

CITY OF NEWTON  
Department of Public Works  
ENGINEERING DIVISION

MEMORANDUM

To: Council Rick Lipof, Land Use Committee Chairman

From: John Daghlian, Associate City Engineer

Re: Special Permit – *Riverside Station*

Date: May 29, 2020

CC: James McGonagle, Commissioner DPW  
Shawna Sullivan, COS DPW  
Barney Heath, Director of Planning  
Jennifer Caira, Deputy Director  
Lou Taverna, PE City Engineer  
Ted Jerdee, Director of Utilities  
Doug Valovcin, Deputy Director of Utilities  
Nadia Khan, Committee Clerk  
Neil Cronin, Chief Planner  
Michael Gleba, Sr. Planner  
Katie Whewell, Sr. Planner

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In reference to the above site, I have the following comments for a plan entitled:

Riverside Station  
Grove Street  
Prepared by: VHB Inc.  
Dated: December 9, 2019  
Revised: April 28, 2020

*Executive Summary:*

This project involves a proposed “*Smart Growth*” mixed-use development that entails construction of 10 buildings: (a hotel, multiple offices, residential, parking garage, and retail space) on 14.4 acres [627,264 square feet] parcel. The entire property is owned by the MBTA totaling 22.5 acres.

Sheet C 2.0 indicates four separate lots; three lots for the development that will comprise of the 14.4 acres and the second lot of 8.1 acres to remaining as MBTA riverside station-garage & tracks. Typically when multiple lots comprise a project site they are combined into one lot should this permit obtain approval, an Approval Not Required (ANR) plan will be needed in accordance to Massachusetts General Laws Chapter 41 Section 81P requiring the multiple lots to be combined into one lot. This plan must be recorded at the Middlesex Registry of Deeds, so that the Conditions of Approval and the Board Order runs with the consolidated property. The Engineering Division's understanding is that portions of the lot will be under a lease agreement and only the land of the future hotel is owned in the name of the applicant; the Engineering Division would request that the Law Department to comment on the standard requirement of common ownership and how the Board Order and conditions will be recorded at the Middlesex Registry of Deeds.

To properly assign legal addresses to the proposed buildings that the *U.S. Postal Service* will recognize and to help navigate emergency 911 responders, the applicant will eventually have to apply for a Definitive Subdivision plan to create a private "*named way*" so that addresses can be officially assigned by the City Engineer. The official naming of ways is via approval of the City Council.

The siting of a proposed residential building labeled '*building # 4 & a portion of #10*' are directly over an existing 48" diameter water transmission main, owned by the *Massachusetts Water Resource Authority* (MWRA). The Authority is requiring the applicant to relocate a portion of it so that the water main is completely accessible. Based on the proposed alignment soil boring investigation is required to determine if some blasting and/or hammering of ledge may be required for the relocation of the water main, and construction of some components of '*Building 1*' along the property line and Route 128. This work will require an MWRA 8M permit as well MassDOT permits.

Vehicular access is proposed from three points; the first, is an interface with *Interstate Route 95/128 & Recreational Road*; this access driveway is under negotiations with MassDOT & the Federal Highway Administration. The second access point is from a new driveway approximately 84-feet southerly from the existing driveway on Grove Street, and a third proposed access point that is an "emergency access" driveway, to deter regular use of this entry point, removal bollards are proposed along the curb cut placed between the gutterline of the road and proposed bike path. This driveway is approximately 300-feet northerly from the current driveway, sight distance for motorists is a concern as this driveway is near the curvature of Grove Street looking northerly. A stopping sight distance plan is needed to ensure adequate stopping distance is available for the posted speed limit of Grove Street. Additionally, a turning template plan will be needed to verify safe access for emergency vehicles (Fire aerial trucks & buses) to the site.

An existing 60" diameter reinforced concrete drainage pipe which transmits *Runaway Brook* [flowing east to west] from the Woodland Country Club then under Grove Street and is within a 30-foot wide City main drain easement traverses the site to the Charles River. Prior to any Building Permit being issued or construction activity, the applicants will have to conduct a Closed Circuit Television (CCTV) inspection along with a tracer unit to pinpoint the actual pipe alignment on the surface to ensure that the drain pipe is within the actual easement limits, this is needed to ensure that the proposed building foundations do not interfere with the drain pipe. The CCTV inspection must be witnessed by the Engineering Division, a copy of the video, report, alignment & easement plan shall be submitted to the City Engineer & Director of Utilities for review. Various utilities encroach this City easement, it is recommended that alternate routes be provided, otherwise license agreements will be required. Cross-sectional details are needed for utilities that transverse the culvert. The limits of the easement shall also be delineated on the site via a survey layout for confirmation.

Various portions of the proposed roadways have a 1% cross-slope; this is a relatively flat cross-slope for proper drainage; the slope should be increased to help direct sheet flow to the catch basins.

It appears that the overhead wires along Grove Street are to be placed underground along the entire frontage of this petition. The applicant needs to demonstrate that adequate electrical power supply & distribution is available for this development, since this project is in close proximity to the *Lower Falls* which recently has experienced frequent power outages, the applicant and Eversource Electric need to assure the City that adequate power is available for the demand from the site and that no negative impact will be placed on the homes or businesses in Lower Falls.

Grove Street is a Scenic Road per City Ordinance, and any tree removal, curb line modification and street modifications need to be approved by the Planning Board. The proposed sidewalks & bicycle paths that terminate at *road B* need ADA tactile warning plates ADA Solution "wet set" or equal in Federal Yellow. Will the developer clean snow and ice off the proposed sidewalk & bike path along Grove Street? It appears that the bike path towards the east of road B fades out, clarification is needed for the transition as the plan is not clear at this point.

A separate utility demolition plan is required as the site has several existing utilities that conflict with proposed building footprints, additionally detailed utility plans are needed at larger scale to determine the constructability of the utilities the 1"=40 scale is too small to determine if conflicts are expected and minimum separation distances are achievable.

The design entails natural gas services to each building, the applicant and Nation Grid need to demonstrate that the existing gas main within Grove Street has adequate capacity provide for the development and to ensure that the area is not negatively impacted.

Emergency Evacuation System:

The Riverside MBTA Station is part of the Federal & State Emergency Evacuation System, it is imperative to note that the Station access must never be hindered during construction process. The applicant and all contactors shall coordinate construction activity with the City's Emergency Response Teams.

Drainage & Environmental:

1. The Riverside site essentially has little to no stormwater controls, every catch basin discharges through a closed network of pipes directly to the City's 60"  $\phi$  pipe with little to no treatment and no control. The proposed drainage improvements will enhance both water quality and quantity exiting the site. The proposed systems meet DEP & DPW Stormwater Management Requirements. In addition to reducing volume and flow rate off the site, the proposed system reduces phosphorous loading rates that discharge to the Charles River through on-site infiltration system.
2. Further detailed profiles of each infiltration system are required, in addition to on-site soil investigation (test pits & percolation test) each recharge systems, all tests are required within 25-feet of each system and must be witnessed by the Engineering Division. As the site exists today there is a concern about the possibility of contaminated soils from railroad yard runoff, and if this is the case, how will the soils be treated prior to any infiltration systems coming online.
3. The long-term Operations and Maintenance (O&M) plan for Stormwater Management Facilities is acceptable and if the project is approved the O&M must be incorporated into the deeds; and recorded at the Middlesex Registry of Deeds. A copy of the recording instrument shall be submitted to the Engineering Division. Maintenance records shall be kept by the property owner and submitted as outlined by the O&M to the City.
4. It is imperative to note that the ownership, operation, and maintenance of the proposed drainage system and all apparenthness including but not limited to the drywells, catch basins, and pipes are the sole responsibility of the property owner(s).
5. Any overflow connection to a City drainage system, will require Pre & Post-Construction inspection via Closed Circuit Television (CCTV) and the inspection must be witnessed by the City Engineer. All overflow connections connecting to the City's 60-inch reinforce concrete pipe shall be cored by mechanical system, jackhammering will not be permitted.

6. It appears that the southwest corner of building #3 will be over the existing 10" drainpipe, the pipe needs to be re-routed, as there is no note that it is to be abandoned.
7. The proposed DMH #13 that is directly over the 60" pipe shall be a vault built around the culvert, separate design and details and requirements will be implemented by the Utilities Division, the engineer of record shall coordinate the final design with the Utilities Division. By-pass pumping maybe needed during the construction of the vault.
8. The drainpipe behind building #7 needs to be re-routed this is not shown on the plans.
9. Catch basins with Grove Street shall have Neenah R-3705 (or equal) gas trap outlets.
10. On sheets C – 9.2 & 11.4 the base for the trench drain needs a concrete base below the frost line to prevent frost heaving. Additionally, the grate shall be ADA compliant.
11. On sheet 11.4 the infiltration unit SC-740 needs to have filter fabric planed over the entire system then a 3" layer of peastone and covered with filter fabric. Additionally, inspection & cleaning out ports are needed.
12. On sheet C-11.5 the Planted Biofiltration Island the perforated pipe needs to be specified with a filter sock wrap in addition to the choker layer.
13. The proposed biofiltration basin should be relocated outside of the City's drain easement and off the 60" RC pipe, otherwise a license agreement will be needed.
14. All catch basins within the construction zone shall have temporary siltation control; installed and maintained by the contractor of record.

Construction Management:

A detailed construction management plan [CMP] is needed for this project. At a minimum, it must address the following: staging site for construction equipment, lay down areas identified for construction materials, delivery of materials, trucking routes, parking of construction worker's vehicles, phasing of the project with anticipated completion dates and milestones, safety precautions, emergency contact personnel of contractor. Excavation and shoring methodology for each building.

The CMP also needs to address any anticipated dewatering during construction, site safety & stability, any impact to abutting properties. Additionally, it must address the need to keep the Riverside Station open for commuters and navigation on the site for pedestrians, motorist, and emergency responders.

Stabilized driveway entrances are needed during construction in concert with a tire wash and mud removal to ensure City streets are kept clean, and to control dust from the site.

Since Grove Street only has an accessible sidewalk along the west side of the street, pedestrian access needs to be addressed when the undergrounding of the power and telecommunications phase of construction commences, and for the duration of construction when new curbing and sidewalks are updated. A protected (via jersey barriers) temporary 6' wide sidewalk in conformance with ADA & AAB Standards and City requirements will be required to help pedestrian navigate along Grove Street.

A site safety plan is needed which will show paths of travel for emergency vehicle access during construction. How the site will be secured during construction and after hours. The applicants shall obtain Newton Police Details during construction hours for safe passage of motorist, pedestrians, and commuters.

If the project is approved, upon completion of all utility, sidewalk & curb line improvements Grove Street shall be milled 1-1/2" - 2" deep and paved with the City's Hot Mix Asphalt specification of *Superpave*, for the entire frontage of the project site, or to the limits as determined by the DPW.

If the project is approved, the contractor of record shall arrange a Pre-construction meeting with the various City Departments involved with construction including but not limited to (Police, Fire, School Bus, ISD, DPW, Health) along with private utility companies.

Environmental:

1. Has a 21E investigation & report been performed on the site, if so, copies of the report should be submitted the Newton Board of Health and the Engineering Division.
2. Are there any existing underground oil or fuel tanks, are they to be removed, if they have been, evidence should be submitted to the Newton Fire Department, and Newton Board of Health.
3. As the total site disturbance is over an acre, a Phase II General Construction (NPDES) Permit will need to be filed with DEP & EPA. A Stormwater Pollution Prevention Plan (SWPPP) will need to be developed.

4. Are any of the proposed infiltration systems located in areas that have contaminated soils?

Sanitary Sewer:

1. The sewer mains proposed for this development will be considered as a “private sewer connection” and not a City main. Ownership and long-term maintenance shall be the responsibility of the applicant/property owner(s).
2. Detailed profiles are needed of the proposed sewer main installation, stationing and offsets for each manhole are needed starting from Sta 0+00 at the existing sewer manhole within the state highway and extending upstream to the last manhole. The profiles need to show the centerline grade of the road and all utilities within 10-feet, the pipe material must be listed, proposed slope(s), rim and invert elevations of each manhole.
3. Hydraulic capacity calculations for each section of pipe is required to justify the sizing of each run between manholes for the anticipated flows from the buildings.
4. All new sewer service(s) shall be pressure tested and videotaped after final installation is complete. All sewer manholes shall be vacuum tested in accordance to the City’s Construction Standards & Specifications. The sewer service(s) will NOT be accepted until testing is satisfactorily completed. All testing MUST be witnessed by a representative of the Engineering Division. A Certificate of Occupancy will not be recommended until this test is completed and a written report is received by the City Engineer. ***This note must be added to the final approved plans.***
5. Except for natural gas service(s), all utility trenches within the City’s right of way shall be backfilled with Control Density Fill (CDF) Excavatable Type I-E, a detail is available in the City of Newton Construction Standards Detail Book.
6. Floor drains of parking garages must be connected to the sanitary sewer via MDC gas traps details are needed.

Infiltration & Inflow: Via a separate memo.

Water:

1. The applicant shall coordinate with the Director of Utilities a quantitative analysis that demonstrates that the water demands of the proposed development will not overburden the water supply of existing infrastructure provided by the City. It shall include fire flow testing for the proposed fire suppression system for each building, exterior fire hydrants, as well as domestic demands from the entire development. The applicant must coordinate these tests with both the Fire Department and Utilities Division; representatives of each department shall witness the testing and test results shall be submitted in a written report. Hydraulic calculations shall be submitted to the Fire Department for approval. Hydraulic analysis for both domestic and fire suppression will be required via hydraulic modeling in a format acceptable to the Utilities Director.
2. The proposed alignment of the new 12" water line between buildings #3 & 4 is directly beneath a series of stairs which is not acceptable for the Utilities Division; an alternate route should be considered.
3. The developer shall install new water mains and hydrants throughout the development within their proposed "Main Street". This water main will be owned and operated by the developer, not the City as it will be considered a service connection for the entire development. This water main shall be looped and tied into the existing 12" water main in Grove Street at 2 locations, one toward the west end of the development, and one towards the east end of the development. Each tie in shall be triple gated. Master water meters and meter pits are required at each tie in location, within the development property. If it is feasible to put the master meters inside a building or a parking garage, would be acceptable. The water meters will be owned by the City. All water distribution piping and hydrants beyond the meters within the development will be owned and operated by the developer. The proposed water meter vaults or pits should be located as close as possible to the sidewalk along Grove Street, access easements to the City maybe required for these vaults.
4. The metering vaults/pits will require electric service for lights, pumps and exhaust fans that come on when the light switch is turned on. The power consumption shall be provided by the developer. All meter installed should conform with the (Automatic Meter Reader (AMR) system that the City uses; additional conduit may be needed to be installed to locate the transmitter outside of the vault. If the project is approved the developer shall arrange a meeting with the Utilities Division to work out the various components, details and requirements for water services.



5. All water connections shall be chlorinated & pressure tested in accordance to AWWA and the City of Newton Construction Standards and Specifications prior to opening the connection to existing pipes.
6. Approval of the final configuration of the water service(s) shall be determined by the Utilities Division, the engineer of record should submit a plan to the Director of Utilities for approval. Fire & domestic water service connections shall be separate dedicated services tapped from the main.
7. Any water needed during construction for dust control, or other construction activities shall be provided via a temporary hydrant meter and backflow preventor obtained from the Utilities Division.
8. Sheet C -10.1 Building #1 does not have domestic or fire suppression service connections. Water supply lines for the proposed hotel is not shown.
9. Sheet C-10.2 building #6 does not have water services shown.
10. Sheet C-10.1 building #3 the domestic and fire suppression service lines must be separate connections off the main.
11. The intersection of road "A" and Main Street has a lot of utilities converging into a tight area, detailed cross-section and/or profile(s) will be needed to ensure conflicts in utilities are avoided specifically near the new 48" MWRA trunk line.
12. An existing hydrant near the MBTA yard behind buildings # 9 &10 has a note "hydrant to remain", however it is unclear as how this hydrant will be supplied with water.
13. The hydrant detail needs to specify *American Darling "Open Right"*.

Blasting:

1. Any blasting that is expected will require a Blasting Permit [which will include a pre-blast survey and associated monitoring] from the Newton Fire Department.
2. If an on-site rock crushing operation is planned, the applicants need to address issues regarding: noise control & dust control, trucking operations, and hours of crushing operations.

### Grade Changes:

- All retaining walls over 4-feet will need a safety fence along its entire length. All retaining wall construction shall be reviewed and approved by the Inspectional Services Department.

### Building Permits and Certificate of Occupancy:

1. A project of this magnitude will obviously be started and completed in various phases; a phasing plan is needed to properly plan the issuance of various permits. It shall be required that all underground utilities be fully installed, tested, and approved by the DPW before any building permit is issued to minimize on site conflicts and activities.
2. If this project is approved each building construction will require complete Building Permits from Inspectional Services Department.

### Trash & Recycling:

- The developer shall engage private services for trash & recycling for the entire development, the City encourages that composting also be provided for the project.

### General:

1. Sheet L 1.2 indicates “Vehicular Bollard Operable” a detail is needed for this feature that is to be placed at the emergency access driveway.
2. Sheet C-7.2 shows various cross-sections for the roadway, station numbers and range need to be added to the cross-sections.
3. The mountable granite curb detail needs to be completely set in cement concrete to prevent settlement from heavy truck loads.
4. Sheet C-11.1 ADA tactile panels detail the City recommends the use of our standard ADA “Wet Set” Solutions or equal in Federal Yellow for uniformity throughout the development and along Grove Street.

5. Clarification is needed for the material that will delineate the division between the sidewalk & bike path along Grove Street. Ideally it should be a textured & reflective type of material.
6. As of January 1, 2009, all trench excavation contractors shall comply with Massachusetts General Laws Chapter 82A, Trench Excavation Safety Requirements, to protect the general public from unauthorized access to unattended trenches. Trench Excavation Permit required. This applies to all trenches on public and private property. This note shall be incorporated onto the plans
7. All tree removal shall comply with the City's Tree Ordinance.
8. Due to the total square footage of the buildings, a scale-massing model will be needed.
9. The contractor is responsible for contacting the Engineering Division and scheduling an appointment 48 hours prior to the date when the utilities will be made available for an inspection of water services, sewer service, and drainage system installation. The utility is question shall be fully exposed for the inspector to view; backfilling shall only take place when the City's Inspector has given their approval. This note should be incorporated onto the plans
10. The applicant will have to apply for Street Opening, Sidewalk Crossing, and Utilities Connecting permits with the Department of Public Works prior to any construction. This note must be incorporated onto the site plan.
11. The applicant will have to apply for a Building Permits with the Department of Inspectional Service prior to any construction.
12. Prior to Occupancy Permit being issued, an As-Built Plan shall be submitted to the Engineering Division in both digital format and in hard copy. The plan should show all utilities and final grades, any easements and final grading. This note must be incorporated onto the site plan.
13. Since this development will be phased, Certificate of Occupancy request for each separate building can be applied, however all infrastructure associated with the specific building shall be completed and acceptable to the City Engineer. This note must be incorporated onto the site plan.
14. The contractor of record shall contact the Newton Police Department 48 hours in advanced and arrange for Police detail to help residents & commuters navigate around the construction activity and the coordination of delivery trucks and materials.

15. If any changes from the original approved design plan that are required due to unforeseen site conditions, the engineer of record shall submit a revised design & stamped and submitted for review and approval prior to continuing construction.

Note: If the plans are updated it is the responsibility of the applicant to provide all City Departments [ ISD, Conservation Commission, Planning and Engineering] involved in the permitting and approval process with complete and consistent plans.

If you have any questions or concerns, please feel free to contact me at 617-796-1023