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DECEMBER 1, 2022

Katie Whewell
Chief Planner
City of Newton
Planning and Development Department
1000 Commonwealth Avenue
Newton, MA 02459

RE: Transportation Peer Review – 1135-1137 Washington Street (Newton Armory)

Dear Ms. Whewell,

As requested, BSC Group, Inc. (BSC) conducted a peer review of the Traffic Memorandum prepared by Nitsch Engineering dated September 1, 2022 for the proposed development located at 1135-1137 Washington Street (Newton Armory) in Newton, MA. The initial peer review that BSC conducted is dated November 8, 2022 and included recommendations and clarifications for the Nitsch Engineering report.

The City of Newton organized a virtual meeting with Nitsch Engineering, the developer, City of Newton personnel, and BSC Group on November 17, 2022 to discuss the initial peer review. After that meeting, Nitsch Engineering issued a revised Traffic Memorandum response dated November 28, 2022.

The purpose of this supplemental review is to either ensure that the comments submitted by BSC have been addressed or to provide further comments. Only initial comments that required a response have been included. The numbering is consistent with BSC's initial peer review data November 8, 2022.

The key findings of our review of the Traffic Memorandum are presented in the following sections. BSC's initial comments to the September 1, 2022 Traffic Memorandum are presented in normal font and BSC's second comments to the revised Traffic Memorandum are presented in **bold**.

Data Collection and Existing Traffic Conditions

2. BSC recommends collecting Automatic Traffic Recorder (ATR) data along Washington Street over a 48-hour period. This data will give a better representation of the amount of traffic along Washington Street during a typical weekday, as well as speeds along the roadway.

Second BSC Comment: No data was collected along Washington Street. Additionally, it was determined at the virtual meeting that traffic data from a nearby development could be referenced. The revised Memorandum does not make reference to any existing traffic data.

BSC still recommends incorporating either new data collection along Washington Street or reference to existing traffic data. The purpose of having the traffic data is to support the conclusions made by Nitsch that the proposed vehicle-trips will not have any impact on the roadway, as well as to better inform sight distance calculations.

4. BSC Comment: The Applicant should provide more detail regarding the public transportation options, including headways during the peak hour, as it is expected residents will utilize public transportation if they do not own a vehicle.

Second BSC Comment: The revised Memorandum includes a description of the public transportation options in the area, as well as a table showing the headways of the two (2) closest bus lines and the West Newton commuter rail station.

BSC is in agreement with Nitsch's response. As such, Comment #4 is satisfied, and no further action is required.

Existing Parking Conditions

5. BSC Comment: BSC is in general agreement with the methodology for collecting parking data in the area. BSC does recommend collecting utilization data of the Washington Street parking during either late night or early morning hours. Since this parking could potentially be used by residents of the site, overnight parking data would be beneficial to ensure there is sufficient overflow parking along the roadway.

Second BSC Comment: The revised Memorandum does not provide any utilization numbers for the parking along Washington Street.

BSC still recommends collecting utilization data along Washington Street during either late night or early morning hours. As discussed at the virtual meeting, this can be a spot study to ensure that parking is available to residents, if needed. This data is needed to confirm the availability of on-street parking for residents.

Crash Data and Safety Within the Study Area

6. BSC recommends that a safety analysis be included as part of the report. The Applicant should gather crash data for, at a minimum, the most recent three (3) years from the MassDOT website and cross-reference this data with the City of Newton crash data during the same period to confirm the list is complete.

Second BSC Comment: The revised Memorandum includes crash data from the years 2017 to 2021, compiled from the MassDOT IMPACT Crash Data Portal. There were a reported 18 motor vehicle crashes during this time period, resulting in a crash rate of 6.21 crashes per million entering vehicles (c/mev), which is approximately 78% higher than the Statewide average (3.49 c/mev).

BSC agrees with the methodology to the collect the crash data and calculating the crash rate. Although the crash rate is higher than the Statewide average, BSC believes the reconstruction and improvements along Washington Street via the Washington Street Vision Plan will improve safety along this section of Washington Street. As such, Comment #6 is satisfied, and no further action is required.

Trip Generation

9. BSC recommends the Applicant calculate the number of trips utilizing the same land use code but utilizing the given fitted curve equations rather than the average rates. BSC believes this will provide a more accurate estimate of the number of trips to and from the site. These calculations should then be compared to the ATR data collected to determine the potential increase in traffic along Washington Street.

Second BSC Comment: The revised Memorandum calculates the proposed trip generation with the fitted curve equation in addition to the average trip rates. There is no comparison of these numbers to the existing traffic volumes along Washington Street.

BSC agrees with the revised trip generation calculation utilizing the fitted curve equations. BSC still recommends comparing the revised trip generation numbers to the existing data along Washington Street to confirm there will be no impact to the roadway network.

Sight Distance

10. BSC agrees with the overall methodology for calculating the sight distances both along Washington Street and from the site driveway. BSC notes that the parking area, both at-grade and below-grade, are accessed from Armory Street, not from Washington Street. BSC recommends confirming the speeds along Washington Street utilizing the collected ATR data and reanalyzing the sight distance utilizing the measured 85th percentile speed and from the intersection of Washington Street at Armory Street.

Second BSC Comment: The revised Memorandum does not provide any speed data along Washington Street. Additionally, the Memorandum still references the site driveway as being along Washington Street.

BSC still recommends confirming the speed along Washington Street and revising the sight distance analysis utilizing the 85th percentile speed, if needed. Additionally, BSC still recommends performing the sight distance analysis from the Armory Street approach.

11. BSC also recommends the Applicant commit to the continued maintenance of any vegetation that may impact sight lines at from the site driveways.

Second BSC Comment: At the virtual meeting, the developer agreed to maintain vegetation and clear snowbanks that may impact sight lines. However, no written response has been provided.

So long as the City of Newton is agreeable to the verbal agreement to maintain vegetation and clear snowbanks that may impact sight lines, BSC is in agreement with the developer's verbal response. As such, Comment #11 is satisfied, and no further action is required.

Parking Generation

14. BSC recommends providing the data from the *Perfect Fit Parking Study* that states the demand of approximately 0.55 parking spaces per unit.

Second BSC Comment: The revised Memorandum provides the raw data from the Perfect Fit Parking Study in the appendix that shows the various sites utilized to calculate the demand of approximately 0.55 parking spaces per unit.

BSC is in agreement with Nitsch's response in providing the raw data in the appendix of the revised report and agrees that the parking demand is approximately 0.55 parking spaces per unit. As such, Comment #14 is satisfied, and no further action is required.

16. BSC recommends reconstruction of the sidewalk along the site frontage along Washington Street, as well as reconstruction of the pedestrian ramps and addition of a crosswalk across Armory Street to encourage pedestrian activity and increase safety.

Second BSC Comment: At the virtual meeting, the developer did not commit to the reconstruction of the sidewalk along the site frontage along Washington Street or the reconstruction of pedestrian ramps and addition of a crosswalk across Armory Street. Additionally, no mention is made in the revised Memorandum. BSC believes these discussions are ongoing between the developer and the City of Newton.

BSC acknowledges that this is an on-going discussion between the developer and the City of Newton. As such, BSC will default to the decision made by the City of Newton, and Comment #16 is satisfied, and no further action is required.

Site Access and Circulation

17. BSC recommends a swept path analysis be conducted to confirm vehicles will be able to access the parking area, as well as the most restrictive of the parking spaces.

Second BSC Comment: The developer, as well as Nitsch, had mentioned in the virtual meeting that swept path analyses may have already been completed. However, the revised Memorandum does not provide, or make mention of, a swept path analysis.

BSC still recommends a swept path analyses be provided to satisfy Comment #17.

BSC still recommends clarification for a few items not addressed in the revised Traffic Memorandum. Please do not hesitate to contact our office with any inquiries you may have.

Sincerely,

BSC Group, Inc.

Stephen Siragusa, M.S.
Traffic Engineer

CITY OF NEWTON
Department of Public Works
ENGINEERING DIVISION

MEMORANDUM

To: Barney Heath, Director of Planning & Development

From: John Daghlian, Associate City Engineer

Re: Comprehensive Permit – 1135 -1137 Washington Street ~ Armory Redevelopment

Date: December 1, 2022

CC: Barney Heath, Director of Planning
Jennifer Caira, Deputy Director
Lou Taverna, PE City Engineer
Katie Whewell, Chief Planner
Michael Gleba, Sr. Planner

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

Conceptual
Redevelopment West Newton Armory
1137 Washington Street
Prepared by: Nitsch Engineering
Dated: 11-15-2022

Executive Summary:

The plan set was not stamped by a Massachusetts registered Professional Engineer.

This Comprehensive application entails the demolition of the rear portion of the armory building while preserving the front headworks of the facility on a 33, 150 square foot [0.76 acre] lot. Located on the corner of Washington Street and Armory Street the site is relatively having a high point elevation at 54-feet near the intersection and sloping towards the north at elevation 44-feet. The lot is essentially all impervious surface with roof & asphalt pavement and small patches of grass.

Currently the site has essentially no stormwater control measures, the runoff from the site sheets off uncontrolled towards Armory Street, the property to the north, and west and

eventually into Cheesecake Brook. The engineer of record has designed a stormwater collection and infiltration system to capture roof & surface parking area runoff in accordance with the DEP and City of Newton Stormwater Ordinances. The proposed system will vastly improve stormwater runoff quality from the site while reducing quantity, the proposed system has an overflow connection to the existing drainpipe within Armory Street. The report indicated an Operation & Maintenance (O&M) plan, however at the time of the review it was not included, prior to the Building Permit application a complete O&M plan shall be submitted for review and approval. Once the plan is approved it shall be recorded at the registry of deeds and a copy of the recording instrument shall be submitted prior to final approval.

The original building was constructed in 1910, during demolition it is expected that asbestos and other hazardous material will be encountered the design team should prepare a remediation plan for demolition and submitted to Inspectional Services Department for approval and implementation.

In accordance with City Ordinance B-42 Section 29-158 the sidewalks along Washington Street must be updated to current standards including the pedestrian curb cut at the intersection.

The proposed sewer service appears to be crossing private property along Gerard Court, this needs to be verified prior to approval, a profile of sewer service is needed as well.

Construction Management:

1. A construction management plan is needed for this project. At a minimum, it must address the following: staging site for construction materials and equipment, parking for construction workers vehicles, phasing of the project with anticipated completion dates and milestones, safety precautions, emergency contact personnel of the general contractor. It shall also address anticipated dewatering during construction, site safety & stability, siltation & dust control and noise impact to abutters.

2. Stabilized driveway construction entrance(s) will be required for the duration of the construction which will provide a truck wash to prevent tracking of mud and silt onto City streets.

3. Catch basins within and downstream of the construction zone will be required to have siltation control installed for the duration of the project and must be identified on the site plan.

Drainage:

1. Prior to applying for a Building permit on site soil testing that will include test pit(s) and a percolation test within 25 -feet of each proposed system and percolation test(s) must be schedule and witnessed by a representative of the Engineering Division. Soil logs shall be submitted on the site plan or drainage report and shall be certified by a Massachusetts Licensed Soil Evaluator and/or Professional Civil Engineer.

2. An Operations and Maintenance (O&M) plan for the long-term maintenance of the proposed stormwater management facilities needs to be drafted and submitted for review. Once approved the O&M must be adopted by the applicant/property owner, 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.

3. It is imperative to note that the ownership, operation, and maintenance of the proposed drainage system and all appurtenances including but not limited to the drywells, catch basins, trench drains, and pipe(s) are the sole responsibility of the property owner(s).

4. The proposed overflow pipe from the site into Armory Street cannot be PVC it shall be either ductile iron or reinforced concrete pipe. The connection to the drain manhole shall via a mechanically cored hole, no jackhammering is allowed.

Environmental:

1. Has a 21E Investigation and report been performed on the site, if so, copies of the report should be submitted to the Newton Board of Health and Engineering Division.

2. Are there any existing underground oil or fuel tanks? Have they been removed, if they have been, evidence of the proper removal should be submitted to the Newton Fire Department and the Board of Health.

Sanitary Sewer & Domestic Water Service(s):

1. Existing water and sewer services to building(s) shall cut and capped at the respective mains and completely removed from the main(s) and its entire length and properly backfilled. The Engineering Division must inspect and approve this work, failure to

having this work inspected will result in delay of issuance of the new Utility Connection or issuance of a Certificate of Occupancy. *This note must be on the final plans.*

2. All new sewer service(s) shall be pressure tested in accordance to the City Construction Specifications & Standards and inspected via Closed Circuit Television CCTV inspection after installation is completed. A copy of the video inspection and written report shall be submitted to the City Engineer or his representative. The sewer service will NOT be accepted until the two methods of inspection are completed AND witnessed by a representative of the Engineering Division. A Certificate of Occupancy will not be recommended until these tests are completed to the satisfaction of the City Engineer. *This note must be on the final plans.*

3. All sanitary sewer manhole(s) shall be vacuum tested in accordance to the City's Construction Standards & Specifications, the sewer service and manhole will NOT be accepted until the manhole(s) pass the testing requirements. 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 to the satisfaction of the City Engineer and a written report of the test results is submitted to the City Engineer. *This note must be on the final plans.*

4. With the exception of natural gas service(s), all utility trenches within the right of way shall be backfilled with Control Density Fill (CDF) Excavatable Type I-E up to within 18-inches of the asphalt binder level, after which Dense Grade Gravel compacted to 95 % Proctor Testing shall be placed over the CDF. Details of this requirement is the Engineering Division website "Standard Construction Details". *This note must be on the final plans.*

5. Fire Flow testing is required for the proposed fire suppression system. The applicant must coordinate the fire flow test with both the Newton Fire Department and the Utilities Division, representative of each department shall witness the testing. Test results shall be submitted in a written report along with hydraulic calculations that demonstrate the required size of the fire suppression system, these calculations shall be submitted to the Newton Fire Department for approval, and copies give to the Engineering Division. *This note must be on the final plans.*

6. All water services shall be chlorinated, and pressure tested in accordance to the AWWA and the City Construction Standards & Specifications prior to coming online. These tests

MUST be witnessed by a representative of the Engineering Division. *This note must be on the final plans.*

7. Approval of the final configurations of the water service(s) shall be determined by the Utilities Division, the engineer of record shall submit a plan to the Director of Utilities for approval. *This note must be on the final plans.*

Infiltration & Inflow:

- Shall be addressed in a separate memo.

General:

1. An MDC gas trap detail is needed for the underground parking's floor drains, this detail is available on the Engineering Division website.

2. The tops of the infiltration units need to be covered with filter fabric, a 3-inch-thick layer of peastone and covered again with filter fabric.

3. The detail for the vertical granite curb needs to indicate that the curb must be set in Class B concrete not gravel.

4. All trench excavation shall comply with Massachusetts General Law Chapter 82A, Trench Excavation Safety Requirements, and OSHA Standards to protect the general public from unauthorized access to unattended trenches or excavations. Trench Excavation Permit is required prior to any construction. This applies to all trenches on public and private property. *This note shall be incorporated onto the final plans.*

5. The proposed underground electrical and telecommunications will require a Grant of Location application, as these are laterals, the DPW Commissioner has the authority to approve this type of application.

6. All tree removal shall comply with the City's Tree Ordinance.

7. The contractor of record 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 services and drainage system installation. The utility in question shall be fully exposed for the Inspector to view, backfilling shall only take place when the City Engineer's Inspector has given their approval. *This note shall be incorporated onto the final plans.*

8. The applicant shall apply for a Building Permit with the Inspectional Services Department prior to ANY construction.

9. Before requesting a Certificate of Occupancy, an As Built plan shall be submitted to the Engineering Division in both digital and paper format. The plan shall show all utilities and final grades, any easements and improvements and limits of restoration. The plan shall include profiles of the various new utilities including but not limited to rim & invert elevations (City of Newton Datum), slopes of pipes, pipe materials, and swing ties from permanent building corners. The as built shall be stamped by both a Massachusetts Registered Professional Engineer and Registered Professional Land Surveyor. Once the As built plan is received the Engineering Division shall perform a final site inspection and then make a determination to issue a Certificate of Occupancy. *This note shall be incorporated onto the final plans.*

10. All site work including trench restoration, sidewalk, curb, apron and loam border (where applicable) shall be completed before a Certificate of Occupancy is issued. *This note shall be incorporated onto the final plans.*

11. The contractor of record shall contact the Newton Police Department 48-hours in advanced and arrange for Police Detail to help residents and commuters navigate around the construction zone.

12. If any changes from the final approved design plan that are required due to unforeseen site conditions, the contractor of record shall contact the design engineer of record and submit revised design and stamped full scale plans for review and approval prior to continuing with 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.