

2. Single-Family Lots



Single-Family House lots are by far the most common project type that DEM reviews. One of the first things for an applicant to consider is whether or not the size of home you desire will fit on the lot you have chosen, particularly if there are wetlands you need to avoid. Prior to purchasing the property it is advisable to have the current owner complete a Determination or Verification Application with the DEM. In response, DEM will determine the presence of wetlands on a property or verify the delineated edge of a wetland when one is already known to exist. The following recommendations are provided for the applicant:

Site Design

- Avoid building in or near wetlands if at all possible.
- Locate the house or building closer to the road. To avoid a wetland it may be necessary to apply for a variance from the town on the required setback from the road.
- If you cannot avoid a wetland, consider obtaining an easement from a neighbor to share a driveway and reduce wetland encroachment.
- Remember to provide realistic Limits of Clearing and Disturbance that will encompass all proposed work and land uses on the site. Consider room for construction vehicles and space for future maintenance (e.g. a backhoe for grading around the house) and use.
- Consider installing a retaining wall, gabions or terracing at the Limits of Clearing and Disturbance to reduce filling.
- The site design should allow for adequate yard space for future uses, such as decks, sheds, gardens, or swing sets outside wetland areas.
- To avoid flooding, determine the boundaries of the 100 Year Flood Plain as well as lesser intensity flood event levels and place the house, driveway, and parking areas outside the flood zone.

Limits of Clearing and Disturbance (LOD)

Realistic Limits of Clearing and Disturbance will vary from project to project. For some it may be 10-15 feet from a structure, for others it may be 20-25 feet. DEM encourages the applicant to thoroughly consider the location of the LOD before submitting the application to avoid future enforcement problems if the LOD is not adhered to.

House Design

- Reduce the size of the house to be built, or consider building “up” instead of “out.”
- Design the garage to be incorporated as part of the first story of the house instead of as a separate structure.
- Decks and other property accessories may need to be reduced in size or eliminated to minimize wetland impacts.

Driveways

- Use retaining walls, terracing, or gabions to reduce the area of fill needed.

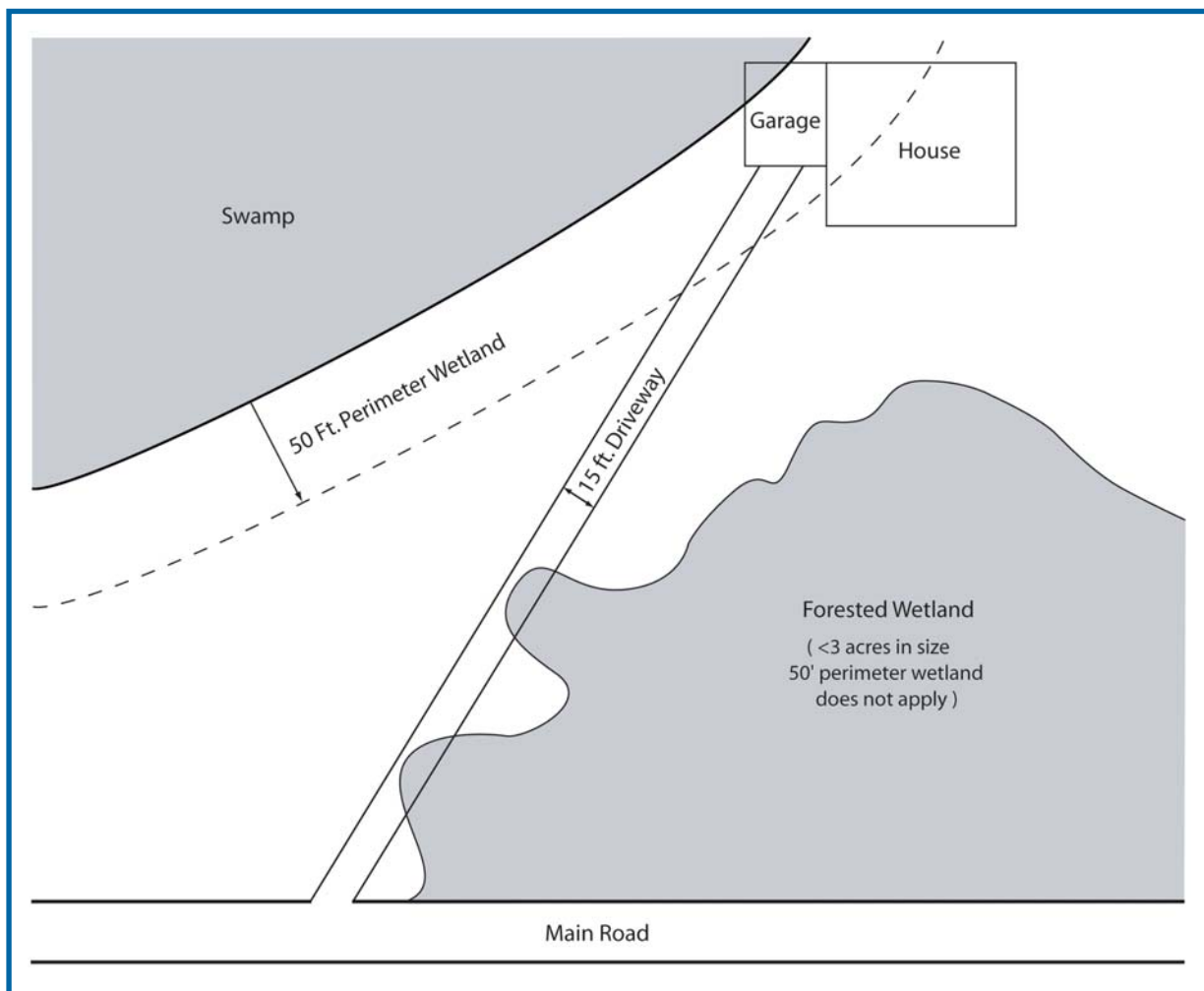
- Maintain existing grading as much as possible.
- Preserve as many large trees and as much of the tree canopy as possible.
- Avoid crossings by locating the driveway outside of wetland areas.
- Minimize the driveway width as much as possible.

Screens and Plantings

- Create a thick buffer by increasing plantings at the Limits of Clearing and Disturbance adjacent to wetlands to reduce noise and disturbance to wildlife. Use 2-3 rows of plantings, instead of just one. If additional rows involve an increase in clearing or soil disturbance in wetland areas, a single row is preferable. Typically, evergreens are preferred because they retain their leaves or needles all year.
- Avoid the use of fertilizers, pesticides, herbicides, or pollutants - chemical or organic - within wetlands.

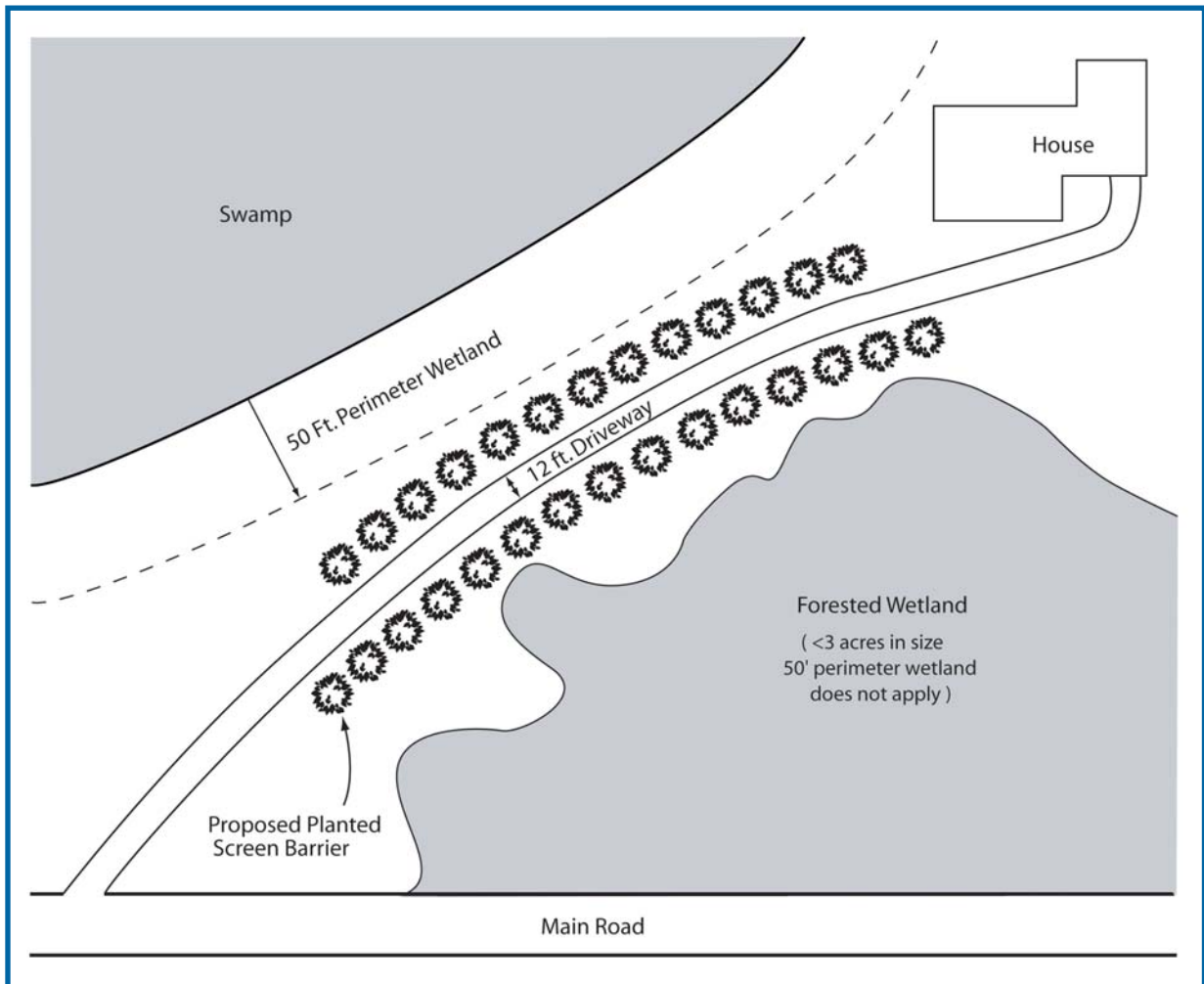
Example 1a: Original Plan for a Single-Family Home

In this example, the proposed house and driveway encroach into the Perimeter and Forested Wetland. The project calls for clear-cutting of the wetland vegetation adjacent to the house and driveway, as well as some filling along the Swamp edge for the garage construction.



Example 1a

Example 1b: **Revised Plan for a Single-Family Home with Avoidance and Minimization**



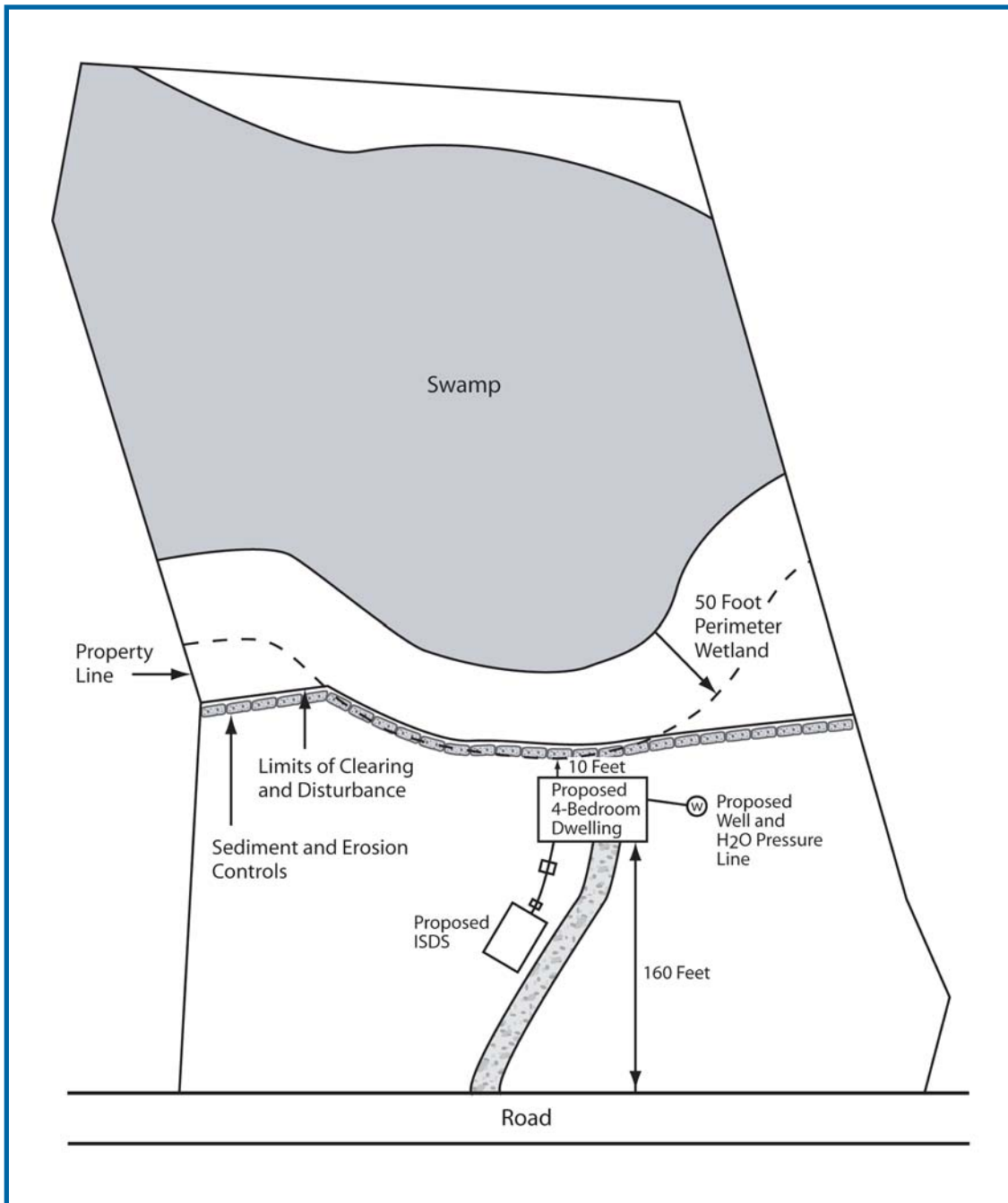
Example 1b

How wetland impacts were minimized:

- ✓ The driveway was moved between the two wetland areas to reduce wetland impacts.
- ✓ The house and driveway were moved out of the Swamp and Perimeter Wetlands, thereby maintaining the original tree canopy in those areas.
- ✓ The garage was incorporated as part of the first story of the house, instead of as a separate structure.
- ✓ Additional plantings were voluntarily proposed adjacent to the driveway to filter noise and light from the wetlands.

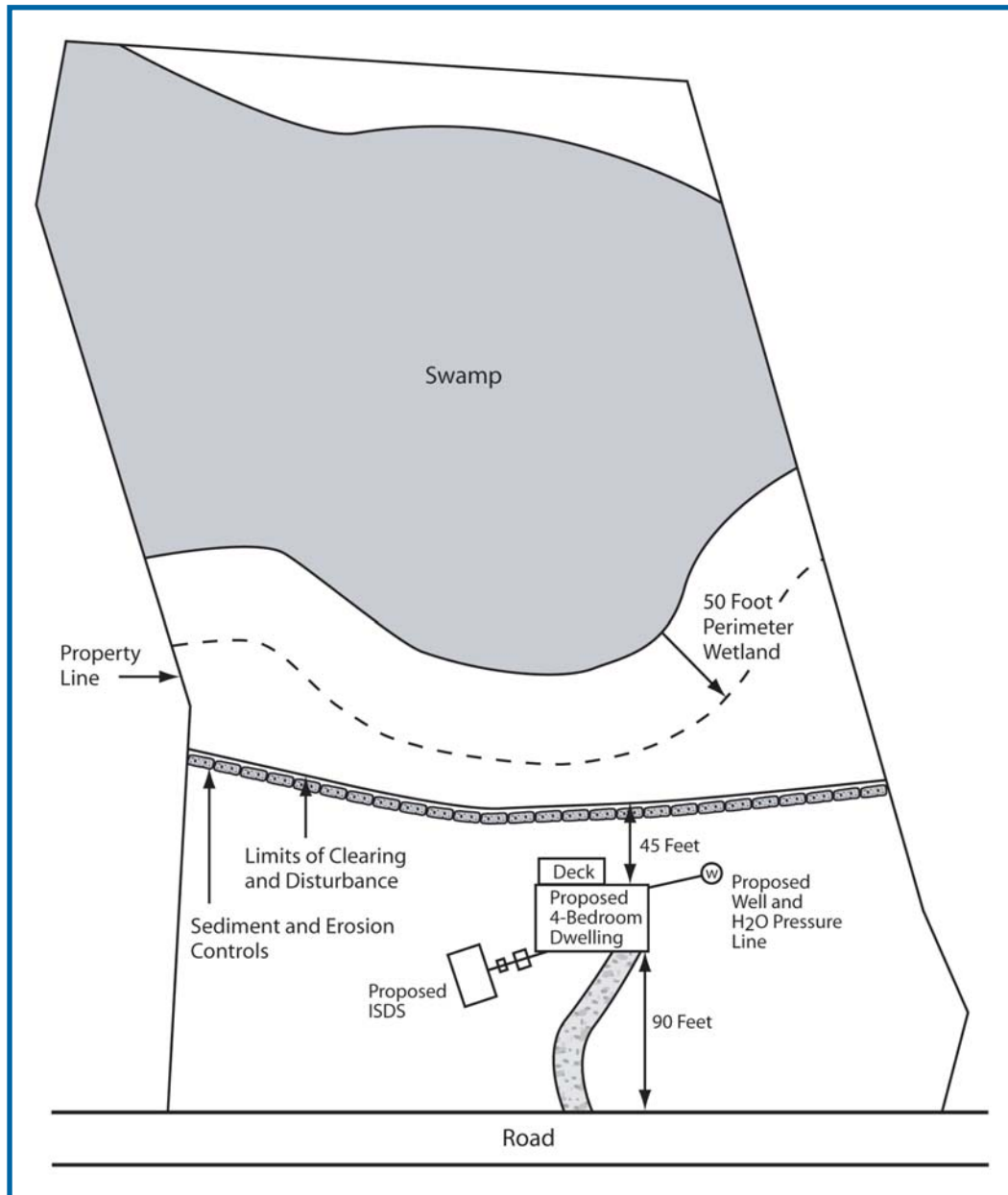
Example 2a: House Placement Original Design

In this example, the house is located more than 160 feet back from the road and only 10 feet from the edge of the Perimeter Wetland.



Example 2a

Example 2b: House Placement Revised Design



Example 2b

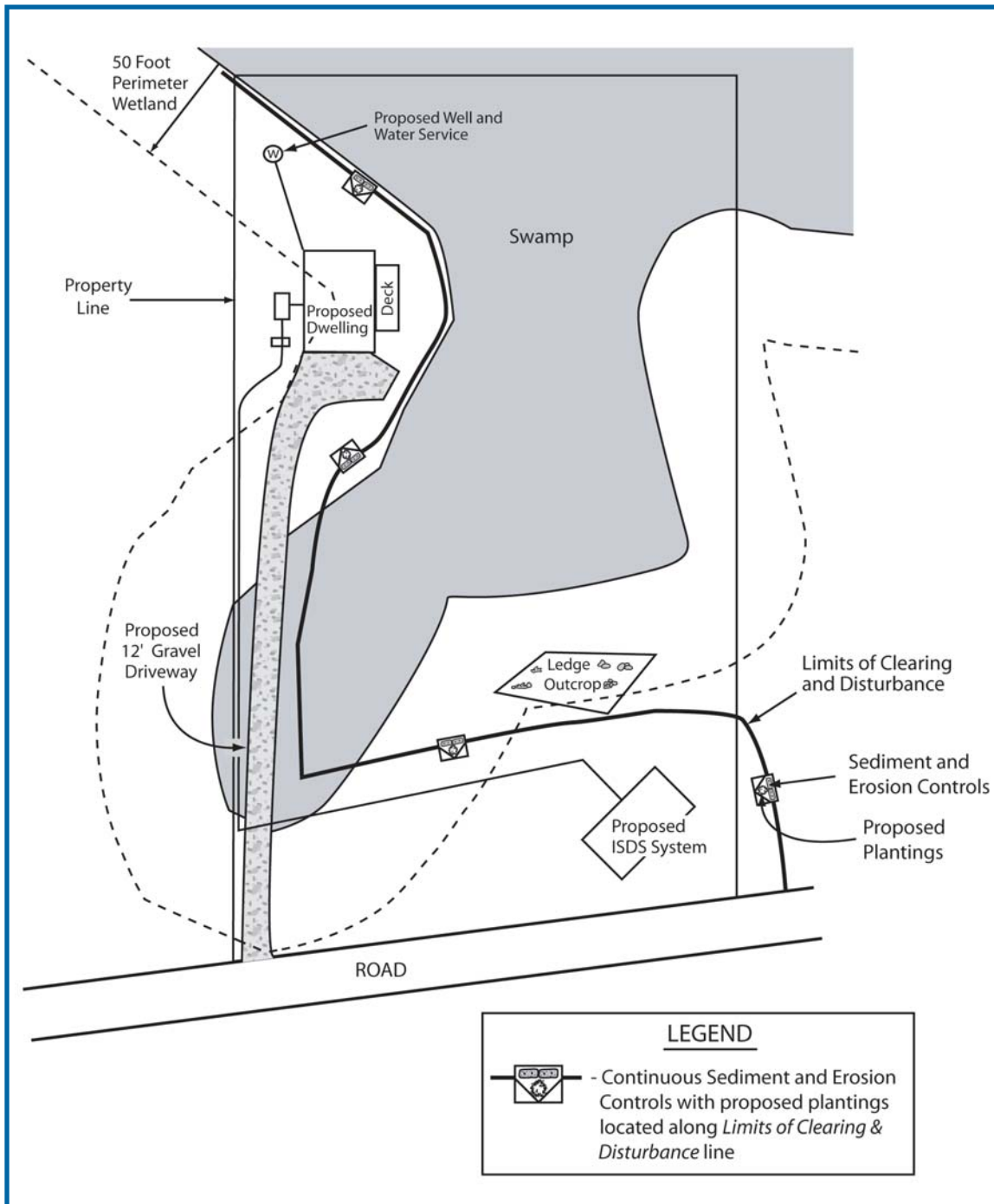
How wetland impacts were minimized:

- ✓ By moving the house closer to the road (still well within the town setback requirements), the dwelling remained the same size and a deck was added, given the extra space.
- ✓ Adequate backyard space does not encroach into the Perimeter Wetland.
- ✓ In this case, the dwelling and limits of disturbance were far enough away from the wetland that the owner did not even need to apply to DEM for a wetland determination or permit.

On a large lot with plenty of room to build, it is possible to avoid wetlands altogether. Project plans that demonstrate provisions to avoid & minimize impacts to wetlands may eliminate the need for a permit.

Example 3a: Lot Layout Original Design

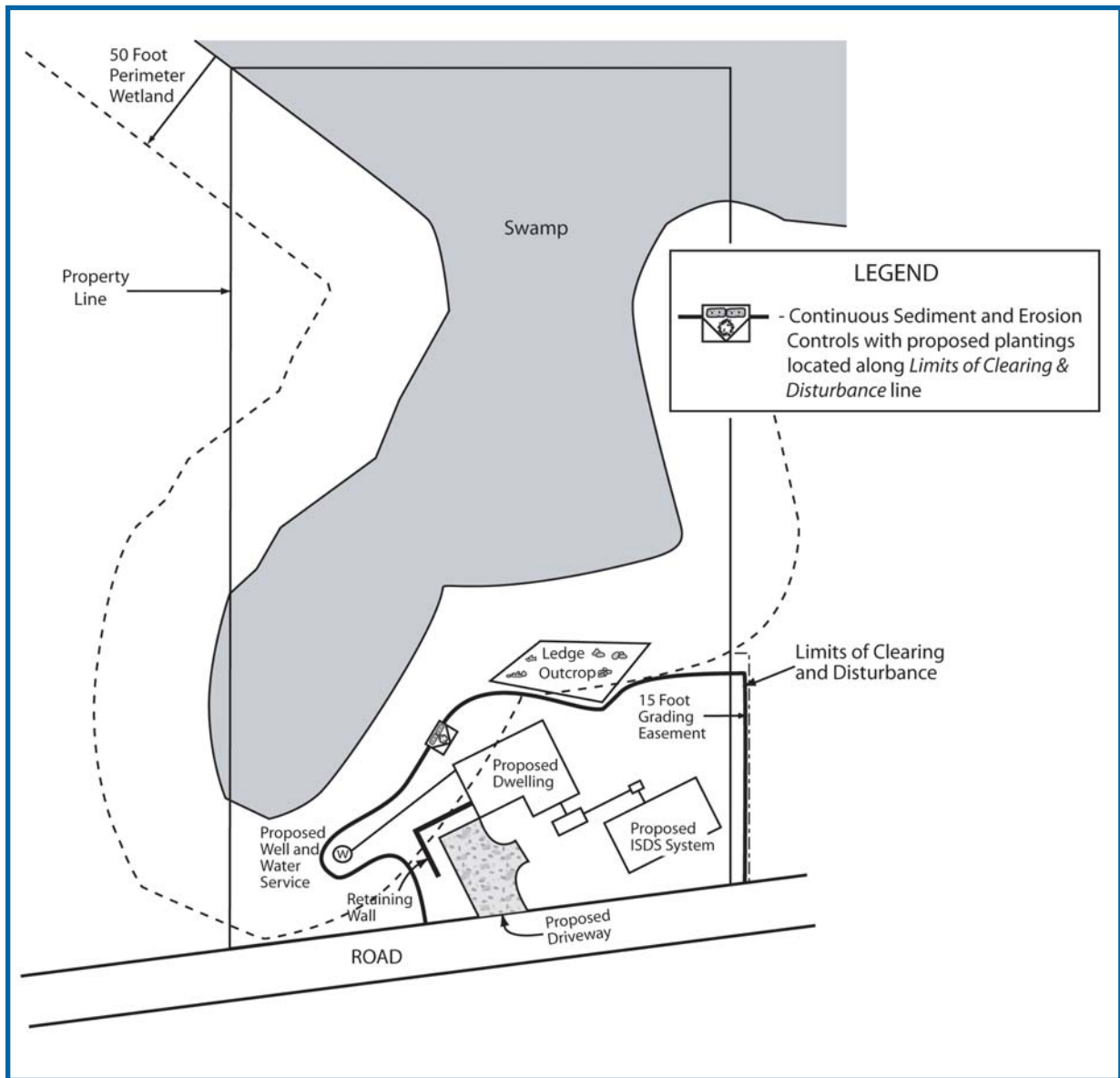
This lot is primarily wetland, making it difficult to locate a house and septic system. In the original design, the proposed dwelling, driveway and deck are within the Swamp and Perimeter Wetland areas. The proposed Individual Sewage Disposal System (ISDS) is located far away from the house thus causing a larger area to be disturbed.



Example 3a

Example 3b: Lot Layout Revised Design

The revised design, while not ideal, proposes significantly less encroachment into wetland areas by relocating the house.



Example 3b

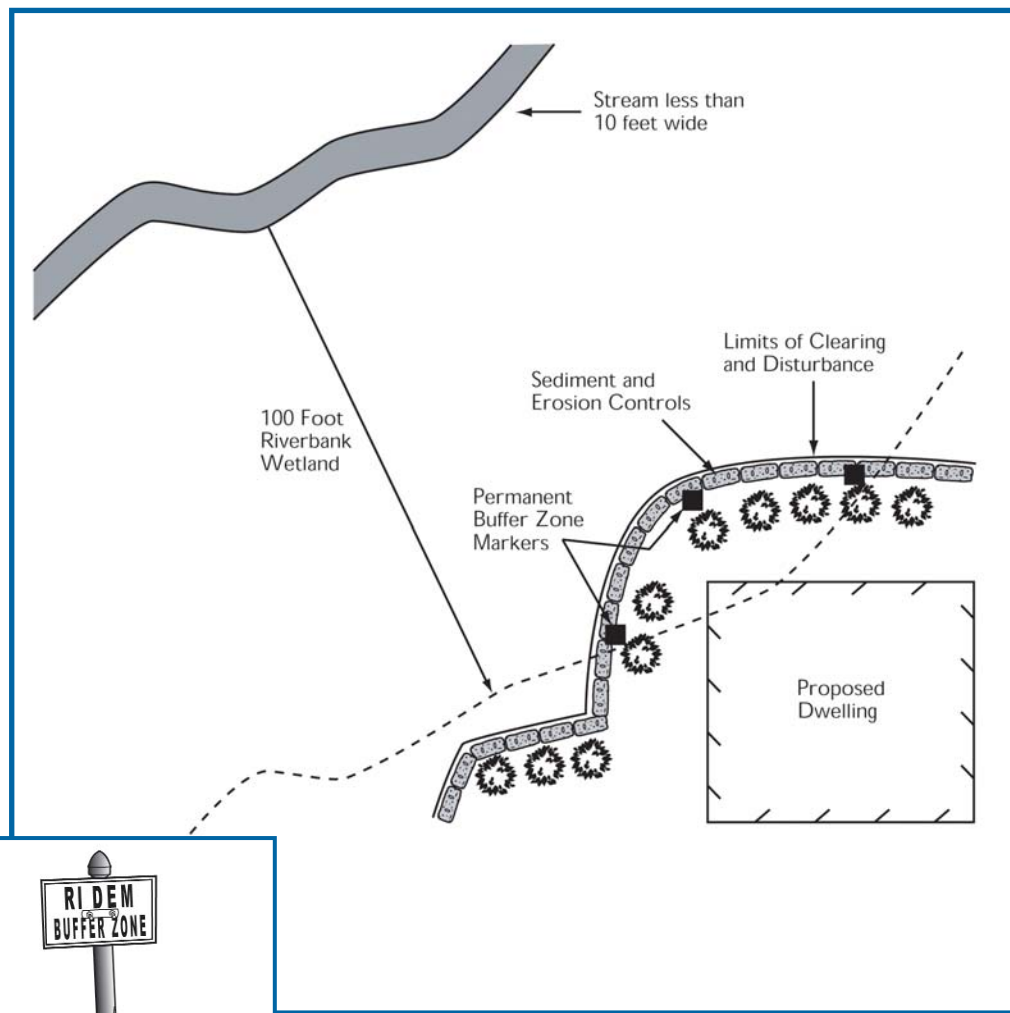
How wetland impacts were minimized:

- ✓ The house and driveway were relocated to the front of the lot resulting in far less wetland encroachment, while still adhering to town setback requirements.
- ✓ The deck was omitted to allow for a larger backyard.
- ✓ The driveway retaining wall reduced the need for grading in the perimeter wetland.
- ✓ Proposed plantings shield the wetland from noise and light disturbance.
- ✓ A grading easement was obtained from the owners of the neighboring lot to allow for more practical Limits of Clearing and Disturbance (LOD).

Example 4: Marking the Buffer Zone

This example illustrates **Buffer Zone Markers**. Often on lots that contain a large amount of wetland, and where proposals have narrow backyards and limited building space, DEM requires as a permit condition that permanent buffer zone markers be installed along the Limits of Clearing and Disturbance. The markers serve as a reminder to homeowners that no disturbance can occur past the line without a permit or specific exemption. Also, if the property is sold, the markers serve as permanent visual reminders that a wetland permit exists for the property.

Acceptable permanent type markers include 4" x 4" pressure treated timber posts, galvanized fence posts with cap, or granite or concrete bounds. Markers should extend a minimum 24" above grade. A permanent-type tag or sign labeled "RIDEM Buffer Zone" must be placed on each marker. A permanent-type fence at least 24 " tall and similarly labeled may be used instead if preferred.



Example 4a



Example 4b