

WORK AUTHORIZATION NO. 1

For

Schematic Design, Drainage Study, & Cost Estimate

PROJECT: CR255/CR289 (CR254 TO RONALD REAGAN BLVD.)

This Work Authorization is made pursuant to the terms and conditions of the Williamson County Contract for Engineering Services, being dated **March 23, 2021** and entered into by and between Williamson County, Texas, a political subdivision of the State of Texas, (*the "County"*) and **Hejl, Lee & Associates, Inc.** (*the "Engineer"*).

Part 1. The *Engineer* will provide the following engineering services set forth in Attachment "B" of this Work Authorization.

Part 2. The maximum amount payable for services under this Work Authorization without modification is **\$149,920.00**.

Part 3. Payment to the *Engineer* for the services established under this Work Authorization shall be made in accordance with the Contract.

Part 4. This Work Authorization shall become effective on the date of final acceptance and full execution of the parties hereto and shall terminate **March 8, 2022**. The Engineering Services set forth in Attachment "B" of this Work Authorization shall be fully completed on or before said date unless extended by a Supplemental Work Authorization.

Part 5. This Work Authorization does not waive the parties' responsibilities and obligations provided under the Contract.

Part 6. County believes it has sufficient funds currently available and authorized for expenditure to finance the costs of the Work Authorization. Engineer understands and agrees that County's payment of amounts under this Work Authorization is contingent on the County receiving appropriations or other expenditure authority sufficient to allow the County, in the exercise of reasonable administrative discretion, to continue to make payments under this Contract. It is further understood and agreed by Engineer that County shall have the right to terminate this Contract at the end of any County fiscal year if the governing body of County does not appropriate sufficient funds as determined by County's budget for the fiscal year in question. County may effect such termination by giving written notice of termination to Engineer.

Part 7. This Work Authorization is hereby accepted and acknowledged below.

EXECUTED this ____ day of _____, 2021.

ENGINEER:
Hejl, Lee & Associates, Inc.

By: _____

Signature

DANIEL P. HEJL

Printed Name

Principal

Title

COUNTY:
Williamson County, Texas

By: _____

Signature

Printed Name

County Judge

Title

LIST OF ATTACHMENTS

- Attachment A – Services to be Provided by County
- Attachment B – Services to be Provided by Engineer
- Attachment C – Work Schedule
- Attachment D – Fee Schedule



6/1/2021

ATTACHMENT A
SERVICES TO BE PROVIDED BY THE COUNTY FOR
CR 255

In general, Williamson County and its representatives to their best efforts will render services as follows:

1. Name, business address, and phone number of County's project manager.
2. Assistance to the Engineer, as necessary, with obtaining data and information from other local, regional, State and Federal agencies required for this project.
3. Obtain Rights of Entry from landowners.
4. Provide available appropriate County data on file including plans and specifications that are deemed pertinent to the completion of the work required by the scope of services (including previous hydraulic studies, models, previous reports and studies, available existing traffic counts, and design year traffic projections).
5. Provide available criteria and full information as to the client's requirements for the project. Provide examples of acceptable format for the required deliverables.
6. Provide information on any meetings/discussions held with adjoining property owners that may impact the project.
7. Provide timely reviews and decisions necessary for the Engineer to maintain the project work schedule. Review recommendations offered by the Engineer, progress of work, and final acceptance of all documents.
8. Submittal of documentation and permits to regulatory agencies for review and comment, when specified.
9. Support project development efforts with stakeholders, coordinate meetings and interface with stakeholders, as needed.
10. Post and maintain project information for public consumption on the County website.
11. Assist with Coordination between the Engineer and the County's other consultants.
12. Negotiate with all utility companies for any agreements and/or relocations required.
13. Provide an agent as necessary to secure proposed ROW and relocate/remove improvements on proposed ROW.

ATTACHMENT "B"

SCOPE OF SERVICES TO BE PROVIDED BY ENGINEER

SCHEMATIC DESIGN & DRAINAGE STUDY FOR CR 255/CR 289 FROM CR 254 TO RONALD REAGAN BOULEVARD TO CONFIRM ROW FOOTPRINT & PREPARE COST ESTIMATE FOR INTERIM TWO LANE DIVIDED ROAD SECTION AND ULTIMATE SIX LANE CURB & GUTTER DIVIDED ROAD SECTION

I. PROJECT SUMMARY

Williamson County has requested that Hejl, Lee & Associates, Inc. (HLA) provide engineering services pertaining to CR 255/CR 289 Arterial Road Improvement Project from Ronald Reagan Boulevard on the east heading west to the intersection with existing CR 254. Said services will include design schematic for the interim and ultimate road section. The approximate length of the project is 3 miles. The schematic plans will provide for an interim two lane divided road section with bar ditch for stormwater management. The ultimate road section will provide for a six-lane divided curb and gutter road section. The proposed roadway right-of-way is 136'. Williamson County provided a preliminary roadway alignment plan for use on this project. The following is a more detailed description of the specific scope.

II. GENERAL-PROJECT MANAGEMENT

- A. Coordination with the Owner, Program Manager and sub-consultant will include all coordination, correspondence, telephone conversations, emails, meetings, schedule updates, etc
- B. Engineer shall be responsible for securing and coordinating the Hydraulics and Hydrologic (H&H) consultant for the project. Miller-Gray, LLC has been selected to perform H&H services for this project.
- C. Prepare monthly progress reports, update schedules, conduct and coordinate progress meetings with General Engineering Consultant (GEC/HNTB). It is anticipated that the schematic phase will take approximately six (6) months to complete. Therefore, the budget will consider 2 hours for preparing for and conducting up to six meetings which includes the initial project kickoff/coordination meeting.

III. QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PLAN

HLA will prepare a Qa/Qc plan and submit to County within 30 days of the notice to proceed. For each deliverable submitted, HLA will include evidence of their internal review and mark-up of that deliverable as preparation for submittal and in accordance with the submitted Qa/Qc plan. HLA will provide continuous Qa/Qc throughout the duration of the project.

IV. ROUTE AND DESIGN STUDIES

- A. Perform record search and obtain existing information, including but not limited to: as-built plans, construction plans, OSSF records, right of way maps, studies, future land use maps, floodplain data, floodplain and drainage models and analyses. Obtain construction plans for projects within the project limits and abutting roadways (as available). Obtain drainage studies, reports and mapping for the project area, including reports for developments affecting the drainage area (as available).
- B. Conduct a field reconnaissance of the proposed roadway alignment and the surrounding areas to determine field conditions including photographic record of notable existing features.
- C. Analyze and identify project-specific design criteria (typical sections, design speed, functional classification, geometric criteria) in accordance with the Williamson County design criteria manual. Prepare a design summary form for the interim and ultimate road sections, submit to HNTB, and update per comments.

V. TRAFFIC EVALUATIONS AND PROJECTIONS NOT INCLUDED

VI. PRELIMINARY HYDROLOGIC AND HYDRAULIC STUDY

A. Prepare Project Area Drainage Map & Identify Drainage Basins

1. Using available elevation data (Williamson County LIDAR) prepare a drainage area map for each drainage basin within the proposed project improvement area, develop a computer model for the existing condition and perform a model run using 2, 5-, 10-, 25- and 100-year storm events San Gabriel River Atlas 14 rainfall intensity data as published in the Williamson County Subdivision Regulation manual.
2. Using the above model results, evaluate drainage structure options, select the preferred drainage structure (RCP/RBC/Etc.) and prepare a schematic road and drainage profile/elevation section. Include consideration of drainage flow from parallel and/or side tributary conditions that may require channelization improvements.
3. Prepare and perform a model run with the proposed road and drainage schematic section/elevation including possible side tributary conditions that may need to be considered for improvement and evaluate results paying particular attention to adverse impacts such as backwater condition, erosion potential, etc.
4. Summarize and document the findings and recommendations including the need to acquire additional right-of-way, drainage easement, etc.

VII. SCHEMATIC SUBMITTAL

A. General

1. Submittal will include a "Title Plate" on both ends of the schematic roll with project description, County name and logo, precinct number, project name, roadway name and limits, project length, bridge length (if applicable) and project description.
2. Road classification, design speed in miles per hour (no traffic data to be provided for this phase) and design summary form.

B. Layout

1. Proposed and existing project features are shown with appropriate labels.
2. Begin and end project limits with stations.

C. Typical Road Sections

1. Existing typical section including right-of-way (ROW), lane widths, lane direction, etc. will be shown as per drawing provided to HLA by HNTB.
2. Proposed typical section including ROW, lane widths, lane direction, shoulders, C&G, border width, horizontal control, design values, minimum design values, and station limits for all roadways for interim and ultimate roadway sections will be included.
3. Control point for the profile grade line (PGL) will be shown.
4. Project baseline and roadway centerline locations will be shown.
5. Cross slopes in percent (%) on roadway and shoulders will be shown.
6. Side slopes as a ratio (H:V) on all other segments such as interim section bar ditches will be shown.

D. Schematic Plan

1. Existing roadway and features will be shown as per the drawing provided to HLA by HNTB.
2. Applicable municipal boundaries/jurisdictions will be identified and shown, water bodies including name of water body (if it is an identifiable water body) and existing street/roadway intersection names will be shown.
3. Provide a beginning and ending project notation and stations to cover all proposed work.
4. Provide alignment with baseline stationing and label every 100', show proposed horizontal curve information, point of intersection data (as applicable), bearings, equation stations, and critical points such as PT's, PC's and PI's, etc.
5. Verify that minimum design standards are satisfied. If they cannot be satisfied, request a variance from the minimum design standards with HNTB.
6. Show intersection data (stations, edge of pavement radius, etc.) of all proposed driveways and connecting roadways. Per the concept alignment and ROW plan provided by HNTB, there will be the need to install new driveways and intersections based on the intent to straighten the existing roadway alignment. The proposed roadway and new driveway intersections will be evaluated as best as possible considering the exact intersections particularly for new driveways may only be finally determined during the final design phase and after ROW acquisition.
7. Show existing and proposed ROW and recommended permanent easement lines and widths at each break within the project limits. For this schematic phase, HNTB has provided a conceptual alignment and ROW limits map. HLA will be tasked to verify that the conceptual alignment and ROW as provided is adequate or if based on HLA's opinion, the alignment and/or ROW requires amendments.
8. Show proposed pavement (lane and shoulder) widths & cross slopes at all break points & transitions, land direction arrow, proposed curb, etc.
9. Show proposed drainage structures, number locations, provide quantity and size of structure recommended. Prepare a table of drainage structures and summarize size, quantity, station location and sheet number on the table.

10. Show locations, type, limits and/or lengths of proposed roadway elements with appropriate notation. Present interim phase improvement by shading on the ultimate section plan roll.

E. SCHEMATIC PROFILE

1. Provide stations and elevations.
2. Show PGL and existing ground elevations with elevations at 50' shown to the nearest 2 decimal places.
3. Show vertical alignment data (grades in percent (%) to 2 decimal places, VPI station, elevation, curve length, K-value, begin and end curve station, elevation, etc.
4. Show all proposed drainage structures.
5. Existing utilities will not be shown at this time.
6. Ensure minimum K-values are met.

F. COST ESTIMATES

1. Perform quantity take-off based on interim and ultimate schematic plans.
2. Perform preliminary engineer's opinion of probable cost estimate for the interim and ultimate road improvements.

G. BRIDGE TYPICAL SECTIONS – NONE ARE PROPOSED AT THIS TIME

H. COMPLETE SCHEMATIC DESIGN AND SUBMITTAL REQUIREMENTS

- Submit 1 electronic copy of each item listed below in PDF format (not zipped) unless otherwise specified to ProjectWise
- Electronic design files zipped (compiled utilizing "Packager" utility in CAD)
- Submit 4 hardcopies of each item listed below including the schematic plan checklist unless otherwise specified:

Schematic Roll Plot – Ultimate w/Interim Shaded
Design Summary Form
Design Schedule
Construction Cost Estimate
Construction Time Determination
Drainage Report and zipped Drainage Models

ATTACHMENT "C"

WORK SCHEDULE

The proposed professional services will be performed in a timely manner pursuant to the tasks and milestones identified in the scope of work (Exhibit "B"). The proposed Schematic Design & Drainage will be proceeded in accordance with the following milestones and associated projected schedule:

- | | |
|--|--|
| • Notice to Proceed | June 02, 2021 |
| • Prepare for and attend kick-off meeting | Week of June 07, 2021 |
| • Prepare and submit Qa/Qc plan | Week of June 14, 2021 |
| • Gather available documents | June 03 to June 18, 2021 |
| • Prepare schematic plan for ultimate road section | June 21, 2021 to July 30, 2021 |
| • Perform H&H & Evaluate Model Results | June 21, 2021 to July 30, 2021 |
| • Update schematic based on Model Results | August 02, 2021 to September 03, 2021 |
| • Perform detention pond evaluation | September 06, 2021 to October 01, 2021 |
| • Update schematic to include detention pond Locations, approx. size, etc. | October 04, 2021 to October 22, 2021 |
| • Prepare traffic construction conceptual schematics for Interim and ultimate road sections including roll plot to include roadway intersections | October 25, 2021 to November 19, 2021 |
| • Prepare opinion of probable construction cost estimates for interim and ultimate road sections include estimate of construction time | November 22, 2021 to December 03, 2021 |
| • Prepare all documents for final submittal including electronic and hard copy format | Week of December 06, 2021 |

ATTACHMENT D - FEE SCHEDULE

The proposed fee for this assignment will be based on the Standard Hourly Rate as agreed to in the engineering services agreement between *Engineer* and the *County*, with a Not to Exceed Maximum Amount. The proposed fee from *Engineer* and its sub-consultant are summarized as follows:

| | |
|--|----------------------------|
| Hejl, Lee & Associates, Inc. | \$ 75,000.00 |
| Miller Gray, LP | <u>74,920.00</u> |
| Total Fee for Design & Bidding Phases | <u>\$149,920.00</u> |

For services described in the Scope of Services (Exhibit B), the compensation for each associated tasks by the Engineer and its consultant are detailed on the following pages. The hourly rate based on each firm's labor classifications are presented on the following section.

HEJL, LEE & ASSOCIATES, INC.
WILLIAMSON COUNTY - COUNTY ROAD 255 IMPROVEMENTS
FROM CR 254 TO RONALD REAGAN BLVD.
AUTHORIZATION NO. 1 - SCHEMATIC DESIGN, DRAINAGE STUDY, & COST ESTIMATE
ESTIMATED MAN-HOUR & ASSOCIATED FEES

HLA Project No. 37002

Prepared: 5-26-2021

| TASKS | MAN-HOUR BY CLASSIFICATION | | | | | |
|--|----------------------------|--------------------|---------------------|-------------------------|-------------------|------------------------------|
| | PRINCIPAL | PROJECT MANAGER | PROJECT ENGINEER | ENGINEER IN TRAINING | CAD TECHNICIAN | ADMINISTRATIV E ASSISTANT |
| II. PROJECT MANAGEMENT & COORDINATION | | | | | | |
| A. Coordinate with County, GEC, & recordkeeping | 1 | 3 | 8 | 6 | | 3 |
| B. Coordinate with H&H consultant | 1 | 2 | 6 | 6 | | 2 |
| C. Monthly progress status reports | 1 | 2 | 6 | 6 | | 4 |
| III QUALITY ASSURANCE & QUALITY CONTROL (QAQC) | | | | | | |
| Perform QAQC review & address comments | 2 | 4 | 8 | 8 | 6 | 1 |
| IV ROUTE & DESIGN STUDIES | | | | | | |
| A. Record search & review | | | 3 | 8 | 6 | 2 |
| B. Field reconnaissance | | 1 | 4 | 3 | | |
| C. Analyze & identify design criteria | 1 | 1 | 3 | 4 | 1 | 1 |
| VI PRELIMINARY HYDROLOGIC & HYDRAULIC STUDY | | | | | | |
| To be performed by Miller Gray (See attached manhour breakdown) | | | | | | |
| VII SCHEMATIC SUBMITTAL | | | | | | |
| A. General | | | | | | |
| 1. Title page & general project description | | 1 | 1 | 2 | 2 | 1 |
| 2. Design summary form | 1 | 1 | 1 | 2 | 2 | 1 |
| B. Layout | | | | | | |
| 1. Label project features- exiting & proposed | 1 | 1 | 2 | 2 | 4 | 1 |
| 2. Design summary form | 1 | 1 | 2 | 3 | 4 | 1 |
| C. Typical sections | | | | | | |
| 1. Existing typical sections | | | 1 | 3 | 3 | |
| 2. Proposed typical sections | | 1 | 2 | 3 | 4 | |
| 3. Control points for PGL | | | 2 | 3 | 4 | |
| 4. Project baseline & roadway center line | | | 2 | 4 | 4 | |
| 5. Cross slope of roadway & shoulder | | 1 | 2 | 3 | 4 | |
| 6. Side slope of bar ditches | | | 2 | 3 | 4 | |
| D. Schematic Plan | | | | | | |
| 1. Existing roadway features | 1 | 1 | 1 | 3 | 4 | |
| 2. Jurisdiction boundaries & watershed | 1 | 1 | 2 | 3 | 4 | 1 |
| 3. Beginning & ending of project limits | 1 | 1 | 2 | 3 | 4 | |
| 4. Horizontal alignment, PC, PI, & PT | 1 | 1 | 3 | 6 | 12 | |
| 5. Minimum design standard & variance | 1 | 1 | 2 | 4 | 4 | 1 |
| 6. Intersection with cross streets & driveways | 1 | 2 | 3 | 6 | 8 | 1 |
| 7. Verify ROW & easements | 1 | 2 | 3 | 6 | 4 | 1 |

HEJL, LEE & ASSOCIATES, INC.
WILLIAMSON COUNTY - COUNTY ROAD 255 IMPROVEMENTS
FROM CR 254 TO RONALD REAGAN BLVD.

AUTHORIZATION NO. 1 - SCHEMATIC DESIGN, DRAINAGE STUDY, & COST ESTIMATE
ESTIMATED MAN-HOUR & ASSOCIATED FEES

HLA Project No. 37002

Prepared: 5-26-2021

| TASKS | MAN-HOUR BY CLASSIFICATION | | | | | |
|---|----------------------------|--------------------|---------------------|-------------------------|-------------------|------------------------------|
| | PRINCIPAL | PROJECT MANAGER | PROJECT ENGINEER | ENGINEER IN TRAINING | CAD TECHNICIAN | ADMINISTRATIV E ASSISTANT |
| 8. Pavement width, cross slope, curb | 1 | 1 | 3 | 6 | 4 | |
| 9. Drainage structures | 1 | 2 | 3 | 6 | 6 | 1 |
| 10. Roadway elements & phasing | 1 | 1 | 3 | 4 | 4 | 1 |
| E. Schematic Profile | | | | | | |
| 1. Station & elevations | | 1 | 2 | 4 | 8 | |
| 2. PGL & exist. grade at 50' intervals | | 1 | 2 | 6 | 12 | |
| 3. Vertical grade, k-value, PVC, PVI, PVT | | 1 | 3 | 4 | 8 | |
| 4. Drainage structure in profile | 1 | 2 | 3 | 6 | 10 | |
| 6. K-value conformance | | | 1 | 2 | 2 | |
| F. Cost Estimates | | | | | | |
| 1. Quantity take-off | 1 | 1 | 2 | 8 | 10 | |
| 2. Cost estimate for interim & ultimate | 1 | 1 | 3 | 8 | 8 | |
| H. Schematic design submittal | | 1 | 2 | 2 | 4 | 1 |
| TOTAL HOURS | 22 | 40 | 98 | 156 | 164 | 24 |
| HOURLY RATE | \$215.00 | \$200.00 | \$160.00 | \$145.00 | \$125.00 | \$90.00 |
| FEE | \$4,730.00 | \$8,000.00 | \$15,680.00 | \$22,620.00 | \$20,500.00 | \$2,160.00 |

TOTAL PROFESSIONAL FEES

\$73,690.00

REIMBURSABLE (Reproduction and printing)

1,310.00

TOTAL FEE THIS AUTHORIZATION (NO. 1)

\$75,000.00

May 27, 2021



| | | | |
|------------------|--------------------------------|-----------|---------------|
| | Reimbursable Expense Allowance | \$ | 500 |
| TOTAL FEE | | \$ | 74,920 |