



Town of Dennis

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**810 MAIN STREET, WD**

**PLANNING BOARD SPECIAL REVIEW - STAFF REPORT– Sept. 11, 2025**

<b>APPLICANT:</b>	Christopher Our of Robert B. Our Co.
<b>PROJECT ADDRESS:</b>	810 MAIN STREET, WEST DENNIS MA 02670
<b>MAP AND LOT:</b>	83-30
<b>APPLICANT ADDRESS:</b>	24 Great Western Rd, Harwich, MA 02645
<b>CASE NUMBER:</b>	SRVW-25-1
<b>ZONING:</b>	Project is mostly in the R-40 District with a piece in the GC-2 Zoning District. Entire Ezra Baker property is in the Medium Wind Facility Overlay District. Project site is mostly mapped as part of the South Dennis Historic District. The proposed pump house is in the AE Flood zone.
<b>MEETING DATE:</b>	September 15, 2025

<b>PROPOSAL</b>	Pump Station 4 for wastewater conveyance and odor control building.
<b>PROJECT SUMMARY</b>	<ul style="list-style-type: none"> <li>• Special Review of a Municipal Project for a new Pump Station (#4) in an approximately 980 sf building to house the pump station for the gravity sewer for wastewater collection and conveyance to the Water Resource Recovery Facility (Phase 1, Contract 2).</li> <li>• Project is the largest of the pump stations at a low point allowing for the largest area of gravity sewer lines. The Pump Station then forces the sewage through the conveyance system toward the Water Resource Recovery Facility at a higher level.</li> <li>• Project site is about ½ acre of 14 acres on the Ezra Baker School property.</li> <li>• Project site is about 180' west of the Ezra Baker School with the Pump Station about 250' from the Ezra Baker School (built in 1900).</li> <li>• The project consists of:             <ul style="list-style-type: none"> <li>○ New Pump Station #4 (app. 980 sf);</li> <li>○ Small 200 sf Odor Control Building south of Pump Station;</li> <li>○ Generator on concrete pad behind Pump Station;</li> <li>○ Underground precast concrete Valve Vault;</li> <li>○ Underground precast concrete Meter Vault;</li> <li>○ Underground precast concrete Wet Well;</li> <li>○ Stormwater Bioretention Basin;</li> <li>○ Vegetative Screening</li> </ul> </li> </ul>
<b>Applicant Summary and Odor Control narrative</b>	<ul style="list-style-type: none"> <li>• This is the largest of eight pump stations within Phase I.</li> <li>• Building has been designed to intentionally blend into the neighborhood. Should not be obvious from the exterior appearance is a pump station.</li> <li>• Most people should never know what it is after it has been constructed.</li> </ul>

	<ul style="list-style-type: none"> <li>• Once constructed care will also be given to the landscaping.</li> <li>• Approximately 1,500 feet of wastewater force mains transition into gravity collectors before discharging into the (PS4) Ezra Baker Pump Station.</li> <li>• Given the system’s configuration and the proximity to sensitive receptors such as the school and nearby residences, the design consultant CDM Smith took a belt and suspenders approach to design.</li> <li>• Many pumping stations have no odor control systems. Typically pump stations are not the areas located within the wastewater system where odors are a concern. However, extra precautions were carefully considered and incorporated into the design to ensure a system in place to treat any nuisance odors and provide for safety management.</li> <li>• The system is also a “tight system” with no open tanks or manholes so the potential for any fugitive vapors is very small.</li> <li>• Methane gas is not anticipated at this pump station.</li> <li>• It is important to clarify that methane typically forms under very specific conditions; prolonged anaerobic (Oxygen deprived) digestion of organic rich sludge. This condition typically occurs in treatment plant digesters or sludge handling facilities and not at pumping stations.</li> <li>• PS4 will be handling raw wastewater with relatively short retention times and continuous flow, which significantly limits the potential for any conditions that produce methane.</li> <li>• There is a small potential for the formation of hydrogen sulfide and other reduced sulfur compounds and volatile organic compounds, which are not very odorous at the levels that might be present.</li> <li>• To mitigate this small potential, PS4 is equipped with a dual-phase odor control system: <ol style="list-style-type: none"> <li>1. Vapor Phase Odor Control (VPOC): A carbon absorber ventilates the wet well at an average rate of 690 CFM with an estimated average concentration of 10 ppm. This system captures and neutralizes odorous gases before they could be released into the environment, helping to protect air quality near the school and surrounding properties. This is a proactive approach so the system will remain under a vacuum and any potentially odorous air will be run through the carbon.</li> <li>2. Liquid Phase Odor Control (LPOC): Calcium nitrate is dosed upstream the wet well to suppress any sulfide formation in the wastewater stream conveyed to the WRRF. While this treatment is not intended for odor control at the pump station itself, it is effective at the final discharge point, where contact time is sufficient and will limit any potential odor generation at the WRRF from the pumping station discharge.</li> </ol> </li> <li>• The applicant expects that these additional preventative odor control systems provide an abundantly cautious approach to mitigating any odors at the pumping station.</li> </ul>
<b>PLOT PLAN</b>	<p>Conformed Documents, Town of Dennis Wastewater Collection and Water Resource Recovery Facilities Phase 1 - Contract 2 Plans for Pump Station Number 4 (Project No. CWSRF – 16676/2) at 810 Main Street, West Dennis, MA. Plans prepared for The Town of Dennis by CDM Smith, 3 Davol Square, Building, A Suite A-425, Providence, RI (02903). Plans consisting of 54 Sheets</p>

	with existing and proposed site plans, building plans and elevations, details, etc. Plan dated September 6, 2024 by Michael P. Guidice Jr.
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1. **TOWN DEPARTMENTS COMMENTS:**

- **NATURAL RESOURCES:** Project was reviewed and approved by the Conservation Commission.
- **HEALTH:** Project was signed-off on by Health Director due to no Septic System.
- **ENGINEERING:**
  - The Engineering Department attended monthly Design Team meetings between October 2022 and June 2024 to provide review and comment on all plans and specifications for Phase 1, Contract 2 from concept through the final conformed document sets referenced above.
  - Construction progress meetings for Phase 1, Contract 2 are currently held on a bi-weekly basis. These meetings are attended by the Design Engineer, OPM, Town Engineering, Wastewater Department, Department of Public Works, Police, Fire, and Sewer Installation Contractor.
  - As the schedule and methods for construction of Wastewater Pumping Station #4 are routinely discussed at the bi-weekly progress meetings, it is the opinion of the Engineering Department that a separate Pre-Construction meeting would not be necessary, unless determined otherwise by the Building Commissioner.
  - A Town of Dennis Stormwater Management Permit (SWMP) will **NOT be required** for this project as the level of site disturbance does not exceed 20,000 sf.
  - Construction period erosion and sedimentation controls shall be installed at locations indicated on the Project Plans, and conform to all requirements set forth in the Contract Documents and Technical Specifications.
  - Engineering recommends a fence be installed along the top of the proposed stormwater bio-retention basin to provide an increased level of safety, and reduce the potential for unauthorized access.
- **Water Department:** Not in Zone II. Water Department has no issues or comments.
- **POLICE:** No comment.
- **FIRE:** What is the fire protection? Monitored smoke detectors?
- **PLANNING:**
  - a) **Traffic & Parking:** Single driveway leads to single lane in front of building (west) and side of building (north) for access to generator. Traffic minimal with occasional maintenance visit.
  - b) **Stormwater:** Project will require a Stormwater Management Permit
  - c) **Wastewater:** Project needs to filed with and was approved by Health Department.
  - d) **Landscaping:** Landscaping Plan has been prepared with vegetative buffer surrounding project with deciduous trees and bushes. Plan includes 27 Red Cedar trees; 2 White Oak; and 10 Shadblow trees. Bushes include 11 Spicebush; 28 Highbush Blueberry; 15 Bayberry; 7 Azaleas; 32 Summersweet Clethra; and 16 Inkberry.
  - e) **Built Environment/Design:** Pump Station building is one-story 980 sf gabled building with faux windows and Fiber Cement Light Gray Shingle Siding on three sides and Light Gray Fiber Cement Clapboards on the front facing Trotting Park Road. Gable has white trim.
  - f) **Lighting:** Plans shows one light pole in front parking lot and 5 exterior lights on the control building and the one pole-mounted light (next to the wet well) are specified to be Dark-Sky International compliant, with a BUG (backlight, up-light and glare) rating of 0-0-0.
  - g) **District Intent:** Rural Residential – To provide for residential sites while at the same time encouraging open space, preserving or enhancing scenic views, protecting the character of the historic environs, encouraging continuation of or re-establishment of agricultural activities while recognizing site and area limitations for on-site waste water disposal systems

in terms of drainage, soil suitability, proximity to surface and sub-surface water resources and slope.

a) **PLANNING SUMMARY:**

a. **Benefits:** Chosen as best location for pump station due to this is the low point in the area and is town owned land.

b. **Detriments:** Site is near residences and a school. Neighbors are concerned about odors.

c. **Plan Questions at this time:**

i. Is there a spill prevention plan for deliveries and storage of chemicals?

ii. Is there an emergency response plan if something happens and odors are emitted from the facility?

2. **4.1.2.5 Design Objectives:** The following design objectives (*italics*) in addition to any standards elsewhere in the Zoning By-Law, shall be used by Planning Board in considering all site plans.

a. **Landscaping:**

i. *Every effort shall be made to minimize removal of existing vegetation and to integrate existing mature trees and vegetation into the landscape plan. **The site has been cleared already and is being used as a staging area for the sewer project. There were a couple of mature trees on the site with some invasive vines.***

ii. *Natural buffers ... shall be maintained whenever possible.*

iii. *A minimum 10-foot vegetated buffer shall be maintained to abutting properties unless the appropriate permit granting authority deems crossing of buffer is warranted. **Landscaping plan includes a vegetative buffer around the project site.***

iv. *Landscaping shall include masses of trees and vegetation around/near buildings to reduce perceived scale and set them into the landscape. **Landscaping reduces view of building.***

b. **Circulation:** *With respect to vehicular and pedestrian circulation, including entrances, ramps, walkways, drives, parking and loading areas, special attention shall be given to*

i. *Location and number of access points to the public streets: **Appropriate.***

ii. *General interior circulation: **Adequate.***

iii. *Separation of pedestrian and vehicular traffic: **Adequate.***

iv. *Delineation of parking stalls and loading zones: **Adequate.***

v. *Surface material: **Appropriate.***

vi. *Access to community facilities: **Adequate.***

vii. *Accommodations for the handicapped: **Building will have to be accessible per A.D.A.***

c. **Surface Water Drainage: Requires a Stormwater Management Permit**

i. *The removal of surface water shall not affect adjoining properties, streets or storm drainage systems nor obstruct circulation of vehicles and pedestrians. **Adequate.***

ii. *For parking areas serving new buildings or expansions to existing parking areas, the performance of surface drainage shall be based on standards set forth in the Dennis Subdivision Rules and Regulations for a 25-year storm frequency. **Adequate.***

d. **Building Location:** *Proposed building and structures shall be integrated as much as possible.*

e. **Building Design:** *The design of proposed buildings, structures and additions shall complement, whenever feasible, the general setback, roofline, arrangement of openings, color, exterior materials, proportions and scale of existing buildings in the vicinity. **South Dennis Historic***

f. **Special Features:** *Exposed machinery, utility structures and areas for parking, loading, storage, service and disposal shall be screened from adjoining properties and streets. **Adequate.***

g. **Safety** - *All open and enclosed spaces shall be designed to facilitate building evacuation and maximize accessibility by fire, police, and other emergency personnel and equipment. **Property***

does not propose fencing as interior of building is inaccessible. Applicant should explain measures to deter site from being accessed at night.

3. **§ 1.4.2.1 Special Permit Granting Authority:** Special permits may be granted only upon a finding by the Board that the proposed use will not create a nuisance, hazard or congestion, or other significant harm to the neighborhood, nor cause derogation from the general purpose and intent of the By-Law, the stated district intent or applicable use criteria. The following criteria must be met:
- a. *The use is allowed by special permit in the district in which proposed, pursuant to §2.2.2 - Use Regulations Schedule; **The municipal use is required and allowed and serves the town if not the District Intent.***
  - b. *Suitability of the site for the proposed use in light of the applicable district intent, as provided in §2.1.5; **The use is part of a major municipal project that will improve the deficiency of on-site waste water systems noted in the District intent.***
  - c. *Adequacy of management of traffic flow within the site as well as in relation to adjoining streets and properties, to minimize unsafe or harmful impacts of the use; **Very limited trip generation.***
  - d. *Compatibility of the proposed use with surrounding land uses, so as to minimize harmful impact or conflict with existing desirable neighborhood character, including views, vistas and other aesthetic values; **Aesthetically the building will meld in and be screened. The major concern for abutters is the potential for odors, which have been designed to be controlled.***
  - e. *Adequacy of provision of utilities and other necessary or desirable public services; **Adequate.***
  - f. *Adequacy of control of artificial light, noise, litter, odor or other sources of nuisance or inconvenience to adjoining properties, public ways and neighborhoods; **The proposal should be conditioned to ensure it will not generate light, noise, litter, odor or other sources of nuisance. Light on the buildings should be downward shielded and motion sensitive. Noise should be limited to weekly backup generator test and fan should not be heard off of the property. Odors have been designed to be controlled but are a concern.***
  - g. *Adequacy of protection from degradation and alteration of the natural environment, including but not limited to slopes and other topographical features, vegetation, wetlands, groundwater and water bodies and wildlife habitat. **The site has already been cleared of 2 mature trees because the site is being used as a staging ground for the larger project.***

**4. PROPOSED CONDITIONS:**

<b>PROPOSED CONDITIONS</b>	<ol style="list-style-type: none"> <li>1. The lot owners shall apply for all required permits and will comply with the intent of the Dennis Stormwater By-law, all requirements of the Dennis Conservation Commission and Board of Health and any other permits that are required.</li> <li>2. Construction shall not commence before 7:00 am nor continue after 7:00 pm Monday through Friday and shall not commence before 7:00 am nor continue after 5:00 pm on Saturdays. No construction shall occur on Sundays or legal holidays.</li> <li>3. The addition shall not generate new light, noise, litter, odor or other sources of nuisance. Any new lighting shall be restricted to downward-shielded security lighting, that is "Dark-Sky" compliant and does not spill off the property.</li> <li>4. A Spill Prevention Plan for deliveries and storage of chemicals and Emergency Response Plan should be provided to public safety before operation of the facility.</li> </ol>
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