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June 8, 2016

Rynal Stephenson, PE
5805 Farringdon Place, Suite 100
Raleigh, NC 27609

RE: Approval of the Traffic Impact Analysis (TIA) associated with the proposed
Lea Tract Development
Pender County, NC

Dear Mr. Stephenson:

Based on the information provided, and conversations held to date, it is our understanding that the proposed development will consist of 130 single family homes and 264 apartments. This development is located west of Us 17 with frontage on Hoover Road and an access to US 17 via Arrow Wood Road in Pender County, North Carolina.

The site plan provided proposes access at the following points:

- US 17 and Arrow Wood Road
- Hoover Road and Neighborhood Access

Below please find the scope to be used for the Traffic Impact Analysis:

1. **Data Collection - Analysis Parameters:**
   a. Existing Conditions
      i. Turning movement counts weekday AM (6:30 AM – 8:30 AM) and PM (4:00 PM – 6:00 PM) peak periods, Signal Timing (if applicable) and Lane Geometry;
         - US 17 and Hoover Road
         - US 17 and Arrow Wood Road
         - Hoover Road and Neighborhood Access

ii. Signal plans may be acquired by sending an email request to NCDOT Traffic Services: Ross Kimbro, rkimbro@ncdot.gov or by calling (910) 341-0300

b. Site Trip Generation, Site Trip Distribution and Background Traffic Assumptions

i. Site Trip Generation Estimate

- See attached (provided by Ramey Kemp & Associates)

ii. Site Trip Distribution

- To be determined based on collected traffic count data. Trip distribution MUST be approved prior to use in the TIA.

iii. Adjacent Development (approved (but as of yet to be built)) development including but limited to;

- N/A

iv. Planned Roadway Improvements

- U-5732

v. Background Traffic Assumptions

- Horizon year – 2019
- Growth rate – 1% per year

vi. Other Information

2. **Capacity Analysis: Week day AM & PM Peak Hour (as listed and for locations per 1.a.i)**

a. Existing – 2016
b. 2019 Future No-Build Conditions
[existing +1% background growth]
c. 2019 Full Build Conditions
[existing +1% background growth + site trips]
d. 2019 Future No-Build Conditions (with TIP)
[existing +1% background growth]
e. 2019 Full Build Conditions (with TIP)
[existing +1% background growth + site trips]

3. **Final Report Submittal:**

a. Completed TIA Application

b. Signed and sealed by a Professional Engineer
c. Four bound copies
d. Four Electronic copies to include PDF of TIA and Synchro files and Synchro analysis files in digital format

4. **Notes:**

   i. TIA's shall be prepared according to NCDOT Congestion Management Guidelines. Any deviations from such shall be approved **prior** to preparation of the TIA.
   ii. This scope shall remain valid for three months from the date of this letter.
   iii. Please note that if any changes occur (including but not limited to; land use, intensity, phasing, and/or site access) additional analysis may be required.
   iv.

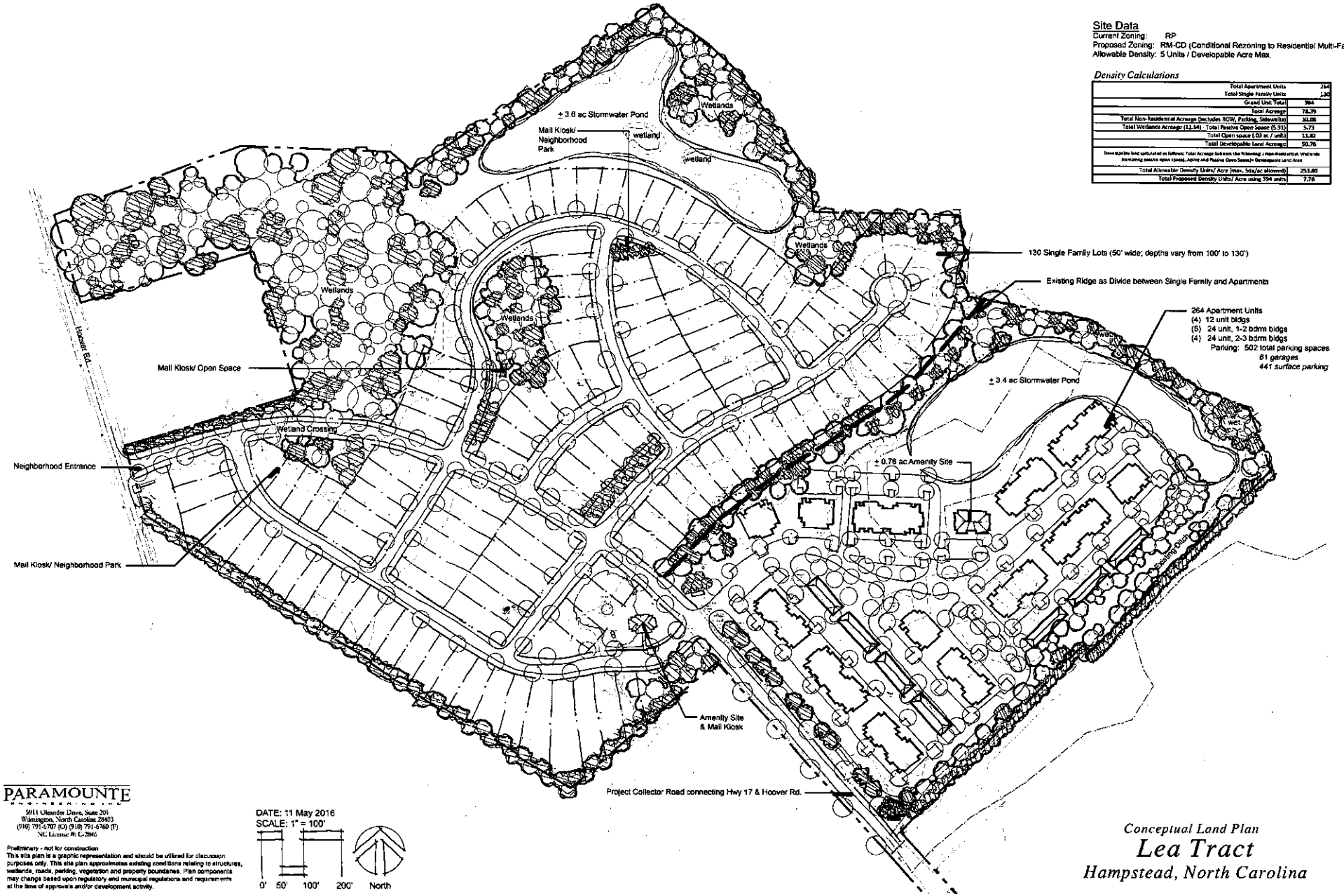
Please contact me at 910-473-5130 with any questions regarding this scope.

Sincerely,

Amy Kimes, PE
Project Manager
Wilmington Metropolitan Planning Organization

Attachments: Trip Generation Summary (provided by Ramey Kemp & Associates)
Site Map (provided by Ramey Kemp & Associates)

Cc: Robert Vause, PE, Division Maintenance Engineer, NCDOT
Allen Hancock, Assistant Traffic Engineer, NCDOT
Kyle Breuer, Planning Director, Pender County
Megan O'Hare, Senior Planner, Pender County
Bill McDow, Transportation Planner, WMPO
Mike Kozlosky, Executive Director, WMPO



Site Data

Current Zoning: RP
Proposed Zoning: RM-CD (Conditional Rezoning to Residential Multi-Family)
Allowable Density: 5 Units / Developable Acre Max.

Density Calculations

Total Apartment Units	264
Total Single Family Units	130
Grand Unit Total	394
Total Acreage	78.39
Total Non-Residential Acreage (includes ROW, Parking, Sidewalks)	10.08
Total Wetlands Acreage (11.54) - Total Passive Open Space (5.71)	5.73
Total Open space (.03 ac / unit)	11.82
Total Developable Land Acreage:	50.76
Developable land calculated as follows: Total Acreage Subtract the following: Non-Residential, Wetlands Increasing passive open spaces, Active and Passive Open Space to Determine Land Area	
Total Allowable Density Units/ Acre (max. 5du/ac allowed)	253.80
Total Proposed Density Units/ Acre using 394 units	7.76

PARAMOUNTE
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Preliminary - not for construction
This site plan is a graphic representation and should be utilized for discussion purposes only. This site plan approximates existing conditions relating to structures, wetlands, roads, parking, vegetation and property boundaries. Plan components may change based upon regulatory and municipal regulations and requirements at the time of approvals and/or development activity.

DATE: 11 May 2016
SCALE: 1" = 100'

0' 50' 100' 200' North

Conceptual Land Plan

Lea Tract

Hampstead, North Carolina

Summary of Multi-Use Trip Generation
Average Weekday Driveway Volumes (Unadjusted for Internal Trips)

Project:
Phase:

Open Date:
Analysis Date:

Description:

ITE: Land Use	24 Hour Two-Way Volume	AM Pk Hour Enter	AM Pk Hour Exit	PM Pk Hour Enter	PM Pk Hour Exit
210: Single Family Detached Housing 130 Dwelling Units [E]	1337	25	76	84	49
220: Apartments 264 Dwelling Units [E]	1723	27	106	106	57
Total Driveway Volume	3060	52	182	190	106
Total Peak Hour Pass-By Trips		0	0	0	0
Total Peak Hour Vol. Added to Adjacent Streets		52	182	190	106

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

TRIP GENERATION 2013, TRAFFICWARE, LLC