



TOWN OF TRURO
Conservation Commission

PUBLIC MEETING AGENDA
Monday, February 6, 2023
Meeting start time 5:00



Remote Meeting Access Instructions

This will be a remote meeting. Citizens can view the meeting on Channel 18 in Truro and on the Town's web site on the "Truro TV Channel 18" button under "Helpful Links" on the homepage. Once the meeting has started, click on the green "Watch" button in the upper right of the page. **To provide comment during the meeting, please call-in toll free at 1 877 309 2073 and enter the following access code when prompted: 464-567-165#** To join this meeting from your computer, tablet or smartphone: <https://global.gotomeeting.com/join/464567165> Please note that there may be a slight delay (15-30 seconds) between the meeting and the live-stream (and television broadcast). If you are watching the meeting and calling in, please lower the volume on your computer or television during public comment so that you may be heard clearly. We ask that you identify yourself when calling in; citizens may also provide public comment for this meeting by emailing the Conservation Agent at cbeebe@truro-ma.gov with your comments.

PUBLIC HEARINGS: The Truro Conservation Commission holds the following public hearings in accordance with the provisions of MGL Ch. 131, s. 40, the Wetlands Protection Act and the Truro Conservation Bylaw, Chapter 8:

1. **Mill Pond Culvert restoration alternatives: Presentation by DPW Director Jarrod Cabral**
2. **Notice of Intent: 423 Shore Road, Jennifer Chrisholm (SE# 75-1162):** demo/rebuild dwelling, cesspool upgrade, site improvements; Barrier Beach, Land Subject to Coastal Storm Flowage. (Map 9, Parcel 1)
3. **Notice of Intent: 25 Knowles Heights Road, Peter Casperson (SE# 75-1158):** sand drift fence, beach nourishment & beach grass plantings; Coastal Beach, LSCSF (*cont. from 12/5/2022*)
4. **Notice of Intent: 4 Pavomet Lane; 4, 6&23 Corn Hill Landing; 2&3 Corn Hill Path, Rob Berman. (SE#75-1159):** reconstruction & maintenance of sand drift fence; Coastal Dune, LSCSF (map 45, parcels 18, 19, 24, 25, 28 & 32) (*continued from 1/9/2023*)
5. **Notice of Intent: 4 River View Road, Christopher Lucy:** small tree removal & crown reduction; Bordering Vegetated Wetland, Riverfront area. (Map 50, Parcel 266)
6. **Request for Determination of Applicability: 2 Ryder Hollow Road:** rebuild existing deck, build new deck Buffer Zone to a Coastal Bank. (Map 63, Parcel 14)
7. **Notice of Intent: 33 Black Pond Road, Catherine Shainberg: (SE# 75-11):** two additions; Buffer zone of a Bordering Vegetated Wetland. (Map 61, Parcel 12) (*continued from 1/9/2023*)
8. **Notice of Intent: 2 Marian Lane, Paul & Nancy Fenichel (SE# 75-11):** construction of a new deck & screen porch; Coastal Bank. (Map 50, Parcel 47) (*continued from 1/9/2023*)
9. **Extension Request:** Mass DOT: Route 6, 6A, South Pamet & Highland Roads, SE #75-951
10. **Emergency Certifications:** (1) Mass DOT-Route 6; (2) Town of Truro- Pamet Harbor North Jetty
11. **Field Change:** 8 Castle Rd (SE #75-1105)
12. **Certificate of Compliance:** 482 Shore Rd, SE#75-1005
13. **Administrative Reviews:** (1) 446 Shore Rd: 1:1 replacement of beach access stairs; (2) **Easement between 30 Sandpiper Rd & 1 Dune Way:** repairs to existing beach access stair handrails & treads; (3) 426 Shore Rd: beach nourishment, 1:1 pole replacement for beach stairs (90-day request); (4) 26 Pond Rd: 60-day ext. request; (5) 2 Corn Hill Path: replace existing driveway with permeable pavers; (6) 556 Shore Rd: installation of snow fencing and plantings.
14. **Minutes:** April 14, 2022 Joint meeting with Wellfleet

Site visits: Commissioners will meet at Town Hall on Monday, February 6, 2023, at 10:00 AM and proceed to:
1) 33 Black Pond Road; 2) #2 Ryder Hollow Road; 3) #2 Marian Lane; 4) #4 River View Road;
5) 25 Knowles Heights Road; 6) 423 Shore Road

Scott Horsley
Water Resources Consultant
65 Little River Road • Cotuit, MA 02635 • 508-364-7818

February 1, 2023

Jarrold J. Cabral
Director
Department of Public Works
Truro MA 02666

RE: Mill Pond Salt Marsh Restoration Project

Dear Jarrod:

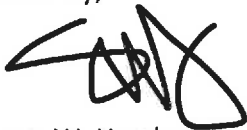
At your request I have reviewed the technical documents associated with the proposed Mill Pond Salt Marsh Restoration Project. These include "Mill Pond Salt Marsh Restoration Alternatives", prepared by Fuss & ONeill dated June, 2022 and the "Mill Pond Restoration Conceptual Design Report Truro, Massachusetts", prepared by the Woods Hole Group dated June 22, 2022.

I concur with the recommended alternative (breach channel with a 65-foot top). In my opinion this is the best long-term solution and will provide the best water quality and ecological restoration results. With climate change and sea level rise in mind this solution will also provide the most resilience to these changing conditions. The removal of the road and its associated stormwater drainage will be a net reduction in pollutant loading to the salt marsh and estuary.

The project is based upon hydrologic modeling completed by the Woods Hole Group. I have over twenty years of experience working with this firm and highly respect their professional work in these types of projects.

Best wishes for the project moving forward. Please call me directly with any questions that you might have.

Sincerely,



Scott W. Horsley
Water Resources Consultant



TOWN OF TRURO

P.O. Box 2030, Truro MA 02666

Tel: (508) 349-7004 Fax: (508) 349-5505

Memorandum

To: Board and Committee Stake Holders
From: Jarrod J. Cabral, Department of Public Works Director
Date: February 2, 2023
Subject: Mill Pond

Currently, the Mill Pond Road culvert restricts tidal flow into Mill Pond from Pamet Harbor and, ultimately, Cape Cod Bay. The purpose of this project is to replace the damaged and undersized culvert at the Mill Pond Road dike with a larger structure or alternative breach design.

Structural, geotechnical analyses was developed by Fuss & O'Neill, in conjunction with a hydrologic/hydraulic analyses performed by Woods Hole Group. These analyses were completed to assess conditions and support development for the proposed alternatives to replace the existing 36-inch corrugated pipe culvert on Mill Pond Road. A total of four alternatives were considered in the development of this report including two larger open bottom precast culverts and two embankment breach formations.

To assess the severity of the restriction and the potential for ecological restoration, the anticipated effects of replacing the undersized culvert with a larger culvert structure or open channel entailing abandonment of the road were evaluated. The Woods Hole Group assessed the current and proposed alternative culvert and breach scenarios and provided recommendations for channel bed scour protection measures for respective alternatives.

- Alternative 1 – 10 foot wide by 8.5-foot-high open bottom culvert.
- Alternative 2 – 8 foot wide by 8.5-foot-high open bottom culvert.
- Alternative 3 – 65-foot-wide open channel “breach” with 2H:1V side slopes
- Alternative 4 – 95-foot-wide breach with a 10-foot-wide inner channel, 14-foot-wide saltmarsh benches, and 2H:1V and 4H:1V side slopes.

The earthen causeway supporting Mill Pond Road effectively functions as a dike restricting tidal flows to, and drainage flows from, the Mill Pond impoundment. A 36-inch corrugated pipe conveys drainage from Mill Pond to the Pamet River. In 1991 a large storm event completely breached the roadway and former railroad embankment. The existing 36-inch pipe was installed after the 1991 storm as a temporary measure, with the intent to subsequently install a larger timber bridge as a permanent structure. The bridge was never constructed, and the 36-inch pipe remains today.

The roadway embankment covering the culvert is subject to wave and roadway runoff erosion, resulting in a narrowing of the roadway shoulders over the culvert, and requiring regular repair and

replenishment of stone armor scour protection. Additionally, the embankment slopes behind the guardrails exhibit signs of erosion and steepening, providing inadequate lateral support to the guardrail system and roadway embankment.

Stormwater runoff north of the culvert generally flows along the roadway's curb at the edge of pavement, with a leaching catch basin on the southbound (west) lane providing partial drainage. The majority of runoff discharges from the road at the low point immediately north of the culvert and into Mill Pond.

The purpose of this project is to replace the undersized culvert that tidally restricts Mill Pond with a larger structure or channel breach alternative that will allow increased tidal flushing to restore degraded salt marsh resources, provide water quality improvements, and improve drainage runoff flows from the impounded system under both normal and storm flow conditions.

The alternative culvert opening sizes, and channel breaches provide improved tidal volumes and ranges to support restoration of salt marsh areas within Mill Pond, and improve post-storm drainage conditions (i.e., allowing impounded water to drain out more quickly vs. existing conditions). Additionally, the maximum storm surge water levels in Mill Pond are similar for all 4 alternatives as well and are increased over existing conditions; however, there does not appear to be any additional significant impacts to private property, dwellings, structure, wells, or septic systems. The roadway overtops during storms larger than the 10-year storm event, which reduces the contributions of storm flooding through the culvert for larger storms anyways.

Alternatives would allow increased inundation into Mill Pond during coastal storm events. Potential impacts to the Depot Road embankment and other adjacent properties, and potential protection / mitigation measures, would need to be evaluated in a future design phase. Public access accommodations including vehicle parking, pedestrian access and provisions for potential emergency response would need to be evaluated in a future design phase. There also does not appear to be any properties or dwellings that are significantly impacted by the alternatives as compared to existing conditions. The additional flooded areas tend to be low lying areas along the face of the coastal bank. According to the septic and well Plan that has been reviewed these systems are located a far enough distance away and elevation above these restored tides meaning that saltwater flooding or intrusion through the groundwater should not impact these systems.

After a review of the alternatives for Mill Pond is completed, the Select Board will need to decide which alternative to move forward with. The Select Board could decide to do nothing, and the Town could continue to provide maintenance above mean highwater, and continue to protect the roadway, and culvert area from undermining for as long as possible. Another option would be to install a new larger culvert to improve tidal flushing and water quality and elevate the road at a later date to mitigate against future sea level rise or install a new culvert and raise the road two feet present day to mitigate against future sea level rise.

My recommendation to the Select Board is to permanently close the road and install a 95' breach with a 10' wide inner channel for the following environmental considerations. Using the model, the Woods Hole Group developed for Massachusetts we can understand specific and far-reaching flood scenarios for Mill Pond. The Massachusetts flood risk model looks at both current and future storm risks with sea level rise, for the entire Massachusetts Coast line, and includes the 100-yr storm and larger storm events both with

and without sea level rise. As part of the Mill Pond alternative analysis several sea level rise scenarios were applied to each alternative that was analyzed. today Mill Pond Road is vulnerable to overtopping from 10-year storm events meaning, no matter which alternative is chosen the roadway will overtop unless the road is raised 2'. Raising the road two feet today will provide protection against the 100-yr storm event in present day. In 2070 the best-case scenario is that raising the road 2' would only provide protection from a 10-year storm event very similar to the vulnerabilities we see today. Additionally closing the roadway will have a positive impact on the environment and provide the best ecological and water quality results. In addition to the increased flushing, it would eliminate direct stormwater discharges from impervious surfaces which would reduce existing pollutant loading. If the roadway were permanently closed there could be recreational benefits applied to the area including but not limited to installing a small pedestrian bridge to accommodate walkers and bikers, provide drop off kayak areas, fishing and potentially shell fishing as the water quality improves overtime.

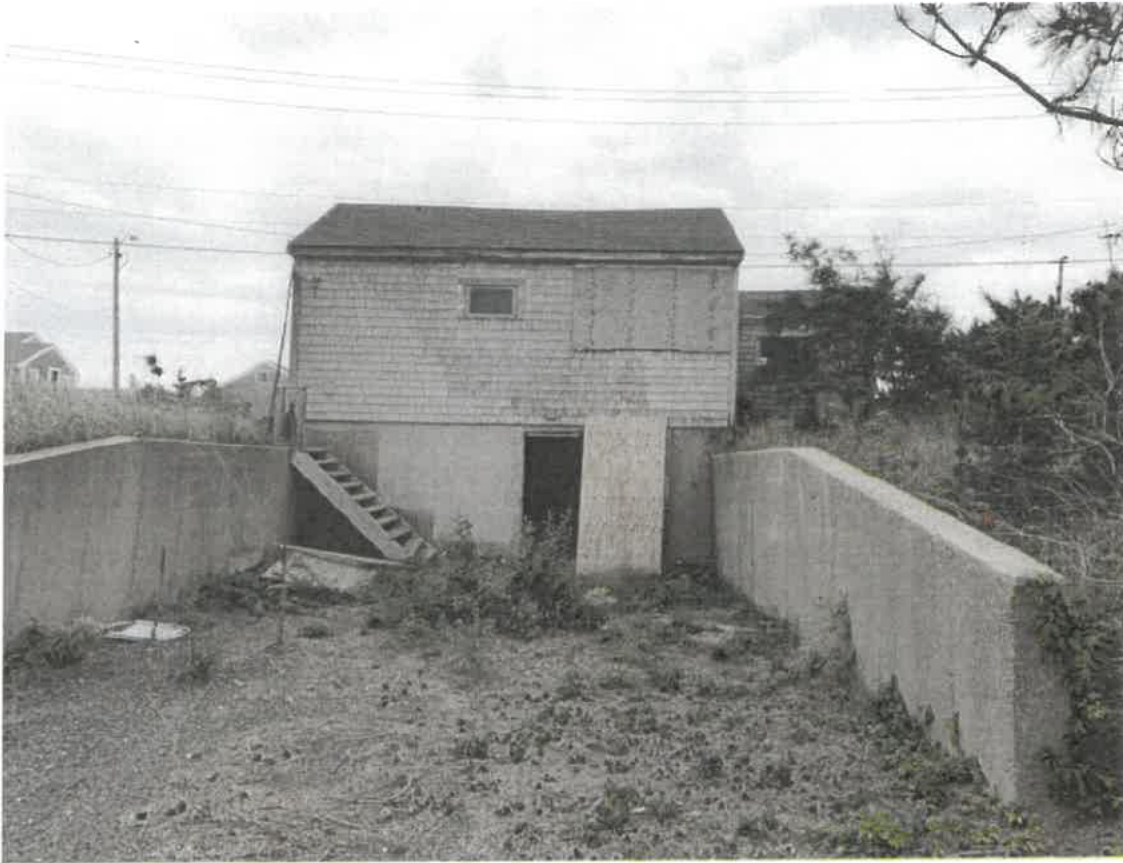
This recommendation directly ties into three Select Board Goals and objectives, Goal C: Protect and restore our fragile environment, Goal D: Use long term strategic planning to guarantee the future health and well-being of our community, Goal E: Proactively engage and involve the Town residents, property and business owners, and objective 5: The Select Board will support and encourage projects that protect and restore our coastal community, and Mill Pond is listed as one of those projects. Lasty over the last two budget cycles the Town Manager directed staff to include the Climate Action Committee, and the Energy Committee in the capital planning process to get their feedback and answer their questions as we work our way through the annual capital project budget cycle. This work directive from the Town Manager is also related to objective 10: The Select Board will provide support to and collaborate with the Climate Action Committee and the Energy Committee on the goals of creating a climate action plan.

Sincerely,
Jarrod J. Cabral
Director
Department of Public Works
Truro Ma 02666

Project Description

The subject property is located at 423 Shore Road in Truro and includes a single family dwelling on the southerly half of the 25,480 square foot parcel. The southerly side of the property abuts Shore Road (aka Route 6A, a former State Highway) and Route 6 (a 4-lane State Highway) lies to the north. Properties to the east and west of locus are existing developed residential properties with dwellings. Access to the locus property is directly from Shore Road. A small gravel and dirt area to the east side of the dwelling provides a parking location for several cars. The existing dwelling is a wood framed structure with gabled roof on a concrete foundation. A walkout basement to the north is flanked by 6ft tall concrete retaining walls with a paved driveway ramp accessing the basement level of the structure. The existing 2 bedroom wood framed structure is in disrepair. The foundation is a combination of poured concrete (full height basement) and concrete blocks (crawl space). There are existing paved or concrete driveways, walkways and slabs located around the existing dwelling, much of which are to the north of the dwelling. The existing building, pavement, and concrete infrastructure are located within the buffer zone to a locally jurisdictional wetland north of the building. The entire site is located within a FEMA AE flood zone (land subject to coastal storm flowage or LSCSF) and a barrier beach. The building is currently served by town water and a single cesspool. Ground cover consists of various scrub pine trees, woody shrubs, and other plant & grasses.





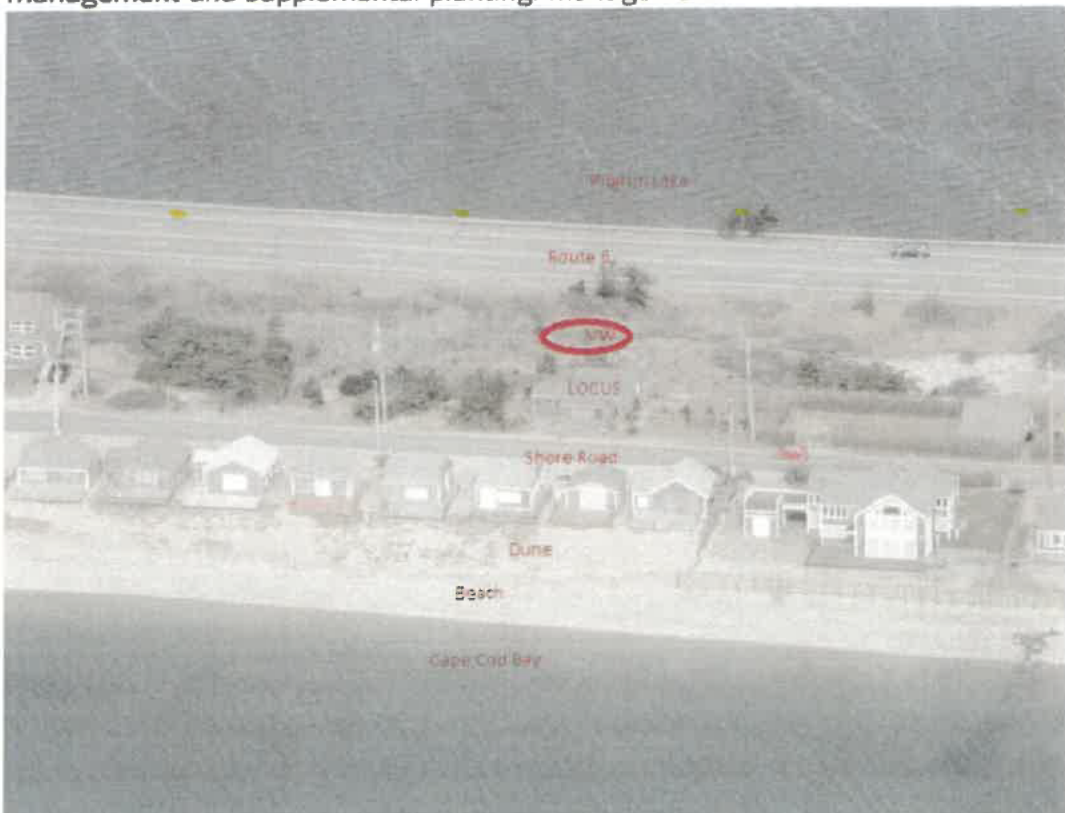
Proposed Improvements:

The proposed scope of work includes removal of the existing dwelling and foundation, construction of a replacement dwelling with flood-compliant foundation, removal of the existing impervious pavement/concrete drives and walks, and substantial ground restoration and mitigation plantings at the site. Other proposed work includes the removal of the existing cesspool, and installation of a new I/A sewage treatment system that will be located outside of the 100 foot buffer zone of the BVW. There is no proposed change from the existing number of bedrooms in the dwelling.

The existing dwelling with its full-height concrete foundation is located within a wetland resource area and will be removed. The proposed replacement dwelling is designed to comply with FEMA/ Mass Building code requirements for flood zone construction. The foundation will be part concrete foundation with flood vents, and part pier/pile style construction. The proposed concrete foundation area is smaller than the existing concrete foundation, and will be located greater than 100 ft from the (locally defined)BVW to the north of the site. The areas of proposed dwelling and deck footprint expansions are designed on piers/piles and will require only a minimal amount of temporary ground disturbance to install. All the structures and hardscape will remain outside of any mapped NHESP priority habitat in this area. The proposed dwelling will be connected to a new I/A sewage disposal system to provide a cleaner effluent discharge.

A significant portion of the project scope includes removal of impervious pavement within the resource area and performing vegetation management. A comprehensive Planting Plan prepared by Blue Flax Design is included in this application. Minimal grade changes are proposed, and any disturbed areas will be vegetated as shown on the drawings. The following is a summary of the main project elements within the buffer zone and resource area:

- The existing dwelling will be removed and replaced with a new foundation and configuration
- 2,900 s.f. of existing pavement and concrete slabs will be removed from the resource area.
- Area of proposed invasive vegetation management and restoration totals approximately 19,881 s.f in mitigation for the increase in structure and removal of pavement
- The concrete foundation for the main section of the dwelling will be smaller than the existing foundation and minimal excavation will be required for the reconstruction.
- The footprint changes are proposed on a pier/pile foundation where only limited ground disturbance will be required for installation.
- The pier/pile foundation provides 2 ft of "freeboard" to the ground below the structure.
- The proposed concrete foundation will be flood zone compliant, with flood vents
- The proposed dwelling configuration is located at the outer perimeter of the BVW buffer zone
- A new sewage disposal system with I/A treatment will be installed outside of the 100' buffer zone from the BVW
- All new walkways, patios, and decks will be installed/laid as pervious.
- Disturbed areas and Native Plant Buffers will be enhanced with invasive plant management and supplemental planting/management.



Performance Standards Narrative

Wetland Performance Standards – (310 CMR) State WPA Regulations

The property at 423 Shore Road has the following **State Defined resource areas**: An explanation is provided to show how each performance standard is met.

Wetland Performance Standards - (310 CMR) State WPA Regulations

The property at 423 Shore Road has the following **State Defined resource areas**:

An explanation is provided to show how each performance standard is met.

10.28: Coastal Dunes

WHEN A COASTAL DUNE IS DETERMINED TO BE SIGNIFICANT TO STORM DAMAGE PREVENTION, FLOOD CONTROL OR THE PROTECTION OF WILDLIFE HABITAT, 310 10.28(3) THROUGH (6) SHALL APPLY:

- (3) Any alteration of, or structure on, a coastal dune or within 100 feet of a coastal dune shall not have an adverse effect on the coastal dune by:*
- (a) affecting the ability of waves to remove sand from the dune;*
 - (b) disturbing the vegetative cover so as to destabilize the dune;*
 - (c) causing any modification of the dune form that would increase the potential for storm or flood damage;*
 - (d) interfering with the landward or lateral movement of the dune;*
 - (e) causing removal of sand from the dune artificially; or*
 - (f) interfering with mapped or otherwise identified bird nesting habitat.*

Proposed project reduces impervious coverage and reduces the area of enclosed foundation from existing conditions. Restoration plantings will enhance and stabilize the resource area. Pile/pier supports for proposed dwelling will allow lateral movement of sand. Any proposed work will comply with conditions which may be issued by NHESP for proposed work in said areas to protect identified habitat.

10.29: Barrier Beaches

- (3) When a Barrier Beach Is Determined to Be Significant to Storm Damage Prevention, Flood Control, Marine Fisheries or Protection of Wildlife Habitat. 310 CMR 10.27(3) through (6) (coastal beaches) and 10.28(3) through (5) (coastal dunes) shall apply to the coastal beaches and to all coastal dunes which make up a barrier beach.*
- (4) Notwithstanding the provisions of 310 CMR 10.29(3), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.*

Proposed project does not directly border on, or adversely impact a beach or areas of marine fisheries. Any proposed work will comply with conditions which may be issued by NHESP for proposed work in said areas to protect identified habitat of identified of rare vertebrate or invertebrate species.

Wetland Performance Standards – Truro Conservation Regulations**2.05: Land Subject to Coastal Storm Flowage****c. Performance Standards**

1. In addition to the interests and values set forth above in Sections 2.05(a) and (b), the following standards shall also be applied to work within LSCSF:

Any activity subject to jurisdiction, and proposed on LSCSF shall not:

- i. Reduce the ability of the resource to absorb and contain flood waters;
- ii. Reduce the ability of the resource to buffer more inland areas from flooding and wave damage;
- iii. Displace or divert flood waters to other areas;
- iv. Cause or create the likelihood of damage by debris to other structures on land within the flood plain (collateral damage); built structures such as stairs or walkways shall be seasonally removable,
- v. Cause ground or surface pollution triggered by coastal storm flowage; and
- vi. Reduce the ability of the resource to serve as a wildlife habitat and migration corridor through activities such as, but not limited to the removal of vegetative cover and/or installation of fencing and other similar structures.
- vii. Any activity proposed in the floodplain may require mitigation to enhance or restore natural functions of the floodplain.

Enclosed foundation area will be reduced within LSCSF and designed with flood vents to meet flood zone construction standards. Pile/pier supports for proposed dwelling will allow stormwater to flow-freely without diverting/displacing to other areas. Removal of existing pavement and concrete will enhance the ability of the resource to absorb and contain flood waters. Approximately 4,000 s.f. of restoration plantings in the resource area will restore buffer zones, increase absorption, provide filtration along the (bv) wetland and provide additional habitat.

(Local Only) Bordering Vegetated Wetlands

(4) General Performance Standards. [from 310 CMR 10.55]

(d) Notwithstanding the provisions of 310 CMR 10.55(4)(a),(b) and (c), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.59.

Removal of existing pavement and concrete from the buffer zone and restoration with native buffer zone plantings will enhance wildlife habitat. Restoration and mitigation plantings in the resource area will restore buffer zones, increase absorption, and provide filtration along buffer zone to the BVW. Any proposed work will comply with conditions which may be issued by NHESP for proposed work in said areas.

Variance Standards and Responses

The applicant is seeking a variance from the Truro Conservation Regulations due to the unusual topography of this property, including the impact of the 2014 flood mapping changes as well as the historic placement of the home. These elements have the existing home located within a coastal resource area and the entire lot within a coastal resource area or 100-foot buffer zone. This renders the lot very different even from other lots in the immediate neighborhood and creates significant challenges for landform and vegetation protection if the regulations were strictly enforced. The project as proposed elevates many of the structural elements of the project above the critical resources than existing conditions, and elsewhere, beyond the buffer zone to the BVW to the extent possible. Of primary benefit to the resource areas, the project includes substantial proposed vegetation management and the creation of buffer areas to the BVW, more than what exist today.

Under Regulation 1.05(e), in order to obtain a variance for the project, the applicant must provide:

1. Clear and convincing proof that the proposed work or its impacts and effects, will not adversely impact the public interests and values protected by the Bylaw and Regulations

Response - The record plans, narratives in the Notice of Intent, and Planting Plan by Blue Flax Design address in detail each of the public interests and values set forth at Section 1.02. The information demonstrates that not only will the project have no effect at all upon and thus not adversely impact the public interests and values, but that the restoration and mitigation plan proposed will make the site better than it is at present. The public interests and values analyzed are:

Protection of public and private water supply
Protection of groundwater quality and supply
Protection of wildlife habitat
Protection of rare species habitat
Control of flooding, erosion, and sedimentation
Protection of pollution and storm damage

2. Description of alternatives explored that would be in compliance and why each is not feasible;

Response – Summarily, there are no areas on the lot which currently lie outside of a resource area and buffer zone to a resource area. Any work proposed on the site would require a variance. Please see the Alternatives Analysis presented elsewhere in this application.

Proposed Project – The proposed project includes the removal and reconstruction of an existing dwelling, replacement of the foundation, and reconfiguration of the dwelling. The renovations, new flood compliant foundation, and impervious pavement removal will result in a reduction of 1,993 sf of impervious coverage within the resource area. Of that, 406 sf is a reduction within the 0-50 ft buffer to the BVW and a reduction of 976 sf. of coverage within the 50-100 ft buffer to the BVW.

Near the south eastern portion of the lot, in the area of the driveway, the proposed sewage disposal system with I/A treatment is located outside of the buffer zone to the BVW. The proposed driveway, walkways, and mowed path access to lower part of the dwelling are pervious.

All roof runoff from structures will be controlled with gutters to drywells, or gravel drip trenches to eliminate potential stormwater erosion and promotes recharge on-site.

3. Description of mitigation measures to be used

Response – The replacement structure will be supported partially by a new foundation with flood vents, and sections elevated on piles/piers designed in compliance with state and local flood zone requirements. This mitigation relates to reducing the potential of storm/ flood damage.

In addition, Blue Flax Design's mitigation plan sets forth in detail proposed mitigation measures.

4. Evidence that overriding public interest is associated with the project which justifies modifying the performance standards.

Response – The materials presented in the included documentation demonstrate not only no adverse impacts to the protected interests and values, but an overall benefit to the Buffer Zone and resource area. Here the overriding public interest for this unique lot and landform is to minimize impacts to the landform and vegetation, both in the short-term during construction, and in the long term in facilitating contiguous wildlife habitat adjacent to and in resource area and to the Buffer Zone of the BVW. The proposal minimizes such impacts and therefore addresses this critical public interest.

Alternatives Analysis

The applicant has evaluated options for redevelopment of the property for many years and has been met with challenges due to FEMA flood zone changes and regulation changes that have impacted the property.

The description of several alternatives considered are identified below:

Alternative 1 - The first alternative is not to make any improvements to the existing dwelling. This is not feasible for the applicants as the house and property are in a state of disrepair. No action would be a safety concern and deprive the applicant from enjoyment of the property.

Alternative 1 is not a reasonable alternative.

Alternative 2 - The second alternative, easily dismissed, is to relocate the structure outside of the Resource Area or Buffer Zone. This is impossible, since the lot is entirely within the resource area.

Alternative 2 is not a reasonable alternative.

Alternative 3 – Reconstruct the dwelling on the existing foundation. This option is not feasible, since the existing foundation is not flood compliant and is located partially within the Shore Road right of way. Leaving the structure in this location creates further zoning violations and does not provide any opportunity to enhance the site with valuable mitigation.

Alternative 3 is not a reasonable alternative.

Alternative 4 – Remove the existing dwelling and existing foundation and relocate a reconfigured dwelling and flood compliant foundation to a different location on the property. The only viable location would be the southeast corner of the lot, however the most favorable location of the sewage disposal system is located in that quadrant of the site. This location of the dwelling would force the sewage disposal system elsewhere on the property which would be closer to the bordering vegetated wetland. This alternative would also result in a significant crater within the existing house location and would require substantial excavation for the relocated structure in another place on the lot.

Alternative 4 is not a reasonable alternative.

Alternative 5 – Remove the existing dwelling and existing foundation and replace it with a reconfigured dwelling and flood compliant foundation to a different location on the property. The new foundation will be flood compliant and utilize the existing void of the existing deep

foundation, and utilize piles/piers for expanded building areas. A new sewage disposal system with I/A will be installed to the southeast corner of the property, at the farthest point away from the BVW. The full portion of the foundation provides secure storage space for the applicant with minimal additional excavation. Additional mitigation plantings and pavement removal make this alternative most favorable.

Alternative 5 is the preferred alternative.

Summary

The preferred alternative to remove the existing structure with foundation and replace it on new foundations will improve flood resiliency of the structure. In comparison with the other alternatives considered, this preferred alternative will provide the most protection for the LSCSF and dune interests by reducing the risk of storm damage and resulting debris, also reducing impervious ground cover within the coastal wetland resource areas/buffer zones, and limiting earthwork/ground disturbance. With the substantial areas of pavement to be converted to naturalized planted buffer areas, there will be positive impacts to the resource area. Additionally, the increase elevation of the proposed structure provides additional vertical buffer than required under the current building code to account for sea level rise. The portion of the elevated structure on piles/piers provides approximately 2 ft freeboard over existing ground. The preferred alternative will not negatively affect private or public groundwater supply, flood control, or storm damage prevention. The proposed project will not add any pollution and will not impact shellfish, fisheries and wildlife habitat as described above & shown on the proposed plans.

Construction Protocol

Pre-Construction Requirements

- A sign bearing the MA DEP file number shall be posted in compliance with the Order of Conditions issued by Conservation Commission.
- Prior to any construction or site disturbance activity, the erosion and sedimentation barriers shall be installed in the location(s) shown on the plan. Silt barrier to be staked wattles.
- A copy of the approved plans and the Order of Conditions shall be provided to the Contractor and shall be on site at all times.

On-Site Pre-Construction Conference

Prior to the start of any sitework or construction, a pre-construction meeting will be held on site to discuss the project requirements with the following parties represented:

- General Contractor
- Sitework and Utility Contractor
- Coastal Engineering Co., Engineer
- Blue Flax Design
- Conservation Commission Agent Topics to be discussed during this meeting:
 - Maintenance of Erosion and Sedimentation Control barrier
 - Limit of Work and Access
 - Demolition Procedures
 - Construction sequencing and schedule
 - Material and Equipment Storage
 - Project contacts

During the preconstruction conference, the Engineer and Conservation Agent shall inspect the erosion and sedimentation barrier. Any deficiencies shall be addressed prior to the commencement of the site work and dwelling reconstruction.

Erosion Control

Proposed undisturbed areas shall be protected from erosion and sedimentation by the placement of an erosion and sedimentation barrier along the proposed work limit. The barrier shall be maintained in good condition. Contractor shall install a sedimentation barrier at the limits shown on the approved plan. The erosion and sedimentation control measures shall remain in place until stabilization of disturbed areas. The erosion control measures shall not be removed without the approval of the Conservation Agent.

Sediment shall be removed by hand anytime the erosion and sedimentation barrier has a thirty percent load of sediment, or as directed by the engineer or an agent of the Conservation Commission.

Limit of Work

The Sitework Contractor shall familiarize himself with the boundaries of the property and the limit of work. The Contractor shall exercise care in order to protect adjacent properties and wetland resource areas. The Contractor shall not operate heavy equipment outside of the work limit.

The staging area shall be on the south-east side of the house. The existing driveway shall be used for temporary storage and vehicle loading and unloading. The project work site shall be accessed from Shore Road and the existing driveway. Any construction debris that is not removed at the end of the workday shall be placed in a trash dumpster to be located in the existing driveway. The dumpster shall be covered at the end of the workday and emptied when full. The Contractor shall police the site daily in order to prevent wind-blown material from entering the resource areas.

Construction Access

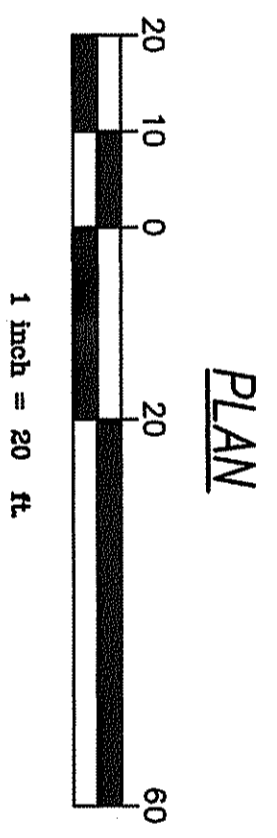
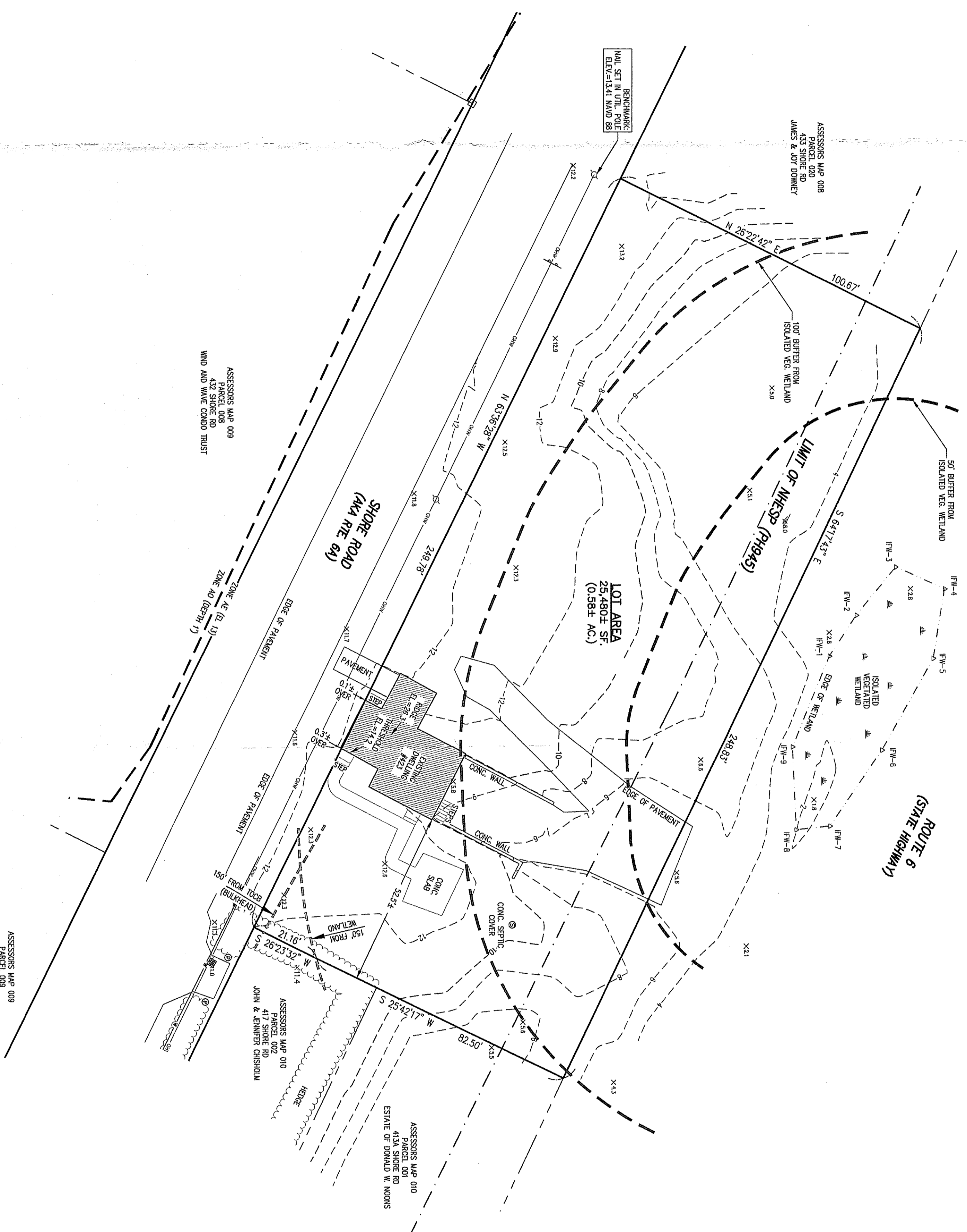
Access to the site for construction vehicles and equipment shall occur from the existing driveway.

Construction and Completion of Construction

The contractor shall practice good housekeeping measures during the day-to-day operations at the site. The site should be policed daily to remove any litter or construction debris. Care shall be taken that no debris be allowed outside the work limit. Debris outside the work limit shall be picked up immediately.

Material stockpiles that are in place for an extended period of time shall be stabilized with vegetation, mulching, erosion control blankets, and other measures that are necessary to prevent the discharge of sediment from the project site.

All disturbed areas to be revegetated with native plants to match the pre-construction conditions or as required by the Order of Conditions issued by the Conservation Commission.



PLAN

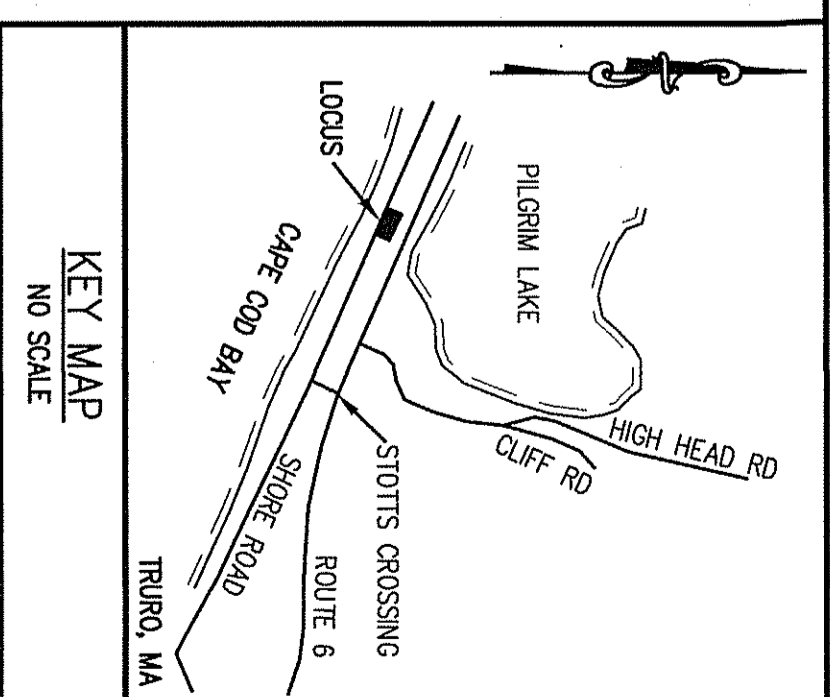
ASSESSORS MAP 009
PARCEL 009
433 SHORE RD
JAMES R. CHISHOLM TRUST

ASSESSORS MAP 009
PARCEL 009
437 SHORE RD
JAMES R. CHISHOLM TRUST

ASSESSORS MAP 010
PARCEL 001
413A SHORE RD
ESTATE OF DONALD W. MOORS

ASSESSORS MAP 010
PARCEL 001
417 SHORE RD
JOHN & JENNIFER CHISHOLM

ASSESSORS MAP 009
PARCEL 009
432 SHORE RD
WIND AND WAVE CANOY TRUST



REFERENCES:
ASSESSORS MAP 9, PARCEL 1
DEED BOOK 13943, PAGE 346
PLAN BOOK 289, PAGE 69

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

FLOOD NOTE:
FLOOD ZONE AE (EL. 13) AS SHOWN ON FEMA FIRM PANEL #2500100117J REVISED JULY 16, 2014

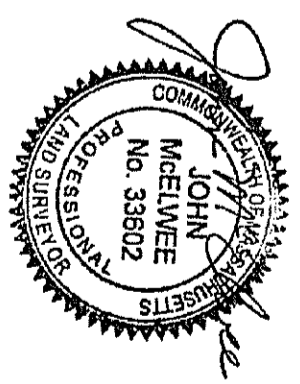
RESOURCE AREA NOTE:
THIS LOT LIES WITHIN LAND SUBJECT TO COASTAL STORM FLOWAGE (LSCSF / FEMA AE FLOOD ZONE) AND THE BUFFER ZONE TO ANY ISOLATED VEGETATED WETLAND.

UTILITY NOTES
1. EXISTING UTILITIES INCLUDING DRAINAGE FACILITIES HAVE BEEN SHOWN WHENEVER POSSIBLE AND ARE SHOWN AS APPROXIMATE FROM EXISTING RECORDS.
2. EXISTING UTILITIES UNDERGROUND AND OVERHEAD, NOT SHOWN IN ADDITION TO THE UTILITY INFORMATION SHOWN ON THIS PLAN.

LEGEND

□	BOUND
■	CATCH BASIN
W	WATER VALVE
⊗	MISC. SIGN
⊙	POST
○	UTILITY POLE
—○—	OVERHEAD UTILITY LINE
---	CONTOUR
X 11.5	SPOT GRADE
NHESP	BOUNDARY OF MASS GIS MAPPED PRIORITY HABITAT

I HEREBY CERTIFY THAT THE CONDITIONS SHOWN HEREON ARE LOCATED AS THEY EXIST ON THE GROUND AS OF 5-27-2021.
DATE: 6-23-2021



Conservation Commission
TOWN OF TRURO
JAN 13 2023

PROJECT 423 SHORE ROAD TRURO, MA		SHEET TITLE PLAN SHOWING EXISTING SITE CONDITIONS	
SCALE	AS NOTED	NO.	DATE
DRAWING TITLE	DATE	REVISION	BY
DATE	6-23-2021		
DRAWN BY	JLH		
CHECKED BY	JLH		
PROJECT NO. C13065-04		SHEET NO. 1 OF 1 SHEETS	
C1.2.1		COASTAL engineering co. 260 Century Hwy, Orange, MA 01903 508.253.6314 P 508.253.6700 F	
Coastal Engineering Co., Inc. © 2021			



**R. CAMPBELL
DESIGN LLC**

423 SHORE ROAD

Jennifer Chisholm
TRURO, MA

No. Description Date

1 Preliminary Design - Opt. 3 12/18/2022

2 Conservation Submission 1/13/2023

Project Number 20220901

Date Issue Date

Drawn By Author

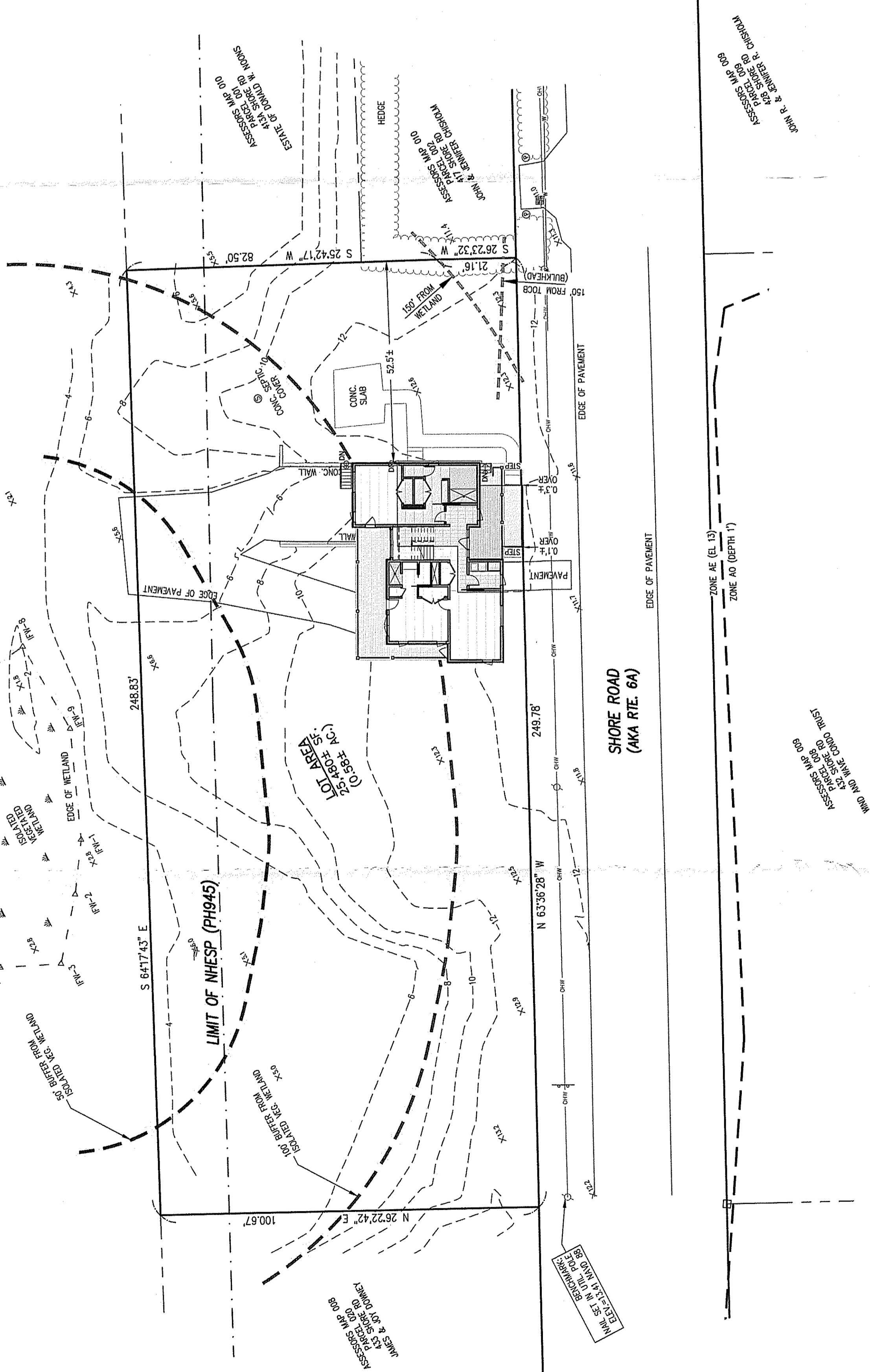
Checked By Checker

Site Diagrams

A0.01

Scale As indicated

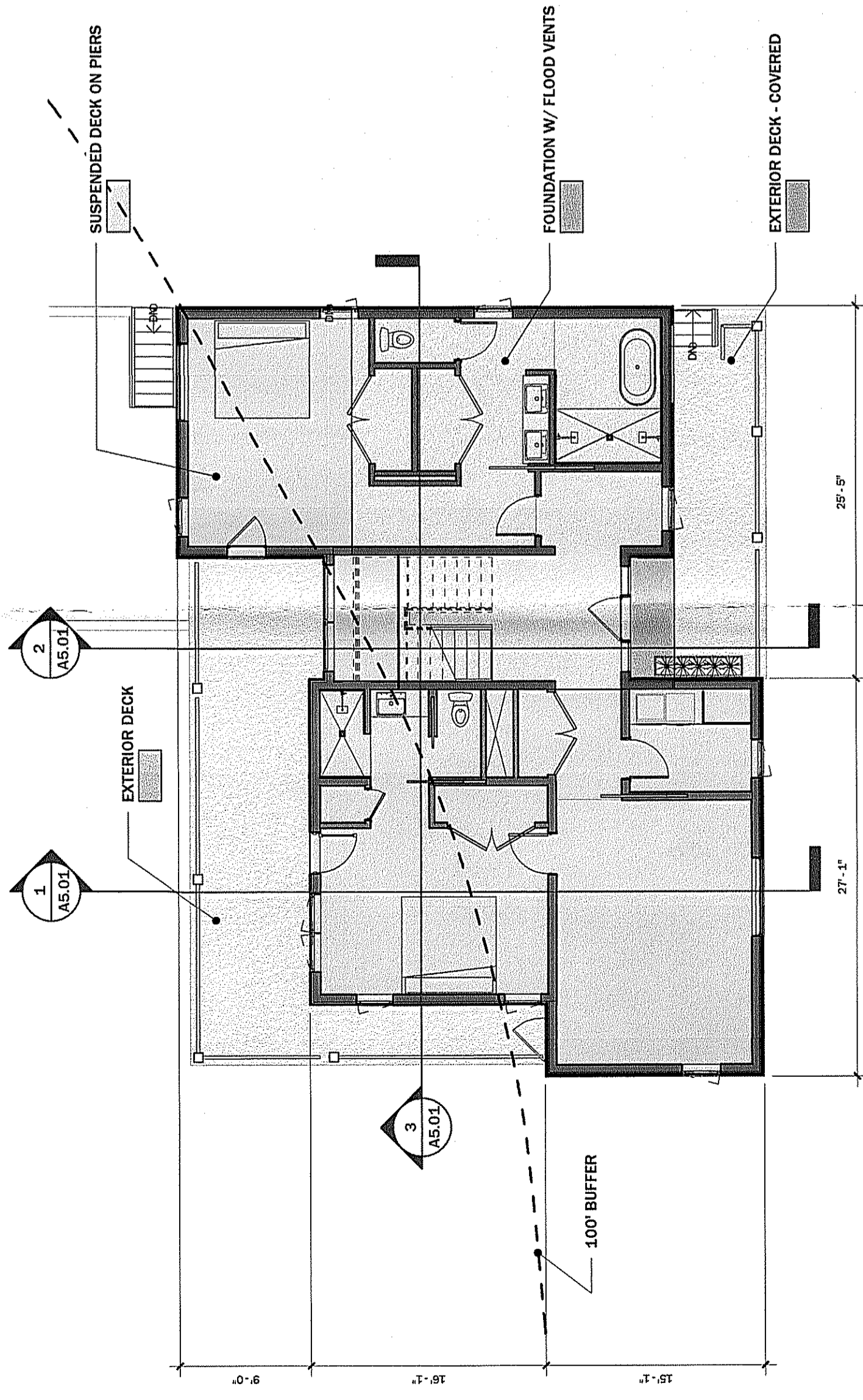
© 2022 R. CAMPBELL DESIGN LLC



1 Plan - Level One - Site Diagram

SCALE: 1" = 20'-0"

1



2 Plan - Foundation Diagram

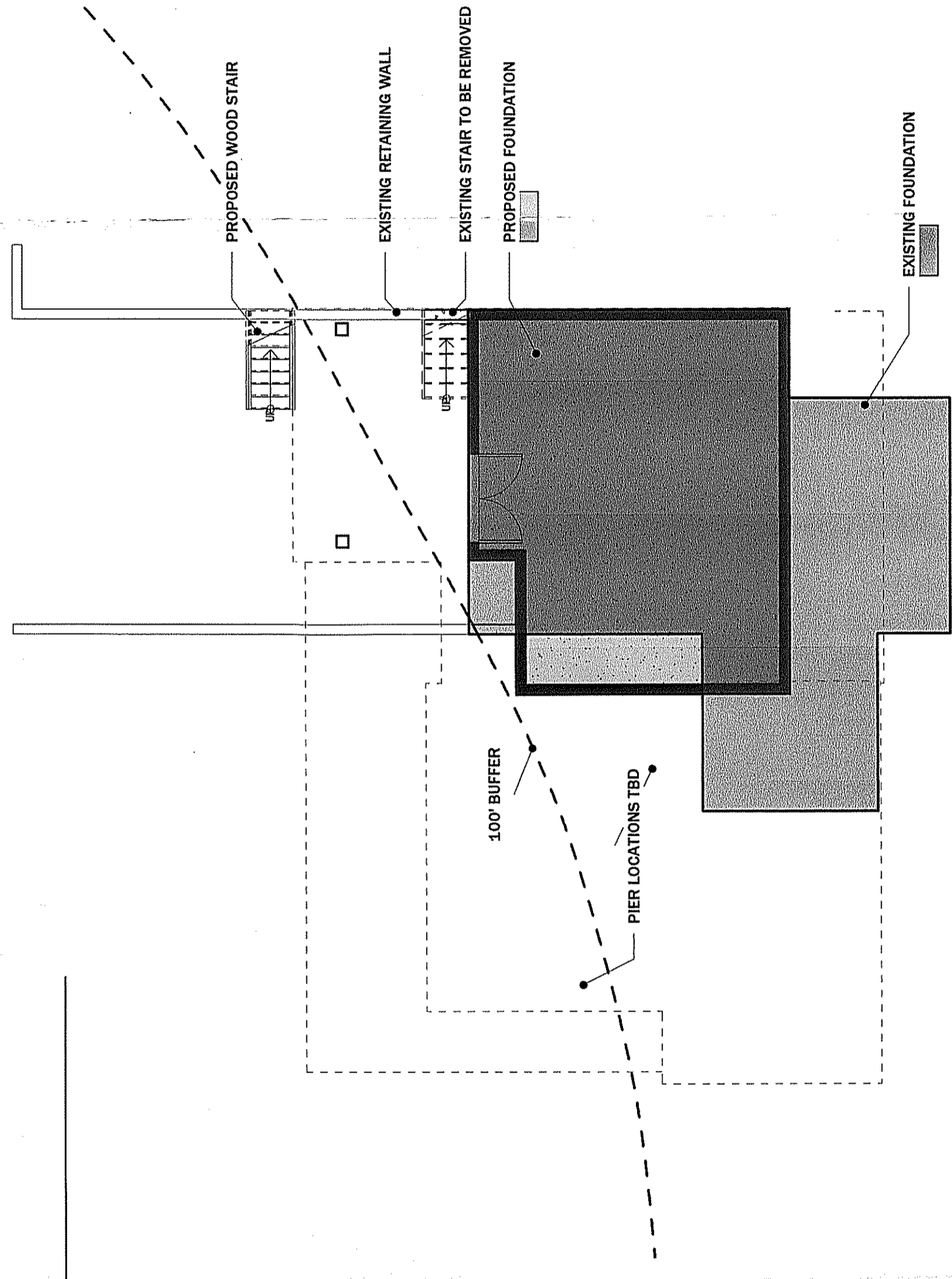
SCALE: 1/8" = 1'-0"

2

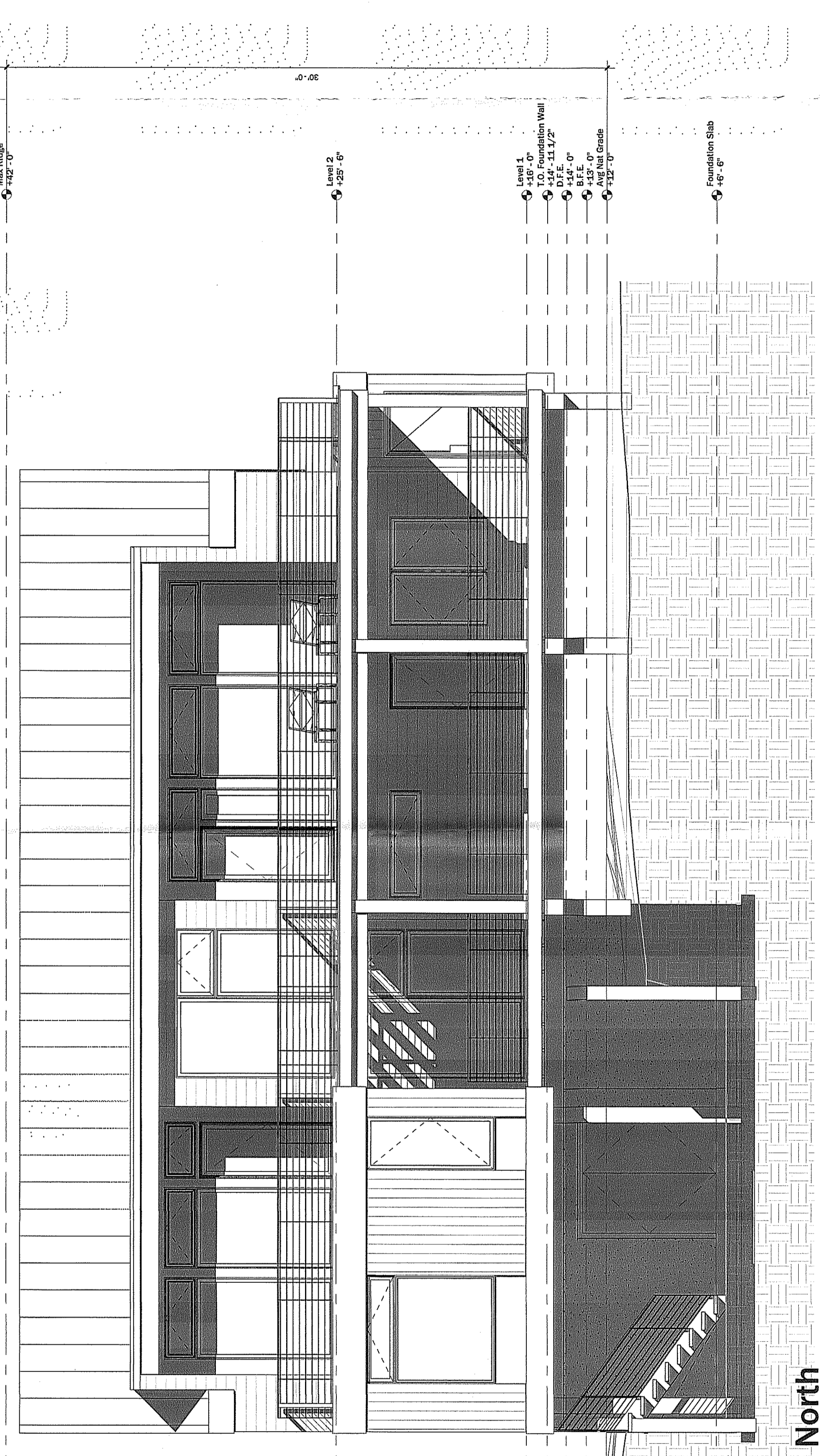
3 Foundation - Existing Overlay

SCALE: 1/8" = 1'-0"

3



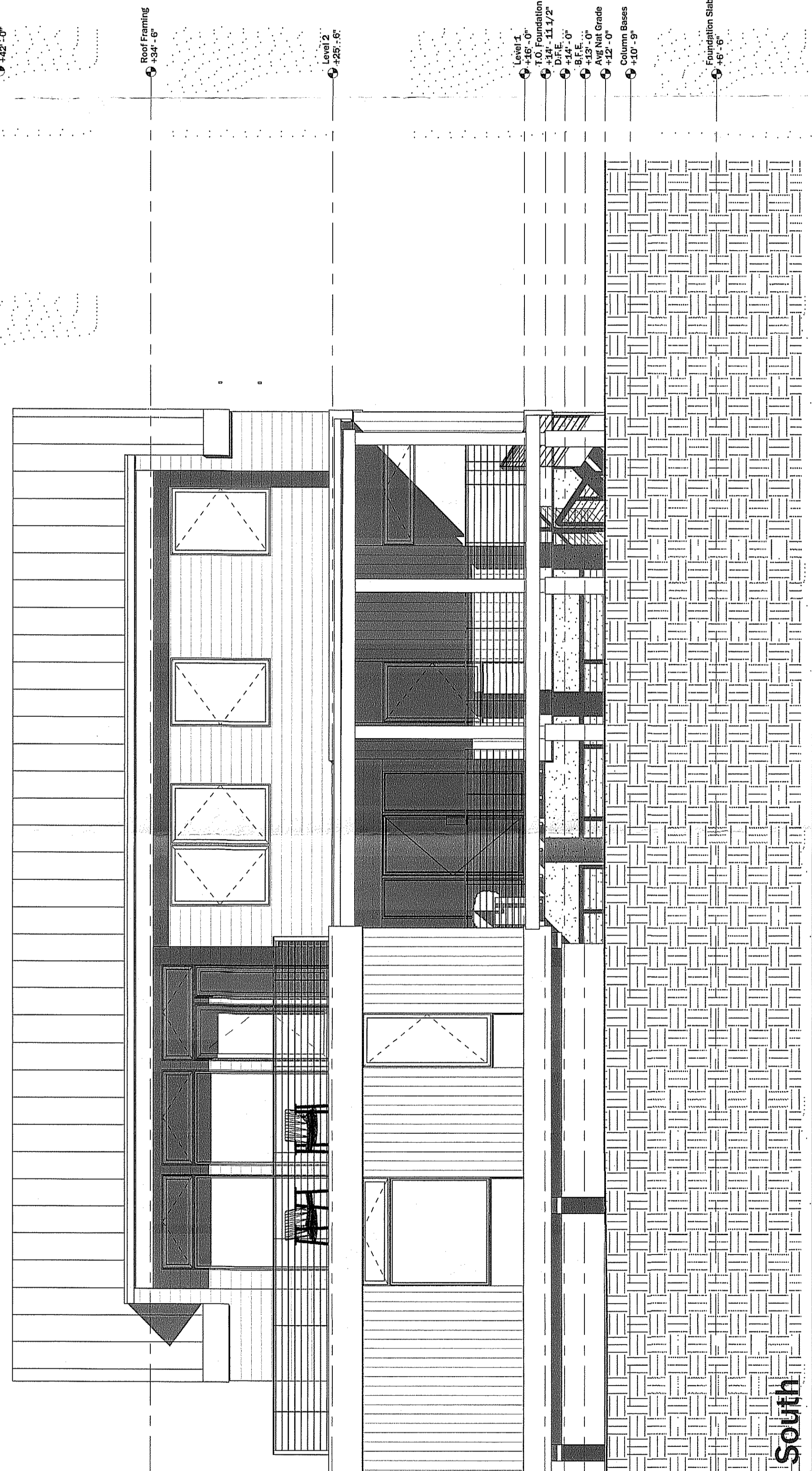
PRELIMINARY -
NOT FOR CONSTRUCTION



Elevation - North

SCALE: 1/4" = 1'-0"

1



Elevation - South

SCALE: 1/4" = 1'-0"

2



R. CAMPBELL
DESIGN LLC

423 SHORE ROAD

Jennifer Chisholm
TRURO, MA

No.	Description	Date
1	Preliminary Design - Opt. 3	12/18/2022
2	Conservation Submission	1/13/2023

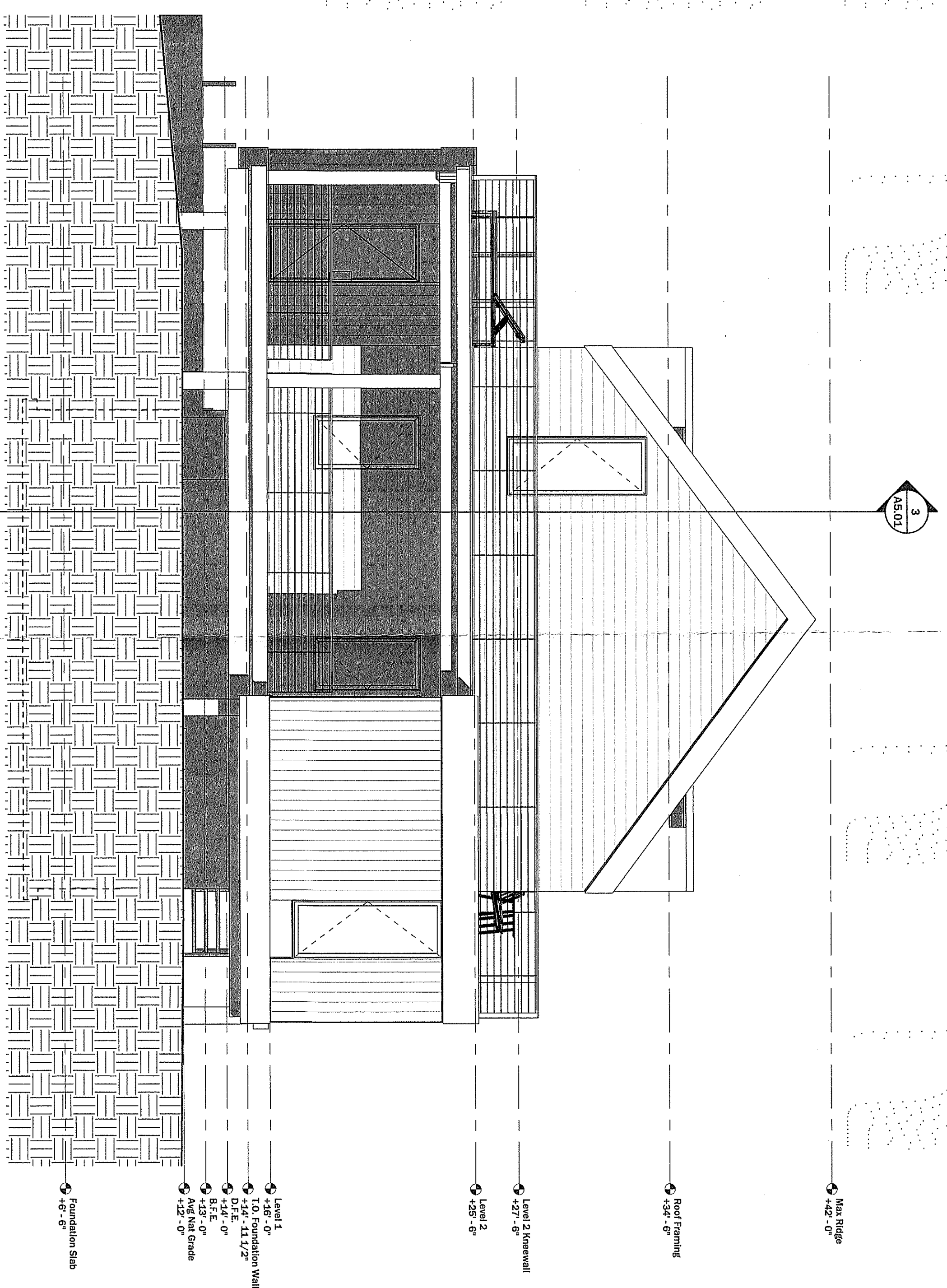
Project Number	20220901
Date	Issue Date
Drawn By	Author
Checked By	Checker

Exterior
Elevations

A2.01

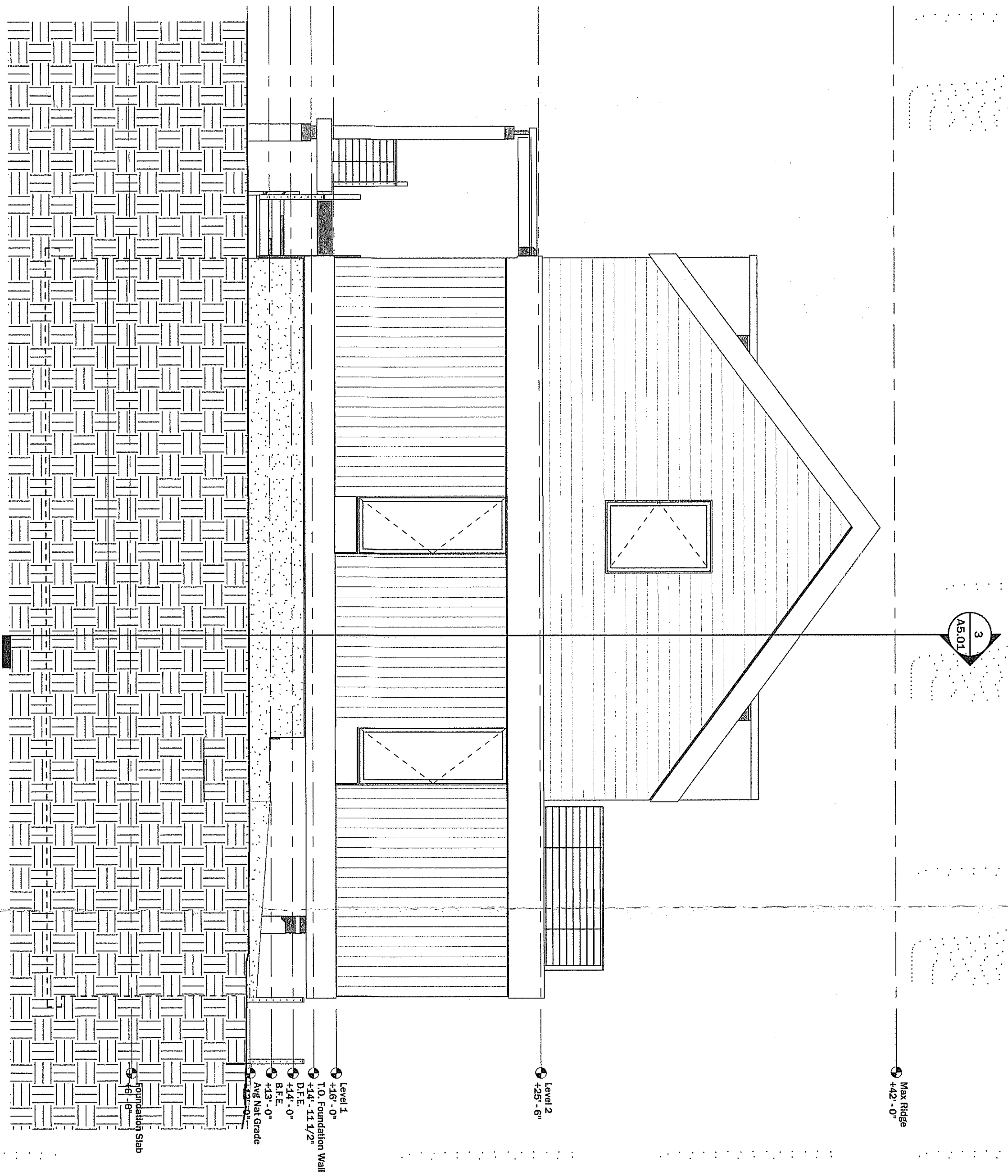
Scale

1/4" = 1'-0"



1
Elevation - West

SCALE: 1/4" = 1'-0"



2
Elevation - East

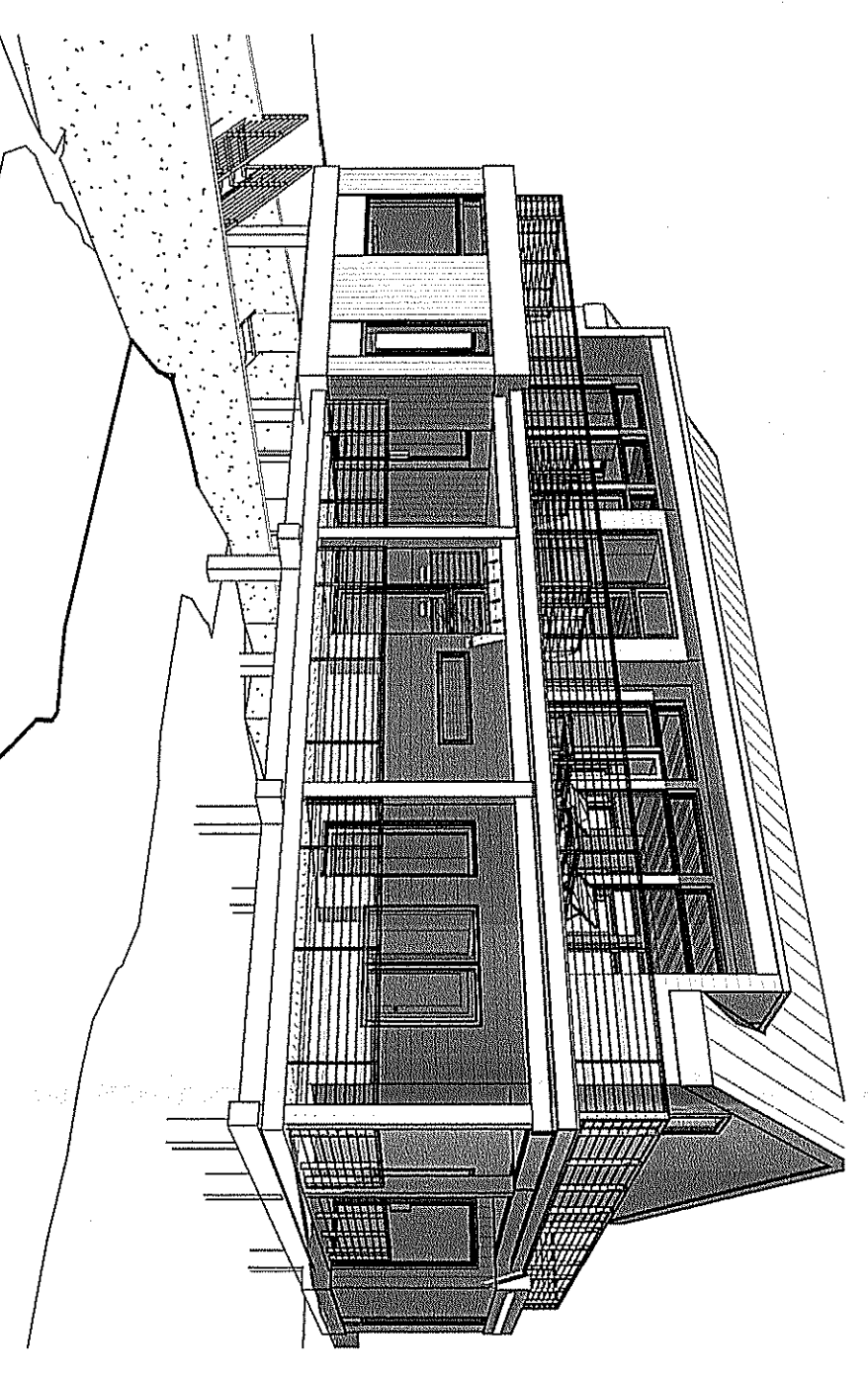
SCALE: 1/4" = 1'-0"

**PRELIMINARY -
NOT FOR CONSTRUCTION**



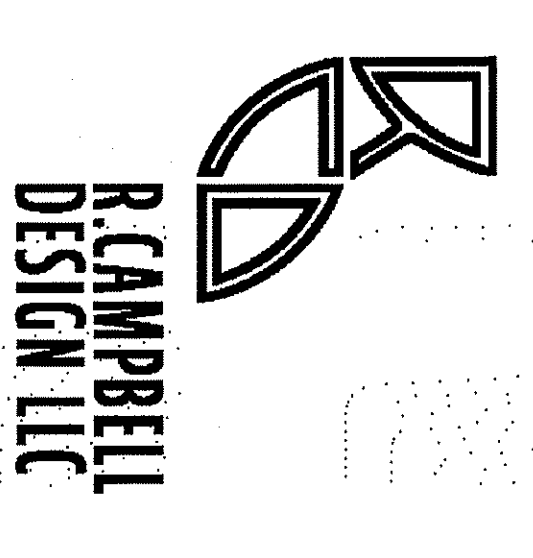
3
View from Northeast

SCALE:



4
View from Northwest

SCALE:



**R. CAMPBELL
DESIGN LLC**

423 SHORE ROAD

**Jennifer Chisholm
TRURO, MA**

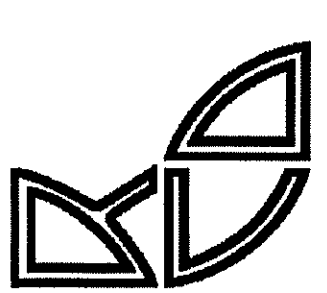
No.	Description	Date
1	Preliminary Design - Opt. 3	12/18/2022
2	Conservation Submission	1/13/2023

Project Number	20220901
Date	Issue Date
Drawn By	Author
Checked By	Checker

**Exterior
Elevations**

A2.02

Scale 1/4" = 1'-0"



R. CAMPBELL
DESIGN LLC

423 SHORE ROAD
Truro, MA
Jennifer Chisholm

No.	Description	Date
1	Preliminary Design - Opt. 3	12/18/2022
2	Conservation Submission	1/13/2023

Project Number	20220901
Date	Issue Date
Drawn By	Author
Checked By	Checker

Building
Sections

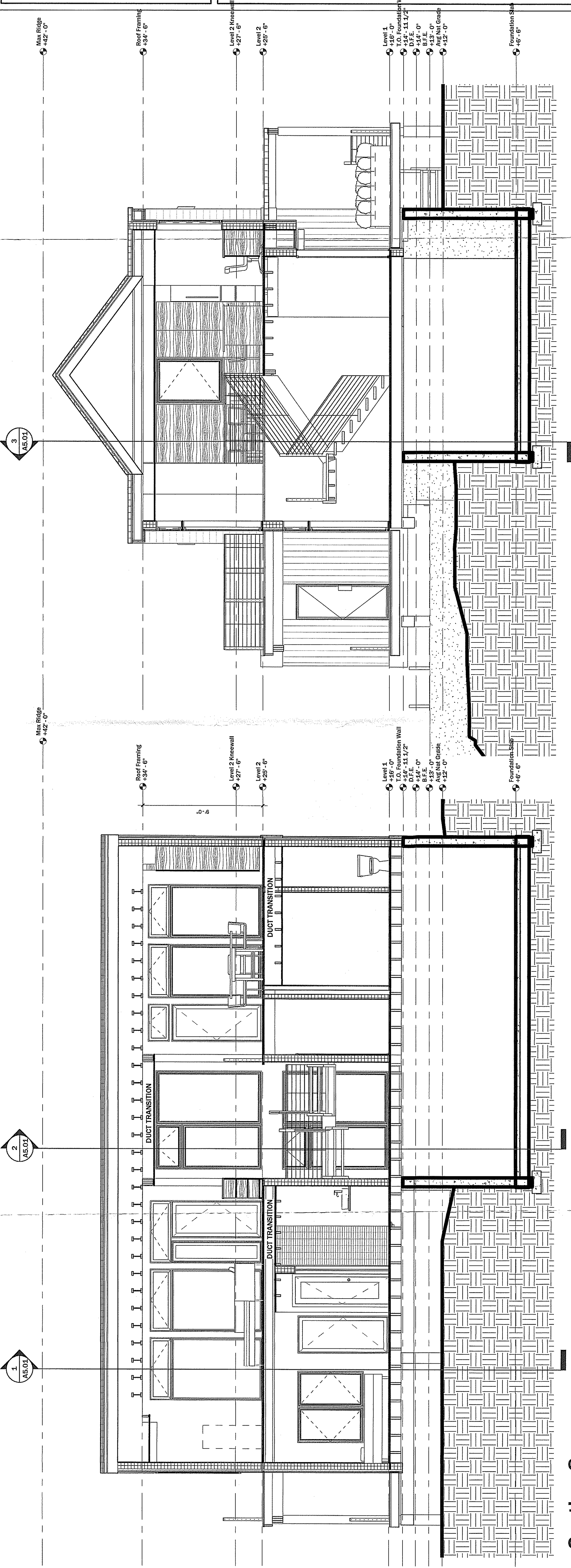
A5.01

Scale

As indicated

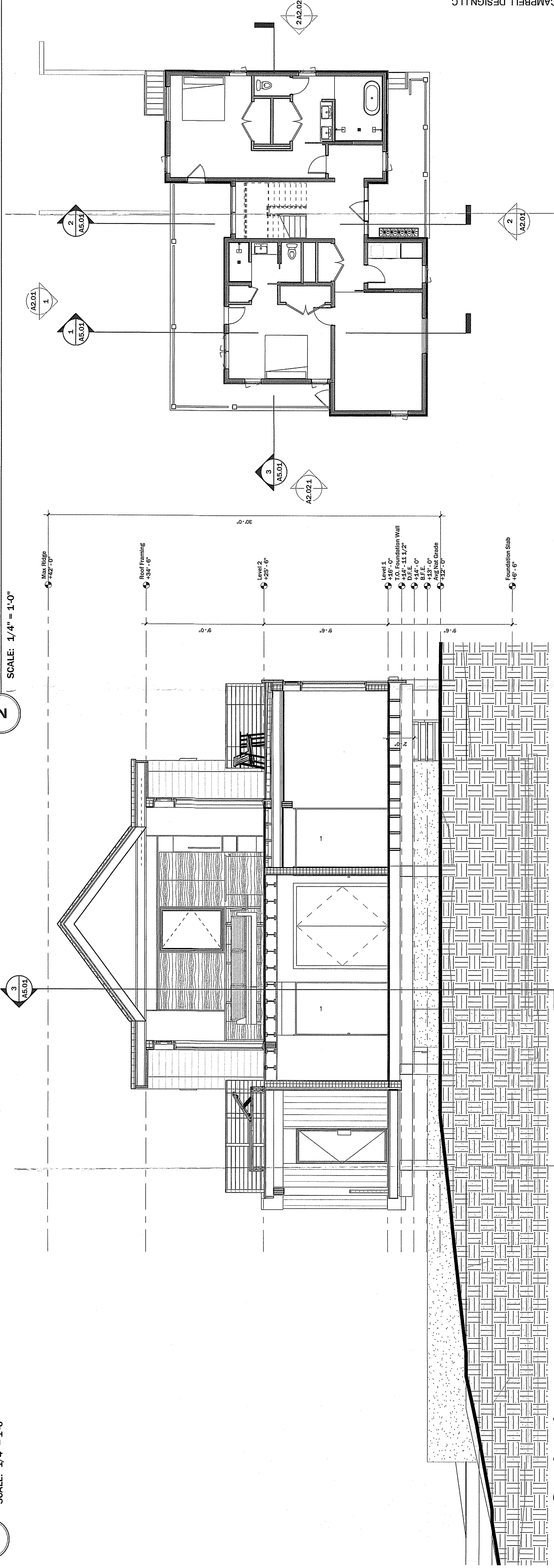
© 2022 R. CAMPBELL DESIGN LLC

1/12/2023 12:24:03 PM



3 Section 8
SCALE: 1/4" = 1'-0"

2 Section 4
SCALE: 1/4" = 1'-0"



1 Section 1
SCALE: 1/4" = 1'-0"

4 Plan - Level 1
SCALE: 1/8" = 1'-0"

PROJECT AREA



Google Earth aerial image of 423 Shore Road, Truro, MA.

PLAN NOTES

- Site plan provided by Coastal Engineering.
- This plan proposes mitigation for the increase in structure in the form of concrete surface removal and invasive vegetation management restoration in a total area of approximately 19,881 square feet.
- Invasive species on site that will be managed/removed include Asiatic bittersweet (*Celastrus orbiculatus*), autumn olive (*Eleagnus umbellata*) and shrub honeysuckle (*Lonicera spp.*). Invasive plants will be selectively treated with an EPA-approved systemic herbicide and removed mechanically or by hand.
- After invasive species removal the project area will be seeded with a native grass and wildflower mix (see below).
- Native vegetation that was damaged by invasive species or historic pruning may be regeneratively pruned using best management practices to promote healthy regeneration and vigorous growth.
- All vegetation debris will be removed from the site and brought to an off-site disposal area.
- Temporary drip irrigation will be required for the first two to three growing seasons while plants establish. Once plants are established irrigation will be removed.
- Follow up invasive species management will be ongoing over the next three growing seasons to ensure proper management and successful restoration.

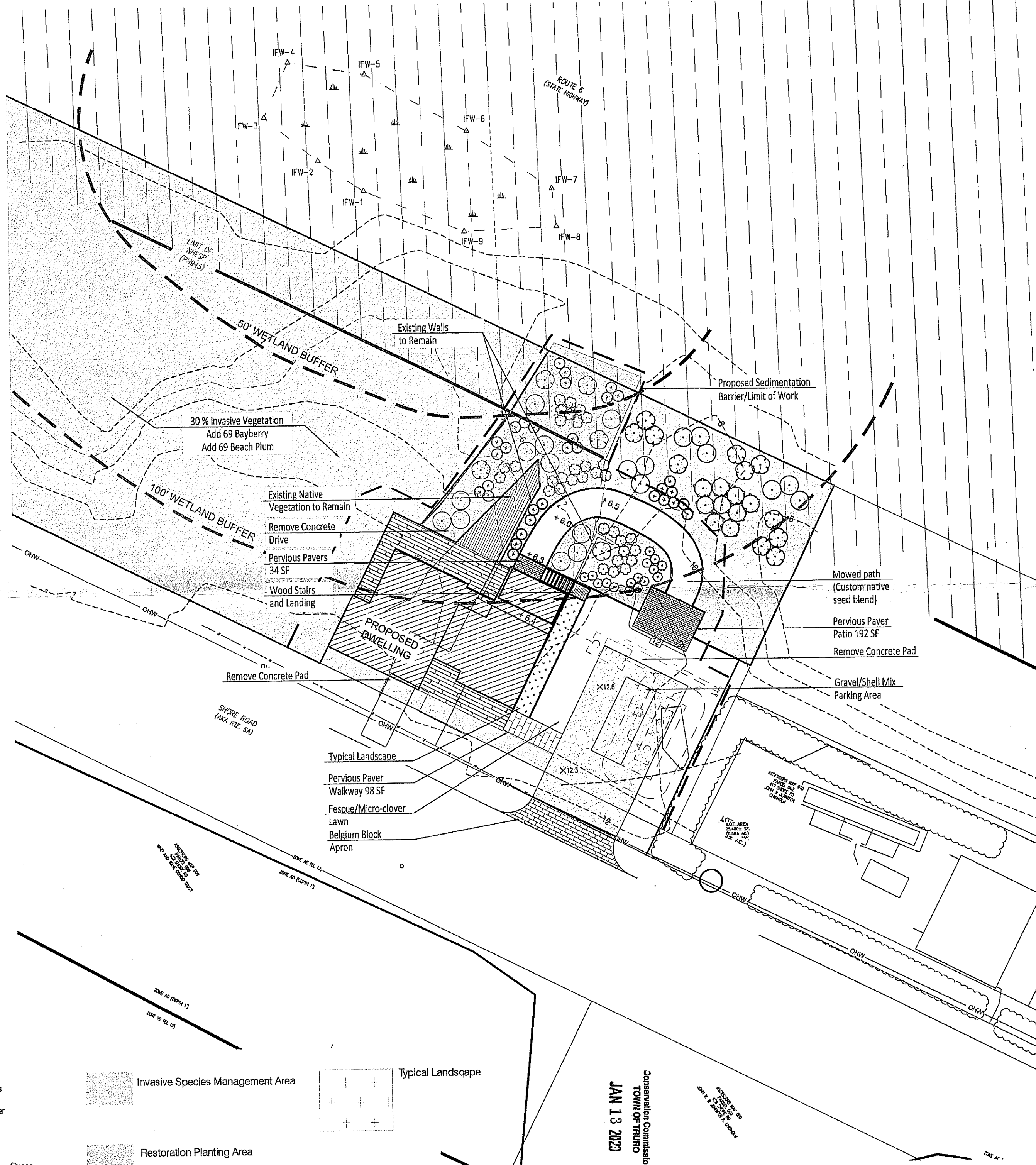
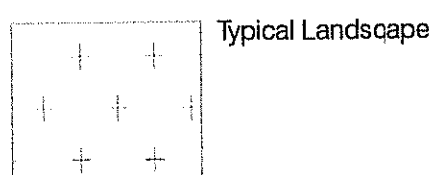
PLANTING SCHEDULE

PLANT SCHEDULE			
SHRUBS	BOTANICAL / COMMON NAME	CONT	QTY
○	Morella pensylvanica / Northern Bayberry	3 gal	89
⊙	Prunus maritima / Beach Plum	3 gal	85
⊙	Rosa carolina / Carolina Rose	1 gal	33
⊙	Rosa virginiana / Virginia Rose	1 gal	9
PERENNIALS	BOTANICAL / COMMON NAME	CONT	QTY
⊕	Asclepias tuberosa / Butterfly Milkweed	1 gal	16
⊕	Solidago sempervirens / Seaside Goldenrod	1 gal	32

CUSTOM NATIVE SEED BLEND
Bouteloua gracilis / Blue Oats Grama
Bouteloua curtipendula / Side Oats Grama
Microclover / *Trifolium repens*
Festuca ovina / Sheep Fescue
Festuca rubra / Red Fescue
Juncus tenuis / Path Rush
Schizachyrium scoparium / Little Bluestem Grass

GRASS & WILDFLOWER SEED MIX
Agrostis perennans / Autumn Bentgrass
Asclepias tuberosa / Butterfly Milkweed
Echinacea purpurea / Purple Coneflower
Festuca ovina / Sheep Fescue
Festuca rubra / Red Fescue
Juncus tenuis / Path Rush
Rudbeckia hirta / Black-eyed Susan
Schizachyrium scoparium / Little Bluestem Grass

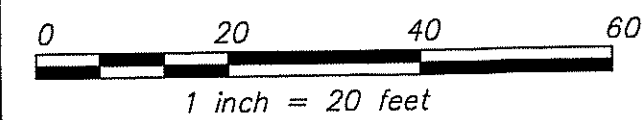
Invasive Species Management Area
 Restoration Planting Area



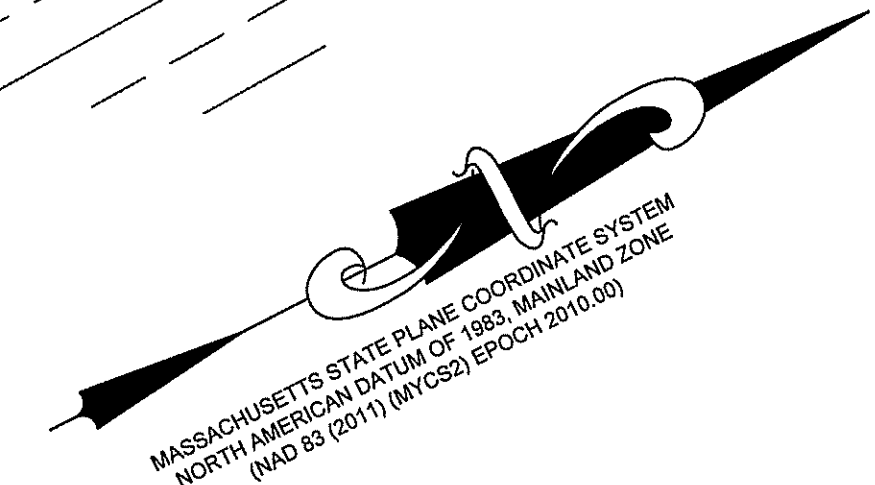
PLANTING PLAN

01/12/23

CHISHOLM RESIDENCE
423 SHORE RD.
TRURO, MA

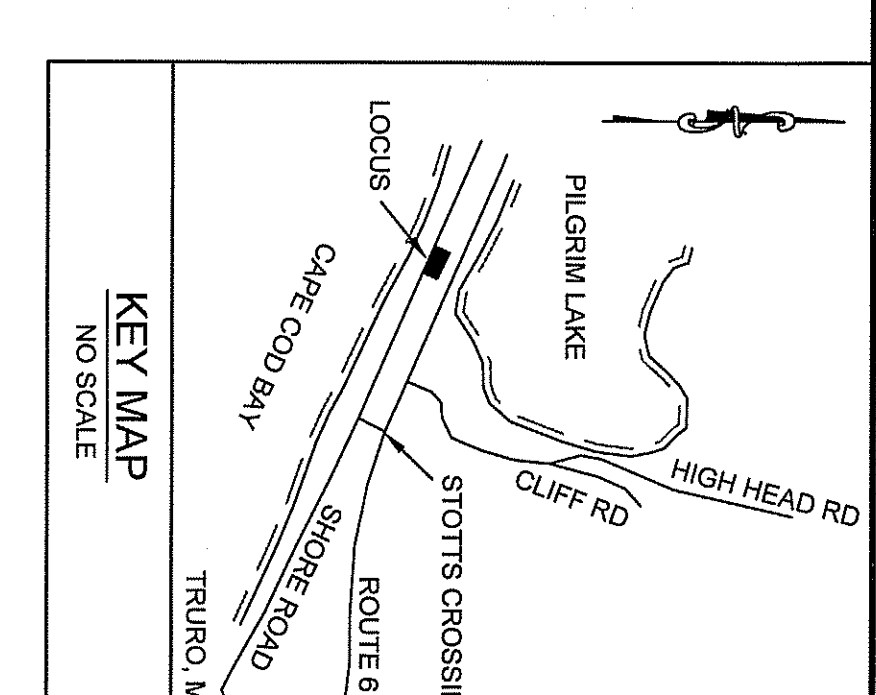


DATE	REVISION	INITIALS



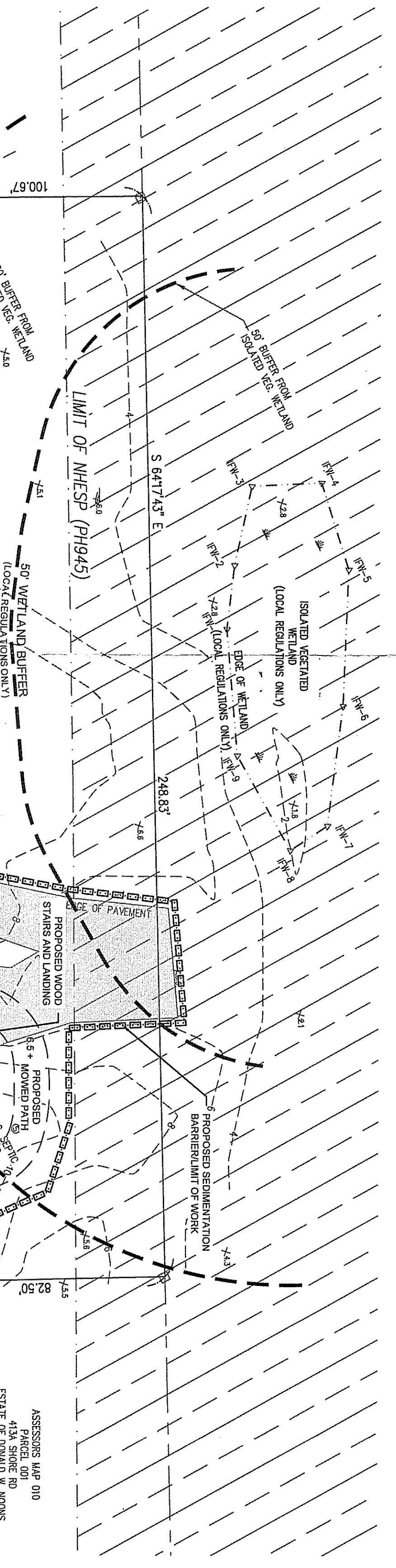
CONSERVATION COMMISSION NOTES:

1. SEE "PLANTING PLAN" PREPARED BY BLUEFLAX DESIGN DATED 07/12/2023 FOR GROUND RESTORATION AND REPLANTED AREAS.
2. THIS PROJECT LIES WITHIN A FEMA 100-YEAR FLOOD HAZARD AREA (LSCSP), A BARRIER BEACH, AND BUFFER ZONES TO A DESIGNATED WETLAND AND DUNE.
3. WORK WITHIN THE NHESP HABITAT INCLUDES PAVEMENT/CONCRETE REMOVAL AND NATIVE PLANTING ACTIVITY ONLY.
4. PROPOSED GRADE CHANGES ARE LESS THAN 2' IN AREA OF CONSTRUCTION.
5. ALL CONSTRUCTION TO BE DESIGNED IN COMPLIANCE WITH APPLICABLE MASS STATE BUILDING CODES FOR FLOOD ZONE CONSTRUCTION.
6. THE PROPOSED SEWAGE DISPOSAL SYSTEM WITH IA TECHNOLOGY FOR THIS PROJECT WAS APPROVED BY THE TRURO BOH ON AUGUST 16, 2022.
7. ALL ROOF RUNOFF TO BE CONTROLLED VIA GUTTERS TO DOWNSPOUTS + DRYWELL OR STONE DRIP EDGES.



REFERENCE:
 ASSESSORS MAP 9, PARCEL 1
 DEED BOOK 13943, PAGE 346
 PLAN BOOK 288, PAGE 69

Conservation Commission
 TOWN OF TRURO
 JAN 13 2023



LOCAL BWW COVERAGE TABLE 0'-50' BUFFER

SUBJECT	EXISTING	PROPOSED	CHANGE
BUILDING & PORCHES (ROOFED)	0 S.F.	0 S.F.	NO CHANGE
DECKS	0 S.F.	0 S.F.	NO CHANGE
HARDSCAPES (WALLS, PATIO, PAVED DRIVEWAY)	408 S.F.	0 S.F.	408 S.F. DECREASE
0'-50' TOTAL BUFFER ZONE COVERAGE	408 S.F.	0 S.F.	408 S.F. DECREASE

LOCAL BWW COVERAGE TABLE 50'-100' BUFFER

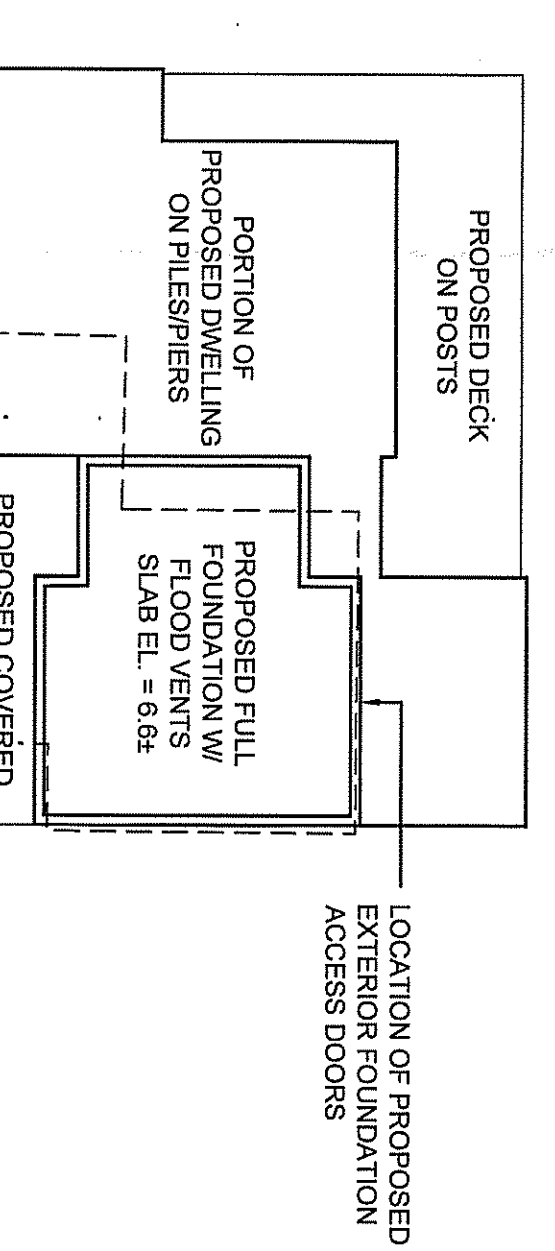
SUBJECT	EXISTING	PROPOSED	CHANGE
BUILDING & PORCHES (ROOFED)	3 S.F.	341 S.F.	338 S.F. INCREASE
DECKS	0 S.F.	378 S.F.	378 S.F. INCREASE
HARDSCAPES (WALLS, PATIO, PAVED DRIVEWAY)	1,786 S.F.	91 S.F.	1,695 S.F. DECREASE
0'-50' TOTAL BUFFER ZONE COVERAGE	1,789 S.F.	810 S.F.	979 S.F. DECREASE

TOTAL AREA OF RESTORATION PLANTING + MITIGATION AND ADDITIONAL INVASIVE SPECIES MANAGEMENT: 19,881 ± S.F.

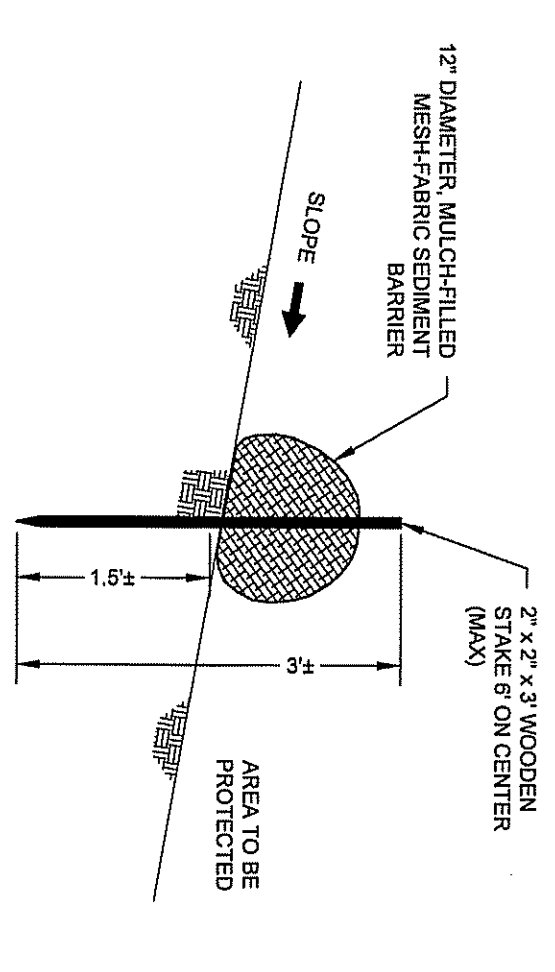
RESOURCE AREA COVERAGE TABLE*

SUBJECT	EXISTING	PROPOSED	CHANGE
BUILDING & PORCHES	837 S.F.	1,728 S.F.	891 S.F. INCREASE
CONCRETE FOUNDATION	187 S.F.	818 S.F.	631 S.F. INCREASE
POST/TILE FOUNDATION	10 S.F.	1,207 S.F.	1,197 S.F. INCREASE
DECK - POST FOUNDATION	10 S.F.	1,911 S.F.	1,901 S.F. INCREASE
HARDSCAPES (WALLS, PATIO, PAVED DRIVEWAY) & CONCRETE INCLUDING WALLS	2,912 S.F.	30 S.F.	2,882 S.F. DECREASE
HARDSCAPES (PERVIOUS, PERVIOUS PAVERS & GRAVEL)	10 S.F.	1,870 S.F.	1,860 S.F. INCREASE
TOTAL IMPERVIOUS COVERAGE	3,749 S.F.	1,768 S.F.	1,981 S.F. DECREASE

*NOTE: ENTIRE SITE LIES WITHIN A RESOURCE AREA - LSCSP - BARRIER BEACH (BRACKETED NUMBERS EXCLUDED FROM TOTAL IMPERVIOUS COVERAGE)

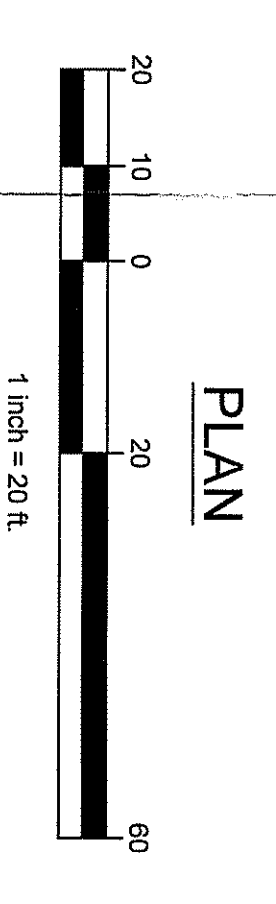


PROPOSED DECK ON POSTS
 PORTION OF PROPOSED DWELLING ON PILES/PIERS
 PROPOSED FULL FOUNDATION W/ SLAB ON GRADE
 PROPOSED COVERED DECK ON POSTS
 EXISTING CONCRETE FOUNDATION TO BE REMOVED
 LOCATION OF PROPOSED EXTERIOR FOUNDATION ACCESS DOORS



SEDIMENTATION BARRIER DETAIL
 NOT TO SCALE

- NOTES:**
1. SLERVE ENDS OF MESH-FABRIC SECTIONS TOGETHER TO FORM A CONTINUOUS SEDIMENT BARRIER.
 2. MESH-FABRIC SEDIMENT BARRIER SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED UNTIL RE-VEGETATION OF AREA DISTURBED BY CONSTRUCTION IS COMPLETE.
 3. AREAS DISTURBED BY CONSTRUCTION SHALL BE RE-VEGETATED PRIOR TO COMPLETION OF PROJECT.
 4. SEDIMENT BARRIER SHALL BE MAINTAINED FROM BARRIER WHEN DEPTH EXCEEDS 1 THE HEIGHT OF THE BARRIER.



PLAN
 1 inch = 20 ft

ISSUED FOR CONSERVATION COMMISSION REVIEW. NOT FOR CONSTRUCTION.

- NOTES:**
1. VERTICAL DATUM IN U.S. SURVEY FEET REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83) BASED UPON THE HEXAGON SMARTNET RTK NETWORK.
 2. EXISTING UTILITIES, UNDERGROUND AND OVERHEAD, MAY EXIST IN ADDITION TO THE UTILITIES INFORMATION SHOWN ON THESE PLANS. THIS PLAN MUST NOT BE USED TO LOCATE UTILITIES UNLESS THE UTILITY SHOWN ON THESE PLANS PRIOR TO STARTING ANY EXCAVATION.
 3. THE SUBJECT PREMISES AS SHOWN LIES WITHIN FLOOD ZONE AE (EL. 13), AS INDICATED ON FLOOD INSURANCE RATE MAP NUMBER #2501001171 FOR BARNSHUR COUNTY MASSACHUSETTS WITH AN EFFECTIVE DATE OF JULY 16, 2014.

LEGEND

- EXISTING
- BOUND
- CATCH BASIN
- WATER GATE
- MISC. SIGN
- POST
- UTILITY POLE
- OVERHEAD WIRES
- CONTOUR
- SPOT ELEV.
- PROPOSED
- PROPOSED SPOT ELEVATION
- PROPOSED CONTOUR
- SEDIMENTATION BARRIERWORK LIMIT
- EXISTING PAVEMENT TO BE REMOVED
- PERVIOUS PAVERS
- PLANTING BED
- EXISTING RETAINING WALL TO REMAIN

COASTAL engineering co.
 200 DEERFIELD AVE, CONCORD, MA 03303
 TEL: 603.251.1717 FAX: 603.251.1713

BEACH POINT TRUST
 JENNIFER CHISHOLM, TRUSTEE
 423 SHORE ROAD
 TRURO, MA

PLAN SHOWING
 PROPOSED SITE IMPROVEMENTS

PROJECT: AS NOTED
 DRAWING FILE: C:\3065-06-CIV.dwg
 DATE: 01-12-2023
 DRAWN BY: JLB
 CHECKED BY: BFM

1 OF 1 SHEETS
C2.1.2
 PROJECT NO: C13065.06

NO. DATE REVISION

Christopher R. Lucy

Conservation Commission
TOWN OF TRURO

JAN 11 2023

Phone (508) 349-1810
Email homely1@comcast.net



NOTICE OF INTENT NARRATIVE 4 RIVER VIEW ROAD, MAP 50, PARCEL 266

WE ARE REQUESTING, THROUGH THIS NOI, TO REMOVE 10 BLACK PINE TREES, VARYING FROM 3" DIAMETER TO 10" DIAMETER, FROM WITHIN THE 100' WETLANDS SETBACK AND THE 200' RIVER SETBACK. THESE PINES WILL BE REMOVED TO RE-ESTABLISH AND MAINTAIN THE VISTA FROM THE HOME. WE ARE ALSO REQUESTING TO REDUCE THE HEIGHTS OF THE REMAINING PINES IN THE SAME AREA THROUGH SELECTIVE PRUNING TO, AGAIN, RE-ESTABLISH AND MAINTAIN THE VISTA FROM THE HOME.

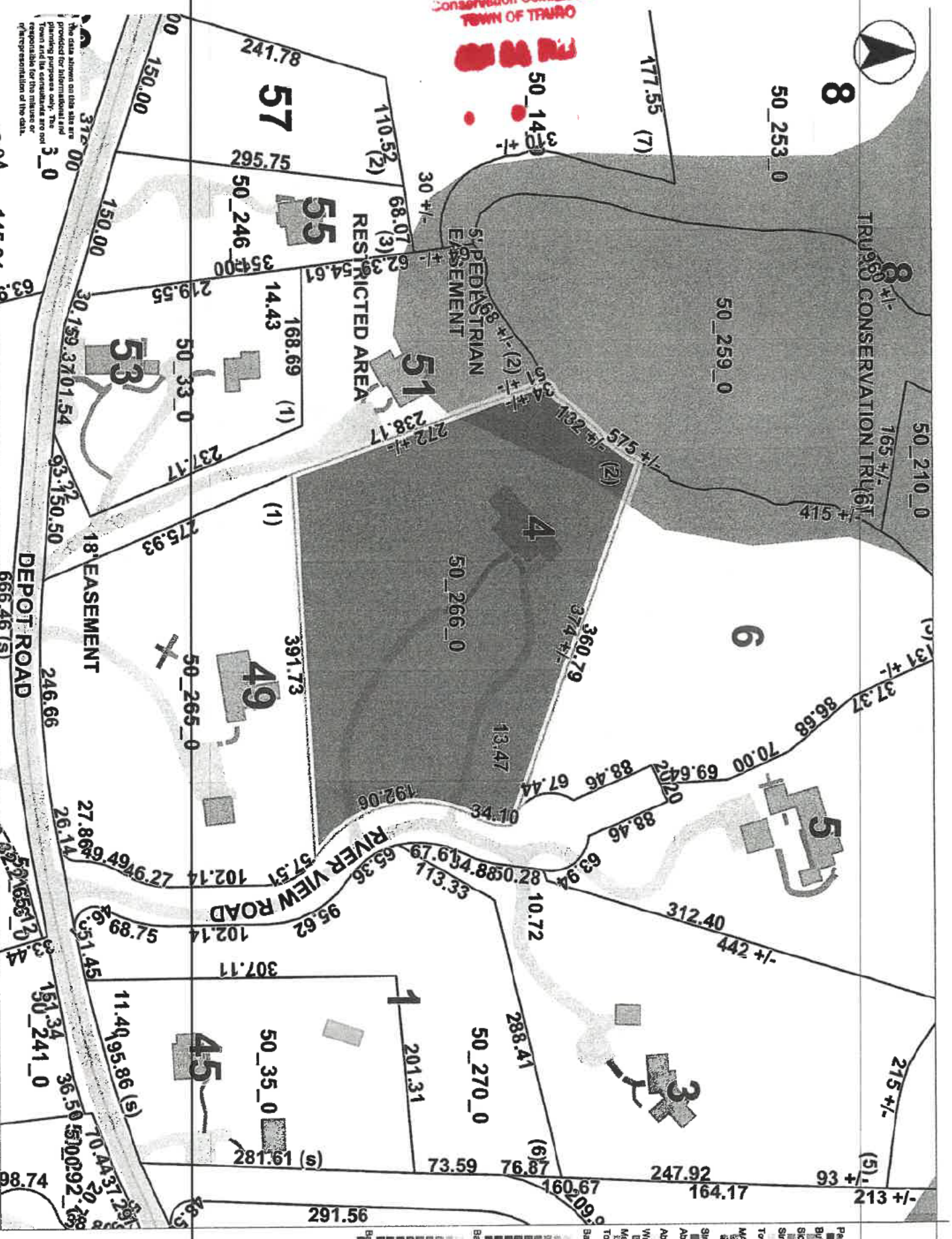
FROM THE PICTURES AND THE MAP (CIRCLED IN GREEN), #1 IS A 6" DIAMETER BLACK PINE AND #2 IS A 3" SCUB OAK. #3 IS A SMALL AREA OF LOW PINE AND OAK BRUSH (ABOUT 40 SQUARE FEET), #4 IS A 10" BLACK PINE AND #5 IS A 6" BLACK PINE. THE TREES AND BRUSH IN THIS AREA ARE BEING REQUESTED TO BE REMOVED TO ESTABLISH A VISTA FROM THE ENCLOSED SCREEN PORCH ON THE LOWER LEVEL AND THE PORCH ROOF TOP DECK.

NUMBERS 6, 7, 8, AND 9 ARE ALL PINES AND ARE BEING REQUESTED TO BE REMOVED TO RE-ESTABLISH THE VISTA FROM THE DECK AND FROM WITHIN THE HOME. A NUMBER OF THESE TREES HAVE BEEN TOPPED AND REMOVED IN THIS AREA IN THE PAST AND HAVE NOW GROWN BACK INTO THE VIEW.

FINALLY, THE AREA OUTLINED IN BLUE ON THE MAP IS THE AREA WE ARE REQUESTING TO REDUCE IN HEIGHT TO, AGAIN, RE-ESTABLISH THE VIEW FROM THE HOME AND DECK. THESE PINES TAKE WELL TO TRIMMING SO LONG AS IT'S DONE IN THE WINTER MONTHS, REDUCING THE CHANCE OF TURPENTINE BEETLES INVADING THE SAPPING CUTS. THERE ARE POTENTIALLY 10-15 TREES TO BE TRIMMED AND THEY WILL BE TRIMMED NO MORE THAN 5' LOWER THAN THEIR CURRENT HEIGHTS.

TREES TO BE CUT WILL BE CUT FLUSH TO GRADE. ALL LOGS, BRUSH AND CUTTINGS WILL BE REMOVED FROM THE SITE WITHOUT THE USE OF MACHINERY, ALL BY HAND.

Conservation Commission
TOWN OF TRURO



This data shown on this site are provided for informational and planning purposes only. The Town and its consultants are not responsible for the misuse or misrepresentation of the data.

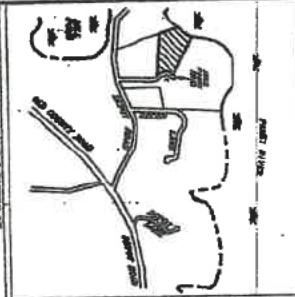
0 180 360 ft

Printed on 01/10/2023 at 05:09 PM

MapOnline - Truro, MA

- Permits
- Buildings
- Sidewalks
- Street Pavement
- Town Boundary
- MA Highways
- US Highways
- State Routes
- Street Centerline
- Abutting Towns Labels
- Abutting Towns
- Waterbodies
- Major Streams
- Town Mark
- Salt Deposit
- 5-10 ft
- 10-15 ft
- 15-20 ft
- 20-30 ft
- 30-40 ft
- 40-50 ft
- 50-60 ft
- 60-70 ft
- 70+ ft
- Bathymetry
- 0-10 ft
- 10-15 ft
- 15-20 ft
- 20-30 ft
- 30-40 ft
- 40-50 ft
- 50-60 ft
- 60-70 ft
- 70+ ft
- Background

REVISIONS
DATE



TRURO CONSERVATION TRUST
ZONE 1A
EX. 11

WORK
AREA

PLAN OF LAND
IN
TRURO

SHEET ONE OF TWO

SCALE 1"=30'

APRIL 11, 1986

HIGH
PAMEL
ROAD

PRIVATE - 40 FT. WIDE

LUCINDA B.
WORTHINGTON
LIFE ESTATS

LOT 2
2.62 AC. ±

LOT 1

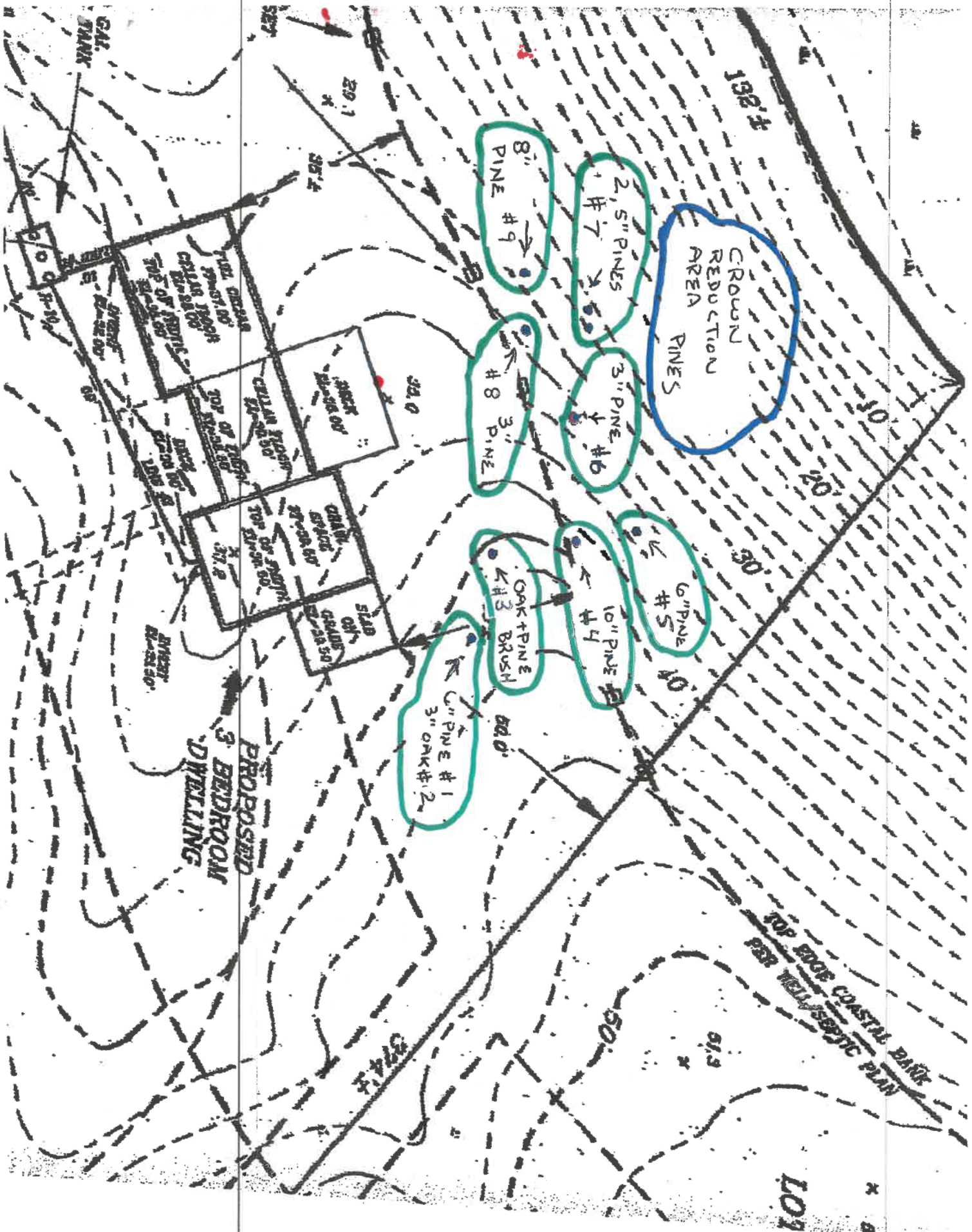
LOT 3

LOT 6

LOCATED
10/23/78



5-104



CROWN REDUCTION AREA PINES

8" PINE #9

2, 5" PINES #7

3" PINE #6

3" PINE #8

6" PINE #5

10" PINE #4

OAK + PINE #3 BRUSH

3" PINE #1
3" OAK #2

PROPOSED 3 BEDROOM DWELLING

TOP EDGE COASTAL BANK PER WELL SEPTIC PLAN

CAL BANK

LD1



WANT
ORHO
11/11

2

→

K

|

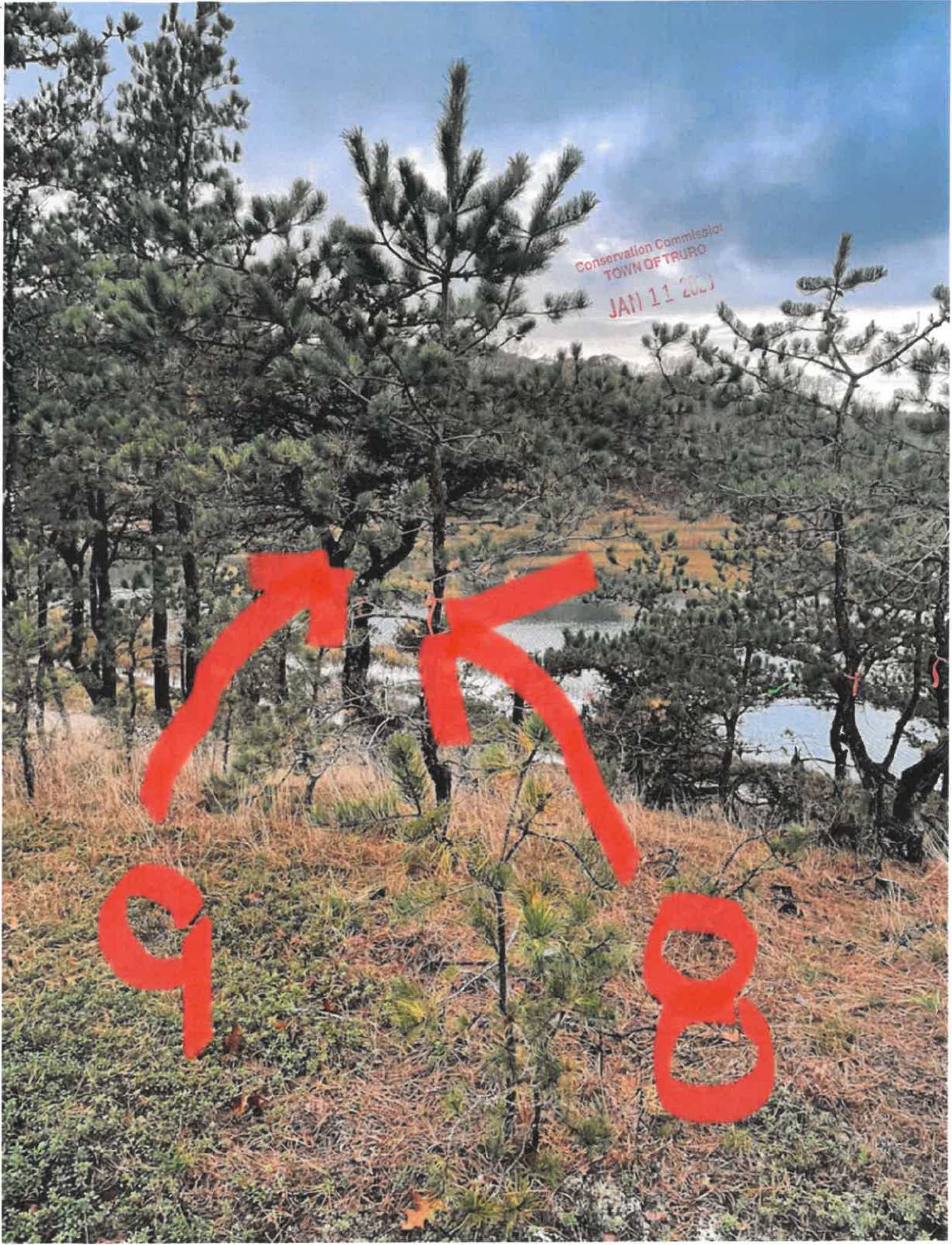


1800 PINEHURST LANE
TOWN OF TRURO
JAN 11 2023



Conservation Commission
TOWN OF TRURO
JAN 11 2009

9 8



JAN 10 2023

Request for Determination

Project address: 2 Ryder Hollow Rd Map 63 Parcel 14

- Is the project located in a resource area or buffer zone Yes
- Resource Area Type(s): BZ to a Coastal Bank
- If Buffer Zone what is the distance from Resource Area: ~90 feet to wetland

Description of project: (list all activities and describe methodology for construction or installation including equipment type if applicable) Rebuild existing deck and replace existing footings with diamond piers. Build new deck at specified location and use existing driveway retaining walls as footings.

Attached site plan titles/dates, and any other plan or narratives title/dates: Aline Architecture plans dated 3/21/22 and Schofield Engineering plot plan dated 1/9/23.

Describe the best management practices/mitigation that will be used on the site: Silt fence shall be used to isolate work area around existing deck. Material storage shall be confined to paved driveway.

Special Conditions required by the Conservation Include:

The proposed project is approved subject to the conditions included herein.

The use of town property for beach access or staging of construction materials requires a permit issued by the Board of Selectmen. The owner and applicant/representative are responsible for obtaining this permit prior to work start.

The owner and applicant/representative shall, avoid and otherwise minimize any activities in the buffer zone or in resource areas by use of best management practices on the site, such as:

- Placement of an agreed upon work limit;
- Proper placement of construction materials in developed or already disturbed areas;
- Proper installation/maintenance of erosion control;
- Good housekeeping that includes at a minimum daily trash pickup; no dumping of paint, plaster or concrete on the site but rather, disposing of it properly.

Approval of the project as described herein includes only the scope and specifications reviewed by the Conservation Commission; any changes to this project shall require additional review by the Conservation Commission prior to the work being done. Expansion of the scope of work may result in the applicant being required to file a full notice of intent. Any work done that exceeds the scope defined in the approved application shall be subject to issuance enforcement action; Violation of these conditions may result in issuance of an enforcement Order; non-criminal violation citations to the owner and/or applicant/representative accompanied by fines that accrue per offense and may accrue daily.

By reading and signing this letter of agreement the applicant acknowledges that they have read and understand the terms as stated herein; the scope of this approval is limited to the work described herein; and your signature on this conditional approval is acknowledgement that no work shall go forward until the RDA conditions have been issued by the Conservation Commission.

Applicant/Representative printed name and signature: Jonathan Buck *Jonathan Buck*
Owners printed name and signature: Bradley Bernstein *Bradley Bernstein*



January 5, 2023

2 Ryder Hollow Rd

Truro, MA

1 inch = 70 Feet

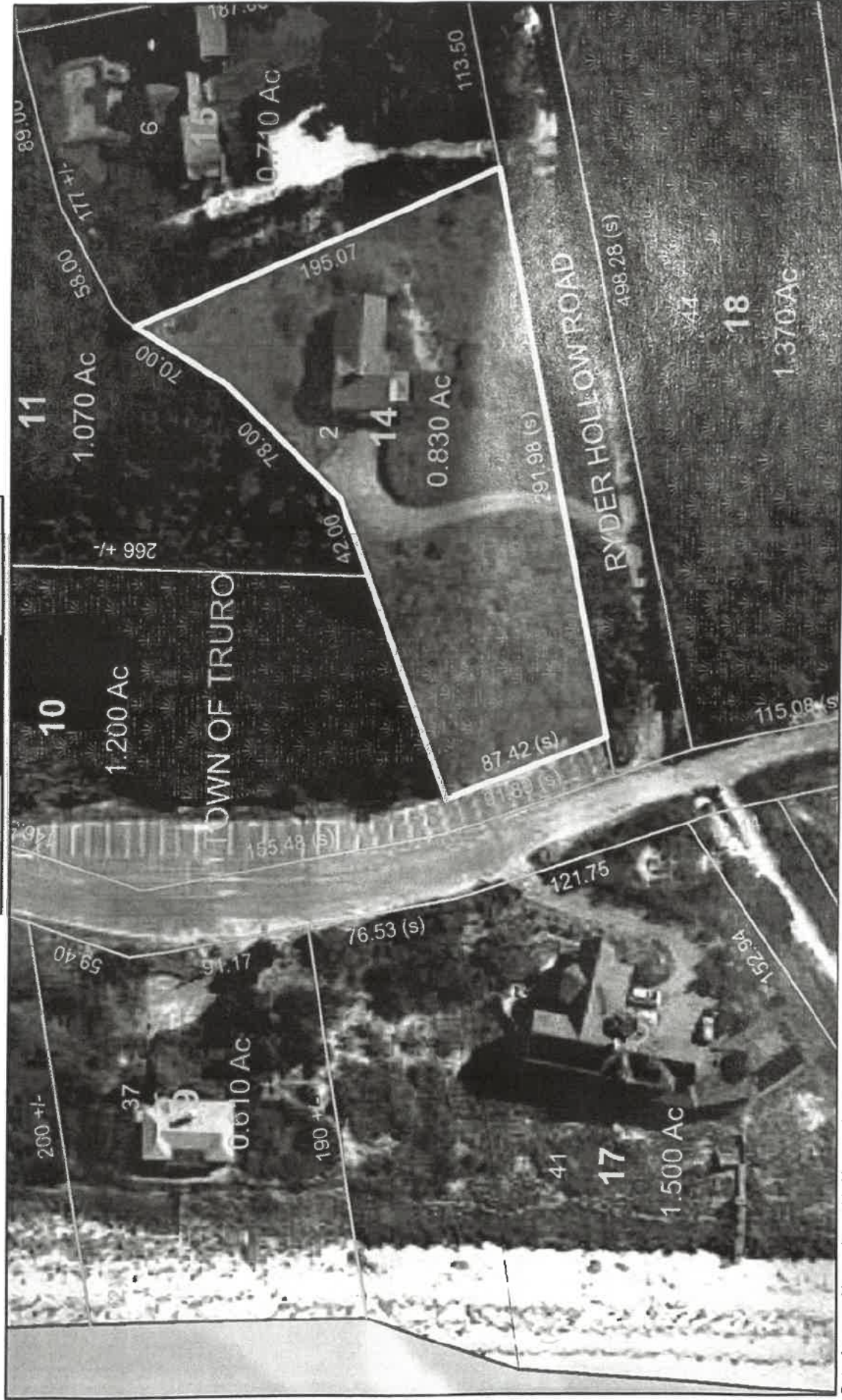


Conservation Commission
TOWN OF TRURO

JAN 10 2023



www.cai-tech.com



Data shown on this map is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.



2 Ryder Hollow Rd

Truro, MA

1 inch = 560 Feet

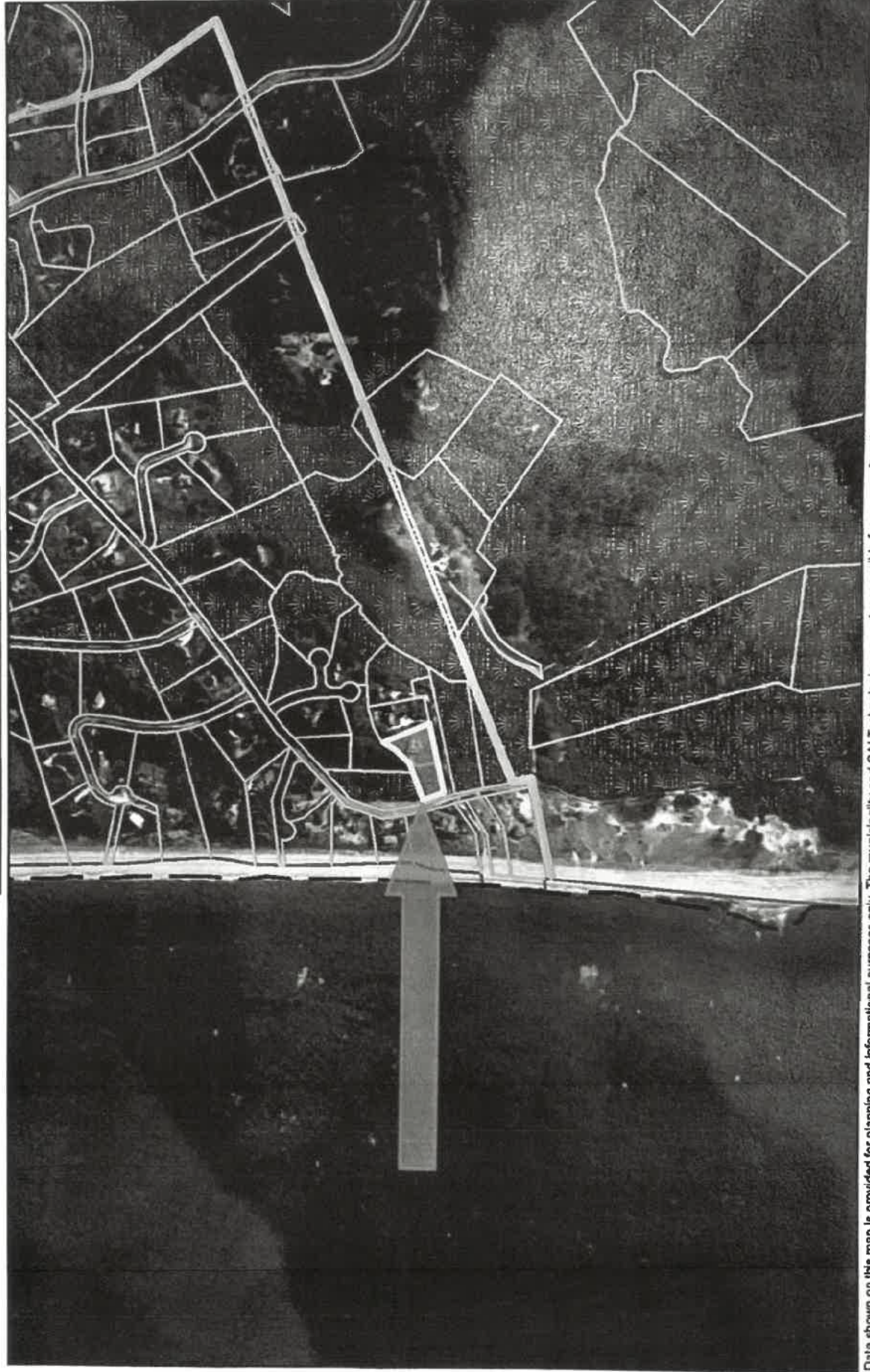


Conservation Commission
TOWN OF TRURO

JAN 10 2023

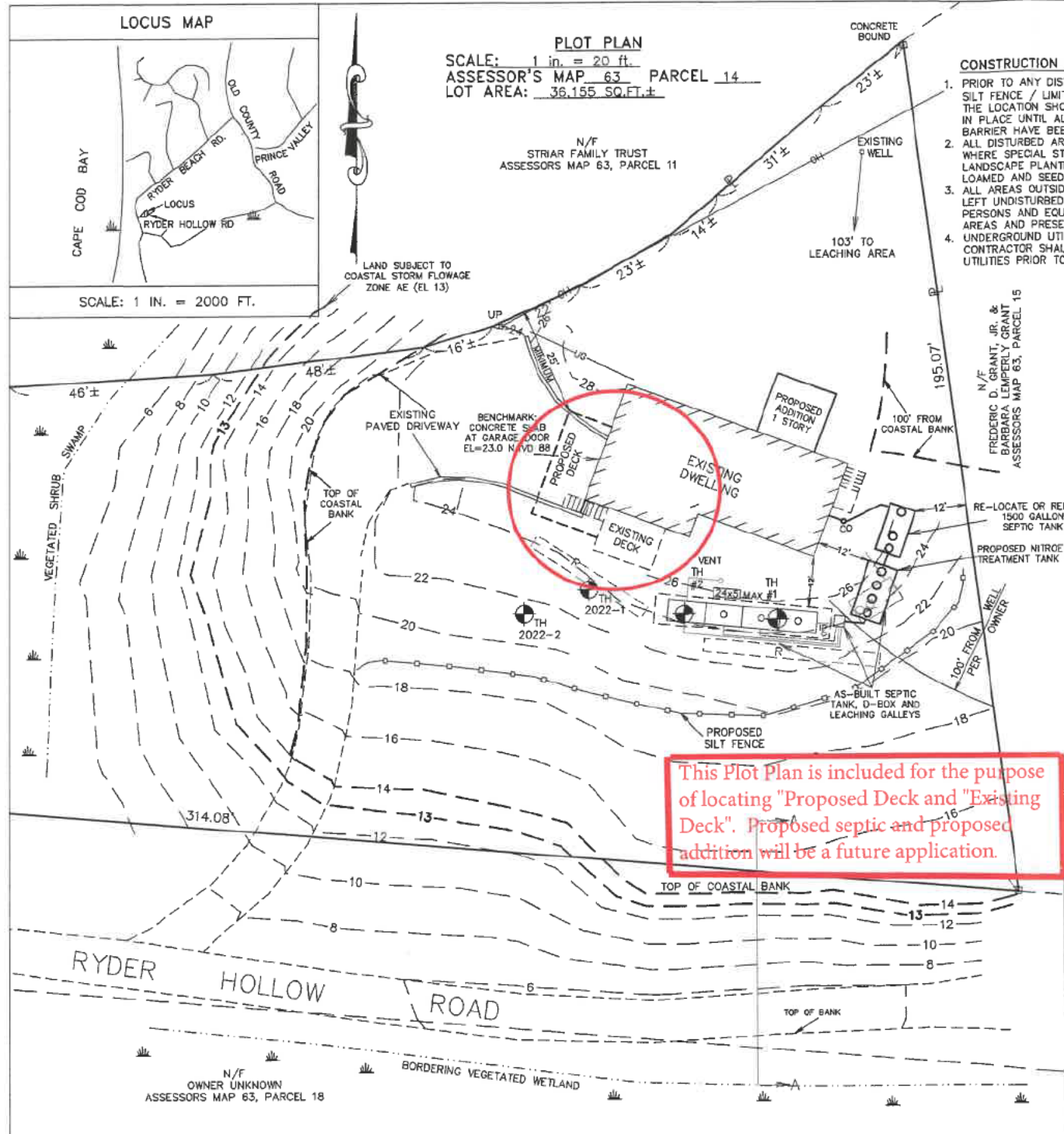


www.cai-tech.com



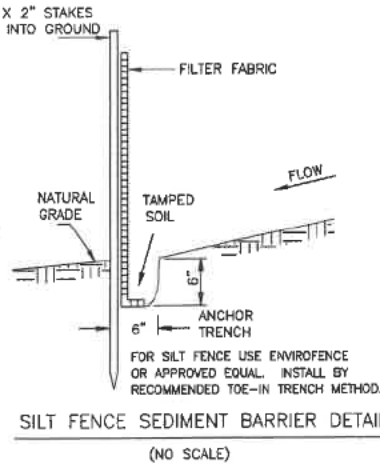
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Conservation Commission
TOWN OF TRURO
JAN 10 2023



CONSTRUCTION & EROSION CONTROL NOTES

1. PRIOR TO ANY DISTURBANCE OF THE SITE, A STAKED SILT FENCE / LIMIT OF WORK SHALL BE INSTALLED IN THE LOCATION SHOWN. THE SILT FENCE SHALL REMAIN IN PLACE UNTIL ALL AREAS UPGRADIENT FROM THE BARRIER HAVE BEEN STABILIZED.
2. ALL DISTURBED AREAS NOT OTHERWISE DEVELOPED OR WHERE SPECIAL STABILIZATION MEASURES OR LANDSCAPE PLANTINGS ARE NOT PROPOSED SHALL BE LOAMED AND SEEDED OR OTHERWISE REVEGETATED.
3. ALL AREAS OUTSIDE OF THE LIMIT OF WORK ARE TO BE LEFT UNDISTURBED. DURING THE SITE WORK, ALL PERSONS AND EQUIPMENT SHALL STAY OUT OF THESE AREAS AND PRESERVE EXISTING VEGETATION.
4. UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION.



VARIANCES REQUESTED FROM THE TOWN OF TRURO BOARD OF HEALTH REGULATIONS ARE AS FOLLOWS:

ARTICLE 1 - GENERAL PROVISIONS NITROGEN CREDIT - NITROGEN CREDIT SHALL NOT BE ALLOWED FOR NEW CONSTRUCTION, UNLESS AN ADU IS BEING CREATED. RELIEF FROM THIS PROVISION IS REQUESTED TO ALLOW NITROGEN CREDIT FOR NEW CONSTRUCTION.

ARTICLE 9 - REQUIRED SETBACKS FOR SYSTEM COMPONENTS RELIEF FROM THE FOLLOWING MINIMUM SETBACK DISTANCES ARE REQUESTED FOR THE SEPTIC TANK, NITRO TANK AND THE RESERVE AREA AS FOLLOWS:
SETBACK TO WETLAND (COASTAL BANK)

SEPTIC TANK 77 FEET
NITRO WASTEWATER TREATMENT SYSTEM 51 FEET
RESERVE AREA 50 FEET

ARTICLE 11 - BUILDABLE UPLAND CALCULATIONS FOR NITROGEN LOADING LIMITATIONS - WHEN APPLYING NITROGEN LOADING LIMITATIONS SET FORTH IN TITLE 5 AND THIS SECTION VI OF THE TRURO BOARD OF HEALTH REGULATIONS, ONLY BUILDABLE UPLAND SHALL BE INCLUDED IN THE LOT AREA CALCULATIONS. RELIEF IS REQUESTED FROM THIS SECTION OF THE LOCAL REGULATIONS.

ARTICLE 13 - NITROGEN LOADING LIMITATIONS 1) THE TRURO BOARD OF HEALTH REQUIRES THAT ALL PROPERTIES WITHIN THE TOWN OF TRURO MEET THE LOADING RESTRICTIONS SET FORTH IN 310 CMR 15.214 AND CONTAIN AT LEAST TEN THOUSAND (10,000) SQUARE FEET OF BUILDABLE UPLAND FOR EVERY 110 GALLONS PER DAY OF DESIGN FLOW. A VARIANCE IS REQUESTED FROM THIS REGULATION TO ALLOW FOR A THREE BEDROOM DWELLING ON A LOT NOT CONTAINING AT LEAST TEN THOUSAND SQUARE FEET OF BUILDABLE UPLAND FOR EVERY 110 GALLONS PER DAY OF DESIGN FLOW. THE LOT DOES CONTAIN THE MINIMUM LOT SIZE TITLE 5 REQUIRES FOR A THREE BEDROOM SYSTEM IN A NITROGEN SENSITIVE AREA.

DESIGN CALCULATIONS

1. ESTIMATED HYDRAULIC LOADING:
3 BEDROOMS AT 110 GPD PER BEDROOM = 330 GPD
GARBAGE GRINDER IS NOT ALLOWED WITH THIS DESIGN
2. SEPTIC TANK SIZE:
AVERAGE DAILY FLOW = 330 GPD X 2 DAYS = 660 GALLONS
SEPTIC TANK PROVIDED = 1500 GALLONS
3. DESIGN PERCOLATION RATE = <2 MINUTES PER INCH
SOIL TEXTURE SANDS, CLASS C
310 CMR 15.242 EFFLUENT LOADING RATE = 0.74 GPD/SF
4. EXISTING LEACHING AREA TO REMAIN:
TOTAL SIDEWALL AREA PROVIDED = 187.2 SF X 0.74 GPD/SF = 138.5 GPD
TOTAL BOTTOM AREA PROVIDED = 272.0 SF X 0.74 GPD/SF = 201.2 GPD
MAXIMUM ALLOWABLE LOADING UNDER TITLE 5 = 291.2 GPD
ACTUAL HYDRAULIC LOADING = 330 GPD (SEE 1)
DESIGNED LEACHING AREA EXCEEDS LEACHING AREA REQUIRED UNDER BOTH TITLE 5 AND THE TOWN OF TRURO BOARD OF HEALTH REGULATIONS
5. TITLE 5 NITROGEN LOADING NOTE:
3 BEDROOMS X 10000 SQ.FT./BEDROOM=30000 SQ.FT. MINIMUM
36155 SQ.FT. PROVIDED
6. RESERVE AREA 3' WIDE X 2' DEEP TRENCH = 750 SQ.FT./LF
70 LF X 7 SQ.FT./LF = 490 SQ.FT. PROVIDED
446 SQ.FT. MIN. REQUIRED

DEEP TEST HOLE OBSERVATION LOG #1

DATE: JULY 22, 2021 JOB: C-12545
PERFORMED BY: LAURA A. SCHOFIELD, RS, SE WITNESSED BY: AROZANA DAVIS, TRURO BOH

ELEVATION (FT)	DEPTH FROM SURFACE (IN)	SOIL HORIZON	SOIL TEXTURE (USDA)	SOIL COLOR (MUNSELL)	SOIL MOTTLING	OTHER
25.0-21.8	0-38	FILL	VARIABLE	VARIABLE		
21.8-21.1	38-47	OLD A	LOAMY SAND	10 YR 4/3		MASSIVE/FRABLE
21.1-19.4	47-57	Bw	LOAMY SAND	10 YR 5/6	NO	
19.4-14.0	57-132	C	SAND	10YR/6	NO	

PARENT GEOLOGICAL MATERIAL: ICE CONTACT OUTWASH STANDING WATER IN HOLE: NO
WEEPING FROM FACE: NO DEPTH TO BEDROCK:
ESTIMATED SEASONAL HIGH GROUNDWATER BELOW 132'

DEEP TEST HOLE OBSERVATION LOG #2

DATE: JULY 22, 2021 JOB: C-12545
PERFORMED BY: LAURA A. SCHOFIELD, RS, SE WITNESSED BY: AROZANA DAVIS, TRURO BOH

ELEVATION (FT)	DEPTH FROM SURFACE (IN)	SOIL HORIZON	SOIL TEXTURE (USDA)	SOIL COLOR (MUNSELL)	SOIL MOTTLING	OTHER
24.5-22.1	0-28	FILL	VARIABLE	VARIABLE		
22.1-21.8	28-35	OLD A	LOAMY SAND	10 YR 4/3		
21.8-19.8	35-59	Bw	LOAMY SAND	10 YR 5/6	NO	SGR, LOOSE
19.8-13.2	59-135	C	SAND, COARSE	10YR/6	NO	

PARENT GEOLOGICAL MATERIAL: GLACIAL OUTWASH STANDING WATER IN HOLE: NO
WEEPING FROM FACE: NO DEPTH TO BEDROCK:
ESTIMATED SEASONAL HIGH GROUNDWATER = BELOW 135'
PERCOLATION TEST: TOP OF PERC. AT 40", 6"-6" DROP IN PERC IN 3:58 MIN. PERC RATE<2 MP1

DEEP TEST HOLE OBSERVATION LOG #2022-1

DATE: OCTOBER 13, 2022 JOB: C-12545
PERFORMED BY: LAURA A. SCHOFIELD, RS, SE WITNESSED BY: AROZANA DAVIS, TRURO BOH

ELEVATION (FT)	DEPTH FROM SURFACE (IN)	SOIL HORIZON	SOIL TEXTURE (USDA)	SOIL COLOR (MUNSELL)	SOIL MOTTLING	OTHER
23.5-22.5	0-12	A	LOAMY SAND	10YR4/3		
22.5-21.8	12-21	B	LOAMY SAND	10YR4/6	NO	SGR, LOOSE
21.8-14.8	21-105	C	LOAMY SAND SAND, COARSE	10YR6/6		

PARENT GEOLOGICAL MATERIAL: GLACIAL OUTWASH STANDING WATER IN HOLE: NO
WEEPING FROM FACE: NO DEPTH TO BEDROCK:
ESTIMATED SEASONAL HIGH GROUNDWATER = BELOW 135'
PERCOLATION TEST: TOP OF PERC. AT 40", 6"-6" DROP IN PERC IN 3:58 MIN. PERC RATE<2 MP1

DEEP TEST HOLE OBSERVATION LOG #2022-2

DATE: OCTOBER 13, 2022 JOB: C-12545
PERFORMED BY: LAURA A. SCHOFIELD, RS, SE WITNESSED BY: AROZANA DAVIS, TRURO BOH

ELEVATION (FT)	DEPTH FROM SURFACE (IN)	SOIL HORIZON	SOIL TEXTURE (USDA)	SOIL COLOR (MUNSELL)	SOIL MOTTLING	OTHER
21.5-20.5	0-7	FILL				
20.5-18.8	7-18	A	LOAMY SAND	10YR4/4		
19.8-18.8	18-35	Bw	LOAMY SAND	10YR4/6	NO	SGR, LOOSE
18.8-11.5	35-120	C	SAND, COARSE	10YR5/6		

PARENT GEOLOGICAL MATERIAL: GLACIAL OUTWASH STANDING WATER IN HOLE: NO
WEEPING FROM FACE: NO DEPTH TO BEDROCK:
ESTIMATED SEASONAL HIGH GROUNDWATER = BELOW 135'
PERCOLATION TEST: TOP OF PERC. AT 36", 6"-6" DROP IN PERC IN 3:15 MIN. PERC RATE<2 MP1

GENERAL NOTES

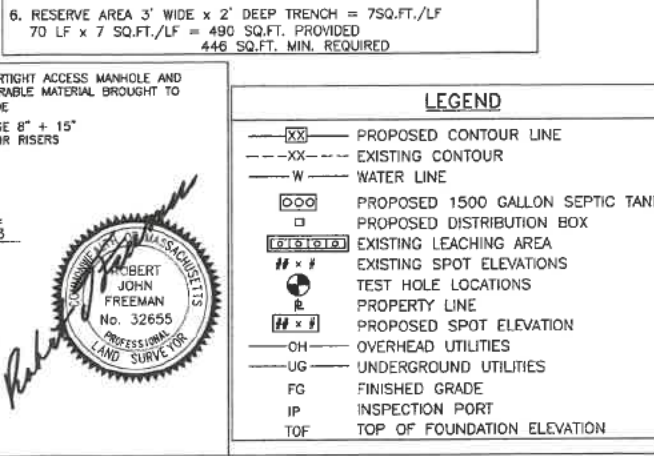
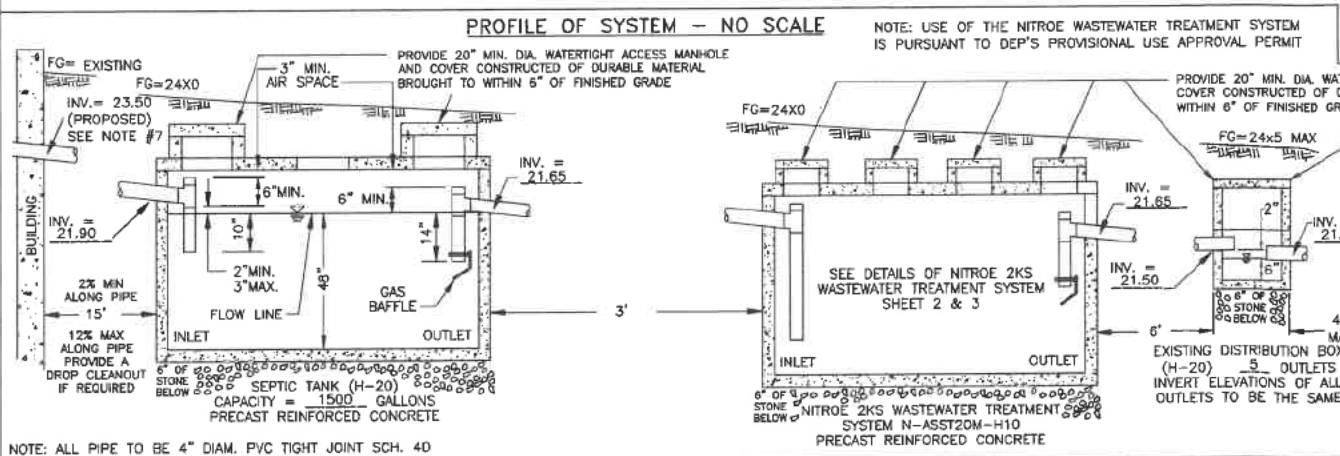
1. ELEVATIONS REFER TO NAVD 1988 DATUM. SEE BENCHMARK ON PLAN.
2. ALL CONSTRUCTION AND MATERIALS TO CONFORM TO TITLE 5 OF THE MASSACHUSETTS STATE ENVIRONMENTAL CODE AND THE BOARD OF HEALTH REQUIREMENTS FOR THE TOWN OF TRURO.
3. ANY CHANGES TO THIS PLAN MUST BE APPROVED BY THE BOARD OF HEALTH AND SCHOFIELD BROTHERS OF CAPE COD.
4. FOR PROPER PERFORMANCE, THE SEPTIC TANK SHOULD BE INSPECTED AT LEAST ONCE PER YEAR. THE TANK SHOULD BE PUMPED WHEN THE TOTAL DEPTH OF SCUM AND SOLIDS EXCEEDS 1/3 OF ITS LIQUID DEPTH.
5. SCHOFIELD BROTHERS OF CAPE COD DOES NOT ASSUME RESPONSIBILITY FOR MATERIALS ENCOUNTERED DURING EXCAVATION.
6. INSTALLATION CONTRACTOR SHALL CONTACT SCHOFIELD BROTHERS PRIOR TO BACKFILLING FOR SYSTEM CERTIFICATION.
7. EXISTING BUILDING SEWER INVERTS SHALL BE VERIFIED IN FIELD PRIOR TO COMPONENT INSTALLATION. CONTACT SCHOFIELD BROTHERS IF SIGNIFICANT DISCREPANCIES EXIST.
8. ALL SEPTIC SYSTEM COMPONENTS ARE DESIGNED FOR A MINIMUM H-10 LOADING. ANY COMPONENT THAT WILL BE SUBJECT TO VEHICLE OR OTHER HEAVY EQUIPMENT TRAFFIC SHALL BE INSTALLED WITH H-20 LOADING CAPACITY.
9. UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION.
10. NO KNOWN WELLS EXIST WITHIN 100' OF THE PROPOSED LEACHING AREA EXCEPT THOSE THAT ARE SHOWN.
11. FUTURE LANDSCAPING IN THE VICINITY OF THE SEPTIC SYSTEM WILL MAINTAIN MINIMUM AND MAXIMUM GRADES OVER THE SYSTEM.
12. CONTRACTOR SHALL USE SHORING AS REQUIRED TO PROTECT STRUCTURE(S) AND EXISTING LEACHING AREA DURING CONSTRUCTION.

PROPOSED SEWAGE DISPOSAL SYSTEM MODIFICATION PLAN

FOR: AN EXISTING TWO BEDROOM DWELLING & PROPOSED ONE BEDROOM ADDITION
AT: TWO RYDER HOLLOW ROAD
TRURO, MASSACHUSETTS
ASSESSOR'S MAP: 63 PARCEL: 14
APPLICANT: BRADLEY BERNSTEIN TEL NO.: (617) 256-5520
146 LARCH ROAD
CAMBRIDGE, MA 02138



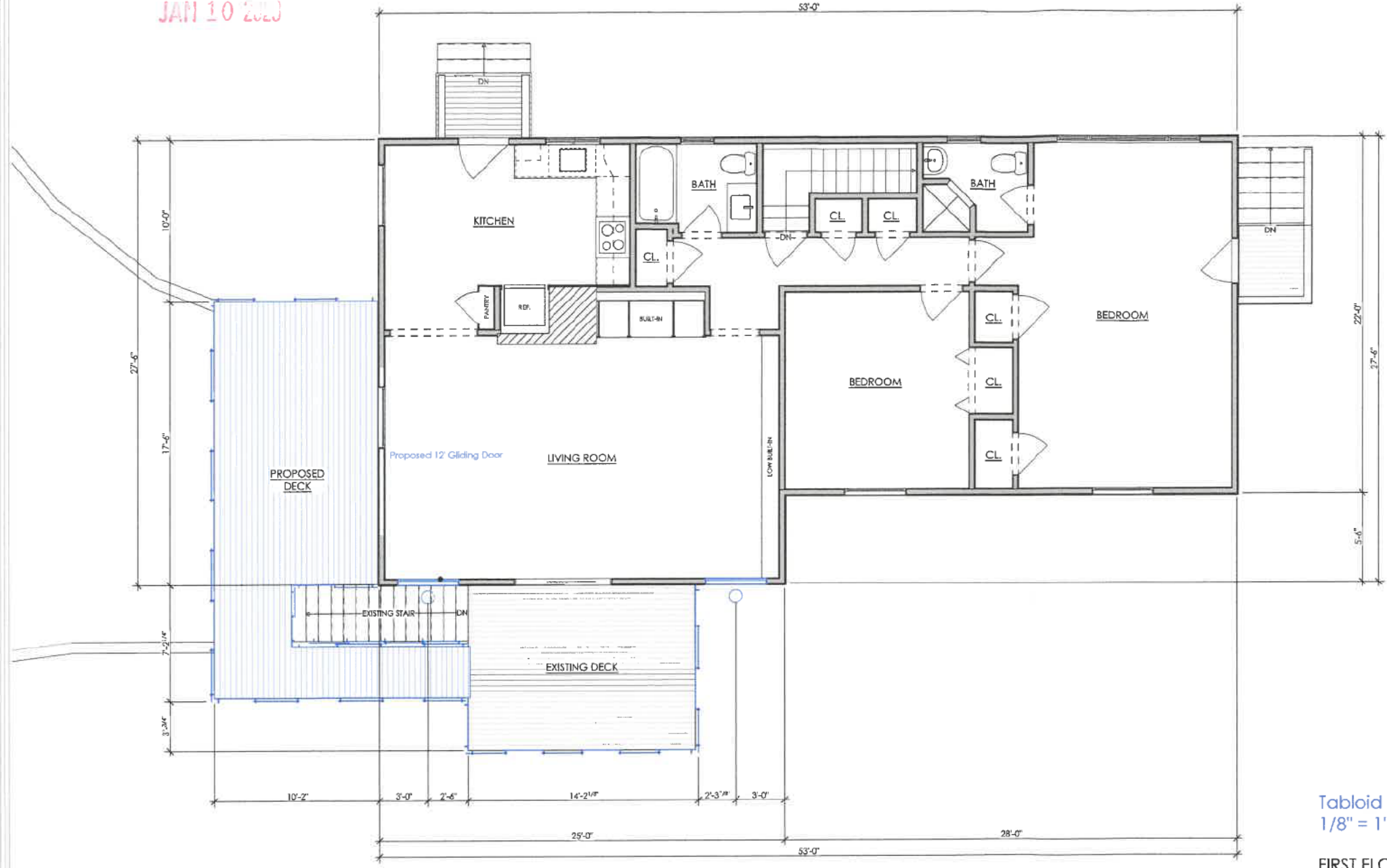
DATE: JANUARY 09, 2023 DESIGNED BY: LAS
DRAWN BY: LAS
CHECKED BY: LAS
SCHOFIELD BROTHERS OF CAPE COD
ENGINEERING - SURVEYING - PERMITTING
P.O. BOX 101, 161 CRANBERRY HIGHWAY ORLEANS, MA
(508) 255-2098



NOTE: ALL PIPE TO BE 4" DIAM. PVC TIGHT JOINT SCH. 40

Conservation Commission
TOWN OF TRURO

JAN 10 2023



Tabloid Scale
1/8" = 1'

FIRST FLOOR PLAN
1/4" = 1'-0"

aline architecture

100 Route 6A Orleans MA 02653
Direct: 508-240-6500
Fax: 508-240-6502
www.alinearchitecture.com

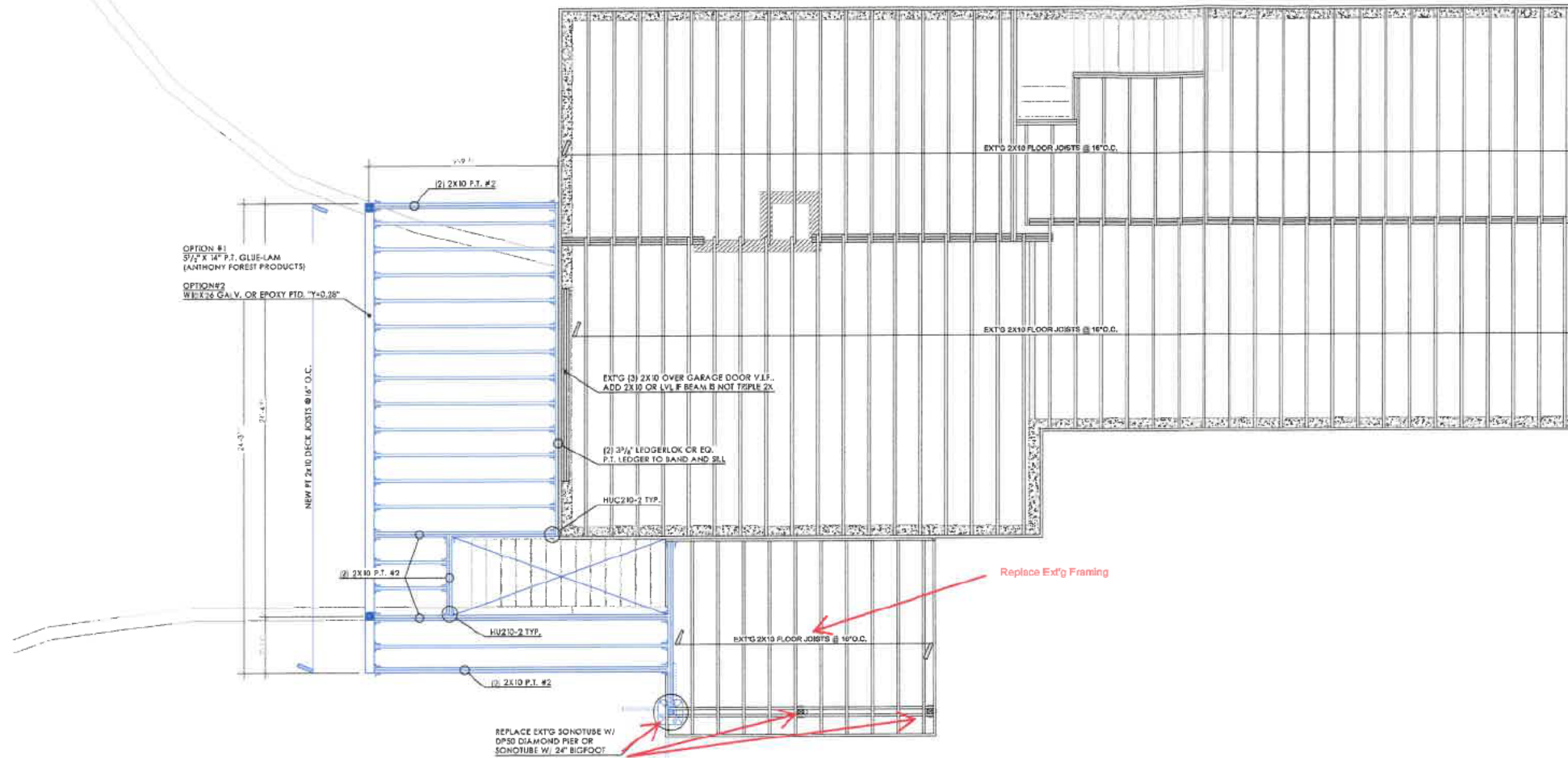
Project: BERNSTEIN RESIDENCE
Location: 2 RYDER HOLLOW ROAD,
TRURO, MA

REV.	DESCRIPTION

scale: AS NOTED
design: drawn: MC
project no. date: 03/21/22

A1.1

Conservation Commission
TOWN OF TRURO
JAN 10 2023



Tabloid Scale
1/8" = 1'

FIRST FLOOR FRAMING
1/4" = 1'-0"

aline architecture

100 Route 6a Orleans MA 02653
Direct: 508-240-6500
Fax: 508-240-6502
www.alinearchitecture.com

Project: BERNSTEIN RESIDENCE
Location: 2 RYDER HOLLOW ROAD,
TRURO, MA

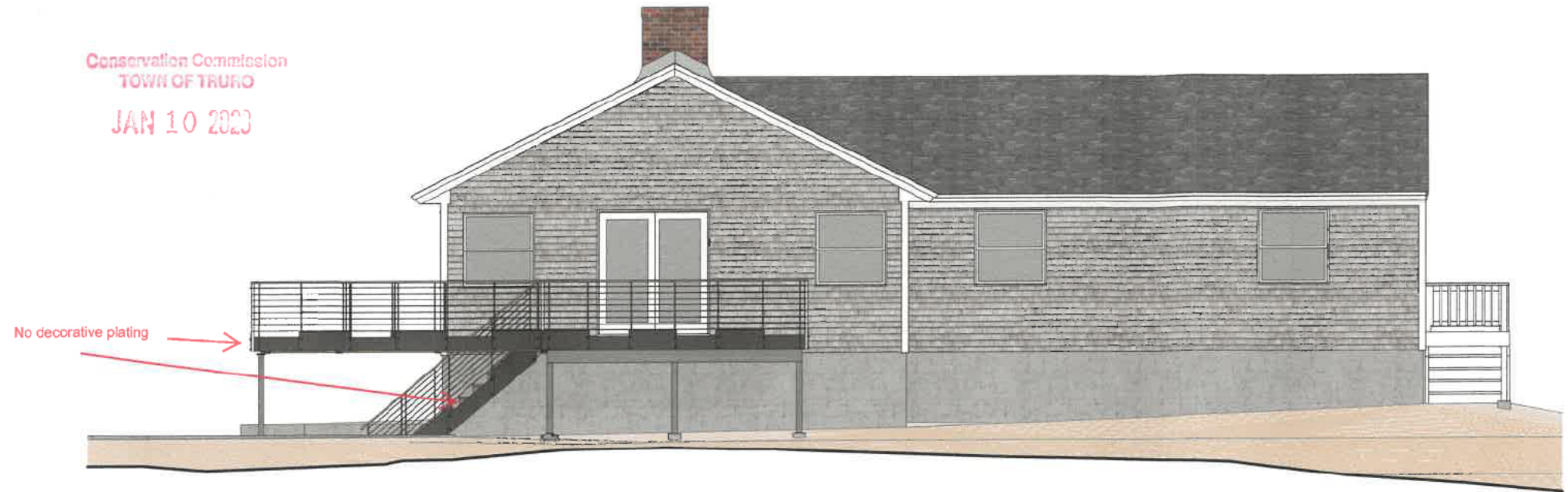
rev.
rev.

scale: AS NOTED

design: drawn: MC
project no. date: 03/21/22

A3.1

Conservation Commission
TOWN OF TRURO
JAN 10 2023



SOUTH ELEVATION
1/4" = 1'-0"

Tabloid Scale
1/8" = 1'



WEST ELEVATION
1/4" = 1'-0"

Tabloid Scale
1/8" = 1'

aline architecture

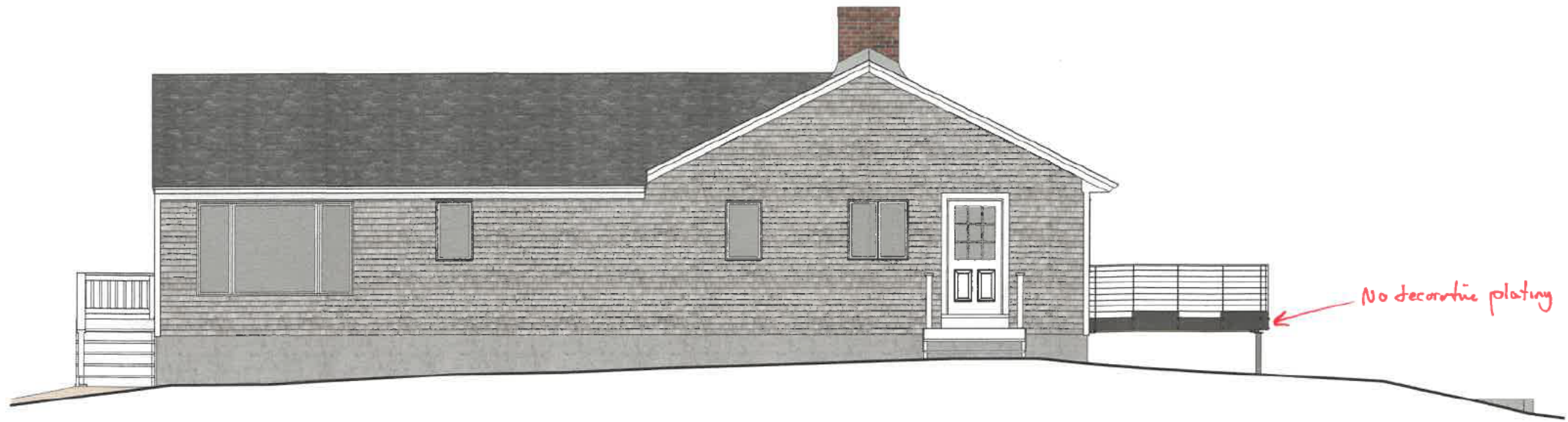
100 Route 6a Orleans MA 02653
Direct: 508-240-6500
Fax: 508-240-6502
www.alinearchitecture.com

Project: BERNSTEIN RESIDENCE
Location: 2 RYDER HOLLOW ROAD,
TRURO, MA

REV.	
REV.	

scale: AS NOTED	
design:	drawn: MC
project no.	date: 03/21/22

A2.1

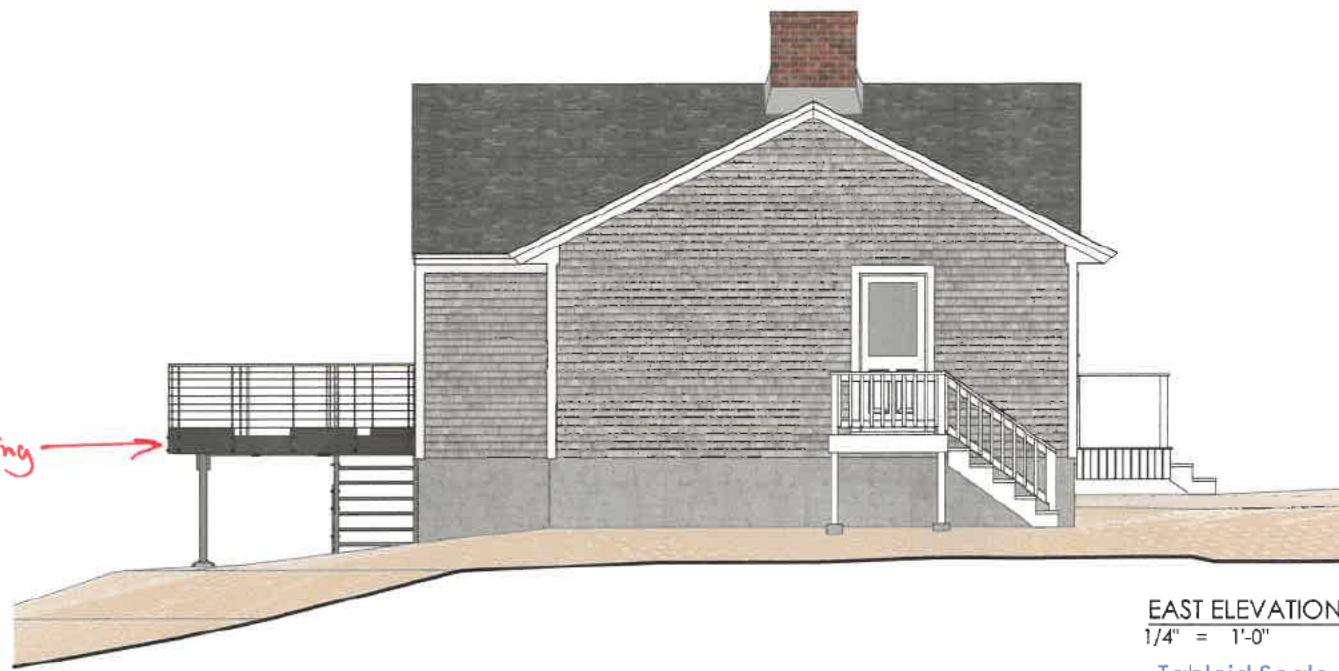


NORTH ELEVATION
1/4" = 1'-0"

Tabloid Scale
1/8" = 1'

Conservation Commisio.
TOWN OF TRURO
JAN 10 2023

No decorative plating →



EAST ELEVATION
1/4" = 1'-0"

Tabloid Scale
1/8" = 1'

aline architecture

100 Route 6a Orleans MA 02653
Direct: 508-240-6500
Fax: 508-240-6502
www.alinearchitecture.com

Project: BERNSTEIN RESIDENCE
Location: 2 RYDER HOLLOW ROAD,
TRURO, MA

rev.
rev.

scale: AS NOTED

design:

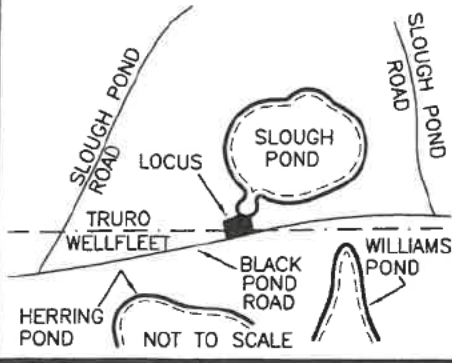
drawn: MC

project no.

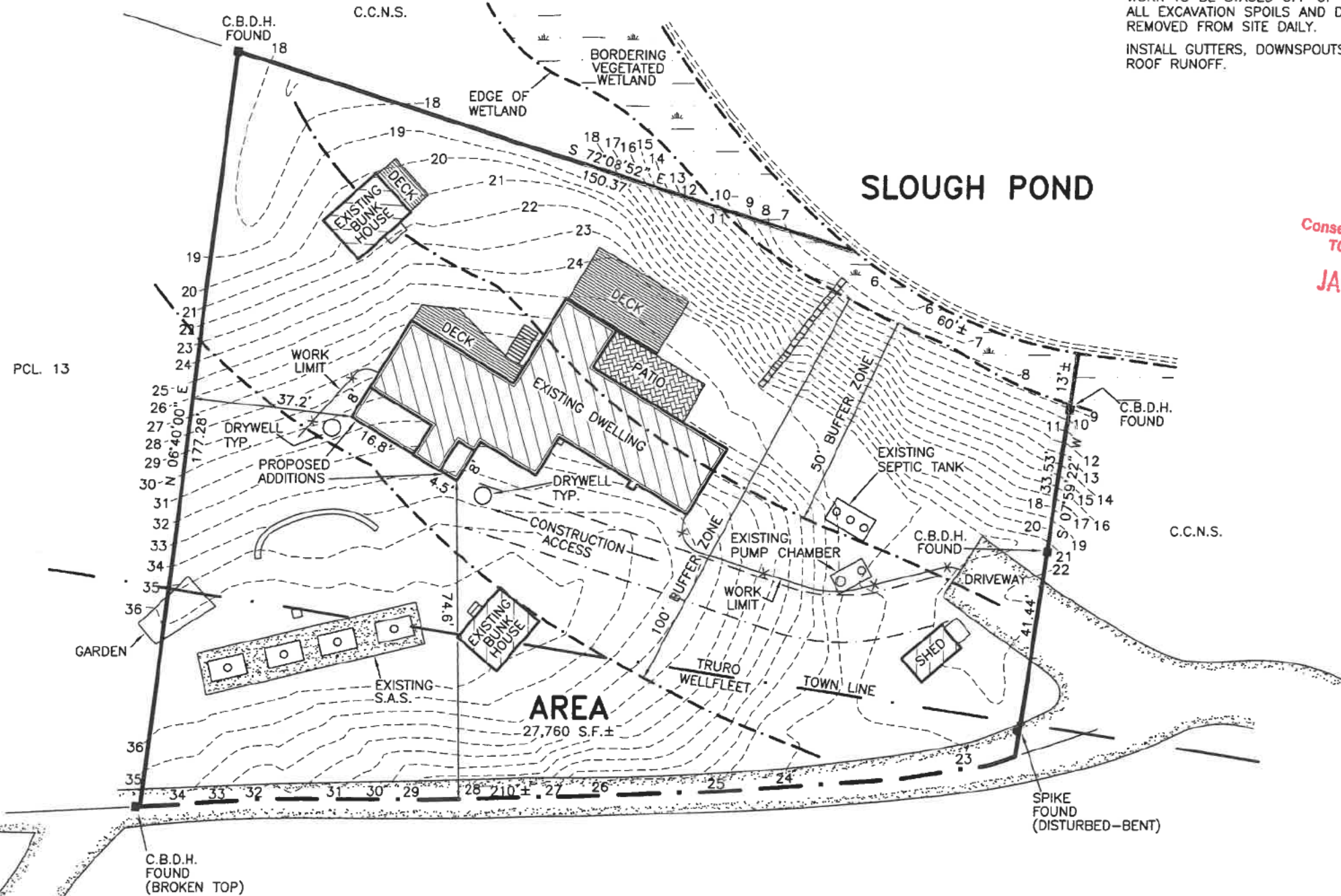
date: 03/21/22

A2.2

LOCUS MAP



SURVEY PLAN REFERENCE:
PLAN BOOK 240 PAGE 45



THIS PLAN REQUIRES CONSERVATION COMMISSION APPROVAL
WORK LIMIT TO BE STAKED SILT FENCE AND STRAW WADDLE.
ALL DISTURBED AREAS TO BE RESTORED WITH CONSERVATION
GRASS SEED MIX.
WORK TO BE STAGED OFF OF DRIVEWAY
ALL EXCAVATION SPOILS AND DEMOLITION DEBRIS TO BE
REMOVED FROM SITE DAILY.
INSTALL GUTTERS, DOWNSPOUTS AND DRYWELLS TO ACCOMMODATE
ROOF RUNOFF.

Conservation Commission
TOWN OF TRURO
JAN 31 2023

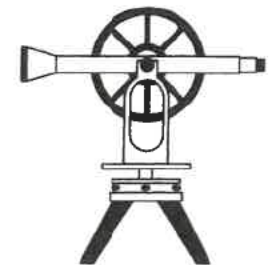
SITE PLAN

SUBJECT: 33 BLACK POND ROAD TRURO, MA	
PREPARED FOR: CATHERINE SHAINBERG 73 FIFTH AVENUE, #8B NEW YORK, N.Y. 10003	
ASSESSOR'S MAP 61 PARCEL 12	SCALE: 1"=30'
DATE: SEPTEMBER 1, 2022	SHEET 1 OF 1

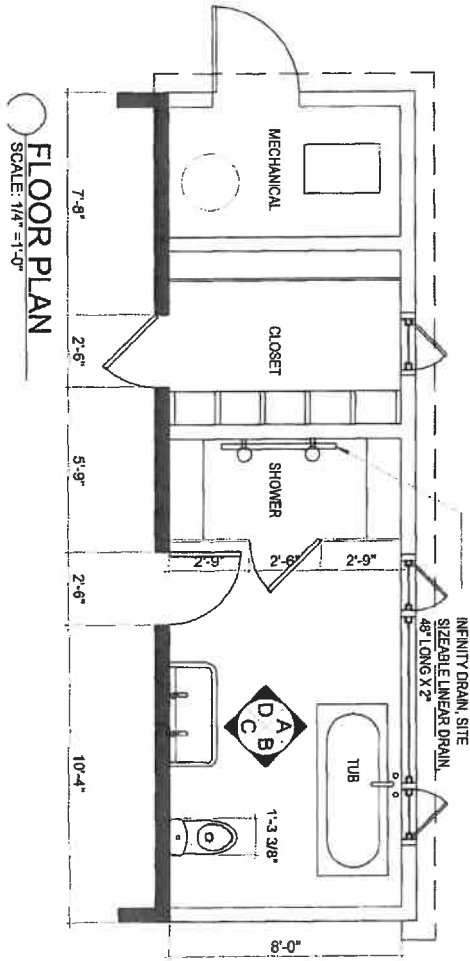


MICHAEL LADUE, P.L.S.
LADUE LAND SURVEYING

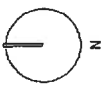
J.C. ELLIS DESIGN



P.O. BOX 81
NORTH EASTHAM, MA 02651
(508)240-2220
Email: jason@jcellisdesign.com

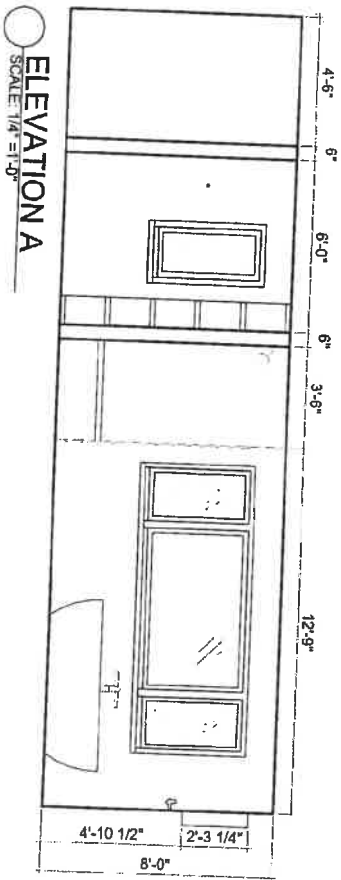


FLOOR PLAN
SCALE: 1/4" = 1'-0"

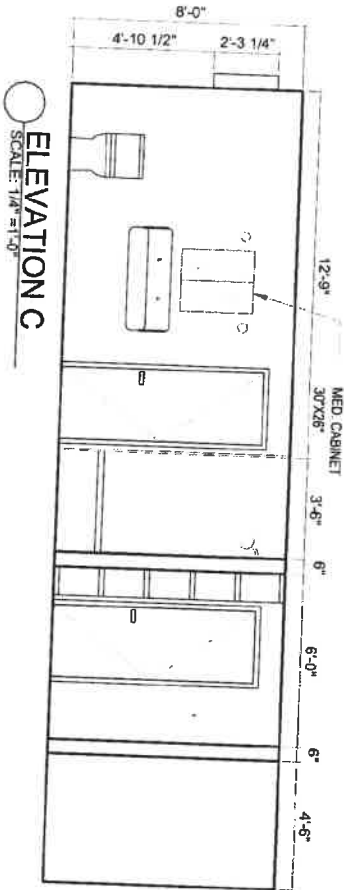


PM
DE
SI
GN
p.o. box 593,
South Wellfleet, Ma,
02653
peller@gpm-design.org
www.gpm-design.org
cell: 774-722-4844

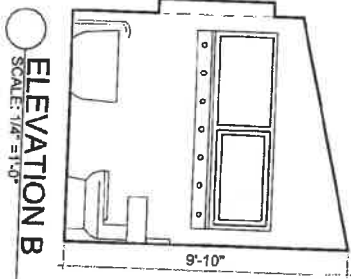
A100
FLOOR PLAN
SCALE: 1/4" = 1'
DATE: 12/05/2021
REVISION #:
BATHROOM ADDITION



ELEVATION A
SCALE: 1/4" = 1'-0"

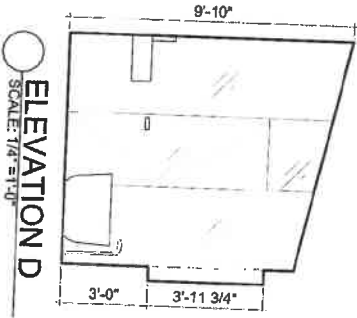


ELEVATION C
SCALE: 1/4" = 1'-0"

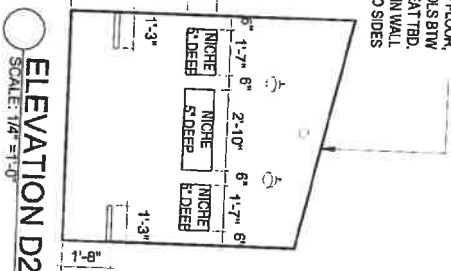


ELEVATION B
SCALE: 1/4" = 1'-0"

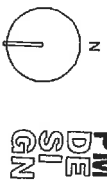
SHOWER HEADS @ 7'-0" OFF FLOOR,
CENTER HEADS AND CONTROLS BTW
NICHE. MATERIAL OF SEAT BID.
PROVIDE STEEL BRACKETS IN WALL
ON TWO SIDES



ELEVATION D
SCALE: 1/4" = 1'-0"

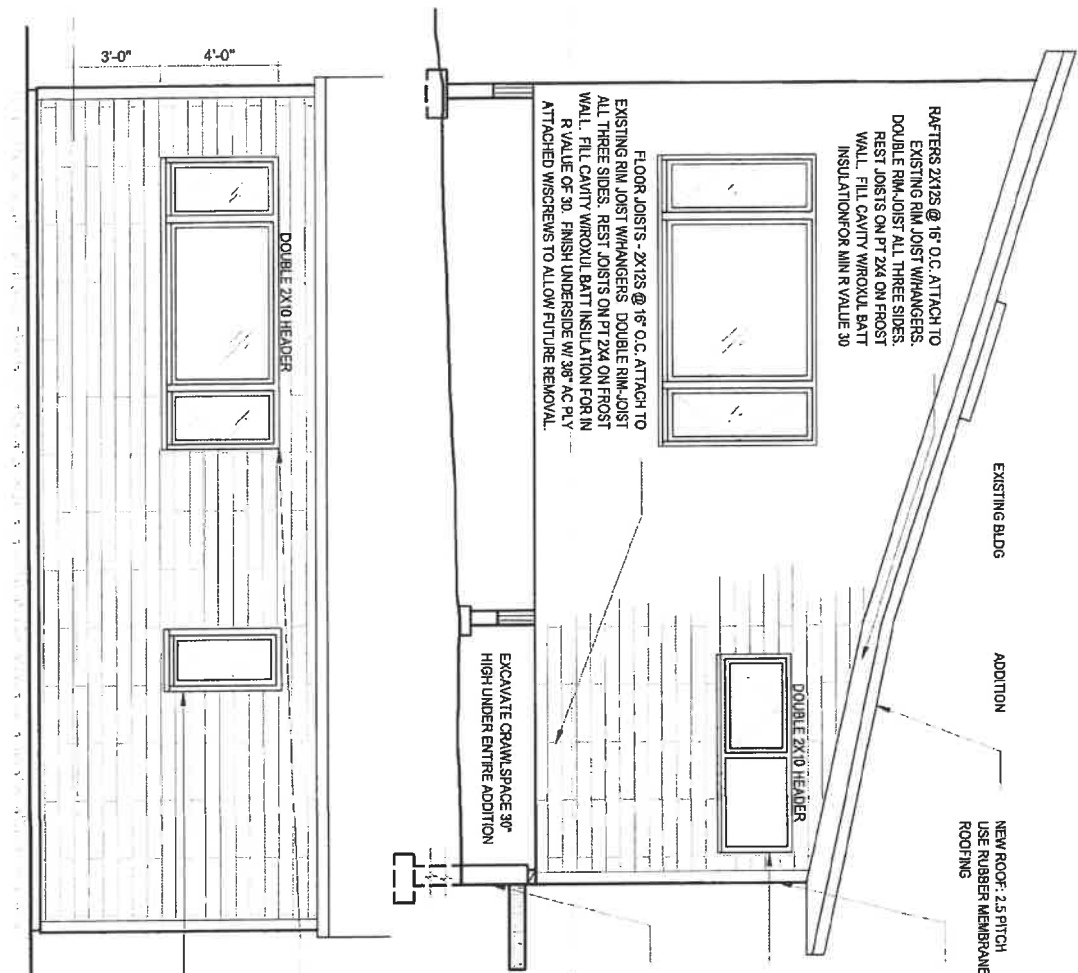


ELEVATION D2
SCALE: 1/4" = 1'-0"



PM
DE
SI
GN
PO BOX 593,
South Wellfleet Ma,
02863
pdx@pm-design.org
www.pdx-design.org
cell : 774-722-4944

A101
INTERIOR ELEVATIONS
SCALE: 1/4" = 1'
DATE: 12/05/2021
REVISION #:
BATHROOM ADDITION



RAFTERS 2X12S @ 16" O.C. ATTACH TO EXISTING RIM JOIST W/HANGERS. DOUBLE RIM JOIST ALL THREE SIDES. REST JOISTS ON PT 2X4 ON FROST WALL. FILL CAVITY W/ROXUL BATT INSULATION FOR MIN R VALUE 30

FLOOR JOISTS - 2X12S @ 16" O.C. ATTACH TO EXISTING RIM JOIST W/HANGERS. DOUBLE RIM JOIST ALL THREE SIDES. REST JOISTS ON PT 2X4 ON FROST WALL. FILL CAVITY W/ROXUL BATT INSULATION FOR MIN R VALUE OF 30. FINISH UNDERSIDE W/ 3/8" AC PLY ATTACHED W/SCREWS TO ALLOW FUTURE REMOVAL.

EXCAVATE GRAVEL SPACE 30" HIGH UNDER ENTIRE ADDITION

WALLS - 2X6S @ 16" O.C. DOUBLE PLATES TOP AND BOTTOM. ROXUL BATT INSULATION FOR MIN R VALUE OF 21

ANDERSON A SERIES AWNING WINDOW 37 1/2" WIDE AND 27 1/2" TALL W/ FIXED PICTURE WINDOW TO THE RIGHT. TOTAL LENGTH APPROX 7'-0". WHITE VINYL EXTERIOR AND NATURAL INTERIOR. SEAL W/ TWO COATS OF SATIN POLY

POUR 8" CEMENT WALL W/ 4" DEEP FOOTING TO RETAIN SOIL AND SUPPORT NEW JOISTS

30" EAVE OVERHANG, LEAVE RAFTER TAIL EXPOSED

REUSE AND RELOCATE EXISTING DOOR TO MECH. ROOM

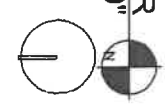
30" WIDE GRAVEL PATH

ANDERSON A SERIES CASEMENT WINDOWS 23 1/2" WIDE BY 47 1/2" TALL W/ FIXED PICTURE WINDOW BTW. TOTAL LENGTH 10'-0". WHITE VINYL EXTERIOR AND NATURAL INTERIOR. SEAL W/ TWO COATS OF STAIN POLY.

REUSE AND RELOCATE EXISTING CASEMENT WINDOW

FIRST FLOOR

0'-0"



PM DESIGN GROUP

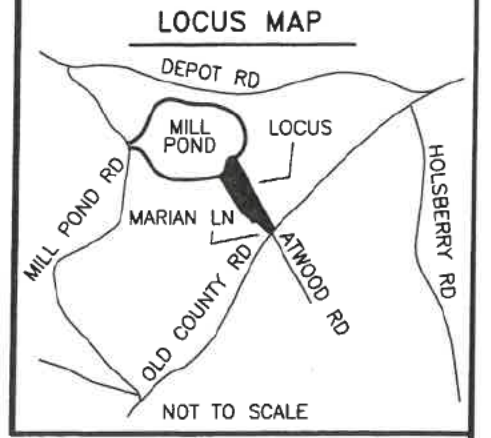
po box 593,
South Wellfleet Ma
02663
pater@pdm-design.org
www.pdm-design.org
cell: 774-722-4944

A102

ELEVATIONS
SCALE: 1/4" = 1'
DATE: 12/05/2021
REVISION #:

BATHROOM ADDITION

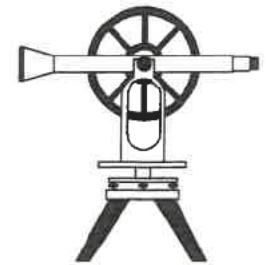
THIS PLAN REQUIRES CONSERVATION COMMISSION APPROVAL.
 WORK LIMIT TO BE STAKED SILT FENCE.



SURVEY PLAN REFERENCE:
 PLAN BOOK 463 PAGE 81

Conservation Commission
 TOWN OF TRURO
 JAN 31 2023

J.C. ELLIS DESIGN



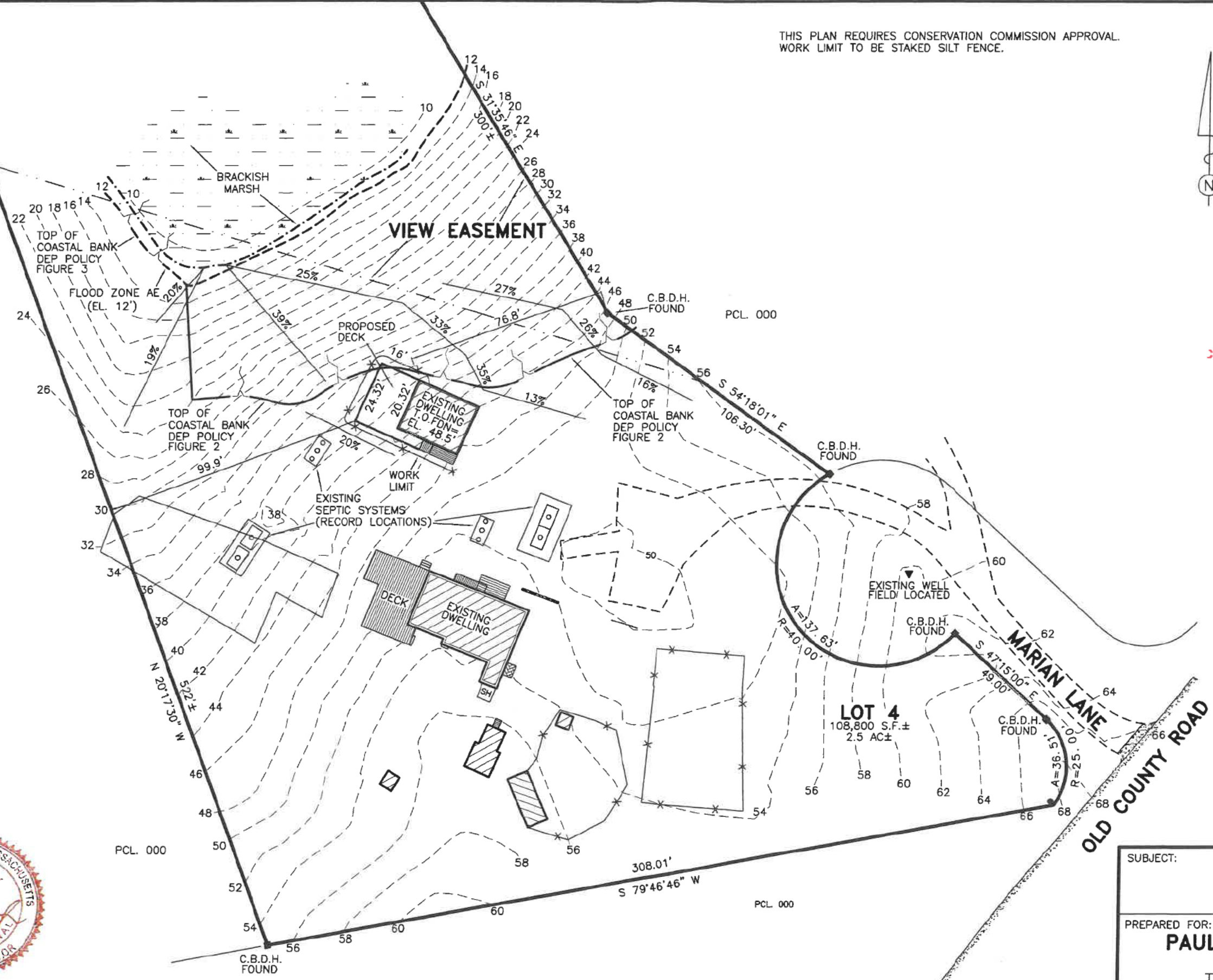
P.O. BOX 81
 NORTH EASTHAM, MA 02651
 (508)240-2220
 Email: jason@jcellisdesign.com

SITE PLAN

SUBJECT: 2 MARIAN LANE TRURO, MA	
PREPARED FOR: PAUL & NANCY FENICHEL P.O. BOX 459 TRURO, MA 02666-0459	
ASSESSOR'S MAP 50, PARCEL 47	SCALE: 1"=30'
DATE: OCTOBER 14, 2022	SHEET 1 OF 1

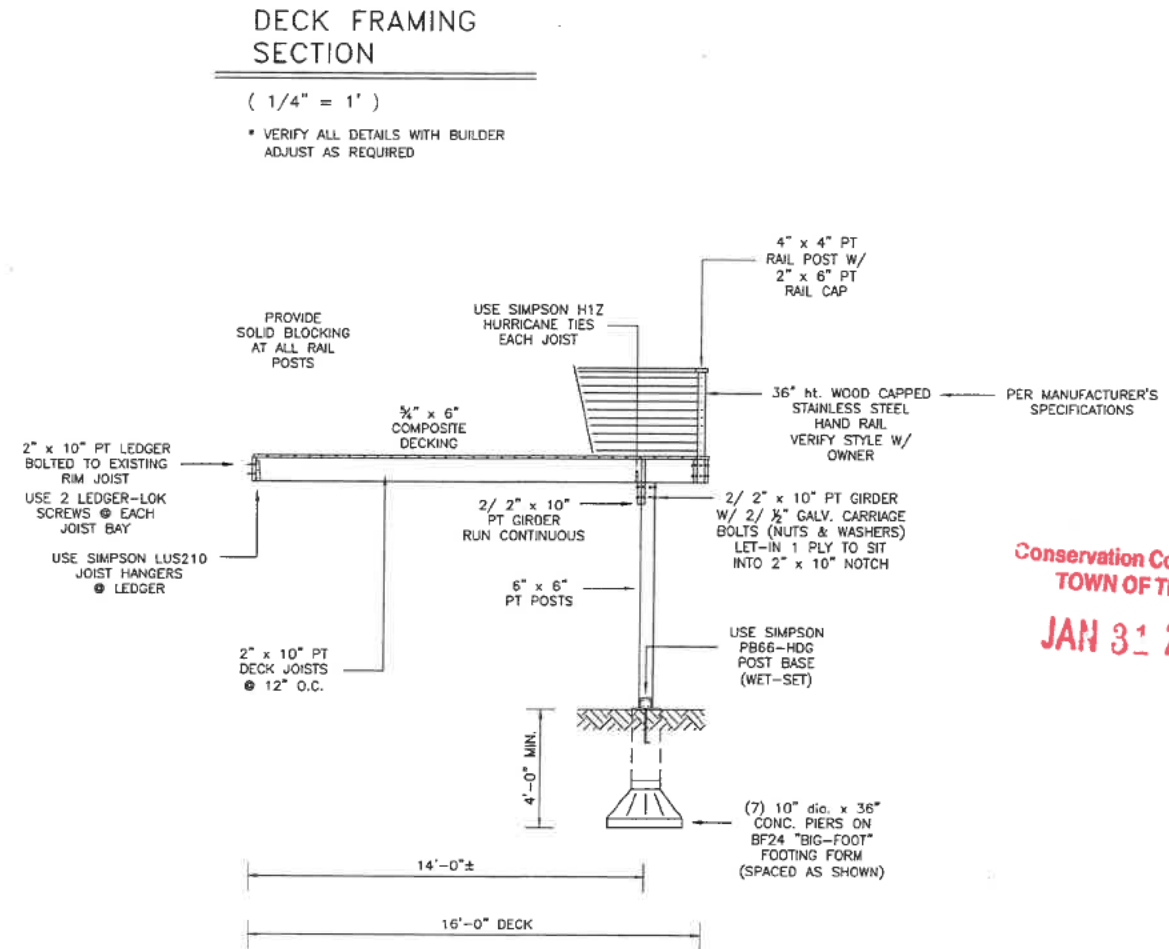
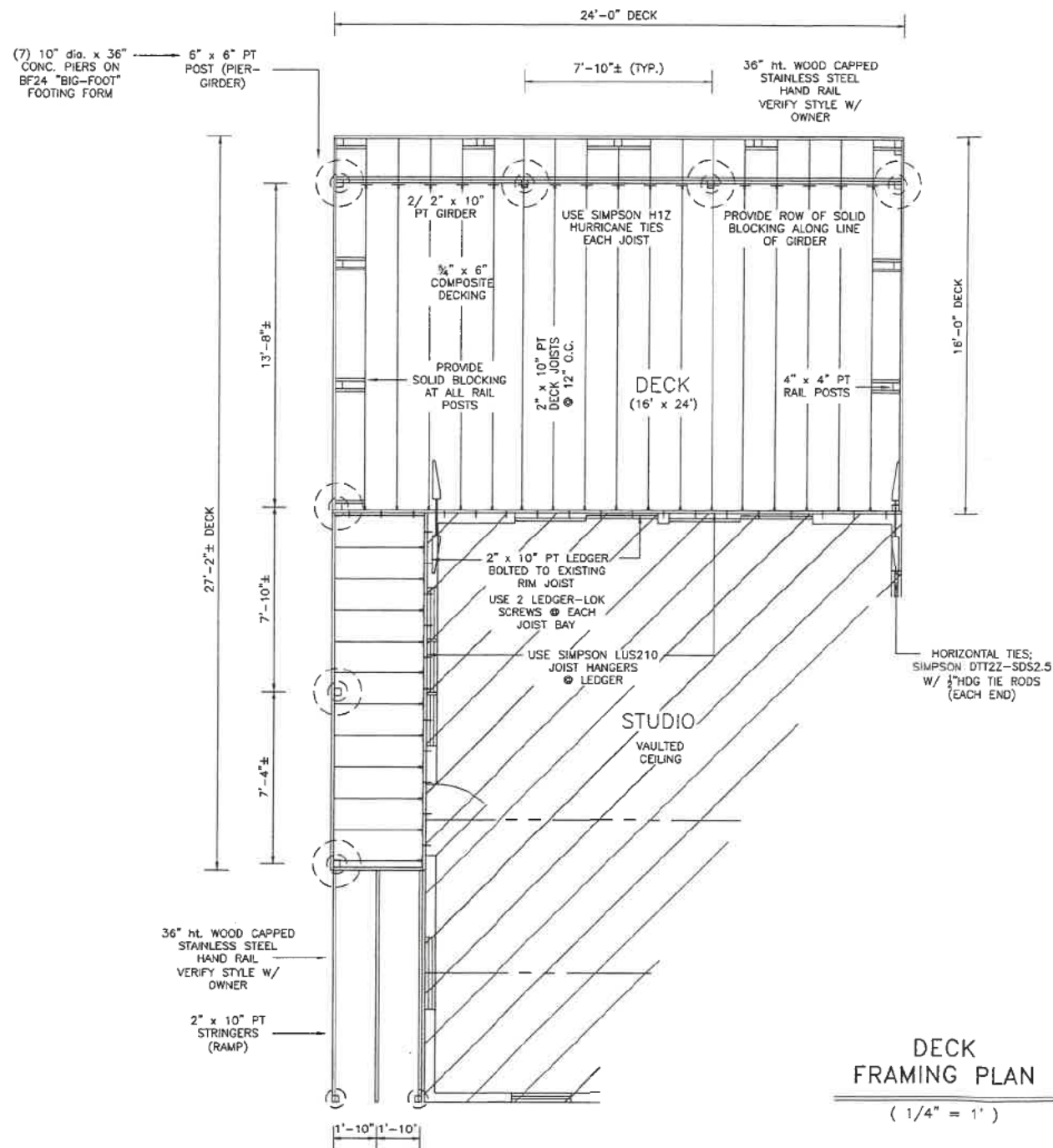


MICHAEL LADUE, P.L.S.
LADUE LAND SURVEYING



ALL CONSTRUCTION TO BE PERFORMED IN STRICT COMPLIANCE WITH THE MASSACHUSETTS STATE BUILDING CODE, NINTH EDITION AND WOOD FRAME CONSTRUCTION MANUAL FOR ONE- AND TWO-FAMILY DWELLINGS

ANY STRUCTURAL ENGINEERING REVIEW, IF NECESSARY, IS AT THE DISCRETION OF THE BUILDING COMMISSIONER AND WILL BE THE RESPONSIBILITY OF THE OWNER



Conservation Commission
TOWN OF TRURO
JAN 31 2023



PROPOSED DECK
PAUL FENICHEL

2 MARION LANE TRURO
-DECK FRAMING PLAN -DECK FRAMING SECTION

DECEMBER 31, 2019 1 OF 1



Charles D. Baker, Governor
 Karyn E. Polito, Lieutenant Governor
 Jamey Tesler, Secretary & CEO
 Jonathan L. Gulliver, Highway Administrator

Conservation Commission
 TOWN OF TRURO
 DEC 06 2022



October 20, 2022

Carol Girard-Irwin, Chair
 Truro Conservation Commission
 Town Hall
 24 Town Hall Road
 Truro, MA 02666

Dear Ms. Girard-Irwin:

This letter concerns an ongoing MassDOT – Highway Division effort to maintain the drainage systems on Routes 6, 6A, South Pamet Road and Highland Road in the Town of Truro. Your Commission issued a five-year Order of Conditions to MassDOT on January 14, 2015, so that the appropriate mechanism would be in place if it was found necessary to perform drainage systems maintenance on short notice in or near a jurisdictional wetland. This Order of Conditions was extended for one year in January 2020, January 2021, and January 2022. The Expiration date for the most recent extension is January 14, 2023.

This letter is a request that you issue an Extension to the original Order of Conditions (Department of Environmental Protection File #SE75-0951) for an additional three years so that this proactive public safety-oriented effort may continue.

If you have any questions concerning this request, please contact Andrea L. Coates, District Environmental Engineer, at (857)368-5085 or at andrea.coates@dot.state.ma.us.

Sincerely,

Mary-Joe
 Perry wdt

Digitally signed by
 Mary-Joe Perry wdt
 Date: 2022.10.25
 16:44:03 -04'00'

Mary-Joe Perry
 District Highway Director

ALC
 Digitally signed by ALC
 Date: 2022.10.26
 14:43:57 -0400

ALC PRH

cc: MJP, PRH, MEB, Highway Maintenance
 Department of Environmental Protection – S.E. Regional Office

District 5, 1000 County Street, Taunton, MA 02780
 Tel: 508-824-6633, TTY: 508-880-6102
www.mass.gov/massdot



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
WPA Emergency Certification Form
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. Emergency Information

Important:
 When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Issuance From: Truro Conservation Commission
Issuing Authority

1. Site Location: Route 6 at MM 112.9, 113.4, 113.5, and across from 206 GAR Highway (Rt 6)

2. Reason for Emergency:
Slope Erosion under guardrail

3. Applicant to perform work: Mass. Dept. of Transportation - Highway Division - District 5

4. Public agency to perform work or public agency ordering the work to be performed:
Mass. Dept. of Transportation - Highway Division - District 5

5. Date of Site Visit:	Start Date:	End Date*:
<u>01/05/23</u>	<u>01/10/23</u>	<u>02/10/23</u>

* no later than 30 days from start date or 60 days in the case of an Immediate Response Action approved by DEP to address an oil/hazardous material release.

6. Work to be allowed*:
Repair of eroded shoulder and slope. Backfill and stabilize eroded slope with riprap over geotextile fabric over gravel. Please refer to sketch.

* May not include work beyond that necessary to abate the emergency.



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
WPA Emergency Certification Form
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Signatures

Certified to be an Emergency by this Issuing Authority.

TRURO CONSERVATION COMMISSION

2-1-2023

Signatures:	
<i>Carol Guerin-Trowid</i>	<i>Carol Guerin-Trowid</i>
Signature	Printed Name
Signature	Printed Name
Signature	Printed Name
Signature	Printed Name
Signature	Printed Name
Signature	Printed Name
Signature	Printed Name

A copy of this form must be provided to the appropriate DEP Regional Office.

C. General Conditions

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Emergency Certification or subject to enforcement action.
2. This Emergency Certification does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of property rights.
3. This Emergency Certification does not relieve the applicant or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. Any work conducted beyond that described above, and any work conducted beyond that necessary to abate the emergency, shall require the filing of a Notice of Intent.
5. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Emergency Certification at reasonable hours to evaluate compliance with this Certification, and may require the submittal of any data deemed necessary by the Conservation Commission or the Department for that evaluation.
6. This Emergency Certification shall apply to any contractor or any other person performing work authorized under this Certification.
7. No work may be authorized beyond 30 days from the date of this certification without written approval of the Department.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Emergency Certification Form
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

D. Special Conditions

E. Appeals

The Department may, on its own motion or at the request of any person, review: an emergency certification issued by a conservation commission and any work permitted thereunder; a denial by a conservation commission of a request for emergency certification; or the failure by a conservation commission to act within 24 hours of a request for emergency certification. Such review shall not operate to stay the work permitted by the emergency certification unless the Department specifically so orders. The Department's review shall be conducted within seven days of: issuance by a conservation commission of the emergency certification; denial by a conservation commission of the emergency certification; or failure by a conservation commission to act within 24 hours of a request for emergency certification. If certification was improperly granted, or the work allowed thereunder is excessive or not required to protect the health and safety of citizens of the Commonwealth, the Department may revoke the emergency certification, condition the work permitted thereunder, or take such other action as it deems appropriate.

2022-ERO-0005
Truro / Rt 6 at East Harbor
3 Locations Rt 6 EB MM 112.9, MM113.4, MM113.5

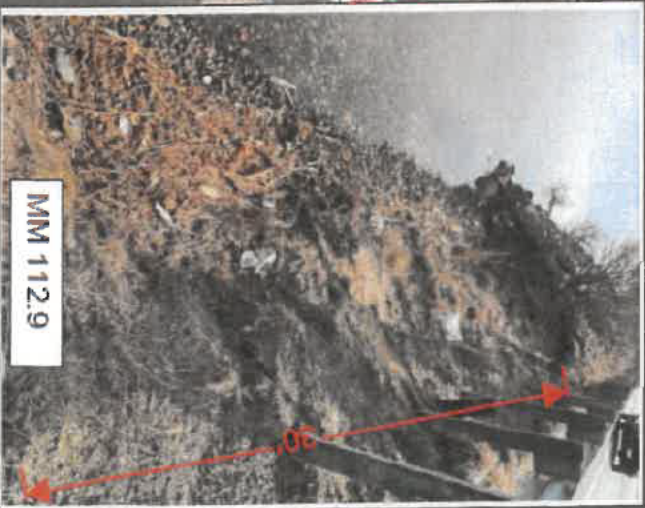
- Notes:
1. Backfill and Stabilize Eroded Slope w/ Dumped Rip Rap over Geotextile Fabric over Gravel
 2. 3 Eroded Slope Locations 30ft each



MM 113.4



MM 113.5



MM 112.9



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
WPA Emergency Certification Form
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. Emergency Information

Important:
 When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Issuance From: Truro Conservation Commission
 Issuing Authority

1. Site Location: Pamet Harbor North Jetty and Corn Hill Beach

2. Reason for Emergency:
erosion

3. Applicant to perform work: Town of Truro

4. Public agency to perform work or public agency ordering the work to be performed:
Town of Truro and County Dredge

5. Date of Site Visit: 1-28-2023 Start Date: 1-28-2023 End Date*: Feb 28, 2023

* no later than 30 days from start date or 60 days in the case of an Immediate Response Action approved by DEP to address an oil/hazardous material release.

6. Work to be allowed*:
Placement of temporary structures as prescribed by BSC engineering to enhance retention of dredged sands that will be placed on top of the temporary structures at the eroded beach on the east end of the North Jetty.

* May not include work beyond that necessary to abate the emergency.

B. Signatures

Certified to be an Emergency by this Issuing Authority.

Signatures: *Carol Ann Lavin* 07-02-2023
 Chairman (or designee) Date

A copy of this form must be provided to the appropriate DEP Regional Office.



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

100 Cambridge Street 9th Floor Boston, MA 02114 • 617-292-5500

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Bethany A. Card
Secretary

Martin Suuberg
Commissioner

December 29, 2022

Kelly Clark
Town of Truro
24 Town Hall Road
P.O. Box 2030
Truro, MA 02666

DEP WQC AUTHORIZATION #
22-WW27-0007-AMD
TRANSMITTAL # X277007
Chapter 91 Permit # 14815
DEP File # SE075-1015

Re: COMBINED CHAPTER 91 PERMIT/401 WATER QUALITY CERTIFICATION
Application for: BRP WW 27, Amendment #1 (22-WW27-0007-AMD)

At: Pamet Harbor, Truro (Barnstable County)
Cape Cod Watershed

Dear: Ms. Clark:

The Department has received a request for an amendment, prepared by the BSC Group, Inc. on your behalf, to the Water Quality Certification (WQC) and the Chapter 91 Dredge Permit referenced above, dated December 7, 2022, to modify the previously issued 401 Water Quality Certification ("401 WQC") for the above-referenced project.


The original 401 WQC authorized the Town of Truro for the maintenance dredging of approximately 4,999 cubic yards (CY) of sediment from the Pamet Harbor mooring basin and navigation channel. The sediment was planned to be pumped to the town-owned beach to the north of the navigation channel jetty at the mouth of the river, where it would be discharged and used as nourishment material.

This modification is necessary to allow a proposed 10 ft widening of the north side of the Pamet Harbor channel, producing an additional of 840 cubic yards of dredged material to be used to repair the beach and dune at the nearby town-owned beach. Since the project impacts will be similar to what was described in the previously approved 401 WQC, your requested project change is herein granted by MassDEP.

In accordance with the provisions of Section 401 of the Federal Clean Water Act as amended (33 U.S.C. §1251 et seq.), MGL c.21, §§ 26-53, and 314 CMR 9.00, and MGL c.91, 310 CMR 9.00, MassDEP has determined there is reasonable assurance the project or activity will be



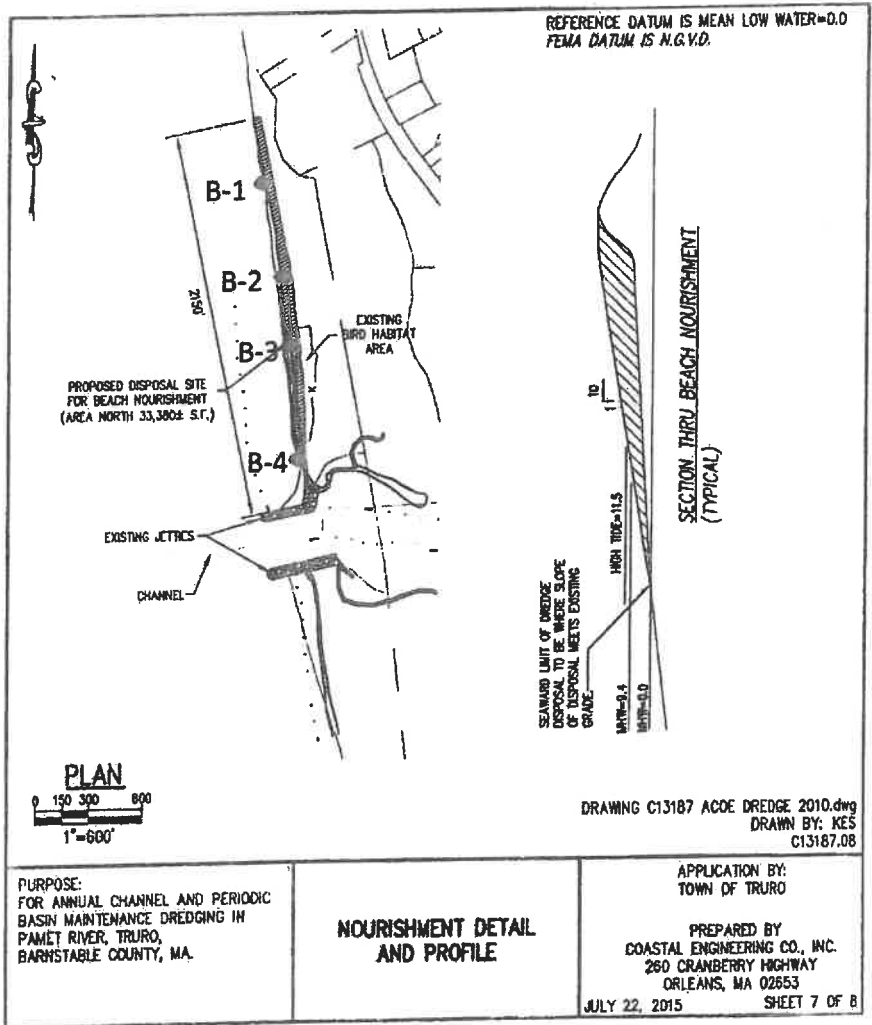
**TOWN OF TRURO
HEALTH & CONSERVATION DEPARTMENT
24 Town Hall Road, Truro 02666
508-349-7004 x119**

Memo to: Jarrod Cabral, DPW Director,
Kelly Clark, Asst Town Manager; Tony Jackett, Harbormaster; Matt Creighton, BSC group
From: Emily Beebe, Truro Health & Conservation Agent 
Date: January 13, 2023
Re: Pamet Jetty emergency repair project narrative

- 2 sections of pipe chained together back-to-back on the beach above MHW, and
- chained to jersey barriers every 25' -the barriers will be landward of the pipes to hold them in place over the next few weeks.
- Total =110 linear feet of dredge pipe
- bury the pipe with compatible beach sand from the dredge about 1/2 to 3/4 of the way in the sand

Addition of sand to breach

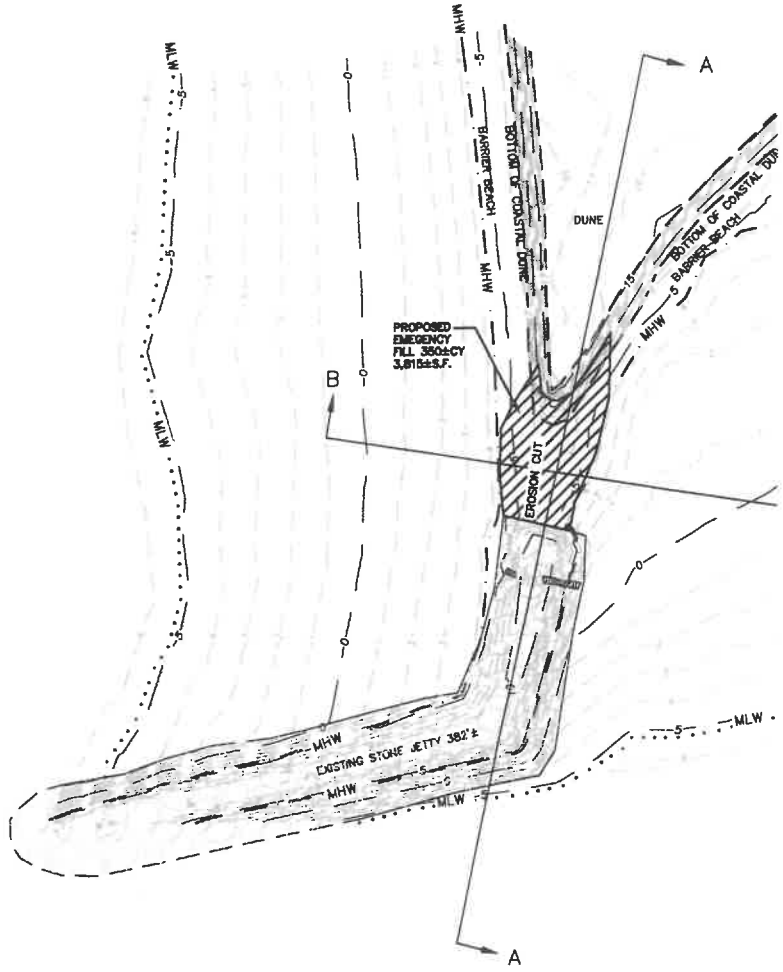
- Fill sand to the elevation of the top of the jetty (elevation 11) and carry that to connect to the existing dune.
- Start at elevation 11 and from the top of the jetty follow a 10:1 slope to the top of dune.



DRAFT

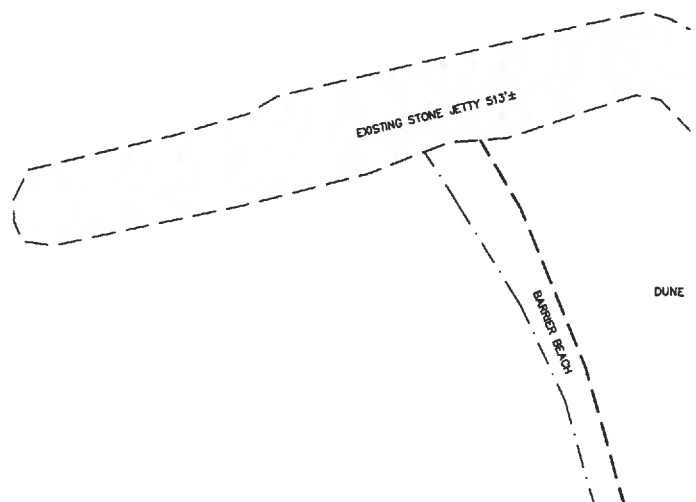


NAD 83 MA MAINLAND



CAPE COD BAY

DRAFT



LOCUS MAP
NOT TO SCALE

DRAFT

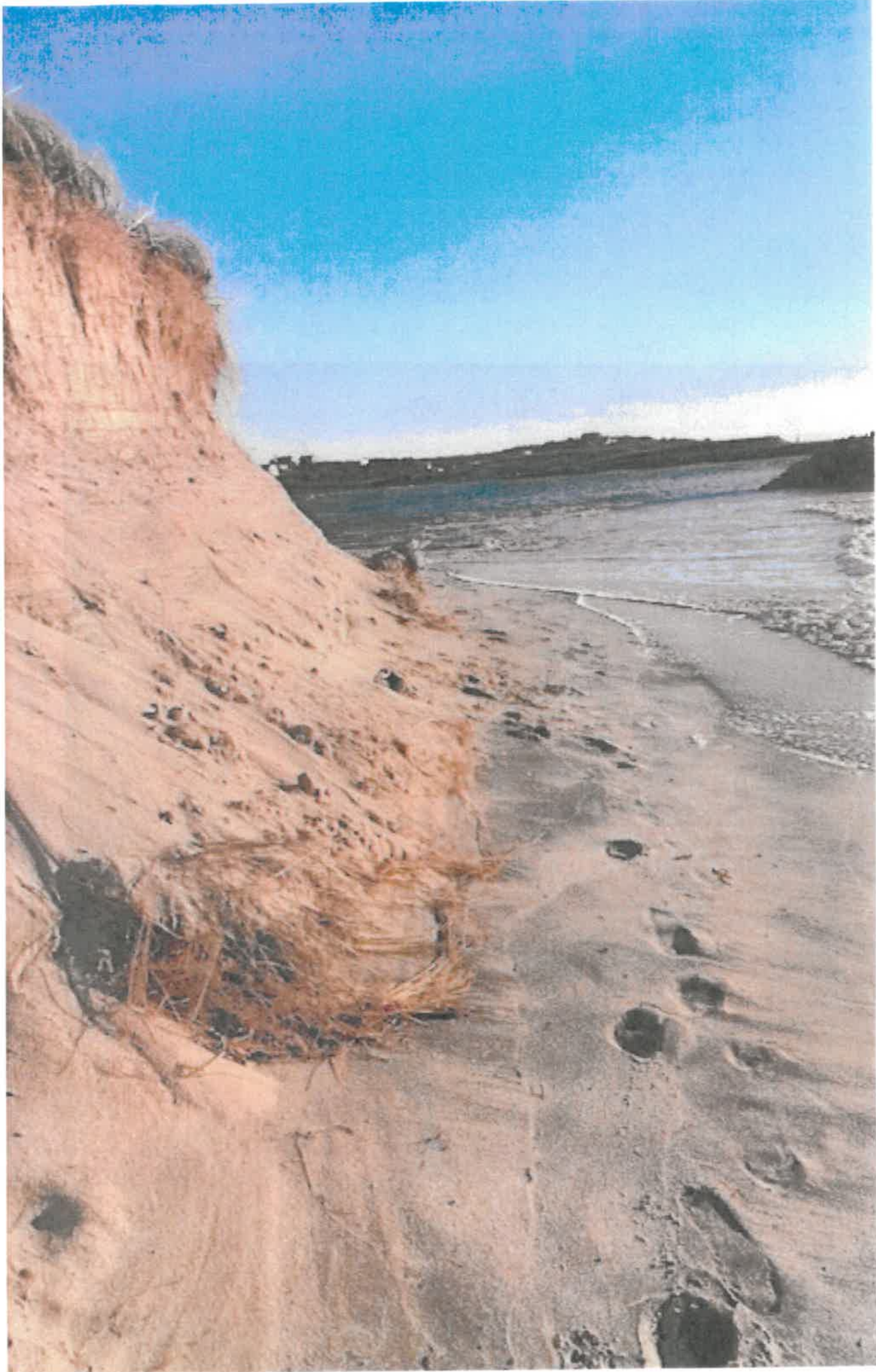
FOR THE RECORD, THIS
DATE

EMERGENCY
NOURISHMENT PLAN
IN
PAMPET HARBOR
TOWN OF
TRURO
MASSACHUSETTS
(PAVIMENTABLE CORNERS)
EXISTING & PROPOSED
CONDITIONS
NOVEMBER 30, 2022

PROJECT NO.
TOWN OF TRURO
24 TOWN HALL ROAD
TRURO, MA 02666
349 Route 28, (1st D)
W. Truro, Massachusetts
02673
508 778 9313

SHEET 1 OF 1
JOB NO. 20200731
DATE: 10/20/22





Field Change Request

Louise Briggs
8 Castle Road
Truro, MA 02666

SE # 75-1105

January 31, 2023

Emily Beebe and Arozana Davis
Conservation Department
24 Town Hall Road
Truro, MA 02666

RE: 8 Castle Road Rear Entry

Dear Emily and Arozana,

The building code requires that the rear entry to my kitchen needs to have at least a 3'0" landing. In the past there was a window where there is now a door. A 3' landing in front of this door would end in the middle of the bulkhead entry, making it hazardous to use. The builder, Paul Renaud, would like to extend the landing to the edge of the bulkhead to make it safe to enter the bulkhead and go down the stairs to the basement. This decking would measure 8' out from the bulkhead and 6'6" from the house, plus the small strip between the bulkhead and the house.

Thank you for your time.

Best Regards,


Louise Briggs

CC: 

Attachments: 2



8 Castle Road
Troy, MA

ALLEN KUPERN ARCHITECTS

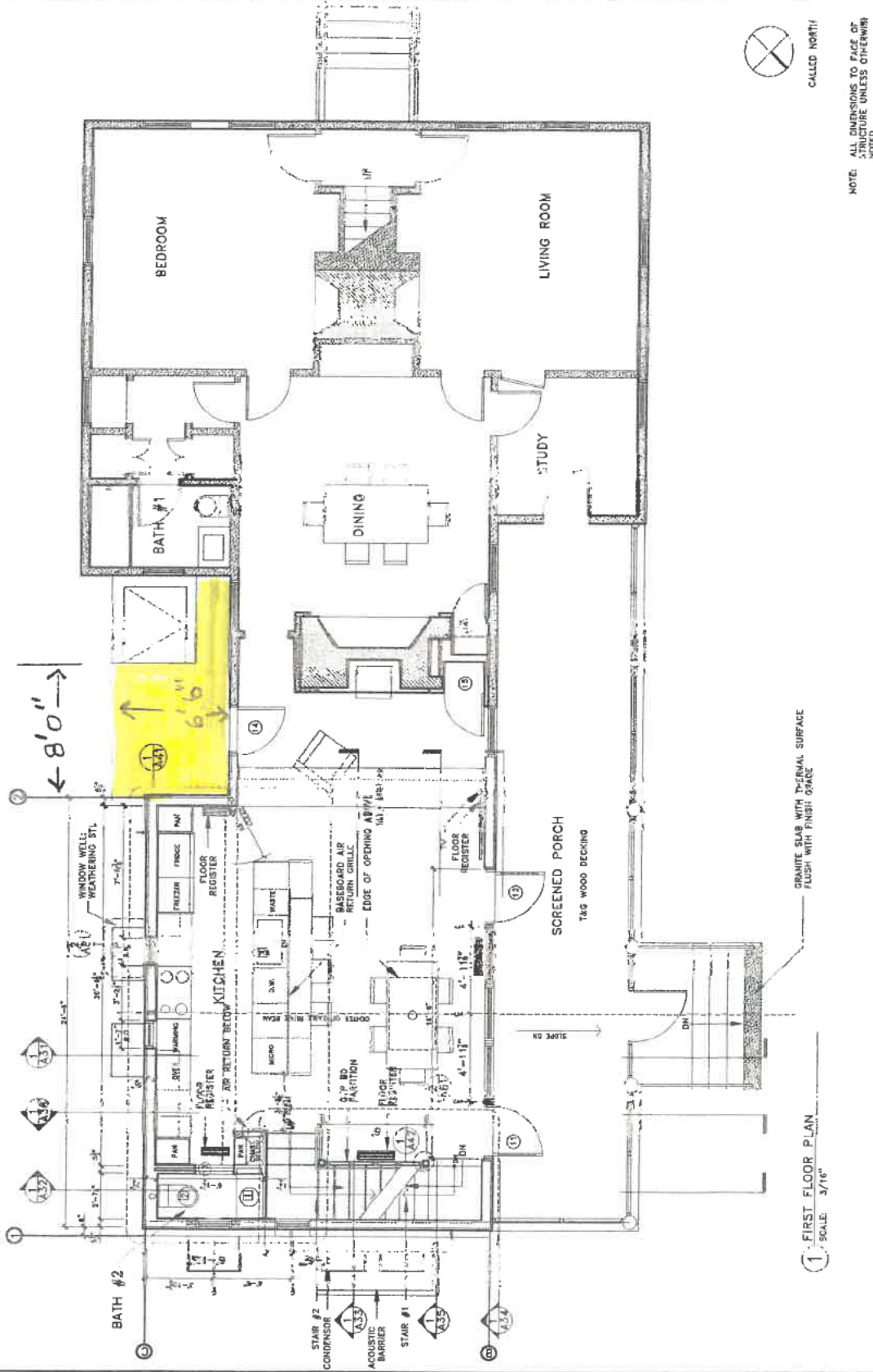
40 WASHINGTON STREET • BOSTON, MA
617 552 9929

JOB NO.	
DRAWN	6 FEB 2007
DATE	
REVISIONS	
NO.	DATE DESCRIPTION

FIRST FLOOR
PLAN

SCALE AS NOTED
DRAWING NO.

A 11



1 - FIRST FLOOR PLAN
SCALE: 3/16"



NOTE: ALL DIMENSIONS TO FACE OF STRUCTURE UNLESS OTHERWISE NOTED
CALLED NORTH!



PAID
27995

PERMIT # 2023-04



TOWN OF TRURO

Conservation Commission

24 Town Hall Road
P.O. Box 2030, Truro MA 02666

APPLICATION FOR ADMINISTRATIVE REVIEW PERMIT

PERMIT FEE \$20

Applicant Name: STEVEN PHILLIPS PHILLIPS, INC ^{GEIGER-} Telephone: 508-349-9543

Email address: steve@geiger-phillips.com

Owner Name: MARK YOUNG & GARY SULLIVAN Telephone: [REDACTED]
(If the applicant is not the owner of the property, written consent to the work MUST be attached to this Application.)

Address of subject property: 444 SHORE RD Map: 9 Parcel: 060

Description of proposed work: REPLACE BEACH ACCESS STAIRS

181

Proximity to Resource Areas: COASTAL BANK & BEACH

CRITERIA FOR ADMINISTRATIVE REVIEW (AR) PERMITS

Vegetation Projects:

- No removal of vegetation within any inland or coastal wetland resource.
- No uprooting of vegetation.
- No mowing to the ground or clear cutting.
- Any proposed tree removal is demonstrated to be necessary, e.g., to protect existing structures, public safety, traffic visibility, etc.
- Mitigation may be required, i.e., an area to be planted with native species of trees or shrubs.
- Trees for removal must be tagged for inspection.
- No excavation by machinery is required or proposed.

Sheds and Other Construction Projects:

- No construction *within* any wetland resource except for minimal projects with the consent of the Conservation Agent.
- Any proposed new construction is more than 50' from the edge of resource area.
- No excavation by machinery is required or proposed.
- Foundation for structure shall be concrete blocks, sono tubes, diamond piers
- Repairs or replacement of existing structures remain within the same footprint.
- New structures must be less than 160 square feet.
- Only minimal projects such as biomimicry, sand nourishment, beach grass and planting of native species shall be allowed under this permit

Procedure:

- The fee shall be submitted with the Administrative Review Application.
- The Agent shall conduct a site visit, at which time the proposed project must be clearly defined in the field with stakes. Trees shall be flagged.

Conservation Commissio.
TOWN OF TRURO

JAN 13 2023

- If the Agent determines that all of the conditions of this Policy are met, the Agent may approve the Application. If the conditions of this policy are not met; the application is incomplete; or the field ID is inadequate the application is denied.
- **If the Agent approves the application, such approval must be ratified by the Truro Conservation Commission prior to the issuance of this permit and prior to the commencement of any work.**
- Any Property Owner, contractor or other agent of the owner performing any work pursuant to an Administrative Review permit shall have a copy of the permit available at the site at all times during the period that the work is being performed.
- Upon approval and ratification by the Commission, an Administrative Permit shall issue.
- The applicant shall notify the Commission prior to the start of the work, and must complete the work within thirty (30) days of issuance of the permit, unless otherwise permitted by the Commission.
- The Conservation Agent shall inspect the property to verify that the work completed is within the scope of the Approved Application.
- Any work beyond the scope of the approved Administrative Review shall be subject to enforcement action.
- NOTE: Use of town property for beach access or staging of construction materials requires a permit issued by the Board of Selectmen.

By signing this permit application, you are acknowledging that you have read and understand the terms as stated herein. You are also aware that no work shall go forward until the permit has been issued by the Conservation Commission.

Steven Phillips 1-11-23
 (Signature of Applicant) (Date)
 GEIGER-PHILLIPS, INC

FOR OFFICE USE ONLY:
 Agent's Comments: *stairway washed away in storm*

Site Inspection Date: *1/30/2023* Application Approved: Yes No

Conservation Commission Review: Meeting Date: _____ Permit Approved: Yes No
 Conditions: _____

Signature of Commission Chair or Agent: _____ Date: _____

From: Mark Young [REDACTED]
Subject: 445 Shore Road
Date: Jan 11, 2023 at 7:32:04 PM
To: Steven Phillips steve@geiger-phillips.com, Mark mark@geiger-phillips.com
Cc: Gary Sullivan [REDACTED]

To whom it may concern. We own the property located at 445 Shore Road in North Truro and hereby approve Geiger-Phillips, Inc (and Steven Phillips) to make application on our behalf and to perform the work relative to replacing our stairs to the beach. Thank you. Mark Young [REDACTED] and Gary Sullivan [REDACTED]

PAID
27996

PERMIT # 2023-03



TOWN OF TRURO

Conservation Commission

24 Town Hall Road
P.O. Box 2030, Truro MA 02666

APPLICATION FOR ADMINISTRATIVE REVIEW PERMIT

PERMIT FEE \$20

Applicant Name: STEVEN PHILLIPS PHILLIPS, INC Telephone: 508-349-9543
Email address: steve@geiger-phillips.com

Owner Name: COBB FARM Telephone: [REDACTED]

(If the applicant is not the owner of the property, written consent to the work MUST be attached to this Application.)

Address of subject property: 30, 1 Dune way SANDPIPER ROAD Map: 5B Parcel: 25 & 28

Description of proposed work: REPAIR OF EXISTING BEACH ACCESS STAIRS TREADS & HAND RAILS on easement between properties

Proximity to Resource Areas: TOE OF COASTAL BANK / COASTAL BEACH

CRITERIA FOR ADMINISTRATIVE REVIEW (AR) PERMITS

Vegetation Projects:

- No removal of vegetation within any inland or coastal wetland resource.
- No uprooting of vegetation.
- No mowing to the ground or clear cutting.
- Any proposed tree removal is demonstrated to be necessary, e.g., to protect existing structures, public safety, traffic visibility, etc.
- Mitigation may be required, i.e., an area to be planted with native species of trees or shrubs.
- Trees for removal must be tagged for inspection.
- No excavation by machinery is required or proposed.

Sheds and Other Construction Projects:

- No construction *within* any wetland resource except for minimal projects with the consent of the Conservation Agent.
- Any proposed new construction is more than 50' from the edge of resource area.
- No excavation by machinery is required or proposed.
- Foundation for structure shall be concrete blocks, sono tubes, diamond piers
- Repairs or replacement of existing structures remain within the same footprint.
- New structures must be less than 160 square feet.
- Only minimal projects such as biomimicry, sand nourishment, beach grass and planting of native species shall be allowed under this permit

Procedure:

- The fee shall be submitted with the Administrative Review Application.
- The Agent shall conduct a site visit, at which time the proposed project must be clearly defined in the field with stakes. Trees shall be flagged.

Conservation Commission
TOWN OF TRURO

JAN 13 2023

- If the Agent determines that all of the conditions of this Policy are met, the Agent may approve the Application. If the conditions of this policy are not met; the application is incomplete; or the field ID is inadequate the application is denied.
- **If the Agent approves the application, such approval must be ratified by the Truro Conservation Commission prior to the issuance of this permit and prior to the commencement of any work.**
- Any Property Owner, contractor or other agent of the owner performing any work pursuant to an Administrative Review permit shall have a copy of the permit available at the site at all times during the period that the work is being performed.
- Upon approval and ratification by the Commission, an Administrative Permit shall issue.
- The applicant shall notify the Commission prior to the start of the work, and must complete the work within thirty (30) days of issuance of the permit, unless otherwise permitted by the Commission.
- The Conservation Agent shall inspect the property to verify that the work completed is within the scope of the Approved Application.
- Any work beyond the scope of the approved Administrative Review shall be subject to enforcement action.
- NOTE: Use of town property for beach access or staging of construction materials requires a permit issued by the Board of Selectmen.

By signing this permit application, you are acknowledging that you have read and understand the terms as stated herein. You are also aware that no work shall go forward until the permit has been issued by the Conservation Commission.

Steven Phillips 1-11-23
 (Signature of Applicant) (Date)
 AETNER-PHILLIPS, INC

FOR OFFICE USE ONLY:
 Agent's Comments *proposal is to: replace treads, railings + some elevated supports - but [NOT] in-ground support posts*

Site Inspection Date: *1/30/2023* Application Approved: Yes No

Conservation Commission Review: Meeting Date: *2/6/2023* Permit Approved: Yes No
 Conditions: _____

Signature of Commission Chair or Agent: _____ Date: _____

From: Solomon, Daniel H.,MD, MPH [REDACTED]
Subject: Re: Truro
Date: January 11, 2023 at 5:24 PM
To: Steven Phillips steve@geiger-phillips.com
Cc: Mark Slivka [REDACTED]



Geiger-Phillips has permission to make application and perform work on the beach access stairs at Cobb Farm in Truro, MA.

Daniel Solomon
Member, Board of Trustees
Cobb Farm Homeowner's Association

Arozana Davis

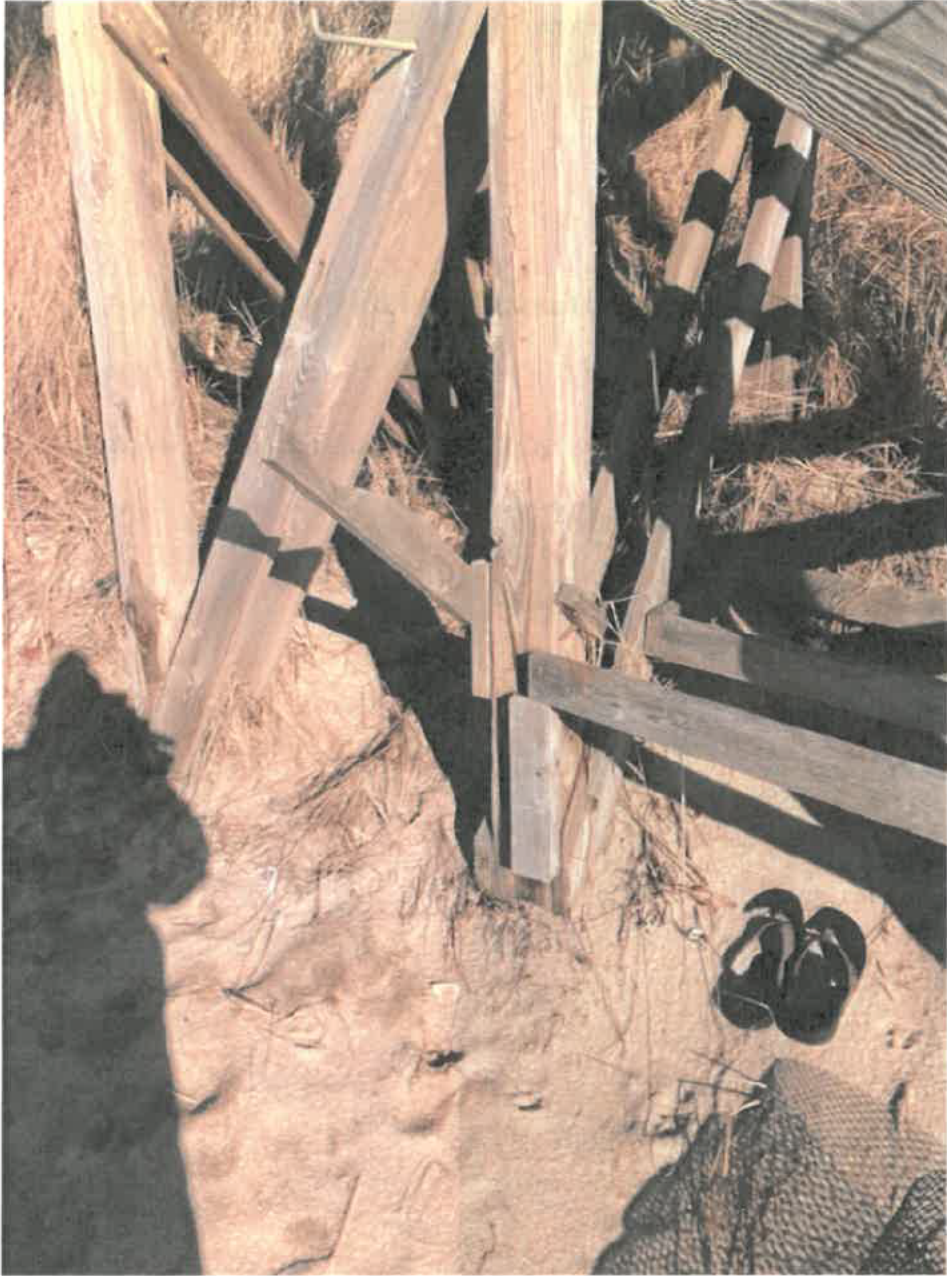
From: Steve Phillips <steve@geiger-phillips.com>
Sent: Wednesday, January 18, 2023 4:44 PM
To: Arozana Davis
Cc: Mark Slivka
Subject: Cobb Farm beach stair

Arozana,
The repairs are minimal - treads to be replaced or nailed. deteriorated handrail. under stair fixes at the toe, etc....

Steven

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.







Sent from my iPhone



PAID Conservation Commission
TOWN OF TRURO

JAN 10 2023

PERMIT # 2023-02



TOWN OF TRURO

Conservation Commission

24 Town Hall Road
P.O. Box 2030, Truro MA 02666

APPLICATION FOR ADMINISTRATIVE REVIEW PERMIT

PERMIT FEE \$20

Applicant Name: Linda Noons-Rose Telephone: [REDACTED]

Email address: [REDACTED]

Owner Name: Noons-Rose Linda & Noons Debra Telephone: same

(If the applicant is not the owner of the property, written consent to the work MUST be attached to this Application.)

Address of subject property: 426 Shore Rd. Map: 010 Parcel: 018

Description of proposed work: Beach nourishment for 90 ft seawall. Dropped over 2 ft during recent storm. Approx 100 yards material. Replace poles for the bottom of new stairs to be rebuilt in same location. No machines on beach. Nourishment to be done from top of seawall. Access from own property around side of garage.

Proximity to Resource Areas: Beach

Request 90 Days

CRITERIA FOR ADMINISTRATIVE REVIEW (AR) PERMITS

Vegetation Projects:

- No removal of vegetation within any inland or coastal wetland resource.
- No uprooting of vegetation.
- No mowing to the ground or clear cutting.
- Any proposed tree removal is demonstrated to be necessary, e.g., to protect existing structures, public safety, traffic visibility, etc.
- Mitigation may be required, i.e., an area to be planted with native species of trees or shrubs.
- Trees for removal must be tagged for inspection.
- No excavation by machinery is required or proposed.

Sheds and Other Construction Projects:

- No construction within any wetland resource except for minimal projects with the consent of the Conservation Agent.
- Any proposed new construction is more than 50' from the edge of resource area.
- No excavation by machinery is required or proposed.
- Foundation for structure shall be concrete blocks, sono tubes, diamond piers
- Repairs or replacement of existing structures remain within the same footprint.
- New structures must be less than 160 square feet.
- Only minimal projects such as biomimicry, sand nourishment, beach grass and planting of native species shall be allowed under this permit

Procedure:

- The fee shall be submitted with the Administrative Review Application.
- The Agent shall conduct a site visit, at which time the proposed project must be clearly defined in the field with stakes. Trees shall be flagged.

- If the Agent determines that all of the conditions of this Policy are met, the Agent may approve the Application. If the conditions of this policy are not met; the application is incomplete; or the field ID is inadequate the application is denied.
- **If the Agent approves the application, such approval must be ratified by the Truro Conservation Commission prior to the issuance of this permit and prior to the commencement of any work.**
- Any Property Owner, contractor or other agent of the owner performing any work pursuant to an Administrative Review permit shall have a copy of the permit available at the site at all times during the period that the work is being performed.
- Upon approval and ratification by the Commission, an Administrative Permit shall issue.
- The applicant shall notify the Commission prior to the start of the work, and must complete the work within thirty (30) days of issuance of the permit, unless otherwise permitted by the Commission.
- The Conservation Agent shall inspect the property to verify that the work completed is within the scope of the Approved Application.
- Any work beyond the scope of the approved Administrative Review shall be subject to enforcement action.
- NOTE: Use of town property for beach access or staging of construction materials requires a permit issued by the Board of Selectmen.

By signing this permit application, you are acknowledging that you have read and understand the terms as stated herein. You are also aware that no work shall go forward until the permit has been issued by the Conservation Commission.

Janet Norman 1/10/23
 (Signature of Applicant) (Date)

FOR OFFICE USE ONLY:
 Agent's Comments: stairway washed away in storm

Site Inspection Date: 1/30/2023 Application Approved: Yes No

Conservation Commission Review: Meeting Date: _____ Permit Approved: Yes No
 Conditions: _____

Signature of Commission Chair or Agent: _____ Date: _____

60 day req.

PERMIT # 2522-44



TOWN OF TRURO

Conservation Commission

24 Town Hall Road
P.O. Box 2030, Truro MA 02666

PAID
0553

APPLICATION FOR ADMINISTRATIVE REVIEW PERMIT

PERMIT FEE \$20

Applicant Name: Bayside Home Svcs, LLC Telephone: [REDACTED]

Email address: baysidehomesvs@gmail.com

Owner Name: Joseph Bogdos Telephone: [REDACTED]

(If the applicant is not the owner of the property, written consent to the work MUST be attached to this Application.)

Address of subject property: 26 Pond Rd., N. Truro Map: 316 Parcel: 316-188-0

Description of proposed work: Repair existing deck on waterside, install Azek decking, take out ground level deck, replace w/stone

Proximity to Resource Areas: Buffer zone to Pond

CRITERIA FOR ADMINISTRATIVE REVIEW (AR) PERMITS

Vegetation Projects:

- No removal of vegetation within any inland or coastal wetland resource.
- No uprooting of vegetation.
- No mowing to the ground or clear cutting.
- Any proposed tree removal is demonstrated to be necessary, e.g., to protect existing structures, public safety, traffic visibility, etc.
- Mitigation may be required, i.e., an area to [REDACTED] or shrubs.
- Trees for removal must be tagged for inspection.
- No excavation by machinery is required or [REDACTED]

Sheds and Other Construction Projects:

- No construction within any wetland resource without consent of the Conservation Agent.
- Any proposed new construction is more than [REDACTED]
- No excavation by machinery is required or [REDACTED]
- Foundation for structure shall be concrete block.
- Repairs or replacement of existing structure [REDACTED]
- New structures must be less than 160 square feet.
- Only minimal projects such as biomimicry, [REDACTED] planting of native species shall be allowed [REDACTED]

60-day extension request

Procedure:

- The fee shall be submitted with the Administrative Review Application.
- The Agent shall conduct a site visit, at which time the proposed project must be clearly defined in the field with stakes. Trees shall be flagged.

Conservation Commission
TOWN OF TRURO

- If the Agent determines that all of the conditions of this Policy are met, the Agent may approve the Application. If the conditions of this policy are not met; the application is incomplete; or the field ID is inadequate the application is denied.
- If the Agent approves the application, such approval must be ratified by the Truro Conservation Commission prior to the issuance of this permit and prior to the commencement of any work.
- Any Property Owner, contractor or other agent of the owner performing any work pursuant to an Administrative Review permit shall have a copy of the permit available at the site at all times during the period that the work is being performed.
- Upon approval and ratification by the Commission, an Administrative Permit shall issue.
- The applicant shall notify the Commission prior to the start of the work, and must complete the work within thirty (30) days of issuance of the permit, unless otherwise permitted by the Commission.
- The Conservation Agent shall inspect the property to verify that the work completed is within the scope of the Approved Application.
- Any work beyond the scope of the approved Administrative Review shall be subject to enforcement action.
- NOTE: Use of town property for beach access or staging of construction materials requires a permit issued by the Board of Selectmen.

By signing this permit application, you are acknowledging that you have read and understand the terms as stated herein. You are also aware that no work shall go forward until the permit has been issued by the Conservation Commission.

Jane Petter 11/28/22
 (Signature of Applicant) (Date)

(AD)

FOR OFFICE USE ONLY:

Agent's Comments elevated deck: replace deck boards, railings + rotten structural boards (not all) - no work on sonotubes, no ground disturbance. front street ground level deck to be removed completely.
 Site Inspection Date: 11/29/22 Application Approved: Yes No
 Conservation Commission Review: Meeting Date: 12/5/2022 Permit Approved: Yes No
 Conditions: _____

Signature of Commission Chair or Agent: ADavis Date: 12/5/2022

Arozana Davis

From: Jane Petterson <baysidehomesvs@gmail.com>
Sent: Monday, January 23, 2023 10:02 AM
To: Arozana Davis
Subject: 26 Pond Rd

Good morning,

I am writing today to request a sixty day extension on the AR permit issued on December 5, 2022. Due to weather delays it has taken longer than anticipated.

Thank you,

Jane Petterson

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Conservation Commission
TOWN OF TRURO
JAN 23 2023

JAN 27 2023

PERMIT # 2023-06



TOWN OF TRURO

Conservation Commission

24 Town Hall Road
P.O. Box 2030, Truro MA 02666

PAID
1/27/23

APPLICATION FOR ADMINISTRATIVE REVIEW PERMIT

PERMIT FEE \$20

Applicant Name: Cape Associates, Inc. / Marybeth Bourgeois Telephone: 508-255-1770 x 725

Email address: mbourgeois@capeassociates.com

Owner Name: David Daglio Telephone: [REDACTED]

(If the applicant is not the owner of the property, written consent to the work MUST be attached to this Application.)

Address of subject property: 2 Corn Hill Path, Truro Map: 45 Parcel: 25

Description of proposed work: Replace existing gravel driveway with permeable pavers. Product specifications included with application. Septic cover will remain accessible.

Proximity to Resource Areas: One corner of driveway within 100' of coastal bank.

CRITERIA FOR ADMINISTRATIVE REVIEW (AR) PERMITS

Vegetation Projects:

- No removal of vegetation within any inland or coastal wetland resource.
- No uprooting of vegetation.
- No mowing to the ground or clear cutting.
- Any proposed tree removal is demonstrated to be necessary, e.g., to protect existing structures, public safety, traffic visibility, etc.
- Mitigation may be required, i.e., an area to be planted with native species of trees or shrubs.
- Trees for removal must be tagged for inspection.
- No excavation by machinery is required or proposed.

Sheds and Other Construction Projects:

- No construction *within* any wetland resource except for minimal projects with the consent of the Conservation Agent.
- Any proposed new construction is more than 50' from the edge of resource area.
- No excavation by machinery is required or proposed.
- Foundation for structure shall be concrete blocks, sono tubes, diamond piers
- Repairs or replacement of existing structures remain within the same footprint.
- New structures must be less than 160 square feet.
- Only minimal projects such as biomimicry, sand nourishment, beach grass and planting of native species shall be allowed under this permit

Procedure:

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- The Agent shall conduct a site visit, at which time the proposed project must be clearly defined in the field with stakes. Trees shall be flagged.



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(Signature of Applicant) (Date)

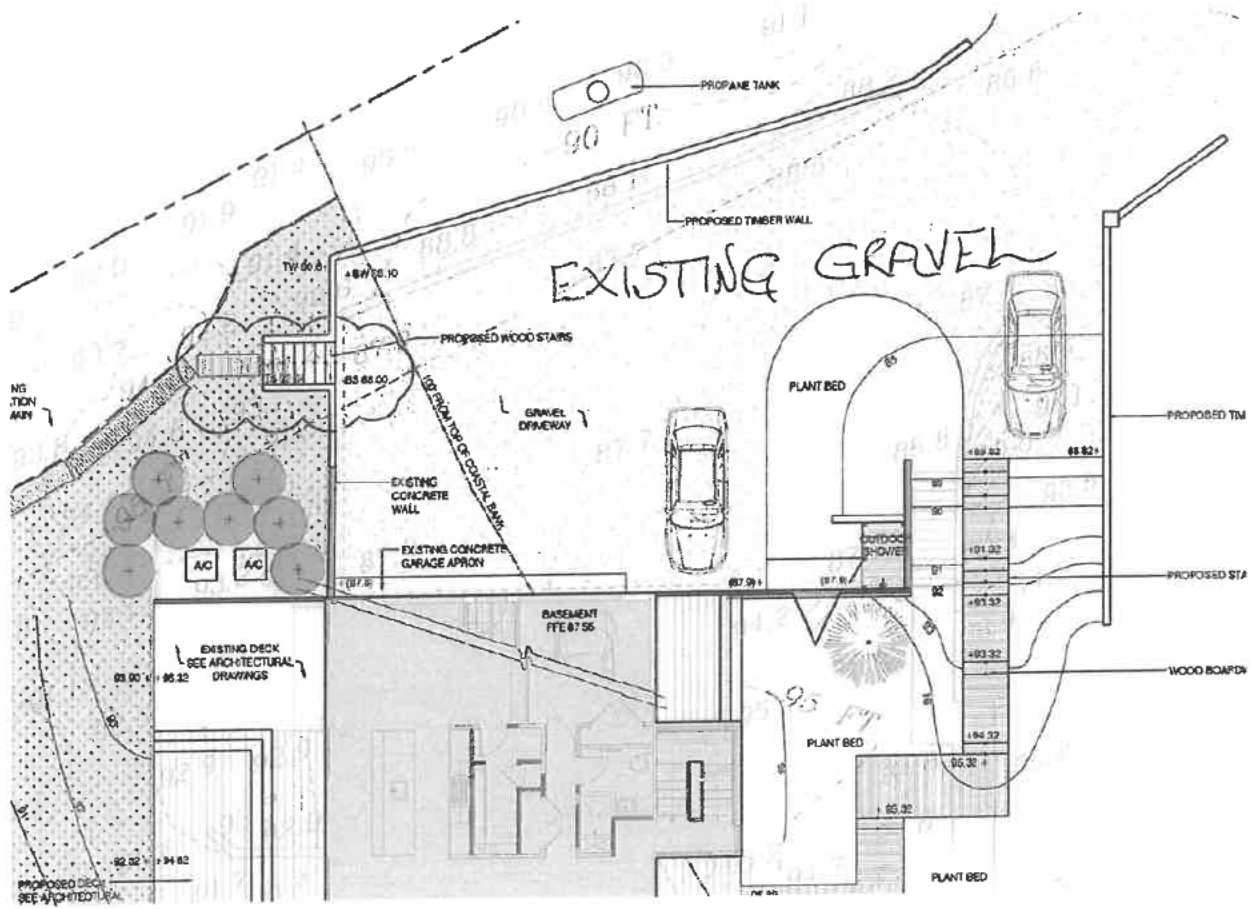
FOR OFFICE USE ONLY:

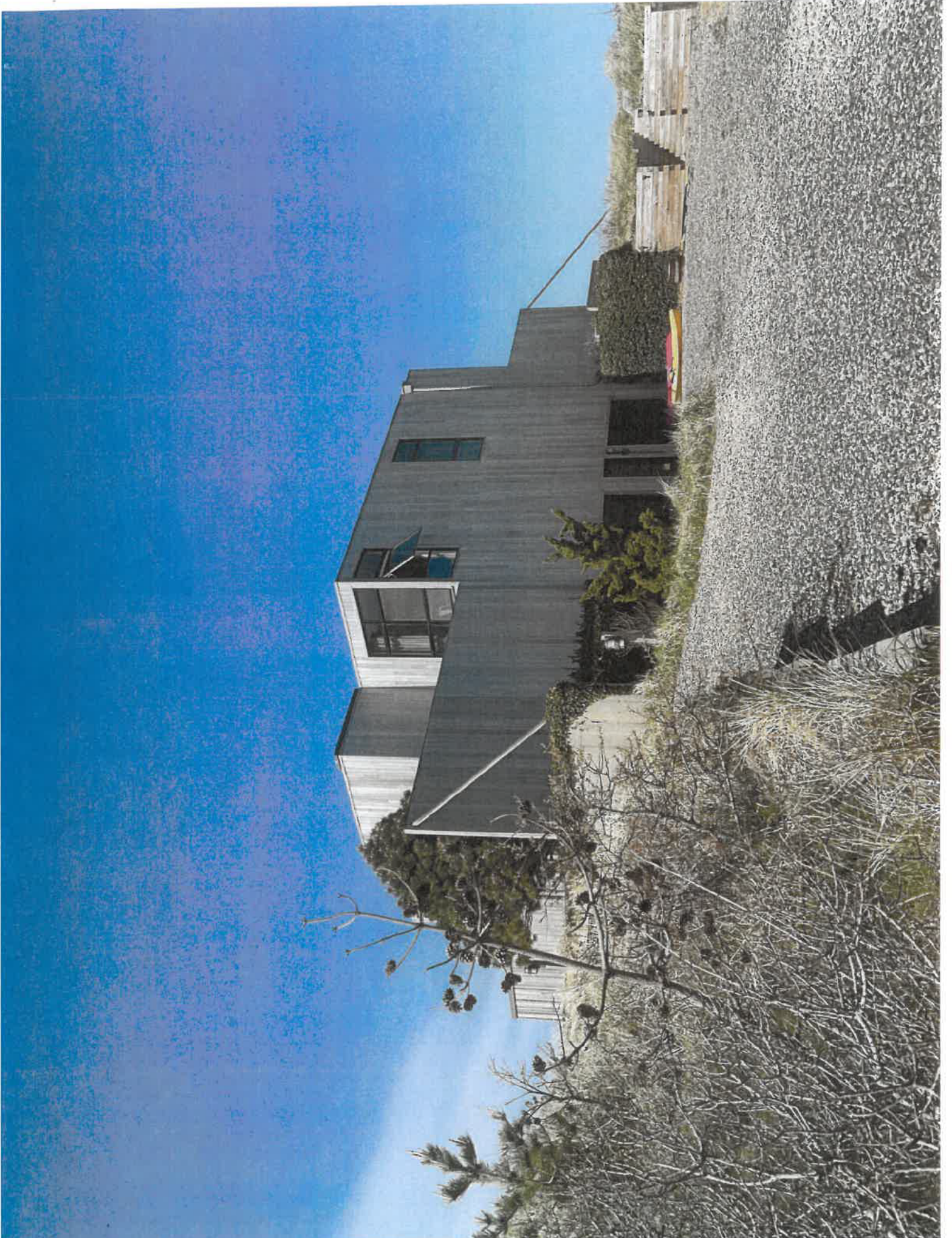
Agent's Comments previous material in place + being used to create basketball court. already altered area.

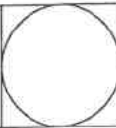
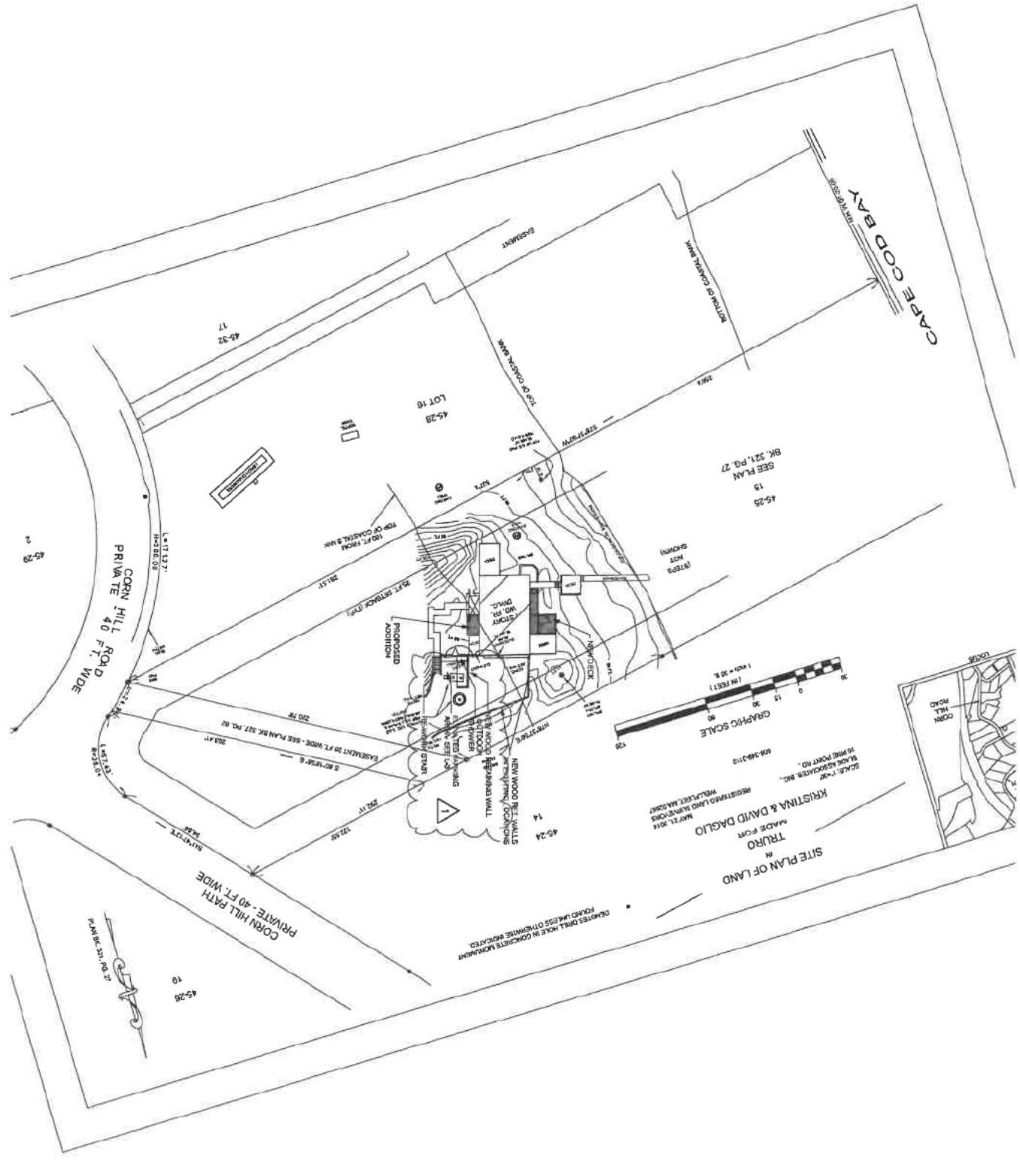
Site Inspection Date: 1/30/2023 Application Approved: Yes No

Conservation Commission Review: Meeting Date: _____ Permit Approved: Yes No
Conditions: _____

Signature of Commission Chair or Agent: _____ Date: _____







penetration -
penetration

penetration surface
to pavers

OK!

request variance

adavis@tmo-ma.gov

Michael
Jan 30th 2020 → Feb 24th 2020

Slab/Paver

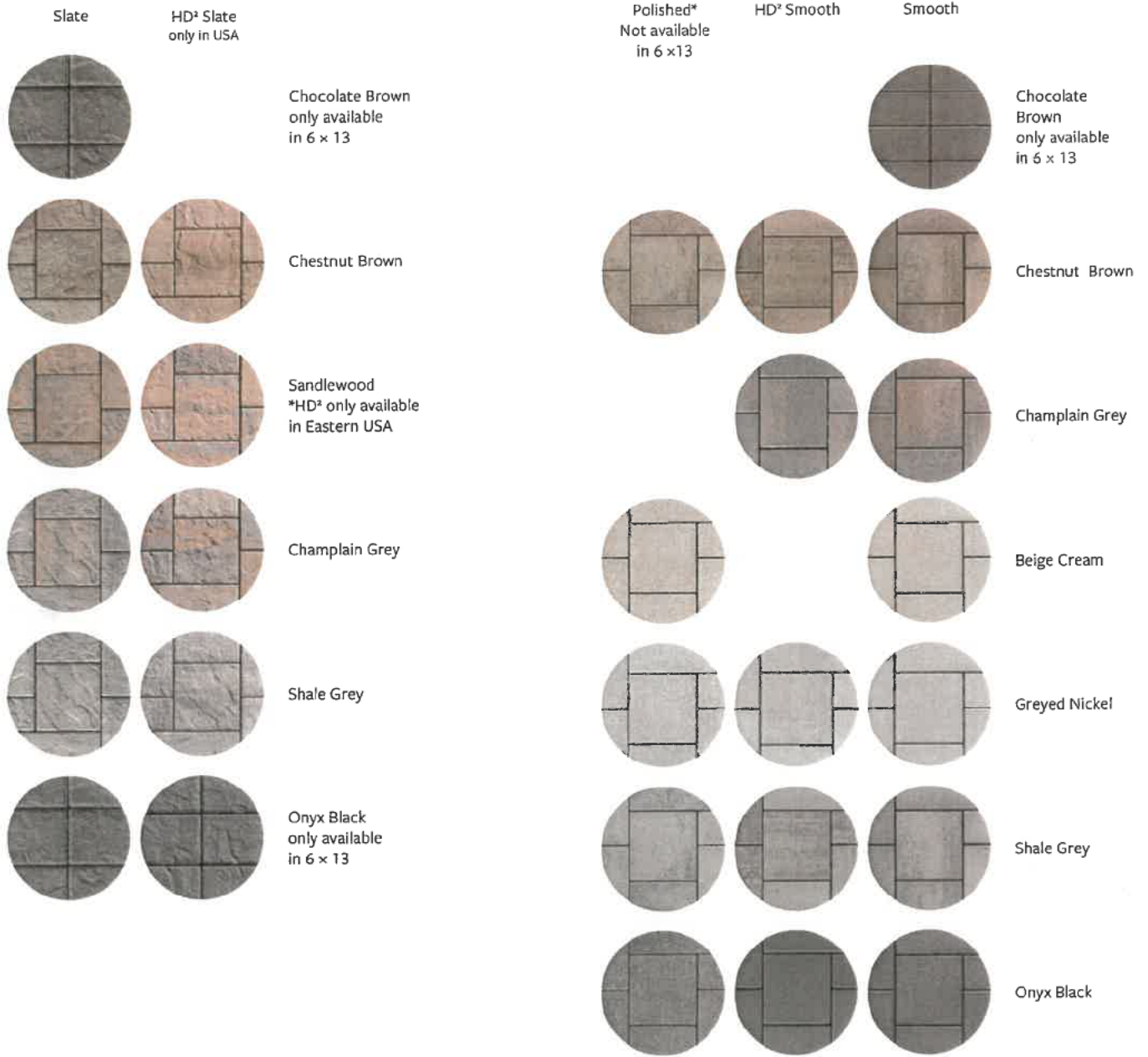
Blu 60 mm



Blu 80 mm



Various sizes - Champlain Grey - Slatewith 6 x 13 - Onyx Black - Smooth



60 mm Various sizes
*Height: 2 5/8 in 60 mm

13 x 6 1/2
330 x 165 13 x 13
330 x 330 13 x 19 1/2
330 x 495



60 mm 6 x 13
*Height: 2 5/8 in 60 mm

13 x 6 1/2
330 x 165



80 mm Various sizes
*Height: 3 1/8 in 80 mm

13 x 6 1/2
330 x 165 13 x 13
330 x 330 13 x 19 1/2
330 x 495



80 mm 6 x 13
*Height: 3 1/8 in 80 mm

13 x 6 1/2
330 x 165



*60 mm: Polished are 2 5/8 in (58 mm) height / 80 mm: Polished are 3 1/8 in (78 mm) height

 60 mm - 6 x 13 only
 60 mm - 6 x 13 only

TECHO—BLOC



SEGMENTAL PERMEABLE PAVEMENT SOLUTIONS

INDUSTRIAL, COMMERCIAL, INSTITUTIONAL & RESIDENTIAL



1. Introduction

One of the direct consequences of urban development is an increase in impervious surface area. Over the years, vast areas that used to be covered by vegetation and natural permeable surfaces have been replaced by parking lots, streets and roofs, disrupting the natural process of water infiltration into the soil. One of the effects of this urbanization is increased runoff and flow during precipitation.

The higher flow and rising water levels in storm sewer pipe systems and streams can cause problems including flooding, erosion, sedimentation and pollution. In addition, with global warming, the frequency of events involving heavy rains and accelerated snowmelt is more pronounced. It is therefore important to rapidly seek new solutions.

TECHO-BLOC permeable pavement systems reduce the volume of water directed to municipal systems and, as such, are viable solutions for better stormwater management. Segmental permeable pavement systems reduce runoff and improve the quality of water returning to the environment. Water seeps through the paving stone joints and is then directed into the ground, or stored temporarily in the base/subbase structure.

The U.S. Environmental Protection Agency (EPA) recognizes segmentable permeable pavements as a best management practice for stormwater and as a low impact development (LID) practice.

TECHO-BLOC is a company dedicated to the development and innovation of new green products to support sustainable development.

2. Operating principle

The role of a segmental permeable pavement system is to allow water from precipitation to pass through the paving stones joints and seep into the ground naturally or to be retained in the base/subbase structure rather than turning into runoff headed directly into the sewer system.

The base/subbase structure consists of a washed, angular, open-graded stone that can collect and store water for some time. The water can then seep into the ground in a more natural process.

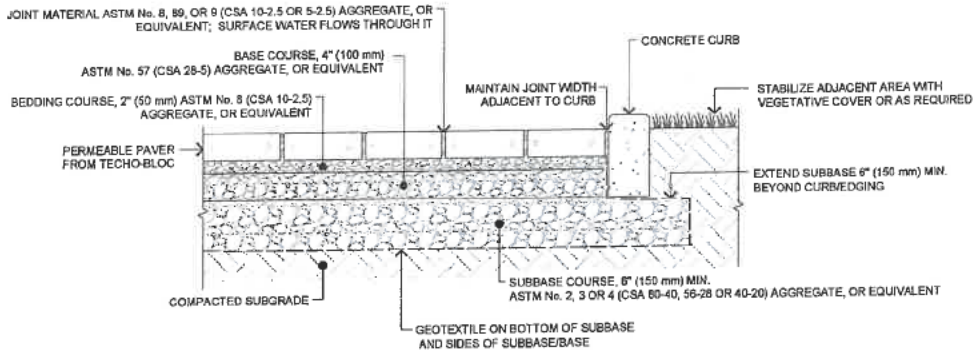
In instances where soil permeability is insufficient, the water is intercepted by a network of perforated drain pipes before being routed to the drainage system; in this case, the system acts primarily as an underground reservoir.

The system is designed to promote water detention and infiltration. Three types of systems are used, depending on soil permeability:

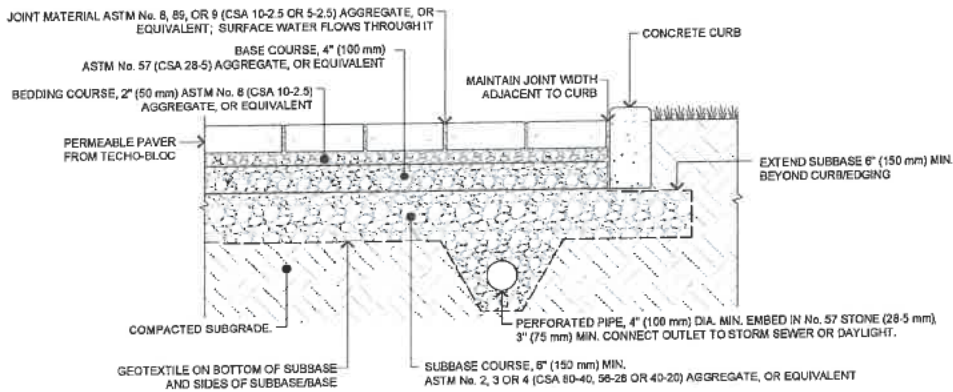


Installation guide

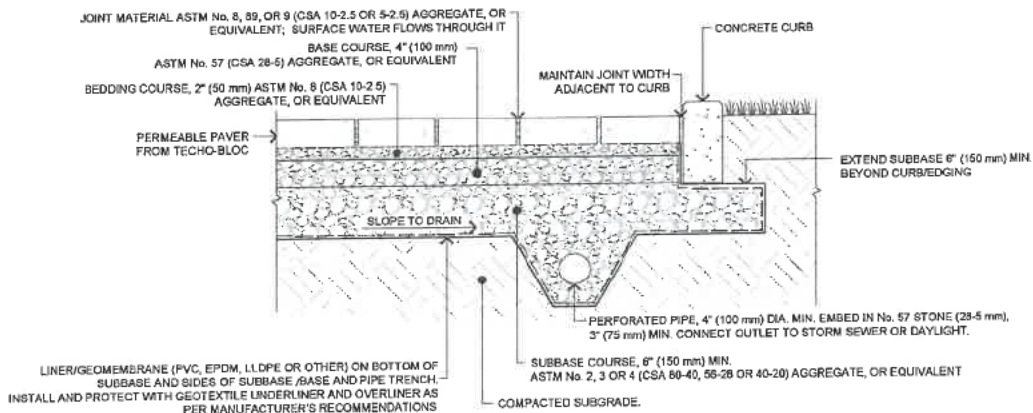
PERMEABLE PAVER - FULL INFILTRATION TO SOIL SUBGRADE



PERMEABLE PAVER - PARTIAL INFILTRATION TO SOIL SUBGRADE

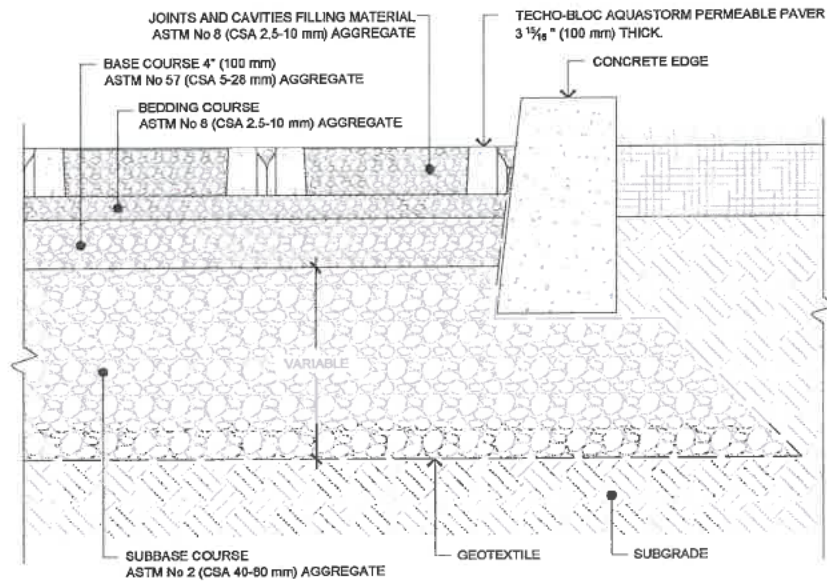


PERMEABLE PAVER - NO INFILTRATION TO SOIL SUBGRADE

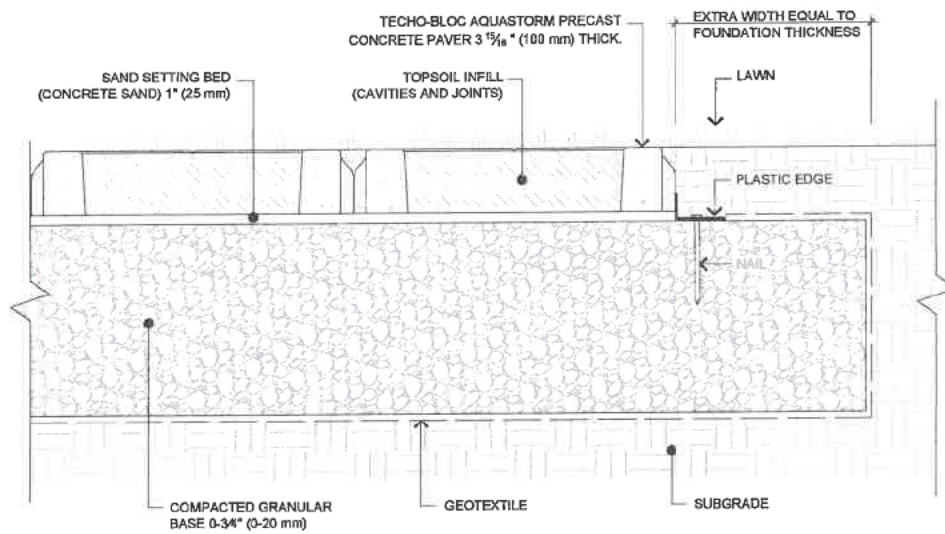


Installation guide

CONCRETE GRID PAVER - AQUASTORM (AGGREGATE INFILL)



CONCRETE GRID PAVER - AQUASTORM (GRASS INFILL)



3. Benefits of segmental permeable pavement systems

- > Reduce the construction of additional impervious surfaces
- > Contribute to maintaining hydrologic conditions that existed prior to development
- > Reduce runoff volume
- > Reduce peak flow (discharge to sewer is spread over a longer period)
- > Reduce network overload
- > Reduce wastewater treatment costs
- > Reduce the need for expensive underground retention basins and surface retention ponds
- > Use in confined spaces in existing areas requiring additional stormwater management
- > Reduce potential risk of erosion and flooding associated with increased runoff rates and volumes
- > Improve water quality
- > Contribute to replenishing the water table
- > Reduce heat island effects (light color, high solar reflectance index, cools and humidifies surrounding air)
- > Gain credits for LEED certification
- > Improve the aesthetic quality of urban landscape

Percentage of pollutant removal by segmental permeable pavement systems¹

POLLUTANT	AVERAGE (%)
Total suspended solids	81
Total phosphorus	53
Total Kjeldahl nitrogen	53
Total copper	13
Total zinc	72

¹ Van Seters, T., Performance Evaluation of Permeable Pavement and Bioretention Swale Seneca College, King City, Ontario, Interim Report #3, Toronto and Region Conservation Authority, Downsview, Ontario, May, 2007.

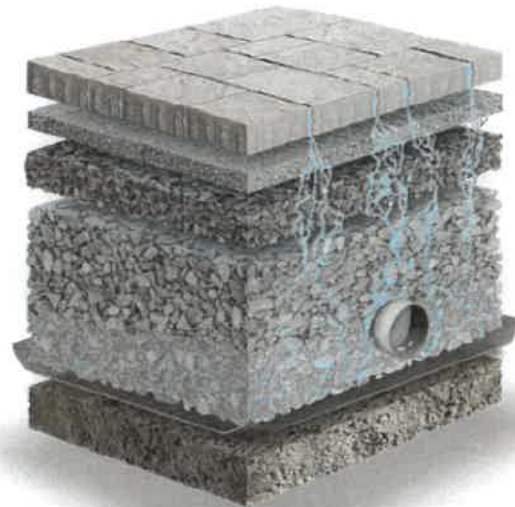
4. Improved water quality

When it rains, water runoff takes on pollutants (suspended solids, nutrients, heavy metals and other contaminants) that are then directed to the municipal network before ending up in the waterways.

Pollutants carried by runoff have a significant impact on water quality, affecting the water supply, fish and wildlife habitat, recreational usage and aesthetic aspects.

Segmental permeable pavements are known for their high pollutant removal potential, which contributes to improving water quality. Pollutants are reduced mainly by infiltration, and through several other processes. The segmental permeable pavement system is effective for removing sediment, nutrients and heavy metals. Several studies have also shown potential for bacterial treatment of oils.

The data shown in the table below was measured on King Campus at Seneca College in King City, Ontario. The Interlocking Concrete Pavement Institute presents several data from the various sites that show lower levels of pollutants where permeable pavers were used.



To better understand the differences and benefits of segmental permeable pavement when compared to other paving solutions, go to:

[YOUTUBE.COM/TECHOBLOC](https://www.youtube.com/techobloc)

Search for keyword "Permeable"

5. Techo-Bloc segmental permeable pavement systems

TECHO-BLOC permeable pavements are an alternative to traditional impervious cover. They reduce stormwater runoff to sewer systems by promoting water detention and infiltration. They are an effective way to control stormwater at source on residential, commercial and industrial lots. They can also minimize the need to build larger sewer systems downstream of vacant lots being developed in an existing urbanized sector.

The segmental permeable pavement system is the type that has been the most successful among the various types of permeable paving available today. It can be used successfully in a winter climate and is less prone to clogging compared to pervious concrete or porous asphalt.

TECHO-BLOC pavers and slabs exceed the requirements of ASTM C936, CSA A231.2 and CSA A231.1 standards.

		ASTM C936	CSA 231.2	
PAVERS	Compressive strength	8000 psi (55 MPa) min.	50 MPa (min)	
	Resistance to freezing and thawing	Loss of mass after 28 cycles, or	225 g/m ²	
		Loss of mass after 49 cycles	500 g/m ²	
	Water absorption	Max. 5 %	-	
	Dimensional tolerances	Length and width	± 1/16" (1.6 mm)	-1 mm to +2 mm
Height		± 1/8" (3.2 mm)	± 3 mm	
		ASTM C1782	CSA A231.1	
SLABS	Modulus of rupture	725 psi [5 MPa]	5.0 MPa (min)	
	Resistance to freezing and thawing	Loss of mass after 28 cycles, or	225 g/m ²	
		Loss of mass after 49 cycles	500 g/m ²	
	Dimensional tolerances	Units up to and including 24 in. [610 mm]	Length & Width: -0.04 in. [1 mm] to +0.08 [2 mm]	Length and width: -1 mm to +2 mm Height: ± 3 mm
			Thickness: ± 0.12 in. [3 mm]	
		Units over 24 in. [610 mm]	Length & Width: -0.06 in. [1.5 mm] to +0.12 [3 mm] Thickness: ± 0.12 in. [3 mm]	
Warpage		± 0.08 in. [2 mm] Dimension of 17.75 in. [450 mm] and less ± 0.12 in. [3 mm] Dimension over 17.75 in. [450 mm]	Dimension up to and including 450 mm : ± 2 mm Dimension Over 450 mm: ± 3 mm	

On a path with no obstacles, walkways should not have any gaps allowing the passage of a sphere greater than 1/2" (13 mm) in diameter. The openings of the permeable paver joints are filled with clean stone and thus comply with ADA Standard for Accessible Design.

PERMEABLE PAVERS	PERCENT OF SURFACE OPENING (%)	JOINT WIDTH (mm)	INFILTRATION RATE ¹ (mm/hr)	JOINT FILL MATERIAL
ANTIKA ²	Variable	Variable	993 in./hr (25 227 mm/hr)	ASTM No. 8 (CSA 2.5 - 10) (1/4")
AQUASTORM ²	38.4	1 1/4" (41 mm)	2,395 in./hr (60,833 mm/hr)	ASTM No. 8 (CSA 2.5 - 10) (1/4")
			1,418.7 in./hr (36,035 mm/hr)	ASTM No. 9 (CSA 2.5 - 5) (1/8")
			1,647.1 in./hr (41,836 mm/hr)	Synthetic Turf
			1,535.2 in./hr (38,994 mm/hr)	Natural Turf (Sod/Grass)
BLU 80 mm ²	3.0	3/32" (7 mm)	570 in./hr (14 475 mm/hr)	ASTM No. 9 (CSA 2.5 - 5) (1/8")
BLU 80 mm (6x13) ²	4.6	3/32" (7 mm)	570 in./hr (14 475 mm/hr)	ASTM No. 9 (CSA 2.5 - 5) (1/8")
HYDRA ¹	8.3	1/2" (13 mm)	605 in./hr (15 345 mm/hr)	ASTM No. 8 (CSA 2.5 - 10) (1/4")
MIKA ²	7.8	5/8" (15 mm)	909 in./hr (23 094 mm/hr)	ASTM No. 8 (CSA 2.5 - 10) (1/4")
MISTA RANDOM ¹	6.3	3/16" (4 mm) to 3/8" (14 mm)	610 in./hr (15 505 mm/hr)	ASTM No. 9 (CSA 2.5 - 5) (1/8")
PURE ²	5.0	3/8" (10 mm)	726 in./hr (18 440 mm/hr)	ASTM No. 9 (CSA 2.5 - 5) (1/8")
TRAVERTINA RAW ²	7.8	5/8" (15 mm)	793 in./hr (20 150 mm/hr)	ASTM No. 8 (CSA 2.5 - 10) (1/4")
VALET ²	5.9	3/32" (7 mm)	400 in./hr (10 160 mm/hr)	ASTM No. 9 (CSA 2.5 - 5) (1/8")
VILLAGIO ¹	8.0	3/8" (9 mm) to 3/16" (15 mm)	896 in./hr (22 750 mm/hr)	ASTM No. 8 (CSA 2.5 - 10) (1/4")
PERMEABLE SLABS	PERCENT OF SURFACE OPENING (%)	JOINT WIDTH (mm)	INFILTRATION RATE ¹ (mm/hr)	JOINT FILL MATERIAL
BLU 60 mm ²	3.0	3/32" (7 mm)	570 in./hr (14 475 mm/hr)	ASTM No. 9 (CSA 2.5 - 5) (1/8")
BLU 60 mm (6 x 13) ²	4.6	3/32" (7 mm)	570 in./hr (14 475 mm/hr)	ASTM No. 9 (CSA 2.5 - 5) (1/8")

¹ Measurements were taken at various sites in conformity to the standard ASTM C 1701-09.

² Measurements were taken at various sites in conformity to the standard ASTM C 1781.

6. Design criteria

The design of a permeable paving system is based on site conditions, including, without limitation, rainfall data, topography, soil characteristics, the height of the water table and bedrock surface, tributary runoff surface and proximity to water supply wells.

The main factors to be considered are:

- Soil infiltration rate should be at least 0.49 in./hr (12.5 mm/hr) where the system is designed for complete infiltration.
- The underside of the system must be at least 2' (0.6 m) above the water table and bedrock.
- The permeable pavement system should be located at a distance of at least 98' (30 m) from water supply wells.
- The paved surface must have a grade of at least 1% and most preferably not more than 5%. The slope of tributary runoff area should not be greater than 20%.
- The ratio between the tributary runoff area and the permeable pavement area should not exceed 5 to 1.
- The void space of the clean stone composing the base and subbase should be no less than 32%, but preferably 40%.
- The percolation rate measured in situ should be understated by at least 2 to account for the long-term reduction of the soil's absorption capacity.
- A maximum drain time of 48 hours is recommended. In situations where rainfall is greater than the design flow rate, an overflow system directs runoff to the drainage network.

7. LEED credits

The U.S. Green Building Council (USGBC) is a non-profit organization promoting the implementation of sustainable projects through the Leadership in Energy and Environmental Design (LEED®) certification program. TECHO-BLOC permeable pavement solutions can directly contribute to obtaining LEED credits in the following categories:

SUSTAINABLE SITES			
CREDIT 6.1	STORMWATER MANAGEMENT	Quantity Control	1 POINT
CREDIT 6.2	STORMWATER MANAGEMENT	Quantity Control	1 POINT
CREDIT 7.1	HEAT ISLAND EFFECT	Non-roof	1 POINT
MATERIALS AND RESOURCES			
CREDIT 5.1	REGIONAL MATERIALS	10% Extracted, Processed and Manufactured Regionally	1 POINT
CREDIT 5.2	REGIONAL MATERIALS	20% Extracted, Processed and Manufactured Regionally	1 POINT (in addition to Credit 5.1)

TECHO-BLOC permeable pavements can contribute to obtaining up to 3 points in the Sustainable Sites category and up to 2 points in the Materials & Resources category.

LEGEND

 TECHO-BLOC COLLECTION PRODUCTS	 DE-ICING SALT RESISTANT	 USE VIBRATING PLATE	 PERMEABLE PAVERS	 PARKING LOTS
 STONEDGE COLLECTION PRODUCTS	 DO NOT USE DE-ICING SALT	 DO NOT USE VIBRATING PLATE	 HIGH DEFINITION & DENSITY	 ADA / ACCESSIBILITY COMPLIANCE
 PEDESTRIAN	 RESIDENTIAL / VEHICULAR	 PEDESTRIAN PLAZA	 HIGH DEFINITION & DENSITY +	
 SECONDARY STREETS	 MAIN STREETS	 MECHANICAL INSTALLATION	 KLEAN-BLOC	

8. FAQ

1. For what type of traffic can segmental permeable pavement be used?

In general, segmental permeable pavements are suitable for use in low speed areas not exposed to heavy vehicles, such as parking areas, driveways, bike paths, walking paths, patios and playgrounds.

However, TECHO-BLOC's Hydra system is designed for applications in larger areas with higher traffic, such as residential streets, parking lanes, storage areas and sidewalks.

2. How much water can be absorbed by a permeable pavement system?

The absorption capacity of the system is based on the infiltration rate of the soil on the site and the clean stone materials (joints, bedding, base and subbase). The soil infiltration rate is an indicator of potential water infiltration directly into the soil and determines the type of system design (complete or partial infiltration). The materials used in the construction of permeable pavements have higher infiltration rates than natural soil. The initial surface infiltration rate of the segmental permeable pavements is very high. The system allows the infiltration of precipitation with intensity lower than the surface infiltration rate or until the water storage capacity in the clean stone reservoir is reached. In a well-designed system, water storage capacity is rarely reached.

3. Can the segmental permeable pavement system perform well in a winter climate?

Yes, in order to ensure their performance in winter weather, TECHO-BLOC permeable pavement products are manufactured to meet, in addition to ASTM C936, CSA A231.2-06 requirements for withstanding freezing and thawing with de-icing salt. Experience with segmental permeable pavements in cold climates has demonstrated the absence of heaving. A maximum drain time of 48 hours is recommended and the water that may have accumulated in the clean stone reservoir should be evacuated within this time frame. The insulating factor of the air found in the system greatly reduces the frequency of freezing. However, in the event that water freezes before it is evacuated, the space between reservoir aggregates allows sufficient room to accommodate the expansion caused by freezing water and the risk of heaving is thereby minimized. Ultimately, the segmental permeable pavement system is flexible enough to tolerate minor movements.

4. What kind of maintenance is recommended for the segmental permeable pavement?

Regular cleaning will help maintain a high enough surface infiltration rate to allow rainwater to soak through the joints. At least one inspection and cleaning should be performed during the first year of service and thereafter as required. Cleaning is recommended when the surface infiltration rate is less than 9.8 in./hr (250 mm/hr), or 99%. Cleaning can be done with a vacuum adjusted to minimize the removal of joint filling material. In winter, snow removal can be done as for any other type of paving, but it is still recommended that snow removal blades be covered with a protective coating and raised 1" (25 mm). Segmental permeable pavements require less de-icing material than conventional pavement. Since melted water does not accumulate, it will not re-freeze on the surface. It is not recommended to spread sand for traction, as this may clog the joints; instead, spread the same aggregate used for filling joints.

TECHO—BLOC

INSPIRING ARTSCAPES



USA

DETROIT

2210 Scott Lake Rd.
Waterford, MI 48328

ILLINOIS

8201 31st St. W
Rock Island, IL 61201

ILLINOIS

24312 W. Riverside Dr.
Channahon, IL 60410

INDIANA

2397 County Rd 27
Waterloo, IN 46793

MARYLAND

6710 Binder Ln.
Elkridge, MD 21075

MASSACHUSETTS

70 East Brookfield Rd.
North Brookfield,
MA 01535

MINNESOTA

4372 170th St. W
Farmington, MN 55024

NASHVILLE

160 Center Point Rd. S
Hendersonville, TN 37075

NEW YORK

55-65 South 4th St.
Bay Shore, NY 11706

NORTH CAROLINA

5135 Surrett Dr.
Archdale, NC 27263

OHIO

97 Industrial St.
Rittman, OH 44270

PENNSYLVANIA

852 W. Pennsylvania Ave.
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PENNSYLVANIA

23 Quarry Rd.
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MONTREAL

5255 Albert-Millichamp St.
Saint-Hubert, QC J3Y 8Z8

CHAMBLY

7800 Samuel-Hatt St.
Chambly, QC J3L 6W4

OTTAWA

581 Somme St.
Gloucester, ON K1G 3Y3

TORONTO

10 Freshway Dr.
Vaughan, ON L4K 1S3

TORONTO

1050 Industrial Rd.
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VISIT OUR WEBSITE:
WWW.TECHO-BLOC.COM

PROUD MEMBER OF



JAN 26 2023

PERMIT # 2023-05



TOWN OF TRURO

Conservation Commission

PAID
CC
\$20.00

24 Town Hall Road
P.O. Box 2030, Truro MA 02666

APPLICATION FOR ADMINISTRATIVE REVIEW PERMIT

PERMIT FEE \$20

Applicant Name: [redacted] Telephone: [redacted]

Email address: [redacted]

Owner Name: Shoreline Beach Condo Association Telephone: [redacted]

(If the applicant is not the owner of the property, written consent to the work MUST be attached to this Application.)

Address of subject property: 556 Shore Road, Truro MA Map: 6 Parcel: 6

Description of proposed work: Replace recently destroyed snow fence and planting.
Details and map attached.

Proximity to Resource Areas: 100

CRITERIA FOR ADMINISTRATIVE REVIEW (AR) PERMITS

Vegetation Projects:

- No removal of vegetation within any inland or coastal wetland resource.
- No uprooting of vegetation.
- No mowing to the ground or clear cutting.
- Any proposed tree removal is demonstrated to be necessary, e.g., to protect existing structures, public safety, traffic visibility, etc.
- Mitigation may be required, i.e., an area to be planted with native species of trees or shrubs.
- Trees for removal must be tagged for inspection.
- No excavation by machinery is required or proposed.

Sheds and Other Construction Projects:

- No construction *within* any wetland resource except for minimal projects with the consent of the Conservation Agent.
- Any proposed new construction is more than 50' from the edge of resource area.
- No excavation by machinery is required or proposed.
- Foundation for structure shall be concrete blocks, sono tubes, diamond piers
- Repairs or replacement of existing structures remain within the same footprint.
- New structures must be less than 160 square feet.
- Only minimal projects such as biomimicry, sand nourishment, beach grass and planting of native species shall be allowed under this permit

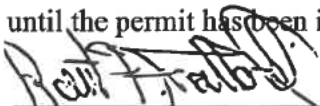
Procedure:

- The fee shall be submitted with the Administrative Review Application.
- The Agent shall conduct a site visit, at which time the proposed project must be clearly defined in the field with stakes. Trees shall be flagged.

90-day request b/c of planting requirements.

- If the Agent determines that all of the conditions of this Policy are met, the Agent may approve the Application. If the conditions of this policy are not met; the application is incomplete; or the field ID is inadequate the application is denied.
- **If the Agent approves the application, such approval must be ratified by the Truro Conservation Commission prior to the issuance of this permit and prior to the commencement of any work.**
- Any Property Owner, contractor or other agent of the owner performing any work pursuant to an Administrative Review permit shall have a copy of the permit available at the site at all times during the period that the work is being performed.
- Upon approval and ratification by the Commission, an Administrative Permit shall issue.
- The applicant shall notify the Commission prior to the start of the work, and must complete the work within thirty (30) days of issuance of the permit, unless otherwise permitted by the Commission.
- The Conservation Agent shall inspect the property to verify that the work completed is within the scope of the Approved Application.
- Any work beyond the scope of the approved Administrative Review shall be subject to enforcement action.
- NOTE: Use of town property for beach access or staging of construction materials requires a permit issued by the Board of Selectmen.

By signing this permit application, you are acknowledging that you have read and understand the terms as stated herein. You are also aware that no work shall go forward until the permit has been issued by the Conservation Commission.

 1-25-23
 (Signature of Applicant) (Date)

FOR OFFICE USE ONLY
 Agent's Comments 90 day request b/c of planting seasons.

Site Inspection Date: 1/30/2023 Application Approved: Yes No

Conservation Commission Review: Meeting Date: _____ Permit Approved: Yes No
 Conditions: _____

Signature of Commission Chair or Agent: _____ Date: _____



20' of fence to discourage foot

Shoreline Beach Condos

Shore Rd

The following is a proposal to replace a snow fence that was recently washed away behind the Shoreline Condominium complex at 556 Shore Road. This plan includes installing fence and planting vegetation to protect the existing dune. This plan was developed in consultation with Emily Bebee following a site visit. It was submitted and approved by the commission in September of 2021. The fence was installed in March of 2022 and destroyed in December of 2022. The condo owners are in discussion with Crawford Land Management, who installed the last fence, to design more robust protection possibly including a sturdy drift fence. Until that can be accomplished we'd like to replace the protection we recently lost.

With the approval of the commission we would install 275' of snow fence on the bay side of the dune. This fence would continue a line of snow fence established by the property to the immediate north of the Shoreline complex. This new fence would be interrupted at three locations to allow access to the beach. Each access point would be approximately 6' wide and would be bordered with fence. Each access way will be on an angle to the beach and include an elbow along the path.

An additional 30' length of snow fence will be erected on the south end of the property 10' back from the top of the dune. This fence is to discourage foot traffic from an adjacent property and to encourage stability on this part of the dune.

Further, a line of half-size snow fence will be erected along the interior edge of the dune at the south of the property. This length of fence is to both discourage foot traffic and allow for the return of threatened vegetation.

This entire length of the dune will be planted with beach grass.



**TOWN OF TRURO
CONSERVATION COMMISSION**
P.O. Box 2030
Truro MA 02666-0630

Conservation Commission Meeting Minutes: April 14, 2022

**Herring River Restoration Hearing
Joint Meeting with Wellfleet Conservation Commission**

Commissioners Present: Chair Commissioner Carol Girard-Irwin, Vice Chair Commissioner Linda Noons-Rose Commissioners Bob White, Larry Lown, Mark Adams & Diane Messinger **Wellfleet Conservation Commission Members Present:** Chair Commissioner Leon Shreves; John Cumbler, Barbara Brennessel, Michael Fisher, Martin Murphy **Others Present:** Emily Beebe, Truro Conservation Agent; Hillary Lemos, Wellfleet Conservation Agent

This was a remote meeting.

Chair Shreves and Chair Girard-Irwin both called the meeting to order at 7:01pm

Town of Wellfleet and Cape Cod National Seashore:

575 Old Chequessett Neck Rd, Map 19 Parcel 6; 1000 Old County Rd., Map 2, Parcel 3; 360 Cole's Neck Rd, Map 7, Parcel 27; 370 Coles Neck Rd, Map 7, Parcel 28; 0 Cole's Neck Rd, Map 7, Parcel 48; 0 Bound Brook Island Rd, Map 7, Parcel 49; 0 Bound Brook Island Rd, Map 7, Parcel 50; 0 Bound Brook Island Rd, Map 7, Parcel 51; 0 Cole's Neck Rd, Map 7, Parcel 51-1; 0 Bound Brook Island Rd, Map 7, Parcel 52; 0 Bound Brook Island Rd, Map 7, Parcel 53; 0 Pole Dike Rd, Map 7, Parcel 54; 339 Cole's Neck Rd, Map 7, Parcel 56-1; 0 Cole's Neck Rd, Map 7, Parcel 62; 0 Cole's Neck Rd, Parcel 7, Parcel 63; 0 Pole Dike Rd, Map 7, Parcel 65; 1136 Brown's Neck Rd, Map 7, Parcel 69; 0 Pole Dike Rd, Map 7, Parcel 76; 1200 Bound Brook Island Rd, Map 7, Parcel 602; 730 Bound Brook Island Rd, Map 6, Parcel 4; 695 Bound Brook Island Rd, Map 6, Parcel 6; 145 Pole Dike Rd., Map 12, Parcel 224; 25 Way #672, Map 12, Parcel 235; 27 Way #672, Parcel 12, Parcel 235-1; 680 Chequessett Neck Rd., Map 19, Parcel 81-0; 133 Old County Rd, Map 59, Parcel 66 (Truro); 125 A Old County Rd, Map 59, Parcel 108 (Truro). Various federally owned parcels within the Cape Cod National Seashore are shown on plans.

Ms. Lemos stated that everyone in the Zoom meeting would be muted since there were many people participating; people should please use the "raise hand" button for any questions or concerns.

Ms. Wall spoke to the group about the permits needed and explained to the Commissions that this is the last major permit that the Herring River Restoration Project needs to move this project forward. She spoke about the project as an Ecological Restoration Limited Project (ERLP) which is designed to restore an estuary that has been impacted by

manmade influences over the past one hundred years. She gave more details about the project and the magnitude of the project's benefits.

Ms. Wall introduced Ms. Reinhart, who has been involved in this project for many years. Ms. Reinhart spoke to the Commissions and stated that this project is a major improvement for the surrounding waters. She gave some background on the Herring River and the negative impacts on it over the years. She then stated the benefits from restoring this area, giving some examples of improvement concerning wildlife, sea level rise, and shellfishing. She continued by listing the many agencies that are supportive of this project, thanking in particular the National Seashore, the Truro Conservation Commission, The Friends of Herring River, and the Wellfleet Conservation Commission.

Cape Cod National Seashore Superintendent Brian Carlstrom spoke to the Commissions next, and thanked everyone involved. He spoke about the major benefits of this project, especially improving the river's water quality. He described the positive impacts of this project from the Seashore's perspective, stating that this is the largest current estuary restoration project in the Northeast.

Carole Ridley, consultant for the Friends of the Herring River shared her screen. She explained the Notice of Intent and how the hearing process will work. She spoke about the extensive commitment from the Towns of Wellfleet and Truro, the National Seashore, the Friends of Herring River, the Division of Ecological Restoration, the United States Department of Agriculture, the United States Fish and Wildlife Services, and NOAA. She explained that because of these groups, this project is able to move forward. She continued by explaining that the project seeks to address decades of severe degradation caused by tidal restrictions. She explained the phases of the project. In particular, she discussed Phase 1, which will restore over 500 acres of salt marsh. She stated that there will be a full restoration of the saltmarsh that had been lost due to tidal restriction. She explained the plans to restore the marsh by controlling the tidal flow by movable tide gates. She gave some examples of the wildlife that needs saltmarsh to survive. She explained that a portion of the Chequessett Neck Dike will be removed and the benefit to the towns. She spoke about the implementation guidance from the government. Ms. Ridley's slides presented the project's adaptive management process, year by year. She finished her presentation by discussing the licenses and permits the Towns need to consider and approve, and explained the specific procedures that the Commissions need to follow. She stated that the last permitting bodies in the process are the Truro and Wellfleet Conservation Commissions. Ridley continued explaining the ERLP provisions, the significant benefits to protected interests of WPA, including restoring the wetland habitats and reopening shellfish beds for farming and recreational shellfishing. Her final slide was a summary of the 5 steps that are needed to get this achieved.

The meeting moved on to questions and answers.

Ms. Lemos read the names of the people who had submitted letters to the Truro and Wellfleet Conservation Commissions and stated that these letters would be available to the public if they request a copy. There were over 30 letters in support of this project, including the state elected officials and department heads. Among these, Ms. Lemos read

the letters from State Representative Sarah Peake and State Senator Julian Cyr, both in support of the project.

Mr. Mumford stated that he represents the Board of the Friends of the National Seashore, stating he wanted to reiterate the Board's support for this project.

Mr. Safir questioned the effects of the project on the over wash at Duck Harbor. Ms. Ridley stated that there will be better draining of saltwater over wash from that area.

Mr. McLaughlin thanked everyone for their efforts in advancing this project. He stated the CYCC will continue to be a supportive partner throughout this project.

Mr. Bow from the Truro Conservation Trust commended Ms. Ridley on her slideshow presentation. He stated that he lives in Truro and asked about the start time for Phase 1. Ms. Ridley stated they are hoping to begin construction with the Chequessett Neck Bridge at the end of 2022 and the next year will begin the golf course reconstruction, hoping to start in 2023, and then the fill of low-lying areas to begin in 2024. She stated this all depends on funding and permits.

Ms. Craig read a letter submitted by an affected small property owner stating her support for the project.

Mr. Burke spoke about the slide show bullets that referred to the quality of ground water. He asked what happens if, after Phase 1 is over, there is salt water in the aquifer with negative effects on private wells. Ms. Ridley explained that there have been extensive modeling studies done and from those findings that is highly unlikely to happen. She stated the project has sent letters to those who might be affected, and if landowners have not received a letter, the chances are very low of their land being impacted.

Ms. Myers asked if the project could be started if all the funding had not yet been received or granted for the project. Ms. Ridley stated that yes, the project could begin.

Ms. Fleming stated that she is supportive of the project as it aligns with her company's mission.

Mr. Carlstrom gave some details on how this project is benefitting the Seashore.

Mr. Peabody spoke in support of the project but reiterated that the project does need to go slow and is monitored closely in case something does go wrong.

Chair Shreves Moved; Fisher Seconded; and it was voted for the Wellfleet Conservation Commission to continue the hearing until May 4, 2022, at 5pm; Vote: 5-0-1

Chair Girard-Irwin Moved to continue the hearing for Truro Conservation Commission to May 2, 2022; Commission Member White Seconded; Roll Call Vote: 5-0

Chair Shreves Moved; Board Member Fisher Seconded; and it was voted to adjourn for the Wellfleet Conservation Commission; Roll Call Vote: 5-0-1

Chair Girard-Irwin Moved to adjourn; Commission Member White Seconded; roll call vote: 5-0

Meeting Adjourned at 6:50 pm

Minutes produced by Truro Conservation Department