IMPROVING COMMUNITIES TOGETHER

August 26, 2022

Southfield Redevelopment Authority
c/o Jim Young
223 Shea Drive
Weymouth, MA 02190

Re: Proposed 99-Unit Hotel Development
Intersection of Main Street & Shea Drive
Development Plan & Site Plan Approval – Peer Review

Members of the Southfield Redevelopment Authority (SRA),

BETA Group, Inc. (BETA) has completed an initial peer review of the proposed 99-unit hotel development (the Project) located at the intersection of **Main Street and Shea Drive in Weymouth, Massachusetts** (the Site). Proposed Site development includes the following activities (collectively "the Project"):

- Demolition of existing onsite features;
- Construction of entrance/egress to and from Shea Drive;
- Construction of bituminous surfaces and 101 parking spaces;
- Installation of stormwater best management practices (BMPs) including two (2) subsurface infiltration structures and modifications to the existing stormwater system;
- Installation of utilities;
- Site grading;
- Mitigation in support of the Project (i.e., wetland replication and compensatory flood storage); and
- Modifications to/integration with mitigation permitted for the MassDOT Route 18 Improvements Project.

As the SRA is aware, the Applicant has submitted a Joint Application for a Development Plan and Site Plan Approval to commence local permitting associated with the Project. To support the SRA in their deliberations, BETA's review includes technical comments on the Project design as they relate to traffic operations and management, stormwater management, compliance with the applicable state and local environmental regulations, and general engineering practices. BETA understands that the SRA has retained a separate consultant for the review of the Project's compliance with the applicable zoning regulations as well as constructability and hydraulics associated with the proposed stormwater management system.

Based on BETA's multidisciplinary review and communications with Amory Engineering (the SRA's consultant), design changes will be required to meet regulatory performance standards pursuant to other local and state permitting processes. It is recommended that the Applicant commence with the Project's permitting under the Massachusetts Wetlands Protection Act and the Wetlands Protection Rules and Regulations for NAS South Weymouth prior to advancing the Development Plan and Site Plan Approval process in the interest of providing the SRA with updated plans that represent a permittable and constructable project for their consideration.

BASIS OF REVIEW

BETA received the following items via email:

- Stormwater Report entitled**: *Drainage Report for Endeavor Capital, Proposed Hotel, Main Street & Shea Drive, City of Weymouth, Massachusetts, Norfolk County***; prepared by Bohler; dated July 14, 2022; stamped and signed by Joshua S. Swerling, MA P.E. No.41697.
- Site Plan set entitled: ***Proposed Site Plan Documents for CP Endeavor Holdings 18 LLC, Proposed Hotel Development***; prepared by Bohler; dated July 14, 2022; stamped and signed Joshua S. Swerling, MA P.E. No.41697 & John K. Holmgren, MA P.E. No. 30848; 11 sheets.
- Architectural Plan set entitled: ***Townplace Suites***; prepared by Opechee Construction Corporation; dated July 16,2022; stamped and signed by David L. Sherborne, MA R.L.A. No. 952700; 4 sheets.
- Plan entitled: ***Easement Exhibit***; prepared by Bohler; dated July 14, 2022.
- Plan entitled: ***Fire Truck Turning Exhibit***; prepared by Bohler; dated July 14, 2022.
- Site Rendering entitled: ***Townplace Suites Marriott, Main Street (Route 18) & Shea Drive, South Weymouth, Massachusetts***; prepared by Annino Incorporated; not dated.
- Application entitled: ***Joint Application for Development Plan and Site Plan Approval to the Southfield Redevelopment Authority, 99 Room Hotel at Intersection of Shea Drive and Main Street (RTE 18)***; dated July 19, 2022.
- Memorandum entitled: ***Professional Wetland Peer Review Services***; prepared by Wetland Strategies, Inc.; dated August 11, 2022.
- Document entitled: ***Request for Amendment to Order of Conditions DEP File No. SE 353-1***; prepared by Tetra Tech; dated January 17 2017.
- Letter entitled: ***RE: Route 18 Widening and Reconstruction Project Special Conditions 18a and 18d, No Flood Rise Analysis***; prepared by the Massachusetts Department of Environmental Protection; dated May 5, 2017.
- Letter and associated documents entitled: ***RE: Wetlands Variance***; prepared by the Massachusetts Department of Environmental Protection; dated September 8, 2016.

Review by BETA included the above items along with the following, as applicable:

- ***Massachusetts Wetlands Protection Act (M.G.L. ch.131 s.40) and associated regulations (310 CMR 10.00),* effective October 4, 2017.**
  (collectively "the Act")
- ***Massachusetts 401 Water Quality Certification Regulations*; effective October 24, 2014.**
  (the 401 WQC Regulations)
- ***Massachusetts Stormwater Handbook***; effective January 2, 2008.
  (the Handbook)
- ***Massachusetts Erosion and Sedimentation Control Guidelines for Urban and Suburban Areas***
  (the ESC Guidelines)
- ***Subdivision Rules & Regulations, for NAS South Weymouth; effective December 16,2014.***
  (the NAS Subdivision Regulations)
- ***Wetlands Protection Rules and Regulations for NAS South Weymouth; effective December 16, 2014.***
  (the NAS Wetlands Regulations)

- ***Zoning and Land Use By-Laws for NAS South Weymouth; effective August 31, 2017.*** (the NAS Zoning Bylaw)

SITE AND PROJECT DESCRIPTION

The Site consists of an approximately 2.234-acre collection of parcels located within the Central Redevelopment Area of Union Point. Further identified as Weymouth Assessor Parcels 58-597-27 and 58-597-147, the Site is situated within the southeast quadrant of the Shea Drive and Main Street (Route 18) intersection in Weymouth, Massachusetts. The Site is bounded to the north by Shea Drive, to the west by residential properties, and to the south and east by undeveloped land. The Site's current land uses are unknown; the Site appears to be vacant and consists of cleared areas, vegetated areas, entrance signage, mitigation constructed as part of the Route 18 reconstruction project, drainage associated with Shea Drive and Route 18, and gravel paths. Several Areas Subject to Protection and Jurisdiction under the Act and the NAS Wetlands Regulations exist at the Site including Bordering Vegetated Wetland (BVW), Bank, Land Under Water (LUW), and Bordering Land Subject to Flooding (BLSF). A network of intermittent streams exists at the Site, portions of which appear to have been historically dredged and culverted.

The Main Street (Route 18) and Shea Drive intersection is signalized and a full access unsignalized driveway is proposed approximately 500 feet from the intersection to the east on Shea Drive. The Site is located within two (2) zoning districts; the northern portion of the lot is zoned as the Shea Village Commercial District within the Mixed-Use Neighborhood Overlay District and the rear of the parcel is zoned as the Open Space-Corporation District. Both the Site and the proposed work are located entirely within the SRA-defined Central Redevelopment Area; accordingly, BETA understands that work at the Site is subject to review by SRA but not the local boards and commissions of Weymouth.

Based on a review of MassGIS data, there are no mapped Outstanding Resource Waters (ORWs), Areas of Critical Environmental Concern (ACECs), Wellhead Protection Areas, Surface Water Protection Areas, or Natural Heritage and Endangered Species Program (NHESP)-mapped habitats at the Site. However, based on an assessment of the surrounding watershed via the United States Geological Survey (USGS) StreamStats application, the intermittent stream/BVW situated parallel with Route 18 appears to drain to the northwest to Resource Areas associated with the Mill River and ultimately Whitmans Pond, a Public Water Supply. Therefore, as noted in the Route 18 Variance document and per the definition provided in the 401 WQC Regulations, the intermittent stream/BVW along Route 18 is an ORW[1]. As depicted on the most recent Federal Emergency Management Agency (FEMA) mapping, the Site is within a FEMA Zone AE Flood Hazard with an associated Regulatory Floodway. As discussed further in the comments below, more recent engineering data on the extent of the floodplain at the Site was developed through the MassDOT Route 18 project Variance and will require review by the Applicant.

The Project requires integration with existing drainage infrastructure, stream/wetland complexes altered through the reconstruction of Route 18 under a MassDEP Variance, roadway geometry, and traffic management devices. As detailed further in this letter, it is recommended that the Applicant provide additional information to demonstrate to the SRA that the Project will not have an adverse impact on the environment, stormwater management, and traffic patterns. However, prior to submission of these documents pursuant to the Site Development and Site Approval process, BETA encourages the Applicant

[1] This conclusion was set forth in the findings of the Variance issued by MassDEP for the Route 18 reconstruction project. Further, BETA reviewed StreamStats watershed mapping on August 22, 2022, which indicates that the Site is within a subwatershed tributary to Whitmans Pond.

to commence other permitting processes noted in this letter to receive feedback from the relevant regulatory entities and ensure that the SRA is reviewing a project that is constructable in light of local and state requirements. At this time, the SRA has not been presented with sufficient information to demonstrate that the Project represents a permittable design.

WETLANDS/ENVIRONMENTAL REGULATORY REVIEW

The proposed Project will impact Areas Subject to Protection and Jurisdiction under the Act and the NAS Wetland Regulations; specifically, 875 square feet of BVW/ORW and an unquantified volume/area of BLSF, Bank, and LUW. In addition, work will occur in the local 50-foot and the state/local 100-foot Buffer Zones to BVW and Bank that include clearing, grading, and construction of imperious surfaces. The Project currently does not meet General Performance Standards under the Act/NAS Wetlands Regulations for BVW, Bank, LUW, and BLSF.

In addition to providing the comments and recommendations below, BETA concurs with the subjects raised in Wetland Strategies, Inc. (WSI)'s August 11, 2022 memorandum. WSI notes that the submission of a Notice of Intent (NOI) will be required, at which point the Applicant will be required to demonstrate full compliance with the Act, the NAS Wetlands Regulations, and the Massachusetts Stormwater Management Regulations and Standards. In addition, WSI notes a conflict resulting from the Applicant proposing work within an easement previously granted to the Massachusetts Department of Transportation (MassDOT) for compensatory flood storage associated with the Route 18 reconstruction project, as well as work being proposed within 50 feet[2] of the onsite BVW and Bank.

BETA is providing the following comments to apprise the SRA of conflicts that exist between the Project and the Act/NAS Wetland Regulations which are anticipated to have significant implications for the design and the SRA's ability to review a constructable and permittable project. BETA is of the opinion that the Project, as proposed, will require numerous revisions to comply with various local and state regulations, thereby resulting in the Applicant eventually revising and/or resubmitting their Site Development and Site Approval application. As noted in greater detail below, BETA recommends that the Applicant address the comments herein and submit an NOI prior to advancing the SRA's current review.

W1. The Resource Area flagging on the Project Plans is not consistent with the ALTA survey provided with the Project Plans. If additional and or revised Resource Area boundaries have been established, a Massachusetts Professional Land Surveyor should stamp and certify an up-to-date Existing Conditions Plan to demonstrate that the Project design is based on accurate existing conditions data.

W2. The Resource Area boundaries depicted on the Project Plans are not qualified (e.g., Bank vs. BVW associated with the culverted stream along Route 18, etc.). The Applicant will be required to accurately qualify each Resource Area at the Site to ensure that impacts are quantified correctly, and all applicable Performance Standards are met. The Applicant will be required to provide this information in order to permit the Project under the Act/NAS Wetlands Regulations and demonstrate to the SRA that the Project is permittable and constructable.

[2] According to the document "Exhibit B Covenant Concerning Wetlands" provided by the SRA and presumed to be within the title chain of the Site, many of the proposed activities including building construction are not permitting within 50 feet of BVW or Bank.

W3. Portions of the Project including grading, tree clearing, and construction of impervious areas will occur within an additional area of BVW/ORW identified by BETA during a Site visit on August 10, 2022, near Proposed Test Pit #5. Hydrophytic vegetation including cattail (*Typha latifolia*) was observed, as well as soil indicators of hydrology within 12 inches of the surface.

BETA recommends that the Applicant reassess this area concurrently with the recommendations provided above in Comment W2. As of this writing, the Applicant has not provided the SRA with accurate existing conditions information related to Wetland Resource Areas at the Site.

W4. The BVW along Route 18 that is proposed to be filled is also the location of an intermittent stream with jurisdictional Bank and LUW. The Project, as proposed, will fill/re-route this intermittent stream and therefore cannot meet the Performance Standards under 310 CMR 10.54(4) and 310 CMR 10.56(4) for Bank and LUW, respectively.

Further, this stream/BVW meets the definition of an ORW due to it being a tributary to Mill River, which appears to ultimately discharge to Whitmans Pond, a Public Water Supply. The 401 WQC Regulations strictly regulate discharge of fill and dredged materials to ORW. BETA recommends that the Applicant demonstrate that the proposed work is permittable under the 401 WQC Regulations and does not require a Variance, as the proposed stormwater and development design relies on filling onsite ORW for purposes of stormwater management.

W5. As noted in the above-referenced Covenant and in WSI's memorandum, 2:1 wetland mitigation is required for impacts to BVW at the Site. The Project as proposed does not adhere to this requirement.

Based on the information provided, the proposed mitigation area will not meet the Performance Standards under 310 CMR 10.55(4), as it does not appear that the mitigation area will be constructed at the same elevation and within the same reach of the adjacent waterbody as the impacted area. Further, the Applicant is proposed a flared-end section along the western portion of the replication area that has been designed to drain the replication area, thereby removing sources of hydrology required to establish a wetland.

BETA recommends that the Applicant seek an alternative area/layout for wetland replication that meets local and state Performance Standards and does not interface with the stormwater management system. This revision will require the construction of a larger wetland replication area and will likely result in proposed stormwater management BMPs being located within 50 feet of a surface water, which is not permittable under the Massachusetts Stormwater Regulations and Standards.

W6. The extent of BLSF on the Project Plans conflicts with the information provided as part of the MassDOT Route 18 Variance proceedings, and the proposed compensatory flood storage does not meet the Performance Standards listed under 310 CMR 10.57(4)(a). BETA offers the following comments regarding the onsite floodplain:

a. As noted by the Applicant, the published FEMA base flood elevation for the Site is 151.2 feet (NAVD88). Although FEMA has published a base flood elevation for the Site, Special Condition 18a and 18d of the MassDOT Variance required MassDOT to assess the floodplain via a HEC-RAS analysis to ensure that there would not be a rise in flood stage following construction of the roadway improvements, as fill was proposed within a Regulatory Floodway. MassDEP's May 5, 2017 letter documented agreement with the

analysis performed by Tetra Tech that established a base flood elevation of 153.83 feet (NAVD88). MassDEP's letter also indicates that MassDOT is required to submit a Letter of Map Revision (LOMR) to FEMA. No LOMR appears to have been submitted at the time of this writing.

BETA recommends that the Applicant be required to consider the results of the HEC-RAS analysis in determining the boundary of BLSF at the Site. Although the Act notes that FEMA mapping is presumed accurate for determining the boundary of BLSF, 310 CMR 10.57(2)(a) indicates that presumption is rebuttable based on credible evidence by a Professional Engineer or another competent professional. Use of the most up-to-date floodplain data will result in a majority of the Site being below the floodplain elevation and the Project not being permittable as proposed.

b. The proposed compensatory storage area is effectively a stormwater basin receiving onsite stormwater discharge and features a hydraulic restriction (i.e., a "pinch point") in the center of the area; therefore, the Performance Standards under 310 CMR 10.57(4)(a) are not met. BETA recommends that the Applicant consider this Performance Standard in any subsequent design revisions.

W7. BETA understands that due to the Site's land use history, polyfluoroalkyl substances (PFAS) have resulted in groundwater contamination. During the August 10, 2022 Site visit, BETA observed an environmental consultant working with a driller to collect soil samples. Numerous groundwater monitoring wells are present at the Site.

Given the nature of the Project and its use of stormwater best management practices (BMPs) that will infiltrate onsite runoff into the groundwater table, the Applicant should provide a full analysis of the PFAS risks at the Site and how work at the Site will comply with the Massachusetts Contingency Plan. It is recommended that full disclosure of contaminants and any potentially required remediation be disclosed to the SRA to determine what constraints, if any, exist for development at the Site.

STORMWATER MANAGEMENT REVIEW

The Project proposes a stormwater management system design consisting of catch basins, subsurface infiltration structures, and drainage manholes. Based on a review of the plans and documents provided, it appears that the proposed design has not been based on Site-specific soils data. Accordingly, until the onsite soil types and the depth to groundwater are determined, there is insufficient data available to determine if the system as designed will meet Massachusetts Stormwater Management Standards (the Standards) 1, 2, 3 & 4. In addition, and as described in the Wetlands/Environmental Review above, the floodplain at the size does not appear to be accurately depicted or characterized. Until these issues are resolved, documentation of compliance with the Standards cannot be accomplished. The following comments outline the issues associated with the stormwater management system as currently designed:

SW1. There are no test pit logs to verify the soil conditions at the Site. Since there is no Natural Resources Conservation Service (NRCS) soils determination in the upland portion of the Site, the entirety of the design is based upon assumptions relative to the curve number (CN) values, infiltration rates, and most importantly, depth to groundwater.

SW2. As noted above, the Site is located within an area tributary to a public water supply (Whitmans Pond) and the wetlands at the Site are therefore considered ORWs. The Project design presently does not provide sufficient setbacks for stormwater BMPs from surface waters, nor does it provide the required level of treatment for stormwater discharging to an ORW. Therefore, the stormwater design is not in compliance with the Standards.

SW3. The design of the two (2) proposed subsurface infiltration systems are based upon test pits to be conducted in the future. The bottom elevation of each of these systems is 147 feet (NAVD88). The adjacent wetlands and streams are depicted at or around elevation 152 feet (NAVD88); therefore, the proposed systems are currently proposed to be five (5) feet lower than the adjacent wetlands. According to the Handbook, the bottom of these systems should be a minimum of two (2) feet above seasonal high groundwater. It is BETA's opinion that it is not reasonable to assume that the groundwater elevation adjacent to the wetlands will be a minimum of seven (7) feet lower than the delineated boundary.

SW4. Proposed Underground Infiltration System No. 1 is located within the wetlands that have been flagged along Main Street, and Underground Infiltration System No. 2 will be only 18 feet from the replicated wetlands area. Neither location will meet the Handbook requirement for an infiltration system to be located a minimum of 50 feet from the surface waters.

SW5. As noted above, additional consideration should be given to the onsite floodplain. If the proposed Project were to be constructed, the Site would act as a dam to restrict flood flows towards the north. This would result the Resource Areas at the rear of the site to detain flood flows and effectively act as a stormwater control structure.

SW6. As proposed, the grades along the southerly property line would be raised by approximately one (1) foot. There is insufficient survey data on the plans to determine if this would result in any additional localized ponding on the adjacent site. At a minimum, it will divert additional flood flows onto the adjacent lot, particularly during events less than a 100-year frequency event.

SW7. The design of the proposed flared end section at the wetland replication area and the connection with the Main Street collection system is associated with the following design issues:

a. During low flows, it will divert runoff away from the wetlands beyond the existing outfall and essentially act to dewater the wetlands.

b. The angle of the inlet into the proposed DMH to be set along Main Street at a significantly acute angle to the direction of flow.

c. During high intensity storm events, a reverse flow may occur within the culvert and allow untreated stormwater flow from the MS4 into the Resource Areas.

SW8. As noted above in Comment W7, the Applicant should demonstrate that the proposed stormwater design accounts for PFAS contamination if found to be present. Should infiltration (as currently proposed) not be feasible due to groundwater contamination concerns, alternative stormwater BMPs will be required and may significantly decrease the developable area at the Site.

TRAFFIC ENGINEERING REVIEW

The proposed development consists of a 101-room hotel. Access to the site would be provided by one full access driveway located on Shea Drive approximately 500 feet east of Main Street (Route 18).

The study area does not include the Main Street (Route 18) and Shea Drive signalized intersection in the vicinity of the site.

T1. Clarify why the Main Street (Route 18) and Shea Drive intersection was not included in the study area. Including adjacent intersections is standard practice for a traffic study.

Traffic volume data were collected via automatic traffic recorder (ATR) on Shea Drive over a 72-hour period from Thursday, September 16th, 2021, through Saturday, September 18th, 2021. The weekday daily volume is 3,640 vehicles per day with a morning peak of 155 vehicles and an evening peak of 520 vehicles. The Saturday daily volume is 4,095 vehicles per day with a peak of 300 vehicles.

Permanent count station data from Route 3 north of Route 18 (Station 6255) were reviewed to determine the need for seasonal adjustment. Traffic volumes in September were found to be above average-month conditions, but the volumes were not adjusted downward, to provide conservative volumes.

To account for the difference in traffic patterns due to the pandemic, permanent count station data from September 2018 was compared to the September 2021 data. The existing 2021 volumes were found to be comparable, so no adjustment was made.

Manual turning movement counts (TMCs) were not collected at the adjacent intersection.

T2. BETA recommends manual turning movement counts (TMCs) be conducted from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM on a weekday to capture peak hour traffic volumes at the Main Street (Route 18) and Shea Drive intersection.

Vehicle speeds were collected via ATR along Shea Drive in the vicinity of the proposed driveway. The posted speed limit is 25 miles per hour (mph). **The 85th percentile speeds were 37 mph in both the eastbound and westbound directions which are significantly higher than expected for a 25-mph roadway.**

Shea Drive has a straight alignment in the vicinity of the proposed driveway. The available stopping sight distance (SSD) at the proposed site driveway would exceed the 270 feet minimum based on the 37-mph 85th percentile speed.

Project-generated traffic volumes were determined by utilizing trip-generation statistics published by the Institute of Transportation Engineers (ITE) for Land Use Code 310 (Hotel). The land use and methodology chosen are accurate and consistent with industry standards. Based on the *10th Edition* of the ITE *Trip Generation Manual*, the project site is estimated to generate 710 new trips on an average weekday. New peak hour trips are estimated to be 45 (27 entering, 18 exiting) in the weekday morning peak hour, 50 (26 entering, 24 exiting) in the weekday afternoon peak hour, and 74 (41 entering, 33 exiting) in the Saturday midday peak hour.

The *11th Edition* of the ITE *Trip Generation Manual* indicates slightly higher peak hour trips, however, the difference is generally deemed not significant.

New trips were noted to be distributed through the study area based on existing travel patterns which with equate to a 50/50 distribution to and from the east and west of the driveway.

T3. While trip distribution based on existing travel patterns is typically appropriate, BETA recommends the Assessment apply all Site trips to the adjacent intersection of Main Street. When reviewed, online mapping services generally do not route trips to travel along Shea Drive to access the Site unless they begin/end within the Union Point area to the south and east. All exterior trips generally are routed via Main Street from the north or south.

The study states that based on the trip generation and distribution assumptions, the impact to the Shea Drive during the peak periods would be approximately one vehicle every 1.5 to 2.5 minutes in either direction.

T4. Due to the close proximity of the proposed driveway to the intersection of Main Street (Route 18) and Shea Drive, provide data/analysis to verify that the intersection operations would not negatively impact each other.

T5. The existing Shea Drive provides a wide landscaped median island separating eastbound and westbound traffic that extends approximately 500 feet east of Main Street. Within this area, Shea Drive utilizes a four-lane section that tapers to a two-lane section east of the proposed site driveway. Consider whether the median island and roadway striping should be altered to accommodate the driveway.

T6. Discuss and include any additional development-related growth for other known proposed developments in the area which would impact the intersections.

T7. In addition, a Traffic Assessment should include a safety analysis. Provide a crash data analysis for the intersection of Main Street (Route 18) and Shea Drive in addition to the segment of Shea Drive adjacent to the proposed driveway.

T8. Recommend the Applicant provide a fire truck turning diagram showing how the fire truck will access the rear of the building.

SUMMARY

Based on our review of the Project documents and plans, the Applicant has not provided the SRA with sufficient information to demonstrate that the proposed Project is constructable or permittable with regards to the applicable local and state environmental/stormwater regulations. The Applicant has also not provided sufficient information to determine the traffic management impacts or the proposed Projects. BETA recommends that the Applicant address the comments in this letter to demonstrate that the SRA is reviewing a constructable and permittable Project that will not require significant redesign throughout the forthcoming permitting processes.

If we can be of any further assistance regarding this matter, please contact us at our office.

Very truly yours,
BETA Group, Inc.

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