




# City of Arlington Council Agenda Bill

**Item:  
WS #4  
Attachment  
D**

<b>COUNCIL MEETING DATE:</b>	
March 26, 2018	
<b>SUBJECT:</b>	
Contract with GeoTest Services, Inc. for Geotechnical and Materials Testing services to support the Arlington Valley Road project	
<b>ATTACHMENTS:</b>	
GeoTest Scope of Work and Fee	
<b>DEPARTMENT OF ORIGIN</b>	
Public Works - Transportation	
<b>EXPENDITURES REQUESTED:</b>	\$51,750.00
<b>BUDGET CATEGORY:</b>	Transportation/Water/Sewer/Storm Funds
<b>BUDGETED AMOUNT:</b>	\$3,796,400.00 <i>(entire project)</i>
<b>LEGAL REVIEW:</b>	
<b>DESCRIPTION:</b>	
Proposal to review and accept Scope of Work and Fee for GeoTest Services, Inc to provide Geotechnical and Materials Testing services to support the Arlington Valley Road project.	
<b>HISTORY:</b>	
<p>The City is contracting with Scarcella Brothers, Inc. for construction of the Arlington valley road project. This project will require independent on-site testing of soils (<i>suitable and unsuitable soils, import, borrow, placement &amp; compaction, etc.</i>) and materials (<i>concrete and asphalt</i>) to verify compliance with contract provisions. The City needs to contract for these specialized services.</p> <p>City staff reviewed qualifications from several geotechnical consultants, rated the consultants, and has elected to enter into negotiations with GeoTest Services, Inc. The attached scope of work and fee is the result of those negotiations and will provide sufficient geotechnical and materials testing services to see this project from start-up through close</p>	
<b>ALTERNATIVES:</b>	
<p>Do not approve the contract for materials testing. Remand to staff for further information.</p>	
<b>RECOMMENDED MOTION:</b>	
Workshop; discussion only. At the April 2, 2018 council meeting the motion will be "I move to approve the contract with GeoTest Services, Inc. for geotechnical and materials testing on the Arlington Valley Road Project and authorize the mayor to sign the contract, pending final review by the city attorney."	

GeoTest is pleased to submit this cost estimate for the above project. Based on a review of the of material quantities that have been provided to us, we believe that the costs for construction special inspection and testing will be approximately \$51,750 for the scope of work detailed below (this is the sum of schedule A and B). At this time we have reviewed plans and specifications but not a construction schedule. We recommend revising this proposal as more information becomes available.

Understanding that construction schedules and logistics can vary, we recommend an anticipated budget range of \$45,000 to \$60,000 for our services. *This is a time and materials estimate intended for budgeting purposes. Our costs are a direct reflection of the project construction schedule.*

**Assumptions:**

Assumes a gauge correlation factor will not be used for density testing of asphalt. One can be provided upon request.

Field time has been estimated based on magnitude of project.

GeoTest has not reviewed plans and specifications at this time. We would be happy to revise this proposal as more information becomes available.

**SCHEDULE A - ROADWAY**

Item No.	Item	Quantity	Test Type	Test Frequency	Quantity	Unit	Unit Rate	Subtotal	Total
A12 & A13	Roadway Excavation	17,000 CY	Compaction (In-Place Density - Nuclear Gauge, Soils & Asphalt)	1-2,500 CY	100	hours	\$70	\$7,000	\$7,900
			Grading (Sieve Analysis, with Wet Wash)	-	3	each	\$125	\$375	
			Moisture Density Relationship (Proctor)	-	3	each	\$175	\$525	
A14, B1 & B9	Trench Backfill (3,605 LF)	15,000 TON	Compaction (In-Place Density - Nuclear Gauge, Soils & Asphalt)	1-200 LF (per layer)	132	hours	\$70	\$9,240	\$10,060
			Grading (Sieve Analysis, with Wet Wash)	1-4000 ton	4	each	\$125	\$500	
			Sand Equivalent	1-4000 ton	4	each	\$80	\$320	
			Dust Ratio (equation)	1-4000 ton	4	each	\$0	\$0	
A25	Gravel Backfill for Drains (1,535 LF)	4,305 TON	Compaction (In-Place Density - Nuclear Gauge, Soils & Asphalt)	1-200 LF (per layer)	60	hours	\$70	\$4,200	\$5,575
			Grading (Sieve Analysis, with Wet Wash)	1-4000 ton	5	each	\$125	\$625	
			Sand Equivalent	1-4000 ton	5	each	\$80	\$400	
			Dust Ratio (Equation)	1-4000 ton	5	each	\$0	\$0	
			Moisture Density Relationship (Proctor)	-	2	each	\$175	\$350	
A28	Crushed Surfacing Base Course	7,120 TON	Compaction (In-Place Density - Nuclear Gauge, Soils & Asphalt)	1-1,000 LF (per layer)	60	hours	\$70	\$4,200	\$5,435
			Grading (Sieve Analysis, with Wet Wash)	1-2000 ton	4	each	\$125	\$500	
			Sand Equivalent	1-2000 ton	4	each	\$80	\$320	
			Fracture	1-2000 ton	4	each	\$60	\$240	
			Moisture Density Relationship (Proctor)	-	1	each	\$175	\$175	
A29	Crushed Surfacing Top Course	980 TON	Compaction (In-Place Density - Nuclear Gauge, Soils & Asphalt)	1-1,000 LF (per layer)	8	hours	\$70	\$560	\$1,000
			Grading (Sieve Analysis, with Wet Wash)	1-2000 ton	1	each	\$125	\$125	
			Sand Equivalent	1-2000 ton	1	each	\$80	\$80	
			Fracture	1-2000 ton	1	each	\$60	\$60	
			Moisture Density Relationship (Proctor)	-	1	each	\$175	\$175	
A31	HMA Cl. 1/2" PG 64-22	4,880 TON	Compaction (In-Place Density - Nuclear Gauge, Soils & Asphalt)	1-100 ton	64	hours	\$70	\$4,480	\$7,025
			Sand Equivalent	1-2,000 ton	3	each	\$80	\$240	
			Percent Fracture	1-2,000 ton	3	each	\$60	\$180	
			Uncompacted Voids - Fine Aggregate	1-2,000 ton	3	each	\$150	\$450	
			Asphalt Content & Gradation (Ignition Furnace)	1-1,000 ton	5	each	\$245	\$1,225	
			Maximum Specific Gravity (Rice Density)	1-1,000 ton	5	each	\$90	\$450	
			Field Technician	-	40	hours	\$65	\$2,600	
A36-A38	Concrete C & G (500 CY)	7,720 LF	Grading - Fine Aggregate (Sieve Analysis, with Wet Wash)	1-1,000 CY	1	each	\$125	\$125	\$3,600
			Grading - Course Aggregate (Sieve Analysis, with Wet Wash)	1-1,000 CY	1	each	\$125	\$125	
			Grading - Combined Aggregate (Sieve Analysis, with Wet Wash)	1-1,000 CY	1	each	\$125	\$125	
			Compressive Strength - 4" x 8" Cylinders	1 test every 10 trucks	25	each	\$25	\$625	

**Arlington Valley Road  
 Arlington, WA  
 Construction Testing Cost Estimate**

A39, A40, A60- A63	Concrete Driveways / Sidewalks / Traffic Curb (400 CY)	443 SY	Field Technician	-	32	hours	\$65	\$2,080	
			Grading - Fine Aggregate (Sieve Analysis, with Wet Wash)	1-1,000 CY	1	each	\$125	\$125	
			Grading - Course Aggregate (Sieve Analysis, with Wet Wash)	1-1,000 CY	1	each	\$125	\$125	
			Grading - Combined Aggregate (Sieve Analysis, with Wet Wash)	1-1,000 CY	1	each	\$125	\$125	
			Compressive Strength - 4" x 8" Cylinders	1 test every 10 trucks	20	each	\$25	\$500	\$2,955
<b>Total Estimated Schedule A Costs</b>									<b>\$43,550</b>

**SCHEDULE B - UTILITIES**

Item No.	Item	Quantity	Test Type	Test Frequency	Quantity	Unit	Unit Rate	Subtotal	Total
B 1 & B9	Included in Schedule A under item A14 (3,605 lf) of trench backfill		Compaction (In-Place Density - Nuclear Gauge, Soils & Asphalt)	1-200 LF (per layer)		hours	\$70	\$0	
			Grading (Sieve Analysis, with Wet Wash)	1-4000 ton		each	\$125	\$0	
			Sand Equivalent	1-4000 ton		each	\$80	\$0	
			Dust Ratio (equation)	1-4000 ton		each	\$0	\$0	\$0
<b>Total Estimated Schedule B Costs</b>									<b>\$0</b>

**OTHER**

Item	Test Type	Quantity	Unit	Unit Rate	Subtotal	Total
Sample Pick Up and Processing	(Soils, Concrete, etc.)	80	hours	\$65	\$5,200	
Project Management	(QC Project Meetings, Report Review, etc.)	-	hours	\$100	\$3,000	
Trip Charge (5 mi x 0.60/mi = \$3/trip)	To the Site and Back to Laboratory	80	mileage	0	\$0	\$8,200
<b>Total Estimated Other Costs</b>						<b>\$8,200</b>

<b>Total Estimated Schedule A &amp; B Costs</b>	<b>\$51,750</b>
---	-----------------

*GeoTest's actual costs are a function of the contractors schedule as well as site & material conditions.*

# GEO TEST SERVICES, INC.

Arlington, Bellingham, Oak Harbor, WA

## FEE SCHEDULE

2018

### ENGINEERING, GEOLOGICAL & ENVIRONMENTAL SERVICES

Senior Geotechnical Engineer .....	180.00 hour
Professional Engineer .....	140.00 hour
Geotechnical Engineer .....	140.00 hour
Technical Director .....	125.00 hour
Staff Engineer .....	100.00 hour
Engineering Geologist .....	100.00 hour
Environmental Professional .....	100.00 hour
Geotechnical Technician .....	85.00 hour
Geologist .....	85.00 hour

### CONSTRUCTION INSPECTION SERVICES

Concrete Inspection .....	65.00 hour
Prestressed Concrete Inspection .....	65.00 hour
Masonry Inspection .....	65.00 hour
Grout Inspection .....	65.00 hour
Fireproofing Inspection .....	65.00 hour
Firestopping Inspection .....	65.00 hour
Proprietary Anchor Inspection .....	65.00 hour
Lateral Framing Inspection (Wood & Steel) .....	70.00 hour
Structural Steel Welding and Bolting Inspection .....	70.00 hour
In-Place Density - Nuclear Gauge, Soils & Asphalt .....	70.00 hour
Soils Observation .....	70.00 hour
CESCL (Certified Erosion & Sediment Control Lead) .....	70.00 hour
Building Envelope Inspection .....	90.00 hour

### CONSTRUCTION SUPPORT SERVICES

QA/QC Inspection Engineer .....	90.00 hour
Field Sampling .....	65.00 hour
Field Technician .....	65.00 hour
Laboratory Technician .....	75.00 hour
Project Manager .....	100.00 hour

### SPECIALTY SERVICES

Bolt Pull-out Tests .....	90.00 hour
Ground Penetrating Radar (GPR) .....	150.00 hour
Pachometer (Magnetic) Rebar Location .....	90.00 hour
Concrete & Asphalt Coring .....	90.00 hour
Schmidt Hammer .....	90.00 hour
Windsor Probe .....	90.00 hour
Brick Shear Testing (2 man crew) .....	175.00 hour
Floor Flatness Testing (Dipstick) .....	120.00 hour
Moisture Emission Testing .....	90.00 hour

# GEO TEST SERVICES, INC.

Arlington, Bellingham, Oak Harbor, WA

## FEE SCHEDULE

2018

### MATERIALS TESTING

#### CONCRETE

Compressive Strength - Concrete .....	25.00 ea
Compressive Strength – Concrete (cast by others) .....	30.00 ea
Compressive Strength - Drilled Cores (includes trimming and testing) .....	60.00 ea
Compressive Strength - Sawed Specimens (includes trimming and testing) .....	60.00 ea
Shotcrete Panel - 3 Cores Per Panel .....	200.00 ea
Additional Shotcrete Cores .....	75.00 ea
Flexural Strength - 6" x 6" Beams .....	55.00 ea
Air Dry Unit Weight .....	35.00 ea
Trimming Specimens – Per End (when required) .....	15.00 ea

#### MASONRY

Compressive Strength - Mortar, 2" x 4" Cylinder .....	25.00 ea
Compressive Strength - Grout, 4" x 4" x 8" Prism .....	25.00 ea
Compressive Strength - 2" x 2" Cubes (Cementitious Grout) .....	25.00 ea
Compressive Strength - 2" x 2" Cubes (Epoxy Grout) .....	30.00 ea
Compressive Strength - Composite Prism .....	100.00 ea
Compressive Strength – Masonry Units .....	100.00 ea

#### AGGREGATE

Sieve Analysis, with Wet Wash .....	125.00 ea
Sieve Analysis, Dry Only .....	75.00 ea
Sieve Analysis, % Passing #200 Sieve .....	75.00 ea
Specific Gravity and Absorption - Fine Aggregate .....	75.00 ea
Specific Gravity and Absorption - Coarse Aggregate .....	60.00 ea
Uncompacted Voids – Fine Aggregate .....	150.00 ea
Unit Weight and Voids .....	40.00 ea
Sand Equivalent .....	80.00 ea
Moisture Content .....	35.00 ea
Percent Fracture .....	60.00 ea
Organic Impurities Test .....	60.00 ea
Clay Lumps and Friable Particles .....	80.00 ea
Lightweight Pieces .....	75.00 ea
Flat/Elongated Particles .....	80.00 ea

#### ASPHALT

Asphalt Content & Gradation (Ignition Furnace) .....	245.00 ea
Maximum Specific Gravity (Rice Density) .....	90.00 ea
Asphalt Core Density/Thickness .....	40.00 ea
Marshall Method Test - Flow, Stability, Density & Voids	
Hot Mix Furnished, Set of 3 .....	300.00 ea
Lab Mixed, Set of 3 .....	350.00 ea

# GEO TEST SERVICES, INC.

Arlington, Bellingham, Oak Harbor, WA

## FEE SCHEDULE 2018

### SOILS

Sieve Analysis, with Wet Sieve .....	125.00 ea
Sieve Analysis, Dry Only .....	75.00 ea
Sieve Analysis, % Passing #200 Sieve .....	75.00 ea
Sieve Analysis w/ Hydrometer .....	200.00 ea
Moisture Density Relationship (Proctor) .....	175.00 ea
Moisture Density Relationship (Proctor) w/ Sieve .....	245.00 ea
Check Point .....	80.00 ea
Moisture Content .....	35.00 ea
Atterberg Limits (3 points) .....	125.00 ea
Specific Gravity .....	75.00 ea
Consolidation - 5 Loads .....	350.00 ea
Permeability - Constant Head or Falling Head (each point) .....	250.00 ea
Organic Content .....	80.00 ea

### MISCELLANEOUS

Fireproofing Density Test .....	60.00 ea
Floor Moisture Test Kit .....	50.00 ea
Windsor Probe Pin (Set of 3) .....	40.00 ea
Whole Building Air Leakage Test .....	quote
Window Water Penetration Test .....	quote

- GeoTest requests 24 hours advance notice for scheduling field services. GeoTest may not be able to provide service for same day call out.
- All GeoTest Services, Inc. (GTS) construction inspection services, construction support services & specialty services are billed portal to portal. A daily four hour minimum charge applies to construction inspection & specialty services. Same day cancellations will incur a two-hour minimum charge.
- Engineering, Geological, and Environmental Services will be billed in accordance with a project specific proposal.
- GeoTest standard operating hours are 7 AM to 5 PM, Monday through Friday, with the exception of holidays. A premium rate of 1.5 times the standard rate will be charged for all work in excess of 8 hours per day and Saturdays. Double-time rates will be applied to services provided on Sundays & legal Holidays.
- A one-hour minimum laboratory technician fee will be applied on Saturdays, Sundays & legal Holidays at 1.5 times the regular rate for any laboratory testing services.
- Night shift (work outside standard operating hours): An eight (8) hour minimum charge at 1.5 times the standard rate may apply to such work including same day cancellations. A four (4) hour minimum charge at 1.5 times the regular rate applies to lab night work.
- Trip charge mileage has been waived for this project.
- Field testing equipment expenses are included in the hourly rates except where specifically noted on the fee schedule or a project specific proposal.
- Laboratory rush samples (less than 48hr turn-around time) will be invoiced at 1.5 times the standard test rate.
- Rental equipment, reimbursable expenses and subcontractor fees will be invoiced at cost plus 15%.
- Unless otherwise agreed, test specimens or samples will be disposed of immediately upon completion of the test. The ordering of work from GTS shall constitute acceptance of the Fee Schedule, General Conditions, and any project specific proposal.