



**Interoffice Memorandum**

October 11, 2022

TO: Mayor Jerry L. Demings  
-AND-  
County Commissioners

FROM: Joseph C. Kunkel, P.E., Director, Public Works Department

CONTACT PERSON: Humberto L. Castellero, P.E., PTOE, Manager  
Traffic Engineering Division

PHONE NUMBER: (407) 836-7891

SUBJ: **Amendment to Interlocal Agreement between Orange County and the City of Ocoee Regarding Improvements to and the Assignment of Traffic Control for the Intersection of Ingram Road, Lake Meadow Road, and Clarcona-Ocoee Road**

Submitted for approval and execution is an amendment to the interlocal agreement between Orange County and the City of Ocoee regarding intersection improvements at Ingram Road, Lake Meadow Road, and Clarcona-Ocoee Road including installation of a mast arm signal, sidewalk, curb ramps, signing and pavement markings.

This amendment identifies that the County shall continue to have jurisdiction and responsibility of the intersection and provide clarity regarding sovereign immunity. The remainder of the conditions for the original agreement stay the same. Orange County and the City of Ocoee agree to equally share the total design and construction costs of the intersection project estimated in good faith at \$500,000. Orange County's contribution is in the amount of \$250,000.

The County Attorney's Office and the Public Works Traffic Engineering Division have reviewed the interlocal agreement and find it acceptable.

**Action Requested: Approval and execution of Amendment to Interlocal Agreement between Orange County, Florida and the City of Ocoee, Florida regarding Improvements to and Assignment of Traffic Control for the Intersection of Ingram Road, Lake Meadow Road, and Clarcona-Ocoee Road. The design and construction cost to the County is \$250,000. District 2.**

JCK/HLC/dar

Attachments

**AMENDMENT TO**  
**INTERLOCAL AGREEMENT**  
**between**  
**ORANGE COUNTY, FLORIDA**  
**and the**  
**CITY of OCOEE, FLORIDA**  
**regarding**  
**IMPROVEMENTS to and ASSIGNMENT of TRAFFIC**  
**CONTROL for the INTERSECTION**  
**of**  
**INGRAM ROAD, LAKE MEADOW ROAD,**  
**and CLARCONA-OCOEE ROAD**

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**Approved by the Orange County  
Board of County Commissioners  
December 14, 2021**

**Approved by the City of Ocoee  
City Commission  
October 5, 2021**

BCC Mtg. Date: November 15, 2022

**AMENDMENT TO  
INTERLOCAL AGREEMENT  
between  
ORANGE COUNTY, FLORIDA  
and the  
CITY of OCOEE, FLORIDA  
regarding  
IMPROVEMENTS to and the ASSIGNMENT of TRAFFIC  
CONTROL for the INTERSECTION of  
INGRAM ROAD, LAKE MEADOW ROAD, and  
CLARCONA-OCOEE ROAD**

**THIS AMENDMENT TO INTERLOCAL AGREEMENT** (the "Amendment"), effective as of the latest date of execution ("Effective Date") is made and entered into by and between **Orange County**, a charter county and political subdivision of the State of Florida ("County") with a mailing address of P.O. Box 1393, Orlando, Florida 32802-1393, and the **City of Ocoee**, a Florida municipal corporation ("City") located at 150 North Lakeshore Drive, Ocoee, Florida 34761. County and City may occasionally be referred to herein individually as "Party" and collectively as "Parties."

WITNESSETH:

**WHEREAS**, County and City previously approved that certain Interlocal Agreement regarding Improvements to and the Assignment of Traffic Control for the Intersection of Ingram Road, Lake Meadow Road, and Clarcona-Ocoee Road (the "Agreement"); and

**WHEREAS**, since the Parties' approvals, certain terms need to be updated to accurately reflect the Parties' obligations; and

**WHEREAS**, in all other respects, the original terms of the Agreement shall remain unchanged and in full force and effect.

**NOW, THEREFORE,** in consideration of the mutual covenants and agreements herein contained, and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged and agreed, County and City agree as follows:

**Section 1. Recitals.** The foregoing recitals are true and correct and form a material part of this Agreement.

**Section 2. Amendments to Agreement.**

**A. The final recital on page 3 of the Agreement is hereby deleted and replaced with the following language:**

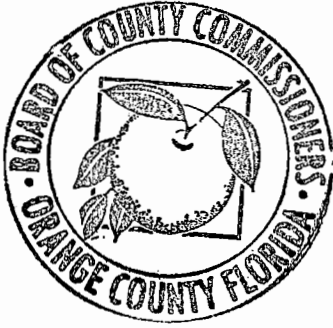
“Whereas, moreover, this Agreement is intended to establish that County shall continue to have the jurisdiction and responsibility to control traffic at the intersection, pursuant to Section 316.006(2), Florida Statutes; and...”

**B. Section 6 (b) is hereby deleted and replaced with the following language:**

“(b) **Liability for Torts.** Liability for torts arising from events occurring on or after the Effective Date shall be in County; however, nothing in this Agreement waives or is intended to waive the sovereign immunity of County (or City for events occurring before the Effective Date) or of the provisions of Section 768.28, Florida Statutes. “

**IN WITNESS WHEREOF,** County and City have executed this Amendment as of the dates written below.

[Signatures appear on following pages]



**ORANGE COUNTY, FLORIDA**

By: Board of County Commissioners

By: *Jerry L. Demings*  
for Jerry L. Demings  
Orange County Mayor

Date: 15 November, 2022

ATTEST: Phil Diamond, CPA, County Comptroller,  
as Clerk of the Board of County Commissioners

By: *Noelia Perez*  
for Deputy Clerk

Print Name: Noelia Perez

**CITY OF OCOEE, FLORIDA**

By: City Commission

By: *Rusty Johnson*  
Rusty Johnson, Mayor

Date: August 30, 2022

ATTEST:

By: *Melanie Sibbitt*  
Melanie Sibbitt, City Clerk

Print Name: Melanie Sibbitt

FOR THE USE AND RELIANCE  
ONLY OF THE CITY OF OCOEE, FLORIDA:  
APPROVED AS TO FORM AND LEGALITY  
this 30<sup>th</sup> day of August, 2022

By: *Scott Cookson*  
Scott Cookson, City Attorney

APPROVED BY THE OCOEE  
CITY COMMISSION AT A MEETING  
HELD ON October 5, 2021  
UNDER AGENDA ITEM NO. 8

APPROVED BY ORANGE  
COUNTY BOARD OF COUNTY  
COMMISSIONERS

BCC Mtg. Date: Dec. 14, 2021

**INTERLOCAL AGREEMENT**

**between**

**ORANGE COUNTY, FLORIDA**

**and the**

**CITY of OCOEE, FLORIDA**

**regarding**

**IMPROVEMENTS to and ASSIGNMENT of TRAFFIC**

**CONTROL for the INTERSECTION**

**of**

**INGRAM ROAD, LAKE MEADOW ROAD,**

**and CLARCONA-OCOEE ROAD**

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Approved by the Orange County  
Board of County Commissioners  
December 14, 2021

Approved by the City of Ocoee  
City Commission  
*October 5*, 2021

**INTERLOCAL AGREEMENT**  
**between**  
**ORANGE COUNTY, FLORIDA**  
**and the**  
**CITY of OCOEE, FLORIDA**  
**regarding**  
**IMPROVEMENTS to and the ASSIGNMENT of TRAFFIC**  
**CONTROL for the INTERSECTION of**  
**INGRAM ROAD, LAKE MEADOW ROAD, and**  
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WITNESSETH:

**WHEREAS**, County has authority pursuant to Section 125.01(1)(p), Florida Statutes, to enter into agreements with another governmental entity or agency for joint performance, or performance by one unit in behalf of the other, of any of either entity's or agency's authorized functions;

**WHEREAS**, City has authority pursuant to Section 166.021, Florida Statutes, to enter into agreements;

**WHEREAS**, all roads that are open and available for use by the public and dedicated to public use, according to law or by prescription, are declared to be and established as, pursuant to Section 335.01(1), Florida Statutes, public roads;

**WHEREAS**, a “road” is defined by Section 334.03(22), Florida Statutes, as “a way open to travel by the public, including, but not limited to, a street, highway, or alley, including, but not limited to, associated sidewalks, the roadbed, the right-of-way, and all culverts, drains, sluices, ditches, water storage areas, waterways, embankments, slopes, retaining walls, bridges [and] tunnels . . .”;

**WHEREAS**, the term “road” as defined by Section 334.03(22), Florida Statutes, also implicitly includes, but is not limited to, curbs, guardrails, landscaping, and traffic control devices (such as signals and signs);

**WHEREAS**, according to Section 335.01(2), Florida Statutes, public roads are divided into four systems: (1) the “county road system”; (2) the “city street system”; (3) the “State Highway System”; and (4) the “State Park Road System”;

**WHEREAS**, the “county road system” is defined by Section 334.03(8), Florida Statutes, as “all collector roads in the unincorporated areas of a county and all extensions of such collector roads into and through any incorporated areas, all local roads in the unincorporated areas, and all urban minor arterial roads not in the State Highway System”;

**WHEREAS**, the “city street system” is defined by Section 334.03(3), Florida Statutes, as “all local roads within a municipality, and all collector roads inside that municipality, which are not in the county road system”;

**WHEREAS**, pursuant to Section 335.0415(1), Florida Statutes, the jurisdiction of public roads and the responsibility for operation and maintenance within the right-of-way of any road within the State, county, and municipal road systems shall be that which existed on June 10, 1995;

**WHEREAS**, under Section 335.04(2), Florida Statutes, the predecessor statute to Section 335.0415, Florida Statutes, each local government’s responsibilities were expressly described therein, and the responsibility of a county for the operation and maintenance of any roads under its jurisdiction that extended into and through a municipality was limited to the roadbed, curbs, culverts and drains, but did not include sidewalks, embankments and slopes;



**WHEREAS**, pursuant to Section 335.0415(2), Florida Statutes, any change of the jurisdiction of a public road after July 1, 1995, that is a part of a county road system or a city street system is governed by Section 335.0415(3), Florida Statutes;

**WHEREAS**, pursuant to Section 335.0415(3), Florida Statutes, subsequent to July 1, 1995, public roads within the respective road systems of a county or a city may be transferred between those jurisdictions only by mutual agreement of those local governmental entities;

**WHEREAS**, Clarcona-Ocoee Road and Lake Meadow Road are part of the County road system;

**WHEREAS**, Ingram Road is part of the City street system;

**WHEREAS**, the intersection of Ingram Road, Clarcona-Ocoee Road, and Lake Meadow Road is currently operated and maintained by County;

**WHEREAS**, County and City have determined that the construction of certain traffic signalization improvements at the intersection (the "Improvements") will provide improved safety and intersection operations based on the conducted signal warrant analysis;

**WHEREAS**, County and City desire to cooperate in designing, permitting, and constructing the Improvements for the mutual benefit of the citizens, property owners, and businesses of both City and County, according to the terms and conditions of this Agreement;

**WHEREAS**, County and City concur that the Improvements will be most efficiently and expeditiously completed if County and City partner to fund such Improvements, and if one party, in this case County, designs, permits, bids, and constructs the Improvements, according to the terms and conditions set forth herein;

**WHEREAS**, therefore, this Agreement is intended to set forth the terms and conditions relating to the design, permitting, bidding, and construction of the Improvements;

**WHEREAS**, moreover, this Agreement is intended to establish that City shall have the jurisdiction and responsibility to control traffic at the intersection, pursuant to Section 316.006(2), Florida Statutes; and

**WHEREAS**, however, this Interlocal Agreement is not intended to apply and shall not be construed as applying to the subject of which law enforcement authority (the City's Police Department or the Orange County Sheriff's Office) has jurisdiction to enforce traffic laws at the intersection, pursuant to Section 316.640, Florida Statutes.

**NOW, THEREFORE**, in consideration of the mutual covenants and agreements herein contained, and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged and agreed, the County and the City agree as follows:

**Section 1. Recitals.**

The foregoing recitals are true and correct and form a material part of this Agreement.

**Section 2. "Intersection" defined.**

The "Intersection" is defined in this Agreement as the general area of convergence of the rights-of-way of Clarcona-Ocoee Road with Ingram Road (north leg) and Lake Meadows Road (south leg), all as generally depicted and described in **Appendix "A"** attached hereto and incorporated herein by reference.

**Section 3. Intersection Project; Intersection Project Costs; Good Faith Estimate; Parties' Shares of Costs.**

(a) **Intersection Project.** County and City agree to modify the Intersection in accordance with the results of County's warrant study and design, permit, bid, construct, and install and a new mast arm traffic signal system at the Intersection ("Intersection Project"), all as generally depicted and described in **Appendix "B"**, attached hereto and incorporated herein by reference.

(b) **Intersection Project Costs.** All actual design, permitting, construction, and related costs for the Intersection Project shall be deemed "Intersection Project Costs."

(c) **Good Faith Estimate.** The parties' good faith estimate of the Intersection Project Costs is Five Hundred Thousand Dollars (\$500,000.00). The itemization of those estimated costs is set forth in **Appendix "C"** attached hereto and incorporated herein by reference.

**(d) Parties' Shares of Costs.** County and City shall each be responsible for fifty percent (50%) of the Intersection Project Costs.

**Section 4. County's Responsibilities for the Intersection Project.**

**(a) Project Management.** County shall be responsible for managing, designing, obtaining necessary permits, bidding, and constructing the Intersection Project.

**(b) Invoices.** Before City makes any payment for the Intersection Project pursuant to Section 5, County shall provide City with a copy of the invoice for such payment, for City's review and approval.

**(c) City Approvals.** County must seek and obtain City approvals, as follows.

**(1) Design.** County has completed the warrant study and the Intersection Project design, including procuring all applicable permits and coordinating with all applicable utilities and other third parties. Although the parties are sharing equally the total costs of the Intersection Project, City shall not be responsible for costs associated with the warrant study or the design, consistent with the terms of Section 5.

**(2) Construction Plans.** County shall send its final design construction plans to City for City's review, comment, and approval no later than ninety (90) days after the Effective Date. City shall have thirty (30) days from delivery to review, comment, and indicate its approval or denial of the final plans. Failure by City to provide its approval or denial of the final plans within such thirty (30) day period shall be deemed approval of the plans. Upon City's approval of the final plans, which approval shall not be unreasonably conditioned, withheld, or delayed, County may proceed to obtain a purchase order for construction of the Intersection Project.

**(d) Timelines for Intersection Project.** County shall make a good faith effort to ensure that the Intersection Project is completed no later than two (2) years after the Effective Date.

**(e) Delays, overruns, etc.** County shall timely communicate to City any material delays, cost overruns, and substantive issues that may arise throughout the Intersection Project. Notwithstanding any

cost overruns, City and County's respective shares of the total Intersection Project Costs shall not exceed fifty percent (50%) of the Intersection Project total costs, including any such overruns.

**(f) City's Right to Inspect.** City shall have the reasonable right, at its discretion, to inspect the Intersection Project throughout the construction phase.

**(h) Completion of Intersection Project.** County shall make reasonable efforts to ensure that the Intersection Project is completed pursuant to the approved final design plans, as may be modified. Upon completion of the Intersection Project, County's Public Works Director shall promptly so notify City's Public Works Director. The completion date of the Intersection Project shall be the date when City's Public Works Director accepts such completion, which acceptance shall not be unreasonably conditioned, delayed, or withheld.

**Section 5. City's Responsibilities for Intersection Project.**

**(a) Payment Schedule.** City shall make payments directly to County for Design and Construction Costs. Upon County issuing a Notice to Proceed to the construction contractor and issuing to City an invoice, City shall, no later than sixty (60) days after such notice, pay to the Orange County Board of County Commissioners two hundred fifty thousand dollars (\$250,000), which shall be delivered to the attention of the Orange County Public Works Fiscal & Operations Division. Thereafter, as and if the total actual costs of construction exceed \$500,000, City shall promptly pay to County fifty percent (50%) of any such additional costs within thirty (30) days after County submits an invoice to City.

**(b) Permits.** At no cost to County, City shall, upon request by County, grant to County all City permits and authorizations appropriate or necessary for the County to construct the Intersection Project, including but not limited to right-of-entry and right-of-way use permits. City hereby waives all fees associated with such permits and authorizations.

**(c) City Review of Estimates, Costs, Payments, and Plans.** To the extent City disapproves or objects to any estimates, costs, payments, or plans, as and where authorized to do so under this Agreement, the parties shall attempt to reach agreement on such issue within thirty (30) days of City's

disapproval or objection, or within such other time as may be agreed upon by City's and the County's representatives.

**Section 6. Assignment of Responsibility for Traffic Control for Intersection; Liability for Torts.**

(a) **Responsibility for Traffic Control.** Orange County hereby acknowledges and accepts the responsibility for traffic control for the Intersection and associated costs for signal operation and maintenance as of the Effective Date.

(b) **Liability for Torts.** Liability for torts arising from events occurring on or after the Effective Date shall be in City; however, nothing in this Agreement waives or is intended to waive the sovereign immunity of City (or County for events occurring before the Effective Date) or of the provisions of Section 768.28, Florida Statutes.

**Section 7. Traffic Control at Intersection.**

As of the Effective Date and upon completion of the Intersection Project, Orange County shall be responsible for regulating, warning, guiding, and controlling traffic of both vehicles and pedestrians in the Intersection, as authorized under Section 316.006(2), Florida Statutes, regardless of any future alteration, realignment, construction, extension, or widening of the Intersection.

**Section 8. General Provisions.**

(a) **Validity.** County and City each represents, warrants, and covenants to and with the other its respective authority and power under Florida law to enter into this Agreement, acknowledges the validity and enforceability of this Agreement, and waives any future right or defense based on any claim of illegality, invalidity or unenforceability of any nature.

(b) **Governing Law; Venue; Attorney's Fees and Costs.**

(1) **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of Florida.

(2) **Venue.** Venue for any action arising out of or related to this Agreement shall be in the Circuit Court of the Ninth Judicial Circuit in and for Orange County, Florida.

(3) **Attorney Fees and Costs.** In the event a party deems it necessary to take legal action to enforce any provision of this Agreement, each party shall bear its own attorney fees and costs.

(c) **Remedies.** Upon any failure of either party to perform its obligations under this Agreement, the aggrieved party shall have the right to pursue any remedy available in law, equity, or otherwise, but before a court action is maintained, such party must comply with Chapter 164, Florida Statutes, incorporated herein by reference.

(d) **Entire Agreement.** This Agreement, including its appendixes, constitutes the entire agreement of the parties with respect to the subject matters of this Agreement. Any previous oral or written communications or understandings of the parties with respect to the subject matters hereof are null and void and pre-empted by this Agreement.

(e) **Amendments.**

Any amendments to this Agreement shall only be deemed enforceable only if in writing, approved by the Board of County Commissioners and the City Commission, and signed by the parties hereto.

(f) **Waivers.**

No waiver of any provision of this Agreement shall be effective unless in writing and signed by the party against whom it is asserted. A waiver shall be applicable only to the specified instance to which it relates and shall not be deemed a continuing or future waiver unless expressly deemed otherwise in writing.

(g) **Notices.** All notices required to be given hereunder shall be in writing and shall be deemed given and received in the following circumstances: (1) when personally delivered by hand; (2) three business days after being deposited in the United States Mail, postage prepaid, certified or registered; (3) the next business day after being deposited with a recognized overnight mail courier delivery service; (4) when sent by electronic mail; or (5) when transmitted by facsimile or telecopy transmission, with receipt acknowledged upon transmission. All notices hereunder shall be addressed as follows (or to such other

official or at such other address, of which either party hereto shall subsequently give written notice as provided herein):

If to the County:                      Director  
Orange County Public Works Department  
4200 S. John Young Parkway  
Orlando, Florida 32839-9205  
Phone: (407) 836-7900  
Telecopy: (407) 836-7716

With a copy to:                      County Administrator  
Post Office Box 1393  
Orlando, Florida 32802-1393  
Phone: (407) 836-7370  
Telecopy: (407) 836-7399

If to the City:                      Robert D. Frank  
City Manager  
City of Ocoee  
150 North Lakeshore Drive  
Ocoee, Florida 34761  
Phone: (407) 905-3111  
Telecopy: (407) 905-3118

With a copy to:                      Scott Cookson  
City Attorney  
1000 Legion Place #1700  
Orlando, Florida 32801  
Phone: (407) 581-9800  
Telecopy: (407) 581-9801

In all cases, notices shall be deemed delivered to a party only upon delivery of copies to the persons indicated above in the same manner as for the party being notified. Either party may change its address or official for notice purposes by giving the other party notice as provided herein.

**(h) Ambiguities.** Both parties have been allowed equal input regarding the terms and wording of this Agreement, and have had the benefit of consultation with their respective legal counsel prior to its execution, such that all language and wording herein shall be construed equally for and against the parties.

**(i) Headings.** The headings or captions of sections or subsections used in this Agreement are merely for the convenience of the parties for reference only and are not intended to define or limit their

contents, and are not intended to affect the construction of or to be taken into consideration in interpreting this Agreement.

(j) **Indemnification.** Each party agrees to defend, indemnify, and hold harmless the other party, its officials, and employees from all claims, actions, losses, suits, judgments, fines, liabilities, costs, and expenses (including attorney's fees) attributable to its negligent acts or omissions, or those of its officials and employees acting within the scope of their employment, or arising out of or resulting from the indemnifying party's negligent performance under this agreement. Nothing contained herein shall constitute a waiver of sovereign immunity or of the provisions of Section 768.28, Florida Statutes. The foregoing shall not constitute an agreement by either party to assume any liability for the acts, omissions, and/or negligence of the other party.

IN WITNESS WHEREOF, County and City have executed this Agreement as of the dates written below.



ORANGE COUNTY, FLORIDA

By: Board of County Commissioners

By: *Jerry L. Demings*  
for Jerry L. Demings  
Orange County Mayor

Date: 17 December, 2021

ATTEST: Phil Diamond, CPA, County Comptroller,  
as Clerk of the Board of County Commissioners


By: *Emily Rivera*  
for Deputy Clerk

Print Name: Emily Rivera



**CITY OF OCOEE, FLORIDA**

By: City Commission

By:   
Rusty Johnson, Mayor


Date: August 30, 2022

ATTEST:

By:   
Melanie Sibbitt, City Clerk

Print Name: Melanie Sibbitt

FOR THE USE AND RELIANCE  
ONLY OF THE CITY OF OCOEE, FLORIDA:  
APPROVED AS TO FORM AND LEGALITY  
this 30<sup>th</sup> day of August, 2022

By:   
Scott Cookson, City Attorney

APPROVED BY THE OCOEE  
CITY COMMISSION AT A MEETING  
HELD ON October 5, ~~2018~~ 2021  
UNDER AGENDA ITEM NO. 8

# Appendix "A"

## General Depiction of Intersection



## **Appendix "B"**

### **General Description of Intersection Project**

Orange County has requested signal design Scope of Services from Metric Engineering, Inc. (Metric) for the design to convert the currently stop-controlled intersection of Clarcona-Ocoee Road at Ingram Road/Lake Meadows Road to a mast arm signalized intersection. The intersection is currently a four-legged intersection that is stop-controlled on the side street approaches.

#### **A. DESIGN SERVICES TO BE PROVIDED**

The work to be performed under this Task Work Order includes the following task activities.

1. Initial Review and Data Collection
  - a. Initial field review by EOR.
    - a. Collection of field measurements and qualitative assessment.
    - b. Topographic survey from right-of-way to right-of-way extending approximately 200 feet for minor approaches and 350 feet for major approaches from the center of the intersection (to be performed by Barnes, Ferland and Associates).
    - c. Collection of any existing as-built data and right-of-way records.
2. 30% Design Plans
  - a. Creation of a concept-level 30% plans set.
    - a. Presentation of 30% plans set at kick-off meeting.
3. 60% Design Plans
  - a. Creation of 60% design plans, which are expected to include:
    - i. Key Sheet
    - ii. Tabulation of Quantities Sheet
    - iii. General Notes Sheet
    - iv. Plans Sheets (Roadway, Signalization and Signing and Pavement Marking)
    - v. Fiber Interconnect Sheet(s) (includes any necessary ITS/ ATMS analysis)
    - vi. Mast Arm Tabulation Sheet
    - vii. Guide Sign Worksheet(s)
  - a. Internal QA/QC
  - b. Submittal of 60% plans to Orange County for review.
4. 100% Design Plans
  - a. Respond to comments from Orange County on 60% plans submittal.
  - b. Creation of 100% design plans, which will include updates to the 60% plans sheets, as well as the addition of the following sheets:
    - i. Mast Arm Assemblies Data Table Sheet

- ii. Splicing Diagram
  - iii. Report of Core Borings
  - iv. Summary of Verified Utilities
- c. To support the additional sheets, the following will occur:
- i. Perform four geotechnical borings, one each near each mast arm location (to be performed by Nadic Engineering).
  - ii. Perform Subsurface Utility Engineering (SUE) to clear each mast hole location (to be performed by Barnes, Ferland and Associates).
  - iii. Perform a structural analysis of proposed new mast arms
- d. Internal QA/QC
- e. Submittal of 100% plans to Orange County for review.

5. Final Signed and Sealed Plans

- a. Respond to comments from Orange County on 100% plans submittal.
- b. Update design plans for final submittal:
- c. Internal QA/QC
- d. Sign and seal and submit plans to Orange County.

6. Post Design

- a. Respond to any questions from Orange County.
- b. Respond to any RFIs from the contractor.
- c. Review of shop drawing submittals from the contractor.
- d. Plans revision if necessary.

7. Management and Coordination

- a. Metric will provide continuous management and oversight of the design process.
- b. Periodic progress updates will be provided.

**B. CONSTRUCTION SERVICES TO BE PROVIDED**

Orange County will use the term contract for New Florida Industrial Electric, Inc. (Contractor) to build the traffic signal.

Once the Contractor receive the notice to proceed for the signal at the intersection of Clarcona-Ocoee Road at Ingram Road/Lake Meadows Road, the construction duration is anticipated to be completed within seven months.

# Appendix "C"

## Good Faith Estimate and Itemization of Intersection Project Costs

Board of County Commissioners

Orange County, Florida  
Telephone (407) 836-5635

Invoice To: Fiscal & Operational Support Division  
4200 S John Young Parkway  
Phone 407-836-7900  
Orlando, FL 32839  
Public Works Department

Vendor Number: 09483  
Contact: MARILEY PEREZ  
Vendor: METRIC ENGINEERING INC  
SUITE 200  
13940 SW 136TH ST  
MIAMI, FL 33186-5541  
305-235-5098

**Change Order/ Amendment**  
**STANDARD**

PO Number: C18902025- 1

ABOVE PURCHASE ORDER NUMBER MUST APPEAR ON ALL INVOICES, BILLS OF LADING, PACKAGES AND CORRESPONDENCE.

Prcu.Id: 2032133

Date: 03/13/2020 Page: 1 of 1

Ship To: Traffic Engineering Division (Administrative Section)  
Conf: NO

4200 S. John Young Prkwy,  
3rd Fl, Phone (407) 836-7861  
Orlando, FL 32839-9205  
Belkys Jorge  
407-836-8007

Delivery Date: 09/30/2020

Reference: Y18-902

Authorized by: Fabio Henao

FOB: FOB Dest, Freight Prepaid

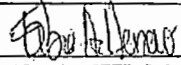
TOTAL: \$55,377.07

Award Date: Award Amount: \$55,377.07

LINE NO	QUANTITY	UNIT	DESCRIPTION	ACCOUNTING LINE AMOUNT	UNIT COST	TOTAL COST
1	55377.07000	EA	Professional Engineering Services to design the upgrades necessary to install mast arm signals at Clarcona-Ocoee Road and Ingram Road/Lake Meadows Road as per proposal dated 2/19/20 Start Date: 3/4/20 End: 9/30/20 Nekia Frazier, Traffic Engineering 407-836-7731 Task Authorization: #025 In accordance with Metric's Proposal dated February 19, 2020. Lump Sum: \$52,212.86 3/13/2020 C/O #1 to update proposal and include upgrades to install mast arm signals at Clarcona-Ocoee Road. Authorized by Fabio Henao. Lump Sum \$3,164.21		1.000000	55,377.07
	RQSOC NO: Q00000123222					
	1004 072 2720 3197			55,377.07		
<b>TOTAL:</b>						<b>\$55,377.07</b>

Special Instructions:

DEPARTMENT COPY

  
AUTHORIZED SIGNATURE

THIS ORDER IS SUBJECT TO THE TERMS AND CONDITIONS ATTACHED HERETO

Rev.10/2015



## Appendix "C"

### Good Faith Estimate and Itemization of Intersection Project Costs (Con't)



March 2, 2020

Project: Orange County Continuing Services Contract  
City Contract: Y18-902-CH  
RE: **Scope of Services for Clarcona-Ocoee Road at Ingram Road/Lake Meadows Road Signal Design**  
Prepared by: Joshua Reichert, P.E.

#### Summary

Orange County has requested this Scope of Services from Metric Engineering, Inc. (Metric) for the design to convert the currently stop-controlled intersection of Clarcona-Ocoee Road at Ingram Road/Lake Meadows Road to a mast arm signalized intersection.

#### **A. SCOPE OF SERVICES**

This Task Work Order describes the proposed scope of work by Metric to Orange County to design the upgrades necessary to install mast arm signals at Clarcona-Ocoee Road and Ingram Road/Lake Meadows Road. The intersection is currently a four-legged intersection that is stop-controlled on the side street approaches. The scope of work will include a basic structural analysis using the FDOT Mathcad program and its default values to ensure that the proposed mast arm configuration meets standard criteria. If any unstandardized condition arises, metric will coordinate with the county on further action. To support the mast arm analysis, four geotechnical borings corresponding to the expected general mast arm locations will be performed, each to a depth of 30 feet. A geotechnical report will be provided that outlines all soil parameters for use in the structural analyses.

The scope of work also includes a fiber interconnect component; ITS fiber is expected to be 72-count single mode and a splicing diagram will be provided. Fiber should run to the adjacent signal at Clarcona-Ocoee Road and Clarke Road to connect to the Orange County network. Additional survey between the signals to support the fiber connection is not expected and the interconnect plans will be overlaid on aerials. Metric will design the signal cabinet to have the ability to be connected via fiber to the County's existing fiber-based signals network. One or more fiber interconnect sheets will be part of the plans and will detail the fiber drop.

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**Appendix "C"**  
**Good Faith Estimate and Itemization of Intersection Project Costs (Con't)**



Signal clearance intervals will be calculated and shown in a proposed timing table on the Signalization Plans. Proposed signal SOP and phase diagrams will also be included with the Signalization Plans. Timing plans are not included in this effort.

This design is intended to be for use by Orange County's continuing services contract Y-19-1077-CH to construct the mast arm signals and will be reflected as such in the tabulation of quantities pay items.

**B. SERVICES TO BE PROVIDED**

The work to be performed under this Task Work Order includes the following task activities.

1. Initial Review and Data Collection
  - a. Initial field review by EOR.
  - b. Collection of field measurements and qualitative assessment.
  - c. Topographic survey from right-of-way to right-of-way extending approximately 200 feet for minor approaches and 350 feet for major approaches from the center of the intersection (to be performed by Barnes, Ferland and Associates).
  - d. Collection of any existing as-built data and right-of-way records.
2. 30% Design Plans
  - a. Creation of a concept-level 30% plans set.
  - b. Presentation of 30% plans set at kick-off meeting.
3. 60% Design Plans
  - a. Creation of 60% design plans, which are expected to include:
    - i. Key Sheet
    - ii. Tabulation of Quantities Sheet
    - iii. General Notes Sheet
    - iv. Plans Sheets (Roadway, Signalization and Signing and Pavement Marking)
    - v. Fiber Interconnect Sheet(s) (includes any necessary ITS/ ATMS analysis)
    - vi. Mast Arm Tabulation Sheet
    - vii. Guide Sign Worksheet(s)
  - b. Internal QA/QC
  - c. Submittal of 60% plans to Orange County for review.
4. 100% Design Plans
  - a. Respond to comments from Orange County on 60% plans submittal.

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## Appendix "C"

### Good Faith Estimate and Itemization of Intersection Project Costs (Con't)



- b. Creation of 100% design plans, which will include updates to the 60% plans sheets, as well as the addition of the following sheets:
    - i. Mast Arm Assemblies Data Table Sheet
    - ii. Splicing Diagram
    - iii. Report of Core Borings
    - iv. Summary of Verified Utilities
  - c. To support the additional sheets, the following will occur:
    - i. Perform four geotechnical borings, one each near each mast arm location (to be performed by Nadic Engineering).
    - ii. Perform Subsurface Utility Engineering (SUE) to clear each mast hole location (to be performed by Barnes, Ferland and Associates).
    - iii. Perform a structural analysis of proposed new mast arms
  - d. Internal QA/QC
  - e. Submittal of 100% plans to Orange County for review.
5. Final Signed and Sealed Plans
- a. Respond to comments from Orange County on 100% plans submittal.
  - b. Update design plans for final submittal.
  - c. Internal QA/QC
  - d. Sign and seal and submit plans to Orange County.
6. Post Design
- a. Respond to any questions from Orange County.
  - b. Respond to any RFIs from the contractor.
  - c. Review of shop drawing submittals from the contractor.
  - d. Plans revision if necessary.
7. Management and Coordination
- a. Metric will provide continuous management and oversight of the design process.
  - b. Periodic progress updates will be provided.

Orange County will provide Metric with any background information that they may have on hand in order to aid in the design process.

#### **C. DURATION OF SERVICES**

Services will begin upon notice to proceed (NTP). The duration of services is expected to be 8 months, with the total design time expected to be six months, including Orange County review periods (please see attached schedule). The additional two-month Purchase Order

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Appendix "C"

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duration is intended to account for any unforeseen circumstances that may arise during the design process.

**D. FEE SCHEDULE**

Total Lump Sum Amount.....\$55,377.07

(See next page)

ESTIMATE OF WORK EFFORT AND COST - PRIME CONSULTANT

Name of Project: Granada-Oceas at Ingram  
 County: Orange  
 FPN: Y18-002-CH  
 FAP No.: NA

Consultant Name: MettE Engineering, Inc.  
 Consultant No.: 4-2403.20  
 Date: 3/2/2020  
 Estimator: Joshua Reichert

Staff Classification	Total Staff Hours From "SH" Summary	Project Manager	Senior Engineer	Project Engineer	Senior Designer	Designer	CADD Designer	Data Collection Technician	Engineer Intern	GIS Specialist	Staff Classification 10	Staff Classification 11	Staff Classification 12	SH By Activity	Salary Cost By Activity	Average Rate Per Task																				
																	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
3. Project Control and Project Common Tasks	14	0	3	4	0	0	1	0	0	0	0	0	0	14	\$2,296	\$164.01																				
4. Roadway Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
5. Roadway Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
6a. Drainage Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
6b. Drainage Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
7. Utilities	20	2	4	6	0	0	8	0	0	0	0	0	0	20	\$2,400	\$119.08																				
8. Environmental Permitting and Env. Clearance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
9. Structural - Misc. Tasks, Dwg, Non-Tech.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
10. Structures - Bridge Development Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
12. Structures - Short Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
13. Structures - Medium Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
17. Structures - Retaining Walls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
18. Structures - Miscellaneous	30	2	15	8	3	3	3	0	0	0	0	0	0	31	\$4,811	\$155.19																				
19. Signing & Pavement Marking Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
20. Signing & Pavement Marking Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
21. Signalization Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
22. Signalization Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
23. Lighting Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
24. Lighting Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
25. Landscape Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
26. Landscape Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
27. Survey (Field & Office Support)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
29. Mapping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
30. Terrestrial Mobile LIDAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
36. 3D Modeling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0/HR																				
<b>Total Staff Hours</b>	<b>64</b>	<b>10</b>	<b>22</b>	<b>16</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>65</b>																						
<b>Total Staff Cost</b>		<b>\$1,683.30</b>	<b>\$3,656.48</b>	<b>\$2,548.24</b>	<b>\$323.34</b>	<b>\$271.77</b>	<b>\$523.48</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>		<b>\$9,506.59</b>	<b>\$149.38</b>																				

Survey Field Days by Subcontractor  
 4 - Person Crew

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

SALARY RELATED COSTS				\$9,506.59
OVERHEAD		0%		\$0.00
OPERATING MARGIN		0%		\$0.00
FCCM (Facilities Capital Cost Money)		0.00%		\$0.00
EXPENSES		0.00%		\$0.00
Survey (Field - 4 by Prime)	0	4 person crew	4 days	\$0.00
<b>SUBTOTAL ESTIMATED FEE:</b>				<b>\$9,506.59</b>
Subcontractor - Archon				\$25,145.00
Subcontractor - Trade				\$7,374.06
Subcontractor - EPA				\$13,349.22
<b>SUBTOTAL ESTIMATED FEE:</b>				<b>\$55,374.87</b>
Geotechnical Field and Lab Testing				\$0.00
<b>SUBTOTAL ESTIMATED FEE:</b>				<b>\$55,374.87</b>
Original Services				\$0.00
<b>GRAND TOTAL ESTIMATED FEE:</b>				<b>\$55,374.87</b>

**Signalization Plan Set for Clarcona-Ocoee Rd at Ingram Rd/Meadows Rd Signal Design**

Estimator/Data: Deborah Greeber, 2/28/2020  
 Consultant: Aptreon Consulting Group, Inc.

Project: Orange County Continuing Professional Traffic Engineering Contract #Y18-902-CH

Activity	Senior Engineer		Count Technician		TOTAL	
	Manhours	Billing Rate	Manhours	Billing Rate	Manhours by Activity	Salary cost for Activity
Signalization Analysis	107	\$149.50	56	\$59.80	163	\$19,345.30
Signalization Plans	24	\$149.50	37	\$59.80	61	\$6,800.60
	131.0	\$19,684.50	93.0	\$5,581.40	224.0	\$25,145.90

Orange County Continuing Services Contract  
 County Contract Y18-902-CH  
 Nadic Engineering Services, Inc. (NADIC)

Task Work Order Ingram Road & Clarcona-Ocoee Road  
 Task Work Order 6  
 Date Estimated: December 5, 2019  
 Nadic Project No.: PQ.GEO-RD18043

Prepared By: Godwn Nnadi  
 Estimator  
 Nadic Engineering Services, Inc. (NADIC)  
 Company Address: 601 N. Hart Blvd.  
 City, State Zip: Orlando, FL 32818

Basic Activity	Principal		Senior Engineer/Geologist		Project Engineer/Geologist		Engineer/Geologist		Engineering Intern		Senior CADD/ GIS Support		Sr. Engineering Tech.		Engineering Technician II		Clerical		Total	
	Rate/Hr.	\$177.04	Rate/Hr.	\$155.72	Rate/Hr.	\$141.16	Rate/Hr.	\$86.53	Rate/Hr.	\$69.91	Rate/Hr.	\$75.59	Rate/Hr.	\$68.50	Rate/Hr.	\$54.36	Rate/Hr.	\$49.99	Man Hours	Cost by Pos. & Act
	Man Hours	Cost by Pos. & Act	Man Hours	Cost by Pos. & Act	Man Hours	Cost by Pos. & Act	Man Hours	Cost by Pos. & Act	Man Hours	Cost by Pos. & Act	Man Hours	Cost by Pos. & Act	Man Hours	Cost by Pos. & Act	Man Hours	Cost by Pos. & Act	Man Hours	Cost by Pos. & Act	Man Hours	Salary Cost By Activity
A. Activity A	4.00	\$708.16		\$0.00		\$0.00	20.00	\$1,730.60		\$0.00	8.00	\$604.72	8.00	\$548.00		\$0.00	2.00	\$99.98	42.00	\$3,691.46
B. Activity B	4.00	\$708.16		\$0.00		\$0.00	18.00	\$1,557.54	14.00	\$978.74	4.00	\$302.36	2.00	\$137.00		\$0.00		\$0.00	42.00	\$3,683.80
C. Activity C		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D. Activity D		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
E. Activity E		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
F. Activity F		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
G. Activity G		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
H. Activity H		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
I. Activity I		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
J. Activity J		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
<b>Total</b>	<b>8.00</b>	<b>\$1,416.32</b>	<b>-</b>	<b>\$0.00</b>	<b>-</b>	<b>\$0.00</b>	<b>38.00</b>	<b>\$3,288.14</b>	<b>14.00</b>	<b>\$978.74</b>	<b>12.00</b>	<b>\$907.08</b>	<b>10.00</b>	<b>\$685.00</b>	<b>-</b>	<b>\$0.00</b>	<b>2.00</b>	<b>\$99.98</b>	<b>84.00</b>	<b>\$7,375.26</b>

Total Loaded Activity Salary Costs	
Basic Activities	\$7,375.26
Total NADIC	<u>\$7,375.26</u>
Direct Reimbursables (out of pocket)	
<b>Grand Total Amount</b>	<b>\$7,375.26</b>

Project: Clarcona Ocean - Ingram Road

Date: December 4, 2019

Firm: Barnes Ferland and Associates  
Genel J. Sturgeon, P.S.M.

**Orange County Project**

Metric Engineering, Inc. - Continuing Professional Traffic Engineering Services Y18-602-CH

Task Designation	Survey Party (2 Person)		Senior Surveyor and Mapper		Survey Technician		Utility Coordinator Designation		Utility Coordinator GPR		SUE Crew (2 person)		SUE Crew (3 Person)		Total Salary Costs	Total Hours	Remarks
	Hrs	Cost	Hrs	Cost	Hrs	Cost	Hrs	Cost	Hrs	Cost	Hrs	Cost	Hrs	Cost			
a. Research/Coordinate	0.0	\$0.00	2.0	\$291.10	2.0	\$163.50	2.0	\$187.16	0.0	\$0.00	0.0	\$0.00	0.0	\$0.00	\$611.76	6	Designate M/RS
b. Designation	0.0	\$0.00	2.0	\$291.10	2.0	\$163.50	24.0	\$1,855.62	0.0	\$0.00	0.0	\$0.00	0.0	\$0.00	\$2,340.52	28	
c. Control Horizontal/Vertical	8.0	\$1,030.96	2.0	\$291.10	2.0	\$163.50	0.0	\$0.00	0.0	\$0.00	0.0	\$0.00	0.0	\$0.00	\$1,485.56	12	
d. Topographic Survey	24.0	\$3,092.88	4.0	\$682.20	16.0	\$1,308.00	0.0	\$0.00	0.0	\$0.00	0.0	\$0.00	0.0	\$0.00	\$4,683.08	44	
<b>Sub Total</b>	<b>32</b>	<b>\$4,123.84</b>	<b>18</b>	<b>\$1,455.58</b>	<b>22</b>	<b>\$1,788.50</b>	<b>26.0</b>	<b>\$2,043.08</b>	<b>0</b>	<b>\$0.00</b>	<b>0</b>	<b>\$0.00</b>	<b>0</b>	<b>\$0.00</b>	<b>\$8,420.82</b>	<b>80.0</b>	
<b>Location Option</b>																	
a. Utility Locates - soft surface	0.0	\$0.00	0	\$0.00	0.0	\$0.00	8	\$628.84	0	\$0.00	0	\$0.00	0	\$0.00	\$628.84	8	Four clearance holes
b. Clearance Holes	0	\$0.00	2	\$291.10	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	17	\$3,008.86	\$3,299.76	19	
<b>Sub Total</b>	<b>0</b>	<b>\$0.00</b>	<b>2</b>	<b>\$291.10</b>	<b>0</b>	<b>\$0.00</b>	<b>8</b>	<b>\$628.84</b>	<b>0</b>	<b>\$0.00</b>	<b>0</b>	<b>\$0.00</b>	<b>17</b>	<b>\$3,008.86</b>	<b>\$3,928.40</b>	<b>27</b>	
<b>TOTAL</b>	<b>32.0</b>	<b>\$4,123.84</b>	<b>12</b>	<b>\$1,746.68</b>	<b>22</b>	<b>\$1,788.50</b>	<b>34.0</b>	<b>\$2,671.72</b>	<b>0</b>	<b>\$0.00</b>	<b>0</b>	<b>\$0.00</b>	<b>17</b>	<b>\$3,809.06</b>	<b>\$13,249.32</b>	<b>117</b>	

Appendix "C"

**Good Faith Estimate and Itemization of Intersection Project Costs (Con't)**



March 2, 2020

Project: Orange County Continuing Services Contract  
City Contract: Y18-902-CH  
RE: **Scope of Services for Clarcona-Ocoee Road at Ingram Road/Lake Meadows Road Signal Design**  
Prepared by: Joshua Reichert, P.E.

Summary

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  - a. Respond to comments from Orange County on 60% plans submittal.

Office: (407) 644-1898  
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## Appendix "C"

### Good Faith Estimate and Itemization of Intersection Project Costs (Con't)



- b. Creation of 100% design plans, which will include updates to the 60% plans sheets, as well as the addition of the following sheets:
    - i. Mast Arm Assemblies Data Table Sheet
    - ii. Splicing Diagram
    - iii. Report of Core Borings
    - iv. Summary of Verified Utilities
  - c. To support the additional sheets, the following will occur:
    - i. Perform four geotechnical borings, one each near each mast arm location (to be performed by Nadic Engineering).
    - ii. Perform Subsurface Utility Engineering (SUE) to clear each mast hole location (to be performed by Barnes, Ferland and Associates).
    - iii. Perform a structural analysis of proposed new mast arms
  - d. Internal QA/QC
  - e. Submittal of 100% plans to Orange County for review.
5. Final Signed and Sealed Plans
- a. Respond to comments from Orange County on 100% plans submittal.
  - b. Update design plans for final submittal:
  - c. Internal QA/QC
  - d. Sign and seal and submit plans to Orange County.
6. Post Design
- a. Respond to any questions from Orange County.
  - b. Respond to any RFIs from the contractor.
  - c. Review of shop drawing submittals from the contractor.
  - d. Plans revision if necessary.
7. Management and Coordination
- a. Metric will provide continuous management and oversight of the design process.
  - b. Periodic progress updates will be provided.

Orange County will provide Metric with any background information that they may have on hand in order to aid in the design process.

#### **C. DURATION OF SERVICES**

Services will begin upon notice to proceed (NTP). The duration of services is expected to be 8 months, with the total design time expected to be six months, including Orange County review periods (please see attached schedule). The additional two-month Purchase Order

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Appendix "C"  
**Good Faith Estimate and Itemization of Intersection Project Costs (Con't)**



duration is intended to account for any unforeseen circumstances that may arise during the design process.

**D. FEE SCHEDULE**

Total Lump Sum Amount.....\$55,377.07

(See next page)

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Estimator: Debbie Graeber

Clarcona-Ocoee Rd at Ingram RD/Meadows Rd

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
21.1	Traffic Data Collection	LS	1	0	0	
21.2	Traffic Data Analysis	PI	1	7	7	
21.3	Signal Warrant Study	LS	1	0	0	
21.4	System Timings	LS	1	0	0	
21.5	Reference and Master Signalization Design File	PI	1	70	70	Signal design with pedestrian features 40, ADA curb ramps and sidewalks 15 and SPM 15
21.6	Reference and Master Interconnect Communication Design File	LS	1	25	25	Connect 72 SM Fiber to adjacent signal with splicing diagrams
21.7	Overhead Street Name Sign Design	EA	2	2	4	
21.8	Pole Elevation Analysis	LS	1	2	2	
21.9	Traffic Signal Operation Report	LS	1	0	0	
21.10	Quantities	LS	1	6	6	60-100 submittals
21.11	Cost Estimate	LS	2	4	8	60-100 submittals at 4 hours each
21.12	Technical Special Provisions	LS	1	0	0	
21.13	Other Signalization Analysis	LS	1	0	0	
<b>Signalization Analysis Technical Subtotal</b>					<b>122</b>	
21.14	Field Reviews	LS	1	16	16	4 Field Reviews (one Kick off 2 hr, one field review 4 hr, one soft dig 8 hr and one final review 2 hr)
21.15	Technical Meetings	LS	1	4	4	Meetings with City and Utilities
21.16	Quality Assurance/Quality Control	LS	%	5%	6	
21.17	Independent Peer Review	LS	%	0%	0	
21.18	Supervision	LS	%	3%	4	
<b>Signalization Analysis Nontechnical Subtotal</b>					<b>30</b>	
21.19	Coordination	LS	%	5%	8	Coordination with utilities, geotech and structures for plans
<b>21. Signalization Analysis Total</b>					<b>160</b>	

Estimator: Debbie Graeber

Clarcona-Ocoee Rd at Ingram RD/Meadows Rd

Task No.	Task	Scale	Units	No of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
22.1	Key Sheet		Sheet	1	4	1	4	
22.2	Summary of Pay Items Including CES Input		Sheet	1	4	1	4	
22.3	Tabulation of Quantities		Sheet	1	4	1	4	
22.4	General Notes/Pay Item Notes		Sheet	1	6	1	6	
22.5	Plan Sheet		Sheet	4	4	4	16	2 signal, 1 intersection detail, 1 srm
22.6	Interconnect Plans		Sheet	2	4	2	8	
22.7	Traffic Monitoring Site		EA	0	0		0	
22.8	Guide Sign Worksheet		EA	1	2	1	2	
22.9	Special Details		Sheet	3	2	3	6	wiring, cctv, splicing diagram sheets
22.10	Special Service Point Details		EA	0	0		0	
22.11	Mast Arm/Monotube Tabulation Sheet		PI	1	3	1	3	
22.12	Strain Pole Schedule		PI	0	0		0	
22.13	TCP Signal (Temporary)		EA	0	0		0	
22.14	Temporary Detection Sheet		PI	0	0		0	
22.15	Utility Conflict Sheet		Sheet	1	6	1	6	
22.16	Interim Standards		LS	1	0		0	
<b>Signalization Plans Technical Subtotal</b>						<b>16</b>	<b>59</b>	
22.17	Quality Assurance/Quality Control		LS	%	5%		3	
22.18	Supervision		LS	%	3%		2	
<b>22. Signalization Plans Total</b>						<b>16</b>	<b>64</b>	

**Appendix "C"**

**Good Faith Estimate and Itemization of Intersection Project Costs (Con't)**



December 5, 2019

**Metric Engineering**  
11760 Marco Beach Drive, Suite 1  
Jacksonville, FL 32224

Attention: Mr. Josh Reichert, PE.  
Traffic Operations Manager

RE: Fee Proposal for Geotechnical Investigations  
Ingram Road at Clarcona Ocoee Road Signal Design  
Orange County, Florida  
Nadic Project No.: PQ. Geo.Rd19043

Dear Mr. Reichert:

**Nadic Engineering Services, Inc. (Nadic)** pleased to submit this Fee Proposal for geotechnical engineering services based on your email dated December 3, 2019 requesting for proposal for Ingram Road at Clarcona Ocoee Road intersection Signal improvements.

**Geotechnical Project Approach:**

The geotechnical evaluation will begin with a review of all available project information, and the proposed geotechnical exploration program. Additional resources include the Orange County Soil Survey, published Geological Surveys and bulletins and any other pertinent information that could be provided by the Orange County Public Works Department, including construction records. We will also conduct a field reconnaissance to assess conditions with respect to the anticipated geotechnical exploration and project construction.

The field-testing program will include Standard Penetration Test borings. **NADIC** will stake the borings and obtain utility clearance prior to field exploration. Laboratory testing will be completed on selected soil samples in accordance with ASTM Standards and the project scope of services and will include organic and moisture content testing, sieve analysis, and Atterberg limit testing.

Our services for this project will consist of providing geotechnical engineering in general accordance with the Florida Department of Transportation (FDOT) and Orange County Public Works Department requirements. **NADIC's** services will include field exploration, analysis evaluation, and development of engineering recommendations. Our scope of services, cost and schedule are presented below:

1. Perform four (4) Standard Penetration Test borings to a depth of 30 feet each below existing grade.
2. Collect groundwater level measurements and estimate normal wet seasonal high groundwater tables. Existing groundwater will be obtained during drilling and the estimated seasonal high groundwater will be based on the encountered soil stratigraphy,

---

**Orlando Office**  
601 N. Hart Boulevard  
Orlando, Florida 32818  
Phone: (407) 521-4771

**NADIC**  
Email: [nadic@nadicinc.com](mailto:nadic@nadicinc.com)  
Fax: (407) 521-4772

**Miami Office**  
15291 NW 60<sup>th</sup> Avenue, Suite 106  
Miami Lakes, Florida 33014  
Phone: (305) 548-8451

**Appendix "C"**

**Good Faith Estimate and Itemization of Intersection Project Costs (Con't)**

**Metric Engineering**  
Ingram Road at Clarcona Ocoee Road Signal Design  
NES Project No. PO. Geo.Re19043

December 5, 2019

Page 2 of 2

groundwater levels, USDA/NRCS information, review of rainfall data, review of roadway plans if available, and past experience with similar soil conditions.

3. Visually examine all recovered soil samples and perform laboratory tests on selected representative soil samples. The laboratory testing will include sieve analysis, Atterberg limits, organic content, and natural moisture content determinations, as appropriate
4. Incorporate the results of the field testing in a formal geotechnical report.

**Fee Schedule**


In accordance with the proposed scope of services and unit prices, we estimate the cost of our geotechnical services to be \$7,375.26. Additional work required beyond the scope of services included in this proposal, or as caused by factors beyond Nadic's control, will be invoiced on a time and expense basis. Additional work will not be performed without prior authorization.

We anticipate completion of this assignment within three (3) weeks from the date of notice to proceed.

We sincerely appreciate the opportunity of submitting this proposal, and look forward to a continued working relationship with you, Metric and Orange County Public Works Department. Please do not hesitate to contact the undersigned if you have any questions or if you need additional information.

Sincerely,

**NADIC ENGINEERING SERVICES, INC.**



Godwin N. Nnadi, Ph.D., P. E.  
Principal Engineer

New 2/Roadway/GeoProposal/2019/Ingram\_Clarcona/Signal Improvement Project

**Attachment:**

Orange County Design Fee Estimate  
FDOT Staff Hour Estimation  
Computation of Geotechnical Cost

**NADIC**

Appendix "C"  
Good Faith Estimate and Itemization of Intersection Project Costs (Con't)



December 4, 2019

Mr. Josh Reichert, PE  
Traffic Operations Manager  
Metric Engineering, Inc.  
11760 Marco Beach Drive, Suite 1  
Jacksonville, Florida 32224

Re: **Clarcona Ocoee Road – Ingram Road,  
Orange County Continuing Services Contract Y18-902-CH**

Dear Mr. Reichert,

Pursuant to your request, Barnes, Ferland & Associates, Inc. (BFA) is pleased to submit our proposal for subsurface utility exploration (SUE) services and surveying mapping services. As we understand your request, BFA will Designate (mark) utilities along the above noted project being approximately 200 feet from right of way to right of way in the north south direction and 300 feet right of way to right of way in the east west direction. Also included in this survey we will provide Locate (excavate) services at a proposed 4 mast arm locations and perform Horizontal Survey Location of existing utilities as marked to be provided in a Cad format.

**Project Location:**

The project area is located at the intersection of **Clarcona Ocoee Road and Ingram Road**, lying in Orange County, Florida.

**Scope of Services**

**Utility Designation:**

Throughout the above described limits underground utilities within the corridor will be Designated and marked. Electronic sensing equipment and ground penetrating radar (GPR) will be used to detect and mark those underground utilities that will transmit a signal. Paint marks and/ or wire flags will be placed on the ground surface that will indicate the approximate location of the underground utility. Each utility will be color coded according to the ASCE standard industry color. Sketches will be made depicting the results of the designation to assist with the field location and drawing the lines connecting the utilities. Utilities designated will include electric, water, force main, gas, numerous communication lines or other utilities that may be discovered. Small service lines and irrigation lines will not be designated.

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## Appendix "C"

### **Good Faith Estimate and Itemization of Intersection Project Costs (Con't)**

Sunshine 811 will be contacted for a location ticket prior to excavation as required by Florida Statute 556.106. This should result in utilities being designated (marked) by the appropriate utility company. BFA will perform additional designation to verify utility markings by others and identify any that are not marked.

**Please see attached Exhibit "A" Limitations regarding underground utilities.**

Utility designation will indicate the presence and approximate horizontal location of most underground utilities through the use and application of electronic sensing equipment and ground penetrating radar. BFA will notify Sunshine One Call (SSOC) for a Design Ticket to acquire utility provider information for the specified work areas. Those utilities that can be marked using the described techniques will be designated and marked with paint and/ or flags.

#### Utility Location:

Excavations are included in this proposal including 4 clearance holes for pole or mast arm installation. All test holes will be staked and graded by Barnes, Ferland and Associates, Inc. Excavations will provide the horizontal and vertical location of the utility as well as the size, type, material and general condition of the utility. A detailed Test Hole Report will be made for the excavation that will show a semi-permanent mark set directly above the utility for survey location. The sketch will show the measurement from the mark to the top of the utility with reference ties to nearby features to aid in the recovery of the mark. All other information obtained will also be on the sketch.

#### Topographic Survey:

Prepare a Topographic Survey of the designated utilities along main corridor. Approximately 200 feet in the north south direction and 300 feet in the east west direction. Elevations will be taken at a maximum of 100' intervals where the existing utilities are marked. Utility Designation marks will be surveyed and shown as Quality Level B according to the type of utility.

All survey work shall meet the requirements of Chapter 472, Florida Statutes, and Chapter 5J-17, Florida Administrative Code, and shall provide sufficiently detailed information to meet the design requirements of the project. Survey data shall include all areas as necessary to address project design considerations.

**BFA**



**Appendix "C"**  
**Good Faith Estimate and Itemization of Intersection Project Costs (Con't)**

**Deliverables:**

The field survey will result in an AutoCAD Civil 3D v2017/v2018 drawing. All located features will be shown and labelled with elevations as appropriate. The drawing will contain Surveyor's Notes describing our methods, sources of information, control points utilized and other information to support and clarify our work. Three signed and sealed drawings, utility designation sheets, utility reports and logs stating the utilities in the area, an Autocad Dwg File, PDF file of the survey, electronic copies of all field notes and maps that may apply and pictures of the sight conditions at the time of survey.

**Fee Estimate:**

See the attached spread sheet for a breakdown of the man hours and our fee to provide you with the requested services.

**Schedule:**

We are prepared to commence work within 10 working days of written notice to proceed for the project. As Designation Sketches are completed in the field we will provide these for your use in the design process.

If you should have any questions or need more information, please give me a call.

Sincerely,

---

Genel J. Sturgeon, P.S.M.  
Survey Division Manager

Encl: Manhour and Fee estimate spread sheet / SUE Services  
Exhibit "A" Limitations

**BFA**

## Appendix "C"

### **Good Faith Estimate and Itemization of Intersection Project Costs (Con't)**

#### **Exhibit "A" Limitations**

Subsurface Utility Engineering (SUE) services are utilized to identify and document the underground utility installations as stipulated in the scope of services and by contractual agreement. As in all disciplines, there are limitations of equipment, technology and personnel. The following describes, but is not limited to, the limitations usually encountered.

- **Impervious subsurface material:** Rock, below a depth of 3 feet. BFA will use pneumatic techniques to remove rock and pavement up to a depth of 3 feet. Below that depth we will rely solely on remote sensing and disclaim definitive results.
- **Ground-water:** BFA will make every reasonable attempt to definitively identify depth, size and type of underground utilities where ground-water is present. There are situations where groundwater will make visual inspection impracticable. We will use manual sensing to make the most reasonable measurements under these conditions, but it is understood that without direct visual confirmation the measurements and characteristic are limited to 'closely approximate'.
- **Depth:** Direct visual observation is limited to 7 feet under ideal conditions and diminishes as conditions deteriorate. Below 7 feet manual sensing is used to determine physical characteristics. Size by manual sensing is generally reliable, but the physical characteristics (type) of utility is dependent on too many variables to be considered definitive.
- There may be utilities that do not transmit electronic signals, that have not been made known to BFA, or that have no evidence at or above ground level. These utilities may not be detected or located.
- **Ownership of underground utilities** is not evident by observation of the buried utility. Every reasonable attempt will be made to determine ownership. Subsurface Utility Engineering (SUE) services do not include sanitary sewer installations/structures (gravity), or storm water lines/structures (gravity). However, the location of these utilities may be negotiated as a specific additional service.
- **Consultant or Client Instructions:** The Consultant or the Client may, from time to time, issue instructions or modify the scope of work. Any such instructions or modifications will be written and accepted by both parties prior to implementation.

If the Consultant or Client has plans, surveys, or other documentation that might assist in determining what utilities are present, they will be provided. As part of the Quality Assurance process, completed plans showing data derived from BFA's services will be submitted for review and confirmation if requested.

BFA's services are intended as an aid to the designers of this project and it may affect actual construction operations. The information provided by BFA is based, in part, upon data furnished by utility owners and their representatives, or by the Consultant or Client.

The logo for BFA, consisting of the letters 'BFA' in a bold, serif font, with three wavy horizontal lines underneath.

**Appendix "C"**  
**Good Faith Estimate and Itemization of Intersection Project Costs (Con't)**

**VENDOR NAME** New Florida Industrial Electric, Inc.

QTY	COMM #	STOCK # / DESCRIPTION	UNIT	PRICE	TOTAL
1.00	1	COMPLEX MAINTENANCE OF TRAFFIC	LS	\$4,882.47	\$4,882.47
48.00	2	TRAFFIC CONTROL OFFICER	MH	\$77.62	\$3,725.76
14.00	3	PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY	ED	\$64.66	\$905.24
22.00	4	REMOVAL OF EXISTING CONCRETE PAVEMENT	SY	\$58.21	\$1,280.62
23.00	9	CONCRETE CURB & GUTTER, TYPE F	LFT	\$97.02	\$2,231.46
52.00	11	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SQYD	\$151.79	\$7,893.08
10.00	12	DETECTABLE WARNINGS	SQFT	\$38.81	\$388.10
316.00	14	ANTI-GRAFFITI COATING, NON-SACRIFICIAL	SF	\$7.69	\$2,430.04
49.00	15	PERFORMANCE TURF, SOD, BAHIA	SQYD	\$8.88	\$435.12
375.00	19	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	\$10.58	\$3,967.50
452.00	20	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	\$25.39	\$11,476.28
1.00	23	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI	\$6,532.23	\$6,532.23
150.00	30	FIBER OPTIC CABLE, F&I, UNDERGROUND, 2-12 FIBERS	LFT	\$2.17	\$325.50
20.00	37	FIBER OPTIC CONNECTION, INSTALL, SPLICE	EA	\$45.09	\$901.80
1.00	39	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE ENCLOSURE	EA	\$769.68	\$769.68
2.00	40	FIBER OPTIC CONNECTION HARDWARE, F&I, SPLICE TRAY	EA	\$95.14	\$190.28
12.00	41	FIBER OPTIC CONNECTION HARDWARE, F&I, PRETERMINATED CONNECTOR ASSEMBLY	EA	\$84.47	\$1,013.64
1.00	44	FIBER OPTIC CONNECTION HARDWARE, F&I, PATCH PANEL-FIELD TERMINATED	EA	\$1,584.65	\$1,584.65
557.00	50	MULTI-CONDUCTOR COMMUNICATION CABLE, FURNISH & INSTALL	LF	\$4.85	\$2,701.45
24.00	56	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	\$833.57	\$20,005.68
1.00	57	PULL & SPLICE BOX, F&I, 24 x 36" COVER SIZE	EA	\$1,324.14	\$1,324.14
1.00	62	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS	\$1,470.36	\$1,470.36
222.00	63	ELECTRICAL SERVICE WIRE F&I	LF	\$4.59	\$1,018.98
1.00	64	ELECTRICAL SERVICES DISCONNECT, F&I, POLE MOUNT	EA	\$1,152.15	\$1,152.15
2.00	69	PRE-STRESSED CONCRETE POLE, F&I, 12' TYPE P-II SERVICE POLE	EA	\$1,180.66	\$2,361.32
5.00	80	ALUMINUM SIGNALS POLE, PEDESTAL	EA	\$1,061.47	\$5,307.35
2.00	81	ALUMINUM SIGNALS POLE, FURNISH & INSTALL PEDESTRIAN DETECTOR POST	EA	\$847.23	\$1,694.46
2.00	85	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 50'	EA	\$24,818.76	\$49,637.52
1.00	86	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 60'	EA	\$28,745.03	\$28,745.03
1.00	87	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 70'	EA	\$32,221.94	\$32,221.94
12.00	104	TRAFFIC SIGNAL, F&I, 3 SECTION, 1 WAY, ALUMINUM	AS	\$921.31	\$11,055.72
1.00	107	TRAFFIC SIGNAL, F&I, 4 SECTION, 1 WAY, ALUMINUM	AS	\$1,095.72	\$1,095.72

**Appendix "C"**  
**Good Faith Estimate and Itemization of Intersection Project Costs (Con't)**

4.00	114	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY	AS	\$635.91	\$2,543.64
1.00	115	PEDESTRIAN SIGNAL, FURNISHED & INSTALLED COUNTDOWN, 2 WAYS	AS	\$1,112.74	\$1,112.74
2.00	128	VEHICLE DETECTION SYSTEM-MICROWAVE, FURNISH AND INSTALL, ABOVE GROUND EQUIPMENT, 1 DIRECTION	EA	\$11,760.13	\$23,520.26
1.00	134	VEHICLE DETECTION SYSTEM-VIDEO, F&I, COMPLETE SYSTEM, 4 DIRECTION	EA	\$1,279.44	\$1,279.44
2.00	137	VEHICLE DETECTION SYSTEM-VIDEO, INSTALL ABOVE GROUND EQUIPMENT, 1 DIRECTION	EA	\$727.97	\$1,455.94
1.00	144	SIGNAL PRIORITY AND PREEMPTION SYSTEM, F&I, OPTICAL, COMPLETE SYSTEM, UP TO 4 DIRECTIONS	EA	\$7,187.88	\$7,187.88
4.00	146	SIGNAL PRIORITY AND PREEMPTION SYSTEM, F&I, OPTICAL, DETECTOR	EA	\$3,950.48	\$15,801.92
6.00	150	PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD	EA	\$258.74	\$1,552.44
1.00	157	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 2 PREEMPTION, SIZE 6 CABINET	AS	\$23,666.50	\$23,666.50
1.00	172	CCTV CAMERA, F&I, DOME ENCLOSURE - NON PRESSURIZED, IP, HIGH DEFINITION	EA	\$7,690.40	\$7,690.40
1.00	176	MANAGED FIELD ETHERNET SWITCH, FURNISH & INSTALL	EA	\$3,033.47	\$3,033.47
1.00	181	UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, LINE INTERACTIVE WITH CABINET	EA	\$5,830.92	\$5,830.92
4.00	191	INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL, 12-18 SF	EA	\$4,690.94	\$18,763.76
				Total	\$324,164.58
33.00	132	Reflective Pavement Markers (RPM) Class B	LFT	\$3.30	\$108.90
1.00	159	Thermo 6" solid white	LFT	\$0.72	\$0.72
292.00	161	Thermo 12" solid white	LFT	\$2.75	\$803.00
422.00	163	Thermo 24" solid white	LFT	\$4.95	\$2,088.90
1.00	166	Thermo 6" dotted / guidedline white	LFT	\$0.72	\$0.72
1.00	168	Thermo arrows white	EA	\$71.50	\$71.50
1.00	170	Thermo 6" solid yellow	LFT	\$0.72	\$0.72
861.00	195	Thermo Remove	LFT	\$1.10	\$947.10
				TOTAL	\$4,021.56

Total Construction Cost = \$328,186.14

**Appendix "C"**  
**Good Faith Estimate and Itemization of Intersection Project Costs (Con't)**

Itemized Good Faith Estimate	
Estimated Design Cost	\$ 55,377.07
Estimated Construction Cost	\$ 328,186.86
Sub-Total Estimated Design + Const. Cost	\$ 383,563.93
Contingency Fee	\$ 116,436.07
Good Faith Estimate Cost	\$ 500,000.00