

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

MEMORANDUM

TO: CFX Board Members

FROM: Aneth Williams 
Director of Procurement

DATE: January 23, 2017

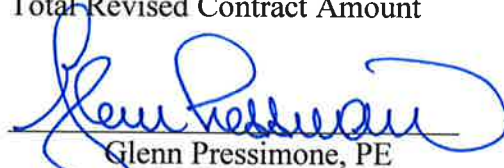
SUBJECT: Authorization for Approval of Supplemental Agreement No. 1
DRMP, Inc.
S.R. 408 Widening from S.R. 417 to Alafaya Trail
Project 408-128, Contract No. 001066

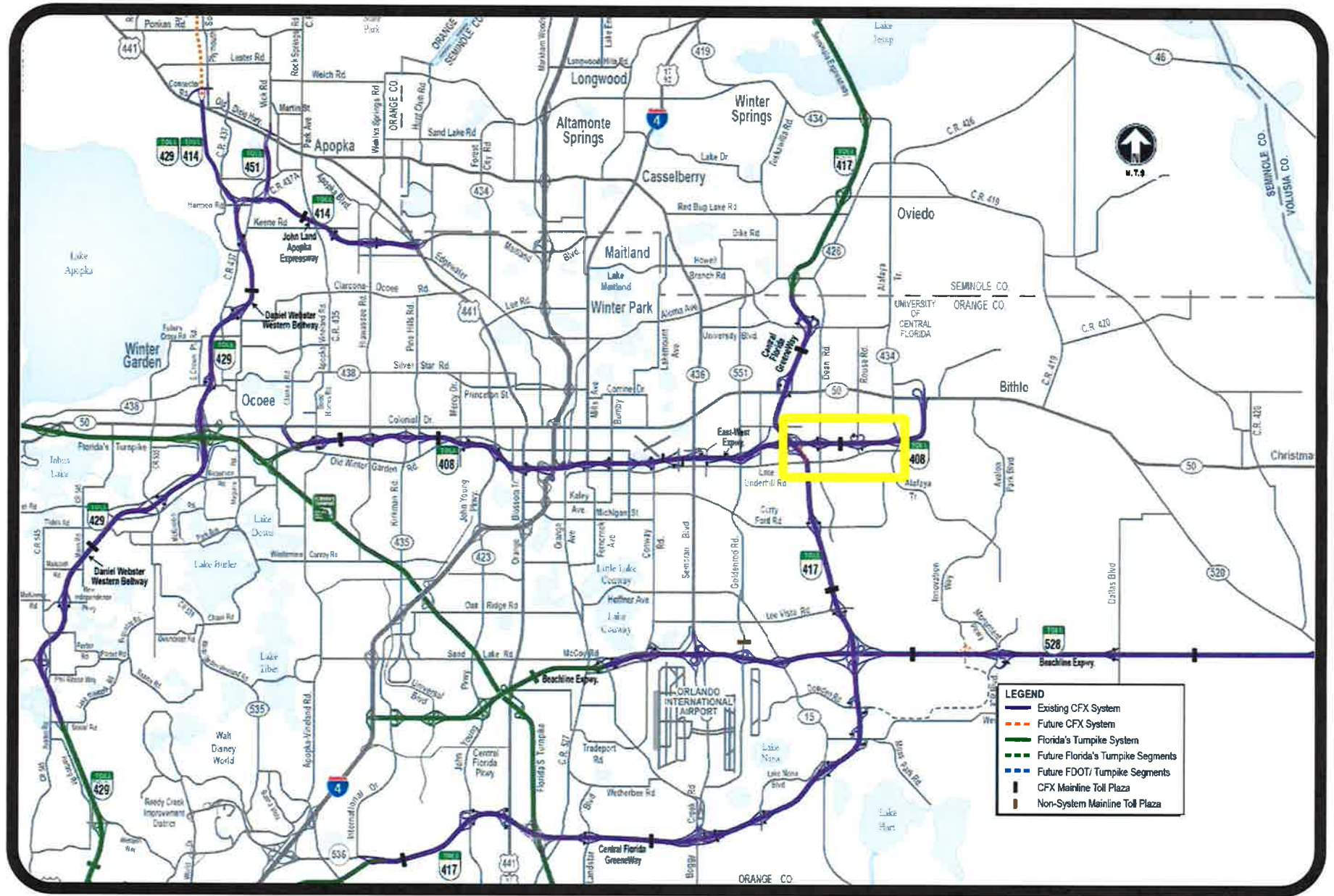
Board approval is requested for Supplemental Agreement No. 1 with DRMP, Inc. in the not-to-exceed amount of \$242,209.24. Supplemental Agreement No. 1 consists of adding additional sound walls, the design of an expanded storm water system, pier protection details, design details for a closed bridge median over Alafaya Trail, extended lighting limits and additional intelligent transportation system modifications.

This Contract was previously approved by CFX for this project. (Original Agreement dated August 13, 2015)

Original Contract Amount	\$4,650,000.00
Amount of Supplemental Agreement No. 1	\$ 242,209.24
Total Revised Contract Amount	<u>\$4,892,209.24</u>

Reviewed by:


Glenn Pressimone, PE
Director of Engineering



Project Location Map for
S.R. 408 Widening from S.R. 417 to Alafaya Trail (408-128)

SUPPLEMENTAL AGREEMENT NO. 1

TO

AGREEMENT FOR PROFESSIONAL SERVICES

FINAL DESIGN

S.R. 408 Widening from S.R. 417 to Alafaya Trail

THIS SUPPLEMENTAL AGREEMENT is made and entered into this _____ day of _____, 2017, by and between the CENTRAL FLORIDA EXPRESSWAY AUTHORITY, a corporate body and agency of the State of Florida, hereinafter called "CFX" and the consulting firm of DRMP, INC. of Orlando, Florida, hereinafter called the "CONSULTANT".

WHEREAS, Articles 2.00 and 12.0 of the Agreement for Professional Services between CFX and the CONSULTANT, dated the 13th day of August 2015, provides that in the event that CFX shall change the amount of work in Exhibit "A" of the said Agreement for Professional Services, the fees to be paid to the CONSULTANT shall be subject to adjustment as shall be mutually agreed upon:

NOW, THEREFORE, BE IT RESOLVED THAT:

1. CFX hereby authorizes the CONSULTANT to proceed with additional services as outlined in the Consultant's December 6, 2016 letter to CFX, which is attached hereto and made a part of this Supplemental Agreement.
2. Exhibit "B", Article 2.00 of the Agreement for Professional Services is amended as follows:
 - a. The Salary Related Costs are adjusted upward by \$288,163.68 to \$2,598,808.23.
 - b. The Design Survey - Office (Prime) is adjusted upward by \$9,816.78 to \$92,041.44.
 - c. The Design Survey - Field (Prime) is adjusted upward by \$30,569.29 to 249,381.05.
 - d. The Direct Expenses (Lump Sum) remain unchanged at \$58,497.65.
 - e. The Subcontract Items are adjusted upward by \$20,000.00 to \$1,893,480.87.

•EPG	\$20,000.00
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 - f. The Allowance is adjusted downward by \$106,340.51 to \$0.00.

The total Maximum Limiting Amount is adjusted upward by \$242,209.24 to \$4,892,209.24.

3. All provisions of said Agreement for Professional Services, or any Supplements thereto, not modified by the above, shall remain in full force and effect, the same as if they had been set forth herein. In the event of a conflict between the provisions of this Supplemental Agreement and of the said Consultant Agreement, or any Supplements thereto, the provisions of this Supplemental Agreement, to the extent such provision is reasonable, shall take precedence.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed, in quadruplicate, the day and year first above written.

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

By: _____
Director of Procurement

DRMP, INC.

Attest: _____ By: _____
Title: Title:

Approved as to form and execution, only.

General Counsel for CFX

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DRMP, INC.



Principals

Wayne D. Chalifoux
Donaldson K. Barton, Jr.
Glenn J. Lusink
Jon S. Meadows
Mark D. Prochak
Mark E. Puckett
Lawrence L. Smith, Jr.

December 6, 2016

DRMP Job # 14-0374.000

Glenn Pressimone, P.E.
Director of Engineering
Central Florida Expressway Authority
4974 ORL Tower Road
Orlando, Florida 32807

Subject: SR 408 Widening Contract 408-128 – Supplemental Agreement No. 1

Dear Mr. Pressimone:


I have attached the SR 408 Widening Project Contract 408-128 Supplemental No. 1 scope and fee for your review. The Supplemental is for the additional work effort at the direction of CFX for additional noise walls, pier protection barriers, additional pond design, closed bridge median details, extended lighting limits, modified wall layout and ITS modifications. The added work includes engineering and plans for roadway, drainage, structures, lighting, ITS, field survey and SUE.

The attached scope includes all of the out of scope work, but the hours that are provided in the man hour forms account for efficiencies during design as modifications were being made throughout the project.

The supplemental includes a credit for a portion of the SR 408 over Alafaya Trail bridge. This credit is a result from the modification of the bridge from being a steel plate girder, as originally negotiated, to a Florida U-Beam (FUB) which was selected as the preferred alternative during the Bridge Concept Report. The supplemental also includes a credit since a box truss structure was not required for DMS signs. The credits are included as negative values in the man hour sheets.

Please contact me if you have any questions. My cell number is 407-923-8585.

Sincerely,
DRMP, Inc.



TJ Lallathin, P.E.
Senior Project Manager

CC: Joseph Berenis, P.E. (CFX)
Jon Meadows, P.E. (DRMP, Inc.)

Enclosures

941 Lake Baldwin Lane
Orlando, Florida 32814
Phone: 407.896.0594
Fax: 407.896.4836

Boca Raton, Florida
Charlotte, North Carolina
Chipley, Florida
Gainesville, Florida
Jacksonville, Florida
Lakeland, Florida
Melbourne, Florida
Panama City, Florida
Pensacola, Florida
Raleigh, North Carolina
Tallahassee, Florida
Tampa, Florida

1.800.375.3767
www.drmp.com

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SR 408 WIDENING FROM SR 417 TO ALAFAYA TRAIL PROJECT № 408-128

Scope of Services Summary – Supplemental No. 1

Project Description:

Supplemental Agreement No. 1 is based on additions to the existing Scope of Services at the direction of Central Florida Expressway Authority. The changes include pier protection for piers and walls within the clear zone, noise walls based on the noise analysis, additional pond design, new closed bridge median details, bridge drainage over the Little Econlockhatchee River, extended lighting limits and ITS modifications.

Tasks 4, 5, 6 and 7

Roadway Design (DRMP)

- Addition of noise walls and configuration adjustments
 - Plan view: wall locations, guardrail & shoulder gutter adjustments
 - Cross sections: walls locations, earthwork adjustments
 - Quantity Summaries: guardrail, miscellaneous asphalt, shoulder gutter adjustments
- Pier protection (Dean Road and Woodbury Road—Median Pier and End Walls)
 - Summary of Quantity Sheets
- Addition of NB turn lane on Rouse Road

Roadway Design (RS&H)

- N/A

Traffic Control Plans (WBQ)

- N/A

Drainage Design (DRMP)

- Hydroplaning calculations analysis and memo
- Temporary spread calculations
- Additional pond design
- Addition of noise walls affecting drainage patterns
- Median grading for pier protection at Woodbury Road
- Additional inlets: Walls, pier protection
- Little Econlockhatchee bridge gore special drainage design (trench)

Utilities (WBQ)

- N/A

Tasks 8

Environmental (DRMP)

- Increase in Dredge and Fill Sketches to accommodate 7 wetland impacts and 34 OSW impacts (2 location included in original scope)
- Wood stork foraging habitat calculations

Tasks 9, 17 and 18

Structures Design (DRMP)

- Closed median detail for the bridges over Little Econlockhatchee River and Alafaya Trail
- Additional noise walls
- Additional retaining walls
- Modification of walls near Kehoe to improve landscaping and maintenance
- Little Econlockhatchee bridge gore drainage details
- Credit for Alafaya Trail bridge, originally steel girder now Florida U-Beam's
- ITS line supported on bridges
- Temporary deck drainage on Alafaya to meet spread requirements
- Credit for Elimination of Box Truss

Structures Design (RS&H)

- N/A

Structures Design (AVCON)

- N/A

Tasks 19-24

Signing & Pavement Marking (RS&H)

- N/A

Signalization Design (DRMP)

- N/A

Lighting Design (DRMP/EPG)

- Extended lighting limits to Challenger Parkway (2.3 miles)

Tasks 27-29

Survey/SUE (DRMP)

- Addition of noise walls (NW-01, NW-03/08 – Adjacent to pond areas)
- SUE for ITS conflicts – Drainage/Noise walls
- Pier protection
- Signing revisions
- Extended lighting limits – Data for poles with GPS, Load centers, power designates
 - Also extended limits on side roads since lights are replaced with LED
- Additional pond (NW quad at Dean Road)

Survey (WBQ)

- N/A

Task 31

Toll Plaza Design (RS&H)

- N/A

Tasks 33 and 34

ITS Design (DRMP/EPG)

- Addition of Wrong Way Detection (WWD) to new Rouse Road interchange and Alafaya Trail

- Shift of the newly installed Mainline 2-line Toll DMS signs
- 2.5-miles of ITS Backbone/Feeder Fiber and conduit replacement on the south and north sides of SR 408 from Rouse Road to Woodbury.
- Addition of wall and drainage impacts to backbone/feeder requiring Temporary Design and MOC Plans.

Task 35

Geotechnical Investigation (Antillian)

- N/A

Geotechnical Investigation (Ardaman)

- N/A

ESTIMATE OF WORK EFFORT AND COST - PRIME CONSULTANT

Name of Project: SR 408 Widening from SR 417 to Alafaya Trail (SA #1)
 County: Orange
 FPN: 408-128
 FAP No.: N/A

Consultant Name: DRMP, Inc.
 Consultant No.: 14-0374,000
 Date:
 Estimator: T.J.L.

Staff Classification	Total Staff Hours From "SH Summary -	Project Manager	Chief Engineer	Senior Engineer	Project Engineer	Senior Designer	Engineer	Project Planner	Engineering Intern	Clerical				SH By Activity	Salary Cost By Activity	Average Rate Per Task
		\$88.58	\$60.99	\$54.89	\$38.95	\$34.84	\$31.27	\$39.79	\$26.88	\$25.46	\$0.00	\$0.00	\$0.00			
3. Project General and Project Common Tasks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
4. Roadway Analysis	277	14	44	47	58	50	22	0	28	14	0	0	0	277	\$12,302	\$44.41
5. Roadway Plans	19	1	3	3	4	3	2	0	2	1	0	0	0	19	\$838	\$44.12
6a. Drainage Analysis	289	14	46	49	61	52	23	0	29	15	0	0	0	289	\$12,804	\$44.30
6b. Drainage Plans	180	9	29	31	38	32	14	0	18	9	0	0	0	180	\$8,013	\$44.52
7. Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
8. Environmental Permits, Compliance & Clearances	84	4	13	14	18	15	7	0	8	5	0	0	0	84	\$3,701	\$44.05
9. Structures - Misc. Tasks, Dwg, Non-Tech,	236	12	38	40	50	42	19	0	24	11	0	0	0	236	\$10,506	\$44.52
10. Structures - Bridge Development Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
12. Structures - Short Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
13. Structures - Medium Span Concrete Bridge	290	15	46	49	61	52	23	0	29	15	0	0	0	290	\$12,892	\$44.46
14. Structures - Structural Steel Bridge	-680	-34	-109	-116	-143	-122	-54	0	-68	-34	0	0	0	-680	(\$30,229)	\$44.45
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
17. Structures - Retaining Walls	618	31	99	105	130	111	49	0	62	31	0	0	0	618	\$27,466	\$44.44
18. Structures - Miscellaneous	196	10	31	33	41	35	16	0	20	10	0	0	0	196	\$8,697	\$44.37
19. Signing & Pavement Marking Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
20. Signing & Pavement Marking Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
21. Signalization Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
22. Signalization Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
23. Lighting Analysis	213	11	34	36	45	38	17	0	21	11	0	0	0	213	\$9,477	\$44.49
24. Lighting Plans	66	3	11	11	14	12	5	0	7	3	0	0	0	66	\$2,925	\$44.31
25. Landscape Architecture Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
26. Landscape Architecture Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
27. Survey (Field & Office Support)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
29. Mapping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
30. Terrestrial Mobile LiDAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
33. Intelligent Transportation Systems Analysis	183	9	29	31	38	33	15	0	18	10	0	0	0	183	\$8,105	\$44.29
34. Intelligent Transportation Systems Plans	218	11	35	37	46	39	17	0	22	11	0	0	0	218	\$9,693	\$44.47
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
Total Staff Hours	2,189	110	349	370	461	392	175	0	220	112	0	0	0	2,189		
Total Staff Cost		\$9,743.80	\$21,285.51	\$20,309.30	\$17,955.95	\$13,657.28	\$5,472.25	\$0.00	\$5,913.60	\$2,851.52	\$0.00	\$0.00	\$0.00		\$97,189.21	\$44.40

Survey Field Days by Subconsultant
 4 - Person Crew.

SALARY RELATED COSTS:			
OVERHEAD:	154.73%		\$97,189.21
PROFIT	12.00%		\$160,099.79
FCCM (Facilities Capital Cost Money):	0.00%		\$30,874.68
EXPENSES:			\$0.00
Survey (Office - if by Prime)			\$0.00
Survey (Field - if by Prime)	19	4-man crew days @ \$ 1,608.91 / day	\$9,816.78
SUBTOTAL ESTIMATED FEE:			\$328,549.75
Subconsultant: RS&H, Inc.			\$0.00
Subconsultant: WBQ			\$0.00
Subconsultant: AVCON			\$0.00
Subconsultant: Antillian			\$0.00
Subconsultant: Ardaman			\$0.00
Subconsultant: EPG Engineering			\$20,000.00
Subconsultant: ACA			\$0.00
SUBTOTAL ESTIMATED FEE:			\$348,549.75
Geotechnical Field and Lab Testing			\$0.00
SUBTOTAL ESTIMATED FEE:			\$348,549.75
Optional Services			\$0.00
GRAND TOTAL ESTIMATED FEE:			\$348,549.75

- Notes:
 1. This sheet to be used by Prime Consultant to calculate the Grand Total fee.
 2. Manually enter fee from each subconsultant. Unused subconsultant rows may be hidden.

Check = \$97,189.21

ESTIMATE OF WORK EFFORT AND COST - SUBCONSULTANT

Name of Project: SR 408 Widening from SR 417 to Alafaya Trail (SA #1)
 County: Orange
 FPN: 408-128
 FAP No.: N/A

Consultant Name: DRMP, Inc.
 Consultant No.: 14-0374
 Date:
 Estimator: AI

Staff Classification	Total Staff Hours From *SH Summary Firm*	Project Manager	Chief Engineer	Senior Engineer	Project Engineer	Senior Designer	Engineer	Project Planner	Engineering Intern	Clerical	Senior Surveyor & Mapper	Surveyor & Mapper	Survey Technician	SH By Activity	Salary Cost By Activity	Average Rate Per Task
		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$72.20	\$178.20	\$138.54	\$104.16			
3. Project General and Project Common Tasks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
4. Roadway Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
5. Roadway Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
6a. Drainage Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
6b. Drainage Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
7. Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
8. Environmental Permits, Compliance & Clearances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
9. Structures - Misc. Tasks, Dwgs, Non-Tech.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
10. Structures - Bridge Development Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
12. Structures - Short Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
13. Structures - Medium Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
17. Structures - Retaining Walls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
18. Structures - Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
19. Signing & Pavement Marking Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
20. Signing & Pavement Marking Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
21. Signalization Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
22. Signalization Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
23. Lighting Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
24. Lighting Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
25. Landscape Architecture Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
26. Landscape Architecture Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
27. Survey (Field & Office Support)	82	0	0	0	0	0	0	0	0	8	8	29	37	82	\$9,817	\$118.72
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
29. Mapping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
30. Terrestrial Mobile LiDAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
Total Staff Hours	82	0	0	0	0	0	0	0	0	8	8	29	37	82		
Total Staff Cost		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$577.60	\$1,425.60	\$3,959.66	\$3,853.92		\$9,816.78	\$119.72

Check = \$9,816.78

SALARY RELATED COSTS:		\$9,816.78
OVERHEAD:	0%	\$0.00
OPERATING MARGIN:	0%	\$0.00
FCCM (Facilities Capital Cost Money):	0.00%	\$0.00
EXPENSES:	-0.00%	\$0.00
SUBTOTAL ESTIMATED FEE:		\$9,816.78
Survey (Field)	19	\$30,569.29
Geotechnical Field and Lab Testing		\$0.00
SUBTOTAL ESTIMATED FEE:		\$40,386.07
Optional Services		\$0.00
GRAND TOTAL ESTIMATED FEE:		\$40,386.07

Notes:
 1. This sheet to be used by Subconsultant to calculate its fee.

Project Activity 4: Roadway Analysis

Estimator: TGC

SR 408 Widening from SR 417 to Alafaya Trail (SA #1)

408-128

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
4.1	Typical Section Package	LS	1	0	0	
4.2	Pavement Type Selection Report	LS	1	0	0	
4.3	Pavement Design Package	LS	1	0	0	
4.4	Cross-Slope Correction	LS	1	0	0	
4.5	Horizontal /Vertical Master Design Files	LS	1	56	56	Add 400' NB turn lane at Rouse (8hrs) Noise Walls (40hrs) - Walls 2D & 2E (revise shldrs., shldr gutter, and guardrail) = 2350' - Walls 4 & 5 (revise shldrs., shldr gutter, and guardrail) = 2150' - Wall 6 (revise shldrs., shldr gutter, and guardrail) = 2200' - Wall 7 (revise shldrs., barrier wall) = 1020' - Wall 8 (revise shldrs., shldr gutter, and guardrail) = 1450' Pier Protection with Special Shoulder Profiles (8hrs)
4.6	Access Management	LS	1	0	0	
4.7	Roundabout Evaluation	LS	1	0	0	
4.8	Roundabout Final Design Analysis	LS	1	0	0	
4.9	Cross Section Design Files	LS	1	143	143	Add Noise Walls to existing sections (123hrs) - Wall 1 = 14 new sections @ .75 hrs - Wall 2A, 2B, 2C, 2D, 2E = 55 (half sections) @ .75hrs - Wall 3 = 16 (half sections) @ .75hrs - Wall 4 & 5 = 21 (half sections) @ .75hrs - Wall 6 = 22 (half sections) @ .75hrs - Wall 7 = 10 (half sections) @ .75hrs - Wall 8 = 15 (half sections) @ .75hrs - Wall 9 = 11 (half sections) @ .75hrs Add Pier Protection at Dean and Woodbury (16) Add NB turn lane at Rouse (4)
4.10	Traffic Control Analysis	LS	1	0	0	
4.11	Master TCP Design Files	LS	1	0	0	
4.12	Design Variations and Exceptions	LS	1	0	0	
4.13	Design Report	LS	1	8	8	Add Pier Protection Barrier to Design Documentation
4.14	Quantities	LS	1	4	4	
4.15	Cost Estimate	LS	1	2	2	
4.16	Technical Special Provisions	LS	1	0	0	
4.17	Other Roadway Analyses	LS	1	24	24	Pier protection options and analysis

Project Activity 4: Roadway Analysis

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
Roadway Analysis Technical Subtotal					237	

Project Activity 4: Roadway Analysis

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
4.18	Field Reviews	LS	1	8	8	2 employees - 1/2 day
4.19	Protection of Existing Structures	LS	1	0	0	
4.20	Technical Meetings	LS	1	0	0	Meetings are listed below
4.21	Quality Assurance/Quality Control	LS	%	5%	12	Includes QC Management Plan
4.22	Independent Peer Review	LS	%	0%	0	
4.23	Supervision	LS	%	5%	12	
Roadway Analysis Nontechnical Subtotal					32	
4.24	Coordination	LS	%	3%	8	
4. Roadway Analysis Total					277	

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
Typical Section	EA	0	0	0		0
Pavement	EA	0	0	0		0
Access Management	EA	0	0	0		0
15% Line and Grade	EA	0	0	0		0
Driveways	EA	0	0	0		0
Local Governments (cities, counties, MPO)	EA	0	0	0	no	0
Work Zone Traffic Control	EA	0	0	0	no	0
30/60/90/100% Comment Review Meetings	EA	0	0	0	no	0
Other Meetings	EA	0	0	0		0
Subtotal Technical Meetings				0	Subtotal Project Manager Meetings	0
Progress Meetings	EA	0	0	0	<i>PM attendance at Progress Meetings is manually entered on General Task 3</i>	--
Phase Review Meetings	EA	0	0	0	<i>PM attendance at Phase Review Meetings is manually entered on General Task 3</i>	--
Total Meetings				0	Total Project Manager Meetings (carries to Tab 3)	0

Carries to 4.17

Carries to Tab 3

Project Activity 5: Roadway Plans

Estimator: TGC

SR 408 Widening from SR 417 to Alafaya Trail (SA #1)
408-12B

Task No.	Task	Scale	Units	No. of Units or Sheet	Hours/ Unit or Sheet	Total Hours	Comments
5.1	Key Sheet		Sheet	0	0	0	
5.2	Summary of Pay Items Including Quantity Input		Sheet	0	0	0	
5.3	Typical Section Sheets						
5.3.1	Typical Sections		EA	5	2	10	Modifying Existing Sheets for Noise Walls
5.3.2	Typical Section Details		EA	1	4	4	Additional sheet for Noise Walls and Pier Protection
5.4	General Notes/Pay Item Notes		Sheet	0	0	0	
5.5	Summary of Quantities Sheets		Sheet	0	0	0	
5.6	Project Layout		Sheet	0	0	0	
5.7	Plan/Profile Sheet		Sheet	0	0	0	
5.8	Profile Sheet	1"=50'	Sheet	0	0	0	
5.9	Plan Sheet	1"=50'	Sheet	0	0	0	
5.10	Special Profile		Sheet	0	0	0	
5.11	Back-of-Sidewalk Profile Sheet		Sheet	0	0	0	
5.12	Interchange Layout Sheet	1"=100'	Sheet	0	0	0	
5.13	Ramp Terminal Details (Plan View)	1"=20'	Sheet	0	0	0	
5.14	Intersection Layout Details		Sheet	0	0	0	
5.15	Special Details		EA	0	0	0	
5.16	Cross-Section Pattern Sheet(s)	1"=100'	Sheet	0	0	0	
5.17	Roadway Soil Survey Sheet(s)		Sheet	0	0	0	
5.18	Cross Sections	10'V:40'H	EA	6	0.5	3	Rouse Rd. cross sections added for turn lane
5.19	Temporary Traffic Control Plan Sheets		Sheet	0	0	0	
5.20	Temporary Traffic Control Cross Section Sheets		EA	0	0	0	
5.21	Temporary Traffic Control Detail Sheets		Sheet	0	0	0	

Project Activity 5: Roadway Plans

Task No.	Task	Scale	Units	No. of Units or Sheet	Hours/ Unit or Sheet	Total Hours	Comments
5.22	Utility Adjustment Sheets		Sheet	0	0	0	
5.23	Selective Clearing and Grubbing Sheet(s)		Sheet	0	0	0	
5.24	Project Network Control Sheet(s)	1"=100'	Sheet	0	0	0	
5.25	Environmental Detail Sheets		Sheet	0	0	0	
5.26	Utility Verification Sheet(s) (SUE Data)		Sheet	0	0	0	
Roadway Plans Technical Subtotal						17	
5.27	Quality Assurance/Quality Control		LS	%	5%	1	
5.28	Supervision		LS	%	5%	1	
5. Roadway Plans Total						19	

Project Activity 6a: Drainage Analysis

Estimator: Ken Kniel

SR 408 Widening from SR 417 to Alafaya Trail (SA #1)

408-128

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
6a.1	Drainage Map Hydrology	Per Map	3	4	12	Revise basin divides and hydrology to accommodate soundwall impacts
6a.2	Base Clearance Report	Per Location	0	0	0	
6a.3	Pond Siting Analysis and Report	Per Basin	0	0	0	
6a.4	Design of Cross Drains	EA	0	0	0	
6a.5	Design of Ditches	Per Ditch Mile	2	8	16	Onsite/offsite ditch impacts of the soundwalls
6a.6	Design of Stormwater Management Facility (Offsite or Infield Pond)	EA	2	16	32	Original 2 new ponds with 3 modifications (New: 2 @ Rouse - Modified :Pond 7A outfall structure, Pond B-1 modeling for impervious area increase, Pond B-6 new modeling for impacts by ramp shift and basin area changes, Pond B-7 modeling for basin area change, Pond B-8 modeling and details for modified basin areas and pond design) Total of 7 pond designs/analysis
6a.7	Design of Stormwater Management Facility (Roadside Ditch as Linear Pond)	Per Cell	0	0	0	
6a.8	Design of Floodplain Compensation	Per Floodplain Basin	1	16	16	Not included in original contract - modeling and impact volume calculations required at Rouse Road interchange. See Appendix E in Drainage Report
6a.9	Design of Storm Drains	EA	60	2	120	Additional structures to accommodate soundwall impacts. (129 negotiated, 171 total at 90% + 14 bridge scupper inlets); 4 inlets modified for Kehoe tiered walls
6a.10	Optional Culvert Material	EA	22	0,5	11	Jack and Bore Pitting Analysis
6a.11	French Drain Systems	Per Cell	0	0	0	
6a.12	Drainage Wells	EA	0	0	0	
6a.13	Drainage Design Documentation Report	LS	1	8	8	Revise for basin limit changes due to soundwalls
6a.14	Bridge Hydraulic Report	EA	0	0	0	

Project Activity 6a: Drainage Analysis

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
6a.15	Temporary Drainage Analysis	LS	1	0	0	
6a.16	Cost Estimate	LS	1	0	0	
6a.17	Technical Special Provisions	LS	1	0	0	
6a.18	Other Drainage Analysis	LS	1	40	40	Hydroplaning Analysis and Memo (24), Special trench drain design at Little Econ Bridge Gore (16)
Drainage Analysis Technical Subtotal					255	
6a.19	Field Reviews	LS	1	0	0	
6a.20	Technical Meetings	LS	1	0	0	Meetings are listed below
6a.21	Environmental Look-Around (ELA) Meeting	LS	1	0	0	N/A
6a.22	Quality Assurance/Quality Control	LS	%	5%	13	
6a.23	Independent Peer Review	LS	%	0%	0	
6a.24	Supervision	LS	%	5%	13	
Drainage Analysis Nontechnical Subtotal					26	
6a.25	Coordination	LS	%	3%	8	
6a. Drainage Analysis Total					289	

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
Base Clearance Water Elevation	EA	0	0	0		0
Pond Siting	EA	0	0	0		0
Agency	EA	0	0	0		0
Local Governments (cities, counties)	EA	0	0	0		0
Drainage	EA	0	0	0		0
Other Meetings	EA	0	0	0		0
Subtotal Technical Meetings				0		0
Progress Meetings	EA	0	0	0	<i>PM attendance at Progress Meetings is manually entered on General Task 3</i>	--
Phase Review Meetings	EA	0	0	0	<i>PM attendance at Phase Review Meetings is manually entered on General Task 3</i>	--
Total Meetings				0	Total Project Manager Meetings (carries to Tab 3)	0

Carries to 6.19

Carries to Tab 3

6b. Drainage Plans

Estimator: Ken Kniel

SR 408 Widening from SR 417 to Alafaya Trail (SA #1)
408-128

Task No.	Task	Scale	Units	No. of Units or Sheet	Hours/ Unit or Sheet	Total Hours	Comments
6b.1	Drainage Map (Including Interchanges)		Sheet	4	2	8	
6b.2	Bridge Hydraulics Recommendation Sheets		Sheet	0	0	0	
6b.3	Summary of Drainage Structures		Sheet	0	0	0	
6b.4	Optional Pipe/Culvert Material		Sheet	0	0	0	
6b.5	Drainage Structure Sheet(s) (Per Structure)		EA	46	2	92	Noise Wall additions (38); Pier protection (4); Kehoe wall modifications (4)
6b.6	Miscellaneous Drainage Detail Sheets		Sheet	1	16	16	1 in original contract - 2 details in 90% plans
6b.7	Lateral Ditch Plan/Profile		Sheet	0	0	0	
6b.8	Lateral Ditch Cross Sections		EA	0	0	0	
6b.9	Retention/Detention Ponds Detail Sheet(s)		Sheet	2	24	48	Pond B-6 (detail impacts-24) and pond B-8 (full detail - 24)
6b.10	Retention Pond Cross Sections		EA	0	0	0	
6b.11	Erosion Control Plan Sheet(s)		Sheet	0	0	0	
6b.12	SWPPP Sheet(s)		Sheet	0	0	0	
Drainage Plans Technical Subtotal						164	
6b.13	Quality Assurance/Quality Control		LS	%	5%	8	
6b.14	Supervision		LS	%	5%	8	
6. Drainage Plans Total						180	

Project Activity 8: Environmental Permits

Estimator: Ken Kniel

SR 408 Widening from SR 417 to Alafaya Trail (SA #1)

408-128

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
Environmental Permits, Compliances and Clearances						
8.1	Preliminary Project Research	LS	1	0	0	
Permits						
8.2	Field Work					
8.2.1	Pond Site Alternatives	per pond site	1	0	0	
8.2.2	Establish Wetland Jurisdictional Lines and Assessments	LS	1	0	0	
8.2.3	Species Surveys	LS	1	0	0	
8.2.4	Archeological Surveys	LS	1	0	0	
8.3	Agency Verification of Wetland Data	LS	1	0	0	
8.4	Complete And Submit All Required Permit Applications					
8.4.1	Complete and Submit All Required Wetland Permit Applications	LS	1	0	0	
8.4.2	Complete and Submit All Required Species Permit Applications	LS	1	0	0	
8.5	Prepare Dredge and Fill Sketches (as needed)	LS	1	50	50	30 hours for sketches at 2 location in original contract. Total 7 locations for wetland impacts and 34 OSW impacts after noisewalls.
8.6	Prepare USCG Permit Sketches	LS	1	0	0	
8.7	Prepare Water Management District Right-of-Way Occupancy Permit	LS	1	0	0	
8.8	Prepare Coastal Construction Control Line (CCCL) Permit Application	LS	1	0	0	
8.9	Prepare Tree Permit Information	LS	1	0	0	
8.10	Mitigation Design	LS	1	0	0	
8.11	Mitigation Coordination and Meetings	LS	1	24	24	Wood stork foraging habitat impact exhibits and calculations for permit
8.12	Other Environmental Permits	LS	1	0	0	
Environmental Clearances/Reevaluations						

Project Activity 8: Environmental Permits

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
8.13	Technical support to Department for Environmental Clearances and Reevaluations (use when consultant provides technical support only)					
8.13.1	NEPA or SEIR Reevaluation	LS	1	0	0	
8.13.2	Archaeological and Historical Features	LS	1	0	0	
8.13.3	Wetland Impact Analysis	LS	1	0	0	
8.13.4	Essential Fish Habitat	LS	1	0	0	
8.13.5	Wildlife and Habitat Impact Analysis	LS	1	0	0	
8.13.6	Section 7 or Section 10 Consultation	LS	1	0	0	

Project Activity 8: Environmental Permits

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments	
8.14	Preparation of Environmental Clearances and Reevaluations (use when consultant prepares all documents associated with reevaluation)						
8.14.1	NEPA or SEIR Reevaluation	LS	1	0	0		
8.14.2	Archaeological and Historical Features	LS	1	0	0		
8.14.3	Wetland Impact Analysis	LS	1	0	0		
8.14.4	Essential Fish Habitat	LS	1	0	0		
8.14.5	Wildlife and Habitat Impact Analysis	LS	1	0	0		
8.14.6	Section 7 or Section 10 Consultation	LS	1	0	0		
8.15	Contamination Impact Analysis	LS	1	0	0		
8.16	Asbestos Survey	LS	1	0	0		
Environmental Permits, Compliance, and Clearances/Reevaluations Technical Subtotal					74		
8.17	Technical Meetings	LS	1	0	0	Meetings are listed below	
8.18	Quality Assurance/Quality Control	LS	%	5%	4		
8.19	Supervision	LS	%	5%	4		
Environmental Permits, Compliance and Clearances Nontechnical Subtotal					8		
8.20	Coordination	LS	%	3%	2		
8. Environmental Permits, Compliance and Clearances Total					84		

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
WMD	EA	0	0	0	no	0
NMFS	EA	0	0	0		0
ACOEUSACE	EA	0	0	0		0
USCG	EA	0	0	0		0
USFWS	EA	0	0	0		0
FFWCC	EA	0	0	0		0
FDOT/County	EA	0	0	0		0
Other Meetings	EA	0	0	0	no	0

Project Activity 8: Environmental Permits

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments	
Subtotal Technical Meetings					0	Subtotal Project Manager Meetings	0
Progress Meetings		EA	0	0	0	<i>PM attendance at Progress Meetings is manually entered on General Task 3</i>	--
Phase Review Meetings		EA	0	0	0	<i>PM attendance at Phase Review Meetings is manually entered on General Task 3</i>	--
Total Meetings					0	Total Project Manager Meetings (carries to Tab 3)	0

Carries to 8.18

Carries to Tab 3

Project Activity 9: Structures Summary and Miscellaneous Tasks and Drawings

Estimator: TJ Lallathin

SR 408 Widening from SR 417 to Alafaya Trail (SA #1)

408-128

Task No.	Task	Units	Design and Production Staffhours				Comments				
			No. of Units	Hours per Unit	No. of Sheets	Total					
General Drawings											
9.1	Key Sheet and Index of Drawings	Sheet	0	0	0	0					
9.2	Project Layout	Sheet	0	0	0	0					
9.3	General Notes and Bid Item Notes	Sheet	0	0	0	0					
9.4	Miscellaneous Common Details	Sheet	1	128	1	128	2 sheets - concrete median cover details with end wall (applicable to 2 bridge sites with different MOT) (40 hrs); 2 sheets - existing expansion joint replacement details (applicable to 3 bridge sites with 2 different existing joint types) (32 hrs); 1 sheet - bridge supported ITS detail (16 hrs); 1 sheet - light pole pedestal retrofit details (16 hrs); 2 sheets - surface finish details (24 hrs)				
9.5	Incorporate Report of Core Borings	Sheet	0	0	0	0					
9.6	Existing Bridge Plans	LS	0	0		0					
9.7	Assemble Plan Summary Boxes and Quantities	LS	0	0		0					
9.8	Cost Estimate	LS	0	0		0					
9.9	Technical Special Provisions	LS	1	4		4	MSP for 10,000 psi concrete				
Structures - Summary and Miscellaneous Tasks and Drawings Subtotal						1	132				
Task No.	Task	Total	Task 10	Task 11	Task 12	Task 13	Task 14	Task 15	Task 16	Task 17	Task 18
10-16	SR 408 over Little Econlockhatchee River	146	0	0	0	146		0	0		
10-16	SR 408 over Rouse Road (Included by RS&H)	0									
10-16	SR 408 over Kehoe Boulevard	0	0			0					
10-16	SR 408 over Alafaya Trail	-536	0			144	-680				
17	Retaining Walls	618								618	
18	Miscellaneous Structures	196									196
Structures Technical Subtotal		424	0	0	0	290	-680	0	0	618	196

Project Activity 9: Structures Summary and Miscellaneous Tasks and Drawings

Task No.	Task	Units	No. of Units	Hours per Unit	Total	Comments
9.10	Field Reviews	LS	1	8	8	2 reviews x 2 people x 2 hours - for noise wall conflicts + Little Econ drainage
9.11	Technical Meetings	LS	1	0	0	Meetings are listed below
9.12	Quality Assurance/Quality Control	LS	%	5%	28	This should be (5% to 10%) x ("Structures - Summary and Miscellaneous Tasks and Drawings Subtotal, cell G21" + "Structures Technical Subtotal, cell C35")
9.13	Independent Peer Review	LS	0	0	0	N/A
9.14	Supervision	LS	%	5%	28	This should be (3% to 7%) x ("Structures - Summary and Miscellaneous Tasks and Drawings Subtotal, cell G21" + "Structures Technical Subtotal, cell C35")
Structures Nontechnical Subtotal					64	
9.15	Coordination	LS	1	40	40	Aesthetics/Geotech/ITS/Drainage for noise walls and Drainage/MOT for Little Econ Bridge Deck Drainage
9. Structures - Summary and Miscellaneous Tasks and Drawings Nontechnical and Coordination Total					236	

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
BDR Coordination/Review	EA	0	0	0	no	0
90/100% Comment Review	EA	0	0	0	no	0
Aesthetics Coordination	EA	0	0	0	no	0
Regulatory Agency	EA	0	0	0	no	0
Local Governments (cities, counties)	EA	0	0	0	no	0
Utility Companies	EA	0	0	0	no	0
Other Meetings	EA	0	0	0	no	0
Subtotal Technical Meetings				0		0
Progress Meetings	EA	0	0	0	<i>PM attendance at Progress Meetings is manually entered on General Task 3</i>	--
Phase Review Meetings	EA	0	0	0	<i>PM attendance at Phase Review Meetings is manually entered on General Task 3</i>	--
Total Meetings				0	Total Project Manager Meetings (carries to Tab 3)	0

Carries to 9.11

Carries to Tab 3

Project Activity 13: Structures- Medium Span Concrete

Estimator: TJ Lallathin

SR 408 Widening from SR 417 to Alafaya Trail (SA #1)

Bridge Identifier (Number or Name): SR 408 over Little Econlockhatchee River

408-128

Task No.	Task	Units	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
General Layout Design and Plans							
13.1	Overall Bridge Final Geometry	LS	0	0		0	
13.2	Expansion/Contraction Analysis	EA Unit	0	0		0	
13.3	General Plan and Elevation	Sheet	0	0	0	0	
13.4	Construction Staging	Sheet	1	18	1	18	Additional sheets required for bridge deck drainage improvements and light pole pedestal retrofits along the outside bridge copings for full length of bridge (within straight and tapered portion of bridge including ramps)
13.5	Approach Slab Plan and Details	Sheet	0	0	0	0	
13.6	Miscellaneous Details	Sheet	1	12	1	12	Slope protection details, atypical sand cement rip rap details
End Bent Design and Plans							
13.7	End Bent Geometry	EA End Bent	0	0		0	
13.8	Wingwall Design and Geometry	EA End Bent	0	0		0	
13.9	End Bent Structural Design	EA Design	0	0		0	
13.10	End Bent Plan and Elevation	Sheet	0	0	0	0	
13.11	End Bent Details	Sheet	0	0	0	0	

Project Activity 13: Structures- Medium Span Concrete

Task No.	Task	Units	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
Intermediate Bent Design and Plans							
13.12	Bent Geometry	EA Bent	0	0		0	
13.13	Bent Stability Analysis	EA Design	0	0		0	
13.14	Bent Structural Design	EA Design	1	16		16	Existing intermediate bent 7 analysis (supports proposed gore widening)
13.15	Bent Plan and Elevation	Sheet	0	0	0	0	
13.16	Bent Details	Sheet	0	0	0	0	
Pier Design and Plans							
Miscellaneous Substructure Design and Plans							
13.22	Foundation Layout	Sheet	0	0	0	0	
Superstructure Deck Design and Plans							
13.23	Finish Grade Elevation (FGE) Calculation	LS	0	0		0	
13.24	Finish Grade Elevations	Sheet	0	0	0	0	
13.25	Bridge Deck Design	EA Section	1	8		8	Modified deck design required to accommodate drainage within gore area
13.26	Bridge Deck Reinforcing and Concrete Quantities	EA Unit	0	0		0	
13.27	Diaphragm Design	EA Section	0	0		0	
13.28	Superstructure Plan	Sheet	0	0	0	0	
13.29	Superstructure Section	Sheet	0	0	0	0	
13.30	Miscellaneous Superstructure Details	Sheet	1	72	1	72	Gore bridge deck drainage details (32 hours); replacement/retrofit bridge deck drainage details (replacement of existing drainage system) (32 hours); thrust block removal details within existing span 7 to remain (8 hours)

Project Activity 13: Structures- Medium Span Concrete

Task No.	Task	Units	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
Reinforcing Bar Lists							
13.31	Preparation of Reinforcing Bar List	Sheet	0	0	0	0	
Continuous Concrete Girder Design							
Simple Span Concrete Design							
13.49	Prestressed Beam	EA Design	1	12		12	Modified FIB36 (removed portion of top flange) to accommodate bridge deck drainage within gore (semi-custom beam design)
13.50	Prestressed Beam Schedules	Sheet	1	4	1	4	Modified FIB36 (removed portion of top flange) to accommodate bridge deck drainage within gore (details)
13.51	Framing Plan	Sheet	0	0	0	0	
Beam Stability							
13.52	Beam/girder stability	EA Unit	0	0		0	
Bearing							
13.53	Bearing pad and bearing plate design	Type/ Span	0	0		0	
13.54	Bearing pad and bearing plate details	Sheet	0	0	0	0	
Load Rating							
13.55	Load Ratings	Per Beam	1	4		4	Include Modified FIB36
13. Structures - Medium Span Concrete Bridge Total					4	146	

Project Activity 13: Structures- Medium Span Concrete

Estimator: TJ Lallathin

SR 408 Widening from SR 417 to Alafaya Trail (SA #1)

Bridge Identifier (Number or Name): SR 408 over Alafaya Trail

408-128

Task No.	Task	Units	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
General Layout Design and Plans							
13.1	Overall Bridge Final Geometry	LS	0	0		0	
13.2	Expansion/Contraction Analysis	EA Unit	0	0		0	
13.3	General Plan and Elevation	Sheet	0	0	0	0	
13.4	Construction Staging	Sheet	0	0	0	0	
13.5	Approach Slab Plan and Details	Sheet	0	0	0	0	
13.6	Miscellaneous Details	Sheet	1	24	1	24	Existing bridge drainage details during MOT phase
End Bent Design and Plans							
13.7	End Bent Geometry	EA End Bent	0	0		0	
13.8	Wingwall Design and Geometry	EA End Bent	0	0		0	
13.9	End Bent Structural Design	EA Design	0	0		0	
13.10	End Bent Plan and Elevation	Sheet	0	0	0	0	
13.11	End Bent Details	Sheet	0	0	0	0	

Project Activity 13: Structures- Medium Span Concrete

Task No.	Task	Units	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
Intermediate Bent Design and Plans							
Pier Design and Plans							
Miscellaneous Substructure Design and Plans							
13.22	Foundation Layout	Sheet	0	0	0	0	
Superstructure Deck Design and Plans							
13.23	Finish Grade Elevation (FGE) Calculation	LS	0	0		0	
13.24	Finish Grade Elevations	Sheet	0	0	0	0	
13.25	Bridge Deck Design	EA Section	1	8		8	Additional design for median section and variable beam spacing
13.26	Bridge Deck Reinforcing and Concrete Quantities	EA Unit	0	0		0	
13.27	Diaphragm Design	EA Section	0	0		0	
13.28	Superstructure Plan	Sheet	0	0	0	0	
13.29	Superstructure Section	Sheet	0	0	0	0	
13.30	Miscellaneous Superstructure Details	Sheet	1	8	1	8	Closed concrete cap median details - bridge specific (8 hours)

Project Activity 13: Structures- Medium Span Concrete

Task No.	Task	Units	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
Reinforcing Bar Lists							
13.31	Preparation of Reinforcing Bar List	Sheet	0	0	0	0	
Continuous Concrete Girder Design							
Simple Span Concrete Design							
13.49	Prestressed Beam	EA Design	4	8		32	FUBs
13.50	Prestressed Beam Schedules	Sheet	1	12	1	12	
13.51	Framing Plan	Sheet	1	12	1	12	
Beam Stability							
13.52	Beam/girder stability	EA Unit	2	4		8	
Bearing							
13.53	Bearing pad and bearing plate design	Type/ Span	2	4		8	Different spacing with DL and LL reactions
13.54	Bearing pad and bearing plate details	Sheet	0	0	0	0	
Load Rating							
13.55	Load Ratings	Per Beam	4	8		32	Exterior beam, and variable interior beam spacing
13. Structures - Medium Span Concrete Bridge Total					4	144	

Project Activity 14: Structures -Structural Steel

Estimator: TJ Lallathin

SR 408 Widening from SR 417 to Alafaya Trail (SA #1)

Bridge Identifier (Number or Name): SR 408 over Alafaya Trail

408-128

Task No.	Task	Unit	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
General Layout Design and Plans							
14.1	Overall Bridge Final Geometry	LS	1	0		0	
14.2	Expansion/Contraction Analysis	EA Unit	0	0		0	
14.3	General Plan and Elevation	Sheet	0	0	0	0	
14.4	Construction Staging	Sheet	0	0	0	0	
14.5	Approach Slab Plan and Details	Sheet	0	0	0	0	
14.6	Miscellaneous Details	Sheet	0	0	0	0	
End Bent Design and Plans							
14.7	End Bent Geometry	EA Bent	0	0		0	
14.8	Wingwall Design and Geometry	EA Bent	0	0		0	
14.9	End Bent Structural Design	EA Design	0	0		0	
14.10	End Bent Plan and Elevation	Sheet	0	0	0	0	
14.11	End Bent Details	Sheet	0	0	0	0	
Intermediate Bent Design and Plans							
Pier Design and Plans							
Miscellaneous Substructure Design and Plans							
14.22	Foundation Layout	Sheet	0	0	0	0	
Superstructure Deck Design and Plans							
14.23	Finish Grade Elevation (FGE) Calculation	LS	1	0		0	
14.24	Finish Grade Elevations	Sheet	0	0	0	0	
14.25	Bridge Deck Design	EA section	0	0		0	
14.26	Bridge Deck Reinforcing and Concrete Quantities	EA Unit	0	0		0	

Project Activity 14: Structures -Structural Steel

Task No.	Task	Unit	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
14.27	Superstructure Plan	Sheet	0	0	0	0	
14.28	Superstructure Section	Sheet	0	0	0	0	
14.29	Miscellaneous Bridge Deck Details	Sheet	0	0	0	0	
Reinforcing Bar Lists							
14.30	Preparation of Reinforcing Bar List	Sheet	0	0	0	0	
Structural Steel Plate Girder Design							
14.31	Unit Modeling	EA Unit	-2	40		-80	Phase I (Middle portion), Full typical section
14.32	Section Design	EA Unit	-2	24		-48	Phase I (Middle portion), Full typical section
14.33	Stiffener Design and Locations	EA Unit	-2	12		-24	Phase I (Middle portion), Full typical section
14.34	Cross-Frame Design	EA Unit	-4	16		-64	Cross frame for inside bridge (1), full width bridge (1); end diaphragm for inside bridge (1), full width bridge (1)
14.35	Connections	EA Unit	-2	12		-24	
14.36	Bearing Assembly Design and Detailing (with Jacking Analysis)	EA Unit	-2	8		-16	
14.37	Splice Design	EA Unit	-2	18		-36	
14.38	Shear Stud Connectors	EA Unit	-2	4		-8	
14.39	Deflection Analysis	EA Unit	-2	16		-32	
14.40	Framing Plan	Sheet	-1	40	-1	-40	Skewed and phased
14.41	Girder Elevation	Sheet	-1	40	-1	-40	
14.42	Structural Steel Details	Sheet	-2	40	-2	-80	
14.43	Splice Details	Sheet	-1	16	-1	-16	
14.44	Girder Deflections and Camber	Sheet	-2	16	-2	-32	
Structural Steel Box Girder Design							
Erection Scheme							

Project Activity 14: Structures -Structural Steel

Task No.	Task	Unit	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
14.60	Erection scheme analysis	EA Critical Stage	-2	16		-32	
14.61	Erection scheme	Sheet	-2	24	-2	-48	One for outside, one for inside
Load Rating							
14.62	Load Rating	EA Unit	-1	60		-60	Skewed grid analysis in final condition
14. Structures - Structural Steel Bridge Total					-9	-680	

Project Activity 17: Retaining Walls

Estimator: TJ Lallathin

SR 408 Widening from SR 417 to Alafaya Trail (SA #1)

408-128

Task No.	Task	Unit	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
General Requirements							
17.1	Key Sheet	Sheet	0	0	0	0	
17.2	Horizontal Wall Geometry	Per Wall	1	104		104	Permanent: Rouse - 2 MSE wall modifications, WB off Ramp - 1 new MSE wall, Kehoe - 2 MSE wall modifications, 4 new CIP walls, Alafaya - 2 new phased MSE walls, 1 new CIP wall; Total = 12 permanent (1 additional) Temporary Sheet Piles: Kehoe - 3 for footing installation adjacent to access - (Design not needed), Kehoe - 4 to reconstruct existing MSE wall at outside widening, Alafaya - 4 for footing removal adjacent to roadway (Design not needed), 4 for phased bridge construction, 4 soldier pile walls at existing MSE wall/backwall ; Total = 19 (4 additional) temporary sheet pile walls Temporary Wire Mesh Walls: Alafaya - 4 adjacent to sheet pile walls, 4 running along alignment until tie down; Total = 8 temporary wire mesh walls Revised Kehoe Wall Layout (Tiered planter Walls): 6 CIP retaining walls (4 planter walls, 2 upper walls with noise wall on top), 4 MSE walls; Total = 10 permanent (all additional) MSE/CIP walls: 11 @ 8 hours Temporary critical sheet pile walls: 4 @ 4 hours Temporary Wire Mesh Walls: 0 @ 4 hours
Permanent Proprietary Walls							
17.3	Vertical Wall Geometry	Per Wall	4	8		32	New walls at Kehoe
17.4	Semi-Standard Drawings	Sheet	0	0	0	0	Included in original scope
17.5	Wall Plan and Elevations (Control Drawings)	Sheet	4	12	4	48	
17.6	Details	Sheet	0	0	0	0	Included in original scope
Temporary Proprietary Walls							
17.7	Vertical Wall Geometry	Per Wall	0	0		0	
17.8	Semi-Standard Drawings	Sheet	0	0	0	0	
17.9	Wall Plan and Elevations (Control Drawings)	Sheet	0	0	0	0	
17.10	Details	Sheet	0	0	0	0	

Project Activity 17: Retaining Walls

Task No.	Task	Unit	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
Cast-in-Place Retaining Walls							
17.11	Design	EA Design	7	12		84	Additional wall east of Alafaya + 6 walls at Kehoe
17.12	Vertical Wall Geometry	EA Wall	7	8		56	Revision of original walls
17.13	General Notes	Sheet	0	0	0	0	N/A in original scope
17.14	Wall Plan and Elevations (Control Drawings)	Sheet	12	12	12	144	Revision of original walls
17.15	Sections and Details	Sheet	2	24	2	48	Special design for Noise wall on top of CIP wall
17.16	Reinforcing Bar List	Sheet	7	4	7	28	

Project Activity 17: Retaining Walls

Task No.	Task	Unit	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
Other Retaining Walls and Bulkheads							
17.17	Design	EA Design	1	8		8	Temporary Cantilever Critical Sheet Pile Walls: 1 design at Kehoe for pier construction (Not needed - credit), 1 design at Kehoe for wall reconstruction, 2 designs at Alafaya due to differing heights (piers), 1 design at Alafaya (phased construction) all @ 12 hours each Temporary Anchored Sheet Pile Walls: 2 designs at Alafaya @ 32 hours each, 1 design @ Kehoe for ramp Temporary Soldier Pile Wall: 2 designs at Alafaya (face of wall & spanning gas line) @ 16 hours each
17.18	Vertical Wall Geometry	EA Wall	4	6		24	Temporary: Kehoe - 3 for footing installation adjacent to access, Kehoe - 4 to reconstruct existing MSE wall at outside widening, Alafaya - 4 for footing installation adjacent to roadway, 4 for phased construction, 4 soldier pile walls; Total = 19 temporary
17.19	General Notes, Tables and Misc. Details	Sheet	0	0	0	0	N/A in original scope
17.20	Wall Plan and Elevations	Sheet	1	18	1	18	Soldier pile walls @ Alafaya
17.21	Details	Sheet	1	24	1	24	Soldier pile walls @ Alafaya
17. Structures - Retaining Walls Total					27	618	

Project Activity 18: Miscellaneous Structures

Estimator: T.J. Lallathin

SR 408 Widening from SR 417 to Alafaya Trail (SA #1)

408-128

Task No.	Task	Unit	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
Concrete Box Culvert							
18.1	Concrete Box Culverts	EA	0	0		0	
18.2	Concrete Box Culverts Extensions	EA Extension	0	0		0	
18.3	Concrete Box Culvert Data Table Plan Sheets	Sheet	0	0	0	0	
18.4	Concrete Box Culvert Special Details Plan Sheets	Sheet	0	0	0	0	
Strain Poles							
18.5	Steel Strain Poles	Initial Config	0	0		0	
		EA Add'l Config	0	0		0	
18.6	Concrete Strain Poles	Initial Config	0	0		0	
		EA Add'l Config	0	0		0	
18.7	Strain Pole Data Table Plan Sheets	Sheet	0	0	0	0	
18.8	Strain Pole Special Details Plan Sheets	Sheet	0	0	0	0	
Mast Arms							
18.9	Mast Arms	EA Design	0	0		0	
18.10	Mast Arms Data Table Plan Sheets	Sheet	0	0	0	0	
18.11	Mast Arm Special Details Plan Sheets	Sheet	0	0	0	0	
Overhead/Cantilever Sign Structures							
18.12	Cantilever Sign Structures	EA Design	0	0		0	
18.13	Overhead Span Sign Structures	EA Design	0	0		0	
18.14	Special (Long Span) Overhead Span Sign Structures	EA Design	1	-112		-112	Box truss not required - Using 2 separate structures with static panels, need walkway details (-160 + 48 = -112)
18.15	Monotube Overhead Sign Structure	EA Design	0	0		0	
18.16	Bridge Mounted Signs (Attached to Superstr.)	EA Design	0	0		0	
18.17	Overhead and Cantilever Sign Structures Data Table Plan Sheets	Sheet	0	0	0	0	
18.18	Overhead and Cantilever Sign Structures Special Details Plan Sheets	Sheet	0	0	0	0	
High Mast Lighting							
18.19	Non-Standard High Mast Lighting Structures	EA Design	0	0		0	
18.20	High Mast Lighting Special Details Plan Sheets	Sheet	0	0	0	0	
Noise Barrier Walls (Ground Mount)							
18.21	Horizontal Wall Geometry	EA Wall	8	8		64	Additional hours for varying layout of walls NW-01: 1340, NW-02 - 4340, NW-03 1860, NW-04 620, NW-05 1100, NW-06 2120, NW-07 1020, NW-08 2420, SW-01 500

Project Activity 18: Miscellaneous Structures

18.22	Vertical Wall Geometry	EA Wall	8	8		64	Maintain "flat" top of wall to improve aesthetics and calculating top of wall geometry since walls are adjacent to roadway not just along existing ground line
18.23	Summary of Quantities - Aesthetic Requirements	Sheet	2	12	2	24	Additional Data Tables (3000' per sheet)
18.24	Control Drawings	Sheet	9	12	9	108	(15320-10930) LF/500' per sheet; curved/tapered walls
18.25	Design of Noise Barrier Walls Covered by Standards	EA Design	0	0		0	N/A - in original scope
18.26	Design of Noise Barrier Walls Not Covered by Standards	EA Design	1	24		24	Evaluate existing retaining wall to include 14' noise wall. Also develop standard for 14' noise wall on retaining wall.
18.27	Aesthetic Details	LS	1	24		24	Shoulder mounted noise wall aesthetic details
Special Structures							
18.28	Fender System	LS	0	0		0	
18.29	Fender System Access	LS	0	0		0	
18.30	Special Structures	LS	1	0		0	
18.31	Other Structures	LS	1	0		0	
18. Structures - Miscellaneous Total					11	196	

Project Activity 23: Lighting Analysis

Estimator: Jim Highland

SR 408 Widening from SR 417 to Alafaya Trail (SA #1)
408-128

Task No.	Task	Units	No. of Units	Hours/Units	Total Hours	Comments
23.1	Lighting Justification Report	LS	1	0	0	
23.2	Lighting Design Analysis Report	LS	1	16	16	LDAR from Woodbury to Challenger Parkway. Lighting system analysis for Upgrade to LED. Assessment of pole locations, light levels, light pole life cycle.
23.3	Aeronautical Evaluation	LS	1	0	0	
23.4	Voltage Drop Calculations	LS	1	0	0	EPG
23.5	FDEP Coordination and Report	LS	1	0	0	
23.6	Reference and Master Design Files	LS	1	130.5	131	45 hours x 2.9 miles (1.3miles mainline+1.6 miles for ramps C1, C3 and C4)
23.7	Temporary Lighting	LS	1	0	0	
23.8	Design Documentation	LS	1	0	0	
23.9	Quantities	LS	17	2	34	
23.10	Cost Estimate	LS	1	0	0	
23.11	Technical Special Provisions	LS	1	0	0	
23.12	Other Lighting Analysis	LS	1	0	0	
Lighting Analysis Technical Subtotal					181	
23.13	Field Reviews	LS	1	8	8	Field review for Woodbury to SR 50 (2 people x 4hrs)
23.14	Technical Meetings	LS	1	0	0	
23.15	Quality Assurance/Quality Control	LS	%	5%	9	
23.16	Independent Peer Review	LS	%	0%	0	
23.17	Supervision	LS	%	5%	9	
Lighting Analysis Nontechnical Subtotal					26	
23.18	Coordination	LS	%	3%	6	
23. Lighting Analysis Total					213	

Project Activity 23: Lighting Analysis

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
Lighting Design	EA	0	0	0		0
Traffic Design	EA	0	0	0		0
Power Company (service point coordination)	EA	0	0	0	no	0
Maintaining Agency (cities, counties)	EA	0	0	0		0
Airport authority	EA	0	0	0		0
FDEP Lighting (coast areas)	EA	0	0	0		0
Other Meetings	EA	0	0	0		0
Subtotal Technical Meetings				0	Subtotal Project Manager Meetings	0
Progress Meetings	EA	0	0	0	<i>PM attendance at Progress Meetings is manually entered on General Task 3</i>	--
Phase Review Meetings	EA	0	0	0	<i>PM attendance at Phase Review Meetings is manually entered on General Task 3</i>	--
Total Meetings				0	Total Project Manager Meetings (carries to Tab 3)	0

Carries to Tab 14

Carries to Tab 3

24. Lighting Plans

Estimator: Jim Highland

SR 408 Widening from SR 417 to Alafaya Trail (SA #1)
408-128

Task No.	Task	Scale	Units	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
24.1	Key Sheet		Sheet	0	0	0	0	
24.2	Summary of Pay Items Including Designer Interface (TRNS+Port) Input		Sheet	0	0	0	0	
24.3	Tabulation of Quantities		Sheet	2	2	2	4	
24.4	General Notes/Pay Item Notes		Sheet	0	0	0	0	
24.5	Pole Data, Legend and Criteria		Sheet	2	8	2	16	
24.6	Service Point Details		Sheet	0	0	0	0	EPG
24.7	Project Layout		Sheet	0	0	0	0	
24.8	Plan Sheet	50	Sheet	17	2	17	34	
24.9	Special Details		Sheet	2	4	2	8	Underdeck lighting details at Woodbury and SR 50
24.10	Temporary Lighting Data and Details		Sheet	0	0	0	0	
24.11	Traffic Control Plan Sheets		Sheet	0	0	0	0	
24.12	Interim Standards		LS	1	0		0	
Lighting Plans Technical Subtotal						23	62	
24.13	Quality Assurance/Quality Control		LS	%	5%		3	
24.14	Supervision		LS	%	2%		1	
24. Lighting Plans Total						23	66	

27. Survey

Estimator: Al Quickel

SR 408 Widening from SR 417 to Alafaya Trail (SA #1)

408-128

Task No.	Task	Units	No of Units	Field Crew Days/Unit	Crew Days	Field Support Hours / Crew Days	Field Support Hours	Office Support Hours / Crew Days	Office Support Hours	Comments
27.1	Horizontal Project Control (HPC)									
	2-Lane Roadway	Mile			0.00		0.00		0.00	
	Multi-lane Roadway	Mile			0.00		0.00		0.00	
	Interstate	Mile			0.00		0.00		0.00	
27.2	Vertical PC / Bench Line									
	2-Lane Roadway	Mile			0.00		0.00		0.00	
	Multi-lane Roadway	Mile			0.00		0.00		0.00	
	Interstate	Mile			0.00		0.00		0.00	
27.3	Alignment and Existing R/W Lines									
		Mile			0.00		0.00		0.00	
27.4	Aerial Targets			Units/Day						
	2-Lane Roadway	EA			0.00		0.00		0.00	
	Multi-lane Roadway	EA			0.00		0.00		0.00	
	Interstate	EA			0.00		0.00		0.00	
27.5	Reference Points	"A"		Units/Day						
	2-Lane Roadway	EA			0.00		0.00		0.00	
	Multi-lane Roadway	EA			0.00		0.00		0.00	
	Interstate	EA			0.00		0.00		0.00	
	Reference Points	"B"		Units/Day						
	Non Alignment Points/Approximate	EA			0.00		0.00		0.00	
27.6	Topography/DTM (3D)									
		Mile	0.38	7.92	3.00	0.50	1.50	4.00	12.00	Additional Survey for Sound walls. 700 feet along EB 408 to NB 417 350 feet behind the pond west of the toll plaza. 950 feet behind the pond at Woodbury Road Estimate includes additional control set as needed.
27.7	Planimetric (2D)									Locate roadway lighting from Woodbury Road to Challenger Parkway and the SR 50 ramps.

27. Survey

Task No.	Task	Units	No of Units	Field Crew Days/Unit	Crew Days	Field Support Hours / Crew Days	Field Support Hours	Office Support Hours / Crew Days	Office Support Hours	Comments
		Spot	76.00	0.03125	2.375	0.50	1.19	4.00	9.50	Approximately 76 light poles
27.8	Roadway Cross-Sections/Profiles									Additional Survey for Overhead signs beyond previous design survey limits. Sections at stations: • OC-3 Sta. 525+71 Northbound Dean Road • OC-2 Sta. 535+03 Southbound Dean Road • OC-14 Sta. 758+52 Southbound Alafaya Trail.
		EA	3.00	0.1667	0.50	0.50	0.25	4.00	2.00	
27.9	Side Street Surveys									
27.10	Underground Utilities									Additional clearance holes and designations for roadway lighting outside of original limits. Estimating: 6500 feet of street lighting @ Challenger Pky. Clearance Holes for 2 TMS, 8 CCTV, 1 signal, 1 DMS, 6 Sign locations LESS 9 Clearance holes in original contract (18-9=9 total additional clearances)
	Designates	Mile	1.23	1.75	2.15	0.50	1.08	2.00	4.31	
	Locates	Point	9	0.50	4.50	0.50	2.25	2.00	9.00	
	Survey		25%	6.65	1.66	0.50	0.83	4.00	6.65	
27.11	Outfall Survey									Pond outfall relating to pond site referenced in 27.15
		Mile	0.50	1.00	0.50	0.50	0.25	3.00	1.50	
27.12	Drainage Survey			Units/Day						detail drainage structures (w/ surveyed top elevation) around and related to pond site referenced in 27.15
		EA	5.00	10.00	0.50	0.50	0.25	4.00	2.00	
27.13	Bridge Survey									Additional Survey for Pier Protection at Woodbury Rd.
	Minor / Major	EA	1.00	1.00	1.00	0.50	0.50	4.00	4.00	
27.14	Channel Survey									
		EA			0.00		0.00		0.00	
27.15	Pond Site Survey									Pond parcel site Survey (NW quad SR 408 & Dean Rd.)
		EA	1.00	3.00	3.00	0.50	1.50	4.00	12.00	
27.16	Mitigation Survey									
		Mile			0.00		0.00		0.00	
27.17	Jurisdiction Line Survey									
		Mile			0.00		0.00		0.00	
27.18	Geotechnical Support			Units/Day						
		EA			0.00		0.00		0.00	
27.19	Sectional / Grant Survey									
		Corner			0.00		0.00		0.00	
		Mile			0.00		0.00		0.00	
27.20	Subdivision Location									

27. Survey

Task No.	Task	Units	No of Units	Field Crew Days/Unit	Crew Days	Field Support Hours / Crew Days	Field Support Hours	Office Support Hours / Crew Days	Office Support Hours	Comments
		Block			0.00		0.00		0.00	
27.21	Maintained R/W									
		Mile			0.00		0.00		0.00	
27.22	Boundary Survey									
		EA			0.00		0.00		0.00	
27.23	Water Boundary Survey									
		EA			0.00		0.00		0.00	
27.24	R/W Staking / R/W Line									
		EA			0.00		0.00		0.00	
		Mile			0.00		0.00		0.00	
27.25	R/W Monumentation									
		Point			0.00		0.00		0.00	
27.26	Line Cutting									
		Mile			0.00					
27.27	Work Zone Safety									
					0.00					
27.28	Miscellaneous Surveys									
					0.00		0.00		0.00	
Survey Subtotal				Crew Days	19	Field Support Hours	9.60	Office Support Hours	62.96	
27.29	Supplemental Surveys									THE % FOR SUPPLEMENTAL WILL BE DETERMINED AT NEGOTIATIONS. THIS ITEM CAN ONLY BE USED IF AUTHORIZED IN WRITING BY THE DISTRICT SURVEYOR
				19	0		0		0	
27.30	Document Research	Units							0	
27.31	Field Reviews	Units							0	
27.32	Technical Meetings	LS							0	
27.33	Quality Assurance / Quality Control	LS								% of Office
								5%	3.15	

27. Survey

Task No.	Task	Units	No of Units	Field Crew Days/Unit	Crew Days	Field Support Hours / Crew Days	Field Support Hours	Office Support Hours / Crew Days	Office Support Hours	Comments
27.34	Supervision	LS						5%	3.63	% of Office + Field
27.35	Coordination	LS						3%	2.18	% of Office + Field
27. Survey Total				Crew Days	19	Field Support Hours	9.60	Office Support Hours	71.92	

SPLS =
 PLS =
 Office Support =
 Total Hours = 82

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
Kickoff Meeting with CFX	EA	0	0	0		0
Baseline Approval Review	EA	0	0	0		0
Network Control Review	EA	0	0	0		0
Vertical Control Review	EA	0	0	0		0
Local Governments (cities, counties)	EA	0	0	0		0
Final Submittal Review	EA	0	0	0		0
Other Meetings	EA	0	0	0		0
Subtotal Technical Meetings				0	Subtotal PM Meetings	0
Progress Meetings	EA	0	0	0	**	--
Phase Review Meetings	EA	0	0	0	**	--
Total Meetings				0	Total PM Mtgs (carries to Tab 3)	0

Carries to 27.32

Carries to Tab 3

** Project Manager attendance at progress, phase and field review meetings are manually entered on General Task 3

33. ITS Analysis

Estimator: Nick DeVito

SR 408 Widening from SR 417 to Alafaya Trail (SA #1)
408-128

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
33.1	ITS Analysis	LS	0	0	0	
33.2	Communications Plan Analysis	LS	0	0	0	
33.3	Lightning Protection Analysis	Per Site	0	0	0	
33.4	Power Subsystem	LS	1	0	0	EPG
33.5	Voltage Drop Calculations	LS	1	0	0	EPG
33.6	Design Documentation	LS	0	0	0	
33.7	Existing ITS System	LS	0	0	0	
33.8	Queue Analysis	PI	0	0	0	
33.9	Reference and Master ITS Design File	PI	0	0	0	
33.10	Reference and Master Communications Design File	LS	1	94	94	3 WWD sites @ 12 hrs/site (2 sites @ Rouse and 1 site @ Alafaya) = 36 hrs 2.5-mile Backbone replacement on north and south sides of SR 408 from Rouse Rd to Woodbury @ 10 hrs/mile = 25 hrs 2.5-mile Temporary backbone/feeder design due to impacts unavoidable until permanent installation can be installed within proposed roadway shoulder @ 10 hrs/mile = 25 hrs 4 Toll DMS relocations = 8 hrs
33.11	Pole Elevation Analysis	LS	0	0	0	
33.12	Sign Panel Design Analysis	LS	0	0	0	
33.13	Quantities	Sheet	52	1	52	New WWD sheets, New MOC Sheets & Permanent sheet changes
33.14	Cost Estimate	LS	0	0	0	
33.15	Technical Special Provisions	LS	1	4	4	WWD TSP review
33.16	Other ITS Analyses	LS	0	0	0	
Intelligent Transportation Systems Analysis Technical Subtotal					150	

33. ITS Analysis

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
33.17	Field Reviews	LS	1	12	12	2 people @ 2hrs/ WWD site * 3 WWD sites = 12 hrs
33.18	Technical Meetings	LS	1	0	0	Meetings are listed below
33.19	Quality Assurance/Quality Control	LS	%	5%	8	
33.20	Supervision	LS	%	5%	8	
Intelligent Transportation Systems Analysis Nontechnical Subtotal					28	
33.21	Coordination	LS	%	3%	5	
33. Intelligent Transportation Systems Analysis Total					183	

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
Kickoff Meeting with CFX	EA	0	0	0		0
Local Governments (cities, counties, MPO)	EA	0	0	0		0
Utility Owners	EA	0	0	0		0
Field Meetings	EA	0	0	0		0
Other Meetings	EA	0	0	0		0
Subtotal Technical Meetings				0	Subtotal Project Manager Meetings	0
Progress Meetings	EA	0	0	0	<i>PM attendance at Progress Meetings is manually entered on General Task 3</i>	--
Phase Review Meetings	EA	0	0	0	<i>PM attendance at Phase Review Meetings is manually entered on General Task 3</i>	--
Total Meetings				0	Total Project Manager Meetings (carries to Tab 3)	0

CARRY TO 33.18

Carries to Tab 3

34. ITS Plans

Estimator: Nick DeVito

SR 408 Widening from SR 417 to Alafaya Trail (SA #1)

408-128

Task No.	Task	Scale	Units	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
34.1	Key Sheet		Sheet	0	0	0	0	
34.2	Summary of Pay Items-including Designer Interface (Trns-port) Input		Sheet	0	0	0	0	
34.3	Tabulation of Quantities		Sheet	11	2	11	22	Additional sheets due to new WWD and Backbone/Feeder replacement pay items
34.4	General Notes/Pay Item Notes		Sheet	1	2	1	2	WWD, Backbone/Feeder replacement and Toll DMS notes
34.5	Project Layout		Sheet	2	1	2	2	Add WWD sheet and Ramp AT4 sheet due to Backbone/Feeder replacement
34.6	Typical and Special Details		Sheet	24	1	24	24	Additional Details, New and CFX modifications. (original scope was 68 details and now have 92 per plans)
34.7	Plan Sheet	50	Sheet	52	2	52	104	3 new plan detail sheets- WWD @ 3 hrs/sht = 9hrs 26 revised sheets - WWD and Permanent backbone/feeder replacement from Rouse to Woodbury @ 2 hrs/sht = 52hrs 23 sheets - Temporary backbone/feeder sheets @ 3 hrs/sht = 69hrs Total = 130 Hours
34.8	ITS Communications Plans		Sheet	0	0	0	0	
34.9	Fiber Optic Splice Diagrams		Sheet	22	2	22	44	10 Permanent Splicing due to WWD and backbone/feeder replacement @ 2 hrs/sht = 20hrs 12 Permanent Splicing due to WWD and backbone/feeder replacement @ 2 hrs/sht = 24hrs
34.10	Lightning Protection Plans		Sheet	0	0	0	0	
34.11	Cross Sections		Sheet	0	0	0	0	
34.12	Guide Sign Worksheet(s)		Sheet	0	0	0	0	
34.13	Special Service Point Details		Sheet	0	0	0	0	EPG
34.14	Strain Pole Schedule		Sheet	0	0	0	0	
34.15	Overhead/Cantilever Sign Structure		Sheet	0	0	0	0	
34.16	Other Overhead Sign Structures (Long Span, Monotube, etc.)		Sheet	0	0	0	0	
34.17	Traffic Control Plans		Sheet	0	0	0	0	
34.18	Interim Standards		Sheet	0	0	0	0	
34.19	GIS Data and Asset Management Requirements		LS	0	0	0	0	

34. ITS Plans

Task No.	Task	Scale	Units	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
Intelligent Transportation System Plans Technical Subtotal						112	198	
34.20	Quality Assurance/Quality Control		LS	%	5%		10	
34.21	Supervision		LS	%	5%		10	
34. Intelligent Transportation System Plans Total						112	218	

ESTIMATE OF WORK EFFORT AND COST - PRIME CONSULTANT

Name of Project: SR 408
 County: Orange
 FPN:
 FAP No.:

Consultant Name: EPG Engineering

Consultant No.:

Date:

Estimator: Mohsen

Staff Classification	Total Staff Hours From "SH Summary Firm"	Principal Engineer A	Engineer B	Staff Classification 3	Staff Classification 4	Staff Classification 5	Staff Classification 6	Staff Classification 7	Staff Classification 8	Staff Classification 9	Staff Classification 10	Staff Classification 11	Staff Classification 12	SH By Activity	Salary Cost By Activity	Average Rate Per Task
		\$150.00	\$100.00	\$100.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			
3. Project General and Project Common Tasks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
4. Roadway Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
5. Roadway Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
6. Drainage Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
7. Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
8. Environmental Permits, Compliance & Clearances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
9. Structures - Misc. Tasks, Dwgs, Non-Tech.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
10. Structures - Bridge Development Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
12. Structures - Short Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
13. Structures - Medium Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
17. Structures - Retaining Walls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
18. Structures - Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
19. Signing & Pavement Marking Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
20. Signing & Pavement Marking Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
21. Signalization Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
22. Signalization Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
23. Lighting Analysis	115	81	34	0	0	0	0	0	0	0	0	0	0	115	\$15,550	\$135.22
24. Lighting Plans	33	23	10	0	0	0	0	0	0	0	0	0	0	33	\$4,450	\$134.85
25. Landscape Architecture Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
26. Landscape Architecture Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
27. Survey (Field & Office Support)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
29. Mapping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
30. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
Total Staff Hours	148	104	44	0	0	0	0	0	0	0	0	0	0	148		
Total Staff Cost		\$15,600.00	\$4,400.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$20,000.00	\$135.14

Check = \$20,000.00

Survey Field Days by Subconsultant
 4 - Person Crew

SALARY RELATED COSTS:					\$20,000.00
OVERHEAD:		0%			\$0.00
OPERATING MARGIN:		0%			\$0.00
FCCM (Facilities Capital Cost Money):		0.00%			\$0.00
EXPENSES:		0.00%			\$0.00
Survey (Field - if by Prime)	0	4-man crew days @	\$	/ day	\$0.00
SUBTOTAL ESTIMATED FEE:					\$20,000.00
Subconsultant: Enter Name Sub 1					\$0.00
Subconsultant: Sub 2					\$0.00
Subconsultant: Sub 3					\$0.00
Subconsultant: Sub 4					\$0.00
Subconsultant: Sub 5					\$0.00
Subconsultant: Sub 6					\$0.00
Subconsultant: Sub 7					\$0.00
Subconsultant: Sub 8					\$0.00
Subconsultant: Sub 9					\$0.00
Subconsultant: Sub 10					\$0.00
Subconsultant: Sub 11					\$0.00
Subconsultant: Sub 12					\$0.00
SUBTOTAL ESTIMATED FEE:					\$20,000.00
Geotechnical Field and Lab Testing					\$0.00
SUBTOTAL ESTIMATED FEE:					\$20,000.00
Optional Services					\$0.00
GRAND TOTAL ESTIMATED FEE:					\$20,000.00

- Notes:
 1. This sheet to be used by Prime Consultant to calculate the Grand Total fee.
 2. Manually enter fee from each subconsultant. Unused subconsultant rows may be hidden.

Project Activity 23: Lighting Analysis

Estimator:

SR 408
0

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
23.1	Investigate Entry point to toll plaza	LS			0	
23.2	Input to design Methodology	LS			0	
23.3	Aeronautical Evaluation	LS		0	0	
23.4	Voltage Drop Calculations	LS	3	18	54	(2) for lighting; (1) for ITS WWD
23.5	Power Subsystem	LS	3	16	48	WWD Load centers
23.6	Reference and Master Design Files	LS	1	0	0	
23.7	Temporary Lighting	LS	1	0	0	
23.8	Design Documentation	LS	1	0	0	
23.9	Quantities	LS	1	0	0	
23.10	Cost Estimate	LS	1	0	0	
23.11	Technical Special Provisions	LS	1	0	0	
23.12	Other Lighting Analysis	LS	1	0	0	
Lighting Analysis Technical Subtotal					102	
23.13	Field Reviews	LS	1	0	0	
23.14	Technical Meetings	LS	0	0	0	
23.15	Quality Assurance/Quality Control	LS	%	5%	5	
23.16	Independent Peer Review	LS	%	0%	0	
23.17	Supervision	LS	%	5%	5	
Lighting Analysis Nontechnical Subtotal					10	
23.18	Coordination	LS	%	3%	3	

Project Activity 23: Lighting Analysis

23. Lighting Analysis Total	115	
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Project Activity 23: Lighting Analysis

Technical Meetings				
Lighting Design	EA	0	0	0
Traffic Design	EA	0	0	0
Power Company (service point coordination)	EA	0	0	0
Maintaining Agency (cities, counties)	EA	0	0	0
Airport authority	EA	0	0	0
FDEP Lighting (coast areas)	EA	0	0	0
Other Meetings	EA	0	0	0
Subtotal Technical Meetings				0
Progress Meetings	EA	0	0	0
Phase Review Meetings	EA	0	0	0
Total Meetings				0

Carries to 23.14

Note: Project Manager attendance at progress, phase and field review meetings are manually entered on General Task 3

Project Activity 24: Lighting Plans

Estimator:

SR 408
0

Task No.	Task	Scale	Units	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
24.1	Key Sheet		Sheet	0	0	0	0	
24.2	Summary of Pay Items Including CES Input		Sheet	0	0	0	0	
24.3	Tabulation of Quantities		Sheet	0	0	0	0	
24.4	General Notes/Pay Item Notes		Sheet	0	0	0	0	
24.5	Pole Data, Legend and Criteria		Sheet	0	0	0	0	
24.6	Service Point Details		Sheet	5	6	5	30	Service point details: Lighting (2), ITS (3) WWD
24.8	Coordination for utility service point		Sheet	0	0	0	0	
24.9	Meeting		Sheet	0	0	0	0	
24.10	Temporary Lighting Data and Details		Sheet	0	0	0	0	
24.11	Traffic Control Plan Sheets		Sheet	0	0	0	0	
24.12	Interim Standards		LS		0		0	
Lighting Plans Technical Subtotal						5	30	
24.13	Quality Assurance/Quality Control		LS	%	5%		2	
24.14	Supervision		LS	%	3%		1	
24. Lighting Plans Total						5	33	

AGREEMENT

**CENTRAL FLORIDA EXPRESSWAY AUTHORITY
AND
DRMP, INC.**

S.R. 408 WIDENING FROM S.R. 417 TO ALAFAYA TRAIL

CONTRACT NO. 001066

**CONTRACT DATE: AUGUST 13, 2015
CONTRACT AMOUNT: \$4,650,000.00**

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

**AGREEMENT, SCOPE OF SERVICES, METHOD
OF COMPENSATION, DETAILS OF COSTS AND
FEES, PROJECT ORGANIZATIONAL CHART,
PROJECT LOCATION MAP, AND SCHEDULE**

**AGREEMENT, SCOPE OF SERVICES, METHOD OF COMPENSATION, DETAILS
OF COSTS AND FEES, PROJECT ORGANIZATIONAL CHART, PROJECT
LOCATION MAP, AND SCHEDULE**

FOR

S.R. 408 WIDENING FROM S.R. 417 TO ALAFAYA TRAIL

CONTRACT NO. 001066

AUGUST 2015

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

Members of the Board

Welton Cadwell, Chairman
Scott Boyd, Vice-Chairman
Brenda Carey, Secretary/Treasurer
Buddy Dyer, Member
Fred Hawkins, Jr., Member
Teresa Jacobs, Member
Walter A. Ketcham Jr., Member
Jay Madara, Member
S. Michael Scheeringa, Member
Diane Guitierrez- Scaccetti, Non-Voting Advisor

Executive Director

Laura Kelley

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>
AG	Agreement
A	Exhibit "A", Scope of Services
B	Exhibit "B", Method of Compensation
C	Exhibit "C", Details of Cost and Fees
D	Exhibit "D", Project Organization Chart
E	Exhibit "E", Project Location Map
F	Exhibit "F", Schedule

**CENTRAL FLORIDA EXPRESSWAY AUTHORITY
AGREEMENT FOR PROFESSIONAL SERVICES**

THIS AGREEMENT, made and entered into this 13th day of August, 2015, by and between the CENTRAL FLORIDA EXPRESSWAY AUTHORITY, a corporate body and agency of the State of Florida, created by Chapter 63-573 Laws of Florida, 1963, (Chapter 348, Part V, Florida Statutes) hereinafter called the "AUTHORITY" and DRMP, INC., hereinafter called "CONSULTANT", carrying on professional practice in engineering with offices located at 941 Lake Baldwin Lane, Orlando, Florida 32814.

That the AUTHORITY did determine that the CONSULTANT is fully qualified to render the services contracted.

WITNESSETH:

1.0 The AUTHORITY does hereby retain the CONSULTANT to furnish certain services in connection with the design of the S.R. 408 widening from S.R. 417 to Alafaya Trail identified as Contract No. 001066.

2.0 The CONSULTANT and the AUTHORITY mutually agree to furnish, each to the other, the respective services, information and items as described in Exhibit "A", Scope of Services, attached hereto and made a part hereof.

Before any additions or deletions to the work described in Exhibit "A", and before undertaking any changes or revisions to such work, the parties shall negotiate any necessary cost changes and shall enter into a Supplemental Amendment covering such modifications and the compensation to be paid therefore.

Reference herein to this Agreement shall be considered to include any Supplemental Agreement thereto.

Reference herein to Director shall mean the AUTHORITY's Executive Director.

Reference herein to the Project Manager shall mean the AUTHORITY's Director of Engineering or his authorized designee. The Project Manager shall provide the management and technical direction for this Agreement on behalf of the AUTHORITY. All technical and administrative provisions of this Agreement shall be managed by the Project Manager and the CONSULTANT shall comply with all of the directives of the Project Manager that are within the purview of this Agreement. Decisions concerning Agreement amendments and adjustments, such as time extensions and supplemental agreements shall be made by the Project Manager.

This Agreement is considered a non-exclusive Agreement between the parties.

3.0 TERM OF AGREEMENT AND RENEWALS

Unless otherwise provided herein or by Supplemental Agreement, the provisions of this Agreement will remain in full force and effect for a five-year term from the date of the Notice to Proceed for the required project services as detailed in Exhibit "A". An extension of the five-year term may be approved by the AUTHORITY at its sole discretion.

The CONSULTANT agrees to commence the scheduled project services to be rendered within ten (10) calendar days from the date specified in the written Notice to Proceed from the Project Manager, which Notice to Proceed will become part of this Agreement. The CONSULTANT shall complete scheduled project services within the timeframe(s) specified in Exhibit "A", or as may be modified by subsequent Supplemental Agreement.

4.0 PROJECT SCHEDULE

The CONSULTANT agrees to provide Project Schedule progress reports in a format acceptable to the AUTHORITY and at intervals established by the AUTHORITY. The AUTHORITY will be entitled at all times to be advised, at its request, as to the status of work being done by the CONSULTANT and of the details thereof. Coordination shall be maintained by the CONSULTANT with representatives of the AUTHORITY, or of other agencies interested in the project on behalf of the AUTHORITY. Either party to the Agreement may request and be granted a conference.

In the event there are delays on the part of the AUTHORITY as to the approval of any of the materials submitted by the CONSULTANT or if there are delays occasioned by circumstances beyond the control of the CONSULTANT, which delay the scheduled project completion date, the AUTHORITY may grant to the CONSULTANT by "Letter of Time Extension" an extension of the scheduled project completion date equal to the aforementioned delays. The letter will be for time only and will not include any additional compensation.

It shall be the responsibility of the CONSULTANT to ensure at all times that sufficient time remains within the project schedule within which to complete the services on the project. In the event there have been delays which would affect the scheduled project completion date, the CONSULTANT shall submit a written request to the AUTHORITY which identifies the reason(s) for the delay, the amount of time related to each reason and specific indication as to whether or not the delays were concurrent with one another. The AUTHORITY will review the request and make a determination as to granting all or part of the requested extension.

In the event the scheduled project completion date is reached and the CONSULTANT has not requested, or if the AUTHORITY has denied, an extension of the completion date, partial

progress payments will be stopped when the scheduled project completion date is met. No further payment for the project will be made until a time extension is granted or all work has been completed and accepted by the AUTHORITY.

5.0 PROFESSIONAL STAFF

The CONSULTANT shall maintain an adequate and competent professional staff to enable the CONSULTANT to timely perform under this Agreement. The CONSULTANT shall continue to be authorized to do business within the State of Florida. In the performance of these professional services, the CONSULTANT shall use that degree of care and skill ordinarily exercised by other similar professionals in the field under similar conditions in similar localities. The CONSULTANT shall use due care in performing in a design capacity and shall have due regard for acceptable standards of design principles. The CONSULTANT may associate with it such specialists, for the purpose of its services hereunder, without additional cost to the AUTHORITY, other than those costs negotiated within the limits and terms of this Agreement. Should the CONSULTANT desire to utilize specialists, the CONSULTANT shall be fully responsible for satisfactory completion of all subcontracted work. The CONSULTANT, however, shall not sublet, assign or transfer any work under this Agreement to other than the associate consultants listed below without the written consent of the AUTHORITY. It is understood and agreed that the AUTHORITY will not, except for such services so designated herein, permit or authorize the CONSULTANT to perform less than the total contract work with other than its own organization.

RS&H, Inc.

AVCON, Inc.

Ardaman & Associates, Inc. (Class 2)

Aerial Cartographic of America, Inc. (Class 2)

WBQ Design and Engineering, Inc.

Antillian Engineering Associates, Inc. (Class 2)

EPG Engineering (Class 2)

CONSULTANT shall not further sublet, sell, transfer, assign, delegate, subcontract, or otherwise dispose of this Contract or any portion thereof, or of the CONSULTANT's right, title, or interest therein without the written consent of the AUTHORITY, which may be withheld in the AUTHORITY'S sole and absolute discretion. Any attempt by CONSULTANT to dispose of this Contract as described above, in part or in whole, without AUTHORITY'S written consent shall be null and void and shall, at AUTHORITY's option, constitute a default under the Contract.

If, during the term of the Contract, CONSULTANT desires to subcontract any portion(s) of the work to a subconsultant that was not disclosed by the CONSULTANT to the AUTHORITY at the time that the Contract was originally awarded, and such subcontract would, standing alone or aggregated with prior subcontracts awarded to the proposed subconsultant, equal or exceed twenty five thousand dollars (\$25,000.00), the CONSULTANT shall first submit a request to the AUTHORITY's Director of Procurement for authorization to enter into such subcontract. Except in the case of an emergency, as determined by the Executive Director or his/her designee, no such subcontract shall be executed by the CONSULTANT until it has been approved by the AUTHORITY Board. In the event of a designated emergency, the CONSULTANT may enter into such a subcontract with the prior written approval of the Executive Director or his/her designee, but such subcontract shall contain a provision that provides that it shall be automatically terminated if not approved by the AUTHORITY Board at its next regularly scheduled meeting.

6.0 SERVICES TO BE PROVIDED

The work covered by this Agreement includes the preparation of construction plans for one construction project. If the work is divided into more than one construction project by the AUTHORITY's Project Manager, then the CONSULTANT shall supply construction plans for each project. A Supplemental Agreement will be required for the additional work.

All construction plans, documents, reports, studies and other data prepared by the CONSULTANT shall bear the endorsement of a person in the full employ of the CONSULTANT and duly registered by the State of Florida in the appropriate professional category.

After the AUTHORITY's acceptance of construction plans and documents for the project, the original set of CONSULTANT's drawings, tracings, plans, maps and CADD files shall be provided to the AUTHORITY, along with one record set of the final plans. The CONSULTANT shall signify, by affixing an endorsement (seal/signature, as appropriate) on every sheet of the record set, that the work shown on the endorsed sheets was produced by the CONSULTANT. With the tracings and the record set of prints, the CONSULTANT shall submit a final set of design computations. The computations shall be bound in an 8-1/2 x 11" format and shall be endorsed (seal/signature, as appropriate) by the CONSULTANT. Refer to Exhibit "A" for the computation data required for this Agreement.

The CONSULTANT shall submit a final set of reports and studies which shall be endorsed (seal/signature) by the CONSULTANT.

The CONSULTANT shall not be liable for use by the AUTHORITY of said plans, documents, reports, studies or other data for any purpose other than intended by the terms of this Agreement.

7.0 COMPENSATION

The AUTHORITY agrees to pay the CONSULTANT compensation as detailed in Exhibit "B", Method of Compensation, attached hereto and made a part hereof, in the amount of \$4,650,000.00. Bills for fees or other compensation for services or expenses shall be submitted to the AUTHORITY in detail sufficient for a proper pre-audit and post audit thereof.

The CONSULTANT may be liable for AUTHORITY costs resulting from errors or deficiencies in designs furnished under this Agreement. The AUTHORITY may enforce such liability and collect the amount due if the recoverable cost will exceed the administrative cost involved or is otherwise in the AUTHORITY's best interest.

Records of costs incurred by the CONSULTANT under terms of this Agreement shall be maintained and made available upon request to the AUTHORITY at all times during the period of this Agreement and for three years after final payment is made. Copies of these documents and records shall be furnished to the AUTHORITY upon request. The CONSULTANT agrees to incorporate the provisions of this paragraph in any subcontract into which it might enter with reference to the work performed.

Records of costs incurred includes the CONSULTANT's general accounting records and the project records, together with supporting documents and records, of the CONSULTANT and all subconsultants performing work on the project, and all other records of the CONSULTANT and subconsultants considered necessary by the AUTHORITY for a proper audit of project costs.

The general cost principles and procedures for the negotiation and administration, and the determination or allowance of costs under this Agreement shall be as set forth in the Code of Federal Regulations, Titles 23, 48, 49, and other pertinent Federal and State Regulations, as applicable, with the understanding that there is no conflict between State and Federal regulations in that the more restrictive of the applicable regulations will govern. Whenever travel costs are included in Exhibit "B", the provisions of Section 112.061, Florida Statutes, shall govern as to reimbursable costs.

8.0 DOCUMENT OWNERSHIP AND RECORDS

All plans, documents, reports, studies, and/or other data prepared or obtained under this Agreement shall be considered instruments made for services and shall become the property of the AUTHORITY without restriction or limitation on their use on this project; and shall be made available, upon request, to the AUTHORITY at any time. The AUTHORITY will have the right to visit the site for inspection of the work and the drawings of the CONSULTANT at any time. Unless changed by written agreement of the parties, said site shall be 941 Lake Baldwin Lane, Orlando, Florida 32814.

The CONSULTANT shall allow public access to all documents, papers, letters, or other material as approved and authorized by the AUTHORITY and subject to the provisions of Chapter 119, Florida Statutes, and made or received by the CONSULTANT in conjunction with this Agreement. Failure by the CONSULTANT to grant such public access shall be grounds for immediate unilateral cancellation of this Agreement by the AUTHORITY.

9.0 COMPLIANCE WITH LAWS

The CONSULTANT shall comply with all federal, state and local laws and ordinances applicable to the work or payment for work thereof, and shall not discriminate on the grounds of race, color, religion, sex, or national origin in the performance of work under this contract.

The CONSULTANT shall keep fully informed regarding and shall fully and timely comply with all current laws and future laws that may affect those engaged or employed in the performance of this Agreement.

10.0 WAGE RATES AND TRUTH-IN-NEGOTIATIONS CERTIFICATE

The CONSULTANT hereby certifies, covenants and warrants that wage rates and other factual unit costs as shown in attached Exhibit "C", Details of Costs and Fees, supporting the

compensation are accurate, complete and current as of the date of this Agreement. It is further agreed that said price shall be adjusted to exclude any significant sums where the AUTHORITY shall determine the price was increased due to inaccurate, incomplete or non-current wage rates and other factual unit costs. All such adjustments shall be made within one year following the date of final billing or acceptance of the work by the AUTHORITY, whichever is later.

11.0 TERMINATION

The AUTHORITY may terminate this Agreement in whole or in part at any time the interest of the AUTHORITY requires such termination.

If the AUTHORITY determines that the performance of the CONSULTANT is not satisfactory, the AUTHORITY shall have the option of (a) immediately terminating the Agreement or (b) notifying the CONSULTANT of the deficiency with a requirement that the deficiency be corrected within a specified time, otherwise the Agreement will be terminated at the end of such time.

If the AUTHORITY requires termination of the Agreement for reasons other than unsatisfactory performance of the CONSULTANT, the AUTHORITY shall notify the CONSULTANT in writing of such termination, not less than seven (7) calendar days as to the effective date of termination or specify the stage of work at which the Agreement is to be terminated.

If the AUTHORITY abandons the work or subtracts from the work, suspends, or terminates the Agreement as presently outlined, the CONSULTANT shall be compensated on the basis of the percentage completion ratio of the fixed fee shown in attached Exhibit "B", plus actual costs as determined in Exhibit "B". In determining the percentage of work completed, the AUTHORITY shall consider the work performed by the CONSULTANT prior to abandonment or termination to the total amount of work contemplated by this Agreement. The ownership of all

engineering documents completed or partially completed at the time of such termination or abandonment, shall be retained by the AUTHORITY.

The AUTHORITY reserves the right to cancel and terminate this Agreement in the event the CONSULTANT or any employee, servant, or agent of the CONSULTANT is indicted or has a direct information issued against him for any crime arising out of or in conjunction with any work being performed by the CONSULTANT for or on behalf of the AUTHORITY, without penalty. It is understood and agreed that in the event of such termination, all tracings, plans, specifications, maps, and data prepared or obtained under this Agreement shall immediately be turned over to the AUTHORITY. The CONSULTANT shall be compensated for its services rendered up to the time of any such termination in accordance with Paragraph 11.0 hereof. The AUTHORITY also reserves the right to terminate or cancel this Agreement in the event the CONSULTANT shall be placed in either voluntary or involuntary bankruptcy or an assignment be made for the benefit of creditors. The AUTHORITY further reserves the right to suspend the qualifications of the CONSULTANT to do business with the AUTHORITY upon any such indictment or direct information. In the event that any such person against whom any such indictment or direct information is brought shall have such indictment or direct information dismissed or be found not guilty, such suspension on account thereof may be lifted by the AUTHORITY's Project Manager.

12.0 ADJUSTMENTS

All services shall be performed by the CONSULTANT to the reasonable satisfaction of the Project Manager who shall decide all questions, difficulties and dispute of any nature whatsoever that may arise under or by reason of this Agreement, the prosecution and fulfillment of the services hereunder and the character, quality, amount and value thereof. Adjustments of compensation and term of the Agreement, because of any major changes in the work that may become

necessary or desirable as the work progresses, shall be left to the absolute discretion of the Director and Supplemental Agreement(s) of such a nature as required may be entered into by the parties in accordance herewith. Disputes between the Project Manager and the CONSULTANT that cannot be resolved shall be referred to the Director whose decision shall be final.

In the event that the CONSULTANT and the AUTHORITY are not able to reach an agreement as to the amount of compensation to be paid to the CONSULTANT for supplemental work desired by the AUTHORITY, the CONSULTANT shall be obligated to proceed with the supplemental work in a timely manner for the amount determined by the AUTHORITY to be reasonable. In such event, the CONSULTANT will have the right to file a claim with the AUTHORITY for such additional amounts as the CONSULTANT deems reasonable; however, in no event will the filing of the claim or the resolution or litigation thereof, through administrative procedures or the courts, relieve the CONSULTANT from the obligation to timely perform the supplemental work.

13.0 CONTRACT LANGUAGE AND INTERPRETATION

All words used herein in the singular form shall extend to and include the plural. All words used in the plural form shall extend to and include the singular. All words used in any gender shall extend to and include all genders.

References to statutes or regulations shall include all statutory or regulatory provisions consolidating, amending, or replacing the statute or regulation referred to. Words not otherwise defined that have well known technical or industry meanings, are used in accordance with such recognized meanings. References to persons include their respective functions and capacities.

If the CONSULTANT discovers any material discrepancy, deficiency, ambiguity, error, or omission in this Agreement, or is otherwise in doubt as to the meaning of any provision of

the Agreement, the CONSULTANT shall immediately notify the AUTHORITY and request clarification of the AUTHORITY's interpretation of this Agreement.

The Agreement shall not be more strictly construed against either party hereto by reason of the fact that one party may have drafted or prepared any or all of the terms and provisions hereof.

14.0 HOLD HARMLESS AND INDEMNIFICATION

The CONSULTANT shall indemnify and hold harmless the AUTHORITY and all of its officers and employees from any liabilities, losses, damages, costs, including, but not limited to reasonable attorneys' fee, arising out of any negligent act, error, omission by the CONSULTANT, its agents, employees, or subcontractors during the performance of the Agreement, except that neither the CONSULTANT, its agents, employees nor any of its subconsultants will be liable under this paragraph for any claim, loss, damage, cost, charge or expense arising solely out of any act, error, omission or negligent act by the AUTHORITY or any of its officers, agents or employees during the performance of the Agreement.

When the AUTHORITY receives a notice of claim for damages that may have been caused by the CONSULTANT in the performance of services required by the CONSULTANT under this Agreement, the AUTHORITY will immediately forward the notice of claim to the CONSULTANT. The CONSULTANT and the AUTHORITY will evaluate the notice of claim and report their findings to each other within fourteen working days.

In the event a lawsuit is filed against the AUTHORITY alleging negligence or wrongdoing by the CONSULTANT, the AUTHORITY and the CONSULTANT will jointly discuss options in defending the lawsuit. After reviewing the lawsuit, the AUTHORITY will determine whether to request the participation of the CONSULTANT in the defense of the lawsuit or to request

that the CONSULTANT defend the AUTHORITY in such lawsuit as described in this section. The AUTHORITY's failure to notify the CONSULTANT of a notice of claim will not release the CONSULTANT from any of the requirements of this section upon subsequent notification by the AUTHORITY to the CONSULTANT of the notice of claim or filing of a lawsuit. The AUTHORITY and the CONSULTANT will pay their own cost for the evaluation, settlement negotiations and trial, if any. However, if only one party participates in the defense of the claim at trial, that party is responsible for all of its costs, but if the verdict determines that there is joint responsibility, the costs of defense and liability for damages will be shared in the same percentage as that judicially established. Nothing herein shall be construed to waive the sovereign immunity damages limitations afforded the AUTHORITY pursuant to F.S. 768.28.

The parties agree that 1% of the total compensation to the CONSULTANT for performance of this Agreement is the specific consideration from the AUTHORITY to the CONSULTANT for the CONSULTANT's indemnity agreement.

The CONSULTANT shall pay all royalties and assume all costs arising from the use of any invention, design, process materials, equipment, product or device which is the subject of patent rights or copyrights. The CONSULTANT shall, at its expense, hold harmless and defend the AUTHORITY against any claim, suit or proceeding brought against the AUTHORITY which is based upon a claim, whether rightful or otherwise, that the goods or services, or any part thereof, furnished under this Agreement, constitute an infringement of any patent or copyright of the United States. The CONSULTANT shall pay all damages and costs awarded against the AUTHORITY.

15.0 THIRD PARTY BENEFICIARY

The CONSULTANT warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the CONSULTANT to solicit or secure

this Agreement, and that the CONSULTANT has not paid or agreed to pay any person, company, corporation, individual or firm any fee, commission, percentage, gift or any other consideration, contingent upon or resulting from the award or making of this Agreement. It is understood and agreed that the term "fee" shall also include brokerage fee, however denoted. For the breach or violation of this paragraph, the AUTHORITY shall have the right to terminate this Agreement without liability, and, at its discretion, to deduct from the contract price, or otherwise recover, the full amount of such fee, commission percentage, gift or consideration.

16.0 INSURANCE

The CONSULTANT, at its own expense, shall keep in force and at all times maintain during the term of this Agreement all insurance of the types and to the limits specified herein.

The CONSULTANT shall require and ensure that each of its subconsultants providing services hereunder procures and maintains, until the completion of the services, insurance of the requirements, types and to the limits specified herein. Upon request from the AUTHORITY, the CONSULTANT shall furnish copies of certificates of insurance evidencing coverage of each subconsultant.

The CONSULTANT shall require all insurance policies in any way related to the work and secured and maintained by the CONSULTANT to include clauses stating each underwriter shall waive all rights of recovery, under subrogation or otherwise, against the AUTHORITY. The CONSULTANT shall require of subconsultants, by appropriate written agreements, similar waivers each in favor of all parties enumerated in this section. When required by the insurer, or should a policy condition not permit an endorsement, the CONSULTANT agrees to notify the insurer and request that the policy(ies) be endorsed with a Waiver of Transfer of Rights of Recovery Against Others, or an equivalent endorsement. This Waiver of Subrogation requirement shall not apply to any

policy, which includes a condition that specifically prohibits such an endorsement or voids coverage should the CONSULTANT enter into such an agreement on a pre-loss basis. At the CONSULTANT's expense, all limits must be maintained.

16.1 Commercial General Liability coverage shall be on an occurrence form policy for all operations including, but not limited to, Contractual, Products and Completed Operations, and Personal Injury. The limits shall be not less than One Million Dollars (\$1,000,000) per occurrence, Combined Single Limits (CSL) or its equivalent. The general aggregate limit shall apply separately to this Agreement (with the ISO CG 25 01 or insurer's equivalent endorsement provided to the AUTHORITY) or the general aggregate limit shall be twice the required occurrence limit. The AUTHORITY shall be listed as an additional insured. The CONSULTANT further agrees coverage shall not contain any endorsement(s) excluding or limiting Product/Completed Operations, Independent Consultants, Broad Form Property Damage, X-C-U Coverage, Contractual Liability, or Severability of Interests. The Additional Insured Endorsement included on all such insurance policies shall state that coverage is afforded the additional insured with respect to claims arising out of operations performed by or on behalf of the insured. If the additional insureds have other insurance which is applicable to the loss, such other insurance shall be excess to any policy of insurance required herein. The amount of the insurer's liability shall not be reduced by the existence of such other insurance.

16.2 Business Automobile Liability coverage shall be on an occurrence form policy for all owned, non-owned and hired vehicles issued on ISO form CA 00 01 or its equivalent. The limits shall be not less than One Million Dollars (\$1,000,000) per occurrence, Combined Single Limits (CSL) or its equivalent. In the event the CONSULTANT does not own automobiles the CONSULTANT shall maintain coverage for hired and non-owned auto liability, which may be

satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.

Each of the above insurance policies shall include the following provisions: (1) The standard severability of interest clause in the policy and when applicable the cross liability insurance coverage provision which specifies that the inclusion of more than one insured shall not operate to impair the rights of one insured against another insured, and the coverages afforded shall apply as though separate policies had been issued to each insured; (2) The stated limits of liability coverage for Commercial/Comprehensive General Liability, and Business Automobile Liability, assumes that the standard "supplementary payments" clause will pay in addition to the applicable limits of liability and that these supplementary payments are not included as part of the insurance policies limits of liability.

16.3 Workers' Compensation and Employer's Liability Insurance shall be provided as required by law or regulation (statutory requirements). Employer's Liability insurance shall be provided in amounts not less than \$100,000 per accident for bodily injury by accident, \$100,000 per employee for bodily injury by disease, and \$500,000 policy limit by disease. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the AUTHORITY for all work performed by the CONSULTANT, its employees, agents and subconsultants.

16.4 Professional Liability Coverage shall have limits of not less than One Million Dollars (\$1,000,000) Combined Single Limit (CSL) or its equivalent, protecting the selected firm or individual against claims of the AUTHORITY for negligence, errors, mistakes or omissions in the performance of services to be performed and furnished by the CONSULTANT.

The CONSULTANT shall provide the AUTHORITY with Certificate(s) of Insurance with required endorsements on all the policies of insurance and renewals thereof in a form(s)

acceptable to the AUTHORITY. The AUTHORITY shall be notified in writing of any reduction, cancellation or substantial change of policy or policies at least thirty (30) days prior to the effective date of said action.

All insurance policies shall be issued by responsible companies who are acceptable to the AUTHORITY and licensed to do business under the laws of the State of Florida. Each Insurance company shall minimally have an A.M. Best rating of A-:VII. If requested by the AUTHORITY, the AUTHORITY shall have the right to examine copies and relevant provisions of the insurance policies required by this Agreement, subject to the appropriate confidentiality provisions to safeguard the proprietary nature of CONSULTANT manuscript policies.

Any deductible or self-insured retention must be declared to and approved by the AUTHORITY. At the option of AUTHORITY, either the insurer shall reduce or eliminate such deductibles or self-insured retentions as requests the AUTHORITY, or the CONSULTANT shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

All such insurance required by the CONSULTANT shall be primary to, and not contribute with, any insurance or self-insurance maintained by the AUTHORITY.

Compliance with these insurance requirements shall not relieve or limit the CONSULTANT's liabilities and obligations under this Agreement. Failure of the AUTHORITY to demand such certificate or evidence of full compliance with these insurance requirements or failure of the AUTHORITY to identify a deficiency from evidence provided will not be construed as a waiver of the CONSULTANT's obligation to maintain such insurance.

The acceptance of delivery by the AUTHORITY of any certificate of insurance evidencing the required coverage and limits does not constitute approval or agreement by the

AUTHORITY that the insurance requirements have been met or the insurance policies shown in the certificates of insurance are in compliance with the requirements.

17.0 COMMUNICATIONS, PUBLIC RELATIONS, AND USE OF LOGOS

The CONSULTANT agrees that it shall make no statements, press releases or publicity releases concerning this Agreement or its subject matter or otherwise disclose or permit to be disclosed any of the data or other information obtained or furnished in compliance with this Agreement, or any particulars thereof, during the period of the Agreement, without first notifying the AUTHORITY and securing its consent in writing. The CONSULTANT also agrees that it shall not publish, copyright or patent any of the data furnished in compliance with this Agreement, it being understood that, under Paragraph 8.00 hereof, such data or information is the property of the AUTHORITY.

Regarding the use of logos, printed documents and presentations produced for the AUTHORITY shall not contain the name of logo of the CONSULTANT unless approved by the AUTHORITY's Director of Public Affairs and Communication or his/her designee. If a copy of the AUTHORITY logo is to be used in a document or presentation, the logo shall not be altered in any way. The width and height of the logo shall be of equal proportions. The proper presentation of the AUTHORITY logo is of utmost importance to the AUTHORITY. Any questions regarding the use of the AUTHORITY logo shall be directed to the Director of Public Affairs and Communication or his/her designee.

18.0 STANDARD OF CONDUCT

The CONSULTANT covenants and agrees that it and its employees shall be bound by the standards of conduct provided in Florida Statutes 112.313 as it relates to work performed under this Agreement, which standards will by reference be made a part of this Agreement as though set

forth in full. The CONSULTANT agrees to incorporate the provisions of this paragraph in any subcontract into which it might enter with reference to the work performed.

The CONSULTANT acknowledges that it has read the AUTHORITY's Code of Ethics and to the extent applicable to the CONSULTANT agrees to abide with such policy.

19.0 DOCUMENTED ALIENS

The CONSULTANT warrants that all persons performing work for the AUTHORITY under this Agreement, regardless of the nature or duration of such work, shall be United States citizens or properly authorized and documented aliens. The CONSULTANT shall comply with all federal, state and local laws and regulations pertaining to the employment of unauthorized or undocumented aliens at all times during the performance of this Agreement and shall indemnify and hold the AUTHORITY harmless for any violations of the same. Furthermore, if the AUTHORITY determines that CONSULTANT has knowingly employed any unauthorized alien in the performance of this Agreement, the AUTHORITY may immediately and unilaterally terminate this Agreement for cause.

20.0 CONFLICT OF INTEREST

The CONSULTANT shall not knowingly enter into any other contract with the AUTHORITY during the term of this Agreement which would create or involve a conflict of interest with the services provided herein. Likewise, subconsultants shall not knowingly enter into any other contract with the AUTHORITY during the term of this Agreement which would create or involve a conflict of interest with the service provided herein and as described below. Questions regarding potential conflicts of interest shall be addressed to the Director for resolution. During the term of this Agreement, the CONSULTANT is not eligible to pursue any advertised construction engineering and inspection projects of the AUTHORITY as either a prime or subconsultant where the CONSULTANT participated in the oversight of the projects or for any project which the

CONSULTANT prepared plans and/or specifications. Subconsultants are also ineligible to pursue construction engineering and inspection projects where they participated in the oversight of the projects or for any project which the subconsultant was involved in the preparation of plans and/or specifications.

21.0 SEVERABILITY

The invalidity or non-enforceability of any portion or provision of this Agreement shall not affect the validity or enforceability of any other portion or provision. Any invalid or unenforceable portion or provision shall be deemed severed from this Agreement and the balance hereof shall be construed and enforced as if this Agreement did not contain such invalid or unenforceable portion or provision.

22.0 GOVERNING LAW AND VENUE

This Agreement is accepted and entered into in Florida and any question regarding its validity, construction, enforcement, or performance shall be governed by Florida law. The parties consent to the exclusive jurisdiction of the courts located in Orange County, Florida.

23.00 ATTACHMENTS

Exhibit "A", Scope of Services

Exhibit "B", Method of Compensation

Exhibit "C", Details of Cost and Fees

Exhibit "D", Project Organization Chart

Exhibit "E", Project Location Map

Exhibit "F", Schedule

IN WITNESS WHEREOF, the CONSULTANT and the AUTHORITY have caused this instrument to be signed by their respective duly authorized officials, as of the day and year first above written. This Contract was awarded by the Authority's Board of Directors at its meeting on August 13, 2015.

DRMP, INC.

BY: *Wayne Chalifoux*
Authorized Signature

Print Name: Wayne Chalifoux, P.E.

Title: President

**CENTRAL FLORIDA
EXPRESSWAY AUTHORITY**

BY: *Claude Miller*
Director of Procurement

Print Name: Claude Miller

ATTEST: *Mary E. Dent* (Seal)
Secretary or Notary



Approved as to form and execution, only.

General Counsel for the AUTHORITY

Joseph Thaxton