

**WORK AUTHORIZATION # CM1415-WA02  
NASSAU COUNTY  
BOARD OF COUNTY COMMISSIONERS  
CONTINUING CONTRACT FOR PROFESSIONAL ENGINEERING SERVICES  
RFQ/BID NO. NC08-015**

<b>Consultant:</b>	Ayres Associates Inc
<b>Contract Number:</b>	CM1415
<b>Contact Name:</b>	Amy Pogue Wright, P.E.
<b>Contact Number:</b>	904-260-6288
<b>Email:</b>	WrightA@AyresAssociates.com

CURRENT WORK AUTHORIZATION			
<b>Project Short Title: CR 121 Drainage/Pond Design</b>			
		<b>CONTRACT OVERVIEW</b>	
<b>Date Submitted</b>	07/06/09	<b>Total of Previous Authorizations</b>	\$8,000.00
<b>Amount</b>	\$68,548.82	<b>This Work Authorization</b>	\$68,548.82
<b>Scheduled Completion</b>	December 7, 2009	<b>Current Contract Total</b>	\$76,548.82

This Work Authorization is to the AGREEMENT between Nassau County and the Consultant known as the Continuing Contract for Professional Engineering Services for Nassau County, Florida, dated March 23, 2009. The services to be provided under this Work Authorization are as follows:

ARTICLE 1. Services Described as:

Ayres Associates Inc will provide professional engineering services necessary for administration of the project, agency coordination, design and construction plans as outlined in the CR 121 Drainage/Pond Design Scope of Work, dated July 6, 2009, attached hereto Attachment "A". The scope of services includes design and plans production efforts as described herein.

ARTICLE 2. Time Schedule

Ayres shall complete the scope of work pursuant to the time schedule, attached hereto as Attachment "B". Final Plans to be submitted December 7, 2009.

ARTICLE 3. Budget

The proposed fee will be based on a lump sum amount of \$68,548.82, in accordance with the Contract Fee Summary, attached hereto as Attachment "C". Rates shall be in accordance with the provisions contained in the "Loaded Billing Rates", Attachment "B" of the above referenced agreement.

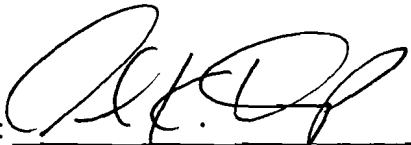
Article 4. Other Provisions

The Services covered by this Work Authorization will be performed in accordance with the provisions set forth in the AGREEMENT referenced above and any of its attachments or schedules. This Work Authorization will become a part of the referenced AGREEMENT when executed by both parties.

In presenting this Work Authorization, Consultant agrees that:

Unless detailed herein, all drawings, data, electronic files and other information required for this Work Authorization has been accepted by Consultant. Specifically, all electronic files have been reviewed and accepted for the purposes of this Work assignment. Any additional information, including detailed scope of services are attached.

AGREED TO BY:

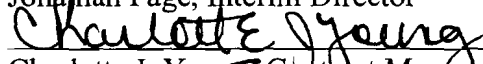
BY:   
Print Name: David K. Kemp  
Title: Vice President  
Date: 7/30/09

**RECOMMENDED AND APPROVED BY NASSAU COUNTY:**

Director of Engineering Services:

  
Jonathan Page, Interim Director

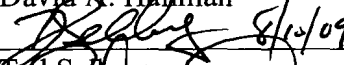
Contract Management :

  
Charlotte J. Young, Contract Manager


County Attorney:

  
David A. Hallman

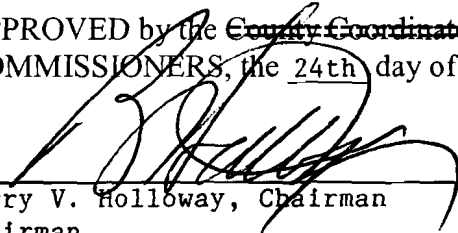
Office of Management & Budget:

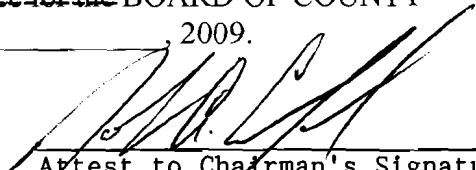
  
Ted Seby 8/10/09

County Coordinator

  
Edward L. Sealover 8/11/09

APPROVED by the ~~County Coordinator, designee for the~~ BOARD OF COUNTY COMMISSIONERS, the 24th day of August, 2009.

  
Barry V. Holloway, Chairman  
Chairman

  
Attest to Chairman's Signature  
John A. Crawford, Ex-Officio Clerk

MES

---

**CR 121 DRAINAGE / POND DESIGN**  
**SCOPE OF WORK**  
**Nassau County, Florida**  
**July 6, 2009**

---

## **INTRODUCTION**

On May 21, 2009 Ayres staff attended a field meeting at CR 121 – approximately 1.25 miles south of US 1 with Jonathan Page, P.E. to discuss re-medial roadside swale and stormwater management facility design as a result of Tropical Storm Fay which occurred August 2008. The tropical system produced significant rainfall totals causing overtopping to occur in the roadside eastern swale onto adjacent private property as well as causing complete failure of the pond control structure to the east of the roadway. The proposed project has two distinct parts: The first will be to evaluate and determine any deficiencies in the existing roadside swale / sidedrain stormwater system to ensure adequate capacity and conveyance capabilities. The second part will be to re-design the existing pond area to its previous configuration and design an overflow structure that can accommodate the 100yr/24hr design storm event.

## **SCOPE OF SERVICES**

The project scope includes professional engineering services necessary for administration of the project, agency coordination, design and construction plans as outlined within this proposal. Construction Plan preparation will include two Phase submittals: 60% and Final Plans. Cost estimates will be submitted at 60% and Final Plans Completion. The scope of services includes the following design and plans production work effort – Drainage Analysis and Plans Production:

### **1.0 Drainage Analysis**

Drainage Analysis will include evaluating existing conditions, modeling proposed conditions, associated quality assurance / quality control and supervision

#### **1.1 Design of Stormwater Management Facility (Off-site Pond)**

Evaluate previous pond configuration, select hydrology parameters, hydraulic modeling for the 25yr/24hr and 100yr/24hr design storm event.

#### **1.2 Design of Outfalls**

Includes design effort for sizing the overflow structure to attenuate up to the 100yr/24hr design storm event. Also includes structural design effort associated with reinforcement requirements for the new pond weir structure.

#### **1.3 Design of Roadside Swales**

The existing swales will be evaluated to determine if they have adequate capacity and conveyance capability. Drive connection sidedrains will also be evaluated to ensure pipe sizes are not restricting flows. If warranted, design effort associated with improvements to the roadside swale conveyance system will be included within the existing Right of Way limits.

#### **1.4 Design of Cross-Drains**

An HY8 backwater analysis of the existing quad rcp cross-drain will be conducted to verify if the culvert is sized properly.

**1.5 Permitting**

A SJRWMD pre-application meeting was held on June 11, 2009 with Cara Perron, P.E. and Robert "Rocky" Thompson to discuss the proposed project improvements. Both Cara and Rocky agreed the project would be exempt from Environmental Resource Permitting based on the pond impounding less than 40 ac-ft. and no additional impervious area added to the site.

**1.6 Field Review**

Includes (2) Site Visits – 2 staff @ 5 hours/each.

**1.7 Quality Assurance / Quality Control**

**1.8 Supervision**

**2.0 Plans Production**

Plans Production includes all cadd work in the development of the construction plan sets, associated quality assurance / quality control and supervision

**2.1 Key Sheet**

**2.2 Summary of Pay Items / Quantities**

**2.3 General Notes & Typical Section**

**2.4 Drainage Map**

**2.5 Plan / Profile Sheet**

Horizontal / Vertical master file set-up, roadside swale profiles (LT) (RT) – if required and erosions control devices.

**2.6 Cross Sections**

Provide cross-section design files in accordance with standard practices. Use 100-foot cross section intervals.

**2.7 Drainage Structures**

Task includes effort in cadd production of one (1) cross-drain and one additional drainage structure on the east side of the roadway alignment – as needed.

**2.8 Detention Pond Detail**

Pond plan view.

**2.9 Detention Pond Cross-Sections**

**2.10 Control Structure Detail Sheet**

**2.11 Traffic Control Design & Plan Sheet**

Applicable FDOT Standard Index 600 series will be included. Neither TCP Typical Sections nor Phasing plans are included.

**2.12 Cost Estimate**

Assumes (2) submittals 60% and Final.

**2.13 Bid Documents and Specifications**

Assumes (2) submittals 60% and Final.

**2.14 Field Review**

Included in Task 1.6.

**2.15 Quality Assurance / Quality Control**

**2.16 Supervision**

**3.0 Design Survey / Right-of-Way Mapping**

3.1 Please see attached Survey Scope provided by Manzie & Drake Land Surveying

**4.0 Geotechnical Engineering Services**

4.1 Please see attached Geotechnical Scope provided by Universal Engineering Sciences.

**ADDITIONAL SERVICES**

The following are items not included in this Scope of Services:

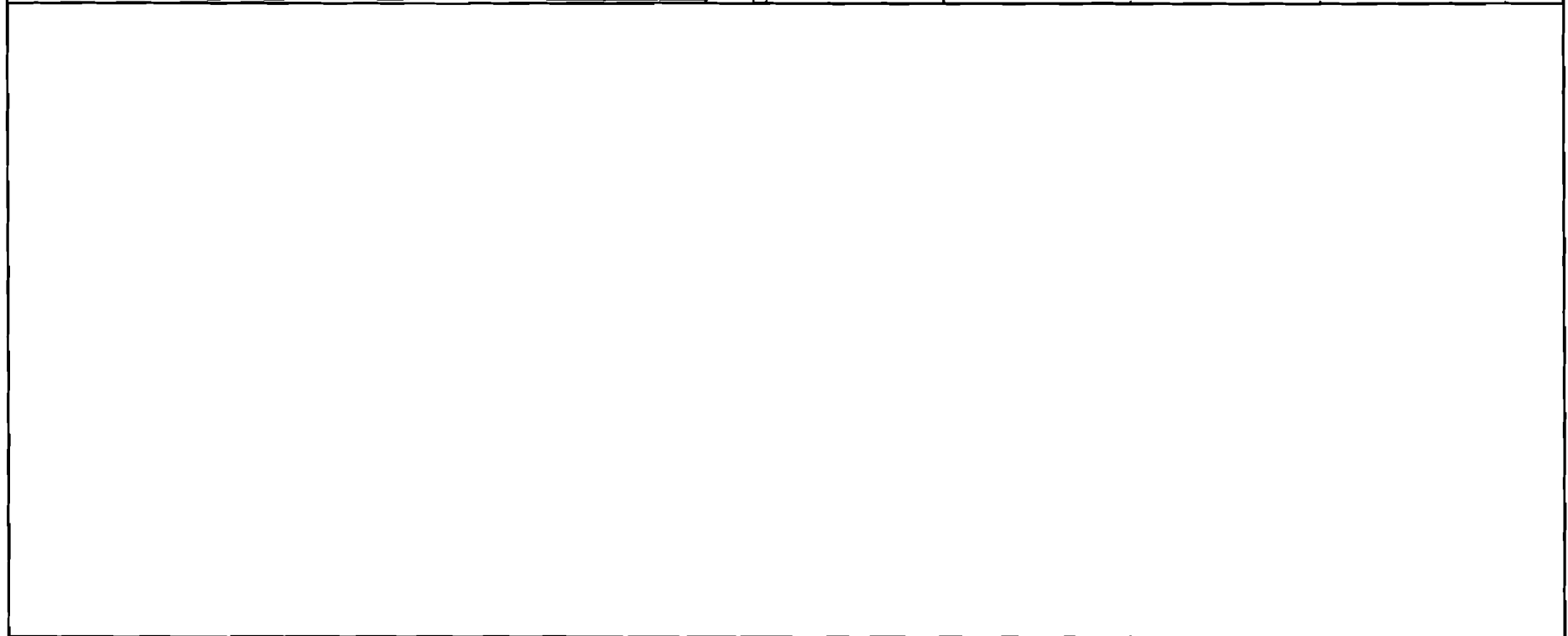
- SJRWMD Permitting
- Utility Adjustments
- Formal public involvement
- Construction Assistance

Should additional services be requested or required beyond that indicated herein, mutually agreed scope, terms, and conditions will be established prior to any work being initiated.

**PROPOSED FEE**

In accordance with the attached Contract Fee Summary, the work described herein will be provided on a lump sum basis, with provisions for survey and geotechnical evaluation.

Activity ID	Description	Original Duration	Early Start	Early Finish	2009																							
					JUL 27	AUG 03	AUG 10	AUG 17	AUG 24	SEP 31	SEP 07	SEP 14	SEP 21	SEP 28	OCT 05	OCT 12	OCT 19	OCT 26	NOV 02	NOV 09	NOV 16	NOV 23	DEC 30	DEC 0				
0001	Final Design	90 *	08/03/09	12/07/09																								
0002	Notice to Proceed	0	08/03/09																									
0003	Perform topographic survey	15	08/03/09	08/24/09																								
0004	Perform geotechnical evaluation	15	08/03/09	08/24/09																								
0005	Drainage Analysis	20	08/24/09	09/21/09																								
0006	Develop 60% Plans	20	09/21/09	10/19/09																								
0007	Submit 60% Plans	0		10/19/09																								
0008	County 60% Plan Review	15	10/19/09	11/09/09																								
0009	Develop Final Plans	20	11/09/09	12/07/09																								
0010	Submit Final Plans	0		12/07/09																								



▲	Early start point	▲	Progress point	Company name	Ayres Associates
▼	Early finish point	▼	Critical point	Data date	08/03/09 11:00AM
█	Early bar	■	Summary point	Run date	07/08/09 11:00AM
▬	Progress bar	◆	Start milestone point		
▬	Critical bar	◆	Finish milestone point		
▬	Summary bar			© Primavera Systems, Inc.	

**CR 121 Drainage / Pond Design**

**Nassau County, Florida**



**CR 121 DRAINAGE / POND DESIGN  
CONTRACT FEE SUMMARY  
NASSAU COUNTY, FLORIDA**

**PART I - GENERAL**

<b>1. Project</b> CR 121 Drainage / Pond Design	<b>2. Proposal Number</b> 1
<b>3. Consultant Name</b> Ayres Associates Inc	<b>4. Date of Proposal</b> 7/9/2009

**PART II - LABOR RELATED COSTS**

<b>5. Labor</b>	Hourly Rate	Estimated Hours	Estimated Cost	TOTALS
Principal / Q/A Manager	\$205.02	48	\$ 9,430.92	
Project Manager	\$131.98	138	\$ 18,213.24	
Roadway Engineer (PE)	\$103.87	161	\$ 16,723.07	
Roadway Designer (EI)	\$97.26	23	\$ 2,236.98	
Senior Designer	\$108.41	48	\$ 4,986.86	
Designer	\$88.65	23	\$ 2,038.95	
CADD Technician	\$82.89	14	\$ 1,160.46	
Administrative Assistant	\$71.54	7	\$ 500.78	
<b>Total Labor</b>		<b>458</b>		<b>\$ 55,281.26</b>

**PART III - OTHER COSTS**

<b>10. Miscellaneous Direct Costs</b> Based on 5% of Labor Total				
<b>MISCELLANEOUS DIRECT COSTS SUBTOTAL</b>				<b>\$ 2,764.58</b>
<b>11. Subconsultants</b>				
Survey Services - Manzie & Drake			\$ 7,900.00	
Geotechnical Services - Universal Engineering Sciences			\$ 2,593.00	
<b>SUBCONTRACTS/PREVIOUS SERVICES CREDIT (LUMP SUM) SUBTOTAL</b>				<b>\$ 10,493.00</b>
<b>TOTAL LUMP SUM AMOUNT (Items 5, 6, 8, 9, 10, and 11)</b>				<b>\$ 68,548.82</b>
<b>12. Reimbursable Costs (Limiting Amount)</b>				
			\$ -	
			\$ -	
			\$ -	
			\$ -	
			\$ -	
			\$ -	
<b>TOTAL REIMBURSABLE COSTS</b>				<b>\$ -</b>

**PART IV - SUMMARY**

<b>TOTAL AMOUNT OF CONTRACT (Lump Sum plus Reimbursables)</b> (Items 5, 6, 8, 9, 10, 11, and 12)	<b>\$ 68,548.82</b>
---	---------------------

**PRIME CONSULTANT  
ESTIMATE OF WORK EFFORT AND FEE  
FINAL DESIGN & PLANS PREPARATION**

CONSULTANT:		Ayres Associates Inc				PROJECT NAME:		CR 121 Drainage / Pond Design				LOCATION:		Nassau County				
RFP NUMBER:						ESTIMATOR NAME / DATE:		John McGarity, P.E. 7/6/2008										
ACTIVITY	Principal / QA Manager		Project Manager		Roadway Engineer (PE)		Roadway Designer (E)		Senior Designer		Designer		CADD Technician		Administrative Assistant		TOTAL HOURS BY ACTIVITY	SALARY COST BY ACTIVITY
	RATE =	\$	RATE =	\$	RATE =	\$	RATE =	\$	RATE =	\$	RATE =	\$	RATE =	\$	RATE =	\$		
	STAFF HOURS	LABOR COST	STAFF HOURS	LABOR COST	STAFF HOURS	LABOR COST	STAFF HOURS	LABOR COST	STAFF HOURS	LABOR COST	STAFF HOURS	LABOR COST	STAFF HOURS	LABOR COST	STAFF HOURS	LABOR COST		
<b>FINAL DESIGN</b>																		
1.0 Drainage Design	20	\$ 4,392.40	59	\$ 8,341.42	69	\$ 7,676.94	10	\$ 1,041.80	20	\$ 2,322.60	10	\$ 949.60	6	\$ 532.80	2	\$ 153.26	196	\$ 25,410.82
2.0 Plans Production	26	\$ 5,710.12	78	\$ 11,169.02	82	\$ 10,236.82	13	\$ 1,354.34	26	\$ 3,019.38	13	\$ 1,236.48	8	\$ 710.40	5	\$ 383.15	262	\$ 33,816.81
<b>FINAL DESIGN TOTALS</b>	<b>46</b>	<b>\$ 10,102.52</b>	<b>138</b>	<b>\$ 19,510.44</b>	<b>151</b>	<b>\$ 17,912.86</b>	<b>23</b>	<b>\$ 2,396.14</b>	<b>46</b>	<b>\$ 5,341.98</b>	<b>23</b>	<b>\$ 2,184.88</b>	<b>14</b>	<b>\$ 1,243.20</b>	<b>7</b>	<b>\$ 536.41</b>	<b>458</b>	<b>\$ 59,227.63</b>
<b>PROJECT TOTALS</b>	<b>46</b>	<b>\$ 10,102.52</b>	<b>138</b>	<b>\$ 19,510.44</b>	<b>151</b>	<b>\$ 17,912.86</b>	<b>23</b>	<b>\$ 2,396.14</b>	<b>46</b>	<b>\$ 5,341.98</b>	<b>23</b>	<b>\$ 2,184.08</b>	<b>14</b>	<b>\$ 1,243.20</b>	<b>7</b>	<b>\$ 536.41</b>	<b>458</b>	<b>\$ 59,227.63</b>

10

30

35

5

10

5

5

100



**STAFF HOUR SUMMARY**

**CONSULTANT NAME:** Ayres Associates Inc  
**ESTIMATOR NAME:** John McGarity, P.E.  
**DATE:** 7/9/2009

**PROJECT NAME:** CR 121 Drainage / Pond Design  
**LOCATION:** Nassau County  
**RFP NO.:**

TASK NO.	CR 121 DRAINAGE DESIGN	NO. OF SHEETS	TOTAL HOURS	COMMENTS
<b>1.0</b>	<b>Drainage Design</b>			
	<b>Totals</b>		196	
<b>2.0</b>	<b>Plans Production</b>			
	<b>Totals</b>		262	
	<b>TOTALS:</b>		458	

## DRAINAGE DESIGN

CONSULTANT NAME:  
ESTIMATOR NAME:  
DATE:

Ayres Associates Inc  
John McGarity, P.E.  
7/9/2009

PROJECT NAME:  
LOCATION:  
RFP NO.:

CR 121 Drainage / Pond Design  
Nassau County

Task No.	Task	Units	No. of Units	Hours / Unit	No. of Sheets	Total Hours	Comments
1.1	Design of Stormwater Management Facility (Off-site Pond)	N/A	1	60	N/A	60	Includes evaluating the previous pond configuration, delineating total contributing area, and modeling effort to support SJRWMD requirements as well as the 100yr/24hr design storm event.
1.2	Design of Outfalls	N/A	1	24	N/A	24	Includes structural design effort associated with the reinforcement requirements for a new overflow pond weir structure
1.3	Design of Roadside Swales	N/A	1	36	N/A	36	Includes an analysis of the capacity and conveyance capability of the existing roadside swales and to determine possible sidedrain constrictions upstream.
1.4	Design of Cross-Drains	N/A	1	24	N/A	24	Includes an HY8 overtopping backwater analysis of the existing RCP quad culvert.
1.5	Permitting	N/A	1	2	N/A	2	As discussed w/ Cara Perron, P.E. and Robert "Rocky" Thompson with the SJRWMD on June 11, 2009 it is not anticipated that an Environmental Resource Permit will be required for the proposed improvements. The project will be exempt based on the pond impounding less than 40 ac-ft and no additional impervious area is added.
<b>Drainage Design Technical Subtotal</b>						<b>146</b>	
1.6	Field Review	LS	2	10		20	Includes (2) Site Visit - 2 Staff @ 5 hours/ea.
1.7	Survey Coordination / Supervision	LS	1	8		8	
1.8	Geotechnical Coordination / Supervision	LS	1	8		8	
1.9	Quality Assurance/Quality Control	LS	%	5%		7	
2.0	Supervision	LS	%	5%		7	
<b>1. Drainage Design</b>						<b>196</b>	

**PLANS PRODUCTION**

**CONSULTANT NAME:**  
**ESTIMATOR NAME:**  
**DATE:**

Ayres Associates Inc  
 John McGarity, P.E.  
 7/9/2009

**PROJECT NAME:**  
**LOCATION:**  
**RFP NO.:**

CR 121 Drainage / Pond Design  
 Nassau County

Task No.	Task	Units	No. of Units	Hours / Unit	No. of Sheets	Total Hours	Comments
2.1	Key Sheet	Sheet	1	8	1	8	
2.2	Summary of Pay Items / Quantities / Reference Points	Sheet	1	12	1	12	
2.3	General Notes	Sheet	1	8	1	8	
2.4	Drainage Map	Sheet	1	16	1	16	Includes cadd development of project drainage divides and cross-drain design highwater table.
2.5	Plan/Profile Sheet	Sheet	1	36	1	36	Includes horizontal / vertical master file set-up, sheet composition set-up, roadside swale profiles (LT)(RT) (if required) and erosion control devices.
2.6	Cross-Sections	Ea	6	6	3	36	Includes cross-section master file set-up. Estimate is based on (1) cross-section per 100 feet over a distance of 600 feet.
2.7	Drainage Structures	Ea	2	6	2	12	Includes (1) cross-drain section and (1) additional section on the east side of the roadway alignment.
2.8	Detention Pond Detail	Sheet	1	12	1	12	Pond plan view.
2.9	Detention Pond Cross-Sections	Sheet	6	4	3	24	
2.10	Control Structure Detail	Sheet	1	8	1	8	
2.11	Traffic Control Design & Plan Sheet	Sheet	1	6	1	6	Applicable FDOT Standard Index 600 Series will be included. Neither TCP Typical Sections nor Phasing plans are included.
2.12	Cost Estimate	N/A	2	6		12	Assumes (2) submittals.
2.13	Bid Documents & Specifications	N/A	1	48		48	
<b>Plans Production Subtotal</b>					<b>16</b>	<b>238</b>	
2.14	Field Review	LS	N/A				Included in Task 1.6
2.15	Quality Assurance/Quality Control	LS	%	5%		12	
2.16	Supervision	LS	%	5%		12	
<b>2. Plans Production</b>						<b>262</b>	