G • GEOTECHNICAL ENGINEERING
E • ENVIRONMENTAL CONSULTING
E • CONSTRUCTION MATERIALS TESTING

GEE Consultants, Inc.

10046 Monroe Drive • Dallas, Texas 75229 • (214) 352-5433 • Fax (214) 352-6972

EXHIBIT "B"

February 12, 2014

Mr. Michael Garza, P.E.
City of Coppell
Assistant Director of Engineering
Engineering Department
265 Parkway Blvd.
P.O. Box 9478
Coppell, Texas 75019
Via: MGarza@coppelltx.gov

RE: Proposal No. 2140204
Freeport Parkway Reconstruction
City of Coppell Project No. ST 05-02A
Coppell, Texas

Dear Mr. Garza:

In accordance with your request, we are pleased to submit the following proposal for materials testing and observation services for the above referenced project. The proposal is based on the plans and specifications, NCTCOG Construction Standards and typical testing frequencies.

We estimate the fees will be as follows:

I. FREEPORT PARKWAY, WEST SIDE TRAIL MASS GRADING (PRIOR TO ANY CEMENT TREATMENT), AND ROW BACKFILL

Compaction Laboratory Testing

ASTM D698 Moisture Density Relationships
3 tests @ $190.00 per test $570.00

Atterberg Limits Test
3 tests @ $57.00 per test $171.00

Percent Passing a No. 200 U.S. Sieve Test
3 tests @ $33.00 per test $99.00

Total Laboratory Testing $840.00

Field Density Testing

Sampling Subgrade Soils
2 Hrs. @ $47.00 per hour $94.00

Proof-rolling Subgrade Observations
(Assumes 1 trip)
2 Hrs. @ $47.00 per hour $94.00

In-Place Moisture Density Tests
(Assumes 7 trips for south bound, 6 trips for north bound, 3 trips
for centerline and 7 trips for trail density/moisture, minimum 3 tests per trip)
115 tests @ $44.00 per test $5,060.00

Trip Charges
25 trips @ $45.00 per trip (4 hours or less) $1,125.00

Total of Pavement Mass Grading Field Compaction Testing and Observation . $6,373.00

Total of Pavement Mass Grading Lab & Field Testing $7,213.00

II. CEMENT TREATED AND UNTREATED PAVEMENT SUBGRADE, HAND PLACED INTERSECTIONS AND DRIVEWAY/APPROACHES

A. Subgrade

Laboratory Testing

Moisture Density Relationships
3 cement treated tests @ $195.00 per test $585.00

Atterberg Limits Test
3 tests @ $57.00 per test $171.00

Total Laboratory Testing $756.00

Field Testing and Observation of Compaction Operations

Sampling and Gradation Testing of Cement Treated Soils
(Gradation tests every 250 lf, Alford driveway and hand placed areas, assumes 10 trips)
25 Hrs. @ $47.00 per hour $1,175.00

In-Place Moisture and Density Tests (based on 25 trips, minimum 3 tests per trip)
75 tests @ $44.00 per test $3,300.00

Trip Charges
35 trips @ $45.00 per trip (4 hours or less) $1,575.00

Total of Field Testing and Observation $6,050.00

Total of Cement Treated and Untreated Pavement Subgrade Testing $6,806.00

III. UTILITY BACKFILL AND CONCRETE TESTING

Laboratory Testing

ASTM D698 Moisture Density Relationships
3 tests @ $190.00 per test $570.00

Atterberg Limits Test
3 tests @ $57.00 per test $171.00

Percent Passing a No. 200 U.S. Sieve Test
3 test @ $33.00 per test $99.00

Total Laboratory Testing $840.00

Field Testing

Concrete Mix Observation (assumes 15 testing trips for storm drain inlets, 4 trips for square manhole testing, 3 trips for catch basins, 2 trips for storm drain manholes, 1 for concrete flume, 3 for head walls, 2 for 8'x6' concrete box and 3 trips for traffic roadway light foundations)
90 Hrs. @ $47.00 per hour 4,230.00

Compressive Strength Concrete and Grout Cylinders (with observation)
132 tests @ $26.00 per test $3,432.00

In-Place Moisture Density Tests (based on 1 test per 250 L.F., assumes 8 trips for storm drains/laterals A, B, C and D, 10 trips for 12' and 8" waterline/laterals, and 3 trips for 15" and 8" sanitary sewer backfill, minimum 3 tests per trip)
134 tests @ $44.00 per test (minimum of 3 tests per trip) $5,896.00

Trip Charges
54 trips @ $45.00 per trip (4 hours or less) $2,430.00

Total of Field Testing and Observation $15,988.00

Total for Storm Drain Testing $16,828.00

IV. MONOLITHIC AND MODULAR BLOCK WALL CONCRETE AND BACKFILL TESTING

Laboratory Testing

ASTM D698 Moisture Density Relationship
(Crushed Stone)
1 test @ $190.00 per test $190.00

Atterberg Limits Test
1 test @ $57.00 per test $57.00

Gradation Test
1 test @ $54.00 per test $54.00

Total Laboratory Testing $301.00

Field Testing

Concrete Mix Observation (Assumes 10 trips for monolithic wall rebar and 10 trips for wall concrete)
55 Hrs. @ $47.00 per hour $2,585.00

Compressive Strength Concrete Cylinders (with observation)
40 tests @ $26.00 per test $1,040.00

In-Place Moisture Density Tests (based on 1 test per 250 L.F., assumes 8 trips for modular block subgrade and crushed stone footing, 11 trips for wall backfill, minimum 3 tests per trip)
68 tests @ $44.00 per test (minimum of 3 tests per trip) $2,992.00

Trip Charges
39 trips @ $45.00 per trip (4 hours or less) $1,755.00

Total of Modular Wall Field Testing and Observation $8,372.00

Total of Wall Field and Lab Testing $8,673.00

V. REINFORCED CONCRETE PAVEMENT

Observation of Concreting (assumes 10 trips for testing 10 inch machine placed pavement, 10 intersection/hand concrete placements, 7 trips for stamped concrete)
180 Hrs @ $47.00 per hour $8,460.00

Compressive Strength Concrete Cylinders (with Observation)
(Based on 1 set of 4 cylinders per 100 cy or fraction thereof)
268 tests @ $26.00 per test $6,958.00

Trip Charges
20 trips @ $52.00 per trip (Over 4 hours) $1,040.00
7 trips @ $45.00 per trip (4 hours or less) $315.00

Total of Concrete Pavement Observation and Testing $16,773.00

VI. GABION WALL SUBGRADE/BACKFILL, ROCK ANCHOR GROUT STRENGTH, ROCK ANCHOR PERFORMANCE/PROOF TESTS

Laboratory Testing

ASTM D698 Moisture Density Relationships
2 tests @ $190.00 per test $380.00

Atterberg Limits Test
2 tests @ $57.00 per test $114.00

Percent Passing a No. 200 U.S. Sieve Test
2 test @ $33.00 per test $66.00

Total Laboratory Testing $560.00

Field Testing

Anchor Drilling and Grout Mix Observation
(assumes 3 testing trips)
30 Hrs. @ $47.00 per hour 1,410.00

Gabion Beam Rebar and Concrete Mix Observation (assumes early arrival for rebar and 3 testing trips for 18 by 18 inch concrete beams)
12 Hrs. @ $47.00 per hour 564.00

Rock Anchor Performance/Proof Test Observation (assumes 25 anchors tested)
10 Hrs. @ $47.00 per hour 470.00

In-Place Moisture Density Tests (based on 1 test per 250 L.F., assumes 30 trips(every 18 inch lift) for gabion subgrade/backfill, minimum 3 tests per trip)
90 tests @ $44.00 per test (minimum of 3 tests per trip) $3,960.00

Compressive Strength Concrete Cylinders, 1 set of 4 per trip (with observation)
12 tests @ $26.00 per test $312.00

Compressive Strength on Non-shrink Grout Cubes, 1 set of 6 per trip (with observation)
18 tests @ $26.00 per test $468.00

Trip Charges
33 trips @ $45.00 per trip (4 hours or less) $1,485.00
4 trips @ $52.00 per trip (Over 4 hours) $208.00

Total of Field Testing and Observation $8,877.00

Total for Gabion Observation and Testing $9,437.00

VII. BRIDGE CAST-IN-PLACE CONSTRUCTION

Field Testing

Pier Drilling, Rebar and Concrete Mix Observation
(assumes 14 days to drill 42 piers)
133 Hrs. @ $47.00 per hour 6,251.00

Rebar and Concrete Mix Observation (assumes 8 early trip arrivals for rebar and concrete testing for pilasters, 4 trips for bent rebar and 4 trips for bent concrete, 8 early arrival trips for rebar and concrete testing trips for wing walls, 8 early arrival trips for rebar and concrete testing trips for abutments, 2 trips for median concrete, 2 trips for bike trail slab, 6 trips for pedestrian rail rebar and 6 trips for pedestrian rail concrete, 4 trips for approach slabs, 3 pavement placements)
172 Hrs. @ $47.00 per hour 8,084.00

In-Place Moisture Density Tests (based on 12 trips for approach slab flex base , minimum 3 tests per trip)
36 tests @ $44.00 per test (minimum of 3 tests per trip) $1,584.00

Compressive Strength Concrete Cylinders, 1 set of 4 per trip (with observation)
160 tests @ $26.00 per test $4,160.00

Trip Charges
48 trips @ $45.00 per trip (4 hours or less) $2,160.00
21 trips @ $52.00 per trip (Over 4 hours) $1,092.00

Total of Field Testing and Observation $23,331.00

VIII. BRIDGE PRESTRESSED CONCRETE BOX BEAM CONSTRUCTION

Engineering Manager to Visit Precast Concrete Plant to Review
Quality Assurance/Quality Control Program Utilized for Construction
of Bridge Box Beams
(assumes local production facility , within 30 miles)
8 Hrs. @ $125.00 per hour 1,000.00

1 trip @ $52.00 per trip (Over 4 hours) $52.00

Total of Prestressed Plant QA/QC Program Review $1,052.00

IX. PEDESTRIAN TRAIL CONCRETE

Observation of Rebar and Concreting (assumes 20 trips for
concrete placements)
120 Hrs @ $47.00 per hour $5,640.00

Compressive Strength Concrete Cylinders (with Observation)
(Based on 1 set of 4 cylinders per 100 cy or fraction thereof)
160 tests @ $26.00 per test $4,160.00

Trip Charges
20 trips @ $52.00 per trip (Over 4 hours) $1,040.00

Total of Concrete Trail Observation and Testing $10,840.00

TOTAL OF ALL OBSERVATION AND TESTING SERVICES $100,953.00

Based on the assumptions our total estimated fee to perform the aforementioned tests and services is detailed above. It should be noted that this proposal is based on the estimated number of tests and quantities mentioned in this proposal and not a lump sum price. The construction sequence or job conditions may require more or fewer testing or observation. Only work which is actually performed will be charged for and all charges will be in accordance with the corresponding unit fees quoted in this proposal or our Schedule of Fees.

We understand we have been selected for this project and therefore, when providing this estimate, we are not in violation of laws governing procurement of professional engineering services with public entities.

If this proposal is acceptable to you, please sign the enclosed copy, along with the *Agreement for Materials Engineering and Related Construction Observation and Materials Testing Services,* and mail it to us at your earliest convenience.

We trust the information provided herein is sufficient for your use. Should you have any comments and/or questions, please do not hesitate to contact us. We are looking forward to working with you.

Sincerely,

GEE Consultants, Inc.

Richard W. Gee, P.E.
President

RWG/de

Enclosure

AGREEMENT FOR MATERIALS ENGINEERING AND RELATED CONSTRUCTION OBSERVATION AND MATERIALS TESTING SERVICES

THIS AGREEMENT is by and between:

City of Coppell
c/o Mr. Michael Garza
Assistant Director of Engineering
Engineering Department

hereinafter called CLIENT and GEE Consultants, Inc., a Texas corporation, hereinafter called GEE Consultants, who agree as follows:

1. **DECLARATIONS.** CLIENT desires to engage GEE Consultants to provide Materials Engineering and related construction observation and materials testing services in connection with CLIENT's project ("THE PROJECT") described as follows:

Freeport Parkway Reconstruction
City of Coppell Project No. ST 05-02A
Coppell, Texas

GEE Consultants has submitted a fee schedule to CLIENT, a copy of which is attached hereto and made a part hereof as Exhibit "A", for Materials Engineering and related construction observation and materials testing services, which fee schedule is acceptable to CLIENT.

2. **SCOPE OF WORK.** GEE Consultants shall provide Materials Engineering and related construction observation and materials testing services for THE PROJECT in accordance with the accompanying proposal "scope of services" made a part hereof as Exhibit B and the "terms and conditions" set forth on the back of and made a part of this Agreement.

EXECUTED THIS ____ day of _____, 2014.

CLIENT _____
By: _____
Title: _____

GEE Consultants, Inc.
By: Richard W. Gee
Title: President Date: 2/13/14

TO BE COMPLETED BY CLIENT FOR PAYMENT OF SERVICES:

Firm: _____
Address: _____
City_____, State_____ Zip Code: _____ Phone No. _____
Attention: _____ Title: _____
Invoice to the Account of: _____

FOR APPROVAL OF INVOICE(S):

If the invoice is to be mailed for approval to someone other than the account charged, please indicate where to mail the invoice in the space below.

Firm: _____
Address: _____
Zip Code: _____ Phone No. _____
Attention: _____ Title: _____

PERSON OR FIRM TO ACT AS CLIENT'S REPRESENTATIVE WITH RESPECT TO GEE CONSULTANTS' SERVICES:

Client's Representative: _____
Person or firm authorized to schedule observation and testing: _____

PERSONS OR FIRMS AUTHORIZED TO RECEIVE COPIES OF GEE CONSULTANTS' OBSERVATION AND TEST REPORTS:

_____
_____
_____

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EXHIBIT "A"

SCHEDULE OF SERVICES AND FEES
CONSTRUCTION MATERIALS ENGINEERING SERVICES
(Effective April 2013)

I. ASPHALTIC CONCRETE/BITUMINOUS MATERIALS OBSERVATION/TESTING:

1.1	Asphaltic concrete mix designs	
	a. Hveem Method, one asphalt content	300.00
	b. Marshall Method, one asphalt content	375.00
	c. Marshall Method, four asphalt contents	725.00
1.2	Confirmation Mix Design, using design prepared by others	At Unit Prices
1.3	Observation/sampling at batch plant or jobsite, per man-hour	47.00
1.4	Rolling Pattern Field Nuclear Density Tests, (minimum of 3 per trip), each	44.00
1.5	Asphaltic Concrete Coring, per diameter-inch	2.85
1.6	Laboratory Density of Pavement Cores, each	28.00
1.7	Molding Test Specimens (3 per set), set	56.00
1.8	Density and Percent Voids (3 per set), set	56.00
1.9	Hveem Stabilimeter Value (3 per set), set	85.00
1.10	Marshall Stability (3 per set), set	85.00
1.11	Marshall Flow Value (3 per set), set	18.00
1.12	Sand Equivalent, each	85.00
1.13	Extraction, each	190.00
1.14	Specific Gravity of Aggregates, each	54.00
1.15	Sieve Analysis of Aggregates, each	54.00
1.16	Evaluation of Built-up Roofing Membrane, each	300.00
1.17	Maximum Theoretical Density, each	175.00

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1.18	Solvent Disposal Charge, each	33.00

II. PORTLAND CEMENT CONCRETE AND AGGREGATES OBSERVATION/TESTING

2.1	Portland Cement Concrete Mix Design, including Specific Gravities, Absorptions, Unit Weights of Aggregates, and Gradations	195.00
2.2	Additional Mix Design (using same aggregates), each	140.00
2.3	Confirmation Mix Design Test Cylinders, each	34.00
2.4	Confirmation Mix Design Test Beams, each	34.00
2.5	Concrete Observation, per hour	47.00
2.6	Concrete Test Cylinders (without observation), each	30.00
2.7	Concrete Test Beams (without observation), each	35.00
2.8	Concrete Test Cylinders (with observation), each	26.00
2.9	Concrete Test Beams (with observation), each	28.00
2.10	Hold Cylinders, each	See Rates Above
2.11	Concrete Reinforcing Steel Observation (Shop or Field), per hour	47.00
2.12	Air Content Measurement when not making cylinders or beams (minimum three hours technician time), each	28.00
2.13	Unit Weight of concrete when not making cylinders or beams (minimum three hours technician time), each	28.00
2.14	Specific Gravity, each	54.00
2.15	Absorption, each	26.00
2.16	Gradation (ASTM C-136), each	54.00
2.17	Sieve Analysis (material finer than #200 U.S. Sieve), each	32.00
2.18	Sulphate Soundness	
	a. Five Cycles, each	295.00
	b. Each additional cycle	85.00

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2.19	Concrete Coring with Technician Time, per diameter-inch	3.00
2.20	Capping and Testing Concrete Cores, each	32.00
2.21	Sawing Core Ends, per end	11.00
2.22	Compressive Strength of brick, block or grout per specimen	35.00
2.23	Flexural Strength of brick or block, per specimen	38.00
2.24	Non-destructive Concrete Testing (excludes expendable materials), per hour	90.00
2.25	Compressive Strength of 2 Block Prism, each	70.00

III. SOIL OBSERVATION/TESTING

3.1	Continuous Observation and Testing of earthwork by Technician with nuclear gauge, per hour	54.00
3.2	In-Place Moisture-Density Tests (minimum of 3 tests per trip)	
	a. Nuclear Method, each	44.00
	b. Other Methods, each	By Request
3.3	Material Sampling, per hour	47.00
3.4	Moisture Content, each	8.00
3.5	Atterberg Limits (including Liquid and Plastic Limits), each	57.00
3.6	Linear Bar Shrinkage, each	24.00
3.7	Slaked and Washed Sieve Analysis	
	a. Materials processed over No. 40 U.S. Sieve, each	32.00
	b. Materials processed over No. 200 U.S. Sieve, ASTM D-422, each	32.00
3.8	Hydrometer Analysis (including sieves), each	245.00
3.9	Gradation of Lime Stabilized Soil per TSDHPT, Item 260, per hour (minimum of 3 hours per trip)	47.00
3.10	Preparation of Base Materials Binder for testing, each	32.00
3.11	Maximum and Minimum Density Tests, each	175.00
3.12	Specific Gravity Tests, each	54.00

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3.13 Moisture-Density Relationship
- a. Standard Method, ASTM D-698 or AASHTO T-99, each 190.00
- b. Modified Method, ASTM D-1557, AASHTO T-180 or TEX-113E, each 195.00
- c. TSDHPT Method TEX-114E, each 260.00

3.14 Moisture-Density Relationship with lime or cement
- a. Standard Method, ASTM D-698 or AASHTO T-99, each 195.00
- b. Modified Method, ASTM D-1557, AASHTO T-180, or TEX-113E, each 200.00
- c. TSDHPT Method TEX-114E, each 280.00

3.15 TSDHPT Triaxial Series, TEX-117E, each ..... By Request

3.16 TSDHPT Wet Ball Mill Analysis, TEX-116E, each 250.00

3.17 Los Angeles Abrasion (small aggregate), each 250.00

3.18 Sample Preparation for L.A. Abrasion or Wet Ball Mill Analysis, each aggregate 47.00

3.19 California Bearing Ratio (CBR), laboratory performed
- a. Native materials, per specimen 340.00
- b. Lime or cement treated, per specimen 350.00

3.20 Strength and Durability of Cement Stabilized Soils
- a. Curing and testing of Compression Samples, each ..... By Request
- b. Wet-Dry Test, ASTM D-559 or AASHTO T-135, each ..... By Request
- c. Freeze-Thaw Test, ASTM D-560 or AASHTO T-136, each ..... By Request
- d. Preparation of Samples for a, b, or c, each ..... By Request

3.21 Phenolphthalein Lime Indicator Charge, per trip 15.00

IV. OBSERVATION/TESTING OF STRUCTURAL STEEL/WELDING

4.1 Ultrasonic/Magnetic Particle/Liquid Penetrant by Level II Technician with equipment (portal to portal) per hour including standby 62.00

4.2 Visual Observation
- a. Structural Steel/Welding Observation - (Shop or Field), per hour ..... 55.00 (4 hour minimum, portal to portal)

4.3 Witness of Welders Qualification in Field
Plate or Pipe Test, per hour (4 hour minimum, portal to portal) 55.00

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4.4 Welders Qualification at our laboratory

a. Pipe Test - AWS or ASME

1 position - 6" Schedule 40	115.00
2 position - 6" Schedule 40	160.00
1 position - 6" Schedule 80	115.00
2 position - 6" Schedule 80	160.00

b. Plate Test - AWS or ASME (inc. all mats and testing in laboratory)

1 position - limited thickness, 3/8" plate	120.00
2 position - limited thickness, 3/8" plate	160.00
1 position - unlimited thickness, 1" plate	115.00
2 position - unlimited thickness, 1" plate	160.00

4.5 Plate Test - Texas Highway Department Standard Specification

1 position - 1" plate	190.00
2 position - 1" plate	310.00

4.6 Tensile Strength Tests (50.00 min. charge - machine costs, sampling extra)

a. Reduced Sections

10 or less, each	50.00
11 or more, each	45.00

b. Reinforcing Steel

# 3 to # 10, each	45.00
# 11 to # 18, each	50.00

V. PROFESSIONAL/TECHNICAL SERVICES

5.1	Typist, per hour	47.00
5.2	Engineering Inspector/Technician, per hour	47.00
5.3	Field Supervisor, per hour	75.00
5.4	Draftsman, per hour	80.00
5.5	Staff Engineer, per hour	95.00
5.6	Project Geotechnical Engineer, per hour	110.00
5.7	Engineering Manager, per hour	125.00
5.8	Principal Engineer, per hour	145.00
5.9	Expert Witness, Depositions, Testimony by Principal Engineer, per hour	195.00

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VI. GENERAL NOTES

6.1	Minimum charge for report	46.00
	Reproduction, per page	0.39
6.2	Hourly rate quoted at regular rate only (portal to portal), Mondays to Fridays, 7:30 am - 5:00 pm	
6.3	Vehicle Transportation Charges for All Field Services	
	Per one-half day within 30 miles of laboratory, per trip	45.00
	Over four hours within 30 miles of laboratory, per trip	52.00
	Outside of these parameters	By Request
6.4	Subsistence, per man-day	125.00
6.5	All direct expenses required/approved	Cost plus 15%
6.6	Terms of payment	Due Upon Receipt
	Finance charge past 30 days 1 1/2% per month, annual rate	18%