

June 6, 2020

Mina Samadi, PE LEED AP
Senior Capital Projects Coordinator
City of Miami Beach
CIP Department
1700 Convention Center Drive
Miami Beach, FL 33139

Re: **Additional Service Request #5**
SR A1A/Indian Creek Drive from 25 Street to 41 Street Improvements
Flood Mitigation Project - Contract Resolution No. 2016-29456



RIBBECK
Engineering, Inc.
CA# 27592
E.I.No. 26-0460404
14335 SW 120th St., Suite 205,
Miami, FL 33186
cribbeck@gmail.com
Cel: 305-319-1397
Phone: 305-383-5909
Fax: 305-383-5979

Dear Mina:

Enclosed for your approval, please find our revised Additional Service Request #5 for a value of \$350,270.73. During the past few months we had gladly attended additional meetings with the commission and public, addressed DERM comments and revised plans accordingly, revised sea wall details, and prepared exhibits and boards for various meetings; all for which have exhausted some of the post design task hours set aside for meetings, reviews, and post design services. Therefore, we are requesting to replenish the utilized hours as shown below and in the attached sheets.

1. As requested by the public, the generator will be relocated which requires revision to the roadway plans, drainage plans, electrical plans and structural plans. In addition, this may require Geotech borings for structural analysis. The total cost for this request is \$46,280.15.
2. The City has requested that we perform pavement cores along Collins Ave to analyze the pavement added. This task was done to analyze the thickness and type of asphalt added by the City so that we can revise the pavement design and maintain the pavement. The total cost for this request is \$4,575.46.
3. We anticipate attending weekly progress meetings, meetings with utility owners and meetings with the public. The total cost for this request is \$99,865.58.
4. Due to the complexity of the project and as a result of multiple agencies, utility owners and the public, ongoing project coordination with the team has not been initially evaluated at the level required and therefore we are requesting additional hours. Also, we expect RFI's, revisions and Shop Drawings that will need to be addressed. The total cost for this request is \$109,916.98.
5. The sea wall plans were previously completed and submitted to the City. Since the City is coordinating the permit efforts with various agencies (USACE, FWS, etc.), the City has requested for the plans to be revised. We have revised the plans and anticipate minor changes to address comments in the future. The total cost estimate for this request is \$30,000.
6. Since the sea wall construction along Indian Creek will be delayed, the City has requested that we provide alternate design for the bus bays where the existing sea wall does not support the proposed bus bays. This scope includes structural support and will provide structural plans and calculations for the approval by FDOT and construction by the contractor. The total cost for this request is \$14,920.01.
7. To assist with any unforeseen issues, we have requested a 20% contingency. The total cost for this request is \$44,712.54.

Attached please find a better breakdown of the tasks listed above and all the subtasks that were or will be performed.

Should you have any questions regarding this invoice payment or require additional information, please contact me at 305-319-1397.

Thanks again for the opportunity.

Sincerely,

A handwritten signature in blue ink, appearing to read 'C. Ribbeck', is placed over a light yellow rectangular background.

Carlos F. Ribbeck, P.E.
President

INDIAN CREEK DRIVE
DRAINAGE MITIGATION PROJECT FROM 25 ST TO 41 ST
POST DESIGN SERVICES - CHANGE ORDER #5
6/9/2020

Task #	Item Description		
35	Generator Relocation (Ribbeck)	85	Hours
36	Meetings	616	Hours
37	Project Coordination and Addressing Future Issues	678	Hours
	Total =	1379	Hours
	Avg Hourly Rate	\$53.50	
	Overhead	163.76%	
	Operating Margin	38.50%	
	Facilities Capital Cost Money	0.767%	
	Cost (Hrs x Loaded Rate)	\$223,562.71	
	Contingency (20%)	\$44,712.54	
	Total =	\$268,275.26	
	Sub Consultants		
38	Geotech (Collins and Generator Pad)	\$9,575.46	
39	Structural (BPA Sea Wall Support and PDS)	\$30,000.00	
40	Electrical (Generator Relocation)	\$27,500.00	
41	Bus Stop Retaining Wall (Structural)	\$14,920.01	
	Total =	\$81,995.47	
	Grand Total =	\$350,270.73	

Generator Relocation				
Item	QTY	Hrs/unit	Hours	Remarks
Analysis, Exhibits, meetings	1	24	24	Rdwy Analysis, Update Design files, Create Revision
Roadway	1	20	20	3 plans, 14 cross sections = $3 \times 2 + 14 \times 1 = 20$
Drainage	1	19	19	Verify Conflicts and re-align any drainage, update 11 cross sections create revision = $2 \times 4 + 11 = 19$
Signing	1	8	8	Verify conflicts and relocate signs, create revision
Coordination (Internal and External)	7	2	14	Structural, Electrical, Utilities, City, MBA, Planning and FDOT
		Total =	85	

MEETINGS				
Item	QTY	Hrs/unit	Hours	Remarks
Bi Weekly Meetings	52	3	468	Assume 2 yrs and half meetings for drainage engineer = 52 wks x 2 x 3hrs x 1.5 engineers
Utility Coordination	3	2	9	Assume 2 FPL (Signal & Lighting Power Source), 4 Teco (conflicts and Generator), 1 ATT (Signals)= 7 mtgs x 3 hrs x 1.5 engineers
Property Owners	2	2	4	Assume 5 property owners @ 2 hrs each
Field Reviews	20	3	90	Estimate 20 field reviews (1 every months) x 1.5 person
Misc. Meetings	15	3	45	Unknown Meetings (MBA, Commisioners, FDOT, Handrail ETC.)
		Total =	616	

Project Coordination and Addressing Future Issues				
Item	QTY	Hrs/unit	Hours	Remarks
Weekly Coordination	104	2	208	Assume 2 hours every week. 52 weeks x 2 years
RFI	208	1	208	Assume 3 RFI per month for 2 years = 52 weeks x 2 years x 2 RFI x 1 hr
Remaining Shop Drawings	102	1	102	Signing (12) Roadway (48) Signals (42)
Revisions	10	16	160	Estimate 2 revisions for RDWY, 2 Drainage, 2 Signals and 1 Electrical, 1 Structures, 2 Lighting
		Total =	678	

Additional Service Request #5

**SR A1A/Indian Creek Drive from 25 Street to 41 Street Improvements
Flood Mitigation Project - Contract Resolution No. 2016-29456**

Geotech (Collins Ave Cores)



EXHIBIT I
Fee Proposal for Geotechnical Services
Collins Avenue Pavement Confirmation
Along Collins Avenue: South of 25th St and 26th St
Miami Beach, Miami-Dade County, FL
UES Opportunity No.: 2130.1219.00006

CONTRACT ID	TASK	QUANTITY	UNIT	UNIT FEE	FEE
Drilling Support Services					
1.A.1	Mobilization of Truck-Mounted Drill Rig	1	day	\$389.20	\$389.20
22.G	Engineer Tech.: Boring Layout & Utility Clearance	4	hours	\$72.28	\$289.12
	Staff Engineer : MOT Coordination (Permits)	4	hours	\$90.00	\$360.00
	MOT lump sum (includes cones, barricades, signs, and certifications)	1	day	\$1,450.00	\$1,450.00
1.B.1	Borings Standard Penetration per ASTM D-1586: 4 SPT borings to 2 feet for pavement	4	feet	\$22.24	\$88.96
1.J	Closing of Boreholes	4	feet	\$8.90	\$35.60
6.H	Asphalt Core Drilling for thickness measurements (includes asphalt patching)	4	cores	\$66.72	\$266.88
Sub-Total: Drilling Support Services					\$2,879.76
Laboratory Testing					
5.H	Organic Content	4	each	\$96.00	\$384.00
5.I	Grain Size per AASHTO T-27 (Sieve Analysis Only)	4	each	\$97.00	\$388.00
Sub-Total: Laboratory Testing					\$388.00
Geotechnical Engineering and Reporting					
22.C	Professional Engineer	1	hours	\$133.44	\$133.44
22.B	Staff Engineer	8	hours	\$100.08	\$800.64
22.A	C.A.D. Operator	4	hours	\$80.06	\$320.24
22.F	Clerical / Administrative	1	hours	\$53.38	\$53.38
Sub-Total: Professional Services					\$1,307.70
GEOTECHNICAL TOTAL:					\$4,575.46

EXHIBIT NOTES:

- Should additional soil borings be warranted, these will be provided at the existing contract unit rates.
- Additional services, consultations, or meetings if requested, will be invoiced at existing contract rates.
- This fee estimate includes three (4) copies of the final reports, including an electronic PDF copy.
- The unit rates used in Exhibit I are consistent with the City of Miami Beach Public Works Department Citywide Geotechnical Laboratory Testing Services (RFQ No. 17-11/12).
- We understand permitting will be required with the City of Miami Beach Public Works Department

Additional Service Request #5

**SR A1A/Indian Creek Drive from 25 Street to 41 Street Improvements
Flood Mitigation Project - Contract Resolution No. 2016-29456**

Electrical (Generator Relocation)

February 28, 2020

Mr. Carlos Ribbeck, P.E.
Ribbeck Engineering Inc.
14335 SW 120 St. #205
Miami, FL 33186

Re: New Pump Station at Indian Creek Dr. and 32nd Street, Miami Beach.
Request for Change Order #1

Revise construction documents as required to reflect new further away location for generator set and swapping of ATS and Control Panel Locations.

Dear Carlos:

We respectfully request your review and approval of this "Request for Change Order #1" to provide the following additional electrical engineering design and construction phase services:

1. Revise electrical construction documents as required to reflect new location of generator set approximately 1,000 feet further away from the ATS than originally designed.

This change will require revisions to approximately 12 of our drawings, detailed voltage drop calculations and sizing/selecting/specifying larger wires and conduits from generator set to ATS to keep voltage drop at acceptable levels.

2. Revise electrical construction documents as required to move the FPL transformer south of the control pad and re-arrange the control pad so that the incoming utility panel, ATS and Power Distribution Panel, will be closer to transformer and the VFD's and Power Control Panel (PCP) will be closer to the pumps.

PROCON Engineering Inc. requested additional fees to provide above described additional electrical engineering, design and construction phase services is \$27,500.

ACCEPTANCE

7240 S.W. 39th Terr. Miami, Florida 33155 Tel. 305-262-7630 Fax. 305-266-7798
E-mail: proconengineers@bellsouth.net/Website: www.ProConEngineers.net

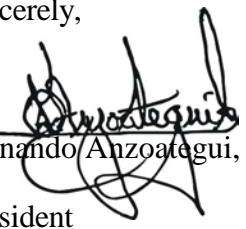
Mr. Carlos Ribbeck
Ribbeck - Pump Station at Indian Creek Dr. & 32nd Street- Request for Change Order #1
February 28, 2020
Page 2

Acceptance of this proposal may be indicated by signature of a duly authorized official of the Client in the space provided below. One signed copy of this proposal returned to PROCON will serve as the notice to proceed. Should this proposal not be accepted within a period of thirty (30) days from the above date, it shall become null and void.

The Client recognizes that time is of the essence with respect to payment of the Engineer's invoices, and that timely payment is a material part of the consideration of this agreement. Invoices shall be paid within thirty (30) days of the invoice date or within 5 days of Client receiving payment.

Thank you for the opportunity to submit this request.

Sincerely,


Fernando Anzoategui, P.E., LEED® AP
President

Agreed to this day of , 2020.

Ribbeck Engineering Inc.

Name

Signature

Title

Additional Service Request #5

**SR A1A/Indian Creek Drive from 25 Street to 41 Street Improvements
Flood Mitigation Project - Contract Resolution No. 2016-29456**

Bus Stop Retaining Wall (Structural)

Project Information Sheet

Financial Project Identification Number: _____		Federal Aid Project Identification Number: 54321		
Name of Prime / Subconsultant: Chrome Engineering, Inc.		County: Miami-Dade		
Project Description: Indian Creek CIP Walls				
Begin Milepost: _____	End Milepost: _____	Project Length: _____	Miles	
Number of Lanes: _____	Typical Section: _____	(Urban / Rural / Int.) Lane Configuration: _____ (Divided / Undivided)		
Project Type: _____ (Minor / Major)	Access Management Classification: _____	Roadway Classification: _____ (NHS/FIHS/Off Sys.)		
CAP Level: _____	TTCP Level: _____	Survey Level: _____		
Design Variations: 1. _____		Design Exceptions: 1. _____		
2. _____		2. _____		
3. _____		3. _____		
4. _____		4. _____		
5. _____		5. _____		
Proposed Design Contract Time: _____ months/days		Date of Negotiation: _____		
		Context Classification: _____		
Project Activity:	Estimated By:		Negotiated By: (name - firm)	
	Consultant	FDOT	Consultant	FDOT
3. Project Common & Project General Tasks	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
4. Roadway Analysis	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
5. Roadway Plans	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
6a. Drainage Analysis	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
6b. Drainage Plans	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
7. Utilities	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
8. Environmental Permits and Env. Clearances	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
9. Structures Summary	Oscar Cruz/Chrome Engineering	Enter name & office	Enter name & firm	Enter name & office
10. Structures - Bridge Development Report	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
11. Structures - Temporary Bridge	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
12. Structures - Short Span Concrete	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
13. Structures - Medium Span Concrete	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
14. Structures - Structural Steel	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
15. Structures - Segmental Concrete	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
16. Structures - Movable Span	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
17. Structures - Retaining Walls	Oscar Cruz/Chrome Engineering	Enter name & office	Enter name & firm	Enter name & office
18. Structures - Miscellaneous	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
19. Signing and Pavement Marking Analysis	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
20. Signing and Pavement Marking Plans	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
21. Signalization Analysis	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
22. Signalization Plans	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
23. Lighting Analysis	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
24. Lighting Plans	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
25. Landscape Analysis	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
26. Landscape Plans	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
27. Survey	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
28. Photogrammetry	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
29. Mapping	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
30. Terrestrial Mobile LiDAR	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
31. Architecture Development	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
32. Noise Barriers Impact Design Assessment	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
33. Intelligent Transportation Systems Analysis	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
34. Intelligent Transportation Systems Plans	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
35. Geotechnical	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office
36. 3D Modeling	Enter name & firm	Enter name & office	Enter name & firm	Enter name & office

ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number: 1/0/1900
FAP Number: 54321

Project Name: Indian Creek CIP Walls
Date: 5/19/2020
Name of Consultant: Chrome Engineering, Inc.

WORK ACTIVITY	Hours from "Summary" sheet	EMPLOYEE CLASSIFICATION													TOTAL STAFF HOURS		ON CADD
	Firm	Total	Senior Engineer 1	Structures Designer	Staff Classi- fication 3	Staff Classi- fication 4	Staff Classi- fication 5	Staff Classi- fication 6	Staff Classi- fication 7	Staff Classi- fication 8	Staff Classi- fication 9	Staff Classi- fication 10	Staff Classi- fication 11	Staff Classi- fication 12	RANGE		
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	PERCENT		
3. Project General and Project Common Tasks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4. Roadway Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5. Roadway Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6a. Drainage Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6b. Drainage Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7. Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8. Environmental Permits, and Env. Clearances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9. Structures - Misc. Tasks, Dwgs, Non-Tech.	19	10	10	0	0	0	0	0	0	0	0	0	0	0	20	22	
10. Structures - Bridge Development Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12. Structures - Short Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13. Structures - Medium Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17. Structures - Retaining Walls	78	39	39	0	0	0	0	0	0	0	0	0	0	0	78	86	
18. Structures - Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
19. Signing & Pavement Marking Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
20. Signing & Pavement Marking Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
21. Signalization Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
22. Signalization Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
23. Lighting Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
24. Lighting Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
25. Landscape Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
26. Landscape Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
27. Survey (Field & Office Support)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
29. Mapping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
30. Terrestrial Mobile LiDAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
36. 3D Modeling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTALS	97	49	49	0	0	0	0	0	0	0	0	0	0	0	98	108	
Field Survey Estimate:													FIRM TOTAL		98	108	
0 4-person crew days																	
Notes:																	

Notes:

1. This worksheet provides the distribution of a firm's total staff hours for a project.
2. Percentages for staff hour distribution by classification are entered below in rows 64 to 98 of this sheet.
3. Total Staff Hours (column O) may not match staff hours from Summary worksheet (column B) due to rounding. Staff hours calculated for employee classifications are to be adjusted so totals in columns B and O match.
4. Formulas under "Total Staff Hours Range" (columns O & P) may be adjusted to provide desired range.

ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number: 1/0/1900

Project Name Indian Creek CIP Walls

FAP Number: 54321

Date: 5/19/2020

Name of Consultant: Chrome Engineering, Inc.

Staff Hour Distribution Percentages - Firm Total														
	Hours from "Summary" sheet Firm Total	Senior Engineer 1	Structures Designer	Staff Classi- fication 3	Staff Classi- fication 4	Staff Classi- fication 5	Staff Classi- fication 6	Staff Classi- fication 7	Staff Classi- fication 8	Staff Classi- fication 9	Staff Classi- fication 10	Staff Classi- fication 11	Staff Classi- fication 12	Total
3. Project General and Project Common Tasks	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
4. Roadway Analysis	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
5. Roadway Plans	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
6a. Drainage Analysis	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
6b. Drainage Plans	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
7. Utilities	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
8. Environmental Permits, and Env. Clearances	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
9. Structures - Misc. Tasks, Dwg, Non-Tech.	19	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%
10. Structures - Bridge Development Report	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
11. Structures - Temporary Bridge	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
12. Structures - Short Span Concrete Bridge	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
13. Structures - Medium Span Concrete Bridge	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
14. Structures - Structural Steel Bridge	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
15. Structures - Segmental Concrete Bridge	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
16. Structures - Movable Span	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
17. Structures - Retaining Walls	78	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%
18. Structures - Miscellaneous	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
19. Signing & Pavement Marking Analysis	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
20. Signing & Pavement Marking Plans	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
21. Signalization Analysis	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
22. Signalization Plans	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
23. Lighting Analysis	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
24. Lighting Plans	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
25. Landscape Analysis	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
26. Landscape Plans	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
27. Survey (Field & Office Support)	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
28. Photogrammetry	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
29. Mapping	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
30. Terrestrial Mobile LIDAR	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
31. Architecture Development	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
32. Noise Barriers Impact Design Assessment	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
33. Intelligent Transportation Systems Analysis	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
34. Intelligent Transportation Systems Plans	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
35. Geotechnical	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
36. 3D Modeling	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%

ESTIMATE OF WORK EFFORT AND COST - SUBCONSULTANT

Name of Project: Indian Creek CIP Walls
 County: Miami-Dade
 FPN: 0
 FAP No.: 54321

Consultant Name: Chrome Engineering, Inc.
 Consultant No.:
 Date: 5/19/2020
 Estimator: Oscar J. Cruz, P.E.

Staff Classification	Total Staff Hours From "SH Summary Firm"	Senior Engineer 1	Structures Designer	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
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, and Env. 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.	19	10	10	0	0	0	0	0	0	0	0	0	0	20	\$1,000	\$50.00
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	78	39	39	0	0	0	0	0	0	0	0	0	0	78	\$3,900	\$50.00
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 Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
26. Landscape 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	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!
36. 3D Modeling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
Total Staff Hours	97	49	49	0	0	0	0	0	0	0	0	0	0	98		
Total Staff Cost		\$3,185.00	\$1,715.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$4,900.00	\$50.00

Check = \$4,900.00

Notes:

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

SALARY RELATED COSTS:				\$4,900.00
OVERHEAD:		167.77%		\$8,220.73
OPERATING MARGIN:		28.0%		\$1,372.00
FCCM (Facilities Capital Cost Money):		0.00%		\$0.00
EXPENSES:		8.72%		\$427.28
SUBTOTAL ESTIMATED FEE:				\$14,920.01
Survey (Field)	0	4-person crew	\$ - / day	\$0.00
Geotechnical Field and Lab Testing				\$0.00
SUBTOTAL ESTIMATED FEE:				\$14,920.01
Optional Services				\$0.00
GRAND TOTAL ESTIMATED FEE:				\$14,920.01

Project Activity 9: Structures Summary and Miscellaneous Tasks and Drawings

Estimator: Oscar J. Cruz, P.E.

Indian Creek CIP Walls

0

Representing	Print Name	Signature / Date
City of Miami Beach		
Chrome Engineering, Inc.	Oscar J. Cruz, P.E.	

NOTE: Signature Block is optional, per District preference

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	1	1	1	1	Index of Drawings
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	0	0	0	0	
9.5	Incorporate Report of Core Borings	Sheet	0	0	0	0	
9.6	Standard Plans- Bridges	LS	1	0		0	
9.7	Existing Bridge Plans	LS	1	2		2	Review Existing Seawall Plans and Bulkhead Wall Plans
9.8	Assemble Plan Summary Boxes and Quantities	LS	1	0		0	
9.9	Cost Estimate	LS	1	2		2	Two 60' Walls
9.10	Technical Special Provisions and Modified Special Provisions	LS	1	0		0	

Project Activity 9: Structures Summary and Miscellaneous Tasks and Drawings

Structures - Summary and Miscellaneous Tasks and Drawings											
Task No.	Task	Total	Task 10	Task 11	Task 12	Task 13	Task 14	Task 15	Task 16	Task 17	Task 18
10-16	Bridge 1	0	0	0	0	0	0	0	0		
10-16	Bridge 2	0									
10-16	Bridge 3	0									
10-16	Bridge 4	0									
10-16	Bridge 5	0									
10-16	Bridge 6	0									
10-16	Bridge 7	0									
10-16	Bridge 8	0									
10-16	Bridge 9	0									
10-16	Bridge 10	0									
17	Retaining Walls	78								78	
18	Miscellaneous Structures	0									0
Structures Technical Subtotal		78	0	0	0	0	0	0	0	78	0
Task No.	Task	Units	No. of Units	Hours per Unit	Total	Comments					
9.11	Field Reviews	LS	0	6	0	2 people x 3 hours x 1 visit					
9.12	Technical Meetings	LS	0	6	0						
9.13	Quality Assurance/Quality Control	LS	%	5%	4						
9.14	Independent Peer Review	LS	1	0	0						
9.15	Supervision	LS	%	5%	4						
Structures Nontechnical Subtotal					8						
9.16	Coordination	LS	1	6	6	Roadway = 2 hrs, Geotech = 2 hrs, Utilities = 2					
9. Structures - Summary and Miscellaneous Tasks and Drawings					19						

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	Comments	PM Attendance at Meeting Required?	Number
BDR Coordination/Review	EA	0	0	0			0
90/100% Comment Review	EA	0	0	0			0
Aesthetics Coordination	EA	0	0	0			0
Regulatory Agency	EA	0	0	0			0
Local Governments (cities, counties)	EA	0	0	0			0
Utility Companies	EA	0	0	0			0
Other Meetings	EA	0	0	0			0
Subtotal Technical Meetings				0			0
Progress Meetings (if required by FDOT)	EA	0	0	0	PM attendance at Progress Meetings is manually entered on General Task 3		--
Phase Review Meetings	EA	2	3	6	PM attendance at Phase Review Meetings is manually entered on General Task 3		--
Total Meetings				6	Total Project Manager Meetings (carries to Tab 3)		0

Carries to 9.11

Carries to Tab 3

Project Activity 17: Retaining Walls

Estimator:

Indian Creek CIP Walls

0

Representing	Print Name	Signature / Date
City of Miami Beach		
Consultant Name	Oscar J. Cruz, P.E.	

NOTE: Signature Block is optional, per District preference

Task No.	Task	Unit	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
General Requirements							
17.1	Key Sheet	Sheet	1	8	1	8	Two 60' long walls one at each proposed bus shelter location
17.2	Horizontal Wall Geometry	Per Wall	2	4		8	
Permanent Proprietary Walls							
17.3	Vertical Wall Geometry	Per Wall	0	0		0	
17.4	Semi-Standard Drawings	Sheet	0	0	0	0	
17.5	Wall Plan and Elevations (Control Drawings)	Sheet	0	0	0	0	
17.6	Details	Sheet	0	0	0	0	
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	
Cast-in-Place Retaining Walls							
17.11	Design	EA Design	1	12		12	Two 60' long walls one at each proposed bus shelter location
17.12	Vertical Wall Geometry	EA Wall	2	6		12	
17.13	General Notes	Sheet	1	2	1	2	
17.14	Wall Plan and Elevations (Control Drawings)	Sheet	2	12	2	24	
17.15	Sections and Details	Sheet	1	12	1	12	Special Drainage Details
17.16	Reinforcing Bar List	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
Other Retaining Walls and Bulkheads							
17.17	Design	EA Design	0	0		0	
17.18	Vertical Wall Geometry	EA Wall	0	0		0	
17.19	General Notes, Tables and Misc. Details	Sheet	0	0	0	0	
17.20	Wall Plan and Elevations	Sheet	0	0	0	0	
17.21	Details	Sheet	0	0	0	0	
17. Structures - Retaining Walls Total					5	78	