DRAINAGE ANALYSIS
&
EROSION AND SEDIMENT
CONTROL PLAN

Old Turnpike Road, Nottingham
Tax Map 6, Lot 22

Prepared for:

Domus Developers, Inc.
11 Whitehorse Road
RYE, NH 03870

Land of

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DESIGN METHOD OBJECTIVES

The owner, Domus Developers, is proposing to subdivide and develop Tax Map 6, Lot 22, Nottingham, by constructing two roads and 22 lots for residential development in an open space subdivision. The drainage infrastructure consists of cross culverts, open swales, dry swales, and rain garden bio-filtration ponds.

Existing Topography was conducted on site during the boundary survey. Off-site topography was derived from USGS maps and Google tin. On-site soil types, in the area of the proposed development, were established by Site Specific Soil Survey mapping by Certified Soil Scientist as reflected on that plan. Off-site soils and isolated areas of the locus parcel were determined by USDA / NRCS Websoil for both Rockingham and Strafford County. The area of the parcel is 59.7 acres and the area of the differential analysis is 128.6 acres.

An Existing and Proposed Conditions analysis was conducted for the purpose of estimating the peak rate of stormwater run-off and to subsequently design adequate mitigation of drainage. There are three existing drainage discharge points which were identified in the existing analysis and duplicated in the proposed conditions analysis. Designing two watershed models we have compared the differences in these rates of peak run-off and surface water volume. Sheet W-1 outlines the characteristics of the site in its existing or pre-construction conditions. The second analysis displays the proposed (post-construction) conditions (See Sheet W-2). The analysis was conducted using data for; 2 Yr – 24 Hr (3.03”), 10 Yr – 24 Hr (4.56”), 25 Yr -24 Hr (5.77”), 50 Yr – 24 Hr (6.89”), and 100 Yr-24 Hr (8.24”) storm events. Storm event analysis was accomplished using the USDA SCS TR-20 method within the HydroCAD Stormwater Modeling System environment and rainfall quantities are based on the Extreme Precipitation Table for this location from the Northeast Regional Climate Center / Cornell University (http://precip.eas.cornell.edu), in accordance with Alteration of Terrain Administrative Code, ENV-Wq (Attached in Appendix 3).

1.0 Existing Analysis:

Reference: W-1 Sheets - Existing Conditions Watershed Plan (Enclosed)
Sheet 3 Existing Conditions Plan
Sheet 4 – 8 Site Specific Soil Survey Map

The existing property consists of vacant land and comprised of 59.7 acres on the north side of US Route 4 in Nottingham, NH. The watershed area consists of land in Barrington, Strafford County and Nottingham, including a residential neighborhood north of the locus parcel. The residential neighborhood has several cross culvert onto that development and several cross culverts leaving the roadway network. The watershed area being analyzed consists of 128.6 acres and is being analyzed at four Final Reach Points, two being culverts from the north side of Old Turnpike Road to the south side. The remaining two Final Reach Points remain on the north side of the road and discharge into Little River.

The soils on the parcel are predominantly Hydrologic Soil Group C with areas of HSG B closer to Old Turnpike Road. The Hydric A soil component of the open water wetland is rated as HSG D. For the most part the soils on site are either a Chatfield Canton Complex or Montauk. The USDA / NRCS soils are mapped as primarily Canton and Charlton, all of which is rated as HSG B.

Final Reach #100:

Subcatchment #1 & 2 on site and Subcatchment #10 & 11 off site, consist of land area north of an existing highway culvert, including the above mentioned open water wetland. Subcatchments #2, 10 and 11 are routed through Subcatchment #1 and modeled as a pond at the roadway culvert. (Pond #1) the runoff that passes though the culvert being evaluated at the south side of the road. (Final Reach #100).

Final Reach #300:

Subcatchment #3 consists of a small portion of the land that contributes directly to a second highway culvert where it is modeled as a pond (Pond #3) and evaluated at the south side of the road. (Final Reach #300)

During the 100 year – 24 hour storm events, the 18-inch culvert at Pond #1 is not sufficient to handle the flow and therefore is bypassed to the 24-inch culvert at Pond #3.

Final Reach #500:

Subcatchment #4 and #5 are minor areas that are defined by a driveway culvert which is modeled as a pond (Pond #5) and Final Reach #500.

Final Reach #600:

Subcatchment #6 is a minor area that passes across the property line and is evaluated as a separate entity. **Final Reach #600**.

2.0 Proposed Analysis:

Reference: W-2 Sheets - Proposed Conditions Watershed Plan (Enclosed)
Sheet 18 Phasing Plan
Sheet 20 - 24, Plan & Profile Sheets
Sheet 25 - 29, Rain Garden Plans

There are two proposed roads that would support access to twenty-two residential lots. The project would be developed in four distinct phases without any overlap. Ada Drive is being proposed to the west of the open water wetlands and Sera Drive to the east. The roadway grading and drainage is being proposed to be built in the first and third phases with availability to develop specific lots. The remaining lots will be the second and fourth phase after the roadway is complete and stabilized.

Final Reach #100

Sera Drive, the two rain gardens, cross culverts, and detention pond within the cul-de-sac divide the total watershed area going into the 18-inch culvert at Pond #1 / Final Reach #100 into ten subcatchments, as compared to the four original delineations.

Subcatchment #10 and #11 remain unchanged. Subcatchment #1 and #2 are the remnants of those original areas.

Subcatchment #12a is the area within the cul-de-sac where surface water runoff is being detained in Detention Pond #108, discharged through a culvert and routed southerly in a roadside swale. Subcatchment #12 is the land area and proposed residential lots that is defined by Rain Garden #104. The runoff from Pond #108 and Rain Garden #104 are combined and discharged through an outlet structure under Sera Drive and into Rain Garden #103.

Subcatchment #13 is the land area that is being intercepted by Rain Garden #103. The primary spillway discharges runoff through a level spreader over buffer area to the culvert being modelled as Pond #1. The Emergency Spillway discharges runoff for the major storm events to the west into the adjacent wetland.

Subcatchments #15 and #16 are areas where runoff bypasses the rain gardens is collected and treated in a bio-filtration dry-swales, Pond #105 and #106. The runoff from the easterly side of Sera Drive, subcatchment #14 and Pond #106, passes under the road in two cross culverts, modelled as Pond #14.

Each of the respective discharge points are routed to Pond #1 and evaluated as Final Reach #100.

During the 100 year – 24 hour storm events, the 18-inch culvert at Pond #1 is not sufficient to handle the flow and therefore is bypassed to the 24-inch culvert at Pond #3, however the bypass is slightly less under the proposed conditions.

Final Reach #300

Subcatchment #3 is relatively small in the existing conditions analysis and due to the placement of Ada Drive is further reduced. The proposed development involved with Ada Drive diverts part of Subcatchment #1, #3, #4, #5 and #6.

The interior of the cul-de-sac, subcatchment 9 is designed as rain garden #107 which although there is an outlet structure and culvert pipe, is modelled with exfiltration capabilities. Our analysis shows no discharge from this pond for the five events.

Roadway and development runoff is reach routed through roadside swales to two rain gardens, #101 and #102, on the west and east side of the roadway respectively. Rain Garden #101 has an outlet structure and emergency spillway that discharge directly to the NHDOT cross culvert, Pond #3. Rain Garden #102 is likewise designed with an outlet structure and culvert that passes under Ada Drive. This relatively long culvert discharges close to the existing NHDOT cross culvert, Pond #3. The bypass from Pond #1, during the 100 year – 24 hour storm event, is routed to Rain Garden #102.

Final Reach #500

A total of three residential lots are within subcatchment #4 and half of one lot is with subcatchment #5. These two subcatchments are evaluated at the driveway crossing as Final Reach #500.

Final Reach #600

Subcatchment #6 is relatively small and is reduced in size due to the proposed construction. The Weighted Curve Number is increased in the Proposed Analysis due to the placement of one-half of a dwelling unit.

Final Reach #500 and #600 in reality are evaluating runoff over a common property line which has been reflected in the addition of Final Reach #700 which is the sum of these two systems.

3.0a Stormwater Treatment:

The Water Quality Volume (WQV) is being treated in one of five bio-filtration Rain Gardens or one of two bio-filtration Dry Swales. There is a NHDES AoT Filtration Spreadsheet provided where the HydroCad Pond number corresponds to the spreadsheet and to the plan set.

3.0b Infiltration Practices:

Infiltration is being provided in three locations, Rain Garden #101, Rain Garden #104, and Rain Garden #107.

Please see Infiltration Feasibility Report completed for Domus Developers, Inc, of this even date, also by Berry Surveying & Engineering.

3.1 FULL COMPARATIVE ANALYSIS:

ANALYSIS	COMPONENT	PEAK RATE DISCHARGE (Cubic Feet / Second)				
		2 Yr.	10 Yr.	25 Yr.	50 Yr.	100 Yr.
Final Reach #100	Existing	6.50	14.26	16.25	17.57	18.68
	Proposed	6.29	14.11	16.13	17.48	18.64
Final Reach #300	Existing	1.29	3.52	5.57	7.59	12.17
	Proposed	0.70	1.69	4.09	7.14	12.14
Final Reach #500	Existing	1.74	6.47	11.28	16.02	19.25
	Proposed	1.45	5.40	9.42	13.50	17.72
Final Reach #600	Existing	0.17	0.82	1.54	2.30	3.29
	Proposed	0.18	0.79	1.44	2.13	3.02
Final Reach #700	Existing	1.90				
Sum of 500 + 600	Proposed	1.63				

ANALYSIS	COMPONENT	VOLUME (Acre Feet)				
		2 Yr.	10 Yr.	25 Yr.	50 Yr.	100 Yr.
Final Reach #100	Existing	2.074	7.448	13.297	16.881	18.254
	Proposed	2.098	7.544	13.188	16.803	18.225
Final Reach #300	Existing	0.137	0.328	0.505	0.683	4.577
	Proposed	0.153	0.522	0.924	1.310	5.098
Final Reach #500	Existing	0.309	0.878	1.442	2.024	2.781
	Proposed	0.254	0.719	1.180	1.655	2.273
Final Reach #600	Existing	0.035	0.112	0.192	0.276	0.386
	Proposed	0.034	0.105	0.177	0.253	0.352

4.0 EROSION & SEDIMENT CONTROL PLANS BEST MANAGEMENT PRACTICES (BMP's):

Reference: Proposed Site Plan and Grading Plan
Erosion & Sediment Control Plan
Erosion & Sediment Control Details, E-101 & E-102

The proposed site development is protected from erosion and the abutting properties are protected from sediment by the use of Best Management Practices as outlined in the New Hampshire Stormwater Manual, Volume 2, Post-Construction Best Management Practices Selection & Design (December 2008, NHDES & US EPA). Any area disturbed by construction will be re-stabilized within 30 days and abutting properties will not be adversely affected by this development. All swales and drainage structures will be constructed and stabilized prior to having run-off directed to them. Reference is also made to the Stormwater System Operation and Maintenance Plan / Inspection & Maintenance Manual which has been written specifically for this project and available to the owner.

Silt Fence / Perimeter Control:

The plan set demonstrates the location of silt fence for sediment control. The Erosion and Sediment Control Details, Sheet E-101, has the specifications for installation and maintenance of the silt fence. Silt fence is rated to be effective for 100 linear feet of fence to capture runoff from one-quarter acre or basically 100 feet of land sloping toward the fence. Filtrexx silt soxx have a variable area and depth, see Filtrexx supporting documents. The NHDES Stormwater Manual requires that the maximum spacing for support stakes is six-feet.

Filtrexx Silt Soxx, or approve equal, has been specified in numerous locations within the plan set and silt fence is not a substitution for silt soxx. Multiple sizes of this product have been specified for use.

EPA CGP 2017: "You must install sediment control along those perimeter areas of your site that will receive stormwater from earth disturbing activity."

In accordance with EPA CGP 2.1.2.1, Provide Natural Buffers or Equivalent Sediment Controls, and CGP Appendix G, Table G-3, and Table G-7, slopes between 3% and 6% with soils that are Fine Sandy Loams, there is a High Risk Factor and it is required to Double Perimeter Control and 7-Day Site Stabilization.

Erosion Control Mix Berm:

As an alternative to the Silt Fence, an Erosion Control Mix Berm can be utilized as a perimeter control. The specifications can be found on Sheet E-101, Detail E6.

Bioretention System (Rain Garden):

Description: Rain Gardens, or bioretention areas are located close to the source of runoff. They are intended to integrate with the site landscaping and become an aesthetically attractive opportunity to provide highly effective stormwater treatment. The rain gardens associated with this proposed development contribute toward recharge of surface water run-off into the ground. It is important that sediment be removed from run-off prior to discharge into the bioretention area to preserve the mulch and soil mix ratio. During construction it is important that the ground surface not be exposed to traffic or construction equipment to preserve the infiltration capabilities of the existing soil. Construction specifications are included in the plan set and New Hampshire Stormwater Manual, Volume 2, 4-3 Treatment Practices, 4c Bio-retention System.

Construction Considerations:

After the stone and bio-media has been installed, Filtrexx Silt Soxx or approved equal, will be installed at the toe of slope intersection between the berm and bio-media and will remain until the slopes of the berm are stable.

Maintenance Considerations:

Rain Gardens should be inspected at least twice annually and following any rainfall event exceeding 2.5 inches in a twenty-four hour period. Maintenance rehabilitation will be conducted as warranted by each inspection. Trash and debris will be removed at each inspection.

On an annual basis the infiltration capabilities need to be confirmed by evaluation of the drawdown time. If the bioretention system does not drain within 72-hours following a rainfall event, a qualified professional will assess the condition of the rain garden to determine measures required to restore the infiltration function. This is normally the direct result of sediment accumulation which will be removed to restore the filter media ratio.

Also on an annual basis the vegetation should be inspected to ensure healthy condition. Invasive species need to be removed along with dead or diseased vegetation.

Rolled Erosion Control Blanket:

Description: Rolled Erosion Control Blankets, such as North American Green Bionet S150, SC150, SC125 (or equal) or turf reinforcement such as North American Green V-Max C-350 (or equal) consist of interlocking fiber mesh, bio-degradable or permanent, used to stabilize sloping earth while vegetation is being established. The product comes in rolls that are laid out over the earth, normally over-lapped, and secured to the soil by the use of anchors or staples. The RECB may be anchored in the earth at the

top of the slope to prevent wash-out. Construction specifications are included in the plan set and New Hampshire Stormwater Manual, Volume 3, 4-1 Erosion Control Practices, Temporary Erosion Control Blanket

Construction Considerations: It is recommended that the blanket be installed in the same direction as the water flow or perpendicular to the slope. The manufacturer will recommend the amount of over-lap from one row to the next and on longer slopes between sections. Care must be taken that the RECB is laid directly on the earth / topsoil and that any existing vegetation not cause tenting as this will cause an issue with the blanket not staying in place. The staples or stakes are to be placed according to the manufacturer based on the slope of the receiving soil and forces that may be encountered. Care must be taken to utilize the correct product as specified. The choice of product are all different and in most cases are not interchangeable. NHDES or NH F&G may specify that some RECBs not be used in some applications.

Maintenance Considerations: RECBs will be inspected during the regular inspection schedule and any construction corrections made if the blanket is compromised.

Vegetated Stabilization:

All areas that are disturbed during construction will be stabilized with vegetated material within 30 days of breaking ground. Construction will be managed in such a manner that erosion is prevented and that no abutter's property will be subjected to any siltation, unless otherwise permitted. All areas to be planted with grass for long-term cover will follow the specification and on Sheet E-102 using seeding mixture C, as follows:

Mixture	Pounds per Acre	Pounds per 1,000 Sq. Ft.
Tall Fescue	24	0.55
Creeping Red Fescue	24	0.55
Total	48	1.10

Conservation Mix

Mixture	Pounds per Acre	Pounds per 1,000 Sq. Ft.
Tall Fescue	15	0.35
Creeping Red Fescue	15	0.35
Annual Ryegrass	5	0.12
Perennial Ryegrass	5	0.12
Kentucky Bluegrass	15	0.35
White Clover	7	0.16
Total	**62**	**1.45**

Conservation Mix will used to stabilize all 2:1 slopes and all land area disturbed within the 50-foot wetland buffer.

Stabilized Construction Entrance:

A temporary gravel construction entrance provides an area where mud can be dislodged from tires before the vehicle leaves the construction site to reduce the amount of mud and sediment transported onto paved municipal and state roads. The stone size for the pad should be 3-inch coarse aggregate, and the pad itself constructed to a minimum length of 75' for the full width of the access road. The aggregate should be placed at least six inches thick. A plan view and profile are shown on Sheet E-102- Erosion and Sediment Control Detail Plan. Alternatives to the length and berm are demonstrated on the detail.

Environmental Dust Control:

Dust will be controlled on the site by the use of multiple Best Management Practices. Mulching and temporary seeding will be the first line of protection to be utilized where problems occur. If dust problems are not solved by these applications, the use of water and calcium chloride can be applied. Calcium chloride will be applied at a rate that will keep the surface moist but not cause pollution.

Drainage Swales / Stormwater Conveyance Channels:

Drainage swales will be stabilized with vegetation for long term cover as outlined below, and on Sheet E-102 using seed mixture C. As a general rule, velocities in the swale should not exceed 3.0 feet per second for a vegetated swale although velocities as high as 4.5 FPS are allowed under certain soil conditions.

Outlet Structures

Description: Outlet Structures of 48-inch and 60-inch round concrete manhole structures are used in the Detention Pond and five rain gardens. All will be equipped with a cone grate trash rack.

Rain Garden #101 Outlet Structure is a 48-inch structure with the sump filled with washed crushed stone to the level of the culvert outlet pipe. As an infiltration pond this outlet structure will receive very little runoff over the concrete rim that is protected by a trash rack. There is no open water storage in the sump of these structures for wildlife protection considerations.

Rain Garden #102 Outlet Structure is a 60-inch structure with an underdrain inlet, 15-inch vertical stack, with a four-inch orifice, that is attached to the discharge culvert.

Again, the sump of the structure is filled with washed crushed stone to the invert elevations.

Rain Garden #107 Outlet Structure, inside the Ada Drive cul-de-sac, is a 48-inch structure with the sump filled with washed crushed stone to the level of the culvert outlet pipe. As an infiltration pond this outlet structure will receive very little runoff over the concrete rim that is protected by a trash rack.

Rain Garden #103 Outlet Structure is a 60-inch structure with an underdrain inlet, 15-inch vertical stack, with a three-inch orifice, that is attached to the discharge culvert. Again, the sump of the structure is filled with washed crushed stone to the invert elevations.

Rain Garden #104 Outlet Structure is a 48-inch structure with the sump filled with washed crushed stone to the level of the culvert outlet pipe. As an infiltration pond this outlet structure will receive very little runoff over the concrete rim that is protected by a trash rack.

Maintenance Considerations: Sediment must be removed from top of the stone filled sumps on a regular basis, at least twice a year and more often if the inverts become blocked. Because of limited runoff in the infiltration ponds or underdrain discharge in the under-drained ponds, sediment is not anticipated to be an issue. Inspections should be conducted periodically. At a minimum they should be cleaned after snow-melt and after leaf-drop. Damaged trash racks must be replaced.

Outlet Protection:

Outlet Protection consists of a riprap apron or preformed scour hole that is designed to provide velocity reduction of the surface water run-off that is leaving a culvert. The design is dependent on the culvert size, soil conditions, velocity, and quantity of the run-off. There are to be no bend or curves at the intersection of the conduit and apron. See sheet E-102 for details. North American Green turf reinforcement is proposed on the outlet berms of the rain garden. To be maintained two to three times annually without the use of a mower.

Rip Rap Level Spreader / Stone Berm Level Spreader:

The purpose of the level spreader is to convert concentrated flow into sheet flow, for example from a rip rap outlet protection at the end of a culvert discharge pipe prior to discharge overland through a filter strip or buffer. Each level spreader is specifically designed based on the amount of flow and specified on the grading plan. Details for the level spreader can be found on Sheet E-102, detail E12 and page 162 in the referenced

NH Stormwater Manual, Volume 2. The level spreader should be inspected after it is installed and stabilized for the deposit of sediment. Any sediment build-up will be removed and transported to a suitable location. North American Green turf reinforcement is proposed on the outlet berms of the rain garden. To be maintained two to three times annually without the use of a mower.

Stockpiled Sediment or Soil:

Stockpiled materials including topsoil, excavated materials, borrow materials imported onto the site, construction aggregates, and sediment removed from temporary sediment traps will be located in designated areas at least 50 feet away form concentrated flows. All stockpiles will have erosion protection in the form of silt fence and diversion swales will be applied to protect the material and surrounding areas. Inactive stockpiles will be seeded for temporary stabilization. Erosion control measures will be inspected in accordance with the schedule for all other activities on site.

At a minimum, you must comply with following (EPA 2012 CGP Part 2.1.2.4d) "Do not hose down or sweep soil or sediment accumulated on pavement or other impervious surfaces into any stormwater conveyance (unless connected to a sediment basin, sediment trap, or similar effective control,) storm drain inlet, or surface water."

Dewatering Practices:

If during construction dewatering becomes required, an addendum will be published specific for the requirements. As a general rule, ground water that needs to be removed from an excavation will be pumped to a sediment basin or a storm drain inlet prior to discharge from the site.

At a minimum, you must comply with following (EPA 2012 CGP Part 2.1.3.4) "With backwash water, either haul it away for disposal or return it to the beginning of the treatment process; and replace and clean the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications."

Regarding dewatering practices in the State of New Hampshire, specifically see Construction General Permit Section 9.1.1 NHR12000 State of New Hampshire and "Clarification of Section 9.1.1 … and other New Hampshire specific information for the U.S. EPA 2012 NPDES Construction General Permit (CGP), January 20, 2017"

Construction Sequence:

1. Cut and remove trees in construction areas as directed or required.

2. Install Silt Fence and construct and/or install temporary and permanent sediment erosion and detention control facilities (Vegetated swales, level spreaders, and constructed filter strips), as required. Erosion, sediment

and facilities shall be installed and stabilized prior to any earth moving operation, and prior to directing run-off to them.

3. Clear, grub, and dispose of debris in approved facilities.

4. Excavate and stockpile topsoil / loam. All disturbed areas shall be stabilized immediately after grading.

5. Construct the roadway and its associated drainage structures.

6. Begin permanent and temporary seeding and mulching. All cut and fill slopes and disturbed areas shall be seeded and mulched as required, or directed.

7. Daily, or as required, construct temporary berms, drainage ditches, sediment traps, etc. to prevent erosion on the site and prevent any siltation of abutting waters or property.

8. Inspect and maintain all erosion and sediment control measures during construction.

9. Complete permanent seeding and landscaping.

10. Remove temporary erosion control measures after seeding areas have established themselves and site improvements are complete. Smooth and re-vegetate all disturbed areas.

11. All swales and drainage structures will be constructed and stabilized prior to having run-off being directed to them.

12. Finish paving all roadways/parking.

Temporary Erosion Control Measures:

1. The smallest practical area of land shall be exposed at any one time.

2. Erosion, sediment control measures shall be installed as shown on the plans and at locations as required, or directed by the engineer.

3. All disturbed areas shall be returned to original grades and elevations. Disturbed areas shall be loamed with a minimum of 4" of loam and seeded with not less than 1.10 pound of seed per 1,000 square feet (48 pounds per acre) of area.

4. Silt fences and other barriers shall be inspected periodically and after every rainstorm during the life of the project. All damaged areas shall be

repaired, sediment deposits shall periodically be removed and properly disposed of.

5. After all disturbed areas have been stabilized, the temporary erosion control measures are to be removed and the area disturbed by the removal smoothed and re-vegetated.
6. Areas must be seeded and mulched within 5 days of final grading, permanently stabilized within 15 days of final grading, or temporarily stabilized within 30 days of initial disturbance of soil.

Inspection and Maintenance Schedule:

Perimeter fencing will be inspected during and after storm events to ensure that the fence still has integrity and is not allowing sediment to pass. Depending on SWPPP / SWMP criteria, all controls will be inspected once every 7 days and after storm events of 0.25 inches. Inspection reports must be submitted to Town of Nottingham Building Department and DPW. Sediment build-up in swales and level spreaders will be removed if it is deeper than six inches. See also Inspection and Maintenance Manual: Stormwater System Management, published separately also by Berry Surveying & Engineering.

Corrective Action measures will be made in accordance with SWPPP requirements and records maintained on site by the Contractor.

5.0 CONCLUSION:

The peak rate of runoff has been reduced all of the Analysis Points for all of the evaluated storm events. The volume of runoff has been reduced for all events at three of the four evaluation Final Reaches. At Final Reach 300, an existing cross culvert under US Route 4, the volume has been increased by less than 0.1 for the four storm events. This very minor increase meets the design mandate.

A Rain Gardens are proposed to treat the surface water runoff from the entire site and infiltrate some of the runoff.

A Site Specific, Terrain Alteration Permit (RSA 485: A-17) is required for this site plan due to the area of disturbance being greater than 100,000 SF. The impact for this site will require an EPA Notice of Intent as the impact is less than one acre.

Respectfully Submitted,
BERRY SURVEYING & ENGINEERING

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