

ENGINEERING SERVICES AGREEMENT

THIS AGREEMENT is made and entered by and between COLLIN COUNTY, TEXAS, a political subdivision of the State of Texas, hereinafter referred to as "County", and, CP&Y, INC., a Texas Corporation, hereinafter referred to as "Engineer", to be effective from and after the date as provided herein.

WITNESSETH:

WHEREAS, the County desires to engage the services of the Engineer to prepare construction plans, specifications, details and special provisions and to perform other related engineering services in connection with **FM 2551 FROM FM 2514 TO FM 2170** in Collin County, hereinafter referred to as the "Project"; and

WHEREAS, the Engineer desires to render such engineering services for the County upon the terms and conditions provided herein.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

That for and in consideration of the covenants contained herein, and for the mutual benefits to be obtained hereby, the parties hereto agree as follows:

1. Employment of the Engineer

The County hereby agrees to retain the Engineer to perform professional engineering services in connection with the Project; Engineer agrees to perform such services in accordance with the terms and conditions of this Agreement, exercising the same degree of care, skill, and diligence as is ordinarily possessed and exercised by a member of the same profession, currently practicing, under similar circumstances.

II. Scope of Services

2.1 The parties agree that Engineer shall perform such services as are set forth herein and described in Exhibit "A", which is attached hereto and thereby made a part of this Agreement. Work for each phase shall be preceded by a Notice to Proceed issued by County. The parties understand and agree that deviations or modifications in the form of written change orders may be authorized from time to time by the County.

2.2 The Engineer will serve as the County's professional engineering representative under this Agreement, providing professional engineering, consultation, advice and furnishing customary services incidental thereto. The Engineer agrees to cooperate and coordinate with other design professionals, the County and its contractors to help facilitate efficient construction of the Project and maintain the Project schedule.

2.3 The Engineer shall advise the County with regard to the necessity for subcontract work such as special surveys, tests, test borings, or other subsurface investigations in connection with design and engineering work to be performed hereunder. The Engineer shall also advise the County concerning the results of same. Such survey, test, and investigations shall be furnished to the County.

2.4 The presence or duties of the Engineer's personnel at a construction site, whether as on-site representatives or otherwise, do not make the Engineer or its personnel in any way responsible for those duties that belong to County's construction contractors or other entities, and do not relieve the construction contractors or any other entity of their obligations, duties, and responsibilities, including but not limited to, all construction methods, means, techniques, sequences and procedures necessary for completing all portions of the construction work in accordance with the Contract Documents and any health or safety precautions required by such construction work. The Engineer and its personnel have no authority to exercise any control over any construction contractor or other entity or their employees in connection with their work or any health or safety precautions.

2.5 The Engineer will make periodic recommendations for periodic construction progress payments to the construction contractor. Recommendations by the Engineer to the County for periodic construction progress payments to the construction contractor will be based on the Engineer's knowledge, information, and belief from sampling and observation that the work has progressed to the point indicated. Such recommendations do not represent that there are not other matters at issue between the County and the construction contractor that affect the amount that should be paid.

2.6 The Engineer agrees to provide a complete and coordinated set of drawings and specifications for the construction of the Project, exercising the same degree of care, skill, and diligence as is ordinarily possessed and exercised by a member of the same profession, currently practicing, under similar circumstances. Construction drawings, specifications, and other construction documents prepared by the Engineer or its consultants and submitted to the County for approval or contractors for bidding or negotiation purposes shall be complete and capable of construction "as is". While the utility of communications between design professionals and construction contractors for the purpose of clarifying design intent is recognized, the Project should be capable of construction without the necessity of formal revisions or contract modifications to provide missing design information after construction contracts are awarded. Said documents shall comply with all applicable codes, ordinances, statutes, and regulations governing the design of the Project.

2.7 The Engineer shall assist the County in the preparation and filing of documents required for the approval of governmental authorities having jurisdiction over the Project.

III. Schedule of Services

3.1 The Engineer agrees to commence its services immediately upon execution of this Agreement, or as otherwise directed in writing by the County, and to proceed diligently with said services to completion as described in the Completion Schedule attached hereto as Exhibit "B" and thereby made a part of this Agreement. Engineer shall not be considered in default of this Agreement for delays in performance caused by circumstances beyond its reasonable control. Should such circumstances occur, the Engineer shall, within a reasonable time of being prevented from performing, give written notice to the County describing the circumstances preventing continued performance and the efforts being made to resume performance of this Agreement.

3.2 In the event that the Engineer is delayed in the progress of the work on the Project by an act or neglect of the County, County's employees, or separate contractors employed by the County, or by changes ordered in the Project, fire, adverse weather conditions not reasonably anticipated, unavoidable casualties or other causes beyond the Engineer's control, or delay authorized by the County pending arbitration, or by other causes which the

County and Engineer agree may justify delay, then the Contract Time shall be reasonably extended by Contract Amendment. The County shall have the right at any time to delay or suspend the work or any part thereof for any reasonable time and if this happens, the Engineer's sole remedy for any delays or suspension shall be any extension of time. However, should the delay continue for more than one year past the original completion date in the completion schedule, the Engineer may request to renegotiate their professional fee provided that the fee is reasonable and substantiated by documents showing the need for the requested increase. Any request for a fee increase shall be submitted to Collin County Commissioners' Court for final approval. The County shall not be independently liable to the Engineer for any delay or interference caused by circumstances beyond the County's control or any delay caused by any other person or entity.

IV. Compensation and Method of Payment

The parties agree that Engineer shall be compensated for all services provided pursuant to this Agreement in the amount and manner described and set forth in the Payment Schedule attached hereto as Exhibit "C" and thereby made a part of this Agreement. Engineer further agrees that it will prepare and present such monthly progress reports and itemized statements as are described in said Exhibit "C". Payment will be made in accordance with The Texas Government Code, Title 10, Subtitle F, Chapter 2251. Engineer further agrees to the following terms prior to payment being due by County:

A. Invoice and Payment

- (1) The Engineer shall provide the County sufficient documentation to reasonably substantiate the invoices.
- (2) The Engineer will issue monthly invoices for all work performed under the Agreement.
- (3) In the event of disputed or contested billing, only that portion so contested will be withheld from payment, and the undisputed portion will be paid. The County will exercise reasonableness in contesting any portion thereof. NO interest will accrue on any contested portion of the billing until mutually resolved.
- (4) In the event of any conflict between Paragraph IV and Chapter 2251 of the Texas Government Code, The Texas Government Code shall prevail.

V. Information to be provided by the County

5.1 The County agrees to furnish to Engineer, prior to the Engineer's commencement of its services, all that information set forth and described on Exhibit "D", which is attached hereto and thereby made a part of this Agreement.

5.2 The County will make its facilities accessible to the Engineer as required for the Engineer's performance of its services. The Engineer represents that it understands the scope of this Agreement and has reviewed and inspected the Project sites, and can fully perform its obligations pursuant to this Agreement. Any failure of the Engineer to acquaint itself with the available information will not relieve the Engineer from its responsibilities pursuant to this Agreement.

5.3 The County shall disclose, to the extent known to the County, the results of prior tests, inspections or investigations conducted for the Project upon request by the Engineer.

VI. Progress Meetings

In addition to providing the monthly progress reports as required under Paragraph IV herein above, Engineer agrees to attend all monthly progress meetings scheduled by County, and at such meetings to outline work accomplished and special problem or delays encountered in connection with the Project during the previous report period, as well as planned work activities and special problems and delays anticipated for the next report period. The Engineer agrees to cooperate and coordinate with other design professionals, the County and its contractors to help facilitate efficient construction of the Project and maintain the Project schedule.

VII. Insurance

Engineer agrees to meet all insurance requirements as set forth on Exhibit "E" which is attached hereto and thereby made a part of this Agreement.

VIII. Indemnity

8.1 The Engineer agrees to the fullest extent permitted by law, to indemnify and hold harmless the County and its officers, agents and employees of and from damages, injuries (including death), claims, property damages (including loss of use), losses, demands, suits, judgments and costs, including reasonable attorney's fees and expenses, arising out of or occasioned by Engineer's breach of any of the terms or provisions of this Agreement, or by any other negligent act, error or omission of the Engineer, its agents, servants, employees, subcontractors, licensees, invitees, or any other persons or entities for whose acts the Engineer is legally liable.

8.2 In claims against any person or entity indemnified under this Section 8.1 by an employee of the Engineer, anyone directly or indirectly employed by the Engineer or anyone for whose acts the Engineer may be liable, the indemnification obligation under this Section 8.1 shall not be limited by a limitation on the amount or type of damages, compensation or benefits payable by or for the Engineer under workers' compensation acts, disability benefit acts or other employee benefit acts.

IX. Independent Contractor

In the performance of services hereunder, the Engineer shall be deemed an independent contractor and shall not, with respect to its acts or omissions, be deemed an agent, subcontractor or employee of the County.

X. Assignment and Subletting

The Engineer agrees that neither this Agreement nor the services to be performed hereunder will be assigned or sublet without the prior written consent of the County. The Engineer further agrees that the assignment or subletting or any portion or feature of the services required in the performance of this Agreement shall not relieve the Engineer from its full obligations to the County as provided by this Agreement.

XI. Audits and Records/Prohibited Interest

11.1 The Engineer agrees that at any time during normal business hours, and as often as County may deem necessary, Engineer shall make available to representatives of the County for examination all of its records with respect to all matters covered by this Agreement, and will permit such representatives of the County to audit, examine, copy and make excerpts or transcripts from such records, and to make audits of all contracts, invoices, materials, payrolls, records of personnel, conditions of employment and other data relating to all matters covered by this Agreement, all for a period of one (1) year from the date of final settlement of this Agreement or of such other or longer period, if any, as may be required by applicable statute or other lawful requirements.

11.2 The Engineer agrees that it is aware of the conflict of interest requirements of the state law which are applicable to persons entering into contracts with the County and will abide by the same. Further, a lawful representative of Engineer shall execute the Affidavit shown in Exhibit "F". Engineer understands and agrees that the existence of a conflict of interest during the term of this Agreement will render the agreement voidable.

11.3 The Engineer acknowledges to the County that it has made full disclosure in writing of any existing conflicts of interest or potential conflicts of interest, including personal financial interest, direct or indirect, in property abutting the proposed Project and business relationships with persons or entities with interest in abutting properties.

XII. Contract Termination

The parties agree that County shall have the right to terminate this Agreement without cause upon thirty (30) days written notice to Engineer. In the event of such termination without cause, Engineer shall deliver to County all finished or unfinished documents, data, studies, surveys, drawings, maps, models, reports, photographs or other items prepared by Engineer in connection with this Agreement. Engineer shall have the right to terminate this Agreement upon thirty (30) days written notice to County in the event of the County's breach of any material term of this Agreement, including but not limited to compensation and method of payment. Regardless of which party initiates termination, Engineer shall be entitled to compensation for any and all services completed to the satisfaction of County in accordance with the provisions of this Agreement prior to termination.

XIII. Cost Estimates

The parties recognize and agree that any and all Engineer's estimates of probable construction costs (estimates) prepared by Engineer in connection with the Project represent the best judgment of Engineer as a design professional familiar with the construction industry, but that the Engineer has no control over costs or the price of labor, equipment or materials or over the Contractor's methods of pricing and does not guarantee that any bids solicited or received in connection with the Project will not vary from estimates prepared by Engineer.

XIV. Ownership of Documents

Original drawings and specifications (Instruments of Service) created by Engineer are the property of the Engineer; however, the Project is the property of the County, and Engineer may not use the drawings and specifications for any purpose not relating to the Project without County's consent. County shall be furnished with such reproductions of drawings and specifications as County may reasonably require. Upon completion of the services or any

earlier termination of this Agreement under Article XII, and payment in full of all monies due Engineer, Engineer will revise drawings to reflect significant changes made during construction as per the marked-up prints, drawings, and other data furnished to the Engineer by or through the County or Contractor. Engineer will promptly furnish the County with one (1) complete set of reproducible record prints. All such reproductions shall be the property of the County who may use them without the Engineer's permission for any proper purpose relating to the Project, including but not limited to, maintenance of the Project, additions to the Project, or completion of the Project. The aforementioned revisions will be based upon information supplied by the County's construction contractor and will be assumed by Engineer to be complete and accurate. As such, Engineer shall not be responsible for errors or omissions resulting therefrom. Prints shall be furnished, as an additional service, at any other time requested by County. The County may use such drawings in any manner it desires; provided, however, that the Engineer shall not be liable for the use of such drawings for any project other than the Project described herein.

XV. Complete Contract

15.1 This Agreement, including the exhibits hereto numbered "A" through "F", constitute the entire agreement by and between the parties regarding the subject matter hereof and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified or canceled by a duly executed written instrument, signed by the County and the Engineer.

15.2 Warranties contained in this Agreement are in addition to and not in lieu of, any and all other liability imposed upon the Engineer by law with respect to the Engineer's duties, obligations, and performance hereunder. The Engineer's liability hereunder shall survive the County's final acceptance and payment for the Project. All representations and warranties set forth in this Agreement, including without limitation, this paragraph, shall survive the final completion of the Work or earlier termination of this Agreement. The Engineer acknowledges that the County is relying upon the Engineer's skill and experience in performing the services pursuant to this Agreement.

XVI. Mailing of Notices

Unless instructed otherwise in writing, Engineer agrees that all notices or communications to the County permitted or required under this Agreement shall be addressed to the County at the following address:

Mr. Ruben Delgado, Director
Collin County Engineering
825 N McDonald St.
McKinney, Texas 75069

County agrees that all notices or communications to Engineer permitted or required under this Agreement shall be addressed to Engineer at the following address:

CP&Y, Inc.
Attn: Ms. Julia Xia, PE
5900 South Lake Forest Dr., Ste. 300
McKinney, Texas 75070

All notices or communications required to be given in writing by one party or the other shall be considered as having been given to the date such notice or communication is posted by

the sending party.

XVII. Miscellaneous

A. Paragraph Headings

The paragraph headings contained herein are for convenience only and are not intended to define or limit the scope of any provision in this Agreement.

B. Interpret Contract Fairly

Although this Agreement is drafted by County, should any part be in dispute, the parties agree that the Agreement shall not be construed more favorable for either party.

C. Venue/Governing Law

The parties agree that the laws of the State of Texas shall govern this Agreement, and that it is performable in Collin County, Texas. The venue for any litigation related to this Agreement shall be in Collin County, Texas.

D. Parties Bound

County and Engineer, and their partners, successors, subcontractors, executors, legal representatives, and administrators are hereby bound to the terms and conditions of this Agreement.

E. Severability

In the event a term, condition, or provision of this Agreement is determined to be void, unenforceable, or unlawful by a court of competent jurisdiction, then that term, condition, or provision shall be deleted and the remainder of the Agreement shall remain in full force and effect.

F. Effective Date

This Agreement shall be effective from and after execution by both parties hereto.

G. Term of Agreement

The term of Agreement shall conform to the schedule as stipulated in Exhibit "B" attached herein. No other extension shall be authorized unless granted by written agreement between the County and Engineer.

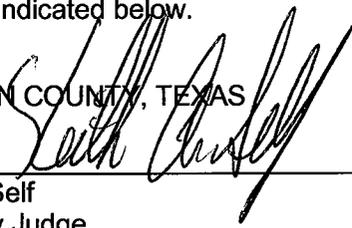
H. Observe and Comply

Engineer shall at all times observe and comply with all federal and State laws and regulations and with all City ordinances and regulations which in any way affect this Agreement and the work hereunder, and shall observe and comply with all orders, laws, ordinances and regulations which may exist or may be enacted later by governing bodies having jurisdiction or authority for such enactment. No plea of misunderstanding or ignorance thereof shall be considered. Engineer agrees to defend, indemnify and hold harmless County and all of its officers, agents, and employees from and against all claims or liability arising out of the violation or any such order, law, ordinance, or regulation, whether it be by itself or its employees.

WITNESS OUR HANDS AND SEALS on the date indicated below.

Date: 8/24/12

COLLIN COUNTY, TEXAS

By: 
Keith Self
County Judge
Court Order No. 2012-523-08-06

Date: 8/20/2012

CP&Y, INC.

By: 
Title: Senior Vice President

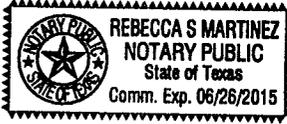
ACKNOWLEDGMENT

STATE OF TEXAS }
 }
COUNTY OF COLLIN }

BEFORE ME, _____ on this day personally appeared William B. Hindman Texas Corporation, known to me (or proved to me on the oath of _____ or through Texas Drivers License (description of identity card or other document) to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he/she executed the same as the act and deed of the corporation, for the purposes and consideration therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this 20th day of August, 2012.

Rebecca S. Martinez
Notary Public, State of Texas



Rebecca S. Martinez
Printed Name

My Commission expires on the 26th day of June, 2015.

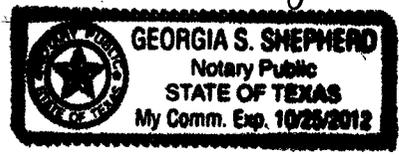
STATE OF TEXAS }
 }
COUNTY OF COLLIN }

KEITH SELF, COUNTY JUDGE

BEFORE ME, _____ on this day personally appeared ~~Franklin Ybarbo, Purchasing Agent~~ of COLLIN COUNTY, TEXAS, a political subdivision of the State of Texas, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he/she executed the same as the act and deed of COLLIN COUNTY, TEXAS, for the purposes and consideration therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this 24th day of August, 2012.

Georgia S. Shepherd
Notary Public, State of Texas



Georgia S. Shepherd
Printed Name

My Commission expires on the 25th day of October, 2012.

EXHIBIT A

FM 2551 (from FM 2514 to FM 2170)
Collin County

SERVICES TO BE PROVIDED BY THE ENGINEER

The Engineer shall provide the necessary engineering and technical services for the preparation of plans, specifications and estimates (PS&E) for the reconstruction of FM 2551 from FM 2514 (Parker Road) to FM 2170 (Main Street) within Collin County. The project length along FM 2551 is approximately 3.4 miles.

The construction will include the widening of FM 2551 from an existing two-lane asphalt roadway to an ultimate six-lane concrete section with curbs and gutters, enclosed storm sewers, a raised median, and a horizontal re-alignment. The re-alignment will eliminate the approximately 2200 ft. offset of FM 2551 at FM 2514 by connecting the two sections of FM 2551 with an "S-curve", beginning approximately 760 ft. north of FM 2514 and ending approximately 320 ft. north of Curtis Drive.

Project development will be developed in two phases. Phase one work will include obtaining accurate locations and depths for the major North Texas Municipal Water District (NTMWD) water and wastewater lines that parallel and cross the roadway. With this water and wastewater line information the approved schematic design will be reviewed and any adjustments made that are necessary to insure the proposed roadway does not conflict with the existing major NTMWD facilities. A project will be identified that can be built without conflicting with the NTMWD facilities, probably four-lanes of the ultimate six-lane facility.

Phase two will be the development of construction plans (PS&E) for the project identified in phase one. The Cost Proposal, Exhibit D, is for the ultimate six-lane facility. If the project identified in phase one is a four-lane facility the Cost Proposal will be adjusted accordingly.

The project will be prepared in conformance with TxDOT Dallas District requirements. The construction plan set shall contain the required drawings, details and applicable standards required to describe the grading, paving, drainage, culverts, signing, pavement marking, delineation, sequence of construction, and traffic control for this construction project. The project will also involve Geotech investigation, SUE investigation, Topographic Survey, and the preparation of ROW maps and deed descriptions.

The engineering work for this project will be divided into a number of tasks as outlined below. It is the intent of Exhibit A (TASK OUTLINE), in coordination with Exhibit B (Services to be provided by the County), to help clarify the scope of work.

TASK OUTLINE

Function Code 110 – Route and Design Studies

110.1 Geotechnical Engineering and Soil Borings

Since there is no bridge and retaining walls for this project and that TxDOT will provide pavement design, it is assumed that geotechnical work will not be required as part of this contract. However, should TxDOT deem this service necessary at a later time, it can be added as a special service and included in a supplemental agreement.

110.2 Pavement Design

The Pavement Design for this project will be provided by TxDOT.

110.3 Geotechnical Supervision and Coordination

110.3.1 The ENGINEER will be required to interpret field tests performed by the geotechnical subconsultant. Boring logs will be incorporated into CADD and included on bridge and retaining wall plans. The ENGINEER will establish a work program for the geotechnical subconsultant at the beginning of the project. The Engineer will be responsible for the coordination, supervision, and review of the geotechnical subconsultant's work.

110.4 Data Collection and Preliminary Project Development

110.4.1 Attend and conduct Design Concept Conference with TxDOT.

110.4.2 Collect and review available data including existing plans, hydraulic studies, etc.

The Engineer shall prepare exhibits for and attend one public meeting to inform the nearby residents of the nature of the project and receive input from the community. These comments and concerns will be evaluated and addressed during the design phase where practical. It is assumed that a formal Public Hearing will not be required.

Function Code 130 – Right-of-Way Data

130.1 ROW Mapping

130.1.1 Obtain permission from the affected property owners to perform the aforementioned surveys.

130.1.2 Research property owners affecting the project and obtaining deeds, addresses, easements and other title information.

130.1.3 Prepare a Right-of-Way Map with appropriate right-of-way instruments of conveyance once the Engineer and the State have established the need for easements and additional right-of-way. Locate property corners of affected parcels of land. All procedures shall conform with TxDOT's Right-of-Way, Book I and II and in accordance with the Texas Board of Professional Land Surveying Practices Act and special procedures as may be require by the Dallas District. Submit (3) three copies each of the preliminary right-of-way strip maps. All final deliverables shall be signed and sealed by a Texas Registered Professional Land Surveyor.

130.1.4 Revise Right-of-Way Map due to changes set forth by the State.

130.1.5 Prepare computation sheets for Survey Closure and Area for each parcel acquired.

130.1.6 Prepare exhibits with field notes for right-of-way acquisition for forty (40) parcels takings. The fee will be based on a per property basis. All exhibits and legal descriptions shall be in accordance with State specifications. Submit three (3) copies of acquisition documents with parent tract deeds and traverse sheets to the TxDOT Area Office for preliminary review. All final deliverables shall be signed and sealed by a Texas Registered Professional Land Surveyor.

130.1.7 Prepare exhibits with field notes for drainage easement acquisition for four (4) easement takings. The fee will be based on a per property basis. All exhibits and legal descriptions shall be in accordance with State specifications. Submit three (3) copies of acquisition documents with parent tract deeds and traverse sheets to the TxDOT Area Office for preliminary review. All final deliverables shall be signed and sealed by a Texas Registered Professional Land Surveyor.

130.1.8 Stake final Right-of-Way and centerline.

Function Code 150 – Field Surveying

150.1 Field Surveying

150.1.1 Establish horizontal control for project from the Dallas District TxDOT survey control and set survey control points along the project limits with a minimum of four being beyond the construction limits.

150.1.2 Establish a vertical control loop along the project and set at least two project Benchmarks.

150.1.3 Provide topographic survey for the project. The limits of the project are as follows: 1.) Along FM 2551, starting approximately 200 linear feet South of the intersection of FM 2551 & FM 2514 and extending north to 200 linear north of the intersection of FM 2551 & FM 2170 for a total linear feet length of approximately 18,500 feet. The topographic survey shall include, but not limited to, driveways, drainage structures with invert elevations, flow lines of drainage ditches, concrete rip rap, curb & gutter, drive lanes, paint strips along FM 2551, tops & toes of slopes. Cross-sections shall be taken along the drainage ways for approx. 200-foot upstream and downstream of the existing right-of way, and along FM 2551 at approx. 200-foot intervals to provide hard ties to the paving surface.

Perform field survey which includes the staking of the proposed center line at the P.C.'s, and P.T.'s, at 500 foot intervals, and at other locations designated by CP&Y.

Contact DIGTESS for the purpose of locating franchise utilities along the proposed corridor and acquire (by field survey) the franchise utility information from the locates placed in the field by DIGTESS. Contact cities along the proposed corridor for the purpose of locating city utilities along the proposed corridor and acquire (by field survey) the city utility information from the locates placed in the field by the cities. When buried utility lines are exposed by SUE work, performed field survey to locate the utility lines horizontally and vertically.

Analyze properties along the proposed corridor in order to establish common property lines for the purpose of establishing these lines for the base map.

Prepare a base map showing the information acquired by research and field survey and provide a digital and hard copy to CP&Y.

150.1.4 Deliverables shall include a final design/topographic drawing in a digital 2D Microstation file showing all survey features located in the field and provide a 3D Microstation file with a digital terrain model and contours utilizing the field ties and the aerial survey data. Deliverables shall also include a copy of the field notes, an ASCII coordinate file of all points located in the field and a hard copy of the coordinates.

150.2 Subsurface Utility Engineering

150.2.1 SUE work will be performed as required for this project in general accordance with the recommended practices and procedures described in ASCE Publication CI/ASCE 38-02 (Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data). As described in the mentioned ASCE publication:

- (1) **Modified Quality Service Level B (QL-B Designating Services)** - Designate is to indicate, by marking with paint, the presence and approximate horizontal location of subsurface utilities using geophysical prospecting techniques, including, without limitations, electromagnetic, sonic and acoustical techniques.

SAM, Inc. will provide the following modified designating services to aid CP&Y in the defining the Test Hole locations.

- (2) **Quality Service Level A - Locating (Test Hole) Services** - Locating services is to locate the accurate horizontal and vertical position of subsurface utilities by excavating a test hole using vacuum excavation techniques and equipment that is non-destructive to utilities.
- (3) Upon receipt of the processed survey data, we will perform a preliminary review of the data to check for completeness and accuracy. Once this preliminary review is complete we will prepare the required SUE deliverables which include plan sheets that are signed and sealed by a Registered Professional Engineer.

150.3 Surveying Supervision and Coordination

150.3.1 The ENGINEER will be required to interpret data performed by the surveying subconsultant. The ENGINEER will establish a work program for the surveying subconsultant at the beginning of the project. The Engineer will be responsible for the coordination, supervision, and review of the surveying subconsultant's work.

Function Code 160 - Roadway Design Controls

160.1 Verify Schematic Geometry

160.1.1 Establish/verify horizontal and vertical geometry set during schematic development utilizing field survey at the project tie-down points.

160.2 Horizontal Alignment Data Sheets

160.2.1 Prepare Project Layout
160.2.2 Prepare Horizontal Alignment Data Sheets.

160.3 Typical Sections

160.3.1 Prepare Existing Typical Section Sheets (FM 2551, Crossings & Intersecting Roadways).
160.3.2 Prepare Proposed Typical Section Sheets (FM 2551, Crossings & Intersecting Roadways).

160.4 Roadway Plan and Profile

160.4.1 Prepare Plan and Profile Sheets for FM 2551
160.4.5 Prepare Cross Street Plan and Profiles

160.5 Miscellaneous Roadway Sheets

160.5.1 Prepare Intersection Layouts at intersections.
160.5.2 Prepare Driveway Details/Profiles.
160.5.3 Prepare Miscellaneous Roadway Details.

160.6 Roadway Quantity and Summary Sheets

160.6.1 Compute roadway quantities for the Preliminary Design, Plans Adequate, and Final Design submittals.
160.6.2 Prepare Summary of Grading and Basis of Estimate Sheets.

160.7 Earthwork Cross Sections

- 160.7.1 Prepare final grading cross sections at a 50' interval. Grading cross sections will include centerline/profile grade line elevation, pavement elevation at face of curb, subgrade break line elevations and offsets to proposed toe of slope and ROW limits.
- 160.7.2 Prepare phase construction grading sections to identify the grading to be done in each phase to ensure the constructability and provide adequate drainage.

160.8 Pavement Removal Plans

- 160.8.1 Prepare Pavement removal plan sheets.
- 160.8.2 Compute removal quantities for the Preliminary Design, Plans Adequate, and Final Design submittals.
- 160.8.3 Prepare Removal Summary.

160.10 Quality Assurance/Quality Control

- 160.10.1 Perform QA/QC of project roadway plans prior to milestone review submittals.

Function Code 161 – Drainage

161.1 Culvert Design

- 161.1.1 Prepare Exterior Drainage Area Map
- 161.1.2 Prepare Culvert Hydraulic Sheet/Computations for proposed culverts.
- 161.1.3 Prepare Culvert Layout.
- 161.1.4 Complete BCS.

161.2 Storm Drain Design

- 161.2.1 Perform field inventory of existing drainage structures to verify structure size and condition and channel characteristics.
- 161.2.3 Prepare Interior Drainage Area Maps. Task includes determining drainage areas and calculating runoff to determining size and location of inlets.
- 161.2.4 Prepare Hydraulic Data Sheets utilizing Geopak Drainage
- 161.2.5 Prepare Storm Sewer Plan & Profile Sheets. Perform hydraulic computations for the sizing and location of storm sewer lines and manholes. Utilize approved hydraulic software to verify the adequacy of the proposed storm sewer lines.
 - 161.2.6 Prepare Lateral Profile Sheets.
- 161.2.7 Analyze drainage ditch capacity and develop ditch tables for inclusion in drainage plans.
- 161.2.8 Prepare Miscellaneous Drainage Details.

161.3 Drainage Quantities and Summary Sheets

- 161.3.1 Compute drainage quantities for the Preliminary Design, Plans Adequate, and Final Design submittals.
- 161.3.2 Prepare Culvert and Storm Sewer Summary Sheets.

161.4 Erosion Control Plans

- 161.4.1 Prepare SW3P District/Area Office standard narrative sheet.
- 161.4.2 SW3P layouts will be produced showing limits of proposed riprap, soil retention, sediment control fences, rock filter dams, permanent seeding, etc. Erosion control plan shall be coordinated with the traffic control plan and sequence of work.

161.5 SW3P Quantities and Summary Sheets

- 161.5.1 Perform SW3P quantity calculations.
- 161.5.2 Prepare SW3P Summary Sheets.

161.6 Quality Assurance/Quality Control

- 161.9.1 Perform QA/QC of project drainage and SW3P plans prior to milestone review submittals.

Function Code 162 - Signing, Markings and Signalization

162.1 Signing and Pavement Markings Layouts

- 162.1.1 Perform a site survey to inventory existing signs and pavement markings.
- 162.1.2 Prepare Signing, Delineation and Pavement Marking Layouts

162.3 Signing and Pavement Marking Quantities and Summary Sheets

- 162.3.1 Perform signing and pavement marking quantity calculations for the Plans Adequate, and Final Design submittals.
- 162.3.2 Perform Overhead Sign quantity calculations.
- 162.3.3 Prepare Summary of Pavement Markings Sheet.
- 162.3.4 Prepare Small Sign Summary Sheets.
- 162.3.5 Prepare Large Sign Summary Sheets.

162.4 Traffic Signal Plans (Discuss w/ Reggie to see when we will need temporary signal)

- 162.4.1 It is assumed that three permanent signals and two temporary signals will be required. The following permanent signal sheets will be produced:
 - 162.4.1.1 Traffic Signal Layout Sheet
 - 162.4.1.2 Traffic Signal Elevation Sheet
 - 162.4.1.3 Phasing and Wiring Plans
 - 162.4.1.4 Complete Traffic Signal Pole Arm and Foundation Standards
 - 162.4.1.5 Miscellaneous Signal Details
- 162.4.2 Perform project walkthrough to field verify preliminary signal layouts for pole and controller locations and potential overhead and underground conflicts.

162.5 Traffic Signal Quantities and Summary Sheets

- 162.5.1 Perform traffic signal quantity calculations for the Final Design submittal.
- 162.5.2 Prepare Summary of Traffic Signals Sheet.

162.6 Quality Assurance/Quality Control

- 162.6.1 Check signing and pavement marking quantities and plans sheets prior to District review.
Check traffic signal quantities and plans prior to District review.

Function Code 163 - Miscellaneous Roadway

163.1 Miscellaneous Roadway Sheets

- 163.1.1 Prepare Title Sheet.

163.1.2 Prepare Index Sheet.

163.3 Traffic Control Plans

163.3.1 Prepare Conceptual Phasing Layout of major phases of construction for approval by Area Office at Preliminary Design stage. Provided on scroll plot at appropriate scale to be determined.

163.3.2 Prepare TCP Narrative for Sequence of Construction Sheets.

163.3.3 Prepare Advance Signing Layout Sheets.

163.3.4 Prepare TCP Typical Sections for each Phase. Assume three phases and two sections per phase.

163.3.5 Prepare TCP Layouts. Assume three phases with multiple stages will be required.

163.3.6 Prepare TCP Detour Sheets. Include horizontal and vertical alignment information for each cross-over, temporary ramp, temporary roadway, etc.

163.3.7 Prepare Shoring Wall Layouts.

163.3.8 Prepare Construction Time Estimate using Primavera (SureTrak).

163.4 Traffic Control Plan Quantities and Summary Sheets

163.4.1 Perform TCP quantity calculations for the Preliminary Design, Plans Adequate, and Final Design submittals.

163.4.2 Prepare Construction Phase Summary Sheets.

163.6 Apply Provided Standard Details

163.6.1 Download applicable TxDOT standards, complete title block information and modify as required for project needs.

163.7 Construction Cost Estimate

163.7.1 Prepare opinions of probable construction cost using Estimator for milestone reviews.

163.7.1.1 Preliminary Plan Submittal

163.7.1.2 Plans Adequate Submittal

163.7.1.3 District Plan Review Submittal

163.7.2 Prepare a final opinion of probably construction cost using Estimator software.

163.8 Specifications and General Notes

163.8.1 Soft copies of the TxDOT Standard General Notes, provided by the District in WORD format or hard copy, will be revised as required and hard copies submitted at the Plans Adequate and 95 percent reviews. The revised WORD file, if provided, will be included with the final plan submittal. TxDOT will place General Notes and Special Provision data on the plan sheets.

163.8.2 Prepare specification and special provisions list.

163.8.3 Prepare TxDOT Form 1002, PS&E. Submission Data, for final submittal of PS&E package to Design Division.

163.9 Quality Assurance/Quality Control

163.9.1 Perform TCP plans check prior to Plans Adequate Review.

163.9.2 Check quantities and perform plans check for remaining plans sheets prior to 95 percent complete review.

163.10 Miscellaneous Project Management

- 163.10.1 Provide routine project management, supervision, and communications. Task includes maintaining project schedule, semi-monthly progress reports to TxDOT project manager (email), and other miscellaneous tasks.
- 163.10.2 Prepare monthly invoices and progress reports summarizing project status. Assume 18 invoices.
- 163.10.3 Project Development Meetings
 - 163.10.3.1 Attend/conduct twelve (12) non-milestone progress meetings with Area Office and/or consultant project team. Prepare and submit meeting minutes.
 - 163.10.3.2 Attend Preliminary Design, Plans Adequate, and District Review meetings with the State. Prepare and submit meeting minutes.
- 163.10.4 Project Closeout. Copy and assemble design/quantity calculations, output and summaries. Prepare CD-ROM of electronic files to be submitted to TxDOT.
- 163.10.5 Attend monthly meeting with City of Rockwall.

Function Code 309 – Design Verification, Changes, and Alterations

309.1 Construction Phase Services

The Engineer shall provide Construction Phase Services at the written request of the TxDOT Project Manager. The written request shall include a description of the work requested, ad mutually agreed upon time limit, and any special instructions for coordination and submittal. These services shall include, but are not limited to the following:

1. Attend preconstruction meeting
2. Attend partnering meeting, if requested
3. Respond to contractor RFI's, when requested
4. Review contractor show drawings, when requested
5. Attend field meetings and make visits to site, when requested
6. Answer contractor and area engineer questions throughout construction
7. Prepare plan revisions when needed to address changed conditions or other requested field changes
8. Calculate quantities and assist the area engineer in preparing change orders
9. Other miscellaneous duties related to the project.

Deliverables

All PS&E milestone review submittals will be in accordance with the attached Texas Department of Transportation (TxDOT) - Dallas District Standard Project Management Guidelines for Submission of Plans, Specifications and Estimates (PS&E).

Assume Preliminary PS&E submittal will include the following:

- One (1) set of 11x17 inch plans consisting of an in-progress Title sheet; Index of sheets, Project Layout Sheets, preliminary Typical Section sheets, TCP sheets, Plan/Profile sheets, Hydraulic Data and Drainage Map sheets for bridge class culverts, culvert computations, Culvert layout and section sheets, and preliminary design cross section sheets.
- One (1) copy of the Construction Cost Estimate in Estimator format.

Assume Plans Adequate PS&E submittal will include the following:

- Six (6) sets of 11x17 inch plans consisting of an in-progress Title sheet; final Typical Section sheets, TCP sheets, Plan/Profile sheets, Intersection Layout/Contour sheets, Misc. Paving Details, Hydraulic Data and Drainage Map sheets for culverts, Culvert Section/Layout sheets, Drainage Plan & Profile sheets, SW3P sheets, Removal plans, and cross sections.
- One (1) copy of the Construction Cost Estimate in Estimator format.

Assume 95 percent complete PS&E submittal for District Review will include the following:

- Seven (7) sets of 11x17 inch plans consisting of all plans sheets including TxDOT Standard sheets.
- One (1) copy of the Construction Cost Estimate in Estimator format.
- Seven (7) copies of the General Notes and Specification list.
- One (1) copy of the Construction Time Estimate.

Assume the Final Plans submittal will include the following:

- One (1) set of 11x17 inch sealed and signed original Mylar plans consisting of all plan sheets including TxDOT Standard sheets.
- Nine (9) sets of prints of original Mylar plans.
- Nine (9) copies of the final Construction Cost Estimate in Estimator format.
- Nine (9) hard copies of the final General Notes and Special Provisions/Specifications.
- Nine (9) copies of the final Construction Time Estimates in SureTrak format.
- Two (2) duplicate originals of CADSEAL of responsible engineer.
- One (1) Read/Write CD ROM containing electronic files of Final PS&E Microstation drawings, GEOPAK design, design cross sections, design cross section data.
- Authorize CADD seal.



BW2 ENGINEERS, INC.

Principals
Michael R. Burge, PE
Jim Waldbauer, PE
John F. (Jack) Wilder, RPLS

June 18, 2012

Ms. Julia Xia, P.E.
Chiang, Patel & Yerby, Inc.
1700 Redbud Blvd., Suite 460
McKinney, Texas 75069

Re: Proposal for Surveying Services
FM 2551 from Parker Road to FM 2170 (Phase II)

Dear Ms. Xia:

BW2 Engineers, Inc. (BW2) is pleased to present this proposal to Chiang, Patel & Yerby, Inc. (CP&Y) for surveying services for the road improvements for the segment of FM 2551 between Parker Road and FM 2170 (approximately 19,000 linear feet in length). This work is to be completed and coordinated with your office.

SCOPE OF SERVICES

Task One – Topographic Surveying

The proposed scope of services for the topographic surveying services include the following:

1. Perform reconnaissance and research for the project relative to the properties along the proposed corridor for the project.
2. Perform a deed plot of the properties along the proposed corridor.
3. Perform field survey to establish project control along the proposed corridor.
4. Perform field survey for the purpose of locating property corners along the proposed corridor.
5. Perform field survey for the purpose of identifying and establishing the location of topographic features along the corridor. This topographic survey will include the existing features within an approximate 200 foot wide corridor at the south end where the proposed road improvements will cross undeveloped land (approximately 6,000 linear feet) and the existing features within an approximate 200 foot wide corridor (or up to existing barriers such as walls or houses that would prevent further surveying) where the proposed improvements will follow the existing FM 2551 (approximately 13,000 linear feet).
6. Perform field survey which includes the staking of the proposed center line at the P.C.'s, and P.T.'s, at 500 foot intervals, and at other locations designated by CP&Y.
7. Perform field survey which includes surveying the drainage ways and creeks along the proposed right-of-way. Survey will include cross sections of the drainage ways and creeks for approximately 200 feet upstream and downstream of the existing right-of-way.
8. Contact DIGTESS for the purpose of locating franchise utilities along the proposed corridor and acquire (by field survey) the franchise utility information from the locates placed in the field by DIGTESS.
9. Contact cities along the proposed corridor for the purpose of locating city utilities along the proposed corridor and acquire (by field survey) the city utility information from the locates placed in the field by the cities.

10. When buried utility lines are exposed by SUE work, performed field survey to locate the utility lines horizontally and vertically.
11. Analyze properties along the proposed corridor in order to establish common property lines for the purpose of establishing these lines for the base map.
12. Prepare a base map showing the information acquired by research and field survey and provide a digital and hard copy to CP&Y.

Task Two– Right-of-Way Maps and Legal Descriptions

The proposed scope of services for right-of-way map and legal description services for the property include the following:

1. Locate the existing right-of-way in the field.
2. Prepare right-of-way maps showing the existing right-of-way and provide a digital and hard copy to CP&Y.
3. After additional right-of-way needs are identified as a result of the design process, modify right-of-way maps accordingly to indicate proposed right-of-way and easement acquisition.
4. Prepare legal descriptions needed for the additional right-of-way and easements.
5. Provide a digital copy and hard copy of the revised right-of-way maps and legal descriptions for the proposed right-of-way to CP&Y.
6. Assist CP&Y in coordinating the review process associated with Collin County's and TxDOT's review of the right-of-way maps and legal descriptions.
7. Incorporate comments received from Collin County and TxDOT and revise the right-of-way maps and legal descriptions accordingly.
8. Prepare and submit the final copies of the right-of-way maps and legal descriptions to CP&Y, including a digital copy and a hard copy.
9. Establish the new right-of-way in the field by setting monuments at the appropriate time.

Additional Services

The scope of services for possible additional services include the following:

1. Provide assistance in obtaining right-of-entry to properties that need to be entered for field survey services.
2. Other services needed and requested by CP&Y.

COMPENSATION

BW2 proposes to provide the aforementioned Scope of Services for the fees set forth below:

Task One – Topographic Surveying

The estimated cost for Task 1, Topographic Surveying is \$65,000. BW2 proposes to provide these services for a fee of \$65,000.

Task Two – Right-of-Way Maps and Legal Descriptions

The level of services required for the right of way maps and legal descriptions will be related to the number of properties affected as a result of the need for additional right-of-way for the project. There appears to be approximately 120 to 140 properties that could be affected due to the existence of developed subdivisions along the proposed corridor.

For these proposed services, the following is suggested:

1. The fee will be based on a per property basis.
2. The impact of the economy of scale will play a part in this phase of the project.
3. For fee determination purposes for this task, it is suggested that approximately forty (40) affected properties be assumed.
4. At forty (40) properties, the estimated cost for Task Two services is \$790 per property.
5. At \$790 per property the projected fee for 40 properties would be \$31,600.
6. If fewer than forty (40) properties are affected, BW2 is committed to providing these Task Two services to CP&Y at the same rate (\$790 per property).
7. For budgeting purposes CP&Y may choose to assume that more than forty (40) properties will be affected resulting in more documents being required.
8. If more than forty (40) properties are affected, resulting in more documents, BW2 would be willing to provide the additional documents at a reduced rate, given the impact of economy of scale. For budgeting purposes BW2 proposes to provide any additional documents required at \$600 per property.

Additional Services

The estimated cost associated with right-of-entry assistance is \$3,000. It is suggested that approximately \$5,000 be budgeted for additional services. This would provide a budget for right-of-entry assistance (if needed) and other minor needs that might be identified by CP&Y during the project. These services will be provided on a time and materials basis.

ASSUMPTIONS

BW2 has made the following assumptions in preparing this proposal:

- Portions of the project site area may have significant tree coverage and, as such, may require some “cutting lines” in order to complete the survey work.
- A Tree Survey and/or Mitigation Plan are not included in this proposal.
- A Boundary Survey is not included as part of this proposal.

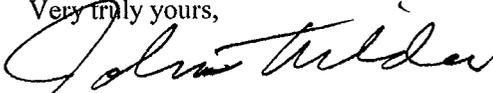
Ms. Julia Xia, P.E.

June 18, 2012

Page Four

We appreciate the opportunity to provide these professional services to CP&Y and we look forward to working with you on this project. If you have any questions, please do not hesitate to contact me.

Very truly yours,

A handwritten signature in black ink, appearing to read "John F. Wilder". The signature is written in a cursive, flowing style.

John F. (Jack) Wilder, R.P.L.S.

Project Manager

JFW/cc

Collin County

EXHIBIT B
SUMMARY OF MANHOURS BY CLASSIFICATION & MAJOR TASK ANALYSIS

FM 2551 (FM 2514 to FM 2170)
CP&Y, Inc
LUMP SUM

TxDOT FUNCTION CODE	DESCRIPTION OF WORK TASK	PHASE I PLAN ADEQUATE (60%)	PHASE II FINAL PLAN & CONSTRUCTION SERVICE	TOTAL COST
110	Route and Design Studies	\$ 19,600.00	\$ -	\$ 19,600.00
150	Field Surveying	\$ 7,600.00	\$ -	\$ 7,600.00
160	Roadway Design Controls	\$ 380,680.00	\$ 119,600.00	\$ 500,280.00
161	Drainage	\$ 298,160.00	\$ 92,560.00	\$ 390,720.00
162	Signing, Markings and Signalization	\$ 134,472.00	\$ 48,768.00	\$ 183,240.00
163	Miscellaneous Roadway	\$ 283,910.00	\$ 114,230.00	\$ 398,140.00
	Direct Costs	\$ 4,209.00	\$ 2,807.00	\$ 7,016.00
	CP&Y Subtotal	\$ 1,128,631.00	\$ 377,965.00	\$ 1,506,596.00
Sub	BW2 Engineering	\$ 94,140.00	\$ 10,460.00	\$ 104,600.00
	SAM	\$ 104,315.00	\$ -	\$ 104,315.00
Construction Phase Services (COST PLUS SPECIFIED RATE)				
309	Design Verification, Changes & Alterations	\$ -	\$ 106,800.00	\$ 106,800.00
Total		\$1,327,086.00	\$495,225.00	\$1,822,311.00

COLLIN COUNTY

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FM 2551 (FM 2514 to FM 2170)
CP&Y, Inc.
LUMP SUM

TxDOT FUNCTION CODE	DESCRIPTION OF WORK TASK	No. of PS&E Sheets	Principal \$200.00	Project Manager \$180.00	Senior Design Engineer \$140.00	Design Engineer / SR ENGR Tech \$120.00	EIT/CADD Tech \$100.00	Clerical \$65.00	Total Labor Hours	Total Labor Cost per Task	Total Labor Cost per Task (60% PS&E)	
160.00 - Roadway Design Controls												
160.1	Verify Schematic Geometry											
160.1.1	Establish/Verify Horizontal and Vertical Geometry		4	40	80	80	80		284	\$36,800.00	\$36,800.00	
160.2	Horizontal Alignment Data Sheets											
160.2.1	Project Layout Sheets	7		8	32	32	32		104	\$12,960.00	\$11,664.00	
160.2.2	Horizontal Alignment Data Sheets	2		8	40	40	40		128	\$15,840.00	\$14,256.00	
160.3	Typical Sections											
160.3.1	Existing Typical Sections	1		2	8	16	16		42	\$5,000.00	\$4,500.00	
160.3.2	Proposed Typical Sections	4		8	40	40	40		128	\$15,840.00	\$14,256.00	
160.4	Roadway Plan and Profile											
160.4.1	FM 2551 Plan & Profile	28	4	80	240	280	320		924	\$114,400.00	\$87,240.00	
160.4.5	Cross Street Plan & Profile	5		16	80	80	100		276	\$33,680.00	\$28,628.00	
160.5	Miscellaneous Roadway Sheets											
160.5.1	Intersection Layout	4		8	80	80	40		208	\$26,240.00	\$20,992.00	
160.5.2	Driveway Details and Profiles	13		8	80	80	80		248	\$30,240.00	\$24,192.00	
160.5.3	Miscellaneous Roadway Details	1		8	24	24	24		80	\$10,080.00	\$8,064.00	
160.6	Roadway Quantity and Summary Sheets											
160.6.1	Calculate Roadway and Earthwork Quantities				80	80	40		200	\$24,800.00	\$14,880.00	
160.6.2	Roadway Summary Sheets	2		8	40	40	24		112	\$14,240.00	\$4,272.00	
Subtotal Roadway Design									2734	\$340,120.00	\$279,744.00	
160.7	Cross Sections											
160.7.1	Final Roadway Cross Sections	90		16	160	200	200		576	\$69,280.00	\$41,568.00	
160.7.2	Construction Phase Cross Sections			16	80	80	40		216	\$27,680.00	\$16,608.00	
Subtotal Cross Sections									792	\$96,960.00	\$58,176.00	
160.8	Removal Plans											
160.8.1	Removal Layouts	14		4	40	80	120		244	\$27,920.00	\$22,336.00	
160.8.2	Calculate Removal Quantities			4	8	24	24		60	\$7,120.00	\$4,272.00	
160.8.3	Removal Summary	1		4	4	8	8		20	\$2,480.00	\$744.00	
Subtotal Removal Plans									324	\$37,520.00	\$27,352.00	
160.10	Quality Assurance/Quality Control		2	48	64	64			178	\$25,680.00	\$15,408.00	
		Total	172	10	286	1176	1328	1228	0	4028	\$500,280.00	\$380,680.00
		Cost		\$ 2,000.00	\$ 51,480.00	\$ 164,640.00	\$ 159,360.00	\$ 122,800.00	\$ -			

COLLIN COUNTY

EXHIBIT B
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FM 2551 (FM 2514 to FM 2170)

CP&Y, Inc.
LUMP SUM

TxDOT FUNCTION CODE	DESCRIPTION OF WORK TASK	No. of PS&E Sheets	Principal	Project Manager	Senior Design Engineer	Design Engineer / SR ENGR Tech	EIT/CADD Tech	Clerical	Total Labor Hours	Total Labor Cost per Task	Total Labor Cost per Task (60% PS&E)
			\$200.00	\$180.00	\$140.00	\$120.00	\$100.00	\$65.00			
161.1 Culvert Design											
161.1.1	Exterior Drainage Area Map	3		8	40	40	16		104	\$13,440.00	\$11,424.00
161.1.2	Culvert Hydraulic Data Sheet	3			24	40	40		104	\$12,160.00	\$10,336.00
161.1.3	Culvert Layout	3		8	40	80	80		208	\$24,640.00	\$20,944.00
161.1.4	Complete BCS	1			8	24	24		56	\$6,400.00	\$5,440.00
161.2 Storm Drain Design											
161.2.1	Field Inventory of Existing Drainage Structures					16	16		32	\$3,520.00	\$3,168.00
161.2.3	Interior Drainage Area Maps	13		16	80	80	40		216	\$27,680.00	\$23,528.00
161.2.4	Storm Sewer Hydraulic Data Sheets	12		16	80	80	80		256	\$31,680.00	\$26,928.00
161.2.5	Storm Sewer Plan & Profiles	40		40	240	320	320		920	\$111,200.00	\$94,520.00
161.2.6	Lateral Profiles	6		16	40	80	80		216	\$26,080.00	\$22,168.00
161.2.7	Ditch Tables	0							0	\$0.00	\$0.00
161.2.8	Miscellaneous Drainage Details	1		8	40	40	40		128	\$15,840.00	\$13,464.00
161.3 Drainage Quantities and Summary Sheets											
161.3.1	Calculate Drainage Quantities			4	40	40	40		124	\$15,120.00	\$9,072.00
161.3.2	Drainage Summary Sheet	1		4	16	40	40		100	\$11,760.00	\$3,528.00
Subtotal Drainage Design									2464	\$299,520.00	\$244,520.00
161.4 Erosion Control Plans											
161.4.1	SW3P Narrative	2		8	16	16	8		48	\$6,400.00	\$3,840.00
161.4.2	SW3P Layouts (Assumed 3 Phases)	40		16	100	120	160		396	\$47,280.00	\$28,368.00
161.5 SW3P Quantities and Summary Sheets											
161.5.1	Calculate SW3P Quantities			4	8	40	16		68	\$8,240.00	\$4,944.00
161.5.2	SW3P Summary Sheet	1		4	8	8	8		28	\$3,600.00	\$1,080.00
Subtotal Erosion Control Design									540	\$65,520.00	\$38,232.00
161.6	Quality Assurance/Quality Control		2	48	64	64			178	\$25,680.00	\$15,408.00
Total		126	2	200	844	1128	1008	0	3182	\$390,720.00	\$298,160.00
Cost			\$ 400.00	\$ 36,000.00	\$ 118,160.00	\$ 135,360.00	\$ 100,800.00	\$ -			

COLLIN COUNTY

EXHIBIT B
SUMMARY OF MANHOURS BY CLASSIFICATION & MAJOR TASK ANALYSIS

FM 2551 (FM 2514 to FM 2170)

CP&Y, Inc.
LUMP SUM

TXDOT FUNCTION CODE	DESCRIPTION OF WORK TASK	No. of PS&E Sheets	Principal	Project Manager	Senior Design Engineer	Design Engineer / SR ENGR Tech	EIT/CADD Tech	Clerical	Total Labor Hours	Total Labor Cost per Task	Total Labor Cost per Task (60% PS&E)	
			\$200.00	\$180.00	\$140.00	\$120.00	\$100.00	\$65.00				
162 Striping, Markings and Signalization												
162.1	Signing and Pavement Marking Layouts											
162.1.1	Existing Sign Inventory				4	16	16		36	\$4,080.00	\$3,468.00	
162.1.2	Signing & Pavement Marking Layouts (1"=60')	13		16	64	80	80		240	\$29,440.00	\$25,024.00	
162.3	Signing and Pavement Marking Quantities/Summary											
162.3.1	Calculate Signing and Pavement Marking Quantities			4	8	16	24		52	\$6,160.00	\$3,696.00	
162.3.3	Summary of Pavement Markings	1		4	8	16	24		52	\$6,160.00	\$1,848.00	
162.3.4	Small Sign Summary	3		2	4	16	16		38	\$4,440.00	\$1,332.00	
Subtotal Signing & Striping									418	\$50,280.00	\$35,368.00	
162.4	Traffic Signal Plans											
162.4.1.1	Traffic Signal Layout Sheet	16		16	120	120	120		376	\$46,080.00	\$36,864.00	
162.4.1.2	Traffic Signal Elevation Sheet	3		4	8	16	40		68	\$7,760.00	\$6,208.00	
162.4.1.3	Phasing and Wiring Plans	3		4	120	120	80		324	\$39,920.00	\$31,936.00	
162.4.1.4	Complete Traffic Signal Standards Sheets				8	8	16		32	\$3,680.00	\$2,944.00	
162.4.1.5	Miscellaneous Signal Details	1		4	8	8	16		36	\$4,400.00	\$3,520.00	
162.4.2	Field Verify Signal Layouts					8	8		16	\$1,760.00	\$1,408.00	
162.5	Traffic Signal Quantities and Summary Sheets											
162.5.1	Calculate Traffic Signal Quantities				8	16	16		40	\$4,640.00	\$2,784.00	
162.5.2	Summary of Traffic Signals	1			8	16	16		40	\$4,640.00	\$1,392.00	
Subtotal Traffic Signals									932	\$112,880.00	\$87,056.00	
162.6	Quality Assurance/Quality Control		2	40	48	48			138	\$20,080.00	\$12,048.00	
		Total	41	2	94	416	504	472	0	1488	\$183,240.00	\$134,472.00
		Cost	\$ 400.00	\$ 16,920.00	\$ 58,240.00	\$ 60,480.00	\$ 47,200.00	\$ -				

COLLIN COUNTY

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FM 2551 (FM 2514 to FM 2170)
CP&Y, Inc.
LUMP SUM

TxDOT FUNCTION CODE	DESCRIPTION OF WORK TASK	No. of PS&E Sheets	Principal	Project Manager	Senior Design Engineer	Design Engineer / SR ENGR Tech	EIT/CADD Tech	Clerical	Total Labor Hours	Total Labor Cost per Task	Total Labor Cost per Task (60% PS&E)	
			\$200.00	\$180.00	\$140.00	\$120.00	\$100.00	\$65.00				
Miscellaneous Roadway												
163.1	Miscellaneous Roadway Sheets											
163.1.1	Title Sheet	1		2	8	8	8		26	\$3,240.00	\$2,916.00	
163.1.2	Index of Sheets	1		4		8	8		20	\$2,480.00	\$2,232.00	
Subtotal Misc. Roadway Sheets									46	\$5,720.00	\$5,148.00	
163.3	Traffic Control Plans											
163.3.1	Conceptual Phasing Layout			8	40	40	80		168	\$19,840.00	\$16,864.00	
163.3.2	General Notes/Sequence of Construction Narrative	1		2	16	24	24		66	\$7,880.00	\$6,698.00	
163.3.3	Advance Warning Sign Layouts	8		4	40	40	40		124	\$15,120.00	\$12,852.00	
163.3.4	TCP Typical Sections	36		8	40	80	80		208	\$24,640.00	\$20,944.00	
163.3.5	Traffic Control Plans	36		48	240	280	280		848	\$103,840.00	\$88,264.00	
163.3.6	Detour Layouts	2			40	80	40		160	\$19,200.00	\$16,320.00	
163.3.8	Shoring Wall Layouts	2			16	24	16		56	\$6,720.00	\$5,712.00	
163.3.9	Construction Time Estimate			8	40	40			88	\$11,840.00	\$7,104.00	
163.4	Traffic Control Quantities and Summary Sheets											
163.4.1	Calculate TCP Quantities				24	40	40		104	\$12,160.00	\$7,296.00	
163.4.2	Construction Phase Summary Sheets	1			8	16	8		32	\$3,840.00	\$1,152.00	
Subtotal Traffic Control									1854	\$225,680.00	\$183,208.00	
163.6	Collect Appropriate TxDOT Standard Sheets	160		4	8	8	16		36	\$4,400.00	\$4,400.00	
163.7	Construction Cost Estimate											
163.7.1.1	Preliminary Design Construction Cost Estimate			8	16	16			40	\$5,600.00	\$5,600.00	
163.7.1.2	Plans Adequate Construction Cost Estimate			8	16	16			40	\$5,600.00	\$5,600.00	
163.7.1.3	District Review Construction Cost Estimate			8	16	16			40	\$5,600.00	\$5,600.00	
163.7.2	Final Opinion of Probable Construction Cost			4	16	16			36	\$4,880.00		
Subtotal Construction Cost Estimates									156	\$21,680.00	\$11,200.00	
163.8	Specification and General Notes											
163.8.1	General Notes			16	24	40			80	\$11,040.00	\$6,624.00	
163.8.2	Prepare Specification and Special Provision List			8	24	40			72	\$9,600.00	\$5,760.00	
163.8.3	Prepare Misc. PS&E Documents			8	16	16			40	\$5,600.00	\$3,360.00	
Subtotal Specifications & General Notes									192	\$26,240.00	\$15,744.00	
163.9	Quality Assurance/Quality Control											
163.9.1	Traffic Control QA/QC			48	64	64			176	\$25,280.00	\$15,168.00	
Subtotal QA/QC									176	\$25,280.00	\$15,168.00	
163.10	Miscellaneous Project Management											
163.10.1	Routine Project Management		4	120					124	\$22,400.00	\$13,440.00	
163.10.2	Invoices and Progress Reports		4	48				12	64	\$10,220.00	\$6,132.00	
163.10.3.1	Miscellaneous Project Meetings (assumed 8 meetings)		4	40	40	16			100	\$15,520.00	\$9,312.00	
163.10.3.2	Milestone Review Meetings		4	40	40	16			100	\$15,520.00	\$9,312.00	
163.10.6	Project Closeout Tasks		4	8	16	16	16		60	\$8,000.00	\$0.00	
163.10.6	Mtgs (18 mos.)		4	54	54				112	\$18,080.00	\$10,848.00	
Subtotal Project Management									560	\$89,740.00	\$49,044.00	
		Total	248	24	506	862	960	656	12	3020	\$398,140.00	\$283,910.00
		Cost		\$ 4,800.00	\$ 91,080.00	\$ 120,680.00	\$ 115,200.00	\$ 65,600.00	\$ 780.00			

COLLIN COUNTY

EXHIBIT B
SUMMARY OF MANHOURS BY CLASSIFICATION & MAJOR TASK ANALYSIS

FM 2551 (FM 2514 to FM 2170)
CP&Y, Inc.
LUMP SUM

DIRECT COSTS

DESCRIPTION	ASSUMPTIONS	UNITS	COST PER	TOTAL COST
Color Bond Plot	/ Foot	100	\$ 6.00	\$ 600.00
Mileage	/ Mile	3200	\$ 0.505	\$ 1,616.00
Car Rental	/ Day		\$ 65.00	\$ -
11" X 17" copies	/ Sheet	32000	\$ 0.10	\$ 3,200.00
11" X 17" Mylar	/ Sheet	800	\$ 1.00	\$ 800.00
Delivery Services	/ Delivery	50	\$ 16.00	\$ 800.00
TOTAL DIRECT COSTS				\$ 7,016.00

COLLIN COUNTY

**EXHIBIT B
SUMMARY OF MANHOURS BY CLASSIFICATION & MAJOR TASK ANALYSIS**

**FM 2551 (FM 2514 to FM 2170)
SURVEY AND ROW (BW2 Engineering)
LUMP SUM**

DIRECT COSTS	QUANTITY	UNIT	UNIT COST	TOTAL
Task 1 - Topographic survey	1	LS	\$65,000.00	\$65,000.00
Task 2 - ROW map and legal descriptions	40	PARCEL	\$790.00	\$31,600.00
Task 3 - Additional Service	1	LS	\$8,000.00	\$8,000.00

EXHIBIT B
SUMMARY OF MANHOURS BY CLASSIFICATION & MAJOR TASK ANALYSIS

FM 2551 (FM 2514 to FM 2170)
SUBSURFACE UTILITY ENGINEERING (SAM)
LUMP SUM

SUBSURFACE UTILITY COST ESTIMATOR	
Project Name: <u>FM 2551 (FM 2514 to FM 2170)</u>	Date: <u>October 1, 2011</u>
Project Location: <u>Collin</u>	Prepared By: <u>SAM</u>
DESCRIPTION	CHARGE
GRAND TOTAL:	
\$104,315.00	

EXHIBIT C

SCHEDULE

FOR

FM 2551 (MURPHY ROAD) REALIGNMENT AND CONSTRUCTION FROM FM 2514 (PARKER ROAD) TO FM 2170 (Main Street)

IN

COLLIN COUNTY, TEXAS

The Engineer will work diligently to complete the design phase, prepare bid documents and provide any support services required during construction. Review periods are estimates based on previous experience with the County staff and TxDOT and may vary from the duration shown. Adjustments to this schedule may be required during the design and/or construction phase and will be coordinated with the County staff as necessary.

FM 2551 (From FM 2514 to FM 2170)

	Duration	Completion Date
Award of Contract	N/A	N/A
Notice to Proceed	N/A	N/A
Utility Investigation & Define Project	90	Nov 1, 2012
Submit Conceptual Plan (30%)	60	Dec 31, 2012
Review by TxDOT/County Staff	35	Feb 4, 2013
Submit Preliminary Plans (65%)	120	Jun 4, 2013
Review by TxDOT/County Staff	60	Aug 3, 2013
Submit Final Plans (95%)	120	Dec 1, 2013
Review by TxDOT/County Staff	60	Jan 30, 2014
Prepare Construction Documents	30	Mar 1, 2014
Advertise for Construction		
Receive Open Bids		
Award Construction Contract		
Begin Construction		
Construction Complete		

To be established by TxDOT

EXHIBIT D

SERVICES TO BE PROVIDED BY THE COUNTY

FOR

FM 2551 (MURPHY ROAD) REALIGNMENT AND CONSTRUCTION
FROM FM 2514 (PARKER ROAD) TO FM 2170 (Main Street)

IN

COLLIN COUNTY, TEXAS

The County will provide the following to the Engineer in the performance of the Project upon request:

- A. Provide any existing data the County has on file concerning the Project, if available.
- B. Provide any available as-built plans for the existing roadway facility.
- C. Provide any available as-built plans for the water and sanitary sewer lines that will be relocated.
- D. Assist the Engineer, as necessary, in obtaining any required data and information from the State or other local utility companies.
- E. Coordinate the preparation and subsequent approval of the required environmental documentation prior to construction.
- F. Assist the Engineer by requiring appropriate utility companies to expose underground utilities within the right-of-way, when required.
- G. Give prompt written notice to Engineer whenever the County observes or otherwise becomes aware of any development that affects the scope or timing of Engineer's services.

EXHIBIT "E"

INSURANCE REQUIREMENTS

1.0 Before commencing work, the vendor shall be required, at its own expense, to furnish the Collin County Purchasing Agent with certified copies of all insurance certificate(s) required by Texas Law indicating the coverage is to remain in force throughout the term of this contract. In addition to any coverage required by Texas Law, the vendor shall provide the following coverages.

1.1 Broad Form Commercial General Liability insurance at minimum combined single limits of (\$1,000,000 per-occurrence and \$2,000,000 general aggregate) for bodily injury and property damage, which coverage shall include products/completed operations, independent contractors, and contractual liability each at \$1,000,000 per occurrence. Coverage must be written on an occurrence form.

1.2 Workers Compensation insurance at statutory limits, including employers liability coverage at minimum limits. In addition to these, the contractor must meet each stipulation below as required by the Texas Department of Insurance, Division of Workers' Compensation; (Note: If you have questions concerning these requirements, you are instructed to contact the DWC.)

1.2.1 Definitions: Certificate of coverage ("certificate"). A copy of a certificate of authority to self-insure issued by the commission, or a coverage agreement in a form approved by the DWC (i.e. DWC-81, DWC-82, DWC-83, OR DWC-84), showing statutory workers compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project. Duration of the project includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

Persons providing services on the project includes, but is not limited to, all persons or entities performing all or part of the services the contractor has undertaken to perform on the project, regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project.

1.2.2 The contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Title 5 of the Texas Labor Code, for all employees of the contractor providing services on the project, for the duration of the project.

1.2.3 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract.

1.2.4 If the coverage period shown on the contractor's current certificate of coverage ends during the duration of the project, the contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

1.2.5 The contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

1.2.5.1 A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

1.2.5.2 no later than seven (7) days after receipt by the contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

1.2.6 The contractor shall retain all required certificates of coverage for the duration of the project and for one year thereafter.

1.2.7 The contractor shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

1.2.8 The contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Workers Compensation Commission, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

1.2.9 The contractor shall contractually require each person with whom it contracts to provide services on a project, to:

1.2.9.1 provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Title 5 of the Texas Labor Code, for all of its employees providing services on the project, for the duration of the project;

1.2.9.2 provide to the contractor, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project;

1.2.9.3 provide the contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;

1.2.9.4 obtain from each other person with whom it contracts, and provide to the contractor:

1.2.9.4.1 a certificate of coverage, prior to the other person beginning work on the project; and

1.2.9.4.2 a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project:

1.2.9.5 retain all required certificates of coverage on file for the duration of the project and for one year thereafter;

1.2.9.6 notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project: and

1.2.9.7 contractually require each person with whom it contracts, to perform as required by paragraphs 1.2.1 through 1.2.7, with the certificates of coverage to be provided to the person for whom they are providing services.

1.2.10 By signing this contract or providing or causing to be provided a certificate of coverage, the contractor is representing to the governmental entity that all employees of the contractor who will provide services on the project will be covered by workers compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

1.2.11 The contractor's failure to comply with any of these provisions is a breach of contract by the contractor which entitles the governmental entity to declare the contract void if the contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

1.3 Commercial Automobile Liability insurance shall be no less than \$500,000 combined single limits per accident for bodily injury and property damage, including owned, non-owned, and hired vehicle coverage.

1.4 Professional Liability Insurance at minimum limits of \$1,000,000. This policy must have a two (2) year extended period of coverage, (i.e. tail coverage). If you choose to have project coverage endorsed onto your base policy, this would be acceptable.

2.0 The required limits may be satisfied by any combination of primary, excess or umbrella liability insurances, provided the primary policy complies with the above requirements and the excess umbrella is following form. The vendor may maintain reasonable and customary deductibles, subject to approval by Collin County.

3.0 With reference to the foregoing insurance requirement, the vendor shall endorse applicable insurance policies as follows:

3.1 A waiver of subrogation in favor of Collin County, its officials, employees, volunteers and officers shall be contained in the workers compensation coverage.

3.2 The vendor's insurance coverage shall name Collin County as additional insured under the General Liability policy.

3.3 All insurance policies shall be endorsed to require the insurer to immediately notify Collin County of any decrease in the insurance coverage limits.

3.4 All insurance policies shall be endorsed to the effect that Collin County will receive at least thirty (30) days notice prior to cancellation, non-renewal or termination of the policy.

3.5 All copies of Certificates of Insurance shall reference the project/contract number.

4.0 All insurance shall be purchased from an insurance company that meets the following requirements:

4.1 A financial rating of B+VII or better as assigned by the BEST Rating Company or equivalent.

5.0 Certificates of Insurance shall be prepared and executed by the insurance company or its authorized agent, and shall contain provisions representing and warranting the following:

5.1 Sets forth all endorsements and insurance coverages according to requirements and instructions contained herein.

5.2 Sets forth the notice of cancellation or termination to Collin County.

EXHIBIT "F"

AFFIDAVIT OF REGULATION OF CONFLICTS OF INTEREST

The undersigned declares and affirms that during the term of this contract they will maintain compliance as defined in Vernon's Texas Codes Annotated, Local Government Code Title 5, Section C, Chapter 171.

I further understand and acknowledge that the existence of a conflict of interest at any time during the term of this contract will render the contract voidable.

Name of Engineer: _____

Title of Officer: _____

Signature of Officer: _____

Date: _____

ACKNOWLEDGMENT

STATE OF TEXAS }
 }
COUNTY OF _____ }

BEFORE ME, on this day personally appeared _____, known to me (or proved to me on the oath of _____ or through _____ (description of identity card or other document) to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he/she executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this, the _____ day of _____, 2012.

Notary Public, State of Texas

Printed Name

My Commission expires on the _____ day of _____, _____.