

MATRIXNEWORLD
Engineering Progress

May 8, 2023

Via Courier

Township of Verona Planning Board
Verona Town Hall
600 Bloomfield Avenue
Verona, NJ 07044

Attn: Ashley Neale, Board Secretary

**RE: PRELIMINARY AND FINAL MAJOR SITE PLAN
VERONA SUNSET URBAN RENEWAL, LLC
1 SUNSET AVENUE – BLOCK 303, LOT 4 (TOWNSHIP OF VERONA)
BLOCK 301, LOT 5 & BLOCK 401, LOT 1 (TOWNSHIP OF MONTCLAIR)
ESSEX COUNTY, NEW JERSEY
MATRIX NO. 19-720**

Planning Board Members:

This letter has been prepared in support of our responses to the comments as listed in the following review letters for the above-referenced project:

- Boswell Engineering Review Letter dated February 16, 2023
- Boswell Engineering Review Memorandum dated March 21, 2023

We are submitting the following items in support of the application:

- 1) Ten (10) copies of the plans entitled "Preliminary and Final Major Site Plan, Verona Sunset Urban Renewal, LLC, Block 303, Lot 4, Township of Verona, and Block 301 Lot 5 and Block 401 Lot 1, Township of Montclair, Essex County, New Jersey" prepared by Matrix New World Engineering and last revised May 5, 2023
- 2) Ten (10) copies of the report entitled "Stormwater Management Report, Verona Sunset Urban Renewal, LLC, Block 303, Lot 4, Township of Verona, and Block 301 Lot 5 and Block 401 Lot 1, Township of Montclair, Essex County, New Jersey" prepared by Matrix New World Engineering and last revised May 5, 2023
- 3) Ten (10) copies of the report entitled "Stormwater Facilities Operations and Maintenance Manual, Verona Sunset Urban Renewal, LLC, Block 303, Lot 4, Township of Verona, and Block 301 Lot 5 and Block 401 Lot 1, Township of Montclair, Essex County, New Jersey" prepared by Matrix New World Engineering and last revised April 27, 2023
- 4) Ten (10) copies of Architectural Plans prepared by Minno Wasko and dated May 5, 2023
- 5) Ten (10) copies of Landscaping Plans prepared by Linda Tycher and Associates, Inc. and dated May 5, 2023
- 6) Ten (10) copies of the approval from Hudson Essex Passaic Soil Conservation District
- 7) Ten (10) copies of the Sanitary Sewer Report and Technical Specifications prepared by Matrix New World Engineering and dated March 10, 2023

- 8) Ten (10) copies of the report entitled "Traffic Impact Study, Proposed Multifamily Development" prepared by Stonefield Engineering and last revised May 3, 2023
- 9) Ten (10) copies of the plan entitled "Pre-Development Drainage Area Map for the Existing Stormwater Pipe in Sunset Avenue" prepared by Matrix New World Engineering and dated March 23, 2023
- 10) Ten (10) copies of the plan entitled "Post-Development Drainage Area Map for the Existing Stormwater Pipe in Sunset Avenue" prepared by Matrix New World Engineering and dated March 23, 2023
- 11) Ten (10) copies of the Existing Pipe Calculations for the Existing Stormwater Pipe in Sunset Avenue prepared by Matrix New World Engineering
- 12) Ten (10) copies of the Proposed Pipe Calculations for the Existing Stormwater Pipe in Sunset Avenue prepared by Matrix New World Engineering
- 13) Ten (10) copies of the 2020-2021 Verona water bills showing existing sanitary and water demands
- 14) Ten (10) copies of the Site Plan revisions memo

In addition to the above enclosures, please review the point-by-point responses below for the above-referenced review letters; *italicized* text indicates review comments and **bold** indicates our response. Also note that all items which are noted as "**The Applicant will comply**" shall be as a condition of approval and any revisions will be included in the compliance submission.

BOSWELL ENGINEERING REVIEW LETTER DATED FEBRUARY 16, 2023

Site Plan

1. *The project proposes a significant amount of earthwork. The Applicant should provide borrow/fill calculations for the proposed work...*

The amount of anticipated cut and fill are 38,885 CY and 8,188 CY, respectively. These calculations were completed by the contractor prior to the finalization of footing and building slab design and provide an order of magnitude for the anticipated cut/fill. Testimony will be provided regarding anticipated number of truck trips required.

2. *If fill is required, the Applicant will be required to provide the following...*

The Applicant will comply with all applicable Township, State, and Federal regulations related to fill material.

3. *The Applicant proposes the following walls on-site.*

- a. *Poured concrete walls with a maximum exposed height of 18.5 ft*
- b. *Block walls with a maximum exposed height of 6.05 ft.*

The enclosed site plans have been revised to reduce the exposed height of the poured wall located to the south of the building to a maximum of 6 feet.

4. *The Applicant must be made aware that all retaining walls greater than three (3') feet in exposed height requires retaining wall stability calculations to be provided...*

Prior to construction, design calculations for retaining walls will be provided.

5. *All retaining walls constructed on site will require a certification by a licensed engineer that he/she has provided on-site inspection during wall construction, that proper methods were utilized in the construction, the wall...*

The Applicant will comply.

6. *Detailed building height, building coverage and lot coverage calculations shall be provided on the plan.*

The enclosed plans have been revised to provide the requested calculations.

7. *There is no sidewalk proposed from the driveway entrance along Sunset Avenue to Afterglow Avenue. We recommend that sidewalk should be extended to Afterglow Avenue*

The enclosed plans have been revised to provide the requested sidewalk.

8. *All ADA pedestrian facilities constructed on site and within public rights-of-ways or easements must be constructed in accordance with Federal ADA Standards. This includes maps located...*

The Applicant will comply.

Parking

9. *The number of spaces per Section 150-17.8.F.(3). (i) is as follows...The floor plans show 93 one-bedroom units, 103 two-bedroom units and 4 three-bedroom units. However, the project unit mix table on Sheet C-01 and parking requirement table on Sheet 1 shows...*

The enclosed plans have been revised to be consistent with the architectural floor plans.

10. *The Applicant proposes the following parking breakdown...*

Statement, no response required.

11. *Per the New Jersey Department of Community Affairs P.L. 2021, Chapter 171 for multifamily residential developments with five (5) or more units, a total of 15% of the required off-street parking shall be made EV-ready.*

The total number of off-street parking spaces required is 380. This accounts for 57 electric vehicle spaces. It is noted on sheet 1 that fifty-eight (58) electric vehicle (EV) parking spaces are proposed in the parking deck. The location of these spaces must be shown on plan.

The location of the EV spaces will be shown on the architectural building plans.

Stormwater Management

12. *The Applicant should provide testimony on a revised Stormwater Management Report and Stormwater Operation and Maintenance Manual...*

A revised Stormwater Management Report and Stormwater Operation and Maintenance Manual are included in this submission. Additional testimony will be provided.

13. Please see below for initial drainage comments prepared by Bright View engineering dated August 16, 2022 and updated responses based on revised site plans and stormwater management report:

(7) The Applicant is not proposing to utilize any green infrastructure or BMPs as part of their drainage design. Per Chapter 455-14P (3), BMPs should be utilized to achieve runoff quantity reductions. (New Boswell Comments) It is noted that the use of infiltration and recharge systems is not feasible due to low permeability of existing soils on-site. The plans have been revised to include permeable pavement in the lower parking area...

The enclosed plans and Stormwater Management Report have been revised to include additional green infrastructure measures including permeable pavement, a small-scale bioretention basin, and a grass swale area.

(9.) The Applicant needs to develop a means to reduce the velocity of runoff and to promote natural infiltration from the swales along the south side of the property. This could be achieved by constructing a basin or other green infrastructure adjacent to the proposed wall. (New Boswell Comments) Channel stability calculations have been provided in Appendix I of the drainage report. The proposed grass swale along the eastern property line conveys flow at a velocity of 5.05 ft/s. According to Standards for Soil Erosion and Sediment Control ...

The analysis of the channel stability included in the Stormwater Management Report has been revised so that the grass swale on the eastern property line conveys flow at a velocity of less than 3 ft/sec.

(12.) Due to the steep contributory slopes, the effectiveness of any proposed lawn/yard inlet will be reduced, and depressed areas should be constructed at each proposed location that are within slopes. As stated above, consideration should be given ... (New Boswell Comments) The plans have been revised to include depressed areas at each inlet location within sloped areas along the south side of the property. A small-scale bioretention basin is also proposed to the south of the proposed building.

Comment, no response required.

(13.) The Applicant must complete a capacity analysis for any Township storm sewer structures that this project will discharge to. The analysis will be needed to confirm that any new connections can be accommodated by the existing system. (New Boswell Comment) It is noted that the proposed development will result in a reduction in the runoff rate directed towards the existing drainage inlet located within Sunset Avenue. Therefore, the reduction in runoff rate will not have a negative impact on the downstream drainage system and no downstream capacity analysis is required.

An analysis has been conducted to model the existing and proposed capacity of the existing drainage inlet located in Sunset Avenue. In existing conditions (during the 25-year storm), the existing 15" pipe is operating well above flow capacity (110%). With the proposed development, the performance of the existing pipe improves significantly in the 25-year storm and will be operating well below flow capacity (40%). An existing drainage area map, proposed drainage area map and pipe calculations are included with this submission which demonstrate this analysis.

(15.) Additional portals and access points will be required to be installed within the storm chamber system to ensure ongoing maintenance can be more easily completed. **(New Boswell Comments)** The plans have been revised to include multiple observation ports for the proposed underground detention systems.

Comment, no response required. As noted, the plans have been revised to include additional observation ports for the proposed underground detention systems.

14. Below are additional comprehensive comments on drainage and stormwater management elements of the project that must be addressed and submitted for review for compliance with the Township's stormwater control ordinance as well as NJDEP stormwater control standards.

a. Detailed calculations (pre and post development) of the time of concentration should be provided in the report.

Detailed time of concentration calculations for pre- and post-development are included in the Stormwater Management Report. These calculations are located in the hydrocad reports in Appendix D (pre-development) and Appendix E (post-development).

b. The drainage report states that "the stormwater runoff flows that were determined for the pre and post development conditions were calculated using the UDSA Natural Resources Conservation Service Methodology, as described...

The enclosed Stormwater Management Report has been revised as requested.

c. In accordance with NJAC 7:8-5.5 Stormwater Runoff Quality Standards, the Applicant does not have to comply with the stormwater runoff quality standards as the proposed development decreases the regulated motor vehicle surface on site. However, per section 455-14R Stormwater Runoff Quality Standards of the Township Code, stormwater runoff quality standards are applicable when the project...

As noted previously, the proposed development would not be subject to the NJDEP water quality standards. However, in an effort to address the Boswell concerns, we have revised the plans to include two (2) water quality treatment devices which will treat runoff before it reaches the Township stormwater system.

d. A recharge spreadsheet has been provided indicating zero (0") inches of annual recharge for both existing and proposed conditions per the soil testing. It is noted in the response letter that a total of eleven (11) geotechnical borings and ten (10) permeability tests were...

The enclosed Stormwater Management Report has been revised to include all the permeability tests completed on-site.

e. Permeable pavement is proposed in the parking lot. It is noted in the report that the infiltration rates on site are 0.0 in/hr., which is below the minimum allowable...

The enclosed plans have been revised to include underdrains in the permeable pavement area. The underdrains will be located at the bottom of the permeable pavement/stone bed and will be able to collect the water running through the pavement section.

- f. *A revised maintenance manual shall be provided including preventative maintenance tasks, schedules,...*

The enclosed Operations and Maintenance Manual has been revised to include the proposed bioretention basin and permeable pavement.

- g. *The maintenance manual shall include drain time calculations for the maximum design storm runoff volume for all proposed underground detention basins,...*

The Operations and Maintenance Manual has been revised to include the requested information.

- h. *The Applicant must add a note to the plan outlining the requirement to submit an inspection report on the conditions of the underground detention basins, bio-retention basins, and pervious paving...*

The enclosed plans have been revised to add the requested note.

- i. *It is noteworthy to point out that the NJDEP is currently in the process of updating the design storms as a rainfall increase has been detected throughout the state. Thus, adjustment factors are being proposed for the rainfall values currently provided...No action is required at this moment. However, it is recommended to test the proposed green infrastructure using the proposed rainfall adjustment factors.*

Comment, no response required.

Utilities

15. (17) *A comparison of the existing versus proposed sanitary sewer flows should be provided. The Applicant must also obtain confirmation that the Township treatment plant can accommodate any increase in flow. In Matrix New World response letter dated January 16, 2023, they provided comparison of the existing versus proposed sewer demand has been provided. However, the existing sewer flow has not been provided...*

The existing sewer flow was previously submitted in the form of a bill from the Township of Verona where the sewer charge has been provided. The bill is enclosed with this submission.

16. (18) *The applicant shall confirm that only one sewer connection will be required for this project. Pipe capacity calculations will be required to confirm the lateral is sized to accommodate the anticipated demand. In Matrix New World response letter dated January 16, 2023, they provided that capacity calculations for the sanitary sewer lateral have been provided, however they were not found in the submission package.*

The pipe capacity calculations for the sanitary sewer lateral are included in the Sanitary Sewer Report included with this submission.

17. (19) *The applicant shall confirm that the existing sanitary sewer lateral will be capped and abandoned and if it is, notes and details should be added to the plans. A note has been added to Sheet 3 stating that the existing sanitary lateral will be capped and abandoned.*

Comment, no response required.

18. (20) A comparison of the existing versus proposed water demand should be provided. The applicant must also obtain confirmation that the Township can accommodate any increase water supply required for this development. In Matrix New World response letter dated January 16, 2023 they provided existing versus proposed water demand has been provided. It is noted that the Township have taken their primary water wells offline...

Applicant shall comply.

19. (21) Will-serve letters from all applicable utility companies need to be provided to ensure the increased demand can be accommodated by the provider. It is noted that will-serve letters were sent to all utility companies provided on the 200-foot list...

Applicant shall comply.

20. The Redevelopment Agreement Feb 3, 2022 (which includes the 1st amended settlement agreement starting on p.54 of overall agreement) states the following:

- a) Expense of Developer: p. 12 of overall doc...

Applicant shall comply.

- b) Expense of Developer: P 26 of overall doc...

Applicant shall comply.

- c) This office is currently reviewing the impacts of the proposed development with the Township's Engineering Manager to access the off-site impacts...

Comment, no response required.

Site Operations & Maintenance

21. (23) The plans indicate that the refuse and recycling will be brought out for pickup on collection day. Testimony should be provided regarding the operation of recycling and refuse pickup and the anticipated frequency of these services...

Testimony has been provided.

22. (24) Testimony should be given regarding the intended snow removal operation on the proposed improvements and the location of potential snow storage if required.

Testimony has been provided.

Traffic, Parking & Circulation

23. In Matrix New World response letter dated January 16, 2023, they provided responses to Bright View Engineering review letter dated August 16, 2022...

1. The name and type of project on the traffic report cover needs to be corrected...

The report has been revised to correct the name and type of project and copies of the revised report are enclosed.

2. *Using ITE's Trip Generation Manual, 11th edition, the proposed use can potentially generate...*

No response required.

3. *The use of peak hour data as the sole determining factor of a site's impact does not consider the distribution of the remaining trips...*

Testimony has been provided.

4. *Testimony is needed on the type and frequency of site support vehicles, such as landscaping, pool, courtyard and grounds maintenance...*

Testimony has been provided.

5. *Testimony is needed on anticipated frequency for other non-resident trips...*

Testimony has been provided.

6. *The traffic report does not contain any information with respect to crash frequency...*

Testimony has been provided.

7. *The report provides bus route information, but is not used or referenced elsewhere...*

The information regarding existing transit service and utilization is provided as it is relevant to the proposed use and within walking distance of the site. However, no transit trip reduction was applied to the analysis, conservatively.

8. *The files used in the analyses are requested for additional review...*

Analysis files were previously submitted to Boswell.

9. *Testimony is needed on the length of existing and expected queues on the Sunset Avenue approach...*

Testimony has been provided.

10. *Item #42 of the response letter indicates the sight triangles and calculations were added to the Geometry Plan (sheet number 5)...*

The sight triangles provided comply with the AASHTO Green Book dimensions.

11. *In a January 8, 2023 memo to Verona's Planning Board, Bright View provided additional review comments and evaluation to supplement their November 28, 2022 review memorandum...*

No response required.

Excerpts Pertaining to Traffic and Circulation Elements from Bright View's Supplemental Memorandum dated January 8, 2022

24. *The traffic study noted that turning movement counts were conducted at the signalized intersection of Sunset Avenue, Bloomfield Avenue and Claremont Avenue...*

Comment has been addressed, no response required.

25. *Traffic counts were also conducted at the existing school on site, but these counts were not included...*

The traffic counts associated with the existing school driveways have been included in the enclosed revised report.

26. *The ITE trip generation manual, 11th edition was utilized to determine trip generation rates associated with the proposed use...*

No response required.

27. *It appears that the levels of service for the 2025 Future Traffic conditions were compared to 2019 Existing Traffic conditions...*

Comment has been addressed. No response required.

28. *To obtain the future traffic conditions, a 1.00% background growth rate was utilized since Bloomfield Avenue is an Urban Principal Arterial...*

Comment has been addressed. No response required.

29. *Since the proposed multifamily housing use may have different peak hours than what was counted at the intersection of Sunset Avenue, Bloomfield Avenue and Claremont Avenue, we recommend performing an additional analysis...*

Comment has been addressed. No response required.

30. *The traffic study states that left turn restriction at the driveways would be removed...*

The report has been revised to indicate that left turn restrictions at both driveways would be maintained.

31. *A level of service analysis for the site driveways should be provided for review...*

Comment has been addressed. No response required.

32. *A technical appendix to the TIS that includes timings utilized and Synchro reports shall be provided...*

Analysis files were previously submitted to Boswell.

33. *The traffic study states that there are 95 one-bedroom units, 110 two-bedroom units, and 3 three-bedroom units, which equates to 208 dwelling units...*

Comment has been addressed. No response required.

34. *Nine (9) accessible parking spaces are proposed, which meet ADA requirements...*

Comment, no response required.

35. *The applicant is proposing a total of 381 parking spaces of which 58, or fifteen percent, will be make-ready for electric vehicles...*

Comment, no response required.

36. *In the Redevelopment Agreement, Exhibit C (Settlement Agreement) paragraph 9.a) iii. States: "Parties also agree that the Developer shall fund the engineering to determine the scope of improvements and costs associated with the installation of a minimum of one additional lane of traffic..."*

Applicant shall comply.

Landscaping

37. (45) *The tree quantity on the landscape plans does not match with the site plans with the landscape plans...*

Revised landscaping plans are included with this submission.

38. (47) *It is recommended that native and deer resistant plants be selected, and that the applicant conform to the landscaping comments by the Township's Environmental Commission...*

Revised landscaping plans are included with this submission.

39. (48) *The applicant should provide testimony as to whether a landscape irrigation system is being proposed for the grounds...*

Testimony has been provided.

40. (49) *The applicant will be required to avoid storing material on the dripline of all trees to remain on the property...*

Testimony has been provided.

Lighting Plan

41. (51) *The Applicant shall provide the following additional information...*

- *Light Loss Factor Utilized (PROVIDED)*
- *Separate calculation areas for pedestrian walkways and access points drive aisles/intersections and parking areas (PROVIDED)*

We have the following observations based on the new information provided:

- a) *The light levels of the top floor of the parking garage appear high compared to IES standards. The Applicant should provide testimony if the light levels will produce a "glow" in the sky with the proposed light levels...*

The proposed lighting fixtures will be outfitted with house shields which will direct the light into the garage area and help prevent any overflow of light above or behind the fixture.

- b) *The west-side of the parking garage is exposed and not surrounded by part of the structure. The intensity of the light levels of the individual floor levels of the garage have not been provided...*

The proposed lighting fixtures will be outfitted with house shields which will direct the light into the garage area and help prevent any overflow of light above or behind the fixture.

42. (52) *The Township Code 150-12.8(3) for additional off-street parking regulations requires attendant/accessible parking spaces to have a minimum of 2-foot candles. The proposed layout appears to meet this standard. Testimony should be given to confirm the standard is being met.*

Testimony will be provided, if required.

43. **The Applicant should confirm in testimony the following with respect to luminaires:**

- a. *The light color of all the proposed luminaires should not exceed 3000k as the property lies in a residential in a residential neighborhood. The details on Sheet 10 for Light fixtures "A" and "C" should specifically denote the light fixtures will have a maximum color temperature of 3000k.*

The lighting plan has been revised to indicate that all fixtures will have a maximum color temperature of 3000K.

- b. *The Township Code, 150-12.8(E) for Additional Off-Street Parking Regulations, requires attendant/accessible parking spaces to have a minimum of 2 footcandles...*

Testimony will be provided, if required.

44. *We recommend that if the application is approved that the Township reserves the right to require modifications and changes in the lighting for a period of six (6) month assessment period after construction...*

Applicant shall comply.

Architecture

45. *The Applicant should provide testimony regarding the revisions to the architectural plans submitted...*

Testimony has been provided.

46. *The applicant should provide testimony regarding the location of proposed HVAC and mechanical equipment...*

Testimony has been provided.

47. *The applicant should present testimony regarding the noise levels of any HVAC and other mechanical equipment...*

Testimony has been provided.

48. *The Applicant should confirm that all patios for the individual units will not exceed 70 s.f. in area...*

Testimony has been provided.

Fire Protection/Fire Department Comments – In Conjunction with Fire Official Matt Gifford

49. *The applicant's engineer should confirm that the Verona Articulated Fire Truck (large wheelbase) can make a turning movement at the circle within the proposed development...*

Testimony has been provided.

50. *The applicant should review the location of the stair wells. It appears that the front of the building does not have a stair well where it would be anticipated for the fire and emergency responders to access the building...*

The plans have been revised to include a stair well in the front of the building.

51. *The Applicant should confirm that the building elevators are of sufficient size for emergency stretchers...*

The proposed building elevators are of sufficient size for emergency stretchers. Additional testimony has been provided.

52. *An eight (8) ft. stabilized path should be provided for emergency vehicles such as pickup truck or specialized emergency vehicle and serve the back of the site.*

A 20 ft. x 20 ft. reinforced grass paver path is proposed along Afterglow Avenue for emergency vehicle access. This does not address the Fire Departments comment to provide an eight (8) foot wide stabilized path for a pickup or specialized emergency vehicle to access the rear of the property to the Domestic Water/Sprinkler Room and rear open patio. The applicant should provide testimony on how this will be addressed.

Testimony has been provided.

- a. *A Construction detail shall be provided for the grass paver path.*

A detail for the reinforced grass paver path has been added to Sheet 14 of the Site Plans.

- b. *The Planning Board should consider if a gate and "EMERGENCY ACCESS ONLY" sign should be installed at the grass paver path entrance into the site from Afterglow Avenue to prevent cars from accidentally going through it.*

The plans have been revised to indicate a gate with "Emergency Access Only" signage at the grass paver path entrance. A detail for the gate has also been added to Sheet 14 of the Site Plans.

53. *Install a dry sprinkler system in the parking garage dye to the amount of parking spots that will be available for Electric Vehicles...*

Applicant shall comply. Testimony will be provided.

54. *Since there is no fire emergency access to the east, south and west sides of the structure, access should be available for emergency personnel to bring ground ladders if necessary...*

Addressed in testimony.

55. *We recommend that the Applicant provide testimony by an expert in fire prevention as to how a fire in the building is to be contained and how the proposed plan addresses firefighting...*

As required by the new building code there will be sprinklers within the garage. In addition, as previously testified to, the building will have a NFPA 13 system which means there are sprinklers throughout every space of the building (including concealed spaces).

Signage

56. *The applicant proposes one (1) monument sign, at the entrance to the site from Sunset Avenue...*

Comment, no response required.

57. *The Applicant proposes one (1) wall sign, measuring 4 square feet in area...*

Comment, no response required.

58. *The Applicant should provide testimony with regards to the illumination of all proposed signage...*

All signage will be backlit.

Additional Permits and Approvals

59. *(51) Approval or status of permit from Hudson-Essex-Passaic Soil Conservation District...*

Approval has been obtained from the Soil Conservation District. A copy of the approval is enclosed with this submission.

60. *(54) Approval or status of permit from Essex County...*

An application to Essex County has been submitted and approval will be provided once obtained.

61. *(58) Approval or status of TWA Application...*

NJDEP TWA Application will be submitted once board approval has been granted. Approval will be provided once obtained.

62. *(56) Approval or correspondence between the Applicant and the Township of Montclair...*

Comment has been previously addressed. No response required.

BOSWELL ENGINEERING MEMORANDUM DATED MARCH 21, 2023

1. *During the hearing of March 16, 2023, the Applicant stated (that) Boswell had agreed that a capacity analysis of the existing stormwater sewer was not necessary. This statement does not represent Boswell's technical opinion on the matter, but Bright View Engineering's.*

In their technical memo (dated August 16, 2022), Bright View Engineering stated: "It is noted that the proposed development will result in a reduction in the runoff rate directed towards the existing drainage inlet located within Sunset Avenue. Therefore, the reduction in runoff rate will not have a negative impact on the downstream drainage system and no downstream capacity analysis is required". This statement was included in Boswell's Technical Memorandum (dated February 16, 2023) only as a reference. Therefore, it should not be construed as Boswell's opinion and/or endorsement.

On the contrary, we (Boswell) recommend that a capacity analysis of the existing stormwater system on Afterglow and Sunset Aves. shall be performed given that some of the existing flow path patterns and the total contributory area of the catchments discharging into the inlets on Afterglow and Sunset Aves. will be modified.

An analysis has been conducted to model the existing and proposed capacity of the existing drainage inlet located in Sunset Avenue. In existing conditions (during the 25-year storm), the existing 15" pipe is operating well above flow capacity (110%). With the proposed development, the performance of the existing pipe improves significantly in the 25-year storm and will be operating well below flow capacity (40%). An existing drainage area map, proposed drainage area map and pipe calculations are included with this submission which demonstrate this analysis.

2. *The Applicant used NRCS Delmarva unit hydrograph (peaking factor of 284) in the submitted hydrologic analysis (latest revision version Jan. 11, 2023). This needs to be corrected...*

The Stormwater Management Report has been revised to analyze using the NRCS Standard Unit Hydrograph. We note that the change in the unit hydrograph did not require any modifications to the previous proposed stormwater management system and the design still meets the NJDEP quantity requirements.

3. *Project's water demand: According to documentation provided by the Applicant, the average water demand is 33,308 GPD (of 22.8 gpm). Using a peaking factor of three (per NJAC 5:21-5.2(d)), the peak flow will be 96,924 GPD (or 67.3 gpm). The Township's water system capacity to supply the demand shall be assessed/determined.*

No response required.

4. *Project's fire flow demand: Per both NJAC 5:21-5.3(i)3 and NJAD7:10-12.37(b), "the design capacity of every distribution main and every service line shall be such as to provide a minimum pressure of 20 psi at ground level..."*


The Applicant intends to conduct hydrant flow tests once the township wells are brought back online. Depending on these results, the applicant agrees to install water pumps to service the project if required.

5. *Project's domestic wastewater flow: According to documentation provided by the Applicant, the average domestic wastewater flow is 40,355 GPD or (28 gpm, or 0.062 cfs). Using a peaking factor of 2.0, the peak wastewater flow will be 80,710 GPD (or 56 gpm, or 0.12 cfs). The capacity of the receiving existing sanitary pipe shall be assessed...*

The Applicant has conducted a video inspection of the existing sanitary sewer main location within a portion of Afterglow Avenue and Afterglow Way as agreed to with the Township Engineer. These results will be shared with the Township. A copy of the sanitary sewer report which demonstrates that the proposed sanitary sewer lateral has capacity, is also enclosed with this submission.

Should you have any questions or require additional information please do not hesitate to contact me by phone at (973) 295-3604 or via email to ssavage@mnwe.com.

Sincerely,



Sean M. Savage, PE
Director of Land Development

TNM:SMS:lb
Enclosures