

April 14, 2021

Lynnfield Conservation Commission
c/o Ms. Emilie Cademartori, Director of Planning and Conservation
Lynnfield Town Hall, 55 Summer Street
Lynnfield, MA 01940-1861

Re: **UPDATED** Review of Request for a Certificate of Compliance
Windsor Estates, MADEP File No. 209-0422
525 Salem Street, Lynnfield, MA

Dear Commissioners:

This correspondence is in response to the request from the Lynnfield Conservation Commission (LCC) for our firm to **UPDATE** our review the Request for a Certificate of Compliance (COC) for the above referenced project. The original Certificate of Compliance request package was dated March 25, 2019 and was received by our firm on in late April 2019. No electronic files were received by us for the original COC Request.

In response to the COC Request, our firm conducted an initial paper review of the COC package submitted. On May 13, 2019, our firm sent an email to the LCC in which we indicated the information we felt was missing from the original COC package and some questions we had regarding the filing.

On Thursday, December 19, 2019, I attended a meeting at the LCC Office with Ms. Emilie Cademartori, Director of Planning and Conservation for the Town of Lynnfield, MA and Mr. Richard Williams, P.E. of William & Sparages to discuss our May 13, 2019 email and issues and concerns our firm had regarding the information submitted and the completed project. Late in the day on January 14th, 2020 we received an UPDATED and REVISED COC Request Package from William & Sparages. This package contained a letter from Mr. Richard Williams, P.E. of William & Sparages to the LCC dated January 13, 2020 and an updated As-Built Plan last revised January 10, 2020.

In response to the receipt of the UPDATED and REVISED COC Request Package and in light of a pending snowstorm, Mr. Richard Cutts, P.E. and I visited the Windsor Estates site on Friday, January 17th, 2020 to view and photograph the conditions without snow cover. Given the late arrival of the UPDATED and REVISED COC Request Package as well as the January 20th, 2020 Holiday we were not able to complete our review in time for the LCC's January 21st, 2020 meeting. On February 7, 2020, our firm completed a letter report of our findings and concerns regarding the COC filing. We also attended the February 18, 2020 LCC meeting at which the COC Request and the status of the project were discussed at length.

On Monday, October 19, 2020 (using the recording of the February 18, 2020 LCC meeting), our firm prepared a detailed listing of the missing materials and what the Applicant and his Engineer stated they would provide to us. This list was forwarded to the Applicant and his Engineer by the LCC Director. On Friday, February 26, 2021 our firm received, via FedEx, a package of plans and documents from Gregg

Lynnfield Conservation Commission, c/o Ms. Emilie Cademartori, Director of Planning and Conservation
Re: **UPDATED** Review of Request for a Certificate of Compliance
Windsor Estates, MADEP File No. 209-0422
525 Salem Street, Lynnfield, MA
April 14, 2021, Page 2 of 9

Monastiero for the Windsor Estates COC Request. The package contained a transmittal from Williams & Sparages (W&S) dated 2/25/21, an Operations and Maintenance Plan last revised January 4, 2021, a plan "To Accompany Operation and Maintenance Plan? By W&S dated January 4, 2021, a letter from W&S dated January 4, 2021, Tables for As-Built Res02R2 and 03R2. an "As-Built Plan showing RES03" by W&S dated February 19, 2020 and an "As-Built Plan showing As-Built Site Plan" by W&S last revised January 4, 2021.

This report is an **UPDATE** to our February 7, 2021 report and the items listed in our October 19, 2020 memo. The item numbers are taken from our original letter report(s).

CERTIFICATE OF COMPLIANCE REVIEW COMMENTS AND CONCERNS

The following comments (1 thru 10) are the comments contained in our May 13, 2019 email regarding the original COC Request package filed with the LCC:

1. Condition 24 of the Order of Conditions (OOC) states, "The Commission shall be notified in writing within 30 days of all transfers of title of any portion of property that take place prior to the issuance of the Certificate of Compliance. In conjunction with the sale of any lot governed by this Order, the applicant shall submit to the Conservation Commission a signed statement by the buyer that he/she is aware of an Outstanding Order of Conditions on the development and has received a copy of this Order of Conditions".

Comment Satisfied. Based on the discussions at the February 18, 2020 LCC meeting it is evident that the Condominium Association who has assumed the ownership of the site is very aware of the requirements of the OOC.

2. Condition 78 of the OOC states, "Permanent boundary markers consisting of 3/4" diameter reinforcing rods, 3 feet long shall be installed at 50-foot intervals along the edge of the 25 foot buffer zone. The location of the markers installed shall be shown on the as-built plan and clearly marked with a note indicating no work shall be performed beyond this point without permission from the Lynnfield.

The locations of these markers are shown on the As-Built Plan and we did observe a number of the markers in the field during our site visit. However, at the time of our site visit none of the markers observed has the required placard indicating no work shall be performed beyond this point without permission from the Lynnfield. These placards need to be added to the reinforcing rods in the field.

Comment NOT Satisfied based on a conversation with the LCC Director.

3. Condition 79 of the OOC (regarding information to be filed with any request for a COC) states, "Upon completion of the project, the applicant shall request in writing a Certificate of Compliance from the Conservation Commission and shall submit the following information with the request:

Lynnfield Conservation Commission, c/o Ms. Emilie Cademartori, Director of Planning and Conservation
Re: **UPDATED** Review of Request for a Certificate of Compliance
Windsor Estates, MADEP File No. 209-0422
525 Salem Street, Lynnfield, MA
April 14, 2021, Page 3 of 9

a. "certification from the professional engineer stating that construction complies in all respects with this Order of Conditions and setting forth deviations, if any exist".

Comment satisfied. The Applicant's Engineer's letter dated January 4, 2021 meets this requirement.

b. "two sets of field surveyed as-built site plans prepared, signed and stamped by a Commonwealth of Massachusetts Registered Land Surveyor or registered Professional Engineer. The as-built plan shall include, at a minimum, and as applicable to the project, elevations of all pipe inverts and outlets, pipe sizes, materials, and slopes; all other drainage structures, limits of clearing, grading and fill; all structures, pavement and spot elevations and 2 foot contour elevations within 100 feet of wetlands boundaries; locations of wetlands boundaries; all alterations within wetland resource areas; all wetland replication areas; and all dates of fieldwork".

Comment NOT FULLY satisfied. Most of the important drainage system slopes and elevations are shown but information is missing for the underground basins (elevations), the roof recharge systems and the underground recharge systems for the roadway drainage (Res01, 07 & 08) need to be labeled with their designation on the plan. Cleanouts and inspection ports for the roof drainage and underground systems (necessary for inspection and cleanout) are not shown. W&S states that this information is unknown to them.

c. "The as-built plans shall locate a control point and benchmark".

Comment previously satisfied.

d "Post-construction photographs demonstrating compliance with this Order, including established vegetation where required."

Comment previously satisfied based on the discussion at the February 18, 2020 LCC meeting.

4. Condition 87 of the OOC states, "The applicant and his successors in ownership shall file written reports of the inspections, cleaning, and stormwater maintenance of the stormwater management system with the Lynnfield Conservation Commission on an annual basis, by November 1st of the year the binder course of pavement is first installed. This condition shall survive the Order of Conditions and shall run with the title of the property in Perpetuity".

Is the project in compliance with this condition? Have the annual reports been filed and has any backup documentation that the maintenance performed is in compliance with the maintenance requirements of the approved Operations and Maintenance Plan been provided?

Comment NOT Satisfied. Based on a conversation with the LCC Director reports for 2019 and 2020 have not been filed and incomplete reports were filed prior to that.

5. Condition 88 of the OOC states, “The applicant shall provide the Conservation with a copy of the Condominium Association documentation and contact name and telephone number for the agent. The developer is responsible for the Operation and Maintenance Plan, of the drainage system until such time as the Condominium Association assumes ownership, as stated in the Declarations”.

The Williams & Sparages letter dated January 13, 2020 provides some of this information with a reference to the Condominium Associations web site for the documents. Is this satisfactory for the LCC or should the Applicant provide a paper copy of the Condominium Association documents for the file?

Comment NOT Satisfied based on a conversation with the LCC Director. No hard copy of the documents has been received by the LCC.

6. Condition 89 of the OOC states, “Any new owner or successor in title shall, within 30 days of assuming ownership, provide a letter to the Lynnfield Conservation Commission acknowledging that they understand their obligations under this Order. This requirement shall be recorded in the deed and on subsequent deeds for the property”.

Comment SOMEWHAT satisfied based on the discussion at the February 18, 2020 LCC meeting but no written documentation has been provided.

7. Condition 90 of the OOC states, “The applicant shall comply with all requirements of the Operation and Maintenance Plan filed with the Order of Conditions. The applicant shall maintain and repair the detention basin and the storm drain collection system and appurtenances in order to ensure that the design capacity, the storm water treatment and pollution abatement capacity, and structural integrity of these facilities are maintained. The applicant shall maintain all stabilized surfaces as designed including maintenance and repair of pavement and maintenance of landscaped areas maintaining a vigorous growth of all plant materials. Catch basins shall be inspected and cleaned and driveways and sidewalks shall be swept at intervals specified in the O&M Plan. Snow shall be plowed onto vegetated areas to encourage infiltration during subsequent thawing periods. Sediments shall be removed from snow storage areas in the early spring. Accumulated sediments shall be removed from sumps and floatable wastes shall be removed from the surface of every catch basin at intervals specified in the O&M Plan. All drain pipes shall be inspected, and sediment and debris removed at intervals specified in the O&M Plan. Sediments and wastes shall be disposed of in accordance with all applicable federal, state, and local laws. The forebay and detention basins shall be inspected and cleaned at intervals specified in the O&M Plan. Vegetation in detention basins, forebays, and swales shall be mowed at intervals specified in the O&M Plan to prevent the growth of woody species”.

Is the project in compliance with this condition? Is the Applicant or the Condominium Association fully aware of what the O & M requires and is there any backup documentation that the

maintenance performed is in compliance with the maintenance requirements of the approved Operations and Maintenance Plan?

Comment NOT Satisfied. Based on a conversation with the LCC Director reports for 2019 and 2020 have not been filed and incomplete reports were filed prior to that
Comment NOT Satisfied based on a conversation with the LCC Director. No hard copy of the documents has been received by the LCC. A new O&M Manual has been prepared (see comments below in this report). We do not know if the Condominium Association is aware of the new O&M Manual.

8. Condition 91 of the OOC states, "The applicant and his successors in ownership shall file written reports of the inspections, cleaning, and stormwater maintenance with the Lynnfield Conservation Commission on an annual basis, by November 1st of the year the binder course of pavement is first installed. This condition shall survive the Order of Conditions and shall run with the title of the property in Perpetuity".

This item was directly not addressed in the January 13, 2020 Williams & Sparages letter; however, the requirements are the same as Condition 87 and our comments are the same as for Condition 87. Have the annual reports been filed and has any backup documentation that the maintenance performed is in compliance with the maintenance requirements of the approved Operations and Maintenance Plan been provided?

Comment NOT Satisfied. Based on a conversation with the LCC Director reports for 2019 and 2020 have not been filed and incomplete reports were filed prior to that.

9. Has the LCC or staff visited the site and reviewed the sufficiency of the vegetation? Has the removal of all erosion controls been approved and if so, have these elements been removed and the areas where they were located restored by seeding? If the erosion controls have not been removed then the LCC should inspect the site for the sufficiency of vegetation and if found to be sufficient the Commission should issue an Enforcement Order for the removal of the erosion controls and the restoration of the ground (EO necessary as there is no valid open OOC).

Comment previously satisfied based on the discussion at the February 18, 2020 LCC meeting.

10. Has the Applicant addressed the issue with the silt that was deposited in Infiltration Basins Res03, 04 & 05 during construction (see attached reports). These basins are infiltration basins, and they are supposed to be empty within no more than 72 hours after a storm. Significant silt was deposited in these basins during construction and on numerous occasions we expressed our concern that these basins would not function as intended (would not have exfiltration at the rates on which all of the runoff calculations were based and would not empty within 72 hours as required). We were assured by the developer that the silt would all be removed, and the basins would be surfaced with sandy loam so that they would function as intended by the design. Was this work

ever done by the developer and are these basins functioning as intended and fully draining within 72 hours?

The January 13, 2020 letter from Williams & Sparages states that the Developer states that this work was done and that they have monitored the basins and they drain within 72 hours with the exception of Res03 which requires more than 72 hours to drain. During our site visit we noted that the conditions in Res04, 05 & 06 are grassy lawn type area that appear to have been mowed and maintained with no hydromorphic vegetation. Res02 (behind units 36 to 38) and Res03 (behind Units 25 to 35) appear to have a less grassy, more meadow type of vegetation with less maintenance and areas of hydromorphic vegetation (predominately cat tails). These basins were designed as infiltration basins with a maximum captured depth of 6" (for infiltration).

From a comparison of the information on the As-Built Plan vs the approved design plans for these two basins, it appears that at least Res03 has not been graded as proposed. This grading may have created pockets in the basin where silt has settled and created conditions favorable to the growth of hydromorphic vegetation.

To resolve this issue, we suggest the following:

- The Engineer should obtain As-Built elevation information for the Brentwood StormTank Units for Res02 & 03.

Comment NOT Satisfied. W&S states that the information on the underground installations was not provided to their firm. Even though the installations were reportedly overseen by the manufacturer's representative there appears to be no as-built information for these systems.

- Using this information along with the ground contours, the Engineer should prepare a table of storage vs elevation for each of these basins and compare the available storage vs the storage shown on the information submitted to and approved by the LCC when the design of these basins was revised.

The information provided indicates that the available storage volumes for Res02 are about 18% less than shown on the proposed plan at all elevations. The available storage volume in Res03 is 28% less at elevation 128 and 18% led at elevation 130. The numbers for RES03 included storage below elevation 126.5 which was the previous bottom of the basin and these areas appear to be the areas that seem to retain water so in our opinion these areas should be filled to elevation 126.5 (after the removal of accumulated silt) and the volumes recalculated.

- The Engineer should prepare a revised HydroCAD model for these two basins and compare the results of this model with the results of the model that was approved for the design.

Lynnfield Conservation Commission, c/o Ms. Emilie Cademartori, Director of Planning and Conservation
Re: **UPDATED** Review of Request for a Certificate of Compliance
Windsor Estates, MADEP File No. 209-0422
525 Salem Street, Lynnfield, MA
April 14, 2021, Page 7 of 9

- The Engineer should prepare an enlarged exhibit showing any necessary changes to the basins resulting from the analysis and identifying the localized low points (particularly within Res03). We suggest that the silty material in these low points be removed and replaced with gravel fill and 6" of sandy loam and the areas reseeded. The work should be done by hand or using rubber-tired landscaping type machinery to minimize disturbance.

The Engineer needs to explain why the As-Built runoff used in the HydroCAD calculations is less than used in the last revised calculations for RES02. Also, since the peak runoff for RES03 increases compared to the proposed (+14% for the 2 & 200 year storms and +0% for the 10 year storm), the Engineer needs to update the total proposed peak runoff for the discharge in this direction to indicate the new values vs existing. The Engineer also needs to provide his HydroCAD model for review..

- If during the investigation it is discovered that the infiltration rate of the natural material is less than used in the design, additional measures should be proposed to satisfy the infiltration requirements for the project.

No soils information for the two low spots was provided.

11. The As-Built Plan does not show any of the roof drainage recharge system piping, overflow piping and splash blocks and observation ports. All of these elements are shown on the approved design plans and were to be built as part of the systems. Were these elements constructed? If so, they need to be shown on the As-Built Plan so that the systems can be properly maintained. If they were not constructed, they need to be installed so that the system can be properly maintained. No elevations are shown on any of the roof drainage infiltration systems and their locations are noted as approximate. What documentation is available to show that these systems were built in accordance with the approved design?

Comment NOT satisfied based on the As Built Plan submitted. Roof drain systems are shown based on the design plans but are not as-built and no elevations or cleanouts/access ports are shown.

A review of the Windsor Estates Certificate of Compliance discussion on the recording of the February 18, 2020 Lynnfield Conservation Commission meeting identified the following items remained to be provided:

2/28/20 #1 W&S to provide the Certification listed under Item #3a of the Linden Engineering letter dated February 7, 2020 along with a list of differences or deficiencies.

Comment satisfied. The Applicant's Engineer's letter dated January 4, 2021 meets this requirement.

2/28/20 #2 W&S to provide a revised and updated as-built plan with the additional/missing information listed in Item #3b of the Linden engineering letter dated February 7, 2020 as discussed at the meeting.

Comment NOT FULLY satisfied. See Comment on the As-Built Plan under #3B above.

Lynnfield Conservation Commission, c/o Ms. Emilie Cademartori, Director of Planning and Conservation
Re: **UPDATED** Review of Request for a Certificate of Compliance
Windsor Estates, MADEP File No. 209-0422
525 Salem Street, Lynnfield, MA
April 14, 2021, Page 8 of 9

2/28/20 #3 W&S to prepare a revised Operations and Maintenance manual for the project conforming to the requirements of the 2008 Massachusetts storm water regulations. This revised O&M shall include a plan of the storm water elements of the project and shall specifically address those elements installed as part of the project along with snow storage areas (see Items 4 & 7 of the Linden engineering letter dated February 7, 2020).

Comment NOT FULLY satisfied. A revised O&M Plan was submitted; however, we have the following comments:

- **The O&M should include Stormceptor's printed instructions for cleanout and maintenance so that the Contractor does not damage the fiberglass insert.**
- **The O&M does not include any maintenance directions for the roof drainage systems.**
- **The O&M should include a reporting form listing all structures (with a number and the numbers should be shown on the accompanying plan) with space for showing the required frequency of maintenance and recording the dates the maintenance was performed..**

2/28/20 #4 The developer for the project shall provide the LCC with one hard copy of the condo documents; (see Item 5 of the Linden engineering letter dated February 7, 2020).

Comment NOT Satisfied based on a conversation with the LCC Director. No hard copy of the documents has been received by the LCC.

2/28/20 #5 The condominium Association shall provide a letter to the LCC indicating they are aware of the requirements of the Order of Conditions for the project.

Comment NOT satisfied based on a conversation with the LCC Director. No written documentation has been provided.

2/28/20 #6 The erosion controls near unit number 35 are to be reviewed and if appropriate removed.

The LCC and/or staff should review this during your site visit.

2/28/20 #7 W&S to provide the information and answers to the questions and issues outlined under Item 10 of the Linden engineering letter dated February 7, 2020.

Comment NOT FULLY satisfied. See Comments under #10 above.

2/28/20 #8 The Owner is to provide a keyed plan for the photographs of the roof drainage systems installed on the property along with all the photographs. The owner is to verify that all the strainers have been installed on the gutters for the project.

Comment NOT Satisfied based on a conversation with the LCC Director. Some photographs were provided but they were not readily identified, and they were not keyed on a plan.

Lynnfield Conservation Commission, c/o Ms. Emilie Cademartori, Director of Planning and Conservation
Re: **UPDATED** Review of Request for a Certificate of Compliance
Windsor Estates, MADEP File No. 209-0422
525 Salem Street, Lynnfield, MA

April 14, 2021, Page 9 of 9

Please feel free to contact us if you have any questions regarding our review and comments.

Very truly yours,

LINDEN ENGINEERING PARTNERS, LLC



William A. Jones, Sr. Partner



Richard G. Cutts, P.E., President