

**To:** Shane Lippard, Right Angle Engineering  
**From:** Brian Chambers, Senior Planner; 910.342.2782  
**CC:** File;  
**Date:** 8/29/2022  
**Re:** The Block on Front TRC Rev. 2

The following is a list of comments for review from planning regarding the project. Please provide your corrections as listed below. A staff summary of comments:

Staff	Department	Notes
Brian Chambers	Planning, Plan Review	Comments below
Rich Christensen	Engineering	Comments attached
Chris Walker	Fire	No further comments
Mitesh Baxi	Traffic Engineering	Comments attached
Bill McDow	Transportation	Comments attached

### Planning Review

Brian Chambers, [brian.chambers@wilmingtonnc.gov](mailto:brian.chambers@wilmingtonnc.gov), 910.342.2782

#### Comments:

- Identify number of residential units and commercial square-footage per building in site data table. *Previous comment*
- Maximum number of parking spaces permitted is 64 (16 units X 2.5 = 40, 4800 sq ft / 200 = 24). The TRC may allow for a parking increase up to 25% above the maximum if excess parking meets standards of the code (Sec 18-528). *Previous comment*
- Tree protection fencing is required at a rate of one-foot per diameter inch around the protected trees. *Previous comment*
- Show compliance with UMX lighting standards (location, height, directional light fixtures). Lighting plan doesn't show height and also indicates light trespass on adjacent sites. *(All site lighting shall be located, angled, shielded, and/or limited in intensity so as to cast no direct light upon adjacent properties, shall minimize off-site backlighting glare, and up-lighting. Light posts shall be no taller than twelve (12) feet.)*
- Surface parking lots visible from the public right-of-way shall be screened by permanent walls, shrubbery or hedges at least three (3) feet in height. If hedges or shrubbery are used, they shall be at three (3) feet in height at the time of planting and shall be maintained at three (3) to five (5) feet in height at all times. *Previous comment*
- Identify areas (shade/hatch) where pervious pavement will be used.
- Provide canopy trees in parking lot landscape islands or justification for using understory trees.
- Provide waiver request, including justification, for proposed sidewalk widths. 12-foot (S. Front) and 8-foot (Wright/Mearns) sidewalks are required. *Previous comment*

- Parking exceeds maximum allowed, reduce number/size of central parking area so that the Oak Trees near the end of parking lot can be retained. *Previous comment*
- Tree credits can only be counted for trees that are not otherwise required to be retained (any protected tree is required to be retained). *Previous comment*
- Provide dumpster screening detail. *Previous comment*

Engineering has reviewed the plans for The Block on Front project submitted August 11, 2022, and have the following comments:

### **Stormwater Management Permit Application Form**

1. IV. Project Information:
  - a. #6 & #7: Per our phone conversation on 8/18, all existing impervious is to be removed. Enter '10,500' in #6 and '0' in #7.
  - b. #8: All newly constructed impervious should be listed in this table. Even impervious that is not being treated.
  - c. #10: This entry may need to be revised.
  - d. #13:
    - i. List all impervious areas within each infiltration system drainage area, even impervious not being treated and impervious that drains to the PC. Also include the pervious pavement square footages in the infiltration system drainage areas.
    - ii. The cumulative total of the pervious pavement (2,018+1,628+1,492+3,796=8,894sf) does not equal the amount listed in the impervious surface table under #8 (13,880sf).
    - iii. Based on the drainage area for PC in DA-1 on sheet C3, the drainage area is only comprised of PC and impervious pavement, no pervious, therefore those two square footages added together should equal the drainage area.
    - iv. PC in DA-4 appears to be incomplete. For example, the pervious concrete volume calculations have 5 areas - 4a-4e. Only 4a-4c are included in the impervious pavement area. Verify that the on-site drainage area, impervious pavement, and the pervious pavement square footages match the PC calculations.

### **Design Narrative**

2. 1. General Information:
  - i. i: Since the project is to be phased, please submit a Phasing Plan. The phasing plan can be a copy of the site plan where the three phases are delineated. This will make it much easier for city inspections (Zoning and Engineering) to know what to inspect when the developer is requesting a certificate of occupancy for a phase.
3. Stormwater Information: e:
  - i. Drainage areas should be 2 and 3.
  - ii. Drainage area 2 should have 8,178sf of impervious not being treated and Drainage Area 3 should have 1,900sf. You can revise your calculations if you want the 442sf of existing impervious to receive the credit as well. Not a requirement.
4. 6. Construction Schedule: Due to the amount of pervious concrete proposed, the construction sequence should include language to protect those areas and the infiltration capability of the subgrade. See the Construction guidance outlined in the Permeable Pavement chapter (C-5) found in the NCDEQ Stormwater Design Manual.
5. Impervious Area Totals:
  - i. Show that the 10,500 sf of existing is gravel.
  - ii. Verify that Proposed Built Upon Areas are still accurate.
6. The Block on Front R-Tank Calculations:
  - a. Note only: As I understand it, the 10,500sf of existing impervious credit is being addressed in the infiltration system calculations and not in the PC calculations. And that credit is occurring in drainage areas 2 and 3 of the infiltration systems.

- b. Provide a breakdown of the impervious in each R-Tank calculation. The numbers need to show what is being treated (and what is not in each DA). I am assuming the PC areas are not being subtracted out? Provide a brief detailed explanation that outlines these things for clarity.
- 7. Pervious Concrete Volumes #4: These numbers must match the table in #13 of the SW application.
- 8. Pervious Concrete Calculations: Provide drawdown calculations per MDC 8 in the NCDEQ SW Design Manual.
- 9. Runoff and Pipe Calculations: Per the technical standards, Chart E-1, page 5-10 runoff coefficient for rooftops is 0.95. 0.90 was used. How was that determined?
- 10. Hydraflow Hydrographs:
  - a. Provide a soils map to verify soils and HSG within the project site.
  - b. Provide more detail for the curve numbers selected for composite CNs. Predevelopment was determined using current land cover? Does not have to be woods good.
  - c. Pond No. 1 –
    - i. Storage volumes should reduce once above the top of the R-tank (20.75') in the stage-storage.
    - ii. Culvert/Orifice B has elevation of 20.10'. Doesn't match detail (20.20').
    - iii. Weir length per the detail is 6 feet. Pond 1 lists 5 feet.
    - iv. Link the pre-development and post-development peak flow rates to show one combined pre and post number for comparison since all systems drain to one discharge point.
- 11. Storm Sewers:
  - a. Line lengths don't seem to quite match the plans.
  - b. Verify that inverts match the plans.
- 12. Provide the 10-year routing with the system not infiltrating per the technical standards.

#### **Supplement**

- 13. Complete 'Entire Site' for the Drainage Areas.
- 14. Recheck Supplement entries to make sure all are still accurate.

#### **Design Plans**

- 15. C1 (Ex. Conditions, Site Inventory & Demolition):Site Data Table: Update the concrete curb and gutter (3,924) and the total impervious (37,743).
- 16. C2 (Site Plan): Driveway flares can be reduced to 13 feet per the technical standards. Flares of 14 and 15 feet are not required.
- 17. C3 (EC, Grading & Stormwater Plan):
  - a. Provide the location of the required observation wells for the PC. There needs to be one in every PC area.
  - b. Some spot grades in DA-1 and 4 appear to show DI rim elevations higher than the surfaces around them.
  - c. There is a low spot in DA-1 near the center of the header curb of PC 1a.
- 18. C4 (Utility Plan):
  - a. Is there any way to combine some of the utility installations to reduce the number of open cuts?
- 19. Details: There does not appear to be any details pertaining to the pervious concrete.

Please call or email if there are any questions. Thank you.

**BASE INFORMATION:**

- Locate and callout the 'existing streetlight' at the corner of S Front St and Wright St abutting this development.

**TECHNICAL STANDARDS:**

1. The flare width for the commercial driveway is 13'. Justify the requirement for greater widths. [SD 3-03.3 & 3-03.4 CofWTSSM] Could be accompanied by vehicle turning movements.

**SIGHT DISTANCE TRIANGLE FOR ANY STREET INTERSECTIONS WITH THOROUGHFARES**

This section of S Front St is a major thoroughfare [Chap VII (C) (2) (a) of CofW Tech Stds]. In accordance with the City Code, sight distances along thoroughfares must be calculated in compliance with the AASHTO requirements. [Chap VII (C) (1) of CofW Tech Stds] [Sec.18-556 CofW LDC]. Show AASHTO departure sight distance for street corner of S front St with Wright St and Meares St abutting this development.

**TECHNICAL STANDARDS – PARKING:**

2. Minimum drive aisle width behind the perpendicular parking is 24'. Provide the turning movements for the vehicle accessing perpendicular parking space behind proposed 20' drive aisle. [Chapter VII Table 6 of CofWTSSM]
3. 'CR' is labelled at incorrect location. Please show location of accessible ramp(s) and parking signs. Curb ramps must not protrude into access aisles. If parallel ramps are required revise accordingly and show the location of detectable warning domes.

Please let me know if you have any questions or if I can be of further assistance.

Project Name: **THE BLOCK AT FRONT**

TRC Date: **08.25.2022**

Reviewer Name: **BILL McDow**

Reviewer Department/Division: **PDT/Transportation Planning**

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**TECHNICAL STANDARDS:**

1. The site has proposed a mixed-use development with 4 buildings, (64 Apartment units and 4800 SF, First Floor Commercial/ Retail/office). The buildings have stairs at the entrances for these buildings.
2. The proposed buildings do not show Accessible access from the public sidewalk. Please show the ADA Accessible path from the public sidewalk to the commercial retail spaces.

Please let me know if you have any questions regarding the comments.