

**APPLICATION OF AVERY BROOK HOMES, LLC TO
TOWN OF LEDYARD INLAND WETLANDS AND WATERCOURSES COMMISSION**

**NARRATIVE DESCRIPTION AND CONSTRUCTION SEQUENCE RELATIVE TO
THE DEVELOPMENT OF A PROPOSED THIRTY-SIX (36) LOT RESIDENTIAL
AFFORDABLE HOUSING SUBDIVISION AT 94, 96, 98 AND 100 STODDARDS
WHARF ROAD A.K.A. CONNECTICUT ROUTE 214**

REVISED: NOVEMBER 21, 2022

PROJECT OVERVIEW:

The Applicant is the owner of four (4) certain contiguous tracts or parcels of land located on the northerly side of Stoddards Wharf Road A.K.A. Connecticut Route 214 in the Town of Ledyard, Connecticut comprising 9.21 acres, more or less. The properties are designated as 94, 96, 98 and 100 Stoddards Wharf Road and are more particularly delineated on Ledyard Assessor's Map 65. The Applicant's properties (hereinafter collectively referred to as the "Property") is abutted to the northwest, north, northeast and east by land of the City of Groton. The Property is comprised of well-drained soils as depicted on the "Boundary and Soils Map" (and as hereinafter described in the Soils section of this Narrative) as depicted on a plan entitled "Plan Showing Resubdivision Property of Avery Brook Homes LLC 94, 96, 98 and 100 Stoddards Wharf Road A.K.A. Connecticut Route 214 Ledyard, Connecticut Scales As Shown July 2022 Revised: October 31, 2022 Sheet 1 of 10 Dieter & Gardner Land Surveyors – Planners P.O. Box 335 1641 Connecticut Route 12 Gales Ferry, CT. 06335 (860) 464-7455 Email: dieter.gardner@yahoo.com".

The Applicant originally proposed to develop the Property for a thirty-six (36) lot single family residential subdivision under the Affordable Housing Act, Connecticut General Statutes §8-30g. The original development scheme for the Property contemplated the development of a private loop road with two (2) access points on the northerly side of Stoddards Wharf Road. Due to the free draining nature of the soils prevalent throughout the site, no closed drainage system was proposed in the roadway system with the anticipation that stormwater runoff from improved portions of the project site would infiltrate into the existing well-drained soils throughout the site; thereby eliminating any point source discharges resulting from the proposed development.

After receiving and reviewing initial review comments with respect to the development initiative, the Applicant, in an October 31, 2022 revision of the affordable housing subdivision initiative, has revised the development proposal by (i) eliminating ten (10) proposed building lots (ii) revising the infrastructure design of the roadway system for the project to provide a municipal street system within the development and by eliminating one street access point to and from Stoddards Wharf Road and limiting the second (westerly) access point to serve three (3) lots; i.e. Lots 15, 16 and 17 and (iii) incorporating into the infrastructure vernacular a partially closed drainage system which will capture and treat for stormwater quality purposes, a substantial portion of the improved site stormwater runoff. In addition, all proposed primary and reserve septic system areas have been removed from the one hundred (100') foot upland review area.

There are only peripheral areas of regulated inland wetlands located on the Property as depicted by Wetland Flags 1 – 8 (along the easterly periphery of Proposed Lot 1), Wetland Flags 1A – 6A (along the easterly periphery of Lot 2) and Wetland Flags 10B – 12B (along the northerly periphery of Lot 7) all as shown on a plan entitled “Plan Showing Resubdivision Property of Avery Brook Homes LLC 94, 96, 98 and 100 Stoddards Wharf Road A.K.A. Connecticut Route 214 Ledyard, Connecticut Scale: 1” = 40’ July 2022 Revised: October 31, 2022 Sheet 2 of 10 Dieter & Gardner Land Surveyors – Planners 1641 Connecticut Route 12 P.O. Box 335 Gales Ferry, CT. 06335 (860) 464-7455 Email: dieter.gardner@yahoo.com”.

Each of the proposed building lots in the affordable housing subdivision will contain a drilled potable water supply well and a subsurface sewage disposal system. The development scheme for the project is depicted on a plan entitled “Plan Showing Resubdivision Property of Avery Brook Homes LLC 94, 96, 98 and 100 Stoddards Wharf Road A.K.A. Connecticut Route 214 Ledyard, Connecticut Scale: 1” = 40’ July 2022 Revised: October 31, 2022 Sheet 3 of 10 Dieter & Gardner Land Surveyors – Planners 1641 Connecticut Route 12 P.O. Box 335 Gales Ferry, CT. 06335 (860) 464-7455 Email: dieter.gardner@yahoo.com” (hereinafter, the “Plan”).

As depicted on the Plan, the Applicant is not proposing any direct impacts to inland wetlands and watercourses. However, the Applicant is proposing construction activities, including the placement of the water quality basin, grading and a portion of the dwelling house on Lot 2 in upland review areas adjacent to inland wetlands. Upland review area activities on the revised subdivision proposal are limited to the installation of the water quality basin on the water quality basin parcel and the placement of a portion of the dwelling house and associated grading on Proposed Lot 2.

An evaluation of the wetland systems located along the periphery of the project site, the characteristics of those wetland systems and an evaluation of the lack of adverse impacts to those systems as a result of the proposed development is contained in a separate report submitted with this application to the Town of Ledyard Inland Wetlands and Watercourses Commission prepared by Ian Cole, Certified Soil Scientist and Wetland Ecologist.

SOILS:

UPLAND SOILS

Upland soils found on the Project site consist of the following:

Charlton-Hollis Soils (CrD). This series consists of well drained to somewhat excessively well drained, non-stony to extremely stony soils that formed in loamy glacial till. Charlton-Hollis Soils are found on upland hills, ridges and glacial till plains. Slopes range from 3 to 45 percent. Charlton-Hollis Soils are found in a drainage sequence on the landscape with moderately well drained Sutton Soils and poorly drained Leicester Soils. They are near well drained Canton, Narragansett, Agawam and Paxton Soils. These soils have finer textures in the C horizon than

Canton and Narragansett Soils and a more friable C horizon than Paxton Soils. Soil characteristics are as follows:

- 0" – 2" Very dark brown, fine sandy loam; weak medium granular structure; very friable; many fine roots; 5 percent rock fragment; strongly acid, clear wavy boundary.
- 2" – 5" Dark brown, fine sandy loam; weak medium granular structure; very friable; common fine roots; 5 percent rock fragment; strongly acid; gradual wavy boundary.
- 5" – 12" Dark yellowish-brown, fine sandy loam; weak medium subangular blocky structure; very friable; common fine roots; 5 percent rock fragment; strongly acid; gradual wavy boundary.
- 12" – 17" Dark yellowish-brown, fine sandy loam; weak medium subangular blocky structure; very friable; common fine roots; 5 percent rock fragment; strongly acid.
- 17" – 24" Yellowish-brown, fine sandy loam; weak medium subangular blocky structure; friable; common fine and medium roots; 15 percent rock fragment; medium acid; clear wavy boundary.
- 24" – 29" Light olive-brown, fine sandy loam; weak medium subangular blocky structure; friable; few fine roots; 15 percent rock fragment; medium acid; clear wavy boundary.
- 29" – 60" Grayish-brown, fine sandy loam; massive; friable; 15 percent rock fragment; medium acid.

Canton and Charlton Very Stony Fine Sandy Loams 3 – 15 Percent Slopes (CdC). These gently sloping and sloping well-drained soils are found on glacial till upland hills, plains and ridges. Stones and boulders cover 8 – 25 percent of the surface. Mapped areas are dominantly irregular in shape and mostly 2 to 40 acres. The mapped acreage of this undifferentiated group is about 55 percent Canton soil, 25 percent Charlton soil and 20 percent other soils. Mapped areas consist of Canton soil or Charlton soil, or both. These soils were mapped together because there are no major differences in use or management. Canton soils are found near somewhat excessively drained Merrimack and Hollis soils, well-drained Charlton and Montauk soils, moderately well-drained Sutton soils and poorly drained Leicester soils.

The soil stratification of the Canton soil is as follows:

- 0" – 1" Black fine sandy loam; weak fine granular structure; very friable; common fine roots and medium; strongly acid; abrupt wavy boundary.

- 1" – 5" Dark yellowish-brown fine sandy loam; weak medium granular structure; very friable; common fine and medium roots; 10 percent rock fragment; strongly acid; gradual wavy boundary.
- 5" – 15" Dark yellowish-brown sandy loam; weak medium granular structure; very friable; common fine and medium roots; 15 percent rock fragment; strongly acid; gradual wavy boundary.
- 15" – 24" Dark yellowish-brown sandy loam; weak medium granular structure; very friable; few fine roots; 15 percent rock fragment; strongly acid; gradual wavy boundary.
- 24" – 60" Grayish brown gravelly sand; massive; friable; 20 percent rock fragment; strongly acid.

The Charlton soils are found in the drainage sequence on the landscape with moderately well-drained Sutton soils and poorly drained Leicester soils. They are near somewhat excessively drained Hollis soils and well-drained Canton, Narragansett, Agawam and Paxton soils. The soil stratification of the Charlton soil is as follows:

- 0" – 8" Very dark grayish-brown fine sandy loam; weak medium granular structure; friable; common fine and medium roots; 10 percent rock fragment; strongly acid; abrupt wavy boundary.
- 8" – 15" Dark yellowish-brown fine sandy loam; weak medium subangular blocky structure; friable; common fine and medium roots; 15 percent rock fragment; medium acid; gradual wavy boundary.
- 15" – 24" Yellowish-brown fine sandy loam; weak medium subangular blocky structure; friable; common fine and medium roots; 15 percent rock fragment; medium acid; clear wavy boundary.
- 24" – 29" Light olive brown fine sandy loam; weak medium subangular blocky structure; friable; few fine roots; 15 percent rock fragment; medium acid; clear wavy boundary
- 29" – 60" Grayish brown fine sandy loam; massive; friable; 15 percent rock fragment; medium acid.

Agawam Fine Sandy Loam, 3 – 8 Percent Slopes (AfB). The Agawam soil consists of well-drained soils that formed in glacial outwash. Agawam soils are found on stream terraces and outwash plains. Slopes range from 0 to 8 percent. The Agawam soils are found in the drainage sequence on the landscape with moderately well-drained Ninigret soils. They are near excessively drained Hinckley soils, somewhat excessively drained Merrimack soils, well-drained Haven,

Canton and Charlton soils and poorly drained Raypol and Walpole soils. The soil stratification of the Agawam soil is as follows:

- 0" – 9" Dark brown fine sandy loam; weak medium granular structure; very friable; few fine roots; 5 percent coarse fragment; strongly acid; abrupt wavy boundary.
- 9" – 19" Dark yellowish-brown fine sandy loam; weak medium subangular blocky structure; very friable; few fine roots; 5 percent coarse fragment; strongly acid; gradual wavy boundary.
- 19" – 24" Dark yellowish-brown fine sandy loam; weak medium subangular blocky structure; very friable; few fine roots; 5 percent coarse fragment; medium acid; abrupt wavy boundary.
- 24" – 32" Light olive brown sand; massive; very friable; few fine roots; 15 percent coarse fragment; medium acid; abrupt wavy boundary
- 32" – 60" Light olive brown very gravelly coarse sand; single grain; loose; 55 percent coarse fragment; medium acid.

Haven Silt Loam, 0 to 3 Percent Slopes (HcA). The Haven soil consists of well-drained soils that formed in glacial outwash. Haven soils are found on stream terraces and outwash plains. Slopes range from 0 to 3 percent. Haven soils are found in the drainage sequence on the landscape with moderately well-drained Tisbury soils and poorly drained Raypol soils. They are found near excessively drained Hinckley soils, well-drained Canton, Charlton, Narragansett and Agawam soils, and moderately well-drained Ninigret soils. The soil stratification of the Haven soil is as follows:

- 0" – 7" Dark brown silt loam; weak fine granular structure; very friable; common fine and medium roots; 5 percent coarse fragment; strongly acid; abrupt wavy boundary.
- 7" – 11" Brown silt loam; weak medium subangular blocky structure; friable; few fine roots; 5 percent coarse fragment; strongly acid; gradual wavy boundary.
- 11" – 15" Dark yellowish-brown silt loam; weak medium subangular blocky structure; friable; few fine roots; 10 percent coarse fragment; strongly acid; gradual wavy boundary.
- 15" – 23" Yellowish-brown silt loam; weak medium subangular blocky structure; friable; few fine roots; 15 percent coarse fragment; strongly acid; clear wavy boundary
- 23" – 60" Light yellowish-brown very gravelly sand; single grain; loose; 55 percent coarse fragment; medium acid.

Hinckley Gravelly Sandy Loam, 3 to 15 Percent Slopes (HkC). This gently sloping and sloping, excessively drained soil is found on stream terraces, outwash plains, kames and eskers. Mapped areas are dominantly irregular in shape and mostly 2 to 25 acres. The Hinckley soils are found near excessively drained Windsor soils, somewhat excessively drained Merrimack soils, well-drained Agawam and Haven soils, moderately well-drained Sudbury soils, poorly drained Walpole soils and very poorly drained Scarboro soils. The soils stratification of the Hinckley soil is as follows:

- 0" – 7" Dark brown gravelly sandy loam; weak fine granular structure; very friable; many fine roots; 20 percent coarse fragment; medium acid; abrupt wavy boundary.
- 7" – 14" Yellowish-brown gravelly loamy sand; single grain; loose; few fine roots; 25 percent coarse fragment; medium acid; gradual wavy boundary.
- 14" – 22" Yellowish-brown gravelly loamy sand; single grain; loose; few fine roots; 40 percent coarse fragment; strongly acid; clear wavy boundary.
- 22" –60" Brownish-yellow very gravelly coarse sand; single grain; loose; 60 percent coarse fragment; medium acid.

Udorthents Urban Land Complex (Ud). Udorthents soils consist of excessively drained to moderately well-drained soils found on glacial till upland hills, ridges, till plans, drumlins and outwash plains and on stream terraces. They are found in areas where more than two feet of the upper part of the original soil has been removed, or in areas that have been covered by more than two feet of fill material. Udorthents are found in loamy or sandy glacial till and gravelly or very gravelly outwash. Slopes range from 0 to 15 percent. Mapped areas are mostly 5 to 40 acres. Included within this complex in mapping are small, intermingled areas of undisturbed soils. Due to the disturbed nature of this soil, this soil complex is not assigned to a capability subclass.

WETLAND SOILS:

Ridgebury-Leicester-Whitman Soils (3). These poorly drained and very poorly drained soils are found in drainageways and depressions on glacial till, upland hills, ridges, plains and drumloidal landforms. Stones and boulders cover 8-25% of the surface. Slopes range from 0-30%. The mapped acreage of this undifferentiated group is about 35% Ridgebury soil, 30% Leicester soil, 20% Whitman soil and 15% other soils. Some mapped areas consist of one of these soils, and other areas consist of two or three. These soils were mapped together because there are no major differences in use and management.

The soil stratification for the Ridgebury soil is as follows:

- 0" – 1" Partly decomposed leaves.

- 0" – 4" Black, fine sandy loam; weak medium granular structure; friable; common fine roots; 5% rock fragments; strongly acid; clear wavy boundary.
- 4" – 13" Gray fine sandy loam; common medium distinct strong brown mottles and common, medium faint yellowish brown mottles; massive; friable; 5% rock fragments; strongly acid; gradual wavy boundary.
- 13" – 20" Brown fine sandy loam; many medium distinct yellowish brown mottles and few fine faint grayish brown mottles; massive; friable; firm in place; 10% rock fragments; slightly acid; clear wavy boundary.
- 20" – 60" Grayish brown sandy loam; few fine faint yellowish brown mottles; massive; very firm, brittle; 5% rock fragment; slightly acid.

The soil stratification of the Leicester soil is as follows:

- 0" – 2" Decomposed leaves.
- 2" – 6" Very dark gray fine sandy loam; weak fine granular structure; very friable; few fine and medium roots; 5% rock fragments; very strongly acid; abrupt smooth boundary.
- 6" – 12" Dark grayish brown, fine sandy loam; few fine faint yellowish-brown mottles and many medium distinct light brownish gray mottles; weak medium subangular blocky structure; very friable; few medium roots; 5% rock fragments; strongly acid; clear wavy boundary.
- 12" – 24" Grayish brown, fine sandy loam; few medium distinct yellowish-brown and dark grayish brown mottles; weak medium subangular blocky structure; friable; 10% rock fragments; strongly acid; gradual wavy boundary.
- 24" – 32" Pale olive fine sandy loam; many coarse distinct yellowish brown mottles; weak medium subangular blocky structure; friable; 15% rock fragments; strongly acid; gradual wavy boundary.
- 32" – 60" Light olive gray gravelly fine sandy loam; many medium distinct yellowish-brown mottles; massive; friable; 25% rock fragment; strongly acid.

The soil stratification of the Whitman soil is as follows:

- 0" – 1" Decomposed leaf litter.

1" – 9"	Black fine sandy loam; weak medium granular structure; friable; common fine and medium roots; strongly acid; abrupt wavy boundary.
9" – 16"	Dark grayish brown fine sandy loam; few fine faint yellowish brown mottles; weak medium subangular blocky structure; friable; few fine roots; 5% rock fragments; medium acid; clear wavy boundary.
16" – 22"	Grayish brown, fine sandy loam; common medium distinct strong brown mottles and few medium light brownish gray mottles; moderate medium platy structure; very firm, brittle; 5% rock fragments; slightly acid; gradual wavy boundary.
22" – 60"	Grayish brown fine sandy loam; common medium distinct strong brown mottles and few medium faint light brownish gray mottles; massive; firm, brittle; 5% rock fragments; slightly acid.

Included with these soils in mapping are small areas of moderately well drained Rainbow, Sutton and Woodbridge soils and very poorly drained Adrian and Palms soils. The Ridgebury soil has a seasonal high water table at a depth of about 6". Permeability is moderate or moderately rapid in the surface layer and subsoil and slow or very slow in the substratum. The Leicester soil has a seasonal high water table at a depth of about 6". Permeability is moderate or moderately rapid. The Whitman soil has a high water table at or near the surface for most of the year. Permeability is moderate or moderately rapid in the surface layer and subsoil and slow or very slow in the substratum.

GENERAL PROCEDURES:

1. Prior to commencing construction of the Project, the Developer and the Developer's contractor shall meet with the Ledyard Wetlands Enforcement Officer (the "Preconstruction Meeting") to agree upon the method of installation and maintenance of erosion and sediment control measures during the development of the Project.
2. Subsequent to the Preconstruction Meeting, the Developer shall install all erosion and sediment control measures in accordance with the Plan. As development occurs on each individual building lot within the Project, additional erosion and sediment control measures as depicted on the Plan shall be installed to mitigate erosion and sediment migration on the particular lot being developed.
3. The Developer's contractor shall install an anti-tracking pad in accordance with the "Temporary Construction Entrance" detail depicted on Sheet 9 of 10 of the Plan at each point of access to the project site from Stoddards Wharf Road A.K.A. Connecticut Route 214.
4. Prior to conducting any construction activities at the Project, the Developer shall notify the Ledyard Wetlands Enforcement Officer and the Ledyard Zoning Enforcement Officer that

erosion and sediment control measures have been installed and request that the same be inspected and approved by the Ledyard Wetlands Enforcement Officer and the Ledyard Zoning Enforcement Officer. This procedure shall be repeated as the development of each lot in the residential subdivision progresses.

5. All activities in conjunction with the development of the Project shall be conducted in accordance with the terms and provisions of the Plan and this Narrative. The Ledyard Wetlands Enforcement Officer shall have authority to modify any construction details or procedures hereinafter contained as warranted by field conditions during the duration of the development of the Project.
6. All erosion and sediment control measures shall be inspected at least weekly while construction is ongoing on each lot, and after every storm event resulting in a discharge, and repaired and maintained as necessary.
7. During the stabilization period (after the completion of development, but prior to the certification of approval by the Ledyard Wetlands Enforcement Officer and the Ledyard Zoning Enforcement Officer for the removal of erosion and sediment control measures), all erosion and sediment control measures shall be maintained in proper working order. Prior to the commencement of construction on each lot in the subdivision, the Developer shall certify, in writing, to the Ledyard Wetlands Enforcement Officer and the Ledyard Zoning Enforcement Officer the name, address, telephone number and facsimile number of the person who will be primarily responsible for the installation and maintenance of sediment and erosion control measures on each lot in the subdivision. Such person shall be the designated representative of the Developer responsible for compliance with all erosion and sediment control measures in conjunction with the development of each lot. All erosion and sediment control measures shall be inspected and maintained and/or repaired, as necessary, on a weekly basis during the stabilization period and after each storm occurrence resulting in a discharge. Until notified otherwise, in writing, "Peter C. Gardner, a member of the Developer, 1641 Connecticut Route 12, Gales Ferry, Connecticut 06335; Telephone: (860) 464-7455; E-mail: dieter.gardner@yahoo.com" shall be the party responsible for compliance with the terms and provisions of the erosion and sediment control plan for the development of the Project.
8. At such time as stabilization has been achieved, and certification thereof received from the Ledyard Wetlands Enforcement Officer and the Ledyard Zoning Enforcement Officer, erosion control measures shall be removed.
9. During the stabilization period, any erosion which occurs shall be immediately repaired by the Developer, reseeded with the seeding mixes set forth in the Construction Sequencing Section of this Narrative, and re-stabilized.
10. If any erosion and sediment control measures fail, or are not installed or maintained in accordance with this Narrative, the Plan, or the directives of the Ledyard Wetlands Enforcement Officer, the Developer, or its successors, shall be required to cease all

development activities on such lot until such time as said erosion and sediment control measures have been installed in accordance with this Narrative, the Plan and the directives of the Ledyard Wetlands Enforcement Officer and approval of the same has been certified by the Ledyard Wetlands Enforcement Officer, in writing.

CONSTRUCTION SEQUENCING

LOT DEVELOPMENT (TYPICAL):

1. The Developer shall install erosion and sediment control measures in the location delineated on the Plan and in accordance with the detail depicted on the Plan.
2. An anti-tracking pad construction entrance shall be installed at the intersection of the driveway for each lot with Avery Brook Circle. The construction entrance shall be constructed in accordance with the “Temporary Construction Entrance” detail delineated on Sheet 9 of 10 of the Plan.
3. That portion of the lot designated for development for a single-family dwelling house and appurtenant facilities shall be cleared, grubbed and rough graded. All vegetated material shall be removed from the lot. Stumps shall either be (i) ground in place or (ii) removed to a location approved in advance by the Town of Ledyard Wetlands Enforcement Officer and the Town of Ledyard Zoning Enforcement Officer. No stumps shall be buried on the Project site.
4. The driveway serving the lot shall be installed at rough grade.
5. The foundation hole shall be excavated. Any stored or stockpiled material shall be encompassed by a single row of silt fence in the “Proposed Stockpile Area” for each lot. All topsoil on the project site shall be retained for the post-construction stabilization of the project area.
6. Footings and foundations shall be poured; and, after the application of water proofing and the passing of the curing period, backfilled with stockpiled material. Due to the pervious nature of the soils on the project site, footing drains are not required.
7. House construction shall commence and proceed to completion, including the installation of the onsite septic system.
8. The finished course, bearing surface, of the driveway shall be installed.
9. Final grading of the lot shall be completed.
10. Disturbed areas of the lot shall be stabilized by spreading surface soil over the same at a thickness of not less than 6 inches. Areas to be seeded will be prepared by spreading ground limestone equivalent to 50 percent calcium plus magnesium oxide applied at a rate of 100

pounds per 1,000 square feet. Fertilizer (10-10-10) is to be applied at a rate of 15 pounds per 1,000 square feet. All areas shall then be seeded with a seeding mix of Creeping Red Fescue applied at a rate of 20 pounds per acre, Kentucky Bluegrass applied at a rate of 20 pounds per acre and Perennial Ryegrass applied at a rate of 5 pounds per acre, for a total application of 45 pounds per acre. After the seeding, the area seeded shall be stabilized with hay mulch applied at a rate of 2 bales per 1,000 square feet, and anchored immediately after spreading by tracking. In the alternative, disturbed areas may be hydroseeded using a hydroseed mix containing similar cultivars. Seeding shall only occur between April 1 and June 15 and August 15 and October 1.

11. Once all seeded areas have been thoroughly stabilized and mowed with a minimum of two mowings, erosion control measures shall be removed.

CONSTRUCTION SEQUENCING – AVERY BROOK CIRCLE

In conjunction with the development of the Avery Brook Homes Affordable Subdivision, the Applicant will construct Avery Brook Circle, a proposed municipal street located on the northerly side of Stoddards Wharf Road in the Town of Ledyard, Connecticut, including its associated infrastructure which consists of a partially closed drainage system and the construction of a stormwater quality basin on the stormwater quality basin parcel in an upland review area.

1. The Applicant shall install an anti-tracking construction entrance at the intersection of proposed Avery Brook Circle with Stoddards Wharf Road.
2. The Applicant shall clear, but not grub, the area for the installation of the stormwater quality basin on the stormwater quality basin parcel; and, if any clearing is required, the area for road construction for Avery Brook Circle.
3. Marketable timber shall be removed from the property. Tree tops shall be chipped and wood chip berms may be substituted for other forms of erosion control delineated on the Plan. Wood chips may be utilized for erosion control on any embankment areas during construction.
4. Erosion control measures shall be installed in the locations delineated on the Plan.
5. Once all erosion control measures have been installed, the Applicant shall request an inspection of the installation of erosion and sediment control measures by the Town of Ledyard Wetlands Enforcement Officer and the Town of Ledyard Zoning Enforcement Officer. In no event shall grubbing or any soil disturbance occur until such time as the installation of erosion and sediment control measures has been approved by the Town of Ledyard Wetlands Enforcement Officer and the Town of Ledyard Zoning Enforcement Officer.
6. Stumps (if any) shall either be removed or ground in place. In the event that stumps are removed, they shall be removed to a location approved in advance by the Town of Ledyard

Wetlands Enforcement Officer and the Town of Ledyard Zoning Enforcement Officer. In no event shall stumps be buried on site.

7. Surface soil shall be stripped in the area for the installation of the stormwater quality basin and shall be stockpiled in a surface soil stockpile location delineated on the Plan.
8. Surface soil shall be retained on site for eventual use in the stabilization of all disturbed areas of the property. Surface soil stockpiles shall be stabilized by installing a single row of silt fence (or a wood chip berm) around each stockpile location. The stockpile shall be constructed at a slope not to exceed 3:1 and shall be stabilized by seeding with an annual rye grass mix and mulch. The annual rye grass mix shall be applied at a rate of 40 pounds per acre. Mulch shall be applied at a rate of 80 pounds per 1,000 square feet and shall be spread by hand or with a mulch blower.
9. The area of the stormwater quality basin on the stormwater quality basin parcel shall be excavated to grade. The stormwater quality basin shall be utilized as a temporary sediment trap during construction of the infrastructure improvements for the project.
10. When the temporary sediment trap has become filled to 50% of its capacity, it shall be excavated to return it to its design capacity and the excavated material shall be utilized as site fill outside of any upland review area.
11. The road shall be “boxed out” and trenches excavated for the installation of stormwater drainage structures and culverts in locations where Avery Brook Circle contains a closed drainage system.
12. Upon completion of culverting, not less than one (1’) foot of clean bedding material shall be installed in each utility trench.
13. Subsequent to the installation of bedding, stormwater drainage pipes and culvers where required, shall be installed as delineated on the Plan.
14. Once stormwater drainage structures and culverts have been installed, each trench shall be backfilled with clean bedding material compacted to a depth of one (1’) foot over the utility installation.
15. The flared end section and modified rip rap plunge pool shall be installed together with the 15 inch HDPE culvert from Catch Basin 1 to the temporary sediment trap.
16. During construction, all pipe and catch basin inlets will be protected with haybale filters and/or silt fence which shall be maintained in place until such time as all disturbed areas have been thoroughly stabilized. Basin protection shall be installed in accordance with the “Catch Basin Inlet Protection” detail delineated on Sheet 9 of 10 of the Plan.

17. Avery Brook Circle shall be constructed in accordance with the “Avery Brook Circle Cross Section” detail delineated on Sheet 10 of 10 of the Plan.
18. Disturbed areas shall be stabilized by spreading stockpiled surface soil over these areas at a thickness of not less than four (4”) inches. Areas to be seeded will be prepared by spreading ground limestone equivalent to 50 percent calcium plus magnesium oxide applied at a rate of 50 pounds per 1,000 square feet. Fertilizer (10-10-10) is to be applied at a rate of 7.5 pounds per 1,000 square feet. Following the initial application of lime and fertilizer, there are to be not periodic applications of lime and fertilizer. Disturbed areas will be seeded with a seeding mix of Kentucky Bluegrass applied at a rate of 20 pounds per acre, Creeping Red Fescue applied at a rate of 20 pounds per acre and Perennial Ryegrass applied at a rate of 5 pounds per acre, for a total application of 45 pounds per acre. A hydroseed mix utilizing comparable cultivars shall be a suitable substitute. In the event that a hydroseed mix is not utilized, after seeding, the area seeded shall be seeded with hay mulch immediately applied at a rate of 70 pounds per 1,000 square feet and anchored by tracking. Seeding shall only occur between April 1 and June 15 and August 15 and October 1.
19. Any accumulated sediment in the temporary sediment trap shall be removed in order to return the sediment trap to its design specifications. The stormwater quality basin outlet structure and modified rip rap spillway shall be installed in accordance with the details delineated on Sheets 6 of 10 and 10 of 10 of the Plan. The stormwater quality basin shall be stabilized by installing not less than eight (8”) inches of enriched organic topsoil containing not less than seven (7%) percent organic content. The stormwater quality basin shall be planted in accordance with the “Stormwater Quality Basin Landscape Plan” and the “Landscape Schedule” delineated on Sheet 6 of 10 of the Plan. Planting shall only occur between April 1 to June 15 and August 15 to October 1.
20. Once all seeded areas have been thoroughly stabilized, erosion and sediment control measures shall be removed.

DELINEATION OF NO FEASIBLE AND PRUDENT ALTERNATIVE

The Applicant is the owner of four (4) tracts or parcels of land, comprising 9.21 acres, in total, located on the northerly side of Stoddards Wharf Road in Ledyard, Connecticut, designated as 94, 96, 98 and 100 Stoddards Wharf Road. The property is located in an R-60 zoning district. However, the Applicant is proposing to develop the combined properties as an affordable housing subdivision pursuant to the provisions of Section 8-30g of the Connecticut General Statutes. As evidenced by the “Boundary and Soil Map” depicted on Sheet 1 of 10 of the Plan, and as delineated in the “Soil Characteristics” section of this Narrative, the project site is blessed with well-drained soils facilitating the development of this parcel for affordable housing at a higher density than allowed by the Ledyard Zoning Regulations with the installation of on-site septic systems and wells, all in compliance with the requirements of the Connecticut Public Health Code. The revised plans submitted for consideration acknowledge the fact that there are wetland systems located along the easterly and northerly periphery of the property. The modified density formulated by the

Applicant's professional consultants recognizes the peripheral limiting factors to the development of the property for 36 or more individual single family building lots and the revised development scheme accommodates the preservation and protection of the wetland ecosystems. In the formulation of the subdivision design for the project, all direct impacts to wetlands and watercourses have always been avoided. In addition, the modified development initiative removes the installation of all on-site primary and reserve septic areas from the 100 foot upland review area adjacent to wetlands and watercourses. The revised development plan now limits upland review area activities to the siting of a portion of the dwelling house on Proposed Lot 2 with associated grading and the construction of the stormwater quality basin on the stormwater quality basin parcel as the only upland review area activities within the project.

As defined in Connecticut General Statutes §22a-38(17), "feasible" means able to be constructed or implemented consistent with sound engineering principles. Section 18 of that Statute defines "prudent" as economically and otherwise reasonable in light of the social benefits to be derived from the proposed regulated activity provided cost may be considered in deciding what is prudent and further provided a mere showing of expense will not necessarily show an alternative is imprudent.

In this instance, the Applicant is proposing a subdivision containing affordable housing units within the Town of Ledyard which will further the laudable goal of providing affordable workforce housing to community constituents who would otherwise be unable to afford and enjoy the privileges of home ownership.

The Applicant has reviewed a number of options for the development of the Property. The initial formulation for the affordable housing subdivision contemplated forty-one (41) single family residential building lots. A subdivision plan was developed with a private road system at that density which would accommodate the proposed forty-one (41) building lots.

A preliminary review of the initial project formulation by regulatory authorities raised concerns with respect to the density of the project and the ability of the project to support both on-site wells and septic systems, notwithstanding the fact that a hydrogeologic investigation performed by GEI Consultants evidences the fact that there is sufficient groundwater recharge to support forty-one (41) potable water supply wells; and the fact that the proposed septic systems on the forty-one (41) lots complied with the requirements of the Connecticut Public Health Code.

Prior to submission of the initial subdivision application for consideration to both the Ledyard Inland Wetlands and Watercourses Commission and the Ledyard Planning and Zoning Commission, the development initiative was scaled back to thirty-six (36) building lots which would be served by a private road system maintained by a homeowner's association with two (2) access points on Stoddards Wharf Road. Again, through the regulatory process, concerns were raised with respect to the proximity of proposed on-site sewage disposal systems located in upland review areas adjacent to the three (3) designated wetland systems located along the easterly and northerly periphery of the project site.

As a result of the comments received to date, the Applicant has re-formulated the development initiative by eliminating ten (10) lots from the submission proposal and modifying the design of the project to accommodate the installation of a public street to provide access to the currently proposed twenty-six (26) building lots. It should be noted that the current formulation of the development proposal (i) has no direct impacts to inland wetlands and watercourses (ii) has incorporated a partially closed drainage system in order to provide stormwater renovation in accordance with the 2004 Stormwater Quality Manual prior to the release of stormwater runoff to the environment (iii) has removed all primary and reserve septic system areas from the 100 foot upland review area adjacent to wetlands and watercourses and (iv) has reduced proposed upland review area activity in conjunction with the development of the project from 37,700 square feet to 13,100 square feet. The Applicant submits that these modifications remove the likelihood of any indirect impacts to wetlands or watercourses as a result of the development of this project as currently formulated.

The statutory definition of the word “prudent” necessarily requires a balancing act to be performed in the administration of a municipal wetland application between the development parameters required to insure a successful project and the protection of the wetland and watercourse resources within the permitting jurisdiction of a municipal inland wetlands and watercourses agency. As indicated above, the Avery Brook Homes Affordable Housing Subdivision has been formulated pursuant to the provisions of Section 8-30g of the Connecticut General Statutes. As such, the developer is required to offer fifteen (15%) of the proposed homes in the project at a purchase price which is affordable to a family which is at or below sixty (60%) percent of the lower of the area or statewide median income and an additional fifteen (15%) percent of the homes in the project at a purchase price which is affordable to families who are at or below eighty (80%) percent of the lower of the area or statewide median income. In order to provide this societal benefit which meets the statewide goal of providing affordable housing to workforce residents, as enunciated by the Connecticut legislature, it is necessary to achieve a certain project density in order to develop and sell the affordable homes at a substantial loss. In considering the feasible and prudent alternatives which have been presented by the Applicant, the municipal inland wetlands and watercourses commission is required to balance these goals in determining whether or not the Applicant, in revising its formulation for the project, has satisfied the feasible and prudent alternative analysis required when a municipal inland wetlands and watercourses commission holds a public hearing as a result of a determination that the development of the project is reasonably likely to have a significant impact on wetlands and watercourses.

The Applicant submits that the modifications to the project plans which have resulted in an elimination of ten (10) building lots as well as the incorporation of stormwater renovation measures into the project vernacular now satisfy this standard. In fact, the Applicant submits that the development proposal, as currently constituted, is not likely to result in any significant adverse impacts to the wetland systems located along the periphery of the project parcel.