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December 20, 2024

Ryan Adams
Airport Director
Denton Enterprise Airport (DTO)
5000 Airport Road
Denton, TX 76207

Re: Denton Enterprise Airport (DTO)
DTO Drainage Study
Professional Services Proposal *(Revision 1)*

Dear Mr. Adams,

Garver is pleased to submit this proposal to provide professional services relating to the improvements listed in "Exhibit A - Scope of Services" for the referenced project.

COMPENSATION

For the DTO Drainage Study, the not-to-exceed fee of **$70,000.00** is based upon the scope of services provided in Exhibit A. A detailed breakdown of the proposed fee for the engineering services is included in Exhibit B. The area of study can be found within Exhibit C.

	FEE AMOUNT	**FEE TYPE**
Title I Services		
Drainage Study	$70,000.00	LUMP SUM
Subtotal (Title I Services)	**$ 70,000.00**	
Total	**$70,000.00**	

Garver is pleased to have this opportunity to submit this proposal, and we look forward to working with you on this project. If you have any questions or would like any additional information, please feel free to call me at 214-619-9023.

Sincerely,
GARVER

Mitchell McAnally, PMP, PE
Senior Project Manager

Attachments: Exhibit A – Scope of Services
Exhibit B – Garver Fee Spreadsheet
Exhibit C – Area of Study

EXHIBIT A
(SCOPE OF SERVICES)

Generally, the Scope of Services includes the following professional services for the Drainage Study at the Denton Enterprise Airport (DTO) with the study limits shown on the attached exhibit and stated in Section 2.4. The Drainage Study will be conducted as shown in the attached Exhibit C.

- Project Administration
- Drainage Study

1. PROJECT ADMINISTRATION

1.1. Garver will serve as the Owner's representative for the project and furnish consultation and advice to the Owner during the performance of this service. Garver will attend conferences alone or with Owner's representatives, local officials, state and federal agencies, and others regarding the scope of the proposed project, its general design, functions, and impacts.

2. DRAINAGE STUDY

Conduct a planning level Downstream Assessment based on guidance from the City of Denton Exhibit A Stormwater Design Criteria Manual, dated October 2024, and the North Central Texas Council of Governments (NCTCOG) integrated Stormwater Management *(i*SWM) Technical Manual, latest edition. The Downstream Assessment shall consider the current master development plan for the Denton Enterprise Airport (DTO) property and assume "full build out" developed conditions.

2.1. Garver will perform a data collection and data gathering task to obtain the following readily available and accessible information:

2.1.1. Garver will prepare a FIS data request for the effective technical and administrative support documentation for Dry Fork Hickory Creek and Hickory Creek within the project approximate project limits. Garver will submit the data request and payment to the FEMA Engineering Library electronically by email to FEMA-EngineeringLibrary@fema.dhs.gov.

2.1.2. Obtain existing as-built plans and drainage design data, including hydrologic and hydraulic model(s), and master development plan for the DTO property.

2.1.3. Obtain publicly available GIS data, lidar topographic data, aerial photography, and NRCS SSURGO digital soils data for portions of Dry Fork Hickory Creek and Hickory Creek watersheds.

2.1.4. Submit a data request to the City of Denton for any hydrologic and hydraulic models within the study area, FEMA effective FIS technical and administrative support documentation for Dry Fork Hickory Creek and Hickory Creek watersheds.

2.2. Garver will develop hydrologic models for the Downstream Assessments of Dry Fork Hickory Creek and Hickory Creek since portions of the airport property drain into both watersheds. The USACE HEC-HMS software will utilize the SCS Unit Hydrograph Method to estimate peak discharges for the 1-, 25-, and 100-year, 24-hour storm events. Modeling methodology and parameters will be selected in accordance with standard engineering practice and Owner standards. Modeling parameters, such as areas, slopes, drainage paths, distances, etc. will be obtained from publicly available Lidar, surveys, planimetric contour maps, and aerial photos.

2.2.1. Hydrologic analysis of the pre- and post-development on-site conditions based on the current airport master development plan.

2.2.2. Offsite undeveloped areas will be considered as "full build-out" for both the pre- and post-development analyses based on the City of Denton's future land use map and/or master development plan.

2.2.3. The Downstream Assessment will evaluate streambank protection and flood mitigation storm events. Since this is a planning level study, the conveyance storm will only include the evaluation of the outlet discharges and will not include a detailed analysis of the individual on-site sub-basins and improvements needed for the full build-out (i.e., streets, sidewalks, inlets, storm drain pipe systems, etc.) to convey the on-site runoff to the drainage basin outlet(s).

2.3. Garver will review the effective hydraulic models, if available, from the FEMA FIS data request. If the models are provided in a usable electronic file format, and Garver determines the models to be adequate to represent current existing conditions, Gaver will utilize the FEMA effective hydraulic model has the bases of the Downstream Assessment.

2.4. If the FEMA effective hydraulic models are not provided in a usable electronic file format, Garver will develop hydraulic models for the Downstream Assessment of Dry Fork Hickory Creek and Hickory Creek. The USACE HEC-RAS software will be used to develop unsteady-flow one-dimensional hydraulic models to evaluate water surface elevations and velocities along the stream reach.

2.4.1. The limits of the hydraulic modeling for Dry Fork Hickory Creek will begin at FEMA cross section "B" and continue upstream to FEMA cross section "J".

2.4.2. The limits of the hydraulic modeling for Hickory Creek will begin at FEMA cross section "F" and continue upstream to FEMA cross section "J".

2.5. If the result of the Downstream Assessment determines that stormwater detention is required for the "full build-out" of the DTO property, Garver will estimate the storage volume required to mitigate the increased peak discharges due to proposed site development leaving the site in accordance with the City of Denton Exhibit A Stormwater Design Criteria Manual, dated October 2024. This will include conceptual level planning and design only and shall not include the detailed design of a stormwater detention facility.

2.6. Garver will develop a brief drainage analysis and this information will be included in the final engineer's report. The drainage analysis report will include the following:

- Pre-development drainage methodology and results
- Conceptual planning level post-development drainage methodology and results
- Planning level drainage recommendations

3. DESIGN SERVICES

3.1. General: Garver will prepare detailed drainage study for the Denton Enterprise Airport (DTO). These designs shall conform to the standards of practice ordinarily used by members of Garver's profession practicing under similar conditions and shall be submitted to the City of Denton from which approval must be obtained.

3.2. Owner / Agency Coordination: Garver's project manager and/or design team will coordinate with the Owner as necessary to coordinate design decisions, site visits, document procurement, or other design needs.

3.3. Project Management Plan / Quality Control Procedures

5.3.1 Garver will develop a project specific project management plan. The project management plan will include the project background, scope of work, stakeholder contact information, project team organization and roles, design criteria, project schedule, deliverables, and quality control procedures.

5.3.2 Garver will complete quality control reviews for each deliverable prior to any design submission to Owner and/or FAA. Quality control reviews will be completed by qualified project managers, project engineers, and/or senior construction observers who are experienced in the relevant discipline and design elements under review. Weekly internal progress meetings will be held during all design phases to ensure adequate quality control throughout the design phases.

4. PROJECT DELIVERABLES

4.1. The following deliverables will be submitted to the parties identified below. Unless otherwise noted below, all deliverables shall be electronic.

- PDF Drainage Study Report describing the findings of the planning level analyses to the City of Denton and Denton Enterprise Airport (DTO)
    - One hard copy
- Other electronic files as requested.

5. ADDITIONAL SERVICES

5.1. The following items are not included under this agreement but will be considered as additional services to be added under Amendment if requested by the Owner.

- Redesign for the Owner's convenience or due to changed conditions after previous alternate direction and/or approval.
- Deliverables beyond those listed herein.
- Engineering, architectural, or other professional services beyond those listed herein.
- Preparation of a Storm Water Pollution Prevention Plan (SWPPP). The construction contract documents will require the Contractor to prepare, maintain, and submit a SWPPP to DEQ.
- Construction Administration Services, On-Site Construction Observation, and/or Construction Materials Testing.
- Environmental Handling and Documentation, including wetlands identification or mitigation plans or other work related to environmentally or historically (culturally) significant items.
- Coordination with FEMA and preparation/submittal of a CLOMR and/or LOMR.
- Services after construction, such as warranty follow-up, operations support, and Part 139 inspection support.

6. SCHEDULE

6.1. Garver shall begin work under this Agreement within ten (10) days of execution of this Agreement and shall complete the work in accordance with the schedule below:

Design Phase	Calendar Months
Drainage Study Report	4 Months from the receipt of Client furnished as-builts and/or FEMA Effective model, whichever is latest

Exhibit B

Denton Enterprise Airport (DTO)
DTO Drainage Study

DRAINAGE STUDY

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	AM-2
	$316.00	$257.00	$211.00	$180.00	$157.00	$135.00	$100.00
	hr	hr	hr	hr	hr	hr	hr
1. Project Management							
Administration and Internal Coordination	10		16		8		
Review meeting (virtual)			2		2		
Subtotal - Project Management	**10**	**0**	**18**	**0**	**10**	**0**	**0**
2. Data Collection and Gathering							
FEMA FIS data request					2		
DTO data request			2				
Online GIS data collection					2	2	
City of Denton data request			2				
Subtotal - Data Collection and Gathering	**0**	**0**	**4**	**0**	**4**	**2**	**0**
3. Hydrologic Analyses							
Pre-Development (Existing) Conditions							
Review/evaluate as-built data			2		2		
Lidar surface processing and preparation					1	2	
GIS base map preparation					2	2	
Delineate watershed and subbasin boundaries					2	4	
Develop land use and CN polygons					4	8	
Determine time of concentration/lag times					2	8	
Develop HEC-HMS model					2	8	
Execute and revise HEC-HMS model					2	4	
Extract model results and format data					1	2	
QA/QC and revisions			4		4	8	
Post-Development (Proposed) Conditions							
Develop land use and CN polygons					2	8	
Delineate watershed and subbasin boundaries					2	4	
Determine time of concentration/lag times					2	8	
Develop HEC-HMS model					2	8	
Execute and revise HEC-HMS model					2	4	
Extract model results and format data					1	2	
QA/QC and revisions			4		4	8	
Subtotal - Hydrologic Analyses	**0**	**0**	**10**	**0**	**37**	**88**	**0**
4. Hydraulic Analyses							
Dry Fork Hickory Creek HEC-RAS Model							
Develop base mapping					2	4	
Develop cross section geometry (15 sections)					8	24	
Develop roadway geometry (4 crossings)					2	4	
Develop pre-development flow data						2	
Execute and revise pre-development plan			4			12	
Develop post-development flow data						2	
Execute and revise post-development plan			2			8	
Hickory Creek HEC-RAS Model							
Develop base mapping					2	4	
Develop cross section geometry (8 sections)					4	16	
Develop roadway geometry (1 crossing)					1	2	
Develop pre-development flow data						2	

Execute and revise pre-development plan			4			8	
Develop post-development flow data						2	
Execute and revise post-development plan			2			4	
QA/QC and revisions			12		8	8	
Subtotal - Hydraulic Analyses	**0**	**0**	**24**	**0**	**27**	**102**	**0**
5. Stormwater Detention Analyses							
Estimate basin size					10	20	
Develop HEC-HMS model parameters			4		4	8	
Execute and revise HEC-HMS model parameters					2	4	
Extract model results and format data					2	4	
QA/QC and revisions			4				
Subtotal - Stormwater Detention Analyses	**0**	**0**	**8**	**0**	**18**	**36**	**0**
6. Drainage Report							
Prepare drainage report					12	16	
QA/QC and revisions			4		4	8	
Subtotal - Drainage Report	**0**	**0**	**4**	**0**	**16**	**24**	**0**
Hours	**10**	**0**	**68**	**0**	**112**	**252**	**0**

SUBTOTAL - SALARIES:		**$69,112.00**
DIRECT NON-LABOR EXPENSES		
Document Printing/Reproduction/Assembly	$210.00	
Postage/Freight/Courier	$108.00	
FEMA FIS Data Request	$400.00	
Travel Costs	$170.00	
SUBTOTAL - DIRECT NON-LABOR EXPENSES:		**$888.00**
SUBTOTAL:		**$70,000.00**
SUBCONSULTANTS FEE:		**$0.00**
TOTAL FEE:		**$70,000.00**