From:	Edwards, Charles N
To:	Kumar Neppalli
Cc:	Mary Jane Nirdlinger; Lance Norris; David Bonk; Megan Wooley
Subject:	Re: Obey Creek Development along US 15-501 in Chapel Hill
Date:	Thursday, June 04, 2015 9:15:03 PM

Kumar,

Per your request. I have provided responses in parentheses adjacent to each item below. Feel free to contact me if you have any questions.

US-15-501 and Market Street/Proposed Obey Creek Access Intersection

* Construction of dual exclusive southbound left turn lanes, each with 300' of full storage and appropriate tapers on US 15-501.

Response: Obey Creek Applicant can accommodate this roadway stipulation, and would like to revisit and analyze the necessity of the second turn lane at the time of driveway permit application. (The stipulated dual southbound left turn lanes at this intersection is consistent with the recommendations included in the traffic analysis prepared by HNTB. NCDOT will be happy to review additional analysis regarding operational needs at this location.)

* Construction of a second exclusive eastbound left turn lane with 225' of full storage and appropriate tapers on existing Market Street

Response: We believe that the Obey Creek Applicant is not responsible for this roadway stipulation. Initial investigation revealed that the existing ROW is not enough to accommodate this stipulation and the Town requests that NCDOT consider removing this condition. Town will work with NCDOT to look other measures as the Park and Ride Lot development occurs. (Since no Obey Creek site traffic contributes to this left turn volume and the Obey Creek developer does not control the property for the right of way required for this improvement, NCDOT agrees to remove this stipulation and work with the Town to identify other measures at the time of development of the Park and Ride Lot property.)

* Provision of a minimum 250' protected internal stem length prohibiting parking and left turn maneuvers on existing Market Street and appropriate internal intersection configurations to avoid adverse impact to US 15-501.

Response: Town will work with NCDOT to implement this measure if feasible and as Park/Ride Lot development occurs. (NCDOT concurs)

* Closure or relocation of the proposed frontage street connection to beyond the limits of the protected internal stem length on existing Market Street.

Response: Town will work with NCDOT to implement this measure if feasible and as Park/Ride Lot development expansion occurs. (NCDOT concurs)

* Construction of an exclusive northbound right turn lane with 300' of full storage and appropriate deceleration taper on US 15-501.

Response: Obey Creek Applicant agreed to construct this roadway stipulation. (

Noted)

Construction of dual ingress lanes and three egress lanes consisting of an exclusive left turn lane, an exclusive through lane, and an exclusive right turn lane, each with 300' of full storage on the Obey Creek site access.
Response: Obey Creek Applicant agreed to construct this roadway stipulation with the exception of 300' of full storage on the Obey Creek site access. Obey Creek Developer and NCDOT agreed to review the internal storage requirement. (NCDOT agrees to review additional analysis provided by the Applicant)

* Provision of a minimum 300' protected internal driveway stem length prohibiting all turning and parking maneuvers on the Obey Creek site access and appropriate internal intersection configuration to avoid adverse impact to US 15-501.

Response: Obey Creek Developer and NCDOT agreed to review the internal storage requirement and protected stem design configurations.
(NCDOT agrees to consider configurations that are shown to operate safely with no potential negative impact to operation on US 15-501)

* Modification of existing traffic signal to accommodate the new intersection geometry with consideration of appropriate timing plans to maximize efficiency in both peak and off peak periods with preferential signal timing and progression provided to US 15-501.

Response: Obey Creek Applicant agreed to this stipulation. (Noted)

US 15-501 and Sumac Road/Obey Creek Access Intersection:

* Construct dual exclusive southbound left turn lanes, each with 375' of full storage and appropriate tapers on US 15-501

Response: Obey Creek Applicant can accommodate this roadway stipulation, and would like to revisit and analyze the necessity of the second turn lane at the time of driveway permit application. (The stipulated dual southbound left turn lanes at this intersection is consistent with the recommendations included in the traffic analysis prepared by HNTB. NCDOT will be happy to review additional analysis regarding operational needs at this location.)

* Construct an exclusive northbound left turn lane with 400' of full storage and appropriate tapers on US 15-501.

Response: Obey Creek Applicant agreed to construct this roadway stipulation. (Noted)

* Construct and exclusive northbound right turn lane with 300' of full storage and appropriate deceleration taper on US 15-501

Response: Obey Creek Applicant agreed to construct this roadway stipulation. (Noted)

Provide a single ingress lane and three egress lanes consisting of an exclusive left turn lane, an exclusive through lane, and an exclusive right turn lane, each with 250'

of full storage on existing Sumac Road.

Response: Town agreed to consider this stipulation and discuss with NCDOT as the Park and Ride Lot development expansion occurs. (NCDOT concurs)

* Provision of a minimum 250' protected internal driveway stem length prohibiting all turning and parking maneuvers on existing Sumac Road and appropriate internal intersection configuration to avoid adverse impact to US 15-501.

Response: Town and NCDOT agreed to review this stipulation as the Park and Ride Lot development expansion occurs. (NCDOT concurs)

* Closure or relocation of the proposed frontage street connection beyond the limits of the internal protected stem on existing Sumac Road.

Response: Town and NCDOT agreed to review this stipulation as the Park and Ride Lot development expansion occurs. (NCDOT concurs)

* Provide dual ingress lanes and three egress lanes consisting of an exclusive left turn lane, an exclusive through lane, and an exclusive right turn lane, each with 300' of full storage on the proposed Obey Creek Access.

Response: Obey Creek Applicant agreed to construct this roadway stipulation. Obey Creek Developer and NCDOT agreed to review the internal storage requirement. (NCDOT agrees to review additional analysis provided by the Applicant)

* Provision of a minimum of 300' of protected internal driveway stem length prohibiting all turning and parking maneuvers on the proposed Obey Creek Access.

Response: Obey Creek Developer and NCDOT agreed to review the internal storage requirement and protected stem design configurations.
(NCDOT agrees to consider configurations that are shown to operate safely with no potential negative impact to operation on US 15-501)

* Closure or relocation of the proposed frontage road connection beyond the limits of the internal protected stem.

Response: Obey Creek Applicant can accommodate this roadway stipulation, and would like to revisit and further analyze the design of the frontage road at the time of driveway permit application.
(NCDOT agrees to consider configurations that are shown to operate safely with no potential negative impact to operation on US 15-501)

* Construct new traffic signal to accomodate the new intersection geometry with consideration of appropriate timing plans to maximize efficiency in both peak and off-peak periods with preferential signal timing and progression provided to US 15-501.

Response: Obey Creek Applicant agreed to this stipulation. (Noted)

Dedication/Reservation by the Applicant:

The Department's consultant, Stantec, has recently completed a corridor traffic analysis repo1i for US 15-501 from NC 54 to US 64. The purpose of the study was to evaluate the existing (2013) and future year (2040) operations in regards to the corridor's ability to accomodate anticipated future growth. The study evaluated both "superstreet" and improved traditional intersections. The study identified that, in the 2040 scenario, "superstreets" provided the best operation for both the main-line as well as side streets, but also indicated that main-line operation in the subject area could be expected to operate acceptably using traditional intersections with the addition of a third through lane on US 15-501 in both directions. In order to accommodate the identified improvements directly attributable to site traffic impacts and to provide for the anticipated future improvement necessary for acceptable operation in the long range planning period, the applicant shall:

* Dedicate any needed right of way to accommodate required road improvements listed above and also adjust site plan to reserve sufficient right of way along the project frontages to accommodate a future third through lane on both directions of US 15-501.

Response: Obey Creek Applicant agreed to reserve sufficient width along its property frontage to accommodate an additional future through lane. NCDOT has acknowledged that the requirement for dedicated right turn lanes into the Obey Creek would not be required if the additional through lanes are added in the future. The Town and/or other developer will work with NCDOT to reserve/dedicate the ROW required on west side of US 15-501 as future development occurs. (In an effort to preserve options to accomodate anticipated future cooridor needs while limiting impacts to adjacent developed property, NCDOT has required right of way reservation sufficient to accomodate a third lane.
Requirements for auxiliary right turn lanes will be evaluated relative to future conditions at the time of future project implementation.)

Alternative Improvements NC 86 (Columbia Street)/NC 54 (Fordham Blvd.) Interchange:
Upon further evaluation by the development team members, construction of the westbound loop ramp as recommended in the HNTB traffic analysis has been determined to be beyond the ability of the applicant due to identified substantial potential impacts to adjacent properties and right of way needs beyond his control. As such the loop project is best pursued through the State Transportation Improvement Program (STIP) process. Based on information provided in the HNTB traffic analysis, the development team me1nbers have identified extension of turn lane storage on the existing westbound off ramp as a feasible and reasonable alternative to address identified traffic queuing and operation issues in the short term.

* As a condition of the pending driveway permit, the applicant shall extend the existing dual left turn lane storage along the full extent of the existing westbound off ramp to accommodate queue lengths identified in the 2022 build scenario of the traffic study.

Response: The Town will extend the existing pavement markings to extend the queue length of the left turn lanes as feasible within the existing pavement. The Town staff will coordinate this work with NCDOT and we would like to complete this work in July, 2015. The draft TIP 2016-2025 included several improvements to the westbound ramp (U-5304-D/E) and the improvements are scheduled to be

constructed in 2023. The Town and NCDOT will work at the June 16th project scoping meeting to finalize further details on this TIP project. (Ultimate interchange improvements are best accomplished via the STIP process. NCDOT will work with Town staff to pursue adjusting the scope and timing of project U-5304 as indicated above. The short term modifications proposed by Town staff will provide minor improvements to queue storage on the ramp and substantively address the incremental impact of the Obey Creek development.)

Previous Requirements and Conditions:
All other requirements and conditions included in my previous correspondence dated September 26, 2014 and listed below for ease of reference remain unchanged and applicable.
Proposed US-15-501 and Site Access #1 Intersection:
NCDOT concurs with the study recommendations to eliminate this access due to proximity to the Dogwood Acres Drive signalized intersection.
Response: Obey Creek Applicant agreed to this stipulation. (Noted)

Proposed US-15-501 and Site Access #2 Intersection:
NCDOT is agreeable to connection of the proposed restricted right-in/right-out access subject to:

* Construction of an exclusive northbound right turn lane with 150' of full storage and appropriate deceleration taper on US 15-501.

Response: Obey Creek Applicant agreed to this stipulation. (Noted)

* Construction of a single ingress lane and a single right turn-only egress lane with a minimum of 100' of full storage on the site access.

Response: Obey Creek Applicant agreed to this stipulation. (Noted)

* Provision of a minimum of 150' of protected internal driveway stem length prohibiting all turning and parking maneuvers on the site access.

Response: Obey Creek Applicant can accommodate this stipulation, and would like to revisit and further analyze the design of the frontage road at the time of driveway permit application.
(NCDOT agrees to consider configurations that are shown to operate safely with no potential negative impact to operation on US 15-501)

* Closure or relocation of the proposed frontage road connection beyond the limits of the internal protected stem.
* Response: Obey Creek Applicant can accommodate this stipulation, and would like to revisit and further analyze the design of the stem length at the time of driveway permit application.
(NCDOT agrees to consider configurations that are shown to operate safely with no potential negative impact to operation on US 15-501)

Proposed US 15-501 and Site Access #5 Intersection:
NCDOT is agreeable to the proposed connection subject to:

* Construction of an exclusive northbound right turn lane with 150' of full storage and appropriate deceleration taper on US 15-501.

Response: Obey Creek Applicant agreed to this stipulation. (Noted)

* Construction of a single ingress lane and a single right turn-only egress lane with minimum of 1OO' full storage on the site access.

Response: Obey Creek Applicant agreed to this stipulation. (Noted)

* Provision of a minimum 100' protected internal driveway stem length prohibiting all turning and parking maneuvers on the site access.

Response: Obey Creek Applicant can accommodate this stipulation, and would like to revisit and further analyze the design of the stem length at the time of driveway permit application.
(NCDOT agrees to consider configurations that are shown to operate safely with no potential negative impact to operation on US 15-501)

US 15-501 and Culbreth Road/Mt. Carmel Church Road Intersection:

In consideration of existing geometric and right of way constraints at this location, NCDOT concurs with the TIA recommendation to reconfigure the westbound Mount Carmel Church Road approach to provide dual exclusive right turn lanes and a combination through/left turn lane and optimize signal timing as a feasible approach to enhance existing operation and mitigate anticipated impacts of site traffic at this intersection.

As a condition of the pending driveway permit, the applicant shall reconfigure the intersection geometry as recommended and modify and optimize existing signal as needed to accommodate the new configuration.

Response: Obey Creek Applicant agreed to this stipulation. (Noted)

C. N. Edwards Jr.,PE
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P. O. Box 766
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On Jun 3, 2015, at 3:53 PM, "Kumar Neppalli" <kneppalli@townofchapelhill.org> wrote:

Dear Chuck,

Thank you for meeting with me, other staff members and the developer

on May 29th. At the meeting, we discussed NCDOT's recommended roadway stipulations along US 15-501 that were included in the attached letter dated May 25th. Town staff agreed during the meeting to provide a written response to each of the roadway stipulations required by NCDOT. I have attached our response for your review and reply prior to the next related Public Hearing on Obey Creek Development Agreement. I would like to share your response with Town Council prior to the Public Hearing the evening of June 8th.

Thanks and please let me know if you need additional information.

Sincerely,

Kumar

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Kumar Neppalli
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<NCDOT Letter-Obey Creek.pdf>

<Response to NCDOT Obey Creek Letter dated May 25 - 2015.pdf>

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