### **APPENDIX F**

CONCURRENCE POINTS AND RECORDS OF MEETINGS SINCE PUBLICATION OF THE 2015 DEIS

# APPENDIX F1 MERGER MEETINGS AND CONCURRENCE POINTS

Date	Meeting Type	Attendees	Location	Purpose
05/18/2016	Merger Team Meeting	AECOM: Andrew Bell, Neil Dean, Celia Foushee, Joanna Rocco, Elizabeth Wargo, Chris Werner City of Asheville: Cathy Ball FBRMPO: Lyubov Zuyeva FHWA: Mitch Batuzich, Felix Davila, Clarence Coleman HNTB: Jennifer Harris NCDENR: Kevin Barnett NCDNCR: Renee Gledhill-Earley NCDOT: Rick Tipton, Kristina Solberg, Zahid Baloch, Michael Wray, Derrick Weaver, Kirby Pendergraft, Bill Zerman, Steve Kendall, Carla Dagnino, Jeff Hemphill, Drew Joyner, James Dunlop, Brendan Merithew, Mark Staley, Tim Sherrill, Doug Calhoun, Herman Huang NCWRC: Marla Chambers USACE: Lori Beckwith, Monte Matthews, Tracey Wheeler USEPA: Cynthia Van Der Wiele USFWS:Marella Buncick	NCDOT Structure Design Conference Room C	To discuss comments received on the 2015 DEIS and obtain concurrence on a least environmental damaging practicable alternative (LEDPA).
07/18/2018	Merger Team Meeting	AECOM: Neil Dean, Claudia Lee, Celia Miars, Joanna Rocco, Eric Spalding CALYX: Heather Wallace FHWA: Michael Dawson NCDENR: Kevin Barnett NCDOT: Derrick Weaver, John Jamison, Jennifer Martin, Steve Cannon, Cameron Cochran, Randy McKinney, Brendan Merithew, Marissa Cox, Kathy Herring, Chris Manley, Melissa Miller, Mike Sanderson, Carla Dagnino, Shane Clark, Jody Kuhne, Jeff Hemphill, Matt Lauffer, Brain Lipscomb, Danile Sellers USACE: Lori Beckwith, Monte Matthews USFWS:Marella Buncick	NCDOT Structure Design Conference Room C	To achieve concurrence on CP 4A – Avoidance and Minimization.

#### **MEETING SUMMARY**



To: Meeting Attendees

**Project File** 

From: Celia Foushee

**AECOM** 

Date: June 15, 2016

RE: Section 404/NEPA Merger Process – Concurrence Meeting: CP 3

**NCDOT STIP Project I-2513 (I-26 Connector)** 

#### Meeting Attendees:

Mitch Batuzich, FHWA Bill Zerman, NCDOT – Hydraulics

Felix Davila, FHWA Steve Kendall, NCDOT – Roadway Design

Clarence Coleman, FHWA

Lori Beckwith, USACE

Monte Matthews, USACE

Carla Dagnino, NCDOT - NES

Jeff Hemphill, NCDOT - NES

Drew Joyner, NCDOT - HES

Tracey Wheeler, USACE James Dunlop, NCDOT – Congestion Management

Marella Buncick, USFWS\*

Brendan Merithew, NCDOT – TPB

Marla Chambers, NCWRC Mark Staley, NCDOT – Roadside Environmental Unit

Cynthia Van Der Wiele, USEPA Tim Sherrill, NCDOT – SMU Lyubov Zuyeva, French Broad River MPO Doug Calhoun, NCDOT – SMU

Renee Gledhill-Earley, NCDNCR – SHPO\* Herman Huang, NCDOT – Community Studies

Kevin Barnett, NCDENR – DWS\*

Cathy Ball, City of Asheville

Rick Tipton, NCDOT – Division 13

Kristina Solberg, NCDOT – Division 13\*

Zahid Baloch, NCDOT - PDEA

Michael Wray, NCDOT - PDEA

Jennifer Harris, HNTB

Andrew Bell, AECOM

Neil Dean, AECOM

Celia Foushee, AECOM

Joanna Rocco, AECOM

Elizabeth Wargo, AECOM

Derrick Weaver, NCDOT – Program Management Chris Werner, AECOM

Kirby Pendergraft, NCDOT – Hydraulics

\*Joined meeting via telephone

A meeting was held at 3:15 PM on Wednesday, May 18, 2016 in the Structures Design Conference Room at the North Carolina Department of Transportation (NCDOT) Century Center. The purpose of this meeting was to present project information to the Merger Team in order to obtain Concurrent Point (CP) 3 (Least Environmentally Damaging Practicable Alternative (LEDPA)/Preferred Alternative). Attendees of the meeting are shown above. A merger packet was distributed to meeting attendees.

Derrick Weaver began the meeting by stating the meeting's purpose and initiating introductions. Chris Werner gave a presentation on the following:

- A brief overview of the project study area and the alternatives;
- A statistical overview of comments received on the 2015 Draft Environmental Impact Statement (DEIS) and comments from the November 2015 Corridor Public Hearing;
- A comparison of the alternatives and the associated impacts, including qualitative and quantitative impacts for each section. Qualitative comparisons included changes in access, weaving patterns, traffic patterns, bicycle and pedestrian accommodations, ramp types, etc. Quantitative comparisons included stream impacts, wetland impacts, number of traffic signals, number of bridge crossings, etc.; and,
- Items addressed as a follow up to CP2A Revisited, which included:
  - Evaluating the feasibility to include bridging over Smith Mill Creek as opposed to culverts, as requested by the Merger Team, even though the water in this stream is of low quality due to high levels of runoff. The long culverts proposed in Alternatives 3 and 3-C were not desirable, but were acceptable. As a result of the evaluation, it was determined a combination of bridging and retaining walls could be utilized to eliminate approximately 600 linear feet of impacts to Smith Mill Creek, estimated to cost approximately \$3.35 million.
  - o Evaluating the feasibility to shift ramp alignments in the northwest quadrant of Alternatives A-2 and D-1 to eliminate bridge piers being located within Upper Hominy Creek. NCDOT investigated the potential to realign this ramp for these alternatives in order to shift the bridge outside of the stream limits. NCDOT has since incorporated this request into the current designs and removed the bridge piers from Upper Hominy Creek; all of which were reflected within the 2015 DEIS.

Discussion points from the meeting are summarized below:

- Discussions during the presentation:
  - It was questioned if the adverse effect (visual impact only) resulting from Alternative 4-B to the Montford Area Historic District (which includes the Riverside Cemetery) could be mitigated. The response stated if this alternative is selected, the project team will coordinate with the State Historic Preservation Office (SHPO) and the property owner to determine the appropriate mitigation. It was further questioned what the approximate impacts would be on the historic district and the Riverside Cemetery. The response stated the visual impact is associated with the multiple flyover ramps being stacked above the existing roadway, which would be similar to the height of a five-story building (approximated from current designs); whereas the height for Alternative 4 would be similar to a two to three-story building (approximated from current designs).
  - o It was questioned whether the lack of direct access to Haywood Road associated with Alternatives 3 and 3-C was a fatal flaw issue. The response stated that access would still be available, is projected to operate acceptably from a traffic perspective, and can be signed adequately for motorists to make the appropriate movement in order to access Haywood Road from I-26EB.

- It was questioned if all alternatives in Section B would result with Patton Avenue being reverted to more of a boulevard type facility, allowing opportunity for more pedestrian and bicycle accommodations. The response stated that Alternatives 3 and 3C would result with I-240 traffic remaining on the Captain Jeff Bowen Bridges; whereas Alternatives 4 and 4B would remove both I-26 and I-240 traffic from the Captain Jeff Bowen Bridges.
- Discussions after the presentation, regarding selection of the LEDPA:
  - O Discussion was initiated by the USACE stating preference for LEDPA in Section C is Alternative F-1, in Section A is the Widening Alternative, and Section B is Alternative 4B. It was noted that Alternatives 4 and 4B solve more of the transportation and access issues. Upon review of the impacts, while Alternative 4B has higher stream impacts and increase in impervious surface, the floodplain impacts are lower. In the future erosion control strategies will be used to mitigate for the increase in impervious surface impacts. It was also noted that while stream impacts are higher for Alternative 4B, the highest impacts occur to UT 1B to Smith Mill Creek, which has a relatively low quality score and is not considered a high quality mountain stream.
  - o Input from the French Broad River MPO (FBRMPO) resulted in agreement in selecting Section C Alternative F-1, Section A Widening Alternative, and Section B Alternative 4B as the LEDPA. It was questioned how the properties under the flyover bridges may be utilized in the future. NCDOT stated there cannot be any private or public buildings under the structures because this will be NCDOT right-of-way; however, the NCDOT and the City of Asheville can enter into an agreement to use the land as a greenspace.
  - Input from the City of Asheville resulted in agreement in selecting Section C Alternative F-1, Section A Widening Alternative, and either Section B Alternative 4 or 4B as the LEDPA.
  - It was questioned as to whether a study has been completed to determine the types of impacts that may occur during the construction phasing. The response stated that a Construction Effects Memorandum was prepared, which developed conceptual construction phasing concepts appropriate for this level of design, which was summarized within the 2015 DEIS. At this point, construction impacts are anticipated to be within the proposed right of way. Additionally, detailed evaluation of construction phasing concepts will be further developed as more detailed designs are prepared for the LEDPA.
  - Upon review of the remaining Merger Team Members perspectives, all were in agreement that the LEDPA in Section C is Alternative F-1, in Section A is the Widening Alternative, and Section B is Alternative 4B. Remaining input was needed from the NC Department of Cultural Resources (NCDNCR). NCDNCR agreed with Section C Alternative F-1 and Section A Widening Alternative; however, was concerned with the visual impacts associated with Section B Alternative 4B. NCDNCR agreed to select Alternative 4B as the LEDPA for Section B on the condition that FHWA and NCDOT will provide mitigation where feasible and coordinate regarding aesthetics to be incorporated. FHWA and NCDOT agreed. NCDOT also noted the project team will be coordinating with an Aesthetic

Advisory Committee, which had previously been established for the project, to determine mitigation opportunities.

 Prior to obtaining concurrence, the USACE requested the following statement be included on the concurrence form noting that the typical sections will be reevaluated:

Note: Following selection of the LEDPA, design details such as reevaluation of the project typical sections (number of lanes) and additional avoidance and minimization efforts will be considered and implemented into the refinement of preliminary designs for the LEDPA based on a new traffic forecast (which will be developed from current FBRMPO Model). Should the impacts increase from those presented within the 2015 DEIS, the Merger Team will be informed and will determine if CP3 needs to be revisited.

- o Following revisions to the concurrence form, it was agreed by all Merger Team Members that the LEDPA for I-2513 I-26 Connector for each section is as follows:
  - Section C: Alternative F-1
  - Section A: Widening Alternative
  - Section B: Alternative 4-B

#### Action Items:

• NCDOT PDEA will coordinate to obtain signatures not received at the meeting. *Update: All signatures have been received on the CP 3 form (see attached).* 

#### MERGER PROJECT TEAM MEETING AGREEMENT

MENGER	INOSEC	I I EANY IVIEW	ING AURE	ENTERL	
Concurrence Point No. 3 -	Least Envi	ronmentally Da	maging Prac	ticable Alternative	
(LEDPA)					
Project Name/Description:		I-26	Connector		
TIP Project No.:		I-251	3		
State Project No.:		VI 25 II 10 III 1	43701		
Federal-Aid Project No.:		MAN	IHF 26-1 (53		
Concurrence					
The Project Team has conci the following alternatives in Practicable Alternative (LE	combinat	ion as the Least	Environme	h the selection of ntally Damaging	
Section C	Section	A	Secti	on B	
☐ Alternative A2	₩ Wide	n Existing	□ A	ternative 3	
☐ Alternative C2	□ No-B	uild	□ Al	ternative 3-C	
☐ Alternative D1				ternative 4	
M Alternative F1			M AI	ternative 4-B	
□ No-Build			□ No	-Build	
Note: Following selection of the Li (number of lanes) and additional a he refinement of preliminary desig from current FBRMPO Model), Sh Merger Team will be informed and	voidance and ins for the LE ould the impo	l minimization effor DPA based on a ne acts increase from t	ts will be consi w traffic foreco hose presented	dered and implemented i ast (which will be develop	nte
J.S. Army Corps of Engineers		Doni le	Deeky	H_	
J.S. Environmental Protection	Agency	Cyuthu Spocusigned by:	i 7 Ua	nderwiele	
J.S. Fish and Wildlife Service		Marilla Bi		1	
V.C. Wildlife Resources Comm	nission	Docusigned by:	(Kam		
I.C. Department of Cultural Ro	esources	Rence Bleco	thill-Earley	<b>(</b>	
I.C. Division of Water Resour	ces	Levin Ban	171		
ederal Highway Administration	on	Michael	O Cha	graf'	
rench Broad River MPO		- Tyn	Syl	1	

N.C. Department of Transportation



## STIP I-2513 I-26 Connector

## **Concurrence Point 3: LEDPA Selection**

May 18, 2016

NAME	AGENCY/ORGANIZATION	EMAIL
Mitch Baturich	FAWA	michael. both wich A dot you
Marla Chambers	Newre	marla.chambers@ncwildlife.org
Steve Kerdall	NcPoT- Roadway Design	Sd Kendall @ nedstiger
Jennifer Harris	HNTB	jhharris@hntb.com
Monte Matthews	USACE	Monte. K. Matthewas sace, org. n: 1
James Dungo	NCDOT CONGLISTION Many	identop@nodut ga
KIRBY PENDERGRAFT	NODOT Hydraulics	Ke pendegrafte redof. you
CYNTHIA VAN DERWIELE	USEPA	vanderwiele, cynthia @ epa. gov
Bill Zermon	Hydraulies	bzckmanencdal. sou
Mark Staley	NCDOT-REU	mstalog@ncdot.gov
Carla Dagnino	NICDOT-MES	Colagnino@ncdot.800
Lyubov Zuyeva	FBRMPO	lyuba a landofsky, ora
TIM SHEPPILL	NCOOT SMU	THEHERILL CHOOT.GOV
Dog Calhoon	NEDOT SMU	drealhoun @ nedot.gov
FELIX DAVILA	FHWA	felix.davila@dot.gov
Elizabeth Wargo	AECOM	elizabeth wargo@aecom.com



# STIP I-2513 I-26 Connector Concurrence Point 3: LEDPA Selection

May 18, 2016

Transportition: NAME	AGENCY/ORGANIZATION	EMAIL
HERMAN HUANG	NUDOT COMMUNITY STUDIES	HEHUANGENCORT. GOV
Tracey Wheeler	USACE	tracey. I wheele Q usace army mil
Cathe Ball	City of Asheville	Challa ashevillenc.gov
CLANGUES COUSINS	FHWA	CLARENCE. CONSUM @ DOT GOV
Michael 11/oay	NCDOT-PDEA	ngwray@ncdot.gov
Celia Fonstree	AECOM	celia. fousher@aecom.com
Joanna Rocco	AECOM	joanna. Pocco @ ae com. com
Weil Dean	AECOM	neil·dean@aecom.com
Derrick Weaver	NCDOT - Program Management	dweaver@ncdot.com
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	-1- MARIE 202	
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## STIP I-2513 I-26 Connector

## **Concurrence Point 3: LEDPA Selection**

May 18, 2016

NAME	AGENCY/ORGANIZATION	EMAIL
Drew Joyner	MCDOT- HES	Lipyner@ucdotgos
Lori Beckwith	USACE	[overta.a. beckwith Quesace_army-mi)
JEFF HEMPHICL	NCOUT-NEG	shenphillancdot.gov
BRENDAY MERETHE	NODOT	Dwnerither endotiger
ZALAID BALOCH	NepiT	Zbahenone dit-jav. Vanderwiele, cynthae
CYNTHIA VAN DER WIELE	USEPA	Vanderwiele, cynthia@
Andrew Bell	AECOM	ANDREW. BELL CAECOM. COM
Marella Buncick*	USFWS	Marella_Bunciek@fws.gov
Kevin Barnett*	NCDENR - DWR	Kevin.bamettæncdenr.gov
Kristina Solberg*	NCDOT Division 13	Klsolberg@ncdot.gov
Renee Gledhill-earley*	NCDCR - SHPO	venee.gledhill-earley@ncdcr.gov

#### **MEETING SUMMARY**



To: Meeting Attendees

**Project File** 

From: Celia Miars

AECOM

Date: September 7, 2018

RE: Section 404/NEPA Merger Process – CP4A Meeting

NCDOT STIP Project I-2513 (I-26 Connector)

#### Meeting Attendees:

Michael Dawson, FHWA Melissa Miller, NCDOT – Biological Surveys Group
Lori Beckwith, USACE\* Mike Sanderson, NCDOT – Biological Surveys Group

Monte Matthews, USACE Carla Dagnino, NCDOT – EAU

Marella Buncick, USFWS

Shane Clark, NCDOT – Geotechnical Engineering Unit\*

Kevin Barnett, NCDEQ\*

Jody Kuhne, NCDOT – Geotechnical Engineering Unit\*

Derrick Weaver, NCDOT – Environmental Policy Unit

John Jamison, NCDOT – Environmental Policy Unit

Jeff Hemphill, NCDOT – NES

Matt Lauffer, NCDOT – Hydraulics

Brian Lipscomb, NCDOT – Hydraulics

Steve Cannon, NCDOT – Division 13\* Daniel Sellers, NCDOT – Transportation Planning Branch

Cameron Cochran, NDOT – Division 13\* Heather Wallace, CALYX

Randy McKinney, NCDOT – Division 13\* Simone Robinson, NCDOT – Public Involvement

Brendan Merithew, NCDOT – Division 13\*

Marissa Cox, NCDOT – Biological Surveys Group

Kathy Herring, NCDOT – Biological Surveys Group

Chris Manley, NCDOT – Biological Surveys Group

Celia Miars, AECOM

Joanna Rocco, AECOM

A meeting was held at 1:00 PM on Wednesday, July 18, 2018 in the Structures Design Conference Room at the North Carolina Department of Transportation (NCDOT) Century Center. The purpose of this meeting was to present project information to the Merger Team in order to obtain Concurrent Point (CP) 4A (Avoidance and Minimization). Attendees of the meeting are shown above. A merger packet was distributed to meeting attendees.

Eric Spalding, AECOM

Joanna began the meeting with a brief overview of the project history, recent updates, and the preferred alternative selected at CP3 in May 2016. Recent updates discussed include:

- An overview of the previous merger meetings held and dates concurrence was received.
- DEIS Published in October 2015
- Corridor Public Hearing held in November 2015

<sup>\*</sup>Joined meeting via telephone

- Established the I-26 Working Group in March 2016
- Traffic studies were updated throughout 2016
- Preliminary designs were updated throughout 2017 and 2018
- Technical studies were updated throughout 2017 and 2018

Below is an overview of other discussion points throughout the presentation.

- Major design revisions since CP 3 include:
  - Reconfiguration of Amboy Road to a split diamond interchange with roundabouts.
  - o Elimination of the collector/distributor roads in Section C
  - o I-26/I-240/Patton Avenue interchange reconfiguration
  - o Realignment of the West Asheville Greenway
- Changes in impacts based on the design refinements to cultural resources, parks and recreational areas, and natural resources.
- Coordination with the City of Asheville regarding the design refinements and bicycle and pedestrian accommodations.
- Next steps in the project include finalizing the preliminary designs, finalizing the Traffic Noise Analysis, finalizing the Final Environmental Impact Statement, completing the Section 7 consultation, and completing Section 106 coordination.

Joanna concluded the presentation of the avoidance and minimization efforts completed thus far on the proposed project.

Discussions regarding the bridge construction of the project began and what types of avoidance, minimization, and mitigation measures should be included in the Biological Assessment (BA) for the gray bat and Appalachian elktoe. It was noted there are several bridge replacements over the French Broad River and Hominy Creek, and three new location bridges over the French Broad River within the project study area. Commitments should be made to prevent the design build team from adding excessive bents in the river.

NCDOT noted that when discussing the commitments to bridge construction for the project, the project team should estimate the worst-case scenario (i.e. maximum of 50 percent of the French Broad River blocked by causeways). In past conversations regarding the bridge construction of the bridges for STIP project I-4400/I-4700, a criterion of 50 percent was designated as the maximum amount the USACE and USFWS would allow causeways to block the river flow. NCDOT has held preliminary discussions with several units including the division office, hydraulics, and structures and determined that the flyover bridges in Section B of the proposed project could likely be constructed with the 50 percent constraint in place. NCDOT and AECOM are currently coordinating to produce a hydraulic model that will identify the effect of causeways on the hydrology of the river (i.e. if placing a causeway in the river that blocks 50 percent of the river would cause substantial flooding effects upstream and surrounding properties within the floodplain, therefore, necessitating a lower constraint).

NCDOT, the USACE, and USFWS are holding a meeting on July 25, 2018 in Asheville to discuss potential bridge construction commitments that can be included in the BA in order for USFWS to analyze the project effects on the protected species and issue a Biological Opinion (BO). Various commitments NCDOT can make during construction will be discussed, including the potential to block more than 50 percent of the river channel for a period of time in order to place bents, the number of bents that can be placed in the water, phasing of construction, and limiting night work, among other things. These

MEETING SUMMARY September 7, 2018 Page 3 of 3

commitments will be included in the design build Request for Proposal (RFP) and design build teams must adhere to them during construction.

The USACE and USFWS noted the water flow constraint of no less than 50 percent has been a general rule of thumb so there is minimal impact to the morphology of the waterway as a whole and the potential for scour issues decrease. However, it was noted that in a large system such as the French Broad River, which spans approximately 300 feet wide at the location of the flyover bridges, depending on the hydrological effects upstream and effects to river users, a larger constraint may be allowed. Additional investigations using the hydrologic model will be completed prior to completion of the Section 7 consultation. Modeling should highlight the effects of the bridge construction and surrounding added impervious surface on the Hill Street culvert system (this culvert system has been identified as a gray bat roosting location).

Since not all of the information needed to develop commitments to the bridge construction was available at the time of this meeting, the following commitment was added to the concurrence form:

The merger team will revisit Concurrence Point 4A to discuss any new avoidance and minimization efforts for major crossings (including the Hill Street culvert system) of the French Broad River and Hominy Creek, including those in the Biological Assessment.

The USACE requested additional commitments be added to the concurrence form to address the completion of a River User Safety Plan and River User Communication Plan before or with the application to the USACE.

AECOM will distribute the concurrence form electronically for signatures.

The meeting concluded at 3:00 p.m.

# Merger Project Team Meeting Agreement Concurrence Point No. 4A – Avoidance and Minimization

Project Name/Description: I-26 Connector, I-40 to US 19-23-70 North of

Asheville in Buncombe County

 STIP Project No.:
 I-2513

 WBS No.:
 34165.1.1

Federal Aid Project No.: MA-NHF-26-1(53)

The Merger Team met on July 18, 2018 and concurred with the following avoidance and minimization measures for STIP Project No. I-2513:

Section 404 Avoidance and Minimization Measures

- Impact reductions to streams and wetlands were calculated within the slope stakes of the current preliminary design plus 25 feet versus the designs from the 2015 DEIS with slope stake limits plus 25 feet.
  - Overall reduced impacts to streams by 724 linear feet.
  - Overall reduced impacts to wetlands by 0.63 acre.
  - Reduced 543 linear feet of impacts to UT2C to Upper Hominy Creek by adding a retaining wall in Section C.
  - Daylighting for Smith Mill Creek for approximately 440' of culvert in the southwest quadrant of the existing interchange.
  - Eliminated longitudinal impacts to Upper Hominy Creek.
  - o Eliminated longitudinal impacts to Ragsdale Creek.

NCDOT will continue to coordinate with the Section 404/Merger Team to identify avoidance and minimization measures to all waters of the U.S. and ensure that hydraulic structures associated with the project are designed and installed to minimize negative impacts to stream stability (and therefore, water quality) to the extent practicable at Concurrence Point 4B – 30 Percent Hydraulic Review and Concurrence Point 4C – Permit Drawing Review.

Section 7 of the Endangered Species Act Avoidance and Minimization Measures

Commitments listed under Section 404 of the Clean Water Act are also commitments in the Biological Assessment (BA). Additional commitments in the BA include:

- NCDOT will continue to coordinate with NCWRC and USFWS regarding avoidance and minimization for the federally-endangered gray bat (*Myotis grisescens*) per Section 7 of the ESA of 1973, as amended and will secure compliance prior to signing the ROD.
  - Surveys are currently underway to investigate the presence of roosting and foraging habitat for gray bat.
  - Emergence counts and trapping will be conducted multiple times in 2018 to determine the number, age, and reproductive status of bats using the culvert where bats were found in Section B (Hill Street culvert).
- NCDOT is assuming presence of the Appalachian elktoe (*Alasmidonta raveneliana*) within the project study area and will comply with Section 7 of the ESA of 1973, as amended (16 U.S.C. 1531 et seq.) and information will be sought and secured prior to signing the ROD.
- NCDOT is evaluating constraints associated with construction of the bridges over the French Broad River and Hominy Creek as part of securing Section 7 compliance for the gray bat and

Appalachian elktoe. As part of this evaluation, NCDOT will document the efforts used to ensure river users are sufficiently notified of construction activity.

#### Human Environment Avoidance and Minimization Measures

- Eliminated impacts to the French Broad River Greenway
- Reduced impacts to the frontage road of Carrier Park (0.72 acre)
- Eliminated ROW impacts to the Montford Hills Historic District.
- Reduced impacts to West Asheville/Aycock School 0.20 acre.
- Removal of collector-distributor road along I-40W which had the following effects on impacts:
  - Reduced impacts to the Asheville School Property 2.28 acres.
  - Reduced ROW impacts along Montgomery Street and eliminated approximately 10 total takes to residential properties.
  - Eliminated ROW impacts to two businesses in the northwest quadrant of US 19/23/70 (Smokey Park Highway).
- Removal of the collector-distributor road along I-40E, which had the following effects on impacts:
  - Eliminated ROW impacts to at least four businesses in the southwest quadrant of the I-40/Smokey Park Highway interchange.
  - Eliminated the extension of an existing RCBC in the southwest quadrant of the I-40/Smokey Park Highway interchange.
  - Eliminated longitudinal impacts to southeast of the I-40/Smokey Park Highway interchange.
  - Reduced residential ROW impacts south of I-40E, completely eliminating approximately 10 total takes.
- Revision of the interchange configurations at Brevard Road and Amboy Road to utilize a split diamond configuration between these two roads. This had the following minimization of effects:
  - Minimized the flyover alignment of Amboy Road to Brevard Road.
  - o Reduced overall proposed ROW and eliminated approximately six total takes.
- Reduction of proposed typical section of I-26 from eight lanes to six lanes between I-40 and Patton Avenue.
- The proposed West Asheville Greenway alignment was shifted in the vicinity of the C. G. Worley House historic property and at the Patton Avenue/ramp Y7RPC intersection. The greenway was moved so that it generally follows the ramp alignment. Along with the use of retaining walls, the alignment shift has reduced the amount of ROW by 0.05 acre.
- Additional retaining walls along US 23 northbound have reduced the ROW needed in the vicinity of Courtland Place.
- Alignment revisions to the West Asheville Greenway in the southeast quadrant of the interchange I-26/Patton Avenue Interchange which will reduce right of way impacts along Hazel Mill Road.
- NCDOT will create a river user safety plan and submit it before or with the application to the USACE
- NCDOT will create a river user communication plan and submit it before or with the application to the USACE.
- The merger team will revisit CP 4A to discuss any new avoidance and minimization efforts for major crossings (including the Hill Street culvert system) of the French Broad River and Hominy Creek including those in the Biological Assessment.

July 18, 2018

USACE Lon Bukwith	NCWRC
Lori Beckwith	Marla Chambers
USEPA	NCDCR
Chris Militscher	Renee Gledhill-Earley
USFWS	NCDWR LESSES COSCEROA
Marella Buncick	Kevin Barnett
Filix Pavila FHWA	FBRMPO Ex7/ACOF86FDEX5/A
Felix Davila	Lyuba Zuyeva
NCDOT Docusigned by:  NCDOT	
Derrick Weaver	

### Rocco, Joanna

From: Somerville, Amanetta < Somerville. Amanetta@epa.gov>

**Sent:** Tuesday, July 24, 2018 1:35 PM

To: Rocco, Joanna
Cc: Militscher, Chris

**Subject:** CP 4A concurrence for the 7/18/18 I-2513 Merger Meeting

#### Good afternoon Joanna,

EPA did not participate in this meeting and abstains from signing the CP4A form for STIP Project # I-2513. Please feel free to contact me if you have any questions.

#### Amanetta Somerville

U.S. Environmental Protection Agency Region 4 61 Forsyth Street SW. Atlanta, Ga 30303 National Environmental Policy Act Program Office Resource Conservation and Restoration Division

Phone: 404-562-9025

E-mail: <a href="mailto:somerville.amanetta@epa.gov">somerville.amanetta@epa.gov</a>

#### Rocco, Joanna

From: Gledhill-earley, Renee <renee.gledhill-earley@ncdcr.gov>

**Sent:** Monday, July 23, 2018 11:54 AM

To: Rocco, Joanna

**Subject:** RE: [External] I-2513 I-26 Connector: CP 4A concurrence form

I don't do CP4 signing.

919 807 6579 office

R

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### Renee Gledhill-Earley Environmental Review Coordinator State Historic Preservation Office 109 E Jones St MSC 4617 Raleigh, NC 27699



Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

<u>Please Note:</u> Requests for project review or responses to our review comments should be sent to our Environmental Review emailbox at <a href="mailto:environmental.review@ncdcr.gov">environmental.review@ncdcr.gov</a> Otherwise, I will have to return your request and ask that you send it to the proper mailbox. This will cause delays in your project. Information on email project submittal is at:
<a href="http://www.hpo.ncdcr.gov/er/er\_email\_submittal.html">http://www.hpo.ncdcr.gov/er/er\_email\_submittal.html</a>

From: Rocco, Joanna [mailto:joanna.rocco@aecom.com]

Sent: Monday, July 23, 2018 11:10 AM

To: loretta.a.beckwith@usace.army.mil; Militscher.Chris@epa.gov; Chambers, Marla J

<<u>marla.chambers@ncwildlife.org</u>>; Barnett, Kevin <<u>kevin.barnett@ncdenr.gov</u>>; <u>lyuba@landofsky.org</u>; Weaver, Derrick G <<u>dweaver@ncdot.gov</u>>; <u>Felix.Davila@dot.gov</u>; <u>marella\_buncick@fws.gov</u>; Gledhill-earley, Renee <<u>renee.gledhill-</u>earley@ncdcr.gov>

Cc: Miars, Celia <celia.miars@aecom.com>; Ellerby, Theresa T <tellerby@ncdot.gov>

Subject: [External] I-2513 I-26 Connector: CP 4A concurrence form

**CAUTION:** External email. Do not click links or open attachments unless verified. Send all suspicious email as an attachment to Report Spam.

#### Good morning,

There has been a request to revise the bullets regarding the river users on the concurrence form, so you will be receiving a new form this afternoon to sign via docusign. I apologize for the inconvenience. I've attached the form to this email in case you have any questions or concerns before signing, just let me know.

Thanks! Joanna

# APPENDIX F2 RECORDS OF OTHER AGENCY MEETINGS

Date	Meeting Type	Attendees	Location	Purpose
11/15/2015 ª	Local Officials Meeting	Approximately 17 local officials	Renaissance Hotel, Asheville	To present the setup and provide a walk-through of the Corridor Public Hearing.
01/25/2016	Post Hearing Meeting	FHWA, NCDOT, FBRMPO, City of Asheville, AECOM, HNTB	NCDOT Structure Design Conference Room	To discuss comments received on the 2015 DEIS and from the Corridor Public Hearing.
03/14/2016 <sup>a</sup>	FHWA Meeting	NCDOT, AECOM, FHWA		Comment resolution with FHWA on DEIS comments.
03/24/2016	Working Group Meeting #1	AECOM: Chris Werner, Joanna Rocco, Celia Foushee Asheville Design Center: Alan McGuinn City of Asheville: Ken Putnam, Gwen Wisler, Bruce Emory, Julie Mayfield, Todd Okolichany NCDOT: David Brown, Jay Swain, Rick Tipton, Derrick Weaver, Michael Wray	City Hall, Asheville	To review comments received from the City of Asheville on the 2015 Draft Environmental Impact Statement
05/16/2016 <sup>a</sup>	Traffic Forecast Review	NCDOT, AECOM, FHWA	FHWA Raleigh Division office	Traffic forecast review with FHWA before completing analysis.
06/03/2016	Working Group Meeting #2	AECOM: Andrew Bell, Joanna Rocco, Celia Foushee, Chris Werner Asheville Design Center: Alan McGuinn City of Asheville: Ken Putnam, Gwen Wisler, Bruce Emory, Julie Mayfield, Todd Okolichany FBRMPO: Lyuba Zuyeva FHWA: Mitch Batuzich, Michael Dawson, Joe Geigle IO Design: Alice Oglesby NCDOT: David Brown, Jay Swain, Rick Tipton, Derrick Weaver, Michael Wray, Brian Wert, Jim Dunlop, Greg Smith	NCDOT Division 13 Buncombe County Maintenance Office	To discuss action items from the previous Working Group meeting, NCDOT noise policies and traffic noise analysis methodologies, and the relationship between travel demand modeling, traffic forecasting, traffic operations analysis, and the development of designs.
06/15/2016 <sup>a</sup>	Traffic Forecast Review	NCDOT, AECOM, FHWA	FHWA Raleigh Division office	Traffic forecast review of results with FHWA.
06/29/2016	Post LEDPA Scoping Meeting	NCDOT, FHWA, AECOM	FHWA Raleigh Division office	To discuss next steps from technical groups to complete the FEIS.

08/09/2016	Working Group Meeting #3	AECOM: Neil Dean, Joanna Rocco, Celia Foushee, Chris Werner Asheville Design Center: Alan McGuinn Burton Street Community: DeWayne Barton City of Asheville: Ken Putnam, Gwen Wisler, Bruce Emory, Julie Mayfield FBRMPO: Lyuba Zuyeva FHWA: Michael Dawson NCDOT: David Brown, Jay Swain, Rick Tipton, Kristina Solberg, Cole Hood, Ed Johnson, Nick Scheuer, Mary Pope Furr, Derrick Weaver, Michael Wray, Jeff Lackey, Kevin Fischer	NCDOT Division 13 Buncombe County Maintenance Office	To discuss action items from the previous Working Group meeting, review NCDOT aesthetics policies and procedures, structure types and aesthetic treatments, multimodal policies and procedures, and discuss the remaining City of Asheville comments on the 2015 DEIS regarding bicycle, pedestrian, and transit.
09/20/2016	Working Group Meeting #4	AECOM: Neil Dean, Joanna Rocco, Celia Foushee, Chris Werner Asheville Design Center: Alan McGuinn Burton Street Community: DeWayne Barton Buncombe County: Jon Creighton City of Asheville: Ken Putnam, Gwen Wisler, Bruce Emory, Julie Mayfield, Todd Okolichany FBRMPO: Lyuba Zuyeva FHWA: Michael Dawson Moon io Media, Inc.: Alice Oglesby Montford Neighborhood: Suzanne Devane NCDOT: David Brown, Jay Swain, Rick Tipton, Kristina Solberg, Cole Hood, Nick Scheuer, Mary Pope Furr, Derrick Weaver, Michael Wray	NCDOT Division 13 Buncombe County Maintenance Office	To discuss action items from the previous Working Group meeting, review elevations and visualizations prepared by NCDOT, discuss contracting mechanisms, and discuss the City of Asheville's requested bicycle and pedestrian accommodations throughout the project study area.

10/17/2016	Working Group Meeting #5	AECOM: Neil Dean, Joanna Rocco, Celia Foushee, Chris Werner Asheville Design Center: Alan McGuinn Buncombe County: Jon Creighton City of Asheville: Ken Putnam, Gwen Wisler, Bruce Emory, Todd Okolichany FBRMPO: Lyuba Zuyeva NCDOT: David Brown, Jay Swain, Rick Tipton, Kristina Solberg, Cole Hood, Derrick Weaver, Michael Wray	City of Asheville Fire and Police Training Room	To discuss the status of the Traffic Operations Analysis and preliminary design refinements, the status of the community small group meetings, action items from the previous Working Group meeting, and review any additional betterment requests from the City.
11/17/2016	FBRMPO/TCC Meeting	NCDOT, FBRMPO, TCC members, AECOM	Land of Sky Regional Council conference room, Asheville	Project team presented at the joint FBRMPO/TCC meeting. Purpose of the meeting to discuss the project and the status of the traffic analyses.
11/18/2016	Working Group Meeting #6	AECOM: Neil Dean, Joanna Rocco, Celia Foushee, Chris Werner AAC: Alice Oglesby Asheville Design Center: Alan McGuinn Buncombe County: Jon Creighton Burton Street Community: DeWayne Barton City of Asheville: Ken Putnam, Gwen Wisler, Bruce Emory, Julie Mayfield, Todd Okolichany FBRMPO: Lyuba Zuyeva, Tristan Winkler FHWA: Felix Davila, Michael Dawson NCDOT: David Brown, Rick Tipton, Cole Hood, Derrick Weaver, Michael Wray, Nick Scheuer	Land of Sky Regional Council conference room, Asheville	To discuss the status of the Traffic Operations Analysis and preliminary design refinements, the status of the community small group meetings, action items from the previous Working Group meeting, and review additional betterment requests from the City and the preliminary cost evaluation provided by NCDOT.
12/15/2016	I-26 Connections Discussion	FHWA, NCDOT, AECOM	FHWA Raleigh Division office	To discuss the interstate connections of I-26 and I-240, signage and next steps of the traffic analyses process.
02/08/2017	Traffic Concept Review Meeting	NCDOT, FHWA, AECOM	FHWA Raleigh Division office	To discuss initial traffic capacity results and design concepts.

02/20/2017	Working Group Meeting #7	AECOM: Neil Dean, Joanna Rocco, Celia Foushee, Chris Werner AAC: Alice Oglesby Asheville Design Center: Alan McGuinn Buncombe County: Jon Creighton Burton Street Community: DeWayne Barton City of Asheville: Ken Putnam, Gwen Wisler, Bruce Emory, Julie Mayfield, Todd Okolichany FBRMPO: Lyuba Zuyeva, Tristan Winkler FHWA: Felix Davila, Michael Dawson NCDOT: David Brown, Rick Tipton, Cole Hood, Derrick Weaver, Michael Wray, Nick Scheuer	Land of Sky Regional Council conference room, Asheville	To discuss the status of the community small group meetings, the status of the traffic operations analysis and preliminary design refinements, the schedule of the Final EIS, action items from the previous Working Group meeting, review the 2016 Traffic Noise Policy in regards to the voting, and review the preliminary cost estimates for the betterment requests from the City.
03/13/2017	City of Asheville Betterments discussion	City of Asheville, AECOM	n/a	Conference call to discuss the betterments list and to identify action items in order to finalize the betterments.
05/09/2017	FHWA Coordination	FHWA, NCDOT, AECOM	FHWA Raleigh Division office	To discuss the project status and the preliminary results of the traffic capacity analysis and design concept development.
05/15/2017	FHWA Coordination	FHWA, NCDOT, AECOM	FHWA Raleigh Division office	To discuss the Failure Year Analysis with FHWA.
05/25/2017	FBRMPO Meeting	FBRMPO, NCDOT, AECOM, PTE		To present a project update and discuss the traffic capacity analysis and review the base year calibrated model for the micro-simulation.

05/26/2017	Working Group Meeting #8	AECOM: Neil Dean, Joanna Rocco, Celia Foushee, Chris Werner AAC: Alice Oglesby Asheville Design Center: Alan McGuinn Burton Street Community: DeWayne Barton City of Asheville: Ken Putnam, Gwen Wisler, Bruce Emory, Julie Mayfield FBRMPO: Lyuba Zuyeva, Tristan Winkler FHWA: Michael Dawson NCDOT: Rick Tipton, Cole Hood, Michael Wray, Kristina Solberg Patriot Transportation Engineering: Peter Trencansky	Land of Sky Regional Council conference room, Asheville	To discuss the status of the community small group meetings, the status of the traffic operations analysis and preliminary design refinements, the schedule of the Final EIS, action items from the previous Working Group meeting, review the base year calibrated model for the I-2513 traffic microsimulation, review the betterment requests from the City, review the outcomes of the Hillcrest and Fairfax/Virginia small group meetings held in March, and review conceptual configurations for Brevard Road, Amboy Road, and Haywood Road.
06/29/2017	Gray Bat Survey Coordination Meeting	USFWS, NCWRC, FHWA, NCDOT, AECOM, CALYX	NCDOT Division 13 district office, Asheville	To discuss gray bat survey needs.
07/27/2017	Working Group Meeting #9	AECOM: Neil Dean, Joanna Rocco, Celia Foushee, Chris Werner, Tom Helper Burton Street Community: DeWayne Barton City of Asheville: Ken Putnam, Gwen Wisler, Bruce Emory, Julie Mayfield, Todd Okolichany FBRMPO: Lyuba Zuyeva FHWA: Michael Dawson NCDOT: Rick Tipton, Cole Hood, Brendan Merithew, Kristina Solberg, Nick Scheuer, Daniel Sellers, Derrick Weaver, Michael Wray	Land of Sky Regional Council conference room, Asheville	To discuss the status of the community small group meetings, the status of the traffic operations analysis and preliminary design refinements, on-going coordination efforts with FHWA, the schedule of the Final EIS, action items from the previous Working Group meeting held on May 26, 2017, review the betterment requests from the City, discuss the Haywood Road interchange concepts, and review the elevations in Section B.
08/08/2017	Gray Bat Research RFP Meeting	NCDOT, USFWS, NCWRC, CALYX, AECOM	NCDOT Division 13 district office, Asheville	To discuss the gray bat research need statement and programmatic Section 7 consultation.
10/25/2017	Gray Bat Survey Coordination Meeting	USFWS, NCWRC, NCDOT, AECOM, CALYX	NCDOT Division 13 office, Asheville	To discuss an update of the gray bat survey efforts and results.

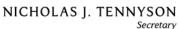
04/17/2018ª	City of Asheville	City of Asheville, NCDOT, AECOM, Sam Schwartz, Interface Studio	NCDOT Roadway Design Conference Room	To discuss design recommendations from the City of Asheville and Sam Schwartz on Section B – Alternative 4-B.
07/25/2018	Biological Assessment and Bridge Construction	USACE, NCDWR, USFWS, NCWRC, NCDOT, AECOM, CALYX	NCDOT Division 13 office	To discuss the biological assessment for the gray bat and Appalachian elktoe and bridge construction.
07/31/2018	Working Group Meeting #10	AECOM: Neil Dean, Joanna Rocco, Celia Foushee, Chris Werner, Tom Helper Burton Street Community: DeWayne Barton City of Asheville: Ken Putnam, Gwen Wisler, Bruce Emory, Julie Mayfield, Todd Okolichany FBRMPO: Lyuba Zuyeva FHWA: Michael Dawson NCDOT: Rick Tipton, Cole Hood, Brendan Merithew, Kristina Solberg, Nick Scheuer, Daniel Sellers, Derrick Weaver, Michael Wray	Land of Sky Regional Council conference room, Asheville	
08/27/2018	Traffic Analysis Discussion	City of Asheville: Julie Mayfield, Ken Putnam, Gwen Wisler, Bruce Emory, David Nutter; SELC: DJ Gerkin FBRMPO: Lyuba Zuyeva NCDOT: Randy McKinney, Brendan Merithew, Derrick Weaver AECOM: Neil Dean, Celia Miars, Joanna Rocco, Eric Spalding PTE: Peter Trencansky	City of Asheville Fire and Rescue Department – Police and Fire Training Room	To discuss additional questions and concerns regarding the preferred alternative designs and traffic analyses, including the microsimulation.
09/11-13/2018	Cost Estimate Review Meeting	NCDOT: several members throughout the time frame; Donna Keener, Derrick Weaver, Theresa Ellerby FHWA: Michael Smith, Chuck Luedders AECOM: Celia Miars, Joanna Rocco	NCDOT Century Center – PDEA Large Conference Room	To discuss the process of a cost estimate review meeting and identify potential project risks from subject matter experts that would effect the project cost and schedule.

10/03/2018	AAC Meeting	City of Asheville: Ken Putnam AAC: Ted Figura, Jason Gilliland, Joe Minicozzi, Mike Zukosk, Woody Farmer, David Nutter, Susan Loftis NCDOT: Jeff Lackey, Kyle Cooper, Derrick Weaver, Theresa Ellerby AECOM: Celia Miars, Joanna Rocco, Eric Spalding	City of Asheville Fire and Rescue Department – Police and Fire Training Room	To discuss the roles and responsibilities of the AAC and review NCDOT guidance regarding aesthetic treatments for NCDOT projects.
10/03/2018	Bridge Phasing Meeting	NCDOT: Derrick Weaver, Randy McKinney, Marissa Cox, Matt Lauffer, Chris Manley, Marissa Miller, Mike Sanderson Design Build: Jeff Ball, Tim Goodson, CALYX: Heather Wallace Three Oaks: Mary Frazer AECOM: Neil Dean, Claudia Lee, Celia Miars, Joanna Rocco, Eric Spalding	NCDOT Division 13 Conference Room	To discuss the Biological Assessment for the gray bat and Appalachian elktoe, to review project commitments that NCDOT may present to USFWS at a follow- up meeting regarding construction of the bridges over the French Broad River and Hominy Creek.
11/14/2018	Bridge Construction Meeting	NCDOT: Derrick Weaver, Theresa Ellerby, Matt Lauffer, Cameron Cochran, Randy McKinney, Marissa Cox, Chris Manley, Mike Sanderson, Paul Chan, Greg Hall FHWA: Felix Davila, Brian Yanchik USFWS: Marella Buncick, Claire Ellwanger Three Oaks: Mary Frazer CALYX: Heather Wallace AECOM: Claudia Lee, Neil Dean, Joanna Rocco, Eric Spalding	NCDOT Division 13 District Maintenance Office	To review the project commitments for the Biological Assessment, and to discuss bridge construction and lighting on the project.
01/11/2019	Post Hearing Meeting	FHWA: Felix Davila NCDOT: Derrick Weaver, Theresa Ellerby, Kevin Moore, Xiudong Han, Brenda Moore, Douglas Kretchman, Tatia White, Missy Pair, Jamille Robbins, Greg Hall, Kevin Fischer, Joe Hummer, Steve Cannon, Chase Carver, Randy McKinney, Brendan Merithew PPP: Simone Robinson AECOM: Neil Dean, Drew Joyner, Chris Lucia, Celia Miars, Joanna Rocco, Eric Spalding	NCDOT Century Center – Structures Design Conference Room	To discuss the Design Public Hearing and comments received at the hearing and during the comment period.

02/21/2019	Working Group Meeting #11	FHWA: Michael Dawson Asheville: Bruce Emory, Julie Mayfield, Todd Okolichany, Ken Putnam, Gwen Wisler, Alan McGuinn, Lyuba Zuyeva, David Nutter, NCDOT: Steve Cannon, Brendan Merithew, Theresa Ellerby, Derrick Weaver, AECOM: Neil Dean, Celia Miars, Joanna Rocco, Eric Spalding	City of Asheville Fire and Rescue Department – Police and Fire Training Room	To provide an update of the comments received at the December 2018 Design Public Hearing, review action items from the previous working group meeting, discuss various design related topics, and provide an overview of the right-of-way acquisition and disposal process.
02/21/2019 <sup>a</sup>	AAC Meeting	City of Asheville: Ken Putnam, Julie Mayfield AAC: Ted Figura, Jason Gilliland, Joe Minicozzi, Mike Zukosk, Woody Farmer, David Nutter, Susan Loftis NCDOT: Steve Cannon, Brendan Merithew, Theresa Ellerby, Derrick Weaver AECOM: Celia Miars, Eric Spalding, Neil Dean, Joanna Rocco	City of Asheville Fire and Rescue Department – Police and Fire Training Room	Regularly scheduled AAC meeting
03/19/2019	AAC Meeting	City of Asheville: Ken Putnam, Julie Mayfield AAC: Ted Figura, Jason Gilliland, Joe Minicozzi, Mike Zukosk, Woody Farmer, David Nutter, Susan Loftis NCDOT: Jeff Lackey, Kyle Cooper AECOM: Celia Miars, Eric Spalding	City of Asheville Fire and Rescue Department – Police and Fire Training Room	Regularly scheduled AAC meeting in which NCDOT was present to provide additional information and guidance regarding aesthetic treatments for NCDOT projects.
05/21/2019 <sup>a</sup>	AAC Meeting	City of Asheville: Ken Putnam, Julie Mayfield AAC: Ted Figura, Jason Gilliland, Joe Minicozzi, Mike Zukosk, Woody Farmer, David Nutter, Susan Loftis NCDOT: Derrick Weaver AECOM:, Neil Dean, Joanna Rocco	City of Asheville Fire and Rescue Department – Police and Fire Training Room	Regularly scheduled AAC meeting

<sup>&</sup>lt;sup>a</sup> No minutes are available for this meeting.







MEMO TO: Post Hearing Meeting Attendees

FROM: Derrick Weaver, P.E.

Project Development and Environmental Analysis Unit - Project

Manager

DATE: 01/25/2016

SUBJECT: Project: 34165.1.2 (I-2513) Buncombe County

F.A. Number NHF-26-1(53)

Asheville - I-240 & New Route from I-26 to US 19-23-70

(I-26 Connector)

#### Post Hearing Meeting

The Draft Environmental Impact Statement (DEIS) was signed on October 13, 2015. A Corridor Public Hearing was held on November 16, 2015 in the Ballroom of the Renaissance Hotel in Asheville and was conducted by Drew Joyner, PE. A Pre-Hearing Open House was held from 4:00 – 6:30 p.m. and the Formal Hearing began at 7:00 p.m. The Alternative included in the DEIS were presented. Participants were encouraged to provide comments for the public record, whether verbally or in writing. Maps and exhibit boards were available for viewing and almost all attendees received a project handout (please note several attendees who arrived later in the evening did not receive a handout).

A total of 439 participants signed in at the Public Hearing. NCDOT also received 1,485 comment sheets, emails, letters, petitions, hotline calls, and a transcript of verbal comments from the 33 individuals who spoke at the Public Hearing. Comments were received from Federal, State, and Local agencies as well as various special interest groups.

The Post Hearing Meeting was held in the Structures Design conference room at 1:30pm on January 25, 2016, to discuss the comments received from the Corridor Public Hearing. The following people attended the post hearing meeting:

Derrick Weaver NCDOT PDEA Michael Wray NCDOT PDEA

Herman Huang NCDOT PDEA Community Studies



Harrison Marshall NCDOT PDEA Community Studies

Jamille Robbins

Anamkia Laad

NCDOT PDEA Human Environment Section

NCDOT PDEA Human Environment Section

NCDOT PDEA Human Environment Section

NCDOT PDEA Natural Environment Section

Kevin Moore NCDOT Roadway Design
Steve Kendall NCDOT Roadway Design
Brenda Moore NCDOT Roadway Design
Tonya Walters NCDOT Roadway Design
Terry Harris NCDOT Roadway Design
Glenn Mumford NCDOT Roadway Design

James Dunlop NCDOT Congestion Management
Elise Groundwater NCDOT Congestion Management
Wael Arafat NCDOT Structures Management Unit

Mary Pope Furr NCDOT Historical Architecture

Brendan Merithew NCDOT Transportation Planning Branch

Steve Grimes NCDOT Right of Way
Bill Zerman NCDOT Hydraulics Unit

Katina Lucas NCDOT STIP and Feasibility Studies

Ali Koucheki NCDOT Utilities Unit
Kristina Solberg NCDOT Division 13
Rick Tipton\* NCDOT Division 13
Ken Putnam City of Asheville

Justin Hembree\* French Broad River MPO
Lyubov Zuyeva French Broad River MPO

Jennifer Harris **HNTB** Chris Werner **AECOM** Joanna Rocco AECOM Neil Dean **AECOM** Andrew Bell AECOM Elizabeth Wargo AECOM Celia Foushee **AECOM** John Richards AECOM

An executive summary of the main design related concerns regarding the project follows. A statistical overview of all the comments and a summary of the major design comments follow the executive summary. A summary of comments and responses not potentially causing design changes follows the design related comments.

<sup>\*</sup>Attended meeting by phone.

#### **EXECUTIVE SUMMARY:**

- The I-26 Connector project is an interstate freeway project that would connect I-26 in southwestern Asheville to US 19-23-70 in northwest Asheville and have a total length of approximately 7 miles.
- The project would extend I-26 from I-40 to US 19-23-70 and would allow for the eventual designation of I-26 from Charleston, South Carolina, to Johnston City, Tennessee, should a remaining section (TIP Project A-0010A) from the north end of this project to Mars Hill, North Carolina be completed.
- The project would upgrade and widen I-240 from I-40 to Patton Avenue and then cross the French Broad River as a new freeway to US 19-23-70 slightly south of the Broadway interchange.
- The project is needed to upgrade the interstate corridor to meet current design standards for the interstate system, improve system linkage by connecting I-26 south of Asheville with US 19-23-70, address traffic capacity problems along the existing I-240 corridor (future I-26), and increase the remaining useful service of the Captain Jeff Bowen Bridges.

#### **STATISTICAL OVERVIEW OF COMMENTS:**

#### **Comments Received**

- 1,485 public comments received
- 248 of the comments received were duplicate comments (form letter comments submitted to NCDOT PI (Drew Joyner) and the City of Asheville.

#### **Comment Type**

- Types of comments received include: comment forms, the Contact Us website, emails, the Engage NCDOT website, form letters, form letters modified, hotline calls, individual letters, petitions, the official transcript, and other.
- 785 comments were Form Letters and Form Letters (with slight modifications)
- 276 comments were emailed
- 182 comments were received from "Contact Us" comments

#### **Comment Subject**

- Form Letters included the following subjects: Other Alternatives, Social Impacts, Induced Socioeconomic Impacts, Environmental Justice, Traffic, Separating Local and Interstate Traffic, Multimodal, 6 versus 8 Lanes, Overall Project Footprint, General Design Comments, Other Accessibility, Residential Locations, and Business Relocations.
- Design related comments included the following subjects: Environmental Justice, Separating Local and Interstate Traffic, Multimodal, 6 versus 8 Lanes,

- General Design Comments, Westgate Access, Other Accessibility, Residential Relocations, and Business Relocations.
- Multimodal comments were the highest of the comment subjects received (1,011 comments with Form Letters and Form Letters Modified and 302 comments without).

#### **Agency Comments Received**

- Federal Agencies:
  - o United States Environmental Protection Agency
  - National Marine Fisheries Service
  - United States Department of Interior
  - United States Army Corps of Engineers
- State Agencies:
  - o NC Historical Preservation Office
  - o The State Clearinghouse:
    - NC Department of Environmental Quality, NC Wildlife Resources Commission, NC Natural Heritage Program, NC Waste Management Solid Waste Section and Inactive Hazardous Sites Branch
- Local Agencies:
  - City of Asheville
  - o Asheville Area Chamber of Commerce
  - o Town of Woodfin
  - Several members of the Asheville City Council and Madison County government

#### **Special Interest Group Comments**

Comments received from the Biltmore Company, Asheville Bear Creek Park and Campground, East West Asheville Neighborhood Association, Woodland Hills Neighborhood Association, Asheville on Bikes, Mountain True, Asheville Design Center, Council of Independent Business Owners, Asheville Sierra Club, WECAN, the Southern Environmental Law Center, Montford Neighborhood Association, and I-26 Connect Us.

#### **Project Opinion**

- 22.4 percent (332) generally in favor of the project
- 71.6 percent (1,063) generally opposed of the project
- 6.0 percent (89) unanswered project opinion\_

#### Excluding the form letters:

- 36.8 percent (257) generally in favor of the project
- 54.1 percent (378) generally opposed of the project
- 9.2 percent (64) unanswered project opinion

#### **Preferred Alternative**

- In Section C
  - o 15 comments in favor of Alternative A2
  - 10 comments in favor of Alternative C2
  - o 12 comments in favor of Alternative D1
  - 55 comments in favor of Alternative F1
  - o 40 comments in favor of the No Build Alternative
- In Section A
  - o 97 comments in favor of the No Build Alternative
  - o 52 comments in favor of the Widen Existing Alternative
- In Section B
  - 35 comments in favor of Alternative 3
  - 15 comments in favor of Alternative 3C
  - o 669 comments in favor of Alternative 4
  - o 749 comments in favor of Alternative 4B
  - o 26 comments in favor of the No Build Alternative

Please note, not all comments received included a preference of alternatives.

#### **GENERAL DESIGN RELATED COMMENTS AND RESPONSES:**

#### A.) ENVIRONMENTAL JUSTICE

#### Comment Summary:

There were a total of 288 comments received that expressed Environmental Justice concerns, of which 60 comments were not categorized as form letters. These comments included concerns of impacts to historically known African American and/or low income populations. Neighborhoods/areas specifically described include the Burton Street neighborhood, Hillcrest Apartments, Montford neighborhood, and the Emma Road area.

#### **General Response:**

As part of the I-2513 Community Impact Assessment Update, an initial threshold screening and evaluation was conducted to determine the relative impact of the I-26 Connector Project on Environmental Justice populations. Through community screening, field studies, demographic research, and agency coordination and public engagement, it was concluded that no communities would experience a high burden, while only two communities would experience a moderate burden. At this stage of project development, the community based effects conclusions and associated mitigation considerations are commensurate with the current level of project design. The information gleaned from the I-2513 Community Impact Assessment Update was summarized in the DEIS and would be considered amongst other project related topics in the determination of which alternative(s) to carry forward in the project development process. As the project proceeds forward with a preferred corridor, and further refinement of alternative design and footprint occurs, the potential for community based effects should become more quantifiable. This will allow for the consideration of project specific benefits and effects as well as mitigation commitments that will be documented in the FEIS.

The Hillcrest Community was evaluated in the CIA and determined to meet the criteria for both low-income and minority populations. Upon further evaluation with regard to the alternatives, it was determined that Alternatives 3 and 3C would have a neutral effect on the community due to the lack of construction on the east side of the French Broad River, while Alternatives 4 and 4B would have a slight benefit to the community. This would primarily be as a result of the improved vehicular, pedestrian, and bicycle traffic to the surrounding areas. As a result, the I-26 Connector Project would not have an adverse impact on the community and thus was not considered an Environmental Justice issue.

Public outreach within communities with protected populations including the Burton Street and Hillcrest neighborhoods is an integral component of NCDOT's project development process in regards to the development of measures to avoid, minimize, or mitigate for project—related impacts. Through community screening, field studies, demographic research, and agency coordination and public engagement, it was determined that the Burton Street community would experience a moderate burden. At this stage of project development, the community based effects conclusions and associated mitigation considerations are commensurate with the current level of project design. As the project proceeds forward with a preferred corridor and further refinement of alternative design and footprint occurs, the potential for community based effects should become more quantifiable. This would allow for further consideration of project-specific benefits and effects as well as mitigation commitments that will be documented in the FEIS.

In assessing the potential for disproportionately high and adverse impacts on protected populations, NCDOT's consideration of community effects on the Burton Street community will include the following:

- Accessibility and mobility
- Physical impacts to land and resources
- Displacement and relocation
- Community cohesion
- Noise cultural resources
- Visual quality
- Air quality
- Community green spaces
- Multi-modal accommodations

#### **B.) SEPARATING PATTON AVENUE AND INTERSTATE TRAFFIC**

#### Comment Summary:

There were a total of 662 comments received that expressed separating Patton Avenue and Interstate Traffic as a concern, of which 182 comments were not categorized as form letters. Comments in this subject expressed interest or approval over converting Patton Avenue into a boulevard, creating a "gateway" into downtown Asheville, or separating I-26 traffic and Patton Avenue traffic.

#### **General Response:**

There are two basic concepts used in the I-2513B proposed alternatives for re-configuring traffic patterns at the Existing I-240/I-26/Patton Avenue interchange. Alternates 3 and 3C will remove I-26 traffic from Patton Avenue, but would maintain existing patterns for I-240 traffic. In turn, Alternates 4 and 4B would remove all interstate traffic from Patton Avenue and the Jeff Bowen Bridges by realigning I-240 in order to separate the interstate traffic from vehicles using Patton Avenue. Alternatives 4 and 4B were developed based on input from the public and are favored by a majority of those who commented on this aspect of the project.

#### C.) MULTIMODAL

#### **Comment Summary:**

There were a total of 1,011 comments received that expressed Multimodal issues as a concern, of which 302 comments were not categorized as form letters. Multimodal comments included the discussion of bicycle and pedestrian accommodations, including bus or light-rail transportation as an alternative, and any other form of transportation aside from automobiles. Several comments included concerns regarding the width of bike lanes and sidewalks and the lack of accommodations shown on the Public Hearing maps. There were several comments discussing the potential trend towards autonomous vehicles, which would reduce congestion on major highways, ultimately eliminating or reducing the need to add lanes due to this project.

#### **General Response:**

The current designs for the Detailed Study Alternatives, which impacts and analysis have been based upon and summarized within the 2015 DEIS, are prepared during the initial phase of the project to allow for a comparison of the Detailed Study Alternatives and are used as the basis for selection of the preferred alternative. Once the preferred alternative has been selected, preliminary designs are then prepared, which are based upon very detailed terrain mapping and underground utility information. The preliminary designs for the Detailed Study Alternatives have been developed with consideration to the current City of Asheville Pedestrian Plan, City of Asheville Comprehensive Bicycle Plan, City of Asheville North Carolina Parks, Recreation, Cultural Arts, & Greenways Master Plan, and the Buncombe County Greenways and Trails Master Plan. Pursuant to NCDOT policies and quidelines regarding bicycle and pedestrian accommodations and complete streets, in areas where existing sidewalks are being disturbed, the designs show these sidewalks being replaced as a part of the proposed designs. In areas where the various plans propose future pedestrian accommodations, the designs have been developed to accommodate or not preclude these elements from being constructed by the various agencies. Additionally, in some areas of the project, existing roads have bicycle accommodations which may include widened paved shoulders or the use of sharrow lane markings. NCDOT will replace these accommodations in kind.

When development of the preliminary designs for the preferred alternative begins, all design criteria is re-examined and updated to utilize the latest adopted design guidelines available from sources such as AASHTO, FHWA, the National Center for Safe Routes to Schools, the US Access Board, and guidance documents produced by the NCDOT. When NCDOT Standard typical sections do not agree with local standard, NCDOT will coordinate

with local agencies with regards to including local standards in the designs, and the associated cost-sharing for which the local agency is responsible.

While studies have been done that show autonomous vehicles may reduce roadway in certain conditions, many variables exist when attempting to determine the actual impacts automated vehicles will have on traffic conditions. These variables include, but are not limited to:

- Reliability and safety of automated vehicles
- Percentage, or ratio, of overall vehicles using the roadway that are automated at a specific point in time
- Maximum flow rate of roadways based on the ratio of automated vehicles using the roadways
- Induced demand on roadways based on the willingness of drivers to make trips in automated vehicles they would have been otherwise unwilling to make
- Suitability of current roadway design characteristics to effectively increase the capacity of roadways for automated vehicles
- Implementation timeframe and implementation rate of automated vehicles into the roadway network
  - With all of these variables in play, it is extremely difficult to predict the impact of automated vehicles to the current roadway network.

#### D.) RESIDENTIAL RELOCATIONS

#### **Comment Summary:**

There were a total of 787 comments received that expressed concerns regarding residential relocations and displacements, of which 153 comments were not categorized as form letters. Residential relocation comments included concerns over the lack of land available for affordable housing, the number of residential displacements in an area due to the proposed alternative, and specific neighborhood concerns.

#### General Response:

A certain amount of private property must be acquired to provide North Carolinians with safer and more modern transportation systems. When a property is shown to be impacted, many factors have been taken into consideration and it has been determined that the affected site is the best location for the transportation artery. The footprints of each alternative shown in the public hearing maps are a "worst-case" scenario, as the purpose is to compare alternatives to select a preferred alternative corridor. Once a preferred alternative is selected, the design will be further refined and take into consideration feasible engineering, safety, economics, public well-being, and the least amount of injury and inconvenience to the public. NCDOT will continue to further avoid and minimize residential relocations due to the project to the greatest extent practicable.

In response to comments regarding affordable housing, according to demographic calculations, approximately 8.6 percent of houses in the demographic study area are vacant, while approximately 10.2 percent are vacant within the City of Asheville. In addition, according to the NCDOT relocation reports, while additional housing programs would be needed, it is estimated that there would be adequate housing available during the relocation period. The relocation reports also indicate that there would not be a

problem of housing within the financial means of those displaced. A copy of the relocation reports can be found in appendix C of the DEIS.

Section 4.1.2.3 of the DEIS references the Consolidated Strategic Housing and Community Development Plan, which emphasizes the need for affordable housing, as well as the need for improvements that will aid in community development. The plan notes that the lack of housing supply is prevalent across the entire region (Buncombe, Henderson, Madison, and Transylvania counties) and across all income levels. The trend indicating the need for affordable housing seems to be driven by social and community influences including neighborhood redevelopment and gentrification and is likely to continue irrespective of the I-26 Connector Project.

The project is not anticipated to permanently affect any of the 1,955 Asheville Housing Authority affordable housing units. Some temporary housing impacts are anticipated in the Hillcrest community due to the modification of Patton Avenue as part of Alternatives 4 and 4B, while the Pisgah View apartments may be temporarily impacted by the modification of Amboy Road as part of Section A.

#### **E.) BUSINESS RELOCATIONS**

#### **Comment Summary:**

There were a total of 281 comments received that expressed concerns regarding business relocations and displacements, of which 58 comments were not categorized as form letters. Business relocation comments included concerns over the number of businesses to be taken due to the proposed alternative.

#### General Response:

The Department is committed to limiting the number of business relocations due to this project. Once a preferred alternative is selected, the design will be further refined and further take into consideration feasible engineering, safety, economics, public well-being, and the least amount of injury and inconvenience to the public. NCDOT will continue to further avoid and minimize relocations due to the project to the greatest extent practicable.

# F.) 6 VERSUS 8 LANES

#### Comment Summary:

There were a total of 651 comments received that expressed concern over 6 versus 8 lanes of traffic through I-240 in Section A, of which 199 comments were not categorized as form letters. Comments in this subject expressed approval or disapproval of the additional lanes in Section A. Several comments stated approval of fewer lanes due to the reduction of impacts to residential areas and environmental resources.

# **General Response:**

As was communicated at the 2015 Open House/Public Hearing, the next step in the project is to select a corridor as the preferred alternative, after which NCDOT will prepare an updated traffic forecast based on the FBRMPO recently adopted travel demand model. The updated forecast will be prepared for multiple scenarios, which may include four lanes, six lanes, eight lanes and ten lanes if needed. NCDOT will utilize the updated traffic forecast to update the traffic operation requirements and reevaluate the

design criteria, including the typical section number of lanes, which will be used to refine the designs for the preferred alternative. The results of the analyses will be included in an updated traffic capacity analysis and carried forward into the preliminary designs for the preferred alternative.

FHWA and NCDOT agree that an alternative with the smallest footprint will have fewer impacts to the human and natural environment. It should be noted that the right of way required for a six lane facility is approximately 3.7 acres less than what is required for an eight lane facility. The updated forecast will be prepared for multiple scenarios, which may include four lanes, six lanes, eight lanes and ten lanes if needed. NCDOT will utilize the updated traffic forecast and FHWA's LOS D requirement to update the traffic operation requirements, which will be used to refine the designs for the preferred alternative. The results of the analyses will be included in an updated traffic capacity analysis and carried forward into the preliminary designs for the preferred alternative. Updated information regarding direct, indirect and cumulative effects due to the project will also be included in the FEIS.

# **G.) WESTGATE ACCESS**

#### **Comment Summary**

There were a total of 21 comments received that expressed concern regarding access to the Westgate Shopping area, of which 19 comments were not categorized as form letters. Comments concerning Westgate access were made in regards to Alternatives 3 and 3C and accessing the area from the south and from Haywood Road.

# **General Response:**

As presented at the Corridor Public Hearing Maps for Alternatives 3 and 3C, I-26 access to the Westgate Shopping Center will be relocated. The new access would be provided via a loop connection to westbound Patton Avenue and then an access road that comes in to the back of the development. This new access route increases the distance that customers must travel from the nearest freeway exit to the shopping center by approximately 0.5 miles, but has been described as a "circuitous route" into the shopping center.

While preparing for the hearing, the Department was presented with a hotel site plan on the Westgate property which will require re-evaluation of the above described access. Two options have been developed to improve access to Westgate Shopping Center for Alternatives 3 and 3C. The studies are conceptual in nature and have not been fully vetted. Option #1 reconfigured the I-26WB/Patton Avenue WB loop to provide a ramp into the back of the Westgate Shopping Center. Option #2 revised the designs on the south side of Patton Avenue to provide a slip ramp and a roundabout in order to provide a similar access configuration as currently utilized. Should either Alternative 3 or 3C be selected as the Preferred Alternative, Option 2 will be further investigated from a design and traffic operations perspective, and implemented into the designs if feasible.

#### H.) OTHER ACCESSIBILITY

# **Comment Summary:**

There were a total of 239 comments received that expressed concern regarding other accessibility issues as a result of the project, of which 20 comments were not categorized

as form letters. Comments concerning other accessibility issues included reduced access to residences or businesses, accessing Hanover Street and/or Haywood Road.

# **General Response:**

NCDOT recognizes that there will be substantial changes access changes to local neighborhoods and businesses within the study area due to the project. The Department is committed to minimizing adverse effects due to these necessary changes. Currently, in order for I-26W traffic to access Haywood Road, it must exit onto Hanover Street, a narrow city street lined with residences. As proposed in I-2513A, this access will be modified by constructing a tight diamond interchange with all ramps terminating on Haywood Road. The new interchange will eliminate access from Hanover Street to Haywood Road, but since the surrounding neighborhood is laid out in a grid pattern, Hanover Road access will be maintained by using Richmond and Pennsylvania Avenues. Additionally, this interchange reconfiguration will improve the safety of the traveling public by reducing the risk of wrong way traffic entering I-26W from Montana Avenue.

Another accessibility issue identified in public comments relates to I-26 EB traffic that wants to access Haywood Road; Alternative 4B is the only alternative to provide direct access to Haywood Road. For Alternatives 3 and 3C, traffic making this movement must exit I-26 EB near the Westgate Mall and traverse a series of service roads and traffic signals to access Haywood Road. Traffic making this movement in Alternative 4 would also have to exit I-26 EB near the Westgate Mall and then traverse a series of ramps to and a traffic signal to reach Haywood Road.

# **GENERAL DESIGN COMMENTS**

#### Comment Summary:

There were a total of 483 comments received that expressed general design related concerns, of which 234 comments were not categorized as form letters. These comments included concerns regarding design related issues that were not categorized by other subjects. Common remarks included the proposed widening of Amboy Road, the number of flyovers, interchange designs, the number of lanes on the Bowen Bridges, congestion at Exit #44, and coordinating designs with local plans.

#### **General Response:**

Design concerns will be further studied in the Preliminary plans phase after selection of a preferred alternative. Specific issues such as the number of flyovers and interchange configurations will vary depending on the selected alternative. Other issues include:

In Section A, there were multiple comments suggesting that the proposed four lane typical section of Amboy Road should be reduced to two lanes; when the new traffic model is available, this typical will be re-evaluated and reduced if possible.

There were several requests for improvements outside of the scope of this project, including requests for stop signs, speed bumps, other traffic control devices, police enforcement, signal pre-emption for transit and emergency vehicles, and improvements to Park and Ride Facilities. These issues are local responsibilities and would require agreements addressing the construction and maintenance of these facilities in order to include in this project.

# RESPONSES TO SPECIFIC PUBLIC COMMENTS (DESIGN RELATED)

## A.) Fairfax Avenue Connection to Amboy Road Extension

#### **Comment Summary:**

In the existing conditions, Fairfax Road intersects Brevard Road approximately 275-feet north of the I-26 EB exit ramp onto NC 191. As shown on the I-2513A Hearing map, the Amboy Road extension intersects NC 191 in the location that Fairfax Avenue currently intersects NC 191; Fairfax Avenue was connected back to Amboy Road extension to maintain a similar traffic pattern in future conditions. Several comments indicated that Fairfax Avenue is a narrow neighborhood street that is often used as a cut-through route. Citizens expressed concern that this road would become more heavily used. Additionally, one commenter stated that pleas to the City for traffic control measures aimed at slowing vehicles in the neighborhood had been denied. Some of the commenters suggested that Fairfax Avenue should not tie-in to Amboy Road.

#### Response:

The Department will investigate eliminating the intersection of Fairfax Avenue to Amboy Road. However, since there is still connectivity from Fairfax Road to NC 191 via High Court Entrance, it is not likely that eliminating the intersection will stop all non-neighborhood traffic.

# B.) Amboy Road Extension impacts to Carrier Park.

# **Comment Summary:**

Due to widening Amboy Road, there are excessive impacts to Carrier Park.

#### Response:

Impacts to Carrier Park have been maintained to a minimum and primarily consist of grading activities in easements. In order to mitigate and minimize permanent impacts to the park, the Department is proposing a retaining wall parallel to Amboy Road to avoid an existing structure. Approximately 300' of the French Broad River Greenway will be impacted in the proposed intersection of Old Amboy Road and Amboy Road Extension, but this will be replaced in kind as part of the construction of this project.

#### C.) Hardees/Bluestone, LLC

#### Comment Summary:

As currently designed, the combined effects of the impacts would render the property unusable for its current and best use. The slope stakes extend approximately 35' into the property and the R/W approximately 47' into the property. The ramp is designed for 2 lanes. There is a 35'+/- median between the ramp and the loop.

# Response:

It may be possible to change the ramp typical and tighten up the median area between the ramp and the loop in order to substantially reduce impacts to the Hardee's.

# D.) Community Baptist Church in Burton Street

#### **Comment Summary:**

Citizen discusses several ways to avoid the proposed impacts to the Community Baptist Church in Burton Street, including extending the retaining wall, shortening or narrowing the

Haywood Road ramp, shifting to "an alternative high alignment to the east", or adding a 6 lane option.

# Response:

Further efforts to avoid and minimize impacts to property within the Burton Street neighborhood including Community Baptist Church will occur during refinement of design of the preferred alternative once it is selected.

#### **E.) CITY OF ASHEVILLE COMMENTS**

**Comment Summary:** 

Section A - Comment Summaries:

A1. The COA strongly encourages the use of an updated Travel Demand Model

#### Response to Comment A1:

A2. NCDOT has received the travel demand model for use and is currently in the process of completing model runs and traffic forecast scenarios for 4, 6, 8, and 10 lanes (if needed). The updated traffic forecast will be used to refine the designs for the LEDPA. The Haywood Road Bridge does not seem to include complete street elements. The COA encourages complete streets elements consistent with NACTO guidelines. COA is specifically requesting a minimum sidewalk width of 6', bicycle lanes, reduced lane widths and intersection dimensions, and reduced intersection radii.

## Response to Comment A2:

NCDOT is committed to Complete Streets improvements and will coordinate efforts with the City of Asheville to incorporate these amenities into the project in compliance with design and cost-sharing guidelines, while trying to avoid or minimize impacts to the various constraints along the Haywood Road Corridor.

A3. COA strongly prefers a two lane typical section on Amboy Road.

#### Response to Comment A3:

See response to A5.

A4. "Amboy Road is not pedestrian and bicycle friendly with the proposed 4-lane cross-section which is recommended simply to match the proposed design for project #U-4739. The City of Asheville is currently designing a project identified as RADTIP which is a complete streets project along Lyman Street/Riverside Drive from Amboy Road (near the French Broad River) to Hill Street. Construction will begin during Calendar Year 2017. The proposed cross-section along the southern section of the project includes two travel lanes, sidewalks, a greenway (multi-use transportation path), and a protected two-way bikeway (1 bicycle lane in each direction). In addition, to 2040 Metropolitan Transportation Plan (MTP) no longer recommends major widening for project # U-4739 but instead recommends spot widening, roadway modernization and access management with complete streets elements. The City of Asheville strongly encourages NCDOT to redesign Amboy Road to be consistent with the City's ongoing project with a design speed of no more than 40 mph."

#### Response to Comment A4:

See response to A5.

A5. The typical section for Amboy Road does not provide enough room for the City's preferred sidewalk cross-section.

# Response to Comments A3, A4, and A5:

The Amboy Road typical section was developed based on the capacity analysis for the project. Once a preferred alternative is selected, the typical section will be reevaluated based on the updated traffic forecast and updated travel demand model.

NCDOT is committed to Complete Streets improvements and will coordinate with the City of Asheville, after the selection of the Preferred Alternative, with regard to incorporating these amenities into the project in compliance with design and cost-sharing guidelines.

A6. The City of Asheville appreciates addition of the greenway from Haywood Road to the Jeff Bowen Bridges. They encourage the use of a wider typical based on AASHTO and NACTO Guidelines. Additionally the greenway should have 2 way bicycle pavement markings.

#### Response to Comment A6:

The Greenway Design is based on AASHTO's 1999 <u>Guide for the Development of Bicycle Facilities.</u> After selection of a preferred alternative and the project continues with preliminary designs, all design criteria will be re-evaluated to meet the requirements of the design guidelines which are currently accepted for use by the Department.

A7. The closing of Haywood Road adversely impacts transit routes W1 and W2 regarding its service to the Pisgah View Apartments (a public housing complex).

#### Response to Comment A7:

Transit stops in the Pisgah View Apartments will not be directly affected by the proposed project. However, with the closing of Hanover Street at Haywood Road transit routes W1 and W2 will have two existing stops on Hanover Street impacted; these are at Montana Street and at Haywood Road. Roadway improvements may be required to assist the City of Asheville to improve Montana Street and/or Michigan Avenue in an effort to re-route buses. The City of Asheville may lose one stop at Hanover Street and Haywood Road, however, the existing stop at Haywood Road and Michigan Avenue is only approximately 800' from the eliminated bus stop.

After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville regarding transit service throughout the design and construction phases.

A8. The City encourages NCDOT to include bicycle/pedestrian infrastructure at the beginning/end of the Hominy Creek Greenway at Hominy Creek Road.

#### Response to Comment A8:

A9. The NCDOT improvements would include I-240 bridging of Hominy Creek Road as well as the Hominy Creek Greenway, similar to the existing conditions. These designs do not preclude the City of Asheville from implementing bicycle/pedestrian infrastructure at the beginning/end of the Hominy Creek Greenway at Hominy Creek Road. NCDOT will continue to coordinate with the City of Asheville regarding bike and pedestrian accommodations throughout the design and construction phases. The city is concerned about the impact to the FBR Greenway during construction of the retaining wall.

## Response to Comment A9:

NCDOT will coordinate with the City of Asheville regarding maintenance of traffic on the French Broad River Greenway during development of final plans for the project. At that time, the Department will have additional information on designs that will impact the final MOT concepts.

A10. The City would like to collaborate with NCDOT on the design of Amboy Road and Brevard Road interchanges to identify opportunities to implement urban design strategies and the use of roundabouts.

#### Response to Comment A10:

After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases.

#### Section B Comment Summaries:

B1. The COA would like to see the Greenway to remain a separate facility from Hazel Mill Road and to utilize culverts for any road crossings. Additionally, they would like to see the greenway utilize NACTO and AASHTO guidelines. COA would like to see the Greenway extend southward to connect to the FBR Greenway and eastward to connect with Clingman Avenue.

#### Response to Comment B1:

The greenway design is based on AASHTO's 1999 <u>Guide for the Development of Bicycle Facilities.</u> NCDOT will take these requests for alignment revisions under advisement when developing preliminary plans on the preferred alternative. NCDOT will evaluate the City of Asheville's requests for alignment revisions when refining the preliminary plans for the Preferred Alternative. The greenway alignment in this area may be affected while developing preliminary plans on the preferred alternative as a result of addressing other comments. After selection of a preferred alternative and the project continues with preliminary designs, all design criteria will be re-evaluated to meet the requirements of the design guidelines which are currently accepted for use by the Department.

B2. COA encourages inclusion of the Emma Greenway, the Montford Greenway, and the Smith-Mill Creek Greenways in the project. COA notes that there appears to be an opportunity to "daylight" Smith Mill Creek as it runs through the project and encourages NCDOT to pursue this.

## Response to Comment B2:

The NCDOT will coordinate with the City of Asheville to refine the preliminary designs for the Preferred Alternative thus that construction of the greenway by others will not be precluded.

Designs as presented in the 2015 DEIS for Alternatives 4 and 4B include bridging Smith Mill Creek for all new crossings. NCDOT is evaluating the feasibility of bridging all proposed crossings of Smith Mill Creek for Alternatives 3 and 3C, which will be completed prior to selection of the Preferred Alternative. It was clarified that the City of Asheville was requesting NCDOT daylight Smith Mill Creek that is currently flowing under the existing Patton Avenue, which may be eradicated upon construction of the LEDPA.

B3. COA is concerned that there is no direct access to Haywood Road from I-26 EB under Alts 3 and 3C, which may encourage traffic to use neighborhood streets (Virginia and Fairfax) to gain access to Haywood road.

# Response to Comment B3:

NCDOT is aware of this circuitous aspect of these alternatives which have been discussed in the DEIS. Alternative 4B is the only alternative to provide direct access to Haywood Road. For Alternatives 3 and 3C, traffic making this movement must exit I-26 EB near the Westgate Mall and traverse a series of service roads and traffic signals to access Haywood Road. Traffic making this movement in Alternative 4 would also have to exit I-26 EB near the Westgate Mall and then traverse a series of ramps to and a traffic light to reach Haywood Road. After selection of a preferred alternative, NCDOT will reevaluate the design configurations based on any updated data, including an updated traffic forecast which is based upon the updated travel demand model.

B4. The COA is concerned about the adverse impacts to Westgate Shopping Center in Alternatives 3 and 3C.

#### Response to Comment B4:

NCDOT is aware of this aspect of Alternatives 3 and 3C. Upon receiving similar comments on the 2015 DEIS, NCDOT has investigated minor design revisions which could be implemented for these alternatives, which would improve the access to the Westgate Shopping Center. After selection of a preferred alternative, NCDOT will reevaluate the design configurations based on any updated data, including an updated traffic forecast which is based upon the updated travel demand model.

B5. COA is concerned about adverse impacts to Burton Street Community in alternatives 3 and 3C and encourages a collaborative planning process to minimize the footprint.

# Response to Comment B5:

NCDOT has identified impacts to the Burton Street Community in the DEIS. After selection of a preferred alternative, NCDOT will coordinate to refine the designs to further avoid or minimize impacts to the Burton Street neighborhood, as well as other neighborhoods that may be impacted by the project.

B6. COA encourages NCDOT to minimize traffic on the Bowen Bridges

# Response to Comment B6:

Implementation of any Detailed Study Alternative would reduce travel demand on the Captain Jeff Bowen Bridges to the point where the traffic operations would operate acceptably for the timespan analyzed for the I-26 Connector project (a period of 20 years into the future). Therefore, should the I-26 Connector project be constructed, the lifespan of the existing bridges would not be dictated by the amount of traffic using the bridges, but would solely be determined based upon the integrity of the bridges and thus the corresponding sufficiency rating. Based on 2012 data provided by NCDOT Bridge Inspection Report, both bridges have a Sufficiency Rating in the high 50's (bridges must have a rating below 50 to be eligible for replacement). Regular maintenance can keep the sufficiency rating above 50 for the foreseeable future.

B7. COA is concerned that 3 and 3C will not eliminate weaving and congestion on the Bowen Bridges.

# Response to Comment B7:

All alternatives will reduce traffic on the Bowen Bridges. Alternatives 3 and 3C do not remove interstate traffic from the Bowen Bridges and therefore will not alleviate the weaving; however, these alternatives do eliminate congestion by taking I-26 traffic off of the Jeff Bowen Bridges and providing another access to northbound I-26. Alternative 4 and 4B further limit traffic on the Bowen Bridges by also moving I-240 traffic onto new infrastructure.

B8. COA is concerned about adverse impacts to business and industrial areas in 3 and 3C

#### Response to Comment B8:

After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases to further avoid or minimize impacts.

B9. The COA strongly encourages continuous sidewalks along Patton Avenue from the west side of the FBR to Clingman Avenue in Alternatives 4 and 4B.

# Response to Comment B9:

After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville with regard to including this request as appropriate in compliance with NCDOT policies on pedestrian facilities and cost sharing.

B10. The City of Asheville strongly encourages NCDOT improve access to the Hillcrest Community.

#### Response to Comment B10:

Alternatives 3 and 3C do not impact the existing access to the Hillcrest community. Alternatives 4 and 4B include access modifications to the Hillcrest Community due to the realignment of I-240 and the reconfiguration of Patton Avenue. As a result of the proposed Alternative 4 and 4B designs, access between the Hillcrest Community and

surrounding areas will be modified. Access between east and west Asheville and the Hillcrest Crest Community and surrounding areas would be improved. However, access between Riverside Drive, the Hillcrest Community, and surrounding areas would no longer have direct access to and from I-240. After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases in order to refine the designs.

- B11. Pros and Cons of Alternatives 3 and 3C: Lower overall costs, does not separate traffic on the Jeff Bowen bridges, adverse impacts to the Burton Street Community, adverse impacts to Westgate Shopping Center.
- B12. Pros and Cons of 4 and 4B: separates traffic, minimizes traffic on the Bowen bridges, the existing bridges could accommodate multi-use facilities, improved transit service between West Asheville and Downtown, higher costs.

# **Section C Comment Summaries:**

C1. The COA encourages minimization of the project footprint near Exit #44 through the use of retaining walls tight geometry for the CD road. They state Alternative F-1 minimizes the footprint.

#### Response to Comment C1:

See response to C3.

C2. Will I-4759 provide much of the needed relief at Exit 44?

#### Response to Comment C2:

See response to C3.

C3. COA suggests an additional exit ramp I-40 WB onto Smoky Park Highway Eastbound at Exit #44 to relieve congestion at the existing ramp.

#### Response to Comments C1, C2, and C3:

I-4759 has specific needs for which it is being developed to address. NCDOT will re-evaluate the proposed Exit 44 configuration after selection of a preferred alternative.

As the project develops and a preferred alternative is selected, the data used to develop designs is often updated and revised. After the Preferred Alternative is selected, the designs will be re-evaluated based on any updated data, including an updated traffic forecast which is based upon the updated travel demand model. NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases in order to refine the designs.

C4. COA is concerned about the need to widen I-40 east of the Brevard Road interchange since there is no data to support the proposed widening and it adds significant cost.

#### Response to Comment C4:

Improvements east of the Brevard Road interchange are required to safely reduce the lanes from the proposed improvements required between I-26 and Brevard Road

interchanges. The lane reduction geometry is based on AASHTO's 2011 <u>A Policy on Geometric Design of Highways and Streets.</u>

After the Preferred Alternative is selected, the designs will be re-evaluated based on any updated data, including an updated traffic forecast which is based upon the updated travel demand model. NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases in order to refine the designs.

C5. In general, if there is an additional \$100,000,000 to spend on this project, the COA prefers the additional investments be made in Section B rather than Section A.

#### Response to Comment C5:

Your comment is noted.

# F.) I-40 Eastbound to I-26 Westbound

#### **Comment Summary:**

Commenter is concerned with the CD road/Flyover to make the movement from I-40 Eastbound to I-26 WB. The commenter expresses concerns that these are unnecessary and cause too many impacts

#### Response:

The need for CD roads will be re-evaluated during development of preliminary designs on the preferred alternative. The FBMPO recently released a new updated traffic model that may impact the required geometry at this location.

# **G.) Haywood Road Business impacts**

#### Comment Summary:

Can the businesses in the Southwest quadrant of the proposed Haywood Road interchange be saved?

# Response:

The design team investigated options to avoid these impacts, which included the potential of eliminating the eastbound right turn lane onto the eastbound I-26 on ramp. Although the impacts were slightly reduced, it was not possible to eliminate impacts to the structures in the southwest quadrant of this interchange. The next measure to consider would be shifting the realignment of Haywood to the north; however, the proposed alignment of Haywood Road was established to avoid impacts to various historic resources while minimizing impacts to other historic resources.

# **H.) Asheville Design Center Comments**

#### Section A Comment Summaries:

B1. The traffic forecasts are overestimated and capacities are underestimated. Six lanes for this section would be sufficient.

#### Response to Comment A1:

The project level traffic forecast was prepared with all fiscally-constrained projects programmed in the MPO. As such, for the I-26 Connector project, future year no-

build and build scenario forecasts were developed with all fiscally-constrained projects assumed to be funded and in place. Additionally, projects are further developed and evaluated as programmed by the RPOs/MPOs. Based on the FBRMPO MTP at the time, and based on coordination with project officials for the projects to the north and south of the I-26 Connector project along I-26, it was determined that I-26 and Future I-26 should be modeled as a six lane facility at the I-26 Connector project termini.

It is fair to say that adding travel lanes to a roadway can increase the amount of traffic that will travel that road. The DEIS, traffic forecast, and traffic capacity analysis do not hide this fact, as was shown in the table comparing the projected traffic volumes at the project termini between the future year no-build and future year build scenarios. However, the traffic volumes that have been added along I-26 and Future I-26 have been redistributed from other roadways. The travel demand model uses a finite number of vehicles and trips for every scenario in the future year, and adding capacity along a roadway does not increase the overall number of trips within the travel demand model network.

The per-lane capacity on freeways is substantially higher than the per-lane capacity along other facilities. The addition of one freeway lane to a facility is the most efficient use of added capacity, since it will allow the most vehicles to travel. In this instance, the failure to increase capacity on I-26 would shift the capacity strain to other facilities (arterials, collectors, etc.), which would require more added capacity than I-26. In short, the overall travel demand within the model does not change based on the capacity assigned to a certain roadway. Rather, that demand is simply shifted around based on the capacity assigned to all roadways within the model.

B2. Amboy road is overdesigned. Since U-4739 no longer calls for 4 lanes, the typical section can be reduced. The alignment could be revised to be closer to the freeway and not use a high speed curve. NCDOT should consider the same ramp configuration for WB- I-240 as EB I-240 between Amboy and Brevard; this would eliminate the need for the new roadway.

# Response to Comment A2:

The Amboy Road typical section was developed based on capacity analysis for the project which included the previously described improvements on U-4739. Once a preferred alternative is selected, the typical section will be re-evaluated based on data that is currently under review by the FBRMPO.

NCDOT will design and construct Amboy Road to satisfy capacity requirements, and will coordinate bicycle and pedestrian improvements with the City of Asheville. In compliance with NCDOT policies, City of Asheville will be required to participate with funding these improvements.

*B3.* Include Complete Street Designs on Amboy Road; there is no need for high speed curves to and from the on/off ramps.

#### Response to Comment A3:

NCDOT is committed to Complete Streets improvements and will coordinate efforts with the City of Asheville, after the selection of the preferred alternative, with regard to incorporating these amenities into the project in compliance with design and cost-sharing guidelines, while trying to avoid or minimize impacts to the various constraints along the Haywood Road Corridor.

The radii at the base of the ramps are not to encourage high speeds, but are used to allow a turning truck to access the freeway without leaving the roadway surface. Trucks have a significant amount of off-tracking when turning, and therefore need larger radii.

#### **Section B Comment Summaries:**

B1. Alternatives 3 and 3C do not provide direct access from I-26 SB to Haywood Road.

# Response to Comment B1:

NCDOT is aware of this circuitous aspect of these alternatives which have been discussed in the DEIS. Alternative 4B is the only alternative to provide direct access to Haywood Road. For Alternatives 3 and 3C, traffic making this movement must exit I-26 EB near the Westgate Mall and traverse a series of service roads and traffic signals to access Haywood Road. Traffic making this movement in Alternative 4 would also have to exit I-26 EB near the Westgate Mall and then traverse a series of ramps to and a traffic light to reach Haywood Road. After selection of a preferred alternative, NCDOT will reevaluate the design configurations based on any updated data, including an updated traffic forecast which is based upon the updated travel demand model.

B2. Alternatives 3/3C do not solve the problems that exist in the I-240/US-19/26/Patton Avenue Interchange on the east side of the river. According to the Roadway Deficiencies Report, Alternatives 3/3C would each have 16 deficiencies while Alternate 4 has six and Alternative 4B has three.

#### Response to Comment B2:

Comment is noted.

B3. There is very poor access to Westgate and Murphy Hill in Alternatives 3/3C. Access would be more convenient in Alternatives 4/4B

# Response to Comment B3:

NCDOT is aware of this aspect of Alternatives 3 and 3C. Upon receiving similar comments on the 2015 DEIS NCDOT has investigated minor design revisions which could be implemented for these alternatives, which would improve the access to the Westgate Shopping Center. After selection of a preferred alternative, NCDOT will reevaluate the design configurations based on any updated data, including an updated traffic forecast which is based upon the updated travel demand model.

B4. Costs and Impacts for all alternatives could be lowered by tightening up designs with lower speeds for I-240 and ramps, e.g. Hill Street area.

# Response to Comment B4:

Interstate Design Criteria is dictated by FHWA and is in compliance with AASHTO's 2011 <u>A Policy on Geometric Design of Highways and Streets.</u> Upon selection of a preferred alternative, the plans will move into the preliminary design phase and all design criteria will be re-evaluated.

#### **Section C Comment Summaries:**

C1. The new C/D roads along I-40 from I-26 to Exit 44 have major residential impacts. Westbound C/D roads impact Hominy Creek and Clairmont Crest Mobile Home Park. NCDOT should retain the existing 8-lane section on I-40 since weaving problems will be reduced in the future when the Liberty Road interchange is constructed.

# Response to Comment C1:

I-4759 has specific needs for which it is being developed to address. NCDOT will reevaluate the proposed Exit 44 configuration after selection of a preferred alternative.

As the project develops and a preferred alternative is selected, the data used to develop designs is often updated and revised. After the Preferred Alternative is selected, the designs will be re-evaluated based on any updated data, including an updated traffic forecast which is based upon the updated travel demand model. NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases in order to refine the designs.

# **MEETING SUMMARY**



To: Project File

From: Celia Foushee

**AECOM** 

Date: April 5, 2016

RE: I-2513 Working Group Meeting #1

NCDOT STIP Project I-2513 (I-26 Connector)

# Meeting Attendees:

David Brown – NCDOT Board Member Alan McGuinn – Asheville Design Center

Jay Swain, NCDOT – Division 3Ken Putnam – City of AshevilleRick Tipton, NCDOT – Division 3Gwen Wisler – City of AshevilleDerrick Weaver, NCDOT – PDEABruce Emory – City of AshevilleMichael Wray, NCDOT - PDEAJulie Mayfield – City of AshevilleChris Werner – AECOMTodd Okolichany – City of Asheville

Joanna Rocco – AECOM Celia Foushee – AECOM

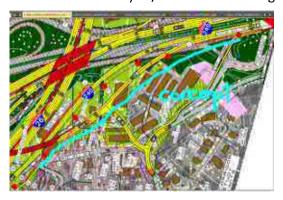
The project team met with the Working Group at 3:15 PM on March 24, 2016 in the Water Administration Conference Room in Asheville City Hall to review comments received from the City of Asheville on the 2015 Draft Environmental Impact Statement. Derrick Weaver reviewed the NCDOT's draft responses to the comments and noted the purpose of today's meeting was to review the general comments of the City of Asheville (see attached presentation and comments highlighted green). He explained, other more technical comments that require input and attendance from specific disciplines, will be held at subsequent Working Group meetings.

Additional discussion points from the meeting are summarized below:

- The Asheville City Board of Education is considering changing a preschool on Haywood Road to K through 3<sup>rd</sup> grade. This could increase pedestrian and vehicle traffic in the area. Gwen Wisler will coordinate with the Asheville City Board of Education regarding the status of this change, which will be communicated to NCDOT during a future Working Group meeting, regarding bicycle and pedestrian comments provided by the City of Asheville.
- It was requested that NCDOT provide to the City of Asheville, a brief 1-2 page summary of requested betterments and associated costs. This information will assist the City in determining if they would like to contribute additional funds or remove certain items. This will be completed once the bicycle and pedestrian Working Group meeting is held and after selection of the Least Environmentally Damaging Practicable Alternative (LEDPA).
- <u>Comment 11:</u> It was agreed by meeting attendees that the Aesthetics Advisory Committee (AAC) should be established after selection of the LEDPA. NCDOT suggested a representative from the Structures Unit to attend a future Working Group meeting to discuss options regarding aesthetic

improvements that are feasible. Ricky Tipton will contact Alice Oglesby, regarding reinitiating the AAC, with input on potential committee members to be discussed in the near future.

- <u>Comment 15:</u> The City of Asheville will clarify their request for NCDOT to consider "bus on shoulder system" to be authorized within the project limits.
- <u>Comment 22</u>: The City of Asheville clarified while buildings on a bridge may not be feasible, implementing a park on bridges would be desirable, referencing Atlanta's construction of parks on bridges. It was noted that this would be considered a betterment which could be further investigated if requested by the City.
- <u>Comment 31:</u> Clarification of the City's request is shownb on the public hearing map for Alternative 3, but is requested to be considered for all section B alternatives, depending on which alternative is selected as the LEDPA. It was clarified that a pedestrian culvert be included under Y7M I to prevent bicycle/pedestrian interaction with vehicular traffic in this area. It was noted that this could be further discussed at the Bicycle/Pedestrian Working Group meeting.

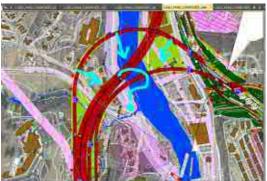


• Comment 34: Clarification of the City's request is shown below on the public hearing map for Alternative 3, but is requested to be considered for all section B alternatives, depending on which alternative is selected as the LEDPA. It was clarified that the City of Asheville was requesting NCDOT daylight Smith Mill Creek that is currently flowing under the existing Patton Avenue, which may be eradicated upon construction of the LEDPA.



- <u>Comment 39:</u> NCDOT will coordinate with NCDOT Bridge Maintenance to determine if additional information can be provided to the City of Asheville regarding the lifespan of the Jeff Bowen Bridges.
- <u>Comment 40</u>: It was clarified that the City of Asheville was requesting NCDOT accurately and thoroughly communicate during the CP3 Meeting, their concerns that Alternatives 3 and 3C will not completely eliminate the existing weaving maneuvers and congestion on the Jeff Bowen Bridges.

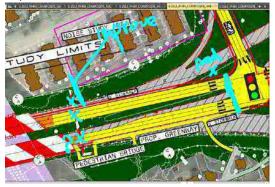
- <u>Comment 41:</u> It was clarified that the City of Asheville does not want the land under the bridges to sit dead and undeveloped. It was explained that the NCDOT Surplus Right of Way disposal process will not be initiated until the FEIS, ROD, and Right of Way Design Plans are completed.
- <u>Comment 42:</u> It was clarified that the City of Asheville was more specifically concerned with the potential visual impacts regarding the flyover bridges. It was requested that the northern flyover bridge to be shifted downward as close to the southern flyover bridge as possible as shown below on the public hearing map.



• <u>Comment 42:</u> It was clarified that the City of Asheville would prefer a more compressed interchange configuration, possibly an urban diamond interchange, which could minimize impacts along Hill Street in the area shown below on the public hearing map.



• <u>Comment 45</u>: It was clarified that the City of Asheville would prefer improved bicycle and pedestrian connectivity between the Hillcrest Community and Patton Avenue (if either Alternative 4 or 4B is selected as the LEDPA) as shown below on the public hearing map. Upon discussion, it was determined the City of Asheville will coordinate with the Asheville Housing Authority regarding this betterment request.



• The CP3 Merger Meeting (LEDPA selection) is anticipated to be held on either May 18 or 19, 2016.

• The next Working Group meeting will be held on May 9<sup>th</sup> from 1-4 p.m. to review the old traffic forecast versus the new traffic forecast. The meeting will also discuss the traffic operations analysis assumptions and methodology that will be used to update the analysis for the Preferred Alternative. This meeting will also include discussion regarding noise impacts, noise mitigation, and noise process/policy.

#### **Action Items**

- Gwen Wisler will coordinate with the Asheville City Board of Education regarding the potential for a preschool on Haywood Road to be changed to K through 3<sup>rd</sup> grade. The status update will be communicated to NCDOT during a future Working Group meeting, regarding bicycle and pedestrian comments provided by the City of Asheville.
- Ricky Tipton will contact Alice Oglesby, regarding reinitiating the AAC, with input on potential committee members to be discussed in the near future.
- NCDOT will coordinate with NCDOT Bridge Maintenance to determine if additional information can be provided to the City of Asheville regarding the lifespan of the Jeff Bowen Bridges.
- NCDOT to send Working Group participants the updated traffic forecast when finalized.
- NCDOT to send Working Group participants the pro/con list which is being prepared to assist in facilitation of the CP3 Merger Meeting and LEDPA selection.
- NCDOT to provide further information regarding lifespan of Jeff Bowen Bridges pending conversations with NCDOT Bridge Unit.
- The City of Asheville will coordinate with the Asheville Housing Authority regarding this betterment request of improving bicycle and pedestrian connectivity between the Hillcrest Community and Patton Avenue (if either Alternative 4 or 4B is selected as the LEDPA).
- Working Group to develop a list of requested improvements following outcome of initial Working Group meetings.



# STIP I-2513 I-26 Connector WORKING GROUP MEETING SIGN IN SHEET

March 24, 2016

Transportation		Waren 24, 2010
NAME	AGENCY/ORGANIZATION	EMAIL
Jay Swain	NCDOT	jswain encotigou
DAVID L-BROWN	NO DOT BOAND MEMBER	dievbrowie beilsoum. NET
ALAN MEGUINN, FAIA	ASHEVILLE DESIGN OTE	elen mayinne arga-design. com
Chris Werner	AECOM	christopher.m. werner @ aecom. com
KEN PUTNAM	COA	KDUTUAMBASHEMLENC, GO
Gwen Wisler	CoA	que mis les @ Zylconneilicon
Julie Menfield	COA	Whenorfiedeadcome. I. con
Bruce Emory	COA-MMTC	emony 226 charter not
Todd OKolichan,	COA	to Kolichan @ashevillencigou
Rick Tiplo	NCDOT	reiotor @ heros. Gov
MICHAEL WRAY	NCDOT	Mawray @ncdot.gov
Celia Fonshee	AECOM	celia fonshee@aecom.com
Joanna Rocco	AECOM	joanna. rocco @ gerom. com
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# Comment to be discussed during 1st Working Group Meeting – March 24, 2016

#	Comment	Response	DISCIPLINE	NOTES
1	The City of Asheville's City Council approved a resolution adopting a complete streets policy on June 26, 2012 (Resolution #12-154). NCDOT adopted a similar policy during July 2009. The City of Asheville strongly encourages the NCDOT to implement complete streets elements consistent with design guidelines published by the National Association of City Transportation Officials (NACTO) along all of the -Y- lines including the bridges that cross the -L- line throughout the entire project for all sections.	NCDOT is committed to Complete Streets improvements and will coordinate efforts with the City of Asheville to incorporate these amenities into the project in compliance with design and cost-sharing guidelines. In areas where the various plans propose future pedestrian accommodations, the designs have been developed to accommodate or not preclude these elements from being constructed by the various agencies.	Design Pedestrian	Discuss on 3/24: Designs have been developed to accommodate or not preclude these elements from being constructed by the various agencies.
2	The City of Asheville has committed \$2,000,000 of co-funding to the I-26 Connector project in order to ensure that local needs are met.	Comment noted.	Funding	Additional discussion regarding this funding should occur during the design phase after a preferred alternative is selected and following betterment requests from the City.
3	As the -Y- lines are streets that are generally local in nature, the City of Asheville strongly encourages collaborative planning throughout the design and construction phases.	Comment noted. After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases.	Design	Discuss on 3/24: As the project moves forward NCDOT will be open for additional discussion and suggestions. If there are other details not already specified, please provide so it can be considered in the design refinements of the Preferred Alternative where feasible.

#	Comment	Response	DISCIPLINE	NOTES
4	The City and County approved a joint resolution regarding the I-26 Connector on March 18, 2014 (Resolution #14-54 and #14-03-12). The resolution included the following quote, "in preparation of the draft Environmental Impact Statement for the project, NCDOT clearly include elements that will address community needs for sound barriers and bicycle, pedestrian and neighborhood connections, including location, design, and the funding methodology of associated infrastructure elements." The City of Asheville strongly encourages NCDOT to fully address these elements in the Final EIS document.	Comment noted. After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville during the design refinements. Efforts also being performed while the designs are being revised will include updating the various technical studies in order to further evaluate and address concerns associated with noise, bike and pedestrian accommodations, community connectivity, human and natural environmental impacts, amongst others.	Design	Discuss on 3/24: NCDOT will work with the City of Asheville moving forward and address specific comments. If there are other concerns not addressed in later sections, please provide a list for further discussion.
5	Due to the City of Asheville's limited ability to annex, the City of Asheville strongly encourages the NCDOT to make all efforts to minimize the overall footprint throughout the entire project length for all sections with the use of additional retaining walls and additional urban design strategies to make sure that all of the on/off ramps are placed as close to the -L-line as possible.	After selection of a preferred alternative, NCDOT will continue in refining the designs in order to either avoid or minimize impacts. While measures such as the use of retaining walls have already been incorporated into the preliminary designs for the Detailed Study Alternatives evaluated within the 2015 DEIS, the refinement of the designs for the LEDPA provides an opportunity to further coordinate with the public, resource agencies, as well as the City of Ashville to further develop the designs and identifying additional areas for avoidance or minimization of impacts.	Design	Comment to be discussed at a subsequent working group meeting that will focus on design issues. If there are specific locations, please provide a list for further discussion.

#	ember 16, 2015 Comment	Response	DISCIPLINE	NOTES
6	Design exceptions should be considered in cases where greater land preservation would result. The City of Asheville would like to be involved in discussing these suggestions during the design phase.	Comment noted. If design exceptions are required to avoid or minimize impacts due to the project, documentation with justification will need to be provided to the Federal Highway Administration for approval of the use of the design exception.	Design	Comment to be discussed at a subsequent working group meeting that will focus on design issues.
		Design exceptions are required when the proposed roadway designs do not meet certain controlling criteria and design standards are established for a specific project. These criteria, consisting of thirteen design elements, are defined in AASHTO's A Policy on Geometric Design of Highways and Streets and are influenced by roadway characteristics such as functional classification and traffic volumes.		
		On projects with federal funding, review, and oversight, the Federal Highway Administration is responsible for reviewing and approval of requested design exceptions. However, design exceptions are typically viewed as undesirable on new or reconstructed roadways due to the long term adverse effects associated with the deficiency, such as reduced highway safety and increased maintenance costs.		
7	The City of Asheville is very interested in assuring the best possible pedestrian and bicycle improvements and would like to be actively involved in the design phase of the project regarding the pedestrian elements after a preferred alternative has been selected. This involvement is critical in order for the City of Asheville to conduct its own transportation and financial planning.	Comment noted. After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases.	Design Bike & Ped	Comment to be discussed at a subsequent working group meeting that will focus on design issues. If there are additional specifics please provide for future discussions.

-	of Asheville – General Comments on 2015 DEIS fo ember 16, 2015			
#	Comment	Response	DISCIPLINE	NOTES
8	The City of Asheville's preferred sidewalk cross-section includes a 5-foot sidewalk and a 5-foot utility strip (buffer area) with a 10-foot overall width. The City of Asheville strongly encourages this cross-section at all sidewalk locations throughout the entire project length for all sections. If the preferred sidewalk cross-section cannot be provided in specific areas, a reduced-width utility strip should be considered, and if that is not possible, then a 6-foot back of curb sidewalk should be used.	NCDOT is committed to Complete Streets improvements and will coordinate with the City of Asheville, after the selection of a preferred alternative, with regard to incorporating these amenities into the project in compliance with design and cost-sharing guidelines.	Bike & Ped	Comment to be discussed at a subsequent working group meeting that will focus on design issues. If there are additional specifics please provide for future discussions.
9	The City of Asheville strongly encourages the NCDOT to consider wider (6') minimum bicycle lane widths along roads with traffic volumes greater than 10,000 vpd and/or operating speeds greater than 35 mph to be consistent with the City of Asheville Standard Specifications and Details Manual, City of Asheville Comprehensive Bicycle Plan, and NACTO recommendations.		Bike & Ped	Comment to be discussed at a subsequent working group meeting that will focus on design issues. If there are additional specifics please provide for future discussions.
10	The City of Asheville strongly encourages the NCDOT to consider multi-use paths to measure 14-16 feet wide with an absolute minimum width of 12 feet.		Bike & Ped	Comment to be discussed at a subsequent working group meeting that will focus on design issues. If there are additional specifics please provide for future discussions.

_	of Asheville – General Comments on 2015 DEIS fo	or TIP Project I-2513 (I-26 Connector)		
	ember 16, 2015	I n	DICCIDI INIE	NOTES
#	Comment	Response	DISCIPLINE	NOTES
11	The City of Asheville would like to be actively involved in the Aesthetics Advisory Committee (AAC) in order to help integrate aesthetics features into the proposed design after a preferred alternative has been selected and final design begins.	Comment noted. After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases.	Aesthetics	Discuss on 3/24: NCDOT proposes reestablishing an aesthetics committee after selection of a preferred alternative. Integration of aesthetics will occur during
- 10				preparation of FEIS and continue for the duration of project development.
12	Retaining walls should include aesthetics standards consistent with the City of Asheville Standard Specifications and Details Manual.	Comment noted. After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases.	Aesthetics	Discuss on 3/24: NCDOT proposes reestablishing an aesthetics committee after selection of a preferred alternative. Integration of aesthetics will occur during preparation of FEIS and continue for the duration of project development.
13	The City of Asheville strongly encourages reasonable mitigation strategies, including funding, for transit, pedestrian, and bicycle routing during the construction phase.	Comment noted. After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases.		These are items NCDOT will continue to discuss during the design phase. If there are additional specifics please provide for future discussions.
14	The City of Asheville strongly encourages the NCDOT to include bus stops along all of the transit routes within the project limits. These bus stops must be designed and constructed to meet ADA requirements.	Comment noted. After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases.	Transit	Discuss on 3/24: NCDOT would like to clarify this comment with the COA. Is COA asking for betterment of existing stops?

#	Comment	Response	DISCIPLINE	NOTES
15	The City of Asheville would like for the NCDOT to consider "bus on shoulder system" to be authorized within the project limits.	Comment noted. After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville to discuss the potential use of the "bus on shoulder system".	Traffic	Comment to be discussed at a subsequent working group meeting that will focus on traffic issues. If there are additional specifics please provide for future discussions.
16	The City of Asheville strongly suggest that NCDOT create a collaborative working group that would meet regularly starting in early 2016 and throughout the design phase to ensure adequate consideration of the concerns listed above. This group could also examine the travel demand model, capacity analysis, and the methodology of calculating Level of Service in an effort to gain consensus.	Comment noted.		
17	The City of Asheville is pleased that NCDOT will be using the new local travels demand model to re-examine travel demand and to conduct a new capacity analysis with a 6-lane alternative in Section A.	Comment noted.	Traffic	Discuss on 3/24: NCDOT has received the travel demand model for use and is currently in the process of completing model runs and forecast scenarios for 4, 6, 8, and 10 lanes (if needed). Additional discussion will occur at a subsequent working group meeting that will focus on traffic issues.

•	of Asheville – General Comments on 2015 DEIS fo ember 16, 2015	r TIP Project I-2513 (I-26 Connector)		
#	Comment	Response	DISCIPLINE	NOTES
18	The City of Asheville would like more information about the placement and sufficiency of sound walls, and assurance that sound walls will be fully included in the Final EIS.	Once a preferred alternative is selected, an updated traffic forecast will be prepared and designs further refined. Once designs of the Preferred Alternative have been refined, noise abatement measures will be reanalyzed.	Noise	Comment to be discussed at a subsequent working group meeting that will focus on noise issues. If there are additional specifics please provide for future discussions.
19	The City of Asheville strongly encourages NCDOT to update all of the base maps in the final EIS in order to reflect construction activities (new homes and businesses) that have occurred during the past several years.	Comment noted. Typically, NCDOT will update project mapping during major milestones of a project (i.e. prior to project initiation or prior to developing final designs used for right of way acquisition). In between these phases, NCDOT may update the mapping due to major changes. Even though the 2015 corridor public hearing maps were created using the slightly dated mapping, the impacts and business and residential relocations reported reflect the current conditions at the time.	Residential and Business Impacts	Discuss on 3/24: NCDOT will update the aerial photography for final design.
	City of Asheville - Section A Comments			
20	The City of Asheville strongly encourages that an updated Travel Demand Model for the project be developed as quickly as possible to assess a scenario for six lanes through Section A, that the analysis in the six-lane scenarios carefully avoid assuming induced-demand levels associated with an eight-lane design, that the analysis include the resulting impact of six lanes on Section B and Section C, and that final design of the project include the fewest number of lanes and smallest footprint possible through the A, B, and C sections of the project.	NCDOT has received the travel demand model for use and is currently in the process of completing model runs and traffic forecast scenarios for 4, 6, 8, and 10 lanes (if needed). The updated traffic forecast will be used to refine the designs for the LEDPA.	Traffic	Discuss on 3/24: NCDOT has received the travel demand model for use and is currently in the process of completing model runs and forecast scenarios for 4, 6, 8, and 10 lanes (if needed). Additional discussion will occur at a subsequent working group meeting that will focus on traffic issues.

#	ember 16, 2015 Comment	Response	DISCIPLINE	NOTES
21	The City of Asheville strongly encourages the NCDOT to include complete streets elements consistent with NACTO guidelines on the Haywood Road bridge (-Y6-) and through the intersection and to make all efforts to make the bridge and intersections as pedestrian and bicycle friendly as possible especially since a proposed greenway (multi-use transportation path) will be located in the northeast quadrant. These elements should include a minimum sidewalk width of 6 feet measured back of curb, bicycle lanes, reduced lane width and intersection dimensions, and reduced radii at the on/off ramps.	NCDOT is committed to Complete Streets improvements and will coordinate efforts with the City of Asheville to incorporate these amenities into the project in compliance with design and cost-sharing guidelines, while trying to avoid or minimize impacts to the various constraints along the Haywood Road Corridor.	Design Bike & Ped	Comment to be discussed at a subsequent working group meeting that will focus on bicycle and pedestrian issues.
22	The City of Asheville would like to explore (with the NCDOT) the possibilities of constructing buildings on the Haywood Road bridge in an effort to maintain connectivity as a business corridor through West Asheville.	Additional coordination is required with the City of Asheville to assist NCDOT in better understand this request.	Haywood Bridge	Comment to be discussed at a subsequent working group meeting that will focus on bicycle and pedestrian issues.
23	The City of Asheville strongly prefers that Amboy Road be designed as a two-lane facility, possibly with wider intersections for turn lanes, in order to reduce the footprint of the entire project and the taking of property, to make it more compatible with adjoining neighborhoods, to make Amboy Road more bicycle and pedestrian-friendly, and to reduce project cost, even if it means achieving level-of-service E for that section of Amboy Road.	The Amboy Road typical section was developed based on the capacity analysis for the project. Once a preferred alternative is selected, the typical section will be re-evaluated based on the updated traffic forecast and updated travel demand model.  NCDOT is committed to Complete Streets improvements and will coordinate with the City of Asheville, after the selection of the Preferred Alternative, with regard to incorporating these amenities into the project in compliance with design	Traffic	Comment to be discussed at a subsequent working group meeting that will focus on traffic issues.

#	Comment	Response	DISCIPLINE	NOTES
24	The City of Asheville strongly encourages the NCDOT to redesign Amboy Road to be consistent with the City's ongoing project U-4739 with a design speed no greater than 40 mph.	and cost-sharing guidelines.	Traffic	Comment to be discussed at a subsequent working group meeting that will focus on traffic issues.
25	The City of Asheville strongly encourages the NCDOT to design and construct the preferred sidewalk cross-section on Amboy Road between NC 191 (Brevard Road) and I-26.		Bike & Ped	Comment to be discussed at a subsequent working group meeting that will focus on bicycle and pedestrian issues. NCDOT will continue to coordinate with the COA on sidewalk locations. Designs evaluated within the DEIS have been developed to accommodate or not preclude these elements from being constructed.
26	The City of Asheville strongly encourages that the West Asheville Greenway from Haywood Road across the Jeff Bowen Bridges, as with all greenways reflected in the DEIS, should reflect the AASHTO and NACTO design standards, which would result in a greenway that is roughly 14-16 feet wide to safely accommodate bikes and would also include appropriate shy-distance from any barriers consistent with AASHTO guidelines and NACTO guidelines. Additionally the path should be marked with 2-way bicycle and pedestrian lanes.	The Greenway Design is based on AASHTO's 1999 Guide for the Development of Bicycle Facilities. After selection of a preferred alternative and the project continues with preliminary designs, all design criteria will be reevaluated to meet the requirements of the design guidelines which are currently accepted for use by NCDOT.	Bike & Ped	Comment to be discussed at a subsequent working group meeting that will focus on bicycle and pedestrian issues.

#	Comment	Response	DISCIPLINE	NOTES
27	The proposed closing of Hanover Street at its intersection with Haywood Road adversely impacts a transit routes W1 and W2 regarding its service to the Pisgah View Apartments (a public housing complex).	Transit stops in the Pisgah View Apartments will not be directly affected by the proposed project. However, with the closing of Hanover Street at Haywood Road transit routes W1 and W2 will have two existing stops on Hanover Street impacted; these are at Montana Street and at Haywood Road. Roadway improvements may be required to assist the City of Asheville to improve Montana Street and/or Michigan Avenue in an effort to re-route buses. The City of Asheville may lose one stop at Hanover Street and Haywood Road, however, the existing stop at Haywood Road and Michigan Avenue is only approximately 800' from the eliminated bus stop.	Transit	Following selection of a preferred alternative NCDOT will coordinate with the COA in order to further review transit operations within the study area and to discussion options if need be.
	continue to coordinate wit regarding transit service the	After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville regarding transit service throughout the design and construction phases.		
28	The City of Asheville strongly encourages the NCDOT to include bicycle/pedestrian infrastructure at the beginning/end of the Hominy Creek Greenway at Hominy Creek Road.	The NCDOT improvements would include I-240 bridging of Hominy Creek Road as well as the Hominy Creek Greenway, similar to the existing conditions. These designs do not preclude the City of Asheville from implementing bicycle/pedestrian infrastructure at the beginning/end of the Hominy Creek Greenway at Hominy Creek Road. NCDOT will continue to coordinate with the City of Asheville regarding bike and pedestrian accommodations throughout the design and construction phases.	Bike & Ped	Comment to be discussed at a subsequent working group meeting that will focus on bicycle and pedestrian issues.
29	The City of Asheville is concerned about the impact to the French Broad River Greenway during the construction of the proposed retaining wall.	NCDOT will coordinate with the City of Asheville regarding maintenance of traffic on the French Broad River Greenway during development of final plans for the project. At that time, NCDOT will have additional information on designs that will impact the final maintenance of traffic concepts.	Bike & Ped	Comment to be discussed at a subsequent working group meeting that will focus on bicycle and pedestrian issues.

_	of Asheville – General Comments on 2015 DEIS for ember 16, 2015	r TIP Project I-2513 (I-26 Connector)		
#	Comment	Response	DISCIPLINE	NOTES
30	The City of Asheville would like the opportunity to collaborate with NCDOT on the design for the new interchanges at Brevard Road and Amboy Road in order to identify opportunities for urban design strategies and the possible use of roundabouts.	After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases.	Traffic	Comment to be discussed at a subsequent working group meeting that will focus on traffic issues.
	City of Asheville – Section B comments			
31	The City of Asheville strongly encourages the NCDOT to keep the West Asheville Greenway "running" parallel to the C/A fence and the - Y7- EBL in order to avoid the 18% +/- vertical grade along Hazel Mill Road and to be routed underneath, via culvert, any street crossings in its path.	The greenway design is based on AASHTO's 1999 Guide for the Development of Bicycle Facilities. After selection of a preferred alternative, all design criteria will be reevaluated to meet the requirements of the design guidelines which are currently accepted for use by the NCDOT. NCDOT will evaluate the City of Asheville's requests for alignment revisions when refining the	Bike & Ped	Comment to be discussed at a subsequent working group meeting that will focus on bicycle and pedestrian issues.
32	The City of Asheville strongly encourages that this greenway be extended southward to connect to the French Broad River Greenway and that it be extended eastward to connect with Clingman Avenue.	preliminary plans for the Preferred Alternative. The greenway alignment in this area may be affected while developing preliminary plans on the Preferred Alternative as a result of addressing other comments.	Bike & Ped	Comment to be discussed at a subsequent working group meeting that will focus on bicycle and pedestrian issues.

#	Comment	Response	DISCIPLINE	NOTES
33	The City of Asheville strongly encourages the inclusion and construction of the Emma Greenway (identified as #7 on the City of Asheville Greenway Master Plan), the Montford Greenway (#14), and the Smith-Mill Creek Greenway (#17). If these greenways are not constructed, the opportunity for construction in the future might not be possible.	The NCDOT will coordinate with the City of Asheville to refine the preliminary designs for the Preferred Alternative thus that construction of the greenway by others will not be precluded.	Bike & Ped	Comment to be discussed at a subsequent working group meeting that will focus on bicycle and pedestrian issues.
34	The City of Asheville notes that there appears to be the opportunity to "daylight" Smith-Mill Creek as it runs through the project area and the City of Asheville strongly encourages NCDOT to pursue that option.	Designs as presented in the 2015 DEIS for Alternatives 4 and 4B include bridging Smith Mill Creek for all new crossings. NCDOT is evaluating the feasibility of bridging all proposed crossings of Smith Mill Creek for Alternatives 3 and 3C, which will be completed prior to selection of the Preferred Alternative.	Design	Discuss on 3/24: Per a previous request by the Merger Team, this request has been recently evaluated and has been determined to be feasible and is expected to add approximately \$3.35 million to project cost.
35	The City of Asheville is concerned that there is no direct access to Haywood Road from I-26 eastbound under Alternatives 3 and 3C which might encourage that traffic to go to the Amboy Road interchange using NC 191 (Brevard Road) and other neighborhood citymaintained streets (Virginia Avenue and Fairfax Avenue) to access Haywood Road. The proposed access requires vehicles to travel through four signalized intersections before reaching Haywood Road.	NCDOT is aware of this circuitous aspect of these alternatives which have been discussed in the DEIS. Alternative 4B is the only alternative to provide direct access to Haywood Road. For Alternatives 3 and 3C, traffic making this movement must exit I-26 EB near the Westgate Mall and traverse a series of service roads and traffic signals to access Haywood Road. Traffic making this movement in Alternative 4 would also have to exit I-26 EB near the Westgate Mall and then traverse a series of ramps to and a traffic light to reach Haywood Road. After selection of a preferred alternative, NCDOT will reevaluate the design configurations based on any updated data, including an updated traffic forecast which is based upon the updated travel demand model.	Traffic	Discuss 3/24: NCDOT will further evaluate the access to Haywood Road during design refinements of the Preferred Alternative.

-	of Asheville – General Comments on 2015 DEIS for ember 16, 2015	or TIP Project I-2513 (I-26 Connector)		
#	Comment	Response	DISCIPLINE	NOTES
36	The City of Asheville is concerned about the adverse impact that Alternatives 3 and 3C will have on the long-term viability of the Westgate Shopping Center including the impact of a new hotel currently under construction at the same location that -Y71- will terminate.	NCDOT is aware of this aspect of Alternatives 3 and 3C. Upon receiving similar comments on the 2015 DEIS, NCDOT has investigated minor design revisions which could be implemented for these alternatives, which would improve the access to the Westgate Shopping Center. After selection of a preferred alternative, NCDOT will reevaluate the design configurations based on any updated data, including an updated traffic forecast which is based upon the updated travel demand model.	Traffic	Discuss on 3/24: The project team has evaluated two potential revisions to improve the proposed Westgate Shopping Center access, which can be further evaluated during the design refinements of the Preferred Alternative, if either Alternative 3 or 3C is chosen.
37	The City of Asheville is concerned about the adverse impacts that Alternatives 3 and 3C will have on the Burton Street Community.	NCDOT has identified impacts to the Burton Street Community in the DEIS. After selection of a preferred alternative, NCDOT will coordinate to refine the designs to further avoid or minimize impacts to the Burton Street neighborhood, as well as other neighborhoods that may be impacted by the project.	Residential and Business Impacts	Discuss on 3/24: Further discussions will occur after the selection of the Preferred Alternative.
38	The City of Asheville strongly encourages a collaborative planning process to identify opportunities to reduce the overall footprint of the project.	Comment noted. After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases to further avoid or minimize impacts.		Avoidance and minimization efforts are on-going throughout all phases of the project development. If there are specific locations the COA would like to focus on, please provide for future discussions.

#	Comment	Response	DISCIPLINE	NOTES
39	The City of Asheville strongly encourages the NCDOT to minimize as much traffic on the Jeff Bowen Bridges as possible in order to extend the life of the two existing bridges.	Implementation of any Detailed Study Alternative would reduce travel demand on the Captain Jeff Bowen Bridges to the point where the traffic operations would operate acceptably for the timespan analyzed for the I-26 Connector project (a period of 20 years into the future). Therefore, should the I-26 Connector project be constructed, the lifespan of the existing bridges would not be dictated by the amount of traffic using the bridges, but would solely be determined based upon the integrity of the bridges and thus the corresponding sufficiency rating. Based on 2012 data provided by NCDOT Bridge Inspection Report, both bridges have a Sufficiency Rating in the high 50's (bridges must have a rating below 50 to be eligible for replacement). Regular maintenance can keep the sufficiency rating above 50 for the foreseeable future.	Design Traffic	Discuss response on 3/24.
40	The City of Asheville is concerned that Alternatives 3 and 3C will not completely eliminate the existing weaving maneuvers and congestion on the Jeff Bowen bridges.	All alternatives will reduce traffic on the Bowen Bridges. Alternatives 3 and 3C do not remove interstate traffic from the Bowen Bridges and therefore will not alleviate the weaving; however, these alternatives do eliminate congestion by taking I-26 traffic off of the Jeff Bowen Bridges and providing another access to northbound I-26. Alternative 4 and 4B further limit traffic on the Bowen Bridges by also moving I-240 traffic onto new infrastructure.	Traffic	Discuss response on 3/24.
1	The City of Asheville is concerned about the adverse impacts to business and industrial sites with Alternative 3 and 3C along the French Broad River.	After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases to further avoid or minimize impacts.	Residential and Business Impacts	Discuss response on 3/24.

City of Asheville – General Comments on 2015 DEIS for TIP Project I-2513 (I-26 Connector) December 16, 2015				
#	Comment	Response	DISCIPLINE	NOTES
42	The City of Asheville is concerned that Alternatives 4 and 4B will adversely impact Hill Street, Isaac Dickson Elementary School, and Riverside Cemetery and as a result, the City of Asheville strongly encourages the NCDOT to minimize the impacts.	After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases to further avoid or minimize impacts.	Residential and Business Impacts	Discuss on 3/24: NCDOT would like clarification on specifics areas of concern for additional avoidance or minimize efforts to be considered during the refinement of the designs for the Preferred Alternative.
43	The City of Asheville strongly encourages continuous sidewalks along both sides of Patton Avenue from the west side of the French Broad River to Clingman Avenue for Alternatives 4 and 4B.	After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville with regard to including this request as appropriate in compliance with NCDOT policies on pedestrian facilities and cost sharing.	Bike & Ped	Comment to be discussed at a subsequent working group meeting that will focus on bicycle and pedestrian issues.
44	The City of Asheville strongly encourages the NCDOT to use complete streets elements along Patton Avenue with Alternatives 4 and 4B in order to improve neighborhood connectivity and accommodate pedestrian-scale urban redevelopment.	NCDOT is committed to Complete Streets improvements and will coordinate efforts with the City of Asheville to incorporate these amenities into the project in compliance with design and cost-sharing guidelines. In areas where the various plans propose future pedestrian accommodations, the designs have been developed to accommodate or not preclude these elements from being constructed by the various agencies.	Bike & Ped	Comment to be discussed at a subsequent working group meeting that will focus on bicycle and pedestrian issues.

City of Asheville – General Comments on 2015 DEIS for TIP Project I-2513 (I-26 Connector)  December 16, 2015				
#	Comment	Response	DISCIPLINE	NOTES
45	The City of Asheville strongly encourages the	Alternatives 3 and 3C do not impact the existing access	Bike & Ped	Comment to be discussed at
	NCDOT to improve access to the Hillcrest	to the Hillcrest community. Alternatives 4 and 4B	Design	a subsequent working group
	Community.	include access modifications to the Hillcrest Community		meeting that will focus on
		due to the realignment of I-240 and the reconfiguration		bicycle and pedestrian issues.
		of Patton Avenue. As a result of the proposed		
		Alternative 4 and 4B designs, access between the		
		Hillcrest Community and surrounding areas will be		
		modified. Access between east and west Asheville and		
		the Hillcrest Crest Community and surrounding areas		
		would be improved. However, access between		
		Riverside Drive, the Hillcrest Community, and		
		surrounding areas would no longer have direct access		
		to and from I-240. After selection of a preferred		
		alternative, NCDOT will continue to coordinate with the		
		City of Asheville throughout the design and		
1		construction phases in order to refine the designs.		

City of Asheville – General Comments on 2015 DEIS for TIP Project I-2513 (I-26 Connector) December 16, 2015				
#	Comment	Response	DISCIPLINE	NOTES
	City of Asheville – Section C Comments			
46	Will project I-4759 (Proposed Liberty Road interchange) not provide much needed relief regarding traffic congestion at I-40 Exit #44, and if so, could the overall footprint of Section C be reduced?	I-4759 has specific needs for which it is being developed to address. NCDOT will re-evaluate the proposed Exit 44 configuration after selection of a preferred alternative.	Design	Discuss response on 3/24.
47	The City of Asheville questions the C/D ramps shown along I-40 west of I-26. These ramps would take a significant number of homes and not resolve the congestion at Exit #44.	As the project develops and a preferred alternative is selected, the data used to develop designs is often updated and revised. After the Preferred Alternative is selected, the designs will be re-evaluated based on any		
48	The City of Asheville suggests that the NCDOT consider an additional exit ramp from I-40 Westbound onto Smoky Park Highway eastbound at Exit #44 in order to relieve congestion at the existing ramp.	updated data, including an updated traffic forecast which is based upon the updated travel demand model. NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases in order to refine the designs.		
49	The City of Asheville strongly encourages the NCDOT to minimize the overall footprint for Section C at and near Exit #44 by using retaining walls and keeping separation between the C/D ramps and the -L- line as narrow as possible.			
50	Alternative F-1 appears to be the best alternative for Section C.	Comment Noted.		

City	of Asheville – General Comments on 2015 DEIS fo	r TIP Project I-2513 (I-26 Connector)		
-	ember 16, 2015			
#	Comment	Response	DISCIPLINE	NOTES
51	The City of Asheville is concerned about the need to widen I-40 east of the Brevard Road interchange since there is no data to support the proposed widening and it adds significantly to the cost.	Improvements east of the Brevard Road interchange are required to safely reduce the lanes from the proposed improvements required between I-26 and Brevard Road interchanges. The lane reduction geometry is based on AASHTO's 2011 A Policy on Geometric Design of Highways and Streets.  After the Preferred Alternative is selected, the designs will be re-evaluated based on any updated data, including an updated traffic forecast which is based upon the updated travel demand model. NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases in order to refine the designs.	Design	Discuss on 3/24: NCDOT to provide clarification.
52	In general, if there is an additional \$100,000,000 to spend on this project, the COA prefers the additional investments be made in Section B rather than Section A.	Comment noted.		

# **MEETING SUMMARY**



To: Project File

From: Chris Werner

**AECOM** 

Date: July 5, 2016

Gwen Wisler - City of Asheville

RE: I-2513 Working Group Meeting #2

NCDOT STIP Project I-2513 (I-26 Connector)

#### Meeting Attendees:

David Brown – NCDOT Board Member

Lyuba Zuyeva – FBRMPO

Jay Swain, NCDOT – Division 13

Rick Tipton, NCDOT – Division 13

Derrick Weaver – NCDOT PDEA

Mitch Batuzich – FHWA

Michael Wray – NCDOT PDEA

Michael Dawson – FHWA Brian Wert – NCDOT Systems Planning

Joe Geigle – FHWA Jim Dunlop – NCDOT Congestion Management

Alan McGuinn – Asheville Design Center

Bruce Emory – City of Asheville

Julie Mayfield – City of Asheville

Todd Okolichany – City of Asheville

Ken Putnam – City of Asheville

Andrew Bell – AECOM

Celia Foushee – AECOM

Joanna Rocco – AECOM

Chris Werner – AECOM

The project team met with the Working Group at 9:00 AM on June 3, 2016 in the Buncombe County Maintenance Conference Room in the Buncombe County Maintenance Office. The purpose of the meeting was to discuss action items from the previous Working Group meeting held on March 24, 2016, NCDOT noise policies and traffic noise analysis methodologies, and the relationship between travel demand modeling, traffic forecasting, traffic operations analysis, and the development of designs.

Derrick Weaver began the meeting with introductions and announced the Preferred Alternative was selected at the Merger Meeting held on May 18, 2016. A brief status review of the Traffic Forecast Update was provided noting the forecast is expected to be completed within the coming months.

Discussion points from the action items from Working Group meeting #1 are summarized below:

- Gwen Wisler spoke with the Asheville City Board of Education regarding the potential for the West Asheville/Aycock School to be converted from a preschool to K through 3<sup>rd</sup> grade. The Board of Education contact said this has not been decided yet and further coordination efforts should occur in the future as the I-2513 project is developed.
  - Julie Mayfield noted that she is now the City Council Liaison with the Asheville Housing Authority and will assist in coordinating betterment requests on their behalf. The next

working group meeting will discuss the various betterments the City of Asheville would like to incorporate in the project.

- Ricky Tipton introduced Alice Oglesby, who previously worked on the project Aesthetics Advisory
  Committee (AAC). Alice Oglesby discussed her previous role regarding noise walls on other
  highway projects adjacent to Asheville. It was noted the AAC will be a sub-committee of the
  working group, which Alice will serve on, in addition to others yet to be determined.
  - Julie Mayfield asked when they could begin forming the AAC members. NCDOT responded this would occur as we approach the design refinement phase, suggesting that NCDOT will coordinate to identify those who were previously on the committee, identify new members to serve on the committee, and work with the City of Asheville to identify new members to serve on the committee.
- Michael Wray provided an update on the lifespan of the Captain Jeff Bowen Bridges, which were
  last rehabilitated in 1984, noting that should traffic capacity not be an issue. The structural
  lifespan of the bridges would be 10-15 years with no rehabilitation work performed. The bridges
  were scheduled for rehabilitation in August of 2016; however, the High Value Bridge Program was
  recently placed on hold. If the program is reinstated, the lifespan would be 30 plus years.
- Prior to selection of the I-2513 Preferred Alternative, NCDOT provided the working group with a copy of the pro/con list used to assist in facilitation of the CP3 Merger Meeting and LEDPA Selection.
- Ken Putnam noted that the City of Asheville is continuing to work on clarifying their questions/comments provided on the 2015 Draft Environmental Impact Statement (DEIS) and will also continue to develop their list of requested improvements which will be discussed at future working group meetings.
  - It was noted that NCDOT is intending to prepare the Final Environmental Impact Statement (FEIS) by mid-2017.
- It was noted that efforts are still needed to further identify participants for the working group to ensure diverse perspectives are represented. It was also directed that Buncombe County be invited to participate on all future working group meetings.

Discussion points from Greg Smith's review of traffic noise are summarized below:

- General traffic noise topics discussed included:
  - o noise policies, methodologies, definitions, noise models, and noise reports
  - o qualifications for being eligible for consideration of a noise wall
  - o noise walls are not shown until the final design phase
  - the final decision of whether a noise wall is built is based upon the voting of property owners and tenants that may be impacted by noise
  - ballots are sent only to property owners and tenants that may be impacted by noise
  - o at least 50 percent of the ballots must be returned and the majority vote will render a decision
  - o the maximum height of a noise wall is 25 feet
  - NCDOT will stain noise walls with one color
- Aesthetics of noise walls and funding can only come from NCDOT or the local government
  - third party funding is not allowed
  - o there must be consistency between walls in adjacent portions of a roadway
  - o any costs over a standard wall will be covered 100% by the locality making the request
- It was questioned if there are any options for noise walls on the flyover bridges to lessen the impacts to the Montford area.

- A general discussion was provided regarding the noise level changes which the human ear can notice.
- o It was noted that even without the I-2513 project, much of this neighborhood already is impacted by traffic noise.
- It was questioned if clear noise walls could be used on the flyovers, similar to what is on the Woodrow Wilson Bridge. It was noted the next phase of the noise analysis will further investigate the ability to reduce noise impacts; however, any noise walls over a standard wall will be covered 100% by the locality making the request.
- The next phase of the noise analysis will be prepared on the final designs, after the Record of Decision (ROD) is prepared.
- It was suggested NCDOT consider meeting with residents that may be impacted by noise in order to inform them of the process and next steps.
  - The response stated there will be public meetings moving forward to discuss the noise walls, but this does not typically happen until NCDOT knows where the walls will be placed.
  - NCDOT will meet various groups or neighborhoods if the City of Asheville makes a formal request. NCDOT stated there will be small group meetings later in the year to review other topics with various neighborhoods and suggested this could be a topic for inclusion in those meetings.
- It was noted the stamps for the patterns on existing noise walls along I-40, between the Smoky Park Highway and I-26, cost approximately \$200,000.
- It was requested for NCDOT to clarify the noise impacts as stated in the 2015 DEIS.
  - Greg described the five categories of impacts: impacted, impacted and benefited, impacted and not benefited, not impacted and benefited, and not impacted not benefited.

Discussion points from Chris Werner's review on the relationship between travel demand models, traffic forecasts, traffic operations analysis, and design characteristics are summarized below:

- Intersection/interchange configurations, number of turn lanes, number of through lanes shown in
  project designs are based upon the recommendations resulting from the traffic operations
  analysis. This is a very iterative process with roadway design engineers and traffic engineers
  working back and forth trying to develop designs that meeting design requirements, handle traffic
  demand in an acceptable manner, while trying to avoid or minimize impacts to the human and
  natural environmental resources.
- The traffic operations analysis is prepared based upon the traffic forecast prepared for the project, as well as industry standard analysis factors, which are verified based upon current day traffic count data.
- The traffic forecast is prepared based upon current day traffic count data and a travel demand model. Generally speaking, current traffic count data is grown based upon growth rates projected from the travel demand model for the Future Year No-Build Alternative. The travel demand model is then used to determine diversion percentages on the forecasted roadways once the project is in place.
- The travel demand model is prepared based upon local planning efforts including factors such as: roadway projects, transit routes, and socioeconomic data projections.
- It was noted now the Preferred Alternative has been identified; the designs for Alternative 4B will be refined based upon an updated traffic operations analysis, using a new traffic forecast, based upon the French Broad River MPO's recently adopted travel demand model. Results of these

refinements will be presented in the Final Environmental Impact Statement which will be made available for public and resource agency review and comment.

To further expand upon traffic forecasts, travel demand model development, usages, and limitations Brian Wert provided a high-level review with the major discussion points summarized below:

- Travel demand models are a tool to help see the growth and the long range transportation plans, as well as the interaction between transportation facilities and land use.
- Traffic forecasts are prepared based upon current day traffic count data and a travel demand model. Current traffic count data is grown based upon growth rates projected from the travel demand model. The travel demand model also provides travel patterns of traffic; as such the travel demand model should not be used to identify specific traffic volumes, which may not match exactly to traffic count data.
- Traffic forecasts are developed using current traffic data, historic traffic growth data, local input, development improvements, and economic projections. Given the wide variety of data sources, the final step of developing a traffic forecast is to review the outcome to determine if the trends make sense and to identify areas where outliers exist before finalizing. These efforts will be noted within the traffic forecast documentation.
- It was questioned if travel demand models use current or future land use.
  - The response stated the model uses both existing and future land use plans. Future land use descriptions are largely gathered from local planners, which NCDOT has no role in developing.
- It was questioned how NCDOT looks at long haul truck traffic.
  - The response stated that NCDOT has developed a statewide freight model to better understand freight patterns.
- It was questioned if there would be an opportunity for NCDOT to walk the locals through the
  review process which will be performed to determine if the traffic forecast trends make sense and
  identifying areas where outliers exist.
  - The stated response was that the traffic forecast includes a detailed report that discusses the issues identified, refinements required, and based upon what data. On June 23, 2016, NCDOT will be presenting to the French Broad River MPO Board on the I-2513 Traffic Forecast if it is finalized by then.
- It was questioned what average growth rate was used in preparing the traffic forecast.
  - The stated response was this information was not brought for today's meeting; however, this information will be noted within the traffic forecast documentation. Growth rates are applied to each forecast volume location. Universal growth rates are not applied in traffic forecasts.

To further expand upon traffic operations analysis and methodologies, Jim Dunlop provided a high-level review with the major discussion points summarized below:

- Traffic operations analysis is prepared using traffic data, the traffic forecast, existing and proposed transportation facility characteristics, and guidance and equations included within the Highway Capacity Manual (HCM), which is prepared by the Transportation Research Board.
- Analysis software analysis has been developed based upon guidance and equations included within the HCM, which allows for ease in evaluating multiple factors and scenarios.
- Level of Service (LOS), which is often used to grade how traffic conditions are operating, was
  discussed noting for example that arterial roadways with intersections are evaluated very
  differently than freeways.

- The HCM provides general guidance for identifying key factors used in preparing the analysis; however, current traffic data and specific project characteristics should be used when available.
- The different types of roadways (e.g. local streets, arterials, and freeways), intersection treatments (e.g. standard intersections, superstreets, roundabouts), and analysis methodologies (e.g. Synchro, SIDRA, VISSIM, and TransModeler) were discussed.
- It was questioned when discussion could be held regarding the factors chosen for use in preparing the traffic operations analysis.
  - The stated response was that discussion on the key factors should be held prior to initiating the traffic operations analysis in order to avoid re-do and schedule delays. However, it was noted NCDOT will be preparing a traditional HCM analysis, which will be followed by a microsimulation analysis. The microsimulation analysis will evaluate the interaction of traffic across the project study area roadway network modeled. The future year build configuration will be based upon a base year calibrated model. The base year model is created to reflect, as closely as possible, existing driving characteristics of motorists within Asheville on existing freeway and interstate roadways. As such, Jim Dunlop provided Bruce Emory with a thumb drive containing traffic count data (which is used to assist in determining the peak hour factors) and the Microsimulation Base Model Calibration Report. Given the microsimulation will be calibrated based on existing local driver characteristics, Mr. Emory was fine with not having a meeting at this time to discuss factors chosen for use in preparing the traffic operations analysis.
- It was questioned if the microsimulation could be presented at the June 23<sup>rd</sup> meeting with the FBRMPO.
  - The stated response was that the microsimulation as well as the traffic forecast might be too much information to review during one meeting. However, NCDOT suggested at a minimum the microsimulation calibration could be presented, followed by a review of next steps for the traffic operations analysis and microsimulation.

Discussion points from Joe Geigle's review of FHWA's issued memo regarding LOS are summarized below:

- FHWA's guidance on LOS is taken from the American Association of State Highway and Transportation Officials A Policy on Geometric Design of Highways and Streets, which states that freeways should generally be designed for LOS C; however, in metropolitan areas LOS C may not be practicable and the use of LOS D may be appropriate. The memo provided flexibility in areas where LOS D is not attainable. In circumstances where reaching LOS D is reasonable and attainable, FHWA will strive to achieve LOS D. For example, a section of I-77 was identified as requiring 14 lanes to achieve LOS D, which was considered unreasonable and thus LOS D that was non-attainable.
- Julie Mayfield suggested there may be differing opinions as to what level of design is considered
  "reasonable and attainable" and stated eight lanes is not desirable as it does not "fit" with the
  character of Asheville. She stated there is a difference in feeling between six and eight lanes and
  requested there be a conversation at a later date about the trade-offs for using LOS E as opposed
  to LOS D for the I-2513 project.
  - It was noted, as was documented within the 2015 DEIS, the differences in Section A of building a six-lane cross section versus and an eight-lane section as included within the designs presented within the 2015 DEIS is roughly 3 acres of additional impact. Based upon review of the impacts associated with the additional roughly 3 acres, designing the proposed project would be considered reasonable and attainable.

- o It was suggested, while the traffic forecast is being finalized, that the City of Asheville work to compile a list of what trade-offs the City would propose; however, it was questioned why compromising the LOS would be considered when the overall footprint of a six-lane facility versus an eight-lane facility would be very similar.
- It was noted that general trade-offs could be identified by the City now; however, specific discussion would be better suited after the traffic operations analysis and microsimulation are completed as this will show the refined designs based upon the updated traffic forecast.

It was agreed by meeting attendees that the next working group meeting will include topics related to bicycle and pedestrian accommodations, transit, and general aesthetics.

 Attendees will be prepared to review City of Asheville standards, specific roadway corridors (existing and planned accommodations) in order to identify specifics such as sidewalk locations, sidewalk widths and offsets, as well as other betterment requests.

#### **Action Items**

- NCDOT will send working group participants the updated traffic forecast when finalized.
- The City of Asheville will identify new members to serve on the Aesthetics Advisory Committee, with the specific role of the committee to be developed by the City of Asheville.
- Buncombe County will be invited to participate on all future working group meetings.
- NCDOT will present the updated traffic forecast to the FBRMPO on June 23, 2016.
- The City of Asheville will provide clarification of their questions/comments provided on the 2015
  DEIS and will also provide their list of requested improvements/betterments which will be
  discussed at Working Group Meeting #3.

#### DRAFT MEETING SUMMARY



To: Project File

From: Chris Werner

**AECOM** 

Date: July 12, 2016

RE: I-2513 Post LEDPA Scoping Meeting

**NCDOT STIP Project I-2513 (I-26 Connector)** 

#### Meeting Attendees:

Mitch Batuzich – FHWA
Felix Davila – FHWA
Michael Dawson – FHWA
Herman Huang – NCDOT, Community Studies
James Dunlop – NCDOT, Congestion Mgmt
Elise Groundwater – NCDOT, Congestion Mgmt
Cole Hood – NCDOT, Division 13\*
Ricky Tipton – NCDOT, Division 13\*
Terry Fox – NCDOT, Geoenvironmental
Damon Jones – NCDOT, HES
Stephen Morgan – NCDOT, Hydraulics
Kirby Pendergraft – NCDOT, Hydraulics

Michael Wray – NCDOT, PDEA
Steve Kendall – NCDOT, Roadway
Kevin Moore – NCDOT, Roadway
Kelvin Jordan – NCDOT, Signing & Delineation
Matthew Tracey – NCDOT, Signing & Delineation
Marc Cheek – NCDOT, Structures
Brian Wert – NCDOT, TPB\*
Andrew Bell – AECOM
Neil Dean – AECOM
Celia Foushee – AECOM
Joanna Rocco – AECOM
Chris Werner – AECOM

Jeff Hemphill – NCDOT, NES

Carla Dagnino – NCDOT, NES Mary Pope Furr – NCDOT, NES

The project team met with several units from NCDOT at 1:00 PM on June 29, 2016 in the Structures Design conference room in the Century Center Building. The purpose of the meeting was to discuss upcoming tasks for the I-26 Connector project now that a Least Environmentally Damaging Practicable Alternative (LEDPA) was chosen and the project team plans to complete the Final Environmental Impact Statement (FEIS).

Michael Wray began the meeting with introductions. Chris Werner then discussed the status of the project, described the LEDPA that was selected at the May 18, 2016 Concurrence Point 3 Merger Meeting, and the purpose of the meeting.

The following represents discussion held with the NCDOT units in attendance:

<sup>\*</sup>Joined meeting via telephone

#### Roadway Design Unit

- Roadway has requested final surveys for all sections of the project. Section C should be available soon, Sections A and B will be available later this year.
- Subsurface Utility Engineering (SUE) has been completed for all sections of the project.
- Preliminary pavement designs have been requested using the latest traffic forecast.
- Roadway will need to know the typical section proposed for Section A; six or eight lanes of traffic.
- The Design Public Hearing will be held prior to the FEIS.
- There has been some correspondence with property owners inquiring about impacts to properties and design status.
  - Ohris discussed the correspondence AECOM and NCDOT have had with the property owners of 307 Smokey Park Highway; currently occupied by Hardee's. The owner has concerns regarding the impacts to the property which may require the property's current use to be non-functioning. Chris has discussed with them the status of the project and it will not be until the Highway Capacity Analysis is complete and designs are underway that we will be able to determine if impacts to the property can be avoided.
  - Chris began discussing other items AECOM and NCDOT have been looking into or have been asked to investigate. These items include:
    - Impacts to the Montgomery Road community,
    - Investigating the super elevation on Haywood Road,
    - Request from the City of Asheville to keep the greenway against the proposed right-of-way,
    - Request from the City to extend the greenway further into town (it was noted this
      would be discussed further with the City during the Working Group #3 meeting in
      Asheville),
    - Request from the City to investigate "daylighting" existing culverts deemed unnecessary due to pavement changes,
    - Various specific design related comments acquired after the Public Hearing in November,
    - Request from the City to revise the Amboy Road typical section to reflect the changes that have been incorporated in the City's most recent update of the Metropolitan Transportation Plan (MTP),
    - Request from the City for NCDOT to follow Complete Streets concepts in designs and allow for local input into the designs, and
    - Request from the City to return the Jeff Bowen Bridges to a boulevard.

#### **Hydraulics Unit**

- The Hydraulics Unit noted that now that the LEDPA has been selected, the grades and lengths of the bridges in Alternative F-1 will need to be checked to determine if any changes to the hydraulic structures are necessary.
- The project team must identify any avoidance and minimization measures taken thus far as well
  as document what avoidance and minimization measures are applied to the LEDPA for discussion
  during CP 4A.
- In areas where NCDOT is putting fill in floodplains, it was noted that the project team must be aware of the cumulative and indirect effects that may result from this activity and if the amount of fill has changed.

 It was asked if there were any major culverts and/or structures being used for greenways, and it was noted that hydraulic structures in the new location portion of the greenway have only minor crossings.

# Division of Bicycle and Pedestrian Transportation

Representatives from this unit were unable to attend the meeting; therefore comments from this unit were received separately, prior to the meeting.

#### **Human Environment Unit**

# Community Studies Group

- Community Studies noted if the alternatives selected as the LEDPA are discussed in the CIA, an update to the CIA may not be necessary.
  - Chris explained the CIA was last updated in 2015. Additional actions items may include meeting with the neighborhoods in the area.
- Regarding Environmental Justice communities, Houston/Courtland will have a moderate impact.
- It was debated whether or not the project team needed to provide an update to the Emma Road community, Ricky Tipton does not think this is necessary because they are no longer being impacted as shown in other alternatives.

#### **Cultural Resources**

- A report was submitted to the State Historic Preservation Office (HPO) last week regarding eligibility of the Burton Street community. The church within this community was reevaluated.
- Mary Pope Furr noted she should be involved in discussions with the City regarding bicycle and pedestrian accommodations, as they may affect historic properties. She can also assist in small group meetings where necessary to discuss the Memorandum of Agreement (MOA) process.
- Archaeology will proceed with further investigations of sites after acquisition of properties.

#### Natural Environment Unit

- Requests for biological surveys for the Northern long-eared bat (NLEB) have been submitted.
  These surveys will likely take place in October 2016. Once surveys are complete, the NES
  Biological Surveys Unit will coordinate their results with the project team and determine next
  steps for coordination with the United States Fish and Wildlife Service. It is anticipated a formal
  Section 7 consultation will not be needed.
- Jurisdictional features within the study area will need to be re-verified by the US Army Corps of Engineers (USACE). The existing jurisdictional determination (JD) will expire Fall 2016. Jeff Hemphill requested AECOM to submit a map showing the expanded study area boundary that occurred after the original JD and the LEDPA corridor.
- Jeff Hemphill will coordinate with Lori Beckwith (USACE representative) regarding how she would prefer to proceed with the preliminary JD because the project is phased for construction.
- AECOM will send Jeff email correspondence with Lori Beckwith regarding the project. *Update:* AECOM forwarded the email correspondence to Jeff on 7/6/2016.

#### Congestion Management Unit

- The Traffic Forecast has been prepared; work on the Highway Capacity Analysis will now begin.
- A roundabout configuration for the Haywood Road interchange was proposed as an effort to reduce impacts.
- Chris Werner discussed the various iterations that will occur between Roadway and Traffic to reach the preliminary designs.

- Structures noted that due to the number of bridges on the project they may have concerns regarding grades, reverse curves, and deicing mechanisms. Bridges over water bodies may not be able to accommodate chemical deicing techniques.
- AECOM will develop a list of items that need to be thoroughly examined. This will include investigating braided ramps, collector/distributor roads, the Haywood interchange, deicing mechanisms, etc.

#### Project Development and Environmental Analysis Unit

- Michael Wray noted Jeff Lackey would like to meet with the project team prior to the Working Group No. 3 meeting in Asheville, scheduled for 8/9/2016. *Update: The project team has scheduled a meeting with Jeff on 7/26/2016.*
- Mitch Batuzich noted the Record of Decision will need to include the Notice of Limitations stating claims against the project cannot begin until 150 days from publication in the federal register.
- Jim Dunlop stated concerns regarding the current order of construction phasing (Sections B, C, then A). Chris Werner stated this will need to be revisited.
- Regarding funding, Ricky Tipton stated the corridor cap may be an issue for the project. The project will likely not be funded before the 2020's.

#### Structures Unit

- Structures should be reengaged prior to finalizing the preliminary designs. Tom Koch will be present at the Working Group No. 3 meeting.
- The Working Group members requested additional visualizations to show the aesthetic options
  for the new bridges over the French Broad River. Mary Pope Furr discussed the Creative Corridors
  initiative in Winston Salem, NC. AECOM will discuss with Drew Joyner options for visualizations
  and the Creative Corridors completed in Winston Salem.
- Chris Werner proposed options for the Jeff Bowen Bridges be discussed since the LEDPA will turn Patton Avenue back into a boulevard. Ricky Tipton stated the need for cantilever may be eliminated.

#### Geoenvironmental Unit

- The original investigation found 19 hazardous sites within the study area.
- The interchange on the east side of the French Broad River was not included in the original study area. An Addendum can be issued to include this area.
- AECOM will send the Geoenvironmental Unit a copy of the LEDPA designs.
- The Roadway Unit will coordinate with the Geoenvironmental Unit to determine if there are any sites that may have an effect on designs. It was noted Amboy Road has a major cut that could be of concern.

#### Signing and Delineation Unit

- This unit will revisit past efforts prior to finalization of preliminary designs. (OR AFTER FINALIZATION?) Concerns include utilities and right-of-way.
- This unit will need to be reengaged with the Structures Unit and will need to coordinate with the Bike and Pedestrian Unit.

#### Division 13

• Rick Tipton stated lighting and Intelligent Transportation Systems (ITS) needs to be considered after finalization of preliminary designs.

MEETING SUMMARY July 12, 2016 Page 5 of 5

# MEETING SUMMARY



To: Project File

From: Chris Werner

**AECOM** 

Date: August 24, 2016

RE: I-2513 Working Group Meeting #3

NCDOT STIP Project I-2513 (I-26 Connector)

#### Meeting Attendees:

David Brown – NCDOT Board Member Lyuba Zuyeva – FBRMPO

Jay Swain - NCDOT Division 13Ed Johnson - NCDOT Bike & PedRick Tipton - NCDOT Division 13Nick Scheuer - NCDOT Bike & PedKristina Solberg - NCDOT Division 13Mary Pope Furr - NCDOT HESCole Hood - NCDOT Division 13Derrick Weaver - NCDOT PDEAMichael Dawson - FHWAMichael Wray - NCDOT PDEA

Alan McGuinn – Asheville Design Center Jeff Lackey – NCDOT REU

DeWayne Barton – Burton Street Community Kevin Fischer – NCDOT SMU

Bruce Emory – City of Asheville

Julie Mayfield – City of Asheville

Ken Putnam – City of Asheville

Gwen Wisler – City of Asheville

Chris Werner – AECOM

Chris Werner – AECOM

The project team met with the I-2513 Working Group at 9:00 AM on August 9, 2016 at the North Carolina Department of Transportation (NCDOT) Division 13 Buncombe County Maintenance Office. The purpose of the meeting was to discuss action items from the previous Working Group meeting held on June 3, 2016, review NCDOT aesthetics policies and procedures, structure types and aesthetic treatments, multimodal policies and procedures, and discuss the remaining City of Asheville comments on the 2015 DEIS regarding bicycle, pedestrian, and transit.

Derrick Weaver began the meeting with introductions, followed by a brief update on the status update of the Traffic Capacity Analysis, which will assist in the design refinement process. It was questioned when would be the most appropriate time to have someone from NCDOT present the traffic microsimulations results for the base year no-build and future year build scenarios to the FBRMPO. It was noted this meeting would be most beneficial if held once NCDOT is closer to completing the simulation models.

Discussion points from the action items from Working Group meeting #2 are summarized below:

Ken Putnam stated the City has not yet identified additional participants for the Aesthetics
Advisory Committee (AAC), but have received several interested participants. It was also noted
that different members may be needed to participate on subcommittees to assist in the various
elements which the AAC will provide input. It was requested NCDOT to provide the Working

Group with a description of the AAC roles and responsibilities and any project examples which also include AAC input. It was noted by NCDOT, the AAC roles and responsibilities will need to be defined by the Working Group, as the AAC is a spin-off of this group; however, NCDOT will identify similar projects and the roles which the AAC fulfilled.

- Ken Putnam stated the City will work on finalizing the list of requested betterments/improvements and have this available for the next working group meeting, scheduled for September 20, 2016. The City did however request clarification regarding the proposed multi-use path along the Jeff Bowen Bridges, as there is desire by the City to extend the greenway to Clingman Avenue. NCDOT noted given Alternative 4B removes the I-240 traffic from the Captain Jeff Bowen Bridges (which is expected to result with excess capacity) the number of lanes on the bridges can be reduced and converted to the multi-use path for the greenway. As a result, utilizing a cantilever bridge to accommodate the greenway on the Captain Jeff Bowen Bridges would no longer be necessary.
- Julie Mayfield reached out to Brownie Newman to join the Working Group as a possible representative of Buncombe County. It was noted Mr. Newman would not be able to participate, however, will coordinate with the City to identify a staff member to represent Buncombe County. Ken Putnam added that Buncombe County has added one million dollars to assist in funding betterments for the project. County funds combined with the City's, increases the total amount to three million dollars.

Discussion points from Jeff Lackey's review of aesthetics policies and procedures are summarized below:

- Jeff began with an overview of the Environmental Roadside Unit within NCDOT. Their responsibilities include:
  - Erosion control,
  - o Historic mitigation,
  - Landscaping,
  - o Site development, etc.
- Several examples of existing site work completed in North Carolina were displayed. The Gateway
  Project for Salisbury included public art sculptures by local artists displayed within the right-ofway. The Smith Creek Parkway project improvements along 3<sup>rd</sup> Street in Wilmington also featured
  local sculptures.
- There are three levels of design for roadway project aesthetics and landscaping: standard, enhanced, and landmark. NCDOT will fund and design to a standard level of design. Municipalities can add capital to the project to increase the level of design to enhanced or landmark. In order to increase the level of design, a municipal agreement must be in place stating the municipality will maintain the area at a high level.
- A new NCDOT Aesthetics Guidance Manual has been finalized; this does not include any new
  policies regarding aesthetics, only guidance. Working Group members can access the manual by
  clicking on the following link:

https://drive.google.com/folderview?id=0ByuTE6v0hrynRHd1X01jQUVveFk&usp=sharing

- It was suggested municipalities should be involved early in the project planning process, so they
  can begin acquiring capital funds for the project and maintenance as soon as possible. It was also
  suggested maintenance of such features, to a high level, should be included in municipality
  budgets every year.
- It was noted the landscaping along I-240 is maintained by NCDOT and was included in an enhancement project several years ago.

Discussion points from Kevin Fischer's review of structure types and aesthetic options are summarized below:

- Most bridge structures are concrete as opposed to steel, given concrete bridges are easier to maintain.
- "Signature bridges" are typically large structures which require longer spans due to sensitive areas they are crossing.
- The Biltmore Avenue Bridge is an example of a bridge structure that was changed for aesthetic reasons. Mary Pope Furr explained for this bridge they made a cast of the old structure and applied it to the new.
- The Wade Avenue and Peace Street bridges in Raleigh are other examples where additional aesthetic features were incorporated. For these bridges the City of Raleigh provided approximately two million dollars for enhancements given they serve as a major gateway into downtown Raleigh.
  - O To add similar levels of enhancements to the proposed bridges over the French Broad River it was approximated to have a cost of 50 percent more than the cost of the bridge.
- It was suggested that the City utilize the money they have allocated for enhancements towards improving the Captain Jeff Bowen Bridges instead of the new I-26 and I-240 flyover bridges.
  - The Captain Jeff Bowen Bridges, enhanced could serve as a gateway with downtown Asheville.
  - Alan McGuinn suggested the new I-26 and I-240 flyover bridges be designed as sleek as possible, with consideration being given to utilizing one column as opposed to the standard two columns at each bent.
  - It was noted, on recent Winston-Salem projects, the City wanted arch bridges throughout; however, this type of bridge was much more expensive. As a result of coordination, NCDOT designed standard bridges and applied structural facades to provide a similar look.
- Alan McGuinn inquired about the use of the Construction Management General Contractor (CMGC) contracting mechanism and if it is currently being used on NCDOT projects, given it could allow for more opportunities for innovation and increased coordination/public input with the contractor during the design phase.
  - o NCDOT will investigate their use of CMGC contracting mechanism and report back to the Working Group.
  - Alternatively, it was suggest design charrettes could be utilized to facilitate receiving early input during the final design and construction of the proposed bridges. As such, more detailed design work and input on the project aesthetics may need to be started sooner, since the project has multiple sensitive areas. Timing for charrettes was approximated to initiate 2-3 years prior to construction.
  - o It was also suggested that a Value Engineering Study could be performed as the project progresses, which will allow an independent team to review the issues, the proposed solutions and to determine if there is a more feasible, cost effective approach that could serve the desired purpose similarly.
- A discussion was held regarding the various view sheds that surround the proposed bridges in Section B. NCDOT explained that the project team is currently working to provide updated visualizations from locations throughout Section B of the project, which are anticipated to be completed by the next Working Group Meeting on September 20, 2016. These visualizations will also be available for the Montford Neighborhood Association meeting that evening, as visual impacts are a major concern to that community.

Julie Mayfield stated anxiety over the project has risen since the LEDPA was selected as now the community sees the project is actually moving forward. It was questioned when budgets would be completed for the proposed bridges. Derrick Weaver responded the estimated costs have been completed and the project team will send them to her via email; however he noted that these costs are based on designs presented in the 2015 DEIS and may change. Update: Estimated costs of Alternative 4-B's bridge costs only have been prepared and are appended to this meeting summary.

Discussion points from Ed Johnson's review of multimodal policies and procedures are summarized below:

- It was noted cost-sharing with the City will be a large component in cost estimating. For example,
  the cost-share for widening a sidewalk more than the NCDOT standard five feet would apply to
  the additional concrete, not necessarily for additional structures, unless the structure needed to
  be widened for the additional sidewalk footage.
- Julie Mayfield suggested pulling together a team (subset of the Working Group) specifically for bicycle and pedestrian discussions. This team would start by reviewing the designs at all locations where there are bicycle and pedestrian interaction.
  - Derrick Weaver suggested the City pull together a list of betterment requests from reviewing their plans and the current designs, after which the City can work with the project team and the NCDOT Bicycle and Pedestrian Division. This collaboration will assist in identifying what components the City would like versus what NCDOT can do and what would be considered a betterment that the City would ultimately be responsible for.
  - Ken Putman noted creating a list, or "menu", of betterment requests (including cost estimates) will give the City an opportunity to prioritize and save for future improvements for the I-2513 project. It will also be useful in communicating with the Buncombe County Commissioners as well as the Asheville City Council.
- It was noted the Working Group has had discussions regarding the proposed sidewalk along the Hillcrest community accessing Patton Avenue, and suggested placing a shorter path at the lower right corner of the neighborhood connecting Patton Avenue as opposed to a longer sidewalk. NCDOT expressed concern regarding this suggestion as a sidewalk may be warranted at that location in the future and if it was not constructed during this project it would be fully paid for by the City. Additionally, the proposed sidewalk would be utilized by other neighborhoods such as Houston/Courtland. It was agreed this level of discussion could be revisited during the meetings which will review the designs at all locations where there are bicycle and pedestrian interaction.
- A discussion was held regarding the existing caged walkway on the Captain Jeff Bowen Bridges and the potential for removal. It was noted this can be looked at, but may be beyond the scope of this project.
- Julie Mayfield questioned how NCDOT intended to accommodate the City of Asheville's planned east-west greenway along the south side of Patton Avenue from west Asheville to downtown Asheville.
  - O As shown in the current designs, sidewalk is being provided along the north side of Patton Avenue. Currently no portions of this greenway have been constructed and there are no sidewalks on the south side of Patton Avenue. If the City would prefer a bridge over I-26, this would be considered a betterment which the City would be responsible for. Consideration can be given into investigation potential for an extra wide sidewalk to be provided along the south side of Patton Avenue. It was agreed this level of discussion

could be revisited during the meetings which will review the designs at all locations where there are bicycle and pedestrian interaction.

• Ken Putman noted the City's 2015 DEIS comment regarding concern of transit route impacts is no longer a major concern as they can be rerouted.

Miscellaneous discussion points are summarized below:

- It was questioned if there was any flexibility in the upcoming bond. The response provided suggested maybe not for this year, but there might be potential in the next one which will be in two years.
- NCDOT clarified for the Working Group that if design elements are removed from the project, the
  funds that are no longer being used cannot be applied elsewhere; the overall cost of the project
  will just be adjusted.
- It was clarified to the Working Group that NCDOT will not provide a description of betterment requests in the FEIS because a municipal agreement with the City will have not yet been drafted.
   Mary Pope Furr noted some historic commitments will be included in the Record of Decision document.
- DeWayne Barton inquired as to how equity is taken into consideration of impacts to neighborhoods and how these impacts can be corrected or mitigated.
  - Derrick Weaver explained the project team is in the process of coordinating with the impacted neighborhoods and communities in order to review the project impacts, discuss potential avoidance/minimization/mitigation measures, and communicate next steps in the project so the communities can stay involved in the further development of the project. These meetings will be critical with assisting NCDOT in identifying ideas of how project impacts to their communities may be addressed.

Due to time constraints, the discussion regarding the remaining City of Asheville comments on the 2015 DEIS related to bicycle, pedestrian, and transit will be discussed at the next Working Group Meeting on September 20, 2016. This will allow the City to prepare a list of requested betterments. The City will also work to identify any city or county plans that were not included in the 2015 DEIS.

It was agreed by meeting attendees that the next working group meeting will be held on September 20, 2016 to discuss CMGC, review the project visualizations, discuss the AAC's expected roles and responsibilities, and review the visualizations created by the project team. A smaller meeting will be held immediately following the Working Group meeting to discuss the City's list of requested betterments.

#### Action Items

- The City will follow up with Brownie Newman to identify a representative of Buncombe County to join the Working Group.
- NCDOT will notify the Working Group of which traffic forecast scenario request will be utilized for the traffic operations analysis update: 6 lanes scenario or 8 lanes scenario.
- NCDOT will coordinate with Jim Dunlop regarding presenting the traffic microsimulations results for the base year no-build and future year build scenarios to the FBRMPO once available.
- NCDOT will provide to the Working Group several sample projects which also include AAC input, and the roles/responsibilities the AAC served on those projects.
- NCDOT will investigate their use of CMGC contracting mechanism and report back to the Working Group.

MEETING SUMMARY August 24, 2016 Page 6 of 6

- NCDOT will determine the appropriate timing for a Value Engineering Study to be performed on the project.
- NCDOT will prepare visualizations from various locations throughout Section B, which are anticipated to be available for the next Working Group meeting, which is scheduled on September 20, 2016.
- NCDOT will provide the Working Group estimated costs for the proposed bridges in Section B.
- The Working Group will create a list of betterments for the project to be discussed at the next Working Group meeting, September 20, 2016.
- The Working Group will identify any city or county plans that were not included in the 2015 DEIS.

#### North Carolina Department of Transportation Preliminary Estimate

TIP No. <u>I2513B ALTERNATE 4B</u>
Route I-26 & I-240 Connection

Prel.

County:

Buncombe

From

STRUCTURE CONSTRUCTION COST
(ALT 4B)
\$196,704,035

Line		Sec							
Item	Des	No.	Description	Quantity	Unit		Price		Amount
			New Bridges						
		SD	New Str., Patton Ave over Y7RPB						
		51	Y7F (Sta. 27+22+/-, 233' x 101.5')	23,650	SF	\$	100.00	\$	2,365,000.00
			New Str., Patton Ave over I26	23,030	51	Ψ	100.00	Ψ	2,303,000.00
			Y7F (Sta. 32+70+/-, 214' x 126'(avg. width)						
		SP	Y7WB (34+84+/-, 96' x 129')	39,348	SF	\$	100.00	\$	3,934,800.00
			New Str., I26NB over Smith Mill Creek & French Broad	ŕ					
			River						
			126 (Sta. 51+00+/-, 600' x 60', 162'x60'(avg. width), 344' x						
			48', 719'x72', 300'x66'(avg. width), 1900' x 60',						
			290'x60'(avg. width))						
			RPD(Sta. 10+00+/-, 161' x 34, 300' x 39'(avg. width))	202 1 47	a.e.	_	120.00		25.055.640.00
		SP	23NB(Sta.30+24+/-, 300, x 39'(avg.width))	292,147	SF	\$	120.00	\$	35,057,640.00
		CD	New Str., RPD over Smith Mill Creek	0.750	CE	•	100.00	¢.	075 000 00
		SP	RPD (Sta. 14+98+/-, 287'x34') New Str., 23NB	9,758	SF	\$	100.00	\$	975,800.00
		SD	23NB (Sta. 24+65+/-, 559'x42')	23,478	SF	\$	100.00	\$	2,347,800.00
		51	New Str., I26SB over Smith Mill Creek and French Broad	23,476	31	φ	100.00	φ	2,347,800.00
			River						
			126 (Sta. 51+00+/-, 500'x84', 313'x48', 418'x66'(avg.						
			width), 3569'x60')						
		SP	240WB (Sta.10+00+/-, 745'x 36')	325,572	SF	\$	120.00	\$	39,068,640.00
			New Str., 240WB over Smith Mill Creek & French Broad						
			River						
			240WB (Sta. 17+45+/-, 1855'x42', 300'x48'(avg. width),						
		SP	724'x54')	131,406	SF	\$	120.00	\$	15,768,720.00
			New Str., 240EB over Smith Mill Creek and French Broad						
			River						
			240EB (Sta. 20+90+/-, 1349'x42', 328,x45'(avg. width),						
		CD	233'x30', 300'x54', 300x48', RPD SL (Sta. 10+00+/-, 230'x26'(avg. width), 320'x 28')	156,888	SF	\$	120.00	\$	19 926 560 00
		ы	New Str., RPD SL over Smith Mill Creek	130,000	SI	Þ	120.00	Φ	18,826,560.00
		SP	RPD SL (Sta. 15+50+/-, 700'x34', 300'x37'(avg. width))	34,900	SF	\$	100.00	\$	3,490,000.00
		51	New Str., 23SB over Y32A	3 1,700	51	Ψ	100.00	Ψ	3,170,000.00
		SP	23SB (Sta. 202+42+/-, 163' x 40')	6,520	SF	\$	100.00	\$	652,000.00
			New Str., Y23E over 240EB & 240WB	,					,
		SP	Y23E (Sta. 20+60+/-, 239' x 28')	6,692	SF	\$	100.00	\$	669,200.00
			New Str., Y31 over 240EB & 240WB						
		SP	Y31 (Sta. 12+57+/-, 205' x 39')	7,995	SF	\$	100.00	\$	799,500.00
			New Str., 240WB over Y32A						
		SP	240WB (Sta. 50+61+/-, 189' x 66')	12,474	SF	\$	110.00	\$	1,372,140.00
		SP	New Str., I26 over Y2 (Broadway Street)	36,314	SF	•	110.00	¢.	2 004 540 00
			I26 (Sta. 141+62+/-, 271' x 134') New Str., LPB over RPB			\$	110.00	\$	3,994,540.00
		SD	LPB (Sta. 21+54+/-, 117'x 46', 102'x 52'(avg. width),	21,242	SF				
		51	182'x 58')	21,242	51	\$	100.00	\$	2,124,200.00
			102 x 30 )			Ψ	100.00	Ψ	2,121,200.00
			Existing Structure Removal						
		SP	-Y7F- Sta. 27+22+/-	23,508	SF	\$	12.00	\$	282,096.00
		SP	-Y7F- Sta. 24+64+/-	7,920	SF	\$	12.00	\$	95,040.00
			-240WB- Sta. 50+50+/-	14,428	SF	\$	15.00		216,420.00
			-240WB- Sta. 58+60+/-	6,759	SF	\$	15.00	\$	101,385.00
			-240WB- Sta. 71+90+/-	4,559	SF	\$	15.00	\$	68,385.00
			-240EB- Sta. 74+60+/-	7,048	SF	\$	15.00	\$	105,720.00
			-240EB- Sta. 75+65+/-	4,971	SF	\$	15.00	\$	74,565.00
			-240WB- Sta. 75+90+/- 126 @ Sta 141+60, Dual Bridges over Broadway St	10,037	SF SF	\$	15.00	\$	150,555.00
		SP	120 (a) Sta 141±00, Dual Bligges over Broadway St	24,456	ъг	Φ	15.00	Φ	366,840.00
			Bridge Deicing						
			Ice Detection System (5 locations)	5	EA	\$	150,000.00	\$	750,000.00
ı	ı		= (5 locations)	5		ı ~	150,000.00	Ψ_	750,000.00

# North Carolina Department of Transportation Preliminary Estimate

Line		Sec					
Item	Des	No.	Description	Quantity	Unit	Price	Amount
			Str. over Floodway & Viaduct over U19-23				
			I-26NB 1,106' (x2) 3 Lanes				
			I-26NB 719' (x2) 4 Lanes				
		SP	I-26NB 300' (x2) Var (4 to 3)				
			I-26NB 2,190' (x2) 3 Lanes				
			RPD 785' (x1) 1 Lane				
			23NB 860' (x1) 2 Lanes	10,275	LF	\$ 585.00	\$ 6,010,875.00
			Str. over Floodway & Viaduct over U19-23				
		SP	I-26SB 500' (x2) 5 Lanes				
		-	I-26SB 4,300' (x2) 3 Lanes				
			240WB 745' (x1) 2 Lanes	10,345	LF	\$ 585.00	\$ 6,051,825.00
			Str. over Floodway & Viaduct over U19-23				
		SP	WB240 1,855' (x1) 2 Lanes				
		-	WB240 300' (x1) Var (2 to 3)				
			WB240 724' (x2) 3 Lanes	3,603	LF	\$ 585.00	\$ 2,107,755.00
			Str. over Floodway & Viaduct over U19-23				
			EB240 1,910' (x1) 2 Lanes				
		SP	EB240 300' (x2) 3 Lanes				
		51	EB240 300' (x1) Var. (3 to2)				
			EB240 1,140' (x1) 2 Lanes				
			RPD_SL 1,550' (x1) 1 Lane	5,500	LF	\$ 585.00	\$ 3,217,500.00
			Str. over Floodway & Viaduct over U19-23				
		CD.	LPB 118' (x2) 3 Lanes				
		SP	LPB 100' (x2) Var. (3 to 4)				
			LPB 182' (x2) 4 Lanes	800	LF	\$ 585.00	\$ 468,000.00
			. ,				
		SP	Road Deicing 1000' (x2) 3 Lanes	2,000	LF	\$ 585.00	\$ 1,170,000.00
			· · ·				
			Temp. Structures for Traffic Control				
		SP	Patton Detour	15,048	SF	\$ 120.00	\$ 1,805,760.00
		SP	WB240Temp	8,400	SF	\$ 120.00	\$ 1,008,000.00
			Misc. & Mob (10% Structures)	1	LS	\$ 15,549,726.10	\$ 15,549,726.10
			Estima	ited Structur	es Cost		\$ 171,046,987.10

 
 Estimated Structures Cost
 \$

 E. & C. 15%
 \$

 Construction Cost
 \$
 171,046,987.10 25,657,048.07

196,704,035.17

#### MEETING SUMMARY



To: Project File

From: Chris Werner

**AECOM** 

Date: October 24, 2016

RE: I-2513 Working Group Meeting #4

NCDOT STIP Project I-2513 (I-26 Connector)

# Meeting Attendees:

David Brown – NCDOT Board Member

Jay Swain – NCDOT Division 13

Rick Tipton – NCDOT Division 13

Kristina Solberg – NCDOT Division 13

Cole Hood - NCDOT Division 13

Michael Dawson - FHWA

Alan McGuinn – Asheville Design Center

DeWayne Barton – Burton Street Community\*

Jon Creighton – Buncombe County

Bruce Emory – City of Asheville

Julie Mayfield – City of Asheville

Todd Okolichany – City of Asheville

Ken Putnam – City of Asheville

\*Denotes participation in Part 1 of the meeting only.

Gwen Wisler – City of Asheville Lyuba Zuyeva – FBRMPO

Alice Oglesby - Moon io Media, Inc.

Suzanne Devane – Montford Neighborhood\*

Nick Scheuer – NCDOT Bike & Ped

Mary Pope Furr – NCDOT HES\*

Derrick Weaver – NCDOT PDEA

Michael Wray – NCDOT PDEA

Neil Dean – AECOM

Celia Foushee – AECOM

Joanna Rocco - AECOM

Chris Werner - AECOM

The project team met with the I-2513 Working Group at 1:00 PM on September 20, 2016 at the North Carolina Department of Transportation (NCDOT) Division 13 Buncombe County Maintenance Office. The meeting was divided into two parts. The purpose of Part 1 of the meeting was to discuss action items from the previous Working Group meeting held on August 9, 2016, review elevations and visualizations prepared by NCDOT, and discuss the Construction Management – General Contractor (CMGC) contracting mechanism. The purpose of Part 2 of the meeting was to discuss the City of Asheville's requested bicycle and pedestrian accommodations throughout the project study area.

Derrick Weaver began the meeting with introductions, an overview of the agenda, and a review of action items from Working Group Meeting #3. Chris Werner followed with a brief status update of the Traffic Capacity Analysis, which will assist in the design refinement process, and the status of small group meetings. It was explained that the project team would most likely start design refinement process with Section C. It was noted that as the project team moves forward with refining the designs, this would also include investigating the need for collector/distributor lanes within this section. It was questioned when would be the most appropriate time to have someone from NCDOT present the calibrated base year nobuild scenario traffic microsimulation to the FBRMPO. The City of Asheville and the FBRMPO suggested a potential date for the meeting could be November 17, 2016 as this is the date for the joint FBRMPO and

MEETING SUMMARY October 24, 2016 Page 2 of 5

TCC meeting. The project team will coordinate with Jim Dunlop to determine the timing for presentation. Regarding the Design Refinement Flowchart (attached) that was sent to the City of Asheville prior to the meeting, it was questioned what the assumption was for the number of lanes in Section B. NCDOT explained the Traffic Operations Analysis will determine the number of lanes needed in all sections of the project, which will also be coordinated with the adjacent TIP projects located to the north and south.

Discussion points from the Working Group meeting #3 action items are summarized below:

- Jon Creighton from Buncombe County will now participate in the Working Group meetings.
- The Working Group is working to identify any city or county plans that were not included in the 2015 DEIS.
- The Working Group has prepared a preliminary list of requested betterments for the project, which is an agenda item for today's meeting.
- NCDOT will prepare visualizations from various locations throughout Section B, which is an agenda item for today's meeting.
- As requested, NCDOT provided the construction cost estimates for the proposed bridges in Section B to the Working Group, which was attached to the meeting summary for Working Group #3.
- NCDOT will continue to coordinate and identify expected roles and responsibilities of the AAC.
- NCDOT will coordinate with Jim Dunlop regarding presenting the traffic microsimulations results for the base year no-build and future year build scenarios to the FBRMPO.

Discussion points from Part 1 of the meeting are summarized below:

- Chris Werner reviewed snapshots from the visualization video prepared for the 2015 Public
  Hearing and various existing and proposed elevations within the Section B study area (attached).
  It was questioned why some ramps appeared to be more elevated than others. It was noted that
  through review of the visualizations, the design team will revisit areas such as this to determine if
  the geometry shown is the minimum necessary.
- Chris Werner then began reviewing the 360-visualizations of the project from various points of view.
  - It was noted that some of the visualizations were still in draft format and will not be reviewed this evening at the Montford Neighborhood Association meeting given these locations are where the project is not visible due to obstructions by trees. These drafts represent initial efforts by NCDOT to show where the project would be located behind the trees, however proved to be in adequate. Therefore, imagery during leaf-off season will be captured this winter in order to better show visibility of the project.
  - The Work Group will assist in identifying additional key locations for which the point of view 360-visualizations will be prepared once designs have been refined. It was also suggested side by side image comparisons be provided using the 360-visualization and Google Earth street view images (proposed versus existing conditions).
  - o It was suggested the 360-visualization tool could be very useful to incorporate potential aesthetic treatments.
  - o It was suggested side by side images of the proposed 360-visualization and Google Earth street view images be provided for comparison.
  - It was questioned when the 360-visualizations would be updated. It was decided the 360-visualizations would be updated after designs are refined and would include both summer and winter foliage. This would be the time to also include potential aesthetic treatments.

- Rick Tipton began discussions regarding the CMGC contracting mechanism. In previous discussions with the Working Group, it was noted this method for contracting had been used by NCDOT in the past. However it was determined that it has not; a similar but different contracting method was used. It was noted that NCDOT has discussed alternative delivery methods for contracting but the State is not looking to use the CMGC method at this time due to the additional risk it creates for the contractor. NCDOT is likely going to use the Design/Build contracting method for this project.
- It is anticipated future Working Group Meetings will be held either at the MPO office or another location to be determined. Additionally, the next Working Group Meeting is tentatively scheduled for October 17, 2016 at 1 PM.
- The Working Group discussed topics for future meetings which included:
  - Hillcrest area designs,
  - o an update of the Traffic Operations Analysis and the microsimulation, and
  - o discussion of local plans not included in the 2015 DEIS.

Discussion points from Part 2 of the meeting are summarized below:

The City of Asheville presented to the NCDOT a list of requested betterments throughout the project. It was noted the spreadsheet is still being reviewed and updated. The goal of this list of betterments is for NCDOT to assist in determining feasibility and associated cost estimates, which will then be presented to the City Council for budgeting and approval for inclusion in the project. It was noted the spreadsheet also includes items from the City of Asheville's comments on the 2015 DEIS. Specific discussion included:

#### Sidewalks

- O The City noted the preferred sidewalk design would be a five-foot sidewalk with a five-foot utility strip behind the curb and gutter. NCDOT noted that this would need to be looked at from a case-by-case basis because not all roads include curb and gutter and some roads, such as Haywood Road, do not have much room to expand the roadway cross-section.
- It was noted that in each case the goal is to not increase the overall footprint of the project.

#### Bicycle Accommodations

- The City will determine if a cycle track is feasible along Patton Avenue. It was estimated that a cycle track would need an additional one to two feet of width than a traditional bicycle lane.
- The cost share for a bicycle lane versus a cycle track was unknown at this time. NCDOT will look into how to cost share cycle tracks and determine if the method is different from a typical bicycle lane.
- o It was questioned if the City looked at any upgrades to State Street for pedestrians and bicyclists. The City noted that it was not included because it was not anticipated the project would make any revisions to the road. It was noted that the proposed I-26 bridge would be widened; and therefore may impact lighting on State Street under the bridge. NCDOT noted that the project would likely not widen State Street for bicycle lanes; however, if the existing sidewalk were to be replaced, the NCDOT would put back a standard five-foot sidewalk; which is wider than the existing. Additionally, it was noted should the City have plans for providing bicycle accommodations along State Street, NCDOT would design the proposed bridge in order to not preclude the City's plans.

• Signalized Intersections: The City noted the desire for all signalized intersections to include pedestrian phases where appropriate.

#### Greenways:

- o It was requested to include bicycle and pedestrian access at Hanover Street and Haywood Avenue. Due to steep slopes in the Hazel Mill Road area, it was also requested the proposed greenway designs be revised by shifting the location from Hazel Mill Road to immediately adjacent the ramp in the southeast quadrant and then to run parallel eastbound along Patton Avenue.
- It was requested to add a direct pedestrian connection from the southeast corner of Hillcrest to Patton Avenue.
- o It was noted the pedestrian bridge on Stewart Street has been closed for several decades and therefore is proposed to be removed as a part of the project.
- It was requested that either a greenway or bicycle accommodations be incorporated along the south side of Patton Avenue.

#### Transit:

- o It was noted the City's goal for new transit is to be as close to ADA compliance as possible.
- Bus-on-shoulder was discussed along Patton Avenue; however the NCDOT noted this would likely not work due to the curb and gutter typical section proposed along the road. It was also noted that transit times should improve due to reduced congestion along Patton Avenue from the proposed project.
- It was explained the general process for betterments would be as follows:
  - o The City work to complete their betterments request.
  - NCDOT will review the betterments spreadsheet to assist in determining feasibility and associated cost estimates.
  - o The City will refine their betterment requests per NCDOT's qualitative evaluation.
  - The betterment requests and NCDOT's qualitative evaluation will be presented to the City Council for budgeting and approval for inclusion in the project.
  - o It was noted that if the City can provide written commitments to provide funding for the requested bicycle and pedestrian improvements, NCDOT will be able to include the improvements on the Design Public Hearing and possibly also include in the project visualizations for the next public meeting.

The meeting adjourned at 4:00 pm. It was decided the next working group meeting will be held on Monday, October 17<sup>th</sup>. The meeting will be held at a different location and will be communicated to the group beforehand.

#### **Action Items**

- NCDOT will coordinate with Jim Dunlop regarding presenting the traffic microsimulations results for the base year no-build and future year build scenarios to the FBRMPO, potentially on November 17, 2016 at the joint FBRMPO and TCC meeting.
- Once designs have been refined, NCDOT will update the 360-visualizations and provide side by side images of the proposed 360-visualization and Google Earth images of current views.
- The Work Group will assist in identifying additional key locations for which the point of view 360-visualizations will be prepared.
- The NCDOT will review the betterments spreadsheet to assist in determining feasibility and associated cost estimates, which will then be presented to the Working Group and ultimately, the City Council for budgeting and approval for inclusion in the project

MEETING SUMMARY October 24, 2016 Page 5 of 5

- NCDOT will investigate cost sharing for bicycle lanes versus cycle tracks.
- The Working Group will identify any city or county plans that were not included in the 2015 DEIS.
- The City will continue to work on the betterments spreadsheet and have a final version prepared for the Working Group #5 meeting.

Comments to be discussed in remaining Working Group meetings.

Comment discussed during 1<sup>st</sup> Working Group Meeting – March 24, 2016

Comments discussed during 2<sup>nd</sup> Working Group Meeting – June 3, 2016

Comments discussed during 3<sup>th</sup> Working Group Meeting – August 9, 2016

Comments discussed during 4<sup>th</sup> Working Group Meeting – September 20, 2016

#	Comment	Response	DISCIPLINE	NOTES
1	The City of Asheville's City Council approved a resolution adopting a complete streets policy on June 26, 2012 (Resolution #12-154). NCDOT adopted a similar policy during July 2009. The City of Asheville strongly encourages the NCDOT to implement complete streets elements consistent with design guidelines published by the National Association of City Transportation Officials (NACTO) along all of the -Y- lines including the bridges that cross the -L- line throughout the entire project for all sections.	NCDOT is committed to Complete Streets improvements and will coordinate efforts with the City of Asheville to incorporate these amenities into the project in compliance with design and cost-sharing guidelines. In areas where the various plans propose future pedestrian accommodations, the designs have been developed to accommodate or not preclude these elements from being constructed by the various agencies.	Design Pedestrian	Designs have been developed to accommodate or not preclude these elements from being constructed by the various agencies.
2	The City of Asheville has committed \$2,000,000 of co-funding to the I-26 Connector project in order to ensure that local needs are met.	Comment noted.	Funding	Additional discussion regarding this funding should occur during the design phase after a preferred alternative is selected and following betterment requests from the City.
3	As the -Y- lines are streets that are generally local in nature, the City of Asheville strongly encourages collaborative planning throughout the design and construction phases.	Comment noted. After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases.	Design	As the project moves forward NCDOT will be open for additional discussion and suggestions. If there are other details not already specified, please provide so it can be considered in the design refinements of the Preferred Alternative where

#	Comment	Response	DISCIPLINE	NOTES
4	The City and County approved a joint resolution regarding the I-26 Connector on March 18, 2014 (Resolution #14-54 and #14-03-12). The resolution included the following quote, "in preparation of the draft Environmental Impact Statement for the project, NCDOT clearly include elements that will address community needs for sound barriers and bicycle, pedestrian and neighborhood connections, including location, design, and the funding methodology of associated infrastructure elements." The City of Asheville strongly encourages NCDOT to fully address these elements in the Final EIS document.	Comment noted. After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville during the design refinements. Efforts also being performed while the designs are being revised will include updating the various technical studies in order to further evaluate and address concerns associated with noise, bike and pedestrian accommodations, community connectivity, human and natural environmental impacts, amongst others.	Design	feasible.  NCDOT will work with the City of Asheville moving forward and address specific comments. If there are other concerns not addressed in later sections, please provide a list for further discussion.  At WG Meeting #2, noise wall policies and noise analysis methodologies were discussed. The WG presented the Project Team with a Betterments "wish list" at WG Meeting #4. Funding of the requested betterments should be discussed at a subsequent working group meeting.
5	Due to the City of Asheville's limited ability to annex, the City of Asheville strongly encourages the NCDOT to make all efforts to minimize the overall footprint throughout the entire project length for all sections with the use of additional retaining walls and additional urban design strategies to make sure that all of the on/off ramps are placed as close to the -L-line as possible.	After selection of a preferred alternative, NCDOT will continue in refining the designs in order to either avoid or minimize impacts. While measures such as the use of retaining walls have already been incorporated into the preliminary designs for the Detailed Study Alternatives evaluated within the 2015 DEIS, the refinement of the designs for the LEDPA provides an opportunity to further coordinate with the public, resource agencies, as well as the City of Ashville to further develop the designs and identifying additional areas for avoidance or minimization of impacts.	Design	Comment to be discussed at a subsequent working group meeting that will focus on design issues. If there are specific locations, please provide a list for further discussion.

#	Comment	Response	DISCIPLINE	NOTES
6	Design exceptions should be considered in cases where greater land preservation would result. The City of Asheville would like to be involved in discussing these suggestions during the design phase.	Comment noted. If design exceptions are required to avoid or minimize impacts due to the project, documentation with justification will need to be provided to the Federal Highway Administration for approval of the use of the design exception.	Design	Comment to be discussed at a subsequent working group meeting that will focus on design issues.
		Design exceptions are required when the proposed roadway designs do not meet certain controlling criteria and design standards are established for a specific project. These criteria, consisting of thirteen design elements, are defined in AASHTO's A Policy on Geometric Design of Highways and Streets and are influenced by roadway characteristics such as functional classification and traffic volumes.		
		On projects with federal funding, review, and oversight, the Federal Highway Administration is responsible for reviewing and approval of requested design exceptions. However, design exceptions are typically viewed as undesirable on new or reconstructed roadways due to the long term adverse effects associated with the deficiency, such as reduced highway safety and increased maintenance costs.		
7	The City of Asheville is very interested in assuring the best possible pedestrian and bicycle improvements and would like to be actively involved in the design phase of the project regarding the pedestrian elements after a preferred alternative has been selected. This involvement is critical in order for the City of Asheville to conduct its own transportation and financial planning.	Comment noted. After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases.	Design Bike & Ped	The City provided the project team a list of requested betterments including bicycle and pedestrian accommodations. The project team will review the list, determine feasible options, and provide the City with costs associated with each. Additional discussions should occur as designs are refined.

#	Comment	Response	DISCIPLINE	NOTES
8	The City of Asheville's preferred sidewalk cross- section includes a 5-foot sidewalk and a 5-foot	NCDOT is committed to Complete Streets improvements and will coordinate with the City of	Bike & Ped	The City provided the project team a list of requested
	utility strip (buffer area) with a 10-foot overall width. The City of Asheville strongly	Asheville, after the selection of a preferred alternative, with regard to incorporating these amenities into the		betterments including bicycle and pedestrian
	encourages this cross-section at all sidewalk locations throughout the entire project length	project in compliance with design and cost-sharing guidelines.		accommodations. The project team will review the list,
	for all sections. If the preferred sidewalk cross-			determine feasible options,
	section cannot be provided in specific areas, a reduced-width utility strip should be			and provide the City with costs associated with each.
	considered, and if that is not possible, then a 6- foot back of curb sidewalk should be used.			Additional discussions should occur as designs are refined.
9	The City of Asheville strongly encourages the NCDOT to consider wider (6') minimum bicycle		Bike & Ped	The City provided the project team a list of requested
	lane widths along roads with traffic volumes greater than 10,000 vpd and/or operating			betterments including bicycle and pedestrian
	speeds greater than 35 mph to be consistent with the City of Asheville Standard			accommodations. The project team will review the list,
	Specifications and Details Manual, City of			determine feasible options,
	Asheville Comprehensive Bicycle Plan, and NACTO recommendations.			and provide the City with costs associated with each.
				Additional discussions should occur as designs are refined.
10	The City of Asheville strongly encourages the NCDOT to consider multi-use paths to measure		Bike & Ped	The City provided the project team a list of requested
	14-16 feet wide with an absolute minimum			betterments including bicycle
	width of 12 feet.			and pedestrian accommodations. The project
				team will review the list,
				determine feasible options, and provide the City with
				costs associated with each.
				Additional discussions should occur as designs are refined.

#	Comment	Response	DISCIPLINE	NOTES
111	The City of Asheville would like to be actively involved in the Aesthetics Advisory Committee (AAC) in order to help integrate aesthetics features into the proposed design after a preferred alternative has been selected and final design begins.	Comment noted. After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases.	Aesthetics	NCDOT proposes reestablishing an aesthetics committee after selection of a preferred alternative. Integration of aesthetics wi occur during preparation of FEIS and continue for the duration of project development. Alice Oglesby was invited to head the AA The project team will coordinate with Alice to determine roles and responsibilities of the AAC.
12	Retaining walls should include aesthetics standards consistent with the City of Asheville Standard Specifications and Details Manual.	Comment noted. After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases.	Aesthetics	reestablishing an aesthetics committee after selection of a preferred alternative. Integration of aesthetics wi occur during preparation of FEIS and continue for the duration of project development. Greg Smith discussed the policies regarding placement and aesthetic options of noise walls in detail at the Working Group meeting #2.
13	The City of Asheville strongly encourages reasonable mitigation strategies, including funding, for transit, pedestrian, and bicycle routing during the construction phase.	Comment noted. After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases.		These are items NCDOT will continue to discuss during the design phase. If there a additional specifics please provide for future discussions.

City	of Asheville – General Comments on 2015 DEIS fo	or TIP Project I-2513 (I-26 Connector)		
Dece	ember 16, 2015			
#	Comment	Response	DISCIPLINE	NOTES
14	The City of Asheville strongly encourages the NCDOT to include bus stops along all of the transit routes within the project limits. These bus stops must be designed and constructed to meet ADA requirements.	Comment noted. After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases.	Transit	NCDOT would like to clarify this comment with the COA. Is COA asking for betterment of existing stops? The City provided the project team a list of requested betterments including transit stop improvements.
15	The City of Asheville would like for the NCDOT to consider "bus on shoulder system" to be authorized within the project limits.	Comment noted. After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville to discuss the potential use of the "bus on shoulder system".	Traffic	The City provided the project team a list of requested betterments including the addition of "bus on shoulder" lanes on Patton Avenue. The project team will review if this is a feasible option and discuss at a later Working Group meeting.
16	The City of Asheville strongly suggest that NCDOT create a collaborative working group that would meet regularly starting in early 2016 and throughout the design phase to ensure adequate consideration of the concerns listed above. This group could also examine the travel demand model, capacity analysis, and the methodology of calculating Level of Service in an effort to gain consensus.	Comment noted.		

#	ember 16, 2015 Comment	Response	DISCIPLINE	NOTES
<u>#</u> 17	The City of Asheville is pleased that NCDOT will be using the new local travels demand model to re-examine travel demand and to conduct a new capacity analysis with a 6-lane alternative in Section A.	Response  Comment noted.	Traffic Traffic	NCDOT has received the travel demand model for use and is currently in the process of completing moderuns and forecast scenarios for 4, 6, 8, and 10 lanes (if needed). The updated Traff Forecast is currently being updated. NCDOT will send the Working Group a copy of the forecast once finalized. Note: the forecast has been finalized and sent to the Working Group. NCDOT is currently working on updating the Capacity Analysis to determine designation.
18	The City of Asheville would like more information about the placement and sufficiency of sound walls, and assurance that sound walls will be fully included in the Final EIS.	Once a preferred alternative is selected, an updated traffic forecast will be prepared and designs further refined. Once designs of the Preferred Alternative have been refined, noise abatement measures will be reanalyzed.	Noise	refinements.  The updated Traffic Forecastis currently being updated. NCDOT will send the Working Group a copy of the forecast once finalized. Greg Smith discussed the policies regarding placement of noi walls in detail at the Working Group meeting. Note: the forecast has been finalized and sent to the Working Group. NCDOT is currently working on updating the Capacity Analysis to determine design refinements.

_	of Asheville – General Comments on 2015 DEIS f ember 16, 2015	or TIP Project I-2513 (I-26 Connector)		
#	Comment	Response	DISCIPLINE	NOTES
19	The City of Asheville strongly encourages NCDOT to update all of the base maps in the final EIS in order to reflect construction activities (new homes and businesses) that have occurred during the past several years.	Comment noted. Typically, NCDOT will update project mapping during major milestones of a project (i.e. prior to project initiation or prior to developing final designs used for right of way acquisition). In between these phases, NCDOT may update the mapping due to major changes. Even though the 2015 corridor public hearing maps were created using the slightly dated mapping, the impacts and business and residential relocations reported reflect the current conditions at the time.	Residential and Business Impacts	NCDOT will update the aerial photography for final design.

#	Comment	Response	DISCIPLINE	NOTES
	City of Asheville - Section A Comments			
20	The City of Asheville strongly encourages that an updated Travel Demand Model for the project be developed as quickly as possible to assess a scenario for six lanes through Section A, that the analysis in the six-lane scenarios carefully avoid assuming induced-demand levels associated with an eight-lane design, that the analysis include the resulting impact of six lanes on Section B and Section C, and that final design of the project include the fewest number of lanes and smallest footprint possible through the A, B, and C sections of the project.	NCDOT has received the travel demand model for use and is currently in the process of completing model runs and traffic forecast scenarios for 4, 6, 8, and 10 lanes (if needed). The updated traffic forecast will be used to refine the designs for the LEDPA.	Traffic	NCDOT has received the travel demand model for use and is currently in the process of completing model runs and forecast scenarios for 4, 6, 8, and 10 lanes (if needed). Additional discussion will occur at a subsequent working group meeting that will focus on traffic issues. The updated Traffic Forecast is currently being updated. NCDOT will send the Working Group a copy of the forecast once finalized. Note: the forecast has been finalized and sent to the Working Group.  NCDOT is currently working on updating the Capacity Analysis to determine design refinements.
21	The City of Asheville strongly encourages the NCDOT to include complete streets elements consistent with NACTO guidelines on the Haywood Road bridge (-Y6-) and through the intersection and to make all efforts to make the bridge and intersections as pedestrian and bicycle friendly as possible especially since a proposed greenway (multi-use transportation path) will be located in the northeast quadrant. These elements should include a minimum sidewalk width of 6 feet measured back of	NCDOT is committed to Complete Streets improvements and will coordinate efforts with the City of Asheville to incorporate these amenities into the project in compliance with design and cost-sharing guidelines, while trying to avoid or minimize impacts to the various constraints along the Haywood Road Corridor.	Design Bike & Ped	The City provided the project team a list of requested betterments including bicycle and pedestrian accommodations. The project team will review the list, determine feasible options, and provide the City with costs associated with each. Additional discussions should occur as designs are refined.

#	Comment	Response	DISCIPLINE	NOTES
	curb, bicycle lanes, reduced lane width and intersection dimensions, and reduced radii at the on/off ramps.			
22	The City of Asheville would like to explore (with the NCDOT) the possibilities of constructing buildings on the Haywood Road bridge in an effort to maintain connectivity as a business corridor through West Asheville.	Additional coordination is required with the City of Asheville to assist NCDOT in better understand this request.	Haywood Bridge	City of Asheville to provide additional clarification regarding this comment.
23	The City of Asheville strongly prefers that Amboy Road be designed as a two-lane facility, possibly with wider intersections for turn lanes, in order to reduce the footprint of the entire project and the taking of property, to make it more compatible with adjoining neighborhoods, to make Amboy Road more bicycle and pedestrian-friendly, and to reduce project cost, even if it means achieving level-of-service E for that section of Amboy Road.	The Amboy Road typical section was developed based on the capacity analysis for the project. Once a preferred alternative is selected, the typical section will be re-evaluated based on the updated traffic forecast and updated travel demand model.  NCDOT is committed to Complete Streets improvements and will coordinate with the City of Asheville, after the selection of the Preferred Alternative, with regard to incorporating these amenities into the project in compliance with design	Traffic	NCDOT presented to the Working Group information regarding the capacity analysis methodology. Designs are ultimately based upon MPO's travel demand model which feed the traffic forecast, which develops the highway capacity analysis.
24	The City of Asheville strongly encourages the NCDOT to redesign Amboy Road to be consistent with the City's ongoing project U-4739 with a design speed no greater than 40 mph.	and cost-sharing guidelines.	Traffic	NCDOT presented to the Working Group information regarding the capacity analysis methodology. Designs are ultimately based upon MPO's travel demand model which feed the traffic forecast, which develops the highway capacity analysis.

#	Comment	Response	DISCIPLINE	NOTES
25	The City of Asheville strongly encourages the NCDOT to design and construct the preferred sidewalk cross-section on Amboy Road between NC 191 (Brevard Road) and I-26.	Response	Bike & Ped	The City provided the project team a list of requested betterments including bicycle and pedestrian accommodations. The project team will review the list, determine feasible options, and provide the City with costs associated with each. Additional discussions should occur as designs are refined. NCDOT will continue to coordinate with the COA on sidewalk locations. Designs evaluated within the DEIS have been developed to accommodate or not preclude these elements from being constructed.
26	The City of Asheville strongly encourages that the West Asheville Greenway from Haywood Road across the Jeff Bowen Bridges, as with all greenways reflected in the DEIS, should reflect the AASHTO and NACTO design standards, which would result in a greenway that is roughly 14-16 feet wide to safely accommodate bikes and would also include appropriate shy-distance from any barriers consistent with AASHTO guidelines and NACTO guidelines. Additionally the path should be marked with 2-way bicycle and pedestrian lanes.	The Greenway Design is based on AASHTO's 1999 Guide for the Development of Bicycle Facilities. After selection of a preferred alternative and the project continues with preliminary designs, all design criteria will be reevaluated to meet the requirements of the design guidelines which are currently accepted for use by NCDOT.	Bike & Ped	The City provided the project team a list of requested betterments including bicycle and pedestrian accommodations. The project team will review the list, determine feasible options, and provide the City with costs associated with each. Additional discussions should occur as designs are refined.

#	Comment	Response	DISCIPLINE	NOTES
27	The proposed closing of Hanover Street at its intersection with Haywood Road adversely impacts a transit routes W1 and W2 regarding its service to the Pisgah View Apartments (a public housing complex).	Transit stops in the Pisgah View Apartments will not be directly affected by the proposed project. However, with the closing of Hanover Street at Haywood Road transit routes W1 and W2 will have two existing stops on Hanover Street impacted; these are at Montana Street and at Haywood Road. Roadway improvements may be required to assist the City of Asheville to improve Montana Street and/or Michigan Avenue in an effort to re-route buses. The City of Asheville may lose one stop at Hanover Street and Haywood Road, however, the existing stop at Haywood Road and Michigan Avenue is only approximately 800' from the eliminated bus stop.	Transit	Following selection of a preferred alternative NCDOT will coordinate with the COA in order to further review transit operations within the study area and to discussion options if need be.
		After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville regarding transit service throughout the design and construction phases.		
28	The City of Asheville strongly encourages the NCDOT to include bicycle/pedestrian infrastructure at the beginning/end of the Hominy Creek Greenway at Hominy Creek Road.	The NCDOT improvements would include I-240 bridging of Hominy Creek Road as well as the Hominy Creek Greenway, similar to the existing conditions. These designs do not preclude the City of Asheville from implementing bicycle/pedestrian infrastructure at the beginning/end of the Hominy Creek Greenway at Hominy Creek Road. NCDOT will continue to coordinate with the City of Asheville regarding bike and pedestrian accommodations throughout the design and construction phases.	Bike & Ped	The City provided the project team a list of requested betterments including bicycle and pedestrian accommodations. The projecteam will review the list, determine feasible options, and provide the City with costs associated with each. Additional discussions should occur as designs are refined.
29	The City of Asheville is concerned about the impact to the French Broad River Greenway during the construction of the proposed retaining wall.	NCDOT will coordinate with the City of Asheville regarding maintenance of traffic on the French Broad River Greenway during development of final plans for the project. At that time, NCDOT will have additional information on designs that will impact the final	Bike & Ped	The City provided the project team a list of requested betterments including bicycle and pedestrian accommodations. The project

#	Comment	Response	DISCIPLINE	NOTES
		maintenance of traffic concepts.		team will review the list, determine feasible options, and provide the City with costs associated with each. Additional discussions should occur as designs are refined.
30	The City of Asheville would like the opportunity to collaborate with NCDOT on the design for the new interchanges at Brevard Road and Amboy Road in order to identify opportunities for urban design strategies and the possible use of roundabouts.	After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases.	Traffic	NCDOT is currently working on updating the Capacity Analysis to determine design refinements.
	City of Asheville – Section B comments			
31	The City of Asheville strongly encourages the NCDOT to keep the West Asheville Greenway "running" parallel to the C/A fence and the - Y7- EBL in order to avoid the 18% +/- vertical grade along Hazel Mill Road and to be routed underneath, via culvert, any street crossings in its path.	The greenway design is based on AASHTO's 1999 <u>Guide</u> for the <u>Development of Bicycle Facilities</u> . After selection of a preferred alternative, all design criteria will be reevaluated to meet the requirements of the design guidelines which are currently accepted for use by the NCDOT. NCDOT will evaluate the City of Asheville's requests for alignment revisions when refining the preliminary plans for the Preferred Alternative. The greenway alignment in this area may be affected while developing preliminary plans on the Preferred Alternative as a result of addressing other comments.	Bike & Ped	The City provided the project team a list of requested betterments including bicycle and pedestrian accommodations. The project team will review the list, determine feasible options, and provide the City with costs associated with each. Additional discussions should occur as designs are refined.
32	The City of Asheville strongly encourages that this greenway be extended southward to connect to the French Broad River Greenway and that it be extended eastward to connect with Clingman Avenue.		Bike & Ped	The City provided the project team a list of requested betterments including bicycle and pedestrian accommodations. The project team will review the list, determine feasible options, and provide the City with costs associated with each. Additional discussions should

#	Comment	Response	DISCIPLINE	NOTES
				occur as designs are refined.
33	The City of Asheville strongly encourages the inclusion and construction of the Emma Greenway (identified as #7 on the City of Asheville Greenway Master Plan), the Montford Greenway (#14), and the Smith-Mill Creek Greenway (#17). If these greenways are not constructed, the opportunity for construction in the future might not be possible.	The NCDOT will coordinate with the City of Asheville to refine the preliminary designs for the Preferred Alternative thus that construction of the greenway by others will not be precluded.	Bike & Ped	The City provided the project team a list of requested betterments including bicycle and pedestrian accommodations. The project team will review the list, determine feasible options, and provide the City with costs associated with each. Additional discussions should occur as designs are refined.  Per a previous request by the Merger Team, this request has been recently evaluated and has been determined to be feasible and is expected to add approximately \$3.35 million to project cost.  NCDOT will further evaluate the access to Haywood Road during design refinements of the Preferred Alternative.
34	The City of Asheville notes that there appears to be the opportunity to "daylight" Smith-Mill Creek as it runs through the project area and the City of Asheville strongly encourages NCDOT to pursue that option.	Designs as presented in the 2015 DEIS for Alternatives 4 and 4B include bridging Smith Mill Creek for all new crossings. NCDOT is evaluating the feasibility of bridging all proposed crossings of Smith Mill Creek for Alternatives 3 and 3C, which will be completed prior to selection of the Preferred Alternative.	Design	
35	The City of Asheville is concerned that there is no direct access to Haywood Road from I-26 eastbound under Alternatives 3 and 3C which might encourage that traffic to go to the Amboy Road interchange using NC 191 (Brevard Road) and other neighborhood citymaintained streets (Virginia Avenue and Fairfax Avenue) to access Haywood Road. The proposed access requires vehicles to travel through four signalized intersections before reaching Haywood Road.	NCDOT is aware of this circuitous aspect of these alternatives which have been discussed in the DEIS. Alternative 4B is the only alternative to provide direct access to Haywood Road. For Alternatives 3 and 3C, traffic making this movement must exit I-26 EB near the Westgate Mall and traverse a series of service roads and traffic signals to access Haywood Road. Traffic making this movement in Alternative 4 would also have to exit I-26 EB near the Westgate Mall and then traverse a series of ramps to and a traffic light to reach Haywood Road. After selection of a preferred alternative, NCDOT will reevaluate the design configurations based on any updated data, including an updated traffic forecast which is based upon the updated travel demand model.	Traffic	

#	Comment	Response	DISCIPLINE	NOTES
<del>#</del> 36		•	Traffic	
36	The City of Asheville is concerned about the	NCDOT is aware of this aspect of Alternatives 3 and 3C.	Traffic	The project team has evaluated two potential
	adverse impact that Alternatives 3 and 3C will	Upon receiving similar comments on the 2015 DEIS,		revisions to improve the
	have on the long-term viability of the Westgate	NCDOT has investigated minor design revisions which		
	Shopping Center including the impact of a new hotel currently under construction at the same	could be implemented for these alternatives, which would improve the access to the Westgate Shopping		proposed Westgate Shopping Center access, which can be
	location that -Y71- will terminate.			
	l location that -171- will terminate.	Center. After selection of a preferred alternative,		further evaluated during the
		NCDOT will reevaluate the design configurations based on any updated data, including an updated traffic		design refinements of the Preferred Alternative, if
		forecast which is based upon the updated travel		either Alternative 3 or 3C is
		demand model.		
27	The City of Achaville is someoned about the		Residential	chosen.
37	The City of Asheville is concerned about the	NCDOT has identified impacts to the Burton Street		DeWayne Barton attended
	adverse impacts that Alternatives 3 and 3C will	Community in the DEIS. After selection of a preferred	and Business	this meeting as a
	have on the Burton Street Community.	alternative, NCDOT will coordinate to refine the designs	Impacts	representative of the Burton
		to further avoid or minimize impacts to the Burton		Street Community. The
		Street neighborhood, as well as other neighborhoods		project team is meeting with
		that may be impacted by the project.		the community on
				10/17/2016 to discuss
				potential impacts and mitigation efforts.
38	The City of Asheville strongly encourages a	Comment noted. After selection of a preferred		Avoidance and minimization
30	collaborative planning process to identify	alternative, NCDOT will continue to coordinate with the		efforts are on-going
	opportunities to reduce the overall footprint of	City of Asheville throughout the design and		throughout all phases of the
	the project.	construction phases to further avoid or minimize		project development. If there
	the project.	impacts.		are specific locations the COA
		impacts.		would like to focus on, please
				provide for future
				discussions.

#	ember 16, 2015 Comment	Response	DISCIPLINE	NOTES
39	The City of Asheville strongly encourages the NCDOT to minimize as much traffic on the Jeff Bowen Bridges as possible in order to extend the life of the two existing bridges.	Implementation of any Detailed Study Alternative would reduce travel demand on the Captain Jeff Bowen Bridges to the point where the traffic operations would operate acceptably for the timespan analyzed for the I-26 Connector project (a period of 20 years into the future). Therefore, should the I-26 Connector project be constructed, the lifespan of the existing bridges would not be dictated by the amount of traffic using the bridges, but would solely be determined based upon the integrity of the bridges and thus the corresponding sufficiency rating. Based on 2012 data provided by NCDOT Bridge Inspection Report, both bridges have a Sufficiency Rating in the high 50's (bridges must have a rating below 50 to be eligible for replacement). Regular maintenance can keep the sufficiency rating above 50 for the foreseeable future.	Design Traffic	NCDOT will coordinate with NCDOT Bridge Maintenance for additional information. NCDOT presented Working Group with additional information. The last bridge rehab was performed in 1984. It was scheduled to have deck overlays August 2016, however the bridge program was put on hold ar the funding pulled. It is expected the bridges will last another 10-15 years without rehab and over 30 years wit rehab.
40	The City of Asheville is concerned that Alternatives 3 and 3C will not completely eliminate the existing weaving maneuvers and congestion on the Jeff Bowen bridges.	All alternatives will reduce traffic on the Bowen Bridges. Alternatives 3 and 3C do not remove interstate traffic from the Bowen Bridges and therefore will not alleviate the weaving; however, these alternatives do eliminate congestion by taking I-26 traffic off of the Jeff Bowen Bridges and providing another access to northbound I-26. Alternative 4 and 4B further limit traffic on the Bowen Bridges by also moving I-240 traffic onto new infrastructure.	Traffic	Discussed response on 3/24
41	The City of Asheville is concerned about the adverse impacts to business and industrial sites with Alternative 3 and 3C along the French Broad River.	After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases to further avoid or minimize impacts.	Residential and Business Impacts	Discussed response on 3/24

#	Comment	Response	DISCIPLINE	NOTES
42	The City of Asheville is concerned that Alternatives 4 and 4B will adversely impact Hill Street, Isaac Dickson Elementary School, and Riverside Cemetery and as a result, the City of Asheville strongly encourages the NCDOT to minimize the impacts.	After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases to further avoid or minimize impacts.	Residential and Business Impacts	NCDOT would like clarification on specifics area of concern for additional avoidance or minimize effort to be considered during the refinement of the designs for the Preferred Alternative. Avoidance and minimization efforts are on-going throughout all phases of the project development.
43	The City of Asheville strongly encourages continuous sidewalks along both sides of Patton Avenue from the west side of the French Broad River to Clingman Avenue for Alternatives 4 and 4B.	After selection of a preferred alternative, NCDOT will continue to coordinate with the City of Asheville with regard to including this request as appropriate in compliance with NCDOT policies on pedestrian facilities and cost sharing.	Bike & Ped	The City provided the project team a list of requested betterments including bicycle and pedestrian accommodations. The project team will review the list, determine feasible options, and provide the City with costs associated with each. Additional discussions should occur as designs are refined.
44	The City of Asheville strongly encourages the NCDOT to use complete streets elements along Patton Avenue with Alternatives 4 and 4B in order to improve neighborhood connectivity and accommodate pedestrian-scale urban redevelopment.	NCDOT is committed to Complete Streets improvements and will coordinate efforts with the City of Asheville to incorporate these amenities into the project in compliance with design and cost-sharing guidelines. In areas where the various plans propose future pedestrian accommodations, the designs have been developed to accommodate or not preclude these elements from being constructed by the various agencies.	Bike & Ped	The City provided the project team a list of requested betterments including bicycle and pedestrian accommodations. The project team will review the list, determine feasible options, and provide the City with costs associated with each. Additional discussions should occur as designs are refined.

City	of Asheville – General Comments on 2015 DEIS f	or TIP Project I-2513 (I-26 Connector)		
Dece	ember 16, 2015			
#	Comment	Response	DISCIPLINE	NOTES
45	The City of Asheville strongly encourages the	Alternatives 3 and 3C do not impact the existing access	Bike & Ped	A sidewalk connecting the
	NCDOT to improve access to the Hillcrest	to the Hillcrest community. Alternatives 4 and 4B	Design	Hillcrest Community directly
	Community.	include access modifications to the Hillcrest Community		to Patton Avenue is
		due to the realignment of I-240 and the reconfiguration		incorporated in the designs.
		of Patton Avenue. As a result of the proposed		Discussions regarding a
		Alternative 4 and 4B designs, access between the		supplemental "cut-through"
		Hillcrest Community and surrounding areas will be		sidewalk are on-going.
		modified. Access between east and west Asheville and		
		the Hillcrest Crest Community and surrounding areas		
		would be improved. However, access between		
		Riverside Drive, the Hillcrest Community, and		
		surrounding areas would no longer have direct access		
		to and from I-240. After selection of a preferred		
		alternative, NCDOT will continue to coordinate with the		
		City of Asheville throughout the design and		
		construction phases in order to refine the designs.		

City	of Asheville – General Comments on 2015 DEIS fo	or TIP Project I-2513 (I-26 Connector)		
Dece	ember 16, 2015			
#	Comment	Response	DISCIPLINE	NOTES
	City of Asheville – Section C Comments			
46	Will project I-4759 (Proposed Liberty Road interchange) not provide much needed relief regarding traffic congestion at I-40 Exit #44, and if so, could the overall footprint of Section C be reduced?	I-4759 has specific needs for which it is being developed to address. NCDOT will re-evaluate the proposed Exit 44 configuration after selection of a preferred alternative.	Design	Discussed response on 3/24.
47	The City of Asheville questions the C/D ramps shown along I-40 west of I-26. These ramps would take a significant number of homes and not resolve the congestion at Exit #44.	As the project develops and a preferred alternative is selected, the data used to develop designs is often updated and revised. After the Preferred Alternative is selected, the designs will be re-evaluated based on any updated data, including an updated traffic forecast		Designs are ultimately based upon MPO's travel demand model which feed the traffic forecast, which develops the highway capacity analysis.
48	The City of Asheville suggests that the NCDOT consider an additional exit ramp from I-40 Westbound onto Smoky Park Highway eastbound at Exit #44 in order to relieve congestion at the existing ramp.	which is based upon the updated travel demand model. NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases in order to refine the designs.		Designs are ultimately based upon MPO's travel demand model which feed the traffic forecast, which develops the highway capacity analysis.
49	The City of Asheville strongly encourages the NCDOT to minimize the overall footprint for Section C at and near Exit #44 by using retaining walls and keeping separation between the C/D ramps and the -L- line as narrow as possible.			
50	Alternative F-1 appears to be the best alternative for Section C.	Comment Noted.		

-	of Asheville – General Comments on 2015 DEIS for ember 16, 2015	r TIP Project I-2513 (I-26 Connector)		
#	Comment	Response	DISCIPLINE	NOTES
51	The City of Asheville is concerned about the need to widen I-40 east of the Brevard Road interchange since there is no data to support the proposed widening and it adds significantly to the cost.	Improvements east of the Brevard Road interchange are required to safely reduce the lanes from the proposed improvements required between I-26 and Brevard Road interchanges. The lane reduction geometry is based on AASHTO's 2011 A Policy on Geometric Design of Highways and Streets.  After the Preferred Alternative is selected, the designs will be re-evaluated based on any updated data, including an updated traffic forecast which is based upon the updated travel demand model. NCDOT will continue to coordinate with the City of Asheville throughout the design and construction phases in order to refine the designs.	Design	NCDOT to provide clarification.
52	In general, if there is an additional \$100,000,000 to spend on this project, the COA prefers the additional investments be made in	Comment noted.		
	Section B rather than Section A.			

# MEETING SUMMARY



To: Project File

From: Chris Werner

**AECOM** 

Date: November 8, 2016

RE: I-2513 Working Group Meeting #5

NCDOT STIP Project I-2513 (I-26 Connector)

# Meeting Attendees:

David Brown – NCDOT Board Member

Jay Swain – NCDOT Division 13

Rick Tipton – NCDOT Division 13

Kristina Solberg – NCDOT Division 13

Cole Hood – NCDOT Division 13

Ken Putnam – City of Asheville

Gwen Wisler – City of Asheville

Lyuba Zuyeva – FBRMPO

Derrick Weaver – NCDOT PDEA

Michael Wray – NCDOT PDEA

Alan McGuinn – Asheville Design Center

Jon Creighton – Buncombe County

Bruce Emory – City of Asheville

Todd Okolichany – City of Asheville

Neil Dean – AECOM

Celia Foushee – AECOM

Joanna Rocco – AECOM

Chris Werner – AECOM

The project team met with the I-2513 Working Group at 1:00 PM on October 17, 2016 in the City of Asheville Fire and Police Training Room. The purpose of the meeting was to discuss the status of the Traffic Operations Analysis and preliminary design refinements, the status of the community small group meetings, action items from the previous Working Group meeting held on September 20, 2016, review any additional betterment requests from the City, and discuss topics for the next Working Group meeting.

Derrick Weaver began the meeting with a brief summary of the Montford Neighborhood Association meeting held on September 20, 2016 and the Burton Street Community meeting to be held that evening on October 17, 2016. It was noted the project team is coordinating with the EWANA neighborhood to hold a meeting on November 17<sup>th</sup> or 18<sup>th</sup>, 2016. Meetings with the historic property owners were also summarized.

Chris Werner gave an update on the traffic analyses, noting the team is working through refinements to the traffic forecast prepared for the Amboy Road and Brevard Road interchanges. The No Build analysis has been submitted and the project team is currently working on the Build analysis. Once traffic analyses are completed, roadway engineers will begin refining designs for Section C. One major area of focus will also include re-evaluating the necessity for some of the collector/distributor roads. It has been confirmed with Jim Dunlop that the project team will be available to present at the FBRMPO Board and TCC joint meeting scheduled for November 17, 2016. It was noted this will likely be a two-part meeting. The first part, to occur on November 17<sup>th</sup>, will be a discussion of the No Build calibrated model and driver characteristics. The second part, to occur at a future date, will be a discussion of the Build calibrated

MEETING SUMMARY November 8, 2016 Page 2 of 4

model and the corresponding refined design configurations. It was questioned if the traffic forecast factored in a change in traffic volumes due to the Liberty Road project. It was noted that all FBRMPO fiscally constrained projects are included in the travel demand model which was used to prepare the traffic forecast and Liberty Road project is a fiscally constrained project. It was suggested for clarification that when the project team presents at the FBRMPO meeting and other public meetings, to refrain from using language such as "no build" and "build" due to any confusion it might cause. Possible options may include "year 2040 without the project built" and "year 2040 with the LEDPA built". It was noted completion of the Build calibrated model analysis is likely three months away.

Derrick Weaver gave an update on the Aesthetic Advisory Committee (AAC) progress. The project team held a conference call with Alice Oglesby October 13, 2016 to discuss the purpose of the AAC and potential guidelines, roles, and responsibilities. It was noted in years past, that the AAC group for the I-26 Connector Project had a very broad scope. The City will handle multi-modal connectivity of the overall designs for the project, and the AAC will strictly be focused on aesthetics. The City will work to recruit members of the committee through appointments of the City Council. It was noted Buncombe County does not need a representative on the committee. A subcommittee for the aesthetics of the "signature bridge" concept for the Captain Jeff Bowen Bridges was discussed. All items the AAC develops for aesthetics would be added to the City's "wish list" of betterment requests to present to City Council and vote.

The City met with their Greenway Committee regarding the betterment request for the project. It was noted the Greenway Committee would be taking a look at all the greenways and how they relate to the project. The City will continue to work towards finalizing the betterments list. Additional pedestrian access at Hillcrest was also discussed. The City will coordinate with the Hillcrest community and the Housing Authority to determine the need/want for a sidewalk connecting the southeast quadrant of the community to the proposed Patton Avenue configuration. The pedestrian bridge at Hillcrest was discussed regarding whether or not to remove the bridge as a part of the project. It was noted the existing bridge is not ADA compliant and removing it now would be less expensive than in the future. The Working Group will coordinate with DeWayne Barton to determine the level of interest from the Hillcrest community to keep the pedestrian bridge.

The City's betterments "wish list" was discussed, noting that as the design refinements progress the City will choose which items are feasible. The project team discussed the level of effort that has been put forth into the "wish list" to determine any requests that may require a change to the typical section of the project or could lead to potential increased costs and impacts. Two areas where this may occur were Bear Creek Road and Sand Hill Road. It was noted it is important to not increase the amount of impacts due to betterment requests unless there is justification. Feedback received suggested that the City needs input such as this from the project team regarding feasibility, costs, and potential impacts in order to assist them in identifying betterments to be requested as a part of the project. The next step in the evaluation of the "wish list" is to discuss the items with Ed Johnson, Interim Manager of the NCDOT Bicycle and Pedestrian group, to determine approximate costs. This information would then be presented to the Working Group and then the City Council to determine which items the City's budget can allow to be incorporated into designs. It was noted a commitment from the City would need to be in place before bicycle and pedestrian accommodations are shown on the public hearing maps and included in the FEIS. It was requested that in the FEIS or at the Public Hearing, NCDOT provide a graphic showing the betterments that were considered by the Working Group (and why they were eliminated), as well as those that will be incorporated in the designs, with a commitment from the City provided. It was noted the FEIS would likely be completed by Fall 2017.

MEETING SUMMARY November 8, 2016 Page 3 of 4

It was discussed NCDOT and the City would communicate more frequently regarding the betterments "wish list" and any circumstances that may have an effect on the typical section or increase impacts. NCDOT will provide the Working Group with the revised betterments spreadsheet which describes the additional construction that would be required to provide the betterment. It should be noted, the evaluation by NCDOT of the betterments does not address the feasibility of the betterment at this time.

Email correspondence from Bruce Emory to members of the Working Group was distributed (see attached). The correspondence noted specific design issues that have been discussed in recent months, which Mr. Emory would like to confirm the project team will investigate during the design refinements. Items discussed include the I-240 interchange with Patton Avenue near Hillcrest, elevations of the proposed bridges and roadways, the removal of ramp Y7RPDB to access I-26 West, and re-evaluation of several collector/distributor roads throughout the project study area.

It was noted the 360-visualizations would be revised using the refined designs and new imagery which will be taken during winter months during leaf-off. The Working Group requested NCDOT to send the existing reference figure for the 360-visualization figure so they can add additional points-of-view locations.

The meeting adjourned at 3:30 pm. The time and date of the next Working Group meeting will be determined once plans to meet with the EWANA community have been finalized.

### **Action Items**

- Derrick Weaver and Ken Putnam will coordinate regarding the AAC roles and responsibilities.
- NCDOT will send Ken Putnam and Gwen Wisler a list of the groups and communities the project team has/will meet with to discuss the project so they may assist in confirming that all groups have been coordinated with. See attached.
- For the FEIS and Public Hearing maps, NCDOT will provide a graphic showing the betterments that
  were considered by the Working Group (and why they were eliminated), as well as those that will
  be incorporated in the designs, with a commitment from the City provided.
- NCDOT will provide the Working Group with the revised betterments spreadsheet which describes general thoughts as to the feasibility of implementing the requested betterment.
- NCDOT will send the Working Group the reference figure used for the 360-visualizations. See attached.
- NCDOT will provide a list of city and county plans that were included in the DEIS, so the Working Group can provide a list of additional documents that should be included in FEIS. See attached.
- NCDOT to notify the Working Group of the date of the next meeting, once a small group meeting with EWANA has been scheduled.
- NCDOT will review design refinement requests per hardcopy of Bruce Emory email.
- The City will finalize the betterments "wish list".
- The City will coordinate with the Housing Authority and the Hillcrest community to determine the need/want for a sidewalk connecting the southeast quadrant of the community to Patton Avenue.
- The Working Group will coordinate with DeWayne Barton to determine the level of interest from the Hillcrest community to hold a neighborhood project update meeting and to discuss keeping the pedestrian bridge.
- NCDOT will incorporate bicycle/pedestrian betterments on the Public Hearing Map typical sections.

 Per the request of the Working Group, NCDOT will investigate the potential to have a greenway connection as shown by the light blue line or could similar accommodations be provided as shown by the light blue dotted line.



#### **Ken Putnam**

From:

Bruce & Day Ann Emory <emory22@charter.net>

Sent:

Friday, October 14, 2016 7:45 AM

To:

Gwen Wisler; Julie Mayfield; Ken Putnam

Cc:

'Alan McGuinn'; Todd Okolichany; 'DeWayne Barton'; Gary Jackson; Cathy Ball;

dweaver@ncdot.gov

Subject:

Re: Working Group #5 Meeting

Hi Gwen:

I have been out of the loop for the last two weeks (way out, in Egypt). There are several design issues that have been discussed in recent months among Julie, Alan and myself. Here are some that I remember:

- 1. The I-240 interchange with Patton Ave near Hillcrest: The current design looks like a suburban/rural style interchange. Designing it as an urban-style interchange, along with reducing the wide median between eastbound and westbound I-240, could reduce the impact on the Hill St. neighborhood and increase the amount of land available for redevelopment. The ramp intersection with Patton should be designed to discourage, rather than encourage, high-speed traffic. A related issue is a potential new street connection from this intersection running south and east to Clingman. This would provide an alternative route to the South Slope/Mission/AB Tech area, relieving traffic pressure on Patton in downtown.
- 2. At the last working group meeting (and the Montford meeting) we saw how high the new bridge structures over the river would be. Chris Werner (lead consultant for NCDOT) said he thought it might be feasible to lower some of the structures. I have looked at the plans and see several areas where I think the vertical clearances are greater than necessary. I think we should ask NCDOT if they have made any progress on this. There are two other potential changes that might reduce the visual impact in this area: one is the possible reduction in lanes on I-26 from six to four; the other would be to shift the westbound I-240 bridge further south, closer to eastbound I-240, more like the original ADC plan.
- 3. On Patton just west of Westgate the plans show a ramp from westbound Patton to southbound I-26/240. The ramp curves north and then south under a large new bridge at the site of the existing Patton bridge over I-240. The ramp would preclude redevelopment along both sides of Patton in this area. Replacing the ramp with left turn lanes at the next intersection (to the west) would allow more redevelopment, and might avoid the need to rebuild the bridge. I think the traffic volume projected to use this ramp is low enough for this to be feasible, but more detailed analysis would be required.
- 4. There are several design issues along I-40, both east and west of I-26. I believe Derrick said they would reevaluate the need for the proposed collector-distributor lanes when the traffic analysis is finished, so we should probably defer any discussion of those issues.

Let me know if you have any questions or comments about the above. Julie and Alan: are there others I have forgotten?

Bruce



To: Working Group Meeting #5 Attendees

From: Chris Werner

**AECOM** 

Date: November 8, 2016

RE: Summary to Working Group of Project Team current and on-going 2016 outreach efforts

NCDOT STIP Project I-2513 (I-26 Connector)

The following is a list of neighborhoods within the project study area (and shown on the attached graphic) which NCDOT outreach efforts have been made or will be made in 2016-2017 regarding obtaining input on the design refinements for the Preferred Alternative and reviewing project next steps.

#### **Clairmont Crest Mobile Home Park**

The project team mailed an informative letter on 9/16/2016 notifying residents of the Preferred Alternative selected, status of the design refinement process, and on-going community outreach efforts. It was noted that while there will be impacts within the vicinity of the community, the I-26 Connector Project will not result in residential or business relocations and NCDOT would be willing to meet with residents to discuss any concerns. Approximately 68 letters were mailed to residents within the Clairmont Crest Mobile Home Park. Boundaries of the mailing list were determined using GIS parcel layers and the community boundary as described in the 2015 Draft Environmental Impact Statement (DEIS). See attached letter sent to residents.

### **Willow Lakes Mobile Home Park**

The project team mailed an informative letter on 9/16/2016 notifying residents of the Preferred Alternative selected, status of the design refinement process, and on-going community outreach efforts. It was noted that while there will be impacts within the vicinity of the community, the I-26 Connector Project will not result in residential or business relocations and NCDOT would be willing to meet with them to discuss any concerns. See attached letter sent to residents. Approximately 67 letters were mailed to residents within the Willow Lakes Mobile Home Park. Boundaries of the mailing list were determined using GIS parcel layers and the community boundary as described in the 2015 Draft Environmental Impact Statement (DEIS). See attached letter sent to residents.

#### **Morningside Park Community**

The project team will organize a small group meeting with the Fairfax/Virginia Avenue community and the Morningside Park community in the near future to discuss the Preferred Alternative selected, status of the design refinement process, and potential impacts to the communities. A letter will be sent once a meeting date has been set, inviting residents to an informative meeting. The mailing list will be created using GIS parcel layers and the community boundaries as described in the 2015 DEIS.

#### Fairfax/Virginia Community

The project team will organize a small group meeting with the Fairfax/Virginia Avenue community and the Morningside Park community in the near future to discuss the Preferred Alternative selected, status of the design refinement process, and potential impacts to the communities. A letter will be sent once a meeting date has been set, inviting residents to an informative meeting. The mailing list will be created using GIS parcel layers and the community boundaries as described in the 2015 DEIS.

### Westwood Place Community (EWANA) and Kentucky/Hanover/Pisgah View Apartments

The project team has coordinated with a representative of the EWANA community to determine a potential date and time for a community meeting to be held. The project team will hold a meeting with the EWANA community and the Kentucky/Hanover/Pisgah View Apartments communities on 11/17/2016 to discuss the Preferred Alternative selected, the status of the design refinement process, and potential impacts to the community. An invitation letter will be mailed to residents within the EWANA and Kentucky/Hanover/Pisgah View Apartments communities in the near future.

# **Burton Street Community**

The project team has been coordinating with DeWayne Barton, a representative of the Burton Street Community. As a result, the project team met with residents of the community on 10/17/2016 to discuss the Preferred Alternative selected, the status of the design refinement process, and the environmental justice determination and potential mitigation opportunities available to the community. Additional community coordination with Burton Street is expected to occur throughout the design refinements process to develop mitigation opportunities to lessen the burden of the proposed project on the community. Further coordination with the Burton Street community will continue to occur through correspondence with DeWayne Barton.

#### **Emma Community**

The project team mailed an informative letter on 9/16/2016 notifying residents of the Preferred Alternative selected, status of the design refinement process, and on-going community outreach efforts. It was noted the community is not directly affected by the Preferred Alternative chosen for the I-26 Connector project, but NCDOT would be willing to meet with them to discuss any concerns. Approximately 31 letters were mailed to residents within the Emma Road community. Boundaries of the mailing list were determined using GIS parcel layers and the community boundary as described in the 2015 Draft Environmental Impact Statement (DEIS). See attached letter sent to residents.

#### **Murphy Hill Community**

The project team mailed an invitation letter on 9/16/2016 informing them that the residents of the Montford Neighborhood Association meeting were holding a meeting on 9/20/2016, which they could attend. It was noted the community is not directly affected by the Preferred Alternative chosen for the I-26 Connector project, but NCDOT would be willing to meet with them to discuss any concerns. Approximately 7 letters were mailed to residents within the Murphy Hill community. Boundaries of the mailing list were determined using GIS parcel layers and the community boundary as described in the 2015 Draft Environmental Impact Statement (DEIS). See attached letter sent to residents.

#### West End/Clingman Area Neighborhood (WECAN)

Through coordination with the NCDOT Human Environment Section on 07/21/2016, it was determined additional community meetings would not be held with WECAN as the community is not directly affected by the Preferred Alternative chosen for the I-26 Connector project, but NCDOT would be willing

to meet with them to discuss any concerns. No further coordination efforts are planned at this stage in the project.

### **River Arts District (RAD) Community**

Through coordination with the NCDOT Human Environment Section on 07/21/2016, it was determined additional community meetings would not be held with the RAD community as the community is not directly affected by the Preferred Alternative chosen for the I-26 Connector project, but NCDOT would be willing to meet with them to discuss any concerns. No further coordination efforts are planned at this stage in the project.

#### **Hillcrest Apartments**

The project team was invited to present at the Montford Neighborhood Association meeting held at 7:00 PM on 9/20/2016 at the Isaac Dickenson Elementary School. Residents from Montford, Courtland/ Houston, and Hillcrest were invited. A panel of NCDOT staff and consultants presented topics requested by the Montford Neighborhood Association including the Preferred Alternative selected, status of the design refinement process, how design configurations are determined, additional draft project visualizations, noise and air policies, right-of-way acquisition process, and the next steps of the project. A question and answer session was held throughout the presentation. Additional coordination efforts with the Hillcrest Apartments community are on-going to discuss impacts to the community and the preservation of a pedestrian bridge.

#### **Courtland/Houston Community**

The project team was invited to present at the Montford Neighborhood Association meeting held at 7:00 PM on 9/20/2016 at the Isaac Dickenson Elementary School. Residents from Montford, Courtland/Houston, and Hillcrest were invited. A panel of NCDOT staff and consultants presented topics requested by the Montford Neighborhood Association including the Preferred Alternative selected, status of the design refinement process, how design configurations are determined, additional draft project visualizations, noise and air policies, right-of-way acquisition process, and the next steps of the project. A question and answer session was held throughout the presentation. Additional coordination efforts are not anticipated until after the designs have been refined.

#### **Montford Community**

The project team was invited to present at the Montford Neighborhood Association meeting held at 7:00 PM on 9/20/2016 at the Isaac Dickenson Elementary School. Residents from Montford, Courtland/Houston, and Hillcrest were invited. A panel of NCDOT staff and consultants presented topics requested by the Montford Neighborhood Association including the Preferred Alternative selected, status of the design refinement process, how design configurations are determined, additional draft project visualizations, noise and air policies, right-of-way acquisition process, and the next steps of the project. A question and answer session was held throughout the presentation. Additional coordination efforts are not anticipated until after the designs have been refined.

#### **UNC Asheville**

Through coordination with the NCDOT Human Environment Section on 07/21/2016, it was determined additional community meetings would not be held with UNC Asheville as the university is not directly affected by the Preferred Alternative chosen for the I-26 Connector project, but NCDOT would be willing to meet with them to discuss any concerns. No further coordination efforts are planned at this stage in the project.

# **Montgomery Road Community and Adjacent Areas**

Much of the community concerns in this area are associated with the width of improvements along I-40 due to the proposed collector-distributor roadways as presented in the designs during the 2015 Public Hearing. As such, coordination with communities is being delayed until the capacity analysis is updated and NCDOT can determine if these collector-distributor roadways will still be needed.



To: Project File

From: Chris Werner

**AECOM** 

Date: November 8, 2016

RE: 2015 DEIS City and County Plans

I-2513 Working Group Meeting #5

NCDOT STIP Project I-2513 (I-26 Connector)

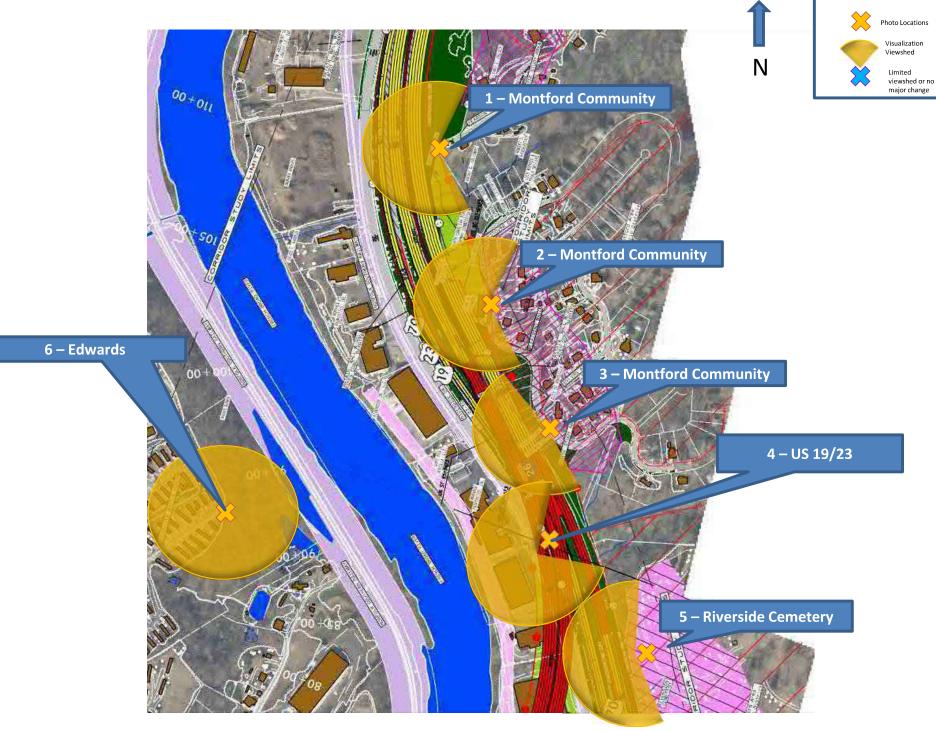
The following City and County plans were reviewed or discussed in the 2015 DEIS:

- Haywood Road Corridor Study (City of Asheville 2005d)
- A Strategic Plan for the Sustainable Economic Development of the City of Asheville, North Carolina (City of Asheville 2004)
- Broadway Corridor Action Plan (City of Asheville 2002b)
- Asheville City Development Plan 2025 (City of Asheville 2002a)
- Wilma Dykeman RiverWay Master Plan (Riverlink 2004)
- Brevard Road Corridor Study (City of Asheville 2005a)
- City of Asheville River Redevelopment Plan (City of Asheville 2005e)
- Consolidated Strategic Housing and Community Development Plan (City of Asheville 2010a)
- Buncombe County Comprehensive Land Use Plan Update (Buncombe County 2013)
- West End/Clingman Small Area Plan (City of Asheville 1996)
- Asheville Downtown Master Plan (City of Asheville 2009a)
- Asheville Unified Development Ordinance (City of Asheville 2009b)
- French Broad River MPO 2035 Long Range Transportation Plan (FBRMPO 2010)
- Comprehensive Transportation Plan for the French Broad River MPO and Rural Areas of Buncombe and Haywood Counties (NCDOT 2008)
- Coordinated Public Transportation and Human Services Transportation Plan (FBRMPO 2008)
- City of Asheville Transit Master Plan (HDR Engineering, Inc. of the Carolinas 2009)
- Asheville Redefines Transit (City of Asheville 2014)
- City of Asheville Pedestrian Plan (City of Asheville 2005b)
- City of Asheville Comprehensive Bicycle Plan (City of Asheville 2008)
- City of Asheville, North Carolina Parks, Recreation, Cultural Arts, & Greenways Master Plan (City of Asheville 2009c)
- Land of Sky Regional Council "Regional Vision 2010"
- Asheville City Council Resolution 00-168 Resolution Supporting the Report and Recommendations of the Community Coordinating Committee Regarding the I-26 Connector Project (2000)
- Sustainability Management Plan (City of Asheville 2009d)
- City of Asheville Complete Streets Policy
- Burton Street Community Plan (ADC 2010a)

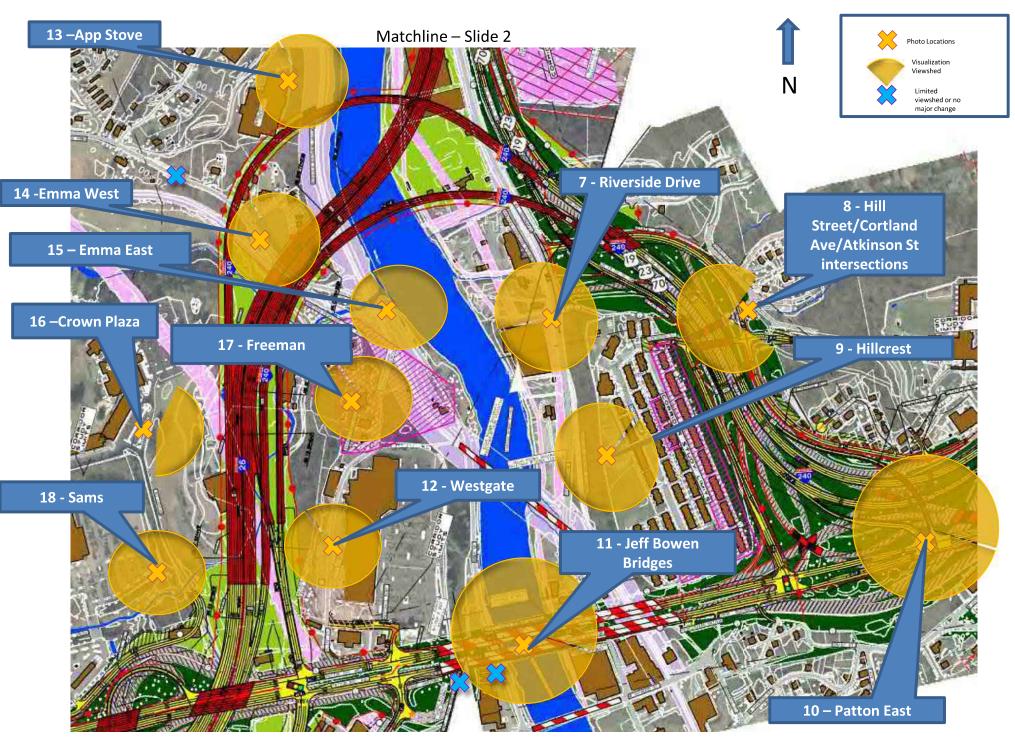
- I-26 Alternative 4B Community Based Design Update (ADC 2010b)
- Downtown Asheville Center City Plan

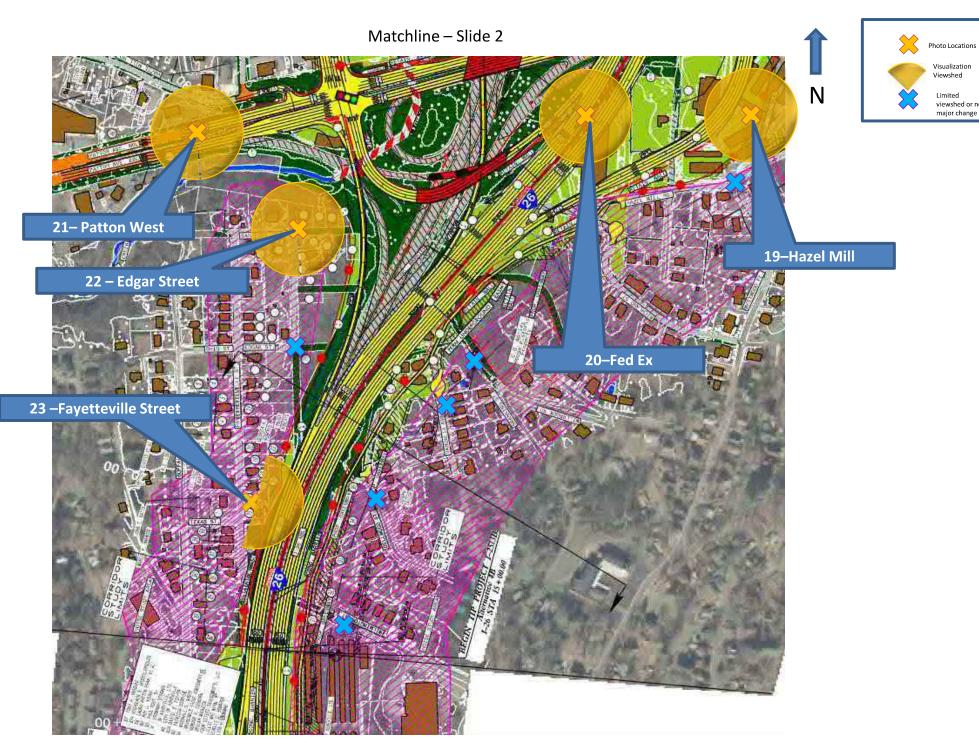
The following local plans have been updated or adopted since the completion of the 2015 DEIS:

- FBRMPO Metropolitan Transportation Plan 2040 (completed September 2015)
- Asheville In Motion Plan
- Blue Ridge Bike Plan



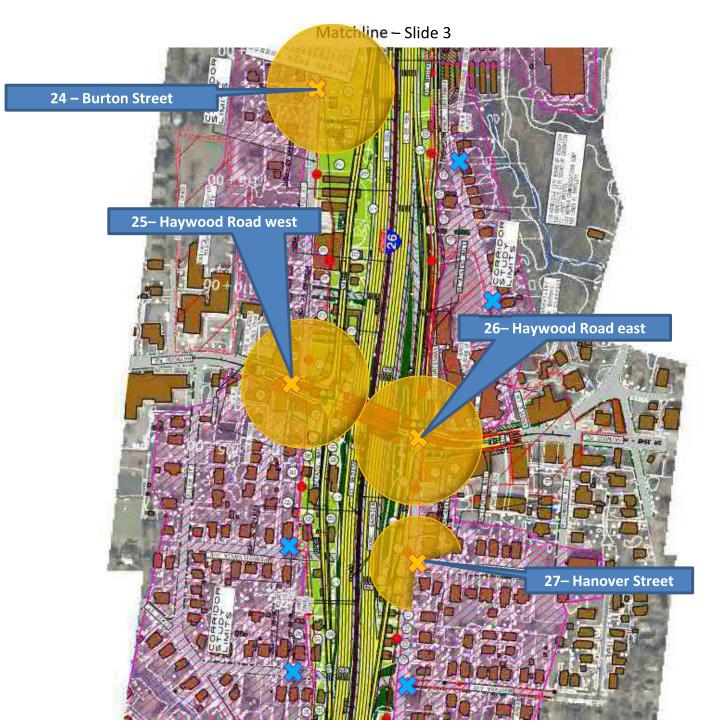
Matchline – Slide 1



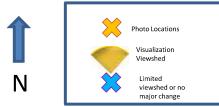


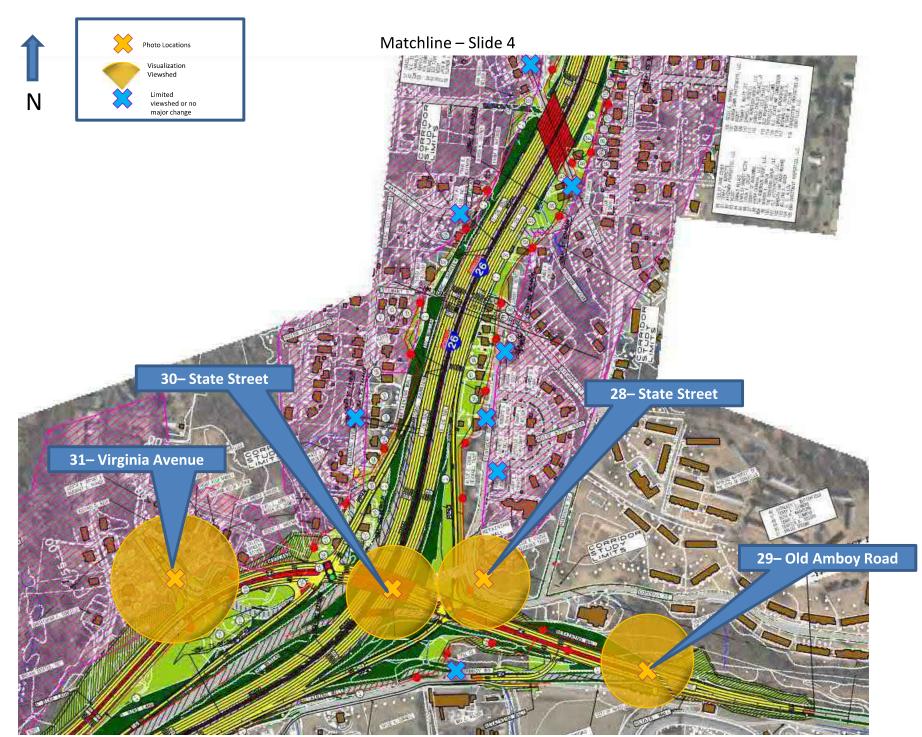
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Matchline – Slide 4



Matchline – Slide 5

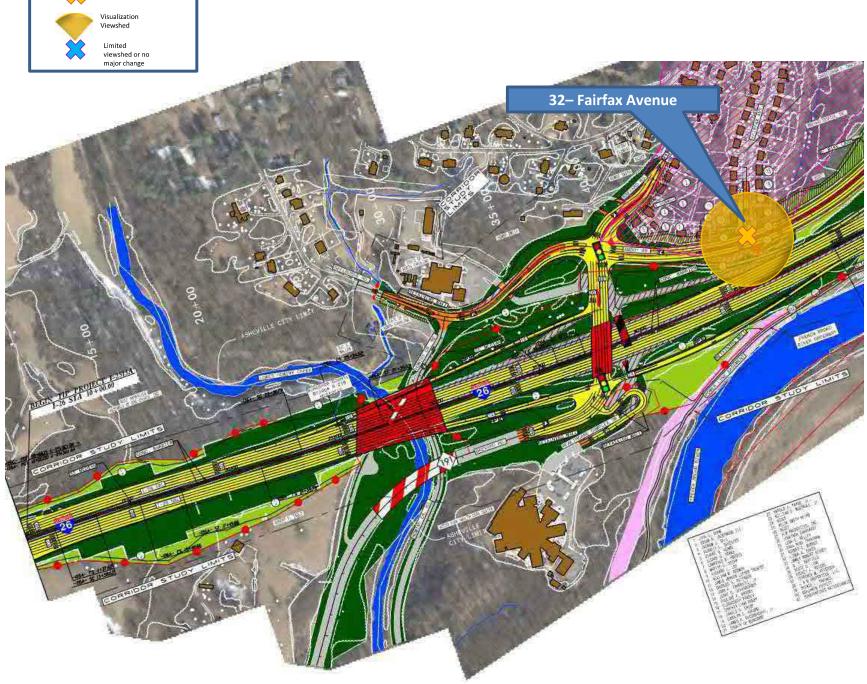




Matchline – Slide 6



Photo Locations



Matchline – Slide 5

# MEETING SUMMARY



To: Project File

From: Celia Foushee

**AECOM** 

Date: December 7, 2016

RE: Joint FBRMPO & TCC Meeting

I-26 Connector Status Update

NCDOT STIP Project I-2513 (I-26 Connector)

### **Project Team Meeting Attendees:**

Jim Dunlop – NCDOT, Congestion Management
Kristina Solberg – NCDOT Division
Michael Wray – NCDOT, PDEA
John Burris – AECOM
Neil Dean – AECOM
Celia Foushee – AECOM
Joanna Rocco – AECOM
Chris Werner – AECOM

The project team was invited to attend and present at the joint FBRMPO and TCC meeting held at 12:00 PM November 17, 2016 in the Asheville Chamber of Commerce conference room. The purpose of the project team's attendance was to provide a brief project update and discuss the status of the traffic capacity analysis and the traffic microsimulation.

Chris Werner began the presentation with a brief overview of the project history and study area. He discussed the selection process for choosing the preferred alternative and the design process that will begin once traffic analyses have been completed. John Burris led the discussion of the Traffic Capacity Analysis and Microsimulation. The 2040 No Build analysis has been submitted and the project team is currently working on the Build analysis for the Traffic Capacity Technical Memorandum. Once the analyses have been completed for the build alternatives, the project team will begin design refinements in Section C. It was noted the limits for Section C will likely extend along I-240 to State Street for microsimulation analysis purposes only. The project team is concurrently completing the microsimulation analysis on "hot spot" areas (areas of known concerns regarding projected traffic operations), which will likely be complete by the end of January or beginning of February. A sub consultant, Patriot Transportation Engineering, PLLC will be providing oversight for an independent review of the traffic analyses and microsimulation. John Burris discussed the microsimulation calibration definitions and how this plays a role in portraying local driver characteristics which will be used in the Build analysis. It was noted that drivers in the Asheville area, particularly along I-240 on the Captain Jeff Bowen bridges, are notably "more aggressive" than national averages, which most likely is attributed to non-standard driving maneuvers required due to closely spaced interchanges, interchanges configurations which go against driver expectations, or even short acceleration or deceleration lanes associated with the existing

MEETING SUMMARY December 7, 2016 Page 2 of 2

interchanges. The driver behavior on the Jeff Bowen Bridges is not indicative of the driver behavior through the entire study area. For this reason, driver behavior on the Captain Jeff Bowen bridges was not used to model future driver characteristics for the Build analysis; however, this area will be included in the microsimulation for the future year.

The following are questions discussed during the meeting:

- It was clarified the Captain Jeff Bowen Bridges and Smokey Park Highway bridge is not included in the 2040 No Build analysis due to the aggressive driver characteristics, however they will be included in the 2040 Build analysis.
- Question: When were traffic counts collected?
  - Answer: Traffic counts were collected in 2013 throughout the project study area.
- A video of the base year calibrated microsimulation model was requested. It was noted NCDOT will provide the video, but the period analyzed is a 2-hour period, which would result with a rather large file size. NCDOT will provide a portion of the calibrated microsimulation model video; however, it was explained caution should be exercised in looking at a small period of the microsimulation and drawing any conclusions as the full 2-hour period is more representative of the current driving conditions.
- Question: Will the project be designed to restrict the "aggressive" driver behavior?
  - Answer: The driver characteristics that are being analyzed for the base year calibrated model are the same characteristics that will be carried forward in the 2040 Build analysis.
     The "aggressive" behavior is not being analyzed because it was outside of the norm and occurring due to current roadway geometry conditions.
- Question: Is vehicle occupancy being captured in the analysis?
  - Answer: The traffic forecast takes into account vehicle occupancy. The Travel Demand Model assumes transit and vehicle occupancy when assigning trips.
- Question: When will the updated capacity analyses and microsimulation for the Preferred Alternative be available?
  - Answer: A review meeting with NCDOT, FHWA, and AECOM is expected to be held at the end of January/early February to review the draft capacity analysis and draft microsimulation for Section C. After this meeting, the project team will make any required revisions and then present the draft findings to the Working Group.

# Action Items

NCDOT to provide attendees with a video of base year calibrated model microsimulation.

# MEETING SUMMARY



To: Project File

From: Chris Werner

**AECOM** 

Date: January 3, 2017

RE: I-2513 Working Group Meeting #6

NCDOT STIP Project I-2513 (I-26 Connector)

# Meeting Attendees:

Michael Dawson - FHWA Alice Oglesby — AAC

David Brown – NCDOT Board Member DeWayne Barton – Burton Street Community

Kristina Solberg – NCDOT Division 13 Michael Wray – NCDOT PDEA

Jon Creighton – Buncombe County Nick Scheuer – NCDOT Bike & Ped

Bruce Emory – City of Asheville

John Burris - AECOM

Julie Mayfield – City of Asheville

Ken Putnam – City of Asheville

Gwen Wisler – City of Asheville

Tristan Winkler – FBRMPO

John Burris - AECOM

Neil Dean – AECOM

Celia Foushee – AECOM

Joanna Rocco – AECOM

Chris Werner – AECOM

Lyuba Zuyeva – FBRMPO

The project team met with the I-2513 Working Group at 9:00 AM November 18, 2016 in the Land of Sky Regional Council conference room in Asheville, NC. The purpose of the meeting was to discuss the status of the Traffic Operations Analysis and preliminary design refinements, the status of the community small group meetings, action items from the previous Working Group meeting held on October 17, 2016, review additional betterment requests from the City and the preliminary cost evaluation provided by NCDOT, and discuss topics for the next Working Group meeting.

Chris Werner began the meeting with an update on the traffic analyses and preliminary design refinements. The 2040 No Build analysis has been submitted and the project team is currently working on the Build analysis for the Traffic Capacity Technical Memorandum. Once the analyses have been completed for the build alternatives, the project team will begin design refinements in Section C and portions of Section A up to State Street. The remaining portion of Section A will be analyzed with Section B. The project team is concurrently completing the microsimulation analysis on "hot spot" areas, which will likely be complete by the end of January or February. A sub consultant, Patriot Transportation Engineering, PLLC will be providing oversight for an independent review of the traffic capacity and microsimulation analyses.

The Working Group requested information from the 2040 No Build analysis in the form of a table or graphic. NCDOT noted the 2040 No Build analysis will be discussed in the Traffic Capacity Technical

MEETING SUMMARY January 3, 2017 Page 2 of 4

Memorandum, which has not been finalized. However, the project team can provide the completed results, figures, and tables of the 2040 No Build analysis to the Working Group.

A discussion followed regarding the potential to add an on ramp in the Northeast quadrant of the Smokey Park Highway interchange with I-40, pending traffic analyses. It was noted that caution should be exercised to avoid greatly changing the alternatives and corresponding impacts which were presented within the 2015 DEIS. Additionally, the inclusion of this ramp, if feasible, would not eliminate the need for the existing loop the Northwest quadrant. The additional ramp would allow for a free flowing turn lane onto Smokey Park Highway and possibly allow the existing loop to only serve I-40 westbound traffic heading south on Smokey Park Highway. It was suggested if the collector/distributor roads in Section C cannot be eliminated, could they be reduced from two lanes to one. It was noted the designs include two lanes per the traffic demand; additionally, two lanes allow for a passing lane should a disabled vehicle stop on the collector/distributor. Providing one lane with wide shoulders would be an undesirable design deficiency that could be discussed with FHWA and NCDOT.

NCDOT noted the project team is waiting to meet with Montgomery Street residents and business owners until designs have been refined enough to determine the need for the collector/distributor roads in Section C and the potential impacts to the street.

Chris Werner gave a brief summary of the project team's presentation at the joint FBRMPO/TCC meeting held on November 17, 2016. The presentation included a status of the project and update of the traffic analyses to date, as well as how the project team will move forward through design refinements. John Burris discussed the calibration definitions discussed in the meeting and how this plays a role in portraying driver characteristics in the analysis of the Preferred Alternative designs. It was noted in the joint meeting that drivers in the Asheville area, particularly along I-240 on the Captain Jeff Bowen bridges, are notably "more aggressive" than national averages. For this reason, driver behavior on the Captain Jeff Bowen bridges was not used to model future driver characteristics for the analysis of the Preferred Alternative designs. The Working Group questioned what implications "aggressive" behavior may have on the designs of the project. It was noted if "aggressive" behavior, which is most likely attributed to congested traffic and roadways which do not meet current design standards, was echoed throughout the project the designs would likely result in a smaller footprint; however, implementation of these characteristics would not be appropriate as the Preferred Alternative designs will be designed to meet current design standards.

Michael Wray gave an update on the status of the small group meetings. It was noted the meeting with the East West Asheville Neighborhood Area (EWANA) was cancelled due to the lack of prompt response from area contacts and thus would not allow adequate time to notify the neighborhood of the meeting. Meetings with EWANA and the Fairfax Avenue/Virginia Avenue neighborhoods will likely be rescheduled in January or February 2017. Julie Mayfield noted she would provide NCDOT with a contact of the Fairfax Avenue area. It was noted the Fairfax Avenue community is concerned about the loss of on-street parking and increased cut-through traffic. Julie Mayfield, Ken Putnam, and Todd Okolichany will review current designs for the Amboy Road extension and provide NCDOT direction as to whether the designs should include right-in/right-out vehicular access to Fairfax Avenue and Virginia Avenue or whether it should only allow bicycle/pedestrian access.

Ken Putnam gave an update on coordination efforts with the Asheville Housing Authority regarding Hillcrest. The proposed pedestrian bridge, sidewalk access to Patton Avenue, and potential removal of the existing pedestrian bridge were discussed with the Housing Authority. They were concerned about the

MEETING SUMMARY January 3, 2017 Page 3 of 4

possibility of a noise wall being constructed and isolating the community. It was questioned who makes the decision to construct a noise wall in circumstances where there is only one property owner and several renters. NCDOT discussed that renters and owners have a different weighted percentage for their vote. NCDOT will provide process information as to how neighborhood input is used in determining if a noise wall is constructed. The Housing Authority also noted they will obtain comments from the Hillcrest community on the project by January, which will include their preference for the existing pedestrian bridge to be kept or removed.

Regarding small groups, Chris Werner briefly discussed the communities in the project study area and how the project team is coordinating with them. The Working Group did not indicate any additional communities that NCDOT should coordinate with. It was noted the project team should check the date of parcel data used to contact communities, as there is a large amount of turnover in the neighborhoods that should be taken into consideration. Additionally, for future public meetings where there is public concern regarding changes in noise due to the project, NCDOT will most likely utilize an additional consultant who will assist in explaining differences in noise impacts to the public and will utilize special software and audio demonstrations of various scenarios.

Ken Putnam discussed recent coordination efforts with Derrick Weaver regarding the Aesthetics Advisory Committee (AAC). Prior to the Working Group meeting, Derrick provided a draft outline for the roles and responsibilities of the AAC to Ken. Ken will begin coordinating internally to finalize the committee members of the AAC, who will assist in refining the roles and responsibilities.

The FBRMPO noted there have been some updates to community plans that were identified in the 2015 Draft EIS. NCDOT will coordinate with the FBRMPO to determine which recently updated plans should be added to the Final EIS.

In regards to NCDOT's action item to include the City of Asheville's betterments on the public hearing maps for the FEIS, the Working Group requested to further detail the type of funding each betterment will require. It was suggested the hearing maps to include a label "funded by NCDOT" and "to be built with funding from others" or something similar. This will also be discussed further with Kevin Moore from NCDOT Roadway Design.

NCDOT discussed Bruce Emory's email (presented at Working Group meeting #5) and reviewed the reasoning for the designs as presented in the 2015 Public Hearing maps. Items discussed in the email included the I-240 interchange with Patton Avenue near Hillcrest, the height of the I-240 flyover bridges, the westbound ramp from Patton Avenue to southbound I-26/I-240, and miscellaneous design issues along I-240. Further discussion regarding these items will follow during the design refinement process.

Chris Werner briefly discussed the 360 visualization locations submitted to the Working Group prior to the meeting. Several points were added in Section B and Section A. No points have been added at this time in Section C as the proposed viewshed in this area is not expected to change greatly from the current conditions. The Working Group suggested removing the following 360 visualization locations: Westgate, Hanover Street, and Pisgah View Apartments points. It was noted the Haywood Road points could potentially be combined and moved to the center of the bridge. The Working Group will further examine the recommended 360 visualization locations and submit to NCDOT any modifications by January 2017. Once the list of locations has been finalized, the project team will obtain video footage of these locations in February for use in preparing the 360 visualizations.

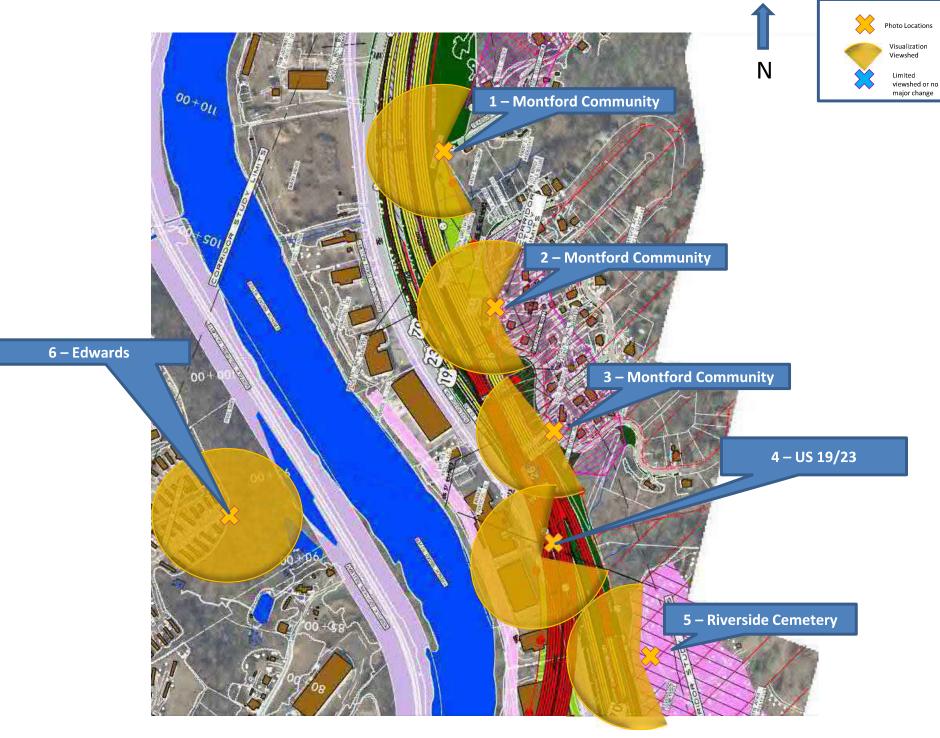
MEETING SUMMARY January 3, 2017 Page 4 of 4

Chris Werner began discussions regarding the City's betterment requests. The original spreadsheet the City submitted to NCDOT was repackaged and organized by site as opposed to type of betterment. Additionally, columns were added noting comments on the betterment, costs to NCDOT, costs to the City, and percentage of cost share. It should be noted, the costs were evaluated only for sidewalks and bicycle lanes. Cycle tracks, greenways, and other miscellaneous betterments were not included in the discussion. The City presented their updated and final betterment list, including the addition of two greenways, Smith Mill Creek greenway and Montford Neighborhood greenway. NCDOT will coordinate with the NCDOT Bicycle and Pedestrian Division to finalize the potential costs of the betterments and present the information to the Working Group at the next meeting. The City will provide a typical section for the preferred cycle track to NCDOT and note how it should be treated at signalized intersections. Betterment requests along Sand Hill Road and Bear Creek Road were discussed as potentially changing the typical section, increasing impacts to surrounding properties, and increasing the square-footage of bridges.

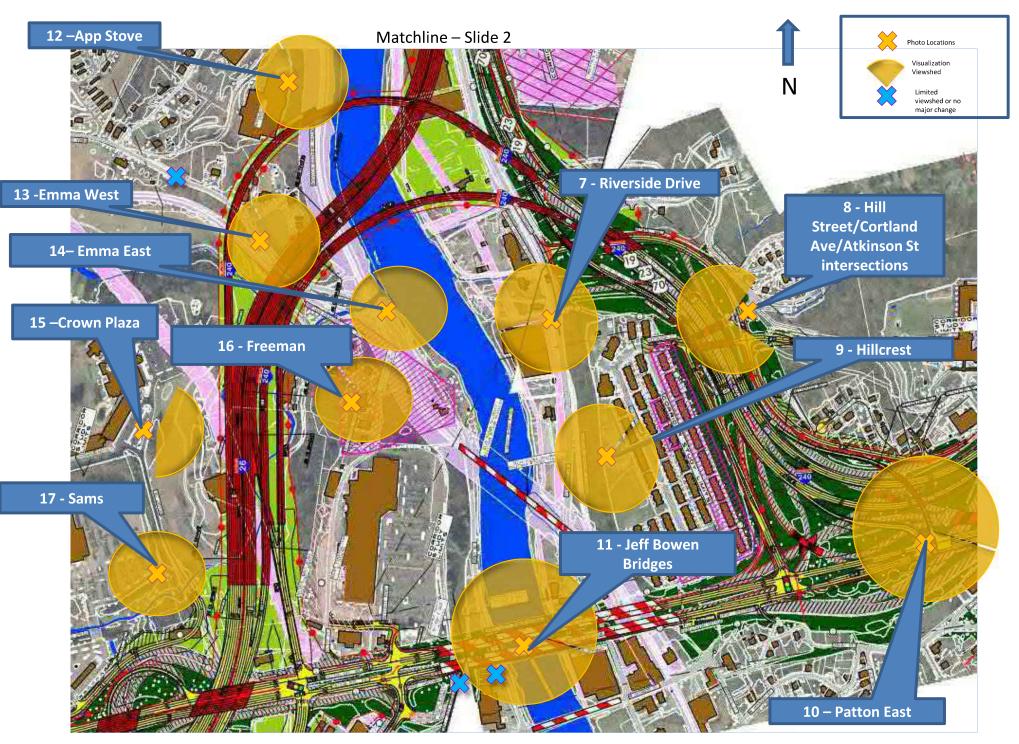
The meeting adjourned at 12:00 pm. The time and date of the next Working Group meeting will be determined closer to finalization of the Preferred Alternative traffic analysis. It is anticipated the next meeting will be held around the end of January or February. Discussions at Working Group #7 should include an update of the traffic operations analysis of the Preferred Alternative, refined cost estimates for the City of Asheville's betterment requests, and a discussion of noise policies specific to the Hillcrest community.

### **Action Items**

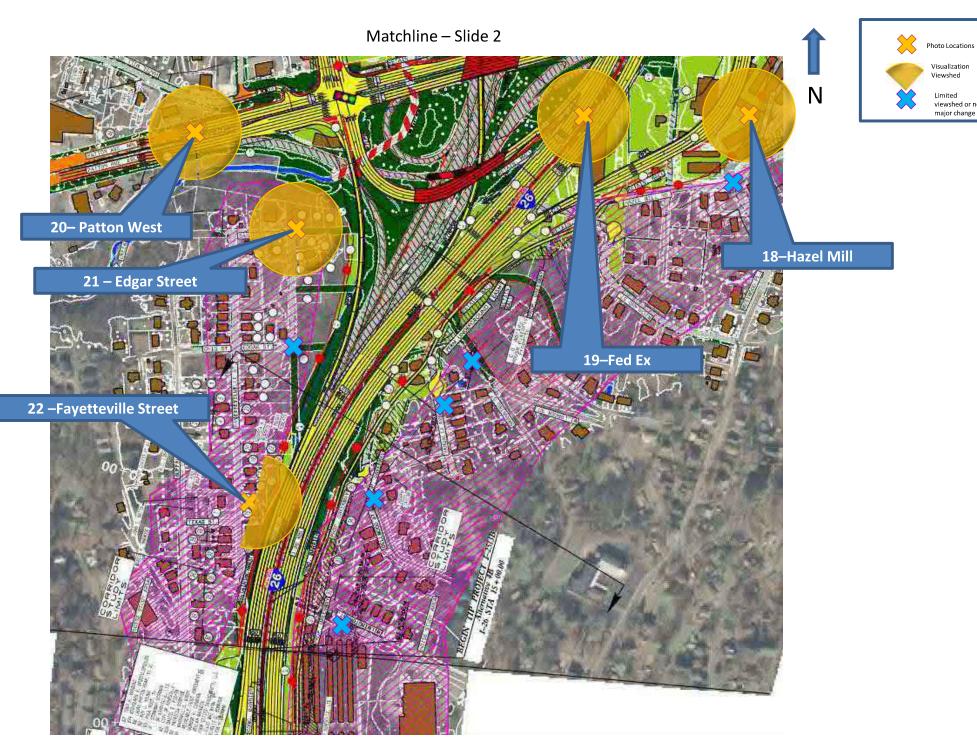
- NCDOT will provide the completed results, figures, and tables of the 2040 No Build analysis to the Working Group.
- Julie Mayfield noted she would provide NCDOT with a contact of the Fairfax Avenue area.
- Julie Mayfield, Ken Putnam, and Todd Okolichany will review current designs for the Amboy Road
  extension and provide NCDOT direction as to whether the designs should include right-in/rightout vehicular access to Fairfax Avenue and Virginia Avenue or whether it should only allow
  bicycle/pedestrian access.
- NCDOT will provide process information as to how neighborhood input is used in determining if a noise wall is constructed.
- The Working Group will continue to coordinate with the Housing Authority to obtain comments from the Hillcrest community on the project by January.
- Ken Putnam will begin coordinating internally to finalize the committee members of the AAC.
- NCDOT will coordinate with the FBRMPO to determine which recently updated plans should be added to the Final EIS.
- The Working Group will further examine the recommended visualization locations and submit to NCDOT any modifications by January 2017.
- NCDOT will check the date of parcel data used to contact communities, as there is a large amount of turnover in the neighborhoods that should be taken into consideration.
- Kevin Moore, NCDOT Roadway Design Unit will be contacted regarding the request to incorporate bicycle/pedestrian betterments on the Public Hearing Map typical sections with labels such as "funded by NCDOT" and "to be built with funding from others".
- Once the list of visualization locations has been finalized by the Working Group, NCDOT will
  obtain video footage of these locations in February for use in preparing the 360 visualizations.



Matchline – Slide 1

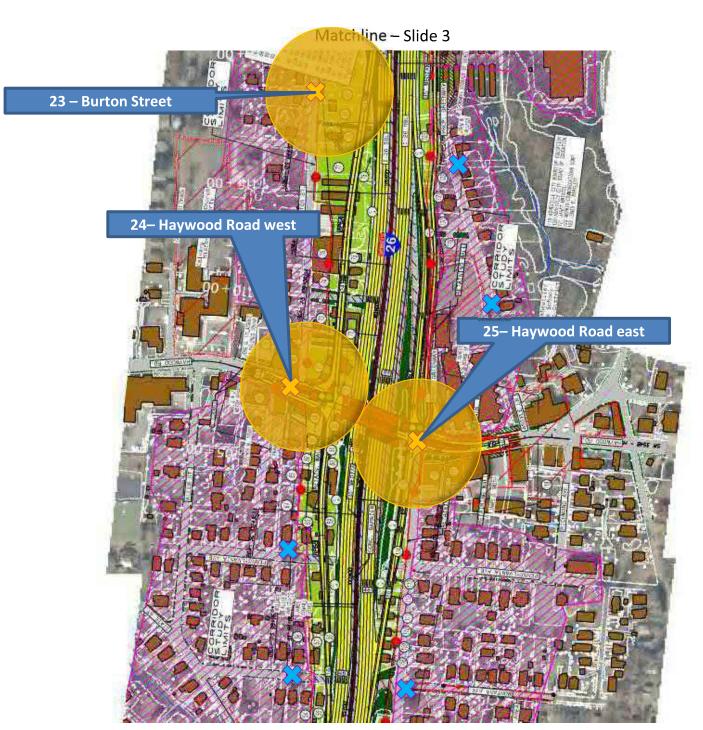


Matchline - Slide 3

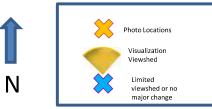


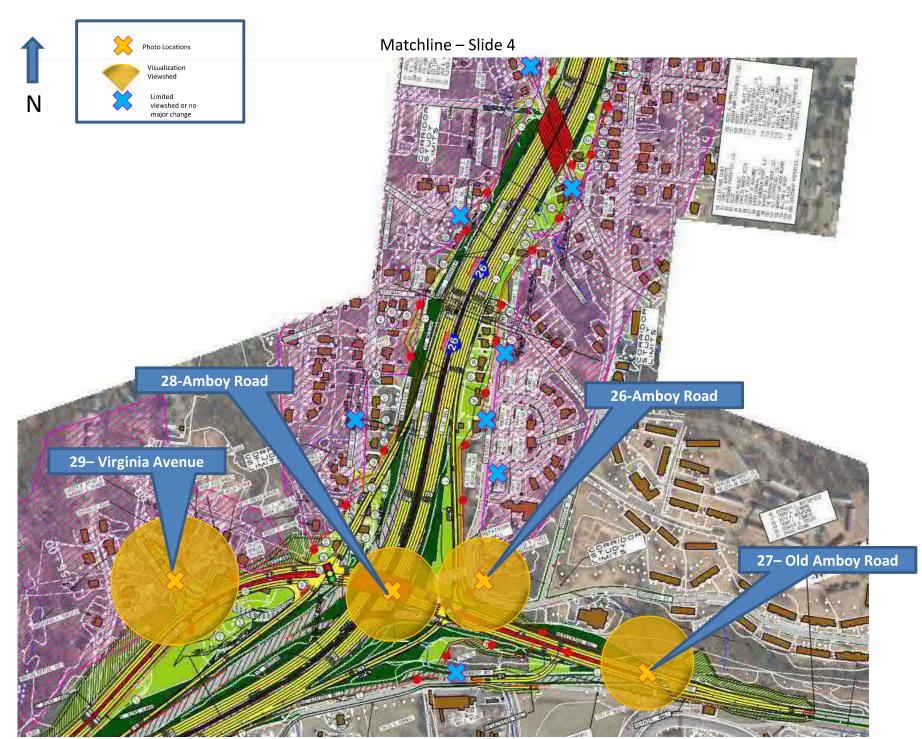
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Matchline – Slide 5

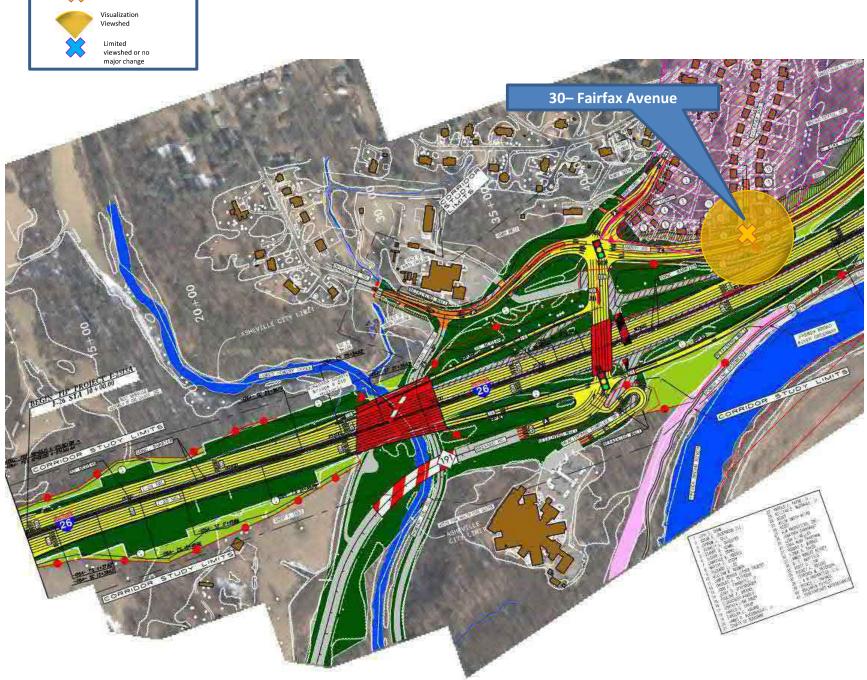




Matchline – Slide 6



Photo Locations



Matchline – Slide 5

# I-2513 Working Group #6 Attachments:

# Please note:

Information included reflects the draft analysis of the future conditions without any major transportation infrastructure improvements (2040 No-Build Alternative). Currently, analysis for the Preferred Alternative (2040 Build Alternative) is underway. Upon completion, analyses for both alternatives will be reviewed for quality control and accuracy with the results documented in the Traffic Capacity Technical Memorandum and summarized in the Final Environmental Impact Statement

Table 1: Year 2040 No-Build Alternative Level of Service Analysis

Segment Number	Table 1: Year 2040 No-Build Alternative Level of Service  Basic Freeway Segments	AM Peak Hour LOS	PM Peak Hour LOS
101	I-40 EB – West of SR 1200 (Wiggins Road)	F	D
102	I-40 WB – West of SR 1200 (Wiggins Road)	С	С
103	I-40 EB – Within SR 1200 (Wiggins Road) Interchange	Е	D
104	I-40 WB – Within SR 1200 (Wiggins Road) Interchange	D	Е
105	I-40 EB – SR 1200 (Wiggins Road) to Liberty Road	F	D
106	I-40 WB – Liberty Road to SR 1200 (Wiggins Road)	D	F
107	I-40 EB – Within Liberty Road Interchange	Е	D
108	I-40 WB – Within Liberty Road Interchange	D	Е
109	I-40 EB – Liberty Road to US 19-23-74A	F	Е
110	I-40 WB – US 19-23-74A to Liberty Road	(2) E	F
111	I-40 EB – Within US 19-23-74A Interchange	D	С
112	I-40 WB – Within US 19-23-74A Interchange	С	D
113	I-40 WB – Ramp From I-240 WB to Ramp from I-26 WB	В	С
114	I-40 WB – Ramp to I-26 EB to Ramp from I-240 WB	В	С
115	I-40 EB – Ramp to I-240 EB to Ramp from I-26 WB	С	В
116	I-40 WB – NC 191 (Brevard Road) to I-26/I-240	С	D
117	I-40 EB – Within NC 191 (Brevard Road) Interchange	D	В
118	I-40 WB – Within NC 191 (Brevard Road) Interchange	В	D
119	I-40 EB – NC 191 (Brevard Road) to US 25	Е	С
120	I-40 WB – US 25 to NC 191 (Brevard Road)	С	Е
121	I-40 EB – Ramp to US 25 to Ramp from US 25 SB	D	В
122	I-40 WB – Ramp to US 25 SB to Ramp from US 25 SB	С	D
123	I-40 WB – Ramp to US 25 NB to Ramp from US 25 NB	С	Е
124	I-40 EB – East of US 2.	F	С
125	I-40 WB – East of US 25	С	F
126	I-26 WB South of NC 191 (Brevard Road)	Е	D
127	I-26 EB – South of NC 191 (Brevard Road)	D	Е
128	I-26 WB – Within NC 191 (Brevard Road) Interchange	D	С
129	I-26 EB – Within NC 191 (Brevard Road) Interchange	С	D
130	I-26 WB – Ramp from NC 191 (Brevard Road) to Ramp to I-40 EB	Е	D
131	I-26 EB – Ramp from I-40 EB to Ramp to NC 191 (Brevard Road)	D	Е
132	I-26 WB – Ramp to I-40 WB to Ramp from I-40 EB	С	В
133	I-26 EB – Ramp from I-40 WB to Ramp from I-40 EB	С	D
134	I-26 EB – Ramp to I-40 WB to Ramp from I-40 WB	В	С
135	I-240 EB – I-40 to NC 191 (Brevard Road)	F	D
136	I-240 WB – NC 191 (Brevard Road) to I-40	D	F
137	I-240 EB – Within NC 191 (Brevard Road) Interchange	E	D
138	I-240 WB – Within NC 191 (Brevard Road) Interchange	D	E

Segment Number	Basic Freeway Segments (Continued)	AM Peak Hour LOS	PM Peak Hour LOS
139	I-240 EB – SR 3556 (Amboy Road) to US 19-23 Business	F	D
140	I-240 WB – US 19-23 Business to SR 3556 (Amboy Road)	D	F
141	I-240 EB – Ramp to Hanover Street to Ramp from US 19-23 Business	E	D
142	I-240 WB – Within US 19-23 Business Interchange	D	E
143	I-240 WB – Ramp to US 19-23-74A (Patton Avenue) to Ramp from Patton Avenue C-D	D	E
144	I-240 EB – Ramp to Westgate Access Road to Ramp from US19-23-74A (Patton Avenue)	D	С
145	I-240 EB – Ramp to US19-23-74A (Patton Avenue) to Ramp from US 19-23 SB	E	D
146	I-240 WB – Ramp to US 19-23 NB to Ramp from US19-23-74A (Patton Avenue)	D	Е
147	US 19-23 NB – Ramp from I-240 WB to Ramp from Patton Avenue WB	D	D
148	US19-23-74A (Patton Avenue) SB – Ramp to I-240 WB to Ramp to I-240 EB	<b>O</b> 1 D	С
149	US 19-23-70 NB – Hill Street to SR 1781 (Broadway)	D	F
150	US 19-23-70 SB – SR 1781 (Broadway) to Riverside Drive	F	D
151	US 19-23-70 NB – Within SR 1781 (Broadway) Interchange	В	С
152	US 19-23-70 SB – Within SR 1781 (Broadway) Interchange	С	В
153	US 19-23-70 NB – SR 1781 (Broadway) to SR 1684 (Elk Mountain Foad)	В	С
154	US 19-23-70 SB – SR 1684 (Elk Mountain Road) to SR 1 81 Broadway)	С	В
155	US 19-23-70 NB – Within SR 1684 (Elk Mountain Road) Interchange	В	С
156	US 19-23-70 SB – Within SR 1684 (Elk Mountain Road) Interchange	С	В
157	US 19-23-70 NB – North of SR 1684 (Elk Mountain Road)	В	С
158	US 19-23-70 SB – North of SR 1684 (Elk Mountain Road)	С	В
159	I-240 WB – Within Montford Avenue Interchange	Е	F
160	I-240 EB – Within Haywood Street Interchange	F	Е
161	I-240 WB – East of Montford Avenue	F	F
162	I-240 EB – East of Haywood Street	F	F
Segment Number	Freeway Merges and Diverges	AM Peak Hour LOS	PM Peak Hour LOS
201	I-40 EB – To SR 1200 (Wiggins Road)	F	Е
202	I-40 WB – From SR 1200 (Wiggins Road) (Isolated Ramp – v/c ratio reported)	0.30	0.26
203	I-40 EB – From SR 1200 (Wiggins Road)	F	D
204	I-40 WB – To SR 1200 (Wiggins Road)	D	F
205	I-40 EB – To Liberty Road	F	D
206	I-40 WB – From Liberty Road	D	F
207	I-40 EB – From Liberty Road	F	Е
208	I-40 WB – To Liberty Road	Е	F
209	I-40 EB – To US 19-23-74A	D	С
210	I-40 WB – From US 19-23-74A	С	С
211	I-40 WB – From I-240 WB (Isolated Ramp – v/c ratio reported)	0.73	0.89
212	I-40 WB – To I-26 EB	В	С

Segment Number	Freeway Merges and Diverges (Continued)	AM Peak Hour LOS	PM Peak Hour LOS
213	I-40 EB – To I-240 EB (Isolated Ramp – v/c ratio reported)	0.97	0.80
214	I-40 WB – From NC 191 (Brevard Road)	В	С
215	I-40 EB – From NC 191 (Brevard Road)	Е	С
216	I-40 WB – To NC 191 (Brevard Road)	С	Е
217	I-40 EB – to US 25	Е	С
218	I-40 WB – from US 25 SB	С	Е
219	I-40 EB – from US 25 SB	D	В
220	I-40 EB – from US 25 NB	F	С
221	I-40 WB – to US 25 NB	D	F
222	I-26 WB – to NC 191 (Brevard Road)	D	D
223	I-26 EB – from NC 191 (Brevard Road)	Ø D	D
224	I-26 WB – from NC 191 (Brevard Road)	D	С
225	I-26 EB – to NC 191 (Brevard Road)	С	D
226	I-26 WB – To I-40 EB (Isolated Ramp – v/c ratio reported)	0.51	0.32
227	I-26 EB – From I-40 EB (Isolated Ramp – v/c ratio reported)	1.10	1.14
228	I-26 WB – To I-40 WB (Major Diverge)	D	С
229	I-240 EB – From I-40 EB	F	С
230	I-26 EB – From I-40 WB	С	D
231	I-240 WB – To I-40 WB	D	F
232	I-240 EB – To NC 191 (Brevard Road)	F	D
233	I-240 WB – From NC 191 (Brevard Road)	D	F
234	I-240 WB – To NC 191 (Brevard Road)	Е	F
235	I-240 WB – From SR 3556 (Ambcy Road)	F	F
236	I-240 EB – To Hanover Street	F	D
237	I-240 WB - From US 19 23 Business (Haywood Road)	D	F
238	I-240 EB – Fron. US 19-23 Business (Haywood Road)	F	D
239	I-240 WB To JS 19-23 Business (Haywood Road)	Е	F
240	I-240 WB – From US 19-23-74A (Patton Avenue)	Е	F
241	I-240 EB – To US 19-23-74A (Patton Avenue) WB	F	E
242	I-240 EB – To Westgate Access Road	Е	D
243	I-240 EB – From US 19-23-74A (Patton Avenue) EB (Major Merge – v/c ratio reported)	1.13	0.89
244	I-240 WB – From US 19-23-74A (Patton Avenue ) WB (Major Diverge)	D	F
245	I-240 EB – To US 19-23-74A (Patton Avenue) EB (Major Diverge)	Е	D
246	I-240 EB – From US 19-23 SB	F	F
247	I-240 WB – From US 19-23-74A (Patton Avenue) WB (Isolated Ramp – v/c ratio reported)	0.51	0.90
248	I-240 WB – To US 19-23 NB	F	F
249	US 19-23-70 NB – To SR 1781 (Broadway)	D	F
250	US 19-23-70 SB – From SR 1781 (Broadway)	В	В

Segment Number	Freeway Merges and Diverges (Continued)	AM Peak Hour LOS	PM Peak Hour LOS
251	US 19-23-70 NB – From SR 1781 (Broadway)	В	С
252	US 19-23-70 SB – To SR 1781 (Broadway)	D	С
253	US 19-23-70 NB – To SR 1684 (Elk Mountain Road)	В	С
254	US 19-23-70 SB – From SR 1684 (Elk Mountain Road)	С	В
255	US 19-23-70 NB – From SR 1684 (Elk Mountain Road)	В	С
256	US 19-23-70 SB – To SR 1684 (Elk Mountain Road)	С	В
257	I-240 WB – From Montford Avenue	F	F
258	I-240 EB – From Haywood Street (Isolated Ramp – v/c ratio reported)	0.23	0.39
259	I-240 WB – To Montford Avenue (Isolated Ramp – v/c ratio reported)	0.35	0.43
Segment Number	Freeway Weaving Segments	AM Peak Hour LOS	PM Peak Hour LOS
301	I-40 EB – US 19-23-74A to Ramp to I-26 EB	F	F
302	I-40 WB – Ramp from I-26 WB to US 19-23-74A	D	Е
303	I-40 EB – Ramp from I-26 WB to NC 191 (Brevard Road)	С	В
304	I-40 WB – Ramp from US 25 NB to Ramp to US 25 SB	С	D
305	I-240 EB – NC 191 (Brevard Road) to SR 3556 (Ambov Rc ad)	F	Е
306	I-240 EB – Across Bowen Bridges	F	Е
307	I-240 WB – Across Bowen Bridges	F	F
308	US 19-23-70 NB – US 19-23-74A (Patton Avenue) to Hill Street	D	F
309	US 19-23-70 SB – Riverside Drive to I-240	F	Е
310	I-240 EB – Clingman Avenue to Montiord Avenue	F	E
Segment Number	Signalized Intersections	AM Peak Hour LOS	PM Peak Hour LOS
401	US 19-23 & SR 1200 (Wiggins Road) Eastbound Left/ Eastbound Through/Right Wes bound Left/ Westbound Through Westbound Right Northbound Left/Through/Right Southbound Left/Through Southbound Right	F F B D F C F A	E F B C F E C F E
402	I-40 EB Ramps & SR 1200 (Wiggins Road) Eastbound Left/Through/Right Northbound Through/Right Southbound Left Southbound Right  I-40 WB Ramps & SR 1200 (Wiggins Road) Westbound Left/Through/Right Northbound Left Northbound Through Southbound Through/Right	F F* F B E E F B	E F E F A D E D B

Segment Number	Signalized Intersections (Continued)	AM Peak Hour LOS	PM Peak Hour LOS
	I-40 EB Ramps and Liberty Road	С	В
	Eastbound Left/Right	E	D
404	Northbound Through	В	В
	Northbound Right	С	С
	Southbound Left Southbound Through	E A	D B
	I-40 EB Ramps and Liberty Road	C	C
	Westbound Left	C	C
	Westbound Right	В	В
405	Northbound Left	В	C
	Northbound Through	В	В
	Southbound Through	В	С
	Southbound Right	В	В
	I-40 EB Ramps & US 19-23-74 / SR 1245 (Acton Circle)	F	F
	Eastbound Left	F	E
	Eastbound Through/Right	O <sub>1</sub> F	F
400	Northbound Left	O F	F
406	Northbound Through	D F	F F
	Southbound Left Southbound Through/Right	E	F
	Southeast Left	F	F
	Southeast Through/Right	F.	F.
	I-40 WB Ramps & US 19-23-74A	Е	F
	Eastbound Left	F	F
407	Eastbound Right	D	E
407	Northbound Left	F	F
	Northbound Through	Α	Α
	Southbound Through/Right	F	F
	East Oakview Road & NC 191 (Brevard Road)	С	D
	Eastbound Left	E	F
	Eastbound Through/Right	E	E
	Westbound Left Westbound Through/Right	E F	E F
408	Northbound Left	D	В
400	Northbound Through	C	D
	Northbound Right	В	В
	Southbound Left	F	F
	Southbound Through	Α	В
	Southbound Right	Α	Α
	I-40 EB Ramps & I C 191 (Brevard Road)	С	В
	Westbound Left	D	E
400	Westpound Right	D	F
409	Northbound Through	В	A
	Northbound Right Southbound Left	A E	A E
	Southbound Through	B E	A
	SR 3413 (Bear Creek Road) / I-40 WB Ramps & NC 191 (Brevard Road)	F	F
	Eastbound Left/Through	F	F
	Eastbound Right	В	A
	Westbound Left/Through	F	F
440	Westbound Right	С	С
410	Northbound Left	F	F
	Northbound Through	С	D
	Northbound Right	С	С
I	Southbound Left	D	F
	Southbound Through/Right	F	F

Segment Number	Signalized Intersections (Continued)	AM Peak Hour LOS	PM Peak Hour LOS
	I-40 EB Off Ramp & US 25 (Hendersonville Road)	С	С
	Eastbound Left	F	D
444	Eastbound Left/Through	F	D
411	Eastbound Right Northbound Through	E	C B
	Northbound Findight	A B	В
	Southbound Through	C	C
	NC 191 (Brevard Road) & Rocky Ridge Road	В	В
	Eastbound Left	Е	F
	Eastbound Right	С	D
412	Northbound Left	D	F
	Northbound Through	В	Α
	Southbound Through	В	В
	Southbound Right	Α	Α
	I-26 EB Ramps & NC 191 (Brevard Road)	C	C I
	Westbound Left	O <sub>1</sub> F	E
413	Westbound Right Northbound Through	C	C C
413	Northbound Right	) A	A
	Southbound Left	E	D
	Southbound Through	A	A
	I-26 WB Ramps & NC 191 (Brevard Road)	С	D
	Eastbound Left	F	F
414	Eastbound Right	E	F
414	Northbound Left	D	D
	Northbound Through	A	A
	Southbound Through/Right	C	F*
	I-240 EB Ramps & NC 191 (Brevard Road) Eastbound Left/Through	<b>F</b> D	<b>F</b> F
	Eastbound Right	A	A
416	Northbound Through	A	В
	Northbound Right	A	A
	Southbound Left/Through	F	F
	I-240 WB Ramps & NC 191 (Brevard Road)	F	F
	Westbound Left/Through	F	F
417	Westbound Right	С	F
717	Northbound Left/Through	F	F
	Southbound Through	F	В
	Southbound Right	A	A
	US 19-23 Business (Haywood Road) & I-240 WB Ramps Eastbound Through/Right	<b>F</b> F	<b>E</b> F
	Westbound Left	F	F
421	Westbound Through	E	E
	Southbound Left/Through	F	E
	Southbound Right	F	Ē
	US 19-23 Business (Haywood Road) & I-240 EB On Ramp / Hanover Street	F	F
	Eastbound Left	F	F
422	Eastbound Through/Right	F	С
422	Westbound Left/Through/Right	F	F
	Northbound Left/Through/Right	F	F
	Southbound Left/Through/Right	D	D

Segment Number	Signalized Intersections (Continued)	AM Peak Hour LOS	PM Peak Hour LOS
	US 19-23-74A (Patton Avenue) & NC 63 (New Leicester Highway)	F	F
	Eastbound Left	F	F
	Eastbound Through/Right Westbound Left	F*	C F
	Westbound Through	F	F
424	Westbound Right	В	В
	Northbound Left/Through	F	F
	Northbound Right	E	E
	Southbound Left Southbound Left/Through	F F	F F
	Southbound Right	D.	E
	US 19-23-74A (Patton Avenue) & SR 1332 (Louisiana Avenue)	F	F
	Eastbound Left	F	F
	Eastbound Through/Right	F	F*
	Westbound Left Westbound Through/Right	F	F F
425	Northbound Left	(Z) F	F
120	Northbound Left/Through	F	F
	Northbound Right	) E	D
	Southbound Left	F	F
	Southbound Left/Through Southbound Right	F D	F F
	US 19-23-74A (Patton Avenue) & Florida Avenue	E	F
	Eastbound Left	F	F
	Eastbound Through/Right	F*	В
426	Westbound Left	F	F
120	Westbound Through/Right	F*	F F
	Northbound Left/Through/Right Southbound Left	E	E
	Southbound Through/Right	E	F
	US 19-23-74A (Patton Avenue) & Regen Park Boulevard	F	F
	Eastbound Left	E	F
	Eastbound Through	F	В
428	Eastbound Right Westbound Left	A C	A A
720	Westbound Through/Right	D	F
	Northbound Left/Through/Right	E	E
	Southbound Lei/Through	F	F
	Southbound Right	С	E
429	US 19-23-74A (Pat on Avenue) & Westgate Service Road Westbound Through	<b>С</b> В	<b>F</b> F
423	South bound Right	F	F
	US 19-23-70 SB Ramps / NC 251 (Riverside Drive) & SR 1781 (Broadway)	F	F
	Eastbound Left	F	F
	Eastbound Through	F	F
	Eastbound Right Westbound Left	D F	D F
	Westbound Through	F.	F
440	Westbound Right	Α	Α
	Northbound Left	F	F
	Northbound Through	E C	E D
	Northbound Right Southbound Left	F	D F
	Southbound Through	D.	D
	Southbound Right	В	В
	US 19-23-70 NB Ramps & SR 1781 (Broadway)	E	D
	Eastbound Left	F	F*
441	Eastbound Through Westbound Through/Right	A F*	B F*
	Northbound Left/Through	F	F
	Northbound Right	D	D

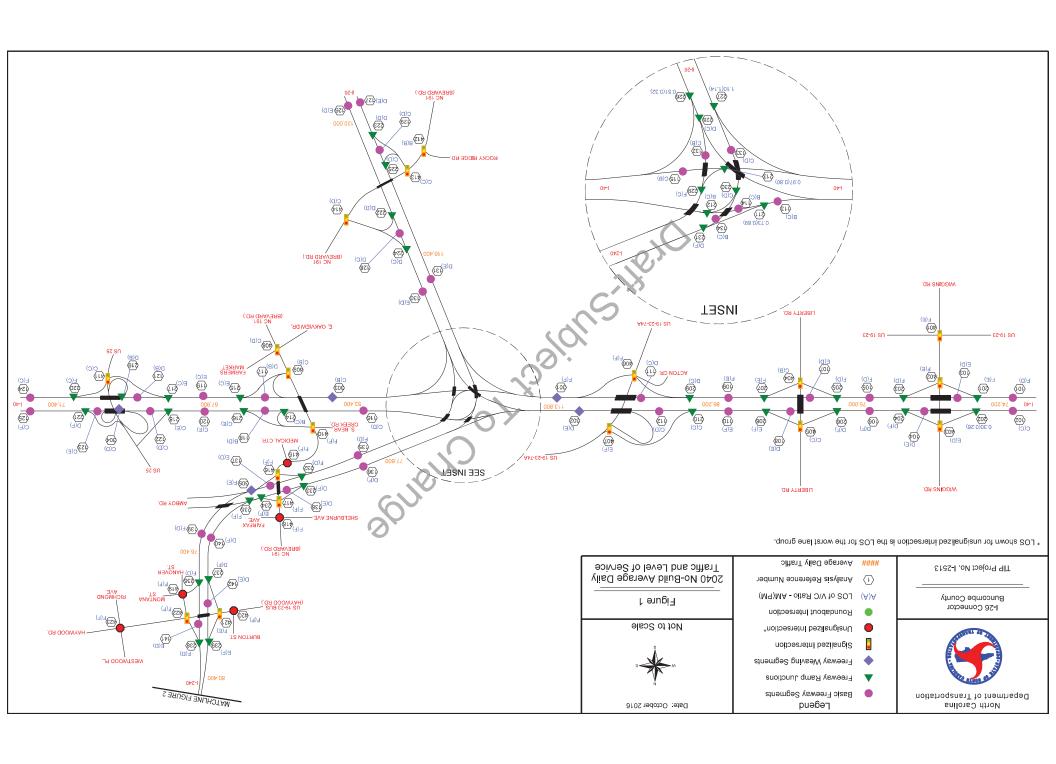
Segment Number	Signalized Intersections (Continued)	AM Peak Hour LOS	PM Peak Hour LOS
	SR 1781 (Broadway) & Campus Drive Eastbound Left	<b>D</b> F	<b>C</b> F
4.40	Eastbound Through/Right	C	В
442	Westbound Left	F	F B
	Westbound Through/Right Northbound Left/Through/Right	D F	F
	Southbound Left/Through/Right	D.	E E
	US 19-23-70 SB Ramps & SR 1684 (Elk Mountain Road)	С	С
	Eastbound Through	D	С
	Eastbound Right	D	С
443	Westbound Left	D	D
	Westbound Through Southbound Left/Through	A C	A C
	Southbound Right	D	D
	US 19-23-70 NB Ramps & SR 1684 (Elk Mountain Road)	C	C
	Eastbound Left	D D	D
	Eastbound Through	A	Α
444	Westbound Through	C	D
	Westbound Right	C	C D
	Northbound Left/Through Northbound Right	С	D
	Patton Avenue & US 19-23-70 Off Ramp	F	F
445	Eastbound Through	F	F
	Southbound Left	F	F
	Patton Avenue & Clingman Avenue	F	F
	Eastbound Left	F	F
	Eastbound Through/Right Westbound Through/Right	F F	E F
446	Northbound Left	F	F
	Northbound Through/Right	D	E E
	Southbound Left/Through	F	F
	Southbound Right	С	D
	Patton Avenue & French Broad Avenue	F	F
	Eastbound Left/Through/Right Westbound Left/Through/Pight	F F*	F F
447	Northbound Left	F	F
447	Northbound Through/Right	E	E
	Southbound Left	F	E
	Southbound 7 n cugh/Right	F	F
	I-240 WB On Ramp & Montford Avenue	E	E
	Westpound Left	F	F
449	Westbound Through/Right Northbound Left	D E	C F
	Northbound Through	F	C
	Southbound Through/Right	D	F
	Haywood Street & Montford Avenue	F	F
	Eastbound Left/ Through	F	D
	Westbound Through	В	С
450	Westbound Right Northbound Left/Through	F D	F E
i	Northbound Left/I frough  Northbound Right	D	E
	Southbound Left	F	F
	Southbound Right	Е	F

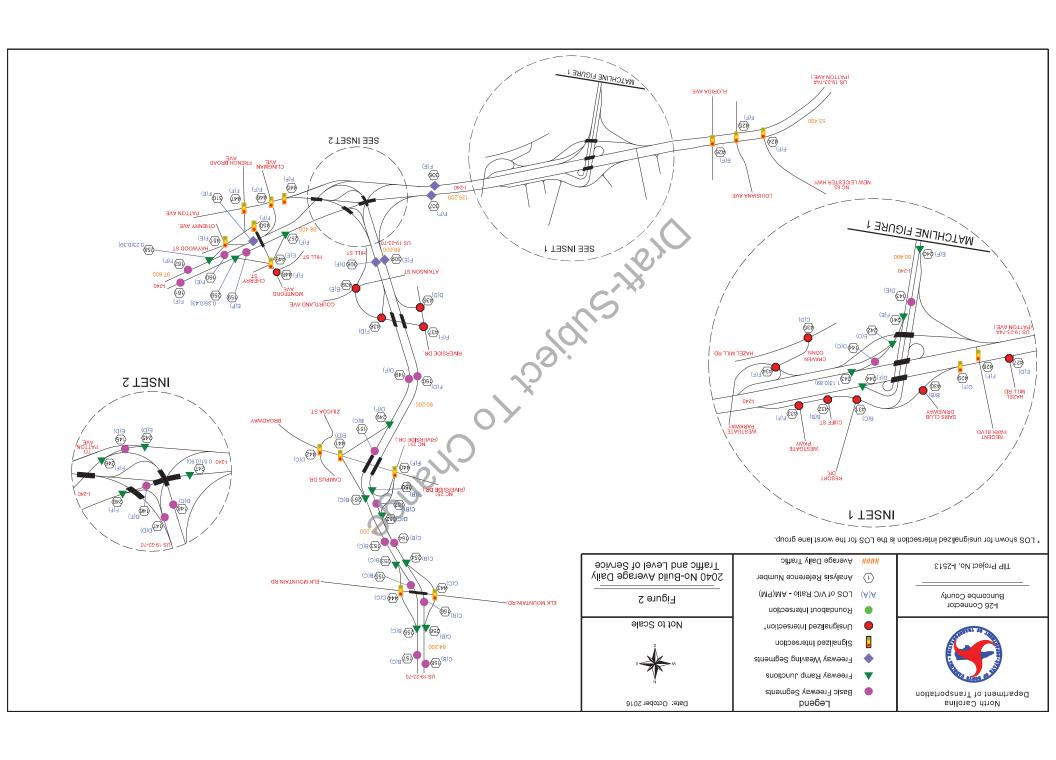
Segment Number	Signalized Intersections (Continued)	AM Peak Hour LOS	PM Peak Hour LOS
	Haywood Street & I-240 EB On Ramp	F	Е
	Eastbound Left	F	E
	Eastbound Through/Right	C	A
451	Westbound Left	E F	D F
451	Westbound Through/Right Northbound Left	Ē	F
	Northbound Through/Right	D	E.
	Southbound Left/Through	F	F
	Southbound Right	С	В
Commont		AM Peak	PM Peak
Segment Number	Unsignalized Intersections	Hour	Hour
Number		LOS	LOS
	NC 191 (Brevard Road) & Medical Center Entrance	-	-
415	Westbound Left/Right	F	F
	Southbound Left/Through	A	Α
	Shelburne Road / Fairfax Avenue & NC 191 (Brevard Road)		-
	Eastbound Left Eastbound Through/Right	F F	F F
418	Westbound Left	F	F
	Westbound Through/Right	F	F
	Northbound Left	В	В
	Southbound Left	Α	В
	I-240 EB Off Ramp / Montana Street & Hanover Street	-	-
419	Westbound Left/Through/Right	В	В
	Southbound Left/Through	A F	A F
	Northeastbound Left/Through/Right	Г	F
420	US 19-23 Business (Haywood Road) & Burton Street Eastbound Left	- В	- E
420	Southbound Left/Right	F	F
	US 19-23 Business (Haywood Road) & Visit wood Place / Richmond Avenue	-	-
	Eastbound Left	С	С
423	Westbound Left/Through /Right	Α	Α
	Northbound Left/Through/Right	F F	F F
	Southbound Left/Through/Right  US 19-23-74A/Patton Avenue VB & Hazel Mill Road	Г	F
427	Southbound Right	E E	D D
400	Sam's Club Entrance & Westgate Service Road	-	-
430	Eastbound Right	В	В
431	Holiday Inn Drive & Westgate Service Road	-	-
431	Sou hbound Right	В	С
432	Cliff Street & Westgate Service Road	-	-
.02	Southbound Right	В	В
433	Westgate Shopping Center & Westgate Service Road	- F	- F
	Southbound Right I-240 EB Off Ramp & I-240 EB On Ramp		I <sup>-</sup>
434	Westbound Left	- A	- A
107	Northbound Through/Right	F	F
	Hazel Mill Road & Craven Connector	-	-
435	Eastbound Left/Through	Α	Α
	Southbound Left/Right	С	D
436	Riverside Drive & US 19-23-70 SB On Ramp	-	-
	Southbound Left	D	D
	Riverside Drive & Hill Street Eastbound Left/Through/Right	- F	- F
437	Westbound Left/Through/Right	F	F
+31	Northbound Left/Through/Right	A	A
	Southbound Left/Through/Right	F	Α
438	Hill Street & US 19-23-70 NB Off Ramp	-	-
430	Northbound Left/Right	F	D

Segment Number	Unsignalized Intersections (Continued)	AM Peak Hour LOS	PM Peak Hour LOS
	Atkinson Street & Hill Street	-	-
	Eastbound Left/Through/Right	E	E
439	Westbound Left/Through/Right	С	С
	Northbound Left/Through/Right	Α	Α
	Southbound Left/Through/Right	Α	Α
	Montford Avenue & Hill Street	-	-
	Eastbound Left/Through/Right	F	F
448	Westbound Left/Through/Right	F	F
	Northbound Left/Through/Right	В	В
	Southbound Left/Through	Α	Α

atheir LOS was whose v/c ratio >1.0 Note: WB means westbound, EB means eastbound, NB means northbound, SB means southbound. The analysis segment numbers correspond with analysis points shown in Figures 1 and 2. Segments in blue text are adjacent to the project area, or located along the project area boundary.

<sup>\*</sup> The volume-to-capacity (v/c) ratio for these movements is >1.00, but their LOS was better than F. Per the 2010 Highway Capacity Manual (Page 18-6, Exhibit 18-4), any lane group whose v/c ratio >1.00 defaults to LOS F.







# STIP I-2513 I-26 Connector

# **WORKING GROUP #6 MEETING SIGN IN SHEET**

November 18, 2016

Transportation		November 18, 2016
NAME	AGENCY/ORGANIZATION	EMAIL
John Burnis	AECOM	
Celia Foushee	AECOM	
dianna Rocco	AECOM	
Chris Werner	AECOM	
Neil Dean	AECOM	
Michael Wray	NCDOT	
Gwen Wisler	City of Asheville	
Non Creyhton	Buncon he Couly	
KEN PUTNAM	COA	
Alice Oglesby	AAC	
Nick Schener	NCDOT BIKE/Ped	
Kinstova Solberg	MEDET DIS	2002
Lyuba Zyeva	FBRMPO	
Bruce Emory	Askeulle MMTC	
Julic Mayfield	City of Asterlle	19-4
DAVIA L. BROON	NCDOT BOARD MEMBISA	77 - 5 12 H 2 GL

Michael Dawsen

FHWA



# STIP I-2513 I-26 Connector

# **WORKING GROUP #6 MEETING SIGN IN SHEET**

November 18, 2016

Transpartation		November 18, 2010
NAME	AGENCY/ORGANIZATION	EMAIL
Tristan Winkler	FBRMPO	
Tristan Winkler DeWayne Barton	FBRMPO Burton Street	
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To: Project File

From: Andrew Bell

AECOM

Date: January 5, 2017

RE: I-240/I-26 Connection Discussion; December 15, 2016

NCDOT STIP Project I-2513 (I-26 Connector)

# Meeting Attendees:

Joe Giegle – FHWA

Derrick Weaver – NCDOT, Programs Management

Michael Wray – NCDOT, PDEA

Jim Dunlop – NCDOT, Congestion Management

Elise Groundwater\* – NCDOT, Congestion Management

Kevin Moore – NCDOT, Roadway

Ricky Tipton\* – NCDOT, Division 13

Andrew Bell - AECOM

Neil Dean – AECOM

Celia Foushee – AECOM

Joanna Rocco – AECOM

Chris Werner - AECOM

\*phone attendance

A meeting was held on December 15, 2016 with NCDOT and FHWA to discuss the interstate connections of I-26 and I-240. The primary topics of discussions were the signage and the next steps of the traffic analyses process.

Traffic analysis concepts such as reversing the existing ramp movements (i.e. braided ramps for I-26 southbound lanes and weaving for I-26 northbound lanes) were discussed; specifically, the flyover ramps classifications. It was determined the I-240 connections with I-26 would continue to be designed as two lane connections with I-26 due to the amount of traffic making either the merge or diverge movements and the sensitivity of two interstates merging.

AECOM will move forward analyzing the HCS components and Synchro components, developing initial roadway concepts, followed by identified "hot spot" locations (areas where traffic operations have been of previous concern) to be analyzed using Transmodeler. Once this effort is completed, AECOM will present this information to the meeting attendees for review and input, which will then be followed by the project study area-wide Transmodeler analysis for verification. It was noted, for non-hot spot locations, AECOM will make efforts to perform HCS and Synchro analysis and prepare initial roadway concepts that will be submitted via email for attendee review and input.

MEETING SUMMARY January 5, 2017 Page 2 of 2

Clarification was requested as to which TIP project will include physical improvements to Smokey Park Highway, should they be needed. It was determined, AECOM will perform the HCS and Synchro analysis, which will be reviewed with the meeting attendees and used to discuss the extent to which improvements in this area may be needed.

Kevin Moore noted, given the project will be going to Design-Build, geotechnical investigations can begin anytime. With input from AECOM, Kevin will submit the request to begin the geotechnical evaluation and note any areas (i.e. Montford) that more robust investigations are requested, which ultimately can be used to respond to comments received on the 2015 DEIS.

# **Action Items**

- AECOM will prepare the HCS, Synchro analysis, conceptual sketches, and possibly the Hot Spot analysis, which will be reviewed at an upcoming meeting with the attendees.
- AECOM will provide Kevin Moore input to assist in the geotechnical evaluation request. Kevin Moore will submit the request to begin the geotechnical evaluation.



To: Project File

From: Joanna Rocco

**AECOM** 

Date: March 2, 2017

RE: Traffic Concept Review Meeting

NCDOT STIP Project I-2513 (I-26 Connector)

# Meeting Attendees:

Joe Geigle – Federal Highway Administration Neil Dean – AECOM

Rick Tipton – NCDOT, Division 13 Celia Foushee - AECOM
Cole Hood – NCDOT, Division 13 Heath Gore – AECOM

Jim Dunlop – NCDOT, Congestion ManagementTom Hepler - AECOMKevin Moore – NCDOT, Roadway Design UnitChris Lucia - AECOMDerrick Weaver – NCDOT, PDEAJoanna Rocco – AECOM

Michael Wray – NCDOT, PDEA Eric Spalding - AECOM
Peter Trencansky – Patriot Transportation Eng. Chris Werner – AECOM

Andrew Bell – AECOM

The project team met with FHWA and NCDOT to discuss initial traffic capacity results and design concepts for I-2513 I-26 Connector Section C and the lower part of Section A. The main discussion points included whether or not lane continuity was appropriate/feasible in some areas, and where it was most appropriate to drop lanes. Additional discussion areas included the following:

- The reduction of through lanes within the I-40 & I-26 interchange
- Evaluation of laneage and weave distance from I-26 to Smoky Park ramp
- Evaluation of laneage from I-40 EB to I-26 NB, which could include switching the two lane ramp to include an option lane (would eliminate additional far left lane that develops for exit), or potentially carry only two lanes through on I-40. The loop from I-26 EB would then be able to continue downstream on I-40 EB as a lane add.
- Evaluation of I-26 SE Loop onto I-40 EB to determine if more acceleration length needed, if there is appropriate room for taper, and if extension of this lane thru the next ramp (if we reduce the continuous I-40 EB lanes from 3 to 2)
- General consensus at Acton Circle is to choose the right-out only option
- Spread diamond at Brevard and Amboy would help with the weaving issues; one of the interchanges could possibly be eliminated
- A discussion was held regarding whether or not roundabouts are a feasible solution at Amboy

MEETING SUMMARY March 2, 2017 Page 2 of 2

> Due to the need to reevaluate current design configurations, and the scheduling of an additional meeting with NCDOT to discuss further, the hot spot analysis will likely take an additional two weeks for design revisions.

# **Action Items**

- Project team to coordinate with NCDOT to schedule follow-up meeting for Section C and lower portion of Section A. Update: A design charrette for Section C and A has been scheduled for March 2<sup>nd</sup> at 1pm.
- Project team to coordinate with NCDOT to schedule meeting to review traffic and design concepts for Section B and upper portion of Section A. Update: A design charrette for Section B and A has been scheduled for March 16<sup>th</sup> at 1pm.



To: Project File

From: Chris Werner

**AECOM** 

Date: May 15, 2017

RE: I-2513 Working Group Meeting #7

NCDOT STIP Project I-2513 (I-26 Connector)

# Meeting Attendees:

Felix Davila – FHWA Alice Oglesby – AAC

Michael Dawson – FHWA DeWayne Barton – Burton Street Community

David Brown – NCDOT Board Member Rick Tipton – NCDOT Division 13

Jon Creighton – Buncombe County Cole Hood – NCDOT Division 13

Bruce Emory – City of Asheville Derrick Weaver – NCDOT Programs Management

Julie Mayfield – City of Asheville Michael Wray – NCDOT PDEA
Todd Okolichany – City of Asheville Nick Scheuer – NCDOT Bike & Ped

Ken Putnam – City of AshevilleNeil Dean – AECOMGwen Wisler – City of AshevilleCelia Foushee – AECOMAlan McGuinn – Asheville Design CenterJoanna Rocco – AECOMTristan Winkler – FBRMPOChris Werner – AECOM

Lyuba Zuyeva – FBRMPO

The project team met with the I-2513 Working Group at 1:00 PM February 20, 2017 in the Land of Sky Regional Council conference room in Asheville, NC. The purpose of the meeting was to discuss the status of the community small group meetings, the status of the traffic operations analysis and preliminary design refinements, the schedule of the Final EIS, action items from the previous Working Group meeting held on November 18, 2016, review the 2016 Traffic Noise Policy in regards to the voting, review the preliminary cost estimates for the betterment requests from the City, and discuss topics for the next Working Group meeting. This Working Group meeting was opened to the public. Members of the public are not included in the above meeting attendees list; however are shown on the attached sign-in sheet.

### **Project Status Update**

• Michael Wray gave an update on the status of the small group meetings. It was noted the project team was meeting with the Burton Street Community for a follow up discussion later in the evening. The small group meeting with Fairfax Avenue and Virginia Avenue neighborhoods will occur on March 21, 2017. The meeting with the Hillcrest community will also occur on March 21, 2017. It was noted since both communities requested the same date and time for their respective meetings, representatives of the City of Asheville and the project team would divide to attend the meetings. The project team will meet with the East West Asheville Neighborhood Area (EWANA)

community in either April or May. It was noted these meetings are the only small group meetings scheduled for the near future. Later in the meeting, NCDOT noted the project team is waiting to meet with Montgomery Street residents and business owners until traffic operations analysis and preliminary design refinements have been reviewed to determine if the collector/distributor (C/D) roads along I-40 in Section C are still required.

- Chris Werner provided an update on the traffic operations analysis and preliminary design refinements. The limits of focus for Section C analyses have been extended to State Street in Section A. The first traffic/design review meeting was held on February 8, 2017 with NCDOT, FHWA, and the project team; it was noted these meetings are being held to expedite the traffic operations analysis/preliminary design refinement iterative process. Interchanges within Section C are very close to one another and therefore are being analyzed, from a traffic operations perspective, as one system; however, no specific lane configurations have been finalized at this time. The project team is still investigating a potential ramp in the northeast quadrant of the I-40 interchange with Smokey Park Highway, which was discussed at the last Working Group meeting. The project team is still investigating the number of lanes required on I-26 through Asheville. Additionally, as a part of this process, the project team is coordinating with FHWA and NCDOT regarding the lane continuity and lane balancing within the project.
- Regarding the schedule, the Final EIS is scheduled to be completed in Winter 2017/2018. Based
  on the right-of-way schedule for the project, it is not anticipated pushing the FEIS out will have an
  impact on the right of way and let year of 2020 as identified in the Draft 2017-2027 STIP.

## **Review Working Group Meeting #6 Action Items (Working Group)**

- As noted above, a small group meeting with Fairfax Avenue and Virginia Avenue neighborhoods
  will occur on March 21, 2017. Ken Putnam gave an update on coordination efforts with the bicycle
  and pedestrian division regarding access restrictions to Fairfax Avenue and Virginia Avenue,
  noting this should be a topic of discussion during the community meeting.
- As noted above, as small group meeting with the Hillcrest Community is scheduled for March 21, 2017.
- Ken Putnam noted coordination efforts for the City of Asheville to internally finalize the committee members of the AAC are still pending.
- The imagery for the 360 visualizations has been collected by the project team; however, after further coordination with residents of Montford, additional visualization points have been added.

# **Review Working Group Meeting #6 Action Items (NCDOT)**

- The project team discussed the 2016 Traffic Noise Policy regarding the voting process for determining where noise walls would be located in the project, specifically in reference to the Hillcrest Apartment community. Property owners and their tenants will be solicited to obtain their preference on a noise barrier, with points per ballot distributed based on whether or not the person is a resident of the property, whether that resident owns or rents the property, and whether or not the resident's property is adjacent to the right of way of the roadway. The points will be distributed as follows:
  - -5 points/ballot for adjacent property owners who reside at property
  - -4 points/ballot for adjacent property owners who rent property to others
  - -3 points/ballot for all non-adjacent property owners who reside at property
  - -2 points/ballot for all non-adjacent property owners who rent property to others
  - -1 point/ballot vote for all tenants of rental property

- It was requested the project team bring visualization tools of the potential noise walls for the
  Hillcrest Community small group meeting. The project team will coordinate with the NCDOT
  Traffic Noise & Air Quality Group in order to have a representative attend the Hillcrest Community
  small group meeting
- **Aside:** A representative from the NCDOT Traffic Noise & Air Quality Group will contact Lael Gray, member of the public, to discuss her questions on the project noise analysis.
- Aside: A member of the public inquired as to whether an air quality analysis has/is being prepared to determine the impacts the project will have on air quality. It was noted project is located in Buncombe County which has been determined to comply with the National Ambient Air Quality Standards. The proposed project is located in an attainment area; therefore, 40 CFR Parts 51 and 93 are not applicable. This project is not anticipated to create any adverse effects on the air quality of this attainment area.
- Aside: A member of the public inquired as to whether NCDOT is analyzing the effects of removing
  trees for construction and how this will change noise throughout the project study area. NCDOT
  explained that small rows of trees do not act as effect noise abatement and therefore the analysis
  was completed as if the trees were not in place.
- At the FBRMPO/TCC meeting held in November 2016, it was requested the project team provide a
  visual representation of the 2040 base year calibrated model. It was discussed presentation of this
  information would be much more beneficial in a meeting setting so that it may be explained. The
  project team will present at the May 25, 2017 FBRMPO Board meeting.

#### **Betterments Discussion**

Discussions followed regarding the City's betterment requests and the draft cost estimates the project team has determined.

- The project team will finalize cost estimates of the City of Asheville's betterment request after reviews are conducted by NCDOT's Bicycle and Pedestrian Division.
- It was suggested in areas where bike lanes will be incorporated, the lane width could be reduced to 11 feet, with a 5 foot bike lane.
- It was requested if sidewalks could be eliminated on one side of the Amboy Road Extension. It was suggested the pros and cons of this request should be considered before a decision is made.
- It was questioned, should a cycle track be incorporated, what changes to traffic signals would be required. It was noted if a cycle track is incorporated; the need for additional traffic signal analysis will be coordinated at that time.
- With regard to bicycle and pedestrian movements along Haywood Road, it was noted, crossing
  the existing bridge over I-240 is the area of most concern with regard to safety. Given the
  adjacent businesses and historic resources, special consideration should be given on how the
  refined designs are prepared.
- It was suggested the City of Asheville consider a separate project, which would include adding crosswalks at the Patton Avenue intersection with Florida Avenue.
- Ken Putnam will transmit to the project team, Smith Mill Creek Greenway concepts prepared by the City of Asheville Greenway Committee.
- With regard to the betterment request of including a cycle track, sidewalks, and a greenway along Patton Avenue, Ken Putnam will coordinate to confirm this is the City's desire. It was suggested that the cycle track, sidewalks, and greenway be replaced with a multi-transportation path along the south side of Patton Avenue from Florida Avenue to Clingman Avenue.

- Given Atkinson Street currently has sidewalks in both directions; these sidewalks will be replaced by NCDOT.
- Ken Putnam will coordinate with the project team as to the specific location of the requested greenway location near Brevard Road and I-40.
- With regard to the City's request to reduce the pavement in areas of turns at ramp termini, it was
  explained these areas are provided to accommodate the project design vehicle (tractor-trailer:
  WB-53). Proposed pavement will be limited to only accommodate the turning radius of the
  design vehicle.
- With regard to the City's request for the construction of a greenway from the Captain Jeff Bowen Bridges to Clingman Avenue; it was noted that the designs presented in the 2015 Public Hearing Maps shows replacement of existing sidewalk in this area. Should the City prefer to replace this with a greenway, then the City will have to cover the increase in cost.
- It was requested the project team coordinate internally to determine if bus/fire department signal preemption is an up-front betterment request.
- It was noted these are preliminary cost estimates and therefore likely to change. It was noted that in areas where betterment requests are adjacent to sensitive areas, there may be pinch points so impacts do not increase. Once the betterments requests and costs are finalized, the City of Asheville should determine what, if any changes would be acceptable to the betterments. Additional follow-up will occur within the City of Asheville to get clarification on some of the betterment requests with regard to greenways, Bear Creek Road, Amboy Road, Brevard Road, and Atkinson Road, among others. The schedule for finalization of the betterments to be incorporated was discussed. It was noted that an agreement from the City on the final betterments to be incorporated would be needed before the project is let for construction; however, the sooner the project team knows the betterments to be incorporated, the better they can be reflected in the project designs and shown on project mapping. NCDOT would prefer the City of Asheville to provide an initial "Letter of Commitment" on betterments which the City of Asheville is requesting. Minor things within the right of way can be decided closer to the let date. Ken Putnam thanked the project team for reviewing the City's betterment requests, discussing the feasibility, and preparing cost estimates for their use in determining which betterments will be formally requested. The project team will continue to coordinate with the City to further refine the betterment request for a future Working Group meeting.
- **Aside:** A member of the public requested traffic forecasts prepared for the project be made available for public access.
- Aside: A member of the public questioned when the City of Asheville's Requests for Proposals
  (RFP) would be issued for a private engineering firm to assist the City in coordination with NCDOT
  on the project. It was explained the RFP was to be issued on February 24th and selection of a firm
  on April 25th.

The meeting adjourned at 3:30 pm. The time and date of the next Working Group meeting will likely be scheduled around the same time as the May FBRMPO meeting where the project team will present on the base year calibrated model. Discussions at Working Group #8 will likely include an update of the traffic operations analysis of the Preferred Alternative and finalized cost estimates for the City of Asheville's betterment requests.

## **Action Items**

• The project team will bring visualization tools of the potential noise walls for the Hillcrest Community small group meeting. Additionally, the project team will coordinate with the NCDOT noise and air representative to attend the Hillcrest small group meeting.

- Ken Putnam noted coordination efforts for the City of Asheville to internally finalize the committee members of the AAC are still pending.
- During the March 21, 2017 small group meeting with Fairfax Avenue and Virginia Avenue neighborhoods, the project team will inquire with the public to gauge their opinion on the right-in/right-out access with the Amboy Road Extension as shown in the 2015 Public Hearing Maps.
- A representative from the NCDOT Traffic Noise & Air Quality Group will contact Lael Gray to discuss her questions on the project noise analysis.
- At the FBRMPO/TCC meeting held in November 2016, it was requested the project team provide a visual representation of the 2040 base year calibrated model. It was discussed presentation of this information would be much more beneficial in a meeting setting so that it may be explained. The project team will present at the May 25, 2017 FBRMPO Board meeting.
- The project team will coordinate with the City to finalize cost estimates of the City of Asheville's betterment request; after which reviews will be conducted by the NCDOT's Bicycle and Pedestrian Division.
- It was requested if sidewalks could be eliminated on one side of the Amboy Road Extension. Pros and cons of this request will be developed and considered before a decision is made.
- It was suggested the City of Asheville consider a separate project, which would include adding crosswalks at the Patton Avenue intersection with Florida Avenue.
- Ken Putnam will transmit to the project team, Smith Mill Creek Greenway concepts prepared by the City of Asheville Greenway Committee.
- With regard to the betterment request of including a cycle track, sidewalks, and a greenway along Patton Avenue, Ken Putnam will coordinate to confirm this is the City's desire. It was suggested that the cycle track, sidewalks, and greenway be replaced with a multi-transportation path along the south side of Patton Avenue from Florida Avenue to Clingman Avenue.
- Ken Putnam will coordinate with the project team as to the specific location of the requested greenway location near Brevard Road and I-40.
- The project team will coordinate to determine if bus/fire department signal preemption is an upfront betterment request.
- Additional follow-up will occur within the City of Asheville to get clarification on some of the betterment requests with regard to greenways, Bear Creek Road, Amboy Road, Brevard Road, and Atkinson Road, among others.
- The project team will continue to coordinate with the City to further refine the betterment request for a future Working Group meeting.
- The project team will coordinate for traffic forecasts prepared for the project to be made available for public access.
- Per the Working Group's direction, the project team will include a public comment/Question/Answer section at the end of future Working Group meeting agendas.



# STIP I-2513 I-26 Connector

# **WORKING GROUP #7 MEETING SIGN IN SHEET**

**February 20, 2017** 

Trunsportation		February 20, 2017
NAME	AGENCY/ORGANIZATION	EMAIL
Jou Greighton	Burcombe County	
Lyuba Zuyeva	FBRMPO	
Mary Lynn Haggins	resident Montford	
Mikalebomer	All Resident	
susan Preble	AVITESTJENT	sustephonk@yahoo.com
KARIN ECKERT	Don't Wrock Asheville	KARINGARDEN 6 YAHOO.COM
RENBERY MOORE	JMTEAGUE ENGUERUG	revber, moore@jinteceque engineering &
BONNIE POTET	BLUESTONE LLC	lavonne potecte genail o con
Cole Hood	NCDOT / Div 13	0
Denayne Barton	Burton Street	¥2
Alice Oglesby	AAC	
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# STIP I-2513 I-26 Connector WORKING GROUP #7 MEETING SIGN IN SHEET

February 20, 2017

Transportation		February 20, 2017
NAME	AGENCY/ORGANIZATION	EMAIL
Celia Foushee	AEcom	
Chris Werner	Accom	
Joanna Rocco	Arecom	
Michael Wray	NCDOT	
Denick Weaver	NUSOT	
Neil Dean	Accom	
KEN PYTNAM	COA	
Told Okolishan	COA	
Gwen Wisler	CoA	
Bruce Enery	Askendo Multinodal Tran	De Consu
ALAN MEGUINN	ASHEVILLE DESKAL CENTEIZ.	
michael Dawson	FNWA	dawson michae Payahoo.com
Felix Davila	FHWA	felix davila adot sou
RICK TIDTON	NCDOT	Ptipter@NCDOT. GOV
Julie May Frend	COA	
DAVID L. BROWN	NODOT BOARD MEMBE	R



To: Project File

From: Celia Foushee

**AECOM** 

Date: March 30, 2017

RE: 3/13/17 Betterments Discussion Call with Ken Putnam

NCDOT STIP Project I-2513 (I-26 Connector)

Meeting Attendees:

Ken Putnam – City of Asheville\*

Neil Dean – AECOM

Celia Foushee – AECOM

The project team held a conference call with the City of Asheville to discuss the betterments list and to identify action items in order to finalize the betterments. Discussion points and action items (bolded) are summarized below.

- The requested additional berm can be removed from locations where it is not as feasible. AECOM
  will break out the cost of the additional berm width in the betterments spreadsheets to show
  the cost of the betterment with and without the berm.
- Amboy Road and Shelburne Road: the cycle track was pursued for continuity purposes from another project that has been identified in the City's RADTIP. It was requested AECOM proceed with a cost estimate for the cycle tracks on these locations. Additionally, the City of Asheville is revising its request for sidewalks on Amboy Road so that sidewalk would be constructed on only the north side of the road.
- Patton Avenue: the request for the multi transportation path along the south side of the roadway is likely feasible. At the proposed intersection of Patton and Regent Park, the following options were discussed: an at-grade crossing, pedestrian tunnels crossing under the interchange ramps and Patton Avenue that closely follow Smith Mill Creek, and several options following the recommendations from the Greenway Committee which would remove the multi transportation path from the roadside and follow Smith Mill Creek. AECOM will further discuss this location with the NCDOT Bicycle and Pedestrian Division and Roadway Design Unit. It was also noted no further investigations into a cycle track along Patton Avenue are warranted at this time. The City would still like to include a sidewalk on the north side of Patton Avenue.
- Regarding the sidewalk proposed along Patton Avenue east of the Captain Jeff Bowen bridges, it
  was suggested this become a multi transportation path instead of a sidewalk. AECOM will
  coordinate with NCDOT to determine the feasibility of this request. AECOM will also investigate
  modifying the access to the River Arts District to a switchback path as opposed to the current
  stairs.

- Atkinson Street: the existing typical section includes sidewalks on both sides. NCDOT will replace
  the existing sidewalks on both sides at no cost to the City of Asheville when using a standard berm
  width.
- Brevard Road: new development may occur in the northwest quadrant of the proposed intersection. AECOM will verify the existing control of access along Brevard Road and Bear Creek Road. It was noted no further investigations into a cycle track along Brevard Road are warranted at this time. However, the City requested that AECOM include an estimate for the cost of widening the bridge to accommodate a future cycle track. It was agreed that this cost would be a 100 percent cost to the City. NCDOT has already agreed to widen the bridge over I-26 to provide for the addition of a sidewalk.
- Bear Creek Road (Site 11) has not had a cost estimate completed for the requested improvements. It was decided to indefinitely defer, as part of this project, completing these estimates and improvements due to the likely costs and additional impact that would result. No further investigations will occur.
- Sand Hill Road: This is a designated bicycle route. The designs will include a 4-foot shoulder on the bridge at no cost to the City. The City is no longer requesting sidewalks at this location.
- Transit: The City has not further discussed this betterment. **AECOM will draft an email with a** suggested betterment solution for the City of Asheville to consider.
- Riverside Drive: the county is completing a feasibility study for a greenway along the facility. It will
  need to be coordinated with the Riverside Drive widening project (U-5868). The County has
  proposed the greenway to be parallel with Riverside Drive; however, the City would prefer the
  greenway to be parallel to the French Broad River.



To: Project File

From: Joanna Rocco

**AECOM** 

Date: May 24, 2017

RE: 05/09/17 meeting with FHWA to discuss project status

NCDOT STIP Project I-2513 (I-26 Connector)

# Meeting Attendees:

Clarence Coleman – FHWA Andrew Bell – AECOM
Joe Geigle – FHWA Joanna Rocco – AECOM
John Sullivan – FHWA Chris Werner – AECOM
Derrick Weaver - NCDOT

The project team held a meeting with FHWA at the FHWA division office in Raleigh to discuss the project status and the preliminary results of the traffic capacity analysis and design concept development. The following includes the main discussion items during the meeting:

- The project team discussed the design charrettes that have taken place, the results of the draft capacity analysis, and the preliminary design concept sketches for the project.
- FHWA suggested their headquarters office review the following reports:
  - Hotspot Microsimulation
  - Project-wide Microsimulation
  - o Current and previous traffic forecasts as well as peak hour volume comparisons
  - Draft Capacity Analysis results recently prepared based upon the new traffic forecast
  - o Draft conceptual design sketches based upon the draft capacity analysis
- FHWA requested headquarters visit the project study area and hold a meeting with the project team in Asheville. This meeting is anticipated to be held in June. It was noted the project team will be in Asheville June 5<sup>th</sup> through 6<sup>th</sup> for small group meetings.
- FHWA suggested a Failure Year Analysis would be beneficial in determining the typical section of Section A. If the Failure Year Analysis shows this portion of the project would fail shortly after the design year of 2040, it may be recommended that the designs accommodate for future lane additions.
- The project team will discuss further with NCDOT Roadway Design to determine the appropriate typical section to allow for potential future widening, if necessary.

MEETING SUMMARY May 24, 2017 Page 2 of 3

# **Action Items:**

- AECOM to submit the hotspot microsimulation, project-wide microsimulation, current and previous traffic forecasts as well as peak hour volume comparisons, draft capacity analysis results recently prepared based upon the new traffic forecast, and the draft conceptual design sketches based upon the draft capacity analysis.
- FHWA to schedule a field review meeting with FHWA headquarters in Asheville.
- AECOM will coordinate with NCDOT regarding preparation of the Failure Year Analysis.

MEETING SUMMARY May 24, 2017 Page 3 of 3

# **Action Items:**

- AECOM to coordinate with Joe Geigle regarding the approach for the Failure Year Analysis.
- AECOM to coordinate with Brian Wert regarding the growth rates to be used for the Failure Year Analysis.
- AECOM to coordinate with NCDOT Congestion Management on what sections to perform analysis once an approach and growth rate have been determined.



To: Project File

From: Joanna Rocco

**AECOM** 

Date: May 24, 2017

RE: 05/15/17 discussion on FHWA Request for Failure Year Analysis (conference call)

NCDOT STIP Project I-2513 (I-26 Connector)

# Meeting Attendees:

Michael Wray – NCDOT, PDEA

Jim Dunlop – NCDOT, Congestion Management

Elise Groundwater – NCDOT, Congestion Management

Andrew Bell – AECOM

Celia Foushee – AECOM

Joanna Rocco – AECOM

Chris Werner – AECOM

The project team held a conference call with NCDOT to discuss the May 9<sup>th</sup>, 2017 meeting with FHWA, where it was determined a Failure Year Analysis would be beneficial in determining the typical section of Section A. If the Failure Year Analysis shows this portion of the project would fail shortly after the design year of 2040, it may be recommended that the designs accommodate for future lane additions.

At the FHWA meeting, the project team discussed the design charrettes that have taken place, resulting in design concept sketches for the project. FHWA suggested their headquarters office review the following reports:

- Hotspot Microsimulation
- Project-wide Microsimulation
- Current and previous traffic forecasts as well as peak hour volume comparisons
- Draft Capacity Analysis results recently prepared based upon the new traffic forecast
- Draft conceptual design sketches based upon the draft capacity analysis

It was noted the Capacity Analysis will likely be in draft form. FHWA would also like headquarters to visit the project study area and hold a meeting with the project team in Asheville. This meeting has not been scheduled; however, it is anticipated this meeting will be held in June.

A discussion was held regarding what sections would be analyzed for the failure year. It was agreed that Section C and A would be beneficial, and only for freeway segments. Section B will be included up to the I-26/I-240 split. This will be confirmed once AECOM gets additional clarification from Joe Geigle of FHWA regarding the approach for the analysis. AECOM will coordinate with Brian Wert in order to estimate volumes for the future failure year analysis.

MEETING SUMMARY May 24, 2017 Page 2 of 2

# **Action Items:**

- AECOM will contact Joe Geigle of FHWA to confirm approach and methodology. AECOM will also inquire regarding FHWA's preference on whether the analysis should be prepared until the first segment with failure is identified or whether the analysis should be completed to the point which failure is identified for the full corridor.
- AECOM will coordinate with Brian Wert in order to estimate volumes for the future failure year analysis.
- AECOM will coordinate with NCDOT Congestion Management regarding analysis coordination with FHWA has been completed.



To: Project File

From: Celia Foushee

**AECOM** 

Date: August 14, 2017

RE: FBRMPO Meeting

I-26 Connector Status Update

NCDOT STIP Project I-2513 (I-26 Connector)

**Project Team Meeting Attendees:** 

Kristina Solberg – NCDOT Division
Michael Wray – NCDOT, PDEA
Peter Trencansky – Patriot Transportation
Neil Dean – AECOM
Celia Foushee – AECOM
Joanna Rocco – AECOM
Chris Werner – AECOM

The project team was invited to attend and present at the FBRMPO meeting held at 12:00 PM May 25, 2017 in the Land of Sky Regional Council conference room in Asheville, NC. The purpose of the project team's attendance was to provide a brief project update and discuss the status of the traffic capacity analysis and review the base year calibrated model for the I-2513 traffic microsimulation.

Chris Werner began the presentation with a brief overview of the project history and study area. He discussed topics of the previous meeting held with the FBRMPO and TCC on November 11, 2016. At this meeting, attendees requested a video of the calibrated model. Peter Trencansky with Patriot Transportation Engineering provided a high level overview of the calibrated model, the data collection process, and elements of the model was provided prior to showing the video. It was again noted that driver behavior between Patton Avenue and the Jeff Bowen Bridges was excluded from the model due to outlier data. Peter began the video explaining the different elements shown as they were seen.

The following are questions discussed during the presentation:

- When was the data collected and is it feasible to update it for comparison purposes?
  - The data was collected about four years ago. Updating the data would be starting from the beginning, however it was noted that Asheville driver behavior has likely not changed, therefore the same results would occur.
- Are there multiple modes of transportation included in the future year calibration?
  - The Future Year calibrated model is based upon the FBRMPO travel demand model.

#### MEETING SUMMARY August 14, 2017 Page 2 of 2

- Has it been evident that adding lanes reduces congestion during traffic events, such as accidents?
  - Yes, adding capacity allows for less congestion during events.
  - o It was noted the model is very representative of driver behavior and congestion, with the exception of traffic at Exit 44 being much worse.

The meeting concluded at 3:00 pm.

#### MEETING SUMMARY



To: Project File

From: Joanna Rocco

AECOM

Date: June 23, 2017

RE: I-2513 Working Group Meeting #8

NCDOT STIP Project I-2513 (I-26 Connector)

#### Meeting Attendees:

Michael Dawson – FHWA

Bruce Emory – City of Asheville

Julie Mayfield – City of Asheville

Ken Putnam – City of Asheville

Michael Dawson – FHWA

Rick Tipton – NCDOT Division 13

Cole Hood – NCDOT Division 13

Kristina Solberg – NCDOT Division 13

Gwen Wisler – City of Asheville

Michael Wray – NCDOT PDEA

Alan McGuinn – Asheville Design Center

Peter Trencansky – Patriot Transportation

Tristan Winkler – FBRMPO

Lyuba Zuyeva – FBRMPO

Alice Oglesby – AAC

DeWayne Barton – Burton Street Community

Neil Dean – AECOM

Celia Foushee – AECOM

Joanna Rocco – AECOM

Chris Werner – AECOM

The project team met with the I-2513 Working Group at 9:00 AM May 26, 2017 in the Land of Sky Regional Council conference room in Asheville, NC. The purpose of the meeting was to discuss the status of the community small group meetings, the status of the traffic operations analysis and preliminary design refinements, the schedule of the Final EIS, action items from the previous Working Group meeting held on February 20, 2017, review the base year calibrated model for the I-2513 traffic microsimulation, review the betterment requests from the City, review the outcomes of the Hillcrest and Fairfax/Virginia small group meetings held in March, review conceptual configurations for Brevard Road, Amboy Road, and Haywood Road, and discuss topics for the next Working Group meeting.

This Working Group meeting was opened to the public. Members of the public are not included in the above meeting attendees list; however are shown on the attached sign-in sheet.

#### **Project Status Update**

- Michael Wray and Joanna Rocco gave an update on the status of the small group meetings.
  - The Hillcrest meeting took place on March 21, 2017, and the main topics of discussion included access changes to the Hillcrest community and traffic noise impacts that may result of the project. NCDOT provided attendees an audible demonstration on how traffic noise impacts to their community may be perceived and the process of soliciting input on their preference of noise walls.

- The project team will meet with the East West Asheville Neighborhood Association (EWANA) community on June 5<sup>th</sup> and the West Asheville Business Association (WABA) on June 6<sup>th</sup>.
- Chris Werner provided an update on the traffic operations analysis and preliminary design refinements. The project team met with the Federal Highway Administration (FHWA) on May 9, 2017, where the FHWA requested their headquarters office review the traffic forecast (previous and current), the peak hour volumes comparison from the two forecasts, the draft capacity analysis, the draft hot spot microsimulation, , and the draft conceptual design sketches.
- The revised date anticipated for the Final EIS will be established after comments have been received by FHWA on the items noted above.

#### **Review Working Group Meeting #7 Action Items (Working Group)**

Ken Putnam noted coordination efforts for the City of Asheville to internally finalize the
committee members and roles/responsibilities of the AAC are still pending; it is anticipated this
information will be finalized within the next 30-60 days, and possibly presented at the next
Working Group Meeting.

#### **Review Working Group Meeting #7 Action Items (NCDOT)**

- A noise and air representative from NCDOT was present at the March 21, 2017 Hillcrest community meeting as noted above.
- Peter Trencansky of Patriot Transportation Engineering, subconsultant to AECOM, presented the
  methodology of preparing the base year calibrated model to be used in the project
  microsimulation. The presentation is attached and will be sent to the FBRMPO for posting on
  their website.
  - o It was noted the project wide microsimulation will determine where there is excess capacity as well as where more capacity is needed.
  - o **Aside:** It was questioned if NCDOT will be considering providing a new ramp in the northeast quadrant of the I-40 interchange at Smokey Park Highway. NCDOT responded that multiple concepts are being considered to refine the designs in this area, one of which includes providing this ramp.
  - O **Aside:** It was questioned if an interstate can be signed for less than 50 miles per hour. NCDOT responded that according the *American Association of State Highway and Transportation Officials A Policy on Design Standards-Interstate Systems* (January 2005), Design Speed for mountainous or urban areas, the design speed shall be at least 50 miles per hour.
  - Aside: A member of the public inquired as to whether the microsimulation takes into account improvements proposed on adjacent roadways in the model. It was explained that the FBRMPO's travel demand model and the traffic forecast includes all of the surrounding roads and fiscally-constrained projects in the area; therefore, the FBRMPO takes the system-level improvements into account.
  - It was requested of the base year calibrated model presentation and corresponding report be made available to the FBRMPO so it may be posted on their website.

MEETING SUMMARY June 23, 2017 Page 3 of 5

#### **Betterments Discussion**

Discussions followed regarding the City's betterment requests and the draft cost estimates the project team has prepared.

- The project team requested the City of Asheville determine which betterments they would like implemented into the project before designs are developed. Ken Putnam stated the City would review the latest spreadsheet of betterment costs in efforts to provide NCDOT input on betterments to be included in the design refinement process before Working Group #9.
- With regard to the betterment request along Patton Avenue (cycle track, sidewalks, greenway or multi-transportation path), Ken Putnam will coordinate to confirm this is the City's desire. It was suggested that the cycle track, sidewalks, and greenway could be replaced with a multi-transportation path along the south side of Patton Avenue from Florida Avenue to Clingman Avenue, which could provide the services the City has requested, but with a narrower footprint along Patton Avenue. It was suggested a multi-transportation path could also address the City's Greenway Committee request, which was provided to the project team via email on 2/21/2017.
- It was questioned why the potential benefits for the Burton Street Community were not a part of this discussion. NCDOT explained betterments discussed today are specific to the requests made by the City of Asheville, throughout the project study area. Additionally, it was explained that although the Preferred Alternative is anticipated to benefit the Burton Street Community in the form of improved emergency response times, negative effects to the community would include recurring impacts to community cohesion, the physical aspects of the project, the potential difficulties associated with finding replacement housing within financial means, as well as anticipated effects to the visual environment within the community. In addition to input provided by the Burton Street Community as to how the project team might further refining the designs to lessen the impacts to the community, NCDOT is also interested in receiving input from the community as to what additional transportation improvements might be made in the Burton Street Community to offset or lessen the burden of the overall project impacts. As such, NCDOT has hired a specialized firm to work with the Burton Street Community, in order to help facilitate this discussion. Results of this coordination will be included in future documentation of the project and will also be coordinated with the City of Asheville.

#### Fairfax Avenue/Virginia Avenue, Brevard Road, Amboy Road

Chris Werner reviewed the discussion that took place at the March 21<sup>st</sup> Fairfax Avenue/Virginia Avenue small group meeting and reviewed the concepts at Brevard Road and Amboy Road that were developed as a result of public feedback at that meeting. The configuration concept of a split diamond with roundabouts at Amboy Road was presented to the working group (see attached). This configuration is a concept prepared by the project team in order to visualize the ideas identified by attendees of the small group meeting, which are consist with comments provided to the project team via the 2015 Public Hearing and on the 2015 DEIS. This configuration allows for less overall impact at this location as well as a greenway connection that doesn't require pedestrians to cross Amboy Road. It was noted this is at a conceptual stage only, and the project team would like to present this configuration to the residents of Fairfax Avenue/Virginia Avenue before refining the designs. Input from the City is also requested.

MEETING SUMMARY June 23, 2017 Page 4 of 5

#### **Haywood Road**

Chris Werner reviewed the various design concepts that have been developed for the Haywood Road interchange. The original concept on the 2015 Public Hearing Map was a Tight Urban Diamond Interchange (TUDI), which included 5 foot wide sidewalks for pedestrians. The TUDI configuration did not include bike lanes as a part of the designs given the City of Asheville's plans designate Haywood Road as a sharrow facility, meaning the roadway is marked to indicate cyclists and motor vehicles would share the lane. Similar to the design refinement process discussed above from the Fairfax Avenue/Virginia Avenue small group meeting, the project team developed draft concepts in response to the City's and publics' comments provided via the 2015 Public Hearing and on the 2015 DEIS. Draft concepts developed and discussed today included a Median U-Turn Diamond Interchange (MUDI), a roundabout interchange, and compressed roundabout interchange (see attached). General pros and cons of each concept were reviewed.

The project team will seek public input on these concepts before designs are refined further. Input from the City is also requested.

**Aside:** Alice Ogelsby noted WABA would likely have interest in reviewing this concept at the June 6<sup>th</sup> meeting as well.

#### **Working Group #9 Date and Topics**

The date of the next Working Group meeting is anticipated to take place in mid to late July. AECOM will send a poll to the working group members to determine the best day that works for attendees. Discussions at Working Group #9 will include an update on the FEIS schedule, betterment decisions from the City of Asheville, follow up from the EWANA and WABA small group meetings, follow-up from FHWA coordination, AAC finalization, and multimodal committee meeting discussion on the concepts discussed above.

#### **Additional Discussion**

Julie Mayfield inquired whether or not a tunnel under the French Broad River to eliminate the flyover bridges had ever been investigated. Chris Werner noted that there was a DEIS comment regarding a tunnel option in Section A, but NCDOT has not considering tunneling the project as a viable alternative. The initial response provide by NCDOT included general concern over the challenges associated with tunneling I-26, as well as the I-240 flyovers, under the French Broad River (FBR). Challenges for I-26 would include the vertical grades required to transition I-26 from a higher elevation at Patton Avenue (west side of the FBR) crossing Emma Road, underneath the FBR, crossing Riverside Drive, and then back up to tie into existing US 19/23/70 prior to Broadway. Similar concerns apply to tunneling the I-240 flyovers, include the vertical grades required to transition I-26 from a higher elevation at Patton Avenue (west side of the FBR) crossing Emma Road, underneath the FBR, crossing Riverside Drive, and then back up to US 19/23/70 near Hill Street and Atkinson Street. NCDOT noted that based on their experience, a tunnel could be five to six times the cost of the bridges. Chris Werner explained that he had recently worked on a 1.2 mile long project, which included a general feasibility assessment of a depressed facility (not a tunnel, yet similar) that estimated approximately \$100 million more in construction cost than a traditional alternative. Any requests to analyze this type of alternative further would need to be more specific, as

MEETING SUMMARY June 23, 2017 Page 5 of 5

determining the cost and feasibility of a tunnel option would be a large effort for a project of this magnitude.

#### **Public Comment Period**

It was requested if NCDOT could provide the percent local traffic versus through traffic for the current and future year scenarios. NCDOT noted this information can be prepared and provided at the next Working Group Meeting.

#### **Action Items**

- AECOM to send the FBRMPO a copy of the base year calibrated model presentation to post on their website.
- The City will review the latest spreadsheet of betterment costs in efforts to provide NCDOT input on betterments to be included in the design refinement process before Working Group #9.
- Ken Putnam noted it is anticipated the AAC committee members and roles/responsibilities will be finalized within the next 30-60 days, and possibly presented at the next Working Group Meeting.
- City of Asheville will review and provide comments on the draft concepts presented on Fairfax Avenue/Virginia Avenue, Amboy Road, Brevard Road, and Haywood Road upon presentation at the City's Multimodal Committee on June 28<sup>th</sup>.
- AECOM will provide the City with copies of the draft concepts prepared for Fairfax Avenue/Virginia Avenue, Amboy Road, Brevard Road, and Haywood Road.
- AECOM to send a poll to working group members to solicit preference on date for Working Group
   #9 in mid to late July.
- NCDOT will provide percent local traffic versus through traffic for the current and future year scenarios at the next Working Group Meeting
- NCDOT will determine next steps in soliciting feedback from public on design concepts at Amboy Road, Brevard Road, and Haywood Road.



## STIP I-2513 I-26 Connector

## **WORKING GROUP #8 MEETING SIGN IN SHEET**

May 26, 2017

Transportation	171ay 20, 2021		
NAME	AGENCY/ORGANIZATION	EMAIL	
Celia Foushee	AECOM	celia. foushee Daecom. com	
Joanna Rocco	AEcom	joanna.rocco@aecom.com	
Julie Mayfield	C.t of Asheville	Juliemeyherde aulconcil. com	
Gwen Wisler	Cof Asheville	quenuisler@zulcouncil.com	
KEN PUTNAM	COA	KPHTNAMBASHENILLENC, GOV	
BRUCE EMORY	Askerlle Multimode Transpo	Come emory 22 @ charter net	
ALAN MEGLINN, FALL	ASHEVILLE DEGIGN CENTER	2 akn. maguinne arcz-design. com	
Lyuba Zuyeva	FBRMPO	lyuba a landofsky. org	
Michael Dawson	FHWA	michael dawsen adot. gov	
Cole Hood	NCDOT / Div. 13	chood @ nedot. gov	
Kristina Solberg	NCDOT BIV. 13	klsolberg@ncdot.gov	
PACK TIPTON	NCPOT DIV 13	1617to @ MCDOT 60V	
Tristan Winkler	FBRMPO	tristan@landofsky.org	
ALAN ROSSITHAL	WEICHERT, REALTONS - UNLINES	O ROSEJTHAL MOUNTAND PROPERTIES E GMAIL. CO	
5000 17 LOF-115	MONTFORD	aploftio@gmail.com	
MARY TRAUNER	DWAC	mary@mtrauner. net	



## STIP I-2513 I-26 Connector

# **WORKING GROUP #8 MEETING SIGN IN SHEET**

May 26, 2017

Transportation	May 20, 2017			
NAME	AGENCY/ORGANIZATION	EMAIL		
Lack Gray	Montford Neighborhoo	laelgray@yahoo.com		
Lavanne Potest	Montford Neighborhood Bluestone LC  Property Owner I-40 Exit 44  Engineer FOR  JM TETP For Bluestone	lavonnepoteete gmail - com		
Reusen Moore	JMTETP for Bluestone	lavonnepoteete gmail « lom revous moore@jnteagre, engineering com		
BILL Laviderte	DWAC	lavsinavL@gmail.com		
Dewayne Barton		0		
Alice Oglesby		grafter :		
W.				
	"			

#### MEETING SUMMARY



To: Meeting Attendees

From: Joanna Rocco

AECOM

Date: July 13, 2017

RE: Gray Bat Survey Coordination Meeting

I-26 Connector Status Update

NCDOT STIP Project I-2513 (I-26 Connector)

#### Meeting Attendees:

Marella Buncick – US Fish and Wildlife Service (USFWS)
Katherine Caldwell – NC Wildlife Resources Commission (NCWRC)
Joey Weber – NCWRC
Mike Dawson – Federal Highway Administration (FHWA)
Cole Hood – NCDOT Division 13
Roger Bryan – NCDOT Division 13
Kathy Herring – NCDOT NES, Biological Surveys
Chris Manley – NCDOT NES, Biological Surveys
Heather Wallace, CALYX
Joanna Rocco – AECOM

A meeting was held on June 29, 2017 at the NCDOT District office at 11 Old Charlotte Highway in Asheville to discuss gray bat survey needs. Following introductions and a review of the meeting purpose, discussion began regarding the federally-listed gray bat in the project study area and what surveys would be needed for the I-26 Connector project. Main discussion items held during the meeting are listed below:

- A discussion was held regarding the timing of the completion of Section 7 consultation. It was noted the Section 7 consultation and the Biological Opinion (BO) must be completed before FHWA would sign the Record of Decision (ROD), which is currently scheduled for completion by the end of 2018.
- The current project schedule includes design refinements on the preferred alternative to be completed this fall, the FEIS in Spring 2018, and the ROD by the end of 2018. Sections C and B are currently scheduled for right of way acquisition in 2019. The project has the potential to be a Design Build project.
- Structure checks should occur this summer. The need for additional studies, such as radio telemetry and acoustics has yet to be determined.

- A discussion was held regarding the research study to gather data related to the gray bat, in an
  effort to develop a Programmatic Consultation with USFWS for transportation projects in NCDOT
  Divisions 13 and 14, within the French Broad River basin.
  - It is anticipated this study would provide endangered species consultation/compliance for most projects and their effects on gray bats for the next five years. It was agreed a request for proposals (RFP) should be prepared as soon as possible with a 60-day turnaround from RFP to receipt of proposals. Kathy Herring will prepare a preliminary proposal for the group's review, and a meeting could be held late July/early August to determine next steps for the research study. In the meantime, data collection may begin for I-2513.
  - It is anticipated the product could aid in providing minimization measures that can be incorporated into multiple projects.
- It was agreed an additional meeting with the project team would be beneficial, potentially in October, to discuss the refined designs and data that's been collected so far to help focus 2018 survey areas.

#### **Action Items**

- Kathy Herring to prepare a preliminary RFP for the group's review.
- The project team to hold additional meeting to discuss preliminary RFP and purpose of research study in late July/early August.
- The project team to hold additional meeting in October to discuss refined designs and data collection results/next steps.
- NCDOT and CALYX to develop a bat survey plan in coordination with USFWS and WRC to begin various surveys.

#### MEETING SUMMARY



To: Project File

From: Celia Foushee

**AECOM** 

Date: September 18, 2017

RE: I-2513 Working Group Meeting #9

NCDOT STIP Project I-2513 (I-26 Connector)

#### Meeting Attendees:

Michael Dawson – FHWA Kristina Solberg – NCDOT Division 13
Bruce Emory – City of Asheville Nick Scheuer – NCDOT Bike & Ped

Julie Mayfield – City of AshevilleDaniel Sellers – NCDOT TPBTodd Okolichany – City of AshevilleDerrick Weaver – NCDOTKen Putnam – City of AshevilleMichael Wray – NCDOTGwen Wisler – City of AshevilleNeil Dean – AECOM

Lyuba Zuyeva – FBRMPO

DeWayne Barton – Burton Street Community

Rick Tipton – NCDOT Division 13

Cole Hood – NCDOT Division 13

Chris Werner – AECOM

Chris Werner – AECOM

Brendan Merithew - NCDOT Division 13

The project team met with the I-2513 Working Group at 1:00 PM on July 27, 2017 in the Land of Sky Regional Council conference room in Asheville, NC. The purpose of the meeting was to discuss the status of the community small group meetings, the status of the traffic operations analysis and preliminary design refinements, on-going coordination efforts with FHWA, the schedule of the Final EIS, action items from the previous Working Group meeting held on May 26, 2017, review the betterment requests from the City, discuss the Haywood Road interchange concepts, review the elevations in Section B, and discuss topics for the next Working Group meeting.

This Working Group meeting was opened to the public. Members of the public are not included in the above meeting attendees list; however, they are shown on the attached sign-in sheet.

#### **Project Status Update**

- Michael Wray and Joanna Rocco gave an update on the status of the small group meetings.
  - The East West Asheville Neighborhood Association (EWANA) meeting took place on June 5, 2017 and the West Asheville Business Association (WABA) meeting was held on June 6, 2017. The purpose of the meetings were to provide the residents of the EWANA and WABA communities an opportunity to ask questions regarding the I-26 Connector Project, review the design concepts at Amboy Road, Brevard Road, and Haywood Road, and get feedback from the community on the impacts and benefits to their community from the

- project. Several attendees expressed safety concerns for bicyclists and pedestrians for the roundabout and "oval-about" interchange options at Haywood Road.
- o The project team will meet with the Fairfax Avenue/Virginia Avenue community on September 7, 2017. This will be the second meeting with the community.
- Neighborhood Solutions is now under contract with the Burton Street community to begin working with them to determine appropriate mitigation opportunities for the community. NCDOT will receive updates from Neighborhood Solutions and relay these updates to the Working Group.
- Chris Werner provided an update on the traffic operations analysis and preliminary design refinements. The Federal Highway Administration (FHWA) headquarters office reviewed the traffic forecast (previous and current), the peak hour volumes comparison from the two forecasts, the draft capacity analysis, the draft hot spot microsimulation, and the draft conceptual design sketches. Based on the information provided, FHWA is in agreement with the proposed interstate access concepts for route continuity and lane balancing. Once all traffic studies have been finalized, anticipated by September, the studies will be available and posted to the project and FBRMPO websites. It was also announced that based upon traffic and design analyses completed thus far, the collector/distributor roadways in Section C are no longer needed and six travel lanes are feasible in Section A. Auxiliary lanes may be provided where needed between entrance ramps and exit ramps.
- The current schedule is as follows:
  - o Final EIS: summer 2018
  - o Record of Decision: late winter 2018/early winter 2019
  - Sections C and B right of way and construction: 2020

#### **Review Working Group Meeting #8 Action Items (Working Group)**

- Ken Putnam provided an update regarding the City's selection of betterments. City representatives met on June 7, 2017 and June 23, 2017 to review the betterments recommendations and costs provided by AECOM and provided the following comments:
  - o Request for the additional one-foot berm width as the City's preferred cross-section at all locations within the project limits where it can be accommodated.
  - Request for a cycle track along the Amboy Road corridor.
  - Request for a multi-use transportation path along the south side of Patton Avenue from Florida Avenue to the west side of the Jeff Bowen Bridges and a sidewalk along the north side of Patton Avenue.
  - o Request for the multi-use transportation path along Patton Avenue be extended from the Jeff Bowen Bridges to Clingman Avenue.
- Ken Putnam noted coordination efforts for the City of Asheville to internally finalize the committee members and roles/responsibilities of the AAC are still pending; it is anticipated this information will be finalized within the next 30-60 days.
- Ken Putnam provided comments from the community on the draft concepts presented on Amboy Road, Brevard Road, and Haywood Road (see attached).

#### **Review Working Group Meeting #8 Action Items (NCDOT)**

 A copy of the base year calibrated model presentation from Working Group #7 has been posted to the French Broad River MPO website at the following link: <a href="http://fbrmpo.org/wp-content/uploads/2017/05/170525\_FBRMPO\_Board\_I-2513\_Microsimulation\_Pres.pdf">http://fbrmpo.org/wp-content/uploads/2017/05/170525\_FBRMPO\_Board\_I-2513\_Microsimulation\_Pres.pdf</a> MEETING SUMMARY September 18, 2017 Page 3 of 5

- Draft conceptual sketches of Amboy Road, Brevard Road, and Haywood Road were provided to NCDOT Division 13 and City staff on 5/30/2017.
- NCDOT was requested to provide the percent local traffic versus through traffic for the current and future year scenarios. NCDOT is currently compiling the data to present in a graphic. *Update:* See attached memorandum.

#### **Betterments Discussion**

Discussions followed regarding the City's betterment requests as presented during the review of action items list from Working Group #8.

- Regarding bicycle/pedestrian access to Carrier Park, the City requested a multi-use transportation
  path close to Amboy Road to access the park and also requested a connection from Shelburne
  Drive along the north side of Amboy Road.
- The City of Asheville requested to have a multi-use transportation path connecting Brevard Road and Amboy Road.
- The Working Group agreed the draft conceptual design at Amboy Road and Brevard Road is the preferred alternative design.
- It was noted the Amboy Road Bridge will need to be wide enough to accommodate for the future Amboy Road widening project.
- At Hanover Street, the Working Group still needs to discuss rerouting options for the buses.
- NCDOT and the City will continue to discuss the betterments requests outside of the Working Group forum.

#### **Haywood Road**

Chris Werner reviewed the various draft design concepts that have been developed for the Haywood Road interchange in response to the City's and public's comments provided via the 2015 Public Hearing, the 2015 DEIS, and the EWANA and WABA small group meetings. Draft concepts developed included a Median U-turn Diamond Interchange (MUDI), a roundabout interchange, and compressed roundabout interchange (or "oval-about"). It was noted pubic feedback on the roundabout interchange and compressed roundabout interchange was mostly negative due to bicycle and pedestrian safety concerns. Furthermore, the MUDI option is not feasible from a geometric design perspective. Based upon preliminary traffic analyses, the original Tight Urban Diamond Interchange (TUDI) design is successful in preventing traffic from queuing down ramps and onto I-26 through lanes. The compressed roundabout interchange results in traffic on ramps queuing onto I-26 during peak hours. It was noted, with both options, substantial traffic delays can be expected on Haywood Road; however, this also currently occurs and is present in the 2040 No-Build scenario. Based on current traffic analysis, the TUDI will be carried through as the recommended option in the Final EIS.

#### **Section B Elevations**

Chris Werner, Neil Dean, and Tom Hepler discussed the controlling points in Section B that require the elevations as currently designed. It was noted the design team has thoroughly investigated all conceivable horizontal and vertical alignment options which would result in lower elevations of the proposed facilities. After much study it is concluded that the only practical modifications to the hearing map alignments would consist of vertical alignment changes and then would result in small reductions of less than 10 feet

MEETING SUMMARY September 18, 2017 Page 4 of 5

in elevation. The exact elevations will not be determined until bridge structures have been designed, which would occur during the final design. Control points that were noted include the following:

- Patton Avenue is at its existing elevation with I-26 passing underneath in a cut.
- Grade on I-26, just north of Patton Avenue, is controlled by the tie from Ramp D (Patton Avenue to I-26 northbound/I-240 eastbound) whose elevation at the tie point is controlled by Patton Avenue elevations and maximum grade design criteria.
- At Hill Street, I-240 eastbound and westbound are controlled by the minimum horizontal curve minimum radius required for the design speed. A constructability issue also evolves around existing bridge over Patton Avenue, which needs to remain open until this leg of WB I-240 is in service. The ramp from Patton Avenue to I-240 westbound was studied as a partial diamond but it resulted in a similar impact to the Hill Street area and it does not function well. Moving the ramp closer to I-240 westbound would increase the skew angle and bridge length and shorten the weaving distance to US 19/23/70 below the minimum required for the traffic and design speed.
- Elevations of I-240 eastbound and westbound are controlled by the minimum clearances over Hill
  Street and subsequently under Atkinson Street followed by the tie to Patton Avenue. I-240
  eastbound is also controlled by clearance over US 19/23/70 southbound which in turn must clear
  Hill Street. . Hill Street is currently designed at its maximum grade in order to tie into Atkinson
  Street.
- The grade on I-240 westbound is controlled by the clearance required over I-26; which, as previously noted, is controlled by Ramp D (Patton Avenue to I-26 northbound/I-240 eastbound).
- I-240 westbound is at the minimum horizontal radius, therefore shifting it closer to I-240
  eastbound would shorten the weaving distance between US 19/23/70 exit and Patton Avenue
  entrance.

#### **Future Working Group Date and Topics**

The date of the next Working Group meeting will be determined as project milestones are met. Discussions at Working Group #10 may include the final visualizations, the Traffic Microsimulation Results, AAC finalization, follow up from the Fairfax Avenue/Virginia Avenue small group meeting, and coordination effort updates by Neighborhood Solutions with the Burton Street community.

#### **Additional Discussion**

Chris Werner announced to the Working Group he will be leaving AECOM and will begin working with the North Carolina Department of Transportation as of July 28, 2017. Joanna Rocco will be the new point of contact as the project manager for AECOM.

#### **Public Comment Period**

Reuben Moore inquired as to whether a signature bridge was still being considered for the bridges/flyovers across the French Broad River. It was explained the focus will now be on the Jeff Bowen Bridges. Julie Mayfield noted the visualizations may help the AAC determine how they will desire the bridges to appear.

MEETING SUMMARY September 18, 2017 Page 5 of 5

#### **Action Items**

- Ken Putnam noted it is anticipated the AAC committee members and roles/responsibilities will be finalized within the next 30-60 days, and possibly presented at the next Working Group Meeting.
- NCDOT will provide percent local traffic versus through traffic for the current and future year scenarios at the next Working Group Meeting. *Update: See attached memorandum.*
- NCDOT will post the Traffic Capacity Analysis on the FBRMPO's website once it has been reviewed and finalized.
- NCDOT will receive updates from Neighborhood Solutions and relay these updates to the Working Group.



## STIP I-2513 I-26 Connector

## **WORKING GROUP #9 MEETING SIGN IN SHEET**

July 27, 2017

Transportation		July 27, 2017			
NAME	AGENCY/ORGANIZATION	EMAIL			
Celia Foushee	AECOM	celia.foushee@aecom-com			
KEN PUTNAM	COA	Kputnama ASHZWLLENC. Go			
Bruce Emory	COA-Martinadal Transp Con	um emory is a charter net			
Julie Mayfield	COA	whenexthedeavhoural.com			
Todd OKolichan	CoA	tokolichan Cashevillencigor			
Gwen Wister	CoA	quenuisler@ as council.com			
Jos Creighton	Buncombe County	Unn creighton ebuncoabecounty org			
RICK TISTOR	NCPOT	PHIPTON @ NEDOT, GOW			
Kristina Solbera	NCDOT	kisolberg@ncdot.gov			
Cole Hood	NCDOT	chood @ nedot. gov			
BRENDAN MERETHEN	MOUT	bumerithen Endot. pou			
Lyuba Zuyera	FBRMPO	lyuba a lundofsky. org			
Michael Dawson	FHWX	michael dawson adot. gov			
Daniel Sellers	NCDOT-TPB	desellers 1 ENCOUT. GOV			
Devayne Starton	Hood Huggers Internation	I blove thoughussers com			
Nick Schenrer	NCDOT Bixe & Ped				



### STIP I-2513 I-26 Connector

## **WORKING GROUP #9 MEETING SIGN IN SHEET**

July 27, 2017

Transportation		July 27, 2017		
NAME	AGENCY/ORGANIZATION	EMAIL		
Joanna Rocco	AECOM			
Neil Dean	AECOM			
Derrick Weaver	NCDOT			
Tom Hepler	AECOM			
Michael Wray	RNCDOT			
Chris Werner	AECOM			
	SELC			
Renben Moore	JMTE	reuben. moore@jmteagueengineerin		
Bonnie Poteet	Public	lavonne potest agmail. com		

#### MEMORANDUM



To: Project File

From: Andrew Bell, PE, PTOE

**AECOM** 

Date: August 31, 2017

RE: I-2513 I-26 Connector

Interstate Trips – Local vs Thru Traffic

At a project working group meeting held on May 26, 2017, a question was asked relating to the amount of local area traffic using the freeways in the Asheville area compared to the non-local traffic. In response to this request, a cursory analysis was performed using the Select Link tool in the French Broad River Travel Demand Model (FBRM) to estimate the percentage of local traffic using the area interstates and the percentage of through traffic. The FBRM utilizes data based on local land use plan inputs to project trips around the Asheville area roadway network. The current version of the FBRM (FBRTDM v2), which was the same version used for the current I-2513 Traffic Forecast, projects traffic to a future year of 2040, which is the future year selected for the I-2513 Project.

To help estimate the percentage of local trips on the area interstates, several representative locations were selected in and around Asheville:

- 1: I-40 Between I-26 and US 19-23-74A (Smoky Park Highway)
- 2: US 19-23-70 North of SR 1781 (Broadway)
- 3: I-26 East of I-40
- 4: I-40 East of I-240 (east of Asheville)
- 5: I-240 Between SR 3556 (Amboy Road) and US 19-23 Business (Haywood Road)

For each of the selected sites, an analysis was performed to estimate the percentage of traffic heading to or coming from the main perimeter freeway corridors. These perimeter locations include:

- A: I-40 Between I-26 and US 19-23-74A (Smoky Park Highway)
- B: I-26 East of I-40
- C: US 19-23-70 Between Hill Street and SR 1781 (Broadway)
- D: I-40 East of I-240 (east of Asheville)

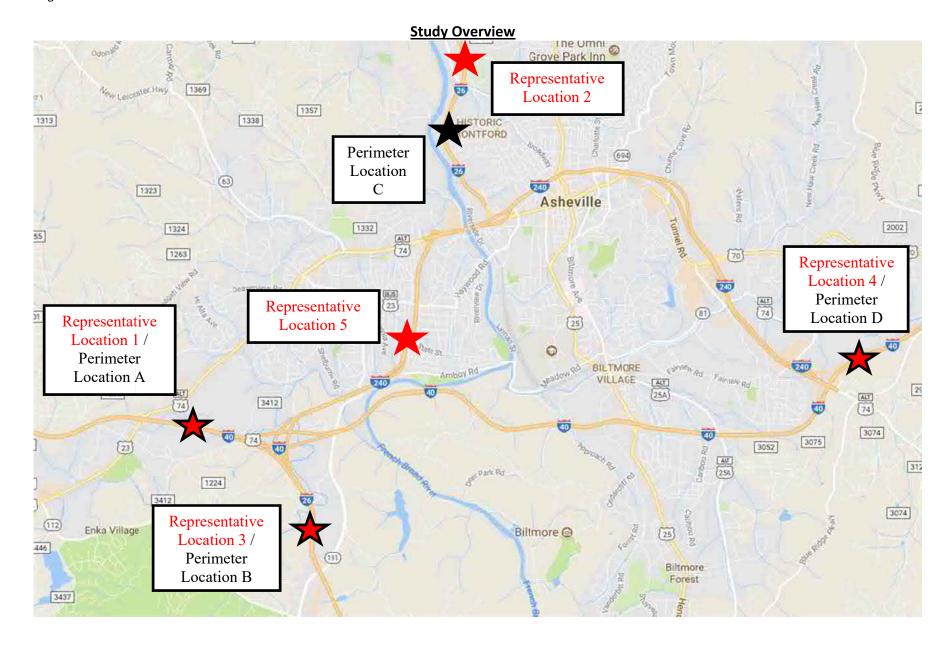
It is assumed for the sake of this analysis that trips passing through the representative analysis locations and the perimeter freeway locations are through trips. For some of the sites analyzed, the perimeter sites are either redundant or along the main route to and from downtown Asheville. For these scenarios, only the locations that would be reasonable destinations or origins for through trips were included in the calculations. In other words, locations that are identical to the representative location or are redundant were not included in the overall calculation of through trips. By removing the assumed through trips, the remainder of the trips were assumed to be trips originating or ending in the immediate Asheville area.

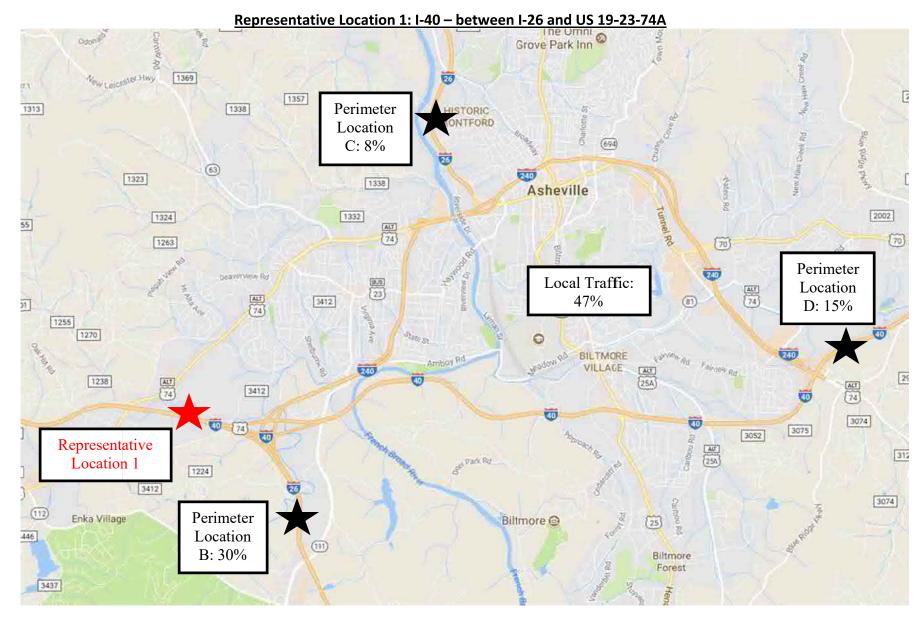
The results of the analysis are shown in the table and figures below. Percentages are shown, and are used to calculate Annual Average Daily Traffic (AADT).

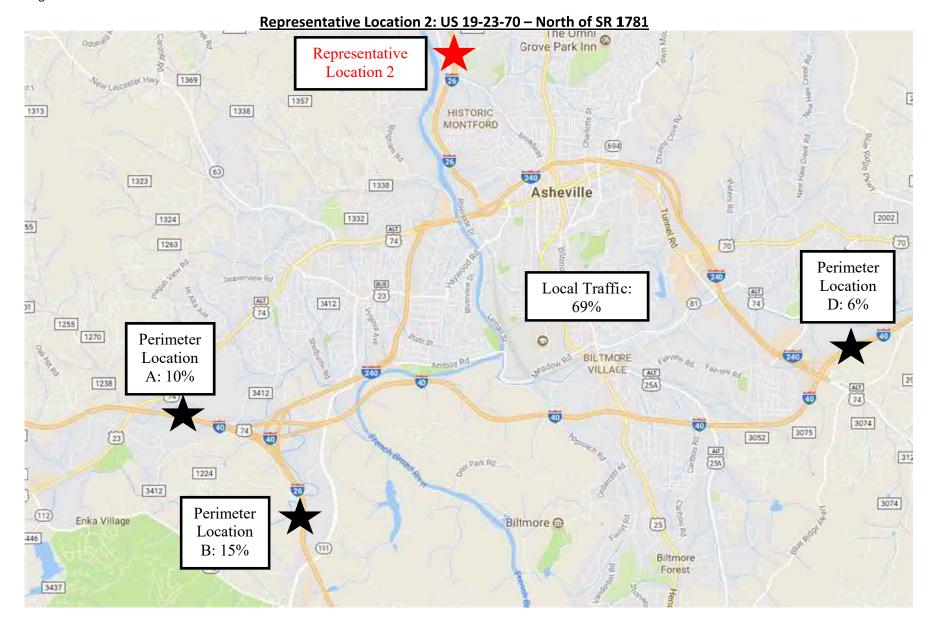
		Perimeter Locations					
		А	В	С	D	Total Through Trips	Assumed Local Trips
ocations F)	1 (80,000)	N/A	30% (24,000)	8% (6,400)	15% (12,000)	53% (42,400)	47% (37,600)
	2 (59,000)	10% (5,900)	15% (8,850)	N/A	6% (3,540)	31% (18,290)	69% (40,710)
sentative Loc (2015 AADT)	3 (81,000)	38% (30,780)	N/A	15% (12,150)	1% (810)	54% (43,740)	46% (37,260)
Representative Locations (2015 AADT)	4 (61,000)	20% (12,200)	1% (610)	6% (3,660)	N/A	27% (16,470)	73% (44,530)
	5 (57,000)	38% (21,660)	50% (28,500)	29% (16,530)	0% (0)	26% (14,820)	74% (42,180)

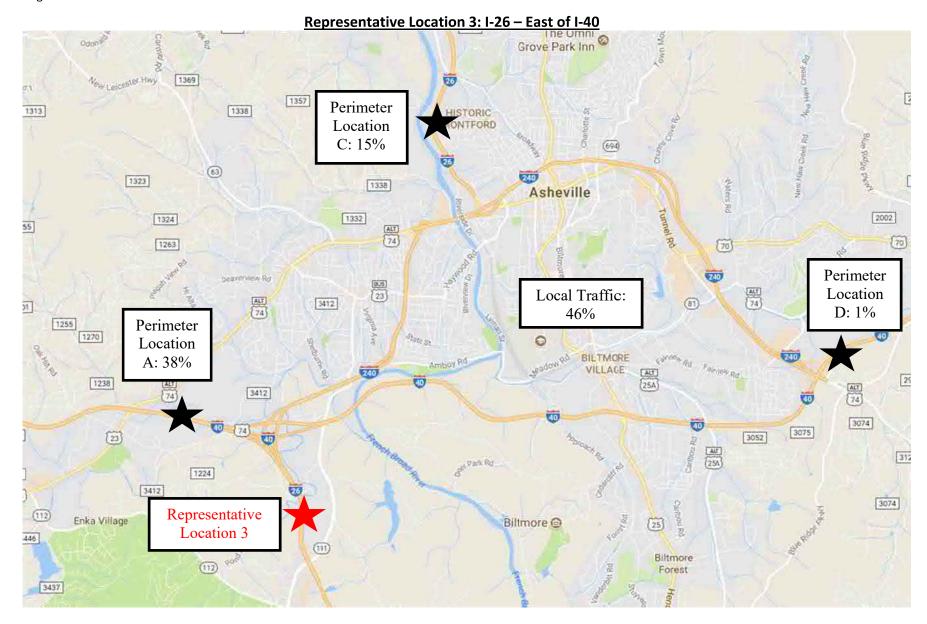
- 1: I-40 Between I-26 and US 19-23-74A
- 2: US 19-23-70 North of SR 1781
- 3: I-26 East of I-40
- 4: I-40 East of I-240
- 5: I-240 Between SR 3556 and US 19-23 Business
- A: I-40 Between I-26 and US 19-23-74A
- B: I-26 East of I-40
- C: US 19-23-70 Between Hill Street and SR 1781
- D: I-40 East of I-240

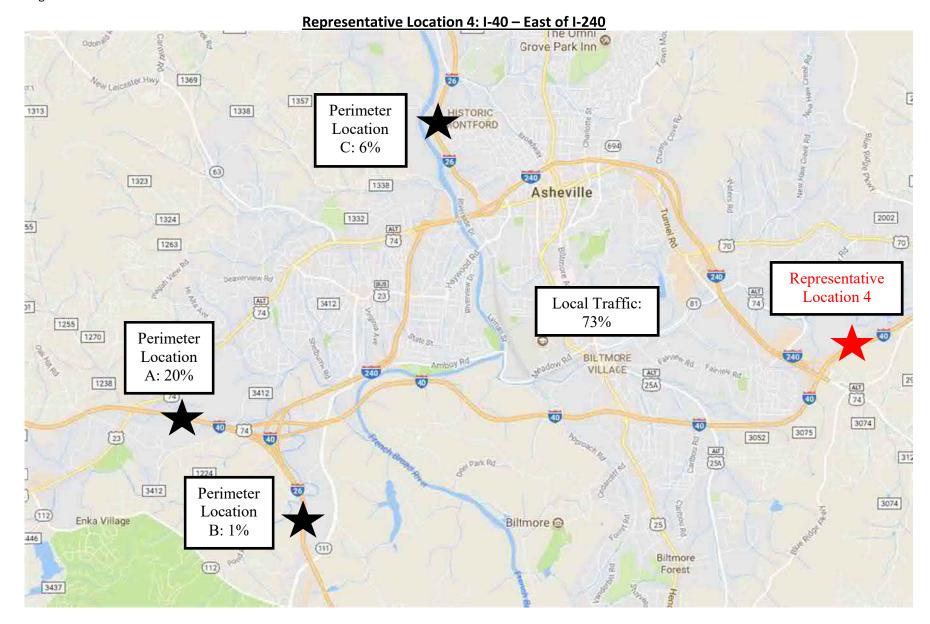
AADT information obtained from NCDOT Traffic Volume Map: http://ncdot.maps.arcgis.com/apps/webappviewer/index.html?id= 5f6fe58c1d90482ab9107ccc03026280

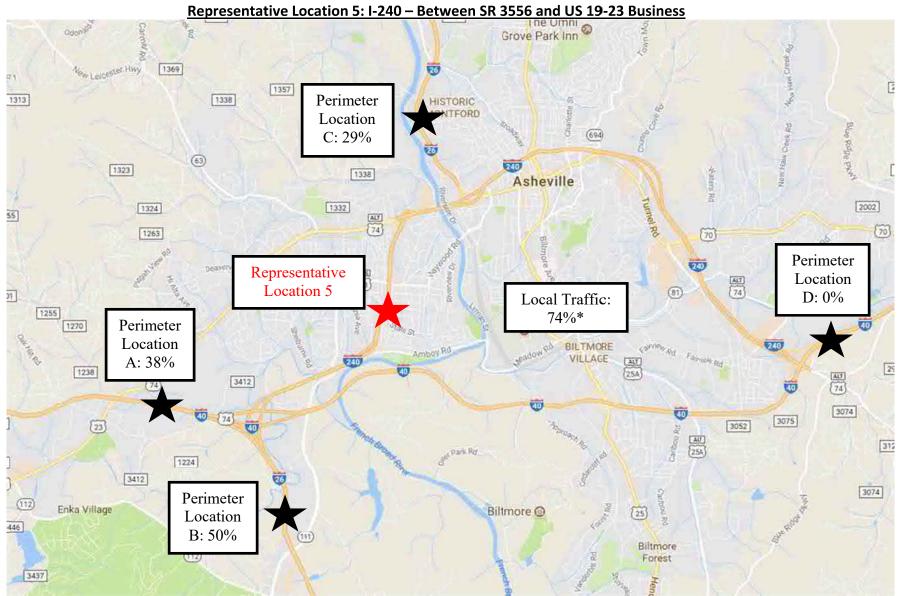












<sup>\*</sup> Based on remainder of trips not passing through US 19-23-70 (29%) and US 19-23-74A/I-26 (88%). See below.

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Since Representative Analysis Location 5 is internal, a different methodology was used to calculate the estimated local traffic. It was assumed that non-local traffic would be required to travel through either Perimeter Location A or B as well as Perimeter Location C (no volume travels between Representative Analysis Location 5 and Perimeter Location D). Since travel to Perimeter Locations A and B make up 88% of the traffic, and travel to Perimeter Location C makes up 29% of the traffic, it is assumed that 29% of this 88% would travel between Perimeter Locations A and B and Perimeter Location C. Therefore, multiplying both factors together calculates to approximately 26% of the trips as non-local trips.

Representative Location 5 (I-240 – Between SR 3556 and US 19-23 Business) services the highest percentage of assumed local trips with 74%. Representative Location 3 (I-26 – East of I-40) services the highest percentage of assumed through trips with 54%. All representative locations service between 46% and 74% of local trips and between 26% and 54% of through trips.

It should be noted that this analysis in intended to be a cursory analysis only, and is not based on any exhaustive research or detailed traffic modeling. Only freeway locations have been considered in this study, and the inclusion of non-freeway arterials in the area could affect the results. In order to obtain more detailed information, a more in-depth analysis would be required, such as a vehicle-based origin-destination analysis.

#### **Meeting Summary**

To: Meeting Attendees

From: Kathy Herring

**NCDOT-Biological Surveys Group** 

Date: August 8, 2017

RE: Gray Bat Research RFP Meeting

Meeting Attendees:

Marella Buncick – US Fish and Wildlife Service (USFWS)
Susan Cameron - USFWS
Katherine Caldwell – NC Wildlife Resources Commission (NCWRC)
Cole Hood – NCDOT Division 13
Ricky Tipton – NCDOT Division 13
Kristina Solberg –NCDOT, Division 13
Roger Bryan – NCDOT Division 13
Kathy Herring – NCDOT NES, Biological Surveys
Chris Manley – NCDOT NES, Biological Surveys
Tyler Stanton, NCDOT, Biological Surveys
Heather Wallace, CALYX
Joanna Rocco – AECOM

A meeting was held on August 8, 2017 at the NCDOT Division 13 office at 55 Orange Street in Asheville to discuss the gray bat research need statement and programmatic Section 7 consultation. Discussion began regarding the need to emphasize the primary focus of the research. Main discussion items held during the meeting are listed below:

- The research should focus on where the bats are in relation to NCDOT projects in Div 13 and 14; the characteristics of the structures that the bats are using.
- There was an indication that a literature search should be included in the research tasks
- The researchers should also suggest possible minimization and conservation measures based on the outcomes of the research
- Set standard conservation measures for the duration of the PBO, the research itself will not be the only conservation measure
- The NCDOT indicated that it needs an MOU signed by all stating that NCDOT will commit to conservation measures (TBD based on summer/winter 2017 survey analysis) and to fund a research project concerning the distribution, foraging, roosting, and migration patterns of the gray bat if the USFWS agrees to develop a Programmatic consultation/compliance for all projects in the French Broad River basin in Divisions 13 and 14 for the next 5 years.
  - This consultation would be re-visited at the end of the 5 year period

- Marella indicated that she will be in conversations with FHWA regarding Washington and Oregon DOT's programmatic consultations for all Section 7 species to see how they were developed.
- Kathy Herring indicated that she would finalize the Research Need Statement and submit to John Kirby of NCDOT's research and Development group by next Wednesday at the latest. We will request a 30 day limit for submittal of proposals.
- The group agreed that we should meet again at that time to discuss the proposals.
- It was agreed an additional meeting with the project team would be beneficial, potentially in October, to discuss the refined designs and data that's been collected so far to help focus 2018 survey areas.

#### **Action Items**

- Kathy Herring to finalize RFP and submit to John Kirby
- NCDOT to draft an MOU for circulation
- The project team to hold additional meeting in October to discuss refined designs and data collection results/next steps.

#### MEETING SUMMARY



To: Meeting Attendees

From: Celia Foushee

**AECOM** 

Date: November 3, 2017

RE: Gray Bat Survey Coordination Meeting

I-26 Connector Status Update

NCDOT STIP Project I-2513 (I-26 Connector)

#### Meeting Attendees:

Marella Buncick – USFWS

Katherine Caldwell –NCWRC

Yates Allen – NCDOT Division 13

Cole Hood – NCDOT Division 13

Rickey Tipton – NCDOT Division 13

Marissa Cox – NCDOT NES

Chris Manley – NCDOT NES

Tyler Stanton – NCDOT NES

Heather Wallace, CALYX

Neil Dean – AECOM

Celia Foushee - AECOM

Joanna Rocco – AECOM

A meeting was held on October 25, 2017 at the NCDOT Division 13 office at 55 Orange Street in Asheville to provide an update of the current and future Gray bat survey efforts. Following introductions and a review of the meeting purpose, discussion began regarding status of the I-26 Connector project and preliminary gray bat survey results. Main discussion items held during the meeting are listed below:

- CALYX completed the structure checks within the I-26 Connector project study area in summer 2017 and found one culvert with bats roosting near Hill Street and Riverside Drive. They found bat staining and bats flying around but could not identify if Gray bats were present.
- USFWS and NCWRC completed emergence counts at the culvert in September. About 200 bats flew out of the outlet and 2 bats flew out through the inlet. Acoustic recordings to determine the species were inconclusive.
- At a follow-up field visit, NCWRC was able to identify a Gray bat inside the culvert.
- Surveys will continue this winter to determine if Gray bats are roosting in the Hill Street culvert.
  Furthermore, additional acoustic detectors will be placed at the opening of the culvert and at
  other locations within the project study for monitoring. An acoustic detector is currently deployed
  at the culvert outlet to monitor bat activity into the fall/winter. In the spring of 2018, additional
  monitoring will occur by acoustic detectors, emergence counts, and mist netting.
- It was noted it is important to determine how the bats are using the culvert to determine the level of impacts; i.e. if there is a hibernaculum in the winter or maternity roost found in the spring there would be a higher level of impact from construction in the area.
- The information gained during the surveys and through the detectors will be used for the I-26 Connector project Section 7 consultation as well as the NCDOT Gray bat research project.

- It was noted that one bat with a transmitter is flying to Marshall and back to the day roost south of the project via the French Broad River corridor. If night lighting is used for construction of the flyover bridges, that could have an effect on the travel patterns of the bats. Takes/impacts would likely be measured in time of construction activities occurring.
- Monitoring may also need to occur after construction to determine the effects the project had on the bat population.
- NCDOT noted if any of the culverts are metal they will need to be replaced due to age and structure deterioration. NCDOT can provide a structures engineer to accompany USFWS and NCWRC during the winter surveys; otherwise, a consultation would be required for non-permitted individuals to access the culvert if bats are using the culvert in the winter. If no bats are present a consultation is not required.
- A review of the final surveys was held to determine the extent of the metal pipes in the culvert system and their location. NCDOT will coordinate with NCWRC and USFWS to complete the required surveys in a single trip.
- NCDOT will provide the updated preliminary designs and hydraulic structures update to USFWS and NCWRC.
- It was agreed an additional meeting with the project team would be beneficial, potentially in January or February, to discuss the preliminary designs and data that's been collected so far to help focus 2018 survey areas.
- AECOM reviewed the proposed design changes in Sections C and A that were recently submitted to NCDOT for review.

#### **Action Items**

- NCDOT will coordinate with NCWRC and USFWS to complete the required winter surveys of the Hill Street culvert.
- NCDOT will provide the updated preliminary designs and hydraulic structures update to USFWS and NCWRC.
- The project team to hold additional meeting in January or February to discuss preliminary designs and data collection results/next steps.

#### **MEETING SUMMARY**



To: Meeting Attendees

**Project File** 

From: Joanna Rocco

**AECOM** 

Date: September 28, 2018

RE: Biological Assessment and Bridge Construction Meeting

NCDOT STIP Project I-2513 (I-26 Connector)

NCDOT Division 13 Conference Room, Asheville NC

#### Meeting Attendees:

Felix Davila, FHWA Marissa Cox, NCDOT – Biological Surveys\*
Michael Dawson, FHWA Mike Sanderson, NCDOT – Biological Surveys\*
Jim Martin, FHWA C.W. Patterson, NCDOT – Right of Way Unit

Lori Beckwith, USACE Matt Lauffer, NCDOT – Hydraulics

Monte Matthews, USACE\* Kevin Fischer, NCDOT – Structures Management Unit

Marella Buncick, USFWS

Claire Ellwanger, USFWS

Derrick Weaver, NCDOT – Environmental Policy Unit
Theresa Ellerby, NCDOT – Project Management Unit

Carla Dagnino, NCDOT – EAU

Jeff Hemphill, NCDOT – EAU

Heather Wallace, CALYX

Neil Dean, AECOM

Kevin Moore, NCDOT – Project Management Unit\*

Yates Allen, NCDOT – Division 13

Roger Bryan, NCDOT – Division 13

Joanna Rocco, AECOM

Cameron Cochran, NCDOT – Division 13 David Hering, NCDOT – Design Build Randy McKinney, NCDOT – Division 13

The project team met with representatives from the US Army Corps of Engineers (USACE) and the US Fish and Wildlife Service (USFWS) on July 25, 2018 to discuss the Biological Assessment (BA) for the gray bat and Appalachian elktoe, two federally endangered species with biological conclusions of "May Affect – Likely to Adversely Affect" for the I-26 Connector project. The purpose of the meeting was to review project commitments that NCDOT may potentially make, particularly during construction of the bridges over the French Broad River and Hominy Creek by the design build team.

Joanna began the meeting with a brief status update of the project. The preliminary design revisions are currently being finalized for the preferred alternative and impacts have been summarized in the draft Final Environmental Impact Statement (FEIS). NCDOT anticipates having the FEIS signed this fall and a design public hearing held afterward to solicit comments on the FEIS and project design. It is anticipated the Record of Decision (ROD) will be signed in early 2019, and the project let later in the year.

<sup>\*</sup>Joined meeting via telephone

Heather gave a brief status update on the gray bat surveys and noted acoustic detectors will remain and continue to collect data, but that the BA will be based on data collected through the last week of July. Gray bats were recorded at all detectors. Structure checks are complete, including 51 bridges and 15 culverts. The Hill Street culvert near Southern States was identified as a gray bat roost in 2017. No additional roosts were identified during the structure checks. The bats roosting in the Hill Street culvert remain active per acoustic surveys; however, bats have not been recorded as a part of the emergence counts in 2018. (Since the meeting, gray bats were captured exiting the culvert.) USFWS will issue their Biological Opinion (BO) before the ROD is signed.

David Hering from NCDOT Design Build Unit gave an overview of the design build process, and noted that the style, material, and/or design of the project may change during this process; however, one of the main goals during the design build process will be to reduce impacts of all types. The design build team will have meetings with the environmental and regulatory resource agencies prior to letting the project as well as during construction to ensure environmental commitments are followed. David noted there is potential for new commitments to come up based on availability of new data. David will send Marella the contract language used for the Bonner Bridge Replacement project, as this project included various coordination aspects as part of the scope of work for the design build team.

Major discussion items regarding the biological assessment and bridge construction are summarized below:

- Environmental Compliance and Design-Build Coordination
  - o Marella stressed the importance of having a design build liaison during construction, especially due to the complexities of the project, the amount of simultaneous construction of other projects, and the amount of environmental commitments that must be adhered to throughout the process. Derrick will set up a meeting with Division 13 to address the appropriate approach for implementation of commitments during construction and spell out what types of coordination should occur, such as monthly agency meetings, construction inspection meetings, etc.
  - o Derrick will set up a meeting with Division 13 to address the appropriate approach for implementation of environmental commitments during construction.
- Hill Street Culvert System
  - The Hill Street culvert system is an active area for the gray bat, therefore the hydraulics of this system should be evaluated as part of the BA. Matt Lauffer from NCDOT Hydraulics Unit will set up a meeting with NCDOT Biosurveys and the Hydraulics Unit to discuss an approach moving forward on this assessment. Matt Lauffer also to contact USGS to request installation of monitoring gauge at the culvert outlet.
  - Marella cautioned that the culverts necessary to construct the new bridge over the river north of the Hill Street culvert should not affect the hydraulics within the culvert.
  - Marella would like to know plans for replacement of culvert sections within the entire system before she can further discuss the possibility of allowing work to occur at specified distances from the concrete box culvert section.
- Hydraulic Modeling
  - Causeways will not restrict more than 50% of the French Broad River and Hominy Creek channel widths, and there must be an adequate river opening maintained for river user safety. Potential additional restrictions for short durations deemed acceptable-will be coordinated with USACE prior to construction and included in the river user safety plan and permit application.

 An updated hydraulic model will be developed for the French Broad River to help the team's understanding of how construction of the bridges will impact the river and associated floodway.

#### Construction Phasing

- o Marella requested a phasing plan that groups construction activities by project sections, and outlines where night work will occur. The plan should identify construction locations, start times, durations, and night time activities for all bridges, and for any NCDOT bridge replacement or major construction projects adjacent to I-2513. A construction plan should be developed for each structure. Then the individual plans can be reviewed and pieced together to determine if some activities should be limited/changed based on the all the activities occurring in close proximity to one another. The plan will be developed after the bat acoustic data is concluded for the end of July and sufficient time has been allowed for analysis. Results of the acoustic analysis may contribute to the development of this plan.
- An additional meeting will be held to discuss construction phasing once data from the acoustic surveys has been processed and evaluated.

#### Night Work and Lighting

- o Commitments to night work type, duration, and intensity should be included in BA.
- Marella suggested that someone approach Southern States about reducing/changing the lighting in their back parking lot near the culvert outlet. If lighting could be reduced in this area, this would serve as a conservation measure for the project.
- Marella is most interested in eliminating light and noise on causeways at night. Other lighting and noise needs to be identified and explained, but is of less concern in terms of effects on bats.
- Marella suggested that NCDOT might limit construction lighting a specified distance from the river bank, or eliminate lighting near the river during certain times of year when this would be most impactful to bat activity. Also, any lights used on land adjacent to the river should be directed toward the ground, rather than shining over the water.
- Lighting during and post-construction will be prescriptive due to the potential impact on the gray bat. For example, red lights will be used to alert river users to the causeway locations, and lighting used during night work will face away from the river, when practicable.

#### Stream Monitoring

- Begin stream monitoring of French Broad River up to one year prior to construction, during construction, and post construction to determine baseline conditions, then any bank erosion, scour, etc. that might be associated with construction.
- o Design Standards for Sensitive Watersheds (DSSW) were discussed but no commitment made.

#### River User Safety

- A river user safety plan will be developed and will include information regarding the control of falling debris during bridge demolition.
- Lori also asked that the river user plan incorporate "positive controls" to guide river users through the causeway openings, and that red lights stay on all night.

#### Gray Bat Monitoring and Conservation Measures

- Acoustic monitoring for gray bats will continue through the fall of 2018. Monitoring will also be required at some locations immediately before, during and after construction. These locations will be determined after review of the 2017/2018 acoustic data. This monitoring will help determine changes in bat activity due to construction.
- Smith Mill Creek is directly across the river from the Hill Street Culvert. Randy mentioned that a
  temporary work bridge will likely be needed across this creek. Marella stated that there is an
  opportunity to develop conservation measures associated with construction activities at this bridge.

MEETING SUMMARY September 28, 2018 Page 4 of 4

A preliminary list of conservation measures were reviewed and revised, and is appended to this meeting summary.

The meeting concluded at 3:15 p.m.

#### Action Items:

- David will send Marella the contract language used for the Bonner Bridge Replacement project.
- Derrick will set up a meeting with Division 13 to address the appropriate approach for implementation of environmental commitments during construction.
- Matt Lauffer will set up a meeting with NCDOT Biosurveys and the Hydraulics Unit to discuss an
  approach moving forward on the assessment of the Hill Street culvert system. Meeting occurred on
  August 23<sup>rd</sup>.
- Matt Lauffer will contact USGS to request installation of monitoring gauge at the Hill Street culvert
  outlet. After visiting the site in person, Matt decided the base flow is too low and the water too
  shallow to install a gauge.
- An updated hydraulic model will be developed by NCDOT and AECOM for the French Broad River to help NCDOT's design-build team's understanding of how construction of the bridges will impact the river and associated floodway.
- An additional meeting will be held to discuss construction phasing once data from the acoustic surveys has been processed and evaluated. *Acoustic and hydraulic analysis are underway*.

# I-2513: I-26 Asheville Connector Preliminary Conservation Measures

Note that gray highlighting indicates portions of a commitment that have yet to be resolved.

#### **Project Design Modification for Avoidance and Minimization**

- Collector/distributer roads eliminated and retaining walls added along Hominy Creek to avoid stream impacts
- Daylighting approximately 440 ft. of Smith Mill Creek (currently piped) by redesigning ramps
- Reduced overall impacts to streams by 724 linear ft.
- Reduced overall impacts to wetlands by 0.63 ac.

#### Measures to Avoid/Minimize Effects to Gray Bat during Hill Street Culvert Construction

- NCDOT will conduct a hydraulic evaluation of the culvert system to generate a baseline of information.
- NCDOT will maintain water sources that provide baseflow to the culvert (non-stormwater sources) to provide a naturally occurring continual water source.
- NCDOT will monitor the hydraulics of the culvert system during and following construction.
- NCDOT will monitor bat activity at the culvert before, during, and after construction. Acoustic monitoring and emergence surveys will be conducted between April and October.
- NCDOT will investigate options to monitor bat activity inside the culvert, potentially with a thermal camera. This may also include micro-habitat monitoring using temperature/humidity dataloggers.
- Replacement of a portion of the Hill Street culvert system will be necessary due to deterioration of the culvert material. The portions that will be replaced will ultimately depend on the final design. In general the pipes to be replaced will likely be the ones under 2 ft. in diameter. NCDOT will try to retain as many large pipes as possible. NCDOT will complete the replacement of this section of the culvert during winter (October 15 through April 1) when no MYGR are not expected to be using the box culvert. If work must be conducted between April 2 and October 14, NCDOT will monitor noise levels inside the culvert and stop work whenever noise levels exceed an established threshold.

#### Measures to Avoid/Minimize Effects to Gray Bat during Road Construction

Roadway Construction Lighting

- NCDOT will limit all construction-related lighting to whatever is necessary to maintain safety in active work areas closest to the French Broad River, Hominy Creek, and Smith Mill Creek (dates to be determined after review of acoustic data).
- Construction-related lighting will be indirect in nature, and will not project into adjacent
  forested areas or over the water surface of the French Broad River, Hominy Creek, or Smith Mill
  Creek, whenever practicable. (Marella suggested that lighting adjacent to the river might be
  limited or eliminated within a specified distance from the water, and/or during times of year
  when it would be most impactful to bats, and should shine toward the ground. This distance
  and/or time frame has not yet been determined.)

#### Measures to Avoid/Minimize Effects to Gray Bat during Bridge Construction

Night Time Construction Activities

• NCDOT will develop a phasing plan to limit night work, particularly during the pup season (dates to be determined). Descriptions of night work type, duration, and intensity will be included in the BA. Commitments related to limitations on night work will also be presented in the BA.

 Marella suggested that lighting adjacent to the river might be limited or eliminated within a specified distance from the water, and/or during times of year when it would be most impactful to bats, and should shine toward the ground rather than over the water. This distance has not yet been determined.

#### Red Safety Lighting

• For construction of all bridges over the French Broad River, NCDOT will place solar-powered, steady-state red lights on the causeways to alert river users to their locations.

# Measures to Avoid/Minimize Effects to Gray Bat and Appalachian elktoe during Bridges Construction Causeways-French Broad River, Hominy Creek, and Smith Mill Creek

- Causeways will not restrict more than 50% of the existing channel width of the French Broad River, Hominy Creek, and Smith Mill Creek. Potential additional restrictions of the channel may be necessary for short durations, and these additional restrictions will be coordinated with USACE and USFWS prior to permitting.
- NCDOT will begin stream monitoring of the French Broad River up to one year prior to
  construction, during construction, and post construction to determine baseline conditions, then
  any bank erosion, scour, etc. that might be associated with construction.
- NCDOT will require the contractor to use clean rock (free of debris and pollutants) for the construction of the causeways to minimize unnecessary sediment input into the river.
- Causeway material will be removed to the extent practicable and either disposed of off-site or used in areas that require permanent stone protection after project completion. NCDOT will also require that concrete barriers (barrier rail) be placed along the downstream edge of each causeway to limit the downstream movement of causeway material during high flow events.
- If the final causeway plan is staged, causeway material will be added/removed as needed for each stage to minimize the causeway footprint over the length of the project.
- To minimize disturbance to the riverbed, all readily detectible causeway material will be removed, to the extent practicable, while removing as little of the original riverbed as possible.
- Construction fabric will not be used under the causeway material, as it has a tendency to tear into tiny pieces and float downstream during removal.
- Any equipment that is placed on the causeways will be removed any time throughout a work day when the water level rises, or is expected to rise overnight, to a point where the equipment could be flooded, or during periods of inactivity (two or more consecutive days). The only exception to this measure is that the drill rig and crane may be left in place for periods of inactivity; however, they must also be removed if the water rises, or is expected to rise, to a point where the drill rig and crane could be flooded.
- NCDOT will require its contractor to have clean, non-leaking equipment, diapers on-site for each causeway, and spill kits located at each causeway.

#### Containment

• All construction equipment shall be refueled outside the 100-year floodplain or at least 200 feet from all water bodies (whichever distance is greater) and be protected with secondary containment. During crucial periods of construction and demolition, when the drill rig and crane cannot be moved, the drill rig and crane can be refueled while inside the 100-year floodplain provided that spill response materials (such as spill blankets and fueling diapers) are used during the refueling. Hazardous materials, fuel, lubricating oils, or other chemicals will be stored outside the 100-year floodplain or at least 200 feet from all water bodies (whichever distance is

- greater), not in a Water of the U.S. Areas used for borrow or construction by-products will not be located within wetlands or the 100-year floodplain.
- When constructing drilled piers for the I-240 and I-26 French Broad River bridges, a containment system will be developed so that material does not enter the river. Material by-product will be pumped out of the shaft to an upland disposal area to the extent practicable and treated through a proper stilling basin or silt bag.
- Construction of all bridges will be accomplished in a manner that prevents uncured concrete from coming into contact with water entering or flowing in the river.
- Removal of existing bridges shall be performed so as not to allow debris to fall into the water. If debris is dropped in a waterway, it will be immediately removed.
- NCDOT will not place bridge bents in Hominy Creek.

# <u>Avoidance/Minimization to Gray Bat and Appalachian elktoe during Road Construction and Bridge</u> <u>Replacement</u>

Erosion Control Measures -The SEC plan will be in place prior to any ground disturbance for all bridge replacements and construction. When needed, combinations of erosion control measures (such as silt bags in conjunction with a stilling basin) will be used to ensure that the most protective measures are being implemented.

- Uncovered areas shall be limited to a maximum total area of 20 ac.
- Erosion and sedimentation control measures shall be designed and constructed to provide protection from the runoff of the 25-year storm event, instead of a 10-year storm.
- Sediment basins will have a settling efficiency of at least 70 percent for the 40-micron (0.04mm) size soil particle transported into the basin by the runoff of a two-year storm.
- Newly constructed open channels shall be constructed with side slopes no steeper than two horizontal to one (2:1) vertical if a vegetative cover is used for stabilization. The angle for side slopes shall be sufficient to restrain accelerated erosion.
- Ground cover sufficient to restrain erosion must be provided within 15 working days or 60 calendar days following completion of construction, whichever period is shorter.
- Environmentally Sensitive Areas will be demarcated within the Action Area.
- The Environmentally Sensitive Areas will be defined by a 50-ft. buffer zone on both sides of
  jurisdictional streams measured from top of streambank, in which the following shall apply:
  - The Contractor may perform clearing operations, but not grubbing operations until immediately prior to beginning grading operations.
  - Once grading operations begin, work shall progress in a continuous manner until complete.
  - o Erosion control devices shall be installed immediately following the clearing operation.
  - Seeding and mulching shall be performed on the areas disturbed by construction immediately following final grade establishment.
  - O Seeding and mulching shall be done in stages on cut and fill slopes that are greater than 20 ft. in height measured along the slope, or greater than 2 ac. in area, whichever is less.
  - O All sedimentation and erosion control measures, throughout the project limits, must be cleaned out when half full of sediment, to ensure proper function of the measures.

#### **Agency Coordination**

- NCDOT will attempt to arrange one meeting between each individual NCDOT Design-Build Team
  that is proposing to construct the project and the permitting agencies.
- NCDOT will arrange, for each shortlisted team, a meeting with representatives of the regulatory agencies prior to the due date for the submission of Technical and Price Proposals. The

- discussions and answers provided at these meetings are not contractually binding, but intend to offer the NCDOT Design-Build Teams an opportunity to inquire as to the permitting process as well as specific team concepts.
- A revised Section 7 Consultation may be necessary depending on the NCDOT Design-Build
  Team's final alignment and approach to construction staging and access. In such case, the
  NCDOT Design-Build Team shall be responsible for all work noted in the Project Special
  Provision, "Construction Access and Staging". In addition, the NCDOT Design-Build Team shall
  draft a letter, for NCDOT review and FHWA's signature, requesting concurrence from the
  USFWS, as necessary, to document compliance with Section 7 of the Endangered Species Act for
  those species requiring such concurrence.
- NCDOT will revisit CP4A with the Merger Team after the BA is submitted to discuss any new avoidance and minimization efforts for major crossings of the French Broad River and Hominy Creek including those in the Biological Assessment.
- The NCDOT Design-Build Team will adhere to project commitments within the ROD and the Biological Opinion relating to Section 7 of the Endangered Species Act. The NCDOT Design-Build Team will be required to prepare information required for any event in which NCDOT and FHWA reinitiate Section 7 consultation with the USFWS. It is possible that consultation be reinitiated prior to Concurrence Point 4B and again at Concurrence Point 4C. NCDOT will continue to identify avoidance and minimization measures to all Waters of the U.S. and ensure that major hydraulic structures associated with the project are designed and installed to minimize negative impacts to stream stability (and therefore, water quality) to the greatest extent practicable. As part of this process, NCDOT and the NCDOT Design-Build Team will continue to coordinate with the Merger Team to identify avoidance and minimization measures and ensure that project impacts are minimized to every practicable extent, including impacts to federally protected species.
- The NCDOT Design-Build Team shall meet with NCDOT personnel and regulatory agency representatives around the time of the 4C meeting in order to review the project and project commitments. At this time, the USFWS shall be afforded the opportunity to meet with key NCDOT Design-Build Team members and NCDOT employees to provide education on the effects of artificial lighting, noise, and construction on nearby wildlife habitat and behavior. The NCDOT Design-Build Team shall contact NCDOT Environmental Analysis Unit in order to schedule these meetings. Every effort shall be made to have this meeting prior to submitting the permit application.
- The NCDOT Design-Build Team will invite regulatory agency representatives to the preconstruction meeting for the proposed project, as well as to all subsequent field inspections prior to construction, to insure compliance with all special project commitments.
- The NCDOT Design-Build Team will provide USFWS with the sediment and erosion control plan and allow 15 days for review.
- The NCDOT Design-Build Team will provide regulatory agency representatives with the demolition plan for all bridges and allow 15 days for review. All agencies will be notified prior to start of demolition so they may have a representative on site.
- The NCDOT Design-Build Team will contact USFWS if new information about MYGR is discovered, as it relates to the project.
- The NCDOT Design-Build Team will report any dead bats found on the construction sites to USFWS.

# **Conservation Measures to Benefit Gray Bat**

Monitoring for MYGR Return and Activity:

- NCDOT will conduct acoustic monitoring for MYGR at some locations immediately before, during and after construction. These locations will be determined after review of the 2017 acoustic data. This monitoring may help determine changes in bat activity due to construction. NCDOT will coordinate the locations and time frame for acoustic monitoring with USFWS.
- To determine whether MYGR avoid the active construction zone, NCDOT will investigate the use of night-vision video recordings, or other methods, in an attempt to monitor bat activity at the bridge while active night time construction is underway.

# Hill Street Culvert Hydraulic Monitoring:

 NCDOT will monitor hydraulics at the Hill Street culvert following construction to determine if there has been a change in flow regime.

# NCDOT-Sponsored MYGR Research Project:

• NCDOT, with the cooperation of the USFWS and NCWRC, committed to a three year study on MYGR within the French Broad River Basin. This study will serve as a conservation measure for NCDOT projects within the Divisions 13 and 14 for a limited time. NCDOT will provide \$900,000 in funding Indiana State University to conduct the research project, which will aid in the recovery and conservation of MYGR. The end goal is to gather the information needed to allow NCDOT and USFWS to enter into a programmatic consultation to cover MYGR for NCDOT Divisions 13 and 14, as well as help to develop species-specific avoidance and minimization measures.

# **Conservation Measures to Benefit Appalachian Elktoe**

French Broad River Conservation Funding:

 NCDOT will provide \$500,000 in funding to the North Carolina Nongame Aquatic Projects Fund for the French Broad River Conservation Plan (FBRCP) proposed by USFWS, which will aid in the recovery and conservation of Appalachian elktoe. The funding will be held by the NCWRC. A multi-agency/organization group of mussel species experts, including USFWS and NCDOT, will determine how to expend the funds, which may include the following: species reintroduction, early warning and emergency production capacity, genetic management program, and other appropriate activities as described in the FBRCP.

# French Broad River Geomorphology Monitoring:

- To ensure bridge construction at the French Broad River crossing will not result in substantial changes to channel stability (scour, erosion, etc.), NCDOT will conduct river channel monitoring at the I-26 bridge construction site to document the morphological condition at the French Broad River bridge site and to evaluate the impacts of construction and temporary causeways on river habitat. Monitoring activities will consist of the following:
  - Surveying the French Broad River channel bathymetry and riverbanks before and during the construction of the I-26 crossing (approximately 3.5 years). Mapping will occur before construction and then every quarter during construction, with one final survey after the causeways are all removed, and will cover at least 100 ft. upstream and 250 ft. downstream of the causeway locations.

- o A complete digital terrain model (DTM) of the stream bed and banks from each survey conducted will be prepared. NCDOT will retain an experienced firm or staff members to analyze the DTM and compile a final report to be submitted to USFWS.
- o If monitoring at the French Broad River reveals excessive bank erosion, bank instability, or sedimentation associated with the bridge replacement, NCDOT will work to identify the cause and will make improvements to address the problems in a timely manner.

# Other

Define checkpoints after BO is issued. Monitoring, reporting, meetings, etc.

# MEETING SUMMARY



To: Project File

From: Celia Miars

AECOM

Date: August 4, 2018

RE: I-2513 Working Group Meeting #10

NCDOT STIP Project I-2513 (I-26 Connector)

# Meeting Attendees:

Michael Dawson – FHWA

Bruce Emory – Asheville Multimodal Transportation

Julie Mayfield – City of Asheville Todd Okolichany – City of Asheville Ken Putnam – City of Asheville Gwen Wisler – City of Asheville

Alan McGuinn – Asheville Design Center

Lyuba Zuyeva – FBRMPO

Steve Cannon – NCDOT Division 13
Brendan Merithew – NCDOT Division 13
Randy McKinney – NCDOT Division 13
Stephen Sparks – NCDOT SPOT

Daniel Sellers – NCDOT TPB

Simone Robinson – Public Participation Partners\*
Woody Farmer – Aesthetic Advisory Committee
Ted Figura – Aesthetic Advisory Committee
David Nutter – Aesthetic Advisory Committee
Mike Zukosk – Aesthetic Advisory Committee

Theresa Ellerby – NCDOT, PMU Derrick Weaver – NCDOT, EPU

Neil Dean – AECOM Celia Miars – AECOM Joanna Rocco – AECOM Eric Spalding – AECOM

The project team met with the I-2513 Working Group at 1:00 PM on July 31, 2018 in the Land of Sky Regional Council conference room in Asheville, NC. The purpose of the meeting was to provide an update of the project status, review action items from the previous working group meeting held on July 27, 2018, discuss the design revisions, recent coordination with the Burton Street Community, review the 360 vantage points, and discuss the Aesthetic Advisory Committee (AAC).

#### **Project Status Update**

- Joanna Rocco gave an update on the status of the following items:
  - Design revisions since the last Working Group meeting in July 2017 the project team has been updating the designs of the preferred alternative. Additional information regarding specific changes was included in later discussions.
  - Traffic capacity analysis the project team completed the updated analysis and based the preferred alternative designs on analysis.
  - Traffic microsimulation the project team completed a microsimulation which confirmed the laneage and configurations recommended for the designs; some changes have been

<sup>\*</sup>Attended by phone

- made to the designs since then and additional updates to the microsimulation will follow. Bruce Emory requested an additional meeting to discuss the microsimulation with the project team.
- Merger team coordination The project team met with the merger team to discuss avoidance and minimization measures implemented on the project and received concurrence on July 18<sup>th</sup>.
- Gray bat/mussel surveys –. CAYLX is preparing a biological assessment with USFWS for two endangered species that may be affected by project (Appalachian elktoe and gray bat).
- Cost estimate review the project team will hold a workshop in early September with NCDOT and FHWA and all of the technical leads of the project; FHWA will complete a riskbased review to verify the accuracy and reasonableness of the cost estimate
- Historic property coordination the project team is meeting with representatives of the Aycock School on 08/16/18 to discuss impacts to the school and potential mitigation opportunities. Similar coordination will occur for Riverside Cemetery with the City of Asheville and the AAC. This meeting has not been set.
- Traffic noise analysis currently underway.
- Status of FEIS and public hearing the FEIS is scheduled to be signed this fall and the public hearing will be held approximately 30 days after.

# Review Working Group Meeting #9 Action Items (Working Group)

- Ken Putnam noted it is anticipated the AAC committee members and roles/responsibilities will be finalized within the next 30-60 days, and possibly presented at the next Working Group meeting.
  - o The AAC has been formed and members were presented at this meeting.

# **Review Working Group Meeting #9 Action Items (NCDOT)**

- NCDOT will provide percent local traffic versus through traffic for the current and future year scenarios at the next Working Group Meeting.
  - o This information was attached with the Working Group #9 meeting summary.
- NCDOT will post the Traffic Capacity Analysis on the FBRMPO's website once it has been reviewed and finalized.
  - The Traffic Capacity Analysis is still underway.
- NCDOT will receive updates from Neighborhood Solutions and relay these updates to the Working Group.
  - o This is an item discussed later in the meeting. Additional information is included below.

# **Design Revision Discussion**

Discussions followed regarding the design revisions of the preferred alternative.

- Number of Lanes in Section A
  - o Based on updated traffic analyses, the eight-lane typical section in Section A was reduced to six lanes with auxiliary lanes.
  - The existing pedestrian bridge over I-240 is now shown to be removed.
- I-26 Configuration between Amboy Road and Brevard Road
  - Based on updated traffic analyses and local input, the Amboy Extension has been replaced with a split diamond configuration.
  - o Roundabouts are proposed at Amboy Road.
  - o Amboy Road now travels underneath I-26.

- Vehicular traffic no longer has access to Fairfax Avenue and Virginia Avenue via the split diamond configuration, bicycle/pedestrian access in not precluded in this area.
- o A multi-use path is proposed to the north of the split diamond ramp.
- The ramps are proposed as two lanes due to the need for two lanes leaving the roundabout and approaching Brevard Road.

# • I-40 Collector/Distributor (C/D) Roads

- o The C/D roads in Section C have been eliminated based upon updated traffic analyses.
- o Impacts were reduced to the residences along Montgomery Street.
- At Smokey Park Highway, a ramp was added in Quadrant A for a free flowing right turn onto Smokey Park Highway.
- The loop configuration in Section B will remain, in relatively the same place.

# • I-26/I-240/Patton Avenue Interchange

- o As requested by the City of Asheville per design concepts from Sam Schwartz, the project team revised the interchange to an urban diamond configuration.
- o Additional right-of-way would be needed for this change; however, minimal residential impact increases are expected.
- The Working Group noted they would prefer the original design to keep the footprint of the project smaller. Derrick noted that by showing the diamond interchange configuration in the FEIS and at the public hearing, there is still the opportunity during final design for additional minimization efforts and to return to the original design if necessary; however, by showing the original design now this could preclude the opportunity for design changes in final design if additional right-of-way would be needed.
- o After the meeting the Working Group met privately to discuss which option they would prefer to show. It was determined to move forward with the diamond interchange configuration and also discuss the original design in the FEIS.
- The diamond configuration allows opportunity to daylight parts of Smith Mill Creek.

## Laneage and project footprint

- o The project team presented right-of-way comparison figures showing areas where right-of-way has increased or decreased since the 2015 designs. See attached.
- Derrick discussed each area showing changes in the right-of-way and AECOM displayed the public hearing maps for 2015 and 2018 on the screen to discuss why the change occurred.

# Elevations

- The reconfiguration of the Patton Avenue interchange increased the elevations of the bridges to the west of the river by approximately 14 feet; however, the elevations of the proposed roadway at Riverside Cemetery was decreased by approximately 6 feet.
- Julie Mayfield requested additional information to better understand the purpose of the elevation at Riverside Cemetery.

#### Betterments

- o No major discussions occurred regarding this topic.
- Ken Putnam noted the betterments list as it stands now is sufficient.

# Sam Schwartz coordination

No additional discussion occurred.

MEETING SUMMARY August 4, 2018 Page 4 of 4

# **Burton Street Coordination**

Simone Robinson discussed the ongoing coordination efforts with the Burton Street community. The Community Plan has been completed and presented to the Planning and Economic Development Committee. This committee will recommend the plan to the City Council.

# **360 Vantage Points**

The 360 vantage points are available on the NCDOT website. However, recent updates to the website may have broken the link. NCDOT will correct the link on the website and send out the link to the Working Group to review.

#### **Aesthetic Advisory Committee**

Ken Putnam noted this meeting and the betterments list can set the stage for the responsibilities of the AAC. The AAC and the City will coordinate to present the betterments list to the City Council. The project team will coordinate with the City to hold an additional meeting with representatives from the NCDOT Roadside Environmental Unit to discuss aesthetic options for the project.

#### **Action Items**

- NCDOT will correct the visualization link on the website and send out the link to the Working Group to review.
- NCDOT will coordinate with Bruce Emory to meet to discuss the microsimulation and its results.
- NCDOT will coordinate with Julie Mayfield to present additional cross sections and design information regarding the proposed height of the roadway and retaining wall at Riverside Cemetery.
- The project team will coordinate with the City to hold an additional meeting with representatives from the NCDOT Roadside Environmental Unit to discuss aesthetic options for the project.

# **MEETING SUMMARY**



To: Project File

From: Celia Miars

**AECOM** 

Date: August 31, 2018

RE: I-2513 Traffic Analyses Discussion

NCDOT STIP Project I-2513 (I-26 Connector)

# Meeting Attendees:

Julie Mayfield – City of Asheville Brendan Merithew – NCDOT, Division 13

Ken Putnam – City of Asheville Derrick Weaver – NCDOT, EPU

Gwen Wisler – City of Asheville

Neil Dean – AECOM

Bruce Emory – Asheville Multimodal Transportation Celia Miars – AECOM

David Nutter – Aesthetic Advisory Committee Joanna Rocco – AECOM
D.J. Gerkin – SELC Eric Spalding – AECOM

Lyuba Zuyeva – FBRMPO Peter Trencansky - Patriot

Randy McKinney – NCDOT, Division 13

The project team met with representatives from the City of Asheville August 27, 2018. The City of Asheville requested the meeting to discuss additional questions and concerns regarding the preferred alternative designs and traffic analyses, including the microsimulation. Prior to the meeting, Bruce Emory submitted specific questions to the project team to guide the meeting (attached).

Andrew Bell began the meeting with a brief overview of the microsimulation and Highway Capacity Manual (HCM) analysis. The HCM analysis analyzes segments of the project to determine if they will meet the required level of service (LOS), while the microsimulation analysis analyzes the project area cumulatively to determine how each segment works together.

Responses to the questions received prior to the meeting are attached. A summary of other discussions is included below.

- Local driver parameters are taken into account using the calibrated base model for the traffic microsimulation. For the model, rolling terrain was used throughout.
- Andrew Bell gave an example of an instance where the microsimulation analysis showed a
  different scenario from the HCM analysis and it resulted in an enhancement to the designs. This
  design revision alleviated trucks slowing due to the grade.
- It was noted the microsimulation analysis has also been used to validate many of the findings of the HCM analysis as well as provide changes to the design where necessary such as increasing storage lengths or optimizing signal timing.

- NCDOT guidelines are used to determine the LOS and is calculated in the same density in the microsimulation analysis as in the HCM analysis.
- The accuracy of the HCM analysis and the level of confidence for the microsimulation analysis is dependent upon the locally-derived data provided in the French Broad River MPO travel demand model.
- Regarding the cross sections on the bridges crossing the French Broad River in Section B, it was noted that the necessary safety measures for sight distance requires wider shoulders or lower design speeds; however, due to the interstate designation on the bridges, the design speed should not be lower than 50 mph.
- The City reiterated their desire to open up the 14-acre tract of land on the east side of Patton Avenue for redevelopment by removing the Patton Avenue off ramp and moving the interchange further east.
  - The project team explained that while moving the interchange east could work geometrically, it would not allow enough room before the next intersection at Clingman, which is currently operating at a poor LOS. Introducing additional traffic to this intersection will further degrade this condition. This could also cause additional impacts to the historic Haywood UMC church on Patton. Taking out the off-ramp would cause traffic issues and congestion on the other side of the interchange as well as on Patton Avenue.
  - The design team has modified the C/A in this area to allow for additional space as much as possible with the current designs to maximize the amount of developable land, and will continue to work with the City during final design to determine how best to achieve the City's goals where possible. It was noted that for the City to use this land they would need to request a change of access to NCDOT and any additional ROW they would want to use for development would need to follow the ROW disposal procedure with NCDOT. This is typically done after the project is complete.

# **MEETING SUMMARY**



To: Project File

From: Celia Miars

**AECOM** 

Date: September 17, 2018

RE: I-2513 Cost Estimate Review Meeting

**NCDOT STIP Project I-2513 (I-26 Connector)** 

The project team, Federal Highway Administration (FHWA), and NCDOT representatives held the Cost Estimate Review (CER) Workshop for the I-26 Connector Project at NCDOT Century Center on Tuesday, September 11 through Thursday, September 13, 2018. Meeting attendees for each day are documented on the attached meeting attendance spreadsheet. Michael Smith and Chuck Luedders with FHWA facilitated the meeting. The purpose of the CER is to verify the accuracy and reasonableness of the project cost estimate and project schedule. A CER is required for projects over \$500 million in total project expense.

Chuck presented the CER Introduction presentation to discuss the process of the CER. The current total project cost estimate is \$1.212 billion with an estimated construction completion of March 2025. This CER will produce a final report that will document the review findings. FHWA uses the results as the official cost estimate for the project.

Joanna Rocco gave a presentation of the project which included a project history and status update, a review of the preferred alternative selected in May 2016, an overview of the next steps of the project, and the current project schedule.

Donna Keener gave an overview of the State Estimate Process. Quantities for each section of the project were prepared by the project team and submitted to NCDOT prior to the meeting to complete the project estimate. The quantities are based on current prices and were completed mid-August. It was noted the level of design is currently at approximately 25 percent. At this stage, the bridge structures have not been designed, however, they have been evaluated for structure types, beam types, and girder types. It was noted the construction of new structures is approximately one-third of the entire construction cost estimate, which does not include the cost to remove existing structures. The structures quantities were priced with a bridge deicing system, which was eliminated from the project cost.

Michael Smith began the discussion regarding potential risks and opportunities for each subject matter and risks included in the risk register. On Tuesday and Wednesday of the meeting, subject matter experts for each discipline joined the meeting to discuss specific risks and opportunities. They made recommendations for revising risk probability, cost increase probability, and schedule delay probability where necessary for the following topics:

- Structures
- Retaining walls

- Railroad coordination
- Sound barriers

MEETING SUMMARY September 17, 2018 Page 2 of 2

- Earthwork
- Drainage
- Pavement
- Roadway
- Geotechnical
- Roadside Environmental (Erosion Control & Landscaping)
- Traffic control
- Signing
- Lighting
- Traffic signals and ITS
- Environmental/permitting/mitigation
- Utilities (wet and dry)
- Right of way

Chuck Luedders facilitated the closeout presentation on Thursday, September 13, 2018. The presentation included a review of the project purpose and identified the preliminary findings of the CER (which includes a probability range for the cost estimate and schedule that represents the projects current stage of progress). Below is a summary of preliminary findings from the CER.

- The cost of delaying the project one year would equate to approximately \$41 million dollars.
- Two, potentially three, endangered species could affect scheduling.
- The tight urban area with restrictive right of way could affect utility relocation.
- NCDOT processes help will control the cost spread.
- The current year total cost estimate is approximately \$1.213 million (includes \$136.9 million in contingencies).
- The year of expenditures total cost estimate ranges from approximately \$1.237 billion (30 percentile) and \$1.284 billion (70 percentile).
- The project completion is anticipated for April 2025.
- Major cost threats include the French Broad River Bridge Construction, utility relocation, high
  material costs (steel), increased square feet of retaining walls, and the increased cost of retaining
  walls.
- Major cost opportunities include design build innovation and efficiencies and innovative bridge construction.
- Major schedule threats include the French Broad River bridge construction and utility relocation.
- Major schedule opportunities include innovative traffic management strategies, design build innovation and efficiencies, and innovative bridge construction.

The following recommendations were made:

- Use the CER results for the Initial Financial Plan (IFP)
- Document any cost/schedule changes from now until the IFP
- Submit the project management plan to FHWA for approval
- Use the CER results as a resource in publicly presenting the project's estimated cost
- Utilize the risk register as a tool to manage the project's cost and schedule risks
- Use FHWA's Schedule Estimating Guidance as a resource in setting the project's baseline completion date in the IFP.

The next steps of the CER are to finalize the CER report prepared by FHWA. FHWA will use the results as the official cost estimate for the project. It was noted the CER is a snapshot of the current estimate.

All findings from the CER will be documented in the CER report and distributed to meeting attendees for review.

# I-26 Connector Asheville, North Carolina FHWA Cost Estimate Review September 2018



**Final Report** 

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# I-26 CONNECTOR - ASHEVILLE

September 2018 Cost Estimate Review Workshop



# **Project Description:**

Approximately 7 miles in length, the proposed I-26 Connector Project reconstructs I-26 from south of the I-40 interchange through Asheville to north of I-240. The project reconstructs portions of I-40 and I-240 including bridges over the French Broad River.

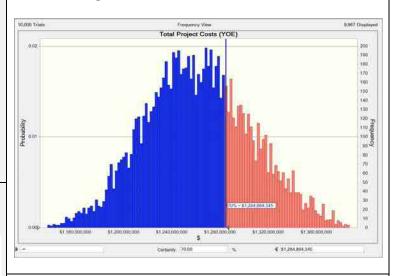
# **Project Benefits:**

- To improve the capacity deficiencies of existing I-240 west of Asheville to accommodate the existing and forecasted (2033 design year) traffic.
- To reduce traffic delays and congestion along the I-240 crossing of the French Broad River.
- To increase the remaining useful service of the existing Captain Jeff Bowen Bridges (Patton Avenue).

# **Financial Fine Print**

The Monte Carlo simulation forecasted a range of total project costs for the I-26 Connector Project ranging from \$1.10 billion to \$1.42 billion in Year of Expenditure (YOE) costs. The 70<sup>th</sup> percentile Total Project Cost is \$1.28 billion (YOE).

# **Cost Range:**



# **Project Schedule Range:**

Construction Expected 2020 to 2026

# **Key Project Risks:**

- The NEPA document is not completed.
- Duke Energy transmission line relocation affects project schedule.
- Rising steel costs may affect project cost.
- Two endangered species inhabit the project site.
   They may cause schedule delay and increase the cost.

# **What's Changed**

This is the initial CER for this Project.

Level of

Section A - 25%

Section B - 25%

Section C - 25%

September 2018

Project Design:

# **EXECUTIVE SUMMARY**

A review team consisting of the North Carolina Department of Transportation (NCDOT), their consultants and the Federal Highway Administration conducted a Cost Estimate Review (CER) workshop to review the cost and schedule estimates for the I-26 Connector Project. The workshop was held at the NCDOT Century Center located at 1020 Birch Ridge Road in Raleigh, North Carolina on September 11-13, 2018. Due to Hurricane Florence, the modeler and facilitator from FHWA participated remotely. FHWA's Division Major Projects' Engineer participated locally in the workshop.

# **Project Description**

NCDOT is developing this project to upgrade the I-26 corridor through the City of Asheville. The project provides improved system linkage in Western North Carolina, increases the capacity of I-26 and reduces congestion on I-240 over the French Broad River. The Project is split into three sections to accomplish these goals.

Section A includes expanding the existing I-240 four-lane roadway from the I-26/I-240 interchange to the I-240 interchange at Patton Avenue. Included are upgrades to the interchanges at Brevard, Amboy and Haywood Roads. It also extends Amboy Road across I-240 to Brevard Road, opposite Shelburne Road.

Section B places the interstate on new alignment north of Patton Avenue to cross the French Broad River. This allows Patton Avenue to become a local street, allowing access for bicycles and pedestrians along the roadway.

Section C upgrades interchanges at Smokey Park Highway (U.S. 19/23/74A), as well as I-26/I-240 and Brevard Road. It maintains the existing two-level configuration of the I-26/I-40/I-240 interchange and adds additional through lanes, as well as a new loop from I-240 West to I-40 East and a ramp from I-40 West to I-240 East.

# **Pre-CER Project Cost and Schedule**

Prior to the start of the review, the project team submitted a total cost estimate for the I-26 Connector Project of \$1.213 billion in 2018 dollars for the combination of the three sections. The estimated completion date for the project was designated as April 2025. All sections are funded with construction expected to be performed concurrently. There is the possibility that all three sections will be combined into one project.

# **CER Estimate Adjustments**

During the cost estimate review, three adjustments were made to the base estimate based on input from the Subject Matter Experts. These adjustments removed the bridge de-icing systems from the project, increased the unit price for the erosion control and doubled the amount for the wetlands and stream mitigation work. Details of these adjustments are shown below:

• Estimate Adjustments

•	Eliminate de-icing system all bridges	(\$62,500,000.00)
•	Increase Erosion Control cost from \$25K to \$30K per acre	\$4,040,000.00
•	Double the mitigation factor for Wetlands and Streams	\$2,020,000.00
•	Total Adjustments	(\$56,440,000.00)

These adjustments reduced the base estimate from \$1.213 billion to \$1.156 billion

#### **Cost Estimate Review Results**

Based on the revised base estimate and the CER risk-based probabilistic approach, the Monte Carlo simulation forecasted a range of total project costs for the I-26 Connector Project ranging from \$1.100 billion to \$1.422 billion in Year of Expenditure (YOE) costs. The 70<sup>th</sup> percentile Total Project Cost is \$1.285 billion (YOE). The 70<sup>th</sup> percentile anticipated completion date for the entire project based on the assumptions used is April 5, 2026. This indicates the schedule risks as input into the analysis foresees a 1 ½ year delay in project completion.

# **Risk Register**

Several outstanding issues affect either the project cost or schedule. The most critical of these are bulleted below:

- The NEPA process is not completed. Delay in approval affects the project cost and schedule. A delay of one year increases the cost \$41 million due to inflation.
- Utility relocations, especially the transmission line, affect both cost and schedule. This issue provided the largest risk impact for both cost and schedule.
- The numerous retaining walls add risk to the project. These walls account for nearly 10% of the project cost. Risks are shown for both a size increase and a higher bid price.
- Steel prices are volatile possibly affecting bids.

# **Review Recommendations**

- Use the results from this CER in the Initial Financial Plan.
- Document any cost/schedule changes from now until the submittal of the Initial Financial Plan.
- A Project Management Plan is required for all Major Projects. It must be submitted and approved prior to Federal Funds being approved for project construction.
- Use the CER results as a resource in the NEPA document and for public information. It is often better to use a range of costs rather than a single number.
- Utilize the risk register as a tool to manage the Project's cost and schedule risks.

# **CHAPTER 1 – REVIEW PROCESS**

## INTRODUCTION

The review team consisted of the North Carolina Department of Transportation (NCDOT) personnel, their consultants and representatives of the Federal Highway Administration. This team conducted a Cost Estimate Review (CER) workshop to review the cost and schedule estimates for the I-26 Connector Project. The workshop was held at the North Carolina DOT headquarters located at 1020 Birch Ridge Road in Raleigh, North Carolina on September 11-13, 2018. Due to Hurricane Florence, the Monte Carlo modeler and the facilitator from FHWA participated remotely. FHWA's Division Major Projects' Engineer was present with the NCDOT Design Team.

The I-26 Connector Project is designed in three sections. Section A includes expanding the existing I-240 four-lane roadway from the I-26/I-240 interchange to the I-240 interchange at Patton Avenue. Section B places the interstate on a new location north of the Captain Jeff Bowen bridges and connects with U.S. 19/23/70 in north Asheville. Section C upgrades the interchanges at Smokey Park Highway (U.S. 19/23/74A), I-26/I-240 and Brevard Road. All three sections may be constructed concurrently according to current plans.

This chapter provides a general overview of the cost estimate review process along with a discussion of the objective of the review and the methodology used.

# **REVIEW OBJECTIVE**

The cost estimate review conducted an unbiased risk-based review to verify the reasonableness of the current total cost estimate to complete the Project in year of expenditure dollars. Probability ranges for the cost estimate indicating best and worst-case scenarios were presented that represent the current stage of Project design. The review team also reviewed the proposed Project schedule to determine potential schedule impacts on the Project cost. This process provides the NCDOT with information outlining the future cost of the Project to ensure adequate cash flow and details the impacts inflation and delays have on Project costs.

# **BASIS OF REVIEW**

The Moving Ahead for Progress in the 21st Century Act (MAP-21) requires a financial plan for all Federal-aid projects with an estimated total cost of \$500 million or more to be approved by the U.S. Department of Transportation Secretary (i.e. FHWA) based on reasonable assumptions. The \$500 million threshold includes all project costs, such as engineering, construction, ROW, utilities, construction engineering and inflation. The FHWA interprets 'reasonable assumptions' to be a

risk-based analysis. The cost estimate review provides this risk-based assessment and is used in the approval of the financial plan. This is an independent review, but does not use an independent FHWA estimate. The review team used the estimate provided by the NCDOT project team.

#### **REVIEW TEAM**

The review team was developed with the intent of having individuals with a strong knowledge of the Project and/or of major project work and expertise in specific disciplines of the Project. This team participated together throughout the workshop. Subject matter experts with specific expertise relative to the project briefed the review team on portions of the Project or estimate development process. The review team also discussed the development of the Project cost estimate quantities, unit prices, assumptions, opportunities and threats. A sign-in sheet documents the attendees for this review and is provided in the Appendices.

The review team was comprised of members of the following organizations:

- NCDOT
- NCDOT Consultants
  - AECOM
  - HNTB
- FHWA
  - North Carolina Division Office
  - Resource Center (remotely)
  - Headquarters Office of Infrastructure (remotely)

#### **DOCUMENTS REVIEWED**

Documents provided by NCDOT and reviewed prior to and during the workshop included:

- Project Cost Estimate
- Project Schedule
- Project overview presentation
- Risk Register
- Draft Environmental Impact Statement (From Project Website)
- Public Hearing Maps with Functional Design Plans

# **METHODOLOGY**

The methodology for this cost estimate review is outlined as follows:

- Verify accuracy of cost estimate.
  - Understand project scope and cost estimate development process.

- Discuss assumptions for contingencies and projected inflation rates.
- Review major cost elements.
- Identify threats and opportunities (Risk Register).
- Model uncertainties.
  - Establish base estimate variability.
  - Determine probability of occurrence and schedule and cost impacts for significant project threats and opportunities.
    - These are based on the experience of the review team and the subject matter experts. The team agrees on the impact of the risk and the probability of it happening and insert these factors into the model.
  - Model anticipated market conditions at the time of letting.
- Perform Monte Carlo simulation to model variability and risks and generate the likely range of project cost and schedule.
- Communicate results.
  - Report methodology and results in a close-out presentation.
  - Document review in a final report (this report) that will be used to inform the public and develop the financial plan.

The following discussion provides more detail about the concepts utilized during the review.

# Verify Accuracy of Cost Estimate

The review team was provided an overview of the estimation process used to develop the project's estimate. This overview included understanding the scope of the project, stage of design and assumptions used to develop the estimate.

# **Model Uncertainties**

In general, uncertainties in the estimate can be described as those relating to base variability, market risks and cost and schedule risk events. Each of these are discussed and modeled to reflect the total uncertainty.

Base variability is a measure of uncertainty applied to the base estimate that represents the inherent randomness associated with the estimating process. Base variability is a function of the project's current level of design and the process used to develop the estimate. This may be demonstrated by the fact that two estimators using the same data sources and following the same general estimate development guidance will generate different estimates. Additionally, the lack of details about the project and assumptions that should be used to develop the estimate would cause more uncertainty and variability in the estimate. This base variation is a function of the system (i.e. assumptions and data sources used to define the estimate). Base variability is applied to the base estimate exclusive of risks. Contingencies that include risks are removed from

the base estimate to avoid double counting risks identified in the risk register. Allowances and expected construction change order costs typically remain in the base estimate.

Market conditions at the time of advertisement, bid and award are modeled to reflect the future competitive bidding environment. Three scenarios are evaluated including worse than planned, as-planned and better than planned. Each scenario is assigned a likelihood of occurrence and a range of associated costs. In addition to market conditions, inflationary risk is also modeled and used to project current year dollars to year of expenditure.

A risk register is developed by interviewing the project team and its consultants to define the components of contingency and establish both cost and schedule risks. The risk register includes the event risk name, a description of the event and a probability measure of the likelihood the event will occur, as well as a probability distribution of costs if the event were to occur. The register also identifies if the risk event is a threat or opportunity for cost and or schedule. Risk threats increase the cost and or schedule while opportunities decrease the cost and or schedule. A very important feature of the risk register is to establish the relationship of risk events. For example, some risks are mutually inclusive or mutually exclusive. Mutually inclusive means the risk event can only occur if the prior risk event occurs. Conversely, for a risk event to be mutually exclusive means that it can only occur if the prior risk event does not occur. Risk events can also be independent in which case the probability of occurrence is not dependent on any other risk event. Correlation determines how one risk event will sample during the simulation relative to another risk event. Correlation should only be established when there is reason to suspect that a relationship exists and needs to be accounted for in the simulation.

After models are developed for market conditions, base variability and risk events, the review team utilized a Monte Carlo simulation to generate a probability based estimate of Year-of-Expenditure (YOE) Total Project Costs. A **simulation** is essentially a rigorous extension of a "whatif" statements or sensitivity analysis, which uses randomly selected sets of values from the probability distributions representing uncertainty to calculate separate and discrete results. A single iteration within a simulation is the process of sampling from all input distributions and performing a single calculation to produce a deterministic result. It is important that each iteration represent a scenario or outcome that is logically possible. It is for this reason that the simulation outcomes be reviewed to ensure accuracy. The process of sampling from a probability distribution is repeated until the specified number of computer iterations is completed or until the simulation process converges. Simulation **convergence** is that point at which additional iterations do not significantly change the shape of the output distribution. The results of the simulation are arrayed in the form of a distribution covering all possible outcomes. The key benefit of this process is that the probability is associated with projected cost and schedule.

#### Communicate Results

The last part of the review is to communicate the review results by providing a closeout presentation and final report. At the end of the review the review team provides a closeout presentation that summarizes the review findings. The presentation identifies the review objectives and agenda, discusses the methodology and highlights the results of the review, including the pre/post workshop estimate results and any estimate adjustments made during the review. The closeout presentation identifies any significant cost and schedule risks and provides a brief overview of recommendations by the review team. The close-out presentation for this review was held on October 1, 2018 by webinar due to Hurricane Florence affecting the original close-out scheduled for September 13<sup>th</sup>. A copy of the close-out presentation is included as an appendix with this report.

The estimate review is a snapshot in time and as additional information becomes available, it is expected that the estimate will change and be updated. The final report communicates all findings of the review to the project sponsor and FHWA Division and serves as the official document for the cost estimate review. As noted earlier, the review results are used in the approval process for the financial plan. Cost estimate review reports are maintained by the FHWA Office of Infrastructure's Major Projects Team in Washington, D.C.

# **CHAPTER 2- REVIEW SUMMARY**

#### PROJECT BACKGROUND

The North Carolina Department of Transportation's (NCDOT) I-26 Connector Project is approximately 7 miles in length. It improves I-26 in Asheville, North Carolina from south of the I-40 interchange to the US-19/23/70 interchange in northwest Asheville.

The proposed project involves three sections:

- Section A includes expanding the existing I-240 four-lane roadway from the I-26/I-240 interchange to the I-240 interchange at Patton Avenue. There would be upgrades to the interchanges at Brevard, Amboy and Haywood Roads. It would also extend Amboy Road across I-240 to Brevard Road, opposite Shelburne Road.
- Section B places the interstate on a new location, from the Patton Avenue interchange across the French Broad River just north of the Captain Jeff Bowen bridges, and connects with U.S. 19/23/70. It would allow Patton Avenue to become a local street, removing the interstate traffic from the bridges. This opens this section of Patton Avenue to access for bicycles and pedestrians along the roadway returning its function to a city street.
- Section C upgrades the interchanges at Smokey Park Highway (U.S. 19/23/74A), at I-26/I-240 and Brevard Road. It maintains the existing two-level configuration of the I-26/I-40/I-240 interchange and adds additional through lanes, as well as a new loop from I-240 West to I-40 East and a ramp from I-40 West to I-240 East.

The I-26 Connector Project provides a median-divided, fully controlled-access freeway accessible only via interchanges. To reduce the required right-of-way, there would be a barrier median dividing opposing directions of travel.

Once complete, the freeway becomes part of the I-26 Interstate that extends from Charleston, South Carolina to Kingsport, Tennessee.

Figure 1 illustrates the location of all three sections within the I-26 corridor and its connections with the other interstate highways in the Asheville area.

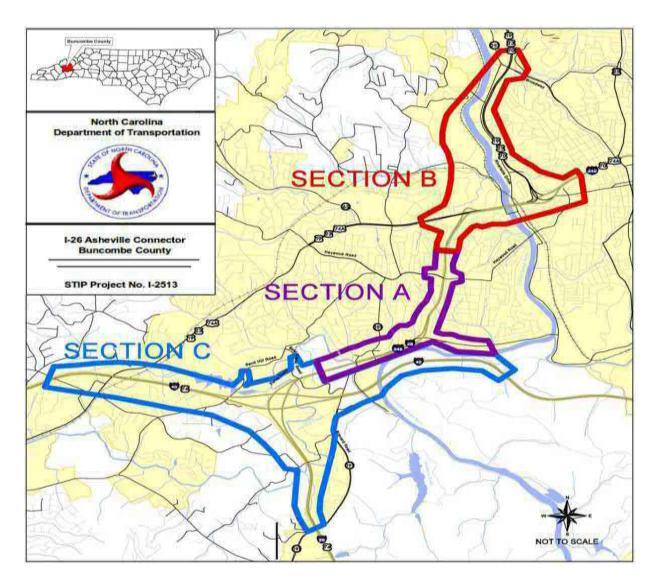


Figure 1 – I-26 Connector Project location in west Asheville.

# **ENVIRONMENTAL PROCESS**

The environmental document for the I-26 Connection is an Environmental Impact Statement. A Record of Decision is expected in early 2019. Currently, a Draft Environmental Impact Statement is available from NCDOT's Project Website. Approval of the Environmental Impact Statement is the controlling factor for initiation of many project activities. Delays in completing this document delays the Project an equivalent amount of time.

# PROJECT PROCUREMENT

NCDOT plans to use a Design-Build procurement for the I-26 Connector Project. Design for all three sections is at 25% in anticipation of this procurement. It is possible that all three sections will be procured under one contract.

# **PROJECT SCHEDULE**

The I-26 Connector Project is divided into three Sections. Sections A and C are assumed to be awarded as one Design-Build contract with construction beginning in February 2020. Section B, the most expensive of the three sections, is scheduled as a separate Design-Build contract that follows the other two sections and start in July of 2020. NCDOT is considering placing all three sections into one contract. This would eliminate any possible conflicts between separate Contractors. Each construction phase is scheduled to last four-years. Figure 2 below taken from the State's estimate provides an overview of the duration of each phase separated by Section.

STIP Project	Cost Stage	Start	End
	Construction	2/5/2020	2/5/2024
	Landscaping	10/31/2024	3/30/2025
	ROW	8/3/2020	8/3/2022
	Utilities	8/3/2020	11/3/2021
	Env. Mitigation	2/5/2020	2/5/2020
4	Admin.	2/5/2020	3/30/2025
-2513A	Priors	6/30/2002	7/31/2018
1-25	TOTALS		
	Construction	7/5/2020	10/5/2024
	Landscaping	10/31/2024	3/30/2025
	ROW	1/1/2021	1/1/2023
	Utilities	1/1/2021	4/1/2022
	Env. Mitigation	7/5/2020	7/5/2020
m	Admin.	7/5/2020	3/30/2025
-25138	Priors	6/30/2002	7/31/2018
-25	TOTALS		
	Construction	2/5/2020	2/5/2024
	Landscaping	10/31/2024	3/30/2025
	ROW	1/1/2021	8/3/2022
	Utilities	1/1/2021	3/30/2025
	Env. Mitigation	2/5/2020	2/5/2020
()	Admin.	7/5/2020	3/30/2025
-2513C	Priors	6/30/2002	7/31/2018
1-25	TOTALS		

Figure 2 – I-26 Connector anticipated Project Schedule

# **COST ESTIMATE**

NCDOT's project team submitted updated total project estimates for the I-26 Connector Project prior to the Cost Estimate Review. The following table summarizes the Project costs as submitted.

	I-26 Connector Project Overview		
Project Sections	Current Year Cost	Year of Expenditure Cost	
Section A (I-2513A)	\$238,733,822	\$264,725,962	
Section B (I-2513B)	\$710,227,987	\$799,396,962	
Section C (I-2513C)	\$263,918,291	\$292,152,962	
Total Cost	\$1,212,888,100	1,356,275,886	
<b>Total Project Completion Date</b>		April 2025	

Figure 3 – Pre-CER Cost Estimate and Completion Date for I-26 Connector

Several adjustments were made to the cost estimate during the Cost Estimate Review. These adjustments are listed below. This review focuses only on capital costs and does not include financing or operations and maintenance costs.

# **I-26 Connector Cost Estimate Adjustments**

- Eliminate de-icing systems from all bridges. (Reduction of \$65,200,000)
- Increase Erosion Control Cost from \$25K to \$30K/acre. (Increase of \$4,040,000)
- Added twice mitigation factor to wetlands and streams. (Increase of \$2,020,000)

These adjustments reduced the base estimate by \$56,440,000 to \$1,156,303,660. The main contributor to the reduction was the removal of the deicing from the bridges. The following table provides a breakdown of the base estimated costs used in the Monte Carlo simulation.

STIP Project	Cost Stage	Cost Estimate with Contingency
	Construction	\$ 152,903,122
	Landscaping	\$ 1,529,032
	ROW	\$ 44,502,173
	Utilities	\$ 2,036,054
	Env. Mitigation	\$ 650,574
₫	Admin.	\$ 28,789,080
-2513A	Priors	\$ 7,678,629
1-25	TOTALS	\$ 238,088,664
	Construction	\$ 448,192,830
	Landscaping	\$ 4,481,929
	ROW	\$ 95,374,368
	Utilities	\$ 13,576,433
	Env. Mitigation	\$ 1,840,299
æ	Admin.	\$ 81,755,027
I-2513B	Priors	\$ 7,678,629
	TOTALS	\$ 652,899,515
	Construction	\$ 200,570,259
	Landscaping	\$ 2,005,703
	ROW	\$ 12,422,846
	Utilities	\$ 4,463,648
	Env. Mitigation	\$ 1,549,022
U	Admin.	\$ 36,625,374
-2513C	Priors	\$ 7,678,629
1-25	TOTALS	\$ 265,315,481
	Construction	\$ 801,666,211
	Landscaping	\$ 8,016,664
40	ROW	\$ 152,299,387
, \$G\$	Utilities	\$ 20,076,135
+(7	Env. Mitigation	\$ 4,039,895
(AL	Admin.	\$ 147,169,482
-2513 (ALL)+\$G\$40	Priors	\$ 23,035,886
1-25	TOTALS	\$ 1,156,303,660

Figure 4 – Cost Estimate after Adjustments during the CER Workshop

# **REVIEW OBSERVATIONS**

Significant review observations include:

• Modeler and facilitator had to participate remotely due to Hurricane Florence. This also delayed the close-out presentation to October 1, 2018.

- The tight urban area with restrictive right-of-way affects utility relocation costs, especially the Duke Energy transmission lines.
- The project has two endangered species with a possible listing of a third in the future. This restricts construction activities in certain areas and may affect the project schedule.
- The NEPA document is not yet complete. Any delays in approval of the NEPA decision could affect the project schedule. The cost of one year's delay to the project is calculated at \$41 million due to the inflation inputs in the Monte Carlo simulation.
- NCDOT's process help control the project cost spread. The risk-based simulation only derived a \$323 million spread between the 0% and 100% confidence levels.

#### REVIEW RECOMMENDATIONS

The following recommendations are provided based on this Cost Estimate Review:

- Plan to use these CER results for the Initial Financial Plan (IFP), which is required before FHWA construction authorization.
- Document any cost and schedule changes between this CER and the IFP.
- Submittal and approval of a Project Management Plan (PMP) are required prior to FHWA approving the Initial Financial Plan.
- Update the project estimate to reflect adjustments made during this review.
- Use the CER results as a resource in publicly presenting the project's estimated total cost and schedule as a range of cost and completion dates.
- Utilize the risk register resulting from this CER as a tool to continue managing the project's cost and schedule risks.
- Use FHWA's Schedule Estimating Guidance as a resource, in addition to these CER results, in setting the project's baseline schedule completion date in the IFP. This resource is found at the following link.
  - https://www.fhwa.dot.gov/majorprojects/schedule estimating/

# **CHAPTER 3 – COST ANALYSIS (MONTE CARLO SIMULATION)**

#### **RISK INTRODUCTION**

Cost estimates, especially those for Major Projects, contain a degree of uncertainty due to unknowns and risks associated with the level of design completed. For this reason, it is logical to use a probabilistic approach and express the estimate as a range rather than a point value. During the cost estimate review, uncertainties in the project estimate such as base variability, inflation, market conditions and risk events were modeled to reflect the opinions of the subject matter experts interviewed. Then a Monte-Carlo simulation was used to incorporate the uncertainties into forecast curves that represent a range of costs and completion dates for the Project. As noted earlier, the CER focuses only on capital costs, and does not include financing or Operations and Maintenance costs.

The following results are from the CER Monte Carlo simulation forecast for all segments of the I-26 Connector Project in Asheville, North Carolina. The results are based on the probability assumptions that were identified and modeled during the CER workshop.

# PROBABILITY ASSUMPTIONS

The assumptions discussed below describe how the review team modeled the risk events, base variability, inflation and market conditions that served as inputs for the results shown in this section of the report. As discussed in Chapter 1, the Monte Carlo analysis selects random inputs from these distributions to determine discrete values for a given number of iterations. The model runs the simulation through 10,000 iterations and ranks the results to determine the likely range of cost and schedule for the project.

In a traditional cost estimate, risks are often accounted for using estimates of contingency. This contingency is intended to cover cost associated with risks events that may be realized during the project. The review team determined that some of the contingency amounts in the pre-CER estimate were allowances for non-risk events. Therefore, these allowances were kept in the base estimate.

Prior to the review, a risk register was created by the Project team identifying specific risk events for the Project. This risk register was used as the starting point for the risks that were identified for inclusion in the Monte Carlo model and simulation.

The purpose of the risk register is to identify significant cost and schedule risks in the estimate. The Team identified and discussed risks to the project in terms of threats and opportunities. For

purposes of this review, a threat is a risk event that can add to the cost and/or schedule of the project and an opportunity is an event that can reduce the cost and/or shorten the schedule.

Risk events are quantified by likelihood of the occurrence and impact if it occurs. For example, Figure 5 shows the binomial distribution used to model a 75% likelihood of occurrence.



Figure 5 - Example of Binomial Distribution for a Project Risk's Likelihood of Occurrence

Figure 6 shows the triangular distribution used to define how the cost impact is modeled in the simulation. In this example, the impact varies from \$0 to \$25 million with the most likely impact of \$12.5 million.

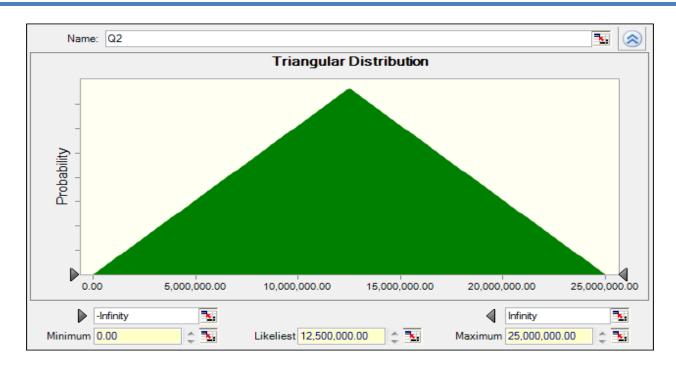


Figure 6 - Example of Triangular Distribution for a Project Risk's Cost Impact

# RISK REGISTER

Figure 7 provides a listing of risks that the review team recognized for affecting for the I-26 Connector Project. These were developed from the Risk Register provided by NCDOT and from discussions with the Subject Matter Experts during the review. Each of these risks have corresponding probabilities and impacts implemented by the probability assumptions explained in the previous section.

Event Risk Name	Probability	Cost Threat Opportunity	Min Cost (\$)	Most Likely Cost (\$)	Max Cost (\$)
French Broad River Bridge Construction	80%	Threat	\$5,000,000	\$10,000,000	\$20,000,000
Complex traffic control during construction	80%	Threat	\$2,000,000	\$3,000,000	\$4,000,000
Unexpected geotechnical issues	40%	Threat	\$1,000,000	\$2,000,000	\$5,000,000
Addition of aesthetic treatments to walls and bridges	20%	Threat	\$0	\$2,500,000	\$5,000,000
Innovative Traffic Management Strategy	85%	Opportunity	\$0	\$1,000,000	\$2,000,000
Design Build Innovation and Efficiencies	100%	Opportunity	\$8,500,000	\$20,000,000	\$34,000,000
Innovative Bridge Construction	50%	Opportunity	\$15,000,000	\$20,000,000	\$25,000,000

Utility relocation	90%	Threat	\$10,000,000	\$25,000,000	\$50,000,000
Railroad agreements / Construction by Others	90%	Threat	\$1,000,000	\$2,000,000	\$3,000,000
High Material Costs (Steel)	80%	Threat	\$5,000,000	\$12,000,000	\$15,000,000
Causeway elevation at FBR	90%	Threat	\$0	\$500,000	\$1,000,000
Pilot Bridge De-Icing System	20%	Threat	\$0	\$5,000,000	\$10,000,000
Increase quantity noise walls	70%	Threat	\$0	\$5,000,000	\$10,000,000
Decrease in quantity of noise wall	50%	Opportunity	\$0	\$2,000,000	\$5,000,000
Increase aesthetic treatments	80%	Threat	\$1,500,000	\$3,000,000	\$5,000,000
Increase Sq. Ft. Retaining Walls	70%	Threat	\$0	\$10,800,000	\$21,600,000
Increase cost of retaining walls	100%	Threat	\$0	\$0	\$14,400,000
New culvert (i.e. avoid bats)	70%	Threat	\$1,000,000	\$2,000,000	\$2,000,000
Potential for construction claims	50%	Threat	\$5,000,000	\$7,500,000	\$10,000,000

Figure 7 – I-26 Connector Risk Threats/Opportunities

#### OTHER FACTORS AFFECTING PROJECT COSTS

# Base Variability

Base variability captures the variability and uncertainty inherently associated with the cost estimating process. NCDOT initially placed this value at 5% for duration variability. This was raised to 10% later in the CER based on the 25% level of design and feedback from the project team and subject matter experts. We were seeing a very tight variability curve based on an initial trial run of the Monte Carlo simulation. Base variation values used in the review are shown as follow:

Phase/Segment Assignment	Base Cost Variability (%)	Duration Variability (%)
ROW+UT+EM-I-2513A	15%	10%
Agn+CN+LS-I-2513A	10%	10%
ROW+UT+EM-I-2513B	20%	10%
Agn+CN+LS-I-2513B	10%	10%
ROW+UT+EM-I-2513C	15%	10%
Agn+CN+LS-I-2513C	10%	10%

Figure 8 – Base Variation Values Used

# **Market Conditions**

The primary reason for modeling market conditions is to reflect the uncertainty associated with the bidding environment at the time of advertisement. These discussions consider the potential number of bidders on project contracts. Other factors considered were labor and material availability and the influence of other large infrastructure projects scheduled to be constructed in the same timeframe in the Asheville area.

The CER team discussed the market conditions and came up with the market conditions shown below. The probability denotes the likelihood of occurrence, and the impact denotes the magnitude as a percent of the planned value for better than planned (less costly than the planned value) and worse than planned (costlier than the planned value). Figure 9 provides the simulation inputs for measuring market conditions.

Phase/Segment Assignment	Probability Better than Plan	Probability Worse than Plan	Percent Offset from As-Planned Better (%)	Percent Offset from As-Planned Worse (%)
ROW+UT+EM-I-2513A	0%	40%	0%	10%
Agn+CN+LS-I-2513A	33%	33%	0%	0%
ROW+UT+EM-I-2513B	0%	70%	0%	30%
Agn+CN+LS-I-2513B	33%	33%	0%	10%
ROW+UT+EM-I-2513C	0%	0%	0%	0%
Agn+CN+LS-I-2513C	33%	33%	0%	0%

Figure 9 – Simulation Inputs for Market Conditions

# Inflation

Per NCDOT recommendations the following inflation rates were modeled: 2.5% inflation was used for Preliminary Engineering. A 4.0% annual inflation rate was used for right-of-way in response to trends in the Asheville Metro area. A 3.0% annual inflation rate was used for the utility relocation and construction.

# FORECAST TOTAL COSTS FOR THE I-26 CONNECTOR PROJECCT

Figure 10 shows the results of the simulation for the I-26 Connector Project in current year dollars. This simulation incorporates the risks from the risk register and the other factors including base variability, market conditions and inflation.

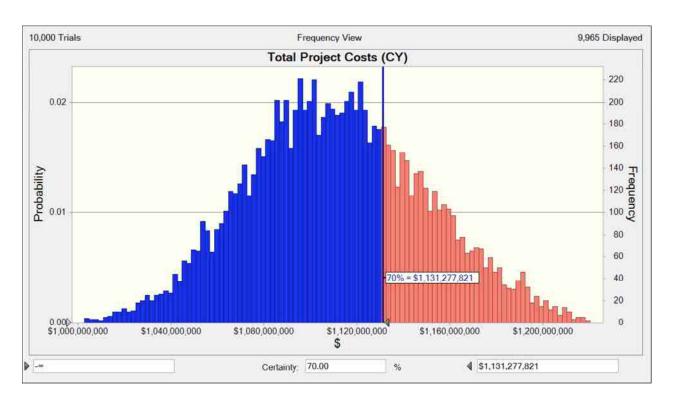


Figure 10 – Monte Carlo Forecast for the I-26 Connector Project Total Cost in CY Dollars (Includes Prior Expenditures)

Figure 11 modifies this with the inclusion of inflation resulting in year of expenditure (YOE) dollars. The 70<sup>th</sup> percentile level of confidence is the value highlighted. FHWA requires this value as the basis for setting the project's baseline cost in the Initial Financial Plan, thereby providing some risk reserve/contingency to be included in the project's budget.

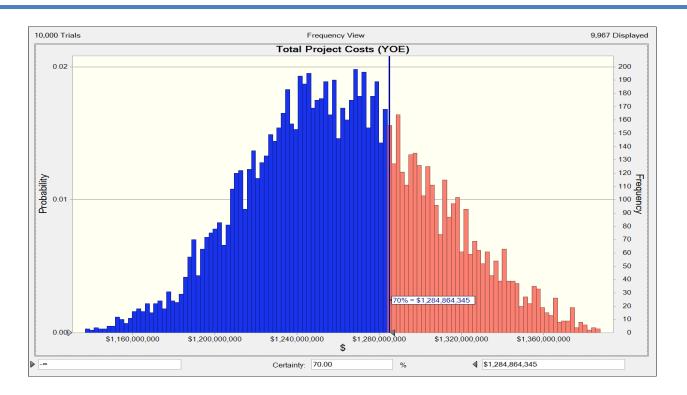


Figure 11 – Monte Carlo Forecast for the I-26 Connector Project Total Cost in YOE Dollars (Includes Prior Expenditures)

The following figure reduces Figure 11 to a table to show the entire range of results from the Monte Carlo simulation. This table provides anticipated costs based on the probabilities and impacts the Review Team agreed upon for the analysis. It indicates that the cost could be as low as \$1.10 billion if all opportunities are realized and no threats occur and as high as \$1.42 billion if all the threats, even those with low probability, are realized at their maximum impact.

Percentiles:	Forecast Values
0%	\$1,099,888,361
10%	\$1,205,998,268
20%	\$1,223,898,427
30%	\$1,237,256,155
40%	\$1,248,936,054
50%	\$1,260,801,659
60%	\$1,272,687,519
70%	\$1,284,864,345
80%	\$1,300,331,123
90%	\$1,321,416,627
100%	\$1,422,628,428

Figure 12 - Percentile Rankings of the I-26 Connector Project Total Cost in YOE Dollars (Includes Prior Expenditures)

FHWA policy states that CER results need to be reviewed and/or updated if more than one year passes between the date of the CER workshop and the date that the project proceeds to advertisement/letting or if the scope of work for the funded portion of the project significantly change. The need for a CER update will be assessed and coordinated between FHWA and NCDOT in concert with the IFP development and the project advertisement/letting schedule.

#### FORECAST PROJECT DELAY

The NEPA document for the I-26 Connector Project is scheduled for approval in early 2019. A delay in the approval of this document or litigation contesting the document can cause project delay. The following simulation provides the Year of Expenditure cost if the Project is delayed one year. The cost of a year's delay to the project is nearly \$41 million. This is determined by the difference between the 70% cost without the delay (\$1.285 billion) versus the 70% cost with the delay included in the calculation (\$1.326 billion). Figure 13 provides the Monte Carlo simulation for a one year's delay.

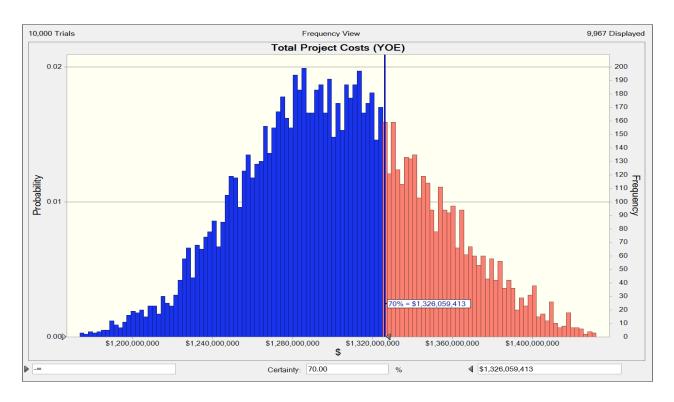


Figure 13 – Monte Carlo Forecast One Year's Delay to the I-26 Connector Project
In Year of Expenditure Dollars

#### SCHEULE ANALYSIS

A project's schedule has risks with duration variabilities like the variabilities that affect the project's base cost. Figure 14 includes the major schedule threats recognized by the review team. Many of the major risks center around the relocation of utilities, especially the Duke Energy

transmission line. The relocation of these utilities could affect the schedule of the Project, outside the control of the Contractor, which could affect the cost of the Project.

Event Risk Name	Probability	Min Schedule (Mo)	Most Likely Schedule (Mo)	Max Schedule (Mo)	Schedule Threat/ Opportunity
French Broad River Bridge Construction	80%	6.0	8.0	12.0	Threat
Unwilling sellers / condemnations	80%	0.0	0.0	3.0	Threat
Unexpected geotechnical issues	40%	0.0	1.0	2.0	Threat
Local stakeholder's involvement	20%	0.0	1.0	2.0	Threat
Innovative Traffic Management Strategy	85%	0.0	3.0	6.0	Opportunity
Design Build Innovation and Efficiencies	100%	0.0	3.0	6.0	Opportunity
Innovative Bridge Construction	50%	0.0	3.0	6.0	Opportunity
Utility relocation Segment A	75%	3.0	4.0	5.0	Threat
Utility relocation Duke Energy Transmission Line	90%	6.0	12.0	18.0	Threat
Utility relocation Segment B	90%	3.0	6.0	12.0	Threat
Railroad agreements / Construction by Others	90%	0.0	2.0	4.0	Threat
Causeway elevation at FBR	90%	0.0	1.0	2.0	Threat
Environmental Agreements	10%	0.0	1.0	2.0	Threat

Figure 14 – Schedule Risks for the I-26 Connector Project

Figure 15 shows the schedule forecast for the I-26 Connector Project. These results include the schedule threats and opportunities included in the risk table above. This projected completion date for the project is a 1 year later than the April 2025 completion date shown in NCDOT's base estimate. This is due to the high probability and extensive delays given to the utility relocation and multiple projects being constructed simultaneously with various constraints due to endangered species. Use of the risk table provides information on where mitigation efforts are most beneficial.

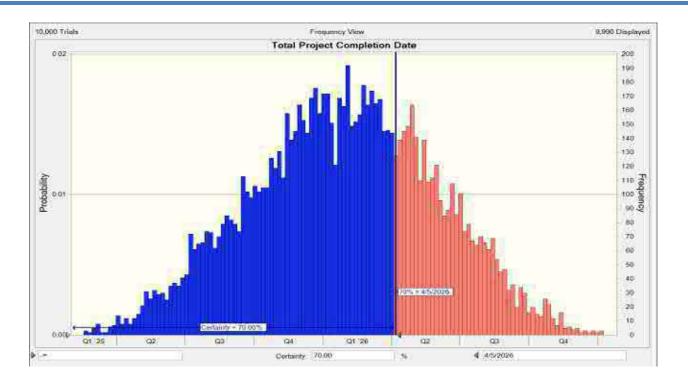


Figure 15 – Monte Carlo Schedule Forecast for the I-26 Connector Project

#### **CONCLUSION**

Based on the assumptions and risks discussed during this review, the range of total project cost for the I-26 Connector Project varies between approximately \$1.099 billion and \$1.423 billion in year of expenditure costs. The FHWA recommends presenting the total project costs as a range in the final environmental decision document and/or as part of the project information presented to the public during the remaining NEPA process.

The estimate at the 70% confidence level for the I-26 Connector Project is \$1.285 billion in year of expenditure cost. This is below the State submitted year of expenditure cost of \$1.356 billion coming into the CER process. The main difference is due to the removal of the de-icing systems from the bridges.

A major concern is the schedule. Our analysis indicates 1 year extension to the schedule is possible. The risk register is beneficial in focusing efforts on areas for mitigation of these schedule risks, especially since these risks also affect the project cost.

This estimate is a snapshot in time and it is expected that through further project development, the estimate will change.

#### **APPENDICES**

- A Cost Estimate Review Closing Presentation
- B Crystal Ball Probability Analysis
- C Cost Estimate Review Agenda
- D Cost Estimate Review Sign-In Sheets

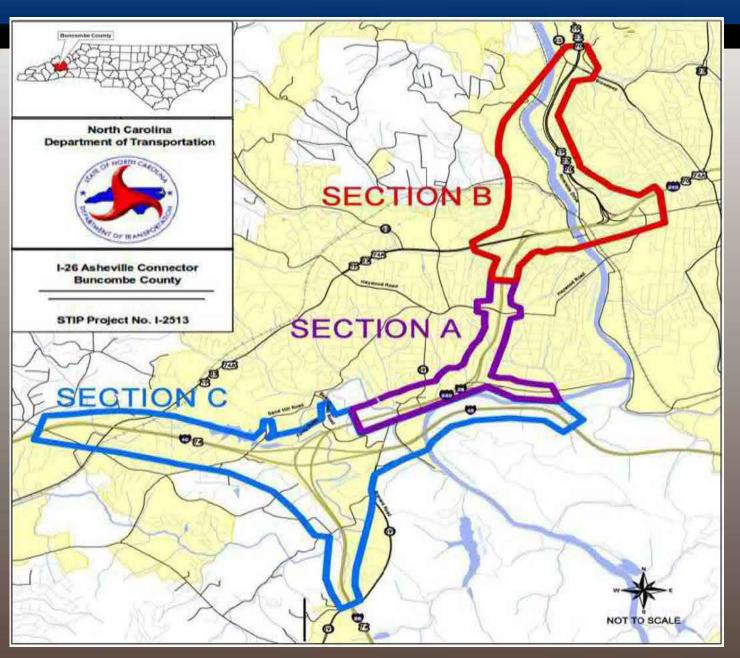
# Cost Estimate Review FHWA Closeout Presentation October 1, 2018

#### I-26 Connector Asheville, North Carolina





# Cost Estimate Review FHWA Closeout Presentation September 13, 2018



**Project Limits** 

#### Purpose and Need

- Upgrade the interstate corridor
- To improve the capacity deficiencies of I-240
- To reduce traffic delays and congestion on I-240
- To increase the remaining useful service of the Patton Avenue Bridges

#### **Proposed Improvements**

#### **Proposed Improvements:**

Section A: Includes expanding the existing I-240 four-lane roadway from the I-26/I-240 interchange to the I-240 interchange at Patton Avenue.

Section B: Places the interstate on a new location north of the Captain Jeff Bowen bridges, and connect with U.S. 19/23/70.

Section C: Upgrades the interchanges at Smokey Park Highway (U.S. 19/23/74A), I-26/I-240 and Brevard Road.

#### **Background Information**

- Project broken into three sections being designed concurrently.
- Design Build procurement expected for the project.
- NEPA Record of Decision expected in 2019.
- Procurement scheduled for 2020.
- Strong possibility all three sections constructed concurrently.
- Currently a four-year construction schedule is planned.

# Cost Estimate Review Objective

Conduct an unbiased risk-based review to verify the accuracy and reasonableness of the current total cost estimate and project schedule to complete the

### I-26 Connector Project – Asheville.

Develop a probability range for the cost estimate and schedule that represents the project's current stage of design.

### **Policy Directives**

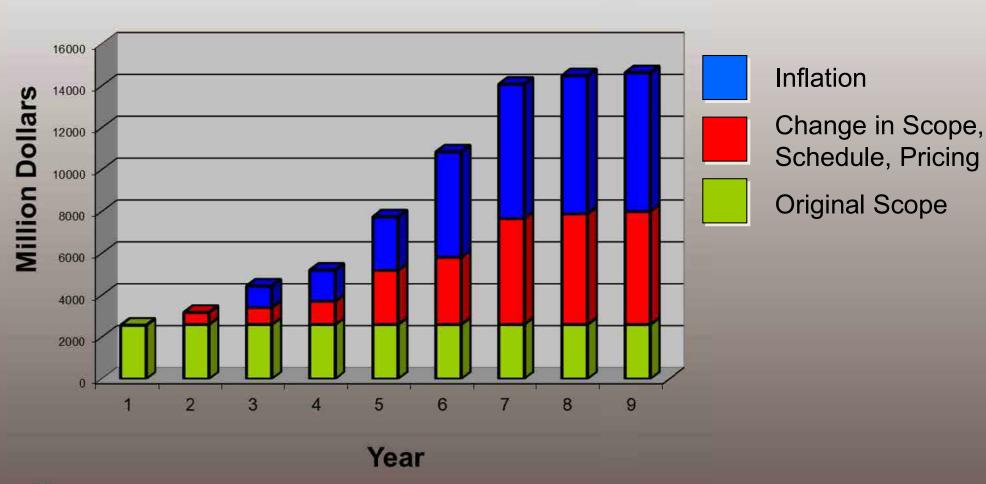
- First enacted by TEA-21
- Title 23 U.S.C §106(h)(3)(B)

...based on reasonable assumptions, as determined by the Secretary, of future increases in the cost to complete the project..."

- Secretary = FHWA
- Reasonable assumptions = Risk based probabilistic approach

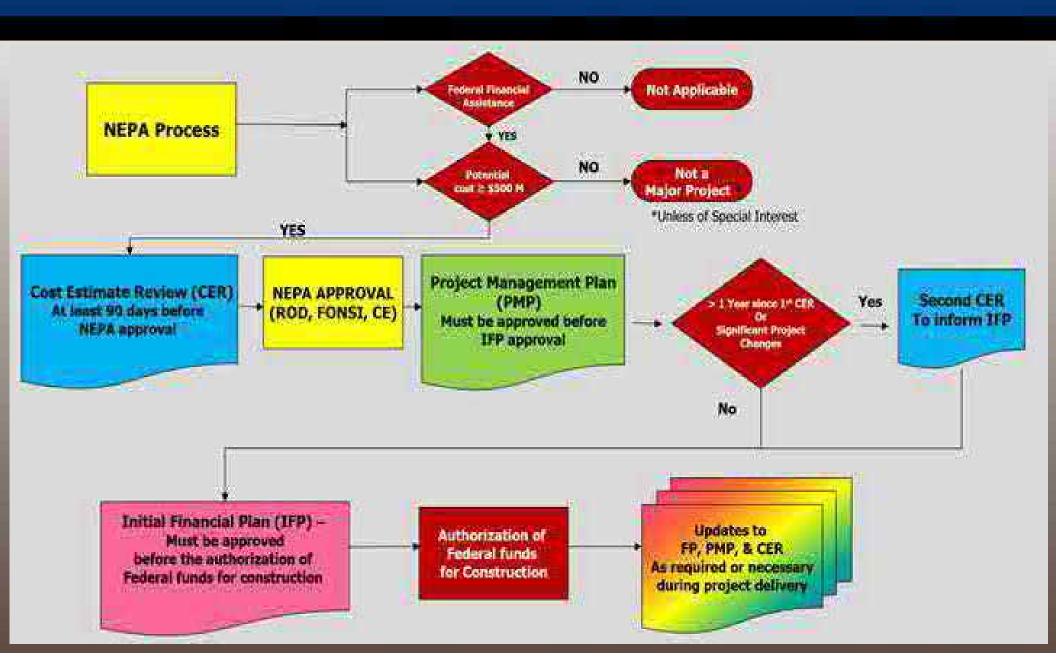


# Evolution of Cost for Example Major Project Cost Estimate





### **Basic Major Project Process**



#### FHWA Major Project Resources

#### FHWA Office of Program Administration

Website:

https://www.fhwa.dot.gov/majorprojects/

Major Project Financial Plan Guidance, December 2014

- FHWA Major Project Guidance, January 2007
- Major Project Program Cost Estimating Guidance, January 2007
- Project Management Plan Guidance, Updated in 2017
- Active Major Project Monthly Status (FOIS Output)

### **Review Participants**

- NCDOT
- NCDOT Consultants
  - AECOM
  - HNTB
- FHWA
  - Division Office North Carolina
  - CER Cadre Team FHWA HQ

### **CER Logistics**

September 11-13, 2018

NCDOT Century Center – Building B PDEA Large Conference Room 1020 Birch Ridge Road Raleigh, NC 27610

#### Pre-Review Webinar

#### Friday, August 17, 2018

- Introduction to FHWA CER process
- CER Logistics/ Agenda
- Project background
- Overview of Project Estimate and Schedule
- Risk Items

## Review Agenda 1<sup>st</sup> Day

#### Tuesday, September 11, 2018

- 10:00 a.m. CER Introduction
- 10:45 a.m. Project Overview by Project Personnel
- 11:15 a.m. Overview of State Estimation Process
- 12:00 p.m. Lunch
- 1:00 p.m. Base Variability & Market Conditions
- 2:00 p.m. Soft Costs (administrative, inflation, allowances)
- 2:30 p.m. Contingency/Risk Register Items
- 3:30 p.m. Structures, Retaining Walls, Railroad Coordination and Sound Barriers
- 5:00 p.m. Adjourn

## Review Agenda 2<sup>nd</sup> Day

#### Wednesday, September 12, 2018

- 8:00 a.m. Recap of First Day
- 8:30 a.m. Earthwork, Drainage, Pavement, Roadway & Geotechnical
- 9:30 a.m. Roadside Environmental (Erosion Control & Landscaping)
- 10:00 a.m. Traffic Control, Signing & Lighting
- 10:30 a.m. Traffic Signal & ITS
- 11:00 a.m. Environmental/Permitting/Mitigation
- 12:00 p.m. Lunch
- 1:00 p.m. Utilities (wet & dry)
- 1:30 p.m. Right of Way
- 2:30 p.m. Revisit estimate items as necessary
- 3:30 p.m. Review and finalize risk register details and aggregate minor risks
- 5:00 p.m. Adjourn

#### **Basis of Review**

- Review based on estimates provided by the Team in advance with revisions made during the review
- Review to determine the reasonableness of assumptions used in the estimate
- Not an independent FHWA estimate
  - Did not verify quantities and unit prices
  - We did have Subject Matter Experts review the estimate
  - Goal is to verify accuracy and reasonableness of estimate

Risk-based Probabilistic Approach

### Review Methodology

Verify

- Major cost elements
- Allowances/contingencies
- Adjust estimate as necessary

Model

- Base variability
- Market conditions and inflation
- Risk events (cost, schedule, probability, impact, relationships)
- Monte Carlo simulation

Communicate

- Closeout Presentation
- Final report
- Issuance of NEPA Decision Document
- Approval of finance plan

#### **Review Observations**

- Modeler and facilitator had to participate remotely due to Hurricane Florence.
- Tight urban area with restrictive right-of-way affects utility relocation costs.
- Two, and maybe three, endangered species affect scheduling.
- Cost of delaying the project one year is \$41 million.
- NCDOT's processes help control the project cost spread.
  - Only \$323 million spread between 0% and 100%.

### Review Baseline (pre-review)

Total Cost (2018\$): \$1.213 billion

(includes \$136.9 million in contingencies)

Total Cost (YOE): \$1.356 billion

(includes \$143.3 million inflation)

**Total Project Completion Date: Apr 2025** 

### **CER Estimate Adjustments**

Pre-Review Estimate (CY)	
Incl Cont and Prior Cost	\$ 1,212,880,100.00
Estimate Adjustments:	
Eliminate de-icing system all bridges	\$ (62,500,000.00)
Increase Erosion Control Cost from \$25K to \$30K/acre.	\$ 4,040,000.00
Added twice mitigation factor to wetlands and streams	\$ 2,020,000.00
Total Adjustments	\$ (56,440,000.00)
Percentage Based	
Adjustments	\$ (136,440.00)
	 · · · · ·
Post Review (CY) Incl Cont,	
Priors, Adjustments	\$ 1,156,303,660.00



### Monte Carlo Inputs

#### Inflation:

Construction	3.0%
Landscaping	3.0%
Right of Way	4.0%
Utilities	3.0%
Administrative	3.0%
Environmental	4.0%

### Monte Carlo Inputs

#### **Base Variation:**

Phase/Segment Assignment	Base Cost Variability (%)	Duration Variability (%)
ROW+UT+EM-I-2513A	15%	10%
Agn+CN+LS-I-2513A	10%	10%
ROW+UT+EM-I-2513B	20%	10%
Agn+CN+LS-I-2513B	10%	10%
ROW+UT+EM-I-2513C	15%	10%
Agn+CN+LS-I-2513C	10%	10%

### Monte Carlo Inputs

#### **Market Conditions**

Phase/Segment Assignment	Prob BtP	Prob WtP	%Offset BtP	%Offset WtP
ROW+UT+EM-I-2513A	0%	40%	0%	10%
Agn+CN+LS-I-2513A	33%	33%	0%	0%
ROW+UT+EM-I-2513B	0%	70%	0%	30%
Agn+CN+LS-I-2513B	33%	33%	0%	10%
ROW+UT+EM-I-2513C	0%	0%	0%	0%
Agn+CN+LS-I-2513C	33%	33%	0%	0%

### **Project's Major Cost Risks**

Event Risk Name	Probability	Cost Threat / Opportunity	Min Cost (\$)	Most Likely Cost (\$)	Max Cost (\$)
French Broad River Bridge Construction	80%	Threat	\$5,000,000	\$10,000,000	\$20,000,000
Design Build Innovation and Efficiencies	100%	Opportunity	\$8,500,000	\$20,000,000	\$34,000,000
Innovative Bridge Construction	50%	Opportunity	\$15,000,000	\$20,000,000	\$25,000,000
Utility relocation	90%	Threat	\$10,000,000	\$25,000,000	\$50,000,000
High Material Costs (Steel)	80%	Threat	\$5,000,000	\$12,000,000	\$15,000,000
Increase Sq. Ft. Retaining Walls	70%	Threat	\$0	\$10,800,000	\$21,600,000
Increase cost of retaining walls	100%	Threat	<b>\$0</b>	<b>\$0</b>	\$14,400,000

12

6

#### Project's Major Schedule Risks

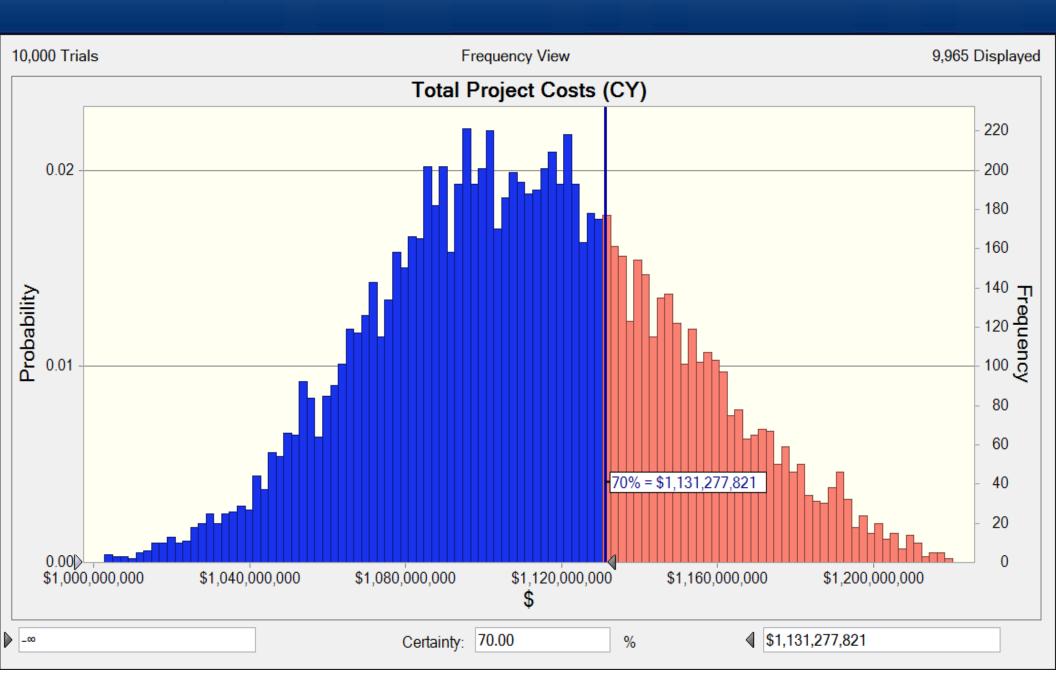
<b>Event Risk Name</b>	Probability	Schedule Threat / Opportunity	Min Schedule (mo)	Most Likely Schedule (mo)	Max Schedule (mo)
French Broad River Bridge Construction	80%	Threat	6	8	12
Innovative Traffic Management Strategy	85%	Opportunity	0	3	6
Design Build Innovation and Efficiencies	100%	Opportunity	0	3	6
Innovative Bridge Construction	50%	Opportunity	0	3	6
Utility relocation	90%	Threat	6	12	18

Threat

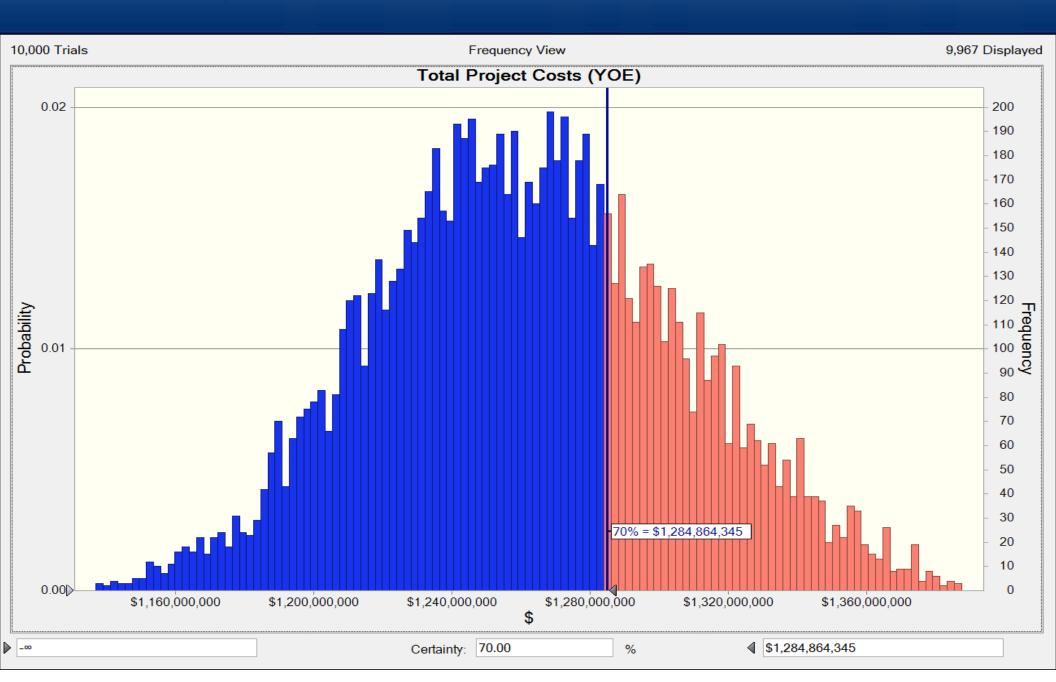
90%

**Utility relocation** 

## Total Project Cost (CY)



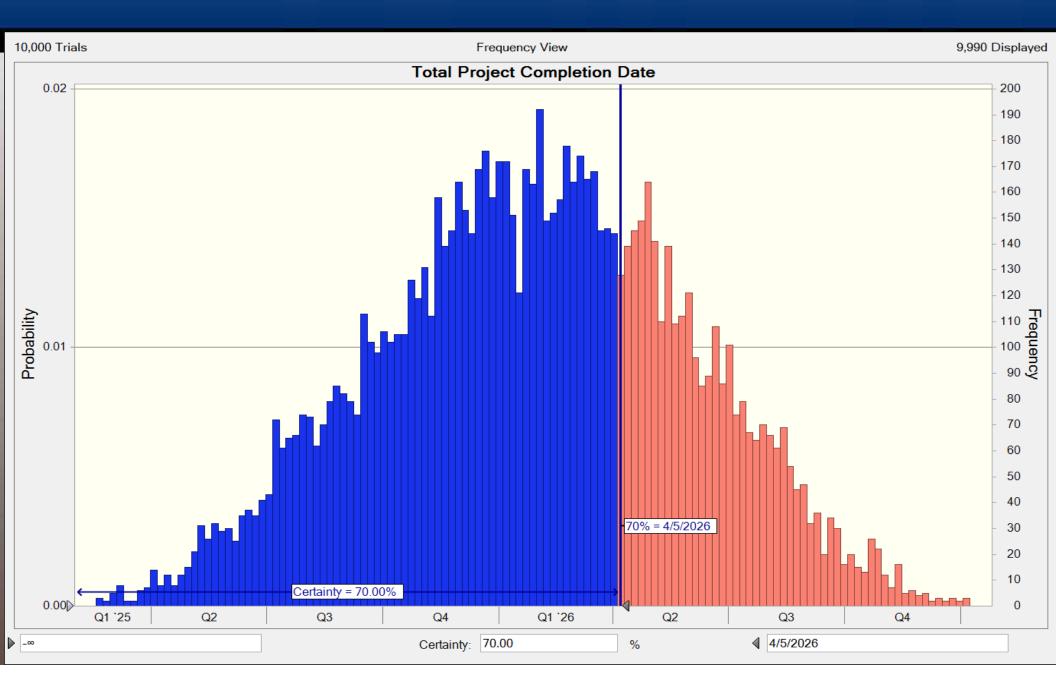
## Total Project Cost (YOE)



# Total Project Cost (YOE)

Percentiles:	Forecast Values
0%	\$1,099,888,361
10%	\$1,205,998,268
20%	\$1,223,898,427
30%	\$1,237,256,155
40%	\$1,248,936,054
50%	\$1,260,801,659
60%	\$1,272,687,519
70%	\$1,284,864,345
80%	\$1,300,331,123
90%	\$1,321,416,627
100%	\$1,422,628,428

### Total Project Schedule Forecast



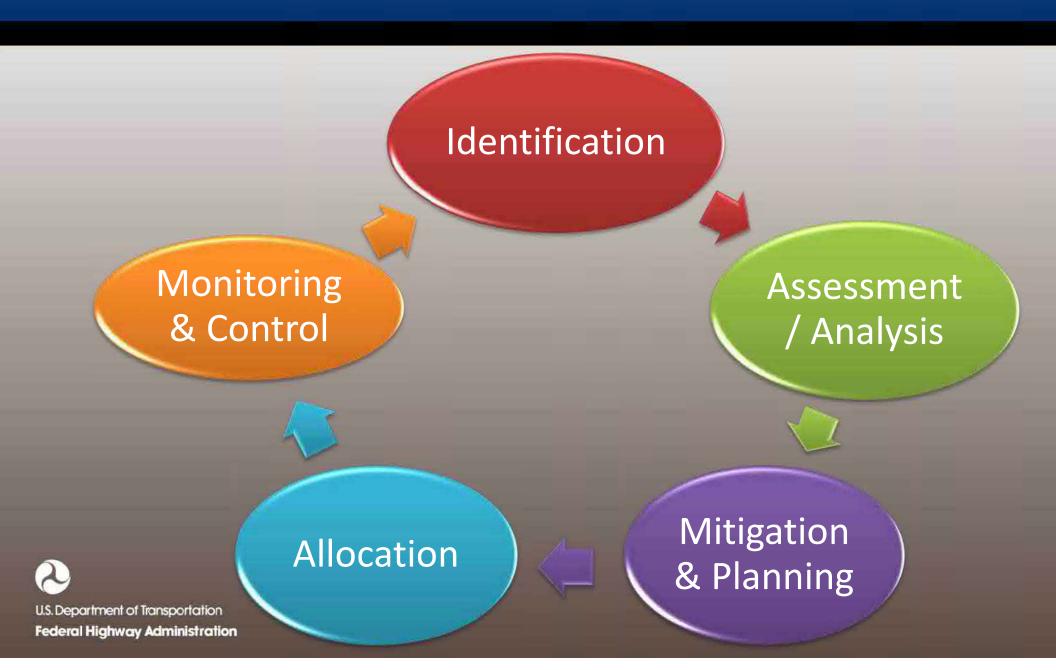
- A Monte-Carlo simulation was run to forecast the cost of one year's delay in letting the project.
- YOE Cost with One-year's delay = \$1.326 million

One-year delay adds = \$41 million

#### Recommendations

- Use these CER results for the Initial Financial Plan (IFP).
- Document any cost/schedule changes from now until the IFP.
- PMP will have to be submitted and approved by FHWA.
- Use the CER results as a resource in publicly presenting the project's estimated cost.
- Utilize the risk register as a tool to manage the project's cost and schedule risks.
- Use FHWA's Schedule Estimating Guidance as a resource in setting the project's baseline completion date in the IFP.
- https://www.fhwa.dot.gov/majorprojects/schedule\_estimating/

### Risk Management Process



### **CER Next Steps**

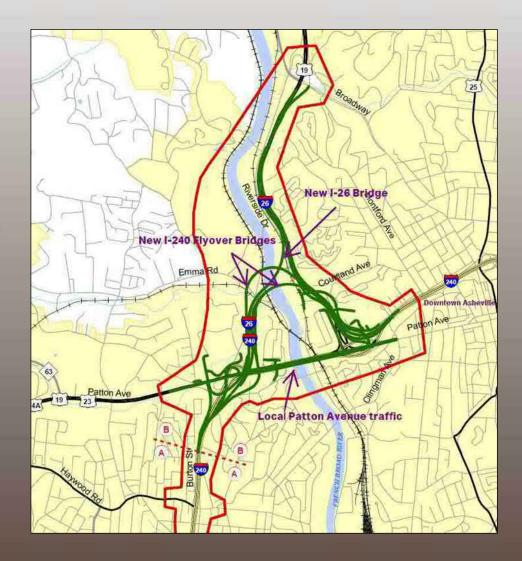
- FHWA will prepare a final report documenting review findings.
  - Draft report for review within 30 days
  - Draft report will be e-mailed to Division Office
  - Division Office will review the draft and forward it to the Project Team
  - Final report issued within 30 days after receipt of comments
  - Final report forwarded to the Division Office for distribution to the Project Team
- FHWA uses the results as the official cost estimate for the project (NEPA, IFP, reporting)
- Estimate review is a snapshot of the current estimate



# Cost Estimate Review FHWA Closeout Presentation September 13, 2018

### I-26 Connector - Asheville

## Questions?





U.S. Department of Transportation Federal Highway Administration

#### Crystal Ball Report - Full

Simulation started on 9/12/2018 at 3:17 PM Simulation stopped on 9/12/2018 at 3:31 PM

#### Run preferences:

Number of trials run	10,000
Latin Hypercube (size	500
Seed	123

#### Run statistics:

Total running time (se	862.60
Trials/second (averag	12
Random numbers per	0

#### Crystal Ball data:

Assumptions	0
Correlations	0
Correlation matrices	0
Decision variables	0
Forecasts	6

**Forecasts** 

Worksheet: [Model\_CER I 26 Connector Day 2 PM.xlsb]YOE

Forecast: Cost Risks (\$)

#### Summary:

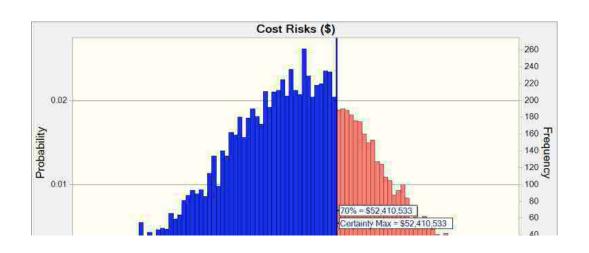
Certainty level is 70.00%

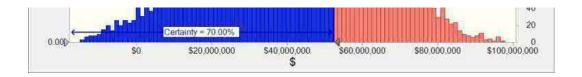
Certainty range is from -∞ to \$52,410,533

Entire range is from \$(35,915,985) to \$104,868,729

Base case is \$59,766,667

After 10,000 trials, the std. error of the mean is \$201,657





Statistics:		Forecast values
	Trials	10,000
	Base Case	\$59,766,667
	Mean	\$41,439,616
	Median	\$42,180,434
	Mode	
	Standard Deviation	\$20,165,690
	Variance	\$406,655,065,486,471
	Skewness	-0.1760
	Kurtosis	2.90
	Coeff. of Variation	0.4866
	Minimum	\$(35,915,985)
	Maximum	\$104,868,729
	Range Width	\$140,784,713
	Mean Std. Error	\$201,657

#### Forecast: Cost Risks (\$) (cont'd)

0% \$(	35,915,985) 314,690,160
	314,690,160
10%	
20%	24,690,210
30%	31,163,268
40%	36,949,473
50%	342,178,568
60%	547,223,432
70%	552,410,533
80%	558,579,328
90%	67,002,378
100% \$1	04,868,729

#### **Forecast: Inflation**

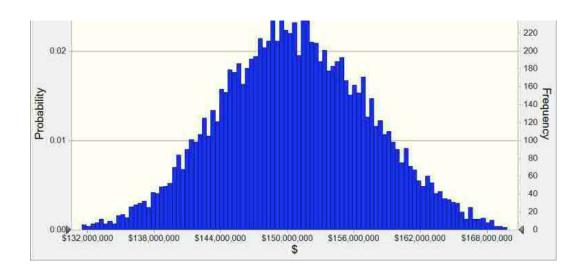
#### Summary:

Entire range is from \$128,331,896 to \$172,830,457

Base case is \$153,484,212

After 10,000 trials, the std. error of the mean is \$68,378





Statistics:		Forecast values
	Trials	10,000
	Base Case	\$153,484,212
	Mean	\$150,651,241
	Median	\$150,535,527
	Mode	
	Standard Deviation	\$6,837,804
	Variance	\$46,755,560,640,444
	Skewness	0.0248
	Kurtosis	2.84
	Coeff. of Variation	0.0454
	Minimum	\$128,331,896
	Maximum	\$172,830,457
	Range Width	\$44,498,561
	Mean Std. Error	\$68,378

#### Forecast: Inflation (cont'd)

Percentiles:	Forecast values
0%	\$128,331,896
10%	\$141,881,685
20%	\$144,858,244
30%	\$146,986,934
40%	\$148,835,609
50%	\$150,534,877
60%	\$152,252,545
70%	\$154,274,659
80%	\$156,523,464
90%	\$159,583,814
100%	\$172,830,457

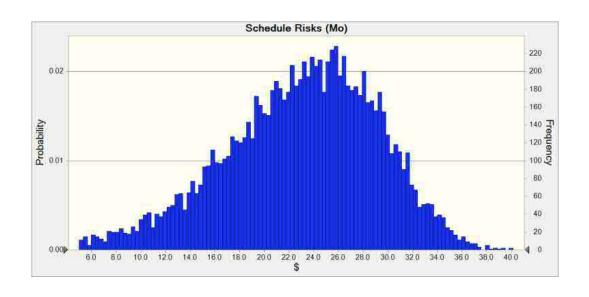
Forecast: Schedule Risks (Mo)

#### Summary:

Entire range is from -2.9 to 40.1

Base case is 28.7

After 10,000 trials, the std. error of the mean is 0.1



Statistics:		Forecast values
	Trials	10,000
	Base Case	28.7
	Mean	22.9
	Median	23.5
	Mode	
	Standard Deviation	6.4
	Variance	40.6
	Skewness	-0.5218
	Kurtosis	3.22
	Coeff. of Variation	0.2787
	Minimum	-2.9
	Maximum	40.1
	Range Width	43.1
	Mean Std. Error	0.1

#### Forecast: Schedule Risks (Mo) (cont'd)

Percentiles:	Forecast values
0%	-2.9
10%	14.3
20%	17.7
30%	20.0
40%	21.8

50%	23.5
60%	25.1
70%	26.6
80%	28.3
90%	30.5
100%	40.1

#### **Forecast: Total Project Completion Date**

#### Summary:

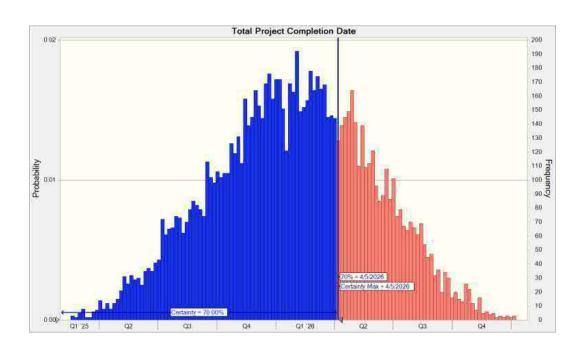
Certainty level is 70.00%

Certainty range is from -∞ to 4/5/2026

Entire range is from 1/24/2025 to 1/24/2027

Base case is 3/30/2026

After 10,000 trials, the std. error of the mean is 1.23



Statistics:		Forecast values
	Trials	10,000
	Base Case	3/30/2026
	Mean	1/26/2026
	Median	1/29/2026
	Mode	
	Standard Deviation	123.26
	Variance	15,192.79
	Skewness	-0.0606
	Kurtosis	2.61
	Coeff. of Variation	0.0027

Minimum	1/24/2025
Maximum	1/24/2027
Range Width	729.63
Mean Std. Error	1.23

#### Forecast: Total Project Completion Date (cont'd)

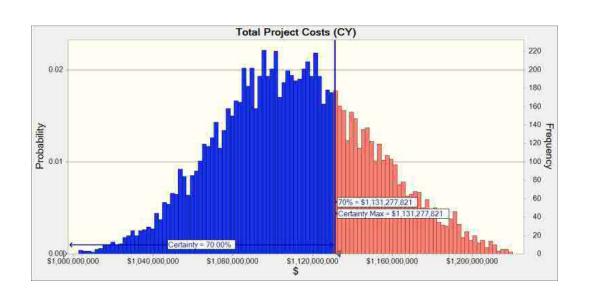
Percentiles:	Forecast values
0%	1/24/2025
10%	8/13/2025
20%	10/11/2025
30%	11/22/2025
40%	12/26/2025
50%	1/29/2026
60%	3/2/2026
70%	4/5/2026
80%	5/13/2026
90%	7/6/2026
100%	1/24/2027

#### Forecast: Total Project Costs (CY)

Includes base costs, prior costs, fixed costs, and risks

#### Summary:

Certainty level is 70.00% Certainty range is from  $-\infty$  to \$1,131,277,821 Entire range is from \$971,223,202 to \$1,254,980,265 Base case is \$1,114,936,165 After 10,000 trials, the std. error of the mean is \$388,423



Statistics:		Forecast values
	Trials	10,000
	Base Case	\$1,114,936,165
	Mean	\$1,111,581,432
	Median	\$1,110,408,411
	Mode	
	Standard Deviation	\$38,842,262
	Variance	\$1,508,721,332,696,390
	Skewness	0.1469
	Kurtosis	2.83
	Coeff. of Variation	0.0349
	Minimum	\$971,223,202
	Maximum	\$1,254,980,265
	Range Width	\$283,757,063
	Mean Std. Error	\$388,423

#### Forecast: Total Project Costs (CY) (cont'd)

Percentiles:	Forecast values
0%	\$971,223,202
10%	\$1,062,416,552
20%	\$1,078,399,321
30%	\$1,089,758,889
40%	\$1,100,088,068
50%	\$1,110,401,775
60%	\$1,120,484,516
70%	\$1,131,277,821
80%	\$1,145,027,667
90%	\$1,162,830,301
100%	\$1,254,980,265

#### Forecast: Total Project Costs (YOE)

#### Summary:

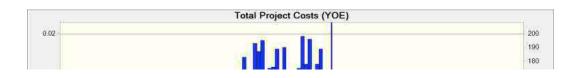
Certainty level is 70.00%

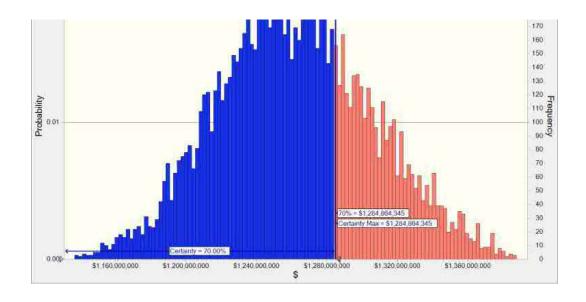
Certainty range is from  $-\infty$  to \$1,284,864,345

Entire range is from \$1,099,888,361 to \$1,422,628,428

Base case is \$1,268,420,377

After 10,000 trials, the std. error of the mean is \$446,514





Statistics:		Forecast values
	Trials	10,000
	Base Case	\$1,268,420,377
	Mean	\$1,262,232,673
	Median	\$1,260,802,593
	Mode	
	Standard Deviation	\$44,651,416
	Variance	\$1,993,748,973,904,500
	Skewness	0.1404
	Kurtosis	2.82
	Coeff. of Variation	0.0354
	Minimum	\$1,099,888,361
	Maximum	\$1,422,628,428
	Range Width	\$322,740,067
	Mean Std. Error	\$446,514

#### Forecast: Total Project Costs (YOE) (cont'd)

Percentiles:	Forecast values
r crocritics.	1 Orccast values
0%	\$1,099,888,361
10%	\$1,205,998,268
20%	\$1,223,898,427
30%	\$1,237,256,155
40%	\$1,248,936,054
50%	\$1,260,801,659
60%	\$1,272,687,519
70%	\$1,284,864,345
80%	\$1,300,331,123
90%	\$1,321,416,627
100%	\$1,422,628,428

**End of Forecasts** 

#### Crystal Ball Report - Full

Simulation started on 9/12/2018 at 3:45 PM Simulation stopped on 9/12/2018 at 4:00 PM

#### Run preferences:

Number of trials run	10,000
Latin Hypercube (size	500
Seed	123

#### Run statistics:

Total running time (se	876.48
Trials/second (averag	11
Random numbers per	0

#### Crystal Ball data:

Assumptions	0
Correlations	0
Correlation matrices	0
Decision variables	0
Forecasts	6

#### User macros executed:

Model\_CER I 26 Connector Day 2\_1 Yr Delay PM.xlsb'!ThisWorkbook.CBAfterSimulation

#### **Forecasts**

Worksheet: [Model\_CER I 26 Connector Day 2\_1 Yr Delay PM.xlsb]YOE

#### Forecast: Cost Risks (\$)

#### Summary:

Certainty level is 70.00%

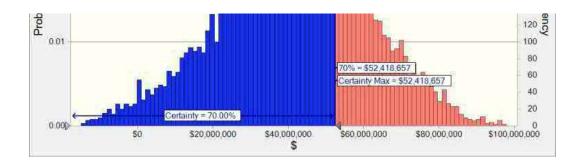
Certainty range is from -∞ to \$52,418,657

Entire range is from \$(35,915,985) to \$104,868,729

Base case is \$59,766,667

After 10,000 trials, the std. error of the mean is \$201,687





Statistics:		Forecast values
	Trials	10,000
	Base Case	\$59,766,667
	Mean	\$41,447,802
	Median	\$42,184,221
	Mode	\$6,391,111
	Standard Deviation	\$20,168,728
	Variance	\$406,777,576,584,207
	Skewness	-0.1760
	Kurtosis	2.90
	Coeff. of Variation	0.4866
	Minimum	\$(35,915,985)
	Maximum	\$104,868,729
	Range Width	\$140,784,713
	Mean Std. Error	\$201,687

#### Forecast: Cost Risks (\$) (cont'd)

Percentiles:	Forecast values
0%	\$(35,915,985)
10%	\$14,696,147
20%	\$24,690,210
30%	\$31,154,405
40%	\$36,960,229
50%	\$42,182,809
60%	\$47,224,862
70%	\$52,418,657
80%	\$58,593,747
90%	\$67,031,504
100%	\$104,868,729

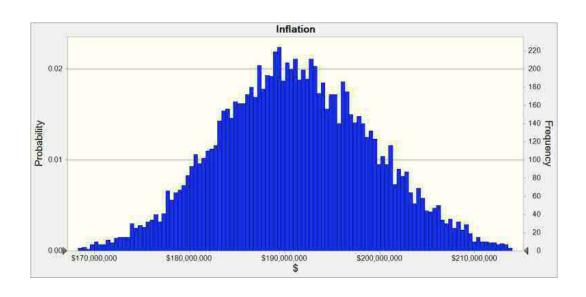
#### **Forecast: Inflation**

#### Summary:

Entire range is from \$163,730,645 to \$217,620,884

Base case is \$194,068,676

After 10,000 trials, the std. error of the mean is \$81,420



Statistics:		Forecast values
	Trials	10,000
	Base Case	\$194,068,676
	Mean	\$191,125,547
	Median	\$190,939,979
	Mode	\$184,976,022
	Standard Deviation	\$8,142,012
	Variance	\$66,292,352,018,579
	Skewness	0.0501
	Kurtosis	2.84
	Coeff. of Variation	0.0426
	Minimum	\$163,730,645
	Maximum	\$217,620,884
	Range Width	\$53,890,239
	Mean Std. Error	\$81,420

#### Forecast: Inflation (cont'd)

Percentiles:	Forecast values
0%	\$163,730,645
10%	\$180,738,755
20%	\$184,147,560
30%	\$186,714,731
40%	\$188,912,605
50%	\$190,938,265
60%	\$193,052,081
70%	\$195,417,259
80%	\$198,080,862
90%	\$201,860,395

#### Forecast: Schedule Risks (Mo)

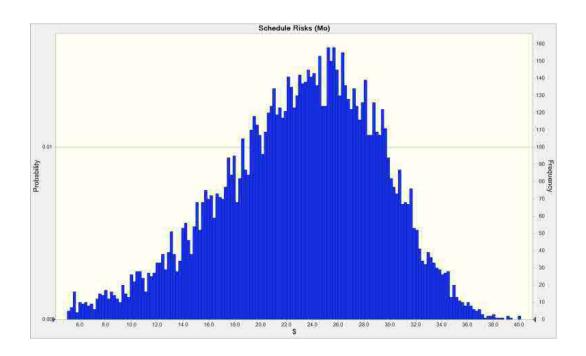
#### Summary:

Entire range is from -2.9 to 40.1

Base case is 28.7

100%

After 10,000 trials, the std. error of the mean is 0.1



Statistics:		Forecast values
	Trials	10,000
	Base Case	28.7
	Mean	22.9
	Median	23.5
	Mode	5.5
	Standard Deviation	6.4
	Variance	40.6
	Skewness	-0.5227
	Kurtosis	3.22
	Coeff. of Variation	0.2788
	Minimum	-2.9
	Maximum	40.1
	Range Width	43.1
	Mean Std. Error	0.1

Forecast: Schedule Risks (Mo) (cont'd)

Percentiles:	Forecast values
0%	-2.9
10%	14.3
20%	17.7
30%	20.0
40%	21.8
50%	23.5
60%	25.1
70%	26.6
80%	28.3
90%	30.5
100%	40.1

#### **Forecast: Total Project Completion Date**

#### Summary:

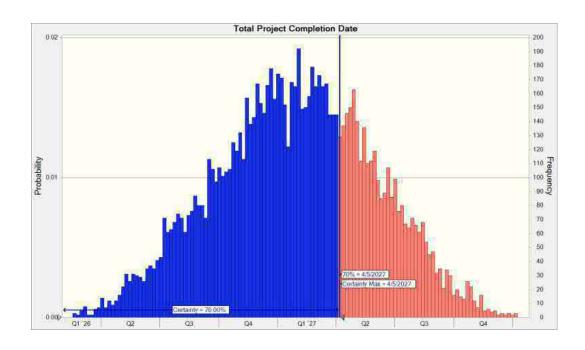
Certainty level is 70.00%

Certainty range is from -∞ to 4/5/2027

Entire range is from 1/24/2026 to 1/24/2028

Base case is 3/30/2027

After 10,000 trials, the std. error of the mean is 1.23



Statistics:		Forecast values
	Trials	10,000
	Base Case	3/30/2027
	Mean	1/26/2027

Median	1/29/2027
Mode	4/26/2026
Standard Deviation	123.28
Variance	15,198.26
Skewness	-0.0610
Kurtosis	2.61
Coeff. of Variation	0.0027
Minimum	1/24/2026
Maximum	1/24/2028
Range Width	729.63
Mean Std. Error	1.23

#### Forecast: Total Project Completion Date (cont'd)

Percentiles:	Forecast values
0%	1/24/2026
10%	8/13/2026
20%	10/11/2026
30%	11/22/2026
40%	12/26/2026
50%	1/29/2027
60%	3/2/2027
70%	4/5/2027
80%	5/13/2027
90%	7/6/2027
100%	1/24/2028

#### Forecast: Total Project Costs (CY)

Includes base costs, prior costs, fixed costs, and risks

#### Summary:

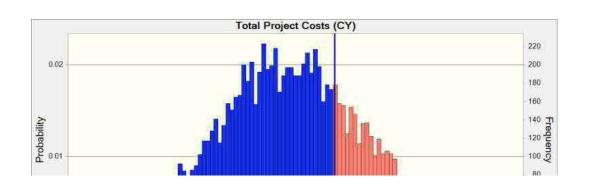
Certainty level is 70.00%

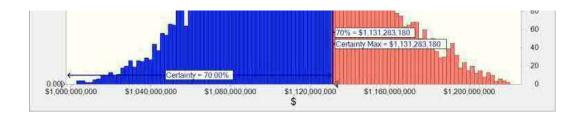
Certainty range is from  $-\infty$  to \$1,131,283,180

Entire range is from \$971,223,202 to \$1,254,980,265

Base case is \$1,114,936,165

After 10,000 trials, the std. error of the mean is \$388,458





Statistics:		Forecast values
	Trials	10,000
	Base Case	\$1,114,936,165
	Mean	\$1,111,598,110
	Median	\$1,110,423,234
	Mode	\$1,094,721,503
	Standard Deviation	\$38,845,838
	Variance	\$1,508,999,105,349,250
	Skewness	0.1463
	Kurtosis	2.83
	Coeff. of Variation	0.0349
	Minimum	\$971,223,202
	Maximum	\$1,254,980,265
	Range Width	\$283,757,063
	Mean Std. Error	\$388,458

#### Forecast: Total Project Costs (CY) (cont'd)

Percentiles:	Forecast values
0%	\$971,223,202
10%	\$1,062,416,552
20%	\$1,078,417,219
30%	\$1,089,811,431
40%	\$1,100,107,697
50%	\$1,110,416,948
60%	\$1,120,514,902
70%	\$1,131,283,180
80%	\$1,145,052,969
90%	\$1,162,835,774
100%	\$1,254,980,265

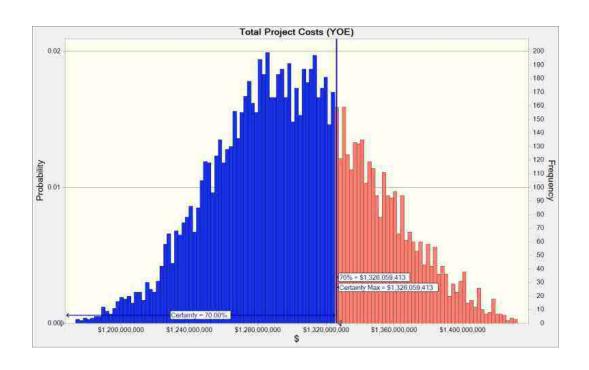
Forecast: Total Project Costs (YOE)

#### Summary:

Certainty level is 70.00%

Certainty range is from  $-\infty$  to \$1,326,059,413

Entire range is from \$1,134,953,847 to \$1,468,312,467



Statistics:		Forecast values
	Trials	10,000
	Base Case	\$1,309,004,841
	Mean	\$1,302,725,238
	Median	\$1,301,295,908
	Mode	\$1,285,783,658
	Standard Deviation	\$46,121,623
	Variance	\$2,127,204,067,666,830
	Skewness	0.1387
	Kurtosis	2.82
	Coeff. of Variation	0.0354
	Minimum	\$1,134,953,847
	Maximum	\$1,468,312,467
	Range Width	\$333,358,619
	Mean Std. Error	\$461,216

#### Forecast: Total Project Costs (YOE) (cont'd)

Percentiles:	Forecast values
0%	\$1,134,953,847
10%	\$1,244,543,752
20%	\$1,263,162,052
30%	\$1,276,898,604

40%	\$1,289,017,297
50%	\$1,301,283,271
60%	\$1,313,537,813
70%	\$1,326,059,413
80%	\$1,342,017,961
90%	\$1,363,950,814
100%	\$1,468,312,467

End of Forecasts



#### FHWA / NCDOT I-2513: I-26 Connector Cost Estimate Review Agenda



Dates: September 11, 2018 – September 13, 2018

**Location:** NCDOT Century Center – Building B

PDEA Large Conference Room

1020 Birch Ridge Road Raleigh, NC 27610

**CER Facilitators:** Charles Luedders, FHWA Major Projects Team

Michael Smith, FHWA Major Projects Team

Jim Martin, FHWA Major Projects Engineer, NC Division Office

#### Core NCDOT Team:

Steve Cannon, Div. 13 Project Dev. Engineer Phil Culpepper, Estimating Management Forrest Dungan, Estimating Management Theresa Ellerby, Project Management Unit

Donna Keener, Design-Build Embedded Consultant

Karen Lovering, Estimating Management
Randy McKinney, Division 13 Const. Engineer
Brendan Merithew, Div. 13 Proj. Team Lead
Kevin Moore, Project Management Unit
Derrick Weaver, Environmental Policy Unit

#### Core Consultant Team:

Andrew Bell, AECOM Neil Dean, AECOM Celia Miars, AECOM Joanna Rocco, AECOM Eric Spalding, AECOM

#### Call in / Webinar information:

https://connectdot.connectsolutions.com/michaelsmith

Dial In: 877-336-1839 Access: 2006524

TUESDAY 09/11/18	TOPIC	INVITEES
10:00 a.m.	CER Introduction by FHWA	Chris Werner, Technical Services Director Virginia Mabry, Manager of the Project Management
10:45 a.m.	Project Overview by Project Personnel	Unit Mark Gibbs, Division Engineer, Div. 13 All Subject Matter Experts
11:15 a.m.	Overview State Estimation Process	Core Project Team
12:00 p.m.	Lunch	
1:00 p.m.	Base Variability & Market Conditions	
2:00 p.m.	Soft Costs (administrative, inflation, allowances)	Core Project Team
2:30 p.m.	Contingency/Risk Register Items	
3:30 p.m.	Structures, Retaining Walls, Railroad Coordination, and Sound Barriers	Kevin Fischer, Asst. State Structures Engineer David Stutts, Structures Project Engineer Cameron Cochran, Regional Bridge Const. Engr. Chris Medlin, Division Bridge Program Manager Missy Pair, Noise & Air Harry Lucas, Estimating Unit John Sloan, AECOM Structures Tom Hepler, AECOM Tracy Roberts, HNTB (Embedded Noise Consultant)
5:00 p.m.	Adjourn	



#### FHWA / NCDOT I-2513: I-26 Connector Cost Estimate Review Agenda



WEDNESDAY 09/12/18	TOPIC	INVITEES
8:00 a.m.	Recap of Day 1	Core Project Team
8:30 a.m.	Earthwork, Drainage, Pavement, Roadway, Geotechnical	Brenda Moore, Roadway Roger Kluckman, Special Design Section Shane Clark, Western Region Geotechnical Engineer Matt Lauffer, Hydraulics Unit Meme Buscemi, AECOM Hydraulics
9:30 a.m.	Roadside Environmental (Erosion Control & Landscaping)	Mark Staley, Roadside Environmental Engineer Jeremy Goodwin, Erosion Control Jeff Lackey, Aesthetic Engineering Bob Kopetsky, Landscape Design
10:00 a.m.	Traffic Control, Signing, Lighting	Don Parker, Work Zone Traffic Control Roger Garrett, Work Zone Traffic Control Kelvin Jordan, Signing Jose Martinez, Signing Paul Chan, Lighting Tom Hepler, AECOM
10:30 a.m.	Traffic Signals and ITS	Tim Williams, Signal Design Nicholas Zinser, Signal Design Paul Marak, ITS Design Gregg Green, ITS Design
11:00 a.m.	Environmental/ Permitting/Mitigation	Marissa Cox, Biological Surveys Carla Dagnino, Env. Coordination & Permitting Jeff Hemphill, Env. Coordination & Permitting Roger Bryan, Div. 13 Environmental Supervisor Yates Allen, Div. 13 Environmental Specialist Heather Wallace, CALYX
12:00 p.m.	Lunch	
1:00 p.m.	Utilities (wet and dry)	Greg Sealy, Sr. Utility Coordinator Todd Lapham, Sr. Utility Coordinator Donna Jackson, Mott MacDonald (Embedded Utilities)
1:30 p.m.	Right of Way	Norman Medford, Area ROW Appraiser Sean Ward, ROW Appraiser James McGowan, State Appraiser Sarah White, ROW Unit Claire Tronel, AECOM ROW



#### FHWA / NCDOT I-2513: I-26 Connector Cost Estimate Review Agenda



2:30 p.m.	Revisit estimate items, i.e. soft costs – as necessary	
3:30 p.m.	Review and finalize risk register details, including descriptions and aggregate minor risks	Core Project Team
5:00 p.m.	Adjourn	
THURSDAY 09/13/18	TOPIC	INVITEES
8:00 a.m.	Findings and Report Preparation	None (FHWA)
8:00 a.m. 8:30 a.m.	Findings and Report Preparation  Presentation Dry Run	None (FHWA)  Core Project Team

				TIME / TOPIC	
TUESDAY, September	11, 2018		10:00 a.m.	10:45 a.m.	11:15 a.m.
Name	Representing	Email Address / Phone Number	CER Introduction by FHWA	Project Overview by Project Personnel	Overview State Estimation Process
Charles Luedders			/		
Jim Martin	FITWA	James. Martin C dot- gov		V	
Michael Smith			1		
Andrew Bell	AECOM	andrew. bell@aecom. com /919-239-7189	1	/	1
Steve Cannon			./		
Philip Culpepper	NCDOT : Estimating Hange	enent peulpapper@nedot. com/919-707-6934	V	V	
Neil Dean	AECOM	neil. Lean Pascon. com 1919-239-7155	V		
Forrest Dungan					
Theresa Ellerby	NCDOT	tellertydof @ ame tellerby encdotga	V	7-2-7	
Donna Keener	Design-Build	dekeenere hedot.gov			/
Karen Lovering	V.J.C.				
Randy McKinney	NODET	[mcKinney @ NCDOT. GOV 9 828-25/6/7/	V	V	1
Brendan Merithew			1/		
Celia Miars	AECOM	celia. miars@aecom. com/919-854-6255	V	1	<b>√</b>
Kevin Moore	NCOOT-PMU	Kmoore @nodot.gov/919-707-6287	V	V	1/
Joanna Rocco	AEcom	jeanna, rocco@aecom.com/919.239.7179	V	1	/
Eric Spalding	AECOM	eric-spalding@ aecom.com /919-854-7751	1	/	1
Demick Weaver	NCDOT	DERRICK DWEATEL (a) MCDOT. GOV /919-707-6253		/	/

TUESDAY, September 11, 2018 10:00 10:45 11:15 a.m. a.m. a.m. CER Introduction by FHWA Project Overview by Project Personnel Overview State Estimation Process Email Address / Name Representing **Phone Number** Yates Allen Meme Buscemi Paul Chan Shane Clark Marissa Cox Carla Dagnino Karmen Dais tfeltes@hntb.com/919-710-5927 HNTB Travis Feltes Kevin Fischer Roger Garrett Mark Gibbs Gregg Green Jeff Hemphill Tom Hepler Donna Jackson Kelvin Jordan Roger Kluckman Bob Kopetsky HNTB jkuse@hn+b.com 919-424-0424 Jessica Kuse Jeff Lackey Todd Lapham Matt Lauffer

TUESDAY, September 11, 2	2018		10:00 a.m.	10:45 a.m.	11:15 a.m.
'Name	Representing	Email Address / Phone Number	CER introduction by PHWA	Project Overview by Project Personnel	Overview State Estimation Process
Harry Lucas			O.E.	2.2	6 2
Virginia Mabry					
Jose Martinez					
Chris Medlin			1		
Brenda Moore					
Missy Pair					
Tracy Roberts			1		
Greg Sealy					
John Sloan					WX.
Mark Staley			V		T.
David Stutts			1		
Clair Tronel			1.7		
Sean Ward					
Chris Werner		II , The party			
Sarah White					
Tim Williams					
Nicholas Zinser					
Roger Bryah	NCDOT-Div.13		J		
	185				

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FHWA / NCDOT

STIP No. I-2513 (I-26 Connector)

Cost Estimate Review

Sign-In Sheet

				TIME / TOPIC						
TUESDAY, September 11, 2018			1:00 p.m.	2:00 p.m.	2:30 p.m.	3:30 p.m.				
Name.	Representing	Email Address / Phone Number	Base Variability & Market Conditions	Soft Costs (administrative, inflation, allowances)	Contingency/Risk Register items	Structures, Retaining Walls, Railroad Goordination, and				
Charles Luedders				V	V					
Jim Martin				1	1					
Michael Smith			/	V		v/				
Andrew Bell						1/				
Steve Cannon						V				
Philip Culpepper						V				
Neil Dean			1	1	V	1/				
Forrest Dungan										
Theresa Ellerby				./	1	./				
Donna Keener		- 10.00			N/	1				
Karen Lovering		-			V					
Randy McKinney			1			V				
Brendan Merithew			V	7.2						
Celia Miars				1/	V	V				
Kevin Moore			1	V						
Joanna Rocco			./	V	V	V				
Eric Spalding				/	V	V				
Derrick Weaver			J	V	/	1				

TUESDAY, September 11, 20	118		1:00 p.m.	2:00 p.m.	2:30 p.m.	3:30 p.m.
:Name	Representing	Email Address / Phone Number	Base Variability & Market Conditions	Soft Costs (administrative, inflation, allowances)	Contingency/Risk Register Rems	Structures, Retaining Walls, Railroad Coordination, and Sound Barriers
Cameron Cochran		8	8 2	0,05	0 2	# 3 5 3 A
Travis Feltes						
Tom Hepler						
Kevin Fischer						1
Jessica Kuse				1	/	1
Harry Lucas				-9		/
Chris Mediin						V
Missy Pair						,
Tracy Roberts						V/
John Sloan						V/
David Stutts						
					-	

							TIME	TOPIC				2000
WEDNESDAY, September 12,	2018		8:00 a.m.	8:30 a.m.	9:30 a.m.	10:00 a.m.	10:30 a.m.	11:00 a.m.	1:00 p.m.	1:30 p.m.	2:30 p.m.	3:30 p.m.
Name	Representing	Email Address / Phone Number	Recap of Day 1	Earthwork, Drainage, Pavement, Roadway, Geotechnical	Roadside Environmental (Erosion Control & Landscaping)	Traffic Control, Signing, Ughting	riaffic Signals and ITS	Environmental / Permitting / Mitigation	Utilities (wet and dry)	Right of Way	Revisit estimate Items, I.e. soft costs as necessary	Review and finalize risk
Charles Luedders			V	V	/	/	V	~	1	V	/	U
Jim Martin			V	V								
Michael Smith			V	V								_
Andrew Bell			10.4	100								
Steve Cannon			1	1								
Phillip Culpepper	-			V								-
Neil Dean			1/	V								_
Forrest Dungan												5-11
Theresa Ellerby			V	1	1	V	V	1/	1		isali S	
Donna Keener			V	V				V	V			
Karen Lovering				100								
Randy McKinney			V	V								
Brendan Merithew				1								
Celia Miars			V	V								
Kevin Moore			V	V								
Joanna Rocco			11	1/	_							
Eric Spalding			1/	1/								
Derrick Weaver				./								_

			a.m.	a.m.	a.m.	10:00 a.m.	10:30 a.m.	11:00 a.m.	1:00 p.m.	1:30 p.m.	2:30 p.m.	3: p.
Name:	Representing	Email Address / Phone Number	Recap of Day 1	Earthwork, Drainage, Pavement, Roadway, Geotechnical	Roadside Environmental (Erosion Control & Landscaping)	Traffic Control, Signing, Lighting	reffic Signals and ITS	Environmental / Permitting / Mitigation	Utilities (wet and dry)	Right of Way	Revisit estimate Items, I.e. soft costs as necessary	Review and finalize risk
Yates Allen											E	-
Roger Bryan					V			1				
Meme Buscemi				V								T
Paul Chan						1						
Shane Clark			V	1								
Marissa Cox								1				
Carla Dagnino								/				
Karmen Dais						/						
Travis Feltes	342				1	1	1	1	/	/	-	ı
Roger Garrett						V						
Jeremy Goodwin					V						188	
Gregg Green												
Jeff Hemphill								/				
Tom Hepler						V	V					
Donna Jackson							_ V					
Kelvin Jordan						1						
Roger Kluckman			V	V		V						
Bob Kopetsky											X	T
Jessica Kuse			V	V	1	/	1	V	/	/	/	L
Jeff Lackey		170			/							-

WEDNESDAY, September 12,	2018		8:00 a.m.	8:30 a.m.	9:30 a.m.	10:00 a.m.	10:30 a.m.	11:00 a.m.	1:00 p.m.	1:30 p.m.	2:30 p.m.	3:3 p.n
Name	Representing	Email Address / Phone Number	tecap of Day 1	Earthwork, Drainage, Pavement, Roadway, Geotechnical	Roadside Environmental (Erosion Control & Landscaping)	Traffic Control, Signing, Lighting	rraffic Signals and ITS	Environmental / Permitting / Mitigation	Utilities (wet and dry)	Right of Way	Revisit estimate items, I.e. soft costs as necessary	Review and finalize risk
Todd Lapham		12 P. C.						ш а	1/	~	& - C	~
Matt Lauffer		00		/					V			
Paul Marak												
Jose Martinez												
James McGowan										菱		
Norman Medford									J	1/		
Brenda Moore				/						V		
Don Parker												
Greg Sealy												
Mark Staley							130					
Claire Tronel								5.2			-85	
Sean Ward									V	1	100	
Sarah White										V		
Tim Williams										101		
Nicholas Zinser												

### FHWA / NCDOT STIP No. I-2513 (I-26 Connector) Cost Estimate Review Sign-In Sheet

				TIME / TOPIC
10	THURSDAY, Septemb	per 13, 2018		9:30 a.m.
	Name:	Representing	Email Address / Phone Number	Presentation Dry Run
	Charles Luedders	FHWA		V
FHWA	Jim Martin	FHWA FHWA		U
	Michael Smith	FHWA		
	Andrew Bell			
	Steve Cannon			
	Philip Culpepper	NCDOT Estimating		
ΑM	Neil Dean	AEcom		
CORE PROJECT TEAM	Forrest Dungan			1.15
RE PRO	Theresa Ellerby	HEDOT-PMU		/
00	Donna Keener	NCDOT D-B		1
	Karen Lovering	NCDOT Estimating Mg mut		V
	Randy McKinney	) 0		

THURSDAY, September	er 13, 2018		9:30 a.m.	
Name	Representing	Email Address / Phone Number	Presentation Dry Run	
Brendan Merithew				
Celia Miars	Aecom			
Kevin Moore	NCDOT			
Joanna Rocco	Aecom		V	
Eric Spalding	Spalding AElom eric. Spalding @ aecom.com			
Derrick Weaver	NC DOT NCDOT	nalbadawi@ncdot.gov		
Nidal Albadawi	NCDOT	nalbadawi@ncdot.gov		
Mark Gibbs				
Jessica Kuse	HNTB			
Virginia Mabry				
Chris Werner	-			

#### MEETING SUMMARY



To: Project File

From: Celia Miars

AECOM

Date: October 5, 2018

RE: I-2513 Aesthetics Advisory Committee Meeting

NCDOT STIP Project I-2513 (I-26 Connector)

#### Meeting Attendees:

Susan Loftis

Ken Putnam – City of Asheville Ted Figura – EWANA Jason Gilliland – SDS Joe Minicozzi – Urban3 Mike Zukosk – AAC Woody Farmer David Nutter Jeff Lackey – NCDOT Roadside Environmental Kyle Cooper - NCDOT Roadside Environmental Derrick Weaver – NCDOT EPU Theresa Ellerby – NCDOT PMU Neil Dean – AECOM Celia Miars – AECOM

Joanna Rocco – AECOM Eric Spalding – AECOM

The project team attended the first meeting of the Aesthetic Advisory Committee (AAC) on October 3, 2018 at the City of Asheville Municipal Building. The purpose of the meeting was to discuss the roles and responsibilities of the AAC and review NCDOT guidance regarding aesthetic treatments for NCDOT projects.

Ken Putnam began the meeting by stating the committee is currently soliciting for additional members, with an application deadline of November 5, 2018. Once all the committee members have been selected, the AAC will elect/appoint a chairperson.

Jeff Lackey gave a presentation discussing NCDOT's aesthetics policies and procedures. Several examples across the state were discussed. There are three levels of design for roadway project aesthetics and landscaping: standard, enhanced, and landmark. NCDOT will fund and design to a standard level of design. Municipalities can add capital to the project to increase the level of design to enhanced or landmark. In order to increase the level of design, a municipal agreement must be in place stating the municipality will maintain the area at a high level.

During the meeting, Joanna provided the AAC members with a weblink to the NCDOT Aesthetics Guidance Manual.

General discussion regarding the AAC's roles and points of interest within the I-26 Connector project study area followed. Meeting information and documents from previously formed community

MEETING SUMMARY October 5, 2018 Page 2 of 2

committees regarding aesthetics for the project were discussed. It was noted all the committee members should review these materials.

The meeting concluded at 3:30 p.m. The next AAC meeting will take place once all members have been chosen.

#### **MEETING SUMMARY**



To: Meeting Attendees

Project File

From: Joanna Rocco

**AECOM** 

Date: November 5, 2018

RE: Biological Assessment and Bridge Construction Meeting

NCDOT STIP Project I-2513 (I-26 Connector)

NCDOT Division 13 Conference Room, Asheville NC

#### Meeting Attendees:

Derrick Weaver, NCDOT – EPU Jeff Ball, Wright Brothers Construction

Randy McKinney, NCDOT – Division 13 Tim Goodson, Tennoca Construction Company

Marissa Cox, NCDOT – Biological Surveys\* Heather Wallace, CALYX\*

Matt Lauffer, NCDOT – Hydraulics\* Mary Frazer – Three Oaks Engineering\*

Chris Manley, NCDOT – Biological Surveys\*

Marissa Miller, NCDOT – Biological Surveys\*

Mike Sanderson, NCDOT – Biological Surveys\*

Celia Miars, AECOM

Joanna Rocco, AECOM Eric Spalding, AECOM

The project team met on October 3, 2018 to discuss the Biological Assessment (BA) for the gray bat and Appalachian elktoe, two federally endangered species with biological conclusions of "May Affect – Likely to Adversely Affect" for the I-26 Connector project. The purpose of the meeting was to review project commitments that NCDOT may present to USFWS at a follow-up meeting later in the month regarding construction of the bridges over the French Broad River and Hominy Creek.

Discussion points from the meeting are summarized below:

- Marella is currently working on the Biological Opinion (BO) for I-4400/I-4700 and is waiting on additional information from the gray bat research study. It was noted she plans to have the BO issued prior to Thanksgiving.
- Hill Street Culvert System discussion:
  - Heather Wallace noted the detectors closest to the Hill Street culvert roost had high activity.

<sup>\*</sup>Joined meeting via telephone

- The Hill Street culvert system is extensive at approximately 162 acres total in size. It is also 60 years old, and under 60 ft. of fill in some locations, so the likely recommendation will be to rehabilitate the culvert.
- NCDOT Hydraulics recommends maintaining 8x8 culvert and relining it; culverts below Atkinston St. (metal pipes) would all be replaced; 48" pipe can be rerouted if needed.
- It was noted a portion of the culvert system that joins the concrete box culvert upstream could create a larger roost site if it is replaced (84"CMP) with concrete.
- It was noted noise will vibrate through the culvert system during rehabilitation and replacement. Marella would probably prefer that main pipe is disturbed the least amount possible.
- It will be assumed the entire 8x8 RCBC and downstream arched pipes will need to be rehabilitated as a worst-case scenario when defining the conservation measures associated with the Hill Street culvert; the rehabilitation could be performed between October and April, with the moratorium applying to the main portion of the culvert only.
- NCDOT Hydraulics will need to access the culvert to get a better understanding of deficiency of system, and this information will be needed for the BA. Due to the presence of bats, the end of November/early December would be the earliest time to access culvert - NCDOT will discuss with USFWS. NCDOT could potentially use robotic camera.
- A commitment will be added in the BA that notes the staging area for the culvert will be replanted, and this area will not be used for staging outside of the area for the 8x8 RCBC and downstream arched pipes.
- A commitment will be added in the BA to limit lighting and construction activities during
  nighttime of moratorium and within 50 feet of riverbank during moratorium with exception of any
  activity over 30 feet in air.
- Any lighting during construction on bridge will be directed to work area and not towards water.
- Acoustic detector Site 6, in the vicinity of the Emma Road community and opposite the culvert on the other side of the river, recorded gray bat activity, and may need to be included in the moratorium.
- Matt suggested creating "alternate" roost sites for bats while the roost culvert is being disturbed.
  This could potentially create an alternate site with a base flow, located near the river, and provide
  other conditions that mimic the conditions in the Hill St. culvert. Division was ok with this idea.
  BSG noted that if bats use these structures, they cannot be removed, and must be maintained.
- Work on the new FBR bridge should not be contingent on work on the culvert, and vice versa.
- Would take 5 years to complete culvert replacement/refurbishment and new bridge over FBR with restrictions versus 4 years with no restrictions.

#### Other bridges:

- The 7 bridges on I-40 over Hominy Creek will likely be constructed at the same time since the maintenance of traffic will be the same for all.
- It will likely take 2.5 to 3 years to complete replacement of all seven bridges in this area.
- The number of piers needed and potential length of causeway for each crossing will be determined to give a worst-case scenario for each bridge.
- Randy noted NCDOT can require the design-build team to send phasing plan for construction of bridges which could be provided to USFWS for their information (not for comment or approval).

• The project team should define the limits of the construction area along I-240/I-26 closest to the French Broad River and west of the Amboy Road interchange where we will not be able to commit to the 50 feet "no lighting" zone during the moratorium window.

#### Action Items:

- AECOM to poll meeting attendees and USFWS regarding date for next meeting. *Update: Meeting with USFWS will be held 11/14 in Asheville.*
- AECOM to prepare map of buffer area associated with new French Broad River bridge denoting area of no lighting between April 15 and October 1.
- AECOM to prepare table that indicates the number of piers needed and potential length of causeway for each crossing. *Update: table sent to project team on 10/12/18.*
- AECOM meeting minutes
- AECOM River User Safety Plan
- AECOM hydraulic modeling to determine how flow in river will be affected by causeways of various sized. Related: Will there be any significant ponding or significant increases in flow that will extend outside the Action Area?
- Matt send location info for culverts with spray lining in Raleigh to Marissa
- Matt organize "tour" of culverts in/near Asheville with spray lining.
- Matt check on delivery date for USGS proposal
- Randy send SEC/clearing language that Marella liked to Marissa
- Heather Update Conservation measures, continue work on BA
- Mary continue work on BA
- Mary/Marissa Track down appropriate NPDES language to use in place of DSSW
- Marissa follow up with Marella regarding Action Area. Is she ok with our proposed limits?
- Derrick discuss updates to CMs with Marella

#### MEETING SUMMARY



To: Project File

From: Claudia Lee

**AECOM** 

Date: November 26, 2018

RE: I-2513 Bridge Construction and Biological Assessment Meeting - November 14, 2018

NCDOT STIP Project I-2513 (I-26 Connector)

#### Meeting Attendees:

Derrick Weaver – NCDOT EPU

Chris Manley\* – NCDOT Biological Surveys
Theresa Ellerby – NCDOT PMU

Mike Sanderson\* - NCDOT Biological Surveys

Matt Lauffer – NCDOT Hydraulics Paul Chan\* – NCDOT Lighting Felix Davila – FHWA Greg Hall\* – NCDOT Lighting

Brian Yanchik\* – FHWA Mary Fraser\* – Three Oaks Engineering

Marella Buncick – USFWS Heather Wallace\* – Calyx (NV5)

Claire Ellwanger – USFWS

Claudia Lee – AECOM

Cameron Cochran – NCDOT Div. 13

Randy McKinney – NCDOT Div. 13

Marissa Cox\* – NCDOT Biological Surveys

Claudia Lee – AECOM

Neil Dean – AECOM

Joanna Rocco – AECOM

Eric Spalding – AECOM

A meeting was held at 1:00 PM on Wednesday, November 14, 2018 in the NCDOT Division 13 district maintenance office in Asheville, NC. The purpose of this meeting was to review the project commitments for the Biological Assessment, and to discuss bridge construction and lighting on the project. Attendees of the meeting are shown above. Joanna began the meeting by providing an update and current project status.

Paul Chan and Greg Hall gave an overview of NCDOT lighting design practices and preferences. NCDOT is currently undertaking a statewide project to upgrade lighting to LED and the project is expected to conclude in March. Greg indicated that 8 miles north of I-40 is currently lit with LEDs. The intention was to take what had recently been installed along the project corridor and reuse any lights for the I-2513 project. Shoulder-mounted lights may be removed because they are a maintenance hazard. High mast light poles are preferred in interchanges which flood the area with light. Light temperature is a consideration, as is the use of dimmable LEDs. The lighting plan should be reviewed for where 45' tall fixtures may be used instead of high mast lights as the gray bat is particularly light-averse. Marella suggested that the group should review the Bonner Bridge plan and the types of lighting used there as the goals are similar due to the presence of endangered sea turtles. Felix indicated that rainy conditions should be considered when designing the lighting.

<sup>\*</sup>Joined via telephone

MEETING SUMMARY November 26, 2018 Page 2 of 3

Derrick reviewed the conservation measures and each were discussed and edited as necessary. Discussion included:

#### Measures to Avoid/Minimize Effects to Gray Bat during Hill St. Construction

- Added "Culvert will be monitored for bat activity before construction begins". Matt said that the video of the culvert will allow for identification of the areas where bats congregate and the locations needing repair. The underwater investigation team does not anticipate major changes.
- Marella reiterated the large number of invasive species in the Hill St. culvert area. Removal of invasive plant species would be a positive side effect. She requested to look into a way to gain control over the outlet of the culvert. Randy will begin a schedule for spray. Randy requests the outlet to be owned as right-of-way.
- Incorporate a staging area at both ends of the Hill St. culvert.
- Consider a conservation easement at the outlet end of the culvert.
- Shield lighting from Southern States property at the outlet end of the culvert.
- Stormwater at Riverside Drive is a concern; stormwater should not discharge into the Hill St. culvert.

#### Measures to Avoid/Minimize Effects to Gray Bat during Bridge Construction

- Randy anticipates 90% of the bridge construction to occur during the daytime. Cameron agreed and added that work can also occur outside of the 50' buffer zone to avoid lighting and noise issues to the gray bats.
- Marella noted the lighting at Southern States could be shielded on the back side of the property in order to avoid additional light. Marissa will look into this further.

#### **Containment**

Matt and Claudia will work to identify language to be added to the containment commitments that removes the fueling structures out of/above the floodplain. Concerns were raised about the ability of the contractor to easily identify the floodplain while in the field.

Derrick reiterated that any bridges over Hominy Creek will have bents on the edges, not in the middle, and will be avoided if possible. There may be bents on the bank.

#### **Agency Coordination**

Marissa will coordinate the commitment regarding arranging a meeting with the representatives of regulatory agencies prior to the due date for Technical and Price Proposals. The commitment about reinitiation of ESA Section 7 consultation will be rewritten to show checkpoints of design matching compliance. Other minor wording suggestions were made to require acknowledge of receipt of deliverables.

#### Hill St. Culvert

It was requested that there be specifics included in the contract to determine how long the bats will be disrupted, specifically regarding the number of days, phasing, and noise. Night work was posed as a workable solution for time delays. Marella will investigate additional potential bat box locations for relocation.

MEETING SUMMARY November 26, 2018 Page 3 of 3

Derrick closed the meeting at 4:30 pm. The next meeting will be the public hearing on December 4<sup>th</sup>.

#### Action Items:

- Review the lighting plan and determine where the river should not be flooded with light
- Randy to schedule vegetation spray at outlet of Hill St. culvert
- Marella to identify other potential bat box locations near the Hill St. culvert
- Matt and Claudia to develop language for removing fueling from an easily field identified boundary
- Matt will get Marella statistics on catastrophic accidents with spills into the French Broad



## STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

ROY COOPER

GOVERNOR

SECRETARY

MEMO TO: Post Hearing Meeting Attendees

FROM: Theresa Ellerby, CPM

Project Management Unit

DATE: February 27, 2019

SUBJECT: Project: 34165.1.2 (I-2513) Buncombe County

F.A. Number NHF-26-1(53)

Asheville – I-240 & New Route from I-26 to US 19-23-70

I-26 Connector

#### **Post Hearing Meeting**

The post hearing meeting was held in the Structures Design conference room at 1:00pm on January 11, 2019, to discuss the comments received from the Design Public Hearing. The Design Public Hearing was held on December 4, 2018 at the Renaissance Asheville Hotel located at 31 Woodfin Street in Asheville. Approximately 450 people were in attendance, with a total of 466 comments received during the comment period, which ended on January 4, 2019. The responses provided in this summary are applicable at the time this memorandum was drafted; however, updated information will be included in the FEIS and ROD as it becomes available.

#### **EXECUTIVE SUMMARY:**

- The I-26 Connector project is an interstate freeway project that would connect I-26 in southwestern Asheville to US 19-23-70 in northwest Asheville and have a total length of approximately 7 miles.
- The project would extend I-26 from I-40 to US 19-23-70 and would allow for the eventual designation of I-26 from Charleston, South Carolina, to Johnston City, Tennessee, should a remaining section (TIP Project A-0010A) from the north end of this project to Mars Hill, North Carolina be completed.
- The project would upgrade and widen I-240 from I-40 to Patton Avenue and then cross the French Broad River as a new freeway to US 19-23-70 slightly south of the Broadway interchange.
- The project is needed to upgrade the interstate corridor to meet current design standards for the interstate system, improve system linkage by connecting I-26 south of Asheville with US 19-23-70, address traffic capacity problems along the existing I-

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Website: www.ncdot.gov

240 corridor (future I-26), and increase the remaining useful service of the Captain Jeff Bowen Bridges.

#### STATISTICAL OVERVIEW OF COMMENTS:

#### **Comments Received**

- 466 public comments received
- 155 in the form of standard language form letters

#### **Comment Types**

Form Letters: 155

Emails: 133

Comment Forms: 85

Contact Us website: 45

Transcript: 17

Individual Letters: 17

Hotline Calls: 2

#### **Comment Subjects:**

• Design: 304

Bicycle/Pedestrian:245

• Community Impacts: 195

Light/Air/Noise Pollution: 59

Project/Construction Schedule: 39

Safety: 31

Environmental Impacts: 25

Right-of-Way and Relocation:

22

Other: 22

Alternative Choice: 22

• Traffic: 20

Access Concerns: 20

Project Costs: 18

Impacts to Personal Property:

• Business Impacts: 17

Environmental Justice: 15

• Construction Impacts: 8

Historic and Archaeological

Resources: 6

Threatened and Endangered

Species: 2

#### **Special Interest Groups**

Comments were received from the Aesthetics Advisory Committee, Asheville on Bikes, Citizens I-26 Connector Action (CICA), Council of Independent Business Owners, East West Asheville Neighborhood Association, WECAN, Montford Neighborhood Association, and Mountain True.

#### **General Project Opinions**

10 percent (49) expressed support for the project

- 23 percent (107) expressed opposition to the project
- 67 percent (310) expressed neutral opinions for the project, mostly suggesting design revisions to be made in various locations

#### **GENERAL RESPONSE TO COMMENTS**

#### Design

#### **Comment Summary**

Approximately 304 comments were received relating to design of the project, of which 155 comments were derived from a form letter. The form letter noted additional design revisions were still warranted to meet the community's vision. Several comments suggested specific design revisions, including:

- Number of lanes on I-240 in Section A, noting eight lanes were still shown in the public hearing maps
- Downgrading I-240 to a boulevard between eastern I-40 and Patton Avenue
- Utilizing design exceptions where possible in order to reduce the project footprint
- Reducing the number of lanes throughout the project, including the flyovers, I-240, Jeff Bowen Bridges, and Amboy Road
- Reducing shoulder widths throughout the project
- Reducing median widths throughout the project by utilizing concrete barriers
- Tightening the Haywood Road interchange
- Tightening the I-240/Patton Avenue interchange to the east of the Jeff Bowen Bridges
- Reducing the number of lanes on the split diamond interchange at Amboy Road and Brevard Road
- Incorporating the visions noted in the Sam Schwartz report
- Incorporating complete streets throughout the project
- Removing the flyover bridges and "stacking" I-26 traffic over the existing Jeff Bowen Bridges
- Utilizing the existing number of lanes and configuration of the Haywood Road Bridge
- Reducing the height of the flyover bridges
- Limiting the number of lanes on Riverside Drive to two lanes, with bicycle/pedestrian accommodations
- Reducing the speed limit throughout the project in order to reduce the footprint of the design

#### Response

• Number of lanes on I-240 in Section A, noting eight lanes were still shown in the public hearing maps

The typical section for I-240 in Section A includes six through lanes with auxiliary lanes between interchanges where necessary. This section only includes six basic freeway lanes.

• Reducing the number of lanes throughout the project, including the flyovers, I-240, Jeff Bowen Bridges, and Amboy Road

Lane configurations were determined by geometric constraints and traffic operations analyses, therefore, reducing the number of lanes throughout the project, including Amboy Road, the ramps of the split diamond interchange between Amboy Road and Brevard Road, the flyovers, I-240, and the Jeff Bowen Bridges is not feasible.

• Downgrading I-240 to a boulevard between eastern I-40 and Patton Avenue

Downgrading I-240 to a boulevard between eastern I-40 and Patton Avenue is outside of the purpose and need of the proposed project.

A double decker bridge was considered as part of the original ADC alternative. In order for geometries to work for the various interchanges, and to be designed to the same standards of the other Detailed Study Alternatives, the double decker bridge alternative was modified to what is now Alternative 4-B.

Furthermore, to construct an upper tier, Patton Avenue would need to be closed to traffic for the duration of construction. Construction costs would likely be extensive due to the highly specialized construction techniques required to implement this strategy and delays to the construction schedule would be extended substantially. Additionally, the existing westbound Patton Avenue bridge is listed on the SHPO National Register and this construction method would likely generate an adverse effect for this resource.

• Reducing shoulder widths throughout the project

Reducing shoulder widths throughout the project would trigger a design exception. Shoulder widths are currently designed in accordance with AASHTO and the NCDOT paved shoulder policy.

• Reducing median widths throughout the project by utilizing concrete barriers

Concrete barriers are utilized throughout Sections A and B in order to reduce median widths. Barriers are not needed in Section C due to the alternative selected, which is a bifurcated interchange configuration.

• Tightening the Haywood Road interchange

During the preliminary design process, multiple interchange configurations were studied in an effort to minimize the footprint at this location. These included an oval-about, the median u-turn diamond interchange, round-abouts at the ramp terminals, and a single point urban diamond interchange. Due to geometric constraints and the proximity of historic resources in the area, the proposed design was carried forward in an effort to minimize impacts to the project area.

• Tightening the I-240/Patton Avenue interchange to the east of the Jeff Bowen Bridges

During the preliminary design process, the project team investigated ways to tighten the horizontal curvature in the vicinity of the I-240/Patton Avenue interchange to the east of the Jeff Bowen Bridges. The current preliminary designs are using horizontal curves with the minimum allowable radius.

• Incorporating complete streets throughout the project

NCDOT is committed to Complete Streets improvements and has continued to coordinate efforts with the City of Asheville to incorporate these improvements into the project in compliance with design and cost-sharing guidelines.

• Reducing the height of the flyover bridges

During the preliminary design process, the heights of the flyover bridges were investigated in an effort to minimize impacts. Elevations are based on design criteria for minimum vertical clearances and minimum grades.

• Limiting the number of lanes on Riverside Drive to two lanes, with bicycle/pedestrian accommodations

NCDOT will continue to coordinate the typical section of Riverside Drive with the City of Asheville.

• Reducing the speed limit throughout the project in order to reduce the footprint of the design

The speed limit throughout the project has been minimized to meet existing speed limits of I-240 and design standards.

• Utilizing design exceptions where possible in order to reduce the project footprint

Through discussions with FHWA, it was noted FHWA has not adopted the 2018 AASHTO "A Policy on Geometric Design of Highways and Streets" at this time, therefore NCDOT is continuing to us the 2011 AASHTO "A Policy on Geometric Design of Highways and Streets" (Green Book) for the purposes of design standards. FHWA did not offer a timeline for when the new policy is expected to be adopted. NCDOT does not anticipate using any new standards for the I-26 Connector project at this time.

Design Exceptions are determined on a case by case basis and are normally justified and approved during the final design phase of the project. Approval authority for design exceptions depends upon the type of work and the highway system. In the case of this project, the Federal Highway Administration would be the approving authority. The FHWA has delegated this authority to the NCDOT, specifically the Roadway Design Unit.

#### **Bicycle and Pedestrian Accommodations**

#### **Comment Summary**

Approximately 245 comments were received regarding bicycle and pedestrian accommodations, of which 155 comments were included in a form letter. The form letter called for the reduction of vehicle lanes to include room for improved bicycle/pedestrian

infrastructure. Several comments noted the lack of bicycle/pedestrian features on the Design Public Hearing maps. General recommendations to incorporate NACTO design standards and standardized pavement markings were also received. The location of bicycle/pedestrian accommodations in relation to entrance/exit ramps was a topic of inclusion traffic calming measures safety concern. The of bicyclists/pedestrians, specifically on Haywood Road, was also noted as a way to increase safety. Additionally, several comments were received requesting bicycle/pedestrian accommodations be constructed and maintained before and during construction of the project, as opposed to after construction. Finally, the form letters and other comments identified several specific locations as areas to add facilities and/or connections to adjacent neighborhoods and communities.

#### Response

Bicycle and pedestrian accommodations shown on the 2018 Public Hearing maps are a part of the project designs and will be constructed as a part of the project. NCDOT is committed to Complete Streets improvements and has continued to coordinate efforts with the City of Asheville to incorporate these improvements into the project in compliance with design and cost-sharing guidelines. In areas where existing sidewalks are being disturbed, the designs show these sidewalks being replaced as a part of the proposed designs. In areas where the various plans propose future pedestrian accommodations, the designs have been developed to accommodate or not preclude these elements from being constructed by the various agencies.

In March 2016, NCDOT and the City of Asheville established the I-26 Connector Working Group, which initiated a series of meetings between members of the City of Asheville City Council, the Asheville Design Center, Buncombe County, FHWA, FBRMPO, NCDOT, and other stakeholders. The purpose of these working group meetings was to discuss methodologies for various technical aspects of the project, discuss FHWA and NCDOT policies that factor into designs of the various project alternatives, receive feedback from local officials and public citizens on various aspects of the project, discuss bicycle/pedestrian accommodations and betterment requests from the City of Asheville, among other topics. Initial discussions of additional bicycle and pedestrian accommodations originated in these meetings, and resulted in a list of betterments provided by the City of Asheville to NCDOT. NCDOT and the City of Asheville have agreed upon several areas where these additional facilities will be included as part of the project designs, and those that will require cost-sharing between NCDOT and the City. This coordination will continue throughout development of the project and into final design.

It is expected that incidental bicycle and pedestrian improvements will be included in the final design of the project, which will be coordinated with the City of Asheville, and will be designed using the AASHTO Guide for the Development of Bicycle Facilities.

The FEIS will include a discussion of existing and proposed facilities as part of the project, and demonstrate how their consistency with local and regional multi-modal plans.

During construction of the project, existing sidewalks and multi-use paths will remain accessible. Proposed bicycle and pedestrian facilities such as sidewalks, multi-use paths, shared bicycle lanes, etc. would be available for use as sections of the project are

completed. Due to grading activities and safety concerns, proposed facilities would not likely be constructed prior to roadway construction. However, construction phasing plans will be determined by the design build team.

#### **Community Impacts/Environmental Justice Impacts**

#### **Comment Summary**

Approximately 195 comments were received regarding community and/or environmental justice impacts accommodations, of which 155 comments were derived from a form letter. The form letter noted the project does not meet the community's vision for the future and additional design changes should occur, such as turning Patton Avenue into an urban, multi-use corridor and tightening up intersections throughout the project to reduce the amount of land used. Other comments received relating to community impacts noted the project was too large and did not fit within the context of Asheville. Additionally it was noted the project could create urban sprawl. Several requests were made to allow the City to develop the land underneath the flyover bridges as parks or for business development. Furthermore, comments requested the land along Patton Avenue be returned to the City for redevelopment.

Several comments received also discussed concern for the impacts to the Burton Street community, noting the community was impacted previously during construction of I-240. Additionally, comments regarding the lack of affordable housing for those that will be displaced within the Burton Street community were also received. Approximately 15 comments were received relating to Environmental Justice impacts.

#### Response

The project is being designed to address project future traffic capacity needs which include both local and regional growth in traffic, as well as the other identified needs in the purpose and need section of the FEIS. The scale of the project is appropriate to meet future traffic needs and to maintain adequate traffic operations. NCDOT will continue to further avoid and minimize impacts due to the project to the greatest extent practicable during final design and construction.

Regarding the development of land underneath the flyover bridges, in the past, agreements between the municipality and NCDOT have been in place to allow use if the use is a transportation use or a park. In some cases, such as underneath the Jeff Bowen Bridges, the City of Asheville is permitted access to the land through an encroachment agreement with the NCDOT. In this instance, the City would file for an encroachment to be approved after construction of the project.

As part of the I-2513 Community Impact Assessment Update (NCDOT 2018), an initial threshold screening and evaluation was conducted to determine the relative impact of the I-26 Connector Project on Environmental Justice populations. Through community screening, field studies, demographic research, and agency coordination and public engagement, it was concluded that no communities would experience a high burden, while only two communities would experience a moderate burden.

Burton Street neighborhood has been classified as an Environmental Justice population that has incurred recurring impacts. NCDOT, with the assistance of a subconsultant that specializes in environmental justice issues, is investigating ways to provide additional

mitigation opportunities to lessen the burden of the project on the Burton Street neighborhood. This is being addressed by the development of a community-driven Burton Street Neighborhood Plan, adopted by the City of Asheville on September 25, 2018. The plan includes a list of mitigation strategies to be implemented by NCDOT as part of the project. It has been estimated that affordable housing is available for those displaced within the project area, it is a goal of the Burton Street Neighborhood Plan to identify areas to improve the availability of these resources to Burton Street residents. The Burton Street Neighborhood Plan will be included in the FEIS.

#### Light/Air/Noise Pollution

#### Comment Summary

Approximately 59 comments were received regarding lighting, air, and noise impacts. Comments received related to air quality noted concerns from increased emissions due to increased traffic volumes. Comments received related to lighting and visual impacts requested an iconic bridge to be constructed as the new flyover bridges or to focus on improving the aesthetics of the Jeff Bowen Bridges. Incorporating aesthetic elements throughout the project was also identified in several comments as an important consideration to be incorporated. Additionally, the use of LED lights on the flyover bridges was suggested, as opposed to traditional lighting. Comments also requested 3D renderings of the project to better display the height of the bridges.

Comments related to noise expressed concerns from increased noise volumes to personal property and a decreased quality of life as a result. Several comments requested additional information regarding the noise analysis, the location of noise barriers throughout the study area, and the process of the noise analysis. Noise impacts during construction were also noted as a concern. Comments requested sound protection measures for Riverside Cemetery. Suggestions were given in several comments to include commitments in the RFP to incorporate "low noise" surface pavement specifications and prevent large trucks from engine braking, also known as "jake braking." Several comments originated from the Montford community.

#### Response

One of the goals of local area plans highlighted in the DEIS and FEIS is to minimize air quality impacts. By providing free-flowing roadways, especially along the interstate, the air quality would be consistent with this goal, and would not exceed the air quality thresholds set forth under the Clean Air Act. The proposed project is located in an attainment area and is not anticipated to create any adverse effects on the air quality of this attainment area.

As previously noted, NCDOT is currently coordinating with the newly-formed Aesthetics Advisory Committee (AAC) to address aesthetic treatments that may be incorporated in the proposed project.

Proposed lighting is currently begin evaluated, and will include LED lighting that is focused towards the bridge to reduce impacts to the federally-endangered gray bat. NCDOT will participate in the discussions of the AAC throughout the final design and construction phases regarding lighting as well.

At the request of the public and the City of Asheville, NCDOT prepared a map of 360-degree photo simulations for the project, in addition to the project visualization shown at the Design Public Hearing. These photo simulations can assist in visualizing what the

proposed project might look like from various points of view throughout the study area. These can be viewed from the project website https://www.ncdot.gov/projects/asheville-i-26-connector/Pages/photos-videos.aspx.

Regarding noise impact concerns, a preliminary traffic noise analysis is currently underway, and the results are not yet available. The analysis is being updated due to the design revisions made to the preferred alternative, the availability of updated traffic data, and the publication of a new NCDOT Noise Policy. Once the analysis is complete, the report will be placed on the project website, and maps will be posted that show areas likely to get noise abatement based on that preliminary analysis. A newsletter will be mailed alerting people to the availability of those materials. During final design, a final design noise analysis will be performed; it is this analysis that will identify recommended noise wall locations. Residence and business property owners will be involved in making the final decisions on whether or not noise walls will be placed in areas that NCDOT has determined can be constructed as part of the project. Low noise surface pavement is not an abatement measure approved by FHWA. Therefore, NCDOT would not specify the use of a low noise surface pavement to be used for noise abatement; however, the NCDOT Division Office could include this type of specification in the RFP without classifying the pavement as a noise abatement measure. There is currently limited information regarding the lifespan of these pavement types. Pavement design will be investigated further during final design. Restrictions on the use of "jake braking" is enforced in some areas by local law enforcement, however, the request for sign installations would originate from the city.

#### Safety

#### **Comment Summary**

Approximately 31 comments were received regarding safety issues. Many comments related to safety specifically addressed bicycle/pedestrian safety. Others noted that removing access at Hanover Street from Haywood Road could increase crime in the surrounding residential area. There were also concerns regarding driver safety on the curved flyover bridges during times of rainfall, snowfall, and other inclement weather.

#### Response

The design of the preferred alternative is in accordance with AASHTO's "A Policy on Design Standards – Interstate System" which states that "The highways of this system (Interstate System) must be designed to ensure safety, permanence, utility, and flexibility to provide for predicted traffic growth." A goal for this project is to provide a safe facility that accommodates projected traffic. In the view of NCDOT and FHWA the design criteria for the proposed project is appropriate and any design revisions would need to adhere to these criteria. These criteria include the appropriate design standards for ensuring the facility is safe on bridges and flyovers during inclement weather. AASHTO has certain precautions that should be considered as final design is developed such as the levels of skid resistance on asphalt, minimization of snow melt and storage, visibility of fog, and other conditions encountered on bridges and flyovers in this area of the state.

Regarding the safety of bicyclists and pedestrians, the appropriate safety amenities have been included in the preliminary designs. All bicycle and pedestrian facilities will be designed according the North Carolina Complete Streets Policy and Design Guidelines, AASHTO Guide for the Development of Bicycle Facilities, and the AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities. A primary goal of planning, designing, and creating complete streets is to make it possible for motorists, pedestrians, bicyclists, and transit riders to all travel safely from their origins to their destinations.

Concerns regarding crime increases due to the proposed designs should be coordinated with local law enforcement.

#### **Environmental Impacts (i.e. Loss of trees/vegetation)**

#### **Comment Summary**

Approximately 25 comments were received relating to environmental impacts. Comments expressed concern over the loss of mature trees during construction (particularly at Community Baptist Church in the Burton Street Community and along Westover Drive in the Montford Community). Several comments requested mature trees that are impacted during construction be replaced, as well as vegetative buffers constructed in areas such as Riverside Drive, Riverside Cemetery, and Montford. Additional comments noted stability in the Montford area as a concern, requesting a study be undertaken to determine the negative effects of additional highway construction. Stormwater impacts due to increased impervious surface were also noted in several comments as a concern. It was suggested NCDOT coordinate with the City's Tree Commission, Stormwater Management Department, and Office of Sustainability.

#### Response

NCDOT will consider incorporating landscaping into the project design to minimize the loss of vegetation. NCDOT is currently coordinating with the newly-formed Aesthetics Advisory Committee (AAC) regarding various aspects of project aesthetics, including how to best incorporate some of the project features to be compatible with the surrounding natural environment. NCDOT will participate in the discussions of the AAC throughout the final design and construction phases.

In areas where removal of vegetation is necessary, it is understood this can negatively impact water quality due to project construction runoff. In accordance with the North Carolina Sedimentation and Pollution Control Act (15A NCAC 4B.0001.0027), an erosion and sedimentation control plan must be prepared for land disturbing activities that cover one or more acres to protect against runoff from a 10-year storm. Thus, prior to the start of project construction activities, an erosion and sedimentation control plan will be prepared in accordance with the NCDEQ publication Erosion and Sediment Control Planning and Design Manual (NCDNR 1993), and the NCDOT guidelines in Best Management Practices for Protection of Surface Waters (NCDOT 1997).

In August 2017, NCDOT requested the Geotechnical Unit to provide a subsurface investigation and inventory and preliminary geotechnical recommendation for the area near Montford. The recommendations were documented in a memo dated November 14, 2017 and did not determine unstable slopes during construction of the I-26 Connector.

#### Right-of-way/Relocations

#### **Comment Summary**

Approximately 22 comments were received related to the right-of-way and relocation process. It was noted the amount of time for relocation was not enough time for residents

and businesses to adequately prepare. As noted above under Community Impacts, several comments were received requesting NCDOT and the City of Asheville to work together to redevelop the property along Patton Avenue for mixed-use. Additionally, comments were received requesting the project footprint be reduced as much as possible to minimize impacts to residences and businesses. Several comments were received with questions regarding specific impacts to personal property. Specific comments received to date with regard to impacts to personal property have been responded to as received.

#### Response

NCDOT will investigate ways to further minimize impacts as much as possible during final design. Section 4.1.2.3 of the DEIS references the Consolidated Strategic Housing and Community Development Plan, which emphasizes the need for affordable housing, as well as the need for improvements that will aid in community development. The plan notes the lack of housing supply is prevalent across the entire region (Buncombe, Henderson, Madison, and Transylvania counties) and across all income levels. The trend indicating the need for affordable housing seems to be driven by social and community influences including neighborhood redevelopment and gentrification and is likely to continue regardless of the I-26 Connector Project.

Comments with specific requests to be contacted regarding impacts to their personal property have been responded to as received.

Regarding the redevelopment of the land to the east of the Jeff Bowen Bridges along Patton Avenue, the City of Asheville will need to coordinate with the NCDOT Right-of-way branch regarding the right-of-way disposal process.

After the final design has been approved, the proposed right-of-way limits will be staked in the ground. Affected property owners will be contacted by a Right-of-Way agent to arrange a meeting and discuss the next steps. The minimum time required for NCDOT to provide notification to impacted property owners regarding relocations is 90 days.

#### **Alternative Choice**

#### Comment Summary

Approximately 22 comments were received suggesting alternative choices to the preferred alternative. Alternatives suggested included:

- Tunneling under the French Broad River as opposed to constructing flyover bridges.
- Creating a bypass around Asheville, as opposed to through Asheville.
- Investigating the future of roadways considering the introduction of autonomous vehicles and electric cars.
- Investing in mass transit options.
- Designing bridges to include light rail, bus rapid transit, or bus on shoulder.
- Constructing park and ride lots.

#### Response

• Tunneling under the French Broad River as opposed to constructing flyover bridges.

NCDOT was requested to investigate the feasibility of constructing a tunnel in Section B under the French Broad River. A Tunnel Feasibility Evaluation Memorandum investigated the feasibility of a subsurface passage of the French Broad River by I-26 and the I-240 connection ramps in Section B. The full memorandum is included in Appendix A of the FEIS. Several major challenges were found with this option and it was determined not to be feasible. These challenges are discussed further in the FEIS.

• Creating a bypass around Asheville, as opposed to through Asheville.

The evaluation of a bypass alternative was evaluated in the Phase I Environmental Analysis and is included in Section 2.5.3.1 of the DEIS. It was determined that a bypass alternative would not meet the purpose and need for the proposed project and was eliminated from further study.

• Investing in mass transit options.

Mass transit alternatives were studied as a part of the alternatives evaluation process. The use of BRT along the freeway corridors within the project study area would not provide substantial benefit as the freeways are radial routes and the routes would likely need to run along the arterials to serve the urban core of Asheville.

• Investigating the future of roadways considering the introduction of autonomous vehicles and electric cars.

While autonomous and electric cars have been introduced to the highways, currently, there is not enough research to forecast the potential impact these vehicles will have on traffic volumes extending to the design year of the project, which is 2040. At this time, autonomous vehicles are not taken into consideration prompting changes to the current preliminary design.

• Designing bridges to include light rail, bus rapid transit, or bus on shoulder.

Constructing HOT or BOS lanes would likely increase the project footprint due to the need to still accommodate "free" lanes of traffic. It was determined mass transit alternatives would not meet the project purposes related to system linkage along the I-26 Corridor. Therefore, mass transit measures implemented alone were not considered reasonable and feasible for this project. Additional discussion is included in Section 2.4 of the FEIS.

• Constructing park and ride lots.

Adding Park and Ride facilities are outside of the scope of this project. The City of Asheville's May 2018 Transit Master Plan proposes several areas where potential park and ride options could be located, as well as their plans for updating the current transit network.

#### Traffic

#### **Comment Summary**

Approximately 20 comments were received concerning traffic. Many proponents noted the project would alleviate traffic congestion along I-26. Acton Circle was identified as an area of concern due to traffic volumes from Monte Vista Road.

#### Response

In the I-2513 2040 Build Alternative capacity analysis, Acton Circle N at US 19-23-74A (Smokey Park Highway) was converted to allow all entering movements, but eastbound was converted to a right-out only configuration. Traffic attempting to make a left turn onto northbound US 19-23-74A (Smokey Park Highway), or go eastbound through onto the I-40 eastbound onramp was rerouted to Acton Circle S, approximately 0.40 mile south of Acton Circle N. However, Acton Circle S was outside of the original study area, and was not included in the I-2513 traffic forecast, and so the impact of this rerouted traffic was not studied.

An adjacent project, I-4759 (I-40 at SR 1228) included both Acton Circle N and Acton Circle S in its traffic forecast. Therefore, the decision was made to analyze the traffic volume impacts at Acton Circle S from the modifications made by the I-2513 traffic capacity analysis. The recommended lane changes that improve operations at this intersection will be added to the final design and shall be considered a commitment in the Final Environmental Impact Statement.

Other intersections located outside of the project study area will be prioritized and studied separately.

#### **Access Concerns**

#### Comment Summary

Approximately 20 comments were received related to concerns about access changes. Specific locations noted in the comments include:

- Haywood Road and Michigan Avenue suggestions to add a stoplight due to changes in access at adjacent roads
- Improved access behind Westgate Mall
- Concerns regarding the proposed closure of Bruce Road
- Concerns regarding removal of on-street parking along Haywood Road, specifically in front of the B&B Pharmacy

#### Response

At a meeting with the Asheville Primary School on August 16, 2018, the school requested a pedestrian signal in the vicinity of Haywood and Argyle Lane. Additionally, the City discussed investigating this pedestrian crossing as well as other signal improvements on Haywood with safety funding and not as a part of this project.

• Haywood Road and Michigan Avenue – suggestions to add a stoplight due to changes in access at adjacent roads

The new design will be removing exiting I-26 traffic from Hanover Street, which is expected to result in lower traffic volumes in the vicinity of Michigan Avenue and Hawyood Road. While outside of the scope of the I-2513 project, NCDOT will consider making Hanover Street a "T" end street to help ease turning movements.

Improved access behind Westgate Mall

NCDOT is aware of the issues associated with truck access in this area and is currently reviewing potential options to improve access. These additional access changes will be included in final design.

• Concerns regarding the proposed closure of Bruce Road

Bruce Road will be closed as a result of the proposed improvements at Smokey Park Highway. Traffic will be rerouted to Monte Vista Road and Acton Circle. An additional benefit of the Bruce Road closure is the removal of a railroad crossing.

• Concerns regarding removal of on-street parking along Haywood Road, specifically in front of the B&B Pharmacy

NCDOT is committed to investigating design measures which minimize impacts along Haywood Road in an effort to replace on-street parking. NCDOT will also coordinate with the City to investigate the possibility of opening the space between parking lots to allow for additional parking.

#### Cost

#### Comment Summary

Approximately 18 comments were received noting the cost of the project as a concern. Comments related to this topic were both in favor and against the project. Those in favor of the project noted the process has taken too long and costs have inflated substantially. Comments opposed to the project noted the project is too costly and not warranted for the community. It was also noted that as opposed to allocating the funds to constructing the project, they should be allocated to maintenance of the existing facilities.

#### Response

The right-of-way, construction, and utility relocation costs presented at the Design Public Hearing are based on the preliminary design plans. The project has been included in the FBRMPO's Metropolitan Transportation Plan for several years as a fiscally constrained project.

The funds allocated for the project are to be used specifically for the proposed project. NCDOT maintenance funds are allocated from a separate source within NCDOT and cannot be transferred.

#### **Business Impacts**

#### Comment Summary

Approximately 17 comments were received regarding concerns over business and economic impacts. Several comments in regards to specific business impacts were received and were responded to as received. As noted in the section regarding access concerns, businesses along Haywood Road expressed concern due to the loss of on-street parking. Comments related to tourism impacts were also received, noting the scale of the project would deter tourists. Proponents of the project noted the project is needed to accommodate increased traffic volumes from tourists. Additionally, comments were received requesting the project footprint be reduced as much as possible to minimize impacts to businesses.

#### Response

NCDOT is committed to minimizing impacts to the number of business relocations due to the proposed project. The preliminary designs for the preferred alternative were refined to further take into consideration feasible engineering, safety, economics, public wellbeing, and the least amount of injury and inconvenience to the public. NCDOT will continue to look for other opportunities to further avoid and minimize relocations due to the project to the greatest extent practicable during final design.

Since the approval of the DEIS and the selection of the LEDPA, preliminary designs have been refined based on updated traffic studies and public and resource agency comments on the 2015 DEIS, with minimization to residences and businesses. Various design changes were the result of periodic meetings with the City of Asheville, local organizations, adjacent neighborhoods, and historic property owners in order to better understand concerns and to obtain input on how the project could be refined to better fit within the context of Asheville while meeting local and regional needs.

#### **Construction Impacts**

#### **Comment Summary**

Approximately eight comments were received related to construction impacts. These included concerns about the length of time it would take to construct this project, noting that there are additional projects to the north and south that will likely be under construction at the same time. It was requested phasing occur to assuage several consecutive years of construction throughout the I-26 Corridor. Other concerns were related to the design build process discussed at the Public Hearing. Comments assumed this process would allow the contractor the freedom to continue to change the designs without additional public involvement. As mentioned in the bicycle/pedestrian section, comments also requested bicycle/pedestrian accommodations before and during the construction process, as opposed to constructing them after the roadway improvements.

#### Response

NCDOT will make every effort possible to continue coordination with the local municipalities the FBRMPO throughout the final design and construction of the project.

The design-build process allows NCDOT to hire a team of designers and contractors that are responsible for the design, right-of-way acquisition, and construction of the project. The team may begin construction on one portion of the project while they finish the design and right-of-way acquisition for another section. This typically results in faster completion. Additional benefits to a design-build project may include innovative solutions that save time, money, and/or reduce impacts and quicker resolution to problems that arise during design and construction. The process may provide additional alternatives or modification to the existing alternative which in turn may reduce costs or impacts. It is important to note, while the opportunity for flexibility in the design is present, the "green sheet" located at the beginning of the FEIS and included in the ROD identifies a list of commitments the design build team must adhere to. Impacts disclosed in the FEIS will not be increased without additional coordination with the agencies and the public. It is the goal of the final design and design build team to minimize impacts.

#### Other

#### **Comment Summary**

Other comments received noted the validity of the logical termini in regards to the projects located to the north and south of the I-26 Connector. It was also noted the environmental document should be prioritized. One comment suggested a health study to be completed for the project.

#### Response

The project segmentation referred to is in regards to three projects along I-26 and Future I-26 in western North Carolina:

- NCDOT STIP Project I-4400/I-4700: Additional lanes on I-26 south of Asheville
- NCDOT STIP Project I-2513: I-26 Connector
- NCDOT STIP Project A-0010A: Upgrade US 19/23 to Interstate Standards

FHWA and NCDOT have closely coordinated project decisions with the local, state, and federal resource agencies and continue to do so as each project progresses. While these projects are closely related, the project limits were established so that each has logical termini and independent utility. System-to-system (or interstate-to-interstate) interchanges are often used to identify project limits, or logical termini, which is the case for these projects. Given major decisions for these projects are coordinated, they are represented separately and analyzed as such due to their different purposes and needs, which allow for a more detailed look to be taken along each segment.

NCDOT typically considers health-related effects of transportation during its long-range planning efforts. Health may be considered during project design as well as during the NEPA review process. Several public health considerations, including access to goods and public services, noise, air quality, and safety, have been addressed in the DEIS and the FEIS and are important considerations that would continue to guide project development.

Cc: Post Hearing Meeting attendees (\*attended by phone)

Felix Davila – FHWA

Derrick Weaver – NCDOT EPU

Theresa Ellerby – NCDOT PMU

Kevin Moore - NCDOT PMU

Xiudong Han – NCDOT RDU

Brenda Moore - NCDOT RDU

Douglas Kretchman – NCDOT RDU

Tatia White – NCDOT RDU

Missy Pair – NCDOT Noise

Jamille Robbins – NCDOT PICSViz

Greg Hall – NCDOT Roadway Lighting

Kevin Fischer - NCDOT SMU

Joe Hummer – NCDOT Traffic Management

Steve Cannon – NCDOT Division 13\*

Chase Carver – NCDOT Division 13\*

Randy McKinney – NCDOT Division 13\*

Brendan Merrithew – NCDOT Division 13\*

Simone Robinson – Public Participation Partners\*

Neil Dean – AECOM

Drew Joyner - AECOM

Chris Lucia - AECOM\*

Celia Miars – AECOM

Joanna Rocco - AECOM

Eric Spalding – AECOM

#### MEETING SUMMARY



To: Project File

From: Celia Miars

**AECOM** 

Date: March 27, 2019

RE: I-2513 Working Group Meeting #11

NCDOT STIP Project I-2513 (I-26 Connector)

#### Meeting Attendees:

Michael Dawson – FHWA Steve Cannon – NCDOT Division 13

Bruce Emory – Asheville Multimodal Transportation Brendan Merithew – NCDOT Division 13

Julie Mayfield – City of Asheville

Theresa Ellerby – NCDOT, PMU
Todd Okolichany – City of Asheville

Derrick Weaver – NCDOT, EPU

Ken Putnam – City of Asheville

Gwen Wisler – City of Asheville

Celia Miars – AECOM

Celia Miars – AECOM

Alan McGuinn – Asheville Design Center Joanna Rocco – AECOM Lyuba Zuyeva – FBRMPO Eric Spalding – AECOM

David Nutter – Aesthetic Advisory Committee

The project team met with the I-2513 Working Group at 9:00 AM on February 21, 2019 in the Asheville Fire and Rescue Department's Police and Fire Training Room in Asheville, NC. The purpose of the meeting was to provide an update of the comments received at the December 2018 Public Hearing, review action items from the previous working group meeting held on July 31, 2018, discuss various design related topics, and provide an overview of the right-of-way acquisition and disposal process.

#### 2018 Design Public Hearing Update

- NCDOT met on January 11, 2019 for the Post Hearing Meeting to discuss comments received at the 2018 Design Public Hearing. Joanna Rocco gave an update on the comments received from the public hearing:
  - The project team received approximately 466 public comments on the 2018 Design Public Hearing
  - o 155 comments were considered form letters (they included the same language)
  - 150 emails/individual letters received
  - o 85 comments on the provided comment forms
  - o 45 comments from the NCDOT Contact Us website
  - o 17 comments recorded at the Public Hearing
  - Below are the number of comments received by subject. It was noted the comment forms
    included the subjects design, bicycle/pedestrian, and community impacts.
    - Design: 304

Bicycle/Pedestrian:245
 Community Impacts: 195
 Light/Air/Noise Pollution: 59
 Project/Construction Schedule: 39

Safety: 31

Environmental Impacts: 25Right-of-Way and Relocation: 22

Other: 22

Alternative Choice: 22

Traffic: 20

Access Concerns: 20Project Costs: 18

Impacts to Personal Property: 18

Business Impacts: 17Environmental Justice: 15Construction Impacts: 8

Historic and Archaeological Resources: 6Threatened and Endangered Species: 2

#### Review Working Group Meeting #10 Action Items (Working Group)

• Provide an update on the Aesthetics Advisory Committee (AAC) – The project team attended the AAC meeting on February 21, 2019 following the Working Group meeting.

#### Review Working Group Meeting #10 Action Items (NCDOT)

- NCDOT will correct the visualization link on the website and send out the link to the Working Group to review. *Update: Visualization links on website have been updated.*
- NCDOT will coordinate with Bruce Emory to meet to discuss the microsimulation and its results.
   Update: The project team met with members of the City of Asheville and the FBRMPO to discuss additional questions and concerns regarding the preferred alternative designs and traffic analyses, including the microsimulation. Meeting summary is attached.
- NCDOT will coordinate with Julie Mayfield to present additional cross sections and design
  information regarding the proposed height of the roadway and retaining wall at Riverside
  Cemetery. Update: The project team discussed these designs during the 10/03/18 AAC meeting.
- The project team will coordinate with the City to hold an additional meeting with representatives from the NCDOT Roadside Environmental Unit to discuss aesthetic options for the project. Update: The project team presented to the AAC on 10/03/2018 to discuss the roles and responsibilities of the AAC and review NCDOT guidance regarding aesthetic treatments for NCDOT projects. The project team has also met with the AAC on 2/11/2019 and 3/19/2019.

#### Designs

Discussions followed regarding design related requests from the public. These topics included investigating downgrading I-240 in order to reduce the footprint of the flyover bridges, the number of lanes in STIP A-0010A (the project immediately north of I-2513B), the feasibility of a tunnel option, and interchange revisions on Patton Avenue.

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#### Downgrading I-240

The design team was requested to investigate downgrading the design speed of I-240 from interstate standards to boulevard standards, therefore allowing tighter radii on the bridges and reducing the overall height and footprint. It was noted, if I-240 is downgraded from an interstate, the project would no longer receive federal funding for maintenance. This cost would be born by the division maintenance fund, which may not be enough or could exhaust funding for other projects. It was also noted the current design speed is lower than typical interstates (currently designed at 50 mph). Furthermore, if the roadway speed was lower than 50 mph, it would likely warrant additional lanes in Section A due to the local travel demand model results. For these reasons, I-240 will not be downgraded to lower than interstate standards, unless the French Broad River MPO has adjustments in their locally derived travel demand model.

#### A-0010A Number of Lanes

STIP Project No. A-0010A begins immediately north of I-2513B, tying into the project at Broadway. In I-2513B, designs include three lanes from I-26 north and two lanes from US 19/23 north that merge together before Broadway. At the Broadway interchange, one lane will leave I-26 northbound and four lanes will remain. Per the locally derived travel demand model, four lanes of traffic are needed to accommodate future traffic demands in the A-0010A project area. It was noted the same travel demand model and same traffic forecast were used for both projects.

#### **Tunnel Feasibility**

On February 20, 2019 the project team met with Susan Loftis and Brierly Associates to discuss the feasibility of a tunnel across the French Broad River to potentially eliminate the I-240 flyovers. It was noted a tunnel could be considered for reasons other than cost, however, in those cases, other options are likely not feasible and a tunnel is the only option. An initial assessment of the feasibility of a tunnel prepared by AECOM was discussed; it has been estimated construction of the bridges would be approximately \$225 million and a tunnel would cost approximately \$510 million. Furthermore, this cost includes only construction of the tunnel and does not include any necessary connections to be made, such as I-240 to Patton or to I-26. Flyover bridges for I-240 traffic would still be necessary. Several other cost implications associated with a tunnel include higher maintenance costs, necessary backup systems in place 24/7, security, and emergency management. It was noted the land above the tunnel would still be purchased by NCDOT due to underground land ownership laws in North Carolina.

#### Patton Avenue

On the west side of the Jeff Bowen Bridges, the current design at Patton Avenue and I-240/I-26 includes a tight urban diamond interchange. A discussion was held regarding whether or not a diverging diamond interchange (DDI) had ever been investigated as an appropriate configuration at this location. It was noted the design team had taken a preliminary look at a DDI from a traffic perspective only; however, this configuration was not carried forward due to the request from the City of Asheville to prepare a diamond interchange at the time, and due to bicycle and pedestrian constraints associated with a DDI. Julie Mayfield asked if in a DDI it was possible to have a completely separated multi-use transportation path. This option is feasible and would likely be placed in the middle of the interchange. Missouri is very progressive with DDI's and found that putting a greenway in the middle is safer because of the elimination of left turn crossings. AECOM will develop a sketch for pedestrian facilities and a DDI interchange at this location. The City will discuss with Asheville on Bikes if a DDI interchange would be preferred at this location.

MEETING SUMMARY March 27, 2019 Page 4 of 4

Members of the Working Group asked if the interchange at Patton Avenue and I-240 on the east side of the Jeff Bowen Bridges could be relocated to the Hill Street Connector or eliminate the exit ramp to allow for more land along Patton Avenue to be redeveloped in the future. The design team noted the exit ramp is needed for traffic capacity to reduce congestion along Patton Avenue. It was noted the best option at this stage in the project would be to leave the designs as is and allow the design build team to develop an innovative concept.

#### Riverside Drive Typical Section

The current typical section for Riverside Drive includes three eleven-foot lanes with curb and gutter. The City of Asheville is interested in having a smaller footprint along Riverside Drive. It was noted that a two lane typical section would require shoulder widths and would result in a 32-foot wide facility (compared to 33-foot wide with 3 lanes). The City of Asheville will discuss their preferred typical section for this section of the project.

#### **Right-of-Way Acquisition and Disposal Process**

Bob Haskett with NCDOT Division 13 Right-of-Way discussed the right-of-way surplus disposal process in detail. The City of Asheville has expressed interest in redeveloping land that will no longer be within NCDOT right-of-way after completion of the project. Typically requests to dispose of surplus right-of-way will come from the adjoining property owner. It was noted this process cannot begin until construction of the project is complete. The Working Group noted they are interested in planning ahead for how much land could potentially be rezoned for use by the City.

#### Miscellaneous

Derrick Weaver noted the timeline for developing a list of commitments, including betterments and AAC recommendations. Assuming the project will be let in July 2020 (earliest date), the project would be advertised in December 2019 and would be shortlisted by March 2020. Therefore, it would be ideal to have the commitments, cost-share agreements, and AAC recommendations by December 2019. Ken Putnam and Neil Dean will coordinate to finalize the list of betterments.

#### **Action Items**

- NCDOT will provide the Working Group with the Tunnel Feasibility Memo.
- AECOM will develop a sketch for pedestrian facilities and a DDI interchange on Patton Avenue west of the Jeff Bowen Bridges.
- The City will discuss with Asheville on Bikes if a DDI interchange would be acceptable on Patton Avenue west of the Jeff Bowen Bridges.
- The City of Asheville will discuss their preferred typical section for Riverside Drive.
- Ken Putnam and Neil Dean will coordinate to finalize the list of betterments.

#### MEETING SUMMARY



To: Project File

From: Celia Miars

**AECOM** 

Date: March 22, 2019

RE: I-2513 Aesthetics Advisory Committee Meeting

NCDOT STIP Project I-2513 (I-26 Connector)

#### Meeting Attendees:

Ken Putnam – City of Asheville David Nutter – AAC

Julie Mayfield – City of Asheville Susan Loftis – AAC

Ted Figura – AAC

Jeff Lackey – NCDOT Roadside Environmental

Kyle Cooper - NCDOT Roadside Environmental

Joe Minicozzi – AAC Celia Miars – AECOM
Mike Zukosk – AAC Eric Spalding – AECOM

Woody Farmer – AAC

Members of the project team attended the Aesthetic Advisory Committee (AAC) meeting on March 19, 2019 at the City of Asheville Municipal Building. This was a regularly scheduled AAC meeting in which NCDOT was present to provide additional information and guidance regarding aesthetic treatments for NCDOT projects.

Below are discussion items from the meeting:

- The AAC adopted the Organizational Principles included in the meeting packet (attached).
- The AAC expressed interest in creating "pocket parks" along the Patton Avenue multi-use path corridor. The City noted they have discussed other redevelopment opportunities along this corridor. The City and AAC will have a discussion in another setting regarding the area along the Patton Avenue corridor.
- The AAC had several questions regarding the December 2019 deadline for a list of aesthetic treatments to NCDOT. At the previous Working Group meeting and AAC meeting on February 21, 2019, NCDOT noted the I-26 Connector Project would be let for construction in July 2020. Therefore, the project would be advertised as early as December 2019 and short listed in March 2020. Given these dates, if the AAC requested aesthetic treatments to structures, such as retaining walls or bridges, these would need to be listed in the advertisement for the project. It was clarified, if the AAC new there were certain areas they plan to focus on for landscaping treatments, specific information regarding treatments did not need to be finalized by December 2019.
- It was noted for the NCDOT to move forward with including these aesthetic treatments in the advertisement for the Design Build contract, the City of Asheville must have a resolution for

maintenance. A municipal agreement would be drafted closer to completion of construction. The AAC requested a standard format for the municipal agreement to review.

- The AAC requested examples of projects that have been completed by NCDOT in which a type of aesthetics committee was formed.
- Jeff Lackey addressed lessons learned from working with other aesthetic committees in North Carolina. He noted it is most successful when the committee appoints a single point of contact to coordinate with NCDOT. He also noted it is important for the committee to identify priority areas and potential enhancements early on to determine preliminary costs.
- The committee discussed the priority locations spreadsheet (attached). Jeff Lackey identified the
  enhancements that would need to be determined by December 2019. These included roadway
  geometrics, pavement design, multi-use path design, retaining walls, bridge abutments, etc. Other
  items on the spreadsheet that can be finalized later included landscaping, graphics, and artwork.
- The AAC had questions regarding the funding available to betterments from NCDOT. The landscaping budget is between 1 percent and 1.5 percent of the construction cost only, not the total project cost. It was clarified that reseeding was included as a part of the construction costs and not taken from the landscaping budget. There are three levels of landscaping; standard, enhanced, and landmark. NCDOT will pay for the standard level, however, costs associated with upgrades to meet an enhance or landmark level will be paid for by the city.
- It was noted retaining wall/noise wall enhancements beyond NCDOT standards is paid for by the City. Regarding the retaining wall at Riverside Cemetery, since this is a historic resource, mitigation opportunities are present for NCDOT to enhance the wall or provide other means of mitigation. Costs for these enhancements will not come from the landscaping budget. This will occur through coordination with the City of Asheville, who owns the cemetery.
- The AAC voted to create a Riverside Cemetery sub-committee to develop potential aesthetic enhancements to the wall.
- NCDOT will provide Ken Putnam with the latest information regarding noise wall patterns.
- Prior to the AAC submitting their list of enhancements to the City Council, the AAC will coordinate
  with NCDOT to discuss. The AAC decided that once NCDOT has reviewed and commented on the
  enhancements, the AAC would hold a public meeting to share with the public and receive
  feedback prior to presenting to City Council.

The meeting concluded at 4:30 p.m.

#### **Action Items**

- The AAC requested a standard format for the municipal agreement to review.
- The AAC requested examples of projects that have been completed by NCDOT in which a type of aesthetics committee was formed.
- NCDOT will provide Ken Putnam with the latest information regarding noise wall patterns.
- The AAC will identify a single point of contact to coordinate with NCDOT.

#### **DRAFT**

#### City of Asheville I-26 Connector Project Aesthetics Committee Organizing Principles

#### Adopted March , 2019

An Organizing Principle is a guiding idea that is used to direct an organization or an initiative. It is a core assumption and a central reference point against which all decisions or policies can be measured.

The City of Asheville I-26 Connector Project Aesthetics Committee ("the Committee") hereby adopts this set of Organizing Principles to guide its work as stated in its Bylaws.

Organizing Principle #1 – The Key Project Design Goals adopted by the Asheville Community Coordinating Committee in 2000 are incorporated by reference as an Organizing Principle of the Committee to the extent that they are applicable to the decisions of the Committee. These goals are restated below:

- 1. Separation of local and interstate traffic
- 2. Matching scale of project to character of community
- 3. Reunification and connectivity of community
  - a. Provide well-defined pedestrian/bicycle facilities throughout the project corridor
  - b. Improve opportunities for reconnecting neighborhoods and Downtown with the French Broad Riverfront
  - c. Expand accessibility for Hillcrest Community
  - d. Create a better local street network (including linkages between West Asheville and Downtown, within Downtown and within West Asheville) to relieve interstate traffic pressure
- 4. Minimization of neighborhood and local business impacts
- 5. Use of updated traffic modeling software and data
- 6. Maintenance of compatibility with community's design, vision and plans; incorporation of community-selected design features
- 7. Creation of full interstate movements between I-26 and I-40
- 8. Minimization of air quality and other environmental impacts
- 9. Emphasis on safety during construction and in the final design and product.

Note: The Key Project Design Goals includes all sub-sections listed in Section 2 of the *Report of the Community Coordinating Committee for the Design of the I-26 Connector Through Asheville* although the sub-sections for Goal 3 are specifically listed here for emphasis.

It is explicitly recognized in adopting these goals as an Organizing Principle that it is not the charge of the Committee to actualize each of the above goals. However, recommendations of the Committee should be guided by and consistent with these goals.

Organizing Principle #2 – The Committee recognizes and respects the work done by those who have gone before and, to the maximum extent feasible, will obtain, examine, utilize and otherwise allow these pre-existing aesthetic design ideas, concepts, forms and prescriptions to inform the work of the Committee.

**Organizing Principle** #3 – Creating a Gateway experience for travelers along I-26 is a priority of the Committee. The aesthetic design of the I-26 Connector Project can and should make a positive statement about our City and community. The design of the bridges associated with the Project will be the most visible element of the Gateway experience and should be given a high level of attention by the Committee.

**Organizing Principle #4** –The aesthetic impacts of the Project on residents, businesses and other users of land that is adjacent to or proximate to the Project are important for the Committee to consider. Also important are the aesthetic impacts of the Project on pedestrian and cyclist users of pathways associated with the Project. The Committee's choices among design recommendations and allocations of aesthetic funding should consider those constituents who will be most affected by the Project.

Organizing Principle #5 – To the extent that there is no conflict with any other Organizing Principle, cost effective design solutions shall be recommended. Consideration shall be given both to the initial cost of aesthetic improvements and to their maintenance costs. Observation of this Organizing Principle shall not preclude the recommendation of more expensive design solutions that may be self-funding, in part or in whole; nor shall it preclude the adoption of more expensive design solutions which further the Key Project Design Goals as stated above.

Organizing Principle #6 – Relative to the purview of the Committee, the term "aesthetics" is to be defined as broadly as reasonably possible. Aesthetics may include, but not be limited to: visual impact, sound impact, light impact, spatial impact, environmental impact, and impact on community or social dynamics. Aesthetic considerations may be applied by the Committee in its recommendations to any design element of the Project not constrained by the Record of Decision of the Final Environmental Impact Statement for the Project. Aesthetic considerations may be applied by the Committee in its recommendations throughout the duration of the Project, unless and until the Committee is terminated by City Council.

**Organizing Principle #7** – The Project's aesthetic design should be context sensitive and reflect the character of the Asheville community and its neighborhoods, particularly those neighborhoods through which the Project passes. To this end, it is anticipated that the aesthetic recommendations of the Committee will be eclectic and will not shy away from implementing the adage, "Keep Asheville Weird."

Organizing Principle #8 – The preservation and revitalization of the French Broad River waterfront—particularly in the area between Hill Street and Broadway, connecting the RADTIP project in the River Arts District to the Woodfin Greenway and Blueway--is an important goal to be furthered by the recommendations of the Committee. With regard to this section of the Project, the Wilma Dyckman Riverway Master Plan should be consulted and potential connections between the University of North Carolina Asheville and the waterfront should be observed.

**Organizing Principle** #9 – The work of the Committee requires the utilization of good urban design and smart growth principles and should be cognizant of potential redevelopment opportunities created by the Project. Therefore, the Committee will need to draw upon the design expertise of a professional with architectural expertise.

**Organizing Principle** #10 – Quality of life issues are paramount to the aesthetic design of the Project. Quality of life issues include but are not limited to: limiting the noise impact from the Project, conformance to the City's dark sky policy, and providing opportunities for transportation nodes to serve both vehicular and non-vehicular transportation modes.

**Organizing Principle** #11 – The Committee will work cooperatively with the recommendations of the Schwartz Report.

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Design Element Matrix for I-20	/1-40/1-240	Interch	ange. As	heviile				16 1										
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## APPENDIX F3 RECORDS OF PUBLIC MEETINGS

Date	Meeting Type	Attendees	Location	Purpose
11/15/2015	Corridor Public Hearing	Approximately 500 attendees	Renaissance Hotel, Asheville, NC	To discuss the DEIS, explain corridor location, design, relocations requirements/procedures, and the state federal relationship. Official comment session with transcribed proceedings and recorded comments and responses.
09/20/2016	Small group meeting - West Asheville Business Association (WABA)	40	Isis Restaurant	To discuss the LEDPA, design refinement process, and gather feedback regarding potential impacts.
09/20/2016	Small group meeting - Montford Neighborhood	Over 100	Isaac Dickenson Elementary School	Invited to Montford to discuss the LEDPA, the project status, and potential impacts such as noise, visual, air quality, land stability, and eminent domain.
10/17/2016	Small group meeting - Burton Street Neighborhood	18	Burton Street Community Center	To discuss the LEDPA, design refinement process, and potential mitigation opportunities associated with the Environmental Justice status.
02/20/2017	Small group meeting - Burton Street Neighborhood	20	Burton Street Community Center	To discuss the design refinement process and potential mitigation opportunities associated with the Environmental Justice status.
03/21/2017	Small group meeting - Fairfax Avenue/Virginia Avenue	39	Mothlight	To discuss the LEDPA, design refinement process, and discuss access options to the community.
03/21/2017	Small group meeting - Hillcrest Apartments	12	Carl E. Johnson Community Center	To review designs and impacts to the community, review next steps of the project, and receive feedback regarding impacts and/or benefits to the community.
06/05/2017	Small group meeting - EWANA	39	East West Village Rentals	To review design concepts at Amboy Road, Brevard Road, and Haywood Road and receive feedback.
06/06/2017	Small group meeting - WABA	40	Isis Restaurant	To review design concepts at Amboy Road, Brevard Road, and Haywood Road and receive feedback.
09/07/2017	Small group meeting - Fairfax Avenue and Virginia Avenue	14	Earth Fare	To review design concepts at Amboy Road and Brevard Road and receive feedback.

01/15/2018	Burton Street Community Open House #1	41	St. Paul's Missionary Baptist Church	To receive feedback from community on developing a community driven Neighborhood and Mitigation Strategies Plan (NMS).
01/15/2018	Burton Street Stakeholder Group Meeting	3	St. Paul's Missionary Baptist Church	To receive feedback from businesses on developing a community driven Neighborhood and Mitigation Strategies Plan (NMS).
03/20/2018ª	Burton Street Community Open House #2	28	St. Paul's Missionary Baptist Church	To receive feedback from community on developing a community driven Neighborhood and Mitigation Strategies Plan (NMS).
04/30/2018 <sup>a</sup>	Burton Street Community Open House #3	34	Burton Street Community Center	To receive feedback from community on developing a community driven Neighborhood and Mitigation Strategies Plan (NMS).
08/16/2018	Small group meeting – Asheville Primary School	20	Aycock Primary School Conference Room	To review design concepts and receive feedback from school officials on impacts to traffic patterns and parking.
11/14/2018ª	Riverlink Meeting	3	Riverlink, Asheville NC	To provide an overview of the I-26 Connector project to local businesses and organizations that use French Broad River, discuss potential impacts to the French Broad River during construction, and to receive feedback from stakeholders on impacts to operations and river user safety.
12/04/2018ª	Design Public Hearing	450	Renaissance Hotel, Asheville, NC	To present the preliminary designs for the preferred alternative under consideration in the Final Environmental Impact Statement.
05/20/2019ª	Burton Street Community Meeting	5	Burton Street Community Center	To present an update on the project and plans to work with community to implement the mitigation strategies
06/24/2019	Asheville Primary School Meeting	4	Asheville Primary School, Asheville, NC	To discuss impacts to the Asheville Primary School and follow-up from discussions held with school officials in August 2018 on impacts to access and the schools parking lot.

<sup>&</sup>lt;sup>a</sup> No minutes are available for this meeting.



# NCDOT TO HOLD A PUBLIC HEARING FOR THE I-26 CONNECTOR PROJECT

November 16, 2015



The North Carolina Department of Transportation (NCDOT) has completed a Draft Environmental Impact Statement (DEIS) for the I-26 Connector Project and is holding a Pre-Hearing Open House and Public Hearing for public input. Locations of the DEIS and the Public Hearing maps for public review are located on the project website noted below.

NCDOT representatives will be available between the hours of 4 p.m. and 6:30 p.m. to answer questions and receive comments relative to the proposed project. Interested participants may attend at any time during the above mentioned hours. A formal presentation will begin at 7 p.m. The hearing will be open to those present for statements, questions and comments. The presentation and comments will be recorded and a transcript will be prepared.

The hearing will also be streamed online if you cannot attend the formal hearing at 7PM (see project website for link). Comments will be accepted during the webinar; however, responses will not be provided until after the comment period has closed on December 16, 2015.

#### TIME AND LOCATION

**November 16, 2015** 

Open House: 4 p.m. - 6:30 p.m.

Public Hearing: 7 p.m.

Renaissance Hotel Grand Ballroom
31 Woodfin Street
Asheville

FOR MORE INFORMATION,

CALL THE PROJECT HOTLINE OR VISIT THE PROJECT WEBSITE.

**TOLL-FREE HOTLINE: 1-800-233-6315** 

WEBSITE:

WWW.NCDOT.GOV/PROJECTS/I26CONNECTOR/



NCDOT will provide auxiliary aids and services under the Americans with Disabilities Act for disabled persons who wish to participate in this workshop. Anyone requiring special services should contact Drew Joyner at 1-800-233-6315 as soon as possible.

NCDOT proporcionará ayuda adicional y servicios, según lo dispuesto en El Acto de Americanos con Discapacidades, a las personas con discapacidades que deseen participar en este taller. Cualquier persona que desee solicitar servicios especiales puede hacerlo llamando lo antes posible al teléfono 1-800-233-6315.



# WELCOME TO THE I-26 CONNECTOR PROJECT PRE-HEARING OPEN HOUSE AND CORRIDOR PUBLIC HEARING

Pre-Hearing Open House: 4-6:30PM
Public Hearing: 7PM

### PLEASE SIGN-IN

- ✓ Let Us Know You Attended Tonight
- ✓ Pickup Handouts
- ✓ Watch Presentation about Project
- ✓ Review the Project Information
- ✓ Ask Questions
- ✓ Provide Your Comments





# SPANISH INTERPRETER

SE HABLA ESPAÑOL

Si Usted desea tener un intérprete para esta reunión, por favor pregunte a un miembro del equipo del proyecto.





# PROJECT PRESENTATION

- ✓ Please watch the video to learn about the project
- ✓ Note that this video will repeat





# Purpose and Need

# **PROJECT PURPOSES:**

- o To **upgrade the Interstate corridor** from I-26 south of Asheville through the US 19-23 interchange to meet design standards for the Interstate system
- o To **provide a link in the transportation system** connecting a direct, multi-lane freeway facility meeting interstate standards from the Port of Charleston, South Carolina, to I-81 near Kingsport, Tennessee
- o To **improve the capacity** of existing I-240 west of Asheville to accommodate the existing and forecasted (2033 design year) traffic in this growing area
- To reduce traffic delays and congestion along the I-240 crossing of the French Broad River, which currently operates at capacity\*
- To increase the remaining useful service of the existing Captain Jeff Bowen Bridges by substantially reducing the volume of traffic on this vital crossing of the French Broad River

# **PROJECT NEEDS:**

# o System Linkage

A better transportation facility is needed to connect US 19-23 north of Asheville with I-26 south of Asheville.

# Capacity \*

I-240 needs additional capacity because increasing traffic volumes have substantially reduced the Level of Service on I-240 west of Asheville.

# o Roadway Deficiencies

Interstates within the study area have roadway deficiencies and need to be upgraded to meet current design standards. Multiple segments of I-240 west of Asheville currently have an accident rate that exceeds the critical crash rate for similar North Carolina facilities.

\*Capacity = In terms of a highway, capacity is the ability of a road to accommodate traffic volume.

Level of Service = A qualitative measure used to relate the quality of traffic operations on a scale of A (free-flow and low traffic density) to F (breakdown of traffic flow with traffic volumes greater than the road's capacity)



# **Project History**





# **NEPA Study Process**

**Identify Purpose of and Need for Project** 

**Collect Data on Project Study Area** 

**Analyze Preliminary Alternatives** 

**Select Detailed Study Alternatives** 

**Evaluate Impacts of Detailed Study Alternatives** 

Publish Draft Environmental Impact Statement

**Select Preferred Alternative** 

Publish Final Environmental Impact Statement

**Issue Record of Decision** 

**Purchase Right of Way** 

**Construct Project** 





# Next Steps



See Comment Form for all comment submittal options and deadlines.

# PREFERRED ALTERNATIVE TO BE SELECTED

The comments received on the DEIS and Public Hearing will be evaluated by the project team and considered in the selection of the Preferred Alternative.

# FOR MORE INFORMATION

visit our website
www.ncdot.gov/projects/126Connector
CONTACT NCDOT
Mr. Drew Joyner, PE

Human Environment Section

1-800-233-6315 djoyner@ncdot.gov

# FINAL ENVIRONMENTAL IMPACT STATEMENT

3

Justification for the selection of the Preferred Alternative will be documented. Additionally, designs for the Preferred Alternative will be refined based on updated traffic projections. Direct, indirect, and cumulative effects of the project will be updated based upon the refined design for the Preferred Alternative, and summarized in the Final



# **NEPA Study Process**

**Identify Purpose of and Need for Project** 

**Collect Data on Project Study Area** 

**Analyze Preliminary Alternatives** 

**Select Detailed Study Alternatives** 

**Evaluate Impacts of Detailed Study Alternatives** 

Publish Draft Environmental Impact Statement

**Select Preferred Alternative** 

Publish Final Environmental Impact Statement

**Issue Record of Decision** 

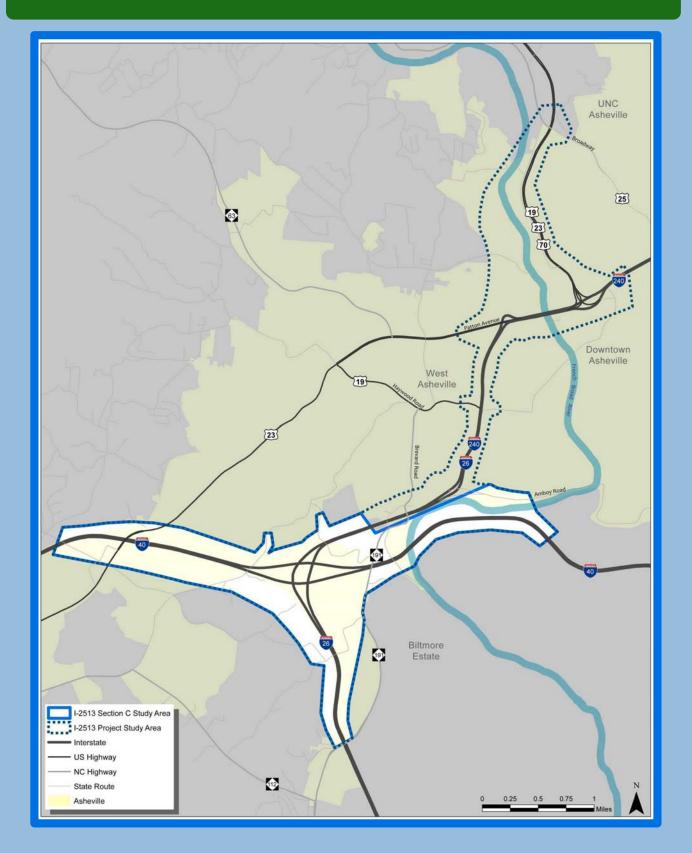
**Purchase Right of Way** 

**Construct Project** 





# Section C







# Section C – New Location Alternatives

# **Alternative A-2**

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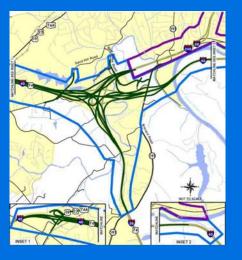
Provides direct flyover ramps for all movements at the I-26/I-40/I-240 interchange.

# **Alternative C-2**



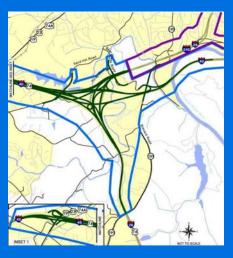
Provides two flyover ramps and two loop ramps at the I-26/I-40/I-240 interchange along with collector-distributor roadways in both directions along I-40 and in the eastbound direction along I-26.

# **Alternative D-1**



Provides three flyover ramps and one loop ramp at the I-26/I-40/I-240 interchange.

# **Alternative F-1**



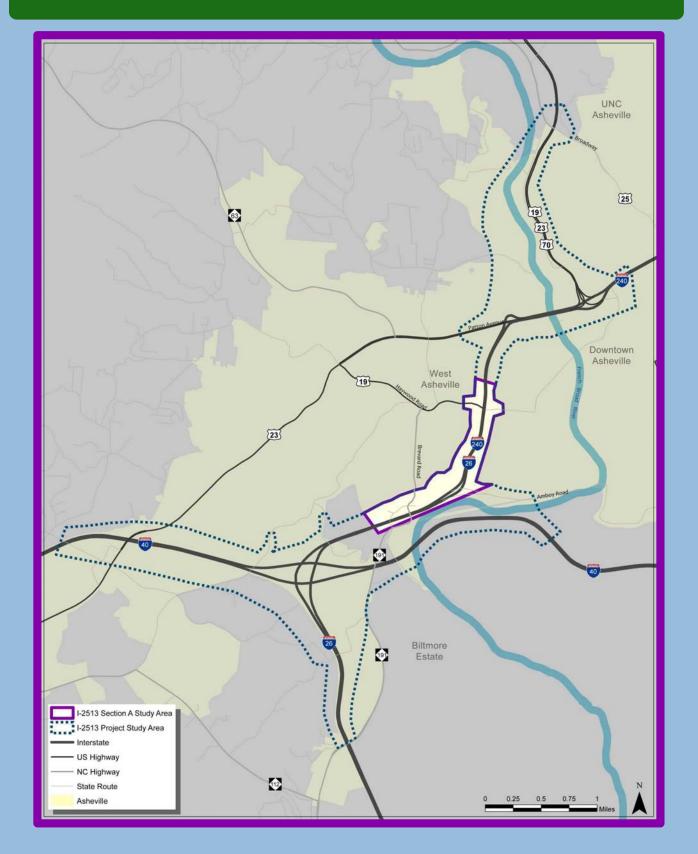
Reconstructs the existing I-26/I-40/I-240 interchange in the same general configuration as today but with the addition of two missing connections to I-40.

Section C includes improvements to the I-26 / I-240 interchange with I-40 and the Brevard Road and Smokey Park Highway interchanges.





# Section A

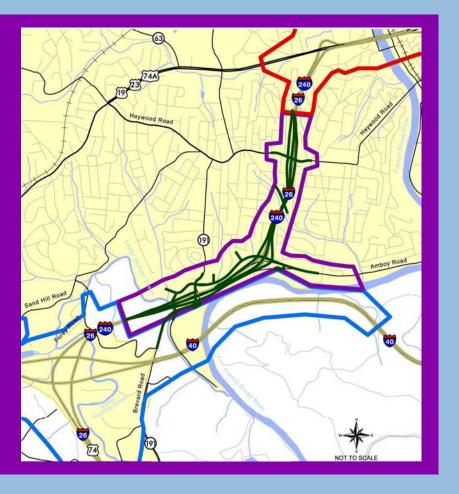






# Section A – Upgrade Existing Roadway Alternative

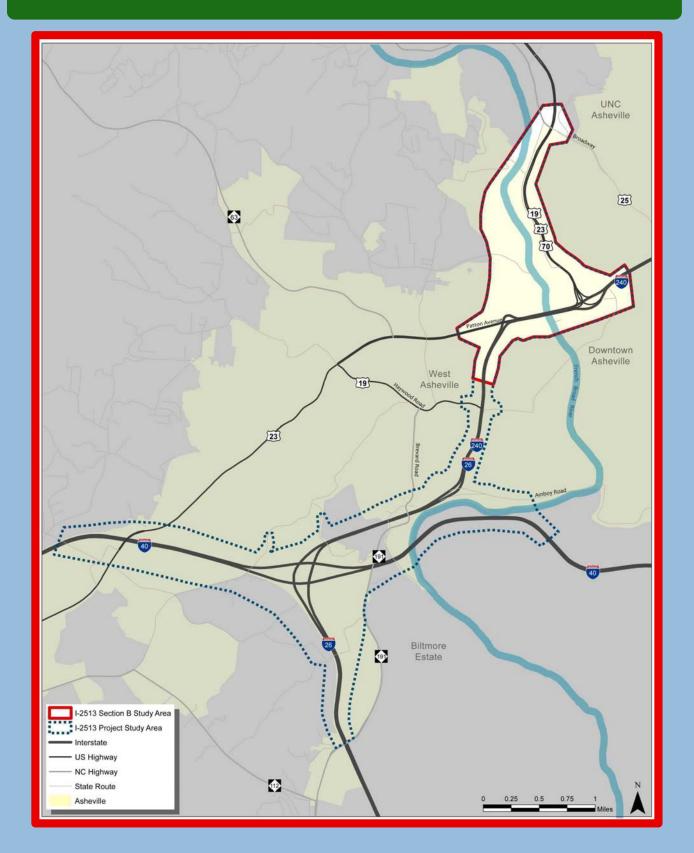
Section A includes upgrading approximately 4.3 miles of existing I-240 from the I-26/I-240 interchange with I-40 to the I-240 interchange with Patton Avenue, west of the French Broad River. This includes upgrades to the Brevard Road, Amboy Road, and Haywood Road interchanges.







# Section B







# Section B – New Location Alternatives

# **Alternative 3**

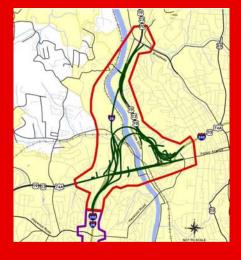
Separates I-240 and I-26, with I-26 running north along a new alignment and I-240 continuing over the Captain Jeff Bowen Bridges as it does currently.

# **Alternative 3C**



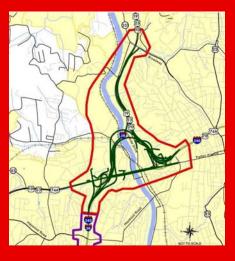
Follows the same alignment as Alternative 3, but crosses the French Broad River on two bridges further south.

# **Alternative 4**



Separates the local traffic on Patton Avenue from the I-240 through traffic, but otherwise follows a similar route as Alternative 3.

# **Alternative 4B**



Also separates the local traffic on Patton Avenue from the I-240 through traffic, otherwise following a similar route as alternative 3C.

Section B includes the construction of the interstate on new location from the Patton Avenue interchange north for approximately 2.6 miles across the French Broad River, tying into US 19 / 23 / 70 south of Broadway (SR 1781).



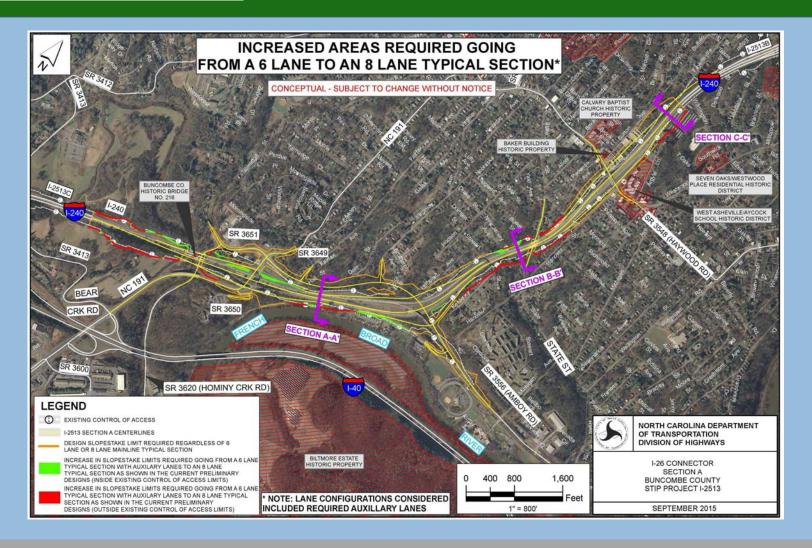


# CONSTRUCTION PHASING CONCEPTS





# Construction Phasing Concepts Overview

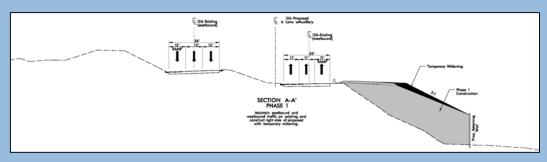


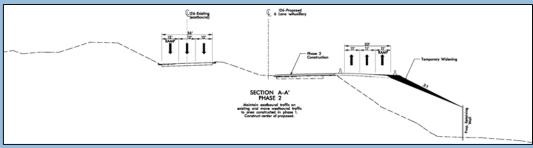


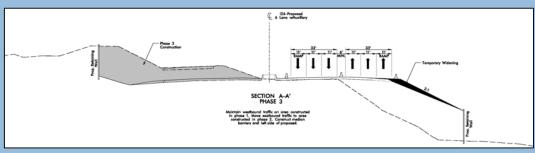


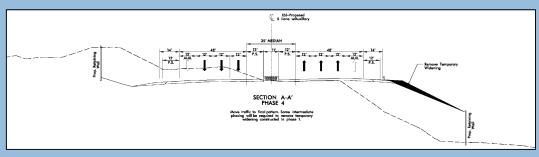
# Construction Phasing Concepts

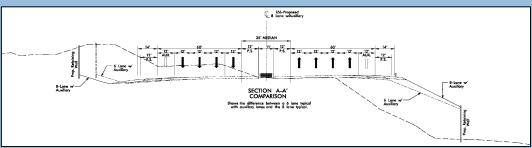
# SECTION A-A (BETWEEN BREVARD ROAD AND AMBOY ROAD)









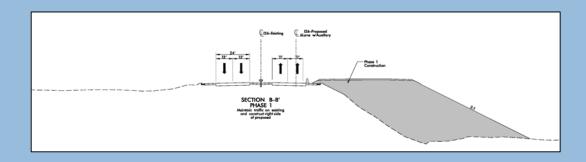


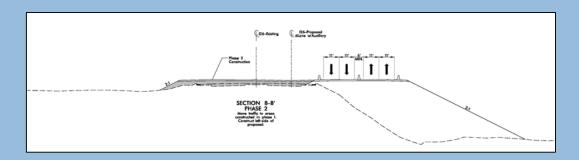


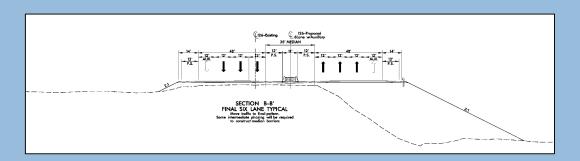


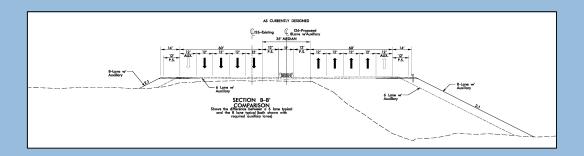
# Construction Phasing Concepts

# SECTION B-B (SOUTH OF BRIDGE OVER STATE STREET)







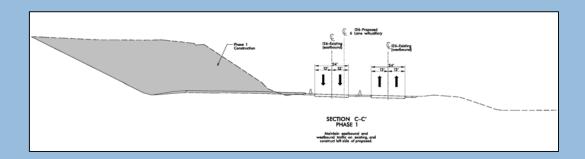


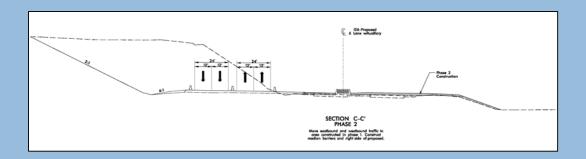


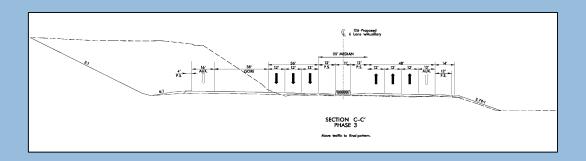


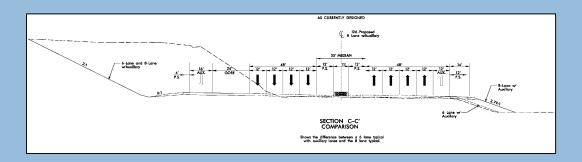
# Construction Phasing Concepts

# Section C-C (North of Haywood Road Interchange)











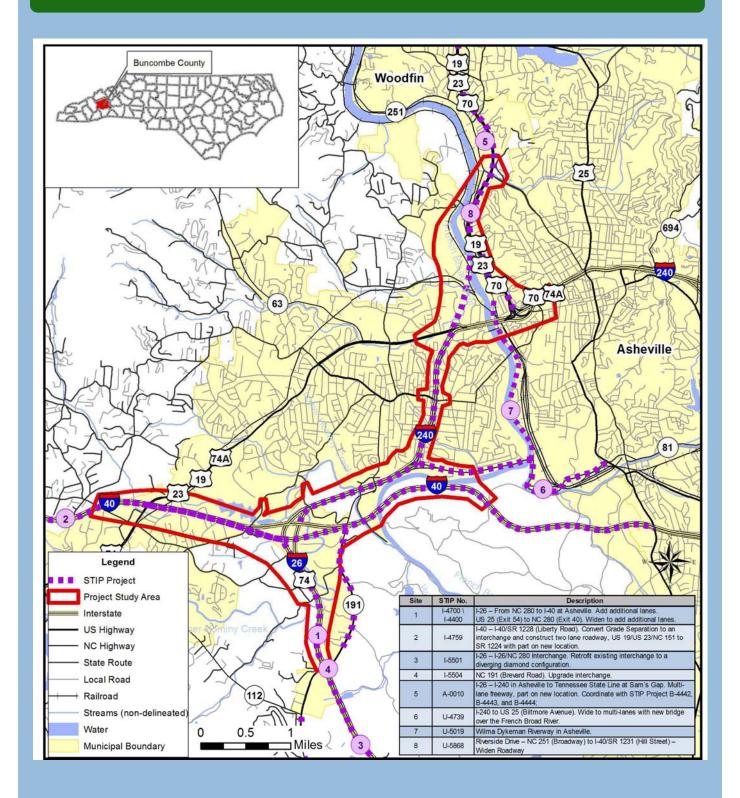


# REGIONAL PROJECTS





# STIP Projects in Vicinity







# **TRANSIT**

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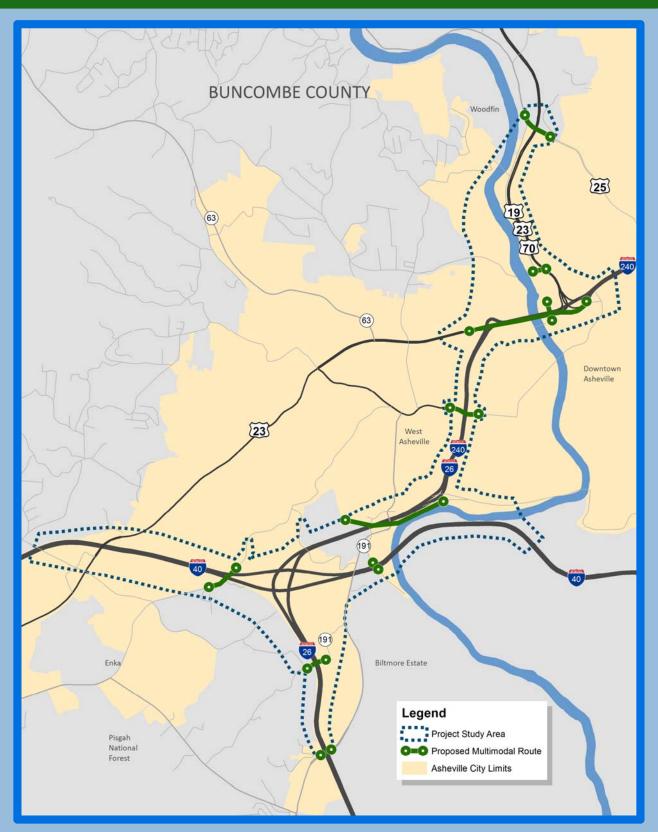
# BICYCLE AND PEDESTRIAN

Accommodations in and around the project





# Multimodal Connectivity



This graphic presents locations of multimodal routes that will be studied in the Draft Environmental Impact Statement (DEIS)
Multimodal may include Greenways, Transit, Bicycle Improvements, or Sidewalks.









# West Asheville Greenway Overview Map







# Proposed West Asheville Greenway

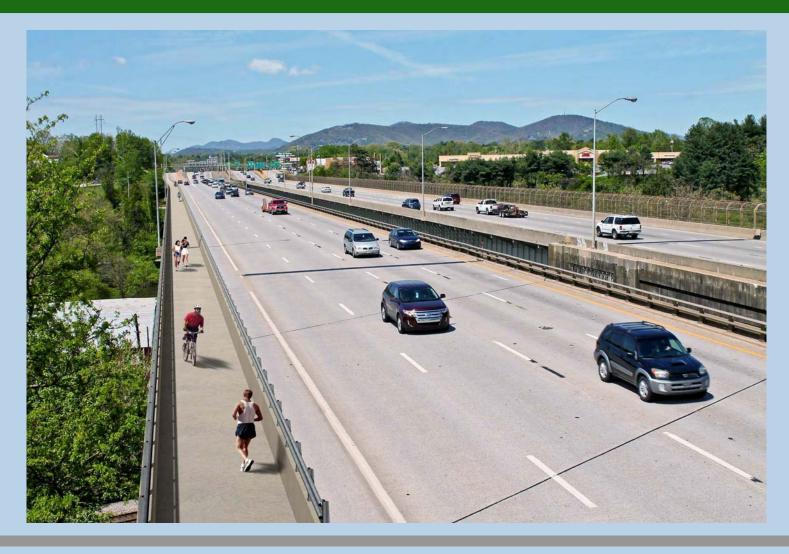








# T-26 CONNECTOR BUNCOMBE COUNTY, NC COnceptual Pedestrian Bridge







# COMMENTS COLLECTED HERE

WE NEED YOUR INPUT!

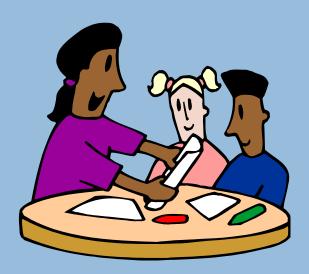
Please Take a Moment to Fill Out a Comment Form.

Copies of the DEIS are available for your review.





# KID'S CORNER







# TRAFFIC NOISE AND RIGHT OF WAY IMPACT INFORMATION





# MAP PRINTING

An assistant is available to help you print a map of anything you have seen today to take home.





# NORTH CAROLINA DEPARTMENT OF TRANSPORTATION



PUBLIC HEARING
NOVEMBER 16, 2015
NCDOT STIP PROJECT NO. I-2513

# THE PURPOSE OF THE OPEN HOUSE AND PUBLIC HEARING

Today's hearing is another important step in the North Carolina Department of Transportation's (NCDOT) procedure for making you, the public, a part of the project development process. The purpose of the hearing is to obtain public input on the location and design of the project.

There are two portions to today's event, an informal open house and a formal public hearing.

### View the DEIS and detailed project maps

Planning and environmental studies on the I-2513, I-26 Connector Project are available in the Draft Environmental Impact Statement (DEIS). Copies of the DEIS, along with today's hearing maps, are available for review.

### View the animated representation of the project

A visualization of some of the proposed alternatives for the project will be played continuously during the pre-hearing open house. Please take a moment to view this video with an explanation of the project.

### Speak with project representatives

NCDOT representatives will be available between the hours of 4 p.m. and 6:30 p.m. to answer questions and receive comments relative to the proposed project.

### Stay for the Public Hearing

A formal presentation will begin at 7 p.m. The presentation will consist of an explanation of the proposed corridor location, design, right of way, relocation requirements/procedures, and the state-federal relationship. The hearing will be open to those present for statements, questions and comments. The presentation and comments will be recorded and a transcript will be prepared. If you can not stay, the Public Hearing will be streamed, live, on the project website and you can submit comments online or through the mail.

Inside This Handout:	
Frequently Asked Questions	Page 2
Project Purpose and Need	Page 2
Public Review and Comment	Page 3
Project Timeline	Page 3
Detailed Study Alternatives	Page 4
Section C Alternatives	Pages 4-5
Section A Alternative	Page 6
Section B Alternatives	Pages 6-7
Nearby Projects	Page 8
Summary of Project Impacts by Section	Pages 9-10

# **PROJECT DESCRIPTION**

The I-26 Connector Project is an interstate freeway project that is being proposed to connect I-26 in southwest Asheville to US 19-23-70 in northwest Asheville. The NCDOT has programmed this project to upgrade and widen I-240 from I-40 to Patton Avenue, and then proceed northward from Patton Avenue on new location across the French Broad River and connect to US 19-23-70 just south of Exit 25 (Broadway). Upon completion, this project will be part of the I-26 Interstate that extends from Charleston, South Carolina, to Kingsport, Tennessee.

The proposed I-26 Connector in Asheville is approximately 7 miles long from the I-40 interchange to Broadway. The project includes three sections: C, A, and B.

### Section C

Improvements to the I-26/I-240 interchange with I-40 and the Brevard Road and Smokey Park Highway interchanges.

### Section A

Upgrading existing I-240 from the I-26/I-240 interchange with I-40 to the I-240 interchange with Patton Avenue, west of the French Broad River. This includes upgrades to the Brevard Road, Amboy Road, Haywood Road and Patton Avenue interchanges.

### Section B

Construction of the interstate on new location from the Patton Avenue interchange north across the French Broad River, tying into US 19-23-70 south of Broadway.

# **PROJECT INFORMATION**

# GENERAL

### What is the DEIS?

In accordance with the National Environmental Policy Act (NEPA) NCDOT prepared a Draft Environmental Impact Statement (DEIS) for the I-26 Connector Project. The DEIS is a federally required environmental document that describes the purpose and need for the project, identifies project alternatives, and evaluates them for potential environmental effects.

# Are the Designs Final?

The design plans shown at the Public Hearing are preliminary and have not been finalized. Additional information including traffic forecasts and updated property information may result in modifications of right-of-way limits, the limits of construction, road curves, or pavement markings.

# Has a Preferred Alternative Been Selected?

At this point, a preferred alternative has not been selected. All alternatives under consideration are presented in the DEIS and to the project team for selection of the preferred alternative.

### What's Next?

The next step in the planning process will be to summarize comments received at the public hearing and choose the Preferred Alternative. Your comments and recommendations will be on public record and will be considered when selecting the Preferred Alternative and to assist in developing the final design of the project.

### When Will Construction Start?

Section C of the project will be the first to start construction and is scheduled to begin in 2021. Section B construction will commence in 2024, and Section A will begin in later years.

# PROJECT PURPOSE AND NEED

# Why is the I-26 Connector needed?

The project is needed to address traffic capacity problems along the existing I-240 corridor (future I-26), across the Captain Jeff Bowen Bridges to US 19-23-70. Presently numerous areas do not meet interstate design standards and cannot be designated I-26 without being improved. The project would improve traffic flow, address the substandard roadway features, and provide an interstate roadway through West Asheville for the I-26 Corridor.

# How will traffic operate if the project is not built?

Traffic operations are evaluated using a "Level of Service" rating ranging from A (best) to F (worst). If no improvements are made, in 2033, 41 of the 80 freeway elements will operate at an unacceptable level of service, based on Federal Highway Administration standards. The completion of portions of the adjacent NCDOT Project A-0010A (US 19-23-70 improvements from Asheville to the Tennessee state line) will further increased traffic demands along I-240 west of Asheville.

# What are the roadway deficiencies along the existing corridor?

The existing route serving I-26 traffic has numerous design deficiencies that do not meet interstate design standards. The corridor was evaluated based on 19 design criteria, and 24 locations were shown to have elements that were substandard. Multiple segments of I-240 west of Asheville currently have an accident rate that exceeds the critical crash rate for similar North Carolina facilities, demonstrating the need for these improvements along this section of the facility.

# **State-Federal Relationship**

The proposed project is a Federal-Aid Highway Project and thus will be constructed under the State-Federal Aid Highway Program. Financing of this project will be 80% Federal funds and 20% State funds through the National Highway System Program. The Board of Transportation is responsible for the selection and scheduling of projects on the Federal Aid System, including their location, design and maintenance cost after construction. The Federal Highway Administration is responsible for the review and approval of the previously mentioned activities to ensure that each Federal Aid Project is designed, constructed and maintained to Federal Aid Standards.

Project Hotline/Línea Gratutita del Proyecto: 1-800-233-6315

http://www.ncdot.gov/projects/i26connector/

# **PROJECT INFORMATION**

# What is done with input received?

A post-hearing meeting will be conducted after the comment period has ended. NCDOT staff representing Planning, Design, Traffic Operations, Division, Right of Way, Public Involvement, Community Studies, and others who play a role in the development of a project will attend this meeting. The project will also be reviewed with federal agencies such as the Federal Highway Administration (FHWA) and the US Army Corps of Engineers (USACE), as well as state agencies such as the NC Department of Environment and Natural Resources. When appropriate, local government staff may also attend.

All spoken and written comments are discussed at the post-hearing meeting. Most issues are resolved at the post-hearing meeting. The NCDOT considers safety, costs, traffic service, social impacts and public comments in making decisions. Complex issues may require additional study and may be reviewed by higher management, Board of Transportation Members and/or the Secretary of Transportation.

Minutes of the post-hearing meeting will be summarized and are available to the public by noting your request on the comment sheet. Once distributed, the post-hearing meeting minutes will also be posted on the project website.

# WHERE TO REVIEW PROJECT INFORMATION

The DEIS and Public Hearing Maps are available for public viewing at the following locations:

### **NCDOT Division 13**

55 Orange Street
Asheville, North Carolina 28801

### City of Asheville Transportation

70 Court Plaza—Mezzanine Level Asheville, North Carolina, 28802

The DEIS is also available for public viewing at the following public library locations:

### State Library of North Carolina:

109 East Jones Street Raleigh, North Carolina 27601

### **West Asheville Library**

942 Haywood Road Asheville, North Carolina 28806

### Pack Memorial Library:

67 Haywood Street
Asheville, North Carolina 28801

### **Buncombe County Law Library**

60 Court Plaza Asheville, North Carolina 28801

People can also view the materials at the project website at http://www.ncdot.gov/projects/i26connector/

# **PROJECT TIMELINE**



## YOUR PARTICIPATION

Now that the opportunity is here, you are encouraged to participate by making your comments and/or questions a part of the public record. This may be done by having them recorded at the formal Public Hearing, calling the project hotline at 1-800-233-6315, or by writing them on the attached comment sheet. Several representatives of the North Carolina Department of Transportation are present. They will be happy to talk with you, explain the design to you and answer your questions. You may write your comments or questions on the comment sheet and leave it with one of the representatives or mail them by December 16, 2015 to the following address:

Mr. Drew Joyner, P.E.

NCDOT - Human Environment Section
1598 Mail Service Center
Raleigh, NC 27699-1598
Email: djoyner@ncdot.gov
1-800-233-6315

Additionally, comments can be submitted through EngageNCDOT, an interactive public engagement tool at http://engagencdot.mysidewalk.com/

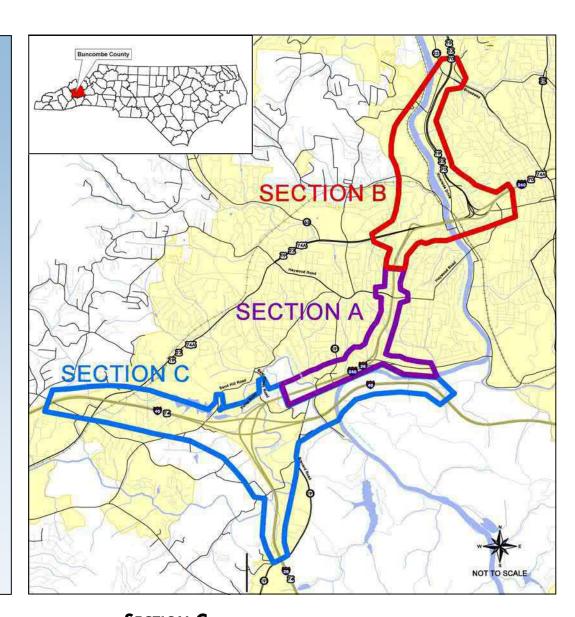
Everyone present is urged to participate in the proceedings. It is important, however, that the opinions of all individuals be respected regardless of how different they may be from your own. Accordingly, debates, as such, are out of place at public hearings. Also, the public hearing is not to be used as a popular referendum to determine the location and/or design by a majority vote of those present.

NCDOT Mission Statement: Connecting people, products, and places safely and efficiently with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina.

# **DETAILED STUDY ALTERNATIVES**

All of the detailed study alternatives would accommodate the projected traffic demands, as well as sharing common features such as landscaping, buffers, and color treatments on structural elements. However, each alternative balances the impacts to the human and natural environment in different ways.

The Project Study Area has been broken into three sections, as shown here. The proposed alternatives for each section are shown on the following pages.



# SECTION C

The four build alternatives for Section C, as presented on the next page, offer a variety of options to reconstruct the existing I-26/I-40/I-240 interchange. All alternatives provide the missing movements at the I-26/I-40/I-240 interchange.

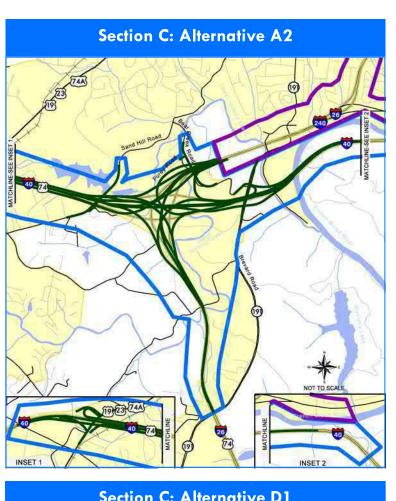
**Alternative A-2** provides direct flyover ramps for all movements at the I-26/I-40/I-240 interchange. This is a comprehensive solution that will result in an interchange that moves traffic in all four directions.

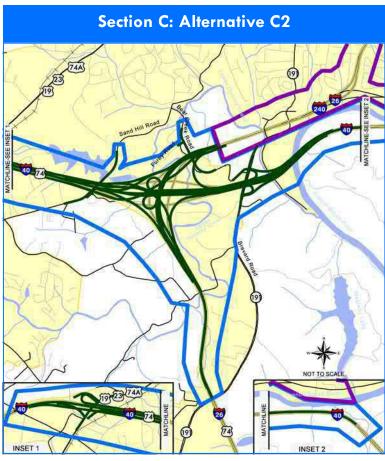
**Alternative C-2** provides two flyover ramps and two loop ramps at the I-26/I-40/I-240 interchange along with Collector-Distributor roadways in both directions along I-40 and in the eastbound direction along I-26. This solution balances between optimal traffic improvements and overall cost.

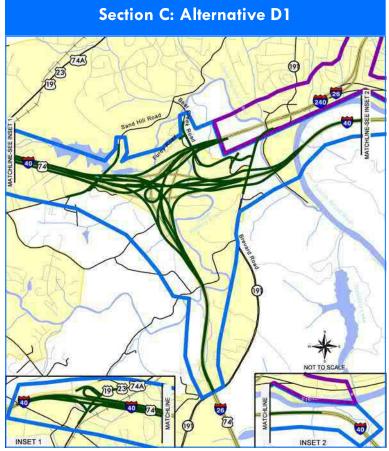
**Alternative D-1** provides three flyover ramps and one loop ramp at the I-26/I-40/I-240 interchange. This solution balances optimal traffic improvements with overall cost.

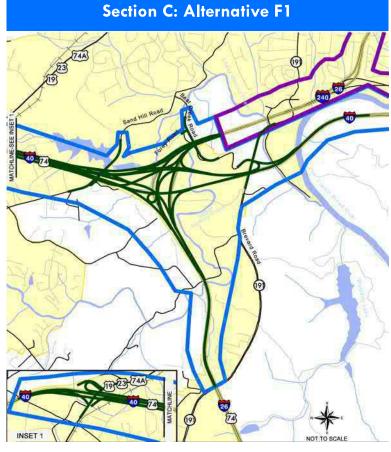
**Alternative F-1** reconstructs the existing I-26/I-40/I-240 interchange in the same general configuration as today but with the addition of two missing connections to I-40. This is a low-cost, efficient, solution that provides the missing movements in the interchange and accommodates projected traffic demands.

# DETAILED STUDY ALTERNATIVES—SECTION C









# **DETAILED STUDY ALTERNATIVES—SECTION A**

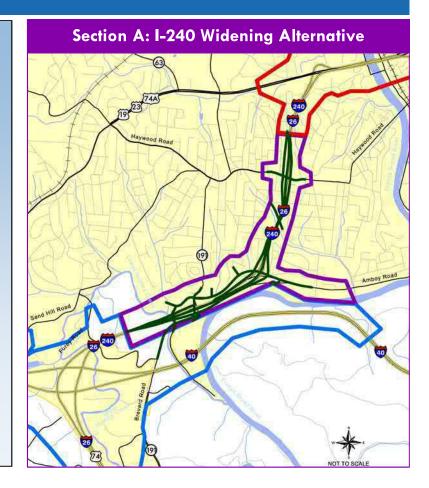
### SECTION A

There is one build alternative for Section A, which would widen I-240 from four lanes to eight lanes and provide upgrades at three interchanges.

The interchange with Brevard Road would have limited connectivity because of close proximity to the Amboy Road interchange. I-26 East/I-40 West traffic would exit at an upgraded Amboy Road interchange and travel along a new extension of Amboy Road to Brevard Road.

This extension of Amboy Road would connect to Fairfax Avenue and Virginia Avenue and continue to an intersection at Brevard Road.

A third interchange, at Haywood Road, would be converted to a tight urban diamond configuration. This design would relocate the current exit ramp from I-240 East that connects to Hanover Street and relocate it to connect directly to Haywood Road. The current two-way section of ramp in the northeast quadrant would also be eliminated.



### SECTION B

The four build alternatives for Section B, as presented on the next page, offer a variety of options for crossing the French Broad River and connecting to US 19-23-70 at the northern end of the project.

**Alternative 3** separates I-240 and I-26, with I-26 running north along a new alignment and I-240 continuing over the Captain Jeff Bowen Bridges as it does currently.

Alternative 3C follows the same alignment as Alternative 3, but crosses the French Broad River on two bridges further south.

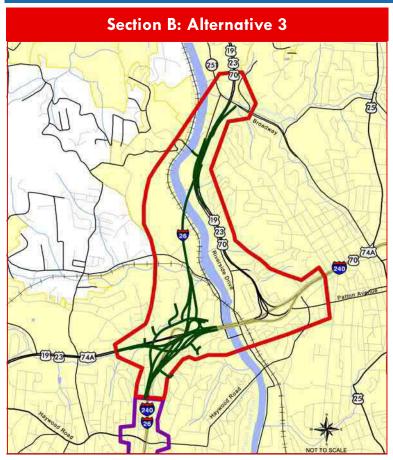
**Alternative 4** separates the local traffic on Patton Avenue from the I-240 through traffic, but otherwise follows a similar route as Alternative 3.

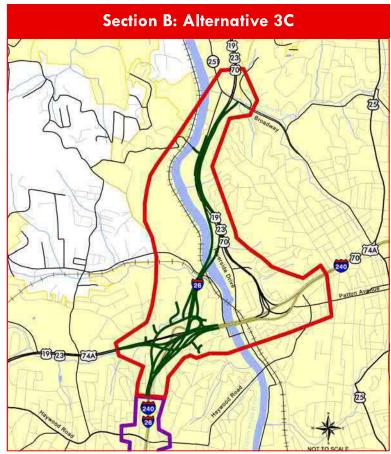
**Alternative 4B** also separates the local traffic on Patton Avenue from the I-240 through traffic, otherwise following a similar route as alternative 3C.

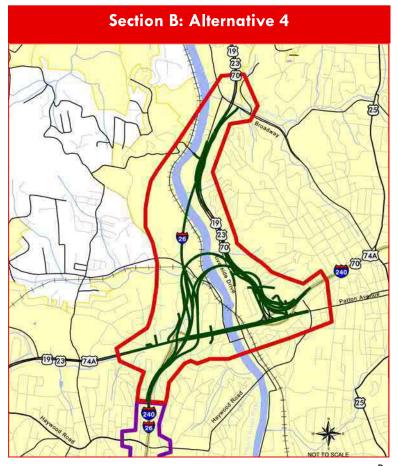
# Bicycle and Pedestrian Accommodations

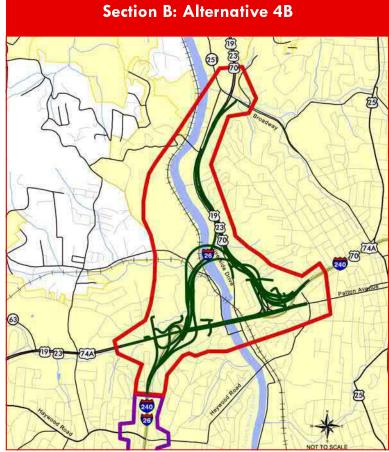
The City of Asheville has multiple plans to address bicycle and pedestrian accommodations throughout the city. In harmony with these plans, a greenway is proposed along Section A and all of the Section B alternatives. The greenway begins at Haywood Road and will follow the I-26 improvements in Section B, where it merges with Patton Avenue to cross the French Broad River and ties to the nearby streets, providing access to downtown Asheville. In addition, the proposed designs include multiple connections throughout the project area to existing sidewalks, bike paths, or transit routes.

# DETAILED STUDY ALTERNATIVES—SECTION B







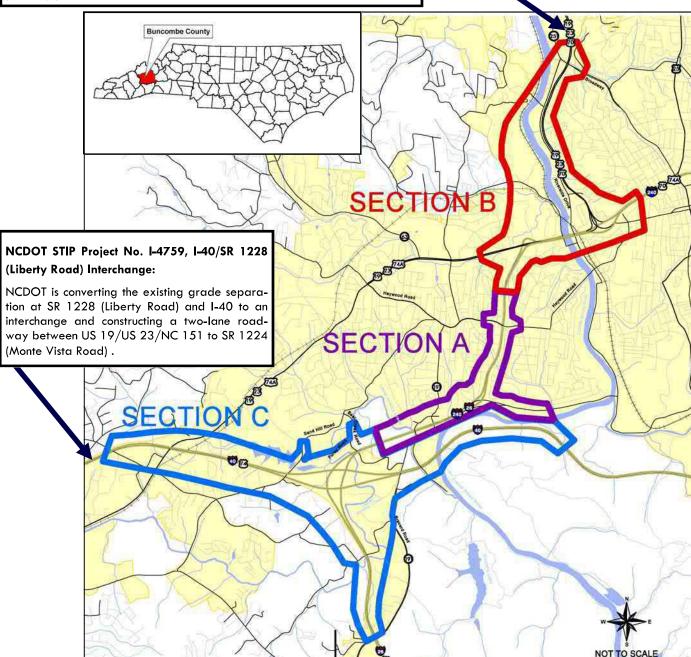


Page 7

## **NEARBY PROJECTS**

## NCDOT STIP Project No. A-0010A, US 19/23 (Future I-26) Improvements Project:

NCDOT is proposing to improve approximately 12 miles of US 19/23 from north of I-240 in Asheville to just south of Exit 13 (Forks of Ivy — Stockton Road) near Mars Hill. This project is currently in the early stages of the planning process.



# NCDOT STIP Project No. I-5504/Brevard Road Interchange project (Exit 33):

NCDOT is modifying an existing partial cloverleaf interchange, primarily to alleviate congestion by increasing the efficiency of the interchange. The project may include the widening of the NC 191 (Brevard Road) bridge over I-26.

# NCDOT STIP Project No. I-4400/I-4700, I-26 Widening Project:

NCDOT is proposing to widen approximately 22 miles of I-26 from US 25 (Exit 54) in Henderson County to I-40 in Asheville. This project is about to begin the preliminary design process.

## **Summary of Project Impacts by Section**

Resource	Section C (I-26/I-40/I-240 Interchange)			Section A	(1		ction B cross French Bro	pad)	
	Alt. A-2	Alt. C-2	Alt. D-1	Alt. F-1	I-240 Widening	Alt. 3	Alt. 3C	Alt. 4	Alt. 4B
Project Features									
Length (miles)									
I-26	2.2	2.2	2.2	2.2	2.0	2.4	2.5	2.4	2.5
I-40/I240	2.9	3.2	2.8	2.8	0.0	0.6	0.6	1.5	1.5
Total Length	5.1	5.4	5.0	5.0	2.0	3.0	3.1	3.9	4.0
Interchanges	3	3	3	3	3	2	2	3	3
Railroad Crossings	2	2	2	2	0	3	3	8	5
Navigable Waterway Crossings	1	1	1	1	0	2	3	4	4
Construction Cost	\$286,100,000	\$269,700,000	\$263,100,000	\$203,300,000	\$105,700,000	\$190,200,000	\$191,200,000	\$255,600,000	\$291,300,000
Right-of-Way Cost	\$26,600,000	\$22,400,000	\$33,800,000	\$17,100,000	\$29,400,000	\$42,800,000	\$36,200,000	\$45,500,000	\$36,800,000
Utilities Cost	\$2,200,000	\$2,000,000	\$2,300,000	\$2,100,000	\$3,400,000	\$3,100,000	\$3,300,000	\$3,600,000	\$3,900,000
Total Cost	\$314,900,000	\$294,100,000	\$299,200,000	\$222,500,000	\$138,500,000	\$236,100,000	\$230,700,000	\$304,700,000	\$332,000,000
Socioeconomic Features									
Relocations									
Residential	50	32	38	31	81	34	23	46	33
Business	6	6	7	5	17	24	33	24	34
Nonprofit	0	0	0	0	1	2	1	2	1
Total	56	38	45	36	99	60	57	72	68
Schools Relocated	0	0	0	0	1	0	0	0	0
Churches Relocated	1	1	1	1	1	0	0	1	1
Parks and Recreational Areas Impacted	1	1	1	1	2	0	0	0	0
Cemeteries Impacted	0	0	0	0	0	0	0	0	0
Physical Environment									
Noise Impacts (No-Build)	193	193	193	193	181	94	94	243	243
Noise Impacts (before abatement)	218	255	214	304	198	193	133	312	224
Noise Impacts (after abatement)	188	225	184	274	94	60	37	126	89
Hazardous Material Sites (moderate or high) Impacted	1	1	1	1	0	1	1	1	1

Resource	Section C (I-26/I-40/I-240 Interchange)			Section A	Section B (New Location across French Broad)				
	Alt. A-2	Alt. C-2	Alt. D-1	Alt. F-1	I-240 Widening	Alt. 3	Alt. 3C	Alt. 4	Alt. 4B
Floodplain Impacts (acres)	20.53	20.39	18.06	16.63	8.36	9.36	7.65	8.13	3.91
Floodway Impacts (acres)	2.74	4.23	2.27	2.00	1.94	2.88	2.96	0.69	0.38
Land Use Impacts by Zoning Category (acres)									
Residential Single-Family Districts	19.3	12.7	19.7	12.5	8.4	4.0	4.3	6.4	7.5
Residential Multifamily Districts	21.4	15.4	15.2	16.0	26.5	26.5	17.0	27.6	17.0
Neighborhood Business District	0	0	0	0	0	0.2	0.2	0.3	0.1
Community Business Districts	0.0	0.0	0.0	0.0	4.9	0.1	0.1	0.04	0.0
Industrial	0	0	0	0	0	4.0	0.0	2.4	0.4
Institutional District	38.6	38.6	35.4	34.5	13.6	0.4	0.4	0.2	0.4
Office	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Highway Business District	11.4	9.6	9.7	7.8	1.9	14.8	15.8	14.0	14.3
Regional Business District	32.3	32.4	34.1	27.1	0.0	15.4	15.4	9.3	10.5
Central Business District	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.2	0.3
Commercial	28.7	31.4	30.8	24.8	2.7	0.0	0.0	0.0	0.0
Resort District	0.0	0.0	0.0	0.0	0.0	22.1	21.5	37.2	19.6
River District	0.0	0.0	0.0	0.0	6.3	11.2	24.8	16.1	22.3
Total	151.8	140.1	144.9	122.6	64.7	98.9	99.7	113.7	92.5
Human Environment								•	
Community Effects (# of communities within or ad	jacent to study ar	ea with benefit or	burden from prop	osed alternatives	s)				
High Benefit	-	-	-	-	-	-	-	-	-
Moderate Benefit	-	-	-	-	-	-	-	1	1
Low Benefit	-	-	-	-	-	-	-	2	2
Neutral	-	-	2	-	1	5	5	1	1
Low Burden	2	2	-	2	3	4	4	4	4
Moderate Burden	-	-	-	-	1	1	1	2	2
High Burden	-	-	-	-	-	-	-	-	-
Cultural Resources	•	•	1	•	•		_	•	•
Historic Properties – Section 106 Effects	0	0	0	0	1 Adverse Effect	0	0	0	1 Adverse Effect

Resource		Section C (I-26/I-40/I-240 Interchange)			Section A	Section B (New Location across French Broad)			
	Alt. A-2	Alt. C-2	Alt. D-1	Alt. F-1	I-240 Widening	Alt. 3	Alt. 3C	Alt. 4	Alt. 4B
Historic Properties Impacted	2	2	1	1	2	2	2	2	2
Archeological Sites Impacted	5	6	5	6	2	1	1	1	0
Natural Environment									
Biotic Resources (acres)									
Maintained/ disturbed	192.86	191.47	188.84	171.93	91.08	87.85	83.96	126.50	124.82
Mesic Mixed Forest	140.72	137.11	135.08	111.26	47.41	39.02	33.32	40.02	40.67
Alluvial Hardwood Forest	8.97	9.11	8.33	6.55	1.50	5.87	4.76	3.10	3.88
Open Water	0.19	0.39	0.24	0.17	0	0.00	0.00	0.00	0.00
Total	342.75	338.07	332.49	289.90	139.99	132.74	122.04	169.63	169.37
Impervious Surface Increase (acres)	74.43	82.03	61.33	57.12	27.45	29.68	28.37	38.26	40.45
Stream Impacts (#)	12	12	13	12	4	7	6	6	7
Stream Impacts (linear feet)	2,965	2,779	2,938	1,984	798	3,874	3,639	1,839	2,128
Wetland Impacts (#)	13	12	13	12	1	3	2	4	2
Wetland Impacts (acres)	2.62	2.36	2.01	1.86	0.01	0.22	0.11	0.22	0.10
Pond Impacts(#)	0	0	0	0	0	3	0	3	0
Pond Impacts(acres)	0	0	0	0	0	0.6	0	0.53	0
Protected Species Adversely Affected	0	0	0	0	0	0	0	0	0

<sup>&</sup>lt;sup>a</sup>Stream, wetland, and pond impacts calculated using design slope stakes plus 25-foot buffer. All other impacts calculated using right-of-way.





PUBLIC HEARING NOVEMBER 16, 2015 NCDOT STIP PROJECT NO. I-2513

### **COMMENT FORM**

Public input is essential to every project that serves the people of the community where it is built. Public comments will be considered by the NCDOT project team in selection of a Preferred Alternative. If you require a direct response, such as a copy of the Public Hearing transcript, please provide your contact information so that we may follow up with you. You may always contact the project team at the Project Hotline below.

YOUR NA	ME:	EMAIL:				
ADDRESS (optional): CITY, STATE, ZIP:					ATE, ZIP:	
ORGANIZ	ATION (IF ANY):	PHONE:				
-	quest a copy of the Public H Section, please select your			No :		
	Section C		Section A		Section B	
	<ul> <li>□ Alternative A2</li> <li>□ Alternative C2</li> <li>□ Alternative D1</li> <li>□ Alternative F1</li> <li>□ Do Nothing (No-Build)</li> </ul>		<ul><li>□ Widen Existing</li><li>□ Do Nothing (No-Build)</li></ul>		<ul> <li>□ Alternative 3</li> <li>□ Alternative 3C</li> <li>□ Alternative 4</li> <li>□ Alternative 4B</li> <li>□ Do Nothing (No-Build)</li> </ul>	
Please pro	ovide any additional comm	en	ts about the I-26 Connecto	r p	roject:	

The hearing will also be streamed online if you cannot attend the formal hearing at 7 p.m. (see project website for link). Comments will be accepted during the webinar; however, responses will not be provided until after the comment period has closed on December 16, 2015.

Please leave completed form in the comment box, or return no later than December 16, 2015 to:

Drew Joyner, P.E.

1598 Mail Service Center
Raleigh, NC 27699-1598

Project Hotline: 1-800-233-6315
Project Website:
http://www.ncdot.gov/projects/i26connector/
Provide comments online at:
http://engagencdot.mysidewalk.com/



Mr. Drew Joyner, PE NCDOT Human Environment Section 1598 Mail Service Center Raleigh, NC 27699-1598

## TITLE VI PUBLIC INVOLVEMENT FORM

Completing this form is **completely** voluntary. You are not required to provide the information requested in order to participate in this meeting.

Meeting Type: Public Hearing	Date: November 16, 2015
Location: Renaissance Hotel, Asheville, North Carolina	
TIP No.: I-2513	
Project Description: I-26 Connector	

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Zip Code:	Gender: Male Female
Street Name: (i.e. Main Street)	<b>Age:</b> ☐ Less than 19 ☐ 20-24 ☐ 25-34
Total Household Income:	☐ 35-44 ☐ 45-54 ☐ 55-59
☐ Less than \$10,000 ☐ \$50,000 − \$74,999	☐ 60-64 ☐ 65-74 ☐ 75-84
☐ \$10,000 <b>–</b> \$14,999 ☐ \$75,000 <b>–</b> \$99,999	85 or over
☐ \$15,000 <b>-</b> \$24,999 ☐ \$100,000 <b>-</b> \$149,000	H <b>B:</b> 199: Ex. Ex.
☐ \$25,000 <b>-</b> \$34,999 ☐ \$150,000 <b>-</b> \$200, 000	Have a Disability: 🗌 Yes 🗌 No
☐ \$35,000 <b>-</b> \$49,999 ☐ \$200,000 or more	
Race/Ethnicity:	National Origin: (if born outside the U.S.)
White	☐ Mexican
Black/African American	Central American:
Asian	South American:
American Indian/Alaskan Native	☐ Puerto Rican
☐ Native Hawaiian/Pacific Islander	☐ Chinese
Hispanic/Latino	□ Vietnamese
Other (please specify):	☐ Korean
	Other (please specify):

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How did you hear about this meeting? (newspaper advertisement, flyer, and/or mailing)

Thank you for your participation!



PDEA
NCDOT Human Environment Section
1598 Mail Service Center
Raleigh, NC 27699-1598



To: Project File

From: Celia Foushee

**AECOM** 

Date: December 13, 2016

RE: I-2513 Small Group Meeting, West Asheville Business Association

**NCDOT STIP Project I-2513 (I-26 Connector)** 

#### **Project Team Meeting Attendees:**

Michael Wray – NCDOT, PDEA

David Brown – NCDOT Board Member

Jay Swain – NCDOT, Division 13

Rick Tipton – NCDOT, Division 13

Neil Dean – AECOM

Celia Foushee – AECOM

Joanna Rocco – AECOM

Chris Werner – AECOM

The project team was invited to attend and present at the West Asheville Business Association (WABA) meeting held September 20, 2016 at 9:30 am at the Isis Restaurant and Music Hall in Asheville, North Carolina. The purpose of the meeting was to provide the WABA members with an update on the I-26 Connector Project, review the designs (presented at the 2015 Public Hearing) and corresponding potential impacts along Haywood Road, and to review next steps for the project.

Chris Werner began the presentation discussing the NEPA Process, the project history, the project study area, the Detailed Study Alternatives, and the Preferred Alternative selected in May 2016. He then briefly discussed the business impacts that are referenced in the 2015 DEIS. It was noted that not all business impacts reflected in the 2015 DEIS result in a business take. In some cases, only a portion of the property will be impacted for right-of-way purposes and the business will remain. Chris discussed the 2015 Public Hearing maps and reviewed the impacts along Patton Avenue and Haywood Road. Additional details regarding the multiple constraints surrounding the Haywood Road interchange were discussed. The next steps and project schedule were then presented.

#### Questions discussed are listed below:

- Clarification of the location of the Haywood Road interchange [is this in Section A or Section B]?
  - Answer: Haywood Road is located within Section A
- Where is the Baker Building Historic Property and what are the other historic resources in the area?
  - Answer: The location of the Baker Building Historic Property was shown on the Public Hearing maps. Additional historic resources adjacent to the Haywood Road interchange include the Calvary Baptist Church Historic Property, and the West Asheville/Aycock School Historic District.
- Are the current designs shown based on an eight-lane section? If so, this is what is pushing the limits. Also, impacts to the Burton Street Community have not been discussed.

- Answer: Yes, the designs presented at the 2015 Public Hearing are based on an eight-lane typical section. Through the design refinement process impacts to the Burton Street Community, as well as other locations throughout the project study area, will be minimized as much as possible. The project team will also meet with the Burton Street Community to discuss the designs, additional avoidance/minimization opportunities, and potential mitigation opportunities.
- What does the light green represent on the Public Hearing maps and can we discuss the businesses that are being taken?
  - Answer: The lighter green on the 2015 Public Hearing maps shows the proposed right-of-way limits. Businesses and residents within the light green may be directly impacted by the project; however, through the design refinement process, impacts will be minimized as much as possible. It was also explained that the final determination as to which businesses and residents will be relocated cannot be determined until the final designs have been prepared following the FEIS.
- What are the drivers that push the ramp in the Northwest quadrant so far to the west?
  - Answer: The existing interchange configuration does not meet current design standards. In order to meet current design standards and accommodate projected travel demand the interchange configuration shown on the 2015 Public Hearing Map was required. With regard to establishing the physical location of the interchange, efforts to minimize impacts to business, residents, as well as the West Asheville/Aycock School Historic District and Baker Building Historic Property were considered. It was explained the current location of the proposed interchange was a best-fit location to avoid or minimize impacts to the greatest extent.
- What type of bicycle and pedestrian accommodations will be included in the Southeast quadrant?
  - Answer: As shown on the 2015 Public Hearing Map, the existing intersection of Hanover Street with Haywood Road is proposed to be closed. Currently, pedestrian accommodations exist along both sides of Haywood Road and along the east side of Hanover Street. There may be a "bicycle waiting area" within the proposed raised median shown on Haywood Road. There would also be five-foot sidewalks along both sides of Haywood Road and on the east side of Hanover Street. Access to Hanover Street from Haywood Road would be closed to motorists; however, bike and pedestrian traffic from Haywood Road and the proposed greenway would still have access to Hanover Street. It was noted detailed bicycle and pedestrian accommodations are not shown on the 2015 Public Hearing maps due to the level of designs presented.
- Are there bicycle and pedestrian counts for this area?
  - Answer: The City of Asheville will input what types of accommodations would be appropriate at this location.
- What kinds of impacts from construction of the bridge can be expected?
  - Answer: This will be discussed more once designs have been refined.
- When will the impacted property owners be notified?
  - Answer: Based upon the current project schedule, Right-of-way acquisition is expected to begin in 2019 for Section C. Individual property owners will be notified if their property is being acquired.
- For those interested in addressing specific items within the designs, what would be the best way to relay that information to NCDOT?

- Answer: Going through the City Council. The NCDOT and members of the City Council
  meet approximately every month to discuss details of the project. It was noted that
  additional items requested, beyond NCDOT standards, would be a cost to the city.
- Was the idea of moving the Haywood Road interchange or closing the interchange all together every considered?
  - It was noted from another WABA member that closing or moving the interchange would likely result in loss of business to several owners surrounding the interchange and this should not be considered.
- How are you measuring the impact of moving the transit stops on the housing authority communities?
  - Answer: The project team is working with the City to investigate alternate transit stops and conducting small group meetings with the communities in the area.
- How can I access the pedestrian study that was completed on Merrimon Street after the death of a pedestrian?
  - It was clarified the scope of the crash data analyzed for the I-26 Connector Project was much larger than only Merrimon Street.
  - Answer: NCDOT will send the location of the study.
- What is the schedule of the project?
  - Answer: Section C is scheduled for right-of-way acquisition in 2019 and construction in 2021. Section B is scheduled for right-of-way acquisition in 2020 and construction to begin in 2023. Section A is currently unfunded for right-of-way and construction, according to the 2016-2025 State Transportation Improvement Program.

Some questions were asked during the meeting but there was not sufficient information to answer at the time and are noted below:

- How much wider will the new Haywood Road bridge be than existing.
  - Answer: The existing bridge structure is approximately 125 feet wide. The proposed structure is approximately 222 feet wide.
- What are the existing bicycle and pedestrian counts for the Asheville area, specifically Haywood Road?

#### **Action Items**

- NCDOT will reproduce a half size set of plans, zoomed to the Haywood Road interchange and send to Alice Oglesby to distribute to the WABA members as necessary.
- NCDOT will find existing bicycle and pedestrian counts in the Asheville area, determine where
  counts were taken, and how they have been used. Mike Sule with Asheville on Bikes requested
  this information. He can be reached at <a href="mike@ashevilleonbikes.com">mike@ashevilleonbikes.com</a> or 828-582-4705. Update: The
  project team has coordinated with the NCDOT Bicycle and Pedestrian division for the requested
  information and, if available, will provide to Mike Sule.
- The project team will locate and provide to meeting attendees a copy of the pedestrian study that
  was completed on Merrimon Street. Update: The requested pedestrian study is attached to the
  meeting summary.

The meeting adjourned at 11:30 am.

#### DRAFT MEETING SUMMARY



To: Project File

From: Celia Foushee

**AECOM** 

Date: September 26, 2016

RE: I-2513 Small Group Meeting, Montford Neighborhood Association

**NCDOT STIP Project I-2513 (I-26 Connector)** 

#### **Project Team Meeting Attendees:**

Mike Dawson – FHWA Rick Tipton – NCDOT, Division 13

Parrick Wasyor – NCDOT, Programs Management Mark Roop – ICA Engineering

Derrick Weaver – NCDOT, Programs Management Mark Reep – ICA Engineering

Michael Wray – NCDOT, PDEA

Mary Pope Furr – NCDOT, HES

Bob Haskett – NCDOT, ROW

David Brown – NCDOT Board Member

Neil Dean – AECOM

Celia Foushee – AECOM

Joanna Rocco – AECOM

Chris Werner – AECOM

Jay Swain - NCDOT, Division 13

The project team was invited to attend and present at the Montford Neighborhood Association (MNA) neighborhood meeting held September 20, 2016 at 7:00 pm at the Isaac Dickson Elementary School in Asheville, North Carolina. The purpose of the meeting was to inform the Montford Neighborhood (Montford) of the I-26 Connector Project status and potential impacts to the neighborhood. Suzanne Devane moderated the meeting and the format involved a panel of project team members that included: Derrick Weaver, Chris Werner, Mark Reep, Bob Haskett, and Rick Tipton.

David Patterson (MNA President) began the meeting with a brief introduction and overview of the purpose of the meeting. Suzanne Devane then gave a statement regarding the intended process of the meeting. It was noted that the project team panel members would provide project specific information and address questions that were raised prior to the meeting. After the presentation, any additional questions from the audience would be addressed.

Derrick Weaver began the presentation discussing the NEPA Process, the project's history, the project study area, and the Preferred Alternative selected in May 2016.

Chris Werner gave additional information regarding the selection process of the preferred alternative and criteria considered. This included the ability to meet the purpose and need for the project, overall impacts to resources, project costs, and public and local officials input. Design considerations of the preferred alternative for Section B were also discussed. It was noted traffic analyses are currently being updated which will be used to further refine the designs. The origin of traffic analyses and the forecast were also noted. Visualizations shown at the 2015 Public Hearing and new 360-visualizations were then displayed. It was noted the 360-visualizations were still in draft form and additional photos would be taken during

MEETING SUMMARY September 26, 2016 Page 2 of 3

winter months when there is less foliage on the trees. An elevation graphic was discussed which showed existing and proposed elevations at various locations in Section B. Concerns regarding tree removal impacts were discussed during the presentation by members of the audience. It was noted the visualizations show tree removal that will occur within the right-of-way, but does not show tree removal during construction. The 360-visualizations are a tool meant to inform the public of what the project could potentially look like once constructed, but are not meant to be a definitive reflection of the final result.

Rick Tipton discussed concerns regarding land stability from construction of the project. It was noted that NCDOT will perform several geological tests to confirm that land in the area is stable and will be stable during construction techniques such as blasting. It was noted that stability issues are a geotechnical issue throughout the project and in the mountain region of North Carolina for all roadway projects, and NCDOT intends to conduct borings of the area before any removal of land occurs.

Mark Reep discussed noise impacts, sound mitigation techniques, and NCDOT's policies regarding sound mitigation. It was noted in order for a noise wall to be constructed a ballot is sent to impacted residents, and a majority vote in favor of constructing a noise wall has to be received in order move forward.

Bob Haskett discussed the Right-of-Way Program, the eminent domain process, condemnation process, and next steps in right-of-way acquisition. It was noted specific information about impacts to homes could not be addressed at the meeting; however, concerned residents could contact Mr. Haskett to inquire about impacts to their property. The 2015 Public Hearing maps and relocation reports disclose information regarding which properties could potentially be impacted. Properties that must have right of way required to construct the project will not be known definitively until final design.

Suzanne Devane discussed some questions for NCDOT officials from members of the audience. Additional questions not discussed during the meeting will be sent to the project team. The questions discussed are listed below:

- Why weren't visualizations of the project provided prior to the meeting?
  - o Answer: Visualizations were provided at the 2015 Public Hearing. The 360-visualizations were created per a request from the Working Group.
- How many vehicles are projected for the area?
  - o Answer: 90,000 vehicles per day.
- Why is the project not being designed at a smaller scale?
  - O Answer: The current designs are at a large scale, or "worst case", for the purposes of comparing alternatives and selective a Preferred Alternative for the project. Through additional traffic analysis and public input, NCDOT is currently working to further refine the designs for the Preferred Alternative. The project is being designed to meet projected traffic volumes in the year 2040, and traffic projections in the analysis are based upon local socioeconomic data from the French Broad River Metropolitan Planning Organization (FBRMPO).
- Is there any chance the Preferred Alternative could be moved to the west side of the French Broad River?
  - Answer: Until the Record of Decision is written, the alignment is not set in stone; however, NCDOT is moving forward with designs using the Preferred Alternative alignment.
- What traffic studies have justified this decision [of the Preferred Alternative]?

- Answer: The previous FBRMPO Travel Demand Model was used to prepare a traffic forecast that was used to create the current designs. The updated FBRMPO Travel Demand Model will be used to update the traffic studies to further refine the designs.
- Request to discuss the Kirby Case and how it relates to the I-26 Connector project.
  - O Answer: The NCDOT staff at the meeting would like the opportunity to further research how this case relates to the project.
- What is the travel time savings for those travelling through Asheville?
  - O Answer: This information is located in another report not readily available. NCDOT will get the information for the MNA's review.
- Why were all properties not shown on the public hearing maps?
  - O Answer: NCDOT is aware that not all properties were displayed on the public hearing maps, for example some parcels that have been subdivided since the latest set of parcel data was not shown. The hearing maps displayed aerials and parcel data available at that time. Mapping is currently being updated and will continue to be updated as appropriate throughout the project development process.
- Was a tunnel option discussed?
  - o Answer: Yes. Tunnels are substantially more expensive.

Some questions were asked during the meeting but there was not sufficient time to answer and are noted below:

- Request to clarify the noise wall policies.
- Is there literature on how noise levels impact property values?
- Request to discuss air quality impacts.

The meeting adjourned at 10:00 pm.



To: Project File

From: Celia Foushee

**AECOM** 

Date: January 4, 2017

RE: I-2513 Small Group Meeting, Burton Street Community

**NCDOT STIP Project I-2513 (I-26 Connector)** 

The project team presented to the Burton Street Community held October 17, 2016 at 6:00 pm at the Burton Street Community Center in Asheville, North Carolina (see attached sign-in sheet). The purpose of the meeting was to provide the Burton Street Community with an update on the I-26 Connector Project, review the designs (presented at the 2015 Public Hearing) and corresponding potential impacts to the Burton Street Community, discuss additional avoidance or minimization efforts, discuss potential efforts to mitigate for the project impacts, and to review next steps for the project.

Prior to the meeting officially beginning, residents viewed the 2015 Public Hearing maps that were displayed on the wall and asked property specific questions to the project team. The Burton Street Community Association leader began the meeting discussing the purpose of the meeting and introducing the I-26 Connector project team. Derrick Weaver began the presentation discussing the NEPA Process, the project's history with the Burton Street Community, the project study area, the Preferred Alternative selected in May 2016, and the goal of the meeting and future meetings. It was noted this would be the first of several meetings with the Burton Street Community to discuss potential mitigation measures to lessen the impacts of the I-26 Connector Project. It was noted the Preferred Alternative selected had the least amount of impacts to the community.

Chris Werner then discussed the design process and the steps required to refine the designs for the Preferred Alternative. It was noted this project was locally identified as a need for the community. The process to determine future traffic conditions and how it will affect the final design was briefly discussed, noting the state and federal guidelines which must be considered. A general review of the data and information considered by the resource agencies when selecting the Preferred Alternative was discussed, noting that the comments collected in response to the 2015 DEIS were taken into consideration, as well as impacts to the human and natural environment. It was noted the project team was meeting with neighborhood and business associations, as well as owners of historic properties, in order to continue with community coordination to obtain additional input on the designs so the Preferred Alternative can be refined as much as possible to best fit with within the adjacent communities. Next steps of the project were discussed which included additional small group meetings with communities, continued meetings with historic property owners, refining designs based upon public and resource agency input and traffic analyses, publication of the Final EIS, and holding of a Design Public Hearing.

Derrick Weaver discussed in more detail the Community Effects Evaluation Findings, summarized within the 2015 Draft Environmental Impact Statement, which suggested that the Preferred Alternative (Section

C Alternative F-1, Section A Widening Alternative, and Section B Alternative 4-B) would have a "Low Burden" on the Burton Street Community. He further explained that although the Preferred Alternative is anticipated to benefit the community in the form of improved emergency response times, negative effects to the community would include recurring impacts to community cohesion, the physical aspects of the project, the potential difficulties associated with finding replacement housing within financial means, as well as anticipated effects to the visual environment within the community. He continued by suggesting in addition to input provided by the community as to how the project team might further refining the designs to lessen the impacts to the community, NCDOT was also interested in receiving input from the community as to what additional transportation improvements might be made in the community to offset or lessen the burden of the overall project impacts. It was noted that this is the first of many meetings with the community to discuss these options and reiterated no decisions would be made tonight. At this time, meeting attendees were invited to examine the 2015 Public Hearing maps and discuss impacts to the Burton Street Community. Below are discussion points and questions raised during this conversation.

- The symbology shown on the maps was discussed. This included proposed and existing right-ofway, noise study areas, historic resource boundaries, and new roadways.
- It was noted the Burton Street Community was evaluated by the North Carolina State Historic Preservation (SHPO) office multiple times to determine eligibility for listing in the National Register. The report was finalized in June 2016.
  - A copy of the report and/or guidelines for decisions by SHPO was requested by a resident of the community.
- Question: How will the project affect houses in the community, specifically on Fayetteville Street?
  - It was noted there would be no homes taken as a result of the project on Fayetteville Street. The Noise Study Area boundary which includes Fayetteville Street was discussed as well as the noise policies and requirements to construct noise walls.
- Specific impacts to Burton Street were discussed. It was noted not all impacts include a full property take. The difference in a full take and a partial take was discussed.
- The possibility of extending the currently proposed retaining wall (located near the intersection of Texas Street and Fayetteville Street) was discussed. It was noted that while this may prevent the full take of properties, the tie back required for the wall would likely still impact the property. It was also noted if a tie back is located underneath a house, it would result in a full take of the property. NCDOT will investigate use of additional retaining walls to further minimize impacts to the Burton Street Community.
- Question: Would six lanes of traffic versus eight lanes make a difference in the amount of impacts?
  - It was discussed there may be a minor difference in the impacts, however the driver to determine the number of lanes in Section A will be the traffic forecast and associated traffic analyses.
- Question: Is the purpose of the project to move truck traffic into Tennessee?
  - o It was discussed this is generally one of the purposes of the project. Other purposes of the project as presented in the DEIS were discussed.
- Question: How are the lengths of the ramps [at the Haywood Road interchange] determined?
  - The ramps are designed to provide enough storage, based on projected amount of traffic using the ramps during the peak hour, without traffic backing up onto the interstate.
- Will Patton Avenue be built as a bicycle and pedestrian friendly roadway?

- O Yes, the project team is working with members of the City Council to determine locations for bicycle and pedestrian accommodations throughout the entire project.
- Questions regarding access to Hanover Street, increased traffic on Baker Avenue, and on-street parking on Baker Avenue and Haywood Road were discussed.
  - o It was noted direct access to Hanover Street from I-240 and Haywood Road would be removed.
  - o It was noted a right-in, right-out concept would likely be implemented at Burton Avenue from Haywood Road. Residents were concerned this would increase traffic on Baker Avenue for those who want to take a left turn onto Haywood Road. This may be challenging given the amount of on-street parking several homes utilize on Baker Avenue.
- Through discussions, it was noted access to Patton Avenue from Florida Avenue has poor access.
   NCDOT stated that an improvement to Florida Avenue is an example of mitigation that NCDOT may be able to offer in efforts to reduce impacts as a result of access modifications to Burton Street.
- Residents noted B & B Pharmacy on Haywood Road is a frequently visited business for Burton Street residents and provides a delivery service to the community which may be impacted by the proposed Haywood Road improvements.
  - It was noted while the on-street parking for B & B Pharmacy may be removed, the building will not be impacted and bicycle/pedestrian accommodations would still be provided.
- Question: Will there be visualizations when the design refinements are finalized?
  - Yes, visualizations are being updated to reflect the refined designs in both winter and summer months.
- Question: What is the time frame for construction of the project?
  - It was noted right-of-way acquisition is scheduled to begin for Section C in 2019 and for Section B in 2021. Section A is currently unfunded for right-of-way and construction. It was noted that constructing the project by sections would be re-evaluated closer to rightof-way acquisition.
- Question: How close will NCDOT work with the community and how can members of the community follow the progress of the project?
  - o It was noted additional small group meetings will occur with the Burton Street Community and other communities in the project study area. The project website is updated and includes project information, updates, and history. All coordination and commitments made to communities will be summarized in the Final EIS. Additionally, the project website has contact information for the NCDOT Project Manager, Michael Wray.
- Question: What is the process of eminent domain and right-of-way acquisition?
  - A brief overview of the process for right-of-way acquisition was discussed. It was noted further details regarding the process could be answered by NCDOT Division Right-of-way staff.
- Question: Will you go into details about the Environmental Justice (EJ) designation?
  - Due to the demographics of the community, Burton Street has been classified as an EJ population which has incurred reoccurring impacts, due to having a minority population and/or low-income population that meets the appropriate threshold within Buncombe County to be designated as such. With an EJ designation, NCDOT can provide additional mitigation opportunities to lessen the burden of the project that other communities are not subject to receive. It was noted the *Burton Street Community Plan* from 2010 may be

MEETING SUMMARY January 4, 2017 Page 4 of 4

a good starting point for residents of Burton Street to identify goals NCDOT can possible provide assistance for.

- Question: Who should residents coordinate with moving forward?
  - o It was noted Derrick Weaver and Michael Wray were NCDOT project managers for the I-26 Connector project located in Raleigh. Cole Hood was identified as a local NCDOT contact for the project and Ken Putnam was identified as a local City contact. DeWayne Barton was also identified as a contact NCDOT has been coordinating with to meet with neighborhoods.
- It was suggested another meeting with the Burton Street Community should occur once residents have had an opportunity to develop a list of potential mitigation measures that may lessen the impact to the community.

The meeting adjourned at 7:30 pm and any specific additional concerns were open for discussion with the project team.

#### **Action Items**

- NCDOT will send a copy of the Historic Architectural Resources Survey Report; Intensive Evaluation: Burton Street Neighborhood to DeWayne Barton to distribute as necessary to the community. *Update: The requested report was sent to DeWayne Barton on 11/10/2016*.
- NCDOT will investigate use of additional retaining walls to further minimize impacts to the Burton Street Community.



To: Project File

From: Celia Foushee

**AECOM** 

Date: March 13, 2017

RE: I-2513 Small Group Meeting, Burton Street Community

**NCDOT STIP Project I-2513 (I-26 Connector)** 

The project team attended the Burton Street Community monthly neighborhood association meeting held February 20, 2017 at 6:00 pm at the Burton Street Community Center in Asheville, North Carolina. This was the second time the project team has met with the community. The purpose of the project team attendance was to provide the Burton Street Community with an update on the I-26 Connector Project, discuss the Environmental Justice policy, discuss additional avoidance or minimization efforts, discuss potential efforts to mitigate for the project impacts, and to review next steps for the project. Prior to the meeting, DeWayne Barton, a Burton Street community representative, took the project team on a walking tour of the neighborhood. He expressed various mitigation opportunities the community would consider during the tour such as potential speed bumps at Burton and Buffalo Roads, and a greenway connection at Saratoga and Fayetteville Roads.

During the meeting, Derrick Weaver began the discussion on the I-26 Connector Project with an update of the design revisions. The Environmental Justice policy and how it affects the community was reviewed. It was noted due to this policy, there is opportunity for NCDOT to provide mitigation to the community due to the impacts from the proposed project. It was recommended the community update their community plan to develop a vision for the community moving forward. It was also recommended the community hire a consultant, with assistance from NCDOT, to complete this task. There would be two phases of the Environmental Justice process; first to update the plan and second to identify the impacts from the project and identify potential mitigation opportunities. Neighborhood Solutions was identified as a potential consultant firm that has experience in assisting communities with this type of effort. Their work in Winston Salem was recognized as an example. It was noted this effort would be funded by NCDOT. At this time, discussion followed and is summarized below.

- What is the timeline for hiring the consultant Neighborhood Solutions?
  - o NCDOT currently has this consultant on a retainer; therefore it is possible they could be under contract for this project within 30 to 45 days.
- What is the timeline for construction of the I-26 Connector Project?
  - Sections B and C are scheduled to begin construction in 2020, the Final EIS is scheduled to be finalized in winter 2017/2018 with a Record of Decision in the summer 2018.
- It was noted Phase 1 of the plan is dependent upon community coordination efforts and it could be possible to have an updated plan within six months.

The community meeting was adjourned at 7:10 pm.

MEETING SUMMARY January 4, 2017 Page 2 of 2

### **Action Items**

• NCDOT will coordinate with Neighborhood Solutions to begin work with the Burton Street Community.



To: Project File

From: Celia Foushee

**AECOM** 

Date: March 29, 2017

RE: I-2513 Small Group Meeting, Fairfax Avenue/Virginia Avenue Community

NCDOT STIP Project I-2513 (I-26 Connector)

Project Team Meeting Attendees:

Mike Dawson – FHWA
Michael Wray – NCDOT, PDEA
Kristina Solberg– NCDOT, Division 13
Neil Dean – AECOM
Celia Foushee – AECOM
Chris Werner – AECOM

The project team presented to the Fairfax Avenue and Virginia Avenue Community on March 21, 2017 at 6:00 pm at The Mothlight venue in Asheville, North Carolina. The Mothlight was a make-shift venue, after the original location, the Grace Baptist Church, was not accessible. The purpose of the meeting was to provide the residents of the Fairfax Avenue and Virginia Avenue Community with an update on the I-26 Connector Project, review the designs and corresponding potential impacts to the community, review next steps for the project, and get feedback from the community on the impacts and benefits to their community from the project.

Chris Werner began the presentation by discussing the project history, the project study area, the Detailed Study Alternatives, and the Preferred Alternative selected in May 2016. He then discussed the current status of the project and the process of updating designs of the Preferred Alternative through updates to the traffic analyses. He reviewed the 2015 Public Hearing maps in the vicinity of the community and explained the proposed designs for the I-26 interchanges at Brevard Road and Amboy Road. It was noted the Amboy Road Extension was conceptualized based upon local input. Amboy Road Extension is currently shown as a 4-lane divided facility with a bike lane in each direction, curb and gutter due to low vehicular design speeds, and berm to accommodate sidewalks, should the City of Asheville choose to assist in the cost of constructing sidewalks. It was explained the four lanes on Amboy Road Extension were provided to meet the traffic demand based upon previous versions of the French Broad River Metropolitan Planning Organization's (MPO) travel demand model, which included socioeconomic data which the MPO established based on local input. It was noted the proposed right-in/right-out access to Fairfax Avenue and Virginia Avenue was provided for access to the neighborhoods, but would go through public, agency and the City of Asheville review for comment as to whether this access should ultimately be provided. Surrounding restrictions that drive the current designs in the vicinity were noted; MEETING SUMMARY March 28, 2017 Page 2 of 3

this includes the steep grade south of I-240 between Brevard Road and Amboy Road, location of the existing greenway, Carrier Park, and avoidance of wetlands.

The process of the project prioritization was briefly discussed. It was noted the project is currently funded for right of way acquisition and construction for Sections C and B to begin in 2020. Section A is currently unfunded; however, it was noted the prioritization is updated every two years, therefore, it could score better in future revisions as the project moves forward, should the locals make that project a priority.

Chris Werner explained that NCDOT is in the process of updating the traffic capacity analysis, which will help determine the number of lanes needed on I-26 and at the interchanges. As such, the designs will be refined to only provide the number of lanes required based upon the new traffic data. At the same time, NCDOT has been reviewing public and resource agency comments provided on the 2015 Draft Environmental Impact Statement. Additionally, NCDOT has also been participating in periodic meetings with the City of Asheville Working Group to review and address their comments on the project. NCDOT has also been meeting with business groups (as requested), adjacent neighborhoods, and historic property owners in order to better understand concerns and to obtain input on how the project could be refined to better fit within the context of Asheville while meeting local and regional needs.

#### General feedback received from attendees included:

- The existing intersection of Virginia Avenue and Haywood Road has traffic operational issues. It was noted the project team would forward this information to the City of Asheville.
- Even providing right-in/right-out access to Fairfax Avenue and Virginia Avenue from Amboy Road
  Extension is perceived to be a safety issue on Fairfax and Virginia Avenues as these are narrow
  streets, with no sidewalks, and on-street parking.
- It was recommended traffic calming measures be implemented on High Court Entrance. It was noted the project team would forward this information to the City of Asheville.
- There were concerns that the City of Asheville does not have an adequate amount of affordable housing for those whom may be relocated by the I-26 Connector Project.
- If the Amboy Road Extension is required, it was suggested removing the right-in/right-out access to Fairfax Avenue and Virginia Avenue.
- It was suggested that there are too many lanes on the Amboy Road Extension.
- Residents expressed interest in removing the Amboy Road Extension all together in order to reduce the overall project impacts. Concepts suggested included a configuration similar to a spread diamond interchange between Brevard Road and Amboy Road. It was noted by residents, with this type of configuration, the bike lanes and sidewalk as currently proposed, could be completely eliminated by providing a greenway. They proposed the greenway connection could begin on the north side of the spread diamond interchange, and run from Shelburne Road east to Carrier Park. It was perceived by some that a greenway serving pedestrians and bicyclists would be more desirable than bike lanes/cycle tracks and a sidewalk.
- Noise impacts were discussed at a high level; however it was noted if the community would like
  additional, more specific information regarding the noise analysis and results, a future meeting
  can be scheduled with a noise representative.
- Residents questioned why a bypass around Asheville is not being considered. It was noted this
  alternative was considered at the early stages of the project; since it does not meet the purpose
  and need of the project, it was eliminated by the Merger Team for further evaluation.

- It was suggested that efforts need to be made to eliminate truckers from using Jake Brakes in residential areas. It was noted this request would be forwarded to the NCDOT Division office and the City of Asheville for further consideration.
- It was generally agreed that Ulla Reeves should continue to be the neighborhood contact. She will use the sign-in sheet to create an email list for future correspondence about the project. Her contact information includes: Ulla Reeves 221 Fairfax Avenue Asheville, NC 28806 ulla.reeves@gmail.com
- It was questioned if any meetings such as this have been held for the Haywood Road/I-240 area.
  The provided response stated no meetings have been requested in that area except by the West
  Asheville Business Association, which has been held; however, NCDOT would be available to meet
  if there was a request.
- General recommendations suggested designs be prepared to provide accommodations for pedestrians and bicyclists throughout the project and with a focus on safety in areas where they interact with motor vehicles.
- It was noted traffic signal timing throughout the city is poor and needs remediation. It was noted
  the project team would forward this information to the City of Asheville and the NCDOT Division
  office.

The meeting adjourned at 8:00 pm.



## **FAIRFAX AVENUE/VIRGINIA AVENUE**

## **COMMUNIT** March 21, 2017

NAME	AGENCY/ORGANIZATION	EMAIL
Celia Fonshee	AECOM	celia.fonshee@aecom.com
BECCA LEE	NEIGHBORHOOD	hibeccalee egmail. com
Anne Cortos	Fair fax Ave Rosident	anne contesa eathlink net
SUSANNALL BROWN	DALEST. RES.	brownsusannaha Qgmail.com
Craig Dentsol	Dale St	craig dentsch 12 @ gmail.com
Genn Middleton	Fairfax resident	alenndavis middleton@quail.com
MAN LAPEAR	VIRGINIA AVE RESIDENA	LAPINE. MATT C GWAT L. com
Emily Unger	Virginia are resident	emily rungers a molt com
Hadley Bergh	Virginia Ave Resident	hjbergh@gmail.com
Margot Moses	Virginia Ave Resident	nhpdq4@gmail.com
Lori Richardson	Fairfax Ave.	Lori-LCSW @yahoo.com
Collean Habis	Fairfax Ave,	m-Innector @ amail. com
Ratic Dean	Sand Hill Rd	KADAN RSILCOM con
Kim Porter	Carceley St homeowner	porter kiger@hotmail.com
STEVE VINZAN	FAIRFAX ROAD	INAZNIV @ GMAIL, com
Benjamin Robinson	Fairfax Rd resident	Ben Krobinson 74@gmail.com



## FAIRFAX AVENUE/VIRGINIA AVENUE

**COMMUNIT** March 21, 2017

Transportation	NOL VINCINITATION	
NAME	AGENCY/ORGANIZATION	EMAIL
Will Kinney	Hubbard Ave. begident	willkinnen 531@ whoo.com
dim Morrison	Dale St. Resident	Jimgmorrison@gmail.com
KEN PUTNAM	COK	KPCTNAME ASHENILIENCGON
Gwen Wisler	Asheville Council	
Liz Preyer   Morris Letsinger		lizpreyeregmail.com/mletsjoyegn
Richard Collins	Virginia Ave- resident	rcollin a@bellsath.vet
WILL SMITH/RYAN WILLIAMS	VIRGINIA Ave Rosideur	Pago ryanandwill@gmail.com
Debby Vance	Fartax Are Rededit	monian Egnado con
Bonnie Bloom	Dale St. Resident	bbloom 78@hotmail.com
Bruce & Donna Criswell	Fairfax Ave. Res.	discrisuelle ginailicon recrisuelle ginailicon
Jensen Gelfond	Pale st. resident	igelfond@me.com
Sarah Sheeran	Hubbard Ave. resident	Smarcink@gmail.com
MaReeves	221 Fairfax Ave resident	Ma reeves @ gmail. com
		habrongegnail.com
John Rost Hd	Hudson St resident  foothospegmail.com = FAIRFAXY ST resident	2
CROM CAREY	GREELEY ST resident	CROM, CAREYO GMAIL



## FAIRFAX AVENUE/VIRGINIA AVENUE

## **COMMUNIT** March 21, 2017

Transportation	The second secon	
NAME	AGENCY/ORGANIZATION	EMAIL
ED ARELIANO	DALE ST.	edwardarellano Chotmail. com
Michal Penninga	Frifex Ave	mpenninan agmail. com
Molly Coffey	fairfaid Ave	molcoff@yahoo.com
DaneNorthway	Brotherton aul	januar Huvay @ grus 1. Cm
Vincent Wroblewski	Fairfax Avenue	jamportimay@gual.com trilluncove Eg mail.com
m reg		



To: Project File

From: Joanna Rocco

**AECOM** 

Date: March 28, 2017

RE: I-2513 Small Group Meeting, Hillcrest Apartment Community

March 21, 2017

NCDOT STIP Project I-2513 (I-26 Connector)

**Project Team Meeting Attendees:** 

Derrick Weaver – NCDOT, PDEA Cole Hood – NCDOT, Division 13 Greg Smith – McCormick Taylor Joanna Rocco – AECOM

The project team was invited to attend and present at the Hillcrest Apartment Community meeting held March 21, 2017 at 6pm at the Carl E. Johnson Community Center in Asheville, North Carolina. The purpose of the meeting was to provide the residents of the Hillcrest Apartments an update on the I-26 Connector Project, review the designs and corresponding potential impacts to the neighborhood, review next steps for the project, and get feedback from the community on the impacts and benefits to their community from the project.

Detrick Weaver began the presentation by discussing the project history, the project study area, the Detailed Study Alternatives, and the Preferred Alternative selected in May 2016. He then reviewed the 2015 Public Hearing maps and explained the access changes to the community. Residents were in agreement that the proposed access changes to and from the community were generally a benefit to the residents.

Feedback was solicited on the types of bicycle and pedestrian accommodations desired by the residents. It was agreed sidewalks to the signalized intersection at Patton Avenue would be desirable, but that attention must be paid to safety at that intersection due to the amount of traffic anticipated. The residents also agreed it would be beneficial to keep the pedestrian bridge, but that there could potentially be ramps instead of stairs to accommodate wheelchairs and any other special needs of pedestrians. NCDOT noted that if the pedestrian bridge was to be moved it would be at full cost to the City of Asheville.

Greg Smith gave an overview of the potential noise impacts to the community and the process of receiving a noise wall. He also explained the results of the initial traffic noise analysis, where a noise wall could potentially be located, demonstrated the current and future noise at the apartment community via a noise demonstration, and showed photos of NCDOT's standard noise walls.

Questions discussed are listed below:

- Are the elevations of the roadway different in that area than the existing elevations?
  - O Answer: The elevations will be relatively the same, except for the area near the French Broad River. That area may be higher due to the bridging and grades at that location.
- How many noise meters were used near the Hillcrest Apartment community during the noise analysis?
  - Answer: There was one noise meter used in this community in order to validate the model at that location. These are used to determine if noise measurements will be accurate at any point along the designs of the project.
- Is the noise analysis looking at the same types of cars used in present day? Won't there be quieter cars in the future?
  - Answer: While it's true the technology in the future may allow for a higher percentage of electric cars, which tend to be quieter, traffic noise above 35 miles per hour is typically a function of the sound of tires on pavement. A percentage of trucks is also included in the model.
- If residents don't want a noise wall, will the noise be louder due to the project?
  - Answer: No, the traffic noise without a wall decreases due to the traffic volumes and the location of the traffic, which is pushed further east with the proposed designs. A noise wall would reduce traffic noise even further.
- How would a noise wall be maintained?
  - Answer: The NCDOT Division 13 office would maintain the grass berm in front of the wall and the wall itself.
- When residents receive the noise ballot, will there be any project information along with it so an informed decision can be made?
  - Answer: Yes, there will be a detailed project information packet that explains the purpose of the project, noise impacts, and general dimensions, appearance, and location of the proposed noise wall.

The meeting adjourned at 8:45 pm.



To: Project File

From: Joanna Rocco

**AECOM** 

Date: August 7, 2017

RE: I-2513 Small Group Meeting, East West Asheville Neighborhood

NCDOT STIP Project I-2513 (I-26 Connector)

**Project Team Meeting Attendees:** 

Michael Wray – NCDOT, PDEA Cole Hood – NCDOT, Division 13 Brendan Merithew - NCDOT, Division 13 Kristina Solberg – NCDOT, Division 13 Rick Tipton – NCDOT, Division 13 Joanna Rocco – AECOM Chris Werner – AECOM

The project team held a public meeting for the East West Asheville community on June 5, 2017 at the East West Vintage Rentals in Asheville, North Carolina. The meeting was held as an "open house" type meeting from 6 to 8pm, to allow residents to attend at any time and no formal presentation was held. The purpose of the meeting was to provide the residents of the East West Asheville Community an opportunity to ask questions regarding the I-26 Connector Project, review the design concepts at Amboy Road, Brevard Road, and Haywood Road (see concepts attached), and get feedback from the community on the impacts and benefits to their community from the project.

Approximately 39 citizens attended the meeting (see attached sign in sheet). General feedback received from attendees included:

- Safety concerns for bicyclists and pedestrians if Haywood Road was designed as a roundabout or "ovalabout". Many residents explained that they value being able to commute from East West Asheville to areas for recreation and work, and didn't feel comfortable with traversing a roundabout. The perception heard from most residents was that drivers will be paying more attention to other vehicles than they would bicyclists and pedestrians.
- Several residents inquired about having a potential pedestrian bridge if a roundabout concept was developed further.
- Residents expressed positive feedback for the concepts recommended between Amboy and Brevard Roads.
- General recommendations suggested designs be prepared to provide accommodations for pedestrians and bicyclists throughout the project and with a focus on safety in areas where they interact with motor vehicles.

The meeting adjourned at 8:00 pm.



# EAST WEST ASHEVILLE COMMUNITY MEETING SIGN IN SHEET

June 5, 2017

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DARRYL & TAMMIE CASPER	ENANA/NAGHBOR	dtcasper@ Charter net
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Karrin Echert	DW AC	KARINGARDEN 6 YAHOO. COH
SCOTT MILLER		scott millers woodwarks@ smail.
SVA CARR	EVARY/ NEIGHBOR	avacanchotmail.com.
Bill Custis	,	bille @ blueridge, edu
Ben Brown	neigh bor	baubrown 828 @ smail, com
Joshua Martin	reighbor	sundownslim egmail. con



# EAST WEST ASHEVILLE COMMUNITY MEETING SIGN IN SHEET

June 5, 2017

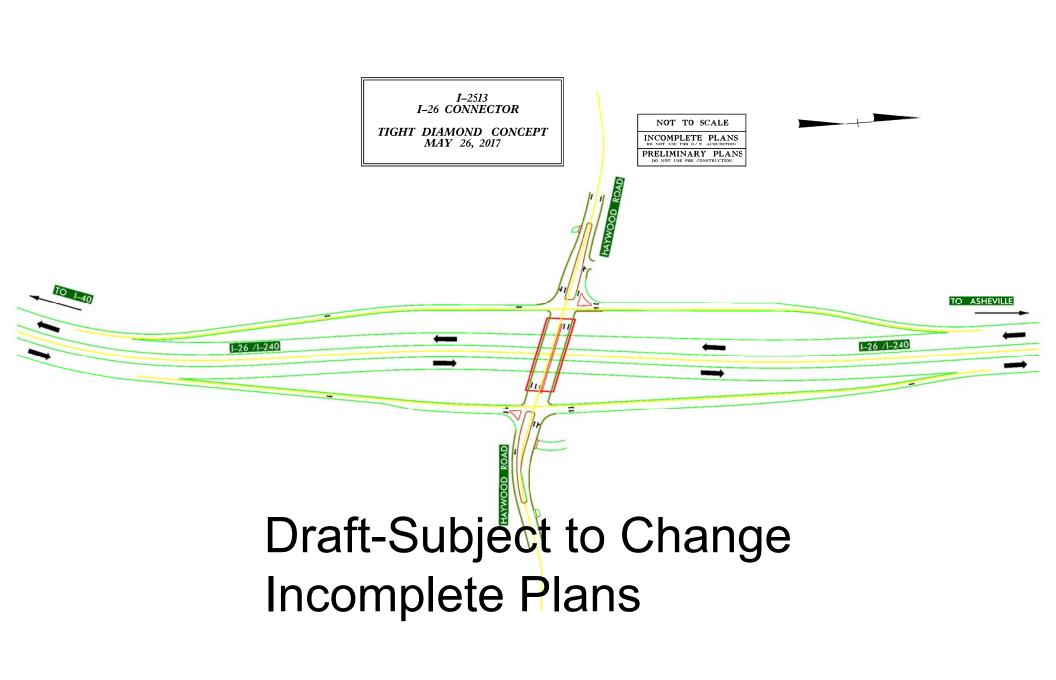
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Dave Campbell	RABBA /Allegra	Love a Allegra Asheville. com
Doudlas	EW ANNA	david bw@bellsonh.net
Lynn Brail Fono	EWANA	liveandlearn.lynnegnail.com
Elena Mansour	EWANA	elena mansour@ hotmail.com
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Brad Foster	,	Kbwhodato me.com
MikeWasmer	Buiton	mdwasmer@yahoo.com
Andrew Hager		Drown @ 6mzil-Com
RACHEL WINGS	NEIGHBOR	RACHEL. WINGO EGMAIL. COM
Roger Smill	EWANA	roger 5147@ yahoo.com
Stacre Smith	EWANA	trainwithsfecretelyman,

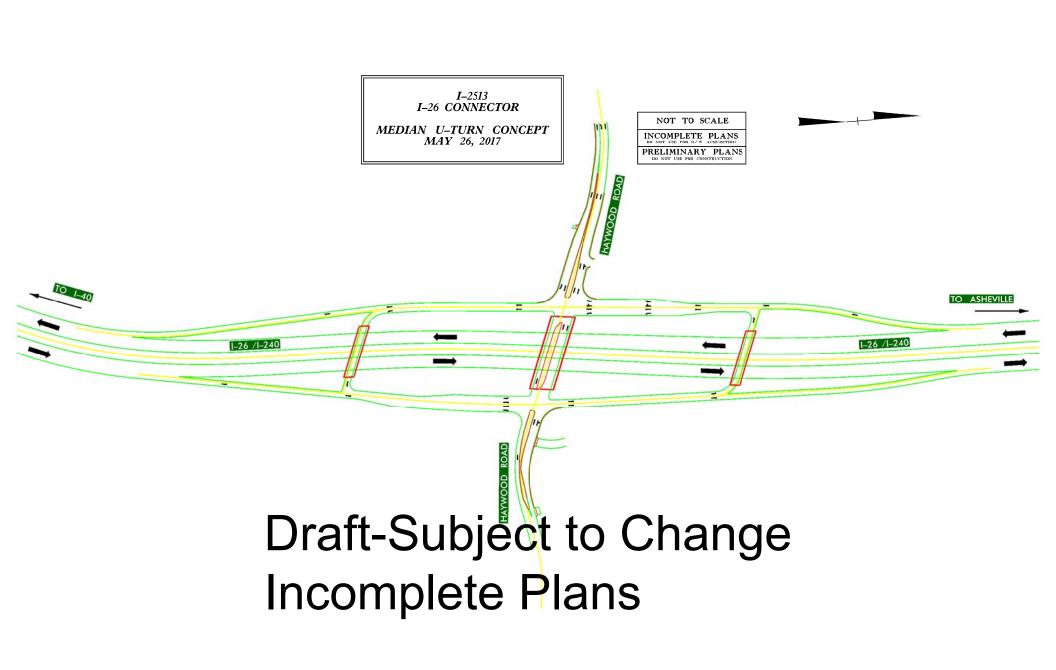


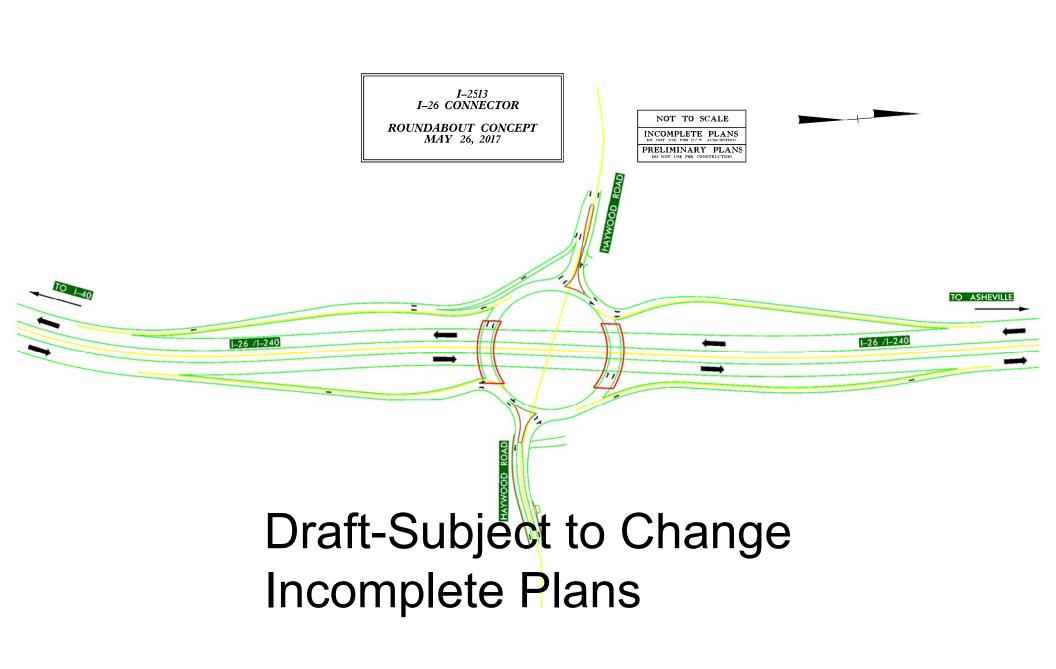
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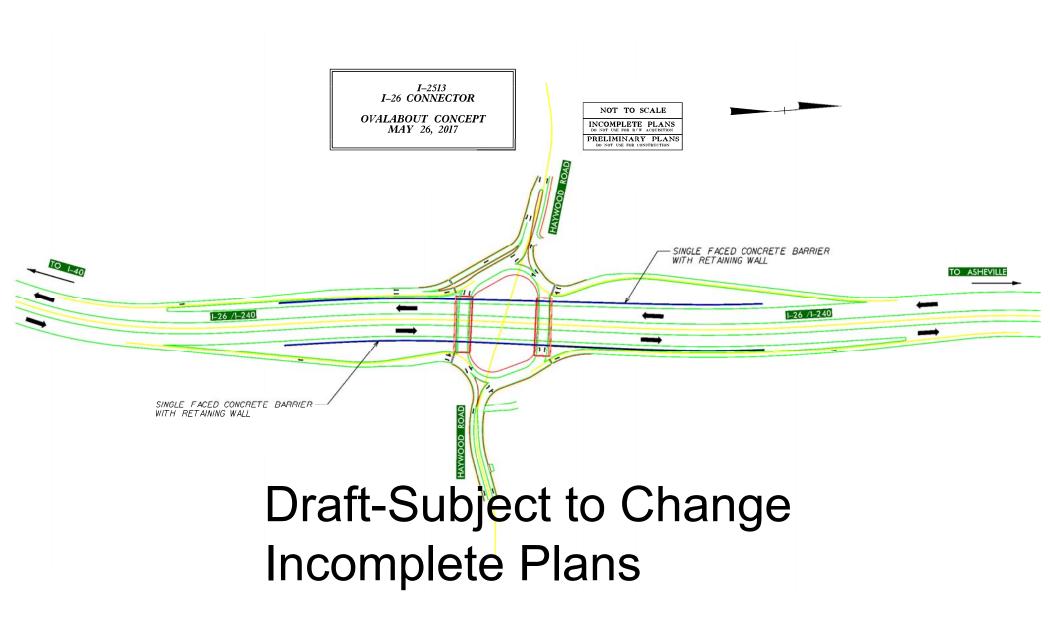
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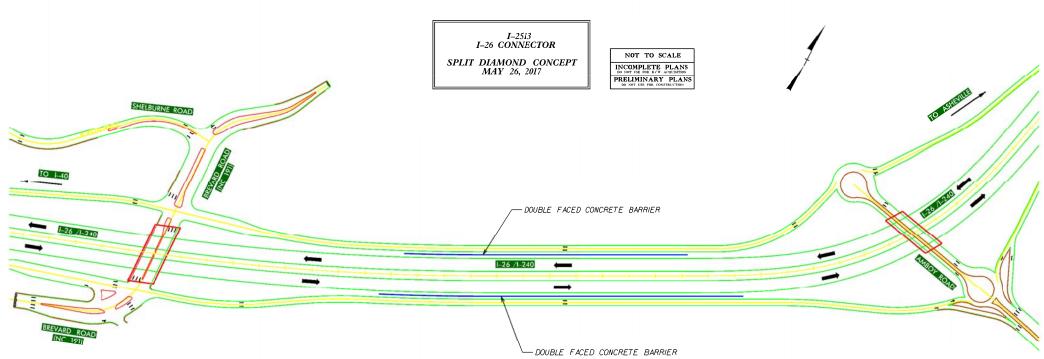
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Tom Burnet	11	tkbaul Dgmail.com
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# Draft-Subject to Change Incomplete Plans

#### **MEETING SUMMARY**



To: Project File

From: Joanna Rocco

**AECOM** 

Date: August 7, 2017

RE: I-2513 Small Group Meeting, West Asheville Business Association

NCDOT STIP Project I-2513 (I-26 Connector)

**Project Team Meeting Attendees:** 

Michael Wray – NCDOT, PDEA Kristina Solberg – NCDOT, Division 13 Rick Tipton – NCDOT, Division 13 Joanna Rocco – AECOM Chris Werner – AECOM

The project team was invited to attend and present at the West Asheville Business Association (WABA) meeting held June 6, 2017 at 9:30 am at the Isis Restaurant and Music Hall in Asheville, North Carolina. The purpose of the meeting was to provide the WABA members with an update on the I-26 Connector Project, review the conceptual designs developed for Amboy, Brevard, and Haywood Roads, and to review next steps for the project.

Michael Wray began the discussion by explaining the project status since we last met with WABA in September of 2016. Chris Werner then explained that the project team has been meeting with small groups and neighborhoods throughout the project development process to solicit feedback on the project. Most recently, the project team met with the Fairfax Avenue/Virginia Avenue community in March, and received feedback on Amboy and Brevard Roads. He noted residents there were concerned about the project providing right-in/right-out access to Fairfax Avenue and Virginia Avenue from Amboy Road Extension, as it is perceived to be a safety issue since these streets are narrow with no sidewalks and have on-street parking. Residents also expressed interest in removing the Amboy Road Extension all together in order to reduce the overall project impacts. Concepts suggested included a configuration similar to a split diamond interchange between Brevard Road and Amboy Road. It was noted by residents, with this type of configuration, the bike lanes and sidewalk as currently proposed, could be completely eliminated by providing a greenway. They proposed the greenway connection could begin on the north side of the spread diamond interchange, and run from Shelburne Road east to Carrier Park.

Chris explained the project team used that feedback from residents to assist in preparing designs for the area between Amboy and Brevard Roads and displayed the current concept (see attached). This concept replaces the Amboy Road Extension with a ramp to reduce the width, eliminates right-in/right-out access to Fairfax Avenue and Virginia Avenue, and replaced traffic signals at Amboy Road with roundabouts to keep traffic moving and decrease speed. This will also help prevent traffic from backing up onto the interstate. He noted that without the Amboy Road Extension (which would have included sidewalks and bike lanes) a greenway could be provided to access Carrier Park. The project team will be holding another

MEETING SUMMARY August 7, 2017 Page 2 of 2

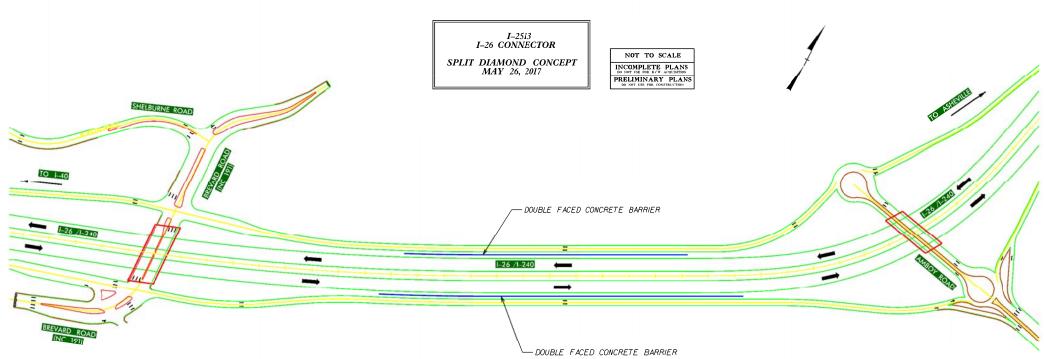
meeting with the residents of the Fairfax Avenue/Virginia Avenue community to get their feedback on the proposed concept.

Chris then reviewed the concept development for the Haywood Road interchange. The original concept presented in the 2015 Public Hearing Maps showed a Tight Urban Diamond Interchange (TUDI). Public comments received regarding a TUDI include concerns on the amount of impacts, safety concerns for bicyclists and pedestrians, and not fitting into the urban context.

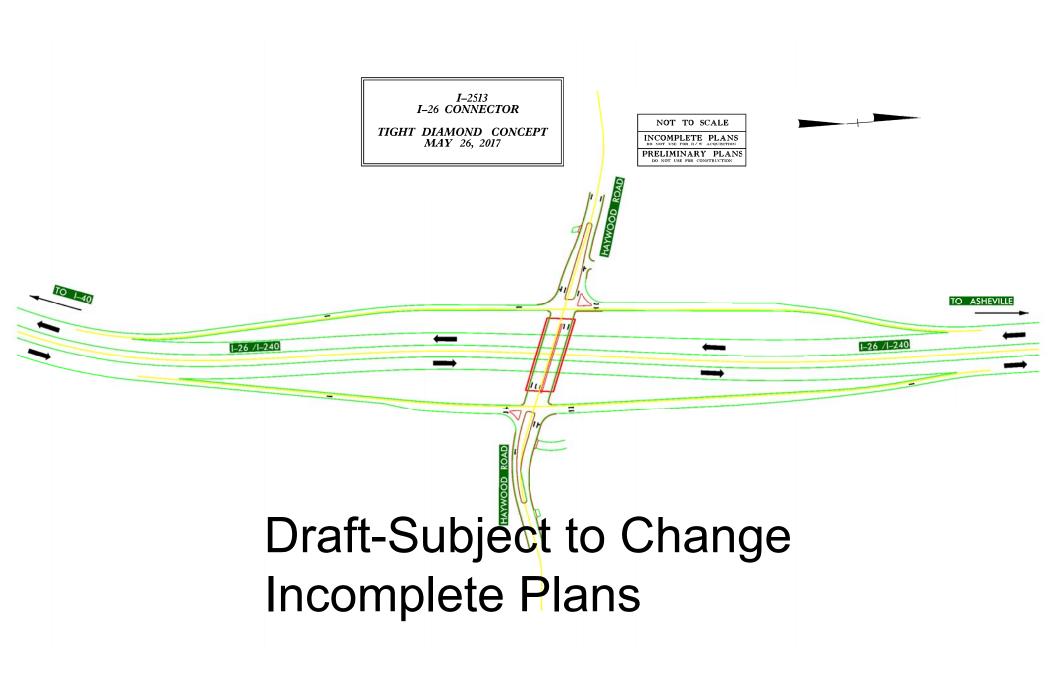
A series of meetings have been held with NCDOT and FHWA, including an urban design specialist from NC State that is now employed with NCDOT. These meetings resulted in several concept iterations. Chris showed the concepts for a Median U-Turn Interchange (MUTI), a roundabout interchange, and an oval-shaped roundabout interchange, or "ovalabout". The primary purpose of the MUTI is to accommodate left-turning traffic (all left turn movements removed) since constraints in the area do not allow the road to be widened. The MUTI is fatally-flawed however, since the distance to the Patton Avenue ramp exceeds the allowable distance between ramp terminals, making it not function from a traffic standpoint. Other disadvantages of the MUTI include vehicles having to go out of their way to make left turn movements and construction of 2 additional bridges. The roundabout design concept was presented and noted that it could potentially increase impacts. It also forces bicycle and pedestrian traffic to have to circumvent the roundabout along with the vehicular traffic. The "ovalabout" design concept was presented as well, which may work better from a traffic standpoint and is still being analyzed to determine its feasibility. It was noted the most concern from the EWANA residents the night before was bicycle and pedestrian safety.

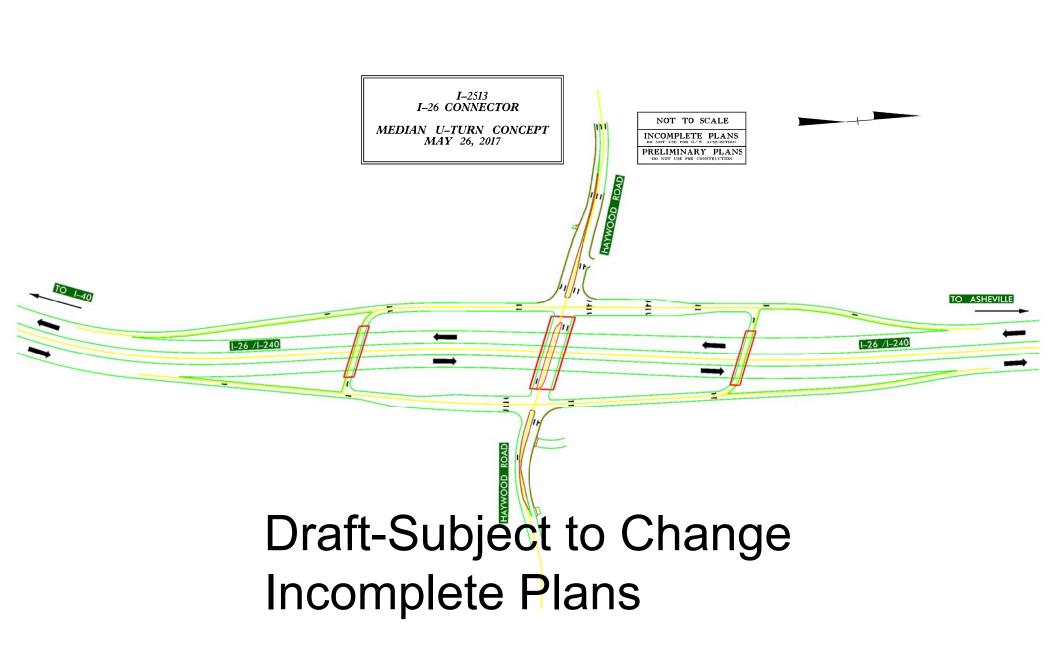
Discussion items after the presentation are listed below:

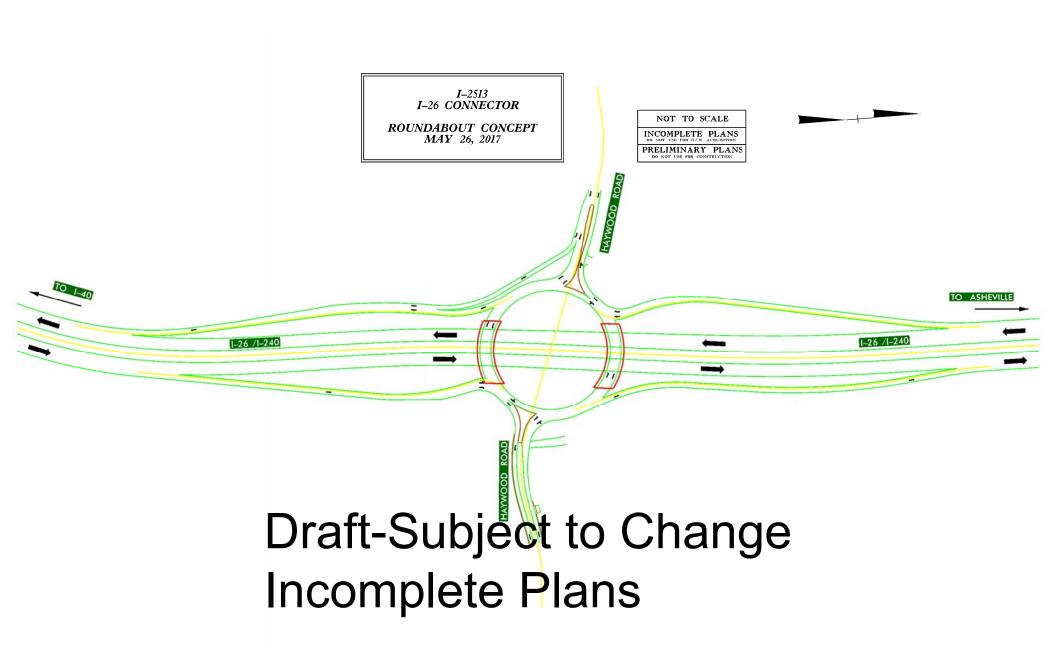
- It was clarified Section A of the project is not yet funded, but the funding is reevaluated every two
  years. This section of the project continues to be studied at the planning level with the other two
  sections while NCDOT works with the French Broad River Metropolitan Planning Organization on
  its prioritization.
- The traffic studies are currently being prepared and will determine if six or eight thru lanes are needed for Section A of the project.
- The goal of all interchanges presented at the meeting is to reduce impacts (or remain the same at least) from the impacts presented in the 2015 Draft Environmental Impact Statement.
- Separate bicycle and pedestrian facilities have not been considered thus far for the roundabout and "ovalabout" design concepts at Haywood. Once traffic studies are complete, and the feasibility of these options and whether or not they can be designed is determined, bicycle and pedestrian facilities will be considered.

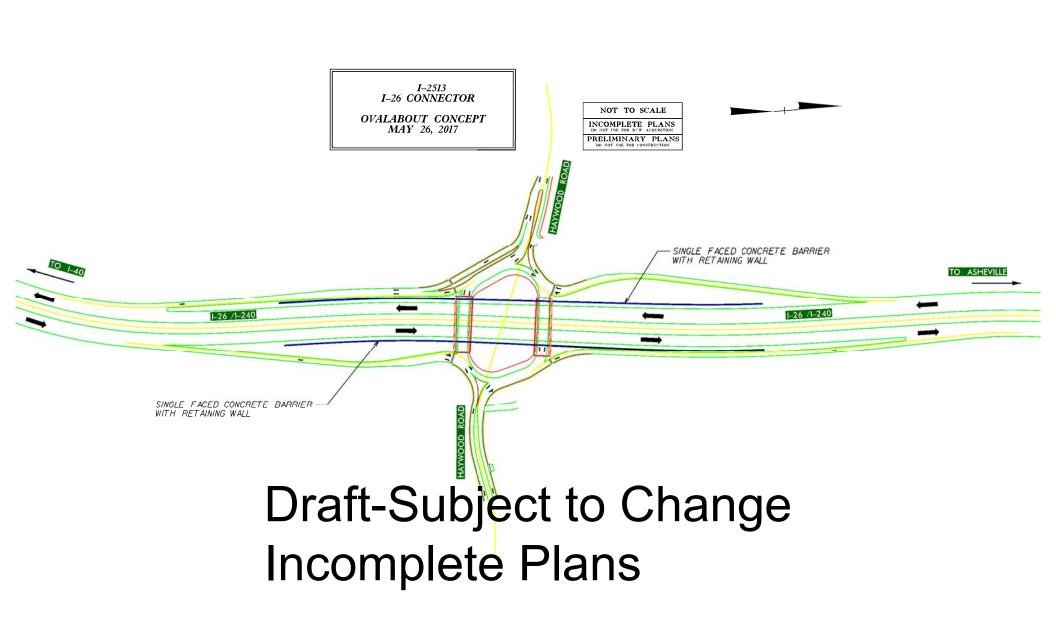


# Draft-Subject to Change Incomplete Plans









#### **MEETING SUMMARY**



To: Project File

From: Celia Foushee

**AECOM** 

Date: September 14, 2017

RE: I-2513 Small Group Meeting, Fairfax Avenue/Virginia Avenue Community

**NCDOT STIP Project I-2513 (I-26 Connector)** 

**Project Team Meeting Attendees:** 

Mike Dawson – FHWA
Michael Wray – NCDOT, PDEA
Kristina Solberg– NCDOT, Division 13
Neil Dean – AECOM
Celia Foushee – AECOM
Joanna Rocco – AECOM

The project team presented to the Fairfax Avenue and Virginia Avenue community on September 7, 2017 at 6:00 pm at Earth Fare in Asheville, North Carolina. The purpose of the meeting was to provide the residents of the Fairfax Avenue and Virginia Avenue community with an update on the I-26 Connector Project, review the conceptual designs developed as a result of the meeting held with the community on March 21, 2017, review next steps for the project, and get feedback from the community on the revised designs at Amboy Road and Brevard Road.

Three sets of maps were on display at the meeting; each set included the 2015 public hearing map, zoomed to Amboy Road and Brevard Road, and the 2017 revised conceptual designs on aerial imagery. The 2017 conceptual design maps did not show proposed right of way and slope stake limits since they are still being developed. The meeting began informally, allowing residents to review the maps with the project team and ask questions.

Michael Wray formally began the meeting by discussing the project history and the project status. Neil Dean then discussed the design revisions that have been made since meeting with the Fairfax Avenue and Virginia Avenue residents in March. This design replaces the Amboy Road Extension with a ramp to reduce the width, eliminates right-in/right-out access to Fairfax Avenue and Virginia Avenue, and replaces traffic signals at Amboy Road with roundabouts. The 2017 revised designs presented at the meeting illustrated a multi-transportation path along the western side of the Amboy Road roundabouts and bridge. The path would likely continue along the north side of the split diamond ramp, connecting to Brevard Road and ultimately to Shelburne Road. NCDOT is working closely with City of Asheville staff to identify the appropriate bicycle and pedestrian accommodations. Residents of the community noted they would like to have the multi-transportation path continue along the north side to connect Shelbourne Road to Carrier Park with connections to Fairfax Avenue and Virginia Avenue. Ken Putnam noted that the

MEETING SUMMARY September 14, 2017 Page 2 of 2

City will request funding to incorporate the requested multi-transportation path in the project. He also noted there will be a connection from the multi-transportation path to neighborhood roads such as Fairfax Avenue and Virginia Avenue.

Neil discussed several different traffic movements to describe how the public would travel from I-26 to Brevard Road, Amboy Road, Carrier Park, and into the Fairfax Avenue and Virginia Avenue community.

Residents expressed safety concerns regarding the slip ramp from I-26 to Amboy Road south, noting cars could speed through the ramp without paying attention to bicyclists or pedestrians. It was noted the slip ramp would be posted for 35 miles per hour and the roundabout design would not encourage people to travel at higher speeds. Furthermore, it was noted roundabouts are designed to slow down traffic, typically to 15 miles per hour.

The residents requested the project team provide additional information regarding traffic patterns in the AM and PM peak hours. It was noted this information is currently being evaluated in the traffic micrsimulation analysis and that additional visualizations showing these patterns may be provided at the Final EIS Public Hearing.

It was noted the project team is in the process of updating the Traffic Noise Analysis based on the revised designs and updated traffic forecast. Additional information regarding traffic noise impacts will be discussed in the Final EIS.

It was noted Section A of the project is currently unfunded. The project team advised the residents to coordinate with their local representatives to voice their support for including Section A in the next State Transportation Improvement Program prioritization.

#### **Action Items**

• The project team will send a notification letter of the design changes to the residents of Fairfax Avenue and Virginia Avenue located within the project study area and a digital version of the letter to Ulla Reeves to distribute to the entire community.

The meeting adjourned at 7:30 pm.





#### STIP I-2513 I-26 Connector

# FAIRFAX AVENUE/VIRGINIA AVENUE COMMUNITY MEETING SIGN IN SHEET

September 7, 2017

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MATILAPINE	STRAKEHOLDEK/Rosident	LAPINE MATIR GULATE COM
Brigite Bassham	Resident	ciao gitte Damail, com
KEN PUTNAM	coA	9 9
Milce Dansen	FHWA	du michiel-dawson Pdot. gov
Bonnie Bloom	resident	bbloom 78@ hotrail.com
Debby Vance	vesdit	momiam a grail.com
Glenn Middleton	resident	glendans inddleton@quail.com
Ryan Williams	resident	ryanandwill@amail.com
Dog Ingram	resident	douglas, e. ingran @gmadl.com
Victoria Rose	resident	torrose Ognail.com
Matt Rudorf	resident	Mateo 20 Egmant. com



#### STIP I-2513 I-26 Connector

# FAIRFAX AVENUE/VIRGINIA AVENUE COMMUNITY MEETING SIGN IN SHEET

September 7, 2017

Transportation COMMONITY MEETING SIGN IN SPILL!		
NAME	AGENCY/ORGANIZATION	EMAIL
Cecilia Rawlins Liz Preyer + Morris Letsinger Kim Porter	resident of 13.1 254 Brevaria.	ranpenatrontor.com
Liz Preyer + Morris Letsinger	123 Virginia Ave	lizpreyer@gmail.com
Kim Porter	messideant property owner Grate	porter kiger@hotmail.com
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## **Burton Street Community Neighborhood and Mitigation Strategies Plan**

Buncombe County I-26 Connector Project STIP Project No. I-2513

Stakeholder Group Meeting Summary

A small group meeting was coordinated by the I-26 Connector Burton Street Neighborhood and Mitigation Strategies Plan (NMSP) project team to introduce the NMSP project to Burton Street community businesses and community organizations and obtain feedback on their specific concerns and issues surrounding the I-26 Connector project and the Burton Street community. Postcard notifications were sent to the property owners and leadership of ten neighborhood churches, businesses and schools. The small group meeting was held on Monday, January 15, 2018 from 11:30am to 12:30pm at the St Paul's Missionary Baptist Church fellowship hall. A project overview presentation followed by a facilitated question and answer period was given, and a project information handout was provided to attendees. Respondent comments were transcribed by project staff. Three church leaders, the Burton Street Community Association Secretary, and project staff were in attendance.

# Burton Street Community Neighborhood and Mitigation Strategies Plan

Buncombe County I-26 Connector Project STIP Project No. I-2513

#### Community Meeting #1 Summary

Two community workshops were coordinated by the I-26 Connector Burton Street Neighborhood and Mitigation Strategies Plan (NMSP) project team to discuss the NMSP project and obtain feedback from residents on community priorities and concerns. Postcard notifications were sent to residents and property owners in the Burton Street neighborhood, email notifications were sent to the Burton Street Community Association (BSCA) email list, and fliers were distributed to neighborhood churches and recreation center. The community workshops were held on Monday, January 15, 2018 from 2:00pm to 4:00pm and 5:00pm to 7:00pm at the St Paul's Missionary Baptist Church fellowship hall. Display boards were used to present information on the NMSP project background, project area, purpose and proposed schedule, and to guide attendees through a community visioning process. A project information handout including a Title VI data collection form and project comment sheet was provided to attendees. Participants were provided with multiple options to provide input, including written comment forms, a web-based survey, and verbally to the project team. Comments on neighborhood assets, priorities, needs and challenges are being accepted via email, mail or online until February 14, 2018. Forty one residents including the BSCA leadership board were in attendance (21 afternoon, 20 evening meeting).





















#### STIP Project No. I-2513 I-26 Connector

River Users Meeting

November 14, 2018

## Agenda

- Purpose of Meeting
- Project History and Overview
- Preferred Alternative Overview
- Next Steps and Schedule
- Endangered Species
- Bridge Locations and River Access Points
- Potential Impacts to French Broad River Users
- River User Safety
- Questions/Feedback

## Purpose of Meeting

- Provide overview of the I-26 Connector project to local businesses and organizations that use French Broad River
- Discuss potential impacts to French Broad River users during construction of I-26 Connector project
- Receive feedback from stakeholders on impact to operations and river user safety

# **Project History**

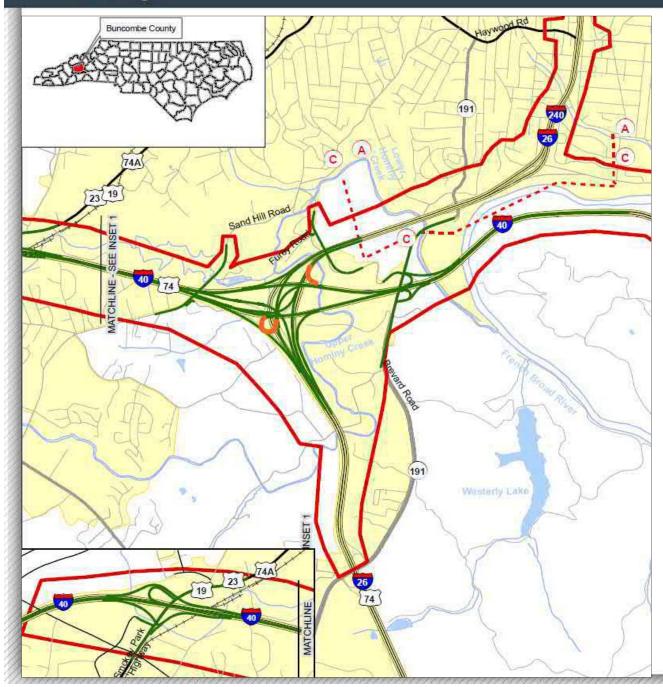
- Draft EIS Published October 2015
- Corridor Public Hearing November 2015
- Traffic Studies updated 2016
- Technical Studies updated 2017/2018
- Preliminary Designs finalized 2018

## **Project Overview**

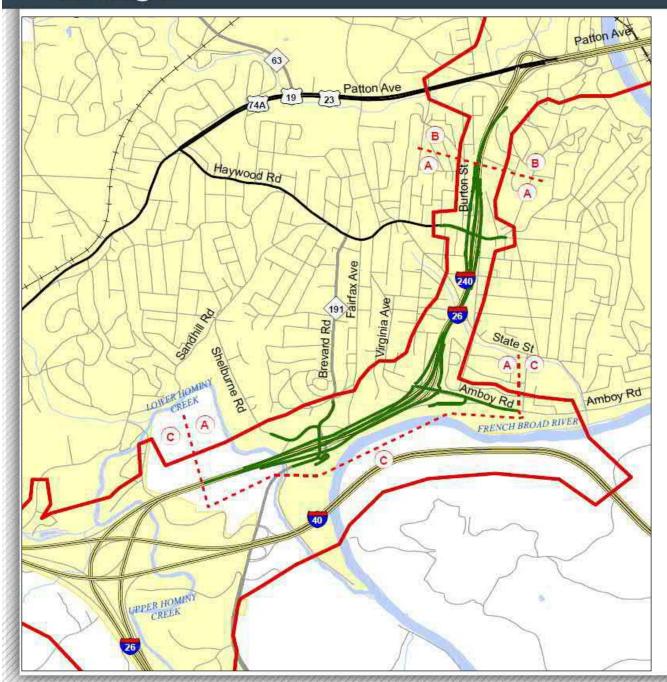
- Purpose of Proposed Action
  - Upgrade corridor
  - Provide improved system linkage
  - Increase capacity of existing I-26
  - Reduce congestion on I-240 over French Broad River

# 19 27 70 Buncombe County Woodfin Asheville (81) **Biltmore Forest**

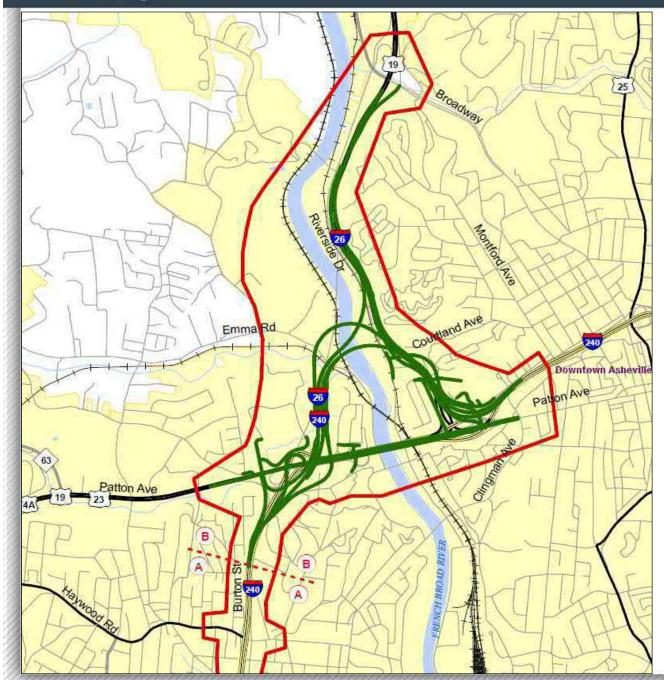
#### Project Study Area



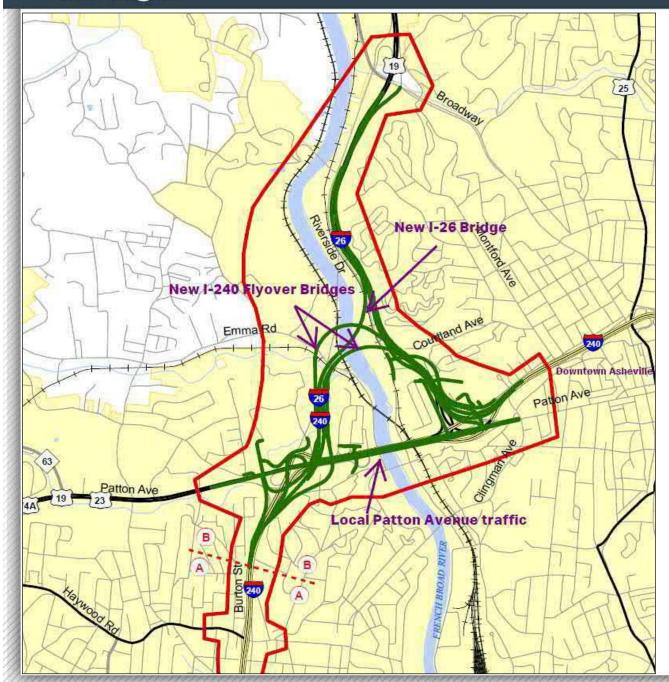
Section C Alt. F-1



Section A Widening Alternative



Section B Alternative 4B



Section B Alternative 4B

#### Next Steps and Schedule

#### Next Steps

- Continue coordination with local officials, the public, and various stakeholders on preferred alternative designs and impacts
- Prepare Traffic Noise Analysis
- Prepare River User Safety Plan
- Hold Design Public Hearing
- Prepare Biological Assessment
- Publish Final Environmental Impact Statement (FEIS) and Record of Decision (ROD)
- Right of way acquisition and construction

#### Schedule

Design Public Hearing
 December 4<sup>th</sup>, 2018

Sign FEIS January 2019

Record of Decision
 June 2019

Design Build LET
 FY 2020

## **Endangered Species**

- Gray Bat (Myotis grisescens)
  - Detected in multiple locations in Buncombe
     County and within the project study area
  - Biological Conclusion: May Affect likely to adversely affect
- Appalachian elktoe (Alasmidonta raveneliana)
  - Previous study found presence in the mainstream French Broad River approximately 1.5 river miles upstream
  - Assuming presence within I-2513 project study area
  - Biological Conclusion: May Affect likely to adversely affect
- Section 7 of the Endangered Species Act of 1973
  - Formal consultation required
  - Biological Assessment will be submitted to the US Fish and Wildlife Service (USFWS)
  - Biological Opinion to be issued by the USFWS



Credit: US Fish and Wildlife Service



Credit: US Fish and Wildlife Service

# French Broad River Users and I-26 Connector Construction



Credit: French Broad River Outfitters

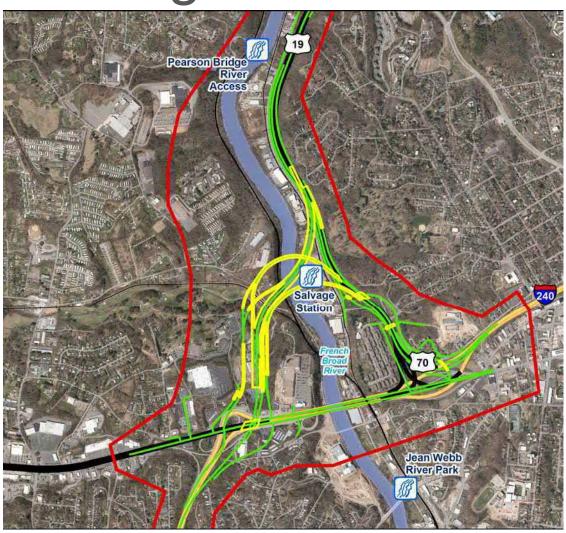


Credit: romanticasheville.com



Credit: Sky Tubing

# **Bridge Locations**



# **Bridge Locations**



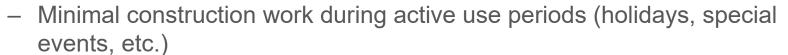
#### River Users and Bridge Construction

#### Impacts to river users

- Navigate bridge construction area
- River opening will be narrowed at bridge sites
- Potential changes in access points
- Temporary river closures (off-season)

#### River user safety

- Safe passage lane provided for users
- Warning lights present
- Signage at common use spaces
- Communication plan in place



- Social media, television, radio, and other community resources notified
- NCDOT River User Safety Plan



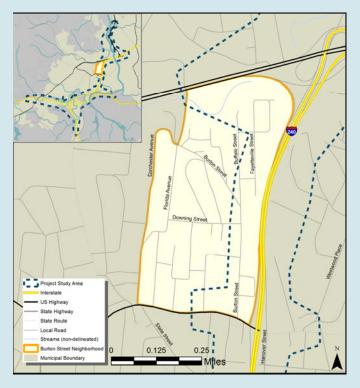
Rendering of passage lane from I-4400/I-4700 River User Safety Plan

#### Questions/Feedback

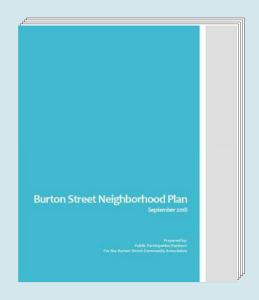
Buncombe County, N.C. STIP No. I-2513



#### **Burton Street Community**



- The Burton Street community is an Environmental Justice\* community impacted by the project
- The community has had recurring impacts from transportation projects throughout the years
- NCDOT, in coordination with the Burton Street Community Association and the City of Asheville, developed the Burton Street Neighborhood Plan
- The Plan includes a list of mitigation strategies to be implemented by NCDOT



\*Environmental justice refers to the equitable treatment of people of all races, cultures, ages, and incomes with respect to development, implementation, and enforcement of environmental laws, regulations, and policies. This section identifies special populations based on those set forth in Title VI of the Civil Rights Act of 1964 and EO 12898, to ensure that the project does not have a disproportionately high and adverse impact or deny benefits of the project.





Buncombe County, N.C. STIP No. I-2513



# **Kids Activity Area**



Buncombe County, N.C. STIP No. I-2513



# Please leave your comments here.

Comments can also be submitted on the project website: http://www.ncdot.gov/projects/i26connector/

Or mailed to:

Mr. Jamille Robbins NCDOT 1598 Mail Service Center Raleigh, N.C. 27699-1598







# **Next Steps**

#### **Submit Comments**







#### **FOR MORE INFORMATION**

#### Visit our website

www.ncdot.gov/projects/ i26connector

#### **Contact NCDOT**

Jamille Robbins NCDOT Public Involvement 1-800-233-6315 jarobbins@ncdot.gov

#### Final Environmental Impact Statement

A Final Environmental Impact Statement (FEIS) will be published, which will summarize the anticipated beneficial and adverse environmental effects of the preferred alternative, as well as address the comments on the 2015 Draft Environmental Impact Statement. The public will have an opportunity to comment on the FEIS.

#### Record of Decision

The final step in the project's planning phase will be to issue a Record of Decision (ROD), which will address comments received on the Final Environmental Impact Statement. The ROD will also identify the preferred alternative, present the basis for the decision, and provide information on the adopted means to avoid, minimize, and compensate for environmental impacts.

#### Let for Construction

After the ROD is published, designs will be refined to further minimize impacts where possible, right-of-way acquisition will begin, and the project will be constructed. The project is scheduled to be let for construction







**I-26 Connector** 

**Buncombe County, N.C.** STIP No. I-2513



Opportunities for public input throughout the process

Buncombe County, N.C. STIP No. I-2513



# **NEPA Study Process**

Identify Purpose of and Need for Project

Collect Data on Project Study Area

**Analyze Preliminary Alternatives** 

Select Detailed Study Alternatives

**Evaluate Impacts on Detailed Study Alternatives** 

Publish Draft Environmental Impact Statement

Select Preferred Alternative

Publish Final Environmental Impact Statement

Issue Record of Decision

Purchase Right of Way

**Construct Project** 

We are here







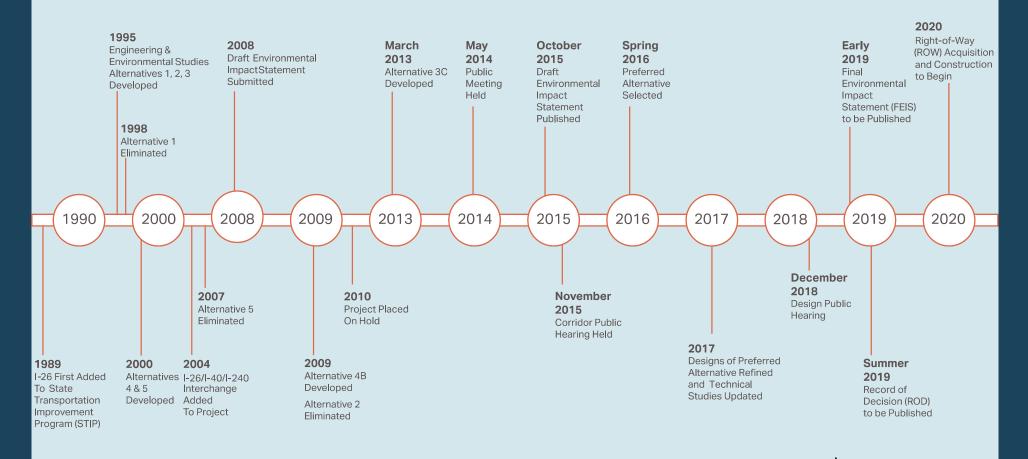
# **Project Video**

- Please watch the video to learn about the project.
- Note this video will repeat.





# **Project Timeline**









**I-26 Connector** 

Buncombe County, N.C. STIP No. I-2513



# **Project Purposes**

- Upgrade the interstate corridor to meet design standards
- Provide a link in the transportation system, connecting a multi-lane freeway from the Port of Charleston, S.C. to I-81 near Kingsport, T.N.
- ◆ Improve the capacity of I-240 west of Asheville to accommodate existing and forecasted traffic levels
- Reduce traffic delays and congestion along I-240 crossing the French Broad River
- Increase the remaining useful service of the Captain Jeff Bowen Bridges by reducing traffic on this crossing of the French Broad River

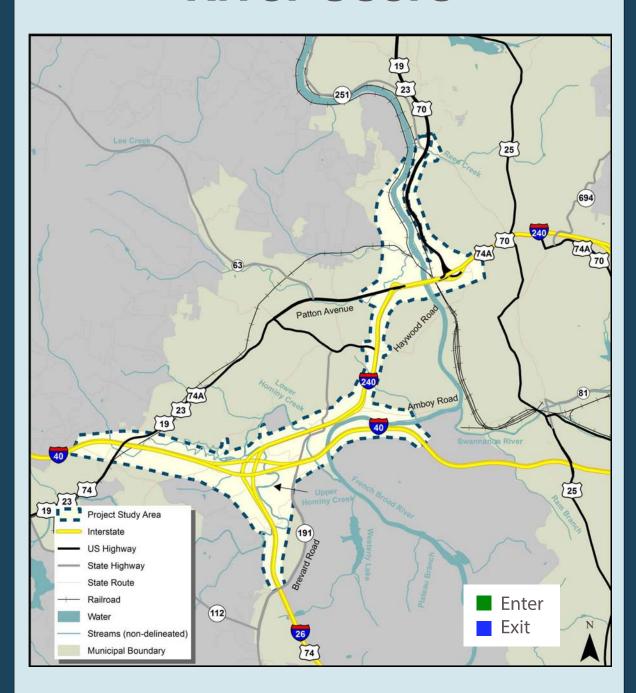
# **Project Needs**

- System linkage better connectivity for travelers between
   I-26 south of Asheville and U.S. 19-23-70 north of Asheville
- Capacity additional capacity along I-240 due to increasing traffic volumes and reduced Level of Service
- Roadway improvements upgrades to remedy current roadway efficiencies and bring interstate up to current design standards





# **River Users**

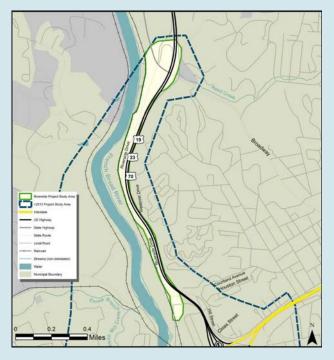


Please indicate areas where you enter or exit the river for recreational activities.



#### **Riverside Drive Widening**

Buncombe County, N.C. STIP No. U-5868



#### **Project Details**

- ♦ Widen 1.4 miles of Riverside Drive from Broadway to Hill Street from two lanes to three lanes
- ◆ Replace bicycle lanes with a 10-foot wide multi-use path on the western side of Riverside Drive
- ♦ The project is included in:
  - French Broad River MPO's Comprehensive Transportation Plan (2007)
  - City of Asheville's Comprehensive Bicycle Plan (2008)
  - French Broad River MPO's 2040 Metropolitan Transportation Plan (2015)

#### **Typical Section**







# Right-of-Way and Relocation Assistance Information

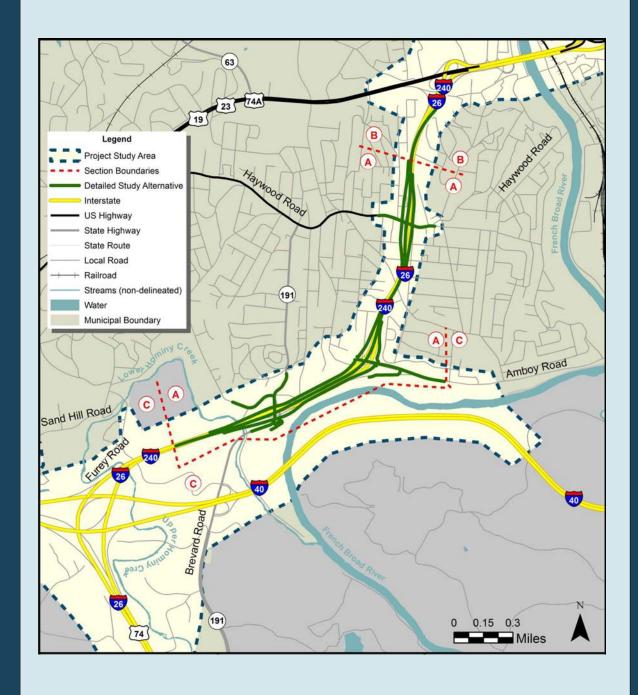






# **Section A - Widening Alternative**

# **Preferred Alternative**







# **Section B - Alternative 4-B**

# **Preferred Alternative**

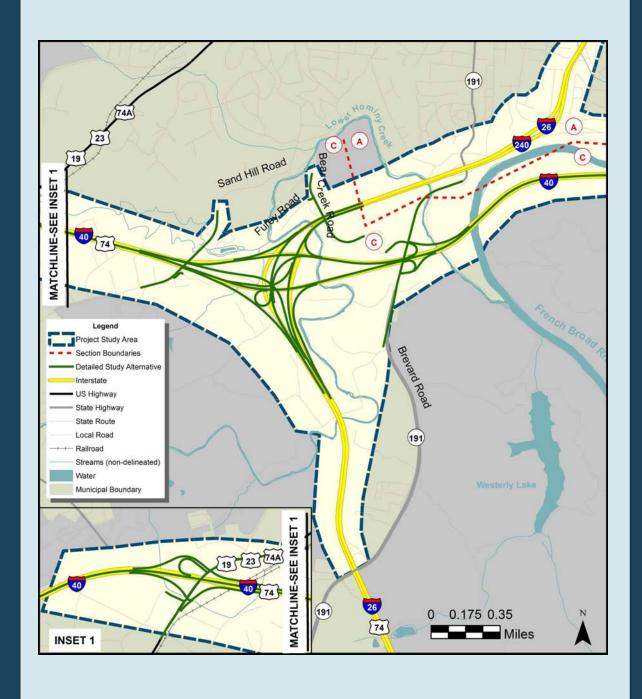






# **Section C - Alternative F-1**

# **Preferred Alternative**





# Spanish Interpreter

# Se Habla Español

Si Usted desea tener un intérprete para esta reunión, por favor pregunte a un miembro del equipo del proyecto.







# Traffic Noise Information



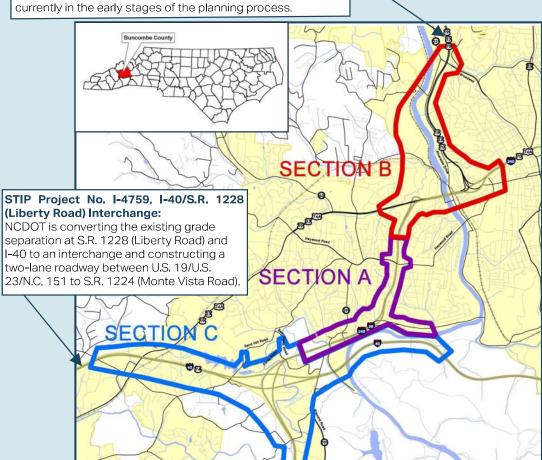




# **Other Projects in the Vicinity**

### STIP Project No. A-0010A, U.S. 19/23 (Future I-26) Improvements Project:

NCDOT is proposing to improve approximately 12 miles of U.S. 19/23 from north of I-240 in Asheville to just south of Exit 13 (Forks of Ivy – Stockton Road) near Mars Hill. This project is currently in the early stages of the planning process.



#### STIP Project No. I-5504/Brevard Road Interchange project (Exit 33):

NCDOT is modifying an existing partial cloverleaf interchange, primarily to alleviate congestion by increasing the efficiency of the interchange. The project may include the widening of the N.C. 191 (Brevard Road) bridge over I-26.

#### STIP Project No. I-4400/I-4700, I-26 Widening Project:

NCDOT is proposing to widen approximately 22 miles of I-26 from U.S. 25 (Exit 54) in Henderson County to I-40 in Asheville.





# Bicycle, Pedestrian, and Transit Accommodations





# Welcome!

# Public Hearing for the I-26 Connector

NCDOT STIP Project I-2513

# Please Sign In Here.

- Let Us Know You Attended
- Pick Up Handouts
- Review Information
- Ask Questions
- Provide Comments





#### The Purpose of the Open House and Public Hearing

Today's hearing is another important step in the N.C. Department of Transportation's procedure for making you, the public, a part of the project development process. The purpose of the hearing is to gather public input and receive feedback on the revised project designs.

There are two portions to today's event, an informal open house and a formal public hearing.

#### View the detailed project maps of the preferred alternative

NCDOT has completed Preliminary Designs for the preferred alternative for the I-26 Connector Project. Copies of the Public Hearing maps are available for review and are located on the project website.

#### View the animated representation of the project

A visualization of the preferred alternative for the project will be played continuously during the pre-hearing open house. Please take a moment to view this video with an explanation of the project.

#### Speak with project representatives

NCDOT representatives will be available between the hours of 4 p.m. and 6:30 p.m. to answer questions and receive comments relative to the proposed project.

#### Stay for the Public Hearing

A formal presentation will begin at 7 p.m. The presentation will consist of an explanation of the proposed design, right of way, relocation requirements/procedures, and the state-federal relationship. The hearing will be open to those present for statements, questions and comments. The presentation and comments will be recorded and a transcript will be prepared. If you can not stay, the Public Hearing will be streamed, live, on the project website and you can submit comments online or through the mail.

Inside This Handout:				
Project Information	Pages 2-3			
Traffic Noise and Bicycle/Pedestrian	Page 4			
Right-of-Way Information and Design-Build	Page 5			
Section C Alternative	Page 7			
Section A Alternative	Page 8			
Section B Alternative	Page 9			
Nearby Projects	Page 10			
Comment Form	Page 11			
Title VI Form	Page 12			

#### **Project Description**

The I-26 Connector Project is an interstate freeway project that is being proposed to connect I-26 in southwest Asheville to U.S. 19-23-70 in northwest Asheville. The NCDOT has programmed this project to upgrade and widen I-240 from I-40 to Patton Avenue, and then proceed northward from Patton Avenue on new location across the French Broad River and connect to U.S. 19-23-70 just south of Exit 25 (Broadway). Upon completion, this project will be part of the I-26 Interstate that extends from Charleston, South Carolina, to Kingsport, Tennessee.

The proposed I-26 Connector in Asheville is approximately 7 miles long from the I-40 interchange to Broadway. The project includes three sections: C, A, and B.

Section C

Improvements to the I-26/I-240 interchange with I-40 and the Brevard Road and Smokey Park Highway interchanges.

Upgrading existing I-240 from the I-26/I-240 interchange with I-40 to the I-240 interchange with Patton Avenue, west of the French Broad River. This includes upgrades to the Brevard Road, Amboy Road, Haywood Road and Patton Avenue interchanges.

Construction of the interstate on new location from the Patton Avenue interchange north across the French Broad River, tying into U.S. 19-23-70 south of Broadway.

Section B also includes improvements along Riverside Drive. This would include the addition of a center turning lane and a 10-foot multi-use path to the west of the roadway, from Hill Street to Broadway.



# **Project Information**

#### **GENERAL**

#### What is the FEIS?

In accordance with the National Environmental Policy Act (NEPA) NCDOT will prepare a Final Environmental Impact Statement, or FEIS, for the I-26 Connector Project. The FEIS is a federally required environmental document that describes the purpose and need for the project, identifies the preferred alternative, and evaluates potential environmental effects from the preferred alternative.

#### Are the designs final?

The design plans shown at the Public Hearing are preliminary and have not been finalized. Once the final environmental document has been signed (Record of Decision, or ROD), the project will be advertised for final design and construction. At this stage, designs may be refined further.

#### What happened last?

In October 2015, the Draft Environmental Impact Statement, or DEIS, was published for review and comment by federal, state, and local agencies, and the public. The DEIS summarized impacts of several alternatives studied in detail and their impact to the human and natural environment.

In November 2015, project designs of all the alternatives studied in the DEIS were presented at a Corridor Public Hearing so the public could provide NCDOT feedback on the various detailed study alternatives being evaluated and their potential impacts. Environmental resource and regulatory agencies met in May of 2016 to select a preferred alternative. The selection considered human and environmental impacts, comments received from the public, and how well the alternative addressed the transportation need for the project.

Since that time, NCDOT has coordinated with several local officials and communities to discuss the proposed impacts of the preferred alternative and potential design revisions.

#### What's Next?

The next step in the planning process will be to publish the FEIS for public review, review comments received at the public hearing, and issue the ROD and a notice of availability in the Federal Register. Once the ROD is published, the project will be advertised for construction and right-of-way acquisition will begin.

#### PROJECT PURPOSE AND NEED

#### Why is the I-26 Connector needed?

The project is needed to address traffic capacity problems along the existing I-240 corridor (future I-26), across the Captain Jeff Bowen Bridges to U.S. 19-23-70. Presently numerous areas do not meet interstate design standards and cannot be designated I-26 without being improved. The project would improve traffic flow, address the substandard roadway features, and provide an interstate roadway through West Asheville for the I-26 Corridor.

#### How will traffic operate if the project is not built?

Traffic operations are evaluated using a "Level of Service" rating ranging from A (best) to F (worst). If no improvements are made, in 2033, 41 of the 80 freeway segments will operate at an unacceptable level of service, based on Federal Highway Administration standards. The completion of portions of the adjacent NCDOT Project A-0010A (U.S. 19-23-70 improvements from Asheville to the Tennessee state line) will further increased traffic demands along I-240 west of Asheville.

# Are there roadway deficiencies along the existing corridor?

The existing route serving I-26 traffic has numerous design deficiencies that do not meet interstate design standards. The corridor was evaluated based on 19 design criteria, and 24 locations were shown to have elements that were substandard.

Multiple segments of I-240 west of Asheville currently have an accident rate that exceeds the critical crash rate for similar North Carolina facilities, demonstrating the need for these improvements along this section of the facility.

#### **State-Federal Relationship**

The proposed project is a Federal-Aid Highway Project and thus will be constructed under the State-Federal Aid Highway Program. Financing of this project will be 80% Federal funds and 20% State funds through the National Highway System Program. The Board of Transportation is responsible for the selection and scheduling of projects on the Federal Aid System, including their location, design and maintenance cost after construction. The Federal Highway Administration is responsible for the review and approval of the previously mentioned activities to ensure that each Federal Aid Project is designed, constructed and maintained to Federal Aid Standards.

The total cost of the project is estimated at approximately \$950 million.

# **Project Information**

#### YOUR PARTICIPATION

Now that the opportunity is here, you are encouraged to participate by making your comments and/or questions a part of the public record. This may be done by having them recorded at the formal Public Hearing, calling the project hotline at 1-800-233-6315, or by writing them on the attached comment sheet. Several representatives of the North Carolina Department of Transportation are present. They will be happy to talk with you, explain the design to you and answer your questions. You may write your comments or questions on the comment sheet and leave it with one of the representatives or mail them by January 4th, 2019 to the following address:

Mr. Jamille Robbins
NCDOT - Environmental Analysis Unit
1598 Mail Service Center
Raleigh, N.C. 27699-1598
Email: jarobbins@ncdot.gov
1-800-233-6315

Everyone present is urged to participate in the proceedings. It is important, however, that the opinions of all individuals be respected regardless of how different they may be from your own. Accordingly, debates, as such, are out of place at public hearings. Also, the public hearing is not to be used as a popular referendum to determine the location and/or design by a majority vote of those present.

#### WHERE TO REVIEW PROJECT INFORMATION

The Public Hearing Maps are available for public viewing at the following locations:

NCDOT Division 13		City of Asheville Transportation 70 Court Plaza—Mezzanine Level
55 Orange Street	-	70 Court Plaza—Mezzanine Level
Asheville, North Carolina 28801	1	Asheville, North Carolina, 28802

The FEIS will also available for public viewing at the following public library locations once published:

State Library of North Carolina	1 1	Pack Memorial Library
109 East Jones Street	1 1	67 Haywood Street
Raleigh, North Carolina 27601	1 1	Asheville, North Carolina 28801
West Asheville Library	1 1	<b>Buncombe County Law Library</b>
West Asheville Library 942 Haywood Road		<b>Buncombe County Law Library</b> 60 Court Plaza

People can also view the materials at the project website at http://www.ncdot.gov/projects/i26connector/

#### What is done with input received?

A post-hearing meeting will be conducted after the comment period has ended on January 4, 2019. NCDOT staff representing Planning, Design, Traffic Operations, Division, Right of Way, Public Involvement. Community Studies, and others who play a role in the development of a project will attend this meeting. The project will also be reviewed with federal agencies such as the Federal Highway Administration (FHWA) and the U.S. Army Corps of Engineers (USACE), as well as state agencies such as the N.C. Department of Environment and Natural Resources.

All spoken and written comments are discussed at the post-hearing meeting. The NCDOT considers safety, costs, traffic service, social impacts and public comments in making decisions.

Minutes of the post-hearing meeting will be summarized and are available to the public by noting your request on the comment sheet. Once distributed, the post-hearing meeting minutes will also be posted on the project website.

# **Traffic Noise**

#### **Traffic Noise Process**

During planning and design for highway projects, NCDOT must identify traffic noise impacts, examine potential noise abatement, incorporate feasible and reasonable noise abatement measures, and coordinate with local officials to provide helpful information on compatible land use planning and control. The procedures for doing this are stipulated by Federal regulation (23 CFR 772) and the NCDOT Traffic Noise Policy.

Preliminary noise analyses for this project are currently underway, and the results of this preliminary analysis will be documented in a Traffic Noise Report (TNR). This TNR will present predicted traffic noise impacts based on the project's preliminary design, and will identify locations where noise abatement preliminarily meet feasibility and reasonableness criteria. The results of this preliminary analysis will be included in the FEIS anticipated in February 2019. As part of the project's final design activities, additional noise studies will be conducted to identify recommended noise barrier locations.

Once recommended noise barrier locations are identified during final design, all property owners and tenants who are benefitted by a barrier will be asked to vote on the barrier. At that time, NCDOT will contact property owners and tenants who are eligible to vote and explain the balloting process and what they are being asked to vote on. Only recommended noise barriers that pass this voting process will be constructed.

#### **Traffic Noise Policy**

An important concept in Federal regulation and in the NCDOT Traffic Noise Policy is the Date of Public Knowledge, which stipulates when NCDOT is and is not responsible for providing noise abatement. The Date of Public Knowledge of the location and potential noise impacts for this project will be the approval date of the Record of Decision (ROD). The ROD is expected to be approved in Summer 2019.

NCDOT is not responsible for evaluating or implementing any noise barriers to protect developed lands that did not have building permits issued before the Date of Public Knowledge. NCDOT advocates use of local government authority to regulate land development, planning, design and construction in such a way that noise impacts are minimized.

While the results of the traffic analysis are not yet available, representatives from NCDOT's Traffic Noise Group are available tonight to answer general questions about traffic noise, NCDOT's Traffic Noise Policy, and noise abatement.

# **Bicycle and Pedestrian Facilities**

Consistent with the City of Asheville's plans to address bicycle and pedestrian accommodations throughout the city, a greenway is proposed in Section A and in Section B. The greenway begins at Haywood Road and will follow the I-26 improvements in Section B, where it merges with Patton Avenue to cross the French Broad River and ties to the nearby streets, providing access to downtown Asheville.

After selection of the preferred alternative, the City of Asheville identified potential bicycle and pedestrian accommodations (referred to as betterments) throughout the project study area, including multi-use paths, sidewalks, and bicycle lanes. The preferred alternative preliminary designs include some of these betterments and/or do not preclude the facilities from being constructed during the construction of the proposed project or in the future. NCDOT is currently coordinating cost-sharing with the City of Asheville for the bicycle and pedestrian facilities, and a summary of the coordination between NCDOT and the City of Asheville regarding the betterments to be included in the proposed project are included in the FEIS.

# **Right-of-Way and Relocations**

#### **Right-of-Way Procedures**

After decisions are made regarding the final design, the proposed right-of-way limits will be staked in the ground. If you are an affected property owner, a Right-of-Way Agent will contact you and arrange a meeting. The agent will explain the plans and advise you as to how the project will affect you. The agent will inform you of your rights as a property owner. If permanent right-of-way is required, professionals who are familiar with real estate values will evaluate or appraise your property. The evaluations or appraisals will be reviewed for completeness and accuracy, and then the Right-of-Way Agent will make a written offer to you. The current market value of the property at its highest and best use, when appraised, will be offered as compensation. The Department of Transportation must:

- Treat all owners and tenants equally
- Fully explain the owner's rights
- Pay just compensation in exchange for property rights
- Furnish relocation advisory assistance

#### **Relocation Assistance**

As the project moves toward Final Design, NCDOT will look to further minimize impacts as much as possible. What is shown on the map is the worst-case scenario. If you are a relocatee, that is, if your residence or business is to be acquired as part of the project, additional assistance in the form of advice and compensation is available.

You will also be provided with assistance regarding locations of comparable housing and/or commercial establishments, moving procedures, and moving aid. Moving expenses may be paid for you. Additional monetary compensation is available to help homeowners cope with mortgage increases, increased value of comparable homes, closing costs, etc. A similar program is available to assist business owners. The Right-of-Way Agent can explain this assistance in greater detail.

NOTE: PAMPHLETS SUMMARIZING RIGHT-OF-WAY AND RELOCATION PROCEDURES ARE AVAILABLE AT THE SIGN-IN TABLE.

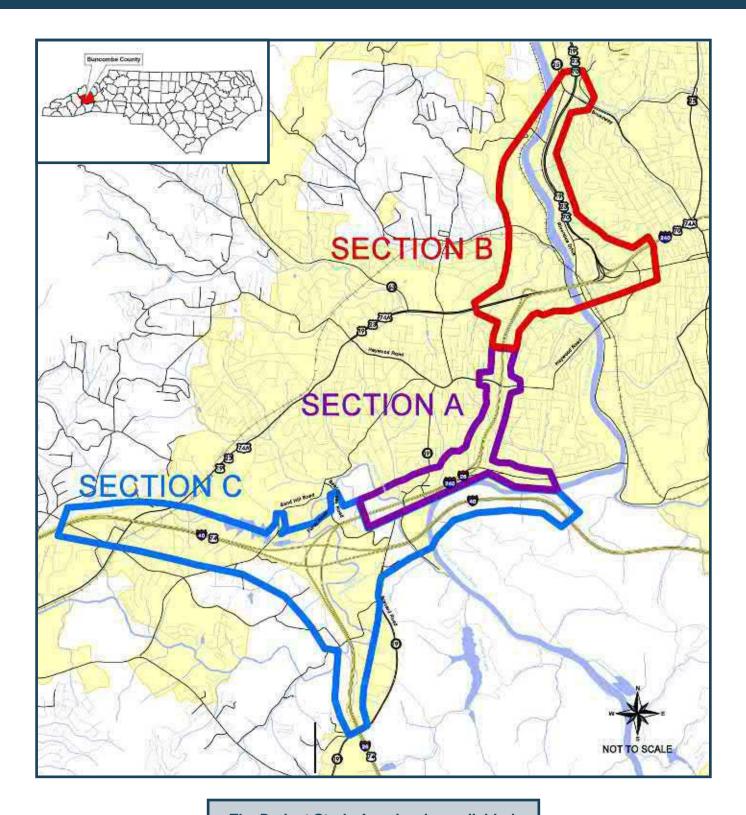
# **Design-Build Process**

The I-26 Connector Project is being constructed as a design-build project.

The design-build process allows NCDOT to hire a team of designers and contractors that are responsible for the design, right-of-way acquisition, and construction of the project. The team may begin construction on one portion of the project while they finish the design and right-of-way acquistion for another section. This typically results in faster completion.

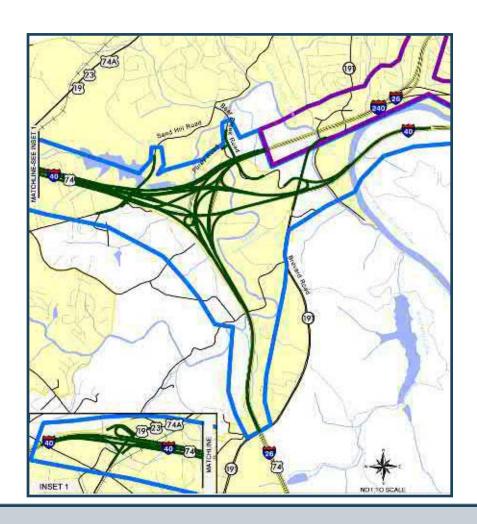
Additional benefits to a design-build project may include innovative solutions that save time, money and/or reduce impacts and quicker resolution to problems that arise during design and construction. The process may provide additional alternatives or modifications to the existing alternatives which in turn may reduce costs or impacts.

# **Project Study Area**



The Project Study Area has been divided into three sections, as shown here. The preferred alternative for each section are shown on the following pages.

# **Preferred Alternative - Section C**

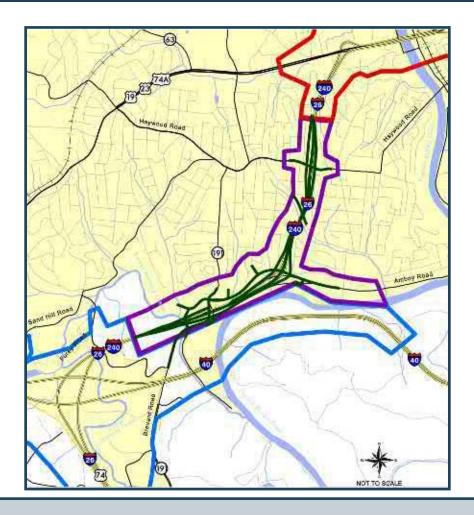


#### **SECTION C**

The preferred alternative in Section C, Alternative F-1, would reconstruct the existing I-26/I-40/I-240 interchange in the same general configuration as today but with the addition of two missing connections between I-40 and I-26/I-240. A new loop would connect I-26 East/I-240 West to I-40 East while a new ramp would connect I-40 West to I-26 West/I-240 East. I-40 would be widened from near the Smokey Park Highway interchange through the Brevard Road interchange. With this alternative, traffic coming to and from I-26 and I-240 would have full access to Brevard Road from I-40.

Major design revisions since the November 2015 Corridor Public Hearing include the removal of the collector/distributor roads along I-40, reducing impacts to several commercial and residential properties. Additionally, the interchange configuration at Smokey Park Highway was revised to minimize impacts to businesses.

# **Preferred Alternative - Section A**



#### **SECTION A**

The preferred alternative selected for Section A would widen I-240 from four lanes to six lanes and provide upgrades at the Brevard Road, Amboy Road, and Haywood Road interchanges.

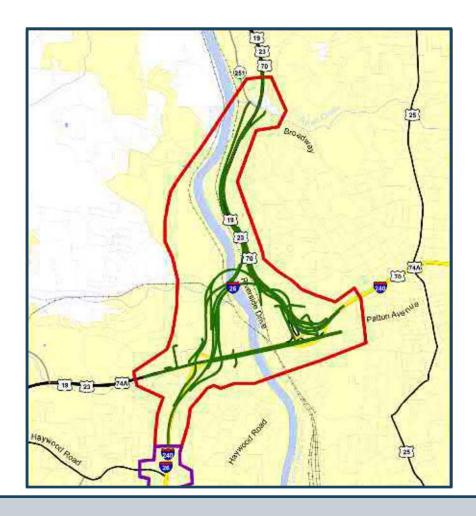
Major design revisions in Section A since the November 2015 Corridor Public Hearing include the reduction of the number of through lanes on I-240 from eight lanes to six lanes.

Additionally, at Amboy Road, the previously proposed Amboy Extension has been removed. Options were presented to the surrounding community, which resulted in a less impactful configuration. This new concept proposes a split diamond interchange configuration parallel to I-26, connecting Amboy Road and Brevard Road. A multi-use path would be constructed to the north of the ramps, connecting Brevard Road to Amboy Road and Carrier Park.

Furthermore, traffic analyses determined the roadway would operate more efficiently and would minimize impacts even more if Amboy Road was positioned under I-26. I-26 East/I-40 West traffic would exit at an upgraded Amboy Road interchange and travel along a new extension of Amboy Road to Brevard Road. The interchange at Amboy Road would include roundabouts to the north and south, with ramps traveling parallel to I-26 and connecting to Brevard Road.

A third interchange at Haywood Road would be converted to a tight urban diamond configuration. This would relocate the current exit ramp from I-240 East that connects to Hanover Street and relocate it to connect di rectly to Haywood Road. The current two-way section of ramp in the northeast quadrant would also be elminated.

#### **Preferred Alternative - Section B**



#### **SECTION B**

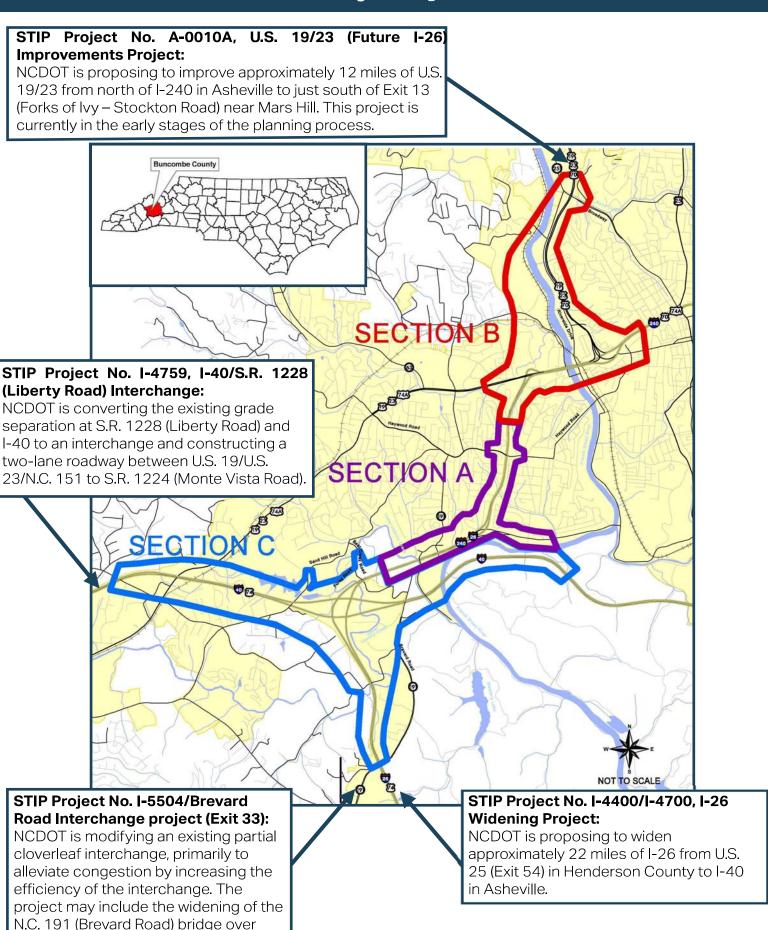
Alternative 4-B was developed to separate the local traffic on Patton Avenue from the I-240 through traffic. To accomplish this, the split between I-26 and I-240 would be moved north of the interchange at Patton Avenue, allowing the Captain Jeff Bowen Bridges to carry only local Patton Avenue traffic.

Alternative 4-B's alignment for the combined I-26/I-240 would cross Patton Avenue slightly west of the Westgate Shopping Center, and run through the edge of the Crowne Plaza golf course. I-26 would then split from I-240 and cross Smith Mill Creek, the Murphy Branch line of the Norfolk Southern Railway, Emma Road and the French Broad River along a complex bridge structure. The I-26 bridge crossing would tie back to U.S. 19-23-70 in the vicinity of Riverside Cemetery where it would become an elevated bridge over the existing lanes of U.S. 19-23-70. The I-26 mainline bridge would end at the north end of the Montford neighborhood where the lanes of US 19-23-70 would merge into I-26. To the north, I-26 would continue to the Broadway in terchange.

A greenway is proposed along Section A and Section B. In Section B the greenway begins at Haywood Road and will follow I-26 where it merges with Patton Avenue to cross the French Broad River linking to other desti nations in downtown Asheville.

Additionally, the Riverside Drive Widening Project (formerly STIP Project No. U-5868) will be included as part of the I-26 Connector project in this section due to the interrelatedness of the two projects. This decision was made in coordination with FHWA, NCDOT, and the City of Asheville. The proposed Riverside Drive project would widen Riverside Drive from Hill Street to Broadway from two lanes to three lanes and construct a multi use path on the western side of the roadway.

# **Nearby Projects**



I-26.

#### Design Public Hearing December 4, 2018

#### **HOW CAN WE REACH YOU?**

Name
Address
City State ZIP
Email or Phone
Homeowner's Association or other Civic Group
How did you hear about today's meeting?
Newsletter Newspaper Friend/Family Other
TELL US YOUR VIEWS
Your opinions about this project are important to us. Please use the space below to include your comment or questions. If you need additional space, please take additional sheets or you may include your own letter



fold here	
	Place Stamp Here
Mr. Jamille Robbins North Carolina Department of Transportation 1598 Mail Service Center Raleigh, NC 27699-1598	
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#### TITLE VI PUBLIC INVOLVEMENT FORM

Meeting Type:

Completing this form is **completely** voluntary. You are not required to provide the information requested in order to participate in this meeting.

Date:

Location:	
TIP No.:	
Project Description:	
that no person(s) shall be excluded from participation in, denied Department's programs, policies, or activities, based on their ra	elated authorities, the N.C. Department of Transportation assured the benefits of, or subjected to discrimination under any of the ace, color, national origin, disability, age, income, or gender.  ublic involvement obligations under Title VI and NEPA, and
will improve how we serve the public. Please place the compan NCDOT official or mail it to the Environmental Analysis Unit,	pleted form in the designated box on the sign-in table, hand it to 1598 Mail Service Center, Raleigh, NC 27699-1598.
All forms will remain on file at the NCDOT as part of the public	record.
Zip Code:	Gender:   Male Female
Street Name: (i.e. Main Street)	<b>Age:</b> ☐ Less than 18 ☐ 45-64
Total Household Income:	☐ 18-29 ☐ 65 and older
☐ Less than \$12,000 ☐ \$47,000 − \$69,999	□ 30-44
□ \$12,000 - \$19,999       □ \$70,000 - \$93,999         □ \$20,000 - \$30,999       □ \$94,000 - \$117,999         □ \$31,000 - \$46,999       □ \$118,000 or greater	Have a Disability: ☐ Yes ☐ No
Race/Ethnicity:	National Origin: (if born outside the U.S.)
White	☐ Mexican
☐ Black/African American	Central American:
Asian	South American:
American Indian/Alaskan Native	European:
Native Hawaiian/Pacific Islander	Chinese
Hispanic/Latino	Vietnamese
Other (please specify):	☐ Korean ☐ Other (please specify):

For more information regarding Title VI or this request, please contact the NCDOT Title VI Nondiscrimination Program at (919) 508-1808 or toll free at 1-800-522-0453, or by email at <a href="mailto:titleVI@ncdot.gov">title VI Nondiscrimination Program at (919) 508-1808 or toll free at 1-800-522-0453, or by email at <a href="mailto:titleVI@ncdot.gov">title VI Nondiscrimination Program at (919) 508-1808 or toll free at 1-800-522-0453, or by email at <a href="mailto:titleVI@ncdot.gov">title VI Nondiscrimination Program at (919) 508-1808 or toll free at 1-800-522-0453, or by email at <a href="mailto:titleVI@ncdot.gov">title VI Nondiscrimination Program at (919) 508-1808 or toll free at 1-800-522-0453, or by email at <a href="mailto:titleVI@ncdot.gov">title VI Nondiscrimination Program at (919) 508-1808 or toll free at 1-800-522-0453, or by email at <a href="mailto:titleVI@ncdot.gov">title VI @ncdot.gov</a>. Thank you for your participation!

How did you hear about this meeting? (newspaper advertisement, flyer, and/or mailing) \_

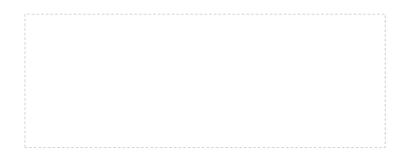


NCDOT - Environmental Analysis Unit Attn: Jamille Robbins 1598 Mail Service Center Raleigh, NC 27699-1598



I-2513 / U-5868 Jamille Robbins NC Department of Transportation Environmental Analysis Unit 1598 Mail Service Center Raleigh, NC 27699-1598

Aquellas personas no hablan inglés, o tienen limitaciones para leer, hablar o entender inglés, podrían recibir servicios de interpretación si los solicitan antes de la reunión llamando al 1-800-481-6494.



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# Public Hearing

Pre-Hearing Open House: 4 – 6:30 p.m.

Public Hearing 7 p.m.

Tuesday
December 4
Renaissance
Hotel Grand
Ballroom
31 Woodfin St.
Asheville



# I-26 Connector Project and Riverside Drive Widening Project



In Asheville

State Transportation Improvement Project Nos: I-2513 and U-5868

The N.C. Department of Transportation in partnership with the City of Asheville, has completed preliminary designs for the preferred alternative for the I-26 Connector Project (Project No. I-2513) and Riverside Drive Widening Project (Project No. U-5868). A Pre-Hearing Open House and Public Hearing will be held to gather public input and receive feedback on project designs. Public Hearing maps are available for public review and are located on the project website noted below.

NCDOT representatives will be available between the hours of 4 p.m. and 6:30 p.m. to answer questions and receive comments relative to the proposed projects. Interested participants may attend at any time during these hours. A formal presentation will begin at 7 p.m., followed by an opportunity for the public to provide verbal comments. Verbal comments will be recorded at the meetings for inclusion in the public hearing record. Written comments can also be submitted until January 4, 2019.

For more information on projects **I-2513 and U-5868**, please call the project hotline or visit the project website. **Toll-free Hotline:** 1-800-233-6315 **Website:** <a href="https://www.ncdot.gov/projects/asheville-i-26-connector">https://www.ncdot.gov/projects/asheville-i-26-connector</a>

NCDOT will provide auxiliary aids and services under the Americans with Disabilities Act for disabled persons who wish to participate in these meetings. Anyone requiring special services should contact Jamille Robbins, (<u>jarobbins@ncdot.gov</u> or 919-707-6085), so that arrangements can be made.

#### **MEETING SUMMARY**



To: Project File

From: Joanna Rocco

AECOM

Date: June 25, 2019

RE: I-2513 Historic Property Meeting, Asheville Primary School

**NCDOT STIP Project I-2513 (I-26 Connector)** 

#### Meeting Attendees:

Lauren Evans –ACS Ken Putnam – City of Asheville

Susanna Smith – ACS Brendan Merithew – NCDOT, Division 13

Don Sims – ACS

Derrick Weaver – NCDOT, EPU

Lack Thomson - Preservation Society of Ashavilla - Thorses Ellerby - NCDOT, PMIL

Jack Thomson – Preservation Society of Asheville Theresa Ellerby – NCDOT, PMU

and Buncombe County

Gwen Wisler – City of Asheville

Neil Dean – AECOM

Joanna Rocco – AECOM

The project team met with several stakeholders from Asheville City Schools (ACS) on June 24, 2019 to discuss impacts to the Asheville Primary School (APS) at I-240 and Haywood Road. APS is part of the West Asheville/Aycock School Historic District, which has been determined to have historical significance by the NC State Historic Preservation Office (HPO) and was determined eligible for the National Register of Historic Places. The purpose of the meeting was to follow up from discussions held with school officials in August 2018 on impacts to access and the school's parking lot resulting from the I-26 Connector project. The goal of the project team was to receive feedback on recently prepared designs for the school that provide additional parking and changes in the school's access patterns. Since the previous meeting, NCDOT has been refining designs for the project based on coordination with local officials, community associations, and the public.

Major discussion items from the meeting are summarized below:

- The school currently uses approximately 10 buses, with dropoff beginning at 7:10 and pickup from 2:30-3pm. A single preschool bus runs throughout the day. The largest bus holds approximately 42 students – ACS will confirm this with the project team so the bus turnaround template can be used to approximate the turning radii needed for buses on the property.
- The school currently has around 40-50 staff.
- The school play yards are currently used by around 300 children and must not be impacted for parking; therefore, concepts that had been prepared by the project team using this portion of the property will not be considered further.
- The school requested that cars and buses remain separated in the traffic pattern for safety. Staff parking spaces may be placed within the area used for the bus turnaround.

The concept prepared by the project team (below) was reviewed. In general this concept was
acceptable to school officials; however, various refinements will be prepared based on discussion at
the meeting.



- Various refinements requested to the above concept included the following:
  - Since a retaining wall would likely be needed between the parking lot next to the gymnasium and the bus turnaround due to the steep grade, it was requested either stairs or a sidewalk (or both) be added on the property for access/mobility. It was noted the sidewalk would be built as part of the I-26 Connector project, however the maintenance costs would likely be the responsibility of the school since it would be placed on school grounds.
  - The road and bus turnaround would likely need to be shifted in order separate buses and cars, however staff parking spaces could be placed within the turnaround area.
  - The bus depot area will be expanded in order to stack additional buses, which will in turn alleviate congestion along Argyle and improve safety.
- The school requested a gravel path be added to an already worn path used by parents/children
  needing to access the front entrance to the school from the parking lot along the I-240 ramp. It
  was noted this would be acceptable from a historic property perspective since it does not include
  any vertical improvements to the front of the school.
- The project team will attempt to create as much parking in the space behind the gym as possible, taking into consideration the one-way travel patterns during carpool and potential relocation of the dumpsters.
- The project team will attempt to show as close to 100 spaces in total where feasible, including the area for staff at the bus turnaround.
- School officials reiterated they would like a crosswalk or signal at the intersection of Argyle and Haywood. It was noted that due to the closing off of Hanover Street, this intersection will be looked at further to determine any improvements needed.

MEETING SUMMARY June 25, 2019 Page 3 of 3

- It was noted NCDOT would communicate with the public regarding changes to access along Haywood during construction.
- It was noted this section of the project will be let for Design-Build in 2020, therefore it will likely be at least two school years before construction would begin. The gravel path could potentially be done sooner.
- The project team will prepare new concepts at the school within 2-3 weeks and will send to the
  school officials to review. Once the concept is agreed upon, NCDOT can use this agreement in the
  Memorandum of Agreement (MOA), pursuant to Section 106 of the National Historic Preservation
  Act (NHPA). The MOA will discuss agreed upon measures to avoid, minimize, or mitigate effects to
  historic properties within the project.
- After the MOA is completed and before the project is let for construction, a meeting(s) will need to be held with parents/board members to inform them of the plan.