



February, 10 2022

Peter Kunen, PE, CFM
Assistant Director of Public Works/City Engineer
City of Hallandale Beach

Re: Atlantic Shores Boulevard Design Services – Supplemental Fee

Dear Mr. Kunen:

Marlin Engineering, Inc. proposes to provide the supplemental services identified below pursuant to Resolution No. 2018-124 dated November 19th, 2018.

I. General

The original scope of work passed under Resolution 2018-124 called for resurfacing the existing pavement along Atlantic Shores Blvd between US 1 and Diplomat Parkway. Other improvements including drainage and landscaping and were proposed in accordance with the available funding for this project.

Through an extensive public engagement and community outreach process, two alternatives were developed from during the period from November 2019 to January 2020. In April 2020, local residents along Atlantic Shores Blvd. received a survey and were asked to select a preferred alternative. Local residents chose "Option B".

On December 16th, 2020, the City of Hallandale Beach Commission endorsed "Option B" which provides for, where feasible, the following elements 1) Head in angled parking, 2) 10 ft wide shared used path, additional parking spaces, and 3) Additional green space for landscaping expanding the scope of work from resurfacing to widening/reconstruction.

This project will consist of providing contract documents to widen/reconstruct the pavement and provide enhancements along Atlantic Shores Boulevard between State Road 5/US 1 and Diplomat Parkway. The scope of work will include roadway, traffic analysis required by Broward County, drainage, utility coordination, signing and pavement markings, a lighting justification report (required for eligibility for the Broward County Surtax) and landscaping. All improvements within this project shall be in accordance with the American with Disabilities Act (ADA).

The scope of services outlines the effort required for the production of the construction documents which will be in accordance with City of Hallandale Beach, Broward County and FDOT Standards and Specifications.

II. Scope of Work

Task 1 – Roadway, S&PM, Lighting Analysis

- a) The Marlin Team will prepare a complete contract set of plans based on preferred alternative “Option B”. The plans shall be supplemented with the following tasks and prepared for submittal and review to all affected agencies (including Broward County and the City of Hallandale Beach) at 60%, 90% and 100% phase submittals.

Roadway analysis shall include;

1. Pavement Design
2. Horizontal/Vertical Master Design Files
3. Cross Section Design Files
4. Temporary Traffic Control Plan Analysis
5. Master TTCP Design Files
6. Additional Quantities

The roadway plan component shall include;

1. Typical Section
2. Summary of Pay Items
3. Typical Section Details
4. General Notes/Pay Item Notes
5. Project Layout
6. Special Details
7. Roadway Soil Survey Sheets
8. Cross Sections
9. Temporary Traffic Control Plan and Detail Sheets
10. Utility Adjustment Sheets

Utility Coordination shall include:

1. Additional follow-up due to complexity of the project.

Signing and pavement marking analysis shall include;

1. Reference and Master Design File
2. Quantities

The signing and pavement marking plan component shall include;

1. General Notes
2. Plan Sheet
3. Special Details

The lighting analysis shall include;

1. Lighting Justification Report (as required by the Broward County Surtax)



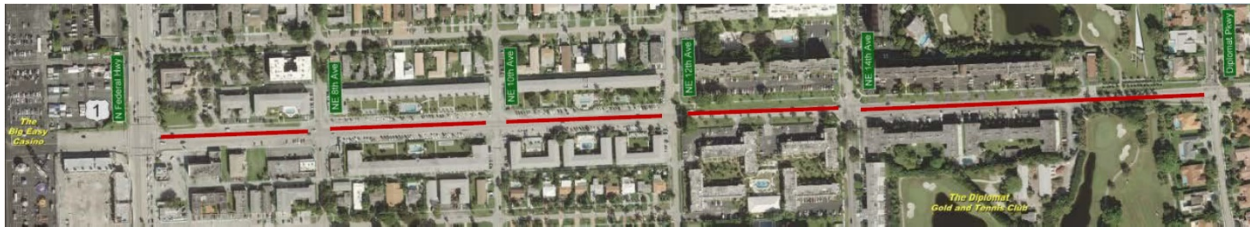
Task 2 - Traffic Analysis

Marlin Engineering, Inc. (MEI) has been requested by the City of Hallandale Beach to perform a traffic analysis for the Complete Streets project proposed on Atlantic Shores Boulevard. The project site is located in the City of Hallandale Beach, from SR 5/US-1/N Federal Highway and Diplomat Parkway. The project proposes to create a multimodal corridor that meets the needs of all street users (vehicular, pedestrians, bicyclists and transit patrons) and includes a raised intersection at NE 8th Avenue, a mid-block crossing east of NE 10th Avenue, a roundabout at NE 12th Avenue, and back-in angled parking and improved streetscape west of Diplomat Parkway.

The following intersections will be included in the analysis:

- US-1 and Atlantic Shores Boulevard (signalized)
- Atlantic Shores Boulevard and NE 8th Avenue (unsignalized)
- Atlantic Shores Boulevard and NE 10th Avenue (unsignalized)
- Atlantic Shores Boulevard and NE 12th Avenue (unsignalized)
- Atlantic Shores Boulevard and NE 14th Avenue (signalized)
- Diplomat Parkway and Atlantic Shores Boulevard (signalized)

A map of the proposed study area for the project is shown below.



A. Data Collection

Traffic counts on typical midweek (non-event) days, adhering to the Florida Department of Transportation's (FDOT's) Manual on Uniform Traffic Studies (MUTS) and other applicable standards are required for this study. Four-hour TMCs will need to be collected at the following intersections:

1. US-1 and Atlantic Shores Boulevard (signalized)
2. Atlantic Shores Boulevard and NE 8th Avenue (unsignalized)
3. Atlantic Shores Boulevard and NE 10th Avenue (unsignalized)
4. Atlantic Shores Boulevard and NE 12th Avenue (unsignalized)
5. Atlantic Shores Boulevard and NE 14th Avenue (signalized)
6. Diplomat Parkway and Atlantic Shores Boulevard (signalized)

Data for crosswalk warrant analyses will also be collected.

- 12-hour pedestrian and bicycle counts
- A 72-hour speed study

Field reviews of the study area will be conducted during the same time that the traffic data is collected to the extent possible. In addition, the existing signal timings and phasings for the signalized intersections listed above will be obtained from Broward County Traffic Engineering Division.

B. Crash Analysis

The Consultant shall download crash data for the last three (3) years of available data. The crash data will be summarized and any patterns which would indicate any facility safety deficiencies will be noted. A review of the crash data will be performed to identify any pedestrian and bicycle crashes and a summary of the analysis will be made for use in the study.

C. Crosswalk Warrant Study

MEI will perform an assessment to determine the need for a new marked crosswalk at a mid-block crossing east of NE 10th Avenue. A pedestrian crosswalk warrant analysis will be performed based on the FDOT Traffic Engineering Manual (TEM) Section 5.2, treatments for pedestrian crosswalks at midblock and unsignalized intersections and the guidelines for Manual on Uniform Traffic Control Devices (MUTCD). MEI shall identify appropriate crosswalk control measure, if a crosswalk is warranted. As part of the task, a review of the following will be made:

- Pedestrian-vehicle crash history within the vicinity of the proposed crosswalk that has occurred based upon a minimum of three (3) years of data. the number and nature of any pedestrian-vehicle conflicts will be documented based on field observations.
- Proximity to significant generators and attractors will be identified to illustrate potential pedestrian routes in relation to the proposed marked crosswalk location.
- Pedestrian data for an average day shall be collected in order to determine the pedestrian demand. Threshold values will be reviewed to verify if the demand meets the selection criteria for placement.
- Minimum location characteristics will include a review of the vehicular volumes along the roadway segment, distance to nearest alternative crossing location, and influence area of adjacent signalized intersections. In addition, transit stop activity data and the location of transit stops within the vicinity of the proposed crosswalk will be reviewed, as applicable.

D. Roundabout Justification Study

An evaluation will be made to justify the proposed roundabout as the most appropriate form of control at the intersection of NE 12th Avenue based on the recommended guidelines from the FDOT Manual on Uniform Traffic Studies. In order to document support for the decision to install a roundabout, the following tasks will be carried out.

Common data will be obtained consisting of:

- Data items needed for a signal warrant study;
- Physical and right of way features and limitations;
- Site development features: businesses, driveways, etc.; and,
- Community considerations.



The justification category for the proposed roundabout will be identified. The data requirements specific to the particular category will also be obtained. Finally, preliminary geometric design will be performed to establish the feasibility of the roundabout.

The performance of the proposed roundabout will be analyzed. The analysis will be conducted using Synchro for the AM and PM peak hours. The No-Build scenario for existing conditions of the Two-Way Stop Control (TWSC) will be analyzed as a base model. In addition, alternative control options such as an All-Way Stop Control (AWSC) will also be analyzed if warranted. A summary of the warrant analysis will be made for this option using data already collected in previous tasks. A traffic signal will not be analyzed since the distance to the signal at NE 14th Avenue is less than the recommended signal spacing requirements to the nearest intersection.

A comparison of the performance of alternative control modes will be made for the scenarios mentioned above. The summary of the analysis will document the Levels of Service, delay, and v/c ratios.

An assessment of any contraindications for the roundabout will be made and mitigation treatments will be proposed as needed.

The final recommendations will be documented using (FORM NO. 750-020-18) from the FDOT Manual on Uniform Traffic Studies.

E. Traffic Operational Analysis

Traffic volumes for the analysis hours will be adjusted by applying seasonal factors as established in the FDOT Project Forecasting Handbook, as needed. The raw TMCs will be entered onto a spreadsheet in order to develop the existing volumes. The existing volumes will be balanced as needed.

Future traffic volumes will be developed for opening year 2025 and design year 2045. The volumes will be generated by applying a growth rate factor. In developing future traffic volumes, consideration will be given to changes in existing traffic patterns likely to result from any future transportation projects to be obtained from the City. These must be approved and funded projects, set for implementation within one year of project opening, within the TPO's adopted transportation improvement program (TIP) and/or the City's program.

An analysis will be conducted on the roadway segments within the study area for the AM and PM peak hours. The Florida Department of Transportation (FDOT) Generalized Level of Service (LOS) Tables will be used to identify the capacity on the roadway segments. The levels of service thresholds used for the analysis are based on the "Generalized" tables for Urbanized Areas within the FDOT Level of Service Handbook, for the City's adopted threshold. The Intersection Levels of Service will also be determined for the AM and PM peak hours using Synchro, based on the procedures of the HCM at the intersections within the study limits.

The analysis will be conducted for the following scenarios during the AM and PM peak hours:

<i>Analysis year:</i>	2021		Opening Year: 2025		Design Year: 2045	
<i>Alternative:</i>	AM	PM	AM	PM	AM	PM
Existing	X	X				
No-Build			X	X	X	X
Build Alt.			X	X	X	X



Measures of Effectiveness (MOE's) will be summarized in the report in a clearly defined table. Intersection MOE's will be reported for all scenarios by overall intersection, approach and by critical movement to properly assess the impact to the traffic operations. The following MOE's will be included in the report:

- Level of Service (LOS) Analysis (LOS A through F)
- Volume-to-Capacity ratios (for roadway segment analysis)
- Vehicular Delays and queues (for intersection analysis)

F. Project Coordination

Additional agency coordination will be made with the Florida Department of Transportation and Broward County Traffic Engineering Division for any review and compliance with state and county guidelines.

MEI will attend up to three (3) project meetings with the City and other reviewing agencies such as FDOT and Broward County as needed, to discuss the findings and results from the study.

G. Major Deliverables

MEI shall produce a report documenting the above tasks including appendices or figures (as appropriate). MEI will submit a draft study to the City, as well as to FDOT and the County's Traffic Engineering Division for review. Any comments provided by the City, FDOT and the County will be incorporated into the final report.

Task 3 – Drainage Analysis and Plans

The Marlin Team will complete the drainage analysis and plans based on preferred alternative "Option B". The plans shall be supplemented with the following tasks and prepared for submittal and review to all affected agencies (including Broward County and the City of Hallandale Beach) at 60%, 90% and 100% phase submittals.

Drainage analysis shall include;

1. Data Collection
2. Preparation of a Drainage Map
3. Design of Storm Drains
4. Retrofit of the outfall with a tidal gate
5. Overflow connection to PS
6. Design of Drainage Wells
7. Preparation of a Drainage Report
8. Meetings
9. Modification of Existing Drainage Permit
10. Coordination with FDOT

The drainage plan component shall include;

1. Quantity Tables & Bid Item Notes
2. General Notes
3. Drainage Sections



4. Connection to PS
5. Tidal Gate Retrofit Details
6. Miscellaneous Details
7. Erosion Control Plans

Assumption: Water quality measures for the additional impervious area will be provided using drainage wells. Existing plans and geotechnical investigation have detected muck within the project limits, therefore it is assumed that French Drains will not be feasible.

Task 4 – Landscape Architecture Analysis and Plans

a) The Marlin Team will prepare a complete contract set of landscape architecture plans based on preferred alternative “Option B”. The plans shall be supplemented with the following tasks and prepared for submittal and review to all affected agencies (including Broward County and the City of Hallandale Beach) at 60%, 90% and 100% phase submittals.

Landscape analysis shall include;

1. Data Collection
2. Site Inventory and Analysis
3. Planting Design
4. Irrigation Design
5. Hardscape Design
6. Plan Summary Boxes
7. Cost Estimates
8. Tree Evaluation Analysis and Field Review (Tree Removal Permit not included).
9. Coordination Meetings

The landscape plan component shall include;

1. Tabulation of Quantities
2. Tree and Vegetation Inventory
3. Planting Details and Notes
4. Irrigation Details and Notes
5. Hardscape Plans
6. Hardscape Details and Notes
7. Cost Estimate



SCHEDULE

The draft traffic report shall be submitted to the applicant within 12 weeks from Notice to Proceed (NTP). A pdf and a hard copy of the report will be provided to the City for submittal to the County and FDOT for review. A final pdf and hard copy of the report, signed and sealed by a Florida licensed Professional Engineer, will be provided 2 weeks after resolution of any review comments are addressed.

III. Subconsultants

The below listed subconsultants will assist in the performance of the Work.

Subconsultant Name	Specialty or Expertise
RJ Behar and Company	Drainage Services
Miller Legg and Associates	Landscape Architecture

Schedule of Work – Time of Performance

The anticipated length of service for Tasks 3 shall be thirty weeks (30) commencing after the Notice to Proceed. Consultant shall submit the Deliverables and perform the Work as depicted in the table below.

SCHEDULE OF DELIVERABLES			
Task or Activity ID#	Major Task, Sub-Task, Activity, or Deliverables	Duration	Delivery Date
1,2,3,4	Plans Production – 90% Plans & Traffic Analysis & LJR	12 weeks	+12
1,2,3,4	Review by the City, County and affected agencies	4 weeks	+16
1,2,3,4	Plans Production – 100% Plans and Permits	12 weeks	+28
1,2,3,4	Review by the City, County and affected agencies	2 weeks	+30

Deliverables: At the completion of each task, Marlin will provide to the City all files associated with each deliverable to include drawings files in DWG or DGN and PDF formats.



IV. Compensation

- Consultant shall perform the additional work detailed in this Supplemental Agreement for a Total fee of \$300,000.00 (See attached worksheets).
- The original Contract amount is \$708,965.34

V. Additional Services

Additional services and unforeseen circumstances beyond established scope shall be negotiated in good faith and at the sole discretion of the City.


VI. City Furnished Documents & Data

The following information or documents are to be provided by the City, if available: As-built information including geotechnical information.

VII. Project Manager

Consultant's Project Manager for this Project will be **Mr. Armando Aguiar, P.E.**

Submitted by:


Betsy Jeffers, P.E.

Vice President, Marlin Engineering

Reviewed and approval in concept recommended by:

Department Director

Procurement Manager

City Manager



CITY OF HALLANDALE BEACH

Consultant Fee Proposal Worksheet

Consultant Name: **Marlin Engineering, Inc.**

Contract No.:

Date: 10/20/2021

Work Order No:

Project: **Atlantic Shore Blvd Supplemental**

Project No.:

Description:

STAFF CLASSIFICATION

Job Classification Assigned Staff Approved Rate	Sr. Project Mngr Aysel Freda Rate: \$200.00		Senior Engineer Rafael Lagos Rate: \$180.00		Project Engineer Julio Almeyda Rate: \$125.00		Senior Designer Ricardo Angulo Rate: \$115.00		Designer Manvitha Rajalingola Rate: \$100.00		Rate:		Rate:		Staff Hours	Salary	Average
	Man hours	Cost/ Task	Man hours	Cost/ Task	Man hours	Cost/ Task	Man hours	Cost/ Task	Man hours	Cost/ Task	Man hours	Cost/ Task	Man hours	Cost/ Task	By Task	Cost By Task	Rate Per Task
1 Roadway Analysis	50	\$10,000	150	\$27,000	180	\$22,500	50	\$5,750	50	\$5,000					480	\$70,250	\$146.35
2 Roadway Plans	26	\$5,200	40	\$7,200	80	\$10,000	20	\$2,300	18	\$1,800					184	\$26,500	\$144.02
3 Utilities	5	\$1,000	16	\$2,880	21	\$2,625	7	\$805	7	\$700					56	\$8,010	\$143.04
4 Signing and Pavement Marking Analysis	14	\$2,800	24	\$4,320	30	\$3,750	10	\$1,150	10	\$1,000					88	\$13,020	\$147.95
5 Signing and Pavement Marking Plans	8	\$1,600	22	\$3,960	24	\$3,000	6	\$690	6	\$600					66	\$9,850	\$149.24
6 Lighting Analysis	6	\$1,200	12	\$2,160	16	\$2,000	5	\$575	5	\$500					44	\$6,435	\$146.25
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Total Staff Hours	109		264		351		98		96						918		
Total Staff Cost		\$21,800.00		\$47,520.00		\$43,875.00		\$11,270.00		\$9,600.00						\$134,065.00	\$146.04
Total % of Work by Position	11.9%		28.8%		38.2%		10.7%		10.5%								

Note: Fee for the Principal(s) of the firm are not to be included above as the multiplier is not applicable to their hours. The fee is to be shown below and entered as a %

Estimate of Principal's Fee

Total hours _____ / hour = \$ _____

Notes:

1. This sheet is to be used by Prime Consultant to calculate the Grand Total Fee and one is to be used for each Subconsultant
2. Manually enter fee from each subconsultant. Unused subconsultant rows may be hidden
3. Where applicable the basis for work activity descriptions shall be the FICE/FDOT Standard Scope and Staff Hour Estimation Handbook.
4. Enter the multiplier value in the field after the word "multiplier" Maximum of 2 decimal points.

1 - SUBTOTAL ESTIMATED FEE: multiplier 1.00

additional Services (All

MARLIN Traffic

RJ Behar and Assoc.

Miller Legg and Assoc.

Principal's Fee

2 - SUBTOTAL ESTIMATED FEE:

Geotechnical Field/Lab Testing:

Survey Fee (or Survey Crew Fee):

Other Misc. Fee: [Enter Fee Description](#)

3 - SUBTOTAL ESTIMATED FEE:

Additional Services (Allowance)

Reimbursables (Allowance)

GRAND TOTAL ESTIMATED FEE:

\$134,065.00

\$37,398.70

\$63,561.30

\$64,975.00

\$ -

\$300,000.00

\$300,000.00

\$300,000.00

MARLIN ENGINEERING, INC.

City of Hallandale Beach
Atlantic Shores Boulevard Complete Streets Traffic Analysis
(SR 5/US-1 to Diplomat Parkway)



4/21/2021

STAFF HOUR ESTIMATE

Task	Activity	Principal	Senior Project Manager	Senior Traffic Engineer	Traffic Engineer	Senior Engineer	Project Engineer	CADD Technician	Survey Technician	Clerical	TOTAL
	<i>Rates</i>		\$ 200.00	\$ 180.00	\$ 125.00	\$ 180.00	\$ 125.00		\$ 110.00		
1	Data Collection										
	Conduct Field Review			2.0	2.0				1.0		5.0
	Summarize Volume & Speed Data				1.0				1.0		2.0
	Develop Exhibits and Figures				1.0				1.0		2.0
	Sub-total Hours	-	-	2.0	4.0	-	-	-	3.0	-	9.0
	Sub-total Salary Cost	\$ -	\$ -	\$ 360.00	\$ 500.00	\$ -	\$ -	\$ -	\$ 330.00	\$ -	\$ 1,190.00
2	Safety Review										
	Download crash data				1.0				1.0		2.0
	Summarize crashes in tables			1.0	1.0						2.0
	Sub-total Hours	-	-	1.0	2.0	-	-	-	1.0	-	4.0
	Sub-total Salary Cost	\$ -	\$ -	\$ 180.00	\$ 250.00	\$ -	\$ -	\$ -	\$ 110.00	\$ -	\$ 540.00
3	Crosswalk Warrant Analysis										
	Review proximity to attractors/generators			1.0	1.0						2.0
	Review pedestrian demand			1.0	1.0						2.0
	Review location characteristics			1.0	1.0						2.0
	Document criteria			1.0	1.0						2.0
	Sub-total Hours	-	-	4.0	4.0	-	-	-	-	-	8.0
	Sub-total Salary Cost	\$ -	\$ -	\$ 720.00	\$ 500.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,220.00
4	Roundabout Justification										
	Obtain pertinent data				2.0				2.0		4.0
	Review Justification categories			1.0	2.0						3.0
	Conduct AWSC warrant analysis			3.0	3.0						6.0
	Summarize operational performance and comparison analysis			2.0	4.0						6.0
	Assess contraindications			2.0							2.0
	Document MUTS form			1.0	2.0						3.0
	Sub-total Hours	-	-	9.0	13.0	-	-	-	2.0	-	24.0
	Sub-total Salary Cost	\$ -	\$ -	\$ 1,620.00	\$ 1,625.00	\$ -	\$ -	\$ -	\$ 220.00	\$ -	\$ 3,465.00
5	Segment and Intersection Operation Analysis										
	Balance existing volumes (AM & PM)			4.0	4.0						8.0
	Opening / Design Year Traffic			2.0	2.0						4.0
	Roadway Level of Service Analysis (3 scenarios, Existing, No-Build & Build/2025 & 2045, AM & PM)			5.0	10.0						15.0
	Existing Synchro Model Calibration /Validation (AM & PM)			6.0	12.0						18.0
	Future No-Build LOS Analysis (2025 & 2045, AM & PM)			3.0	6.0						9.0
	Future Build LOS Analysis (2 Alternatives, 2025 & 2045, AM & PM)			12.0	20.0						32.0
	Sub-total Hours	-	-	32.0	54.0	-	-	-	-	-	86.0
	Sub-total Salary Cost	\$ -	\$ -	\$ 5,760.00	\$ 6,750.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,510.00
8	Project Coordination										
	Meetings (3)			6.0							6.0
	Agency Coordination			6.0							6.0
	Sub-total Hours	-	-	12.0	-	-	-	-	-	-	12.0
	Sub-total Salary Cost	\$ -	\$ -	\$ 2,160.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,160.00
7	Documentation										
	Draft Report			12.0	18.0				4.0	1.0	35.0
	Final Report			5.0	10.0				2.0	1.0	18.0
	QA/QC			4.0							4.0
	Sub-total Hours	-	-	21.0	28.0	-	-	-	6.0	2.0	57.0
	Sub-total Salary Cost	\$ -	\$ -	\$ 3,780.00	\$ 3,500.00	\$ -	\$ -	\$ -	\$ 660.00	\$ -	\$ 7,940.00
	Marlin Engineering Total Hours	-	-	81.0	105.0	-	-	-	12.0	2.0	200.0
	Marlin Engineering Salary Cost	\$ -	\$ -	\$ 14,580.00	\$ 13,125.00	\$ -	\$ -	\$ -	\$ 1,320.00	\$ -	\$ 29,025.00

0%	0%	41%	53%	0%	0%	6%	1%
Traffic Data Collection							
4-Hour Turning Movement and/or pedestrian Counts	Broward	\$1,000.74	x	5	Intersection	\$5,003.70	
Pedestrian 12Hrs Volume Counts	Broward	\$1,283.74	x	1	Intersection	\$1,283.74	
ADT 72-hr Arterial	Broward	\$528.88	x	4	locations	\$2,115.52	
Data Collection - Total Fee						\$ 8,402.96	
Marlin Engineering Total Project Cost						\$ 37,427.96	

FEE PROPOSAL SUMMARY**R.J. BEHAR & COMPANY****PROJECT DESCRIPTION: Atlantic Shores Option B Implementation****DRAINAGE**

ACTIVITY	PROJECT MANAGER		SENIOR ENGINEER		PROJECT ENGINEER		DESIGNER		MANHOURS BY ACTIVITY	TOTAL COST BY ACTIVITY
	MAN HOURS	\$ 205.00 HOURLY RATE	MAN HOURS	\$ 137.00 HOURLY RATE	MAN HOURS	\$ 110.00 HOURLY RATE	MAN HOURS	\$ 75.00 HOURLY RATE		
DESIGN & PERMITTING	29	\$ 5,945.00	113	\$ 15,481.00	113	\$ 12,430.00	27	\$ 2,025.00	282	\$ 35,881.00
PLANS	25	\$ 5,125.00	37	\$ 5,069.00	74	\$ 8,140.00	108	\$ 8,100.00	244	\$ 26,434.00
TOTAL	54	\$ 11,070.00	150	\$ 20,550.00	187	\$ 20,570.00	135	\$ 10,125.00	526	\$ 62,315.00
LABOR FEE										\$ 62,315.00
DIRECT REIMBURSABLE (2%)										\$ 1,246.30
SUBCONSULTANTS										
SURVEY:										
GEOTECH:										\$ -
TOTAL LUMP SUM:										\$ 63,561.30

Notes:

Assumes Milling and Resurfacing w/minor widening. Only adding water quality treatment for the additional impervious area.

Assumes adding structures based on new curb lines.

DESIGN**R.J. BEHAR & COMPANY****PROJECT DESCRIPTION: Atlantic Shores Option B Implementation****DESIGN**

TASK	BASIS OF ESTIMATE	NO. OF UNITS	HRS/ UNIT	NO. OF SHEETS	TOTAL HOURS	REMARKS
Field Review	L.S.	0	0		0	Already included in original scope
Data Collection	L.S.	1	4		4	Review exist permits, as-built plans, survey, flood maps, water table maps, etc
Prepare Drainage Map	L.S.	1	18		18	For calculations
Design Storm Drains	EA	50	2.5		125	Check spread, modify Str sewer 32 exist + 28 new. 60 - 10 included in original analysis
Optional Culvert Analysis	EA	1	0		0	N/A City uses ADS gray pipe
Retrofit Outfall W/Tidal Gate	LS	1	32		32	Calculations and design
Overflow Connection to PS	LS	1	8		8	Develop details
Design Drainage Wells	EA	2	8		16	Assume two wells to treat additional impervious area
Drainage Report	LS	1	32		32	
Meetings	EA	6	3		18	2 w/BC, 2 w/City, 2 Internal
Permit Modification*	LS	1	8		8	Modify existing permit (Minor Modification) BC (BC license and ERP) 40 hr - 32 included
Coordination W/FDOT	LS	1	8		8	
Quality Control Hours	LS	1	13		13	5%
					0	
					0	
SUBTOTAL					282	

PLANS**R.J. BEHAR & COMPANY****PROJECT DESCRIPTION: Atlantic Shores Option B Implementation****Plans Preparation**

TASK	BASIS OF ESTIMATE	NO. OF UNITS	HRS/ UNIT	NO. OF SHEETS	TOTAL HOURS	CADD HOURS	REMARKS
Quantity Tables & Bid Item Notes	SHEET	2	6	1	12		3 sheets - 1 included = 2
General Notes	SHEET	1	6	1	6		
Drainage Sections	EA	38	3	3	114		32 structures to modify and 28 new - 22 included
Connection to PS	EA	1	12	1	12		
Tidal Gate Retrofit Details	EA	1	40	1	40		
Miscellaneous Details	EA	1	24	1	24		Pervious Pavement, drainage well and Misc. details
Erosion Control Plans	EA	3	8	3	24		
Quality Control Hours	LS	1	12		12		5%
SUBTOTAL				11	244		

ESTIMATE OF WORK EFFORT AND COST - SUBCONSULTANT

Name of Project:		Atlantic Shores Boulevard from US-1 / Federal Highway to Diplomat Parkway (Supplemental #1)										Consultant Name: Miller Legg & Associates, Inc.				
County:		Broward										Consultant No.: 65-0563467				
FPN:		0										Date: 3/1/2021				
FAP No.:		N/A										Estimator: Brian Shore				
Staff Classification	Total Staff Hours From "SH Summary Firm"	Senior Landscape	Landscape Architect	Landscape Designer	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	SH By Activity	Salary Cost By Activity	Average Rate Per Task
		\$135.00	\$115.00	\$100.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			
25. Landscape Architecture Analysis	333	78	98	157	0	0	0	0	0	0	0	0	0	333	\$37,500	\$112.61
26. Landscape Architecture Plans	244	57	72	115	0	0	0	0	0	0	0	0	0	244	\$27,475	\$112.60
Total Staff Hours	577	135	170	272	0	0	0	0	0	0	0	0	0	577		
Total Staff Cost		\$18,225.00	\$19,550.00	\$27,200.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$64,975.00	\$112.61
Check = \$64,975.00														GRAND TOTAL ESTIMATED FEE:		
														\$64,975.00		

25. Landscape Arch. Analysis

Estimator: Brian Shore

Atlantic Shores Boulevard from US-1 / Federal Highway to Diplomat Parkway (Supplemental #1)

0

Representing	Print Name	Signature / Date
City		
Miller Legg & Associates, Inc.		

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
25.1	Data Collection	LS	1	16	16	Additional coordination of design files and research associated with applicable design standards
25.2	Site Inventory and Analysis	LS	1	13	13	Includes additional office analysis of existing, proposed and field review data
25.3	Planting Design	LS	1	64	64	Additional landscape: Includes an increase in planting areas, median islands / swales and/or parking islands / bulbouts / one roundabout. Initial Design: 0.85 mile x 40 hrs = 34 hrs Final Design: 0.85 mile x 40 hrs = 34 hrs
25.4	Irrigation Design	LS	1	54	54	Additional irrigation: Includes an increase in irrigation areas, median islands / swales and/or parking islands / bulbouts / one roundabout. Assumes one existing reclaimed water source supplied by others. Feasibility Report for reclaimed water demand or pressure: N/A Initial Design: 0.85 mile x 24 hrs = 20 hrs Final Design: 0.85 mile x 40 hrs = 34 hrs
25.5	Hardscape Design	LS	1	85	85	Hardscape: Includes hardscape features at roundabout, intersections. (does not include underground tree cell systems) Initial Design: 0.85 mile x 40 hrs = 34 hrs Final Design: 0.85 mile x 60 hrs = 51 hrs
25.6	Plan Summary Boxes	LS	1	12	12	Additional landscape & Irrigation
25.7	Cost Estimates	LS	1	12	12	Additional: Increase in Landscape Irrigation & Hardscape features Preliminary 4 hrs & Initial estimate 4 hrs
25.8	Technical Special Provisions and Modified Special Provisions	LS	0	0	0	Not Applicable
25.9	Other Landscape Architecture	LS	1	15	15	Tree Evaluation analysis (office) = 8 hrs Tree Evaluation field review = 0.85 mile x 8 hrs = 7 hrs Tree Removal Permit = Not Included, provided by others
Landscape Architecture Analysis Technical Subtotal					271	
25.10	Outdoor Advertising	LS	0	0	0	Not Applicable
25.11	Field Reviews	LS	1	6	6	Additional Field Review: 1 staff x 1 visit x 6 hrs each = 6 hrs
25.12	Technical Meetings / Public Meetings	LS	1	16	16	Meetings are listed below
25.13	Quality Assurance/Quality Control	LS	%	5%	14	Quality Assurance/Quality Control

25. Landscape Arch. Analysis

25.14	Independent Peer Review	LS	%	0%	0	Not Applicable
25.15	Supervision	LS	%	5%	14	Supervision
Landscape Architecture Analysis Nontechnical Subtotal					50	
25.16	Project Coordination	LS	%	2%	6	Project Coordination
25.17	Interdisciplinary Coordination	LS	%	2%	6	Interdisciplinary Coordination
25. Landscape Analysis Total					333	

25. Landscape Arch. Analysis

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	Comments	PM Attendance at Meeting Required?	Number
Kickoff, Concept review	EA	0	0	0	No included		0
Maintaining Agency (cities, counties)	EA	0	0	0	No included		0
Utility Owners	EA	0	0	0	No included		0
Local Agency for Tree Removal	EA	0	0	0	No included		0
Local Citizen Group(s)	EA	2	6	12	Public Meetings		0
Other Meetings	EA	0	0	0	No included		0
Subtotal Technical Meetings				12	Subtotal Project Manager Meetings		0
Progress Meetings	EA	2	2	4	PM attendance at Progress Meetings is manually entered on General Task 3		--
Phase Review Meetings	EA	0	0	0	PM attendance at Phase Review Meetings is manually entered on General Task 3		--
Total Meetings				16	Total Project Manager Meetings (carries to Tab 3)		0

Carries to 25.12

Carries to Tab 3

26. Landscape Arch. Plans

Estimator: Brian Shore

Atlantic Shores Boulevard from US-1 / Federal Highway to Diplomat Parkway (Supplemental #1)

0

Representing	Print Name	Signature / Date
City		
Miller Legg & Associates, Inc.		

Task No.	Task	Scale	Units	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
26.1	Key Sheet		Sheet	1	0	1	0	Not Applicable
26.2	Tabulation of Quantities		Sheet	1	8	1	8	Landscape Tabulation = 1 sheet Irrigation Summary = 1 sheet
26.3	General Notes		Sheet	0	0	0	0	Not Included
26.4	Tree and Vegetation Inventory, Protection and Relocation Plans	1" = 40'	Sheet	14	3	14	42	Tree Disposition Plans - 14 Sheets
26.5	Planting Plans For Linear Roadway Projects	1" = 30'	Sheet	0	0	0	0	Not Applicable
26.6	Planting Plans (Interchanges and Toll Plazas)		Sheet	0	0	0	0	Not Applicable
26.7	Planting Details and Notes		Sheet	2	8	2	16	Additional Sheets
26.8	Irrigation Plans for Linear Roadway Project		Sheet	0	0	0	0	Not Applicable
26.9	Irrigation Plans for Interchange and Toll Plazas		Sheet	0	0	0	0	Not Applicable
26.10	Irrigation Details and Notes		Sheet	1	12	1	12	1 Additional Detail Sheet (Assumes existing reclaimed water point of connection)
26.11	Hardscape Plans	1" = 10' / 30'	Sheet	14	6	14	84	Hardscape Plans - 14 Sheets
26.12	Hardscape Details and Notes		Sheet	4	16	4	64	Hardscape Details (does not include underground tree cell systems)
26.13	Maintenance Plan		Sheet	0	0	0	0	Not Applicable
26.14	Cost Estimate		LS	1	2		2	Additional Final Estimate
Landscape Architecture Plans Technical Hours Subtotal						37	228	
26.15	Quality Assurance/Quality Control		LS	%	5%		11	Quality Assurance/Quality Control
26.16	Supervision		LS	%	2%		5	Supervision
26. Landscape Architecture Plans Total						37	244	