 50’ long, 12” diameter culvert modeled as an outfall and for the 100 year storm it discharges 5.10 cfs; this pipe does not appear to be on the plans.
- Pond 6 in HydroCAD has a 14’ diameter, 7’ high drywell with 48% voids. The plans indicate one 6’ diameter leaching pit surrounded by a 3’ bed of stone. This does not appear to be modeled in the Town Calculations. The “Leaching Pit & Drywell System – Cross Section” detail indicates 4’ wide and 4’ high pit with a 13’ effective bottom width and 5’ effective sidewall height.

Pond 6 has been split into LS1, LS2, LS3, and DW in the new calculations. Comments no longer applicable.

- Catchbasins 3&4 are interconnected, we do not recommend interconnected catchbasins because the sump gets stirred up from incoming piped stormwater. Both catchbasins should be connected to LS2 individually.

The revised plans do not include interconnected catchbasins. Comment addressed.

- Pond 1 in HydroCAD is a collection of two underground infiltration systems and detention basin modeled as one unit. There are two distinct systems that are not interconnected; they should be modeled entirely separate.
- Pond 1 in HydroCAD includes 18,493 cf of storage in the model indicated to be above ground and 6” deep. Where is this?
- Pond 1 in HydroCAD has a 50’ long, 12” diameter culvert modeled as an outfall to the detention basin; on the plans it appears to be 64’ long without a diameter indicated.

Pond 1 has been split into LS6 and LS7 in the new calculations. Comments no longer applicable.

- Pond DW in HydroCAD is modeled as two 14’ diameter 4’ high drywells with 48% voids. The plans indicate four 6’ diameter leaching pits each surrounded by a 3’ bed of stone 6’ deep, and the Town calculations indicate two 6’ diameter
leaching pits surrounded by a 3’ bed of stone 4’ deep. The “Leaching Pit & Drywell System – Cross Section” detail indicates 4’ wide and 4’ high pit with a 13’ effective bottom width and 5’ effective sidewall height.

The Engineer has revised the stormwater management system to use 6’ diameter, 6’ high drywells in a 3’ stone envelope set on a 1’ stone bed throughout the site wherever drywells are proposed. Comment addressed.

- Pond DW in HydroCAD has an outlet invert 3.5’ over the bottom of the structure, but the structure is 4’ high.

Pond DW has been revised in the new calculations. Comment no longer applicable.

- Ponds 5, 6, and 1 in HydroCAD include galley systems with stone beds 5’ high. The plans do not indicate stone bed depth. The Town calculations use 5’ high stone beds. The “Leaching Pit & Drywell System – Cross Section” details indicate indicates 4.5’ high stone bed.

Ponds 5, 6, and 1 have been split into LS4, LS5, LS1, LS2, LS3, DW, LS6 and LS7. Comments no longer applicable.

- In HydroCAD B1 and B2 are routed to Pond 1 which is routed to Pond 2. Only LS6 is shown connected to the detention basin on the plans, and LS6 and LS7 is not connected to each other, the model and plans do not match.

No change in the plans. The new calculations still show a discharge from LS7 for the 100 year storm without a means to convey the discharge to the basin.

- The HydroCAD node diagram sheet includes Pre-development conditions however there are no calculations or summaries provided for these.

Pre-development calculations are provided in the revised report. Comment addressed.

- The HydroCAD calculations do not appear to include LS8, the catchbasin and drywell system near the west entrance.

LS8 has been added to the revised calculations.

- The HydroCAD calculations indicate overflow of DW1 and DW2 for the 100 year storm, both routed to a reach node. Some of this flow would go offsite to the south, and some of this flow would flow to LS8; the model doesn’t reflect this.

In the revised calculations, DW1 and DW2 do not overflow for the 25 and 100 year storms.

- The HydroCAD calculations for DW1 have an outlet invert 5.5’ over the invert but the structure is modeled as 6’ high.

Pond DW has been revised in the new calculations. Comment no longer applicable.

- The HydroCAD calculations indicate overflow of Pond 5 for the 100 year storm but does not route it anywhere.

Pond 5, 6, and 1 have been revised in the new calculations. Comment no longer applicable.

- The HydroCAD calculations indicate overflow of Pond 6 for the 100 year storm but does not route it anywhere.

- The HydroCAD calculations indicate overflow of Pond 1 for the 100 year storm. Since Pond 1 is a combination of infiltration areas not interconnected, which one is overflowing; LS6 is connected to the basin via a pipe, but LS7 is not.

Ponds 1, 5, and 6 have been revised in the new calculations. Comment no longer applicable.

The calculations are included in the revised calculations. Comment addressed.

- The Town calculations do not include LS3 (between catchbasins 5&6).

We are assuming the calculations indicated for A2c are intended to be for A2d which would be for LS8; if this is the case then the calculations are included in the revised calculations. Comment addressed.

- It is not clear what portions of roofs go to which drywells or LS systems.

No change in the plans. Comment remains.

- The configuration of some of the leaching areas are different on the Drainage Area Plan and the Plans.

The revised plans appear to be consistent. Comment addressed.

- The pre-development drainage plan does not show all the area for “Area ‘C’”.

- The post-development drainage plan does not show all the area for “Area ‘C’”.

No change in the plans. Comment remains.

- The post-development drainage plan only shows the large overall areas ‘A’, ‘B’, and ‘C’. While there are labels for A1-A5, B1&B2, and C1, there are no individual delineations shown for these subcatchments.

The revised plans include delineation of subcatchments. Comment addressed.

- The report claims 80% TSS removal for the bioretention areas. The Massachusetts Stormwater Handbook indicates 90% TSS removal if there is adequate pretreatment (vegetated filter strip, grass and gravel combination filter strip, or pea diaphragm with vegetated filter strip). Filter strip minimum lengths are listed between 10 and 25 feet long depending on surface material, area, and slope. There appears to be little to no distance between pavement edge and bioretention areas and there is a “Bituminous Concrete Waterway” detail on Sheet C-303 and Cape Cod Berm proposed throughout so there doesn’t appear to be any filter strip; where does the 80% TSS removal come from?

The revised calculations claim 25% TSS removal for the bioretention areas. Comment addressed.
Table RR in the Massachusetts Stormwater Handbook Volume 1 states that stormwater infiltration structures should be setback 50 feet from Title 5 soil absorption areas. 310 CMR 15.211 requires 25 foot setback from dry wells (typically applied for all underground infiltration structures). The proposed soil absorption areas are 25 to 28 feet at the closest from stormwater infiltration areas on the site.

No change in the plan. Comment remains.

- On Sheet C-502 the “Precast Concrete Catch Basin” detail shows a 3’ minimum sump, this should be 4 times the outlet pipe diameter or 4’ deep minimum.

This detail was revised to 4’ deep minimum sump. Comment addressed.

- It appears that Cape Cod Berm is proposed throughout, we assume that the “Bituminous Concrete Waterway” shown on Sheet C-503 will be used at the bioretention areas; these are not shown on the plans.

The revised plans show paved waterways to the bioretention areas. Comment addressed.

- Sheet E-101 shows one temporary siltation basin. The site generally slopes down from the center in all directions, will there be other siltation basins? It doesn’t appear that all downhill areas are protected by erosion and sediment control measures. For example there doesn’t appear to be any proposed measures along most of the southern property line. Will there be temporary diversion swales? Some additional information should be added to this plan to ensure protection of abutting properties.

The revised plans include an additional a haybale line along the southern property line. Comment addressed.

No additional sedimentation basin is shown. The predevelopment drainage maps indicate 3 directions for stormwater runoff; diversion swales and/or additional siltation basins should be added to the erosion and sediment control plans. It appears erosion from Area A would be contained onsite, but not all of Area B and Area C would be contained onsite. Comment remains.

- A note should be added to the Grading & Drainage Plan C-111 or the detail sheets regarding removal of materials down to the sand layer below all infiltration structures.

Notes regarding material removal were added to the details. Comment addressed.

- A small portion of the grading falls within the highway right of way, permitting will be subject to MassDOT approval.

The revised plans do not include grading within the MassDOT right of way. Comment addressed.

General Comments
- Water and septic details shown on the plans are subject to Water Department and Board of Health approval.

Nothing to address.

- Sheet C-505 is not included in the Sheet List Table. “Mashpee Water District” is referenced on this sheet.

The revised plans include the Sheet C-505 reference and Mashpee was removed. Comment addressed.

- All drainage, water, and septic system piping located within 10 feet of any building may be subject to Massachusetts State Plumbing Code, we defer to Inspectional Services on applicability of the Code to any of these pipes.

Nothing to address.

- The plans are not endorsed by registered professionals where required.

The revised plans include the proper endorsements. Comment addressed.

- With the Shining Sea Bikeway nearby, does the Applicant plan to include bike racks?

Bike racks are included in the revised plans. Comment addressed.

- We could not find a benchmark on the plans as required by §300-15.

Benchmarks are included on the revised plans. Comment addressed.

- The Church Street right of way should show on the plans as required by §300-15.

The Church Street right of way is included on the revised plans. Comment addressed.

New Comments – Stormwater Management

Town Calculations
- Some of the calculations use 35% voids and others use 40% voids; the Town uses 45% voids. The lower voids used in the calculations would result in extra capacity not accounted for in the structures. Revisions not necessary.
• Some of the calculations use 50 minute leaching times, others use 60 minutes; the Town uses 60 minutes. The less time allowed for infiltration would result in extra capacity not accounted for in the structures. Revision not necessary.

• The following systems appear to adequately sized for the Town design storm:
  o A1, A2a, A2b (A2b&c combined), A3a, A3b, A4a, A4b, B1, B2, C1

• The following systems do not appear to be adequately sized for the Town design storm:
  o A2c (A2d), A4c

• A 6 foot deep stone bed is used for A1; 7 feet is proposed. This system still appears to be adequately sized to contain and infiltrate the Town design storm.

• System A2b appears to be A2b combined with A2c (the area for two roofs was used). It appears that only 2 drywells are required and 4 are provided; this system appears to be adequately sized.

• System A2c appears to be A2d. This system appears to be sized adequately.

• The areas used in the calculations for A4a does not match the plans and doesn’t appear to include all contributing areas. This system, however, appears to be sized adequately when using the correct areas.

• There is no calculation provided for A4d, however it is the small addition to the existing dome and a drywell is shown, a single drywell is more than adequate for the small flow generated.

**HydroCAD Calculations**

• The following areas incorrectly use Type II, 24-hour storms: A1, A2a, B1, B2, and C

• The leaching pits and drywells are modeled as 2’ diameter, 7’ high drywells with 48% voids, not drywells set in stone beds with 45% voids as proposed. The modeled volumes do not match what is used in the Town calculations.

• The leaching pits and drywells detail indicates solid rims will be used on the risers, however some of the calculations use 1.5’ square horizontal grates as outlets.

• DW1 is modeled with 4’ high risers set at elevation 59 which sets rim elevation at elevation 63 but it is modeled with a 1.5’ square horizontal grate at elevation 62.7 which is below the rim elevation.

• DW2 is modeled with 2’ high risers set at elevation 55 which sets rim elevation at elevation 57 but it is modeled with a 1.5’ square horizontal grate at elevation 56.7 which is below the rim elevation.

• LS8 overtops the modeled outlet in the 25 year storm.

• LS5 overtops the modeled outlet in the 25 and 100 year storms.

• It isn’t clear why the peak elevation in DW1 decreases in the 100 year storm versus the 25 year storm.
• LS8 discharges in the 25 and 100 year storms, this flow is not routed anywhere in the model.

• LS5 discharges in the 25 and 100 year storms; this flow is not routed anywhere in the model.

• Some of the drywells utilize storage within the risers to hold stormwater volume. Any structures that rely on riser volume must include elevations on the plan to ensure tall enough risers are installed. For example, the drywells for drainage area A1 models 4’ high risers at elevation 59 and the 25 year storm peak elevation is 61.5. These drywells have to be installed deep enough to allow for a 30” minimum riser in order to work as modeled; if they aren’t installed deep enough for at least a 30” riser, the stormwater volume modeled will not be contained in the structure. While these plans are not construction documents, this is information that could easily be missed because the only place it shows up is in the calculations. The alternative is to size the infiltration structures to fully contain the design storm which would allow flexibility in the elevation installed.

• Some of the infiltration structures indicate primary discharge through 1.5’ square horizontal orifices. What is this supposed to represent? It appears to match the elevation of an upstream catchbasin. If the entire volume is not contained in the infiltration structure and stormwater backups into the catchbasins, the model needs to be modified to represent these conditions.

• Typically underground infiltration systems either mitigate for the 100 year storm with no discharge (other than infiltration) or via a controlled overflow such as a pipe diversion to additional storage area or a controlled discharge where it doesn’t cause flooding to abutting properties. This model shows flows out of some of these systems but does not model where this stormwater goes.

• Time spans used in the calculations are inconsistent, they vary between 0-24 hours and 0-30 hours.

**Plans**

• Typically elevations for underground stormwater structures are included on the plans, either on the Grading and Drainage plans, or in a table with the structure detail. While these are not construction drawings, as stated before, if storage outside the structures themselves (in risers for example) is required for the model to work, these structures need to be installed at proper elevations in order to work as modeled and this detail can only be found in the stormwater report and could easily be missed unless elevations are included in the plans.

**New Comments – Other**

• There is a concrete bound with drill hole west of Building A that should either be protected during construction or reset after construction.

Scott Schluter, P.E.
Staff Engineer
DPW Engineering
Town of Falmouth
Planning Board Requirements

- Site Plan Review Application
- $200 filing fee
- Certified abutters list for properties within 100'
- One set of mailing labels from the certified abutters list and stamps for each abutter
- 3 full size sets of site plans
- 3 sets of dimensioned floor plans (all floors), including elevation plans for any new construction
- Photos of the existing house (front and rear)
- Advertising fee—to be determined once published in paper

Thinking About Building an Accessory Apartment In Your House?

**The first step is to schedule a preliminary meeting with the Building Commissioner to make sure your project meets the Town and State Building Code Requirements.

A.   B.   C.   D.

Town of Falmouth
59 Town Hall Square
Falmouth, MA 02540
Basic Requirements:

- Must be owner occupied for 7 months of each calendar year.
- Both units cannot be rented at the same time.
- Lot must be in a Single Family Residence or Agricultural District.
- Minimum lot size is 7,500 sf (*there are additional requirements for lots under 20,000 sf).
- Accessory apartment can only have a maximum of two (2) bedrooms.
- Accessory apartment cannot exceed 40% of the size of the house.
- Maximum size for the accessory apartment is 800 sf.
- Parking for the accessory apartment will be on your lot.

How Do I Measure That?

- Look at the house types on the front of this brochure to identify your house type.
- If your house is A, measure the first floor from the exterior of the house and multiply that by 1.5.
- If your house is B, measure the first floor from the exterior of the house and multiply that by 1.75.
- If your house is C, measure the first floor from the exterior of the house and multiply that by 1.9.
- If your house is D, measure the first floor from the exterior of the house and multiply that by 2.

How Many Bedrooms?

- There is a limit on the number of bedrooms.
- If your house has more than 4 existing bedrooms, you can convert 2 of them into one accessory apartment.
- If the lot is less than 20,000 sf, the total number of bedrooms cannot exceed four (4) for the lot.

Additional Requirements:

- For lots in a Water Resource District or a Coastal Pond Overlay District, the total number of bedrooms cannot be more than one bedroom per 10,000 sf of lot.
- For lots in a Coastal Pond Overlay District, check with the Health Agent regarding your septic system requirements or with the Wastewater Department if on sewer.

Design Standards:

- Your house should still look like a single family residence with your accessory apartment.
- The architectural effect, as the result of the accessory apartment being constructed within the principal dwelling or attached thereto, shall be that of a single family residence consistent in its exterior character.