

**DECISION UPON APPLICATION OF COVENTRY WOODS, LLC
FOR A COMPREHENSIVE PERMIT UNDER
MASSACHUSETTS GENERAL LAWS CHAPTER 40B**

I. THE APPLICATION AND PUBLIC HEARING

On October 6, 2005, the Carlisle Zoning Board of Appeals (the "ZBA") opened a public hearing at the Carlisle Town Hall on the application of Coventry Woods, LLC (the "Applicant") for a comprehensive permit under Massachusetts General Laws Chapter 40B, §§ 20-23 ("Chapter 40B") and the Carlisle Zoning By-Laws (the "By-Laws") to build low or moderate income housing consisting of 56 condominium units (the "Project") on approximately 22.8 acres of land located off Concord Road in Carlisle, further identified as Parcel 10 on Carlisle Assessor's Map 8 (the "Site"). The ZBA conducted views of the Site on or about December 3, 2005 and December 9, 2006 and held numerous continued public hearings between October 6, 2005 and April 18, 2007.

The hearing was opened subsequent to a Project Eligibility letter ("Project Eligibility Letter"), dated June 10, 2005, from Thomas R. Gleason, Executive Director of MassHousing, to Bruce Wheeler, representing Coventry Woods Carlisle LLC.

Citing comments received from the Town of Carlisle, MassHousing directed the applicant: "the following issues should be addressed in your application for a comprehensive permit to the local ZBA and be fully explored in the public hearing process." The issues cited by MassHousing include: the sensitivity of wetlands, vernal pools and wildlife habitats and nearby conservation areas, as well as the fact that Carlisle does not have public water or sewer and associated concerns that construction of the proposed project could jeopardize abutters' private wells. MassHousing also instructed the applicant to "apply only for those waivers from local environmental bylaws that are necessary for the financial feasibility of the project" and "to include a justification for each waiver requested." See Exhibit 229.

The Project Eligibility letter includes a directive to the applicant: "In order to adequately protect local water supplies and environmental resources, you should be prepared to address each of the above concerns during the public hearing and incorporate any necessary changes into development plans."

MassHousing's letter also stated that the Town is concerned that a single access way may not be able to accommodate emergency vehicles. "You have indicated that it is possible to loop the existing access way in order to have two points of access onto Concord Street..." No such secondary access has been shown.

On November 21, 2005, the ZBA selected Beals and Thomas, Inc. as its civil engineering peer review consultant after soliciting quotations pursuant to G.L. c. 44, §53G.

On December 21, 2005, representatives from Beals and Thomas met with the Applicant's engineers and requested additional information and further detail on various design elements of

the 56-unit Project, in order for it to perform an adequate review of the Project. Beals and Thomas also recommended on-site testing to determine water supply, impact on wetlands and impacts on abutting wells. Pursuant to the directive from MassHousing and based on subsequent testimony by its peer review consultant as well from the Carlisle Board of Health and the Carlisle Board of Selectmen, the ZBA requested that the applicant conduct pre-permit water connectivity tests to determine if the proposed wells and water usage at the project could adversely affect the abutting citizens' private wells, specifically the quantity and quality of water that may be available to them should this development be constructed. The applicant refused to conduct such tests. The Applicant's original submittal was deficient in many ways with respect to the application requirements in the ZBA's Comprehensive Permit Rules and Regulations.

On January 23, 2006, the Applicant's engineer responded to the request for additional data from Beals and Thomas. The hearing that had been scheduled for January was postponed until February 13, 2006 so that Beals and Thomas could perform their review of the information submitted by the Applicant on January 23.

In its February 10, 2006 Supplementary Review Letter, Beals and Thomas reported that the issues they had raised in their December, 2005 had not been fully addressed: "Some of the supplementary documentation was submitted to address comments from this letter; however, a majority of the issues presented remain unaddressed." Beals and Thomas went on to enumerate further deficiencies in the information that it had been supplied.

In late February, 2006, the Applicant's representatives, members of the Board of Selectmen, and abutters to the Site commenced informal discussions on reducing the density of the Project and addressing several of the Project's design concerns. On March 4, 2006, the Applicant's agent Mark O'Hagan met with those parties to discuss the possibility of entering into a Memorandum of Understanding ("MOU"), under which the Applicant would agree to make certain design changes to the 56-unit Project, including a reduction in density, in return for the Town's and abutters' support of the revised Project. By March 8, 2006, a first draft of an MOU was circulated. As a result of the meeting, the Applicant requested that the hearing scheduled for March 13 be rescheduled to March 27, 2006 to accommodate a redesign of the plans. The meeting was instead rescheduled to April 3, 2006 to accommodate that work.

At the hearing on April 3, 2006, the Applicant submitted a revised conceptual plan, reducing the density of the Project to 41 units with a commensurate reduction in infrastructure as well as removing the age restriction in the original 56-unit proposal (the "Revised Project"). During April, Beals and Thomas and several local boards and commissions reviewed the new plans for the Revised Project. Additionally, the Town of Carlisle selectmen petitioned the Community Preservation Committee to allocate \$200,000 for the Applicant to help fund two additional affordable units within the Revised Project, raising the number of affordable units to 12 units. Coincident with this action, Special Counsel was directed to petition MassHousing to raise the sale price of the affordable units to \$183,000 to more accurately reflect the 70% medium income valuation. Carlisle Town meeting approved the motion to subsidize two additional affordable units on May 1, 2006.

At the ZBA's request, Special Counsel drafted a decision approving the Revised Project with conditions, which was circulated on May 3, 2006. Contemporaneously, the Applicant and the attorney for several of the abutters advised the ZBA that they were working on a mutually-acceptable well testing protocol and plan, under which the Applicant would test several of the abutters' private domestic wells at the same time it pump tests its own private water supply wells on the Site, and that the Applicant and abutters would be presenting an agreed-upon protocol for the ZBA to consider as a condition to the comprehensive permit. Given that the Town is wholly dependent upon private water supplies, the ZBA had urged the Applicant in December, 2005 to conduct such water testing to try to determine whether the proposed density of the project would adversely affect the water quality and quantity available to the abutters, and whether the available aquifer would be sufficient for the future occupants of the project and the abutters. The Applicant and the abutters also informed the ZBA that they were negotiating other conditions to be added to the decision.

By June 2006, negotiations between the Applicant and the abutters had broken down. The abutters were disappointed by the Applicant's delay in providing engineered plans for the 41-unit conceptual plan it presented on April 3. The Applicant insisted that the bulk of the engineering peer review should occur after the comprehensive permit has been issued.

Finally, on June 15, 2006, the Applicant provided its first engineered plans for the 41-unit Revised Project. At the urging of the Planning Board, the ZBA requested the Applicant to make a more robust effort to incorporate "low impact development" principles into the design of the Project, particularly its landscaping components, given that the Site and all of the abutters are reliant on bedrock wells for their domestic water needs. During June and July, 2006, the Applicant's engineered plans were peer reviewed and the ZBA received many critical comments from the Planning Board and the Board of Health, particularly concerning missing information and the Project's water supply, wastewater management and landscaping. The ZBA, Planning Board and peer review engineer repeatedly requested the Applicant to provide the ZBA with a complete and itemized list of waivers of local by-laws and regulations it was requesting for the Project. The ZBA asked Special Counsel to prepare an "issues matrix," identifying all the outstanding substantive design issues and charting any progress by the Applicant in addressing the numerous concerns raised by local boards, Beals and Thomas, and with increasing frequency, the abutters.

On August 9, 2006, members of the Town's various land use boards and committees, municipal staff and officials with expertise in land use matters, and the ZBA's peer review engineer and Special Counsel met at Town Hall to discuss the issues in the Issues Matrix and to develop a set of recommendations to the ZBA. These recommendations were then supplied to the ZBA and included, once again, requesting specific information be provided by the Applicant, some of which had been requested in the initial peer review during December 2005 through February of 2006. In the meantime, the Applicant continued to have discussions with the abutters on a well-testing protocol and attempts to reach a consensus on other substantive design issues in the form of proposed conditions to the comprehensive permit.

In September 2006, the Applicant provided substantial supplemental design information and engineering calculations for the 41-unit proposal, including revised plans, responses to peer review letters from July, drainage and water balance calculations, a blasting plan and cut and fill analysis, certain information about traffic elsewhere on Concord Street, and a landscaping plan and irrigation report. This information was thoroughly reviewed by the peer review engineer and local boards during September and October, which resulted in several rounds of peer review comments, responses by the Applicant, and further comments and concerns from local boards and officials.

In December, 2006, the issue of wastewater management, specifically the large septic system identified on the plans as "System C" located at the western end of the Site and close to the private wells of two abutters, had become a major concern of the Board of Health, Board of Selectmen and abutters. The abutters retained Scott Horsley of Horsley and Witten, Inc., an environmental engineering and consulting firm, to comment on System C. Horsley's opinion provided to the ZBA concluded that the "proposed project raises serious questions regarding the impacts of wastewater disposal on abutters' drinking water wells. This is a public health issue and should be fully evaluated prior to any decisions by the Board of Appeals." Exhibit 139.

Between December, 2006 and March, 2007, the Board of Health sent several memoranda to the ZBA expressing their grave concerns with the design of System C and the health threat it posed to the abutters. These memoranda repeated concerns the Board of Health had previously raised in memoranda from June through October of 2006. The Board of Health and the abutters called for the Applicant to perform a full hydrogeologic study, primarily to evaluate whether pathogens and nitrogen from System C would migrate to the abutters' wells in unacceptable concentrations.

At the public hearing on January 29, 2007, the ZBA requested the Applicant to undertake a hydrogeologic study specifically related to System C and provided the Applicant with a proposed Scope of Work. The Applicant refused to conduct such a study, and notified the ZBA that it considered the public hearing to be closed that night. The Applicant asserted that the hearing had been open long enough and that, if the hearing remained open, the permit would be deemed to have been "constructively approved." It also rejected repeated requests to pay outstanding peer review invoices or replenish the peer review escrow account in accordance with the ZBA's Rules and Regulations.

The ZBA does not believe that the public hearing was closed on January 29, 2007. Further, the ZBA does not believe that it had sufficient and adequate information from the Applicant about the Revised Project to fairly assess its impact on the health and safety of Carlisle residents. Both the length of the hearing and the extent of peer review expenses were directly attributable to the Applicant's failure to provide requested information completely or timely, if at all. In several instances, the applicant provided information that had been requested by the ZBA only after months of delay. The piecemeal supply of information resulted not only in inefficiencies in the process, but also in higher peer review expenses as the supplementary submittals on each topic were presented by the Applicant as complete, then peer reviewed and found to be incomplete or inaccurate.

By January 29, the substantive conditions to the draft decision were taking shape, and in response to the Applicant's claims that certain conditions in the draft decision would render the project uneconomic, and in accordance with the MHP Guidelines, the ZBA at that hearing asked the Applicant to provide an updated *pro forma* for the 41-unit plan. The ZBA also asked the Applicant for a breakdown of the costs to comply with the proposed conditions in the draft decision. The Applicant did not respond to this request until April 6, 2007.

The ZBA held continued sessions of the public hearing on February 16 and March 1, 2007. The Applicant did not attend these sessions. During this period, the ZBA was largely grappling with how to complete the decision given that the Applicant had made it clear that it was not going to provide any of the requested test data.

On March 1, the Applicant presented a written offer to the ZBA to withdraw its assertion that the hearing had closed on January 29, 2007 and any corresponding claim of a constructive approval if the ZBA agreed to issue and file a decision by April 27, 2007. At the public hearing that evening, the ZBA accepted that offer and proceeded with the hearing.

At the continued hearing on March 14, 2007, the Applicant presented for the first time a new conceptual plan for a revised, age-restricted project containing 48 units. It informed the ZBA that: (1) it was "withdrawing" the 41-unit plan that all parties had been discussing for over a year, and (2) it would not provide any additional information beyond the one-sheet conceptual plan or funds for the ZBA to peer review the new plan. The Applicant also refused to extend the April 27, 2007 deadline for rendering a decision to accommodate peer review of that plan.

The 48-unit plan has significant design changes that would necessitate additional peer review, as well as review by local boards and departments. The Fire Chief advised the ZBA that he considered that plan to be inherently unsafe due to the length of the road and the number of units it would serve. The Carlisle Housing Authority advised the ZBA that age-restricted housing, which was proposed under the 48-unit scenario, is not consistent with the Town's affordable housing needs and its Planned Production Plan adopted and approved pursuant to Chapter 40B regulations.

On March 16, 2007, the Applicant submitted to the ZBA a hydrogeologic report for the 41-unit proposal. Before that submission, the ZBA, through Town funds, had hired Dr. James Vernon of ENSR Corporation, an environmental consulting firm, to help refine the scope of work for a hydrogeological study that the ZBA would require as a condition to the issuance of the permit. Dr. Vernon reviewed the Applicant's report and concluded, among other concerns "that the information submitted is insufficient to demonstrate that nearby domestic wells (sensitive receptors) will not be adversely impacted." Exhibit 225.

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By memo dated March 26, 2007, the Board of Health advised the ZBA that it was rescinding its previous recommendation to waive certain local health regulations, and based on the threat to public health posed by the proposed Project was now recommending that the ZBA decline to waive any local health regulations. The Board of Health, citing the lack of requested

data from the applicant, found that “[w]ithout the necessary data to resolve its concerns, the Board finds that it is unable to determine whether the development layout as proposed is feasible. The Board is reluctant to stand by its previous recommendations on the requested waivers since to do so could jeopardize the health and safety of the residents of Carlisle and the environment.” Exhibit 222.

At the March 28, 2007 continued hearing, the Applicant presented the new 48-unit proposal. Exhibit 227. No additional data was provided by the applicant beyond the originally submitted one-page project plan for this proposal. The ZBA also heard presentations from abutters’ attorneys on outstanding and still unresolved water supply and wastewater management issues. Specifically, Attorney Jon Witten, representing some of the abutters, again reminded the ZBA that the Applicant had been directed by MassHousing in its June 10, 2005 Project Eligibility Letter to address and fully explore in the public hearing process seven specific concerns raised by the Town and in fact, as Attorney Witten emphasized, this had not been done. Of the concerns the Applicant was directed to address were issues regarding the proposed septic systems, possible contamination of private wells, blasting and adequate water supply.

At the April 9, 2007 hearing, the ZBA heard testimony from abutters, local officials and the Applicant concerning the economics of the Project. The Applicant submitted *pro formas* for both the 48-unit and 41-unit proposals, and a table showing the projected costs for some of the proposed conditions in the draft decision. Attorney Witten suggested that the ZBA should reduce the project to 24 units to address the public health concerns, and argued that doing so would not render the Project uneconomic. The Board of Selectmen presented an appraisal of the Site that it had commissioned from Jon Avery and Associates on the concern that the Applicants *pro forma* was overstating the land acquisition cost. The Avery appraisal determined that the land value of the Site on February 23, 2005 was \$1.6 million for development under the Zoning By-Laws.

On April 18, 2007, the ZBA took further testimony from abutters on Project economics, including a presentation by Kenneth Hoffman, an abutter with degrees in civil engineering from M.I.T. and specific expertise in construction management cost estimation, showing that a 28-unit project would be financially feasible. The ZBA then closed the hearing and entered into deliberations.

The minutes and exhibits from the public hearing are available for public inspection in the office of the Town Clerk. A list of the exhibits is contained in the record.

Sitting as members of the ZBA for the hearing were Cindy Nock, Ed Rolfe and Steve Kirk. Alternate Steve Hinton attended all of the sessions as well. Alternates Emmanuel Crespo and Terry Herndon attended several sessions of the hearing.

II. NATURE OF THE APPLICATION; PROCEDURE REQUIRED BY STATUTE

In hearing this matter, the ZBA was guided by the Supreme Judicial Court's decision in Dennis Housing Corp. v. Board of Appeals of Dennis, 439 Mass. 71, 76-77 (2003) (citations omitted), that a qualified developer proposing to build low or moderate income housing:

may submit to the zoning board of appeals "a single application to build such housing in lieu of separate applications to the applicable local boards." The zoning board is then to notify those "local boards" for their "recommendations" on the proposal; the zoning board may "request the appearance" of representatives of those "local boards" at the public hearing as may be "necessary or helpful" to the decision on the proposal; and the zoning board may "take into consideration the recommendations of the local boards" when making its decision. The zoning board then has "the same power to issue permits or approvals as any local board or official who would otherwise act with respect to such application," ... and, in some circumstances, has the power to override requirements or restrictions that would normally be imposed by those local boards. If the zoning board denies the application for comprehensive permit, or approves it only on conditions that make the project "uneconomic," the applicant may appeal to the housing appeals committee ... which also has the power to override local regulations and direct the issuance of a comprehensive permit."

The Housing Appeals Committee's decision itself is further reviewable by the Superior Court in accordance with the State Administrative Procedure Act, G.L. c. 30A. Any person aggrieved by the issuance of a comprehensive permit has a right of appeal to the Superior Court under Section 17 of the Zoning Act, General Laws Chapter 40A.

III. GOVERNING LAW

The law governing this decision is The Low and Moderate Income Housing Act, Massachusetts General Laws Chapter 40B, §§ 20-23 (the "Act"), and the regulations promulgated by the Department of Housing and Community Development ("DHCD") Housing Appeals Committee, 760 CMR 30.00 and 31.00 (the "Regulations").

The Act prohibits the use by cities and towns of exclusionary local bylaws to shut out needed low and moderate income housing. Board of Appeals of Hanover v. Housing Appeals Committee 363 Mass. 339 (1973). The purposes of the Act are satisfied if (a) a town has low or moderate income housing (i) exceeding 10% of the housing units reported in the latest decennial census or (ii) on sites comprising 1.5% or more of the town's total land area zoned for residential, commercial or industrial use, or (b) if the application results in the commencement of low and moderate income housing construction on sites comprising more than 0.3% of such total area or 10 acres, whichever is larger, in one year. See, e.g., Arbor Hill Holdings Limited Partnership v. Weymouth Board of Appeals, Housing Appeals Committee No. 02-09 (9/24/03).

Carlisle does not currently meet any of these criteria. Accordingly, the By-Laws and Carlisle's other local bylaws and regulations that ordinarily govern development in the Town

may be waived to extent necessary to make the construction of low or moderate income housing financially feasible. Board of Appeals of Hanover. Under the Act and the Regulations, in deciding this application, the ZBA must balance the regional need for low and moderate income housing against any local objection to the proposed plan. Id. If a comprehensive permit is granted with conditions, those conditions must not render the project uneconomic.

IV. JURISDICTIONAL ELEMENTS (760 CMR 31.01(1) and 31.02(1))

Pursuant to the Act and the Regulations, an applicant for a comprehensive permit must fulfill three initial jurisdictional requirements:

1. The applicant must be a public agency, a non-profit organization, or a limited dividend organization;
2. The project must be fundable by a subsidizing agency under a low and moderate income housing subsidy program; and
3. The applicant must “control the site.”

The ZBA finds that the Applicant has provided sufficient information to establish that it will qualify as a limited dividend organization, the proposed project is fundable under a low and moderate income housing subsidy program (under the Massachusetts Housing Finance Authority’s Housing Starts program or under the Federal Home Loan Bank of Boston’s New England Fund), and it has the legal right to acquire title to the Site.

SUMMARY OF DECISION

For the reasons stated below, the ZBA approves with the conditions set forth below the Application of Coventry Woods, LLC for a comprehensive permit under Chapter 40B for the Project consisting of no more than 30 units of housing.

V. FINDINGS OF FACT

1. The Applicant, Coventry Woods, LLC is a Massachusetts limited liability company having an address of 148 Park Street, Suite 3, North Reading, Massachusetts.
2. Based on the information submitted as part of the Application, including a project eligibility letter issued by MassHousing dated June 10, 2005 (Application, Tab 3.2), the Applicant has made a sufficient preliminary showing that it will conform with the limited dividend requirements of Chapter 40B by entering into a legally-binding agreement to limit its development profit in the Project to 20% of its allowable development costs in accordance with policies set forth under the Housing Starts program or the New England Fund, whichever is applicable.

3. Through the project eligibility letter, the Applicant made a preliminary showing that the project is fundable by a subsidizing agency under a low and moderate income housing subsidy program. However, on April 9, 2007, the ZBA was presented with the Avery and Associates appraisal, which contradicted the Applicant's assertion that the fair market value of the Site was \$2.85 (subsequently, \$3) million. Under MassHousing's policies, Chapter 40B applicants may not carry a "site acquisition" cost in their development budgets exceeding the fair market value of the project site, under conventional zoning, as of the date of the project eligibility application. The development budget the Applicant submitted to MassHousing with its project eligibility application on February 23, 2005 carried a site acquisition cost of \$2.85 million (the Applicant later adjusted his acquisition cost to \$3 million). The appraisal indicates that the actual fair market value of the Site as of February 23, 2005 was \$1.6 million.

The ZBA brought this discrepancy to MassHousing's attention on April 23, 2007. Specifically, the ZBA asked MassHousing whether this discrepancy causes MassHousing to rescind its project eligibility determination for the Project, in light of its recent rescission of a project eligibility letter for a project in another town in which that applicant had materially misrepresented the fair market value of the site. On April 26, 2007, MassHousing notified the ZBA that it would not rescind the project eligibility determination.

4. Based on a purchase and sale agreement provided as part of the Application, and extensions thereto submitted by the Applicant during the public hearing, the ZBA finds that the Applicant has demonstrated that it has a sufficient legal interest in the Site to exercise a comprehensive permit requested in the Application.

5. The Revised Project consists of 41 townhouse-style condominium units in 12 residential buildings, to be served by a private water supply and a private wastewater disposal system. The Applicant presented its 41-unit revised proposal on April 3, 2006, after only preliminary civil engineering peer review of the 56-unit plans. The Applicant asked the ZBA to consider the 41-unit concept to be the operative plan. Since the time of submission of the 41-unit plan in April, 2006, that plan has been considered the operative plan and was thoroughly reviewed by peer review engineers and site designers, local board and commissions, and the ZBA for over a year.

6. On March 14, 2007, the Applicant presented an alternative plan depicting 48 age-restricted units. Given the already intense use of the site under the 41-unit proposal, the ZBA determined that the 48-unit plan would have to be peer reviewed in order for it to consider it adequately. The ZBA, faced with the Applicant's position that the hearing had been closed on January 29, had agreed on March 1 to close the hearing and issue a decision by April 27, 2007, leaving insufficient time to perform peer review, collect testimony from local boards and interested parties, deliberate, and render a decision on the new, 48-unit plan. Furthermore, the ZBA's peer review escrow account was already overdrawn and the Applicant refused to pay outstanding bills, let alone replenish the account as required under the ZBA's Rules and Regulations Governing Comprehensive Permit Applications under General Laws Chapter 40B ("ZBA's Chapter 40B Rules"), Section 4.3. Given the significant limitations imposed by the Applicant on the ZBA's ability to review the new 48-unit plan, the ZBA rejects that plan and

considers the 41-unit plan to remain the operative one submitted by the Applicant for the ZBA's evaluation.

7. The buildings containing the 41 units are shown on a set of architectural renderings included in the comprehensive permit application. The Applicant did not submit scaled architectural plans signed by registered professional architect as required by the ZBA's Chapter 40B Rules, Section 3.12.10.

8. The buildings containing the units, as well as other improvements and infrastructure, are shown on a set of plans entitled "Definitive Comprehensive Permit for Coventry Woods" prepared by Stamski and McNary, Inc. dated September 15, 2006, containing the following 15 sheets:

- (1) Layout Plan;
- (2) Master Plan and Land Use Plan;
- (3) Natural Features and Existing Conditions Plan (A);
- (4) Natural Features and Existing Conditions Plan (B);
- (5) Site Development Plan (A);
- (6) Site Development Plan (B);
- (7) Plan and Profile – Pasquale Way;
- (8) Plan and Profile – Anna Drive-A;
- (9) Plan and Profile – Anna Drive-B (i);
- (10) Plan and Profile – Anna Drive-B (ii);
- (11) Construction Details (A);
- (12) Construction Details (B);
- (13) Construction Details (C);
- (14) Erosion and Sedimentation Plan (A); and
- (15) Erosion and Sedimentation Plan (B).

The improvements and infrastructure are also depicted on the following plans:

- (a) "Irrigation Plan," consisting of five sheets:
 - (1) "Irrigation Plan," Sheet 1 (October 4, 2006);
 - (2) "Irrigation Plan," Sheet 2 (October 4, 2006);
 - (3) "Irrigation Details," Sheet 3 (October 4, 2006);
 - (4) "Typical Roof Water Collection Tank Details," Sheet 4 (September 18, 2006); and
 - (5) "Typical Irrigation Pump and Tank Details, Sheet 5 (September 18, 2006).
- (b) "Landscape Plan," consisting of three sheets dated September 18, 2006.
- (c) "Fire Cistern Easement Sketch" by Stamski and McNary (October 23, 2006).
- (d) "Vegetation Removal Sketch" by Stamski and McNary (October 23, 2006).

- (e) “Outdoor Lighting Sketch” by Stamski and McNary (October 23, 2006).
- 9. The Applicant submitted the following plans and reports for the Revised Project:
 - (a) “Blasting Plan and Cut/Fill Analysis” (September 22, 2006).
 - (b) “Stormwater Maintenance and Operation Plan” (September 22, 2006).
 - (c) “Limited Traffic Study” (September 22, 2006).
 - (d) “Limited Traffic Study – Addendum” (October 24, 2006).
 - (d) “Irrigation Report” (October 10, 2006).
 - (e) “Drainage and Water Balance Calculations.”
 - (f) “Water Balance Narrative” (October 25, 2006).
 - (g) “Hydraflow Hydrographs Model” (October 24, 2006).
 - (h) Hydrology Report (March 9, 2007).
- 10. The Property is located within Carlisle’s “Residence B” zoning district.
- 11. A significant portion of the Site is located within the 100-foot wetland protection buffer zone protected under the state Wetlands Protection Act and the Carlisle Wetlands Bylaw.
- 12. The Applicant submitted a list of requested waivers and exceptions from Carlisle’s local bylaws and regulations as part of its original application, which it revised upon presentation of the Revised Project.

A. Open Space Wetland Resources

13. On October 20, 2004, an Abbreviated Notice of Resource Area Delineation was submitted to the Conservation Commission by Habitech Development, LLC, a related party to the Applicant. The Conservation Commission conducted a peer review and, following revisions to the proposed delineation plan, issued an Order of Resource Area Delineation on December 8, 2004. See Exhibit 26. The Order approves a plan delineating the boundaries and buffer zones relative to the wetland resource areas on the Site. See Exhibits 24 and 40. The Order expires on December 8, 2007.

14. On November 14, 2005, a former Conservation Commission member, J. Thomas Brownrigg, submitted vernal pool certification forms for three vernal pools on the Site. The forms indicate that the Conservation Commission Administrator, Sylvia Willard, and Mr.

Brownrigg surveyed the Site on May 11, 2005, and observed evidence of a “breeding spotted salamander and wood frog.” See Exhibit 43.

15. In May, 2006, the Applicant appeared before the Conservation Commission, and received an Order of Conditions on June 26, 2006 for site preparation, well installation, and pump testing for a public water supply consisting of five wells.

16. An informal presentation was made to the Conservation Commission on the 41-unit plan on September 7, 2006, and at that time the Commission asked the Applicant to file a Notice of Intent so that the Applicant’s plans can be reviewed concurrently with the ZBA’s review of the project. The ZBA echoed this request repeatedly.

17. The Applicant will be required to file a Notice of Intent with the Conservation Commission under the state Wetlands Protection Act for the proposed access driveway and other site development features.

18. The Applicant has requested a blanket waiver from the Town’s Wetlands Bylaw. The ZBA’s consulting engineer, George Preble, has advised that since the Conservation Commission will retain jurisdiction under the state Wetlands Protection Act, a waiver from the local Bylaw should not compromise the integrity of the resource areas on the Site. However, he also advised the ZBA may want to preserve that component of the Bylaw requiring applicants to “reimburse the reasonable costs and expenses borne by the Commission for specific expert engineering and consulting services deemed necessary by the Commission” since the Wetlands Act does not expressly require applicants to reimburse conservation commissions for their peer review expenses. See Exhibit 45.

B. Internal Traffic Circulation and Fire Protection

19. During the public hearing, Carlisle Fire Chief David Flannery expressed concerns over the ability of emergency vehicles to access the far reaches of the Site and maneuver through the network of private roads proposed as part of the Project.

20. Carlisle’s Subdivision Rules and Regulations prohibit the construction of any subdivision dead-end road that serves more than 10 residential lots or exceeds 1,000 feet in length. The proposed roadway in the 41-unit plan, as well as the 48-unit plan, is greater than 2,500 feet long.

21. A single-access partially-looped roadway is proposed to serve the Revised Project. There is only one way into, and one way out of, the Site to Concord Road.

22. Fire Chief Flannery has recommended further mitigation to be incorporated as conditions to a comprehensive permit to enhance fire protection in the Revised Project, including (a) a 40,000-gallon fire cistern with appropriate paved bump-out for fire apparatus within 100 feet of Concord Road and designed in accordance with the specifications of the Carlisle Fire Department; (b) Residential Sprinkler Systems with addressable fire alarm systems consistent

with NFPA 13R sprinkler design standards in all units regardless of the number of units per building; (c) additional visitor parking spaces in two locations: drive-in spaces off the rear cul-de-sac and parallel spaces around the center island, the design of which shall be generally consistent with previous plans submitted and finally approved by the Fire Chief; and (d) posting of fire lanes at strategic points along the roadway identified and designated by the Fire Department. See Exhibits 58, 98 and 137.

23. Chief Flannery objected to the length of the dead-end roadway for the 41-unit plan, but noted that his concern was mitigated by the Applicant's willingness to widen the roadway, add off-street parking, and provide fire lanes. In a review letter dated April 6, 2007, Chief Flannery stated that the 48-unit proposal created a public safety issue by adding four units at the far end of the single-access driveway. He does not approve of the 48-unit plan for public safety reasons.

C. Water Supply

24. On June 27, 2005, the Applicant obtained preliminary approval from the Department of Environmental Protection ("DEP") to conduct tests for a private well source on the Site to serve the Project. The Applicant proposes to install five bedrock wells, each with a proposed pumping rate of 2,000 gallons per day ("gpd"), to provide the water supply demand of 9,020 gpd for the Project. The water supply wells are proposed to be located at least 50 feet apart from each other, and each will have a protective radius of 145 feet pursuant to DEP regulations and standards. See Exhibit 39.

25. The Applicant's well test approval was renewed on June 6, 2006. As part of the renewal, DEP ordered the Applicant to measure the water levels in three abutters' wells.

26. The Applicant's 145-foot protective radii for the five wells overlap with each other. Installing five wells with overlapping radii would seem to defy the intent of the protective radius requirement, since the radius is calculated based on the number of gallons of water being pumped from the ground. If the Applicant chose to install one 10,000 gallon well rather than five 2,000 gallon wells, the protective radius would 250 feet from that well. To comply with the requirement that the all land within the protective radius be controlled by the well owner, the radius would consume approximately twice as much land area as the cumulative overlapping 145-foot radii, and would result in the loss of several housing units and related infrastructure. Surprisingly, proposing wells with overlapping radii is apparently acceptable to DEP, so long as the wells are at least 50 feet apart. DEP will treat the wells as one "well field," and thus mandate a larger protective radius for all five wells, if the well pump tests establish that the five wells are hydraulically connected.

27. The ZBA finds the DEP policy of accepting overlapping protective radii illogical and susceptible to manipulation. The presumption should be the reverse of DEP's policy – wells located within the protective radius of one another should be presumed to be hydraulically connected, thereby extending the protective radius to include each well within the overlapping radii, unless the pump tests prove otherwise.

28. During the course of the public hearing, members of the Board of Health and the Town's Health Agent met with DEP staff to discuss appropriate testing protocols and standards for the proposed private water supply. The Board of Health submitted several recommendations to incorporate as conditions to a comprehensive permit. See Exhibits 51, 78, 83 and 99.

29. As described above, the Applicant also met directly with certain abutters and their attorney during the public hearing to develop a mutually-acceptable well conflict testing protocol. The Applicant and abutters could not reach agreement on a protocol.

30. Based on testimony from the Board of Health and Scott Horsley, an expert retained by the abutters, the ZBA finds that the Revised Project's water supply system poses a distinct threat to the quantity and quality of water in the wells of abutters. Given the unique hydrology in the neighborhood, there is a strong likelihood that the Project's wells will be hydraulically connected to at least some if not all of the abutters' wells. Carlisle does not have a public water system, and residents in Carlisle have experienced water shortages during dry conditions. The ZBA finds that the interests of public health require well tests for (X) abutters' wells that are in proximity to the Project's wells, and for the Applicant to provide surety to the abutters in the event of well failure after the Project has been built and is occupied.

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31. The ZBA received substantial testimony and evidence on irrigation during the public hearing. The Applicant proposed an irrigation well to serve the Project's landscaping needs, which would draw up to 20,000 gallons of water from the ground per day during peak establishment periods. The first source of water for irrigation will be two 12,000-gallon subsurface storage tanks that will collect roof runoff from approximately half of the buildings in the Project. However, Mr. Preble concluded that these cisterns would be quickly depleted during dry weather, and therefore the irrigation well would likely run continuously during times of peak demand. The ZBA asked the Applicant to consider reducing the demand on the irrigation well by incorporating more runoff collection or decreasing the overall demand on irrigation. Mr. Preble evaluated the Project's irrigation plans and actual needs thoroughly in a report dated January 26, 2007 (Exhibit 152), concluding that an irrigation well could be avoided altogether.

32. The Applicant has requested a waiver from the local Board of Health private water supply regulations.

D. Wastewater Management

33. The Applicant proposes three soil absorption septic systems to serve the Project's sewage treatment and wastewater disposal needs. Before constructing the Project, the Applicant will need to obtain approvals for any septic systems under Title 5 of the State Environmental Code.

34. In various memoranda submitted to the ZBA, the Board of Health recommended that the Applicant be required to perform a hydrogeologic evaluation of the Site that includes a groundwater mounding analysis for System C, and a solute transport model that would determine

the concentrations of bacteria, nitrogen and viruses at the property boundaries downgradient and cross-gradient from System C. The ZBA voted to require the hydrogeologic study at its hearing on January 29, 2007. The Applicant refused to perform any of the testing outlined in the scope of study. The ZBA's consulting hydrogeologist, James Vernon, refined the scope of study in a memorandum dated March 13, 2007 (Exhibit 213), but the Applicant continued to refuse to undertake any of the testing, data collection or analysis recommended in that memorandum.

35. The ZBA received written and oral testimony from Scott Horsley, a pre-eminent hydrogeologist retained by abutters, questioning the constructability of System C. Based on this testimony and its own analysis, the Board of Health rescinded its recommendations on the Applicant's requests for waivers from its local health regulations governing septic systems. Mr. Vernon also reviewed the Applicant's March 9, 2007 hydrology report to determine whether this information could adequately predict groundwater flow and direction, and mounding effects, from System C. See Exhibit 225. Mr. Vernon determined that data and analysis in that report was insufficient to make any credible predictions on the effect of on the hydrology of the Site and abutting properties, and that more data, tests and analysis are necessary to determine whether nearby private wells will be compromised by. Mr. Vernon outlined the specific elements of a hydrogeologic study that would be required to meet acceptable industry and regulatory standards. Mr. Vernon concluded that there was substantial risk of contamination of private wells given the bedrock soil characteristics. Mr. Vernon stated that the 48-unit plan would not alter his conclusions.

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36. The ZBA finds that System C poses an unacceptable health risk to the abutters west of the Site, and that insufficient data have been collected to predict adequately the effects of this System on the private wells of those abutters. The ZBA also finds that the Applicant has obstructed the ZBA's efforts to gather the information it needs to make an educated decision on wastewater management issues, particularly the Applicant's request for waivers from the local health regulations. The Applicant refused to undertake a narrowly-tailored hydrogeologic study, or to provide funds for the ZBA's technical review of the Applicant's proposed wastewater management system. The Applicant's intransigence has left the ZBA with no choice but to require full compliance with the Board of Health's local wastewater management regulations.

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E. Stormwater Management

37. George Preble reviewed the Applicant's preliminary stormwater management analysis and proposed plans for stormwater management infrastructure on the Site. The Site is large enough to accommodate the stormwater management structures that will be required to attenuate run-off and satisfy DEP's stormwater management policies and guidelines under the Wetlands Protection Act.

38. Mr. Preble also reviewed the Applicant's preliminary drainage calculations. The Applicant made several design improvements during the course of the public hearing in response to Mr. Preble's comments. **Since the design of the stormwater management system will not be finalized until after the comprehensive permit has been issued and an Order of Conditions has been issued by the Conservation Commission, the ZBA will condition its approval of this application on final review and approval of the system by its consulting engineer before the issuance of any building permits for the Project.**

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F. Planning Issues and Density

39. In November, 2005, the Planning Board submitted a memorandum to the ZBA expressing its concern with the 56-unit project. It observed that:

[T]he size and density of the proposed development and the correspondingly large impact on natural resources and on abutters in close proximity to clustered dwellings raise serious concerns about water supply, septic drainage, traffic, and fire safety. If there is an opportunity for negotiations with the developer to modify the proposal, perhaps reducing its size and/or altering the layout of the access road, open space, dwellings and increasing the percentage of affordability to help mitigate the dramatic impacts of such a development on the town and its residents, the Planning Board would be happy to take part in such discussions.

See Exhibit 29.

40. Housing density is a legitimate planning, health, and safety concern to be addressed by a zoning board of appeals in the context of a comprehensive permit application. As the Planning Board noted, the density of a housing project, and the intensity of the use of a particular parcel of land, affects a variety of matters such as sewage disposal arrangements, stormwater drainage arrangements, fire protection, traffic circulation, water supply and the availability of open space, all of which are relevant to comprehensive permit proceedings. 760 CMR 31.07(3). These issues become more critical, and often more challenging, as the density of housing increases.

41. During the public hearing, present and past members of the Carlisle Board of Selectmen met informally with the Applicant's representative and representatives of the abutters who have participated in the hearing, encouraging the Applicant to reduce the size and scale of

the Project and to address the concerns raised by the abutters, the Planning Board and others. These discussions lead to the presentation of the Revised Project on April 3, 2006.

42. The Revised Project reduced the density from 56 units to 41 units. The 56-unit project was to be deed-restricted for households with members at least 55 years old, while the 41-unit proposal would not be age-restricted. The 41-unit plans were subjected to peer review by the Consulting Engineer, and review by the various Town boards and commission, including the Board of Health, Conservation Commission and Planning Board. The Planning Board opined that a 41-unit development strains the site from ecological, environmental and public safety perspectives, and recommended a further reduction in density. See Exhibit 111.

43. The ZBA is mindful of the Housing Appeals Committee's position that zoning boards should not endeavor to "redesign projects." Fortunately, the Revised Project can be further improved, and the significant health, safety and environmental concerns raised throughout the public hearing by Carlisle's local boards and commissions and the ZBA's consulting review engineers can be addressed, without "redesigning" the project. Specifically, requiring compliance with the Board of Health's design flow regulation, mandating that each bedroom shall be presumed to generate 165 gallons of wastewater per day for purposes of calculating design flow under Title 5 of the State Environmental Code, will have the practical effect of either reducing the overall density on the Site or improving the treatment of the wastewater generated by the Project. Imposing reasonable setbacks between private wells and the Project's septic systems, and requiring a thorough hydrogeologic evaluation of the Site, will provide better protection for the wells than the current proposal. While these and other conditions will effectively reduce the number of the housing units in the Project, setting a firm cap on density is necessary to overcome the substantial gap in information that has left the ZBA and every other land use board and official in Carlisle with little confidence that a 41-unit project adequately protects the health and safety of the Project's residents and the abutters and neighbors to the Project.

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44. Any abrogation from Carlisle's local bylaws and regulations is undesirable. Under conventional zoning, the Site could accommodate 4 single-family homes. The ZBA agrees with the Planning Board's assessment that 20 units – five times the permitted density under conventional zoning – exceeds an acceptable density for this site. The Town's thoughtfully-conceived zoning bylaws place appropriate limits on density, not in furtherance of "snob zoning" disapproved under Chapter 40B, but rather to provide a layer of protection for our public health and environmental interests where state laws are deficient. Carlisle requires stricter development standards than those provided under state laws governing domestic water supply development and wastewater management, given that the Town lacks public water and sewer utilities and is faced with predominantly bedrock soil characteristics.

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45. Under Chapter 40B, the ZBA must balance Town's legitimate land use planning, environmental, and public safety interests against the need for affordable housing. It must find a balance that preserves the integrity of the Town's local bylaws and regulations to the greatest extent possible while also addressing the demand for housing for the Town's low and moderate income families. While the Site cannot safely accommodate the development of 20 housing

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units, it can accommodate more than 4 single-family homes if the development is planned and constructed appropriately. ZBA also finds through its evaluation of the Applicant's *pro forma* and related testimony that the development of 20 units is not necessary to make the project financially feasible, and that a project consisting of XX units with seven affordable units would be financially viable for the Applicant.

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VI. CONDITIONS ATTACHED TO COMPREHENSIVE PERMIT

For the foregoing reasons, the ZBA grants the Application of Coventry Woods, LLC for a comprehensive permit for the Revised Project consisting of no more than (XX) housing units on the Site under Chapter 40B, subject to each and every one of the following conditions:

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A. General Conditions

A.1 Before the commencement of any construction activities or any site clearing, except clearing reasonably necessary for the private water supply well tests as shown on the plans approved by the Carlisle Conservation Commission ("Post-Well Test Site Activities"), the Applicant shall submit to the ZBA a final comprehensive permit site plan and the final engineered plans and calculations for the construction of the roadways and related infrastructure, stormwater management utilities, the approved septic systems, and the approved water supply wells for technical review by the ZBA to ensure that it is consistent and in conformity with this Decision, which upon such finding shall be approved and endorsed by the ZBA (the "Approved Plans"). The ZBA shall render a decision under this Condition within 45 days of the Applicant's complete submittal.

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A.2 This Decision shall be noted on the endorsed Approved Plans and both this Decision and the Approved Plan shall be recorded at the Middlesex Registry of Deeds. Proof of recording shall be forwarded to the ZBA before issuance of a building permit.

A.3 The Applicant shall comply with all local bylaws, rules and regulations of the Town of Carlisle and its boards and commissions in effect as of [application date] unless expressly waived herein.

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A.4 The Applicant shall pay all fees of the Town of Carlisle imposed generally for construction projects and for the purposes of monitoring compliance of the construction and occupancy of the Project in accordance with this Comprehensive Permit unless otherwise expressly waived in this Decision.

A.5 The Applicant shall copy the ZBA and the Neighborhood Representative (defined under Condition C.1) on all correspondence between the Applicant and any federal, state or Town official, board or commission that concerns the design and/or conditions set forth in this Decision, including but not limited to all testing results, official filings and other permits issued for the Project.

A.6 The Applicant shall comply with the State Building Code and any local regulations or fees of the Building Inspector. The Applicant shall pay all required fees for all such building permits, including any fees customarily charged for inspections and permits.

A.7 The Applicant shall maintain a copy of the endorsed Approved Plans and this Decision at the Site during construction.

A.8 The Applicant shall obtain temporary easements, licenses or written permission from any abutting property owner if, during the course of construction, it becomes necessary to enter upon abutting land for construction or planting.

A.9 Each condition in this Decision shall run with the land and shall, in accordance with its terms, be applicable to and binding on the Applicant and the Applicant's successors and assigns. Reference to this Decision shall be incorporated in the condominium Master Deed and in each Unit Deed recorded for the Project and for any unit in the Project.

A.10 This Decision permits the construction, use, and occupancy of no more than ~~XX~~ housing units on the Site. The construction and use of the Site shall be in conformity with the Plans as modified by the Approved Plans, and no additional housing units or bedrooms or any other structures or infrastructure except that which is shown on the Approved Plans shall be created without further approval of the ZBA in the form of an amendment to this Decision pursuant to Section N.1 below.

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A.11 Before Post-Well Test Site Activities, the Applicant shall remit payment for all outstanding peer review invoices and bills (plus Vernon review), and replenish with a \$20,000 deposit the ZBA's consultant escrow account to fund the Consulting Engineer's and Town Counsel's review of the Applicant's additional submissions set forth in this Decision. Any amounts not expended from the escrow account shall be returned to the Applicant. The purpose of this condition is to ensure that peer review expenses incurred by the Board associated with the Project shall be paid for by the Applicant.

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A.12 Before Post-Well Test Site Activities, the Applicant shall submit a report to the ZBA's Consulting Engineer certifying whether any MEPA thresholds will be triggered by the Project.

A.13 If, at any time after the date of this Decision, the Applicant's subsidizing agency rescinds or revokes its project eligibility determination for the Project, this comprehensive permit shall be deemed null and void and have no further effect.

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B. Submission Requirements

B.1 Pre-Construction Submissions: Before the Applicant begins any Post-Well Test Site Activities, it shall have:

- a. Obtained a written technical review from the ZBA's Consulting Engineer of the Applicant's fully-engineered stormwater management system, landscaping plan, architectural floor plans, and the Approved Plans' conformity with the conditions of this Decision, and the ZBA's approval of the same;
- b. Obtained any approvals from the Carlisle Board of Health and DEP that may be required under any statute, code or regulation affecting public health not otherwise preempted by Chapter 40B or expressly waived under this Decision;
- c. Obtained any approvals from the Carlisle Conservation Commission or DEP that may be required under any statute, code or regulation under its jurisdiction not otherwise preempted by Chapter 40B, including a final Order of Conditions or Superseding Order of Conditions under the Wetlands Protection Act as to any portion of the Site subject to the Wetlands Protection Act;
- d. Obtained a National Pollutant Discharge Elimination System ("NPDES") stormwater permit for the Project;
- e. Where an Environmental Notification Form (ENF) or Environmental Impact Report (EIR) under the Massachusetts Environmental Policy Act (MEPA) is required, obtained either confirmation that an EIR is not required or, if one is, a Certificate of the Secretary of Environmental Affairs of compliance pursuant to 301 CMR 11.08(8)(a);
- f. Delivered to the ZBA final architectural drawings for the buildings/units to be constructed materially consistent with the Architectural Drawings referenced in Section V.6 of this Decision, providing a scaled depiction of the front, rear and side elevations with accompanying specification sheets for all exterior lighting fixtures, stamped and signed by a registered architect;
- g. Received from MassHousing written confirmation that it will either: (a) provide the funds necessary to complete the Project (pursuant to the Housing Starts program), or (b) issue final approval under the New England Fund Program. A commitment of financing shall be forwarded to the Board from MassHousing.

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h. Delivered to the ZBA with copies to the Building Inspector, Planning Board, Board of Health, Conservation Commission, Superintendent of the DPW, Fire Chief, the Neighborhood Representative and Police Chief, and obtained the ZBA's approval of, a complete Construction Management Plan (CMP), which shall address the following topics and items:

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- i. Construction Administration
 - Hours of construction
 - Hours of construction delivery
 - Truck routes
 - Trash and debris removal
- ii. Construction Phasing and Schedule (critical path)
 - timing and phasing of construction
 - site clearing; construction of roadways and utilities; buildings, etc.
- iii. Communications (with neighborhood liaison committee)
- iv. Noise and Dust Control
 - Tree removal (chipping, etc.)
 - Public street cleaning and repair
 - Dust
 - Noise
 - Rock crushing
- v. Blasting
 - Blasting Plan
 - Identification of petitioner's blasting consultant
 - Selection of independent blasting consultant
 - Selection of blasting contractor
 - Pre- and post-blast survey (scope and content)
 - Insurance coverage
 - Blasting limits
 - Notification to abutters of blasting schedule
 - Road closures (if necessary)
 - School bus conflicts (limits on hours)
- vi. Erosion Control
 - Silt sacks, hay bales, silt fences, etc.
 - Tree protection plan
 - Drainage infrastructure
- vii. Identification of existing underground utilities

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viii. Construction Staging
Staging areas
Site office trailers
Storage trailers/containers
Open storage areas
Delivery truck holding areas
Re-fueling areas.

ix. Traffic and Parking (during construction)
On-site locations
Off-site locations
Snow removal
Police details
Warning signs

x. Fire and Emergency
Timing and testing of cistern installation (before wood framing)
Temporary emergency access driveway

xi. Construction Specifications

The scope of the ZBA's review of the CMP shall be for completeness and for consistency with generally-accepted construction practices and for compliance with all the conditions of this Decision. The ZBA shall issue its decision on the CMP within 30 days after a complete submission from the Applicant.

C. Site Development Construction Conditions

C.1 The Applicant shall designate a representative as a liaison for the Project to the Building Department, ZBA and the Neighborhood Representative, who shall initially be ~~XXXX~~. The liaison shall meet regularly with the Neighborhood Representative and provide contact information to allow the Neighbors to address promptly issues that may arise during construction.

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C.2 Before Post-Well Test Site Activities, the Applicant shall meet with the Building Department, Police Chief or his representative, Fire Chief or his representative, the ZBA's Consulting Engineer, and the Chair of the ZBA or her representative at a mutually convenient time and place to review the CMP and coordinate the Building Department's periodic inspections of the Project (the "Pre-Construction Meeting"). This meeting shall be open to the public, and notice shall be given to the Neighborhood Representative at least 48 hours in advance.

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At least two weeks before the commencement of any construction or site development/clearing activities, the Applicant shall submit to the ZBA, with a copy to the Neighborhood Representative, the Police Chief, the Fire Chief and the Building Inspector, a Construction Schedule indicating the anticipated start and end points for each significant phase of development (site grubbing, clearing and filling, construction of roadways and related infrastructure, excavation and blasting for foundations, framing and interior construction, etc.). The Construction Schedule shall also include the anticipated daily vehicle trips per phase, and the anticipated hours of the day during which heavy equipment and construction vehicles are expected to enter and exit the site. All temporary construction trailers shall be located on the site at a minimum of 300 feet from Concord Street and within the limits of the cleared area.

C.3 The Applicant shall ensure safe and convenient vehicular access to the Site during the entire Project. Municipal representatives shall be permitted access to the Site to observe and inspect the site and construction progress until the Project has been completed.

C.4 The Applicant shall submit to the ZBA and the Neighborhood Representative an updated construction and permitting schedule semi-annually to assist in project status update and review.

C.5 The Building Department or its appointed agents may conduct periodic inspections during the construction of the Project, to ensure compliance with the terms of this Decision and the State Building Code, and for consistency with generally-accepted construction and engineering practices for the installation of roadways, stormwater management facilities, utilities, and other common development infrastructure. Inspections during the construction phase shall be conducted at the expense of the Applicant.

C.6 The Applicant shall forward final architectural plans to the Building Inspector at the time of applying for building permits. All construction shall be inspected by the Building Inspector at the Applicant's expense and shall be in compliance with all State Building Code requirements.

C.7 The Applicant shall ensure that nuisance conditions do not exist in and around the site during construction. The Applicant shall at all times use all reasonable means to minimize inconvenience to residents in the general area.

C.8 Hours – Site clearing or construction work shall not occur before 7:00 AM or after 6:00 PM Monday-Friday, and shall not occur at all on Sundays or federal and Massachusetts state holidays. On Saturdays, construction shall be limited to 9:00 AM -5:00 PM, provided that no blasting shall be allowed, and no heavy equipment or loud machinery shall be used after 3:00 PM. Blasting and heavy equipment and loud machinery shall not be permitted after 5:00 PM or before

9:00 AM on any day of the week. No vehicles shall arrive at the site earlier than 6:30 AM on Monday-Friday or 8:30 AM on Saturday.

C.9 Dust – Methods of controlling dust shall meet all air pollutant standards as set forth by Federal and State regulatory agencies. The applicant shall implement dust control measures as directed by the Building Inspector.

C.10 Noise and Vibrations – The Applicant shall implement measures to ensure that noise from project construction activities does not exceed acceptable levels, as set forth by Federal and State regulatory agencies, and shall implement noise and vibration control measures as directed by the Building Inspector. The Applicant shall implement necessary controls to ensure that vibration does not create a nuisance or hazard beyond the subject Site.

C.11 Traffic – The Applicant shall implement necessary traffic safety controls to ensure a safe and convenient vehicular access in and around the site. Any traffic problems that occur as a result of site operations and construction shall be mitigated immediately, at the expense of the Applicant.

C.12 Roads – The Applicant is responsible for the sweeping, removal of snow and sanding of the internal roadways and driveways permitting access to residents, emergency vehicles, and others during construction and until the Condominium Associations have been legally established. The final coat of pavement on the internal roadways shall be installed after the base course has endured a full winter season. The Applicant shall promptly clean any debris or dirt deposited on Carlisle streets and roads as a result of the Revised Project.

C.13 Burial of any stumps or solid debris onsite is expressly prohibited. Localized burial of stones and/or boulders is prohibited to prevent the creation of voids from soil settlement over time.

C.14 Soil material to be used as backfill for pipes, roads, and/or structures (*i.e.*, detention basins) shall be tested at the expense of the Applicant by a firm reasonably acceptable to the Building Department. Testing of said backfill shall be performed in conformance with standards and frequencies reasonably established by the Building Department.

C.15 Utilities, including but not necessarily limited to electric, cable and telephone, shall be located underground. A final utility plan approved by the applicable public utilities shall be submitted to the Building Inspector before the installation of the applicable utilities.

C.16 Stabilization Requirements - No disturbed areas shall be left in an open, unstabilized condition longer than 30 days or as may be governed by the NPDES permit. Temporary stabilization shall be accomplished by hay bales, hay

coverings or matting. Final stabilization shall be accomplished by loaming and seeding exposed areas in accordance with the landscaping plans reviewed during the course of the public hearing by the ZBA's Consulting Engineer.

C.17 Construction vehicles shall be parked on the Site, and off Concord Street at all times.

C.19 Blasting - Any rock blasting shall be performed by a licensed blasting professional, who shall first obtain all required permits from the Carlisle Fire Department. All blasting and removal of debris shall be performed in accordance with state regulations and local Fire Department requirements, and the Applicant shall provide evidence thereof to the Fire Chief.

a. Selection of the Blasting Contractor. A blasting contractor, acceptable to both the Applicant and the Carlisle Fire Department, shall be selected after review of the qualifications of such contractor.

b. Independent Blasting Consultant. If required by the Fire Chief, an independent geotechnical-blasting consultant shall be selected and paid for by the Applicant, subject to the approval of the Carlisle Fire Department. The consultant shall review the qualifications of the blasting contractor, and review the final blasting plan prepared by the blasting contractor, check the calibration of the seismograph monitors, approve the location and installation of the seismograph monitors, and, if required by the Carlisle Fire Department, determine the blast limits throughout the blast period, and shall consult with the Carlisle Fire Department as needed throughout the blasting period.

c. Pre-blast Survey. Before any blasting on the Site, the Applicant shall conduct a pre-blasting survey that shall include video-recording of the foundations of all direct abutters to the Revised Project, and shall provide copies of that survey to the ZBA, Fire Chief and each abutter upon request.

d. Insurance Coverage. The blasting contractor shall carry comprehensive public liability insurance in the amount of not less than \$1,000,000 for property damage in respect of any one occurrence and \$2,000,000 aggregate. A certificate shall be submitted to the Carlisle Fire Department by the contractor documenting that the required coverage will be in force for the duration of the blasting at the site. If there is a general contractor or developer associated with the blasting, each shall carry a minimum of \$1 million of comprehensive liability insurance.

e. Blasting Limits. The Commonwealth of Massachusetts blasting limits

shall be observed. However, if, based upon the recommendation of the independent blasting consultant, the Carlisle Fire Department feels that a lower limit is necessary to protect the site and the abutting residential neighbors, that lower limit shall be in effect.

- f. Notification. Not less than one week before the commencement of any period of blasting, the Applicant shall notify the immediate abutters within 200 feet of the blast area, stating when the blasting period shall begin. Notification under this provision and under any other provision in the Comprehensive Permit shall be by the following three methods: (1) phone or in person; (2) by email; and (3) by letter. Such notification shall include an explanation of the warning procedures for blasting, including soundings. The Applicant shall send another letter notifying the same abutters that the blasting period has been completed. In addition, the Applicant shall notify the Fire Department 30 minutes before each blast, and a Fire Department detail is required for every blast, who shall be certified by the Fire Academy regarding the requirements of the state blasting regulation.
- g. Post-blasting Survey. After the completion of all blasting, the Applicant shall conduct a post-blasting survey that shall include video-recording of the foundations of all direct abutters to the Revised Project, and shall provide a copy of that survey to the ZBA, Fire Chief, and each abutter, respectively, upon request.
- h. No perchlorate shall be used during blasting at any time.

C.20 As-Built Plans: Before the occupancy or use of the final dwelling unit constituting a part of the Project, the Applicant shall submit to an ZBA an “As-Built Plan” in paper and CAD format, showing all pavement, buildings, stormwater management structures and other infrastructure as they exist on the Site, above and below grade, including appropriate grades and elevations. The plans shall be signed by a registered land surveyor and civil engineer, certifying that the Project as built conforms and complies with the conditions of this Comprehensive Permit. The purpose of this provision is to facilitate the Consulting Engineer’s review of the project for compliance with the comprehensive permit before the final occupancy permit is issued.

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C.21 The boundaries of any land shown as “Area to Remain Undeveloped” on the Approved Plans shall be flagged by the Applicant before any site development activities, including clearing. Before initiating any site development activities, the Applicant shall obtain the Building Inspector’s confirmation that the flags are properly located. No construction or site development activity shall occur within the Area to Remain Undeveloped unless such activity is clearly shown on the Approved Plans, provided however, that in no event shall any site development

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activities, other than that necessary to complete the initial three hundred (300) feet of the ingress and egress roadway, occur within one hundred (100) feet (40 feet along the southern property boundary) of any real property not owned or controlled by the Applicant. See Condition F.2.

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C.22 Trees – Before commencing construction or any site clearing, the Applicant shall erect a physical barrier such as a plastic fence to ensure that any trees to be preserved within 40 feet of the property line on all sides shall not be touched during construction and to ensure that there is a protective radius within the drip line around such trees. If any such trees having a caliper of four inches or greater four feet from the ground are destroyed or injured as a result of construction, the Applicant shall plant in their place new trees of a comparable species with a minimum height of nine feet at a ratio of 2 new trees for each destroyed tree. Such replanting shall be done by a qualified landscape professional.

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C.23 The ZBA has given approval for the removal of four trees shown on the vegetation removal sketch. The removal of any trees having a caliper of four inches or greater four feet from the ground, other than the four trees for which the Applicant requested and was granted approval for such removal, as well as removal of any stone walls within the Right of Way of Concord Street, a designated Scenic Road, shall require prior written approval of the Carlisle Planning Board and Tree Warden per the provisions of the Scenic Roads Act and corresponding local Bylaws, Rules and Regulations and the Public Shade Tree Act, provided that the removal of any trees that the Consulting Engineer deems necessary to provide adequate sight distances at Concord Street shall also be presented to the ZBA in the form a requested amendment to the comprehensive permit pursuant to 760 CMR 31.03(3).

C.24 Before the issuance of occupancy permits for the Revised Project, the Applicant shall convey an easement for the use and maintenance of the fire cistern to the Town of Carlisle in a form acceptable to Town Counsel.

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C.25 Roadway Design: All roadway design standards and requirements of the Planning Board's Subdivision Rules and Regulation shall be fully complied with, with the exception of the Section III.2.3 – "Dead-end Streets," and except as may be otherwise provided herein. If the roadway of the Project is redesigned to accommodate other conditions in this Decision, the length of the roadway shall not exceed the length shown on the 41-Unit Plan, and the end of any roadway or cul-de-sac shall not be further from the Project's entrance at Concord Street than the road shown on the 41-Unit Plan. Any such redesign shall be subject to review and approval by the Carlisle Fire Chief pursuant his authority under G.L. c. 148, § 28 and the state Fire Prevention Code. See Exhibit 137.

All proposed roadway and utility construction, grading and appurtenant work shall be described in complete detail to readily enable peer review and

construction. A note shall be placed on each pertinent sheet of the Plans stating that the Project is the subject of a comprehensive permit under G.L. c. 40B, § 20-23, that the roads and ways within the Project in some cases may, and in other cases may not, conform to the standards and requirements of the Planning Board's Subdivision Rules and Regulations. The Approved Plans shall, however, indicate that roadway construction materials and thicknesses conform to the standards set forth in the Subdivision Rules and Regulations. The roadway cross section shall include Cape Cod berms; the ZBA waives the subdivision regulation requiring granite curbing.

The roadway must include a two-foot "hard" shoulder on each side. No obstructions of any kind shall be allowed in this area including stone walls, mailboxes and plantings. See Exhibit 58.

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C.26 The Applicant shall submit to the ZBA, the Building Inspector and the Fire Chief final and detailed scaled architectural drawings for all building as approved by this Decision, including interior floor plans, current and finished elevations, construction type and exterior finishes to the detail required under the State Building Code for review for consistency with the conditions in this Decision.

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C.27 The Approved Plans shall identify the location of all street lighting fixtures. Lighting on poles shall be allowed, but poles shall not exceed fourteen (14) feet in height and light from these poles shall be downcast with cut-off shields so that there is no light trespass onto abutting properties. All exterior light fixtures specified for the Project [also deed-restrict and change in exterior lighting fixtures] shall cast light downward ("dark sky"). Specifically, no light should be emitted above a horizontal plane running through the lowest part of the fixture to minimize sky glow.

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D. Legal Requirements

D.1 The Applicant shall reimburse the ZBA for its legal expenses in reviewing the Regulatory Agreement, Monitoring Services Agreement, Affordable Housing Restrictions (Deed Rider), Lottery Plan and Condominium Documents, which shall not exceed a total of \$2,000.00.

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D.2 The Applicant shall establish a condominium owners' association (the "Condo Association") for the Project in a form subject to review by the ZBA for consistency with this Decision, which shall include provisions for reserves to be established and maintained for repairs to, or replacement of, and maintenance of the septic systems and private water supply, landscaping required by the Landscaping Plan and all Project-related infrastructure including drainage facilities.

D.3 Any sale or transfer of rights or interest in all or any part of the Site shall include a condition that successors are bound to the terms and conditions of this Decision. This Decision may not be transferred to a person other than the Applicant, or to an entity of which the Applicant controls less than 50%, without the written approval of the ZBA and the execution of any instruments or documents that may be required for the perpetual enforcement of this Comprehensive Permit pursuant to Town Counsel's review and approval by the Subsidizing Agency.

D.4 The Applicant and/or subsequent owner(s) shall be bound by all conditions and requirements set forth in this Comprehensive Permit.

D.5 In setting the percentages of beneficial interest in the condominium common areas in the Condominium Master Deeds, the Applicant shall ensure that the percentages assigned to the Affordable Units reflect the fair market value of the Affordable Units, taking into account the affordable housing restrictions that encumber said units or as otherwise required by the Subsidizing Agency.

D.6 The driveways, utilities, drainage systems, water supply wells and distribution infrastructure, sewage disposal system and all other infrastructure shown on the Approved Plans as serving the Project, except the fire cistern, shall remain private and the Town of Carlisle shall not have, now or ever, any legal responsibility for the operation or maintenance of the roadways, driveways or infrastructure, including but not limited to snow removal, the stormwater management system, the sewage disposal system, and landscape maintenance.

D.7 At least 25% of the units in the Project shall be designed and constructed to include a master bedroom on the first floor of the unit. The purpose of this condition is to ensure that some units will be available to households with individuals who have physical handicaps or mobility limitations.

E. Traffic and Safety Conditions

E.1 Traffic signage shall be consistent with the requirements of the current edition of the Manual for Uniform Traffic Control Devices (MUTCD).

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E.2 Visitor parking spaces shall be designated in the Condominium documents in the areas shown on the Plans. There shall be one visitor space for every two housing units. In accordance with Condition C.25, if the roadway and parking areas of the Project are redesigned to accommodate other conditions in this Decision, the any such redesign shall be subject to review and approval by the Carlisle Fire Chief pursuant his authority under G.L. c. 148 § 28 and the state Fire Prevention Code.

E.3 The Applicant shall post signage for fire lanes at strategic points along the Project roadway, to be identified and designated by the Fire Chief.

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E.4 The paved surface of the roadway shall be 24 feet wide.

E.5 The Applicant shall install traffic signs wherever they are deemed necessary and appropriate by the Department of Public Works and MassHighway, and shall bear the cost of all such signage and installation.

E.6 All traffic improvements shall be completed in accordance with the standards set forth in the most recent edition of the Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD) and MassHighway, and shall be in place before project occupancy.

E.7 The central fire alarm call box for the condominiums shall be located in an area acceptable to the Fire Chief, and where it would not be susceptible to damage by snow plows in the winter months.

E.8 The land shown as "15' Clear Sight Area" on the Master Plan and Land Use Plan shall be landscaped so as to ensure adequate sight distance at the proposed intersection with Concord Street. The area shall not be clear-cut. The obligation for proper maintenance for the landscaping and vegetation to ensure the adequacy of sight distance shall be included in the Landscaping Operation and Maintenance Plan required pursuant to Condition F.8 below.

F. Landscaping Conditions

F.1 Before obtaining a certificate of occupancy for the last dwelling unit in the Project, the Applicant shall complete the landscaping improvements located on the Site as depicted on the Plans, as modified by the conditions of this Section F, provided, however, the landscaping that provides screening to the abutters as shown on the Landscaping Plans shall be installed by the Applicant contemporaneous with the construction of buildings, roadways or other

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infrastructure, including septic systems and drainage basins, located within 200 feet of such screening.

- F.2 The Applicant shall provide a 100-foot protective buffer along the eastern and western property boundaries and a 40-foot protective buffer along the rear (southern) property boundary (the "Protective Buffer"). The Protective Buffer shall remain in its natural vegetated state except for the landscaping improvements shown on the Approved Plans, and except for the installation of monitoring wells required by this Decision. The Applicant shall delineate the Protective Buffer and the "Area to Remain Undeveloped" on the Approved Plans.
- F.3 The Applicant shall install at least two, 12,000-gallon "rain barrel" cisterns as shown on the Plans, which shall be the primary source of water for irrigation of the common area landscaping elements in the Project, and which shall collect and store rainwater from the roofs of the buildings. The proposed irrigation well shall only be pumped and used for irrigation when the cisterns are empty. Project irrigation shall conform to the irrigation plan set forth in the letter from Irrigation Consulting, Inc. to the Board, dated October 10, 2006, which is public hearing exhibit 101, as modified by this Comprehensive Permit.
- F.4 The Applicant may install one irrigation well with a maximum discharge rate of 2,000 gallons per day. Consistent with state water regulations, the well shall not pump more than 40 gallons per day per unit on average within any month. See Exhibit 155. If the exercise of this condition requires modifications to the Landscaping Plans, the Applicant shall present such modifications to the ZBA pursuant to Condition B.1(a) above, provided however that the Applicant shall not modify the landscaping improvements that provide screening to abutters as shown on the Landscaping Plans, and shall make all necessary arrangements to ensure that those plantings are established.
- F.5 The Condominium Association shall collect and maintain pumping data from the irrigation well through a flow meter and submit such data, and a statement as to effectiveness of the irrigation well, to the Board of Health. Such records shall clearly show how many gallons of water are pumped from the well each day and the pumping rate (e.g., 15 gallons per minute). Flow meters shall also be installed on, and data collected from, the irrigation pump so that the Board of Health may evaluate how effective the cisterns are for meeting the Project's irrigation needs. Daily flow rates and quantities from the irrigation pump and well shall be submitted to the Board of Health quarterly. The Board of Health shall report to the ZBA any problems resulting from the Revised Project's irrigation well for informational purposes.
- F.6 The Board of Health shall have the authority to declare a local water emergency and may order the irrigation well shut off for whatever period of time it determines is necessary to protect the potable water supply of the Project and its

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abutters. The irrigation well shall also be shut off upon a declaration of a drought level of “Watch” or higher by the Massachusetts Drought Management Task Force and shall remain shut off until the drought level is returned to “Advisory” or “Normal.” After the commencement of operation of the irrigation well, the Board of Health may order the irrigation well shut off if a Project well or a private well of an abutter to the Project fails to provide water at generally acceptable rates of flow and pressure, and the Board determines that such failure probably would not have occurred but for the operation of the irrigation well. The Board of Health may further order that the irrigation well not be turned back on until the failure has been cured to its satisfaction.

F.7 Between May and September, inclusive, the irrigation well shall not operate between the hours of 9:00 AM and 5:00 PM, and may only operate up to two days per week, consistent with DEP’s Guidance Document for Water Management Act Permitting Policy, dated January 17, 2006, Section IV. The Town of Carlisle is deemed to be within a “medium stressed basin” as defined in that Guidance Document. Any violation of this condition may be enforced by the Board of Health as well as the Building Inspector under his zoning enforcement authority, and any violation shall be deemed to be a violation of a Board of Health regulation and subject to civil penalties as the Board of Health may establish from time to time for violations of its regulations.

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F.8 The irrigation system shall be controlled centrally, and shall be managed by the Association through a professional property manager. The Applicant shall prepare a Landscaping Operation and Management Plan for the ZBA review and approval prior to the issuance of any occupancy permit in the Project. The Plan shall include provisions for ensuring that landscaping improvements in the Protective Buffer are watered for establishment of new plantings as required.

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F.9 The irrigation well shall be pump-tested at the same time as the Project’s water supply wells, to accurately measure the total water supply impacts of the Project. The irrigation well shall be pumped at peak rates. The irrigation well and the Project’s potable water supply wells shall be tested for hydraulic connectivity, to determine whether any one well is hydraulically depending on any of the other wells. If tests reveal hydraulic connectivity between the irrigation well and the water supply wells, the irrigation well shall be permanently abandoned.

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F.10 The common area landscaping (including landscaping in the Protective Buffer) shall be maintained in perpetuity by the Association, which obligations shall be incorporated in the condominium documents. Dead or diseased plantings shall be replaced as soon as possible in accordance with growing and weather conditions.

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F.11 The boundaries of the land shown on the “Layout Plan” as “Area to Remain Undeveloped” shall be marked on the ground with stone corner bounds or one-cubic-yard boulders, or recreated rudimentary stone wall segments, and

referenced in the condominium documents. Where the two areas to be marked overlap, the markings need not be duplicated.

- F.12 The existing stone walls on the perimeter of the Site shall not be disturbed. Stones from the stone walls located within the Site shall be reused in the marking of the boundaries under Condition F.9 above and shall not be used as fill, and any remaining stones shall be offered to the Carlisle Department of Public Works.
- F.13 The Applicant shall incorporate into the final Landscaping Plan the elements, dimensions, and specifications of the landscaping sketches prepared by the Coppinger Company dated May and June, 2006 and submitted by the Neighborhood Representative as Exhibit 241. Fences shall be added to the final Landscape Plan, in the locations shown on those sketches, and in the style shown on Exhibit 240.
- F.14 The Approved Plans shall show snow storage areas, the adequacy of which shall be determined by the ZBA's Consulting Engineer and the ZBA. Snow shall not be trucked off site.

G. Affordability Requirements

G.1 At least 25% of the units within the Project shall be made available for purchase by households whose aggregate income is no greater than 80% of the area median income, adjusted for household size, as published by the Department of Housing and Urban Development for the Boston Primary Metropolitan Statistical Area (the "Affordable Units").

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G.2 **Sale Prices:** The Affordable Units shall be sold to qualified households at prices deemed affordable to households earning 70% of the area median income, adjusted for household size, utilizing cost assumptions developed under the MassHousing Housing Starts Program or the NEF Program. If acceptable to the Subsidizing Agency and the Carlisle Housing Authority ("CHA"), the Monitoring Agent for the affordability components of the Project shall be the CHA.

G.3 **Selection of Buyers for Affordable Units:** The Applicant shall obtain the Subsidizing Agency's approval of a Buyer Selection Plan for the sale of the Affordable Units prior to putting the Affordable Units on the market. Buyers shall be selected through a fair lottery process (the "Lottery"), acceptable to the Subsidizing Agency.

To the maximum extent permitted by law and the Subsidizing Agency, first preference for the purchase of 70% of the Affordable Units shall be given to households that meet one or more of the following "Carlisle Connection" preference criteria:

- (a) at least one member of the household is currently a legal resident of the Town of Carlisle at the time of the Affordable Unit lottery application deadline. For purposes of the Lottery, a person shall be deemed a resident if that person has been registered as an Carlisle resident with the Carlisle Town Clerk pursuant to G.L. c. 51, §4 and would be considered a resident under the United States Census Bureau's residency guidelines.
- (b) at least one member of the household is either a son, daughter, niece, nephew, sibling, or parent of a Carlisle resident.
- (c) at least one member of the household was a legal resident of the Town of Carlisle within five years of the Affordable Unit lottery application deadline.
- (d) at least one member of the household is an employee of the Town of Carlisle, the Carlisle Public Schools, or the Concord Carlisle Regional School District, and has been an employee for a period of at least 12 months at the time of the Affordable Unit lottery application deadline, and has worked at least 15 hours per week on average over the 12 months preceding the Affordable Unit lottery application deadline.
- (e) at least one member of the household is currently privately or publicly employed within the Town of Carlisle, and has been an employee for a period of at least 12 months at the time of the Affordable Unit lottery application deadline, and has worked at least 15 hours per week on average over the 12 months preceding the Affordable Unit lottery application deadline.
- (f) at least one member of the household is a student in the Carlisle Public Schools or the Concord-Carlisle Regional School District, or is related by blood or adoption to such a student.

The selection of purchasers for the Affordable Units, including the administration of the Lottery, shall be administered by a consultant retained by the Applicant, subject to the Subsidizing Agency's approval. The Lottery shall be implemented pursuant to a Lottery Plan developed by the lottery consultant and approved by the Subsidizing Agency. If acceptable to the Subsidizing Agency, disputes concerning income qualification and Carlisle Connection qualification shall be resolved in the first instance by the Monitoring Agent and a party aggrieved by qualification-related decision of the Monitoring Agent may appeal the decision to the ZBA for a final determination.

The provisions of this section are intended to complement and not to supersede any applicable requirements of the Subsidizing Agency, fair marketing regulations of the Department of Housing and Community Development, the

Massachusetts Commission Against Discrimination, MassHousing, or any authority with jurisdiction and like purpose, to provide low and/or moderate income housing.

- G.4 Phasing-in of Affordable Units: No more than three certificates of occupancy shall be issued by the Building Inspector for units designated for sale at fair market prices (the “Market Rate Units”) until at least one certificate of occupancy is issued for an Affordable Unit. The proportion of Market Rate Unit certificates of occupancy issued to Affordable Unit certificates of occupancy issued shall at no time exceed 3:1. The Affordable Units shall be reasonably interspersed within the Project.

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- G.5 Perpetual Affordability Restriction: Before the issuance of any building permits, a Regulatory Agreement, substantially in the form attached to the original comprehensive permit application and acceptable to the Subsidizing Agency, shall be executed and recorded. The Regulatory Agreement shall provide, among other things, that (a) 12 units in the Project will be sold and resold subject to a Deed Rider, in substantially the same form as attached to the Regulatory Agreement and acceptable to the Subsidizing Agency, and (b) the Project Owner’s profit shall be limited to 20% of the total development cost of the Project as defined by the applicable regulations of the Subsidizing Agency. The Deed Rider shall be attached to and recorded with the Deed for each and every Affordable Unit in the Project at the time of each sale and resale, and the Deed Rider shall restrict each such affordable unit pursuant to this Decision in perpetuity. The Deed Rider shall give the Town of Carlisle a right of first refusal to purchase the Affordable Unit upon any notice of an impending mortgage foreclosure.

- G.6 Profit Cap: To conform to the intent of Chapter 40B that profits from the Project be reasonable and limited, the Applicant shall be limited to an overall profit cap of twenty percent (20%) of total development costs of the Project, exclusive of development fees in accordance with the requirements of the Subsidizing Agency (the “Profit Cap”).

Consistent with the Subsidizing Agency’s policies concerning the Profit Cap, the Applicant shall comply with the following terms and provisions:

- (a) Upon issuance of a final Certificate of Occupancy for the Project or final Certificates of Occupancy for all the Units, the Applicant shall deliver to the Subsidizing Agency and the Board of Selectmen an itemized statement of total development costs together with a statement of gross income from the Project to date in a form satisfactory to the Subsidizing Agency (the “Certified Cost and Income Statement”), prepared and certified by a certified public accountant. If all units in the Project have not been sold as of the date the Certified Cost and Income Statement is delivered, the Applicant shall at least once every ninety (90)

days thereafter, until all of the Units are sold, deliver to the Subsidizing Agency and the Town an updated Certified Cost and Income Statement.

(b) The Applicant shall provide any back-up and supporting documentation, including, but not limited to, cancelled checks, invoices, receipts, and financial statements, reasonably requested by the Subsidizing Agency and the Town for all Project costs and income sources.

(c) All Project-related transactions between the Applicant and its parents, subsidiaries, affiliates, successors, and assigns, or to their respective partners, limited partners, shareholders, managers, or other owners, or to the relatives of the same, or to any entity in which the Applicant or its members have a financial interest (“Related Party Transactions”) resulting in Project costs or income must be disclosed in the Cost and Income Statement, and documentation must be provided identifying, where applicable, what portion of costs were paid to non-related third parties (*e.g.*, subcontractors) and what portion was retained by Related Parties. To the extent that payments made to Related Parties for are carried as Project costs, such costs shall not exceed, for purposes of determining compliance with the Profit Cap, the fair market value of whatever was exchanged for such payments (*e.g.*, services, supplies, etc.).

(d) The maximum land acquisition cost that the Applicant may carry as a Project cost is the value of the Site as of the date of the Applicant’s original application for project eligibility to the Subsidizing Agency, as determined by an appraisal prepared by a duly-qualified appraiser.

The ZBA may elect to review for accuracy MassHousing’s own audit of the Project. Said review shall use the same standards as the Project Administrator, and may utilize the services of an independent auditor selected by the Board and paid for by the Developer. Before the issuance of any building permits for the Project, the Applicant shall deposit \$5,000 into the ZBA’s G.L. c. 44, §53G consultant escrow account to cover the ZBA’s review expenses. If the ZBA does not exercise its option to review the Project, the deposit shall be returned to the Applicant.

G.7 Regulatory Agreement: Before Post-Well Test Site Activities, the Applicant shall submit to the ZBA a copy of a fully executed Regulatory Agreement between the Applicant and the Subsidizing Agency, to be recorded with the Registry of Deeds, governing the protection and administration of the affordable units covered by this Decision.

G.8 Monitoring Services Agreement: Before applying for a building permit for the Project, the Applicant shall enter into a Monitoring Services Agreement with the Monitoring Agent for the affordability components of the Project in a form

subject to approval by the subsidizing agency. The Applicant shall pay a \$7,500 monitoring services fee to the Monitoring Agent.

- G.9 The Market Rate Units and the Affordable Units shall be indistinguishable from the exterior. The Affordable Units shall contain at least 1,500 square feet of living space and shall include at least a one-car garage.

H. Public Safety and Fire Protection

- H.1 A 45,000-gallon fire cistern with appropriate paved “bump-out” for fire apparatus shall be located within 100 feet of Concord Road as shown on the approved plan and designed in accordance with the specifications of the Carlisle Fire Department. The Fire Cistern Well shall be located adjacent to the Fire Cistern. A pre-construction meeting with the Fire Department, the Applicant, and the general contractor shall take place before work begins on installing the cistern. The cistern must be installed and approved by the Fire Department before the issuance of any building permits for the Project.

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- H.2 The Applicant shall install residential sprinkler systems with addressable fire alarm systems consistent with NFPA 13R sprinkler design standards into all units regardless of the number of units per building. This system shall be subject to the approval of the Fire Chief pursuant to G.L. c. 148, § 28.

- H.3 The numbering system and the identification of the dwelling units shall be subject to the approval of the Fire Chief. Street names shall be subject to the approval of the Fire Chief and Police Chief.

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- H.4 The Applicant shall provide paved fire lanes between buildings as may be required by the Fire Chief.

- H.5 Wooden shingles shall not be used for roofing on the structures.

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- H.6 Outside grills shall not be permitted above the ground level of any structures. There shall be no open burning permitted on the property. These restrictions shall be incorporated into the condominium documents.

- H.7 There shall be a “Knox Box” installed in each building at a location to be determined by the Fire Chief.

- H.8 The final design of all roadways shall be submitted to the Fire Chief for confirmation that the paved width, shoulders and turning radii of all internal roadways are adequate to accommodate all public safety vehicles before the final Approved Plans are presented to the ZBA for approval pursuant to Condition A.1.

- H.9 There shall be no on-street parking on any roadway in the Project. Pursuant to

General Laws Chapter 90, Section 18, this Comprehensive Permit authorizes the Town of Carlisle, through its Police Chief, to enforce this condition.

I. Surety & Covenants

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I.1 As security for the completion of the infrastructure related to the Project as shown on the Approved Plan, including, but not limited to, the binder coat of the roadway, sidewalks, parking areas and common areas, recreational areas, sewage disposal system, drainage facilities, utilities, landscaping, and any other specific infrastructure shown on the plan (the "Infrastructure"), the release of occupancy permits for all housing units and the sale of all housing units in the Project shall be subject to the following restrictions:

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a. No occupancy permit for a unit in any building shall be issued, and no sale of any unit shall be permitted, until: (1) the base and binder course for the driveway and parking areas shown on the Approved Plans associated with said building has been installed; and (2) all Infrastructure described herein and as shown on the Plan; been constructed or installed so as to adequately serve said building.

b. No occupancy permit for a unit in any building shall be issued, and no sale of any unit shall be permitted, until the Approved Plans have been endorsed by the ZBA and recorded with the Registry of Deeds. This Comprehensive Permit shall be referenced on the Approved Plans prior to endorsement by the ZBA.

c. No more than ~~(XX)~~ occupancy permits shall be issued before all the Infrastructure shown on the Approved Plan (except the final coat of pavement on the roadways) is fully installed. The final coat of pavement shall not be installed until after the base and binder coat has endured a full winter season.

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d. If, in Applicant's reasonable judgment, weather circumstances preclude the installation of plantings to complete landscaping before the issuance of occupancy permits, the Applicant shall post a bond or a deposit with the ZBA an amount equivalent to 1.5 times the reasonably expected cost of the plantings to ensure completion by the Applicant as soon as weather allows, and in no event later than the first growing season following the issuance of the Certificate of Occupancy.

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J. Stormwater Management System

J.1 The Project's stormwater management infrastructure shall be constructed in accordance with the Plans, as may be amended and approved by the ZBA. The stormwater management system shall be designed and constructed in compliance

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with the Massachusetts Stormwater Management Policy and the accompanying two-volume publication, "Managing Stormwater in Massachusetts", dated March 1997, prepared by DEP and Massachusetts Office of Coastal Zone Management, as may be amended. Hydrologic calculations up to the 100-year storm shall be provided that separately analyze each location where stormwater runoff may exit the property under pre- or post-development conditions and demonstrate that the final design of the stormwater management system is adequately sized and does not increase the runoff rate or volume to offsite areas in any storm event up to and including the 100-year storm event. Soil lithology, infiltrative capacity and groundwater conditions shall be analyzed as needed to assure proper design and function of the stormwater retention basins, and to the extent possible a two-foot separation of the basin bottoms from seasonal high groundwater shall be demonstrated. Nothing in this Decision shall supersede the Conservation Commission's authority and jurisdiction over stormwater management systems under the state Wetlands Protection Act.

J.2 All stormwater drainage basins shall be located as to facilitate the maintenance and operation of the basins or drainage utility.

J.3 The Applicant shall maintain and repair the drainage structures and stormwater management system within the condominium parcels until such time as the Applicant either (1) sells the condominium parcels to a new Applicant subject to these responsibilities or (2) assigns or otherwise transfers these responsibilities to the successor condominium association, at which time the such obligations shall be assumed by the transferee. A plan for the maintenance of the stormwater management systems shall be referenced in the condo association bylaws.

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J.4 Before any site clearing or construction, the Applicant shall provide fully engineered stormwater management plans and calculations, prepared and stamped by a Registered Professional Engineer, for review and approval by the ZBA and its Consulting Engineer, to confirm consistency with DEP regulations and policies and conformity with generally-accepted sound engineering practices. The stormwater management system shall be designed to provide, in the reasonable opinion of the Consulting Engineer, sufficient means of artificially recharging precipitation to the groundwater to compensate for the loss of pervious areas on the Site. Accordingly, before the issuance of any occupancy permits for the Project, the Applicant shall submit detailed calculations stamped by a registered Professional Engineer to the ZBA, to confirm the effectiveness and methodology of recharge, which shall be reviewed by the ZBA's Consulting Engineer at the expense of the Applicant. The calculation of impervious area is a function of the entire Property. Impervious area shall include, but not be limited to, building areas, patios, roadways and parking areas. Upon the completion of the construction of 50% of the Units of the Project, the Applicant shall prepare a report detailing, at a minimum, the constructed impervious area, a comparison to

the proposed impervious area, the methodology of recharge, and an opinion by a registered Professional Engineer regarding compliance with this condition.

J.5 The Applicant shall add swales or other grading acceptable to the ZBA's peer review engineer along the base of the mounded soil absorption areas to intercept surface drainage from the slope of any proposed mound, as may be recommended by the ZBA's peer review engineer.

J.6 The ZBA's expenses in reviewing the stormwater management plans and subsequent reports shall be borne by the Applicant. If the Carlisle Conservation Commission (or DEP) engages the services of someone other than the ZBA's Consulting Engineer to review the Project stormwater management system in connection with the review of a Notice of Intent under the State Wetlands Protection Act, the Applicant may arrange for such alternate consultant to perform the stormwater management review required by the ZBA under this Section J.6 in lieu of the ZBA's Consulting Engineer.

J.7 The Applicant shall prepare a stormwater management system operation and maintenance plan to be referenced in the condominium Master Deed that shall bind the condominium association to regularly inspect, maintain, and repair the stormwater management system to ensure its effectiveness for as long as the Project is in existence. Said plan shall be subject to the approval of the Consulting Engineer and Town Counsel for consistency with this Decision and best management practices.

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K. Water Supply

K.1 The Applicant shall fully comply with the Carlisle Board of Health private water supply regulations with respect to the irrigation and fire cistern wells. Site clearing for the well pump tests shall only be to the extent necessary to conduct the pump tests.

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K.2 Contemporaneous with its private water supply pump tests, the Applicant shall monitor the impact of the pump tests on the private wells of each of the Neighbors listed below who have given their written consent, in accordance with the Well Monitoring Plan and Protocol ("WMPP") set forth under Condition K.3 below:

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- (1) 515 Concord Street (Connolly)
- (2) 63 Spencer Brook Lane (Breuing/Kummer)
- (3) 69 Palmer Way (Niels)
- (4) 57 Spencer Brook Lane (Epstein/Stone)
- (5) 77 Russell Street (Parker)
- (6) 44 Spencer Brook Lane (Hoffman)
- (7) 64 Palmer Way (Dinardo)
- (8) 201 Clark Farm Road (Wilson)

(9) 81 Russell Street (Talbot)

The purpose of the WMPP is to determine whether the Project, under simulated conditions, will have a detrimental effect on the quantity and/or quality of private drinking water wells on abutting properties. The WMPP shall be implemented before the issuance of any building permits for the Revised Project or any Post-Well Test Site Activities. The costs of implementing the WMPP shall be borne by the Applicant. The Applicant shall retain a civil engineer to perform the services under the WMPP and oversight of the pump testing shall be provided by an independent qualified engineer retained by the ZBA at the Applicant's expense. The Applicant shall indemnify any abutter for damage to private property caused by its own negligence, recklessness, or intentional conduct, or that of its contractors and subcontractors, in carrying out the WMPP.

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If the results of the water well testing protocol indicate that the Water Well Performance Standard ("WWPS") set forth under Condition K.3 below will be exceeded, the Applicant may not apply for a building permit or commence additional site clearing work until such time as the WWPS can be met.

K.3 Well Monitoring Plan and Protocol. The testing of the above private wells shall be governed by the following Well Testing Protocol:

(a) Water Quality:

A baseline water quality sample shall be collected from each residence and shall be submitted for laboratory analysis in a data table entitled "Coventry Woods Water Quality Testing for Abutter Existing Wells" shown below.

***Coventry Woods
Water Quality Testing for Abutters' Existing Wells***

Parameter	Units	Reference Values	
		MMCL	SMCL
Alkalinity	mg/L	N/A	N/A
Chloride	mg/L	N/A	250
Color	Color Units	N/A	15
Nitrate Nitrogen	mg/L	10	N/A
Nitrite Nitrogen	mg/L	1	N/A
Odor	T.O.N.	N/A	3
pH	pH Units	N/A	6.5 – 8.5
Sediment	Pos/Neg	N/A	N/A
Sulfate	mg/L	N/A	250
Turbidity	NTU	N/A	N/A
Total Dissolved Solids	mg/L	N/A	500
Hardness	mg/L CaCo3	N/A	N/A

Arsenic	mg/L	N/A	0.01
Calcium	mg/L	N/A	N/A
Copper	mg/L	N/A	1
Iron	mg/L	N/A	0.3
Magnesium	mg/L	N/A	N/A
Manganese	mg/L	N/A	0.05
Sodium	mg/L	N/A	20(OSRG)
Lead	mg/L	0.015	N/A
Total Coliforms	cfu/100 mls	0	N/A

This same water quality analysis shall be completed at the end of the 48-hour pump test and again approximately 2-4 days after the transducers have been removed from the wells and the wells have been chlorinated. A fourth water quality analysis shall be completed once the Coventry Woods blasting activities are complete. The costs for the water quality testing shall be borne by the Applicant. If the post-blasting test results for any abutter's well exceeds the previous test results by a statistically significant (95% confidence interval) margin for any of the constituents, the Applicant shall restore the abutter's previous water quality at its own expense. The data collected from the water quality testing shall be reported to the Board of Health and DEP with the pump test results.

No perchlorate shall be used by the Applicant in blasting activities. The Applicant shall test each consenting abutter's well for perchlorate at least once before any blasting is performed on the Site, and once no later than two weeks after blasting has been concluded, and report the results to the Board of Health and DEP.

(b) Water Quantity:

Whether a PWS or not, The Applicant shall conduct a simultaneous 48-hour pumping test of all currently proposed public water supply (PWS) wells plus the one proposed irrigation well. The proposed flow rates to be implemented during the pumping test will be consistent with DEP protocol for the PWS wells and consistent with any Carlisle Board of Health pump test requirements for wells.

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Transducers shall be installed and will be set to record on an automatic monitoring device, baseline water levels every 2 minutes for a minimum of 10 days before commencement of the pumping test, continuing during the required pumping tests, and for 7 days following the pumping test or until 90 percent recovery of all wells, whichever is longer; After this time they will be removed from the wells. The pumping tests shall be run continuously for a minimum of 48 hours at the maximum design flow rate.

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Utilizing the data from the transducers, the maximum self-induced drawdown ("Baseline Self-induced Drawdown Range") in each private well shall be

calculated. This is the range between the depth to the non-pumping average static water level and the depth to the lowest pumping water level in each well. Next, the 180-day projected test-induced drawdown (“Test-induced Drawdown”) on each private well (if observed) shall be calculated by creating a drawdown versus log of time graph of the decline in the normal static water levels (if observed) due to pumping the Coventry Woods wells. Lastly, after determining the pump depth in each well (either by pump installers records, Board of Health records, or by probing the well) the total available water column above the well pump as the difference between the depth to the non-pumping average static water level and the depth to the well pump (“Total Available Water Column”) shall be calculated. For clarification on the definition and meaning of the terms used above, reference is made to Exhibit 249.

All data from the pumping tests shall be conveyed to the Board of Health for permanent preservation. Additionally, data from each abutter’s well tests shall be conveyed to each Neighbor.

Based on the above data, if the sum of the Baseline Self-induced Drawdown Range and the Test-induced Drawdown (1) exceeds 50% of the Total Available Water Column, and at least 10% of this total is the Test-induced Drawdown, or (2) exceeds 75% of the Total Available Water Column, and at least 2% of this total is the Test-induced Drawdown, then it the well shall be deemed to be impacted.

K.5 The well pump tests shall be conducted during August or September. See Exhibit 65.

K.6 Any proposed water supply wells shown on the Approved Plans whose Zone I protective radii overlap shall be presumed to be hydraulically connected, and treated as one well for purposes of calculating the protective radius under state law, given their proximity to one another, unless the presumption of connectivity is rebutted by evidence collected through the DEP-mandated well pump tests. Unless the presumption is rebutted, the protective radius for each well shall be calculated assuming that the pumping rate for each well is equal to the pumping rate for all of the wells with overlapping radii. The Approved Plans shall reflect the recalculated Zone I protective radii. There shall be no buildings, roadways, or project-related infrastructure within the revised protective radii pursuant to the state groundwater supply protection regulations, 310 CMR 22.00 *et seq.*

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K.7 Before the issuance of XXth occupancy permit granted for the Project, the Applicant shall deposit into escrow \$10,000 per private well listed in Section K.2, which shall be held by the Board of Health in escrow for 18 months after issuance of the final certificate of occupancy for the Project to cover expenses incurred by the Applicant or by the well owners to correct deficiencies or to address impacts on the private wells caused by the Project’s wells. Escrowed monies shall be

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released by the Board of Health to aggrieved well owners only upon request of the aggrieved well owner and only if the WWPS has been breached and the requested disbursement constitutes a reasonable reimbursement, in the Board of Health's discretion, of the well owner's expenses to restore the well to its pre-pump test Total Available Water Column.

This provision shall not be interpreted as precluding any private cause of action any aggrieved well owner may have against the Applicant or its successors or assigns. ~~Any escrowed funds remaining 24 months after full occupancy shall be released to the Applicant, with any accrued interest. The escrowed funds shall be kept in an interest bearing savings account. If the Board of Health does not accept the responsibilities under this Section, the ZBA shall serve as the escrow agent hereunder.~~

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K.8 Septic System/Well Replacement Fund – see Section M.6.

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K.9 The Applicant shall deposit funds in the amount of \$30,000 in an escrow account held by the Board of Health, or provide the Board of Health with evidence of a Defect Bond naming the successor condominium association as beneficiary, before the approval of Sewage Disposal Construction Works Permits, as a financial guaranty to remedy or correct construction- or installation-related defects in the public water supply wells, the fire cistern and well, and the septic systems. The bond or escrowed funds shall be held for a period of one year from the date of issuance of the final Certificate of Occupancy. The Board of Health may disburse escrowed funds to the successor condominium association to reimburse said association for expenses incurred in correcting such defects, but only after all diligent, good faith efforts to compel the Applicant to correct such defects have been exhausted. Whether the condominium association has used diligent, good faith efforts shall be determined by the Board of Health in its discretion. Any remaining funds shall be returned to the applicant at the expiration of the escrow period. See Exhibit 256 (Board of Health Memo dated June 19, 2006).

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K.10 Annual yield data from the Project's wells, including the irrigation well, shall be submitted to the Board of Health.

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K.11 Before the issuance of any building permits for the Project, the Applicant shall submit to the ZBA and the Board of Health for their technical review for consistency with standard industry practices a water supply plan (the "Water Supply Plan"), which shall include a comprehensive set of design drawings for the water supply infrastructure (including pumping facilities), and pumping test results obtained in accordance with DEP requirements and Condition K.2 above.

K.12 The Applicant shall provide the Carlisle Board of Health with at least one week's notice of all drilling, sealing, pump testing of the wells, and the testing of the

permanent pumping facilities, and shall allow the Board of Health full access to witness said activities.

L. Open Space and Wetland Resources

L.1 The Approved Plans shall delineate a “limit of work” boundary to protect all wetland resources on the Site and shall implement erosion and sedimentation controls for any areas where construction activities: (a) will occur within 100 feet of a wetland resource or, (b) could potentially impact a wetland resource as determined by the Conservation Commission. This section shall not be interpreted as approving any structures or disturbance in areas under the jurisdiction of the Carlisle Conservation Commission.

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L.2 The Approved Plans shall delineate a 100-foot setback from all wetland resource areas on the Site. No construction activities shall occur within the 100-foot setback, except as may otherwise be permitted by the Carlisle Conservation Commission or DEP pursuant to an Order of Conditions issued under the Wetlands Protection Act.

L.3 Before Post-Well Test Site Activities, the Applicant shall provide the ZBA for its approval a Conservation Restriction pursuant to G.L. 184, § 31 and record the same, clearly identifying the land areas noted on the Approved Plans as “Area to Remain Undeveloped” and the Protective Buffer to be left in their natural vegetative state with no provisions for site alteration, including but not limited to a prohibition on structures and tree removal, clearing and grading of these areas. The Conservation Restriction shall be granted to the Conservation Commission.

L.4 In connection with any proceeding before the Conservation Commission in relation to the Revised Project, the Applicant shall reimburse the reasonable costs and expenses borne by the Commission for specific expert engineering and consulting services deemed necessary by the Commission in addition to the customary filing fees set forth in the Commission’s fee schedule dated March, 2006 and referenced in the Commission’s letter to the ZBA dated July 17, 2006, submitted as Exhibit 79.

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M. Wastewater Management

M.1 In connection with the Applicant’s expected application for a sewage disposal works construction permit from the Board of Health under Title 5 of the State Environmental Code, the Applicant shall reimburse the Board of Health for its reasonable civil engineering peer review expenses. To this end, the Applicant shall pay an application fee of \$1,300 per soil absorption system (“SAS”), which shall include design review of the SAS, inspections of the leaching area, and review of “as-built” plans. See Exhibit 140. The Applicant shall also make an initial deposit of \$10,000 into an escrow account maintained by the Board of

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Health pursuant to G.L. c. 44, §53G to fund the Board's technical peer review of the required groundwater mounding analysis for all soil absorption systems in the Project and the hydrogeologic analysis pursuant to Condition M.2 below. Any amounts not spent by the Board shall be returned to the Applicant.

M.2 Pursuant to the strong recommendation by the Board of Health and two expert hydrologists Scott Horsley and James Vernon, contemporaneous with the filing of the Applicant's Title 5 applications to the Board of Health, the Applicant shall undertake a hydrogeologic assessment for all septic systems that are upgradient or sidegradient of any property boundary that abuts lots containing existing domestic water supply wells in conformity with the Memorandum from James Vernon dated March 13, 2007 (Exhibit 213), as modified by Mr. Vernon's April 19, 2007 memorandum (attached hereto as Appendix A), and shall provide said analysis to the Board of Health for peer review.

In addition, exploration and modeling shall incorporate and quantify any impacts to groundwater at the wastewater disposal system(s) from any up-gradient storm-water detention basins. Exploration and modeling shall confirm that there are no unknown offsite boundaries to groundwater flow or geological characteristics which will affect the height of the wastewater mound under the leaching area or cause the wastewater to breakout to the land surface. If the hydrogeological exploration, analyses and modeling reveal any problems with the function of the wastewater disposal facilit(ies) as designed, the design shall be modified to accommodate these site limitations while still conforming to all other conditions in this Decision.

M.3 Consistent with United States Environmental Protection Agency's Final Ground Water Rule promulgated on November 8, 2006 in accordance with the 1996 Amendments to the federal Safe Drinking Water Act (Exhibit 182), the Applicant shall demonstrate to the satisfaction of the Board of Health that any septic system that is upgradient or cross-gradient of any property boundary that abuts lots containing existing domestic water supply well will achieve at least 99.99% inactivation or removal of viruses from the groundwater at the Site's downgradient and cross-gradient property boundaries. If the Applicant believes that the groundwater already contains viruses, it may achieve compliance with this performance standard by demonstrating that the septic system will generate no additional viruses, or higher concentration of viruses, at those locations.

M.4 Consistent with DEP's Guidelines for Title 5 Aggregation of Flows and Nitrogen Loading under 310 CMR 15.216 (Exhibit 261) and pursuant to the Board of Health's recommendation (Exhibit 189), the Applicant shall demonstrate to the satisfaction of the Board of Health that the standards of 5 mg/l total nitrogen and zero (0) colonies of coliform bacteria will be met at the downgradient and cross-gradient property boundaries.

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M.5 If the Board of Health approves a Title 5 application for septic systems for the Revised Project, and said approval limits the flow of effluent into the approved septic system (the “Design Flow”), the Applicant shall record a Title 5 Deed Restriction in a form prescribed by DEP, or acceptable to Town Counsel, prohibiting any increase in the Design Flow without further approval from the Board of Health. This restriction shall also be referenced prominently in the Master Deed for the Condominium.

M.6 As set forth under Condition K.9 above, the Applicant shall establish an interest-bearing Septic System/Well Replacement Fund trust account for the condominium association. The condominium association shall maintain such account for as long as the Revised Project is served by private wells and common septic systems. The principal and interest of said account shall be used exclusively for the repair, replacement or upgrading of the septic system and water supply well, and related infrastructure. This condition shall be incorporated into the Master Deed for the Condominium. This provision is not intended to impose duplicative obligations on the Applicant if DEP requires substantially similar provisions to ensure that the successor condominium association will have sufficient financial resources to maintain, repair and replace the septic system, provided however that the minimum endowment of the fund shall be \$35,000, prorated over the course of the sale of the units.

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M.7 No condominium unit shall contain more than two bedrooms, as “bedroom” is currently defined by Title 5. The condominium documents and each unit deed shall reference this condition.

M.8 The Applicant shall install three shallow overburden monitoring wells (a/k/a. “soldier wells”) downgradient and cross-gradient from each soil absorption area in locations specified by the Board of Health before issuance of the final certificate of occupancy for the Project, and shall perform readings quarterly upon initial occupancy on any unit served by the respective septic system, then quarterly for two years following full occupancy of all units served by the respective septic system, and then annually thereafter unless the Board of Health requires more frequent monitoring, submitting data to the Board of Health at the Applicant’s and successor condominium association’s own expense. The wells shall be sampled for E. coli coliform bacteria, total phosphorus, nitrate nitrogen, and ammonia nitrogen.

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M.9 Design of the septic system(s) shall eliminate groundwater mounding at all property lines. To monitor groundwater elevations, permanent monitoring wells shall be installed at locations acceptable to the Board of Health along property boundaries downgradient from any soil absorption area. Samples shall be collected from these wells monthly from January through June during the first year of full occupancy and provide copies of the monitoring reports to the Board of Health. The Applicant shall grant to the Carlisle Board of Health a permanent

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access easement to monitor groundwater. The Condominium Association shall maintain and keep clear the easement area to facilitate the Board of Health's access to the wells. Any non-seasonal, non- *de minimis* increase in groundwater elevations at the property line as determined by the Board of Health shall be in violation of this Condition.

M.10 Given the complex geology underlying the locus and abutting properties and the fact that bedrock fractures provide direct pathways for contaminants to travel through the subsurface, no leach field or similar component of any wastewater disposal facility that has a design flow of greater than 1,000 gallons per day under Carlisle health regulations (165 gpd/bedroom) shall be located closer to the current location of any private drinking water supply well than two hundred (200) feet.

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N. Amendments

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N.1 If, between the date this Decision is filed in the office of the Carlisle Town Clerk and the completion of the Project, the Applicant desires to change in a material way or to a significant degree the proposed Project as reflected in and approved by this Decision, such changes shall be governed by 760 CMR 31.03(3).

N.2 No structure constructed under this Comprehensive Permit shall be altered, reconstructed, extended, or changed unless authorized by the ZBA by a special permit pursuant to Section 6.3 of the Zoning Bylaws, as may be amended. Upon such an application for special permit, the Board shall determine, in the first instance, whether such alteration, reconstruction, extension or change is "substantial" or "insubstantial." Alterations to residential structures shall generally be presumed to be insubstantial. For all special permit applications for such insubstantial changes, the ZBA shall employ the standards of review set forth under Section 6.3 of the Zoning Bylaw pertaining to changes to pre-existing, nonconforming structures, as may be amended. Requests for substantial changes shall be treated as requests to amend this Comprehensive Permit. Notwithstanding the foregoing, this Paragraph shall not apply to the original construction of structures by the Applicant, but shall only apply to subsequent alterations, extensions, and changes to such structures.

N.3 The terms alteration, reconstruction, extension, and change shall have the same meaning under the Massachusetts Zoning Act, G.L. c. 40A, §6 as applied under the Carlisle Zoning Bylaws.

O. Expiration Date

If construction of roadways authorized by this Comprehensive Permit has not begun within 24 months of the date on which the permit becomes final, the permit shall lapse. The permit shall become final on the date that the written decision is filed in the office of the town clerk if no appeal is filed. Otherwise, it shall

become final on the date the last appeal is decided or otherwise disposed of. The Project shall be completed expeditiously and, in any event, within three years of the date of the first building permit issued.

P. Notice to Abutters

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At least 14 days before the start of construction, the Applicant shall provide written notice to the ZBA and to the residential abutters of the Project of the anticipated construction start date and the anticipated construction schedule.

VII. APPLICANT'S REQUESTED WAIVERS

The Applicant has requested waivers from the By-Laws of the Town of Carlisle, the Town of Carlisle Zoning Bylaws, the Rules and Regulations Governing the Subdivision of Land, and other local rules and regulations. The Applicant's requested waivers are set forth in its Application, at Section 3:13, as supplemented through the public hearing process. The ZBA's grant of waivers shall be subject to the terms and conditions imposed by this Decision, and to the extent that any waiver is inconsistent with a term or condition set forth elsewhere in this Decision, such term or condition shall govern. No grant of any waiver shall be deemed to waive compliance with any condition of approval of this Decision.

The ZBA's decision with respect to each waiver request is as follows:

General Bylaws:

By-Law Reference	Waiver Request	Required	Waiver
Article VIII; Section 8.5.4 & 8.5.5	Earth Removal, Deposit and Stockpiling – Requested waiver from the provision prohibiting the removal of more than 1,000 cubic yards of earth within a 3-day period without a permit.	Prohibition against removing more than 1,000 cubic yards of fill within a 30-day period.	Waiver granted to allow the transfer of no greater than 12,000 yards of fill within a 30 day period, subject to all the conditions of this comprehensive permit. No additional permits are required.
Article X; Section 10.3.5	Requested waiver to permit excavation within a public way (Concord Street) for the installation of utilities, access and associated grading.	Excavation within a public way requires a permit from the Board of Selectmen.	Waiver granted to allow the excavation contemplated on the Plans, subject to all the conditions of this comprehensive permit.
Article X; Section 10.3.6	Requested waiver from obtaining consent from Superintendent of Public Works in order to remove brush and cut designated trees within the Concord Street right of way.	Requires permission from the Superintendent of Public Works in order to remove brush and cut designated trees within a right of way	Waiver granted to allow the clearing of brush and trees, subject to all the conditions of this comprehensive permit.
Article XII	Scenic Road Bylaw	Permission from the Planning Board to remove trees within layout of a scenic road – Concord Street.	Waiver denied. The Applicant is granted permission to remove those four trees identified to be removed on the “Vegetation Removal Sketch,” prepared by Stamski and McNary, Inc., dated October 23, 2006.
Article XIII	Requested waiver from Wetland Protection Bylaw.	Carlisle’s Wetland Protection Bylaw requires a separate analysis of impacts within the jurisdictional areas of the state Wetland Protection Act.	Waiver granted from provisions of Wetland Protection Bylaw, except that Applicant shall comply with the Conservation Commission’s fee schedule and pay the Commission’s reasonable fees for all filings made by the Applicant under the Wetland Protection Act (see Condition L.4).

Planning Board Subdivision Rules and Regulations:

The Planning Board Subdivision Rules and Regulations are technically not applicable to the Project, as the Revised Project does not contemplated the subdivision of land, and therefore are not waived through this comprehensive permit. The Town of Carlisle has not adopted design standards for the construction of multi-family residential development projects such as the Project because the Project would not be permitted under the Town’s Zoning Bylaw. During the public hearing the ZBA repeatedly requested a narrative from the Applicant, identifying the Project’s conformity with the Subdivision Rules and Regulations as if they would have applied in the absence of a comprehensive permit. The Applicant provided a narrative, which has been marked as Exhibit 119; however, the narrative failed to identify which provisions of the Rules and Regulations the Project complies with, and does not comply with. As such, the ZBA has no choice but to require compliance with the substantive design standards set forth in the Regulations as set forth under Condition C.25.

Board of Health Regulations:

Regulation Reference	Description	Required	Waiver	Formatted: Highlight
Section 15.221:	Requested waiver from the requirement that capacity for garbage grinders be incorporated into the design of the septic systems.	Regulation requires that capacity for garbage grinders be incorporated into the design of the septic systems. Applicant proposes to restrict garbage grinders, and to record a deed restriction to that effect, per section 15.290-15.293 part 5.	Waiver denied.	Formatted: Highlight
Section 15.290-15.293, Part 2.	Requested waiver from requirement to procure bond or insurance	Bond or insurance for construction or installation defects.	Waiver denied. Applicant shall deposit \$30,000 or procure a defect bond in the same amount as provided under Section K.8.	Formatted: Highlight
Section 15.290-15.293, Part 4.	Requested waiver to established limits on design flow.	Systems are limited to a design flow of 5,000 gallons per day, and bedrooms are presumed to have a design flow of 165 gallons per day (compared to 110 gpd under Title 5).	Waiver denied.	Formatted: Highlight
Section 15.290-15.293, Part 7.	Requested Waiver from installing individual water meters.	A water meter must be installed for each water line serving a multi-unit building.	Waiver denied. Meters shall be installed for each water line entering a building, as a means of tracking water usage and sewage flows.	Formatted: Highlight
Section 15.401:	Requested waiver from the requirement of a Board of Health meeting and notification of abutters in order to obtain waivers to Supplementary Board of Health regulations.	Requires a Board of Health meeting and notification of abutters in order to obtain waivers to Supplementary Board of Health regulations.	Waiver denied.	Formatted: Highlight
Water Supply Regs.	Requested waiver from entire regulation.	Governs installation of private wells.	Waiver denied.	Formatted: Highlight

Zoning Bylaw:

By-Law	Description	Required	Waiver
Section 3.2.1:	Requested waiver to allow Multi Family housing in Residence B District	Multi Family housing not permitted in zoning district	Waiver granted.
Section 4.1.3.3:	Requested waiver from the requirement that dwellings can be included within an ellipse with certain dimensions.	Siting of dwellings within a lot must meet certain elliptical dimensional requirements.	Waiver granted.
Section 4.1.4:	Requested waiver to allow for more than one dwelling to be located on a lot.	No more than one dwelling per lot.	Waiver granted.
Section 5.2.6:	Requested waiver of the need to secure a Special Permit from the Planning Board for work within a Wetland District.	Special permit required.	Waiver granted – special permit is deemed granted by this comprehensive permit.
Section 7.5	Requested waiver to this section in recognition of the Comprehensive Permit process.	This bylaw merely restates the standard of review for granting variances from intensity and dimensional requirements of the Zoning Bylaw.	Waiver denied. A waiver from this provision is not necessary for the construction and use of the Revised Project as shown and contemplated on the Plans.
Section 7.6	Requested waiver of the need of Site Plan Review by the Board of Selectmen.	Site plan review required for multi-family housing structures.	Waiver granted – site plan review is among the various local approvals that are subsumed by this comprehensive permit. Site plan approval is deemed granted.

The Town of Carlisle does in fact have a Zoning Bylaw that would allow multi-family dwelling in specific circumstances for parcels over 10 acres, the Senior Residential Open Space Community (SROSC). The SROSC Bylaw was designed to encourage residential development that meets the needs of senior citizens and to encourage preservation of open spaces and natural settings as well as energy-efficient and cost-effective residential development. The Bylaw requires that such a development protect a large portion of the development parcel to make up for the more concentrated development permitted, while still limiting such development to an average of 1 unit per two acres of total land. **If the proposed development was an SROSC, it would be limited to 4 dwelling units, 5 acres of the parcel would be set aside as permanently protected Open Space, none of the structures could be larger than 6000 square feet (including garages), and all residential buildings would have to be located at least 100 feet from the property boundary. Only the last of these requirements, the 100-foot buffer, can be applied to**

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Coventry Woods, but given the extent to which the proposed project exceeds the other protective provisions of the SROSC Bylaw, the 100-foot setback is a necessary protection for abutting properties.

By granting the waivers from local bylaws and regulations specifically listed in this Comprehensive Permit, it is the intention of this Comprehensive Permit to permit construction of the Revised Project as shown on the Final Approved Plans. If, in reviewing the Applicant's building permit application(s), the Building Inspector determines that any additional waiver from local zoning, wetlands, health regulations is necessary to permit construction to proceed as shown on the Final Approved Plans, the Building Inspector shall proceed as follows: (a) any matter of a *de minimis* nature shall be deemed within the scope of the waivers granted by this Comprehensive Permit; and (b) any matter of a substantive nature shall be reported back to the ZBA for disposition of the Applicant's request for a waiver therefrom.

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VIII. CONCLUSION

For all the reasons stated above, the Application for a comprehensive permit for the Revised Project is approved with the foregoing conditions.

CARLISLE ZONING BOARD OF APPEALS

DATED: _____

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appendix A

MEMORANDUM

TO: Carlisle Zoning Board of Appeals
FROM: James H. Vernon, Ph.D., ENSR Corporation
DATE: 4/19/07
SUBJECT: Coventry Woods Septic System C - Recommended "Hydrogeologic Assessment"

INTRODUCTION:

ENSR's approach to the Hydrogeologic Assessment for Coventry Woods Septic System C is based on the question: Will the proposed septic system have adverse impacts on abutters' water supply wells?

Three key factors make this situation unique and lead ENSR to conclude that site-specific hydrogeologic investigations are required that may be more stringent than those that are considered standard in order to address this question. The factors are:

- Two domestic wells (Epstein/Stone and Breuing/Kummer) are located on abutting properties proximal to the proposed leach field.
- ENSR's understanding is that the wells are completed in bedrock, and thus potential impacts are more difficult to predict than for receptors located in overburden.
- There is no Town water system to which the homes could be connected in case the wells are negatively impacted. This places an extra burden on hydrogeologic studies intended to predict the impact on the wells. This may make it more critical to demonstrate that the wells are "safe".

NOTES:

1. These recommendations are derived from the Massachusetts Department of Environmental Protection (DEP) "Guidelines for Title 5 Aggregation of Flows and Nitrogen Loading" (Guidelines) and what ENSR has learned to date regarding the Coventry Woods site.

2. ENSR has reviewed a report entitled "Hydrogeologic Evaluation – Sewage Disposal System C" by Stamski and McNary dated March 9, 2007 (report). ENSR provided a review of the report in a Memorandum to the Carlisle ZBA, dated 3/28/07. The Memorandum enumerated Major Concerns, Minor Concerns, and Conclusions.

3. ENSR also has received certain letters, memoranda, and other documents submitted by the Board of Health, Scott Horsley, and others between November 27, 2006 and March 12, 2007, which are pertinent to these recommendations. The Carlisle Board of Health has issued a number of specific recommendations and has stated its anticipated requirements should it review a Title 5 permit application for Septic System C. The Board of Health has indicated clearly that more data are needed and that a hydrogeological analysis should be performed.

RECOMMENDED ELEMENTS FOR HYDROGEOLOGIC ASSESSMENT:

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I. Borings/Shallow Monitoring Wells/Shallow Groundwater Flow Direction Determination – Drill borings at Septic System C site and describe the drilling samples; construct a minimum of 3 shallow, screened, and developed monitoring wells (screens below or at the water table); estimate saturated thickness in overburden and depth to bedrock (may require a drilling method that can penetrate glacial till); survey the wells (determine elevation of a measuring point on the well casing); measure water levels and convert to sea level elevation; plot results on map and estimate flow direction. A geologist or hydrogeologist should be on site during the boring; he/she should collect and describe drilling samples in

order to characterize subsurface geology.

CMG (letter to Carlisle ZBA dated 11/27/06) also advised that monitoring wells be installed and used to determine ambient groundwater flow direction. Current information is inadequate to resolve conflicting interpretations regarding the ambient groundwater flow direction.

This geologic information should be synthesized with test pit information provided in the Stamski and McNary report, published soils mapping, and published surficial geologic mapping.

II. Basic Bedrock Study – Desktop analysis, plus one field visit will provide basic geologic information on the bedrock in the area. The following tasks should be included.

- Compile and assess published bedrock geologic mapping;
- Conduct airphoto lineament analysis (must be performed by an experienced analyst) on stereo pairs of at least two different dates and scales of air photographs;
- Perform on-site geologic reconnaissance and bedrock outcrop fracture measurement (strike, dip, morphology – must be performed by a qualified bedrock geologist), analyzing the results and synthesizing with the published information and air photo work;
- Try to obtain drilling records and pump setting information for abutters' wells.

These elements are critical, assuming the homeowner wells are completed in bedrock and are receiving their water from bedrock fractures. The only **exception** to the need for such a basic bedrock study, in ENSR's opinion, would occur if an areally-extensive clay layer is found in the overburden, located above the bedrock, but below the proposed leach field for Septic System C.

III. Soil Evaluation in accordance with Title 5 Requirements – This has been done using existing test pit data provided in the report. Results could be confirmed or expanded based on the results from the boring descriptions in item I.

IV. Determination of Seasonal High Groundwater in Accordance with Title 5 Requirements – This has been done using existing test pit data (report). Note that the test pit data used for this determination are not suitable for mapping groundwater contours or determining groundwater flow direction.

V. Determination of Aquifer Parameters Sufficient for Calculation of Mounding Potential – Specific data gathering needs depend on the type of mounding analysis to be conducted. The usefulness of the model results depends, among other things, on the reliability of the aquifer parameters that are input. In general, the following items will be needed:

- *K estimate*: The report provides hydraulic conductivity estimates based on published soil mapping. These estimates may be sufficient. However, if the proposed mounding calculation has more stringent requirements, additional methods for determining hydraulic conductivity may be required. Results of sensitivity analyses for the selected mounding analysis should indicate whether existing hydraulic conductivity estimates are sufficient.
- *Saturated thickness of the "aquifer"*: This can be estimated from item I, above. If the sandy loam and loamy sand soils on site (per the report) are seasonally unsaturated, then the borings will have to be installed deep enough to characterize the subsurface "aquifer". (Saturated thickness estimates provided in the report should not be used for the mounding analysis, as these were estimated based on soil mottling and not on observed groundwater at any given time and as discussed in ENSR's 3/28/07 Memorandum.) It is possible that year-round saturated thickness above the bedrock is zero.
- *Conceptual hydrogeologic model*: This will govern the general model setup, boundary conditions, etc. The conceptual hydrogeologic model should be developed from information in the report and from new information gathered during the Hydrogeologic Assessment tasks outlined above.

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- **Water level measurements:** Water levels measured in surveyed monitoring wells (item I) will be needed to calibrate the model.

ENSR notes that the Hydrogeologic Assessment should be used to guide the other elements of a “Site-Specific Mass Balance Analysis” (Guidelines, p. 8). The Coventry Woods proposed Septic System C meets the criteria for which the Mass Balance Analysis may be required unless the Hydrogeologic Assessment clearly indicates that sensitive receptors (in this case, homeowner wells) will not be affected. Coventry did not propose the use of credit land. In addition to the Hydrogeologic Assessment, the following elements are part of a Mass Balance Analysis:

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- **Mounding Analysis** – not presented in report; should be performed and presented; in addition to presenting the results, the applicant should clearly explain the method or model used and the assumptions involved; in light of the site conceptual hydrogeologic model developed as part of the Hydrogeologic Assessment, the degree to which the method assumptions are violated should be discussed, along with the implications. The Carlisle Board of Health (Memo dated 1/26/07 to ZBA) anticipates requiring such an analysis. Further, the Board of Health (Memo to ZBA dated 3/1/07) anticipates requiring a three-dimensional model for the analysis.

As suggested by the Horsley Witten Group (letter to Carlisle ZBA dated 12/18/06), effects due to storm water infiltration should also be considered. If the ambient groundwater has a component of flow from Septic System C toward an existing homeowner well, the mounding analysis should include an estimate of the water level increase to be expected at the location of the existing well, as suggested by the Horsley Witten Group (12/18 letter).

- **Nitrogen Analysis** – the report contains a nitrogen analysis. The analysis itself follows the Guidelines. The applicability of the analysis assumptions to the site should be discussed. For example, is it reasonable to assume that infiltrated wastewater will fully mix with groundwater before exiting the site?
- **Groundwater Monitoring Program** – see below.

WHAT WILL THE RESULTS MEAN, AND WHAT ARE THE NEXT STEPS?

The results of this investigation may indicate that an adverse impact is likely, that it is uncertain whether there will be an adverse impact, or that an adverse impact is unlikely. Depending on those results, one or both of the following additional steps may be taken:

- **Advanced Bedrock Study** – To augment the Basic Bedrock Study (item II, above), the next step would be to assess whether there is a hydraulic connection between the site of proposed Septic System C (in the overburden) and the homeowners' bedrock wells. This could be done with injection tests and water level monitoring or with tracer tests and water level monitoring. (There are also other possible approaches.) For the tracer tests, nested pairs (one in overburden and one in bedrock) of monitoring wells should be drilled along the property line for sampling and water level measurements during the test (to avoid risking saline water or fluorescent dyes reaching the homeowner wells during the testing, even though these are non-toxic). It may also be prudent to try to evaluate travel time of groundwater (and possible pathogens) through bedrock, as recommended by Horsley Witten Group (letter to Carlisle ZBA dated 12/18/07).

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- **Long-Term Monitoring** – To mitigate risk that may remain even if the above studies do not indicate a clear threat, long-term monitoring could be required as a permit condition. Nested pairs of monitoring wells could be installed along the property line between Septic System C and the homeowner wells also suggested by CMG, 11/26/06 letter to Carlisle ZBA; Horsley Witten Group, 1/11/07 letter to Carlisle Board of Health). Water levels could be monitored with data loggers, and water samples could be collected periodically. These results could be used to verify predictions of the mounding and nitrate analyses, as well as to sample for bacteria and viruses.

The wells could serve as sentry wells that might provide a warning before contamination reached the homeowner wells.

Conduct of long-term monitoring implies that actions would be taken if monitoring demonstrates or predicts an adverse impact to nearby homeowner wells. ENSR notes that since there is no existing public water system to which the homes could be connected and since it is unknown whether a replacement well that meets all setback requirements and is not adversely impacted can be sited if necessary, options would be limited. ENSR recommends that a contingency plan be developed in case of adverse impact to a homeowner well.