



AMENDED
Truro Planning Board Agenda
Remote Zoom Meeting
Wednesday, January 24, 2024 – 5:00 pm
www.truro-ma.gov

Join the meeting from your computer, tablet or smartphone:

<https://us02web.zoom.us/j/89244245081>

Dial in: +1-646-931-3860 or +1-305-224-1968

Meeting ID: 892 4424 5081 Passcode: 228541

Open Meeting

This will be a remote public meeting. Citizens can view the meeting on Channel 8 in Truro and on the web on the "Truro TV Channel 8" button under "Helpful Links" on the homepage of the Town of Truro website (www.truro-ma.gov). Click on the green "Watch" button in the upper right corner of the page. Please note that there may be a slight delay (approx. 15-30 seconds) between the meeting and the television broadcast/live stream.

Citizens can join the meeting to listen and provide public comment by entering the meeting link; clicking on the agenda's highlighted link; clicking on the meeting date in the Event Calendar; or by calling in toll free. Citizens will be muted upon entering the meeting until the public comment portion of the hearing. If you are joining the meeting while watching the television broadcast/live stream, please lower or mute the volume on your computer or television during public comment so that you may be heard clearly. Citizens may also provide written comment via postal mail or by emailing Liz Sturdy, Planning Department Assistant, at esturdy@truro-ma.gov.

Public Comment Period

The Commonwealth's Open Meeting Law limits any discussion by members of the Board of an issue raised to whether that issue should be placed on a future agenda. Speakers are limited to no more than 5 minutes.

Board Action/Review

- ◆ **2023-002/PB Preliminary Subdivision** – 9B Benson Road, Fisher Road Realty Trust, Gloria J. Cater and Willie J. Cater, Trustees

1. **Planner Report**
2. **Chair Report**

Board Action/Review

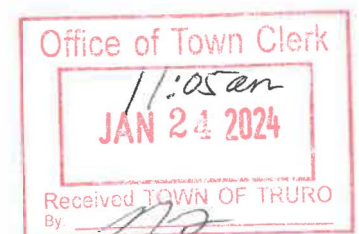
- ◆ Patricia Callinan and Marie Belding, as Trustees of the Belding-Callinan Revocable Trust v Truro Planning Board, Land Court Case #23MISC000618 (DRR), discussion and potential vote

Board Discussion

- ◆ Zoning Task Force
- ◆ Planning Board priorities for possible 2024 ATM zoning bylaw changes
 - Affordable Housing on Undersized Lots
 - Mean Grade, Building Height, Roof Slope
 - Street Inventory
 - Lot Clearing
 - Exhibit A – example: 70 North Pamet Road
 - Lot Coverage

Next Meeting: Wednesday, February 7, 2024 at 5:00 pm

Adjourn



STAFF MEMORANDUM

To: Truro Planning Board

From: Barbara Carboni, Town Planner and Land Use Counsel

Date: January 23, 2024

Re: Meeting January 24, 2023

Board Action:

Preliminary Subdivision Plan, 9B Benson Road, Fisher Road Realty Trust, Gloria J. Cater and Willie J. Cater, Trustees

Preliminary Subdivision Plans

This Preliminary Subdivision Plan has been filed pursuant to G.L. c. 41, s.81S. Unlike a Definitive Subdivision Plan filed under G.L. c. 81, s. 81T, a Preliminary Plan, even if approved, cannot be filed in the Registry of Deeds. An approved Preliminary Plan freezes zoning and thereby preserves the owner's rights in the event of a zoning change, but provides no other legal right to the owner. The denial of a Preliminary Plan is not appealable.

Typically, a Preliminary Plan would be filed, approved or disapproved without great depth of inquiry, followed by a the filing of a Definitive Plan, at which point the Planning Board would review the proposal in depth. In fact, G.L. c. 81S provides that "the provisions of the subdivision control law relating to a plan shall not be applicable to a preliminary plan." However, the proposal in this case is not typical, due to its legal history; the interests of other property owners and other factors. For this reason, counsel for the applicant and I agreed that it would be beneficial to "frontload" issues that would arise in the Definitive Plan process for the Board's consideration. This process will also serve to inform the applicant in preparing a Definitive Plan for submission.

(Abbreviated) Legal History and Land Court Decision

The 9B Benson Road property does not have frontage on Benson Road or other way.¹ Through litigation in Land Court, the owners obtained the right to access their property by easement from Benson Road over properties owned by Clark (7 Benson Road); Loffredo/Hershkoff (9 Benson Road); and the Truro Conservation Trust (9A Benson Road). While ruling on the Caters' property rights, the Land Court decision did not (and could not) provide the *regulatory* approval needed to construct a roadway within the easement area. The Land Court set a limit of 12 feet width for the finished surface of the roadway, while acknowledging that the

¹ A frontage variance was granted by the ZBA in April 2017 to allow for access to the parcel for construction of one single family home. However, the variance expired after three years.

Town's Subdivision Regulations provide for a minimum width of 14 feet. The Court also noted the Town's finished grade requirements and potential need for waivers.

Noting that G.L. c. 81R allows a Planning Board to grant waivers from Subdivision Regulations, the Land Court stated that "the Caters will have the responsibility to seek waivers and other approvals needed to bring into reality the roadway authorized by the judgment." Cater v. Bednarek, 2013 WL 431342 (Land Court, 2013). That direction is what brings the Caters to the Planning Board with this Preliminary Plan - and, ultimately, with a Definitive Plan. The Board is not *obliged* by the Court's decision to grant any requested waivers, but it may not refuse to consider them. The Land Court decision provides that if the Caters "ultimately cannot secure the waivers required, they will be permitted to return to th[e Land] court to seek modifications of the judgment."

Board Review

The point of explaining the Land Court decision above is to help clarify the scope of the Board's review. Despite the unusual history of this project and multiple parties whose properties are affected, the Board should treat this application in the same way it would any other proposed subdivision, asking: 1) does the proposal comply with the Town's Subdivision Rules and Regulations; and 2) if it does not, may waivers be granted under Section 1.5 of the Rules. This section provides that:

"Strict compliance with the requirements of these Rules and Regulations may be waived when, in the judgment of the Board, such action is in the public interest and not inconsistent with the purpose and intent of the Subdivision Control Law. In waiving strict compliance, the Board may impose such alternative conditions as will serve substantially the same objective as the standards or rules waived. . . .

Section 1.5 (partial). As noted above, Preliminary Plans are not recorded, and do not provide the property owner with any rights (other than a zoning freeze). However, the Board's review and consideration of waivers in this case will give the applicant and project team a sense of how to proceed in preparing a Definitive Plan.

Cape Cod Commission Technical Assistance Memo

The Town requested technical assistance from the Cape Cod Commission in reviewing the application, requesting in particular a comparison of the two roadway options proposed (9% slope and 14% slope). The Commission's Memo advises that the 9% slope is "slightly preferred for a number of reasons" (see p.3). The Memo contains other observations and recommendations with respect to stormwater management; impact on cultural resources; archeological resources; wildlife and plant habitat; and mitigation with respect to the Truro Conservation Trust property.

While the Commission's advice may inform the Board's consideration of potential waivers and conditions, the Board cannot premise a denial of approval on any particular observation or finding in the Technical Assistance memo. The Board's task remains, consistent with the Land Court decision, to determine whether the proposal complies with the Town's Subdivision Rules and Regulation, and if it does not, may waivers be granted under Section 1.5.

3225 MAIN STREET • P.O. BOX 226
BARNSTABLE, MASSACHUSETTS 02630



CAPE COD
COMMISSION

(508) 362-3828 • Fax (508) 362-3136 • www.capecodcommission.org

To: Barbara Carboni
From: Cape Cod Commission Staff
Date: January 23, 2024
Re: 9B Benson Road, Truro – Technical Assistance Request

Cape Cod Commission staff reviewed the subdivision plans and other materials you provided on the proposed roadway access to the 9B Benson Road property. This memo provides staff's observations and recommendations with regard to Cultural and Archaeological Resources, Stormwater Management, Wildlife and Plant Habitat, and Open Space considerations.

Cultural Resources

The 9B Benson Road property is within the Hopper House and Landscape, an area that is significant for its association with the American artist Edward Hopper, his studio, and his numerous paintings of the nearby landscape. The area was determined eligible for listing on the National Register of Historic Places in 2007. At the time, Massachusetts Historical Commission (MHC) staff noted: "these buildings and the landscape in which they sit comprise a potential National Register district of exceptional significance associated with one of the most important American painters of the 20th century."

Commission staff reviewed the proposed access plans for 9B Benson Road in an effort to assess the project's visual impacts on this significant landscape. The altered landform and paved area along the access road are likely to have modest visual impact on the Hopper Landscape when viewed from Hopper's studio but will be more noticeable when viewed from close range. Efforts to limit the footprint of clearing and grading for the access road should limit visual impacts by maintaining more of the natural landscape forms. Plantings may also be helpful in partially screening proposed paved areas and retaining walls within the viewshed.



The greater visual impact on the Hopper Landscape is likely to come from the house design since it will be visible above the natural landforms. Specifically, the elevation of the house site, the house's overall height and scale, and its orientation will determine the size of its silhouette and its visual impact on the landscape. Without a site plan or building elevation drawings to consider, staff suggests that locating the building as far as possible to the north and east of the lot will keep it furthest from the heart of the Hopper Landscape and thus limit its overall visual impact. In addition, siting the building off and partially behind the highest elevation point would better preserve the natural landscape forms and shield some of the structure from the viewshed. Aligning the new house with the adjacent residence to the north could also limit the breadth of intrusions into the undisturbed area of the Hopper Landscape when viewed from the Hopper studio. It is staff's general belief that a smaller building footprint of two stories would have less visual impact than a larger building footprint of a single story, especially if the building incorporates traditional roof forms that undulate like the landscape, and traditional building materials that weather to blend with the natural colors of the vegetation. Given the sensitivity of the landscape, a smaller structure is more likely to have less impact on the landscape's cultural significance.

Archaeological Resources

The project area may be archaeologically sensitive because of its location on a high promontory. To protect archaeological resources, the area of ground disturbance should be limited as much as possible. Requiring an archaeological survey (with an MHC permit) prior to construction and/or archaeological monitoring for unanticipated discoveries during sitework is recommended.

Stormwater Management

There are some discrepancies between the plan view and the associated profile drawings, such as the number of catch basins and leaching pits. It is not clear if the 9% slope plan proposes 2 or 3 leaching pits, but 3 are recommended. There are also inconsistencies between the legend key and the symbols used on the plans. Lastly, key information is missing that is needed to make a confident assessment of the functionality of the stormwater management systems for either of the proposed alternatives, such as drainage calculations and quantity (square feet) of impervious surface.

That aside and in terms of stormwater management the proposed access roadway with a 9% slope is slightly preferred for a number of reasons, but primarily because the slope is less extreme. The alternative with the 14% slope is nearly at the maximum slope considered safe for travel. However, there are several concerns with the 9% alternative as it is proposed.

Regardless of whether the driveway has a slope of 9 or 14%, most of the stormwater runoff will not enter the catch basins that are located on the slope, as it is too steep. Most of the runoff will run over or around the catch basins. Other stormwater management systems could be considered for the steeply sloped section of the driveway that would likely provide better stormwater management. For example, water bars constructed diagonally across the road directing runoff to sheet-flow over the sides of the road (country drainage, no berm) to vegetated swales (possibly also with water bars or ridges) alongside the road. Water bars (or ridges), which act to slow and direct runoff, can be designed in such a way as to allow cars to drive over them.

Alternatively, if berms are required due to the extreme slope of the driveway, water bars or ridges could be used to direct stormwater runoff to the catch basins. It might also be worth considering a trench drainage system at the bottom of the sloped section; or two catch basins on each side of the road (if road is crowned) at the base of the slope (total of 4 catch basins). These may prove to be better options than multiple catch basins located along the extremely sloped section.

The roadway design should also be reviewed by the police and fire department to ensure emergency vehicles can access the property via the designed access roadway. Commission staff also recommend that the Town of Truro hire a Professional Engineer to conduct a peer review of the engineering designs for the proposed roadway and stormwater designs for Hopper's View.

Concerning the removal of invasive species and stormwater management, consider retaining the black locust (*Robinia pseudoacacia*) and especially white poplar (*Populus alba*) trees if they are large and well established on the slopes. Large trees provide bank stabilization and increase precipitation infiltration. White poplar is non-native; however, it is not considered an invasive plant in Massachusetts. And while black locust is an invasive plant, mature trees are often advantageous for the above-mentioned reasons.

Wildlife and Plant Habitat

The site drive and surrounding areas are not mapped for rare species habitat, nor as BioMap Core habitat or Critical Natural Landscapes. The town could consider requiring a natural resources inventory to assess what species may be present.

It is worth noting that the western portion of the subject property, abutting the ocean and including the coastal bank, is mapped for rare species; likely shorebirds. The plans indicate an intention to maintain a 100 ft buffer from the top of the bank, which will help to protect shorebirds or additional rare species which may be present in this area.

While the location of the site access drive across the Truro Conservation Trust (TCT) property and the significant slopes on this site is unfortunate, it appears from a desktop analysis of the topography of the site that the proposed road location is likely the best option. However, it may be worth asking the site engineer whether directing the site access to the northeastern corner of 9B might reduce the cut and fill, grading, and resulting slope of the access road. Starting from the access road's junction with the rear boundaries of 9 and 7 Benson Road, angling the road to the north across the TCT property, rather than to the south, would not lengthen the road, and it is possible it could have fewer impacts on the TCT property.

The grading from the cut through the hill is steep, and managing erosion will be a challenge. The replanting and restoration plan by BlueFlax seems appropriate. The species selection is thoughtful and consistent with native species present in the area; quantities and size of materials seem appropriate. There is a variety of maturity of species which should help with establishment of the plantings. Keeping things adequately watered will be a challenge and plans to monitor and replace plants over the three years following installation is appropriate. The use of plugs should facilitate establishment, rather than relying on more mature plants for those materials.

BlueFlax has also provided a plan to address the variety of invasive species on the site. The BlueFlax plan was prepared ten years ago and it will be worthwhile having them revisit the site and update the invasive species assessment, as needed, and possibly management methods for some species. The proposed use of glyphosate is limited and minimized, but there may be new methods for managing some of these species that do not rely on glyphosate. It may be worthwhile to have BlueFlax identify the scope of invasive species across the proposed work area on a plan, and

to address construction vehicle protocols to avoid introducing invasives into the delicate sandplain grassland/shrubland habitat.

Open Space

The alteration of the TCT lands to a roadway, or “conversion” of open space, should be mitigated. The applicants propose to donate a portion of 9B, through the creation of an additional lot, to the Trust. If the TCT property is protected under Article 97 of the state constitution for conservation purposes, the conversion of that land should be mitigated in kind, and the applicants should not benefit from the tax benefits that would accrue from a donation. According to the BlueFlax plan, approximately 25,000 sq ft of land will be disturbed; of that disturbed area that is located on the TCT property a commensurate amount of the “donation lot” should be required mitigation. The remainder could be considered a gift.



TOWN OF TRURO

Planning Department

24 Town Hall Road, P.O. Box 2030, Truro, MA 02666
Tel: (508) 349-7004, Ext. 127 Fax: (508) 349-5505

EXTENSION AGREEMENT FOR CASE NO. 2023-002/PB

I, Robin B. Reid, Esq., as authorized agent of Fisher Road Realty Trust, Gloria J. Cater and Willie J. Cater, Trustees, with respect to property located at 9B Benson Road, agree to an extension of time through January 24, 2024 for action by the Planning Board on the above Application filed with the Town Clerk pursuant to G.L. c. 41, s. 81L.

Signature of Applicant/Agent

12/11/23
Date

Filed with the Planning Department:

Elizabeth Story 12/11/2023
Name Date

Filed with the Town Clerk:

[Signature] 12/11/23
Name Date

Robin B. Reid
Mediator
Attorney at Law

Mailing address: Post Office Box 1713
Provincetown, Massachusetts 02657

Telephone: (508) 487-7445
E-mail: Robin@RobinBReidEsq.com

November 6th, 2033

Elizabeth Sturdy
Planning Department
Town of Truro

by hand at Truro Town Hall

RE: 9B Benson Road
Fischer Road Realty Trust
Gloria J. Cater and Willie J. Cater, trustees

Additional Materials

APPLICATION FOR APPROVAL OF PRELIMINARY PLAN

Dear Ms. Sturdy

As you may recall, I represent the Fisher Road Realty Trust, Gloria J. Cater and Willie J. Cater trustees, in the matter of an Application for Approval of a Preliminary Subdivision Plan.

This matter is scheduled for hearing before the Truro Planning Board on January 24, 2024.

Enclosed please find 12 sets of\ additional materials to be added to the Preliminary Plan Approval application, which includes:

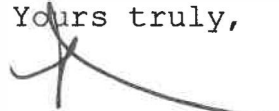
- i. a revised access right of way plan, and
- ii. a Request for Waivers.

Please note that David Clark will be delivering the full scale plan copies to your office today.

Finally, after the site visit on January 4, 2024, and various conversations with Planning Board members, the Caters will be changing the name of the Right of Way to Cater Hill Lane, from Hopper View Lane. The plans do not yet reflect this change, but will be amended for the Definitive Plan application.

Thank you for your consideration in this matter.
Please do not hesitate to call if you have any questions.

Yours truly,

A handwritten signature in black ink, appearing to read "Robin B. Reid", with a long, sweeping underline that extends to the right.

Robin B. Reid, Esq.

cc. Barbara Carboni, Town Planner
Elizabeth Verde, Town Clerk
Emily Beebe, Health & Conservation
Gloria and Willie Cater
Kate Carter, Dain, Torphy, Le Ray, Weist & Garner, PC

all by email

REQUEST FOR WAIVERS

9B Benson Road

Application for Approval of a Preliminary Plan

Waivers requested from the Subdivision design standards and specifications found at Appendix 2, Table 1 of the Town of Truro Rules and Regulations Governing the Subdivision of Land:

1. **Minimum Right of Way Width** - 12 feet, rather than 40 feet
2. **Minimum Roadway width**, not including berms - 12 feet, rather than 14 feet
3. **Shoulder width** - 2 feet, rather than 4 feet

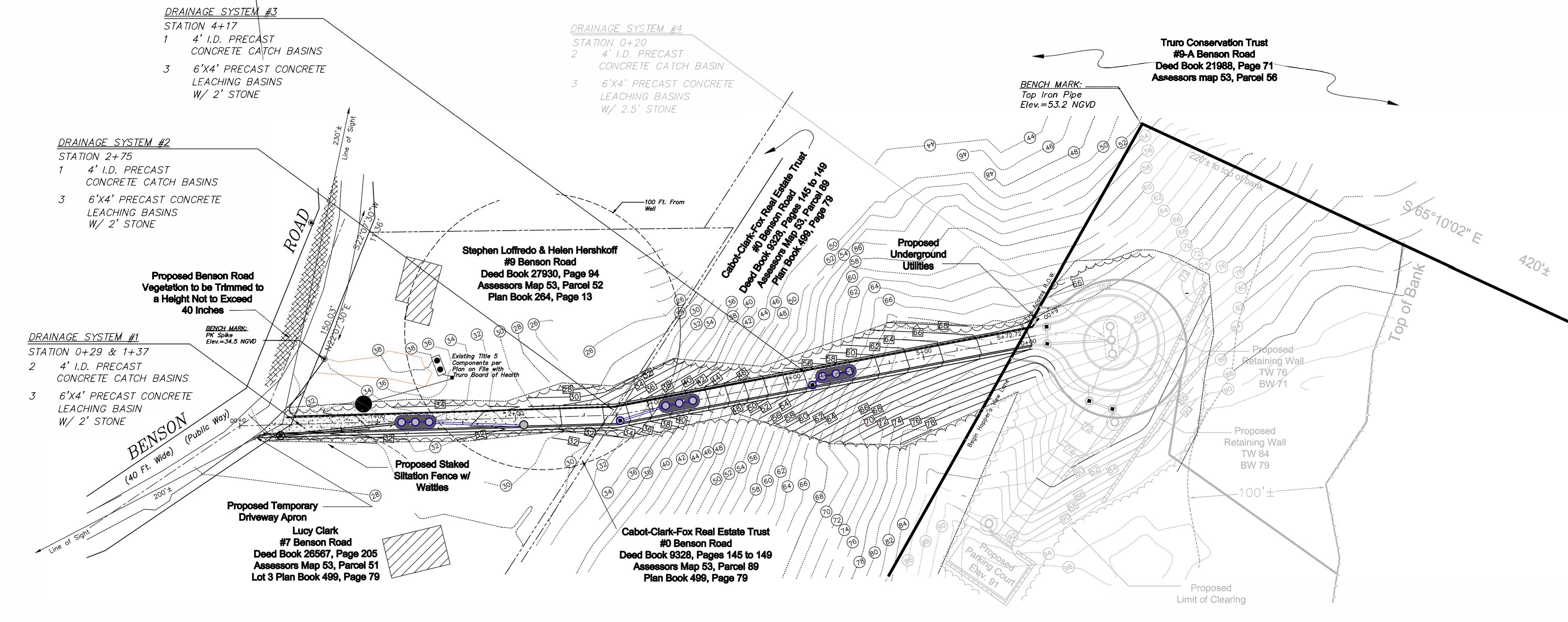
Waivers requested from the Subdivision road construction specifications found at §§ 4.1.6 and 4.1.8 of the Town of Truro Rules and Regulations Governing the Subdivision of Land:

1. **4.1.6 Grade** - no crown, rather than a 1/4 inch of pitch per foot from center line
2. **4.1.8 Berms** - 1 berm, rather than 2

DESIGN ELEMENTS	Table 1	Hopper's View Lane	Access ROW
Roadway Layout			
Minimum right-of way width	40 Ft.	40 Ft.	12 Ft.*
Minimum Roadway width- not including berms	14 Ft.	14 Ft.	12 Ft.*
Shoulder width	4 Ft.	4 Ft.	2 Ft.*
Horizontal Alignment			
Minimum radius at street centerline	125 Ft.	N/A	N/A
Vertical Alignment			
Clear sight distance	200 Ft.	200 Ft.	200 Ft. +
Minimum vertical curve	100 Ft.	250 Ft.	100 Ft.
Grade			
Maximum grade	8.00%	4.50%	14 %*
Minimum grade	1.00%	1.75%	2%
Maximum grade, within 30' from intersection	2%	N/A	2%
Intersection Standards			
Minimum intersection angle	60°	180°	66 ° - 32 1/2 °
Minimum centerline offset	125 Ft.	N/A	200 Ft.+
Minimum curb radius	20 Ft.	25 Ft.	15 Ft.*
Dead-end Street			
Maximum length	1000 Ft.	123 Ft. (653 Ft. total)	573 Ft.
Minimum radius of circular turnaround	40 Ft.	40 Ft.	N/A
Pavement and Storm Frequency Standards			
Unpaved	6"/3"	N/A	6"
Pavement, compacted thickness	3 In. total	4 In. total	N/A
Base, compacted thickness	8 In. total	8 In. total	8 In. total
Storm frequency for drainage calculations	50 Yr.	50 Yr.	50 Yr.
Storm frequency for cross culverts sizing	50 Yr.	50 Yr.	50 yr.
Section 4.1.6 Grade			
Roadway is to be constructed ... with a crown of 1/4" / ft.		Crowned	No Crown*
4.1.8 Berms			
Berms shall be provided on both sides of all paved roads		2 Berms	1 Berm*
* Waiver Required			

LEGEND

- Existing Contour
- Proposed Contour
- Existing Spot Grade
- Proposed Spot Grade
- Water Service
- Overhead Utility Line(s)
- Underground Utility Line(s)
- Gas Line
- Concrete Bound (CB)
- Utility Pole
- Catch Basin
- Fire Hydrant
- Limit of Clearing
- Staked Siltation Fence



PLAN VIEW
ACCESS RIGHT OF WAY IMPROVEMENTS
SCALE: HORIZONTAL 1"=40'



ACCESS RIGHT OF WAY CONSTRUCTION PLAN
Prepared For
DOCTOR WILLIE J. and GLORIA J. CATER

OUTERMOST LAND SURVEY, INC.
3904 Main Street, Brewster, MA 02631
Tel.: (508) 255-0477; Fax.: (508) 255-0577

CLARK ENGINEERING LLC
156 Crowell Road Suite B, Chatham, MA. 02633
Tel.: (508) 945-5454; Fax.: (508) 945-5458

Rev. #	Description of Revision	Date
1	Regraded access driveway to 14%	
	Relocated stormwater infiltration outside	
	100' Buffer from Potable Well	10-25-23
2	Reduced southerly driveway flare to 5'	01-11-24

Date: 07-14-2023 Drawing No.: 0802010D
Scale: SEE PLAN Sheet No.: 2 of 5

Proposed

§ Definitions 10.4

Flat Roof. A roof surface having a pitch <3V:12H.

High Ridge Line. The line formed by two opposed Sloped Roof planes (excluding dormers) meeting at a horizontal ridge line (or at a point, for doubly symmetric hip roofs) which represents the highest elevation of the building.

Maximum Building Height. The difference in elevation between the Mean Ground Level Elevation and the elevation at the highest point of the roof or building, including parapets, railings, dormers and rooftop decks but excluding antennas, vents and chimneys. Maximum Building Height shall be limited to 23 feet for Flat Roofs and Clerestory Roofs and for all Shed Roofs, regardless of pitch. Exceptions for specific Sloped Roof configurations are described below and illustrated graphically in Appendix Q.

- Exception 1: Gable Roof , Hip Roof and Gambrel Roof Building Height - for these roof configurations having opposing Sloped Roof planes meeting at a point or at a High Ridge Line: For all such roofs, Mean Building Height shall be limited to 23 feet and Maximum Building Height shall be limited to 30 feet.
- Exception 2: Saltbox Roof Building Height - Mean Building Height shall be computed as being the average elevation of the two opposing Mean Roof Plane Elevations for the two Sloped Roof surfaces that define the High Ridge Line. For all such roofs, Mean Building Height shall be limited to 23 feet and Maximum Building Height shall be limited to 30 feet.

Mean Building Height. For buildings with two opposing Sloped Roof planes meeting at a High Ridge Line (or high point), the Mean Building Height shall be taken as the average of the two Mean Roof Plane Elevations for those two roof planes, minus the Mean Ground Level Elevation. Mean Building Height shall be limited to a maximum of 23 feet in all cases. For all other roof configurations **Mean Building Height** shall be defined as the difference in elevation between the high point of the building and the Mean Ground Level Elevation.

Mean Ground Level. Where the finished ground level varies in elevation on different sides of a building, the average of the various elevations at the centers of the four main sides, or the average of the four elevations as measured at the centers of the building sides as viewed or projected onto four orthogonal vertical planes (e.g., N, S, E and W building elevations). In the case where fill has been used to raise the finished ground level on a side(s) of the building to an elevation higher than the preconstruction ground level, on those sides measurement shall be taken as the preconstruction ground level elevation measured at a point offset taken from center of that side ten (10) feet out from the side of the building. In the case where the building is located wholly or partially within a "A" or "V" Flood Zone as shown on the most recent FEMA FIRM mapping, the Mean Ground Level shall be taken as the Base Flood Elevation (BFE) when the BFE is higher than the Mean Ground Level as computed by the above grade measurement procedure. Further, the finished grade of the fill, within one hundred (100) feet of the building shall not have a grade steeper than ten per cent (10%)(one foot of drop for every ten foot run).

Mean Roof Plane Elevation. The average elevation of a Sloped Roof plane taken as the elevation midway between the eave and the ridge (or peak) of that single roof plane. For a gambrel roof, the Mean Roof Plane Elevation shall be taken as either a.) the pitchbreak elevation, or b.) as the average elevation of an imaginary line between the main ridge and the eave line, encompassing the pitchbreak, whichever is greater in elevation.

Pitchbreak. The line of intersection of two roof slopes on a gambrel roof, other than at the main ridge, (i.e. a low or intermediate ridge line).

Sloped Roof a roof surface having a pitch $\geq 3V:12H$.

§ 50.1 Regulations

B. Table

DIMENSIONAL REQUIREMENT	ALL DISTRICTS
Minimum Lot Size	33,750 sq. ft. (1)(2)(8)
Minimum Lot Frontage	150 ft (1)(2)
Minimum frontyard setback	25 ft (3)
Minimum sideyard setback	25 ft (3)(4)
Maximum building height	2 stories; 30 feet (5)(5a)(6)
Minimum backyard setback	25 ft (3)(4)
Lot Shape	(9)

(4/05, 4/06, 4/10)

NOTES

1. Except buildings for accessory use and cottage.
2. Except lots or parcels lawfully in existence and shown on a subdivision plan or described in a deed recorded at the Barnstable County Registry of Deeds prior to the adoption of the bylaw by Truro Town Meeting on February 15, 1960, having at least five thousand (5,000) square feet of area and at least fifty (50) feet of lot frontage.
3. Except in the Seashore District where the minimum setback from all streets is 50 feet measured at a right angle from the street line.
4. Except in those portions of the Beach Point Limited Business District served by the Town of Provincetown Water System, where the minimum sideyard and backyard setbacks shall be equivalent to five (5) feet per story of the building or structure in question. Structures less than a full story shall meet the minimum 5 ft setback.
5. The ~~2-story~~ **30 ft height** limitation shall be measured from ~~above~~ mean ground level **or, in FEMA "A" and "V" flood zones, from the Base Flood Elevation, whichever is higher.**
 - 5a. Except buildings which do not have a ridge or hip **defined by two opposing sloped roof surfaces** the maximum building height shall not exceed twenty-three (23) ft as measured to the highest point of the structure (4/12).
6. Free standing flagpoles and private noncommercial radio and television antennae shall not exceed fifty (50) ft above mean ground level.
7. (#7 deleted 4/12)
8. Except in the Seashore District where the minimum lot size is 3 acres. (4/05)
9. For any lot created after April 30, 2004, the portion of the lot connecting the frontage with the front line of any building site shall not be less than 50 feet wide, as measured between opposite sidelines.

APPENDIX Q: BUILDING ROOF ELEVATION IN RELATION TO MEAN GROUND LEVEL, ROOF CONFIGURATION AND BUILDING HEIGHT

Roof Type:

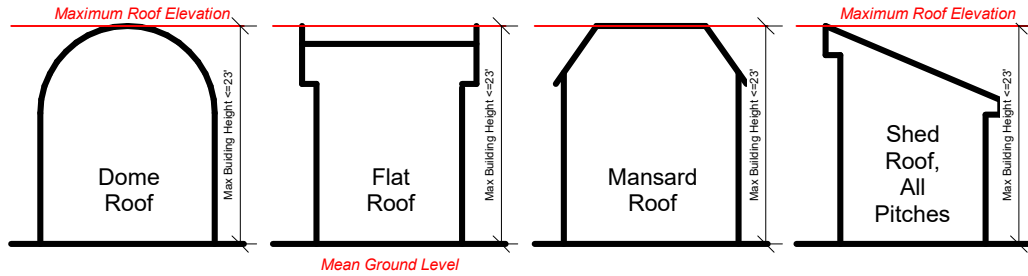
Dome/Flat
Mansard/Shed/
Clerestory

Mean Building Height

The elevation of the highest dome, flat, shed or mansard roof, including the top of any parapet

Maximum Building Height

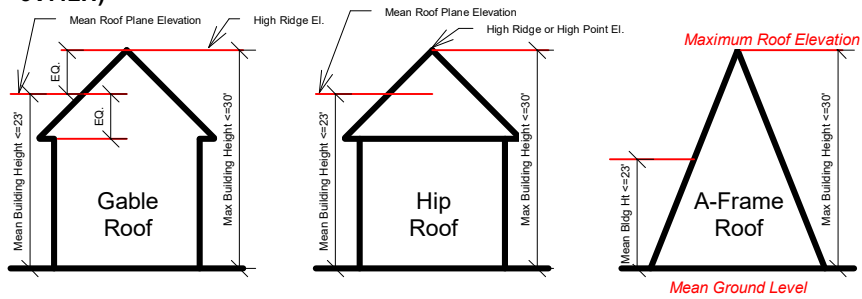
The elevation of the highest point of the roof, including the top of any parapet



Gable/Hip A-Frame (With Sloped Roof Surfaces (pitch >=3V:12H))

The Mean elevation of the roof (other than a dormer)

The elevation of the highest point of the roof, including the top of any parapet.



Salt Box (with Sloped Roof Surfaces)

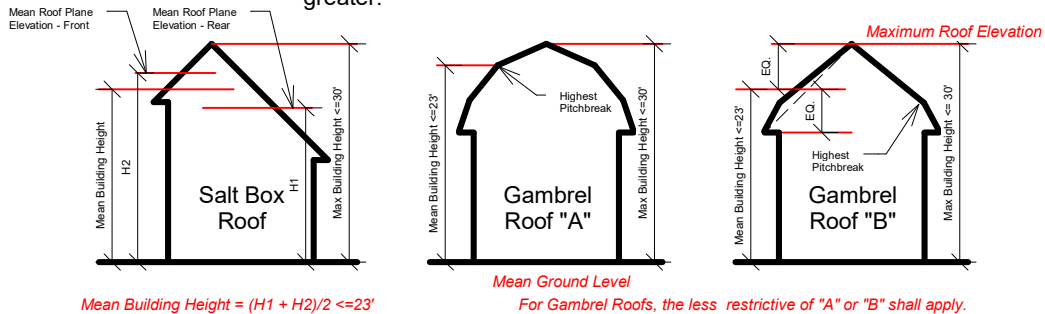
The average of the Mean Roof Plane Elevations for the two opposing roof planes defining the High Ridge line

The elevation of the highest point of the roof, including the top of any parapet.

Gambrel (with Sloped Roof Surfaces)

The mean elevation of the roof (other than a dormer) with the highest mean elevation between its highest ridge and its lowest corresponding eave ("B" below), or the elevation of the highest pitchbreak ("A" below), whichever is greater.

The elevation of the highest point of the roof, including the top of any parapet.



Cape Cod Commission Model Bylaws and Regulations

Model Land Clearing, Grading and Protection of Specimen Trees Bylaw

Background

Growth and development have created permanent changes to the Cape Cod landscape and its natural resources. Forested areas, open spaces, and other naturally vegetated areas have been permanently lost through clearing and grading activities often associated with land development. Clearing and grading activities also impact both water quality and quantity. Loss of ground cover coupled with grading, smoothing, and compaction of the land contributes to decreased groundwater infiltration, increased stormwater flow and erosion and increased sediment runoff into streams and other water bodies. This in turn results in decreased water quality in aquatic habitats and breeding grounds. Erosion and sedimentation often results in environmental damage to abutting properties.

In addition to the physical and ecological changes associated with grading and land clearing activities, aesthetic values and community character can also be impacted. Cape Cod is defined in part by its mix of woodlands, open landscapes and scenic views. As noted in the Cape Cod Commission's "Designing the Future to Honor the Past," Cape Cod is a place of abundant nature, surrounded by and connected to the sea. Land clearing and grading activities can have a direct impact on the quality of the visual experience for both residents and tourists.

Local bylaws address the issues of clearing and grading to varying degrees, ranging from limits on clearing prior to the issuance of development permits to earthmoving regulations. However, most of the existing Cape bylaws do not address the issues of combined clearing and grading activities. In addition, while local Conservation Commissions require erosion and sediment control for projects within 100 feet of wetlands through the Wetlands Protection Act and local bylaws and regulations, they do not have authority beyond the 100 foot buffer until after an erosion problem has resulted in damage to wetlands and waterways.

Through a combination of Site Plan Review Standards and Special Permit requirements, this model bylaw seeks to minimize the loss of natural vegetation and topography and to protect specimen trees, significant forest types, and the most valuable wildlife habitat when developing a site. Minimizing the loss of natural vegetation provides for a cost-effective means of controlling erosion, flooding, and managing stormwater runoff from nonpoint sources such as development sites, streets and parking lots.

Commentary: Towns may choose between two different mechanisms for minimizing clearing and grading activities. One approach involves adopting these regulations into the zoning bylaw, requiring a special permit for clearing and grading of projects that exceed a certain size. In the alternative the town may adopt Site Plan Review standards that

apply to all projects requiring Site Plan approval. Where a Special Permit is required the reviewing board has authority to approve or deny a proposed use. Site Plan Review, on the other hand, simply stipulates the conditions applicable to a given use.

01.0 Purposes: The purposes of this bylaw are to:

01.1 Protect the health, safety and property of the residents of the Town of _____ by regulating clearing and grading activities associated with land development and preserving existing trees and vegetation, preventing erosion and sedimentation of inland and coastal wetlands, ponds and other waterbodies, controlling stormwater runoff, minimizing fragmentation of wildlife habitat and loss of vegetation;

01.2 Limit land clearing and alteration of natural topography prior to development review;

01.3 Protect specimen trees and significant forest communities from damage or removal during site development;

01.4 Protect water quality of adjacent wetlands and surface water bodies;

01.5 Encourage the use of Best Management Practices that prevent and reduce nonpoint sources of pollutants;

01.6 Promote land development and site planning practices that are responsive to the town's scenic character without preventing the reasonable development of land;

01.7 Protect archaeological and/or historic resources.

02.0 Definitions: In this bylaw, the following words have the meanings indicated:

02.1 Applicant - Any person proposing to engage in or engaged in any non-exempt clearing of trees or understory vegetation within the Town.

02.2 Best Management Practices (BMPs) - A structural, nonstructural, or managerial technique recognized to be the most effective and practical means to prevent and reduce nonpoint source pollutants. BMPs should be compatible with the productive use of the resource to which they are applied, and should be cost-effective.

02.3 Caliper - American Association of Nurserymen standard for measurement of trunk size of nursery stock. Caliper of the trunk shall be taken 6" above the ground up to and including 4" caliper trees, and 12" above the ground for larger sizes.

02.4 Certified arborist - A professional who possesses the technical competence through experience and related training to provide for or supervise the maintenance of trees and other woody plants in the residential, commercial, and public landscape.

02.5 Clearing - Removal or causing to be removed, through either direct or indirect actions, trees, shrubs and/or topsoil from a site, or any material change in the use or appearance of the land. Actions considered to be clearing include, but are not limited to: causing irreversible damage to roots or trunks; destroying the structural integrity of vegetation; and/or any filling, excavation, grading, or trenching in the root area of a tree which has the potential to cause irreversible damage.

02.6 Dripline - An area encircling the base of a tree which is delineated by a vertical line extending from the outer limit of a tree's branch tips down to the ground.

02.7 Essential Root Zone - An area located on the ground between the tree trunk and 10 feet beyond the dripline of a tree which is required for protection of a tree's root system.

02.8 Diameter/diameter-breast-height (dbh) - The diameter of any tree trunk, measured at 4.5 feet above existing grade.

02.9 Filling - The act of transporting or placing (by any manner or mechanism) material from, to, or on any soil surface or natural vegetation.

02.10 Grading - Any excavating, filling, clearing, or the creation of impervious surface, or any combination thereof, which alters the existing surface of the land.

02.11 Hazardous tree - A tree with a structural defect or disease, or which impedes safe sight distance or traffic flow, or otherwise currently poses a threat to life or property.

02.12 Landscape architect - A person licensed by the Commonwealth of Massachusetts to engage in the practice of landscape architecture.

02.13 Protected tree/vegetation - A tree or area of understory vegetation identified on an approved landscape plan to be retained and protected during construction.

02.14 Specimen tree - A native, introduced or naturalized tree which is important because of its impact on community character, its significance in the historic/cultural landscape or its value in enhancing the effects of wildlife habitat. Any tree with a dbh of 6" or larger is eligible to be considered a specimen tree. Trees that have a small height at maturity or are slow growing, such as flowering dogwood or american holly with a dbh of 4" or larger are eligible to be considered specimen trees.

02.15 Significant forest community - Unfragmented forests including forest types that provide habitat for rare species, unusual ecological processes, highly diverse forest communities, rare forest types, and those

forest types which maintain connections between similar or different habitat patches.

02.16 Site Alteration Special Permit - A special permit issued by the Planning Board authorizing land clearing and grading activities in the town of _____.

02.17 Understory vegetation - Small trees, shrubs, and groundcover plants, growing beneath and shaded by the canopy of trees.

03.0 Applicability: No person shall undertake land clearing/grading activities of an area greater than 40,000 square feet without first obtaining a Site Alteration Special Permit from the Planning Board, unless specifically exempted under Section 05.0 of this bylaw.

Commentary: The Cape Cod Commission has proposed this threshold for review, however, towns may wish to adopt a higher or lower threshold depending on their particular circumstances.

04.0 Review and Decision: Upon receipt of a completed application and required plans as described in Section 06.0 below, the Planning Board shall transmit one copy each to the Conservation Commission, Building Inspector, and Department of Public Works. Within 45 days of receipt of completed application/plans, these agencies shall submit recommendations to the Planning Board. The Planning Board shall act on applications according to the procedure specified in G.L. c. 40A, §9.

05.0 Exemptions: The provisions of this bylaw shall not apply to the following activities:

05.1 Removal of hazardous trees, as defined herein;

05.2 Routine maintenance of vegetation and removal of dead or diseased limbs and/or trees necessary to maintain the health of cultivated plants, to contain noxious weeds and/or vines in accordance with a Department of Environmental Management (DEM) - approved Forest Management Plan, or to remedy a potential fire or health hazard or threat to public safety;

05.3 Construction and maintenance of public and private streets and utilities within town-approved roadway layouts and easements;

05.4 Work conducted in accordance with a valid earth removal permit issued by the Town of _____;

05.5 Agricultural activities in existence at the time a bylaw is adopted, work conducted in accordance with an approved Natural Resource Conservation Service Agricultural Plan or agricultural uses on parcels of land of more than five acres as specified in MGL c. 40A Section 3.

05.6 Construction of roadways and associated infrastructure for subdivisions approved in accordance with the Town Subdivision Rules and Regulations.

05.7 Construction of any state or town agency project approved by the town manager, town council, or town selectmen.

05.8 Construction or installation of public utilities.

05.9 Non-commercial cutting for fuel, provided that clear-cutting does not occur.

06.0 Application Requirements: Unless determined otherwise by the Planning Board the following submittals are required at the time of application:

06.1 Survey of existing vegetation conducted by an individual qualified through appropriate academic credentials and field experience. A statement of credentials should be submitted with the survey.

The survey of existing vegetation shall include the following information:

06.1.1 major upland vegetational communities located on the site, including trees, shrub layer, ground cover and herbaceous vegetation;

06.1.2 size and height of trees, noting specimen trees and/or forest communities;

06.1.3 location of any rare and endangered species as mapped by the Massachusetts Natural Heritage Program or Association for the Preservation of Cape Cod;

06.2 Submission of a locus map at a scale of 1" = 500' showing the proposed site in relation to the surrounding area.

06.3 Submission of a plan at a scale of 1" = 40' of the project site showing existing and proposed contour lines at intervals of not more than 2 feet prepared by a registered civil engineer or land surveyor.

06.4 Soil survey or soil logs indicating predominant soil types on the project site, including information on erosion potential from the Natural Resources Conservation Service.

06.5 Delineation of all bodies of water, including wetlands, vernal pools, streams, ponds, and coastal waters within 100 feet of the project site/limit of work and delineation of the 100-year floodplain.

06.6 Submission of a plan at a scale of 1" = 40' indicating the limit of work. The limit of work shall include all building, parking, and vehicular use areas, and any grading associated with the proposed development. The plan or accompanying narrative shall document the species and quantities of specimen trees and/or other vegetation to be removed or relocated within the project area.

06.7 Construction schedule which describes the timing of vegetation removal, transplanting or replacement in relation to other construction activities.

06.8 Plans and/or description of Best Management Practices to be employed in development of the project site.

06.9 Submission of an erosion and sedimentation control plan at a scale of 1" = 40'. This plan shall include BMPs for erosion and sediment control (vegetative and/or structural) to prevent surface water from eroding cut and fill side slopes, road shoulders and other areas and measures to avoid sedimentation of nearby wetlands and ponds. The following information shall be submitted on erosion control and sedimentation plans submitted with the project application:

06.9.1 Plans and details of any sediment and erosion control structure drawn at a scale of 1" = 40', details @ _____ scale

06.9.2 Spillway designs showing calculations and profiles

06.9.3 Notes and construction specifications

06.9.4 Type of sediment trap

06.9.5 Drainage area to any sediment trap

06.9.6 Volume of storage required

06.9.7 Outlet length or pipe sizes

06.9.8 A description of the sequence of construction activities which specifies the time frame for soil stabilization and completion and any necessary winter stabilization measures.

Commentary: Some of the application submittals may require the review of the town engineer or a landscape architect. The town may retain a technical expert to review the application at the expense of the applicant. The town must first adopt the provisions of Chapter 593 of the Acts and Resolves of 1989, which allows towns to establish special accounts to hire consultants. If the Planning Board wishes to use developer funds for review of special permits, it must adopt regulations specifying a procedure for the submission and expenditure of such funds. Such rules and regulations must be adopted under G.L. c. 40A.

07.0 Review Standards:

Commentary: The following section contains standards that could be added to existing Site Plan Review Bylaws, independent of this bylaw. However, and as previously discussed, towns may also wish to adopt these standards only for larger projects, as defined by a size threshold.

The applicant shall demonstrate that the following measures are employed in development of the site:

07.1 Minimize site alteration/land clearing:

07.1.1 Site/building design shall preserve natural topography outside of the development footprint to reduce unnecessary land disturbance and to preserve natural drainage channels on the site.

07.1.2 Clearing of vegetation and alteration of topography shall be limited to _____% of the site with native vegetation planted in disturbed areas as needed to enhance or restore wildlife habitat.

Land Use	% Clearing Allowed
Agriculture	50%
Residential	35%
Institutional, Commercial, Industrial	40%

Commentary: The percentages for land clearing within specific land use types, and even the types themselves may need to be adjusted according to the constraints and land use patterns of the town, and relative to lot size. An alternate method could employ the Significant Natural Resource Area Map of the 1996 Regional Policy Plan as a way of identifying clearing limits. For example, projects within a Significant Natural Resource Area (SNRA) may only clear 35% of the site; land outside of SNRAs may clear up to 50%, and areas both outside of SNRAs and in certified growth centers may clear up to 60%. These percentages could be further fine tuned within the Town's zoning bylaw/ordinance. For example, the town may wish to limit clearing within residential districts more strictly than within non-residential districts.

07.1.3 Clearing for utility trenching shall be limited to the minimum area necessary to maneuver a backhoe or other construction equipment. Roots should be cut cleanly rather than pulled or ripped out during utility trenching. Tunneling for utilities installation should be utilized wherever feasible to protect root systems of trees.

07.1.4 Protect hilltops and/or scenic views within the town of _____:

07.1.4.1 Placement of buildings, structures, or parking facilities shall not detract from the site's scenic qualities and shall blend with the natural landscape. Building sites shall be directed away from the crest of hills, and foundations shall be constructed to reflect the natural terrain.

07.1.5 Protect wildlife habitat:

07.1.5.1 Sites shall be designed in such a way as to avoid impacts to rare and endangered species and wildlife habitat on a site, and to maintain contiguous forested areas.

07.1.6 Avoid impacts to archaeological resources:

07.1.6.1 Applicants shall submit a response from the Massachusetts Historical Commission (MHC) regarding the potential for archaeological or historical resources on the site.

07.1.7 Preserve open space and specimen trees on the site:

07.1.7.1 In the design of a development, priority shall be given to retention of existing stands of trees, trees at site perimeter, contiguous vegetation with adjacent sites (particularly existing sites protected through conservation restrictions), and specimen trees.

07.1.8 Understory vegetation beneath the dripline of preserved trees shall also be retained in an undisturbed state. During clearing and/or construction activities, all vegetation to be retained shall be surrounded by temporary protective fencing or other measures before any clearing or grading occurs, and maintained until all construction work is completed and the site is cleaned up. Barriers shall be large enough to encompass the essential root zone of all vegetation to be protected. All vegetation within the protective fencing shall be retained in an undisturbed state.

07.1.9 Forested areas shall be preserved if they are associated with:

- 07.1.9.1 significant forest communities as defined herein;
- 07.1.9.2 wetlands, waterbodies and their buffers;
- 07.1.9.3 critical wildlife habitat areas;
- 07.1.9.4 slopes over 25 percent.

07.1.10 Minimize cut and fill in site development:

07.1.10.1 Development envelopes for structures, driveways, wastewater disposal, lawn areas and utility work shall be designated to limit clearing and grading.

07.1.10.2 Other efforts to minimize the clearing and grading on a site associated with construction activities shall be employed, such as parking of construction vehicles, offices/trailers, stockpiling of equipment/materials, etc. in areas already planned for permanent structures. Topsoil shall not be stockpiled in areas of protected trees, wetlands, and/or their vegetated buffers.

07.1.10.3 Finished grades should be limited to no greater than a 2:1 slope, while preserving, matching, or blending with the natural contours and undulations of the land to the greatest extent possible.

07.1.10.4 Employ proper site management techniques during construction:

(a) BMPs shall be employed to avoid detrimental impacts to existing vegetation, soil compaction, and damage to root systems.

(b) The extent of a site exposed at any one time shall be limited through phasing of construction operations. Effective sequencing shall occur within the boundaries of natural drainage areas.

07.1.10.5 Protect the site during construction through adequate erosion and sedimentation controls:

(a) Temporary or permanent diversions, berms, grassed waterways, special culverts, shoulder dikes or such other mechanical measures as are necessary may be required by the Board to intercept and divert surface water runoff. Runoff flow shall not be routed through areas of protected vegetation or revegetated slopes and other areas. Temporary runoff from erosion and sedimentation controls shall be directed to BMPs such as vegetated swales. Retaining walls may be required where side slopes are steeper than a ratio of 2:1.

(b) Erosion and sedimentation controls shall be constructed in accordance with the DEP Stormwater Guidance manual.

(c) Erosion control measures shall include the use of erosion control matting, mulches and/or temporary or permanent cover crops. Mulch areas damaged from heavy rainfalls, severe storms and construction activity shall be repaired immediately.

(d) Erosion control matting or mulch shall be anchored where plantings are on areas subject to mulch removal by wind or water flows or where side slopes are steeper than 2:1 or exceed 10 feet in height. During the months of October through March when

seeding and sodding may be impractical, anchored mulch may be applied at the Board's discretion.

(e) Runoff from impervious surfaces shall be recharged on the site by stormwater infiltration basins, vegetated swales, constructed wetlands or similar systems covered with natural vegetation. Runoff shall not be discharged directly to rivers, streams, or other surface water bodies. Dry wells shall be used only where other methods are not feasible. All such basins and wells shall be preceded by oil, grease, and sediment traps. The mouths of all catch basins shall be fitted with filter fabric during the entire construction process to minimize siltation or such basins shall be designed as temporary siltation basins with provisions made for final cleaning.

(f) The applicant shall be required to conduct weekly inspections of all erosion and sedimentation control measures on the site to ensure that they are properly functioning as well as to conduct inspections after severe storm events.

07.1.10.6 Revegetate the site immediately after grading:

(a) Proper revegetation techniques shall be employed using native plant species, proper seed bed preparation, fertilizer and mulching to protect germinating plants. Revegetation shall occur on cleared sites within 7 (seven) calendar days of final grading and shall occur during the planting season appropriate to the selected plant species.

(b) A minimum of 4" of topsoil shall be placed on all disturbed surfaces which are proposed to be planted.

(c) Finished grade shall be no higher than the trunk flare(s) of trees to be retained. If a grade change of 6" or more at the base of the tree is proposed, a retaining wall or tree well may be required.

08.0 Required Security: The Planning Board may require a performance guarantee in a form acceptable to the town to cover the costs associated with compliance with this bylaw under a Site Alteration Special Permit.

08.1 The required performance guarantee in the amount of 150% of the cost of site restoration shall be posted prior to the issuance of a Site Alteration Special Permit for the proposed project.

08.2 The performance guarantee shall be held for the duration of any prescribed maintenance period required by the Site Plan Review Committee/Planning Board to ensure establishment and rooting of all new plantings, and may be reduced from time to time to reflect completed work. Plantings which die within the prescribed maintenance period shall be replaced. Securities shall not be fully released without a final inspection and approval of vegetation replacement by the town.

09.0 Monitoring and Inspections:

09.1 Prior to commencement of construction, the applicant, land owner, contractor and construction crew, town engineer or zoning enforcement officer, and site engineer shall conduct a meeting to review the proposed construction phasing and number and timing of site inspections.

Commentary: Towns should decide what official is appropriate to review clearing and grading proposals, and require that official to report to the Planning Board.

09.2 Initial site inspection of erosion and sedimentation controls and placement of tree protection measures shall occur after installation of barriers around preserved areas and construction of all structural erosion and sedimentation controls, but before any clearing or grading has begun.

09.3 Routine inspections of preserved areas and erosion and sedimentation controls shall be made at varying intervals depending on the extent of site alteration and the frequency and intensity of rainfall.

09.4 Effective stabilization of revegetated areas must be approved by the town before erosion and sedimentation controls are removed. The town shall complete an inspection prior to removal of temporary erosion and sedimentation controls.

10.0 Enforcement: The town of _____ may take any or all of the enforcement actions prescribed in this bylaw to ensure compliance with, and/or remedy a violation of this bylaw; and/or when immediate danger exists to the public or adjacent property, as determined by the _____ Building Inspector. Securities described in Section 07.0 above may be used by the town in carrying out any necessary enforcement actions.

10.1 The _____ Building Inspector may post the site with a Stop Work order directing that all vegetation clearing not authorized under a Site

Alteration Permit cease immediately. The issuance of a Stop Work order may include remediation or other requirements which must be met before clearing activities may resume.

10.2 The Town may, after written notice is provided to the applicant, or after the site has been posted with a Stop Work order, suspend or revoke any Site Alteration Special Permit issued by the Town.

10.3 No person shall continue clearing in an area covered by a Stop Work order, or during the suspension or revocation of a Site Alteration Special Permit except work required to correct an imminent safety hazard as prescribed by the Town.

0.11 Severability:

0.11.1 If any provision of this bylaw is held invalid by a court of competent jurisdiction, the remainder of the bylaw shall not be affected thereby. The invalidity of any section or sections or parts of any section or sections of this bylaw shall not affect the validity of the remainder of the [town]'s zoning bylaw.

Commentary: This Section is a generic severability clause. Severability clauses are intended to allow a court to strike or delete portions of a regulation that it determines to violate state or federal law. In addition, the severability clause provides limited insurance that a court will not strike down the entire bylaw should it find one or two offending sections.
