



TOWN of FALMOUTH
DEPARTMENT OF PUBLIC WORKS, WATER DIVISION
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DATE: September 4, 2020

SUBJECT: Water Department Comments on Village at Old Brick Kiln
511 Brick Kiln Road

FROM: Stephen Rafferty, Water Department Superintendent

TO: Zoning Board of Appeals

This comment memo has two components to it. First is a comment that the project should not proceed at the density proposed and the technical reasons for that position. The second is a series of comments on the proposed water main layout should the Zoning Board of Appeals determine to allow the project to proceed at the proposed density.

The project at the proposed density should not proceed for the following reasons:

- The density is not in conformance with the Town's Watershed Protection District Zoning Overlay.
- The overlay was created after a detailed study of the geological and hydrogeological conditions and defines the zone of contributions for each of the Town's water supply locations.
- The overlays were created to protect the quality of the drinking water sources within the Town from the impacts of overdevelopment.
- This proposed project lies within the zone of contribution of Long Pond as defined in the Watershed Protection District overlay for Long Pond.
- Long Pond is the Town's major source of drinking water, providing approximately 50% of the water supply during the winter months and approximately 80% of the supply during the summer month.
- Long Pond is a pure "kettle hole" it has not contributory stream into it nor a stream that drains out of it.
- Long Pond is entirely fed by ground water from the zone of contribution.
- The State regulates land usage for surface waters based on a scientific model that assumes that the surface water has a stream into it and a stream out of it. The State regulations for surface waters regulate the watershed.
- Since the pond is entirely under the influence of groundwater and not the watershed to a contributing stream the Town did the analysis and created the protective overlay.
- The project's density will create a point loading of nitrogen, phosphorous, cleaning products and pharmaceuticals along with other household wastes that are washed to the project's septic system.

- The wastes will flow via the groundwater directly to Long Pond causing an incremental decay to the overall water quality of the pond.
- The wisdom of the citizens that worked to create the Watershed Protection Districts was an understanding that managing density in the zones of contribution would optimize water quality in Long Pond and would minimize the need for treatment. That is why there were/are multiple parcels with a low density within the Long Pond watershed.

For all of the above stated reasons, and as the Department with the most direct responsibility to preserve the Town's existing water resources, the Water Department opposes the development of this parcel at the density proposed and without advanced treatment for, as a minimum nitrogen and phosphorous, at the on-site wastewater disposal facilities.

Comments on the proposed water system should the project proceed are:

- The location does not have a water pipe adjacent to it and the proponent will need to provide a water main extension to the site.
- The Town's past distribution system study identified that the proper size pipe on Brick Kiln Road would be a 12 inch diameter pipe from West Falmouth Highway to Gifford Street/Gifford Street Extension. Currently there is a 12 inch pipe from West Falmouth Highway under Route 28 and to Service Road. Proponent has the option to install a 12 inch pipe to their project location either from the Service Road or from Gifford Street/Gifford Street Extension. Plans must show that scope of work.
- Confer with the Town's engineering and highway department for their restoration/paving requirements associated with the water main installation on Brick Kiln Road.
- At the intersection of the development and Brick Kiln Road provide a three valve cluster and a hydrant on the Brick Kiln portion for department.
- There is a proposed development of the adjacent parcel to the east of this site. Water Department standards require looping of mains where feasible. A water easement to the adjacent parcel with a stub main to the property line is required. Coordinate with that developer on alignment.
- A note needs to be added to the plans that all work shall be in accordance with the Town of Falmouth Water Department Standards for materials and installation.
- Water Department Standards require a water main in front of every parcel that will be served. Present plan shows a single main with a series of lengthy service connections to the various parcels. Revise the plan to provide a water main to each parcel.
- Hydrant spacing shall be a maximum of 500 feet. A hydrant is needed at the terminus of any dead end main for ease of flushing. Revise the hydrant layout based on the choice of location for extending water service to this location.
- A utility easement over the roadway layout shall be provided in a form acceptable to the Town to allow the Town to access the curb stops for each unit as necessary. The

developer shall pay the fee in effect at the time the easement is prepared for the Town Counsel to review and process the easement.

- It is unclear if the roadway layout will become an accepted Town Road. The water main within the development will be a private main and hydrants to be maintained by the abutters until such time as the road is an accepted Town Road.
- Each unit shall have its own meter, located within the structure. If the developer installs the water service and curb stop to the property line then they will only need to apply for a water service and pay the meter fee in effect at the time of application. If the services are not installed by the developer the application or water service will include the fee for service installation to the property line and the meter fee in effect at the time of application.