

July 21, 2022

Peter Lowitt
Director / Land Use Administrator
33 Andrews Parkway
Devens, MA 01434

**Subject: 57 Jackson Road & 75 Jackson Road
Level 2 Applications
Response to DEC Review Comments**

Dear Mr. Lowitt,

Highpoint Engineering, Inc. has received Devens Utilities and MassDevelopment review comments regarding the Level 2 application for 57 – 75 Jackson Road. Highpoint has reviewed the comments and revised the site development plans and reports accordingly. Please refer to the enclosed documents relative to this Response to Comments:

1. Email from Onix Castro to Neil Angus dated June 29, 2022;
2. Email from Mark Cohen to Neil Angus dated June 24, 2022 regarding 57 Jackson Road;
3. Email from Mark Cohen to Neil Angus dated June 24, 2022 regarding 75 Jackson Road;
4. Email from Peter Lowitt to Doug Hartnett and Julie Farrer dated July 8, 2022.

Original comments are shown in *italics* followed by Highpoint's responses below in **bold**.

Email from Onix Castro to Neil Angus dated June 29, 2022:

1. *An "Outlet Control Structure (OCS)" must be added on the outlet run connecting to "Head Wall #2 (HW #2).*

Response: The outlet control for each subsurface infiltration system is achieved through the discharge pipe manifold and distribution design. An additional outlet control structure at the end of the line will surcharge the on-site pipes and infiltration systems. Mr. Castro later agreed via email that this was not required.

2. *We suggest that the "Area Drain" by building perimeter along Jackson Road and Givry Street, should be treated with a "Water Quality Unit (WQU)" before entering the "Stormwater Basin" System.*

Response: All area drains discharging to HW #1 involve clean stormwater runoff from landscaped areas and footpaths. No water quality and TSS removal is required for this area.

3. *Corrugated Metal pipes are known to discompose with time and cause problems later on. We recommend using up to date top of the line corrugated plastic pipes.*

Response: Corrosion of corrugated metal (CM) pipes often occurs due to salt and other contaminants that infiltrate through soils to the top of the pipes. The CM pipes are located below asphalt paving, which creates a barrier to untreated stormwater runoff migrating vertically through the soil column into the system. Proprietary water quality devices and lined rain gardens provide a minimum of 80% TSS removal prior to any stormwater entering the system. Therefore, stormwater collected within the CM pipes should have a negligible contributing effect on pipe corrosion.

4. *Please call out "Outlet Control Structure(s) (OCS)" and any other stormwater product used herein based on the site details (pages: C800-C805).*

Response: Outlet controls are built into the corrugated metal pipe systems manufactured by Contech via a series of orifices at a specific elevation that overflow to a drain manhole, similar to the systems installed at 33 – 45 Jackson Road. No outlet control structures are proposed as part of this project.

5. *All stormwater on site must be treated before entering the "Stormwater Basin" System.*

Response: All stormwater from paved areas with vehicular traffic is treated by rain gardens or proprietary water quality devices prior to recharge per MassDEP and Devens CM Stormwater Regulations.

5. *Some grading comments (see attached PDF – page 2 (C500)).*

Response: The elevation on the El. 334 contour interval has been corrected. A spot grade has been added where noted on the Plans. Please see responses to questions 1 and 2 for responses to other notes on markup.

Email from Mark Cohen to Neil Angus dated June 24, 2022, 11:36 AM, regarding 57 Jackson Road:

A. DWG. C600 – UTILITY PLAN

General Comments:

1. *Proposed work for 57 Jackson Rd site is shown in bold lines but work on adjacent site at 75 Jackson Rd is shown in faint lines on the same plan, even though utility lines continue through both sites. This is confusing. Utility work between the two sites should be coordinated and shown fully on both sets of plans where utilities cross from one site to the other.*

Response: The sites have been divided for permitting purposes. After permitting, the two sites will be incorporated into a single plan set.

2. *North arrow and graphic scale is not included on plan but should be.*

Response: These have been added to the plans.

Water:

1. *The 12" water main that traverses the site from east to west and is to be relocated, is a critical Devens water main that serves many customers. The details for this pipe, such as location, pipe diameter, and existing valve locations, are not adequately called out on the plan. In fact, the required insertion valve to be installed is not even called out on this plan but is called out on the 75 Jackson Rd utility plan. This is more evidence of the confusing separation of work shown on the two sets of plans.*

Response: The labels were hidden due to a drafting issue and have been restored on the plan.

Because of the lack of existing water valves on this critical 12" water line, it is paramount that the insertion valve called for in the northwestern corner of the site (and shown on the 75 Jackson Rd utility plan but not on the 57 Jackson Rd utility plan) be installed before any other work be performed that could impact the existing 12" water main. And, because insertion valves in 12" pipes often don't result in a total shutdown of flow, a second 12" gate valve should be installed a short distance from the insertion valve in the new pipe to be installed on the site. This, hopefully, will allow us to backfeed downstream customers while the remainder of the water main is being relocated on site.

Response: The insertion valve has been added to the plan. A nearby water gate is proposed near the new connection.

2. *Near the southeastern edge of the proposed building, a callout says to connect a new 8" water main to an existing 8" water main at the edge of the driveway that provides access to the 53 Jackson Road site. Connecting at that point will leave a short stretch of 8" cast iron water main in service across that driveway. Work done for the 45 Jackson Rd site brought new 8" ductile iron pipe (DIP) up to the southern edge of that driveway, with the intention of replacing the remainder of the cast iron pipe (CIP) across the driveway when 57 Jackson Rd was constructed. The new 8" water main should be extended to the southern side of the driveway to connect to the 8" DIP and replace this section of CIP so only DIP will remain in service.*

Response: The water line has been revised to connect to the south of the 53 Jackson Road driveway.

3. *A new water main is shown being installed to the Amenity building but the means of connecting that pipe to the 12" water main routed along Jackson Rd, and the pipe size and material are not shown but should be.*

Response: Labels have been added on the plan.

Sewer:

4. *The plan calls for relocating our active 10" sewer pipe that traverses the site. This pipe serves several customers. Service to these customers must be maintained at all times. New sewer pipe and manholes should be installed, tested, and prepared to be put into service before impacting the existing sewer line to minimize any disruption to our customers. This may require bypass pumping of wastewater flows during the switchover from the existing to the new sewer.*

Response: These comments have been added to the Notes.

2. *Proposed SMH #7 is indicated to be a "Drop Over" manhole. Is this the same as a doghouse manhole, which is constructed over the existing sewer pipe? If so, I didn't see a detail in the plans to indicate how this should be constructed. Such a detail should be included in the plans. As an example, I have attached a typical doghouse manhole detail. This is provided for informational purposes only, and is not intended to be exactly what is required.*

Response: A drop over manhole detail has been added to the plans.

B. DWG. C701 – SITE DETAILS

1. *Detail A1 calls for gate valves and hydrants to open right. This does not meet Devens standards. All gate valves and hydrants shall open left (counterclockwise).*

Response: This detail has been revised.

C. LANDSCAPING

1. *General Comment: Trees should not be planted within 5' of underground utility lines and, if possible, 10' horizontal clearance is preferred.*

Response: A note has been added to the Utility Plans.

Email from Mark Cohen to Neil Angus dated June 24, 2022, 2:45 PM, regarding 75 Jackson Road:

A. DWG. C200 – EXISTING CONDITIONS

1. A gas easement is shown on the Givry Street side of the site just north of Jackson Road. This easement appears to correspond to the location of a 2" gas line shown on the Devens GIS that extends into the site and was supposedly cut and capped a short distance into the site. I've included a screenshot below from the Devens GIS that shows the location of that gas line.

Jim Verner, do we have any records that show where this gas line was cut and capped and whether the portion on the site is still live? If not, is this something we could get NatGrid to determine if it is still live?

Response: The record location has been added to the Site Preparation Plan along with notes to confirm the location and coordinate with National Grid.

3. A 6" water stub that extends into the site off Jackson Rd just north of DMH 7199 appears to be shown on the plan but is not identified. The screenshot below also shows this 6" stub. If this the line shown on the plan, it should be identified as such.

Response: The proposed hydrant is now connected to the stub. Notes have been added to the Utility Plan.

B. DWG. C600 – UTILITY PLAN

General Comments:

1. Proposed work for 75 Jackson Rd site is shown in bold lines but work on adjacent site at 57 Jackson Rd is shown in faint lines on the same plan, even though utility lines continue through both sites. This is confusing. Utility work between the two sites should be coordinated and shown fully on both sets of plans where utilities cross from one site to the other.

Response: The sites have been divided for permitting purposes. After permitting, the two sites will be incorporated into a single plan set.

4. I didn't see a scale on the plan. It should be added.

Response: A scale has been added to the plan.

Water:

1. The 12" water main that traverses the site from east to west and is to be relocated, is a critical Devens water main that serves many customers. The details for this pipe, such as location, pipe diameter, and existing valve locations, are not adequately called out on the plan.

Response: These details have been added to the plan.

Because of the lack of existing water valves on this critical 12" water line, it is paramount that the insertion valve called for in the northwestern corner of the 57 Jackson Road site (and shown on the 75 Jackson Rd utility plan but not on the 57 Jackson Rd utility plan) be installed before any other

work be performed that could impact the existing 12" water main. And, because insertion valves in 12" pipes often don't result in a total shutdown of flow, a second 12" gate valve should be installed a short distance from the insertion valve in the new pipe to be installed on the site. This, hopefully, will allow us to backfeed downstream customers while the remainder of the water main is being relocated on site.

Response: The insertion valve has been added to the plan. A water gate is proposed on the new main.

2. A 12" tapping sleeve is called for on the 12" water main that traverses the site near Jackson Rd. Rather than installing a tapping sleeve, if a good shutdown of the 12" main can be effected via the proposed insertion valve and a 2nd gate valves as described above, proponent should consider cutting the 12" main and connecting the new pipe via a new 12" gate valve directly to the cut end of the pipe. We can discuss these recommendations in more detail with the proponent if requested to try to clarify if necessary.

Response: The plans have been revised per the recommendation.

3. A 12" x 6" tapping sleeve on the 12" water main along Jackson Rd is shown south of Givry Street. The 6" water line connected to the tapping sleeve would serve a hydrant adjacent to the proposed building. This tap appears to be very close to where a 6" water stub was left to serve this site when the 12" water main was installed along Jackson Rd circa 2001. See the screenshot below for the location of this stub. The proponent should consider using this stub to serve the hydrant rather than installing another tap on the 12" line. Field investigation during construction can determine if the 6" gate valve and 6" pipe are in good condition and can be used. FYI, a 10" water stub that was left circa 2001 to serve what is now the 39 Jackson Rd site was recently found to be functional and is being used to serve the 39 Jackson Rd site.

Response: The hydrant service line has been connected to the water line and notes have been added to this effect.

4. The callout on the plan for the 12" insertion valve to be installed says to "connect to existing 12-inch service with insertion valve." The insertion valve is not really how the connection would be made and the 12" pipe is a main, not a service. Recommend changing wording to something like "install 12-inch insertion valve in 12-inch water main." Also, as mentioned above, given the criticality of the existing 12" water main that is to be relocated, a 2nd gate valve should be installed in the new 12" water main section a short distance from the insertion valve to try to provide a good shutdown of the pipe.

Response: The labels have been revised and a gate valve was added to the plans.

Sewer:

1. The plan calls for relocating our active 10" sewer pipe that traverses the site. This pipe serves several customers. Service to these customers must be maintained at all times. New sewer pipe and manholes should be installed, tested, and prepared to be put into service before impacting the existing sewer line to minimize any disruption to our customers. This may require bypass pumping of wastewater flows during the switchover from the existing to the new sewer.

Response: These comments have been added to the Notes.

2. Proposed SMH #7 is indicated to be a "Drop Over" manhole. Is this the same as a doghouse manhole, which is constructed over the existing sewer pipe? If so, I didn't see a detail in the plans to indicate how this should be constructed. Such a detail should be included in the plans. As an example, I have attached a typical doghouse manhole detail. This is provided for informational purposes only, and is not intended to be exactly what is required.

Response: A drop over manhole detail has been added to the plans.

C. DWG. C801 – SITE DETAILS

1. Detail A1 calls for gate valves and hydrants to open right. This does not meet Devens standards. All gate valves and hydrants shall open left (counterclockwise).

Response: This detail has been revised.

D. LANDSCAPING

1. General Comment: Trees should not be planted within 5' of underground utility lines and, if possible, 10' horizontal clearance is preferred.

Response: A note has been added to the Utility Plans.

Email from John Marc-Aurele to Neil Angus and Peter Lowitt dated July 8, 2022:

1. *Final site configuration/grading needs to provide access to the forebays of the municipal detention pond for general access and maintenance. As it currently stands there is minimal room between the bottom of the retaining wall and the slopes into the forebay. This needs to be addressed prior to issuing the stormwater connection approval letter.*

Response: A 10' wide maintenance access path is proposed within the stormwater maintenance easement controlled by MassDevelopment. A new drainage outfall and associated headwall for the site discharge to one of the Hospital Road Pond forebays is reconstructed to provide the 10' maintenance path.

2. *Approval to connect to the municipal stormwater will include the standard provisions (draft attached)*

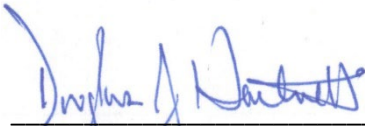
Response: Highpoint takes no exceptions to any of these provisions.

3. *Please have KSP show the new electric duct which will be providing power to the site from the Hospital Rd. sub-station. We had discussed a possible route but I'd like to see it on paper. They may need to add another sheet or add an insert but they should show the FULL extent of the new duct bank and all proposed structures along with dimensions (3D) of both.*

Response: An area electrical plan is being prepared and coordinated with the electrical engineer and Devens Utilities for primary electric service to the Project. The final primary electric routing within the local area road network and/or land controlled by MassDevelopment will be reviewed with Devens Engineering prior to construction.

Thank you for your review of the proposed project. If you have additional questions or comments, please feel free to call or email at any time.

Sincerely,



Douglas J. Hartnett, P.E.
Principal



Hilde Karpawich
Project Manager