

To: Charlie Cazier, Intracoastal Engineering
From: Pat O'Mahony, Associate Planner; 910-341-0189
CC: File;
Date: 8/24/2020
Re: Cape Fear Moto Group TRC Rev. 1

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:

| | Department | Notes |
|---------------------|-----------------------|-------------------|
| Pat O'Mahony | Planning, Plan Review | Comments attached |
| Richard Christensen | Engineering | Comments attached |
| Chris Walker | Fire | Comments attached |
| Mitesh Baxi | Traffic Engineering | Comments attached |
| Bill McDow | Transportation | Comments attached |

Planning (Pat O'Mahony)

Site Plan Comments:

- Show tree removal overlaid on site plan to justify removal of significant trees.
- Sec. 18-458: Ensure tree protection meets the standards of preserving the Critical Root Zone.
- Show pedestrian connection from sidewalk to building entrance.
- Show parking maximum at 150% of the minimum (44 spaces max) per Sec. 18-528(d).
- Show bicycle parking compliance on the site plan.
- If a progress energy easement or power line exists on site, please contact Bill Wilder @ 383- 4042.
- A tree preservation/removal permit is required
- All federal, state and local permits are required prior to full construction release. This includes, but is not limited to: state storm water, state utility extension permits, wetland disturbance permits, city storm water, tree protection permits, etc.

Landscape Plan to Include:

- Sec. 18-448(2): Shrubs not use for parking lot screening (min. 3' height), shall be shown as a minimum height of 12". Update plant schedule to reflect this requirement.
- Sec. 18-448(b): Provide calculations for tree preservation credits.
- Sec. 18-448(d): fifteen (15) trees per disturbed acre, two (2) inches DBH or greater, must be retained or planted on the disturbed portion of the site, including trees located in the street yard and bufferyard. Show compliance.
- Sec. 18-462 (d) (3): Show approximate locations, species and critical root zones of all protected trees.
- Sec. 18-462 (d) (4): Show note on plan stating that prior to any clearing, grading, or construction activity, tree protection fencing will be installed around protected trees or

groves of trees. And no construction workers, tools, materials or vehicles are permitted within the tree protection fencing.

Engineering has reviewed the plans for the Cape Fear Moto Group project submitted July 22, 2020 for TRC review and have the following comments:

Stormwater Management Permit Application Form

1. IV. Project Information; #8:
 - a. Subtract out the 1,900sf of decorative pervious pavers from the Impervious pavement and add it back under Pervious Pavement as 1,900/1,900 (listing it this way will show that pervious credit was not given). Impervious pavement will become 35,169sf.
 - b. The Total Onsite Newly Constructed Impervious Surface is incorrect. Should be 65,129sf.
2. IV. Project Information; #13: As in #8, subtract the pervious pavers (1,900) from the impervious pavement and add it under Pervious Pavement as 1,900/1,900.

Calculations

3. 10/50-year Pipe Calculations: Please provide HGL calculations that include a tailwater elevation. It would appear that the calculations do not account for the water surface elevation of the pond during the two design events.
4. The pond appears to be sized insufficiently. Stage-storage calculations should be calculated using elevation increments no greater than one foot to determine volumes of the main pool and forebay. Average depth, SA/DA ratio and forebay sizing, etc. calculations appear to need revising.
5. The pond outfalls into an existing pipe system. Please assign a tailwater elevation to the pond routing analysis. The outlet pipe is not in a free discharge scenario.
6. Based on the pond grading, there doesn't appear to be hardly any volume between sediment storage elevations and the forebay and main pond bottoms for any sediment storage.
7. Slight discrepancy regarding the orifice size. Pond calcs and outlet structure detail have it as a 1.25" diameter orifice, while the routing analysis and supplement have it as a 1.50" diameter. Please clarify.
8. Shouldn't Pond 4P have as a third device? The weir that is the top of the outlet structure at elevation 36.00?
9. An emergency spillway shall be provided such that it can handle the 50-year storm assuming the principle spillway is obstructed or not operating properly. The elevation of the dam shall be a minimum of 0.5 feet above the peak surface elevation for the 50-year storm. Please provide the 50-year analysis.
- 10.

Supplement

11. Wet Pond MDC from 02H .1053:
 - a. Revisions to this section may be needed based on my Calculations comments.
 - b. #29: Equation 3 must be used since the vegetated shelf is partially submerged.
 - c. #46: The vegetated shelf is only 6 feet wide.

Plans

12. C-2:
 - a. It is the intent that all vegetated slopes be designed such that the soils and slopes of the banks will support stable vegetation growth unless armored or designed in another approved manner. Side slopes where vegetation is used for stabilization shall be 3 (horizontal) to 1 (vertical) or flatter. The side slopes should be a minimum of 3 to 1 where mowing will be necessary. Where the side slopes are protected with riprap, fabric form, or other approved armoring, side slopes of 2 to 1 will be permitted. Steeper slopes

may be approved by the City Engineer on a case-by-case basis. The forebay berm slopes appear to be steeper than 2:1.

- b. An emergency outlet or overflow designed according to the following parameters:
 - 1. *Minimum of six (6) inches higher than the top of the outlet structure but in no case lower than the water surface elevation that restricts the discharge to the 25-year pre-development flow rate.*
 - 2. Sized to pass the 100-year storm event;
 - 3. It shall have appropriately designed stabilization material from the top of the spillway down to natural grade.
- Make sure all relevant parameters are met.
13. C-6: Omit CFPUA detail sheets.

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

Project Name: **Cape Fear Moto Group**

Formal TRC Date: August 27, 2020

Reviewer Name: Chris Walker

Reviewer Department/Division: FIRE

No Comments from FIRE

Project Name: CAPE FEAR MOTO GROUP
Formal TRC Date: 08.27.2020
Reviewer Name: Mitesh Baxi
Reviewer Department/Division: PDT/Traffic Engineering

GENERAL COMMENT FOR THE REQUESTOR OF OFFICIAL ACCEPTANCE FOR GARRIS RD:

Street lighting (City Street lighting policy):

- Street lights are required to be installed on Garris Rd prior to the acceptance of Garris Rd ROW for City maintenance.
- All the applicable construction charges and one-time underground charges, if applicable, must be paid in full to Duke Energy before the standard street lights can be transferred to City's account for future billing.
- All the street lights shall be installed within the public ROW.
- Street trees must be located a minimum of 15 feet from street lights. [CofW SD 15-17]
- Contact Traffic Engineering at (910) 341-7888 to discuss street lighting options.

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

Project Name: **CAPE FEAR MOTO GROUP**

TRC Date: **08.27.2020**

Reviewer Name: **BILL McDow**

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

TECHNICAL STANDARDS:

1. Please show the handicap ramp on the sidewalk located at the Southwest Corner of the building. This sidewalk is along the ADA Accessible route from the handicap parking spaces to the Southeastern portion of the building.
2. Please ensure the proposed bollards at the corners of the building do not block pedestrian access to the sidewalk and building. The bollard at the Southeastern part of the building appears to be in the marked area of the ADA Accessible route.
3. No Further Comments.