WMC
CONSULTING ENGINEERS

87 Holmes Road
Newington, CT 06111

Phone: (860) 667-9624
Fax: (860) 665-1551

October 4, 2021

Mr. James Ventres
Land Use Coordinator
Town of East Haddam
7 Main Street – P.O. Box – K
East Haddam, Connecticut 06423

Re: Lofts at Black Birch Country Club – Community Center Redevelopment
WMC Reference No.: 07056.30

Dear Mr. Ventres:

In regards to the above referenced project, we offer the following responses to Brian Curtis' comments dated July 8, 2021 in the order of which they were received:

A. Drainage

1. *Based on our site inspection, the current privately owned portion of Banner Road and other site access drives beginning approximately 50 feet east of the Banner Road/Banner Lane traffic circle and extending to the west, appear to only have the binder course of pavement in place. This has resulted in catch basin tops and manhole frame tops extending above the pavement surface, resulting in roadway runoff flow bypassing the catch basins. The raised catch basin and manhole tops are also not provided with any winterization pavement, resulting in a number of damaged catch basin tops and manhole tops due to snow plowing operations. The stormwater drainage report calculations are based on the catch basins intercepting road gutter flow, with stormwater entering the storm drainage system. Currently this is not taking place in most locations. This situation will impact plans for the entrance drive and parking areas for the proposed apartment building because Banner Road slopes in a westerly direction towards the proposed building, drives and parking areas.*

   The applicant's design engineer should address plans and a schedule for application of the top course of pavement and repairs to drainage structures.

   a. Response: The Applicant agrees to apply the surface pavement course to Sections A and B as part of any conditions of approval.

WENGELL, McDONNELL & COSTELLO, INC. ● AN EQUAL OPPORTUNITY EMPLOYER

87 Holmes Road
Newington, CT 06111

Phone: (860) 667-9624
Fax: (860) 665-1551

2. *The proposed easterly parking area and entrance drive in front of the apartment building include the installation of 4 new catch basins and 2 storm manholes for drainage of surface water runoff. The 12 ft. wide paved driveway proposed directly in front of the building is cross pitched to the west to drain towards the building entrance. This entrance location is also shown with ADA accessible sidewalks and a cross walk.*

   It is recommended that additional detail on a smaller scale drawing with spot elevations be provided for this area, to demonstrate how driveway surface water will flow and not impact the entrance sidewalks and crosswalk.

   a. Response: A grading enlargement of the area has been provided on Sheet 7. Sidewalks will be pitched toward the gutterline and very little runoff is expected to flow by the crosswalk area due to the catch basin north of the portico, the covered portico itself and just a small grass/landscaped strip east of the portico foundation wall.

3. *On the existing conditions drawing and the site grading, drainage & utility plan drawing, it is unclear if existing catch basins in Banner Road located east of the traffic circle and around the traffic circle are connected to the proposed drainage system. It is requested that the design engineer clarify the existing storm drainage system in this area. Once clarified we can continue with review of the WMC storm drainage analysis report.*

   Once review of the storm drainage analysis report is completed, additional related comments will be provided.

   a. Response: The catch basins at the rotary discharge to the irrigation pond to the south as shown on Sheet 3 Existing Conditions Plan.

4. *A management plan for operation and maintenance of the storm drainage system (catch basin sumps, road sweeping, etc.) and stormwater quality unit should be provided for review and approval.*

   a. Response: O&M plan was included in the June 20, 2021 Storm Drainage Analysis.

5. *The existing catch basin in the grass area located north of the building is noted as being buried. The catch basin is proposed to remain and should be uncovered and the surrounding area graded accordingly.*

   a. Response: The catch basin can be uncovered, however we note the two yard drains installed west of the structure currently capture overland runoff from the lawn area and has functioned effectively for years. The buried catch basin is not a critical component to the functionality of the system however a note has been added to the plans to install a new catch basin frame and grate and to grade the area to drain.

WENGELL, McDONNELL & COSTELLO, INC. ● AN EQUAL OPPORTUNITY EMPLOYER

WMC
CONSULTING ENGINEERS

87 Holmes Road
Newington, CT 06111

Phone: (860) 667-9624
Fax: (860) 665-1551

B. ADA Accessible Route

1. *In order to verify that ADA maximum grade requirements are met for accessible routes, it is recommended that additional detail on a smaller scale drawing with spot elevations be provided for the ADA sidewalks and parking stalls from the proposed easterly and southerly parking areas to the building entrance.*
    a. Response: Grading enlargements of the areas have been provided on Sheet 7.

2. *Information should be provided by the design engineer on an accessible route from the front of the building/parking areas to the lower level rear of the building and pool area. Currently no accessible route from these locations is shown on the drawings.*
    a. Response: An additional ramp is proposed south of the building providing access to the lower level. Grading Enlargement A has been provided on Sheet 7. Final grading and design will be coordinated prior to the issuance of a building permit.

3. *On the site layout plan, detectable warning strips should be called out at the sidewalk ends at the southerly parking area and at the building entrance/crosswalk.*
    a. Response: Detectable warning strips are called for and depicted accordingly.

4. *Is any lighting proposed for the 2 Sidewalks from the parking areas to the building?*
    a. Response: Bollard lighting is proposed along the sidewalks. See attached Site Lighting Photometric Calculation Sheet SL-1 dated 09/17/21 for the preliminary site lighting plan developed by working with Apex Lighting Solutions. We note the northern most parking spaces at the eastern parking lot were revised after the development of the current lighting plan. All lighting will be in harmony with existing lighting within the development and dark sky compliant. A final plan will be submitted to Jim Ventres for review and approval prior to construction.

5. *A new ramp with handrails is proposed in the front of the building to accommodate the elevation change between sidewalk elevation and the first floor elevation of the building.*
    a. Response: Comment noted.

6. *ADA requires 1 handicapped accessible parking space per every 25 parking spaces. A total of 3 handicapped accessible parking spaces are proposed, which meets this requirement.*
    a. Response: Comment noted.

C. Parking

1. *The proposed project includes 20 apartments. The proposed easterly parking area provides 21 parking spaces (including 3 HC accessible parking spaces) and the proposed southerly parking area provides 13 parking spaces (including 1 HC accessible parking space), for a total of 34 parking spaces.*

WENGELL, McDONNELL & COSTELLO, INC. ● AN EQUAL OPPORTUNITY EMPLOYER

87 Holmes Road
Newington, CT 06111

Phone: (860) 667-9624
Fax: (860) 665-1551

If residents of the 20 apartments have 2 cars per apartment, a total of 40 parking spaces would be required, plus additional parking spaces for guests.

The existing parking area located immediately to the west of the proposed southerly parking area currently has a total of 21 parking spaces. Based on unit number pavement markings in the parking stalls, it appears that 15 of the 21 parking stalls in the westerly lot are reserved for existing residential units (Units No.1, 5, 11, 12, 14, 16, 17 and 18), leaving 6 undesignated parking stalls. It is unknown if the 6 undesignated stalls are allocated for other existing uses such as guests or the pool area or can be used for the proposed apartments.

The existing conditions plan does not reflect the current parking stall arrangement In the existing westerly parking area (currently there is 1 additional space on the east side of the lower lot and 1 less space on the west side of the lower lot).

It is recommended that the design engineer provide additional information to the Commission to address the anticipated number of vehicles associated with the 20 apartments and guests and where the vehicles are proposed to park. Ample open area is available to the north of the proposed easterly parking area and perhaps this area could be provided with improvements for overflow parking.

a. Response: The lower parking lot stall arrangement has been updated to reflect the existing condition.
b. Attorneys are currently researching the Declarant Plans filed with regards to the original southern parking lot's 8 spaces that had been designated for Sections A & B visitor parking and comparing to a later revision. The updated plans submitted here within have assumed those 8 spaces are reserved for Sections A & B at this time and therefore have made accommodations for additional parking in the eastern lot associated with the Lofts.
c. The eastern parking lot now indicates the previously submitted "future reserve" parking spaces to be constructed as part of this application. There are now 39 total parking spaces proposed; 30 are assigned for the 20 one-bedroom units and 9 visitor spaces.
d. We note the two grassy areas both north and south of the new parking lot east of the building which can be made accessible and allow for additional visitor parking should the future need arise.

D. Fire Protection Water Tank

1. *It is recommended that the location proposed for the 20,000 gallon fire suppression water storage tank (immediately east of easterly parking area) be reviewed and commented on by the East Haddam Fire Marshall and East Haddam Volunteer Fire Department Fire Chief. Final details and submittals for the tank and water fill/withdrawal system will require review and approval by the Fire Marshall and Fire Chief.*

WENGELL, McDONNELL & COSTELLO, INC. ● AN EQUAL OPPORTUNITY EMPLOYER

87 Holmes Road
Newington, CT 06111

Phone: (860) 667-9624
Fax: (860) 665-1551

a. Response: Comment Noted. Final details and design will be coordinated with the Fire Chief prior to the issuance of any building permit. There is more than adequate space for a tank of any size.
b. Encore Fire Protection will be designing the system and has indicated the 20,000 gallon tank provided meets the industry standard for NFPA #13R design and will be further reviewed by the Fire Chief.

E. Water Utilities

1. *The location of the existing water service line and shutoff valve for the apartment building is not shown on the drawings and should be provided.*
    a. Response: The approximate locations of the existing water service and shutoff valve are shown at the southeast corner of the building. This location will be confirmed via test pits prior to construction.

2. *The Connecticut Water Company has indicated that a sufficient quantity of water is available to serve the proposed 20 residential apartments. With the change in use of the building from a function hall to 20 apartments, it is recommended that the design engineer determine the diameter of the existing water service line and evaluate if the line size is sufficient to accommodate peak flows for the proposed use.*
    a. Response: We are currently coordinating with CT Water to determine the existing size and size requirement for the building's demand. The existing service has a maximum flow capacity of 50 gpm per CT Water. Final details will be coordinated prior to the issuance of any building permit once the number of water supply fixtures is finalized.

F. Wastewater Utilities

1. *The location of the connection point of the existing sanitary building sewer to the apartment building is not shown on the drawings and should be provided. A portion of the existing building sewer is shown directly below what is currently a large evergreen tree, and if so, consideration should be given to relocation of the sewer line or removal of the tree.*
    a. Response: The actual connection point from the building to the sewer is unknown and approximated on the plans from the best available information and past surveys. The plans have been updated to indicate the removal of the evergreens in the vicinity of the grinder pump. This location will be confirmed via test pits prior to construction.

2. *The drawings show installation of a grinder pump chamber to intercept the existing building sewer that serves the apartment building and redirecting sewage flow from the existing wastewater collection system to a new septic tank and subsurface sewage disposal system located to the southeast on the golf course. The proposed grinder pump chamber is shown approximately 6 ft. north of Pinehurst Lane. The location of the proposed grinder pump chamber will require modification to the plan because based on*

WENGELL, McDONNELL & COSTELLO, INC. ● AN EQUAL OPPORTUNITY EMPLOYER

87 Holmes Road
Newington, CT 06111

Phone: (860) 667-9624
Fax: (860) 665-1551

the drawings provided, it appears that this same sewer line serves existing residential units No, 9, 10, 11, 12 and 14, The sewer line diameter changes from 6" diameter to 8" diameter at the junction point where the building sewer serving these units connects with the building sewer serving the apartment building, A review of record drawings for the sewerage system at this location should be provided for clarification and to give additional detail on the existing wastewater collection system, Presumably, the location of the proposed grinder pump chamber could be modified to a location upstream (to the north) of the junction point and at a sufficient distance away from the water main that runs through this location.

a. Response: The location of the grinder pump has been relocated north of the sewer junction closer to the community center, approximately 25 ft north of the water main crossing.

3. *The utility details drawing shows a simplex Model GP 2010 grinder pump by EOne proposed to serve the 20 unit apartment building, This grinder pump model is suited to serve a single family residential unit and would not have sufficient volume or flow capacity to serve 20 residential apartment units, A duplex pump chamber will be required for the multi-family residential building with a larger wetwell storage volume.*
    a. Response: The detail sheet has been revised to indicate a duplex grinder pump and will be further coordinated with future submissions to DEEP.

4. *The existing building sewer from the apartment building is 6 inch diameter, so the grinder pump detail will need to accommodate an inlet sewer of this diameter.*
    a. Response: Detail revised accordingly and will be further coordinated with future submissions to DEEP.

5. *An exterior check valve and curb stop valve and curb box will be required on the discharge pressure sewer from the grinder pump chamber.*
    a. Response: A check valve and curb stop valve have been added to the plan sheet and will be coordinated with future submissions to DEEP.

6. *The proposed subsurface sewage disposal system for the design wastewater flow of 3,000 gallons per day will require approval by the Connecticut Department of Energy and Environmental Protection.*
    a. Response: Comment Noted.

G. *Supplemental comments received by Jacobson Associates*

1. *One other comment related to drainage is the condition of the outfall area of the existing storm drainage system that is proposed to receive drainage from the proposed Lofts at Black Birch parking areas. On past inspections of this outfall for Phase III of the Banner project, the outfall appeared to have erosion issues due to the steep slope down to the lower pond. If you could take a look at this area and provide recommendations.*

WENGELL, McDONNELL & COSTELLO, INC. ● AN EQUAL OPPORTUNITY EMPLOYER

WMC
CONSULTING ENGINEERS

87 Holmes Road
Newington, CT 06111

Phone: (860) 667-9624
Fax: (860) 665-1551

a. Response: A riprap swale is recommended at the existing outfall location as part of their ongoing community maintenance plan. Due to the steepness of the slope standard riprap is proposed to overcome shear stress of discharge velocities and 25 percent embankment slope. A detail is provided on Sheet 13.

2. *Provide a more focused drainage comparison of the development area contributing to the existing subsurface drainage system associated with Section B (Pinehurst Lane). Rather than use previous conditions of impervious areas (circa 2004), utilize the existing surface characteristics with regards to the underlying subbase material associated with the eastern parking lot that previously existed.*
   a. Response: A pre/post comparison analysis is provided in the Supplemental Storm Drainage Calculations dated October 1, 2021. The existing subsurface system has the capacity to accommodate the small increase in peak runoff to the outfall location. As noted above and indicated on the plans, it is recommended the outfall be retrofitted with a riprap swale constructed down to the toe of slope and we have proposed a plunge pool at the base to further slow water down. The exact location will be determined in the field and coordinated with the Town.

We trust that these responses address individual concerns, however, should you have any further questions please contact us at your earliest convenience.

Sincerely,
WENGELL, McDONNELL & COSTELLO, INC.

Robert E. Barneschi Jr.
Project Engineer

WENGELL, McDONNELL & COSTELLO, INC. ● AN EQUAL OPPORTUNITY EMPLOYER