

General Design and Construction Inspection

General Construction Administration and Inspection - Hourly and Unit Price Basis Allowances based on 120 days of construction (75% inspection)

Item	Project Task	Project Manager Michael Craig, PE	Senior Engineer Michael Mills, PE	Senior Inspector William Mitchell	Engineer Casey Howard, EI	Inspector Josh Fisher	Secretary Amanda Ellis	Total HR
1	Site Visit Repair Revisions measurements Photos	16		20		20		56
2	Design Contract Contract Documents Standard Specifications Engineering Estimates Bid Items per bridge or repair type Final Quantities Location Maps Photos Coversheet Design Sketches Design Standard drawings	80	180	240	160	40	4	704
3	Bid advertisement	4		4			4	12
4	Pre-Bid conference	4		4				8
5	Bid Opening	4		2				6
6	Bid Review	4		2				6
7	Pre- Construction Conference	4		4				8
8	Construction Administration	80	20				20	120
9	Construction Inspection*	80		320		400		1080
	Total hours	276	200	596	160	460	28	1720

Mileage Mooresville NC to Charlotte NC, 60 miles roundtrip, 140 trips

Classification	Employee			Hours	Rate	Amount
Project Manager	Michael Craig, PE			276	\$70.00	\$19,320.00
Senior Engineer	Michael Mills, PE			200	\$49.00	\$9,800.00
Senior Inspector	William Mitchell			596	\$39.00	\$23,244.00
Engineer	Casey Howard, EI			160	\$35.00	\$5,600.00
Inspector	Josh Fisher			460	\$25.00	\$11,500.00
Secretary	Amanda Ellis			28	\$27.00	\$756.00

Direct Labor		\$70,220.00
Over head rate	1.61	\$113,054.20
Sub total		\$183,274.20
Profit \$ 10%		\$18,327.42
Cost of Capital		0
Total fee Proposal		\$201,601.62

Bridge Painting and Deck Epoxy design and Construction Inspection (590368, 590378, 590431, 590407, 590406, 590375, 490477)

- Hourly and Unit Price Basis Allowances based on 60 days of construction (50% inspection)

		Project Manager	Senior Engineer	Senior Inspector	Engineer	Inspector	Secretary	
Item	Project Task	Michael Craig, PE	Michael Mills, PE	William Mitchell	Casey Howard, EI	Josh Fisher	Amanda Ellis	Total HR
10	Design Contract* Contract Documents Standard Specifications Engineering Estimates Bid Items per bridge or repair type Final Quantities Location Maps Photos Coversheet Design Sketches Design Standard drawings	40		40	80			160
11	Bid advertisement	4		4				8
12	Pre-Bid conference	4		4				8
13	Bid Opening	4		2				6
14	Bid Review	4		2				6
15	Pre- Construction Conference	4		4				8
16	CEI	24		120		120		264
	Total hours	84	0	176	80	120	0	460

Mileage

Mooresville NC to Charlotte NC, 60 miles roundtrip, 60 trips

Classification	Employee			Hours	Rate	Amount
Project Manager	Michael Craig, PE			84	\$70.00	\$5,880.00
Senior Engineer	Michael Mills, PE			0	\$49.00	\$0.00
Senior Inspector	William Mitchell			176	\$39.00	\$6,864.00
Engineer	Casey Howard, EI			80	\$35.00	\$2,800.00
Inspector	Josh Fisher			120	\$25.00	\$3,000.00
Secretary	Amanda Ellis			0	\$27.00	\$0.00

Direct Labor		\$18,544.00
Over head rate	1.61	\$29,855.84
Sub total		\$48,399.84
Profit \$10%		\$4,839.98
Cost of Capital		0
Total fee Proposal		\$53,239.82

Deck Preservation Latex Modified Concrete Deck Repair Bridge 590383, 590138, 590398, and 590396 (Construction Estimate \$1.8Mil)
- Hourly and Unit Price Basis Allowances based on 90 days of construction (75% inspection)

		Project Manager	Senior Engineer	Senior Inspector	Engineer	Inspector	Secretary	
Item	Project Task	Michael Craig, PE	Michael Mills, PE	William Mitchell	Casey Howard, EI	Josh Fisher	Amanda Ellis	Total HR
17	Design Contract* Contract Documents Standard Specifications Engineering Estimates Bid Items per bridge or repair type Final Quantities Location Maps Photos Coversheet Design Sketches Design Standard drawings	40	80		120			240
18	Bid advertisement	4		4				8
19	Pre-Bid conference	4		4				8
20	Bid Opening	4		2				6
21	Bid Review	4		2				6
22	Pre- Construction Conference	4		4				8
23	CEI	40		200		540		780
	Total hours	100	80	216	120	540	0	1056

Mileage Mooresville NC to Charlotte NC, 60 miles roundtrip, 90 trips

Classification	Employee			Hours	Rate	Amount
Project Manager	Michael Craig, PE			100	\$70.00	\$7,000.00
Senior Engineer	Michael Mills, PE			80	\$49.00	\$3,920.00
Senior Inspector	William Mitchell			216	\$39.00	\$8,424.00
Engineer	Casey Howard, EI			120	\$35.00	\$4,200.00
Inspector	Josh Fisher			540	\$25.00	\$13,500.00
Secretary	Amanda Ellis			0	\$27.00	\$0.00

Direct Labor		\$37,044.00
Over head rate	1.61	\$59,640.84
Sub total		\$96,684.84
Profit \$10%		\$9,668.48
Cost of Capital		0
Total		\$106,353.32
Boyle Engineering (SBE) - Concrete testing		\$42,000
	Total	\$148,353.32

Chloride Testing -Deck Preservation Program

		Project Manager	Senior Engineer	Senior Inspector	Engineer	Inspector	Secretary	
Item	Project Task	Michael Craig, PE	Michael Mills, PE	William Mitchell	Casey Howard, EI	Josh Fisher	Amanda Ellis	Total HR
24	Chloride Testing and Detailed deck Inspection -Field	8		60		60		128
25	Chloride Testing -Lab					40		40
26	Preservation Recommendations and specifications	8		8				16
	Total hours	16	0	68	0	100	0	184

Mileage Mooresville NC to Charlotte NC, 60 miles roundtrip,10 trips

Classification	Employee			Hours	Rate	Amount
Project Manager	Michael Craig, PE			16	\$70.00	\$1,120.00
Senior Engineer	Michael Mills, PE			0	\$49.00	\$0.00
Senior Inspector	William Mitchell			68	\$39.00	\$2,652.00
Engineer	Casey Howard, EI			0	\$35.00	\$0.00
Inspector	Josh Fisher			100	\$25.00	\$2,500.00
Secretary	Amanda Ellis			0	\$19.00	\$0.00

Direct Labor		\$6,272.00
Over head rate	1.61	\$10,097.92
Sub total		\$16,369.92
Profit 15%		\$2,455.49
Cost of Capital		0
Total fee Proposal		\$18,825.41

Direct Non-Salary Costs

Railroad Protective Liability	1	\$3,000	\$3,000.00
Mileage	16200	\$0.54	\$8,748.00
Extraction and calibration fluid for chloride testing	274	\$5.76	\$1,578.24
General Repairs - Reproduction (10 copies)	4000	\$0.06	\$240.00
General Repairs - Color Reproduction (10 copies)	4000	\$0.35	\$1,400.00
Tabs and Binders	310	\$0.75	\$232.50
Bridge Painting and Epoxy - Reproduction (10 copies)	1000	\$0.06	\$60.00
Bridge Painting and Epoxy - Color Reproduction (10 copies)	1000	\$0.35	\$350.00
Tabs and Binders	110	\$0.75	\$82.50
Bridge preservation -Latex - Reproduction (10 copies)	1000	\$0.06	\$60.00
Bridge Preservation- Latex - Color Reproduction (10 copies)	1000	\$0.35	\$350.00
Tabs and Binders	110	\$0.75	\$82.50
Total direct Non-Salary			\$16,183.74

Additional Unknown services

\$0

Grand Total

\$438,203.92

LIST OF BRIDGE STRUCTURE GENERAL REPAIR DETAILS AND DRAWINGS

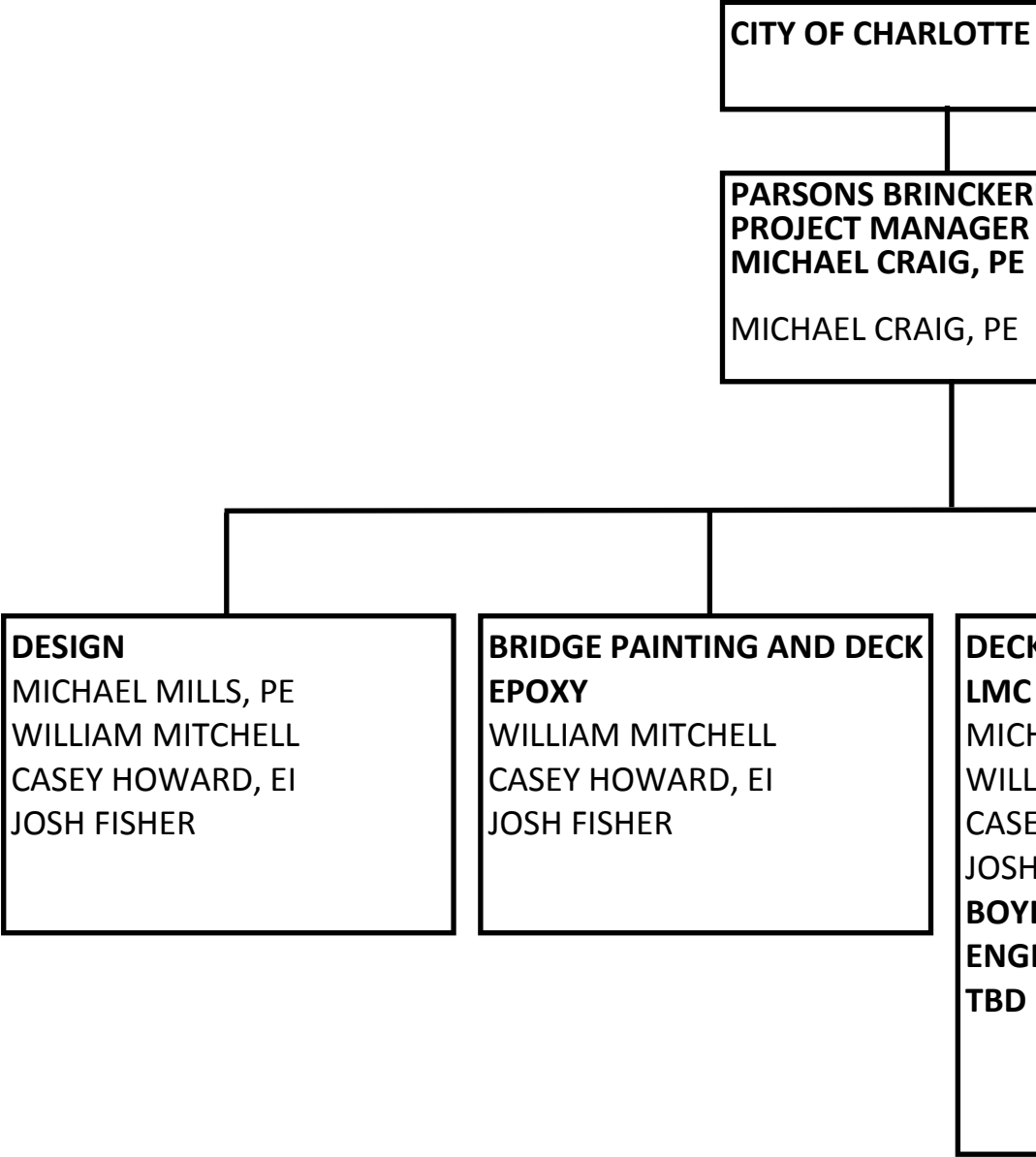
	Bridge Number	Route Carried	Route Over	Last Inspection Date
1	590006	Choate Circle	Steele Creek	06/01/16
2	590007	Choate Circle	Polk Ditch	06/01/16
3	590039	Margaret Wallace	McAlpine Creek	03/01/16
4	590042	Idlewild Rd	McAlpine Creek	06/02/16
5	590057	Plott Rd	Reedy Creek	03/01/16
6	590138	East 12th St	Tryon St	05/24/16
7	590144	Gum Branch Rd	Gum Branch	04/25/16
8	590154	La Salle Street	Irwin Creek	04/14/16
9	590232	Elizabeth Ave	Little Sugar Creek	04/25/16
10	590234	Coulwood Dr	Gum Branch	03/21/16
11	590255	Matheson Ave	Southern RR, Brevard ST	03/29/16
12	590258	West Trade St	Irwin Creek	04/27/16
13	590365	Margaret Wallace Rd	Campbell Creek	03/01/16
14	590374	Remount Rd	Norfolk Southern RR	03/23/16
15	590383	West Tyvola Rd	Norfolk Southern RR	03/23/16
16	590385	Tuckaseegee Rd	Stewart Creek	05/12/16
17	590386	Tuckaseegee Rd	Pedestrian Walkway	03/04/16
18	590387	Sharon Rd	Little Sugar Creek	04/04/16
19	590389	Fourth Street Ext	Irwin Creek	04/18/16
20	590390	Mockingbird Lane	Little Hope Creek	04/04/16
21	590391	Seneca Place	Little Hope Creek	04/05/16
22	590392	Tyvola Rd	Little Sugar Creek	06/14/16
23	590393	Archdale Dr	Little Sugar Creek	06/02/16
24	590395	Hillside Ave	Little Sugar Creek	06/14/16
25	590396	Princeton Ave	Little Sugar Creek	04/04/16
26	590398	Medical Center Dr	Little Sugar Creek	06/22/16
27	590402	Kings Dr	CPCC Parking Lot	04/06/16
28	590419	Randolph Rd	Briar Creek	05/12/16
29	590420	Arborway Lane	McMullen Creek	04/04/16
30	590432	Shamrock Rd	Briar Creek	03/01/16
31	590445	Idlewild Rd	Campbell Creek	04/07/16
32	590484	Old Steele Creek Rd	Southern RR	07/21/16
33	590485	Chadsford Pl	Briar Creek	04/07/16
34	590486	Tyvola Rd	Little Sugar Creek Trib.	06/13/16
35	590527	Four Mile Creek Rd	Creek	05/04/16
36	591013	Brevard St	Little Sugar Creek	05/18/16
37	591016	Johnston Rd	McAlpine Creek	05/03/16
38	591018	Sardis Rd	Irwin Creew	04/07/16
39	591019	Westinghouse Blvd	Little Sugar Creek	04/01/16
40	591164	Berryhill Road	Briar Creek Trib.	05/18/16
41	591168	Saxonbury Rd	Clark Creek	05/11/16
42	COC037	Cinderella Rd	Little Sugar Creek	02/18/16
43	COC041	Belvedere Ave	Briar Creek Trib.	02/18/16
44	COC049	Hubbard Rd	Trib.	02/19/16
45	COC052	Fox Point Dr	Mallard Creek Trib.	03/08/16
46	COC057	Archdale Dr	King's Branch	03/18/16

Project Schedule

All Construction work must be completed by March 2018 prior to beginning the next NBIS inspection

ACTIVITY	START DATE	END DATE
Design of Repairs	24-Oct-16	16-Dec-16
Chloride Testing	24-Oct-16	16-Dec-16
Construction Contract Execution	16-Dec-16	31-Mar-17
Construction Inspection	3-Apr-17	6-Nov-17

on cycle





HOFF



◀ **PRESERVATION AND**

HAEL MILLS, PE
JAM MITCHELL
EY HOWARD, EI
I FISHER
LE CONSULTING
INEERS

CHLORIDE TESTING
WILLIAM MITCHELL
JOSH FISHER

PREVIOUSLY REPAIRED STRUCTURES (72/109)

590020
590021
590039
590057
590138
590144
590152
590200
590233
590234
590254
590365
590368
590374
590379
590380
590383
590384
590385
590387
590389
590390
590391
590392
590393
590394
590395
590396
590397
590398
590402
590407
590408
590411
590416
590418
590419
590420
590422
590423
590428
590431
590434
590435
590438

NOT PREV. REPAIRED STRUCTURE

590006
590007
590042
590074
590154
590232
590255
590258
590274
590386
590406
590425
590427
590433
590445
590447
590466
590467
590470
590485
590486
590554
590655
590696
590712
591013
591170
COC007
COC008
COC010
COC011
COC029
COC030
COC041
COC044
COC051
COC055

590441
590446
590477
590484
590497
590527
590547
590560
590710
591012
591015
591016
591017
591018
591019
591032
591034
591164
591168

COC004
COC006
COC013
COC037
COC039
COC046
COC049
COC052

ES (37/109)

PAINT STRUCTURES

590006
590233
590368
590374
590375
590378
590383
590384
590386
590387
590395
590398
590406
590407
590431
590434
590466
590477

COC004
COC006
COC007
COC008
COC013
COC029
COC030
COC037

HYDRO-DEMO STRUCTURES

590138
590255
590383