



Interagency Project Meeting

FINAL MEETING SUMMARY

Date: March 16, 2016
1:00 p.m. – 2:30 p.m.
H. W. Lochner Inc. – Conference Room

Project: STIP R-2721, R-2828, and R-2929 – Complete 540 - Triangle Expressway Southeast Extension

Attendees:

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|------------------------------------|-----------------------------------|
| Donnie Brew, FHWA | Tony Houser, NCDOT Roadway Design |
| Eric Alsmeyer, USACE | Keith Hanson, Contractor to NMFS |
| Cynthia Van Der Wiele, Phd., USEPA | Kiersten Bass, HNTB |
| Rob Ridings, NCDWR | Jennifer Harris, HNTB |
| Chris Lukasina, CAMPO | Roy Bruce, Lochner |
| Brian Yamamoto, NCDOT PDEA | Brian Eason, Lochner |
| Nora McCann, NCDOT PDEA | Doug Wheatley, Lochner |
| Rob Hanson, NCDOT PDEA | |

Meeting Materials: Agenda, Presentation, Public Hearing Maps, and Functional Preliminary Plans

Purpose: Interagency informational meeting on the development of functional preliminary plans for the 17 Detailed Study Alternatives (DSA) for the project

General Discussion: The following information was discussed at the meeting:

- **Introductions and Overview/Purpose of the Meeting:** Donnie Brew welcomed all and thanked everyone for their attendance at the meeting. He reviewed the purpose of the meeting and led introduction of participants.
- **Presentation:** Roy Bruce gave a presentation that showed the progression of design from concept through functional preliminary plans for the 17 DSAs and how impact avoidance and minimization was a focus at each step of the process. The following items were discussed during and following the presentation:
 - All design was done to the same level of detail and following the same process for each of the 10 color-coded corridor segments that are then combined to form the 17 DSAs.
 - Multiple interchange designs were evaluated at each of the proposed interchange locations.
 - The selected interchange type at each of the interchange locations meets the operational requirements for the project and minimizes impacts to human and natural resources to the extent practical.
 - The design effort on this project was consistent with or exceeded other similar large-scale new location highway projects for NCDOT.
- **Example Locations and Corridor Reviews:** Brian Eason reviewed several locations along various color-coded corridor segments where impacts had been minimized during the design process through alignment shifts (within the 1,000 foot corridor), or bridging. Additionally, the functional preliminary designs in several of the color-coded corridor segments were reviewed. The following items were discussed during the corridor reviews:
 - Development of the next level of design (preliminary plans) will be done for the Preferred Alternative only. At this time, NCDOT has indicated their preference for DSA 2 (Orange-Green-Mint-Green).
 - The Section 6002 Coordination Plan has a provision for additional agency participation during development of the preliminary plans at a minimization meeting for the Preferred Alternative (a

Concurrence Point 4A type meeting in the Merger Process). This meeting will take place before additional design public meetings or hearings are held on the project.

- During the conceptual and functional design phases, each of the interchanges are typically represented as standard diamond interchanges with provisions for future loop ramps. These interchanges are reconsidered during preliminary design for functionality and minimization of impacts. For the Complete 540 project, most of the interchanges have already been reviewed and minimization has been incorporated into the current designs. This does not preclude discussion of further minimization during preliminary design for the preferred alternative.
- Shifting an alignment in a corridor was not a simple matter because avoidance or minimization of specific resources at one location added or increased impacts to resources at another location. There are many tradeoffs in impacts to the human and natural environment in locating a highway such as 540 in an urbanizing area.
- **Coordination with the City of Raleigh:** FHWA let the agencies know that there has recently been some coordination between the City of Raleigh, NCDOT, FHWA, and USACE relative to various infrastructure elements owned by Raleigh along the various color-coded corridors.
- **Meeting Conclusion:** FHWA asked the agencies present if they have, or are aware of, any Issues of Concern. None were noted.

Previous Action Items (from February 17, 2016 IAM):

- Agencies will submit written comments, identifying any Issues of Concern and noting any items about the Draft Preferred Alternative Report, by March 18. Agencies not planning to submit written comments should notify Kiersten Bass by email at kbass@hntb.com. *(as of March 18, 2016 no Issues of Concern regarding the recommendation of DSA 2 as the Preferred Alternative have been raised)*
- Agencies will notify USACE about any Issues of Concern as soon as possible and prior to submitting written comments to NCDOT. *(as of March 18, 2016 no Issues of Concern regarding the recommendation of DSA 2 as the Preferred Alternative have been raised)*

New Action Items:

- NCDOT and FHWA will review the comments on the draft Preferred Alternative Report and determine if there is need for an additional agency coordination meeting.
- NCDOT will address comments on the Draft Preferred Alternative Report either in the Final Preferred Alternative Report of Final EIS, as appropriate.

Next Steps:

- Announce selection of the Preferred Alternative – Spring 2016
- Finalize Preferred Alternative Report – Spring 2016
- Final Environmental Impact Statement – To be determined
- Record of Decision – To be determined

USEPA Comments Received Post Meeting:

Following the conclusion of the meeting, USEPA provided comments relative to the functional preliminary designs to FHWA. The comments were marked on a set of the Public Hearing Maps that had been provided by the study team to USEPA on 3/3/16. There were no comments on Sheets 3, 6B, 7A, 7B, 7E, 8, and the Key Map. The following are the comments received and responses.

Sheet 1

Comment: Orange Corridor between NC 55 Bypass and Sunset Lake Road - Avoidance here was “avoid subdivision and go on top of stream/wetland system” . . . Alignment does not appear to be “best fit”; looks like dead center.

Response: The existing alignment for the already constructed portion of the Triangle Expressway at NC 55 Bypass sets the beginning alignment for the project. The subdivisions Sunset Hills, Miramonte, and Fair Oaks were constructed immediately adjacent to the Protected Corridor. Avoidance of the stream and

wetlands in this area is not possible. Moving the alignment towards and into Sunset Hills will not likely reduce stream impacts as the stream impacts avoided near Miramonte will be replaced with additional stream impacts east of Sunset Hills. Similarly, moving the alignment towards and into Fair Oaks is a tradeoff of stream impacts. The situation for wetlands is similar. This crossing of Middle Creek (site 1) was discussed at the project Interagency Bridging Meeting on 11/13/14 and was also discussed during the agency field review on 12/3/14. The conclusion at those meetings was to bridge the main channel of Middle Creek with roughly 90 foot long bridges. Hydraulically this crossing requires a triple 11'x11' box culvert. This area is common to all 17 DSAs and can be reviewed further for additional minimization in the future.

Comment: Orange Corridor at the Holly Springs Road interchange – Why is all this needed for a high speed thru route?

Response: Kildaire Farm Road and Holly Springs Road both carry a relatively high amount of traffic as two-lane roads. The intersection that joins these two roads will be relocated in conjunction with the Complete 540 project. Each of these roads is planned for widening in the future as growth continues in the area. In order to accommodate the traffic volumes and movements associated with the Complete 540 project, improvements are needed along both Kildaire Farm Road and Holly Springs Road.

Comment: Orange Corridor at the Bells Lake Road interchange – Why massive interchange on a little secondary road?

Response: The Bells Lake Road interchange is included in the Capital Area Metropolitan Planning Organization's Metropolitan Transportation Plan for the region. This interchange is to provide access to the residences and businesses in this portion of the study area. The next interchange to the west is at Holly Springs Road about two miles away and the next interchange to the east is at Fayetteville Road also about two miles away. The size of the proposed interchange is smaller than a typical diamond interchange at a secondary road since all movements have been consolidated into two interchange quadrants. This consolidation was done to minimize impacts to streams, ponds, and wetlands.

Sheet 2

Comment: Orange Corridor and Red Corridor at the Fayetteville Road (US 401) interchange – Any other type of interchange design that'll work or has a smaller footprint?

Response: Several interchange configurations were developed and reviewed at these two locations. None of the other interchange configurations were smaller than the ones shown and met the operational needs for the interchange and this heavily traveled US highway with multiple access points to adjacent properties.

Comment: Red Corridor at the extension of Caddy Road – What is this all about?

Response: The existing intersection of Caddy Road and Fayetteville Road (US 401) would be in the interchange area and therefore must be relocated. This new connection could have been along the outside of the fill of the ramp in the southeast quadrant of this interchange and tie to an existing development access road away from the interchange. Alternatively, a new connection could be created by extending Caddy Road to Ten Ten Road east of Fayetteville Road. If the Red Corridor is part of the DSA selected as the Preferred Alternative, this property access road matter can be further addressed.

Comment: Red Corridor at Swift Creek crossing – How about bridging from wetland edge to wetland edge?

Response: This crossing of Swift Creek (site 34) was discussed at the project Interagency Bridging Meeting on 11/13/14 and was also discussed during the agency field review on 12/3/14. The conclusion at those meetings was to bridge Swift Creek with the size of bridge that is needed hydraulically. If the Red Corridor is part of the DSA selected as the Preferred Alternative, this bridge length can be reviewed further for additional minimization in the future.

Comment: Orange Corridor at Old Stage Road interchange – Why do you need a massive interchange for Old Stage Road? You're not going highway to highway.

Response: The proposed interchange is a diamond configuration that allows for future loops in both the northeast and southwest quadrants. This interchange type is the standard interchange form utilized by NCDOT for a “service” interchange. A “system” interchange that would allow for access from high speed highway to highway would be a different configuration and be a larger footprint. If the Orange Corridor is part of the DSA selected as the Preferred Alternative, this design can be discussed further relative to minimization of impacts.

Sheet 4

Comment: Red Corridor at Reedy Creek crossing – Doesn’t look like best fit.

Response: Shifting the alignment to the north at Reedy Creek in the Red Corridor (site 38) would potentially reduce stream and wetland impacts at this location. The tradeoff would be substantially greater residential relocations in the Heather Ridge and Heather Hills subdivisions. Additionally, shifting the alignment to the north would also impact Timber Drive Elementary School and possibly conflict with existing Timber Drive.

Comment: Red Corridor at I-40 – Two massive interchanges this close together?

Response: The proximity of the existing US 70 and I-40 interchange to the proposed 540 and I-40 interchange is not ideal and requires the inclusion of collector distributor ramps along I-40 in order to allow the two interchanges to function together. These collector distributor ramps are included in the functional preliminary plans as part of the interchange complex.

Comment: Red Corridor at I-40 – Bridge the system from wetland edge to wetland edge.

Response: It is not clear from the comment what stream crossing is being referenced (possible sites 42, 43, or 44). However, if the Red Corridor is part of the DSA selected as the Preferred Alternative, this wetland crossing can be reviewed further for additional minimization in the future.

Sheet 5A

Comment: Orange Corridor at Juniper Branch – I’m seeing a design that is dead center rather than best fit. No bridging from wetland edge to wetland edge.

Response: The subdivisions of Crest of Carolina and Tavernier were developed up to the Protected Corridor in this location. The alignment in the center of the corridor at this location may be the best fit. Shifting to the south in the corridor would result in a similar stream impact and more wetland impacts. Plus this would likely result in an alignment that is closer to the Panther Branch School, which is listed on the National Register of Historic Places. Shifting to the north in the corridor would increase stream impacts and possibly somewhat reduce wetland impacts. This shift would impact the homes for a half mile along Contender Drive in Crest of Carolina. The bridging that is shown at Juniper Branch is as was discussed at the project Interagency Bridging Meeting on 11/13/14. If the Orange Corridor is part of the DSA selected as the Preferred Alternative, this bridging can be discussed further relative to minimization of impacts.

Comment: Orange Corridor at Benson Road (NC 50) interchange – Any other interchange design options?

Response: Several interchange configurations were reviewed at this location. The interchange that is included is a standard diamond interchange with the movements from the northern quadrant included in the western quadrant. This design was selected to minimize impacts on streams. Changing to a more urban interchange would increase stream impacts.

Comment: Orange Corridor at a tributary to Swift Creek – How about bridging the system?

Response: This crossing (site 21) was discussed at the project Interagency Bridging Meeting on 11/13/14 and was also discussed during the agency field review on 12/3/14. The conclusion at those meetings was to bridge the wetlands associated with this system at this skewed crossing. If the Orange Corridor is part of the DSA selected as the Preferred Alternative, this bridging can be discussed further relative to minimization of impacts.

Sheet 5B

Comment: Orange Corridor – No preliminary design here . . .

Response: Sheet 5B intentionally only shows the preliminary design for the Blue Corridor. Sheet 5A shows the design for the Orange and the Lilac Corridors. This was done in this manner to facilitate easier viewing of the corridors in this section of the project because of overlapping adjacent designs at the Benson Road interchange location.

Sheet 6A Inset O-G

Comment: Orange Corridor – Interchange design. Spanning structures.

Response: The exact meaning of this comment is unclear. Several interchange configurations were reviewed at this location where I-40, the Clayton Bypass, and 540 come together. This is a complicated system to system interchange. Additionally, entrance ramps to 540 were separated from other ramps because of 540 operating as a toll facility. At a tributary to Swift Creek west of I-40 (site 24) two ramps have bridges and the mainline and other ramps have a culvert. This crossing was discussed at the project Interagency Bridging Meeting on 11/13/14 and was also discussed during the agency field review on 12/3/14. The conclusion at those meetings is what is shown in the current plans.

Sheets 7C & 7D (duplicate comment & related response)

Comment: Red Corridor at Rock Quarry Road interchange – Big diamond for secondary road?

Response: The size of the proposed interchange is typical for a diamond interchange. This interchange form is the standard interchange form utilized by NCDOT. If the Red Corridor is part of the DSA selected as the Preferred Alternative, this design can be discussed further relative to minimization of impacts. Because there is no interchange provided on the Red Corridor at US 70 Business, the Rock Quarry Road interchange serves the US 70 Business traffic. To better accommodate this traffic, Rock Quarry Road is improved and extended to US 70 Business as part of this interchange. No interchange is provided on the Red Corridor at US 70 Business because of the close proximity to the existing interchange along US 70 Business at Greenfield Parkway, to the intersection of Auburn-Knightdale Road and Raynor Road with US 70 Business, and to the I-40 interchange along the Red Corridor.