



January 31, 2024

Mr. Chris Dilorio
Director of Community Development and Planning
Town of Hull
253 Atlantic Ave.
Hull, MA 02045

Subject: Planning Board Peer Review
Paragon Dunes Development
189 & 193 Nantasket Avenue, 0 George Washington Boulevard
Hull, Massachusetts 02045
CEC Project 334-762

Dear Mr. Dilorio:

On behalf of the Applicant for the above referenced property, Civil & Environmental Consultants, Inc. (“CEC”) has prepared this memorandum in response to comments provided in a memorandum from Chessia Consulting Services, LLC (“Chessia”), dated January 9, 2024.

The comments provided are summarized below in italics, followed by CEC’s response in bold.

CHESSIA COMMENTS

GENERAL COMMENTS:

1. I note that prior submission had lot lines and metes and bounds that are not consistent when compared to the current plans. The Board may want clarification on this issue, in particular relative to the land near the carousel.

CEC Response: CEC performed a new ALTA survey for the current applicant. The metes and bounds are consistent with the previously developed surveys; however, the difference lies in the horizontal bearing system used. The previously prepared survey was based on an assumed horizontal bearing system that aligns with record plans. CEC performed the ALTA survey based on NAD83 State Plane Coordinates, Massachusetts Mainland Zone. The apparent discrepancy for the carousel building may be attributed to the plotted extents of the building based on the canopy projection in the current survey when compared to the previous surveys that did not depict the canopy that projects beyond the face of the structure.

2. *The site would be access from George Washington Boulevard and Rockland Circle. The site would be accessed from George Washington Boulevard and Rockland Circle. Four curb cuts are proposed to George Washington Boulevard and will require approval from the DCR. There is also one curb cut proposed at Rockland Circle. This would also require coordination with the DCR and the Town of Hull as it will alter their existing curb cut to the DCR land as proposed.*

CEC Response: The Applicant has reached out to DCR to coordinate the proposed improvements and will continue to coordinate with the appropriate parties as necessary.

3. *There are several drainage features that should be fully investigated as several are indicated as extending to unknown locations. As the Paragon Boardwalk portion was permitted as extending to within the last 4 years, there should be full documentation of the utilities, including stormwater for this area. The open parking area was also permitted through the Conservation Commission in 2022 and existing stormwater facilities, with the exception of an undetermined outlet, was all identified and should be indicated. The plans should identify all utility terminations for pipes crossing the site with inverts if applicable to identify existing uses that would be impacted by the work.*

CEC Response: The plans have been revised to depict additional detail regarding subsurface utilities within the Paragon Boardwalk Project based on record information. Additionally, additional survey was performed along the Bay to locate additional drainage outfalls from the Site and George Washington Boulevard. See the Site Plans for additional information.

4. *Some utilities are indicated on the plans but insufficient data to determine connections has been provided. There are utility poles indicated around the property, guy wires and support poles have not all be indicated.*

CEC Response: The plans have been revised to show more details on existing utilities including guy wires for the utility poles. See the Site Plans for additional detail.

NANTASKET BEACH OVERLAY DISTRICT:

5. *The project is in the Special Flood Hazard Area, but the Applicant has not requested an increase in height. The proposed building height is listed as 40' but this is only along Nantasket Avenue. The building would be higher along the George Washington Boulevard frontage as the grades are lower. Based on the Definition the height should be based on the mean grade around*

the building not just the elevation along Nantasket Avenue. This issue will need to be addressed by the Applicant and the Board.

CEC Response: The proposed building height is 47-feet measured from the curb grade along Nantasket Avenue and the Applicant is requesting a Special Permit from the Planning Board which allows for flexibility on building height to allow for flood proofing for buildings within a Special Flood Hazard Area (SFHA). The elevation basis for measuring curb height was reviewed with the Building Inspector and confirmed to be compliant.

The maximum building height in a SFHA is identified to be no more than four feet higher than the elevations required to comply with 780 CMR (Massachusetts State Building Code). The project falls within flood zone AO with a depth of 3-ft. Per the Zoning Ordinance, the maximum building height would be measured to be no more than approximately 47-ft measured from the curb grade along Nantasket Avenue. (40-ft base requirement + 3 ft to comply with 780 CMR + 4 ft allowed by Zoning for buildings in Special Flood Hazard Area). The revised building height will be reviewed by the Building Inspector for compliance.

6. *The Regulations require a 10 foot front yard setback. The Applicant has requested a waiver to have a minimum 1.4 foot setback based on the Application Letter. The Plans indicate a minimum setback of 1.83 on Nantasket Avenue. The existing building is listed as 1.3 feet from Nantasket Avenue. The submittal should also discuss setbacks from George Washington Boulevard as they are proposed as less than 10 feet. The existing building is also closer than 10 feet but the setback is not specified on the plans. Based on my review of this requirement it appears to reference maintaining setbacks consistent with other buildings on the same block. The abutting buildings are setback further than the buildings to be removed in some cases. The Board can consider existing building setbacks in the same block to determine an average setback. I recommend that the existing conditions survey plan be expanded to include the two adjacent lots and the existing building setbacks on these adjacent lots along Nantasket Avenue and George Washington Boulevard. Typically the average of the setbacks would be used to determine an acceptable setback. The Board should address this request.*

CEC Response: The project setbacks were reviewed with the Building Inspector (Zoning Enforcement Officer) and the project was identified to be in conformance with the Zoning By-Law requirements.

7. *The Application Letter does not discuss any request to increase the building height as part of this section. The project is in the Special Flood Hazard Area as it is in the FEMA Zones AO*

and A and if approved an increase in height of up to four feet, excluding appurtenances, could be permitted above the minimum elevation required under 780 CMR.

CEC Response: The project has been revised to incorporate additional architectural elements and is now requesting approval under the increased building height allowances for projects in a SFHA. See response to Comment 5.

8. *The site is not in a residential district, but does abut a residential building to the east. There are Landscape Plans with plantings but there do not appear to be any privacy fences. The plants would provide some screening. The Board may want to have a Landscape Architect review the plans.*

CEC Response: The project has been updated to provide an opaque fence along the parking area that abuts the residential property to the east. See the Layout Plans for additional detail.

9. *It is proposed that the restaurant uses obtain parking from existing on-street parking. The plans include a long strip of parking that is far from the building, some is nearly 1,000 feet from the closest corner of the building. The Board should review this aspect of the plan as there is considerable discretion allowed the Board for a Special Permit.*

CEC Response: The project was revised to provide additional parking spaces located near the proposed building and a sidewalk was included along the full length of the parking lot improving pedestrian access through the parking area. The Project includes a total of 185 parking spaces exceeding the 177 spaces required under the Zoning Bylaw.

10. *The Applicant may propose shared parking for the retail/service uses subject to documentation from the DCR relative to use of the spaces in the DCR lot. The DCR lot is within 500 feet as required to propose shared parking in the DCR lot. To implement this option, documentation from the DCR is required.*

CEC Response: No fee-in-lieu parking is required or requested. Please see response above.

11. *Fee-in-lieu of parking. It is unclear if fees in lieu of parking would be proposed for the restaurant use. This should be addressed by the Applicant. If proposed the Applicant must demonstrate compliance with the requirements under this section., which have not been listed at this time as no data on this aspect has been provided.*

CEC Response: The Applicant does not require Fee-in-lieu of parking. The parking for the retail uses is provided on Nantasket Avenue and other available public parking areas similar to other projects approved in the Overlay District.

12. Two bicycle spaces are required for every 20 required off-street spaces. In this case 270 off-street spaces are required. A total of 14 bicycle spaces would be required. The plans indicate 18 spaces but the sizing does not comply with requirements...Bicycle spaces are required to be of 2 feet by 6 feet. The plans indicate an area that scales 5 feet wide by 25 feet long. This could be adjusted to provide the required spaces but should be longer and wider.

CEC Response: The Architectural Plans have been revised to meet the sizing of the proposed bicycle spaces located within the building to be compliant with the dimensional requirements. Additional exterior bicycle racks are provided along the parking area near the Art Walk for the project.

13. This section discusses the specific requirements for bicycle racks. It is unclear if the bicycle racks comply as no detail has been provided.

CEC Response: Exterior bike racks have been added to the plans, as requested. A bike rack detail has been provided in the detail sheets.

SITE PLAN REVIEW:

14. I recommend that the plans clarify the various existing easements and identify what rights are afforded by these easements. There should be a plan in the set that identifies where easements are eliminated, if that is proposed, and if additional easements are required such as to access through the site from the DCR lot to Nantasket Avenue. There is a partial easement in this area but it does not extend completely through the site. There are several passageway easements that appear to be eliminated by the project. As the site consists of three parcels but is being developed as one site, it is unclear if any cross easements would be required if any as part of the project.

CEC Response: The title report and associated deeds were reviewed and one additional easement was added to the plans. Notes have been added to the demolition plan identifying the existing easements and interior property lines to be eliminated as part of the project. The associated easement documents have been reviewed and confirmed that the easements provide cross access to the individual properties controlled by the Applicant. An 8-ft wide pedestrian easement is proposed across the Site that provides pedestrian access from George Washington Boulevard and the DCR parking to the Art

Walk. A draft Grant of Easement document was provided to the Town for review and will be finalized to coincide with the final pedestrian pathway. The parcels will be consolidated and the existing easements will be eliminated prior to construction. See Existing Conditions and Demolition Plans for reference.

15. Portions of the sitework are proposed within the DCR right of way. The Applicant should provide documentation that the proposed work will be allowed by the DCR.

CEC Response: The Applicant has had preliminary meetings with DCR staff and will continue to coordinate with the appropriate parties having jurisdiction and will pursue appropriate permits as needed for work within their respective rights-of-way.

16. There is a loading area for the residential units located in the west side of the site, accessed off of George Washington Boulevard. A 10' by 30' space is proposed, which accesses the trash room. There appears to be another loading area indicated on the east side in the DCR easement, but there is no label so it is unclear if this is also a proposed loading area.

CEC Response: The space near the east side of the building has been labeled as a loading space and will provide access for the retail spaces as well as tenant moving operations. The loading space at the westerly end of the building will provide similar opportunities for tenant and commercial space loading and will also be the location to access the interior trash operations as well. The easement in the vicinity of the loading space shown on previous surveys was reviewed, added to the plans and was determined to not impact the development. This easement will be eliminated prior to construction.

17. The submittal should discuss where and how moving vans, and commercial deliveries, etc. would service the project.

CEC Response: See response above for discussion of loading operations. Truck turning exhibits have been prepared to demonstrate turning movements of typical vehicles that will access the site including a SU-30 Box Truck.

18. There is a general trash room and a “chute” for trash, no dumpsters within the building are indicated. The Board may request details of how the trash area will function.

CEC Response: Trash will be serviced internally and loaded onto trash trucks via the loading area at the western portion of the site.

19. *A photogrammetric plan has not been provided. It is unclear what is proposed for lighting but lighting of the facility is proposed and the plans indicate some light locations and a pole base detail.*

CEC Response: Interior lighting design will have appropriate lighting levels for use types (lighting power density dictated by room type, using no more than necessary/required), light fixtures will be high efficacy, non-integrated light bulbs shall be LED. Exterior lighting will be minimal, low level, targeted (downlit), and valanced. All exterior lights will be warm, shorter blue wavelength lighting will be avoided. A photometric plan documenting compliance with appropriate lighting standards is being developed and will be provided for review.

20. *The Existing Conditions Plans do not indicate the extensive utility work done for the Boardwalk project to connect water, sewer, electric, etc. to the various units in the site.*

CEC Response: The previously utility work including sanitary sewer and drainage services installed for the Paragon Boardwalk project have been added to the plans based on record information, as requested.

21. *The Demolition and Erosion Control plan indicates capping many of the existing utilities, but not all of the existing utilities that may be eliminated. Not all stormwater features are indicated on the plans.*

CEC Response: The Demolition and Erosion Control plan has been revised to show appropriate capping of existing utilities that will be discontinued for the project. The plans have been revised to depict existing stormwater features within the site and adjacent areas, as requested.

22. *The plans indicate three new water services and three new fire protection lines to the Dunes Project. It appears that the two commercial units would each have a separate service and there would be one service for the residential portion of the project. It is proposed to reuse the existing fire protection line connection at the street for the residential building. I note that none of the existing buildings would remain and some sort of temporary cap to utilities to remain would be required. The Board should receive comment from Weir River Water System that the project will be served and that the proposed utility design is acceptable to the Weir River Water System. I note that none of the existing buildings would remain and some sort of temporary cap to utilities to remain would be required. The Board should receive comments from Weir River Water System that the project will be served and that the proposed utility design is acceptable to the Weir River Water System.*

CEC Response: The proposed residential use and three proposed commercial uses will each be served by separate domestic services with a fire service entering the mixed-use building distributing fire service through the building. The commercial uses at the Site were previously served by the water system in Nantasket Avenue and we have not been made aware of any capacity limitations in the existing system. The project includes cutting and capping the existing services that will no longer be in use and installing new services at the main where practicable. The applicant will work with the Weir River Water System through the local review process and submit applications for water service at the appropriate time.

23. *It appears that there would be one new gas connection is for the entire project. It is assumed that there would be separate meters for the end users. The Board should receive data on how many meters and if individual unit meters for the residential units will be required as this would take up a large amount of space.*

CEC Response: The project proposes to utilize natural gas service for the commercial spaces only. Two meters are currently proposed in the rear of the two commercial spaces at the east end of the building, and if needed an additional gas service may be provided to the northerly commercial space, if warranted. The residential units will not include gas service and will be served by electric service only; therefore, it is not anticipated that a large area for a meter bank will be required for this project. All services and meter requirements will be coordinated with the appropriate utility providers as needed prior to construction.

24. *The plans should include noted and details on what will be done to cap/remove exist sewer services as there are many throughout the site.*

CEC Response: Notes have been added to the plans. The mode of cutting and capping existing sewer services will be coordinated with the Town of Hull, as necessary.

25. *The plans should specify pipe sizes for water and sewer.*

CEC Response: The plans previously provided sizes and materials for water and sewer services. See Utility Plans for additional information.

26. *It is proposed to connect power and other cable utilities via new underground conduits off of existing utility poles along George Washington Boulevard. The duct bank appears to interfere with other proposed and existing utilities and this aspect of the design should be*

addressed. This would likely be a large duct bank with many conduits. Some overhead utilities cross the site to other facilities and some poles would be required to maintain these services. Based on the plans all units would receive power through a transformer at the west end of the building. As with other utilities electric services can require an extensive meter bank and where this would be located is an important aspect of the design.

CEC Response: The team has had preliminary meetings with Hull Municipal Light Plan (HMLP) staff and developed the proposed electric design based on input and feedback from HMLP. The details of the proposed electric duct bank will be coordinated with HMLP prior to construction.

The proposed transformer is located at the west end of the building and will be elevated above the 100-year flood plain elevation. Secondary services will be routed to a central electrical room located in the service areas of the building, which will also be elevated above the 100-year flood plain elevation. Individual tenant and commercial use services will be distributed accordingly. Final design will be provided to the Town for review as part of Building Permit Applications.

27. The stormwater system would connect to three existing outlets that are partially indicated. Full survey data on the outlet pipes to be used should be provided, including material, diameter and inverts.

CEC Response: Additional survey was performed locating additional storm drain outlets along the stone revetment along George Washington Boulevard. More detailed utility information has been provided on the Site Plans, as requested.

28. Catch basins, storm sewers and manholes are proposed to collect runoff and provide initial treatment. There are four subsurface infiltration systems for recharge and treatment and four proprietary treatment units are proposed to provide pretreatment of runoff. The DPW or appropriate State Agency, should review this aspect of the design as all of the systems ultimately pass through DCR property.

CEC Response: Water and Natural Gas services are proposed from Nantasket Avenue and sanitary sewer and drainage connections from the proposed building and adjacent paved areas connect to existing infrastructure that discharges across George Washington Boulevard, which is a MassDOT roadway. The applicant will coordinate with DCR as needed for the re-use of the existing drainage discharge from the parking area that passes through the DCR parking lot and will coordinate with MassDOT as part of the permitting process.

29. *The outlets, although not all identified would discharge to an Area of Critical Environmental Concern (ACEC) and a higher water quality volume for treatment is required.*

CEC Response: As noted in the stormwater report, the project has been designed to provide treatment of the 1” water quality volume. The project provides the water quality pre-treatment from paved and imperious surfaces via a proprietary water quality unit with the 1” water quality volume provided via the infiltration chambers.

30. *At a minimum the design should include all other connections to the manholes with pipe sizes, materials and direction of flow, etc. Any associated catch basins or manholes up and down gradient should also be indicated on the plans as applicable. The capacity of the system may be required to be identified by the Board, DPW or State.*

CEC Response: Additional details have been added to the Site Plans depicting additional known drainage infrastructure and connections, as requested. Pipe sizing calculations for the infrastructure utilized for this project have been included.

31. *Under current NPDES permits for MS4 discharges all of the outlets should be identified for location elevation and diameter.*

CEC Response: All known outlets have been identified with pipe sizes, materials and elevations. The Applicant will work with the Town DPW and appropriate agency staff to confirm all drainage connections and outlets prior to connection.

32. *The plans include existing contours at 1 foot intervals, which exceeds requirements but is desirable for a relatively level site as exists on these parcels. There are also some spot grades indicating existing elevation. More spot grades should also be provided, in particular in the Paragon Boardwalk portion of the project...There are also variable high and low points within the mini golf course that are mostly indicated. More data on how the water feature works may be required to assess existing drainage. Refer to comments under Stormwater below for information on the drainage system.*

CEC Response: Additional spot elevations have been included in the plans where practicable. The mini-golf course is largely impervious with various high and low points as noted. Runoff would generally flow into the water feature that meanders through the min-golf course and discharge through a 6-inch overflow pipe located in the southeast corner that drains towards George Washington Boulevard. Flow that exceeds the capacity of the 6-inch drainage pipe would overflow across the sidewalk into George

Washington Boulevard to the existing municipal drainage catch basin which also drains to the bay through a 12-inch ductile iron pipe. The Applicant will work with the Town DPW and appropriate agency staff to confirm all drainage connections and outlets prior to connection.

33. Minimal narrative information was provided in the Application Request letter. A Project Narrative for stormwater was included in the Stormwater Report. I recommend a more detailed narrative addressing required data as discussed in other sections be provided. Data on traffic generation has been provided and is provided under separate cover.

CEC Response: The Application Request Letter includes detail relating proposed application and additional detail has been provided throughout the reviews with the Design Review Board and the Planning Board.

34. Internal Pedestrian Circulation – There are several passageway easements that would be eliminated by the project. In addition, it is likely that access through the site from the DCR parking lot to the beach side would be desirable and there is a partial easement on the deed and in prior plans that appears to provide this access. I recommend a description of internal and external pedestrian access be discussed.

CEC Response: The Applicant will be providing an easement across the parking area to provide a pedestrian connection from the George Washington Boulevard right-of-way to the existing Art Walk providing a continuous pedestrian connection from the right-of-way and the DCR parking lot to Nantasket Avenue. The details of this easement will be coordinated with the Town of Hull and finalized as needed.

DEP STORMWATER MANAGEMENT REGULATIONS:

Standard 1 – Untreated Stormwater

35. This standard requires that the project not result in point sources of untreated runoff and that runoff not result in erosion or sedimentation.

There would not be any new point source discharges as the system connects to existing storm sewer systems. The existing system outlets should be identified and surveyed. Some treatment of surface runoff from paved areas is proposed for the pavement. A combination of catch basins, proprietary treatment units and subsurface infiltration systems are proposed for paved parking and access areas only. The courtyard areas would be treated in the infiltration systems and pretreatment is proposed through a proprietary unit for each courtyard. There would be no treatment for the building roof.

This Standard may be met under partial redevelopment conditions. I recommend more data on the roof as all runoff receives some treatment and there are no new point source discharges. Refer to comment under other Standards.

CEC Response: The proposed building roof areas will include roof drains that will be plumbed and connected to the proposed stormwater infiltration systems prior to discharge to the analysis points. A dividing line for the interior roof drainage allocated to each discharge location has been added to the Grading and Drainage Plans to ensure the final building roof drain and plumbing design will align with the stormwater analysis.

Standard 2 – Post Development Peak Discharge Rates

36. This standard requires that the peak rate of discharge does not exceed pre-development conditions and that the design would not result in off-site flooding during the 100-year storm. System designs should comply with the DEP Handbook for stormwater management systems. The project is in the coastal zone and a waiver from this requirement could also be requested, but has not been requested at this time. The site is in the FEMA flood hazard zone both the AE (depth 3 feet) and AO EL 10. Under DEP this would be considered Land Subject to Coastal Storm Flowage (LSCSF).

According to the Stormwater Checklist a waiver from this standard has not been requested for land in the Coastal Flood Zone. The existing storm drain near the former kart track discharges to a tidal water body and the other systems would also although the outlet locations have not been specified, one is listed as based on record plans. There is no requirement to control the peak rate of runoff in tidal locations if this requirement is waived by the Conservation Commission. This submission does not request a waiver from this Standard.

I recommend that the DPW or DCR as applicable comment on the proposed storm sewer connection to the public system. As noted all outlet locations should be surveyed and indicated on the plans. It is unclear if there are other permits required to connect to these drains as the pipe location and any other connections to the pipe have not been fully identified. It is anticipated that all of the outlet pipe pass through DCR property. As noted the location of the outlets will need to be determined in the field.

CEC Response: The Applicant will coordinate with appropriate agencies having jurisdiction through the project design process.

37. I request that any future submissions include full size to scale watershed plans. It is not feasible to measure areas to confirm the calculations.

CEC Response: Full size watershed plans have been provided, as requested.

38. *Existing Conditions: Insufficient data has been provided to demonstrate that runoff from the western side of the site discharges to the pipe identified as DP 3. The roadway pitches to the west and although there is an overflow pipe in the water feature much of the runoff would flow to the roadway and to a catch basin near the intersection with Wharf Avenue.*

CEC Response: The elevation of the ground surface for the mini-golf area along George Washington Boulevard is at approximate elevation 11.4-11.7 and the overflow pipe is located at elevation 9.47. The runoff will drain through this overflow pipe, with flows exceeding the capacity of this pipe overflowing to George Washington Boulevard. An additional design point has been added to the stormwater analysis including the westernmost area that drains overland to George Washington Boulevard that may drain to the catch basin at this location. Refer to the Stormwater Report under separate cover for additional information.

39. *Existing Conditions: It is unclear how the roofs discharge. If there are central collection and discharge points they should be identified. If roofs have external downspouts or drains these locations should be identified and could impact watershed areas. This applies to all buildings including the easterly building. Runoff in part of the east appears to be to the southerly abutter for a small strip and potentially part or all of the building.*

CEC Response: Roof areas will be plumbed internally and discharge to stormwater BMPs prior to discharge to the municipal drainage system. See response to comment 35.

40. *Existing Conditions: Impervious paved areas are overestimated in both areas 1A and 3A.*

CEC Response: The watershed plans have been updated to more accurately estimate impervious areas within the noted areas.

41. *Existing Conditions: The overall analysis limits should be equal in both the existing and proposed cases.*

CEC Response: Areas have been reviewed and adjusted to align in both existing and proposed conditions.

42. *Existing Conditions: There appears to be flow from the DCR property at the west end into the site that should be accounted for as it may impact post development flows.*

CEC Response: The adjacent DCR owned property at the west end of the site appears to have a ridge line along the property line draining to a low point with a drainage inlet in the central portion of the parking area. It does not appear any of the adjacent property drains into the Site. Refer to the updated Site Plans and drainage area maps for detail.

43. *Proposed Conditions:* It is unlikely that HDPE pipe would be acceptable for a building of this size and use. A qualified mechanical engineer will need to design the piping within the building, including manholes, etc., which could require modifications to the system.

CEC Response: The proposed piping within the building has been eliminated. This will be further coordinated with the team’s MEP engineer.

44. *Proposed Conditions:* There should be a pipe capacity analysis of the entire system together with data on the roof drainage. Although some of this may be deferred to the final building plans Since piping of the runoff in and out of the building in several locations is proposed, it is critical to design a pipe network that will have adequate capacity without back up into the building. As the site discharges to a flood zone, how the pipes and other aspects of the system will function in flood events should be addressed. This is not a significant concern with the open parking areas, but is a concern within a building. The building code requires floor drains be connected to the sanitary sewer and back-ups or overflows of the storm sewers would then impact the sanitary sewer.

CEC Response: A pipe capacity analysis has been prepared, as required.

45. *Proposed Conditions:* The design utilizes infiltration in all storm events. The DEP Regulations and as noted on page 5 of the DEP Checklist for Stormwater Report, requires either 4 feet of groundwater separation or a mounding analysis for all infiltration systems. Although some data has previously been submitted to the Conservation Commission on the parking area in the former rail road bed, no data on mounding has been provided in this submittal. I note that recent data from DEP Northeast Region does not allow infiltration in subsurface systems as a means of rate control. This has not been the practice for other projects in Town but may need to be considered given recent data I have received.

CEC Response: A mounding analysis has been prepared, as required.

46. *Proposed Conditions:* More data on soil conditions, including groundwater is required. For locations near the coast typically testing is performed at high tide to determine maximum seasonal high water as required by DEP. Testing has been performed in the open parking lot in the former rail road bed and was witnessed by this office. It does not appear that any other

testing has been performed. I recommend additional testing be performed and that any testing performed be witnessed by an agent of the Town.

CEC Response: Additional geotechnical borings were performed by CEC with significant depth to groundwater consistent with previous testing performed at the Site. The boring logs are attached for reference and have been included on the Site Plans for reference.

47. Proposed Conditions: Based on my observations the outlet pipe for the drainage systems would be underwater at some tide stages. The design uses a fixed tailwater elevation at the outlet pipe of 4.83. It is unclear how this elevation was determined. I recommend data on typical annual higher tides be provided. The analysis may not need to be revised to account for all extremes but water from an annual higher high tide should not backflow into the systems. It should take an extreme storm to impact flow into the system from the rising tidal waters.

CEC Response: As noted, the tailwater analysis was performed assuming the high tide elevation extends into the existing catch basin to be converted to a drainage manhole. The high tide elevation (4.33-ft NGVD88) would result in approximately 9-inches of standing water in the catch basin at high tide utilizing the Mean High Water Elevation. Per the NOAA data, the Mean Higher-High Water elevation is identified to be 4.77 ft which is less than 6-inches higher than the MHW elevation and would not be anticipated to have a significant impact on the performance of the stormwater management system. Based on previous analysis performed on the infiltration chambers systems, the tailwater elevations at both outlet control systems at the connection from the parking area were calculated to be more than 6-inches lower than the overflow weir elevations from the infiltration chamber systems.

48. Proposed Conditions: DEP requires soil evaluations under proposed infiltration systems. I recommend confirmatory inspections be performed at the system location during construction if the project is approved. Soil testing should include determination of seasonal high groundwater as well as soil textures, etc. Groundwater separation is required to be 2 feet to the bottom of proposed infiltration systems and no on-site data to justify groundwater separation for P1A and P3A has been provided, although it is assumed that, subject to suitable soils, that similar conditions would be encountered. I recommend any testing be witnessed by an agent of the Town. As a previously disturbed area it is unclear if suitable soils are present, filled salt marsh was encountered in the former railroad bed.

CEC Response: The applicant is amenable to performing confirmatory soils evaluations and testing prior to construction and working with the town to provide necessary observations.

Standard 3 – Recharge to Groundwater

49. *There are some partial test pit logs but they are incomplete and appear to only identify the ground water elevation and it is unclear the timing of the work relative to tides. I recommend that additional soil testing be performed to determine soil conditions, at the location of proposed subsurface infiltration systems P1A and P3A. DEP requires soil evaluations under proposed infiltration systems. I recommend confirmatory inspections be performed at the system location during construction if the project is approved. Soil testing should include determination of seasonal high groundwater as well as soil textures, etc. Groundwater separation is required to be 2 feet to the bottom of proposed infiltration systems and no on-site data to justify groundwater separation for P1A and P3A has been provided, although it is assumed that, subject to suitable soils, that similar conditions would be encountered. I recommend any testing be witnessed by an agent of the Town. As a previously disturbed area it is unclear if suitable soils are present, filled salt marsh was encountered in the former railroad bed.*

CEC Response: See response to comment # 49.

Standard 4 – 80% TSS Removal

50. *I note that there are also many landscape basins, which would not be credited with TSS removal as they do not comply with the DEP Handbook design for deep sump catch basins and are linked, i.e. not off line, in several locations. To receive TSS removal credit catch basins are required to receive ¼ acre (10,890 square feet) of impervious area or less. All proposed deep sump catch basins would meet this requirement. Catch basins would receive 25% TSS removal credit. TSS removal credit for catch basins should not be included for subareas 1B, 3D and a portion of Off-1A where work is proposed in the DCR roadway.*

CEC Response: The TSS removal calculation worksheet has been revised to exclude the proposed landscape inlets in the identified subcatchment areas.

51. *Subsurface Infiltration System. – These systems are credited with 80% removal. I note that the parking lot design approved by the Conservation Commission included an “isolator row” that facilitates maintenance and is a low cost feature during construction. I recommend that these be added back to the design. As noted additional soil testing is required for systems P1A and P3A.*

CEC Response: Separator rows have been included in the subsurface infiltration system plans, as requested.

Standard 7 – Redevelopment Projects

52. *The design proposes to comply with all Standards although there is no treatment of the proposed roof. I note that roofs do not require pretreatment but treatment is required. The submittal should provide an evaluation of available alternatives that could be implemented on the site relative to the roof. The submission should discuss alternatives and why they are not suitable for this site. Based on my review there are limited options but it is the Applicant's responsibility to present their case.*

CEC Response: The drainage design for the eastern portion of the building will route the runoff from the roof areas through infiltration chambers providing 80% TSS removal. The western portion of the building roof runoff has been revised to route roof runoff through water quality units for treatment and is therefore included in the calculations for Water Quality Volume. As a partial redevelopment project, the project is requesting relief from full compliance with the TSS removal criterion for the runoff from the western portion of the roof runoff due. The runoff from building roof areas will not experience the same degree of sediment as other impervious site areas; however will be routed through water quality treatment and the project as a whole will provide significant improvements to the water quality of the runoff prior to discharging to the municipal drainage system.

53. *I recommend a more comprehensive construction plan that includes erosion and sediment controls as well as staging data, maintenance of access etc. This site has extensive construction, including within the DCR property and abuts developed uses. It is important to describe how the site will be constructed, worker parking, staging areas, stockpile areas, etc. Some data on construction is identified on the plans.*

CEC Response: The Demolition and Erosion Control plan has been updated to provide a additional construction plan information. Additional detailed construction logistics plans will be provided to the Town for review prior to construction.

54. *The plans should indicate all proposed sediment and erosion control measures and include details for various measures proposed. I also recommend that a construction fence be installed to protect the site from unauthorized access and define the limit of work.*

CEC Response: Construction fence has been added to the Site Plans along with preliminary locations for soil stockpiles and construction staging. Final details will be coordinated with the selected contractor and included in the SWPPP to be prepared and filed with EPA under the Construction General Permit.

55. *I recommend that the data provided be responsive to the DEP Stormwater Checklist. The project is over the 1 acre of disturbance threshold and a NPDES permit and SWPPP would be required. This aspect could be deferred to a later date, but I recommend no work commence until the SWPPP has been submitted and approved by the Town.*

CEC Response: A SWPPP will be prepared and a NPDES NOI application will be submitted with copied provided to the Town as required.

Standard 9 – Operation and Maintenance Plan

56. *Cultec Subsurface Chambers – The O&M includes the Cultec Separator rows, which are recommended, but are not indicated on the plans. Provided these are added to the plans and details at the appropriate locations this would comply with DEP requirements.*

CEC Response: See response to comment # 51.

57. *The plans should identify where snow will be stored on-site.*

CEC Response: Snow storage areas have been included in the plans, as required.

58. *There is an infiltration basin listed but no such basin is proposed and should be eliminated from the O&M. The Stormwater outfalls will need to be identified. It is unclear who would be responsible as some may include DCR connections. This aspect will need to be addressed.*

CEC Response: Any language pertaining to an infiltration basin has been removed from the O&M Plan. All stormwater outfalls have been identified and included in the O&M Plan, as requested.

Standard 10 – No Illicit Discharges

59. *The required certification from the owner of the property should be provided. The Checklist identifies that it will be provided prior to any discharge to the system. As a partial redevelopment it is required to inspect and identify discharges from the existing buildings typically, but in this case no existing features are to remain. As noted the existing stormwater outlets and any connections to remain, one existing connection would remain through the site at a minimum are required to be identified. It is unclear if any sanitary sewers cross the site as all of these are required to be indicated. This data should be provided.*

CEC Response: Per the Massachusetts Stormwater Management Handbook, an illicit discharge statement may be provided following construction. All new sanitary sewer and drainage connections will be reviewed during construction and confirmed that illicit cross connections are not included.

60. *The proposed sewer connection would connect to the existing sewer main. The plans specify size of pipes, and inverts, but some are record data not surveyed. The existing system should be surveyed for elevations, etc.*

CEC Response: The existing sewer system is located significantly lower than the proposed connections from the development and minor deviations in the elevations of the existing sewer system identified by surveys within the past three years will not have a material impact on the project design. The applicant will work with the Town of Hull to incorporate appropriate design elements as needed.

61. *I note that the grease trap is only 2 feet from the building foundation and the oil/water separator is only 1 foot off of the foundation. These may not be feasible to construct without interfering with the foundation of the building. These would also be subject to the plumbing code being within 10 feet of the building. The DPW should review the proposed connections.*

CEC Response: The applicant recognizes that work within close proximity to the building will be subject to plumbing code and will work with the project MEP engineers as needed to incorporate appropriate materials. The applicant will review the sizing of the grease traps and coordinate with the Town DPW as needed when specific tenants are identified.

62. *A trash area and location for loading is proposed in the west end of the building and a loading space for a trash truck is just outside the building on the west side. I recommend that more description be provided relative to how the proposed area will function.*

CEC Response: The trash pickup is anticipated to be provided with vehicles entering the westerly parking and loading area from George Washington Boulevard. Trash will be stored internally that will serve the residential uses as well as the commercial uses. Trucks will access the trash room at the roll-up doors where vehicles will load and exist the site onto George Washington Boulevard. See turning templates for maneuvering of the trash pickup.

63. *The site plans indicate some light locations. A photogrammetric plan has not been provided. I recommend data on lighting be provided to the Board. No signage is indicated on the Plans. I recommend more specific data on signage should be provided.*

CEC Response: Signage will be coordinated with the Town and appropriate permits for signage will be pursued as needed. A photometric plan is being developed and will be provided to the Town for review when finalized.

64. *As noted the project will require a Notice of Intent filing and an Order of Conditions (OOC) from the Conservation Commission. Although an OOC has been issued for the parking previously, the plans have changed and more impacted area is proposed with this project and a new filing will be required. The major environmental issues relate to flooding and stormwater treatment.*

CEC Response: A Notice of Intent (NOI) application has been filed with the Town of Hull Conservation Commission and MassDEP.

FLOODPLAIN DISTRICT USE AND DEVELOPMENT:

65. *The project is partially in the AO zone and based on the plans there would be limited areas for bypass of floodwaters except at the east and west ends of the site. The Applicant should discuss this requirement.*

CEC Response: The proposed garage will be wet flood proofed with generous openings allowing flood waters to pass freely into and through the garage. The commercial and ground-floor lobby areas will be dry-floodproofed with flood barriers to prevent floodwaters from entering these spaces. The garage is predominantly located within the Zone AO flood plain; however, the southerly portion of the Site is located in a Zone A (elevation 10) floodplain along George Washington Boulevard. The garage has been raised to elevation 11.0, providing freeboard above the identified Zone A elevation along the southerly portion of the Site. The design has also been revised to eliminate the westerly elevated courtyard allowing floodwaters to enter the garage at-grade which will be floodproofed with openings designed to allow flood water to pass freely through the garage. The easterly courtyard has also been revised to pull back a portion of the elevated courtyard and provide a connection to the garage allowing flood waters to pass through the garage from this courtyard as well. With the additional openings provided along the building façade the project will result in more evenly distributed flow around the dry-flood proofed elements of the building.

PARKING AND LOADING REQUIREMENTS:

66. *As noted, I recommend that it be demonstrated how trucks will access the loading area and dumpsters. As noted how other deliveries, etc. would occur should be discussed. A*

photogrammetric plan should be provided together with proposed lighting details, if any are proposed in the parking area.

CEC Response: A photometric plan is being developed and will be provided to the Town for review. Vehicular turning templates have been prepared and are included as an attachment.

67. Screening is required along the street fronts and side lot lines. I recommend that the Board review screening. This section requires screening dense screening of specific heights for protection of abutting properties. The submittal should document the percentage of interior parking lot landscaping.

CEC Response: The project includes dense landscape screens where appropriate along with an opaque fence as needed where setbacks are 3-ft or less. Fencing will be coordinated with flood requirements which will dictate openings to allow flood waters to pass through. The project will provide ±6,760 sf of interior landscaping within the ±43,215 sf parking lot which equates to 15%.

We hope that you find these responses helpful in your evaluation of the Site Plan Review Application before the Planning Board. Please feel free to contact us with any questions at kskulte@cecinc.com or via phone at (774) 501-2176.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.



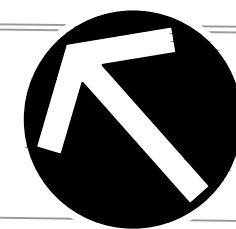
Karlis Skulte, P.E.
Principal



Kay Mae L. Pascua, E.I.T.
Project Consultant

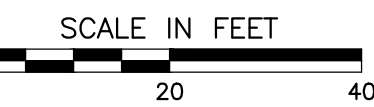
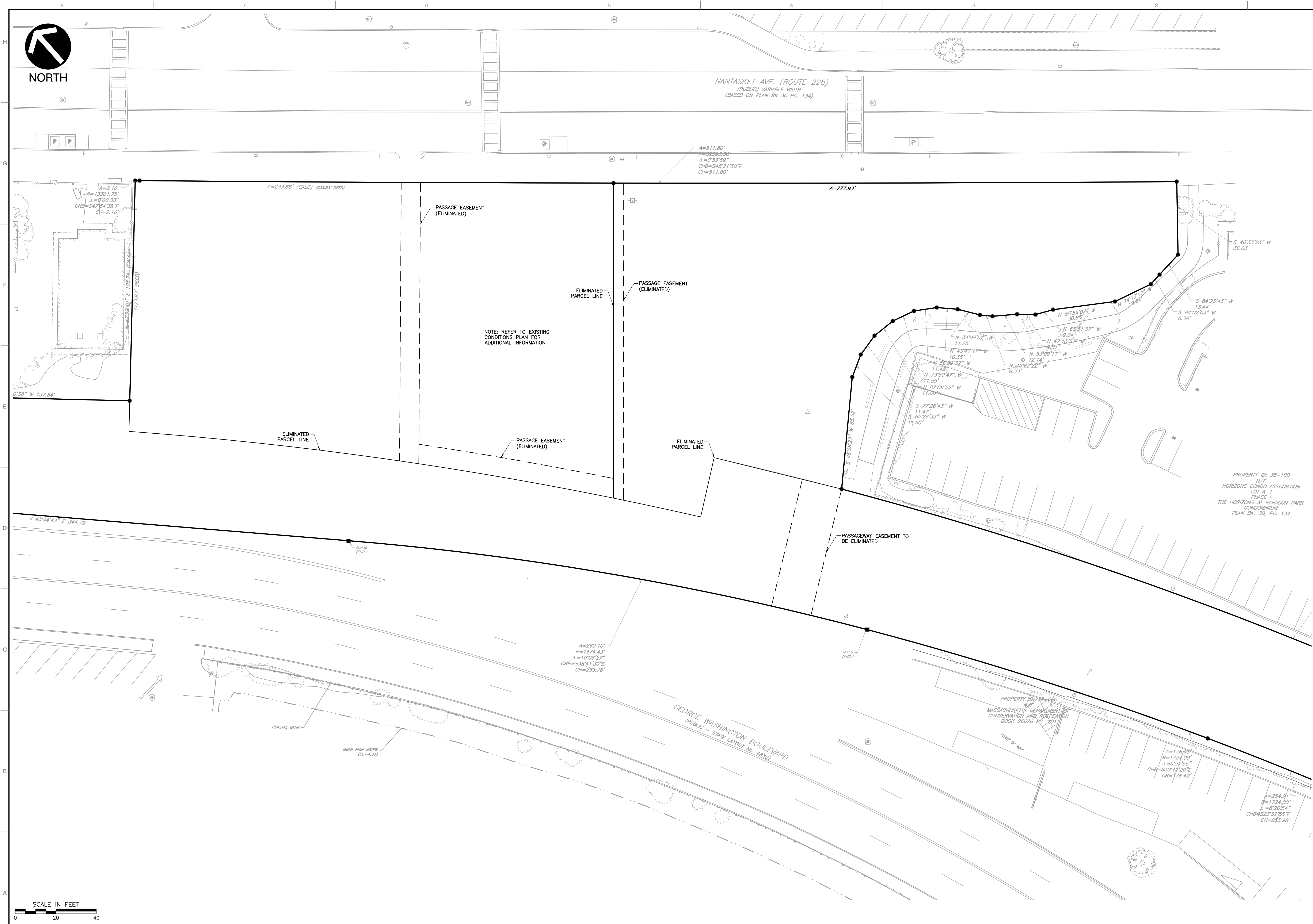
Attachments: Vehicular Turning Templates

APPENDIX A – VEHICULAR TURNING TEMPLATES



NORTH

NANTASKET AVE. (ROUTE 228)
(PUBLIC) VARIABLE WIDTH
(BASED ON PLAN BK 30 PG. 134)



I:\projects\lab\proj\130-001\130-001.dwg (130-001) (130-001) - 0400 (Dwg) (130-001) (130-001) - 0400 - 1/21/2024 1:31 PM

NO.	DATE	REVISION RECORD DESCRIPTION

31 Bellows Road
Rayham, MA 02767
Ph: 774.501.2176
www.ccecinc.com

Civil & Environmental
Consultants, Inc.

**PARAGON DUNES
MIXED-USE REDEVELOPMENT
180 & 193 NANTASKET AVENUE &
0 GEORGE WASHINGTON BOULEVARD
HULL, MASSACHUSETTS**

EASEMENT EXHIBIT

DATE:	JANUARY 2024	DRAWN BY:	KLP
DWG SCALE:	1"=20'	CHECKED BY:	KPS
PROJECT NO.:	334-762	APPROVED BY:	KPS