

Public Comment Summary and Responses

Project: NCDOT STIP Project I-5701: Addition of lanes on I-40
NCDOT STIP Project I-5703: Reconstruction of the I-40/I-440/US-1/US-64 Interchange

Subject: I-5701 and I-5703 Comment Summary and NCDOT Response to Public Comments from the Public Meeting held March 14, 2023

Date of Meeting: March 14, 2023 **Time:** 4:00 pm – 7:00pm

Location: Hope Community Church, 821 Buck Jones Road, Raleigh, NC 27606

Prepared by: Atkins

Date prepared: July 20, 2023

Overview

The North Carolina Department of Transportation (NCDOT) held a public meeting for the current phase of development on March 14, 2023, for State Transportation Improvement Projects (STIP) I-5701 and I-5703 located in Raleigh and Cary, Wake County.

The comment period for this phase of development of the project extended from March 14 to March 28, 2023. A total of 108 comment submittals were received: which includes six voicemail comments, 21 emailed comments, one written comment, and 80 comment submittals posted through the project's website: <https://publicinput.com/40-440-US1-interchange>.

After the comment period closed, all comments were consolidated. The table below is a summary of comments received on both projects. The table is ordered by the groups of topics receiving the most total comments (I-5701 + I-5703). Following the table, the responses to generalized comments are provided.

Summary of Topics Discussed in Comments for Projects I-5701 and I-5703

Topic No.	Topic	Total # Comments	I-5701 Portion	I-5703 Portion	Description/Representative Comments
Alternative Preferences					
1	Project Not Needed	10	9	1	Feel the I-5701 portion is not needed and money would be better spent elsewhere.
2	Don't Build	9	7	2	Feel improvements just induce demand or feel this does not need to be done or it is a waste of resources.
3	Prefer Alternative 3	8	0	8	Feel third flyover should be done now as will cost more in future as well as that it compensates more for future growth.

Topic No.	Topic	Total # Comments	I-5701 Portion	I-5703 Portion	Description/Representative Comments
4	Other Projects More Important	4	2	2	I-5703 is more important; upgrading Hwy 64 between Rolesville Rd and Zebulon is more important; Exit 293 A-B should be fixed instead; Exit where 1B intersects I-440/I-40 should be fixed instead.
5	Like Project	4	1	3	Specifically stated they support the project.
6	Prefer Alternative 2	4	0	4	Prefer Alternative 2.
7	Start Soon	1	0	1	Start work as soon as possible.
Traffic Noise and Noise Barriers					
8	Noise Wall – Wellington Park (Benedum Place area)	17	0	17	Feel proposed removal of noise wall will be detrimental and a noise wall should be constructed for Wellington Park from Benedum Place and US-1/US-64 to proposed ramp at Piney Plains Road.
9	Noise Wall-Roylene Acres	11	0	11	Feel noise from highway is already too loud and improvements will make it worse, especially with trees cut down, necessitating a noise wall.
10	Noise Wall – Wynwood South	4	0	4	Feel increase in noise and traffic warrants a noise wall for Wynwood South.
11	Noise Wall – Crescent Ridge	1	1	0	Feel noise is already an issue in Crescent Ridge and adding lanes will make noise worse, necessitating a noise wall like other stretches.
12	Noise Wall – Hillsdale Forest	1	0	1	Feel the traffic volume increase over next 22 years warrants a bigger noise wall for Hillsdale Forest.
13	Noise Wall – Meadowood	1	1	0	Feel 171 townhomes backing up to I-40/I-440 between Avent Ferry Road and Gorman Street should get a noise wall to mitigate additional noise.
14	Noise	5	4	1	People who objected to loss of a noise wall or want noise wall (but did not provide their location) or just plainly feel the project will add too much noise.

Topic No.	Topic	Total # Comments	I-5701 Portion	I-5703 Portion	Description/Representative Comments
Traffic and Safety					
15	Induced Traffic	20	12	8	Feel this project would induce traffic, whether on the widened interstate or in the areas around the mall.
16	Safety	9	0	9	Concerns about safety for residents, pedestrians, drivers, bikers, especially the area around the proposed ramp.
17	Town of Cary Sports Complex	5	0	5	The Town of Cary recently decided to turn the South Hills Mall into the Town of Cary Sports Complex Community Center and asks if plans considered traffic from the new community center.
Design Suggestions					
18	Various Design Suggestions	10	2	8	Various design suggestions, such as: sequencing of construction to finish flyovers before adding the exit at Dillard Dr; start flyover ramp sooner and merge into left side of US-1 south; southeast quadrant US-1/US-64 exit ramps too close; create left flyover from US-1/US-64 north to I-40 west; questioning the proposed exit ramp location; separate exit lane to US-1/US-64/I-440 earlier with barriers to prevent late entries which cause backup and accidents; build a bridge carrying the US-1/US-64 NB to I-40 ramps over the entrance to I-440.
19	Don't Move Exit Ramp	8	0	8	Residents near planned exit did not buy homes to be by a big exit ramp, or that the planned ramp would put traffic several lights from destination, causing more traffic, safety issues,
20	Improve Dillard/Piney Plains	5	0	5	Feel Dillard Drive and Piney Plains Road should be improved with the project or they will become bottlenecks.
21	Add flyover	2	0	2	Add third flyover from US-1/US-64 south to I-40 east. Create left flyover from US-1/US-64 north to I-40 west. Add flyover from I-440 south to I-40 east.

Topic No.	Topic	Total # Comments	I-5701 Portion	I-5703 Portion	Description/Representative Comments
22	Don't Remove the Crossroads Ramp	2	0	2	Do not want ramp from Crossroads to US-1/US-64 NB and I-440 removed.
23	Remove Ramp Crossroads/Buck Jones	1	0	1	Feel keeping the Crossroads/Buck Jones exit ramp is mistake; it should be demolished and have drivers use the Walnut St exit ramp instead.
24	Planted Median	1	0	1	Feel a planted median should be considered to reduce traffic speed and provide safe crossings for pedestrians.
Bike/Ped/Public Transit					
25	Public Transit	14	12	2	Feel the money would be better spent on public transit.
26	Preserve Greenway	7	0	7	Concerned about access to greenway during and after construction, including the pedestrian overpass, and concerned about encroachment on greenway space.
27	Bicycle/Pedestrian	6	3	3	Improve capacity by adding pedestrian and cycling infrastructure here or elsewhere with the money, in line with the Cary Imagine Plan.
28	Bicycle/Pedestrian on Dillard/Piney Plains	2	0	2	Protected bicycle facilities/lane to area of Dillard Drive and Piney Plains Road as there should be greenway crossings envisioned here.
Stormwater Runoff					
29	Storm Runoff	12	0	12	Storm runoff currently causes issues, and worry that the construction will worsen this, especially into neighborhoods right off the highway, specifically Roylene Acres, Wellington Park, Brook Hill Apartments, and into creeks.
30	Construction Runoff	6	0	6	Concerned about construction runoff into Wellington Park which already has issues with flooding and runoff from storms.

Topic No.	Topic	Total # Comments	I-5701 Portion	I-5703 Portion	Description/Representative Comments
Signals and Stop Signs					
31	Signals – Stephens/ Piney Plains	11	0	11	Feel stoplight at Stephens Road and Piney Plains Road is needed for safety of area’s residents, specifically Wellington Park, with moved ramp and more traffic.
32	Improve Stephens Road	4	0	4	Feel Stephens Road, which used to be a no outlet road, cannot handle traffic coming from Dillard Drive/Piney Plains Road and needs to be improved or widened with a signal.
33	Stop Signs	1	1	0	Just add 4 way stop signs everywhere.
Other Topics					
34	Air Quality	6	4	2	Feel expansions increase air pollution. Concern about dust and air pollution during construction.
35	Website Corrections	2	0	2	Feel projected costs are wrong. Feel there is mistake on description of Alternative 2 (should say WESTbound I-40 to southbound US-1/US-64 rather than eastbound).
	TOTALS	214	59	155	

Summary of Comments Received and Responses

Alternative Preferences

Topic 1: Project Not Needed

- *I-5701: Existing traffic volumes do not warrant this project. We do not need more lanes on I-40.*

The project is being designed to address projected future traffic volume needs for the design year 2045, which include both local and regional growth in traffic. The scale of the project is appropriate to increase the carrying capacity of I-40 and improve traffic flow.

- *I-5701: This project should be a lower priority than I-5703.*

Project I-5701 and Project I-5703 are part of the Capital Area Metropolitan Planning Organization’s (CAMPO) long-range transportation plan and included in the NCDOT 2024-2033 Statewide Transportation Improvement Program (STIP) as funded projects. Both

projects will be awarded for construction at the same time to the same design-build contractor.

- *I-5701: This project costs too much and construction will be too disruptive for years.*

Project I-5701 and Project I-5703 are part of the Capital Area Metropolitan Planning Organization's (CAMPO's) long-range transportation plan and included in the NCDOT 2024-2033 STIP as funded projects. The right-of-way, construction, and utility relocation costs presented at the March 14, 2023, public meeting are based on the preliminary design plans. Both projects will be awarded at the same time to the same design-build contractor, which will increase the efficiency of the construction schedule.

NCDOT utilizes the Design-Build process to complete projects faster, resolve constructability issues and afford opportunities for innovation. The Design-Build process allows NCDOT to have one contract with a team of designers and contractors. This approach reduces the overall construction time and helps NCDOT avoid cost inflation.

Topic 2: Don't Build

- *I-5701: It is a waste of resources to expand I-40 and the negative impacts outweigh any benefits.*

The project is being designed to address projected future traffic volume needs for the design year 2045, which include both local and regional growth in traffic. The scale of the project is appropriate to increase the carrying capacity of I-40 and improve traffic flow.

The project is not anticipated to create significant impacts. NCDOT will continue to work with federal and state agencies and local stakeholders through the environmental permitting process and construction process to avoid and minimize impacts to the natural and human environments.

- *I-5701: The expanded roadway doesn't seem for the benefit of residents of Raleigh, but instead for increased through traffic.*

The project is being designed to address projected future traffic volume needs for the design year 2045, which include both local and regional growth in traffic. The scale of the project is appropriate to increase the carrying capacity of I-40 and improve traffic flow. Local traffic will have improved traffic flow between the I-40 interchanges at I-440/US-1/US-64, Gorman Street, and Lake Wheeler Road, which will provide improved access to local destinations in these areas.

- *I-5701: The 68.8 million dollars would be better spent on rezoning and incentivizing better urban planning.*

Project I-5701 is part of the Capital Area Metropolitan Planning Organization's (CAMPO's) long-range transportation plan and included in the NCDOT 2024-2033 Statewide Transportation Improvement Program (STIP) as a funded project and includes federal funds. The funding for this project could not be used for local zoning or urban planning.

- *I-5703: The Walnut Street exit is not the issue for traffic, it's the exit where US-1/US-64 northbound Exit 1B intersects with I-440/I-40. This bottle neck is not safe and needs to be fixed. This is what Cary and Raleigh should prioritize.*

The movement to I-40 from US-1/US-64 northbound will be improved with the Project I-5703 Preferred Alternative. A loop ramp in this direction will be replaced with a flyover ramp to I-40 westbound, which will improve traffic carrying capacity and eliminate the back-to-back loop ramps within the main interchange.

- *I-5703: Additional ugly ramps that require 28 acres more land is not a good plan.*

Most of the new right of way needed for Project I-5703 will be at the new US-1/US-64 ramps to Dillard Drive/Piney Plains Road. The ramps were relocated south from Walnut Street to provide increased distance from the main interchange ramps with I-40 to allow for improved traffic flow.

Topic 3: Prefer Alternative 3

- *I-5703: Alternative 3 is the most prudent choice. It better accommodates future growth and would be more expensive to build the additional flyover later. Alternative 3 doesn't have any back-to-back loops and would work better.*

Traffic analyses conducted for Project I-5703 showed that Alternative 2 and Alternative 3 would have similar benefits to overall operations within the interchange area for future projected traffic. Alternative 2 was selected as the Preferred Alternative because Alternative 2 would have less impact to stream and wetland resources and would have substantially lower total cost to construct.

Topic 4: Other Projects More Important

- *I-5701: There are other projects more important than I-5701, including upgrading US-64 between Rolesville Road and Zebulon.*

Project I-6005, along US-64/US-264, is included in the 2024-2033 Statewide Transportation Improvement Program (STIP). This project would widen US-64/US-264 to six lanes from US-64 Business (Wendell Blvd) to the US-64/US-264 split in Zebulon.

- *I-5703: What is the plan for fixing Exit 293 A-B? US-1/US-64 backs up as people going to EB I-40 cross over those trying to go to SB US-1/US-64.*

This comment is referring to the back-to-back loops shown in quadrants B and C on the Project I-5703 Alternative 2 Public Meeting Map. The loop in quadrant B goes from I-40 westbound to US-1/US-64 southbound. The loop in quadrant C goes from US-1/US-64 southbound to I-40 eastbound. Under existing conditions, the loop in quadrant B serves all traffic wanting to go from I-40 westbound to US-1/US-64 southbound. With the Project

I-5703 Preferred Alternative, commuting traffic wanting to travel from I-40 westbound to US-1/US-64 southbound will use a new flyover ramp. The only traffic that would remain on the loop in quadrant B will be local traffic wanting to access Buck Jones Road and the bridge to Crossroads Plaza. This will reduce the crossover volumes and backups between the back-to-back loop ramps.

Topic 5: Like Project

- *I-5701: I support the project.*

Comment acknowledged.

- *I-5703: I am happy to know this interchange will be improved. I am pleased to see Loop B to Crossroads is being kept because that is a key entry into an important economic area.*

Comment acknowledged. An important consideration in the proposed designs for Project I-5703 was maintaining access to Buck Jones Road and to Crossroads Plaza via the bridge over US-1/US-64.

- *I-5703: This project is worthwhile. The current merging area with the back-to-back loops is dangerous.*

Comment acknowledged.

Topic 6: Prefer Alternative 2

- *I-5703: The Preferred Alternative 2 looks sensible. The new flyover ramps will help separate traffic.*

Comment acknowledged.

- *I-5703: The smaller footprint of Alternative 2 is preferable. The time to construct the interchange should be considered, having lived through Fortify and the I-440 improvements, and it seems it would be shorter with Alternative 2 than Alternative 3 which has a third flyover ramp.*

Project I-5701 and Project I-5703 will be awarded at the same time to the same design-build contractor, which will increase the efficiency of the construction schedule.

Topic 7: Start Soon

- *I-5703: Please start work as soon as possible.*

Comment acknowledged.

Traffic Noise and Noise Barriers

Topic 8: Noise Wall – Wellington Park (Benedum Place area)

- *I-5703: Will a temporary noise wall be installed during construction for the existing noise wall section that will be removed?*

NCDOT will coordinate with the contractor to explore cost-effective ways to reduce construction noise. This will be a commitment in the project's environmental document (Categorical Exclusion). Although construction noise impact abatement should not place an undue burden upon the financial cost of the project or the project construction schedule, generally, low-cost and easily implemented construction noise control measures will be incorporated into the project plans and specifications to the greatest extent possible. These measures could include, but are not limited to, portable noise barrier, work-hour limits, equipment exhaust muffler requirements, haul-road locations, elimination of "tail gate banging," ambient-sensitive backup alarms, construction noise complaint mechanisms, and consistent and transparent community communication.

- *I-5703: Will a new noise wall be constructed to replace the section being removed? The noise in Wellington Park should remain equal or better after the project is built and replacing the wall should be considered at a minimum. Can the noise wall be extended from its current termination point at Benedum Place to the end of the proposed new exit ramp?*

NCDOT conducts its noise studies in compliance with Federal Regulation (23 CFR Part 772) and the NCDOT Traffic Noise Policy. We use computer models to predict future noise levels along proposed highway projects and, when the predicted traffic noise levels reach certain thresholds, we consider noise walls. If noise walls meet feasibility and reasonableness criteria detailed in our policy, they are built as part of the highway project. All noise walls must remain within the constraints of the feasibility and reasonableness criteria defined within the NCDOT Policy. The heights and lengths of recommended noise walls are determined by complex modeling and an iterative analysis process, through which an optimal wall (length, height, and placement) that meets Policy requirements is identified.

NCDOT has performed preliminary noise analyses for Project I-5703 and an initial Traffic Noise Report has been prepared. The Traffic Noise Report analyzed projected traffic noise from the proposed preliminary design along Forest Park Way, Benedum Place, and adjacent areas. At a minimum, the segment of noise wall that is being removed by the construction of the new off-ramp from US-1/US-64 northbound to Dillard Drive/Piney Plains Road will be replaced "in-kind"; that is, it will be replaced with a relocated segment of wall that has a similar acoustic performance, barring any unresolvable engineering conflicts that prevent this. This area has also been analyzed to determine if additional abatement is warranted over and above the replacement of the removed section of the wall; the preliminary finding is that additional abatement is not warranted, but this will be reevaluated during the project's final design as part of the development of the project's Design Noise Report. All noise sensitive locations in this area, including those not directly behind the existing noise

wall, were included in the evaluation, and all noise sensitive locations impacted by project related traffic noise were considered in the analysis of noise abatement.

During final roadway design, a Design Noise Report (DNR) will be prepared to determine the final length, height and placement of the replacement noise wall such that it meets the required feasibility and reasonableness criteria.

- *I-5703: When the existing noise wall section is removed, will there be any safety barriers put in place to block people and pets from getting too close to the highway?*

The project construction area will be fenced off during construction. Also, see previous response regarding the replacement of the wall segment that will be removed.

- *I-5703: The plans for the new interchange immediately across from my home at Benedum Place mention a 'noise abatement area' since the wall across from us will be removed. Would this include a budget for sound reducing windows for impacted homeowners?*

At a minimum, the wall that is being removed by the construction of the new off-ramp from US-1/US-64 northbound to Dillard Drive/Piney Plains Road will be replaced “in-kind”; that is, it will be replaced with a relocated segment of wall that has a similar acoustic performance, barring any unresolvable engineering conflicts that prevent this. This area has also been analyzed to determine if additional abatement is warranted over and above the replacement of the removed section of the wall; the preliminary finding is that additional abatement is not warranted, but this will be reevaluated during the project’s final design as part of the development of the project’s Design Noise Report. In accordance with FHWA regulations in Title 23 of the US Code of Federal Regulations Part 772.15(c)(5) (23 CFR 772.15(c)(5)), noise insulation measures are only considered for Activity Category D land uses, which include the following: auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools and television studios.

- *I-5703 Comment: How will I be notified with respect to the design of the permanent noise wall.*

The portion of the existing noise wall along Benedum Place that will be removed and replaced as part of Project I-5703 will have the same appearance as the remaining sections of the existing noise wall. Project status updates will be available on the project website.

Topic 9: Noise Wall – Roylene Acres

- *I-5703: Why was Roylene Acres not listed on the public meeting maps as one of the areas affected by noise?*

For the Roylene Acres area (which includes Stockton Drive, Norman Place, and South Lakeside Drive), a noise wall is being constructed as part of Project U-2719, the widening of I-440 from Walnut Street to Wade Avenue. This wall is located along I-440 adjacent to the Brookhill Apartments along Dana Drive.

The preliminary traffic noise analysis conducted for Project I-5703, which is documented in the Traffic Noise Report, analyzed traffic noise in the design year 2045 with the U-2719 wall in place to determine if any additional noise abatement is warranted as part of the I-5703 project. The conclusion of the Traffic Noise Report is that no additional noise walls are warranted over and above the one that is being constructed as part of U-2719.

Since no additional noise walls currently are recommended as likely under Project I-5703 for the Roylene Acres area, this area was not shaded on the Project I-5703 Preferred Alternative public meeting map as an area for potential noise abatement.

- *I-5703: Why is our neighborhood (Roylene Acres) not getting a noise wall along the I-440/US-1 interchange? Since the removal of countless trees from our area due to this growing project, the highway noise pollution has substantially increased.*

Please see response to the previous comment regarding a noise wall at Roylene Acres. The noise models already account for the removal of the trees. We do not include any trees in our model because trees are often removed as part of construction and because deciduous trees do not have foliage for part of the year. Vegetation generally is not effective for reducing noise levels. Studies have shown that vegetation must be at least 100 feet thick, evergreen, and dense enough to provide a 5-decibel traffic noise reduction. Nonetheless, leaving them out of our models ensures we are modeling worst case, in the event they are providing some noise shielding. This is to the homeowners' advantage since it increases the chance for noise abatement consideration to be triggered.

Topic 10: Noise Wall – Wynwood South

- *I-5703: Please consider increasing the number of noise walls along the highway and along the new exit ramp near Wynwood South (Putney Drive and Cellarius Lane).*

Decisions about recommended noise wall locations are made in compliance with Federal Regulations (23 CFR Part 772) and the NCDOT Traffic Noise Policy. First, noise impacts are identified, and where impacts occur, noise walls are considered. Where noise walls are determined feasible and reasonable according to the NCDOT Traffic Noise Policy criteria, they are constructed. All noise walls must remain within the constraints of the feasibility and reasonableness criteria defined within NCDOT policy.

The preliminary traffic noise analysis conducted for Project I-5703, which is documented in the Traffic Noise Report, evaluated traffic noise for the entire project area. This analysis found that noise walls are preliminarily feasible and reasonable in four areas. One area is the replacement of a portion of existing noise wall along Benedum Place that will be removed to construct a new exit ramp from US-1/US-64. The preliminary noise analysis shows that future noise levels for homes along Putney Drive and Cellarius Lane will not be high enough to trigger noise abatement consideration, largely because of distance; these two roads are over 1000 feet away from I-40, and noise levels dissipate with distance. A more detailed analysis will be completed during the project's final design, which will reexamine the entire study area. These areas will be considered for noise abatement if that analysis shows future noise levels to be high enough.

- *Why is a noise wall replacement and/or extension past Benedum Place along the new exit ramp just being studied and not already a part of the project?*

NCDOT conducts its noise studies in compliance with Federal Regulation (23 CFR Part 772) and the NCDOT Traffic Noise Policy. We use computer models to predict future noise levels along proposed highway projects and, when the predicted traffic noise levels reach certain thresholds, we consider noise walls. If noise walls meet feasibility and reasonableness criteria detailed in our policy, they are built as part of the highway project. All noise walls must remain within the constraints of the feasibility and reasonableness criteria defined within the NCDOT Policy.

The noise wall that exists today along this section of I-40 was built to provide noise abatement for homes impacted by a previous project, and that wall met the feasibility and reasonableness criteria in effect at that time. The height and length of that noise wall was determined by complex modeling and an iterative analysis process, through which an optimal wall (length, height, and placement) that met Policy requirements was identified.

At a minimum, the section of this existing wall that is being removed by the construction of the new off-ramp from US-1/US-64 northbound to Dillard Drive/Piney Plains Road will be replaced "in-kind"; that is, it will be replaced with a relocated segment of wall that has a similar acoustic performance, barring any unresolvable engineering conflicts that prevent this. This area has also been analyzed to determine if additional abatement is warranted over and above the replacement of the removed section of the wall; the preliminary finding is that additional abatement is not warranted, but this will be reevaluated during the project's final design as part of the development of the project's Design Noise Report (DNR).

The DNR will determine the final length, height, and placement of the replacement noise wall such that it meets the required feasibility and reasonableness criteria.

Topic 11: Noise Wall – Crescent Ridge

- *I-5701: What noise barriers will be constructed for Crescent Ridge (e.g. Crescentview Parkway and Sugarbend Way)?*

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 Part 772) and the NCDOT Traffic Noise Policy.

NCDOT has performed preliminary noise analyses for Project I-5701 and an initial Traffic Noise Report has been prepared. Based on that analysis, traffic noise levels due to the projects are predicted to be high enough in some areas in the project's design year (year 2045) to constitute a traffic noise impact as defined by NCDOT Traffic Noise Policy. Where noise impacts are predicted, noise abatement was considered.

For the Crescent Ridge area (which includes Crescentview Parkway and Sugarbend Way), a noise wall is preliminarily feasible and reasonable based on the preliminary noise analysis documented in the Traffic Noise Report. This area for potential noise abatement shown on the Project I-5701 public meeting map includes Meadowoods Crossing to the west and Crescent Ridge.

A more detailed noise analysis will be completed during the project's final design, and a Design Noise Report (DNR) will be prepared. Noise barriers preliminarily found to be feasible and reasonable in the Traffic Noise Report may not be found to be feasible and reasonable during the final design noise analysis due to change in proposed project alignment and other design considerations, surrounding land use development, or utility conflicts, among other factors. Conversely, noise barriers that preliminarily were not considered feasible and reasonable in the Traffic Noise Report may meet the established criteria and be recommended for construction in the DNR.

Topic 12: Noise Wall – Hillsdale Forest

- *I-5703: Is the 38-68% increase in traffic volumes projected over the 22 years a reason to increase the height of the existing noise wall between Hillsdale Forest (Kingston Ridge Drive, Bloomingdale Drive) and US-1/US-64?*

NCDOT conducts its noise studies in compliance with Federal Regulation (23 CFR Part 772) and the NCDOT Traffic Noise Policy. We use computer models to predict future noise levels along proposed highway projects and, when the predicted traffic noise levels reach certain thresholds, we consider noise walls. If noise walls meet feasibility and reasonableness criteria detailed in our policy, they are built as part of the highway project. All noise walls must remain within the constraints of the feasibility and reasonableness criteria defined within the NCDOT Policy. The heights and lengths of recommended noise walls are

determined by complex modeling and an iterative analysis process, through which an optimal wall (length, height, and placement) that meets Policy requirements is identified.

The existing noise wall along southbound US-1/US-64 at Kingston Ridge was included in the traffic noise models for Project I-5703. The traffic volumes used in the model are for the design year 2045. The existing noise wall at its current height is projected to continue to provide noise reduction for the residences behind the noise wall even accounting for the future traffic volumes. An extension of the noise wall northward was evaluated as part of Project U-2719, the widening of I-440 from Walnut Street to Wade Avenue but determined to be not feasible to construct.

Topic 13: Noise Wall – Meadowood

- *I-5701: What is the process for homeowners in the Meadowoods Crossing neighborhood (171 townhome along roads including Treerose Way and Mistiflower Drive) to advocate for a noise barrier to mitigate the additional noise caused by Project I-5701?*

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 Part 772) and the NCDOT Traffic Noise Policy.

NCDOT has performed preliminary noise analyses for Project I-5701 and an initial Traffic Noise Report has been prepared. Based on that analysis, traffic noise levels due to the projects are predicted to be high enough in some areas in the project's design year (year 2045) to constitute a traffic noise impact as defined by NCDOT Traffic Noise Policy. Where noise impacts are predicted, noise abatement was considered.

For the Meadowoods Crossing area (which includes Treerose Way and Mistiflower Drive), a noise wall is preliminarily feasible and reasonable based on the preliminary noise analysis documented in the Traffic Noise Report. This area for potential noise abatement shown on the Project I-5701 public meeting map includes Meadowoods Crossing and Crescent Ridge to the west.

A more detailed noise analysis will be completed during the project's final design, and a Design Noise Report (DNR) will be prepared. Noise barriers preliminarily found to be feasible and reasonable in the Traffic Noise Report may not be found to be feasible and reasonable during the final design noise analysis due to change in proposed project alignment and other design considerations, surrounding land use development, or utility conflicts, among other factors. Conversely, noise barriers that preliminarily were not considered feasible and reasonable in the Traffic Noise Report may meet the established criteria and be recommended for construction in the DNR.

Topic 14: Noise

- *I-5701: Will noise barriers be built as part of Project I-5701?*

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 Part 772) and the NCDOT Traffic Noise Policy.

NCDOT has performed preliminary noise analyses for Project I-5701 and an initial Traffic Noise Report has been prepared. Based on that analysis, traffic noise levels due to the projects are predicted to be high enough in some areas in the project's design year (year 2045) to constitute a traffic noise impact as defined by NCDOT Traffic Noise Policy. Where noise impacts are predicted, noise abatement was considered.

As shown on the Project I-5701 Public Meeting Map, there are nine areas where noise barriers preliminarily meet feasibility and reasonableness criteria and are labeled as likely noise abatement areas.

A more detailed noise analysis will be completed during the project's final design, and a Design Noise Report (DNR) will be prepared. Noise barriers preliminarily found to be feasible and reasonable in the Traffic Noise Report may not be found to be feasible and reasonable during the final design noise analysis due to change in proposed project alignment and other design considerations, surrounding land use development, or utility conflicts, among other factors. Conversely, noise barriers that preliminarily were not considered feasible and reasonable in the Traffic Noise Report may meet the established criteria and be recommended for construction in the DNR.

- *I-5701: Project I-5701 will induce traffic, which will create more traffic noise.*

NCDOT has performed preliminary noise analyses for Project I-5701 and an initial Traffic Noise Report has been prepared. The noise analysis evaluated traffic noise based on traffic volumes projected for the design year 2045 for the loudest traffic conditions and identified nine areas that preliminarily meet feasibility and reasonableness criteria for noise walls. A more detailed noise analysis will be completed during the project's final design, and a Design Noise Report (DNR) will be prepared. Noise barriers preliminarily found to be feasible and reasonable in the Traffic Noise Report may not be found to be feasible and reasonable during the final design noise analysis due to change in proposed project alignment and other design considerations, surrounding land use development, or utility conflicts, among other factors. Conversely, noise barriers that preliminarily were not considered feasible and reasonable in the Traffic Noise Report may meet the established criteria and be recommended for construction in the DNR.

Traffic and Safety

Topic 15: Induced Traffic

- *I-5701 and I-5703: Adding new lanes will only induce traffic demand. This worsens traffic and air quality and can disproportionately impact or displace minority households.*

The purpose of Project I-5701 is to improve the traffic carrying capacity of I-40 and the purpose of Project I-5703 is to improve traffic flow and operational efficiency and to enhance mobility through the I-40/I-440/US-1/US-64 interchange. The projects evaluated projected traffic volumes through the design year 2045.

Projects I-5701 and I-5703 are included in the 2050 Capital Area Metropolitan Transportation Plan (long-range regional transportation plan). Under the federal Clean Air Act, a region's transportation plan must be determined to be in conformity with the National Ambient Air Quality Standards. This determination was adopted by the Capital Area Metropolitan Planning Organization on February 16, 2022.

The preliminary designs for the Project I-5701 Preferred Alternative and the Project I-5703 Preferred Alternative would not displace any residences or businesses.

- *I-5703: Will traffic using Dillard Drive and Piney Plains Road to get back on US-1/US-64 to get to I-40 create traffic congestion in the Crossroads area?*

Traffic patterns in the Crossroads area would change as a result of relocating the US-1/US-64 northbound Walnut Street ramps to Dillard Drive/Piney Plains Road. The Crossroads area is already congested, and the project would not attract additional traffic volumes to the general area since the access to/from US-1/US-64 already exists. An analysis of surface streets in this area for future year conditions showed potential congestion (a level of service of F on a scale of A to F) by year 2035 in the evening peak rush hours at the new Dillard Drive/Piney Plains Road/ramp intersection and at the Dillard Drive/Meeting Street intersection. The study determined that reasonable measures could be implemented as separate projects to improve traffic operations in the area. These measures could include installing additional traffic signals in the area and improving the Columbus Avenue corridor with restriping and signalization.

- *I-5703: Will traffic increase on Stephens Road and Piney Plains Road as a result of the new ramps at Dillard Drive/Piney Plains Road?*

The proposed ramp terminus at Dillard Drive/Piney Plains Road is a relocation of the existing ramp terminus at Walnut Street. The traffic wanting to use Piney Plains Road south of Dillard Drive to go to/from destinations south of Piney Plains Road would continue to use Piney Plains Road regardless of whether the ramp terminus is at Walnut Street or Dillard Drive/Piney Plains Road.

Stephens Road is a neighborhood-serving minor street and does not offer a shorter or faster path through the area, so traffic is not expected to increase on Stephens Road as a

result of Project I-5703, although general growth in the area or new development off Stephens Road may increase traffic volumes over time.

Topic 16: Safety

- *I-5703: I am concerned about the safety of pedestrians where the new ramps connect to Dillard Drive/Piney Plains Road.*

Existing sidewalks and sidepaths in the Dillard Drive/Piney Plains Road area would be replaced as part of Project I-5703. The existing intersection of Dillard Drive and Piney Plains Road does not have a striped pedestrian crossing. Pedestrian crossings at the intersection would be provided that conform to NCDOT design guidelines and policies.

- *I-5703: The unsignalized intersection of Piney Plains Road/Stephens Road is difficult to turn into and out of during peak hours and traffic safety is a concern at this location, especially if traffic increases on Piney Plains Road due to the project.*

The intersection of Piney Plains Road and Stephens Road is outside the project study area. A traffic signal for this intersection, if warranted, would be a separate project. The traffic signal to be installed at the intersection of the relocated ramps and Dillard Drive/Piney Plains Road may create gaps in traffic flow along Piney Plains Road that may provide more opportunities for turning movements.

- *I-5703: The narrow cross-section of Stephens Road and the increased traffic creates safety issues*

Stephens Road is outside the Project I-5703 study limits and any improvements to this road would need to be done as a separate project.

Topic 17: Town of Cary Sports Complex

- *I-5703: Was traffic from the new Town of Cary Sports Complex Community Center planned at South Hills taken into account for Project I-5703?*

Traffic forecasts for the project were developed for the design year 2045 and the project was designed based on future traffic. Forecasts take into account both local and regional growth based on zoning and general future land uses projected by local jurisdictions. The 2045 forecasts take into account traffic generated at the site based on a general land use profile, but not specifically a sports complex. NCDOT and the Town of Cary currently are coordinating regarding the proposed sports complex, and it is the Town of Cary's responsibility to evaluate the specific traffic impacts of the center.

- *I-5703: Would a new interchange at I-40 and Buck Jones Road be needed to handle traffic from events at the planned Town of Cary Sports Complex Community Center?*

The Town of Cary Sports Complex Community Center is a Town of Cary project, and the Town is coordinating with NCDOT regarding this development and access to/from the site.

A new interchange at I-40/Buck Jones Road currently is not included in any state or regional transportation plans.

- *I-5703: Traffic in the Walnut Street and Crossroads Mall area, along with the new Town of Cary Sports Complex Community Center, would be better served with the existing exits, not one farther away as proposed.*

The entrance/exit ramps to/from Walnut Street and US-1/US-64 southbound would remain in their current location. The entrance/exit ramps to/from Walnut Street and US-1/US-64 northbound would be relocated approximately one-half mile farther from the Crossroads area to the Dillard Drive/Piney Plains Road intersection. This relocation provides more room for vehicles to merge onto US-1/US-64 before the main interchange.

Design Suggestions

Topic 18: Various Design Suggestions

- *I-5701: The Regional Transportation Alliance (RTA) has one requested modification. We are requesting that the typical section for the inside (i.e., left, median) shoulder of I-40 reflect a 14' wide dynamic inside shoulder, rather than the 10' wide inside shoulder shown on the project page. A 14' dynamic inside shoulder is consistent with RTA's support for enabling transit priority shoulders adjacent to the median of I-40 and other freeways in our core metropolitan freeway system, to help maintain reliable regional transit service during peak periods as our region grows. A 14' dynamic inside shoulder is also consistent with the typical section shown in the current (Feb 2023) express design plan for I-40 in RTP (TIP H184316). Thank you to the Department for continuing to advance vital multimodal mobility projects for our region and state.*

GoTriangle, GoCary, and GoRaleigh currently do not operate bus routes on the segments of I-40, I-440, and US-1/US-64 in the project area. A collaborative study, Bus on Shoulder System (BOSS) Implementation Blueprint (June 2021) was prepared by NCDOT, Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (MPO), NC Capital Area MPO, and GoTriangle. This report determined that I-40 through Wake County was “most suitable” for BOSS, and BOSS is operating along some segments of I-40. US-1/US-64 and I-440 in the project area were “2nd most suitable”.

The study states that BOSS is preferred to be located on the outside shoulder but can be implemented on an inside shoulder under certain situations. The study also states that the shoulder width with a barrier (e.g. guardrail) is 11 feet (minimum) to 12 feet (desirable) and the shoulder width without an adjacent barrier is 10 feet (minimum) to 12 feet (desirable).

I-40 in the Project I-5701 study area currently has a median barrier with 10-foot paved inside shoulders on either side. The Project I-5701 Preferred Alternative would widen I-40 only to the outside to add the additional auxiliary lanes proposed between the

interchanges and would include a 12-foot outside paved shoulder. No modifications are proposed along the existing lanes or inside shoulder.

Adding two to four feet to each inside shoulder would increase the project footprint and the project impacts and costs. Each interchange ramp connection to I-40 would need to be re-aligned. In review of the existing bridges over I-40 there are potential horizontal clearance issues at the bridges of Jones Franklin Road, Avent Ferry Road, Lake Dam Road, and Trailwood Drive if the roadway was widened to accommodate the 14-foot median shoulder as requested. The additional four to eight feet of pavement also would increase impacts to adjacent wetlands and streams.

Based upon the additional potential impacts and costs, including a 12-14 foot inside shoulder would not be practicable for Project I-5701. The 12-foot outside shoulder meets the criteria contained in the BOSS study. The corridor could be evaluated for BOSS in the future as a separate project.

- *I-5701 and I-5703: This project does not appear to address the major issue on I-40 westbound, especially in the morning, of a long queue to exit onto US-1/US-64/I-440, and drivers attempting to join the queue late. These attempted late entries then backs up the traffic lanes and/or cause accidents. This exit lane needs to be separated from through traffic far earlier, with physical barriers to prevent late entry.*

The exit lane from I-40 westbound to I-440/US-1/US-64 begins as a collector-distributor road off I-40 westbound with sufficient weaving distance between this exit and the prior entrance ramp from Gorman Street. Under the Project I-5703 Preferred Alternative, a new flyover will be constructed from the collector-distributor road for the heavier traffic volumes going from I-40 westbound to US-1/US-64 southbound. Any congestion currently occurring at the subsequent back-to-back loop ramps would be relieved because the loop ramp from US-1/US-64 northbound to the I-40 westbound collector-distributor road would be removed.

- *I-5703: The Regional Transportation Alliance (RTA) are requesting that the typical section for the inside (i.e., left, median) shoulder of I-40 west of I-440, reflect a 14' wide dynamic inside shoulder, rather than the 12' wide inside shoulder shown on the project page. A 14' dynamic inside shoulder is consistent with RTA's support for enabling transit priority shoulders adjacent to the median of I-40 and other freeways in our core metropolitan freeway system, to help maintain reliable regional transit service during peak periods as our region grows. A 14' inside dynamic shoulder is also consistent with the typical section shown in the current (Feb 2023) express design plan for I-40 in RTP (TIP H184316).*

If practical, we also would request a 14' dynamic inside shoulder for all (or part) of the portions of I-440 north of I-40 and/or US-1/US-64 south of I-40 within the project limits. However, it is not clear if a 14' inside shoulder is practical in all or any of these locations. Either way, our priority for a 14' dynamic inside shoulder for project I-5703 is along I-40.

GoTriangle, GoCary, and GoRaleigh currently do not operate bus routes on the segments of I-40, I-440, and US-1/US-64 in the project area. A collaborative study, Bus on Shoulder

System (BOSS) Implementation Blueprint (June 2021) was prepared by NCDOT, Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (MPO), NC Capital Area MPO, and GoTriangle. This report determined that I-40 through Wake County was “most suitable” for BOSS, and BOSS is operating along some segments of I-40. US-1/US-64 and I-440 in the project area were “2nd most suitable”.

The study states that BOSS is preferred to be located on the outside shoulder but can be implemented on an inside shoulder under certain situations. The study also states that the shoulder width with a barrier (e.g. guardrail) is 11 feet (minimum) to 12 feet (desirable) and the shoulder width without an adjacent barrier is 10 feet (minimum) to 12 feet (desirable).

I-40 west of I-440 in the project study area currently has an approximately 42 to 45-foot wide grassy median with 10-12-foot paved inside shoulders on either side and 10-12 foot wide outside shoulders. The Project I-5703 Preferred Alternative would widen I-40 only as needed in the interchange area and the typical section includes 12-foot paved inside and outside shoulders and a grassy median.

US-1/US-64 in the project study area is highly constrained, particularly underneath the Walnut Street bridge and Crossroads flyover bridge, with no additional room to add more pavement at this location. The proposed cross-section for US-1/US-64 varies due to the numerous exit and entrance ramps, but the inside and outside shoulders are proposed to be 12 feet.

I-440 in the project study area is currently being modified by Project U-2719. This area is highly constrained by Walnut Creek and its floodway/floodplain on the I-440 westbound side. In this area, I-440 would have 12-foot inside and outside shoulders.

The proposed inside and outside shoulders for I-40 west of I-440, US-1/US-64 and I-440 would meet the desired width stated in the BOSS study. Adding two feet to each inside shoulder would increase costs and impacts. Along I-40, the added pavement would decrease the width of the grassy median such that new guardrail would be needed. Along US-1/US-64, this would require removing and replacing the Walnut Street bridge and Crossroads flyover bridge. Along I-440, there would be impacts to Walnut Creek.

Based upon the additional potential impacts and costs, including a 14-foot inside shoulder would not be practicable for Project I-5703. The 12-foot inside and outside shoulders meet the criteria contained in the BOSS study, and BOSS could be studied as a future separate project.

- *I-5703: Looking at the maps for I-5703, it looks like no one has considered how cars will leave Crossroads and go toward Raleigh or parts of Cary toward Morrisville. Locally, within Crossroads, the exit road to Walnut Street backs up consistently and with no additional storage at Meeting Street, it will cause backups there to significantly worsen, especially the left turn lanes. I urge someone to take a step back here and look at the whole picture.*

Vehicles traveling from Crossroads Plaza to Raleigh or Morrisville will be able to use the relocated on-ramp from Dillard Drive, or could travel on Crossroads Boulevard to Jones

Franklin Road, turn left on Jones Franklin Road and use the I-440/Jones Franklin Road interchange.

Traffic patterns in the Crossroads area would change as a result of relocating the US-1/US-64 northbound Walnut Street ramps to Dillard Drive/Piney Plains Road. An analysis of surface streets in this area for future year conditions showed that if intersections in the area become congested, there would be reasonable measures that could be implemented as separate projects to improve traffic operations. These measures could include installing additional traffic signals in the area and improving the Columbus Avenue corridor with restriping and signalization.

- *I-5703: Sequencing the construction is important. Please finish the flyovers and new ramps BEFORE adding the exit at Dillard Drive. Otherwise, traffic will exit there to avoid the construction area and contribute major congestion to neighborhood streets.*

Project I-5701 and Project I-5703 will be awarded at the same time to the same design-build contractor, which will increase the efficiency of the construction schedule. NCDOT utilizes the Design-Build process to complete projects faster, resolve constructability issues and afford opportunities for innovation. The Design-Build team will determine the appropriate construction sequencing, and they will be required to maintain reasonable access to and through the area during construction.

- *I-5703: Recommend one change on the flyover from I-40 westbound to US1 southbound is where the ramp arrives on US-1/US-64. The current proposal shows a traditional right-side entry onto US-1/US-64 southbound, but you may want to consider starting the flyover just a little sooner and merging into the left side of US-1/US-64 southbound. The median area between US-1/US-64 north and south could accommodate that ramp and you have additional room south of the Walnut Street bridge for the left side merge lane. Merging on the left side of US-1/US-64 southbound gives more room for the revamped Crossroads exits as well as the I-40 eastbound to US-1/US-64 southbound exit. That would mean less Right-of-Way to purchase from South Hills Mall and Christian Academy. It may help us pay for the 3rd flyover with less acquisition of private land.*

Shifting the flyover ramp from I-40 westbound to US-1/US-64 southbound so that it merges into US-1/US-64 on the left side would have other impacts. The radius of the curve along the proposed flyover ramp cannot be tightened. Therefore, shifting the terminus of the ramp at US-1/US-64 southbound would require shifting the alignment of the entire flyover ramp. This shift would require additional right of way and parking spaces from the Centerview Office Park in the southeast quadrant of the interchange and potential acquisition of one of the office buildings. The American Association of State Highway Transportation Officials' (AASHTO's) A Policy on Geometric Design of Highways and Streets (also known as the Green Book) notes that left entrances and exits are undesirable and all entrance and exit ramps should be on the right except in highly special cases.

- *I-5703: Do not move the Walnut Street exit. Instead create a left-side flyover from US-1/US-64 northbound to I-40 westbound. This will reduce traffic volumes in the right lanes that cause the bottlenecks. You would save money by not having to relocate the Walnut Street exit.*

A left-side flyover from US-1/US-64 northbound to I-40 westbound was evaluated as part of Alternative 1 for Project I-5703. Alternative 1 was eliminated from study for the following reasons. To incorporate a left-side flyover, additional pavement would be needed under the Walnut Street bridge and the Crossroads flyover bridge, which would require removal and replacement of these bridges. These bridges connect major retail commercial areas at Crossroads Mall South Hills Mall & Plaza and are the only vehicular and pedestrian connections over US-1/US-64 in the area. Replacement of these bridges would generate major disruptions in vehicular and pedestrian traffic patterns during construction and increase costs and impacts. Also, the American Association of State Highway Transportation Officials' (AASHTO's) A Policy on Geometric Design of Highways and Streets (also known as the Green Book) notes that left entrances and exits are undesirable and all entrance and exit ramps should be on the right except in highly special cases.

- *I-5703: Overall the 2 flyovers are a good idea to separate traffic. Disappointing that the entrance ramp from Crossroads Blvd to US-1/US-64 northbound and I-440 is being eliminated. Looking at the maps, it looks like a bridge carrying the new US-1/US-64 northbound to I-40 ramps could be built over that entrance ramp to I-440.*

A bridge carrying US-1/US-64 northbound to the I-40 ramps would not be feasible to build over the Crossroads Blvd entrance ramp to US-1/US-64 northbound. The required vertical clearance over the entrance ramp would cause this bridge to extend south past the Walnut Street bridge and Crossroads Plaza entrance bridge, requiring removal of these key connectors across US-1/US-64.

- *I-5703: Is it possible to connect Meeting Street to Piney Plains Road to provide a more direct route out of the shopping center, or to otherwise reconfigure the Crossroads Plaza entrances and parking areas to make exiting the area simpler.*

Improvements to roadways in the area around Crossroads Plaza would be separate projects that could be done by NCDOT or the Town of Cary. Changes to private streets in the Crossroads Plaza property would need to be initiated by the property owner, in coordination with the Town of Cary.

Topic 19: Don't Move Exit Ramp

- *I-5703: The proposed new ramps at Dillard Drive/Piney Plains will put too much traffic on these roads.*

The intersection of the relocated ramps and Dillard Drive/Piney Plains Road is expected to operate acceptably based on projected year 2045 traffic volumes, with the exception of possible congestion during some evening peak rush hours. An analysis of surface streets in this area for future year conditions showed that if intersections in the area become congested, there would be reasonable measures that could be implemented as separate projects to improve traffic operations. These measures could include installing additional

traffic signals in the area and improving the Columbus Avenue corridor with restriping and signalization.

- *I-5703: The proposed new ramps at Dillard Drive/Piney Plains Road will make it harder for drivers to get to and from Crossroads Plaza*

Under the Project I-5703 Preferred Alternative, access to/from Crossroads Plaza via US-1/US-64 will require a longer travel distance on surface streets from the new ramps at Dillard Drive/Piney Plains Road. The ramps needed to be moved farther away from the main I-40/I-440/US-1/US-64 interchange to provide sufficient space for vehicles to maneuver between the new ramps and the main interchange. Access to/from Crossroads Plaza via local streets would not change.

Topic 20: Improve Dillard Dr / Piney Plains Rd

- *I-5703: Due to increased traffic from Project I-5703, consider adding additional traffic signals along Piney Plains Road. Dillard Drive and Piney Plains Road should be improved with this project so bottlenecks do not occur.*

The intersection of the relocated ramps and Dillard Drive/Piney Plains Road will be improved and signalized. An analysis of surface streets in this area for future year conditions showed potential congestion (a level of service F on a scale of A to F) by year 2035 in the evening peak rush hours at the new Dillard Drive/Piney Plains Road/ramp intersection and at the Dillard Drive/Meeting Street intersection. The study determined that reasonable measures could be implemented as separate projects to improve traffic operations in the area. These measures could include installing additional traffic signals in the area and improving the Columbus Avenue corridor with restriping and signalization.

Topic 21: Add Flyover

- *I-5703: Add a third flyover from I-440 westbound to I-40 eastbound.*

Alternative 3 includes a third flyover from I-440 westbound to I-40 eastbound. Traffic analyses conducted for Project I-5703 showed that Alternative 2 and Alternative 3 would have similar benefits to overall operations within the interchange area for future projected traffic. Alternative 2 was selected as the Preferred Alternative because Alternative 2 would have less impact to stream and wetland resources and would have substantially lower total cost to construct.

Topic 22: Don't Remove the Crossroads Ramps

- *I-5703: Relocating the Walnut Street ramps and removing the ramp from Crossroads Plaza to US-1/US-64 northbound, this design seems to eliminate both primary routes out of Crossroads Plaza and the Target/Home Depot shopping center to I-40 and I-440. Is it possible to connect Meeting Street to Piney Plains Road to provide a more direct route out of the shopping center or*

to otherwise reconfigure the Crossroads Plaza entrances and parking areas to make existing the area simpler?

There are no current plans to connect Meeting Street to Piney Plains Road. People traveling to/from Crossroads Plaza and the Target/Home Depot would use Dillard Drive to access the relocated ramps to/from US-1/US-64 northbound. Changes to private streets in the Crossroads Plaza property would need to be initiated by the property owner, in coordination with the Town of Cary.

Topic 23: Remove Ramp at Crossroads/Buck Jones Rd

- *I-5703: I think keeping the Crossroad Blvd/Buck Jones Road exit bridge and ramp is a mistake. Not that many drivers seem to utilize the ramp as of today. Would it make the project cheaper to demolish the ramp and have drivers use the Walnut Street exit ramp instead?*

The Town of Cary was a stakeholder throughout the Project I-5703 project development process. They provided input that local access such as to Buck Jones Road and the bridge to Crossroads Plaza from US-1/US-64 southbound were important to preserve.

Topic 24: Planted Median

- *I-5703: Please consider a planted median, as this has shown to reduce the speed of traffic and provide safe crossings for pedestrians.*

Planted medians along Dillard Drive or Piney Plains Road are not proposed as part of Project I-5703. However, NCDOT is committed to Complete Streets improvements to provide for all modes of transportation. Existing sidewalks and sidepaths in this area will be replaced and appropriate pedestrian crossings included at the new ramps' signalized intersection with Dillard Drive/Piney Plains Road.

Bike/Ped/Public Transit

Topic 25: Public Transit

- *I-5701: Can the funds for Project I-5701 be used for public transportation instead, such as improved bus routes?*

Federal funds for the interstate improvements cannot be allocated to non-highway purposes.

- *I-5701: Construct a separate bus lane or light rail between Cary and Raleigh to improve connectivity and reduce traffic.*

There are separate efforts ongoing to improve public transportation in Wake County. The Wake Transit program is a taxpayer-supported initiative approved by voters in 2016 to optimize public transportation in Wake County (www.goforwardnc.org/wake-county). GoTriangle and the Capital Area Metropolitan Planning Agency together are leading this program.

- *I-5703: Funding would be better spent on improving public transit infrastructure.*

Federal funds for the interchange improvements cannot be allocated to non-highway purposes.

Topic 26: Preserve Greenway

- *I-5703: Will access to greenways such as the Hinshaw Greenway pedestrian bridge over US-1/US-64 be maintained during construction?*

The Hinshaw Greenway pedestrian bridge is outside the project study area. Access to the Hinshaw Greenway pedestrian bridge and other existing greenways is not expected to be affected by Project I-5703 construction.

- *I-5703: Will Project I-5703 impact the Town of Cary's planned greenway shown going through the undeveloped land east of the Wellington neighborhood?*

The Town of Cary Community Plan shows a future greenway generally through a portion of the undeveloped land adjacent to the south side of the Dillard Drive/Piney Plains Road off ramp. The proposed off ramp would not preclude construction of a greenway in this undeveloped land.

Topic 27: Bicycle/Pedestrian

- *I-5701: Build better pedestrian and bicycling infrastructure instead of Project I-5701 to incentivize people to not drive on I-40.*

Federal funds for the interstate improvements cannot be allocated to non-highway purposes.

- *I-5703: Include in the project pedestrian and multi-use trail enhancements across US-1/US-64 near Walnut Street and Crossroads Mall as shown in the Town of Cary 2040 Community Plan.*

The Town of Cary 2040 Community Plan shows future sidepaths along Walnut Street along the bridge over US-1/US-64 and a new separate greenway crossing of US-1/US-64 between Walnut Street and I-40. The Walnut Street bridge over US-1/US-64 would not be impacted by Project I-5703. For the new separated greenway crossing, Project I-5703 would not

preclude this crossing and NCDOT would work with the Town of Cary if they want to implement this crossing as a separate project.

Topic 28: Bicycle/Pedestrian along Dillard Dr/Piney Plains Rd

- *I-5703: Add protected bicycle facilities on Dillard Drive and Piney Plains Road.*

Project I-5703 would replace the existing sidewalk and sidepath (a greenway adjacent to a road) impacted by the proposed project. The Town of Cary 2040 Community Plan does not show separated bicycle lanes along Dillard Drive or Piney Plains Road. These would need to be separate projects implemented by the Town of Cary and/or NCDOT.

- *I-5703: Will the project include or accommodate the future planned greenway crossing shown in the Town of Cary's 2040 Community Plan that crosses Piney Plains Road at Dillard Drive?*

The Town of Cary's 2040 Community Plan shows new greenways and sidepaths (a greenway adjacent to a road) in the Piney Plains Road/Dillard Drive/ramp intersection area. A new greenway is proposed in the undeveloped land south of the relocated exit ramp to Dillard Drive/Piney Plains Road. This new greenway would cross Piney Plains Road and continue southward through currently undeveloped land. In addition, the existing sidepath along Piney Plains Road north of Dillard Drive is proposed to be extended to Walnut Street, and a sidepath also is proposed along Dillard Drive from Piney Plains Road to Walnut Street.

The preliminary design for the Preferred Alternative would not preclude the future planned greenway or sidepaths. Pursuant to NCDOT policies and guidelines areas where existing sidepaths are being disturbed will be replaced. A pedestrian crossing will be included at the signalized Dillard Drive/Piney Plains Road/ramp intersection to provide connections for the sidewalks, sidepaths, and future greenways. The NCDOT will work with the Town of Cary during final design for the design of these facilities.

Stormwater Runoff

Topic 29: Storm Runoff

- *I-5703: What are the impacts to Walnut Creek upstream of the culvert under I-40 due to the proposed project? Would there be additional flooding and erosion at the end of Ivy Lane and along Cary Parkway?*

As reported in the Project I-5703 Hydraulic Planning Report, the Walnut Creek culvert under I-40 is a 9-ft by 9-ft triple box culvert that has adequate capacity to handle future

conditions. The preliminary design for the Preferred Alternative does not require extending or modifying this culvert.

Prior to construction, an erosion and sedimentation plan will be developed for the Preferred Alternative in accordance with applicable rules, regulations and guidance. This plan will follow *Design Standards in Sensitive Watersheds* and *Neuse River Riparian Buffer Rules* in accordance with NC Department of Environmental Quality (NCDEQ) and NCDOT guidance and best management practices.

NCDOT's Post-Construction Stormwater Program manages long-term stormwater runoff from NCDOT projects to protect water quality. A Stormwater Management Plan will be prepared during final design of the project to direct the drainage design and manage long-term stormwater runoff. As part of the plan, NCDOT will implement structural best management practices and non-structural pollution minimization measures.

- *I-5703: How will increased runoff from the project be managed and contained in the area by Roylene Acres?*

Roylene Acres is in the northeast quadrant of the I-40/I-440/US-1/US-64 interchange. Walnut Creek is located between the interchange and the Roylene Acres neighborhood.

The preliminary design of the Project I-5703 Preferred Alternative includes a retaining wall along the outside of the I-440 off-ramp to I40 westbound that would keep the project construction limits away from Walnut Creek and its floodplain/floodway.

Prior to construction, an erosion and sedimentation plan will be developed for the entire Preferred Alternative in accordance with applicable rules, regulations and guidance. This plan will follow *Design Standards in Sensitive Watersheds* and *Neuse River Riparian Buffer Rules* in accordance with NC Department of Environmental Quality (NCDEQ) and NCDOT guidance and best management practices.

NCDOT's Post-Construction Stormwater Program manages long-term stormwater runoff from NCDOT projects to protect water quality. A Stormwater Management Plan will be prepared during final design of the project to direct the drainage design and manage long-term stormwater runoff. As part of the plan, NCDOT will implement structural best management practices and non-structural pollution minimization measures.

Topic 30: Construction Runoff

- *I-5703: What measures will be taken to ensure runoff from the project does not cause flooding or sedimentation in the Wellington Park neighborhood during and after construction?*

The relocated US-1/US-64 northbound exit/entrance ramps to/from Dillard Drive/Piney Plains Road are located just east of the Wellington Park neighborhood. The ramps would cross streams in this area. Culverts are recommended to carry the streams under the ramps, and these will be appropriately sized in accordance with NCDOT hydraulic design guidelines.

Prior to construction, an erosion and sedimentation plan will be developed for the entire Preferred Alternative in accordance with applicable rules, regulations and guidance. This plan will follow *Design Standards in Sensitive Watersheds* and *Neuse River Riparian Buffer Rules* in accordance with NC Department of Environmental Quality (NCDEQ) and NCDOT guidance and best management practices.

NCDOT's Post-Construction Stormwater Program manages long-term stormwater runoff from NCDOT projects to protect water quality. A Stormwater Management Plan will be prepared during final design of the project to direct the drainage design and manage long-term stormwater runoff. As part of the plan, NCDOT will implement structural best management practices and non-structural pollution minimization measures.

Signals and Stop Signs

Topic 31: Signals – Stephens Road / Piney Plains Road

- *I-5703: It currently is difficult to turn into and out of the Piney Plains Road/Stephens Road intersection. The new exits ramps at Dillard Drive/Piney Plains Road will increase traffic on Piney Plains Road and make it more difficult to turn into and out of the Piney Plains Road/Stephens Road intersection. A new traffic signal or traffic circle should be installed at the Piney Plains Road/Stephens Road intersection.*

The intersection of Piney Plains Road and Stephens Road is outside the project study area. A traffic signal or a traffic circle for this intersection, if warranted, would be a separate project. The traffic signal to be installed at the intersection of the relocated ramps and Dillard Drive/Piney Plains Road may create gaps in traffic flow along Piney Plains Road that may provide more opportunities for turning movements.

Topic 32: Improve Stephens Road

- *I-5703: I put in a traffic study over 2 years ago to have speed bumps installed along Stephens and it was approved, but no further correspondence or action has taken place on this project.*

Improvements to Stephens Road (State Road 1316) are not part of Project I-5703. The Town of Cary would be responsible for installing traffic calming devices such as speed bumps along Stephens Road.

- *I-5703: Widen Stephens Road and add streetlights. Perform regular maintenance on this road.*

Improvements to Stephens Road (State Road 1316) are not part of Project I-5703. Widening Stephens Road and adding streetlights would need to be done as a separate project by the Town of Cary and/or NCDOT.

Topic 33: Stop Signs

- *I-5701: Erect 4 way stop signs everywhere that traffic problems exist, that will fix the problem for sure!*

Project I-5701 would make improvements to I-40. The project is being designed to address projected future traffic volume needs for the design year 2045, which include both local and regional growth in traffic. The scale of the project is appropriate to increase the carrying capacity of I-40 and improve traffic flow. The Preferred Alternative would not extend to the interchange ramp termini or surface streets in the project study area. Therefore, there would be no intersections where stop signs or traffic signals would be included in the project.

Other Topics

Topic 34: Air Quality

- *I-5701: The project will induce more traffic and will negatively impact air quality.*

The purpose of Project I-5701 is to improve the traffic carrying capacity of I-40 and the purpose of Project I-5703 is to improve traffic flow and operational efficiency and to enhance mobility through the I-40/I-440/US-1/US-64 interchange. The projects evaluated projected traffic volumes through the design year 2045.

Projects I-5701 and I-5703 are included in the 2050 Capital Area Metropolitan Transportation Plan (long-range regional transportation plan). Under the federal Clean Air Act, a region's transportation plan must be determined to be in conformity with the National Ambient Air Quality Standards. This determination was adopted by the Capital Area Metropolitan Planning Organization on February 16, 2022.

- *I-5703: What measures will NCDOT take to minimize dust and air pollution during construction?*

Dust suppression measures will be implemented during construction in accordance with state and local requirements. These measures include items such as, but not limited to, requiring proper emission controls on construction equipment and implementing a watering program to minimize entrained dust.

Topic 35: Website Corrections

- *I-5703: I think your projected costs are wrong. You have the same values listed for I-5701 and I-5703, even though I-5703 looks like a much more expensive project. I would like to see the actual expected cost for I-5703 Alternative 2.*

The project website www.publicinput.com/40-440-us1-interchange incorrectly shows the same I-5701 cost table for I-5701 and I-5703. This has been corrected.

- *I-5703: I believe there is a mistake in the description of Alternative 2. The second flyover ramp should say WESTbound I-40 to southbound U.S. 1/U.S. 64 rather than eastbound I-40 to U.S. 1/U.S. 64. Please confirm if you've made the correction on the website.*

The current project website <https://publicinput.com/40-440-US1-interchange> correctly describes Alternative 2.