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NORTH CAROLINA
Department of Transportation

P8 Workgroup Meeting #1

NCDOT SPOT Office

October 8, 2024

Connecting people, products and places safely and efficiently with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina

Introduction



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Agenda

Topic	Time (Duration)	Goal
Start	9:30 am	
Introduction	9:30 am (15 min)	
Workgroup Approach	9:45 am (30 min)	Discussion / Consensus
P8 Schedule	10:15 am (30 min)	Discussion / Consensus
Break	10:45 am (15 min)	
Carryovers & Number of Submittals	11:00 am (45 min)	Discussion / Consensus
Lunch	11:45 am (45 min)	
Resiliency	12:30 pm (45 min)	Education / Discussion
Local Input Points	1:15 pm (45 min)	Discussion / Consensus
Break	2:00 pm (15 min)	
Topic Clarification, P8 Subcommittees, & Topic Scheduling	2:15 pm (60 min)	Discussion
Recap & Next Steps	3:15 pm (15 min)	
Adjourn	By 3:30 pm	

Housekeeping

- Restrooms & exits
- Refreshments
- Lunches
- Parking Lot
- Wi-Fi & laptops

Workgroup Approach



Workgroup Meeting Approach

Proposal: Retain P7 scoring process unless there is consensus to recommend a change

Background:

- Mature process and multiple successful prioritization cycles
 - Same approach as P6 + P7: need consensus to change something, otherwise keep as is
 - Implies that there is consensus on what is not discussed in Workgroup
 - Includes all aspects of scoring: criteria, weights, measures, data usage, local input points, submittal numbers, etc.
- **Desire to reach consensus on proposed approach**
- Benefit to reaching consensus: Workgroup has more time to discuss other topics
 - Downside to not reaching consensus: Workgroup time would need to be spent on established scoring methods that were not put forward during topic gathering

Workgroup Meeting Approach

Proposal : Workgroup recommend that the Board approves the system until changed

Background:

- There is some uncertainty on if the Board is approving a cycle-specific or ongoing methodology
- Proposal would clarify that approval is for the entire process until such time as it is changed
- Workgroup would still have full purview to recommend changes every cycle
- SPOT Office would need to discuss with Board if they are receptive to this concept
 - SPOT Office will not initiate conversation with Board if the Workgroup does not recommend this approach

Goal: Discuss topic and gauge Workgroup interest

- Benefit to reaching consensus: provides additional clarity to all parties
- Downside to not reaching consensus: continue with status quo which is currently working

P8 Schedule



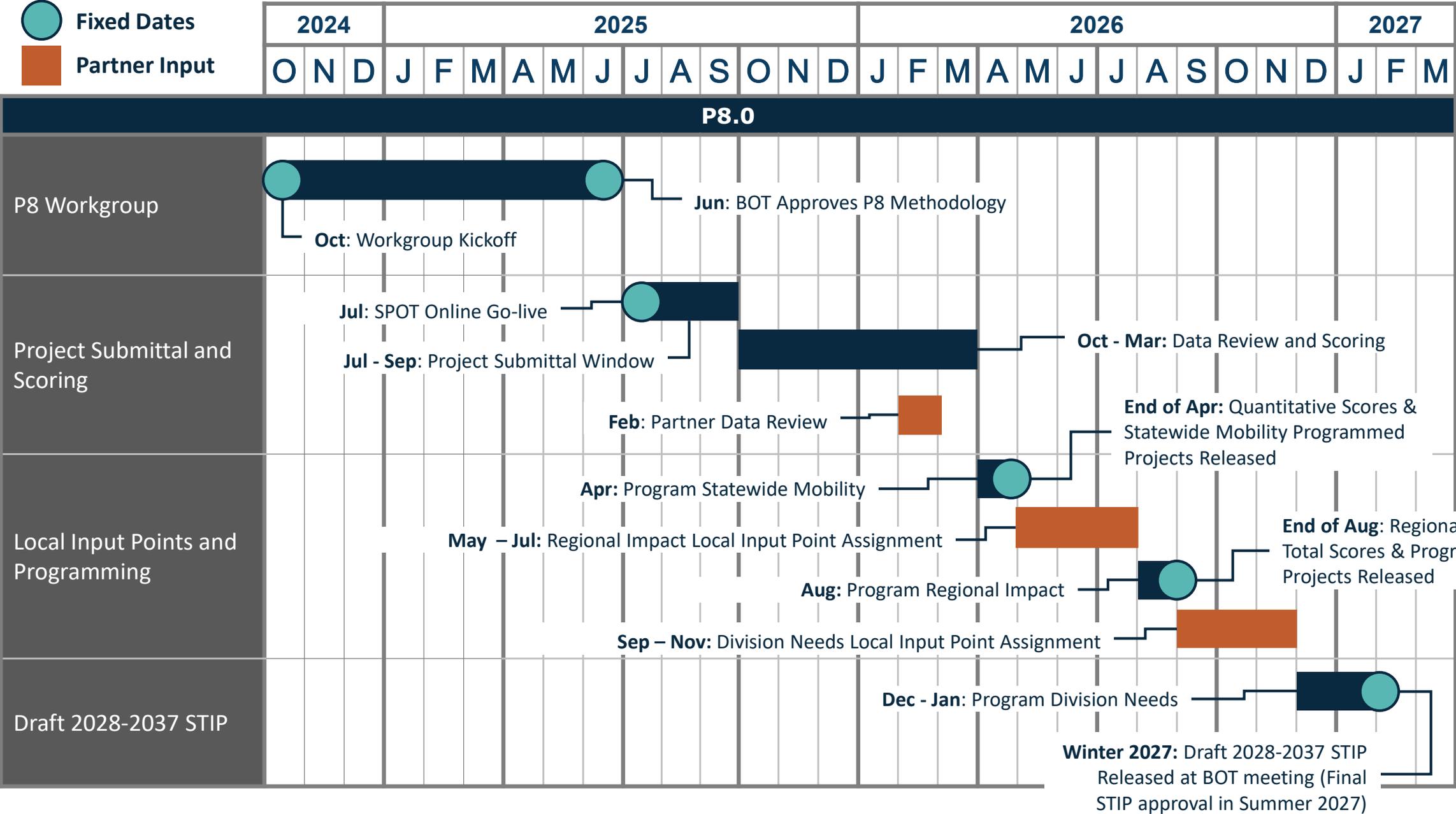
Draft P8 Schedule

- Goals of this discussion:
 - Review draft schedule windows and approximate dates and discuss changes
 - **Desire to reach consensus on schedule after feedback from the Workgroup**
- Background Information and Key Dates:
 - Schedule on next slide is based on initial P7 schedule
 - Expected Board of Transportation (BOT) approval in June 2025
 - Submittal window in Summer 2025
 - Scoring window in Fall 2025 through Winter 2026
 - Local Input Point windows in Summer 2026 and Fall 2026
 - Draft 2028-2037 STIP to be released in early 2027

Draft P8 Schedule

October 8, 2024

● Fixed Dates
■ Partner Input

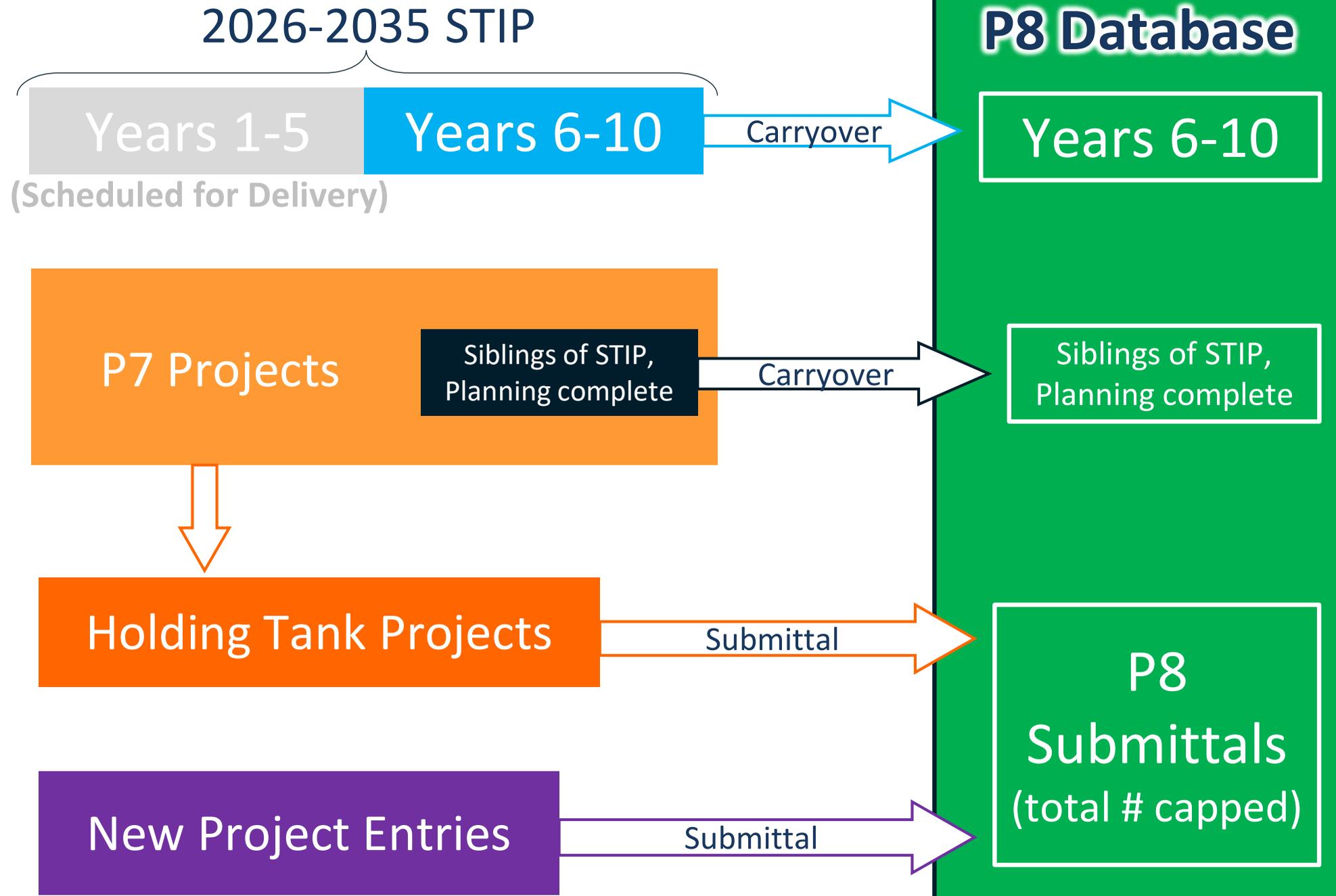


Carryovers & Number of Submittals



Goals of this Discussion

- Review proposed Carryover definition for P8
 - Reach consensus if desired
- Review proposed formula for Submittals and resulting allotments
 - Reach consensus if desired



Carryovers

- Carryover projects are automatically evaluated in the next round of Prioritization
 - Historic Carryover definition:
 - In the adopted 2024-2033 STIP and not scheduled for delivery
 - Have completed environmental documents
 - Sibling of programmed projects
 - Note: P7 definition included a one-time addition of two P6.0 new submittals (per partner discretion)
 - Same modifications as usual would remain (segmenting, scope changes, 1 out / 1 in)
 - All other projects “removed” and available for resubmittal [Holding Tank]
- **Desire to reach consensus on using historic Carryover definition for P8**

Proposed P8 Methodology for Number of Submittals

- Proposal: Use the same formula as P7 to calculate the number of project submittal allotments

MPOs and RPOs

- Base of 12 submittals, plus:
 - + 1 submittal for every 50,000 in population
 - + 1 submittal for every 500 centerline miles(No maximum number of submittals)

Divisions

- 14 submittals
- Formula applies to each mode

Proposed P8 Number of Submittal Allotments

- In meeting, will display live version of resulting number of submittal allotments for each organization based on proposal, including comparisons to P7 numbers
 - Note that resulting numbers are based on initial analysis from DIT – final numbers may vary slightly depending on updated analysis and final review
- **Desire to reach consensus on using the P7 formula for number of submittals for P8**

Resiliency



Goals of this Discussion

- Recap of resilience initiatives discussed in P7
- Review items pertinent to resilience including:
 - Legislation / Executive Orders
 - NCDOT Resilience Improvement Plan
 - Definitions of resilience from NCDOT and FHWA
- Identify next steps including developing short-term (1 cycle) and long-term (2+ cycles) goals
- Note: the following slides contain a large amount of information. Please review prior to the meeting, as the plan is to move through the background information quickly during the Workgroup meeting in order to focus on discussion.

Recap of Resilience Initiatives Discussed in P7: Geo-FRIT

Geo-FRIT

- Description: A comprehensive study of the risk and resiliency profiles of public roads, with a Focus on primary and secondary freight routes
- Objectives: to establish a geospatial analytics platform for transportation data integration and modeling. This platform provides a tool for quantifying freight risk and resilience in transportation.
- Status: **Completed**
- Note: The resilience group does not recommend using this tool for Prioritization. This is due to the fidelity of the data sources used and because the tool may not provide the best representation statewide.

Recap of Resilience Initiatives Discussed in P7 : US 74 Study

U.S. 74 Study

- Description: Vulnerability assessment with resilience considerations that focuses on potential vulnerabilities from continued growth and future weather events, considering factors like people, economy, weather, and infrastructure.
- Study Objectives: To determine goals and objectives for future U.S. 74 resiliency; identify and define any vulnerabilities to future extreme weather events, develop and stress-test potential mitigation and adaptation scenarios against future conditions; and quantify benefits relative to goals and objectives.
- Status: **Completed**
- Notes: This study only encompasses a 20-mile-wide corridor along US 74 from I-485 in Matthews to Wilmington's port. This makes statewide application difficult/ infeasible without additional work.

Recap of Resilience Initiatives Discussed in P7 : Inundation Tools

- Roadway Inundation Tool (RIT)
 - Description: Provides estimated inland roadway inundation depth for five return periods (10, 25, 50, 100, and 500-year).
 - Status: **Not Completed**
 - Notes: The tool is available statewide up to the 100-year event. Other tool upgrades are still in process. Completion may take 6 month to 3 years depending on floodplain mapping progress.
- Coastal Roadway Inundation System (CRIS)
 - Description: Provides coastal flood depths for three sea-level rise (SLR) with storm surge scenarios.
 - Status: **Not Completed**
 - Notes: This is only along the coast and not statewide.
- Geotechnical Asset Management (GAM) database
 - Description: Provides point locations and other documentation of rockslide/rockfall/landslide/embankment failure areas under NCDOT jurisdiction.
 - Status: **Not completed**
 - Notes: Have the money to complete but there is currently no estimated completion date.

Items Pertinent to Resilience: Legislation and Executive Orders

- Moving Ahead for Progress in the 21st Century Act (MAP-21)
 - Enacted in 2012
 - Shifted the focus towards the performance of transportation systems, including aspects of safety, infrastructure condition, and system reliability.
 - Encouraged states to consider resilience in transportation planning and asset management activities.
- Fixing America's Surface Transportation (FAST) Act
 - Signed into law in December 2015
 - Requires agencies to take resiliency into consideration during the transportation planning process.
- NC Executive Order 80
 - Issued October 2018
 - Encourage the Department to take a proactive role in considering climate resilience in its planning, construction, and maintenance of transportation infrastructure.

Items Pertinent to Resilience: Legislation and Executive Orders (cont)

- Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT)
 - Established by the Bipartisan Infrastructure Law in 2021
 - To boost the resilience of transportation infrastructure against natural disasters and the effects of climate change.
- NCDOT Resilience Policy
 - Issued September 2021
 - To consider the resiliency of the Department's organization and the state's transportation system to support its mission.
- Executive Order 266
 - Issued July 2022
 - Set resilience standards for projects within and outside floodplains.

Items Pertinent to Resilience: NCDOT Resilience Improvement Plan

Resilience Improvement Plan (RIP)

- Description: The RIP is one of the steps NCDOT has taken to fulfill the Resilience Policy to keep the transportation infrastructure safe, dependable, and efficient by actively managing risks and enhancing the resilience of the transportation system, considering both natural and human-made hazards.
- Objectives: To implement the Resilience Policy in support of NCDOT mission and goals.
- Notes: Two of the assessments developed in this plan are the Criticality Assessment and Resilience Assessment which assist with identifying resiliency projects (in whole, or a resiliency component of a project) in the STIP. The identified resilient projects become eligible for PROTECT funding and a seven percent (7%) reduction of the non-federal share of the costs associated with the resilience portion of the project.
- The Resilience Improvement Plan can be accessed [here](#) for complete details.

Items Pertinent to Resilience: NCDOT Resilience Improvement Plan

Criticality Assessment

- **Description:** An assessment that identifies areas that are critical to supporting the functionality of the transportation system and wellbeing of the region. It evaluates the significance of assets in terms of their system and community value, such as economic impact, healthcare access, and emergency evacuation routes.
- **Objectives:** To develop a Statewide Criticality Map for both roadways and rail lines to use as criteria for identifying vulnerable areas of concern and potential resilience projects.
- **Notes:** This is a multicriteria systematic risk-based assessment. Ranking is based on Criticality Score, Exposure Score, and Sensitivity Score. Was developed using an adapted methodology from the US-70 vulnerability pilot which utilized the Federal Highway Administration's Vulnerability Assessment Scoring Tool (VAST) to evaluate climate impact risks on US-70 from Wake County to the coast, focusing on various assets and climate stressors for 2030 and 2050 scenarios.

Items Pertinent to Resilience: NCDOT Resilience Improvement Plan

Resilience Assessment

- Description: An assessment that identifies and evaluates projects and vulnerable areas based on their criticality and exposure and sensitivity to hazards.
- Objectives: To provide a priority resilience list for all vulnerable areas of concern and projects that have been identified and prioritized for potential resilience improvements.
- Notes: This assessment focuses on three natural hazards: inland and coastal flooding, geotechnical (landslides, rockfall, rockslides and embankment failure), and sea level rise (SLR) with storm surge. Applies only to Interstate, NC, and US routes. Both the Criticality and Resilience Assessments facilitates the identification and prioritization of areas of concern and potential resilience projects. The scoring and priority list can be found [here](#).

Items Pertinent to Resilience: NCDOT Resilience Improvement Plan

Example Projects with resilience-focused design elements

- Project I-6064 for widening I-95 in Robeson County, which features road elevation, enhanced bridge design for better water flow, and modified medians for quicker water runoff.
- The Alligator River Bridge replacement, designed to last until 2100, is under construction with resilient materials and considers projected SLR and storm activity; it secured a \$110 million federal grant for replacement this year.
- The Department is evaluating designs for I-40 to withstand 100-year flood events plus added elevation for extra safety. This includes evaluating flood-resilient options near Burgaw and Rockfish Creek, informed by the I-95/I-40 Flood Resiliency Feasibility Study.
- The Living Shoreline Project to protect a key causeway on N.C. 24 between Swansboro and Cedar Point blends engineered and natural elements to reduce wave energy and erosion. The project aims to guard against the impacts of rising seas and stronger storms and the project team expects it to be more resilient than traditional bulkheads as it provides benefits such as new fish habitats, improved water quality through oyster filtration, and reduced erosion.

Items Pertinent to Resilience: FHWA & NCDOT Definitions of Resilience

- Both the Federal Highway Administration and NCDOT defines resiliency as the “ability to anticipate, prepare for and adapt to changing conditions and withstand, respond to and recover rapidly from disruptions.”
- Resilience affects all aspects of transportation, from the designing and constructing infrastructure to withstand hurricanes or rockslides, to traffic operations during emergency events, to regular inspection and maintenance of existing networks.

Questions To Aide Discussion of Next Steps

- What is resilience as it pertains to the Workgroup?
 - Would developing a definition be a potential next step?
 - Would developing a vision for a Resilience component be a potential next step?
 - Other ways to help focus the conversation?
- How and where can Resilience be incorporated effectively into the scoring system?
 - Should this apply to all modes or only select modes?
 - Should this apply to all funding categories or only select funding categories?
 - What are viable paths within the confines of the STI to include resilience in our scoring system?
- What additional information would be helpful to the Workgroup?
 - What tools would be useful to get more information?
 - What subjects would be helpful to learn more about?
- What is realistic to accomplish?
 - What could be our short-term accomplishments/goals (1 cycle: P8.0)?
 - What could be our long-term accomplishments/goals (2+ cycles P9.0/P10.0)?

Local Input Points



Goals of this Discussion

- Recap the work of the P7 Ongoing Subcommittee for Local Input
- Reach consensus on the P8 methodology for calculating Local Input Points
- Discuss process for studying potential future changes as recommended by the Ongoing Subcommittee

P7 Ongoing Subcommittee: Local Input

Background:

- Workgroup members and stakeholders have expressed a desire over multiple Prioritization cycles to review and potentially refine the local input process
- Subcommittee was convened to perform an in-depth evaluation of the existing local input process and consider whether any changes would be beneficial
- Met monthly from December 2023 to August 2024 (7 meetings)
- Special thanks to subcommittee members:

Ben Johnson	Janet Robertson	Neil Burke
Mike Kozlosky	Chris Lukasina	Sam Boswell
Tristan Winkler	Vicki Eastland	Sarah Lee / Brian Wert

(and thanks to Fountainworks for facilitation)

P7 Ongoing Subcommittee: Local Input

- Full memo was provided to Workgroup members on September 4th
- Summary of subcommittee recommendations:
 1. **Maintain the Status Quo:** keep the local input process as-is for the P8.0 cycle
 2. **Explore Future Process Changes:** explore potential local input process changes that could be implemented in future cycles

P7 Ongoing Subcommittee: Local Input

Recommendation #1: Maintain the Status Quo (for P8)

- **Key Finding:** Cooperative point assignment from Division Engineers (DEs) and Planning Organizations (POs) is crucial to the successful programming of projects, but projects do not always need to have both DE and PO points to be programmed.
- **Key Finding:** There is no correlation between project cost and local input points. In other words, projects that received funding also received points across all cost spreads.
- **Benefits:**
 - Nothing about the current process is broken
 - Keeps it simple – no new information to learn
 - Local input points themselves are not the issue
- **Watchouts:**
 - 100 points on a low-cost project is the same as 100 points on a high-cost project

Proposed P8 Methodology for Number of Local Input Points

- Proposal: Use the same formula as P7 to calculate the number of Local Input Points

Number of Points per Area

- Base of 1,000 points
 - + 100 additional points for every 50,000 (rounding up to next) in population
- Max 2,500 points per area
- Same allocation for Regional Impact and Division Needs
- 100 point max per project per category

Proposed P8 Local Input Point Allotments

- In meeting, will display live version of resulting number of local input points for each organization based on proposal, including comparisons to P7 numbers
 - Note that resulting numbers are based on initial analysis from DIT – final numbers may vary slightly depending on updated analysis and final review
- **Desire to reach consensus on using the P7 formula for local input points for P8**

P7 Ongoing Subcommittee: Local Input

Recommendation #2: Explore Future Process Changes

- Explore potential local input process changes that could be implemented in future cycles
 - This would take the form of additional research/analysis, likely via consultant, and begin developing a scope this Fall
- Workgroup discussion:
 - Should this take the form of a Subcommittee? If so, same group as before? Any others?
 - At the very least, may need one meeting to confirm the process for moving forward
 - What area would you explore / improve (not what is the improvement)?
 - Ideas so far include changing the number of points and relating points to project cost (not budget)
 - Others?

Topic Clarification, P8 Subcommittees, & Topic Scheduling



Goals of this Discussion

- Clarify / confirm the goal of the topics on the current P8 topic schedule
- Identify any subcommittees and participants for the P8 Workgroup cycle
- Adjust topic schedule as needed

P8 Topic Clarification / Confirmation

Topic	Number of Sessions	SPOT Office Understanding	Additional Notes
Carryovers / Number of submittals	3	Examine the Carryover definition and the formula for number of submittals for P8.	SPOT Office has received some comments suggesting that the number of projects scored is not inline with the expected funds available for programming. There have been no projections of available funding for the P8 cycle to date.
Resiliency	5	Examine ways to incorporate resiliency into the Prioritization process.	SPOT Office suggests developing a multi-cycle approach to tackling this topic, starting with defining what resiliency means and examining how / where that might be incorporated into the scoring system.
Probe data	2	Examine existing probe data sets to determine if the data is viable for use in Prioritization and, if so, if / how to incorporate in Prioritization.	SPOT office will share the white paper developed by ITRE and informed by industry regarding the viability of the data.
Vehicular traffic (Peak ADT / AADT years)	4	Review AADT to determine the years to use for P8. This is fundamentally a question about the use of post-COVID or pre-COVID data. Peak ADT will look at the methodology and potential ways to improve or adjust this methodology	SPOT Office suggests that the focus on PADT may be a larger question and that this conversation should take a step back to define the question first. There is some time for this in the schedule, but more time may be needed. This could be a subcommittee if there is a need to spend significant time on defining the problem.

Topics shaded in yellow are items the SPOT Office would like clarification on

P8 Topic Clarification / Confirmation

Topic	Number of Sessions	SPOT Office Understanding	Additional Notes
Transportation Disadvantage Index (TDI)	3	Examine the results associated with the TDI analysis of P7 Bike/Ped and Transit projects and examine scoring process updates related to this data set.	
Safety	3	Examine the Safety criteria and determine if updates should/can be made	
Resourcing for prioritization process	2	Determining resource allocation to SPOT Office.	
Road Diet Scoring	2	Examine potential update to road diet scoring beyond what was done in P7. There has been mention of road diet-specific measures. Current process uses the same measures regardless of improvement type. <u>SPOT Office would like clarification on this topic.</u>	P7 allowed for Road Diets to be scored as Mobility or Modernization projects, defaulting to Mobility, and submitters needed to email SPOT if they desired projects to be scored as Modernization. Should this include a Modernization discussion?
Highway Multimodal Criteria	4	Review the Highway Multimodal criteria and looking at ways to improve. This may need to be a subcommittee. The WG may also need to take a multi-cycle view on this topic.	
Quantitative benefits for Bike/Ped & Transit	3	Determine a quantitative measure for benefits that can be used for Bike/Ped and / or Transit projects. <u>SPOT Office would like some clarification on this topic.</u>	The current scoring uses a Cost Effectiveness measure that is based on other criteria. There is no quantitative calculation of benefits or a definition of what those benefits are.
Rail	3	Review of new Modernization scoring from P7 and suggested improvements to the process.	

Topics shaded in yellow are items the SPOT Office would like clarification on

P8 Topic Clarification / Confirmation

Topic	Number of Sessions	SPOT Office Understanding	Additional Notes
Aviation	2	Div of Aviation proposed updates to scoring data, primarily focused on SITs and other administrative items. No overall scoring methodology changes.	
Area-specific weights	1	Review Area-Specific Weights and determine if opt-in should be in perpetuity or single cycle-specific.	There is some confusion on this amongst submitters.
Federal Performance Measures / Life Cycle Cost Analysis	3	Review relation between the NC Prioritization Process and federal PMs. Also examine life cycle cost analysis to determine if that can and/or should be included in Prioritization.	In P7, the WG opted to not further align Prioritization to Federal PMs. SPOT Office is not aware of any changing conditions that would require this decision to be reviewed. <u>Is the Federal PM item pertinent and important enough for P8?</u>
FSU cost estimation communication process	2	Review of the cost estimation communication process. <u>SPOT Office would like clarification on this topic.</u>	SPOT Office is unsure of how this is a WG topic. While there is a desire to improve the process, there needs to be a clear nexus of how this is Prioritization related. The methods for cost estimating are not a WG subject. The use of the data is a WG subject.
Bike/Ped Points of Interest (POI) updates	2	Review strike team analysis completed since P7 and examine potential updates to POIs.	
Highway Accessibility / Connectivity	3	Further review of the Accessibility/Connectivity criteria. SPOT Office understands this to be focused on expanding the types of projects that qualify for the 'Improve Mobility' measure.	Does this need a multi-cycle approach? Should this be a subcommittee?
Highway Scoring Detailed Decision-Making Process	3	SPOT Office is not certain what this topic pertains to. <u>SPOT Office would like clarification on this topic.</u>	

Topics shaded in yellow are items the SPOT Office would like clarification on

P8 Topic Clarification / Confirmation

Topic	Number of Sessions	SPOT Office Understanding	Additional Notes
Air quality / environmental impacts	4	Examine how to incorporate air quality impacts into Highway scoring. This may need to take a multi-cycle view.	SPOT Office believes this discussion should begin with if this is possible given the legislation. Next, is something that should be incorporated before moving on to potential solutions.
Topic gathering for P9	1	Gathering of potential topics for P9	
Ongoing subcommittees	1	Identification of ongoing subcommittees between the P8 and P9 WG cycles	
Plus / Delta	1	Review of what went well in WG and what can be improved for P9 WG	

Topics shaded in yellow are items the SPOT Office would like clarification on

Potential P8 Subcommittees

- Transit Subcommittee recommended by SPOT to discuss remaining topics from P7 subcommittee and any other changes
- Topics identified based on Workgroup member feedback during topic gathering include:
 - Accessibility/Connectivity Subcommittee to discuss potential changes to the Accessibility/Connectivity Highway criteria
 - Highway Modernization Scoring Subcommittee to review scoring of Modernization projects
 - TDI Subcommittee to dig into the data and potential scoring updates in more depth
- Are there others?
- SPOT Office would like to limit the number of committees to 4 (at most) so there is sufficient time and resources

P8 Topic Schedule Review / Updates

- Are there any changes to the P8 Topic Schedule needed?
- PDF copy was provided along with this slide deck in advance of the meeting
 - Hard copies will be provided for reference at the meeting
- Adjustments to the topic schedule can be made in the future if needed/desired
 - Note that changes in the future may require reducing or eliminating time for other subjects

Recap & Next Steps



Upcoming Meetings

#2: Virtual

Tuesday, October 22, 2024

9:30am – 12:00pm

Current topics include:

- Carryovers and Submittals
- Resiliency
- Vehicle Probe Data
- Vehicular Traffic (AADT + PADT)

#3: In-Person

Tuesday, November 12, 2024

9:30am – 3:30pm

Current topics include:

- Carryovers and Submittals
- Resiliency
- Transportation Disadvantage Index
- Vehicle Probe Data
- Vehicular Traffic (AADT + PADT)

Thank you!

