



TOWNSHIP of HOPEWELL MERCER COUNTY

**201 WASHINGTON CROSSING – PENNINGTON ROAD
TITUSVILLE, NEW JERSEY 08560-1410**

PROJECT / APPLICATION

BLOCKS:

LOTS:

ADDRESS:

PROJECT NAME:

REVIEW REPORTS CONTENTS



TOWNSHIP OF HOPEWELL

201 Washington Crossing-Pennington Road
Titusville, New Jersey 08560-1410
Phone 609.737.0605 Ext. 6280

M E M O R A N D U M

TO: Hopewell Township Planning Board

CC: Applicant

FROM: Mark Kataryniak, P.E., Board Engineer *(MK)*

DATE: April 16, 2021

RE: **Engineering Review #1 – PBA 20-09**

The Collection at Hopewell

Applicant: US Home at Hopewell Urban Renewal, LLC

P/F Major Subdivision & P/F Site Plan; IMF-X Zone

Block 85, Lot 3; 12 Washington Crossing Pennington Road

Block 85, Lot 9; 1646 Reed Road

Block 86, Lots 32, 33, 34 & 130; 24 & 26 Diverty Road

I. Description

- A. The subject application seeks approval for preliminary and final major subdivision as well as preliminary and final site plan to develop 379 residential units, with associated roadway, stormwater management, landscape and parking improvements.
- B. The application seeks to create 87 subdivided tax lots and contain the development within 29 three-story buildings consisting of:
 - 61 townhomes contained within ten multi-unit buildings
 - Nine of the buildings contain six units / each
 - One building contains seven units
 - All of the townhome units contain three bedrooms and are three-stories tall
 - 144 stacked townhomes within eleven multi-unit buildings
 - Eight of the buildings contain 12 units / each
 - Three of the buildings contain 16 units / each
 - Each stacked townhome unit contains one two-bedroom and one three-bedroom units for a total of 72 two-bedroom and 72 three-bedroom units
 - All of the stacked townhomes are three-stories tall
 - 96 multi-family condominium units within four multi-unit buildings
 - Each building contains twenty-four two-bedroom units
 - Each building contains three stories
 - 78 multi-family affordable units within four multi-family buildings
 - Three of the buildings contain 19 units / each comprised of:
 - 2 – one-bedroom units
 - 12 – two-bedroom units
 - 5 – three-bedroom units
 - One of the buildings contains 21 units comprised of:
 - 2 – one-bedroom units
 - 14 – two-bedroom units
 - 5 – three-bedroom units

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II. Application Submission Items

A. An initial application submission package was received on November 25, 2020 containing:

1. A letter dated November 20, 2020 from Jason Tuvel, Esq., of Prime and Tuvel, transmitting the subject application and itemizing included materials as further described herein.
2. Completed Application forms executed by Applicant and by the three owners, in counterpart, of the Property; namely, the Township of Hopewell (Block 85, Lot 3), Michael Kane (Block 85, Lot 9) and Dorina Frizzera, individually and as Executrix of the Estate of William C. Heitzman (Block 86, Lots 32, 33, 34 & 130);
3. Two checks of the Applicant, made payable to the Township of Hopewell, representing Application Fees and Escrow Deposit;
4. Executed Escrow Agreement with IRS Form W-9 pertaining to Applicant;
5. Hopewell Township Tax Collector's certification of payment of taxes;
6. Consent to Entry executed by all owners and by Applicant
7. Checklists for Preliminary and Final Site Plan and Preliminary and Final Subdivision, completed and signed by Sean Delany, PE, Bowman Consulting, Project Engineer;
8. Certificate of Ownership / Applicant Disclosure Statement, completed by Applicant;
9. Tree Inventory Plan (Site Plan, Sheet 3);
10. Preliminary and Final Major Subdivision and Preliminary and Final Site Plan Set consisting of Sheets 1- 20, prepared by Sean Delany, PE, Bowman Consulting, Freehold New Jersey, dated 11/20/2020;
11. Traffic Engineering Evaluation, prepared by Eric L. Keller, PE, PP, Bowman Consulting, entitled, "Traffic Engineering Evaluation for The Collection at Hopewell," dated November 9, 2020;
12. Environmental Impact Assessment entitled, "Environmental Impact Statement for The Collection at Hopewell," prepared by Envirotactics, Inc., dated November 2020;
13. Fiscal Impact Report entitled, "Community Impact Statement, Proposed Residential Development, Hopewell Township, Mercer County, New Jersey," prepared by Richard B. Reading of Richard B. Reading Associates, Princeton, NJ, dated November 9, 2020;
14. Soils Test Reports, prepared by Chadd W. Ingram, PE, Ingram Engineering Services, Inc., dated January 19, 2018, February 1, 2018, November 8, 2018 and September 29, 2020;
15. Consistency with Wastewater Management Plan of Hopewell Township, NJDEP Geoweb Sewer Service Area Exhibit, prepared by Bowman Consulting, dated 2/19/2018;
16. Copies of the following NJDEP permits:

Block 85, Lot 3:

NJDEP Freshwater Wetlands Letter of Interpretation: Line Verification Permit dated January 9, 2019 (File No.: 1106-03-0004.2 FWW180001);

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NJDEP Freshwater Wetlands Letter of Interpretation: Line Verification - Clarification Letter dated February 13, 2019 (File No.: 1106-03-0004.2 FWW180001);

NJDEP Flood Hazard Area Applicability Determination dated June 29, 2020 (File No.: 1106-03-0004.2 APD 200001);

Block 86, Lots 32, 33, 34 and 130:

NJDEP Freshwater Wetlands Letter of Interpretation: Line Verification Permit dated September 13, 2019 (File No.: 1106-03-0004.3 FWW190001);

NJDEP Flood Hazard Area Applicability Determination dated November 15, 2019 (File No.: 1106-03-0004.3 APD 190001);

17. Wetlands Report and Wetlands Delineation (part of Item 18);
18. Utility Letters from electric, telephone, cable TV, water and gas regarding acceptable size and location of proposed underground easements;
19. Architectural Elevations and Floor Plans, prepared by Holliday Architects for The Collection at Hopewell, dated November 11, 2020, Sheets CS-1 and A-1 through A-23;
20. Preliminary Engineering Report for The Collection at Hopewell, Hopewell Township Pump Station, prepared by Sean Delany, PE, Bowman Consulting, dated November 20, 2020.

B. A supplemental package was received on December 7, 2020 containing.

1. ALTA / NSPS Land Title Survey, Block 85 Lot 3 and Block 86, Lots 32, 33, 34 and 130, prepared by Martin F. Tirella, PLS, Bowman Consulting, dated 2/10/18, last revised 10/27/20, consisting of 2 sheets;
2. Preliminary and Final Subdivision Plat for The Collection at Hopewell, prepared by Bowman Consulting, dated November 20, 2020, consisting of 6 sheets.

C. A second supplemental package was received on December 11, 2020 containing:

1. Stormwater Management Facilities Maintenance Manual, The Collection at Hopewell, Block 85, Lot 3; Block 86, Lots 32-34 & 130; and part of Block 85, Lot 9, prepared by Sean A. Delany, PE, Bowman Consulting, dated November 20, 2020.

D. Electronic versions of the originally submitted and supplemental materials described above were transmitted on December 21, 2020.

E. Following the issuance of my Completeness Memo #1, issued on January 8, 2021, the following materials were received on January 11, 2021:

1. Stormwater Management Report for The Collection at Hopewell, prepared by Bowman Consulting, dated November 20, 2020.
2. Checklist Submission and Design Waiver Request Form, undated
3. Revised Application Form Page 2, undated
4. Revised Submission Checklists for:
 - a. Preliminary Major Subdivision, dated 1/11/2021
 - b. Final Major Subdivision, dated 1/11/2021
 - c. Preliminary Major Site Plan, dated 1/11/2021

- d. Final Major Site Plan, dated 1/11/2021

The application was deemed complete by the Hopewell Township Planning Board at a public hearing on January 28, 2021. Submission waivers were granted by the board as outlined in my office's memorandum dated January 20, 2021.

III. Redevelopment Plan & Zoning Compliance

- A. The site is governed by the Redevelopment Plan for the Project Area, issued on November 2017, amended February 2018, the Residential Site Improvement Standards (RSIS) N.J.A.C. 5:21, and by the Township's Land Use and Development Ordinance (LUDO). Section 3 of the Redevelopment Plan, entitled Land Use and Building Requirements, establishes that the general standards set forth in the LUDO continue to apply except when inconsistent with the standards set forth in the Redevelopment Plan.
- B. We defer to the Board Planner for a complete interpretation of the standards set forth in the Redevelopment Plan, but note the following items that may require further explanation to fully demonstrate compliance:
 1. Under Section 3.5 "Other Requirements"
 - a. Item A.5 requires all HVAC and mechanical equipment to be located at the side or rear of the homes and shielded from view. Testimony should be provided regarding compliance with this requirement, and the plans should be revised as necessary to illustrate the locations of the mechanical units on the site.
 - b. Item A.7 requires buildings incorporate spare conduit to accommodate future roof-mounted PV Systems. The Applicant should provide testimony to confirm compliance with this requirement, and we recommend this detail be stipulated as a Condition of any approval granted by the Board.
 - c. Item B.2 requires pedestrian and/or bicycle circulation systems extend through the site and connect with open space and common areas. This section also requires that sidewalks be constructed on at least one side of all streets. The Applicant should provide testimony or a graphic of the intended bicycle circulation throughout the site, and indicate if the access will be through dedicated or shared use lanes. All signage and striping intended on the site should be indicated on the plans with details provided as necessary.
 - d. Item C.1 requires a minimum of 20 percent of the tract to be set aside for conservation, recreation or other open space. The areas intended to meet this requirement should be illustrated and quantified on the plans. The Applicant should demonstrate through testimony the proportion of the total tract area that will satisfy this requirement. Preservation of these areas with dedicated easements, where practicable, is encouraged.
 - e. Item E requires stormwater design be as naturalized as possible. The applicant should provide testimony to illustrate how closely the proposed stormwater design complies with the recently established Green Infrastructure Techniques developed by the NJDEP.

2. Provide testimony to demonstrate compliance with LUDO Section 17-262.a.3(a), which requires low- and moderate-income units to be integrated with the market rate units to the extent possible.
3. A comparison of the Architectural Plans and Site Plans notes a discrepancy in the number of townhouse units located at the southerly portion of the site. The seven-unit building shown on the site plans near the southwest corner of the site is shown as an eight unit building on the architectural plans. With all of the other building types remaining the same in terms of the number of units provided, the maximum number of townhouses permitted under the Redevelopment Agreement is 61, (9-6-unit buildings and 1-7-unit building per the site plan), to remain within the cap of 301 market rate units for the site.
4. The Redevelopment Plan and Redevelopment Agreement, at the time of their adoption, allowed for condominium buildings of up to four stories and restricted the location of the four-story buildings to the area south of the gas line easement. The Applicant should provide testimony on the changes made to the overall site plan from the original adoption of the Redevelopment Agreement that led to the elimination of four-story structures and discuss the benefits/impacts the changes had on the development including visual impacts to surrounding properties and impacts to the overall lot coverage.
5. The general layout of the site plan has changed when compared to the conceptual plans included with the Redevelopment Plan and the Agreement documents related to the transfer of ownership of the property. The Applicant should provide an overall description of the major changes and how they advance the overall goals and objectives of the Redevelopment Plan.

IV. Bulk Requirements

A. With respect to the information contained in the Zoning Table included on the General Notes Sheet, we note the following:

1. Under the requirement for Minimum Setbacks from Buildings Onsite, the “Front to Side” entry is indicated as 40’ Required & 95’ Provided. This item should be corrected to 58.3’ Provided to reflect the dimension indicated on the plans between Multi-Family Buildings 1 and 3. It is acknowledged that this requirement remains compliant for the proposed site plan as presented.

B. Variances

1. All of the proposed improvements depicted on the plans fall within the listing of Permitted Principal Uses for the IMF-X Zone.
2. The proposed site plan conforms to the Bulk and Area Requirements established in Section 3.3 of the Redevelopment Plan, with the exception of the following:
 - a. Item S requires a minimum drive aisle width of 24 feet, where Alley BB is proposed at a width of 22 feet, and the Applicant has categorized this as a Waiver from the zoning standards. It is noted that the width of Alley BB exceeds the minimum width of 18 feet for a two-way alley, as defined in the Residential Site Improvement Standards §5:21-4.2 – Table 4.3. I further note that the proposed alley is configured in a straight alignment with

conventional and conforming corner radii at its intersections with the main circulation road, identified as Road 2. I defer to the Board's Planner for an interpretation of the Redevelopment Plan, but this item appears to be a variance from the strict interpretation of the standards established in the Redevelopment Plan. I recommend the Applicant provide testimony to support the granting of this deviation as a variance pursuant to the provisions in Section 3.13 of the Redevelopment Plan.

C. Design Waivers and/or Exceptions

We note the following items that may require waivers or exceptions from strict interpretation of the Design Standards established in the LUDO and RSIS:

1. Section 17-81 – Curbs

a. §17-85.a requires conventional or regular curb to be constructed as monolithic concrete curb where the applicant proposes granite block curb throughout the development. We support the granting of a design waiver for the use of granite block curb as an alternative, except at ADA curb ramps. The curb should transition to concrete flush curb in the area of the ramp, and the details on the plans should be modified accordingly.

2. Section 17- 90 – Lighting

a. §17-90.a states that the purpose of the design standard is to prevent the negative impacts of excessive illuminance, glare, light trespass, and sky glow to encourage energy conservation and prevent light pollution. The proposed lighting plan indicates the installation of over 140 individual pole mounted fixtures plus building-mounted fixtures the results in a level of illumination well in excess of typical lighting within the township streets. The applicant should consider reducing the number of lighting sources within the development to be more consistent with typical treatments within the township, and consistent with the requirements of §17-90.3.b.

b. The proposed fixtures for the pole-mounted and building mounted lights do not conform to the full cut-off requirements per §17-90.1.b.

c. The minimum illumination levels within the parking areas appear to exceed the maximum 0.2 footcandles stipulated in §17-90.3.c.1.(a). The applicant should provide an analysis of the lighting in the parking lot areas to demonstrate compliance with the design requirements or request specific waivers.

d. The Glare Rating for the proposed fixtures should be identified to confirm compliance with the requirements of §17-90.c.3.

e. The applicant should demonstrate that the light pole foundations comply with the design wind load requirements per §17-90.5.a.3 or stipulate to compliance as a Condition of any approval granted.

f. The applicant should confirm compliance with §17-90.5.a.8 requiring the lighting calculations be performed by a NCQLP Lighting Certified professional.

3. Section 17- 95 – Off-Street Parking and Loading

- a. §17-95.f requires parking lots greater than six spaces provide visual screening between different lots within a residential district. Screening should be provided for the parking running along the northerly side of the pipeline easement to block visibility for the townhouse lots located on the south side of the easement.

4. Section 17- 103 – Sewage Disposal

- a. §17-103.a requires that the developer convey to the Township of Hopewell title to or easements across all lands necessary to ensure the operation and maintenance of the collection system. All easements should be depicted on the plans, and final conveyance of easements should be stipulated as a Condition of any approval granted by the Board.

5. Section 17- 105 – Sight Triangles

- a. Sight triangle should be depicted on the plans as easement areas at all intersection locations where private drives/roads intersect the proposed public streets and the sight line extends beyond the dedicated right of way line.

6. The following items are noted with respect to a review for compliance with the requirements of the Residential Site Improvement Standards (RSIS, N.J.A.C. 5:21):

- a. §5:21-4.19(b)2 requires a minimum offset or separation of 150 feet for street intersections. The parallel roads within the northern portion of the development, identified as Road 2, Road B, and Alley BB, are separated by approximately 135 feet. This condition requires a de minimis exception be granted by the Board. It is noted that the impacted roads are all proposed to remain under private ownership. Testimony should be provided to the board to support the granting of this exception.

V. Plan Comments

In addition to the general comments contained within this section, detailed technical comments are contained on a March 1, 2021 memorandum prepared by Van Cleef Engineering Associates, LLC, which are included herein by reference and attached for reference.

- A. The plans should be revised to provide a consistent right of way width for proposed Road 1. The plans currently depict a variable width in the vicinity of the stacked townhomes, and differing conditions are depicted comparing the subdivision and site plans.
- B. The subdivision plans should provide separate and distinct areas for the open space lots and the public parking areas.
- C. Provide testimony as to how the homeowners association or multiple associations will be structured for the various types of units proposed.
- D. The full extent of the utilities for the site and the connections offsite are not fully detailed on the plans. In particular the sanitary sewer force main terminates at Reed Road with no connection or reference to how the sanitary sewer collection system will be addressed offsite. The applicant should provide separate plans depicting the extent of the off-site utility

improvements associated with this project and include the required details to address restoration of the public roads or other areas that will be disturbed to accommodate the installation.

- E. The Utilities Plan does not include the construction of a sanitary sewer trunk line along the length of Diverty Road as required by Section 3.02 of the Redeveloper's Agreement.
- F. Testimony should be provided on how trash and recycling will be managed in general across the site.
- G. The following is noted with respect to the proposed sanitary sewer pump station area proposed on the easterly side of the development:
 - 1. The detail should be revised to include the required motion-sensor activated lighting required on the Control/Generator Building, per the Township's Standard Details.
 - 2. Provide a north arrow and/or directional control notes on the detail with respect to the location of the Control/Generator Building within the proposed enclosure. The enclosure area extends into the building setback along the easterly tract boundary, and controls are needed to ensure the proposed building respects the building setback within the enclosure area.
 - 3. The alignment of the force main along the access drive should be adjusted to avoid the embankment for the detention basin adjacent to the driveway.
- H. The following is noted with respect to the proposed intersection of Reed Road and Proposed Road 1:
 - 1. An existing Type B inlet is located along Reed Road that will require, at a minimum, conversion to a Type E inlet with the removal of the curb, or a relocation to the median island in Proposed Road 1. The plans should be revised to the required modifications of the drainage structure and associated piping as necessary.
 - 2. The grading at the newly created intersection should be detailed on the plan. The road crowns should tie to each other as opposed to matching the existing gutter line grades along Reed Road.
 - 3. A "Keep Right" (R4-7) sign should be provided on the center median of Road 1.
- I. The bull-nose ends of the center medians on proposed Road 1 and Road A should be modified to provide a vertical curb face for safety and protection of the pavement with turning vehicles.
- J. The proposed access road (Road 1) on Lot 9 appears to impact the septic tank for the existing dwelling on the lot. The septic system should be depicted on the plans and measures taken to avoid impacts with the access road construction.

VI. Traffic Impact Statement and Circulation

- A. A review of the Traffic Impact Report submitted with the applicant will be addressed in a separate report.

VII. Outside Approvals

The following outside agency approvals will be required as a condition of approval:

1. Mercer County Planning Board
2. Mercer County Soil Conservation District
3. Delaware & Raritan Canal Commission
4. Hopewell Township Board of Fire Commissioners
5. Hopewell Township Health Officer
6. Ewing Lawrence Sewerage Authority, ELSA
7. NJDEP TWA
8. NJDEP Wetlands

VIII. Conditions of Approval

In addition to any Conditions stipulated by the Applicant, recommended herein in this report, we recommend or required by the Board, we have provided the listing below of items that should be included as Conditions of any approval granted by the Board:

- A. Payment of all outstanding fees and escrows.
- B. Certification that any soil imported to site satisfies all applicable NJDEP requirements for clean material.
- C. Submission of all deed restrictions imposed on any portion of the project for review by the Township Engineer and Planning Board attorney.
- D. Submission of a Developer's Agreement for all improvements that will be conveyed to the township for ownership and or maintenance purposes as public improvements.
- E. Confirmation of all street names by the Postmaster of the Post Office.
- F. Confirmation of the adequacy of all utility easements from the various utility service providers that will be providing underground services within the development.
- G. Written confirmation by all utility service providers to provide services to the project.
- H. Confirmation of the block and lot numbers by the Township Tax Assessor.
- I. Submission of quantity and cost estimates for all improvements that will be dedicated to Hopewell Township as public improvements.
- J. Updating all conservation easements to reflect the extents of regulated lands under NJDEP jurisdiction following the issuance of final permit by the NJDEP. Updates should include all plan updates and deed recordings as required.



M E M O R A N D U M

TO: Mark Kataryniak, PE
Community Development Director/Township Engineer

FROM: James Bash, PE
For the Firm

DATE: March 1, 2021

RE: Zaitz - Preliminary & Final Subdivision and Site Plan Review
Block 86, Lot 3; Block 86, Lots 32-34, 130
VCEA File No. 78062007

This office has reviewed the Preliminary & Final Subdivision and Site Plan application package submitted for the above referenced project. Upon review of the submitted items, we offer the following comments:

Layout and Dimension Plan

1. How is bike circulation accommodated per Section 3.5B.2 of the Redevelopment Plan?
2. Sidewalks shall be provided on at least one side of the road in all locations.
3. All signage, including but not limited to, speed limit signs and road identification signs shall be shown on the plan.
4. Pedestrian crossing signs shall be added at all mid-block crosswalk locations.
5. Accessible Routes shall be provided from all buildings to their corresponding trash enclosure.
6. The plan shall be revised to show the depiction of the flush curb at all bio-swale locations.
7. The flush curb at the stacked townhouse driveways shall be revised to be shown as depressed curb with a 1.5" reveal.
8. Typical dimensions shall be added to parallel parking spaces adjacent to the stacked townhouses to ensure they meet the 23' length required by RSIS.
9. A stop bar and stop sign shall be added where Road 2 meets eastern side of Road A.
10. It should be noted that the Belgian block curb shall transition to concrete curb at all ramps.
11. Designated fire lanes shall be established in accordance with RSIS section 5:21-4.16(e)1.
12. It appears there may be flush curbs in the porous pavement area. This shall be clarified on the plan and properly identified on the plan.

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13. Building setback dimensions to right-of-way/lot lines shall be shown for all buildings.
14. There are improvements shown in wetlands transition areas. A transition area averaging plans shall be prepared and all applicable permits shall be obtained by NJDEP.
15. Additional info should be provided for the roundabout including dimensions, curb type and materials for the interior of the roundabout.
16. The cross-section for Road A shows a 12' wide bio-swale, but the plan depicts a 10' bio-swale to the south of the roundabout. This discrepancy shall be clarified.
17. Existing information appears to be missing on Sheet 5F for the County Road to the east of the site entrance.
18. Road stations shall be shown on all Layout and Dimension Plan Sheets.

Grading Plan

1. All contours shall be labeled.
2. All high point and low points shall be shown on the plan.
3. The grading shall be reviewed in the vicinity of Inlet A7. It appears that a '214' contour and a '215' contour intersect in this area.
4. The grading of Road A at Stacked Townhouses 6 and 10 does not appear to match the typical road cross-section.
5. Portions of Alley BB have high points to indicate a crown in the road, while the contours/inlets show all drainage to be directed and collected along the center line of the Alley. The grading shall be revised to show a uniform cross-section.
6. The grading at basin access points shall be reviewed. All locations are graded at 3:1 slopes which will prohibit some maintenance vehicles from accessing. Some locations also conflict with flared end sections and rip rap apron locations.
7. The parking to the south of the Multi-Family Buildings shows contours crossing through what appears to be full height curb. The curb type shall be clarified or the grading shall be revised in this area.
8. Grade elevations shall be provided at all door locations, ADA ramps and along accessible routes to demonstrate compliance with all barrier free regulations.
9. Grade elevations shall be provided at all trash enclosures to demonstrate stormwater is not being trapped by the enclosure walls.
10. The minimum slope allowable by RSIS for open space areas is 1.5%. The areas between Multi-Family Building 3 and COAH Building 3 has significantly flatter slopes than 1.5%. All slopes, including but not limited to this area, shall be revised to a minimum grade of 1.5%.

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11. The slopes along the Curb of Alley BB between Inlets A45/A46 and Road 1 is approximately 10%. RSIS limits Ally slopes to 5% within 50 feet of an intersection. The grades along the curb line shall be revised.
12. The grading at the intersection of Road 1 and Parkway 1 should be reviewed and revised as necessary. It is unclear what is the depressed curb grade is between the '212' contour in the intersection and the '212' contour around Inlet A10.
13. The grades around Inlets A13 and A14 should be reviewed and revised as necessary. It appears that contours are missing in the vicinity of these inlets.
14. It appears there is a low point in Alley AA to the east of the Roundabout. The Layout Plan does not depict flush curb here, though it appears the intention is to allow runoff to enter the basin through the curb cut. The applicant shall demonstrate if this will meet all stability requirements to prevent excessive erosion.
15. What is the emergency spillway elevation and location for Basin 'B'. It is unclear the elevation of the pump station, but it appears stormwater will inundate the pump station at the same elevation it tops the spillway.
16. Road stations shall be shown on all Grading Plan Sheets to verify grades on the road profile.

Utility Plan

1. The bio-swale detail shows 24" of amended planting soil with storm sewer below. In many locations, the pipe is not deep enough to provide the 24" of amended planting soil. As the inlet grates are 12" above grade, the top of pipe would need to be a minimum of 3 feet below the grates to meet this condition. The storm sewer design shall be reviewed and revised as necessary.
2. The design of the bio-swales in the middle of the boulevards should be reviewed and revised as necessary. The inlets are raised to allow infiltration and according to the cross-section they are only 3" below the road. Additionally, according to the grading plan they are sloped so all the runoff will initially run to the low point. Areas of critical concern include but, are not limited to the following areas:
3. The entrance on County Road 546: The grate closest to the road is higher than the depressed curb at County Road 546. Anything that doesn't infiltrate immediately will bypass inlet and flow uncontrolled into the county road.
4. The utility easement crossing: The low point here has a grate elevation of 206.03, but there is a section of road about 200' long with elevations of 206 or lower which may lead to roadway flooding.
5. The outer diameter of the 42" pipe will require a larger inlet structure than the 'E' inlets depicted on the plan.
6. Several of the 15" Class III RCP pipes at the beginning of storm sewer runs do not provide the required minimum of 16" of cover over the pipe.

7. The 18" pipe between A112 and A113 does not have provide the required minimum of 16" of cover over the pipe. All pipes shall be reviewed and revised to ensure the minimum required cover for Class III RCP pipes is required.
8. Several of the flared end sections have question marks in the structure label. This shall be revised/clarified.
9. All storm structures shall be revised to have a drop within the structure for the inverts of the pipe into the structure and pipe out of the structure. The crowns shall be matched where pipe sizes change.
10. Inlet A105 is depicted as a type 'B' inlet grate. This shall be revised to be shown as a type 'E' inlet grate.
11. Inlet A75 is not connected to the storm sewer. The plan shall be revised to show where this inlet connects to.
12. The outfall pipe for SWM Basin 'E' is a 15" pipe that discharges into a smaller 12" pipe down stream of storm manhole E01. The size of these pipes should be reviewed and revised as necessary.
13. The invert information for storm manhole E01 should be revised to reflect the actual proposed invert of the pipes in and out of the structure.
14. The plan does not show roof leaders. Roof leaders shall be shown on the plan with connection points to the storm sewer.
15. The water services to COAH Building 3 shall not be installed under the rain garden in the parking area.
16. The actual rim and invert elevations shall be shown for Manhole S59.
17. Will the site have natural gas service? No gas mains are shown on the plan.
18. All Fire Hydrant locations shall be shown on the plan.
19. There are conflicts between water services and sanitary sewer manholes S-11 and S-14. The plan shall be revised.
20. Sanitary sewer laterals tie directly into sanitary sewer manholes S-4, S11.2, S-14.1 and S-15.3. Laterals are not permitted to toe directly into manholes. The plan shall be revised to show typical lateral connections into the sanitary sewer main.
21. The sanitary sewer laterals for Multi-Family Building 1 show the connections directed in the upstream direction of the sanitary sewer main. The connection shall be revised to direct the flow downstream.
22. All trees shall be adequately distanced show storm sewer, sanitary sewer and all other utilities.
23. Easements shall be provided for all public utilities that are not contained within right-of-ways.

Road Profiles

1. The road profiles shall be revised to accurately depict the road grades. All road grades and vertical curve data shall be shown on the profiles.

Storm Profiles

1. The proposed grade for the storm sewer in the bio-swales does not appear to be accurate. It should be depicted to show the inlet grates higher than the proposed grades.
2. Dimensions of pipe crossings should be added to the plan as there are several crossings with minimal separation and it is unclear if they can be constructed when the thickness of the RCP pipe is accounted for.
3. The profile for the pipe run A1-A19 shows conflicts with the water mains at stations 9+63 and 15+40.
4. The profile for the pipe run A42-A43 shows a conflict with the water mains at station 3+13.
5. The labels for the flared end section appear to be missing data and shall be revised to remove the portions of the label with question marks.
6. The proposed grade lines at all of the flared end sections shall be reviewed and revised as necessary to accurately depict grades. There are instances of exposed pipe, discharges above grade and discharges below grade depicted on the profiles.
7. The profile for the pipe run C206B-C200 has a pipe with a negative slope label and a crossing with a negative slope label. This shall be revised.
8. The profile for the pipe run C206B-C200 has a 30" pipe crossing labeled at approximately station 8+00, however no crossing is depicted. This shall be clarified or revised as necessary.
9. There are numerous crossings labeled on Sheets 8E and 8F with no crossings depicted. This shall be clarified or revised as necessary.

Soil Erosion and Sediment Control Plan

1. This plan is subject to the review and certification of the Mercer County Soil Conservation district.
2. All scour holes shall be depicted to scale on the plan.

Sanitary Sewer

With regards to Sheet 7A, we offer the following comments:

1. There is 6-inch DIP from sanitary manhole S-19 to S-18 before it transitions to 8-inch PVC sanitary sewer main. The pipe does not appear to collect any flow and the

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intent should be clarified, as well as why it is a different size and material.

Additionally, it is labeled with a negative slope and shall be revised to show positive flow downstream.

2. The force main terminates at manhole S59. It is unclear where it connects to from here as there is no existing sanitary sewer at this location. The connection to an existing sanitary sewer main shall be depicted on the plans.
3. No blow off or combo valves are shown for the very long force main run (labeled lengths of 643, 271, and 569 feet) with 2 changes in direction. Force main profiles shall be submitted to further review the design.

With regards to Sheet 7B, we offer the following comments:

1. The sanitary sewer pipe collecting the laterals from COAH Building 2 should be revised to be an 8-inch sanitary sewer main with manholes on both ends. The size, length, slope and material of the pipe should be labeled on the plan.
2. The length, size and slope of pipe between manholes S15.1 and S15.2 shall be labeled on the plan.
3. Cleanouts shall be provided on sewer laterals for COAH Building 2.

With regards to Sheet 7C, we offer the following comments:

1. Negative sewer slopes are labeled on the sanitary sewer mains adjacent to Multi-Family Buildings 1, 2 and 3. This shall be corrected.
2. The sanitary sewer pipes collecting the laterals from COAH Buildings 2, 3 and 4 should be revised to be an 8-inch sanitary sewer mains with manholes on each end. The size, length, slope and material of the pipe should be labeled on the plan.
3. All sanitary sewer mains shall have a maximum distance of 300' between manholes per Ewing-Lawrence Sewage Authority (ELSA) rules and regulations.

With regards to Sheet 7E, we offer the following comments:

1. The cleanouts for Stacked Townhouse #7 are located in the curb. They should be revised to be behind the curb line.
2. All pipes shall be labeled with the size, length, material and slope.
3. All sanitary sewer mains shall have a maximum distance of 300' between manholes per Ewing-Lawrence Sewage Authority (ELSEA) rules and regulations.
4. It appears the proposed force main encroaches into the stormwater basin area. The force main shall be located outside of the basin area.
5. The sanitary sewer main between sanitary manholes S-20 and S-21 is only 0.15%. It appears that this slope can be increased. It is recommended that the plan be revised to increase the slope to help prevent the potential solid deposition.

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The Sanitary Sewer Profiles shall be revised to show/include the proposed force main. The force main shall indicate all high points for air release/combo manholes. An air release valve/combo manhole shall be shown at the 90-degree bend on the force main near the pump station as well.

With regards to Sheet 8H, we offer the following comment:

1. All conflicts with the storm sewer shall be revised.

With regards to Sheet 8I, we offer the following comments:

1. Two pipe runs show negative slopes that are not correct and shall be revised.

With regards to Sheet 8J, we offer the following comment:

1. It appears that there are potential conflicts with the 42-inch SW line between SMH #14 and SMH- S7. This shall be reviewed and corrected as necessary.

With regards to Sheet 8K, we offer the following comment:

1. The rim elevation for SMH S10 needs to be raised to ground level.

Landscaping

1. *Carpinus betulus 'Fastigiata'*, Pyramidal European Hornbeam is specified, though it is not an approved species on the Township Approved Plant list. In this case, however, the location of these trees near proposed sidewalks is very appropriate and a better choice than the *Carpinus caroliniana* (Hornbeam) on the approved list.
2. *Metasequoia glyptostroboides*, Dawn Redwood, is specified on the plan. This is a very messy deciduous needle bearing tree that is not on the Township's list of approved trees. Choose another species from the Township list.
3. *Platanus acerifolia* Bloodgood is not on the approved list of trees and shall be substituted with *Platanus occidentalis*, a native cultivar, instead (Sycamore).
4. *Ulmus parvifolia* is also not on the approved list of trees,. Instead, substitute with *Ulmus americana* or *Ulmus rubra* from the list.
5. *Tilia tomentosa* is also not on the approved list of trees. Please substitute with the native *Tilia americana* instead.
6. *Zelkova serrata* is not native and is, therefore, not on the approved list of trees. Choose a native species from the list.
7. *Juniperus scopulorum 'Skyrocket'* is not on the list of approved Evergreen trees. Substitute instead *Chamaecyparis thyoides*, Atlantic White Cedar or *Juniperus virginiana*, Redcedar.

8. While *Picea abies* is not on the list of approved Evergreen Trees, this species does very well in this area. This is an acceptable species. Two symbols are shown on the plan: PA and PAB1, though they do not appear to be any different.
9. *Picea pungens 'Glauca'*, Colorado Blue Spruce is not on the list of approved Evergreen trees and should not be specified. Instead, choose another species for planting at this site.
10. *Liquidambar styraciflua* is a native tree on the approved plant list. The *Rotundiloba* cultivar is a non-fruiting variety of the Sweet Gum, which is a very good choice.
11. *Liriope muscari* (Lilyturf) is an acceptable groundcover, though it is not on the list of approved plants. It is approved for this application.
12. *Cupressocyparis leylandii* is not on the approved list of trees. Another species shall be selected from the approved list.
13. *Thuja plicata 'Green Giant'*, the Western Redcedar, is not native to this area and is, therefore, not on the list of approved trees. However, this evergreen species does very well in this area and will be allowed at this site.
14. Street trees shall be placed no more than 50' apart. In most cases, the street trees appear adequate.
15. No trees shall be planted within 50' of the intersecting street right-of-way lines. These appear to be private streets.
16. Some of the numbers of trees in the plant schedules do not appear to match the number shown on the plan for the particular sheet listed. Please double check tabulations. In some cases, plants are totally missing from the schedule on a particular sheet.
17. Individual plant schedules for each sheet with the dividing lines shown between sheets is a very good idea.
18. A minimum of 10 shrubs and 1 shade or ornamental tree of 2 1/2" min. caliper or larger shall be provided for each 1,500 s.f. of residential dwelling development. Please quantify this on the plans with a calculation, showing required and provided numbers.
19. Native species shall be used to the maximum extent practicable. Not more than 20% of any one species shall be planted in any development. Please show a calculation for each species to demonstrate compliance with this requirement.

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20. Any single parking area with 20 or more spaces shall provide at least 10% of its area in green area/landscaping. Show calculations for each parking lot on the site to demonstrate compliance with this requirement.
21. Light Pole locations shall be shown on the Landscape Plans in order to evaluate conflicts with plant material.
22. On sheet 9A, all of the trees in the central island of the Boulevard (within the Bio Retention Swale) are depicted on top of stormwater pipe. This is an obvious conflict.
23. The cluster of Colorado Blue Spruce behind COAH2 are located within 10' of the laterals providing service to that building.
24. On Sheet 9B, there is an Evergreen Screen shown on the north side of SWM Basin 'A' that runs right through the Basin where it widens toward County Route 546. The Evergreen screen shall be re-positioned around the north side of the Basin 'A'.
25. Elms (*Ulmus parvifolia*) are shown directly on top of handicap ramps between stacked Townhouse 4 & 5 and stacked Townhouse 6 & 7. Obvious conflict.
26. There are other Elms shown directly over stromwater pipes between stacked Townhouse 4 & 8, 5 & 9, 6 & 10, and 7 & 11.
27. On Sheet 9C, the London Planetrees located in the Center island of the Boulevard within the Bio Retention Swale are all depicted on top of the stormwater pipe.
28. Elms are shown in various locations on top of stormwater pipes
29. Ornamental Trees are shown in various locations to be in conflict with laterals serving COAH 3 & 4, as well as stormwater pipes adjacent to those buildings.
30. On sheet 9D, there are many Dawn Redwoods depicted in conflict with stormwater piping in the Bio Retention swales of the central Boulevard island.
31. There are two areas to the west of Townhouses 1 & 5 that need Evergreen Screen Buffers shown along the property lines.
32. The Evergreen Screen along the south property line behind Townhouses 9 & 10 needs the addition of Canopy and Ornamental Trees to create a more naturalized buffer.
33. On Sheet 9E, more conflicts with Red Maples, Swamp Oaks, and London Plantrees with the stormwater piping in the central islands of the Boulevards of Road 1 and Road 'A', within the Bio Retention Swales. Resolve conflicts with Trees and pipes.
34. A couple Dawn Redwoods and a Red Maple also have pipe conflicts. Please resolve.

35. Some Colorado Blue Spruce Trees are in conflict with laterals providing connection to COAH 4; please resolve.
36. For the Rain Garden plantings at the Stacked Townhouses, *Rosa rugosa* is not on the approved plant list. Use *Rosa palustris* instead.
37. The Creeping Red Fescue and the Switch Grass are not on the approved plant list, but are acceptable for this application within the Rain Garden. All other Rain Garden plantings are acceptable for the Stacked Townhouses.

The following comments pertain to Sheet 10, Typical Foundation Landscape Plans.

38. We strive for the most part to select plant material for the site that is native to the area and included on the approved list of plant material. That is not always necessary or even possible for Foundation Plantings.
39. Little Princess Japanese Spirea is not on the approved list of plantings. We suggest either *Cornus amomum*, *Clethra alnifolia*, or *Lindera benzoin*.
40. The *Rosa meidiland* series are not on the approved plant list. We suggest *Rosa palustris* be used instead, or *Cornus sericea*.
41. While Knockout Rose is not on the Approved List, it is a worthwhile cultivar, so we will approve its use in this foundation planting application.
42. *Buxus* is not on the approved list of plant material. We suggest using *Ilex glabra* 'Shamrock' instead.
43. Duke Gardens Plum Yew is not on the Approved Plant List. We suggest using *Myrica pensylvanica* instead, or *Taxus canadensis* from the list.
44. *Ilex meserveae* is not on the Approved Plant List. We, therefore, suggest the use of *Ilex verticillata* instead.
45. While *Sarcococca Hookeriana* is not on the Approved Plant List, it is a useful groundcover plant and will be allowed for this application.
46. The Switch Grass and Hameln Fountain Grass are not on the Approved Plant List, but there is no viable substitute on the List and we have good luck with these grasses in Hopewell, so they are acceptable for use.
47. *Ilex crenata* 'Green Lustre' is not on the Approved Plant List, but is a viable plant for foundation use in the area, and is therefore, approved for use as a foundation planting.

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48. Threadleaf Coreopsis is a good groundcover and is, therefore, approved for foundation planting application at this site, though it is not on the list of approved plants for Hopewell Township.
49. The non-natives listed above for approval are only approved as foundation plantings; nowhere else on the site.

General Landscape Comments:

50. All Landscape Plans shall be signed by the Landscape Architect who prepared them.
51. Lawn Seed Mixture and the Ernst Seed Mix specified for the Stormwater Management Areas appear to be adequate. However, two different mixtures by Ernst are listed for the stormwater management areas. Choose one and remove the other from the Detail Sheet.
52. The Bio Retention Swale and Rain Garden seed mixture appears to be adequate but no standard company seed number is listed, which will make purchasing this mix very difficult for the installation contractor. List an Ernst Seed Mix number to correspond with the listed mixture.
53. The use of street trees being planted on top of the Bio Retention Swale piping is of great concern to the Township.
54. The two sampling areas for identifying trees on site for removal and replacement are an acceptable method for quantifying tree replacement. This is standard industry practice widely used in municipalities all over New Jersey and Pennsylvania. However, only ½ of the work for identifying tree replacement has been completed on the plans. The first problem is that both listings are labeled Plot 2. We assume the larger is Plot 1. Sample Plot 1 is to be applied to the woodland removal at the southwest portion of the site. Sample Plot 2 is to be applied to the smaller woodland and removal at the eastern portion of the site. Calculate the existing percentages of tree categories in each removal area and apply them to the Tree Replacement Table to calculate the number of replacement trees that are required in each category. Replacement trees shall be above and beyond street tree requirements, buffering requirements, and parking lot tree requirements. Replacement trees shall be labeled as such to distinguish them from other trees required on the site, and place them in their own Tree Replacement Landscape Schedule for easy identification.

General Landscape Notes and Details to be Added to the Plans:

55. It shall be noted that all trees shall be maintained in a healthy and satisfactory growing condition for no less than 2 years from the date of planting and shall be guaranteed for 2 years from the date of acceptance by the Township.

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56. Replacement of dead trees shall be made according to the original specifications and during the normal planting period, and shall be replaced within 60 days following a written inspection report from the Township.
57. Add a Typical Tree Protection Fence Detail to protect trees to remain during construction. The required detail is attached to this review.
58. Plant materials shall be provided in accordance with the standards set forth in ANSI Z60.1, American Standard for Nursery Stock. All trees shall be grown under climatic conditions similar to the job site for a period of not less than two (2) years immediately prior to installation and must be nursery grown.
59. No substitutions shall be permitted in either kind or grade without written authorization from the Township Engineer's office.
60. Plants shall have the habit of growth that is normal for the species or cultivar and shall be sound, healthy, vigorous, free from insects, plant diseases and injuries or damage of any nature. All plants shall be of the grades specified, neither larger nor smaller, without written authorization from the Township Engineer's Office. No plants shall be pruned, clipped or trimmed prior to delivery without written authorization from the Township.
61. All plants shall have been root pruned at the nursery at least once during the three-year period immediately preceding transplanting and at least one year prior to transplanting. All plants must be State Inspected and a copy of the "Certificate of Inspections" issued by the State Department of Agriculture at the point of origin must accompany shipments from each source.
62. Prior to commencement of planting, the contractor shall contact the Township to establish a schedule of planting. Landscaping may be installed from March 1 through June 30 or September 1 through November 30, and may be planted only when the soil is frost free and friable.
63. Unless otherwise specified within these specifications, all work shall conform to accepted horticultural practices. Plants shall be protected upon arrival to the site by being thoroughly watered and properly maintained until properly planted and watered. If water is unavailable on the site, it is the responsibility of the contractor to furnish it at the time of planting. Unplanted stock shall be "healed-in" a bed of material approved by the project supervisor upon delivery to the site unless they will be planted within four (4) hours after delivery. At all times workmanlike methods customary in good horticultural practices shall be exercised. The contractor shall protect all existing features on the site including underground utilities, structures, and existing trees.
64. All trees and shrubs shall be planted in pits that are a minimum of two (2') feet larger in diameter than their ball of earth or their spread of roots. The depth of the pits shall be

equal to the depth of the root ball after proper planting. The tree or shrub shall be centered in the hole and then back filled one-half the depth of the soil ball with topsoil. The backfill shall be lightly but thoroughly tamped and well-watered. The remainder of the hole is then to be backfilled with approved topsoil to a depth that after settling will assure the tree will be at the same level it was previously growing at the nursery.

65. The plant will be well-watered again before mulch is placed over the surface of the root ball. Uniformly shredded hardwood mulch supplied by the contractor shall be free of debris and shall be placed by the contractor around all plantings at the time of planting to a depth of three (3") inches. Care shall be exercised to keep mulch three (3") inches away from the bases of all plantings.
66. Plants must be protected from deer browse.
67. The installation of tree stakes and supporting materials shall be done to those trees that the Township deems necessary. Stakes shall be made of wood, of the length and size required to restrict excessive movement by the tree, as ultimately determined by the inspector. Tie materials shall be plastic chain lock or flat, woven webbing designed specifically for staking trees. Trees shall not be wrapped.
68. Plantings shall be watered regularly and in a manner appropriate for the specific plant species through the first growing season. Dead or dying plants shall be replaced by the applicant during the next planting season.

SWM/Drainage

1. The reference to "The Parc" in the Introduction paragraph on Page 1 of the SWM Report should be revised to read "The Collection".
2. The applicant is claiming to meet the quantity management aspect of the regulations for portions of the site (Points of Analysis 2, 3 and 7) per NJAC 7:8-5.4(a)(3)(ii), which states that "the designer must demonstrate through hydrologic and hydraulic analysis that there is no increase, as compared to the pre-construction condition for the two, 10 and 100-year storm events and that the increased volume or change in timing of stormwater runoff will not increase flood damage at or downstream of the site". The regulation goes on to require that "**(t)his analysis shall include the analysis of impacts of existing land uses and projected land uses assuming full development under existing zoning and land use ordinances in the drainage area.**" This full build-out analysis for the Stony Brook (74°46' dam to/incl Baldwin Creek) HUC 14 drainage area to which the entire site ultimately drains has not been provided, so the requirements have not been met. Further, NJDEP instructs Planning Board review engineers specifically to be wary of any attempt to use this method, as it is almost never done successfully. The applicant shall provide the necessary additional information or choose a different method to demonstrate compliance.

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3. SWM Basins A, B, D and F do not depict outlet control structures (OCS) on the Utility Plans. However, A and B utilize specific hydraulic outlet controls in the Pond routings. The plans are to be revised to show the location of each OCS and its outfall to grade.
4. The HydroCAD pond information for Basin D indicates only a broad-crested weir at elevation 210.00 for outlet control. The Water Quality Design Storm Elevation (WQDSE) for this basin is 207.72 and the NJ Stormwater BMP Manual prohibits infiltration of storm volumes greater than this. A discharge outlet must be provided at or near this WQDSE (say 207.75). Basin F may have a similar issue, but no design information for this basin was found in the report. The lowest outlet for all other infiltration basins must be lowered to the WQDSE as well.
5. Soil logs and permeability test locations for SWM facilities must be shown on the Utility Plans (and may be removed from Grading Plans, if desired).
6. Additional soil testing appears to be required for Basins C, D, E1, E and F.
7. All proposed BMPs shall be identified by name on the Utility Plans and Drainage Area Maps, including rain gardens.
8. Basins B, C and E exhibit discharge during the WQDS routings. The designs need to be revised to eliminate the discharge.
9. No basin routings were found in the report for Basin F.
10. The SWM Report refers to Appendix 1 for Groundwater Recharge spreadsheets, but none were found there, nor anywhere else in the report.
11. The storm sewer design was performed using the 25-year design storm. The design should be upgraded to accommodate the 100-year storm to the various basins or the 100-year storm must be routed through the currently proposed system and a “surcharge plan” provided, showing areas of any temporary inundation and ensuring that none of these areas will bypass any of the facilities that are assumed to manage them.
12. Provide TCB elevations for all B inlets.
13. Inlet A105 is shown as a B inlet but is not located along a curb line. Change symbol to E inlet.
14. The ground elevation for A105 shown on the plan and profile does not match the Storm Sewer Tabulation chart (hereafter “pipe chart”) in the SWM Report.
15. The plan and profile indicate the pipe run from A106 to A105 is 24" RCP; the pipe chart indicates 15". Revise for consistency and accuracy.
16. The invert out elevation from A105 to A104 is obscured by a 211 contour label.

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17. The inverts of the pipe run from A105 to A104 as shown on plan and profile do not match data in pipe chart.
18. The plan and profile indicate the pipe run from A105 to A104 is 24" RCP; the pipe chart indicates 18". Revise for consistency and accuracy.
19. The ground elevations for A104 and A103 shown on the plan and profile does not match the pipe chart.
20. The inverts for A104 and A103 shown on the plan and profile does not match the pipe chart.
21. The plan and profile indicate the pipe run from A104 to A103 is 24" RCP; the pipe chart indicates 18". Revise for consistency and accuracy.
22. The ground elevations for A103 and A102 shown on the plan and profile does not match the pipe chart.
23. The inverts for A103 and A102 shown on the plan and profile does not match the pipe chart.
24. The invert out from A107 to A102 is 6 inches higher than its invert in from A108.
25. A profile from A102 to A108A is to be provided.
26. The pipe run from A102 to A101 is 24" RCP on plan and profile but 30" in pipe chart.
27. The grading in the vicinity of cross-drain inlets A101 and A101A appears to be a typical crowned roadway but the grate elevation of A101 is 9-1/2" lower than A101A as shown on the plan. Please review. I note that the grate elevations in the pipe chart more closely match and that A101A's grate elevation is not provided in the profile.
28. The change from 24" pipe to 30" pipe requires a 6" drop in invert to maintain the top of pipe grade. This drop was not provided at A101 but was provided at A102 when the pipe diameters (per the plan and profile) did not change. The design is to be reviewed and revised as necessary.
29. The inlet design data for A303 shall be added to the plan.
30. The plan and profile shows the pipe run from A303 to A302 to be 24" RCP but the downstream run from A302 to STM MH A301 only to be 18" diameter. The pipe chart shows A303 to A302 as 15" with A302 to A301 as 18".
31. The pipe run from A301A to A301 is shown as being back-pitched by 0.65'.

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32. The two pipe runs from A302 to FES A300 are identified as HDPE pipe when everything else is RCP. If there is a reason for the different pipe material, please explain; otherwise, be consistent.
33. The pipe from A401 to FES A400 is identified as 15" in the pipe chart, but shown as 12" on the plan.
34. The profile for Inlet A1 – FES A19 indicates numerous call-outs for "RCP Pipe Crossings", none of which appear to exist; review and revise as necessary.
35. The same profile indicates two storm/water main conflicts that must be addressed.
36. The grate elevation for A1 as shown on the plan and profile does not match the pipe chart.
37. The grate elevation for A6 as shown on the plan and profile does not match the pipe chart.
38. The plan and profile indicate the pipe run from A10 to A11 is 30" RCP; the pipe chart indicates 24". Revise for consistency and accuracy. The invert drop across A10 is 6", which would be appropriate for a 24" pipe. If the change is to a 30" pipe, an additional 6" of invert drop is required.
39. The Hydraulic Grade Line (HGL) elevations for A1 through A13 in the pipe chart are all significantly higher than the grate elevations of the structures, indicating surcharge, which is borne out by the total flow exceeding capacity in these lines. Additional design attention is required.
40. The pipe chart for pipe run A111 indicates a flow of 15.31 cfs and a capacity of only 5.15. However, I note that the land cover that is tributary to this inlet appears to be predominantly vegetated, but an impervious cover "c" value was used instead.
41. The pipe size for Line A14 in the pipe chart should read 42", not 24".
42. The profile for Inlet A14 indicates two inverts out.
43. The line upstream from A31 is identified as A44 on the plan and A34 in the pipe chart. The design data for each do not match.
44. The profile and pipe chart show a pipe run from Inlet A42 to FES A43 and the pipe chart also indicates that Inlet F102 connects to the system, discharging to Basin B at FES A43. It is questioned why these structures have "A" and "F" designations rather than "B".
45. The ground elevations for A69, A70 and A71 shown on the plan and profile does not match the pipe chart.

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46. Inlet A70 has a grate elevation of 207.50 and a 24" invert in of 205.56 from A69, which puts the top of the inflow pipe higher than the structure.
47. The pipe run from A71 to A70 is shown as 30" on plan and profile but 24" in pipe chart.
48. The pipe runs from A70 to FES A73 are shown as 30" on plan and profile but 24x38" elliptical in pipe chart.
49. Inlet A75 has no discharge pipe exiting.
50. Move the inlet callouts for C206 and C206B so that they appear on Sheet 7D. Currently, they are outside of the limits of any of the 5 sheets provided.
51. The invert out from C206 cannot be read, but the negative slope from C206 to C205 indicates a potential back-pitched condition that must be addressed.
52. Inlet C205 has an invert out to A87 that is higher than its invert in from C206.
53. Why do Inlets C204A and 204B connect to an inlet named A87 rather than C204, as is the convention everywhere else on the roadway (and in the pipe chart)?
54. The slope from C205 to A87 is 0.6% in the pipe chart but 0.4% on plan and profile.
55. Inlet C202A is mislabeled as C201A on the plan and profile.
56. The discharge pipe to Basin D from A113 to HW A114 is shown as 18" on the plan and profile but 24" in the pipe chart. Also, again, why give "A" designations to infrastructure that serves Basin D?
57. Add FES 101 – FES 100 and OCS E02 – STM MH E01 to the pipe chart

Stormwater Management Facilities Maintenance Manual

1. A maintenance manual has been submitted for review. I have reviewed same and find that it does not meet the standards as set forth by NJDEP at:
https://www.nj.gov/dep/stormwater/maintenance_guidance.htm
2. Deficiencies include, but are not limited to:
 - The inclusion of Field Manuals for each proposed BMP type;
 - Specific design information for each individual BMP;
 - Training requirements for maintenance personnel;
 - Requirement for Annual evaluation of the effectiveness of the plan;
 - Inclusion of required documents such as soil logs and permeability test results;
 - A specific disposal plan, including dewatering standards should any of the infiltration basins fail.

3. The applicant may use the boilerplate document from NJDEP as the basis of the maintenance plan or may reformat his own to comply.
4. The maintenance plan shall also be revised to indicate that the previous year's inspection reports and maintenance logs are to be submitted to the Township's Tier A Municipal Stormwater Coordinator no later than April 1st.

Plat Review

Sheet 1

1. The outbound does not close by 0.47'.
2. North arrow with reference.
3. For existing lot 130, block 86; is the distance 613.44 based on the survey and the distance 613.75 deed? If so, it should be noted.
4. Near the Diverty Road area, there is the bearing South 7°-36'-23" East with a distance of 0.03 and another bearing South 7°-36'-23" East with a distance of 149.97'. It is the same line so the total distance of 150.00' should be used.
5. Show the right-of-way width of Diverty Road (it's in grey scale).
6. If a consolidation plan is not developed, show all property lines that are to be removed in grey scale.
7. Title block should include the words "Major Subdivision" (recommendation).
8. Why are the planimetrics shown on some of the surrounding properties?
9. Existing Transcontinental Gas Pipe Line Easement to be shown darker.
10. What is a Parkway?
11. Comply with the Mercer County Planning Board Land Development Standards for Mercer County signature block.
12. Bearing and curve data shall include the radius, delta angle, length of arc, chord distance and chord bearing-any non-tangent curves and non-radial lines shall also be labeled.
13. Show all proposed and existing public easements and area dedicated to public use. All proposed permanent easements, including sight right easements and utility easements (all sheets).
14. The map shall show as a chart on the plat any other technical design control required by local ordinances, including minimum street width, minimum lot areas and minimum yard dimensions.
15. A minimum of three (3) outbound corners distributed around the tract shall indicate New Jersey State Plane Coordinates (NJSPC).
16. Wetland areas not shown along with buffer area.
17. Need access easement from public road "A" to proposed pump station.
18. Proposed public right-of-way width to be shown (all sheets).
19. Show all lots that are to be removed in grey scale.
20. Show area of proposed public right-of-way.
21. Proposed lot numbers and block numbers to be shown.
22. Private roads to have their own lot number and area to be shown.
23. The Map Filing Law as part of New Jersey Map Recordation Act states that "each proposed monument to have "reasonable survey access to the monument is granted". Cannot find in the act that a 5-foot radius survey easement is implied.
24. Better clarity of the consolidated lot bearing and distances in the area of Diverty Road.

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25. New block and lot numbers required on either side of proposed public right-of-ways (Road A and Road1). Road A and Road 1 divide the tract.

Sheet 2

1. North arrow with reference.
2. Roads to show right-of-way.
3. C21 is a 1' radius, really?
4. Total curve data along Rte. 546 should be on the opposite side of the right-of-way line and denote it is "Total" curve (2894.90' radius) in the county right-of-way dedication area.
5. Put curve data (2894.90' radius) for the remainder on inside of the right-of-way line in the county right-of-way dedication area.
6. Monument to be at the property corner of right-of-way dedication to county rather than the way it's shown on the plan.
7. Need to show proposed lot numbers, block numbers, Also the remaining lot area to be shown, plan shows area of original lot 3.
8. Areas to be to the nearest square foot (S.F. not SQ.) or nearest one hundredth of an acre (all sheets).
9. Need access easement to public road for sanitary sewer pump station.
10. Is the proposed lot for the pump station to be dedicated to Hopewell Township?
11. Wetland buffer not shown.
12. Private roads to have a lot number and area.
13. What are the lands remaining outside the proposed lots and right-of-way going to be, open space?
14. Road 2 and Road B are to be private.

Sheet 3

1. North arrow with reference.
2. Wetland buffer not shown.
3. Proposed lot and block numbers to be shown.
4. Several erratic symbols to be removed on lot 4, block 85.
5. Plotted pump station bearings and distances from ties on sheet 2. Calculated different tie distances to outbound at pump station lot. Plan 24.97' - calc. 25.33', plan 24.87' - calc. 25.23', plan 29.43 - calc. 29.74'.
6. Show limits (tic mark) of C30 (point of tangency).
7. Public road "A" right-of-way overlaps outbound right-of-way line on Diverty Road by 0.25' (sheet 6).
8. What are the lands remaining outside of the proposed lots and right-of way going to be, open space?

Sheet 4

1. North arrow with reference.
2. Proposed lot and block numbers to be shown.
3. Parkways to be private with lot number.
4. Distance of 406.11 at Parkway 3 should be 406.10'.
5. Road "A" right-of-way to be shown.
6. Wetland buffer not shown.

March 1, 2021

Zaitz - Preliminary & Final Subdivision and Site Plan

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7. Private roads to have lot number and area.
8. Road "A" to have a consistent right-of-way width.
9. Road "A" did not close by 0.87'. Started plotting from Rte. 546 to point of tangency at C13, plotted the easterly right-of-way of road "A" all the way around to point of tangency at C13.
10. What is the reasoning for the series of several reverse curves (C6, C7 & C8) at road 1 and road "A.?"
11. The lands remaining are going to be open space? Need area and lot number.
12. Road 3 to be private.
13. Plan bearing of South 56°-41'-48" West, 1.21' (tie) should be North 56°-41'-48" East.
14. There are no bearings and tie distances to plot the townhouse lots to the south of road 3.
15. Monumentation to be provided for these townhouse lots.
16. Remove bearing South 39°-17'-55" West, distance 0.31'.
17. Remove distance of 699.99'.

Sheet 5

1. North arrow with reference.
2. Wetland buffer not shown.
3. Proposed lot and block to be shown.
4. Check bearing and distance at point of tangency of C41 on road "A". Should be perpendicular to South 84°-09'-50" West, ((North 5°-50'-10" West). Calculated North 7°-15'-30" West and is 1.28' off.
5. Distance of 406.11 should be 406.10'.
6. Road 1 ends abruptly at the outbound property line, possible access to Reed Road to be considered.
7. Plan lot area of 19,209 SF along Parkway3 to be verified, calculated 19,219 SF.
8. Cumulative tie distances along Parkway 1 (146.62'+203.36+77.54=427.52'); plan shows overall distance is 427.51'. Revise accordingly.

Sheet 6

1. North arrow with reference.
2. Proposed lot and block numbers to be shown.
3. Lot number needed for remaining open space (?) with area.
4. Remove "Lot Line To Be Removed".
5. No tie distances and bearings to townhouse lots at road "A" and road 4.
6. Monumentation to be provided for townhouse lots.
7. Roads 3 & 4 to be private with lot number.
8. Road "A" to have a consistent width throughout.
9. No utility easements shown.
10. Remove previous owner's names that is now part of the subdivision.
11. Remove old lot 33 block 86 notation, POB Lots 34 & 130, POB Lots 32 & 33.
12. Remove previous lot line North 6°-42'-23" West, 341.65'.
13. Provide tic marks for C30 and C33, only one shown.
14. Bearing along Diverty Road to be shown, South 83°-17'-37" West-60.01'.
15. Remove distance 25.84', 50.00 and 98.86 along Diverty Road.
16. Remove "325.10 (ESM'T)" near western boundary.
17. Wetland buffer not shown.

18. Cumulative distances along southern side of road 3 add up to 265.13; plan overall distance between proposed monuments is 265.14. Revise accordingly.

Environmental Impact Statement Review

Environmental

There are upland forested areas in the SW section of the site. Block 86, Lot 130 will have some clearing of those forested areas. There is also a small manmade lake offsite that will not be impacted with this proposal.

The site is made up of a large existing agricultural field (58.79%), forested areas composed of both upland and wetland forest ecosystems (34.10%). Forest species include pin oak, white oak, black cherry and sweetgum among others. A wet meadow is shown as 2.31%.

Block 85, Lot 3 has three intermediate wetland areas and 3 isolated wetland areas. There will be filling of the 3 isolated wetlands and the applicant expects to submit a Wetlands Transitional Waiver-Averaging Plan, a General Permit (GP) #2 (underground utilities), GP #6 (non-tributary wetlands), GP #10 (road crossing) and a GP #11 (outfalls and intake structures) for work in those designated areas. There will be no impacts to non-isolated wetlands.

A Stony Brook unnamed tributary (UNT) runs thru the northwest corner of the site and is classified as FW-2 NT. It is too warm to support trout. There is a 50-foot riparian zone buffer along this UNT. There will be no impacts to this UNT with this application. There is no flood hazard area in this location. There are also no vernal habitats located on this subject site.

For stormwater management there are a series of 5 basins that will be designed as extended detention-infiltration basins. There is a substantial amount of less permeable soil conditions in that area (shale) which may limit any infiltration potential. The final design of these basins and their ability to effectively infiltrate will need to be carefully reviewed. There is an extensive depth to groundwater in this area.

The NJ Natural Heritage Database Reports show this site is a breeding area for Coopers Hawk and a foraging area for the Great Blue Heron. Both are species of concern. Within one mile of this site Bald Eagle, Grasshopper Sparrow, American Kestrel and Eastern Meadowlark were identified as utilizing the area for breeding and foraging.

The applicant has mentioned a 2018 Phase 1 Archeological report that says there is a low percentage for early American archeological resources. We have not reviewed that document.

Air Quality

There will only be short term impacts from construction activities.

Traffic

With the addition of 379 dwelling units – an increase in traffic is unavoidable. There will be some modifications required at the traffic lights on that “circle” on Route 31 to account for that increase.

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Noise

During construction will be the highest potential for any noise impacts but they should be relatively short-lived. The project also shows 300 feet to the nearest resident and there will be separation from them by a vegetated buffer.

Geology

The site is primarily siltstone and shale underlying the topsoil. There are no areas of erosion on site. There are no steep slopes (greater than 10%) on site. The elevation here is 208 to 211 feet above sea level.

Should you have any questions concerning this matter, please do not hesitate to contact this office.

T O W N S H I P of H O P E W E L L

MEMORANDUM

TO: Hopewell Township Planning Board

FROM: Dawn Marling, Health Officer

SUBJECT: Completeness Review
The Collection at Hopewell
Block 85; Lot 3 and Lot 9
Block 86; Lots 32, 33, 34 and 130

DATE: January 27, 2021

The applicant, US Home at Hopewell Urban Renewal, LLC proposes to develop 379 residential units on Washington Crossing-Pennington Road, Reed Road, and Diverty Road on the above-referenced parcels. The application packets indicate that all of the proposed residential units will be served by public water and sewer and, as such, waivers for septic systems and well water supplies may be granted. A Treatment Works Approval (TWA) submission to NJDEP is needed, however, the applicant has requested that it be a condition of any Board approval.

The Health Department approves the application completeness review with the condition that the required submission for TWA approval from NJDEP be obtained.



HOPEWELL TOWNSHIP FIRE DISTRICT NO. 1

Board of Fire Commissioners

MERCER COUNTY

201 Washington Crossing-Pennington Road
Titusville, New Jersey 08560-1410

January 11, 2021

Mark Kataryniak
Director of Community Development, Zoning Officer
Township of Hopewell
201 Washington Crossing-Pennington Rd
Titusville, NJ 08560-1410

VIA ELECTRONIC MAIL

RE: Block 85, Lots 3, 9 and Block 86, Lots 32, 33, 34, 130 – The Collection at Hopewell (Zaits Tract)
US Home at Hopewell Urban Renewal, LLC
Planning Board Application Review

Dear Mark:

The Office of Fire Safety in conjunction with The Pennington Fire Company and The Pennington First Aid Squad, have reviewed the application documents and offer the following comments for consideration by The Board.

The following identified as areas of concern with the proposed development need to be resolved with the applicant:

1. Impacts on emergency services call volume and volunteer retention
2. Fire department access to all sides of the buildings
3. Turning radius and clearances for fire department access
4. Fire hydrant locations and access
5. Parking plan and fire lane designations
6. The installation of residential fire sprinklers in the “townhome” style construction to NFPA-13R
7. The installation of residential fire sprinklers in the single family homes to NFPA-13D

This list may not constitute a complete list. Until a meeting takes place with the applicant and the design professionals, it is impossible to identify every possible concern.

We request a meeting with the applicant and the applicant's design professionals to discuss the following concerns with the proposed development.

Please feel free to contact me at any time directly at (609) 537-0212 with any questions that may arise. On behalf of the Board of Fire Commissioners I would like to thank you for your assistance.

Regards,

Andrew J. Fosina Jr.

Andrew J. Fosina, Jr.
Fire Official – Hopewell Valley Bureau of Fire Safety

CC: Hopewell Township Board of Fire Commissioners
Pennington Fire Company
Pennington First Aid Squad
Matthew Martin – Chief of Emergency Services
File

TOWNSHIP OF HOPEWELL
MEMORANDUM

TO: Planning Board Members

FROM: Environmental Commission Members

DATE: April 24, 2021

RE: **The Collection at Hopewell**
Block 85, Lots 3 & 9; 12 Washington Crossing-Pennington Rd, 1646 Reed Road
Block 86, Lots 32, 33, 34 & 130; 24 & 26 Diverty Road
IMF-X Zoning District
Preliminary & Final Major Subdivision & Site Plan

We are writing to inform you of our concerns regarding the subject application. During our Environmental Commission meeting via Zoom on April 20, 2021, members Nora Sirbaugh, Rex Parker, Andrew Plunkett, Jim Gambino, Mark Bean, Paul Kinney and Mike Aucott reviewed and discussed the application together with Mark Kataryniak and Courtney Peters-Manning.

Climate Change

We believe we should employ every reasonable means possible to reduce our greenhouse gas emissions and increase renewable energy sources. This applies to any new construction. While we would like to see the use of extra building insulation, rooftop solar panels and/or community solar throughout the development, we understand this is not a requirement and would create an added expense for the project. However, the contract does require all buildings to be “solar ready” by including conduit for future solar systems. We also believe the applicant can incorporate light-colored (white) roofing on all buildings to diminish heat gain without additional cost. We suggest the applicant consider adding electric car charging stations where appropriate, since electric vehicles will become more dominant in the near future.

Ecosystem

We understand there are no streams on the property. The plans show adequate buffers for all wetland areas, although there are some improvements shown in wetland transition areas.

Although the project contains green infrastructure such as bioswales, rain gardens and porous pavement areas, there is minimal green infrastructure shown in the southern portion of the project between the gas pipeline and Diverty Road residences. We understand there are five stormwater basins proposed for this project, although the plans contain no details as to how the basins will be constructed or vegetated.

We recommend the applicant establish an Integrated Pest Management plan and incorporate biological controls to mitigate any mosquito issues and diminish the need to use pesticides.

The following list of native plants is appropriate for use in and around the basins since they will attract beneficial “mosquito eating” insects and birds:

- Terrestrial plants - *Rudbeckia hirta*, *Asclepias incarnata*, *Eupatorium fistulosum*, *Echinacea purpurea*, *Achillea millefolium*, *Liatris spicata*, and *Helenium autumnale*
- Aquatic plants - *Sagittaria latifolia*, *Vallisneria americana*, *Nymphaea odorata*, *Equisetum fluviatile*, and *Pontederia cordata*

Flat rocks placed around the basins would provide Dragonflies a place to sun, and strategically placed birdhouses designed for Purple Martins and Tree Swallows would provide nearby homes for these mosquito eating predators. The planting of drought tolerant grasses throughout the development, such as Meyer Zoysia Grass, would reduce water usage and diminish the need for fertilizers and their associated pollution problems.

We believe the above measures will benefit this development by providing more enjoyable time outdoors for residents, more picturesque scenery for resident yards, common spaces, and anthropogenic and natural aquatic ecosystems, and lead to healthier residents and a healthier ecosystem.

Lighting

The Township's lighting ordinance states that "Minimal required levels of illumination are to be used in all applications. All lighting shall be designed, selected and installed both to prevent negative impacts caused by misdirected or excessive light and to conserve energy."

The application fails to meet these requirements. We believe that 141 lighting installations are excessive for the proposed development and recommend significantly reducing this amount to the minimum required. There are only 10 existing street lights on the surrounding roads outside this development.

The luminaires are not described in detail in the plans. The township desires to minimize light pollution and the lighting ordinance requires zero uplight using full cut-off fixtures. Even full cutoff fixtures cause skyglow from reflected and scattered light in direct proportion to the number of fixtures in a given area. The Township's lighting ordinance also specifies that LED color temperature for residential applications should be 2700K.

Trees - Landscaping

We recommend this project strive to minimize tree loss, land disturbances, and adverse environmental impacts for its duration. While the applicant conducted sample tree surveys at two locations, we question whether there are any significant trees located in non-surveyed areas of the property. Therefore, we request that the applicant identify any Specimen Tree as defined in the Township's Woodlands Ordinance. We therefore recommend a full accounting of all proposed tree removal, and a tree preservation and replacement mitigation plan for this project as per the township's ordinance.

We note that many landscape planting choices are not native species as required by the Township's Landscape Ordinance. All plantings should be chosen from the Township's approved plant list. Of special concern is the *Ulmus parvifolia*, the Chinese elm. This plant is on the US Invasive species list and has contributed to a significant decline of native species. For a similar habit to the *Metasequoia glyptostroboides*, Dawn Redwood, we recommend the US

native Bald Cypress, *Taxodium distichum*. Native sugar maples, *Acer saccharum*, are extremely sensitive to road pollutants and salts. This should be considered in placement.

While our landscape ordinance is specific to woody plants, we also note several non-native herbaceous plants. *Pennisetum alopecuroides* (native to Asia) is listed in the Invasive Plant Atlas of the United States and should not be planted. Also, for a similar profile to the *Liriope muscari*, consider some of the American *carex* spp or, for wetter sites, *Acorus americanus*.

A monoculture may occur with the proposed street/shade tree selections. We recommend diversifying these plantings so similar species do not occur one after another. The project should alternate species 1,2,3,4 wherever possible. We would be happy to work with the contractor on this as work progresses.

There is concern with the use of street trees being planted on top of the bio-retention swale piping. Lastly, we recommend additional plantings along the projects' Southern boundary to create a perpetual visual screen since some evergreens tend to lose their lower branches with age.

We also note the Van Cleef Engineering Review Report contains a more thorough plant review, and we agree with their findings and suggestions.

Parking

The Environmental Impact Statement shows the project has more parking spaces (943) than that which is required (828) for the number of bedrooms in the proposed community. This will result in additional and unnecessary impervious cover. We recommend reducing the number of parking spaces to the minimum required and thereby reduce the total amount of asphalt.

Recreation/Open Space

The Community Impact Statement predicts the project will have 800 (+-) residents living here, and none will have their own yards. The project does not appear to contain adequate open space for these residents. A dog park and community garden is shown, but the plans contain no playgrounds or other recreation areas or opportunities.

Please consider all of our observations and suggestions as you review this project.

Respectfully submitted: Jim Gambino, Secretary

cc: M. Kataryniak, C. Peters-Manning, EC Members

Memorandum

To: Hopewell Township Planning Board

From: Francis J. Banisch III, PP/AICP

Date: May 11, 2021

Re: Preliminary and Final Major Subdivision and Site Plan
The Collection at Hopewell/US Home at Hopewell Urban Renewal, LLC
Block 85; Lots 3 and 9 and Block 86, Lots 32, 33, 34 & 130
Washington Crossing- Pennington Road/Reed Road/Diversity Road
IMF-X Zone

1.0 MATERIALS REVIEWED FOR THIS REPORT

- Planning Board and Zoning Board Application
- Checklists for Preliminary and Final Site Plan and Preliminary and Final Subdivision, prepared by Sean Delany, P.E.
- Preliminary and Final Major Subdivision and Preliminary and Final Site Plan Set, prepared by Sean Delany, P.E. dated 11/20/2020 revised through January 11, 2021
- Traffic Engineering Evaluation, prepared by Eric L. Keller, PE, PP, dated November 9, 2020
- Environmental Impact Assessment entitled “Environmental Impact Statement for The Collection at Hopewell,” prepared by Envirotactics, Inc., dated November 2020
- Fiscal Impact Report entitled “Community Impact Statement, Proposed Residential Development, Hopewell Township, Mercer County, New Jersey,” prepared by Richard B. Reading of Richard B. Reading Associates, Princeton, NJ, dated November 9, 2020
- Architectural Elevations and Floor Plans, prepared by Holliday Architects for The Collection at Hopewell, dated November 11, 2020
- Preliminary and Final Subdivision Plat for The Collection at Hopewell, prepared by Bowman Consulting, dated November 20, 2020, consisting of 6 sheets

2.0 NATURE OF APPLICATION

2.1 Block 85, Lot 3, Block 86, Lots 32-34 and 130, and Block 85, Lot 9 (formerly "Zaitz") comprise approximately 49.39 acres and contains of agricultural lands and uses and wooded wetland areas. The property is subject to a redevelopment plan adopted in November 2017 and amended in February 2018 and subsequent Ordinance No. 18-1687 to provide for a 379-unit multi-family inclusionary development on the subject lots.

2.2 The proposed development will be located in the northeast portion of the site, to the rear of the Shoprite and commercial properties at the intersection of Washington Crossing

Pennington Road and Route 31, utilizing much of the agriculturally cleared portion of the site.



2.3 The project consists of three main areas.

- The northern section will have an access drive to Washington Crossing Pennington Road and consist of eleven (11) market rate stacked townhouse buildings and two 3-story affordable apartment buildings .
- The center section of the proposed development will consist of four (4) multifamily market rate apartment buildings and two (2) multifamily apartment dwellings for affordable housing.
- The southern portion will consist of ten (10) market rate townhouse buildings.

Each area includes associated improvements including parking, driveways, dumpsters for the apartment buildings. A community garden and dog park area are proposed in the central area.

2.4 The project includes a mix of residential unit types including:

• Affordable Housing multifamily units:	78 units
• Market rate Multifamily units:	96 units
• Market rate Stacked Townhouses:	144 units
• Market rate Townhouses:	61 units
	Total: 379

2.5 Additional site improvements include a loop driveway system with and access driveway located on Washington Crossing Pennington Road and one located on Reed Road. An emergency access will connect to Diverty Road. Sidewalks are located throughout the development.

2.6 There are four retention basins proposed and landscaping is provided throughout each section.

3.0 VARIANCES REQUESTED

3.1 The applicant is not seeking use or bulk variances.

4.0 PLAN REVIEW COMMENTS

4.1 According to 17-262a3a, new construction requirements for inclusionary developments include the following:

3. Design:

(a) In inclusionary developments, to the extent possible, low- and moderate- income units shall be integrated with the market units.

According to Section 3.4A of the Zaitz Redevelopment Plan:

2. The affordable housing units shall be located in *more than one building*.

Four (4) affordable housing buildings are proposed, including 2 apartment buildings in the northern section and 2 apartment buildings in the center section. The applicant should provide testimony regarding how the placement of the affordable housing units is consistent with the Code and Redevelopment Plan.

4.2 The applicant should provide testimony regarding the total number of affordable units and the bedroom mix and income distribution to ensure compliance with the Redevelopment Plan and UHAC bedroom distribution.

4.3 The site plan does not indicate any recreational facilities for residents with the exception of a dog park and community garden identified in the central portion of the development. According to the Redevelopment Plan:

- A minimum of 20 percent of the tract shall be specifically set aside for conservation, recreation and/or other open space which shall include any area available for civic uses and restricted due to utility easements.
- Active and passive recreational facilities, such as jogging and fitness trails, passive sitting areas, and other athletic facilities shall be provided for the benefit of building occupants.

The proposed site plan does not achieve this goal. The applicant should provide testimony regarding any proposed recreation facilities, walkways/bike paths, and other recreational opportunities to be provided. If no additional facilities are proposed, the applicant should identify how a dog park and community garden meet the goals and objectives of the Redevelopment Plan.

4.4 The site includes sidewalks throughout the development. The dog park and community garden are located along Road 1, which is the access road out to Reed Road. Given the number of units and mix of residential unit types and their associated parking areas and driveways, are traffic calming measures needed to provide safe pedestrian access to the open space areas?

4.5 The proposed landscaping includes shade trees, ornamental trees, evergreen trees, and shrubs and groundcover which line the parking areas, residential units, and driveways. The interior of the site shows typical residential development landscaping with shade trees, foundation plantings, ornamentals and shrubs. Larger evergreen trees are located around trash enclosures and utility areas and along road frontages.

Along Washington Crossing Pennington Road, a line of evergreens, including Norway Spruce, Red Cedar, Holly and Blue Spruce are located off the ROW area. Running adjacent to the road is a line of London Plane tree. The same evergreen combination is also located along the emergency access to Diverty Road. The remainder of the site will retain the existing vegetation, providing screening to some of the residential properties along Diverty Road and properties along Reed Road.

4.6 The applicant should provide testimony regarding how the proposed landscaping will provide adequate buffers between the residential properties along Diverty Road and those along Reed Road.

4.7 The proposed lighting is typical for this type of development. The applicant should provide testimony regarding the lighting impacts, in particular, how lighting in the parking lot areas will affect adjoining residences.

4.8 The site plan shows that apartment buildings have a dedicated dumpster enclosure in the parking area. Are the proposed dumpsters adequate to handle loads from all units in the apartment building or is there a need for additional dumpsters or other enclosures? How will recycled goods be collected?

4.9 The applicant should provide testimony regarding signage, including any monument or freestanding signs to ensure they comply with the ordinance.

4.10 The applicant should provide testimony regarding the parking. Are the number of spaces provided adequate to meet the needs of the townhomes and apartment areas? Will there be adequate parking for all units, including visitor spaces?

4.11 The townhouse development areas include off-street parking, however, it is assumed overflow and visitor parking for those units will be located on-street with some dedicated in parking areas along the roadway. We defer to the Engineer for compliance with the parking requirements.

4.12 Any approval by the Planning Board should be conditioned on approval by any other agency having jurisdiction.

cc via email: Linda Barbieri, for distribution to Planning Board members, professionals and applicant



181 WEST HIGHSTREET
SOMERVILLE, NJ 08876

908 927 0100p
908 927 0181f

May 17, 2021

Planning Board
Township of Hopewell
Department of Community Development
201 Washington Crossing Pennington Road
Titusville, NJ 08560

Attn: Linda Barbieri, Asst. Comm. Dev. Coord.

Re: Traffic Engineering Review #1
Traffic Impact Study/Site Plan Review
The Collection at Hopewell
Block 85, Lot 3 & 9
Block 86, Lots 32 to 34 & 130
Hopewell, Mercer County

Dear Planning Board Members:

As requested, Dolan & Dean Consulting Engineers, LLC (D&D) has completed an initial review of the Traffic Impact Study and Site Plans prepared as part of the site plan application for The Collection at Hopewell, designated as Lots 3 and 9 in Block 85 and Lots 32, 33, 34, and 130 in Block 86. The materials provided for our review include:

- *"Traffic Engineering Evaluation"* prepared by Bowman Consulting Group, Ltd. ("Bowman") dated November 9, 2020
- Preliminary and Final Site Plan prepared by Bowman Consulting Group, Ltd. dated November 20, 2020

These review comments can be considered preliminary pending resolution of the comments noted below. Regarding the submission, we offer the following traffic engineering and site plan comments for the Board's consideration:

Traffic Impact Study

- T1. Peak hours were determined and evaluated by each individual intersection, providing a conservative analysis of the adjacent roadway network.
- T2. The traffic data collected in 2020 was appropriately increased to account for the traffic volume reductions attributed to the COVID-19 pandemic, using available NJDOT traffic count data and historical counts.

T3. Bowman should provide justification for the use of fitted curve instead of the average rate for projected trip generation, as the average rate yields a higher trip count and would provide a more conservative traffic analysis.

T4. We recommend that Delaware Valley Regional Planning Commission (DVRPC) and US Census Bureau journey-to-work data be used in the traffic assignments to development trip distribution for the proposed residential development, as it will be more representative of travel patterns during the weekday morning and evening peak hours. Additional use of local streets is anticipated particularly for school related trips in the morning peak hour should be evaluated.

T5. Heavy vehicle percentages utilized in the analysis do not appear to be consistent with the count data in Appendix III. For example, for the weekday AM peak hour, the counts for Ingleside Road southbound show 7% for the through movement and 4% for the right-turn movement. The HCM output shows 0% for the through movement and 1% for the right-turn. This will have a notable impact on the capacity analyses. Therefore, please review and revise the analysis for all intersections to reflect heavy vehicle percentages consistent with the count data.

T6. The added traffic at the CR546 & Ingleside Road/Reed Road intersection increases the delay at the Reed Road left/through movement by 23.4 seconds during the AM Peak and 30.6 seconds during the PM peak from the No-Build to Build conditions. Under the No-Build condition, this movement is projected to operate at LOS F during both study peak hours and will be exacerbated by the addition of site traffic. Bowman should investigate mitigation options at this intersection to improve operation.

T7. The Hopewell Valley Central High School is located at the intersection of Dublin Road and Pennington-Titusville Road, north of the site. For future students who may reside within The Collection and attend the high school, the primary trip to and from school would be via Dublin Road and CR 546. Therefore, the study scope should be expanded to include capacity analyses to assess the impact of the proposed project at the Dublin Road/CR-546 intersection.

T8. Bowman should provide information regarding the ownership of the lots that comprise the development.

T9. What is the contingency plan for access if the current access design proves to be infeasible? Note, should the access plan be revised, additional traffic analyses will be required for review.

Layout & Dimension Plan (Sheets 5A through 5F)

SP1. The proposed 379-unit development requires a total of 828 parking stalls per the Residential Site Improvement Standards (RSIS). The Site Plan proposes 943 parking stalls, exceeding the

RSIS requirements. The proposed parking will be sufficient to accommodate both residents and visitors as the site is designed with a surplus of 115 parking stalls.

- SP2. The proposed parking stall dimensions are 9 feet wide by 18 feet long with two-way drive aisle widths of 22 feet and 24 feet, for the alleys and access aisle, respectively. This design is in accordance with typical design standards and meets the RSIS requirements.
- SP3. On Sheet 5B, the striped area that is shown between the driveways of the stacked townhouses is shown as asphalt. This area should be considered as a landscaped area instead of impervious.
- SP4. Traffic calming measures should be implemented along Road A and Road 1 as they are the main arterials through the site. Specifically, the crosswalks along Road A and Road 1 could be designed as raised crosswalks. Pedestrian warning signage should be added to these locations.
- SP5. Site Plan Sheet 5B should include a stop bar and signage (R1-1) on the east leg of the Road A/Road 2 intersection.
- SP6. The RSIS minimum centerline radius requirement (Table 4.6) for residential access is 100 feet. The site plans show 75 feet for the minimum centerline radius. Please revise the Site Plans to meet the 100-foot requirement or discuss with the Board why compliance cannot be achieved.
- SP7. It is recommended that the surface parking lot on Road 2 is redesigned to facilitate two-way access and circulation. Is there a specific reason for the one-way design?
- SP8. On Site Plan Sheet 5C, the median extending past the crosswalk on the eastbound approach at the Road 1/Road B intersection should be removed from the plans. Per the previous comment, the crosswalks along Road 1 should be redesigned as raised crosswalks. The site plan should be revised to reflect the removal of the median extension and the proposed raised crosswalk and associated pedestrian signage.
- SP9. Pedestrian connectivity between the site and the adjacent ShopRite supermarket should be implemented. The connection will introduce a convenience factor that will facilitate a walkable neighborhood and eliminate unnecessary vehicle trips into and out of the community.

Overall, the traffic study has been prepared following standard accepted practices, however, many of the comments above will impact the results and conclusions reached in the report. As such, we recommend that the comments above be addressed prior to a further review of the project traffic impacts.

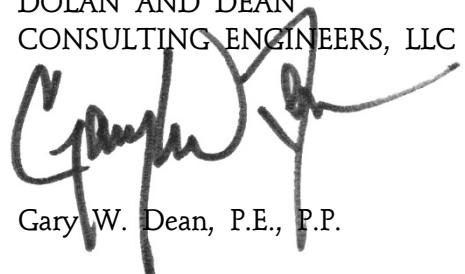
THE COLLECTION AT HOPEWELL
BLOCK 85, LOTS 3 & 9; BLOCK 86, LOTS 32 TO 34 & 130
HOPEWELL, MERCER COUNTY

MAY 17, 2021

If you have any questions regarding the above, please do not hesitate to contact us. We look forward to discussing these concerns at the appropriate public hearing.

Very truly yours,

DOLAN AND DEAN
CONSULTING ENGINEERS, LLC



Gary W. Dean, P.E., P.P.

RSK/lrc



Paul W. Ferriero, PE, PP, CME, LEED AP, CFM
Robert C. Brightly, PE, PP, CME

Steven B. Bolio, PE, CME
Mark S. Denisiuk, PE, CME, LEED AP
Mark Kataryniak, PE, PTOE
Joseph S. Kosinski, PG, CFM, LEED
C. Richard Quamme, PE, CME
Jess H. Symonds, PE

MEMORANDUM

(via email)

TO: Hopewell Township Planning Board

FROM: Mark Kataryniak, P.E., P.T.O.E. *(MK)*
Redevelopment Consultant to Hopewell Township

CC: Francis Linnus, Planning Board Attorney
Applicant, US Home at Hopewell Urban Renewal, LLC

DATE: June 22, 2021

SUBJECT: **Technical Review Update**
PBA 20-09 – The Collection at Hopewell
Preliminary and Final Major Subdivision and Site Plan
US Home at Hopewell Urban Renewal, LLC
Block 85, Lot 3; 12 Washington Crossing Pennington Road
Block 85, Lot 9; 1646 Reed Road
Block 86, Lots 32, 33, 34 & 130; 24 & 26 Diverty Road
Inclusionary Multi-Family (IMF-X) Zone
FEI Project No.: 21HT202

As the Board heard the referenced application at its June 10, 2021 meeting, a discussion took place between the Applicant, Board members and Board professionals regarding the evolution of the planned access for the subject redevelopment project. The Applicant provided testimony describing several modifications to the configuration of the site plan and the proposed site access as the design of the project advanced from the conceptual plans developed as part of both the Redevelopment Plan, adopted in November 2017 and amended in February 2018, and the Redevelopment Agreement adopted by the Hopewell Township Committee on April 9, 2018.

During the time period between the initial adoption of the Redevelopment Plan, in November 2017, and the submission of the referenced application in November 2020, progress meetings were held, as permitted by Article IV, Section 4.01 of the Redevelopment Agreement, between the Redeveloper / Applicant (Applicant) and a subcommittee of the township representatives, comprised of representatives of the Township Committee and members of the professional staff (Subcommittee).

As the progress meetings took place, the Applicant provided updates to the Subcommittee on comments received and design constraints that arose as the Applicant advanced discussions with various County and State agencies having jurisdiction over certain aspects of the redevelopment project, and the Subcommittee provided guidance on suggested modifications to the development

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plan. Simultaneously, the Subcommittee informed the Applicant of various concerns raised by the public during outreach meetings conducted in part to satisfy other aspects of the township's settlement agreement with respect to its third-round affordable housing obligations. Several of the concerns discussed at the progress meetings involved issues related to potential traffic impacts, changes to area traffic patterns with the creation of new circulation roads within the site that would connect to the existing street network, and infrastructure needs for the future Senior/Community Center planned for a portion of the subject property, as described in the Redevelopment Agreement.

The Subcommittee required the Applicant to design the main circulation roads within the project as public streets that would be dedicated to the township following completion of the project. In addition to developing the future public streets in conformance with all applicable design requirements of the Township Ordinance and Residential Site Improvement Standards, the Subcommittee directed the Applicant to include elements of traffic calming and stormwater management into the design of these streets, which resulted in the current configuration and layout of the divided main circulation roads that the Applicant described in his testimony at the Board's prior meeting.

As it related to site access, the Subcommittee asked the Applicant to consider an alternative to the secondary site access on Diverty Road. The Subcommittee cited concerns over increased traffic on Diverty Road, given its narrow width, the minimal setback of residences along its length, and the lack of full turning movements permitted at its intersection with Route 31. Also discussed was the need for the site access to serve the planned Senior/Community Center and the need for a public street network through the project that would serve the broader community.

The resulting plan proposes the secondary access from Reed Road to the Applicant's project through property adjacent to the western boundary of the Redevelopment Area, identified as 1646 Reed Road; Block 85 Lot 9 (Lot 9). This property is under contract to be purchased by the Hopewell Valley YMCA, as part of a partnership with the Township to develop and operate the planned Hopewell Valley Senior/Community Center. The availability of this property provided the space to accommodate the township's expanded vision for the Senior/Community Center beyond what was envisioned when the Redevelopment Plan and Agreement were adopted by the township.

As the conceptual site plan was refined through several progress meetings held with the Applicant, the Subcommittee and Applicant recognized the mutual benefit the access road through Lot 9 would have as both a secondary site access and as an extension of the public streets planned within the project to serve the broader community for the planned Senior/Community Center. The Applicant had agreed to include a connection for the planned Senior/Community Center off of the proposed secondary site access to Reed Road that they would construct as part of their project. The Subcommittee, recognizing the benefits to the community that would be advanced with the extension of a public street through Lot 9, directed the Applicant to add the access road through Lot 9 as it is currently depicted on the Site Plan application presently before the Planning Board.

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The Subcommittee further directed the Applicant to configure the road through Lot 9 as an extension of the internal site circulation roads that would be dedicated as public streets. The Subcommittee informed the Applicant that the township would be advancing the Senior/Community Center project with the YMCA and other partners separately, but continued to emphasize the importance of planning the independent projects as one cohesive development.

I therefore recommend that the Planning Board make a formal request to the Township Committee that the proposed roadway segment traversing Block 85 Lot 9, as presented on the Preliminary & Final Subdivision and Site Plan application materials presently before the Planning Board, be designated as a public street. The Township Committee has the ability to establish the proposed roadway segment as a public street through several means that would advance independent of the subject application. Therefore, I recommend that the Planning Board, as a Condition of any Approval granted for the subject application, require the Applicant to post the appropriate bonds and enter into a Developer's Agreement, as permitted by the Land Use and Development Ordinance and the Municipal Land Use Law, for the construction of the planned public street through Block 85, Lot 9, as depicted on the pending application or as modified through the course of these proceedings.

The construction obligation of the Applicant should be inclusive of all of the construction and materials necessary for the excavation, grading and construction of the roadway subbase, pavement subbase, pavement surface, curbs, sidewalks, stormwater drainage infrastructure, landscaping, lighting, striping and signage as depicted on the approved plans and subject to the approval of the Township Engineer. The portion of the access road traversing Block 85 Lot 9 should be considered an improvement constructed by the Applicant that would be dedicated as a public improvement.

I am happy to discuss this matter further with the Board at your request.