



## Guidelines for Developing a Research Idea

**Introduction:** The Research and Development Unit works with NCDOT business units to initiate contract research that addresses issues facing North Carolina's transportation system and community. Ideas are also accepted from university and business partners as they may have novel insight or approaches to transportation related issues. Most of NCDOT's research is *applied research*: Research that is intended to solve a specific problem or set of problems. Potential projects include but are not limited to: new or revised specifications, new or revised design guides, new or updated performance or traffic models, safety studies, material testing, economic impact studies, environmental studies and revised policies.

➔ ***Most operational, policy and design areas of NCDOT are eligible for research funding.***

The Research Idea Form serves as the framework on which researchers build proposals. While preparing a Research Idea, you are strongly encouraged to communicate with NCDOT research staff and key business units at NCDOT in order to better define the topic and proposed research. **No commitment for funding can be made or should be implied from the acceptance of a Research Idea.** Research Ideas submitted by NCDOT personnel will be advertised and distributed to all eligible researchers.

➔ ***Research Ideas submitted by external researchers will not be included in a general RFP. Direct notification to the researcher will be made if a full proposal is requested.***

➔ ***Research ideas from external partners will only be considered if a verified NCDOT Champion is identified.***

Research proposals are selected on a competitive basis based on Departmental need, urgency and available funding.

**Project Duration:** Research projects typically vary in length between six (6) months and three (3) years, with two (2) years being the most common project length. Proposals generated from selected research ideas will include a researcher's best estimate of a schedule based on the complexity and needs of the proposed project. **Synthesis projects**, for which a researcher compiles knowledge and best practices to produce a guidance document typically have a maximum one (1) year duration.

## Accessing the Idea Submittal Form

Research ideas are only accepted via the online form. **This form requires external users to log-in.** The online form provides the advantage of users being able to create and edit their ideas and makes provision for the inclusion of attachments. An NCID is required and instructions for registering are provided at the link below. Notification is sent by email upon successful submittal.

If you are an NCDOT internal user, and already signed into your computer, you should be able to immediately proceed to submitting ideas.

**External users that have submitted ideas or proposals previously should still have access**, but please do not wait until the submittal deadline to check. It can take several days to grant access.



The web form for requesting access and submitting a new Research Idea (and later a proposal) can be found at the following link and is also linked from the [main Research Homepage](#).

<https://connect.ncdot.gov/projects/research/Pages/research-dev-ideas.aspx>

**Idea Submission Form**

Click the button below to submit your new idea.

**Submit New Idea**

[Research Idea Instructions](#)

**Review Your Submitted Ideas**

Click the button below to access the Research & Development site and review your submitted idea.

**Login**

Once on the Idea and Proposal page, be sure to choose the correct button to submit an idea. If you have already submitted an idea for the current research cycle, you may also Login to review and edit.

As noted above, you will need to request access to the system if you do not already have it. Instructions and links for obtaining a user ID and the [requesting access are detailed on the entire left side](#) of the Idea and Proposal page. It is important that you use and/or create a [BUSINESS NCID using the provided links](#). **Personal NCIDs will not work with NCDOT's verification system.** You may choose any ID format (initial plus last name for example)

**Research & Development**  
Ideas and NCDOT Proposals

Connect NCDOT > Projects > Research > Research & Development

**External Users - Get Access**

New External Users will need a **BUSINESS** NCID to sign in. An Individual NCID will not work properly for access to NCDOT Connect websites. Follow these steps to get your NCID and access to the Research and Development Research Idea and Proposal Submission Site. *Internal*

Individual	Request access to the State of North Carolina services
Business	Request access to the State of North Carolina services
State Employee	Currently employed or assigned to work for an agency
Local Government Employee	Currently employed or assigned to work for a North Carolina local government

**Choose BUSINESS**

This process is not automated. It may take up to two business days to completely process your request. Any errors with the NCID process will delay access to the idea form.

You will receive a notification email that your request has been received and another notification email once access has been granted or if additional information is required.

Required \*

\*Email:

\*Name:

\*Company:

\*NCID UserID:

**Before submitting an access request to the Research Unit, make sure you have logged in with your new ID and completed all security questions!** Once a BUSINESS NCID has been set-up and obtained, you may request access to the system. This may take several days and you will be notified by email when access is granted.



## **Completing the Form**

Please be concise and clear when filling out each portion of the web form. A screenshot of the form is provided below for reference. Note that you will be notified by email upon successful submittal of an idea.

**Form Type:** Please select whether you are an internal (NCDOT personnel) or an external customer (includes researchers and NCDOT business partners)

**Idea Submitter Information:** Please submit your Name, Affiliation, Phone Number, and Email Address. This information will be used in the Research and Development (R&D) database and will provide a way for R&D or a business unit to contact you.

**Title:** The title of the Research Idea should describe the idea in a few words. Concise is best but be specific.

**Problem or Issue Needing Investigation:** This field should be used to broadly outline the scope of the problem. Example questions you might ask yourself when preparing an idea: Is a new specification needed? Does a new intersection design require investigation for safety and efficiency before being placed in wide use? Is material durability in question for certain applications? Is increased knowledge in an area needed? Does a policy need revision?

When preparing the research idea, you should identify the specific problem to be addressed by the research and think about the questions of How? What? and Why?

Idea submitters should conduct a preliminary research or literature review on the topic in current periodicals and journals to see what research has already been conducted and if it meets your needs. A brief reference to a lit review is appropriate in the research idea form. One of the best sources of existing research is the TRB Database, TRID: <http://trid.trb.org/>

**Background:** Please provide a brief background statement describing events, procedures, experiences and/or processes leading up to your idea. Providing sufficient background in non-technical language (without unneeded jargon) will help reviewers understand the importance of the problem.

**Research Tasks:** This should be a basic list of what is *likely* to be required as part of this research. This does not have to be detailed but will help any reviewers and proposal responders understand your thoughts behind the problem.

**Products of the Research:** Research products are deliverables associated with the research that will be used for implementation and integration of the results into departmental processes, policies, standards, and practices. This is not simply a final report document. **Examples:** Could include manuals, protocols, improved processes, new products, new procedures, increased general practice knowledge, improved current practices, validated or improved models, developed guidelines, developed methodologies, updated design criteria, project prioritization methods, inputs for analysis systems, identification of additional resources needed, training manuals and courses, cost-benefit analyses, improved testing methods, etc.



**Benefit to the Department / Explain Anticipated Benefits:** This section includes a set of check boxes to capture the general area of benefit. In the explanation box, please provide additional details pertaining to the anticipated benefits of the research. Each customer of the research program has a different set of needs, and for this reason, each end-user and stakeholder may have a different way of evaluating the benefits of a research project. Examples of benefits include: cost or time savings for the agency or the public, efficiency improvements, improved accuracy of models or design methods, validation of a design, material or technique, etc.

**Possible IT Components:** If the suggested research has any type of IT component related to it, please describe that component here. If the research requires coordination with NCDOT's IT Department, we need to be sure that they are involved in project development from the onset.

**Implementation:** Implementation is a key component of the NCDOT research program. By describing potential implementation measures, NCDOT personnel can move research from the lab and computer screen to the field and design office. *It is not expected that a detailed implementation plan can be developed at this early stage in the research process, but research ideas should be developed with a tangible and usable identifier of success in mind.* Please describe any general concepts for implementation and designate the unit, position title and name that will oversee placing this research into practice in the Sponsor/Champion fields. Be sure to include any potential issues/barriers to project implementation.

**NCDOT Project Sponsor:** A project Sponsor/Champion is REQUIRED for all submissions. For NCDOT ideas, the Project Sponsor/Champion information may be the same as the idea submitter, but this is not always the case. Please list the person most likely to guide project results into implementation. We recommend that you have the project Sponsor / Champion review your research idea to ensure that you are on the same page. **External (university or other partner) ideas cannot be considered without a sponsor.**

**Additional Comments and Information:** Include any additional information you think is relevant to the proposal. Key information could include units and personnel that were consulted during the development of the Research Idea and any additional business units that would be involved in implementation.

**A Note on Researcher Contact with NCDOT Personnel:**

Prospective researchers are encouraged to contact NCDOT technical and business experts when developing a Research Idea. Phone calls, emails, and visits are all appropriate to better understand departmental needs, define the scope of work and gain support for a topic. However, *NCDOT cannot make any statement regarding awarding of work.* Discussions should focus on technical and practical issues. *Cost should not be discussed during the idea phase.* Proposals will be requested only after received ideas are reviewed by research technical subcommittees.

**Assistance:**

For additional information or clarification, contact any of the Research and Development staff listed below.



**For questions or comments, please contact any of the following:**

Neil Mastin	Research Manager	919-707-6661	<a href="mailto:jmastin@ncdot.gov">jmastin@ncdot.gov</a>
John Kirby	Environment and Hydraulics	919-707-6662	<a href="mailto:jkirby@ncdot.gov">jkirby@ncdot.gov</a>
Mustan Kadibhai	Pavement, Materials, Maintenance, Structures, Construction, Geotech	919-707-6667	<a href="mailto:mkadibhai@ncdot.gov">mkadibhai@ncdot.gov</a>
Curtis Bradley	Implementation, Tech Transfer, Planning and Multi-modal	919-707-6664	<a href="mailto:cbradley8@ncdot.gov">cbradley8@ncdot.gov</a>
Vacant	Mobility, Safety, Roadway Design	919-707-6663	
Lamara Williams-Jones	Research Librarian	919-707-6665	<a href="mailto:lcwilliams2@ncdot.gov">lcwilliams2@ncdot.gov</a>
Research Office		919-707-6660	<a href="mailto:research@ncdot.gov">research@ncdot.gov</a>

**Research Home Page:** <https://connect.ncdot.gov/projects/research/Pages/default.aspx>



**Online Form Screenshot for Reference – ALL SUBMITTALS MUST OCCUR VIA WEBSITE**

Select Form Type

Select Internal for NCDOT employees and External for University and others.

Date

Submission Date

Submitter Name \*

Affiliation/Division/Unit \*

Phone \*

Email \*

Research Idea Title \*

What is the problem or issue needing investigation? \*

Be specific and detailed.

Background \*

Provide supporting information about the business unit, processes and tools

Research Tasks \*

Describe specific activities that are anticipated (gathering data, structural testing, traffic analysis, etc.)

Products of the Research \*

Examples of products could include models, specifications, policies, general guidance...etc.



Explain Anticipated Benefits \*

Provide details for the benefits checked above.

Possible IT Components \*

Describe any IT products or components

Implementation \*

Discuss Implementation Ideas

Sponsor/Champion Name \*

Provide Sponsor/Champion Name

Sponsor/Champion Title \*

Provide Sponsor/Champion Position Title

Sponsor/Champion Unit \*

Provide Sponsor/Champion Unit Name

Sponsor/Champion Phone \*

Sponsor/Champion Email \*

Additional Comments and Information

Attach Files

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