Project Grant Application

Name	City of McKinney Texas
Federal Tax I.D.	75-6000599
Incorporation Date	03-29-1849
Mailing Address	222 N. Tennessee St., McKinney, TX, 75069
Phone Number	(972) 547-7527
Email	bshelton@mckinneytexas.org
Website	mckinneytexas.org
Please provide a detailed narrative about your organization including years established, mission, goals, scope of services, successes, contribution to community, etc.	The City Council of the City of McKinney has adopted a resolution directing staff to approach both the MCDC and the MEDC to request grant funding to proceed with the designing of the necessary infrastructure on the eastside of McKinney National Airport (TKI). TKI is a growing general aviation airport that is rapidly running out of readily developable properties on the west side of the runway. The airport has a significant annual economic impact, measure to be $217 million in 2018, and provides for job creation and corporate tenant expansion in the city.
Organization Type	Governmental Agency
Name	Barry Shelton
Title	Assistant City Manager
Mailing Address	222 N. Tennessee St., McKinney, TX, 75069
Phone Number	(972) 547-7527
Email Address	bshelton@mckinneytexas.org
Name	Barry Shelton
Title	Assistant City Manager

Mailing Address	222 N. Tennessee St., McKinney, TX, 75069
Phone Number	(972) 547-7527
Email Address	bshelton@mckinneytexas.org
Are you the property owner?	Yes
Funding - Total Amount Requested	3,607,030
Are matching funds available?	No
Will funding be requested from any other City of McKinney entity (e.g. TIRZ Grant, City of McKinney 380, CDBG Grant)?	Yes
Provide name of City of McKinney entity funding source and amount.	A companion request is being made to the MEDC for $1,781,000 for this planning and design project.
Have you received or will funding be requested from other organizations / foundations for this project?	No
Has a request for grant funding been submitted to MCDC in the past five years?	No
Board of Directors	McKinney City Councilmembers include: Mayor George Fuller Mayor Pro Tem Charlie Philips Gere Feltus Justin Beller Michael Jones Rick Franklin Patrick Cloutier

Leadership Staff	City Manager Paul Grimes Assistant City Manager Barry Shelton Airport Director Ken Carley
Project / Business Name	McKinney National Airport
Location of Project	1508 Industrial Blvd
Physical Address	1508 Industrial Blvd, McKinney, Texas, 75069
Property Size (in acres)	147.612
Collin CAD Property ID	2775664
What kind of project is proposed? (Check all that apply.)	Expansion / improvement Multi-phase project
Estimated Date of Project Start Date	07/01/2024
Estimated Date of Project Completion Date	03/01/2025
Project Details and Proposed Use	The requested funds will be used in conjunction with the MEDC grant funds to fund the planning and design of the eastside airport infrastructure. The MCDC portion of the funding will go towards the planning and design of the capital improvements that are permitted under state statute for the MCDC, but that are not permitted to be funded by the MEDC. The MCDC funded improvements include taxiways, aprons and airport facilities that may include hangars and/or terminals.
Days / Hours of Business Operation	The airport operates 24 hours a day and 365 days a year. The FBO terminal currently operates 6:00 am to 10:00 pm daily, with after hours service on request.
What is the total cost for this Project?	5,388,030
What percentage of Project funding will be provided by the applicant?	0

Are matching funds available?	No
Estimated Annual Taxable Sales	5000000
Current Appraised Value of Property	19,289,936
Estimated Appraised Value (post-improvement)	64,000,000
Estimated Construction Cost for Total Project	64,000,000
Total Estimated Cost for Project Improvements included in grant request	64,000,000
Total Grant Amount Requested	3,607,030
Attach Competitive Bids for the Project	67_TKI Eastside Development - Design Package Proposal 2023-12-08_9556.pdf
Has a feasibility study or market analysis been completed for this proposed project?	No
Attach Executive Summary	TKI Eastside Development - Design Package Proposal 2023-12-08.pdf
Current financial report including current and previous year's profit & loss statement and balance sheet.	FY2023-24 Budget Final.pdf
Budget	146_FY2023-24 Budget Final_3778.pdf
Financial Statements	9 Hearse.jpg
W9	24 img483.jpg

Business plan including mission and goals of company / organization, target customers, staff, growth goals, products / services, location(s), etc.	MEDC MCDC Design Grant Presentation.pdf
Timeline and schedule from design to completion.	155_TKI Eastside Development - Design Package Proposal 2023-12-08_1088.pdf
Plans for future expansion / growth.	The requested funds are for the planning and design of the eastside of the airport, including programming. The next phase of the project will be construction of the improvements.
We certify that all figures, facts and representations made in this application, including attachments, are true and correct to the best of our knowledge.	Selecting this option indicates your agreement with the above statement.
Representative Completing Application	
Date	03-26-2024
Property Owner	
Date	03-26-2024

3000 Internet Blvd
Suite 400
Frisco, TX 75034

TEL 972.377.7480
FAX 972.377.8380

www.GarverUSA.com

December 8, 2023

Ken Carley
McKinney National Airport
1500 Industrial Blvd, Suite 201
McKinney, TX 75069

Re: McKinney National Airport (TKI)
Eastside Development
Engineering Services Proposal

Dear Mr. Carley,

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 McKinney National Airport Eastside Development project, the lump sum not-to-exceed fee of **$4,398,000.00** is based upon the scope of services provided in Appendix A.

	FEE AMOUNT	**FEE TYPE**
Title I Services		
Landside Site Improvements (Roadway and Parking)	$1,036,000.00	LUMP SUM
Terminal Facility	$554,000.00	LUMP SUM
Taxiway C	$905,000.00	LUMP SUM
Terminal Apron	$884,000.00	LUMP SUM
FM 546 Connection	$640,000.00	LUMP SUM
Eastside Fuel Farm	$169,000.00	LUMP SUM
Commercial Service Development (NOT INCLUDED WITH THIS SUBMITTAL)	$0.00	HOURLY
Design Evolution	$210,000.00	HOURLY
Subtotal (Title I Services)	**$4,398,000.00**	
TOTAL FEE	**$4,398,000.00**	NOT-TO-EXCEED

Garver is pleased to have this opportunity to submit this proposal and 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 anytime at 214-619-9023.

Sincerely,
GARVER

Mitchell McAnally, PE, PMP
Senior Project Manager

Attachments: Exhibit A – Scope of Services
Exhibit B – Fee Summary
Exhibit C – Project Schedule
Exhibit D – Project Layout

EXHIBIT A
SCOPE OF SERVICES – SCOPE SUMMARY

Generally, the Scope of Services includes the following professional services for improvements associated with the Eastside Development at McKinney National Airport (TKI). Improvements will consist primarily of roadway development, parking lot development, terminal development, apron development, taxiway development, utility infrastructure, fuel farm development, and other associated project elements as shown in Exhibit D.

The scope of services of this project will be divided into multiple design packages. A summary of each design package is included below:

Landside Site Improvements (Roadway and Parking) – This design package will include full design development for the terminal parking lot, access road, and utility main improvements for electrical, water, sewer, telecommunications, and natural gas utilities. The following services will be included in this package:

- Surveying Services
- Geotechnical Services
- Preliminary Design
- Final Design

Terminal Facility – This design package will include full design development for the proposed 30,000 square foot prefabricated terminal structure (Sprung Structure). The terminal facility design will also include all service line utility connections to the proposed structure. The following services will be included in this package:

- Design Development (DD)
- Construction Documents (CD)

Taxiway C Construction – This design package will include full design development of Taxiway C from the proposed terminal apron to the extended Runway 36 end. This design will also include one new taxiway connector from Taxiway C to the terminal apron and a new connector to Runway 18-36. The following services will be included in this package:

- Surveying Services
- Geotechnical Services
- Preliminary Design
- Final Design
- Bidding Services

Terminal Apron Construction – This design package will include full design development of the terminal apron to accommodate five aircraft parking positions. The design also includes high mast lighting for the proposed apron. The following services will be included in this package:

- Surveying Services
- Geotechnical Services
- Preliminary Design
- Final Design
- Bidding Services

FM 546 Connection – This design package will include full design development of the proposed connection of the airport terminal loop roadway to Farm Road (FM) 546. This includes the design of a new roundabout

located at the southwest entry to the proposed terminal complex. The following services will be included in this package:

- Surveying Services
- Geotechnical Services
- Preliminary Design
- Final Design
- Bidding Services

Eastside Fuel Farm – This design package will include site design and access roadways for a proposed fuel farm located southwest of the terminal apron. The fuel farm is expected to have a capacity of 40,000 gallons of Jet A fuel. A performance specification will be developed for the procurement of the fuel system.

Commercial Service Development – Commercial service development services **ARE NOT** included in this proposal.

Design Evolution – A design evolution item is included in the proposal at 5% of the total design fee. This phase will serve to provide additional design capacity for changes in the design and scope of services through the evolution of the project. In the event of a change to the design or scope, Garver will submit a formal design evolution request, including an estimated fee for the change in design. Any changes in scope requiring fee in excess of the design evolution item will be executed through contract amendments.

Procurement Summary:

The following is a summary of the planned procurement packages associated with this project:

- Construction Manager At-Risk (CMAR)
  - Landside Site Improvements (Roadway and Parking)
  - Terminal Facility
  - Eastside Fuel Farm
- Airfield Bid Package
  - Taxiway C Construction
  - Terminal Apron Construction
- Roadway Bid Package
  - FM 546 Improvements

SCOPE OF SERVICES – LANDSIDE SITE IMPROVEMENTS

1. SURVEYING SERVICES

1.1. Design Surveys. White Hawk Engineering, as a subconsultant to Garver, will provide field survey data from field work for designing the project, and this survey will be tied to the Owner's control network. The following is a summary of the design surveying services provided under this Scope of Services. A full scope of services is included as an attachment to this scope of services.

Field surveys will be conducted utilizing radial topography methods, at intervals and for distances at and/or along the project site as appropriate for modeling the existing ground, including locations of pertinent features or improvements. Buildings and other structures, airfield pavements, streets, drainage features, airfield lights and signs, fences, trees over eight inches in diameter, visible utilities as well as those underground utilities marked by their owners and/or representatives, and any other pertinent topographic features that may be present at and/or along the project site, will be located. Control points will be established for use during construction. All surveys shall be conducted during normal working hours (8AM – 5PM).

Garver will assemble data obtained during the performance of the field surveys in an AutoCAD Civil3D base map drawing to be utilized for design of the project.

2. GEOTECHNICAL SERVICES

2.1. STL Engineers, as a subconsultant to Garver, will be responsible for obtaining, interpreting, and evaluating geotechnical data necessary for the design of this project. The following is a summary of the geotechnical services provided under this Scope of Services. A full scope of services is included as an attachment to this scope of services.

2.2. The proposed field investigation for the roadway (STL Engineers) will include drilling 16 borings to a depth of 10 feet below existing site grade, three (3) pond borings to a depth of 20 feet, and two (2) signage borings to a depth of 50 feet.

2.3. Laboratory testing will be conducted on samples obtained during the field exploration. The tests will be used to evaluate and classify the soils/rock, identify subsurface site characteristics, and provide data for analysis. Tests to be performed include Atterberg limits, grain size analyses, unconfined compression tests, uniaxial rock compressive strength tests, hydraulic conductivity tests, density-moisture relationship test, California bearing ratio tests, and other as necessary to evaluate conditions.

2.4. An engineering analysis and evaluation of the field and laboratory data will be performed for the project based on available project concepts. The report will include a summary of field investigation data and recommendations for grading, subgrade preparation, embankment design, compaction requirements, drainage, rock excavation, sign foundations, and pavement sections.

3. PRELIMINARY AND FINAL DESIGN SERVICES

3.1. Project Administration

3.1.1. 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. In support of the Owner's program, Garver will assist the Owner in preparing for, attending, documenting and, at times, leading the following meetings:

- Project Kickoff Meeting
- Monthly Progress Meetings
- Design Review Meetings
- Grant Funding Coordination Meetings

3.1.2. Garver will attend these and other meetings alone or with Owner's representatives, local officials, state and federal agencies, and others, as necessary, regarding the scope of the proposed project, its general design, functions, and impacts. Garver's project manager and/or design team will coordinate with the Owner as necessary on design decisions, site visits, document procurement, or other design needs.

3.1.3. Garver will hold weekly internal progress meetings with all design team members to coordinate design efforts, schedules, action items, and cross-discipline design items.

3.1.4. 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.

3.1.5. City of McKinney Planning Development Coordination: Garver will coordinate all necessary development approvals through the City of McKinney's Planning Department as required for non-residential development in the 2023 Development Guide. This includes the following:

- Pre-Development Meeting
- Site Plan Development
  - Initial Submission
  - Staff Coordination
  - Revisions and Resubmittals
- Development Permit

3.2. General Design Services: Garver will prepare detailed construction drawings and specifications, all based on guides furnished to Garver by the Owner and FAA, or internally developed by Garver. Contract Documents (Plans, Specifications, and Estimates) will be prepared for the award of one (1) construction manager at-risk (CMAR) contract. These designs shall conform to the standards of practice ordinarily used by members of Garver's profession practicing under similar conditions.

3.3. 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.

3.4. Quality Control Procedures

3.4.1. 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.

3.5. Airspace Analysis: Garver will prepare and submit the project to the FAA for permanent airspace clearance on the Obstruction Evaluation and Airport Airspace Analysis (OE/AAA) website and coordinate with FAA representatives.

3.6. Construction Safety and Phasing Plan / Maintenance of Traffic

3.6.1. Garver will develop a construction safety and phasing plan (CSPP) and maintenance of traffic (MOT) plan for the project. During development of the CSPP and MOT, Garver will hold a meeting with Airport staff and other stakeholders at the Airport's request to obtain feedback regarding operations during each proposed phase of construction.

3.6.2. After receiving comments from the meeting, Garver will develop a preliminary CSPP for the Owner's review prior to submission to the FAA. After incorporating Owner comments, the CSPP will be submitted to FAA for review through the OE/AAA website.

3.7. Existing Conditions Review

3.7.1. Record Document Review: Garver will review record document data from the vicinity of the construction site to evaluate existing conditions. Record document data may include record drawings, record surveys, utility maps, GIS data, and previous design reports. All information provided to Garver from the Owner will be assumed to be correct.

3.7.2. Site Visits: Garver's civil, water, wastewater, and electrical engineers will perform up to two (2) site visits to the project site to review existing conditions and evaluate survey and record document data.

3.8. Geometric Design: Garver will provide geometric design for the project in accordance with the standards provided by the City of McKinney, the AASHTO Geometric Design of Highways and Streets, and the Manual of Uniform Minimum Standards for Design (MUTCD) with proper consideration given to the design traffic volumes, design speed, capacity and levels of service, functional classification, adjacent land use, design consistency and driver expectancy, drainage features, aesthetics, pedestrian and bicycle concerns, ADA requirements, access management, and scope of work.

The design elements shall include, but not be limited to, the horizontal and vertical alignments, lane widths, shoulder widths, cross slopes, borders, sight distance, side slopes and ditches, lane transitions, superelevation, features of intersections, utility conflicts, interchanges, and limited access points.

3.9. Pavement Design: Garver will coordinate with STL Engineers, as a subconsultant to Garver, to perform pavement design analysis for roadway elements associated with the proposed project. Garver will develop estimated traffic volume levels and vehicle classification mix for use in the pavement design.

3.10. Modeling: Garver will develop preliminary vertical alignments based on the requirements of the City of McKinney and the AASHTO Geometric Design of Highways and Streets. Upon the completion of vertical alignments, assemblies will be developed based on the pavement design and corridors will be modeled for each roadway alignment. Modeling will include all surface changes from centerline of corridor to tie into existing grade for the project site. At the completion of individual corridor developments, all corridors will be combined into a final grading surface. Modeling will be an iterative process to determine the most efficient design solution.

3.11. Grading and Drainage

3.11.1. Garver will develop hydrologic and hydraulic models of the airfield drainage system within the project limits for the 1-, 2-, 5-, 10-, 25-, 50-, and 100-year storms. Autodesk Storm and Sanitary Analysis will be utilized to complete interconnected pond analysis for all drainage areas. 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 surveys, planimetric contour maps and aerial photos and verified by field investigation.

3.11.2. A pre-development model will be developed to include drainage infrastructure that is known to be functional. Damaged or non-functional drainage infrastructure will not be included in the pre-development model. Garver will also develop a post-development model to manage runoff from the project site. The post-development model may include the expansion of the existing detention areas as well as potential onsite mitigation options.

3.11.3. Garver will develop a brief drainage analysis. The drainage analysis report will include the following:

- Pre-development Drainage Methodology and Results
- Conceptual Post-development Drainage Methodology and Results
- Overall Drainage Recommendations

3.12. General Utility Design and Coordination: It is expected that the following utilities will require extension / modification as part of the project. Garver will coordinate with the Owner and applicable utility owners for utility relocation design.

- Electrical (ONCOR)
- Telecommunications (AT&T)
- Natural Gas (ATMOS)

Garver will furnish plans to all known utility owners potentially affected by the project at each stage of development. Garver shall conduct coordination meetings among all known affected utility owners to enable them to coordinate efforts for any necessary utility relocations. Garver will include the surveyed locations of the observable and marked utilities in the construction plans. Garver will also include proposed and/or relocated utility information in the construction plans as provided by the utility companies.

3.13. Roadway Lighting. Roadway lighting will be designed along the terminal loop roadway and all intersections. All lighting will be LED type. Spacing of the poles, pole foundations, and placement of conduit will be determined based on photometric analysis modeling using LED roadway fixtures. The lighting models will consider the current project's ultimate design. The design will implement single phase power. Additionally, the design will be completed using aluminum wire with infrastructure hardening methods to deter wire theft. Roadway lighting will be designed in accordance with IESNA RP-8 recommendations.

3.14. Parking Lot Lighting. Parking lot lighting will be designed throughout the parking lots. All lighting will be LED type. Spacing of the poles, pole foundations, and placement of conduit will be determined based on photometric analysis modeling using LED fixtures. The lighting models will take into account the current project's ultimate design. The design will implement single phase power. Additionally, the design will be completed using aluminum wire with infrastructure hardening methods to deter wire theft. Parking lot lighting will be designed in accordance with IESNA RP-8 recommendations.

3.15. Water and Wastewater Utility Design: Garver will coordinate water and sewer extension design with the City of McKinney Public Works Department. As part of the design, Garver will develop preliminary horizontal alignments of both water and sewer extensions. A capacity analysis will be completed in conjunction with the terminal facility architectural team to determine flow characteristics for sizing each extension. In addition, Garver will develop flow models for the waterline extension for use in fire flow calculations for the terminal facility.

Garver will meet with the City of McKinney to review preliminary drawings prior to proceeding with final design. During final design, Garver will develop vertical alignments of each extension and perform conflict analysis between both existing and proposed utilities. Garver will design all necessary manhole locations, meter locations, easement layouts, hydrant locations, and infrastructure for future extensions.

Prior to issuing construction documents, Garver will coordinate with the Texas Commission on Environmental Quality (TCEQ) for approval of all water and sewer extension construction documents.

3.16. Landscape Architecture. Garver will provide landscape architecture and irrigation design. The following is a summary of the landscape and irrigation design services associated with an area near the entrance of the terminal loop roadway, including design of a monument sign.

3.17. Parking Booths / Access Control Systems. Garver will coordinate with the Owner's designated parking lot provider to design parking booths, access control systems, and revenue collection systems to control all parking areas. The Owner's parking provider will provide details and specifications for parking booths and access control systems for Garver's use in design. Garver will provide structural, architectural, and MEP design for all parking booths and access control systems. No bathrooms will be provided in parking booths.

3.18. Plan Set Development

The following matrix details the plan drawings to be included in each design submittal.

Plan Set	Design Phase	
	Preliminary	Final
Cover Sheet	X	X
Sheet Index	X	X
General Notes	X	X
Project Layout Plan	X	X
Survey Control Plan	X	X
Construction Safety and Traffic Plans	X	X
Construction Safety and Traffic Details	X	X

Existing Conditions Plans	X	X
Erosion Control Plans	X	X
Erosion Control Details	X	X
Demolition Plans	X	X
Demolition Details	X	X
Drainage Plans	X	X
Drainage Details	X	X
Underdrain Plans	X	X
Underdrain Details	X	X
Typical Sections	X	X
Paving Plans	X	X
Paving Details	X	X
Grading Plans	X	X
Grading Details	X	X
Joint Layout Plans	X	X
Joint Details	X	X
Elevation Plans		X
Elevation Details		X
Pavement Marking Plans	X	X
Pavement Marking Details	X	X
Traffic Control and Signage Plans	X	X
Traffic Control and Signage Details	X	X
Fencing Plans	X	X
Fencing Details		X
Cross Sections		X
Electrical Notes	X	X
Lighting Installation Plans	X	X
Lighting Details	X	X
Duct Bank Profiles	X	X
Power Installation Plans	X	X
Power and Control Diagrams	X	X
Water / Sewer Notes	X	X
Water Installation Plans	X	X
Water Profiles	X	X
Water Details	X	X
Sewer Installation Plans	X	X
Sewer Profiles	X	X
Sewer Details	X	X
Parking Booth Plans	X	X
Parking Booth Details	X	X

3.19. Technical Specifications. Detailed specifications shall be developed using FAA "Standards for Specifying Construction for Airports" AC 150/5370-10 (latest edition), TxDOT Specifications, City of McKinney standard specifications, or other appropriate standards. Additional supplementary specifications will be developed for project requirements not covered by the standards above or when state or local standards are approved.

3.20. Quantities and Engineer's Opinion of Probable Cost: Garver will develop detailed quantities in PDF format for use in construction cost estimating for each design phase. Quantities will be completed by pay item. Upon the completion of quantity development, Garver will review previous cost data and market conditions and complete an Engineer's Opinion of Probable Cost.

3.21. Construction Management Plan. Garver will prepare a "Construction Management Plan" to be submitted, if required based on funding, to the Federal Aviation Administration (FAA) for approval. At a minimum, the plan shall list key construction personnel, qualifications of construction management personnel, and materials quality assurance information. If required based on funding, the plan will be reviewed by the FAA project manager.

3.22. Design Services Submission and Meeting Summary: The following design submittal phases shall be included in the fee summary. A summary of each design phase and the associated review meetings is included below.

3.22.1. Preliminary Design

3.22.1.1. Garver will develop preliminary design plans and specifications and submit these to the Owner for review. It is anticipated that the Owner will review the design submission within three (3) weeks.

3.22.1.2. At the completion of the Owner review period, Garver will meet with the Owner to review the preliminary design plans and specifications and to receive Owner comments and direction.

3.22.2. Final Design

3.22.2.1. Garver will develop final design plans and specifications and submit these to the Owner for review. It is anticipated that the Owner will review the design submission within three (3) weeks.

3.22.2.2. At the completion of the Owner review period, Garver will meet with the Owner to review the final design plans and specifications and to receive Owner comments and direction.

4. CONSTRUCTION PHASE SERVICES

4.1. Construction Administration Services – To be added via future amendment.

4.2. On-Site Construction Observation Services – To be added via future amendment.

4.3. Construction Materials Testing – To be added via future amendment.

5. PROJECT DELIVERABLES

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

- Preliminary Design Plans, Specifications, and Report to the Owner and affected Utilities.
- Final Design Plans, Specifications, and Report to the Owner and affected Utilities.
- Other electronic files as requested.

6. ADDITIONAL SERVICES

6.1. 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.
- Pavement Design beyond that furnished in the Geotechnical Report.
- Bidding Services
- Solar Canopy Design
- Landscaping beyond that required for the entrance monument and adjacent space.
- Design of any utility extension / modification / relocation beyond those included in the scope of services.
- Engineering, architectural, or other professional services beyond those listed herein.
- Structural design beyond that required for the proposed light pole foundations.
- Retaining wall design.
- LEED Implementation
- Permitting or fees associated with the permitting process for the federal, state or local requirements.
- Assistance with procurement of Aboveground Storage Tank Installation Permit from State Fire Marshal or any other Federal, State, or local permits.
- Commissioning assistance.
- 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 the City of McKinney.
- TXDOT permitting for traffic control. The City of McKinney will utilize traffic control plans to obtain all TXDOT permits.
- 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, including HEC-RAS modeling.
- Services after construction, such as warranty follow-up, operations support, and Part 139 inspection support.
- Urban park design.
- Rental car facilities
- Boundary surveys and plat development.
- Engineering Report

7. SCHEDULE

7.1. Garver shall begin work under this Agreement upon execution of this Agreement and shall complete the work within the schedule shown in Exhibit C.

SCOPE OF SERVICES – TERMINAL FACILITY

1. DESIGN DEVELOPMENT (DD), AND CONSTRUCTION DOCUMENTS (CD)

1.1. Project Administration

1.1.1. 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. In support of the Owner's program, Garver will assist the Owner in preparing for, attending, documenting and, at times, leading the following meetings:

- Project Kickoff Meeting
- Monthly Progress Meetings
- Design Review Meetings
- Grant Funding Coordination Meetings

1.1.2. Garver will attend these and other meetings alone or with Owner's representatives, local officials, state and federal agencies, and others, as necessary, regarding the scope of the proposed project, its general design, functions, and impacts. Garver's project manager and/or design team will coordinate with the Owner as necessary on design decisions, site visits, document procurement, or other design needs.

1.1.3. Garver will hold weekly internal progress meetings with all design team members to coordinate design efforts, schedules, action items, and cross-discipline design items.

1.1.4. 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.

1.1.5. Garver will assist the City of McKinney with development of support documents for Part 139 certification. Garver will assist the Owner in the development of required airfield exhibits.

1.2. General Design Services: Garver will prepare detailed construction drawings and specifications, all based on guides furnished to Garver by the Owner and FAA, or internally developed by Garver. Contract Documents (Plans, Technical Specifications, and Estimates) will be utilized by the City of McKinney in their award to a Construction Manager through CMAR procurement methods. These designs shall conform to the standards of practice ordinarily used by members of Garver's profession practicing under similar conditions.

1.3. 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.

1.4. Quality Control Procedures

1.4.1. 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.

1.5. Airspace Analysis: Garver will prepare and submit the project to the FAA for permanent airspace clearance on the Obstruction Evaluation and Airport Airspace Analysis (OE/AAA) website and coordinate with FAA representatives.

1.6. Terminal Facility. Corgan, as a subconsultant to Garver, will provide terminal design services for the proposed terminal facility. Design services will include the following professional services disciplines:

- Architecture
- Interior Design
- Mechanical Engineering
- Electrical Engineering
- Plumbing Engineering
- Fire Protection
- Information Technology & Security
- Baggage Handling Systems
- Code and Life Safety

A full scope of services is included as an attachment to this scope of services.

1.7. Structural Design

Garver will be the structural engineer-of-record for the project and will specify the design criteria for the temporary Pre-Engineered Tension Fabric Building (PETFB) system, including geometric requirements, applicable codes and/or design loads, site and construction conditions that affect design criteria, and serviceability criteria. Additionally, Garver will provide the structural analysis and design of the building foundation to support the Pre-Engineered Tension Fabric Building system in accordance with the International Building Code (IBC) (current adopted edition) and/or other local standards. The design of the structural foundation elements will be based on the requirements and loading information (i.e. reactions) provided in the sealed construction drawings issued by the PETFB's structural engineer-of-record. Garver shall be entitled to rely upon the accuracy and completeness of the PETFB drawings and reactions, dimensional control plans, and electronic BIM models, and shall not be held responsible for any errors or omissions that may arise from erroneous or incomplete information provided by the PETFB structural engineer-of-record.

1.8. Plan Set Development

The following matrix details the plan drawings to be included in each design submittal.

Plan Set	Design Phase	
	Design Development (DD)	Construction Documents (CD)
Foundation Plans	X	X
Foundation Details	X	X
Column Layout Plans	X	X
Column Details	X	X

1.9. Specifications and Contract Documents

1.9.1. Technical Specifications: Detailed specifications shall be developed using FAA "Standards for Specifying Construction for Airports" AC 150/5370-10 (latest edition), TxDOT Specifications, City of McKinney standard specifications, or other appropriate standards. Additional supplementary specifications will be developed for project requirements not covered by the standards above or when state or local standards are approved.

1.10. Design Services Submission and Meeting Summary: The following design submittal phases shall be included in the fee summary. A summary of each design phase and the associated review meetings is included below.

1.10.1. Design Development (DD)

1.10.1.1. Garver will develop Design Development (DD) plans and specifications and submit these to the Owner for review. It is anticipated that the Owner will review the design submission within three (3) weeks.

1.10.1.2. At the completion of the Owner review period, Garver will meet with the Owner to review the Design Development (DD) plans and specifications and to receive Owner comments and direction.

1.10.2. Construction Documents (CD)

1.10.2.1. Garver will develop Construction Documents (CD) plans and specifications and submit these to the Owner for review. It is anticipated that the Owner will review the design submission within three (3) weeks.

1.10.2.2. At the completion of the Owner review period, Garver will meet with the Owner to review the Construction Documents (CD) plans and specifications and to receive Owner comments and direction.

2. CONSTRUCTION PHASE SERVICES

2.1. Construction Administration Services – To be added via future amendment.

2.2. On-Site Construction Observation Services – To be added via future amendment.

2.3. Construction Materials Testing – To be added via future amendment.

3. PROJECT DELIVERABLES

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

- Design Development Plans, Specifications, and Report to the Owner.
- Construction Document Plans, Specifications, and Report to the Owner.
- Other electronic files as requested.

4. ADDITIONAL SERVICES

4.1. 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.
- Plat Development
- Deliverables beyond those listed herein.
- Pavement Design beyond that furnished in the Geotechnical Report.
- Design of any utility extension / modification / relocation beyond those included in the scope of services.
- Engineering, architectural, or other professional services beyond those listed herein.
- Site structural design, including retaining walls.
- Structural analysis, design, and/or detailing of the PETFB Garver will not be the structural engineer-of-record for the PETFB. This includes structural analysis, design, and/or detailing of roof canopies attached to the PETFB, mezzanine(s) located inside the PETFB, and detailing of cold-formed metal stud wall framing.
- Special inspections, observation, and/or testing in accordance with adopted building code and/or building official.
- Providing structural calculations unless specifically required by a regulatory agency.
- LEED Implementation
- Permitting or fees associated with the permitting process for the federal, state, or local requirements.
- Overhead lighting design.
- Revit modeling above Level of Development (LOD) 300.
- Assistance with procurement of Aboveground Storage Tank Installation Permit from State Fire Marshal or any other Federal, State, or local permits.
- Commissioning assistance.
- 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.
- Engineering Report

5. SCHEDULE

5.1. Garver shall begin work under this Agreement upon execution of this Agreement and shall complete the work within the schedule shown in Exhibit C.

SCOPE OF SERVICES – TAXIWAY C CONSTRUCTION

1. SURVEYING SERVICES

1.1. Design Surveys. White Hawk Engineering, as a subconsultant to Garver, will provide field survey data from field work for designing the project, and this survey will be tied to the Owner's control network. The following is a summary of the design surveying services provided under this Scope of Services. A full scope of services is included as an attachment to this scope of services.

Field surveys will be conducted utilizing radial topography methods, at intervals and for distances at and/or along the project site as appropriate for modeling the existing ground, including locations of pertinent features or improvements. Buildings and other structures, airfield pavements, streets, drainage features, airfield lights and signs, fences, trees over eight inches in diameter, visible utilities as well as those underground utilities marked by their owners and/or representatives, and any other pertinent topographic features that may be present at and/or along the project site, will be located. Control points will be established for use during construction. All surveys shall be conducted during normal working hours. Escorts will complete badge training at the Airport prior to providing escort services.

Garver will assemble data obtained during the performance of the field surveys in an AutoCAD Civil3D base map drawing to be utilized for design of the project.

2. GEOTECHNICAL SERVICES

2.1. STL Engineers, as a subconsultant to Garver, will be responsible for obtaining, interpreting, and evaluating geotechnical data necessary for the design of this project. The following is a summary of the geotechnical services provided under this Scope of Services. A full scope of services is included as an attachment to this scope of services.

2.2. The proposed field investigation will include drilling 18 borings to a depth of 10 feet below existing site grade and four (4) test pits. Escorts will complete badge training at the Airport prior to providing escort services.

2.3. Laboratory testing will be conducted on samples obtained during the field exploration. The tests will be used to evaluate and classify the soils/rock, identify subsurface site characteristics, and provide data for analysis. Tests to be performed include Atterberg limits, grain size analyses, unconfined compression tests, uniaxial rock compressive strength tests, hydraulic conductivity tests, density-moisture relationship test, California bearing ratio tests, and other as necessary to evaluate conditions.

2.4. An engineering analysis and evaluation of the field and laboratory data will be performed for the project based on available project concepts. The report will include a summary of field investigation data and recommendations for grading, subgrade preparation, embankment design, compaction requirements, drainage, rock excavation and unsuitable material, and pavement design parameters.

3. PRELIMINARY AND FINAL DESIGN SERVICES

3.1. Project Administration

3.1.1. 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. In support of the Owner's program, Garver will assist the Owner in preparing for, attending, documenting and, at times, leading the following meetings:

- Project Kickoff Meeting
- Monthly Progress Meetings
- Design Review Meetings
- Grant Funding Coordination Meetings

3.1.2. Garver will attend these and other meetings alone or with Owner's representatives, local officials, state and federal agencies, and others, as necessary, regarding the scope of the proposed project, its general design, functions, and impacts. Garver's project manager and/or design team will coordinate with the Owner as necessary on design decisions, site visits, document procurement, or other design needs.

3.1.3. Garver will hold weekly internal progress meetings with all design team members to coordinate design efforts, schedules, action items, and cross-discipline design items.

3.1.4. 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.

3.2. General Design Services: Garver will prepare detailed construction drawings, specifications, instructions to bidders, and general provisions and special provisions, all based on guides furnished to Garver by the Owner and FAA, or internally developed by Garver. Contract Documents (Plans, Specifications, and Estimates) will be prepared for award of one (1) construction contract. These designs shall conform to the standards of practice ordinarily used by members of Garver's profession practicing under similar conditions.

3.3. 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.

3.3.1. Separate Procurement for Special Systems (ALCMS): Garver will assist with the development of separate procurement documents required by the AIP Handbook including such duties as assembling initial scope of work, equipment procurement requirements, design reviews, cost estimating, and reviewing the manufacturers/system installers invoices and scope of work documents to support the project. This work includes the required correspondence duties with the FAA ADO and PM as outlined in the AIP Handbook.

3.4. Quality Control Procedures

3.4.1. 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.

3.5. Airspace Analysis: Garver will prepare and submit the project to the FAA for permanent airspace clearance on the Obstruction Evaluation and Airport Airspace Analysis (OE/AAA) website and coordinate with FAA representatives.

3.6. Construction Safety and Phasing Plan

3.6.1. Garver will develop a construction safety and phasing plan (CSPP) for the project. During development of the CSPP, Garver will hold a meeting with Airport staff and other stakeholders at the Airport's request to obtain feedback regarding operations during each proposed phase of construction.

3.6.2. After receiving comments from the meeting, Garver will develop a preliminary CSPP for the Owner's review prior to submission to the FAA. After incorporating Owner comments, the CSPP will be submitted to FAA for review through the OE/AAA website, including submission of Points of Interests for each phase of construction.

3.6.3. As part of the CSPP process, Garver will evaluate the opportunity to convert Taxiway B to a temporary visual only runway for use in the construction of the proposed Runway 18-36 taxiway connector.

3.7. Existing Conditions Review

3.7.1. Record Document Review: Garver will review record document data from the vicinity of the construction site to evaluate existing conditions. Record document data may include record drawings, record surveys, utility maps, GIS data, and previous design reports. All information provided to Garver from the Owner will be assumed to be correct.

3.8. Site Visits: Garver's civil and electrical engineers will perform up to two (2) site visits to the project site to review existing conditions and evaluate survey and record document data.

3.9. Geometric Design: Garver will provide geometric design in accordance with FAA AC 150/5300-13 (latest edition) or other local standards. The following design criteria will be used for airfield design:

- Airplane Design Group (ADG) – III
- Aircraft Approach Category (AAC) – D
- Taxiway Design Group (TDG) – 3
- Critical Aircraft – TBD

3.10. Pavement Design: Garver will develop a fleet mix for the proposed project based on aircraft fleet data from the Airport Operator, Airport Master Plan, and Airport. Upon completion of the aircraft fleet mix, Garver will submit the fleet to the Owner for review. Upon approval by the Owner, Garver will use FAARFIELD and life cycle cost analysis methods to develop a recommendation for the most economical pavement design. Based on this analysis and discussions with the Owner, a pavement design for the project will be chosen. For concrete pavement design, Garver will design joint patterns and jointing details.

3.11. Modeling: Garver will develop preliminary vertical alignments based on the requirements of FAA AC 150/5300-13 (latest edition). Upon the completion of vertical alignments, assemblies will be developed based on the pavement design and corridors will be modeled for each taxiway alignment. Modeling will include all surface changes from centerline of corridor to tie into existing

grade for the project site. At the completion of individual corridor developments, all corridors will be combined into a final grading surface. Modeling will be an iterative process to determine the most efficient design solution.

3.12. Grading and Drainage

3.12.1. Garver will develop hydrologic and hydraulic models of the airfield drainage system within the project limits for the 1-, 2-, 5-, 10-, 25-, 50-, and 100-year storms. Autodesk Storm and Sanitary Analysis will be utilized to complete interconnected pond analysis for all drainage areas. 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 surveys, planimetric contour maps and aerial photos and verified by field investigation.

3.12.2. A pre-development model will be developed to include drainage infrastructure that is known to be functional. Damaged or non-functional drainage infrastructure will not be included in the pre-development model. Garver will also develop a post-development model to manage runoff from the project site. The post-development model may include the expansion of the existing detention areas as well as potential onsite mitigation options.

3.12.3. Garver will develop a brief drainage. The drainage analysis report will include the following:

- Pre-development Drainage Methodology and Results
- Conceptual Post-development Drainage Methodology and Results
- Overall Drainage Recommendations

3.13. Airfield Electrical. Garver will provide electrical engineering services to design the new lighting improvements on the project including but not limited to the following: taxiway edge lighting and signage. This will include improvements to home run circuits and new regulator infrastructure in the existing electrical vault building. Garver will also coordinate all updates to the Airfield Lighting Control and Monitoring System (ALCMS).

3.14. Plan Set Development

The following matrix details the plan drawings to be included in each design submittal.

Plan Set	Design Phase	
	Preliminary	Final
Cover Sheet	X	X
Sheet Index	X	X
General Notes	X	X
Project Layout Plan	X	X
Survey Control Plan	X	X
Construction Safety Plans	X	X
Construction Safety Details	X	X
Existing Conditions Plans	X	X
Erosion Control Plans	X	X

Erosion Control Details	X	X
Demolition Plans	X	X
Demolition Details	X	X
Drainage Plans	X	X
Drainage Details	X	X
Underdrain Plans	X	X
Underdrain Details	X	X
Typical Sections	X	X
Paving Plans	X	X
Paving Details	X	X
Grading Plans	X	X
Grading Details	X	X
Joint Layout Plans	X	X
Joint Details	X	X
Elevation Plans		X
Elevation Details		X
Pavement Marking Plans	X	X
Pavement Marking Details	X	X
Cross Sections	X	X
Electrical Notes	X	X
Lighting Removal Plans	X	X
Lighting Removal Details	X	X
Lighting Installation Plans	X	X
Lighting installation Details	X	X
Duct Bank Profiles	X	X

3.15. Specifications and Contract Documents

3.15.1. Technical Specifications: Detailed specifications shall be developed using FAA "Standards for Specifying Construction for Airports" AC 150/5370-10 (latest edition) or other appropriate standards approved for use by the FAA. Additional supplementary specifications will be developed for project requirements not covered by FAA AC150/5370-10 or when state or local standards are approved by the FAA.

3.15.2. Construction Contract Documents: Garver will develop construction contract documents based on EJCDC standards and those provided by the City of McKinney. If necessary, a specimen copy of the General Provisions and applicable prevailing wage rates will be obtained by Garver from the FAA and/or Department of Labor as appropriate for incorporation into the specifications for the proposed project. Final construction contract documents will be submitted to the Owner for final review and approval.

3.16. Quantities and Engineer's Opinion of Probable Cost: Garver will develop detailed quantities in PDF format for use in construction cost estimating for each design phase. Quantities will be

completed by pay item. Upon the completion of quantity development, Garver will review previous cost data, market conditions, and complete an Engineer's Opinion of Probable Cost.

3.17. Construction Management Plan. Garver will prepare a "Construction Management Plan" to be submitted, if required based on funding, to the Federal Aviation Administration (FAA) for approval. At a minimum, the plan shall list key construction personnel, qualifications of construction management personnel, and materials quality assurance information. If required based on funding, the plan will be reviewed by the FAA project manager.

3.18. Design Services Submission and Meeting Summary: The following design submittal phases shall be included in the fee summary. A summary of each design phase and the associated review meetings is included below.

3.18.1. Preliminary Design

3.18.1.1. Garver will develop preliminary design plans and specifications and submit these to the Owner for review. It is anticipated that the Owner will review the design submission within three (3) weeks.

3.18.1.2. At the completion of the Owner review period, Garver will meet with the Owner to review the preliminary design plans and specifications and to receive Owner comments and direction.

3.18.2. Final Design

3.18.2.1. Garver will develop final design plans and specifications and submit these to the Owner for review. It is anticipated that the Owner will review the design submission within three (3) weeks.

3.18.2.2. At the completion of the Owner review period, Garver will meet with the Owner to review the final design plans and specifications and to receive Owner comments and direction.

4. BIDDING SERVICES

4.1. Bidding. Garver will assist the Owner in advertising for and obtaining bids or negotiating proposals for one prime contract for construction, materials, equipment and services; and, where applicable, maintain a record of prospective bidders to whom Bidding Documents have been issued, and attend a pre-bid conference. The Owner will pay advertising costs outside of this contract.

4.2. Garver will issue addenda as appropriate to interpret, clarify or expand the Bidding Documents. Garver will consult with and advise the Owner as to the acceptability of subcontractors, suppliers and other persons and organizations proposed by the prime contractor(s) (herein called "Contractor(s)") for those portions of the work as to which such acceptability is required by the Bidding Documents. Garver will consult with the Owner concerning the acceptability of substitute materials and equipment proposed by Contractor(s) when substitution prior to the award of contracts is allowed by the Bidding Documents.

4.3. Garver will attend the bid opening, prepare a bid tabulation, and assist the Owner in evaluating bids or proposals and in assembling and awarding a single contract for construction. Garver will assist the Owner in the execution of all contract documents and furnish a sufficient number of executed documents for the Owner and Contractor.

5. CONSTRUCTION PHASE SERVICES

5.1. Construction Administration Services – To be added via future amendment.

5.2. On-Site Construction Observation Services – To be added via future amendment.

5.3. Construction Materials Testing – To be added via future amendment.

6. PROJECT DELIVERABLES

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

- Preliminary Design Plans, Specifications, and Report to the Owner and FAA.
- Final Design Plans, Specifications, and Report to the Owner and FAA.
- Other electronic files as requested.

7. ADDITIONAL SERVICES

7.1. 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.
- Obstruction data acquisition or detailed airspace analysis for the conversion of Taxiway B to a temporary runway.
- Deliverables beyond those listed herein.
- Design of any utility extension / modification / relocation.
- Engineering, architectural, or other professional services beyond those listed herein.
- Structural design.
- Permitting or fees associated with the permitting process for the federal, state or local requirements.
- Assistance with procurement of Aboveground Storage Tank Installation Permit from State Fire Marshal or any other Federal, State, or local permits.
- 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 the City of McKinney.
- 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.
- Engineering Report

8. SCHEDULE

8.1. Garver shall begin work under this Agreement upon execution of this Agreement and shall complete the work within the schedule shown in Exhibit C.

SCOPE OF SERVICES – TERMINAL APRON CONSTRUCTION

1. SURVEYING SERVICES

1.1. Design Surveys. White Hawk Engineering, as a subconsultant to Garver, will provide field survey data from field work for designing the project, and this survey will be tied to the Owner's control network. The following is a summary of the design surveying services provided under this Scope of Services. A full scope of services is included as an attachment to this scope of services.

Field surveys will be conducted utilizing radial topography methods, at intervals and for distances at and/or along the project site as appropriate for modeling the existing ground, including locations of pertinent features or improvements. Buildings and other structures, airfield pavements, streets, drainage features, airfield lights and signs, fences, trees over eight inches in diameter, visible utilities as well as those underground utilities marked by their owners and/or representatives, and any other pertinent topographic features that may be present at and/or along the project site, will be located. Control points will be established for use during construction. All surveys shall be conducted during normal working hours.

Garver will assemble data obtained during the performance of the field surveys in an AutoCAD Civil3D base map drawing to be utilized for design of the project.

2. GEOTECHNICAL SERVICES

2.1. STL Engineers, as a subconsultant to Garver, will be responsible for obtaining, interpreting, and evaluating geotechnical data necessary for the design of this project. The following is a summary of the geotechnical services provided under this Scope of Services. A full scope of services is included as an attachment to this scope of services.

2.2. The proposed field investigation will include drilling 15 pavement borings to a depth of 10 feet below existing site grade for the proposed terminal apron and six (6) foundation borings to a depth of 55 feet for the proposed terminal structure.

2.3. Laboratory testing will be conducted on samples obtained during the field exploration. The tests will be used to evaluate and classify the soils/rock, identify subsurface site characteristics, and provide data for analysis. Tests to be performed include Atterberg limits, grain size analyses, unconfined compression tests, uniaxial rock compressive strength tests, hydraulic conductivity tests, density-moisture relationship test, California bearing ratio tests, and other as necessary to evaluate conditions.

2.4. An engineering analysis and evaluation of the field and laboratory data will be performed for the project based on available project concepts. The report will include a summary of field investigation data and recommendations for grading, subgrade preparation, embankment design, compaction requirements, drainage, rock excavation, sign foundations, and pavement sections.

3. PRELIMINARY AND FINAL DESIGN SERVICES

3.1. Project Administration

3.1.1. 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. In support of the Owner's program, Garver will assist the Owner in preparing for, attending, documenting and, at times, leading the following meetings:

- Project Kickoff Meeting
- Monthly Progress Meetings
- Design Review Meetings
- Grant Funding Coordination Meetings

3.1.2. Garver will attend these and other meetings alone or with Owner's representatives, local officials, state and federal agencies, and others, as necessary, regarding the scope of the proposed project, its general design, functions, and impacts. Garver's project manager and/or design team will coordinate with the Owner as necessary on design decisions, site visits, document procurement, or other design needs.

3.1.3. Garver will hold weekly internal progress meetings with all design team members to coordinate design efforts, schedules, action items, and cross-discipline design items.

3.1.4. 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.

3.2. General Design Services: Garver will prepare detailed construction drawings, specifications, instructions to bidders, and general provisions and special provisions, all based on guides furnished to Garver by the Owner and FAA, or internally developed by Garver. Contract Documents (Plans, Specifications, and Estimates) will be prepared for award of one (1) construction contract. These designs shall conform to the standards of practice ordinarily used by members of Garver's profession practicing under similar conditions.

3.3. 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.

3.4. Quality Control Procedures

3.4.1. 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.

3.5. Airspace Analysis: Garver will prepare and submit the project to the FAA for permanent airspace clearance on the Obstruction Evaluation and Airport Airspace Analysis (OE/AAA) website and coordinate with FAA representatives.

3.6. Construction Safety and Phasing Plan

8.1.1. Garver will develop a construction safety and phasing plan (CSPP) for the project. During development of the CSPP, Garver will hold a meeting with Airport staff and other stakeholders at the Airport's request to obtain feedback regarding operations during each proposed phase of construction.

8.1.2. After receiving comments from the meeting, Garver will develop a preliminary CSPP for the Owner's review prior to submission to the FAA. After incorporating Owner

comments, the CSPP will be submitted to FAA for review through the OE/AAA website, including submission of Points of Interests for each phase of construction.

3.7. Existing Conditions Review

3.7.1. Record Document Review: Garver will review record document data from the vicinity of the construction site to evaluate existing conditions. Record document data may include record drawings, record surveys, utility maps, GIS data, and previous design reports. All information provided to Garver from the Owner will be assumed to be correct.

3.7.2. Site Visits: Garver's civil electrical engineers, and landscape architects will perform up to two (2) site visits to the project site to review existing conditions and evaluate survey and record document data.

3.8. Geometric Design: Garver will provide geometric design in accordance with FAA AC 150/5300-13 (latest edition) or other local standards. The following design criteria will be used for airfield design:

- Airplane Design Group (ADG) – III
- Aircraft Approach Category (AAC) – D
- Taxiway Design Group (TDG) – 3
- Critical Aircraft – TBD

3.9. Pavement Design: Garver will develop a fleet mix for the proposed project based on aircraft fleet data from the Airport Operator, Airport Master Plan, and Airport. Upon completion of the aircraft fleet mix, Garver will submit the fleet to the Owner for review. Upon approval by the Owner, Garver will use FAARFIELD and life cycle cost analysis methods to develop a recommendation for the most economical pavement design. Based on this analysis and discussions with the Owner, a pavement design for the project will be chosen. For concrete pavement design, Garver will design joint patterns and jointing details.

3.10. Modeling: Garver will develop preliminary vertical alignments based on the requirements of FAA AC 150/5300-13 (latest edition). Upon the completion of vertical alignments, assemblies will be developed based on the pavement design and corridors will be modeled for the apron alignment. Modeling will include all surface changes from centerline of corridor to tie into existing grade for the project site. At the completion of individual corridor developments, all corridors will be combined into a final grading surface. Modeling will be an iterative process to determine the most efficient design solution.

3.11. Grading and Drainage

3.11.1. Garver will develop hydrologic and hydraulic models of the airfield drainage system within the project limits for the 1-, 2-, 5-, 10-, 25-, 50-, and 100-year storms. Autodesk Storm and Sanitary Analysis will be utilized to complete interconnected pond analysis for all drainage areas. 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 surveys, planimetric contour maps and aerial photos and verified by field investigation.

3.11.2. A pre-development model will be developed to include drainage infrastructure that is known to be functional. Damaged or non-functional drainage infrastructure will not be included in the pre-development model. Garver will also develop a post-development

model to manage runoff from the project site. The post-development model may include the expansion of the existing detention areas as well as potential onsite mitigation options.

3.11.3. Garver will develop a brief drainage analysis and this information. The drainage analysis report will include the following:

- Pre-development Drainage Methodology and Results
- Conceptual Post-development Drainage Methodology and Results
- Overall Drainage Recommendations

5.2. Apron Ramp Lighting. Apron ramp lighting will be designed along the terminal apron aircraft parking positions and RON locations. All lighting will be LED type. Spacing of the poles, pole foundations, and placement of conduit will be determined based on photometric analysis modeling using LED roadway fixtures. The lighting models will consider the current project's ultimate design. The design will implement single phase power. Lighting will be designed in accordance with IESNA RP-8 recommendations.

5.3. Airfield Electrical. Garver will provide electrical engineering services to design the new lighting improvements on the project including but not limited to the following: apron edge lighting. This will include improvements to home run circuits and new regulator infrastructure in the existing electrical vault building. Garver will also coordinate all updates to the Airfield Lighting Control and Monitoring System (ALCMS).

3.12. Plan Set Development

The following matrix details the plan drawings to be included in each design submittal.

Plan Set	Design Phase	
	Preliminary	Final
Cover Sheet	X	X
Sheet Index	X	X
General Notes	X	X
Project Layout Plan	X	X
Survey Control Plan	X	X
Construction Safety Plans	X	X
Construction Safety Details	X	X
Existing Conditions Plans	X	X
Erosion Control Plans	X	X
Erosion Control Details	X	X
Demolition Plans	X	X
Demolition Details	X	X
Drainage Plans	X	X
Drainage Details	X	X
Underdrain Plans	X	X
Underdrain Details	X	X
Typical Sections	X	X

Paving Plans	X	X
Paving Details	X	X
Grading Plans	X	X
Grading Details	X	X
Joint Layout Plans	X	X
Joint Details	X	X
Elevation Plans		X
Elevation Details		X
Pavement Marking Plans	X	X
Pavement Marking Details	X	X
Cross Sections	X	X
Electrical Notes	X	X
Lighting Removal Plans	X	X
Lighting Removal Details	X	X
Lighting Installation Plans	X	X
Lighting installation Details	X	X
Duct Bank Profiles	X	X

3.13. Specifications and Contract Documents

3.13.1. Technical Specifications: Detailed specifications shall be developed using FAA "Standards for Specifying Construction for Airports" AC 150/5370-10 (latest edition) or other appropriate standards approved for use by the FAA. Additional supplementary specifications will be developed for project requirements not covered by FAA AC150/5370-10 or when state or local standards are approved by the FAA.

3.13.2. Construction Contract Documents: Construction contract documents will not be developed for this project. This project will utilize the construction contract documents developed as part of the Taxiway C bid package.

3.14. Quantities and Engineer's Opinion of Probable Cost: Garver will develop detailed quantities in PDF format for use in construction cost estimating for each design phase. Quantities will be completed by pay item. Upon the completion of quantity development, Garver will review previous cost data, market conditions, and complete an Engineer's Opinion of Probable Cost.

3.15. Construction Management Plan. Garver will prepare a "Construction Management Plan" to be submitted, if required based on funding, to the Federal Aviation Administration (FAA) for approval. At a minimum, the plan shall list key construction personnel, qualifications of construction management personnel, and materials quality assurance information. If required based on funding, the plan will be reviewed by the FAA project manager.

3.16. Design Services Submission and Meeting Summary: The following design submittal phases shall be included in the fee summary. A summary of each design phase and the associated review meetings is included below.

3.16.1. Preliminary Design

3.16.1.1. Garver will develop preliminary design plans and specifications and submit these to the Owner for review. It is anticipated that the Owner will review the design submission within three (3) weeks.

3.16.1.2. At the completion of the Owner review period, Garver will meet with the Owner to review the preliminary design plans and specifications and to receive Owner comments and direction.

3.16.2. Final Design

3.16.2.1. Garver will develop final design plans and specifications and submit these to the Owner for review. It is anticipated that the Owner will review the design submission within three (3) weeks.

3.16.2.2. At the completion of the Owner review period, Garver will meet with the Owner to review the final design plans and specifications and to receive Owner comments and direction.

4. BIDDING SERVICES

4.1. Bidding. Garver will assist the Owner in advertising for and obtaining bids or negotiating proposals for one prime contract for construction, materials, equipment and services; and, where applicable, maintain a record of prospective bidders to whom Bidding Documents have been issued, and attend a pre-bid conference. The Owner will pay advertising costs outside of this contract.

4.2. Garver will issue addenda as appropriate to interpret, clarify or expand the Bidding Documents. Garver will consult with and advise the Owner as to the acceptability of subcontractors, suppliers and other persons and organizations proposed by the prime contractor(s) (herein called "Contractor(s)") for those portions of the work as to which such acceptability is required by the Bidding Documents. Garver will consult with the Owner concerning the acceptability of substitute materials and equipment proposed by Contractor(s) when substitution prior to the award of contracts is allowed by the Bidding Documents.

4.3. Garver will attend the bid opening, prepare a bid tabulation, and assist the Owner in evaluating bids or proposals and in assembling and awarding a single contract for construction. Garver will assist the Owner in the execution of all contract documents and furnish a sufficient number of executed documents for the Owner and Contractor.

5. CONSTRUCTION PHASE SERVICES

5.1. Construction Administration Services – To be added via future amendment.

5.2. On-Site Construction Observation Services – To be added via future amendment.

5.3. Construction Materials Testing – To be added via future amendment.

6. PROJECT DELIVERABLES

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

- Preliminary Design Plans, Specifications, and Report to the Owner and affected Utilities.

- Final Design Plans, Specifications, and Report to the Owner and affected Utilities.
- Other electronic files as requested.

7. ADDITIONAL SERVICES

7.1. 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.
- Pavement Design beyond that furnished in the Geotechnical Report.
- Design of any utility extension / modification / relocation beyond those included in the scope of services.
- Engineering, architectural, or other professional services beyond those listed herein.
- Structural design beyond that required light pole foundations.
- LEED Implementation
- Permitting or fees associated with the permitting process for the federal, state or local requirements.
- Stormwater reuse plans.
- Assistance with procurement of Aboveground Storage Tank Installation Permit from State Fire Marshal or any other Federal, State, or local permits.
- 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 the City of McKinney.
- 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.
- Engineering Report

8. SCHEDULE

8.1. Garver shall begin work under this Agreement upon execution of this Agreement and shall complete the work within the schedule shown in Exhibit C.

SCOPE OF SERVICES – FM 546 INTERSECTION CONNECTION

1. SURVEYING SERVICES

1.1. Design Surveys. White Hawk Engineering, as a subconsultant to Garver, will provide field survey data from field work for designing the project, and this survey will be tied to the Owner's control network. The following is a summary of the design surveying services provided under this Scope of Services. A full scope of services is included as an attachment to this scope of services.

Field surveys will be conducted utilizing radial topography methods, at intervals and for distances at and/or along the project site as appropriate for modeling the existing ground, including locations of pertinent features or improvements. Buildings and other structures, airfield pavements, streets, drainage features, airfield lights and signs, fences, trees over eight inches in diameter, visible utilities as well as those underground utilities marked by their owners and/or representatives, and any other pertinent topographic features that may be present at and/or along the project site, will be located. Control points will be established for use during construction. All surveys shall be conducted during normal working hours.

Garver will assemble data obtained during the performance of the field surveys in an AutoCAD Civil3D base map drawing to be utilized for design of the project.

1.2. Right-of-Way Survey. White Hawk Engineering, as a subconsultant to Garver, will provide right-of-way survey and documentation. Documentation will include a key map showing all affected properties and an individual tract map with a description of temporary and permanent acquisition for each property. The Owner will provide a standard easement acquisition document or "go-by" example for use by Garver. A full scope of services is included as an attachment to this scope of services.

2. GEOTECHNICAL SERVICES

2.1. STL Engineers, as a subconsultant to Garver, will be responsible for obtaining, interpreting, and evaluating geotechnical data necessary for the design of this project. The following is a summary of the geotechnical services provided under this Scope of Services. A full scope of services is included as an attachment to this scope of services.

2.2. The proposed field investigation will include drilling eight (8) roadway borings to a depth of 10 feet below existing site grade, five (5) borings within existing pavement to a depth of 10 feet below existing grade, and two (2) signage borings to a depth of 50 feet.

2.3. Laboratory testing will be conducted on samples obtained during the field exploration. The tests will be used to evaluate and classify the soils/rock, identify subsurface site characteristics, and provide data for analysis. Tests to be performed include Atterberg limits, grain size analyses, unconfined compression tests, uniaxial rock compressive strength tests, hydraulic conductivity tests, density-moisture relationship test, California bearing ratio tests, and other as necessary to evaluate conditions.

2.4. An engineering analysis and evaluation of the field and laboratory data will be performed for the project based on available project concepts. The report will include a summary of field investigation data and recommendations for grading, subgrade preparation, embankment design, compaction requirements, drainage, rock excavation, sign foundations, and pavement sections.

3. PRELIMINARY AND FINAL DESIGN SERVICES

3.1. Project Administration

3.1.1. 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. In support of the Owner's program, Garver will assist the Owner in preparing for, attending, documenting and, at times, leading the following meetings:

- Project Kickoff Meeting
- Monthly Progress Meetings
- Design Review Meetings
- Grant Funding Coordination Meetings

3.1.2. Garver will attend these and other meetings alone or with Owner's representatives, local officials, state and federal agencies, and others, as necessary, regarding the scope of the proposed project, its general design, functions, and impacts. Garver's project manager and/or design team will coordinate with the Owner as necessary on design decisions, site visits, document procurement, or other design needs.

3.1.3. Garver will hold weekly internal progress meetings with all design team members to coordinate design efforts, schedules, action items, and cross-discipline design items.

3.1.4. 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.

3.2. General Design Services: Garver will prepare detailed construction drawings, specifications, instructions to bidders, and general provisions and special provisions, all based on guides furnished to Garver by the Owner and FAA, or internally developed by Garver. Contract Documents (Plans, Specifications, and Estimates) will be prepared for award of one (1) construction contract. These designs shall conform to the standards of practice ordinarily used by members of Garver's profession practicing under similar conditions.

3.3. 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.

3.4. Quality Control Procedures

3.4.1. 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.

3.5. Airspace Analysis: Garver will prepare and submit the project to the FAA for permanent airspace clearance on the Obstruction Evaluation and Airport Airspace Analysis (OE/AAA) website and coordinate with FAA representatives.

3.6. Construction Safety and Phasing Plan / Maintenance of Traffic

3.6.1. Garver will develop a construction safety and phasing plan (CSPP) and maintenance of traffic (MOT) plan for the project. During development of the CSPP and MOT, Garver will hold a meeting with Airport staff and other stakeholders at the Airport's request to obtain feedback regarding operations during each proposed phase of construction.

3.6.2. After receiving comments from the meeting, Garver will develop a preliminary CSPP for the Owner's review prior to submission to the FAA. After incorporating Owner comments, the CSPP will be submitted to FAA for review through the OE/AAA website.

3.7. Existing Conditions Review

3.7.1. Record Document Review: Garver will review record document data from the vicinity of the construction site to evaluate existing conditions. Record document data may include record drawings, record surveys, utility maps, GIS data, and previous design reports. All information provided to Garver from the Owner will be assumed to be correct.

3.7.2. Site Visits: Garver's civil and electrical engineers will perform up to two (2) site visits to the project site to review existing conditions and evaluate survey and record document data.

3.8. Geometric Design: Garver will provide geometric design for the project in accordance with the standards provided by the City of McKinney, the AASHTO Geometric Design of Highways and Streets, and the Manual of Uniform Minimum Standards for Design (MUTCD) with proper consideration given to the design traffic volumes, design speed, capacity and levels of service, functional classification, adjacent land use, design consistency and driver expectancy, drainage features, aesthetics, pedestrian and bicycle concerns, ADA requirements, access management, and scope of work.

The design elements shall include, but not be limited to, the horizontal and vertical alignments, lane widths, shoulder widths, cross slopes, borders, sight distance, side slopes and ditches, lane transitions, superelevation, features of intersections, utility conflicts, interchanges, and limited access points.

3.9. Pavement Design: Garver will coordinate with STL Engineers, as a subconsultant to Garver, to perform pavement design analysis for roadway elements associated with the proposed project. Garver will develop estimated traffic volume levels and vehicle classification mix for use in the pavement design.

3.10. Modeling: Garver will develop preliminary vertical alignments based on the requirements of the City of McKinney and the AASHTO Geometric Design of Highways and Streets. Upon the completion of vertical alignments, assemblies will be developed based on the pavement design and corridors will be modeled for each roadway alignment. Modeling will include all surface changes from centerline of corridor to tie into existing grade for the project site. At the completion of individual corridor developments, all corridors will be combined into a final grading surface. Modeling will be an iterative process to determine the most efficient design solution.

3.11. Grading and Drainage

3.11.1. Garver will develop hydrologic and hydraulic models of the airfield drainage system within the project limits for the 1-, 2-, 5-, 10-, 25-, 50-, and 100-year storms Autodesk

Storm and Sanitary Analysis will be utilized to complete interconnected pond analysis for all drainage areas. 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 surveys, planimetric contour maps and aerial photos and verified by field investigation.

3.11.2. A pre-development model will be developed to include drainage infrastructure that is known to be functional. Damaged or non-functional drainage infrastructure will not be included in the pre-development model. Garver will also develop a post-development model to manage runoff from the project site. The post-development model may include the expansion of the existing detention areas as well as potential onsite mitigation options.

3.11.3. Garver will develop a brief drainage analysis. The drainage analysis report will include the following:

- Pre-development Drainage Methodology and Results
- Conceptual Post-development Drainage Methodology and Results
- Overall Drainage Recommendations

3.12. General Utility Design and Coordination: It is expected that the following utilities will require extension / modification as part of the project. Garver will coordinate with the Owner and applicable utility owners for utility relocation design.

- Electrical (ONCOR)
- Telecommunications (AT&T)
- Natural Gas (ATMOS)

Garver will furnish plans to all known utility owners potentially affected by the project at each stage of development. Garver shall conduct coordination meetings among all known affected utility owners to enable them to coordinate efforts for any necessary utility relocations. Garver will include the surveyed locations of the observable and marked utilities in the construction plans. Garver will also include proposed and/or relocated utility information in the construction plans as provided by the utility companies.

3.13. Roadway Lighting. Roadway lighting will be designed along the terminal loop roadway and all intersections. All lighting will be LED type. Spacing of the poles, pole foundations, and placement of conduit will be determined based on photometric analysis modeling using LED roadway fixtures. The lighting models will consider the current project's ultimate design. The design will implement single phase power. Additionally, the design will be completed using aluminum wire with infrastructure hardening methods to deter wire theft. Roadway lighting will be designed in accordance with IESNA RP-8 recommendations.

3.14. Plan Set Development

The following matrix details the plan drawings to be included in each design submittal.

Plan Set	Design Phase	
	Preliminary Design	Final Design
Cover Sheet	X	X

Sheet Index	X	X
General Notes	X	X
Project Layout Plan	X	X
Survey Control Plan	X	X
Construction Safety and Traffic Plans	X	X
Construction Safety and Traffic Details	X	X
Existing Conditions Plans	X	X
Erosion Control Plans	X	X
Erosion Control Details	X	X
Demolition Plans	X	X
Demolition Details	X	X
Drainage Plans	X	X
Drainage Details	X	X
Underdrain Plans	X	X
Underdrain Details	X	X
Typical Sections	X	X
Paving Plans	X	X
Paving Details	X	X
Grading Plans	X	X
Grading Details	X	X
Joint Layout Plans	X	X
Joint Details	X	X
Elevation Plans		X
Elevation Details		X
Pavement Marking Plans	X	X
Pavement Marking Details	X	X
Cross Sections	X	X
Electrical Notes	X	X
Lighting Installation Plans	X	X
Lighting Installation Details	X	X
Duct Bank Profiles	X	X
Power Installation Plans	X	X
Power Details	X	X

3.15. Specifications and Contract Documents

3.15.1. Technical Specifications: Detailed specifications shall be developed using FAA "Standards for Specifying Construction for Airports" AC 150/5370-10 (latest edition), TxDOT Specifications, City of McKinney standard specifications, or other appropriate standards. Additional supplementary specifications will be developed for project

requirements not covered by the standards above or when state or local standards are approved.

3.15.2. Construction Contract Documents: Garver will develop construction contract documents based on EJCDC standards and those provided by the City of McKinney. If necessary, a specimen copy of the General Provisions and applicable prevailing wage rates will be obtained by Garver from the FAA and/or Department of Labor as appropriate for incorporation into the specifications for the proposed project. Final construction contract documents will be submitted to the Owner for final review and approval.

3.16. Quantities and Engineer's Opinion of Probable Cost: Garver will develop detailed quantities in PDF format for use in construction cost estimating for each design phase. Quantities will be completed by pay item. Upon the completion of quantity development, Garver will review previous cost data, market conditions, and complete an Engineer's Opinion of Probable Cost.

3.17. Construction Management Plan. Garver will prepare a "Construction Management Plan" to be submitted, if required based on funding, to the Federal Aviation Administration (FAA) for approval. At a minimum, the plan shall list key construction personnel, qualifications of construction management personnel, and materials quality assurance information. If required based on funding, the plan will be reviewed by the FAA project manager.

3.18. Design Services Submission and Meeting Summary: The following design submittal phases shall be included in the fee summary. A summary of each design phase and the associated review meetings is included below.

3.18.1. Preliminary Design

3.18.1.1. Garver will develop preliminary design plans and specifications and submit these to the Owner and, if necessary, TXDOT for review. It is anticipated that the Owner and TXDOT will review the design submission within three (3) weeks.

3.18.1.2. At the completion of the Owner review period, Garver will meet with the Owner to review the preliminary design plans and specifications and to receive Owner comments and direction.

3.18.2. Final Design

3.18.2.1. Garver will develop final design plans and specifications and submit these to the Owner and, if necessary, TXDOT for review. It is anticipated that the Owner and TXDOT will review the design submission within three (3) weeks.

3.18.2.2. At the completion of the Owner review period, Garver will meet with the Owner to review the final design plans and specifications and to receive Owner comments and direction.

4. BIDDING SERVICES

4.1. Bidding. Garver will assist the Owner in advertising for and obtaining bids or negotiating proposals for one prime contract for construction, materials, equipment and services; and, where applicable, maintain a record of prospective bidders to whom Bidding Documents have been issued, and attend a pre-bid conference. The Owner will pay advertising costs outside of this contract.

4.2. Garver will issue addenda as appropriate to interpret, clarify or expand the Bidding Documents. Garver will consult with and advise the Owner as to the acceptability of subcontractors, suppliers and other persons and organizations proposed by the prime contractor(s) (herein called "Contractor(s)") for those portions of the work as to which such acceptability is required by the Bidding Documents. Garver will consult with the Owner concerning the acceptability of substitute materials and equipment proposed by Contractor(s) when substitution prior to the award of contracts is allowed by the Bidding Documents.

4.3. Garver will attend the bid opening, prepare a bid tabulation, and assist the Owner in evaluating bids or proposals and in assembling and awarding a single contract for construction. Garver will assist the Owner in the execution of all contract documents and furnish a sufficient number of executed documents for the Owner and Contractor.

5. CONSTRUCTION PHASE SERVICES

5.1. Construction Administration Services – To be added via future amendment.

5.2. On-Site Construction Observation Services – To be added via future amendment.

5.3. Construction Materials Testing – To be added via future amendment.

6. PROJECT DELIVERABLES

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

- Preliminary Design Plans, Specifications, and Report to the Owner and affected Utilities.
- Final Design Plans, Specifications, and Report to the Owner and affected Utilities.
- Other electronic files as requested.

7. ADDITIONAL SERVICES

7.1. 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.
- Pavement Design beyond that furnished in the Geotechnical Report.
- Design of any utility extension / modification / relocation beyond those included in the scope of services.
- Engineering, architectural, or other professional services beyond those listed herein.
- Structural design beyond that required for light pole foundations.
- LEED Implementation
- Permitting or fees associated with the permitting process for the federal, state or local requirements.
- Assistance with procurement of Aboveground Storage Tank Installation Permit from State Fire Marshal or any other Federal, State, or local permits.
- Commissioning assistance.

- 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 the City of McKinney.
- TXDOT permitting for traffic control. The City of McKinney will utilize traffic control plans to obtain all TXDOT permits.
- 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.
- Engineering Report

8. SCHEDULE

8.1. Garver shall begin work under this Agreement upon execution of this Agreement and shall complete the work within the schedule shown in Exhibit C.

SCOPE OF SERVICES – EASTSIDE FUEL FARM

1. PRELIMINARY AND FINAL DESIGN SERVICES

1.1. Project Administration

1.1.1. 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. In support of the Owner's program, Garver will assist the Owner in preparing for, attending, documenting and, at times, leading the following meetings:

- Project Kickoff Meeting
- Monthly Progress Meetings
- Design Review Meetings

1.1.2. Garver will attend these and other meetings alone or with Owner's representatives, local officials, state and federal agencies, and others, as necessary, regarding the scope of the proposed project, its general design, functions, and impacts. Garver's project manager and/or design team will coordinate with the Owner as necessary on design decisions, site visits, document procurement, or other design needs.

1.1.3. Garver will hold weekly internal progress meetings with all design team members to coordinate design efforts, schedules, action items, and cross-discipline design items.

1.2. General Design Services: Garver will prepare performance-based plans, performance-based specifications, instructions to bidders, general provisions, and special provisions, all based on guidelines furnished to Garver by the Owner, State, and FAA, or internally developed by Garver. Contract Documents (plans, specifications, and estimates) will be prepared for the award of one construction manager at-risk (CMAR) selection. These designs shall conform to the standards of practice ordinarily used by members of Garver's profession practicing under similar conditions.

1.3. 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. Garver will review a Fueling System Design Development Checklist with the Owner, their branding representative (if applicable), and the AHJ to coordinate design decisions. Garver will conduct a plan review meeting with the AHJ upon completion of 90% design.

1.4. Quality Control Procedures

1.4.1. 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.

1.5. Airspace Analysis: Garver will prepare and submit the project to the FAA for permanent airspace clearance on the Obstruction Evaluation and Airport Airspace Analysis (OE/AAA) website and coordinate with FAA representatives.

1.6. Construction Safety and Phasing Plan / Maintenance of Traffic

1.6.1. Garver will develop a construction safety and phasing plan (CSPP) and maintenance of traffic (MOT) plan for the project. During development of the CSPP and MOT, Garver will hold a meeting with Airport staff and other stakeholders at the Airport's request to obtain feedback regarding operations during each proposed phase of construction.

1.6.2. After receiving comments from the meeting, Garver will develop a preliminary CSPP for the Owner's review prior to submission to the FAA. After incorporating Owner comments, the CSPP will be submitted to FAA for review through the OE/AAA website.

1.7. Geometric Design: For design of the access roadway, Garver will provide geometric design for the project in accordance with the standards provided by the City of McKinney, the AASHTO Geometric Design of Highways and Streets, and the Manual of Uniform Minimum Standards for Design (MUTCD) with proper consideration given to the design traffic volumes, design speed, capacity and levels of service, functional classification, adjacent land use, design consistency and driver expectancy, drainage features, aesthetics, pedestrian and bicycle concerns, ADA requirements, access management, and scope of work.

The design elements shall include, but not be limited to, the horizontal and vertical alignments, lane widths, shoulder widths, cross slopes, borders, sight distance, side slopes and ditches, lane transitions, superelevation, features of intersections, utility conflicts, interchanges, and limited access points.

1.8. Modeling: Garver will develop preliminary vertical alignments based on the requirements of the City of McKinney and the AASHTO Geometric Design of Highways and Streets. Upon the completion of vertical alignments, assemblies will be developed based on the pavement design and corridors will be modeled for each roadway alignment. Modeling will include all surface changes from centerline of corridor to tie into existing grade for the project site. At the completion of individual corridor developments, all corridors will be combined into a final grading surface. Modeling will be an iterative process to determine the most efficient design solution.

1.9. Grading and Drainage: No additional hydraulic modeling will be completed for the fuel farm project. The fuel farm improvement limits shall be included in the hydraulic model completed for the Landside Improvements project.

1.10. General Utility Design and Coordination: It is expected that the following utilities will require extension / modification as part of the project. Garver will coordinate with the Owner and applicable utility owners for utility relocation design.

- Electrical (ONCOR)

Garver will furnish plans to all known utility owners potentially affected by the project at each stage of development. Garver shall conduct coordination meetings among all known affected utility owners to enable them to coordinate efforts for any necessary utility relocations. Garver will include the surveyed locations of the observable and marked utilities in the construction plans. Garver will also include proposed and/or relocated utility information in the construction plans as provided by the utility companies.

1.11. Plan Set Development

Garver will develop performance-based plans outlining the Owner's preference for the fuel system and general guidance for the fuel system design. Garver will not provide detailed drawings for the fuel system, structural, electrical, mechanical, or piping elements. The detailed final design of the fuel system and all its appurtenances and elements will be delegated to the bidders/contractors proposing the system. The drawings provided by the contractor during the submittal review process shall be stamped by a licensed engineer in the state of the project and shall reference the applicable building and fire codes.

The following matrix details the plan drawings to be included in each design submittal.

Plan Set	Design Phase	
	Preliminary	Final
Cover Sheet and Index of Sheets	X	X
Project Layout and Survey Control Plan	X	X
General Notes	X	X
Construction Safety and Phasing Plan	X	X
Fueling Facility Site Plan	X	X
Civil Details	X	X
Electrical Legend and Notes	X	X
Electrical Details	X	X
Fuel Farm Rack Details	X	X
Emergency Shut-Off Station Details	X	X
One-Line Diagram	X	X
Panel Schedule	X	X

1.12. Technical Specifications. The specifications produced by Garver for the fuel system shall be considered performance specifications and will not include any mechanical, electrical, or structural design for the fuel system. The performance specifications are intended to direct final design to the construction contractor, who shall be responsible for the completed engineering design.

1.13. Quantities and Engineer's Opinion of Probable Cost: Garver will develop detailed quantities in PDF format for use in construction cost estimating for each design phase. Quantities will be completed by pay item. Upon the completion of quantity development, Garver will review previous cost data and market conditions and complete an Engineer's Opinion of Probable Cost.

1.14. Design Services Submission and Meeting Summary: The following design submittal phases shall be included in the fee summary. A summary of each design phase and the associated review meetings is included below.

1.14.1. Preliminary Design

1.14.1.1. Garver will develop preliminary design plans and specifications and submit these to the Owner for review. It is anticipated that the Owner will review the design submission within three (3) weeks.

1.14.1.2. At the completion of the Owner review period, Garver will meet with the Owner to review the preliminary design plans and specifications and to receive Owner comments and direction.

1.14.2. Final Design

1.14.2.1. Garver will develop final design plans and specifications and submit these to the Owner for review. It is anticipated that the Owner will review the design submission within three (3) weeks.

1.14.2.2. At the completion of the Owner review period, Garver will meet with the Owner to review the final design plans and specifications and to receive Owner comments and direction.

2. CONSTRUCTION PHASE SERVICES

2.1. Construction Administration Services – To be added via future amendment.

2.2. On-Site Construction Observation Services – To be added via future amendment.

2.3. Construction Materials Testing – To be added via future amendment.

3. PROJECT DELIVERABLES

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

- Preliminary Design Plans, Specifications, and Report to the Owner and affected Utilities.
- Final Design Plans, Specifications, and Report to the Owner and affected Utilities.
- Other electronic files as requested.

4. ADDITIONAL SERVICES

4.1. 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.
- Bidding Services
- Design of any utility extension / modification / relocation beyond those included in the scope of services.
- Engineering, architectural, or other professional services beyond those listed herein.
- Structural design. The Contractor shall provide a structural design for the fuel tank system.
- Retaining wall design.
- Permitting or fees associated with the permitting process for the federal, state or local requirements.
- Assistance with procurement of Aboveground Storage Tank Installation Permit from State Fire Marshal or any other Federal, State, or local permits.
- Commissioning assistance.

- 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 the City of McKinney.
- TXDOT permitting for traffic control. The City of McKinney will utilize traffic control plans to obtain all TXDOT permits.
- 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, including HEC-RAS modeling.
- Services after construction, such as warranty follow-up, operations support, and Part 139 inspection support.
- Overhead lighting design.
- Mechanical, electrical, and structural design associated with fuel system.
- Preparation and implementation of a Spill Prevention, Control, and Countermeasure (SPCC).
- Engineering Report

APPENDIX B
McKinney National Airport
Eastside Development Design Services

TOTAL FEE	**$**	**4,398,000.00**

Landside Site Improvements (Roadway and Parking)		
Service		**Total Fee**
Surveys	$	32,900.00
Geotechnical	$	87,100.00
Preliminary Design	$	489,000.00
Final Design	$	427,000.00
Total for Services	**$**	**1,036,000.00**

Terminal Facility		
Service		**Total Fee**
Design Development (DD)	$	214,000.00
Construction Documents (CD)	$	340,000.00
Total for Services	**$**	**554,000.00**

Taxiway C		
Service		**Total Fee**
Surveys	$	45,200.00
Geotechnical	$	70,400.00
Preliminary Design	$	417,000.00
Final Design	$	349,000.00
Bidding Services	$	23,400.00
Total for Services	**$**	**905,000.00**

Terminal Apron Construction		
Service		**Total Fee**
Surveys	$	28,400.00
Geotechnical	$	106,000.00
Preliminary Design	$	399,000.00
Final Design	$	338,000.00
Bidding Services	$	12,600.00
Total for Services	**$**	**884,000.00**

FM 546 Connection		
Service		**Total Fee**
Surveys, SUE, and ROW	$	154,200.00
Geotechnical	$	77,700.00
Preliminary Design	$	222,400.00
Final Design	$	162,400.00
Bidding Services	$	23,300.00
Total for Services	**$**	**640,000.00**

Eastside Fuel Farm		
Service		**Total Fee**
Preliminary Design	$	98,600.00
Final Design	$	70,400.00
Total for Services	**$**	**169,000.00**

Commercial Service Development (NOT INCLUDED)		
Service		**Total Fee**
Sky Synergy *(Subconsultant)*	$	-
Total for Services	**$**	**-**

Design Evolution (5% of Design Fee)		
Service		**Total Fee**
Design Evolution	$	210,000.00
Total for Services	**$**	**210,000.00**

McKinney National Airport
Landside Site Improvements

Surveys

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Develop Survey Field Work Exhibits			1	2	4					
Develop Survey Subconsultant Agreement	1		2							
Coordinate with Survey Subconsultant			4							
Survey Site Visit					6					
Base Map Developing / Survey Processing			1	2	4			8		
QC Review of Survey Data		1	1	2	4			5		
Subtotal - Project Administration	**1**	**1**	**9**	**6**	**18**	**0**	**0**	**13**	**0**	**0**
Hours	**1**	**1**	**9**	**6**	**18**	**0**	**0**	**13**	**0**	**0**

SUBTOTAL - SALARIES:	**$10,471.00**
DIRECT NON-LABOR EXPENSES	
Computer Modeling/Software Use	$0.00
Document Printing/Reproduction/Assembly	$4.00
Travel Costs	$25.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$29.00**
SUBTOTAL:	**$10,500.00**
SUBCONSULTANTS FEE (White Hawk; Topo Survey):	**$22,400.00**
TOTAL FEE:	**$32,900.00**

McKinney National Airport
Landside Site Improvements

Geotechnical

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Geotechnical Kickoff Meeting		1	1	1						
Coordinate with Geotechnical Subconsultant			6							
Develop Geotechnical Subconsultant Agreement	1	2	4							
Develop Geotechnical Field Work Exhibits			1	2						
Site Visit During Field Work				8						
Geotechnical Report Review		4	2	2						
Correspondence for Design Input		4	1	2						
Subtotal - Project Administration	**1**	**11**	**15**	**15**	**0**	**0**	**0**	**0**	**0**	**0**
Hours	**1**	**11**	**15**	**15**	**0**	**0**	**0**	**0**	**0**	**0**

SUBTOTAL - SALARIES:	**$11,539.00**
DIRECT NON-LABOR EXPENSES	
Computer Modeling/Software Use	$60.00
Document Printing/Reproduction/Assembly	$76.00
Travel Costs	$25.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$161.00**
SUBTOTAL:	**$11,700.00**
SUBCONSULTANTS FEE (STL Engineers):	**$75,400.00**
TOTAL FEE:	**$87,100.00**

McKinney National Airport
Landside Site Improvements

Preliminary Design

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Civil Project Management (4hr/week; 12 weeks)	48									
Electrical Project Management (2hr/week; 12 weeks)			24							
Water / Sewer Project Management (1hr/week; 12 weeks)	12									
Develop Quality Control Plan & Work Plan	1	2	5	2	1					2
Design Package Kickoff Meeting	2	6	6	4	4	4	2	2	2	2
Internal Weekly Progress Meetings (12 weeks)	3	6	6	6	6	6	6	3	3	3
External Monthly Progress Meetings (3 months)	3		6	6	3					8
Grant Funding Assistance	8									
CMAR Procurement Assistance	4		20							
City of McKinney Development Permit Coordination	4		20					16		
Subtotal - Project Administration	**85**	**14**	**87**	**18**	**14**	**10**	**8**	**21**	**5**	**15**
2. Civil Engineering										
Coordination with TXDOT	1		1	3	3					
Coordination with Gas Utility	1		1	3	1					
Coordination with Telecom Utility	1		1	3	1					
Site Visit			6	6						
Base Map Setup			2	4	8		4	16		
Review As-Built Drawings			2	4						
Develop Preliminary Construction Safety and Phasing Plan	1		1	2	4					
CSPP Submission to FAA Through OEAAA			1	2	4		2	4		
Develop Geometric Layout			2	4	6		4	16		
Develop Horizontal Alignments			1	2	4		4	16		
Develop Vertical Alignments			1	4	8		16			
Develop Assemblies			1	4	8		16			
Develop Corridor Model			2	4	8		40			
Develop Roadway Design Parameters	1		2	4						
Develop Pavement Design		4	1	2						
Drainage Basin Development			1	2	4		8	4		
Pre-Development Flow Calculations			4	8	16					
Post-Development Flow Calculations			6	12	20					
Drainage Structural Design Calculations		4	2	6						
PARCS Design and Coordination	2		4	16	4					
Landscape Design			4				24			
Preliminary Plans										
Cover Sheet			1	1	1			2		
Sheet Index			1	1	1			2		
General Notes			1	1	1			2		
Project Layout Plan			1	1	2			4		
Survey Control Plan			1	1	1			2		
Construction Safety and Traffic Control Plans			1	1	2			6		
Construction Safety and Traffic Control Details			1	1	2			5		
Existing Conditions Plans			1	1	2			5		
Erosion Control Plans			1	1	2			8		
Erosion Control Details			1	1	2			2		
Demolition Plans			1	1	2			4		
Demolition Details			1	1	2			2		
Drainage Plans			1	1	3			8		
Drainage Details			1	1	2			4		
Underdrain Plans			1	1	2		5			
Underdrain Details			1	1	2			4		
Typical Sections			1	1	2		6			
Paving Plans			1	1	3		6			
Paving Details			1	1	2			4		
Grading Plans			2	2	4		16			
Grading Details			1	1	2			4		
Joint Layout Plans			1	2	4		4			
Joint Details			1	2	3			6		
Pavement Marking Plans			1	2	3		6			
Pavement Marking Details			1	2	2		4			
Traffic Control and Signage Plans			1	2	3			6		
Traffic Control and Signage Details			1	2	2			4		
Fencing Plans			1	2	2			4		
Cross Sections			1	2	4		32			
Landscaping Plans			6				16			
Irrigation Plans			4				8			
Landscaping and Irrigation Details			6				16			
Develop Preliminary Technical Specifications			2	4						4
Develop Preliminary Supplemental Specifications			2	4						4
Develop Preliminary Quantities			1	2	3		6	4		
Develop Preliminary Opinions of Probable Construction Costs	1		2	4						
Internal Quality Control (QC) Review (4 Independent QC Reviewers)	10	20	10	10					10	6
Incorporate QC Review Comments		5	10	10	20		20	15		
Prepare for Preliminary Plan Review Meeting	1		4	8						4
Attend Preliminary Plan Review Meeting	4		4	4	4					4

McKinney National Airport
Landside Site Improvements

Preliminary Design

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
Prepare and Distribute Preliminary Review Meeting Minutes and Tasks	1		1	2						4
Incorporate Preliminary Owner Review Comments			4	8	8		10	12		
Prepare and Submit Permanent Airspace Study			2	4	4			6		
Subtotal - Civil Engineering	**24**	**33**	**134**	**193**	**203**	**0**	**273**	**181**	**10**	**26**
3. Electrical Engineering										
Coordination with Electric Utility			2		6					
Site Visit			6		6					
Review As-Built Drawings			1		2	8				
Develop One-Line Diagram			2		8	4				
Roadway Light Modeling			4		8	4				
Preliminary Plans										
Electrical Notes			1		2	6				
Lighting Installation Plans			2		12	16				
Lighting Details			2		6	12				
Duct Bank Profiles			4		8	12				
Power Installation Plans			2		6	12				
Power and Control Diagrams			1		4	8				
PARCS Control Plans			2		4	8				
PARCS Details			2		4	8				
Develop Preliminary Technical Specifications			2		6					
Develop Preliminary Supplemental Specifications			2		6					
Develop Preliminary Quantities			1		2	12				
Develop Preliminary Opinions of Probable Construction Costs			1		8					
Internal Quality Control (QC) Review		6	6		2				6	2
Incorporate QC Review Comments		4	2		4	10				
Attend Preliminary Plan Review Meeting			4		4					
Incorporate Preliminary Owner Review Comments			2		4	8				
Prepare and Submit Permanent Airspace Study			1		2	8				
Subtotal - Electrical Engineering	**0**	**10**	**52**	**0**	**114**	**136**	**0**	**0**	**6**	**2**
4. Water / Sewer Utility Engineering										
Coordination with Water Utility			6	12						
Coordination with TCEQ			2	4						
Site Visit				6		6				
Review As-Built Drawings			2	4		6				
Coordination with Architecture for Facility Needs			2	6						
Water Network Modeling and Calculations			2	12		24				
Sewer Flow Calculations			4	8		16				
Develop Horizontal Alignments			4	8		8				
Develop Vertical Alignments / Conflict Analysis			4	8		12	4			
Preliminary Plans										
Water / Sewer Notes			2	4		12				
Water Installation Plans			4	12		24				
Water Profiles			2	8		16				
Water Details			1	4		8				
Sewer Installation Plans			4	12		24				
Sewer Profiles			2	8		12				
Sewer Details			1	4		8				
Develop Preliminary Technical Specifications			2	8						
Develop Preliminary Supplemental Specifications			2	6						
Develop Preliminary Quantities			1	2		8				
Develop Preliminary Opinions of Probable Construction Costs			1	4						
Internal Quality Control (QC) Review		20	10						10	8
Incorporate QC Review Comments		4	2	4		16				
Attend Preliminary Plan Review Meeting			4	4						
Incorporate Preliminary Owner Review Comments			1	2		6				
Subtotal - Water / Sewer Utility Engineering	**0**	**24**	**65**	**150**	**0**	**206**	**4**	**0**	**10**	**8**
Hours	**109**	**81**	**338**	**361**	**331**	**352**	**285**	**202**	**31**	**51**

SUBTOTAL - SALARIES:	**$487,896.00**
DIRECT NON-LABOR EXPENSES	
Document Printing/Reproduction/Assembly	$104.00
Computer Modeling/Software Use	$900.00
Travel Costs	$100.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$1,104.00**
SUBTOTAL:	**$489,000.00**
SUBCONSULTANTS FEE:	**$0.00**
TOTAL FEE:	**$489,000.00**

McKinney National Airport
Landside Site Improvements

Final Design

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Civil Project Management (4hr/week; 8 weeks)	32									
Electrical Project Management (2hr/week; 8 weeks)			16							
Water / Sewer Project Management (1hr/week; 8 weeks)	8									
Internal Weekly Progress Meetings (8 weeks)	2	4	4	4	4	4	2	2	2	2
External Monthly Progress Meetings (3 months)	4		4	4	2					6
Grant Funding Assistance	4									
CMAR Procurement Assistance	4		20							
City of McKinney Development Permit Coordination	4		20					16		
Subtotal - Project Administration	**58**	**4**	**64**	**8**	**6**	**4**	**2**	**18**	**2**	**8**
2. Civil Engineering										
Incorporate CSPP Comments from FAA Review	1		2	4	8					
Coordination with TXDOT	1		1	4	4					
Coordination with Gas Utility	1		2	4	2					
Coordination with Telecom Utility	1		2	4	2					
Update Geometric Layout			2	2	4		2	16		
Update Horizontal Alignments			2	2	4		4	16		
Update Vertical Alignments			2	4	8		20			
Update Assemblies			2	4	6		12			
Update Corridor Model			2	4	8		40			
Update Pavement Design		2	1	4						
Update Drainage Basin Development			1	2	2		8	4		
Update Drainage Calculations			4	8	16					
Construction Management Plan		1	1	2	4					
PARCS Design and Coordination	2		4	16	4					
Landscape Design			4				24			
Final Plans										
Cover Sheet				1	1			2		
Sheet Index				1	1			2		
General Notes				1	1			2		
Project Layout Plan				1	2			4		
Survey Control Plan				1	1			2		
Construction Safety and Traffic Control Plans			1	1	2			4		
Construction Safety and Traffic Control Details				1	2			4		
Existing Conditions Plans				1	2			4		
Erosion Control Plans				1	2			6		
Erosion Control Details				1	1			2		
Demolition Plans				1	2			4		
Demolition Details				1	1			2		
Drainage Plans			1	2	4			8		
Drainage Details				1	2			4		
Underdrain Plans				1	2		6			
Underdrain Details				1	2			4		
Typical Sections			1	1	2		10			
Paving Plans			1	1	2		10			
Paving Details				1	2			2		
Grading Plans			1	2	4		20			
Grading Details				1	1			2		
Joint Layout Plans			1	4	8		4			
Joint Details			1	2	4			6		
Elevation Plans			1	2	4		16			
Elevation Details				1	1		2			
Pavement Marking Plans			1	1	4		8			
Pavement Marking Details				1	1		2			
Traffic Control and Signage Plans			1	1	1			4		
Traffic Control and Signage Details				1	1			2		
Fencing Plans				1	1			6		
Fencing Details				1	1		4			
Cross Sections			2	4	8		24			
Landscaping Plans			6				16			
Irrigation Plans			4				8			
Landscaping and Irrigation Details			6				16			
Develop Final Technical Specifications			2	6						6
Develop Final Supplemental Specifications			2	6						6
Develop Final Quantities			1	2	4		6	6		
Develop Final Opinions of Probable Construction Costs	1		2	6						
Internal Quality Control (QC) Review	10	20	10	10					10	5
Incorporate QC Review Comments		4	8	12	24		24	16		
Prepare for Final Plan Review Meeting	1		2	4						2
Attend Final Plan Review Meeting	4		4	4	4					4
Prepare and Distribute Final Review Meeting Minutes and Tasks	1		1	2						8
Incorporate Final Owner Review Comments			4	8	12		24	12		
Subtotal - Civil Engineering	**23**	**27**	**96**	**166**	**189**	**0**	**310**	**146**	**10**	**31**

McKinney National Airport
Landside Site Improvements

Final Design

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
3. Electrical Engineering										
Coordination with Electric Utility			2		8					
Update One-Line Diagram			2		8	4				
Update Roadway Lighting Model			2		10	4				
Final Plans										
Electrical Notes					2	4				
Lighting Installation Plans			2		8	20				
Lighting Details			2		4	12				
Duct Bank Profiles			2		4	12				
Power Installation Plans			2		4	12				
Power and Control Diagrams			2		4	12				
PARCS Control Plans			2		4	8				
PARCS Details			2		4	8				
Develop Final Technical Specifications			2		4					
Develop Final Supplemental Specifications			2		4					
Develop Final Quantities			1		2	8				
Develop Final Opinions of Probable Construction Costs			2		4					
Internal Quality Control (QC) Review		10	10		5				10	5
Incorporate QC Review Comments		4	2		2	6				
Attend Final Plan Review Meeting			2		2					
Incorporate Final Owner Review Comments			4		4	16				
Subtotal - Electrical Engineering	**0**	**14**	**45**	**0**	**87**	**126**	**0**	**0**	**10**	**5**
4. Water / Sewer Utility Engineering										
Coordination with Water Utility			4	8						
Coordination with TCEQ			2	4						
Coordination with Architecture for Facility Needs			4	8						
Water Network Modeling and Calculations			4	16		40				
Sewer Flow Calculations			4	8		20				
Update Horizontal Alignments			2	12	2	20				
Update Vertical Alignments / Conflict Analysis			4	12		24	8			
Final Plans										
Water / Sewer Notes				4		8				
Water Installation Plans			2	4		20				
Water Profiles			1	4		12				
Water Details				2		8				
Sewer Installation Plans			2	6		20				
Sewer Profiles			2	6		12				
Sewer Details			2	4		12				
Develop Final Technical Specifications			2	6						
Develop Final Supplemental Specifications			2	4						
Develop Final Quantities				2		4				
Develop Final Opinions of Probable Construction Costs			1	2						
Internal Quality Control (QC) Review		10	10	5					10	5
Incorporate QC Review Comments		2	2	8		16				
Attend Final Plan Review Meeting			2	2						
Incorporate Final Owner Review Comments			2	2		7				
Subtotal - Water / Sewer Utility Engineering	**0**	**12**	**54**	**129**	**2**	**223**	**8**	**0**	**10**	**5**
Hours	**81**	**57**	**259**	**303**	**284**	**353**	**320**	**164**	**32**	**49**

SUBTOTAL - SALARIES:	**$425,807.00**
DIRECT NON-LABOR EXPENSES	
Document Printing/Reproduction/Assembly	$243.00
Computer Modeling/Software Use	$900.00
Travel Costs	$50.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$1,193.00**
SUBTOTAL:	**$427,000.00**
SUBCONSULTANTS FEE:	**$0.00**
TOTAL FEE:	**$427,000.00**

McKinney National Airport
Terminal Facility

Design Development (DD)

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Civil Project Management (1hr/week; 12 weeks)	12									
Structural Project Management (2hr/week; 12 weeks)			24							
Internal Weekly Progress Meetings (12 weeks)	3			6			6			
External Monthly Progress Meetings (2 months)	4									
Grant Funding Assistance	4									
CMAR Procurement Assistance	10									
Subtotal - Project Administration	**33**	**0**	**24**	**6**	**0**	**0**	**6**	**0**	**0**	**0**
2. Structural Engineering										
Coordination with Building Supplier				2			6			
Column Moment Calculation Reviews				2			8			
Foundation Design and Calculations				2			10			
Building Slab Foundation Design and Calculations				2			8			
Design Development (DD) Plans										
Foundation Plans				1			4			
Foundation Details				1			4			
Column Layout Plans				1			3			
Column Details				1			6			
Develop DD Technical Specifications				2						
Develop DD Supplemental Specifications				2						
Internal Quality Control (QC) Review		4							4	
Incorporate QC Review Comments				1			2			
Attend DD Plan Review Meeting	4									
Incorporate DD Owner/FAA Review Comments				1			2			
Subtotal - Structural Engineering	**4**	**4**	**0**	**18**	**0**	**0**	**53**	**0**	**4**	**0**
Hours	**37**	**4**	**24**	**24**	**0**	**0**	**59**	**0**	**4**	**0**

SUBTOTAL - SALARIES:	**$42,861.00**
DIRECT NON-LABOR EXPENSES	
Document Printing/Reproduction/Assembly	$239.00
Computer Modeling/Software Use	$100.00
Travel Costs	$0.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$339.00**
SUBTOTAL:	**$43,200.00**
SUBCONSULTANTS FEE (Corgan Architectural Team):	**$170,800.00**
TOTAL FEE:	**$214,000.00**

McKinney National Airport
Terminal Facility

Construction Documents (CD)

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Civil Project Management (1hr/week; 8 weeks)	8									
Structural Project Management (2hr/week; 8 weeks)			16							
Internal Weekly Progress Meetings (8 weeks)				4			4			
External Monthly Progress Meetings (2 months)	4									
Subtotal - Project Administration	**12**	**0**	**16**	**4**	**0**	**0**	**4**	**0**	**0**	**0**
2. Structural Engineering										
Foundation Design Updates				2			6			
Building Slab Foundation Updates				2			6			
Construction Documents (CD) Plans										
Foundation Plans				1			2			
Foundation Details				1			2			
Column Layout Plans				1			1			
Column Details				1			2			
Develop CD Technical Specifications				2						
Develop CD Supplemental Specifications				2						
Internal Quality Control (QC) Review		2							2	
Incorporate QC Review Comments				1			3			
Attend CD Plan Review Meeting	4									
Incorporate CD Owner/FAA Review Comments				1			2			
Subtotal - Structural Engineering	**4**	**2**	**0**	**14**	**0**	**0**	**24**	**0**	**2**	**0**
Hours	**16**	**2**	**16**	**18**	**0**	**0**	**28**	**0**	**2**	**0**

SUBTOTAL - SALARIES:	**$22,534.00**
DIRECT NON-LABOR EXPENSES	
Document Printing/Reproduction/Assembly	$166.00
Computer Modeling/Software Use	$100.00
Travel Costs	$0.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$266.00**
SUBTOTAL:	**$22,800.00**
SUBCONSULTANTS FEE (Corgan):	**$317,200.00**
TOTAL FEE:	**$340,000.00**

McKinney National Airport
Taxiway C Construction

Surveys

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Develop Survey Field Work Exhibits			1	2	4					
Develop Survey Subconsultant Agreement	1		2							
Coordinate with Survey Subconsultant			4							
Survey Site Visit					6					
Base Map Developing / Survey Processing			1	2	4			8		
QC Review of Survey Data		1	1	2	4			2		
Subtotal - Project Administration	**1**	**1**	**9**	**6**	**18**	**0**	**0**	**10**	**0**	**0**
Hours	**1**	**1**	**9**	**6**	**18**	**0**	**0**	**10**	**0**	**0**

SUBTOTAL - SALARIES:	**$9,907.00**
DIRECT NON-LABOR EXPENSES	
Computer Modeling/Software Use	$8.00
Document Printing/Reproduction/Assembly	$60.00
Travel Costs	$25.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$93.00**
SUBTOTAL:	**$10,000.00**
SUBCONSULTANTS FEE (White Hawk; Topo Survey):	**$35,200.00**
TOTAL FEE:	**$45,200.00**

McKinney National Airport
Taxiway C Construction

Geotechnical

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Geotechnical Kickoff Meeting		1	2	2	2					
Coordinate with Geotechnical Subconsultant			6							
Develop Geotechnical Subconsultant Agreement	2	2	4							
Develop Geotechnical Field Work Exhibits			1	2	8					
Site Visit During Field Work				6	6					
Geotechnical Report Review		8	2	1						
Correspondence for Design Input		4	2	4						
Subtotal - Project Administration	**2**	**15**	**17**	**15**	**16**	**0**	**0**	**0**	**0**	**0**
Hours	**2**	**15**	**17**	**15**	**16**	**0**	**0**	**0**	**0**	**0**

SUBTOTAL - SALARIES:	**$16,890.00**
DIRECT NON-LABOR EXPENSES	
Computer Modeling/Software Use	$121.00
Document Printing/Reproduction/Assembly	$64.00
Travel Costs	$25.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$210.00**
SUBTOTAL:	**$17,100.00**
SUBCONSULTANTS FEE (STL Engineers):	**$53,300.00**
TOTAL FEE:	**$70,400.00**

McKinney National Airport
Taxiway C Construction

Preliminary Design

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-3	T-2	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Civil Project Management (4hr/week; 12 weeks)	48									
Electrical Project Management (2hr/week; 12 weeks)			24							
Develop Quality Control Plan & Work Plan	2	4	10							4
Design Package Kickoff Meeting	4	8	8		8	4	4	4	4	4
Internal Weekly Progress Meetings (12 weeks)	3	6	6		6	6	6	6		6
External Monthly Progress Meetings (3 months)	3		6		6					6
Subtotal - Project Administration	**60**	**18**	**54**	**0**	**20**	**10**	**10**	**10**	**4**	**20**
2. Civil Engineering										
Coordination with FAA	2		4		16					
Site Visit			8		8					
Base Map Setup			2		4			12		
Review As-Built Drawings			1		2			6		
Develop Preliminary Construction Safety and Phasing Plan	2		2		8			16		
Taxiway B Conversion to Alternate Landing Surface (ALS) Coordination	2		8		16			40		
CSPP Submission to FAA Through OEAAA			1		4			8		
Develop Geometric Layout			1		2			8		
Develop Horizontal Alignments			1		2			6		
Develop Vertical Alignments			1		2		8			
Develop Assemblies			1		2		12			
Develop Corridor Model			1		6		60			
Develop Fleet Mix	1		1		4					
Develop Pavement Design		4	1		6					
Drainage Basin Development			1		4		8			
Pre-Development Flow Calculations			1		8					
Post-Development Flow Calculations			2		16					
Drainage Structural Design Calculations		4	1		2					
Preliminary Plans										
Cover Sheet					1			2		
Sheet Index			1		1			2		
General Notes			1		1			2		
Project Layout Plan			1		2			4		
Survey Control Plan			1		1			4		
Construction Safety Plans			1		8			16		
Construction Safety and Details			1		3			8		
Existing Conditions Plans			1		3			12		
Erosion Control Plans			1		4			8		
Erosion Control Details			1		1			2		
Demolition Plans			1		2			4		
Demolition Details			1		2			4		
Drainage Plans			1		8		20			
Drainage Details			1		6			8		
Underdrain Plans			1		6		16			
Underdrain Details			1		2			6		
Typical Sections			1		6		12			
Paving Plans			1		8		16			
Paving Details			1		4			8		
Grading Plans			2		20		40			
Grading Details			1		4			8		
Joint Layout Plans			2		16		12			
Joint Details			2		12			16		
Pavement Marking Plans			2		12			24		
Pavement Marking Details			1		4			8		
Cross Sections			8		30		60			
Develop Preliminary Construction Contract Documents	2		4		8					8
Develop Preliminary Technical Specifications			4		12					8
Develop Preliminary Supplemental Specifications			4		12					8
Develop Preliminary Quantities			2		8		6	6		
Develop Preliminary Opinions of Probable Construction Costs	2		4		12					
Internal Quality Control (QC) Review (2 Independent QC Reviewers)	15	30	15						15	8
Incorporate QC Review Comments		10	12		16		48	24		
Prepare for Preliminary Plan Review Meeting	2		8							8
Attend Preliminary Plan Review Meeting	8		8		8					8
Prepare and Distribute Preliminary Review Meeting Minutes and Tasks	2		2							8
Incorporate Preliminary Owner/FAA Review Comments			4		8		24	12		
Prepare and Submit Permanent Airspace Study			2		4		8			
Subtotal - Civil Engineering	**38**	**48**	**143**	**0**	**367**	**0**	**350**	**284**	**15**	**56**

McKinney National Airport
Taxiway C Construction

Preliminary Design

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-3	T-2	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
3. Electrical Engineering										
Review As-Built Drawings			2		8					
Locate Existing Circuits			1		8	8				
Site Visit			6		6	6				
CCR Load Calculations			2		12					
Develop One-Line Diagram			1		8	16				
Preliminary Plans										
Construction Safety Plans			1		4	16				
Construction Safety Details			1		2	8				
Electrical Notes			1		4	8				
Lighting Removal Plans			2		4	16				
Lighting Removal Details			1		2	8				
Lighting Installation Plans			2		6	24				
Lighting Installation Details			1		2	16				
Duct Bank Profiles			1		2	16				
Develop Preliminary Technical Specifications			2		8					
Develop Preliminary Supplemental Specifications			2		8					
Develop Preliminary Quantities			1		4	16				
Develop Preliminary Opinions of Probable Construction Costs			2		6					
Internal Quality Control (QC) Review		10	20		10				10	10
Incorporate QC Review Comments		4	4		12	24				
Attend Preliminary Plan Review Meeting			8							
Incorporate Preliminary Owner/FAA Review Comments			2		10	20				
Subtotal - Electrical Engineering	**0**	**14**	**63**	**0**	**126**	**202**	**0**	**0**	**10**	**10**
Hours	**98**	**80**	**260**	**0**	**513**	**212**	**360**	**294**	**29**	**86**

SUBTOTAL - SALARIES:	**$415,641.00**
DIRECT NON-LABOR EXPENSES	
Document Printing/Reproduction/Assembly	$309.00
Computer Modeling/Software Use	$900.00
Travel Costs	$150.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$1,359.00**
SUBTOTAL:	**$417,000.00**
SUBCONSULTANTS FEE:	**$0.00**
TOTAL FEE:	**$417,000.00**

McKinney National Airport
Taxiway C Construction

Final Design

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-3	T-2	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Civil Project Management (4hr/week; 8 weeks)	32									
Electrical Project Management (2hr/week; 8 weeks)			16							
Internal Weekly Progress Meetings (8 weeks)	2	4	4		4	4	4	4		4
External Monthly Progress Meetings (2 months)	4		4	4	4					4
Subtotal - Project Administration	**38**	**4**	**24**	**4**	**8**	**4**	**4**	**4**	**0**	**8**
2. Civil Engineering										
Incorporate CSPP Comments from FAA Review	2		4		8					
Taxiway B Conversion to Alternate Landing Surface (ALS) Coordination	4		8		8			24		
Coordination with FAA	2		4		16					
Update Geometric Layout			2		4			8		
Update Horizontal Alignments			2		4			12		
Update Vertical Alignments			2		4		24			
Update Assemblies			2		4		12			
Update Corridor Model			2		8		24			
Update Pavement Design		4	1		2					
Update Drainage Calculations			4		16					
Construction Management Plan		4	2	4	8					
Final Plans										
Cover Sheet					1			1		
Sheet Index			1		1			1		
General Notes			1		1			2		
Project Layout Plan			1		1			4		
Survey Control Plan			1		1			4		
Construction Safety Plans			2		4			16		
Construction Safety and Details			1		4			8		
Existing Conditions Plans			1		2			6		
Erosion Control Plans			1		2			6		
Erosion Control Details			1		2			4		
Demolition Plans			1		2			4		
Demolition Details			1		2			2		
Drainage Plans			2		6		16			
Drainage Details			2		4			8		
Underdrain Plans			1		6		16			
Underdrain Details					1			2		
Typical Sections			2		6		8			
Paving Plans			2		6		16			
Paving Details					1			2		
Grading Plans			4		16		40			
Grading Details					1			2		
Joint Layout Plans			4		14		24			
Joint Details			2		4			8		
Elevation Plans			4		12		24			
Elevation Details			1		2		4			
Pavement Marking Plans			4		8			20		
Pavement Marking Details			2		2			8		
Cross Sections			12		30		60			
Develop Final Construction Contract Documents	2		4		8					8
Develop Final Technical Specifications			4		12					8
Develop Final Supplemental Specifications			4		12					8
Develop Final Quantities			1		4		2	2		
Develop Final Opinions of Probable Construction Costs	1		2		6					
Internal Quality Control (QC) Review	15	30	15						15	8
Incorporate QC Review Comments		10	12		24		48	24		
Prepare for Final Plan Review Meeting	2		8							8
Attend Final Plan Review Meeting	8		8		8					8
Prepare and Distribute Final Review Meeting Minutes and Tasks	2		2							8
Incorporate Final Owner/FAA Review Comments			4		8		24	12		
Subtotal - Civil Engineering	**38**	**48**	**151**	**4**	**306**	**0**	**342**	**190**	**15**	**56**

McKinney National Airport
Taxiway C Construction

Final Design

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-3	T-2	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
3. Electrical Engineering										
Update CCR Load Calculations			2		8					
Update One-Line Diagram			2		4	12				
ALCMS Coordination			4		20					
Final Plans										
Construction Safety Plans					4	12				
Construction Safety Details					2	6				
Electrical Notes					4	8				
Lighting Removal Plans					4	12				
Lighting Removal Details					2	8				
Lighting Installation Plans			2		6	24				
Lighting Installation Details			2		2	12				
Duct Bank Profiles			2		4	12				
Develop Final Technical Specifications			2		8					
Develop Final Supplemental Specifications			2		8					
Develop Final Quantities			2		4	8				
Develop Final Opinions of Probable Construction Costs			2		4					
Internal Quality Control (QC) Review		10	20		10				10	12
Incorporate QC Review Comments		2	4		10	24				
Attend Final Plan Review Meeting			8							
Incorporate Final Owner/FAA Review Comments			2		10	20				
Subtotal - Electrical Engineering	**0**	**12**	**56**	**0**	**114**	**158**	**0**	**0**	**10**	**12**
Hours	**76**	**64**	**231**	**8**	**428**	**162**	**346**	**194**	**25**	**76**

SUBTOTAL - SALARIES:	**$347,843.00**
DIRECT NON-LABOR EXPENSES	
Document Printing/Reproduction/Assembly	$207.00
Computer Modeling/Software Use	$900.00
Travel Costs	$50.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$1,157.00**
SUBTOTAL:	**$349,000.00**
SUBCONSULTANTS FEE:	**$0.00**
TOTAL FEE:	**$349,000.00**

McKinney National Airport
Taxiway C Construction

Bidding Services

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Upload Bid Documents to Plan Room			1	4						
Dispense Plans and Specs to Prospective Bidders	1		2							
Review and Respond to Request for Information (RFI)			4	10	6					
Draft and Distribute Addendums	1		2	4	10					
Prepare for Pre-Bid Meeting			2							
Attend Pre-Bid Meeting	4		4							
Bid Opening	4		4							
Prepare Bid Tabulation	1		2		6					
Evaluate Bids and Prepare Recommendation of Award	2		4							
Prepare Contract Documents			2		8					4
Subtotal - Project Administration	**13**	**0**	**27**	**18**	**30**	**0**	**0**	**0**	**0**	**4**
Hours	**13**	**0**	**27**	**18**	**30**	**0**	**0**	**0**	**0**	**4**

SUBTOTAL - SALARIES:	**$23,284.00**
DIRECT NON-LABOR EXPENSES	
Document Printing/Reproduction/Assembly	$66.00
Postage/Freight/Courier	$0.00
Office Supplies/Equipment	$0.00
Travel Costs	$50.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$116.00**
SUBTOTAL:	**$23,400.00**
SUBCONSULTANTS FEE:	**$0.00**
TOTAL FEE:	**$23,400.00**

McKinney National Airport
Terminal Apron Construction

Surveys

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Develop Survey Field Work Exhibits			1	2	6					
Develop Survey Subconsultant Agreement	2		4							
Coordinate with Survey Subconsultant			6							
Survey Site Visit				6						
Base Map Developing / Survey Processing			1	1	4			10		
QC Review of Survey Data		1	2	4	6			2		
Subtotal - Project Administration	**2**	**1**	**14**	**13**	**16**	**0**	**0**	**12**	**0**	**0**
Hours	**2**	**1**	**14**	**13**	**16**	**0**	**0**	**12**	**0**	**0**

SUBTOTAL - SALARIES:	**$13,267.00**
DIRECT NON-LABOR EXPENSES	
Computer Modeling/Software Use	$100.00
Document Printing/Reproduction/Assembly	$8.00
Travel Costs	$25.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$133.00**
SUBTOTAL:	**$13,400.00**
SUBCONSULTANTS FEE (White Hawk; Topo Survey):	**$15,000.00**
TOTAL FEE:	**$28,400.00**

McKinney National Airport
Terminal Apron Construction

Geotechnical

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Geotechnical Kickoff Meeting		1	2	2	2					
Coordinate with Geotechnical Subconsultant			8							
Develop Geotechnical Subconsultant Agreement	2	2	4							
Develop Geotechnical Field Work Exhibits			1	2	6					
Site Visit During Field Work				6						
Geotechnical Report Review		8	4	2						
Correspondence for Design Input		4	2	2						
Subtotal - Project Administration	**2**	**15**	**21**	**14**	**8**	**0**	**0**	**0**	**0**	**0**
Hours	**2**	**15**	**21**	**14**	**8**	**0**	**0**	**0**	**0**	**0**

SUBTOTAL - SALARIES:	**$16,200.00**
DIRECT NON-LABOR EXPENSES	
Computer Modeling	$68.00
Document Printing/Reproduction/Assembly	$7.00
Travel Costs	$25.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$100.00**
SUBTOTAL:	**$16,300.00**
SUBCONSULTANTS FEE (STL Engineers):	**$89,700.00**
TOTAL FEE:	**$106,000.00**

McKinney National Airport
Terminal Apron Construction

Preliminary Design

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Civil Project Management (4hr/week; 12 weeks)	48									
Electrical Project Management (1hr/week; 12 weeks)			12							
Develop Quality Control Plan & Work Plan	2	4	12							5
Design Package Kickoff Meeting	5	10	10		10	5	5	5	5	5
Internal Weekly Progress Meetings (12 weeks)	3	6	6		6	6	6	6		6
External Monthly Progress Meetings (3 months)	3		3		3					3
Subtotal - Project Administration	**61**	**20**	**43**	**0**	**19**	**11**	**11**	**11**	**5**	**19**
2. Civil Engineering										
Coordination with FAA	1		2		8					
Site Visit			6		6					
Base Map Setup			2		4			8		
Review As-Built Drawings			1		2			6		
Develop Preliminary Construction Safety and Phasing Plan	1		2		4			8		
CSPP Submission to FAA Through OEAAA			2		4			8		
Develop Geometric Layout			2		4			8		
Develop Horizontal Alignments			2		4			8		
Develop Vertical Alignments			2		4		8			
Develop Assemblies			2		4		12			
Develop Corridor Model			2		8		30			
Develop Fleet Mix	1		2		6					
Develop Pavement Design		6	2		8					
Drainage Basin Development			2		6		12			
Pre-Development Flow Calculations			4		10		4			
Post-Development Flow Calculations			4		16		4			
Drainage Structural Design Calculations		8	4		12					
Glycol Collection Design		2	4		12			4		
Preliminary Plans										
Cover Sheet					1			2		
Sheet Index			1		2			4		
General Notes			1		2			6		
Project Layout Plan			2		4			8		
Survey Control Plan			2		2			8		
Construction Safety Plans			2		4			12		
Construction Safety and Details			2		4			8		
Existing Conditions Plans			1		4			8		
Erosion Control Plans			2		6			8		
Erosion Control Details			1		2			6		
Demolition Plans			2		4			8		
Demolition Details			1		4			4		
Drainage Plans			2		4		12			
Drainage Details			2		8			12		
Underdrain Plans			2		6		12			
Underdrain Details			1		4			8		
Typical Sections			2		6		12			
Paving Plans			2		6		12			
Paving Details			1		6			12		
Grading Plans			2		8		16			
Grading Details			1		6			12		
Joint Layout Plans			4		8		16			
Joint Details			2		4			8		
Pavement Marking Plans			4		8			16		
Pavement Marking Details			1		4			12		
Cross Sections			4		8		40			
Develop Preliminary Technical Specifications			4		16					8
Develop Preliminary Supplemental Specifications			4		16					8
Develop Preliminary Quantities	2		4		12		8	8		
Develop Preliminary Opinions of Probable Construction Costs	2		4		12					
Internal Quality Control (QC) Review (2 Independent QC Reviewers)	16	32	16						16	16
Incorporate QC Review Comments		4	8		16		32	24		
Prepare for Preliminary Plan Review Meeting	2		8							8
Attend Preliminary Plan Review Meeting	8		8		8					8
Prepare and Distribute Preliminary Review Meeting Minutes and Tasks	2		2							8
Incorporate Preliminary Owner/FAA Review Comments			2		4		16	10		
Prepare and Submit Permanent Airspace Study			2		4		8			
Subtotal - Civil Engineering	**35**	**52**	**156**	**0**	**335**	**0**	**254**	**254**	**16**	**56**

McKinney National Airport
Terminal Apron Construction

Preliminary Design

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
3. Electrical Engineering										
Review As-Built Drawings			2		8					
Locate Existing Circuits			1		2	4				
Site Visit			6		6	6				
CCR Load Calculations			2		12					
Lighting Level Modeling			4		16					
Light Foundation Design			4	20			12			
Develop One-Line Diagram			1		4	8				
Preliminary Plans										
Construction Safety Plans			1		4	8				
Construction Safety Details			1		2	4				
Electrical Notes			1		4	8				
Lighting Removal Plans			2		4	8				
Lighting Removal Details			1		2	8				
Lighting Installation Plans			2		4	12				
Lighting Installation Details			1		2	12				
Light Foundation Details			2	4			12			
Duct Bank Profiles			1		2	12				
Develop Preliminary Technical Specifications			2		8					
Develop Preliminary Supplemental Specifications			2		8					
Develop Preliminary Quantities			1		4	10				
Develop Preliminary Opinions of Probable Construction Costs			2		6					
Internal Quality Control (QC) Review		10	20		8				10	7
Incorporate QC Review Comments		4	4		4	12				
Attend Preliminary Plan Review Meeting			6							
Incorporate Preliminary Owner/FAA Review Comments			2		4	12				
Subtotal - Electrical Engineering	**0**	**14**	**71**	**24**	**114**	**124**	**24**	**0**	**10**	**7**
Hours	**96**	**86**	**270**	**24**	**468**	**135**	**289**	**265**	**31**	**82**

SUBTOTAL - SALARIES:	**$397,729.00**
DIRECT NON-LABOR EXPENSES	
Document Printing/Reproduction/Assembly	$171.00
Computer Modeling/Software Use	$900.00
Travel Costs	$200.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$1,271.00**
SUBTOTAL:	**$399,000.00**
SUBCONSULTANTS FEE:	**$0.00**
TOTAL FEE:	**$399,000.00**

McKinney National Airport
Terminal Apron Construction

Final Design

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Civil Project Management (4hr/week; 8 weeks)	32									
Electrical Project Management (1hr/week; 8 weeks)			8							
Internal Weekly Progress Meetings (8 weeks)	2	4	4		4	4	4	4		4
External Monthly Progress Meetings (2 months)	4		4	4	4					4
Subtotal - Project Administration	**38**	**4**	**16**	**4**	**8**	**4**	**4**	**4**	**0**	**8**
2. Civil Engineering										
Incorporate CSPP Comments from FAA Review	2		4		8					
Coordination with FAA	2		4		10					
Update Geometric Layout			2		4			8		
Update Horizontal Alignments			2		4			8		
Update Vertical Alignments			2		4		8			
Update Assemblies			2		4		12			
Update Corridor Model			2		8		30			
Update Pavement Design		4	1		2					
Update Drainage Calculations			4		20					
Update Glycol Calculations		4	8		16		8			
Construction Management Plan		4	2	4	8					
Final Plans										
Cover Sheet					1			1		
Sheet Index					1			1		
General Notes					1			2		
Project Layout Plan			1		2			4		
Survey Control Plan			1		2			4		
Construction Safety Plans			2		8			16		
Construction Safety and Details			1		4			8		
Existing Conditions Plans					4			6		
Erosion Control Plans			1		2			8		
Erosion Control Details			1		2			4		
Demolition Plans			1		4			8		
Demolition Details			1		2			4		
Drainage Plans			4		8		6	24		
Drainage Details			2		4			12		
Underdrain Plans			1		4		8			
Underdrain Details			1		2			8		
Typical Sections			1		4		8			
Paving Plans			4		8		16			
Paving Details			1		2			8		
Grading Plans			4		8		24			
Grading Details			1		2			4		
Joint Layout Plans			4		8		24			
Joint Details			2		4			12		
Elevation Plans			2		8		20			
Elevation Details			1		2		4			
Pavement Marking Plans			2		8			24		
Pavement Marking Details			2		4			12		
Cross Sections			12		24		60			
Develop Final Construction Contract Documents	1		2		4					4
Develop Final Technical Specifications			2		6					4
Develop Final Supplemental Specifications			2		6					4
Develop Final Quantities			1		4		2	2		
Develop Final Opinions of Probable Construction Costs	1		2		6					
Internal Quality Control (QC) Review	16	32	16						16	16
Incorporate QC Review Comments		4	8		16		40	24		
Prepare for Final Plan Review Meeting	2		8							8
Attend Final Plan Review Meeting	8		8		8					8
Prepare and Distribute Final Review Meeting Minutes and Tasks	2		2							8
Incorporate Final Owner/FAA Review Comments			2		5		20	12		
Subtotal - Civil Engineering	**34**	**48**	**139**	**4**	**276**	**0**	**290**	**224**	**16**	**52**

McKinney National Airport
Terminal Apron Construction

Final Design

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
3. Electrical Engineering										
Update CCR Load Calculations			2		6					
Update One-Line Diagram			1		2	6				
Light Level Model Updates			2		4	8				
Light Foundation Design			4	16			8			
ALCMS Coordination			4		12					
Final Plans										
Construction Safety Plans					2	8				
Construction Safety Details					1	4				
Electrical Notes					2	4				
Lighting Removal Plans					2	8				
Lighting Removal Details					1	4				
Lighting Installation Plans			2		2	8				
Lighting Installation Details			1		1	6				
High Mast Light Foundation Details				8		16				
Duct Bank Profiles			1		2	4				
Develop Final Technical Specifications			1		4					
Develop Final Supplemental Specifications			1		4					
Develop Final Quantities			1		2	6				
Develop Final Opinions of Probable Construction Costs			1		4					
Internal Quality Control (QC) Review		10	20		10				10	10
Incorporate QC Review Comments		2	4		8	24				
Attend Final Plan Review Meeting			6							
Incorporate Final Owner/FAA Review Comments			2		8	18				
Subtotal - Electrical Engineering	**0**	**12**	**53**	**24**	**77**	**124**	**8**	**0**	**10**	**10**
Hours	**72**	**64**	**208**	**32**	**361**	**128**	**302**	**228**	**26**	**70**

SUBTOTAL - SALARIES:	**$336,687.00**
DIRECT NON-LABOR EXPENSES	
Document Printing/Reproduction/Assembly	$313.00
Computer Modeling/Software Use	$900.00
Travel Costs	$100.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$1,313.00**
SUBTOTAL:	**$338,000.00**
SUBCONSULTANTS FEE:	**$0.00**
TOTAL FEE:	**$338,000.00**

McKinney National Airport
Terminal Apron Construction

Bidding Services

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Review and Respond to Request for Information (RFI)			4	12	8					
Draft and Distribute Addendums	1		4	8	20					
Subtotal - Project Administration	**1**	**0**	**8**	**20**	**28**	**0**	**0**	**0**	**0**	**0**
Hours	**1**	**0**	**8**	**20**	**28**	**0**	**0**	**0**	**0**	**0**

SUBTOTAL - SALARIES:	**$12,577.00**
DIRECT NON-LABOR EXPENSES	
Document Printing/Reproduction/Assembly	$23.00
Postage/Freight/Courier	$0.00
Office Supplies/Equipment	$0.00
Travel Costs	$0.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$23.00**
SUBTOTAL:	**$12,600.00**
SUBCONSULTANTS FEE:	**$0.00**
TOTAL FEE:	**$12,600.00**

McKinney National Airport
FM 546 Intersection Connection

Surveys, SUE, and ROW

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Develop Survey Field Work Exhibits			1	2	4					
Develop Survey Subconsultant Agreement	4		8							
Coordinate with Survey Subconsultant			4							
Survey Site Visit				6						
Base Map Developing / Survey Processing			2	2	4			8		
QC Review of Survey Data		2		4	6			3		
Subtotal - Project Administration	**4**	**2**	**15**	**14**	**14**	**0**	**0**	**11**	**0**	**0**
Hours	**4**	**2**	**15**	**14**	**14**	**0**	**0**	**11**	**0**	**0**

SUBTOTAL - SALARIES:	**$14,333.00**
DIRECT NON-LABOR EXPENSES	
Computer Modeling/Software Use	$50.00
Document Printing/Reproduction/Assembly	$92.00
Travel Costs	$25.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$167.00**
SUBTOTAL:	**$14,500.00**
SUBCONSULTANTS FEE (White Hawk; Topo Survey & SUE):	**$84,400.00**
SUBCONSULTANTS FEE (White Hawk; Boundary Survey):	**$55,300.00**
TOTAL FEE:	**$154,200.00**

McKinney National Airport
FM 546 Intersection Connection

Geotechnical

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Geotechnical Kickoff Meeting		2	2		2					
Coordinate with Geotechnical Subconsultant			4							
Develop Geotechnical Subconsultant Agreement	1	2	4							
Develop Geotechnical Field Work Exhibits			2	4	5					
Site Visit During Field Work				6	6					
Geotechnical Report Review		6	4	4						
Correspondence for Design Input		4	2	4						
Subtotal - Project Administration	**1**	**14**	**18**	**18**	**13**	**0**	**0**	**0**	**0**	**0**
Hours	**1**	**14**	**18**	**18**	**13**	**0**	**0**	**0**	**0**	**0**

SUBTOTAL - SALARIES:	**$16,538.00**
DIRECT NON-LABOR EXPENSES	
Document Printing/Reproduction/Assembly	$37.00
Computer Modeling	$0.00
Travel Costs	$25.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$62.00**
SUBTOTAL:	**$16,600.00**
SUBCONSULTANTS FEE (STL Engineers):	**$61,100.00**
TOTAL FEE:	**$77,700.00**

McKinney National Airport
FM 546 Intersection Connection

Preliminary Design

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-3	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Civil Project Management (2hr/week; 12 weeks)	24									
Internal Bi-Weekly Progress Meetings (12 weeks)	6		12		12	12		12		12
External Monthly Progress Meetings (3 months)	3		3		3					2
RAISE Grant Application										
Program Narrative and Goals	2									20
Budget Development	2									12
Performance Metrics	4									40
Grant Application Preparation	2									20
QC Review	4									8
Subtotal - Project Administration	**47**	**0**	**15**	**0**	**15**	**12**	**0**	**12**	**0**	**114**
2. Civil Engineering										
Coordination with TXDOT / City	4		8		16					
Develop Geometric Layout			2		4			12		
Develop Horizontal Alignments			2		4			12		
Develop Vertical Alignments			2		4			16		
Develop Assemblies			2		4			8		
Develop Corridor Model			4		8			32		
Develop Pavement Design		4	2		6					
Drainage Calculations			4		20			8		
Preliminary Plans										
Cover Sheet					1			1		
Sheet Index					1			1		
General Notes					1			1		
Project Layout Plan					1			2		
Survey Control Plan					1			2		
Traffic Control Plans			2		4			16		
Traffic Control Details			2		4			8		
Existing Conditions Plans			1		2			4		
Erosion Control Plans			1		2			8		
Erosion Control Details			1		2			4		
Demolition Plans			2		2			8		
Demolition Details			1		2			4		
Drainage Plans			2		4			16		
Drainage Details			2		4			8		
Typical Sections			1		2			8		
Paving Plans			1		2			8		
Paving Details			1		2			4		
Grading Plans			2		8			24		
Grading Details			1		2			4		
Joint Layout Plans			2		4			16		
Joint Details			1		2			8		
Pavement Marking Plans			1		2			8		
Pavement Marking Details			1		2			6		
Cross Sections			4		8			24		
Develop Preliminary Construction Contract Documents			2		6					
Develop Preliminary Technical Specifications			2		8					
Develop Preliminary Supplemental Specifications			2		8					
Develop Preliminary Quantities					2			4		
Develop Preliminary Opinions of Probable Construction Costs			2		4					
Internal Quality Control (QC) Review		12	12						12	6
Incorporate QC Review Comments		2	4		8			20		
Prepare for Preliminary Plan Review Meeting	1		2		4					4
Attend Preliminary Plan Review Meeting	6		6							6
Prepare and Distribute Preliminary Review Meeting Minutes and Tasks			2							4
Incorporate Preliminary Owner/TXDOT Review Comments			2		4			12		
Subtotal - Civil Engineering	**11**	**18**	**91**	**0**	**175**	**0**	**0**	**317**	**12**	**20**

McKinney National Airport
FM 546 Intersection Connection

Preliminary Design

3. Electrical Engineering										
Coordination with Electric Utility					8					
Develop Roadway Light Modeling					4	16				
One-Line Diagram					4	12				
Preliminary Plans										
Electrical Notes					2	4				
Lighting Installation Plans					6	20				
Lighting Details					4	12				
Power Installation Plans					2	12				
Power Details					2	6				
Duct Bank Profiles					2	6				
Develop Preliminary Technical Specifications					6					
Develop Preliminary Supplemental Specifications					6					
Develop Preliminary Quantities					2	4				
Develop Preliminary Opinions of Probable Construction Costs					2					
Internal Quality Control (QC) Review		6			6				6	
Incorporate QC Review Comments		2			4	12				
Incorporate Preliminary Owner/TXDOT Review Comments					2	8				
Subtotal - Electrical Engineering	**0**	**8**	**0**	**0**	**62**	**112**	**0**	**0**	**6**	**0**
Hours	**58**	**26**	**106**	**0**	**252**	**124**	**0**	**329**	**18**	**134**

SUBTOTAL - SALARIES: **$221,396.00**

DIRECT NON-LABOR EXPENSES

Document Printing/Reproduction/Assembly	$254.00
Computer Modeling/Software Use	$600.00
Travel Costs	$150.00

SUBTOTAL - DIRECT NON-LABOR EXPENSES: **$1,004.00**

SUBTOTAL: **$222,400.00**

SUBCONSULTANTS FEE: **$0.00**

TOTAL FEE: **$222,400.00**

McKinney National Airport
FM 546 Intersection Connection

Final Design

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-3	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Civil Project Management (2hr/week; 8 weeks)	16									
Internal Bi-Weekly Progress Meetings (8 weeks)	2		4		4	4		4		4
External Monthly Progress Meetings (2 months)	2		2		2					2
Subtotal - Project Administration	**20**	**0**	**6**	**0**	**6**	**4**	**0**	**4**	**0**	**6**
2. Civil Engineering										
Coordination with TXDOT / City	4		8		16					
Update Geometric Layout					2			8		
Update Horizontal Alignments					2			8		
Update Vertical Alignments					4			16		
Update Assemblies					2			8		
Update Corridor Model			1		4			24		
Update Pavement Design		2			4					
Update Drainage Calculations			4		16			4		
Construction Management Plan		2	1	2	8					
Final Plans										
Cover Sheet					1			1		
Sheet Index					1			1		
General Notes					1			1		
Project Layout Plan					1			1		
Survey Control Plan					1			1		
Traffic Control Plans			2		4			16		
Traffic Control Details			2		4			8		
Existing Conditions Plans			1		2			4		
Erosion Control Plans			1		2			8		
Erosion Control Details			1		2			4		
Demolition Plans			2		2			8		
Demolition Details			1		2			4		
Drainage Plans			2		4			12		
Drainage Details			2		4			8		
Typical Sections			1		2			8		
Paving Plans			1		2			8		
Paving Details			1		2			4		
Grading Plans			2		8			16		
Grading Details			1		2			4		
Joint Layout Plans			2		4			12		
Joint Details			1		2			8		
Elevation Plans			2		4			8		
Elevation Details			1		2			4		
Pavement Marking Plans			4		8			24		
Pavement Marking Details			1		2			8		
Cross Sections			1		2			6		
Develop Final Construction Contract Documents			4		8			24		
Develop Final Technical Specifications			1		2					
Develop Final Supplemental Specifications			1		2					
Develop Final Quantities					1			2		
Develop Final Opinions of Probable Construction Costs			1		1					
Internal Quality Control (QC) Review		12	12						12	6
Incorporate QC Review Comments		2	2		2			16		
Prepare for Final Plan Review Meeting			2		4					4
Attend Final Plan Review Meeting	6		6							6
Prepare and Distribute Final Review Meeting Minutes and Tasks			1							2
Incorporate Final Owner/TXDOT Review Comments			1		2			8		
Subtotal - Civil Engineering	**10**	**18**	**77**	**2**	**151**	**0**	**0**	**305**	**12**	**18**

McKinney National Airport
FM 546 Intersection Connection

Final Design

3. Electrical Engineering										
Coordination with Electric Utility					6					
Update Roadway Light Modeling					4	12				
One-Line Diagram					4	8				
Final Plans										
Electrical Notes					1	2				
Lighting Installation Plans					4	12				
Lighting Details					2	6				
Power Installation Plans					2	8				
Power Details					2	4				
Duct Bank Profiles					2	4				
Develop Final Technical Specifications					2					
Develop Final Supplemental Specifications					2					
Develop Final Quantities					2	4				
Develop Final Opinions of Probable Construction Costs					2					
Internal Quality Control (QC) Review		6			6				6	
Incorporate QC Review Comments		1			2	8				
Incorporate Final Owner/TXDOT Review Comments					2	6				
Subtotal - Electrical Engineering	**0**	**7**	**0**	**0**	**45**	**74**	**0**	**0**	**6**	**0**

Hours	**30**	**25**	**83**	**2**	**202**	**78**	**0**	**309**	**18**	**24**

SUBTOTAL - SALARIES: **$161,724.00**

DIRECT NON-LABOR EXPENSES

Document Printing/Reproduction/Assembly	$126.00
Computer Modeling/Software Use	$500.00
Travel Costs	$50.00

SUBTOTAL - DIRECT NON-LABOR EXPENSES: **$676.00**

SUBTOTAL: **$162,400.00**

SUBCONSULTANTS FEE: **$0.00**

TOTAL FEE: **$162,400.00**

McKinney National Airport
FM 546 Intersection Connection

Bidding Services

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-4	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Upload Bid Documents to Plan Room			1	4						
Dispense Plans and Specs to Prospective Bidders	1		2							
Review and Respond to Request for Information (RFI)			2	8	4					
Draft and Distribute Addendums	1		2	8	16					
Prepare for Pre-Bid Meeting			2							
Attend Pre-Bid Meeting	4		4							
Bid Opening	4		4							
Prepare Bid Tabulation	1		2		6					
Evaluate Bids and Prepare Recommendation of Award	2		4							
Prepare Contract Documents			2		4					4
Subtotal - Project Administration	**13**	**0**	**25**	**20**	**30**	**0**	**0**	**0**	**0**	**4**
Hours	**13**	**0**	**25**	**20**	**30**	**0**	**0**	**0**	**0**	**4**

SUBTOTAL - SALARIES:	**$23,202.00**
DIRECT NON-LABOR EXPENSES	
Document Printing/Reproduction/Assembly	
Postage/Freight/Courier	$48.00
Office Supplies/Equipment	$0.00
Travel Costs	$50.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$98.00**
SUBTOTAL:	**$23,300.00**
SUBCONSULTANTS FEE:	**$0.00**
TOTAL FEE:	**$23,300.00**

McKinney National Airport
Eastside Fuel Farm

Preliminary Design

WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-3	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Civil Project Management (2hr/week; 12 weeks)	24									
Internal Bi-Weekly Progress Meetings (12 weeks)	6		12	12						12
External Monthly Progress Meetings (3 months)	3		3							3
CMAR Procurement Assistance	5		10							
Subtotal - Project Administration	**38**	**0**	**25**	**12**	**0**	**0**	**0**	**0**	**0**	**15**
2. Civil Engineering										
Coordination with Fuel Service Provider	2		8							
Coordination with AHJ	2		8							
Develop Geometric Layout			1		2			6		
Develop Access Road Horizontal Alignment			1		2			6		
Develop Vertical Alignments			2		8			12		
Develop Grading Model			4		8			12		
Develop Pavement Design			2		4					
SPCCP Review and Updates			1		2		6			
Preliminary Plans										
Cover Sheet and Index of Sheets			1		1			2		
Project Layout and Survey Control Plan			1		2			4		
General Notes			1		1			2		
Construction Safety and Phasing Plan			2		4			8		
Fueling Facility Site Plan			2		4			12		
Develop Preliminary Supplemental Specifications	1		2		8					
Develop Preliminary Quantities			2		4					
Develop Preliminary Opinions of Probable Construction Costs			1		2					
Internal Quality Control (QC) Review		4	4						4	
Incorporate QC Review Comments			2		4			8		
Prepare for Preliminary Plan Review Meeting	1		2		4					4
Attend Preliminary Plan Review Meeting	6		6							6
Prepare and Distribute Preliminary Review Meeting Minutes and Tasks			2							4
Incorporate Preliminary Owner Review Comments			2		4			8		
Subtotal - Civil Engineering	**12**	**4**	**57**	**0**	**64**	**0**	**6**	**80**	**4**	**14**
3. Electrical Engineering										
Coordination with Electric Utility				2		4				
Panel Load Calculations				2		4				
One-Line Diagram				2		4				
Preliminary Plans										
Electrical Legend and Notes				1		2				
Electrical Details				2		8				
Fuel Farm Rack Details				2		4				
Emergency Shut-Off Station Details				2		4				
One-Line Diagram				2		8				
Panel Schedule				1		2				
Develop Preliminary Supplemental Specifications				4						
Develop Preliminary Quantities				1		2				
Develop Preliminary Opinions of Probable Construction Costs				1		2				
Internal Quality Control (QC) Review			3	3					3	
Incorporate QC Review Comments				2		4				
Incorporate Preliminary Owner Review Comments				2		4				
Subtotal - Electrical Engineering	**0**	**0**	**3**	**29**	**0**	**52**	**0**	**0**	**3**	**0**
Hours	**50**	**4**	**85**	**41**	**64**	**52**	**6**	**80**	**7**	**29**

SUBTOTAL - SALARIES:	**$98,272.00**
DIRECT NON-LABOR EXPENSES	
Document Printing/Reproduction/Assembly	$178.00
Computer Modeling/Software Use	$100.00
Travel Costs	$50.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$328.00**
SUBTOTAL:	**$98,600.00**
SUBCONSULTANTS FEE:	**$0.00**
TOTAL FEE:	**$98,600.00**

McKinney National Airport
Eastside Fuel Farm

Final Design

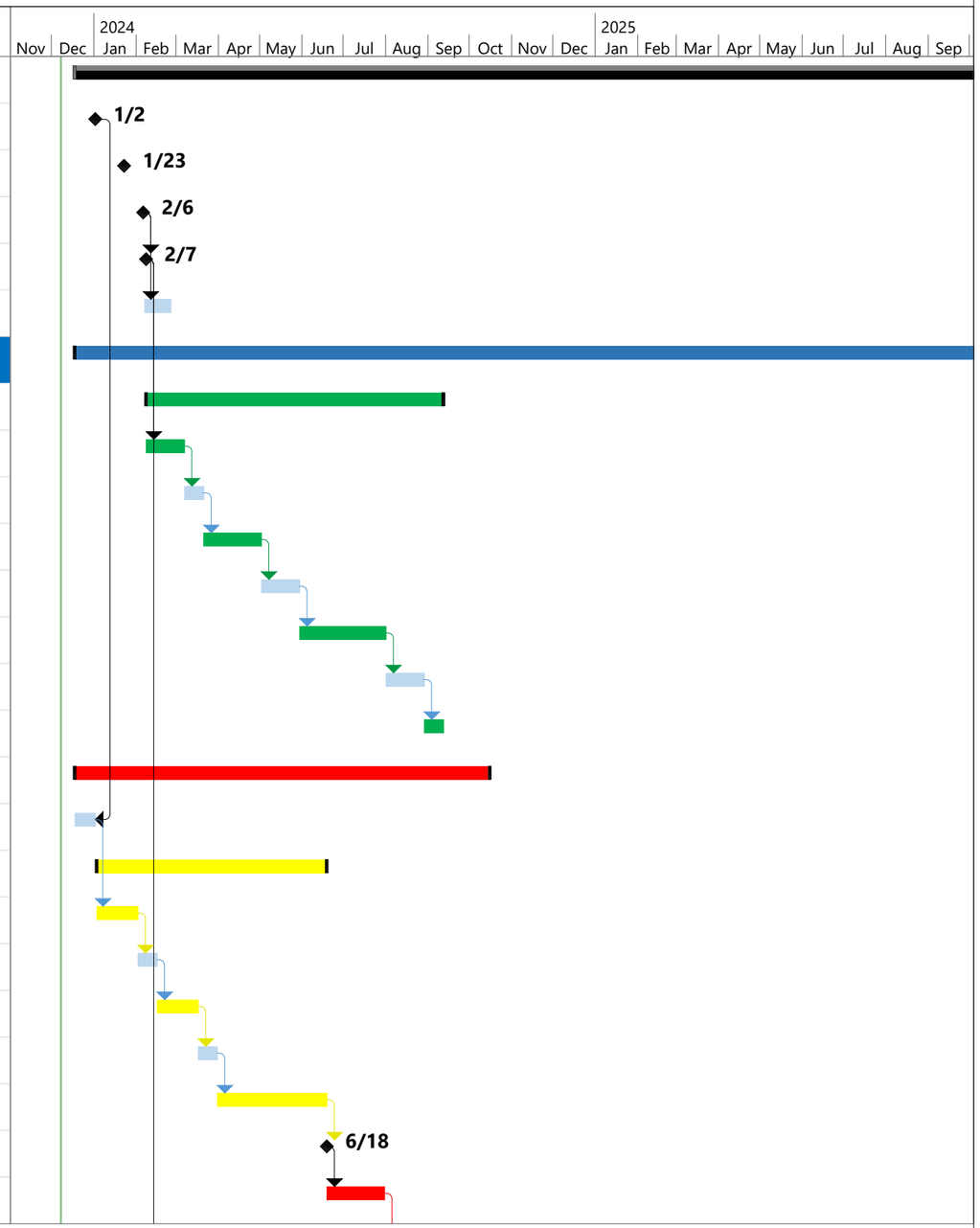
WORK TASK DESCRIPTION	E-6	E-5	E-4	E-3	E-2	E-1	D-3	T-3	C-3	AM-3
	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr
1. Project Administration										
Civil Project Management (2hr/week; 8 weeks)	16									
Internal Bi-Weekly Progress Meetings (8 weeks)	4		8			8				8
External Monthly Progress Meetings (2 months)	2		2							2
CMAR Procurement Assistance	5		10							
Subtotal - Project Administration	**27**	**0**	**20**	**0**	**0**	**8**	**0**	**0**	**0**	**10**
2. Civil Engineering										
Coordination with Fuel Service Provider	2		8							
Coordination with AHJ	2		8							
Update Geometric Layout			1		2			4		
Update Access Road Horizontal Alignment			1		2			4		
Update Vertical Alignments			1		2			6		
Update Grading Model			1		2			6		
Final Plans										
Cover Sheet and Index of Sheets					1			1		
Project Layout and Survey Control Plan					1			2		
General Notes					1			1		
Construction Safety and Phasing Plan			1		2			4		
Fueling Facility Site Plan			1		2			5		
Develop Final Supplemental Specifications			1		2					
Develop Final Quantities			1		2					
Develop Final Opinions of Probable Construction Costs			1		1					
Internal Quality Control (QC) Review		5	5						5	3
Incorporate QC Review Comments			1		2			4		
Prepare for Final Plan Review Meeting	1		2		4					4
Attend Final Plan Review Meeting	6		6							6
Prepare and Distribute Final Review Meeting Minutes and Tasks			2							4
Incorporate Final Owner Review Comments			1		2			4		
Subtotal - Civil Engineering	**11**	**5**	**42**	**0**	**28**	**0**	**0**	**41**	**5**	**17**
3. Electrical Engineering										
Coordination with Electric Utility				2		4				
Panel Load Calculations				2		4				
One-Line Diagram				2		6				
Final Plans										
Electrical Legend and Notes				1		1				
Electrical Details				2		6				
Fuel Farm Rack Details				2		6				
Emergency Shut-Off Station Details				2		4				
One-Line Diagram				1		4				
Panel Schedule				1		2				
Develop Final Supplemental Specifications				2						
Develop Final Quantities				1		2				
Develop Final Opinions of Probable Construction Costs				1		2				
Internal Quality Control (QC) Review			4	4					4	2
Incorporate QC Review Comments				1		2				
Incorporate Final Owner Review Comments				1		2				
Subtotal - Electrical Engineering	**0**	**0**	**4**	**25**	**0**	**45**	**0**	**0**	**4**	**2**
Hours	**38**	**5**	**66**	**25**	**28**	**53**	**0**	**41**	**9**	**29**

SUBTOTAL - SALARIES:	**$70,033.00**
DIRECT NON-LABOR EXPENSES	
Document Printing/Reproduction/Assembly	$217.00
Computer Modeling/Software Use	$100.00
Travel Costs	$50.00
SUBTOTAL - DIRECT NON-LABOR EXPENSES:	**$367.00**
SUBTOTAL:	**$70,400.00**
SUBCONSULTANTS FEE:	**$0.00**
TOTAL FEE:	**$70,400.00**

McKinney National Airport (TKI)
Eastside Development Schedule
As of Fri 12/8/23

Green - Garver
Red - Construction
Yellow Hatch - Bidding
Light Blue - Review Periods

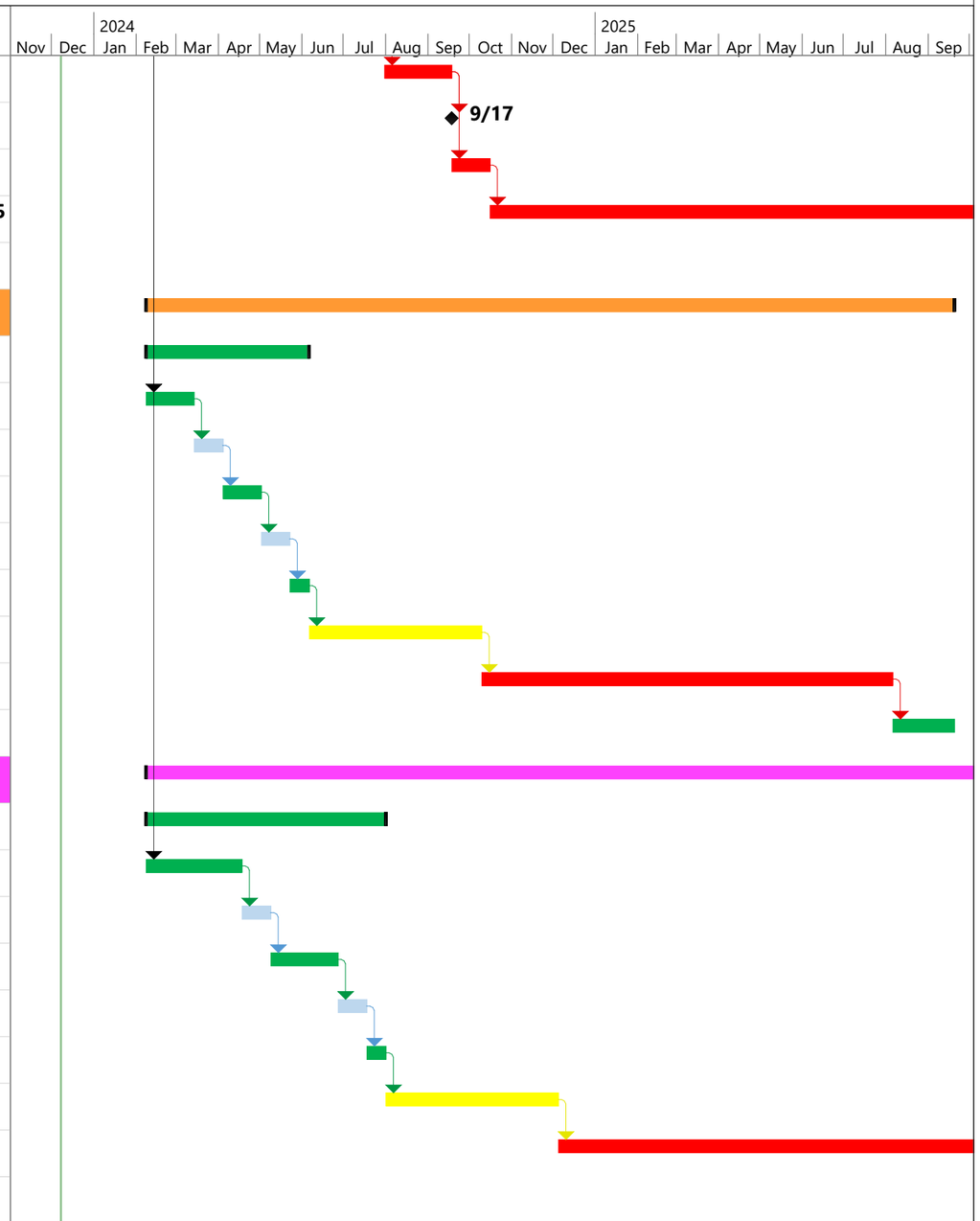
ID	Task Name	Duration	Start	Finish
0	**McKinney National Airport (TKI)**	**763 days**	**Mon 12/18/23**	**Sun 1/18/26**
1	Council Resolution for Eastside Infrastructure	0 days	Tue 1/2/24	Tue 1/2/24
2	McKInney EDC / CDC Meeting	0 days	Tue 1/23/24	Tue 1/23/24
3	Council Meeting for Contract Approval	0 days	Tue 2/6/24	Tue 2/6/24
4	Notice to Proceed	0 days	Wed 2/7/24	Wed 2/7/24
5	Design Contract Execution	19 days	Wed 2/7/24	Sun 2/25/24
6	**Landside Package - Terminal, Roadway Loop, Parking, Utilities, Fuel Farm (CMAR)**	**728 days**	**Mon 12/18/23**	**Sun 12/14/25**
7	**Design**	**217 days**	**Thu 2/8/24**	**Wed 9/11/24**
8	Schematic Design (SD)	28 days	Thu 2/8/24	Wed 3/6/24
9	City of McKInney Review	14 days	Thu 3/7/24	Wed 3/20/24
10	Design Development (DD)	42 days	Thu 3/21/24	Wed 5/1/24
11	City of McKinney Review	28 days	Thu 5/2/24	Wed 5/29/24
12	Construction Documents (CD)	63 days	Thu 5/30/24	Wed 7/31/24
13	City of McKinney Review	28 days	Thu 8/1/24	Wed 8/28/24
14	Address Comments and Issue IFC Set	14 days	Thu 8/29/24	Wed 9/11/24
15	**CMAR Preconstruction**	**303 days**	**Mon 12/18/23**	**Tue 10/15/24**
16	Develop CMAR Procurement Documents	15 days	Mon 12/18/23	Tue 1/2/24
17	CMAR Procurement	**168 days**	**Wed 1/3/24**	**Tue 6/18/24**
18	RFQ Phase	30 days	Wed 1/3/24	Thu 2/1/24
19	Evaluate RFQ Documents and Shortlist	14 days	Fri 2/2/24	Thu 2/15/24
20	RFP Phase	30 days	Fri 2/16/24	Sat 3/16/24
21	Evaluate and Select CMAR Contractor	14 days	Sun 3/17/24	Sat 3/30/24
22	Preconstruction Agreement Services Contract	80 days	Sun 3/31/24	Tue 6/18/24
23	Council Approval for CMAR Preconstruction Contract	0 days	Tue 6/18/24	Tue 6/18/24
24	CMAR Pricing based on CD	42 days	Wed 6/19/24	Tue 7/30/24



McKinney National Airport (TKI)
Eastside Development Schedule
As of Fri 12/8/23

Green - Garver
Red - Construction
Yellow Hatch - Bidding
Light Blue - Review Periods

ID	Task Name	Duration	Start	Finish
25	Finalize GMP and CMAR Construction Contract	49 days	Wed 7/31/24	Tue 9/17/24
26	Council Approval for CMAR Construction GMP Contract	0 days	Tue 9/17/24	Tue 9/17/24
27	Construction Startup	28 days	Wed 9/18/24	Tue 10/15/24
28	**CMAR Construction (To be finalized during design)**	**365 days**	**Wed 10/16/24**	**Wed 10/15/25**
29	Closeout	60 days	Thu 10/16/25	Sun 12/14/25
30	**Taxiway Charlie & Terminal Apron - (DBB)**	**590 days**	**Thu 2/8/24**	**Fri 9/19/25**
31	**Design**	**119 days**	**Thu 2/8/24**	**Wed 6/5/24**
32	Preliminary Design (60%)	35 days	Thu 2/8/24	Wed 3/13/24
33	City of McKinney Review	21 days	Thu 3/14/24	Wed 4/3/24
34	Final Design (90%)	28 days	Thu 4/4/24	Wed 5/1/24
35	City of McKinney Review	21 days	Thu 5/2/24	Wed 5/22/24
36	Address Comments and Issue IFB Set (100%)	14 days	Thu 5/23/24	Wed 6/5/24
37	**Bidding**	**126 days**	**Thu 6/6/24**	**Wed 10/9/24**
38	**Construction (To be finalized during design)**	**300 days**	**Thu 10/10/24**	**Tue 8/5/25**
39	Closeout	45 days	Wed 8/6/25	Fri 9/19/25
40	**FM 546 Intersection Connection (DBB)**	**711 days**	**Thu 2/8/24**	**Sun 1/18/26**
41	**Design**	**175 days**	**Thu 2/8/24**	**Wed 7/31/24**
42	Preliminary Design (60%)	70 days	Thu 2/8/24	Wed 4/17/24
43	City of McKinney Review	21 days	Thu 4/18/24	Wed 5/8/24
44	Final Design (90%)	49 days	Thu 5/9/24	Wed 6/26/24
45	City of McKinney Review	21 days	Thu 6/27/24	Wed 7/17/24
46	Address Comments and Issue IFB Set (100%)	14 days	Thu 7/18/24	Wed 7/31/24
47	**Bidding**	**126 days**	**Thu 8/1/24**	**Wed 12/4/24**
48	**Construction (To be finalized during design)**	**365 days**	**Thu 12/5/24**	**Thu 12/4/25**
49	Closeout	45 days	Fri 12/5/25	Sun 1/18/26



APPENDIX D

FM 546

RD 722

ULTIMATE TERMINAL DEVELOPMENT (OUT OF SCOPE)

PROPOSED PARKING

TERMINAL FACILITY

PROPOSED 30,000 S.F. TER

EXISTING INDUSTRIAL DEVELOPMENT

RD 722

ARFF (OUT OF SCOPE)

ULTIMATE TERMINAL DEVELOPMENT (OUT OF SCOPE)

TERMINAL APRON

2

3

LANDSIDE SITE IMPROVEMENTS

FM 546 CONNECTION

FM 546

VSR (OUT OF SCOPE)

EASTSIDE FUEL FARM

TAXIWAY C CONSTRUCTION

WAY CHARLIE (PHASE 1)

RUNWAY 18-36

BRL ROFA RSA RPZ

0 100' 200' 400' 600'

(IN FEET)

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF SARA C. ANDREWS, P.E. 126832 ON 06-16-2023. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.

REV.	DATE	DESCRIPTION	BY

MCKINNEY NATIONAL AIRPORT (TKI)
MCKINNEY, TEXAS

COMMERCIAL SERVICE TERMINAL PROGRAMMING

CONCEPTUAL TERMINAL AND FM 546 LAYOUT

JOB NO.: 22A11173
DATE: JUNE 2023
DESIGNED BY: MRM
DRAWN BY: RJT

BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DRAWING NUMBER
EXB

SHEET NUMBER **2**

File: L:\2022\22A11173 - TKI - Eastside Programming\Drawings\EXHIBITS\Landside Layout Alternatives\RJT\Landside Alternatives - ULCC-2.dwg Last Save: 7/7/2023 1:57 PM Last saved by: RJTierney
Last plotted by: Tierney, R. (Jim) Plot Style: AECmono.ctb Plot Scale: 1:1 Plot Date: 9/22/2023 10:53 AM Plotter used: DWG To PDF.pc3

WA2240 - Chestnut Tank Improvements

Annual Budget – Below is a link to the City of McKinney's Annual Budget

https://www.mckinneytexas.org/210/Budget

Financial Status of Applying Organization – Below is a link to the City of McKinney's financial webpage:

https://www.mckinneytexas.org/152/Financial-Services

Form **W-9**
(Rev. October 2018)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

▶ **Go to *www.irs.gov/FormW9* for instructions and the latest information.**

Give Form to the requester. Do not send to the IRS.

Print or type. See **Specific Instructions** on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

City of McKinney

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☑ Other (see instructions) ▶ Municipality

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) 3

Exemption from FATCA reporting code (if any)

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.

222 N Tennessee Street. PO Box 517

Requester's name and address (optional)

6 City, state, and ZIP code

McKinney TX 75070

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN,* later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

7	5	–	6	0	0	0	5	9	9

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here **Signature of U.S. person ▶** Judy Mathis **Date ▶** 1/2/24

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9.*

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *later.*