

# Scoping Process

Project Development and  
Environmental Analysis Unit



Approved:  
Version: 2.0

## Introduction

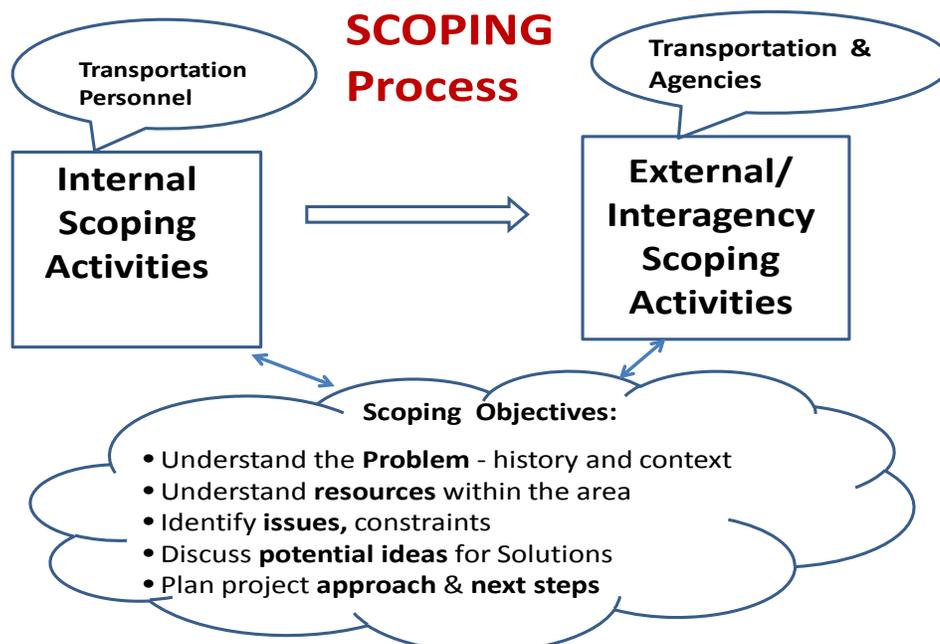
This guidance provides more detailed information about how to conduct internal and external scoping.

Scoping is a process – not a meeting or two. It is comprised of many different types of communications, coordination, approaches and activities. Meetings are a popular and often very effective approach, but they are not the only type of activity that occurs during scoping. Phone calls, emails, and discussions with individuals are also scoping activities.

But because meetings are such a common way of doing business, this guide focuses specifically on the subject matter that may be covered during scoping meetings and should be used in conjunction with the NCDOT PDEA Scoping Procedure. This guide provides advice on specific topics to consider, sources of information, questions to ask, and techniques to use when preparing for and conducting scoping meetings. The Scoping Process is flexible and should be adapted to meet individual project needs; therefore this guide is not a step by step process but rather basic topics to explore during scoping to assess the project and its particular needs. Do not limit yourself to just these topics or approaches but use them as a springboard for scoping your project.

The guidance is structured around the basic scoping process illustrated in the diagram below and includes these specific sections:

- Internal Scoping Meetings
- Activities Between Meetings
- External Scoping Meetings
- Information Sources and Data Needs for Scoping



## **Internal Scoping Meetings**

Below is an outline of the general agenda topics for an Internal Scoping meeting. The agenda topics essentially mirror the Scoping Objectives listed in the above diagram under Scoping Approach and should be coordinated and finalized between the Project Development Engineer (PDE), Transportation Planning Branch (TPB), MPO/RPO, and the NCDOT Division as stated in the Scoping Procedure. Following each topic are examples of the type of information that should be covered and questions to address. Refer to the Scoping Process Procedure for information on attendees, steps to follow, sample agendas, and project information to send in advance.

### **Discussion Topics**

#### **I. Orientation to the Project Problem, its History and Context**

The main point is to examine known information and ask questions about the problem and its origin to fully understand what the problem is, what is causing it, and the context or setting of the problem. You are essentially “telling the story” of the transportation problem and the project it is to become.

##### Topics to Cover:

1. Introduce and explain the problem. Review the problem statement from TPB. As part of the project prioritization and programming process, each project should at least have a basic problem statement. Cover information such as the existing transportation facilities and services, the nature of the transportation problem, where it occurs, why it occurs, its severity, duration, etc.
2. Examine the existing data from long range planning that supports and demonstrates the transportation problem. Determine whether the data is still sound and valid. Is the problem adequately defined and supported by data? If not, what type of data would be needed to help characterize and demonstrate the problem? Remember, at this stage of the process we are concerned about measuring the problem and its effects in terms of the overall “order of magnitude,” not with the exactness we will use in the latter phases of project development and design. See the Information Sources and Data Needs for Scoping section at the end of this guidance for additional thoughts on using data.
3. Explain the context or setting where the problem/project resides by reviewing information about human and natural environment gleaned from long range planning information, GIS level data and previous projects. The amount of information available may vary from project to project but could include topics such as:
  - Applicable planning documents (Comprehensive Transportation Plan, Thoroughfare Plans, Long-Range Transportation Plans) their status and update schedule. The local community’s objectives and goals as related to the transportation needs reflected in this project
  - Natural and Human Environment issues considered during plan development
  - Extent of public involvement and level of participation
  - Local issues that arose during plan development (positive/negative)
  - Local land use and land development information used in plan development
  - Unique characteristics of local area/project vicinity
  - Air quality information/status
  - History of past measures taken to address the transportation problem (Division and MPO/RPO are excellent resources for this topic)
  - Any other projects (on-going or planned) in the vicinity that the group should be aware of

4. Summarize the alternatives that were considered during the CTP/LRTP process, their pros and cons, why alternatives were eliminated, and why the recommended was chosen. Also include the study area used in the plan.
5. Discuss the project limits in the context of logical termini and independent utility. Establish what the physical or geographical scope of the project would be.
6. Solicit questions and comments about the purpose and need of the project. Assess if there are major questions and concerns about the existence of a transportation problem.

#### Sample Questions for Discussion:

- Where is the project located and what project limits have been identified?
- Based on the project's location and proposed extent, are the termini logical? Is this a "stand alone" project with independent utility?
- Is the problem well defined in the problem statement or is it vague? Is the problem stated more as a solution and not a need?
- What is generating the problem? Is there sufficient supporting data from the CTP? If not, what data is needed to support and demonstrate the magnitude of the problem?
- Who is recommending the project and are such entities as the MPO/RPO and other local officials in agreement that there is a valid problem? If the project encompasses several counties or local governments, is everyone on the same page or is there varying points of view and support for the project?
- Is the project included and accurately described in the CTP or LRTP? In the TIP and the STIP? Is it included in the current travel demand model for the area, especially if it is in a non-attainment or maintenance area? Note the scope of the project included in the LRTP and its horizon year. Make everyone aware that if the project scope, termini, and/or horizon year changes from what is in the LRTP and/or TIP and the STIP, then there could be implications involving transportation conformity (air quality).
- What are the basic community characteristics such as possible areas of Environmental Justice compliance, community assets, schools, cemeteries, etc.
- What natural resources are present which may be involved in the project?
- Is there a feasibility study? How does this report define the problem?
- Is the public supportive of the project?
- What is the overall schedule and funding/programming for the project?

## **II. Understand Resources in Area and Identify Issues, Constraints, Questions**

Defining the significant issues allows for better utilization of everyone's time since it will be easy to identify when the project team is placing too much time and effort on an issue that, in the end, will not make a difference in the final decision. It also assists with meeting facilitation so that meetings are spent on the major decision-driving issues and not in long discussions on less important issues.

As part of the discussion on the orientation to the project problem (topic 1), the group should already have a sense of the overall characteristics of the project's setting and involved resources. Now it is time to give each participant an opportunity to provide input relative to specific resources or topics. It may be helpful to go around the room and allow each representative at the meeting to discuss any known or anticipated issues, past experiences, or point out where data or information gaps exist. In this discussion, you should determine if the data supporting the issues (likely to be GIS-based data) are complete and valid or if more research may be needed and why. Results of this part of the meeting will feed into determining the next steps and actions for the project, so be sure to record key input, questions and possible actions as the discussion progresses.

### Topics to Cover

1. Pedestrian traffic and facilities (existing, recommended, and accommodations during construction). Reference Evaluating Temporary Pedestrian Accommodations During Construction for guidance.
2. Known natural and human resources in the area (e.g. Threatened and Endangered Species, Historic Properties, potential EJ community, FEMA floodplains, wetlands, etc.)
3. Known GeoEnvironmental issues and Geotechnical issues
4. Projects planned or underway in proximity of the project
5. Status and condition of existing structures (if applicable)
6. Whether or not the facility is identified as a Strategic Highway Corridor
7. Whether or not the facility is part of Congressional mandate (e.g. ADHS, I-73, I-74)
8. Potential engineering design constraints
9. Potential issues or concerns with constructability, traffic management, detours
10. Potential railroad involvement
11. Key people or groups that should be involved in the project development process, especially other federal agencies with specialized jurisdiction or authority
12. Public involvement: what should be conducted and timeframes?
13. Will the project be placed in the Merger Process? This may not be able to be determined until the External Scoping Meeting is held with resource agencies.
14. Class of action or documentation (EIS, EA, etc.)? Federal or state?
15. Potential issues or concerns related to the project's funding
16. Potential issues or concerns related to the project's schedule.

### Sample Questions for Discussion:

- What issues will play a major role in decision making?
- What issues need to be addressed to show compliance, but are not major players?
- What are other red flags and potentially high cost items?
- Will constructability play a factor in the solution that is chosen?
- What issues are not significant?
- Ask participants, "What are the top 2-3 issues that will play a major role in the development of this project?"
- If data about an issue is lacking and people think more data is needed, ask about the exact type of data that is needed, how it would be used, and why it is needed or how it might help. Make sure the data will be "value added" or useful before deciding to collect it.

### **III. Discuss Ideas for Potential Solutions**

Once there is a clear understanding of the problem and the constraints and issues have been identified based on existing data, then start looking at potential solutions. Start with the alternatives scenario analysis from long range planning and/or the feasibility study for the project if they are available and proceed from there. Reviewing these reports will also give the team a feel for the depth of analysis already performed in the study. We have the potential to save time by using these basic alignments to begin early coordination with the resource agencies.

### Topics to Cover:

1. The solutions the Division or local government has already tried. Knowing this information and documenting it demonstrates to the resource agencies that we have worked to use inexpensive, low impact solutions, but they are no longer adequate.

2. The solutions that were analyzed during the CTP process or feasibility study that are not recommended and why they were not recommended.
3. The Long Rang Plan recommended alternative and why it was recommended.
4. Any other potential solutions that have not been suggested. The PDE and Design representatives may have some ideas to bring to the meeting. The group could also brainstorm potential solutions so be ready with a map that can be marked up as the discussion progresses. Remember, the goal of this meeting is not for it to be stiff and formal, but generate meaningful discussion about the project given what we know.
5. Identify the criteria that will be important to use to evaluate the alternatives as the project progresses. Obviously alternatives need to meet the project's Purpose and Need, but use the group's discussion on the project areas key resources and significant issues to identify other criteria that would be used to assess and evaluate alternatives.
6. Identify if any additional data (e.g. traffic-related, resource specific, etc.) may be needed to help evaluate potential alternatives and/or assist with future design work. Specify *what* data, *why* it is needed or *how* it would be used, and *when* it would be needed. You need to understand what exactly is needed, how you would use it, and how it would help make project decisions before deciding to collect the data.

Sample Questions for Discussion:

- Are we ready to talk about potential solutions now? How much time should we spend on it? Is the project problem/purpose and need developed and supported enough such that we are ready to discuss potential alternatives?
- What are the apparent advantages and disadvantages of the options we are considering?
- How confident do we feel about these options?
- How early should design work start? Would it be more efficient to first get input from resource agencies during external scoping before investing time in designs?
- What criteria or factors should we use to evaluate this project's alternatives and help us as we work towards identifying a preferred alternative? What data and information will most help us evaluate the alternatives?
- How do the local communities feel about the potential solutions?
- What "improve existing facility" alternatives should be considered?

**IV. Plan Project Approach, Next Steps, and Actions**

Once the project has been adequately scoped, the results of discussions and meetings can be used to define or refine the project schedule, the immediate next steps and actions, and the overall approach or strategy for the project.

Topics to Cover:

1. Discuss the overall project schedule. As the next steps are determined, consider how the timeline for those actions affect or fit into the overall project schedule.
2. Identify the key issues and determinations that have resulted from the meeting and lay out the next steps. Finalize the next steps for each of the units with due dates.

3. Based on the meeting discussion, summarize whether, at this point, we think the project should or should not be in Merger and why. Identify actions and timeframes to involve the USACE and NCDENR in determining the project's merger status.
4. Based on the discussion determine a target date for the External Scoping Meeting and identify the overall range of agency participants who should be included in the meeting.
5. Discuss the overall nature of the External Scoping Meeting – will it be strictly scoping or is this particular project a good candidate for discussing Purpose and Need with the potential of securing concurrence on CP1?
6. Identify any threats or challenges to meeting the project schedule. How should they be addressed?
7. Determine if, based on potential issues, there are any units present at the Internal Scoping Meeting who do not need to attend the External Scoping Meeting.
8. Identify and assign action items for the External Scoping Meeting, indicate due dates.

Sample Questions for Discussion:

- What opportunities exist to enhance project development and delivery to make it more effective and efficient for this project?
- What are the areas that need a greater level of effort and what areas have data that is good enough at this point in time?
- What can be done concurrently? What steps can be combined? What steps can be skipped?
- Can documents and technical reports be streamlined?
- What is the risk of moving ahead and collecting more data versus continuing to rely on existing GIS? Or, should we meet with the resource agencies first before collecting more data? What makes sense to do for this project?
- When should public involvement start? What is the risk of doing public involvement before alternatives have been fully determined (e.g. prior to CP2)?
- Who should we send a Start of Study Letter to?

**Post Meeting**

Document and send meeting minutes. The Project Development Engineer will write up a summary of the meeting outcomes and decisions. The minutes should be a concise summary of main discussion topics, decisions, and next steps. Send out a draft for all attendees to review very soon after the Internal Scoping Meeting, within 1-2 weeks of the meeting. Finalized meeting minutes should be placed in Project Store as well as key supporting documents. Email the final version to any attendees who do not work at NCDOT.

**Activities Between Internal and External Scoping**

The activities performed between the Internal and External Scoping meetings will be project dependent. However, typical activities may include:

- Preparing and sending a Start of Study letter to the NCDOT Board of Transportation member, local officials, resource agencies that NCDOT does **not normally coordinate** with, and stakeholder groups identified during the CTP process that may need to stay informed. The Project Development Engineer can identify and confirm the exact recipients of the Start of Study letter through the Internal Scoping discussions and meetings.
- Producing a draft purpose and need statement from the problem statement provided by TPB.
- Requesting the Community Characteristics Report.
- Augmenting the Environmental Features Map based on input from the Internal Scoping Meeting.
- Follow up on questions raised during the Internal Scoping Meeting as needed for the External Scoping Meeting.
- Very basic functional design work, if merited.

- Coordination with the USACE representative on such issues as the potential for the project to be in the Merger Process and whether it might be possible to achieve CP1 at the External Scoping Meeting.

## **External Scoping Meetings**

The purpose of the External Scoping Meeting mimics that of the Internal Scoping Meeting except that the makeup of the attendees includes the appropriate resource agency representatives and the key transportation staff as determined at the Internal Scoping Meeting. The results of internal scoping should heavily influence the objectives of the external scoping meeting for each specific project. This meeting should not have a large group of attendees so that discussion and brainstorming is encouraged.

The basic meeting content and flow is very similar to the internal scoping meeting. Topics and sample questions suggested for use during Internal Scoping are applicable here as well. Therefore, for each topic, always refer back to the information in the Internal Scoping Meeting section. The information below augments the Internal Scoping Meeting information.

Throughout the meeting, the PDE will need to assess whether it is feasible and a good use of time to move on to the next topic. For example, a discussion about the environmental features or potential solutions would be a waste of time if there is disagreement over whether the project is even necessary.

## **Discussion Topics**

### **I. Orientation to the Project Problem, its History and Context**

Topics to Cover:

The TPB Engineer and the appropriate Division staff will assist the PDE in presenting the transportation problem and background information just as they did for the Internal Scoping Meeting. Give attendees an opportunity to comment on the problem and/or ask questions for clarification about the problem. Silence should not be construed to mean agreement or no issues.

#### Sample of Questions for Discussion:

Refer to the sample questions under the Internal Scoping Meeting. If there is little to no discussion, ask questions such as:

1. Do you feel like the problem is clear and well defined?
2. Are there aspects of the project information that did not make sense or seems to contradict your understanding?
3. What do you think about the supporting data for the problem? Does it seem creditable to you or do you have some concerns?
4. Do you have any questions about the solutions that have been applied to date to correct the problem?

### **II. Understand Resources in Area and Identify Known Issues, Constraints, Questions**

This discussion builds upon preliminary screening that NCDOT has already summarized as part of internal scoping and provided participants in the meeting's scoping packet. You could call on each attendee individually, or you might prefer to order the discussion by topics. For example, discuss natural environment wetland and streams before moving on to T&E species, moratoriums, etc. Each meeting participant, especially representatives from the resource agencies, should be given the opportunity to discuss any known issues, concerns or questions that will affect the project. At the conclusion of this part of the meeting, engage the representatives that have not offered any information or comments. Again, silence should not be taken as an indication that there are no issues or concerns.

### Topics to Cover:

Topics should cover the range of potential issues concerning the natural, human and cultural environment, funding, constructability and post-NEPA operations, and the public's views. This input should be based on past experiences and known existing data. In this discussion, you should determine if the data and methodologies supporting the issues (likely to be GIS-based data) are complete and valid or if more research may be needed and if so, why. Results of this part of the meeting will feed into and serve to focus the next steps and actions for the project. Document the input and comments you get during the discussion.

Sample Questions for Discussion: The questions found under the Internal Scoping Meeting section are very important to ask at this meeting as well. However, be proactive about asking follow up questions and clarifying points made. If participants suggest that more data be collected, first get the group to specify *what* data, *why* it is needed or *how* it would be used, and *when* it would be needed. You need to understand what exactly is needed, how you would use it, and how it would help make project decisions before deciding to collect the data.

### **III. Discuss Ideas for Potential Solutions**

Review and discuss potential solutions to the problem(s). Be ready with a map that can be marked up as the discussion progresses. These alternatives are likely ones considered during a feasibility study, during Long Range Planning, and/or a result of internal scoping discussions. They should be identified in the scoping packet sent prior to the meeting. The group may identify additional alternative ideas during the meeting and identify the merits and drawbacks of the ideas generated thus far.

### **IV. Plan Project Approach, Next Steps, and Actions**

Based on the meeting discussion, summarize key issues and questions and identify the necessary next steps and actions for the project. Review the overall project schedule, and assign appropriate timeframes for the action items identified in the meeting. From this meeting it should be confirmed if the project will or will not follow the Merger Process (if this is not in fact confirmed going prior to external scoping). Based on this decision, the group could then strategize the next process steps and identify any opportunities for further efficiencies (e.g. hold a combined CP 2/2A meeting).

### **After Meeting**

Document and send meeting minutes! The Project Development Engineer will summarize the meeting's outcomes and decisions to include a concise synopsis of main discussion topics, decisions, and next steps. Send out a draft for all attendees to review very soon after the External Scoping Meeting, within 1-2 weeks of the meeting. Finalized meeting minutes should be placed in Project Store as well as key supporting documents. Email the meeting minutes to any non-NCDOT scoping attendees.

### **Information Sources and Data Needed for Scoping:**

Data collection during the early phases of project development can contribute to the length of time between the start of a project and holding a scoping or Purpose and Need/CP 1 meeting. In fact, data collection and analysis can require a lot of time at any point during the project development process. Therefore, it is very important to be thoughtful and strategic about what data is collected, how and when it is developed or collected, and how it will be used. We need to ensure that we spend time collecting only the data that will be of most use.

Two techniques that can help with this: (1) Asking some basic questions before we start collecting data; and (2) Maximizing the use of existing data, to include use of GIS data.

### **Questions for Planning Data Collection**

When planning for project scoping (or any subsequent meeting) it is helpful to think through the following questions:

- What decision(s) are we trying to make at any given point in the process? What question(s) are we trying to answer? This is not just about obtaining concurrence. It includes decisions or questions on scope, level of detail needed, scheduling, funding, how or when to evaluate a topic, etc.
- What data and methodologies are needed to help us make the decision(s), answer the question(s), or move forward?
- What level of accuracy does the data and methodology need to be in order to make a sound decision?
- If someone has requested data or suggested that some be collected, before agreeing to collect it, first determine: how will we use it; what will it tell us; and how will it help?

Once you have identified the decision you are trying to make, it becomes easier to focus your efforts on the data required to make that decision. It also becomes easier to identify sources of that data and how accurate or detailed it will need to be. You can ask these questions repeatedly as you go through scoping and the project development process to guide the project through the process.

### **Maximizing Use of Existing Data and GIS**

#### **A. Long Range Planning Data**

A lot of data is collected during the CTP process, but it is often not fully transferred to PDEA from TPB. As Integration of Long Range Planning and NEPA moves forward and is fully implemented, this data will be better documented and easier to retrieve. The type of information that may be available includes:

- A problem statement used for prioritization and the supporting data to show the need for the project.
- Existing and future traffic projections and capacities. (Note: Do not make a formal request for a traffic forecast until you have met with the TPB Engineer to determine what is already available from long range planning.)
- Alternatives that were studied and discarded and the reason why they were discarded.
- The CTP/LRTP alternative and the reason for the recommendation.
- Safety information if the problem is defined as a safety issue.
- Recommended typical cross sections.
- Input from the public. Specifically if the public had varying opinions about the recommendation and if there are any advocacy groups or ad hoc committees that need to continue to be coordinated with during the project development process.
- Basic community characteristics, the community's future vision, and the assets that are highly valued by the community.
- Land use planning and Indirect and Cumulative Effects screening or high level assessment.
- An Environmental Features Map showing what GIS layers were used in the CTP analysis.

## B. GIS Level Information

GIS data is another source of information that can be used early in the scoping process. There are initiatives underway to provide up to date, reliable GIS level information to assist the NEPA process and decision making.

The PDE will produce an updated Environmental Features Map using the GIS layers used in the CTP process. Obviously the layers will be more up to date depending on the age of the CTP. In using GIS level data, the PDE should note the source and the last time a layer was updated. This will also help determine how much the GIS data can be used in the process or whether there are data gaps or questions that might merit some field verification by NCDOT staff. The idea would be for any field work at this point to be minimum and more of a general screening or visual observation without conducting extensive investigation or survey. It is anticipated that GIS data should be accurate enough and provide an overall “order of magnitude” so a project team can effectively and efficiently scope a project. . However, if the PDE feels that it is worth the risk to go ahead and get more refined data, then they should do so. This possibility will probably be more prevalent on widening projects or projects with a well-defined project area and scope versus a new location project or more complex widening project. Assessing the source and validity of GIS data early will also assist the PDE while working with resource agencies during scoping when they may request additional data collection.

## C. Feasibility Studies

Feasibility studies are another source of data and information. These studies are often done separately from the CTP process and are usually requested by local governments or a single entity that would like to know the feasibility of a proposed transportation project. The feasibility study will contain a basic defined problem and purpose for the project, information on the data used to assess the project, alternatives analysis, cost estimates, and the final recommendation(s). These studies can provide helpful input and insight into the transportation problem, the potential issues and constraints, and the possible solutions.