

WORK AUTHORIZATION

**PLANNING/ENGINEERING CONSULTING SERVICES BY:
[CONSULTANTCY]**

**FOR:
[PROJECT NAME]**

**AT:
[AIRPORT]**

**REFERENCING:
[PROJECT GRANT AND W.B.S. NUMBER (IF KNOWN)]**

[DATE]

NOTE: CONSULTANT TO PROVIDE INFORMATION AS REQUESTED IN FAA AC 150/5100-14 (CURRENT).
NOTE: CONSULTANT TO ENSURE NCDOT GENERAL PROVISIONS & GRANT ASSURANCES ARE MET.

I. PROJECT SUMMARY

[Consultant should include a description of the intended improvements to be made, the limits of work of the project, and any circumstances that make the project unique/difficult (e.g. the relocation of an 84” storm sewer through a taxiway extension).]

[Consultant should provide justification for the project; either in a short excerpt from the Master Plan, or by providing a brief summary of what necessitated the project (e.g. Volume/Capacity, Safety, Design-life End, etc.).]

[Consultant should indicate if this project is a part of an overall development program – that is, Project 3 of a total of 4 projects that make up a runway extension program. The consultant should also reference any other grant numbers that this project will be linked to, as necessary.]

[Consultant should provide a reference to the master design contract (MDC) that the work is being performed under, and note any major deviations from that contract, if applicable.]

[Consultant should include a CAD drawing or notated aerial photo clearly showing the project area with respect to the airport layout here, or in an appendix if necessary for ease of inclusion.]

[Consultant should include the Transportation Improvement Program (TIP) estimate of the project construction cost, and an estimated aggregate program cost if part of a larger program.]

[Consultant should indicate how the project is intended to be funded, and ensure that the sponsor can afford their share of the project costs.]

II. CONSULTANT'S SCOPE OF WORK OVERVIEW

[Consultant should describe what engineer/planning phase services this contract is intended to cover (e.g. Preliminary Design Only, Design Services through Bid or Construction, etc.)]

[Consultant should state what type of fee is intended to be used (Lump Sum, NTE with backup documents, etc.). and what audited overhead multiplier will be used for the project.]

[Consultant should include a breakdown of all subconsultant's intended scope of work in Appendix C, and attach copies of subsequent fee estimates to the man-hour fee estimate.]

[Describe any known omissions to the engineering scope (e.g. Only completing up to 30% Design level in support of NEPA documents).]

III. DESIGN CRITERIA AND REQUIREMENTS

[This section would be used to reference the appropriate Advisory Circulars and any other local/state/federal design standards that would be used to complete the design effort while noting any possible deviations from standard design criteria.]

TRUNCATED EXAMPLES:

- *Federal Aviation Regulation Part 77 Surfaces*
- *ADO Generated "Airport Sponsor Grant Expectations"*
- *FAA AC 150/5300-13X; Airport Design*
- *FAA AC 150/5320-6X; Airport Pavement Design and Evaluation*
- *FAA AC 150/5340-1X; Standards for Airport Markings*
- *FAA AC 150/5370-2X; Operational Safety On Airports During Construction*
- *FAA AC 150/5370-10X; Standards for Specifying Construction of Airports*

X – Indicate latest version at time of contract, in case of update to design standard during the design effort.

IV. WORK TASKS

[Consultant should provide information on the aspects of each phase of the project, including each deliverable (e.g. Preliminary Design Report, 60% Design Review Plans, Construction Documents Phase, Bidding Services, Construction Administration, and Closeout). The consultant is encouraged to be as descriptive as possible in this area, to ensure cost alignment with the independent fee estimate to be completed for the services rendered. Each of the categories should include:

- A brief discussion of each milestone/submittal efforts,
- A summary of submittal deliverables,

[CONSULTANT NAME] SCOPE OF WORK

CONTRACT FOR [PLANNING / DESIGN / BID / CONSTRUCTION ADMINISTRATION] PHASE SERVICES
[PROJECT NAME] [PROJECT GRANT NUMBER]

- An anticipated sheet list anticipated for each submittal (see Appendix A),
- A summary of specifications & reports (engineer's report, boring results) for each submittal,
- A description of items that are considerable portions of this phase's effort (e.g. describe survey and boring efforts during the preliminary design phase),
- A summary of review meetings/coordination to be completed with necessary stakeholders,
- A copy of subconsultant's contract/scoping letter (not executed) so scope can be evaluated,
- A description of the work within each task for the subconsultant(s),
- A description of the quality control measures to be taken throughout each phase,
- A description of close-out work to be completed, including delivery of CAD as-builts, and
- Call out any deviations from the master design contract that are minor in nature.]

TRUNCATED WORK TASK EXAMPLE:

DESIGN PHASE SUBMITTAL (60%):

The preliminary design phase is intended to identify and evaluate design alternatives in order to assure cost effective and practical solutions are identified for the overall project scope. The engineer will complete an evaluation of alternatives through contact with the client, the local authorities/stakeholders and previous design experience on similar projects.

The intended deliverables for this submittal shall include:

- A. *Draft Engineering Report*
- B. *Estimated cost of construction with 15% contingency*
- C. *List of general conditions, special provisions and technical specifications intended for bidding*
- D. *Preliminary plans including:*
 - 1. *Cover Sheet and Legend/Notes Plans*
 - 2. *Existing Conditions and Demolition Plans*
 - 3. *Layout Plan*
 - 4. *Grading/Drainage Plan*
 - 5. *Paving Plan*
 - 6. *Pavement Typical Sections*
 - 7. *Drainage and Erosion Control Details*
- E. *The topographic survey and boring investigation will be complete by this time, and summaries will be provided as appendices to the Engineer's Report. The survey will be incorporated into the drawings by the 60% submittal.*
- F. *Coordination and Review Meetings: The consultant shall engage in a 60% design review with the airport representatives AND the state/federal agency providing the funding for the project approximately 1-2 weeks after submission of the Design Phase Submittal Deliverables.*
- G. *Any other information deemed germane to the submittal.*

Note: If referencing a portion of the master design contract in the work summary, the consultant should attach only the relevant pages of that master contract as an appendix to this document. For example, if the master contract contains verbiage pertaining to the Resident Project Representative (RPR), and modifications to the master contract for RPR work are needed only for this project, then the consultant would attach the pages that would be affected for reference.

V. PROJECT SCHEDULE

[Consultant should provide a rough design schedule with phase durations, considering review times for airports, stakeholders, and state/federal agencies, while noting any time restrictions anticipated, and a contract end date.]

TRUNCATED EXAMPLE:

Survey and Geotechnical Engineering Report	__ Days	(XX/XX/14)
Design Phase Submittal (60%)	__ Days	(XX/XX/14)
Client Review and Comments	__ Days	(XX/XX/14)
Construction Drawing Submittal (100%)	__ Days	(XX/XX/14)
Client Review and Comments	__ Days	(XX/XX/15)
Bid Documents	__ Days	(XX/XX/15)
Total from NTP to Bid Advertisement	__ Days	

VI. GENERAL ASSUMPTIONS AND CLARIFICATIONS

[Consultant should provide a list of general assumptions and clarifications forming the basis of the scope of services detailed herein. It is noted that any future change to the general assumptions could constitute a change in the project scope and may result in a need to revise the fee estimate.]

VII. EXPENSES/RESIDENT PROJECT REPRESENTATIVE (RPR)

[Consultant should include any information about expenses, while noting that lodging, meals, and per diems are allowed at the state or federal rate depending on who the majority grantor is of the funds. State rates can be found at: <https://connect.ncdot.gov/projects/Roadway/Private%20Engineering%20Firm%20Resources/Maximum%20Allowable%20Non-Salary%20Direct%20Costs.pdf> Federal rates can be found at: <HTTP://WWW.GSA.GOV/PORTAL/CATEGORY/100120>]

[RPR work will be completed on an hourly not-to-exceed cost. Further, the actual rate the RPR is paid – not the company billing rate for that staff – shall be clearly disclosed in the subsequent fee estimate.]

VIII. OTHER

[Consultant should include any other information relevant to the project in this space (e.g. MBE/WBE involvement and thresholds) with each under its own heading, as necessary, for clarity.]

IX. CONTACT/CLOSING

[Consultant should provide contact information for their project manager, and sign the document.]

APPENDIX A: EXAMPLE DRAWING SHEET LIST (DEPENDING ON NEED)

Cover Sheet
Drawing Index Sheets
Summary of Quantity Sheets
General Notes Sheets
Overall Site Plan
Construction Control Plan
Construction Safety Plan
Construction Phasing Plans
Horizontal Control Sheet
Soil Boring Location Plans
Demolition Plan Sheets
Typical Sections
Geometry Plans
Runway Profile Sheet
Taxiway Profile Sheets
Pavement Sections
Pavement Joint Layout Plans
Joint Details
Detailed Pavement Elevation Plans
Grading Plans
Grading Details
Drainage Plans
Pipe and Ditch Profiles
Drainage Details
Erosion Control Plans
Erosion Control Details
Utility Plans
Underdrain Plans
Underdrain Details
Pavement Marking Plans
Pavement Marking Details
Airfield Lighting and Signage Plans
Circuitry Plans and Schematics
Airfield Signage Schedule
Airfield Electrical Ductbank and Vault Plan
Airfield Lighting Details
Airfield Signage Details
Miscellaneous Electrical Details

APPENDIX B: CONTRACT CHECKLIST FROM FAA ADVISORY CIRCULAR 15/5100-14X

The following checklist identifies important items and provisions to be considered in preparing any contract for consultant services. It is not intended to be all-inclusive, as each contract will vary based on the unique requirements of the project scope of services, but should be reviewed by the consultant and sponsor to ensure the general intent and content of the scoping document are fully developed.

- a. Effective date of contract.
- b. Names and descriptions of the parties to the agreement with their addresses and, in the case of a corporate body, the legal description of the corporation.
- c. Nature, extent, and character of the project, the location thereof, and the time limitations.
- d. Services, including performance and delivery schedules, to be rendered by the consultant.
- e. Delineation of responsibilities of the consultant, the sponsor, and other consultants and parties involved in the performance of the project, particularly key personnel such as the project manager.
- f. Delineation of the duties and responsibilities of the resident engineer/inspector.
- g. Inclusion of mandatory contract provisions identified in paragraph 3-4 (of the Advisory Circular).
- h. Provision for renegotiation of the contract on the basis of change in the scope of the project, changes in conditions, additional work, etc.
- i. Provision that reproducible copies of planning and design drawings and specifications be made available to the sponsor upon request.
- j. Compensation, including methods of payment and payment schedules, for services to be rendered by consultants.
- k. Provision for the termination of the consultant services before completion of work.
- l. Provision for preparation of a Quality Control Plan as required by the special provisions of the grant agreement.
- m. Provision for preparation of an Engineer's Design Report and Final Report.

APPENDIX C: SUB-CONSULTANT SCOPE OF WORK CONTRACTS (on new page)