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September 24, 2021

Mr. Fred Andre, Secretary
BOROUGH OF RUMSON PLANNING BOARD
80 East River Road
Rumson, New Jersey 07760

Re: First Engineering Review
YELLOW BROOK PROPERTY RESIDENTIAL – LAURISTON PARK
91 Rumson Road; Block 124, Lot 31
Borough of Rumson, Monmouth County, New Jersey 07760
FPA No. 15053.003

Dear Mr. Andre,

Enclosed, please find the following documents in response to the letter dated 7/21/2021 by T&M Associates:

1. Eighteen (18) 11x17 Site Plan sets dated January 29, 2021, and last revised September 24, consisting of 27 sheets total.
2. Five (5) revised "Stormwater Management Report" dated January 28, 2021, revised September 24, 2021.
3. Five (5) revised "Operations and Maintenance Manual" dated January 2021, revised September 2021.

Specifically, FPA offers the following responses to the required actions:

1. Planning and Zoning
 - 1.1. Additional sidewalks have been added to accommodate the proper flow of pedestrian traffic.
 - 1.2. All pedestrian walkways have minimum 0.2 footcandles lighting levels.
 - 1.3. The proposed permeable paver section consists of 3.125-inch thick permeable pavers, a 2-inch thick setting bed (ASTM No. 8), a 4-inch thick base course (ASTM No. 57), and a 12-inch thick subbase course (ASTM No. 2). Calculations provided by the manufacturer indicate that the structural number of 2.62 for the proposed permeable paver section is greater than the structural number of 2.48 for the typical roadway section specified in the Borough of Rumson Ordinance Section 22-9.3.c.3. Therefore, the proposed permeable paver section is equivalent to the Borough of Rumson typical roadway



section. See the attached “Structural Number Comparison Table for Lauriston Park” for calculations. If further modifications are required for the roadway section, we will review this with the Borough Engineer and Board Engineer and will coordinate as necessary.

- 1.4. A design waiver will be required for the lighting levels on the proposed roadway. This has been noted on the Cover Sheet.
- 1.5. A note has been added to the “Concrete Paver Private Driveway Detail” and the “Concrete Paver Sidewalk Detail” stating that the section shall be modified to include a 4” minimum thick concrete slab reinforced with welded wire fabric mesh.
2. Site Layout/Requirements and Traffic Circulation
 - 2.1. The plans have been revised to account for the proper parking requirements per R.S.I.S. rules and regulations.
 - 2.2. This comment has been noted.
 - 2.3. Testimony has been provided.
 - 2.4. This comment has been noted.
 - 2.5. This comment has been noted.
 - 2.6. All depressed curbing has been called out “depressed concrete curbing” and the requested ADA note has been added to the cover sheet.
 - 2.7. Note #8 stating “The applicant may choose to substitute vertical Belgium block or concrete in lieu of mountable Belgium block” has been removed from the plans.
 - 2.8. Four (4) designated 5-foot by 5-foot ADA passing spaces have been added to the plans.
 - 2.9. All proposed improvements and materials have been called out on the Layout and Dimension Plan.
 - 2.10. All handicap ramps are clearly labelled and the appropriate grading has been noted.
 - 2.11. Pedestrian crossings have been added to the site.
 - 2.12. Sight triangles have been added to the intersection with Rumson Road and the Emergency Access drive. The interior roadways are private roadways and therefore shall not be subject to sight triangles.
 - 2.13. A “No Outlet” sign has not been provided at the site entrance along Osprey Lane.
 - 2.14. “No Parking” signs have been added along both sides of the proposed roadway.
 - 2.15. The stop bar at the interior street intersection has been relocated.
 - 2.16. An emergency access detail notes a cedar split rail fence with a breakaway chain.
 - 2.17. Testimony has been provided by the Traffic Engineer.
3. Grading and Drainage
 - 3.1. Additional spot shots have been provided at the handicap ramps along the back of the sidewalk.
 - 3.2. Spot elevation have been provided at the corners of the buildings.
 - 3.3. Grading in this area has been adjusted to ensure proper runoff.
 - 3.4. The grading of the paver walkway on the southern side of the southern duplex unit has been adjusted.
 - 3.5. Top and bottom of wall shots have been added at fifty-foot intervals or less, as necessary. A decorative wall detail has been provided.



- 3.6. Most of the proposed walls are shorter than 30"; therefore, a fence for fall protection is only required at the modular block retaining wall to the south of the proposed carriage house. This has been noted on the plans.
- 3.7. The pipe connecting to the existing drainage system along Osprey Lane has been modified to a reinforced concrete pipe.
- 3.8. The roof leaders have been properly noted as HDPE on the site plans.
- 3.9. This comment has been noted.
- 3.10. This comment has been noted.
- 3.11. This comment has been noted.
- 3.12. This comment has been noted.
- 3.13. The time of concentration pathways have been called out on the Drainage Area maps.
- 3.14. The new impervious area has been noted in the stormwater management report in Section 4 on page 3 and Section 4b on page 4.
- 3.15. The calculations have been revised to properly note the downstream slope and invert of the outlet structure from the basin. The downstream channel capacity has been provided after the post-development calculations.
- 3.16. The drainage areas have been updated to match in both the Stormwater Management Report and the Drainage Area maps.
- 3.17. The drainage areas have been updated to match in both the Stormwater Management Report and the Drainage Area maps.
- 3.18. The Annual Groundwater Recharge spreadsheet has been revised accordingly.
- 3.19. The grates and inverts of all proposed cleanouts has been provided.
- 3.20. The pipe callout has been added for the cleanouts to Inlet #A-2 and Inlet #A-3.
- 3.21. The invert of the 4-inch perforated HDPE pipe in the Pervious Pavers has been added to the appropriate Inlet callouts.
- 3.22. The pipe slopes on the profiles have been adjusted to match the Grading and Drainage Plan.
- 3.23. The pipe inverts on the profiles have been adjusted to match the Grading and Drainage Plan.
- 3.24. The proposed invert of the existing pipe has been properly adjusted to note an elevation of 8.33.
- 3.25. We will review this with the Borough Engineer and Board Engineer and will coordinate any improvements that may be necessary with the Borough. We will revise the plans accordingly.
- 3.26. Offsite runoff has already been limited to the maximum extent possible.
- 3.27. A Trash Rack Detail for the outlet control structure has been added to the plans.
- 3.28. All tables in the Stormwater Management Report have been updated accordingly.
- 3.29. The Operations and Maintenance (O&M) Manual has been revised to note the Homeowner's Association as the responsible party for all stormwater maintenance measures.
- 3.30. The "Tier A MS4 NJPDES Permit – Attachment D – Major Development Stormwater Summary" form has been provided.
- 3.31. The pervious paving system has been added to the O&M Manual.



4. Landscaping and Lighting

- 4.1.1. Landscape Buffer has been added along Northern Buffer.
- 4.1.2. We have provided the additional Buffer Plantings.
- 4.2. We have applied additional planting in accordance with the ordinance.
- 4.3. A Landscape Screen has been added at the end of the 5' parking stalls.
- 4.4. The existing plantings will remain as identified on the Tree Save Plan.
- 4.5. A Planting Plan has been provided by the garage.
- 4.6. Plants have been substituted with the approval of T&M Associates' Landscape Architect.
- 4.7. Note has been revised.
- 4.8. Note has been revised to two years.
- 4.9. A Tree Save Plan has been provided and shows all existing trees and tree protection.
- 4.10. Existing vegetation has been provided on Tree Save Plan and Landscape Plan.
- 4.11. Note was added that irrigation system is proposed.
- 4.12. We have reviewed the driveway entrance and no trees are being removed.
- 4.13. Testimony will be provided.
- 4.14. Plans have been revised.
- 4.15. No light spillage on neighboring properties.
- 4.16. Testimony will be provided.

5. Utilities

- 5.1. An additional "Service Utility Plan" sheet has been added to the full set of plans.
- 5.2. This comment has been noted.
- 5.3. The individual locations, materials, and slopes of all sanitary sewer laterals and cleanouts have been added to the Utility Plan.
- 5.4. A "cleanout protection box" has been noted on the sewer cleanout detail.
- 5.5. A sanitary sewer report has been prepared.

6. General

- 6.1. To be handled by the architect.
- 6.2. The signature block has been added to the cover sheet.
- 6.3. Testimony has been provided.
- 6.4. To be handled by the architect.
- 6.5. Proposed street name will be requested.
- 6.6. To be handled by the architect.
- 6.7. Testimony has been provided.
- 6.8. This comment has been noted.
- 6.9. A note has been added to the site plan indicating "All damage to pavement or public improvements along the property frontage damaged as part of the construction shall be replaced and/or repaired."
- 6.10. The cover sheet has been updated to note "...all work within Osprey Lane..."
- 6.11. The design waivers have been added to the cover sheet.
- 6.12. This comment has been noted.
- 6.13. This comment has been noted.
- 6.14. This will be prepared by the applicant's attorney and will be forwarded under separate cover.



- 6.15. A perspective view illustrating the anticipated final product of all improvements from the Osprey Lane perspective has been provided.
- 6.16. Testimony has been provided.
- 7. Permits and Approvals
 - 7.1. This comment has been noted.
 - 7.2. The Monmouth County Planning Board approval is currently pending.
 - 7.3. This comment has been noted.
 - 7.4. This comment has been noted.
 - 7.5. Utility verification letters shall be provided.
 - 7.6. This will be prepared by the applicant's attorney and will be forwarded under separate cover.
 - 7.7. The NJDEP Treatment Work Approval for the proposed sewer main extension shall be applied for.

Very truly yours,

FRENCH & PARRELLO ASSOCIATES

A handwritten signature in blue ink, appearing to read 'Brian R. Decina', is written over the printed name and title.

Brian R. Decina, PE, CME
Exec. Vice President
Discipline Manager, Site Engineering
Brian.Decina@FPAengineers.com

Structural Number Comparison Table for Lauriston Park

Proposed Belgard Permeable Paver Roadway Section for Site Entrance Driveway

Material	A: Layer Thickness (in.)	B: Structural Layer Coefficient ¹	SN = A*B
Permeable Paver	3.125	0.30	0.9375
Setting Bed (ASTM No. 8)	2.000	0.30	0.6000
Base Course (ASTM No. 57)	4.000	0.09	0.3600
Subbase Course (ASTM No. 2)	12.000	0.06	0.7200
Total SN			2.6175

Borough of Rumson Typical Roadway Section per Ordinance Section 22-9.3.c.3

Material	A: Layer Thickness (in.)	B: Structural Layer Coefficient ¹	SN = A*B
Asphalt Surface Course	1.500	0.40	0.6000
Asphalt Binder Course	3.500	0.33	1.1550
Aggregate Base Course	6.000	0.12	0.7200
Total SN			2.4750

¹ Structural layer coefficients used are from *ASCE Design Standard 68-18 Permeable Interlocking Concrete Pavement*

The structural number of 2.6175 for the proposed permeable paver roadway section is greater than the structural number of 2.4750 for the typically roadway section specified in the Borough of Rumson Ordinance Section 22-9.3.c.3. Therefore, the proposed permeable section is equivalent to the Borough of Rumson typical roadway section.