

May 1, 2025

Via Certified Mail

Massachusetts Department of Environmental Protection
Division of Wetlands and Waterways
Northeast Regional Office
150 Presidential Way
Woburn, MA 01801

RECEIVED
MAY 2 2025
MassDEP NERO

Re: Thorndike Place, Dorothy Road, Arlington, MA
Applicant: Arlington Land Realty LLC
DEP File No. 091-0356
REQUEST FOR SUPERSEDING ORDER OF CONDITIONS

Dear Sir or Madam:

Introduction

Pursuant to M.G.L. c.131, §40 (WPA) and 310 CMR 10.05(7), Arlington Land Realty LLC (Applicant) requests that the Department of Environmental Protection (Department) issue a Superseding Order of Conditions (SOC) approving Applicant's proposed buffer zone and bordering land subject to flooding project at the project site located off Dorothy Road, in Arlington, Massachusetts as detailed within a Notice of Intent Application (NOI) filed with the Arlington Conservation Commission (the Commission) on September 6, 2023 and the set of civil plans submitted therewith, entitled "Thorndike Place Notice of Intent Dorothy Road" prepared by BSC Group, dated September 6, 2023, as revised through December 10, 2024 (hereinafter, the Project Plans). This request results from the failure of the Commission to render a decision within the extended time afforded to it by the Applicant upon the close of the hearing. The public hearing closed on February 6, 2025, and the Commission was granted a 15-day extension to act, which decision deadline expired on March 14, 2025. This request is timely made within 70 days of the Commission's failure to act by such deadline in accordance with 310 CMR 10.05(7)(c).¹

As more fully set forth herein, the Applicant requests the Department issue a SOC under the WPA consistent with the scope of the Applicant's NOI application, narrowly tailored to work within buffer zone to vegetated wetlands and floodplain, regulated as Bordering Land Subject to Flooding (BLSF), which are the only project impacts. In accordance with 310 CMR 10.05(7), a Request for Department Action Transmittal Form and filing fee (\$245.00) have been sent on this day to the Department's Lock Box. Copies of the form and filing fee payment are attached as Exhibit 1. This Request for Department Action is timely made in accordance with 310 CMR 10.05(1).

¹ Per 310 CMR 10.05(7)(c), "[w]hen the basis of such request is the conservation commission's failure to act, the request may be made at any time up to 70 days after the expiration of the period within which the conservation commission was to have acted."

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Background

Applicant is the owner of a 17.7 +/- acre tract of land off Dorothy Road in East Arlington; the property is located between Route 2/Concord Turnpike to the south, residential neighborhoods to the north and west and Thorndike Park to the east. The topography of the site is undulating with small to medium sized depressions in the northeasterly portion of the property.² Currently, the property is largely wooded with extensive areas overrun with invasive species including Garlic Mustard, Japanese Knotweed, and Oriental Bittersweet. A portion of the full 17.7-acre site is located within BLSF³ and BVW; such areas are located predominantly on the southerly side of the site.

Applicant's proposed development known as Thorndike Place, is an affordable housing community which is confined to approximately five (5) acres within the northwest section of the 17.7-acre site, extending back from Dorothy Road along the property's northern boundary.⁴ The proposed affordable housing project includes six (6) duplex townhouse buildings along Dorothy Road, together with a four-floor, 126-unit independent senior housing residence with garage parking behind the townhouses, an internal drive and parking, utilities, landscaping, a woodland restoration area and stormwater management systems.

In December 2021, the Arlington Zoning Board of Appeals (ZBA) unanimously approved a Comprehensive Permit under G.L. c.40B, §§20-23 for Thorndike Place. During that process, the ZBA utilized an independent peer reviewer (BETA Group); as part of its review of the comprehensive permit project, the BETA Group determined that the preliminary stormwater system design was appropriate. The Comprehensive Permit serves as the permitting for all local approvals for the project. A previously-filed NIMBY appeal from the Comprehensive Permit filed in December 2021, was dismissed in July 2023.⁵ Thereafter, on or about September 6, 2023, Applicant promptly submitted a Notice of Intent application (NOI) under the WPA to the Arlington Conservation Commission seeking an Order of Conditions for the work within buffer zone and BLSF associated with ZBA-approved affordable housing project.⁶

Project work proposed under the NOI involves clearing only that portion of the northwest section of the Property to allow construction of a four-story independent senior residential building with lower-level parking, six (6) duplex townhouses together with surface parking, walkways, utilities, and a

² Prior to the Applicant's purchase of the site in 1954, the site was extensively used for strip mining loam which created depressions and construction staging from adjacent Route 2 which resulted in stockpiles of gravel, loam, peat, and broken concrete.

³ The 100-year floodplain is identified as Elevation 6.8 and is shown on the Existing Conditions and Existing Environmental Resources Plans (Sheets V-100 and C-100 in the attached BSC plan set).

⁴ Applicant will place a restriction against future development on the balance of the 17.7-acre site as confirmed within the prior ZBA proceedings.

⁵ In January 2022, a NIMBY appeal was filed in Middlesex Superior Court, challenging the Comprehensive Permit. The suit had no merit, and after creating more than a year of delay, the NIMBY plaintiffs quietly and voluntarily withdrew their appeal in July 2023.

⁶ The Applicant's affordable townhouse and independent senior housing development has been permitted pursuant to G.L. c. 40B, §§20-23, for which a Comprehensive Permit was issued by unanimous vote of the Arlington Zoning Board and which comprehensive permit subsumes all local permitting.

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stormwater management system. Portions of the southwest area of the independent senior residential building and a porous pathway along the rear of the building are within the 100-foot buffer to BVW resource area. The proposed Project likewise includes work within the FEMA 100-Year Floodplain / BLSF. No work is proposed within the BVW resource area.

Project impacts include 32,616-sf / 4,392.9-cu ft of fill within BLSF, for which 9,160.8-cu ft of compensatory flood storage will be provided, and 34,084-sf of impacts to the 100-ft Buffer Zone to BVW (associated with built area and areas of porous pavement). To mitigate work within the Buffer Zone, the Project includes replacing degraded and invasive vegetation within a proposed woodland restoration area and other areas of the site (as proposed within the Planting Plan). Likewise, the Project will provide compensatory storage at more than a 2 to 1 ratio at each impacted elevation for work within BLSF, representing more than double the required compensatory storage required under the WPA and its regulations.

On September 21, 2023, the Commission opened the public hearing. The public hearing continued for another twelve sessions over the course of 18 months, until February 6, 2025, when the Commission closed the public hearing.⁷ The Commission was required under the WPA and its regulations to issue an Order, approving or denying the proposed work within 21 days of the close of the public hearing. At the request of the Commission, the Applicant granted a 15-day extension to that time, resulting in a decision date by March 14, 2025. The Commission failed to issue an Order, neither approving nor denying the Project work by such deadline and thereby has forfeited any authority over the project permitting.

A copy of the complete NOI, inclusive of the Project Plans, Stormwater Report, and Invasive Species Management Plan (ISMP) are attached at Exhibit 2 (original NOI filing), Exhibit 3 (Project Plans, as revised through December 10, 2024), Exhibit 4 (Stormwater Report, as revised through December 2024) and Exhibit 5 (ISMP, dated March 7, 2024). The Commission's peer review and Applicant's responses are provided in **Appendix A**.

Timeline of Commission's Review and Failure to Adhere to Timelines Required Under the WPA

The Commission opened the public hearing on Applicant's NOI on September 21, 2023, and closed the public hearing approximately eighteen (18) months later, on February 6, 2025.⁸ Per 310 CMR 10.05(6), a conservation commission is required to issue a decision within 21 days of the close of the public hearing.⁹

⁷ The public hearing opened on September 21, 2023 and continued to the following dates: October 19, 2023, November 2, 2023, November 16, 2023, February 1, 2024, February 15, 2024, March 7, 2024, March 21, 2024, April 4, 2024, May 2, 2024, June 6, 2024, October 24, 2024 and February 6, 2025.

⁸ Although the Commission's review of the project under the WPA commenced in September 2023, previously, the Commission actively reviewed and advised the ZBA with respect to the Project's design and impacts within the Chapter 40B public hearing process during mid-2020 to late-2021. Notably, in addition to conducting working sessions with Applicant's engineer and the ZBA's independent peer reviewer (BETA Group) to recommend conditions within the Comprehensive Permit approving the Project, the Commission also issued a series of eight (8) comment letters to the ZBA, collaborating with the ZBA's peer reviewer at the BETA Group to present its eighth comment letter with suggested conditions of approval for the Comprehensive Permit which were subsequently incorporated.

⁹ Pursuant to 310 CMR 10.05(6) Orders of Conditions Regulating Work and Orders of Resource Area Delineation: "(a) Within 21 days of the close of the public hearing, the conservation commission shall either: 1. make a

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The Commission requested a fifteen (15) day extension of the 21-day decision deadline, i.e., until March 14, 2025, to issue its decision. The Applicant confirmed its assent to such extension at the February 6, 2025 public hearing session.

On March 6, 2025, the Commission met within a regularly scheduled Commission meeting to review and presumptively issue its decision. However, the Commission failed to have sufficient votes to issue an Order of Conditions (OOC) with conditions and similarly failed to have sufficient votes to issue a Denial OOC. A transcript of that meeting is attached at Exhibit 6. Subsequent to the March 6 public meeting and through March 14, 2025 deadline, the Commission did not otherwise issue a decision on the Applicant's project.

As the Commission failed to issue any decision, it has ceded its authority. See Boston Clear Water Co. v. Town of Lynnfield, 100 Mass.App.Ct. 656, 661 (2022) (The failure to conduct a timely hearing and the failure to issue a timely decision following a hearing result in the same consequence under the same provision of the act — in both instances, the act authorizes the applicant to request an order of conditions from the DEP.)

During the extensive public hearing process, the Commission retained three (3) separate peer review professionals to review the NOI. In particular, the Commission retained SWCA Environmental Consultants ("SWCA")¹⁰ to review aspects of the NOI related to landscaping and invasives species management. With respect to review of the stormwater system, the Commission first retained Hatch Associates Consultants, Inc. ("Hatch")¹¹ to have its civil engineers review the design of the proposed stormwater system. The Commission, thereafter, sought additional registered professional engineer review from GZA Environmental ("GZA")¹² to review those aspects of the stormwater system with respect to Stormwater Standards 2 and 3. *The sum total of these independent peer review services requested by the Commission and borne by the Applicant was approximately \$24,963.*¹³ The independent peer review services performed by Hatch and GZA¹⁴ were conducted by registered professional engineers, to review

determination that the area on which the work is proposed to be done, or which the proposed work will remove, fill, dredge or alter, is not significant to any of the interests identified in M.G.L. c. 131, § 40, and shall so notify the applicant and the Department on Form 6; 2. make a determination that the area on which the work is proposed to be done, or which the proposed work will remove, fill, dredge or alter, is significant to one or more of the interests identified in M.G.L. c. 131, § 40, and shall issue an Order of Conditions for the protection of said interest(s), on Form 5."

¹⁰ SWCA Environmental Consultants Inc., according to its website, employs over 1600 people in 43 offices across the US and Mexico and as such is a leader in a leader in environmental and management consulting services.

¹¹ Hatch, according to its website, is a global company with over 11,000 employees in the US and 16 other countries.

¹² GZA Environmental, Inc., according to its website, employs over 700 people in 32 offices across the US.

¹³ The precise breakdown of payments for peer review included the following: \$5,425 for Hatch Environmental's review of the stormwater management plan in November 2023; \$10,700 for SWCA's review of Applicant's planting plan and invasives species management; an additional \$6,000 for stormwater review performed by GZA Environmental in June 2024; a further supplemental payment of \$1,500 for GZA's continued stormwater management plan review and a final payment of \$4,000 for GZA's further review of stormwater management. \$2,661.87 was subsequently refunded to the Applicant

¹⁴ The GZA Environmental Peer Review was confined to Stormwater Standards 2 and 3.

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the Project's adherence to the MassDEP Stormwater Standards¹⁵. SWCA's peer review entailed review of the landscaping plan and invasives species management proposed by Applicant. Each of the Commission's peer reviewers affirmed the Project's adherence to the WPA and its Regulations, including the Stormwater Management Plan.

This information was peer reviewed by Hatch Associates Consultants, Inc. (Hatch) in a series of memorandums dated January 23, 2024, February 7, 2024, and February 14, 2024, as well as an email from Ross Mullen, PE, CFM of Hatch on March 15, 2024. In response to these reviews, BSC submitted additional information in letters dated January 24, 2024, February 13, 2024, and February 28, 2024.

As detailed below, all three (3) independent peer reviewers hand-selected by the Commission have confirmed the Project's compliance with the Act, its Regulations and the Stormwater Handbook¹⁶ and incorporated into their summary reports to the Commission certain proposed conditions of approval, all of which the Applicant had confirmed it would accept as reasonable conditions within an Order of Conditions. The set of peer review reports prepared by SWCA, Hatch and GZA and the responses provided to each report by BSC are provided in the separate **Appendix A**.

Project Work Description

As detailed within its NOI filing, Applicant proposes limited work in the 100-foot Buffer Zone ("Buffer Zone") to Bordering Vegetated Wetlands ("BVW") and Bordering Lands Subject to Flooding ("BLSF") related to Applicant's affordable housing residential community known as Thorndike Place ("Thorndike Place" or the "Project"). The breakdown of the project impacts is detailed in the reproduced Table 3-1, Page 4 of 13 of the NOI's Attachment A – Project Narrative set forth below:

¹⁵ The Massachusetts Stormwater Handbook requires that stormwater systems must be designed by or under the direction of a Registered Professional Engineer (RPE) licensed in the Commonwealth. Of note, while project opponents retained representatives to critique the NOI, none of the opponents' hired representatives hold the required Professional Registered Engineer qualifications under the Stormwater Handbook. Instead, the opponents retained others, not holding the RPE licensure, who are known to represent opposition to Ch. 40B affordable housing projects across the Commonwealth.

¹⁶ For clarity, registered professional engineers at Hatch and GZA addressed matters under the MA Stormwater Handbook. In accordance with the MA Stormwater Handbook, Chapter 3, qualifications to design a stormwater system and prepare a stormwater report must be performed by or under the direction of a Registered Professional Engineer licensed in the Commonwealth. Accordingly, the Commission sought independent review of the stormwater system by peer review professionals holding such requisite engineering qualifications. SWCA's peer review services were confined to review of a woodland restoration area as part of the project's landscaping and the proposed measures to address invasive species within the 5-acre locus.

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Table 3-1: Project Impacts within Wetland Resource Areas and Buffer Zones

<u>Resource Area</u>	<u>Impacts</u>	
BLSF	Impervious surface (buildings)	8,357 sft
	Semi-pervious surface (porous pavement)	4,511 sft
	Pervious surface (vegetated/landscaped areas)	6,895 sft
	Grading	12,853 sft
100-ft Buffer Zone	Impervious surface (buildings)	630 sft
	Semi-pervious surface (porous pavement)	3,998 sft
	Pervious surface (vegetated/landscaped areas)	1,052 sft
	Grading	28,404 sft
	Woodland Restoration Area	23.985 sft

The Project's stormwater system, which was further refined within the Commission's public hearing to address comments provided by the Commission's peer reviewers, includes five (5) smaller, underground infiltration systems between the townhouse buildings along Dorothy Road, together with a larger underground infiltration system behind the townhouses and a separate mid-sized underground infiltration system which collects runoff from the project driveway. The designed system mimics existing groundwater recharge by providing infiltration throughout the project site.

The Commission's stormwater peer reviewers at Hatch and GZA confirmed that the stormwater system complied with the stormwater standards and that the estimated seasonal high groundwater ("ESHW") was appropriately determined to be Elevation 4 as confirmed by an extensive series of on-site test pits and monitoring well readings obtained by BSC over the course of three years (2020, 2023 and 2024).¹⁷

The Project's Compliance with the WPA and Its Regulations.

Applicant's project and its limited impacts on BLSF and Buffer Zone to BVW and the project's designed stormwater system were designed utilizing a series of conservative measures that not only meet but exceed applicable performance standards under the WPA and its Regulations.

1. The Project Work in BLSF Provides Twice the Compensatory Flood Storage Volume As Required Under 310 CMR 10.57(4).

The 100-year floodplain base flood elevation, and therefore the limit of BLSF, is Elevation 6.8 NAVD. As referenced in the NOI, work within the BLSF has been calculated to be 32,616 sf / 4,392.9 cf. The regulatory performance standard for work within floodplain requires compensatory storage at a 1 to 1 ratio to be incrementally equal to the theoretical volume of flood water at each elevation up to and including the base flood elevation. Likewise, the provided compensatory storage volume is to have an unrestricted

¹⁷ As noted by the Commission's peer reviewer, GZA, the spring of 2024 when extensive monitoring well readings were collected every two weeks, was the one of the wettest on record.

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connection to the water body or waterway. *See* 310 CMR 10.57(4). The designed project provides 9,160.8 cf of compensatory storage volume, which volume not only exceeds the requirements of the WPA, but also that of the local bylaw.

No loss in flood storage volume will occur as a result of the proposed Project, and activities within BLSF shall not restrict flows or result in an increase in flood stage or velocity and will maintain an unrestricted hydraulic connection to the existing flood plain. The proposed work in BLSF meets and exceeds the performance standards of 310 CMR 10.57(4) by providing an unrestricted hydraulic connection for the designed compensatory flood storage volume, at a ratio far in excess of the 1:1 ratio required by the WPA regulations.

Following construction, a woodland restoration and invasive species management are proposed within the 5.5 -acre parcel, and the balance of the Applicant's property (roughly 12 acres out of 17.7 acres), is to be preserved as open space under a Conservation Restriction. Nearly 90% of the entire 17.7 acre site will remain pervious.

2. The Project Work in Buffer Zone to BVW Does Not Impact the BVW Wetland Resource Area.

While Buffer Zone is not a resource area under the WPA, any work within the Buffer Zone should not alter an Area Subject to Protection under the Act. The limited buffer zone work proposed by the project, with the exception of the woodland restoration and invasive species management, is confined to the outer 50' of the Buffer Zone, thereby preserving those portions of the Buffer Zone closest to the BVW resource area to fully protect the BVW. Further, the majority of the proposed alteration to the Buffer Zone is temporary and/or does not involve permanent structure or impervious surface within the impacted outer Buffer Zone. As described in Table 3-1, only 630 square feet of work in the Buffer Zone are associated with structure, the balance of the work is grading, landscaping and a pervious pathway around the rear of the senior residence building. Further, none of the project's infiltration systems are within the Buffer Zone. Per 310 CMR 10.02(d), all other proposed work outside the Buffer Zone is not subject to regulation under the WPA unless and until that activity actually alters an Area Subject to Protection.

The designed project avoids, minimizes, and mitigates the limited work in the Buffer Zone. Notably, the design of the project intentionally employs a compact building footprint nearly completely outside of Buffer Zone. As referenced, only 630 sf of building is within the very outer portion of the Buffer Zone along the southwest portion of the senior residence building. Likewise, the project mitigates its impact in two principal respects: a) Applicant's use of only 5 acres as the project locus, with the balance of the 12 acres to be subject to a conservation restriction; and b) a thoughtful invasive species management plan and woodland restoration project within the project locus.

The woodland restoration work was reviewed and deemed appropriate by SWCA, the Commission's peer reviewer for the landscaping work on March 14, 2024. A copy of the email correspondence from Chase Bernier, SWCA, to the Commission's agent is included in Appendix A at Page 580. By the SWCA Peer Review correspondence of March 27, 2024, the Commission's landscape peer reviewer documented completion of satisfactory review of landscaping. *See* Appendix A, Page 583. SWCA had one outstanding comment regarding the ISMP, which was responded to in a letter from BCS dated April 4, 2024. *See* Appendix A, Page 591. BSC's letter, included in Appendix A, clarifies that the ISMP is an adaptive approach with varying methodologies for species type and time of year per SWCA's request.

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3. The Stormwater System Design Satisfies Each of the Applicable Stormwater Handbook Standards

Applicant's stormwater system design is based upon a comprehensive assessment of groundwater elevation within the areas of the infiltration systems and run through stormwater models which apply precipitation rates notably beyond the precipitation rates required by the MA Stormwater Handbook. Further, both of the Commission's peer reviewers (Hatch and GZA) charged with reviewing the stormwater system design, concurred that it met the Stormwater Standards.

The proposed stormwater system utilizes a series of infiltration systems to manage stormwater throughout the development. The layout of the stormwater system is depicted on Sheet C-4 of the Project Plans, as revised through December 2024. (See Exhibit 3). As shown on the Project Plans, five small underground infiltration systems will be located under the townhouse driveways. The small townhouse systems are designated as Infiltration Systems 2 through 6 and consist of varying numbers of R-Tank XD units with the same footprint and a bottom stone elevation of 7.00, or 3 feet above estimated seasonal high groundwater (ESHGW). The townhouse infiltration systems maintain a 10-foot separation from any building foundation. In larger storm events, these smaller systems will overflow to a larger infiltration system (Infiltration System 1). BSC performed a groundwater mounding analysis of these systems utilizing the total volume infiltrated during the 100-year, 24-hour storm event¹⁸, resulting in expected groundwater mounds of less than one foot.

With respect to the primary infiltration systems adjacent to the senior residence building, there are two infiltration systems, System 1 and System 7, designed to collect and infiltrate runoff. Infiltration System 1 consists of 77 3.0-foot StormTrap chambers with a bottom elevation of 8.0. Overflow from infiltration systems in the townhouse driveways, as well as area drains behind the townhouses and the roof of the senior residence building are routed through System 1. This system maintains a four-foot separation from ESHGW and as such, a groundwater mounding analysis is not required per DEP's Massachusetts Stormwater Handbook. Infiltration System 7 is a mid-sized system, located to the west of Infiltration System 1. It consists of 25 1.75-foot StormTrap chambers with a bottom elevation of 7.15 (which corresponds to 3.15-feet above ESHGW). This system collects runoff from driveway and paved areas associated with the senior residence building. BSC performed the required groundwater mounding analysis of this system utilizing the total volume infiltrated during the 100-year, 24-hour storm event (NOAA++ data), and determined the expected groundwater mound to be less than 3 feet.

- a) Each of the Infiltration Systems Maintains a Minimum Two Foot Separation from Estimated Seasonal High Groundwater, As Determined Through Direct Observation of Groundwater Levels Over the Course of Three Years.

In designing the comprehensive stormwater system for the project, Applicant's Registered Professional Engineer at BSC, Dom Rinaldi, determined that the highest elevation of groundwater,

¹⁸ As a further layer of conservative design, BSC's design rainfall far exceeds DEP's TP-40 rainfall standard. Instead, BSC utilized a much more conservative standard, NOAA 14++, in its design models. The difference between these two standards, TP-40 (the standard established by the Stormwater Handbook) and NOAA 14++ (that used by BSC), is appreciable. Whereas under TP-40, the 100-year storm frequency rainfall for the site is 6.6 inches, under that same 100-year storm, NOAA 14++ (the data used in the Applicant's design) assumes rainfall depth is 11.5 inches. In other words, the calculations used to confirm the compliance of the designed stormwater system under Standards 2 and 3, apply an amount of storm water that is 75% larger than is required by the DEP's design standards.

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as observed during springtime conditions over two years and in 13 monitoring wells and test pits across the site, was just below Elevation 4. As a conservative measure, while this observed high groundwater was not uniform across the site and significantly lower in some locations, nonetheless, the stormwater systems as designed universally applies such groundwater elevation for each of the systems.

Per the Stormwater Handbook, Volume 2, Chapter 2: Structural BMP Specifications for the Massachusetts Stormwater Handbook, estimated seasonal high groundwater is to be “based on soil mottles *or through direct observation when borings are conducted in April or May, when groundwater levels are likely to be highest.*” (Emphasis added).

As part of the Comprehensive Permit review process, Applicant performed three (3) soil test pits in November 2020 to determine soil types and estimated seasonal high groundwater (ESHW) elevation for use in stormwater management design. Subsequent to the November 2020 test pits, the project’s building layout was revised to its current configuration, slightly adjusting the location of the infiltration systems. In May 2023, Applicant’s engineers at BSC performed eight (8) soil test pits in the location of the updated stormwater management system. These test pits were witnessed and verified on behalf of the Town by of an independent third-party, Whitestone Associates, hand-selected by the Town as its representative. As part of the May 2023 test pit work, three (3) groundwater measurement wells were installed – one in the location of the bio-retention area, one in one of the townhouse infiltration systems, and one in the larger infiltration system. The 2023 test pits resulted in the determination of an ESHGW elevation of 4.0 for the entirety of the site as this elevation was the highest elevation at which groundwater and/or indicative redoximorphic features were found throughout all of the locations.¹⁹ This selection was made to provide a conservative approach to stormwater management design.

The following Spring, in March 2024, the Applicant performed additional test pits on site along with installation of an additional groundwater well in the large infiltration system and monitored all four wells on site. On April 17, 2024, Applicant’s professionals at BSC performed five (5) additional soil test pits in the area of the large infiltration system and installed one (1) additional groundwater well (TP-9). BSC coordinated the installation of the additional test pits with the Commission, and the same was observed by a representative from the Arlington Department of Public Works Engineering Division. The May 2023 and April 2024 test pit data is summarized below.

Test Pit	Existing Grade	Total Depth (in.)	Depth Fill (in.)	Depth Standing GW (in.)	Depth Weeping GW (in.)	Depth to Redox (in.)	ESHW
TP-1	10.66	120	90	114	108	n/a	1.66
TP-2	8.79	104	83	97	n/a	n/a	0.71
TP-3	7.88	87	27	82	n/a	51	3.63
TP-4	7.08	96	64	72	68	n/a	1.41
TP-5	7.98	74	33	60	60	48	3.98
TP-6	6.87	132	30	110	110	64	1.54

¹⁹ Non-indicative redoximorphic features were observed and noted by Applicant and the Town’s independent third-party reviewer in one test pit but were appropriately discounted by both as not continuous through the depth of the test pit and therefore not determinative.

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TP-7	8.92	114	108	110	n/a	n/a	-0.24
TP-8	11.83	120	120	n/a	112	n/a	2.50
TP-9	11.47	118	100	116	90	n/a	3.97
TP-10	11.27	130	130	126	94	n/a	3.44
TP-11	11.09	114	114	111	93	n/a	3.34
TP-12	8.37	76	76	68	53	n/a	3.95
TP-13	7.96	74	74	67	57	n/a	3.21

In addition to the groundwater level observations from November 2020, the May 2023 groundwater observations of the eight test pits within the infiltration systems, and the April 2024 groundwater observations in five additional test pits, BSC performed seven (7) additional rounds of groundwater level measurements of the on-site wells during March, April, and May 2024. The measurements are summarized below (all elevations in NAVD88):

Well	3/15/24	4/1/24	4/17/24	4/24/24	5/2/24	5/9/24	5/16/24
TP-1	2.26	2.94	3.01	2.87	2.69	2.74	2.64
TP-6	2.37	3.00	2.95	2.68	2.28	2.79	2.05
TP-7	2.82	3.41	3.47	3.30	3.05	3.26	2.95
TP-9	n/a*	n/a*	3.97*	3.78	3.59	3.30	3.30

* TP-9 was installed on 4/17/24. Groundwater elevation shown for that date is observed groundwater in the test pit.

Of note, the month of March 2024 was one of the wettest months since 1895. The attached graphics from the National Oceanic and Atmospheric Administration (NOAA) demonstrate the severity of precipitation that occurred in March 2024. See Appendix A. Page 210 As such, groundwater elevations during this time would be expected to be above normal conditions.

The direct observations of groundwater levels during *seven* rounds of groundwater testing during March-April 2024, together with the prior testing performed in November 2020 and March 2023 confirms the appropriateness of El. 4 as the ESHGW elevation. The amount of direct observation data relied upon by BSC in its design of the stormwater system goes beyond any requirement of the WPA. Specifically, neither the WPA regulations nor the Mass Stormwater Handbook impose a requirement for multiple months or years within which groundwater level observations are observed. Nonetheless, Applicant obtained direct observations of groundwater levels within the areas of the infiltration system over the course of months and over multiple years, with every observed measurement reporting the highest level of groundwater at El. 3.98. Based on this extensive set of data points, BSC conservatively designed the system with an ESHGW at Elevation 4.00.

The Commission's independent stormwater peer reviewers confirmed the appropriateness of

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ESHW at Elevation 4.0.²⁰ Per the Commission's independent peer reviewer at GZA (Anthony Urbano, RPE): "[w]e conclude that seasonal high water table elevation of 4.0 feet used by BSC is for "above normal" groundwater conditions and is suitable to be used for stormwater design for this project. As noted above, GZA's opinion on design groundwater elevation findings are consistent with the opinion expressed by Hatch and BSC²¹." See Appendix A, Pages 247-258, GZA Peer Review Letter dated August 1, 2024.

In his subsequent October 22, 2024 Peer Review Letter, Mr. Urbano, stated: "It is GZA's opinion that BSC's design groundwater elevation findings are consistent with this definition (in its entirety). Redox features were not present; therefore wells were installed, water levels were measured in the Spring (when the groundwater was highest) and the water levels were compared to historic USGS groundwater levels for a relative comparison of the type of spring conditions present at the time that the measurements were recorded at the site. As previously reported by GZA, the USGS water levels were well above normal at the time of the site recorded groundwater elevation measurement (i.e., the highest seasonal water table observed over the past 10 years)." See Appendix A, Pages A347-A352 – GZA Peer Review Letter dated October 22, 2024.

b) Applicant Has Demonstrated Compliance with All Applicable Stormwater Standards.

Standard 1 – New Stormwater Conveyances

Per Massachusetts Stormwater Management Standard #1, no new outfalls may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth. No new untreated stormwater discharges are proposed. Rip-rap outlet protection sizing calculations are included in Section 6.0 of the Stormwater Report.

Standard 2 – Stormwater Runoff Rates

Watershed modeling was performed by BSC using HydroCAD Stormwater Modeling Software version 10.20, a computer aided design program that combines SCS runoff methodology with standard hydraulic calculations. A model of the site's hydrology was developed for both pre- and post-development conditions to assess the effects of the proposed development on the project site and surrounding areas.

Here, the stormwater runoff was modeled using data from the NOAA 14++ rainfall atlas. The NOAA 14++ precipitation values are 1.75 times higher than the TP-40 rainfall values for the 100-year, 24-hour storm event that are required by the Stormwater Handbook and result in a system design targeted to address larger storm events than would be required under current DEP requirements.

²⁰ On March 22, 2024, the Commission's Peer Reviewer Ross Mullins of Hatch was requested by the Commission's agent to confirm whether the determination of ESHGW at El. 4 was consistent with the Massachusetts DEP Stormwater Standards and Handbook. Thereafter, Anthony Urbano, RPE at GZA (the Commission's second stormwater peer reviewer) confirmed on August 1, 2024, and October 22, 2024, that the ESHGW design elevation was appropriate.

²¹ Within the same Peer Review letter, GZA further clarified that reference to a USGS well in Lexington (for which an opponent to the affordable housing project asserted was a relevant data point) was not an appropriate reference point. GZA stated: "Note that we did not use USGS Well Lexington MA-LTW in our analysis because that well is in a sand and gravel aquifer with a very shallow water table. Those conditions are not present at this site. In addition, the USGS well is more affected by individual rainfall events than by seasonal variations of the groundwater table, which is not typical of other USGS wells in the area."

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The stormwater management system for the project has been designed such that the post-development conditions result in no increase to peak runoff rates off the property for the 2, 10, 25, 50, and 100-year, 24-hour storm events.²² The Commission's independent peer reviewer at GZA has likewise confirmed that calculations support the finding that post development flows do not exceed pre-development flows, thereby meeting Stormwater Standard 2. "The stormwater redesign appears to adequately address the MassDEP Stormwater Standard 2 Peak Rate Attenuation Requirements." See Appendix A, Pages 493-510 - GZA Peer Review Report dated January 25, 2025.

Stormwater Standard 3 - Groundwater Recharge.

Standard 3 requires that loss of annual recharge to groundwater shall be eliminated or minimized. The minimum compliance requires that the annual recharge from the post-development site shall approximate the annual recharge from pre-development conditions based on soil type.

Here, recharge is provided on site via multiple underground structural infiltration systems beneath the surface parking area to the north of the affordable senior housing building and smaller systems beneath each individual driveway of the duplex townhouses. Overall, the project will result in no loss of annual recharge to groundwater as required by Standard 3. Section 6.0 of the Stormwater Report details the groundwater recharge information.

As the townhouse driveway infiltration systems (Systems 2-6) and the infiltration system collecting the majority of the driveway (System 7) have more than 2-feet but less than 4-feet separation to estimated seasonal high groundwater, a mounding analysis was performed utilizing the Hantush method²³ for each to ensure that a groundwater mound does not extend into the bottom of the infiltration system preventing infiltration of the required recharge volume. Applicant's engineers performed the analysis utilizing the infiltration volume that occurs during the more conservative (NOAA 14++) 100-year storm event. As the infiltration system that collects the 4-story building roof (i.e., System 1) has 4-feet of separation to ESHGW, a mounding analysis was not required in accordance with the Stormwater Handbook, Volume 3, Chapter 1.

Again, the Commission's Peer Reviewer at GZA, found that subject to two recommended conditions, Stormwater Standard 3 was achieved and the Applicant's mounding analysis complied with the Stormwater Handbook. Per the GZA Peer Reviewer, "[w]ith the implementation of building underdrainage and peat removal as summarized above, *the revised stormwater mound evaluations provided in BSC's January 3, 2025 report adequately addresses the Massachusetts Stormwater Handbook's requirements to evaluate impacts of groundwater mounding during large (100-year) storm events and addresses the 72-hour drainage requirement for the infiltration systems. The revised predicted groundwater mound beneath the stormwater infiltration systems is not expected to adversely impact the ability of the infiltration systems to empty in less than 72 hours.* We premise these conclusions on the assumption that an underdrain system will be installed beneath the building located near Infiltration System 1 and the organic deposit (peat layer) underlying Infiltration System 1 is removed and replaced with clean sand up to the bottom of the Infiltration System 1." GZA Peer Review Letter, dated January 28, 2025 (emphasis added); see Appendix A, Pages 493-596.

²² Again, the designed stormwater system exceeds the WPA standards. The designed system provides no increase to peak run-off for the 2-, 10-, 25-, 50- and 100-year storms; the Massachusetts Stormwater Handbook requires only that there is no increase to peak run-off *for two storm events*: the 2- and 10-year storm. As modeled by BSC, the project stormwater system will have no peak run-off for *all* storm events.

²³ The Hantush method is the DEP-recognized model per the Massachusetts Stormwater Handbook, Vol. 3, Ch. 1.

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The Applicant confirmed to the Commission – and reiterates such confirmation to the DEP – that it is amenable to both installing such underdrain system and to remove the peat layer identified in the eastern portion of Infiltration System 1.

Stormwater Standard 4 – TSS Removal

As a new development, the Project stormwater management system will achieve a TSS removal greater than 80%. The proposed stormwater management system has been designed to provide treatment of runoff in order to reduce suspended solids prior to discharge off-site through the implementation of the following best management practices:

- Deep Sump Hooded Catch Basins
- Proprietary Hydrodynamic Separators
- Underground Stormwater Infiltration Systems
- Rain Garden

The water quality volume is defined as the runoff volume requiring TSS Removal for the site and is equal to 0.5-inches of runoff over the total impervious area of the post-development site. The required water quality volume for the project is found within Section 6.0 of the Stormwater Report.

The underground infiltration systems have been sized to treat the required water quality volume and calculations for the same are detailed in Section 6.0 of the Stormwater Report. A long-term pollution prevention plan complying with the requirements of Standard 4 are included in Section 4.0 of the Stormwater Report.

Stormwater Standard 5 – Land Uses with Higher Potential Pollutant Loads

Stormwater Standard 5 is not applicable as the proposed project is not a land use with higher potential pollutant loads (LUHPPL).

Stormwater Standard 6 – Stormwater Discharges to a Critical Area

Stormwater Standard 6 is not applicable as runoff from the project site does not discharge to a critical area.

Stormwater Standard 7 – Redevelopment Projects

This project is a new development and therefore has been designed to fully comply with the Stormwater Management Standards.

Stormwater Standard 8 – Sedimentation and Erosion Control Plan

Erosion and sedimentation controls are shown on the Project Plans. Additionally, a Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan is found in Section 3.0 of the Stormwater Report.

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Stormwater Standard 9 – Long Term Operation and Maintenance Plan

A Long-Term Operation and Maintenance Plan is included in Section 4.0 of the Stormwater Report.

Stormwater Standard 10 – Illicit Discharges

There are no known illicit discharges on the project site, and none are proposed. An illicit discharge compliance statement is included in Section 6.0 of the Stormwater Report and will be signed by the Applicant prior to issuance of any permits.

**Support Within the Commission to Credit the Commission's Independent Peer Reviewers
and Issue an Approval OOC**

The Commission consists of seven (7) members, six (6) of whom participated during the hearing sessions and one member who recused himself. Owing to the protracted length of the public hearing process (18 months) and the fact that there were twelve (12) public hearings, two Commission members each missed more than one public hearing and therefore were not eligible to vote but were able to participate in the Commission's deliberations.

At the Commission's final deliberation session, during which all six (6) of the participating members discussed the project, four (4) of the Commission members (two voting and two non-voting members) were in general support of the review of the Commission's peer reviewers and, as to those voting members adopting the Commissioner's peer review findings and recommendations, they sought a vote to approve the issuance of a positive OOC. The vote to issue an approval OOC was tied 2-to-2; a second motion to deny the project, likewise failed to obtain a majority support of the voting Commissioners. While two Commissioners disregarded their own independent peer reviewers, such disregard was not universal. The following deliberations are illustrative of this point:

Commissioner David Kaplan made the following observations within the Commission's discussion on March 6, 2025:

David Kaplan (02:25:42): "Yeah, I mean I personally don't disagree with how they came to the four foot... I thought they used standard methods to come to that and I thought they planned accordingly. So I did not have any issue with the use of the four elevation for the estimated seasonal high groundwater ... But again, I think that the applicant and our peer reviewer used standard engineering methods and they came to the conclusion that there was no adverse impact and it met the Wetlands Protection Act and the performance standards. So I'm inclined to, I guess, recommend a order of conditions issuing the project with an order of conditions."

Similarly, Commissioner Brian McBride²⁴ followed up with his comments:

Brian McBride (02:27:54): "Yes, I guess I echo what Dave said. I know I don't get to vote on this one due to missed meetings, but I didn't find from my level of knowledge, great inconsistencies between the applicant and the peer reviewers. I found them relatively consistent. I found that the contradictions were between the critics' paid consultant and the peer reviewer and the applicant, and I have no reason to suspect anything was unusual wrong about that. I don't know these people, but the basic nature of that relationship makes me more skeptical and I think because of that, if I was voting, I would vote to approve the project based on the consistency between the two peer reviewers and the applicant. Thanks."

²⁴ Commissioner McBride and Commissioner Gildesgame missed more than one meeting, and were not able to vote.

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Brian McBride (02:05:55): “Yeah, I’m going on a limb here Chuck, because I’m not familiar with all the details of this very technical situation, but pardon if this is too simple. But we hired an independent consultant to review the applicant’s data and their calculations and that consultant returned an answer to us that the applicant’s data was correct and that they did meet the requirements of the guidelines. To me that has the most weight of anything. I know there were critics of the project and there were many different voices. Some of them I can’t judge their technical capabilities or their knowledge or their biases, but the independent person that we hired to review this calculation told us it passed. I really have a hard time going against that sort of objective voice, even though there may be contradictory information from critics of the project. To me it’s very hard to accept overruling our own hired independent consultant unless we have something dramatic. That’s my opinion.”

A third Commissioner, Nathaniel Stevens, Esq, provided the following concurring position with Commissioners Kaplan and McBride:

Nathaniel Stevens (02:07:41): “Yeah, thanks. I guess I was about to say what Brian said, but Brian said it more eloquently again, I think we went around again, the reason why we hired a peer reviewer is because we felt that no one on the commission had the requisite engineering background to really delve into this. And I think that’s the reason commissions hire peer reviewers is, well, one of the main reasons is because we lack the expertise ourselves to do that. So we hired the first peer reviewer who I did not find terribly helpful and the applicant was kind enough to indulge us in the hiring a second peer reviewer who I felt was much better. But even the first peer reviewer in their muddled way seemed to indicate that the applicant was somewhat complying with the standards. It just wasn’t clear to me exactly. It was kind of like a “yes, but” answer we got from the first peer reviewer and they were more focused on the flooding issues. But I think, so we’ve had two peer reviewers and as Brian’s, I guess I’m more inclined to defer to the expertise of GZA on this because think I feel like we’re going to get down another rabbit hole in a way if we try to second gear the second guess our peer reviewer, I don’t know...”

A copy of a transcript from the March 6, 2025 Commission meeting is attached at [Exhibit 6](#).²⁵

Conclusion

Upon its receipt of a final Comprehensive Permit approving Applicant’s affordable housing project - which public review and conditioning included significant input from the Commission to the Zoning Board of Appeals - Applicant duly filed its NOI with the Commission under the WPA in September 2023. Since that time, Applicant has fully participated in 12 public hearings over 18 months and funded for the direct benefit of the Commission over \$24,000 for independent peer review by qualified professionals hand-selected by the Commission. Upon completion of the extensive independent peer review contracted for by the Commission and paid by Applicant, the independent peer reviewers collectively concluded that the work as proposed in the NOI adhered to the WPA, the WPA regulations and the stormwater standards. Despite this independent and thorough review, the Commission failed to issue a written decision despite nineteen months of review and \$24,000 worth of independent qualified professional review.

The Commission has abdicated its responsibility as the issuing authority by failing to render a decision, and lost authority over the NOI. Further, the Commission’s inaction has delayed the creation of affordable housing in Arlington by more than a year and half and has needlessly cost the Applicant tens of thousands of dollars paid for independent peer review as well as many more tens of thousands in

²⁵ The Commission’s discussion of Thorndike Place commences at timestamp 1:00:55 of the enclosed transcript. See Exhibit 6, commencing on Page 27 of 67

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professional fees associated with Applicant's good faith and diligent responsiveness during the eighteen-month hearing process.

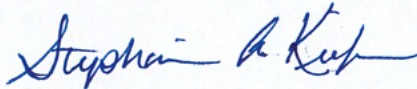
Applicant's proposed work in Buffer Zone and BLSF fully complies with the WPA and its Regulations. Similarly, the Applicant's designed stormwater system – a system premised on conservative modeling inputs (i.e., use of NOAA 14++ rainfall data, multiple years of onsite documented groundwater levels in springtime conditions and a site-wide assumption of ESHGW at El. 4, and design of the system to provide no increase to peak flow run-off for *all* storm events and not just the two- and ten-year storm events required by the DEP) demonstrably satisfies – and exceeds - the applicable DEP stormwater standards.

Accordingly, the Applicant requests a Superseding Order be issued approving the work as proposed within its NOI. Such Superseding Order will allow Applicant to forthwith construct the affordable senior and family housing desperately needed in this Commonwealth and especially in the Town of Arlington.

Relief Requested

For the reasons set forth above, the Applicant respectfully requests the Department issue a Superseding Order of Conditions which is based on the NOI application and, as such, limited to approval of the proposed buffer zone and BLSF work and the proposed project's stormwater system.

Respectfully,



Stephanie A. Kiefer

Encl: Exhibits 1-6
Appendix A

cc: Arlington Conservation Commission (with encl.), via certified mail
DEP Lock Box