RESOLUTION NO. 2018-89

A RESOLUTION OF THE MAYOR AND VILLAGE COUNCIL OF THE VILLAGE OF PALMETTO BAY, FLORIDA, RELATED TO VILLAGE-WIDE TRAFFIC CALMING IMPROVEMENTS; APPROVING THE IMPLEMENTATION OF PHASE 2 OF TRAFFIC STUDIES FOR ALL MAJOR INTERSECTIONS ALONG OLD CUTLER ROAD, AS IDENTIFIED IN THE ADOPTED TRAFFIC CALMING MASTER PLAN INCLUDING SW 176TH ST., SW 168TH ST. TO SW 144 ST., AND SW 136TH ST.,; AUTHORIZING THE VILLAGE MANAGER TO EXECUTE THE APPLICABLE TRAFFIC STUDY PROPOSALS WITH MARLIN ENGINEERING, INC. FOR THE AMOUNTS OF $44,122.12, $70,646.36, $74,437.72, RESPECTIVELY; AND PROVIDING FOR AN EFFECTIVE DATE. *(Sponsored by Administration)*

WHEREAS, the Village of Palmetto Bay recently approved the Village-wide Traffic Calming Master Plan, completed by Marlin Engineering, Inc., through the adoption of Resolution No. 2018-20; and,

WHEREAS, the Traffic Calming Master Plan identifies priorities and solutions that improve traffic flow in the Village and creates a safer environment for pedestrians and drivers; and,

WHEREAS, as part of the Traffic Calming Master Plan, Marlin Engineering, Inc., completed a number of traffic studies to assist in recommending priorities and strategies to achieve better traffic flow and improve safety; and,

WHEREAS, Old Cutler Road serves as one of the main North/ South corridors in the Village and present traffic conditions on this arterial road primarily impact residential areas; and,

WHEREAS, Village residents have voiced concerns over a significant increase in cut-through traffic and aggressive driving trends on their neighborhood streets resulting from the existing traffic conditions along Old Cutler Road; and,

WHEREAS, Marlin Engineering completed the first phase of traffic studies as part of the Traffic Calming Master Plan and the Village desires to implement phase two of the traffic studies with said consultant for all major intersections along Old Cutler Road, including SW 136 St, SW 144 St. to SW 168 St., and SW 176 St.

NOW, THEREFORE, BE IT RESOLVED BY THE VILLAGE OF PALMETTO BAY, FLORIDA, THAT:

Section 1. The Village Council hereby approves the implementation of phase 2 of traffic studies for all major intersections along Old Cutler Road, as identified in the adopted Traffic Calming Master Plan.

Section 2. The Village Manager is authorized to execute the applicable traffic study proposals with Marlin Engineering, Inc. to complete the traffic studies for the major intersections along Old Cutler Road, to include SW 136 St. for the amount of $74,437.72, SW 144 St. to SW 168 St. for the amount of $70,646.36, and SW 176 St. for the amount of $44,122.12.

Section 3. This Resolution shall take effect immediately upon its adoption.

PASSED and **ADOPTED** this 9th day of July, 2018.

Attest:

DocuSigned by:
Missy Arocha
6EDC211E5E8C48C...
Missy Arocha
Village Clerk

DocuSigned by:
3B8854AD569F494...
Eugene Flinn
Mayor

APPROVED AS TO FORM AND LEGAL SUFFICIENCY FOR THE USE AND RELIANCE OF THE VILLAGE OF PALMETTO BAY, FLORIDA ONLY:

DocuSigned by:
Dexter W. Lehtinen
1B1D00E71321445...

Dexter W. Lehtinen
Village Attorney

FINAL VOTE AT ADOPTION:

Council Member Karyn Cunningham	YES
Council Member David Singer	YES
Council Member Larissa Siegel Lara	YES
Vice-Mayor John DuBois	YES
Mayor Eugene Flinn	YES

MARLIN

OLD CUTLER ROAD AT SW 136TH STREET AND SW 67TH AVENUE TRAFFIC STUDY SCOPE

TO: Mr. Dionisio Torres
Public Works Director
Village of Palmetto Bay
9705 Hibiscus Street
Palmetto Bay, FL 33157

FROM: Steven Schindler, PE, PTOE
MARLIN Engineering Inc.
1700 NW 66th Avenue, Suite 106
Plantation, FL 33313

SUBJECT: Old Cutler Road at SW 136th Street and SW 67th Avenue Traffic Study Scope

DATE: June 1, 2018

Dear Mr. Torres,

Marlin Engineering, Inc. (MEI) has been requested by the Village of Palmetto Bay to provide a scope and manhours/fee to perform a traffic study to determine improvements for the intersections of Old Cutler Road and SW 136th Street and SW 67th Court, and Old Cutler Road and SW 67th Avenue. These are intersections which are located approximately 465 feet from each other. Both are currently controlled by traffic signals. Both intersections (and affected nearby intersections) will be analyzed in the study. After approval of the preferred alternative by the Village of Palmetto Bay and the Miami-Dade County Department of Transportation and Public Works (DTPW), Traffic Engineering Section, the preferred alternative would then be designed and constructed under future scopes.

I. DESCRIPTION OF SERVICES

TASK A- Traffic Counts

MEI shall collect eight (8) hours of turning movement counts (6AM-9AM, 11AM-1PM, and 3PM-6PM) at each of the study intersections during a typical weekday on the same day (Tuesday, Wednesday, or Thursday). Trucks shall be included and tabulated separately. Pedestrian and bicycle counts shall be included and tabulated separately. The turning movement counts will be performed using Miovision video recording equipment. Peak hour for the AM peak, Mid-Day peak, and PM peak will be determined. The peak hours determined will be for both intersections as a whole and not individually. In addition, turning movement counts will also be conducted at SW 136th Street and SW 70th Avenue/Farmer Road, Old Cutler Road and S Cartee Road, Old Cutler Road and SW 70th Avenue/Farmer Road, and SW 136th Street and 68th Court. The recommended improvement may result in a change in travel patterns, as the left-turn movement from northeastbound Old Cutler Road to westbound SW 136th Street is currently prohibited, and the recommended improvement may restore this movement. In addition, the recommended improvement could potentially cut off the SW 67th Court approach to the intersection of Old Cutler Road and SW 136th Street.

Task A products:

i) Eight-hour turning movement counts at each study intersection (6 intersections)
ii) Eight-hour pedestrian and bicycle counts at each study intersection (6 intersections)

TASK B- Intersection Inventory/Existing Conditions

MEI shall conduct a field inventory of the study intersections, roadway between the intersections, and all approaches to the intersections. The condition diagram shall be created using CADD and shall include intersection geometry, lane use/arrangements, and identification of all traffic control devices including pedestrian features, and other roadway or roadside elements that contribute to the quality of intersection operation or safety such as bus stops, school zones, sight distance obstructions, etc. It shall also include any roadway features which may be impacted by an alternative.

A qualified traffic engineer of MEI and registered in the state of Florida (PTOE certified preferred) shall perform field reviews during the study peak time periods (AM and PM) to make qualitative assessments. Such factors as queue lengths, delays, vehicular conflicts, pedestrian conflicts, or any other operational characteristics critical to evaluate the need for improvements will be noted. During the field review safety conditions shall be observed and recorded.

Task B product:

i) Existing condition diagram

TASK C- Crash Analysis

MEI shall analyze the crash data and identify abnormal crash characteristics or patterns to assist in evaluating alternatives. Crash data shall be of the latest three (3) full years available using crash data from the Signal Four Analytics (University of Florida) website.

Task C products:

i) Crash analysis (include crash summary sheets)
ii) Abnormal crash characteristics/patterns
iii) Possible crash causes and countermeasures for each abnormal pattern

TASK D- Existing Conditions Operational Analysis

MEI shall factor the turning movement counts by the Peak Season Factor for Miami-Dade County South provided by the Florida Department of Transportation (FDOT) Florida Traffic Online website. Existing signal timings shall be obtained from the Miami-Dade County Department of Transportation and Public Works (MDC DTPW), Traffic Engineering section. Using methodology based on the Highway Capacity Manual, and using SYNCHRO software, MEI shall determine the existing and resulting level of service (LOS) and delays for the existing intersections (for each approach and overall) for the AM, Mid-Day, and PM peak hours. In addition, MEI shall determine if any improvement in operations would be made if the existing signal timings were optimized.
Task D products:

i) Level of service and delays and 95th percentile queue lengths for existing condition
ii) Level of service and delays and 95th percentile queue lengths for optimized existing conditions

TASK E- Future Traffic (Opening Year and Design Year- 20 years from Opening Year) Projection

MEI shall utilize Traffic Trends software and historical count data from either Miami-Dade County and/or FDOT to determine a growth rate. The growth rate would be applied to the factored turning movement counts to determine the turning movement counts at opening year. The opening year would be the estimated year that the improvement would be completed and open to traffic (tentatively estimated to be 2021 unless otherwise directed by the Village). In addition, the design year will be 20 years from opening year (2041). To determine turning movement counts for the design year, all committed developments within the study area will be quantified. This data will be collected from the Village of Palmetto Bay and MDC Department of Planning and Zoning. It will include all developments that have entered the concurrency application process, yet have not been constructed, are within the study area, as defined by the Village's Planning Department (generally within a one (1)-mile radius of the project). To counterbalance subtractions from transportation network capacity, future transportation projects, which add capacity to the network shall be quantified. These must be represented as approved and funded projects, set for implementation within one year of project opening, within the Miami-Dade TPO's adopted Transportation Improvement Program (TIP) and/or the Village's program. This information would be used to factor into the development of Design Year turning movement volumes.

Task E products:

i) Turning movement count diagrams for AM peak, Mid-Day peak, and PM peak for Existing, Opening year, and Design Year
ii) Turning movement count diagrams for AM peak, Mid-Day peak, and PM peak for Opening Year and Design Year if left-turn movement from northeastbound Old Cutler Road to westbound SW 136th Street is restored (would reduce traffic volumes on northbound SW 70th Avenue/Farmer Road) and if the SW 67th Court approach is cut off with access to residences along the north side of SW 136th Street provided via 68th Court only

TASK F- Alternatives Analysis

MEI shall consider intersection geometry, channelization, signal timing and phasing, display and operations, crash history, and delays as well as any other factors that impact the safety and operation of the intersections. Recommendations for improvement shall be evaluated for their effectiveness. A minimum of three (3) alternatives will be evaluated. The "Do Nothing" alternative may be included but not counted as one of the alternatives. Roundabout(s) will be considered in the development of alternatives. Roundabout analysis will be performed using SIDRA software.

From the results of the previous tasks and appropriate analysis, MEI shall make conceptual recommendations for optimizing the intersection operation - from both a safety and operational standpoint. The Consultant shall provide sketches, created in CADD with detailed measurements as appropriate, for proposed conditions for the improvement alternatives identified. The report shall recommend, in consideration of accepted traffic engineering practice and optimal project/user benefits, improvements to include but not be limited to geometry and/or capacity enhancements, improved channelization and positive guidance, improved traffic signal operations, which may include display

adjustments or phasing and timing adjustments, up to additional turn lanes, realignment, or total reconstruction of one or both of the intersections into roundabouts.

All proposed intersection improvements should be evaluated for their overall and peak period effectiveness. MEI shall describe the expected number and type of crashes reduced by each improvement. As part of this effort the consultant shall evaluate the design criteria, design variances/exceptions, constructability and impacts (Right of Way, drainage, permits, utilities, environmental, access management, American with Disabilities Act, etc.) of the alternatives.

Task F products:

i) Proposed improvement diagrams
ii) Analysis of effectiveness for each alternative
iii) Operational analysis for each alternative for AM peak, Mid-Day peak, and PM peak for Opening Year and Design Year (LOS, delay, and 95th percentile queue lengths for each approach, and overall LOS and delay for each intersection)

TASK G- Public Information Meeting

MEI shall conduct a public information meeting with assistance from the Village at a location of the Village's choosing after the draft report is submitted to the Village and Miami-Dade County for review and comment. After comments from the Village and County are received and incorporated into the draft report, a public information meeting shall be held. MEI will produce a flyer describing the study to notify Village residents of the public meeting. Distribution of the flyer will be as per the Village. A PowerPoint presentation will be prepared, along with roll plots and/or display boards depicting improvement alternatives for display to the public. Public comments will be received and incorporated into the analysis and study as necessary.

Task G products:

i) Flyer to advertise public meeting
ii) PowerPoint presentation
iii) Roll plots and/or display boards of alternatives for display
iv) Attend public meeting and solicit public comments and answer questions

TASK H- Preliminary Cost Estimate

The Consultant shall determine a preliminary cost estimate (which will include design, construction engineering, and contingencies; also Right of Way if necessary) of the improvement alternatives proposed using recent FDOT historical cost data. A total benefit/cost ratio for each of the proposed alternatives shall be provided.

Task H product:

i) Cost estimates and benefit/cost ratio for proposed improvements

TASK I- Miami-Dade County Department of Transportation and Public Works (MDC DTPW), Traffic Engineering Section, Coordination and Approval

MEI will submit the draft and final traffic study to the Village and MDC DTPW, Traffic Engineering Section, for review and comment. MEI will respond to and incorporate comments received as necessary. MEI will submit the final traffic study for MDC DTPW approval. MEI will coordinate as necessary to ensure approval is obtained in a timely fashion.

TASK J- Report

The products of previous tasks within this study shall be analyzed collectively. MEI shall then form a traffic study report. The report shall recommend, in consideration of accepted traffic engineering practice and optimal project/user benefits, improvements to include but not be limited to geometry and/or capacity enhancements, improved channelization and positive guidance, improved traffic signal operations, which may include display adjustments or phasing and timing adjustments, up to additional turn lanes, realignment, or total reconstruction of one or both of the intersections into roundabouts. Attached to this report, in the form of appendices or figures (as appropriate), shall be the products described above. MEI will submit the final study to the Village and MDC DTPW, Traffic Engineering Section, for review and comment. Comments will be incorporated into the final study as necessary.

Task J products:

i) One (1) draft hard copy and one (1) draft CD-R, and three (3) final hard copies (signed and sealed) and one (1) final CD-R of traffic study

II. SCHEDULE

MEI shall begin work upon issuance of the work order.
Data Collection- Completed within 30 days of issuance of work order (Notice To Proceed)
Draft Traffic Study- Completed within 180 days from NTP
Respond to Village and MDC DTPW comments on draft study- Within 14 days of receiving comments
Public Information Meeting- Completed within 240 days from NTP
Final Traffic Study- Completed within 270 days from NTP
Respond to Village and MDC DTPW comments on final study- Within 7 days of receiving comments

III. BUDGET

The attached staff hour fee proposal contains the budget for the work effort including out of pocket expenses. For the services performed, the Village will pay the Engineer the lump sum fee of **$74,437.72.** The hourly billing rates are consistent with the unit rates shown in the Executed Agreement for this contract. This Work Order is a Lump Sum Work Order, and shall be billed monthly as a percentage of completion.

IV. ACCEPTANCE

The return of an executed copy of this proposal and retainer fee would constitute our Notice to Proceed.

Sincerely,

MARLIN ENGINEERING, INC.

Steven Schindler, PE, PTOE
Traffic Engineering Department Manager

ACCEPTED BY: _____ **DATE:** _____

ENTITY: _____

TITLE: _____

MARLIN ENGINEERING, INC.

CONSULTANT SERVICES FOR VILLAGE OF PALMETTO BAY

OLD CUTLER ROAD AT SW 136TH ST AND SW 67TH AVE TRAFFIC STUDY

COST PROPOSAL

6/1/2018

Task	Activity	Project Manager / Senior Traffic Engineer	Senior Engineer / Traffic Engineer	Project Engineer / Roadway Engineer	Engineering Intern	CADD Specialist	Engineering Technician	Clerical	TOTAL
	Rates	$ 145.00	$ 135.00	$ 125.00	$ 110.00	$ 90.00	$ 80.00	$ 50.00	
A	**Traffic Counts**								
	Set up Miovision camera	0.0	0.0	0.0	0.0	0.0	8.0	0.0	8.0
	Remove Miovision camera	0.0	0.0	0.0	0.0	0.0	6.0	0.0	6.0
	Sub-total Hours	-	-	-	-	-	**14.0**	-	**14.0**
	Sub-total Salary Cost	$ -	$ -	$ -	$ -	$ -	$ 1,120.00	$ -	**$ 1,120.00**
B	**Intersection Inventory/Existing Conditions**								
	Field review during AM peak and PM peak	20.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0
	Existing condition diagram	2.0	2.0	0.0	8.0	16.0	0.0	0.0	28.0
	Sub-total Hours	**22.0**	**2.0**	-	**8.0**	**16.0**	-	-	**48.0**
	Sub-total Salary Cost	$ 3,190.00	$ 270.00	$ -	$ 880.00	$ 1,440.00	$ -	$ -	**$ 5,780.00**
C	**Crash Analysis**								
	Acquire crash data	0.0	0.0	0.0	0.0	0.0	4.0	0.0	4.0
	Crash Analysis	1.0	4.0	0.0	16.0	0.0	0.0	0.0	21.0
	Sub-total Hours	**1.0**	**4.0**	-	**16.0**	-	**4.0**	-	**25.0**
	Sub-total Salary Cost	$ 145.00	$ 540.00	$ -	$ 1,760.00	$ -	$ 320.00	$ -	**$ 2,765.00**
D	**Existing Conditions Operational Analysis**								
	Obtain existing signal timings	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0
	Turning movement diagrams for existing	0.0	0.0	0.0	6.0	0.0	4.0	0.0	10.0
	SYNCHRO analysis of existing conditions	0.0	16.0	0.0	0.0	0.0	0.0	0.0	16.0
	Analyze optimizing signal timings	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0
	Sub-total Hours	-	**20.0**	-	**7.0**	-	**4.0**	-	**31.0**
	Sub-total Salary Cost	$ -	$ 2,700.00	$ -	$ 770.00	$ -	$ 320.00	$ -	**$ 3,790.00**
E	**Future Traffic Projection**								
	Determine growth rate	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0
	Quantify committed developments	0.0	8.0	0.0	0.0	0.0	0.0	0.0	8.0
	Turning movement diagrams for opening & design years	0.0	16.0	0.0	0.0	0.0	8.0	0.0	24.0
	Sub-total Hours	-	**28.0**	-	-	-	**8.0**	-	**36.0**
	Sub-total Salary Cost	$ -	$ 3,780.00	$ -	$ -	$ -	$ 640.00	$ -	**$ 4,420.00**
F	**Alternatives Analysis**								
	Alternatives Analysis	8.0	48.0	0.0	24.0	0.0	0.0	0.0	80.0
	Proposed Improvement diagrams	4.0	0.0	0.0	0.0	32.0	8.0	0.0	44.0
	Identify impacts of alternatives	4.0	24.0	0.0	0.0	0.0	0.0	0.0	28.0
	SYNCHRO & SIDRA analysis of alternatives	0.0	40.0	0.0	0.0	0.0	0.0	0.0	40.0
	Sub-total Hours	**16.0**	**112.0**	-	**24.0**	**32.0**	**8.0**	-	**192.0**
	Sub-total Salary Cost	$ 2,320.00	$ 15,120.00	$ -	$ 2,640.00	$ 2,880.00	$ 640.00	$ -	**$ 23,600.00**
G	**Public Information Meeting**								
	Flyer to advertise public meeting	2.0	0.0	0.0	4.0	0.0	0.0	0.0	6.0
	PowerPoint presentation	4.0	8.0	0.0	4.0	0.0	0.0	0.0	16.0
	Roll plots and/or display boards	0.0	0.0	0.0	0.0	8.0	0.0	0.0	8.0
	Administer public meeting	8.0	8.0	0.0	0.0	0.0	0.0	2.0	18.0
	Sub-total Hours	**14.0**	**16.0**	-	**8.0**	**8.0**	-	**2.0**	**48.0**
	Sub-total Salary Cost	$ 2,030.00	$ 2,160.00	$ -	$ 880.00	$ 720.00	$ -	$ 100.00	**$ 5,890.00**
H	**Preliminary Cost Estimate**								
	Preliminary Cost Estimate & Benefit/Cost Ratio	2.0	0.0	16.0	16.0	0.0	0.0	0.0	34.0
	Sub-total Hours	**2.0**	-	**16.0**	**16.0**	-	-	-	**34.0**
	Sub-total Salary Cost	$ 290.00	$ -	$ 2,000.00	$ 1,760.00	$ -	$ -	$ -	**$ 4,050.00**
I	**Miami-Dade County DTPW Coordination**								
	MDC DTPW Coordination	16.0	0.0	0.0	0.0	0.0	0.0	0.0	16.0
	Respond to comments	6.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0
	Obtain approval	12.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0
	Sub-total Hours	**34.0**	-	-	-	-	-	-	**34.0**
	Sub-total Salary Cost	$ 4,930.00	$ -	$ -	$ -	$ -	$ -	$ -	**$ 4,930.00**
J	**Report**								
	Report writing	8.0	48.0	0.0	0.0	48.0	0.0	0.0	104.0
	Submit draft study	2.0	0.0	0.0	0.0	0.0	0.0	2.0	4.0
	Respond to comments	6.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0
	Submit final study	2.0	0.0	0.0	0.0	0.0	0.0	2.0	4.0
	QA/QC	12.0	12.0	0.0	0.0	2.0	0.0	0.0	26.0
	Sub-total Hours	**30.0**	**60.0**	-	-	**50.0**	-	**4.0**	**144.0**
	Sub-total Salary Cost	$ 4,350.00	$ 8,100.00	$ -	$ -	$ 4,500.00	$ -	$ 200.00	**$ 17,150.00**
	Marlin Engineering Total Hours	**119.0**	**242.0**	**16.0**	**79.0**	**106.0**	**38.0**	**6.0**	**606.0**
	Marlin Engineering Salary Cost	17,255.00	32,670.00	2,000.00	8,690.00	9,540.00	3,040.00	300.00	**$ 73,495.00**
								Subtotal	$ 73,495.00
								Miovision Processing Fee	$942.72
								TOTAL	**$ 74,437.72**

MARLIN

OLD CUTLER ROAD FROM SW 144TH STREET TO SW 168TH STREET TRAFFIC STUDY SCOPE

TO: Mr. Dionisio Torres
Public Works Director
Village of Palmetto Bay
9705 Hibiscus Street
Palmetto Bay, FL 33157

FROM: Steven Schindler, PE, PTOE
MARLIN Engineering Inc.
1700 NW 66th Avenue, Suite 106
Plantation, FL 33313

SUBJECT: Old Cutler Road from SW 144th Street to SW 168th Street Traffic Study Scope- Intersection Improvements at three intersections

DATE: June 1, 2018

Dear Mr. Torres,

Marlin Engineering, Inc. (MEI) has been requested by the Village of Palmetto Bay to provide a scope and manhours/fee to perform a traffic study to determine improvements for the intersections of Old Cutler Road at SW 144th Street, Old Cutler Road at SW 152nd Street, and Old Cutler Road at SW 168th Street. These intersections are all controlled by traffic signals. The Village desires to improve traffic operations at these intersections, which could include reversible lanes which would allow dual left-turns from side streets onto Old Cutler Road during peak periods, providing additional capacity without the necessity to construct a substantial amount of pavement widening. After approval of the preferred alternative by the Village of Palmetto Bay and the Miami-Dade County Department of Transportation and Public Works (DTPW), Traffic Engineering Section, the preferred alternative would then be designed and constructed under future scopes.

I. DESCRIPTION OF SERVICES

TASK A- Traffic Counts

MEI shall collect eight (8) hours of turning movement counts (6AM-9AM, 11AM-1PM, and 3PM-6PM) at the three (3) study intersections during a typical weekday (Tuesday, Wednesday, or Thursday). Trucks shall be included and tabulated separately. Pedestrian and bicycle counts shall be included and tabulated separately. The turning movement counts will be performed using Miovision video recording equipment. Peak hour for the AM peak, Mid-Day peak, and PM peak will be determined.

Task A products:

i) Eight-hour turning movement counts at each study intersection
ii) Eight-hour pedestrian and bicycle counts at each study intersection

TASK B- Intersection Inventory/Existing Conditions

MEI shall conduct a field inventory of the study intersections and all approaches to the intersections. The condition diagram shall be created using CADD and shall include intersection geometry, lane use/arrangements, and identification of all traffic control devices including pedestrian features, and other roadway or roadside elements that contribute to the quality of intersection operation or safety such as bus stops, school zones, sight distance obstructions, etc. It shall also include any roadway features which may be impacted by an alternative.

A qualified traffic engineer of MEI and registered in the state of Florida (PTOE certified preferred) shall perform field reviews during the study peak time periods (AM and PM) to make qualitative assessments. Such factors as queue lengths, delays, vehicular conflicts, pedestrian conflicts, or any other operational characteristics critical to evaluate the need for improvements will be noted. During the field review safety conditions shall be observed and recorded.

Task B product:

i) Existing condition diagram

TASK C- Crash Analysis

MEI shall analyze the crash data, and identify abnormal crash characteristics or patterns to assist in evaluating alternatives. Crash data shall be of the latest three (3) full years available using crash data from the Signal Four Analytics (University of Florida) website.

Task C products:

i) Crash analysis (include crash summary sheets)
ii) Abnormal crash characteristics/patterns
iii) Possible crash causes and countermeasures for each abnormal pattern

TASK D- Existing Conditions Operational Analysis

MEI shall factor the turning movement counts by the Peak Season Factor for Miami-Dade County South provided by the Florida Department of Transportation (FDOT) Florida Traffic Online website. Existing signal timings shall be obtained from the Miami-Dade County Department of Transportation and Public Works (MDC DTPW), Traffic Engineering section. Using methodology based on the Highway Capacity Manual, and using SYNCHRO software, MEI shall determine the existing and resulting level of service (LOS) and delays for the existing intersections (for each approach and overall) for the AM, Mid-Day, and PM peak hours. In addition, MEI shall determine if any improvement in operations would be made if the existing signal timings were optimized.

Task D products:

i) Level of service and delays and 95th percentile queue lengths for existing condition
ii) Level of service and delays and 95th percentile queue lengths for optimized existing conditions

TASK E- Future Traffic (Opening Year and Design Year- 20 years from Opening Year) Projection

MEI shall utilize Traffic Trends software and historical count data from either Miami-Dade County and/or FDOT to determine a growth rate. The growth rate would be applied to the factored turning movement counts to determine the turning movement counts at opening year. The opening year would be the estimated year that the improvement would be completed and open to traffic (tentatively estimated to be 2020 unless otherwise directed by the Village). In addition, the design year will be 20 years from opening year (2040). To determine turning movement counts for the design year, all committed developments within the study area will be quantified. This data will be collected from the Village of Palmetto Bay and MDC Department of Planning and Zoning. It will include all developments that have entered the concurrency application process, yet have not been constructed, are within the study area, as defined by the Village's Planning Department (generally within a one (1)-mile radius of the project). To counterbalance subtractions from transportation network capacity, future transportation projects, which add capacity to the network shall be quantified. These must be represented as approved and funded projects, set for implementation within one year of project opening, within the Miami-Dade TPO's adopted Transportation Improvement Program (TIP) and/or the Village's program. This information would be used to factor into the development of Design Year turning movement volumes.

Task E products:

i) Turning movement count diagrams for AM peak, Mid-Day peak, and PM peak for Existing, Opening year, and Design Year

TASK F- Alternatives Analysis

MEI shall consider intersection geometry, channelization, signal timing and phasing, display and operations, crash history, and delays as well as any other factors that impact the safety and operation of the intersections. Recommendations for improvement shall be evaluated for their effectiveness. A minimum of three (3) alternatives will be evaluated per intersection. The "Do Nothing" alternative may be included but not counted as one of the alternatives.

From the results of the previous tasks and appropriate analysis, MEI shall make conceptual recommendations for optimizing the intersection operation - from both a safety and operational standpoint. The Consultant shall provide sketches, created in CADD with detailed measurements as appropriate, for proposed conditions for the improvement alternatives identified. The report shall recommend, in consideration of accepted traffic engineering practice and optimal project/user benefits, improvements to include but not be limited to geometry and/or capacity enhancements, improved channelization and positive guidance, improved traffic signal operations, which may include display adjustments or phasing and timing adjustments, up to providing reversible lanes.

All proposed intersection improvements should be evaluated for their overall and peak period effectiveness. MEI shall describe the expected number and type of crashes reduced by each improvement. As part of this effort the consultant shall evaluate the design criteria, design variances/exceptions, constructability and impacts (Right of Way, drainage, permits, utilities, environmental, access management, American with Disabilities Act, etc.) of the alternatives.

Task F products:

i) Proposed improvement diagrams

ii) Analysis of effectiveness for each alternative
iii) Operational analysis for each alternative for AM peak, Mid-Day peak, and PM peak for Opening Year and Design Year (LOS, delay, and 95th percentile queue lengths for each approach, and overall LOS and delay for each intersection)

TASK G- Public Information Meeting

MEI shall conduct a public information meeting with assistance from the Village at a location of the Village's choosing after the draft report is submitted to the Village and Miami-Dade County for review and comment. After comments from the Village and County are received and incorporated into the draft report, a public information meeting shall be held. MEI will produce a flyer describing the study to notify Village residents of the public meeting. Distribution of the flyer will be as per the Village. A PowerPoint presentation will be prepared, along with roll plots and/or display boards depicting improvement alternatives for display to the public. Public comments will be received and incorporated into the analysis and study as necessary.

Task G products:

i) Flyer to advertise public meeting
ii) PowerPoint presentation
iii) Roll plots and/or display boards of alternatives for display
iv) Attend public meeting and solicit public comments and answer questions

TASK H- Preliminary Cost Estimate

The Consultant shall determine a preliminary cost estimate (which will include design, construction engineering, and contingencies; also Right of Way if necessary) of the improvement alternatives proposed using recent FDOT historical cost data. A total benefit/cost ratio for each of the proposed alternatives shall be provided.

Task H product:

i) Cost estimates and benefit/cost ratio for proposed improvements

TASK I- Miami-Dade County Department of Transportation and Public Works (MDC DTPW), Traffic Engineering Section, Coordination and Approval

MEI will submit the draft and final traffic study to the Village and MDC DTPW, Traffic Engineering Section, for review and comment. MEI will respond to and incorporate comments received as necessary. MEI will submit the final traffic study for MDC DTPW approval. MEI will coordinate as necessary to ensure approval is obtained in a timely fashion.

TASK J- Report

The products of previous tasks within this study shall be analyzed collectively. MEI shall then form a traffic study report. The report shall recommend, in consideration of accepted traffic engineering practice

and optimal project/user benefits, improvements to include but not be limited to geometry and/or capacity enhancements, improved channelization and positive guidance, improved traffic signal operations, which may include display adjustments or phasing and timing adjustments, up to reversible lanes. Attached to this report, in the form of appendices or figures (as appropriate), shall be the products described above. MEI will submit the final study to the Village and MDC DTPW, Traffic Engineering Section, for review and comment. Comments will be incorporated into the final study as necessary.

Task J products:

i) One (1) draft hard copy and one (1) draft CD-R, and three (3) final hard copies (signed and sealed) and one (1) final CD-R of traffic study

II. SCHEDULE

MEI shall begin work upon issuance of the work order.
Data Collection- Completed within 30 days of issuance of work order (Notice To Proceed)
Draft Traffic Study- Completed within 150 days from NTP
Respond to Village and MDC DTPW comments on draft study- Within 14 days of receiving comments
Public Information Meeting- Completed within 210 days from NTP
Final Traffic Study- Completed within 240 days from NTP
Respond to Village and MDC DTPW comments on final study- Within 7 days of receiving comments

III. BUDGET

The attached staff hour fee proposal contains the budget for the work effort including out of pocket expenses. For the services performed, the Village will pay the Engineer the lump sum fee of **$70,646.36.** The hourly billing rates are consistent with the unit rates shown in the Executed Agreement for this contract. This Work Order is a Lump Sum Work Order, and shall be billed monthly as a percentage of completion.

IV. ACCEPTANCE

The return of an executed copy of this proposal and retainer fee would constitute our Notice to Proceed.

Sincerely,

MARLIN ENGINEERING, INC.

Steven Schindler, PE, PTOE
Traffic Engineering Department Manager

MARLIN

ACCEPTED BY: _____ **DATE:** _____

ENTITY: _____

TITLE: _____

MARLIN ENGINEERING, INC.

CONSULTANT SERVICES FOR VILLAGE OF PALMETTO BAY

OLD CUTLER ROAD AT SW 144TH ST, SW 152ND ST, & SW 168TH ST TRAFFIC STUDY

COST PROPOSAL

6/1/2018

Task	Activity	Project Manager / Senior Traffic Engineer	Senior Engineer / Traffic Engineer	Project Engineer / Roadway Engineer	Engineering Intern	CADD Specialist	Engineering Technician	Clerical	TOTAL
	Rates	$ 145.00	$ 135.00	$ 125.00	$ 110.00	$ 90.00	$ 80.00	$ 50.00	
A	**Traffic Counts**								
	Set up Miovision camera	0.0	0.0	0.0	0.0	0.0	8.0	0.0	8.0
	Remove Miovision camera	0.0	0.0	0.0	0.0	0.0	5.0	0.0	5.0
	Sub-total Hours	-	-	-	-	-	**13.0**	-	**13.0**
	Sub-total Salary Cost	$ -	$ -	$ -	$ -	$ -	$ 1,040.00	$ -	**$ 1,040.00**
B	**Intersection Inventory/Existing Conditions**								
	Field review during AM peak and PM peak	24.0	0.0	0.0	0.0	0.0	0.0	0.0	24.0
	Existing condition diagram	2.0	2.0	0.0	8.0	16.0	0.0	0.0	28.0
	Sub-total Hours	**26.0**	**2.0**	-	**8.0**	**16.0**	-	-	**52.0**
	Sub-total Salary Cost	$ 3,770.00	$ 270.00	$ -	$ 880.00	$ 1,440.00	$ -	$ -	**$ 6,360.00**
C	**Crash Analysis**								
	Acquire crash data	0.0	0.0	0.0	0.0	0.0	8.0	0.0	8.0
	Crash Analysis	1.0	6.0	0.0	24.0	0.0	0.0	0.0	31.0
	Sub-total Hours	**1.0**	**6.0**	-	**24.0**	-	**8.0**	-	**39.0**
	Sub-total Salary Cost	$ 145.00	$ 810.00	$ -	$ 2,640.00	$ -	$ 640.00	$ -	**$ 4,235.00**
D	**Existing Conditions Operational Analysis**								
	Obtain existing signal timings	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0
	Turning movement diagrams for existing	0.0	0.0	0.0	0.0	0.0	6.0	0.0	6.0
	SYNCHRO analysis of existing conditions	0.0	8.0	0.0	0.0	0.0	0.0	0.0	8.0
	Analyze optimizing signal timings	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0
	Sub-total Hours	-	**12.0**	-	**1.0**	-	**6.0**	-	**19.0**
	Sub-total Salary Cost	$ -	$ 1,620.00	$ -	$ 110.00	$ -	$ 480.00	$ -	**$ 2,210.00**
E	**Future Traffic Projection**								
	Determine growth rate	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0
	Quantify committed developments	0.0	8.0	0.0	0.0	0.0	0.0	0.0	8.0
	Turning movement diagrams for opening & design years	0.0	12.0	0.0	0.0	0.0	8.0	0.0	20.0
	Sub-total Hours	-	**24.0**	-	-	-	**8.0**	-	**32.0**
	Sub-total Salary Cost	$ -	$ 3,240.00	$ -	$ -	$ -	$ 640.00	$ -	**$ 3,880.00**
F	**Alternatives Analysis**								
	Alternatives Analysis	8.0	48.0	0.0	24.0	0.0	0.0	0.0	80.0
	Proposed Improvement diagrams	2.0	0.0	0.0	0.0	24.0	8.0	0.0	34.0
	Identify impacts of alternatives	4.0	24.0	0.0	0.0	0.0	0.0	0.0	28.0
	SYNCHRO analysis of alternatives	0.0	24.0	0.0	0.0	0.0	0.0	0.0	24.0
	Sub-total Hours	**14.0**	**96.0**	-	**24.0**	**24.0**	**8.0**	-	**166.0**
	Sub-total Salary Cost	$ 2,030.00	$ 12,960.00	$ -	$ 2,640.00	$ 2,160.00	$ 640.00	$ -	**$ 20,430.00**
G	**Public Information Meeting**								
	Flyer to advertise public meeting	2.0	0.0	0.0	4.0	0.0	0.0	0.0	6.0
	PowerPoint presentation	4.0	12.0	0.0	4.0	0.0	0.0	0.0	20.0
	Roll plots and/or display boards	0.0	0.0	0.0	0.0	12.0	0.0	0.0	12.0
	Administer public meeting	8.0	8.0	0.0	0.0	0.0	0.0	2.0	18.0
	Sub-total Hours	**14.0**	**20.0**	-	**8.0**	**12.0**	-	**2.0**	**56.0**
	Sub-total Salary Cost	$ 2,030.00	$ 2,700.00	$ -	$ 880.00	$ 1,080.00	$ -	$ 100.00	**$ 6,790.00**
H	**Preliminary Cost Estimate**								
	Preliminary Cost Estimate & Benefit/Cost Ratio	2.0	0.0	16.0	16.0	0.0	0.0	0.0	34.0
	Sub-total Hours	**2.0**	-	**16.0**	**16.0**	-	-	-	**34.0**
	Sub-total Salary Cost	$ 290.00	$ -	$ 2,000.00	$ 1,760.00	$ -	$ -	$ -	**$ 4,050.00**
I	**Miami-Dade County DTPW Coordination**								
	MDC DTPW Coordination	10.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0
	Respond to comments	8.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0
	Obtain approval	10.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0
	Sub-total Hours	**28.0**	-	-	-	-	-	-	**28.0**
	Sub-total Salary Cost	$ 4,060.00	$ -	$ -	$ -	$ -	$ -	$ -	**$ 4,060.00**
J	**Report**								
	Report writing	8.0	48.0	0.0	0.0	32.0	0.0	0.0	88.0
	Submit draft study	2.0	0.0	0.0	0.0	0.0	0.0	2.0	4.0
	Respond to comments	8.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0
	Submit final study	2.0	0.0	0.0	0.0	0.0	0.0	2.0	4.0
	QA/QC	16.0	16.0	0.0	0.0	2.0	0.0	0.0	34.0
	Sub-total Hours	**36.0**	**64.0**	-	-	**34.0**	-	**4.0**	**138.0**
	Sub-total Salary Cost	$ 5,220.00	$ 8,640.00	$ -	$ -	$ 3,060.00	$ -	$ 200.00	**$ 17,120.00**
	Marlin Engineering Total Hours	**121.0**	**224.0**	**16.0**	**81.0**	**86.0**	**43.0**	**6.0**	**577.0**
	Marlin Engineering Salary Cost	17,545.00	30,240.00	2,000.00	8,910.00	7,740.00	3,440.00	300.00	**$ 70,175.00**
								Subtotal	$ 70,175.00
								Miovision Processing Fee	$471.36
								TOTAL	**$ 70,646.36**

MARLIN

OLD CUTLER ROAD AT SW 176TH STREET TRAFFIC STUDY SCOPE

TO: Mr. Dionsio Torres
Public Works Director
Village of Palmetto Bay
9705 Hibiscus Street
Palmetto Bay, FL 33157

FROM: Steven Schindler, PE, PTOE
MARLIN Engineering Inc.
1700 NW 66th Avenue, Suite 106
Plantation, FL 33313

SUBJECT: Old Cutler Road at SW 176th Street Traffic Study Scope

DATE: June 1, 2018

Dear Mr. Torres,

Marlin Engineering, Inc. (MEI) has been requested by the Village of Palmetto Bay to provide a scope and manhours/fee to perform a traffic study to determine improvements for the intersection of Old Cutler Road and SW 176th Street. The intersection is currently a "T"-intersection controlled by a traffic signal. The Village desires to provide a northbound "turbo lane" to allow a free-flow condition for northbound traffic, except when a pedestrian or bicyclist desires to cross Old Cutler Road to/from the multiuse path that parallels the east side of Old Cutler Road. After approval of the preferred alternative by the Village of Palmetto Bay and the Miami-Dade County Department of Transportation and Public Works (DTPW), Traffic Engineering Section, the preferred alternative would then be designed and constructed under future scopes.

I. DESCRIPTION OF SERVICES

TASK A- Traffic Counts

MEI shall collect eight (8) hours of turning movement counts (6AM-9AM, 11AM-1PM, and 3PM-6PM) at the study intersection during a typical weekday (Tuesday, Wednesday, or Thursday). Trucks shall be included and tabulated separately. Pedestrian and bicycle counts shall be included and tabulated separately. The turning movement counts will be performed using Miovision video recording equipment. Peak hour for the AM peak, Mid-Day peak, and PM peak will be determined.

Task A products:

i) Eight-hour turning movement counts at study intersection
ii) Eight-hour pedestrian and bicycle counts at study intersection

TASK B- Intersection Inventory/Existing Conditions

MEI shall conduct a field inventory of the study intersection and all approaches to the intersection. The condition diagram shall be created using CADD and shall include intersection geometry, lane use/arrangements, and identification of all traffic control devices including pedestrian features, and other roadway or roadside elements that contribute to the quality of intersection operation or safety such as bus stops, school zones, sight distance obstructions, etc. It shall also include any roadway features which may be impacted by an alternative.

A qualified traffic engineer of MEI and registered in the state of Florida (PTOE certified preferred) shall perform field reviews during the study peak time periods (AM and PM) to make qualitative assessments. Such factors as queue lengths, delays, vehicular conflicts, pedestrian conflicts, or any other operational characteristics critical to evaluate the need for improvements will be noted. During the field review safety conditions shall be observed and recorded.

Task B product:

i) Existing condition diagram

TASK C- Crash Analysis

MEI shall analyze the crash data, and identify abnormal crash characteristics or patterns to assist in evaluating alternatives. Crash data shall be of the latest three (3) full years available using crash data from the Signal Four Analytics (University of Florida) website.

Task C products:

i) Crash analysis (include crash summary sheets)
ii) Abnormal crash characteristics/patterns
iii) Possible crash causes and countermeasures for each abnormal pattern

TASK D- Existing Conditions Operational Analysis

MEI shall factor the turning movement counts by the Peak Season Factor for Miami-Dade County South provided by the Florida Department of Transportation (FDOT) Florida Traffic Online website. Existing signal timings shall be obtained from the Miami-Dade County Department of Transportation and Public Works (MDC DTPW), Traffic Engineering section. Using methodology based on the Highway Capacity Manual, and using SYNCHRO software, MEI shall determine the existing and resulting level of service (LOS) and delays for the existing intersections (for each approach and overall) for the AM, Mid-Day, and PM peak hours. In addition, MEI shall determine if any improvement in operations would be made if the existing signal timings were optimized.

Task D products:

i) Level of service and delays and 95th percentile queue lengths for existing condition
ii) Level of service and delays and 95th percentile queue lengths for optimized existing conditions

TASK E- Future Traffic (Opening Year and Design Year- 20 years from Opening Year) Projection

MEI shall utilize Traffic Trends software and historical count data from either Miami-Dade County and/or FDOT to determine a growth rate. The growth rate would be applied to the factored turning movement counts to determine the turning movement counts at opening year. The opening year would be the estimated year that the improvement would be completed and open to traffic (tentatively estimated to be 2020 unless otherwise directed by the Village). In addition, the design year will be 20 years from opening year (2040). To determine turning movement counts for the design year, all committed developments within the study area will be quantified. This data will be collected from the Village of Palmetto Bay and MDC Department of Planning and Zoning. It will include all developments that have entered the concurrency application process, yet have not been constructed, are within the study area, as defined by the Village's Planning Department (generally within a one (1)-mile radius of the project). To counterbalance subtractions from transportation network capacity, future transportation projects, which add capacity to the network shall be quantified. These must be represented as approved and funded projects, set for implementation within one year of project opening, within the Miami-Dade TPO's adopted Transportation Improvement Program (TIP) and/or the Village's program. This information would be used to factor into the development of Design Year turning movement volumes.

Task E products:

i) Turning movement count diagrams for AM peak, Mid-Day peak, and PM peak for Existing, Opening year, and Design Year

TASK F- Alternatives Analysis

MEI shall consider intersection geometry, channelization, signal timing and phasing, display and operations, crash history, and delays as well as any other factors that impact the safety and operation of the intersections. Recommendations for improvement shall be evaluated for their effectiveness. A minimum of three (3) alternatives will be evaluated. The "Do Nothing" alternative may be included but not counted as one of the alternatives.

From the results of the previous tasks and appropriate analysis, MEI shall make conceptual recommendations for optimizing the intersection operation - from both a safety and operational standpoint. The Consultant shall provide sketches, created in CADD with detailed measurements as appropriate, for proposed conditions for the improvement alternatives identified. The report shall recommend, in consideration of accepted traffic engineering practice and optimal project/user benefits, improvements to include but not be limited to geometry and/or capacity enhancements, improved channelization and positive guidance, improved traffic signal operations, which may include display adjustments or phasing and timing adjustments, up to a northbound turbo lane.

All proposed intersection improvements should be evaluated for their overall and peak period effectiveness. MEI shall describe the expected number and type of crashes reduced by each improvement. As part of this effort the consultant shall evaluate the design criteria, design variances/exceptions, constructability and impacts (Right of Way, drainage, permits, utilities, environmental, access management, American with Disabilities Act, etc.) of the alternatives.

Task F products:

i) Proposed improvement diagrams

ii) Analysis of effectiveness for each alternative
iii) Operational analysis for each alternative for AM peak, Mid-Day peak, and PM peak for Opening Year and Design Year (LOS, delay, and 95th percentile queue lengths for each approach, and overall LOS and delay for each intersection)

TASK G- Public Information Meeting

MEI shall conduct a public information meeting with assistance from the Village at a location of the Village's choosing after the draft report is submitted to the Village and Miami-Dade County for review and comment. After comments from the Village and County are received and incorporated into the draft report, a public information meeting shall be held. MEI will produce a flyer describing the study to notify Village residents of the public meeting. Distribution of the flyer will be as per the Village. A PowerPoint presentation will be prepared, along with roll plots and/or display boards depicting improvement alternatives for display to the public. Public comments will be received and incorporated into the analysis and study as necessary.

Task G products:

i) Flyer to advertise public meeting
ii) PowerPoint presentation
iii) Roll plots and/or display boards of alternatives for display
iv) Attend public meeting and solicit public comments and answer questions

TASK H- Preliminary Cost Estimate

The Consultant shall determine a preliminary cost estimate (which will include design, construction engineering, and contingencies; also Right of Way if necessary) of the improvement alternatives proposed using recent FDOT historical cost data. A total benefit/cost ratio for each of the proposed alternatives shall be provided.

Task H product:

i) Cost estimates and benefit/cost ratio for proposed improvements

TASK I- Miami-Dade County Department of Transportation and Public Works (MDC DTPW), Traffic Engineering Section, Coordination and Approval

MEI will submit the draft and final traffic study to the Village and MDC DTPW, Traffic Engineering Section, for review and comment. MEI will respond to and incorporate comments received as necessary. MEI will submit the final traffic study for MDC DTPW approval. MEI will coordinate as necessary to ensure approval is obtained in a timely fashion.

TASK J- Report

The products of previous tasks within this study shall be analyzed collectively. MEI shall then form a traffic study report. The report shall recommend, in consideration of accepted traffic engineering practice

and optimal project/user benefits, improvements to include but not be limited to geometry and/or capacity enhancements, improved channelization and positive guidance, improved traffic signal operations, which may include display adjustments or phasing and timing adjustments, up to a northbound turbo lane being incorporated. Attached to this report, in the form of appendices or figures (as appropriate), shall be the products described above. MEI will submit the final study to the Village and MDC DTPW, Traffic Engineering Section, for review and comment. Comments will be incorporated into the final study as necessary.

Task J products:

i) One (1) draft hard copy and one (1) draft CD-R, and three (3) final hard copies (signed and sealed) and one (1) final CD-R of traffic study

II. SCHEDULE

MEI shall begin work upon issuance of the work order.
Data Collection- Completed within 30 days of issuance of work order (Notice To Proceed)
Draft Traffic Study- Completed within 90 days from NTP
Respond to Village and MDC DTPW comments on draft study- Within 14 days of receiving comments
Public Information Meeting- Completed within 150 days from NTP
Final Traffic Study- Completed within 180 days from NTP
Respond to Village and MDC DTPW comments on final study- Within 7 days of receiving comments

III. BUDGET

The attached staff hour fee proposal contains the budget for the work effort including out of pocket expenses. For the services performed, the Village will pay the Engineer the lump sum fee of **$44,122.12.** The hourly billing rates are consistent with the unit rates shown in the Executed Agreement for this contract. This Work Order is a Lump Sum Work Order, and shall be billed monthly as a percentage of completion.

IV. ACCEPTANCE

The return of an executed copy of this proposal and retainer fee would constitute our Notice to Proceed.

Sincerely,

MARLIN ENGINEERING, INC.

Steven Schindler, PE, PTOE
Traffic Engineering Department Manager

MARLIN

ACCEPTED BY: _____ **DATE:** _____

ENTITY: _____

TITLE: _____

MARLIN ENGINEERING, INC.

CONSULTANT SERVICES FOR VILLAGE OF PALMETTO BAY

OLD CUTLER ROAD AT SW 176TH STREET TRAFFIC STUDY

COST PROPOSAL

6/1/2018

Task	Activity	Project Manager / Senior Traffic Engineer	Senior Engineer / Traffic Engineer	Project Engineer / Roadway Engineer	Engineering Intern	CADD Specialist	Engineering Technician	Clerical	TOTAL
	Rates	$ 145.00	$ 135.00	$ 125.00	$ 110.00	$ 90.00	$ 80.00	$ 50.00	
A	**Traffic Counts**								
	Set up Miovision camera	0.0	0.0	0.0	0.0	0.0	6.0	0.0	6.0
	Remove Miovision camera	0.0	0.0	0.0	0.0	0.0	4.0	0.0	4.0
	Sub-total Hours	-	-	-	-	-	**10.0**	-	**10.0**
	Sub-total Salary Cost	$ -	$ -	$ -	$ -	$ -	$ 800.00	$ -	**$ 800.00**
B	**Intersection Inventory/Existing Conditions**								
	Field review during AM peak and PM peak	10.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0
	Existing condition diagram	1.0	2.0	0.0	4.0	8.0	0.0	0.0	15.0
	Sub-total Hours	**11.0**	**2.0**	-	**4.0**	**8.0**	-	-	**25.0**
	Sub-total Salary Cost	$ 1,595.00	$ 270.00	$ -	$ 440.00	$ 720.00	$ -	$ -	**$ 3,025.00**
C	**Crash Analysis**								
	Acquire crash data	0.0	0.0	0.0	0.0	0.0	4.0	0.0	4.0
	Crash Analysis	1.0	3.0	0.0	16.0	0.0	0.0	0.0	20.0
	Sub-total Hours	**1.0**	**3.0**	-	**16.0**	-	**4.0**	-	**24.0**
	Sub-total Salary Cost	$ 145.00	$ 405.00	$ -	$ 1,760.00	$ -	$ 320.00	$ -	**$ 2,630.00**
D	**Existing Conditions Operational Analysis**								
	Obtain existing signal timings	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0
	Turning movement diagrams for existing	0.0	0.0	0.0	0.0	0.0	4.0	0.0	4.0
	SYNCHRO analysis of existing conditions	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0
	Analyze optimizing signal timings	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0
	Sub-total Hours	-	**6.0**	-	**1.0**	-	**4.0**	-	**11.0**
	Sub-total Salary Cost	$ -	$ 810.00	$ -	$ 110.00	$ -	$ 320.00	$ -	**$ 1,240.00**
E	**Future Traffic Projection**								
	Determine growth rate	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0
	Quantify committed developments	0.0	8.0	0.0	0.0	0.0	0.0	0.0	8.0
	Turning movement diagrams for opening & design years	0.0	8.0	0.0	0.0	0.0	4.0	0.0	12.0
	Sub-total Hours	-	**20.0**	-	-	-	**4.0**	-	**24.0**
	Sub-total Salary Cost	$ -	$ 2,700.00	$ -	$ -	$ -	$ 320.00	$ -	**$ 3,020.00**
F	**Alternatives Analysis**								
	Alternatives Analysis	4.0	24.0	0.0	16.0	0.0	0.0	0.0	44.0
	Proposed Improvement diagrams	2.0	0.0	0.0	0.0	16.0	4.0	0.0	22.0
	Identify impacts of alternatives	4.0	16.0	0.0	0.0	0.0	0.0	0.0	20.0
	SYNCHRO analysis of alternatives	0.0	16.0	0.0	0.0	0.0	0.0	0.0	16.0
	Sub-total Hours	**10.0**	**56.0**	-	**16.0**	**16.0**	**4.0**	-	**102.0**
	Sub-total Salary Cost	$ 1,450.00	$ 7,560.00	$ -	$ 1,760.00	$ 1,440.00	$ 320.00	$ -	**$ 12,530.00**
G	**Public Information Meeting**								
	Flyer to advertise public meeting	2.0	0.0	0.0	4.0	0.0	0.0	0.0	6.0
	PowerPoint presentation	4.0	8.0	0.0	4.0	0.0	0.0	0.0	16.0
	Roll plots and/or display boards	0.0	0.0	0.0	0.0	8.0	0.0	0.0	8.0
	Administer public meeting	8.0	8.0	0.0	0.0	0.0	0.0	2.0	18.0
	Sub-total Hours	**14.0**	**16.0**	-	**8.0**	**8.0**	-	**2.0**	**48.0**
	Sub-total Salary Cost	$ 2,030.00	$ 2,160.00	$ -	$ 880.00	$ 720.00	$ -	$ 100.00	**$ 5,890.00**
H	**Preliminary Cost Estimate**								
	Preliminary Cost Estimate & Benefit/Cost Ratio	2.0	0.0	8.0	8.0	0.0	0.0	0.0	18.0
	Sub-total Hours	**2.0**	-	**8.0**	**8.0**	-	-	-	**18.0**
	Sub-total Salary Cost	$ 290.00	$ -	$ 1,000.00	$ 880.00	$ -	$ -	$ -	**$ 2,170.00**
I	**Miami-Dade County DTPW Coordination**								
	MDC DTPW Coordination	8.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0
	Respond to comments	4.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0
	Obtain approval	8.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0
	Sub-total Hours	**20.0**	-	-	-	-	-	-	**20.0**
	Sub-total Salary Cost	$ 2,900.00	$ -	$ -	$ -	$ -	$ -	$ -	**$ 2,900.00**
J	**Report**								
	Report writing	4.0	24.0	0.0	0.0	24.0	0.0	0.0	52.0
	Submit draft study	2.0	0.0	0.0	0.0	0.0	0.0	2.0	4.0
	Respond to comments	4.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0
	Submit final study	2.0	0.0	0.0	0.0	0.0	0.0	2.0	4.0
	QA/QC	8.0	8.0	0.0	0.0	2.0	0.0	0.0	18.0
	Sub-total Hours	**20.0**	**32.0**	-	-	**26.0**	-	**4.0**	**82.0**
	Sub-total Salary Cost	$ 2,900.00	$ 4,320.00	$ -	$ -	$ 2,340.00	$ -	$ 200.00	**$ 9,760.00**
	Marlin Engineering Total Hours	**78.0**	**135.0**	**8.0**	**53.0**	**58.0**	**26.0**	**6.0**	**364.0**
	Marlin Engineering Salary Cost	11,310.00	18,225.00	1,000.00	5,830.00	5,220.00	2,080.00	300.00	**$ 43,965.00**
								Subtotal	$ 43,965.00
								Miovision Processing Fee	$157.12
								TOTAL	**$ 44,122.12**

Attachment D

RESOLUTION NO. 2018-20

A RESOLUTION OF THE MAYOR AND VILLAGE COUNCIL OF THE VILLAGE OF PALMETTO BAY, FLORIDA, RELATING TO VILLAGE-WIDE TRAFFIC CALMING STUDY MASTER PLAN REPORT; ACCEPTING THE FINAL REPORT DOCUMENT AND THE RECOMMENDATIONS; AND FURTHER AUTHORIZING THE VILLAGE MANAGER TO REQUEST A COMPREHENSIVE TRAFFIC STUDY BY MIAMI-DADE COUNTY; AND PROVIDING FOR AN EFFECTIVE DATE. (Sponsored by Councilmember David Singer and Co-sponsored by Mayor Eugene Flinn, Councilmember Karyn Cunningham, and Councilmember Larissa Siegel Lara)

WHEREAS, through Resolution, the Village contracted with Marlin Engineering for development of a village wide comprehensive traffic calming plan for purposes of addressing various traffic issues; and

WHEREAS, Marlin Engineer has completed the Traffic Calming Study Master Plan and indicated the most important aspects to improve traffic flow in our community to create a safer environment for pedestrians and commuters alike; and

WHEREAS, the Village will use the Traffic Study Master Plan as a guide in making transportation investments and as a policy document that recommends projects to be developed on an as needed basis for efficient and safe movement of vehicles and pedestrians through the Village; and

WHEREAS, Administration is requesting the Village Council to accept the final Traffic Study Master Plan provided by Marlin Engineering and further authorize the Village Manager to take all action necessary to request that Miami Dade County Department of Transportation and Public Works (DTPW) complete a Comprehensive Traffic Study on behalf of the Village.

NOW, THEREFORE, BE IT RESOLVED BY THE VILLAGE OF PALMETTO BAY, FLORIDA, THAT:

Section 1. Village Council accepts the final Traffic Calming Study Master Plan prepared by Marlin Engineering and further authorizes the Village Manager to take all action necessary to request that Miami Dade County Department of Transportation and Public Works (DTPW) work with the Village to develop a Comprehensive Traffic Study with approval from the Council for all items (including arterial roads) to complete a Comprehensive Traffic Study on behalf of the Village.

Section 2. This Resolution shall take effect immediately upon its adoption.

PASSED and **ADOPTED** this 5th day of February, 2018.

Attest:

DocuSigned by:
Missy Arocha
6EDC211E5E8C48C...
Missy Arocha
Village Clerk

DocuSigned by:
3B8854AD569F494...
Eugene Flinn
Mayor

APPROVED AS TO FORM AND LEGAL SUFFICIENCY FOR THE USE AND RELIANCE OF THE VILLAGE OF PALMETTO BAY, FLORIDA ONLY:

DocuSigned by:
Dexter W. Lehtinen
1B1D06E71321445...
Dexter W. Lehtinen
Village Attorney

FINAL VOTE AT ADOPTION:

Council Member Karyn Cunningham	YES
Council Member David Singer	YES
Council Member Larissa Siegel Lara	YES
Vice-Mayor John DuBois	YES
Mayor Eugene Flinn	YES