

Where existing natural growth is proposed to remain, the applicant shall include in the plans the proposed methods to protect the existing vegetation from disturbance and injury during and after construction. These methods shall include fences, berms, curbing, tree wells and similar devices.

D. The following design principles shall be followed:

1. Landscaping shall be located to ameliorate temperature and wind effects on buildings and outdoor use areas. For example, shade trees may be planted on the south side of buildings to shield the hot summer sun, and evergreens planted on the north and northwest for windbreaks when warranted.
2. Landscaping shall be used to accent and complement buildings and should be in scale to the building. For example, long, low buildings may warrant only foundation plantings while trees can help scale down taller buildings.
3. Landscaping shall be provided in public areas, at recreation sites and adjacent to buildings. On residential lots, rear yardscapes should afford privacy with special consideration being given to the screening of second story views from neighboring units.
4. If vines and climbing plants are used along large expanses of walls, a removable trellis must be used for the plants to anchor to.
5. Trees shall be grouped with other trees and shrubs, except along streets where they shall be planted in a straight line at the quantity equivalent to planting them at thirty (30)-foot intervals. Types of trees shall vary within a neighborhood. At least three (3) types of trees shall be used in each neighborhood for environmental diversity. The use of native species of trees is encouraged.
6. Vegetative ground covers shall be used extensively to reduce erosion and are encouraged on slopes. All plantings should be mulched to conserve soil moisture; however, in no case should the mulch exceed four (4) inches in depth and must taper to zero (0) inches at the bases of trees and shrubs.
7. A variety and mixture of landscaping shall be provided on each site. The mixture shall consider susceptibility to disease, colors, seasonal performance, texture, shapes, blossoms, foliage, and whether the species is endemic to this portion of New Jersey.
8. Local soil conditions and water availability shall be considered in the choice of landscaping.
9. The landscaping plan must consider the mature size of the proposed plants. Mature plants must be proportional to nearby buildings and located so as to not infringe on access ways or sight triangles.
10. When the extent of landscaping is constrained, it is preferable to have a few large specimen trees than more small ones.
11. Deciduous trees shall be at least two and one-half (2 1/2) inches caliper at planting, and evergreens shall be at least six (6) feet tall. Shrubs shall be at least three (3) to four (4) feet tall at planting. It is preferable to plant some trees that are 4-6 inches diameter at breast height (dbh) when site conditions permit, such as with street trees. All plantings shall be balled and burlapped unless otherwise approved by the Board. Plants less than four (4) feet tall must be protected from herbivory by deer until they have grown sufficiently to withstand browsing.
12. Entrances to sites deserve special landscaping treatment.
13. Existing large trees shall be saved by maintaining the grade around each tree, by construction of tree wells and walls, and by erecting protective fences during construction activities. Maximum effort shall be made to save groups of trees rather than individual ones. Natural communities such as fields must also be protected and preserved wherever possible.
14. Parking lots shall be landscaped as provided in Section 807.A. and in accordance with the following additional requirements:
 - a. Parking lots shall be canopied with trees for shade.
 - b. Landscaping in or near parking areas shall be designed and located to withstand the effects of snowplowing.

- c. All landscaping in or near parking areas and access drives shall be located so as not to obstruct driver vision. A variety of different types of trees and shrubs shall be grouped to break up views of the massed cars.
 - d. Trees shall be selected that can withstand an urban environment.
 - e. Common parking areas shall be appropriately landscaped to balance personal safety with screening of parked vehicles.
15. Plantings shall be chosen to match the particular microclimate and space restrictions to which they will be exposed. For example, drought-tolerant plants shall be located in areas surrounded by pavement, and maples and other trees shall be located where their roots will not raise sidewalks. Street trees shall be selected to fit the space provided when they are at maturity, with wide spreading trees planted where there is room, and small or narrow trees in restricted areas. Street trees must be pruned so that there are no branches below seven (7) feet in height that extend into the street or over a sidewalk.
 16. Whenever possible, street trees should be located on the farthest side of the sidewalk, if one exists, from the roadway and preferably outside of the right-of-way. Only when no practical alternative exists can street trees be planted between the sidewalk and the curbline or edge of pavement.
 17. Landscaping used in a buffer area or for screening, alone or in combination with other screening devices, shall be a minimum of four (4) feet in height or two and one-half (2½) inches caliper at time of planting and shall consist of a mixture of evergreen and deciduous trees and shrubs. In buffer areas, all added plant material must be of native species. Plantings shall be spaced in accordance with the types of plantings utilized. Evergreen plantings should be used to shield vehicular lights from windows in residential buildings. See also Section 308.
 18. A minimum of six (6) shade trees per acre shall be planted on single-family residential lots, and a minimum of six (6) shade trees per acre of tract shall be planted in open space areas unless the open space is already densely wooded or encompasses a natural field community. A minimum of six (6) shade trees per acre of tract shall be planted throughout the tract in the case of nonresidential or multi-family residential development, except in naturally vegetated areas that do not need supplemental planting. All newly planted shade trees shall be of nursery stock, shall have a minimum caliper of two and one-half (2½) inches, measured four (4) feet from the ground, include at least three (3) different species, and shall be species indigenous to the area, approved by the High Bridge Environmental Commission and reviewed by the Planning Board.
 19. No Landscaping Plan can include species that have been documented to be invasive in the States of New Jersey or Pennsylvania.

E. Maintenance Guarantee

The landscaper or developer shall guarantee that all plantings will survive for a minimum of two (2) years after the date of completion of the project. During such time, any tree, shrub or perennial plant that dies or is severely browsed so as to hinder its future growth must be replaced in-kind. The cost of the landscaping shall be included in the performance bond for the entire project (see Section 702.D). During the project construction, the developer shall be responsible for maintaining all plantings including supplemental watering, deer protection, weeding, mulching, and any other measures that may be required to ensure survival of the plants.

Section 809. Public Utilities.

- A. All public services shall be connected to an approved public utilities system where one exists. The developer shall arrange with the servicing utility for the underground installation of the distribution supply lines and service connections, in accordance with the provisions of the applicable standard terms and conditions incorporated as part of its tariff, as the same are on file with the New Jersey State Board of Public Utility Commissioners. However, lots not part of a new major subdivision or site plan which abut existing streets where overhead electric, CATV or telephone distribution supply lines and service connections have heretofore been installed may be

supplied with electric, CATV and telephone service from these overhead lines, but any new service connections from the utilities' overhead lines shall be installed underground. In cases where extension or replacement of service is needed for existing or new buildings in established subdivisions or developments, the present method of service may be continued. In the case of existing overhead utilities, however, should a road widening or an extension of service or such other condition occur as a result of the development and necessitate the replacement or relocation of such utilities, the developer shall cause the replacement or relocation to be underground. All underground utility lines shall be placed in conduits to facilitate access for maintenance purposes.

1. Prior to the pre-construction meeting preceding the commencement of construction, the developer shall furnish the Board's Administrative Officer with a copy of the agreements with the applicable public utility companies certifying the jurisdiction of the public utility company to serve the property; indicating agreement with the proposed utility installation design; and stating who will construct the facility so that service will be available prior to occupancy. The form of such agreement(s) shall be reviewed and approved by the Borough Attorney prior to the commencement of construction.
 2. The developer shall provide the Borough with four (4) copies of a final "as-built" plan showing the installed locations of all utility facilities.
- B. Easements along property lines or elsewhere for utility installations may be required. Such easements shall be at least fifteen (15) feet wide and located in consultation with the utility concerned and, to the fullest extent possible, shall be centered on or adjacent to lot lines. Such easement dedication shall be expressed on the plat or plan as follows: "Utility right-of-way easement granted for the purposes provided for and expressed in the Land Use and Development Ordinance of the Borough of High Bridge". Utility easements along street right-of-way lines shall be a minimum of ten (10) feet in width. Where a utility easement is located on or along a side lot line, the affected side yard(s) shall be increased by the width of the easement or portion thereof on the lot(s) but shall not be required to be greater than twenty-five (25) feet in the R-3 and R-4 zones. No increase in width of the side yard is required in all other zones.

Section 810. Sanitary Sewers and Septic Systems.

- A. Where a public wastewater treatment plant and collection system is accessible, or where such facilities are to be constructed as a condition of approval of any application for development, the developer shall construct such wastewater treatment facilities and/or sanitary sewer lines and building connections in accordance with the High Bridge Borough Wastewater Management Plan and NJDEP permit requirements and in such a manner as to make adequate sewage treatment available to each lot and building within the development.
- B. Where the use of subsurface sewage disposal systems is proposed, the same may be approved if all requirements of the NJDEP and County and Borough Boards of Health or their assigns are met.
- C. In the event of approval of the use of individual subsurface disposal systems, the Board additionally may require the installation of sewer lines, including lateral connections to each building up to the right-of-way line (i.e., street line), for future use when public sewage treatment facilities are provided to serve the realty improvements to be constructed in the development.
- D. The end fitting of all dry sanitary sewer building connection lines shall have a "tamper proof" plug or cap, temporarily sealed with a material that can be removed to utilize the fitting when the system is to be activated. The Plumbing Subcode Official or the Plumbing Inspector shall affix an adhesive backed disc on the cap or plug bearing a pre-printed message and instructions related to tampering and future use, that will be sufficient to alert and warn the original and subsequent occupants of the building. The capping and plugging shall be performed by the developer at his expense and the message disc shall be provided and attached by a Borough representative.

- E. All sanitary sewer lines shall be air and mandrel tested. Additionally, all lines shall be video recorded and a videotape of the lines shall be provided to the Borough Engineer immediately prior to the activation of the sewer lines or acceptance of the streets in which the lines are constructed, whichever occurs earlier.
- F. All sanitary sewers and individual subsurface disposal systems shall comply with the provisions of Chapter 171, "Sewers", of the Code of the Borough of High Bridge and, for residential development projects, the "Residential Site Improvement Standards", as applicable.

Section 811. Streets, Curbs and Sidewalks.

A. Streets.

- 1. All developments shall be served by paved streets in accordance with the approved subdivision and/or site plan. The arrangements of such streets not shown on the Master Plan or Official Map, as adopted by the Borough, shall be such as to provide for the appropriate extension of such streets and conform with the topography of the land as far as practicable. Minor streets shall be planned so as to discourage through-traffic.
- 2. When a new development adjoins land susceptible to being subdivided or developed, suitable provisions shall be made for access to adjoining lands.
- 3. In subdivisions that abut arterial streets and such other streets or portions of streets as the Board may designate on the Master Plan, the Board may require provisions for marginal access roads, reverse frontage lots with buffer strips for planting, or other design methods for the purpose of separating through and local traffic.
- 4. The right-of-way width of a street shall be measured from lot line to lot line and shall not be less than fifty (50) feet unless a greater width is shown on the Master Plan or Official Map.
- 5. No subdivision showing reserve strips controlling access to streets shall be approved except where the control and disposal of the land comprising such strip has been placed with the Borough Council under conditions approved by the Board.
- 6. Subdivisions or Site Plans that adjoin or include existing streets that do not conform to the widths as shown on the Master Plan or Official Map or the street width requirements of this Ordinance shall provide for the dedication of additional right-of-way, if necessary to accommodate the required roadway width, along either one or both sides of said road. If the subdivision abuts one side of the road only, one-half of the required extra width shall be conveyed to the Borough. Actual widening of the roadway to the required width is not required but may be done in the future if warranted. If improvements are necessary to the existing street(s) on which the property that is the subject of the proposed subdivision or site plan has frontage, then the developer shall be responsible for one hundred percent (100%) of the cost of such improvements along said frontage.
- 7. Residential street hierarchy and standards for the design and construction of residential streets shall be in accordance with the "Residential Site Improvement Standards," as amended.
- 8. No street shall have a name which will duplicate or so nearly duplicate the name of an existing street that confusion results. The continuation of an existing street shall have the same name. Curvilinear streets shall change their name only at street intersections. The Board reserves the right to approve or name streets within a proposed development.
- 9. Where a tract is subdivided into larger parcels than ordinary building lots, such parcels shall be arranged so as to allow the opening of future streets and logical subdivisions.
- 10. The pavement width of streets and the quality of subsurface and base materials shall adhere to the minimum standards set forth by the County or State when said paving concerns roads under their jurisdiction and where such standards exist. Concerning streets under the jurisdiction of the Borough, the following standards shall apply:
 - a. All construction shall be in accordance with the "New Jersey State Highway Standards and Specifications for Road and Bridge Construction" (1983) and any amendments thereto.

- b. On all public and private streets, the subbase course shall be a minimum of four (4) inches compacted thickness of quarry process stone, Type 5, Class A, applied over the compacted subgrade.
- c. On all minor Borough Streets, the base course shall be four (4) inches of bituminous concrete mixture (Mix No. 1-2), constructed in two (2) layers each of not less than two (2) inches of compacted thickness.
- d. On all collector Borough streets, the base course shall be five (5) inches of bituminous concrete mixture (Mix No. 1-2), constructed in two (2) layers each of not less than two and one-half (2.5) inches of compacted thickness.
- e. On all arterial Borough streets, the base course shall be six (6) inches of bituminous concrete mixture (Mix No. 1-2), constructed in two (2) layers each of not less than three (3) inches of compacted thickness.
- f. The surface course for all Borough streets shall consist of two (2) inches of bituminous concrete mixture (Mix No. 1-5), applied according to State Highway specifications.
- g. Where subgrade conditions are yielding or otherwise unsatisfactory in the opinion of the Borough Engineer, all unsuitable material shall be removed, and suitable material shall be applied to the satisfaction of the Borough Engineer.

B. Curbs.

Curbing, either granite block or concrete, shall be installed at all street intersections, where storm water velocities exceed the erosion velocities specified in the "Standards for Soil Erosion and Sedimentation Control in New Jersey" manual, where necessary for traffic channelization and control, for public safety reasons, and/or bordering streets or other areas where on-street parking is permitted and/or is likely to occur. Curbing on all Borough streets shall be granite block or concrete. All curbing shall be laid in the manner approved by the Borough Engineer or the County Engineer in the case of county roads. Depressed curb ramps for the handicapped shall be installed at all radii in accordance with the laws of the State of New Jersey.

C. Sidewalks and/or Pedestrian-Bikeway Corridors.

- 1. Sidewalks (and related aprons) and/or pedestrian-bikeway corridors shall be constructed by the developer in accordance with the following criteria:
 - a. Existing sidewalks shall be extended throughout all areas of the Borough when the roads upon which they are located are extended.
 - b. Sidewalk linkages and/or pedestrian-bikeway corridors shall be provided throughout all areas of the Borough between existing and/or previously approved sidewalks and/or pedestrian-bikeway corridors, unless specifically waived in specific locations by the Board for good cause, such as the existence of, or proposal for, alternate linkages for pedestrian and bicycle movement and/or a determination that such specific linkages will not be utilized and/or other specified reasons.
- 2. Sidewalks may be located in the traditional manner between the proposed edge of pavement and street line or, in the alternative, the Board may require that the sidewalks be set back further from the proposed edge of pavement and be constructed in a meandering pattern. In such instances, the sidewalks ordinarily will be located both within the street right-of-way and an additional five (5) feet of the ten (10) foot strip of land adjacent to the street right-of-way provided for the location of underground utilities and known as the "utility easement".
 - 1. When the sidewalks are required to be constructed in a meandering pattern, the underground utilities will be located within the five (5)-foot portion of the ten (10)-foot utility easement furthest from the street centerline. The meandering sidewalk will be

located within the remainder of the utility easement and the portion of the street right-of-way between the roadway and the utility easement.

2. Sidewalks and sidewalks at aprons shall be concrete, shall be at least four (4) feet wide, and shall be appropriately reinforced. Sidewalks shall be constructed of Class "B" concrete four (4) inches thick, six (6) inches thick at driveways, on a bed of clean stone at least four (4) inches thick. Expansion joints shall be constructed every twenty (20) feet and shall extend the full depth and width of the concrete. All sidewalks shall be laid in a manner approved by the Borough Engineer. Additionally, where subgrade is yielding or otherwise unsatisfactory in the opinion of the Borough Engineer, all unsuitable material shall be removed and suitable material shall be applied until the subgrade is nonyielding to the satisfaction of the Borough Engineer.
3. Where concrete sidewalks are not possible to construct because of environmental constraints, stone pathways may be permitted instead at the discretion of the Board based upon testimony by the applicant. Stone pathways shall be at least four (4) feet wide. Additionally, where subgrade is yielding or otherwise unsatisfactory in the opinion of the Borough Engineer, all unsuitable material shall be removed and suitable material shall be applied until the subgrade is nonyielding to the satisfaction of the Borough Engineer. Pathways placed in wetlands or wetland transition areas are subject to the NJDEP regulations of the Freshwater Wetlands Protection Act (N.J.A.C. 7:7A).
4. All concrete shall be protected and cured as specified in the "Standard Specifications."

Section 812. Water Supply.

- A. Where public water is available, water mains shall be constructed in such a manner as to make adequate water service available to each lot or building within the development. The entire system shall be designed in accordance with the requirements and standards of the applicable water utility and all local and/or State agencies having approval authority; shall comply with the provisions of Chapter 194, "Water", of the Code of the Borough of High Bridge; and shall be subject to their approvals. The system shall also be designed with adequate capacity and sustained pressure and shall be a looped system with no dead-end lines, whenever possible.
- B. Where no public water is available, all water requirements shall be stated in the development application, and shall be furnished on an individual lot basis. Water shall be supplied from wells only after an approved or accepted geologic study is furnished by the applicant and certified by a professional geologist that the underground water supply and levels will not be appreciably altered in such a way as to endanger the water level and supply for other properties. If a well is installed on a lot which also contains its own sewage disposal facilities, the well shall be of the drilled type with a minimum fifty (50) feet of casing where possible or, where such minimum footage of casing is not possible, the well shall be drilled at least twenty (20) feet into unweathered rock. Well installation, sealing and testing shall be in accordance with the "New Jersey Standards for Construction of Water Supply Systems in Realty Improvements" (Chapter 199 of the Public Laws of 1954), as amended, and in accordance with all applicable ordinances of the Borough of High Bridge and all regulations of the County and Borough Boards of Health. Prior to the issuance of a Certificate of Occupancy for any building served by an individual well, the developer shall certify to the Borough Board of Health and Planning Board that he has complied with all applicable State and local regulations.

Section 813. Soil Erosion and Sediment Control.

- A. Purpose.

The purpose of this section is to control soil erosion and the resulting sedimentation within the Borough by requiring proper provisions for water disposal and the protection of soil surfaces during and after construction. Land disturbance and lot grading in areas undergoing housing construction, industrial and commercial development, and highway and utility construction cause stormwater runoff, soil disturbance, destruction or removal of ground cover or plant life, all of which result in off-site sediment damage. Such protection is deemed essential and necessary to protect the public health, convenience, safety and welfare of the citizens of the Borough of High Bridge to accomplish the following objectives:

1. To maintain the useful life of reservoirs by preventing sedimentation.
2. To prevent dangers to life and property from flooding resulting from excessive water runoff and clogging of drainage structures.
3. To preserve the recreational use of water bodies for swimming and fishing by preventing sedimentation and maintaining oxygen levels.
4. To enhance the recycling of stormwater by promoting soil infiltration to maintain base flows in rivers and streams.
5. To prevent toxic materials, nitrates and pesticides from entering public water supplies and streams.
6. To reduce public expenditures for repair of public facilities resulting from soil erosion and sedimentation.
7. To conserve the taxable value of property by enhancing the environmental character of the Borough.

B. Definitions.

The following definitions shall apply specifically to the interpretation and enforcement of this Section, notwithstanding a similar term defined in Article 1:

APPLICANT – A person, partnership, corporation or public agency requesting permission to engage in a land-disturbance activity.

APPROVED PLAN – A plan to control soil erosion and sedimentation that has been approved by the Borough Engineer.

CERTIFICATION – A signed, written endorsement of a Soil Erosion and Sediment Control Plan or grading plan, where applicable, which indicates that the plan meets or exceeds the standards of this Section.

CRITICAL EROSION AREA – A sediment-producing, highly erodible or severely eroded area.

DIVERSION – A channel with or without a supporting ridge on the lower side constructed across or at the bottom of a slope.

EMBANKMENT – A man-made deposit of soil, rock or other materials.

FARM CONSERVATION PLAN – A plan that provides for the use of land, within its capabilities, and treatment, within practical limits, according to chosen use to prevent further deterioration of soil and water resources.

LAND DISTURBANCE – The excavation or filling of land or grading activity that alters the existing grade of the ground surface.

NATURAL GROUND SURFACE – The ground surface in its original state before any grading, excavation or filling.

PERMIT – A certificate issued to perform work under this Section.

PERMITTEE – Any person to whom a permit is issued in accordance with this Section. See also “Applicant”.

REGULATED GRADING – Any grading performed with the approval of and in accordance with criteria established by the Borough Engineer.

SEDIMENT BASIN – A barrier or dam built across a waterway or at any other suitable location to retain rock, sand, gravel or silt or other material.

SOIL CONSERVATION DISTRICT – The governmental subdivision of this state, which encompasses this municipality, organized in accordance with the provisions of Chapter 24 of Title 4 of the New Jersey Statutes Annotated (N.J.S.A. 4:24-1 et seq.)

STANDARDS – Standards for Soil Erosion and Sediment Control in New Jersey, as promulgated by the State Soil Conservation Committee.

STATE SOIL CONSERVATION COMMITTEE – An agency of the State established in accordance with the provisions of Chapter 24 of Title 4 of the New Jersey Statutes Annotated.

TEMPORARY PROTECTION – Stabilization of erosive or sediment-producing areas for a set period of time until permanent measures can be established.

VEGETATIVE PROTECTION – Stabilization of erosive or sediment-producing areas by covering soil with:

1. Permanent seeding, producing long-term vegetative cover;
2. Short-term seeding, producing temporary vegetative cover, or;
3. Sodding, producing areas covered with a turf of perennial sod-forming grass.

C. Applicability.

1. Exemptions. The following activities are specifically exempt from this Section:
 - a. Use of the land for gardening primarily for home consumption or ornamentation.
 - b. Landscape plantings, such as trees and shrubs, on residential lots with existing dwellings.
 - c. The construction or modification of accessory structures on an existing developed lot or additions to existing residential dwellings when the area to be disturbed is on a slope of less than eight percent (8%) and the land disturbance is limited to the footprint of the proposed structure.
 - d. Agricultural use of lands, when operated in accordance with a Farm Conservation Plan approved by the Hunterdon County Soil Conservation District or when it is determined by the Hunterdon County Soil Conservation District that such use will not cause erosion and sedimentation.
 - e. Percolation tests and/or soil borings.
2. Exempted Activity Compliance. All exempted soil disturbance activities must comply with the following requirements:
 - a. Any soil disturbed for any purpose, except gardening, must be seeded and mulched within thirty (30) days according to Hunterdon County Soil Conservation District standards.
 - b. All existing bare soil associated with present or previous construction or cut and fill activity must be stabilized according to Hunterdon Soil Conservation District standards within thirty (30) days of the enactment of this Section.
3. Subdivision and Site Plan Requirements.

- a. Site Grading Plans and Soil Erosion and Sediment Control Plans (see D.6.a below) shall be required for all major and minor subdivisions and site plan applications regardless of the total square feet of disturbance.
 - b. In the case of major and minor subdivisions, in lieu of submitting a Detailed Site Grading Plan (see D.6.c below), the applicant may submit a Conceptual Site Grading Plan (see D.6.b) for the purposes of preliminary and final subdivision approval. Notwithstanding the above, prior to the issuance of a Building Permit, a Detailed Site Grading Plan conforming to this Section shall be submitted for each lot to the Borough Engineer for review and approval. If the applicant fails to meet the requirements of this Section, a Building Permit shall not be issued.
 - c. The fees for Soil Erosion and Sediment Control (see Section 701) shall be submitted at the time of submission of the Detailed Site Grading Plan.
4. Requirements for Variance Applications. A detailed Site Grading Plan and Soil Erosion and Sediment Control Plan may be required for all applications for a "c" variance unless the project is exempt under 'C.1' above. For projects that require minimal land disturbance or are located on a slope of less than eight percent (8%), the applicant may request a waiver of part or all of this requirement from the Board of Adjustment. The Board of Adjustment shall consult with the Borough Engineer in determining whether to grant the waiver. Notwithstanding the above, any applicant proposing construction of a new single- or two-family dwelling on an isolated lot (i.e., not part of a current subdivision application) must submit the Grading Plan and Soil Erosion and Sediment Control Plan with the variance application and is not entitled to a waiver from this requirement.
 5. Requirement for Existing Lots. Any applicant proposing activities regulated under this Section on a lot, including construction of single- and two-family dwellings, that is not the subject of an application before the Planning Board or Board of Adjustment or exempt under 'C.1' above, must obtain a Grading Permit from the Zoning Officer prior to the land disturbance.

D. Application Procedure.

1. Application for development. No application for development submitted to the Planning Board or Board of Adjustment, as described in Subsection C.3 and 4 above, shall be conditioned upon certification by the Borough Engineer of a plan for soil erosion and sediment control, and no such plan shall be accepted by the Planning Board or Board of Adjustment for review unless such application includes a Soil Erosion and Sediment Control Plan and Grading Plan as defined herein. Such plans must be submitted to and reviewed by the Borough Engineer. This plan must receive approval and written certification from the Borough Engineer prior to any approval of the aforementioned plats or application.
2. Waivers for Variance Applications. In accordance with Subsection C.4 above, applicants that are only applying for a "c" variance may request a waiver from some or all of the requirements for a Soil Erosion and Sediment Control Plan and Detailed Grading Plan. The applicant must request the waiver at the time of submission of the variance application. The Administrative Officer shall forward the variance application with the waiver request to the Borough Engineer for review. The Borough Engineer shall submit his recommendation on approval or denial of the waiver to the Board prior to the meeting to determine completeness of the application. The Board of Adjustment shall grant or deny the waiver along with the determination of completeness of the variance application. Should the waiver be denied, the applicant must submit all required items for the soil erosion and grading plans before the variance application will be heard. The Borough Engineer shall review the application in accordance with Item '4' below and submit his comments to the Board prior to the scheduled hearing on the application.

3. Building Permit. No building permit shall be issued by the Construction Official for any proposed structure unless and until the Borough Engineer has approved a Detailed Site Grading Plan or Grading Permit submitted in accordance with this Section.

A Grading Permit must be issued if the project meets the conditions set forth in 'C.5' above. The application for the Grading Permit shall be submitted to the Zoning Officer who will then forward it to the Borough Engineer for review and approval. The application for the Grading Permit shall include the fees specified in Section 701, the appropriate application form, a Detailed Site Grading Plan prepared in accordance with Item '6.c' below as well as Items (3) and (6) from the requirements for Soil Erosion and Sediment Control Plans. The applicant may request a waiver from certain plan requirements at the time of submission of the application. The Zoning Officer may make the determination whether to waive the requirements for small projects when warranted and may consult with the Borough Engineer if necessary to make this determination. Upon approval or denial of any Grading Permit required by this Section, the Borough Engineer shall forthwith notify the Zoning Officer and the Construction Official.

No Certificate of Occupancy shall be issued by the Construction Official unless and until proof has been submitted to him or her that all conditions of the Grading Permit approval have been fully met and complied with. The Borough Engineer shall issue a letter to the Construction Official and Zoning Officer indicating same.

4. Approval by Borough Engineer.
 - a. The Soil Erosion and Sediment Control Plan or any major amendment shall be approved by the Borough Engineer in the manner and form according to the regulations herein set forth.
 - b. Minor amendments to a Soil Erosion and Sediment Control Plan or Site Grading Plan required as a result of conditions arising in the field during construction may be certified and approved by the Borough Engineer upon written request to him.
 - c. The Borough Engineer, in approving said Soil Erosion and Sediment Control Plan, may impose lawful conditions or requirements designed or specified on or in connection therewith and may require that such conditions or requirements and the satisfaction thereof be made a part of all improvement and maintenance agreements to be executed with the Borough and the securities be posted in connection therewith. These conditions and requirements shall be provided and maintained as a condition to the establishment, maintenance and continuance of any use or occupancy of any land or structure thereon.
 - d. Copies of all communications from the Borough Engineer shall be directed to the Borough Council, Planning Board/Board of Adjustment and Hunterdon County Soil Conservation District.

5. The applicant may consult the Hunterdon County Soil Conservation District in the development of the plan and the selection of appropriate erosion and sediment control measures. The applicant shall bear the final responsibility for the installation and construction of all required soil erosion and sediment control measures according to the provisions of this Section including activities in accordance with 'C.2' above.

6. Data required:
 - a. Soil Erosion and Sediment Control Plans. The applicant shall submit to the Planning Board a separate Soil Erosion and Sediment Control Plan for each application for development. Such plan shall be prepared at a scale of not less than 1" = 30' by a professional engineer licensed in the State of New Jersey, and shall contain:

- (1) The location and description of existing natural and man-made features on and surrounding the site, including general topography and soil characteristics, and a copy of the Soil Conservation District Soil Survey, where available.
 - (2) The location and description of proposed changes to the site, including contours and spot elevations showing existing and post-construction conditions.
 - (3) Plans and specifications for soil erosion and sediment control prepared in accordance with the standards of this Section.
 - (4) A timing schedule indicating the anticipated starting and completion dates of the development sequence and the time exposure of each area prior to the completion of effective erosion and sediment control measures.
 - (5) A schedule of the sequence of installation of planned erosion and sediment control measures as related to the progress of the project, including starting and completion dates.
 - (6) A description of means of maintenance of erosion and sediment control measures and facilities during and after construction.
- b. Conceptual Site Grading Plans. The conceptual site grading plan shall be drawn by a licensed or certified landscape architect or professional engineer at a scale of not less than 1" = 30', and contain:
- (1) Location of all proposed buildings and the first floor elevation.
 - (2) The existing and proposed contours at a contour interval of two feet or less.
 - (3) The proposed elevations of the levels of land above and below retaining walls, as well as top-of-wall elevations.
 - (4) The location of proposed vehicular facilities, including roads, drives or parking areas.
 - (5) The location of all existing wooded areas and individual trees greater than four (4) inches in diameter at four (4) feet above the ground.
 - (6) The plans for any proposed retaining walls, fences or other protective structures.
 - (7) The location of any existing or approved potable water or sanitary sewage disposal facilities on or within one hundred (100) feet of the lot.
 - (8) A slope map showing existing slope areas and limits of grading.
 - (9) The location of any proposed drywells or seepage pits which may be proposed to control runoff.
- c. Detailed Site Grading Plans. The detailed site grading plan shall be drawn and certified by a professional engineer licensed in the State of New Jersey at a scale of not less than 1" = 30' and contain:
- (1) The tax map sheet, block and lot number, date, graphic scale, north arrow and the names and address of the owner(s) of the tract, the applicant, if other than the owner, and of the engineer who prepared the site grading plan.
 - (2) All lot dimensions.
 - (3) Front, side and rear yard setback dimensions.
 - (4) Location of all proposed buildings, dimensions thereof, and the first floor elevations.
 - (5) Location of all buildings on adjoining lots.
 - (6) The existing and proposed contours at a contour interval of two (2) feet or less.
 - (7) The proposed elevations of the ground at the corners of the foundation of any structures and the bottom and top-of-wall elevations of any retaining walls.
 - (8) The layout of existing and proposed public streets and public utilities.

- (9) The location of any existing or approved potable water or sanitary sewage disposal facilities on or within one hundred (100) feet of the lot.
- (10) The location of proposed vehicular facilities, including roads, drives or parking areas.
- (11) The location of all existing landscaping, including trees, shrubs and ground cover, with type and size of trees and shrubs.
- (12) The disposition and extent of topsoil to be removed or backfilled.
- (13) The disposition and extent of all other soil to be removed or backfilled.
- (14) The plans and specifications for any proposed retaining walls, fences or other protective structures.
- (15) The location, plans and specifications for any proposed drywells or seepage pits which may be proposed to control runoff.

E. Standards.

1. General Standards. In the preparation of a Soil Erosion and Sediment Control Plan, in accordance with the Standards, the following general principles of design shall be adhered to. All control measures shall apply to all aspects of the proposed site development involving land disturbance and shall be in operation during all stages of the disturbance activity.
 - a. The smallest practical area of land shall be exposed at any one time during development, and when feasible, natural vegetation shall be retained and protected.
 - b. Temporary protection shall be used to protect critical erosion areas during development.
 - c. Temporary diversions and outlets shall be constructed or installed to accommodate the increased runoff caused by the changed soil and surface conditions during development.
 - d. Sediment basins, desilting basins or silt traps shall be installed to remove sediment from runoff waters and to retain sediment on site.
 - e. Permanent plant cover, lawn or ground cover shall be installed on any site prior to the issuance of a Certificate of Occupancy. In the event that such permanent plant cover cannot be installed because of weather conditions, the installation thereof shall be enforced by appropriate provisions in the bond or other security and improvement agreements and shall be installed within such time limits as may be reasonable at the direction of the Borough Engineer.
 - f. Permanent improvements, such as roads, catch basins, curbs and the like, shall be installed or constructed and completed as soon as possible.
 - g. Stripping of vegetation, grading or other soil disturbance shall be done in a manner that will minimize soil erosion.
 - h. Water runoff shall be minimized and retained on site whenever possible to facilitate groundwater recharge.
2. Detailed Standards. The detailed plans, specifications and standards in any Soil Erosion and Sediment Control Plan shall be dictated by the characteristics of the site to be developed and the nature of the development. All such plans shall utilize the standards and specifications set forth in the Standards for Soil Erosion and Soil Control in New Jersey, or any state or county specifications and standards which may in the future supersede these Standards.
3. Lot Grading Design Standards.
 - a. General Grading Required. The land on every lot shall be graded to ensure proper drainage away from buildings and dispose of runoff without ponding. Minimum two-percent (2%) slopes and maximum ten-percent (10%) slopes within twenty (20) feet of structures shall generally be required.

- b. Grading Goals. Site grading shall be designed to establish building floor elevations and ground surface grades which:
- (1) Allow drainage of surface water away from buildings.
 - (2) Minimize earth settlement problems.
 - (3) Avoid concentrating runoff onto neighboring properties.
 - (4) Keep earthwork to a practical minimum.
 - (5) Provide usable outdoor space.
 - (6) Minimize erosion.
 - (7) Relate aesthetically with the terrain and buildings on adjacent properties.
- c. Excavations and Fills.
- (1) No excavation shall be made with a cut face steeper in slope than two horizontal to one vertical in wooded areas, or three horizontal to one vertical in non-wooded or lightly wooded areas except as approved by the Borough Engineer when handled under special conditions.
 - (2) No fill shall be placed which creates any exposed surface steeper in slope than two horizontal to one vertical in wooded areas, or three horizontal to one vertical in non-wooded areas, except as approved by the Borough Engineer when handled under special conditions.
 - (3) Adequate provisions shall be made to prevent surface water from eroding the cut face of excavations or the sloping surfaces of fills.
 - (4) Retaining walls or cribbing shall be required where needed to prevent the surface excavations or fills from exceeding at any point the maximum allowable slope.
 - (5) Excavations shall not be made so close to property lines as to endanger adjoining property without supporting and protecting the face of the excavation.
 - (6) No fill or excavation shall be made closer than five (5) feet to a property line or proposed property line.
- d. Retaining Walls.
- (1) All walls shall be designed in conformance with generally accepted design principles. A detailed plan and specifications shall be submitted.
 - (2) Retaining walls located parallel to each other and stepped, shall be spaced horizontally at least two times the height of the lower wall.
 - (3) No retaining wall shall be closer than the height of the wall to any lot line or proposed lot line. Retaining walls shall not be constructed within any public street right-of-way or across property lines. When maintaining or replacing a retaining wall that does cross a property line, the owner should attempt to match the construction material of the remaining wall, except that railroad tie walls should be replaced with a more durable material, if possible.
 - (4) Concrete modular retaining walls shall be designed and constructed in accordance with manufacturer's specifications. All timber used for retaining wall construction shall be southern yellow pine treated with preservative, copper chromated arsenate (CCA) 0.40 retention. Timber shall be marked indicating the preservation retention.
 - (5) Fences may be required along the tops of retaining walls at the discretion of the Borough Engineer.
 - (6) Retaining walls erected as part of an approved site plan or Grading Permit shall not require a Zoning Permit as per Section 304.
- e. Driveways. Driveways to be constructed or modified as part of a site Grading Permit application shall conform to the provisions of Section 307 Driveways, of this Chapter.

- f. **Reasons for Soil Disturbance.** Proposed disturbance of soil shall be for purposes consistent with the intent of this ordinance, and shall be executed in a manner that will not cause excessive erosion or other unstable conditions.
- g. **Surface Water Runoff.** Provision shall be made for the proper disposition of surface water runoff so that it will not create unstable conditions. Appropriate storm drainage facilities shall be constructed as deemed necessary, and adequate protective measures shall be provided for downstream properties.
- h. **Public Safety.** Provision shall be made for any structures or protective measures that proposed slopes may require for the protection of the public safety, including but not limited to retaining walls, headwalls and fences.
- i. **Water and Sewerage.** Proper facilities shall be provided for a safe water supply and for the disposal of sanitary sewage as approved by the Borough Council or Hunterdon County Health Department.
- j. **Impeding Flow of Surface water.** No proposed building, structure or attendant protective measures shall impede the flow of surface waters through any watercourse or cause an increase in flood heights or velocities.
- k. **Building Supports.** Any proposed building or structure shall be of sound engineering design with footings designed to extend to stable soil and/or rock, with proper lateral support, and when built, may be occupied without peril to the health or safety of the occupants.
- l. **Roads and Parking Areas.** Any proposed vehicular facilities, including roads, driveways or parking areas, shall be so designed that any land disturbance shall not cause excessive erosion. Both the vertical and horizontal alignment of vehicular facilities shall be so designed that hazardous circulation conditions will not be created.
- m. **Removal of Trees.** Removal of trees shall be in accordance with Chapter 183 of the Code of the Borough of High Bridge.

F. **Implementation of Proposed Measures.**

Since considerable soil erosion can take place during land disturbance, development plans shall contain proposed soil erosion and sediment control measures and shall be incorporated into any final construction drawings that are prepared. Soil erosion and sediment control measures shall conform to the standards as defined in Subsection E above. The measures shall apply to all features of the construction site, including street and utility installations, as well as to the protection of individual lots.

- 1. **Timing.** The Borough Engineer shall require the construction or installation, or both, of improvements or such other measures necessary to prevent soil erosion and sedimentation prior to any site development work or start of construction.
- 2. **Bonding.** Improvements or other such measures on an approved Soil Erosion and Sedimentation Control Plan, which may be required subsequent to the start of construction or site development work, may be deferred until such appropriate time as required. The Planning Board shall provide for the posting of performance guaranties and maintenance bonds in the same manner as provided in Section 813.I and Article 7, Section 702 of this Chapter.

G. **Maintenance of Soil Erosion and Sediment Control Measures.**

Individuals or developers carrying out soil erosion and sediment control measures under this Section and all subsequent owners of property on which such measures have been installed must adequately maintain all permanent soil erosion control measures, devices and plantings in effective working condition for a minimum period of two (2) years after implementation. The

Borough Engineer shall give the applicant, upon request, a certificate indicating the date on which the measures called for in the approved plan were completed.

H. Inspection and Enforcement.

1. The requirements of this Section shall be enforced by the Borough Engineer, who shall inspect or require adequate inspection of the work. The applicant shall notify the Borough Engineer at least twenty-four (24) hours prior to the start of construction. No underground installation done for the purpose of this Section shall be covered until inspected and approved. If the Borough Engineer finds conditions not as stated in the applicant's Soil Erosion and Sediment Control Plan, or Site Grading Plan, or if he finds that the provisions of the certified plan are not being followed by the applicant, he may refuse to approve further work and may issue a stop order of the construction of such improvements listed under Section 702 F.2 of this Chapter. The Borough Engineer shall notify the Planning Board, in writing, of the reason for the refusal or the stop order, and he may require additional necessary erosion and sediment control measures to be promptly installed. The applicant shall have the certified plan on site during construction. The Borough Engineer shall provide the Planning Board, Environmental Commission, the Construction Official or Zoning Officer, and the Hunterdon County Soil Conservation District with a report of compliance upon completion of the project.
2. Revocation of Building Permit, or Certificate of Occupancy. In the event of a failure to comply with any condition of the Soil Erosion and Sediment Control Plan or Site Grading Permit, the Construction Official shall cause the revocation of the Building Permit, or Certificate of Occupancy, as the case may be, and seek to enjoin the violation or take such steps looking to the enforcement of any such conditions as may be lawful. The Construction Official shall notify the Borough Engineer and Zoning Officer immediately of the failure to comply and proceed to enforce the plan's requirements in accordance with the directives of the Borough Engineer.

I. Maintenance Bonds.

The Planning Board may require a cash amount to be deposited in an escrow account in favor of the Borough of High Bridge in an amount not to exceed fifteen percent (15%) of the estimated cost of improvements called for in the approved Soil Erosion and Sediment Control Plan or Grading Plan. The amount of the maintenance guaranty shall be determined by the Borough Engineer based on a review and approval of an estimate of quantities and costs prepared by the applicant's engineer. Said maintenance bond/account shall run for a period of two (2) years. Said two-year period shall run from the date of the issuance of the last Certificate of Occupancy for a site plan or for the last home in the development as shown on the preliminary plat in the case of a subdivision. Such maintenance guaranty may be made part of the maintenance bond required by this Ordinance .

J. Liability Insurance.

Prior to final approval of any site plan or any section of a major or minor subdivision, the applicant shall have filed with the Borough of High Bridge a certificate of liability insurance of at least fifty thousand dollars (\$50,000) to cover damage to surrounding properties or watercourses.

K. Fees.

Application and escrow fees required for the plan reviews, inspections and permits described herein, shall be posted in accordance with Article 7, Section 701.

L. Violations and Penalties.