

AMENDATORY AGREEMENT

THIS AMENDATORY AGREEMENT is made and entered into between the CITY AND COUNTY OF DENVER, a municipal corporation of the State of Colorado (the "City"), and TSIIOUVARAS SIMMONS HOLDERNESS, INC., (the "Design Consultant"), a Colorado corporation, whose address is 5690 DTC Boulevard, Level #3, Suite 345W, Greenwood Village, Colorado 80111.

RECITALS:

1. The City and the Design Consultant previously entered into a Design Services Agreement dated March 17, 2009 for professional design engineering and related services pertaining to the reconstruction of Broadway Boulevard from the southern approach of Iowa Avenue to the northern portion of Wesley Avenue and improvements to Evans Avenue from the west approach to Broadway following to Delaware Street as well as the design of Asbury Outfall (the "Agreement"); and

2. The City and the Design Consultant wish to amend the Agreement to amend the scope and to increase the total compensation.

NOW, THEREFORE, in consideration of the premises and the mutual covenants and obligations herein set forth, the parties agree as follows:

1. All references to "...Exhibit A..." in the Existing Agreement shall be amended to read: "...Exhibit A and Exhibit A-1, as applicable..." The scope of work marked as Exhibit A-1 attached to this Amendatory Agreement is hereby incorporated by reference.

2. Section 3.01 of the Agreement, entitled "Fee for basic services" is hereby amended to read in its entirety as follows:

"3.01 Fee for basic services. The City agrees to pay the Design Consultant, as full compensation for its basic services rendered hereunder, a fee not to exceed **TWO MILLION SIX HUNDRED NINETY-FIVE THOUSAND THREE HUNDRED SIXTY-FOUR AND NO/100 DOLLARS (\$2,695,364.00)**, in accordance with the billing rates and project budget stated in **Exhibit A and A-1**. The amounts budgeted for phases may be increased or decreased, and the amounts allocated for services and expenses adjusted, upon written approval of the Manager or his designee, and subject to the Maximum Contract Amount stated in this Section 3."

3. Section 3.05(a) of the Agreement, entitled "Maximum Contract Amount", is hereby deleted in entirety and replaced with:

"3.05 Maximum Contract Amount.

(a) Notwithstanding any other provision of the Agreement, the City's maximum payment obligation will not exceed **TWO MILLION SIX HUNDRED NINETY-FIVE THOUSAND THREE HUNDRED SIXTY-FOUR AND NO/100 DOLLARS (\$2,695,364.00)** (the "Maximum Contract Amount"). The City is not obligated to execute an Agreement or any amendments for any further services, including any services performed by Consultant beyond those specifically described in Exhibit A and A-1. Any Services performed beyond those set forth therein are performed at Consultant's risk and without authorization under the Agreement."

4. Section 5.19 entitled "NO EMPLOYMENT OF ILLEGAL ALIENS TO PERFORM WORK UNDER THE AGREEMENT" is hereby amended to read as follows:

"5.19 NO EMPLOYMENT OF ILLEGAL ALIENS TO PERFORM WORK UNDER THE AGREEMENT:

a. This Agreement is subject to Division 5 of Article IV of Chapter 20 of the Denver Revised Municipal Code, and any amendments (the "Certification Ordinance").

b. The Design Consultant certifies that:

- (1) At the time of its execution of this Agreement, it does not knowingly employ or contract with an illegal alien who will perform work under this Agreement.
- (2) It will participate in the E-Verify Program, as defined in § 8-17.5-101(3.7), C.R.S., to confirm the employment eligibility of all employees who are newly hired for employment to perform work under this Agreement.

c. The Design Consultant also agrees and represents that:

- (1) It shall not knowingly employ or contract with an illegal alien to perform work under the Agreement.
- (2) It shall not enter into a contract with a subconsultant or subcontractor that fails to certify to the Design Consultant that it shall not knowingly employ or contract with an illegal alien to perform work under the Agreement.
- (3) It has confirmed the employment eligibility of all employees who are newly hired for employment to perform work under this Agreement, through participation in the E-Verify Program.
- (4) It is prohibited from using the E-Verify Program

procedures to undertake pre-employment screening of job applicants while performing its obligations under the Agreement, and that otherwise requires the Design Consultant to comply with any and all federal requirements related to use of the E-Verify Program including, by way of example, all program requirements related to employee notification and preservation of employee rights.

- (5) If it obtains actual knowledge that a subconsultant or subcontractor performing work under the Agreement knowingly employs or contracts with an illegal alien, it will notify such subconsultant or subcontractor and the City within three (3) days. The Design Consultant will also then terminate such subconsultant or subcontractor if within three (3) days after such notice the subconsultant or subcontractor does not stop employing or contracting with the illegal alien, unless during such three-day period the subconsultant or subcontractor provides information to establish that the subconsultant or subcontractor has not knowingly employed or contracted with an illegal alien.
- (6) It will comply with any reasonable request made in the course of an investigation by the Colorado Department of Labor and Employment under authority of § 8-17.5-102(5), C.R.S, or the City Auditor, under authority of D.R.M.C. 20-90.3.

d. The Design Consultant is liable for any violations as provided in the Certification Ordinance. If Design Consultant violates any provision of this section or the Certification Ordinance, the City may terminate this Agreement for a breach of the Agreement. If the Agreement is so terminated, the Design Consultant shall be liable for actual and consequential damages to the City. Any such termination of a contract due to a violation of this section or the Certification Ordinance may also, at the discretion of the City, constitute grounds for disqualifying Design Consultant from submitting bids or proposals for future contracts with the City.”

5. Paragraph 5.29, entitled “**ELECTRONIC SIGNATURES AND ELECTRONIC RECORDS**,” is hereby added to the Contract to read as follows:

“5.29 ELECTRONIC SIGNATURES AND ELECTRONIC RECORDS: Design Consultant consents to the use of electronic signatures by the City. The Agreement, and any other documents requiring a signature hereunder, may be signed electronically by the City in the manner specified by the City. The Parties agree not to deny the legal effect or enforceability of the Agreement solely because it is in electronic form or because an electronic record was used in its formation. The

Parties agree not to object to the admissibility of the Agreement in the form of an electronic record, or a paper copy of an electronic document, or a paper copy of a document bearing an electronic signature, on the ground that it is an electronic record or electronic signature or that it is not in its original form or is not an original.”

6. Except as amended herein, the Agreement is affirmed and ratified in each and every particular.

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK

Contract Control Number: CE95002

Vendor Name: TSIIOUVARAS SIMMONS HOLDERNESS INC

By: 

Name: George N. Tsiouvaras
(please print)

Title: Principal
(please print)

ATTEST: [if required]

By: _____

Name: _____
(please print)

Title: _____
(please print)



Contract Control Number: CE95002

Vendor Name: TSIOUVARAS SIMMONS HOLDERNESS INC

IN WITNESS WHEREOF, the parties have set their hands and affixed their seals at Denver, Colorado as of

SEAL

CITY AND COUNTY OF DENVER

ATTEST:

By _____

APPROVED AS TO FORM:

REGISTERED AND COUNTERSIGNED:

DOUGLAS J. FRIEDNASH, Attorney
for the City and County of Denver

By _____

By _____

By _____



December 3, 2010

Mr. Dennis J. Ohlrogge, P.E.
Project Manager
City and County of Denver
Department of Public Works
Engineering Division
Capital Project Management, Dept. 506
201 West Colfax Avenue
Denver, Colorado 80202

RE: Post Design Construction Support

For South Broadway Reconstruction – Wesley Avenue to Iowa Avenue including Evans
Scope of Work and Cost Proposal

Dear Dennis:

Tsiouvaras Simmons Holderness Inc. is pleased to submit the attached Scope of Services and Cost Worksheet to provide support services during the construction phase of the South Broadway Reconstruction Project – Wesley Avenue to Iowa Avenue. The scope and estimate are based on providing anticipated support services, including attendance of the pre-construction meeting, periodic field observation, attendance of weekly construction meetings, shop drawing review, design clarifications and revisions, and progress reports.

The assumed hours required for each of these activities are shown on the attached worksheet. As shown on the worksheet, our proposed not to exceed cost for this work is Two Hundred Ninety-Eight Thousand and four and No/100 Dollars (\$298,004.00).

We have appreciated the opportunity to work with you on the Broadway Design Phase and look forward to providing any needed support to Denver during the Construction Phase. If you have any questions or comments regarding this proposal, please contact me at by phone at 303.771.6200 or by e-mail at george.tsiouvaras@tshengineering.com.

Sincerely,

TSIOUVARAS SIMMONS HOLDERNESS, INC.



George N. Tsiouvaras, P.E.
Project Manager

GNT/ksm

Attachments

Tsiouvaras Simmons Holderness, Inc.
5690 DTC Blvd., Level 3, Suite 345W
Greenwood Village, CO 80111
(303) 771-6200 main
(303) 771-6800 fax
www.TSHengineering.com

**SOUTH BROADWAY RECONSTRUCTION
WESLEY AVENUE TO IOWA AVENUE INCLUDING EVANS
POST DESIGN CONSTRUCTION SUPPORT
SCOPE OF WORK
DECEMBER 3, 2010**

- Tsiouvaras Simmons Holderness (TSH) will attend the Pre-construction meeting.
- Tsiouvaras Simmons Holderness (TSH) will provide support during the bid phase.
- Tsiouvaras Simmons Holderness (TSH) shall, if requested, provide the following services during construction.
 1. Provide periodic observations of construction progress to verify work is in conformance with the intent of the construction documents.
 2. Provide the City with bid phase support as requested, by the City.
 3. Attend weekly construction progress meetings as requested (assume TSH will attend a total of 40 meetings).
 4. Review shop drawings, colors and materials. Assist the City in reviewing traffic control and construction phasing plans.
 5. Submit reports identifying activities in progress or actions taken while making periodic site observations during the construction period.
 6. Address field requests for information, questions, and provide supporting details as requested by the City. Incorporate plan changes as requested by the City.
 7. Perform construction materials testing services per the attached scope of work from Geocal, Inc. TSH shall coordinate with subconsultants as needed.

**SOUTH BROADWAY RECONSTRUCTION
WESLEY AVENUE TO IOWA AVENUE INCLUDING EVANS
POST DESIGN CONSTRUCTION SUPPORT
COST PROPOSAL
December 3, 2010**

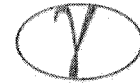
Direct Labor Costs								
Task Description	George Tsiouvaras	Robert Marusin	Kyle Dorrenbacher	David Woolfall	Steve Florian	Krystel DeHererra	Total Hours	Labor Costs
2011 Hourly Rates	\$149	\$142	\$114	\$138	\$94	\$61		
Construction Phase								
Attend Pre-Construction Meeting	3	3	3				9	\$1,215
Bid Phase Support	4	4	20	12	8		48	\$5,852
Field Observation and Construction Progress Meeting	40	40	80	20			180	\$23,520
Review Shop Drawing	2	2	40				44	\$5,142
Traffic Control/Phasing Plans	4	4	40	40			88	\$11,244
Progress Report	36					36	72	\$7,560
Field Questions and RFIs and Details	16	96	160	24	120		416	\$48,848
Totals	105	149	343	96	128	36	857	\$103,381

Direct Expenses and Subconsultants	
Reproduction	\$497
Mileage	\$1,000
Geocal, Inc.	\$174,940
Shapins Belt Collins	\$18,186
Total	\$194,623

Total - Maximum not to Exceed \$298,004

GEOCAL, INC.

Geosciences and Engineering



December 6, 2010

Mr. George Tsiouvaras, PE
Tsiouvaras Simmons Holderness, Inc.
5690 DTC Boulevard, Suite 345
Greenwood Village, Colorado 80111

**RE: Revised QA Construction Materials Testing Services Proposal
South Broadway Reconstruction, Iowa to Wesley, West Evans Reconstruction,
S. Broadway to S. Cherokee
Project Nos: STU C010-192, STU M3220-069, and STU C010-093
Denver, Colorado**

Dear George,

Geocal, Inc., is pleased to submit this revised proposal to provide QA construction materials testing services during construction of the above referenced project. The anticipated scope of services and associated fees are described as follows.

Scope

The scope of services for this project is to provide construction materials testing services in accordance with CDOT's 2010 Field Materials Manual (FMM), project Special Provisions, and project specifications. Testing of Hot Bituminous Asphalt will be performed in accordance with MGPEC and the Special Provision requirements.

In general, testing services will include: soils and aggregate testing, subgrade preparation, utility trench backfill and aggregate base course; concrete testing associated with concrete paving, site work (median cover, curb & gutter) and structural concrete (walls, inlets/manholes); and asphalt pavement testing. It is assumed that pavement coring for thickness/density determinations will be the responsibility of the contractor. Services will be provided on a part-time/as-needed basis as coordinated through our main office in Centennial (303) 337-0338. Based on our previous experience, we have assumed that in general a full time technician will be required; however, we understand that there will be portions of the project where a technician will not be required on-site and portions where multiple technicians will be required. We have based our revised estimate on the following assumptions:

Revised QA Construction Materials Testing Services Proposal
South Broadway Reconstruction, Iowa to Wesley, West Evans, S. Broadway to S. Cherokee
Project Nos: STU C010-192, STU M3220-69, STU C010-093
P10.0952.000
December 6, 2010
Page 2 of 2

- The majority of major construction (earthwork, utilities, paving, sidewalks and medians) can be completed within 56 weeks, with average required hours on site by our technicians of 35 hours per week.
- Asphalt paving operations can be completed in 20 days.
- Concrete paving operations can be completed in 40 days.

The estimate does not include costs for standby, retests, or other contractor delays.

Fees

The projected cost and rates to be used on this project are those outlined on the attached tabulation, Cost Estimate for QA Construction Materials Testing Services. Based on our conversations, a review of the project documents, and our experience on projects of similar scope and complexity, a cost of **\$174,940.00** has been estimated. The actual invoiced amount will be a function of contractor's efficiency and requirements from the project inspectors and may be more or less than the estimated total shown. The unit rates identified includes standard tools and equipment, and no additional charges will be made for clerical time or test report distribution. Services will be charged portal to portal from our main office in Centennial and vehicle mileage will also be charged. Any additional services requested and not identified herein will be provided in accordance with the attached Fee Schedule. We can provide a mobile field trailer to conduct laboratory testing of soils and concrete and can provide a revised cost for that service, if requested.

If you have any questions, or if we can be of further service, please feel free to give me a call.

Sincerely,

GEOCAL, INC.



Gabriel A. Burgess, P.E.
Senior Engineer

GAB/P10.0952.000

Attachments: Cost Estimate for QA Construction Materials Testing Services
Standard Fee Schedule, January 2010

Cost Estimate for QA Construction Materials Testing Services
South Broadway Reconstruction, Iowa To Wesley, Evans Avenue from S. Broadway to S. Cherokee -
Projects: STU C010-192, STU M3220-069 and STU C010-093
Denver, Colorado

Personnel	Unit	Rate	Quantity	Amount
*Materials Technician	Hour	\$ 59.00	1960	\$ 115,640.00
Field Supervisor	Hour	\$ 75.00	150	\$ 11,250.00
Project Manager/Technical Review	Hour	\$ 120.00	75	\$ 9,000.00
Vehicle Mileage - Per Effective Federal Mileage Rate	Mile	\$ 0.50	9,800	\$ 4,900.00
Subtotal:				\$ 140,790.00

Laboratory Testing	Unit	Rate	Quantity	Amount
<u>Soils Lab</u>				
Modified Proctor	Each	\$ 100.00	8	\$ 800.00
Gradation	Each	\$ 50.00	12	\$ 600.00
Atterberg Limits	Each	\$ 60.00	12	\$ 720.00
Proctor Check Point	Each	\$ 55.00	6	\$ 330.00
R-value (ABC, Soil Surveys)	Each	\$ 350.00	4	\$ 1,400.00
LA Abrasion (ABC)	Each	\$ 150.00	2	\$ 300.00
<u>Concrete Lab</u>				
Sand Equivalent	Each	\$ 60.00	40	\$ 2,400.00
Concrete Cylinder Compressive Strength	Each	\$ 18.00	600	\$ 10,800.00
Core Thickness Determination (Contractor Cored)	Each	\$ 15.00	40	\$ 600.00
<u>Asphalt Lab</u>				
AC Gauge Calibration	Each	\$ 400.00	4	\$ 1,600.00
Asphalt Cement Content	Each	\$ 100.00	20	\$ 2,000.00
Gradation	Each	\$ 50.00	20	\$ 1,000.00
Air Voids & VMA	Each	\$ 300.00	20	\$ 6,000.00
HVEEM Stability	Each	\$ 100.00	20	\$ 2,000.00
Maximum Theoretical Specific Gravity (Rice)	Each	\$ 60.00	20	\$ 1,200.00
Lottman	Each	\$ 300.00	4	\$ 1,200.00
Microdeval	Each	\$ 200.00	4	\$ 800.00
Core Density/Thickness (Contractor Cored)	Each	\$ 20.00	20	\$ 400.00
Subtotal:				\$ 34,150.00
Estimated Total:				\$ 174,940.00

Services will be charged port to port from our office in Centennial. The unit rates identified include standard tools and equipment and no additional charges will accrue for clerical time or report distribution. Other civil inspections and tests requested and not identified in this proposal will be performed in accordance with Geocal's standard fee schedule or at a negotiated rate. It is assumed that pavement coring for thickness/density determinations will be performed by the contractor.

Costs assume that PCCP paving will follow concrete cylinder QC program and not flexural beam QC program, we can provide a revised cost assuming use of flexural beams. Costs for laboratory testing could also be reduced if the client would like set-up of field trailer for testing of soils and concrete. We can provide an alternative cost assuming use of site field trailer.

*A multiplier of 1.35 will be applied to the personnel rates identified for "Premium Time Services" and is defined as all work performed over 8 hours/day, 40 hours/week, and all work performed on weekends, holidays and night shifts (8:00 p.m.-5:00 a.m). No Premium Time charges will be applied for management and supervisor personnel.

GEOCAL, INC.

Fee Schedule, January 2010

Geosciences and Engineering

Page 1 of 1

PERSONNEL FEES

Principal Engineer, per hour	\$ 155.00
Project Manager, per hour	\$ 125.00
Senior Engineer or Scientist, per hour	\$ 110.00
Project Engineer or Scientist, per hour	\$ 95.00
Staff Engineer/ Scientist, Structural Steel Insp per hour	\$ 80.00
Civil Inspector, per hour	\$ 75.00
Field Eng., Geologist, Drilling Supervision, per hour	\$ 75.00
Materials Testing Supervisor, per hour	\$ 75.00
Senior Technician, per hour	\$ 65.00
Field or Laboratory Technician, per hour	\$ 58.00
Laboratory Manager, per hour	\$ 85.00
Graphics/Cadd, per hour	\$ 50.00
Clerical, per hour	\$ 30.00
Expert Witness, Depositions, Court Appearances, per hour	\$ 300.00
Overtime (over 8 hours per day, Saturday, Sunday or Holiday) billed at standard rate times 1.5 Field time is charged port-to-port.	

DRILL RIG & MISCELLANEOUS EXPENSES

Solid Stem Auger per hour	\$ 125.00
Hollow Stem Auger 4 to 6-inch per hour	\$ 145.00
Diamond Core Drilling	Quotes Available Upon Request
Nuclear Test Gauge cost per day	\$ 25.00
Vehicle Charge, per mile	\$ 0.50
Out-of-town living expenses	Cost + 15%
Outside services, equipment rentals, supplies, etc.	Cost + 15%

SOILS LABORATORY TESTING

Swell/Consolidation (ASTM D 4546), per test	\$ 60.00
Swell/Consolidation (remolded, ASTM 4546), per test	\$ 90.00
One Dimension Time Consolidation (ASTM D 2435), per load	\$ 70.00
Gradation Analysis to the No. 200 sieve (ASTM D 422), per test	\$ 50.00
Percent minus No. 200 sieve (ASTM D 1140), per test	\$ 45.00
Hydrometer Analysis (ASTM D 422), per test	\$ 70.00
Plastic and Liquid Limits (ASTM D 4318), per sample	\$ 60.00
Natural Moisture Content & Dry Unit Weight (ASTM D 2216)	\$ 25.00
Specific Gravity (ASTM D 854), per test	\$ 65.00
Permeability Test - Undisturbed (ASTM D 2434), per sample	\$ 250.00
Permeability Test - Remolded (ASTM D 2434), per sample	\$ 350.00
Permeability Test - Triaxial, per sample	\$ 400.00
Unconfined Compression (ASTM D 2166), per test	\$ 75.00
Triaxial Testing (ASTM D 2850):	
Unconsolidated - Undrained, per point (Quick Test)	\$ 175.00
Consolidated - undrained, per point (R-Test)	\$ 250.00
Consolidated - drained, per point (S-Test)	\$ 350.00
Direct Shear Tests (ASTM D 3080)	
Unconsolidated - Undrained (Quick Test)	\$ 125.00
Consolidated - Undrained (R-Test)	\$ 175.00
Consolidated - Drained (ASTM D 3080)	\$ 300.00
California Bearing Ratio (ASTM D 1883), 3-points	\$ 330.00
Resistance R-Value (ASTM D 2844), 3-points	\$ 350.00
Water Soluble Sulfates, per sample	\$ 35.00
PH Level	\$ 25.00
Standard Proctor (ASTM D 698/AASHTO T-99), per sample	\$ 95.00
Modified Proctor (ASTM D 1557/AASHTO T-180), per sample	\$ 105.00
Check Point on Modified or Standard Proctor, per sample	\$ 55.00
Relative Density (ASTM D 4253 and 4254), per sample	\$ 175.00
Crumb Test (ASTM D6572)	\$ 30.00
Unconfined Compressive Strength - Chemically Treated Soils	\$ 55.00
Moisture/Density Relationship - Chemically Treated Soils	\$ 120.00

AGGREGATE LABORATORY TESTING

Sieve Analysis	
ASTM C 136 Coarse or Fine Aggregate per test	\$ 60.00
ASTM C 117 Percent Passing #200 sieve	\$ 50.00
ASTM D 422 Hydrometer Analysis, per test	\$ 70.00
Large Pit Run Samples cost per hour	\$ 58.00
Los Angeles Abrasion Test each	
ASTM C 131 (1 1/2" maximum)	\$ 150.00
ASTM C 535 (3" maximum)	\$ 175.00
Sodium Sulfate Soundness, ASTM C 88	\$ 230.00

Aggregate Testing (continued)

Magnesium Sulfate Soundness (5 cycles), per test	
ASTM C 88 Coarse or Fine Aggregate	\$ 220.00
Soundness Test for Filter Rock (20 cycles), per test	\$ 300.00
Specific Gravity ASTM C 127/C 128, per test	\$ 65.00
Organic Impurities ASTM C 40 Fine Aggregate	\$ 45.00
Friable Particles ASTM C 142	\$ 50.00
Lightweight Pieces ASTM C 123	\$ 50.00
Soft Particles ASTM C 851 Coarse Aggregate	\$ 50.00
Sand Equivalent AASHTO T-17/ASTM D 2419	\$ 60.00
Fractured Faces CP-45 Coarse Aggregate	\$ 45.00
Flat and Elongated Particles Coarse Aggregate	\$ 45.00
Unit Weight ASTM C 29	\$ 40.00
Moisture Content ASTM C 566	\$ 20.00
Effective Size and Uniformity Coefficient	\$ 25.00
Void Content of fine aggregate	\$ 45.00
Micro-Deval Abrasion	\$ 200.00
Alkali Reactivity ASTM C1260	\$ 500.00

CONCRETE LABORATORY TESTING

Compression Tests, cost per cylinder	\$ 18.00
Ship-in Cylinders (made by others), per cylinder	\$ 30.00
Flexural Test (Beams), cost per beam	\$ 30.00
Tensile Splitting Test ASTM C 496	\$ 40.00
Modulus of Elasticity Test ASTM C 469	\$ 100.00
Setting Time Test ASTM C 403	\$ 175.00
Shrinkage Test ASTM C 157, set of 3	\$ 200.00
Concrete Mix Designs (aggregate tests separate)	
6 Cylinders (full design)	\$ 1,300.00
6 Beams (full design)	\$ 1,800.00
Concrete Coring (per hour):	\$ 85.00
Trimming, Length, Unit Weight, Compression	\$55.00 each
Special Laboratory Tests	\$65.00/hour
Cores, Grout, Brick	\$20.00 each
Prisms	\$25.00 each
Concrete steel pull test (tie-bars), per hour	\$ 85.00

ASPHALT LABORATORY TESTING

Superpave Mix Design (4 pts, aggregate tests separate)	\$ 2,200.00
(includes Hveem stability, Rice, VMA, total voids)	
Superpave Volumetric Properties, Production Sample	\$ 300.00
(3 specimens, AC separate)	
Hveem Stability (with production samples tests)	\$ 100.00
Without production sample tests	\$ 200.00
Marshall Mix Design (4 points) includes bulk specific gravity, flow, stability, Rice	\$ 1,700.00
Marshall Properties (3 Specimens), ASTM D 6926 & 6927	\$ 220.00
Includes Unit Weight, Stability and Flow	
Maximum Theoretical Specific Gravity (Rice Value)	\$ 60.00
per sample, ASTM D 2041, AASHTO T-209	
Asphalt Content (ignition/nuclear) Calibration	\$ 400.00
AC Content w/ Ignition or Nuclear Oven, each	\$ 100.00
Asphalt Coring per hour	\$ 85.00
Bulk Density and Thickness (cores), cost per core	\$ 25.00
Lottman, per test	\$ 300.00

MASONRY UNITS LABORATORY TESTING

Bricks compressive strength ASTM C67	\$ 60.00
Absorption ASTM C67	\$ 60.00
Freeze-Thaw ASTM C 67 per set	\$ 500.00
Initial Rate of Absorption ASTM C 67 each test	\$ 30.00
Masonry Units - Compressive Strength ASTM C 140	
Hollow Block	\$50.00/each
Grout Filled Block	\$60.00/each
Masonry Prisms - Compressive Strengths	
Block, Hollow Prism	\$120.00/each
Block, Grout Filled (up to 8" width)	\$120.00/each
Block, Grout Filled (over 8" width)	\$175.00/each
Mortar Cubes Compressive Strength	\$25.00/each
Grout (cast in block)	\$45.00/each
Grout Cubes	\$25.00 each



S. BROADWAY IMPROVEMENT PROJECT: IOWA TO WESLEY

POST DESIGN SERVICES AND CONSTRUCTION ADMINISTRATION / OBSERVATION

Provide construction administration / observation services including....

Task 1.1 Pre-Bid and Pre-Construction Meetings

Belt Collins will attend one pre-bid and one pre-construction meetings and provide clarification in response to contractor questions.

Task 1.2 RFI's/Clarifications/Change Orders

Belt Collins will promptly answer contractor questions and provide any needed clarification of plans, details and specifications. Belt Collins will provide professional services related to review of change orders and/or response to RFI's (Requests for Information). BC will provide revised plan sets and/or full sized re-plots for clarity and legibility if requested.

Task 1.3 Plant Material Selection

Belt Collins will provide professional services related to selection of specified plant materials including a nursery visit and tagging of plant material.

Task 1.4 Construction Progress Site Visits

Belt Collins will provide periodic observations of construction progress to assure work is in conformance with the intent of the landscape, urban design and irrigation construction documents. Belt Collins will attend construction progress meetings as requested (assumes a total of 12 meetings). Belt Collins will submit Construction Observation Reports identifying activities in progress, direction provided and/or actions taken while making periodic site observations during the construction period.

Task 1.5 Substantial Completion Walkthrough/Punchlist

The Team will provide one Substantial Completion Walkthrough at the project site with the City and the contractor. A Substantial Completion Punchlist will be prepared listing all items requiring completion to be consistent with the bid/contract documents.

Task 1.6 Final Completion Walkthrough/Punchlist Completion Verification and Memo

The Team will provide one Final Completion Walkthrough at the project site with the City and the contractor to verify all substantial completion walkthrough items have been addressed/corrected. A Final Completion Verification Memo will be prepared noting that all items have been corrected, or listing items requiring further attention.

Products: Submittal Review and documentation
Change Order Review and documentation
Site Visit Reports
Substantial Completion Walkthrough Punchlist
Final Completion Walkthrough Memo

Meetings: Pre-Bid Meeting (1)
Pre-Construction Meeting (1)
Nursery visit (1)
Construction Progress Site Visits (12)
Substantial Completion Walkthrough (1)
Final Completion Walkthrough (1)

S. BROADWAY IMPROVEMENT PROJECT: IOWA to WESLEY - POST DESIGN SERVICES

DATE: DECEMBER 1, 2010 **Principal in Sr. PM - LA FEE TOTALS**
 PREPARED BY: BELT COLLINS WEST (MARGARET LOPERFIDO) **Charge - LA**

\$150.51 \$120.55

Task #	POST DESIGN SERVICES AND CONSTRUCTION OBSERVATION				
1.1	Pre-Bid and Pre-Construction Meetings (2 total)	0	8	\$	964.40
1.2	RFI's / Clarifications / Change Orders	4	16	\$	2,530.84
1.3	Tag Plant Materials at Nursery / Nurseries	0	8	\$	964.40
1.4	Construction Site Visits and Site Visit Reports (12 total)	4	48	\$	6,388.44
1.5	Review Landscape, Urban Design and Irrigation Submittals	1	12	\$	1,597.11
1.6	Substantial Completion Walkthrough and Punchlist	1	8	\$	1,114.91
1.7	Final Acceptance Walkthrough and Punchlist Verification	1	8	\$	1,114.91
	PHASE 1 HOURS SUBTOTAL	11	108		
	PHASE 1 FEE SUBTOTAL	\$1,655.61	\$13,019.40		\$14,675.01

REIMBURSEABLE EXPENSES **SUBTOTAL A: FEES** **\$14,675.01**

Mileage - Boulder to Denver 17 trips (\$0.50/mile) \$ 561.00

Direct Expenses Estimate at Cost (printing, copying, etc...) \$ -

SUBTOTAL B: REIMBURSEABLES **\$ 150.00**

SUBTOTAL C **\$ 711.00**

SUBTOTAL D: SUBCONSULTANT FEES **\$15,386.01**

SUBCONSULTANT TEAM FEES

Irrigation Design: Hydrosystems KDI \$ 2,800.00

SUBTOTAL D: SUBCONSULTANT FEES **\$ 2,800.00**

TOTAL FEE **\$18,186.01**