Transportation

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Governor

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Secretary

August 8, 2016

Bryan Fugundus, PE
ARK Consulting Group
3820 Charles Blvd., Suite B
Greenville, NC 27858

SUBJECT: TIA and site plan review for Egret Landing Shopping Center fronting NC58 in Emerald Isle

Dear Mr. Fugundus;

I am writing to advise that NCDOT has completed our review of the Traffic Impact Analysis (TIA) which was completed by SEPI Engineering for the subject site. Based on our review we have the following comments and recommendations.

Since the TIA was submitted the site plan has been revised and now consists of a 31,568 sq. ft. free standing grocery store located on the north side of Crew Drive with an outparcel in the southeast corner of Crew Drive and Emerald Landing Drive / Mallard Drive. Over half the parking provided for the grocery store is now on the same side of Crew Drive. The proposed use of the outparcel is a 3,600 sq. ft. retail sales building with possible drive thru window. There are two driveway connections from the grocery store onto Crew Drive with three driveway connections onto Crew Drive from the grocery store overflow parking lot. The western driveway connection from the grocery store is located about 110 ft. from Emerald Landing Drive. The layout of the overflow lot does not provide for internal circulation, causing users to have to exit onto Crew Drive to get to other area of lot. Driveway access into the Outparcel (Lot 2) is shown to be via a driveway onto Crew Drive near the eastern property line (about 120 ft. from Emerald Landing Drive). As part of Congestion Managements review of the TIA they analyzed the use of a roundabout for control of traffic at the NC58 (Emerald Drive) intersection with Mallard Drive and determined that installation of a roundabout would operate at an acceptable level of service.

Recommendations:

1. In as much as the Town has requested a TIP project to convert the existing signalized intersections on NC58 to roundabouts, based on our evaluation, we recommend that a roundabout be constructed at the Mallard Drive intersection with NC58 rather than installing a signal. The roundabout would be a single lane design with dual lane approaches for the east, west, and southbound approaches.

2. The cross-section on Mallard / Emerald Landing Drive may need to be revised to complement the roundabout.
3. The TIA indicates the intersection of Crew Drive with Mallard / Emerald Landing Drive was analyzed with Mallard and Emerald Landing having stop condition and Crew Drive as free flow. The site plan indicates an all way stop proposed at this location. The site plan also shows three northbound approach lanes on Mallard Drive that would have stop control, which would be difficult for motorists to manage. Based on this, we recommend that Mallard Dr. / Emerald Landing Dr. be given the free flow condition and that Crew Drive have a stop condition. An option may be to use a three way stop with traffic exiting Emerald Landing having stop control as well.

I have also reviewed a copy of the July 22, 2016 version of the revised site plan for this development and have the following comments.

1. It appears that Mallard Drive extends northward from NC58 to Crew Drive. Emerald Landing Drive is the section north of Crew Drive.
2. Suggest that the overflow parking lot be designed to provide for internal circulation. This could facilitate the removal of the middle driveway and utilize only two driveway connections to Crew Drive.
3. The proposed sidewalk along the east sided of Mallard Drive should be constructed at the same offset from the property line southward from the right turn lane and continue straight to connection to the NC58 sidewalk.
4. The proposed radius in the northeast corner of the Crew Drive intersection with Emerald Landing Drive should form a continuous radius and connect to the existing C&G on Emerald Landing Drive. A dual directional ADA WCR should be provided in this radius. The proposed ADA ramp in the southeast corner should also be dual direction, and the C&G in the southwest corner should be wiped down for future dual direction WCR. There appears to be a drop inlet in the southeast corner, how is this going to be handled?
5. Need to end the proposed 24 inch C&G along Mallard Drive at the NC58 R/W line.
6. Wheel chair ramps need to be provided at all locations where sidewalk crosses driveways.
7. Sidewalk is shown along the north side of the overflow parking lot. Suggest that the west end of the sidewalk be extended at least to the property line of outparcel preferably to Mallard Drive.
8. Two ramps are shown in the southwest corner of the grocery store at the western driveway connection to Crew Drive. Suggest that just one dual direction ADA WCR is constructed in the radius and that the proposed crosswalk across Crew Drive be shifted west to this location.

9. It would be desirable for there to be an internal cross connection between the outparcel and the overflow parking lot. A possible location would be along the southern end of these areas.
10. The cart corral on the east side of the eastern driveway into the overflow parking area extends close to Crew Drive. Suggest that the angle of the corral be reduced to be more parallel to the adjacent parking stall.
11. Crew Drive transitions from a 30 ft. B-B width on the west side of the truck dock to 45.5 ft. width at the eastern property line. Suggest that the width remain at 30 ft. and shift from south to north to better align with the service isle along the frontage of the adjacent shopping center. Also suggest that the sidewalk along the north side of Crew Drive in this area be extended eastward to tie into radius of adjacent property drive across from the sidewalk along the adjacent building frontage.

Should you have any questions or need additional information, please feel free to contact me.

Sincerely,

Steven J. Hamilton, PE, CPM
Division Traffic Engineer

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