MOUNT DORA CITY COUNCIL MEETING
March 1, 2016, 6:00 p.m.
City Hall Board Room, 510 N. Baker Street

AGENDA

Mayor Nick Girone, At-Large; Vice-Mayor Ed Rowlett, District 3; Councilmembers Laurie Tillett, District 1; Cal Rolfson, District 2; Marc Crail, District 4; Marie Rich, At-Large Even; and Mark Slaby, At-Large Odd

As a courtesy, please silence all cellular devices
Public Participation/Comments will be limited to three (3) minutes

CALL TO ORDER:

MOMENT OF SILENCE & PLEDGE OF ALLEGIANCE

ROLL CALL

PUBLIC COMMENT (Please limit comments to 3 minutes)

APPROVAL OF AGENDA

APPROVAL OF MINUTES

RECESS CITY COUNCIL MEETING TO CONVENE AS NECRA BOARD

1. Consideration of Amendment to the NECRA Master Plan to Include Stormwater Improvements

ADJOURN AS NECRA TO RECONVENE AS CITY COUNCIL

PUBLIC HEARINGS/PRESENTATIONS

1. Water and Wastewater Rate Public Hearing
OLD BUSINESS

NEW BUSINESS

1. Consideration to Approve Joint Participation Agreement (JPA) with Florida Department of Transportation Regarding Reimbursement for Driveway Construction at Wastewater Plant #2.

2. Consideration to Approve Construction Engineering Services and Inspections with Quinton Hampton for the Driveway Construction Project at Wastewater Plant #2.

3. Consideration to Accept Bids for Driveway Construction at Wastewater Plant #2 and Award to Low Responsive Bidder.

4. Consideration to Approve Electric Utility Territorial Agreement with SECO

5. Consideration to Introduce Ordinance 2016-03 Regarding SECO Electric Utility Franchise

6. Consideration to Approve Interim City Manager Employment Agreement

7. Consideration to Approve Fiscal Year 2015-16 Budget Amendments

8. Consideration to Approve Wireless Communications Agreement

CITY ATTORNEY UPDATE

CITY MANAGER UPDATE

CITY COUNCIL COMMENTS

ADJOURNMENT

NOTICE: If any person decides to appeal any decisions made at this meeting with respect to any matter considered at this meeting, such person may need a record of these proceedings. For such purpose, a person may need to ensure that a verbatim record of the proceedings is made which record includes the testimony and evidence upon which the appeal is to be based.

NOTICE: In accordance with the Americans with Disabilities Act of 1990, persons needing a special accommodation to participate in this proceeding should contact Gwen Johns, City Clerk, no later than seven (7) days prior to the proceedings. Telephone (352) 735-7126 for assistance. If hearing impaired, telephone the Florida Relay Service numbers, (800) 955-8771 (TDD) or (800) 955-8770 (Voice) for assistance.

City Council meetings will be recorded and under the State of Florida General Records Schedule, Audio Recordings are retained on file for two (2) anniversary years after adoption of the official minutes. Recent audio recordings available at http://www.ci.mount-dora.fl.us/Archive.aspx?AMID=70

NOTICE: In accordance with a policy placed by the City Council of the City of Mount Dora, citizens are advised that the City Council may take action and vote on any item that is brought up at a City Council Meeting.
DATE: March 1, 2016

TO: Northeast Community Redevelopment Agency Board

FROM: Northeast Community Redevelopment Agency Advisory Committee
Gus Gianikas, Planning & Development

VIA: Mark Reggentin, Deputy City Manager
Vincent Pastue, City Manager

RE: Northeast Community Redevelopment Agency (NECRA) Stormwater Master Plan – Redevelopment Plan Amendment

**Recommendation:** The Northeast Community Redevelopment Agency (NECRA) Advisory Committee and staff recommend the Northeast CRA Board initiate the redevelopment plan amendment process for the proposed Redevelopment Plan Amendment to allow for stormwater and drainage planning, design, and construction.

Staff recommends that City Council move to forward the amendment to the NECRA Masterplan to the Local Planning Agency (Planning and Zoning Commission) for their review and approval.

**Background/Information:** Due to drainage and flooding problems in the neighborhood, the NECRA has identified the need for stormwater improvements in their CRA area. Currently, there are no plan, drawings or proposed improvements for the area. The stormwater facilities are limited and haphazard in the area, so it is necessary to do a stormwater master plan first. The City CIP does not have any stormwater planning or construction for the neighborhood; therefore the NECRA wants to initiate the project and provide funding for it. The proposed amendment adds this type of work to the NECRA Redevelopment Plan.

The Plan Amendment language is as follows.

**STORMWATER AND DRAINAGE**

There are inadequate stormwater and drainage facilities in the area and as a result there is flooding and other drainage problems conditions that need to be addressed. The area experiences flooding and other similar problems due to inadequate stormwater and drainage facilities.
2.7 Stormwater and Drainage

Objective: To address the condition of inadequate stormwater and drainage facilities, the NECRA can partner with the City to design and construct improvements.

Implementation: Stormwater and drainage improvements may be accomplished by the NECRA providing funding or reimbursing the City for needs assessment, planning and design, construction, permitting, and other related activities associated with the improvements. CDBG and other grants will be sought to provide funding.

The plan amendment process takes at least 4-5 months. The process is outlined below.

1. A proposed amendment to the community redevelopment plan is presented to the governing board of the CRA. The amendment may be prepared at the direction of the CRA or any other person, including residents, property owners, businesses, or associations in the existing community redevelopment area, or any agency (public or private). [Fla. Stat. 163.360(4)]

2. Prior to considering the proposed amendment, the CRA board forwards the proposed amendment to the "local planning agency" for review and recommendations regarding the amendment’s consistency with the comprehensive plan of the city. [Fla. Stat. 163.360(4)]

3. Within 60 days after receipt of the amendment, the local planning agency's written recommendations are sent back to the CRA governing board. If the local planning agency has not submitted its recommendations within 60 days of receiving the proposed amendment, then the CRA may nonetheless proceed with the amendment without the local planning agency comments. [Fla. Stat. 163.360(4)]

4. The CRA governing board receives and considers the recommendations from the local planning agency. If the local planning agency found the amendment is not consistent with the comprehensive plan, then the CRA board should make such changes in the amendment as are necessary to make it consistent with the comprehensive plan.

5. When considering the amendment, the CRA governing board may either: (i) approve the amendment and forward it to the City Council with recommendations; (ii) make recommended changes to the proposed amendment or (iii) reject the proposed amendment. If the amendment is rejected, that is the end of the process.

6. If the CRA governing board approves the amendment, or approves with recommended changes, it shall submit the amendment, with its recommendations, to City Council and to each taxing authority that levies ad valorem taxes on taxable real property within the
redevelopment boundaries. [Fla. Stat. 163.360(5)] In lieu of submitting the proposed amendment in writing, the CRA may orally present it to each governing authority; or the CRA may present it both orally and in writing. [Fla. Stat. 163.361(3)(a)]

7. The City Council will hold a public hearing to consider the amendment. Notice to each taxing authority which levies ad valorem taxes on taxable real property within the redevelopment area must be sent by the City Council by registered mail at least 15 days prior to the public hearing. [Fla. Stat. 163.346] This notice requirement to taxing authorities is in addition to the CRA notice to taxing authorities. [Fla. Stat. 163.361(3)(a)]

8. Council must have a notice published in a newspaper of general circulation in the City 10 days prior to the public hearing. The notice must include: time, date, place, and purpose of public hearing; general description of the redevelopment area; outline general scope of the amendment to be considered; where the proposed amendment can be inspected (presumably, City Hall); and a statement that interested persons may appear at the meeting and be heard with respect to the plan amendment. [Fla. Stat. 163.360(6)(a); 163.361(2); 163.346; 166.041(3)(a)]

a. If the original redevelopment plan was created by resolution, the amended redevelopment plan must also be adopted by resolution. If the original redevelopment plan was created by ordinance, the amended redevelopment plan must also be adopted by ordinance and will require a first reading prior to the public hearing required under the Community Redevelopment Act.

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1 Since both Fla. Stat. §§ 163.361(3)(a) and 163.346 require that both the agency and Council notify taxing authorities, one notice can be from both entities and can be sent out by registered mail at least 15 days prior to the hearing.
TO: Mayor and City Council

FROM: Vincent Pastue, City Manager

DATE: March 1, 2016

SUBJECT: Water and Wastewater Rate Public Hearing

Recommendation:

1. Public Hearing – The City Council hold a public hearing on proposed water, wastewater, and reclaimed water rates. The public hearing has been noticed in accordance with statutory requirements. Each customer was sent a notice of the public hearing and proposed rate increases.

2. Provide Staff Direction - The recommendation from City Administration and the rate consultant was to increase the combined rates by 21.2%, effective April 1. At the February 22nd workshop, the rate consultant provided an alternative whereby the significant rate increase could be spread over a two-year period. Staff needs direction from City Council as to which of the two alternatives to select. The rates will be brought back for approval at either the March 15 or April 4 meeting.

Other Considerations

1. The rate increases include the miscellaneous charges discussed at the February 22nd workshop.

2. There is a 90 day notice requirement before the water, wastewater, and reclaimed impact fee rates can be amended. This must be done by ordinance.

Attachments:

1. The rate study is on the City’s website for review
DATE: March 1, 2016

TO: Mayor and City Council

FROM: John Peters, Public Works & Utilities Director

VIA: Vincent Pastue, City Manager

RE: Florida Department of Transportation (FDOT) Joint Participation Agreement Supplemental Amendment Number 1

**Recommendation:** Staff recommends that City Council approve the FDOT Joint Participation Agreement Supplemental Amendment Number 1.

**References/Support:** N/A

**Background/Information:** Masci Corporation was the only contractor that responded to the Invitation to bid. The bid price was higher than the Engineer’s estimate. The Florida Department of Transportation (FDOT) had provided $1,572,048.00 in the original agreement with the City which included inspection and contingency funding.

FDOT was contacted to determine if they would be able to provide additional funding to cover the higher than expected bid price. FDOT responded by preparing the Joint Participation Agreement Supplemental Amendment Number 1 to provide an additional $ 177,430.00 to cover inspection services and provide some contingency funding for additional construction costs that may arise. The new total Agreement amount is $1,749,478.00.

**Attachments:**
- FDOT Joint Participation Agreement Supplemental Amendment Number 1
- Resolution 2016-10
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION  
JOINT PARTICIPATION AGREEMENT  
SUPPLEMENTAL AMENDMENT NUMBER 1  
EXECUTION DATE: ________________

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<td>238275-2-58-01</td>
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<td>Contract Amount: $1,749,478.00</td>
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The terms of the original Joint Participation Agreement between the Florida Department of Transportation and the City of Mount Dora for the Project described as “Construction Services for the Entrance Road Relocation from State Road 441 to the City of Mount Dora’s Wastewater Treatment Plant”, executed on **February 3, 2016**, are hereby amended as follows:

The DEPARTMENT has authorized additional funds in Fiscal Year 2015/2016 in the amount of $177,430.00 (One Hundred Seventy Seven Thousand Four Hundred Thirty Dollars and No/100) for Construction Costs based on Bids. This executed Amendment will serve as notice that the Total Lump Sum Amount for this Agreement is now increased to $1,749,478.00 (One Million Seven Hundred Forty Nine Thousand Four Hundred Seventy Eight Dollars and No/100) for Fiscal Year 2015/2016.

The LOCAL GOVERNMENT understands that construction of this Project utilizing the additional funding cannot begin until the funds have been authorized and the Notice to Proceed has been issued. **Any work performed prior to the funds being authorized and the issuance of the Notice to Proceed, is not subject to reimbursement.**

The following attachments are hereby incorporated into this Amendment:

Exhibit “B” Revised Method of Compensation
Resolution

Except as hereby modified, amended or changed, all of the terms and conditions of said original Agreement thereto will remain in full force and effect.
IN WITNESS WHEREOF, the LOCAL GOVERNMENT has executed this Agreement this _______ day of ____________________, 2016, and the DEPARTMENT has executed this Agreement this _______ day of ____________________, 2016.

CITY OF MOUNT DORA
By: __________________________
Name: __________________________
Title: Chairman

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
By: __________________________
Name: Frank J. O’Dea, P.E.
Title: Director of Transportation Development

As approved by the Council on:

________________________
Attest:

________________________
Attest:

________________________
Executive Secretary

Legal Review:

Legal Review:

________________________
City Attorney

Financial Provisions Approval by the Office of the Comptroller on:

________________________
Authorization Received from the Office of the Comptroller as to Availability of Funds:
Exhibit “B”

REVISED METHOD OF COMPENSATION
Financial Management Number: 238275-2-58-01

For satisfactory completion of all services detailed in Exhibit “A” (Scope of Work) of this Agreement, the DEPARTMENT will compensate the LOCAL GOVERNMENT an amount not to exceed $1,749,478.00 (One Million Seven Hundred Forty Nine Thousand Four Hundred Seventy Eight Dollars and No/100) for actual costs incurred.

The LOCAL GOVERNMENT may receive progress payments for actual costs incurred for deliverables based on a percentage of services that have been completed, approved and accepted to the satisfaction of the DEPARTMENT when properly supported by detailed invoices and acceptable evidence of payment. The final balance due under this Agreement will be reimbursed upon the completion of all Project services, receipt of final construction cost documentation and proper submission of a detailed invoice and when the Project has been inspected, approved and accepted to the satisfaction of the DEPARTMENT in writing.
RESOLUTION
Financial Management Number: 238275-2-58-01
RESOLUTION 2016-10

WHEREAS, the State of Florida Department of Transportation and the City of Mount Dora desire to facilitate the Construction Services for the Entrance Road Relocation from State Road 441 to the City of Mount Dora’s Wastewater Treatment Plant and,

WHEREAS, the State of Florida Department of Transportation has requested City of Mount Dora to execute and deliver to the State of Florida Department of Transportation the Supplemental Amendment Number 1 to the Joint Participation Agreement for the aforementioned project, FPN 238275-2-58-01.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Mount Dora, City Council Members that Nick Girone, Mayor of the City of Mount Dora, is hereby authorized to make, execute, and deliver to the State of Florida Department of Transportation the Supplemental Amendment Number 1 to the Joint Participation Agreement for the aforementioned project, FPN 238275-2-58-01.

DONE AND RESOLVED this 1st day of March, 2015.

CITY COUNCIL OF MOUNT DORA, FL

ATTEST:

__________________________  ____________________________
(Mayor)                                           (City Clerk)

__________________________  ____________________________
(Date)                                                         (Date)

(Affix County or City Seal)
DATE: March 1, 2016

TO: Mayor and City Council

FROM: John Peters, Public Works & Utilities Director

VIA: Vincent Pastue, City Manager

RE: Change Order #3 for Quentin L. Hampton, Inc. (QLH) for Driveway Relocation for Wastewater Plant #2 due to Wekiva Parkway Routing

**Recommendation:** Staff recommends that change order #3 be approved for QLH in the amount of $67,430.00. The existing contract amount is $125,835.00. The new contract amount will be $193,265.00.

**Budgetary Impact:** FDOT will reimburse the City for all costs associated with the construction of the new driveway to the wastewater plant. The City will incur the costs upfront and then request reimbursement.

**References/Support:** N/A

**Background/Information:** The reconstruction of the State Road 46 and U.S. 441 interchange will require a flyover with structural wall and bridge piers. Due to the reduced height clearance that will be established at the existing entrance road to Wastewater Plant #2, the new entrance road will be relocated to US HWY 441. The entrance road design will be required to meet all FDOT requirements.

The original design work was awarded to QLH after the City went through the rating and ranking of firms as required by state law.

Upon approval of Change Order #3 to the contract, QLH will assist with the bidding process and contract award will review all shop drawings to ensure they meet the contract requirements. QLH will perform periodic inspection of the work concentrating on quality control of critical construction items. City staff will perform daily inspection of the work.

**Attachments:** See proposed additional scope with QLH
October 13, 2015

John A. Peters, III, PE
Director of Public Works and Utilities
City of Mount Dora
1250 North Highland Street
Mount Dora, Florida 32757

Re: CITY OF MT. DORA WWTP #2 DRIVEWAY RELOCATION AND UTILITIES RELOCATION CONSTRUCTION PHASE SERVICES SCOPE OF SERVICES AND FEE ESTIMATE

Dear Mr. Peters:

Quentin L. Hampton Associates, Inc. (QLH) is pleased to offer the enclosed scope and fee estimate for the above referenced project to provide construction administration and inspection services. The attached scope of services describes, in detail, what our firm understands to be required for this project. We understand the City would like QLH to assist the City with construction phase services for the subject project.

Upon acceptance by the City, we will forward an agreement for Professional Services as the City desires. We look forward to the opportunity to work with the City on this project. If you have any questions or comments, please contact our office.

Sincerely,

QUENTIN L. HAMPTON ASSOCIATES, INC.

Andrew M. Giannini, P.E.
Project Manager

David A. King, P.E.
President

DAK/AMG:cl:km:bf

Enclosures: Exhibit ‘A’ – Scope of Services
Exhibit ‘B’ – Fee Estimate

cc: Paul Lahr, P.E. – LahrP@ci.mount-dora.fl.us
EXHIBIT ‘A’
CITY OF MT. DORA
WWTP #2 DRIVEWAY RELOCATION AND UTILITIES RELOCATION
CONSTRUCTION ADMINISTRATION/INSPECTION
SCOPE OF SERVICES AND FEE ESTIMATE

**General:** This fee estimate and scope of services constitutes an agreement for Continuing Engineering Consulting Services between the City of Mount Dora, Lake County, Florida, hereinafter called the “City”, and Quentin L. Hampton Associates, Inc., a Florida corporation having its office in Port Orange, Florida, hereinafter called “QLH”.

**Background:** The Florida Department of Transportation (FDOT) has released the Wekiva Parkway Project Development and Environment (PD&E) Study and with it has notified the City of Mount Dora that modifications will be required to the City’s Wastewater Treatment Plant entrance road and utility mains. With the entrance road relocation, modifications to the existing stormwater management system will be required. The plant has substantial truck traffic to the septage receiving station which will require safe routing with the modification. The closed landfill, adjacent to the plant, will require roadway and utility access as well. Utility adjustments, at the new plant entrance, will be included due to the grade change at the proposed entrance. QLH has recently completed design and permitting for these improvements.

**Purpose of Work:** The CITY desires to have QLH provide construction/inspection phase services which are needed for this project.

**Description of Services:** QLH shall provide the following services:

**Construction Contract Administration:** QLH will provide the following services during the construction phase:

1. Coordinate execution of contracts
2. Schedule and preside over preconstruction conference
3. Issue Notice to Proceed to Contractor
4. Review shop drawings/material submittals
5. Address Contractor/CITY questions
6. Twice per month site visits
7. Review of monthly Contractor pay requests
8. Review of Contractor as-built drawings
9. Review change orders
10. Prepare final record drawings, utilizing Contractor as-builts and inspector sketches, etc.
11. Determine substantial completion.
12. Provide final inspection
13. Recommend final payment
14. Coordinate execution of final paperwork
15. Provide Certificate of Completion to permitting agencies
Construction Project Representative: QLH will provide a qualified inspector to provide part-time inspection for the following services during the construction phase:

1. Attend pre-construction conference
2. Assist Engineer with shop drawing review
3. Observe contractor’s construction activities
4. Document construction activity via daily reports/logs
5. Address complaints/RFIs
6. Review contractor’s soil and erosion control efforts
7. Review contractor’s monthly pay requests/quantities
8. Prepare supplemental as-built sketches
9. Review contractor’s as-built surveys
10. Review contractor’s locating efforts of existing utilities
11. Coordinate responses to contractor’s Requests For Information (RFIs)
12. Coordinate engineer’s field directives
13. Coordinate material and field tests.

Basis of Fee: The proposed fee is sixty-seven thousand four hundred thirty dollars ($67,430) based on attached Exhibit ‘B’.

All fees to be billed on a lump sum basis except for “allowances” which will be billed at actual cost or hours expended.

If Florida Sales Tax becomes due on professional services, the CITY shall reimburse QLH for the additional sales tax cost.

“PURSUANT TO FLORIDA STATUTE SECTION 558.0035, AN INDIVIDUAL EMPLOYEE OR AGENT OF QUENTIN L. HAMPTON ASSOCIATES, INC. MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE.”

Prepared by:
QUENTIN L. HAMPTON ASSOCIATES, INC.
-Consulting Engineers-
October 13, 2015
# EXHIBIT B
CITY OF MOUNT DORA
WWTP #2 ENTRANCE RELOCATION AND UTILITIES RELOCATION
QLH ESTIMATED ENGINEERING FEES

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<th>Project Engineers (hours)</th>
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<th>Engineering Analysts (hours)</th>
<th>CAD Technicians (hours)</th>
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Notes:
(1) Assumes 8 months of actual construction; Includes 1 visit per month by Supervisor at 4 hours each, and Construction project Rep at 20 hours per week x 8 months
(2) Includes TEDS Direct Expenses, Printing, and misc expenses to be charged as needed with receipts
DATE: March 1, 2016

TO: Mayor and City Council

FROM: John Peters, Public Works & Utilities Director

VIA: Vincent Pastue, City Manager

RE: Contract Award to Masci Corporation for Wastewater Plant #2 (WWTP#2) Driveway Relocation

Recommendation: Staff recommends that City Council award a contract to Masci Corporation for the driveway relocation for WWTP#2 for $1,569,373.88.

References/Support: N/A

Background/Information: Masci Corporation was the only contractor that responded to the Invitation to bid. The bid price was higher than the Engineer’s estimate. The Florida Department of Transportation (FDOT) had provided $1,572,048.00 in the original agreement with the City which included inspection and contingency funding.

FDOT was contacted to determine if they would be able to provide additional funding to cover the higher than expected bid price. FDOT has provided an amendment to the original agreement which is included as a separate agenda item. The modification to the Memorandum of Agreement will provide an additional $177,430.00 to cover inspection services and provide some contingency funding for additional construction costs that may arise.

Attachments: See Masci bid document.
INVITATION TO BID

City of Mount Dora, Florida
Purchasing Division
1250 North Highland Street
Mount Dora, Florida 32757
Voice (352) 735-7176
Fax (352) 735-4789

BIDDER’S NAME & ADDRESS

Masci Corporation
5752 S. Ridgewood Avenue
Port Orange, FL 32127

WWTP #2 DRIVEWAY RELOCATION AND UTILITY ADJUSTMENTS

Bids will be opened and publicly read aloud at the Purchasing Division, City of Mount Dora, 1250 North Highland Street, Mount Dora, Florida at 2:00 PM, on January 7, 2016. Bids must be submitted on the form furnished by the city and in accordance with specifications and list of quantities desired. This completed form must appear as the top sheet for all bids submitted. A Bid Bond is required and may be in the form of a Bond, Cashier's Check or Certified Check.

Amount of Bid Bond (5%)
$ 18,469

Amount of Cashier’s Check
$ n/a

Amount of Certified Check
$ n/a

Total Amount of Bid or Base Bid
$ 1,569,373.88

All Items Bid?
Yes x No

It is the intent and purpose of the City of Mount Dora that this invitation to bid promotes competitive bidding. It shall be the bidder’s responsibility to advise the Purchasing Division at the address noted in the Special Conditions, if any language, requirements, etc., or any combination thereof, inadvertently restricts or limits the requirements stated in this invitation to bid to a single source. Such notification must be submitted in writing and must be received by the Purchasing Division not later than ten (10) days prior to the bid opening date.
SECTION 00300

PROPOSAL

FOR

WWTP #2 DRIVEWAY RELOCATION AND UTILITY ADJUSTMENTS

BID #

(To be Completed in Duplicate)

Bidder’s Name: Masci Corporation

Submitted: January 7, 2016

City of Mount Dora, Florida
Purchasing Division
1250 North Highland Street
Mount Dora, Florida 32757

Gentlemen:

The undersigned, as Bidder, hereby declares that the only person or persons interested in the Proposal, as principal or principals, is or are named herein and that no other persons than herein mentioned has any interest in the Proposal or the Contract to which the work pertains; that this Proposal is made without connection or arrangement with any other person, company, or parties making a bid or proposal and that the Proposal is in all respects fair and made in good faith without collusion or fraud.

The Bidder further declares that he has examined the site of the work and that from personal knowledge and experience, or that he/she has made sufficient test holes and/or other subsurface investigations to fully satisfy self that such site is a correct and suitable one for this work and he/she assumes full responsibility therefore; that he/she is familiar with all legal requirements (Federal, State and local laws, ordinances, rules and regulations) pertaining to the Work; that he/she has examined the Drawings and Specifications for the work and from his/her own experience or from professional advice that the Drawings and Specifications are sufficient for the work to be done and he/she has examined the other Contract Documents and all addenda relating thereto, and that he/she has satisfied himself/herself fully, relative to all matters and conditions with respect to the work to which this Proposal pertains.

The Bidder proposes and agrees, if this Proposal is accepted, to contract with the City of Mount Dora, (Owner) in the form of contract specified, to furnish all necessary materials, equipment, machinery, tools, apparatus, transportation, and labor and to perform all work necessary to complete the Work specified in the Proposal and other Contract Documents.

The Bidder further proposes and agrees to comply in all respects with the time limits for commencement and completion of the Work as stated in the Contract Form.
The Bidder further agrees that the deductions for liquidated damages, as stated in the Contract Form, constitute fixed and agreed liquidated damages to reimburse the Owner for additional costs to the Owner resulting from the Work not being completed within the time limit stated in the Contract Form.

The Bidder further agrees to execute a Contract and furnish satisfactory Performance and Payment Bonds, each in the amount of one-hundred percent of the Contract price, and the required Certificates of Insurance, within ten consecutive calendar days after written notice being given by the Owner of the award of the Contract, and the undersigned agrees that in case of failure on his/her part to execute the said Contract, Performance and Payment Bonds and Insurance Certificates within ten (10) consecutive calendar days after the award of the Contract, the bid guarantee accompanying his/her bid and the money payable thereon shall be paid to the Owner as liquidation of damages sustained by the Owner; otherwise, the bid guarantee shall be returned to the undersigned within fifteen days after the Contract is signed and the Performance and Payment Bonds and Insurance Certificates are filed.

The undersigned agrees to accept as full compensation for completion of the project in full compliance with the Contract Documents, the unit prices for the items named in Section 00310, Schedule of Unit Prices, submitted herein with this Proposal.

The undersigned offers to furnish all materials, equipment and labor for construction of “WWTP #2 DRIVEWAY RELOCATION AND UTILITY ADJUSTMENTS” for the City of Mount Dora, Florida, complete in every respect in strict accordance with the drawings, specifications and any future changes therein. The Contractor shall perform these obligations for the prices listed in the “Schedule of Unit Prices: Section 00310” attached and made a part of this Bid. The estimated bid totals:

TOTAL BID: One Million Five Hundred Sixty Nine Thousand Three Hundred Seventy Three Dollars and Eighty Eight Cents

Dollars $1,569,373.88

1.01 COMPLETION TIME OF CONTRACT

A. The Contractor agrees that the work shall be started not later than the date indicated in the ‘Notice to Proceed’ and that the work shall be substantially complete within 240 days and final completion, shall be within 270 days including all weekends and holidays.

B. The Contractor further agrees that for each calendar day, with the exception of Sundays and legal holidays that any work shall remain uncompleted after the stated completion time stipulated above the sum of $1000 (One Thousand Dollars) per day shall be deducted from monies due the contractor, not as a penalty, but as
liquidated damages. If the Contractor is declared in default in accordance with the provisions of the Specifications, liquidated damages shall be charged as provided herein, and such amounts shall be deducted from the final amount payable to the Contractor or his/her Surety. Should the total amount chargeable as liquidated damages exceed the amount due or payable to the Contractor or his/her Surety, then such excess shall be paid to the Owner by the Contractor or his/her Surety.

1.02 SUPPLEMENTAL REQUIREMENTS

A. The following documents are attached to and made a condition of this bid:

Proposal: Section 00300 including Acknowledgement of Addenda & Bid Security
Schedule of Unit Prices: Section 00310
Statement of Bidder’s Qualifications: 00320
Listing of Subcontractors: Section 00330
Listing of Previous Experience: Section 00331
Bid Bond: Section 00410
Suspension & Debarment, Non-Collusion & Lobbying Certification Form: 00450
Public Entity Crimes Statement: Section 00470
Anti-Collusion Statement: Section 00480
Drug Free/Tie Preference Statement: Section 00485
Trench Safety Affidavit: Section 00490
Certificate as to Corporate Principal: Section 00620
City of Mount Dora Insurance Requirements: Section 00800A

1.03 REQUIRED DISCLOSURE

A. At its sole discretion, the City of Mount Dora, Florida may reject any bidder the City finds to lack, or whose present or former executive employees, officers, directors, stockholders, partners or owners are found by the City to lack honesty, integrity, or moral responsibility. The discretion of the City may be exercised based on the City's own investigation, public records, or any other reliable sources of information. By submitting a bid, bidder recognizes and accepts that the City may reject the bid based upon the exercise of its sole discretion and bidder waives any claim it might have for damages or other relief resulting from the rejection of its bid based on these grounds.

B. The City reserves the right to award any or all parts to most responsive qualified bidder in order to construct the improvements in a timely manner.

1.04 SCHEDULE OF MAJOR MANUFACTURERS AND SUPPLIERS

A. The equipment manufacturers/suppliers on this project shall be as delineated in the following schedule. Bidders should note that the Owner and Engineer have made rigorous investigations of equipment performance and features, and as a result,
Bidders are to note that the contract price for this project shall be based on Base Bid equipment. The Base Bid equipment for this project falls under one of two categories. The first category is equipment that the Owner and Engineer have determined will be supplied by a sole source of supply, for which no substitutions or alternates will be entertained or allowed. Bidder is advised that offering of any alternatives to the sole source supplied equipment will be grounds for rejection of his bid as not responsive. The second category of equipment includes those items where the Owner and Engineer deem there to be more than one acceptable supplier of the particular item listed. The equipment which falls under these two categories is shown on the subsequent pages of this Schedule of Major Manufacturers and Suppliers. Bidder is advised that the award of this Contract will be based solely on the use of Base Bid equipment.

B. The following comments relate only to the second category of equipment, where the Contract Documents are based upon the equipment or products available from the suppliers denoted as A, B, C, etc. below. These equipment manufacturers, along with the sole source suppliers constitute the Base Bid.

C. Provision is made in the Contract Documents for alternate manufacturers and suppliers whose equipment or product may be deemed equivalent in quality (see General Conditions). However, the Bidder must indicate in his Bid which Base Bid supplier he intends to use for each item of equipment listed by circling one of the listed manufacturers/suppliers. If the Bidder fails to indicate which listed manufacturer/supplier he intends to use if an alternate is rejected, he must use the supplier listed as "A". Also, if the Bidder circles more than one listed supplier, he must use the first supplier circled (unless an alternate is approved).

D. If the Bidder desires to propose one or more alternate manufacturers/suppliers, he may write in the name of such alternates in the spaces provided on the Alternate Manufacturers/Suppliers page following the schedule. He must, nevertheless, also circle one of the listed manufacturers/suppliers because Bidders' Bid price must be based upon this Base Bid list. Wherever an alternate supplier is proposed, the Bidder must insert the amount to be deducted from the Contract Price (either lump sum or unit price) if the alternate supplier is eventually approved. If the proposed alternate supplier is determined "not equivalent" by the Engineer, the Bidder must use the circled supplier.

E. For any alternate supplier accepted by the Owner, the Contract Price will be reduced by the deductive amount stated in the Bid. However, the Contract Price will not be adjusted for any alternate supplier rejected.

F. Each proposed alternate will be evaluated in accordance with the General Conditions. The deductive amount specified for alternate manufacturers/suppliers will not be used in determining the successful Bidder. Alternates will be considered only after award of the contract.
G. The Contractor shall reimburse the Owner for any costs directly attributable to the change in suppliers, such as additional field trips for the Engineer, additional redesign costs, additional review and inspection costs, etc.

H. The Owner may request and the Bidder shall supply complete information on proposed alternates prior to the Notice of Award.

**SCHEDULE OF MAJOR MANUFACTURERS AND SUPPLIERS**

**Category I - Sole Source Equipment Items:** NONE

**Category II - Major Equipment Items:**

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<th>Spec No.</th>
<th>Equipment/Material</th>
<th>Manufacturer or Supplier</th>
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<td>(a) American Darling B84B</td>
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<td>b) Mueller A-423</td>
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<td>c) Clow Medallion</td>
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### ALTERNATE MANUFACTURERS/SUPPLIERS

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</table>

Name (signature)  
Date

Leticia Masci  
Name (typed and printed)

Vice President  
Title

00300-6
ACKNOWLEDGMENT OF ADDENDA

Addenda will be issued via email and it is the Bidder’s responsibility to confirm that all addenda have been received prior to submitting a bid for the project. Acknowledgment is hereby made of the following Addenda received since issuance of Drawings and Specifications:

Addendum No. 1 Dated: 1/4/16
Addendum No. 2 Dated: __________
Addendum No. 3 Dated: __________
Addendum No. 4 Dated: __________

Attached hereto is a cashier's check on the Bank of __________ or Bid Bond for the sum of $26,416.90, made payable to The City of Mount Dora (Owner).

Masci Corporation
Name of Bidder
5752 S. Ridgewood Avenue
Address
Port Orange, FL 32127
City/State/Zip
(386) 322-4500
Telephone
CGC1509397
Contractor’s Florida License Number

The full names and residences of persons and firms interested in the foregoing bid, as principals, are as follows:
Masci Corporation, 5752 S. Ridgewood Avenue, Port Orange, FL 32127 (and all its principals)

END OF SECTION

00300-7
### SECTION 00310
### SCHEDULE OF UNIT PRICES

**CITY OF MOUNT DORA**

**WWTP #2 DRIVEWAY RELocation AND UTILITY RELOCATES**

**BID # 16-03-001**

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<td>THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6&quot;</td>
<td>NM 0.371</td>
<td>2.00</td>
<td>0.746</td>
<td></td>
</tr>
<tr>
<td>771-16-211</td>
<td>THERMOPLASTIC, STD-OTH, YELLOW, SOLID, 6&quot;</td>
<td>NM 0.200</td>
<td>1.50</td>
<td>0.300</td>
<td></td>
</tr>
<tr>
<td>711-17</td>
<td>THERMOPLASTIC, REMOVE</td>
<td>SF 22</td>
<td>1.00</td>
<td>22.00</td>
<td></td>
</tr>
<tr>
<td>E1</td>
<td>ELECTRICAL, INCL WIRING, CONDUIT, LIGHTING, ELECTRIC GATE OPERATORS, ET AL</td>
<td>LS 1</td>
<td>893.42</td>
<td>893.42</td>
<td></td>
</tr>
</tbody>
</table>

### PART 'B' UTILITY RELOCATIONS

1. Furnish & Install AWWA C905 DR18 Pressure Main
   a) 16" Force Main | 390 LF | 139.70 | 54,583
   b) 16" Reclaimed Water Main | 650 LF | 90.96 | 60,079
   c) 16" Potable Water Main | 1,750 LF | 77.95 | 136,440

2. Directional Drill HDPE DR11 Pressure Main
   a) 20" Potable Water Main | 170 EA | 357.85 | 60,800

3. Tie-ins
   a) 16" Force Main to Ex. 20" FM | 2 EA | 5,895 | 11,790
   b) 16" RecWM to Ex. 20" RecWM | 2 EA | 3,280 | 6,560
   c) 16" RecWM to Ex. 16" RecWM | 1 EA | 3,280 | 3,280
   d) 8" Pot. WM | 2 EA | 1,580 | 3,160

4. Air Release Valve Assembly and Vault
   a) 16" Force Main | 1 EA | 7,830 | 7,830
   b) 16" Reclaimed Water Main | 1 EA | 2,130 | 2,130
   c) 16" Potable Water Main | 2 EA | 1,260 | 2,520

5. Resilient Seat Gate Valve and Box
   a) 16" FM | 1 EA | 5,997 | 5,997
   b) 8" Potable Water | 2 EA | 1,349 | 2,698
   c) 16" Potable Water | 2 EA | 5,997 | 11,994
   d) 16" Reclaimed Water | 2 EA | 5,997 | 11,994

6. Tapping Sleeve and Valve
   a) 20x20 | 1 EA | 18,915 | 18,915
   b) 16x16 | 1 EA | 11,510 | 11,510
   c) 16x2 | 1 EA | 1,029 | 1,029

7. Fire Hydrant Assembly (includes removal of existing) | 1 EA | 5,997 | 5,997

8. Water Service
   a) 2" | 1 EA | 720 | 720


10. Concrete Pavement
    a) 6" thk 3000 psi | 100 SY | 47.12 | 4,712
    b) 4" thk 3000 psi | 50 SY | 35.35 | 1,767.50

11. Open Cut and Repair Asphalt | 600 SY | 4135 | 248,180

12. DIP Fittings Add/Delete | 2 TN | 4000 | 8000

13. Furnish and Install Sod | 5,000 SY | 47.12 | 235,600

14. Pre-Construction Video/Photographs | 1 LS | 3,150 | 3,150

15. Layout/As-Buils | 1 LS | 38,200 | 38,200

16. Compliance with Trench Safety Act | 1 LS | 20,000 | 20,000

17. Utility Pole Holding Allowance | 1 LS | 10,000.00 | 10,000.00

18. Indemnification | 1 LS | 1,000.00 | 1,000.00

19. Rock Excavation (U.C.Y. shown on plans) | 100 CY | 5 | 500

20. Unsuitable Material Excavation and Replacement | 100 CY | 5,95 | 5,95

21. Shell or Crushed Rock Trench Bedding Material | 100 CY | 9.50 | 950
## Section 00310
### Schedule of Unit Prices

**City of Mount Dora**

WWTP #2 Driveway Relocation and Utility Relocates

**Bid # 16-03-001**

<table>
<thead>
<tr>
<th>PAY ITEM</th>
<th>DESCRIPTION</th>
<th>QTY</th>
<th>UNIT</th>
<th>UNIT COST</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>Bulk Concrete</td>
<td>10</td>
<td>CY</td>
<td>120</td>
<td>1200</td>
</tr>
</tbody>
</table>

**Part 'B' Subtotal**: 595,905.50

**Total Bid**: 1,516,373.87

Submitted by: [Signature]

Contractor: [Masci Corporation]

Address: 5752 S. Ridgewood Ave, Mt. Orange, FL 32177

Telephone: (386) 322-4500

Fax: (386) 322-4600

State of Florida Certified Underground or General Contractor (Required Information)

Licensee: [Masci Corporation, Legal: Maschi, P.B]

License No: [CGC1509397]

City Council Agenda Packet - March 1, 2016
SECTION 00330
LISTING OF SUBCONTRACTORS

The Bidder proposes that the following subcontractors are qualified to perform the referenced work and have successfully done so on recent projects similar in nature and size. All subcontractors whose work product accounts for 5% or more of the total contract value shall be listed. Upon approval of subcontractors listed the successful bidder shall not substitute subcontractors without approval from the Engineer. Bidder shall attach additional sheets as necessary.

<table>
<thead>
<tr>
<th>SUBCONTRACTOR</th>
<th>COMPANY NAME</th>
<th>REFERENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical</td>
<td>United Electrical Contractors, Inc.</td>
<td>1) Upon award</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3)</td>
</tr>
</tbody>
</table>

END OF SECTION

00330-1
The bidder proposes that he/she is qualified to perform the referenced work and has successfully done so on recent projects similar in nature and size. A minimum of three (3) projects must be listed below. The Owner reserves the right to check references and confirm information provided herein.

<table>
<thead>
<tr>
<th>NO.</th>
<th>PROJECT</th>
<th>OWNER</th>
<th>DESCRIPTION/COST</th>
<th>REFERENCE</th>
<th>DATE WORK STARTED &amp; FINISHED MM/yr TO MM/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Airport Rd. Force Main</td>
<td>See attached</td>
<td>See attached</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>SR 415 Utilities</td>
<td>See attached</td>
<td>See attached</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>CR 437 Runoff WM</td>
<td>See attached</td>
<td>See attached</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>Name of Project/Owner Contact</td>
<td>Scope</td>
<td>Dollar Value</td>
<td>Completion Date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------------------------------------</td>
<td>----------------</td>
<td>-----------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Airport Road Force Main</td>
<td>This project included force main installation of 5,862 lf of 6&quot; - 16&quot; PVC DR18 C-900 force main, 16,780 lf of 8&quot;-18&quot; SDR 13.5 directionally drilled force main, 13 tie-ins, and jack and bore crossings. Also included was 5,640 lf of 8&quot;016&quot; DR 18 C-900 reclaimed water main, 15,280 lf of 10&quot;-24&quot; directionally drilled reclaimed water main, 5 tie-ins, and jack &amp; bore crossings. The raw water main installed consisted of 3,000 lf of 8&quot; SDR 11 raw water main, including 2 tie-ins. Restoration included 2,700 SY of asphalt.</td>
<td>$6,325,241.00</td>
<td>July 2013</td>
<td></td>
<td></td>
</tr>
<tr>
<td>City of Ormond Beach</td>
<td>Mr. Alex Blake</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22 S. Beach Street</td>
<td>Ormond Beach, FL (386) 676-3306 <a href="mailto:Blake@ormondbeach.org">Blake@ormondbeach.org</a></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 415 Utility</td>
<td>Construction of over 20,000 LF of various size (8&quot; to 20&quot;) PVC force main reclaimed water main and potable water main. Directional drilling over 8,000 LF of various size (6&quot; to 24&quot;) HDPE forcemain, reclaimed water and potable water with all appurtenances and restoration.</td>
<td>$3,627,624.60</td>
<td>September 2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>City of Deltona</td>
<td>City of Deltona 2345 Providence Blvd. Deltona, FL (386) 878-7100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR 437 (Binion Road) Reuse WM</td>
<td>Project includes, but not limited to, the construction of approximately 9,500 feet of a 48-inch diameter ductile iron pipe reclaimed water distribution main.</td>
<td>$2,573,332.25</td>
<td>March 2011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>City of Apopka</td>
<td>City of Apopka Mr. Ken Gatton 748 E. Cleveland St Apopka, FL (407) 703-1731 <a href="mailto:kgatton@apopka.net">kgatton@apopka.net</a></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

***MORE AVAILABLE UPON REQUEST***
KNOW ALL MEN BY THESE PRESENTS, that we, Masci Corporation as Principal and
North American Specialty Insurance Company of the City of Manchester, State of NH, a
corporation existing under the laws of the State of Florida, as Surety, are held and firmly bound
unto the City of Mount Dora hereinafter called the Owner, in the sum of

Five Percent of Amount Bid

Dollars ($5%--)

lawful

money of the United States of America, for the payment of which sum well and truly to be made,
we bind ourselves our heirs, executors, administrators and successors, jointly and severally,
firmly by these presents.

The condition of this obligation is such that whereas the Principal has submitted the
accompanying Proposal or Bid, for the construction of:

WWTP #2 DRIVEWAY RELOCATION AND UTILITY ADJUSTMENTS

BID NO. 16-03-001

NOW, THEREFORE, if the Principal shall not withdraw said Bid within ninety (90) days after
the opening of the same and in the event of the acceptance of his proposal by the Owner, shall,
within the period specified therefore, enter into a written contract with the Owner in accordance
with the Bid as accepted, and give bond with good and sufficient surety or sureties, as may be
required, for the faithful performance and proper fulfillment of such contract, or in the event of
the withdrawal of said Bid within the period specified, of the failure to enter into such contract
and give bonds within the time specified, if the Principal shall pay the Owner the difference
between the amount specified in said Bid and the amount for which the Owner may procure the
required work, if the latter amount be in excess of the former, then the above obligation shall be
void and of no effect, otherwise to remain in full force and virtue.
IN WITNESS WHEREOF, the above bounden parties have executed this instrument under their several seals this 7th day of January, 2016, the name and corporate seal of each corporate body being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

IN PRESENCE OF:

____________________________
____________________________
____________________________

Witness

ATTEST:

_________________________
Maria Masci, Secretary

Masci Corporation
5752 S. Ridgewood Avenue, Port Orange, FL 32127
Address

_________________________
Vic President
AFFIX Teresa L. Masci
CORPORATE SEAL

North American Specialty Insurance Company
650 Elm Street, Manchester, NH 03101
Address

By _______________________
AFFIX Teresa L. Durham
CORPORATE SEAL

North American Specialty Insurance Company
Corporate Surety

ATTEST:

_________________________
Yaniris Romero

END OF SECTION
NAS SURETY GROUP

NORTH AMERICAN SPECIALTY INSURANCE COMPANY
WASHINGTON INTERNATIONAL INSURANCE COMPANY

GENERAL POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT North American Specialty Insurance Company, a corporation duly organized and existing under laws of the State of New Hampshire, and having its principal office in the City of Manchester, New Hampshire, and Washington International Insurance Company, a corporation organized and existing under the laws of the State of New Hampshire and having its principal office in the City of Schaumburg, Illinois, each does hereby make, constitute and appoint:

JEFFREY W. REICH, SUSAN L. REICH, KIM E. NIV, TERESA L. DURHAM, PATRICIA L. SLAUGHTER, LESLIE M. DONAHUE
DON BRAMLAGE, GLORIA A. RICHARDS, CHERYL POLEY, LISA ROSELAND, and GLENN ARVANITIS

JOINTLY OR SEVERALLY

Its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its act and deed, bonds or other writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of:

FIFTY MILLION ($50,000,000.00) DOLLARS

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both North American Specialty Insurance Company and Washington International Insurance Company at meetings duly called and held on the 9th of May, 2012:

"RESOLVED, that any two of the Presidents, any Managing Director, any Senior Vice President, any Vice President, any Assistant Vice President, the Secretary or any Assistant Secretary be, and each or any of them hereby is authorized to execute a Power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings and all contracts of surety, and that each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be binding upon the Company when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached."

By

Steven P. Anderson, Senior Vice President of Washington International Insurance Company & Senior Vice President of North American Specialty Insurance Company

Michael A. Ito, Senior Vice President of Washington International Insurance Company & Senior Vice President of North American Specialty Insurance Company

IN WITNESS WHEREOF, North American Specialty Insurance Company and Washington International Insurance Company have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers this 24th day of April, 2015.

North American Specialty Insurance Company
Washington International Insurance Company

State of Illinois
County of Cook

On this 24th day of April, 2015, before me, a Notary Public personally appeared Steven P. Anderson, Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company and Michael A. Ito, Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.

Jeffrey Goldberg, the duly elected Assistant Secretary of North American Specialty Insurance Company and Washington International Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney given by said North American Specialty Insurance Company and Washington International Insurance Company, which is still in full force and effect.

IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this 7th day of January, 2016.

Jeffrey Goldberg, Vice President & Assistant Secretary of Washington International Insurance Company & North American Specialty Insurance Company
SECTION 00450

Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion

Contractor Covered Transactions

(1) The prospective contractor of the Recipient, City of Mount Dora, certifies, by submission of this document, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(2) Where the Recipient’s contractor is unable to certify to the above statement, the prospective contractor shall attach an explanation to this form.

CONTRACTOR:

[Signature]

City of Mount Dora

Leticia Masl, Vice President

5752 S. Ridgewood Avenue

City, State, Zip

Date

END OF SECTION
SECTION 00470
PUBLIC ENTITY CRIME STATEMENT

STATE OF FLORIDA
COUNTY OF VOLUSIA

Before me, the undersigned authority, personally appeared affiant Leticia Masci, who being first duly sworn, deposes and says:

1. That the undersigned firm is furnishing this Public Entity Crime Statement pursuant to Section 287.133 of the Florida Statutes for the undersigned firm to receive a contract with the City of Mount Dora, a public entity, for goods or services.

2. The firm acknowledges that "a person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes for CATEGORY TWO for a period of 36 months following the date of being placed on the convicted vendor list."

3. The firm warrants that none of its employees or affiliates are on the convicted vendor list kept and published by the State Department of Management Services.

FURTHER AFFIANT SAYETH NAUGHT

Name of Firm: Masc Corporation
By: Leticia Masci, Vice President
Date: 1/7/16

The foregoing instrument was acknowledged before me this 7 day of January, 2016, by Leticia Masci, as Vice President of Masc Corporation and who [X] is personally known to me; or [ ] has produced [ ] as identification.

HEATHER A. KNIGHT
Notary Public, State of Florida at Large
Printed Name, Commission Seal and Term Expiration Date

END OF SECTION

00470-1
SECTION 00490

TRENCH SAFETY AFFIDAVIT

Trench excavations on this Project are expected to be in excess of 5 feet deep. The Occupational Safety and Health Administration excavation safety standards, 29 CFR 1926.650 Subpart P trench safety standards will be in effect during the period of construction of the Project.

Bidder acknowledges that included in the Bid Price are costs for complying with the Florida Trench Safety Act (90-096, Laws of FL) effective October 1, 1990, and hereby gives assurance that, if awarded the Contract, the Contractor or Subcontractor performing trench excavation work on the Project will comply with the applicable trench safety standards. The Bidder further identifies the costs as follows:

<table>
<thead>
<tr>
<th>Trench Safety Item (Description)</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOXES / SHEETING</td>
<td>$20,000-</td>
</tr>
</tbody>
</table>

(Total Cost: $20,000)

FAILURE TO COMPLETE THE ABOVE SHALL RESULT IN THE BID BEING DECLARED NON-RESPONSIVE

COMPANY NAME: Masci Corporation

DATE: 1/7/16

BY: Leticia Masci, Vice President

(Additional sheets shall be attached, as needed, and items shall be organized to correspond with the bid format)

END OF SECTION
CERTIFICATE AS TO CORPORATE PRINCIPAL

I, Maria Masci, certify that I am the Corporate secretary of the corporation named as Principal in the within Bid Bond; that Leticia Masci, who signed the said Bid Bond on behalf of the Principal was then Vice President of said corporation; that I know his signature, and his signature thereto is genuine; and that said Bid Bond was duly signed, sealed and attested for in behalf of said corporation by authority of its governing body.

Maria Masci, Secretary

AFFIX CORPORATE SEAL

END OF SECTION
CERTIFICATE OF LIABILITY INSURANCE

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFER NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
ASSOCIATES AGENCY, INC.
11470 N 53rd St
Temple Terrace, FL 33617

CONTACT NAME:
NAME:
(813) 988-1234
FAX NO.: (813) 988-0989
E-MAIL ADDRESS: agent@associatesins.com

INSURED
Masci Construction Inc & Masci Corporation Inc
5752 S. Ridgewood Ave.
Port Orange, FL 32127

DATE (MM/DD/YYYY)
1/5/2016

COVERAGES
CERTIFICATE NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR Type
LIMIT

A COMMERCIAL GENERAL LIABILITY
1 ACE OCCUR
X CLAIMS-MADE
X OCCUR
X CONTRACTUAL
X XCU
GENL AGGREGATE LIMIT APPLIES PER:
POLICY X PROJ X LOC
OTHER

B COMMERCIAL AUTO
1 ACE OCCUR
X CLAIMS-MADE

C UMBRELLA
1 ACE OCCUR
X CLAIMS-MADE

D POLLUTION POLICY
1 ACE OCCUR

E E & O
1 ACE OCCUR

F WORKMEN'S COMPENSATION
1 ACE OCCUR

G OTHER AUTOMOBILE LIABILITY
1 ACE OCCUR

H PHYSICAL DAMAGE
1 ACE OCCUR

I MACHINERY & EQUIPMENT
1 ACE OCCUR

J SUPPLIES
1 ACE OCCUR

K FIRE PROTECTION
1 ACE OCCUR

L ACCOUNTS RECEIVABLE
1 ACE OCCUR

M COMPUTER SOFTWARE
1 ACE OCCUR

N INCOME PRODUCTION
1 ACE OCCUR

O GENERAL LIABILITY
1 ACE OCCUR

P PRODUCTS LIABILITY
1 ACE OCCUR

Q CONTIGUOUS LIABILITY
1 ACE OCCUR

R ENVIRONMENTAL LIABILITY
1 ACE OCCUR

S OTHER LIABILITY
1 ACE OCCUR

T HABITATION LIABILITY
1 ACE OCCUR

U OTHER LIABILITY
1 ACE OCCUR

V OTHER LIABILITY
1 ACE OCCUR

W OTHER LIABILITY
1 ACE OCCUR

X OTHER LIABILITY
1 ACE OCCUR

Y OTHER LIABILITY
1 ACE OCCUR

Z OTHER LIABILITY
1 ACE OCCUR

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: Bid - WWTP #2 Driveway Relocation & Utility Adjustments

CERTIFICATE HOLDER
City of Mount Dora
Attention: Purchasing Division
1250 North Highland Street
Mount Dora, FL 32757

CANCELLATION
SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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Every day we work to improve the way we do business in order to serve you better. For information about our services, please log onto www.myfloridalicense.com. There you can find more information about our divisions and the regulations that impact you, subscribe to department newsletters and learn more about the Department’s initiatives.

Our mission at the Department is: License Efficiently, Regulate Fairly. We constantly strive to serve you better so that you can serve your customers. Thank you for doing business in Florida, and congratulations on your new license!
Congratulations! With this license you become one of the nearly one million Floridians licensed by the Department of Business and Professional Regulation. Our professionals and businesses range from architects to yacht brokers, from boxers to barbecue restaurants, and they keep Florida’s economy strong.

Every day we work to improve the way we do business in order to serve you better. For information about our services, please log onto www.myfloridalicense.com. There you can find more information about our divisions and the regulations that impact you, subscribe to department newsletters and learn more about the Department’s initiatives.

Our mission at the Department is: License Efficiently, Regulate Fairly. We constantly strive to serve you better so that you can serve your customers. Thank you for doing business in Florida, and congratulations on your new license!
ADDENDUM NO. 1
TO THE BIDDING/CONTRACT DOCUMENTS AND SPECIFICATIONS
CITY OF MOUNT DORA
WWTP #2 DRIVEWAY RELOCATION AND UTILITY ADJUSTMENTS
BID NO. 16-03-001

January 4, 2016

To All Plan Holders:

The following changes, clarifications and additions are hereby made part of the bidding and contract documents for the above reference project dated November 2015 and prepared by Quentin L. Hampton Associates, Inc. as fully and completely as if the same were fully set forth therein.

1. **Section 00310 ‘Schedule of Unit Prices’** is revised with the following:
   a. RCP required for storm pipe.

2. **Specification Section 00500 ‘Agreement’** is revised with contract duration days corrected to be consistent with other sections.

3. FDOT Driveway Connection Permit is attached

4. **Bid Date and time remains unchanged.**

Questions and responses from bidders/suppliers are provided herein (from Michelle Spiegel-Ferguson).

1. Who is the funding source for the project?
   
   **Response:** FDOT and City of Mount Dora are providing funding.

2. What are the storm pipe optional materials allowed as noted in Pay Items 430-175-115, 430-175-118 and 430-175-224?

   **Response:** The City will require RCP for all storm pipe.

3. Part ‘b’ Utility Relocates Bid Items 1 A-C call for all 16" material to be DR18, Specification Section 15100 2.02 calls for all pipe above 12" to conform to C905 DR25. Please clarify which is the correct DR Rating for all Pressure Pipes.

   **Response:** The City desires to construct this project with DR18 pipe for additional pressure rating. Please disregard Section 15100 as it relates to pressure rating for pipe larger than 12 inches.
4. There is conflicting sources for Ductile Iron Fittings within the specifications. Please clarify if we are to supply Fittings domestically produced as noted in specification section 02600 2.02 or supply them with no domestic requirements per 15100 2.01?

Response: Fittings shall comply with Section 02616 in regard to meeting domestic manufacturer.

5. Please confirm the acceptance of all American Flow Control Products. Series 2500 Gate Valves; Series B84B Hydrants; Series 2800 Mechanical Joint Tapping Sleeves.

Response: American Flow Control Products are acceptable with the exception of the tapping sleeve. The City will require a full bodied, stainless steel tapping sleeve similar to that as mfg by JCM model 432 or approved equal.

Disclaimer: This addendum was transmitted via email. The email read receipt is acknowledgement that the addendum has been received. It is the sole responsibility of bidder to confirm that all addenda have been received prior to submitting bid and acknowledge such in the bid documents.
DATE: March 1, 2016

TO: Mayor and City Council

FROM: John Peters, Public Works & Utilities Director
       Charles F. Revell, Electric Utility Manager

VIA: Vincent Pastue, City Manager


**Recommendation:** Staff recommends City Council approve the new Territorial Agreement between Sumter Electric Cooperative, Inc. (SECO) and the City of Mount Dora.

**Background/Information:** The City of Mount Dora and SECO are subject to the regulatory jurisdiction of the Florida Public Service Commission (FPSC) and are required to maintain a territorial agreement pursuant to Section 366.04(2) F.S. A territorial agreement between utilities establishes geographic boundaries so that new customers clearly understand which utility will provide electric service. The territorial agreements also serve the public interest by avoiding uneconomic duplication of facilities and promoting safe and efficient operations by electric utilities.

Territorial agreements are regulated by the FPSC and establish territorial areas that are independent of existing city limits or future annexations. In general, the City's electric territory is bounded by U.S. Highway 441 on the north and east, the Orange County line and Lake Dora on the south, and the areas adjacent to CR 19A and Eudora Road on the west. Customers outside the City's territorial area are served by Duke Energy or SECO, as shown in the attached Composite Exhibit A that is a part of the new Territorial Agreement.

The existing Territorial Agreement between SECO and the City was entered into 20 years ago and is set to expire on July 31, 2016. Staff has been working with SECO for several months to finalize the new territorial agreement and confirm the City's existing territorial boundaries. The new Territorial Agreement incorporates more contemporary language and contains detailed maps showing the City's existing territorial boundaries.

Staff recommends Council approve the attached Territorial Agreement and Composite Exhibit A so they can be filed with the Florida Public Service Commission as soon as possible.

**Attachments:**
Territorial Agreement
Composite Exhibit A – Territorial Maps
TERRITORIAL AGREEMENT

SUMTER ELECTRIC COOPERATIVE, INC., an electric cooperative organized and existing under the laws of the State of Florida ("SECO"), and CITY OF MOUNT DORA, a Municipal Government organized and existing under the laws of the State of Florida ("MOUNT DORA") (collectively, the "Parties") enter into this Territorial Agreement (the "Agreement") on this _____ day of ______________________, 2016.

WITNESSETH:

Article I. RECITALS

Section 1.1 WHEREAS, SECO, by virtue of Florida Statutes Chapter 425 and the Charter issued to it thereunder, and MOUNT DORA, by virtue of the laws of Florida, are each authorized, empowered and obligated by their corporate charter and laws of the State of Florida to furnish retail electric service to persons upon request within their respective service areas; and

Section 1.2 WHEREAS, the respective areas of service of the Parties are contiguous in many places in Lake County, and to avoid duplication of service, SECO and MOUNT DORA entered into the currently effective territorial agreement dated November 27, 1995, and approved by the Commission pursuant to its powers under Section 366.04, Florida Statutes, in Order No. PSC-96-0886-FOF-EU, issued July 9, 1996 in Docket No. 960396-EU (the "Current Agreement"), which delineates the Parties’ service territory in Lake County; and

Section 1.3 WHEREAS, the Parties desire to enter into a new territorial agreement in order to gain further operational efficiencies and customer service improvements in the retail service territory in Lake County, while continuing to eliminate circumstances giving rise to the uneconomic duplication of service facilities and hazardous situations that the Current Agreement is intended to avoid.
NOW THEREFORE, in fulfillment of the purposes and desires aforesaid, and in consideration of the mutual covenants and agreements herein contained, which shall be construed as being interdependent, the Parties hereby agree as follows:

Article II. DEFINITIONS

Section 2.1 Territorial Boundary Line(s). As used herein, the term “Territorial Boundary Line(s)” shall mean the boundary line(s) depicted on the maps attached hereto as Composite Exhibit A which delineate and differentiate the parties respective Territorial Areas in Lake County.

Section 2.2 SECO Territorial Area. As used herein, the term “SECO Territorial Area” shall mean the geographic areas in Lake County allocated to SECO as its retail service territory and labeled as “SECO Territorial Area” or “SECO” on the maps contained in Composite Exhibit A.

Section 2.3 MOUNT DORA Territorial Area. As used herein, the term “MOUNT DORA Territorial Area” shall mean the geographic areas in Lake County allocated to MOUNT DORA as its retail service territory and labeled as “MOUNT DORA Territorial Area” or “MOUNT DORA” on the maps contained in Composite Exhibit A.

Section 2.4 Point of Use. As used herein, the term “Point of Use” shall mean the location within the Territorial Area of a Party where a customer’s end-use facilities consume electricity, which such Party shall be entitled to provide retail electric service under this Agreement, irrespective of where a customer’s point of connection or metering is located.

Section 2.5 New Customers. As used herein, the term “New Customers” shall mean all end use customers applying for retail electric service after the Effective Date of this Agreement at a Point of Use in the Territorial Area of either Party.
Section 2.6  **Extra-Territorial Customers.** As used herein, the term “Extra-Territorial Customers” shall mean those customers, other than Temporary Service Customers, served by either Party subsequent to the Effective Date of this Agreement who are located within the Service Territory of the other Party due to modifications of the Territorial Boundary Lines established herein.

Section 2.7  **Commission.** As used herein, the term “Commission” shall mean the Florida Public Service Commission.

Section 2.8  **Effective Date.** As used herein, the term “Effective Date” shall mean the date on which the Commission’s final order granting approval of this Agreement in its entirety becomes no longer subject to judicial review.

Section 2.9  **Temporary Service Customers.** As used herein, the term “Temporary Service Customers” shall mean customers who are being temporarily served under the temporary service provisions of this Agreement.

**Article III. RETAIL ELECTRIC SERVICE**

Section 3.1  **In General.** Except as otherwise specifically provided herein, SECO shall have the exclusive authority to furnish retail electric service within SECO Territorial Area and MOUNT DORA shall have the exclusive authority to furnish retail electric service in the MOUNT DORA Territorial Area, both as shown on the maps contained in Composite Exhibit A. The Territorial Boundary Line shall not be affected by any change, through annexation or otherwise, that may occur in the corporate limits of any municipality (including MOUNT DORA) lying within or adjacent to SECO Territorial Area or the MOUNT DORA Territorial Area, unless agreed to in writing by the Parties and approved by the Commission.

Section 3.2  **Service to New Customers.** The Parties agree that neither of them will knowingly serve or attempt to serve any New Customer whose Point of Use is located within the Territorial Area of the other Party, except as specifically provided in Sections 3.3 below.
However, in those instances where the Territorial Boundary Line traverses the property of an individual New Customer or prospective New Customer, the Party in whose service area the preponderance of the Customer’s electric energy usage is expected to occur shall be entitled to serve all of the Customer’s usage. With respect to new residential customers, however, the Parties recognize that in some such instances, the information needed to locate the various points of the New Customer’s usage in relation to the Territorial Boundary Line with reasonable certainty may be unavailable or difficult to determine, and agree that in such event the Party with the greater portion of the New Customer’s property in its service area shall be entitled to serve all of the New Customer’s usage.

Section 3.3 Temporary Service. The Parties recognize that in exceptional circumstances, economic constraints or good engineering practices may indicate that a New Customer’s Point of Use either cannot or should not be immediately served by the Party in whose Territorial Area such Point of Use is located. In such instances, upon written request by the Party in whose Territorial Area the New Customer’s Point of Use is located, the other Party may, in its sole discretion, agree in writing to temporarily provide service to such New Customer until such time as the requesting Party provides written notice of its intent to serve the Point of Use. The other Party shall inform the customer of the temporary nature of such service. Any such agreement for temporary service which lasts, or is anticipated to last, for more than one year shall be submitted to the Commission for approval in accordance with Section 6.1 hereof. Such temporary service shall be discontinued upon written notice from the requesting Party of its intent to provide service, which the Parties shall coordinate to minimize any inconvenience to the customer. In conjunction with such discontinuance, the Party providing temporary service hereunder shall be compensated by the requesting party in accordance with Section 4.3.1 for its distribution facilities used exclusively to provide such service. However, the Party providing temporary service hereunder shall not be required to pay the other Party for any loss of revenue
associated with the provision of such temporary service, nor shall the Party providing temporary service be required to pay the other Party any going concern value.

Section 3.4  **Referral of Service Request.** In the event that a prospective New Customer requests or applies for service from either Party to be provided to a Point of Use located in the Territorial Area of the other Party, the Party receiving the request or application shall advise the prospective New Customer that such service is not permitted under this Agreement, as approved by the Commission, and shall refer the prospective New Customer to the other Party.

Section 3.5  **Correction of Inadvertent Service Errors.** If any situation is discovered during the term of this Agreement in which either Party is inadvertently providing retail electric service to a customer’s Point of Use located within the service area of the other party, service to such customer will be transferred to such other Party. Until the transfer of service can be completed, the Party providing inadvertent service to the customer’s Point of Use will be deemed to be temporary service provided in accordance with Section 3.3 above. The electric facilities of the inadvertently serving Party used solely to provide service to the customer subject to transfer will also be transferred to the other Party in return for compensation determined in accordance with section 4.3.1 below. Any such transfer shall be completed within 12 months of the discovery of the inadvertent error.

**Article IV. TRANSFER OF CUSTOMERS**

Section 4.1  **In General.** As of the Effective Date of this Agreement, there are no known Extra-Territorial Customers that are subject to transfer hereunder. Should circumstances arise during the term of this Agreement in which the Parties agree that, based on sound economic consideration or good engineering practices, an area located in the Territorial Area of one Party would be better served if reallocated to the service territory of the other Party, all Extra-Territorial Customers shall be transferred to the Party in whose Territorial Area such
customers are located at the earliest practical time, consistent with sound utility practices and reasonable consumer notice. The Parties will jointly petition the Commission in writing for approval of a modification of the Territorial Boundary line that places the area in question (the “Reallocated Area”) within the Territorial Area of the other Party and transfer of the customers located in the Reallocated Area to the other Party.

Section 4.2 Transfer of Facilities. Upon the transfer of Extra-Territorial Customers pursuant to section 4.1 above, the receiving Party may elect to purchase the facilities of the transferring Party related exclusively to serving the Extra-Territorial Customers for an amount determined in accordance with Section 4.3.1 below.

Section 4.3 Compensation for Transferred Customers and Facilities.

4.3.1. Compensation for Transferred Facilities. If service facilities are transferred pursuant to Sections 3.3, 3.5, or 4.2 above, the receiving Party shall compensate the transferring party in an amount based upon the following formula: replacement cost (new), less depreciation calculated on a straight line basis over the life of the asset (facility) as determined from the transferring Party’s books and records using FERC depreciation tables in effect at the time of the transfer multiplied by the appropriate Handy Whitman Index cost escalator, together with and the cost to the transferring Party for reintegration of its remaining system to the extent such reintegration costs are reasonably required by sound utility practices, plus going concern value as agreed upon by both parties.

4.3.2. Time of Payment. All payments from the receiving Party to the transferring Party determined in accordance with this section shall be made in cash within 60 days of the presentation of an invoice from the transferring Party.

4.3.3. Transfer Instruments. For each transfer made under this Agreement, the transferring party will make, execute, and deliver to the receiving Party a conveyance, deed or other instrument of transfer, as is appropriate, in order to convey all rights, titles
and interests of the transferring party in any facilities, rights-of-way, easements, road
permits, or other rights to the receiving party.

4.3.4. **RUS Approval.** Property transfer from **SECO** to **MOUNT DORA** may be
subject to approval by the United States of America Department of Agriculture and Rural
Utilities Service (RUS).

Section 4.4 **Extra-Territorial Service.** Except as otherwise provided herein, each party
retains the right and obligation to continue to provide retail electric service at existing points of
delivery, which are in the retail service areas of the other Party. Existing points of delivery shall
mean service drops and underground service laterals which are physically connected to the
customer’s property, whether energized or not. Each party may maintain, repair and replace its
facilities used to service such existing points of delivery.

If the service requirements for an Extra-Territorial Customer change or if the service is to
be provided at a new point of delivery which is near the facilities of the Party in whose territory
the customer is located, that Party shall provide the service except the Party may request in
writing, and the other Party currently serving the customer may in its discretion agree, that the
service will continue to be provided by the Party currently serving subject to a transfer of the
service to the Party in whose territory the customer is located when that Party determines that it
is appropriate to extend its facilities.

**Article V.  OPERATION AND MAINTENANCE**

Section 5.1 **Facilities to Remain.** Other than expressly provided herein, no generating
plant, transmission line, substation, distribution line or related equipment shall be subject to
transfer or removal hereunder; provided, however, that each Party shall operate and maintain its
lines and facilities in a manner that minimizes any interference with the operations of the other
Party.
Section 5.2 **SECO Facilities to be Served.** Nothing herein shall be construed to prevent or in any way inhibit the right and authority of SECO to serve any SECO facility located in the MOUNT DORA Territorial Area which facility is used exclusively in connection with SECO’s business as an electric utility; provided, however that SECO shall construct, operate and maintain said lines and facilities in such manner as to minimize any interference with the operation of MOUNT DORA in the MOUNT DORA Territorial Area.

Section 5.3 **MOUNT DORA Facilities to be Served.** Nothing herein shall be construed to prevent or in any way inhibit the right and authority of MOUNT DORA to serve any MOUNT DORA facility (i.e., owned by the CITY OF MOUNT DORA) located in the SECO Territorial Area which facility is used exclusively in connection with MOUNT DORA’s business as a municipal government; provided, however, that MOUNT DORA shall construct, operate, and maintain said lines and facilities in such manner as to minimize any interference with the operation of SECO in the SECO Territorial Area.

**Article VI. PREREQUISITE APPROVAL**

Section 6.1 **Commission Approval.** The provisions and the Parties’ performance of this Agreement are subject to the regulatory authority of the Commission, and appropriate approval by that body of this Agreement in its entirety shall be an absolute condition precedent to the validity, enforceability and applicability hereof. This Agreement shall have no effect whatsoever until such approval has been obtained. Any proposed modification to this Agreement shall be submitted to the Commission for approval. In addition, the Parties agree to jointly petition the Commission to resolve any dispute concerning the provisions of this Agreement or the Parties performance hereunder.
Section 6.2 Liability in the Event of Disapproval. In the event approval pursuant to section 6.1 is not obtained, neither Party will have any claim against the other arising under this Agreement.

Section 6.3 Supersedes Prior Agreements. Upon approval by the Commission, this Agreement shall be deemed to specifically supersede the Current Agreements and all other prior agreements between the Parties defining the boundaries of their respective Territorial Areas.

Article VII. DURATION

Section 7.1 Term. This Agreement shall continue and remain in effect for a period of twenty (20) years from the date of the rendering of the Florida Public Service Commission’s Order approving this Agreement. Upon the expiration of the initial twenty (20) year Term, this Agreement shall automatically renew for successive one-year renewal terms. Either Party may terminate this Agreement, provided that such termination becomes effective after the initial twenty (20) year term, by providing notice of termination to the other Party no less than 12 months prior to the effective date of the termination. The notice shall be in accordance with Section 9.3 and shall state the effective date of the termination.

Article VIII. CONSTRUCTION OF AGREEMENT

Section 8.1 Other Electric Utilities. Nothing in this Agreement is intended to define, establish or affect in any manner the rights of either Party hereto relative to any other electric utility not a party to this Agreement with respect to the furnishing of retail electric service including, but not limited to, the service territory of either Party hereto relative to the service territory of any other electric utility not a party to this Agreement. The Parties understand that SECO or MOUNT DORA may, from time to time and subject to Commission approval, enter into territorial agreements with other electric utilities providing retail service in Sumter, Lake, Marion, Citrus, Levy, Pasco, and Hernando Counties and that, in such event, nothing herein shall be
construed to prevent SECO or MOUNT DORA from designating any portion of its Territorial Area under this Agreement as the retail service area of such other electric utility.

Section 8.2 Bulk Power for Resale. Nothing herein shall be construed to prevent either Party from providing a bulk power supply for resale purposes, regardless of where the purchaser for resale may be located. Further, no other section or provision of this Agreement shall be construed as applying to a bulk power supply for resale purposes.

Section 8.3 Intent and Interpretation. It is hereby declared to be the purpose and intent of the Parties that this Agreement shall be interpreted and construed, among other things, to further this State’s policy of actively regulating and supervising the service territories of electric utilities; supervising the planning, development, and maintenance of a coordinated electric power grid throughout Florida; avoiding uneconomic duplication of generation, transmission and distribution facilities; and encouraging the installation and maintenance of facilities necessary to fulfill the Parties respective obligations to serve.

Article IX. MISCELLANEOUS

Section 9.1 Negotiations. Whatever terms or conditions may have been discussed during the negotiations leading up to the execution of this Agreement, the only terms and conditions agreed upon are those set forth herein, and no alteration, modification, enlargement or supplement to this Agreement shall be binding upon either of the Parties unless made in writing, signed by both Parties, and approved by the Commission.

Section 9.2 Successors and Assigns. Nothing in this Agreement, expressed or implied, is intended or shall be construed to confer upon or give to any person or corporation, other than the parties, any right, remedy or claim under or by reason of this Agreement or any provision or conditions hereof; and all the provisions, representations, covenants and conditions herein contained shall inure to the sole benefit of and shall be binding only upon the Parties and their respective representative, successors and assigns.
Section 9.3 Notices. Notices and other written communications contemplated by this Agreement shall be deemed to have been given if sent by certified mail, postage prepaid, by prepaid private courier, or by confirmed facsimile transmittal, as follows:

To SECO:  
CEO  
Sumter Electric Cooperative, Inc.  
330 South U.S. Hwy 301 (33585)  
P.O. Box 301 (33585-0301)  
Sumterville, Florida  
Facsimile 352-793-2563

To MOUNT DORA:  
City Clerk/City Manager  
City of Mount Dora  
510 N. Baker Street (32757-5521)  
P.O. Box 176 (32756-0176)  
Mount Dora, Florida  
Facsimile 352-383-4801

Either Party may change its designated representative or address to which such notices or communications shall be sent by giving written notice thereof to the other Party in the manner herein provided.

IN WITNESS WHEREOF, this Agreement has been caused to be executed in triplicate in their respective corporate names and their corporate seals affixed by their duly authorized officers on the day and year first above written.

(Signature blocks follow on Page 13)
SUMTER ELECTRIC COOPERATIVE, INC.

By: ____________________________
    James P. Duncan
    As its CEO

ATTEST:

CITY OF MOUNT DORA

By: ____________________________
    Gwen Johns
    City Clerk

By: ____________________________
    Nick Girone
    Mayor

(SEAL)

APPROVED AS TO FORM AND LEGALITY:

By: ____________________________
    Clifford B. Shepard, III, Legal Counsel
    to the City of Mount Dora

By: ____________________________
    Lewis W. Stone, Legal Counsel
    to Sumter Electric Cooperative, Inc.
DATE: March 1, 2016

TO: Mayor and City Council

FROM: Mike Sheppard, Finance Director
       Charles F. Revell, Electric Utility Manager

VIA: Vincent Pastue, City Manager

RE: First Reading of Ordinance No. 2016-03 Granting a Non-Exclusive Electric Utility Franchise to Sumter Electric Cooperative, Inc.

Recommendation: Staff recommends the City Council move to approve Ordinance No. 2016-03 pertaining to granting a non-exclusive electric utility franchise to Sumter Electric Cooperative, Inc. (SECO).

Background/Information: The City of Mount Dora currently has a franchise arrangement with SECO that was implemented through Ordinance No. 685 passed on February 4, 1997. Under the current SECO Franchise Ordinance, SECO pays the City 6% of its electric revenues from customers located within the City limits for the right to put its poles and electric facilities within the City’s road right-of-ways. This franchise arrangement, including the 6% franchise fee, is common among Florida cities that have outside utility companies using city streets for their equipment. Mount Dora has franchise ordinances and receives franchise fees from a number of utility companies, including Duke Energy, SECO, CenturyLink, and TECO Energy (natural gas).

The current SECO Franchise Ordinance has a term of 20 years and expires on February 4, 2017. Rather than waiting until 2017 to adopt a new franchise ordinance for SECO, staff recommends adopting an ordinance now so that both the SECO Territorial Agreement and the new SECO Franchise Ordinance will expire concurrently. Synchronizing the dates will streamline the review process with SECO during the next revision cycle.

City staff began negotiations with SECO several months ago. SECO initially supplied a Franchise Agreement (contract) to implement new franchise arrangement instead of using a City ordinance. Staff was reluctant to use a contract rather than an ordinance because this would limit the City’s enforcement options. In addition, the SECO-supplied Franchise Agreement did not contain as many features and protections for the City as compared to our existing Duke Energy Franchise Ordinance. After negotiations, SECO agreed to implement the franchise arrangement through a new City ordinance that was modeled after the City’s Duke Energy Franchise Ordinance.
The attached SECO Franchise Ordinance contains the following features and improvements:

1. A 20 year term that will expire concurrently with the new SECO Territorial Agreement.
2. A 6% franchise fee, consistent with the existing franchise fee.
3. Specific timing requirements for SECO to update its franchise payments to the City when the franchise area is changed due to annexations or contractions.
4. A provision to reconsider the SECO Franchise Ordinance if the franchise payments to the City are adversely affected by retail wheeling, where a third party makes energy sales directly to an end use customer of SECO.
5. A specific payment date for the franchise fee with a penalty for late payments.
6. An updated Favored Nations provision that will require SECO to increase the franchise fee paid to the City if it were to accept a franchise arrangement with any other municipality for more than 6%. This provision would also apply if the City imposed a lesser franchise fee to another utility.
7. Updated indemnification and insurance requirements.
8. Expanded ability for the City to request records and reports from SECO to verify franchise payments and identify customers within the franchise area.

Staff recommends Council move to approve the Ordinance No. 2016-03.

**Attachments:**
Ordinance No. 2016-03 – Electric Utility Franchise for SECO
ORDINANCE 2016-03

AN ORDINANCE GRANTING A NON-EXCLUSIVE ELECTRIC UTILITY FRANCHISE; PRESCRIBING THE TERMS AND CONDITIONS ACCOMPANYING THE GRANT OF FRANCHISE; PROVIDING FOR SEVERABILITY OF PROVISIONS; PROVIDING FOR CONFLICTS & REPEALER, SEVERABILITY, AND AN EFFECTIVE DATE.

WHEREAS, the City of Mount Dora, Florida, pursuant to its home rule powers under the Florida Constitution, its Charter, and Florida Statutes, has the power and authority to regulate the use of its public rights-of-way by electric utilities for the provision of electric utility services within the corporate limits of said City; and

WHEREAS, the City of Mount Dora, Florida has the authority to enter into non-exclusive franchise agreements for the use of public rights-of-way to serve the citizens and protect their health, safety and welfare; and

WHEREAS, Sumter Electric Cooperative, Inc. (hereinafter “SECO”) is an electric utility,

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Mount Dora, Florida:

SECTION 1. Findings.

Grantor deems it necessary, desirable and in the interest of its citizens to establish by ordinance a non-exclusive electric franchise memorializing the entire bargained-for agreement between Grantor and Grantee granting to Grantee the permission to occupy Rights-of-Way in the City of Mount Dora, Florida, for the purpose of providing electric services, on the terms and conditions set forth herein.

SECTION 2. Short Title.

This ordinance shall be known and may be cited as the "SECO Franchise."

SECTION 3. Definitions.

For the purposes of this ordinance, the following terms, phrases, words, and their derivatives shall have the meaning given herein. When not inconsistent with the context, words in the present tense include the future, words in the plural number include the singular number, and words in the singular number include the plural number. The word "shall" is always mandatory and not merely permissive.

(A) "Base Revenues" means all Grantee's revenues from the retail sale of electricity, net of customer credits, to residential, commercial, and industrial customers and City sponsored street lighting all within the corporate limits of the City.
(B) “Electric Energy Provider” means every legal entity or association of any kind (including their lessees, trustees or receivers), including any unit of state, federal or local government (including Grantor herein), which owns, maintains, or operates an electric generation, transmission, or distribution system or facilities, or which otherwise provides, arranges for, or supplies electricity or electric energy to the public, or which supplies electricity to itself utilizing Grantee’s distribution or other facilities. Without limitation of the foregoing, “Electric Energy Provider” shall also include every Electric Utility, electric power marketer, or electric power aggregator. It shall also include every entity providing such services as metering, customer billing, payment collection and processing, and customer information and data processing.

(C) “Electric Utility” shall have the meaning set out in Section 366.02(2), Florida Statutes (2015) and shall also include every electric “Public Utility” as defined Section 366.02(1), Florida Statutes (2015). “Electric Utility” shall further include every investor owned, municipally or governmentally owned, or cooperatively owned electric utility (including their lessees, trustees or receivers), which owns, maintains, or operates an electric generation, transmission, or distribution system in any State or Country.

(D) "Electric Utility System" means an electric power system installed and operated in the Franchise Area in accordance with the provisions of state and federal law governing Rural Electric Cooperatives or such other regulations as may be applicable to Grantee’s successors or assigns establishing technical standards, service areas, tariffs and operating standards, which shall include but not be limited to electric light, heat, power, and energy facilities, and a generation, transmission, and distribution system, with such extensions thereof and additions thereto as shall hereafter be made.

(E) "Franchise Area" means that area for which Grantee provides electric utility service, which is within the corporate City limits of Grantor.

(F) “Grantee” means Sumter Electric Cooperative Inc. (“SECO”), its successors and assigns.

(G) "Grantor" means the City of Mount Dora, Florida, also referred to herein as “City”.

(H) "Person" means any person, firm, partnership, association, corporation, company or organization of any kind.

(I) “Public Service Commission” means the Florida Public Service Commission.

(J) "Rights-of-Way" - All of the public streets, alleys, highways, waterways, bridges, easements, sidewalks and parks owned by the City, as they now exist or may be hereafter constructed, opened, laid out or extended within the present limits of the City, or in such territory as may hereafter be added to, consolidated or annexed to the City.

(K) “Retail Wheeling” - A customer/supplier arrangement whereby an electric energy provider utilizes transmission and/or distribution facilities of Grantee to make energy sales directly to an end use customer located within the Franchise Area.
“Adversely Affected” - For the Grantee, a loss of one percent (1%) of Base Revenues within the corporate city limits due to Retail Wheeling. For the Grantor, a loss of one percent (1%) of franchise fees due to Retail Wheeling.

SECTION 4. Grant of Authority.

(A) There is hereby granted by Grantor, to Grantee, the right and privilege to construct, erect, operate, own and maintain, in, upon, along, across, above, over and under Rights-of-Way now laid out or dedicated, and all extensions thereof, and additions thereto in the corporate City limits, poles, wires, cables, underground conduits, manholes, fiber optic cable for its own use and other fixtures necessary or proper for the maintenance and operation of its Electric Utility System, provided that all portions of the same shall conform to the National Electrical Safety Code. This grant of authority is for the purpose of the provision by Grantee of electric utility services. Grantee agrees that without the prior written permission of Grantor, it will not allow any entity providing a wireless communication system to acquire rights to occupy Rights-of-Way under this franchise. This Franchise does not create any right for Grantee to use Grantee’s existing facilities, or acquire or construct facilities, in order to provide public communications, leased fiber optic capacity, or video services to existing or potential consumers. Notwithstanding the foregoing, the parties acknowledge that any entity which has entered into a franchise with Grantor for the use of Rights-of-Way or otherwise received Grantor’s permission to occupy Rights-of-Way may negotiate with Grantee for the attachment to Grantee’s poles. No separate permission need by acquired from Grantee to permit such pole attachments and no fee or tax shall be paid under this Franchise by Grantee to the Grantor in connection with such pole attachments.

(B) Annexation or Contraction. Grantee agrees that the Franchise Area is subject to expansion or reduction by annexation and contraction of municipal boundaries. If Grantor approves any Franchise Area expansion or reduction by annexation or contraction, Grantor will provide written notice to Grantee, in accordance with Section 13 herein, within sixty (60) days of such approval. Grantee must revise its payments due to any expansion or reduction by annexation within a reasonable time after notice to Grantee, but no later than sixty (60) days after receipt of notice. Grantor understands and affirmatively acknowledges that the Grantee will exclusively rely upon the Grantor to provide timely and accurate information to the Grantee regarding any such annexations or contractions, and that failure to do so will impair, inhibit, and/or preclude the Grantee’s ability to revise any payments due to the Grantor that are impacted by such annexations or contractions.

(C) Non-Exclusive Use. The right to use and occupy Rights-of-Way for the purposes herein set forth shall be non-exclusive, and Grantor reserves the right to grant a similar use of said Rights-of-Way, to any person at any time during the period of this Franchise so long as such grant does not materially and adversely impact Grantee's right to use and occupy Rights-of-Way as aforesaid.

SECTION 5. Term of Franchise.
(A) Except as otherwise provided herein, the Franchise and rights herein granted shall take effect and be in force from and after the final passage hereof, as required by law and upon the filing of an acceptance by Grantee of all the terms thereof with Grantor and shall continue in force and effect for a term of twenty (20) years after the effective date of this Franchise ordinance.

(B) In the event the appropriate governmental authorities authorize Retail Wheeling, then either party, if Adversely Affected thereby, may reopen the agreement memorialized by this ordinance upon thirty (30) days written notice to the other for the sole purpose of considering and, if necessary, equitably adjusting franchise fee payments between Grantee and Grantor. If the parties are unable to agree within ninety (90) days of reopening, either party may declare an impasse and may file an action in the Circuit Court in Lake County, Florida for declaratory relief as to the proper franchise fee in light of Retail Wheeling.

SECTION 6. Payment to Grantor.

(A) Effective the first day of the second month beginning after the effective date of this ordinance, Grantor shall be entitled to receive from Grantee a monthly franchise amount that will equal six percent (6%) of Grantee’s Base Revenues for the preceding month, which amount shall be the total compensation due Grantor for the rights, authority and privileges granted by this Franchise. Any franchise amounts that will be paid to the Grantor will be collected by the Grantee from Grantee’s customers in the Franchise Area and passed through to the Grantor in the manner described in Section 6(B).

(B) Payment shall be made to Grantor for each month no later than the twentieth (20th) day of the following month. The monthly payment shall be made by wire transfer if required by Grantor. Any monthly payment or any portion thereof made twenty (20) days after the due date without good cause shall be subject to interest at the rate of ten percent (10%) per annum until all payments are paid in full.

SECTION 7. Favored Nations.

(A) In the event Grantee shall hereafter accept an electric utility franchise ordinance from any municipality providing for the payment of a franchise fee in excess of that provided for in Section 6 above, Grantee shall notify Grantor, and Grantor reserves the right to amend this Franchise to increase the franchise fee payable under this ordinance to no more than the greater franchise fee that Grantee has agreed to pay to such other municipality. Grantee's obligation to pay such greater franchise fee to Grantor shall apply prospectively beginning with the next monthly franchisee fee payment following Grantor's timely notice of its exercise of its amendment right to which Grantee may collect such increased fee from its customers. Grantee's failure to notify Grantor of such additional payments does not limit Grantor's right to amend to require such additional franchise fees. However, in the event Grantee does not provide timely notice as required by this paragraph, Grantor's amendment right shall, if exercised, relate back to the time at which Grantor could have first exercised that right hereunder if Grantor had been timely notified. Grantor shall notify Grantee whether Grantor will exercise its amendment rights as to franchise fees within a reasonable period of time of Grantee's giving notice of such other franchise terms.
(B) It is the intent and agreement of Grantor and Grantee that Grantee shall not be required to pay Grantor a franchise fee under Section 6 of a percentage greater than that paid to Grantor by any other Electric Utility or Electric Energy Provider utilizing Grantor's Rights-of-Way on such Electric Utility's or Electric Energy Provider's revenues attributable to services that are the same or substantially the same as those performed by Grantee. It is further the intent and agreement of Grantor and Grantee that Grantee should not be placed at a competitive disadvantage by the payments required by Section 6 of this Ordinance in the event other Electric Utilities or Electric Energy Providers provide services in competition with Grantee without utilizing Grantor's Rights-of-Way.

(C) If Grantor imposes a lesser fee, or no fee, or is unable to impose a fee on another Electric Utility or Electric Energy Provider providing or seeking to provide services in competition with Grantee to customers within Grantor’s municipal boundaries, whether utilizing Grantor’s Rights-of-Way or not utilizing Grantor’s Rights-of-Way, Grantee’s fee under Section 6 for such services shall be automatically reduced to the lesser fee charged the other Electric Utility or Electric Energy Provider (or to zero, if no fee is charged such other Electric Utility or Electric Energy Provider).

SECTION 8. Indemnification.

(A) Grantor shall in no way be liable or responsible for any accident or damage that may occur in the construction, operation or maintenance by Grantee of its facilities thereunder, and the acceptance of this Franchise by Grantee shall be deemed an agreement on the part of Grantee to indemnify Grantor and hold it harmless against any and all direct damages, claims, expenses, penalties, reasonable attorneys’ fees (including appellate fees) and costs that Grantor may incur arising out of or resulting from the negligence, default, or misconduct of Grantee, its contractors and agents in the construction, repair, operation, or maintenance of its electric utility facilities thereunder. Notwithstanding the above, the Grantee’s indemnification of the Grantor shall be limited to the extent that the Grantor’s liability is found to be limited by §768.28, Florida Statutes, and no part of this Agreement is intended to be a waiver of sovereign immunity with respect to claims described in this subparagraph. In no event shall Grantee be liable to Grantor for any consequential, incidental, punitive, exemplary, multiple, or indirect damages, lost profits or other business interruption damages, by statute, in tort (including negligence or strict liability), in contract, or under any indemnity provision or otherwise.

(B) Grantee shall maintain throughout the term of this Franchise insurance, naming the Grantor as an additional insured with regard to all damages set forth in Section 8(A) in the minimum amounts of:

(i) $1,000,000 Each Occurrence for bodily injury and property damage
(ii) $2,000,000 General Aggregate
(iii) $2,000,000 Excess Liability

The right is hereby reserved to Grantor to adopt, in addition to the provisions herein contained and existing applicable ordinances, such additional regulations as it shall find necessary in the exercise of its police power, provided that such regulations, by ordinance or otherwise, shall be reasonable, and shall not be in conflict with the laws of the State of Florida or the lawful regulations of any state agency possessing the power to regulate the activities of Grantee, or conflict with or otherwise interfere with the benefits conferred on the Grantee hereunder.


(A) In addition to Grantee’s right and obligation to serve retail customers under Florida law, Grantee is hereby granted the right, authority and privilege to make all necessary work and excavations in said Rights-of-Way of Grantor. Grantee shall have the right to fasten and to stretch and lay along the lines of said poles, conduits, pipes and cables necessary for transmitting and conveying the electric current to be used in Grantee’s business, together with all the right and privileges necessary or convenient for the full use including the right to trim, cut and keep clear all trees and limbs along said lines that may in any way endanger the proper operation of same. Moreover, Grantee shall have the right to construct, erect, operate and maintain in said City an electric system consisting of necessary substations, lines and related facilities for carrying on Grantee’s business; provided that, in accomplishing these purposes, the streets of said City shall not be unnecessarily obstructed and work in connection therewith shall be done and carried on in conformity with such reasonable rules, standards, regulations and local ordinances with reference thereto as may be adopted by Grantor for the protection of the public and which are not in conflict with or otherwise interfere with the benefits conferred on the Grantee hereunder.

(B) Grantee shall locate new facilities and relocated facilities in a manner that minimizes interference with traffic on said public right-of-way. In such cases where electrical facilities of Grantee unreasonably conflict with authorized street widening and improvements, Grantee shall relocate said facilities in accordance Florida Statute 337.403 as it exists now and as may be amended from time to time and any other applicable laws of the State of Florida or regulation by a state agency having the right to regulate the Grantee. When any public right-of-way or public property of Grantor is excavated by Grantee, that portion so excavated shall, shall be restored by Grantee in accordance with Florida Statute 337.402 as it exists now and as may be amended from time to time and any other applicable laws of the State of Florida or regulation by a state agency having the right to regulate the Grantee.

(C) Any request to underground electric utility facilities shall be submitted to Grantee and performed in accordance with applicable tariffs, policies adopted by Grantee, and any applicable laws and/or regulations. All costs associated with such underground work requested by Grantor shall be at Grantor’s expense and/or any costs associated with such underground work requested by any third party shall be at the third party’s expense as required per Grantor’s municipal code and estimated and applied in accordance with the Grantee’s tariffs and policies and any applicable laws and/or regulations.

SECTION 11. Records and Reports.
(A) **Grantee Rules and Regulations.** The following records and reports shall be available to Grantor upon Grantor's reasonable request: copies of rules, regulations, terms and conditions adopted by Grantee that relate to Grantee's use of Grantor's Rights-of-Way, Grantee's most recent audited financial report.

(B) **Accounting.** Grantee shall use the system of accounts and the form of books, accounts, records, and memoranda prescribed by its lenders, or as mutually agreed to by Grantor and Grantee.

(C) **Reports.** Grantee will attach to each payment a statement of its estimated Base Revenues for the period on which such payment is based. The acceptance of any statement or payment shall not estop the Grantor from asserting that the amount paid is not the amount due, or from recovering any deficit by any lawful proceeding, including interest to be applied at the rate set forth in Section 6(B).

(D) **Availability of Records and Reports.** Grantee shall supply information that Grantor or its representatives may from time to time reasonably request relative to the calculation of franchise fees. Such records shall, on written request of Grantor, be open for examination and audit by Grantor and Grantor's representatives during ordinary business hours and such records shall be retained by Grantee for a period of two (2) years.

(E) **Audit.** Grantor may require, upon prior written notice and during Grantee’s normal business hours, an audit of Grantee's books not more than once every two (2) years. Grantee will reimburse Grantor's audit costs if the audit identifies errors in Grantee's franchise Base Revenues of five percent (5%) or more for the period audited. Errors identified during the audit process shall be projected for any additional time periods not covered during the audit if there is a reasonable probability these errors occurred during the unaudited period, but not for more than five (5) years. If an underpayment of franchise fees has occurred due to the Grantee’s error, interest will be computed at a rate of ten percent (10%) per annum. Both the underpayment and interest shall be paid within thirty (30) days after receipt of demand therefor from Grantor.

(F) **Customer Report.** Grantor shall provide to Grantee upon Grantee’s request, which request shall be made no more often than semi-annually, a report in a format acceptable to Grantee setting forth a listing of Grantee’s customers within the corporate limits of the City.

**SECTION 12. Governing Law and Venue.**

(A) This Franchise ordinance shall be construed and interpreted according to the laws of the State of Florida.

(B) In the event that any legal proceeding is brought to enforce the terms of this Franchise, the same shall be brought in Lake County, Florida, or, if a federal claim, in the U.S. District Court in and for the Middle District of Florida, Ocala Division.

**SECTION 13. Notices.**
Except in exigent circumstances, all notices by either Grantor or Grantee to the other shall be made by either depositing such notice in the United States Mail, Certified Mail return receipt requested or by facsimile. Any notice served by certified mail return receipt shall be deemed delivered five (5) days after the date of such deposit in the United States mail unless otherwise provided. Any notice given by facsimile is deemed received by next Business Day. "Business Day" for purposes of this section shall mean Monday through Friday, with Saturday, Sunday and Grantor and Grantee observed holidays excepted. All notices shall be addressed as follows:

To Grantor:     To Grantee:
City of Mount Dora   CEO
City Clerk/City Manager   Sumter Electric Cooperative, Inc.
P.O. Box 176   P.O. Box 301
Mount Dora, FL 32756-0176   Sumterville, FL 33585-0301
Facsimile No.: (352) 793-2563

Notice shall be given as required by this Franchise and for all other emergencies. Notice shall be provided to the above-named addressees unless directed otherwise in writing by Grantor or Grantee.


The failure of either party to insist in any one or more instances upon the strict performance of any one or more of the terms or provisions of this Franchise shall not be construed as a waiver or relinquishment for the future of any such term or provision, and the same shall continue in full force and effect. No waiver or relinquishment shall be deemed to have been made by either party unless said waiver or relinquishment is in writing and signed by the parties.

SECTION 15. Assignment.

Grantee shall not sell or transfer its rights pursuant to this Franchise without the prior written consent of the Grantor, which consent shall not be unreasonably withheld or delayed, provided, however, that no such consent shall be required if Grantee merges with, sells its business, or sells a substantial part of its business to another entity.


All ordinances or resolutions or parts thereof, which may be determined to be in conflict herewith, are hereby repealed. This ordinance shall supersede, as to the rights, privileges and obligations between Grantor and Grantee, all ordinances and parts of ordinances in conflict with the terms of this ordinance.
SECTION 17. Severability.

Should any section or provision of this Franchise ordinance or any portion thereof, the deletion of which would not adversely affect the receipt of any material benefits or, substantially increase the burden of any party hereunder, be declared by a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the remainder, as a whole or any part thereof, other than the part declared to be invalid. In the event of any such partial invalidity, Grantor and Grantee shall meet and negotiate in good faith to obtain a replacement provision that is in compliance with the judicial authority’s decision.

SECTION 18. Effective Date.

This ordinance shall become effective upon being legally passed and adopted by the City Council of the City of Mount Dora; and it is further agreed that Grantee shall accept this Franchise as of the date of the passage and adoption by the City Council and shall signify its acceptance in writing within thirty (30) days after the City Council’s approval of this ordinance by filing its written acceptance with the City Clerk. If Grantee fails to accept this franchise within thirty (30) days of its date of passage, then this Ordinance shall be null and void, and of no force and effect of any kind.

PASSED AND ORDAINED this ____ day of _______________, 2016, by the City Council of the City of Mount Dora, Florida.

Attest:

___________________________    __________________________
Gwen Johns, City Clerk     Nick Girone, Mayor
City of Mount Dora      City of Mount Dora

Approved as to form:

____________________________
Clifford B. Shepard, City Attorney
City of Mount Dora
TO: Mayor and City Council
FROM: Vincent Pastue, City Manager
DATE: March 1, 2016
SUBJECT: Consideration to Approve Interim City Manager Employment Agreement

Recommendation:

This item is placed on the agenda anticipating that the City Council will make a selection regarding the interim City Manager following the interviews on Saturday, February 27. A full copy of the agreement will be presented once negotiations have been completed.

Attachments:

None
DATE: March 1, 2016

TO: Mayor and City Council

FROM: Mike Sheppard, Finance Director

VIA: Vincent Pastue, City Manager

RE: Resolution 2016-11 Eliminate CRA Advance from Electric Fund

**Recommendation:**

Move to adopt Resolution 2016-11 amending the FY 2015-16 Budget eliminating the CRA debt owed to the Electric Fund.

**Background/Information:**

During Fiscal Year 2014-15, the City Council authorized the CRA to borrow to $850,000 from the Electric Fund to cover expenditures for the Downtown Phase III project in order to maintain a positive cash position. When the project costs were finalized, $500,000 was loaned from the Electric Fund to the CRA. However, as the attached draft income statement from the CRA Fund shows, there is a negative fund balance (equity) at the end of fiscal year (September 30, 2015) in the amount of $393,163 due to the loan.

It is recommended that this internal debt be alleviated allowing the CRA to have a clean balance sheet going forward. The budgeted repayment of the loan was $150,000 for Fiscal Year 2015-16 and a similar amount in future years until the loan is repaid. With this obligation lifted, the CRA fund will be able to enhance streetscape maintenance. In addition, it will provide additional capital funding for Streetscape Phases 4 and 5 along with parking infrastructure needs.

The other reason for this recommendation is that the General Fund ending balance as of September 30, 2015 is $4,437,623. Past City Council adopted a policy of maintaining the General Fund balance between 10% and 20% of annual operating expenses. A 20% fund balance to expenditure policy is good. Based on the current year General Fund budget of $12,666,800, the maximum fund balance policy amount would require $2,533,360. However, the one qualifier is that $1,980,000 of the $4,437,623 ending fund balance is a General Fund loan to the Impact Fee Funds which is getting paid back at a very slow rate. During the budget process, staff and City Council may discuss forgiving this loan.
Financial Considerations:

1. The General Fund will have a one-time Transfer Out expenditure in the amount of $500,000.

2. The CRA will have a one-time receipt Transfer In Revenue in the amount of $500,000.

3. The CRA will have a one-time payment of the loan made to the Electric Fund in the amount of $500,000.

4. The Electric Fund will receive the one-time payment eliminating the debt.

5. Budget Amendment

**General Fund:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Account #</th>
<th>DR.</th>
<th>CR.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimate Carryover</td>
<td>001-0000-399-00-00</td>
<td>$500,000</td>
<td></td>
</tr>
<tr>
<td>Transfers Out to CRA</td>
<td>001-5123-591-17-00</td>
<td></td>
<td>$500,000</td>
</tr>
</tbody>
</table>

**CRA:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Account #</th>
<th>DR.</th>
<th>CR.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfers In From General Fund</td>
<td>117-0000-381-17-00</td>
<td>$500,000</td>
<td></td>
</tr>
<tr>
<td>Estimated Carryover</td>
<td>117-0000-399-00-00</td>
<td></td>
<td>$500,000</td>
</tr>
</tbody>
</table>

6. Payment of Loan:

**CRA:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Account #</th>
<th>DR.</th>
<th>CR.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advance From Electric Fund</td>
<td>117-0000-236-90-21</td>
<td>$500,000</td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>117-0000-101-00-00</td>
<td></td>
<td>$500,000</td>
</tr>
</tbody>
</table>

**Electric Fund:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Account #</th>
<th>DR.</th>
<th>CR.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>410-0000-101-00-00</td>
<td>$500,000</td>
<td></td>
</tr>
<tr>
<td>Advance to CRA Fund</td>
<td>410-0000-132-90-04</td>
<td></td>
<td>$500,000</td>
</tr>
</tbody>
</table>
Other Considerations:

1. Listed below is the fund balance target calculations.

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiscal Year 2014-15 Ending Fund Balance</td>
<td>$4,437,623</td>
</tr>
<tr>
<td>Maximum 20% Target (Current Year Budget: $12,666,800 x 205)</td>
<td>($2,533,360)</td>
</tr>
<tr>
<td>Target Surplus</td>
<td>$1,904,263</td>
</tr>
<tr>
<td>Less: CRA Loan Forgiveness</td>
<td>($ 500,000)</td>
</tr>
<tr>
<td>Surplus After Loan Forgiveness</td>
<td>$1,404,263</td>
</tr>
</tbody>
</table>

* General Fund Loan to Impact Fee Funds - $1,980,000

Compliance with City Policies and Procedures:

This will comply with GASB as well as City Policy and Procedures.

The City reserve policy is a minimum of 10% and a maximum of 20% for the General Fund. Since the policy was established in 2006 prior to the economic down turn, we may want to revise the policy to a minimum of 25% (3 months) and a maximum of 40% (almost 5 months). This will allow for the use of reserves to weather future economic declines and still maintain the appropriate level of service.

It is recommended that funds that exceed the maximum reserve policy should be allocated for one item expenditures such as reducing debt or for a capital project. Other potential uses would be any requirement to cover the Health Self-Insurance Funds in the event of unexpected medical cost.

References/Support:

Resolution 2016-11 Budget Amendment Eliminate Internal Debt to Electric Fund
CRA 9-30-15 Revenue & Expenditure
RESOLUTION NO. 2016-11

A RESOLUTION OF THE CITY OF MOUNT DORA, FLORIDA, PERTAINING TO AMENDING THE BUDGET FOR THE FISCAL YEAR 2015-16, PROVIDING FOR THE ANNUAL APPROPRIATIONS; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the City of Mount Dora has adopted the 2015-16 Budget; and

WHEREAS, the City of Mount Dora has determined that the 2015-16 Budget estimates of revenues and expenditures requires an amendment based upon staff recommendations.

NOW, THEREFORE, BE IT RESOLVED by the City Council of Mount Dora, that:

SECTION 1. The 2015-16 budget is amended to repayment of an advance in the amount of $500,000 from the Electric Fund to the Community Redevelopment Fund as described in the attached cover memorandum and made a part hereof of both budgets.

SECTION 2. The expenditures contained in this amendment to the 2015-16 Budget are hereby appropriated to be expended in accordance to the City’s Purchasing Policies and Procedures.

SECTION 3. This resolution shall take effect immediately upon passage and adoption by the City Council.

PASSED AND RESOLVED this 1st day of March, 2016, by the City Council of the City of Mount Dora.

CITY OF MOUNT DORA, FLORIDA

By: ____________________________
    Nick Girone, Mayor

ATTEST: _________________________
    Approved as to form:

By: ____________________________
    Clifford Shepard
    City Attorney

Gwen Keough-Johns, City Clerk
## CITY OF MOUNT DORA, FLORIDA
### SCHEDULE OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCE
#### BUDGET AND ACTUAL
##### MAJOR FUND - COMMUNITY REDEVELOPMENT AGENCY
###### (INCREMENTAL TAX DISTRICT)
##### FOR THE YEAR ENDED SEPTEMBER 30, 2015

<table>
<thead>
<tr>
<th></th>
<th>Original Budget</th>
<th>Final Budget</th>
<th>Actual</th>
<th>Variance With Final Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxes</td>
<td>$ 427,300</td>
<td>$ 427,300</td>
<td>$426,127</td>
<td>$ (1,173)</td>
</tr>
<tr>
<td>Intergovernmental</td>
<td>381,600</td>
<td>381,600</td>
<td>432,815</td>
<td>51,215</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>50</td>
<td>50</td>
<td>12,293</td>
<td>12,243</td>
</tr>
<tr>
<td><strong>Total Revenues</strong></td>
<td>808,950</td>
<td>808,950</td>
<td>871,235</td>
<td>62,285</td>
</tr>
</tbody>
</table>

| **Expenditures**   |                 |              |        |                             |
|--------------------|                 |              |        |                             |
| **General Government:** |               |              |        |                             |
| Personal Services  | 213,350         | 213,350      | 200,087 | 13,263                     |
| Operating Expenses | 165,300         | 165,300      | 155,678 | 9,622                      |
| Grants and Aid     | 170,000         | 233,000      | 199,821 | 33,179                     |
| Capital Outlay     | -               | -            | -       | -                          |
| **Total General Government** | (548,650) | (611,650)    | (555,586) | 56,064                    |

| **Transportation** |                 |              |        |                             |
|--------------------|                 |              |        |                             |
| Operating Expenses | -               | -            | 27,209  | (27,209)                   |
| Capital Outlay     | 910,000         | 757,930      | 695,257 | 62,673                     |
| **Total Transportation** | (910,000) | (757,930)    | (722,466) | 35,464                    |

| **Debt Service**   |                 |              |        |                             |
|--------------------|                 |              |        |                             |
| Principal          | 147,000         | 147,000      | 147,000 | -                          |
| Interest           | 50,500          | 50,500       | 50,767  | (267)                      |
| **Total Debt Service** | (197,500) | (197,500)    | (197,767) | (267)                     |

| **Total Expenditures** |                 |              |        |                             |
|------------------------|                 |              |        |                             |
|                        | (1,656,150)     | (1,567,080)  | (1,475,819) | 91,261                    |

| **Net Change in Fund Balance** |                 |              |        |                             |
|-------------------------------|                 |              |        |                             |
|                                | (847,200)       | (758,130)    | (604,584) | 153,546                    |

| **Fund Balance, Beginning of Year** |                 |              |        |                             |
|------------------------------------|                 |              |        |                             |
|                                    | -               | 320,930      | 211,421 | (109,509)                  |

| **Fund Balance, End of Year**      |                 |              |        |                             |
|------------------------------------|                 |              |        |                             |
| $ (847,200)                        | $ (437,200)     | $ (393,163)  | $ 44,037 |                            |

City Council Agenda Packet - March 1, 2016

Page 76 of 163
DATE: March 1, 2016

TO: Mayor and City Council

FROM: Johnna Shamblin, IT Manager

VIA: Mike Sheppard, Finance Director
Vincent Pastue, City Manager

SUBJECT: Change Order for Wireless Upgrade

**Recommendation:** Staff recommends Council approval to “change order for the purchase wireless equipment upgrade for water/wastewater plant connectivity”. This upgrade is necessitated by faulty equipment.

**References:** Invitation to Quote (ITQ)

**Background/Information:**

The current wireless equipment remains unstable resulting in intermittent and frequent loss of connectivity between the Water Plant 2 and Wastewater Plant 2 – East locations. Network connectivity is required to maintain Scada management and monitoring for utility systems in addition to staff’s computer network and telephone usage. The resulting downtime caused by the equipment is hindering staff’s ability to monitor systems and access network resources in an effective manner.

Quotes for our original solution were formally solicited by John Bruce, Purchasing Manager and two quotes were received.

<table>
<thead>
<tr>
<th>Company</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCIS, Inc.</td>
<td>$13,012</td>
</tr>
<tr>
<td>Quality Tower</td>
<td>$21,600</td>
</tr>
</tbody>
</table>

The low bidder was MCIS, Inc. When they were awarded the contract they said that they would be happy to sell the equipment as presented, however, they did suggest that an engineering survey be performed to insure that the proper equipment was installed based on current information as well as of the line of site data. The current equipment is designed to provide high reliability now with the ability to upgrade as things change regarding bandwidth requirements. We will now have our own dedicated licensed frequency. This will provide reliability since no other organization can use the same frequency, which means no interference between the two plants.
Based on the new information staff has made an appropriate change order and total Cost including the survey is $29,462.

**Budgetary Impact:**

The FY 2015-16 Budget has a budget of $29,500 which is sufficient to cover the cost for wireless communication between Water Plant 2 and Wastewater Plant 2.

**Attachments:**

MCIA Wireless Study and Recommendation
ITQ 16-5160-001 Upgrade Microwave Point to Point
February 16, 2016

Johnna Shamblin
IT Manager
City of Mt. Dora
P.O. Box 176
Mt. Dora, FL 32756

Subject: Change in Radios for the Water Treatment Plant to Waste Water East Link Upgrade

Dear Mrs. Shamblin:

As background, MCIS was awarded the bid to replace the existing 2.4 GHz link with a Ubiquity 24 GHz link. Due to the unknown nature of the existing radios’ intermittent failures and the high frequency being requested, MCIS recommended assessing the existing link and verifying that the 24 GHz link specified would provide the anticipated reliability and throughput. When performing installation only type work (as opposed to design/builds), MCIS always tries to verify existing engineering (if available) or perform it to prevent our clients from potentially spending funds on a solution that does not meet expectations.

It was determined that there are no obstructions causing diffraction losses, which reduce reliability and can cause intermittent radio failures. Interference can also cause similar failures, however a spectral analysis was not performed to determine interference levels since there was no intent to use that frequency band regardless of the results of the microwave engineering.

When performing the reliability calculations using the 24 GHz frequencies and the Ubiquity radios, we found the at the lowest order modulation (lowest throughput and highest reliability) the radio still did not meet the industry standard of 99.999% reliability. This is the carrier class reliability similar to fiber reliability that any wireless (microwave) communication network should obtain (mission critical military projects we’ve design typically require 99.9999%). At the lowest order modulation that only achieves 31.7 Mbps the 24 GHz solution could only provide 99.9976% reliability. At the highest order modulation it would not work at all, and at the expected throughput of 1 Gbps, the reliability drops to 99.736% (roughly 250 times worse than the industry standard). It is likely that the existing 2.4 GHz solution was more reliable and had more throughput when the radios were operating properly.

It’s very important to design systems to run with the industry standard reliability at the modulation and throughput you want. If this is done, it doesn't matter what applications you want to run or may run in the future because you'll have guaranteed bandwidth. If there was no video, voice or anything but data, you might be able to live with lower reliabilities at the high modulations because the radio will drop modulations as needed to keep the link up. It can then simply resend lost packets. Even in these cases however, the lowest order modulation should provide the industry standard reliability. If there is streaming video (or voice) you need guaranteed bandwidth.

Once it was determined that the specified radio and frequency band would not provide the expected performance, MCIS began exploring alternatives. The primary reason the reliability was so poor at 24 GHz is due to the severe power restrictions the FCC imposes on that band. In the licensed bands, there are no restrictions on power, but the frequencies must be coordinated with other users of that band within a certain

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radius (e.g. 50 miles) of the radios in order to guarantee the new link will not interfere with any existing links. The optimum frequency for a link of this distance is the licensed 18 GHz band. Using the standard Class A antennas (2’ dishes), high reliability can be obtained at a high data rate. At lower frequencies larger antennas are required by FCC rules, which increase tower loading, installation time and complexity. Thus, utilizing the highest frequency possible is the best practice.

Using the Exalt ExtremeAir in the 18 GHz band allowed for 1 Gbps data rates with 99.9983% reliability. We do not believe it is worth adding cost by increasing the size of one of the antennas to make up the very small difference between the reliability obtained and the 99.999% standard. The difference amounts to less than 2 minutes per year of additional “down” time and in reality the link will not go down but simply switch from a 1 Gbps data rate to a lower data rate (i.e. 965 Mbps which has a reliability of 99.99%). The lowest order modulation will allow for a data rate of 258 Mbps with a reliability of 99.99998%, which implies that the link will affectively never drop.

We have attached one CONTRACTOR CHANGE ORDER REQUEST form with project information. The change order includes the cost difference between the original radios and the new radios, the cost of the frequency coordination for the 10 year FCC license, and the cost of the antennas required (the Ubiquity radios do not require external antennas). Details of the RF analyses performed are also included as Attachment A - Propagation Analyses.

Please feel free to call if you have any questions or require additional information.

Sincerely,

Rue S Hestand IV, MSEE
President & COO
MCIS, Inc.
CONTRACTOR CHANGE ORDER REQUEST

Purchase Order No. 16-50518  Date February 16, 2016

Owner City Of Mount Dora

Project Description Upgrade of existing 2.4 GHz link

Contractor MCIS, Inc.

6550 New Tampa Hwy., Suite B Lakeland, FL 33815

Change Order Requested:

1. Additional cost Exalt ExtremeAir radios, FCC frequency coordination, and 2 antennas.

Reason for Change Order:

1. Specified radio at 24 GHz will not provide sufficient bandwidth or reliability.

CONTRACT AMOUNT of the Materials for the Assessment, Recommendations and Repairs:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Contract Amount</td>
<td>$13,950.00</td>
</tr>
<tr>
<td>Change Order Increase</td>
<td>$13,012.00</td>
</tr>
<tr>
<td>Revised Contract Amount</td>
<td>$26,962.00</td>
</tr>
</tbody>
</table>

This document shall become an amendment to the Contract and all stipulations and covenants of the Contract shall apply hereto.

MCIS, Inc. (Contractor)  Date 2/17/16

City of Mt. Dora (Owner)  Date
Attachment A – Propagation Analyses

The intent of this section is to provide a detailed overview of the propagation analyses performed for the upgrade to the Water Treatment Plant to Waste Water East link. This upgrade was originally specified to be a 24 GHz Ubiquity link. Due to the unknown nature of the existing radios’ intermittent failures and the high frequency being requested, MCIS recommended accessing the existing link and verifying that the 24 GHz link that was specified would provide the anticipated reliability and throughput. Thus, two propagation studies will be shown; one using the 24 GHz Ubiquity radio and one using the 18 GHz Exalt ExtremeAir.

MCIS has performed the appropriate engineering to design a high performance system and has evaluated link performance based on the analyses contained in this section. The propagation analyses graphically depict the proposed systems’ reliability in reference to locations, climate, terrain, obstructions, etc. that are associated with each link.

The first diagram, the Network Configuration Map, shows the significant sites as represented on a topographical map. We typically provide the atmospheric refractivity gradients of a similar and/or nearby regions if any of the links are at least 3 miles in length. Since this link is only 1.6 miles this has not been included.

The individual link analyses include the Specular Reflection Profile View, Reflection Model(s), a Multipath Model, Profile View(s), a Diffraction Report (as necessary) and Reliability Report. NOTE: Because the 24 GHz solution does not provide sufficient throughput or reliability only the Specular Reflection Profile View (without obstructions since it will be shown in the 18 GHz analyses that there are no obstructions that impact the path) and the Reliability Reports showing the poor performance using this frequency band.

Trees and structures (e.g. buildings) are shown on the terrain pictures to represent the obstructions along the paths. Additionally, links are analyzed for three (3) climatic extremes: sub-refraction, super-refraction, and standard atmospheric conditions. The K factors associated with those conditions depend on the location and refractivity gradient data utilized. For links under three (3) miles, the climatic extremes do not vary the propagation significantly. Thus, only the standard atmospheric factor (K = 1.4) profile and report will be shown.

The Profile View provides three separate views. The first is an overall representation of the terrain over which the wireless system will propagate. The second and third views represent the terrain with the optical line of sight and the radio line of sight (first order Fresnel zone), as described below:

Optical Line-of-Sight
The optical line of sight represents the shortest distance between the two antennas (i.e. a straight line).

Radio Line-of-Sight (First Order Fresnel Zone)
Radio line-of-sight is defined as 60% of the first order Fresnel zone. This is the minimum area that must be unobstructed to prevent signal degradation due to diffraction.

Where diffraction occurs due to clipping the first order Fresnel zone with trees or other obstructions, a diffraction report follows. The Reliability Report has been provided as a tabular summary to identify the wireless link reliability based on terrain, climate, effective receiver sensitivity, transmit power, frequency, antenna gain, cable other RF losses, multipath degradation, miss-pointing allocation caused by wind loading and installation limitations, atmospheric loss, rain loss for that region, and other modeling assumptions.
RF Analyses Assumptions:

It must be understood that science does not clearly define or have data for atmospheric refractivity gradients over paths. Refractivity gradient data at a single point is available for a number of locations and those applicable have been included in this report. This data comes from "Refractivity Gradients in the Northern Hemisphere" by CA Samson and was obtained from the NTIS (National Technical Information Services). As discussed in the publication, there are several issues associated with the method used to collect the data. The most critical issue is that the measurements are of single points in space whereas the microwave link is a path crossing an infinite number of points. “The atmospheric layers near the surface are greatly influenced by terrain features, ground moisture sources, and vegetation; thus, on most long overland paths, low-level refractivity gradients can be expected to vary by appreciable amounts over distances on the order of a few kilometers. The net result of this variation in space should be to produce less extreme effective path gradients …” Even for paths completely over water, depth changes, temperature changes in the water and air, distance from land, other variables changing along the path would be expected to produce less extreme gradients, although not to the same level. Other research has yielded similar results stating that the most probable cause of very high or low K values existing across an entire path is much less likely than the meteorological data found from measurements of single points. The explanation is believed to be that the unusual conditions causing the extreme values are unlikely to occur over more than a small part of the path at any given instant. It should also be noted that it is unlikely that in the two measurements taken each day, the extremes for the day at that point occurred at the exact time of the measurement. However, over the course of the path it is still believed that extremely high or low refractivity gradients will be very unusual.

It is currently impossible for science to predict for any microwave path what the probability of extreme gradients occurring will actually be. The two closest weather stations with refractivity gradient data are Tampa and Cocoa Beach. Based on what is known and the refractivity gradient data from Cocoa Beach and Tampa, the following assumptions would be made for links over 3 miles. For the extreme sub-refractive conditions the worst case modeled would be K = 0.7. The highest gradient in Tampa was K = 0.7. The highest gradient in Cocoa was 275 N-Units/KM, which corresponds to roughly K = 0.3. However, this is extremely rare and was only measured in November. Further in-land such low K factors are even more rare and would be modulated by the path length as described above. Thus, K = 0.7 over the entire path is expected to be conservative. For the extreme super-refractive conditions the worst case modeled is K = -1.0. Although Cocoa and Tampa again had an even more extreme worst case super-refractive K factor, this is very unlikely to occur over the length of a path. Thus, the K = -1.0 is also expected to be conservative. If other K factors were used in any of the analyses, it will be disclosed on the analysis sheet along with the reason for the variation.

In some cases the heights of the antennas and/or the heights of structures causing potential diffraction losses may be modeled at different heights than are found in other sections of this report. This is to account for potential measurement errors and other uncertainties and leads to very conservative diffraction analyses. The “Knife-Edge” diffraction model is used on the two largest diffraction contributors. This is a very conservative diffraction model which historically has been experimentally shown to yield larger loss numbers than field testing. This also adds to the surety that reliabilities predicted by the analyses herein are equal to or lower than the reliabilities that will actually be seen if the system is installed according to the recommendation found within this report.

The reliability analyses use the Crane 96 model for rain and the digital Vigants-Barnett for the reliability calculations. These are conservative models that have been used by the US military to design highly reliable microwave communication systems for years. The Crane 96 model is an updated rain model that takes into consideration the cloud density, water droplet size, storm intensity, duration and other variables that impact microwave communication for the region specified. The Vigants-Barnett Digital Reliability Method takes into consideration the propagation environment (e.g. difficult conditions such as gulf coastal areas, flat terrain, and hot and humid weather; or good conditions such as dry, mountainous regions). It also
models the Rayleigh probability distribution of multipath fading. Specular reflection fading is calculated manually in the reflection analyses and potential losses associated with this type of fading are added to the miscellaneous loss of the reliability model. Notes associated with additional losses being modeled can be found in the appropriate section (e.g. in the reflection analyses or the reliability analyses). In general, the reliability is expected to be equal to or greater than that predicted by these models.

Analyses are all performed under “Standard Conditions.” These conditions can be client-defined but are typically 50 mph winds and heavy rains (tropical storm type conditions). Thus, under clear day conditions the reliability will be significantly better than the reliability reported in this section.

Link budget considerations typically include cable and connector loss, diffraction loss, fades due to specular reflections where the main and reflected signal add vectorially to produce signal nulls, antenna gain and radiation pattern, radio effective receiver sensitivity at assumed modulation rate, radio transmit power at assumed modulation rate, angular deflection of the antennas produced by wind loading under “standard” conditions, misalignment budget, and other losses typical of microwave communication systems.

All other analyses in this section are particular to (and organized by) individual links. The table below summarizes the pertinent information pertaining to each analysis, such as reliability, distance, and throughput. It clearly shows the vastly superior performance using the 18 GHz band. The reported reliability is based on a selected set of assumptions and, for this project, true propagation reliability is expected to be somewhat better than that reported. This is primarily because loss is modeled in the system to account for angular deflection during high wind loads, mis-alignment allocation, multipath, and other losses that are not present most of the time.

The throughput column shows the full duplex throughput that will be available at the Ethernet Layer 2 level and is also related to the modulation the radios will utilize. Lower throughput numbers improve reliability and make the radios less susceptible to atmospheric conditions. The link using each radio is shown using the highest order modulation (most throughput) and the lowest order modulation (most reliable). Because the radios support Adaptive Modulation, the radio will actually run at the highest throughput 99.994% of the time and go to lower throughputs automatically the rest of the time. The true average throughput will thus be only slightly lower than the highest throughput sited.

<table>
<thead>
<tr>
<th>Radio Type</th>
<th>Originating Location</th>
<th>Terminating Location</th>
<th>Distance (mi)</th>
<th>Link Reliability</th>
<th>Throughput (Mbps)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ubiquity 24 GHz – High Modulation</td>
<td>Water Treatment Plant</td>
<td>Waste Water East</td>
<td>1.6</td>
<td>99.912%</td>
<td>1 Gbps</td>
</tr>
<tr>
<td>Ubiquity 24 GHz – Low Modulation</td>
<td>Water Treatment Plant</td>
<td>Waste Water East</td>
<td>1.6</td>
<td>99.9957%</td>
<td>31.7 Mbps</td>
</tr>
<tr>
<td>Exalt 18 GHz – High Modulation</td>
<td>Water Treatment Plant</td>
<td>Waste Water East</td>
<td>1.6</td>
<td>99.9983%</td>
<td>1 Gbps</td>
</tr>
<tr>
<td>Exalt 18 GHz – Low Modulation</td>
<td>Water Treatment Plant</td>
<td>Waste Water East</td>
<td>1.6</td>
<td>99.99998%</td>
<td>115 Mbps</td>
</tr>
</tbody>
</table>

* Full Duplex Ethernet Layer 2 Throughput (Aggregate Throughput is Double)
Network Configuration Map
This analysis shows the specular reflection region is in a very flat region. The reflection point shown was calculated at K=1.4 (standard atmospheric conditions) and is also clearly in a flat region. However, the trees and buildings in the path will break up multipath.
REFLECTION MODEL
(Sub, Standard, Super Atmospheric Conditions Over Height Variation at the Water Treatment Plant)

This shows the range of variation with respect to height of the antenna at the Water Treatment Plant. This analysis brackets the impact of measurement variation associated with the elevation difference between the two sites and the reflection point. There are a number of trees and terrain obstructions to help reduce the impact of the multipath. However, due to the high frequency, tight antenna radiation patterns and good terrain variation, there will be no multipath.
REFLECTION MODEL
(Sub-refractive, Standard Atmospheric & Super-Refractive Conditions Over Varying Frequency)

This shows the variation across the entire 18 GHz band. There is no variation because the path is so short and because there is no multipath as shown on the previous analysis.
This shows that there is no diffraction loss and significant room for additional tree growth. There is 20’ of clearance over the closest measured tree to the Fresnel zone. Because the link is less than 3 miles, changing atmospheric conditions do not affect the electromagnetic propagation and thus only the standard atmospheric conditions (K=1.4) are shown.
# RELIABILITY REPORT at

Standard Atmospheric Conditions (K=1.4)
256 QAM (Maximum Modulation) – 986 Mbps

<table>
<thead>
<tr>
<th></th>
<th>Water Treatment Plant</th>
<th>Waste Water East</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latitude</td>
<td>28 48 36.35 N</td>
<td>28 47 39.00 N</td>
</tr>
<tr>
<td>Longitude</td>
<td>081 36 20.04 W</td>
<td>081 37 27.80 W</td>
</tr>
<tr>
<td>True azimuth (°)</td>
<td>226.15</td>
<td>46.14</td>
</tr>
<tr>
<td>Vertical angle (°)</td>
<td>-0.40</td>
<td>0.38</td>
</tr>
<tr>
<td>Elevation (ft)</td>
<td>164.04</td>
<td>147.37</td>
</tr>
<tr>
<td>Antenna gain (dBi)</td>
<td>38.40</td>
<td>38.40</td>
</tr>
<tr>
<td>Antenna height (ft)</td>
<td>95.00</td>
<td>55.00</td>
</tr>
<tr>
<td>Miscellaneous loss (dB)</td>
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<td>0.30</td>
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<tr>
<td>Frequency (MHz)</td>
<td>18500.00</td>
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<tr>
<td>Polarization</td>
<td>Vertical</td>
<td></td>
</tr>
<tr>
<td>Path length (mi)</td>
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<tr>
<td>Free space loss (dB)</td>
<td>125.94</td>
<td></td>
</tr>
<tr>
<td>Atmospheric absorption loss (dB)</td>
<td>0.16</td>
<td></td>
</tr>
<tr>
<td>Net path loss (dB)</td>
<td>49.89</td>
<td>49.89</td>
</tr>
<tr>
<td>Radio model</td>
<td>Exalt ExtremeAir</td>
<td>Exalt ExtremeAir</td>
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<td>256 QAM-80 MHz</td>
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<td>EIRP (dBm)</td>
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<td>54.10</td>
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<tr>
<td>RX threshold level (dBm)</td>
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<tr>
<td>Receive signal (dBm)</td>
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<tr>
<td>Thermal fade margin (dB)</td>
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<td>27.11</td>
</tr>
<tr>
<td>Dispersive fade occurrence factor</td>
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<td></td>
</tr>
<tr>
<td>Effective fade margin (dB)</td>
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<td>27.11</td>
</tr>
<tr>
<td>Climatic factor</td>
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<tr>
<td>Terrain roughness (ft)</td>
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<td></td>
</tr>
<tr>
<td>C factor</td>
<td>6.31</td>
<td></td>
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<tr>
<td>Average annual temperature (°F)</td>
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<tr>
<td>Worst month multipath availability (%)</td>
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<td>99.99977</td>
</tr>
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<td>Worst month multipath unavailability (sec)</td>
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<td>Annual multipath unavailability (sec)</td>
<td>25.09</td>
<td>25.09</td>
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<tr>
<td></td>
<td>Water Treatment Plant</td>
<td>Waste Water East</td>
</tr>
<tr>
<td>---------------------------</td>
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</tr>
<tr>
<td>Annual 2 way multipath availability (%)</td>
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<td>Polarization</td>
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<tr>
<td>Rain region</td>
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<tr>
<td>Rain rate (mm/hr)</td>
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<td>Flat fade margin - rain (dB)</td>
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<td>Rain attenuation (dB)</td>
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<td>Annual rain + multipath unavailability (min)</td>
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Multipath fading method - Vigants - Barnett
Rain fading method - Crane

This shows the theoretical reliability is 99.998% with 0.8 dB of loss associated with losses that could occur during wind loading of antennas, miss-pointing budget, and other losses. This is the highest order modulation possible with this radio. Thus, 99.998% of the time it will provide a minimum of 986 Mbps (at Ethernet, 1000 Mbps over the air). The following analysis will show the reliability under the minimum throughput mode (QPSK), which provides 258 Mbps (319 Mbps over the air).
RELIABILITY REPORT at
Standard Atmospheric Conditions (K=1.4)
QPSK (Minimum Modulation) – 319 Mbps

<table>
<thead>
<tr>
<th></th>
<th>Water Treatment Plant</th>
<th>Waste Water East</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latitude</td>
<td>28 48 36.35 N</td>
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<td>Miscellaneous loss (dB)</td>
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<td>Polarization</td>
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<td>Path length (mi)</td>
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<td>Atmospheric absorption loss (dB)</td>
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<td>Net path loss (dB)</td>
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<td>49.89</td>
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<td>Dispersive fade occurrence factor</td>
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<td>Terrain roughness (ft)</td>
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<td>C factor</td>
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<td>Average annual temperature (°F)</td>
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<td>1.160E-003</td>
<td></td>
</tr>
<tr>
<td>Worst month multipath availability (%)</td>
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<td>Worst month multipath unavailability (sec)</td>
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<tr>
<td>Annual multipath unavailability (sec)</td>
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<td>Water Treatment Plant</td>
<td>Waste Water East</td>
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<tr>
<td>-----------------------</td>
<td>----------------------</td>
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</tr>
<tr>
<td>Annual 2 way multipath availability (%)</td>
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<td>Polarization</td>
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<tr>
<td>Rain region</td>
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<td>Rain rate (mm/hr)</td>
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<tr>
<td>Annual rain + multipath availability (%)</td>
<td>99.99998</td>
<td></td>
</tr>
<tr>
<td>Annual rain + multipath unavailability (min)</td>
<td>0.09</td>
<td></td>
</tr>
</tbody>
</table>

Multipath fading method - Vigants - Barnett  
Rain fading method - Crane

This shows the theoretical reliability is 99.99998% with 0.8 dB of loss associated with losses that could occur during wind loading of antennas, miss-pointing budget, and other losses. This is the lowest order modulation that the radio does and it will provide 319 Mbps of Ethernet layer 2 throughput. This very high reliability will insure the link will effectively never drop.
Water Treatment Plant – Waste Water East

PROFILE VIEW (24.0 GHz) at
Standard Atmospheric Conditions (K=1.4)

This analysis shows the specular reflection region is very similar to the 18 GHz specular reflection region. At 24 GHz the Fresnel zone is slightly smaller so the specular reflection region is also slightly smaller. It also shows the antenna to antenna propagation. The Fresnel zone shown there is also smaller than at 18 GHz.
RELIABILITY REPORT at
Standard Atmospheric Conditions (K=1.4)
256 QAM (2\textsuperscript{nd} Highest Modulation (highest is 1024 QAM)) – 1024 Mbps

<table>
<thead>
<tr>
<th>Water Treatment Plant</th>
<th>Waste Water East</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latitude</td>
<td>28 48 36.35 N</td>
</tr>
<tr>
<td>Longitude</td>
<td>081 36 20.04 W</td>
</tr>
<tr>
<td>True azimuth (°)</td>
<td>226.15</td>
</tr>
<tr>
<td>Vertical angle (°)</td>
<td>-0.40</td>
</tr>
<tr>
<td>Elevation (ft)</td>
<td>164.04</td>
</tr>
<tr>
<td>Antenna gain (dBi)</td>
<td>33.00</td>
</tr>
<tr>
<td>Antenna height (ft)</td>
<td>100.00</td>
</tr>
<tr>
<td>Miscellaneous loss (dB)</td>
<td>0.50</td>
</tr>
<tr>
<td>Antenna gain (dBi)</td>
<td>40.00</td>
</tr>
<tr>
<td>Antenna height (ft)</td>
<td>98.00</td>
</tr>
<tr>
<td>Miscellaneous loss (dB)</td>
<td>0.50</td>
</tr>
<tr>
<td>Frequency (MHz)</td>
<td>24000.00</td>
</tr>
<tr>
<td>Polarization</td>
<td>Vertical</td>
</tr>
<tr>
<td>Path length (mi)</td>
<td>1.58</td>
</tr>
<tr>
<td>Free space loss (dB)</td>
<td>128.20</td>
</tr>
<tr>
<td>Atmospheric absorption loss (dB)</td>
<td>0.43</td>
</tr>
<tr>
<td>Net path loss (dB)</td>
<td>56.63</td>
</tr>
<tr>
<td>TX power (dBm)</td>
<td>0.00</td>
</tr>
<tr>
<td>EIRP (dBm)</td>
<td>32.50</td>
</tr>
<tr>
<td>RX threshold level (dBm)</td>
<td>-64.00</td>
</tr>
<tr>
<td>Receive signal (dBm)</td>
<td>-56.63</td>
</tr>
<tr>
<td>Thermal fade margin (dB)</td>
<td>7.37</td>
</tr>
<tr>
<td>Dispersive fade occurrence factor</td>
<td>4.00</td>
</tr>
<tr>
<td>Effective fade margin (dB)</td>
<td>7.37</td>
</tr>
<tr>
<td>Climatic factor</td>
<td>2.50</td>
</tr>
<tr>
<td>Terrain roughness (ft)</td>
<td>23.87</td>
</tr>
<tr>
<td>C factor</td>
<td>6.54</td>
</tr>
<tr>
<td>Average annual temperature (°F)</td>
<td>70.46</td>
</tr>
<tr>
<td>Fade occurrence factor (Po)</td>
<td>1.558E-003</td>
</tr>
<tr>
<td>Worst month multipath availability (%)</td>
<td>99.97147</td>
</tr>
<tr>
<td>Worst month multipath unavailability (sec)</td>
<td>749.66</td>
</tr>
<tr>
<td></td>
<td>Water Treatment Plant</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Annual multipath availability (%)</td>
<td>99.98995</td>
</tr>
<tr>
<td>Annual multipath unavailability (sec)</td>
<td>3169.08</td>
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<tr>
<td>Annual 2 way multipath availability (%)</td>
<td>99.97990</td>
</tr>
<tr>
<td>Annual 2 way multipath unavailability (sec)</td>
<td>6338.17</td>
</tr>
</tbody>
</table>

- **Polarization**: Vertical
- **Rain region**: E-96 Sub Tropical Wet
- **Rain rate (mm/hr)**: 21.29
- **Flat fade margin - rain (dB)**: 7.37
- **Rain attenuation (dB)**: 7.40
- **Annual rain availability (%)**: 99.75578
- **Annual rain unavailability (min)**: 1283.62
- **Annual rain + multipath availability (%)**: 99.73568
- **Annual rain + multipath unavailability (min)**: 1389.25

Multipath fading method - Vigants - Barnett  
Rain fading method - Crane

This shows the theoretical reliability is 99.736%. This is roughly 250 times worse than the industry standard reliability, and it is not even the highest modulation. At the highest modulation there is not enough gain to even close the link, so this was not shown.
**RELIABILITY REPORT at**

Standard Atmospheric Conditions (K=1.4)

¼ Rate QPSK (Lowest Modulation) – 32 Mbps

<table>
<thead>
<tr>
<th>Water Treatment Plant</th>
<th>Waste Water East</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latitude</td>
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</tr>
<tr>
<td>Longitude</td>
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</tr>
<tr>
<td>Antenna height (ft)</td>
<td>100.00</td>
</tr>
<tr>
<td>Miscellaneous loss (dB)</td>
<td>0.50</td>
</tr>
<tr>
<td>Antenna gain (dBi)</td>
<td>40.00</td>
</tr>
<tr>
<td>Antenna height (ft)</td>
<td>98.00</td>
</tr>
<tr>
<td>Miscellaneous loss (dB)</td>
<td>0.50</td>
</tr>
<tr>
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<td>24000.00</td>
</tr>
<tr>
<td>Polarization</td>
<td>Vertical</td>
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<td>Thermal fade margin (dB)</td>
<td>34.37</td>
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<td>23.87</td>
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<td>C factor</td>
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</tr>
<tr>
<td>Average annual temperature (°F)</td>
<td>70.46</td>
</tr>
<tr>
<td>Fade occurrence factor (Po)</td>
<td>1.558E-003</td>
</tr>
<tr>
<td>Worst month multipath availability (%)</td>
<td>99.99994</td>
</tr>
<tr>
<td>Worst month multipath unavailability (sec)</td>
<td>1.50</td>
</tr>
<tr>
<td></td>
<td>Water Treatment Plant</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Annual multipath availability (%)</td>
<td>99.99998</td>
</tr>
<tr>
<td>Annual multipath unavailability (sec)</td>
<td>6.32</td>
</tr>
<tr>
<td>Annual 2 way multipath availability (%)</td>
<td>99.99996</td>
</tr>
<tr>
<td>Annual 2 way multipath unavailability (sec)</td>
<td>12.65</td>
</tr>
<tr>
<td>Polarization</td>
<td>Vertical</td>
</tr>
<tr>
<td>Rain region</td>
<td>E-96 Sub Tropical Wet</td>
</tr>
<tr>
<td>Rain rate (mm/hr)</td>
<td>138.40</td>
</tr>
<tr>
<td>Flat fade margin - rain (dB)</td>
<td>34.37</td>
</tr>
<tr>
<td>Rain attenuation (dB)</td>
<td>34.37</td>
</tr>
<tr>
<td>Annual rain availability (%)</td>
<td>99.99759</td>
</tr>
<tr>
<td>Annual rain unavailability (min)</td>
<td>12.64</td>
</tr>
<tr>
<td>Annual rain + multipath availability (%)</td>
<td>99.99755</td>
</tr>
<tr>
<td>Annual rain + multipath unavailability (min)</td>
<td>12.85</td>
</tr>
</tbody>
</table>

Multipath fading method - Vigants - Barnett
Rain fading method - Crane

This shows the theoretical reliability is 99.9976%. Thus even at the lowest order modulation that only obtains 32 Mbps, the radio is not even at the industry standard reliability.
City of Mount Dora – Upgrade Existing Wireless 2.4 GHz Microwave Point-To-Point Wireless System To A New 24 GHz System
#P6157118-01

Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 1</td>
<td>Invitation to Quote Form/Certification</td>
</tr>
<tr>
<td>Section 2</td>
<td>Addenda Acknowledgement</td>
</tr>
<tr>
<td>Section 3</td>
<td>Drug Free Workplace Certificate</td>
</tr>
<tr>
<td>Section 4</td>
<td>W-9</td>
</tr>
<tr>
<td>Section 5</td>
<td>Vendor Proposal</td>
</tr>
</tbody>
</table>
ITQ No. 16-5160-001

UPGRADE EXISTING 2.4 GHZ MICROWAVE POINT-TO-POINT WIRELESS SYSTEM TO A NEW 24 GHZ SYSTEM

ITQ Deadline: December 23, 2015 @ 2:00 PM (Local Time)
SECTION 4 – SUBMITTAL DOCUMENTS

Quote Submission Form/Certificate:

<table>
<thead>
<tr>
<th>Submit quote to:</th>
<th>City of Mount Dora Purchasing Division</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Attn: Mr. John A Bruce – CPPB, MBA, CPM</td>
</tr>
<tr>
<td></td>
<td>Purchasing &amp; Property Manager</td>
</tr>
<tr>
<td></td>
<td>1250 North Highland Street</td>
</tr>
<tr>
<td></td>
<td>Mount Dora, Florida 32757</td>
</tr>
</tbody>
</table>

DUE DATE: December 23, 2015    DUE TIME: 2:00 p.m. LOCAL TIME    QUOTE# 16-5160-001

QUOTE TITLE: UPGRADE EXISTING 2.4 GHZ MICROWAVE POINT-TO-POINT
WIRELESS SYSTEM TO A NEW 24 GHZ SYSTEM

<table>
<thead>
<tr>
<th>Vendor Name</th>
<th>MCIS, Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vendor Address</td>
<td>6550 New Tampa Hwy. Ste. B</td>
</tr>
<tr>
<td>City, State, Zip</td>
<td>Lakeland, FL. 33815</td>
</tr>
<tr>
<td>Phone Number</td>
<td>863-327-1095</td>
</tr>
<tr>
<td>Fax Number</td>
<td>863-327-1091</td>
</tr>
<tr>
<td>E-Mail Address</td>
<td><a href="mailto:info@mciszone.com">info@mciszone.com</a></td>
</tr>
<tr>
<td>Federal ID Number</td>
<td>59-3642262</td>
</tr>
</tbody>
</table>

"I, the undersigned, certify I have reviewed the addenda listed below (list all addenda received to date). I understand timely commencement may be considered in award of this Invitation to Quote (ITQ), and cancellation of award will be considered if commencement time is not met, and that untimely commencement may be cause for assessment of liquidated damages claims. I further certify the services will meet or exceed the ITQ requirements. I, the undersigned, declare I have carefully examined the ITQ, specifications, terms and conditions as applicable for this Request, and I am thoroughly familiar with all provisions and the quality and type of coverage and services specified. I further declare I have not divulged, discussed or compared this ITQ with any other Offeror and have not colluded with any Offerors or parties to an ITQ whatsoever for any fraudulent purpose."

<table>
<thead>
<tr>
<th>ADDENDUM #1</th>
<th>ADDENDUM #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADDENDUM #3</td>
<td>ADDENDUM #4</td>
</tr>
</tbody>
</table>
DESCRIPTION:

The Pricing below is firm and in effect for sixty (60) days following the Quote Opening. I hereby make my offer as follows:

**PLEASE INCLUDE THE LINE BY LINE BREAKDOWN COSTS ON YOUR PROPOSAL/QUOTE AT THE END OF THIS DOCUMENT**

| TOTAL COST   | $ 13,950.00 |

**THE TOTAL AMOUNT LISTED ABOVE MUST MATCH THE TOTAL ON THE VENDOR'S PROPOSAL**

PAYMENT TERMS:

If payment terms are not indicated, terms of NET 30 DAYS shall be applied by the City. Payment terms to apply after receipt of invoice or final acceptance of the product/service, whichever is later. Payment terms offering less than 20 days for payment will not be considered. However the City has implemented a Visa credit card program. As a card-accepting vendor, some of the benefits of the program are: payment received within 72 hours of receipt and acceptance of goods, reduced paperwork, issue receipts instead of generating invoices, resulting in fewer invoice problems, deal directly with the cardholder (in most cases). Vendors accepting payment by the City’s p-card (Visa) may not require the City (Cardholder) to pay a separate or additional convenience fee, surcharge or any part of any contemporaneous finance charge in connection with a Transaction. Such charges are allowable, however must be included in the total cost of the quote/bid.

Indicate whether you will accept Visa credit card payment(s) for award of this contract: YES ___ NO ___ X ___

I certify this quote is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a quote ITQ for the same material, supplies, equipment or services, and is in all respects fair and without collusion or fraud. I agree to abide by all conditions of this ITQ and certify I am authorized to sign this response and that the offer is in compliance with all requirements of the ITQ, including but not limited to, certification requirements. In conducting offers with an agency for The City of Mount Dora, respondent agrees if this quote is accepted, the respondent will convey, sell, assign, or transfer to the City of Mount Dora all rights, title and interest in and to all causes of action it may now or hereafter acquire under the anti-trust laws of the United States and the City of Mount Dora for price fixing relating to the particular commodities or services purchased or acquired by the City. At the City’s discretion, such assignment shall be made and become effective at the time the purchasing agency renders final payment to the respondent. Additionally, I, the undersigned, agree if I am awarded a contract as a result of this solicitation and my response to it, contracts will be required to be notarized and executed and all applicable bonds recorded, within fourteen (14) calendar days from the date of the Notice of Award. If bonds are not available from the bonding agency when contracts are returned, a letter from the bonding agent must be attached stating that they are in the process of preparing bonds.
BY SIGNING THIS, ALL GENERAL CONDITIONS INCLUDED WITH THIS SOLICITATION ARE ACKNOWLEDGED

[Signature]

AUTHORIZED SIGNATURE

Paul Kerby
AUTHORIZED PRINTED NAME

Vice President - Operations
TITLE OF PERSON SIGNING

12/21/2015
DATE OF SIGNATURE

MCIS, Inc.
COMPANY NAME

**THIS FORM MUST BE COMPLETED AND RETURNED WITH YOUR SUBMITTAL**
DRUG FREE WORKPLACE CERTIFICATE

I, the undersigned, in accordance with Florida Statute 287.087, hereby certify that my firm publishes a written statement notifying that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the Workplace named above, and specifying actions that will be taken against violations of such prohibition.

- Informs employees about the dangers of drug abuse in the workplace, the firm’s policy of maintaining a drug free working environment, and available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug use violations.
- Gives each employee engaged in providing commodities or contractual services that are under quote or proposal, a copy of the statement specified above.
- Notifies the employees that as a condition of working on the commodities or contractual services that are under quote or proposal, the employee will abide by the terms of the statement and will notify the employer of any conviction or pleas of guilty or nolo contendere to, any violation of Chapter 893, or of any controlled substance law of the State of Florida or the United States, for a violation occurring in the workplace, no later than five (5) days after such conviction, and requires employees to sign copies of such written (*) statement to acknowledge their receipt.
- Imposes a sanction on, or requires the satisfactory participation in, a drug abuse assistance or rehabilitation program, if such is available in the employee’s community, by any employee who is so convicted.
- Makes a good faith effort to continue to maintain a drug free workplace through the implementation of the Drug Free Workplace program.
- "As a person authorized to sign this statement, I certify that the above named business, firm or corporation complies fully with the requirements set forth herein".

Authorized Signature

Paul Kerby

Authorized Printed Name

MCIS, Inc.          [20/1/2015]

Company Name          Date Signed

State of: Florida

County of: Palm

Sworn to and subscribed before me this 1st day of December, 2015

Personally known or Produced Identification (ID TYPE)

Signature of Notary

My Commission expires: 01/9/2019

**THIS FORM MUST BE COMPLETED AND RETURNED WITH YOUR SUBMITTAL**
## Request for Taxpayer Identification Number and Certification

1. **Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.**
   
   **MCIS, Inc.**

2. **Business name/disregarded entity name, if different from above**
   
   **City of Mount Dora Purchasing Division**

3. **Check appropriate box for federal tax classification; check only one of the following seven boxes:**
   
   - [ ] Individual/sole proprietor
   - [ ] Corporation
   - [ ] Single-member LLC
   - [ ] Trust/estate
   - [ ] Limited liability company
   - [ ] Limited partnership
   - [ ] General partner

4. **Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):**
   
   - [ ] Exempt payee code (if any)
   - [ ] Exemption from FATCA reporting code (if any)

5. **Address (number, street, and apt. or suite no.)**
   
   6550 New Tampa Highway, Ste. B
   
   **Lakeland, FL 33815**

6. **City, state, and ZIP code**
   
   **City of Mount Dora Purchasing Division**
   
   1250 N. Highland Street
   
   **Mt. Dora, FL 32757**

7. **List account number(s) here (optional):**

## Part I: Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see **How to get a TIN** on page 3.

**Note.** If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

### Social security number

<table>
<thead>
<tr>
<th>Social security number</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 9 - 3 6 4 2 2 6 2</td>
</tr>
</tbody>
</table>

### Employer identification number

<table>
<thead>
<tr>
<th>Employer identification number</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 7 2 3 4 5 6 7 8</td>
</tr>
</tbody>
</table>

## Part II: Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and

2. I am subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and

3. I am a U.S. citizen or other U.S. person (defined below); and

4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

**Sign Here**

<table>
<thead>
<tr>
<th>Signature of U.S. person</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Signature]</td>
</tr>
</tbody>
</table>

**Date:** 12/22/2015

## General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

**Future developments.** Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at [www.irs.gov/fw9](http://www.irs.gov/fw9).

### Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- [ ] Form 1099-INT (interest earned or paid)
- [ ] Form 1099-DIV (dividends, including those from stocks or mutual funds)
- [ ] Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- [ ] Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- [ ] Form 1099-S (proceeds from real estate transactions)
- [ ] Form 1099-X (merchant card and third party network transactions)
- [ ] Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- [ ] Form 1099-C (canceled debt)
- [ ] Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding? on page 2.

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),

2. Certify that you are not subject to backup withholding,

3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and

4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See What is FATCA reporting? on page 2 for further information.
City of Mount Dora – Upgrade Existing Wireless 2.4 GHz Microwave Point-To-Point Wireless System To A New 24 GHz System
#P6157118-01

Subsection 1: Company Background

Organization and Size

CORPORATE NAME: MCIS, Inc.

CORPORATE HEADQUARTERS: 6550 New Tampa Hwy., Suite B.
Lakeland, FL 33815

TOLL FREE NO.: (800) 727-4337

TELEPHONE: (863) 327-1095

FAX NO.: (863) 327-1091

E-MAIL: info@mciszone.com

EMPLOYEES: 18

ESTABLISHED: 4/20/2000

CEO: Paul D. Gates

PRESIDENT: Rue S. Hestand IV, M.S.E.E.

VP OPERATIONS – PM Paul Kerby (Primary Contact)
pkerby@mciszone.com
(863) 327-1095 ex. 203

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City Council Agenda Packet - March 1, 2016

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Firm History

Established in April 2000, MCIS, Inc. is a privately held microwave engineering corporation specializing in turn-key (design/build) deployments of microwave communications systems. MCIS is technology independent and has deployed and/or performed trouble-shooting for most manufacturers of wireless devices. In addition MCIS has designed, installed and commissioned over 1,000 microwave links with a 100% success rate, inclusive of: Point-to-Point, Point-to-MultiPoint, Mesh, Distributed Antenna Systems (DAS), Wireless Access Points (WAP), and wireless solutions for Supervisory Control and Data Acquisition (SCADA) systems. All links deployed performed equal to or better than predicted. Our team is comprised of Professional Engineers (RF – Electrical – Computer), CAD / Drafting services, and Network Specialists.

Rue Hestand and Paul Kerby are the Senior System Engineer and System Engineer respectively. Rue Hestand is the Principal-in-Charge and both employees are Project Managers that have managed large (over $500K) and small projects. More information on operations can be found in the Experience Section related to the Operational Plan. Tony Marincovich is another Senior Project Manager that is utilized with over 20 years of experience in Construction and Project Management and is a General Contractor. All resumes are included in Subsection 4: MANAGERIAL AND STAFF CAPABILITY.

MCIS is a robust team consisting of leadership personnel, RF Engineering, Professional Engineering, survey crew, and administrative support. All are educated, registered and/or certified in complimentary fields including, but not limited to Computer Engineering (Cp.E), Electrical Engineering (E.E/ M.S.E.E.), Professional Engineers (P.E., registered in various states), Computer Aided Design (CAD), and Computer Networking.

As of January 2015, there are 18 employed personnel supporting the efforts of MCIS. Below is a chart outlining MCIS’ operational structure.
MCIS is a Florida Corporation with business activities occurring nationally and internationally. MCIS has performed work in Canada, Mexico and the Caribbean as well as throughout the United States. The primary region of business activities is in the Midwest and eastern United States. MCIS is committed to excellence wherever our services are requested worldwide.

Our commitment to industry excellence and use of proper engineering principals is demonstrated in various white papers issued covering numerous subjects such as “The Importance of RF Engineering”, “Wireless LANs: A Comprehensive Approach to Design”, “Issues Impacting RF Connectivity”, and others.

Throughout its 15 years of business, MCIS has regularly been engaged in simultaneously managing multiple large scale projects in a cooperative role with contractors and subcontractors. Effective leadership, project management and scope definition lay the foundation for proper delivery of complex and integrated systems.
Areas of Specialty

MCIS has a proven fifteen year track record with a 100% success rate deploying robust and highly reliable microwave networks. Its 100% success rate is owed to an experienced staff of RF and professional engineers combined with sound engineering practices and an experienced installation team trained by engineers. Paired with a professional team of Project Managers, CAD drafters, Network Specialists, certified tower climbers and skilled installers, MCIS ensures the success of all its wireless systems. MCIS has extensive experience providing microwave backhaul of streaming video, VoIP, and other bandwidth and latency intensive and sensitive data. MCIS specializes in EMI (Electromagnetic Interference) and EMC (Electromagnetic Compatibility) analyses and making sure that all microwave systems are inter-operable. Our knowledge of digital communications (i.e. how Co-Channel to Interference Ratios at various modulations impact Bit Error Rates (BER) and thus performance) is critical to wireless deployments such as this one. Coupling that with our understanding of antenna radiation patterns, polarization and cross-polarization isolation, the radios effective receiver sensitivity over various modulations, throughput requirements, modulation requirements, and other RF parameters allows our team to deliver highly reliable microwave systems that can effectively backhaul data 100% of the time. Our team has provided reliable and cost effective solutions for many federal and local government entities and municipalities for many years.

Our expertise is in RF Link budgeting, RF propagation analysis, reflectivity analysis, co-location analysis, interference analysis, reliability calculations, security, voice & data, closed circuit television (CCTV), shared systems, narrow banding, development of system design, alternative system designs, estimates of construction & equipment costs, licensing, implementation, acceptance criteria, project coordination services, document preparation, bid / RFP evaluation and services during construction. Our core focus is on providing quality engineering, design, and implementation of integrated microwave systems for telephony, security, video, IP and data connectivity. Our RF experts have extensive experience in designing military and commercial microwave communication systems in both the licensed and unlicensed space and have a proven track record with integrating systems. We differentiate ourselves through our degreed and certified engineers, project management, and technical support staff. Our staff structure ensures proper development, execution, and management of services in all phases of wireless network communications.

Our special qualifications include Professional Engineering Licenses, Tower Safety International Certification, ComTrain Tower Climbing Safety & Rescue, Certified Business Energy Professionals, Certified Energy Managers, Proxim Certifications (WiFi Engineer, Silver, Gold, Platinum, Broad Band Engineer), Partnership Certifications, Transient Voltage and Surge Suppression training, and an on-staff Electrical Engineer with over 20 years of experience and a Master’s degree in Electrical Engineering specializing in Electromagnetics (RF Propagation) and Digital Communications.

Examples of many point-to-point, point-to-multipoint, and mesh network systems engineered, installed, and commissioned by MCIS can be found in Subsection 2: Technical Capability and Solution Approach/Compliance. These examples provide additional support of our Firm’s knowledge, expertise and qualifications. Other examples of similar scope can be provided upon request.
MCIS utilizes proper microwave test equipment inclusive of an HP 8595E spectrum analyzer, Rohde and Schwarz SMT06 RF signal generator, T-BERD model 209A/211 and XL Microwave model 2261 Analyzer-R Test Sets, along with RF power meters, couplers, and other RF equipment. This type of equipment and expertise provided by our Firm is required for proper engineering, bench testing, installation, commissioning, acceptance testing, and troubleshooting of RF systems. Link budgets and reliability modeling are performed using PathLoss Modeling software complemented by detailed terrain and climatologically data across the United States from the US Department of Commerce Office of Telecommunications (atmospheric refractivity gradient data).

As stated earlier, MCIS is fully equipped to perform all phases of wireless work, from professional engineering to technical installation, commissioning, and system integration. These combinations of trades add significant value to our Firm over “plug and play” type businesses. MCIS utilizes conservative design standards that enable our wireless systems to operate in some of the harshest climate conditions. This ensures our clients receive a highly reliable and robust wireless system with years of serviceability.

MCIS maintains accounts with local and national rental companies to acquire cranes, bucket trucks and aerial lifts, and is staffed with individuals who possess a valid Commercial Driver’s License to operate equipment/vehicles requiring the endorsement. Additionally, MCIS is capable of providing quick response times, typically within 24 hours, for troubleshooting and repairing wireless networks throughout the U.S.
City of Mount Dora – Upgrade Existing Wireless 2.4 GHz Microwave Point-To-Point Wireless System To A New 24 GHz System

#P6157118-01

Subsection 2: TECHNICAL CAPABILITY AND SOLUTION APPROACH

Scope of Work:

The City of Mount Dora (City) would like to procure services to upgrade the existing 2.4 GHz point-to-point wireless system to a 24 GHz wireless system. The wireless link provides connectivity between the City of Mount Dora Water Treatment Plant (WTP) located at 1600 Niles Rd., Mt. Dora, FL. and the City of Mount Dora Waste Water East facility (WWE) located at 1850 FL-46, Mt. Dora, FL. The existing wireless topology is comprised of two (2) radios with integrated panel antennas and mounting infrastructure consisting of a ~100’ AGH self-supporting tower located at WTP, and a ~60’ AGH concrete strain pole located at WWE. Each wireless device has a single Ethernet surge arrester and Power-over-Ethernet (PoE) injector. The current wireless system in place is inadequate for the intended purpose.

The new wireless system shall include two (2) unlicensed 24 GHz Ubiquiti airFiber 24HD wireless radios with integrated antennas, four (4) Ethernet surge protectors (one mounted at each radio and one mounted inside each building), armored CAT6 cable with RJ45 connectors, and grounding of radios and surge protectors.

MCIS will provide installation services for the physical antenna change out, and technical services for set up and calibration of the new wireless system. Surge protection will be installed per the manufacturer’s specification for each wireless device. A summary report, per MCIS’ reporting methods, shall be delivered to the City upon completion of installation and commissioning of the wireless link. The report shall provide bandwidth testing and results.

Approach

MCIS has extensive knowledge and experience delivering carrier-class wireless performance to transmit critical data for the Utilities sector of both private and public entities. Typical network topography within Utility operations consists of PC’s, CCTV cameras, VOIP phone systems, and SCADA systems. MCIS is very cognizant of the fact that true RF engineering is required to guarantee the performance of any RF system. In fact, our company was founded on this fundamental truth. Because a large part of our business is fixing microwave communication systems that were poorly engineered, we recognize the importance of performing detailed microwave analyses that are not typically performed by many providers.

In the case of this ITQ, no requirements for such engineering work have been indicated. Therefore, only installation and technical services to exchange equipment, set up, and calibrate the new wireless devices are provided with the quote.

In support of this project and by way of example, the following were considered representative of review topics.
MCIS recognizes that this project has several aspects that make it complex. Some aspects of complexity include:

1. Engineering basis: It cannot be emphasized enough that a properly engineered system is a requirement for projects like this. An important aspect of an engineered system, are detailed site and path surveys. This system will be utilizing the 24 GHz unlicensed frequency. Engineering for interferers and self-interference is foundational, especially as many public and private entities move towards utilizing higher unlicensed frequency devices. Additionally, it is very important to perform spectral analyses at each location, preferably with antennas similar to what will be utilized on the project. This facilitates proper frequency planning. Path surveys must be performed in order to understand the specular reflection region, which will allow better modeling in the reflectivity analyses, and they are critical to understanding height requirements and/or diffraction losses. These losses can be dramatically increased under sub-refractive atmospheric conditions. Since a single tree in the path can severely degrade the signal, it is critical that every potential obstruction be surveyed. Having the physical environment mapped allows proper engineering for deterministic reliability and performance.

2. High density in small geographical area that can lead to significant self-interference degradation and requires self-interference / isolation analyses;

3. Video data/VOIP requires highly reliable and robust signal propagation since packet retransmission and high latency are unacceptable

4. Reflective paths are expected since the link crosses road ways, which are very reflective. Multipath and reflectivity analyses are required.

5. Latency is critical due to the nature and requirements for video/VOIP traffic. Proper engineering will be a driver in this process.

6. System documentation supporting implementation and ongoing system support will be foundational to a performing and maintainable system over the long term.

7. Power quality and grounding will require special attention due to the nature of RF and network equipment.

In each of these areas, and many more, MCIS has demonstrated years of significant expertise and experience to ensure a fully functional and performing system. Nearly all of our past experience is on projects that have most or all of those complexities.

Typical “plug and play” devices and design practices can provide a low-cost wireless solution. However, without proper engineering, frequency, and equipment selection, these wireless systems are susceptible to interference, latency, and reliability issues. Furthermore, these systems are not considered a viable cost/benefit solution over the long term. As mentioned earlier, a large part of our business is fixing microwave communication systems that were poorly engineered or not engineered at all. A properly engineered system utilizing carrier-class equipment, operating in a FFC licensed frequency will deliver the most reliable wireless connectivity and perform as well as fiber.

**Frequency Selection**

Two options are available for consideration when designing a wireless system: Licensed and Unlicensed. The primary advantage of the licensed solution is the frequency coordination required by the FCC. If any future installations by 3rd parties were to interfere with the existing installations, they would be protected by law. The
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This terrain data shown above suggests that a link between these sites may be achievable with existing infrastructure. These types of diagrams form the basis of discussion when determining the feasibility of wireless links.

Complementing the terrain data is an aerial view of a wireless topography. Each site is identified and labeled, along with the wireless path between sites. This form of graphic provides the City with a top-down view of each site and path location.
III. **Site and Path Survey**

In support of the information anticipated for discussion, the example demonstrated below is representative of documentation supporting a typical site and path survey. This information is gathered from physically inspecting of each site and traversing each identified path considered viable. This detailed information improves terrain assessment and provides appropriate obstruction detail for engineering analysis. The following is representative of information provided from detailed site and path surveys:

**Example Location (Site Name)**

I. Coordinates: N 00° 0' 00.00", W 00° 00' 00.00"
II. Infrastructure Height: ~60’ AGH concrete monopole
III. Current Equipment: 900 MHz radio, 9 dB Omni antenna
IV. Conduit: No existing conduit
V. Power: 120 VAC, non GFI Outlet
VI. Sufficient mounting space for power supply and surge protector in communications rack.
VII. Lightning: No existing protection
VIII. Grounding: Ground grid present

Path/Link Survey Detail Example

**Site A to Site B**
The path is x.xx miles in distance and crosses varying terrain occupied by trees, roadways and single story buildings.

Potential obstacles:
1. Tree T1: ~65’ AGH, Located East of Pole Location at Site 1
2. Tree T2: ~82’ AGH, Located South of Pole Location at Site 1
3. Terrain Elevation TE1: ~400’ Peak A-S1-H, Located 2.04 miles from Site 1
5. Tree T4: ~69’ AGH, Located 2.36 miles from Site 1, peak is ~60’ from path
6. Tree T5: ~55’ AGH, located 2.6 miles from site, peak is ~10’ from path

RF Testing

In support of the information anticipated for discussion, the following is representative of interference data collected during field surveys using a spectrum analyzer. Data includes signal amplitude (strength), band and channel width (frequency), total channel power, date and time, GPS coordinates, site description and polarization.

Example Interference Data
IV. Propagation and RF Analysis

Propagation and RF analysis is the engineering to establish reliability and performance expectations. The intent of this section is to provide a detailed overview of the propagation analyses necessary to deliver a reliable and performing system. This link analyzed is a traditional point-to-point microwave engineering method. MCIS is an engineering firm with expertise in performing the appropriate engineering to design high performance systems via evaluation of link performance based on the analyses contained in, and not limited to, this section.

The propagation analyses graphically depicts the system’s reliability in reference to locations, climate, terrain, obstructions, etc. that are associated with each link.

The first diagram, the Network Configuration Map, shows the significant sites as represented on a topographical map. We typically provide the atmospheric refractivity gradients of a similar and/or nearby regions where any links is at least 3 miles in length. This has been included since this example link is 6.4 miles.

Individual link analyses include the Specular Reflection Profile View, Reflection Model(s), a Multipath Model, Profile View(s), a Diffraction Report (as necessary) and Reliability Report.

Trees and structures (e.g. buildings) resulting from the site and path surveys are shown on the terrain to represent the obstructions along the paths. Additionally, links are analyzed for three (3) climatic extremes: sub-refraction, super-refraction, and standard atmospheric conditions. The K factors associated with those conditions depend on the location and refractivity gradient data utilized.

The Profile View provides three separate views. The first is an overall representation of the terrain over which the wireless system will propagate. The second and third views represent the terrain with the optical line of sight and the radio line of sight (first order Fresnel zone), as described below:

**Optical Line-of-Sight**
The optical line of sight represents the shortest distance between the two antennas (i.e. a straight line).

Radio Line-of-Sight (First Order Fresnel Zone)
Radio line-of-sight is defined as 60% of the first order Fresnel zone. This is the minimum area that must be unobstructed to prevent signal degradation due to diffraction.

Where diffraction occurs due to clipping the first order Fresnel zone with trees or other obstructions, a **diffraction report** follows. The **Reliability Report** has been provided as a tabular summary to identify the wireless link reliability based on terrain, climate, effective receiver sensitivity, transmit power, frequency, antenna gain, cable other RF losses, multipath degradation, miss-pointing allocation caused by wind loading and installation limitations, atmospheric loss, rain loss for that region, and other modeling assumptions.
RF Analyses Discussion and Assumptions:

It must be understood that science does not clearly define or have data for atmospheric refractivity gradients over paths. Refractivity gradient data at a single point is available for a number of locations and an applicable example has been included. This data comes from “Refractivity Gradients in the Northern Hemisphere” by CA Samson and was obtained from the NTIS (National Technical Information Services). As discussed in the publication, there are several issues associated with the method used to collect the data. The most critical issue is that the measurements are of single points in space whereas the microwave link is a path crossing an infinite number of points. “The atmospheric layers near the surface are greatly influenced by terrain features, ground moisture sources, and vegetation; thus, on most long overland paths, low-level refractivity gradients can be expected to vary by appreciable amounts over distances on the order of a few kilometers. The net result of this variation in space should be to produce less extreme effective path gradients …” Even for paths completely over water, depth changes, temperature changes in the water and air, distance from land, other variables changing along the path would be expected to produce less extreme gradients, although not to the same level. Other research has yielded similar results stating that the most probable cause of very high or low K values existing across an entire path is much less likely than the meteorological data found from measurements of single points. The explanation is believed to be that the unusual conditions causing the extreme values are unlikely to occur over more than a small part of the path at any given instant. It should also be noted that it is unlikely that in the two measurements taken each day, the extremes for the day at that point occurred at the exact time of the measurement. However, over the course of the path it is still believed that extremely high or low refractivity gradients will be very unusual.

It is currently impossible for science to predict for any microwave path what the probability of extreme gradients occurring will actually be. Based on what is known and the refractivity gradient data, the following assumptions have been made for this example. For the extreme sub-refractive conditions the worst case modeled would be \( K = 0.7 \). The highest gradient in Tampa was \( K = 0.7 \). The worst case data was around that same \( K \) factor with an outlier in November. Due to the path length and reasons discussed below \( K = 0.7 \) over the entire path is expected to be conservative. For the extreme super-refractive conditions the worst case modeled is \( K = -1.0 \). Although Cocoa and Tampa had an even extreme worst case super-refractive \( K \) factor, this is very unlikely to occur over the length of a path. Thus, the \( K = -1.0 \) is also expected to be conservative. If other \( K \) factors were used in any of the analyses, it will be disclosed on the analysis sheet along with the reason for the variation.

In some cases the heights of the antennas and/or the heights of structures causing potential diffraction losses may be modeled at different heights. This is to account for potential measurement errors and other uncertainties and leads to very conservative diffraction analyses. The “Knife-Edge” diffraction model is used on the two largest diffraction contributors. This is a very conservative diffraction model which historically has been experimentally shown to yield larger loss numbers than field testing. This also adds to the surety that reliabilities predicted by the analyses are equal to or lower than the reliabilities that will actually be seen if the system is installed according to a recommendation.

The reliability analyses use the Crane 96 model for rain and the digital Vigants-Barnett for the reliability calculations. These are conservative models that have been used by the US military to design highly reliable microwave communication systems for years. The Crane 96 model is an updated rain model that takes into consideration the cloud density, water droplet size, storm intensity, duration and other variables that impact
microwave communication for the region specified. The Vigants-Barnett Digital Reliability Method takes into consideration the propagation environment (e.g., difficult conditions such as gulf coastal areas, flat terrain, and hot and humid weather; or good conditions such as dry, mountainous regions). It also models the Rayleigh probability distribution of multipath fading. Specular reflection fading is calculated manually in the reflection analyses and potential losses associated with this type of fading are added to the miscellaneous loss of the reliability model. Notes associated with additional losses being modeled are provided in the appropriate section of the final report (e.g., in the reflection analyses or the reliability analyses). In general, the reliability is expected to be equal to or greater than that predicted by these models.

Analyses are all performed under “Standard Conditions.” These conditions can be client-defined, and in this case are typically 50 mph winds and heavy rains. Thus, under clear day conditions the reliability will be significantly better than the reliability reported.

Link budget considerations typically include cable and connector loss, diffraction loss, fades due to specular reflections where the main and reflected signal add vectorially to produce signal nulls, antenna gain and radiation pattern, radio effective receiver sensitivity at assumed modulation rate, radio transmit power at assumed modulation rate, angular deflection of the antennas produced by wind loading under “standard” conditions, misalignment budget, and other losses typical of microwave communication systems.

All analyses are particular to (and organized by) individual links. The table below is an example that summarizes the pertinent information pertaining to each link, such as reliability, distance, connectivity and throughput. The reported reliability is based on a selected set of assumptions and, for the project, true propagation reliability is expected to be somewhat better than that reported. This is primarily because loss is modeled in the system to account for angular deflection during high wind loads, mis-alignment allocation, multipath, and other losses that are not present most of the time. The throughput column shows the full duplex throughput that will be available at the Ethernet Layer 2 level and is also related to the modulation the radios will utilize. Lower throughput numbers improve reliability and make the radios less susceptible to atmospheric conditions. This link example obtains 99.999% reliability at 64QAM Modulation with 181 Mbps of throughput, as shown in the first line of the table below. The second line in the table below shows its reliability of 99.995% at the highest throughput; 256QAM and 277 Mbps.

<table>
<thead>
<tr>
<th>Originating Location</th>
<th>Terminating Location</th>
<th>Distance (mi)</th>
<th>Link Reliability</th>
<th>Modulation</th>
<th>Throughput (Mbps)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site A</td>
<td>Site B</td>
<td>6.35</td>
<td>99.999%</td>
<td>64QAM</td>
<td>181 Mbps</td>
</tr>
<tr>
<td>Site A</td>
<td>Site B</td>
<td>6.35</td>
<td>99.995%</td>
<td>256QAM</td>
<td>277 Mbps</td>
</tr>
</tbody>
</table>

* Full Duplex Ethernet Layer 2 Throughput (Aggregate Throughput is Double)
Atmospheric Refractivity Gradient - Example

Tampa, Florida

27-58 N, 82-32 W.  3 meters MSL


Temperature (°F):  January 71/51; July 90/73

Mean Dewpoint (°F):  January 51; July 72

Precipitation (inches):  Annual 51.6; July 8.62; November 1.46

Located on Tampa Bay about 20 miles from the Gulf of Mexico.  Subtropical climate, with 60% of annual rainfall June-September.  Frequent winter fogs; 87 days/yr with thunderstorms.
This example analysis shows part of the specular reflection region is flat; however, there were a number of neighborhoods assumed in the path (shown in grey) that will help break up multipath. NOTE: Path surveys have not been performed, so the assumed heights have not been verified. This data is representative of what should be expected from the microwave analyses. The reflection point shown was calculated at K=1.4 (standard atmospheric conditions) and is in a relatively flat region.
This example shows the range of variation with respect to height of the antenna at Site A. This analysis brackets the impact of measurement variation associated with the elevation difference between the two sites and the reflection point. There are a many trees, homes and terrain obstructions to help reduce the impact of the multipath, so 10 dB was assumed for ground cover loss. The nulls across the entire climate variation overlap, so it is impossible to miss them by selecting an appropriate height. However, at 90' AGH the height is sufficient to clear the assumed obstructions and there is a gain under standard atmospheric conditions.
This example shows the large variation of loss across the 5.8 GHz band under different atmospheric conditions. The lines are not color coded because at the heights specified, the terrain would be blocking the reflection point.
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PROFILE VIEW (5.8 GHz) at Sub-Refractive Atmospheric Conditions (K=0.7) {EXAMPLE SYSTEM Site A – Site B}

This shows that there is no diffraction loss even under sub-refractive atmospheric conditions assuming the obstructions shown. NOTE: In some cases it may be uneconomical to obtain the required height needed to avoid diffraction losses under sub-refractive or even standard atmospheric conditions. In those cases, the diffraction losses will be different under the varying atmospheric conditions. If there is diffraction loss, the diffraction analysis would follow this chart.
This shows that there is more clearance under normal atmospheric conditions.
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RELIABILITY REPORT at
Standard Atmospheric Conditions (K=1.4)
64 QAM, K=2/3, 52 Mbps
{EXAMPLE SYSTEM }

<table>
<thead>
<tr>
<th></th>
<th>Site A</th>
<th>Site B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latitude</td>
<td>00 00 00.00 N</td>
<td>00 00 00.00 N</td>
</tr>
<tr>
<td>Longitude</td>
<td>000 00 00.00 W</td>
<td>000 00 00.00 W</td>
</tr>
<tr>
<td>True azimuth (°)</td>
<td>149.36</td>
<td>329.38</td>
</tr>
<tr>
<td>Vertical angle (°)</td>
<td>-0.14</td>
<td>0.08</td>
</tr>
<tr>
<td>Elevation (ft)</td>
<td>1075.89</td>
<td>984.25</td>
</tr>
<tr>
<td>Antenna model</td>
<td>4’ Dish (TR)</td>
<td>2’ Dish (TR)</td>
</tr>
<tr>
<td>Antenna gain (dBi)</td>
<td>34.90</td>
<td>29.20</td>
</tr>
<tr>
<td>Antenna height (ft)</td>
<td>50.00</td>
<td>90.00</td>
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<td>TX line model</td>
<td>NONE</td>
<td>LMR 400</td>
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<tr>
<td>TX line unit loss (dB/100 ft)</td>
<td>10.80</td>
<td>1.50</td>
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<tr>
<td>Miscellaneous loss (dB)</td>
<td>1.50</td>
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</tr>
<tr>
<td>Frequency (MHz)</td>
<td>5800.00</td>
<td></td>
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<tr>
<td>Polarization</td>
<td>Vertical</td>
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<tr>
<td>Path length (mi)</td>
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<tr>
<td>Free space loss (dB)</td>
<td>125.86</td>
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<tr>
<td>Atmospheric absorption loss (dB)</td>
<td>0.07</td>
<td></td>
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<tr>
<td>Net path loss (dB)</td>
<td>64.83</td>
<td>64.83</td>
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<tr>
<td>Radio model</td>
<td>Typical</td>
<td>Typical</td>
</tr>
<tr>
<td>Radio file name</td>
<td>52 Mbps</td>
<td>52 Mbps</td>
</tr>
<tr>
<td>TX power (dBm)</td>
<td>19.00</td>
<td>19.00</td>
</tr>
<tr>
<td>Emission designator</td>
<td>64 QAM, K=2/3</td>
<td>64 QAM, K=2/3</td>
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<tr>
<td>EIRP (dBm)</td>
<td>52.40</td>
<td>46.70</td>
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<td>RX threshold level (dBm)</td>
<td>-72.00</td>
<td>-72.00</td>
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<td>Receive signal (dBm)</td>
<td>-45.83</td>
<td>-45.83</td>
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<tr>
<td>Thermal fade margin (dB)</td>
<td>26.17</td>
<td>26.17</td>
</tr>
<tr>
<td>Dispersive fade occurrence factor</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Effective fade margin (dB)</td>
<td>26.17</td>
<td>26.17</td>
</tr>
<tr>
<td>Climatic factor</td>
<td>1.00</td>
<td></td>
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</table>
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### Multipath Performance Summary

<table>
<thead>
<tr>
<th></th>
<th>Site A</th>
<th>Site B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terrain roughness (ft)</td>
<td>20.00</td>
<td></td>
</tr>
<tr>
<td>C factor</td>
<td>3.29</td>
<td></td>
</tr>
<tr>
<td>Average annual temperature (°F)</td>
<td>68.20</td>
<td></td>
</tr>
<tr>
<td>Fade occurrence factor (Po)</td>
<td>5.993E-003</td>
<td></td>
</tr>
<tr>
<td>Worst month multipath availability (%)</td>
<td>99.99855</td>
<td>99.99855</td>
</tr>
<tr>
<td>Worst month multipath unavailability (sec)</td>
<td>38.03</td>
<td>38.03</td>
</tr>
<tr>
<td>Annual multipath availability (%)</td>
<td>99.99951</td>
<td>99.99951</td>
</tr>
<tr>
<td>Annual multipath unavailability (sec)</td>
<td>155.63</td>
<td>155.63</td>
</tr>
<tr>
<td>Annual 2 way multipath availability (%)</td>
<td>99.99901</td>
<td></td>
</tr>
<tr>
<td>Annual 2 way multipath unavailability (sec)</td>
<td>311.27</td>
<td></td>
</tr>
<tr>
<td>Polarization</td>
<td>Vertical</td>
<td></td>
</tr>
<tr>
<td>Rain region</td>
<td>F-96 Sub-Tropical Arid</td>
<td></td>
</tr>
<tr>
<td>Rain rate (mm/hr)</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Flat fade margin - rain (dB)</td>
<td>26.17</td>
<td></td>
</tr>
<tr>
<td>Rain attenuation (dB)</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Annual rain availability (%)</td>
<td>100.00000</td>
<td></td>
</tr>
<tr>
<td>Annual rain unavailability (min)</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Annual rain + multipath availability (%)</td>
<td>99.99901</td>
<td></td>
</tr>
<tr>
<td>Annual rain + multipath unavailability (min)</td>
<td>5.19</td>
<td></td>
</tr>
</tbody>
</table>

Multipath fading method - Vigants - Barnett  
Rain fading method - Crane

This example shows the theoretical reliability is 99.999% even with 2 dB of loss associated with losses that could occur during rain events, multipath, wind loading of antennas, miss-pointing budget, and other losses. This is the highest order modulation that will provide this reliability. Thus, 99.999% of the time it will provide a minimum of 52 Mbps (assuming a single data stream and a 20 MHz channel).
RF/Microwave Engineering

MCIS performs engineering analysis based on the frequency band being utilized for a project. These analyses include:

- Assumed bandwidth, throughput, link distances, and Telco criteria will be used to establish performance guidelines.
- Determination of system performance under “Standard” and “Extreme” operating conditions.
- RF propagation analysis – This will take into considerations terrain and climate modeling, diffraction effects, multipath, rain and wind loading (causing angular deflection or mis-pointing of the antennas) and other relevant factors.
- Antenna types, required heights of infrastructure based on “standard” local vegetation conditions, output power of proposed radios, and cable lengths will be determined. Note: When the Site and Path Survey is completed these heights are based on the actual obstructions.
- Appropriate antennas will be based on radiation patterns, gains, frequency rejection, Front-to-Back ratios, Side lobe levels, and VSWR required.
- Reliability calculations based on the propagation analysis and equipment determination. Reliability will be calculated using the appropriate climate model for the region (e.g. Crane Region E) and digital reliability model. The conservative (results in lower reported reliabilities) Vigant-Barnett digital reliability model and Crane model for rain will be employed.
- Terrain analyses will be performed and will use the most accurate USGS terrain data available (typically 1 second data).
- Sub-refractive and super-refractive atmospheric conditions will be modeled for links of sufficient length for these climatic conditions to play a role. These analyses will determine the exact height requirements of the antennas.
- Multipath and reflective analyses will be performed for areas over water or flat unobstructed terrain. For areas over water affected by tidal variation, tidal analyses will also be performed (this raises and lowers the effective height of the antennas and can thus significantly alter the multipath and reflectivity analyses). The outcome of these analyses will also help determine the exact height required for the antennas.
- Frequency reuse plans.
- Polarization diversity plans.
- Spatial filtering requirements.
- Performance and RF Interference analysis will be based on the Bit Error Rates (BER (typically 10⁻⁶)), sensitivity of receiver, max output power, C/I requirements for published BER, level of noise rejection immunity, as well as data throughput for the proposed radios. Calculated interference from all transmitters at each receiver will be analyzed to verify the C/I requirements are being met. Any co-located receivers will also be analyzed with respect to near-field coupling of the co-located antennas and the required isolation will be defined.
- Satellite imaging of sites and paths.
- MCIS will provide an easy-to-read and comprehensive report outlining the design, equipment, and system performance.

* These analyses are required for radios operating in unlicensed frequency bands. In the case of radios operating in licensed frequency bands, the licensing process with the FCC verifies all these conditions are met.
City of Mount Dora – Upgrade Existing Wireless 2.4 GHz Microwave Point-To-Point Wireless System To A New 24 GHz System

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I. Field Surveys

Each path is physically surveyed for possible physical obstructions, and, where possible, RF interference will be measured (requires height close to that of actual height of proposed antenna). All findings are reported in the Engineering deliverable and incorporated into any preliminary path and reliability analyses to finalize them. This survey includes:

- Physical survey of sites, terrain and path
- Obstacle identification and alternative solution suggestions
- Measuring of heights of obstacles
- Spectrum interference analysis where possible
- Path and reliability analyses using detailed information (trees, buildings, interference, etc.) found in the Site Survey.

Our diversity of resources and expertise is broad, and we have consistently demonstrated the capability to expand and allocate resources as needed to meet the most challenging of projects. Our project history, client satisfaction and repeat business demonstrate competence and efficiency. As demonstration of MCIS’s project approach and our full understanding of project management, the following representation of our process is employed.

Project Management Methods

Monitoring processes are based on the project plan, adjusting for monitoring is much like the tailoring for planning. For smaller projects, the plan is likely to undergo little to no changes as the scope of work and resolution of items is minimal, and therefore able to be completed with relative ease. For many medium and large projects, the plan is likely to undergo change, to reflect the resolution of items that were unknown or that have changed since the start of the project.

MCIS’ monitoring activities vary for different types of projects, in the same way that planning the project varies by type. The charts on the following pages show various project activities, functions, and deliverables that occur on some projects and how the intensity can be customized to suite the project. In most cases, only a few of these categories will be utilized and many times a “low” or “medium” focus is all that is required. However, there are times when many of these are utilized and when a “high” focus is preferred. The project manager and team understanding the full potential range in these areas allows for a smoother project experience for the client in nearly any situation. The last chart shows the roles that may be found on a project and a description of their function.
City of Mount Dora – Upgrade Existing Wireless 2.4 GHz Microwave Point-To-Point Wireless System To A New 24 GHz System

#P6157118-01

Figure MCIS-1: Function Customization

<table>
<thead>
<tr>
<th>Function</th>
<th>Low Focus</th>
<th>Medium Focus</th>
<th>High Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Manager</td>
<td>Person in this role is also likely to be a member of the team doing the work</td>
<td>Person in this role may also do some of the work of the team</td>
<td>Person in this role is dedicated to project management</td>
</tr>
<tr>
<td>Configuration Management</td>
<td>Role may be performed by project manager or a member of the team</td>
<td>Role may be performed by someone on the project team or someone from an independent group</td>
<td>Role likely to be performed by someone from an independent group</td>
</tr>
<tr>
<td>Change Control Committee</td>
<td>May be done by the project manager and one or two others</td>
<td>Likely to be small group – project manager, senior manager, QA, user representative</td>
<td>Formally chartered group composed of representatives from all major stakeholders</td>
</tr>
</tbody>
</table>

Figure MCIS-2: Deliverable Customization

<table>
<thead>
<tr>
<th>Activity Work Product</th>
<th>Low Focus</th>
<th>Medium Focus</th>
<th>High Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project activities, status reports</td>
<td>Email or verbal reports</td>
<td>Meetings, email, possibly hardcopy at major milestones</td>
<td>Meetings, email, regular hard copy at milestones, filed in project notebook</td>
</tr>
<tr>
<td>Project performance measurement indicators</td>
<td>Probably confined to schedule and budget</td>
<td>Schedule, budget, size of major deliverables, defect counts</td>
<td>Schedule, budget, size of major deliverables, defect counts plus project issue-driven measures</td>
</tr>
<tr>
<td>QA non-compliance reports</td>
<td>Informal discussion with Project Manager</td>
<td>Notes from QA kept in project notebook</td>
<td>Formal reports to standard distribution</td>
</tr>
<tr>
<td>CM activity/ status reports</td>
<td>Notes from CM</td>
<td>Activity logs kept in project notebook</td>
<td>Formal reports to standard distribution</td>
</tr>
<tr>
<td>Revised work products</td>
<td>Notes added as attachment to original documents</td>
<td>Revisions made to major deliverables</td>
<td>Revisions tracked through traceability tool</td>
</tr>
</tbody>
</table>

Figure MCIS-3: Activities Customization
### Activities

<table>
<thead>
<tr>
<th>Low Focus</th>
<th>Medium Focus</th>
<th>High Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuously Monitor Progress</td>
<td>Project manager uses project plan as basis for monitoring; each team member provides weekly report of progress</td>
<td>Project manager uses project plan as basis for monitoring; each team member provides weekly report of progress to the project manager or a team leader</td>
</tr>
<tr>
<td>Conduct Team Reviews</td>
<td>May be done with email or informal sessions</td>
<td>May be several sub-teams which regularly get together to review progress, as well as an overall regular team meeting and regular reports</td>
</tr>
<tr>
<td>Conduct Formal Progress Reviews</td>
<td>Likely to need a weekly coordination meeting to review status of the work, risks, measures, and action items being handled</td>
<td>Likely to be done on a monthly basis with senior management and key stakeholders</td>
</tr>
<tr>
<td>Manage Changes</td>
<td>Likely to include representatives of project, customer, management, QA, CM</td>
<td>Likely to include representatives of project, customer, management, QA, CM</td>
</tr>
<tr>
<td>Revise the Plan</td>
<td>Significant changes need to be reviewed and agreed to by those who originally approved the plan</td>
<td>Significant changes need to be reviewed and agreed to by those who originally approved the plan</td>
</tr>
<tr>
<td>Conduct Work Product Reviews</td>
<td>Some may be walkthroughs, some technical reviews and inspections</td>
<td>Likely to have both technical reviews and inspections, based on quality goals</td>
</tr>
</tbody>
</table>
**Figure MCIS-4: Roles**

<table>
<thead>
<tr>
<th>Role Names</th>
<th>Role Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Manager</td>
<td>Responsible for planning and tracking the project, including approved revisions to project plans, estimates, schedules and budgets</td>
</tr>
<tr>
<td>Project Team</td>
<td>Participates in building and reviewing the plan and project work items; develops or implements the deliverables</td>
</tr>
<tr>
<td>Senior Management</td>
<td>Authorizes the project and provides personnel and other resources</td>
</tr>
<tr>
<td></td>
<td>Reviews progress and approves any changes to plans to ensure the project meets organization goals</td>
</tr>
<tr>
<td>Quality Assurance</td>
<td>Reviews processes used in performing the project, to ensure they comply with the project plan and organization standards and processes</td>
</tr>
<tr>
<td></td>
<td>Reviews deliverables of the project, to ensure they meet customer requirements, quality requirements, project plans, and organization standards</td>
</tr>
<tr>
<td>Configuration Management</td>
<td>Identifies (or reviews work done by the team to identify) the configuration items to be handled with configuration management, places the items under control, creates baselines, makes authorized changes to the configurations, provides status reports, and builds releases of the product</td>
</tr>
<tr>
<td>Change Control Committee</td>
<td>Reviews requests for changes to project baselines (requirements, deliverables completed, work underway), approves or rejects change requests, ensures approved changes are completed as authorized</td>
</tr>
</tbody>
</table>

To be sure that the project stays on track, the MCIS Project Team continuously monitors their progress to the Project Plan relative to a comprehensive schedule. This requires continuous examination of the progress on all key dimensions of the project, to determine whether or not project goals are likely to be met, as documented in the Project Development Plan. When a variance is detected, the team must take appropriate corrective action. Special attention is always given to tasks on the “Critical Path,” which is determined at the project schedule creation.

In order for this methodology to function, certain actions must be taken by the stakeholders. The Project Plan must be documented and approved and the work needs to be underway. Explicit assignments of responsibility for work products and activities must be made and the Project staffed. Other resources need to be made available; particularly the resources and funding required to do project tracking.
City of Mount Dora – Upgrade Existing Wireless 2.4 GHz Microwave Point-To-Point Wireless System To A New 24 GHz System

It is useful to have regular reviews of progress and status for each project. The purpose is to communicate status and plan for next activities of the project. In order for this to be feasible, the project needs to be staffed and underway. This activity continues until the project is completed or terminated.

Formal progress reviews are conducted for large projects and for some medium projects, to ensure that all stakeholders are kept informed of project status and progress. These reviews may be at key milestones for a project, or they may be event or date driven. Depending on their duration, projects hold monthly or quarterly reviews, in addition to (or instead of) project phase-based milestone reviews. The purpose of the reviews is to communicate the status of the project to stakeholders and ask for assistance in areas that need management or stakeholder attention. This activity ends when the reviews are held and any follow-up information communicated or the action item list is updated with items from the review.

For most projects, there are multiple changes to one or more project parameters once the project has started. This might include changes to requirements, problems, or defects in the deliverables, lead time changes on equipment caused by manufacturers, or changes to resource commitments. Each of these can be handled by a change management process external to this process, or by this activity. The purpose of this activity is to identify, evaluate, prioritize, and control changes to the project and is started once the project is underway or a change request has been submitted by a project member or a stakeholder.

This change management process is completed when the change has been addressed and the requestor has been informed or the change request records have completed information about the request and the work that was done to address it.

If there are significant changes in project deliverables, schedule, budget, or approach, the project plan is revised. This is usually done at the end of each major life cycle phase. Any signoffs that were needed for the initial project plan are needed for a significant change. The goal is to revise the project plan (including estimates and schedule) to accommodate significant changes, so that the documented plan reflects the plan in use by the project team. The project plan will only be revised when the project team and management have agreed to a significant change in the project. This activity is completed when the project plan is updated, approved, and under configuration management and any changes to commitments have been communicated to all affected parties.

Throughout the project life cycle, the project team conducts team reviews of the work performed. The types of reviews may vary, according to the plan set by the project team, to ensure best use of time spent on the review. The purpose of this phase of the methodology is to ensure that all involved understand the content of a given work product, and identify any changes needed in the work product before starting work on other work products that depend on it. The team reviews begin when the author agrees work product is ready for review, the team is available to review the item, and the review process is defined and understood by the review team. The team reviews are complete when feedback is incorporated into the plan.
City of Mount Dora - Upgrade Existing Wireless 2.4 GHz Microwave Point-To-Point Wireless System To A New 24 GHz System

Additional Technical Capabilities:

Installation and Commissioning: MCIS has appropriate resources to provide technical installation and commissioning, to include the utilization of a Continuous Wave Source Generator and Spectrum Analyzer for antenna alignment, installation of all mounting infrastructure, antennas and all associated RF equipment necessary for functional wireless network. MCIS will also provide developing training material, such as documentation, manuals, etc. (excludes hardware), and training time. Maintenance or other needs after commissioning of links are available as well, under a separate Time & Material Contract.

RF Propagation & Interference: Signal propagation, throughput and interference patterns are fundamental to effective wireless connectivity. MCIS has significant engineering expertise that can provide the necessary analysis and design for effective system performance. Our team uses continuous wave generators, spectrum analyzers, network analyzers, microwave/wireless engineering, implementation/commissioning, wireless consulting (wireless business plans, mesh structure, ROI, etc.) and other equipment necessary to analyze and deliver deterministic systems.

Wireless Networking: For new or existing networks, MCIS can assist with design or troubleshooting services that will meet any need. Our Firm has a portfolio of Network and RF Design services, including comprehensive RF engineering, interference analysis and interoperability design, detailed network design, content inspection, security management, signal planning, network transport planning, and traffic planning.

Wireless Solutions (Consultations): MCIS can provide wireless consultation value through our experience and extensive knowledge of technology, networks and data management. We help evaluate new and existing markets, network service solutions, and possible expansions of existing communications systems. Our consultation services can assist with the development of a business plan that encompasses the whole business, not only the wireless segment.

Support Services:

MCIS will provide on-going network engineering, integration expertise, technical support and maintenance services to the Client under a mutually agreeable contractual agreement.
Project Assumptions:

a. MCIS rates are based upon the amounts shown in Attachment A of this section: Professional Fee Schedule. Any changes to the contract made by the Client will be billed at the rates provided.

b. Access to all sites, including any City owned property that the paths will cross, will be made accessible to MCIS during normal operating business hours.

c. MCIS will provide no structural engineering. No structural engineering or structural modifications on existing structures are assumed (only the RF engineering as documented herein will be performed).

d. MCIS shall warrant workmanship for a period of one (1) year from date of equipment installation. No warranty for equipment and labor by MCIS is expressed or implied. Equipment warranty and labor to repair is provided solely by the Manufacturer. Labor to troubleshoot, repair, or replace wireless equipment under this ITQ shall be performed under a separate contract between MCIS and the Client at the current Professional Fee Schedule of MCIS.

e. The entire design is contingent on sites as per the site addresses provided by the City of Mount Dora. Any changes to those locations will require additional engineering to verify the new locations are capable of supporting a reliable microwave link. The engineering may show that additional relays are required. No cost associated with additional engineering or additional relays required due to a location change is assumed.

f. It is assumed Client will handle any permitting required. No vehicle permits or any other type of permits to perform the work as outlined herein has been assumed.

g. MCIS is not responsible for Force Majeure events causing damage or delays. Force Majeure is defined as any unforeseeable or unpreventable event beyond the reasonable control and without gross negligence of the party alleging its occurrence, which, despite all reasonable efforts such party to prevent its occurrence or mitigate its effects, causes a delay or disruption in the performance of any obligation imposed on such a party hereunder. Subject to the foregoing, Force Majeure shall include but not be limited to: acts of god; meteorological or atmospheric conditions; interference from new or existing sources; explosions; fires; storms; floods; lightning; system emergencies; terrorism; vandalism; any Force Majeure event described in the foregoing clauses that affects the performance of any person that is party to any material services; and any events that are deemed to be Force Majeure events under applicable law.

h. CLIENT will provide coordination and timely access to all sites including the towers and/or building roofs as required for the survey efforts. This includes sites not owned or operated by the City.

i. A comprehensive engineering report will be provided to the Client within two (2) weeks of the completion of the site and path surveys.

TERMS AND CONDITIONS

This proposal and quotations are based on MCIS performing the entire scope of work as outlined above. Price assumes normal access to facilities. A separate contract or a change order may be utilized to complete additional tasks. Quoted fees exclude any applicable sales tax. Payment terms will be net 30 days.

FEE AND TERM OF CONTRACT

This proposal is valid for 60 calendar days from the date listed on this proposal. The above work will be provided for Client.

MCIS represents and warrants that it is acting as an independent contractor, and none of its personnel shall be employees of the Client. MCIS will be responsible for all taxes, benefits and insurance pertaining to its
City of Mount Dora – Upgrade Existing Wireless 2.4 GHz Microwave Point-To-Point Wireless System To A New 24 GHz System #P6157118-01

personnel. MCIS shall not be an agent for the Client or hold itself as an agent for the Client and shall not have the authority or power to enter into any contract, make any purchase for or otherwise obligate the Client in any manner.

CONFIDENTIALITY
Any non-public information relating to the Client or its business will be kept confidential by MCIS.

MCIS Inc.  
By: __________________________  
Rue S. Hestand IV  
President & COO  
Date: _________________________

Client
By: __________________________
Date: _________________________
### Professional Fee Schedule

**Effective January 1, 2015**

| I. GENERAL |
| MCIS Inc. will provide services in accordance with the following fee schedule. Should you have any questions or require further details, please give us a call. |

| II. SENIOR SYSTEM & NETWORK ENGINEER | $150/hour | $1100/day |
| III. PROJECT, NETWORK SYSTEM ENGINEER | $125/hour | $875/day |
| IV. TOWER CLIMBER | $85/hour | $625/day |
| V. WIRELESS TECHNICIAN | $70/hour | $525/day |
| VI. CAD DRAFTING & FIELD TECH | $60/hour | $450/day |
| VII. OFFICE SUPPORT STAFF | $40/hour | $300/day |

### VIII. EXPENSES AND CONSIDERATIONS
A. Overtime rate is 1½ times the regular hourly rate.
B. Premium rate is 2 times the regular hourly rate.
C. Field service over 8 hours per day and Saturdays will be billed at the overtime-hourly rate. Sundays, Holidays, and Emergency Call-Outs will be billed at the premium rate.
D. All expenses will be billed at cost unless otherwise specified.
E. Domestic air travel will be coach class; international travel will be business class.
F. Daily rates are for one 8-hour day.
G. Consultants’ time includes travel time to and from the MCIS office in Lakeland, FL.
H. All payments will be paid to MCIS Inc., net 30 days unless otherwise specified.
I. All car mileage will be charged at $0.565/mile.
J. Billing of the contract will occur on a pro-rata monthly basis, including all expenses unless otherwise specified.
K. All rates subject to change without notice.

### IX. FIRM CONTRACTS
A. MCIS will provide fixed fee bids for any jobs having a clearly defined scope or work definition.
City of Mount Dora – Upgrade Existing Wireless 2.4 GHz Microwave Point-To-Point Wireless System To A New 24 GHz System
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Subsection 3: COST/PRICE CONSIDERATION

PURPOSE:
This section is meant to provide the City of Mount Dora with costs inclusive of all time, materials, and equipment necessary to complete the desired deliverable (See attached Fee Schedule). Pricing herein assumes MCIS will complete the entire scope of work outlined in the City of Mount Dora solicitation: # 16-5160-001.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ubiquiti AirFiber 24HD Radios/Antennas, and associated materials</td>
<td>$8,700.00</td>
</tr>
<tr>
<td>Installation Services: Exchanging wireless devices, bucket truck, cabling,</td>
<td>$4300.00</td>
</tr>
<tr>
<td>grounding, Eth. surge, PoE, mounts.</td>
<td></td>
</tr>
<tr>
<td>Technical Services: Set up and Calibration</td>
<td>$950.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$13,950.00</strong></td>
</tr>
</tbody>
</table>
Subsection 4: MANAGERIAL AND STAFF CAPABILITY

This section contains examples of similar projects successfully completed by MCIS key personnel. These examples provide additional support of our Firm’s knowledge, expertise and qualifications. Additional information in this section includes: past performance projects, resumes/certifications/licenses, manufacturer’s certifications, occupational licenses, insurance certifications, and trade references.

Tampa, FL
RF Network Master Plan – SCADA System

In 2015, MCIS supported the efforts of the City of Tampa Utilities by providing engineering services to be applied in a cost/benefit analysis to determine the feasibility of building out the Supervisory Control and Data Acquisition (SCADA) system utilizing wireless technology instead of traditional leased lines to backhaul data and video surveillance. The RF Network Master Plan consisted of four (4) FCC licensed backhaul links, nine (9) unlicensed high bandwidth links, and twenty-nine (29) low-frequency low-bandwidth links, located throughout the City of Tampa. MCIS provided site and path surveys, spectrum and propagation analyses, system design, and infrastructure requirements to the City in a comprehensive report detailing the recommended solution. The project was successfully completed August 2015.
City of Columbus, OH
Simplex Grinnell
Neighborhood Safety Camera Wireless Backhaul

2011 – 2015: MCIS began supporting the efforts of SimplexGrinnell and the City of Columbus with the Neighborhood Safety Camera project. The City of Columbus (COC) pilot project includes closed-circuit television (CCTV) camera systems located within five (5) neighborhoods in and around the City of Columbus. The project has since been expanded multiple times and now includes fifty-eight (58) camera sites, totaling over 150 cameras, to which MCIS provided wireless connectivity. The first expansion took place in mid-2012, which added several camera locations within the Livingston neighborhood of Columbus. The second expansion took place in late-2012, adding camera locations to three of the initial five neighborhoods. Licensed links at 18 GHz and unlicensed links at 5 GHz were utilized for the project. Equipment was installed on existing power and light poles, as well as varying city owned buildings throughout the five selected neighborhoods. Simplex Grinnell hired MCIS as its wireless contractor, to complete design, installation, commissioning, and integration of all wireless equipment. Due to the success of the initial phases of the project, Security Risk Management Consultants hired MCIS to perform a feasibility study to potentially double the size of the project by late 2015.
Pasco County, FL
Emergency 911 Wireless System

2011 – 2015: MCIS was approached by radio manufacturer Proxim Wireless and Pasco County to inquire about the utilization of Proxim equipment in order to backhaul the county’s Emergency 911 system. MCIS worked hand in hand with sister company TEAMWORKnet, under a Government Services Administration contract to provide Pasco County with the connectivity required in order to operate their system properly. After three years of planning and installation, the project was completed in late-2014. The network would come to consist of three (3) licensed backhaul links, stretching east to west across Pasco county, covering over 30 miles. An additional five (5) remote sites were connected as part of the county’s system, utilizing Proxim unlicensed radios. The successful deployment has led to continued work with Pasco County, with multiple projects in various phases.
Florida Department of Transportation (FDOT)
District 4 – Intelligent Transportation Systems
FM No. 428449-52-1 / FM No. 428451-52-1, Contract Number: E4M33

2012 – 2014: MCIS began supporting the efforts of Miller Electric for the FDOT D-4 ITS project. MCIS provided engineering, installation, acceptance testing, and commissioning for twenty-five (25) wireless links. The system consisted of a fully redundant, ring topology network that is tied into the FDOT network. The wireless system backhauled video from CCTV cameras and data from twenty Six (26) sites, to the FDOT Hub site located at SR25/US27 and Interstate 75. Proxim radios operating in the FCC Licensed 6 GHz frequency and high performance antennas were utilized for this project. MCIS installed all mounting equipment, radios, antennas, and associated RF equipment, and performed stand-alone and sub-system testing as required. The project was successfully completed in 2014.

Many other FDOT projects have been successfully completed by MCIS. These include projects in District 2, 4, 5, 6, 7, and the Turnpike Authority. For example, in District 6 a wireless backbone 130 miles long from Key West to Florida City was completed by our Firm. Over 50 CCTV cameras and many DMS were then wirelessly backhauled to that backbone utilizing other frequencies. Another project for District 4 required over 70 miles of VOIP along the I-75 and I-95 corridors with over 30 ADMS all backhauled wirelessly to their fiber demarcations. More detail and other projects are available upon request.
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Point-To-Point Wireless System To A New 24 GHz System 
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St. Vincent’s Health System – Birmingham, AL 
Bandwidth Lease 
Complete System Design/Build

2007 – Present: The installation of the wireless system for St. Vincent’s Health System to carry critical 
data, consists of seven (7) sites and six (6) total links. Sites used for this wireless system include three 
(3) hospitals within the St. Vincent’s Health System and four (4) existing towers utilized as relay 
points. The intention of this system is to link Blount Hospital to St. Vincent’s East with a minimum 
average aggregate of 160 Mbps data throughput, and also St. Clair Hospital to St. Vincent’s East with 
a minimum average aggregate of 200 Mbps data throughput. These links vary in distance, with a 
maximum of twenty-three (23) miles. A key benefit of this completed system is the proprietary 
monitoring program in use by MCIS. The system allows for proactive monitoring and maintenance of 
the wireless system as opposed to being forced to be reactive to failures.

MCIS has the capability to monitor any SNMP enabled device through this software solution, and it 
was custom fit to notify MCIS team members via email if the system begins to operate outside of pre-
determined specifications. The purpose of the system is expedited transmission of critical patient 
information between hospitals, without needing the use of a courier, which takes time and has the 
potential to put patients’ private information into the wrong hands. Furthermore, MCIS provides 24 
hour response times to St. Vincent’s in the event of equipment failure.
CenturyLink – Florida
Engineering studies, wireless infrastructure work

In 2015, MCIS begin supporting the efforts of CenturyLink on multiple projects from Ft. Myers to Orlando. Projects include engineering studies for wireless communication links, wireless infrastructure relocation work, site and path surveys, and equipment pricing. MCIS recently completed the Altamonte Springs Evaluation study for a planned wireless system connecting WKMG TV’s tower site and CenturyLink’s Altamonte Springs tower site. Deployment of the wireless system will be performed by MCIS in early 2016.
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Past Performance

Utilities
*City of Tampa, FL Water Utilities, microwave engineering for security/SCADA & master planning
TECO Energy (FL), design/build SCADA network (12 sites, full telemetry, ~1 million sq. ft.)
Invenergy (FL), design/build SCADA network and CCTV’s
City of Boca Raton, FL Utilities, design/build microwave communication network
City of Tallahassee, FL Electric Utility, microwave systems engineering

Cities and Municipalities
*City of Columbus, OH, design/build city wide microwave surveillance & communication system
City of Key West, FL, design/build microwave data communication system
City of North Miami, FL, design/build microwave data network
City of Tampa, FL, consulting/engineering, implementation of general contract for Co-Location
City of Boca Raton, FL, design/build microwave data network
City of Lakeland, FL, microwave master planning
City of Coral Springs, FL, microwave engineering
City of Rockledge, FL, city-wide microwave canopy engineering/design
Village of Wellington, FL, design/build microwave network (430 Mbps)
City of Sunny Isles, FL, city-wide microwave mesh engineering/design
City of Clearwater, FL, design/build microwave network
City of Marco Island, FL, microwave engineering
City of Tampa, FL, design/build microwave intelligent transportation system
City of Aventura, FL, design/build microwave intelligent transportation system
City of Lake Worth, FL, design/build microwave network

Federal and Governmental
*Pasco County (FL), E-911 microwave Communications
*FDOT Dist. 4 (FL), design/build license microwave network. Fully redundant, 80 miles, 26 CCTV’s
FCC (FL), Antenna/RF Systems relocation and testing
World Trade Organization (FL), design/build microwave video & data network for security
10th Circuit Court (FL), microwave streaming audio/video system design/build
Hillsborough County, FL, troubleshooting/re-engineering & repair of existing system
Hillsborough County, FL, Sheriff’s Office, microwave engineering for data communication network
Mystic Seaport/NOAA (FL), design/build microwave video/data/audio streaming network
National Parks & Recreation (CA), design/build video/data/audio streaming network
FDOT Dist. 6 (FL), design/build intelligence transportation system (130 mi. video/data streaming)
FDOT District 7 (FL), design/build microwave communication network
Eglin AFB (FL), video surveillance & SCADA for substations with micro. comm. System
Jacksonville Port Authority (FL), engineering for data communication network
FDOT Turnpike Authority (FL), microwave link installation and consulting
FDOT Dist. 4 (FL), design/build microwave ITS and 80 miles contiguous wireless VOIP coverage
FDOT Dist. 2 (FL), design/build microwave ITS

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TDOT (TN), Memphis, design/build microwave ITS
FDOT Dist. 1 (FL), design microwave ITS
LDOT (LA) – Long range microwave backhaul of CCTV and DMS

School Districts
Hardee County School System (FL), design/build microwave system (6 com-links, 45 Mbps)
DeSoto County School District (FL), microwave engineering & design
Frontier School District (IN), microwave engineering/design

Medical and Hospitals
*St. Vincent’s Healthcare System (AL), an Ascension Health Group, full service bandwidth lease
Bayfront Medical Center (FL), engineer/design wireless network (311 access points, 5 facilities)
University Community Hospital (FL), microwave data network (45 Mbps)
Winter Haven Hospital (FL), engineer/design wireless network (~1 million sq. ft. facility)
Moffitt Cancer Center (FL), microwave consulting and maintenance
Jupiter Medical Center (FL), design/build microwave data/voice communication network

Private Industry / Commercial
*CenturyLink Orlando (FL), microwave engineering for data communication network
Nielsen Media Research (FL), design/build gigabit data/voice network (430 Mbps w/repeater)
Mosaic / CF Industries (FL), design/build mesh networks for SCADA and monitoring
Barnell Technologies (NE), engineer/design wireless ISP (Nebraska)
IDEAL/GATES/TYCO (TX), design/build data-voice microwave network (Texas to Mexico)
Nephron Pharmaceuticals (FL), design/build data microwave communication network
Sony of Latin America, microwave engineering for data communication network
Eckerd Drugs (FL), microwave engineering for data communication network
All Star Bleachers (FL), design/build microwave video surveillance security system
Global Signal (FL), design/build microwave system
Hirst (FL), engineer/design data communication network
Hancock (FL), engineer/design data communication network
US Sugar (FL), engineer/design data communication network
Miller Electric (FL), design/build data microwave communication network
Hines (international real estate firm) (FL), design/build mesh network for Palencia subdivision
Transcore (FL), design/build data communication network
Florida Natural Growers (FL), design/build data microwave communication network
Maya Telecom (Bahamas), design/build microwave system between islands
Content Solar (Jamaica), design/build microwave system, project manage tower installation
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Resumes/Certifications/Licenses

Rue S. Hestand IV
President – Senior Project Manager and Chief Engineer

**Education:**
- **Degree:** Master of Science - Electrical Engineering  
  **Concentration:** Microwave (RF)/Antennas/Electromagnetic Fields and Digital Communications  
  **University of Central Florida; Orlando, Florida**  
  **GPA:** 4.0/4.0
- **Degree:** Bachelor of Science - Electrical Engineering, Magna Cum Laude  
  **Minors:** Computer Science and Mathematics  
  **University of Central Florida; Orlando, Florida**  
  **GPA:** 3.6/4.0

**Experience:**

**MCIS, Inc.**; Lakeland, Florida 10/01 – Present
**Title:** President & Chief Operating Officer

Responsible for training and overseeing all engineering activities. Design all high-end ($1/4 mil or above) systems and check all designs. Perform interference calculations (EMI and EMC analyses), link budgets, reliability analyses, wind loading calculations, BER, and design polarization diversity, spatial filtering and frequency plans. Perform multipath and reflectivity analyses over local refractivity gradients and tidal variations where applicable. Projects include:

- City of Tampa Utilities, FL – SCADA and security camera backhauls
- City of Columbus, OH – Neighborhood Camera System – Designed and engineered the wireless system inclusive of licensed links that supported 5 neighborhoods of video surveillance and EMI/EMC analyses, as well as, two (2) additional phase expansions completed, and design for third expansion phase.
- Hillsborough County Sheriff's Office – Designed and engineered the wireless system including several expansions of their Eye on Crime projects. This involved over 100 cameras all backhauled wirelessly. Effort included all RF engineering inclusive of EMI/EMC analyses.
- FDOT District 4 – US 27 – Redundant licensed microwave backhaul for 26 CCTV sites and DMS over 45 miles.
- Invenergy, Hardee Power, FL – Microwave backhaul of security cameras
- TDOT (TN)- Region 4, District 45– Microwave backhaul of CCTV and DMS
- LDOT (LA) – Long range microwave backhaul of CCTV and DMS
- Eastern Health (Ascension), AL –Microwave backhaul, on-going 24X7 monitoring and maintenance.
- World Trade Organization (Boca Raton, FL) – Microwave backhaul of video and security systems
- Eglin AFB – West Range and Valparaiso projects Microwave backhaul of SCADA data and security cameras
- FDOT District 6 – Upper and Lower Keys – Microwave backhaul of CCTV and DMS (130 miles, 55 sites)
- FDOT District 7 – SR 60 – Microwave backhaul of CCTV and DMS
- FDOT District 4 – Broward County – Microwave backhaul of 34 DMS and 78 miles of VoIP coverage
- Mystic Seaport / NOAA (FL Keys) – Microwave backhaul of controls data and cameras
- Mystic Seaport / National Park (Channel Islands, CA) - Microwave backhaul of controls data and cameras

**Terion, Inc.**; Melbourne, Florida 11/00 – 10/01
**Title:** Project Engineer / Senior RF-Antenna Engineer

Was the project engineer for the “cab” products, which represented roughly half of the company’s product lines. Responsibilities included the design, development, and production of the “cab” product line inclusive of antennas and RF design. Was also the FCC’s Terion contact for our Part 15 and Part 90 type acceptance (passed both flawlessly). Handled all FCC related issues (scheduling of tests, reviewing test data, etc.). Worked with Terion’s Configuration Manager to improve CM/DM process control flows and identified and addressed key problem areas that were targeted for improvement.

Designed, modeled, built and tested RF matching circuits for the FM and HF antennas as well as antenna simulator circuits. Formulated and modeled the algorithms used in the RT (Remote Tuner) using Matlab as well as...
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making significant improvements to the existing products’ algorithms. Antennas that were designed, analyzed and measured were at the HF, FM and cellular frequencies. A dual band monopole type antenna was used for HF and FM. In the cellular arena, printed dipoles were predominately used. Work on a cavity backed slot antenna at cellular frequencies for the trailer product was started.

Harris Corporation, Space Systems; Palm Bay, Florida 8/95 – 11/00

Titles: Project (IPT) Leader and Antenna (RF) Design Engineer

Led multi-discipline teams for communication systems consisting of the antenna team, software and controls teams, and subcontracts as well as other multi-discipline teams consisting of the RF/antenna engineering, mechanical engineering, manufacturing and materials acquisition teams. Performed system engineering for space operations, air-to-air, ground-to-air, and ground-to-ground hi-rel communication links utilizing state of the art modeling processes.

As an RF/Antenna engineer, supported numerous programs not only with antenna design but also the RF feed design. This included all analyses, design, fabrication, testing, writing test procedures, and verifying acceptance testing. Antennas designed range from microstrip antennas including the RF microstrip or stripline feeds, stand alone horns, feed horns for reflectors, and reflectors of all types including multibeam and multiband antennas. Frequencies from L band to W band (specifically L, S, C, X, Ku, K, Ka, Q and W bands). Several unique designs developed resulted in papers being published and patent applications with me being the principal author and patent holder.

Wrote graphical interfaces for electromagnetic codes, tied together multiple electromagnetic codes (e.g. Ticra and C-Plan) by writing utility packages (one effort over 1,800 lines of C code). Used Unix scripting, C, C++, Fortran, Matlab and other codes to add function and capability to the department’s ability to analyze antenna structures.

CREOL - Center for Research and Education in Optics and Lasers; Orlando, Florida 6/93 - 8/95

Title: Research Assistant

Responsible for modeling a variety of lithographic and printed microstrip antennas using the finite element method. Determined the operating characteristics of an experimental infrared spiral antenna and verified against lab data. The infrared sources used were a blackbody, a CO$_2$ laser and a PB-NaCl (lead-salt) diode laser which must be cryogenically cooled with liquid helium and kept under vacuum conditions.

Electrical Engineering Department; UCF, Orlando, Florida 1/93 - 6/93

Title: Electromagnetic Interference/Compatibility (EMI/EMC) Research Assistant

Measured a variety of possible electromagnetic interference sources at the Kennedy Space Center, including sources in the docking bays for the shuttles and sources in the main computing room. Different types of shielding designs and materials were analyzed, tested, and then one was recommended in the Final Report.

IST - Institute for Simulation and Training; Orlando, Florida 5/89 - 1/93

Titles: Conceptual Level Programming Consultant

Hardware Analyst

Instructional Technology Programmer

Consulted by Amherst, Inc. in conjunction with the armed forces about the interoperability of J-MASS (Joint Modeling and Simulation System), which is not a “real-time” simulation and DIS (Distributed Interactive Simulation), which is a real-time simulation. Responsible for determining and correcting any logical flaws found in the construction of a “patch” which was to allow J-MASS to interact with DIS in real-time.

Responsible for bringing an F-16 flight simulator on line. The simulator used three computers to provide very realistic “real-time” flight and battles with Russian Mig’s. Navy pilots were used to test the response of the simulator in comparison to actual F-16’s, and data was taken to provide information about the efficiency of various dead-reckoning algorithms.

Responsible for the programming and debugging of an interactive, language learning aid on a variety of computers including: the Apple, McIntosh and IBM. Programmed an interactive language aid for use by the Marines in Somalia. This was done on a McIntosh “Power Book.”

Publications & Conferences: There are numerous publications in top IEEE journals and other forums as well as presentations at IEEE conferences. A complete list is available upon request.
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Paul T. Kerby
Vice President of Operations – Project Manager

Experience:

MCIS, INC.: Lakeland, FL  
Title: Vice President of Operations  
02/06 – Present

Responsible for managing microwave engineering and installation projects. Key responsibilities include project planning and implementation, site surveys, organization and documentation of collected data, on-site management, quality assurance, and system monitoring.

Recent applicable projects:

- City of Columbus, OH – 2012 Expansion of the Neighborhood Camera System
- City of Columbus, OH – Livingston Expansion of the Neighborhood Camera System
- City of Columbus, OH – Neighborhood Camera System
- FDOT District 4 – US 27 – Redundant licensed microwave backhaul for 26 CCTV sites and DMS over 45 miles.
- City of Tampa Utilities, FL – SCADA and security camera microwave backhauls
- City of Clearwater, FL – High Rel Microwave Backbone, on-going 24 X 7 monitoring and maintenance
- City of Aventura, FL – Microwave backhaul of ITS CCTV cameras and controls
- Pasco County, FL – Emergency 911 licensed backhaul system across county.
- Hillsborough County Sheriff’s Office – Microwave system to support over 100 cameras across region.
- TDOT (TN)- Region 4, District 45– Microwave backhaul of CCTV and DMS
- LDOT (LA) – Long range microwave backhaul of CCTV, MVDS and DMS
- Eastern Health (Ascension), AL –Microwave backhaul, on-going 24X7 monitoring and maintenance.
- Eglin AFB – West Range and Valparaiso projects solar powered Microwave backhaul of SCADA data and security cameras
- FDOT District 6 – Upper and Lower Keys – Microwave backhaul of CCTV and DMS (130 miles, 55 sites)
- FDOT District 4 – Broward County – Microwave backhaul of 34 DMS and 78 miles of VoIP coverage
- FDOT Turnpike Authority – Sawgrass and “B” projects – Microwave backhaul of DMS

Certifications & Training:

- Cisco CCNA Certification – Cisco ID No. CSCO11380268
- Com Train Advanced “Tower Climbing and Rescue” Certification – Certificate #: CTC2243-21466-44
- OSHA 10-hour training, General Industry & Health – certificate #: 700325517
- Maintenance of Traffic Intermediate Training - Provider #138, Completion Date: 08/29/2013
- First Aid, CPR, AED certified - Instructor ID# 06091385773, Completion Date: 04/2014
- FDOT Class B CDL
- Grounding and Protection of Communication Sites training
Anthony Marincovich  
PROJECT MANAGER / GENERAL CONTRACTOR

Solutions-focused professional with extensive experience in applying an expertise in planning, communication, and effective leadership. A team-oriented leader with hands-on experience who moves easily from the development of strategies to the execution of plans. Strong problem-solving and interpersonal skills. Tenacious in the pursuit of goals. Core qualifications include:

- Planning & Project Management
- Industrial, Commercial and Residential Construction Experience
- Forecasting & Scheduling
- Government Liaison
- Safety Management & Control
- Sub-Contractor Management
- Vendor Supply & Cost Reduction
- Architecture & Specifications
- Customer Relations & Satisfaction
- Quality Assurance
- Goal Setting & Productivity Improvement
- Project Documentation

PROFESSIONAL EXPERIENCE:

**FORTUNE 7, Inc. (and Subsidiaries), Lakeland, Florida**  
2008 to Present

*Industrial Power Distribution and Communication Industries.*

**Project Manager and General Contractor**

Responsible for Construction Operations of MCIS, Inc., Team Power Solutions, Inc. and TEAMWORKnet, Inc. in the Industrial Power Distribution and Communication Industries including creating construction teams specific to individual projects. Involved in each construction project from the initial planning phase through Post Construction documentation. Also involved in the office’s Non-Construction projects as Project Manager.

**BARTLETT CUSTOM HOMES, Lithia, Florida**  
1999 to 2008

*A $20+ million annual Custom Builder of Luxury Residential Estates*

**Construction Superintendent** (1999 to 2008)

Autonomous decision making responsibility for permitting, scheduling and management of Sub-Contractors, Vendor Supply and quality assurance while maintaining hands-on management of this High-Quality Custom Home Builder.

**LICENSES:**

- **FLORIDA GENERAL CONTRACTOR LICENSE NUMBER:** CGC1518808
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Grant F. Nichols
Wireless Technician

Experience:

MCIS, INC.: Lakeland, FL
Title: Wireless Technician

2009 – Present

Responsible for assisting in microwave engineering and installation projects. Key responsibilities include assistance in project planning and implementation, site surveys, organization and documentation of collected data, on-site work, quality assurance, and system monitoring.

Recent applicable projects:

- Pasco County, FL – Emergency 911 Wireless Backhaul – Configuration, bench testing, deployment, installation and commissioning for wireless system.
- City of Columbus, OH – Neighborhood Camera System – Installation and commissioning of wireless system for backhaul of camera streams within five neighborhoods of Columbus, Ohio. 2012 Expansion of the Neighborhood Camera System – Installation and commissioning of wireless system throughout Columbus, Ohio.
- Hillsborough County Sheriff’s Office – Designed and engineered the wireless system including several expansions of their Eye on Crime projects. This involved over 100 cameras all backhauled wirelessly.
- City of Tampa Utilities, FL – SCADA and security camera backhauls
- LDOT (LA) – Long range microwave backhaul of CCTV, MVDS and DMS
- St. Vincent’s Health System – Microwave backhaul of IP data, on-going 24 x 7 monitoring and maintenance.
- FDOT District 4 – I95 & I75 – Microwave backhaul of 34 DMS and 78 miles of VoIP coverage. US27 – Redundant licensed microwave backhaul for 26 CCTV and DMS sites over 45 miles.
- Mosaic Phosphate – Plant City, FL – Microwave backhaul of IP data, implementation and commissioning.
- Mosaic Phosphate – Riverview, FL – Maintenance and expansion of wireless mesh network, including deployment, installation and configuration.
- Mosaic Phosphate – Bowling Green, FL – FCC licensed backhaul linking administrative offices with two mining and processing facilities. Maintenance and expansion of wireless mesh network, including deployment, installation and configuration.
- City of Clearwater, FL – High Reliability Microwave Backbone,
- Columbus, OH – Hoover Dam – Microwave CCTV Surveillance, implementation and commissioning.

Airgroup, Tampa, FL
Title: Logistics Planner and Driver

2004 – 2008

Responsible for planning pickups and deliveries, writing quotes and billing. Also personally made pickups and deliveries throughout the state of Florida.

Certifications:

- Com Train “Tower Climbing and Rescue” Course – certificate #: 3932-30118-1
- Florida Class B Commercial Driver’s License
- Maintenance of Traffic Intermediate Training - Provider #138, Completion Date: 08/29/2013
- First Aid, CPR, AED certified - Instructor ID# 06091385773, Completion Date: 03/2014
- Transportation Security Administration - Transportation Worker Identification Credential
- Florida Phosphate Producers Certification – ID #9613129
- Mine Safety and Health Administration certified
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Jamie L. Brady
Wireless Technician

Experience:

MCIS, INC.: Lakeland, FL 2011 – Present
Title: Wireless Technician

Responsible for assisting in microwave engineering and installation projects. Key responsibilities include assistance in project planning and implementation, site surveys, organization and documentation of collected data, installation, tower and on-site work, quality assurance, and system monitoring.

- City of Tampa Utilities – RF Master Project Plan for SCADA system.
- Pasco County, FL – Emergency 911 Wireless Backhaul – Configuration, bench testing, deployment, installation and commissioning for wireless system.
- City of Columbus, OH – Neighborhood Camera System – Installation and commissioning of wireless system for backhaul of camera streams within five neighborhoods of Columbus, Ohio.
- City of Columbus, OH – Livingston Expansion of the Neighborhood Camera System - Installation and commissioning of wireless system for backhaul of camera streams within Livingston neighborhood of Columbus, Ohio.
- City of Columbus, OH – 2012 Expansion of the Neighborhood Camera System – Installation and commissioning of wireless system throughout Columbus, Ohio.
- Hillsborough County Sheriff’s Office – Designed and engineered the wireless system including several expansions of their Eye on Crime projects. This involved over 100 cameras all backhauled wirelessly.
- FDOT District 4 – Broward County - Redundant licensed microwave backhaul for 26 CCTV and DMS sites over 45 miles.
- St. Vincent’s Health System – Microwave backhaul of IP data, on-going 24 x 7 monitoring and maintenance.
- Columbus, OH – Hoover Dam – Microwave CCTV Surveillance, implementation and commissioning.
- Mosaic Phosphate – Plant City, FL – Microwave backhaul of IP data, implementation and commissioning.
- Mosaic Phosphate – Riverview, FL – Maintenance and expansion of wireless mesh network, including deployment, installation and configuration.
- Pasco County, FL – High Reliability Microwave Backup for Emergency 911 System, performed engineering surveys, RF interference testing, and project planning.

JEDD, LLC. Jamestown, TN 2008 - 2010
Title: Business Manager

Responsible for managing residential and commercial construction projects. Key responsibilities include project management, construction design and estimating, site safety, vendor management, sales and marketing, staffing, contracting, permitting, and meeting budgetary requirements.

Certifications:

- Com Train “Advanced Tower Climbing and Rescue” – Competent Climber - certificate #: 5910-37963-44
- Transportation Security Administration - Transportation Worker Identification Credential
- Florida Phosphate Producers Certification – ID #9568177
- OSHA Fall Safety Training and Certification
- Florida Class B Commercial Driver’s License
- Maintenance of Traffic Intermediate Training - Provider #138, Completion Date: 08/29/2013
- Mine Safety and Health Administration certified
- First Aid, CPR, AED certified - Instructor ID# 06091385773, Completion Date: 03/2014
Senior Management & Senior Staff

Paul D. Gates, C.P.E. is CEO and Principal of MCIS; has significant business experience in energy, power production and information management systems. He has more than 27 years utility experience with project management and the integration of hardware, software, communication, and information systems.

Rue S. Hestand IV, M.S.E.E. is President, Chief Operating Officer and Principal of MCIS; has a Bachelor’s and Master’s Degree in Electrical Engineering specializing in RF/Microwave Communications as well as minors in Computer Science and Mathematics. Rue has more than 22 years of design and management experience in all phases of communication technology including RF Engineering, antenna design, wireless, and GPS, integration as well as extensive computer programming development in those fields.

Paul W. Wood, E.E. is Principal for MCIS; has more than 17 years of experience in engineering economic analysis, engineering modeling, and utility rate and financial analysis. He is instrumental in the preparation of reports and studies as well as interfacing with clients. Paul has provided leadership in business management for a staff of engineers, CAD design staff, and office personnel.

Paul T. Kerby is Vice President of Operations for MCIS, has more than 9 years of experience at MCIS in microwave/wireless communications and computer networking. He has experience with project management, software development, and all facets of Information Systems.

Other Principals

Thomas E. Ashline, P.E. is a professional engineer with more than 17 years of experience with detailed field engineering and power system engineering including project startup, system troubleshooting, and final commissioning of engineering systems.

Christopher W. Seelig, P.E. has more than 22 years of experience in power system engineering including power generation, transmission, substation, and switchgear design. Chris has provided leadership to deliver exceptional customer service and delivery of quality engineering.

Harry J. Tittel, E.E. has more than 17 years of experience with power engineering studies including short circuit, relay coordination, load flow, power quality and harmonic analysis. In addition to this, Harry has extensive experience in thermal imaging analysis, grounding and lightning surveys, and commissioning services.
Manufacturers Letters/Certifications

The following list contains the radio manufacturers for which we are VAR’s (Value Added Resellers) and/or in which we have experience programming and troubleshooting their equipment. Because a significant portion of MCIS’ business comes from fixing poorly designed RF Systems, we have encountered a large number of different kinds of radios.

- Alcatel-Lucent
- Alvarion
- Axxcellera Broadband
- BelAir Networks
- Bridgewave Communications
  - Ceragon
  - Cisco Systems
  - 3Com
  - DragonWave
  - Enterasys
- Exalt Communications
  - Firetide
  - HP ProCurve
  - Intuicom
  - Meru
- Microwave Networks
- Motorola Broadband
- Motorola Wireless
- Nera Networks
- Proxim Wireless
  - RAD
  - Radwin
  - Redline
  - Siklu
  - SkyPilot
  - Trango
- Trapeze Networks
- Tropos Networks
- Ubiquitous
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Occupational License

POLK COUNTY LOCAL BUSINESS TAX RECEIPT

ACCOUNT NO. 5036  EXPIRES: 9/30/2016

OWNER NAME  LOCATION
RUE S HESTAND - PRES  6550 NEW TAMPA HWY STE B

BUSINESS NAME AND MAILING ADDRESS  CODE  ACTIVITY TYPE
MCIS, INC  540000  LTD PROFESSIONAL TECHNICAL

6550 NEW TAMPA HWY
LAKELAND, FL 33810-3148

PROFESSIONAL LICENSE (IF APPLICABLE)

OFFICE OF JOE G. TEDDER, CFC * TAX COLLECTOR

PAID 15114328 00001 0001 07/13/2015 07/13/2015 PAX 154 31-50 RUE HESTAND
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Insurance Certifications

The following two (2) pages include copies of MCIS’ Certificate of Liability Insurance.
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## Certificate of Liability Insurance

<table>
<thead>
<tr>
<th>INSURED</th>
<th>MCIS, Inc 8550 New Tampa Hwy Suite B Lakeland, FL 33816</th>
</tr>
</thead>
<tbody>
<tr>
<td>INSURER</td>
<td>American Interstate Ins. Co. 31988</td>
</tr>
</tbody>
</table>
Professional Engineering Licenses

State of Florida
Board of Professional Engineers
Artets that
Thomas E. Ashline, P.E.

Is licensed as a Professional Engineer under Chapter 471, Florida Statutes
Expiration: 2/28/2017
P.E. Lic. No: 56727
Audit No: 228201718888

State of Florida
Board of Professional Engineers
Artets that
Christopher W. Seelig, P.E.

Is licensed as a Professional Engineer under Chapter 471, Florida Statutes
Expiration: 2/28/2017
P.E. Lic. No: 46700
Audit No: 228201725825
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Contract Litigation/Legal Proceedings

MCIS has no pending or past litigation relative to the subject matter of this IYQ, nor any litigation or pending lawsuits filed against our Firm in the last five years.
MEMORANDUM

TO: Mayor and City Council

FROM: Vincent Pastue, City Manager

DATE: February 26, 2016

SUBJECT: City Manager’s Update – For the Agenda of March 1, 2016

1. 5K Runs on March 15 Meeting Agenda – At the March 15 meeting, the City Council will have two requests to approve additional 5K runs in the City of Mount Dora. Given that the applicants submitted an application in good faith and worked cooperatively with staff in planning the two events, it is recommended that these two applications be approved. However, a small community like Mount Dora having six running events during the year is a bit much. I would recommend that going forward you place some kind of moratorium on additional running events. Because these events involve a large geographic area and require multiple street closures, it is a difficult event to plan and staff for, and by their nature any breech of the secure street area presents a motorist/runner conflict not to mention disrupting traffic patterns.

2. Equal Rights Ordinance – We had planned on having this item on the March 1 agenda for adoption. Regrettably, we missed the public notice deadline and therefore must move approval to the March 15 meeting.

3. Christmas Tree at Pedestrian Mall – Larry Baker with Main Street Leasing spoke with me regarding whether the City will continue to approve the Christmas Tree at the Fourth Street pedestrian mall. His question is timely in that before committing a significant amount of money to refurbish the tree, he needs to know if the City Council is still interested. Since I received mixed comments regarding the tree, I had planned on asking the City Council their thoughts on going forward. Even though I will not be the Mount Dora City Manager beyond March 4, I will prepare a staff report for the City Council to consider for the March 15 meeting.

4. Board and Committee Alternates – The Mayor and I discussed the alternate vacancies on the Library and Parks and Recreation Board and their necessity. The rationale for the alternates was to insure there was a quorum for the meetings. Keep in mind that these are advisory boards to the City Council. Unlike the Planning and Zoning Board and Historic Preservation Board that serve quasi-judicial functions where a quorum is absolutely necessary, the same does not apply for advisory boards. The Mayor and I thought this should be discussed at a future meeting.
5. **Budget Discussion** – I had planned on having a discussion regarding the upcoming Fiscal Year 2016-17 Budget Process. Upon further consideration, I thought it would be better to have a workshop to discuss the City Council’s goals and objectives. I will still prepare a memo regarding my thoughts before I leave on March 4.

6. **Special Events** – I met this past week with a couple of major event organizers. The essence of the meeting is that they are greatly appreciative of the work, cooperation, and dedication of Chris Carson in making our events run as smoothly as they do. They also expressed concern that they feel he is underpaid and may eventually get recruited by another city willing pay him more; they recognize his value. They even expressed a willingness to incur a $250 application fee for a single day event and $500 for events of two or more days if the money goes to additional compensation for Mr. Carson. As a note, they are already incurring the full-cost for other city personnel for their events; Mr. Carson is paid out of the General Fund. The proposal is something the City Council can do. Internally, I would recommend work with Human Resources Director Ken Bloom to review the job description and what other communities are paying for comparable positions. The difficulty will be finding another similar sized community that has as many events as Mount Dora.

7. **Office Switch** – I have authorized the switch of the City Clerk and City Manager’s office. The offices are identical in size but the current Manager’s office has more built-in filing cabinet space which is more important for the Clerk. It is a pretty simple switch with no furniture movement.

8. **Upcoming Agenda Items** -

**March 15, 2016**

1. Consideration to Adopt Equal Rights Ordinance

2. Consideration to Adopt Ordinance 2016-03 Regarding SECO Electric Utility Franchise

3. Consideration to Approve Water, Wastewater, and Reclaimed Water Rates

4. Consideration to Introduce Ordinance to Amend Water and Wastewater Rates, Security Deposits, and Late Penalties

5. Consideration to Approve City Attorney Selection

6. Consideration to Approve US 441 Easement Agreements

7. Approval of Bids for US 441 Utility Relocations

8. Presentation – Fiscal Year 2014-15 Audit

9. Approval of the Lutheran Counseling Services Family Fun Run for May 14
March 15, 2016 Cont’d

10. Approval of the Twilight 5K Run for May 5 (Thursday evening)

11. Discussion - Continue Christmas Tree at Pedestrian Mall

April 5, 2016

1. Proclamation – Central Florida Letter Carriers

Future Agenda Items

1. Discussion/Approval – Board of Canvassers

2. Discussion - Street Sweeping Services in Gated Communities

3. Discussion – City Council Conceptual Layouts and City Hall Security Improvements

4. Discussion – Tree Board/Ordinance/Release of Tree Inventory RFP

5. Second Reading Comp Plan Amendment – Innovation District