



**MILLENNIUM ENGINEERING, INC.**  
*Land Surveyors and Civil Engineers*

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December 21, 2021

Methuen Engineering Department  
City Hall, Searles Building  
41 Pleasant Street  
Methuen, MA. 01844

Attn: Stephen Gagnon, Engineering Dept.

Re: YWCA Residences at Ingalls Court, Methuen, MA Response to Comprehensive Permit Review provided by Methuen Engineering Department, dated December 14, 2021

Mr. D'Agostino,

The following provides our response to peer review comments referenced above and in response to our Zoom Conference Call on December 20, 2021. We have included the peer review comments and our response to facilitate the Commission's review.

<i>Comment / Response</i>	
<b>Site Plan Review</b>	
<b>Comment 1:</b>	<i>The zoning table on sheet 1 of the plan set indicates some zoning dimensional requirements will not be achieved or will be exacerbated due to the proposed construction.</i>
<b>Response:</b>	We are requesting zoning relief as part of the Comprehensive Permit.
<b>Comment:</b>	<i>Comment addressed.</i>
<b>Response:</b>	<b>No response required.</b>
<b>Comment 2:</b>	<i>The phase I plan indicates 2 buildings are to be connected to one sewer service connection. Chapter 14 article II D. of the Municipal code requires every building have separate sewer connection.</i>
<b>Response:</b>	The existing sewer service for the Element Care building will remain in place and a new service is proposed for the Phase 1 building. A new sewer service will be provided for the Phase 2 building.
<b>Comment:</b>	<i>The plan depicts a 6" diameter PVC sewer service entering Lot A from Lot C. A 6" diameter pipe is considered a service connection, consequently, is not suitable to service both buildings.</i>
<b>Response:</b>	<b>We understand the question of having multiple buildings on one service, it is our opinion that the 6" sewer line is adequate for this use. The two buildings are connected and are only considered to be separate for phasing and funding purposes. We have agreed to investigate the size of the main downstream of the location of the Nevins building and Element Care connections.</b>



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<i>Comment 3:</i>	<i>A summary of necessary easements should be provided and depicted on the plan set i.e., Access, sewer, water, drainage, parking.</i>
<i>Response:</i>	All easements will be shown on a final plan set prior to the issuance of a building permit.
<i>Comment:</i>	<i>I recommend all easements be depicted and secured prior to approval as this issue could cause significant delays in securing permits.</i>
<i>Response:</i>	<b>The anticipated easements that will be required include Access between all lots, shared parking, utility easements, and maintenance easements. A final plan showing all easements will be provided prior to the issuance of a building permit.</b>
<i>Comment 4:</i>	<i>All utilities should be depicted for phase I &amp; II of the project.</i>
<i>Response:</i>	The current plan depicts all utilities.
<i>Response:</i>	<b>No further comment was issued.</b>
<i>Comment 5:</i>	<i>Massachusetts DEP regulations require where a water main services a fire hydrant the main shall be a minimum 8" diameter. The plan set should be revised accordingly.</i>
<i>Response:</i>	This project is not proposing any new hydrants. The water service for the project will be taken from Granit Street and connect to both Phase 1 and Phase 2 Buildings.
<i>Comment:</i>	<i>The plan should be revised to provide a hydrant at the end of the water main. Typically, a dead-end water main, such as proposed, would terminate with a hydrant to provide the ability flush the main after construction and to address any future water quality issues. Also, the plan does not depict a connection to an existing main on Granite St. The plan should be revised to depict the existing mains in Granite Street and the proposed connection with appropriate valving.</i>
<i>Response:</i>	<b>The size and approximate location of the water mains in Granite Street have been added to the plans and more detail on the connections has been provided. We have also proposed a connection to the existing water main on Lot C to better provide looped water mains throughout the site. No new hydrants are proposed.</b>
<i>Comment 6:</i>	<i>Egress doors should be depicted on the plan set.</i>
<i>Response:</i>	The current plan set does depict the egress doors.
<i>Comment:</i>	<i>It appears one is missing at the east end of Lot A building.</i>
<i>Response:</i>	<b>The end of the building on Lot A has an open garage entrance but no egress door. We have added the egress door to the west of the connection as was discussed.</b>
<i>Comment 7:</i>	<i>The plan set depicts stormwater runoff generated on lot A directed to an infiltration facility on lot C and vice versa. Is it possible to contain the stormwater runoff and the infiltration facilities on their respective lots to simplify easements and maintenance obligations?</i>
<i>Response:</i>	Due to the grades and existing drainage systems in place, it is not possible to separate the drainage systems by lot.
<i>Comment:</i>	<i>Operation and Maintenance plan for each facility</i>
<i>Response:</i>	<b>A separate O&amp;M Plan will be provided for each facility prior to the issuance of a Building Permit.</b>
<i>Comment 8:</i>	<i>The Plan does not depict any drainage facilities for lot B and the west side of Lot A.</i>



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Response:	The Lot B and west side of Lot A are included in the stormwater management plan and drainage design.
<b>Comment:</b>	<i>The plan does not provide a drainage system to collect the stormwater on Lot B and the west side of Lot A.</i>
<b>Response:</b>	<b>The stormwater system has been designed for the runoff from the entrance on Lot B to flow towards Lot A and be collected by catch basins and directed into the infiltration systems. The west side of the buildings will be graded to allow runoff to flow from north to south towards the Spicket River.</b>
<i>Comment 9:</i>	<i>Final retaining wall design should be provided.</i>
Response:	The Final retaining wall design will be included with building permit application set.
<b>Comment:</b>	<i>Depending on the wall design, several other issues come into play such as is a guardrail required? Is a fence required? Will the wall construction effect the proposed water main? Will the access road be closed during construction?</i>
<b>Response:</b>	<b>Final wall design and guardrail designs will be provided prior to the issuance of a Building Permit. Every effort will be made to minimize the access drive closure time.</b>
<i>Comment 10:</i>	<i>On page 7 of the plan Set, general notes 12 &amp; 13 should be edited to strike the second sentence of each note.</i>
Response:	The notes will be revised as requested.
<b>Comment:</b>	<b>Notes have not been revised.</b>
<b>Response:</b>	<b>The notes have been revised accordingly.</b>
<i>Comment 11:</i>	<i>The plan set depicts an existing water main on the south side of the building on lot C. The proposed water main from granite street. The existing and proposed water mains should be connected to provide redundant water supply connections.</i>
Response:	A connection to the water line at parking the parking area between Element Care and Nevins will be added to the plans prior to the issuance of a building permit. .
<b>Comment:</b>	<b>The water connection has not been provided on the plan set.</b>
<b>Response:</b>	<b>The water connection has been added to the plan set.</b>
<i>Comment 12:</i>	<i>Just South of the subject site the city's 16" water transmission main was disconnected due to construction activities. This main should be reconnected as an offsite improvement.</i>
Response:	This work is unrelated to the proposed project and cannot be a requirement of approval.
<b>Comment:</b>	<b><i>The project will significantly increase the demand on the dead end main in Granite St. The suggested off-site improvement would provide abundant water supply in this area, at full build out of this project. If the Applicant is not agreeable to the suggested work, at a minimum, fire flow test demonstrating sufficient pressure and volume must be provided.</i></b>
<b>Response:</b>	<b>A note has been added to the plans requiring a flow test prior to a Building Permit being issued. A 16" Main offsite connection will not be provided.</b>
<i>Comment 13:</i>	<i>The Traffic Impact Assessment (TIA) indicates access to the site is from Ingalls Ct. There does not appear to be an existing or proposed connection to Ingalls Ct. The TIA should be revised accordingly.</i>



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<b>Response:</b>	The Traffic Impact Statement will be revised to clarify the access to the site.
<b>Comment:</b>	<i>A revised TIA was not provided to me to review.</i>
<b>Response:</b>	The TIA has been revised to clarify that access is not off Ingalls Court but rather a driveway that is accessed from Broadway.

**New Items**

<b>Comment 1:</b>	<i>Pipe end treatment, either headwalls or flared end section, should be provided for the drainage discharge.</i>
<b>Response:</b>	Flared ends are proposed on any new pipe discharged. A detail has been added to the plan set.
<b>Comment 2:</b>	<i>Are floor drains proposed for the parking garage? If so MDC gas trap(s) must be provided. None are depicted in the plan set.</i>
<b>Response:</b>	Floor drains are proposed for the garages and will be part of the Plumbing Design Plan set which will be provided prior to the issuance of a Building Permit.
<b>Comment 3:</b>	<i>Millennium's response to TEC's peer review letter indicates the infiltration rate for the infiltration have been revised. Revised drainage calculations should be submitted for review.</i>
<b>Response:</b>	A revised Stormwater Management Report has been submitted along with this submittal.

We trust this response letter provides the necessary information for the Board's consideration of the request for completeness. If you have any questions or comments, please feel free to contact our office at your convenience.

Sincerely,

Millennium Engineering, Inc.

James Melvin, P.E.  
Project Manager

w/ Attachments

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