

September 30, 2016

Ms. Jean Delios  
Assistant Town Manager  
Town of Reading  
16 Lowell Street  
Reading, MA 01867-2685

RE: Nitsch Project #11455  
Civil Engineering Peer Review  
40B – Reading Village  
Reading, MA

Dear Ms. Delios:

Nitsch Engineering has initiated a civil engineering peer review of revised materials related to a Comprehensive Permit Application (M.G.L. Chapter 40B) submitted to the Town of Reading (the Town) Zoning Board of Appeals by MKM Reading, LLC (the Applicant). The revised materials reviewed by Nitsch Engineering included the following items:

1. Digital copy of a drawing set entitled “Proposed Apartment Building”, Drawings 1-9, prepared by DeCelle-Burke and Associates, Inc., dated September 12, 2016 (the Drawings).
2. Digital copy of three (3) sketches related to automobile access, trash removal, and bicycle access (1 sketch each), prepared by Decelle-Burke and Associates, Inc., dated September 12, 2016 (the Sketches).

The proposed project site (the Site) is located at the intersection of Prescott Street and Lincoln Street in Reading, Massachusetts. We understand that the Drawings that have been submitted to the Town reflect a project alteration associated with acquisition of an additional parcel. We assume that other aspects of the application remain in place, including several waiver requests as noted in our comments below. Based on information included on the Drawings, we also understand that the project density has been reduced from 77 dwelling units to 72 dwelling units.

As noted in our review letter dated March 10, 2016, the project is subject to the Town Zoning Bylaws; and by reference, the Reading Site Plan Review Guidelines, Regulations, and Standards; and the DEP Stormwater Standards. The purpose of Nitsch Engineering’s review was to evaluate the submitted materials in terms of content and technical compliance of site construction elements with the foregoing municipal bylaws and regulations, and standard engineering practice. Nitsch Engineering’s peer review did not include evaluation of the project in terms of dimensional compliance of the building, its layout and construction, or resulting off-site traffic impacts. Our current review was also limited to evaluation of the project in terms of the information presented on the Drawings only. No revised narrative or calculation materials were provided by the Applicant.

#### ZONING COMPLIANCE, PARKING, ACCESS, GRADES

1. Based on the proposed use, the project is required to provide one and one-half parking spaces per dwelling unit per the parking requirements in the Town Zoning Bylaw. The 72 proposed dwelling units correspond to a total parking requirement of 108 parking spaces. The Applicant has proposed a total of 73 parking spaces. The Applicant had previously requested a waiver from this requirement. We also note that the Drawings indicate a total of 74 parking spaces, which varies from our count of the spaces shown.
2. Based on the proposed use, the project is required to provide one loading and unloading space per 20 rental units. The 72 proposed dwelling units correspond to a total loading/unloading space requirement of four (4) 12’ x 35’ spaces. One (1) 12’ x 30’ “loading area” is indicated on the Drawings. The Applicant

had not previously requested a waiver from the corresponding number of or dimensional requirements for loading spaces. We also note that the loading area, as shown on the Drawings, does not appear to have vehicular access from a public way or from an internal vehicle access way on the Site. We recommend that the Applicant clarify the intended means of vehicle access to this area.

3. The Drawings indicate proposed modification to existing sidewalks, and proposed curb cut configurations and accessible ramp locations. Based on the spot grades provided on Drawing 6 of 8, the proposed grading condition at the vehicle access curb cuts do not comply with the corresponding accessibility requirements of 521 CMR: Architectural Access Board (AAB). We also note that an "apex curb cut" appears to be proposed at the intersection of Prescott Street and Lincoln Street. Perpendicular curb cuts are required unless certain site conditions prohibit their use. We recommend that the Applicant demonstrate that a perpendicular curb cut cannot be installed at this location in accordance with the provisions in the corresponding AAB regulations.
4. It is unclear how emergency vehicles will access the Site. We recommend that the Applicant provide confirmation from the appropriate municipal departments that the proposed project complies with emergency vehicle access requirements in terms of access routes and clearances.
5. The limit of parking and access aisles on the south side of the Site is effectively set at the property line. We recommend that the Applicant indicate whether or not any screening is proposed to provide a visual barrier and to protect the abutting residential properties from headlight glare.
6. The Drawings indicate several locations for building-mounted lighting. We recommend that the Applicant provide information related to proposed illumination levels relative to abutting residential properties.
7. The Drawings indicate a location for trash storage/receptacle. The sketches indicate an intended path for trash removal, presumably by wheeled receptacles. We recommend that the Applicant comment on the number of receptacles and frequency of trash removal needed to service the 72 proposed dwelling units.
8. The Drawings indicate several areas dedicated to snow storage. We recommend that the Applicant provide information related to anticipated landscaping in these areas and comment on whether or not proposed plantings will be affected by snow stockpiling.
9. The Drawings include proposed spot grades generally indicating slopes of finish surfaces under and around the proposed building. Based on the spot grades shown, the slope of the proposed paved surface beneath the southwesterly portion of the building, between the two area drains shown, appears to be relatively flat. We recommend that the Applicant augment the proposed spot grades in this area to demonstrate pavement pitch sufficient to facilitate surface drainage.
10. The exterior paved area surrounding the building is curbed. The pavement edge beneath the building parallel to Prescott Street, which appears to in be an open-air condition, does not appear to include a curb. We recommend that the Applicant clarify the intent of construction along this edge, and indicate whether or not a barrier to vehicle movement is proposed.

#### SEDIMENT AND EROSION CONTROLS

1. The Applicant proposes to install 25-foot long crushed stone aprons at the construction entrances for the project. We recommend that the apron length be increased to 50 feet to accommodate large

construction vehicles and that a mountable berm be included at the entrance to inhibit conveyance of sediment onto public ways.

2. Protection of existing drain inlets is not shown on the Drawings. We recommend that the Drawings be augmented to indicate all the existing and new catch basins that are to be protected, and that the Drawings include a corresponding construction detail.

#### SITE UTILITY SYSTEMS

1. Daily and peak sanitary sewage flow estimates for the development have not been provided. We recommend that the Applicant submit corresponding flow estimates for review.
2. Daily and peak water (fire and domestic) demand estimates for the development have not been provided. We recommend that the Applicant submit corresponding demand estimates and demonstrate that capacity for provision of these demands is available in the existing municipal water system infrastructure.
3. The Drawings indicate the location of a proposed pad-mounted transformer. We recommend that the Applicant comment on whether or not screening of the transformer from view from the public way is proposed.
4. The Drawings indicate that the proposed sanitary sewer service connection will be a 6-inch pipe. We recommend that the Applicant verify that a 6-inch pipe is consistent with the Uniform State Plumbing Code (USPC) requirement for service pipe diameter for the proposed buildings.
5. Several existing monitoring wells are located on the Site. We recommend that the Applicant provide information related to the wells relative to their purpose and planned disposition. We also recommend that the Applicant verify that there are no soil or groundwater contamination conditions that would preclude or be exacerbated by the implementation of the proposed groundwater recharge systems.
6. The Drawings indicate that the drainage generated by the parking surface below the building will be collected by four (4) area drains and then directed to the municipal sewer system in Lincoln Street. Because the surface parking is situated beneath the proposed building structure, collected drainage from the paved surfaces may be subject to the Uniform State Plumbing Code (USPC) regulations for Interceptors, Separators, and Holding Tanks (248 CMR 10.09). If the Town Building Division determines that the proposed parking area is classified as a "residential garage" (248 CMR 10.09.1(b).3), this system in its entirety will be subject to the USPC. As such, the number and spacing of drain inlets may not comply with the corresponding USPC code requirements. We also recommend that the Applicant augment the number of proposed spot grades shown on the Drawings to verify that drainage from all surfaces beneath the building is collected by the above system, and that runoff from all exterior surfaces is collected by the proposed storm drainage system.
7. The Drawings appear to indicate that run-off generated by the building roof areas will be conveyed to proposed recharge systems by internal roof drains. The architectural drawings previously provided by the Applicant appeared to indicate that the building will be constructed with pitched roofs. We recommend that the Applicant clarify the proposed means of conveying roof runoff to the recharge system.
8. As noted previously, the Applicant did not provide revised narrative or calculation materials for review. As such, we are unable to comment on the hydrologic or hydraulic design of the storm drainage system, or other aspects of the site utility systems as noted in items 1. and 2. in this section. We

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recommend that the Applicant provide additional information to facilitate a more complete review of the proposed site utility systems.

Several of the above comments include recommendations for the provision of additional drawing and document information. The updated information may result in the generation of additional comments once received and reviewed. We hope you find the above information useful. If you have any questions, please contact us at your convenience.

Very truly yours,

**Nitsch Engineering, Inc.**



Matthew T. Brassard, PE  
Executive Project Manager