

# ENGINEER'S OPINION OF PROBABLE MATERIALS COST

## TETRA TECH

Tetra Tech EM Inc., 1881 Campus Commons Drive, Suite 200, Reston, VA 20191 Telephone: (703) 391-5875 FAX: (703) 391-5876

**PROJECT:** SRA Brownfields Analytical & Technical Contract, Work Assignment 0018  
**LOCATION:** City of Laredo, Texas  
**BASIS FOR ESTIMATE:**  CONCEPTUAL  PRELIMINARY  FINAL  
**WORK:** LID Parking Lot Design Pilot Project  
 Haynes Recreation Center, Laredo, Texas

**DATE:** 5/4/2009  
**PROJECT NO.:** 103DG1392-1806.02  
**ESTIMATOR:** DGS  
**CHECKED BY:**  
**CURRENT ENR:**

ITEM NO.	DESCRIPTION	QUANT.	UNIT	UNIT AMOUNT	TOTAL AMOUNT	Comments
	<b>Bioretention Cells</b>					
	Topsoil	290	cy	\$0.00	\$0.00	use from on-site
	Compost	50	cy	\$0.00	\$0.00	see "Cost per City"
	Stone, #57 angular, washed (5/8" diameter)	280	tons	\$0.00	\$0.00	120 pcf, see "Cost per City"
	US Fabrics US80NW 3 oz/sy non-woven geotextile (or equal)	10,000	sf	\$0.06	\$600.00	\$250/500-sy roll, Includes delivery
	4" Solid Corrugated Single-Wall HDPE Overflow Pipe	20	lf	\$0.50	\$10.00	
	4" Atrium Grate	4	ea	\$7.00	\$28.00	
	Mulch	60	cy	\$0.00	\$0.00	see "Cost per City"
	Stone, washed, angular, 1-1.5" diameter	11	tons	\$0.00	\$0.00	Filter trench, 105 pcf, see "Cost per City"
	Bollards, concrete	7	ea	\$450.00	\$3,150.00	Or typical Laredo specs
	Native plants, 0.5-1 gallon pot size (preferred)	1,200	ea	\$10.00	\$12,000.00	Approx. 2-ft centers, unit cost varies by plant type
	Agri Drain Inline WCS (or equal), 4" inlet/outlet, 5-ft height	1	ea	\$560.00	\$560.00	Optional
	Agri Drain Inline WCS (or equal), 6" inlet/outlet, 5-ft height	3	ea	\$570.00	\$1,710.00	Optional
	<b>Stormwater</b>					
	4" Perforated Corrugated Single-Wall HDPE Pipe	20	lf	\$0.50	\$10.00	
	4" Solid Dual-Wall ADS N-12 Smooth Inner Wall HDPE Pipe	40	lf	\$1.00	\$40.00	
	6" Perforated Corrugated Single-Wall HDPE Pipe	220	lf	\$1.40	\$308.00	
	6" Perforated Dual-Wall ADS N-12 Smooth Inner Wall HDPE Pipe	280	lf	\$2.40	\$672.00	
	6" Solid Dual-Wall ADS N-12 Smooth Inner Wall HDPE Pipe	180	lf	\$2.40	\$432.00	
	8" Solid Dual-Wall ADS N-12 Smooth Inner Wall HDPE Pipe	180	lf	\$4.00	\$720.00	
	US Fabrics US80NW 3 oz/sy non-woven geotextile (or equal)	150	sf	\$0.06	\$9.00	Level spreader, \$250/500-sy roll, Includes delivery
	Stone, #57 angular, washed (5/8" diameter)	11	tons	\$0.00	\$0.00	Level spreader, 120 pcf, see "Cost per City"
	1500-gal plastic underground non-potable water storage tank	1	ea	\$1,500.00	\$1,500.00	Optional
	<b>Envirogrid System</b>					
	EnviroGrid Paver, 2" depth	3,800	sf	\$1.75	\$6,650.00	Includes delivery
	EnviroGrid EGA 206	3,800	sf	\$1.20	\$4,560.00	Includes on-site training
	US Fabrics US160NW 6 oz/sy non-woven geotextile (or equal)	7,800	sf	\$0.09	\$702.00	\$375/500-sy roll, Includes delivery
						\$325/500-sy roll, Includes

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	<b>Pervious Concrete</b>					
	Pervious Concrete	40	cy	\$0.00	\$0.00	see "Cost per City"
	US Fabrics US160NW 6 oz/sy non-woven geotextile (or equal)	2,200	sf	\$0.09	\$198.00	\$375/500-sy roll, Includes delivery
	US Fabrics US250 woven geotextile (or equal)	2,300	sf	\$0.08	\$184.00	\$325/500-sy roll, Includes delivery
	Stone, #57 angular, washed (5/8" diameter)	95	tons	\$0.00	\$0.00	see "Cost per City"
	<b>Vegetated Swale</b>					
	US Fabrics US80NW 3 oz/sy non-woven geotextile (or equal)	20,000	sf	\$0.06	\$1,200.00	Varies based on swale width, \$250/500-sy roll, Includes delivery
	Native plants, 0.5-1 gallon pot size (preferred)	500	ea	\$10.00	\$5,000.00	Final Qty TBD per City
	Native Trees, minimum 2"-dbh	20	ea	\$150.00	\$3,000.00	Final Qty TBD per City
	<b>Miscellaneous</b>					
	Parking Stops (Recycled Rubber or Plastic)	34	ea	\$70.00	\$2,380.00	Prices vary from \$50-\$90
	<b>Cost per City</b>					
	Boardwalk (elevated walkway)	83	lf		\$0.00	Design & Cost per City
	Compost	50	cy		\$0.00	total of all items above
	Concrete Sidewalk, solid, 4" thickness	19	cy		\$0.00	Cost per City, Includes conceptual walk
	Endwall, concrete, 24"x12"x36" (LxWxD)	2	ea		\$0.00	Option: Natural stone
	Flat Curb, concrete	24	cy		\$0.00	1-ft depth curb
	Grass Seed (all disturbed areas)	0.85	ac		\$0.00	As desired by City
	Landscaping, general	1	lump		\$0.00	Design & Cost per City
	Lighting	1	lump		\$0.00	Design & Cost per City
	Masonry Sand	30	cy		\$0.00	total of all items above
	Mulch	60	cy		\$0.00	total of all items above
	Pervious Concrete	40	cy		\$0.00	
	Stone, #57 angular, washed (5/8" diameter)	656	tons		\$0.00	total of all items above
	Stone, #89 angular, washed (3/8" diameter)	2	tons		\$0.00	total of all items above
	Stone, washed, angular, 1-1.5" diameter	11	tons		\$0.00	total of all items above
	Topsoil	315	cy	\$0.00	\$0.00	total of all items above, use from on-site
	Typical Laredo Pavement Surface	9,736	sf		\$0.00	Design & Cost per City
	Typical Laredo Pavement/Road Markings	1	lump		\$0.00	As specified per City
	Typical Laredo Raised Curb, concrete	641	lf		\$0.00	Cost per City
	<b>Materials Subtotal</b>				<b>\$45,975.00</b>	
	<b>Contingency</b>			<b>20.00%</b>	<b>\$9,195.00</b>	
	<b>Materials Total</b>				<b>\$55,170.00</b>	
	<b>Note: Unless otherwise specified, taxes, shipping, and installation are not included in the unit material costs.</b>					