WARE MALCOMB

ARCHITECTURE
PLANNING
INTERIORS

CIVIL ENGINEERING
BRANDING
BUILDING MEASUREMENT

March 24, 2021

VIA E-Mail Delivery: ncarter@edgewaterpark-nj.com

Mrs. Marian Johnson, Chairwoman

Edgewater Park Planning Board Township of Edgewater Park
400 Delanco Road
Edgewater Park, NJ 08010

Re: Preliminary Major Site Plan with Use and Bulk Variances
Edgewater Storage, LLC Block 404, Lot 2.02
4201 S Route 130
Edgewater Park Township

Attn: Ms. Nicole Carter, Planning Board Secretary

On behalf of the applicant, Edgewater Storage, LLC, enclosed please find electronic copies of the following documents for your review and approval:

- Civil Site Plans entitled "Final Site Plans – Edgewater Park Self Storage," dated March 22, 2020, prepared by Ware Malcomb, revised through 12/07/2020;
- "Drainage Report – Edgewater Park Self Storage," dated July 21, 2020, prepared by Ware Malcomb, last revised March 22, 2021;
- "Stormwater Management Measures – Maintenance Plan & Field Manuals," dated March 08, 2021, prepared by Ware Malcomb.

On February 23, 2021, the applicant and Edgewater Park Township professionals held a virtual to review the technical comments received from Environmental Resolutions, Inc., dated December 15, 2020. This letter is the formal response to the technical comments provided. The comments are identified in ***italics*** and Ware Malcomb's responses are in **red**.

Completeness Review

Site Plan Comments

12. Sheets 4-6 – Site Plan

a. Any striping changes at the Mount Holly Road jug handle required by NJDOT should be noted on the plan set.

Response: At this time we have not received comments from NJDOT regarding changes to the Mount Holly Road jug handle. Ware Malcomb will adjust plans as needed.

b. The applicant has added bollards at corners of buildings adjacent to circulation aisles. We recommend adding a bollard to west wide of Building C, east corner of Building F, and east corner of Building H.

Response: Ware Malcomb has added bollards at the corners of Building C, F and H.

c. The plans revisions show that Mt. Holly Road access will be an egress only. Testimony shall be provided as to whether the NJDOT has approved the design of the driveway, as the width appears to be excessive

for the number of trips expected.

Response: The access along Mt. Holly Road will be an egress only drive. The drive is sized to be able to accommodate fire truck movements.

Grading & Drainage & Utilities

13. We recommend the following revisions to Sheets 7 & 8 – Grading & Drainage Plans:

a. There is an approximate 40% non-traversable grade in proximity to the Mount Holly Road drive- way. The grading should be revised to a traversable grade or a guiderail should be provided. The guiderail should conform to current MASH standards. *The guiderail has been added, but the limits of the guiderail should be clearly noted and should meet the minimum functional length. The line weight is the same as the fence. The details of the guiderail do not reflect the current NJDOT standards.*

Response: The guiderail limits have been called out on the plans, and the line weight has been revised accordingly.

b. A is generally designed at the maximum traversable grade in proximity to the interior circulation aisles. As a result, no construction tolerances are afforded in the design. *The Applicant has acknowledged this comment*

Response: The grading design provides a 2 foot transition area behind the curb prior to the 3:1 basin side slope.

c. Basin A outlet structure rim shows 36.15 on these sheets, but the outlet control structure on sheet 26 shows the grate elevation at 34.8. These sheets should correlate.

Response: Ware Malcomb has revised the call out on the Grading Plans to call out elevation 34.80.

d. The contours along the shared property lines with the landscaping business should be reviewed and revised. The proposed contours are not matching with the existing contours. This will require the applicant to coordinate with the owner of Lot 4 to remove stockpiled material at the property line. **The applicant to provide testimony** on status of discussions with Lot 4 owner(s) and whether or not temporary construction easement discussions have commenced.

Response: The owner is working with the adjacent landscaping business to have the material removed prior to construction.

e. *The Applicant will provide inverts for the roof leaders as a condition of approval.* The beginning and end inverts for the roof runoff collection system should be shown.

Response: Ware Malcomb has provided new Roof Drain Plans to call out the roof leader inverts.

f. *The Applicant has said they would add the test pit and boring locations to the plans as a condition of approval.* The test pit and boring locations should be added to the plan.

Response: Ware Malcomb has provided the Test Pit locations and their corresponding information to the Grading Plans and the Erosion Control Plans.

g. *The Applicant has said they would provide a satisfactory maintenance program.* The designer should verify the outlet structures can be provided with a 6" plugged orifice at the basin bottoms. The manner of plugging should be specified; threaded cap, gate valve, slide gate, etc. This would facilitate non-mechanical dewatering if required. The outfall pipe invert elevation would have to be lowered, and the dewatering plug should be discussed in the O&M Manual as well, if this can be accommodated.

If the plugged orifice cannot be accommodated, an open Type A inlet (no grate) should be added to the bottom of each basin with an open 18" orifice just above (1-inch ±) the basin bottom elevation. The inlet can be tucked into the basin embankment. Add a concrete pad with an electric service plug at the top of basin. Coordinate with the Township Engineer for approval of the final locations for the inlets and concrete pads prior to finalizing the next submittal.

These would be required to facilitate mechanical dewatering in the event the basin needs to be drained. The inlet is required so that a pump can be placed without sucking sand from the bottom of the basin.

Response: Since the bottom of the stormwater basins are lower than the discharge elevation inverts, a plugged orifice cannot be accommodated. An open type A inlet is being provided to allow for mechanical dewatering in the even the basin needs to be drained.

14. We recommend the following revisions to Sheets 21 - 24 – Construction Details:

a. Sheet 21

1) Accessible Parking Sign and Striping. Graphically, the signs should be shown closer together,

2) A crosswalk striping detail should be added. *The crosswalk must be a minimum of 6-foot-wise to conform with MUTCD*

Response: Ware Malcomb has revised the accessible parking sign detail to show the signs closer together. Additionally, the crosswalk detail has been revised to be a minimum of 6 feet wide.

b. *The orifice plate detail references Basin A, but no orifice is specified for Basin A. ERI suggests eliminating references to Basin A in the Orifice Plate Detail on Sheet 26.* Sheet 24 – Basin A Outlet Control Structure:

1) Ensure the number of orifices shown in the plate is reflected in the calculations.

Response: Ware Malcomb has revised the orifice plate detail to remove references to Basin A, and has been revised to reflect the correct number of orifices for Basin B.

c. *Minimum cover should be added to the detail.* Sheet 24 – a construction detail for the HDPE with Duraslot should be added. Minimum cover should be noted.

Response: Ware Malcomb is awaiting a response from the manufacturer on minimum cover requirements and will make note on the plans prior to approval.

d. Sheet 24 – Basin Section Views:

1) *The slowest permeability should be noted for Basin B.* Add a table for each Basin Section showing the Elevation, Area, and cumulative volume of each basin. The permeability rate and maximum expected drain down time for the 100-yr storm should be noted.

Response: Ware Malcomb has revised the Basin Statistics table to show the slowest permeability rate for Basin B.

2) NJ BMP Manual section 9.5:

a) *The Applicant should provide a response.* A sloped-sided trash rack as shown in the BMP manual is recommended in lieu of the flat, grate-type track proposed.

Response: Ware Malcomb has revised the outlet control structure details to show a sloped trash-rack.

b) *The Applicant has agreed to provide forebays to the satisfaction of the township engineer and soil district.* Forebays are recommended to be added to the infiltration basin to facilitate maintenance and further protect the infiltrative capacity of the basin. In lieu of forebays, the designer could consider one or both of the following: (*The Applicant should provide a response to the following)*.

i. Permanent Flexstorm filters (or equal) for all inlets that connect to the infiltration basin.

ii. Add a Trash Guard Plus by ACF Environmental (or equal) to the outlet pipe of the final structures prior to discharge into the basin (SD-MH-101, SD-INLET-301, SD-INLET-401, and SD-INLET-201).

iii. Wherever filters are specified, they should be added to the O&M Manual.

Response: Ware Malcomb has forgone adding forebays due to the unique geometry of the basin. The design will utilize sump inlets with an Envirohood on the final structure prior to discharge into the basin.

3) Basin Note:

a) *One revision since the BMP Manual was updated.* An as-built survey, post- construction permeability testing, and as-built routings must be performed on each as-built infiltration basin. The permeability testing must be completed in accordance with NJ Stormwater BMP Manual ~~Appendix E, Section 4.~~ If the as- built routings exceed the allowable and/or permeability testing shows a longer drain time than 72 hours, corrective action must be taken. The Township Engineer must be notified at least one week in advance of the testing and copied on the results, including proposed subsequent corrective action(s), if needed. The Township Engineer may request that samples be collected at the same time testing is carried out.

Response: Ware Malcomb has revised the note to be consistent with above.

Stormwater Management

15. The Applicant should include this information in the Stormwater Maintenance Report, which will be included with the application or final plan approval. See comment 26. The applicant should provide the name, address, email address, and phone number of the responsible individual(s) who will be inspecting, performing maintenance, and repair of the stormwater management systems, at a minimum, upon construction initiation and conveyance to the receiving party (if property is sold).

Response: Ware Malcomb has included an Operations and Maintenance Manual as part of this submittal.

16. *Page 142 of the Drainage Report.pdf (148 of 206) still shows the 7.52 in/hr infiltration rate.* Appendix D – Post-Development Water Quality Hydrologic Calculations

    a. Appendix F shows test pit 6 K1 shows an infiltration rate is 5.28 in/hr., but the 7.52 in/hr. testing replicate was used. The slower of the tests for test pit 6 should be used in the drain time calculation.

    b. *Additional test pits in the bottom of proposed Basin B and permeability testing should be included.* NJ BMP Manual Chapter 9.5 Infiltration Basins page 4 states, "Soil tests are required at the exact location of the proposed basin in order to confirm its ability to function as designed. A minimum of two soil profile pits are required within the infiltration area of any proposed infiltration basin." Consult the NJ BMP Manual Chapter 12 Soil Testing Criteria for information on the test pits and permeability testing.

Response: Ware Malcomb has revised the Drainage Report to show the slower infiltration rate of test pit 6. Additional test pits have been scheduled within Basin B. We will update the plans and report as needed once that information is received go.

17. *The existing conditions map does not sufficiently illustrate that additional runoff from the nearby sites are captured in their entirety. Either additional topography should be shown (County or LiDAR would be sufficient) that clarifies the drainage areas.* Additional Appendix H – Drainage Maps.
    a. Offsite drainage that currently drains to the site should be accommodated/addressed in the design.

Response: Ware Malcomb has revised the Drainage Maps to include the nearby property's runoff.

18. ***To Be Addressed at Final Site Plan.*** *The Applicant has stated he will finalize the Emergency Spillway Calculations with the application for final site plan approval. The outfall pipes in Appendix I should be reviewed and revised for size and manning's n.* Appendix I – Emergency Spillway Calculations.

    a. The 100-yr rainfall should be updated.

Response: The 100-year rainfall of 8.81" is being utilizing based on the NOAA Atlas 14 Volume 2, as stated in Chapter 2 of the Engineering Field Handbook, NJ Supplement, dated August 2012.

    b. The 100-yr inflow to the basin should be routed through the emergency spillway. Basins A & B's emergency spillways show Q of under 1 cfs.

Response: The 100-yr spillway report has been included for both basins in Appendix I.

c. A detail should be added to the plan set showing the spillway's elevation, length, and width. The emergency spillway location has been called out on the Grading & Drainage Plan(s), but a TW elevation should be listed at either side of the spillway to delineate its location.

Response: A TW elevation has been added on the grading plan in the location of the emergency spillway. The emergency spillway length and elevation has also been called out.

d. There appears to be no break in the proposed landscaping, and no landscaping should be proposed in the emergency spillway location since landscaping could impede flow.

Response: We have revised the planting design based on conversations with the township engineer and planner. Landscaping is proposed along the Basin B emergency spillway to provide adequate screening from the residential zone. The plantings will have a negligible effect on flow through the emergency spillway.

e. It must be demonstrated that erosion will not occur downstream of the spillways.

Response: The flow velocity of the emergency spillways for infiltration basin A and B are 1.04 fps and 0.49 fps, respectively, which is below the maximum allowable velocity of 3.0 fps for sod with underlying sandy soil.

19. ***To Be Addressed at Final Site Plan***. *The designer has stated he will provide this report with the application for final site plan approval.* The Applicant should submit a stormwater maintenance report for review and approval. The report must be reviewed and approved by our office prior to signature of final plans. In addition, the Designated Inspectors List must be completed prior to signatures of the final site plan. This report should be provided in an oversized three-ring binder to the owner so that completed inspection logs can be easily added to the report. The following general comments should be considered during the preparation of this report:

a. The stormwater management maintenance plan and any future revisions should be recorded upon the deed of record for the property. This deed restriction should be prepared and forwarded to the Township Engineer for review and approval and should require the owner to maintain stormwater facilities in a manner satisfactory to the Township. The following restriction should be incorporated.

1) The deed restriction should provide that in the event that the responsible party fails in its maintenance obligation, the Township has the right, but not the obligation, to enter upon the property to perform the necessary maintenance at the responsible party's expense.

b. The final report should include the final grading, utility, and associated storm details plans in the appendix.

c. Add a checklist for each individual basin/bed. The author should consider the layout of the maintenance checklists from an end-user point-of-view. Each checklist should be unique to the components identified as a Basin or bed and included in the title of each checklist. Each checklist (inspection and preventative maintenance) should have its proposed schedule on it along with a key map of where it is in the development so that it can be utilized on its own, separate from the report.

1) Add a header or footer on each checklist that it should be photocopied for use.

2) Add a note that the completed checklists must be sent to the Township at least annually, but if an item or items is/are identified as "urgent", the checklist must be shared with the Township immediately.

3) Ongoing maintenance (lawn cutting, etc.) should be combined and have bullet items that would outline a scope to a landscaping company, assuming that several companies would be utilized over the years. It would not seem user-friendly for a landscaper to check several boxes for grass cutting for one basin.

4) Riprap aprons must be weeded, and stones replaced, as necessary.

5) The maintenance section of the BMP type should be consulted and dictate the checklist items. For example, infiltration basins recommend annual tilling of the sand layer.

d. Add a discussion for the above-ground basins for indications of basin failure. There could be a troubleshooting table or flowchart so that the user will know when it is time to call a licensed engineer because it has tried something (or a couple things) on its own.

e. Add a note (narrative and actual checklists) that the completed checklists must be sent to the Township at least annually, but if an item or items is/are identified as "urgent", the checklist must be shared with the Township immediately.

Response: Ware Malcomb has included an Operations and Maintenance Manual as part of this submittal.

Landscaping

20. ERI requested an opaque, i.e. solid vinyl fence along the retaining wall after our teleconference. The applicant proposed vinyl coated chain link fence with slats. The buffer proposed between infiltration basins A and B and the property line bordering the R-3 residential district appears to be less than 15' wide for much of its length and as little as 10' along the west side of basin A and bordering the sanitary sewer easement running along the northeasterly corner of the tract. Both widths are insufficient to provide effective screening. A double row of evergreen trees is proposed in the affected areas however the spacing will not provide sufficient room for growth, health and vigor.

Response: The landscaping design has been revised based on conversations with the township engineer and planner to provide a more sustainable planting design. The chain link fence with privacy slats has been revised to be solid white opaque vinyl.

21. *The designer does not want to put buffering between basin B and the property line because they need access to the outlet structure. The adjacent property is currently vacant, but it is zoned residential. This should be discussed as part of the justification for granting a design waiver.* We recommend the buffer bordering basin B be expanded south into the undeveloped portion of the tract to provide the 30' width re- quired by ordinance and that they be expanded to a minimum of 20' in developed areas. We recommend that the applicant's professionals meet with this office to develop an effective buffer.

Response: Based on our conversations with the township engineer and planner we have proposed staggered plantings between the rear property line and basin. We have expanded the clearing limits to provide access to the outlet control structure along the southern and western sides on the basin.

22. We recommend that a drip irrigation system be installed along the US Route 130 planting areas to supply supplemental water during dry periods and enhance plant vigor and growth.

Response: The applicant agrees to provide a drip irrigation system as suggested. A note has been added to the plans.

Miscellaneous

23. We recommended that the Board as a condition of approval that the applicant request Title 39 enforcement from the township committee.

Response: Informative. No action required by applicant.

24. We reserve the right to make additional comments as more information becomes available.

Response: Informative. No action required by applicant.

25. The Applicant should provide our office with electronic copies of all outside agency approvals once they are received.

Response: Outside agency approvals will be forwarded as they are received.

Should you have any questions on any aspect of this project, please do not hesitate to contact me via telephone at 848.999.3987 or email at ewilkes@waremalcomb.com.

Sincerely,
Ware Malcomb

Edward Wilkes Jr., PE
Civil Engineering Manager

cc: Edgewater Storage, LLC, Applicant via email astickney@treetopdev.com
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