

Scope of Services for Development of the Southeast Collin County Mobility Study

Overall Project

This project provides for the development of the Southeast Collin County Mobility Study from Visioning through environmental analysis and will be broken up into two phases. Burns & McDonnell will provide the following services to the County regarding the study:

- ▶ Design Surveying, Aerial Mapping and Limited SUE
- ▶ Coordination of Travel Demand Modeling
- ▶ Traffic Simulation Modeling of Key Weaving Areas and Intersections
- ▶ Route Studies
- ▶ Hydraulic Studies of Major Drainageways
- ▶ Schematic Plans
- ▶ Cost Estimates
- ▶ Environmental Analysis and Documentation
- ▶ Public/Stakeholder Involvement
- ▶ Renderings and Animations
- ▶ Right-of-Entry Agreements
- ▶ Preliminary Pavement Design
- ▶ Right-of-Way/Easement Determination, Mapping and Documentation

Phase 1 is defined as the project visioning portion of the project. This is where the study team will focus efforts on identifying current and future problems, collecting data, laying the groundwork to develop a strong project purpose and need, and communicating with the public and stakeholders why Collin County is undergoing the study.

Phase 2 is defined as the formal feasibility, environmental and schematic design phase. During this portion of the study the study team will develop and advance reasonable alternatives through schematic design and develop the appropriate level of environmental documentation to support future project implementation decisions and the potential use of federal funding. This phase can be further divided into multiple subphases as determined during Phase 1.

The total estimated cost of the Phase 1 of the project is **\$988,314.00**.

The cost of Phase 2 is heavily dependent on the outcomes of Phase 1, which should provide a better understanding of the Study Area that will be utilized in Phase 2.

Phase 1: Project Visioning Study

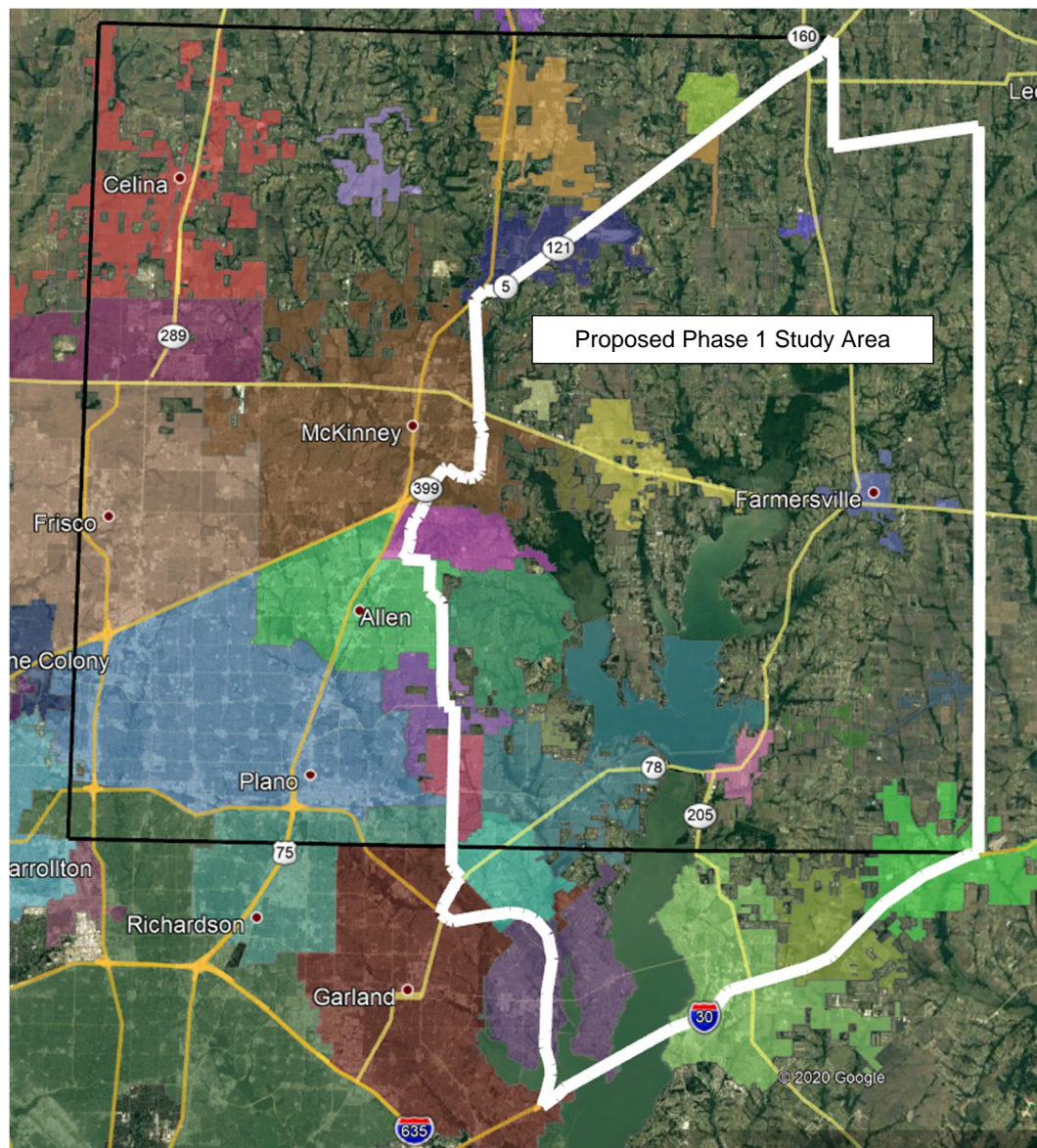
Overview

Task 1	Project Management and Quality Control
Task 2	Data Collection & Preliminary Analysis
Task 3	Public Involvement and Stakeholder Outreach

Project Details

The project Study Area will be bounded by I-30 on the south, SH 121 on the north, and the Collin County/Hunt County line on the east. The western boundary is made of a combination of PGBT, SH 78, FM 2551, SH 5 and Airport Blvd. A map of the project limits can be seen below denoted by the white boundary line.

The estimated duration of Phase 1 is 8 months from notice to proceed.



TASK 1: PROJECT MANAGEMENT AND QUALITY CONTROL

- ▶ Prepare a Project Management Plan
- ▶ Develop progress reports and invoicing
- ▶ Attend bi-monthly (twice a month) team coordination calls/meetings
- ▶ Oversee subconsultant services
- ▶ Provide QC/QA of deliverables

TASK 2: DATA COLLECTION & PRELIMINARY ANALYSIS

- ▶ Review and digitization of previous corridor planning work performed in the Study Area by Jacobs, NCTCOG and Collin County Engineering.
- ▶ Review city/county positions and/or resolutions regarding the existing/planned roadway network.
- ▶ Review and digitization of existing/planned roadway networks from cities, Collin County, Dallas County and Rockwall County.
- ▶ Conduct origin-destination (O-D) studies using Mobility anonymized cell phone data. This work includes:
 - Coordinating data collection with Mobility data team
 - Data calibration and verification
 - Data processing:
 - Import Jupiter notebook into ESRI ArcMAP for processing and analysis
 - Scale and balance counts with GIS and traffic engineering teams
 - Calibrate and scale number of trips for Mobility compared to existing tube counts
 - Balance O-D volumes along the corridor to maintain continuity of trips in the model
 - Tie trips to O-D zones using census blocks
 - Tie trip data to ESRI datasets (ACS, business data, etc.):
 - 2010-2019 historic data
 - 2024 demographic forecast data
 - Create data visualization using maps and tables
 - Performing an O-D analysis to identify traffic pattern trends for key portions of the Study Area. The analysis will contain:
 - O-D matrix with the following attributes:
 - Trip duration
 - Trip length
 - Trip speed
 - AM, PM and 24hr volumes
 - Trip purpose (home/work or private/commercial)
 - Diversion graphic and figures containing:
 - Patterns identified by algorithms
 - Repetitive trips
 - Local and non-local traffic
 - Ultimate O-D (inside and outside the Study Area, Collin County and State of Texas)
 - This information will be presented on O-D exhibits (up to 7) as well as an online data visualization tool, such as Microsoft PowerBI or ArcMAP.
 - The results of the O-D study will be presented to Collin County in an in-person meeting.
- ▶ Conduct early coordination with NCTCOG to prepare for traffic analysis of alternatives. This includes 1 kickoff meeting with NCTCOG, Jacobs and Collin County, and 3 internal team meetings to discuss actions to take in Phase 2.
- ▶ Conduct a high-level safety analysis using available TxDOT Crash Records Information System (CRIS) accident data. Analysis will include crashes between 2015 and 2020. The project team will prepare a crash volume heat map within the project limits and identify crash “hot spots”. A multivariate analysis will be performed to analyze crash data graphically,

identify problem areas and evaluate applicable countermeasures using crash modification factors (CMFs). The project team will summarize findings in a safety "white paper" to present to Collin County Engineering identifying safety needs and propose possible solutions. An interactive digital crash analysis tool will also be utilized in the analysis and delivered to Collin County.

- ▶ Request, obtain, and digitally map significant future commercial and residential developments in the project Study Area for inclusion in a project constraints map. Timing of the proposed development will be ascertained and the area denoting the location of the development will be colorized in a "heat map" fashion to indicate the timing of the completion of the development.
- ▶ Collect and analyze relevant environmental data, including demographic characteristics, land use, major utility corridors, public parks and recreation areas, conservation/environmentally sensitive areas, and natural features. Data sources may include, but not be limited to:

US Fish & Wildlife Service, National Wetlands Inventory	Texas Historical Sites - ATLAS
US Department of Agriculture Natural Resources Conservation Service	Texas Department of Transportation
Texas Parks & Wildlife	Federal Emergency Management Agency
Texas Water Development Board	Texas Railroad Commission
Texas Commission on Environmental Quality	United States Geological Survey
Texas Natural Resources Information System	Dallas County Appraisal District
Texas Historical Sites - ATLAS	Collin County Appraisal District
North Central Texas Council of Governments	Rockwall County Appraisal District
Homeland Infrastructure Foundation-Level Data	Collin County GIS
Potential Archeological Liability Maps	

- ▶ Develop a constraints base map for use in defining potential mobility corridors.

TASK 3: PUBLIC AND STAKEHOLDER OUTREACH

- ▶ Develop a public and stakeholder outreach plan for approval by Collin County.
- ▶ Develop tailored and strategic project messaging, lists of target audiences, brand identity/consistent look and feel, and logo.
- ▶ Compile, maintain, and update mailing and email lists of property owners, stakeholders, elected officials, agencies and organizations interested in the study.
- ▶ Provide social media strategy and editorial content/calendar for the County to post to its social media accounts include Facebook and NextDoor. This will include outreach to influential project champions with significant social media presence.
- ▶ Develop custom digital assets including high-quality custom graphics, infographics and photography that will speak directly to the target audiences.
- ▶ Develop and update an independent website that can be linked to the Collin County webpage. The website will allow interested parties to learn more about the study, stay up to date on project news and events, house FAQ content, and allow the public to sign up for project updates and meeting notices. The Study Website will be responsive and optimized for mobile functionality, comply with ADA standards, and adhere to code and transparency best practices.
- ▶ Develop a project email address listing.
- ▶ Conduct a stakeholder work group meeting with key regional representatives prior to the public meeting.
- ▶ Send out up to 3 email blasts to stakeholders at Phase 1 milestones, including: study kickoff and 2 in conjunction with the public meeting. Collin County will provide its email list for the first email blast.
- ▶ Host and document 1 public meeting at 3 locations that is focused solely on communicating data about current and future conditions, project need, regional mobility, study scope and project timeline. This work includes preparing or coordinating the following:
 - Logistics and venues
 - Presentations, exhibits and handouts
 - Meeting notices and project marketing such as:
 - Postcards mailed to all property owners and residents in the Study Areas

- Newspaper ads
- Changeable message signs
- Press releases
- Electronic and hardcopy surveys
- Spanish and ASL translation services at the meeting and for select materials
- Law enforcement and security staff
- AV equipment
- ▶ Host and document 1 virtual or online public meeting.
- ▶ Develop 1 electronic survey to gather input in conjunction with the first public meeting. GIS analysis will be conducted with survey data in order to better understand public sentiment and to determine key issues in different areas.
- ▶ Conduct up to 40 small group stakeholder meetings (see initial list below of possible stakeholders). Some of these meetings might be combined for convenience sake and as appropriate.

Stakeholders	
▶ Collin County Judge, Commissioners and staff	○ New Hope
▶ Mayors and city staff	○ Parker
○ Anna	○ Princeton
○ Blue Ridge	○ Rockwall (Rockwall County)
○ Fairview	○ Rowlett (Dallas and Rockwall County)
○ Farmersville	○ Royce City (Rockwall and Collin County)
○ Fate (Rockwall County)	○ Sachse (Dallas and Collin County)
○ Garland (Dallas County)	○ St. Paul
○ Josephine	○ Wylie (Collin, Dallas and Rockwall County)
○ Lavon	▶ Partners
○ Lowry Crossing	○ NCTCOG
○ Lucas	○ USACE
○ McKinney	○ City of Dallas (DWU)
○ Melissa	○ Dallas County
○ Murphy	▶ Vocal opponents (such as Save Lake Lavon)
○ Nevada	▶ Possible project champions